PROTEZIONE CIVILE
Presidenza del Consiglio dei Ministri
Dipartimento della Protezione Civile

Regione Emilia-Romagna

CONFERENZA DELLE REGIONI E
DELLE PROVINCE AUTONOME

Attuazione dell'articolo 11 della legge 24 giugno 2009, n.77

MICROZONAZIONE SISMICA

Allegato n.1
Certificati indagini geognostiche

Regione Emilia-Romagna

Comune di Medolla

Regione Emilia Romagna	Soggetto realizzatore	Amministrazione comunale
Studio realizzato con il contributo di cui all'ODPC 293/2015 Coordinamento della Regione Emilia Romagna Servizio sismico dei suoli dott. geol. Luca Martelli	dott. Geol. Pier Luigi Dallari collaboratori studio MS e CLE: dott. Geol. Gabriele Ghirardini dott. Geol. Linda Veratti	Responsabile uff. tecnico geom. Alberto Annovi Data Novembre 2021

Sondaggi a carotaggio continuo

GEO PROGETTI	DATA ESECUZIONE 04/06/1998	METODO PERFORAZ. ROTAZIONE VERTICALE	SONDAGGIO n° 1
	QUOTA PIANO CAMPAGNA	ATTREZZO	

COMMITTENTE COMUNE di MEDOLLA

CANTIERE DISCARICA INTERCOMUNALE

CAMPIONI

CAROTIERE SEMPLICE	C	CAROTIERE DOPPIO	◻
S.P.T.	●	DENISON	▨
VANE TEST	◐	INDISTURBATI	■

LIVELLO ACQUA DATA	m. da P.C.	PROF. FORO	PROF. RIVEST.	ASSISTENTE
04/06/98	6.0	55m.	55m.	OPERATORE

mt.	QUOTA da P.C.	CAMPIONI TIPO	PROF.
5		C1	5.20 5.60
		C2	6.40 7.00
		C3	8.00 8.60
10	11.0	C4	11.6 12.1
	12.0	C5	13.8 14.4
15	17.0		
20	21.0		
25	27.0		
30	30.0		
35	36.0		
40	42.0		
45			
50			

DESCRIZIONE STRATIGRAFICA

Argilla grigio - azzurra con noduli e patine ocracee, presenza di frustoli torbosi, plastiche, compatte e asciutte, decimetrico livello di torba a 6.60 m.

Argilla debolmente limosa grigio - azzurra con patine ocracee, presenza di frustoli organici e calcinelli.

Argilla nocciola con venature azzurre e frustoli organici, stratificata, plastica e asciutta.

Argilla grigio - scuro a frattura concoide con frustoli organici, compatta.

Argilla grigio - azzurra con noduli e patine ocracee, presenza di frustoli torbosi.

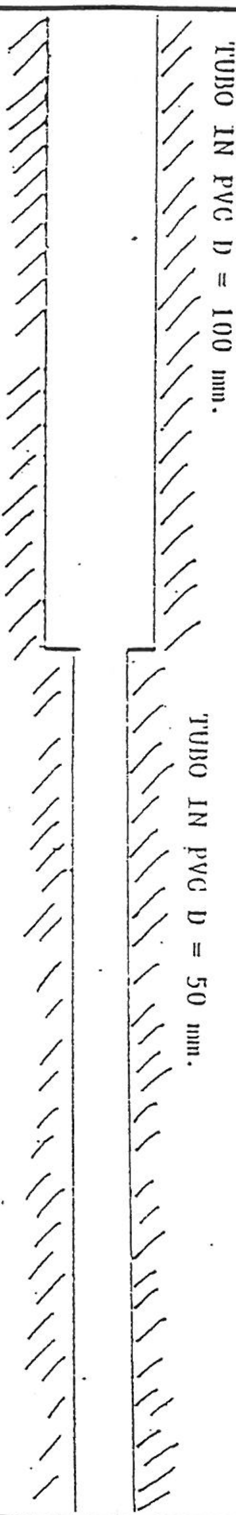
Argilla grigio - scuro a frattura concoide, plastica, compatta.

Argilla grigio - azzurra con patine ocracee plastica.

Sabbia argillosa a granulometria fine grigia

Sabbia a granulometria media, grigia.

CAROTAGGIO % | POKET Kg/cmq. | TORVANE Kg/cmq. | NOTE



EO PROGETTI

DATA ~~ESECUZIONE~~ 04/06/1998

METODO PERFORAZ. ROTAZIONE VERTICALE

SONDAGGIO n° 1

QUOTA PIANO CAMPAGNA

ATTREZZO

COMMITTENTE COMUNE di MEDOLLA

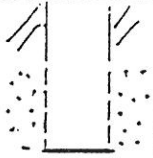
CANTIERE DISCARICA INTERCOMUNALE

CAMPIONI

CAROTIERE SEMPLICE	○	CAROTIERE DOPPIO	☐
S.P.T.	●	DENISON	◫
VANE TEST	◑	INDISTURBATI	☒

LIVELLO ACQUA DATA	m. dal P.C.	PROF. FORO	PROF. RIVEST.	ASSISTENTE
04/06/1998	6.0	55m.	55m.	OPERATORE

mt.	QUOTA da P.C.	SIMBOLOGIA	CAMPIONI TIPO	CAMPIONI N.	CAMPIONI PROF.	DESCRIZIONE STRATIGRAFICA	CAROTAGGIO %	POKET Kg/cmq.	TORVANE Kg/cmq.	NOTE
55						Sabbia a granulometria media, grigia.				TUBO IN PVC D = 50 mm. MICROFESSURATO FILTRO
						FINE SONDAGGIO				



SCHEDA STRATIGRAFICA SONDAGGIO

ALL. N. 7

GEO PROGETTI S.r.l.
Di Paolo Cestari & C.
Laboratorio di prove geotecniche in sito
Decreto di concessione 55442 del 27/01/2006
ai sensi del D.P.R. 06.06.2001 n. 380

Sede legale:Via Duca D'Este n.6
41036 Medolla (MO)
P.I.:01754860367
Tel : 0535/47170 Fax: 0535/49364

Committente: AIMAG S.P.A.

Cantiere : VIA CAMPANA DISCARICA DI MEDOLLA

Periodo di esecuzione: Dal 30/07/2018 Al 31/07/2018

Sondaggio n. 1

Quota: PIANO CAMPAGNA

Attrezzo di perforazione: SONDA MUSTANG ATLAS COOPCO

Metodo di perforazione: A ROTAZIONE E CAROTAGGIO CONTINUO

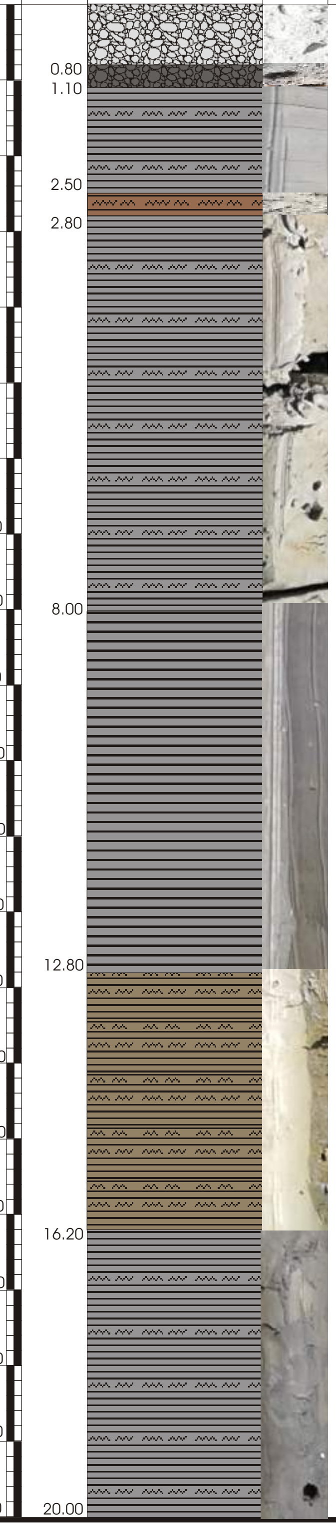
Attrezzatura in foro: Piezometri | Inclinometri | Altro

Sperimentatore: EMILIO MONTANARI
Responsabile di sito: Dott. Geol. PAOLO CESTARI
Direttore del Laboratorio: Dott. Geol. RITA BALLISTA

Livello Acqua Data	Ora	m. Dal p.c.	Prof. Foro	Diametro Tipo di carotiere	Prof. Rivest.	Diametro Tipo di Rivest.
31/07/2018		1.10	- 30.00 m	SEMPLICE D=101mm	- 30.00 m	D=127mm

Campioni

Carotiere semplice	○	Campione rimaneggiato	☐
Pareti sottili tipo Shelby	●	Idraulico tipo Osterberg	■
S.P.T.	◐	Carotiere doppio tipo Denison	◧



Quota dal p.c.	Campioni N°	Campioni Quota	Campioni Tipo	Descrizione Stratigrafica
0.80				RIPORTO IN GHIAIA E SABBIA SCIOLTA BIANCA.
1.10				RIPORTO IN RESTI DI LATERIZIO, CEMENTO E MATERIALI VARI.
2.50				ARGILLA GRIGIA CON SPALMATURE NOCCIOLA. A TRATTI DEBOLMENTE LIMOSA, COMPATTA, ASCIUTTA.
2.80				LIVELLO DI ARGILLA LIMOSA PLASTICA, UMIDA.
8.00	C1	3.00 3.60	●	ARGILLA GRIGIA VARIEGATA IN NOCCIOLA A TRATTI LEGGERMENTE LIMOSA COMPATTA E ASCIUTTA CON RARE INCLUSIONI CARBONATICHE.
12.80				ARGILLA GRIGIA CON SPALMATURE NOCCIOLA, COMPATTA E ASCIUTTA. RESTI DI MATERIALE ORGANICO DA 8,10 m A 8.30 m.
16.20	C2	13.00 13.60	●	ARGILLA LIMOSA VARIEGATA GRIGIA E NOCCIOLA. COMPATTA E UMIDA NEI TRATTI Più LIMOSI, IL RESTO ASCIUTTA. MENO COMPATTA NEI TRATTI Più LIMOSI. LIVELLO PARTICOLARMENTE LIMOSO TRA 15.30 m E 16.00 m.
20.00				ARGILLA GRIGIA A TRATTI DEBOLMENTE LIMOSA CON UN LIVELLO DI TORBA TRA 16.85 m E 17.00 m. MEDIAMENTE COMPATTA, ASCIUTTA.

INDICE RQD | AVAN. CON RIVEST. ▼ | AVAN. SENZA RIVEST. ▽ | Carotaggio % 25 50 75

Fino a (m)	Pocket kPa.	Torvane kPa
1.00		
2.00	230 230	100 100
3.00	250 100 280	120 40 90
4.00	180 130	90
5.00	250 220	100 95
6.00	310 220 170	110 80 70
7.00	170 150	90 60
8.00	170 160	60 80
9.00	140 150	60 70
10.00	140 120	60 40
11.00	170 240 230	80 100 140
12.00	210 260	80 100
13.00	440 140	170 80
14.00	130 200	80
15.00	210 70 170	100 20 60
16.00	60 100	20 30
17.00	190 90	70 40
18.00	150 150	30 70
19.00	340 350	140 140
20.00	110 50	50 20

S.P.T. Quota	S.P.T. Colpi	Vane Test kPa	Note	Falda

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Sede legale:Via Duca D'Este n.6
41036 Medolla (MO)
P.I.:01754860367
Tel : 0535/47170 Fax: 0535/49364

Committente:
AIMAG S.P.A.

Cantiere :
VIA CAMPANA
DISCARICA DI MEDOLLA

Periodo di esecuzione:
Dal 30/07/2018 Al 31/07/2018

Sondaggio n. 1

Quota:
PIANO CAMPAGNA

Attrezzo di perforazione:
SONDA MUSTANG ATLAS COOPCO

Metodo di perforazione:
A ROTAZIONE E CAROTAGGIO CONTINUO

Attrezzatura in foro		
Piezometri	Inclinometri	Altro

Sperimentatore: EMILIO MONTANARI
Responsabile di sito: Dott. Geol. PAOLO CESTARI
Direttore del Laboratorio: Dott. Geol. RITA BALLISTA

Livello Acqua			Prof. Foro	Diametro Tipo di carotiere	Prof. Rivest.	Diametro Tipo di Rivest.
Data	Ora	m. Dal p.c.				
31/07/2018		1.10	- 30.00 m	SEMPLICE D=101mm	- 30.00 m	D=127mm

Campioni

Carotiere semplice	○	Campione rimaneggiato	☐
Pareti sottili tipo Shelby	●	Idraulico tipo Osterberg	■
S.P.T.	◍	Carotiere doppio tipo Denison	▨

Mt.	Quota dal p.c.	Descrizione Stratigrafica	Campioni N°	Campioni Quota	Campioni Tipo	Carotaggio %
20.00–21.30	21.30	ARGILLA GRIGIA CON INCLUSE CONCREZIONI CARBONATICHE. MOLTO COMPATTA E ASCIUTTA.				▨
21.30–26.70	26.70	ARGILLA LIMOSA GRIGIA VARIEGATA NOCCIOLA A TRATTI SENSIBILMENTE LIMOSA COMPATTA E ASCIUTTA. MENO CONSISTENTI LE PARTI Più LIMOSE. LIVELLO DI TORBA TRA 25.90 m E 26.10 m.	C3	23.00 23.60	●	▨
26.70–27.00	27.00	SABBIA LIMOSA GRIGIA, ASCIUTTA, SCIOLTA.				▨
27.00–27.40	27.40	SABBIA GRIGIA MEDIA SCIOLTA E BAGNATA.				▨
27.40–30.00	30.00	ARGILLA GRIGIA VARIEGATA NOCCIOLA A TRATTI DEBOLMENTE LIMOSA CON INCLUSE CONCREZIONI CARBONATICHE. MOLTO COMPATTA				▨
		FINE SONDAGGIO				

Carotaggio % : 25 50 75

Mt.	Pocket kPa.	Torvane kPa
21.00	350 430 380	>200 160
22.00	150 250	40 100
23.00	140 180	20 40
24.00	140 170 100	100 40
25.00	240 90	100 40
26.00	180 170 170	100 60 60
27.00	140	60
28.00	150 380	60 160
29.00	350 370	140 180
30.00	270 360	160 160
31.00		
32.00		
33.00		
34.00		
35.00		
36.00		
37.00		
38.00		
39.00		
40.00		

INDICE RQD	AVAN. CON RIVEST. ▼	AVAN. SENZA RIVEST. ▽	S.P.T. Quota	S.P.T. Colpi	Vane Test kPa	Note	Falda

DOCUMENTAZIONE FOTOGRAFICA SONDAGGIO S1

ALL. N. 7.1

COMMITTENTE: AIMAG SPA
Loc. CANTIERE: DISCARICA MEDOLLA
DATA ESECUZIONE: 30/07/18
SONDAGGIO N° 1 CASSETTA N° 1
DA m. 0 A m. 5.0

COMMITTENTE: AIMAG SPA
Loc. CANTIERE: DISCARICA MEDOLLA
DATA ESECUZIONE: 30/07/18
SONDAGGIO N° 1 CASSETTA N° 2
DA m. 5 A m. 10.0


COMMITTENTE: AIMAG SPA
LOC. CANTIERE: DISCARICA MEDOLLA
DATA ESECUZIONE: 30/07/18
SONDAGGIO N° 1 CASSETTA N° 3
DA m. 10 A m. 15


COMMITTENTE: AIMAG SPA
LOC. CANTIERE: DISCARICA MEDOLLA
DATA ESECUZIONE: 30/07/18
SONDAGGIO N° 1 CASSETTA N° 4
DA m. 15 A m. 20

COMMITTENTE: AIMAG SPA

Loc. CANTIERE: DISCARICA MEDOLLA

DATA ESECUZIONE: 31/07/18

SONDAGGIO N° 1 CASSETTA N° 5

DA m. 20 A m. 25

COMMITTENTE: AIMAG SPA

Loc. CANTIERE: DISCARICA MEDOLLA

DATA ESECUZIONE: 31/07/18

SONDAGGIO N° 1 CASSETTA N° 6

DA m. 25 A m. 30

FOTOGRAFIA DEL CAMPIONE

ALTO → BASSO

commessa:	settore:	id. campione:	Sperimentatore:	Direttore del Laboratorio:
032/18	04	S1 C1	Dott. Massimo Maugeri	Dott. Massimiliano Galli

certificato di prova n° 1164/18 del 07/09/2018
pag. 1 di 1

C.G.G. S.r.l. con sistema qualità ISO 9001:2015
Certificato Bureau Veritas Italia S.p.A.
Laboratorio autorizzato dal Min. Infrastrutture e Trasporti
Prove e controlli su materiali e prodotti da costruzione,
terre e rocce, in sito ed in laboratorio

COMMITTENTE:	AIMAG SPA	**SONDAGGIO:**	S1
LOCALITA':		**CAMPIONE:**	C1
CANTIERE:	MEDOLLA VIA CAMPANIA	**PROFONDITA' (m):**	3.00-3.60
		DATA DI PRELIEVO:	

PESO DI VOLUME (UNI CEN ISO/TS 17892-2 - metodo A)

DATI DI PROVA

Data di accettazione: 07/08/2018
Data di esecuzione prove: 08-09/08/2018

volume (cm^3)	*peso umido (g)*	*test eseguito*	*posizione*
86,18	166,11	provino 1	superiore
86,18	162,99	provino 2	centrale
86,18	161,92	provino 3	inferiore

Peso di volume: ρ 1,90 Mg/m^3
(medio, in condizioni di umidità naturale)

commessa:	**settore:**	**id. campione:**	**lo sperimentatore:**	**il direttore del Laboratorio:**
032/18	**04**	**S1 C1**	**Dott. Massimo Maugeri**	**Dott. Massimiliano Galli**

C.G.G.
C.G.G. S.r.l. con sistema qualità ISO 9001:2015
Certificato Bureau Veritas Italia S.p.A.
Laboratorio autorizzato dal Min. Infrastrutture e Trasporti
Prove e controlli su materiali e prodotti da costruzione,
terre e rocce, in sito ed in laboratorio

COMMITTENTE: AIMAG SPA
LOCALITA':
CANTIERE: MEDOLLA VIA CAMPANIA

SONDAGGIO: S1
CAMPIONE: C1
PROFONDITA' (m): 3.00-3.60
DATA DI PRELIEVO: -

UMIDITA' NATURALE (UNI CEN ISO/TS 17892-1)

DATI DI PROVA

Data di accettazione: 07/08/2018
Data di esecuzione prove: 08-09/08/2018

peso umido (g)	*peso secco (g)*	*test eseguito*	*posizione*
44,66	35,79	provino 1	superiore
111,79	90,69	provino 2	centrale
73,13	58,82	provino 3	inferiore

Umidità allo stato naturale: **W** 24,13 %

commessa:	**settore:**	**id. campione:**	**lo sperimentatore:**	**il direttore del Laboratorio:**
032/18	**04**	**S1 C1**	**Dott. Massimo Maugeri**	**Dott. Massimiliano Galli**

C.G.G. S.r.l. con sistema qualità ISO 9001:2015
Certificato Bureau Veritas Italia S.p.A.
Laboratorio autorizzato dal Min. Infrastrutture e Trasporti
Prove e controlli su materiali e prodotti da costruzione,
terre e rocce, in sito ed in laboratorio

certificato di prova n° 1166/18 07/09/2018
pag. 1 di 2

COMMITTENTE: AIMAG SPA
LOCALITÀ:
CANTIERE: MEDOLLA VIA CAMPANIA
Data di accettazione: 07/08/2018

SONDAGGIO: S1
CAMPIONE: C1
PROFONDITÀ (m): 3.00-3.60
DATA PRELIEVO: -

LIMITI DI ATTERBERG (CNR-UNI 10014)

DATI DI PROVA

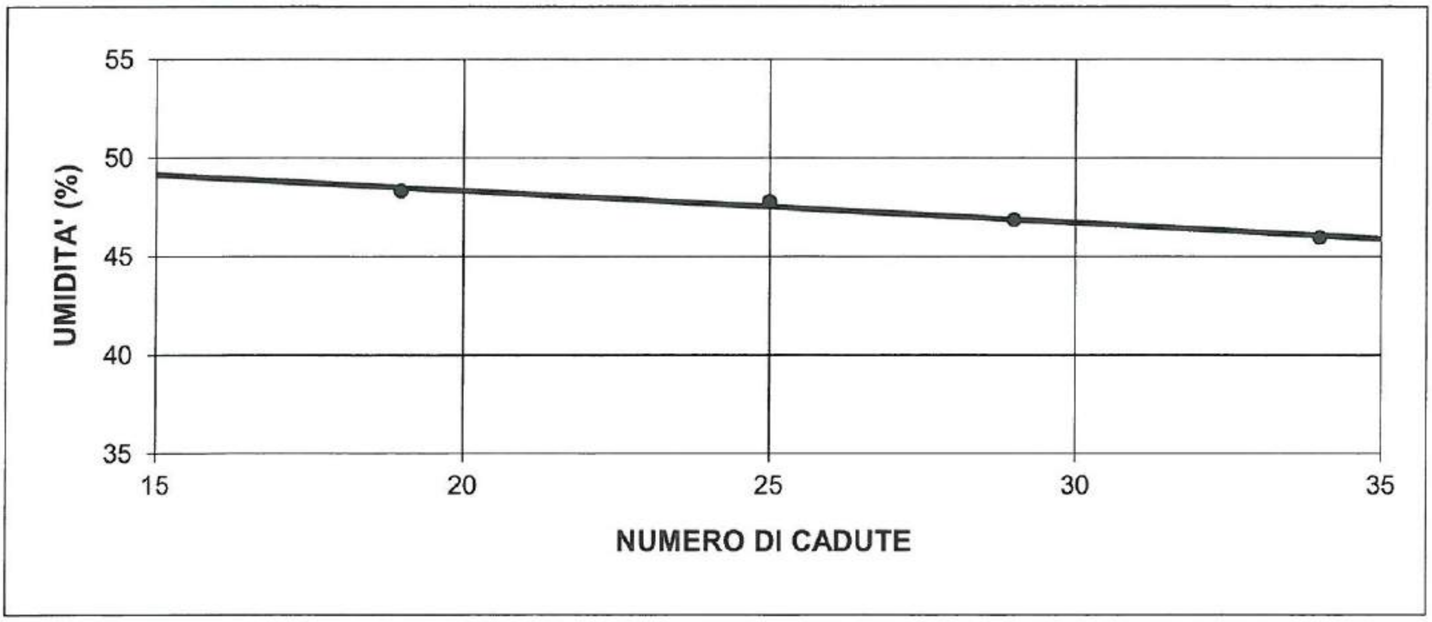
data di esecuzione: 04-05/09/2018

limite di liquidità				*limite di plasticità*		
n° di cadute	*peso umido (g)*	*peso secco (g)*	*umidità (%)*	*peso umido (g)*	*peso secco (g)*	*umidità (%)*
19	16,45	11,09	48,33	1,00	0,83	20,48
25	16,36	11,07	47,79	1,13	0,93	21,51
29	14,54	9,90	46,87			
34	14,61	10,01	45,95			

limite di ritiro

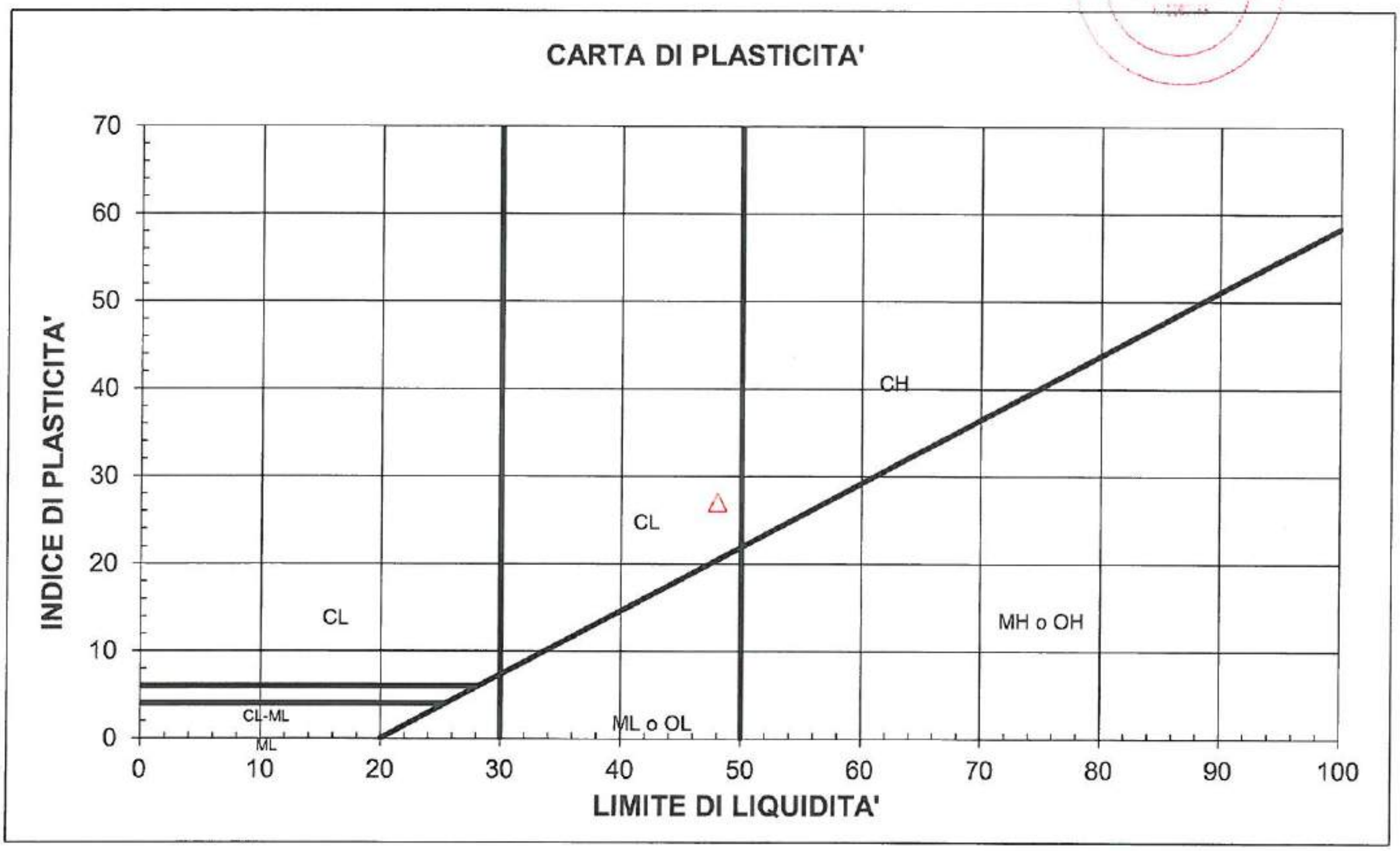
volume umido (cm^3)	*peso umido (g)*	*volume secco (cm^3)*	*peso secco (g)*

LIMITE DI LIQUIDITA'	**Wl**	48	%
LIMITE DI PLASTICITA'	**Wp**	21	%
LIMITE DI RITIRO	**Wr**		
INDICE DI PLASTICITA'	**IP**	27	



Note: N.D.= non determinabile - N.P.= non plastico

commessa:	**settore:**	**id. campione:**	**lo sperimentatore:**	**il direttore del Laboratorio:**
032/18	**04**	**S1 C1**	**Dott. Massimo Maugeri**	**Dott. Massimiliano Galli**


CARTA DI PLASTICITA'

M = limi inorganici
C = argille inorganiche
O = limi e argille organiche

L = basso limite di liquidità
H = alto limite di liquidità

commessa:	**settore:**	**id. campione:**	**lo sperimentatore:**	**il direttore del Laboratorio:**
032/18	**04**	**S1 C1**	**Dott. Massimo Maugeri**	**Dott. Massimiliano Galli**

C.G.G.

C.G.G. S.r.l. con sistema qualità ISO 9001:2015
Certificato Bureau Veritas Italia S.p.A.
Laboratorio autorizzato dal Min. Infrastrutture e Trasporti
Prove e controlli su materiali e prodotti da costruzione,
terre e rocce, in sito ed in laboratorio

certificato di prova n° 1176/18 *07/09/2018*

COMMITTENTE: AIMAG SPA
CANTIERE: MEDOLLA VIA CAMPANIA
LOCALITÀ:
Data ricevimento campione: 07/08/2018

SONDAGGIO: S1
CAMPIONE: C1
PROFONDITÀ: 3.00-3.60
Data esecuzione prove: 20/08-06/09/18

PROVA DI CONSOLIDAZIONE EDOMETRICA (ASTM D2435)

CARATTERISTICHE DEL PROVINO

sezione	19,87	cm^2	*indice dei vuoti iniziale*	0,856	
altezza iniziale	20,00	mm	*altezza ridotta*	10,777	mm
massa iniziale	79,27	g	*altezza finale*	17,43	mm
umidità iniziale	25,42	%	*umidità finale*	23,68	%
*peso specifico dei granuli**	2,68	Mg/m^3	*massa secca finale*	57,39	g

* valore utilizzato sulla base delle indicazioni bibliografiche in assenza della specifica prova

DATI DI PROVA

data inizio	*carico (kPa)*	*altezza (mm)*	*dH (mm)*	*indice vuoti*	*dH/H_0 (%)*	*m_v (kPa^{-1})*	*E_{ed} (kPa)*
20/08/2018	5	20,000	0,000	0,856	0,000		
21/08/2018	12	19,876	0,124	0,844	0,620	8,732E-04	1,145E+03
22/08/2018	25	19,751	0,249	0,833	1,245	5,123E-04	1,952E+03
23/08/2018	49	19,590	0,410	0,818	2,050	3,286E-04	3,043E+03
24/08/2018	98	19,375	0,625	0,798	3,125	2,194E-04	4,558E+03
25/08/2018	196	19,035	0,965	0,766	4,825	1,735E-04	5,765E+03
data inizio	*carico (kPa)*	*altezza (mm)*	*dH (mm)*	*indice vuoti*	*dH/H_0 (%)*	*c_s (kPa^{-1})*	*SR (kPa^{-1})*
26/08/2018	98	19,236	0,764	0,785	3,820	6,196E-02	3,339
27/08/2018	49	19,435	0,565	0,803	2,825	6,134E-02	3,305
data inizio	*carico (kPa)*	*altezza (mm)*	*dH (mm)*	*indice vuoti*	*dH/H_0 (%)*	*m_v (kPa^{-1})*	*E_{ed} (kPa)*
28/08/2018	98	19,225	0,775	0,784	3,875	2,143E-04	4,667E+03
29/08/2018	196	18,979	1,021	0,761	5,105	1,255E-04	7,967E+03
30/08/2018	392	18,296	1,704	0,698	8,520	1,742E-04	5,739E+03
31/08/2018	784	17,552	2,448	0,629	12,240	9,490E-05	1,054E+04
01/09/2018	1569	16,690	3,310	0,549	16,550	5,490E-05	1,821E+04
02/09/2018	3138	15,875	4,125	0,473	20,625	2,597E-05	3,850E+04
data inizio	*carico (kPa)*	*altezza (mm)*	*dH (mm)*	*indice vuoti*	*dH/H_0 (%)*	*c_s (kPa^{-1})*	*SR (kPa^{-1})*
03/09/2018	784	16,368	3,632	0,519	18,160	7,595E-02	4,092
04/09/2018	196	16,872	3,128	0,566	15,640	7,768E-02	4,186
05/09/2018	49	17,428	2,572	0,617	12,860	8,569E-02	4,617

Commessa:
-

Verbale di accettazione:
032/18

Io sperimentatore:
Dott. Massimo Maugeri

il Direttore del Laboratorio:
Dott. Massimiliano Galli

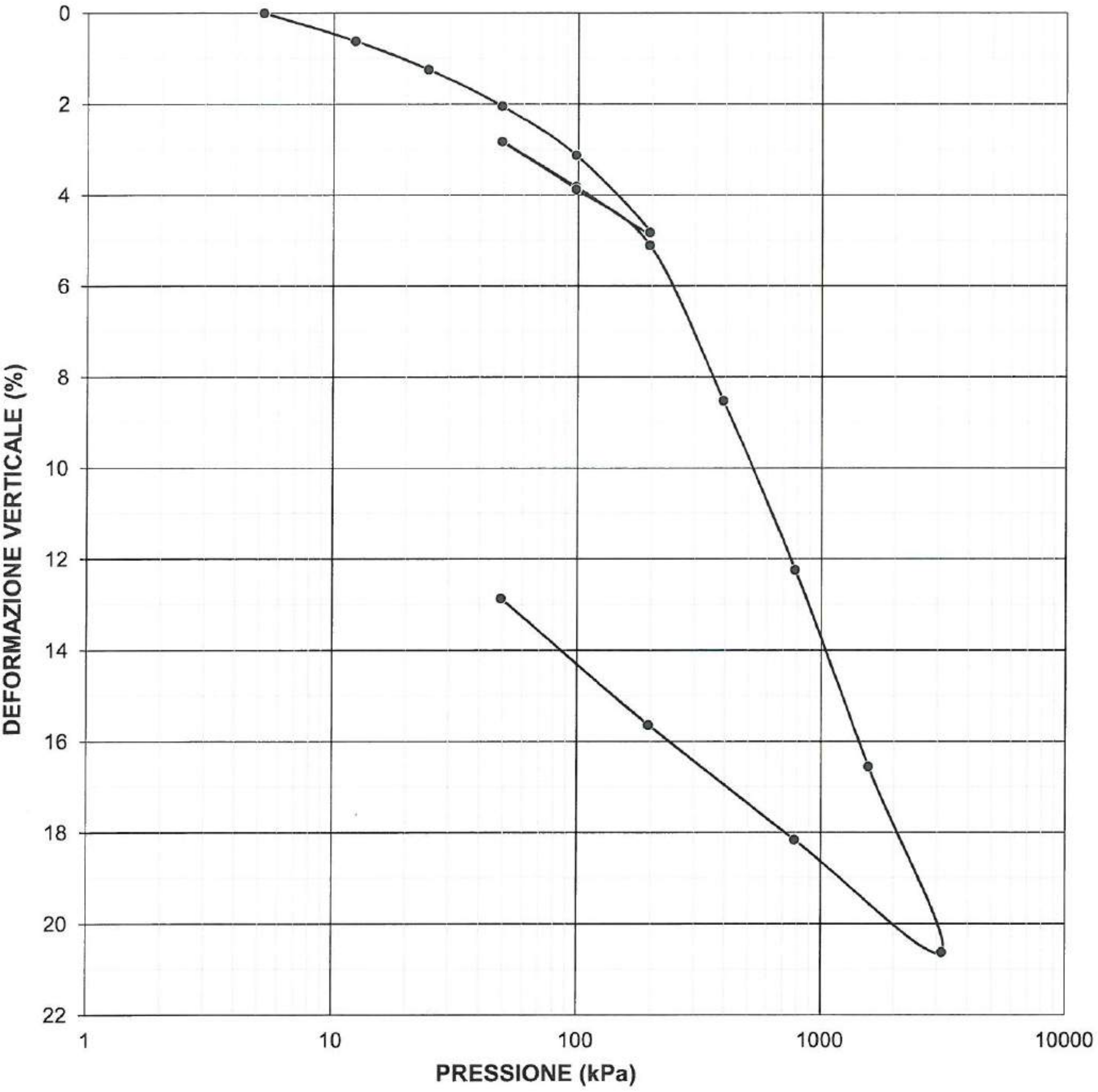
DATI DI PROVA: ANDAMENTO DEI CEDIMENTI NEL TEMPO

gradino IX (98-196 kPa)		*gradino X (196-392 kPa)*	
tempo (s)	*dH (mm)*	*tempo (s)*	*dH (mm)*
0	0,775	0	1,021
6	0,831	6	1,126
15	0,838	15	1,153
30	0,846	30	1,182
60	0,857	60	1,226
120	0,873	120	1,294
240	0,885	240	1,361
480	0,903	480	1,416
900	0,924	900	1,474
1800	0,945	1800	1,523
3600	0,964	3600	1,581
7200	0,983	7200	1,633
14400	1,002	14400	1,661
28800	1,011	28800	1,683
86400	1,021	86400	1,704

gradino XI (392-785 kPa)	
tempo (s)	*dH (mm)*
0	1,704
6	1,988
15	1,999
30	2,005
60	2,033
120	2,084
240	2,131
480	2,196
900	2,257
1800	2,312
3600	2,348
7200	2,382
14400	2,407
28800	2,426
86400	2,448

Commessa:	**Verbale di accettazione:**	**lo sperimentatore:**	**il Direttore del Laboratorio:**
-	**032/18**	**Dott. Massimo Maugeri**	**Dott. Massimiliano Galli**

CURVA DI CONSOLIDAZIONE EDOMETRICA - I



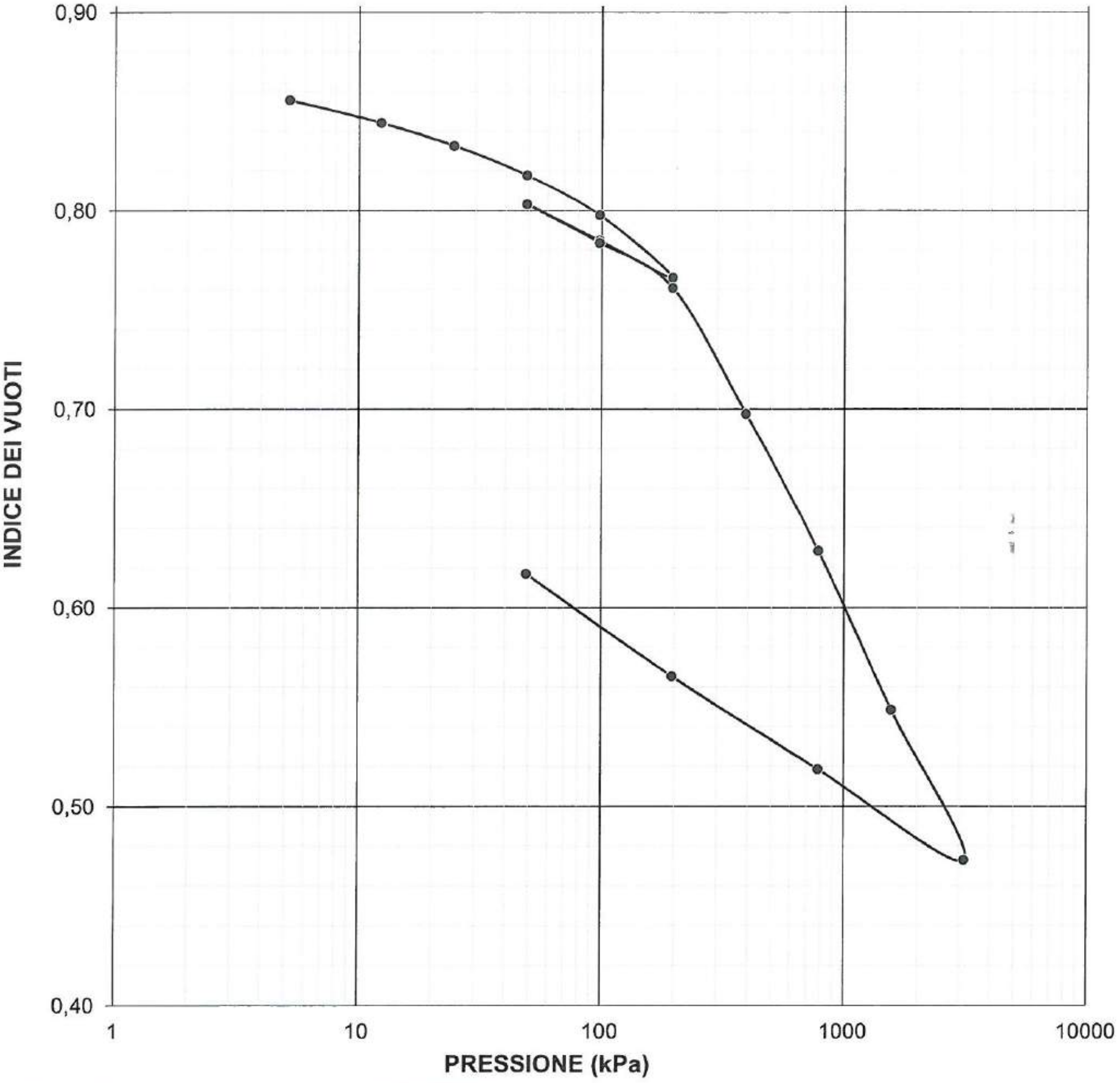
Commessa:
-

Verbale di accettazione:
032/18

lo sperimentatore:
Dott. Massimo Maugeri

il Direttore del Laboratorio:
Dott. Massimiliano Galli

VARIAZIONE DELL'INDICE DEI VUOTI - II



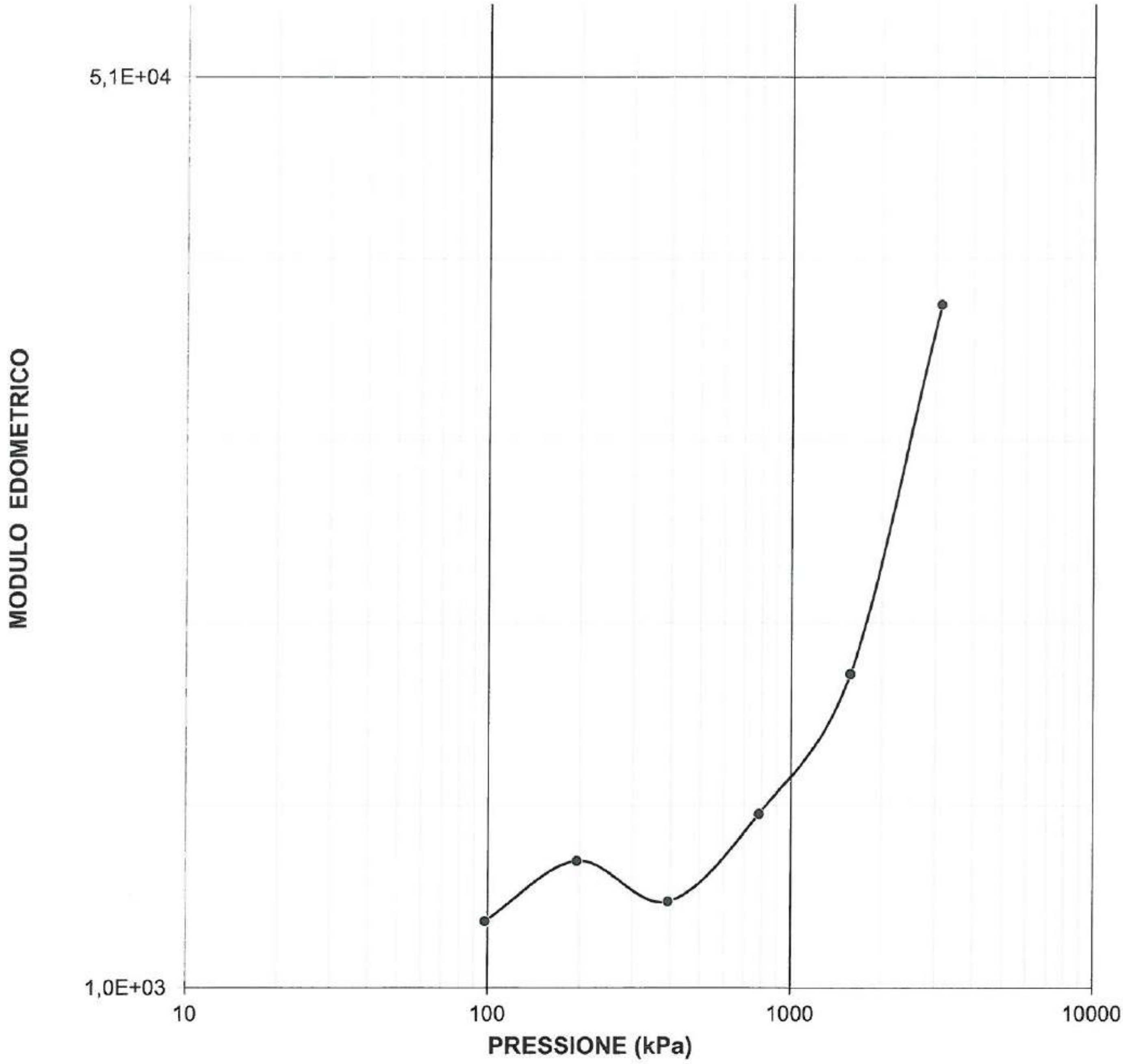
Commessa:
-

Verbale di accettazione:
032/18

Io sperimentatore:
Dott. Massimo Maugeri

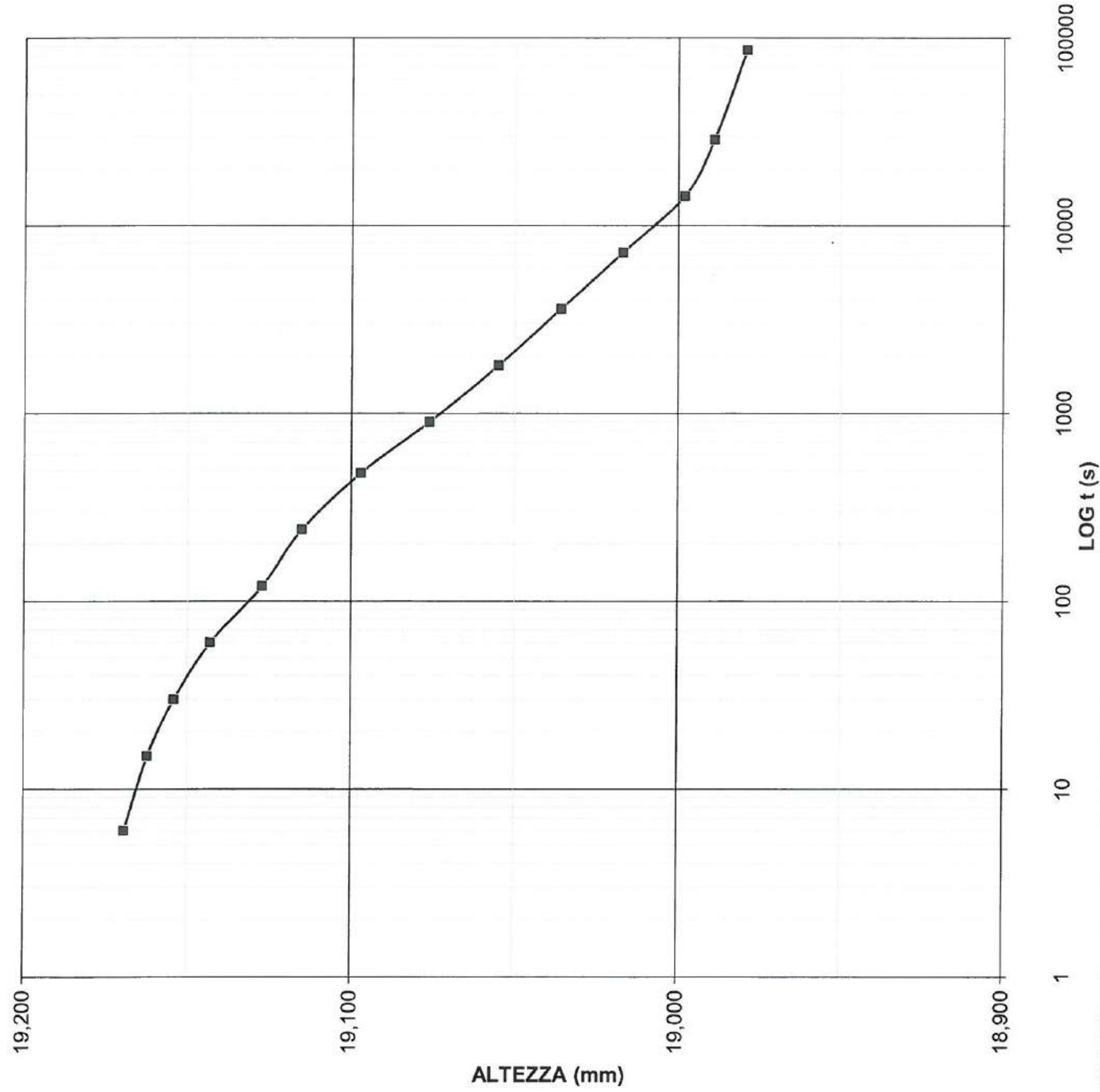
il Direttore del Laboratorio:
Dott. Massimiliano Galli

VARIAZIONE DEL MODULO EDOMETRICO III



Commessa:	**Verbale di accettazione:**	**lo sperimentatore:**	**il Direttore del Laboratorio:**
-	**032/18**	**Dott. Massimo Maugeri**	**Dott. Massimiliano Galli**

ANDAMENTO DEI CEDIMENTI NEL TEMPO - gradino V (98-196 kPa)



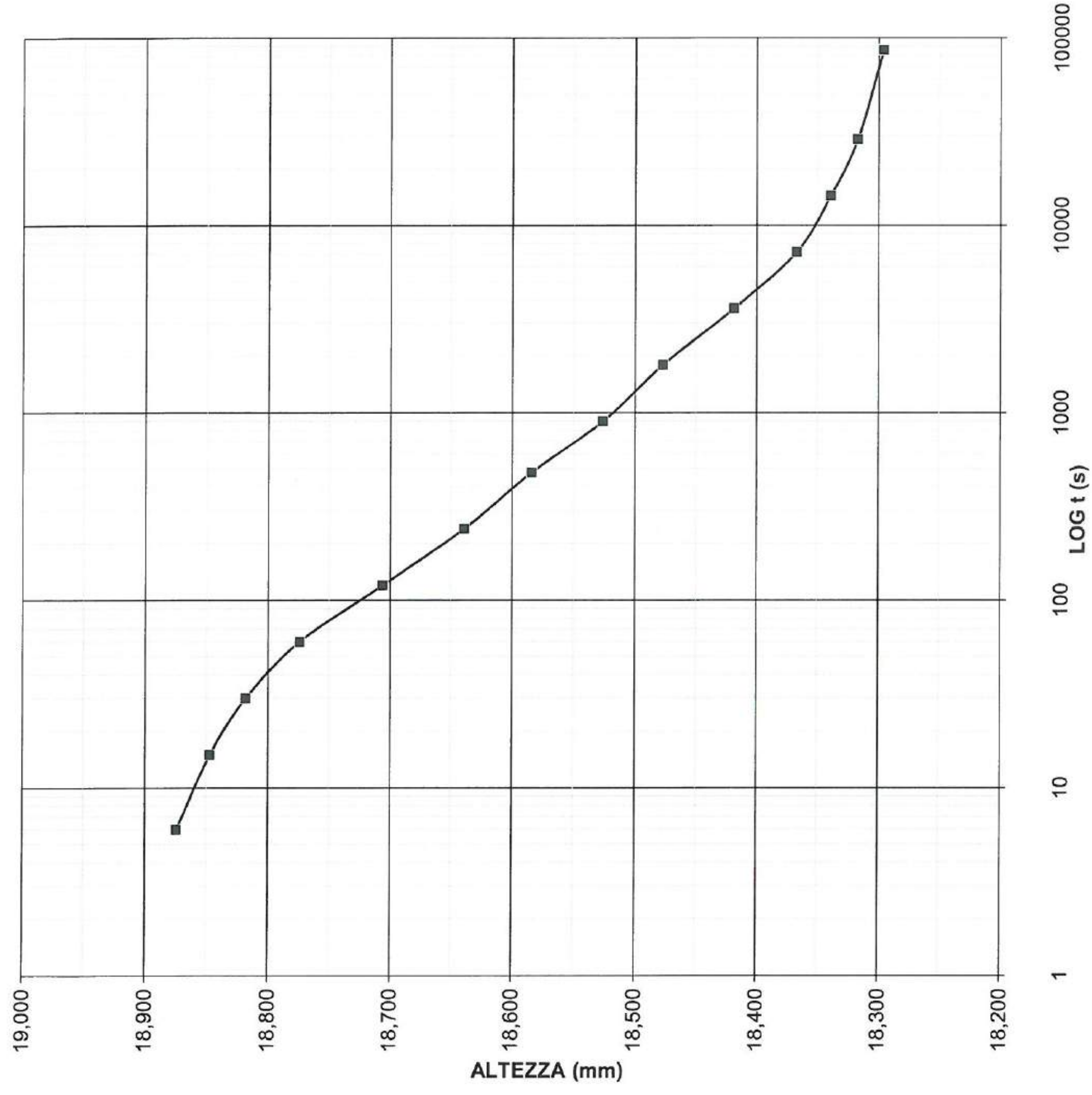
Commessa:
-

Verbale di accettazione:
032/18

Io sperimentatore:
Dott. Massimo Maugeri

il Direttore del Laboratorio:
Dott. Massimiliano Galli

ANDAMENTO DEI CEDIMENTI NEL TEMPO - gradino VI (196-392) kPa



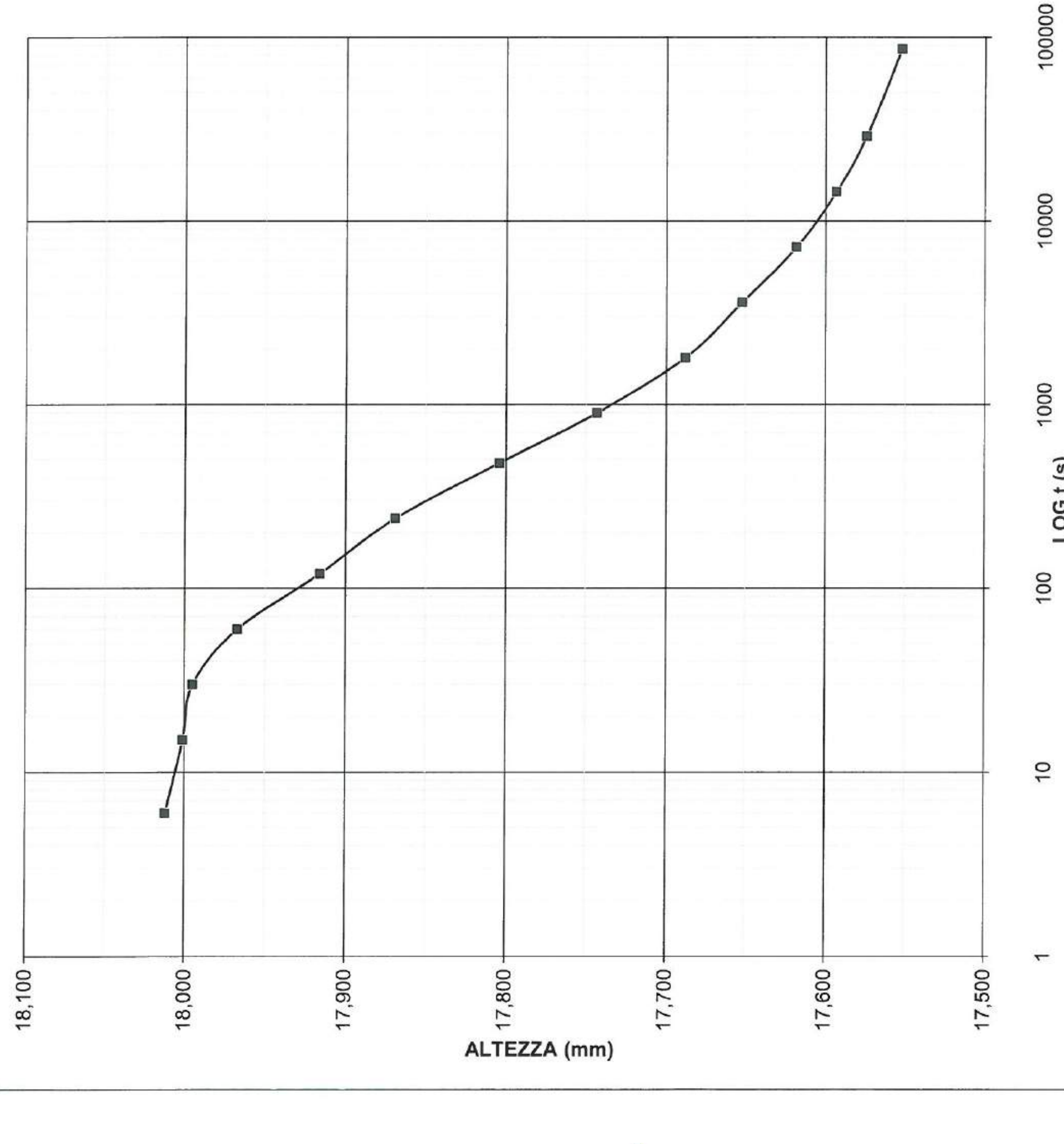
Commessa:
-

Verbale di accettazione:
032/18

Io sperimentatore:
Dott. Massimo Maugeri

il Direttore del Laboratorio:
Dott. Massimiliano Galli

ANDAMENTO DEI CEDIMENTI NEL TEMPO - gradino VII (392-784) kPa



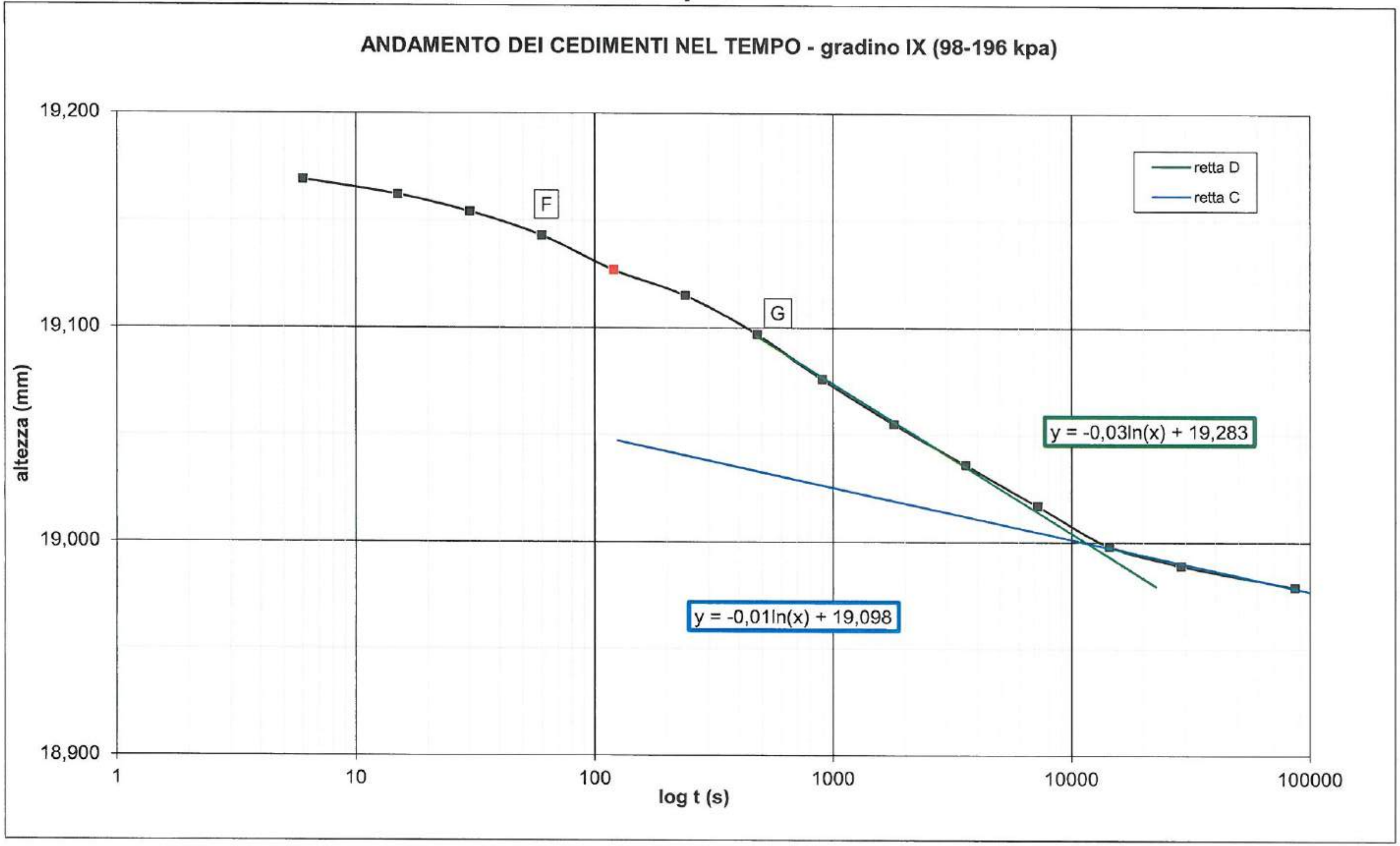
Commessa: -

Verbale di accettazione: 032/18

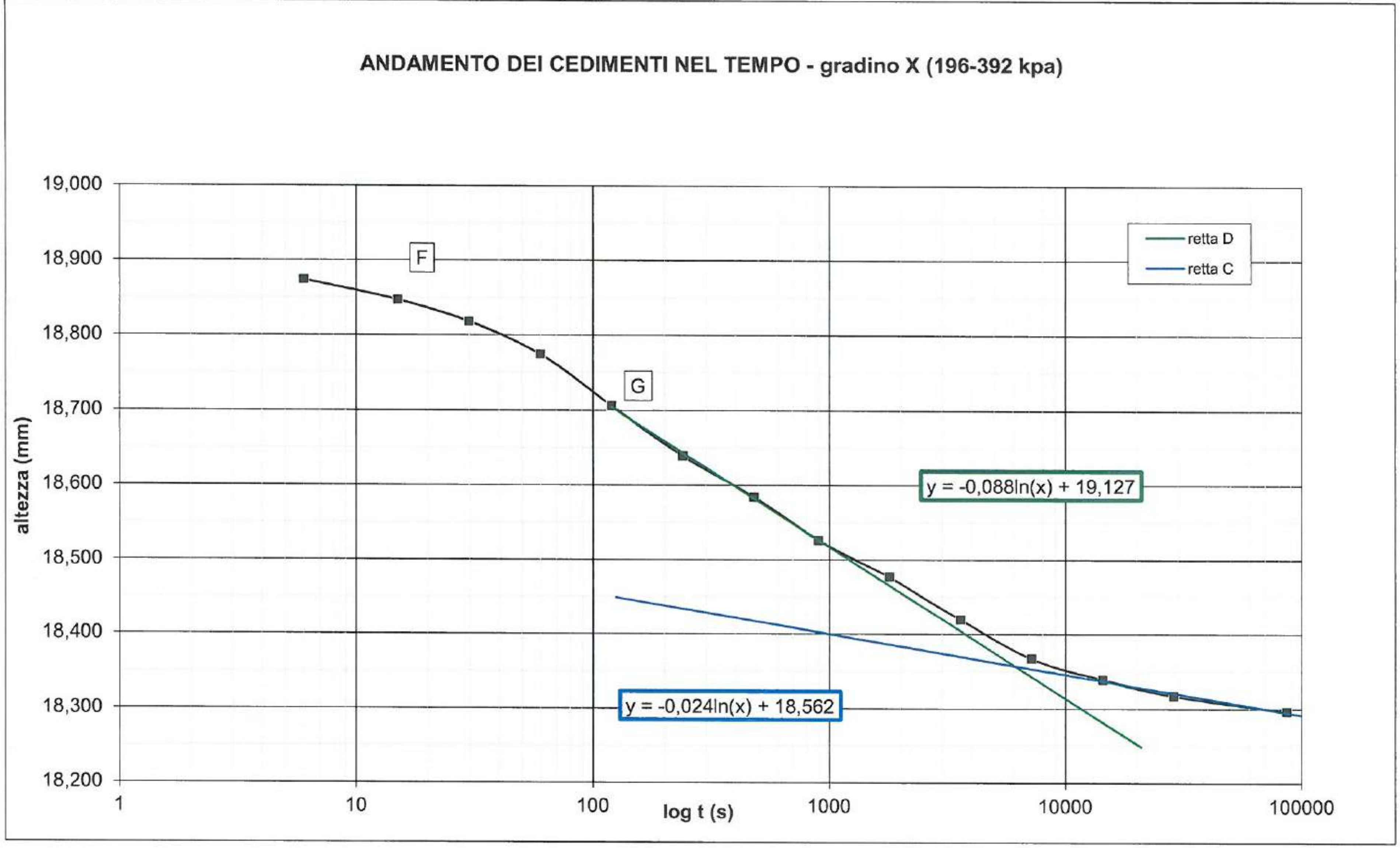
Io sperimentatore: Dott. Massimo Maugeri

il Direttore del Laboratorio: Dott. Massimiliano Galli

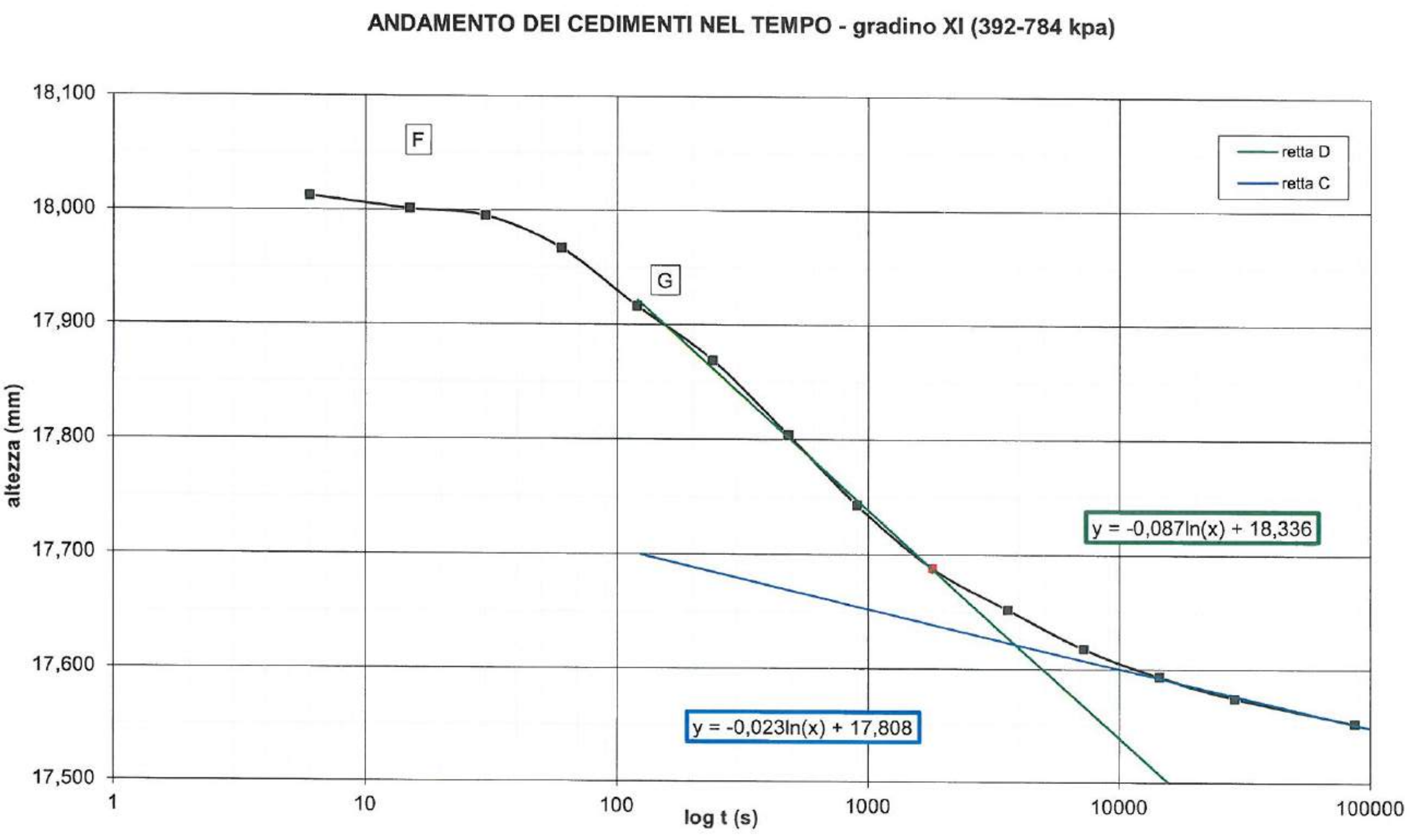
certificato di prova n° 1176/18


ANDAMENTO DEI CEDIMENTI NEL TEMPO - gradino IX (98-196 kpa)

certificato di prova n° 1176/18



certificato di prova n° 1176/18



COMMITTENTE: AIMAG SPA
LOCALITÀ: -
CANTIERE:
MEDOLLA VIA CAMPANIA

SONDAGGIO: S1
CAMPIONE: C1

cedimento a inizio di prova		0,775	mm	**gradino IX (98-196 kPa)**
altezza iniziale	h_0 =	1,919	cm	
altezza campione a fine cedimento primario	h_{100} =	1,900	cm	
altezza campione al 50% della consolidazione primaria	h_{50} =	1,909	cm	
tempo al 50% della consolidazione primaria	t_{50} =	508	s	
tempo al 100% della consolidazione primaria	t_{100} =	11626	s	
coefficiente di consolidazione	**C_v =**	**3,54E-04**	cm^2/s	
coefficiente di compressibilità volumetrica	**m_v =**	**1,26E-04**	kPa^{-1}	
coefficiente di permeabilità verticale	**K_v =**	**4,44E-09**	cm/s	

cedimento a inizio di prova		1,021	mm	**gradino X (196-392 kPa)**
altezza iniziale	h_0 =	1,899	cm	
altezza campione a fine cedimento primario	h_{100} =	1,836	cm	
altezza campione al 50% della consolidazione primaria	h_{50} =	1,867	cm	
tempo al 50% della consolidazione primaria	t_{50} =	172	s	
tempo al 100% della consolidazione primaria	t_{100} =	6115	s	
coefficiente di consolidazione	**C_v =**	**1,00E-03**	cm^2/s	
coefficiente di compressibilità volumetrica	**m_v =**	**1,74E-04**	kPa^{-1}	
coefficiente di permeabilità verticale	**K_v =**	**1,74E-08**	cm/s	

cedimento a inizio di prova		1,704	mm	**gradino XI (392-785 kPa)**
altezza iniziale	h_0 =	1,809	cm	
altezza campione a fine cedimento primario	h_{100} =	1,762	cm	
altezza campione al 50% della consolidazione primaria	h_{50} =	1,785	cm	
tempo al 50% della consolidazione primaria	t_{50} =	263	s	
tempo al 100% della consolidazione primaria	t_{100} =	3838	s	
coefficiente di consolidazione	**C_v =**	**5,98E-04**	cm^2/s	
coefficiente di compressibilità volumetrica	**m_v =**	**9,49E-05**	kPa^{-1}	
coefficiente di permeabilità verticale	**K_v =**	**5,67E-09**	cm/s	

C.G.G. S.r.l. con sistema qualità ISO 9001:2015
Certificato Bureau Veritas Italia S.p.A.
Laboratorio autorizzato dal Min. Infrastrutture e Trasporti
Prove e controlli su materiali e prodotti da costruzione,
terre e rocce, in sito ed in laboratorio

certificato di prova n° 1265/18 18/09/2018
pag. 1 di 9

COMMITTENTE: AIMAG SPA
LOCALITÀ:
CANTIERE: MEDOLLA VIA CAMPANIA
Data di accettazione: 07/08/2018

SONDAGGIO: S1
CAMPIONE: C1
PROFONDITÀ (m): 3.00-3.60
DATA DI PRELIEVO:

PROVA DI COMPRESSIONE TRIASSIALE CONSOLIDATA ISOTROPICAMENTE NON DRENATA (UNI CEN ISO/TS 17892/9)

CARATTERISTICHE DEI PROVINI

	sezione (cm^2)	*altezza iniziale* (cm)	*massa iniziale* (g)	*umidità iniziale* (%)
provino 1	11,34	7,60	176,47	18,92
provino 2	11,34	7,60	177,06	19,50
provino 3	11,34	7,60	179,58	19,82

	altezza finale (cm)	*massa finale* (g)	*volume finale* (cm^3)	*umidità finale* (%)
provino 1	6,28	175,94	85,98	15,89
provino 2	6,24	178,24	84,03	19,00
provino 3	6,17	176,76	82,31	17,19

SIMBOLOGIA ADOTTATA

σ_1 = pressione assiale
σ'_1 = pressione assiale efficace
BP = contropressione
B = parametro di Skempton
dH = deformazione assiale
A_c = area corretta

σ_3 = pressione di confinamento
σ'_3 = pressione di confinamento efficace
dU = variazione di pressione interstiziale
dF = variazione di forza assiale
ΔV = variazione di volume

DATI DI PROVA: FASE DI SATURAZIONE

provino 1

data di esecuzione: 07/09/2018

σ_3 iniziale (kPa)	*σ_3 finale (kPa)*	*BP (kPa)*	*dU iniziale (kPa)*	*dU finale (kPa)*	*B*
0	50	0	0,0	23,1	0,462
50	50	45	23,1	30,2	
50	95	45	30,2	74,1	0,976

commessa:	**settore:**	**id. campione:**	**lo sperimentatore:**	**il direttore del Laboratorio:**
032/18	**032/18**	**S1C2**	**Dott. Massimo Maugeri**	**Dott. Massimiliano Galli**

provino 2 *data di esecuzione:* 07/09/2018

σ_3 iniziale (kPa)	*σ_3 finale (kPa)*	*BP (kPa)*	*dU iniziale (kPa)*	*dU finale (kPa)*	*B*
0	50	0	0,0	28,2	0,564
50	50	45	28,2	34,2	
50	100	45	34,2	68,1	0,678
100	100	90	68,1	77,2	
100	150	90	77,2	126,1	0,978
150	190	90	126,1	164,5	0,960

provino 3 *data di esecuzione:* 07/09/2018

σ_3 iniziale (kPa)	*σ_3 finale (kPa)*	*BP (kPa)*	*dU iniziale (kPa)*	*dU finale (kPa)*	*B*
0	50	0	0,0	27,3	0,546
50	50	45	27,3	33,1	
50	100	45	33,1	82,1	0,980
100	195	45	82,1	175,1	0,979

DATI DI PROVA: FASE DI CONSOLIDAZIONE

provino 1
data di esecuzione: 12/09/2018
pressione di confinamento: 95 kPa
contropressione: 45 kPa

tempo (s)	*ΔV (cm^3)*	*tempo (s)*	*ΔV (cm^3)*	*tempo (s)*	*ΔV (cm^3)*	*tempo (s)*	*ΔV (cm^3)*
0	0,00	60	1,88	900	3,35	14400	6,25
6	0,89	120	2,23	1800	4,16	28800	6,43
15	1,22	240	2,43	3600	4,92	86400	6,47
30	1,69	480	2,84	7200	5,64	172800	6,64

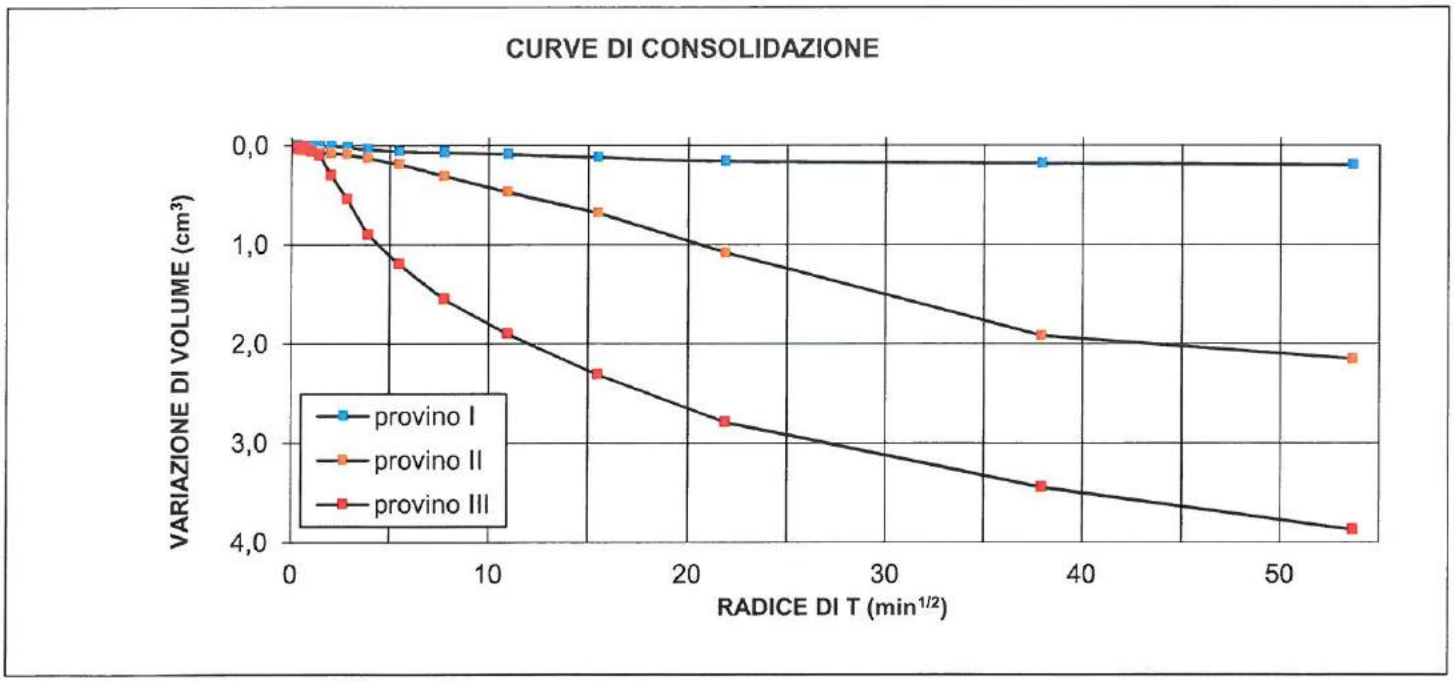
provino 2
data di esecuzione: 12/09/2018
pressione di confinamento: 190 kPa
contropressione: 90 kPa

tempo (s)	*ΔV (cm^3)*	*tempo (s)*	*ΔV (cm^3)*	*tempo (s)*	*ΔV (cm^3)*	*tempo (s)*	*ΔV (cm^3)*
0	0,00	60	1,88	900	3,35	14400	6,25
6	1,26	120	2,23	1800	4,16	28800	6,43
15	1,66	240	2,43	3600	4,92	86400	6,47
30	1,69	480	2,84	7200	5,64	172800	6,64

commessa:	**settore:**	**id. campione:**	**lo sperimentatore:**	**il direttore del Laboratorio:**
032/18	**032/18**	**S1C2**	**Dott. Massimo Maugeri**	**Dott. Massimiliano Galli**

provino 3		*pressione di confinamento:*	195	kPa
data di esecuzione:	12/09/2018	*contropressione:*	45	kPa

tempo (s)	*Δ V (cm³)*	*tempo (s)*	*Δ V (cm³)*	*tempo (s)*	*Δ V (cm³)*	*tempo (s)*	*Δ V (cm³)*
0	0,00	60	3,42	900	5,87	14400	8,76
6	1,88	120	3,92	1800	6,58	28800	9,46
15	2,55	240	4,30	3600	7,26	86400	10,03
30	2,94	480	5,13	7200	8,13	172800	10,36



commessa:	**settore:**	**id. campione:**	**lo sperimentatore:**	**il direttore del Laboratorio:**
032/18	**032/18**	**S1C2**	**Dott. Massimo Maugeri**	**Dott. Massimiliano Galli**

DATI DI PROVA: FASE DI ROTTURA

provino 1			*velocità di deformazione:*	8,3	µm/s
data di esecuzione:	13/09/2018		*pressione di confinamento:*	95	kPa
altezza iniziale:	74,05	mm	*contropressione:*	45	kPa

dH (mm)	*dH (%)*	*A_c (cm^2)*	*dF (N)*	*$\sigma_1 - \sigma_3$ (kPa)*	*dU (kPa)*
0,000	0,00	11,61	0	0,0	0
0,199	0,27	11,64	6	5,2	0
0,316	0,43	11,66	16	13,7	2
0,444	0,60	11,68	24	20,5	4
0,598	0,81	11,71	42	35,9	7
0,656	0,89	11,72	57	48,7	8
0,808	1,09	11,74	71	60,5	10
0,924	1,25	11,76	83	70,6	11
1,143	1,54	11,79	89	75,5	11
1,301	1,76	11,82	93	78,7	11
1,451	1,96	11,84	96	81,1	11
1,671	2,26	11,88	98	82,5	11
1,856	2,51	11,91	100	84,0	11
2,093	2,83	11,95	102	85,4	11
2,321	3,13	11,99	104	86,8	11
2,642	3,57	12,04	106	88,0	11
2,802	3,78	12,07	108	89,5	11
2,967	4,01	12,10	110	90,9	11
3,230	4,36	12,14	112	92,2	11
3,489	4,71	12,19	114	93,6	11
3,755	5,07	12,23	116	94,8	10
3,987	5,38	12,27	118	96,2	11
4,188	5,66	12,31	119	96,7	11
4,403	5,95	12,35	119	96,4	11
4,581	6,19	12,38	119	96,1	11
4,786	6,46	12,41	118	95,1	11
4,988	6,74	12,45	118	94,8	11
5,164	6,97	12,48	118	94,5	12
5,293	7,15	12,51	118	94,4	11
5,520	7,46	12,55	118	94,0	11
5,727	7,73	12,58	118	93,8	11
5,842	7,89	12,61	118	93,6	11
6,004	8,11	12,64	118	93,4	11
6,279	8,48	12,69	118	93,0	11
6,484	8,76	12,73	117	91,9	10
6,683	9,03	12,76	117	91,7	10
6,966	9,41	12,82	117	91,3	10
7,233	9,77	12,87	117	90,9	11
7,458	10,07	12,91	117	90,6	10
7,680	10,37	12,96	117	90,3	10
7,977	10,77	13,01	117	89,9	10
8,206	11,08	13,06	117	89,6	10
8,396	11,34	13,10	117	89,3	10
8,659	11,69	13,15	117	89,0	10

commessa:	**settore:**	**id. campione:**	**lo sperimentatore:**	**il direttore del Laboratorio:**
032/18	**032/18**	**S1C2**	**Dott. Massimo Maugeri**	**Dott. Massimiliano Galli**

dH (mm)	*dH (%)*	*A_c (cm^2)*	*dF (N)*	*$\sigma_1 - \sigma_3$ (kPa)*	*dU (kPa)*
8,871	11,98	13,19	117	88,7	9
9,121	12,32	13,24	116	87,6	10
9,309	12,57	13,28	116	87,3	10
9,656	13,04	13,35	116	86,9	10
9,967	13,46	13,42	116	86,5	10
10,084	13,62	13,44	116	86,3	10
10,200	13,77	13,47	116	86,1	10
10,494	14,17	13,53	116	85,7	10
10,751	14,52	13,58	116	85,4	10
10,889	14,71	13,61	116	85,2	10
11,255	15,20	13,69	116	84,7	10
11,255	15,20	13,69	116	84,7	10

provino 2			*velocità di deformazione:*	8,3	µm/s
data di esecuzione:	13/09/2018		*pressione di confinamento:*	190	kPa
altezza iniziale:	73,61	mm	*contropressione:*	90	kPa

dH (mm)	*dH (%)*	*A_c (cm^2)*	*dF (N)*	*$\sigma_1 - \sigma_3$ (kPa)*	*dU (kPa)*
0,000	0,00	11,61	0	0,0	0
0,173	0,23	11,64	16	13,6	0
0,338	0,46	11,66	36	30,1	1
0,377	0,51	11,67	54	44,7	2
0,567	0,77	11,70	72	60,1	1
0,719	0,97	11,73	88	73,5	2
0,799	1,08	11,74	95	78,6	2
0,923	1,25	11,76	105	86,2	3
1,188	1,60	11,80	117	95,5	4
1,305	1,76	11,82	130	105,6	4
1,501	2,03	11,85	145	117,2	5
1,650	2,23	11,88	158	126,7	6
1,872	2,53	11,91	165	131,2	7
2,053	2,77	11,94	168	132,0	9
2,318	3,13	11,99	170	132,4	9
2,616	3,53	12,04	172	132,3	11
2,815	3,80	12,07	172	130,7	12
3,000	4,05	12,10	172	129,6	13
3,232	4,36	12,14	173	128,5	14
3,551	4,80	12,20	173	127,6	14
3,789	5,12	12,24	173	126,4	15
3,987	5,38	12,27	174	127,0	15
4,201	5,67	12,31	174	126,0	15
4,457	6,02	12,36	174	125,5	15
4,584	6,19	12,38	174	124,8	16
4,760	6,43	12,41	174	124,7	16
4,963	6,70	12,45	174	124,0	16
5,150	6,95	12,48	174	123,3	16
5,322	7,19	12,51	174	123,2	16
5,486	7,41	12,54	174	123,1	16
5,669	7,66	12,57	175	123,9	15
5,903	7,97	12,62	175	123,4	15

commessa:	**settore:**	**id. campione:**	**lo sperimentatore:**	**il direttore del Laboratorio:**
032/18	**032/18**	**S1C2**	**Dott. Massimo Maugeri**	**Dott. Massimiliano Galli**

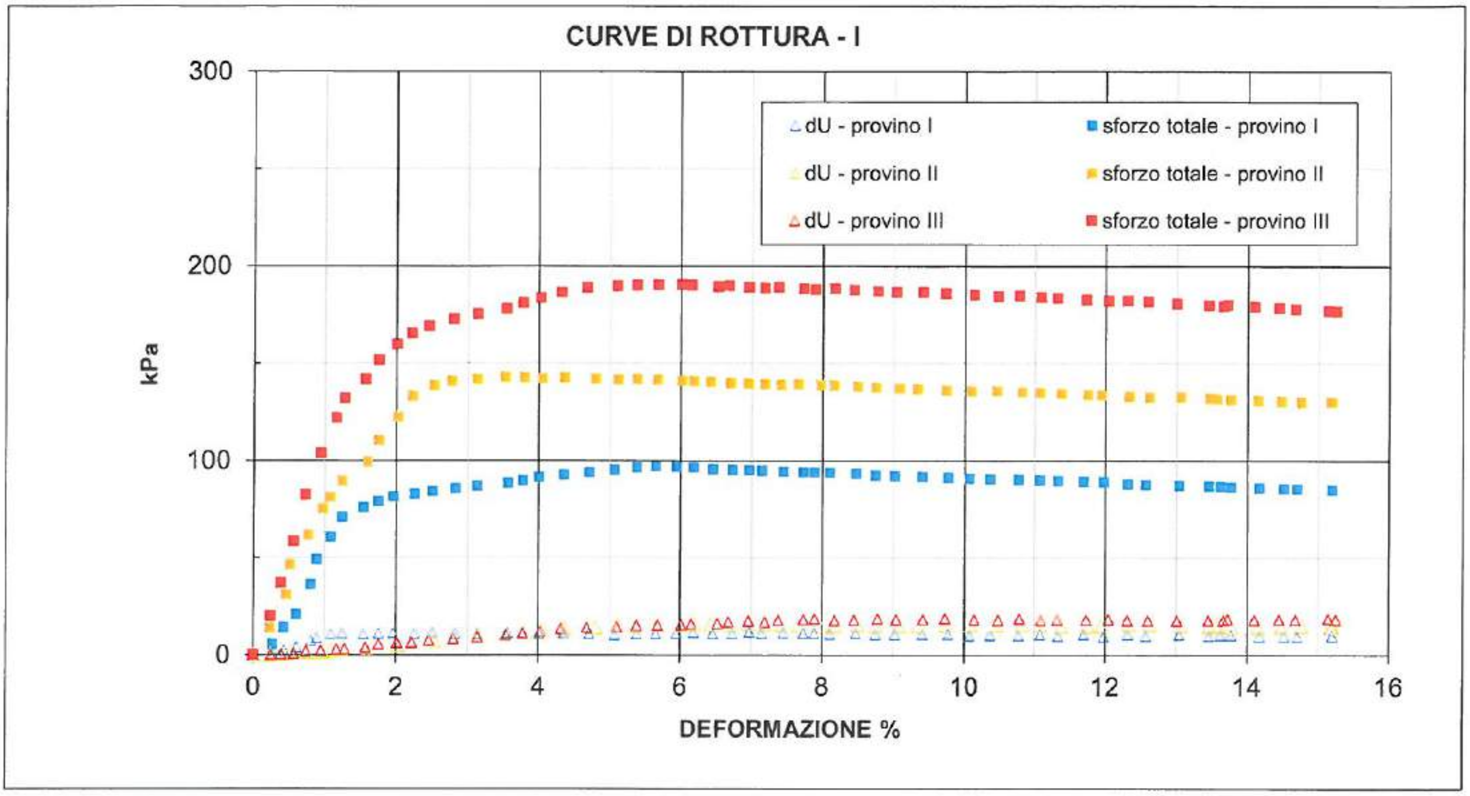
dH (mm)	*dH (%)*	*A_c (cm^2)*	*dF (N)*	*$\sigma_1 - \sigma_3$ (kPa)*	*dU (kPa)*
6,049	8,17	12,64	175	123,4	15
6,293	8,50	12,69	175	122,3	16
6,485	8,76	12,73	175	122,5	15
6,730	9,09	12,77	175	122,0	15
6,915	9,34	12,81	175	121,6	15
7,212	9,74	12,86	175	120,7	15
7,473	10,09	12,92	175	119,8	16
7,747	10,46	12,97	176	120,2	16
8,017	10,83	13,02	176	119,4	16
8,204	11,08	13,06	176	119,4	15
8,426	11,38	13,10	176	119,2	15
8,708	11,76	13,16	176	118,7	15
8,846	11,95	13,19	176	118,5	15
9,136	12,34	13,25	176	117,2	16
9,348	12,62	13,29	176	116,8	16
9,673	13,06	13,36	177	117,3	15
9,973	13,47	13,42	177	117,1	15
10,049	13,57	13,43	177	116,6	15
10,196	13,77	13,47	177	116,7	15
10,476	14,15	13,53	177	116,2	15
10,722	14,48	13,58	177	115,5	15
10,931	14,76	13,62	177	114,7	15
11,238	15,18	13,69	178	115,1	15
11,254	15,20	13,69	178	115,3	15

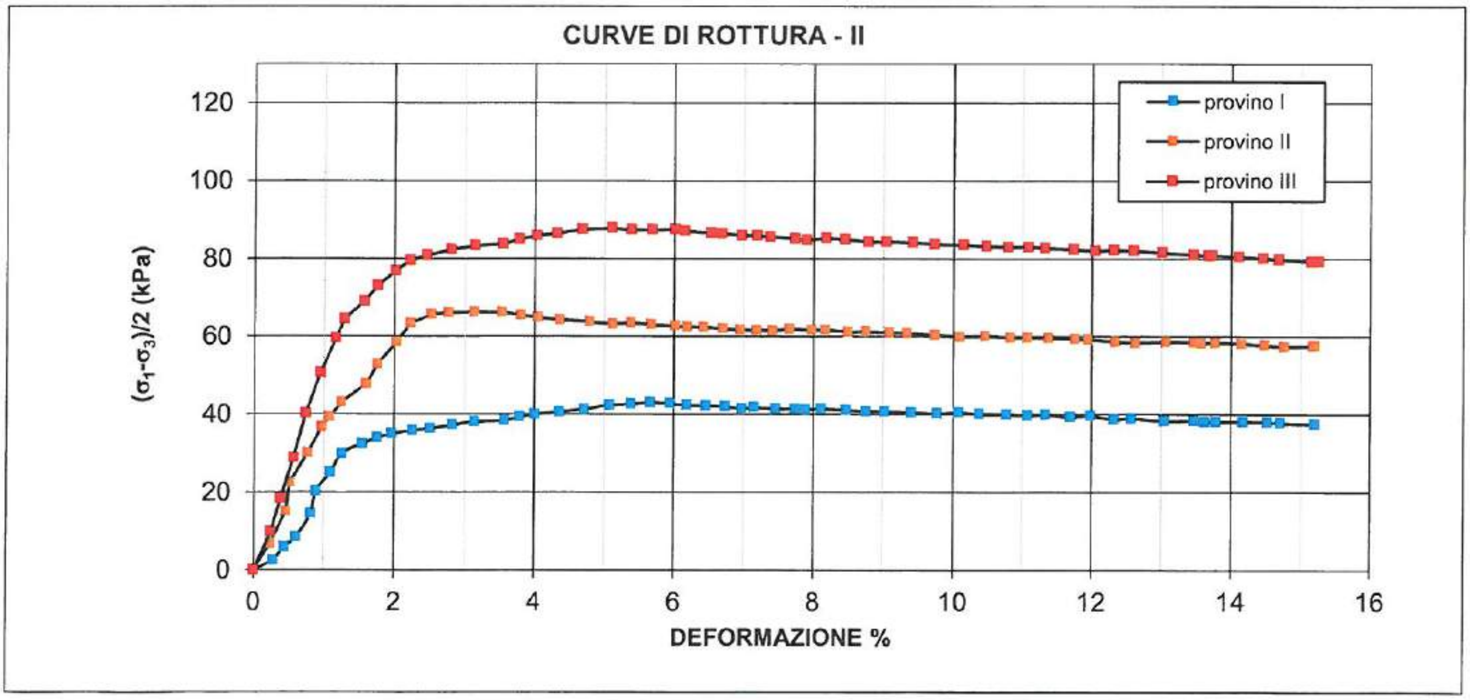
provino 3			*velocità di deformazione:*	8,3	µm/s
data di esecuzione:	13/09/2018		*pressione di confinamento:*	195	kPa
altezza iniziale:	72,95	mm	*contropressione:*	45	kPa

dH (mm)	*dH (%)*	*A_c (cm^2)*	*dF (N)*	*$\sigma_1 - \sigma_3$ (kPa)*	*dU (kPa)*
0,000	0,00	11,61	0	0,0	0
0,179	0,24	11,64	23	19,6	0
0,284	0,38	11,66	43	36,6	0
0,418	0,56	11,68	68	57,6	1
0,546	0,74	11,70	96	80,3	2
0,703	0,95	11,72	121	101,1	2
0,864	1,17	11,75	143	119,1	3
0,953	1,29	11,76	155	128,9	3
1,164	1,57	11,80	167	137,9	4
1,304	1,76	11,82	179	146,1	5
1,492	2,01	11,85	189	153,5	6
1,643	2,22	11,88	196	158,9	6
1,821	2,46	11,90	201	161,5	7
2,077	2,80	11,95	206	164,3	8
2,325	3,14	11,99	210	166,3	9
2,625	3,54	12,04	214	167,4	10
2,800	3,78	12,07	218	169,6	11
2,985	4,03	12,10	222	171,6	12
3,200	4,32	12,14	226	172,7	13
3,469	4,69	12,18	230	174,9	14

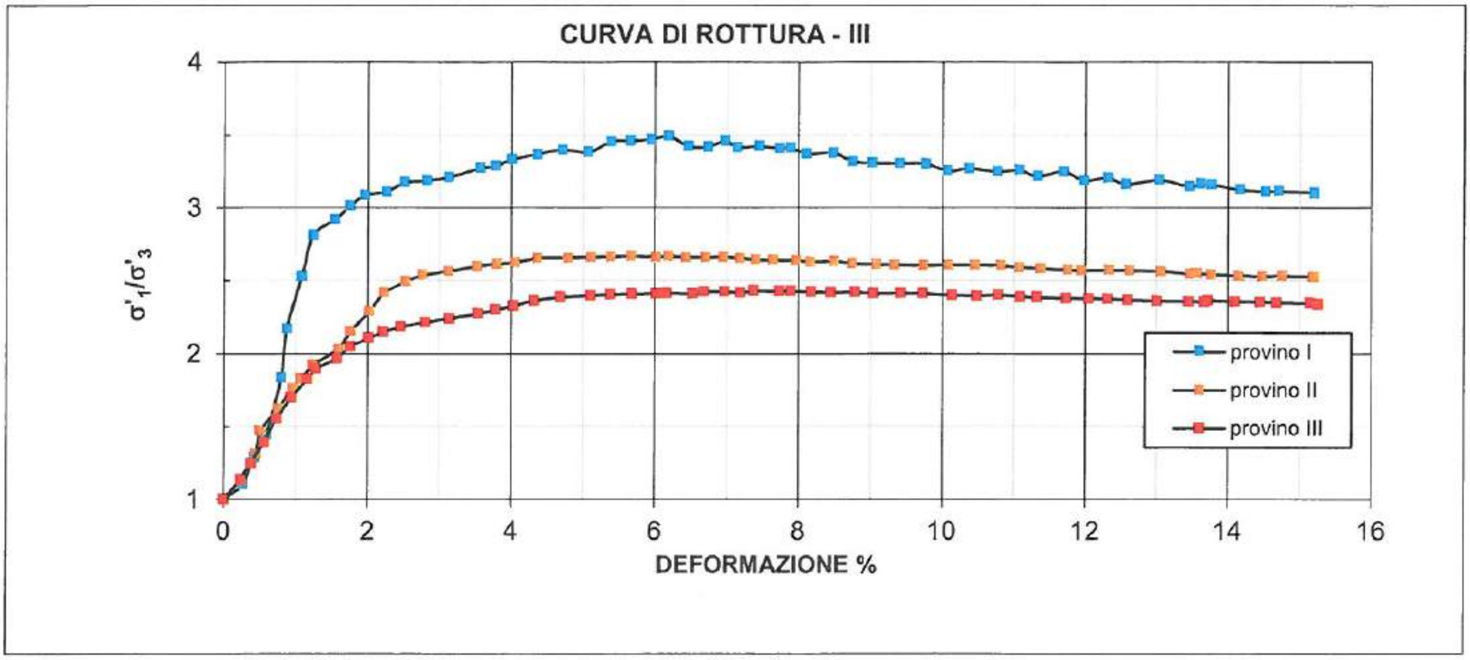
commessa:	**settore:**	**id. campione:**	**lo sperimentatore:**	**il direttore del Laboratorio:**
032/18	**032/18**	**S1C2**	**Dott. Massimo Maugeri**	**Dott. Massimiliano Galli**

dH (mm)	*dH (%)*	A_c *(cm^2)*	*dF (N)*	$\sigma_1 - \sigma_3$ *(kPa)*	*dU (kPa)*
3,781	5,11	12,24	232	175,3	14
3,986	5,38	12,27	233	174,7	15
4,210	5,69	12,31	234	174,8	15
4,456	6,02	12,36	235	174,9	15
4,561	6,16	12,37	235	174,1	16
4,834	6,53	12,42	235	173,1	16
4,948	6,68	12,44	236	172,7	17
5,158	6,97	12,48	236	171,8	17
5,325	7,19	12,51	236	171,8	17
5,465	7,38	12,54	237	171,2	18
5,727	7,73	12,58	237	170,1	18
5,848	7,90	12,61	237	169,6	18
6,058	8,18	12,65	238	170,4	18
6,261	8,46	12,68	238	169,8	18
6,508	8,79	12,73	238	168,5	18
6,698	9,05	12,77	238	168,4	18
6,976	9,42	12,82	239	168,3	18
7,204	9,73	12,86	239	167,2	19
7,510	10,14	12,92	239	166,9	18
7,762	10,48	12,97	239	166,3	18
7,988	10,79	13,02	240	165,9	19
8,215	11,09	13,06	240	165,8	18
8,388	11,33	13,10	240	165,3	18
8,690	11,73	13,16	240	164,7	18
8,921	12,05	13,20	240	163,9	18
9,120	12,32	13,24	241	164,3	18
9,331	12,60	13,29	241	163,9	17
9,633	13,01	13,35	241	163,1	17
9,964	13,46	13,42	241	161,9	18
10,120	13,67	13,45	241	161,5	18
10,161	13,72	13,46	242	161,5	18
10,441	14,10	13,52	242	161,0	18
10,702	14,45	13,57	242	160,1	18
10,871	14,68	13,61	242	159,6	18
11,215	15,14	13,68	242	158,2	19
11,295	15,25	13,70	242	158,4	18





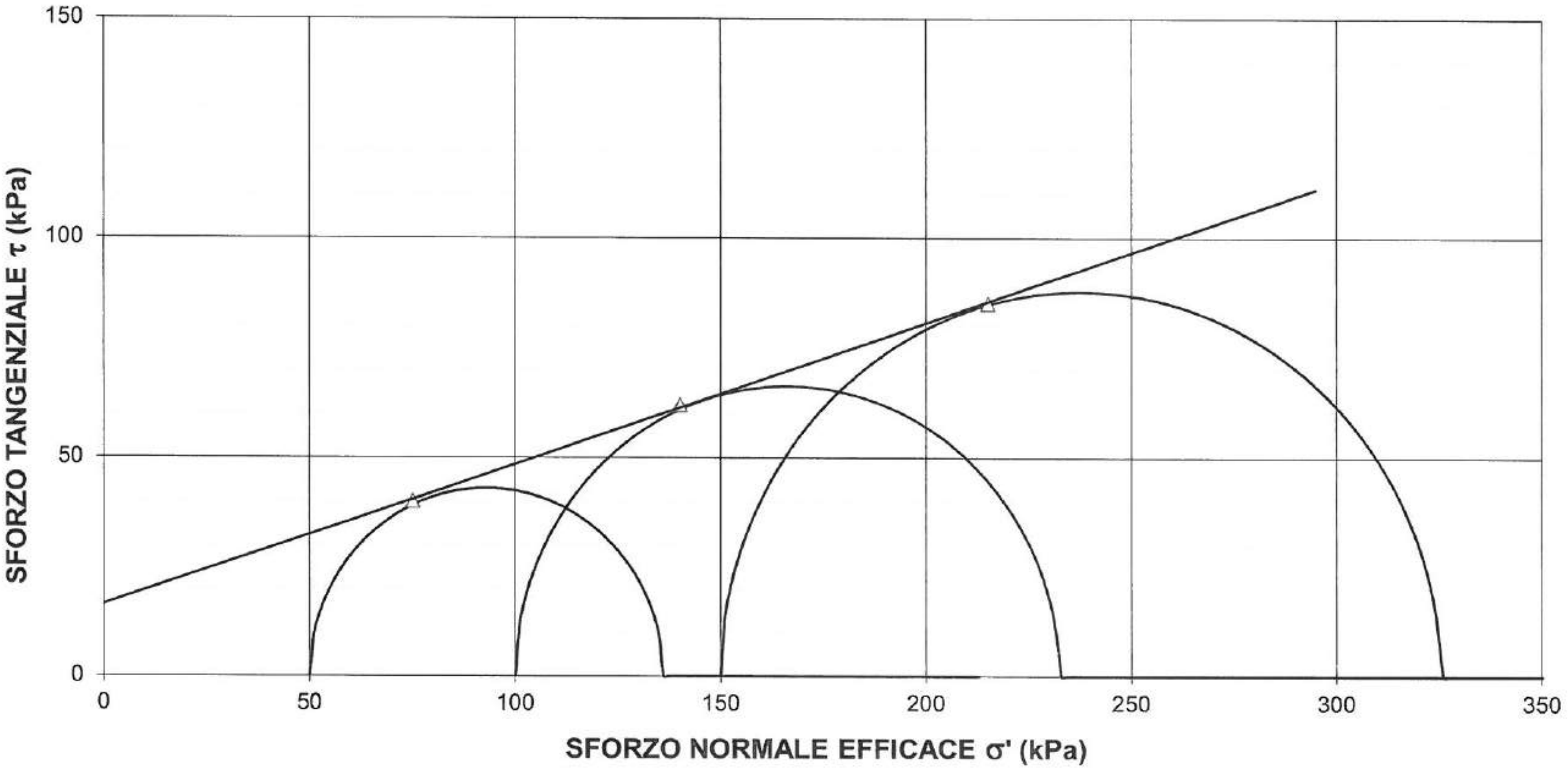
commessa:	settore:	id. campione:	lo sperimentatore:	il direttore del Laboratorio:
032/18	032/18	S1C2	Dott. Massimo Maugeri	Dott. Massimiliano Galli



commessa:	settore:	id. campione:	lo sperimentatore:	il direttore del Laboratorio:
032/18	032/18	S1C2	Dott. Massimo Maugeri	Dott. Massimiliano Galli

commessa: 032/18 **sondaggio:** S1 **campione:** C1

INVILUPPO DI ROTTURA SECONDO MOHR-COULOMB



commessa: 032/18 **sondaggio:** S1 **campione:** C1

provino	1	2	3
X	75	140	215
Y	40,0	62,0	85,0

c' (kPa) = 16,3

ϕ' (° sessadecimali) = 17,8

FOTOGRAFIA DEL CAMPIONE

ALTO → BASSO

commessa:	settore:	id. campione:	Sperimentatore:	Direttore del Laboratorio:
032/18	04	S1 C2	Dott. Massimo Maugeri	Dott. Massimiliano Galli

certificato di prova n° 1168/18 del 07/09/2018

C.G.G. S.r.l. con sistema qualità ISO 9001:2015
Certificato Bureau Veritas Italia S.p.A.
Laboratorio autorizzato dal Min. Infrastrutture e Trasporti
Prove e controlli su materiali e prodotti da costruzione, terre e rocce, in sito ed in laboratorio

C.G.G. S.R.L.

COMMITTENTE: AIMAG SPA
LOCALITA':
CANTIERE: MEDOLLA VIA CAMPANIA

SONDAGGIO: S1
CAMPIONE: C2
PROFONDITA' (m): 13.00-13.60
DATA DI PRELIEVO:

PESO DI VOLUME (UNI CEN ISO/TS 17892-2 - metodo A)

DATI DI PROVA

Data di accettazione: 07/08/2018
Data di esecuzione prove: 08-09/08/2018

volume (cm^3)	*peso umido (g)*	*test eseguito*	*posizione*
86,18	171,74	provino 1	superiore
86,18	177,46	provino 2	centrale
86,18	174,62	provino 3	inferiore

Peso di volume: ρ 2,03 Mg/m³
(medio, in condizioni di umidità naturale)

commessa: 032/18
settore: 04
id. campione: S1 C2
lo sperimentatore: Dott. Massimo Maugeri
il direttore del Laboratorio: Dott. Massimiliano Galli

C.G.G. S.r.l. con sistema qualità ISO 9001:2015
Certificato Bureau Veritas Italia S.p.A.
Laboratorio autorizzato dal Min. Infrastrutture e Trasporti
Prove e controlli su materiali e prodotti da costruzione,
terre e rocce, in sito ed in laboratorio

COMMITTENTE: AIMAG SPA
LOCALITA':
CANTIERE: MEDOLLA VIA CAMPANIA

SONDAGGIO: S1
CAMPIONE: C2
PROFONDITA' (m): 13.00-13.60
DATA DI PRELIEVO: -

UMIDITA' NATURALE (UNI CEN ISO/TS 17892-1)

DATI DI PROVA

Data di accettazione: 07/08/2018
Data di esecuzione prove: 08-09/08/2018

peso umido (g)	*peso secco (g)*	*test eseguito*	*posizione*
43,12	35,75	provino 1	superiore
72,01	59,40	provino 2	centrale
75,77	62,77	provino 3	inferiore

Umidità allo stato naturale: **W** 20,85 %

commessa:	**settore:**	**id. campione:**	**lo sperimentatore:**	**il direttore del Laboratorio:**
032/18	**04**	**S1 C2**	**Dott. Massimo Maugeri**	**Dott. Massimiliano Galli**

C.G.G.
C.G.G. S.r.l. con sistema qualità ISO 9001:2015
Certificato Bureau Veritas Italia S.p.A.
Laboratorio autorizzato dal Min. Infrastrutture e Trasporti
Prove e controlli su materiali e prodotti da costruzione,
terre e rocce, in sito ed in laboratorio

COMMITTENTE: AIMAG SPA
LOCALITÀ:
CANTIERE: MEDOLLA VIA CAMPANIA
Data di accettazione: 07/08/2018

SONDAGGIO: S1
CAMPIONE: C2
PROFONDITÀ (m): 13.00-13.60
DATA PRELIEVO: -

LIMITI DI ATTERBERG (CNR-UNI 10014)

DATI DI PROVA

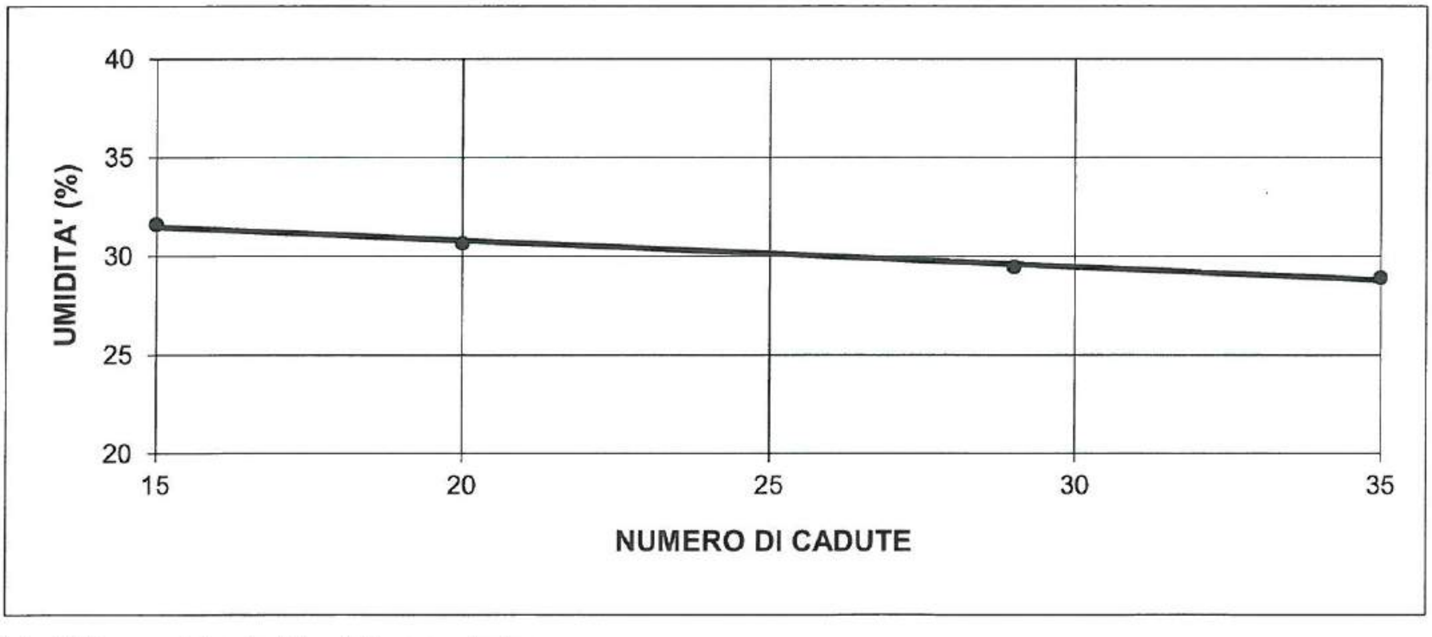
data di esecuzione: 04-05/09/2018

limite di liquidità				*limite di plasticità*		
n° di cadute	*peso umido (g)*	*peso secco (g)*	*umidità (%)*	*peso umido (g)*	*peso secco (g)*	*umidità (%)*
15	12,03	9,14	31,62	1,40	1,18	18,64
20	15,81	12,10	30,66	1,15	0,97	18,56
29	14,24	11,00	29,45			
35	15,60	12,10	28,93			

limite di ritiro

volume umido (cm^3)	*peso umido (g)*	*volume secco (cm^3)*	*peso secco (g)*

LIMITE DI LIQUIDITA'	**Wl**	30	%
LIMITE DI PLASTICITA'	**Wp**	19	%
LIMITE DI RITIRO	**Wr**		
INDICE DI PLASTICITA'	**IP**	11	

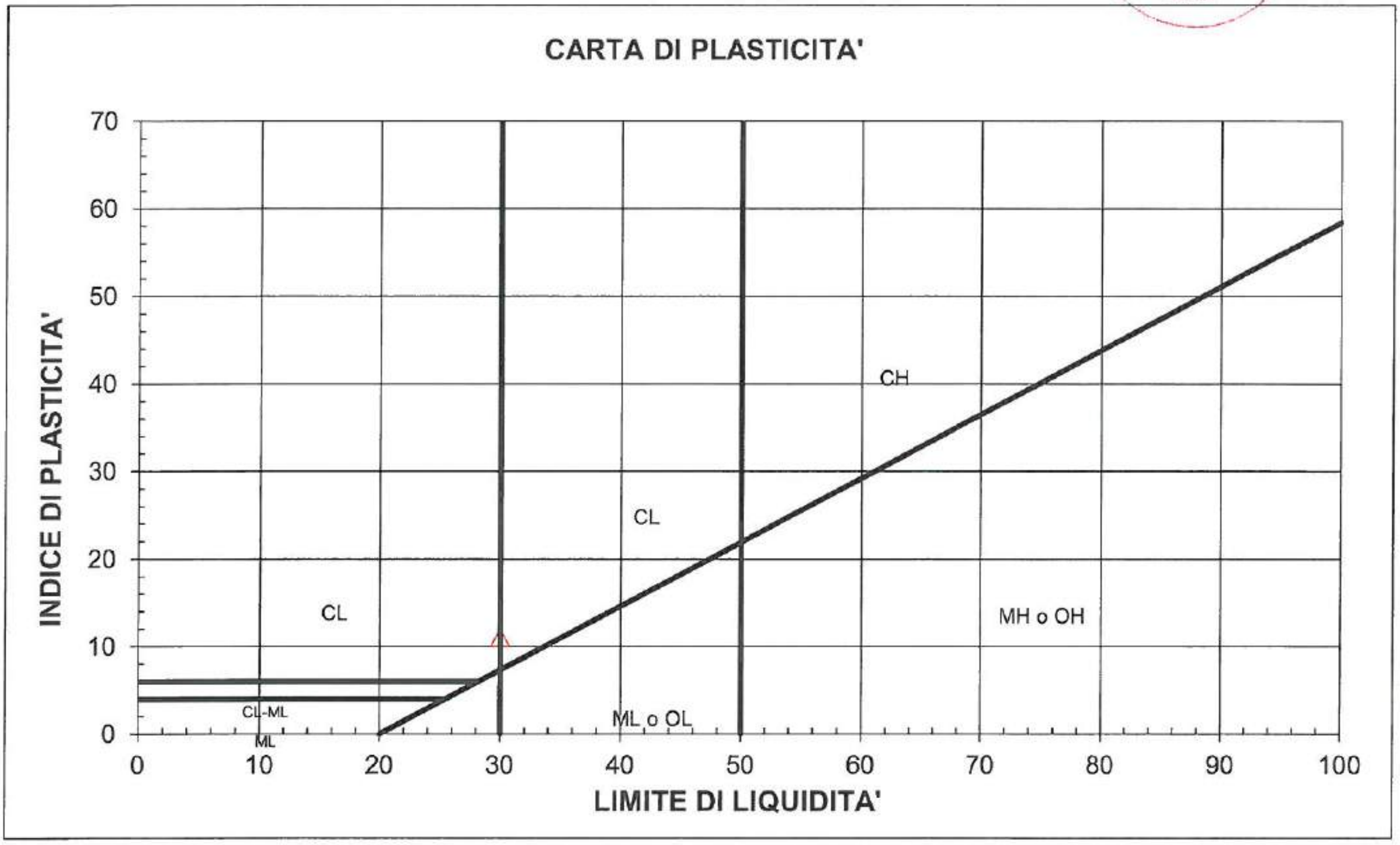


Note: N.D.= non determinabile - N.P.= non plastico

commessa:	**settore:**	**id. campione:**	**lo sperimentatore:**	**il direttore del Laboratorio:**
032/18	**04**	**S1 C2**	**Dott. Massimo Maugeri**	**Dott. Massimiliano Galli**

certificato di prova n° 1170/18 07/09/2018

C.G.G. S.R.L.


CARTA DI PLASTICITA'

M = limi inorganici
C = argille inorganiche
O = limi e argille organiche

L = basso limite di liquidità
H = alto limite di liquidità

commessa:	settore:	id. campione:	lo sperimentatore:	il direttore del Laboratorio:
032/18	04	S1 C2	Dott. Massimo Maugeri	Dott. Massimiliano Galli

C.G.G.

C.G.G. S.r.l. con sistema qualità ISO 9001:2015
Certificato Bureau Veritas Italia S.p.A.
Laboratorio autorizzato dal Min. Infrastrutture e Trasporti
Prove e controlli su materiali e prodotti da costruzione,
terre e rocce, in sito ed in laboratorio

certificato di prova n° 1177/18 *07/09/2018*

COMMITTENTE: AIMAG SPA
CANTIERE: MEDOLLA VIA CAMPANIA
LOCALITÀ:
Data ricevimento campione: 07/08/2018

SONDAGGIO: S1
CAMPIONE: C2
PROFONDITÀ: 13.00-13.60
Data esecuzione prove: 20/08-06/09/18

PROVA DI CONSOLIDAZIONE EDOMETRICA (ASTM D2435)

CARATTERISTICHE DEL PROVINO

sezione	19,87	cm^2	*indice dei vuoti iniziale*	0,668	
altezza iniziale	20,00	mm	*altezza ridotta*	11,990	mm
massa iniziale	82,45	g	*altezza finale*	17,20	mm
umidità iniziale	22,75	%	*umidità finale*	21,53	%
*peso specifico dei granuli**	2,68	Mg/m^3	*massa secca finale*	63,85	g

* valore utilizzato sulla base delle indicazioni bibliografiche in assenza della specifica prova

DATI DI PROVA

data inizio	*carico (kPa)*	*altezza (mm)*	*dH (mm)*	*indice vuoti*	*dH/H_0 (%)*	*m_v (kPa^{-1})*	*E_{ed} (kPa)*
20/08/2018	5	20,000	0,000	0,668	0,000		
21/08/2018	12	19,880	0,120	0,658	0,600	8,451E-04	1,183E+03
22/08/2018	25	19,720	0,280	0,645	1,400	6,557E-04	1,525E+03
23/08/2018	49	19,515	0,485	0,628	2,425	4,184E-04	2,390E+03
24/08/2018	98	19,245	0,755	0,605	3,775	2,755E-04	3,630E+03
25/08/2018	196	18,897	1,103	0,576	5,515	1,776E-04	5,632E+03
data inizio	*carico (kPa)*	*altezza (mm)*	*dH (mm)*	*indice vuoti*	*dH/H_0 (%)*	*c_s (kPa^{-1})*	*SR (kPa^{-1})*
26/08/2018	98	18,930	1,070	0,579	5,350	9,143E-03	0,548
27/08/2018	49	18,987	1,013	0,584	5,065	1,579E-02	0,947
data inizio	*carico (kPa)*	*altezza (mm)*	*dH (mm)*	*indice vuoti*	*dH/H_0 (%)*	*m_v (kPa^{-1})*	*E_{ed} (kPa)*
28/08/2018	98	18,912	1,088	0,577	5,440	7,653E-05	1,307E+04
29/08/2018	196	18,803	1,197	0,568	5,985	5,561E-05	1,798E+04
30/08/2018	392	18,283	1,717	0,525	8,585	1,327E-04	7,538E+03
31/08/2018	784	17,748	2,252	0,480	11,260	6,824E-05	1,465E+04
01/09/2018	1569	17,130	2,870	0,429	14,350	3,936E-05	2,540E+04
02/09/2018	3138	16,479	3,521	0,374	17,605	2,075E-05	4,820E+04
data inizio	*carico (kPa)*	*altezza (mm)*	*dH (mm)*	*indice vuoti*	*dH/H_0 (%)*	*c_s (kPa^{-1})*	*SR (kPa^{-1})*
03/09/2018	784	16,729	3,271	0,395	16,355	3,462E-02	2,075
04/09/2018	196	16,998	3,002	0,418	15,010	3,726E-02	2,234
05/09/2018	49	17,204	2,796	0,435	13,980	2,854E-02	1,711

Commessa:	**Verbale di accettazione:**	**Io sperimentatore:**	**il Direttore del Laboratorio:**
-	**032/18**	**Dott. Massimo Maugeri**	**Dott. Massimiliano Galli**

DATI DI PROVA: ANDAMENTO DEI CEDIMENTI NEL TEMPO

gradino IX (98-196 kPa)		*gradino X (196-392 kPa)*	
tempo (s)	*dH (mm)*	*tempo (s)*	*dH (mm)*
0	1,088	0	1,197
6	1,136	6	1,366
15	1,149	15	1,390
30	1,157	30	1,427
60	1,167	60	1,473
120	1,173	120	1,522
240	1,178	240	1,562
480	1,182	480	1,598
900	1,185	900	1,621
1800	1,187	1800	1,645
3600	1,190	3600	1,668
7200	1,192	7200	1,683
14400	1,194	14400	1,697
28800	1,196	28800	1,707
86400	1,197	86400	1,717

gradino XI (392-785 kPa)	
tempo (s)	*dH (mm)*
0	1,717
6	1,864
15	1,901
30	1,941
60	1,995
120	2,056
240	2,106
480	2,144
900	2,173
1800	2,198
3600	2,214
7200	2,226
14400	2,235
28800	2,244
86400	2,252

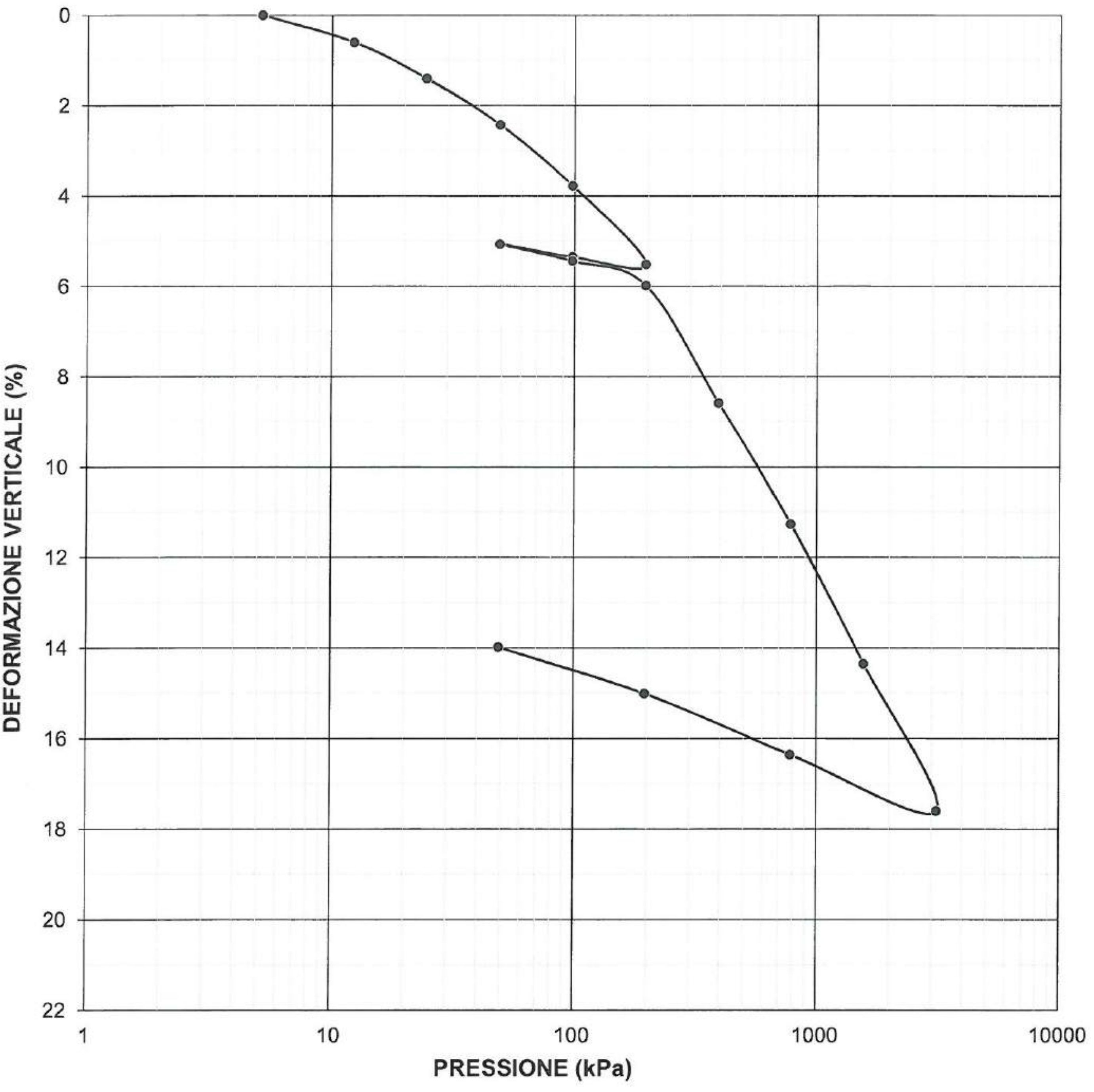
Commessa:
-

Verbale di accettazione:
032/18

lo sperimentatore:
Dott. Massimo Maugeri

il Direttore del Laboratorio:
Dott. Massimiliano Galli

CURVA DI CONSOLIDAZIONE EDOMETRICA - I



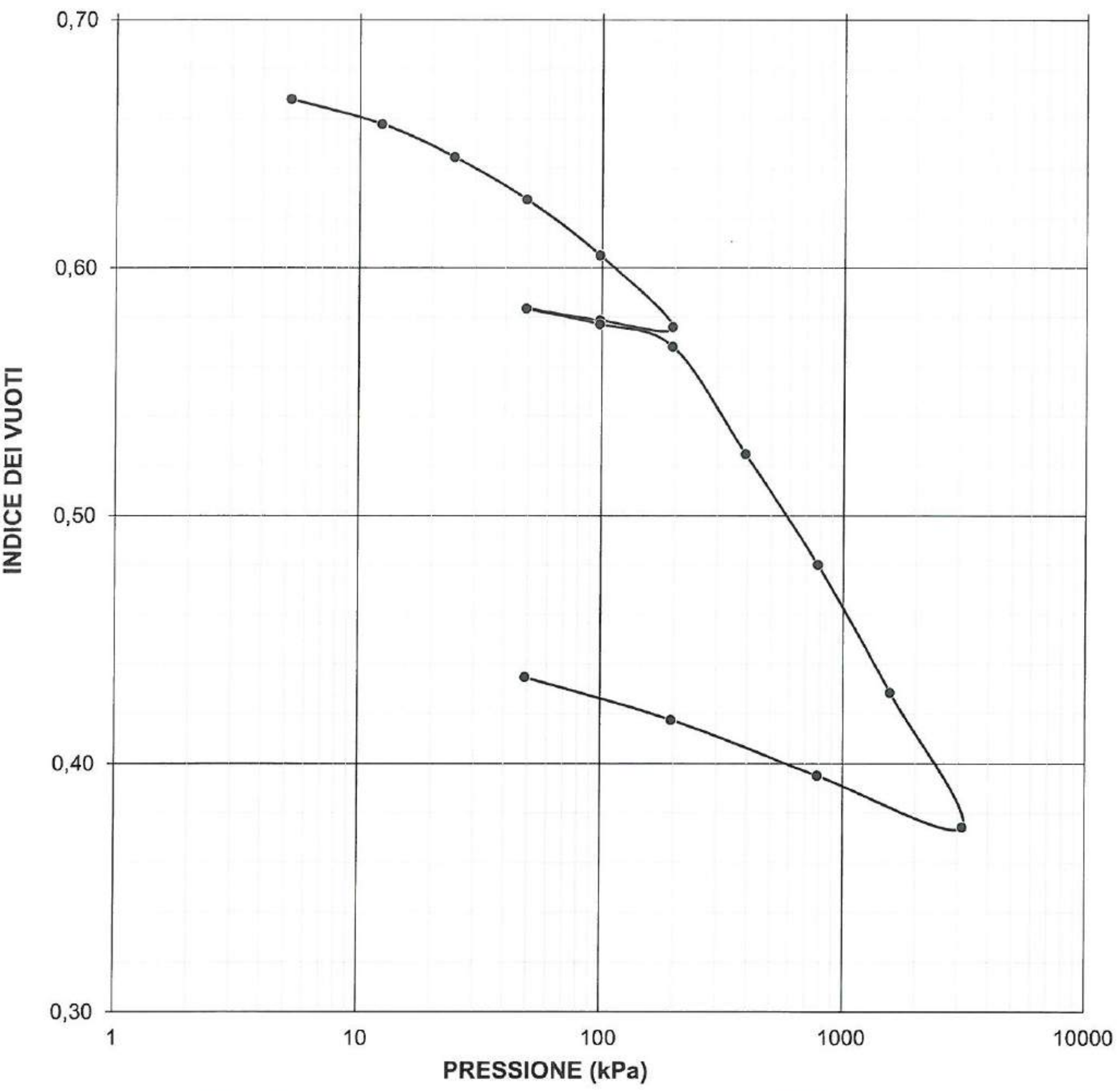
Commessa:
-

Verbale di accettazione:
032/18

lo Sperimentatore:
Dott. Massimo Maugeri

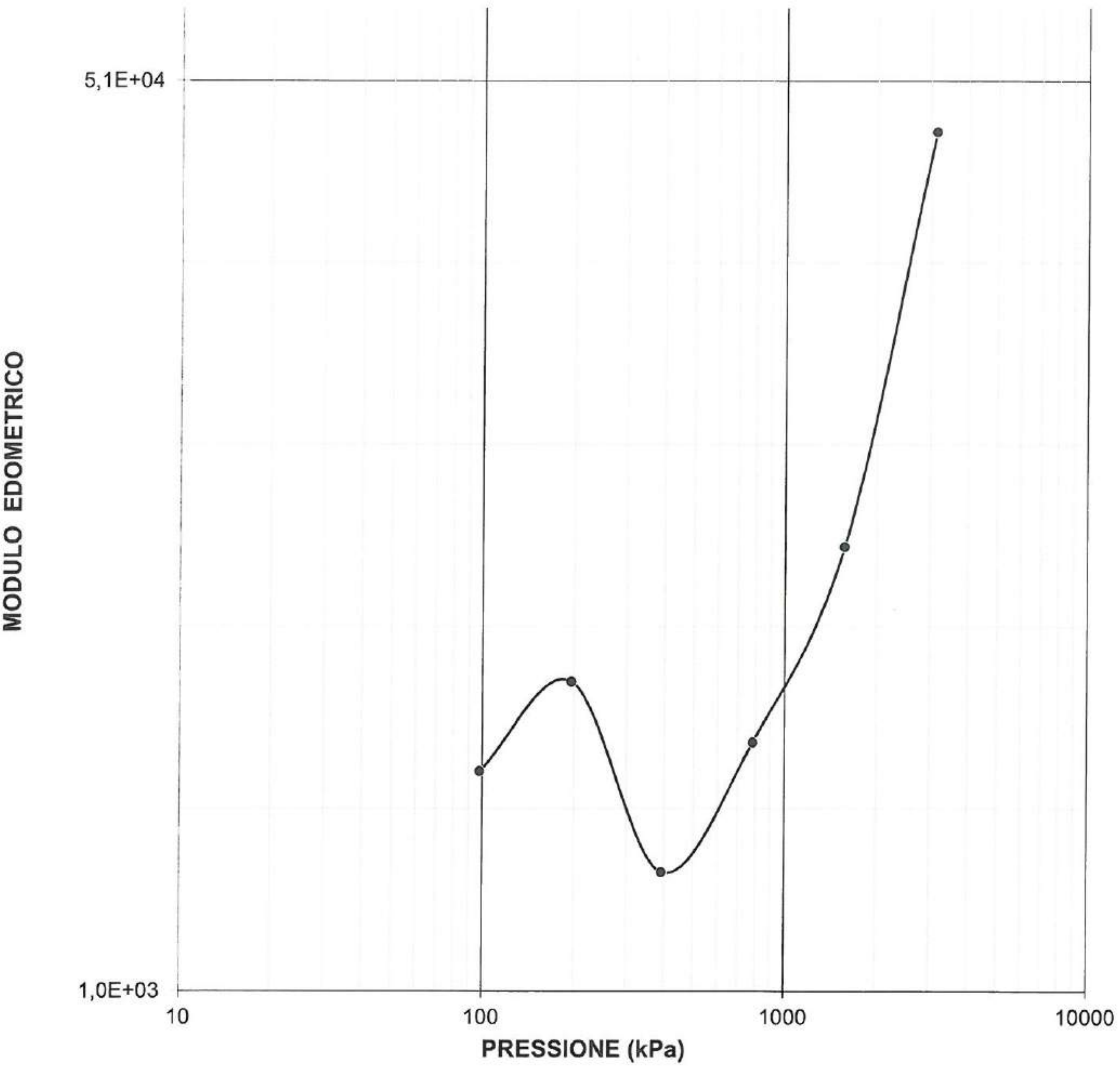
il Direttore del Laboratorio:
Dott. Massimiliano Galli

VARIAZIONE DELL'INDICE DEI VUOTI - II



Commessa:	**Verbale di accettazione:**	**Io sperimentatore:**	**il Direttore del Laboratorio:**
-	**032/18**	**Dott. Massimo Maugeri**	**Dott. Massimiliano Galli**

VARIAZIONE DEL MODULO EDOMETRICO III



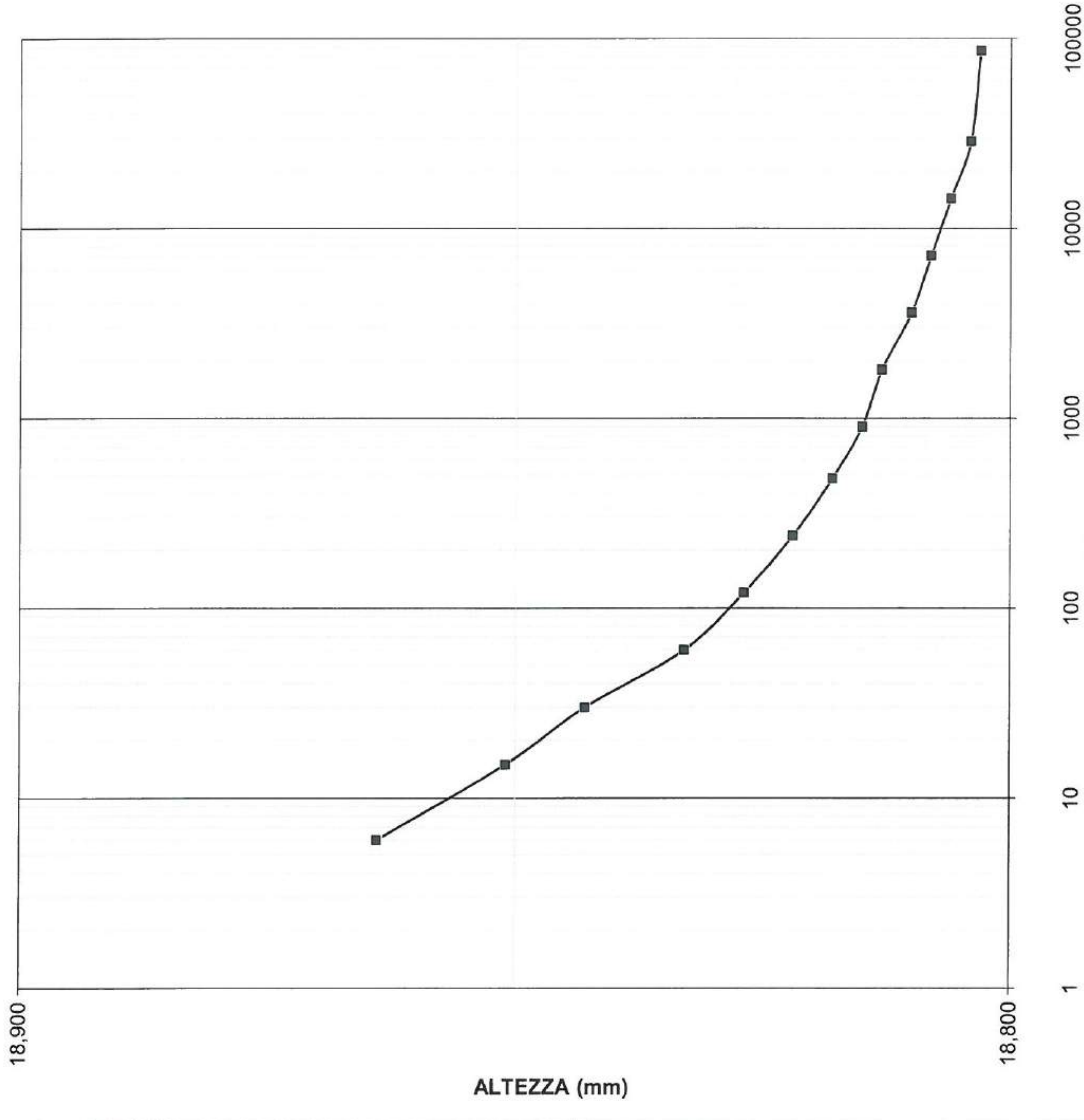
Commessa:
-

Verbale di accettazione:
032/18

lo sperimentatore:
Dott. Massimo Maugeri

il Direttore del Laboratorio:
Dott. Massimiliano Galli

ANDAMENTO DEI CEDIMENTI NEL TEMPO - gradino V (98-196 kPa)



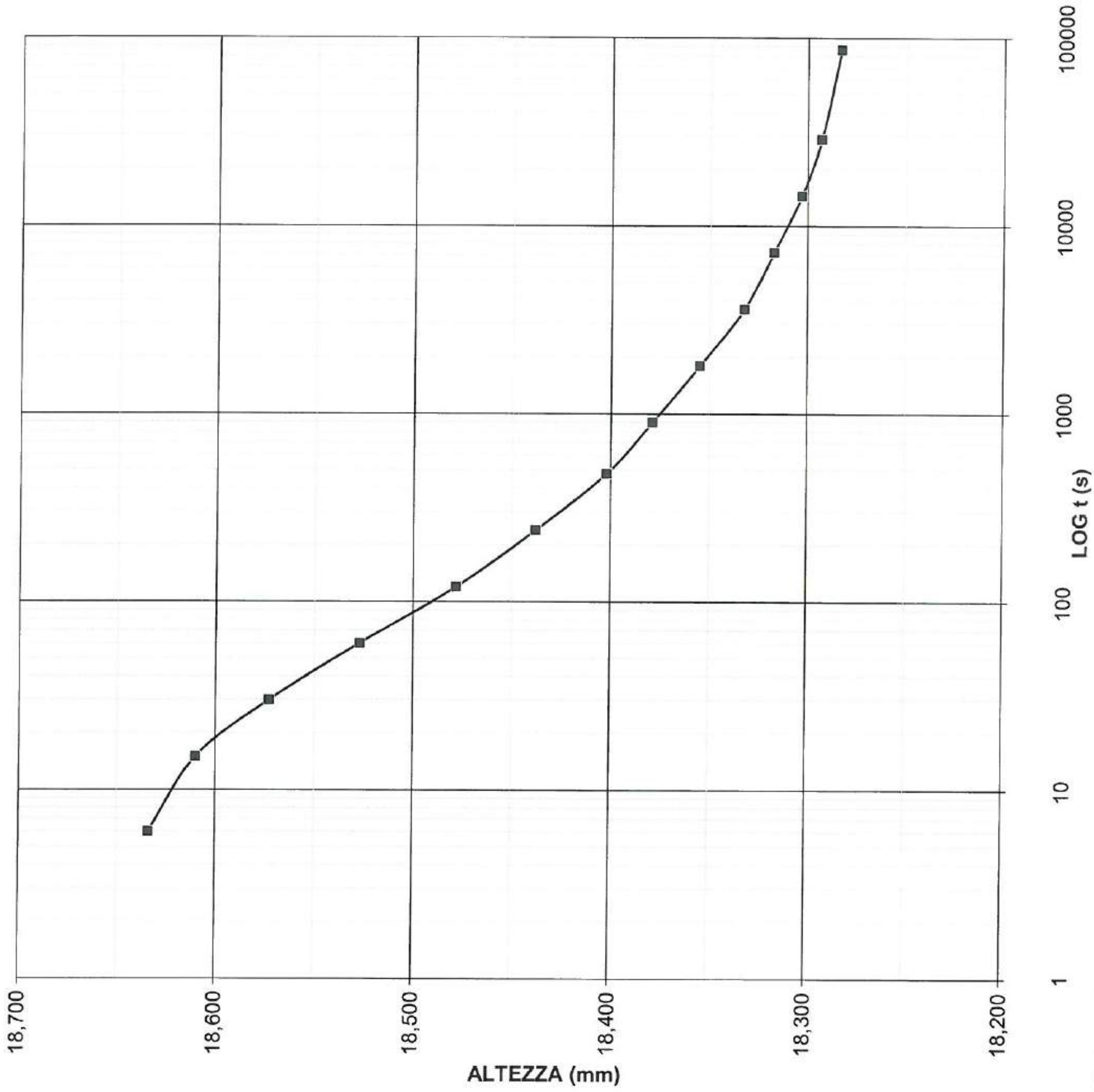
Commessa:
-

Verbale di accettazione:
032/18

Io sperimentatore:
Dott. Massimo Maugeri

il Direttore del Laboratorio:
Dott. Massimiliano Galli

ANDAMENTO DEI CEDIMENTI NEL TEMPO - gradino VI (196-392) kPa



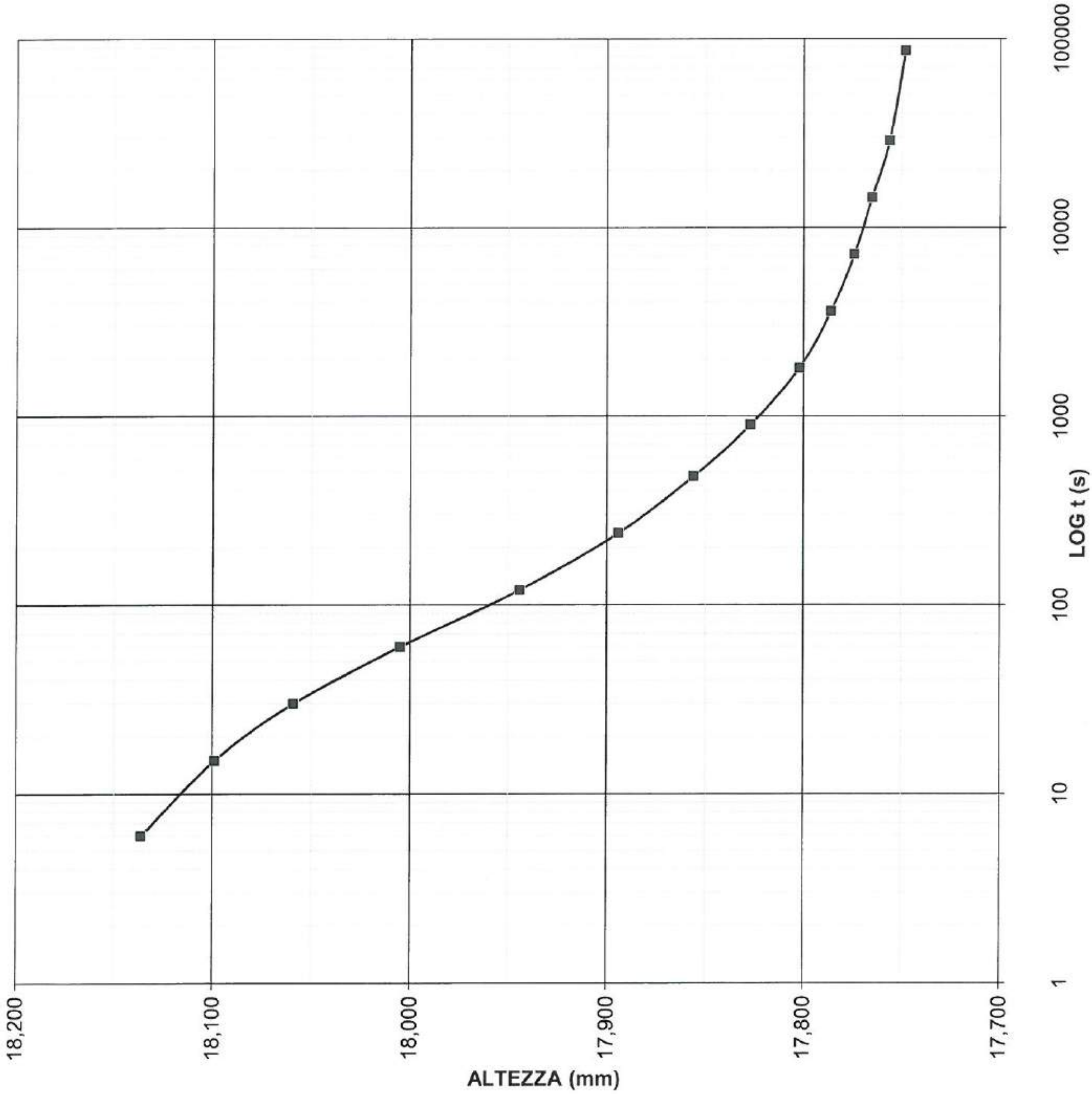
Commessa:
-

Verbale di accettazione:
032/18

Io sperimentatore:
Dott. Massimo Maugeri

il Direttore del Laboratorio:
Dott. Massimiliano Galli

ANDAMENTO DEI CEDIMENTI NEL TEMPO - gradino VII (392-784) kPa



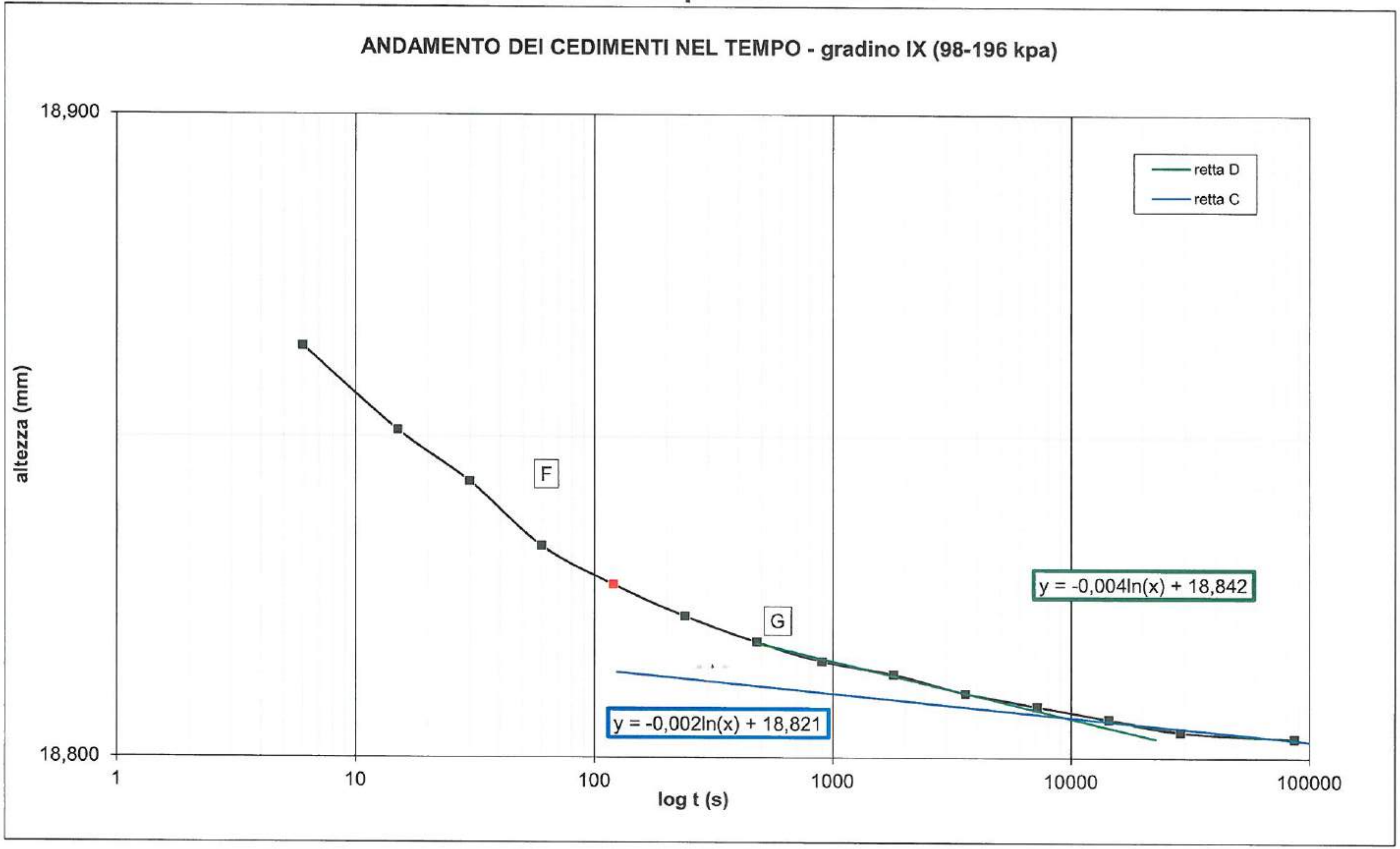
Commessa:
-

Verbale di accettazione:
032/18

Io sperimentatore:
Dott. Massimo Maugeri

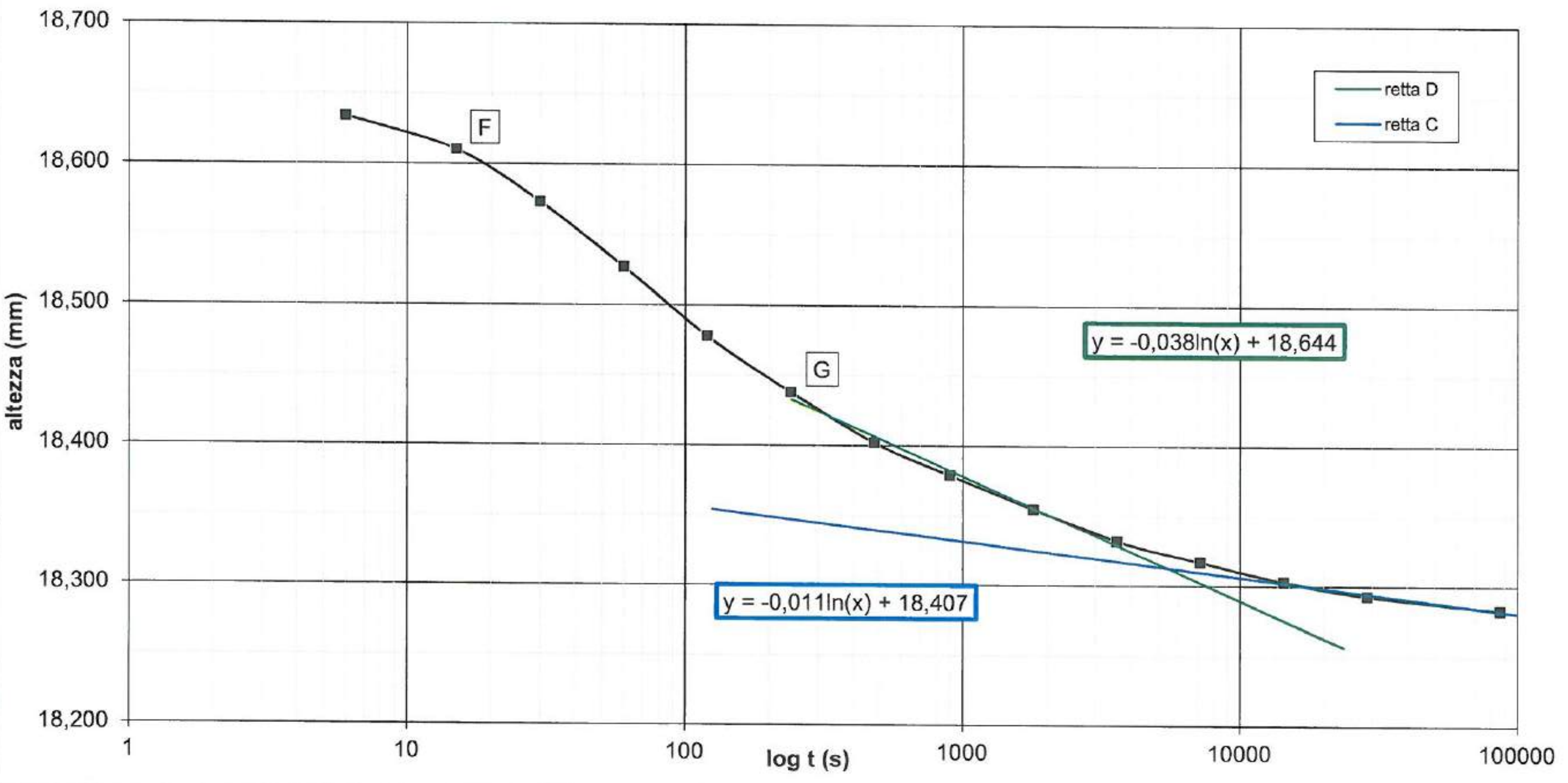
il Direttore del Laboratorio:
Dott. Massimiliano Galli

certificato di prova n° 1177/18



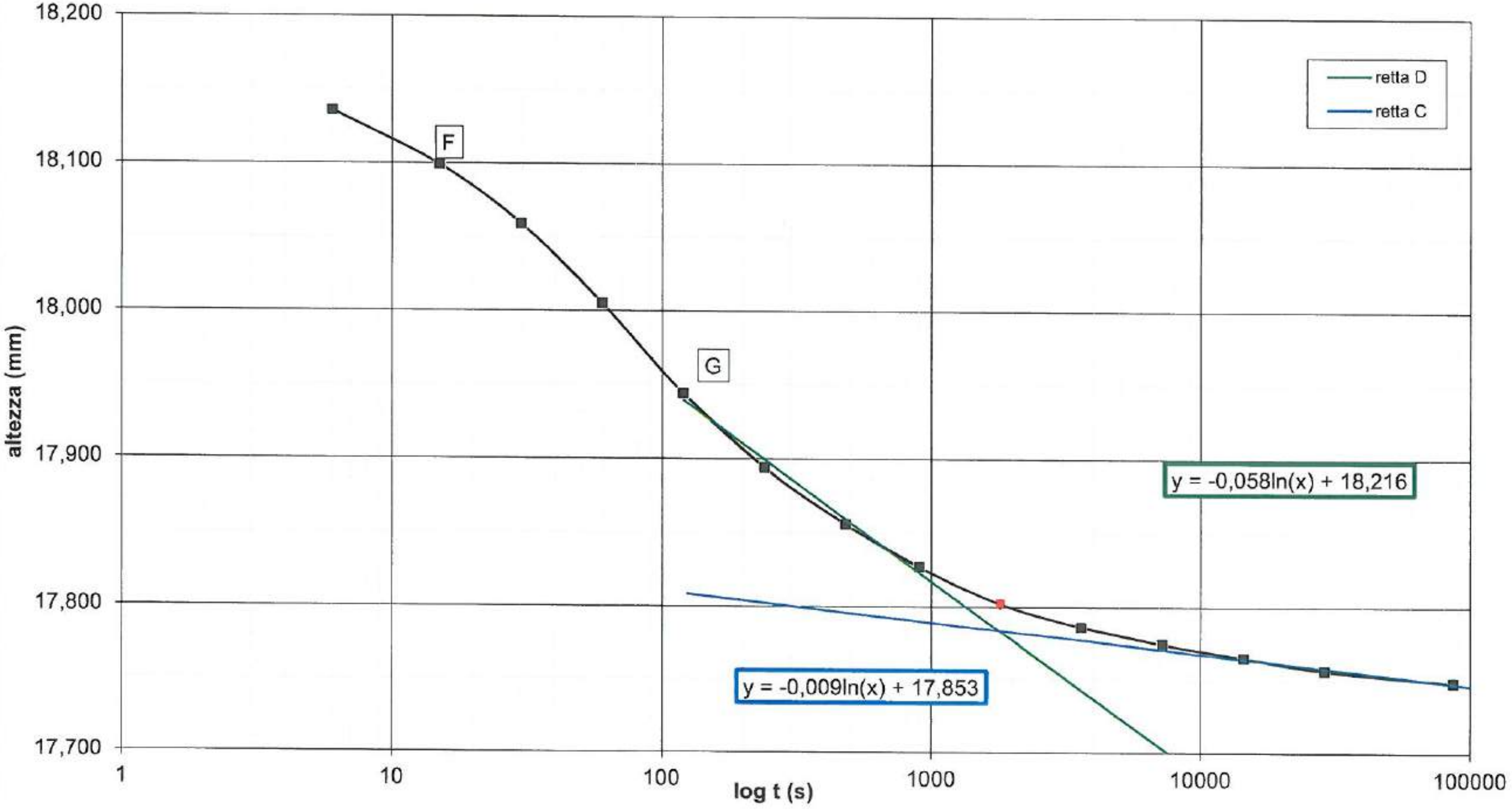
certificato di prova n° 1177/18

ANDAMENTO DEI CEDIMENTI NEL TEMPO - gradino X (196-392 kpa)



certificato di prova n° 1177/18

ANDAMENTO DEI CEDIMENTI NEL TEMPO - gradino XI (392-784 kpa)



COMMITTENTE: AIMAG SPA
LOCALITÀ: -
CANTIERE:
MEDOLLA VIA CAMPANIA

SONDAGGIO: S1
CAMPIONE: C2

cedimento a inizio di prova		1,088	mm	**gradino IX (98-196 kPa)**
altezza iniziale	h_0 =	1,885	cm	
altezza campione a fine cedimento primario	h_{100} =	1,881	cm	
altezza campione al 50% della consolidazione primaria	h_{50} =	1,883	cm	
tempo al 50% della consolidazione primaria	t_{50} =	42	s	
tempo al 100% della consolidazione primaria	t_{100} =	9439	s	
coefficiente di consolidazione	**C_v =**	**4,12E-03**	cm^2/s	
coefficiente di compressibilità volumetrica	**m_v =**	**5,56E-05**	kPa^{-1}	
coefficiente di permeabilità verticale	**K_v =**	**2,29E-08**	cm/s	

cedimento a inizio di prova		1,197	mm	**gradino X (196-392 kPa)**
altezza iniziale	h_0 =	1,865	cm	
altezza campione a fine cedimento primario	h_{100} =	1,831	cm	
altezza campione al 50% della consolidazione primaria	h_{50} =	1,848	cm	
tempo al 50% della consolidazione primaria	t_{50} =	105	s	
tempo al 100% della consolidazione primaria	t_{100} =	9320	s	
coefficiente di consolidazione	**C_v =**	**1,61E-03**	cm^2/s	
coefficiente di compressibilità volumetrica	**m_v =**	**1,33E-04**	kPa^{-1}	
coefficiente di permeabilità verticale	**K_v =**	**2,13E-08**	cm/s	

cedimento a inizio di prova		1,717	mm	**gradino XI (392-785 kPa)**
altezza iniziale	h_0 =	1,825	cm	
altezza campione a fine cedimento primario	h_{100} =	1,778	cm	
altezza campione al 50% della consolidazione primaria	h_{50} =	1,802	cm	
tempo al 50% della consolidazione primaria	t_{50} =	30	s	
tempo al 100% della consolidazione primaria	t_{100} =	1781	s	
coefficiente di consolidazione	**C_v =**	**5,24E-03**	cm^2/s	
coefficiente di compressibilità volumetrica	**m_v =**	**6,82E-05**	kPa^{-1}	
coefficiente di permeabilità verticale	**K_v =**	**3,58E-08**	cm/s	

COMMITTENTE: AIMAG SPA
LOCALITÀ:
CANTIERE: MEDOLLA VIA CAMPANIA
Data di accettazione: 07/08/2018

SONDAGGIO: S1
CAMPIONE: C2
PROFONDITÀ: 13.00-13.60
DATA DI PRELIEVO:

PROVA DI COMPRESSIONE TRIASSIALE CONSOLIDATA ISOTROPICAMENTE NON DRENATA (UNI CEN ISO/TS 17892/9)

CARATTERISTICHE DEI PROVINI

	sezione (cm^2)	*altezza iniziale* (cm)	*massa iniziale* (g)	*umidità iniziale* (%)
provino 1	11,33	7,60	171,74	20,62
provino 2	11,33	7,60	177,46	20,13
provino 3	11,33	7,60	177,93	19,67

	altezza finale (cm)	*massa finale* (g)	*volume finale* (cm^3)	*umidità finale* (%)
provino 1	6,45	91,00	85,69	21,95
provino 2	1,39	92,28	84,13	22,60
provino 3	6,34	87,99	82,91	20,50

SIMBOLOGIA ADOTTATA

σ_1 = pressione assiale
σ'_1 = pressione assiale efficace
BP = contropressione
B = parametro di Skempton
dH = deformazione assiale
A_c = area corretta

σ_3 = pressione di confinamento
σ'_3 = pressione di confinamento efficace
dU = variazione di pressione interstiziale
dF = variazione di forza assiale
ΔV = variazione di volume

DATI DI PROVA: FASE DI SATURAZIONE

provino 1

data di esecuzione: 10/09/2018

σ_3 iniziale (kPa)	*σ_3 finale (kPa)*	*BP (kPa)*	*dU iniziale (kPa)*	*dU finale (kPa)*	*B*
0	50	0	0,0	24,3	0,486
50	50	45	24,4	36,4	
50	100	45	36,4	63,3	0,538
100	100	90	63,3	82,3	
100	150	90	83,6	122,1	0,770
150	150	140	122,1	140,0	
150	200	140	132,1	175,6	0,870
200	200	190	175,6	203,0	
200	240	190	181,0	220,3	0,983

commessa:
032/18

id. campione:
S1C2

lo sperimentatore:
Dott. Massimo Maugeri

il direttore del Laboratorio:
Dott. Massimiliano Galli

provino 2 *data di esecuzione:* 10/09/2018

σ_3 *iniziale (kPa)*	σ_3 *finale (kPa)*	*BP (kPa)*	*dU iniziale (kPa)*	*dU finale (kPa)*	*B*
0	50	0	0,0	19,9	0,398
50	50	45	19,9	32,5	
50	100	45	32,5	57,0	0,490
100	100	90	56,7	80,2	
100	150	90	80,2	107,0	0,536
150	150	140	107,0	131,0	
150	200	140	131,0	165,0	0,680
200	240	140	165,0	203,0	0,950

provino 3 *data di esecuzione:* 10/09/2018

σ_3 *iniziale (kPa)*	σ_3 *finale (kPa)*	*BP (kPa)*	*dU iniziale (kPa)*	*dU finale (kPa)*	*B*
0	50	0	0,0	45,0	0,900
50	50	45	45,0	45,0	
50	245	45	40,0	228,0	0,964

DATI DI PROVA: FASE DI CONSOLIDAZIONE

provino 1 *pressione di confinamento:* 240 kPa
data di esecuzione: 11-12/09/2018 *contropressione:* 190 kPa

tempo (s)	ΔV *(cm^3)*	*tempo (s)*	ΔV *(cm^3)*	*tempo (s)*	ΔV *(cm^3)*	*tempo (s)*	ΔV *(cm^3)*
0	0,00	60	0,00	900	0,01	14400	0,21
6	0,00	120	0,00	1800	0,03	28800	0,40
15	0,00	240	0,00	3600	0,05	57600	0,42
30	0,00	480	0,01	7200	0,07		

provino 2 *pressione di confinamento:* 240 kPa
data di esecuzione: 11-12/09/2018 *contropressione:* 140 kPa

tempo (s)	ΔV *(cm^3)*	*tempo (s)*	ΔV *(cm^3)*	*tempo (s)*	ΔV *(cm^3)*	*tempo (s)*	ΔV *(cm^3)*
0	0,00	60	0,39	900	1,54	14400	1,98
6	0,02	120	0,61	1800	1,80	28800	1,95
15	0,11	240	0,91	3600	1,93	57600	1,85
30	0,22	480	1,26	7200	1,97		

commessa:
032/18

id. campione:
S1C2

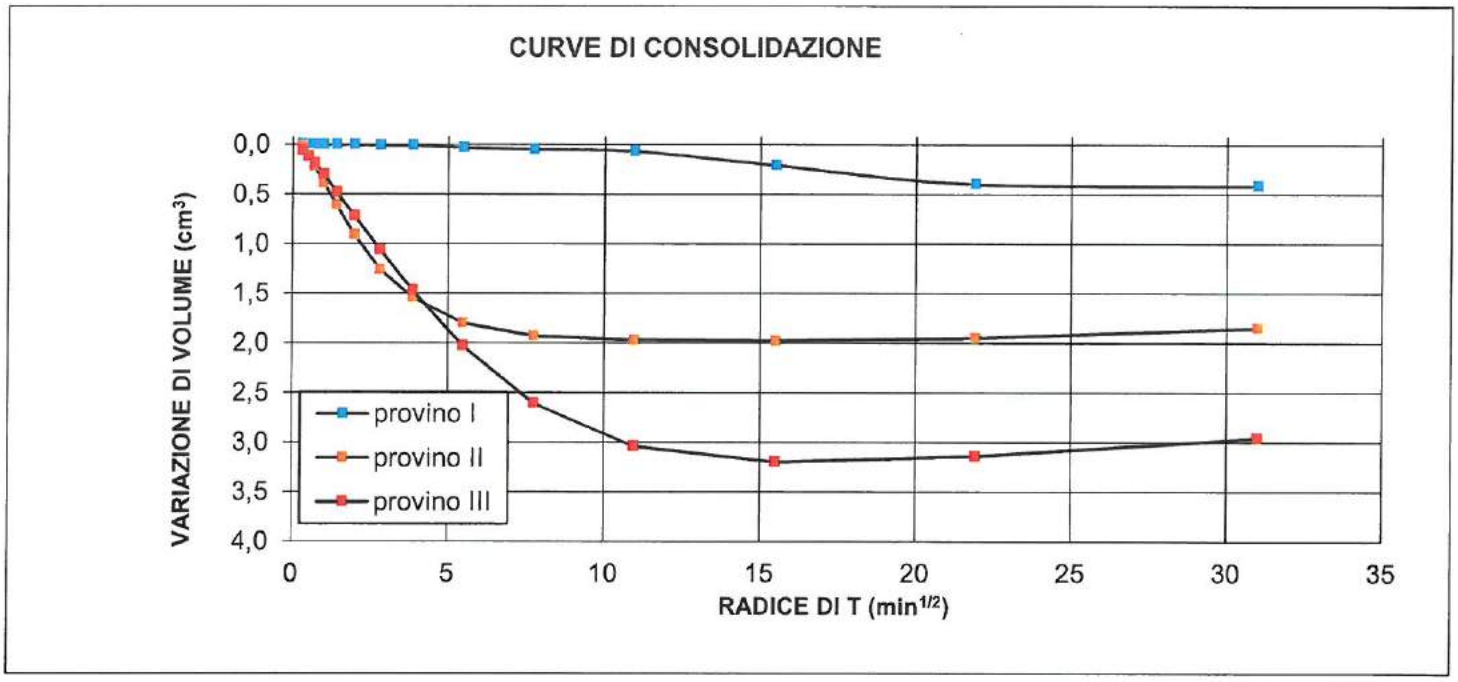
lo sperimentatore:
Dott. Massimo Maugeri

il direttore del Laboratorio:
Dott. Massimiliano Galli

provino 3
data di esecuzione: 11-12/09/2018

pressione di confinamento: 245 kPa
contropressione: 45 kPa

tempo (s)	*ΔV (cm^3)*	*tempo (s)*	*ΔV (cm^3)*	*tempo (s)*	*ΔV (cm^3)*	*tempo (s)*	*ΔV (cm^3)*
0	0,00	60	0,30	900	1,47	14400	3,20
6	0,06	120	0,48	1800	2,03	28800	3,14
15	0,12	240	0,72	3600	2,61	57600	2,96
30	0,19	480	1,06	7200	3,04		



commessa:
032/18

id. campione:
S1C2

lo sperimentatore:
Dott. Massimo Maugeri

il direttore del Laboratorio:
Dott. Massimiliano Galli

DATI DI PROVA: FASE DI ROTTURA

provino 1			*velocità di deformazione:*	8,3	µm/s
data di esecuzione:	13/09/2018		*pressione di confinamento:*	240	kPa
altezza iniziale:	75,88	mm	*contropressione:*	190	kPa

dH (mm)	*dH (%)*	*A_c (cm^2)*	*dF (N)*	*$\sigma_1 - \sigma_3$ (kPa)*	*dU (kPa)*
0,000	0,00	11,29	0,00	0,00	0,00
0,204	0,27	11,32	45,00	31,12	0,85
0,535	0,71	11,37	59,00	39,47	2,54
0,848	1,12	11,42	67,00	43,89	3,80
1,155	1,52	11,47	75,00	48,27	5,07
1,459	1,92	11,51	82,00	52,24	5,92
1,738	2,29	11,56	88,00	55,50	6,76
2,019	2,66	11,60	95,00	59,09	8,03
2,323	3,06	11,65	102,00	63,62	8,03
2,630	3,47	11,70	109,00	67,44	8,87
2,937	3,87	11,75	115,00	70,54	9,72
3,236	4,26	11,80	121,00	73,95	10,14
3,521	4,64	11,84	126,00	76,67	10,56
3,814	5,03	11,89	131,00	79,35	10,99
4,120	5,43	11,94	137,00	82,99	10,99
4,430	5,84	11,99	142,00	85,59	11,41
4,740	6,25	12,05	148,00	88,83	11,83
5,047	6,65	12,10	152,00	90,71	12,25
5,351	7,05	12,15	157,00	93,57	12,25
5,660	7,46	12,20	161,00	95,74	12,25
5,967	7,86	12,26	165,00	97,89	12,25
6,260	8,25	12,31	168,00	99,39	12,25
6,544	8,62	12,36	173,00	102,18	12,25
6,841	9,02	12,41	176,00	103,30	12,68
7,148	9,42	12,47	180,00	105,36	12,68
7,457	9,83	12,52	184,00	107,40	12,68
7,767	10,24	12,58	187,00	108,77	12,68
8,075	10,64	12,64	188,00	108,87	12,68
8,380	11,04	12,70	189,00	108,96	12,68
8,686	11,45	12,75	190,00	109,05	12,68
8,995	11,85	12,81	191,00	109,46	12,25
9,286	12,24	12,87	192,00	109,56	12,25
9,571	12,61	12,92	193,00	109,67	12,25
9,868	13,01	12,98	194,00	109,75	12,25
10,171	13,40	13,04	195,00	109,82	12,25
10,478	13,81	13,10	196,00	109,87	12,25
10,782	14,21	13,16	196,00	109,31	12,25
11,085	14,61	13,23	196,00	109,10	11,83
11,415	15,04	13,29	195,00	107,55	12,25

commessa:	**id. campione:**	**lo sperimentatore:**	**il direttore del Laboratorio:**
032/18	**S1C2**	**Dott. Massimo Maugeri**	**Dott. Massimiliano Galli**

provino 2			*velocità di deformazione:*	8,3	μm/s
data di esecuzione:	13/09/2018		*pressione di confinamento:*	240	kPa
altezza iniziale:	75,42	mm	*contropressione:*	140	kPa

dH (mm)	*dH (%)*	*A_c (cm^2)*	*dF (N)*	*$\sigma_1 - \sigma_3$ (kPa)*	*dU (kPa)*
0,000	0,00	11,29	0,00	0,00	0,00
0,095	0,13	11,31	27,90	19,74	0,30
0,400	0,53	11,35	87,30	61,52	4,10
0,701	0,92	11,40	122,40	85,91	11,60
0,998	1,32	11,44	143,10	100,04	17,50
1,296	1,71	11,49	158,40	110,29	22,10
1,577	2,08	11,53	170,10	117,99	25,10
1,836	2,42	11,57	181,80	125,67	27,10
2,123	2,80	11,62	192,60	132,62	28,60
2,421	3,19	11,67	202,50	138,87	29,50
2,720	3,58	11,71	210,60	143,84	29,60
3,017	3,98	11,76	217,80	148,15	29,10
3,302	4,35	11,81	224,10	151,84	28,60
3,587	4,73	11,85	230,40	155,50	27,90
3,882	5,12	11,90	236,70	159,10	27,20
4,193	5,53	11,95	242,10	162,03	26,60
4,501	5,93	12,01	247,50	164,93	25,80
4,809	6,34	12,06	252,90	167,80	25,10
5,114	6,74	12,11	257,40	170,05	24,20
5,419	7,14	12,16	261,90	172,28	23,70
5,726	7,55	12,21	265,50	173,89	23,20
6,025	7,94	12,27	269,10	175,49	22,70
6,312	8,32	12,32	272,70	177,11	21,90
6,598	8,70	12,37	276,30	178,71	21,20
6,900	9,09	12,42	279,90	180,25	20,30
7,208	9,50	12,48	283,50	181,75	19,40
7,517	9,91	12,53	286,20	182,66	18,60
7,824	10,31	12,59	289,80	184,12	17,80
8,129	10,71	12,65	292,50	185,01	16,90
8,429	11,11	12,70	295,20	185,89	16,00
8,734	11,51	12,76	297,90	186,74	15,10
9,030	11,90	12,82	299,70	187,04	14,20
9,317	12,28	12,87	302,40	187,91	13,50
9,608	12,66	12,93	305,10	188,76	12,60
9,914	13,07	12,99	306,90	189,00	11,80
10,227	13,48	13,05	309,60	189,76	10,90
10,540	13,89	13,11	311,40	189,95	10,10
10,848	14,30	13,18	313,20	190,15	9,30
11,148	14,69	13,24	315,90	190,90	8,60
11,390	15,01	13,29	316,80	190,73	7,50

commessa: **032/18**	**id. campione:** **S1C2**	**lo sperimentatore:** **Dott. Massimo Maugeri**	**il direttore del Laboratorio:** **Dott. Massimiliano Galli**

provino 3
data di esecuzione: 13/09/2018
altezza iniziale: 75,06 mm

velocità di deformazione: 8,3 µm/s
pressione di confinamento: 245 kPa
contropressione: 45 kPa

dH (mm)	*dH (%)*	A_c *(cm^2)*	*dF (N)*	$\sigma_1 - \sigma_3$ *(kPa)*	*dU (kPa)*
0,000	0,00	11,29	0,00	0,00	0,00
0,260	0,34	11,33	31,00	21,81	0,10
0,513	0,68	11,37	145,00	100,66	1,70
0,789	1,04	11,41	193,00	132,34	3,70
1,066	1,40	11,45	223,00	151,19	5,70
1,347	1,78	11,50	246,00	165,25	7,40
1,600	2,11	11,54	261,00	173,79	9,00
1,865	2,46	11,58	278,00	183,85	10,30
2,151	2,83	11,62	293,00	192,32	11,70
2,440	3,22	11,67	306,00	199,40	13,00
2,730	3,60	11,71	317,00	205,20	14,10
3,013	3,97	11,76	327,00	210,29	15,20
3,284	4,33	11,80	335,00	214,08	16,20
3,561	4,69	11,85	344,00	218,57	17,10
3,856	5,08	11,90	352,00	222,28	18,00
4,156	5,48	11,95	359,00	225,34	18,80
4,456	5,87	12,00	366,00	228,53	19,40
4,754	6,27	12,05	372,00	230,93	20,10
5,047	6,65	12,10	378,00	233,40	20,70
5,347	7,05	12,15	384,00	235,82	21,30
5,647	7,44	12,20	389,00	237,62	21,80
5,929	7,81	12,25	394,00	239,46	22,30
6,207	8,18	12,30	399,00	241,37	22,70
6,498	8,56	12,35	404,00	243,12	23,20
6,799	8,96	12,40	410,00	245,62	23,50
7,109	9,37	12,46	414,00	246,68	23,90
7,415	9,77	12,52	418,00	247,73	24,30
7,721	10,18	12,57	422,00	248,92	24,50
8,017	10,57	12,63	426,00	250,05	24,80
8,316	10,96	12,68	430,00	251,15	25,10
8,612	11,35	12,74	434,00	252,31	25,30
8,894	11,72	12,79	436,00	252,26	25,50
9,171	12,09	12,85	440,00	253,46	25,70
9,465	12,47	12,90	444,00	254,65	25,80
9,767	12,87	12,96	447,00	255,09	26,00
10,075	13,28	13,02	451,00	256,19	26,10
10,383	13,68	13,08	453,00	255,95	26,30
10,691	14,09	13,15	457,00	257,00	26,40
10,999	14,50	13,21	459,00	256,82	26,50
11,307	14,90	13,27	460,00	256,10	26,50
11,615	15,31	13,33	459,00	254,10	26,60

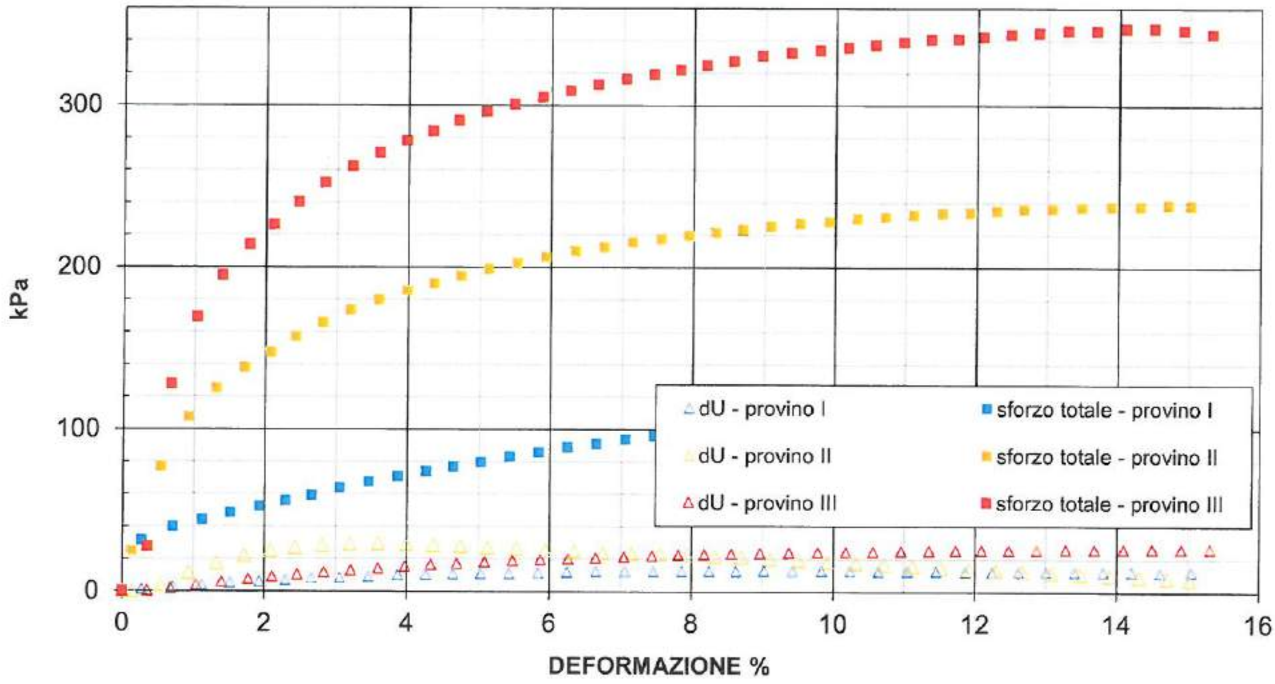
commessa:
032/18

id. campione:
S1C2

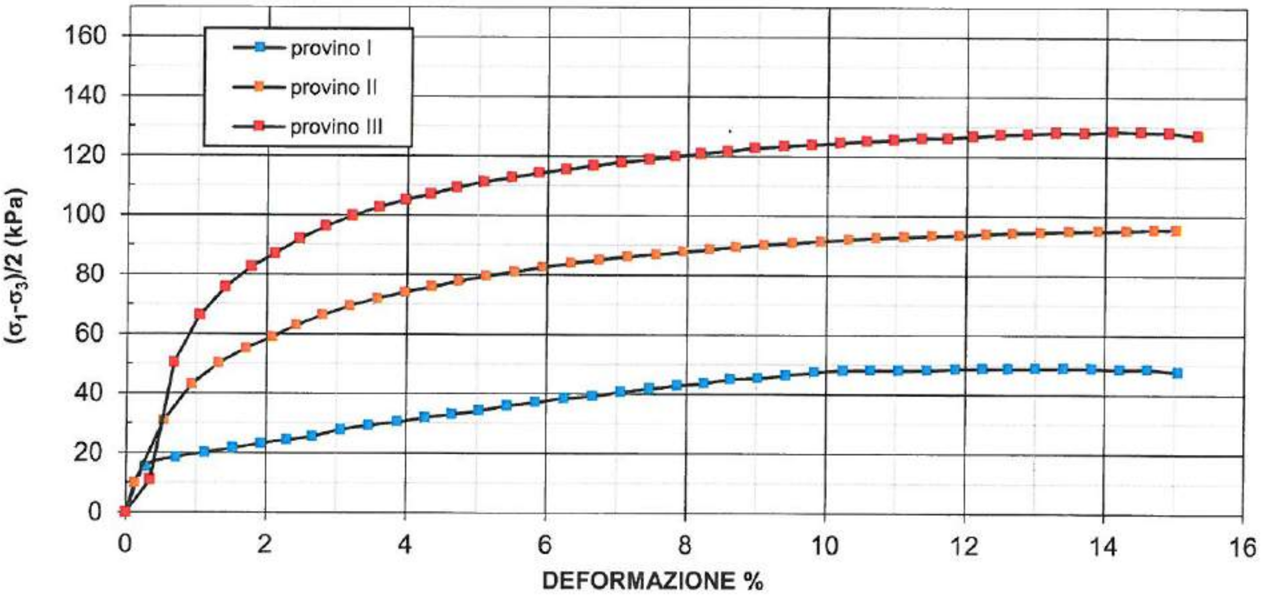
lo sperimentatore:
Dott. Massimo Maugeri

il direttore del Laboratorio:
Dott. Massimiliano Galli

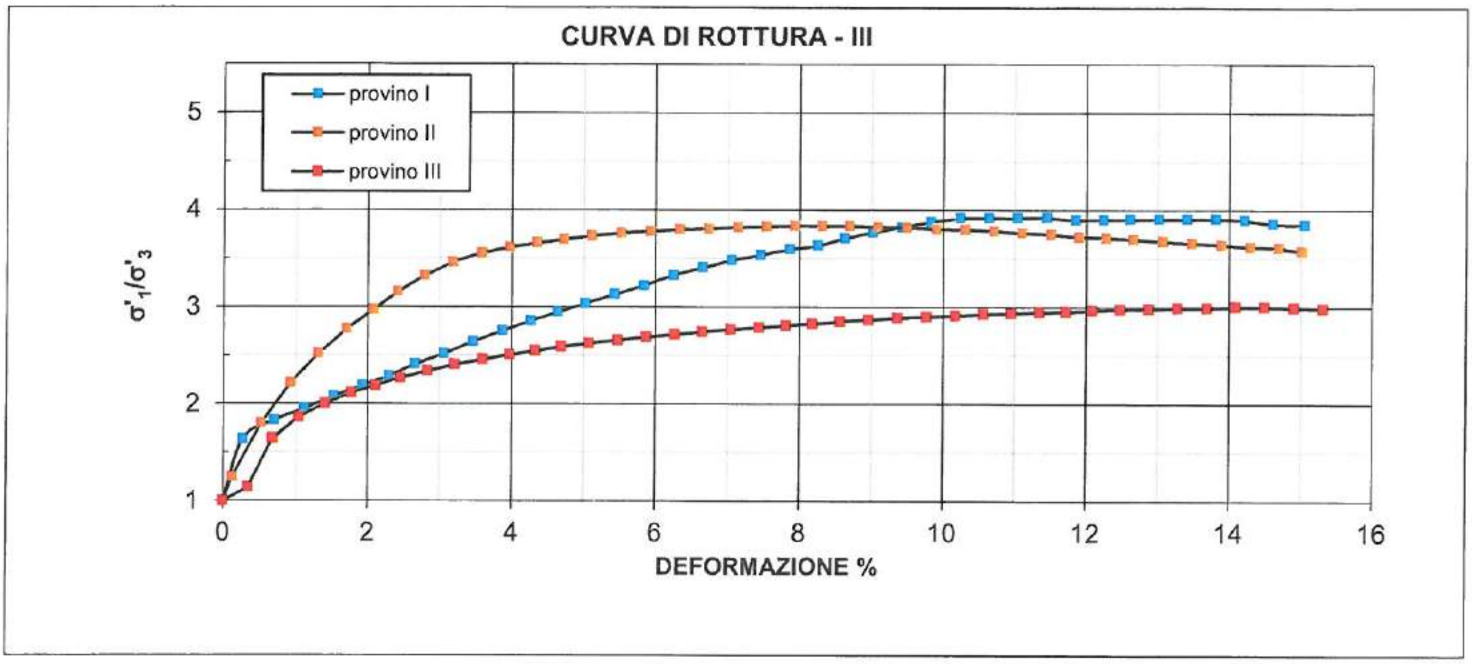
CURVE DI ROTTURA - I



CURVE DI ROTTURA - II



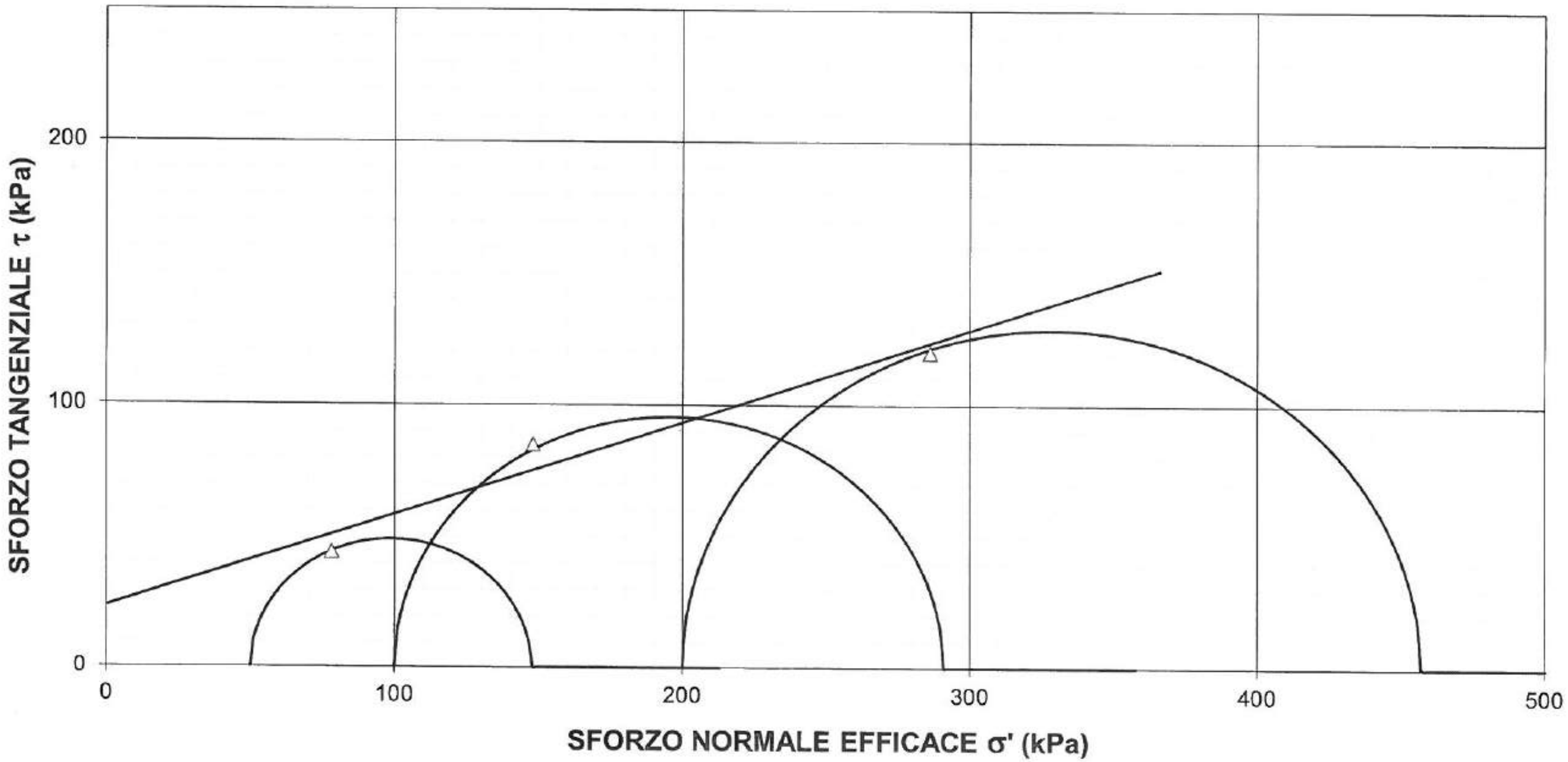
commessa:	**id. campione:**	**lo sperimentatore:**	**il direttore del Laboratorio:**
032/18	**S1C2**	**Dott. Massimo Maugeri**	**Dott. Massimiliano Galli**



commessa:	id. campione:	lo sperimentatore:	il direttore del Laboratorio:
032/18	S1C2	Dott. Massimo Maugeri	Dott. Massimiliano Galli

commessa: 032/18 **sondaggio:** S1 **campione:** C2

INVILUPPO DI ROTTURA SECONDO MOHR-COULOMB



provino	1	2	3
X	78	148	286
Y	44,0	85,0	120,0

k 0,350

c' (kPa) = 23,3
ϕ' (radianti) = 0,336
ϕ' (° sessadecimali) = 19,28

C.G.G. S.R.L.

FOTOGRAFIA DEL CAMPIONE

ALTO

BASSO

commessa:	settore:	id. campione:	Sperimentatore:	Direttore del Laboratorio:
032/18	04	S1 C3	Dott. Massimo Maugeri	Dott. Massimiliano Galli

certificato di prova n° 1172/18 del 07/09/2018

C.G.G. S.r.l. con sistema qualità ISO 9001:2015
Certificato Bureau Veritas Italia S.p.A.
Laboratorio autorizzato dal Min. Infrastrutture e Trasporti
Prove e controlli su materiali e prodotti da costruzione, terre e rocce, in sito ed in laboratorio

COMMITTENTE:	AIMAG SPA	**SONDAGGIO:**	S1
LOCALITA':		**CAMPIONE:**	C3
CANTIERE:	MEDOLLA VIA CAMPANIA	**PROFONDITA' (m):**	23.00-23.60
		DATA DI PRELIEVO:	

PESO DI VOLUME (UNI CEN ISO/TS 17892-2 - metodo A)

DATI DI PROVA

Data di accettazione: 07/08/2018
Data di esecuzione prove: 08-09/08/2018

volume (cm^3)	*peso umido (g)*	*test eseguito*	*posizione*
39,25	75,01	provino 1	superiore
39,25	75,43	provino 2	centrale
39,25	75,65	provino 3	inferiore

Peso di volume: ρ 1,92 Mg/m^3
(medio, in condizioni di umidità naturale)

commessa:	**settore:**	**id. campione:**	**lo sperimentatore:**	**il direttore del Laboratorio:**
032/18	**04**	**S1 C3**	**Dott. Massimo Maugeri**	**Dott. Massimiliano Galli**

certificato di prova n° 1173/18 del 07/09/2018

C.G.G. S.r.l. con sistema qualità ISO 9001:2015
Certificato Bureau Veritas Italia S.p.A.
Laboratorio autorizzato dal Min. Infrastrutture e Trasporti
Prove e controlli su materiali e prodotti da costruzione,
terre e rocce, in sito ed in laboratorio

COMMITTENTE: AIMAG SPA
LOCALITA':
CANTIERE: MEDOLLA VIA CAMPANIA

SONDAGGIO: S1
CAMPIONE: C3
PROFONDITA' (m): 23.00-23.60
DATA DI PRELIEVO: -

UMIDITA' NATURALE (UNI CEN ISO/TS 17892-1)

DATI DI PROVA

Data di accettazione: 07/08/2018
Data di esecuzione prove: 08-09/08/2018

peso umido (g)	*peso secco (g)*	*test eseguito*	*posizione*
284,75	215,57	provino 1	superiore
123,11	93,06	provino 2	centrale
107,04	80,69	provino 3	inferiore

Umidità allo stato naturale: **W** 32,35 %

commessa:	**settore:**	**id. campione:**	**lo sperimentatore:**	**il direttore del Laboratorio:**
032/18	**04**	**S1 C3**	**Dott. Massimo Maugeri**	**Dott. Massimiliano Galli**

C.G.G. S.r.l. con sistema qualità ISO 9001:2015
Certificato Bureau Veritas Italia S.p.A.
Laboratorio autorizzato dal Min. Infrastrutture e Trasporti
Prove e controlli su materiali e prodotti da costruzione,
terre e rocce, in sito ed in laboratorio

certificato di prova n° 1174/18 07/09/2018

COMMITTENTE: AIMAG SPA
LOCALITÀ:
CANTIERE: MEDOLLA VIA CAMPANIA
Data di accettazione: 07/08/2018

SONDAGGIO: S1
CAMPIONE: C3
PROFONDITÀ (m): 23.00-23.60
DATA PRELIEVO: -

LIMITI DI ATTERBERG (CNR-UNI 10014)

DATI DI PROVA

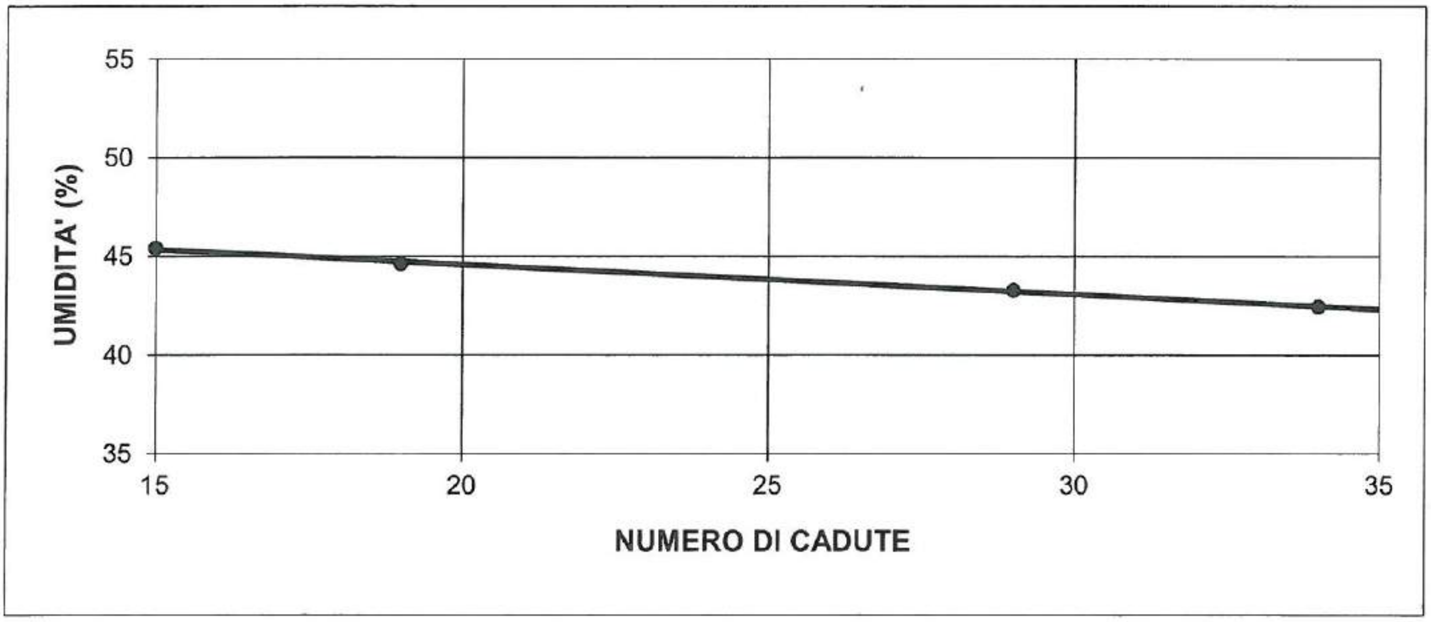
data di esecuzione: 04-05/09/2018

limite di liquidità				*limite di plasticità*		
n° di cadute	*peso umido (g)*	*peso secco (g)*	*umidità (%)*	*peso umido (g)*	*peso secco (g)*	*umidità (%)*
15	15,88	10,92	45,42	1,04	0,84	23,81
19	14,49	10,02	44,61	1,09	0,88	23,86
29	15,26	10,65	43,29			
34	12,92	9,07	42,45			

limite di ritiro

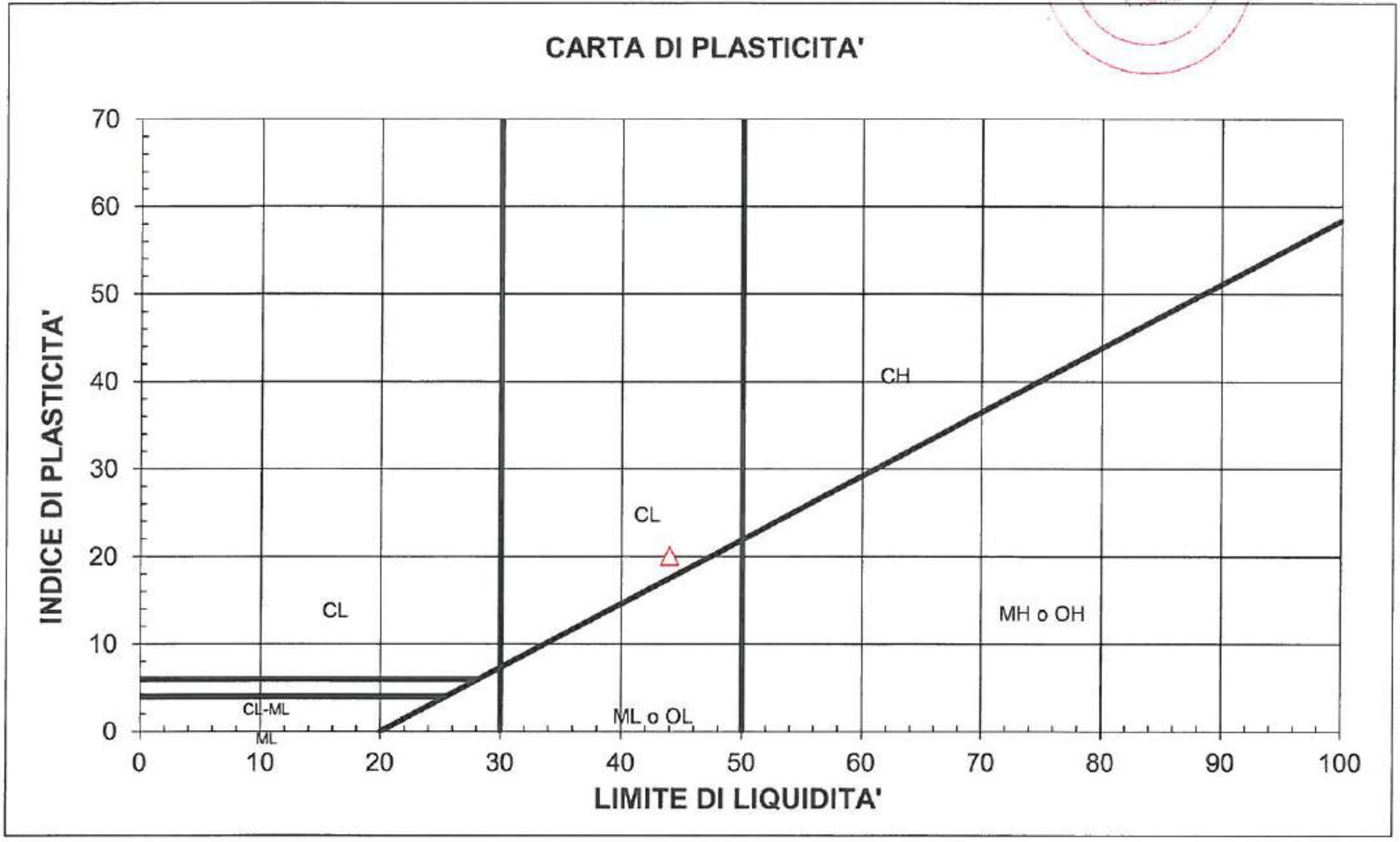
volume umido (cm^3)	*peso umido (g)*	*volume secco (cm^3)*	*peso secco (g)*

LIMITE DI LIQUIDITA'	**Wl**	44	%
LIMITE DI PLASTICITA'	**Wp**	24	%
LIMITE DI RITIRO	**Wr**		
INDICE DI PLASTICITA'	**IP**	20	



Note: N.D.= non determinabile - N.P.= non plastico

commessa:	**settore:**	**id. campione:**	**lo sperimentatore:**	**il direttore del Laboratorio:**
032/18	**04**	**S1 C3**	**Dott. Massimo Maugeri**	**Dott. Massimiliano Galli**



M = limi inorganici
C = argille inorganiche
O = limi e argille organiche

L = basso limite di liquidità
H = alto limite di liquidità

commessa:	settore:	id. campione:	lo sperimentatore:	il direttore del Laboratorio:
032/18	**04**	**S1 C3**	**Dott. Massimo Maugeri**	**Dott. Massimiliano Galli**

C.G.G.

C.G.G. S.r.l. con sistema qualità ISO 9001:2015
Certificato Bureau Veritas Italia S.p.A.
Laboratorio autorizzato dal Min. Infrastrutture e Trasporti
Prove e controlli su materiali e prodotti da costruzione,
terre e rocce, in sito ed in laboratorio

certificato di prova n° 1175/18 07/09/2018
pag. 1 di 3

COMMITTENTE: AIMAG SPA
LOCALITÀ:
CANTIERE: MEDOLLA VIA CAMPANIA
Data di accettazione: 07/08/2018

SONDAGGIO: S1
CAMPIONE: C3
PROFONDITÀ (m): 23.00-23.60
DATA PRELIEVO: -

ANALISI GRANULOMETRICA (ASTM D 422-63)

DATI DI PROVA - SETACCIATURA

data di esecuzione: 04-05/09/2018

massa terreno setacciato (g): 306,70

Ø / maglia (mm)	*trattenuto (g)*	*passante (g)*	*passante (%)*
38,1	0,00	306,70	100,00
25,4	0,00	306,70	100,00
19,05	0,00	306,70	100,00
12,7	0,00	306,70	100,00
9,5	0,00	306,70	100,00
4,75	0,00	306,70	100,00
2	1,39	305,31	99,55
1	2,08	304,62	99,32
0,425	2,83	303,87	99,08
0,25	3,27	303,43	98,93
0,125	3,95	302,75	98,71
0,075	4,32	302,38	98,59

commessa:	**settore:**	**id. campione:**	**lo sperimentatore:**	**il direttore del Laboratorio:**
032/18	**04**	**S1 C3**	**Dott. Massimo Maugeri**	**Dott. Massimiliano Galli**

DATI DI PROVA - ANALISI GRANULOMETRICA PER SEDIMENTAZIONE

data di esecuzione: 04-05/09/2018
temperatura di prova (°C): 22,0

densimetro utilizzato: ASTM 151 H
massa terreno alla sedimentazione (g): 42,07

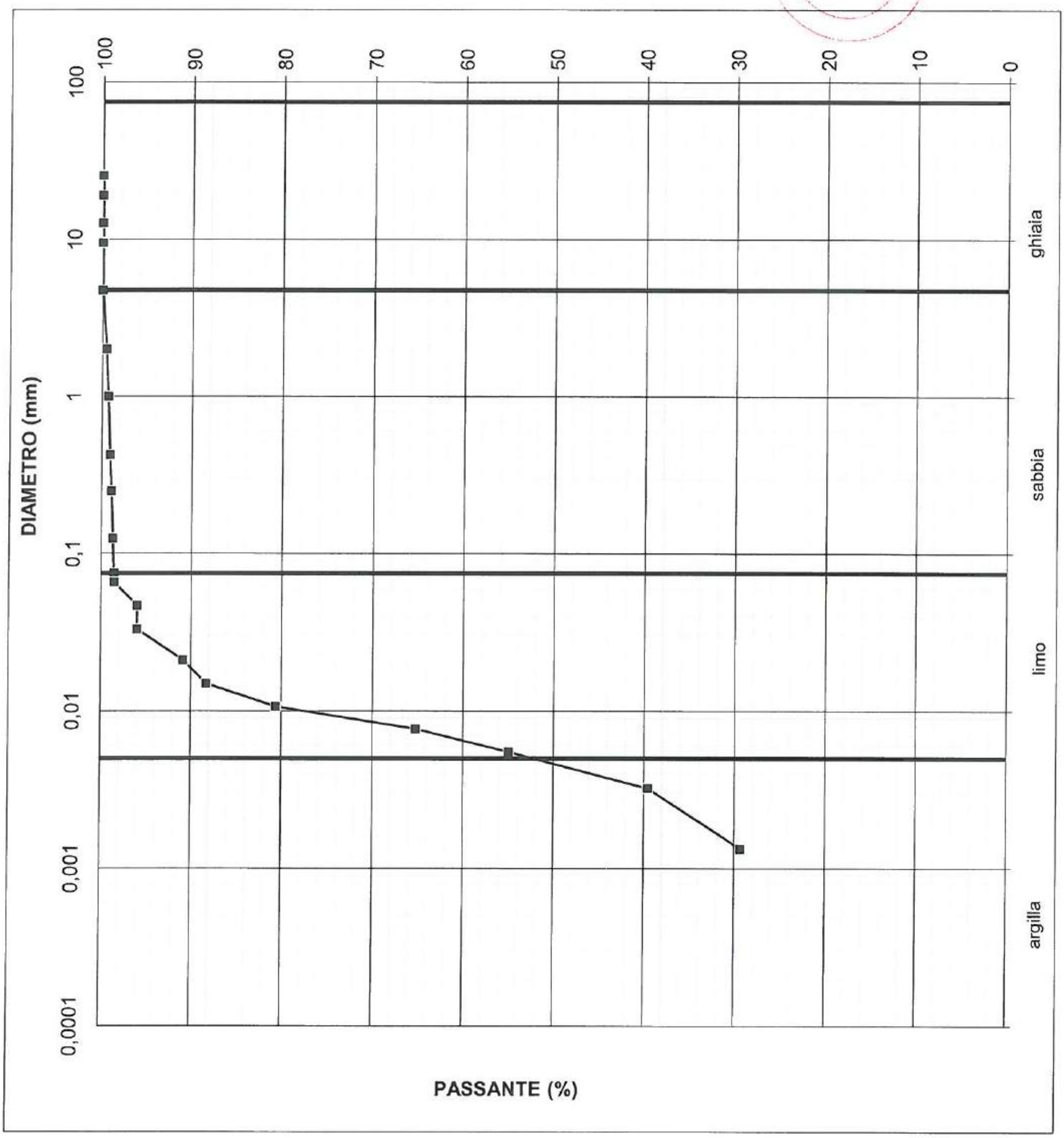
tempo (s)	*ø equivalente (mm)*	*lettura densimetrica**	*passante (%)*
30	0,066	23,5	98,56
60	0,047	23	96,00
120	0,033	23	96,00
300	0,021	22	90,87
600	0,015	21,5	88,30
1200	0,011	20	80,61
2400	0,008	17	65,22
4800	0,005	15	54,96
14400	0,003	12	39,57
86400	0,001	10	29,31

**correzioni applicate:*

$C_m = 0,5$
$C_d = 5$
$C_t = 1,2$

composizione granulometrica	
% ghiaia	0,0
% sabbia	1,4
% limo	46,4
% argilla	52,2

commessa:	**settore:**	**id. campione:**	**lo sperimentatore:**	**il direttore del Laboratorio:**
032/18	**04**	**S1 C3**	**Dott. Massimo Maugeri**	**Dott. Massimiliano Galli**



commessa:	**settore:**	**id. campione:**	**lo sperimentatore:**	**il direttore del Laboratorio:**
032/18	**04**	**S1 C3**	**Dott. Massimo Maugeri**	**Dott. Massimiliano Galli**

C.G.G.

C.G.G. S.r.l. con sistema qualità ISO 9001:2015
Certificato Bureau Veritas Italia S.p.A.
Laboratorio autorizzato dal Min. Infrastrutture e Trasporti
Prove e controlli su materiali e prodotti da costruzione, terre e rocce, in sito ed in laboratorio

certificato di prova n° 1178/18

COMMITTENTE: AIMAG SPA
CANTIERE: MEDOLLA VIA CAMPANIA
LOCALITÀ:
Data ricevimento campione: 07/08/2018

SONDAGGIO: S1
CAMPIONE: C3
PROFONDITÀ: 23.00-23.60
Data esecuzione prove: 20/08-06/09/18

PROVA DI CONSOLIDAZIONE EDOMETRICA (ASTM D2435)

CARATTERISTICHE DEL PROVINO

sezione	19,87	cm^2	*indice dei vuoti iniziale*	1,232	
altezza iniziale	20,00	mm	*altezza ridotta*	8,961	mm
massa iniziale	75,01	g	*altezza finale*	17,62	mm
umidità iniziale	32,09	%	*umidità finale*	31,22	%
*peso specifico dei granuli**	2,68	Mg/m^3	*massa secca finale*	47,72	g

* valore utilizzato sulla base delle indicazioni bibliografiche in assenza della specifica prova

DATI DI PROVA

data inizio	*carico (kPa)*	*altezza (mm)*	*dH (mm)*	*indice vuoti*	*dH/H_0 (%)*	*m_v (kPa^{-1})*	*E_{ed} (kPa)*
20/08/2018	5	20,000	0,000	1,232	0,000		
21/08/2018	12	19,980	0,020	1,230	0,100	1,408E-04	7,100E+03
22/08/2018	25	19,940	0,060	1,225	0,300	1,639E-04	6,100E+03
23/08/2018	49	19,875	0,125	1,218	0,625	1,327E-04	7,538E+03
24/08/2018	98	19,720	0,280	1,201	1,400	1,582E-04	6,323E+03
25/08/2018	196	19,400	0,600	1,165	3,000	1,633E-04	6,125E+03
data inizio	*carico (kPa)*	*altezza (mm)*	*dH (mm)*	*indice vuoti*	*dH/H_0 (%)*	*c_s (kPa^{-1})*	*SR (kPa^{-1})*
26/08/2018	98	19,489	0,511	1,175	2,555	3,299E-02	1,478
27/08/2018	49	19,611	0,389	1,188	1,945	4,523E-02	2,026
data inizio	*carico (kPa)*	*altezza (mm)*	*dH (mm)*	*indice vuoti*	*dH/H_0 (%)*	*m_v (kPa^{-1})*	*E_{ed} (kPa)*
28/08/2018	98	19,510	0,490	1,177	2,450	1,031E-04	9,703E+03
29/08/2018	196	19,293	0,707	1,153	3,535	1,107E-04	9,032E+03
30/08/2018	392	18,727	1,273	1,090	6,365	1,444E-04	6,926E+03
31/08/2018	784	17,799	2,201	0,986	11,005	1,184E-04	8,448E+03
01/09/2018	1569	16,620	3,380	0,855	16,900	7,510E-05	1,332E+04
02/09/2018	3138	15,579	4,421	0,738	22,105	3,317E-05	3,014E+04
data inizio	*carico (kPa)*	*altezza (mm)*	*dH (mm)*	*indice vuoti*	*dH/H_0 (%)*	*c_s (kPa^{-1})*	*SR (kPa^{-1})*
03/09/2018	784	16,305	3,695	0,820	18,475	1,345E-01	6,027
04/09/2018	196	16,960	3,040	0,893	15,200	1,214E-01	5,440
05/09/2018	49	17,623	2,377	0,967	11,885	1,229E-01	5,506

Commessa:	**Verbale di accettazione:**	**Io sperimentatore:**	**il Direttore del Laboratorio:**
-	**032/18**	**Dott. Massimo Maugeri**	**Dott. Massimiliano Galli**

DATI DI PROVA: ANDAMENTO DEI CEDIMENTI NEL TEMPO

gradino IX (98-196 kPa)		*gradino X (196-392 kPa)*	
tempo (s)	*dH (mm)*	*tempo (s)*	*dH (mm)*
0	0,490	0	0,707
6	0,526	6	0,756
15	0,536	15	0,781
30	0,548	30	0,807
60	0,563	60	0,849
120	0,585	120	0,897
240	0,611	240	0,960
480	0,632	480	1,030
900	0,648	900	1,079
1800	0,660	1800	1,137
3600	0,671	3600	1,178
7200	0,681	7200	1,213
14400	0,689	14400	1,239
28800	0,699	28800	1,256
86400	0,707	86400	1,273

gradino XI (392-785 kPa)	
tempo (s)	*dH (mm)*
0	1,273
6	1,363
15	1,393
30	1,426
60	1,471
120	1,545
240	1,650
480	1,776
900	1,888
1800	1,976
3600	2,033
7200	2,095
14400	2,138
28800	2,178
86400	2,201

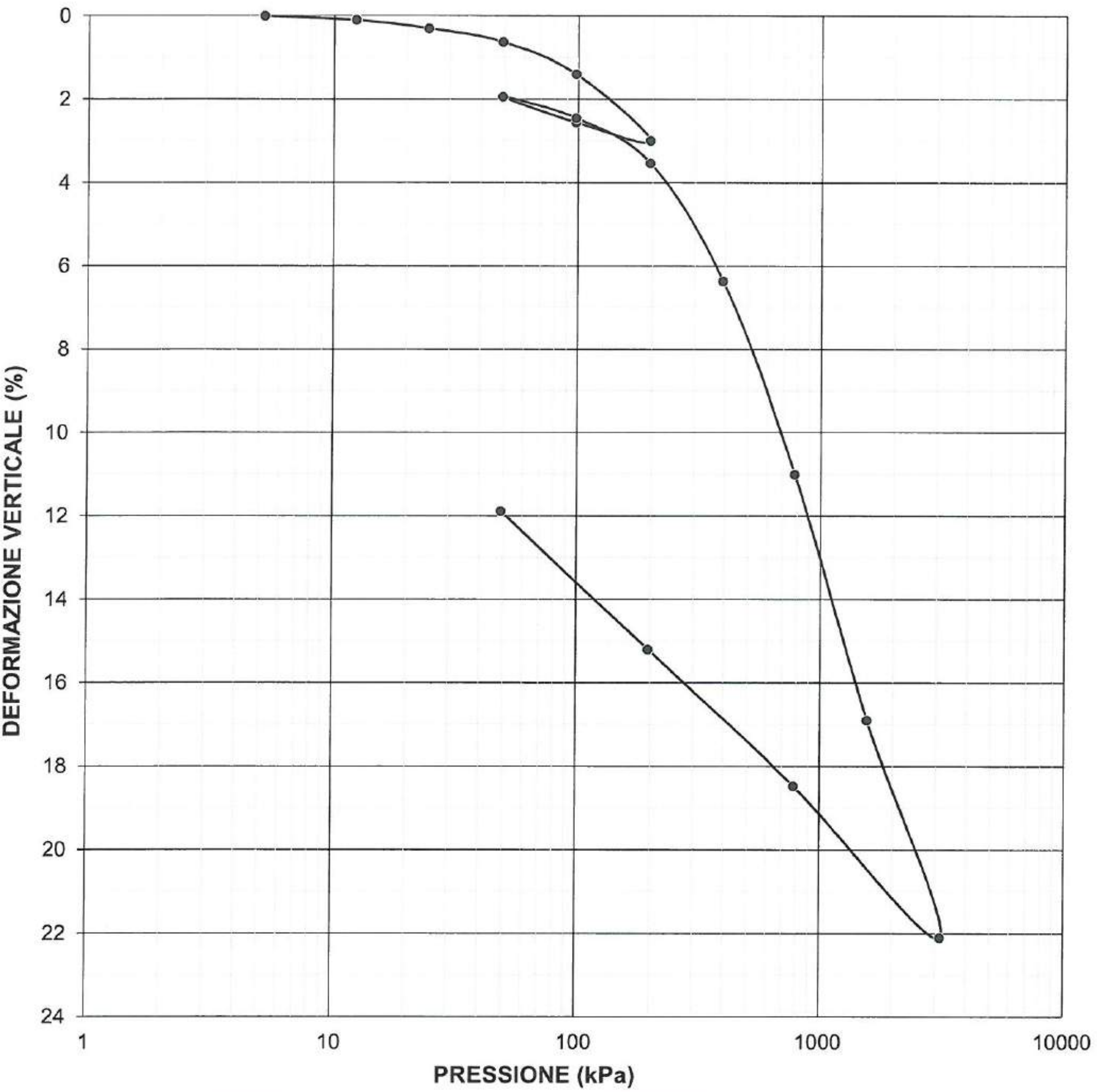
Commessa: -

Verbale di accettazione: 032/18

lo sperimentatore:
Dott. Massimo Maugeri

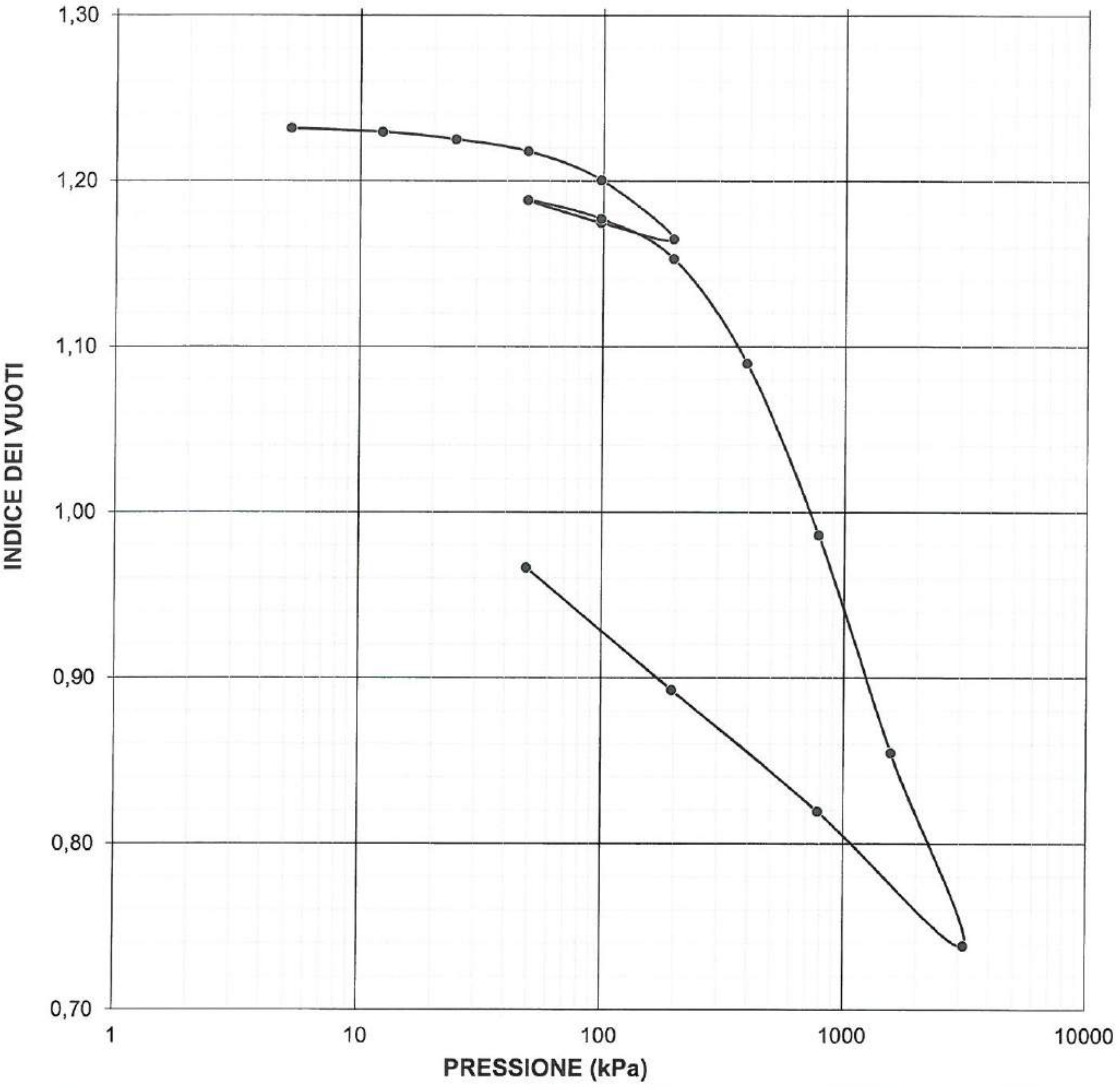
il Direttore del Laboratorio:
Dott. Massimiliano Galli

CURVA DI CONSOLIDAZIONE EDOMETRICA - I



Commessa:	Verbale di accettazione:	Io sperimentatore:	il Direttore del Laboratorio:
-	032/18	Dott. Massimo Maugeri	Dott. Massimiliano Galli

VARIAZIONE DELL'INDICE DEI VUOTI - II



Commessa:
-

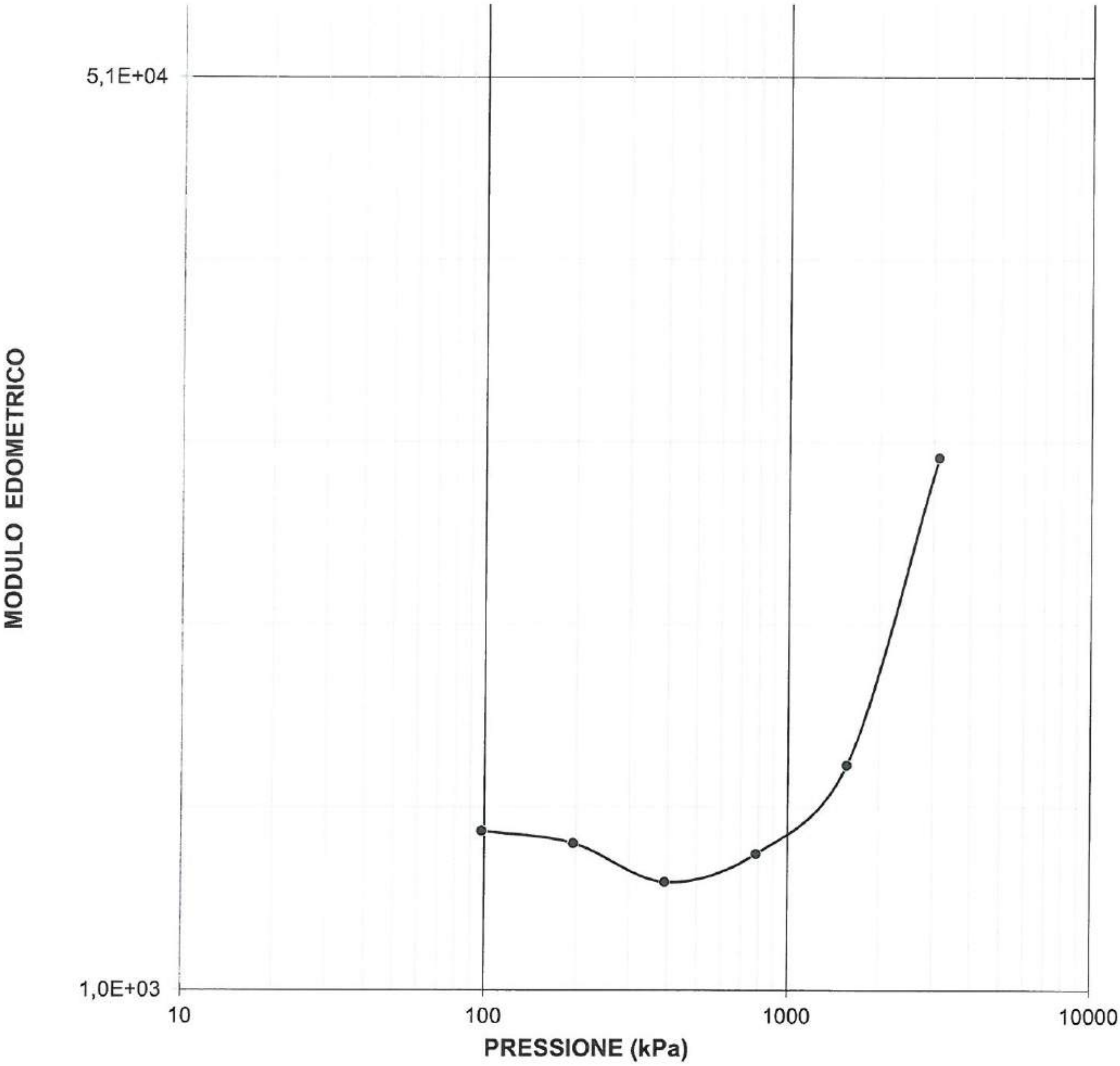
Verbale di accettazione:
032/18

Io sperimentatore:
Dott. Massimo Maugeri

il Direttore del Laboratorio:
Dott. Massimiliano Galli

C.G.G. S.R.L.

VARIAZIONE DEL MODULO EDOMETRICO III



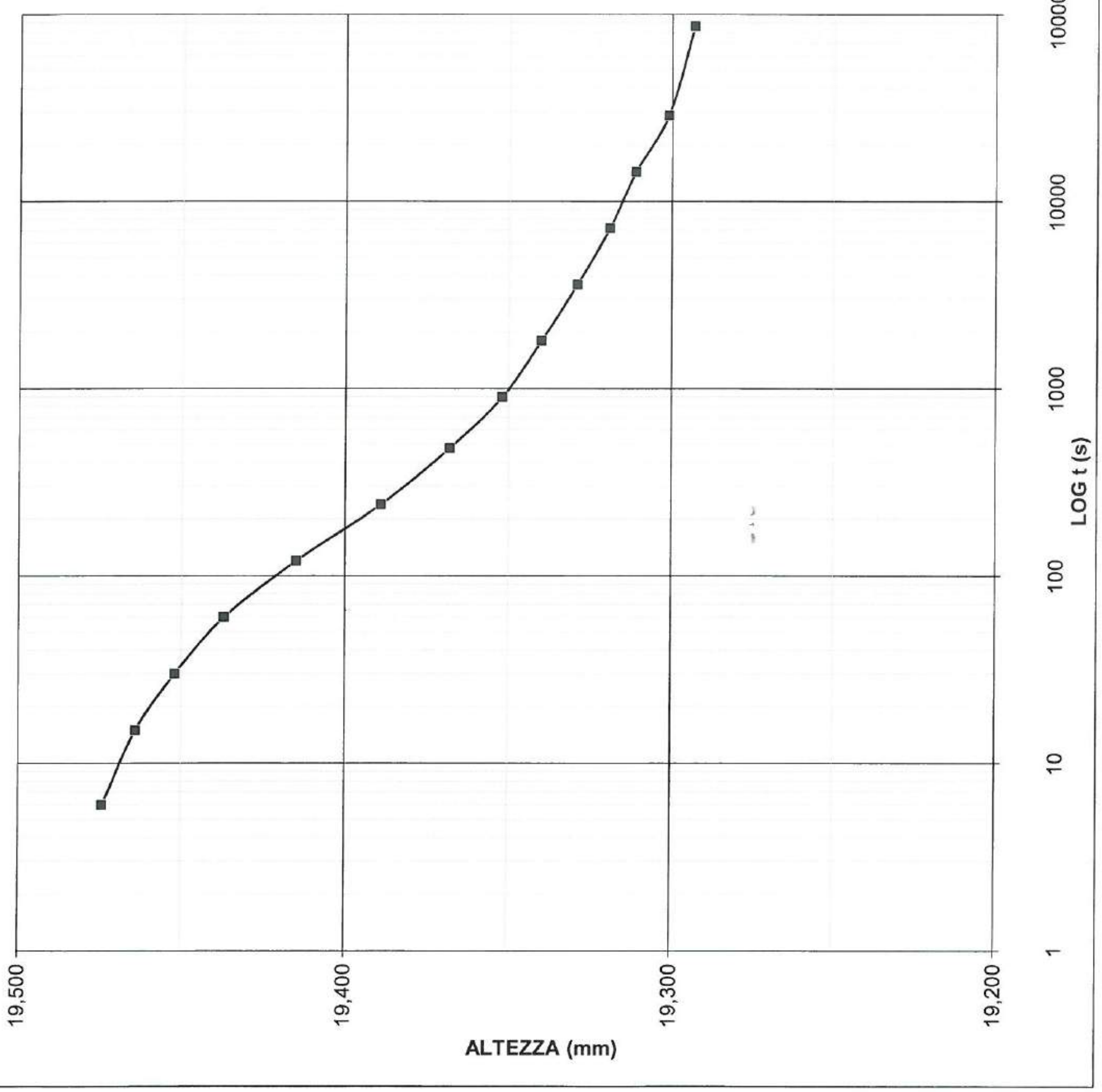
Commessa: -

Verbale di accettazione: 032/18

lo sperimentatore:
Dott. Massimo Maugeri

il Direttore del Laboratorio:
Dott. Massimiliano Galli

ANDAMENTO DEI CEDIMENTI NEL TEMPO - gradino V (98-196 kPa)



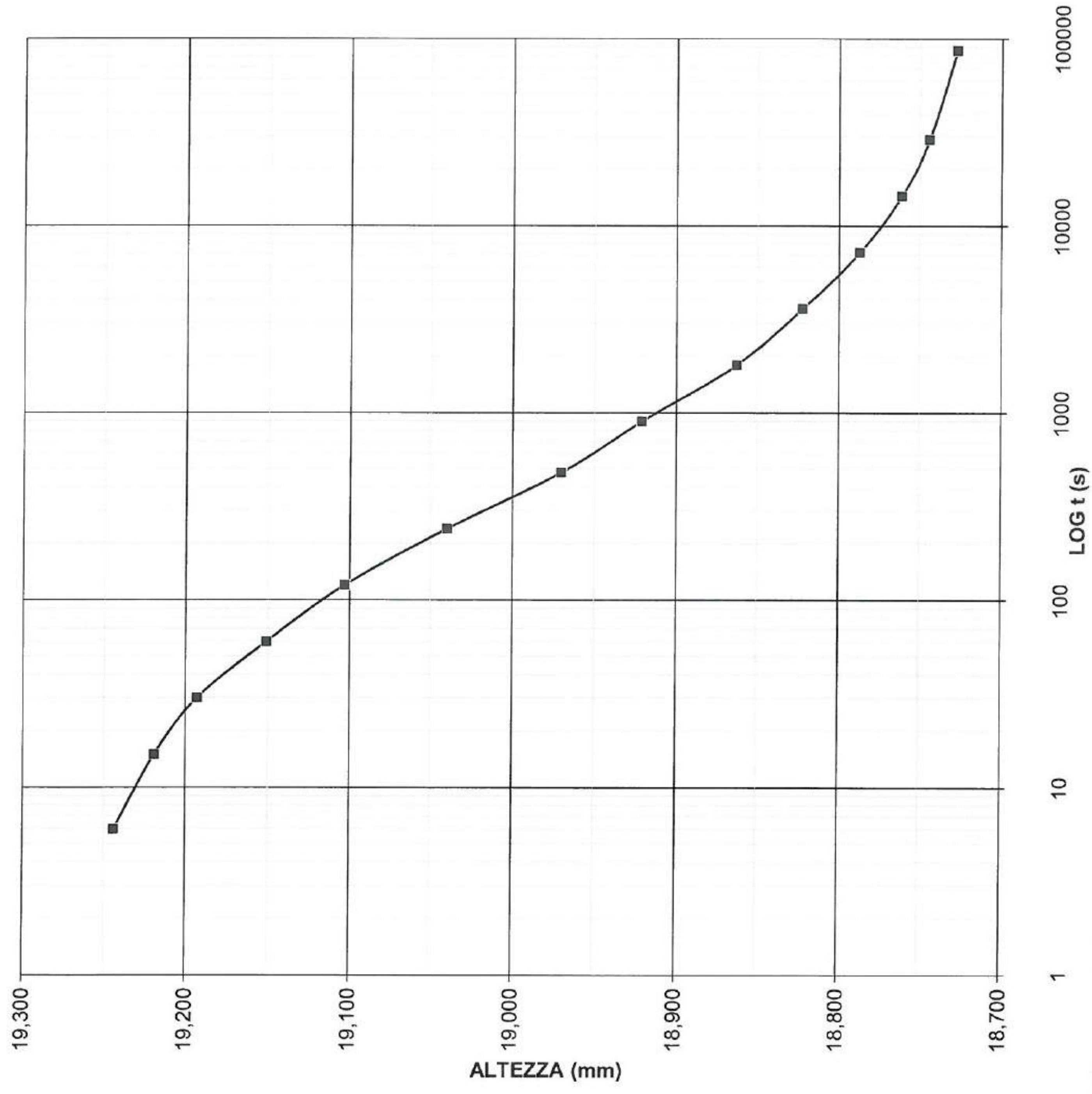
Commessa:
-

Verbale di accettazione:
032/18

Io sperimentatore:
Dott. Massimo Maugeri

il Direttore del Laboratorio:
Dott. Massimiliano Galli

ANDAMENTO DEI CEDIMENTI NEL TEMPO - gradino VI (196-392) kPa



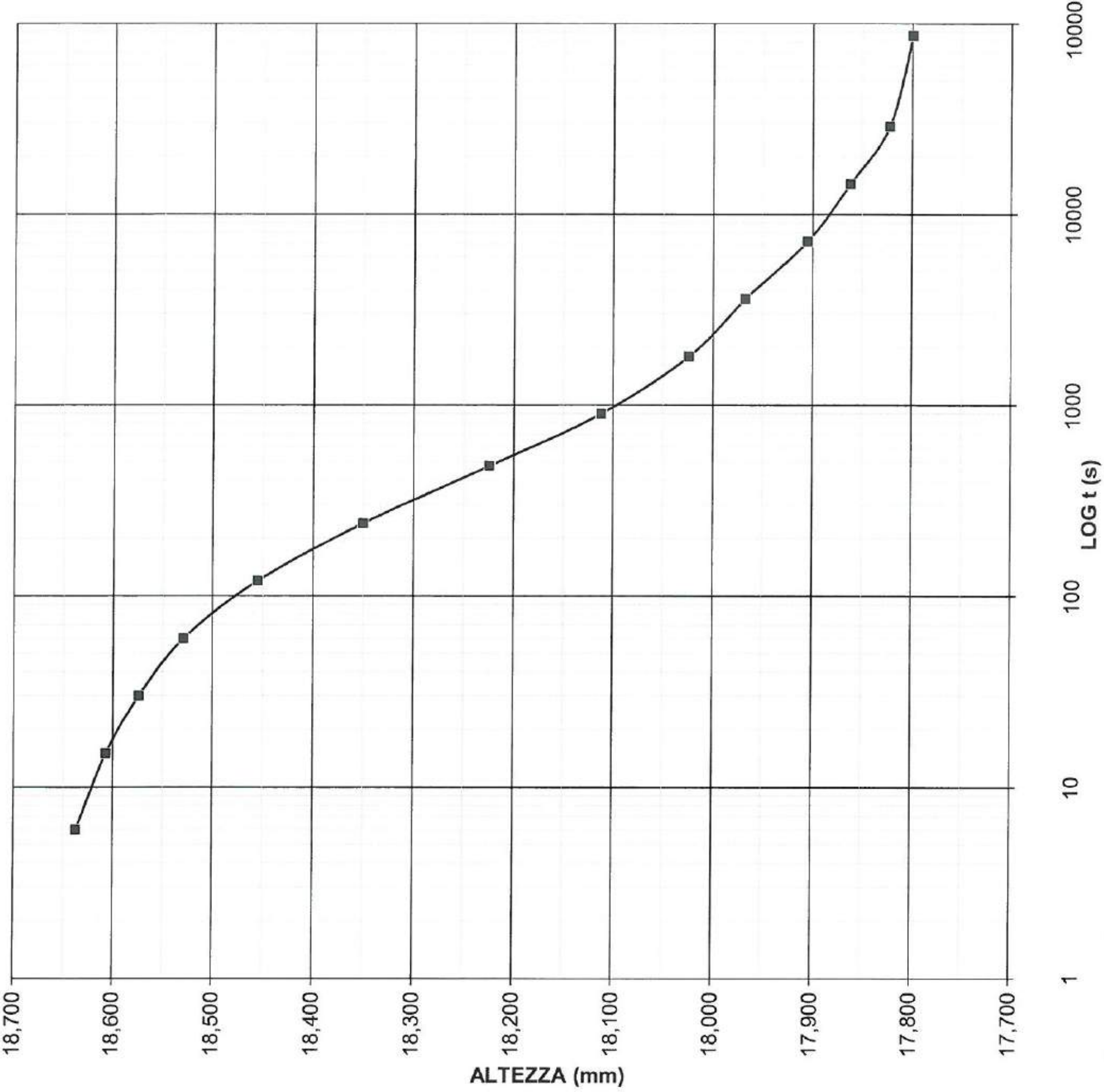
Commessa: -

Verbale di accettazione: 032/18

Io sperimentatore: Dott. Massimo Maugeri

il Direttore del Laboratorio: Dott. Massimiliano Galli

ANDAMENTO DEI CEDIMENTI NEL TEMPO - gradino VII (392-784) kPa



Commessa: -

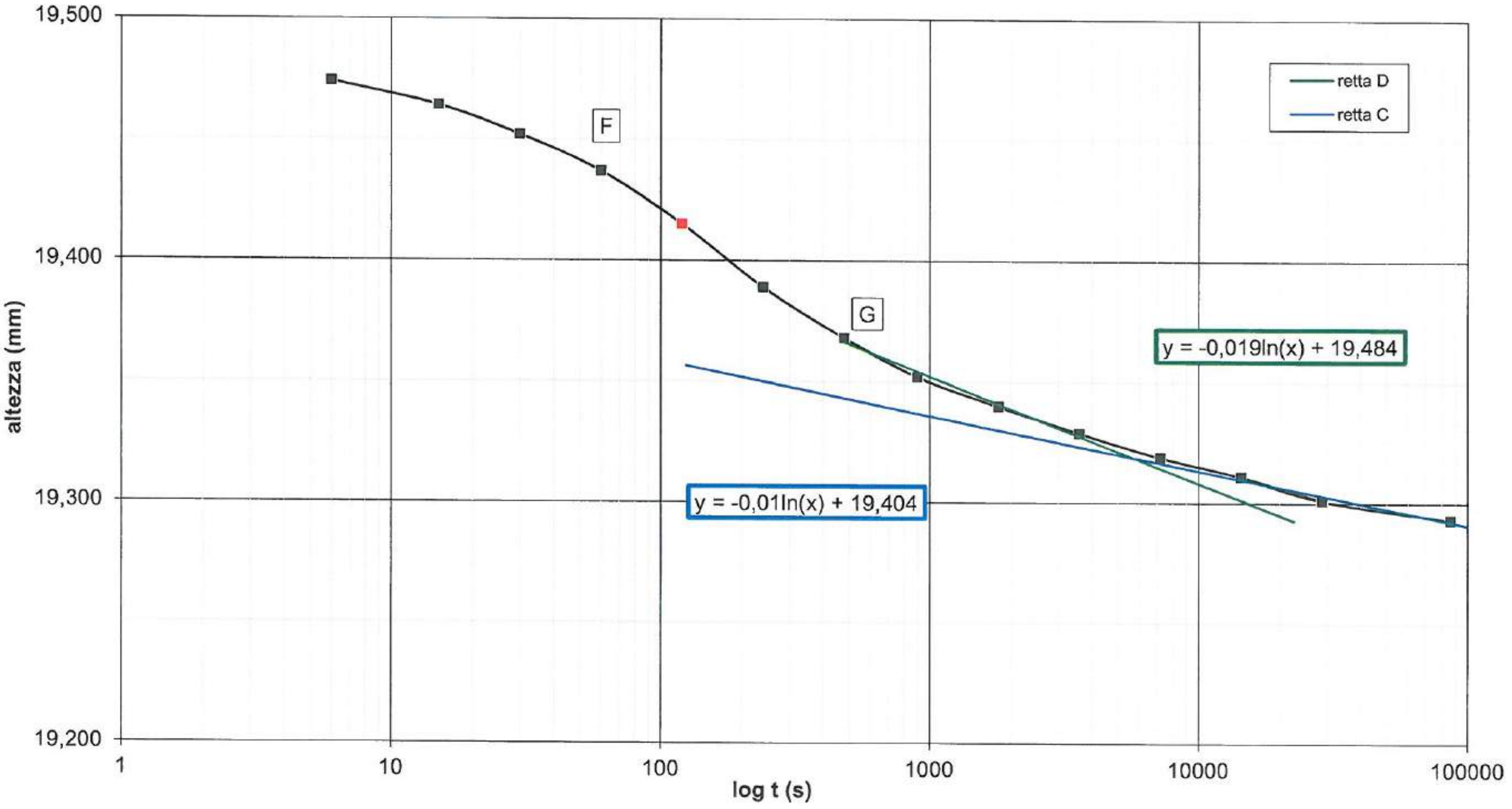
Verbale di accettazione: 032/18

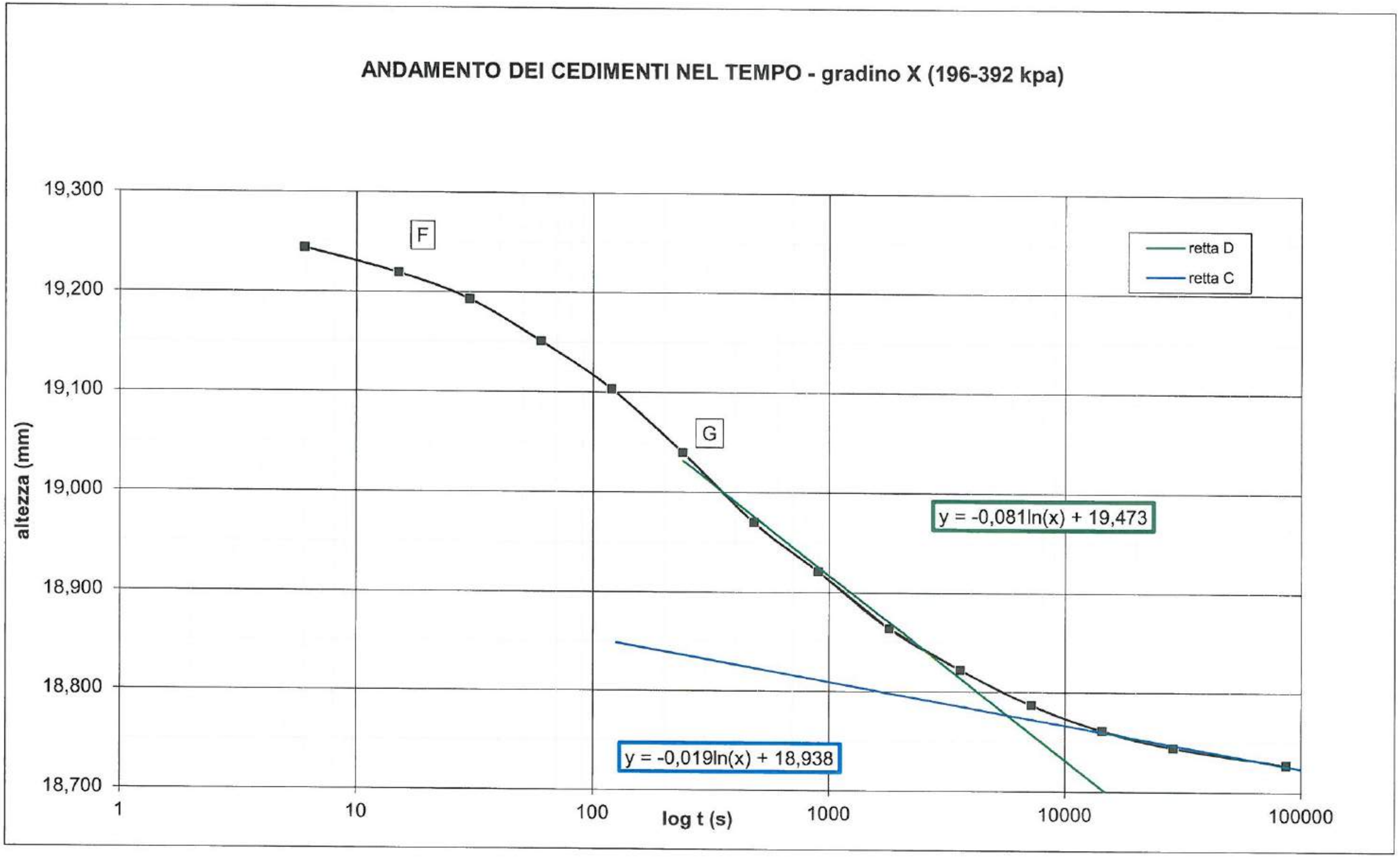
Io sperimentatore: Dott. Massimo Maugeri

il Direttore del Laboratorio: Dott. Massimiliano Galli

certificato di prova n° 1178/18

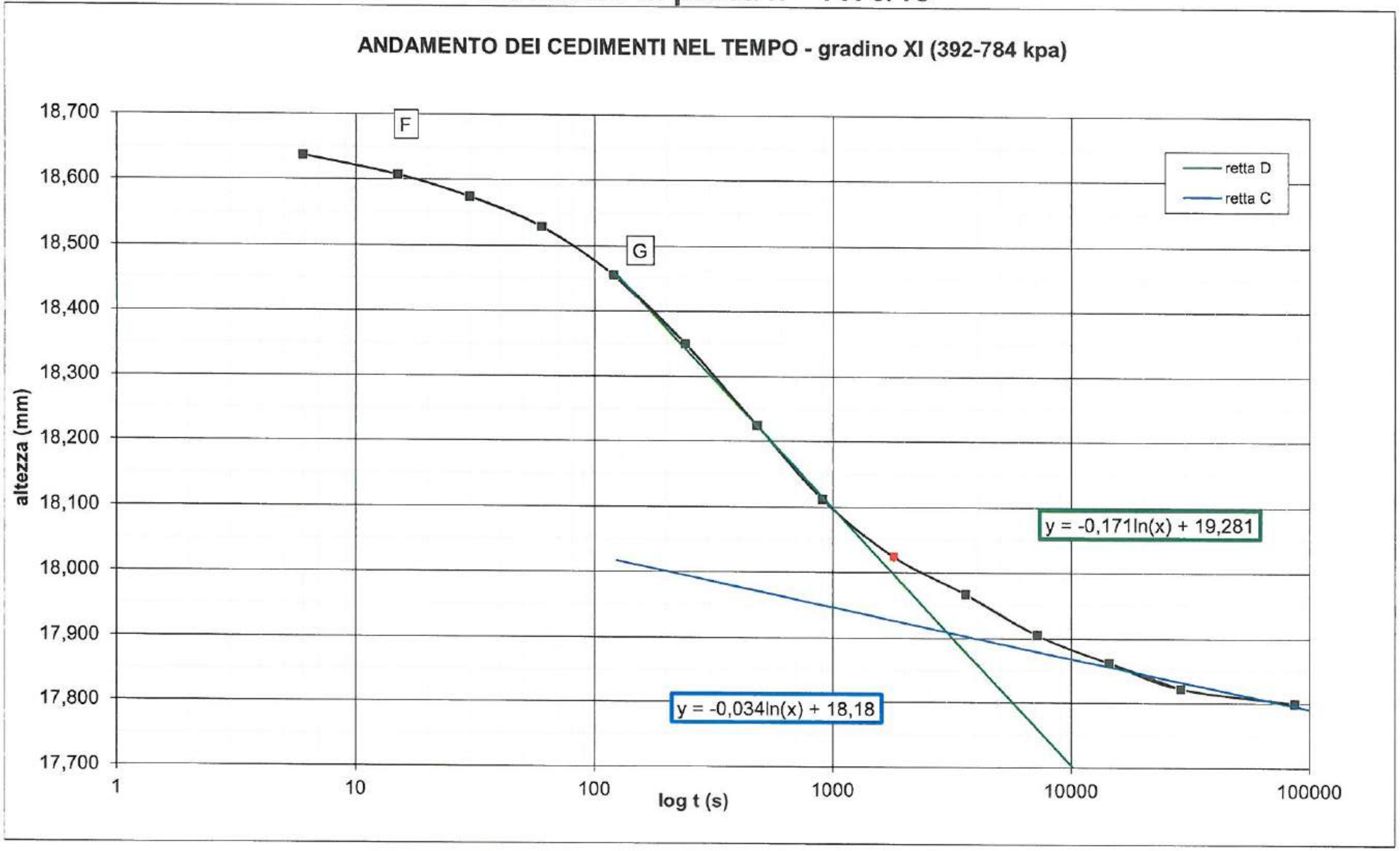
ANDAMENTO DEI CEDIMENTI NEL TEMPO - gradino IX (98-196 kpa)





ANDAMENTO DEI CEDIMENTI NEL TEMPO - gradino X (196-392 kpa)

certificato di prova n° 1178/18



ANDAMENTO DEI CEDIMENTI NEL TEMPO - gradino XI (392-784 kpa)

COMMITTENTE: AIMAG SPA
LOCALITÀ: -
CANTIERE:
MEDOLLA VIA CAMPANIA

SONDAGGIO: S1
CAMPIONE: C3

cedimento a inizio di prova		0,490	mm	**gradino IX (98-196 kPa)**
altezza iniziale	h_0 =	1,951	cm	
altezza campione a fine cedimento primario	h_{100} =	1,932	cm	
altezza campione al 50% della consolidazione primaria	h_{50} =	1,941	cm	
tempo al 50% della consolidazione primaria	t_{50} =	43	s	
tempo al 100% della consolidazione primaria	t_{100} =	5745	s	
coefficiente di consolidazione	**C_v =**	**4,35E-03**	cm^2/s	
coefficiente di compressibilità volumetrica	**m_v =**	**1,11E-04**	kPa^{-1}	
coefficiente di permeabilità verticale	**K_v =**	**4,81E-08**	cm/s	

cedimento a inizio di prova		0,707	mm	**gradino X (196-392 kPa)**
altezza iniziale	h_0 =	1,933	cm	
altezza campione a fine cedimento primario	h_{100} =	1,876	cm	
altezza campione al 50% della consolidazione primaria	h_{50} =	1,905	cm	
tempo al 50% della consolidazione primaria	t_{50} =	319	s	
tempo al 100% della consolidazione primaria	t_{100} =	10760	s	
coefficiente di consolidazione	**C_v =**	**5,61E-04**	cm^2/s	
coefficiente di compressibilità volumetrica	**m_v =**	**1,44E-04**	kPa^{-1}	
coefficiente di permeabilità verticale	**K_v =**	**8,10E-09**	cm/s	

cedimento a inizio di prova		1,273	mm	**gradino XI (392-785 kPa)**
altezza iniziale	h_0 =	1,876	cm	
altezza campione a fine cedimento primario	h_{100} =	1,791	cm	
altezza campione al 50% della consolidazione primaria	h_{50} =	1,833	cm	
tempo al 50% della consolidazione primaria	t_{50} =	251	s	
tempo al 100% della consolidazione primaria	t_{100} =	3007	s	
coefficiente di consolidazione	**C_v =**	**6,58E-04**	cm^2/s	
coefficiente di compressibilità volumetrica	**m_v =**	**1,18E-04**	kPa^{-1}	
coefficiente di permeabilità verticale	**K_v =**	**7,79E-09**	cm/s	

GEO PROGETTI S.r.L.
Indagini Geognostiche in Sito
Sede legale: Via Genova n.1/8
41036 Medolla (MO)
P.I.:01754860367
Tel: 0535/47170
Fax: 0535/49364

Sondaggio n. 1 P6

Committente: AIMAG S.P.A.	Cantiere: Medolla - Via Campana DISCARICA	Periodo di esecuzione: dal 19/02/2016 al 22/02/2016	
Quota: Piano campagna	Attrezzo di Perforazione: Sonda Mustang	Metodo di perforazione: a distruzione di nucleo	Attrezzature in foro Piezometri Ø = 3'' | Inclinometri | Altro

Responsabile del sito: Dott. Geol. Paolo Cestari

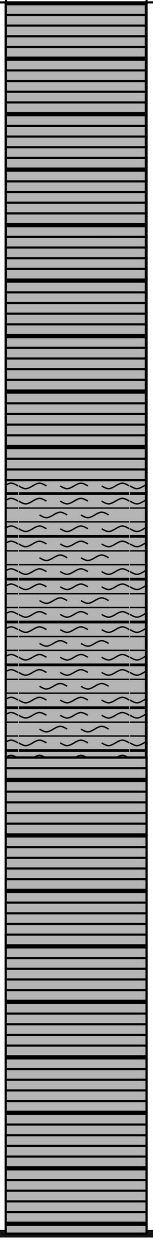
Direttore del Laboratorio: Dott. Geol. Rita Ballista

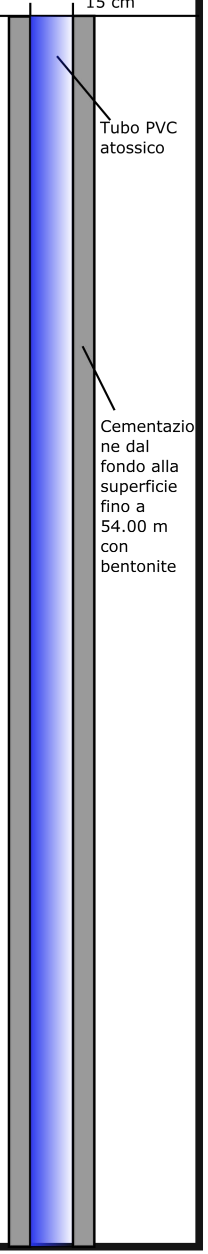
Livello acqua Data	Ora	m. dal p.c.	Prof. foro	Diametro Tipo di carotiere	Prof. rivest.	Diametro Tipo di rivest.
25/02/2016		- 5.40 m			4.5 m 40.5 m	153 mm 113 mm

Campioni

Carotiere semplice	○	Carotiere doppio	☐
Pareti sottili tipo Shelby	●	Idraulico tipo Osterberg	■
S.P.T.	◐	Carotiere doppio tipo Denison	▨

Mt.	Quota dal p.c.	Simbologia	Campioni				Descrizione Stratigrafica	Indice RQD	▼ Avan. con rivest.	▽ Avan. senza rivest.	Carotaggio %	Pocket kPa	Torvane kPa	S.P.T.		Vane Test kPa	Note	Falda	Attrezzatura in foro
			Tipo	N°	Quota	Data prel.					25 50 75			Quota	Colpi				15 cm
2.25							ARGILLE E ARGILLE LIMOSE CON LIVELLI SABBIOSI DECIMETRICI ALLE QUOTE DI 12.57 m, 18.50 m, 28.60 m.					2.25					Stratigrafia da analisi del cutting.		
4.25												4.25							
6.75												6.75							
9.00												9.00							
11.25												11.25							
13.25												13.25							
15.75												15.75							
18.00												18.00							
20.25												20.25							
22.50												22.50							
24.75												24.75							
27.00												27.00							
29.25												29.25							
31.50												31.50							
33.75												33.75							
36.00												36.00							
38.25												38.25							
40.50												40.50							
42.75												42.75							
45.00												45.00							




Tubo PVC atossico

Cementazione dal fondo alla superficie fino a 54.00 m con bentonite

GEO PROGETTI S.r.L.

Indagini Geognostiche in Sito
Sede legale: Via Genova n.1/8
41036 Medolla (MO)
P.I.:01754860367
Tel: 0535/47170
Fax: 0535/49364

Committente:
AIMAG S.P.A.

Cantiere:
Medolla - Via Campana
DISCARICA

Periodo di esecuzione:
dal 19/02/2016 al 22/02/2016

Sondaggio n. 1 P6

Quota:
Piano campagna

Attrezzo di Perforazione:
Sonda Mustang

Metodo di perforazione:
a rotazione e carotaggio continuo

Attrezzature in foro		
Piezometri Ø = 3''	Inclinometri	Altro

Responsabile del sito: Dott. Geol. Paolo Cestari

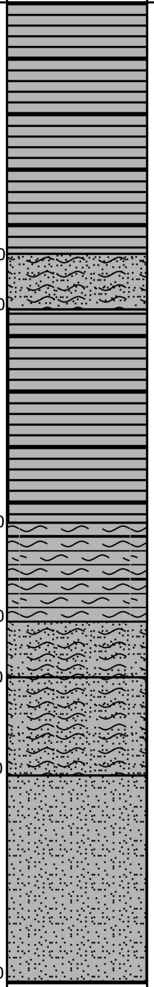
Direttore del Laboratorio: Dott. Geol. Rita Ballista

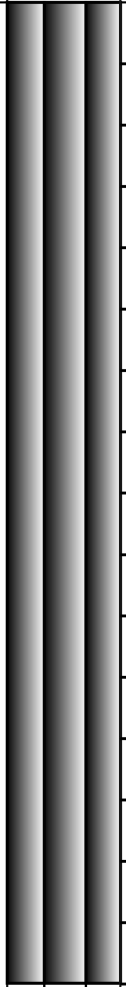
Livello acqua			Prof. foro	Diametro Tipo di carotiere	Prof. rivest.	Diametro Tipo di rivest.
Data	Ora	m. dal p.c.				
25/02/2016		- 5.40 m	60 m	107 mm	60 m	113 mm

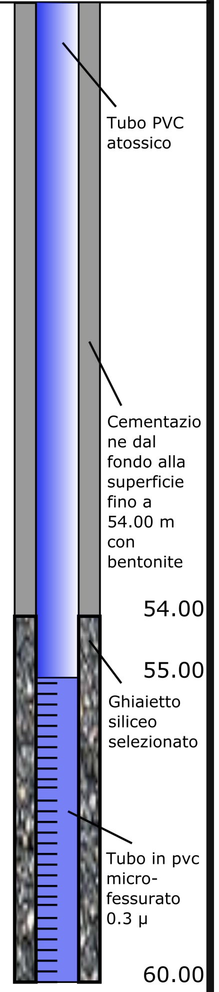
Campioni

Carotiere semplice	○	Carotiere doppio	☐
Pareti sottili tipo Shelby	●	Idraulico tipo Osterberg	■
S.P.T.	◐	Carotiere doppio tipo Denison	▨

Mt.	Quota dal p.c.	Simbologia	Campioni Tipo	Campioni N°	Campioni Quota	Campioni Data prel.	Descrizione Stratigrafica	Indice RQD	Avan. con rivest. ▼	Avan. senza rivest. ▽	Carotaggio % (25 50 75)	Pocket kPa	Torvane kPa	S.P.T. Quota	S.P.T. Colpi	Vane Test kPa	Note	Falda	Attrezzatura in foro
45.00												45.00							
46.00												46.00							
47.00												47.00							
48.00												48.00							
	48.10						ARGILLE GRIGIE COMPATTE CON RARI LIVELLI LIMOSI E RARI FRUSTOLI ORGANICI, ASCIUTTE.												
49.00	49.00						LIMO SABBIOSO GRIGIO SCIOLTO E ASCIUTTO.					49.00							
50.00												50.00							
51.00												51.00							
52.00												52.00							
	52.50						ARGILLA COMPATTA GRIGIA CON CONCREZIONI CARBONATICHE.												
53.00												53.00							
54.00												54.00							
	54.10						ARGILLA LIMOSA GRIGIA COMPATTA ASCIUTTA.												
55.00	55.00						LIMO SABBIOSO GRIGIO SCIOLTO ASCIUTTO.					55.00							
56.00												56.00							
	56.60						SABBIA LIMOSA GRIGIA FINE UMIDA.												
57.00												57.00							
58.00												58.00							
59.00												59.00							
60.00	60.00						SABBIA FINE GRIGIA OMOGENEA BAGNATA.					60.00							
61.00												61.00							
62.00												62.00							
63.00												63.00							
64.00												64.00							



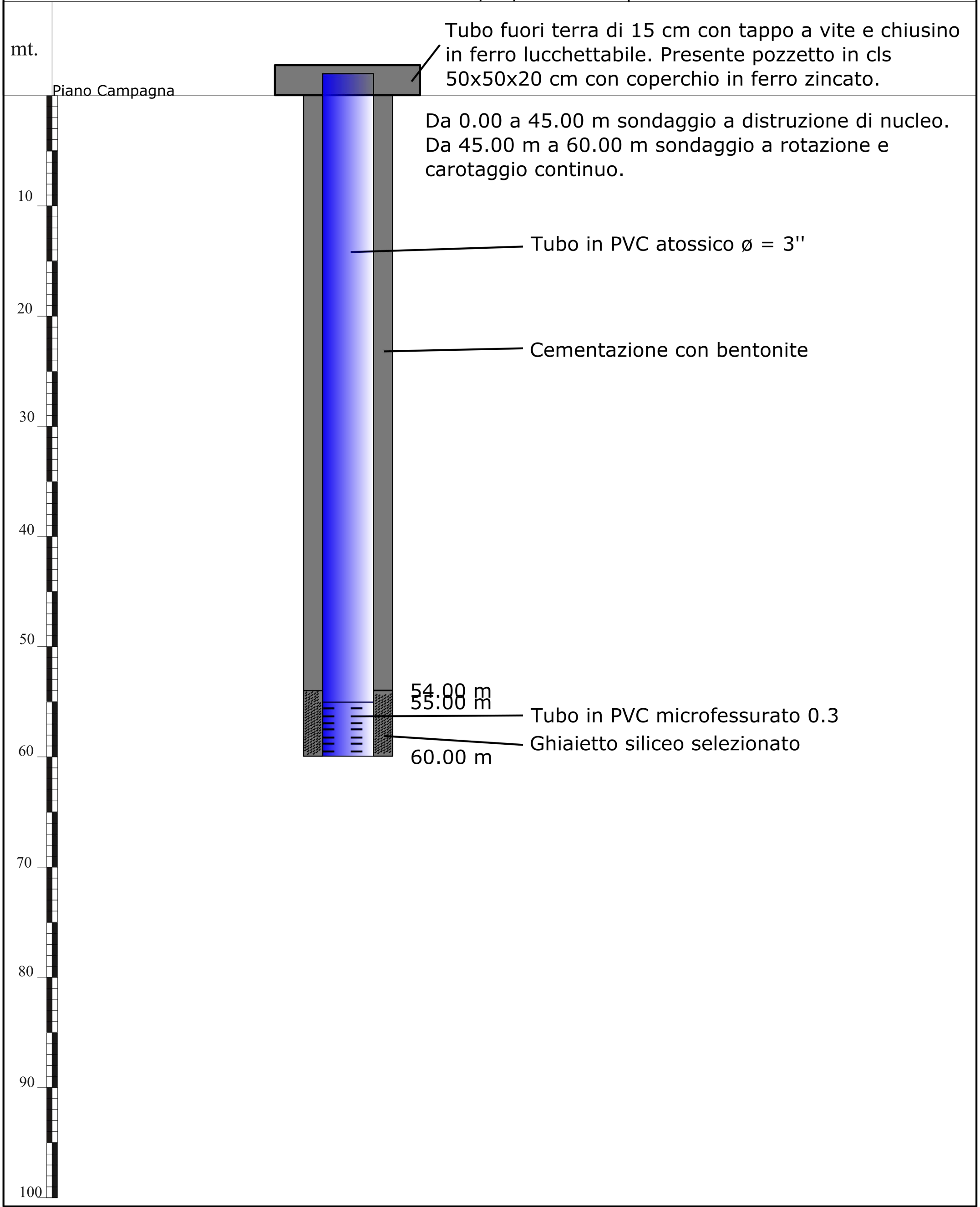




SCHEMA PIEZOMETRO - P6

COMMITTENTE: AIMAG S.P.A.
CANTIERE: MEDOLLA - VIA CAMPANA - DISCARICA

Falda misurata in foro il 25/02/2016 alla quota di - 5.40 m



Tubo fuori terra di 15 cm con tappo a vite e chiusino in ferro lucchettabile. Presente pozzetto in cls 50x50x20 cm con coperchio in ferro zincato.

Da 0.00 a 45.00 m sondaggio a distruzione di nucleo. Da 45.00 m a 60.00 m sondaggio a rotazione e carotaggio continuo.

Tubo in PVC atossico ø = 3''

Cementazione con bentonite

Tubo in PVC microfessurato 0.3

Ghiaietto siliceo selezionato

EDI PROGETTI

41036 MEDOLLA – MO

	DATA ESECUZIONE 04/06/1998	METODO PERFORAZ. ROTAZIONE VERTICALE	SONDAGGIO n°
	QUOTA PIANO CAMPAGNA	ATTREZZO	

COMUNE DI MEDOLLA

006712 16 GIU. 1998

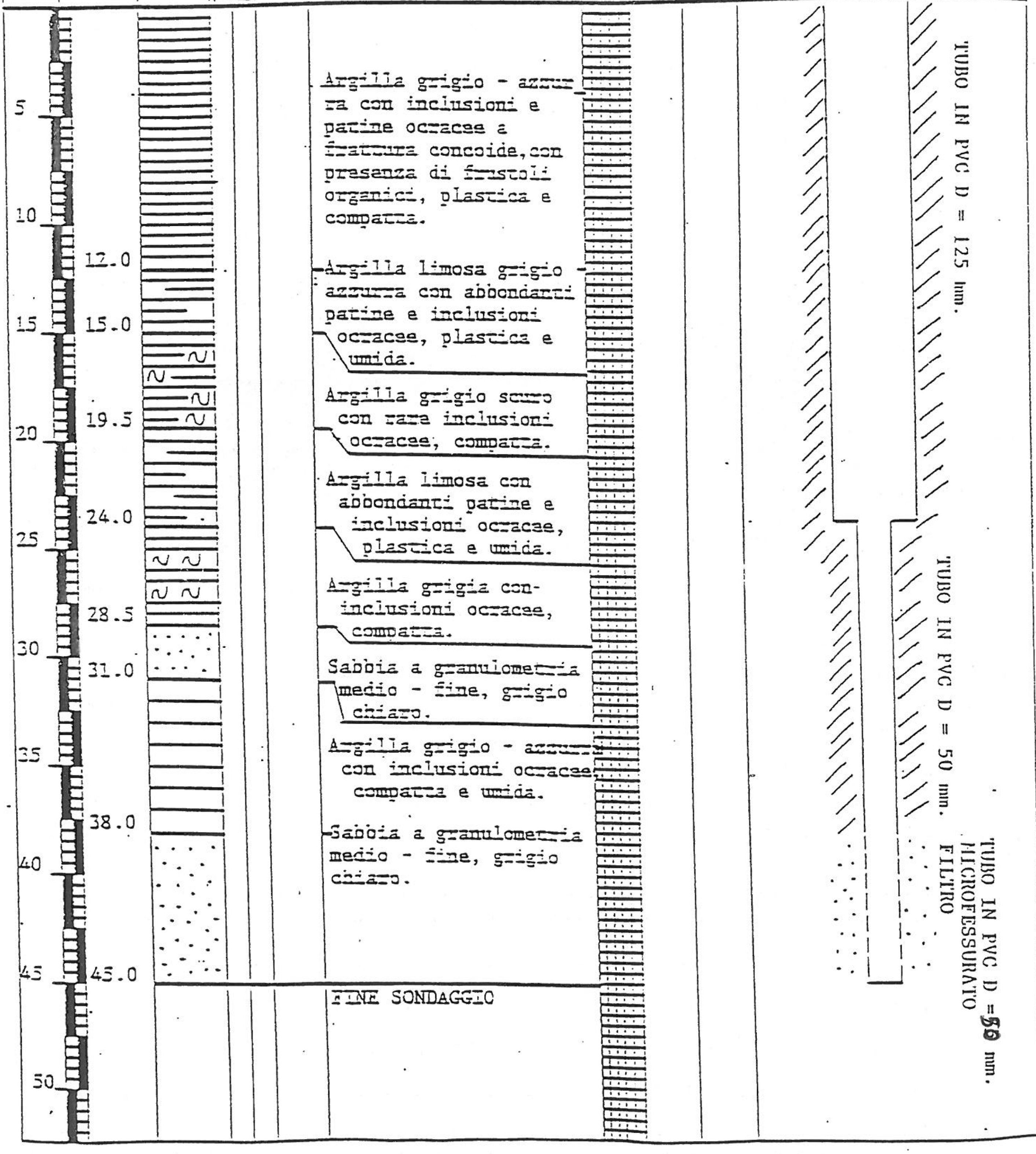
CAT. CL. FASC.

COMMITTENTE COMUNE di MEDOLLA	CANTIERE DISCARICA INTERCOMUNALE

CAMPIONI

CAROTIERE SEMPLICE	○	CAROTIERE DOPPIO	▯
S.P.T.	●	DENISON	◪
VANE TEST	◐	INDISTURBATI	■

LIVELLO ACQUA DATA	mt. da P.C.	PROF. FORO	PROF. RIVEST.	ASSISTENTE
04/06/98	5.0	45m.	45m.	OPERATORE



QUOTA da P.C.	DESCRIZIONE STRATIGRAFICA
0.0 – 12.0	Argilla grigio - azzurra con inclusioni e patine ocracee a frattura concoide, con presenza di frustoli organici, plastica e compatta.
12.0 – 15.0	Argilla limosa grigio - azzurra con abbondanti patine e inclusioni ocracee, plastica e umida.
15.0 – 19.5	Argilla grigio scuro con rare inclusioni ocracee, compatta.
19.5 – 24.0	Argilla limosa con abbondanti patine e inclusioni ocracee, plastica e umida.
24.0 – 28.5	Argilla grigia con inclusioni ocracee, compatta.
28.5 – 31.0	Sabbia a granulometria medio - fine, grigio chiaro.
31.0 – 38.0	Argilla grigio - azzurra con inclusioni ocracee, compatta e umida.
38.0 – 45.0	Sabbia a granulometria medio - fine, grigio chiaro.
45.0	FINE SONDAGGIO

ALL. N. 8

EO ROGETTI s.a.s

Di Paolo Cestari & C.
Indagini Geognostiche in Sito
Sede legale: Via Duca D'Este n.6
41036 Medolla (MO)
P.I.:01754860367
Tel : 0535/47170
Fax: 0535/49364

Committente: AIMAG S.P.A.

Cantiere : DISCARICA DI MEDOLLA

Periodo di esecuzione: Dal 06/02/2006 Al 13/02/2006

Sondaggio n. 1

Quota: PIANO STRADALE

Attrezzo di perforazione: SONDA MUSTANG ATLAS COPCO A65

Metodo di perforazione: ROTAZIONE A CAROTAGGIO CONTINUO

Attrezzatura in foro

Piezometri	Inclinometri	Altro
Sì d= 3"		

Sperimentatore: *EMILIO MONTANARI*

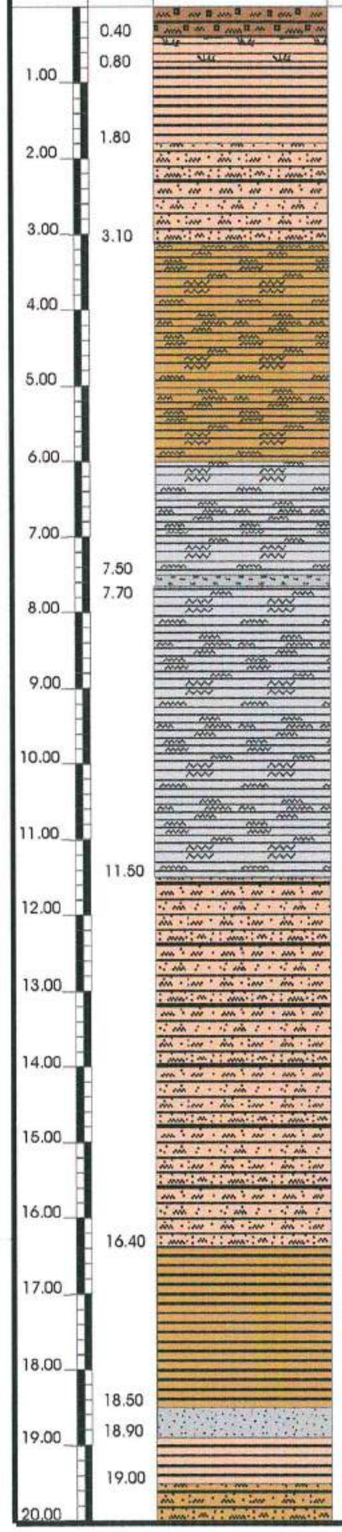
Direttore del Laboratorio: *Dott. Geol. RITA BALLISTA*

Livello Acqua Data	Ora	m. Dal p.c.	Prof. Foro	Diametro Tipo di carotiere	Prof. Rivest.	Diametro Tipo di Rivest.
13/02/2006	10.00	- 5.00m	56.00 m	101 mm SEMPLICE	128 mm 25.50 m	128 mm
					113 mm 36.00 m	113 mm

Campioni

Carotiere semplice	○	Campione disturbato	☐
Pareti sottili tipo Shelby	●	Idraulico tipo Osterberg	■
S.P.T.	◎	Carotiere doppio tipo Denison	▨

Mt. | Quota dal p.c. | Simbologia | Campioni (Tipo, N°, Quota, Data Prel.) | Descrizione Stratigrafica | Avan. con rivest. ▼ | Avan. senza rivest. ▽ | Carotaggio % | Pocket kPa. | Torvane kPa | S.P.T. (Quota, Colpi) | Vane Test Kg/cmq. | Note | Falda | Attrezzatura in foro



Quota dal p.c.	Descrizione Stratigrafica
0.40	RIPORTO PIETRISCO CALCAREO
0.80	TERRENO AGRARIO NOCCIOLA ALTERATO CON RESTI VEGETALI, UMIDO
1.80	ARGILLE CONSISTENTI, NOCCIOLA, VARIEGATE, UMIDE
3.10	ALTERNANZE DECIMETRICHE DI LIMI SABBIOSI E LIMI ARGILLOSI DA MOLLI A CONSISTENTI, NOCCIOLA, SATURI
	ARGILLE LIMOSE MEDIAMENTE CONSISTENTI, SATURE, NOCCIOLA VARIEGATE IN GRIGIO
7.50 7.70 11.50	ARGILLE LIMOSE MEDIAMENTE CONSISTENTI, SATURE, GRIGIE, A TRATTI VARIEGATE NOCCIOLA, CON PRESENZA DI UN LIVELLO TORBOSO BRUNO, UMIDO, SATURO TRA m.7,50 E 7,70
16.40	ARGILLE LIMOSE CON RARI LIVELLI DI LIMI SABBIOSI NOCCIOLA VARIEGATI, MOLTO CONSISTENTI, SATURI
18.50	ARGILLE CON RARI LIVELLI LIMOSI GRIGI, MEDIAMENTE CONSISTENTI, SATURI
18.90	LIVELLO SABBIOSO GRIGIO, POCO ADDENSATO, SATURO
19.00	ARGILLE NOCCIOLA CONSISTENTI, CON CONCREZIONI CARBONATICHE

Mt.	Pocket kPa.	Torvane kPa
1	180	80
2		
3	50 120	25 70
4	180 200	100 100
5	80 150	25 70
6	200 160	100
7	150	15 80
8	200 70	110 40
9	160	60
10	180 170	80 80
11	370	130
12	300	170
13	310 400	150 200
14	350	120
15	350	120
16	120	20
17	150 120	40 20
18	120 100	30 60
19		
20		

GEO PROGETTI s.a.s.
Di Paolo Cestari & C.
Indagini Geognostiche in Sito
Sede legale: Via Duca D'Este n.6
41036 Medolla (MO)
P.I.:01754860367
Tel : 0535/47170
Fax: 0535/49364

Committente: AIMAG S.P.A.	Cantiere : DISCARICA di MEDOLLA	Periodo di esecuzione: Dal 06/02/2006 Al 13/02/2006	Sondaggio n. 1
Quota: PIANO STRADALE	Attrezzo di perforazione: SONDA ATLAS COPCO A65	Metodo di perforazione: ROTAZIONE A CAROTAGGIO CONTINUO	Attrezzatura in foro Piezometri Si 3" · Inclinometri · Altro

Sperimentatore: EMILIO MONTANARI

Direttore del Laboratorio: Dott. Geol. RITA BALLISTA

Livello Acqua Data	Ora	m. Dal p.c.	Prof. Foro	Diametro Tipo di carotiere	Prof. Rivest.	Diametro Tipo di Rivest.
13/02/2006	10.00	- 5.00 m	56.00 m	101 mm	128 mm 25.50 m 113 mm 36.00 m	128 mm 113 mm

Campioni

Carotiere semplice	○	Campione disturbato	☐
Pareti sottili tipo Shelby	●	Idraulico tipo Osterberg	■
S.P.T.	◎	Carotiere doppio tipo Denison	▨

Quota dal p.c.	Descrizione Stratigrafica
22.50	ALTERNANZE DECIMETRICHE DI LIMI ARGILLOSI CONSISTENTI E LIMI SABBIOSI SCIOLTI NOCCIOLA GRIGI VARIEGATI, SATURI
24.50	ARGILLE LIMOSE DEBOLMENTE GRIGIE, MEDIAMENTE CONSISTENTI, SATURE
24.80	TORBE BRUNE, SECCHE E FESSURATE, POCO CONSISTENTI
25.00 25.20 25.70 25.80 26.60 27.10 28.60	ALTERNANZE DECIMETRICHE (20-30 cm) DI ARGILLE LIMOSE GRIGIE CON ARGILLE ORGANICHE NERASTRE E LIVELLI LIMOSI MEDIAMENTE CONSISTENTI, SATURI PRESENZA DI LIVELLI DI ARGILLE ORGANICHE NERASTRE TRA m.25,00 E 25,20; 25,70 e 25,80; 26,60 e 27,10
30.40	SABBIE LIMOSE GRIGIE MEDIAMENTE ADDENSATI, SATURI
31.80	ARGILLE GRIGIO-NERASTRE CONSISTENTI, UMIDE, CON CONCREZIONI CARBONATICHE
34.30	LIMI ARGILLOSO-SABBIOSI GRIGI DA POCO ADDENSATI A MEDIAMENTE ADDENSATI, SATURI
34.80	ARGILLE GRIGIE POCO CONSISTENTI, SATURE
35.40	TORBE E ARGILLE TORBOSE NERASTRE, UMIDE
36.60 36.80	ALTERNANZE DECIMETRICHE (20-30 cm) DI ARGILLE LIMOSE GRIGIE MOLTO CONSISTENTI E LIMI ARGILLOSI POCO CONSISTENTI GRIGI, SATURI PRESENZA DI LIVELLI DI ARGILLE ORGANICHE NERASTRE TRA m.36,60 E 36,80; 40,60 e 40,80

Campioni Tipo	N°	Quota	Data Prel.
☐	C.1	33.50	10/02/06

Mt.	Pocket kPa.		Torvane kPa
	80	21	30
	60		20
22.00	100	22	40
23.00		23	
24.00	160	24	80
	160		80
25.00	120	25	60
	100		40
26.00		26	
	100		400
27.00		27	
28.00		28	
29.00		29	
30.00		30	
31.00	200	31	100
32.00		32	
33.00		33	
34.00		34	
35.00		35	
36.00	160	36	60
	180		80
37.00		37	
38.00	100	38	50
39.00	100	39	50
40.00	120	40	70

AVAN. CON RIVEST. ▼	AVAN. SENZA RIVEST. ▽	Carotaggio %	S.P.T. Quota	S.P.T. Colpi	Vane Test Kg/cmq.	Note	Falda	Attrezzatura in foro

EO ROGETTI s.a.s.
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41036 Medolla (MO)
P.I.:01754860367
Tel : 0535/47170
Fax: 0535/49364

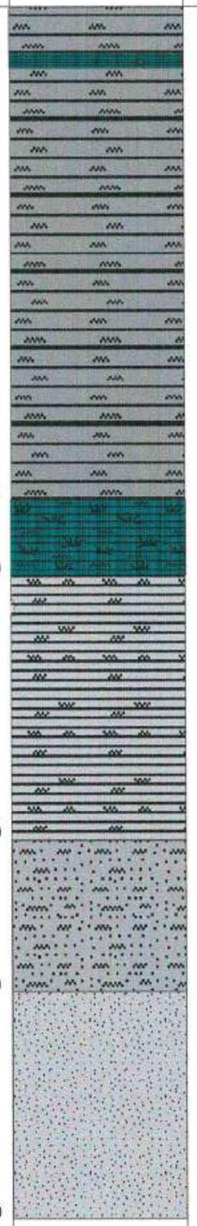
Committente: AIMAGI	Cantiere : DISCARICA di MEDOLLA	Periodo di esecuzione: Dal 06/02/2006 Al 13/02/2006	Sondaggio n. 1
Quota: PIANO STRADALE	Attrezzo di perforazione: SONDA ATLAS COPCO A65	Metodo di perforazione: ROTAZIONE A CAROTAGGIO CONTINUO	Attrezzatura in foro: Piezometri Sì d= 3"; Inclinometri; Altro

Sperimentatore: EMILIO MONTANARI Emilio Mol.

Direttore del Laboratorio: Dott. Geol. RITA BALLISTA B

Livello Acqua Data	Ora	m. Dal p.c.	Prof. Foro	Diametro Tipo di carotiere	Prof. Rivest.	Diametro Tipo di Rivest.
13/02/2006	10.00	- 5.00 m	56.00 m	101 mm SEMPLICE	128 mm 25.50 m 113 mm 36.00 m	128 mm 113 mm

Campioni
- Carotiere semplice ○
- Pareti sottili tipo Shelby ●
- S.P.T. ◎
- Campione disturbato ☐
- Idraulico tipo Osterberg ■
- Carotiere doppio tipo Denison ▨



Mt.	Quota dal p.c.	Campioni Tipo	N°	Quota	Data Prel.	Descrizione Stratigrafica	▼ AVAN. CON RIVEST.	▽ AVAN. SENZA RIVEST.	Carotaggio %	Pocket kPa.	Torvane kPa	S.P.T. Quota	Colpi	Vane Test Kg/cmq.	Note	Falda	Attrezzatura in foro
4i0.00	40.60 40.80	☐	C.2	40.70	10/02/06	ALTERNANZE DECIMETRICHE (20-30 cm) DI ARGILLE LIMOSE GRIGIE MOLTO CONSISTENTI E LIMI ARGILLOSI POCO CONSISTENTI GRIGI, SATURI PRESENZA DI LIVELLI DI ARGILLE ORGANICHE NERASTRE TRA m.36,60 E 36,80; 40,60 e 40,80				350 41	140						
4i1.00										150 42	80						
42.00										200 43	100						
43.00										400 44	140						
44.00										45							
45.00										46							
46.00	46.50					ARGILLE ORGANICHE E ARGILLE TORBOSE NERASTRE POCO CONSISTENTI, SATURE				47							
47.00	47.50	☐	C.3	47.40	10/02/06	ARGILLE LIMOSE GRIGIE, CONSISTENTI, CON CONCREZIONI CARBONATICHE, SATURE				200 48	100						
48.00										250 49	120						
49.00										250 50	120						
50.00		☐	C.4	50.50	10/02/06					51							
51.00	51.00					ALTERNANZA DI SABBIE E LIMI SABBIOSI GRIGI, MEDIAMENTE ADDENSATI, SATURI				52							
52.00										53							
53.00	53.00					SABBIA FINE, GRIGIA, MEDIAMENTE ADDENSATA, SATURA				54							
54.00										55							
55.00		☐	C.5	55.40	10/02/06					56							
56.00	56.00					FINE SONDAGGIO				57							
57.00										58							
58.00										59							
59.00										60							
50.00																	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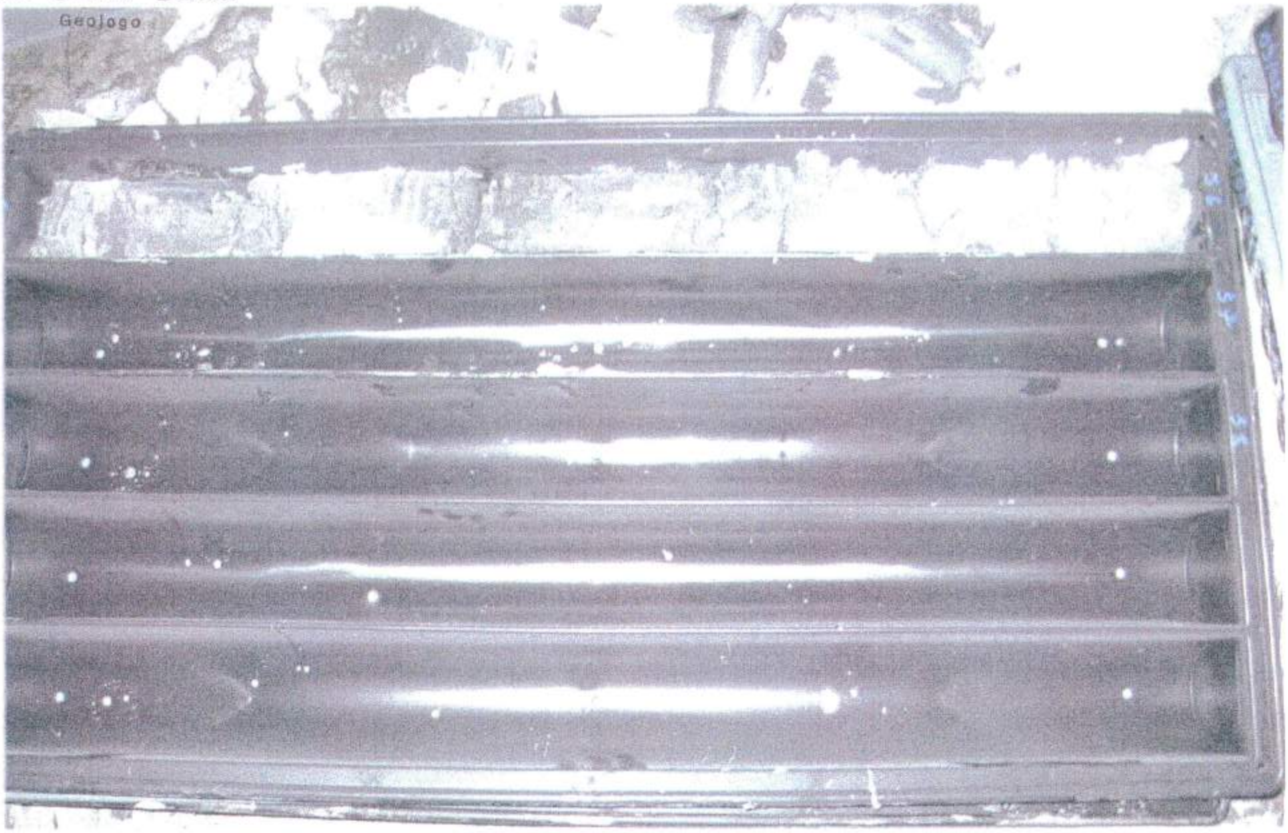

Fig. 2: terreni carotati da 0.00 a 56.00 m in cassette catalogatrici di 5.00 m cadauna

GEO GROUP srl
Via per Modena, 12 - Castelnuovo Rangone (MO)
Via Cesare Costa, 182 - MODENA
Tel. 059-828367 / Fax 059-5332019
email : geo.group@libero.it

STRATIGRAFIA - S1

SCALA 1 :41
Pagina 1/2

Riferimento: S-22-13	Sondaggio: S1
Località: Medolla SS 12 n°102 - Menù S.r.l.	Quota:
Impresa esecutrice: GEO GROUP SRL	Data: 16/04/2013
Coordinate:	Redattore: Dott.ssa Sonia Giovannini
Perforazione: Sondaggio meccanico a carotaggio continuo	

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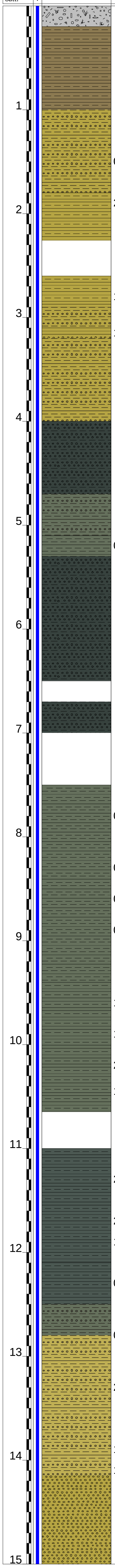

RP	VT	S.P.T. m	S.P.T.	N	Campioni	prof. m	Spess. m	DESCRIZIONE	DATI TECNICI
						0,2	0,2	Riporto costituito da riciclato misto da demolizioni in matrice sabbioso-argillosa con alla base un telo in TNT	
						1,0	0,8	Argilla limosa compatta e asciutta di colore da Codice Munsell 2.5Y 4/2 bruno verdastro scuro; Presenza di inclusi: calcinoli e sostanza organica.	
0.6	0.25					1,8	0,8	Limo sabbioso fine debolmente argilloso poco addensato umido di colore verde oliva chiaro (C.M. 2.5Y 5/3) con striature grigio rossastre.	
2.0	1.0					2,3	0,5	Argilla limosa compatta e umida di colore verde oliva chiaro (C.M. 2.5Y 5/3) con striature grigio rossastre.	
					1) Ost < 2,26 2,60	2,6	0,3	Campione indistrurbato OSTERBERG - C1	
1.5	0.7					2,9	0,3	Argilla limosa mediamente consistente e umida di colore verde oliva chiaro (C.M. 2.5Y 5/3) con striature grigio rossastre.	
1.3	0.6					3,1	0,2	Limo sabbioso fine debolmente argilloso poco addensato umido di colore verde oliva chiaro (C.M. 2.5Y 5/3) con striature grigio rossastre.	
						3,2	0,1	Argilla limosa debolmente sabbiosa mediamente consistente e umida di colore verde oliva chiaro (C.M. 2.5Y 5/3).	
						4,0	0,8	Limo sabbioso fine debolmente argilloso poco addensato molto umido di colore verde oliva chiaro (C.M. 2.5Y 5/3) con striature grigio rossastre.	
						4,7	0,7	Sabbia limosa a grana medio fine poco addensata satura di colore grigio verdastro molto scuro (C.M. GLEY 2 3/10BG)	
						5,1	0,4	Limo sabbioso fine debolmente argilloso poco addensato molto umido di colore grigio verdastro scuro (C.M. GLEY 1 4/5GY)	
0.6	0.35					5,3	0,2	Limo argilloso poco consistente umido di colore grigio verdastro scuro (C.M. GLEY 1 4/5GY)	
						6,5	1,2	Sabbia limosa a grana fine poco addensata satura di colore grigio verdastro molto scuro (C.M. GLEY 2 3/10BG)	
					2) Ost < 6,50 6,70	6,7	0,2	Campione indistrurbato OSTERBERG - C2	
						7,0	0,3	Sabbia limosa a grana fine poco addensata satura di colore grigio verdastro molto scuro (C.M. GLEY 2 3/10BG)	
					3) Ost < 7,00 7,50	7,5	0,5	Campione indistrurbato OSTERBERG - C3	
0.3 0.3 0.5 0.3						9,4	1,9	Limo argilloso molle e plastico molto umido di colore grigio verdastro scuro (C.M. GLEY 1 4/5GY). Abbondante presenza di sostanza organica (frustoli e legnetti)	
1.2 1.0 2.0 1.5	0.6 0.5 0.8 0.7					10,7	1,3	Argilla limosa da mediamente consistente a consistente e leggermente umida di colore grigio verdastro scuro (C.M. GLEY 1 4/5GY). Presenza di sostanza organica (frustoli e legnetti)	
					4) Ost < 10,50 11,00	11,0	0,4	Campione indistrurbato OSTERBERG - C4	
2.7 2.0 1.8	1.2 0.8 0.8					12,1	1,1	Argilla limosa consistente e leggermente umida di colore grigio verdastro molto scuro (C.M. GLEY 1 3/10Y). Presenza di calcinoli.	
0.6						12,5	0,4	Argilla limosa o limo argilloso a medio scarsa consistenza umida di colore grigio verdastro molto scuro (C.M. GLEY 1 3/10Y). Abbondante presenza di calcinoli.	
0.8						12,8	0,3	Limo sabbioso fine debolmente argilloso da mediamente addensato a poco addensato umido di colore colore grigio verdastro scuro (C.M. GLAY 1 4/10Y).	
2.4 1.5 1.5						14,2	1,3	Limo sabbioso fine debolmente argilloso da mediamente addensato ad addensato molto umido di colore verde oliva chiaro (C.M. 2.5Y 5/4) con striature grigiastre. Presenza di intercalazioni sabbiose a grana media tra - 12.90 m e 13.05 m da p.c. attuale, tra - 13.40 m e 13.60 m da p.c. attuale e tra - 13.70 m e 13.75 m da p.c. attuale.	
		14,5	3-5-10	15				Sabbia mediamente addensata umida di colore verde oliva chiaro (C.M. 2.5Y 5/3) fino a - 16.85 m da p.c. attuale e di seguito di colore grigio bluastro scuro (C.M. GLAY2 4/10B)	

GEO GROUP srl
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STRATIGRAFIA - S1

SCALA 1 :41
Pagina 2/2

Riferimento: S-22-13	Sondaggio: S1
Località: Medolla SS 12 n°102 - Menù S.r.l.	Quota:
Impresa esecutrice: GEO GROUP SRL	Data: 16/04/2013
Coordinate:	Redattore: Dott.ssa Sonia Giovannini
Perforazione: Sondaggio meccanico a carotaggio continuo	

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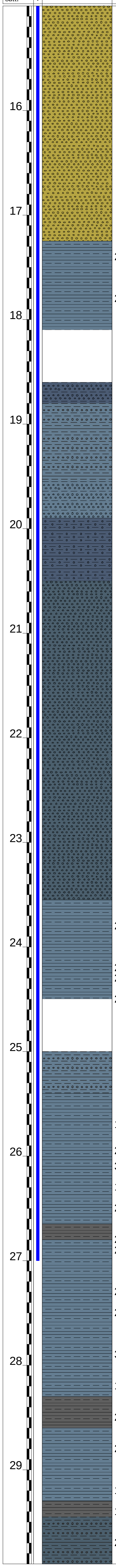

RP	VT	S.P.T. m	S.P.T.	N	Campioni	prof. m	Spess. m	DESCRIZIONE	DATI TECNICI
		15,5	8-13-14	27		17,3	3,1	Sabbia mediamente addensata umida di colore verde oliva chiaro (C.M. 2.5Y 5/3) fino a - 16.85 m da p.c. attuale e di seguito di colore grigio bluastro scuro (C.M. GLAY2 4/10B)	
2.5 2.8	1.0 1.2				5) Ost < 18,10 18,60	18,1	0,9	Argilla limosa compatta umida di colore grigio bluastro (C.M. GLEY2 5/10B). Presenza di calcinoli da - 17.80 m da p.c. attuale.	
						18,6	0,5	Campione indistrurbato OSTERBERG - C5	
						18,8	0,2	Sabbia limosa poco addensata satura di colore grigio bluastro molto scuro (C.M. GLEY2 3/5PB)	
						19,6	0,8	Limo sabbioso fine debolmente argilloso da mediamente addensato a poco addensato molto umido di colore grigio bluastro (GLAY2 5/10B) con striature rossastre.	
						19,9	0,4	Sabbia limosa fine poco addensata satura di colore ggrigio bluastro (GLAY2 5/10B)	
		20,5	5-7-9	16		20,5	0,6	Limo sabbioso fine poco addensato satura di colore grigio bluastro molto scuro (GLAY2 3/10B).	
		22,0	10-14-21	35		23,6	3,0	Sabbia media mediamente addensata satura di colore grigio bluastro scuro (GLAY2 4/10B)	
2.6 2.5 2.8 2.0	1.1 1.0 1.2 0.8				6) Ost < 24,50 25,00	24,5	1,0	Argilla limosa compatta umida di colore grigio bluastro (C.M. GLEY2 5/5B) con striature rossastre. Abbondante presenza di calcinoli.	
						25,0	0,5	Campione indistrurbato OSTERBERG - C6	
	95					25,4	0,4	Limo sabbioso molto fine debolmente argilloso poco addensato satura di colore grigio bluastro (GLAY2 5/5B) con striature rossastre.	
1.2 2.5 3.0 1.8 2.0	0.5 1.2 1.4 0.4 1.0					26,7	1,3	Argilla limosa a media consistenza con sottili intercalazioni limo-sabbiose presenti fino a - 25.90 m da p.c. Seguita da argilla liomosa compatta fino a - 26.20 m da p.c. e nuovamente da argilla limosa a media consistenza e platica. Tale deposito argilliso si presenta umido di colore grigio bluastro (C.M. GLEY2 5/5B) con striature rossastre con all'interno dei calcinoli sparsi.	
						26,8	0,1	Argilla limosa compatta, umida di colore grigio molto scuro (C.M. GLEY1 3/N).	
2.5 2.4 2.5 2.5 3.0 1.3	1.1 0.9 1.0 1.0 1.4 0.6					28,3	1,5	Argilla limosa compatta leggermente umido di colore grigio bluastro (C.M. GLEY2 5/5B) con all'interno dei calcinoli sparsi.	
2.5	0.9					28,6	0,3	Argilla limosa compatta, umida di colore grigio molto scuro (C.M. GLEY1 3/N)	
2.0 1.8	0.6 0.7					29,3	0,7	Argilla limosa compatta leggermente umido di colore grigio bluastro (C.M. GLEY2 5/5B) con all'interno dei calcinoli sparsi.	
1.8	0.6					29,5	0,2	Argilla limosa compatta, umida di colore grigio molto scuro (C.M. GLEY1 3/N)	
2.2	1.0					29,9	0,4	Limo Argilloso debolmente sabbioso mediamente consistente, umido di colore grigio bluastro scuro (GLAY2 4/5B)	

Prove penetrometriche statiche con punta meccanica CPT

Geo Group Srl
GEOLOGIA E AMBIENTE
Via Cesare Costa 182
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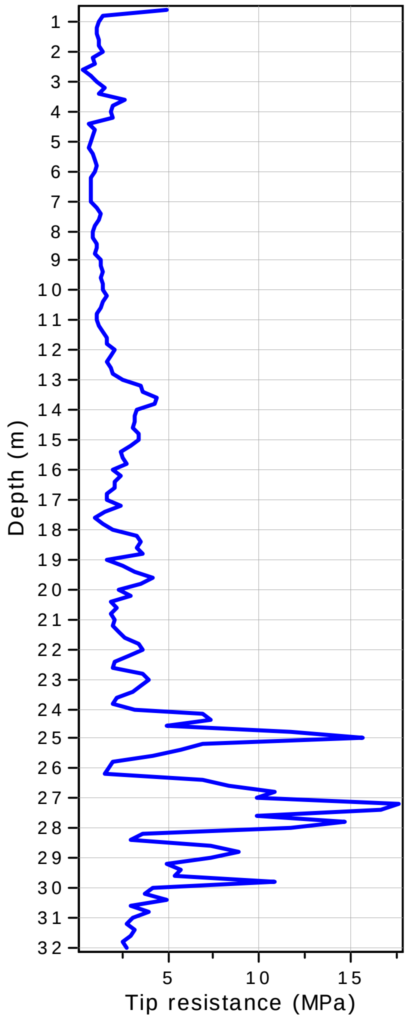
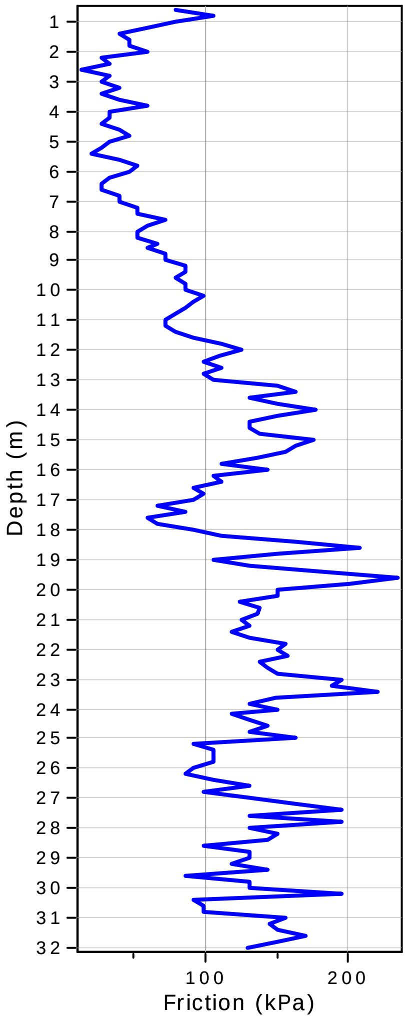
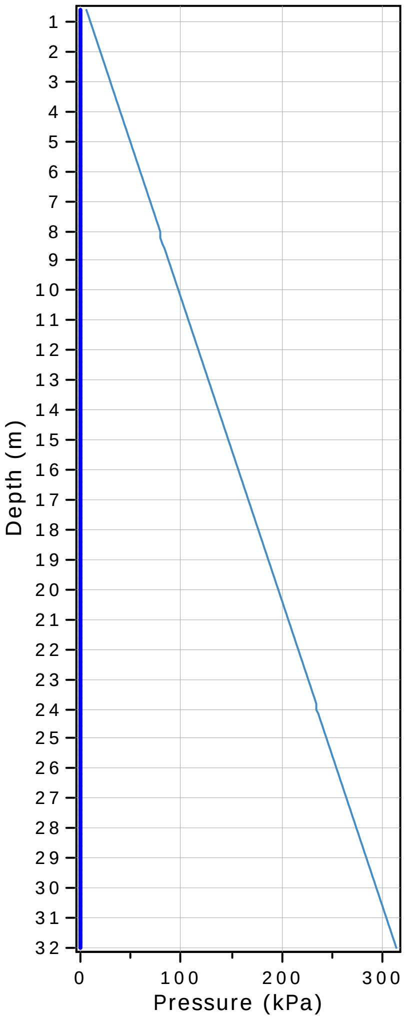
CPT: 036021P100CPT100
Total depth: 32.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

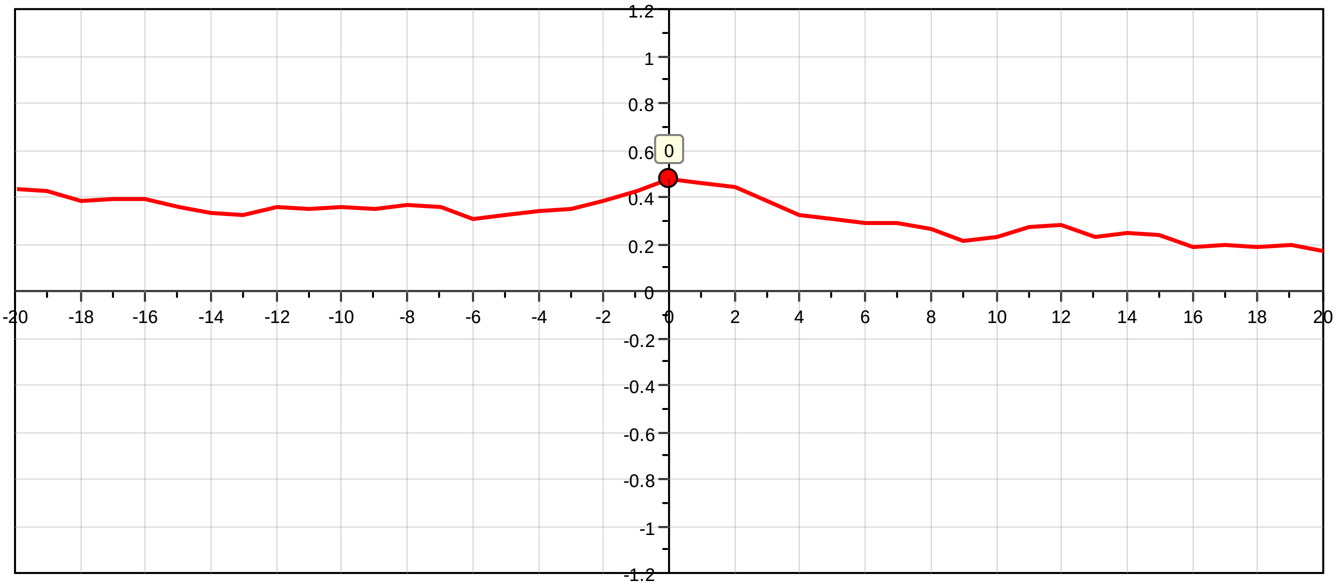
Project:
Location:


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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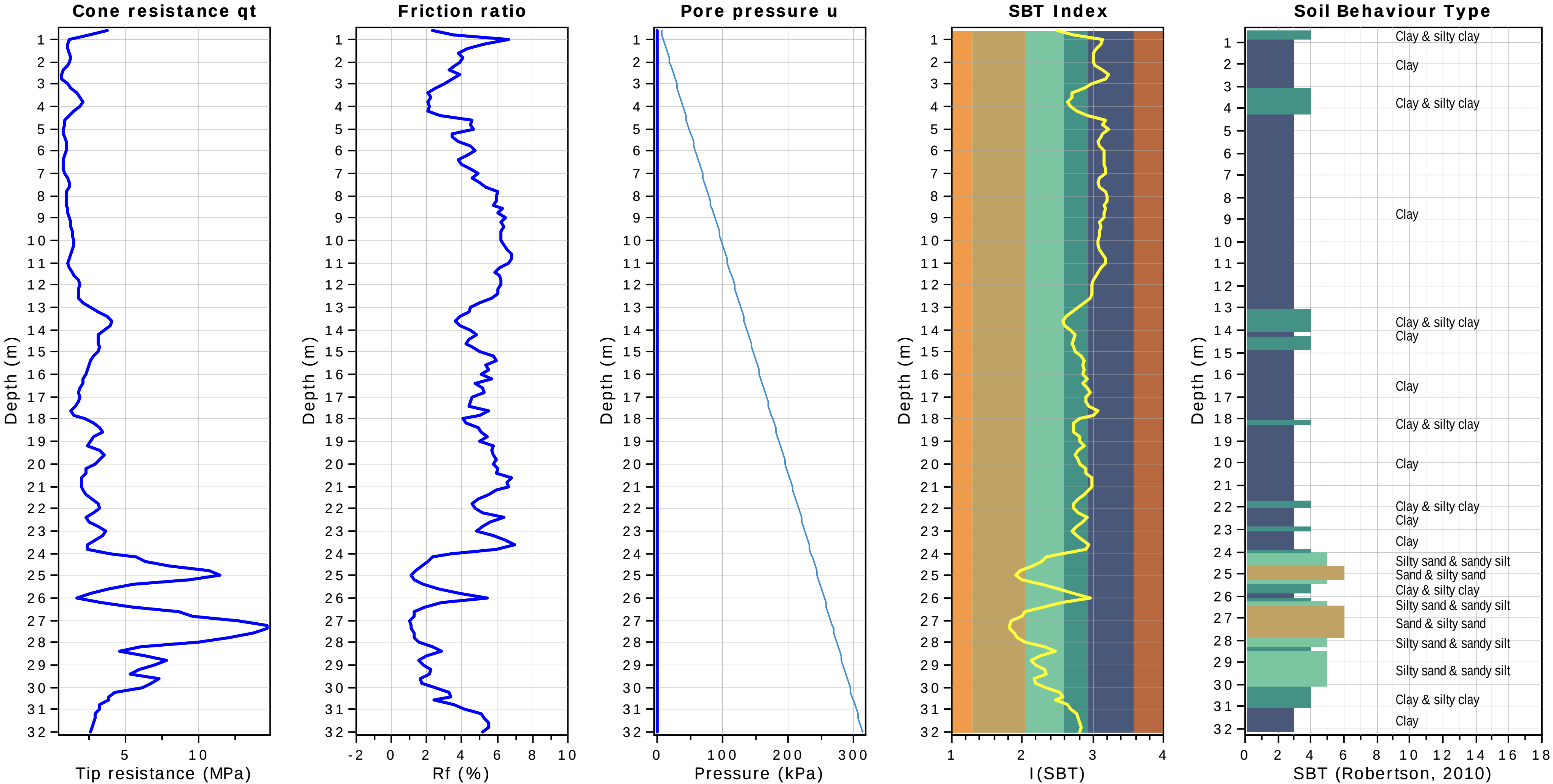
CPT: 036021P100CPT100
Total depth: 32.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬛ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

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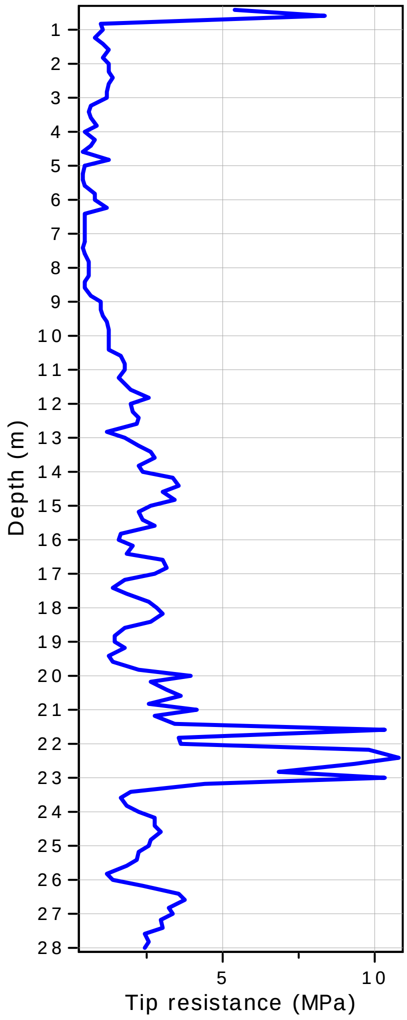
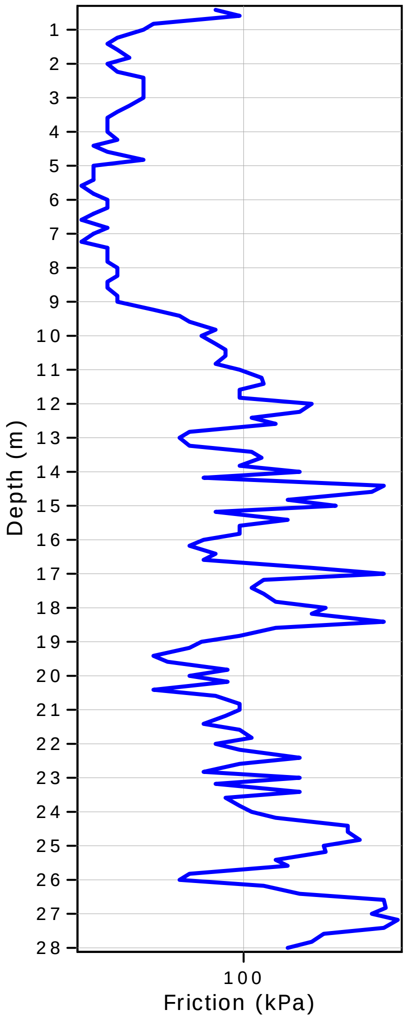
CPT: 036021P101CPT101
Total depth: 28.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

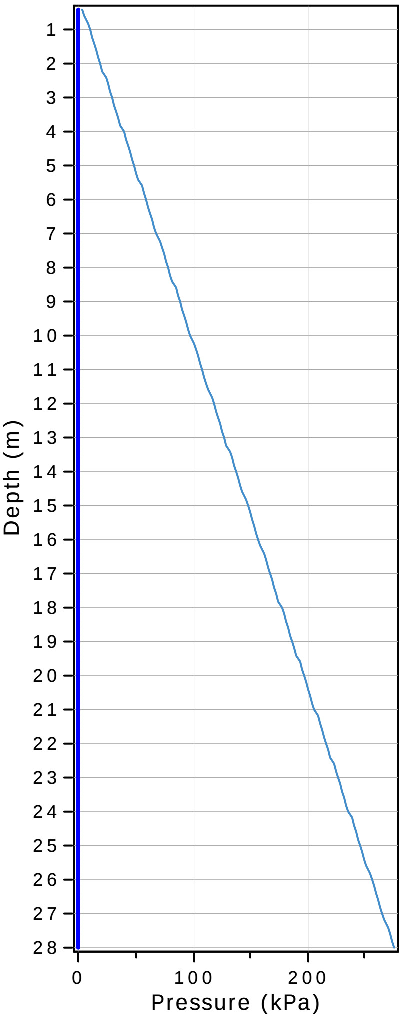
Cone resistance



Sleeve friction

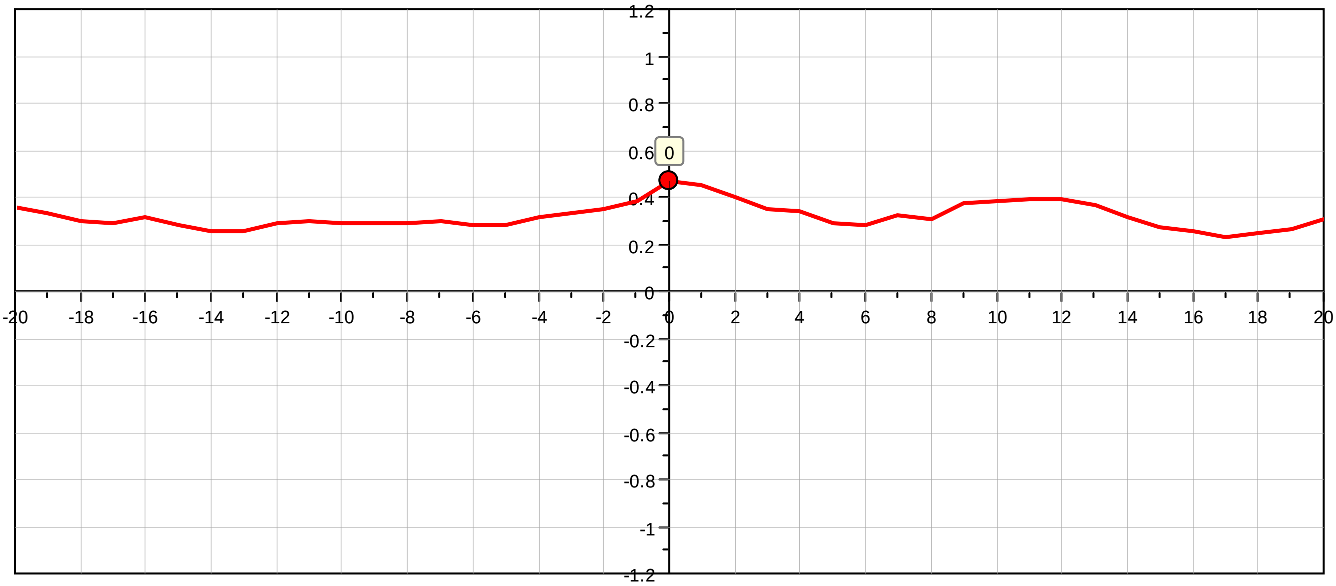


Pore pressure



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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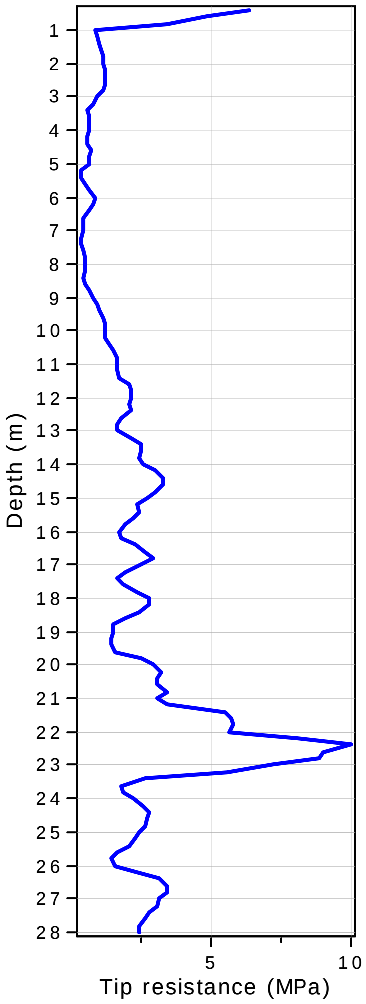
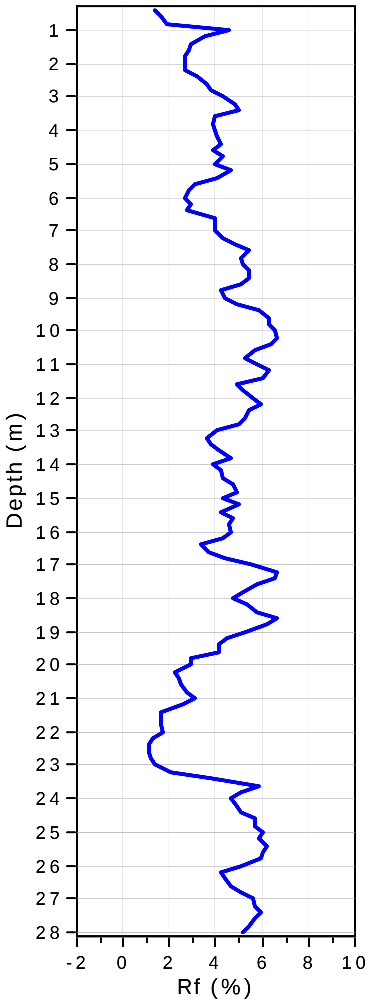
CPT: 036021P101CPT101
Total depth: 28.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

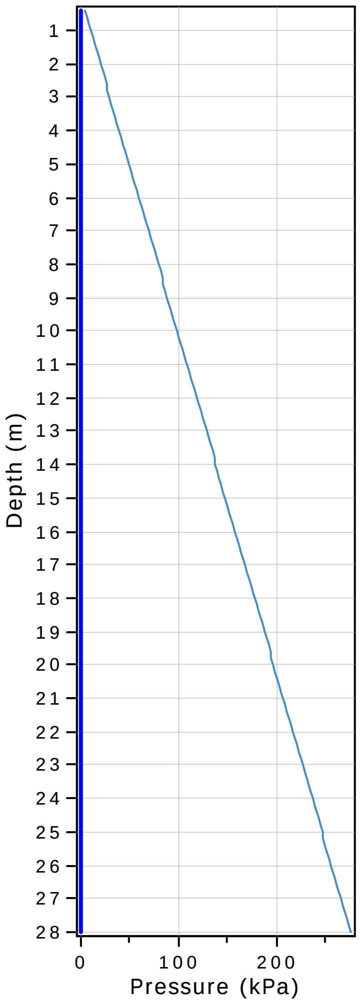
Cone resistance qt



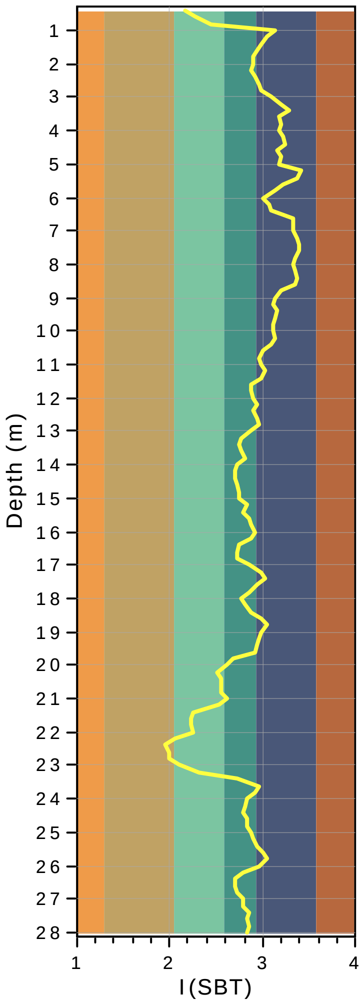
Friction ratio



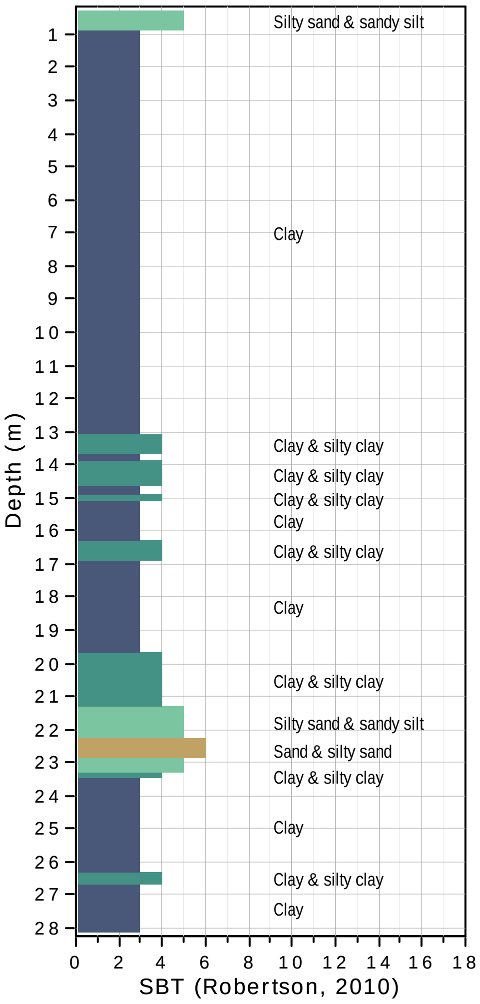
Pore pressure u



SBT Index



Soil Behaviour Type



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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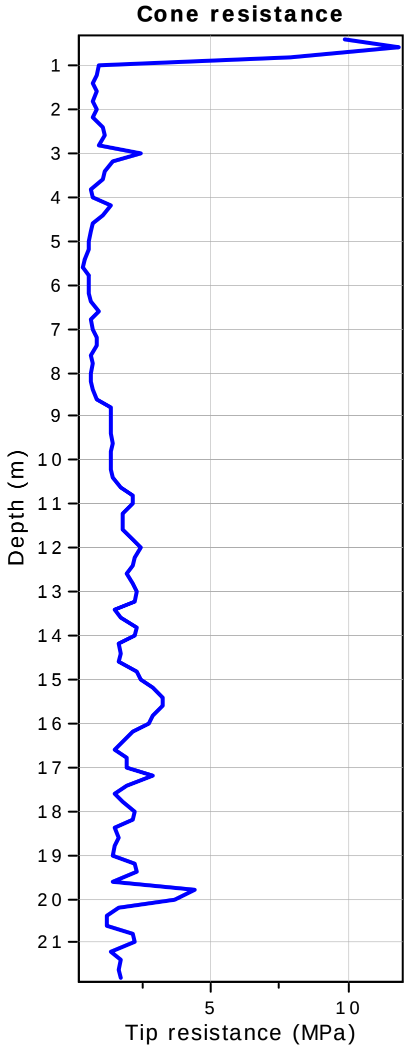
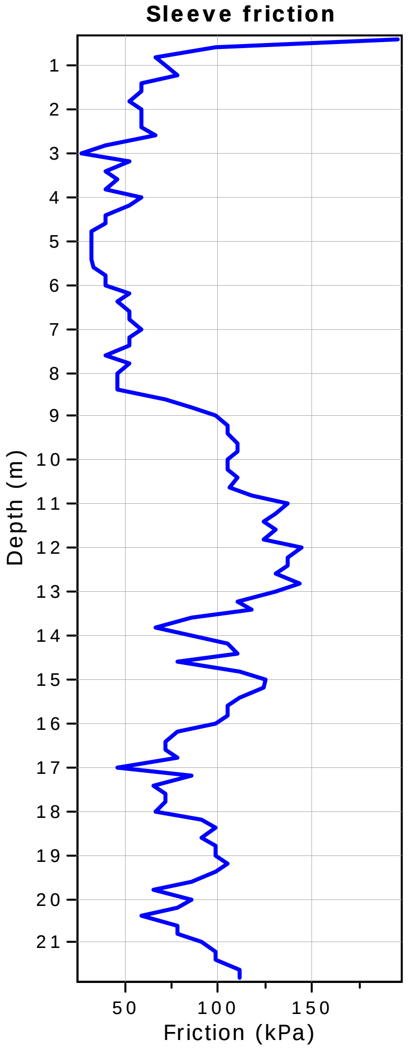
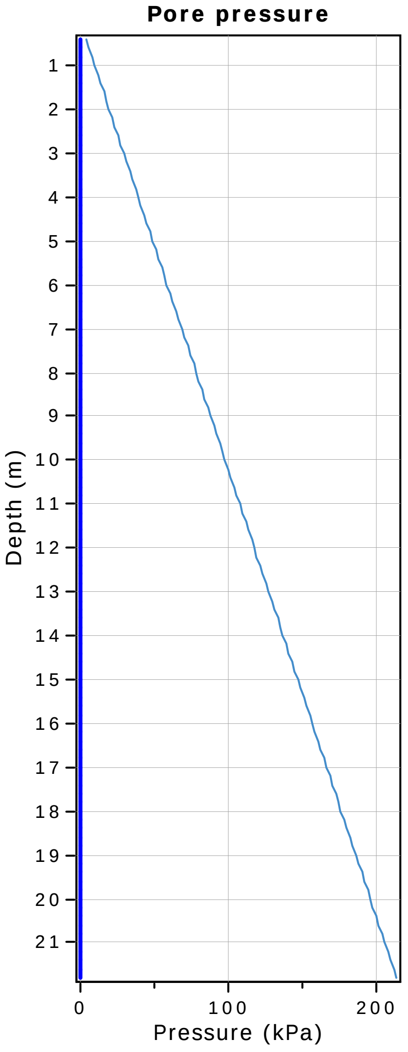
CPT: 036021P102CPT102
Total depth: 21.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

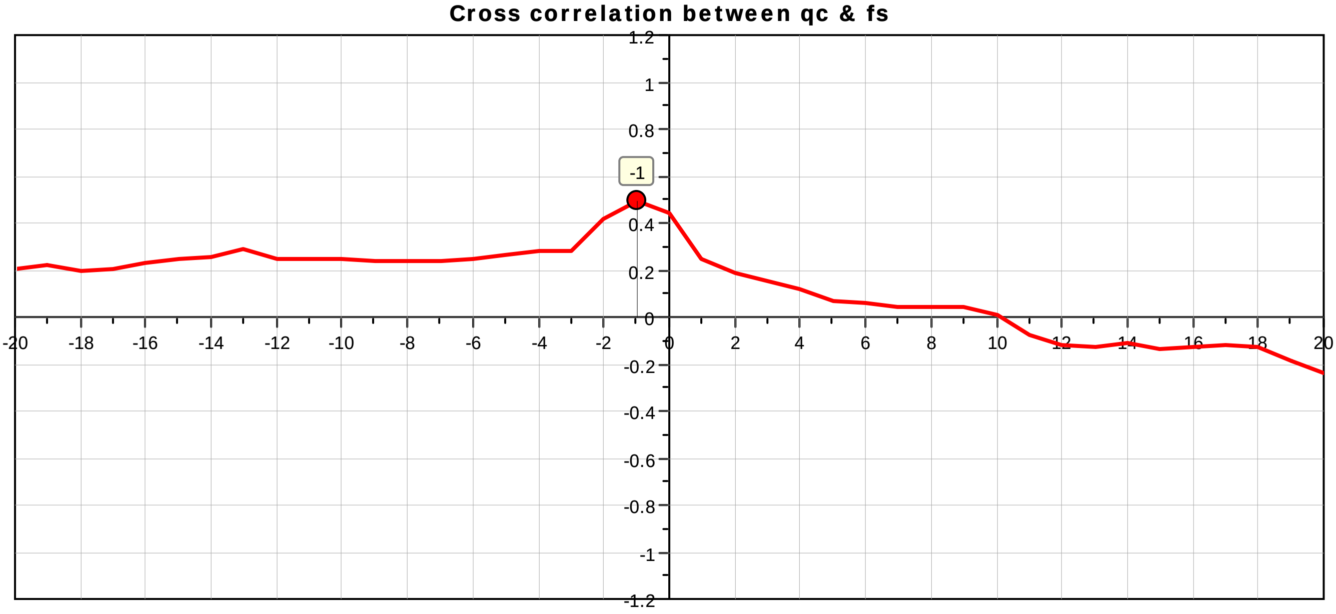
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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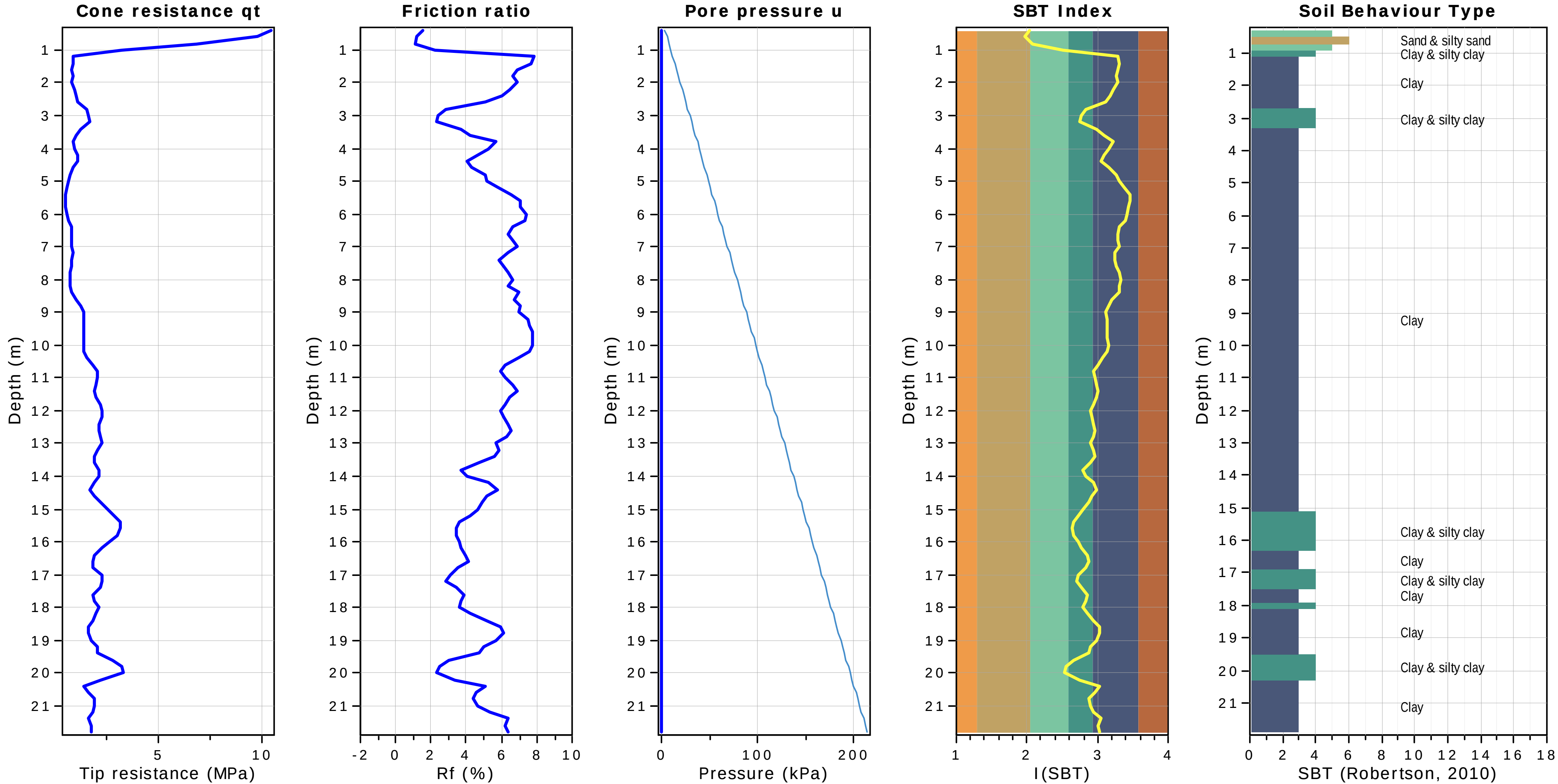
CPT: 036021P102CPT102
Total depth: 21.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟨 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

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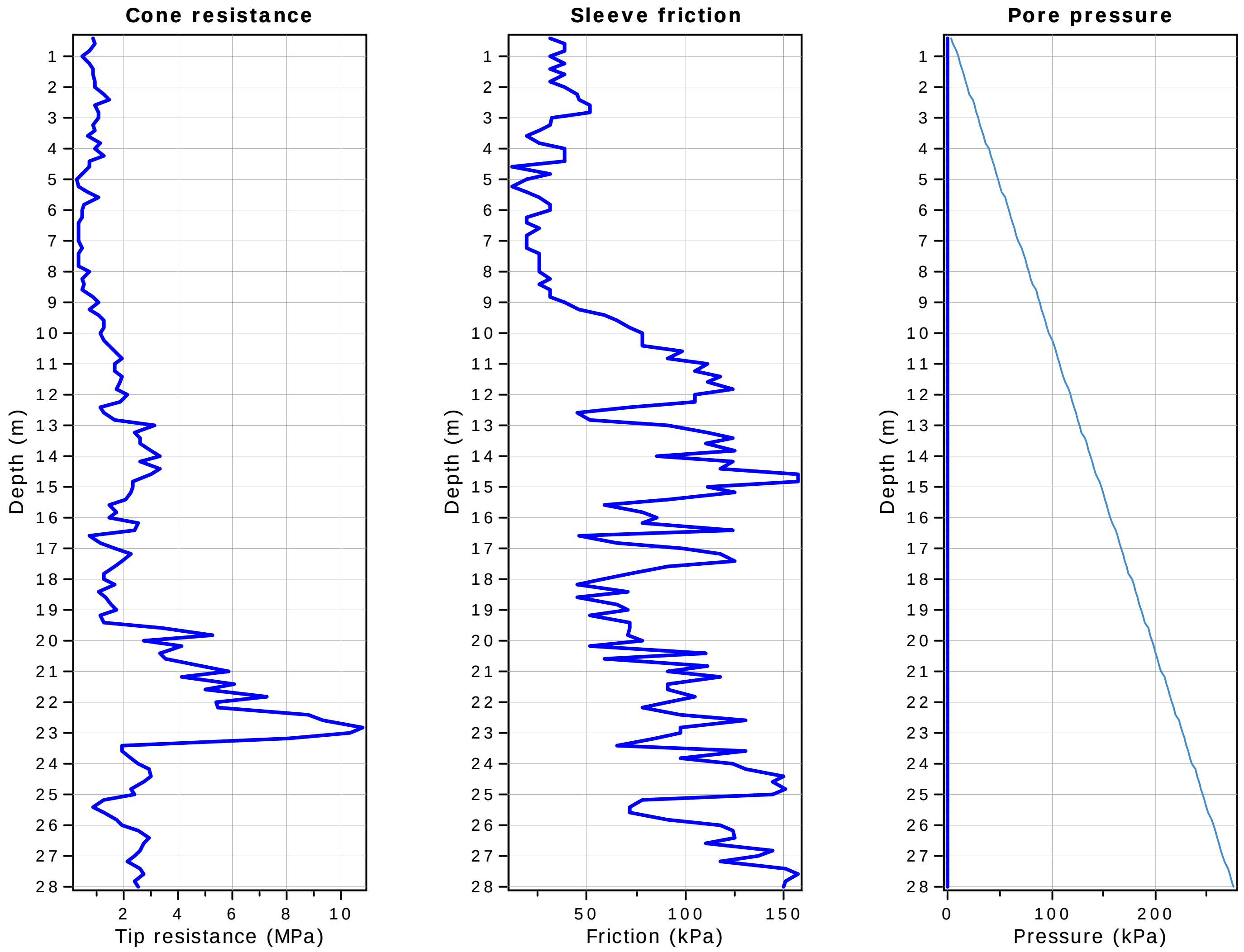
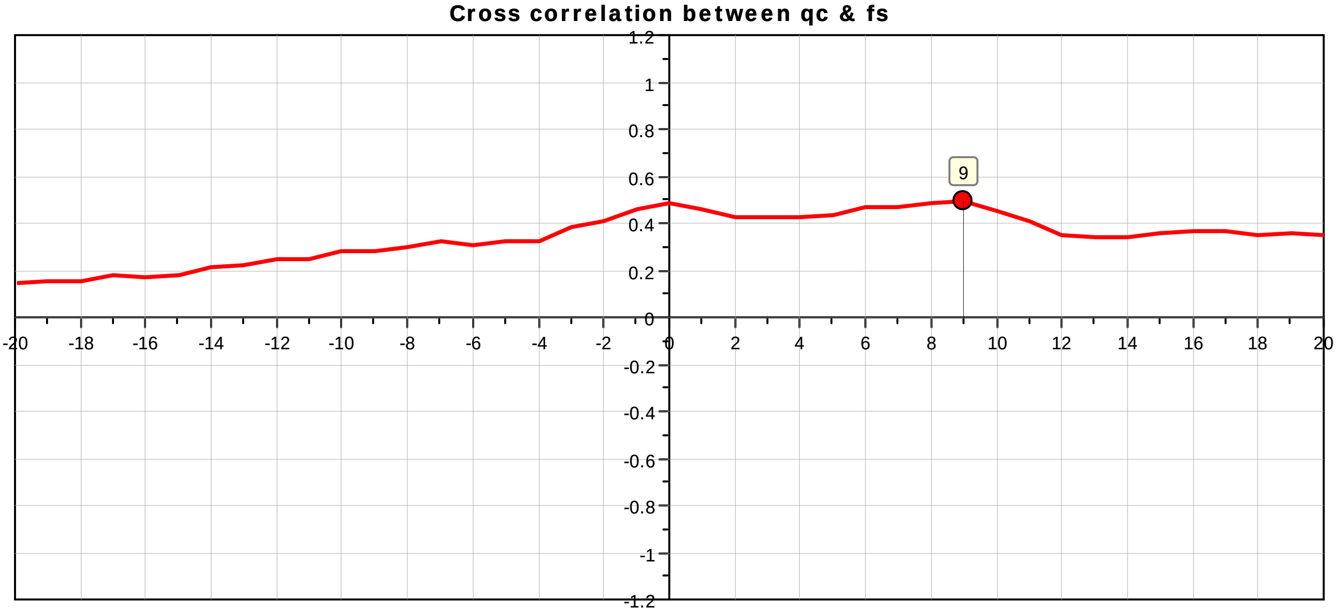
CPT: 036021P104CPT104
Total depth: 28.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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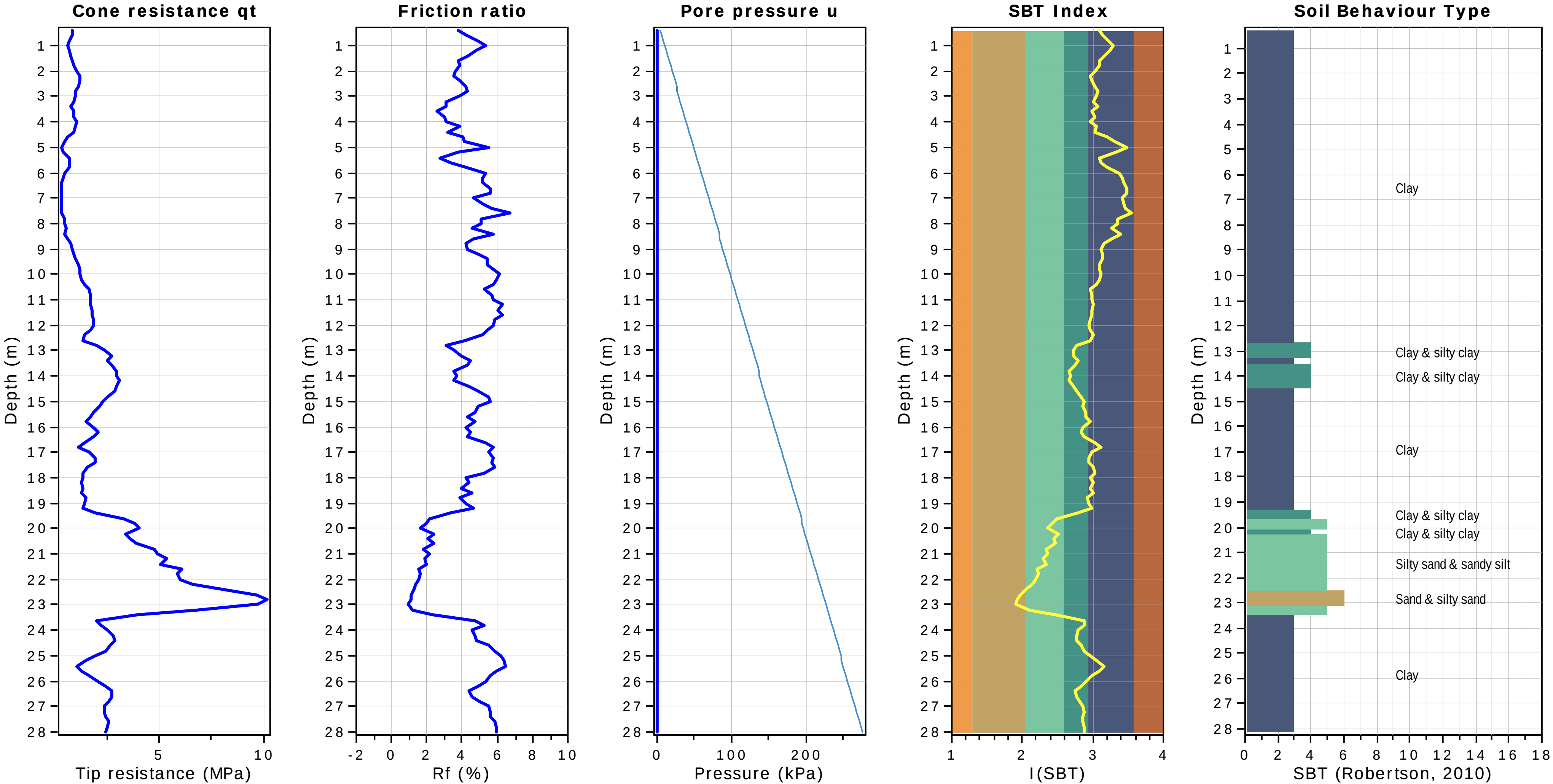
CPT: 036021P104CPT104
Total depth: 28.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

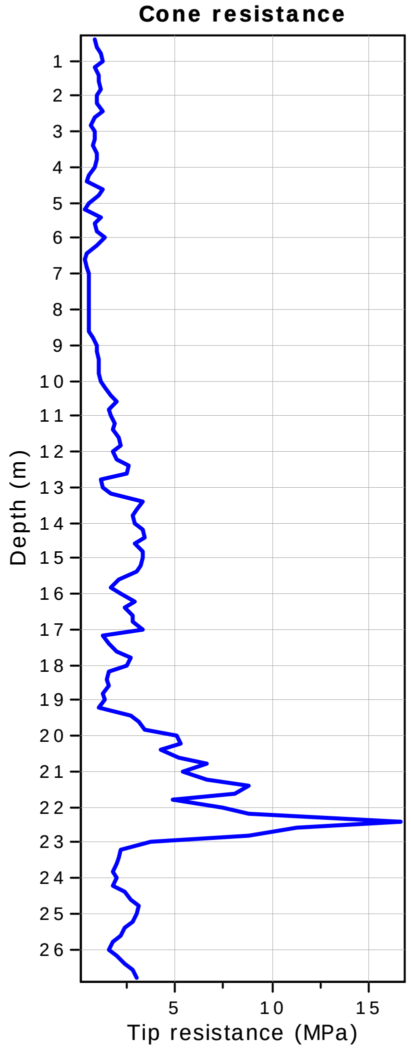


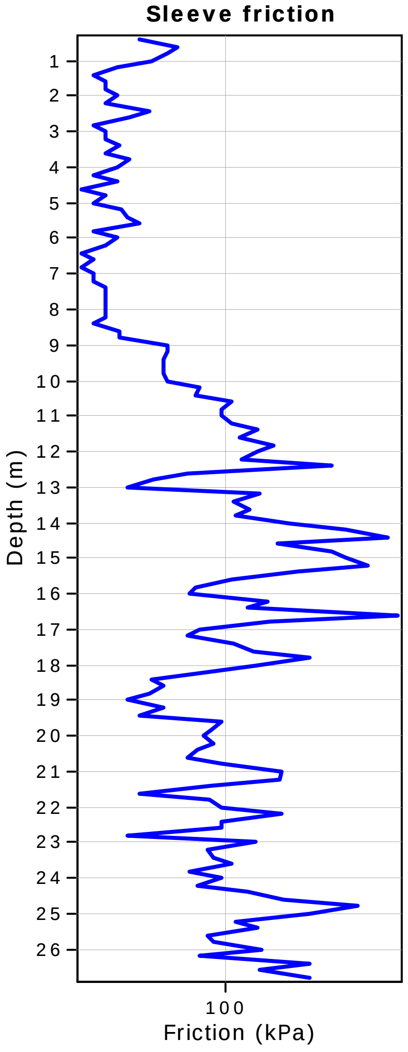
SBT legend

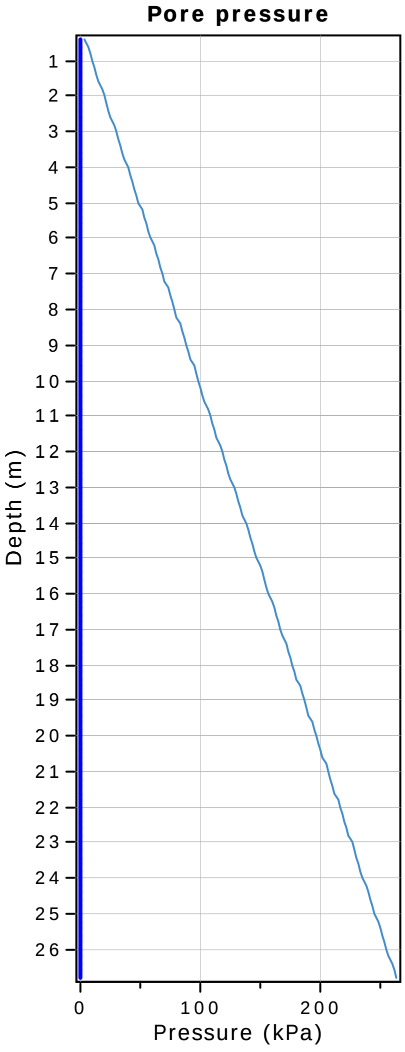
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P16CPT16
Total depth: 26.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

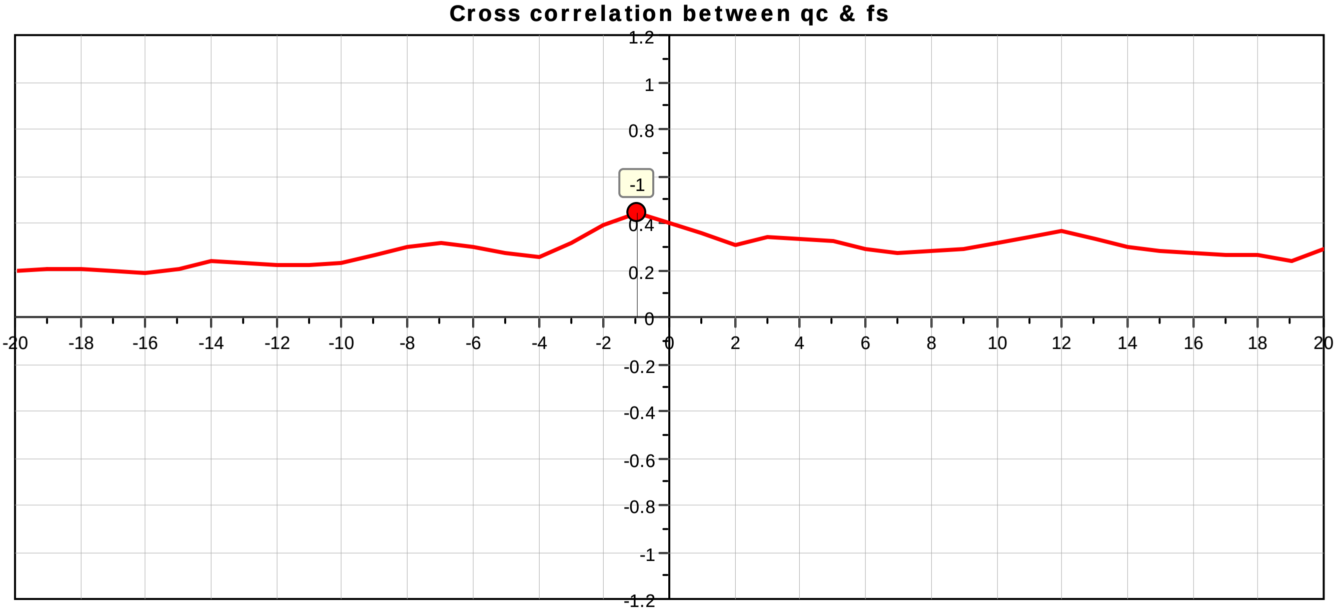
Project:
Location:


Cone resistance


Sleeve friction

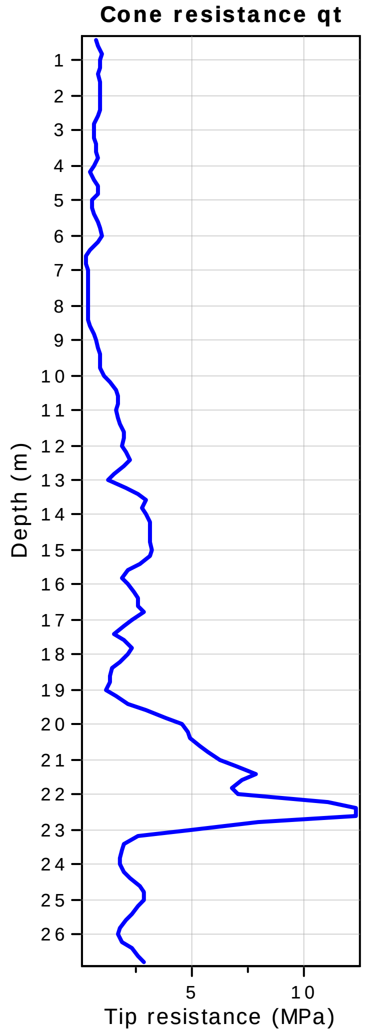

Pore pressure

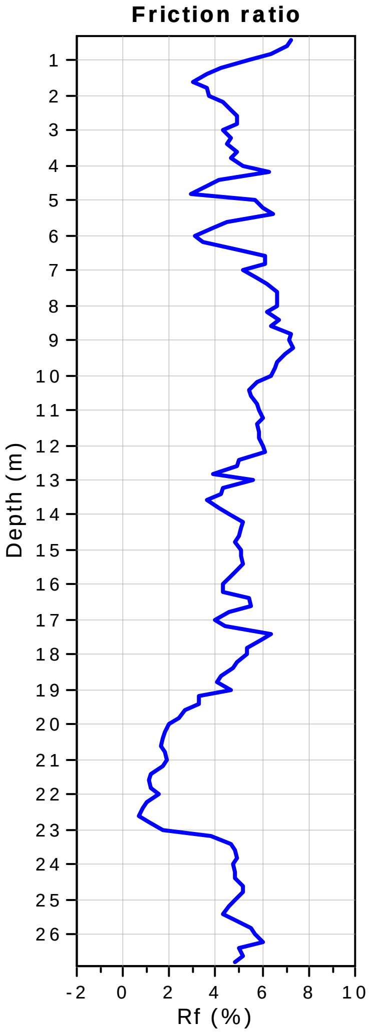
The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

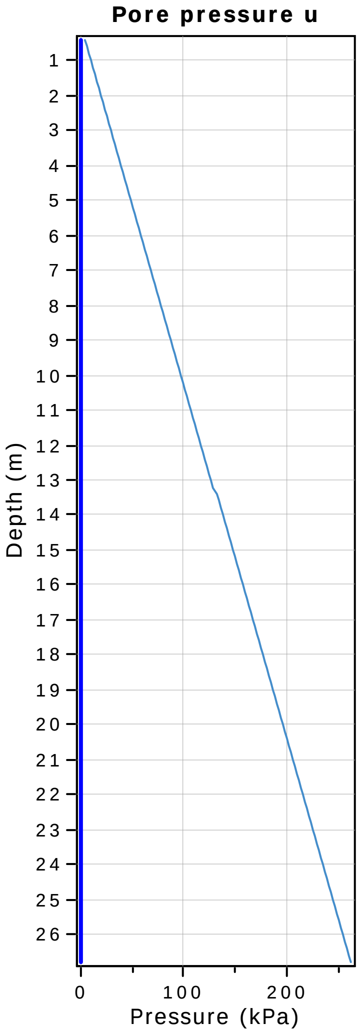

Cross correlation between qc & fs

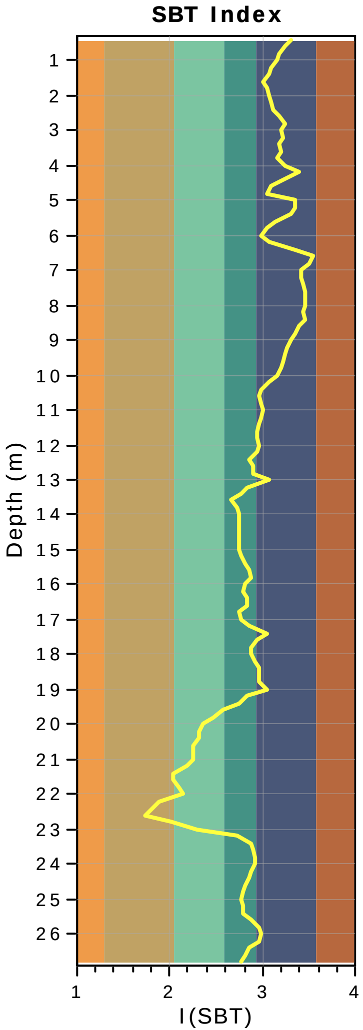
CPT: 036021P16CPT16
Total depth: 26.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

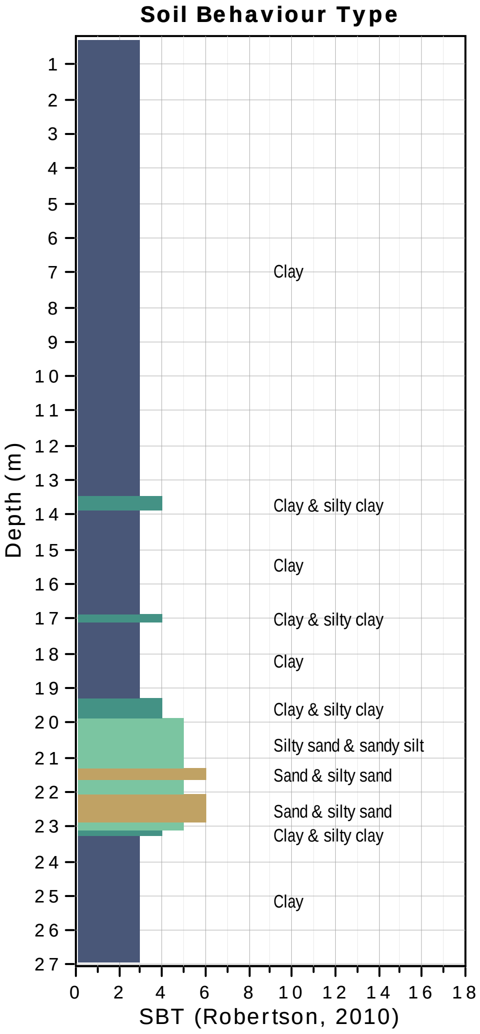
Project:
Location:





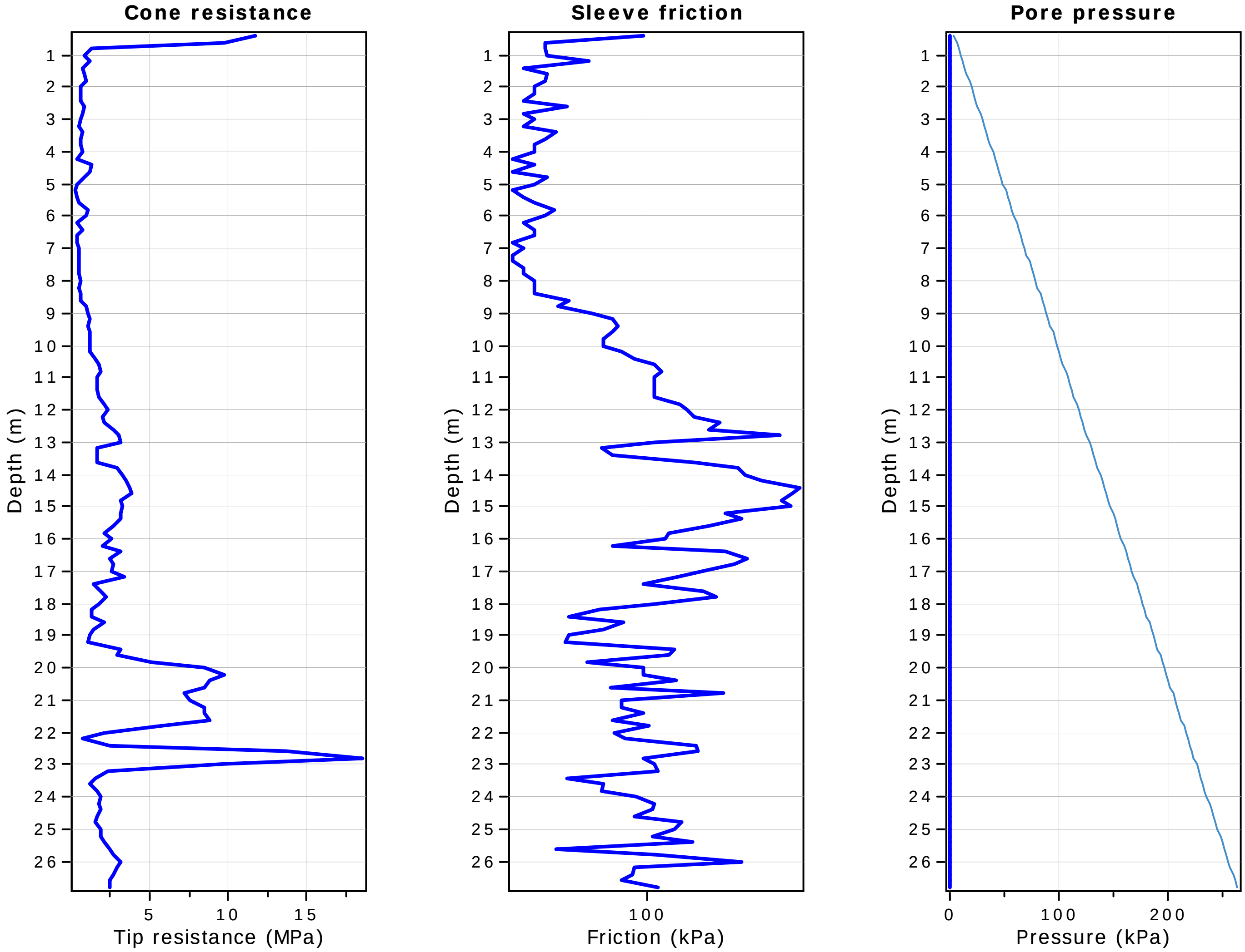




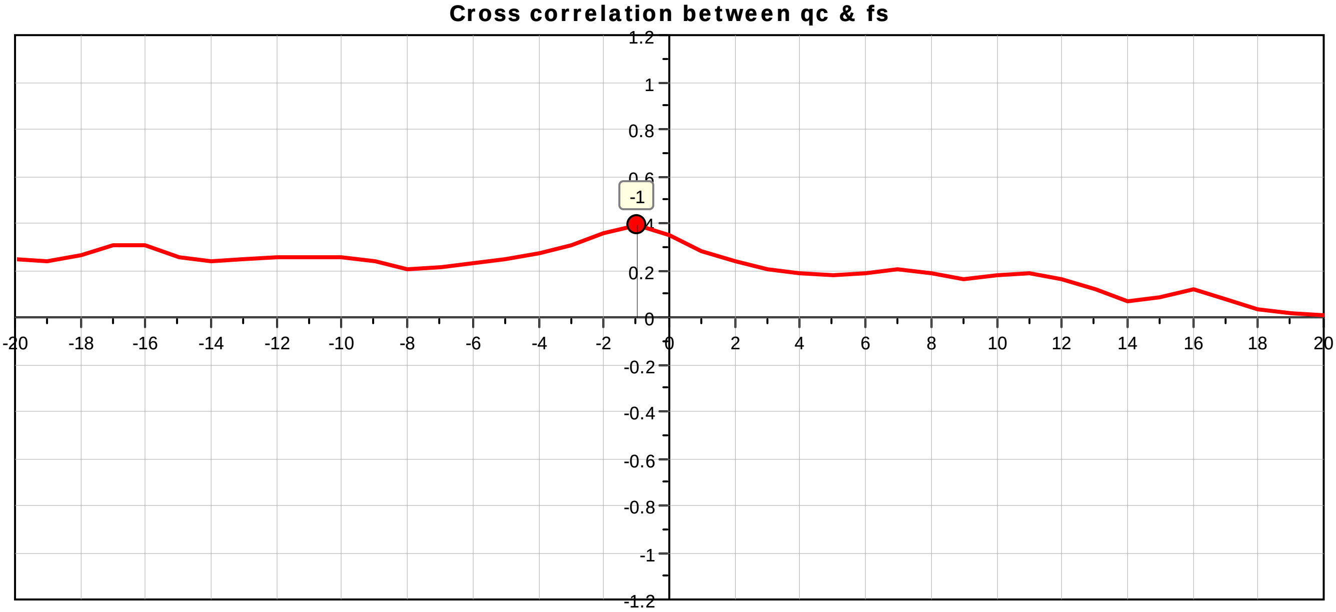


SBT legend

🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟨 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained


Cone resistance
Sleeve friction
Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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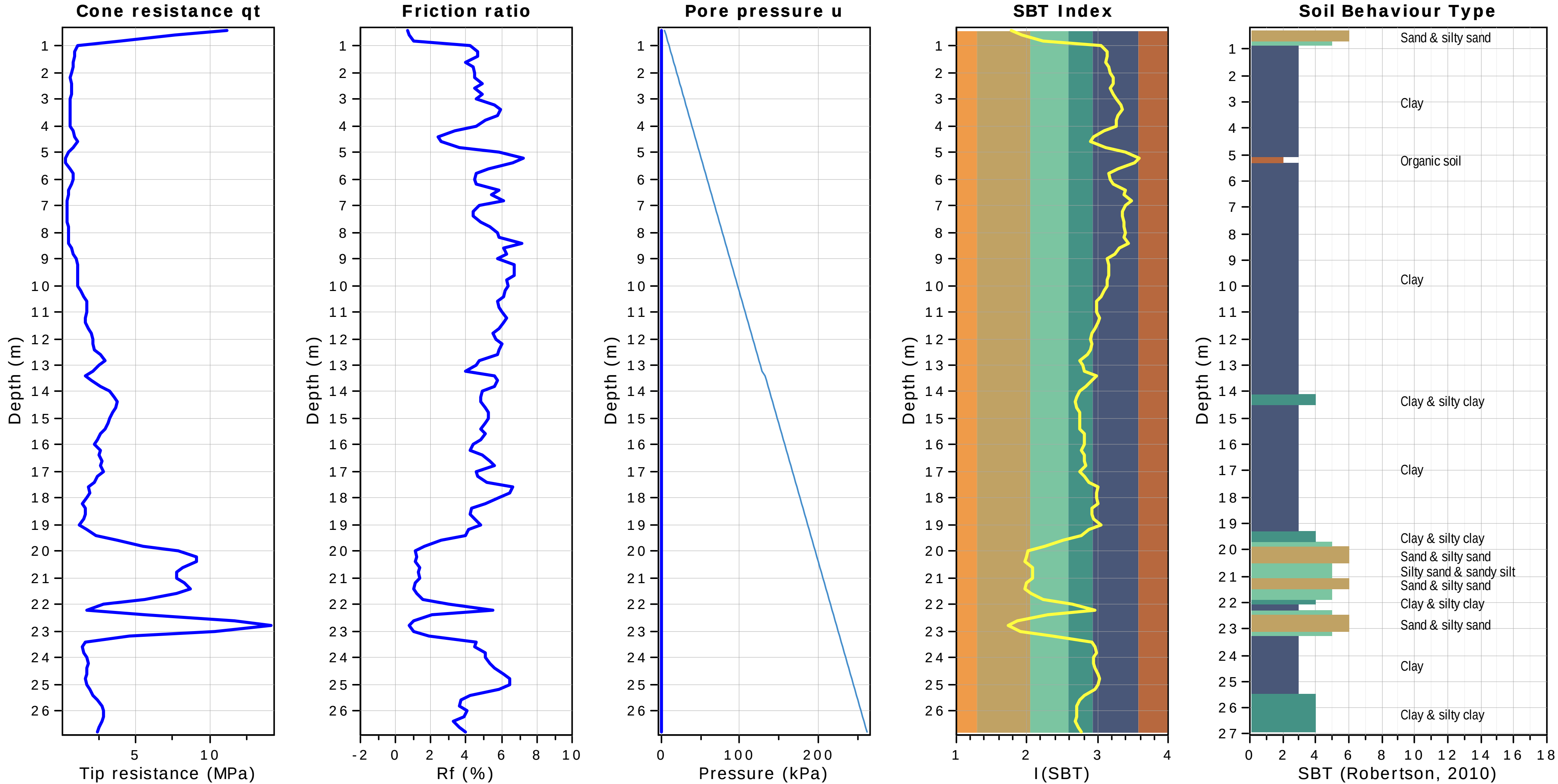
CPT: 036021P108CPT108
Total depth: 26.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

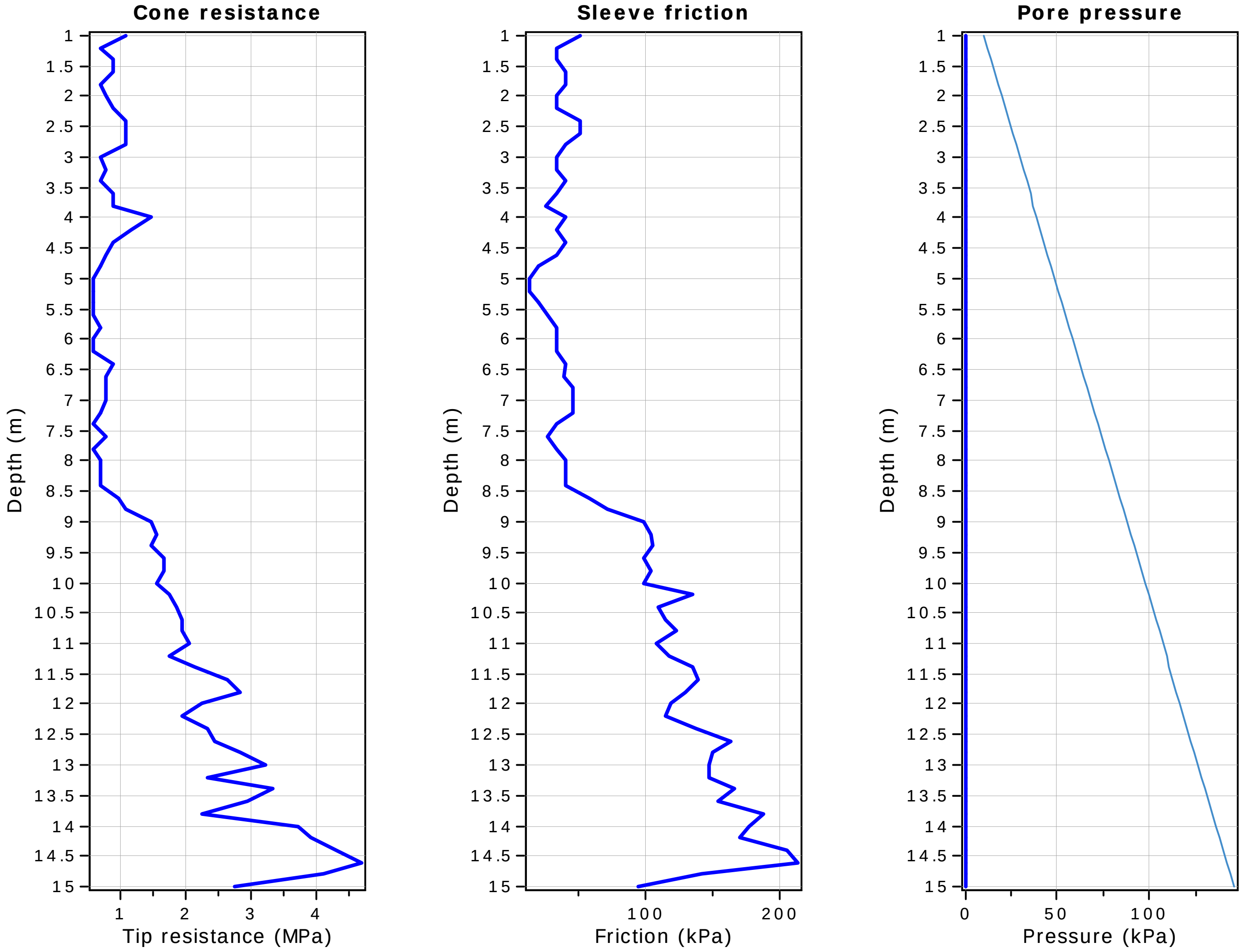


SBT legend

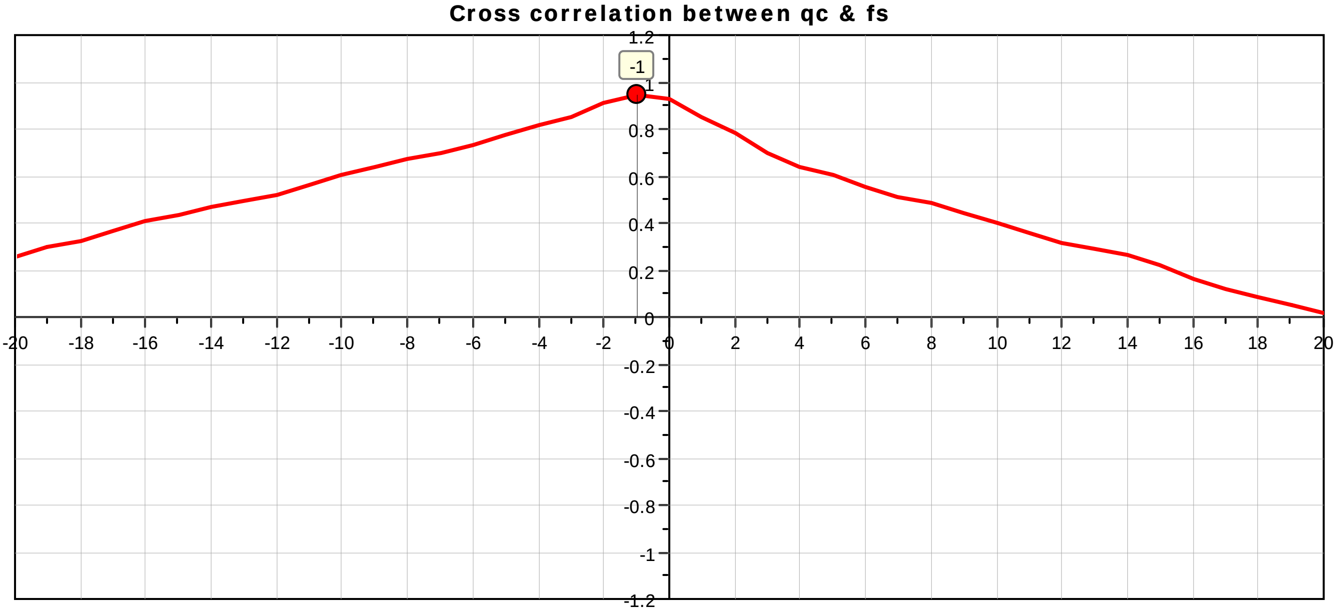
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟫 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

CPT: 036021P109CPT109
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

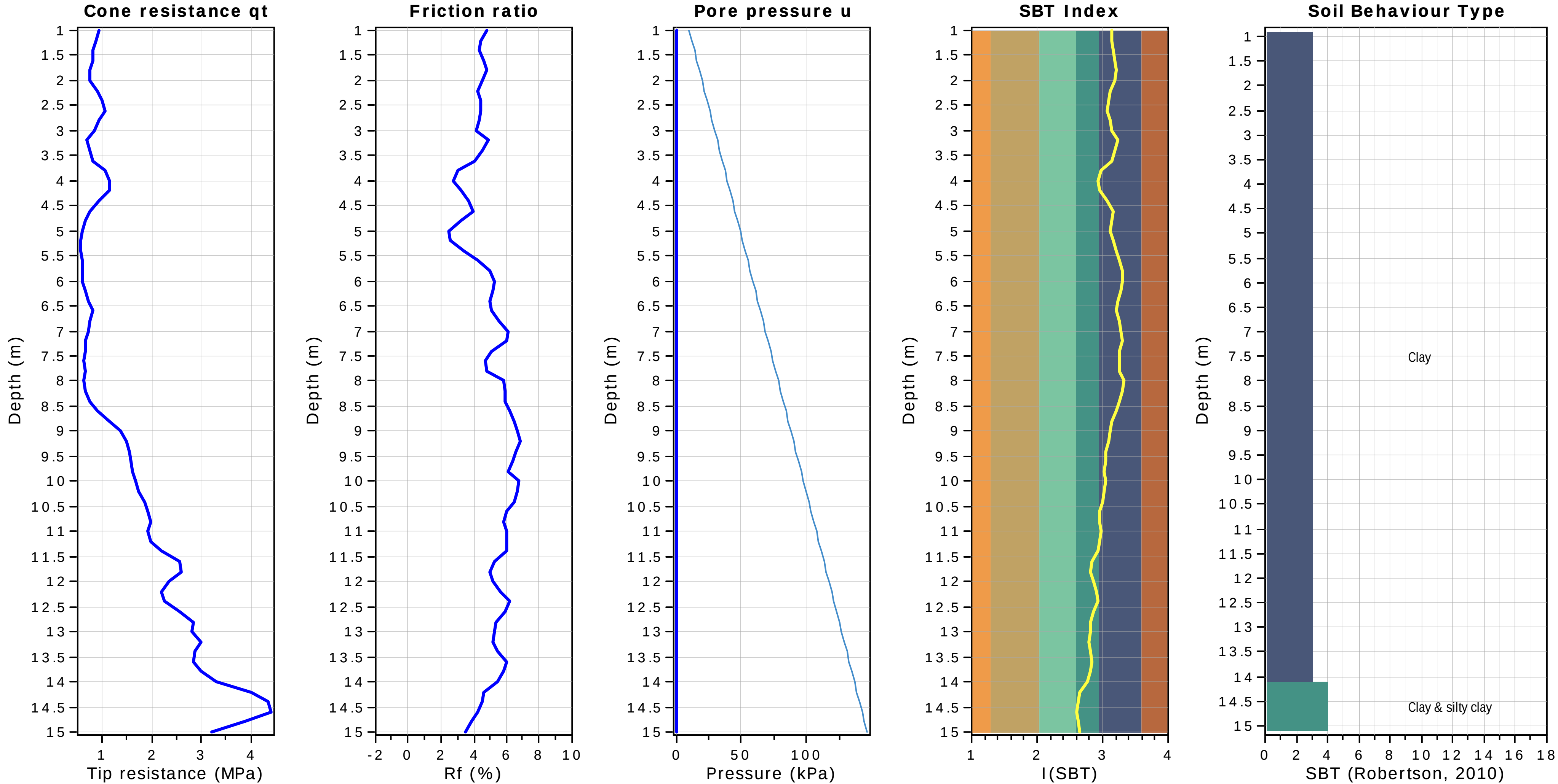


The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT: 036021P109CPT109
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

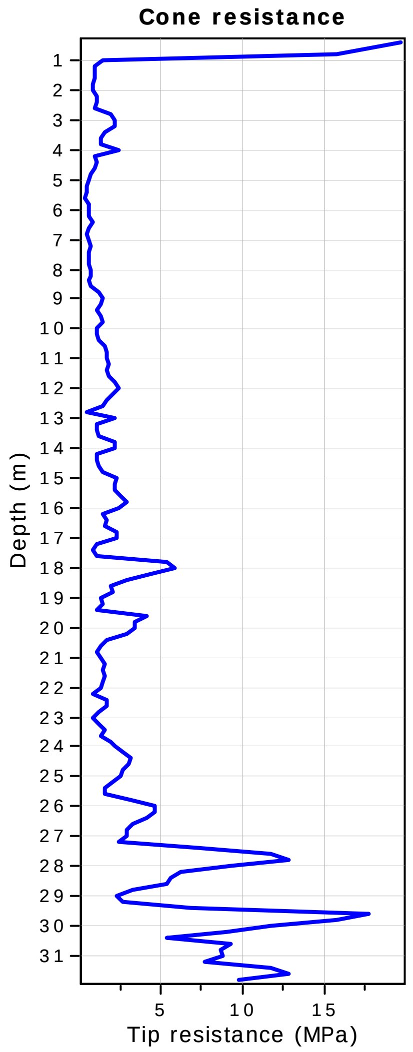


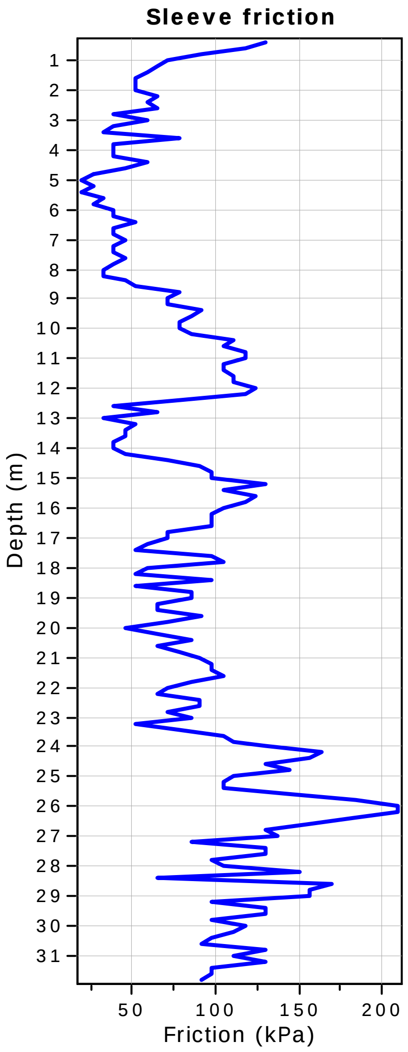
SBT legend

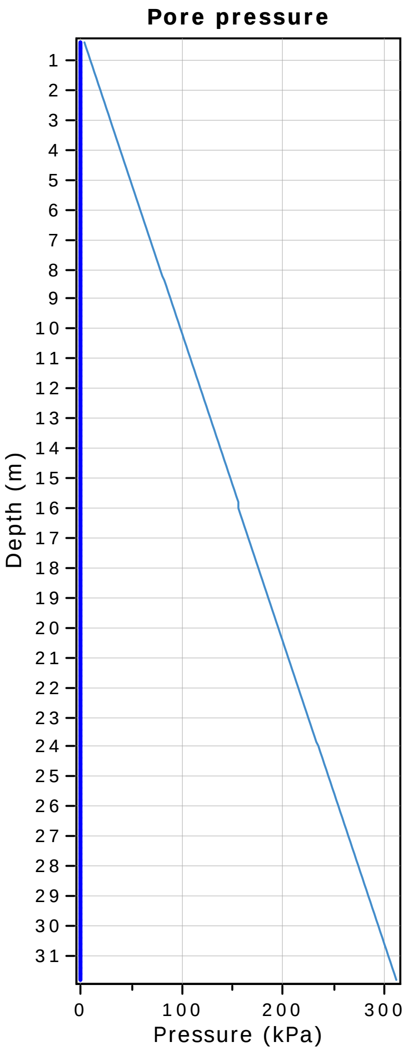
🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬛ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟨 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

CPT: 036021P110CPT110
Total depth: 31.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

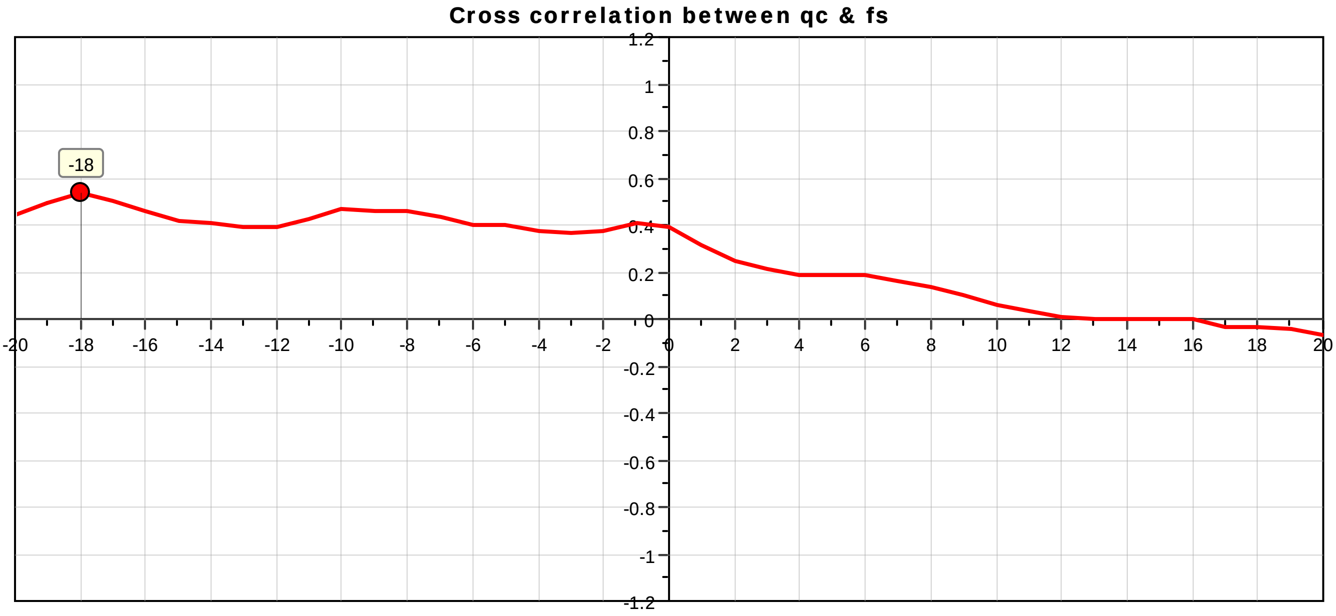
Project:
Location:





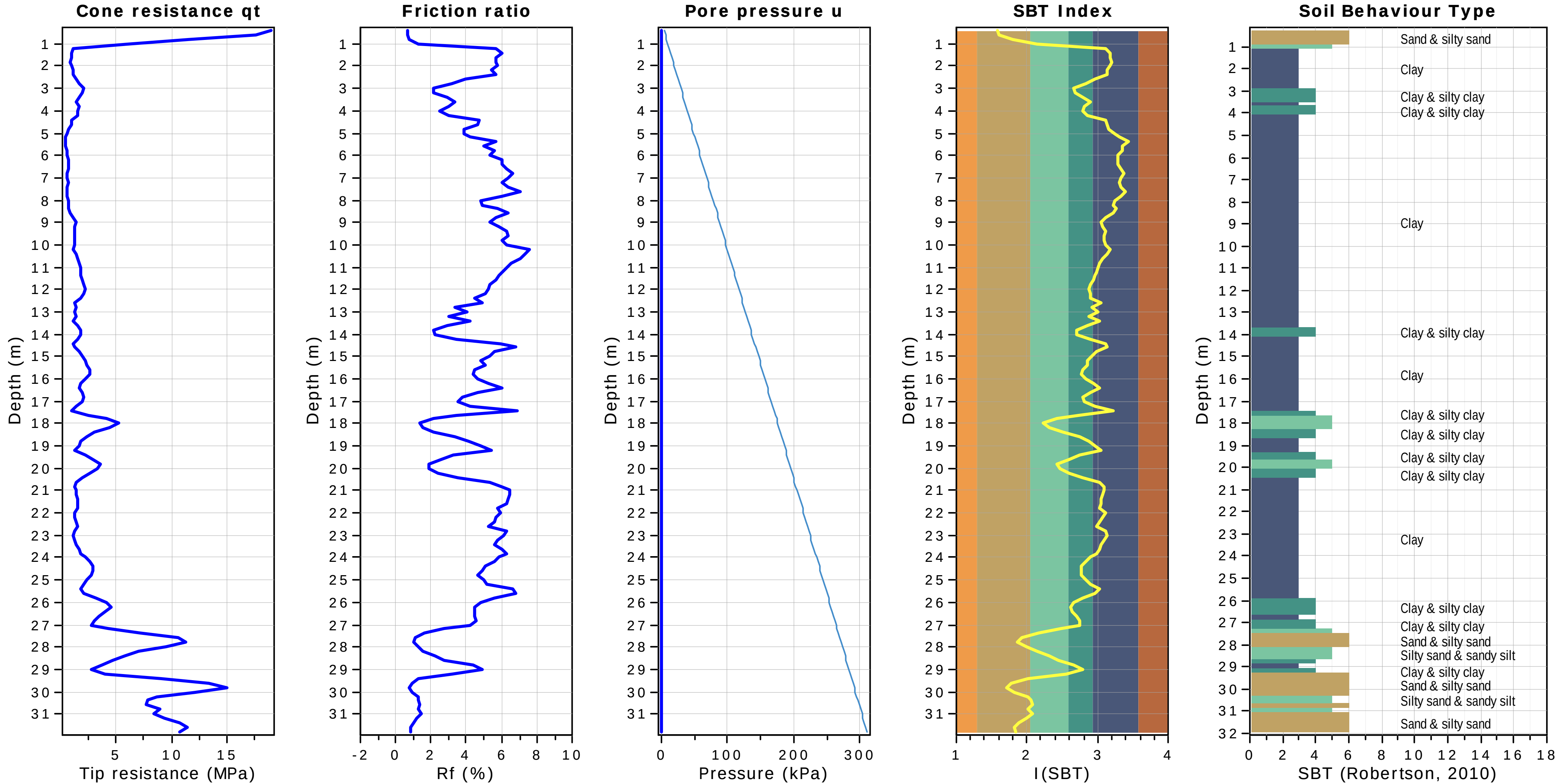


The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT: 036021P110CPT110
Total depth: 31.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

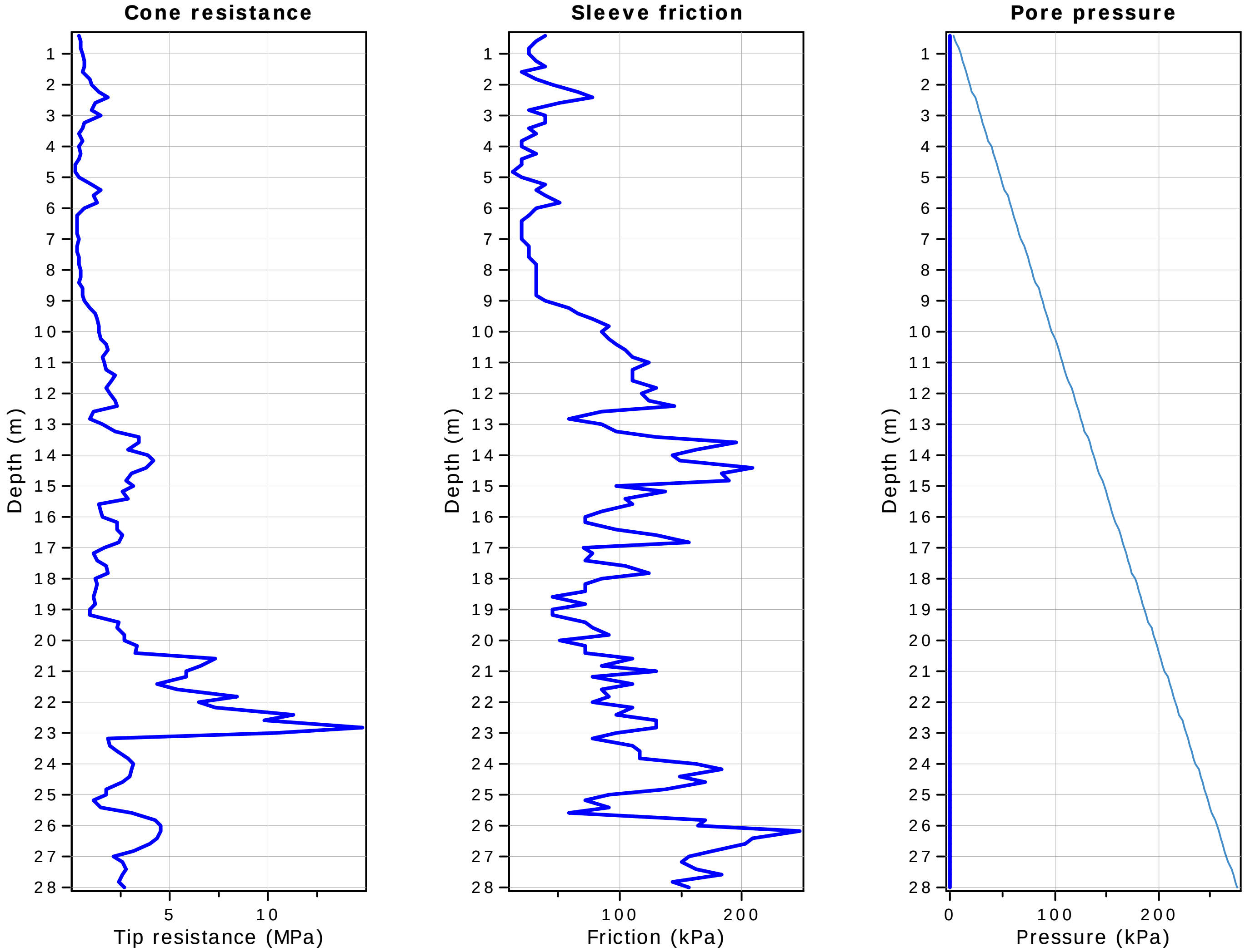


SBT legend

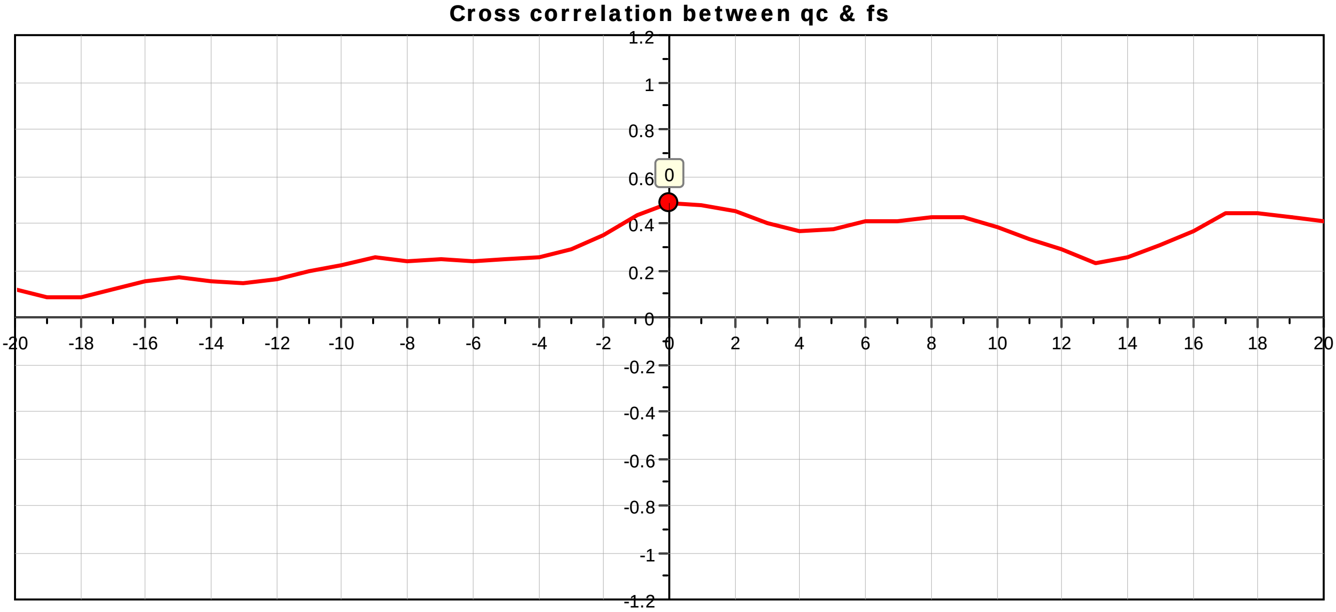
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P111CPT111
Total depth: 28.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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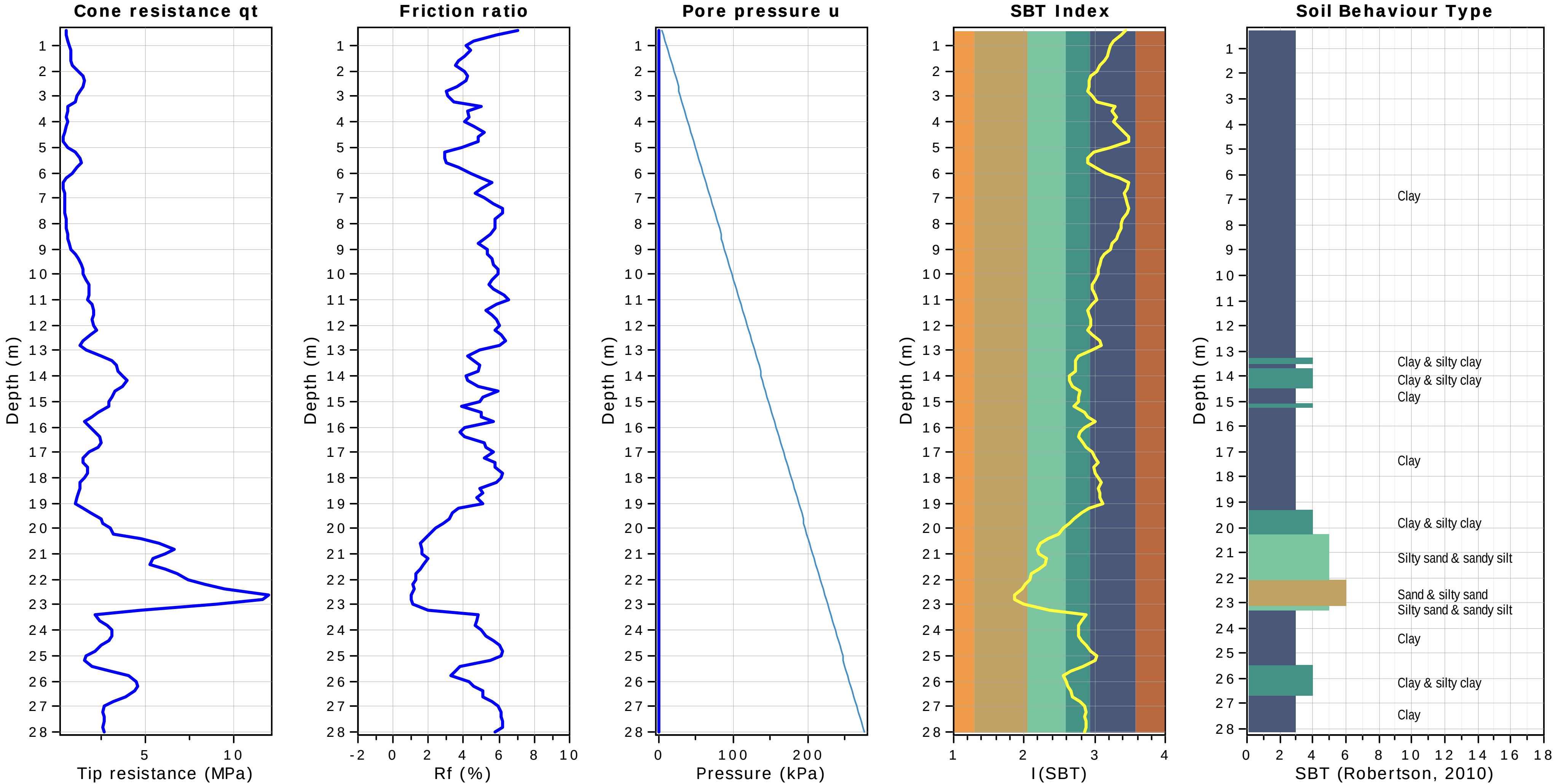
CPT: 036021P111CPT111
Total depth: 28.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

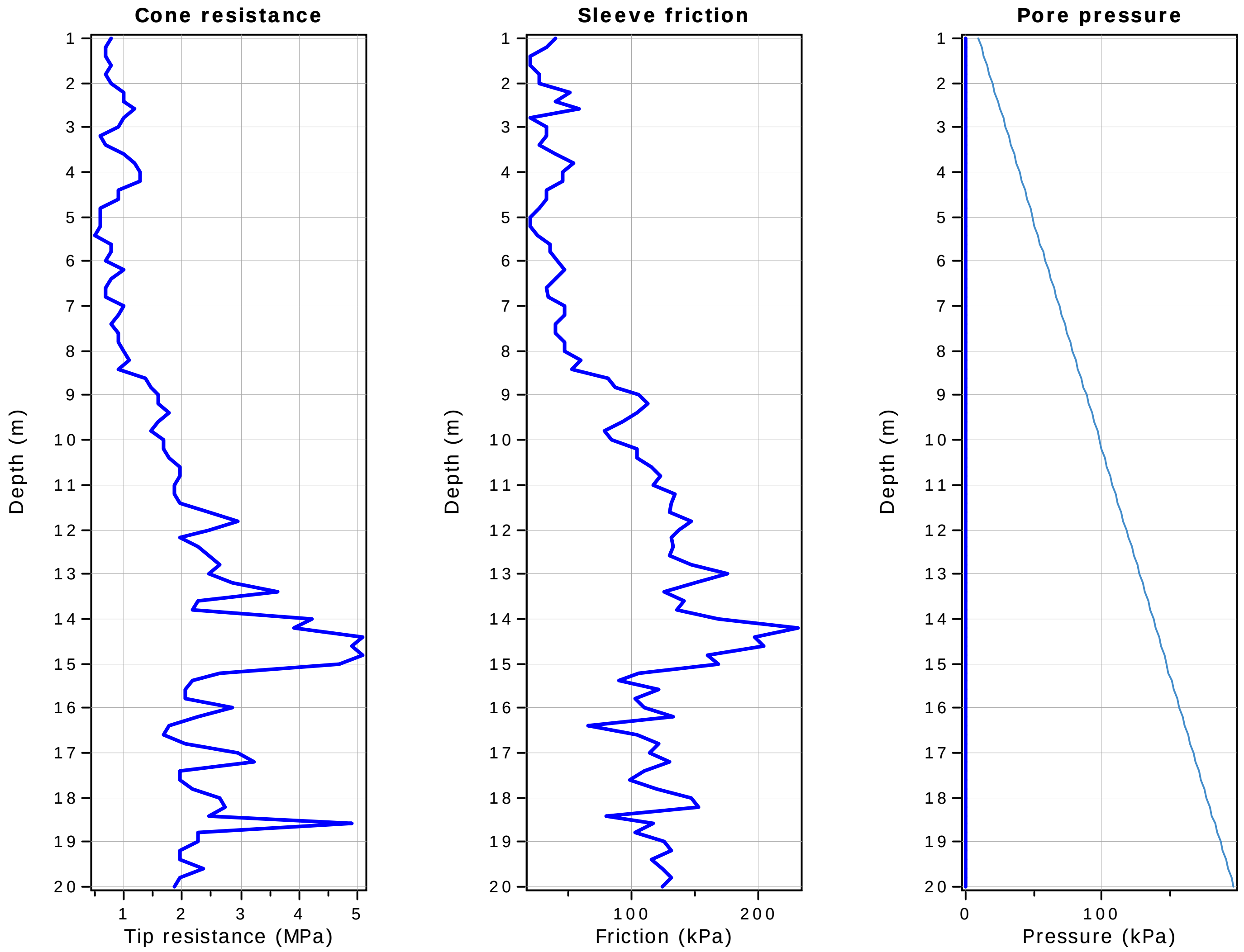


SBT legend

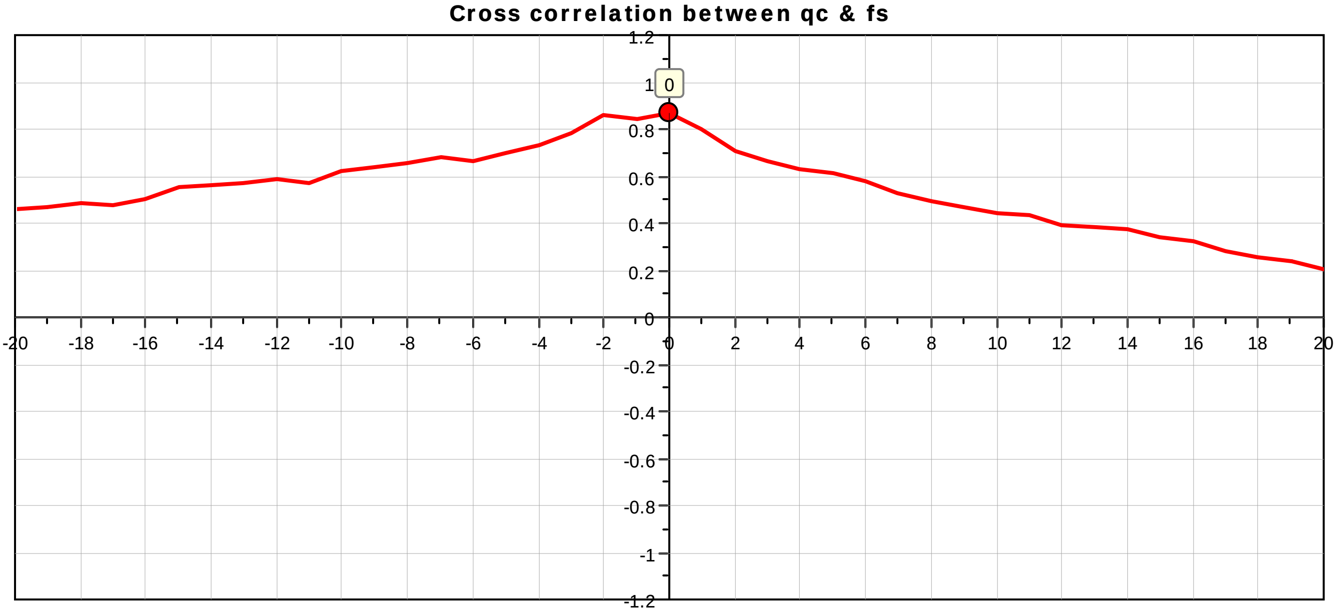
🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟨 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

CPT: 036021P112CPT112
Total depth: 20.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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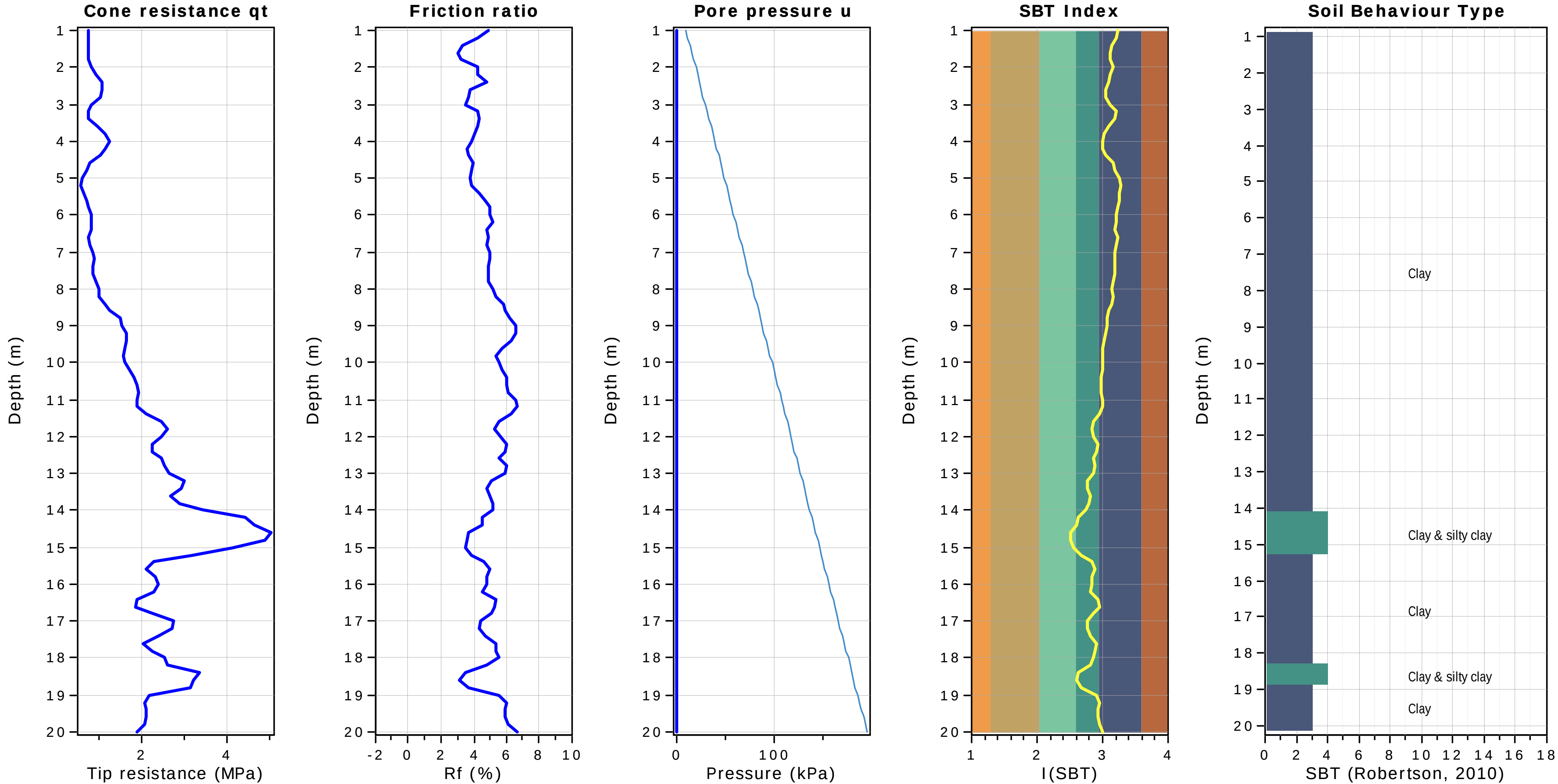
CPT: 036021P112CPT112
Total depth: 20.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟫 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

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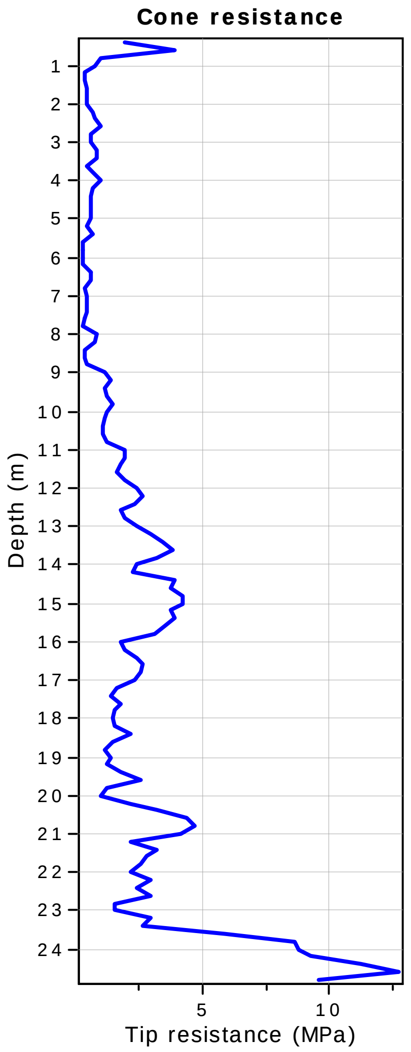
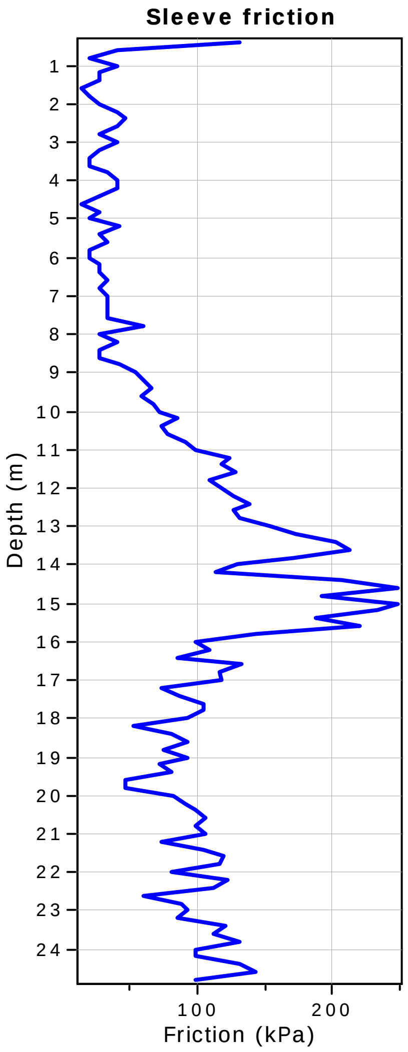
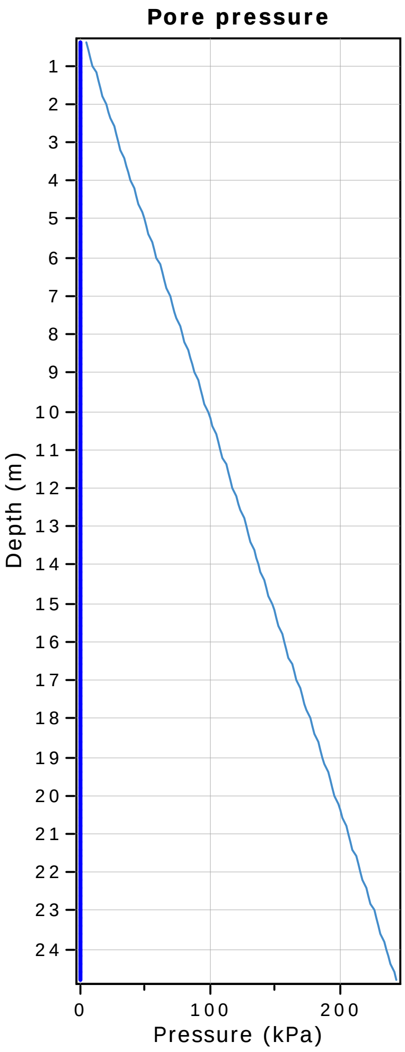
CPT: 036021P113CPT113
Total depth: 24.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

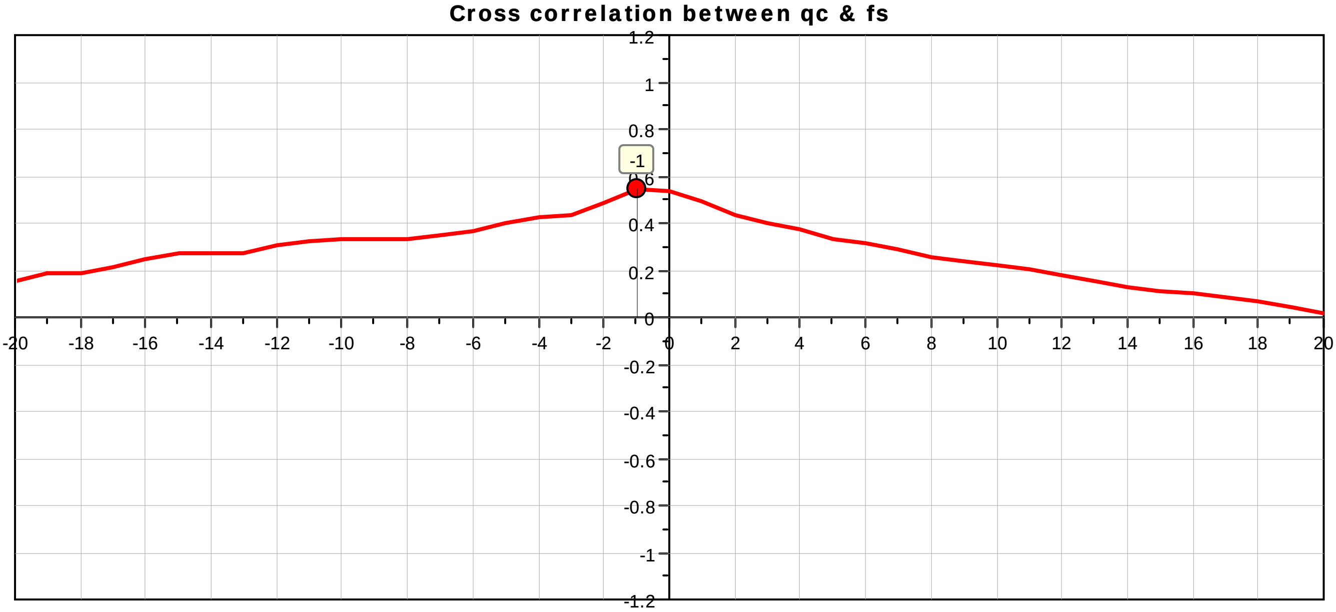
Project:
Location:


Cone resistance


Sleeve friction

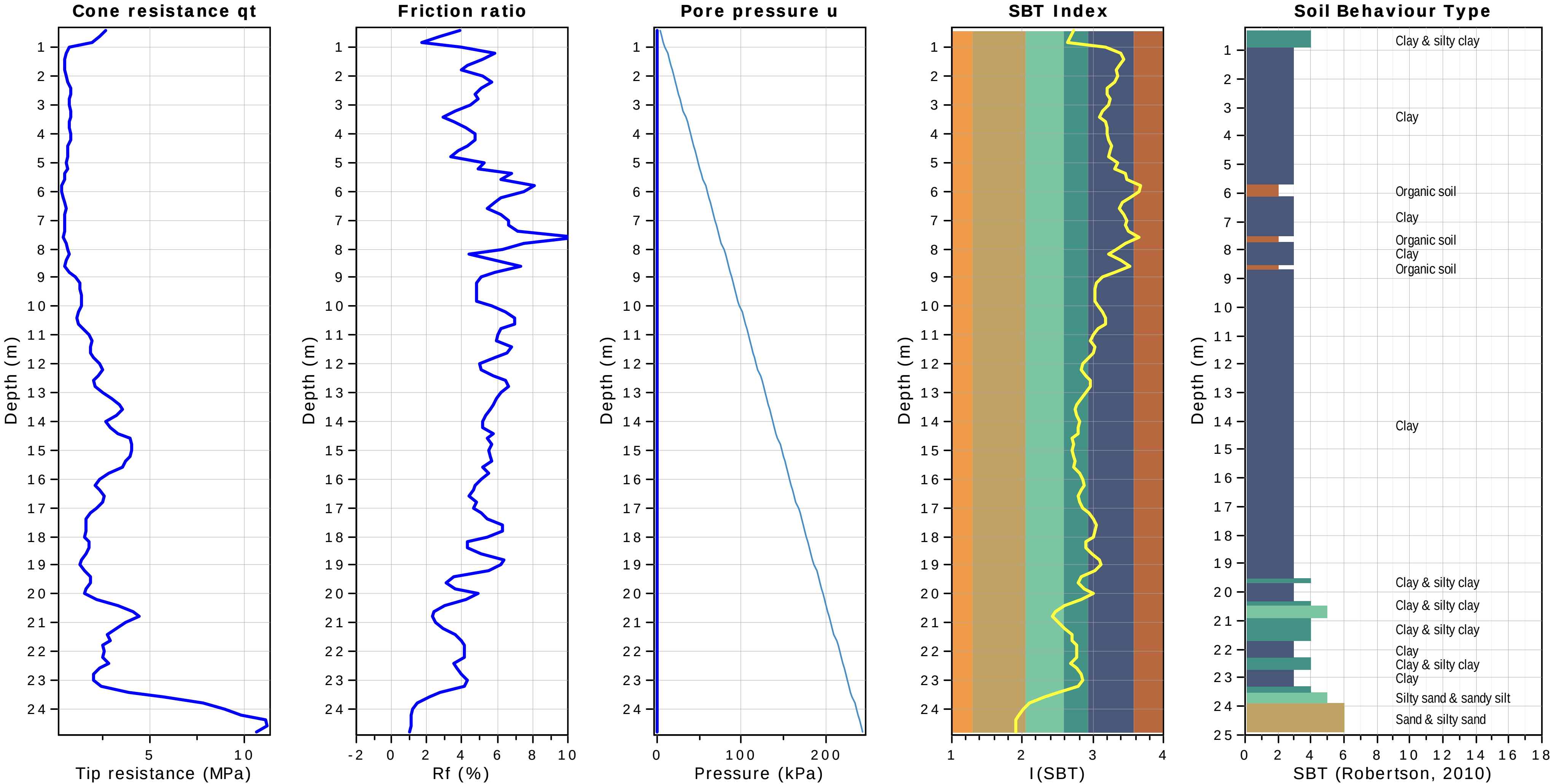

Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

CPT: 036021P113CPT113
Total depth: 24.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

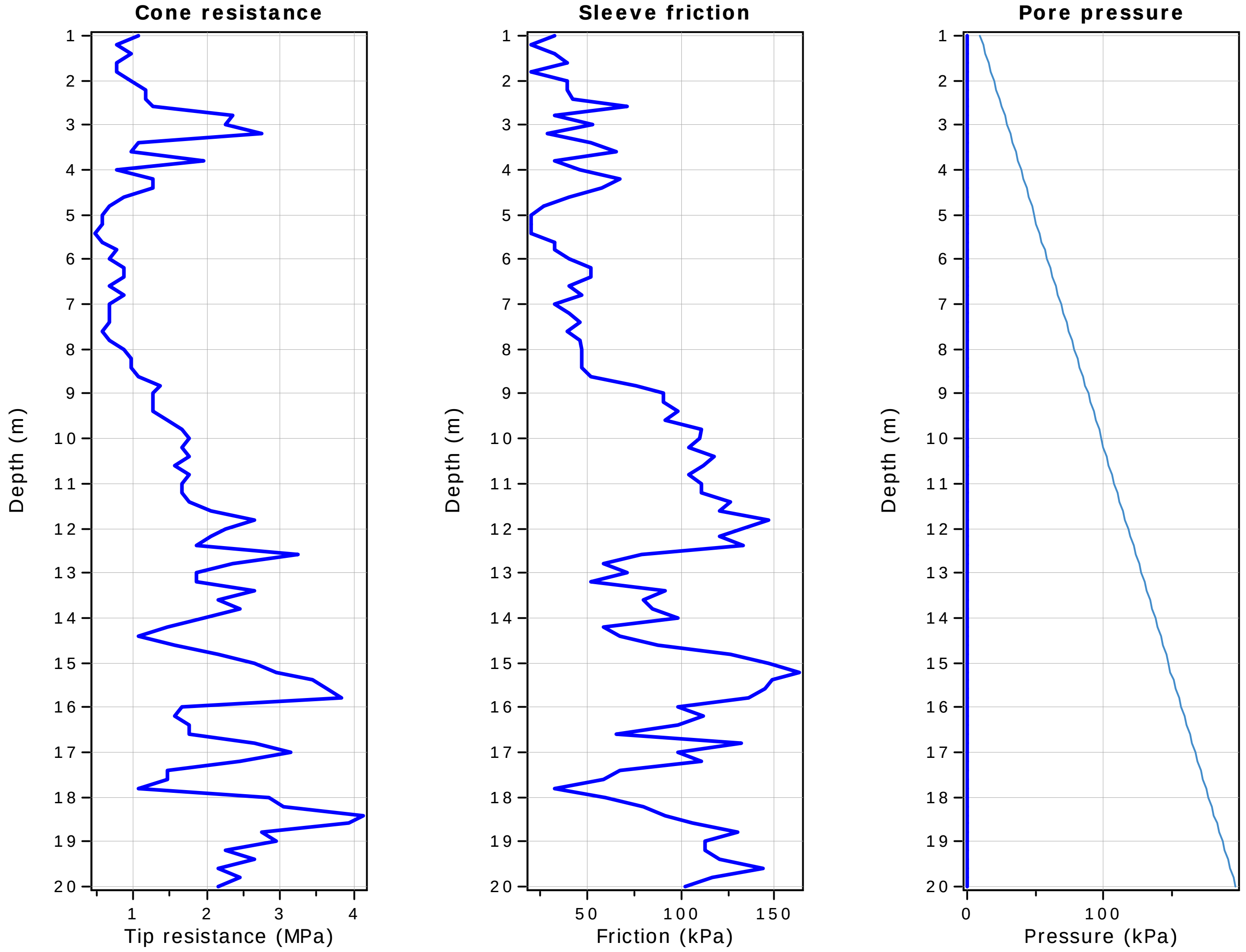


SBT legend

🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟫 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

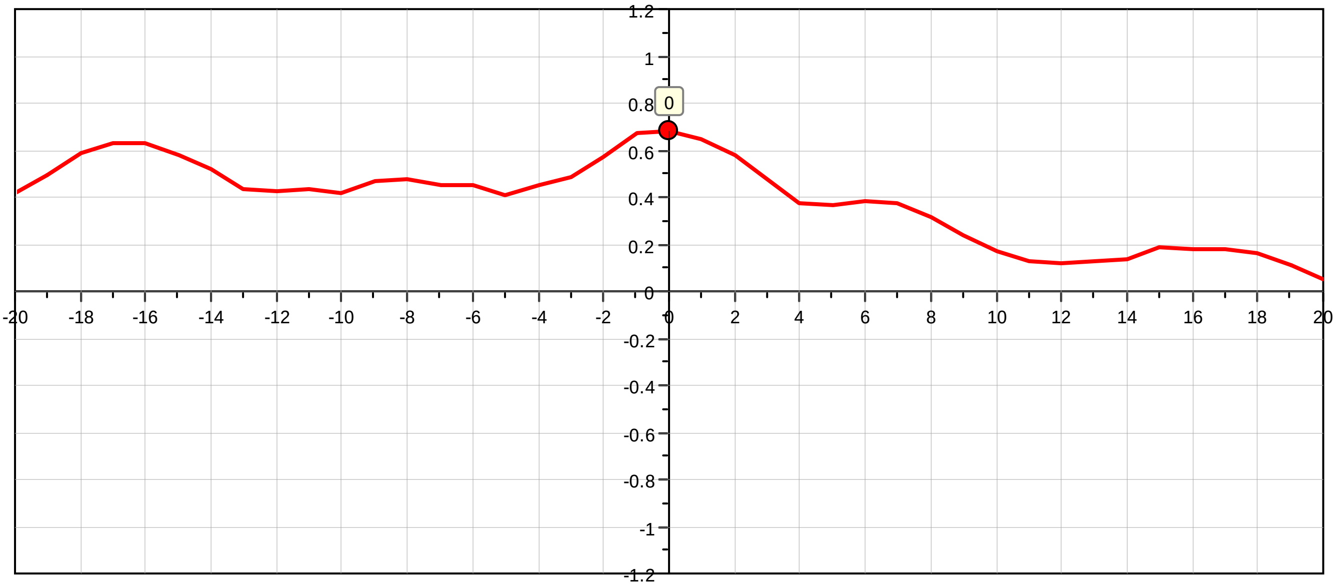
CPT: 036021P114CPT114
Total depth: 20.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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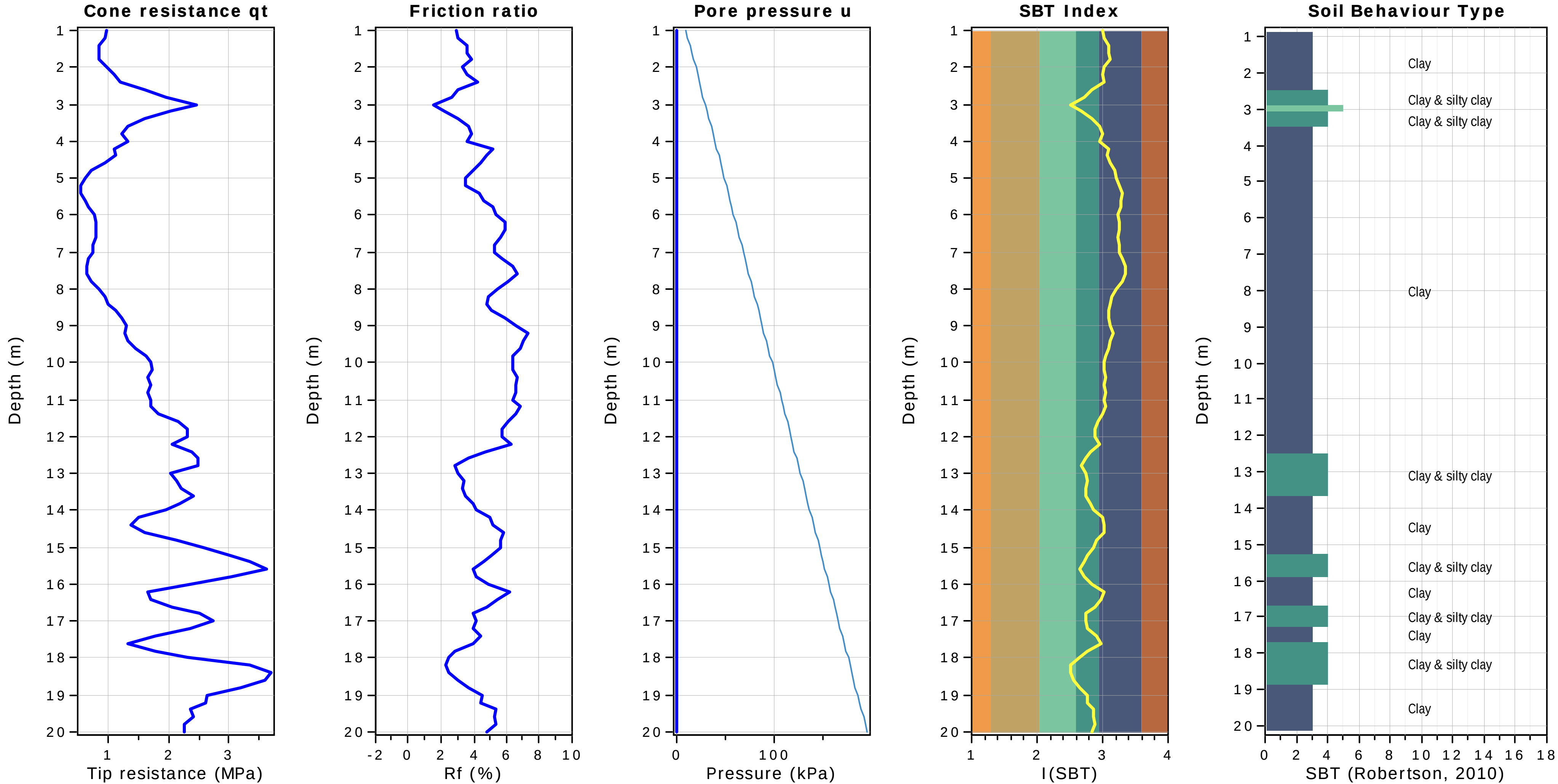
CPT: 036021P114CPT114
Total depth: 20.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

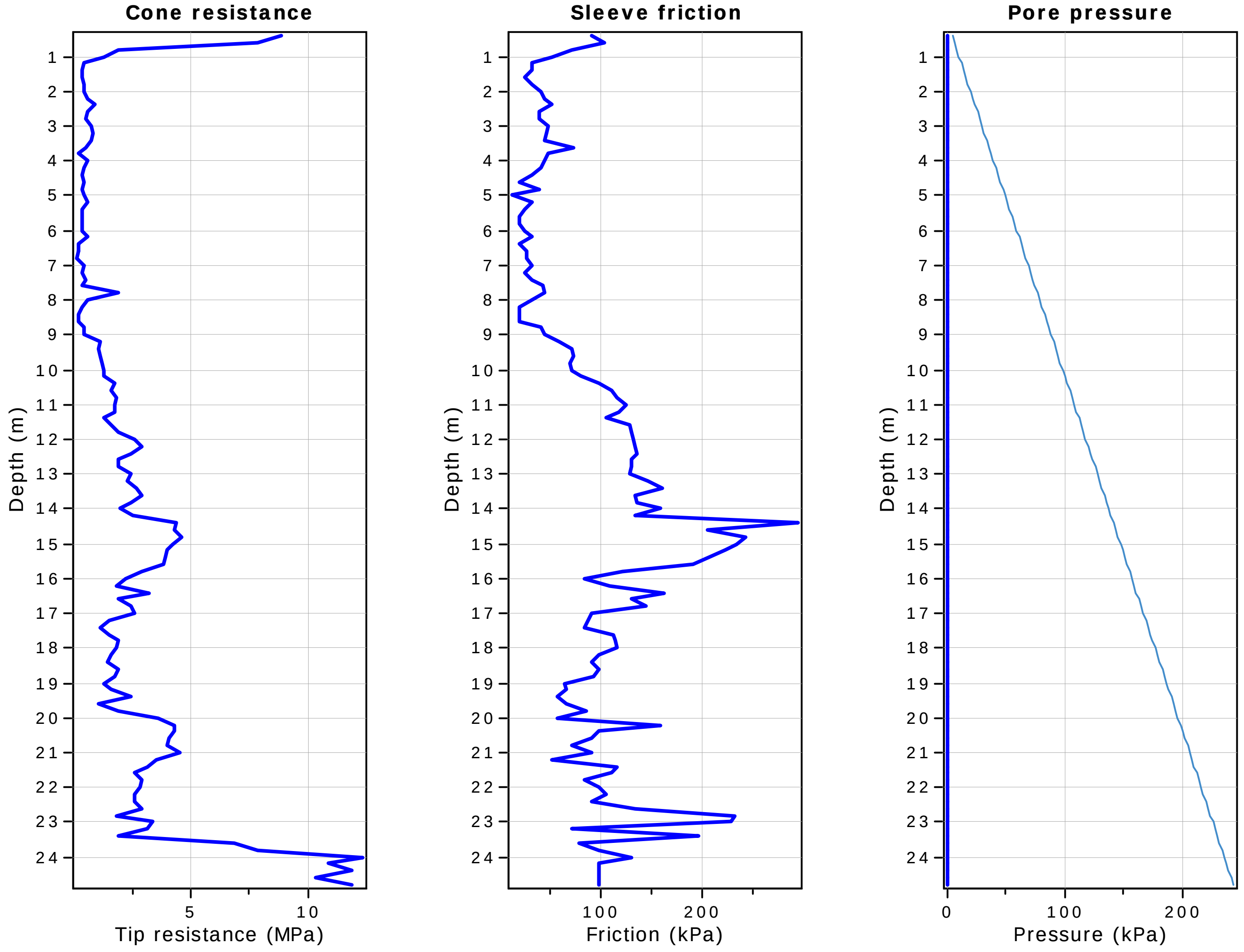


SBT legend

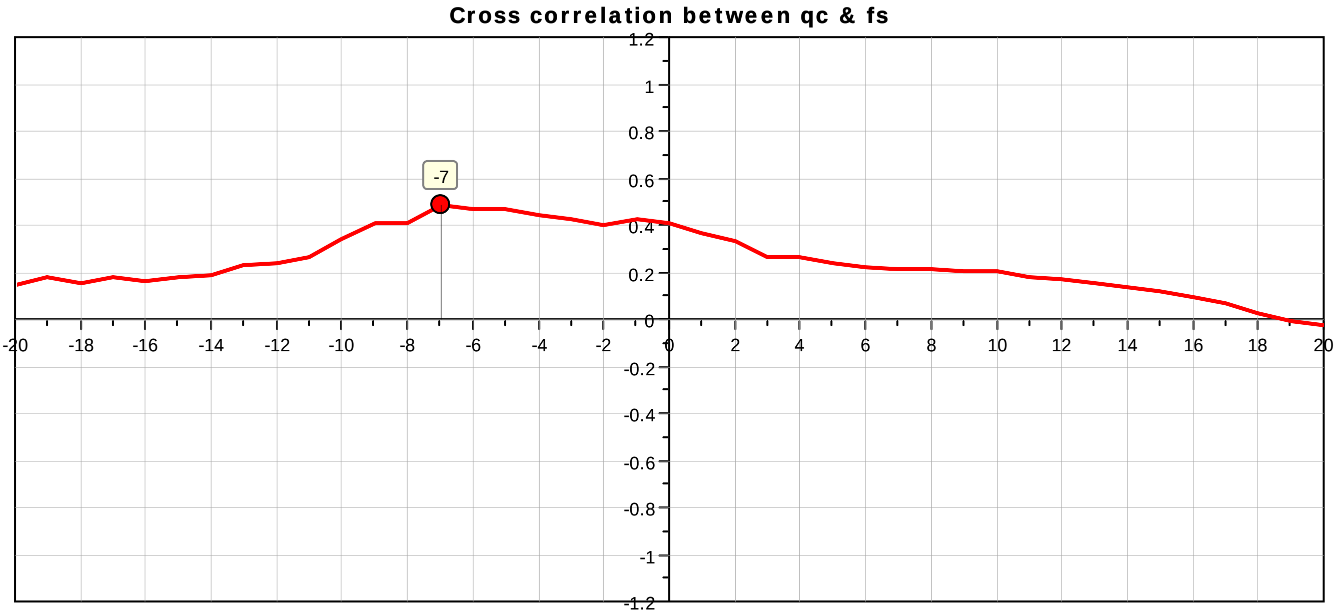
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟫 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

CPT: 036021P115CPT115
Total depth: 24.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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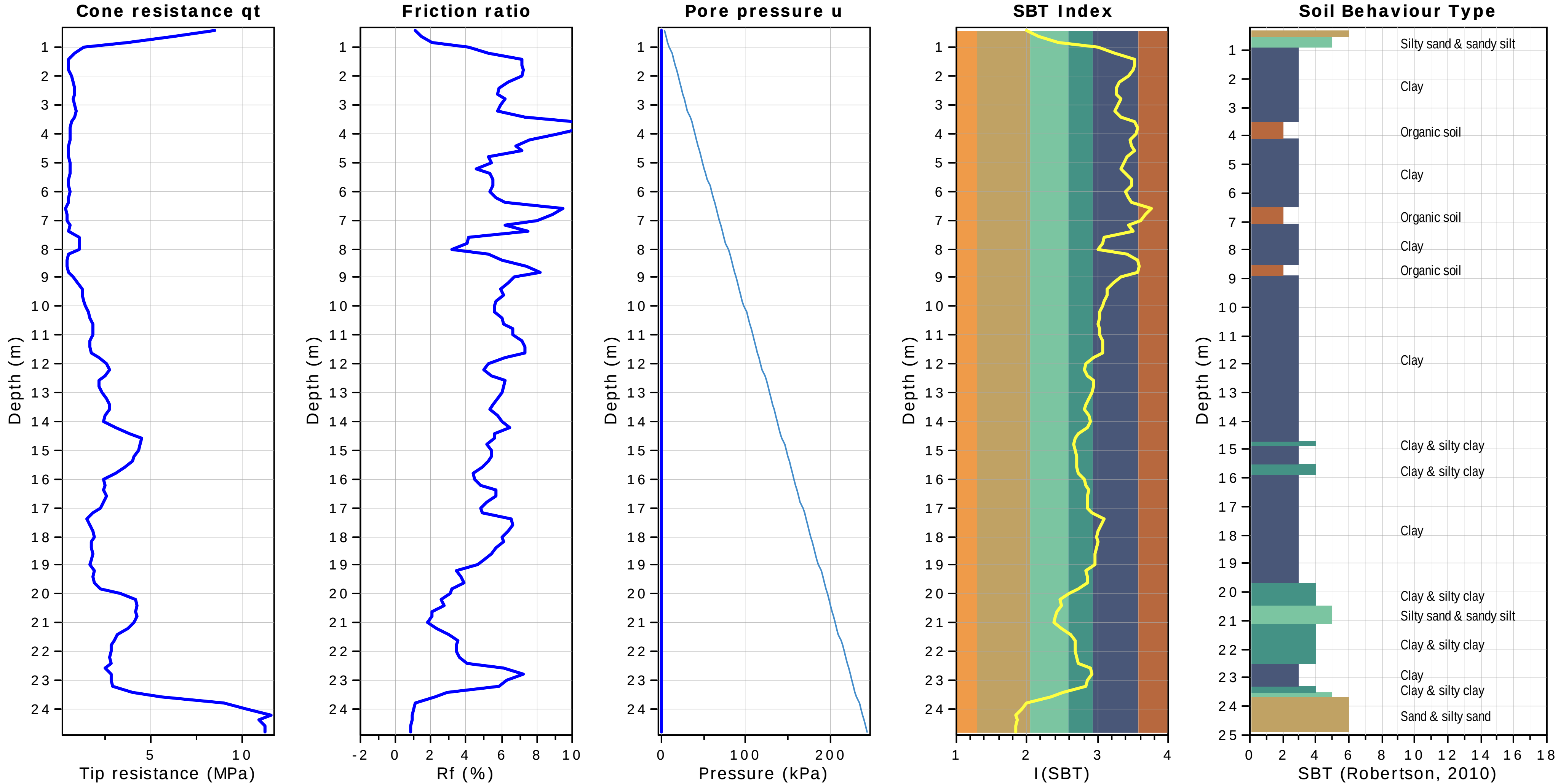
CPT: 036021P115CPT115
Total depth: 24.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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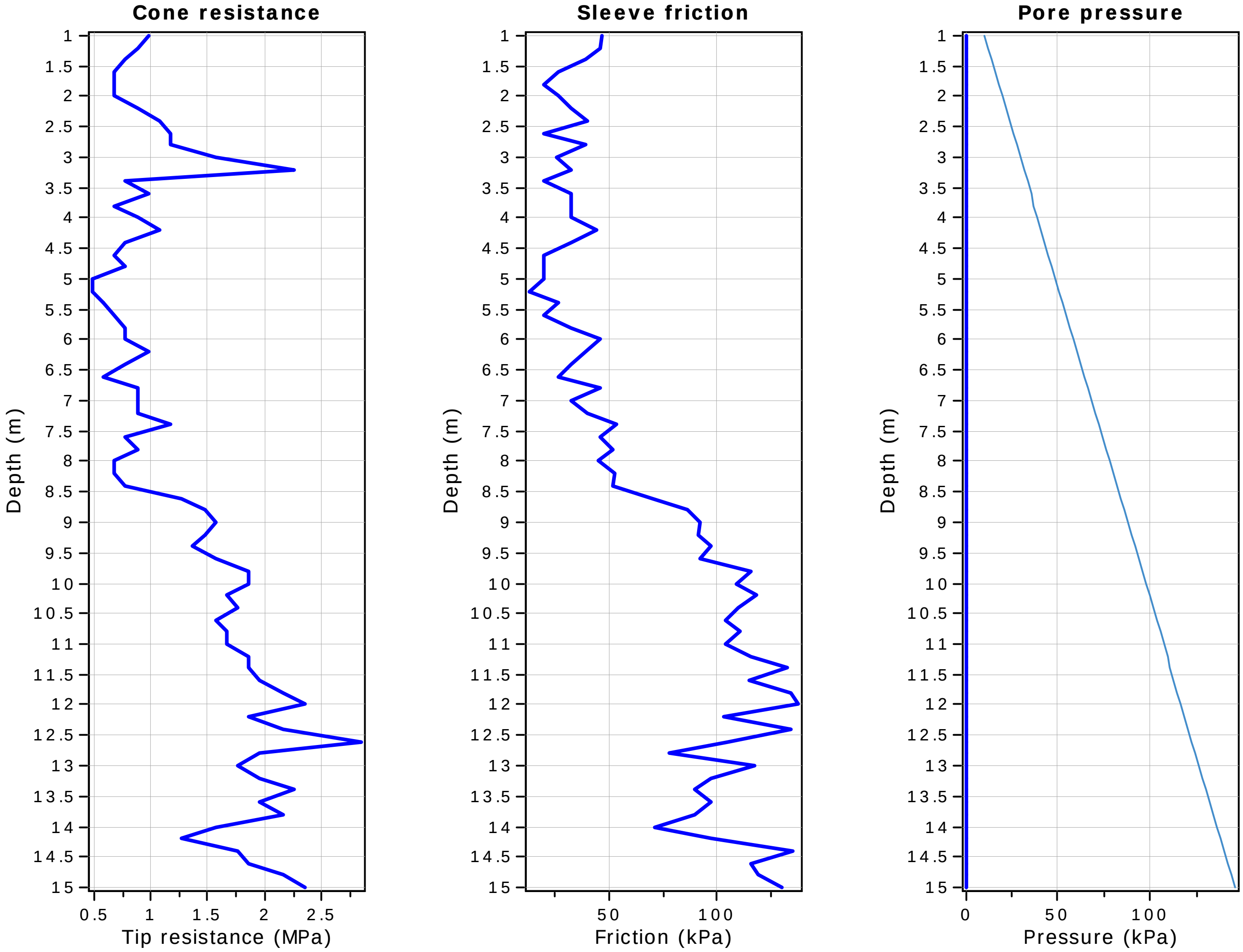
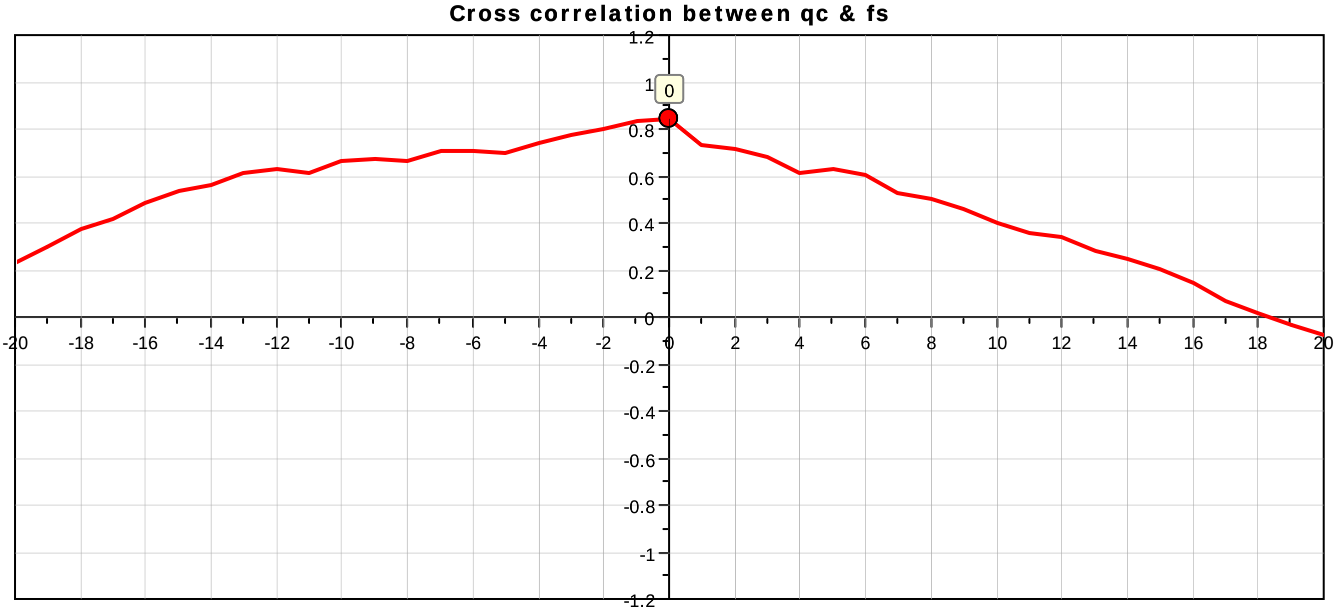
CPT: 036021P116CPT116
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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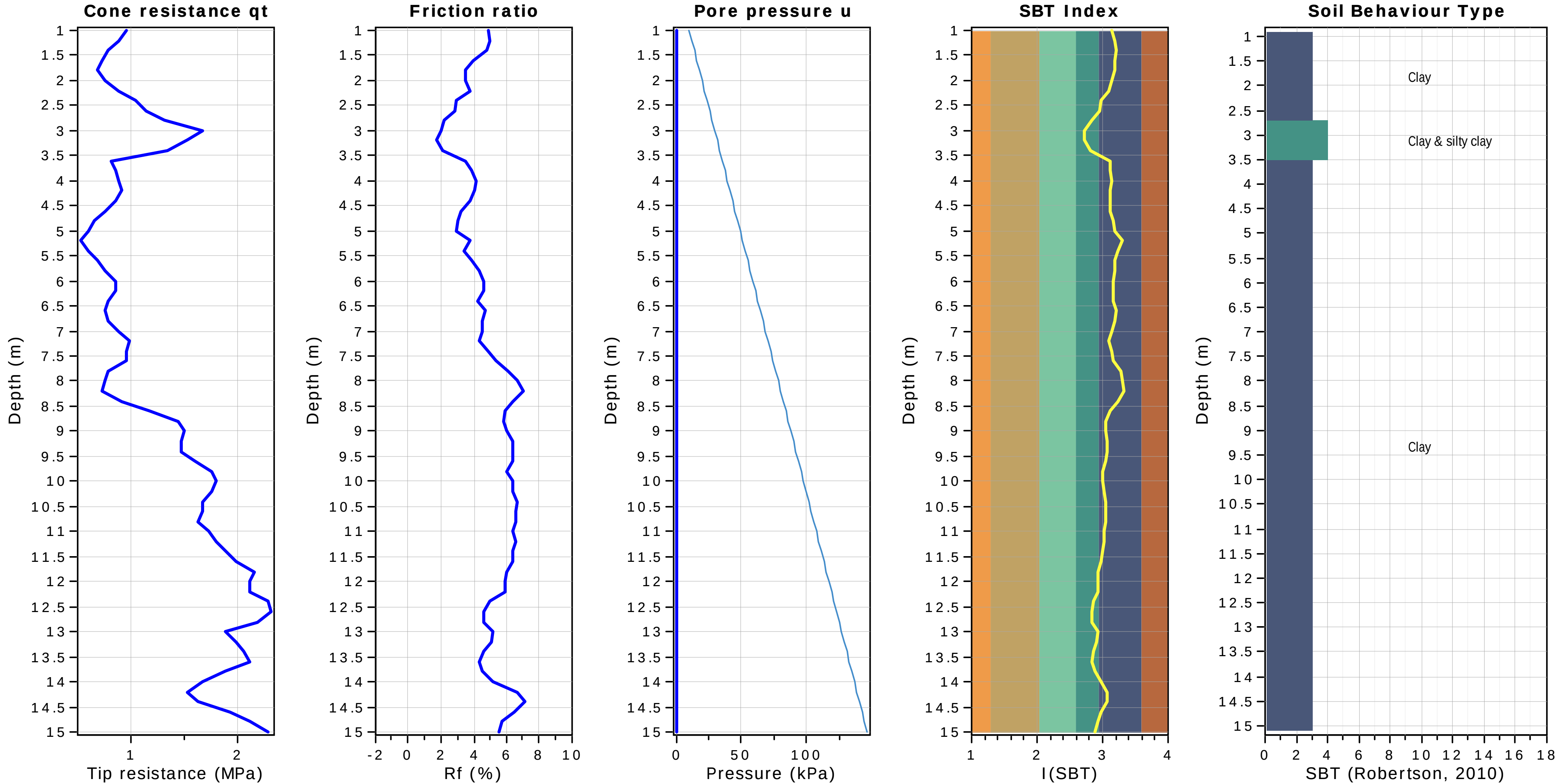
CPT: 036021P116CPT116
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟨 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

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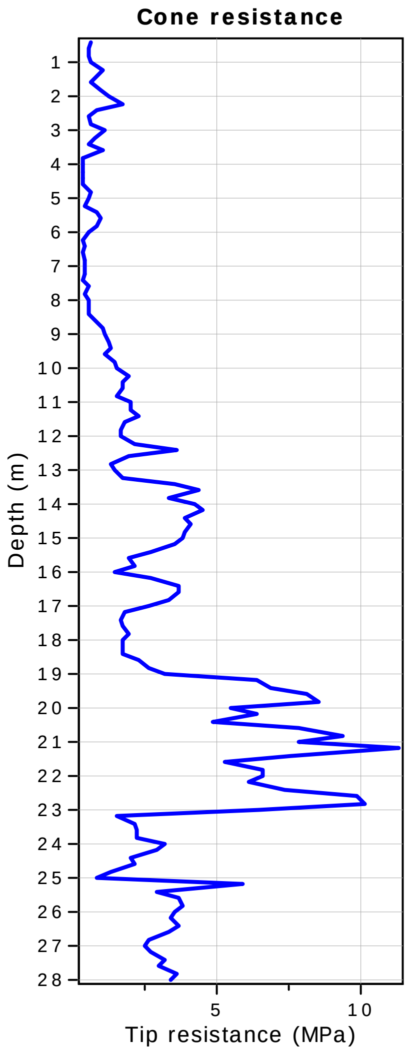
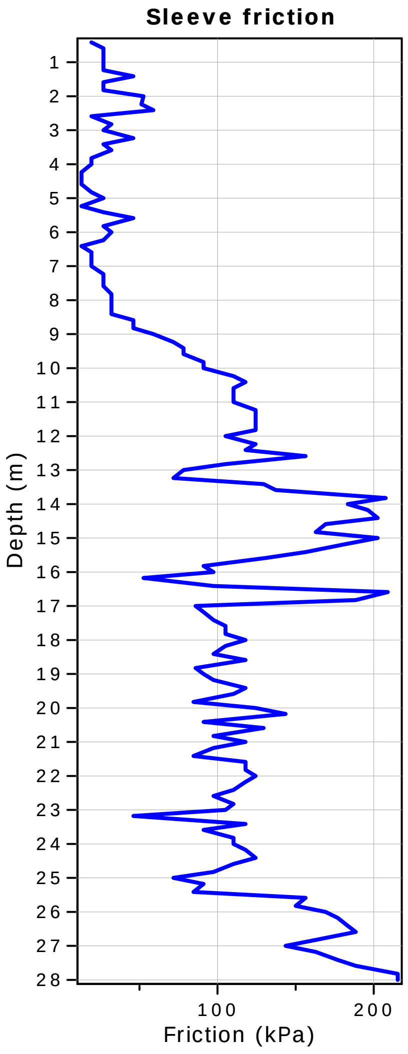
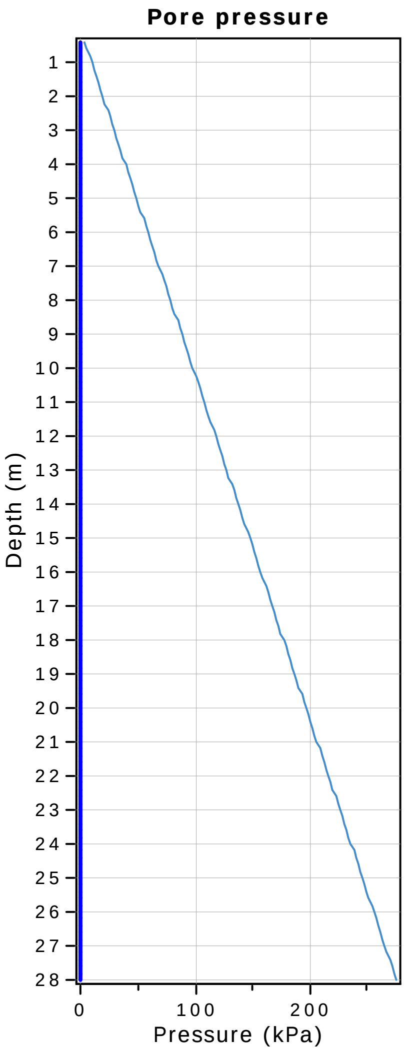
CPT: 036021P118CPT118
Total depth: 28.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

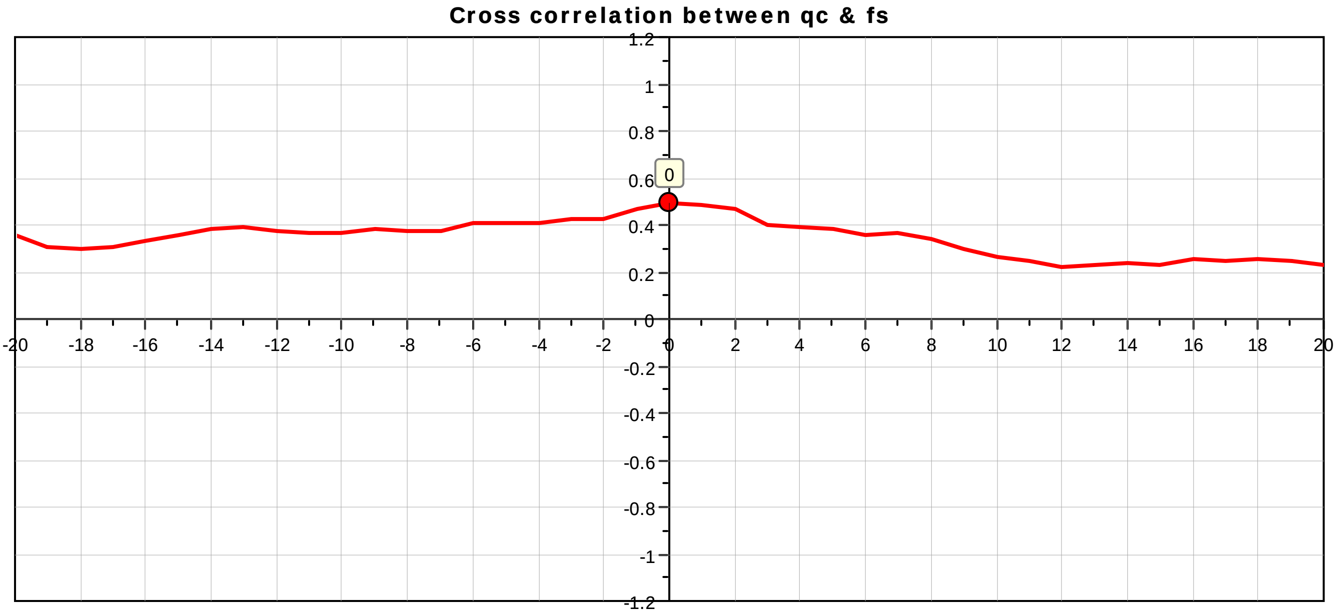
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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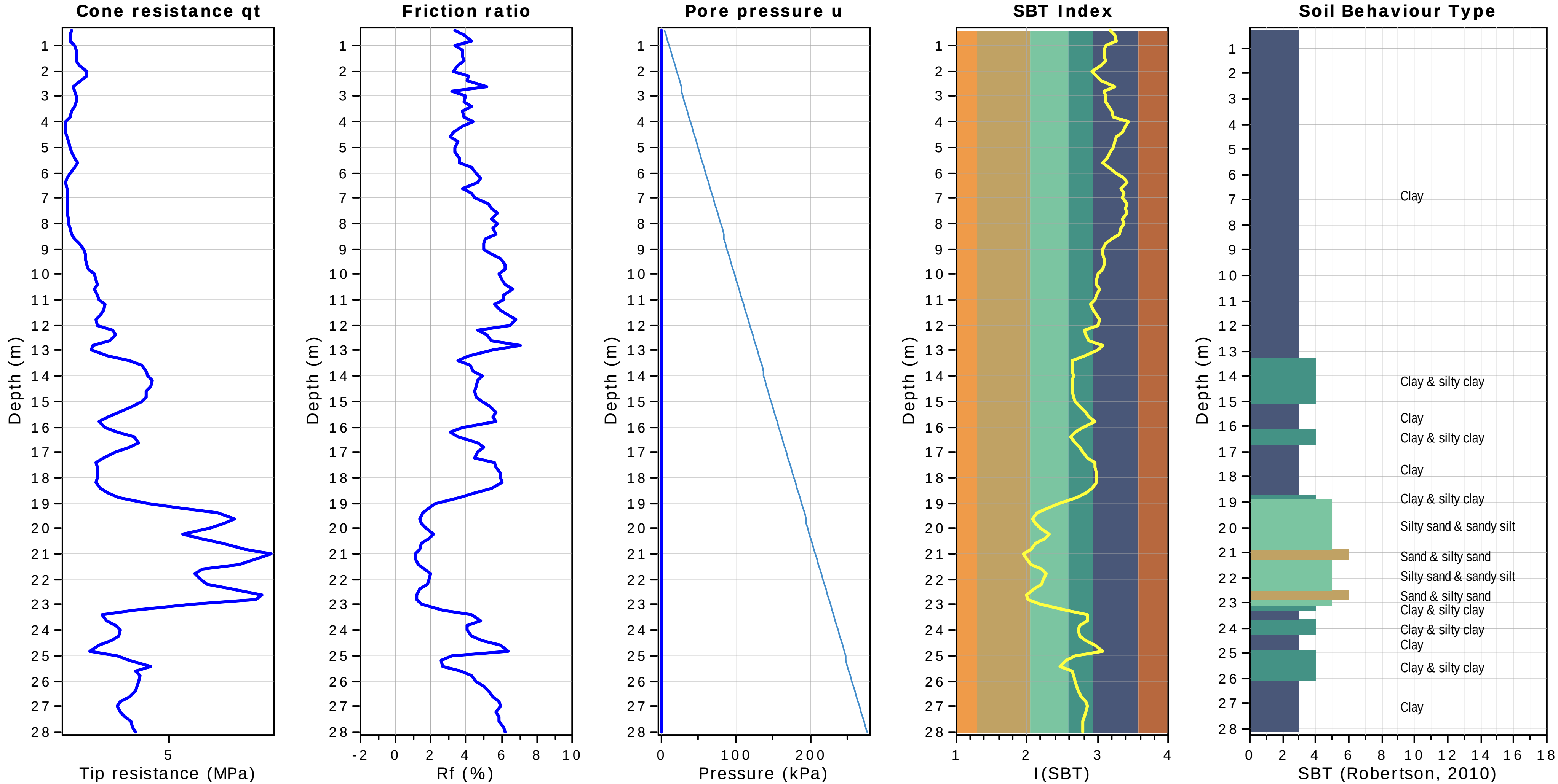
CPT: 036021P118CPT118
Total depth: 28.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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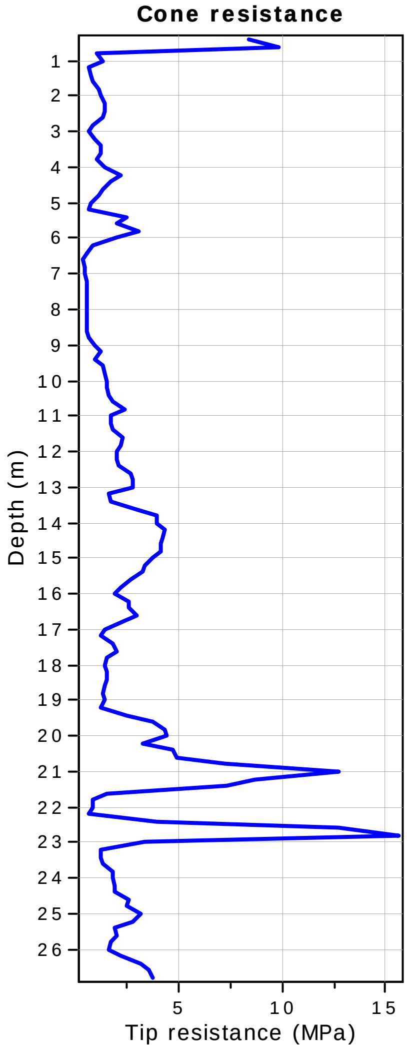
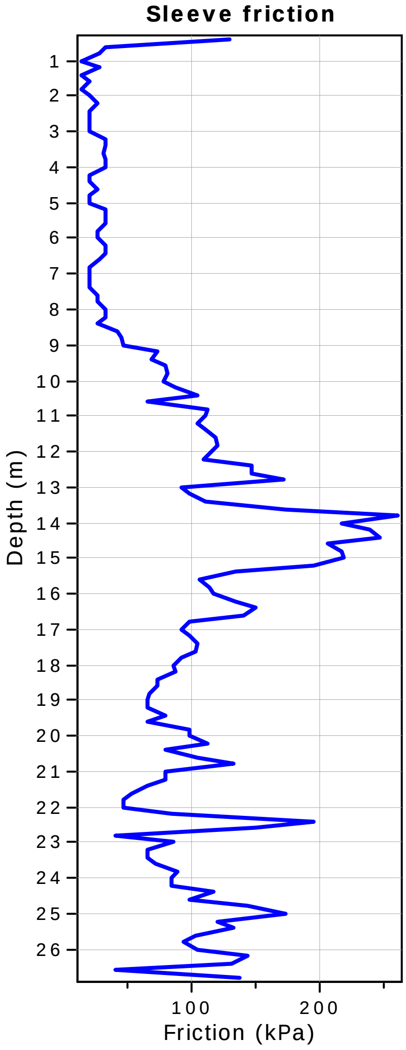
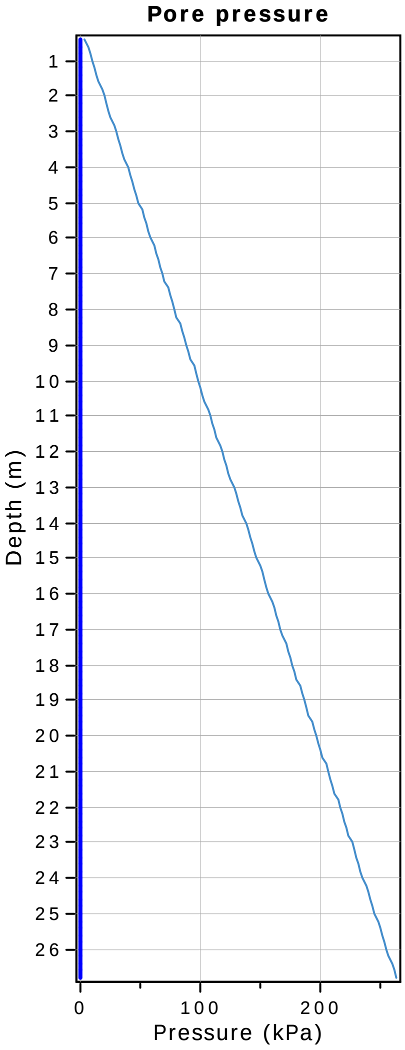
CPT: 036021P119CPT119
Total depth: 26.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

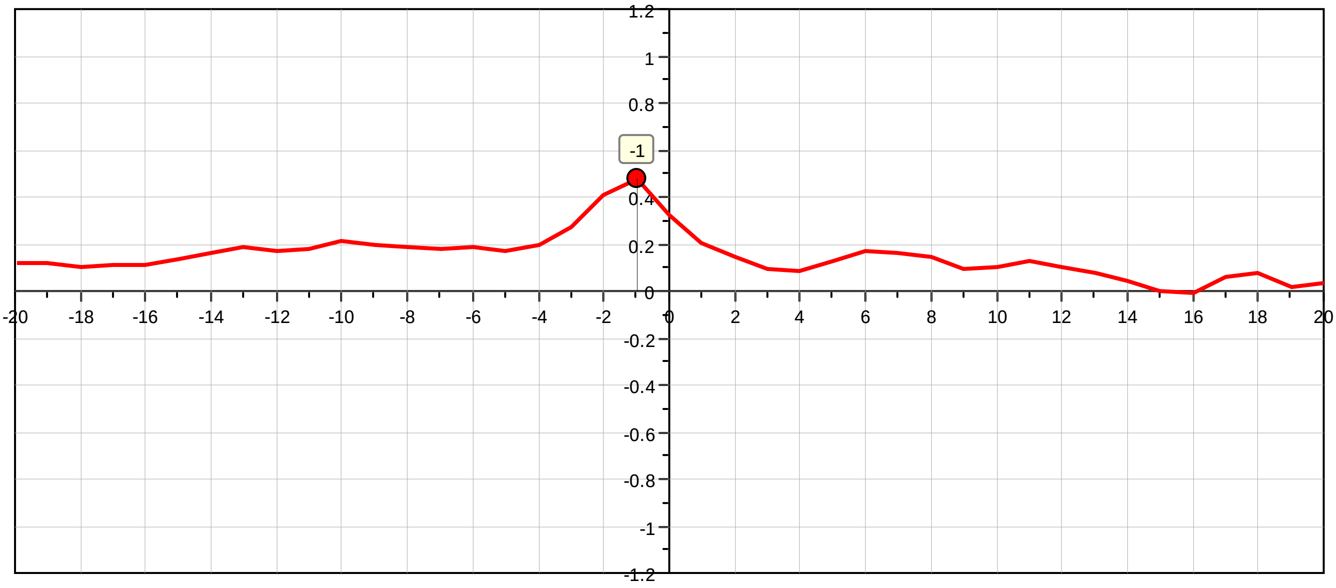

Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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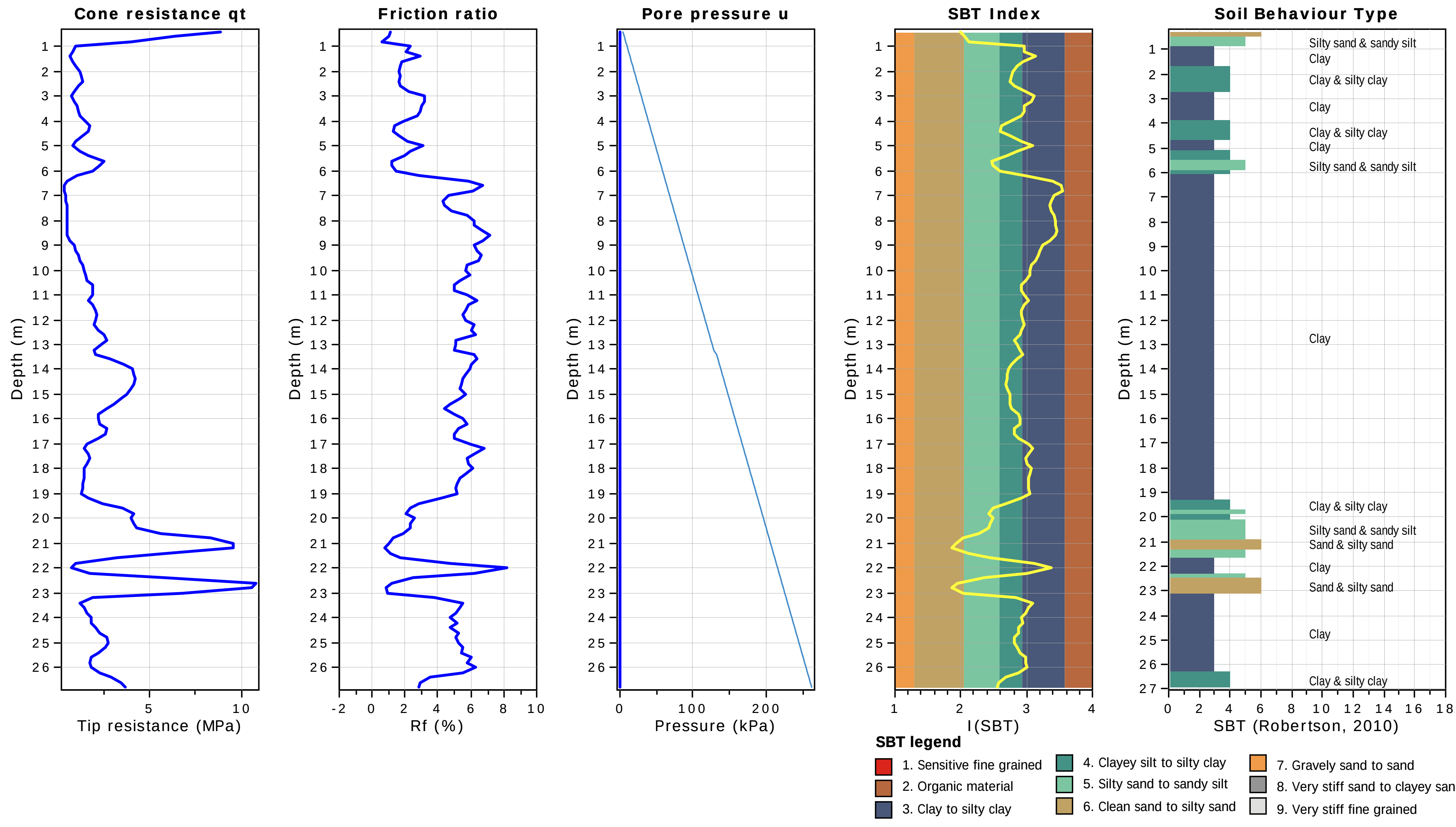
CPT: 036021P119CPT119
Total depth: 26.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



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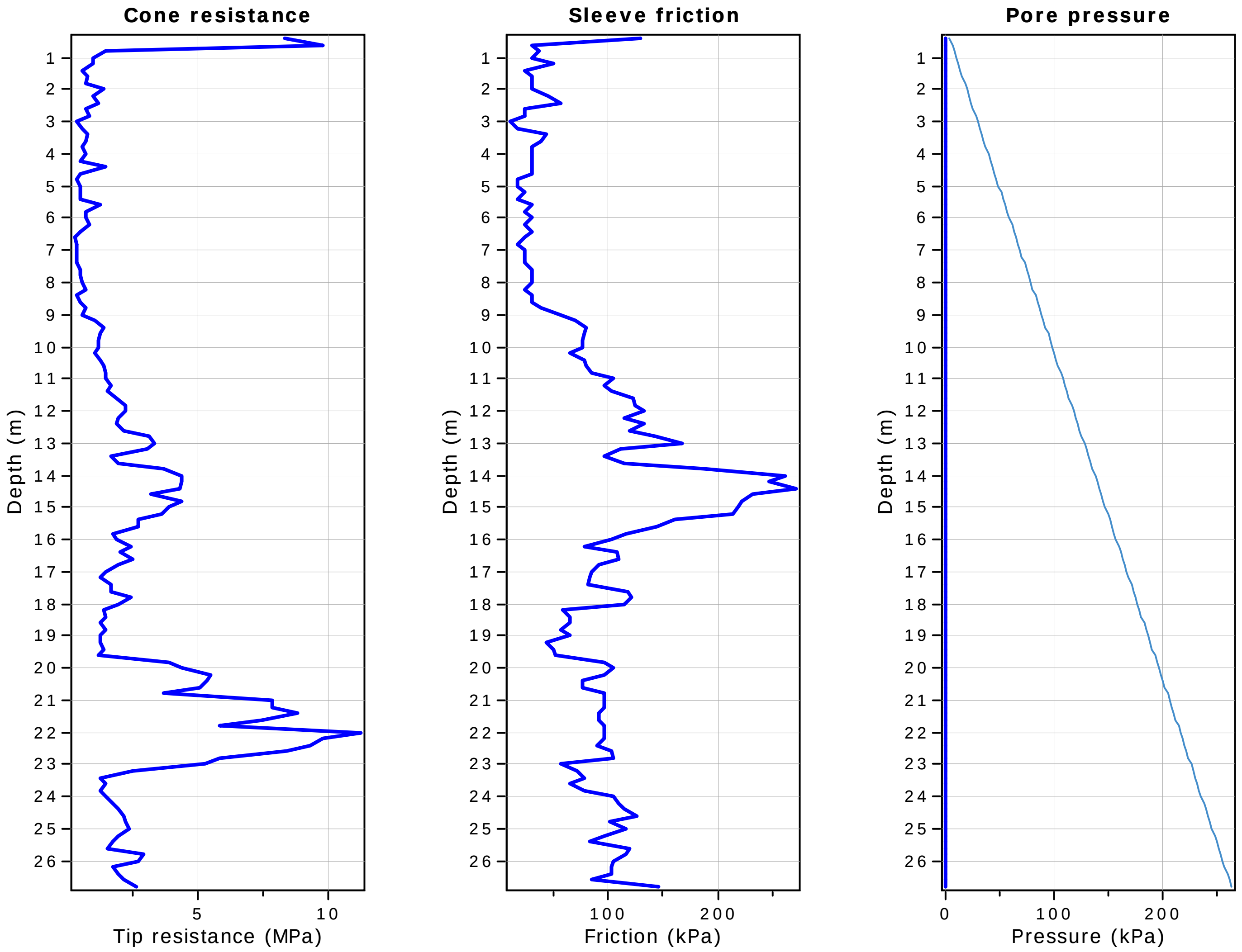
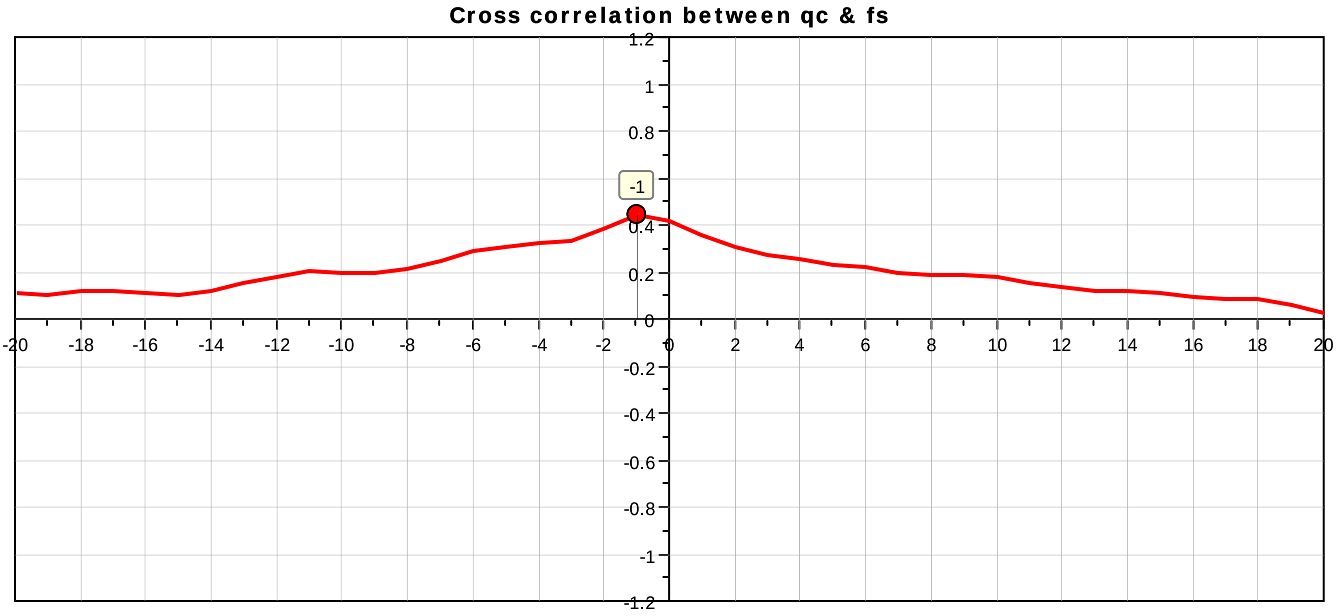
CPT: 036021P122CPT122
Total depth: 26.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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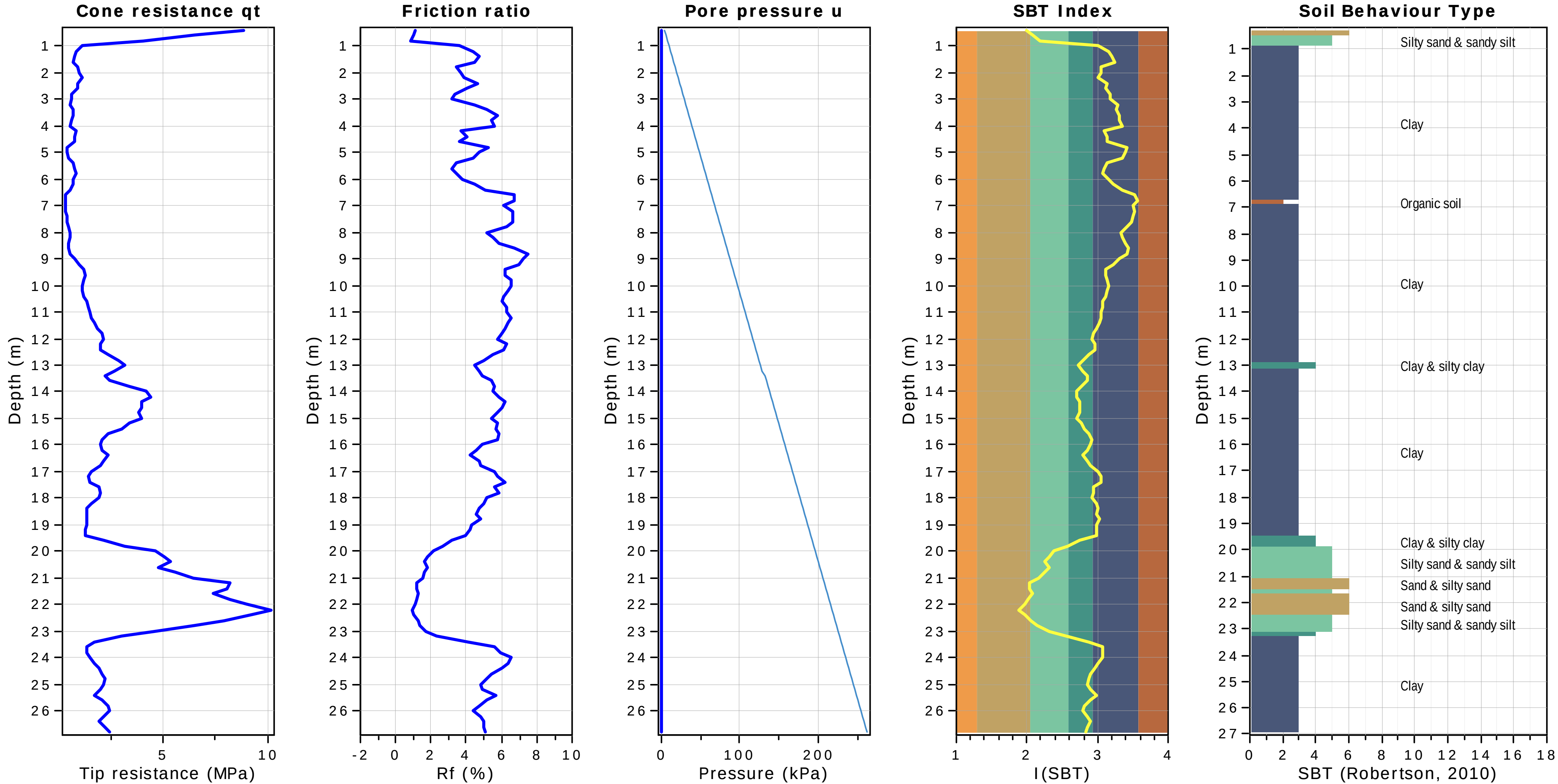
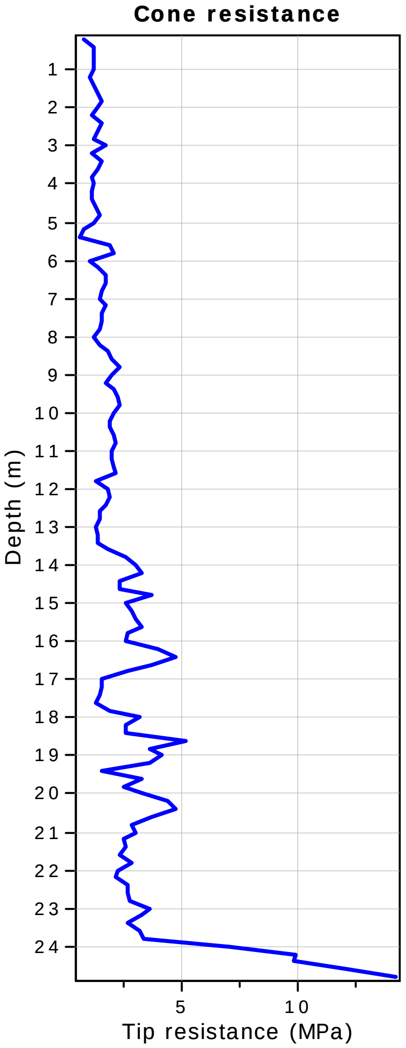
CPT: 036021P122CPT122
Total depth: 26.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

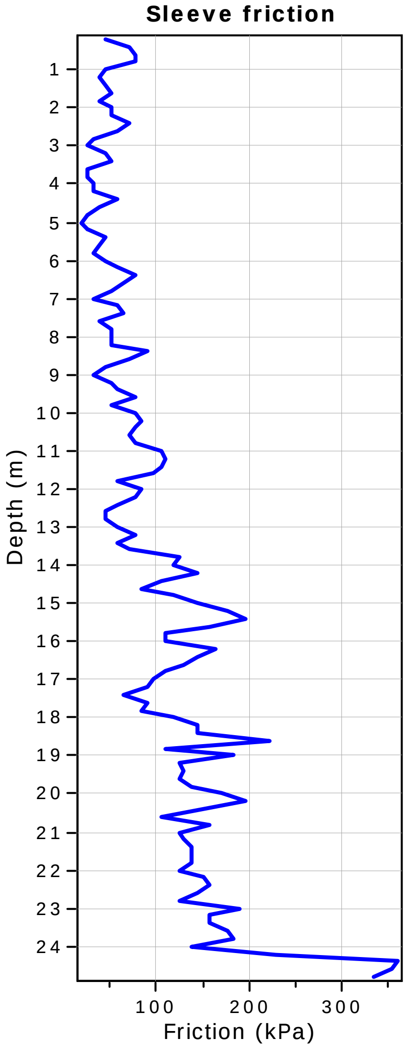
Project:
Location:

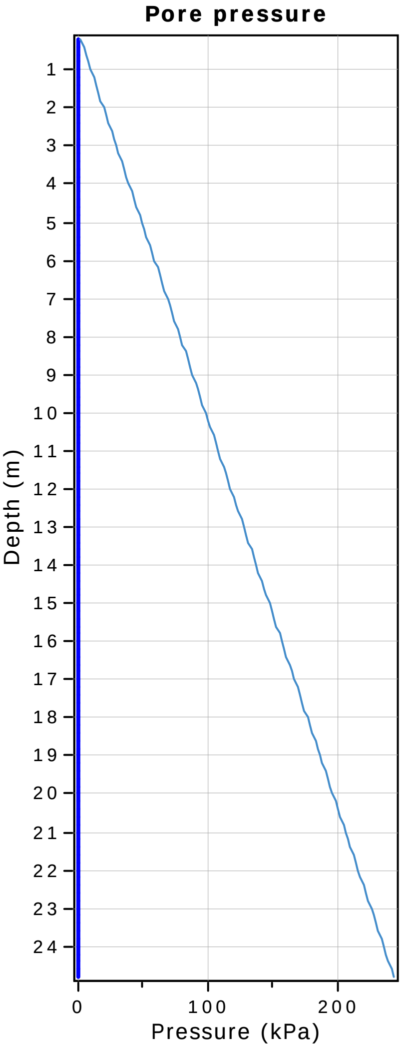


SBT legend

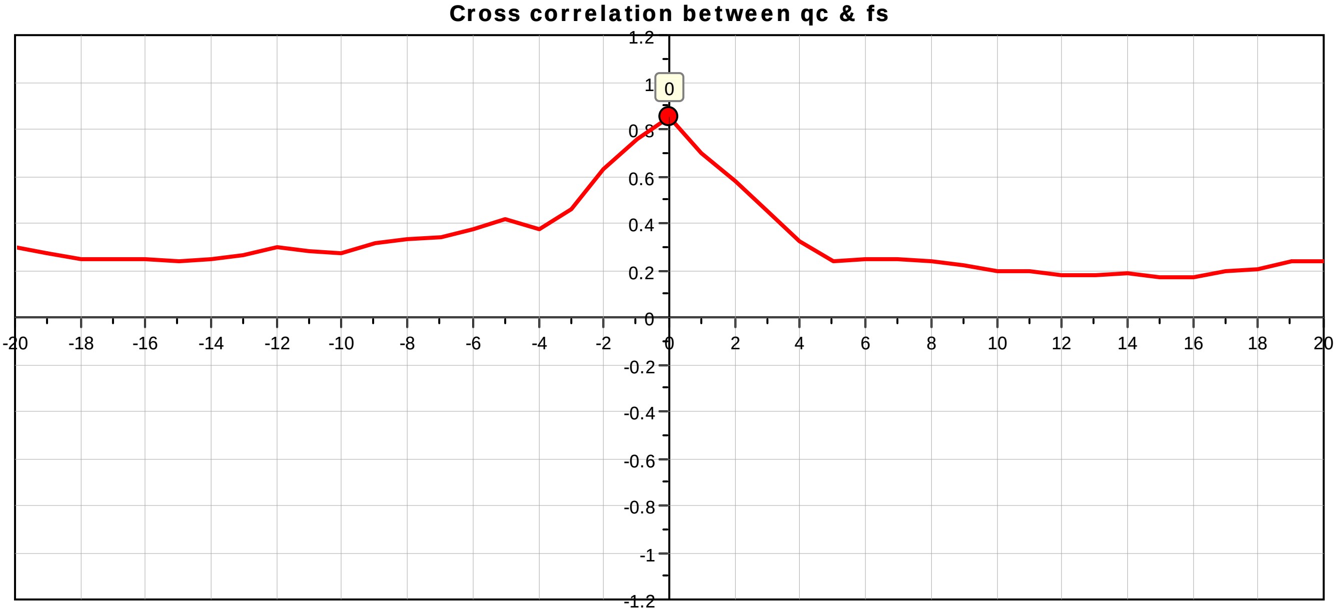
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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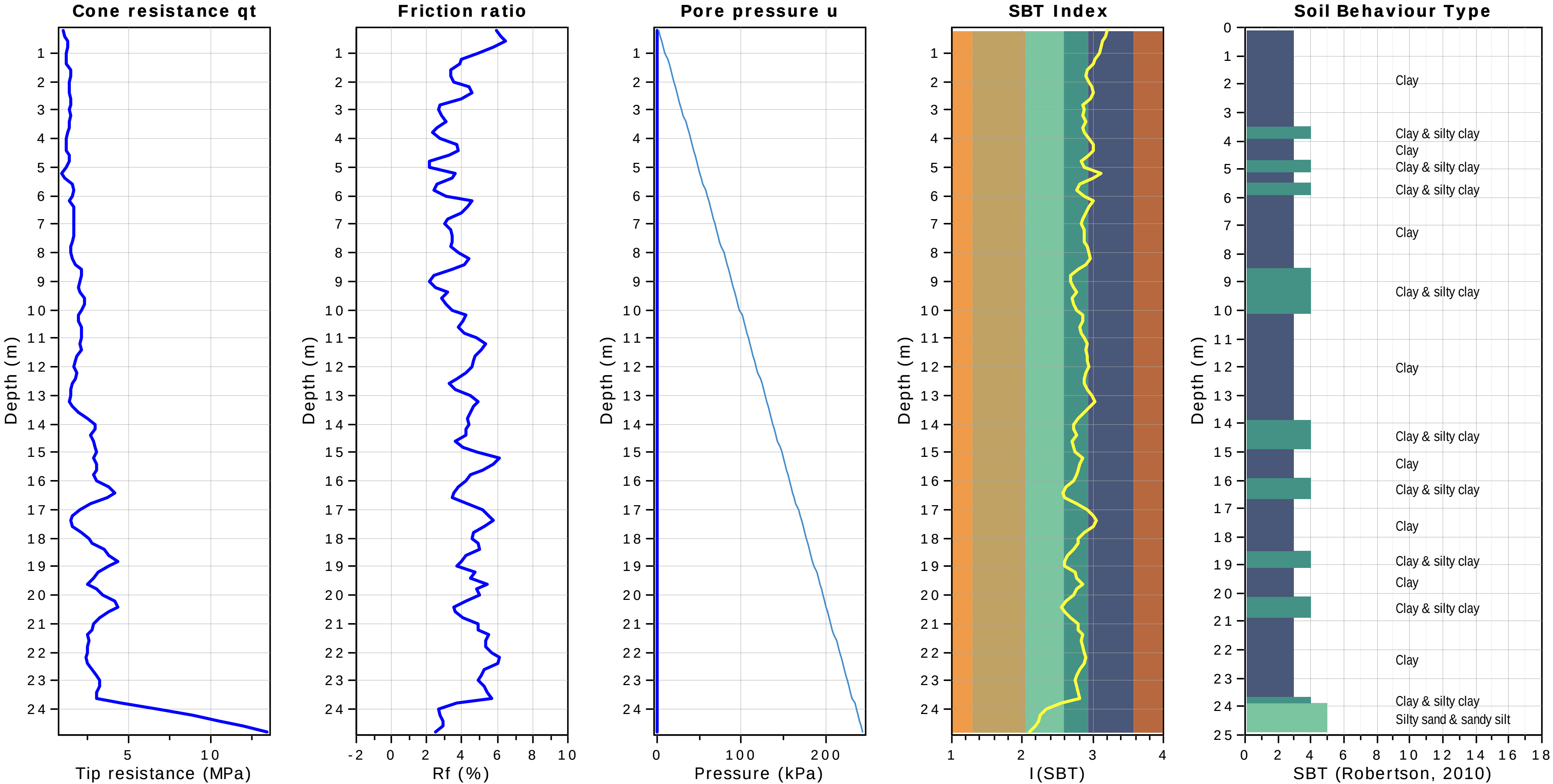
CPT: 036021P123CPT123
Total depth: 24.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

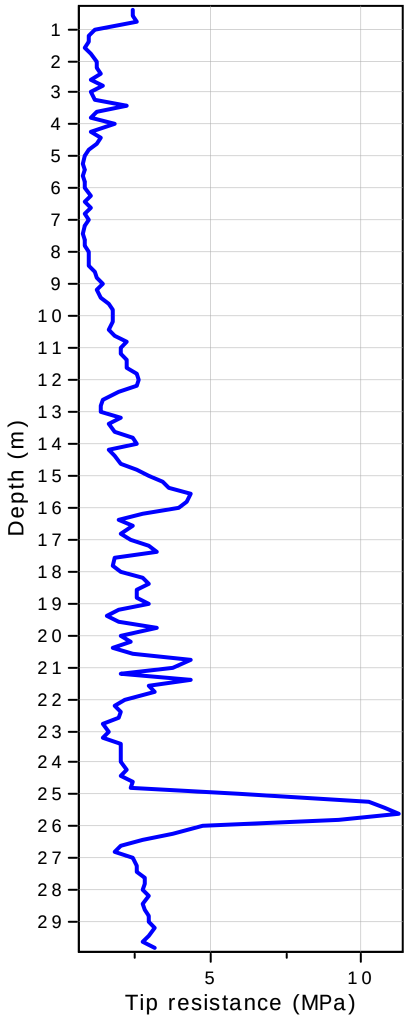
Project:
Location:



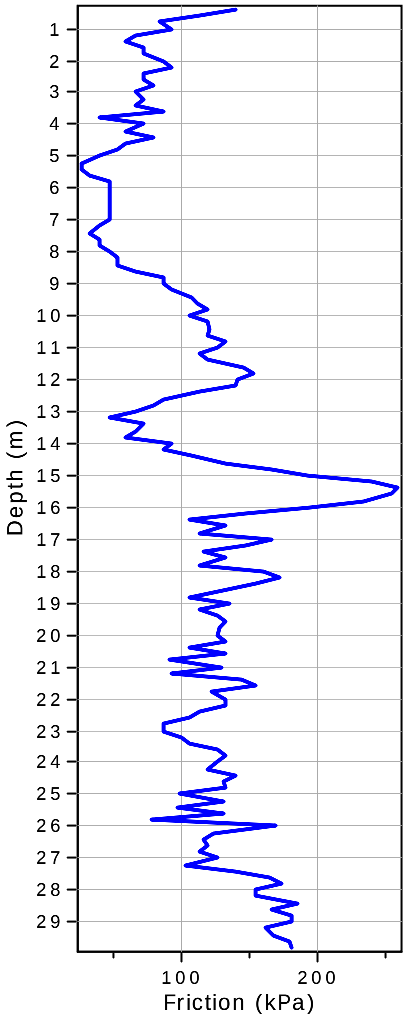
SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

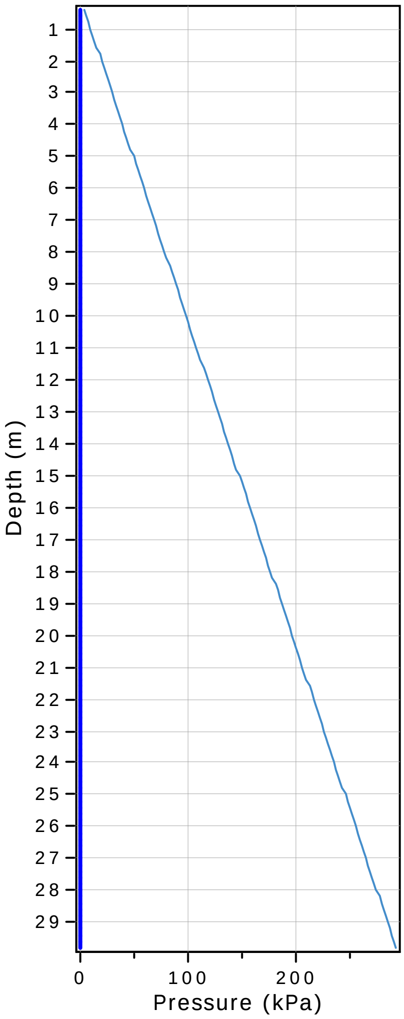
Cone resistance



Sleeve friction

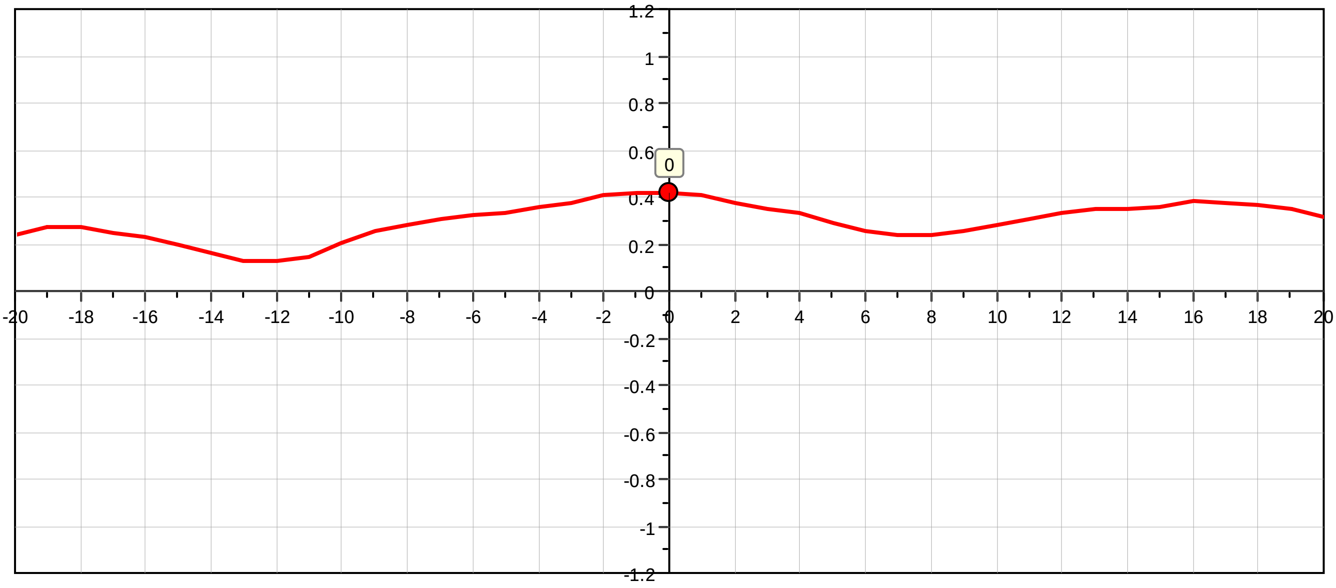


Pore pressure



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

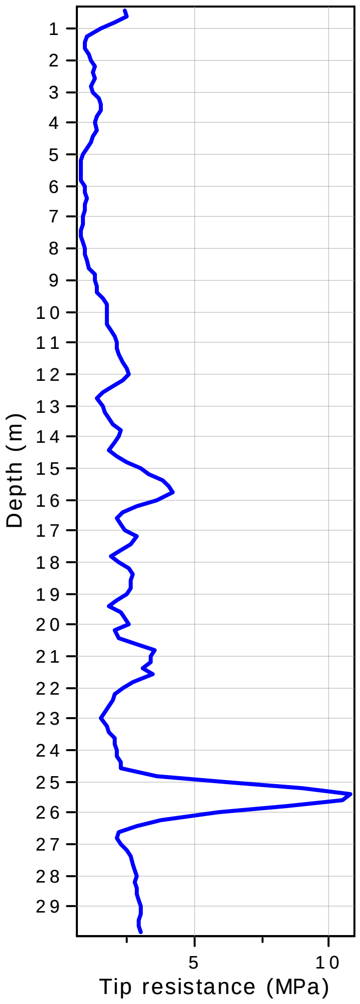
Cross correlation between qc & fs



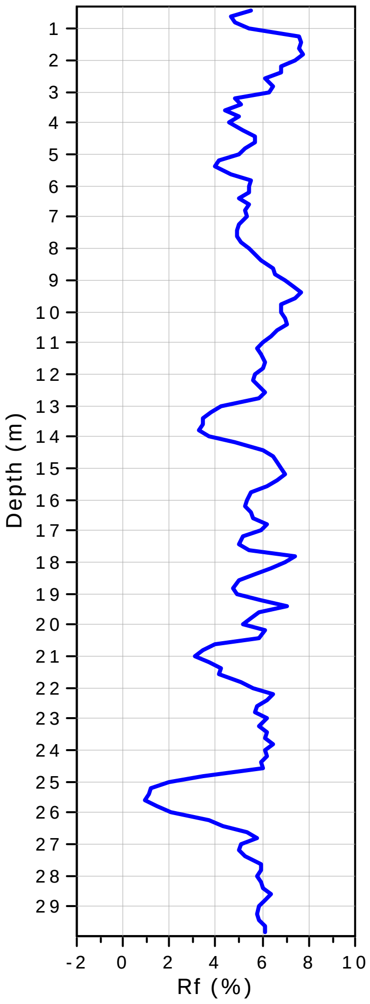
CPT: 036021P124CPT124
Total depth: 29.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

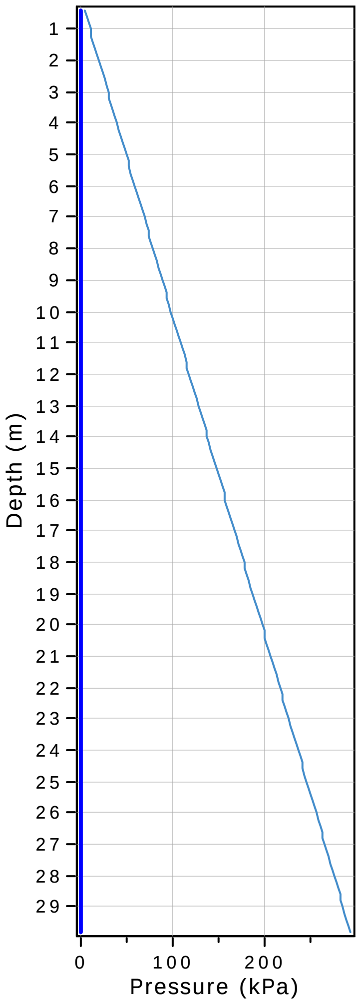
Cone resistance qt



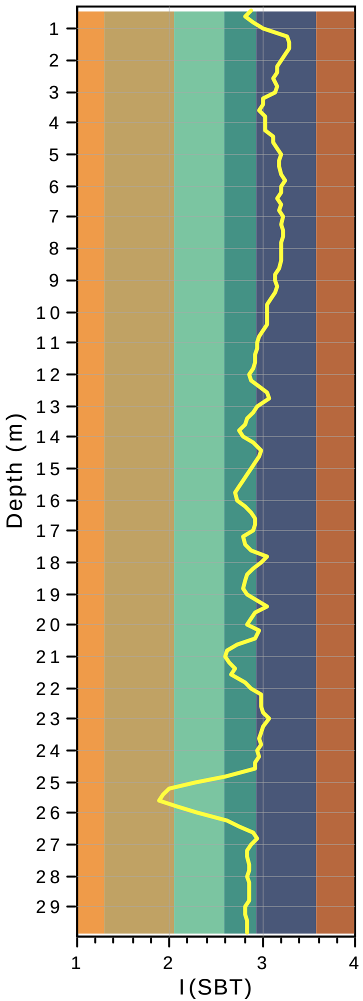
Friction ratio



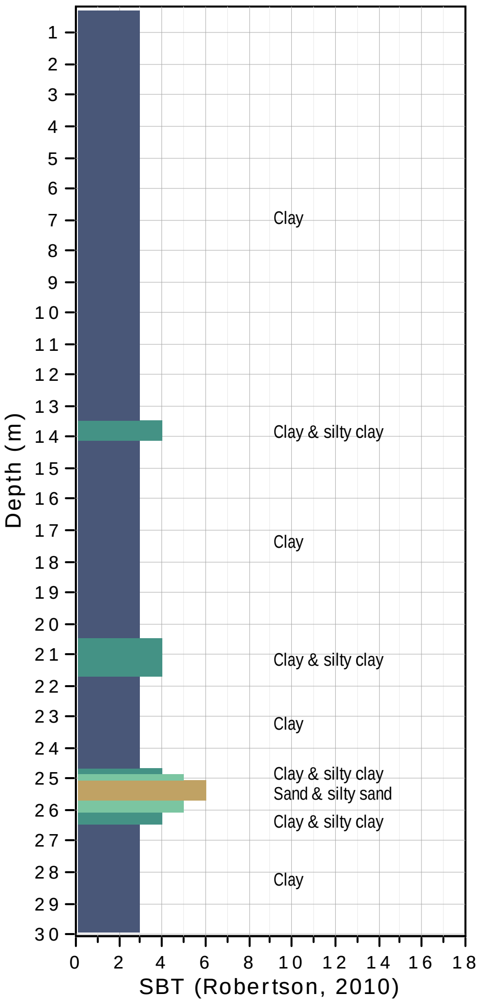
Pore pressure u



SBT Index

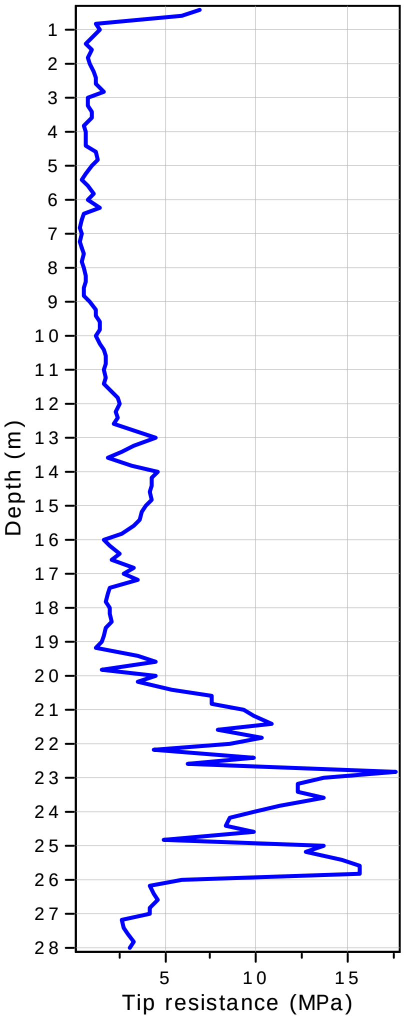


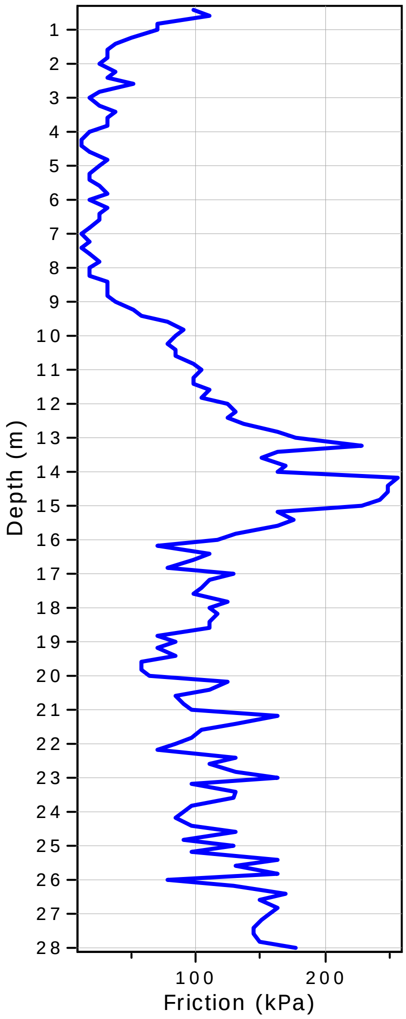
Soil Behaviour Type

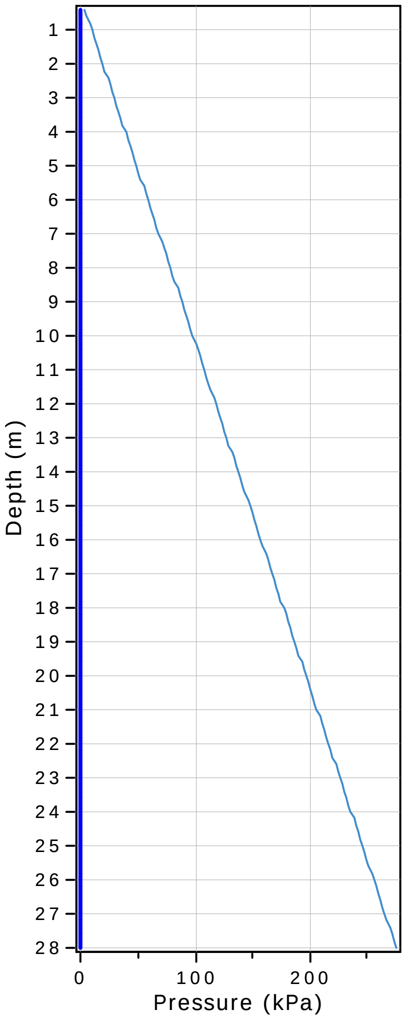


SBT legend

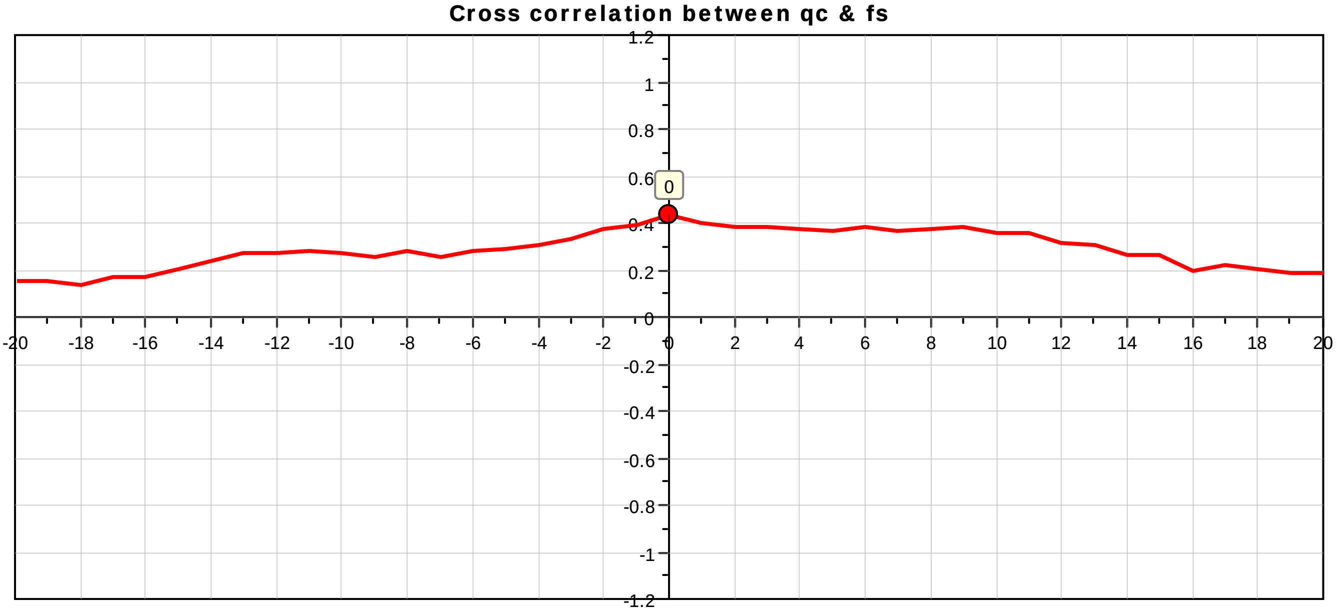
🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟨 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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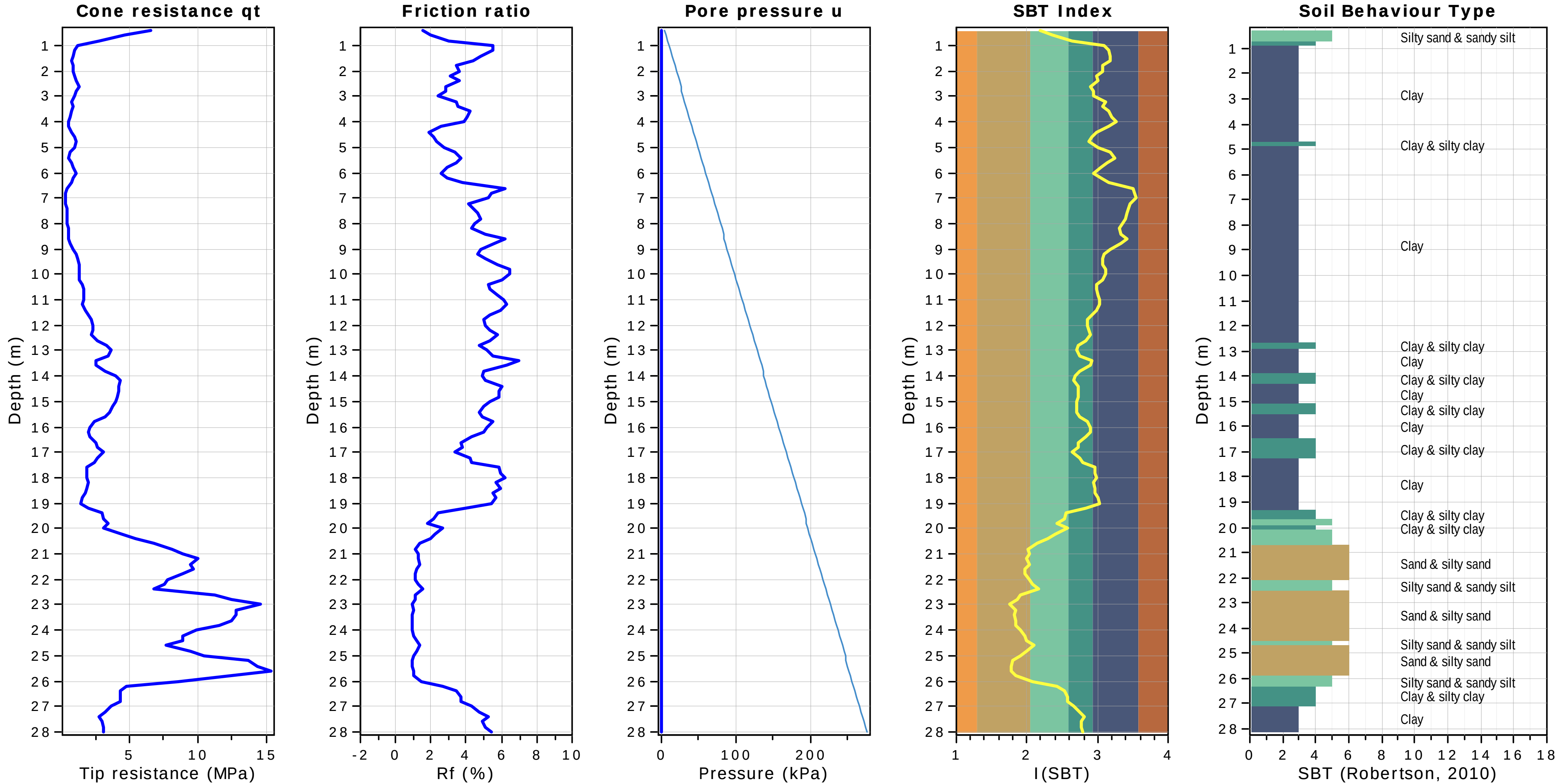
CPT: 036021P125CPT125
Total depth: 28.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

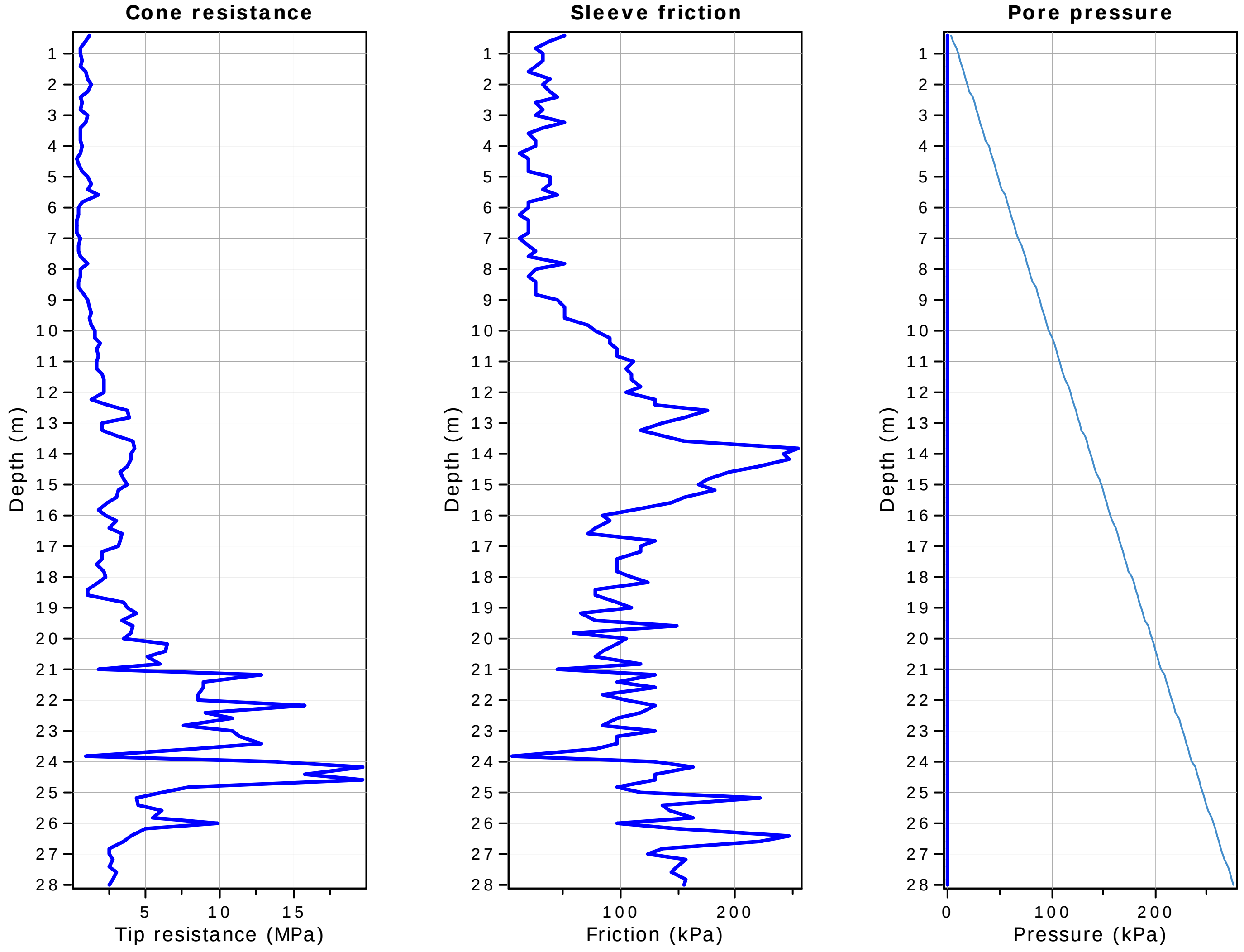


SBT legend

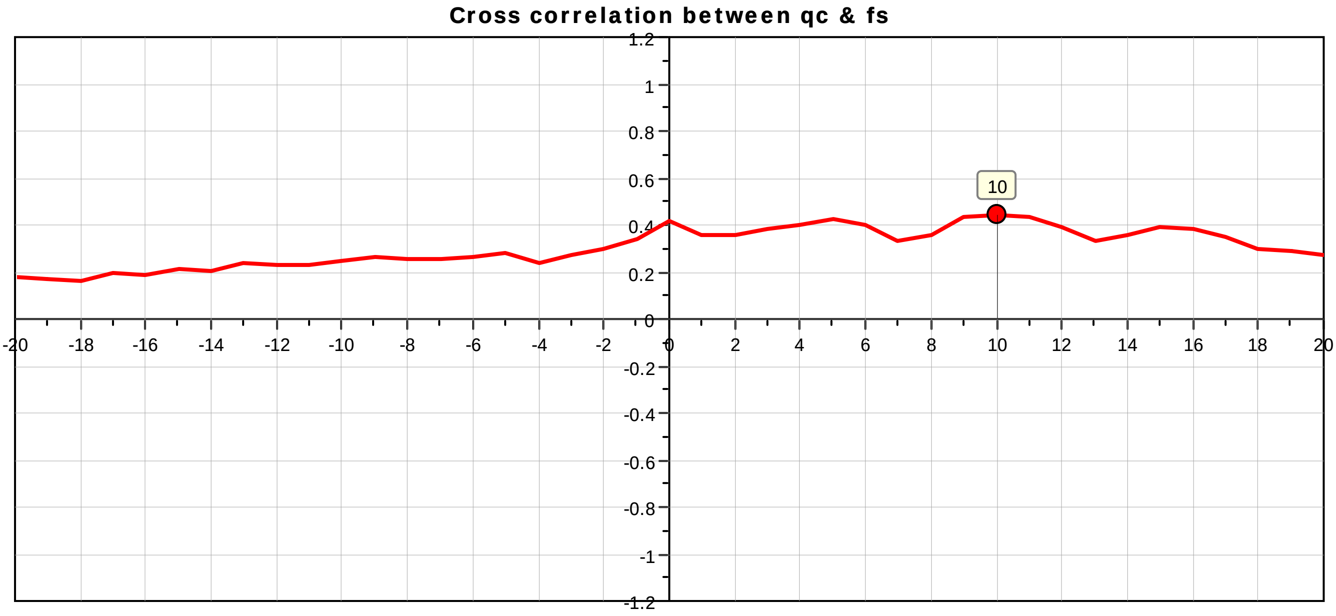
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P126CPT126
Total depth: 28.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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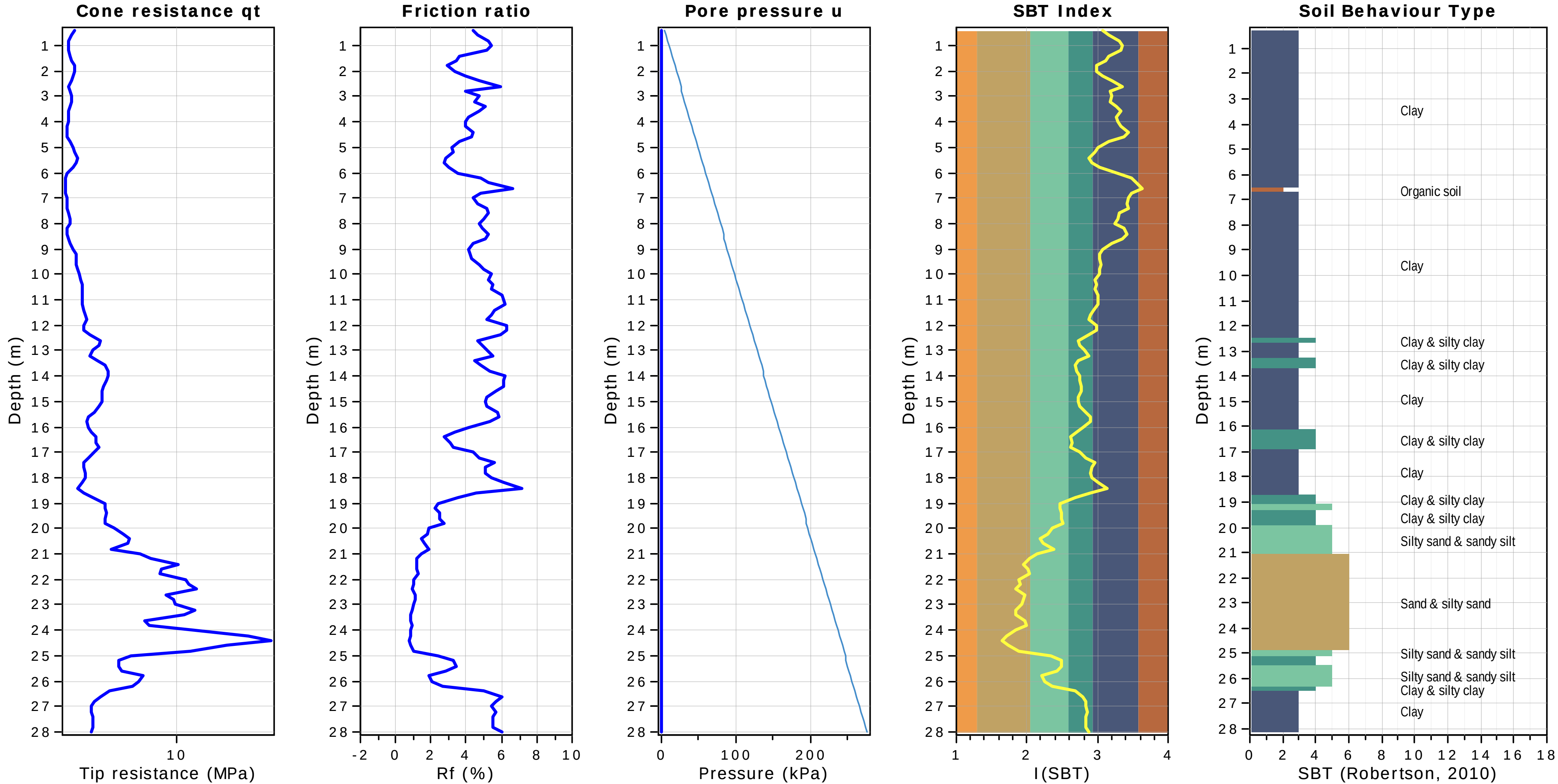
CPT: 036021P126CPT126
Total depth: 28.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

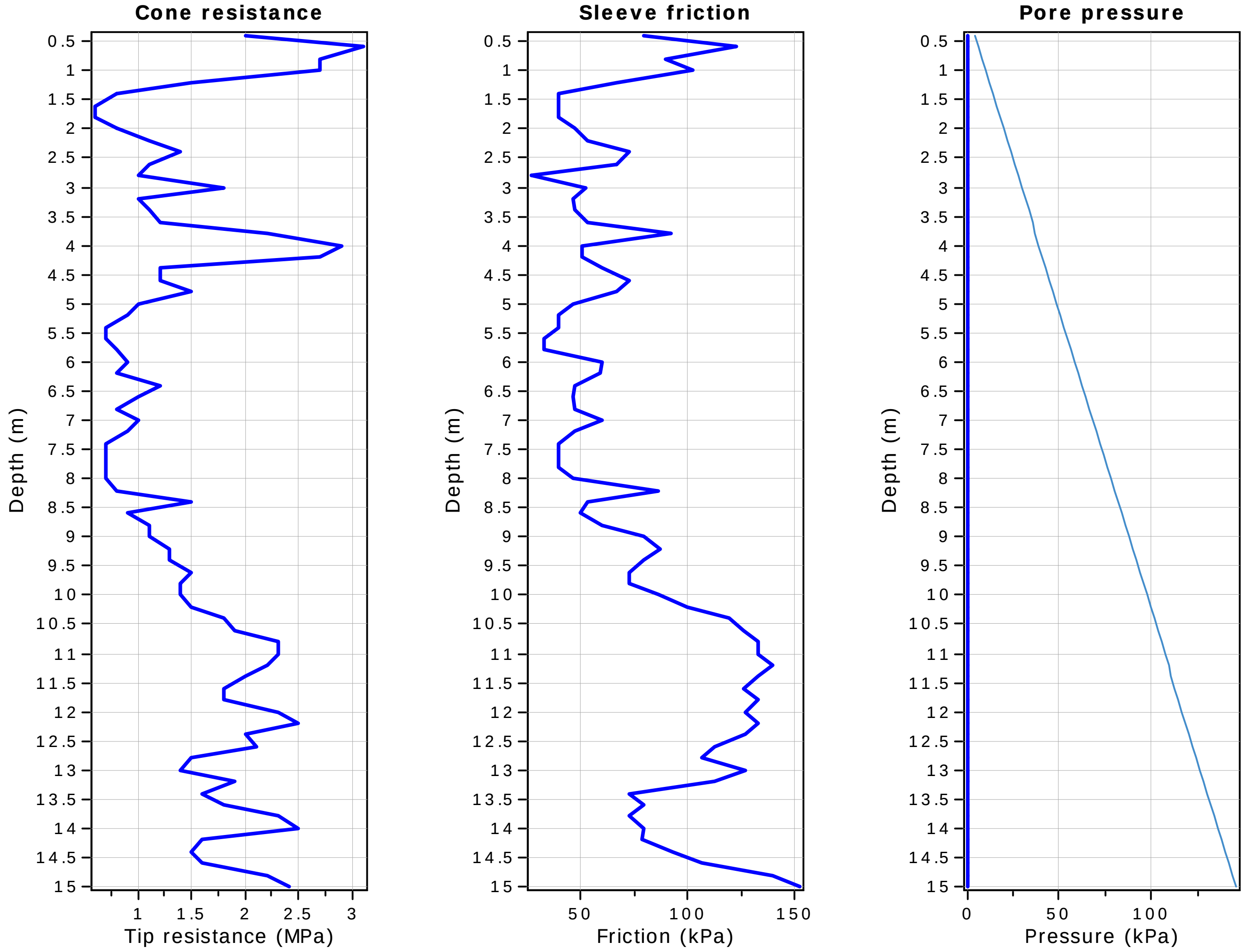


SBT legend

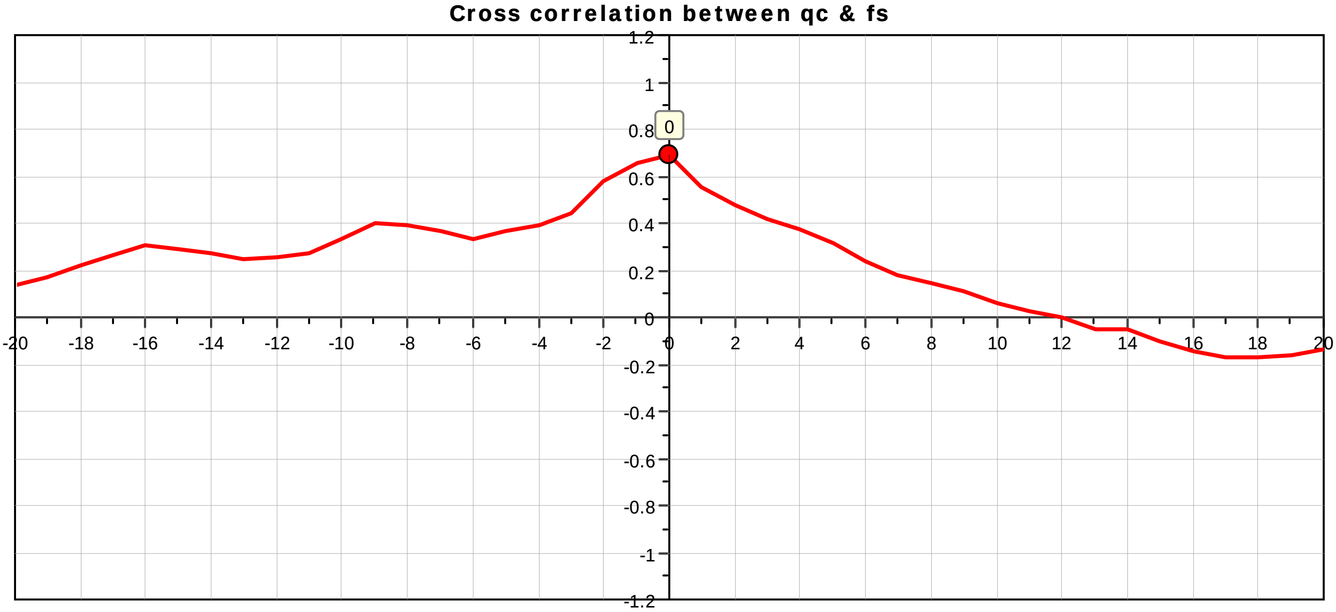
🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟨 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

CPT: 036021P127CPT127
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

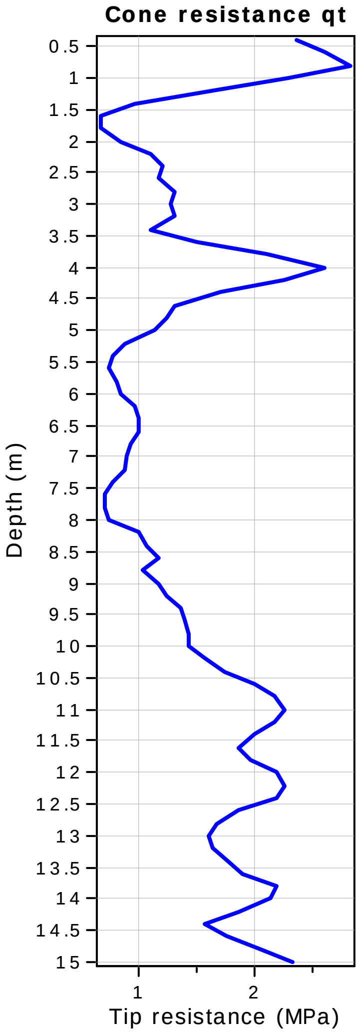


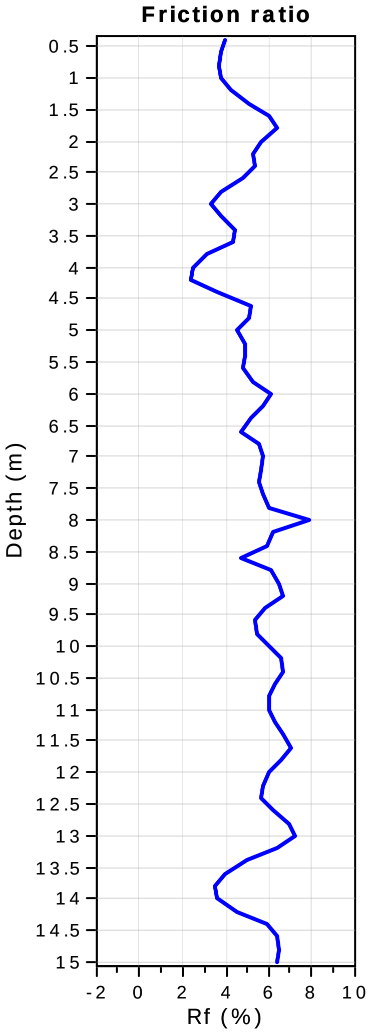
CPT: 036021P127CPT127

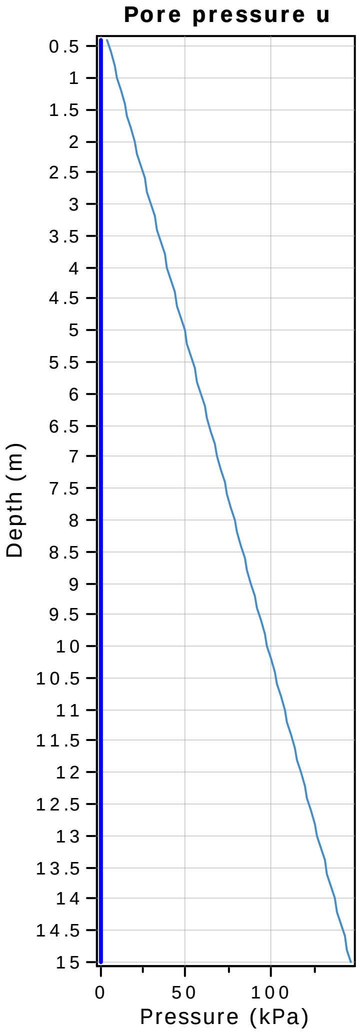
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

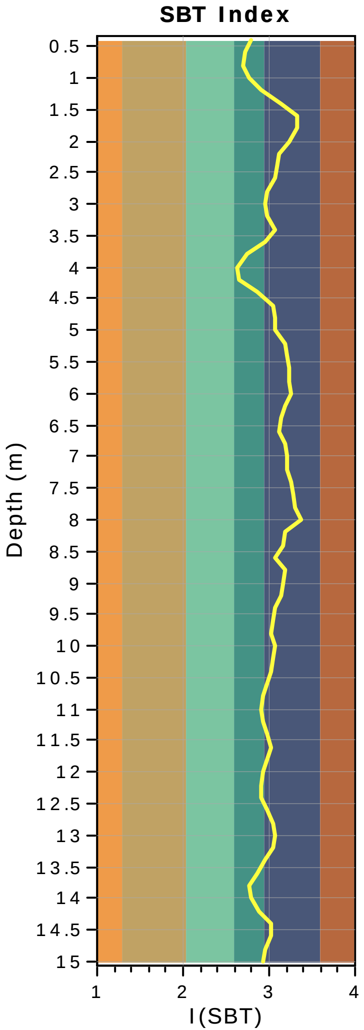
Project:

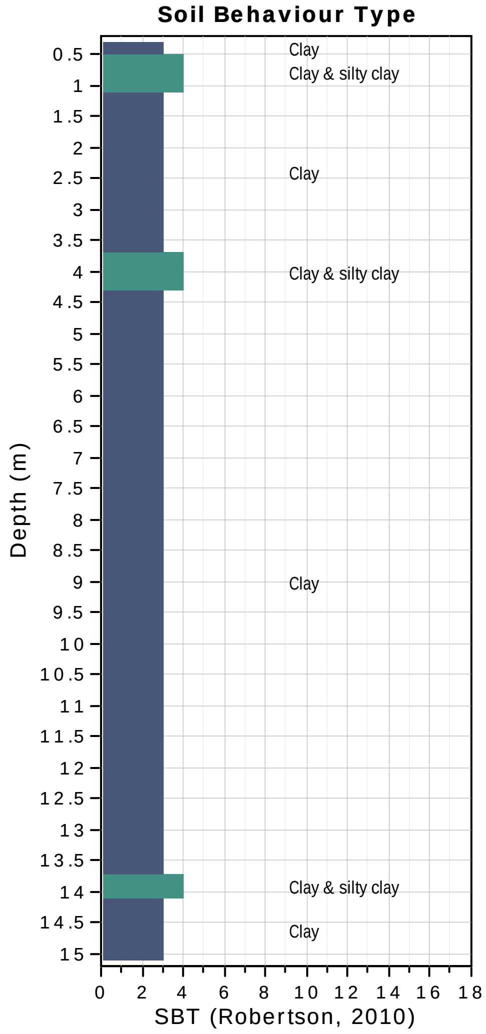
Location:











SBT legend

🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟫 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

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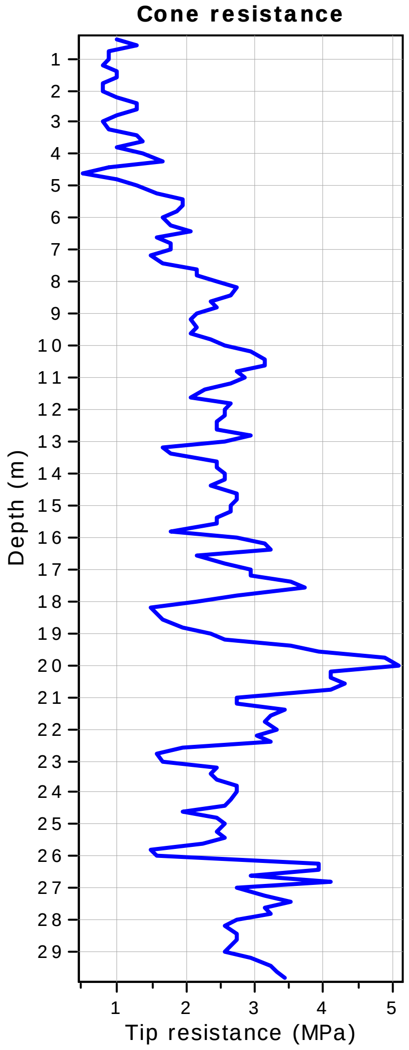
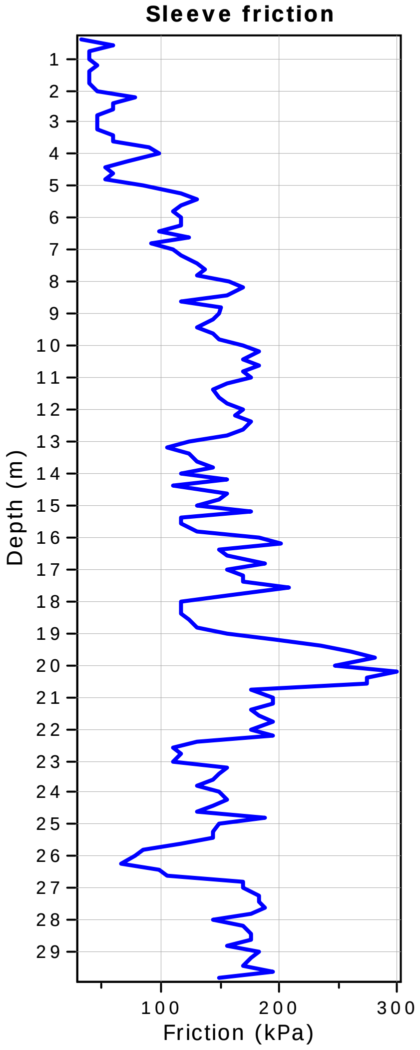
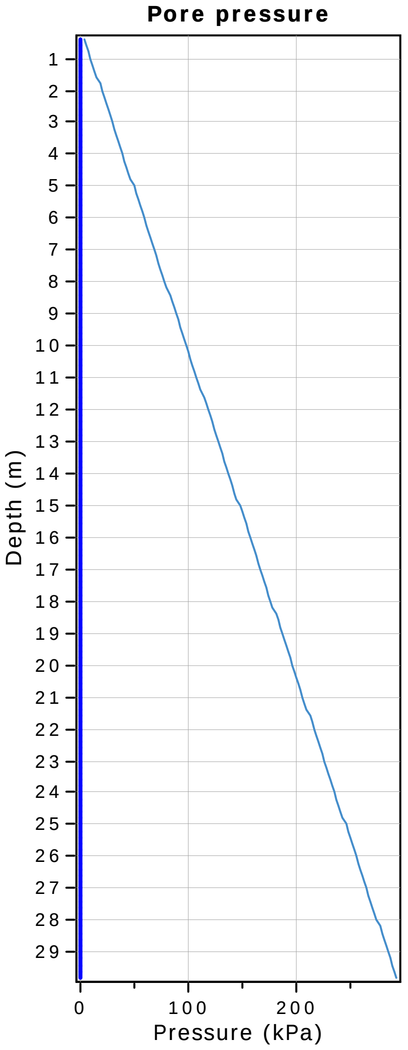
CPT: 036021P12CPT12
Total depth: 29.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

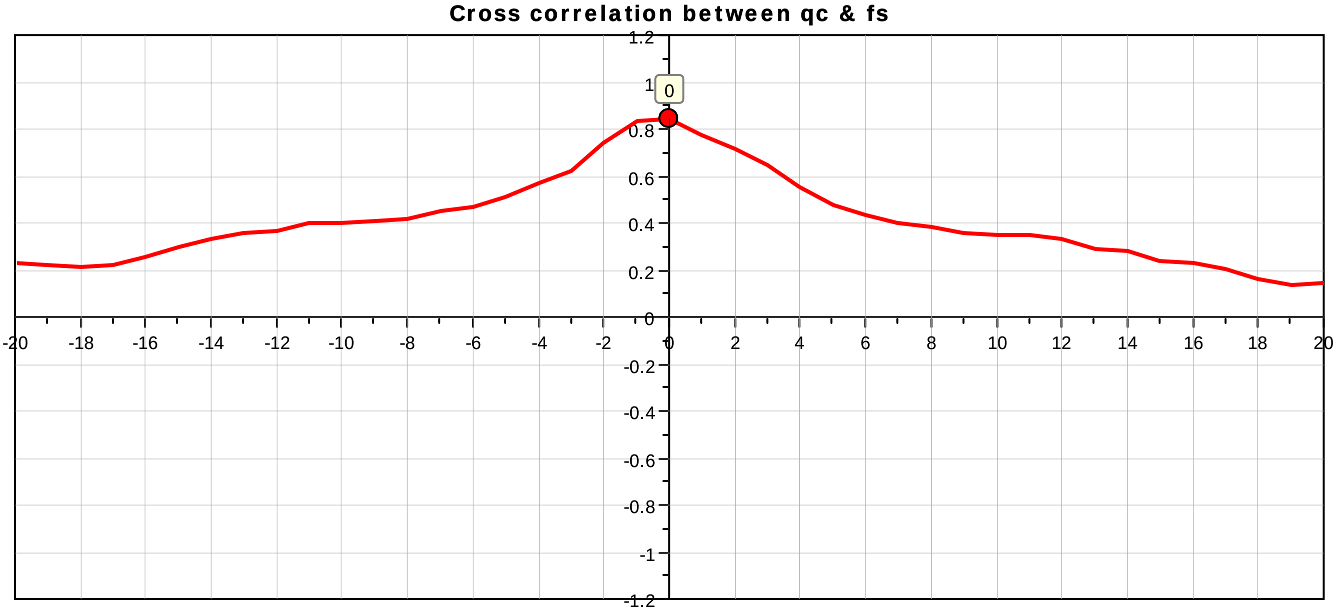
Project:
Location:


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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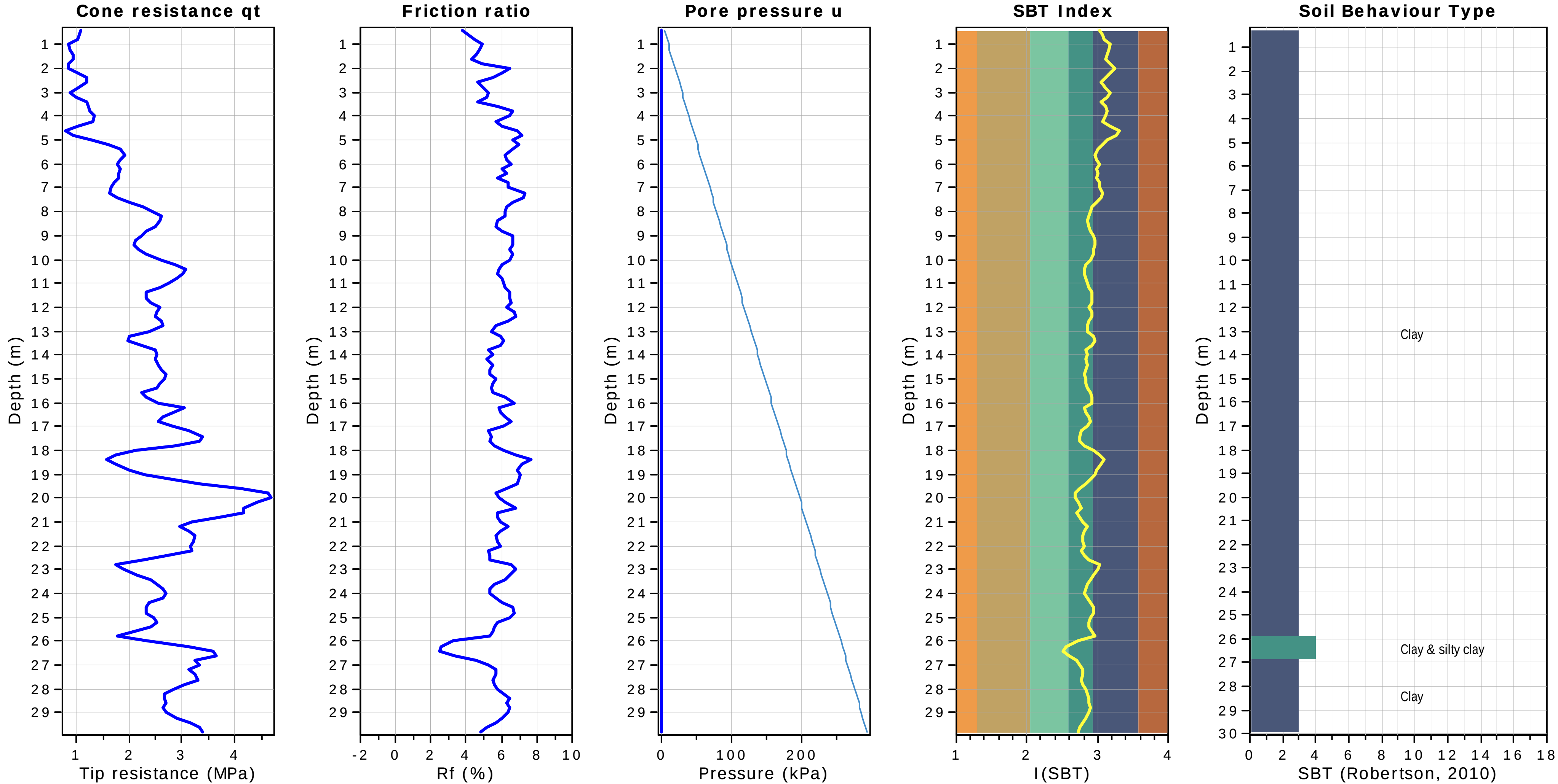
CPT: 036021P12CPT12
Total depth: 29.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

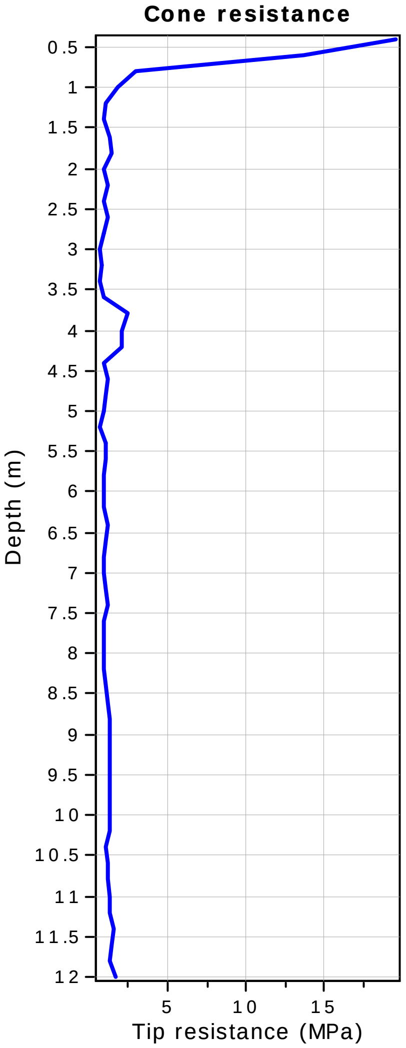


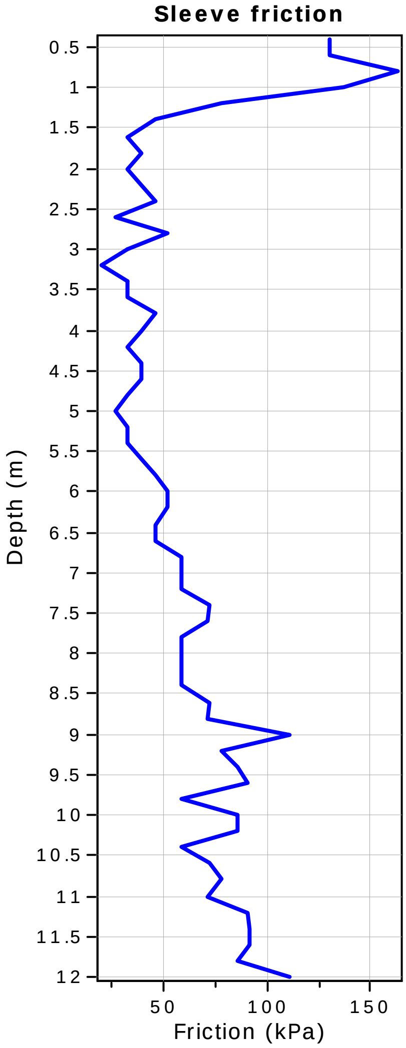
SBT legend

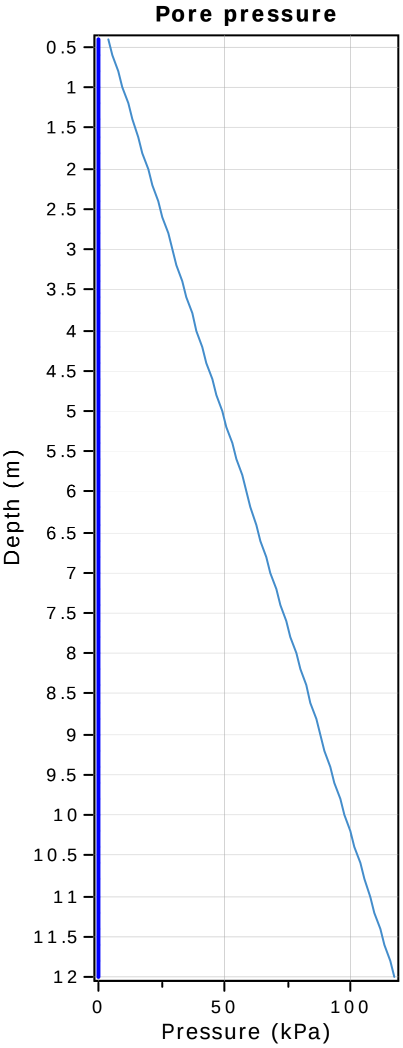
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

CPT: 036021P130CPT130
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

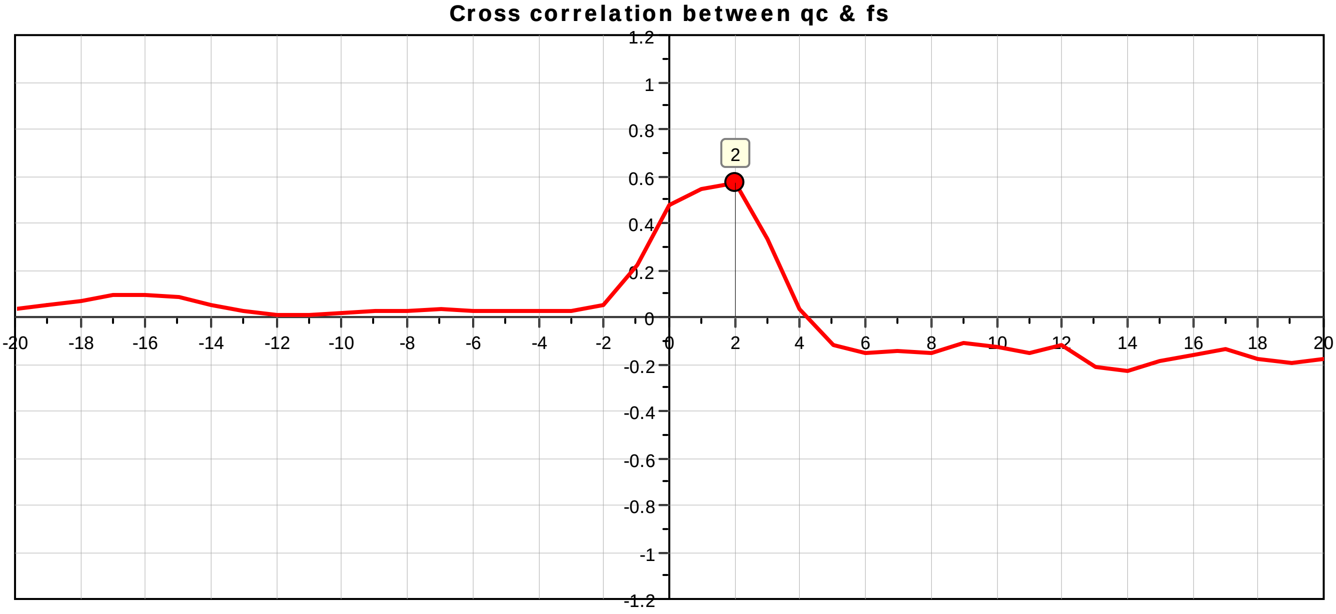
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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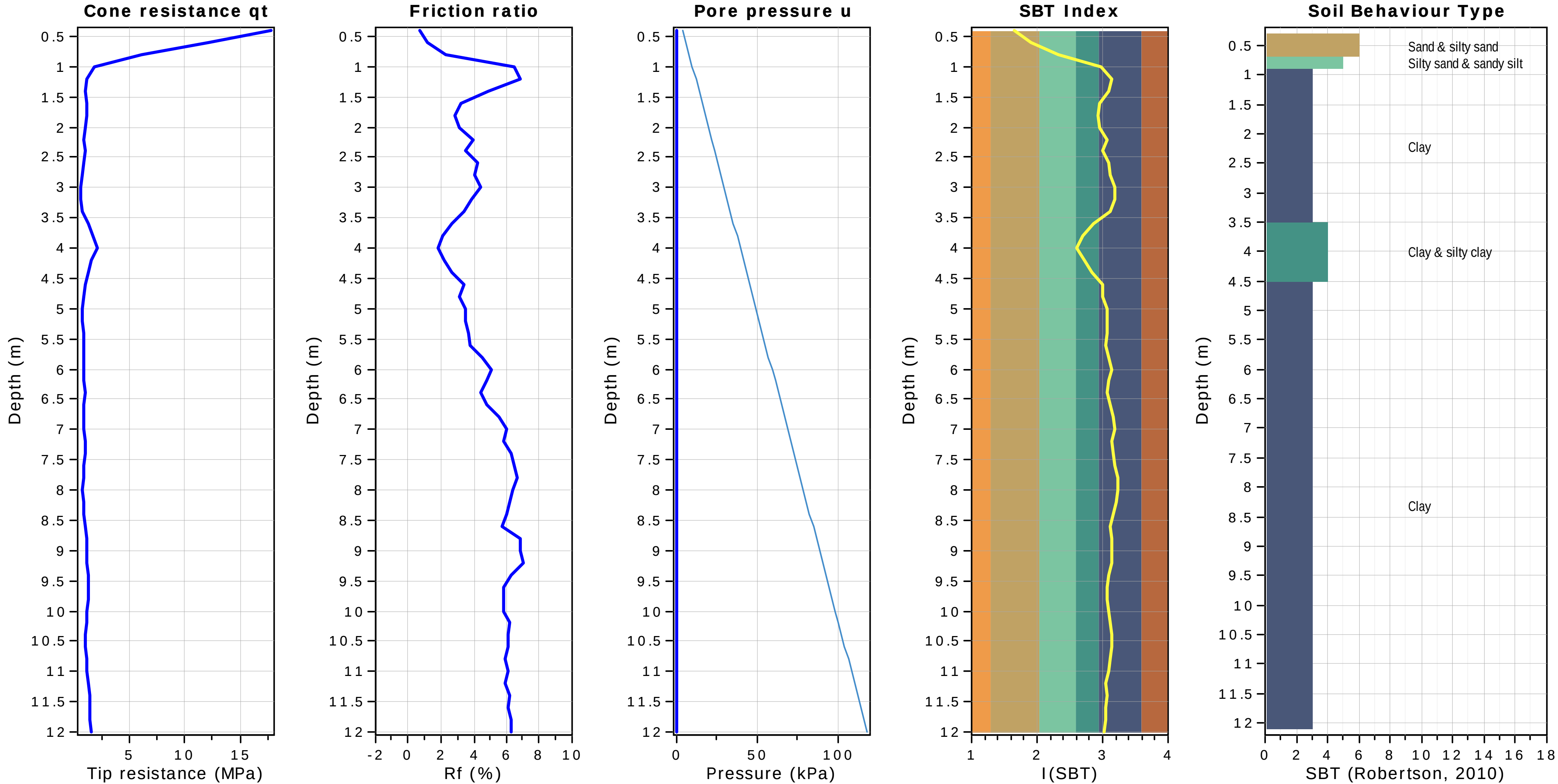
CPT: 036021P130CPT130
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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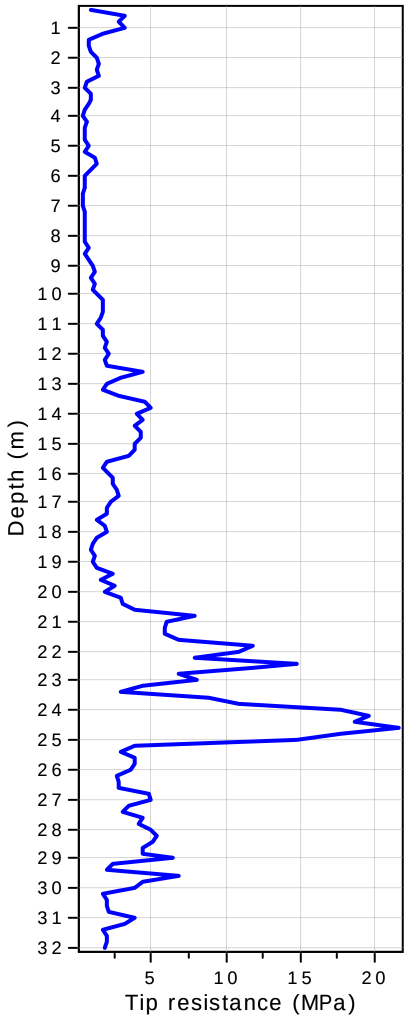
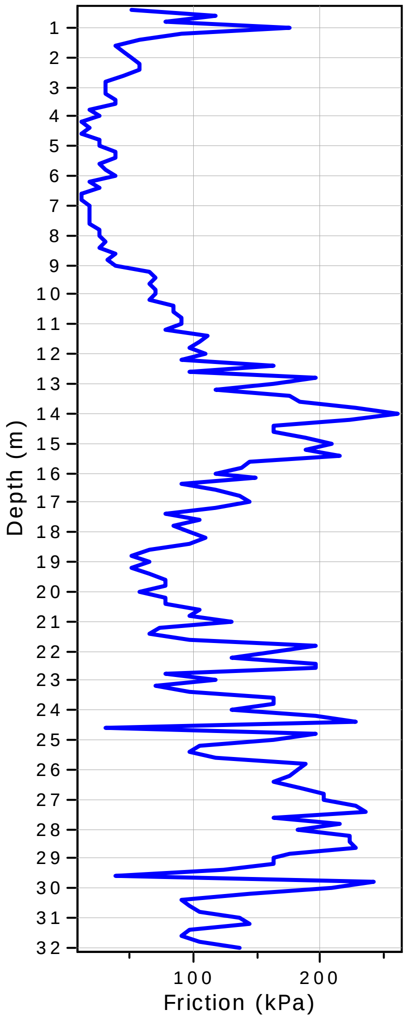
CPT: 036021P131CPT131
Total depth: 32.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

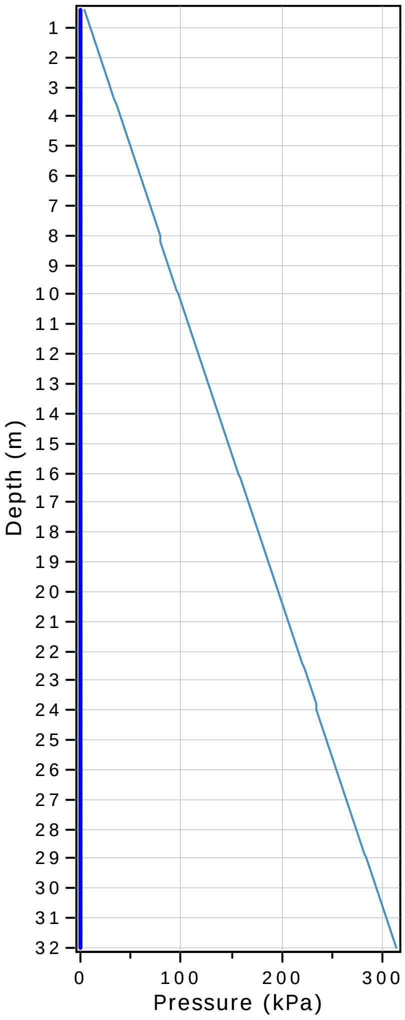
Cone resistance



Sleeve friction

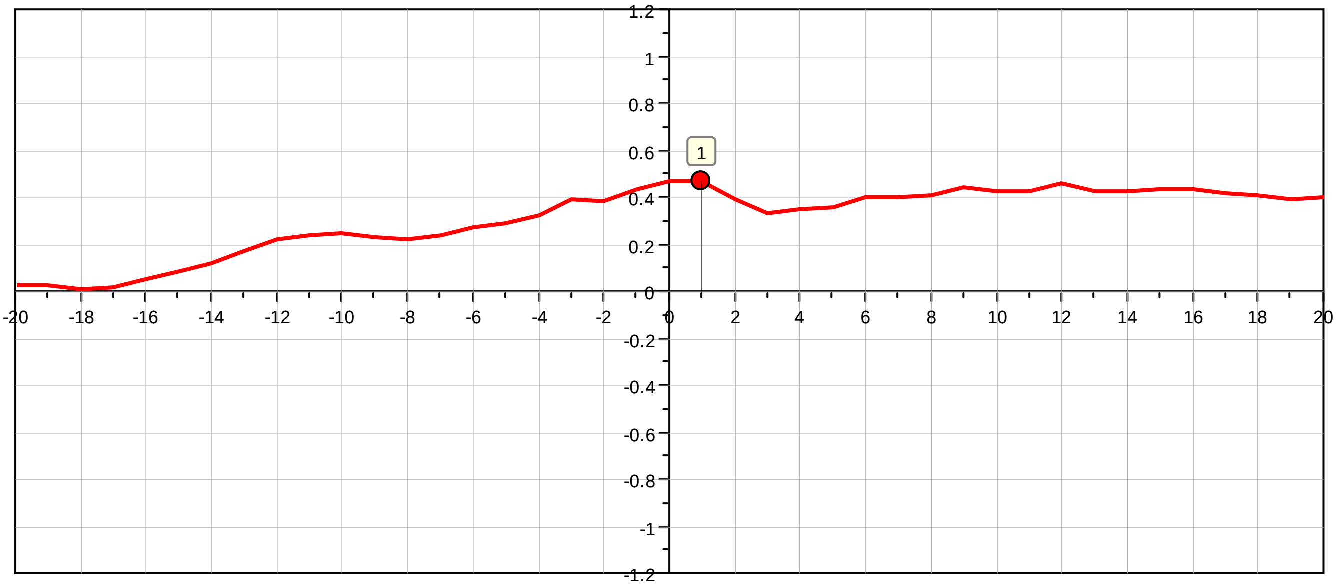


Pore pressure



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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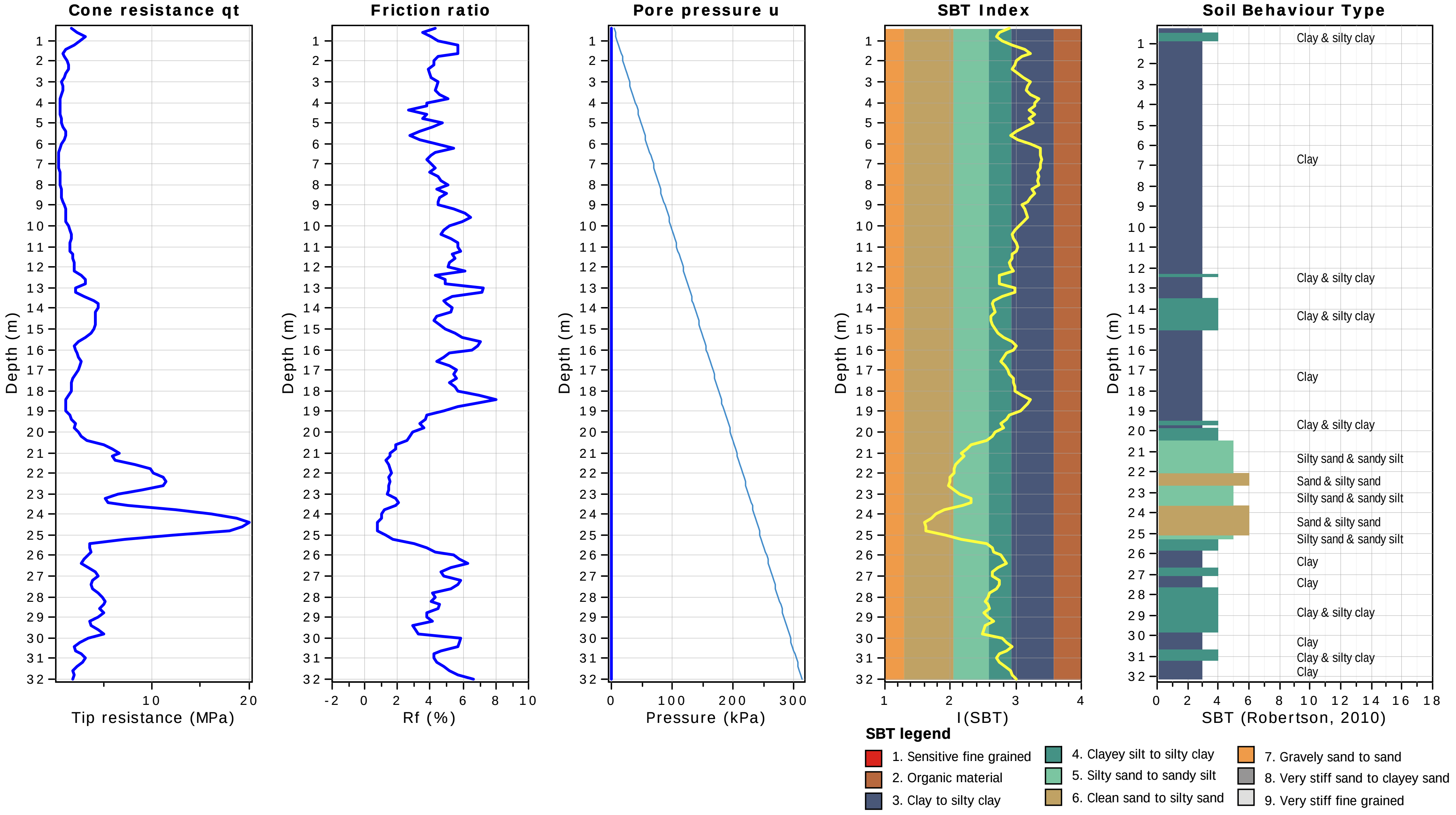
CPT: 036021P131CPT131
Total depth: 32.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

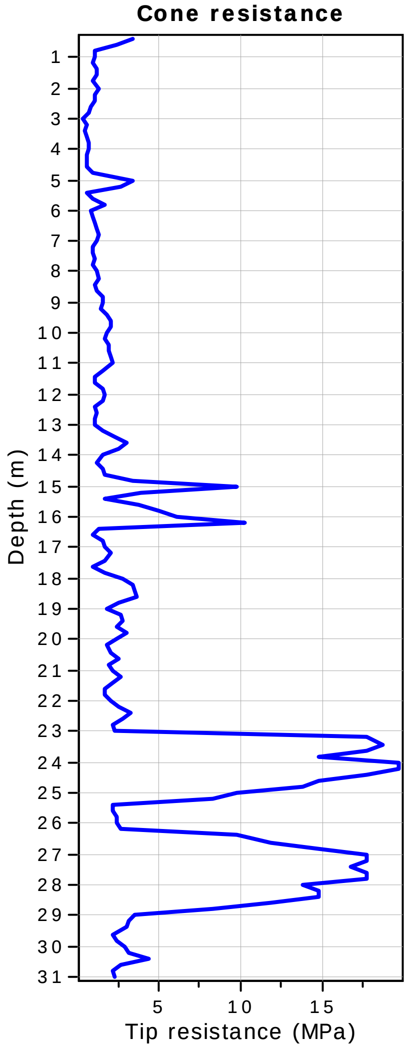
Project:
Location:



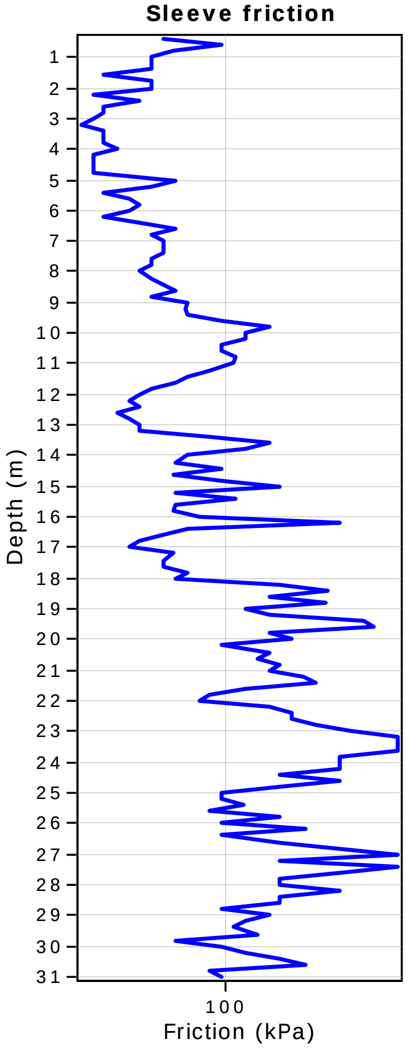
CPT: 036021P134CPT134
Total depth: 31.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

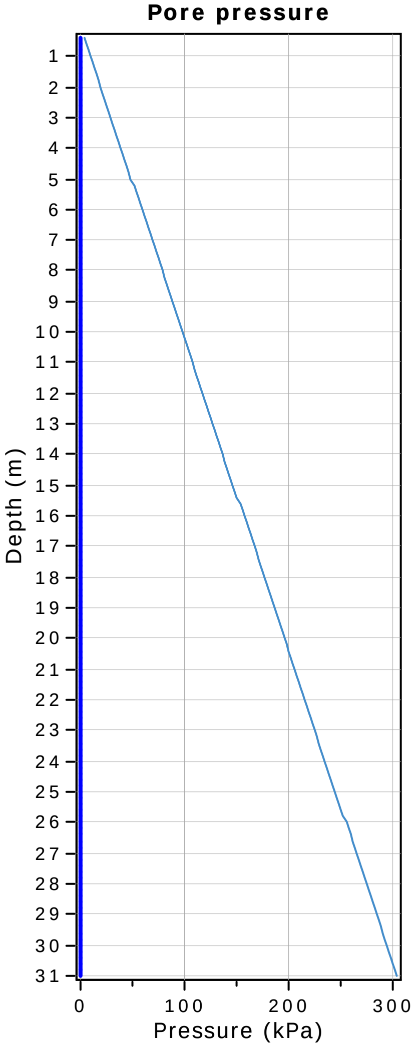
Cone resistance



Sleeve friction

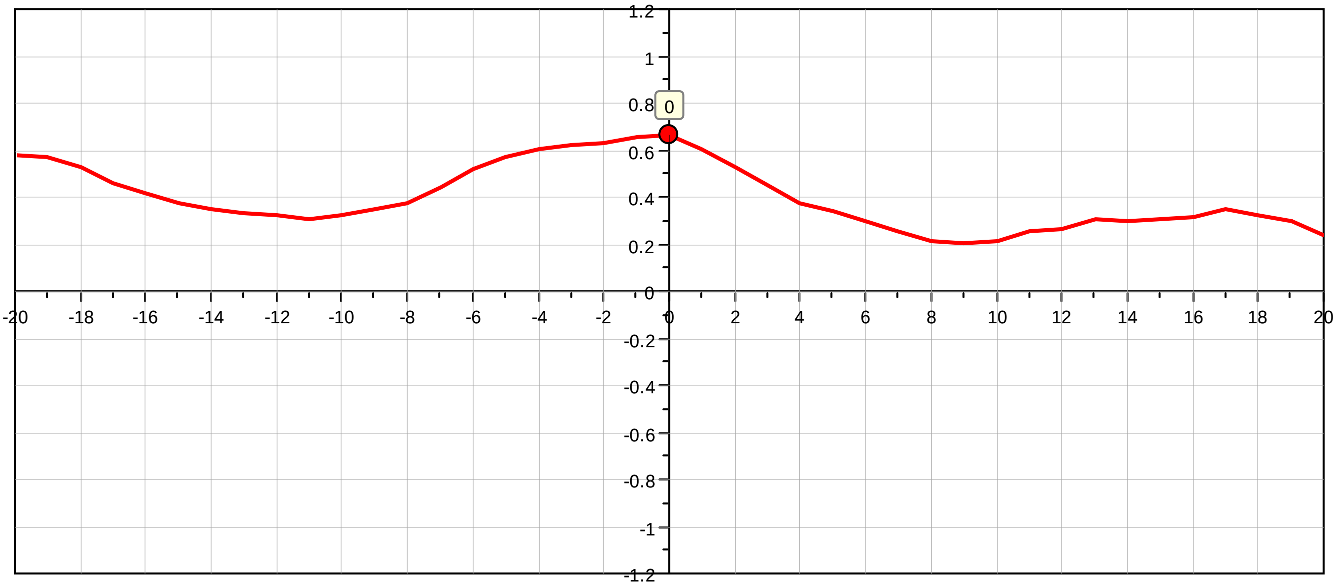


Pore pressure



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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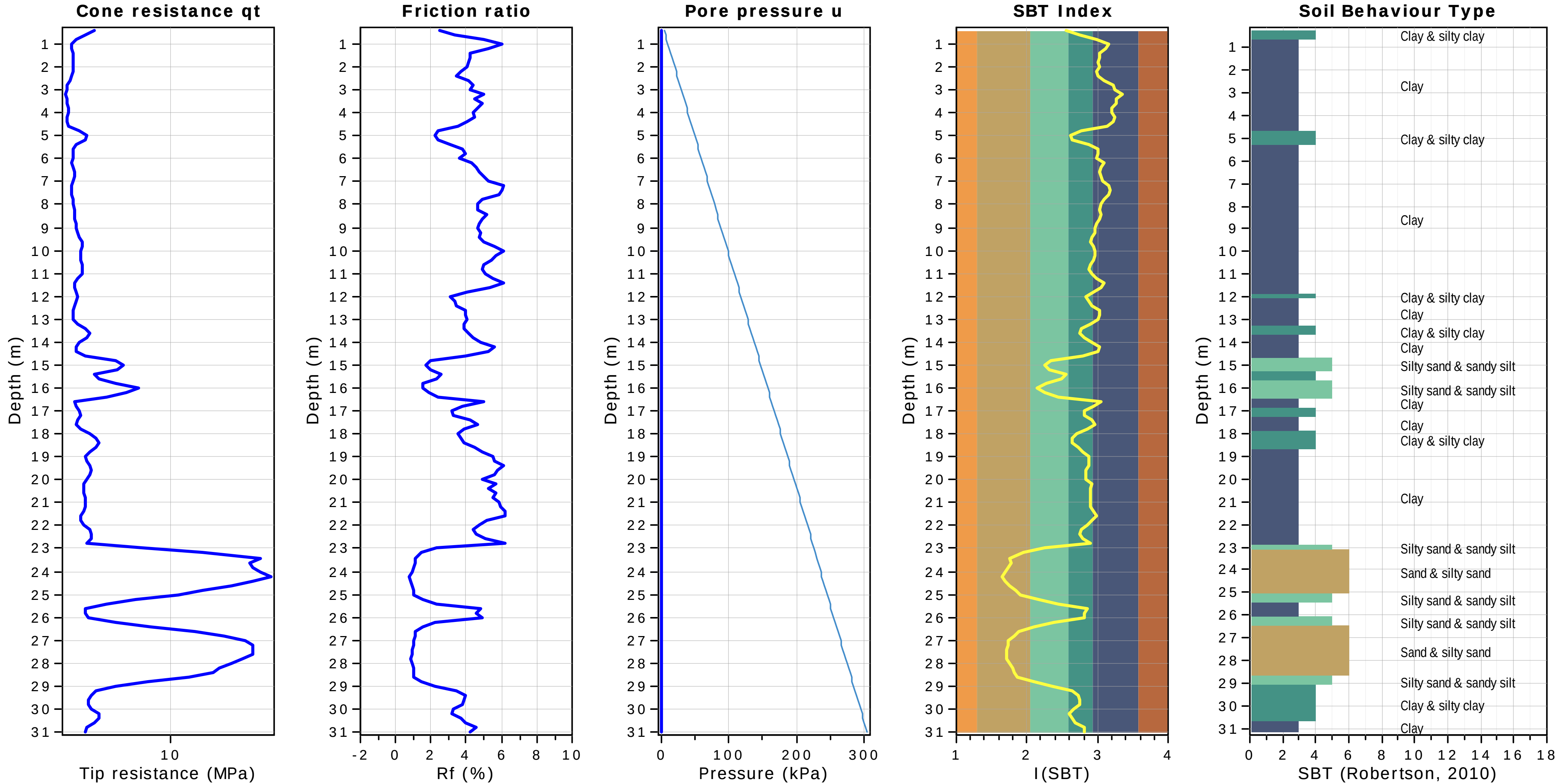
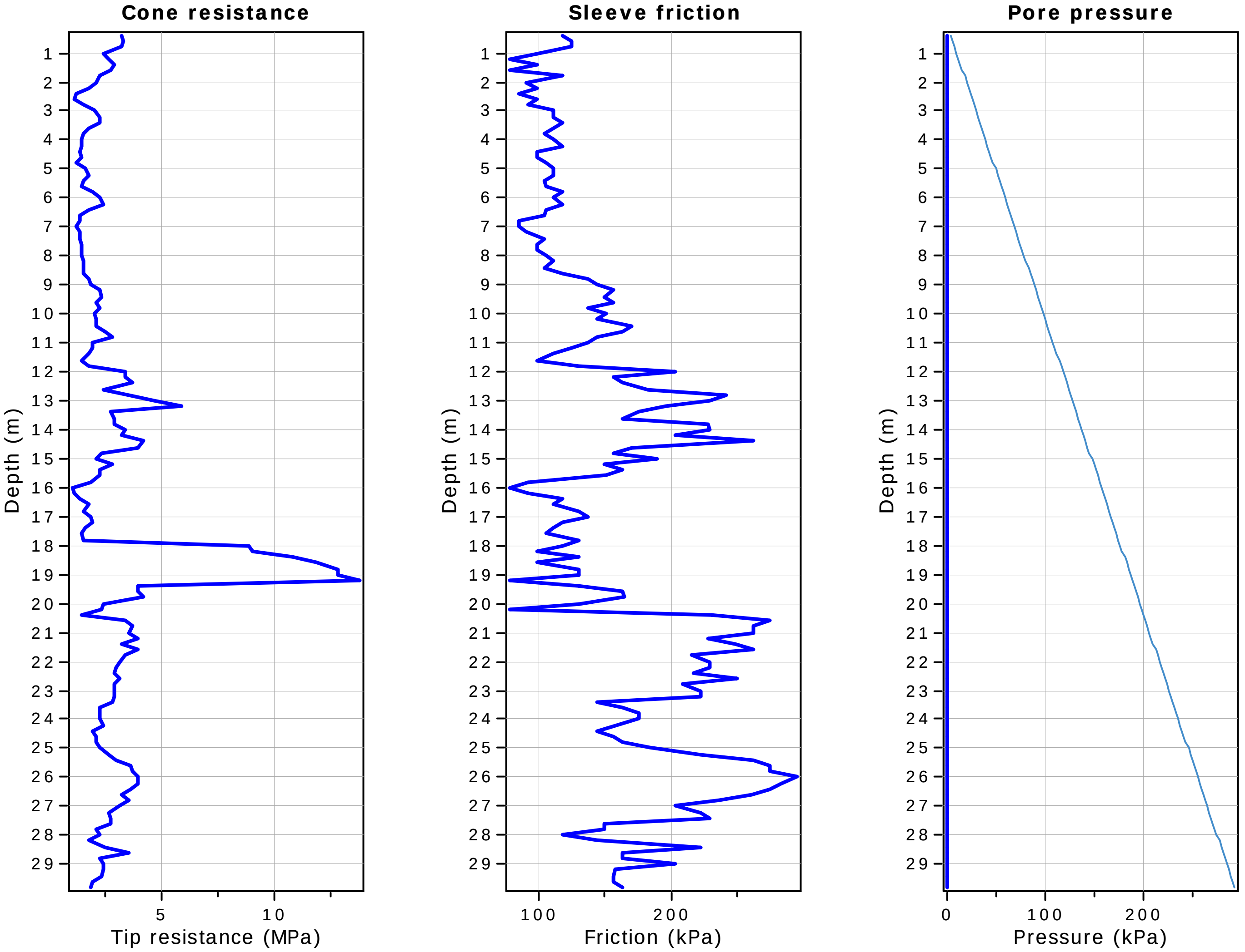
CPT: 036021P134CPT134
Total depth: 31.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

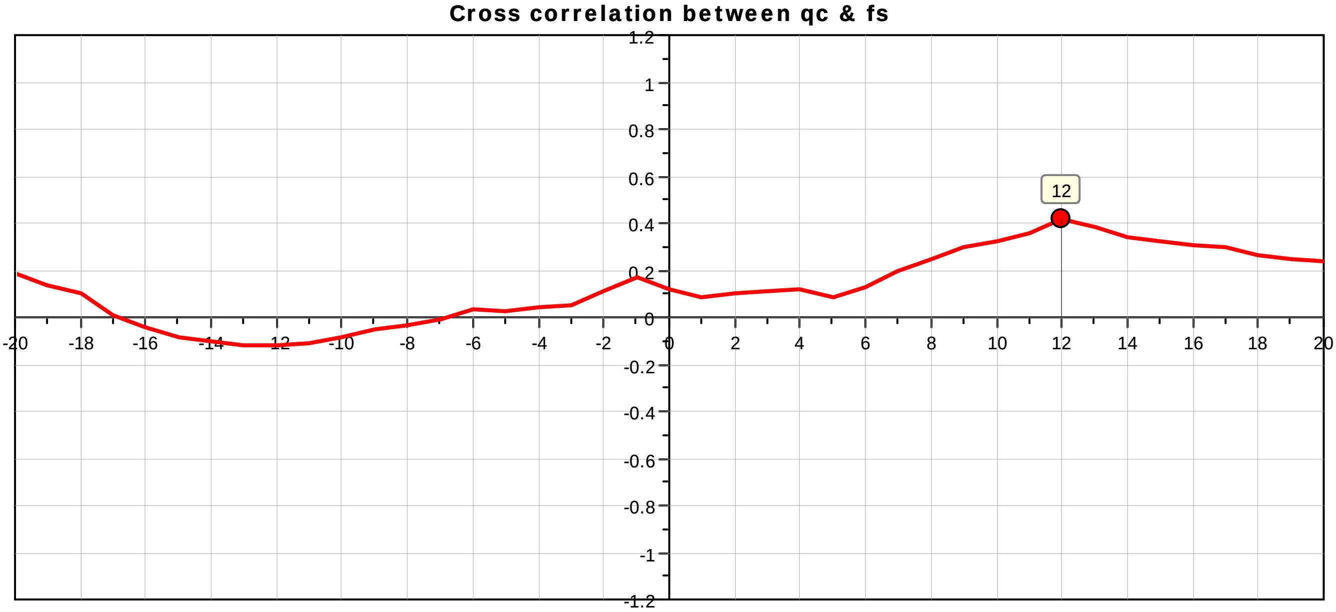


SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟫 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬛ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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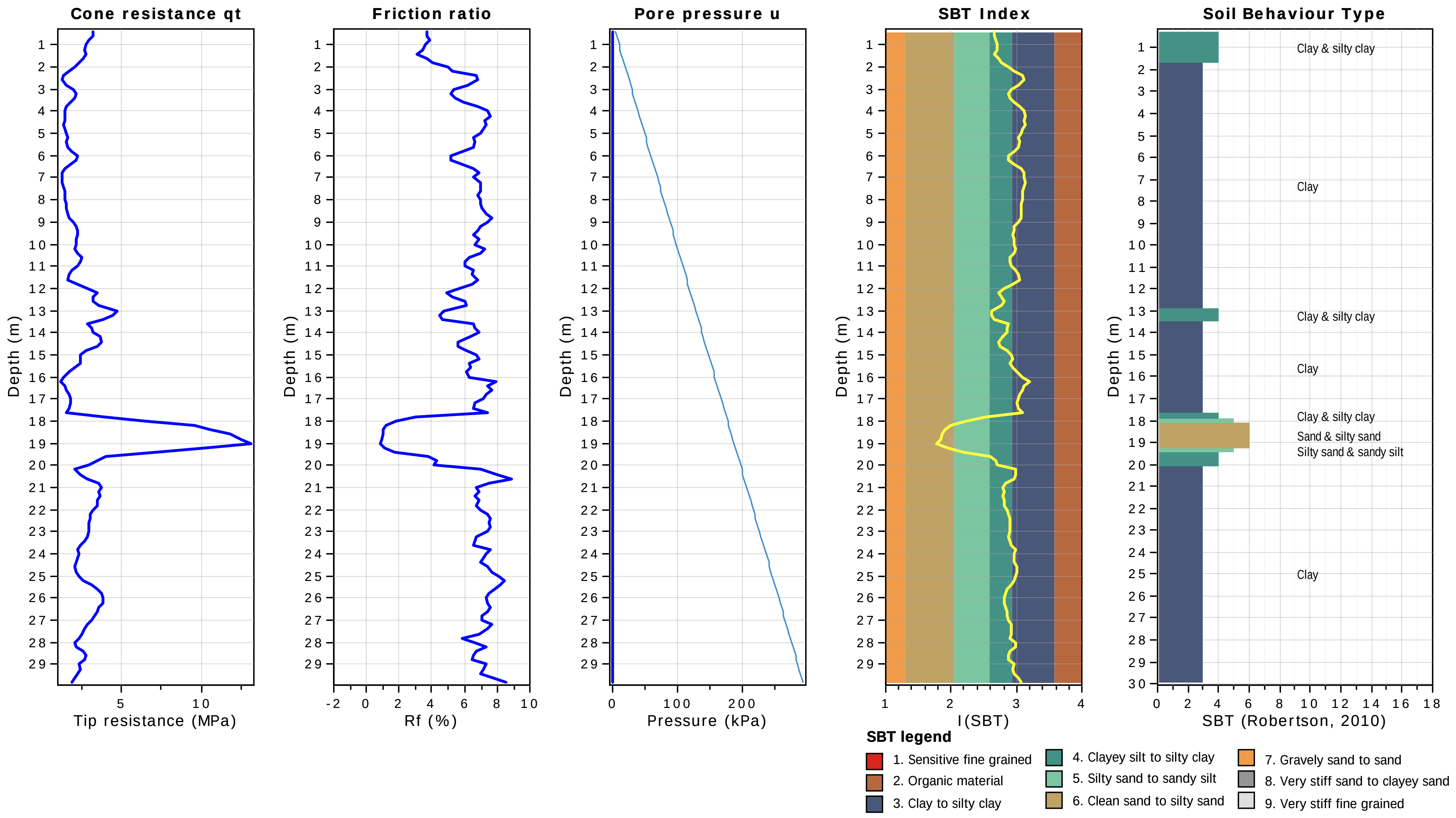
CPT: 036021P135CPT135
Total depth: 29.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



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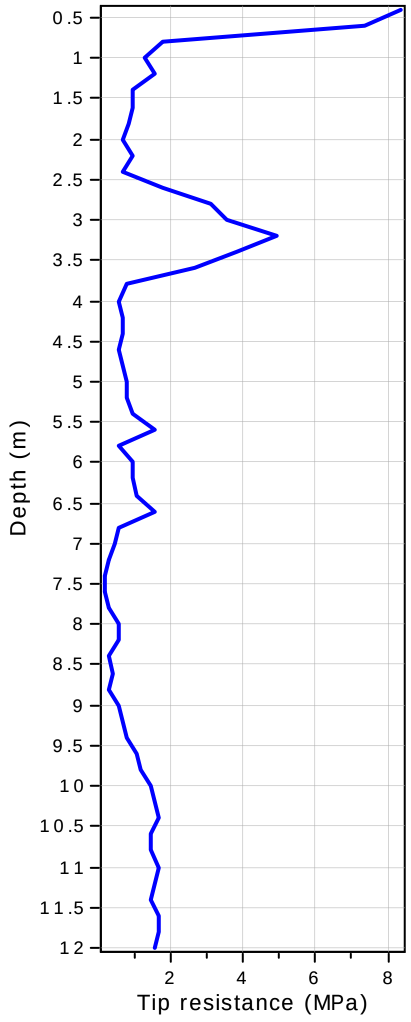
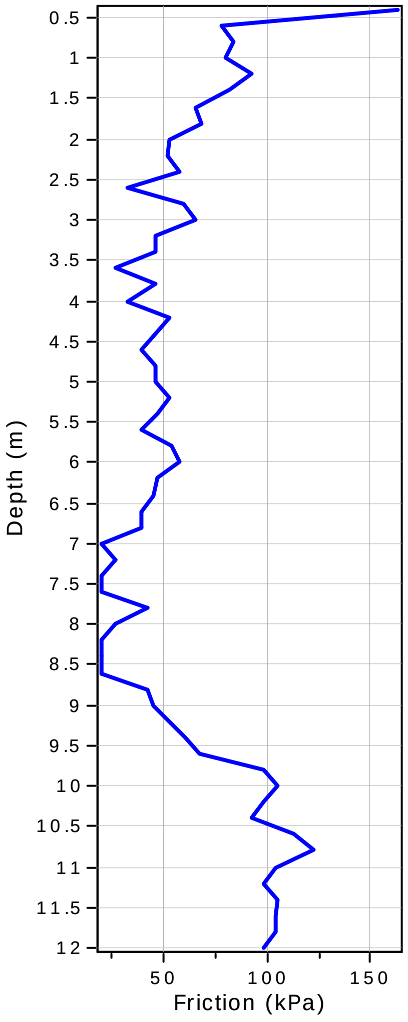
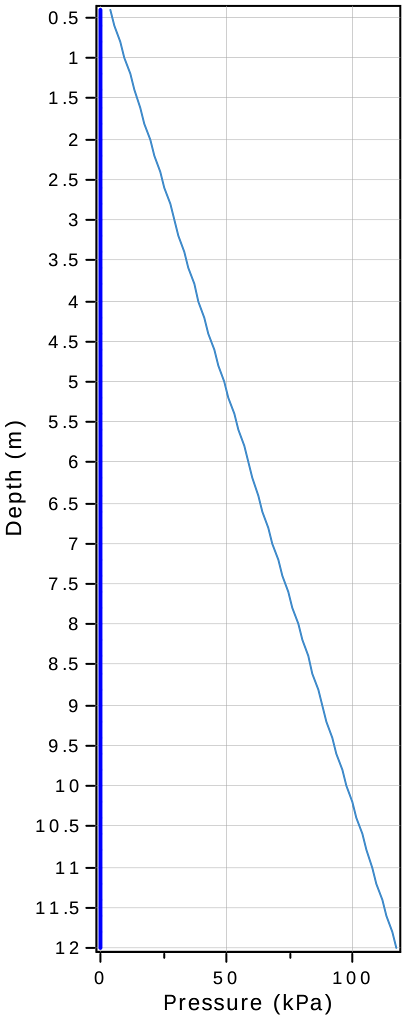
CPT: 036021P136CPT136
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

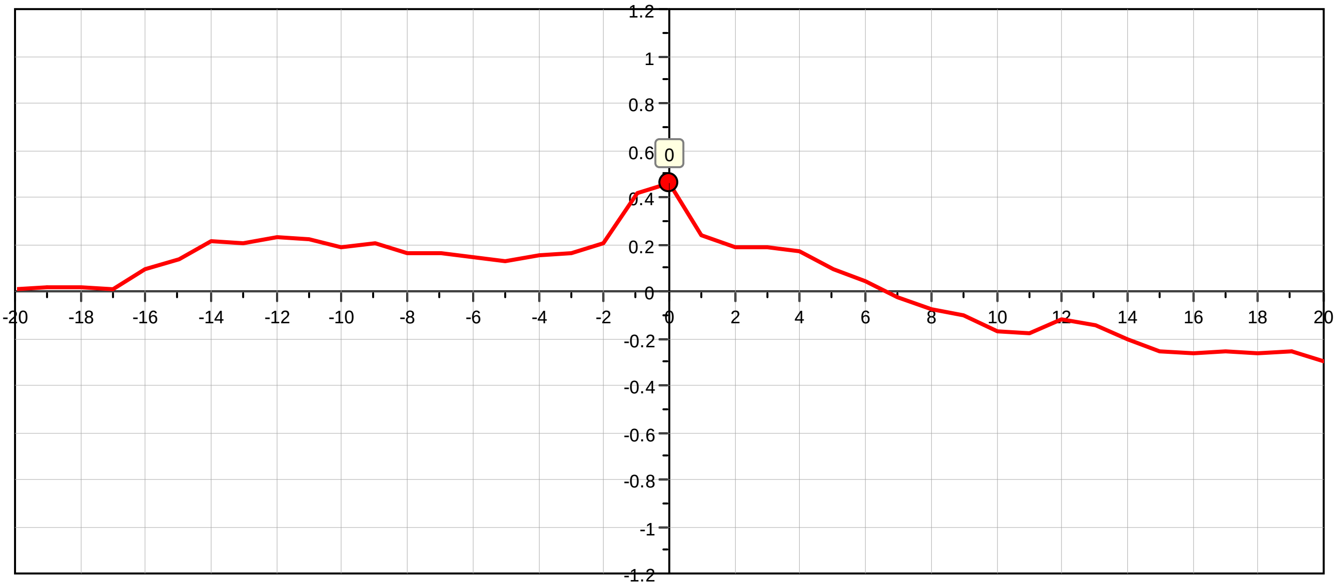

Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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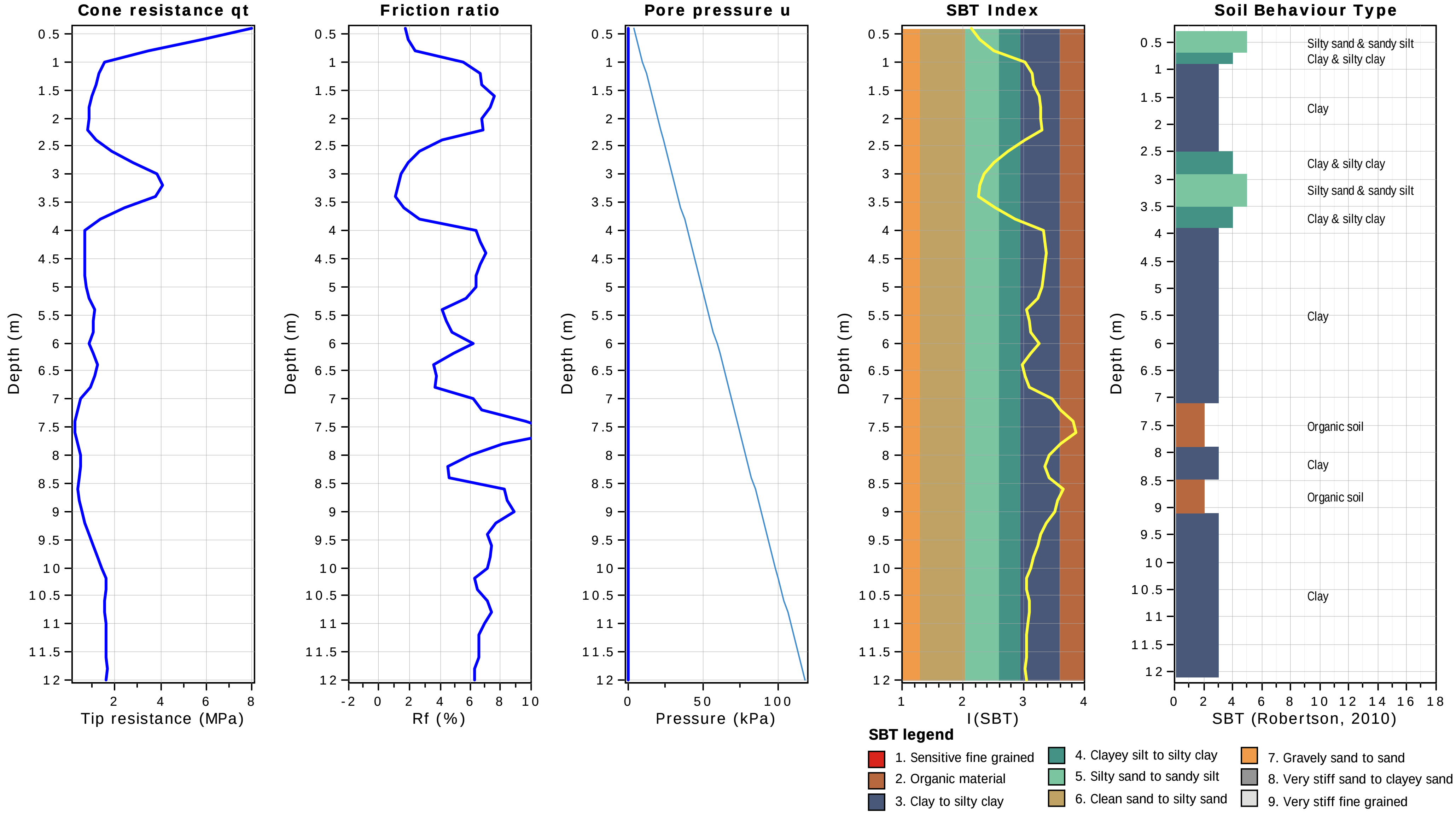
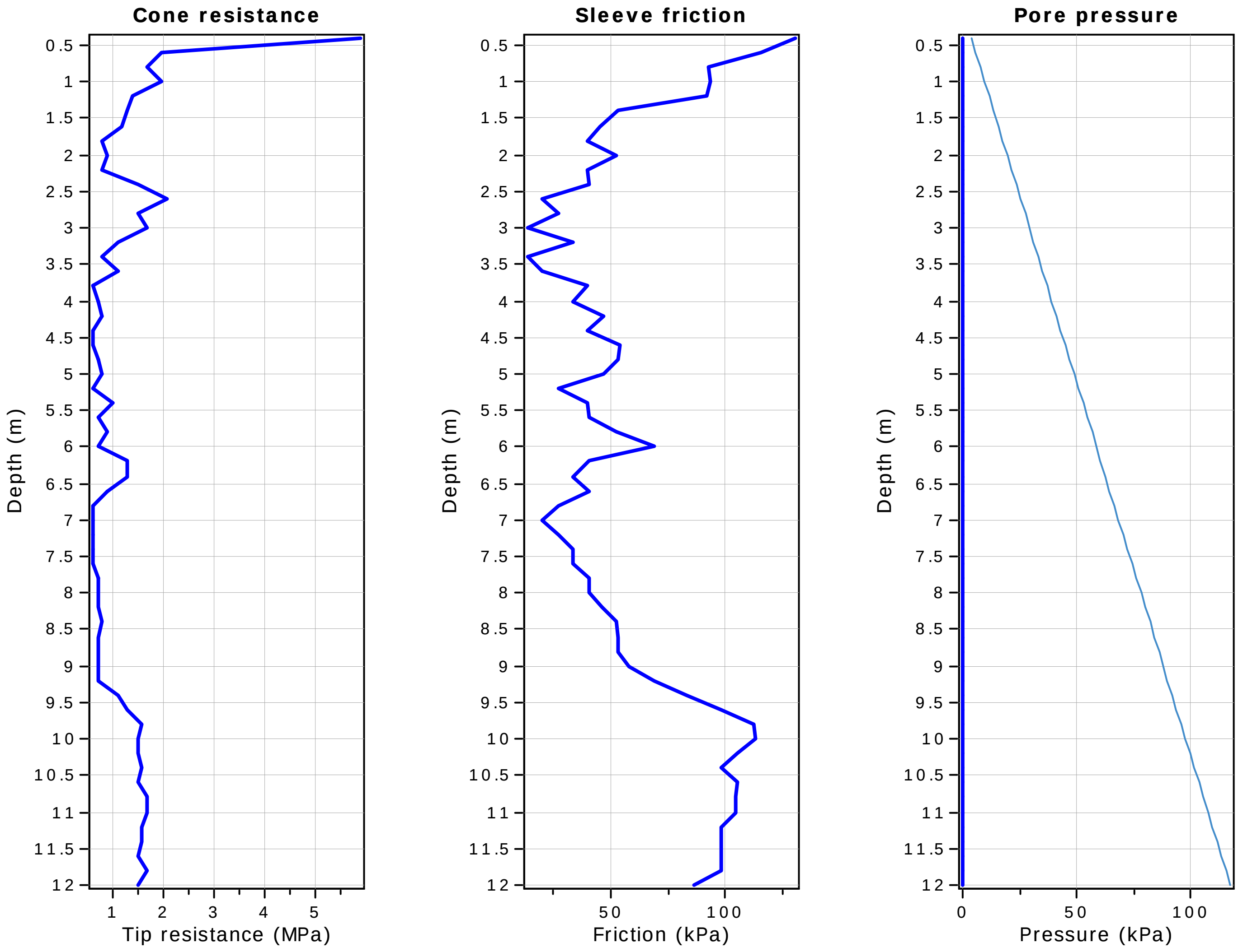
CPT: 036021P136CPT136
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

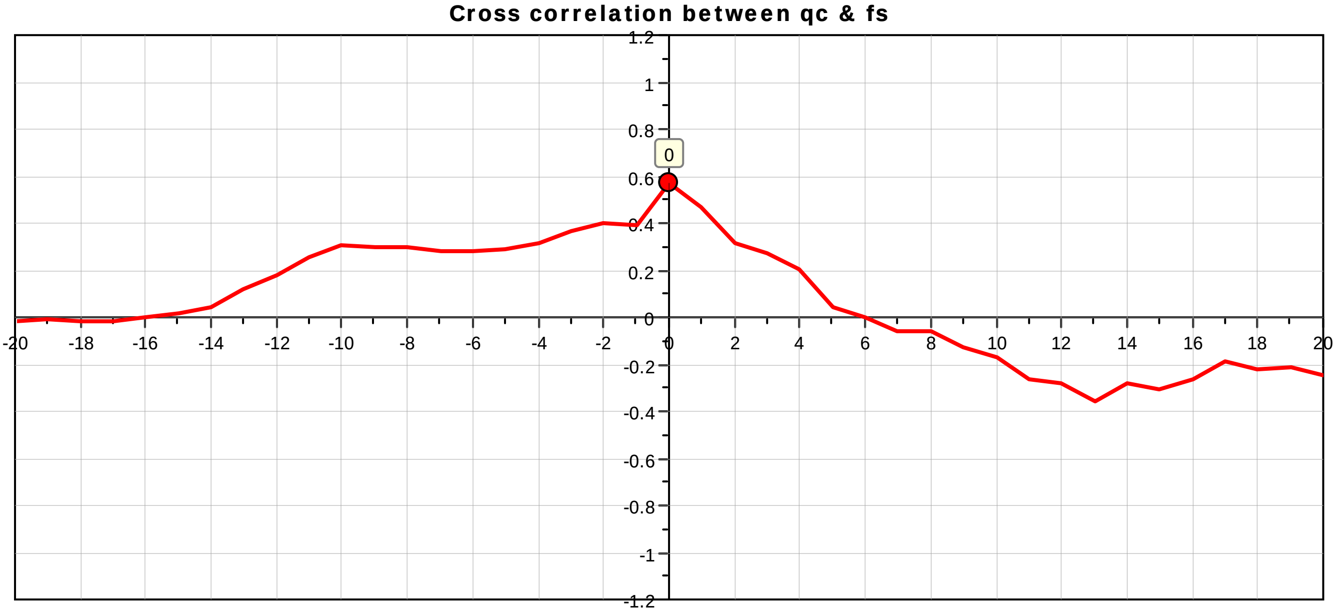


CPT: 036021P137CPT137
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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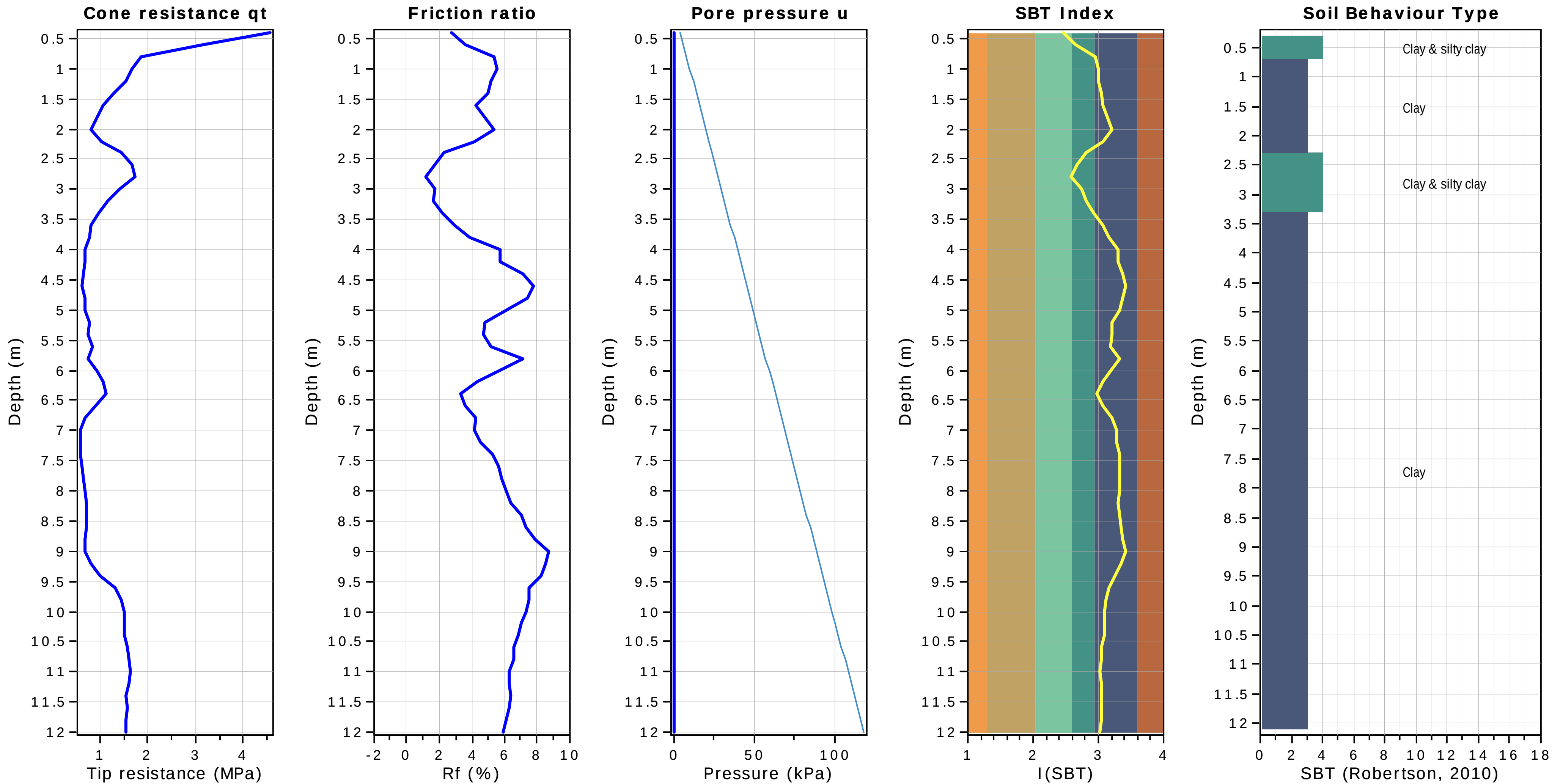
CPT: 036021P137CPT137
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

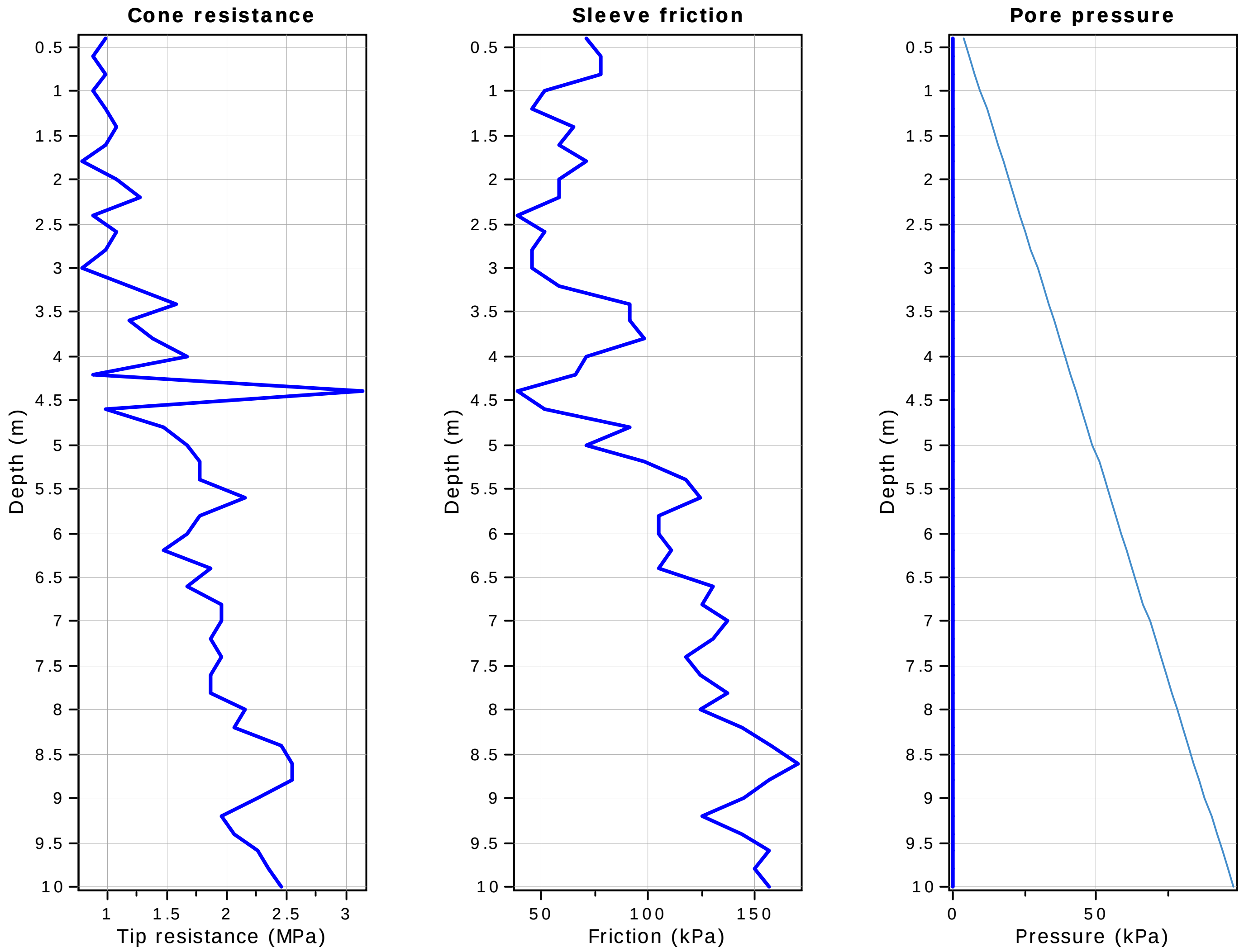


SBT legend

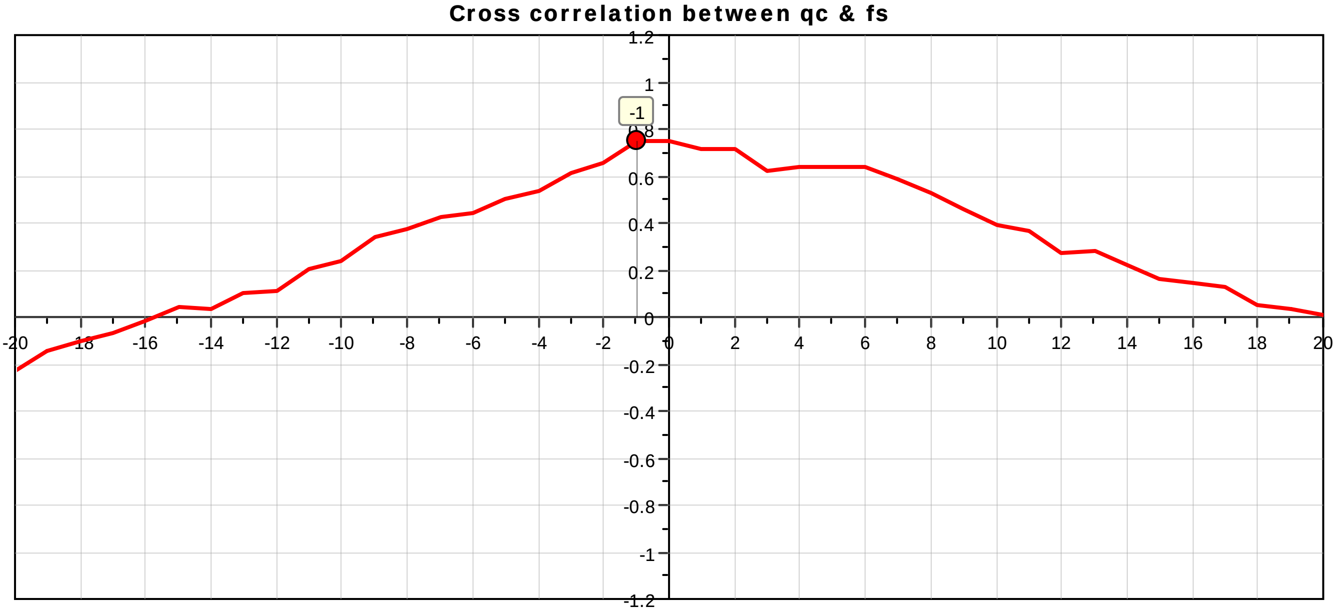
🟥 1. Sensitive fine grained
🟫 2. Organic material
▨ 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
▨ 8. Very stiff sand to clayey sand
☐ 9. Very stiff fine grained

CPT: 036021P13CPT13
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

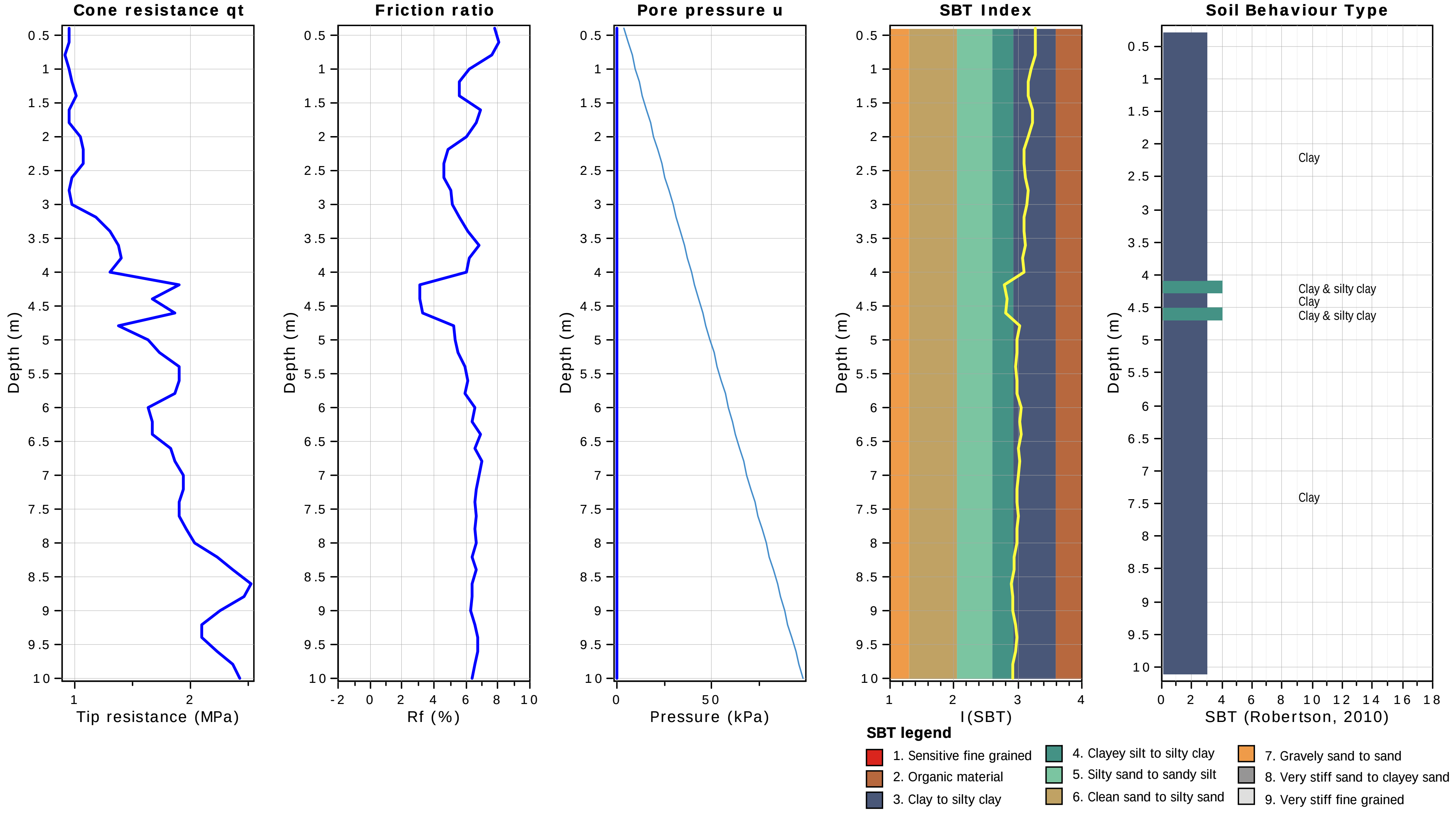

Cone resistance
Sleeve friction
Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

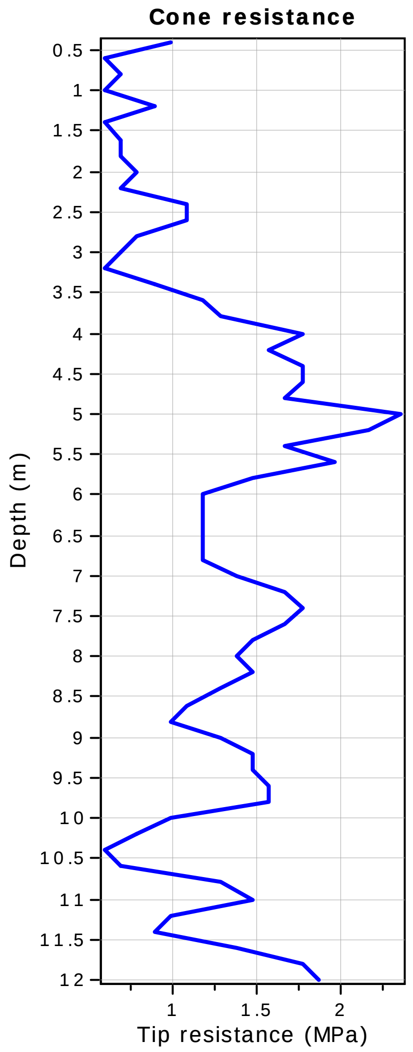
CPT: 036021P13CPT13
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

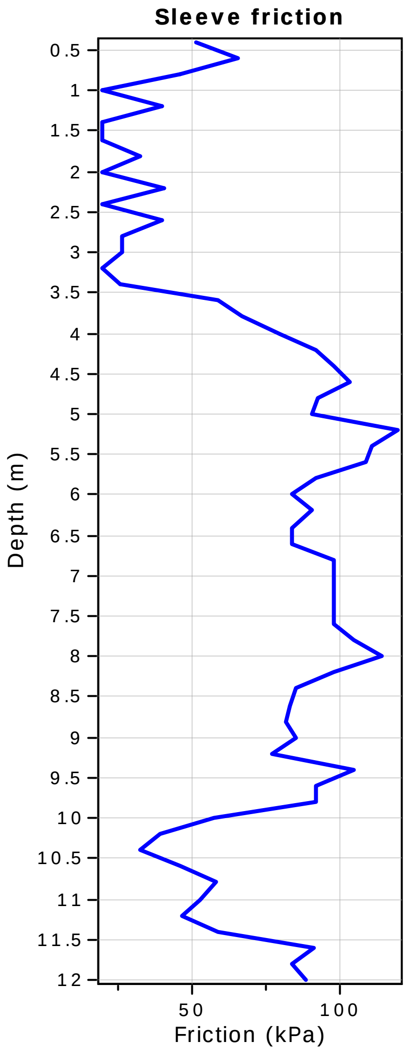
Project:
Location:

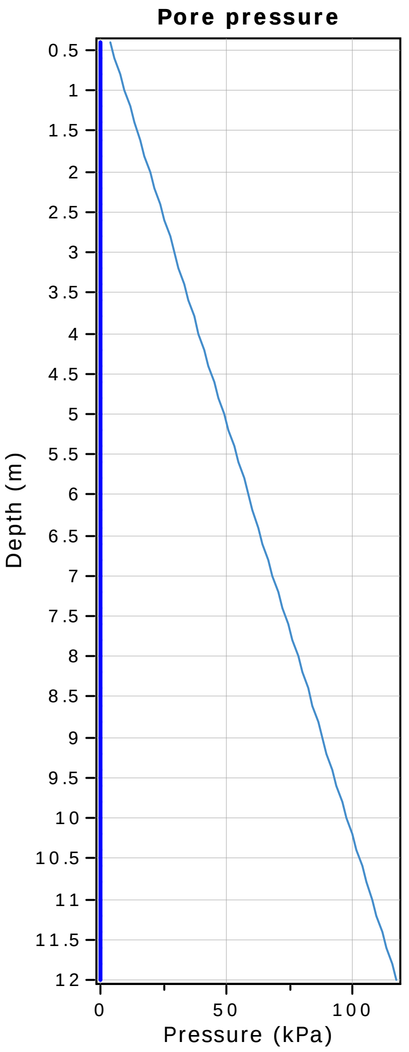


CPT: 036021P140CPT140
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

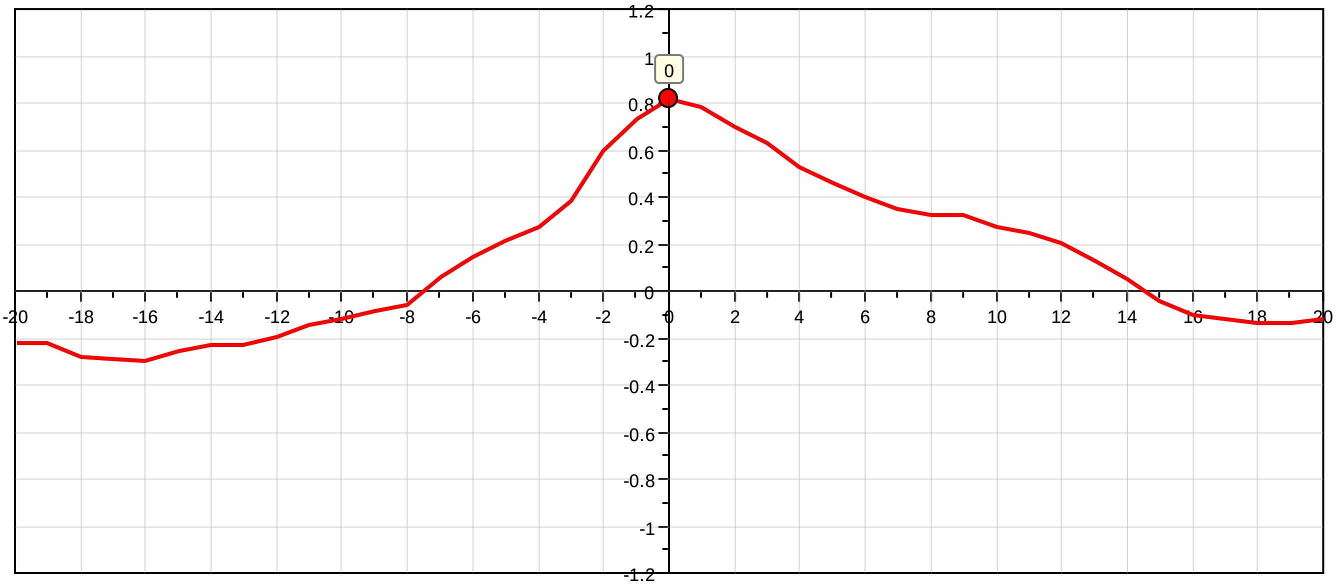






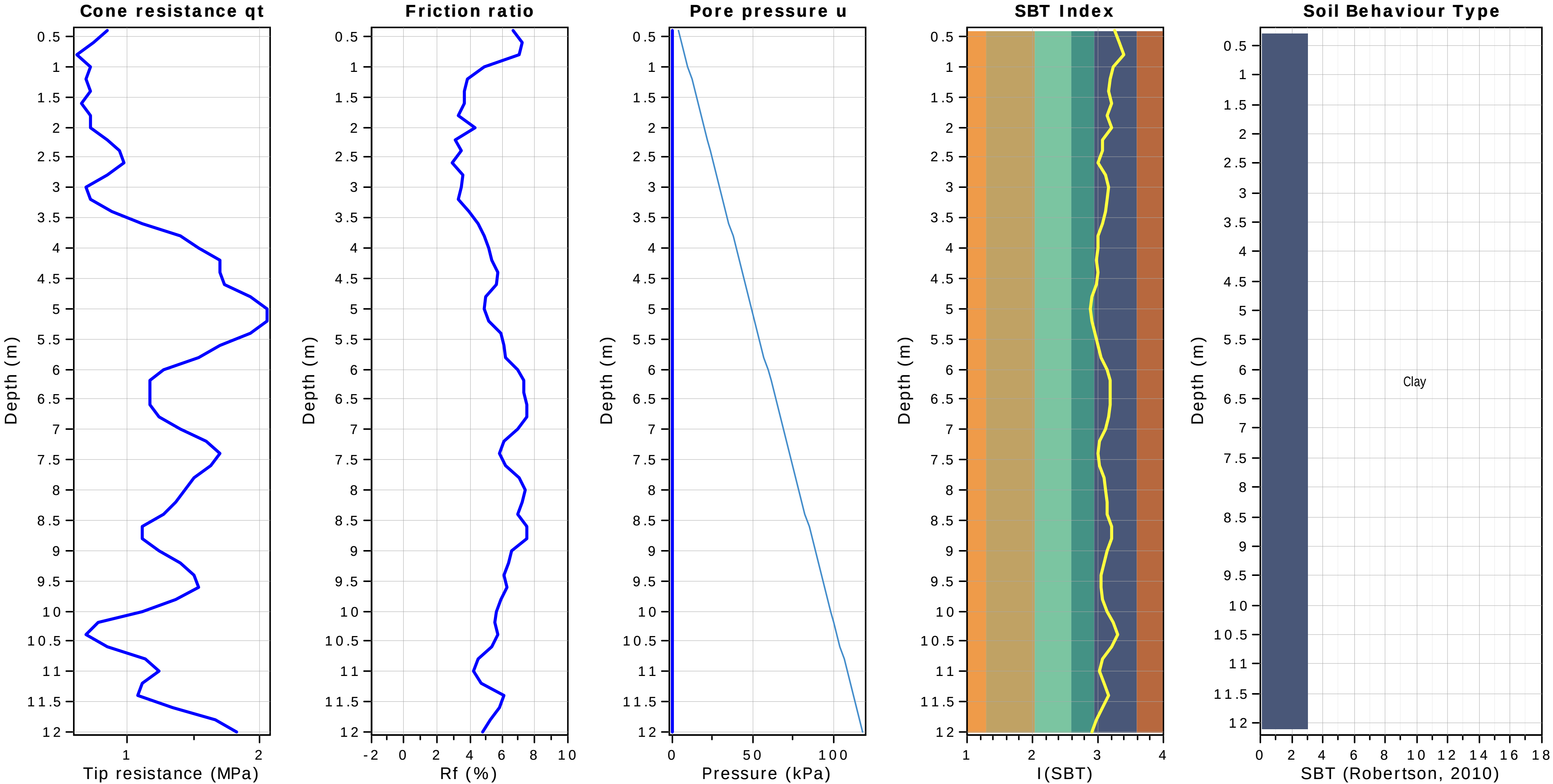
The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



CPT: 036021P140CPT140
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

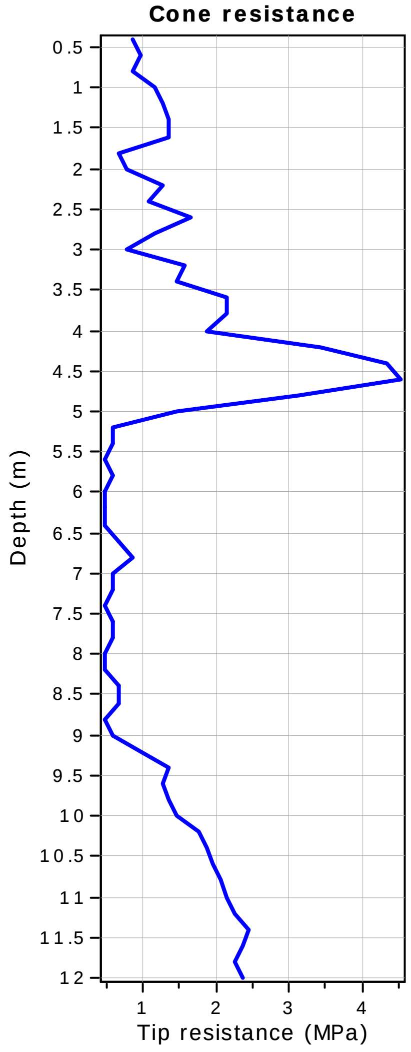


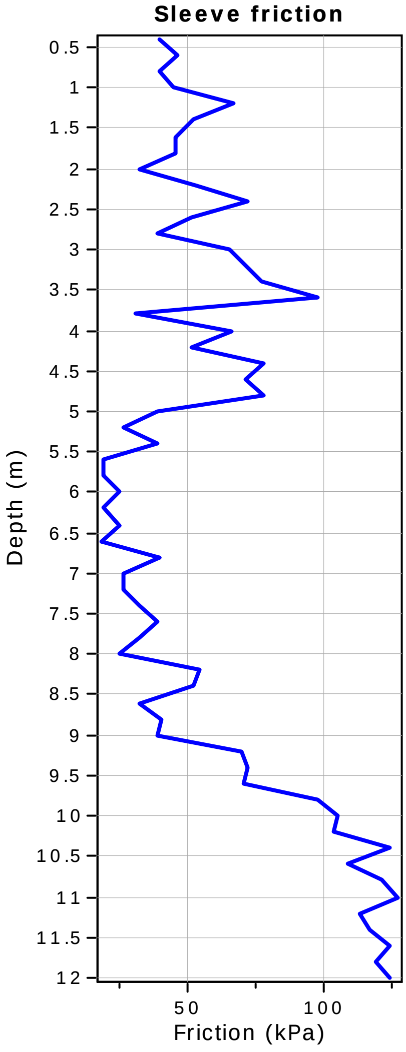
SBT legend

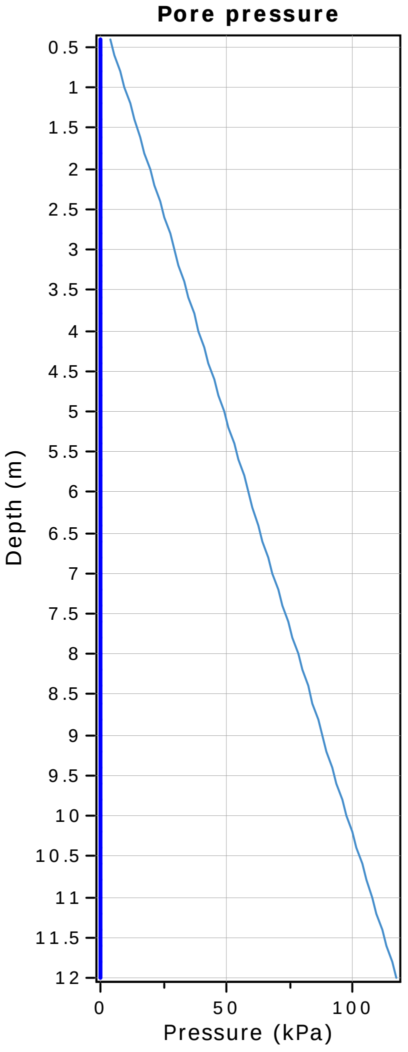
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P144CPT144
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

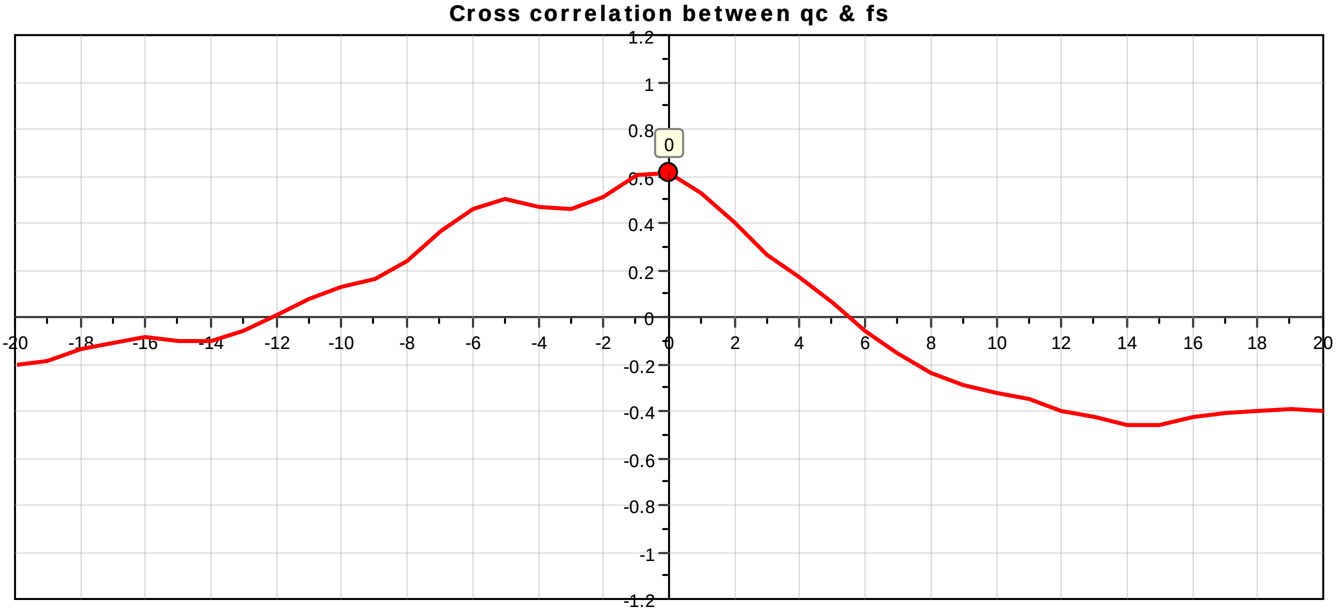
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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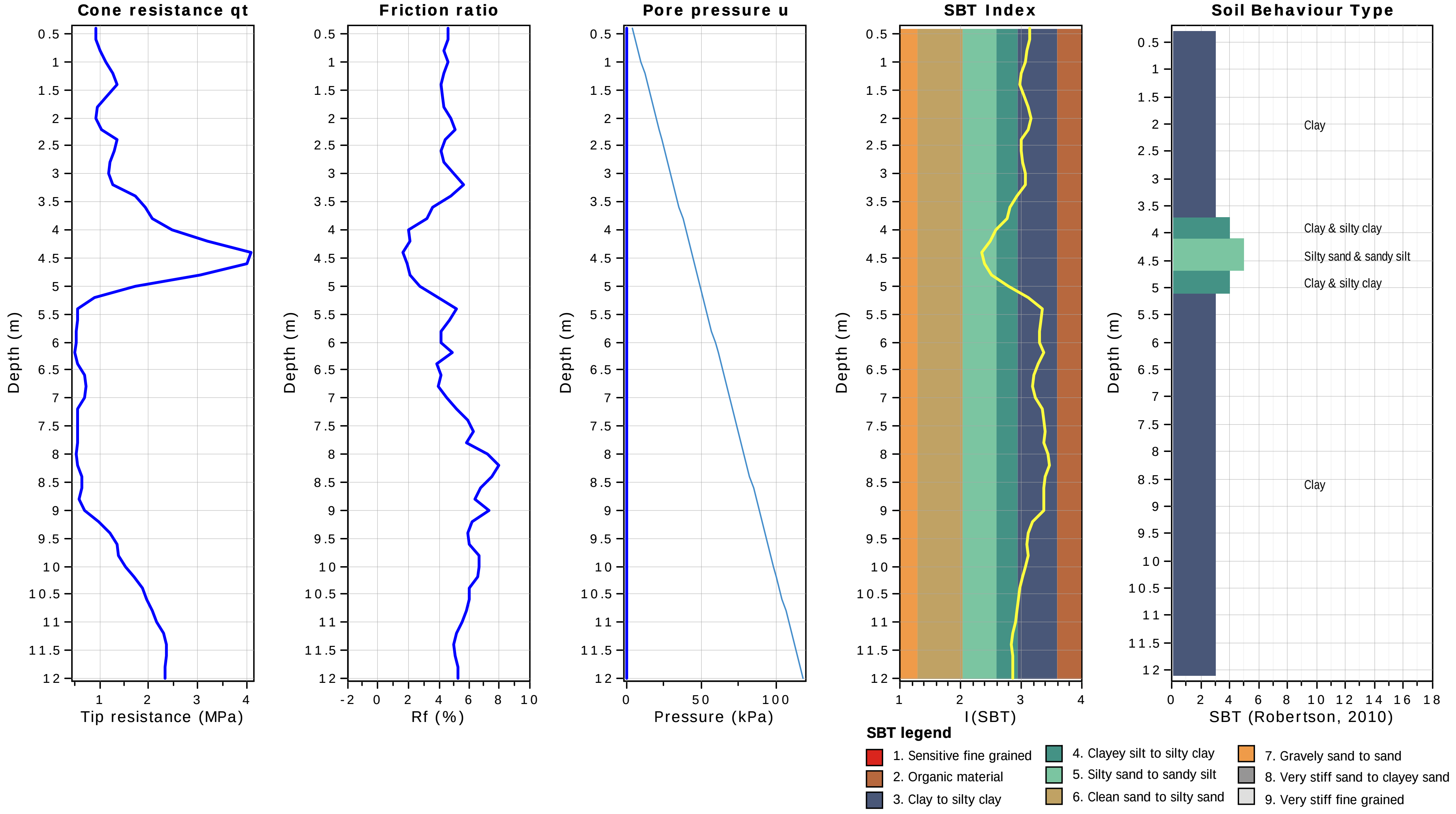
CPT: 036021P144CPT144
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:


Cone resistance qt
Friction ratio
Pore pressure u
SBT Index
Soil Behaviour Type

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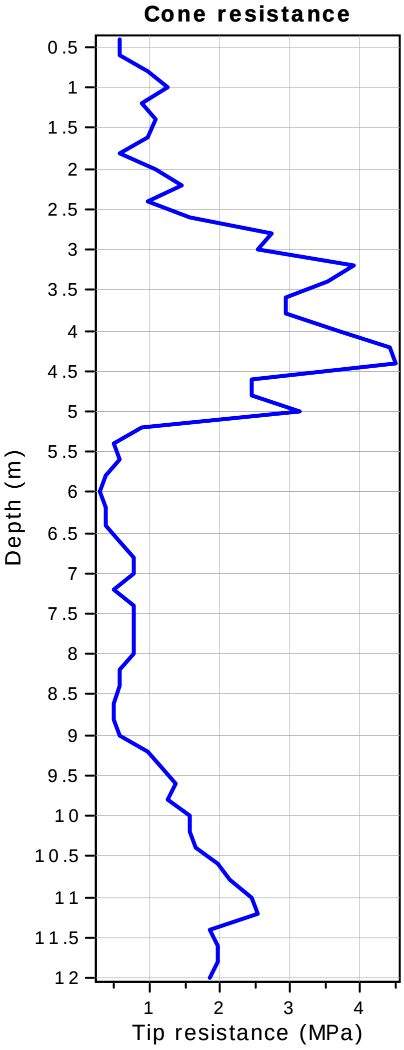
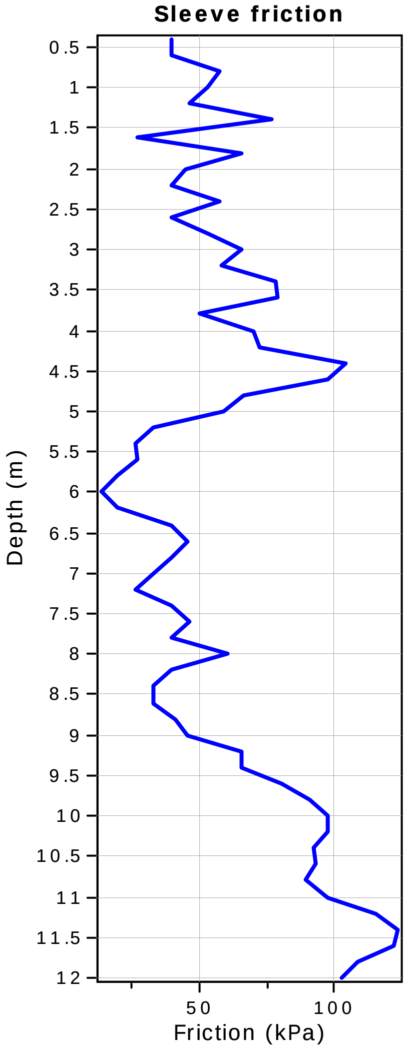
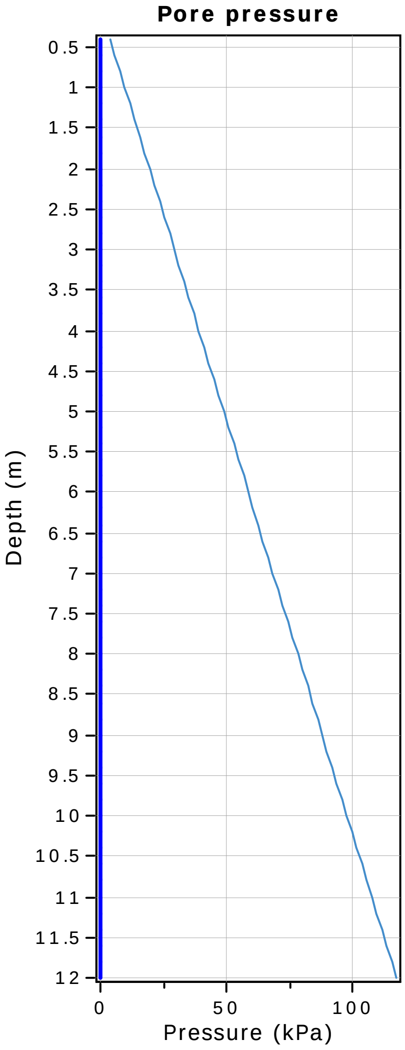
CPT: 036021P145CPT145
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

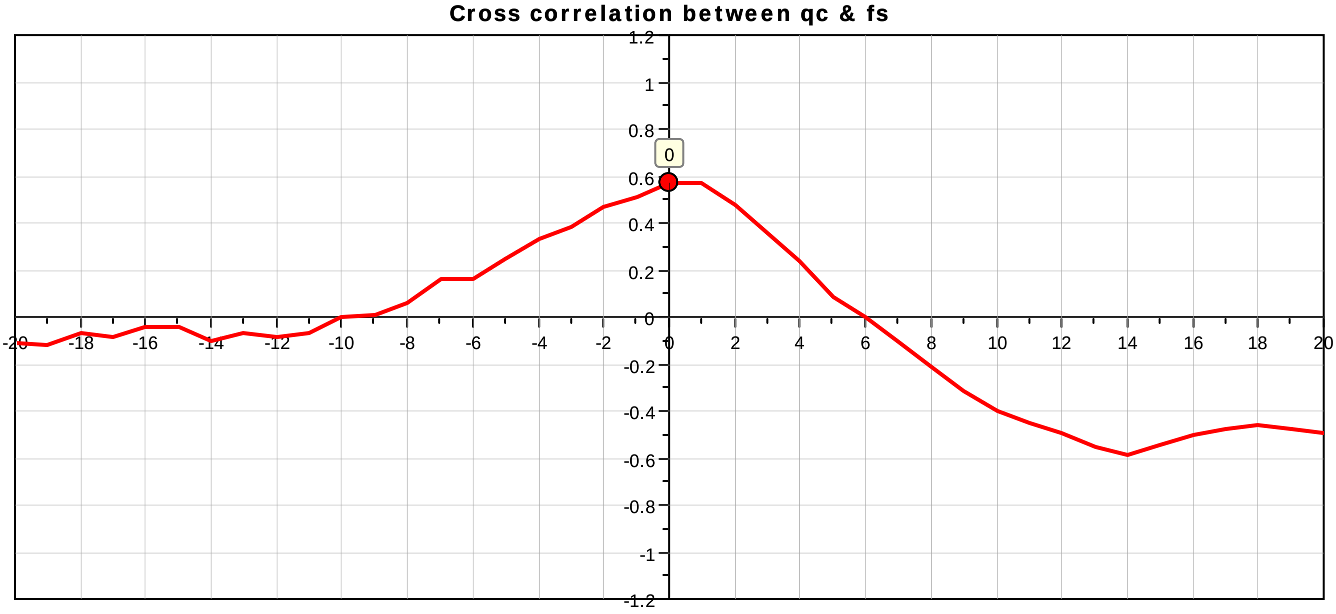
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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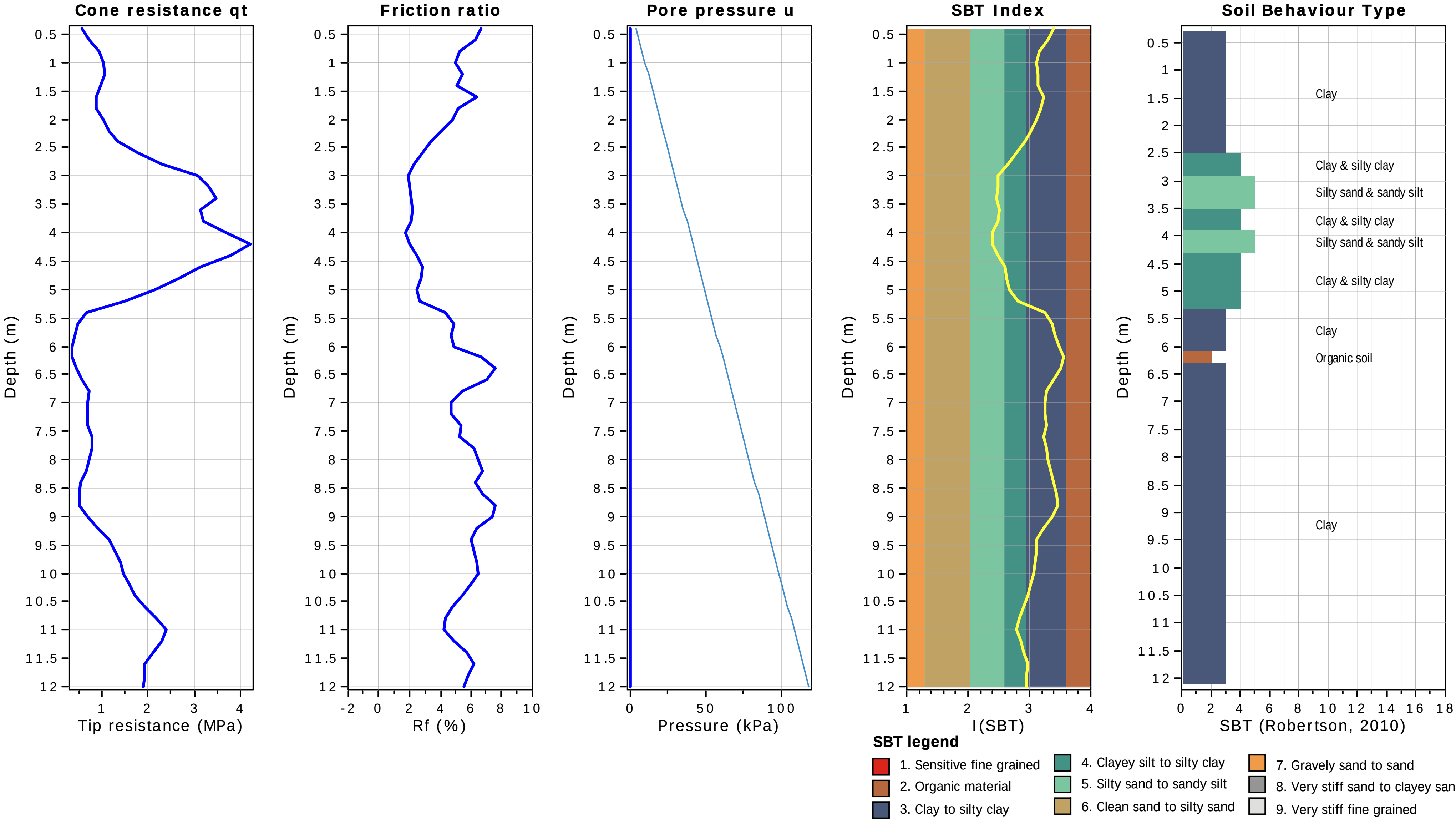
CPT: 036021P145CPT145
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



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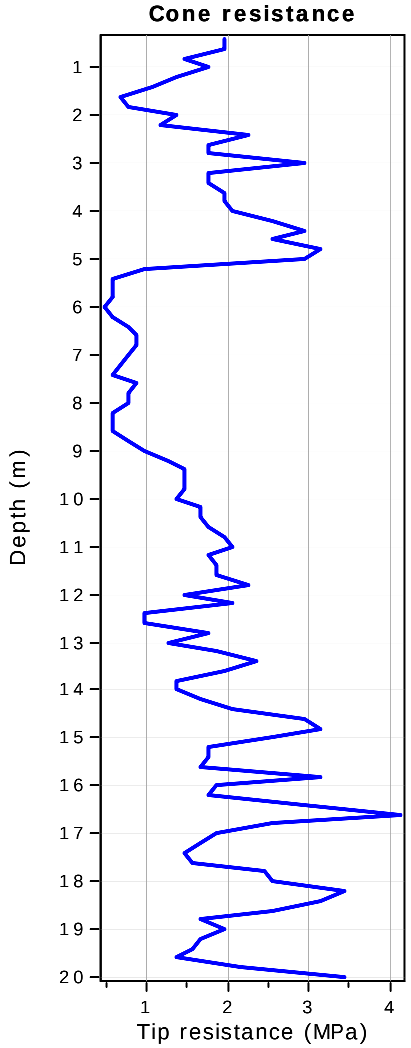
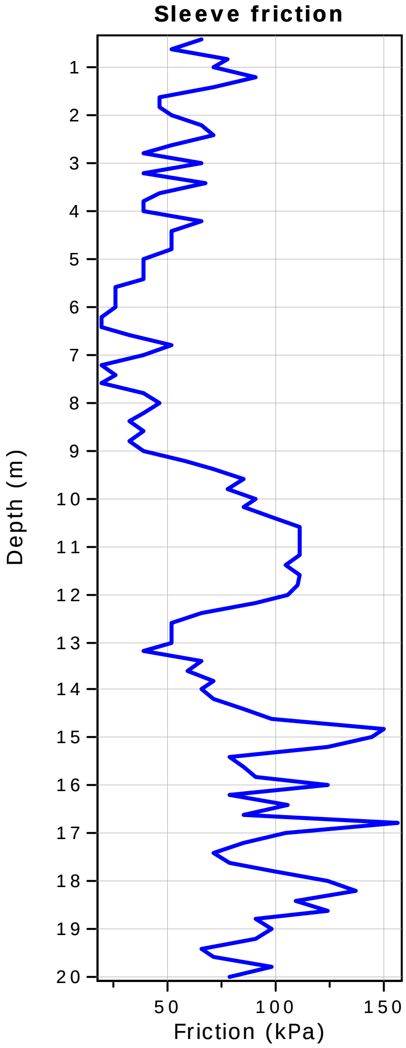
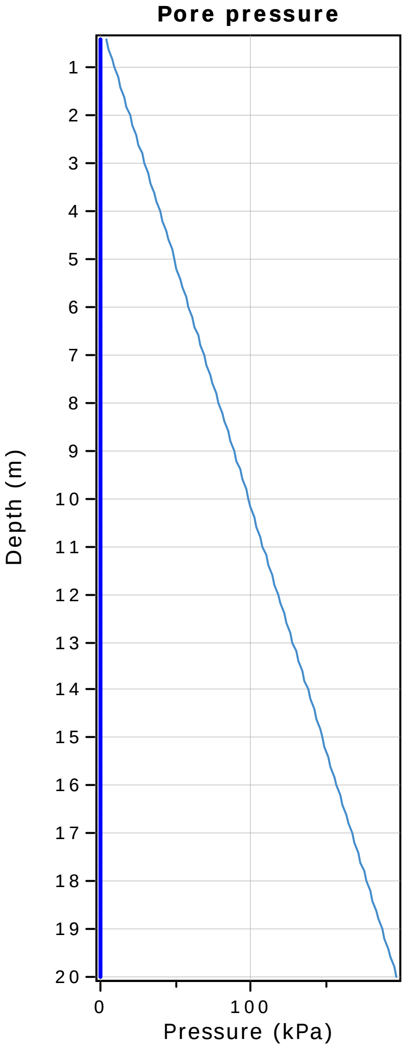
CPT: 036021P152CPT152
Total depth: 20.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

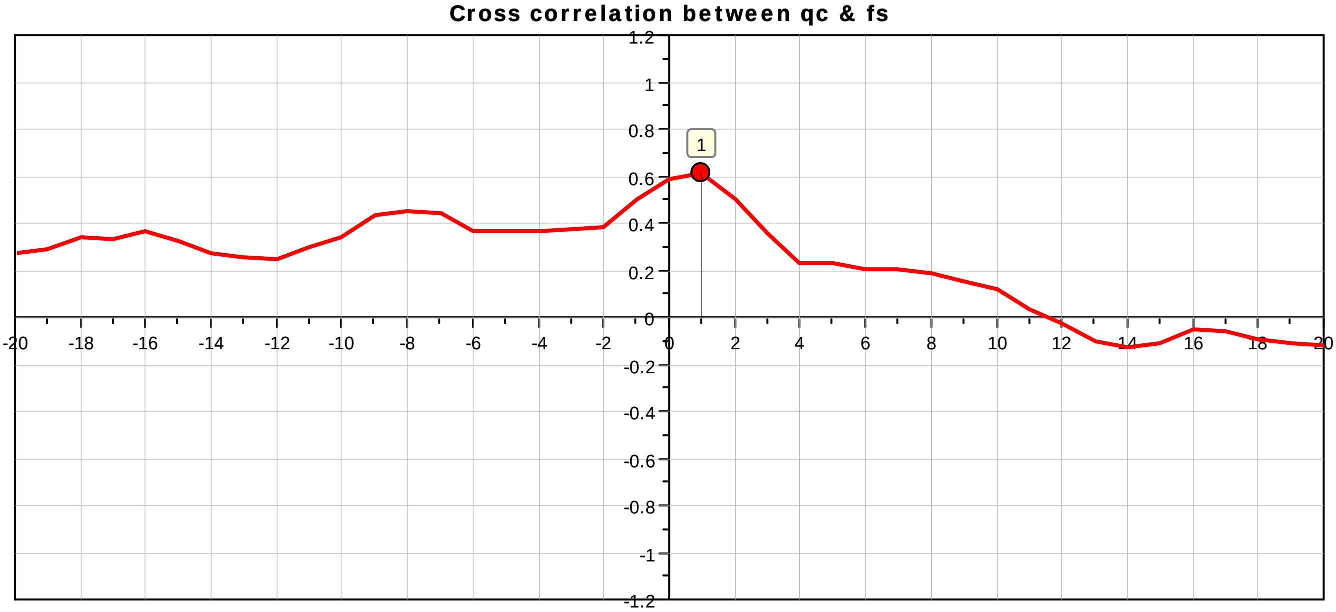
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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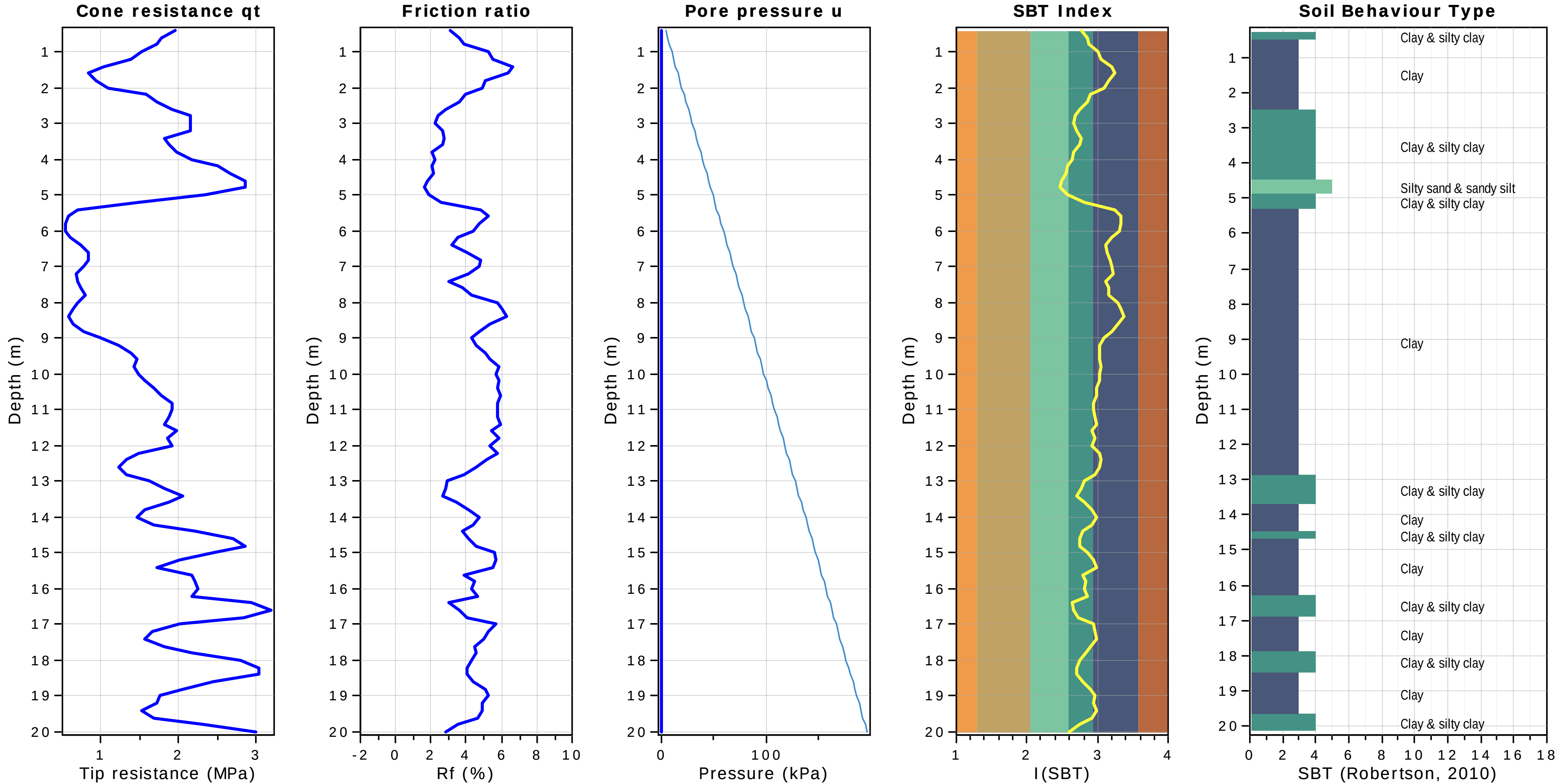
CPT: 036021P152CPT152
Total depth: 20.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



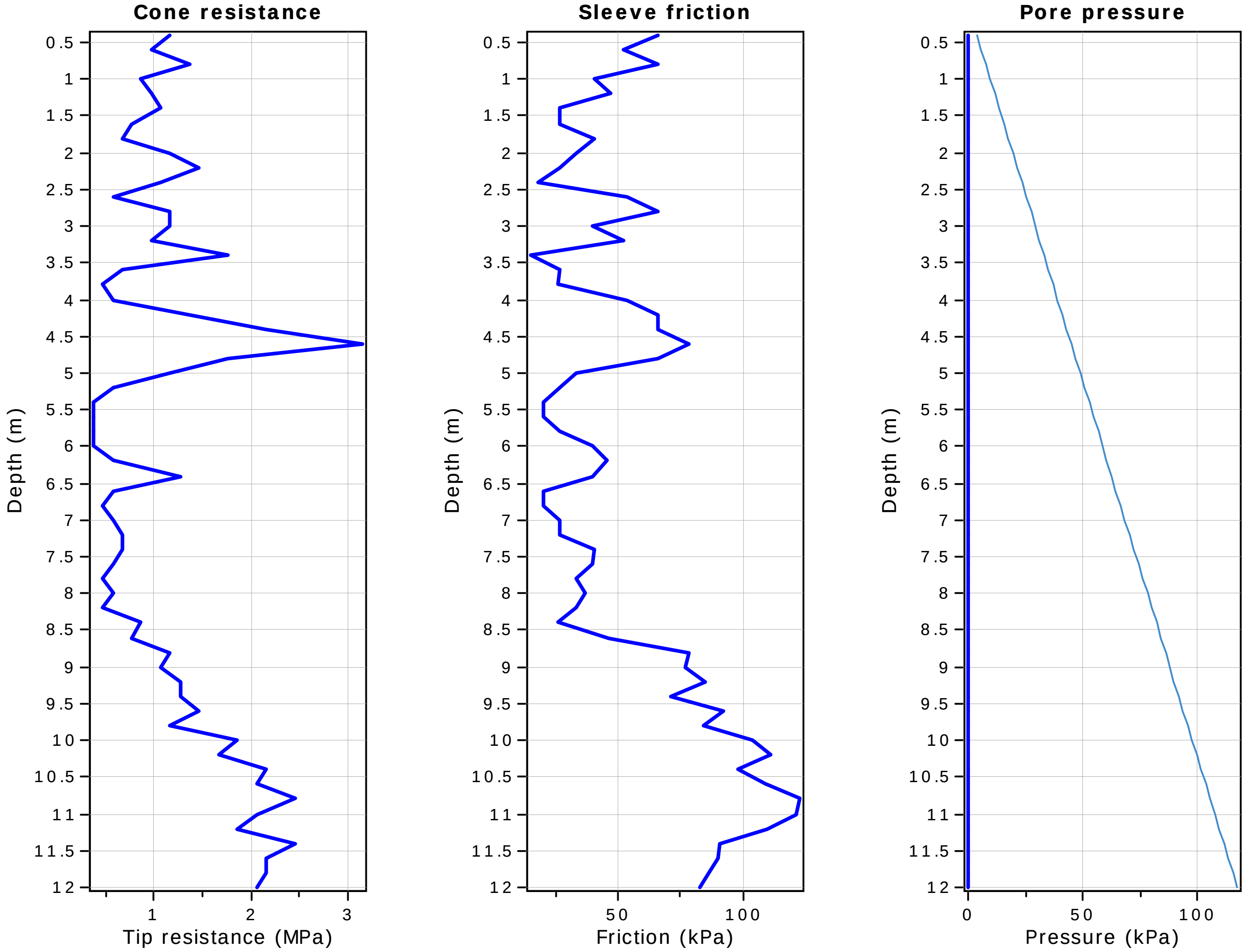
SBT legend

🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟫 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

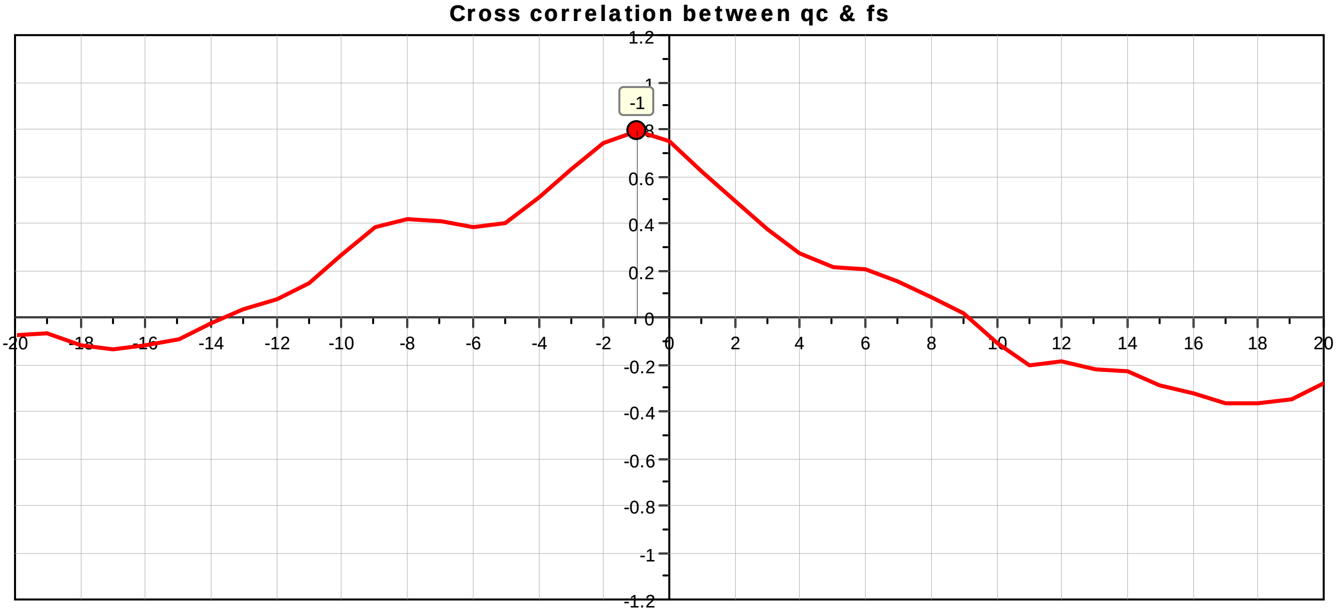
CPT: 036021P154CPT154

Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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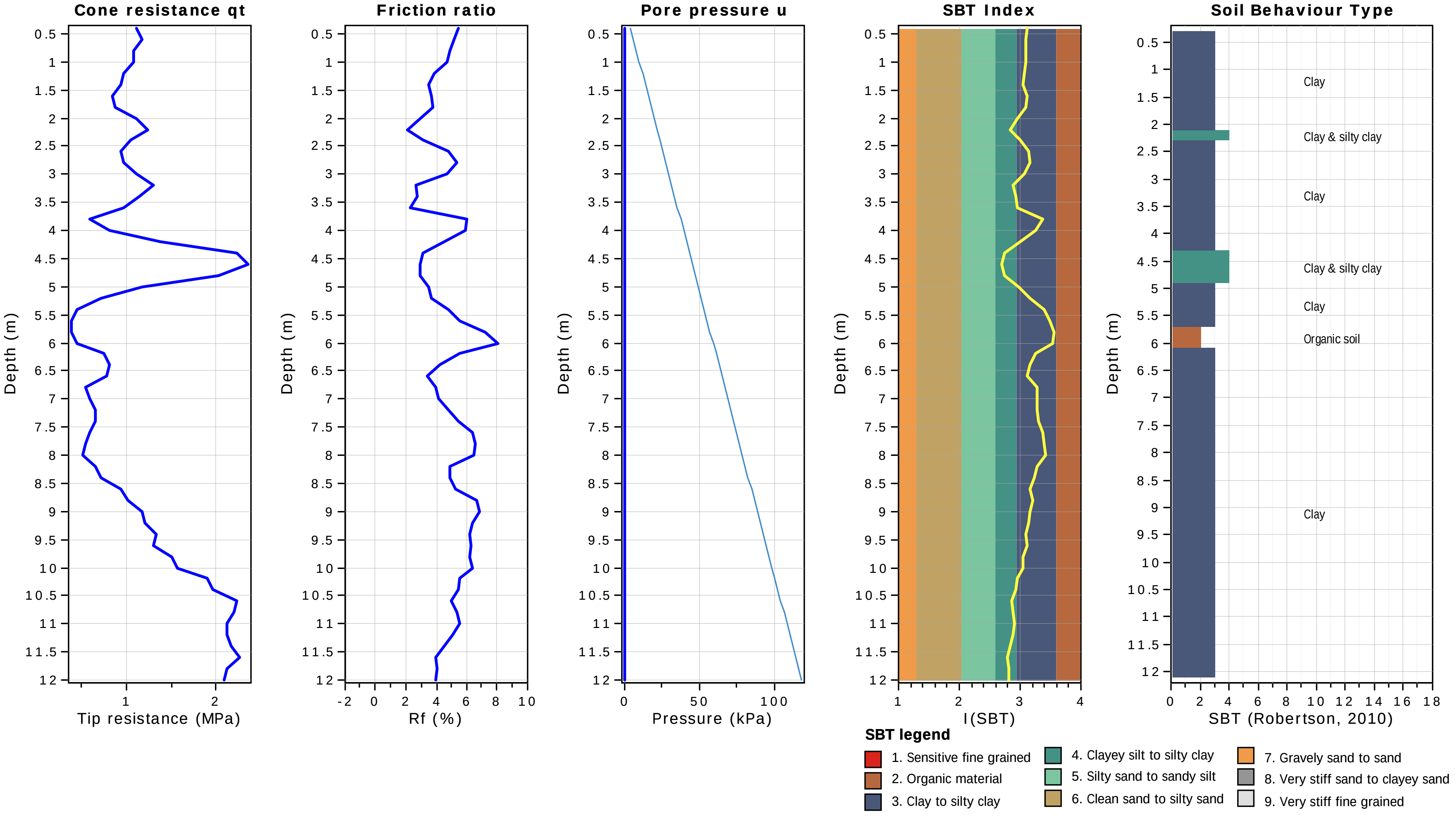
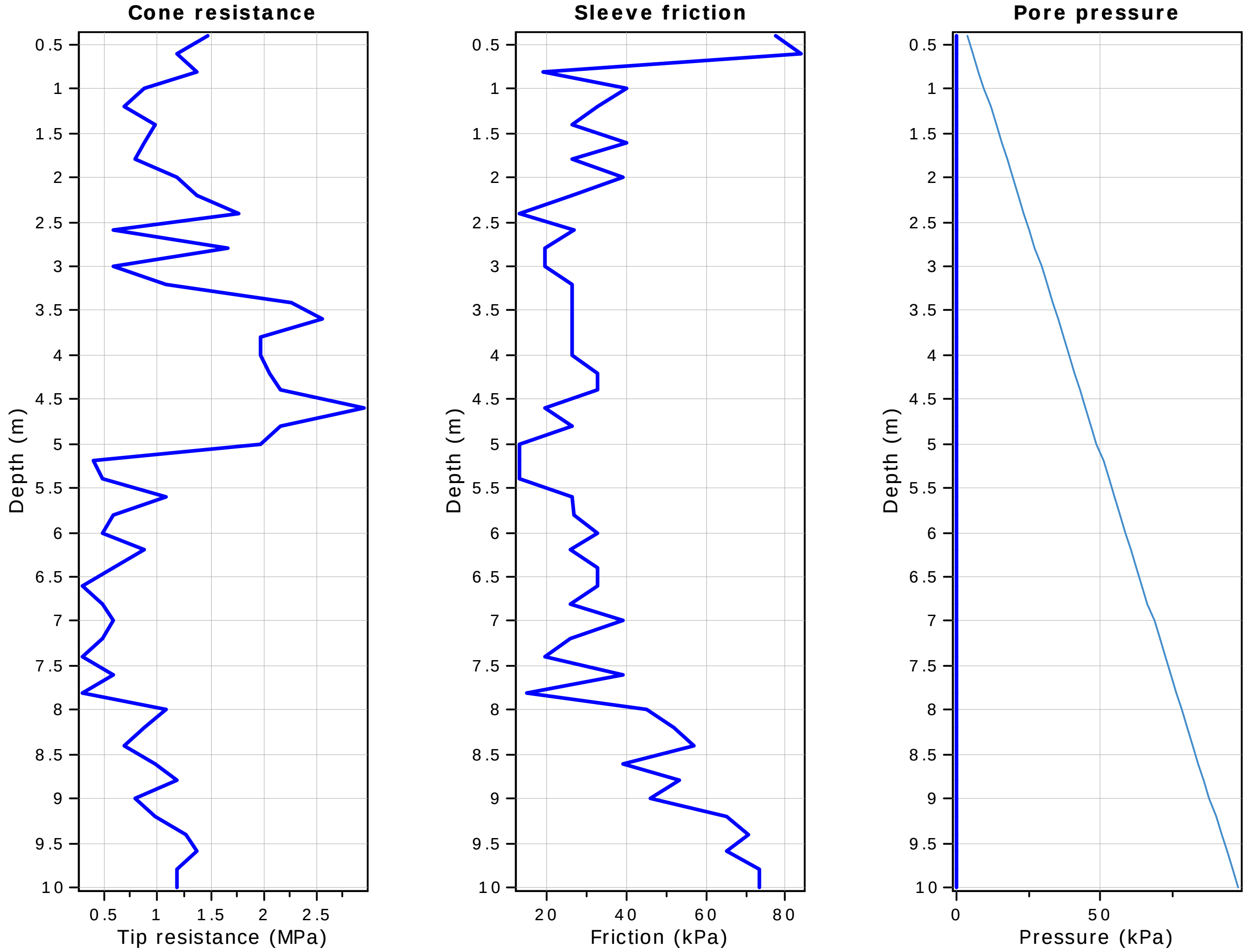
CPT: 036021P154CPT154
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



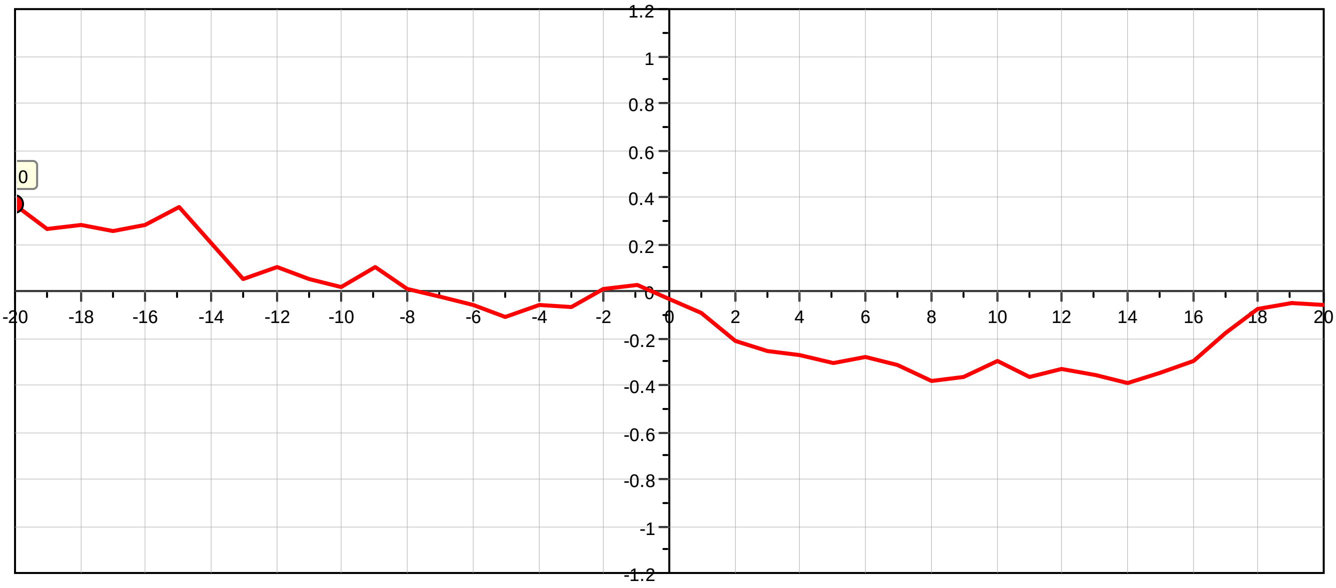
CPT: 036021P157CPT157
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

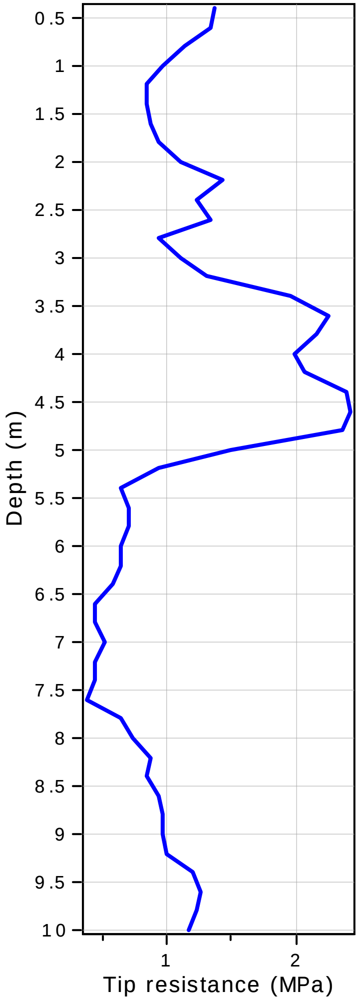
Cross correlation between qc & fs



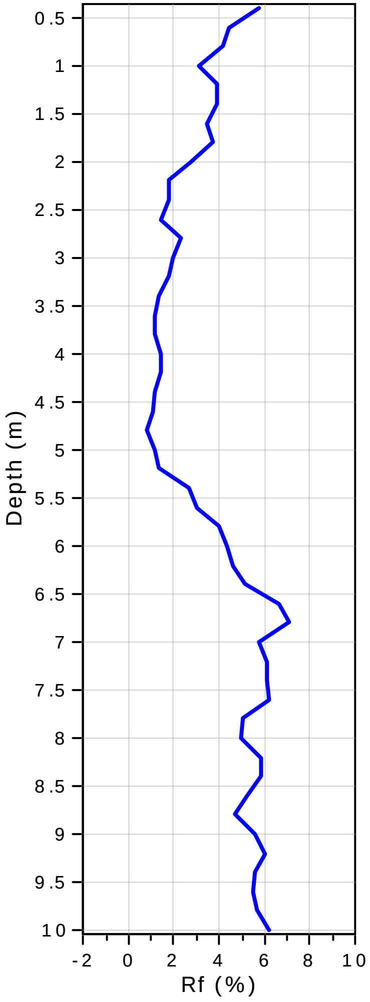
CPT: 036021P157CPT157
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

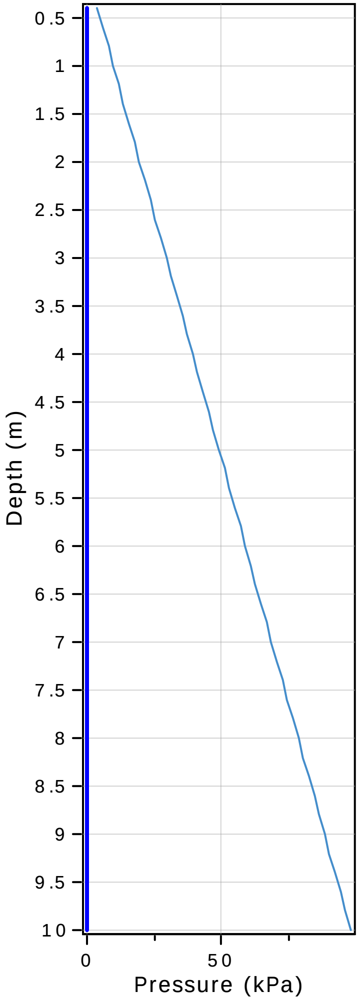
Cone resistance qt



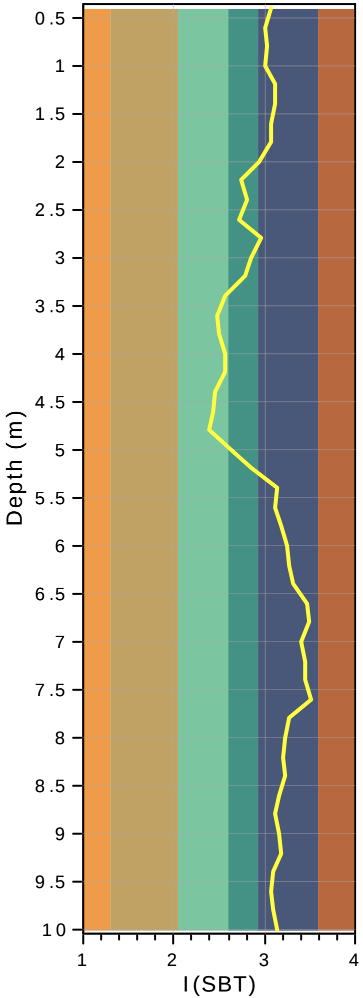
Friction ratio



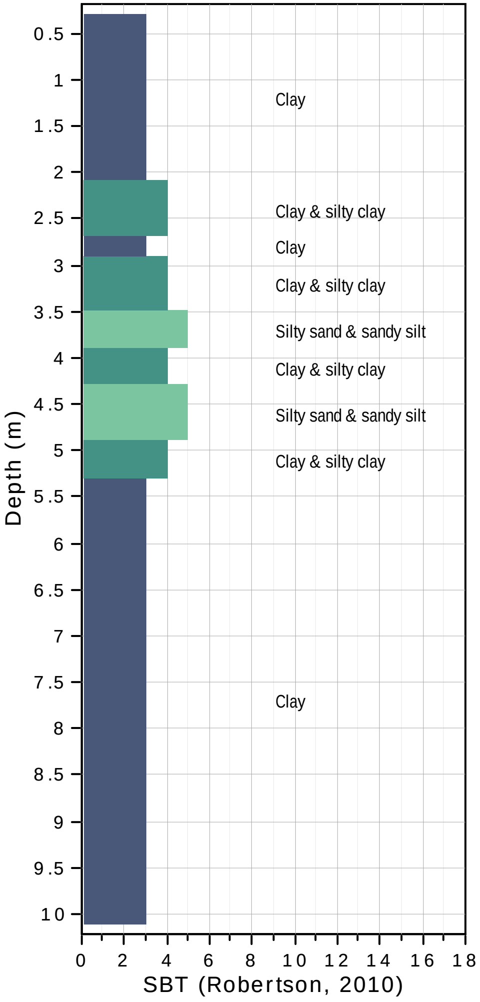
Pore pressure u



SBT Index



Soil Behaviour Type

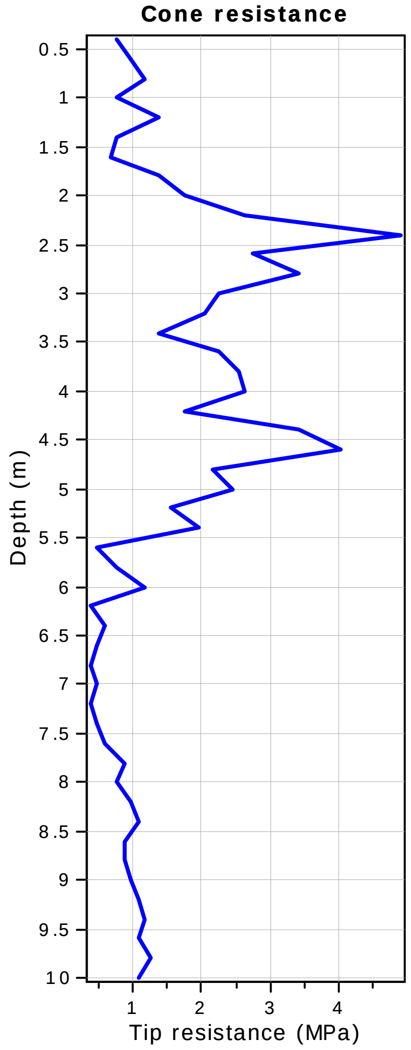


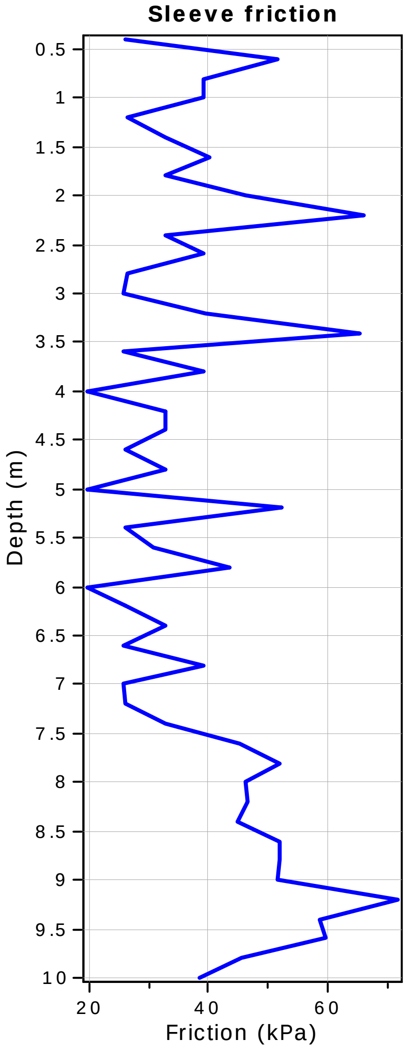
SBT legend

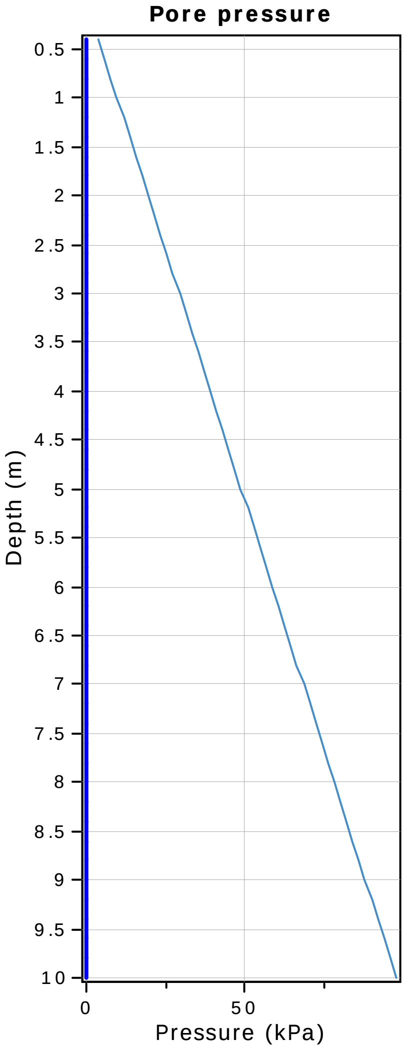
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬛ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

CPT: 036021P158CPT158
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

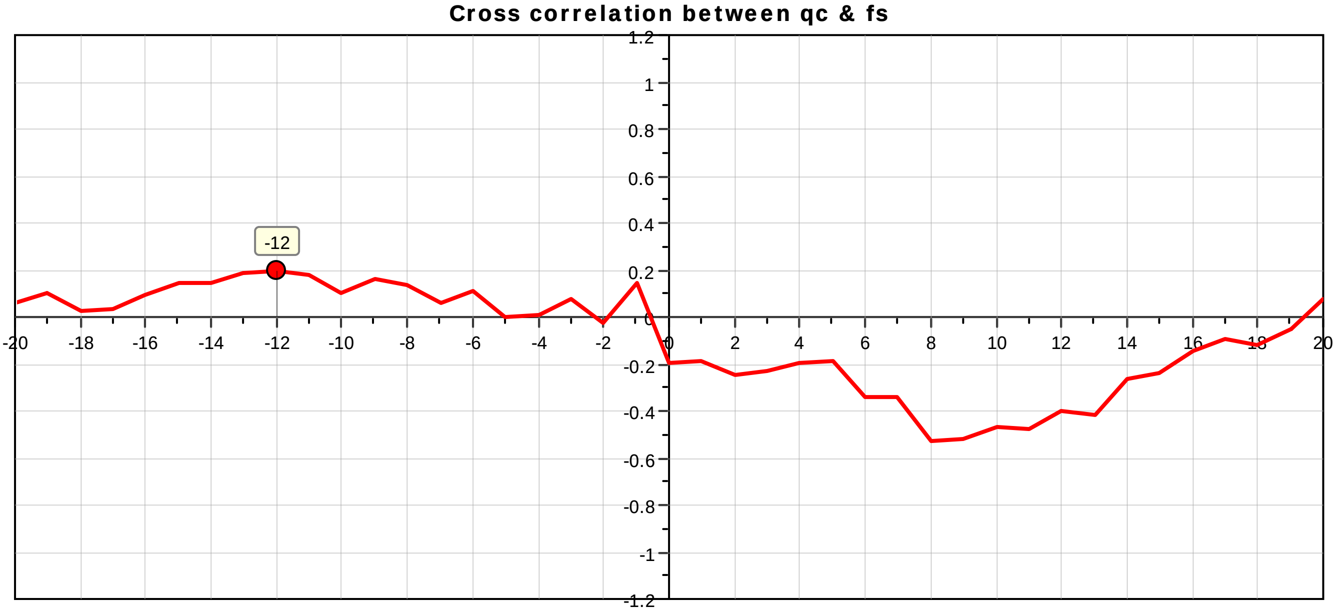
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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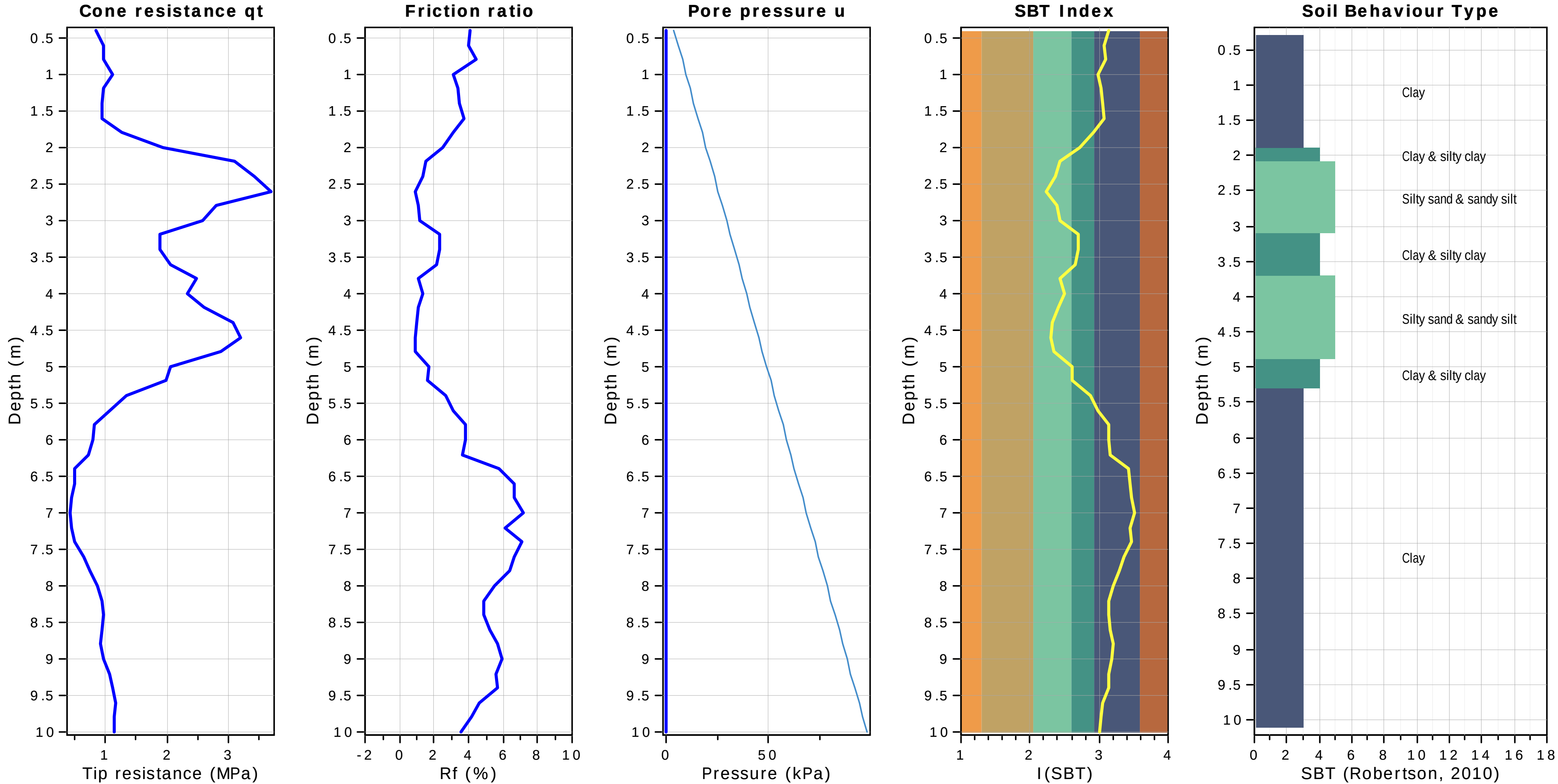
CPT: 036021P158CPT158
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

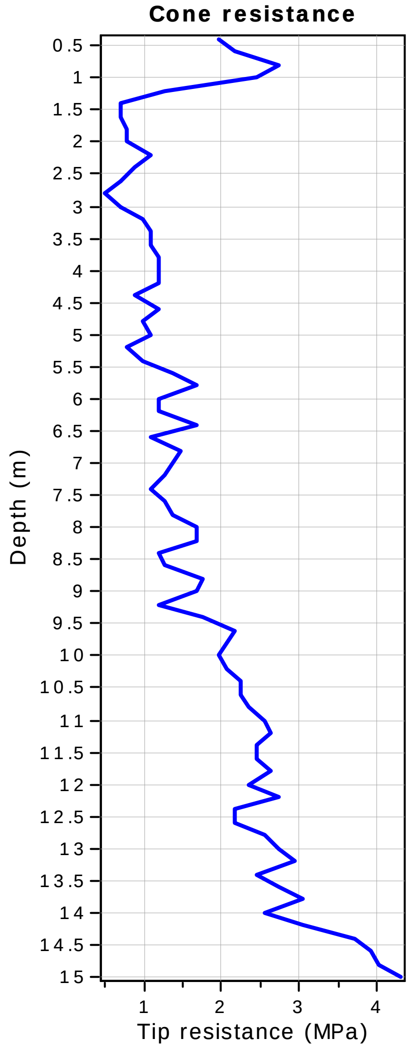


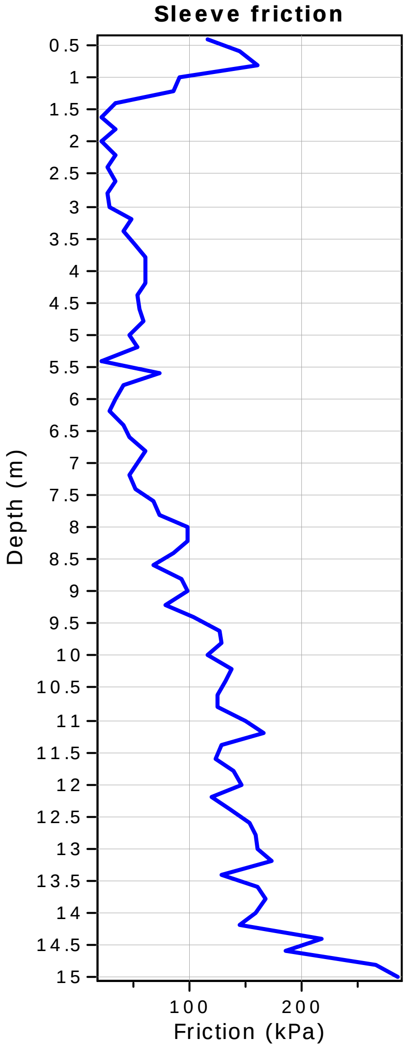
SBT legend

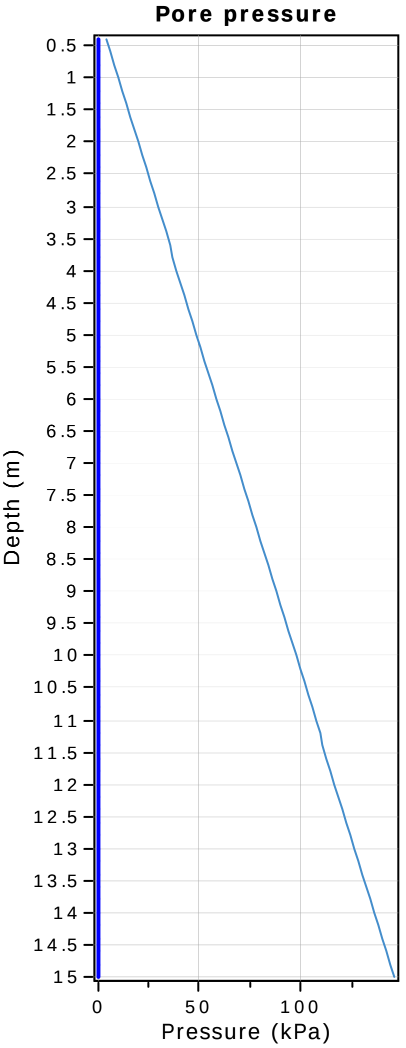
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P15CPT15
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

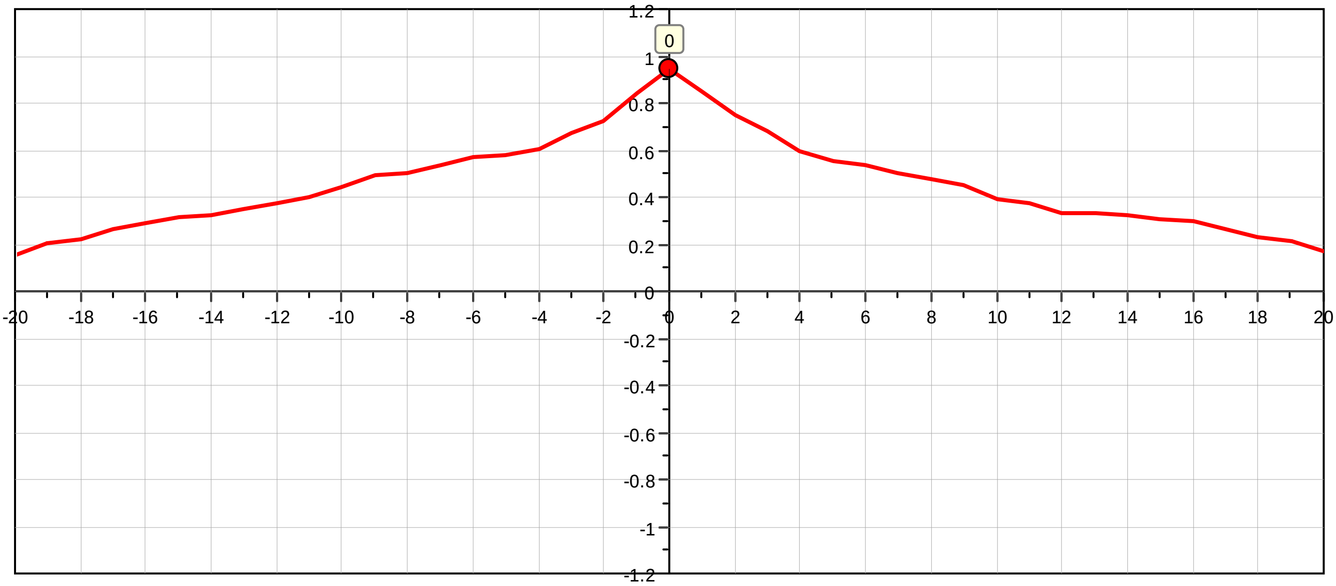

Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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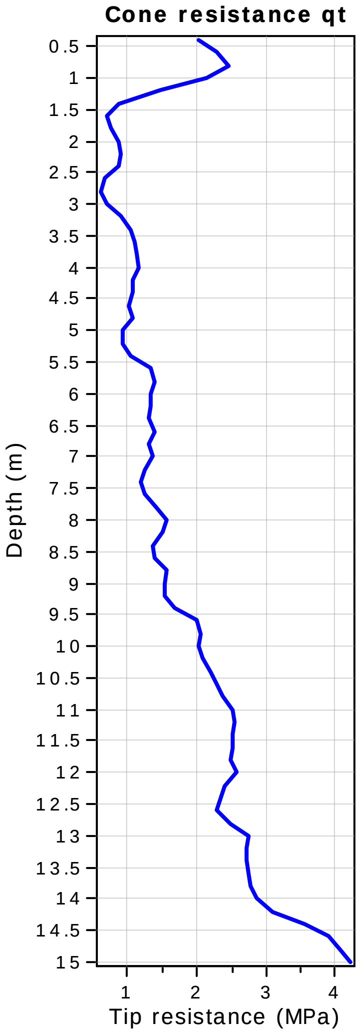
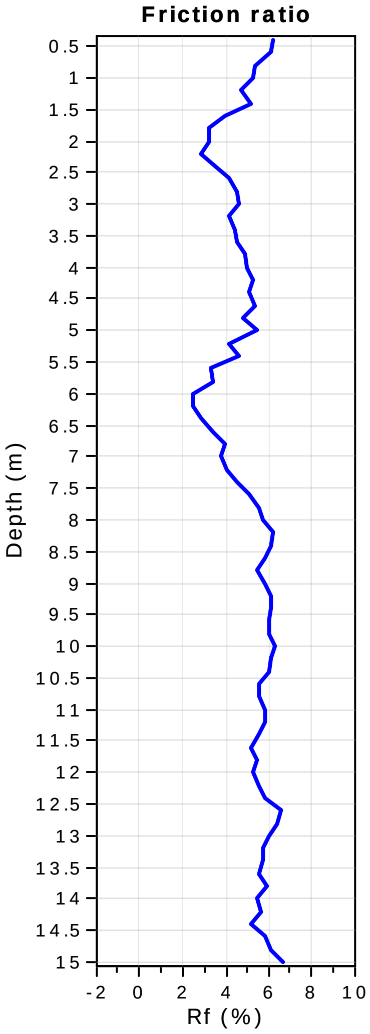
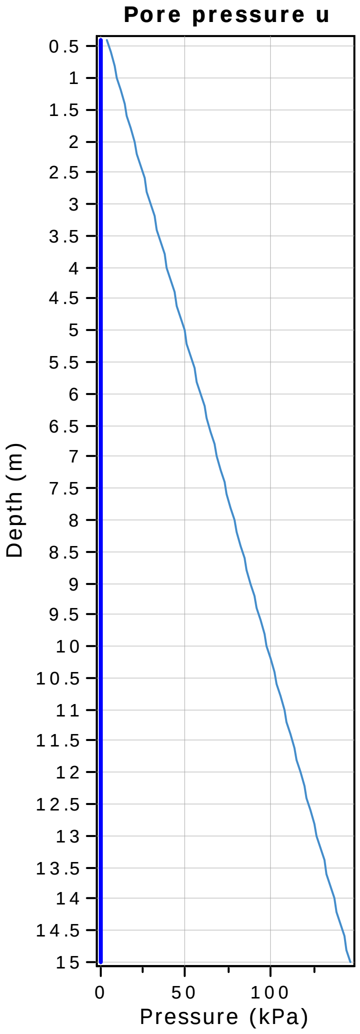
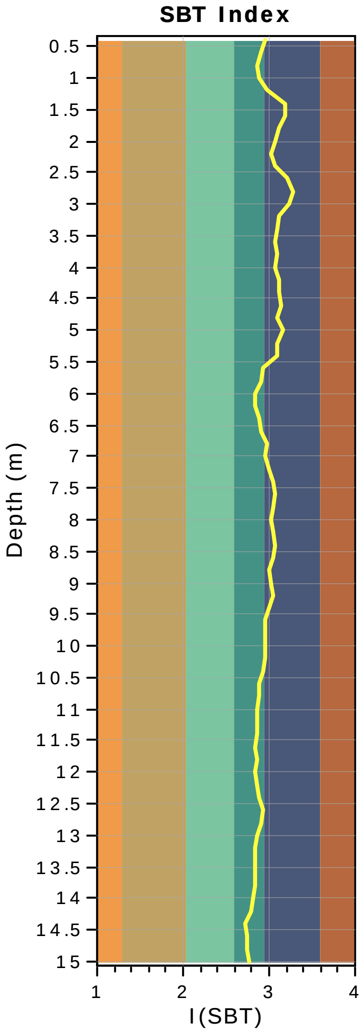
CPT: 036021P15CPT15
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

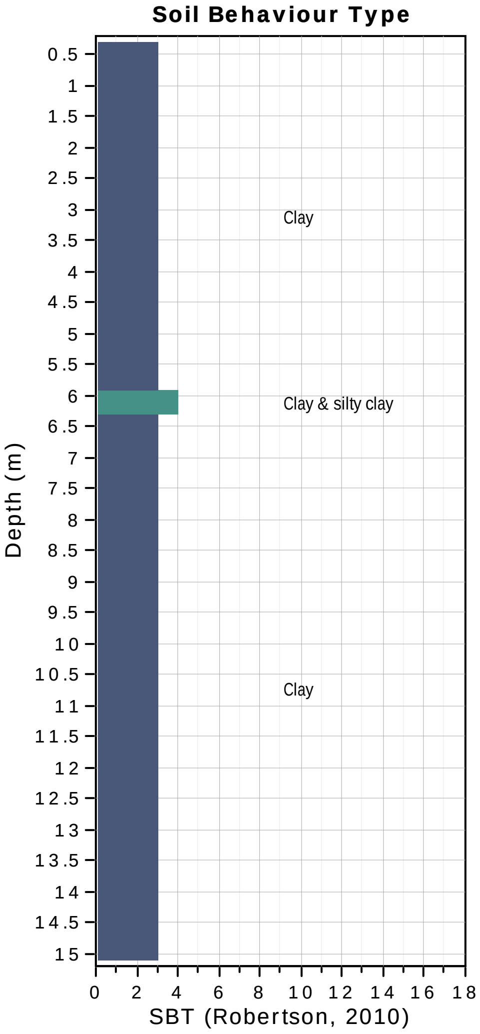
Project:
Location:


Cone resistance qt


Friction ratio


Pore pressure u


SBT Index


Soil Behaviour Type

SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ◼ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

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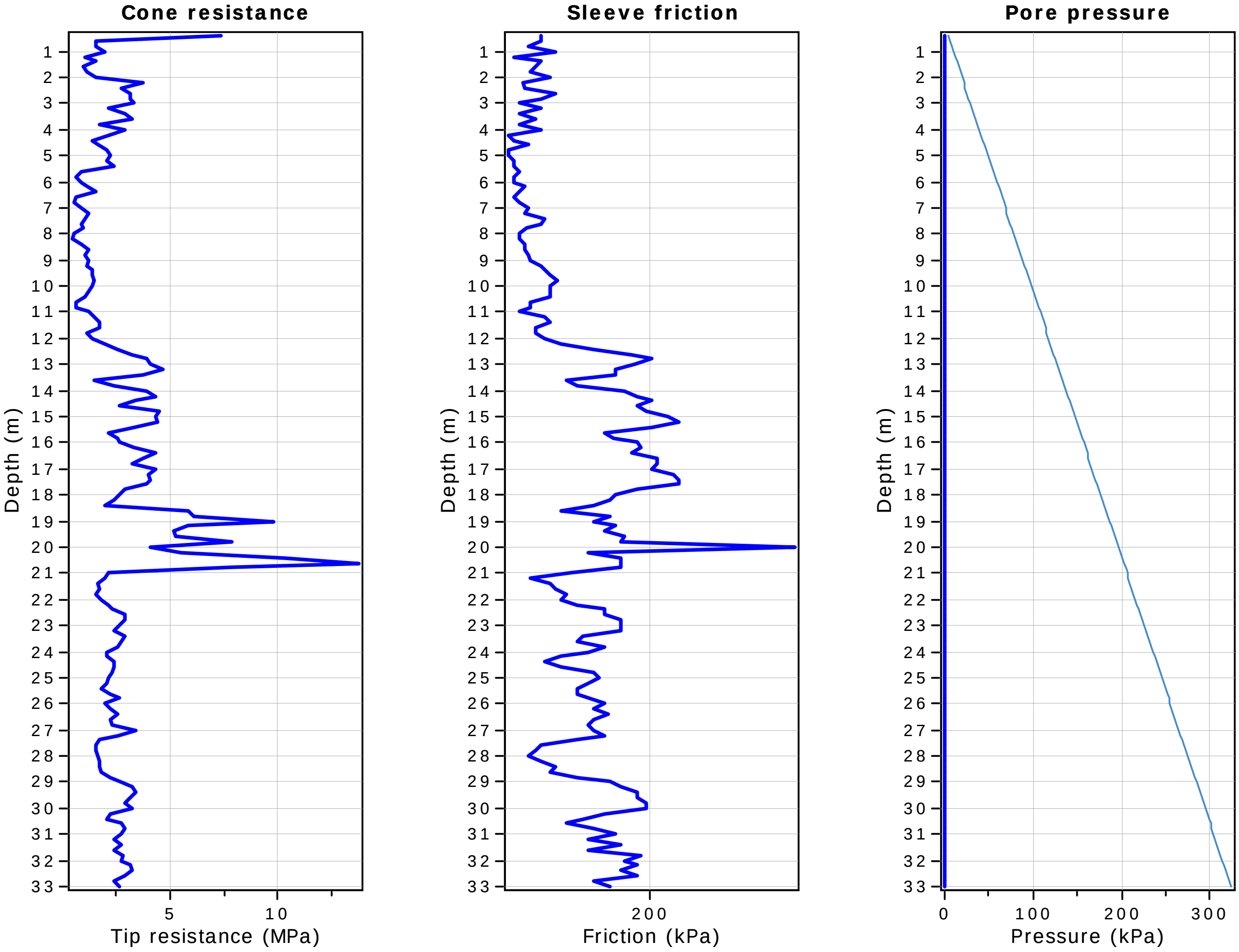
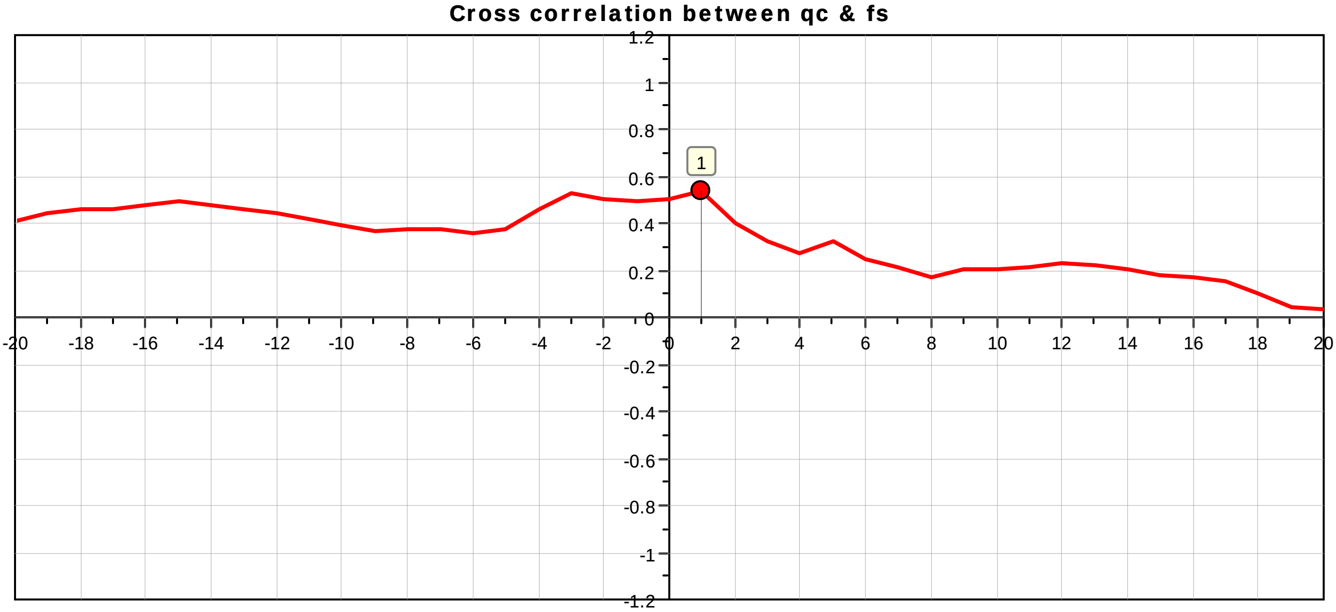
CPT: 036021P160CPT160
Total depth: 33.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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Via Cesare Costa 182
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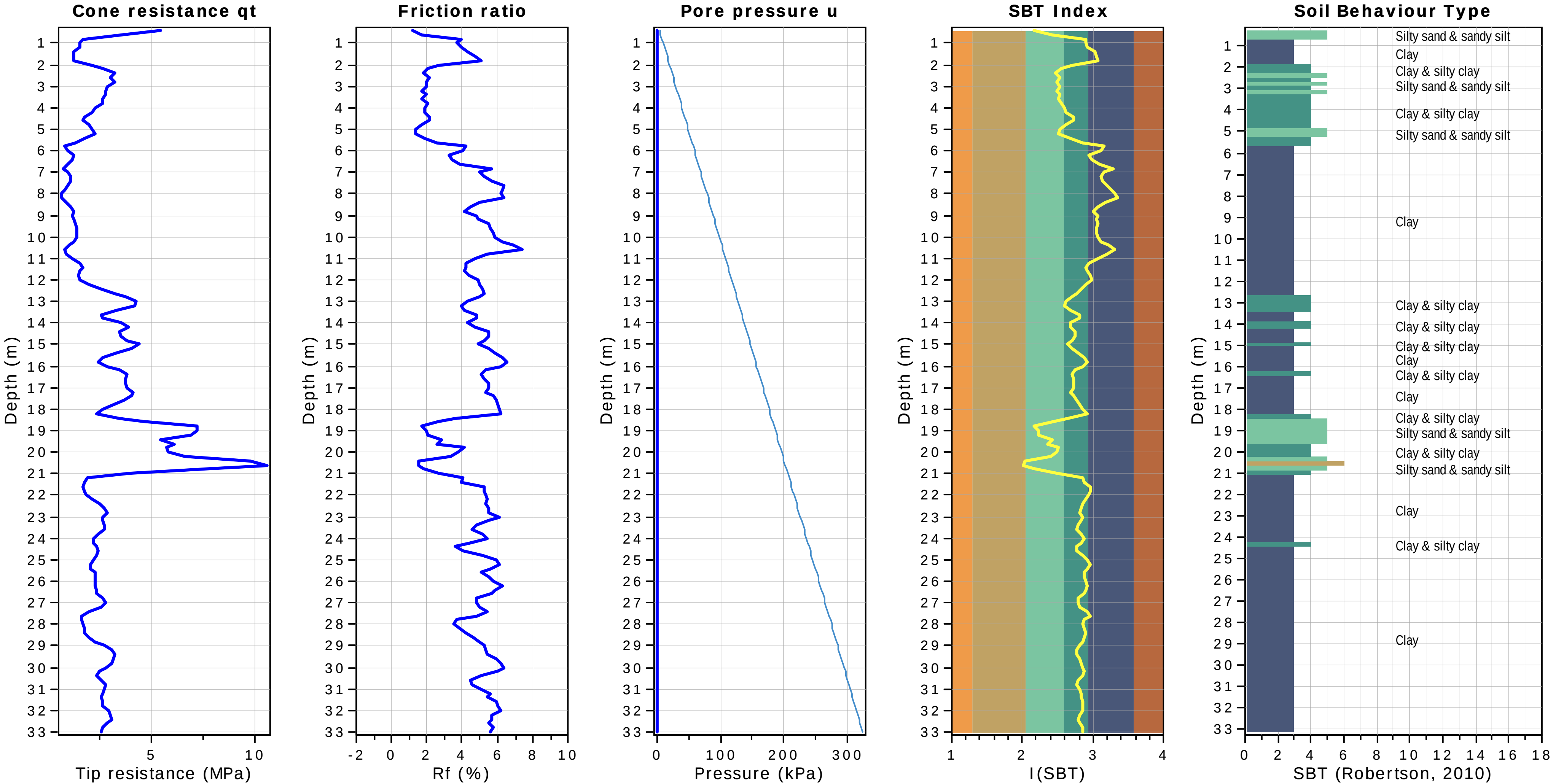
CPT: 036021P160CPT160
Total depth: 33.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟫 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

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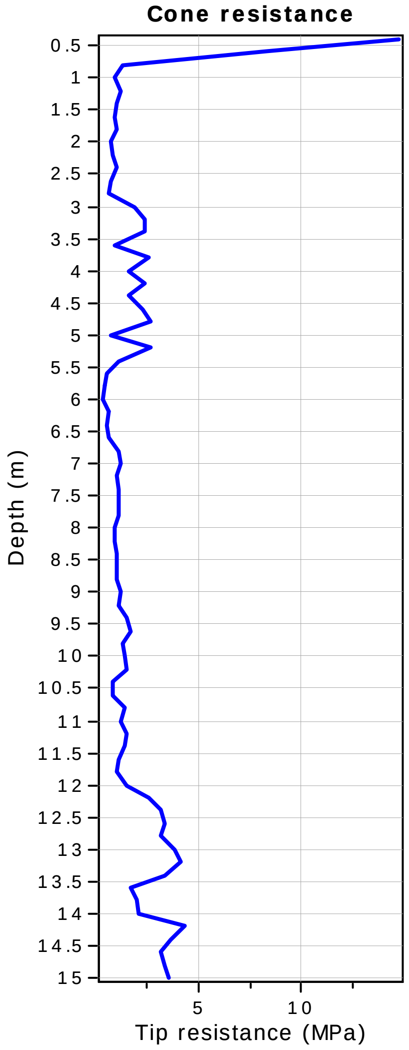
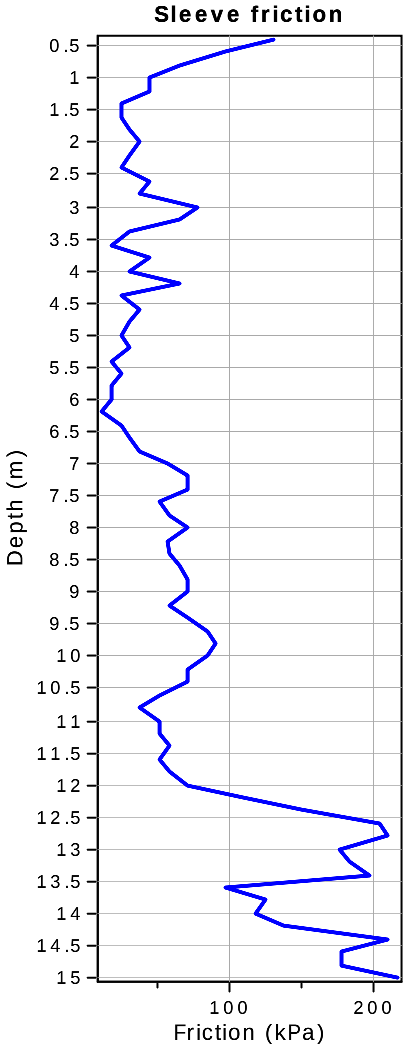
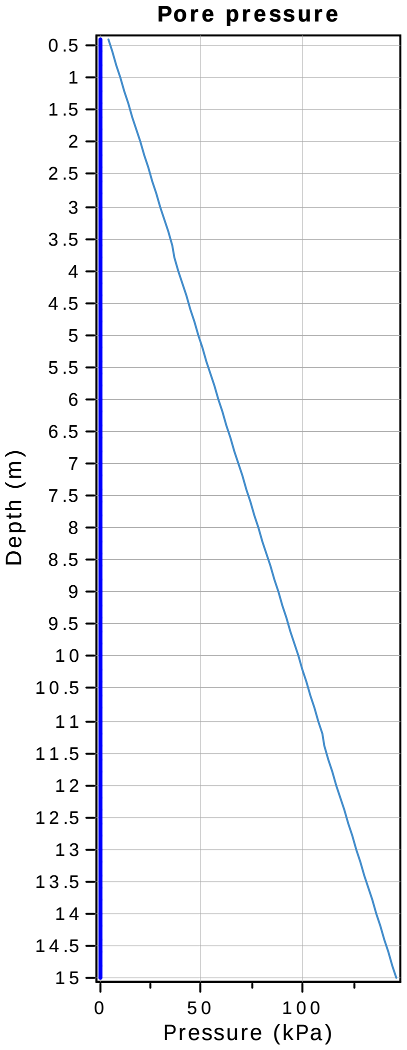
CPT: 036021P161CPT161
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

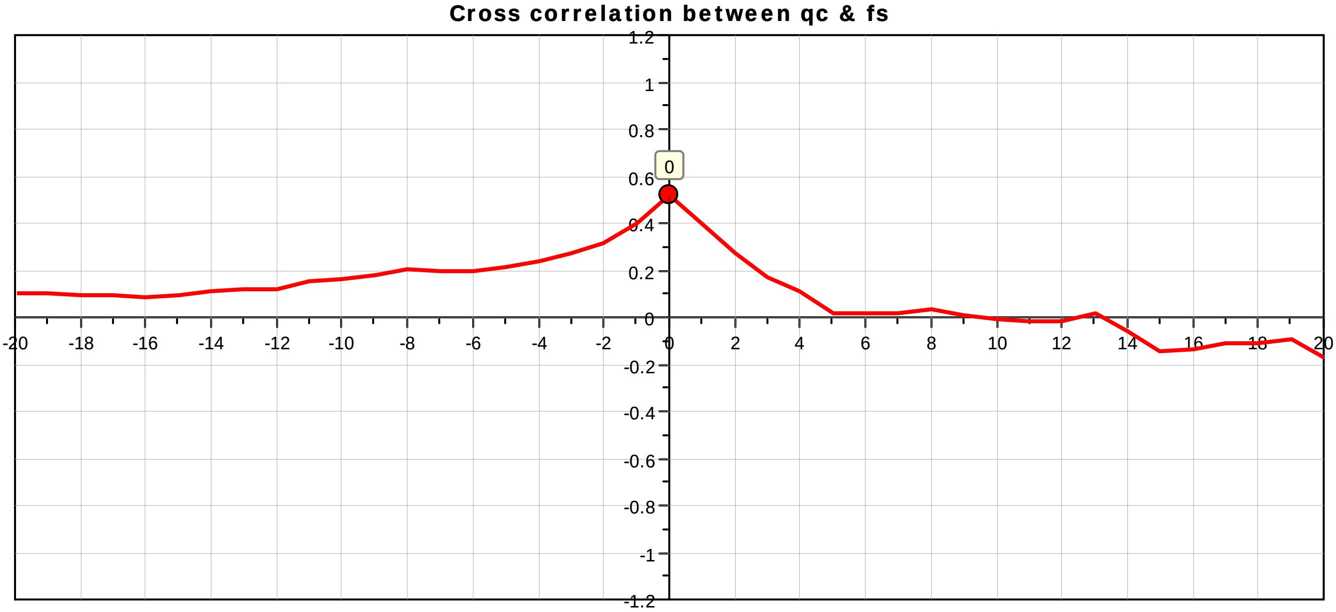
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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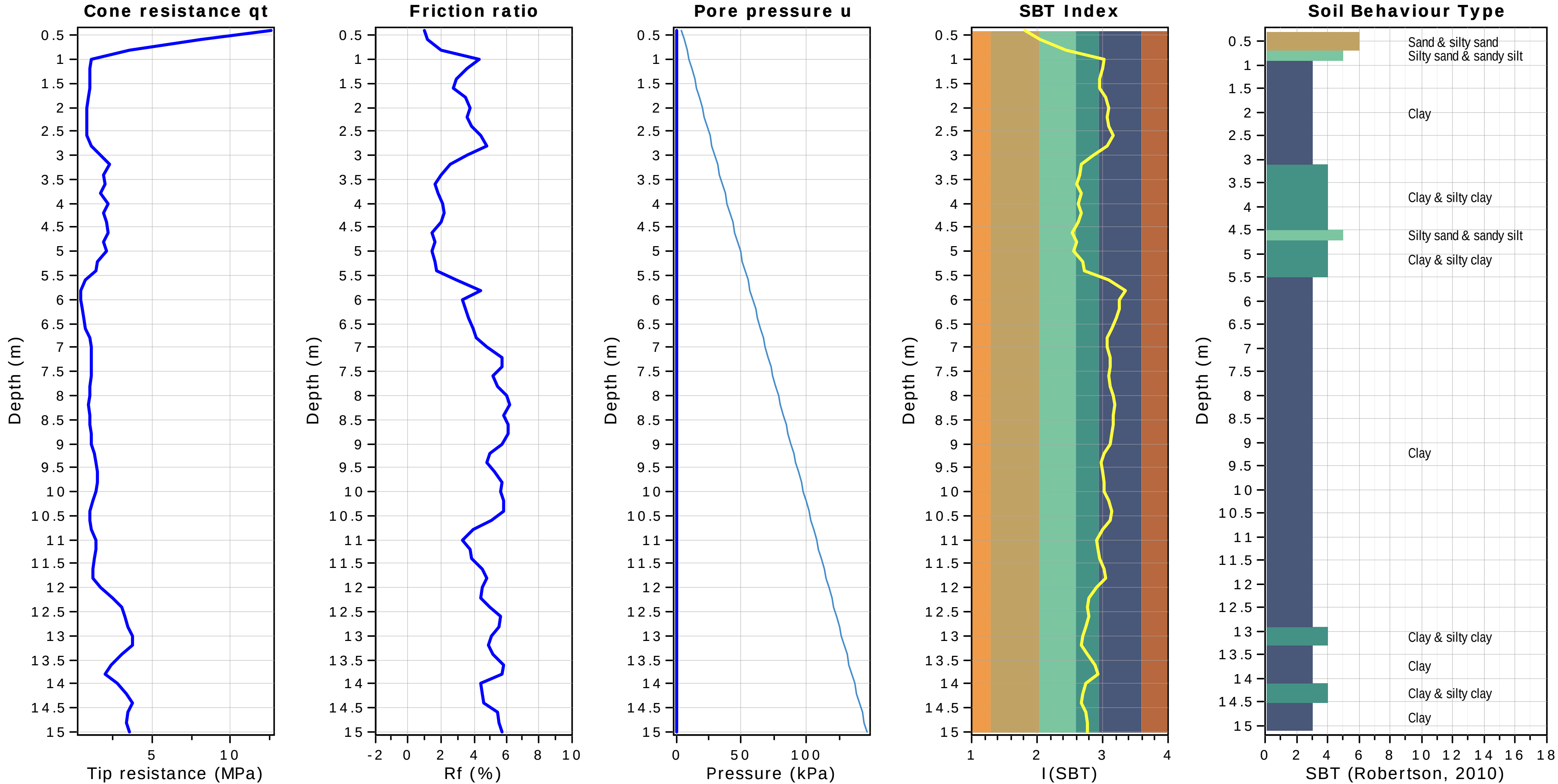
CPT: 036021P161CPT161
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟨 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

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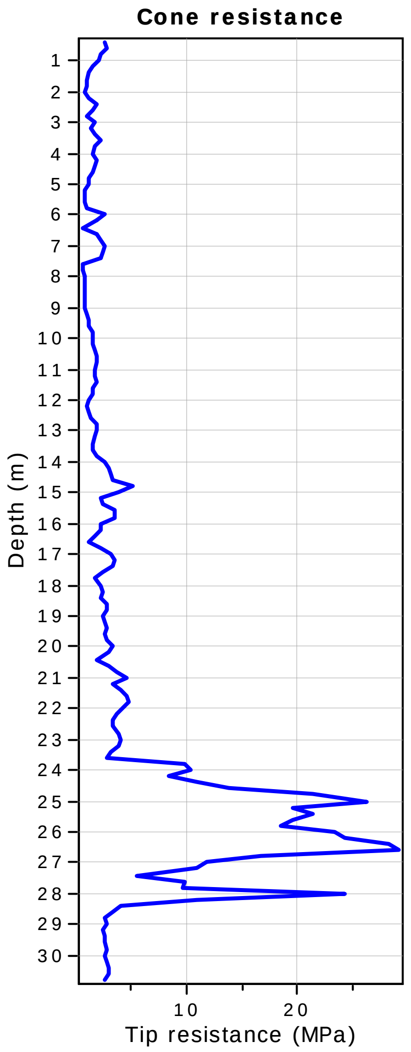
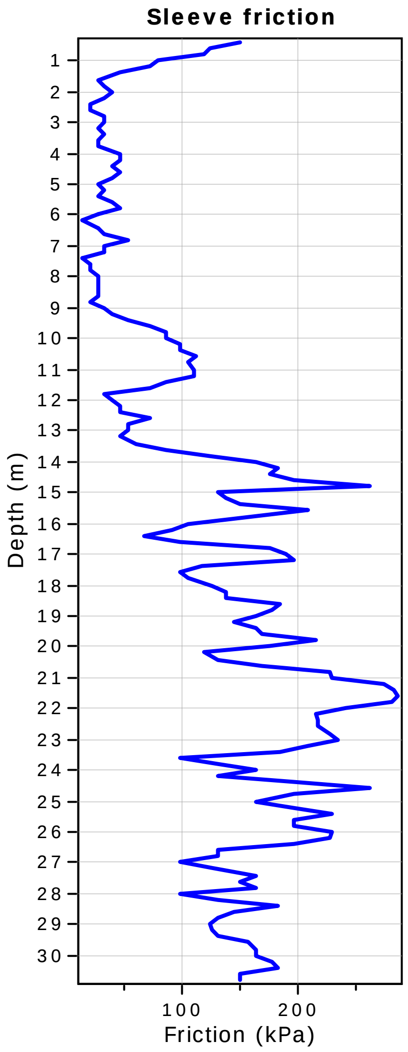
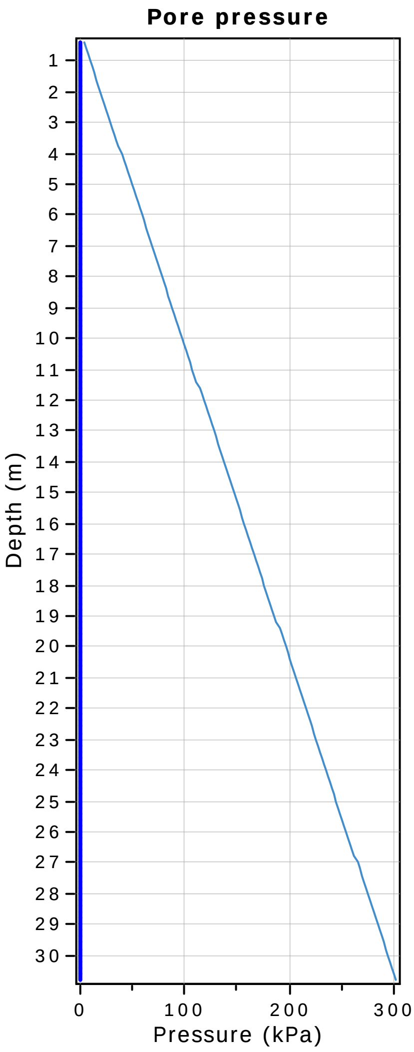
CPT: 036021P162CPT162
Total depth: 30.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

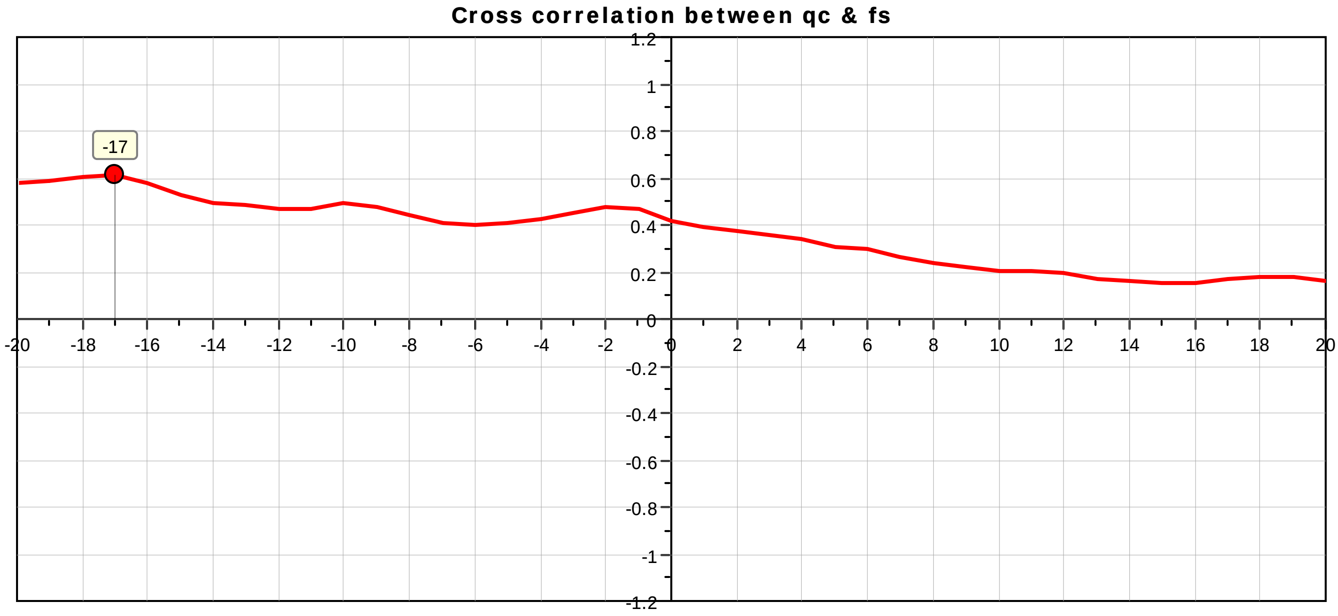
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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Via Cesare Costa 182
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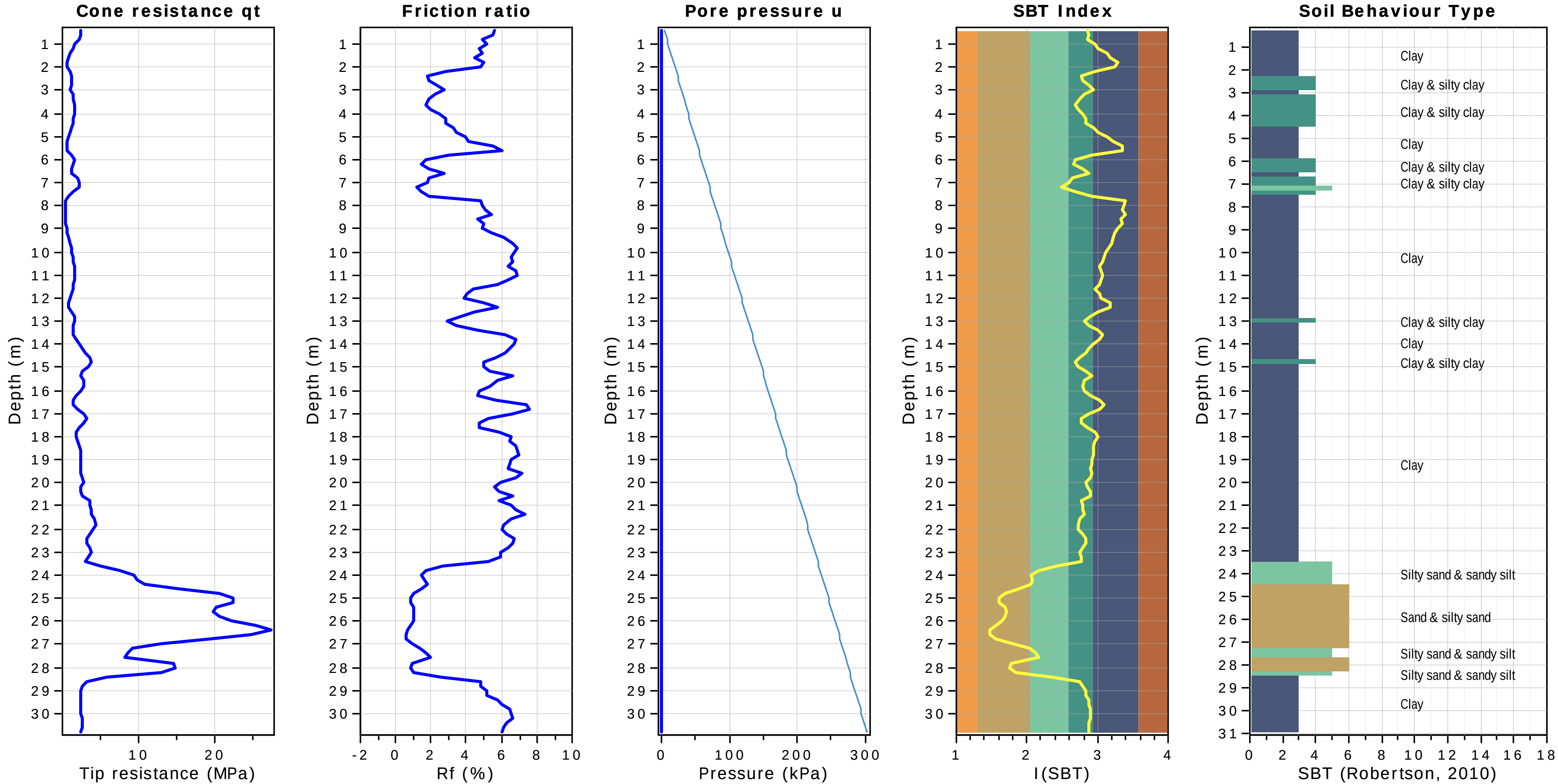
CPT: 036021P162CPT162
Total depth: 30.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

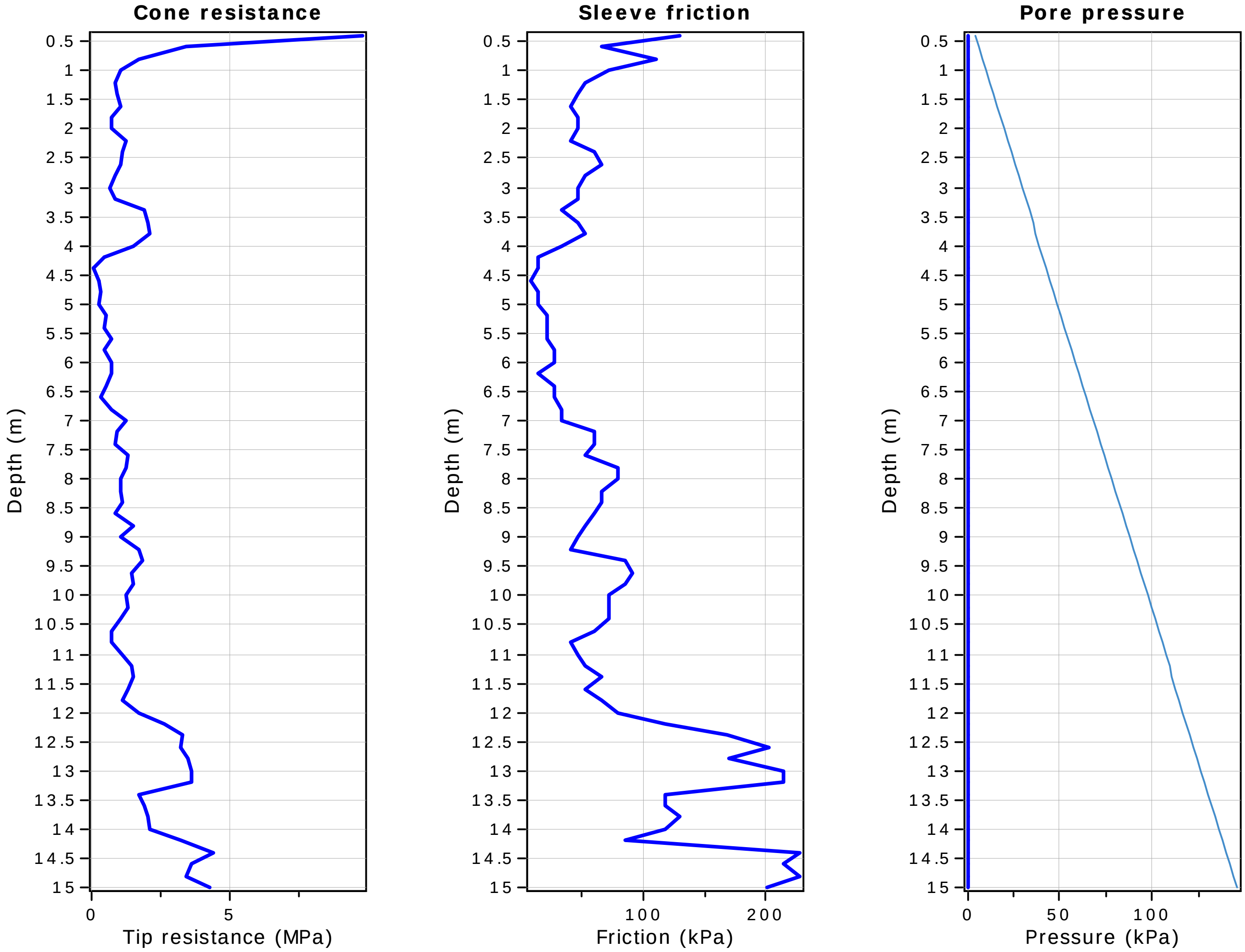


SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟫 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

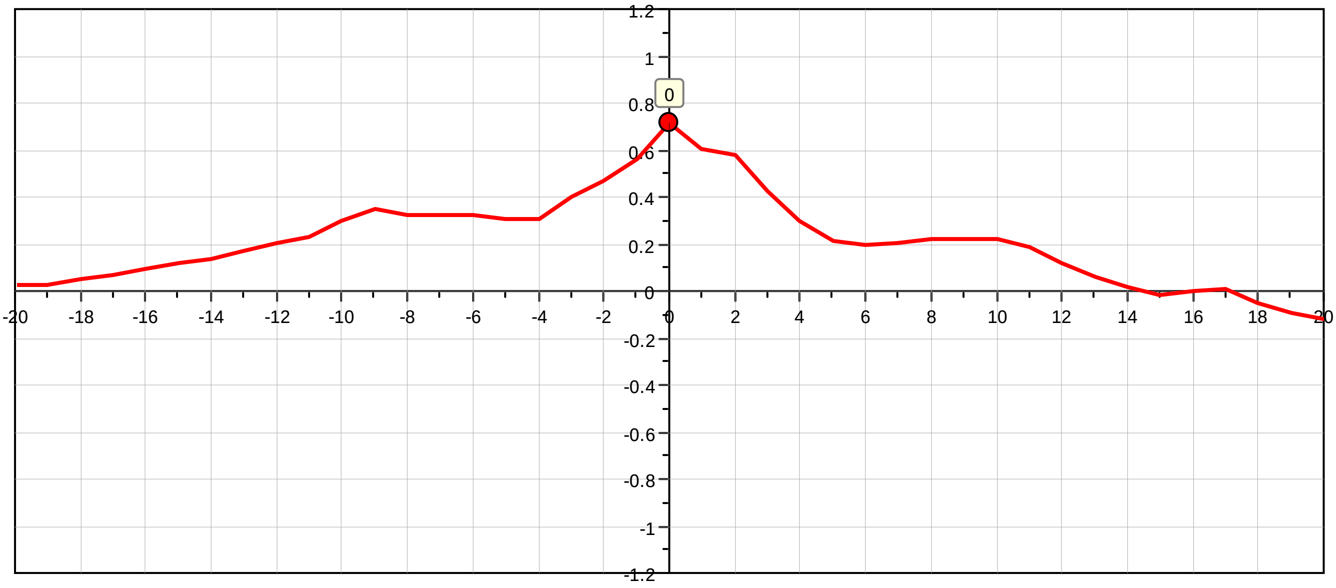
CPT: 036021P163CPT163
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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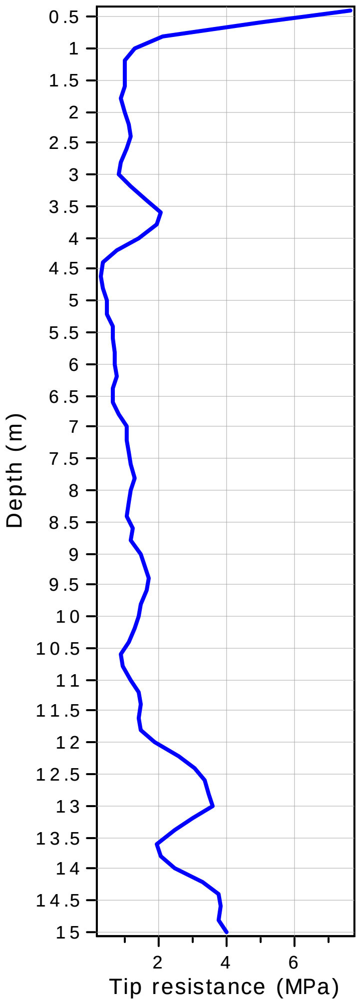
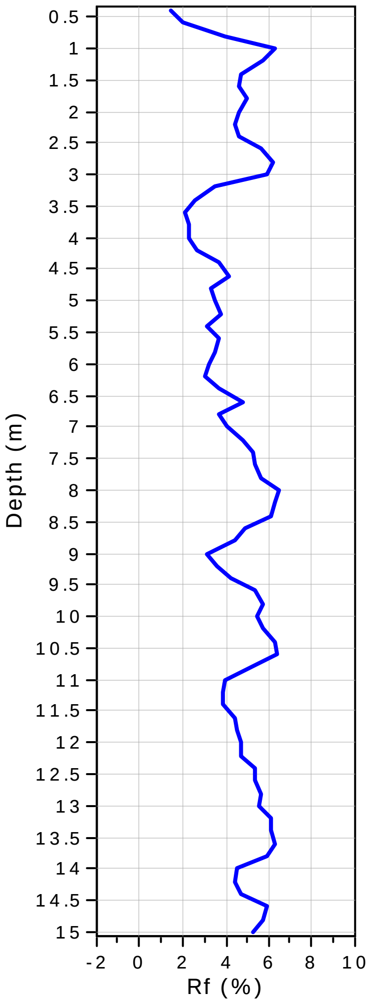
CPT: 036021P163CPT163
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

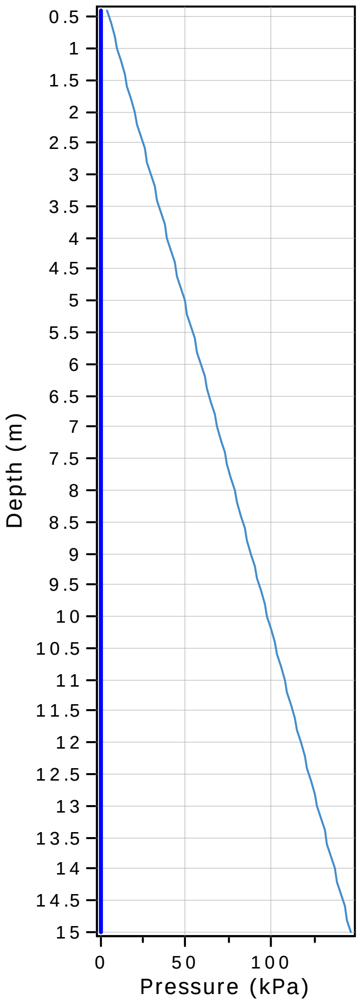
Cone resistance qt



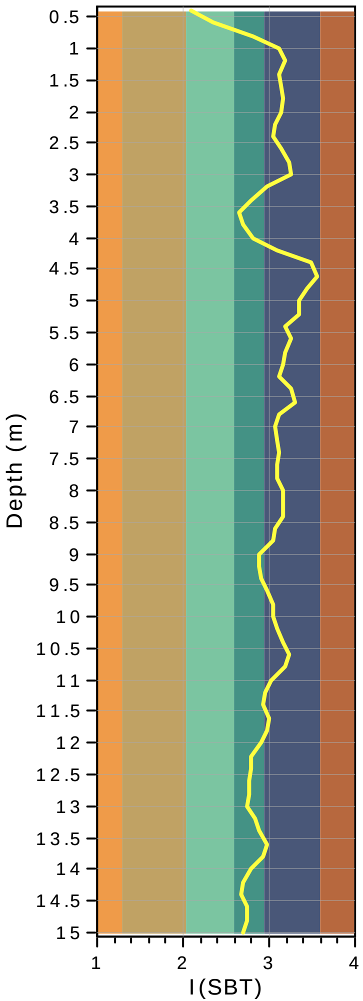
Friction ratio



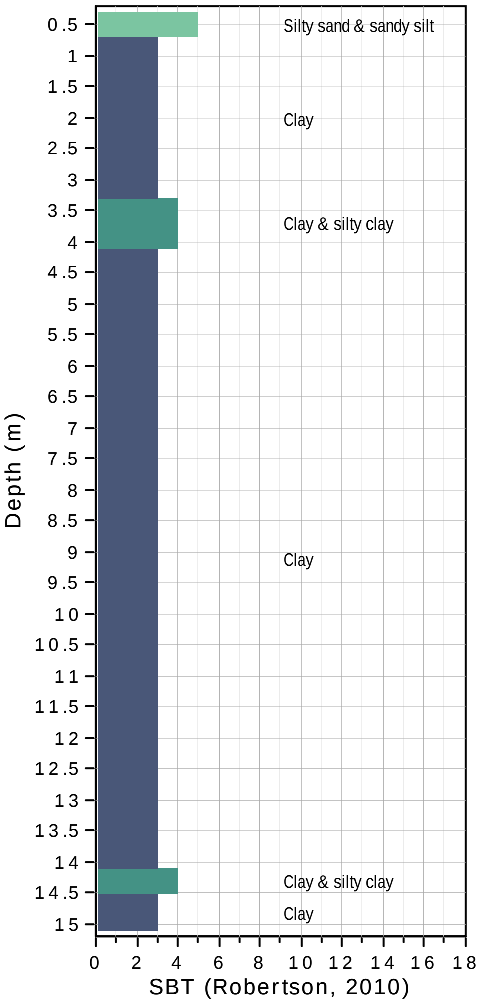
Pore pressure u



SBT Index



Soil Behaviour Type



SBT legend

🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟫 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

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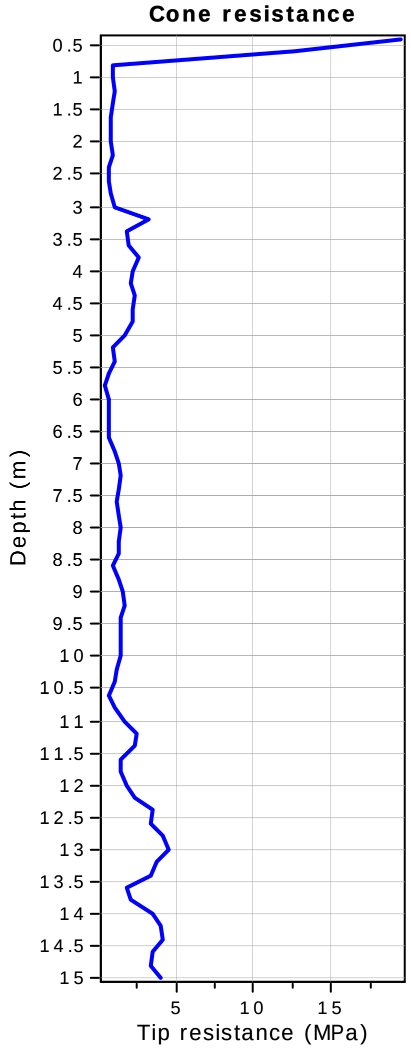
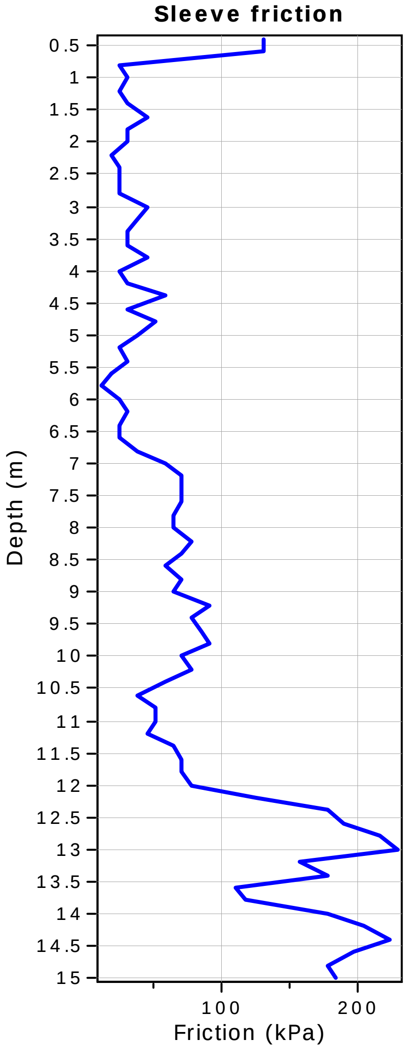
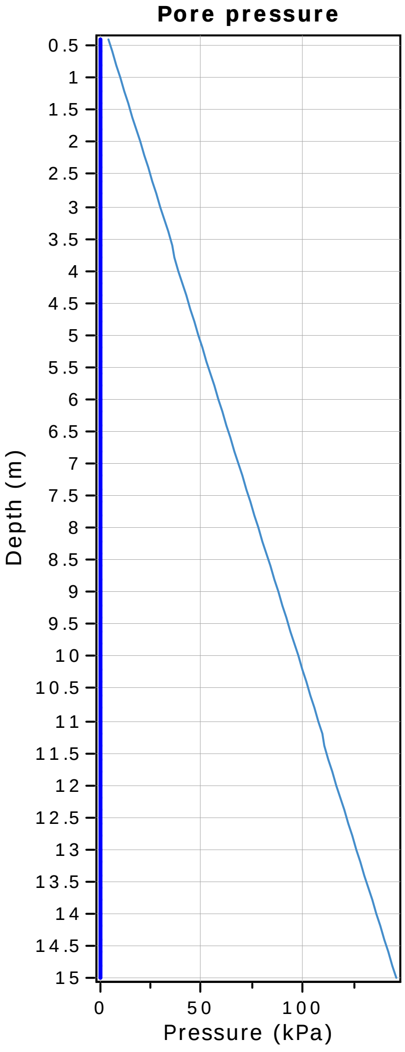
CPT: 036021P164CPT164
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

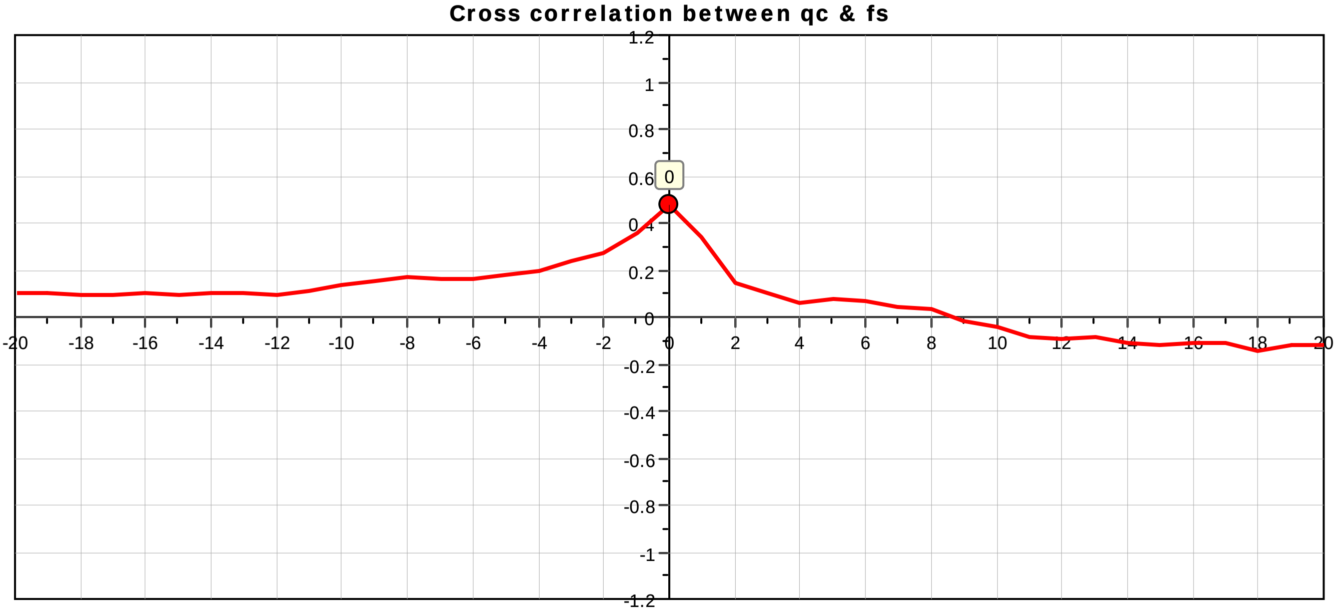
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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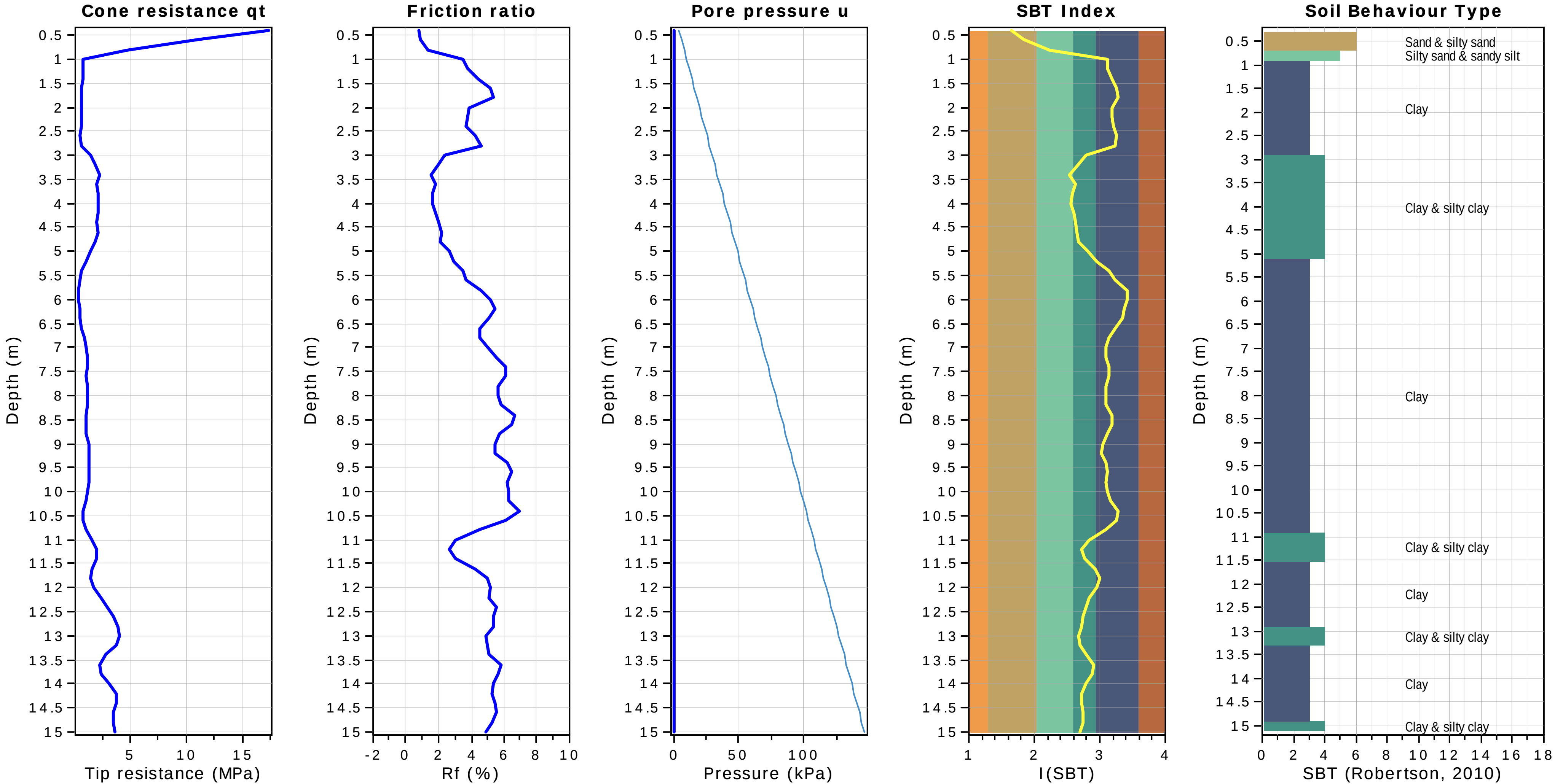
CPT: 036021P164CPT164
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

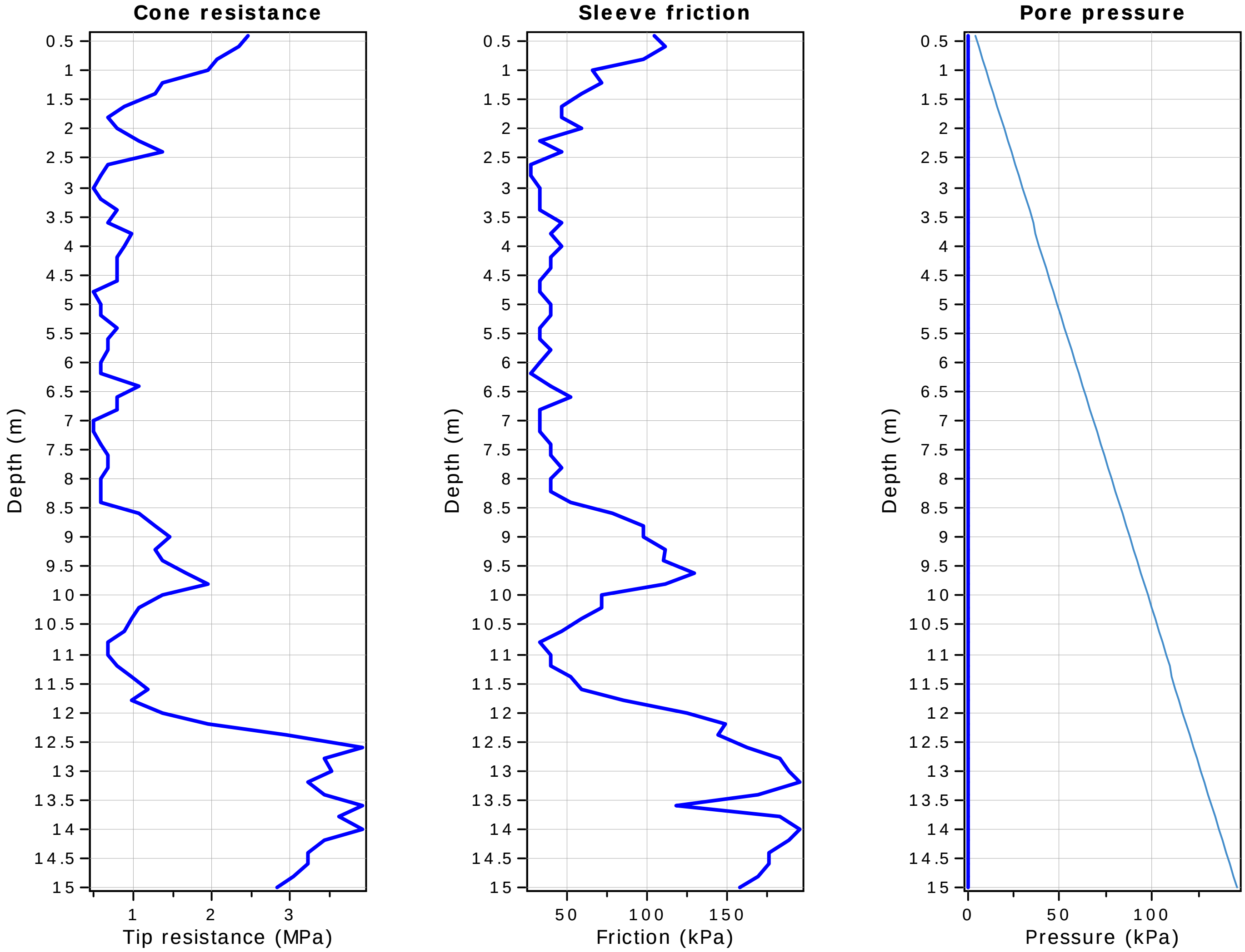


SBT legend

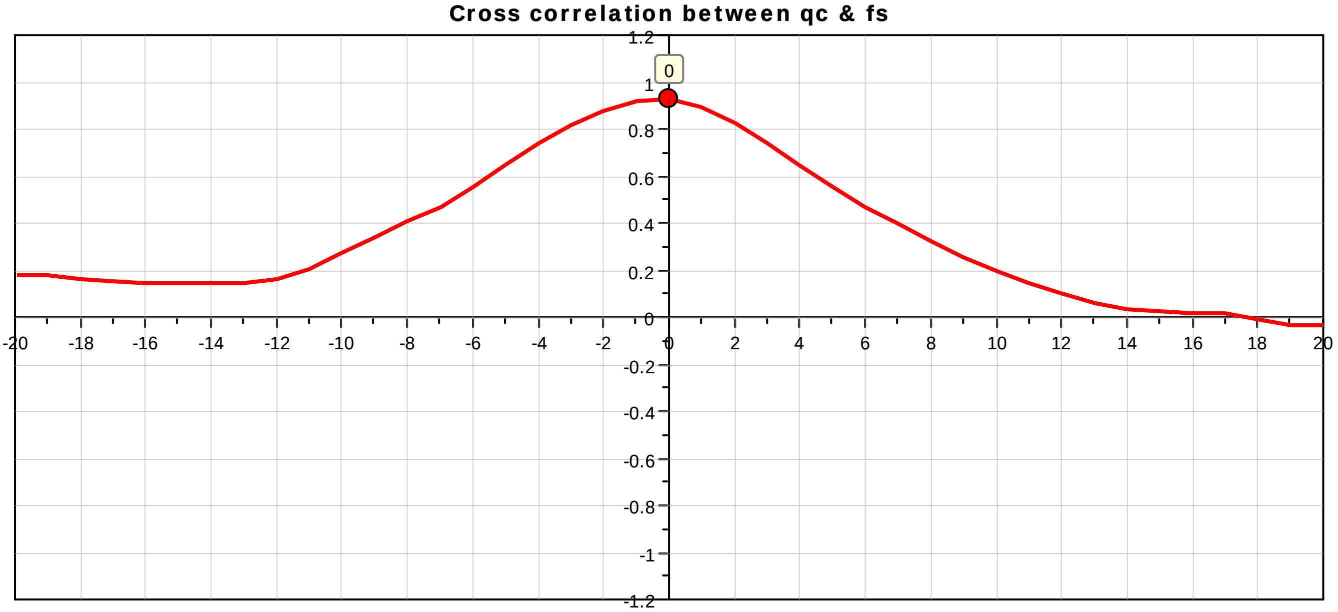
🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟨 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

CPT: 036021P165CPT165
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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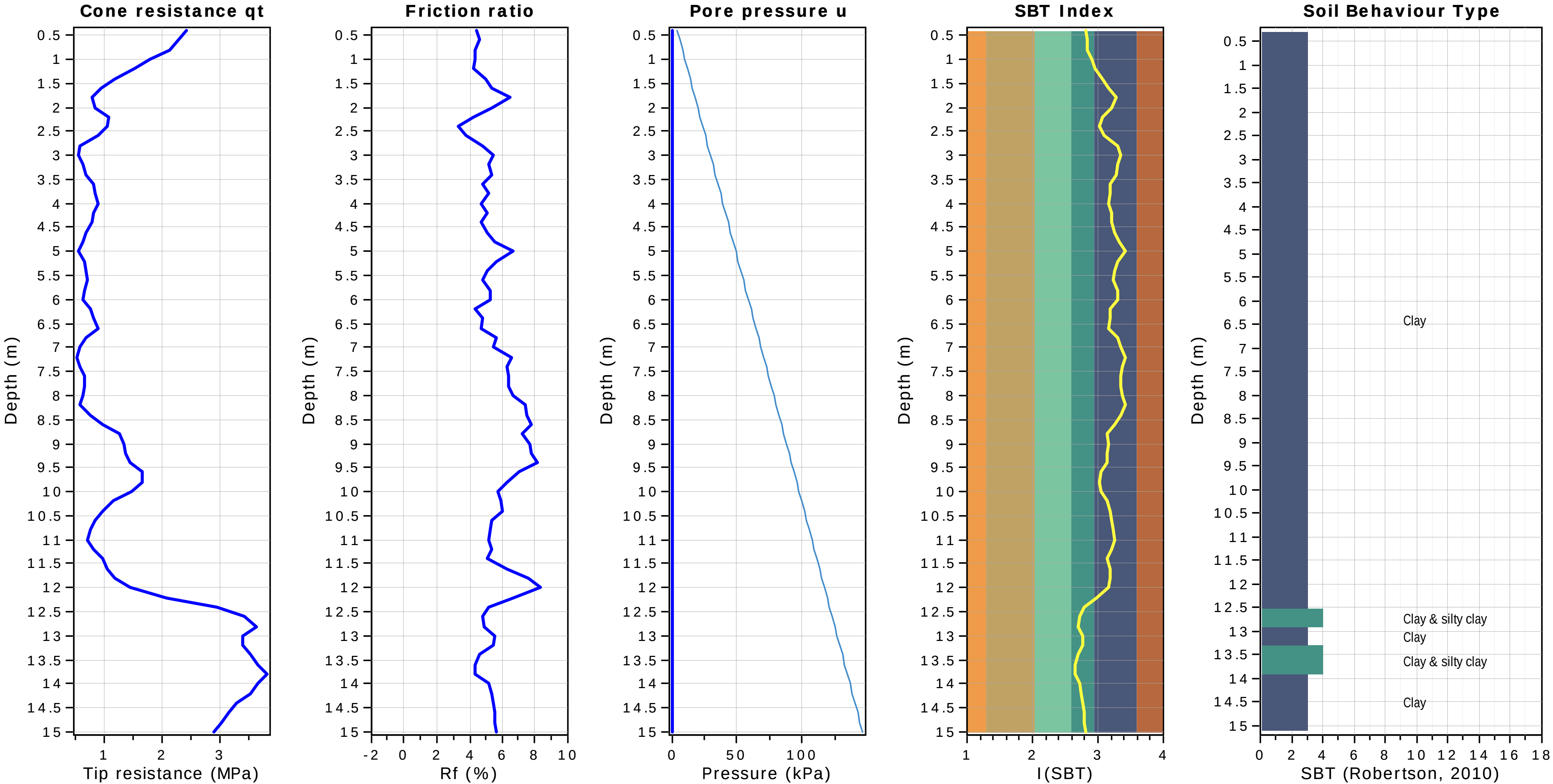
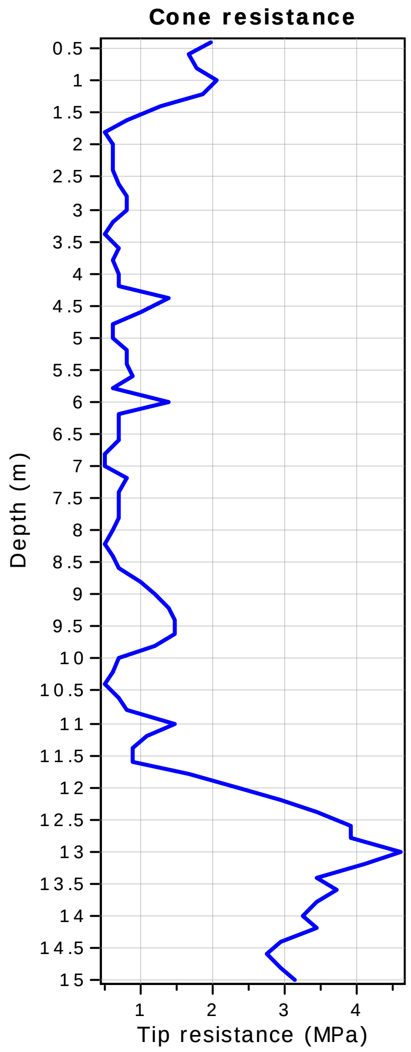
CPT: 036021P165CPT165
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

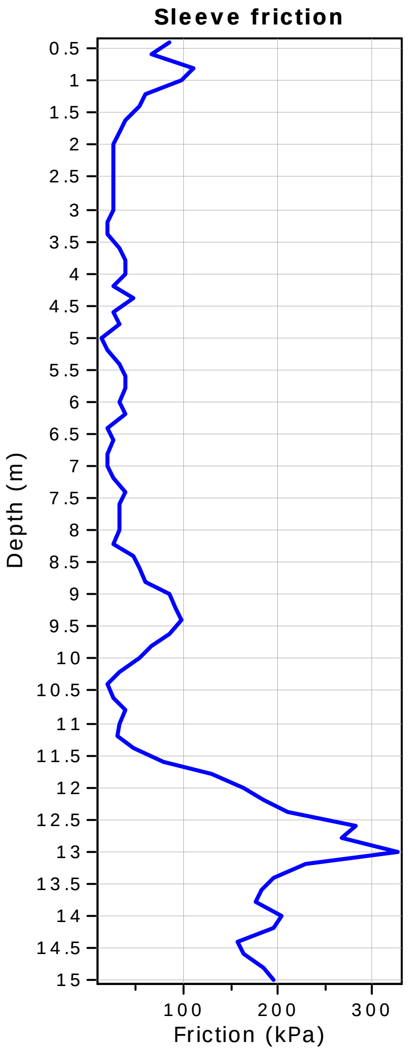
Project:
Location:

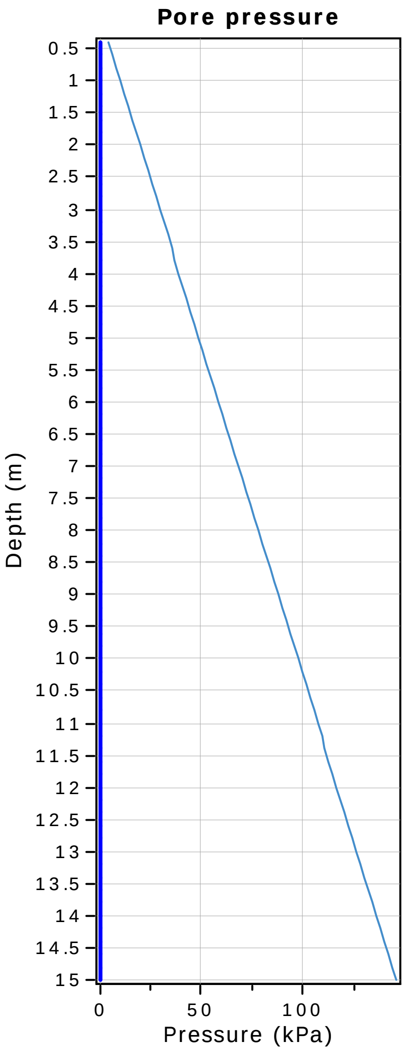


SBT legend

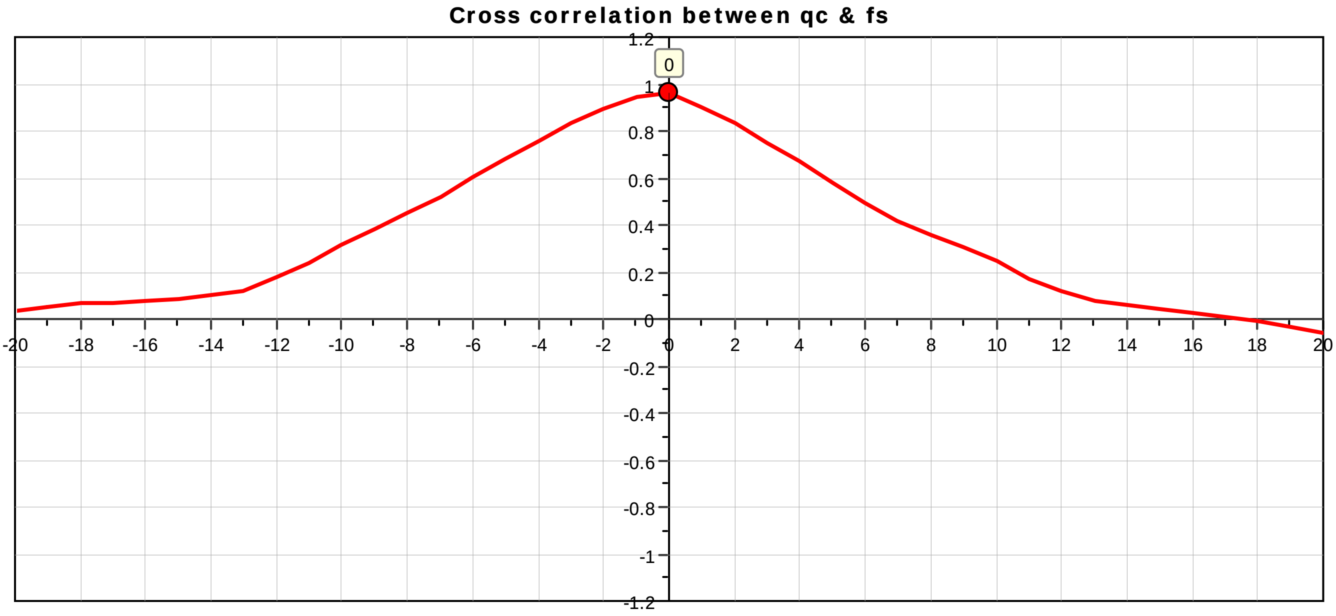
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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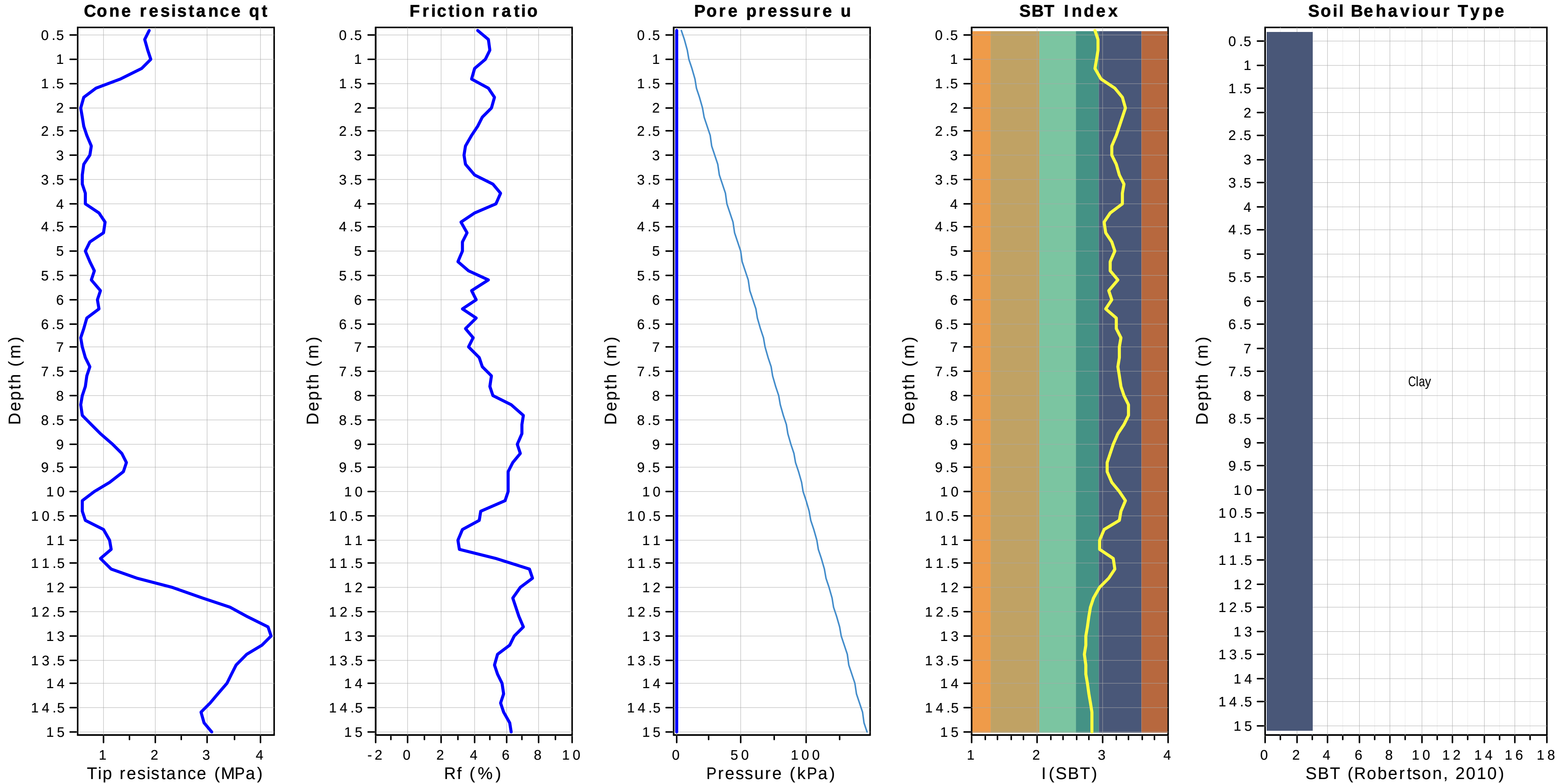
CPT: 036021P167CPT167
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬛ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

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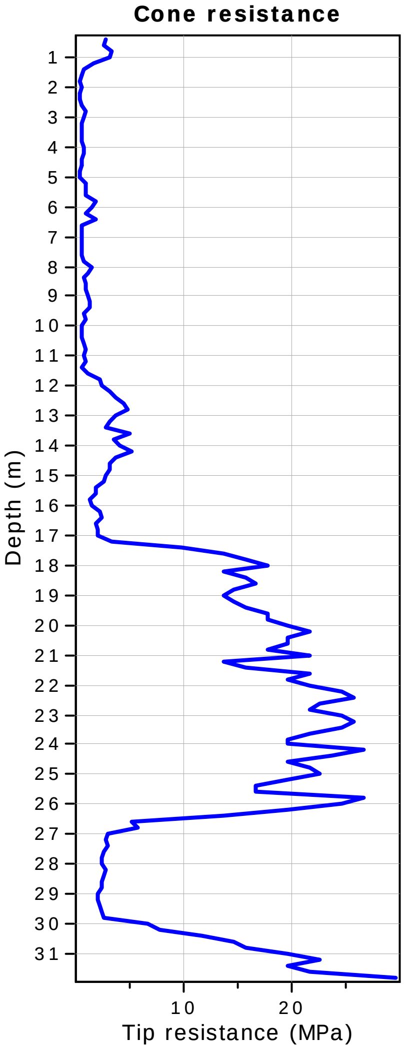
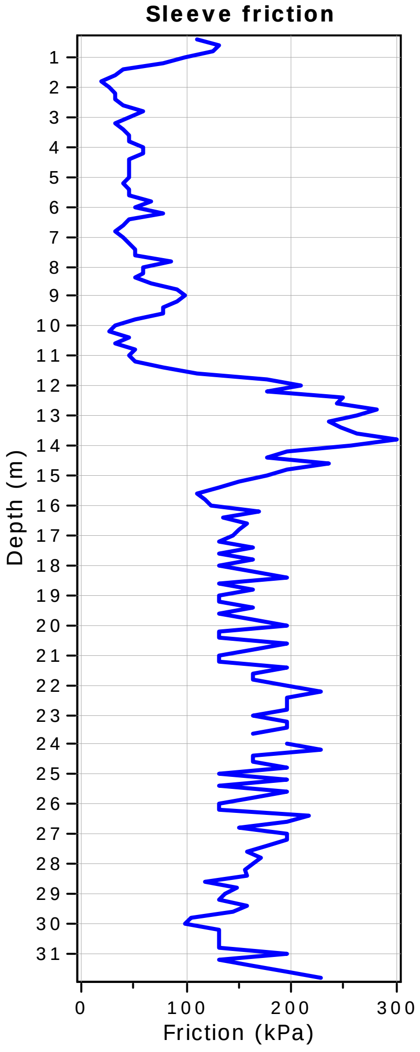
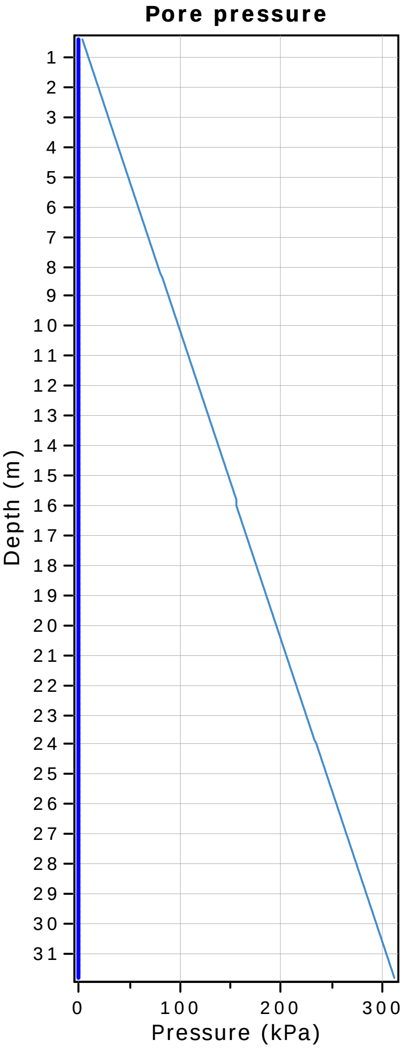
CPT: 036021P168CPT168
Total depth: 31.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

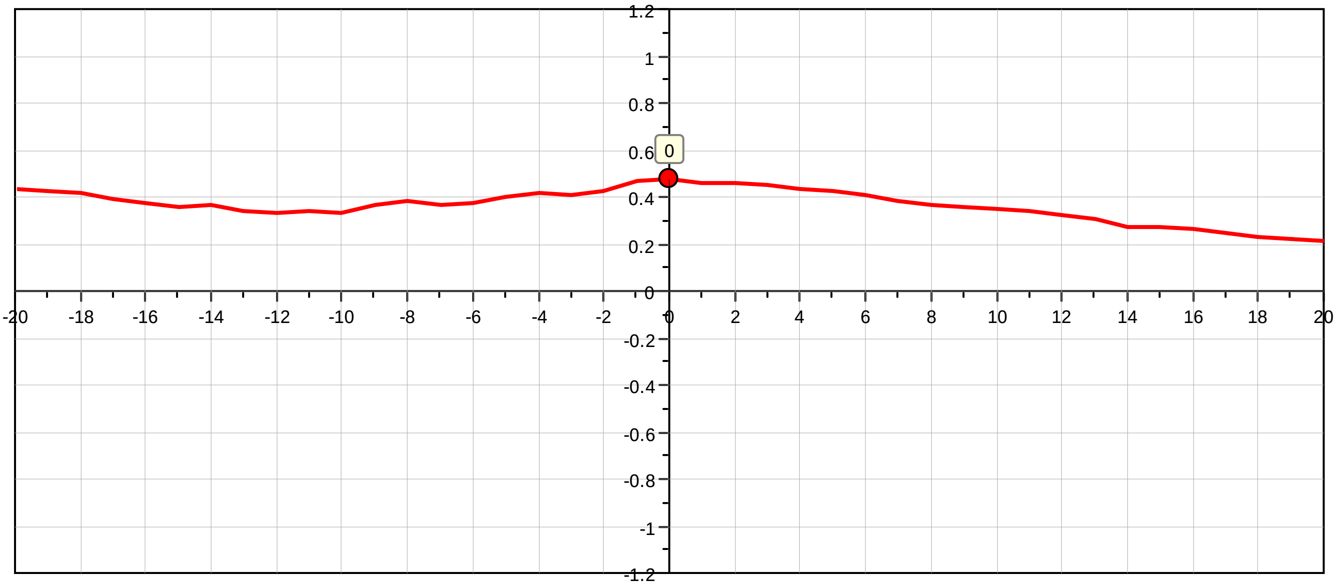






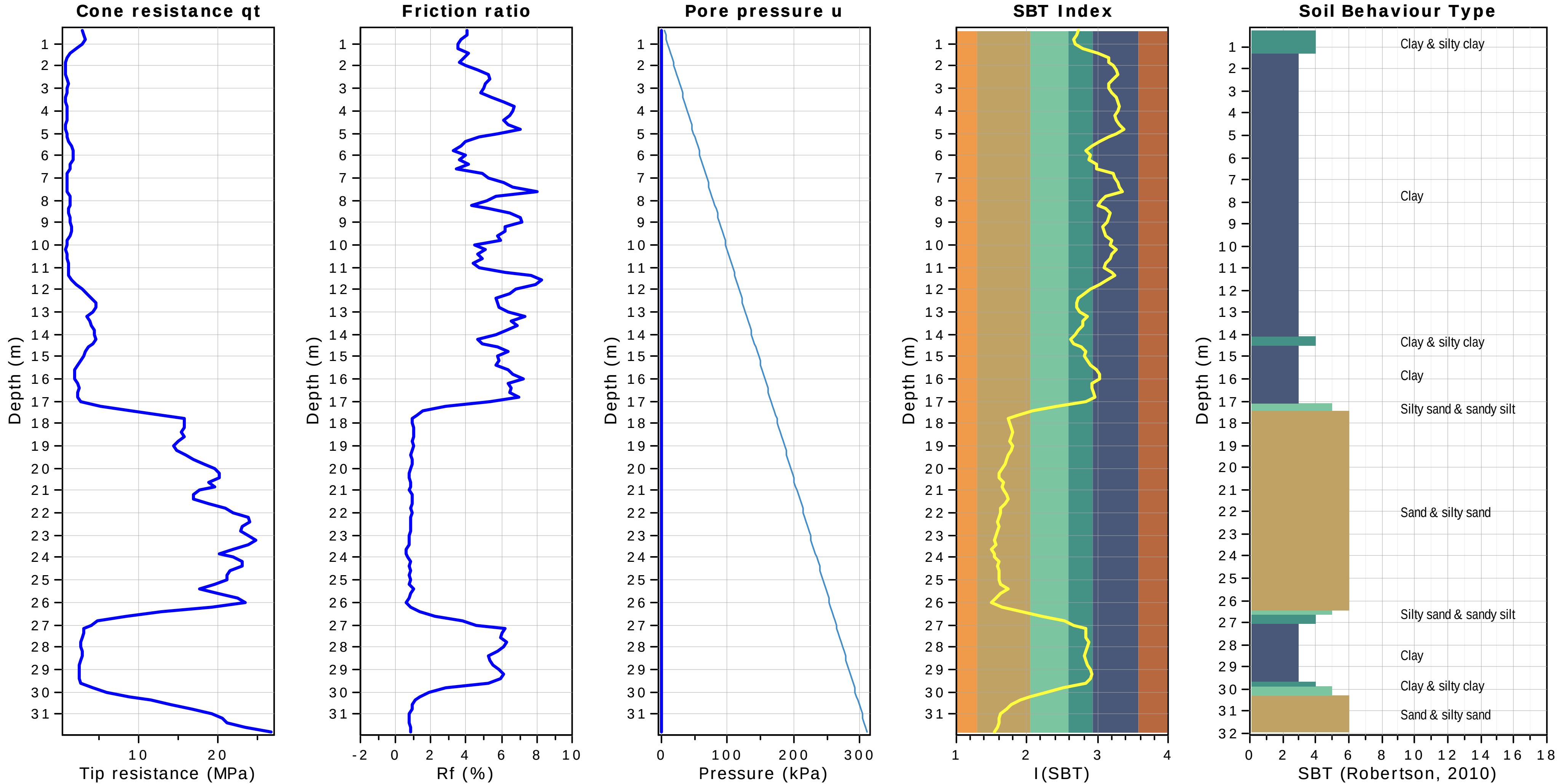
The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



CPT: 036021P168CPT168
Total depth: 31.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

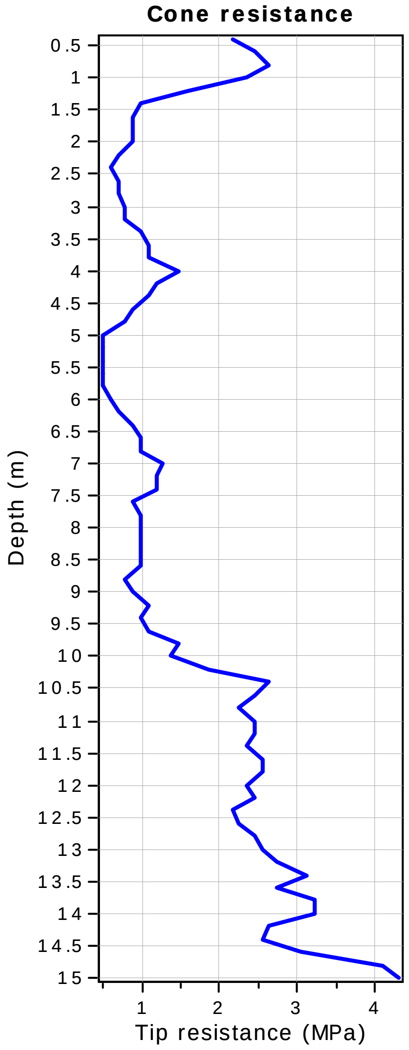


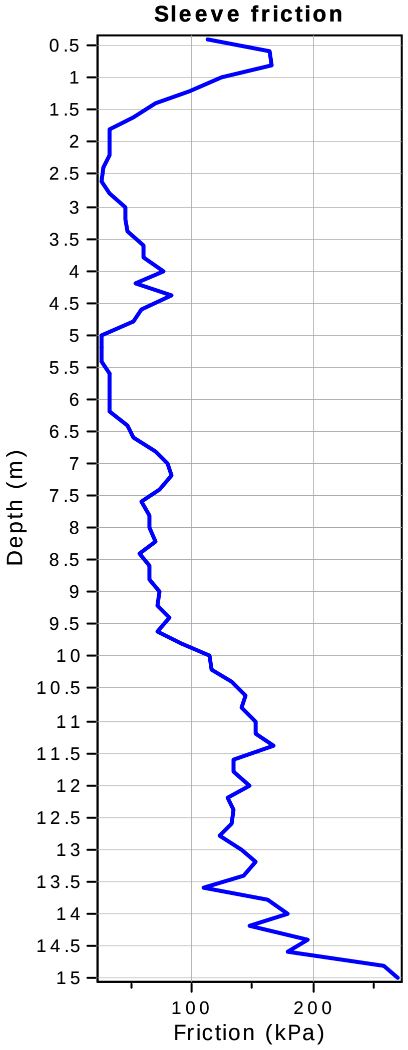
SBT legend

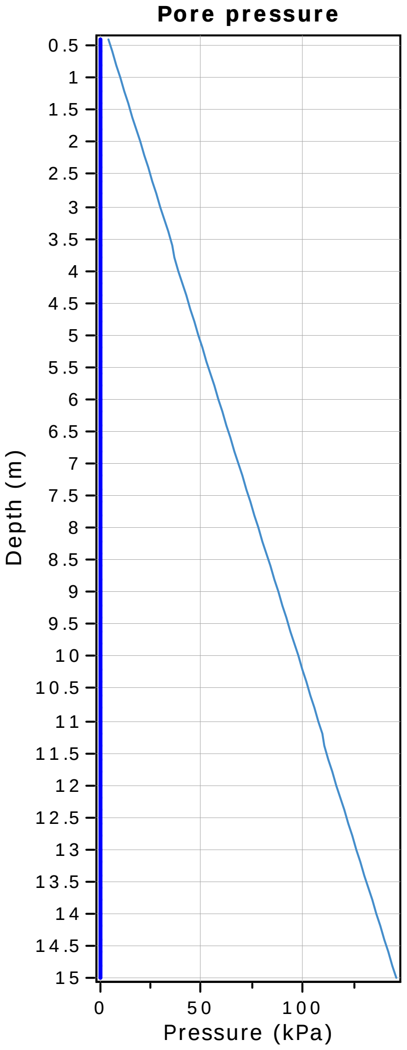
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P16CPT16
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

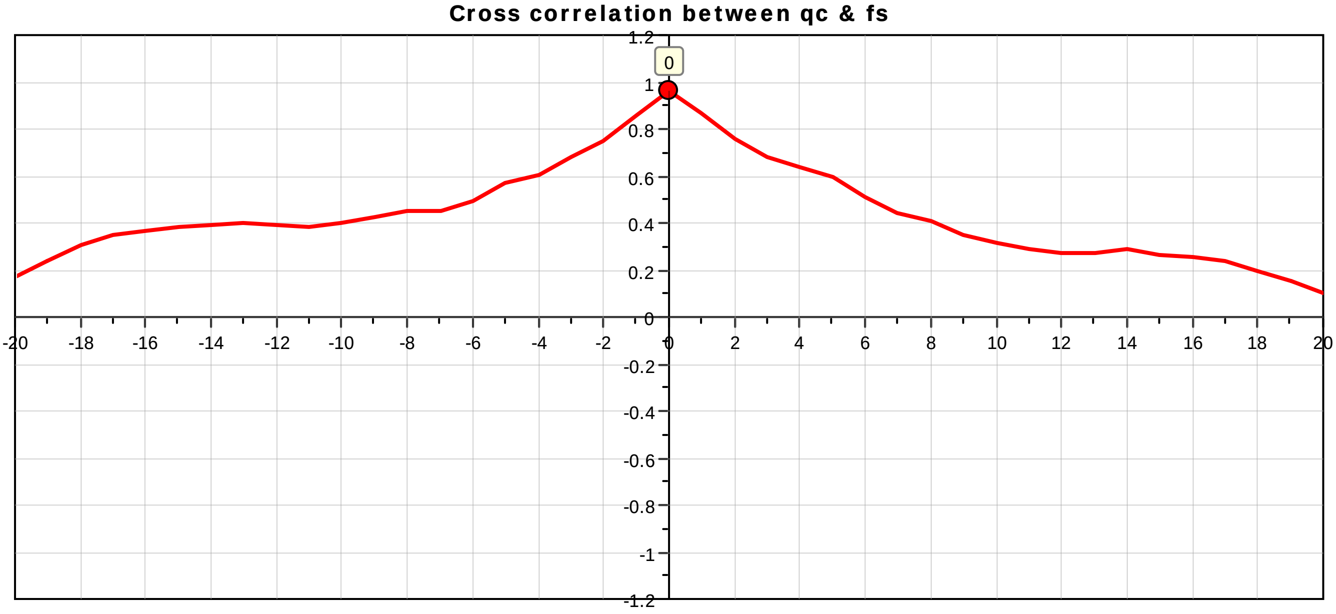
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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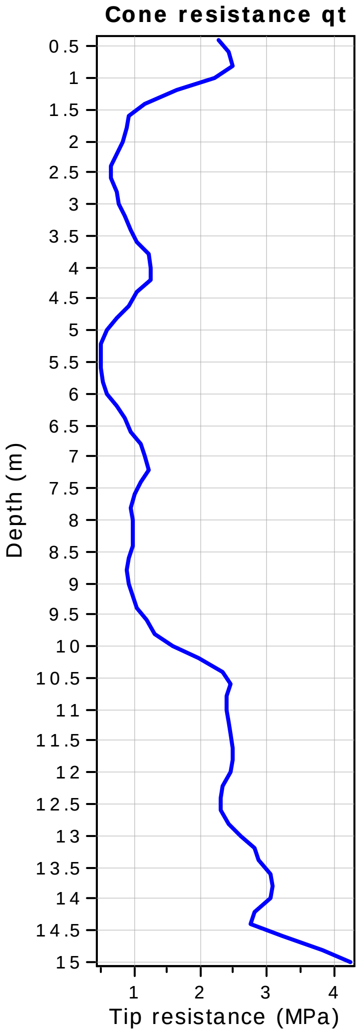
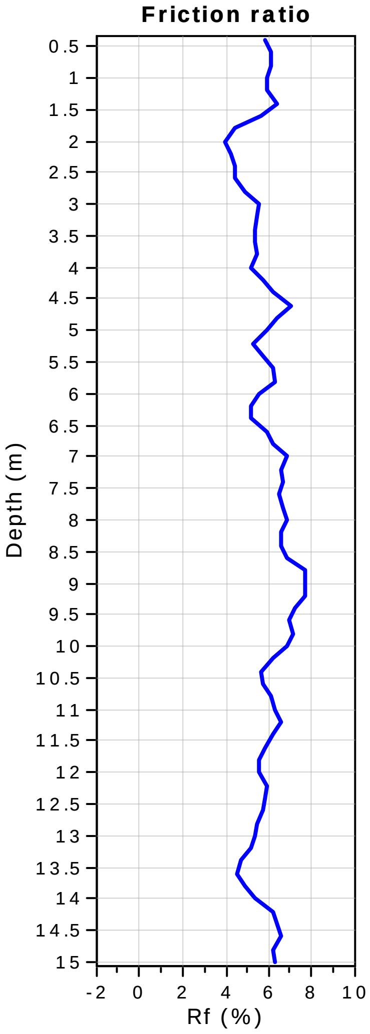
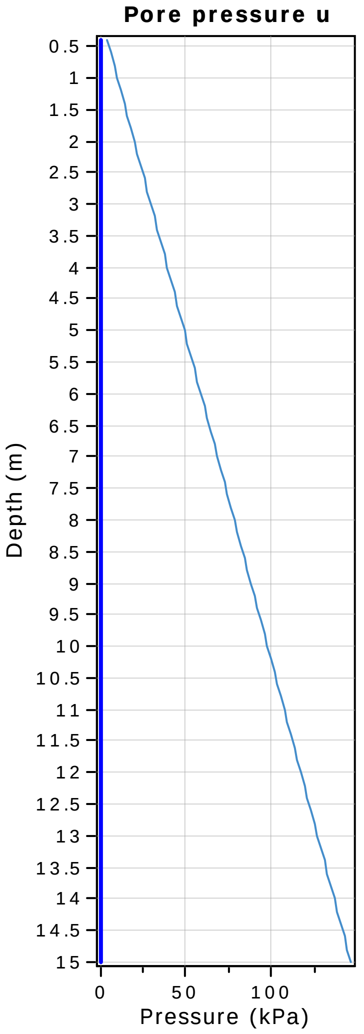
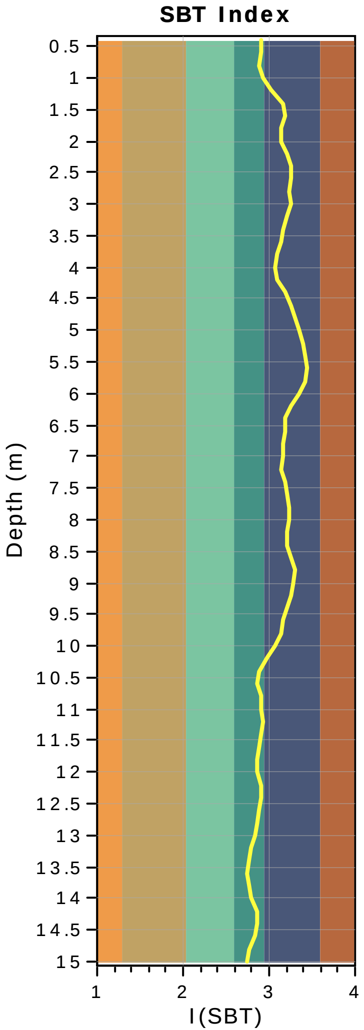
CPT: 036021P16CPT16
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

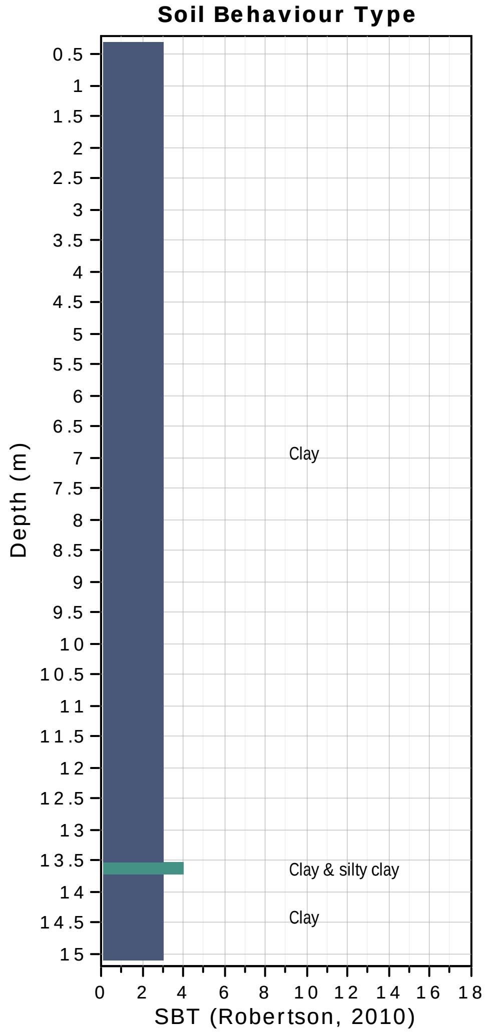
Project:
Location:


Cone resistance qt


Friction ratio


Pore pressure u


SBT Index

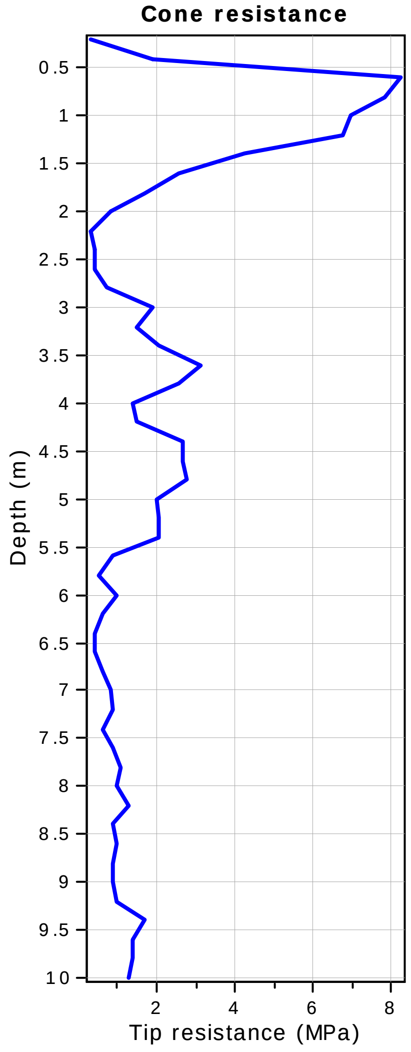

Soil Behaviour Type

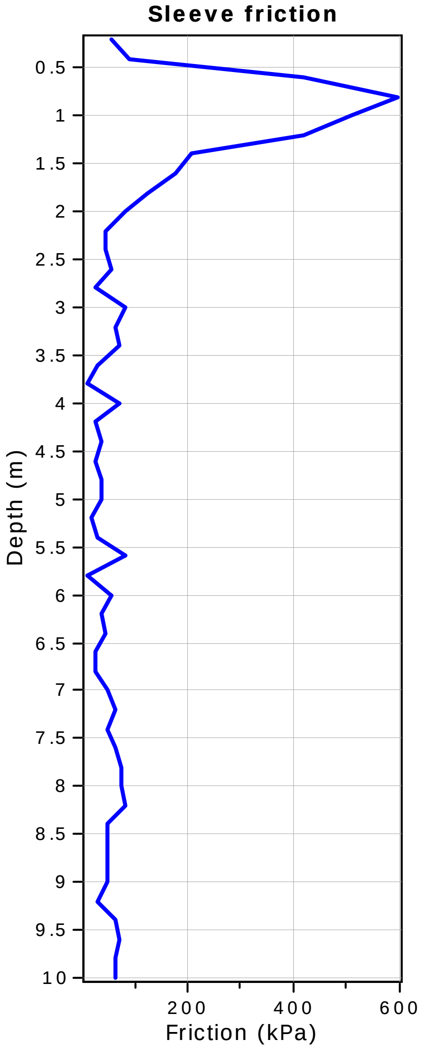
SBT legend

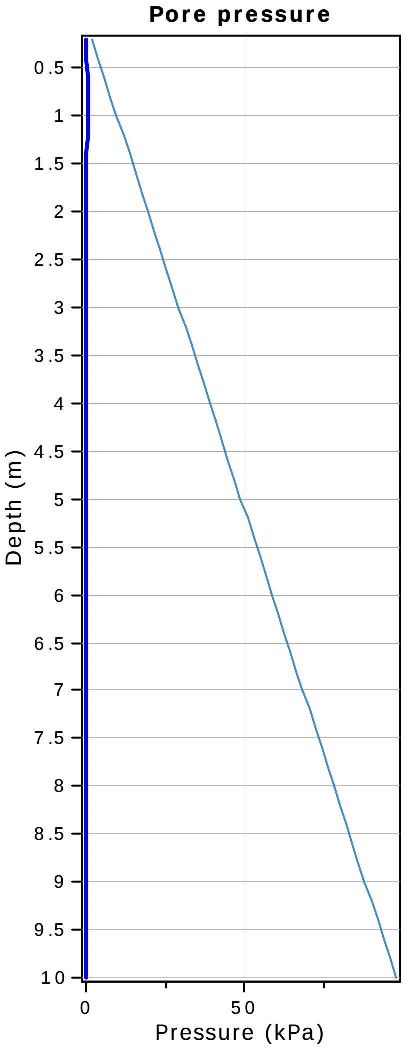
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

CPT: 036021P175CPT175
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

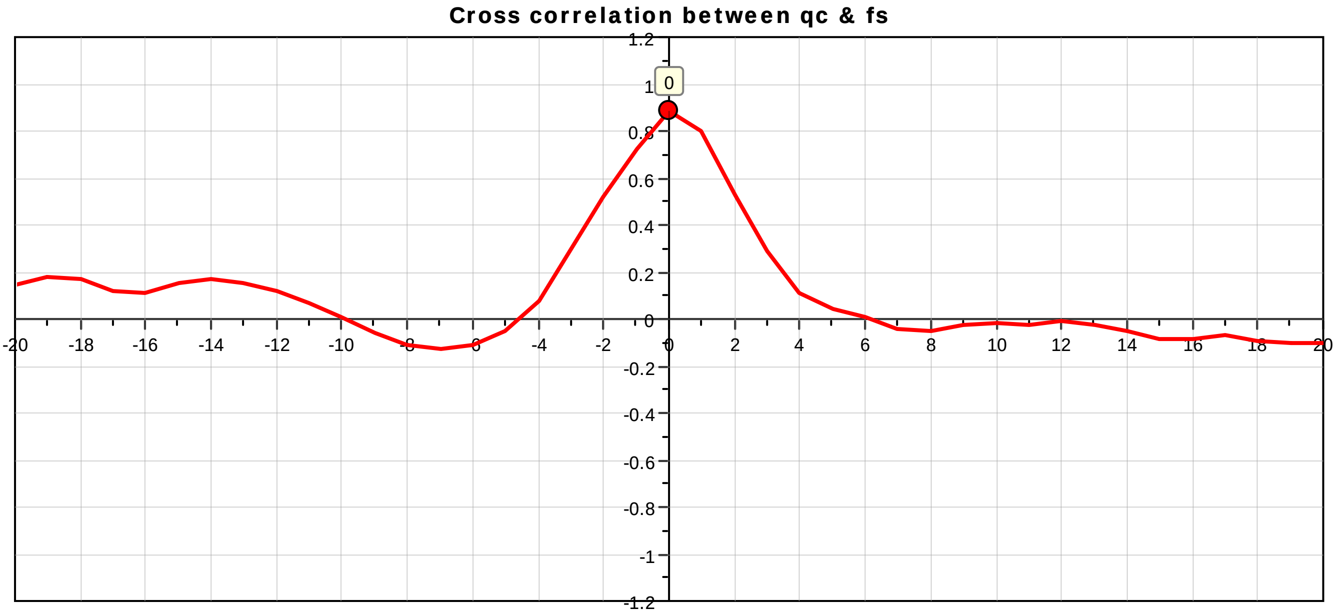
Project:
Location:





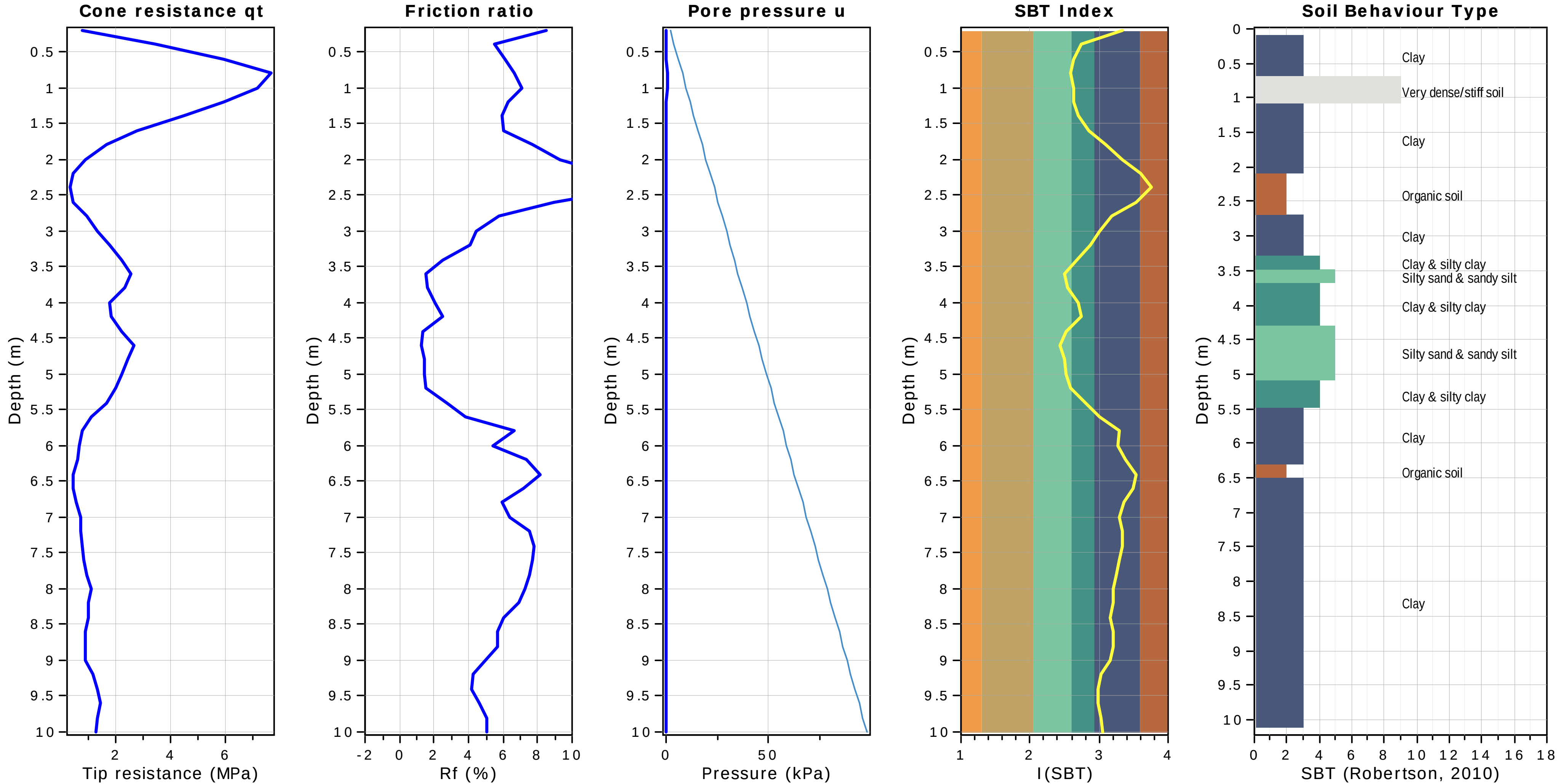


The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT: 036021P175CPT175
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



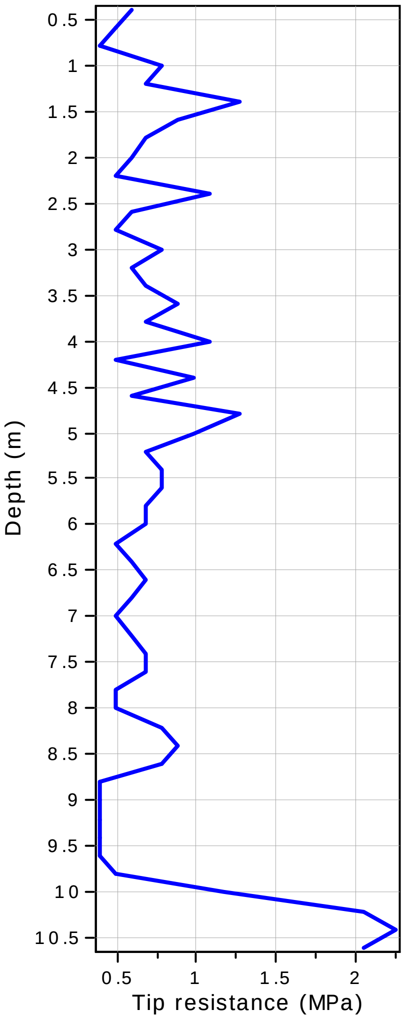
SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

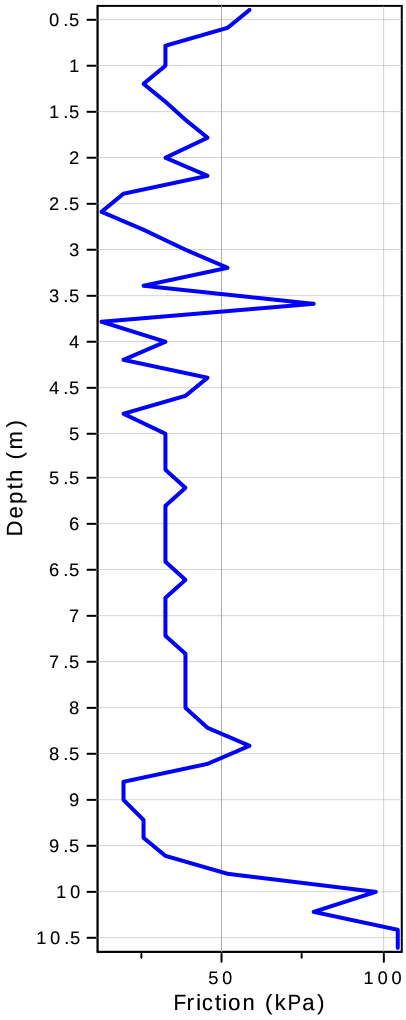
CPT: 036021P178CPT178
Total depth: 10.60 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

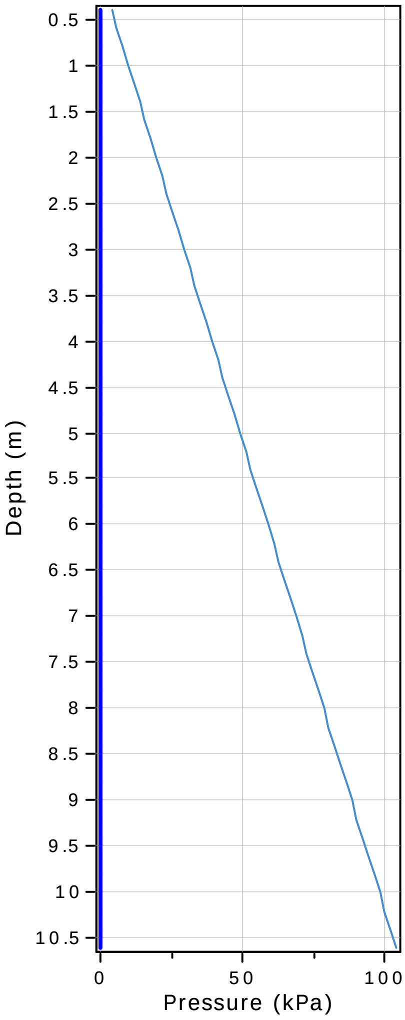
Cone resistance



Sleeve friction

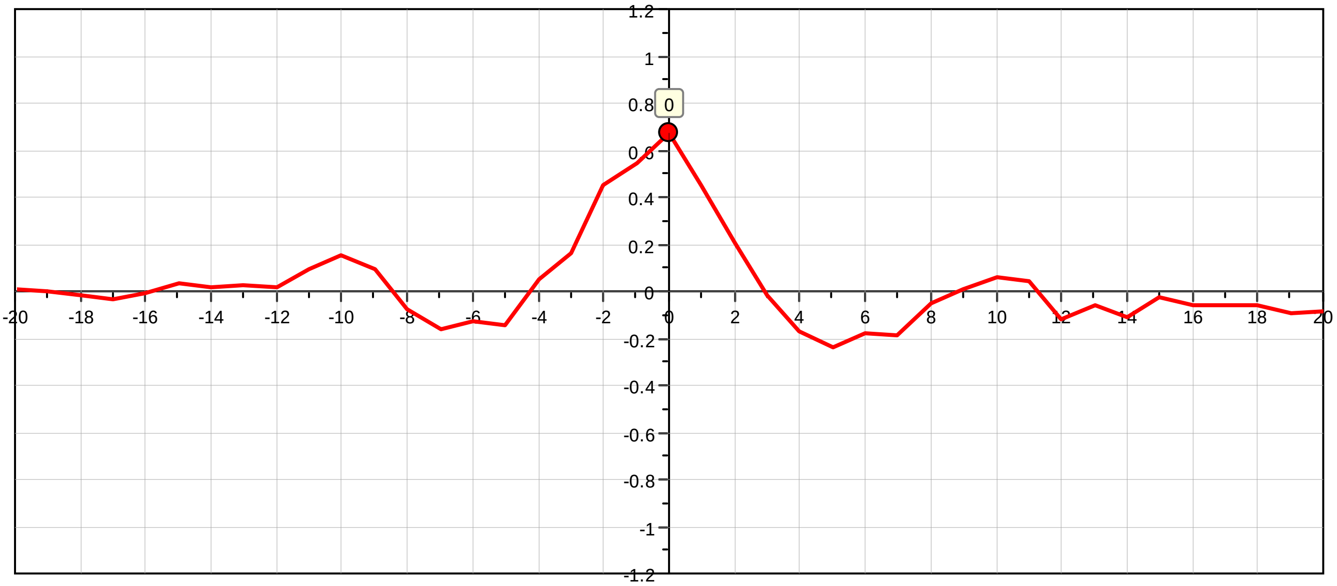


Pore pressure



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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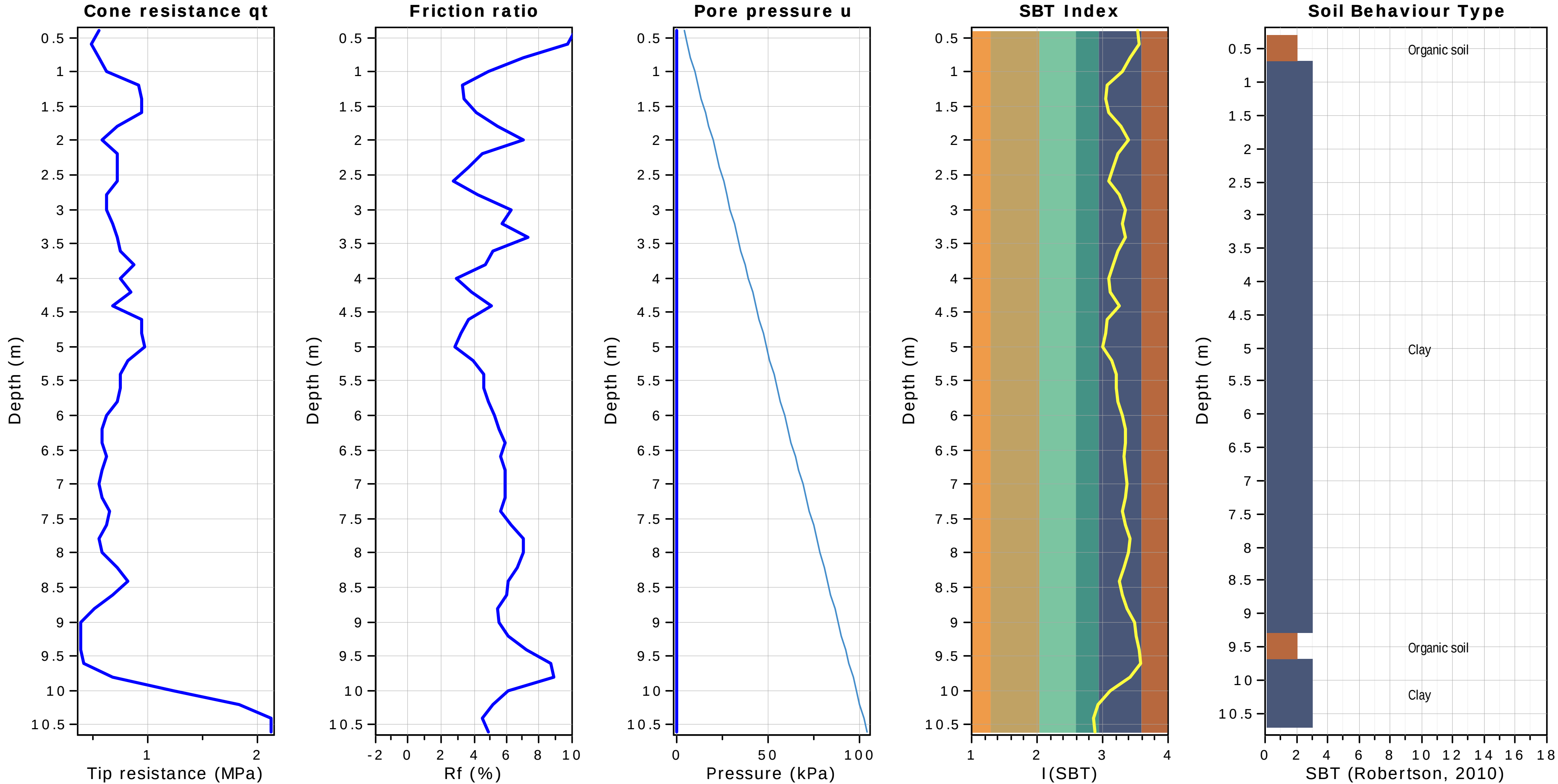
CPT: 036021P178CPT178
Total depth: 10.60 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

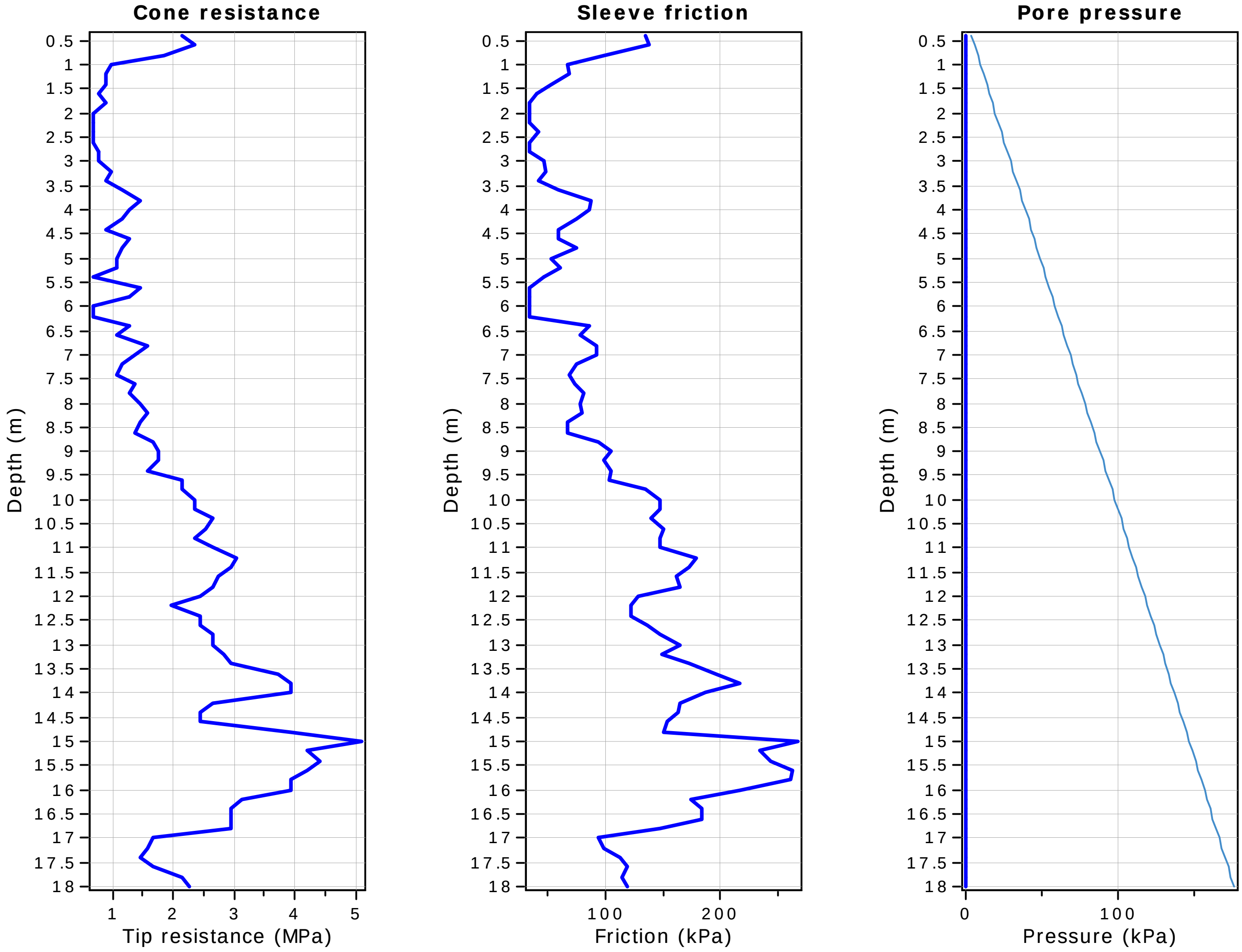


SBT legend

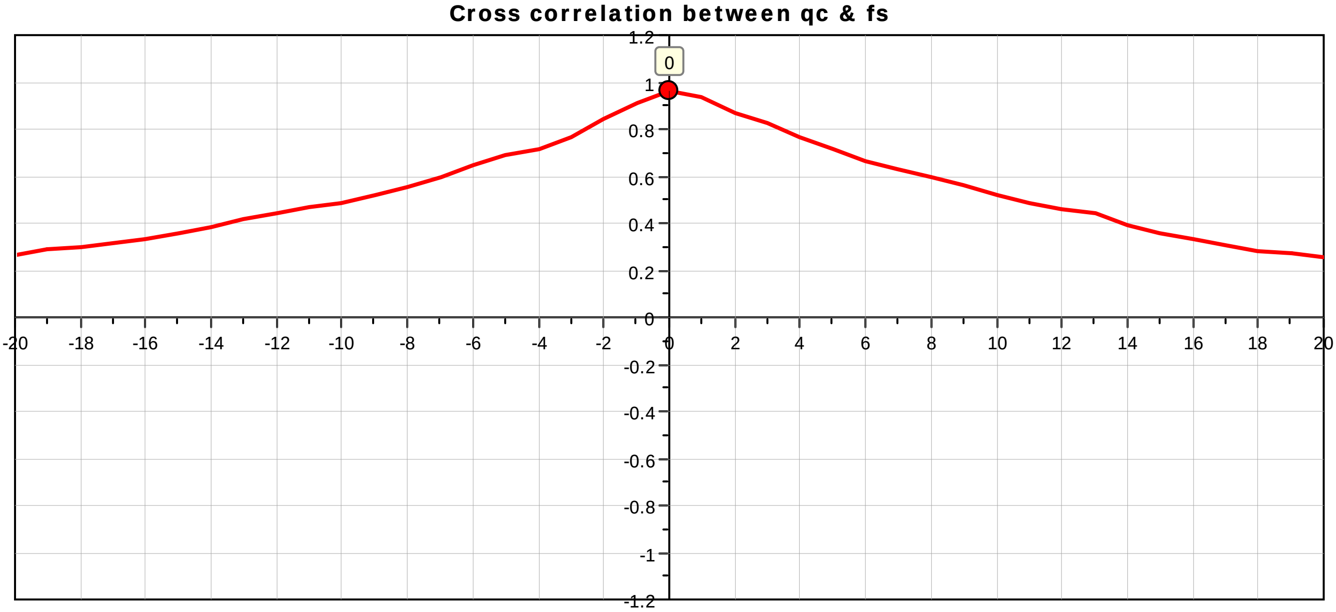
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P17CPT17
Total depth: 18.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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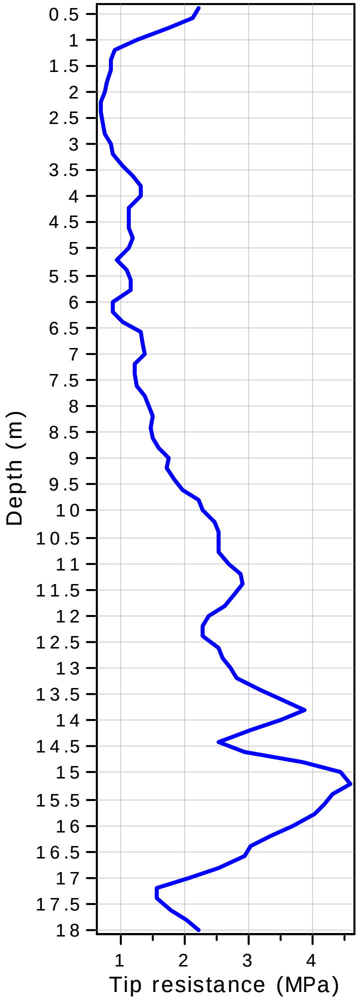
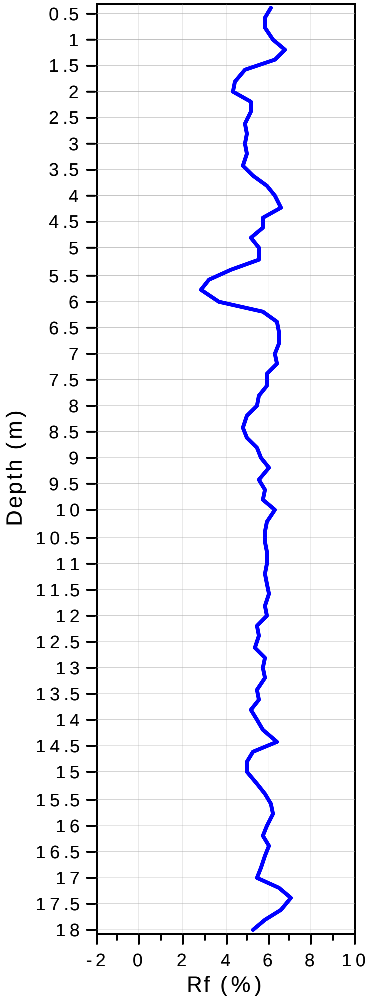
CPT: 036021P17CPT17
Total depth: 18.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

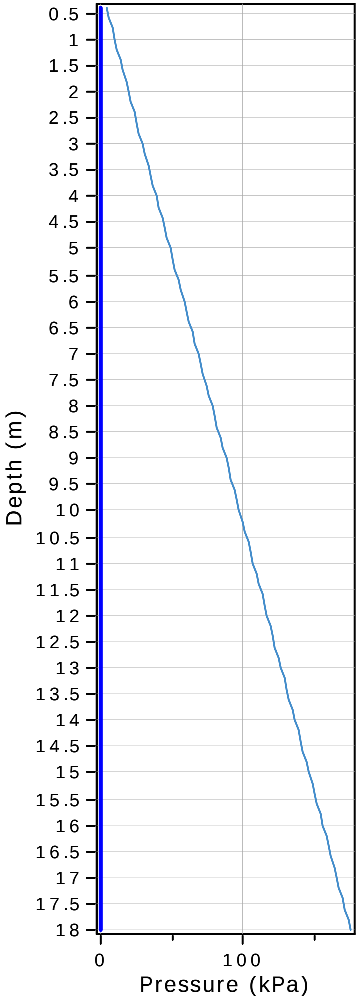
Cone resistance qt



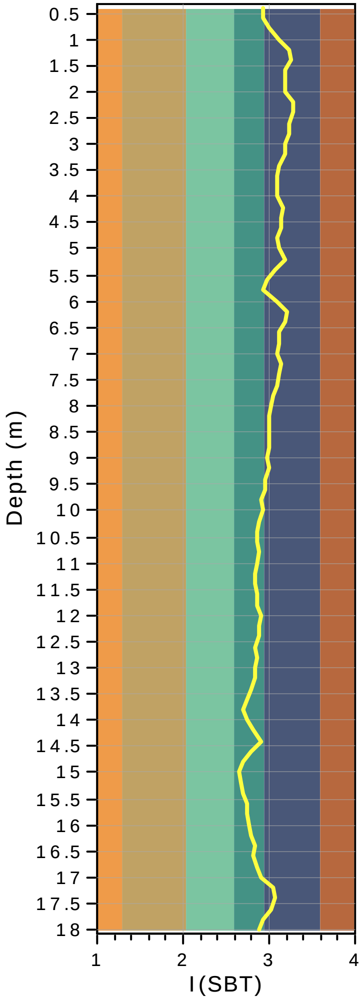
Friction ratio



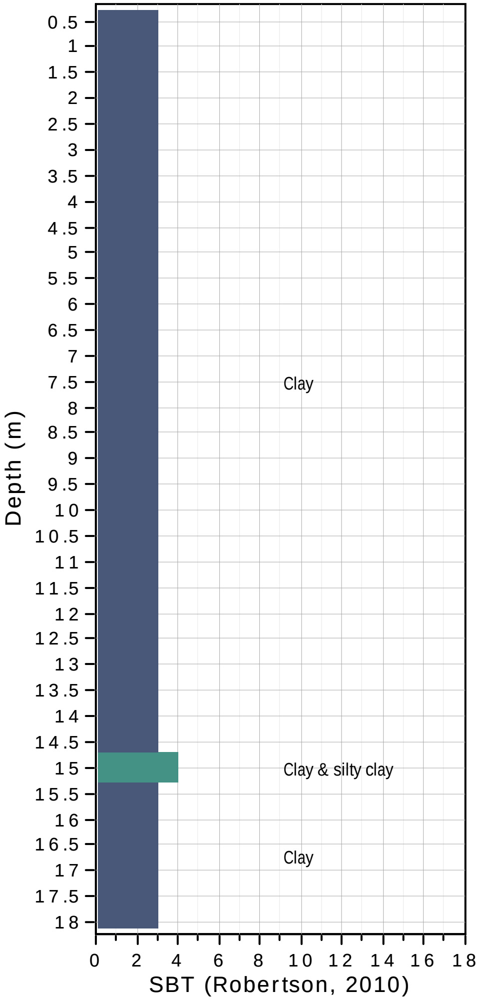
Pore pressure u



SBT Index



Soil Behaviour Type



SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

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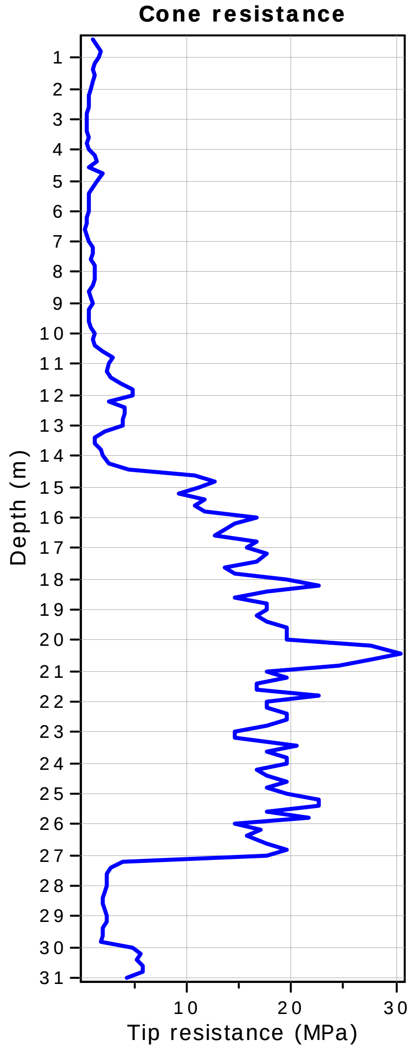
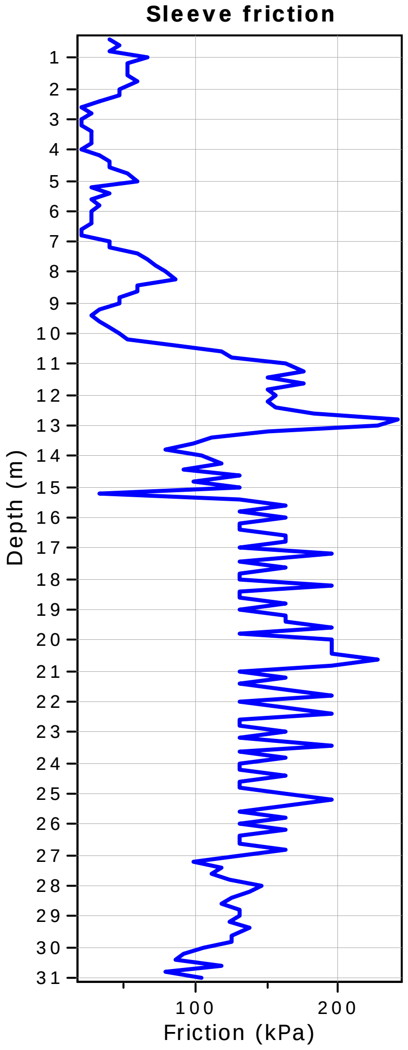
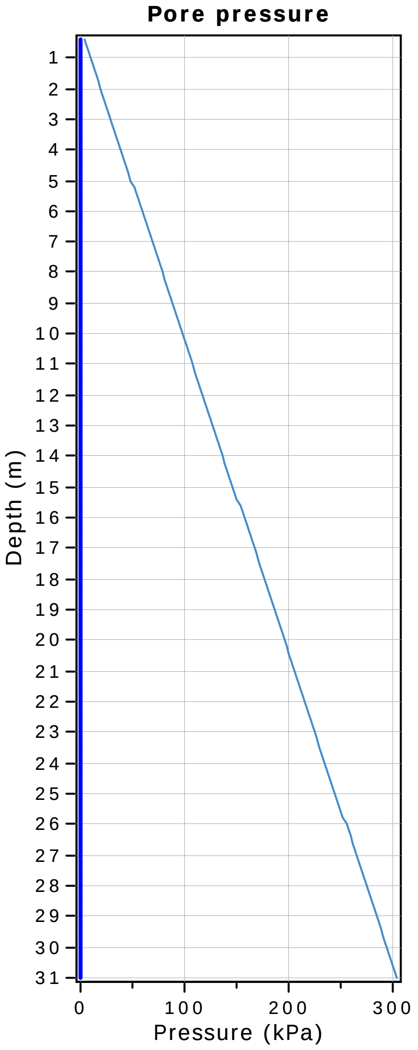
CPT: 036021P180CPT180
Total depth: 31.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

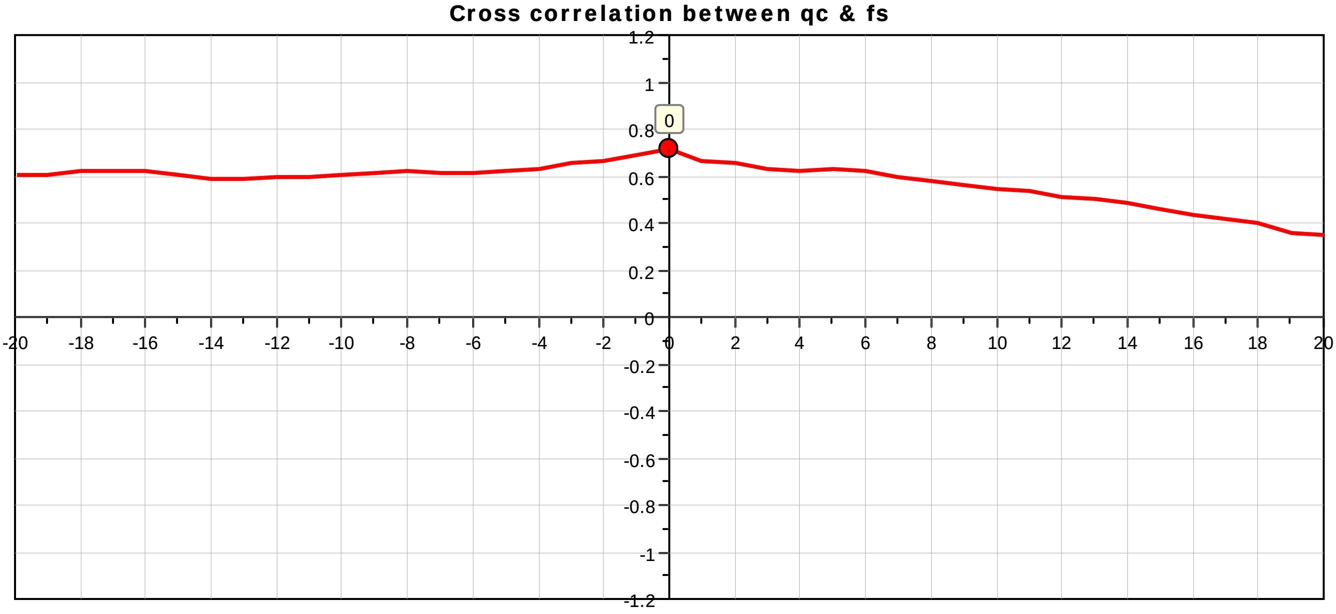
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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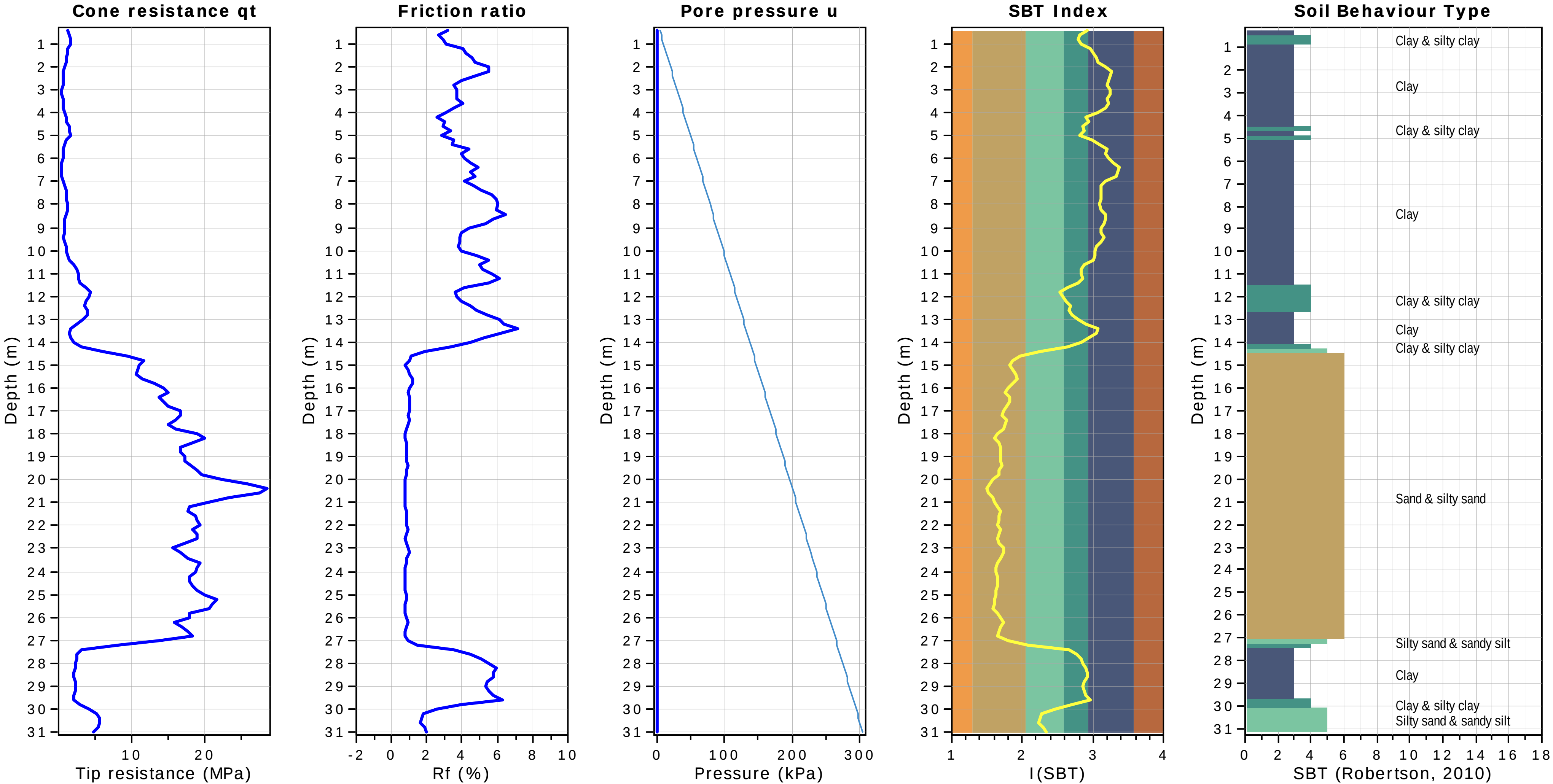
CPT: 036021P180CPT180
Total depth: 31.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

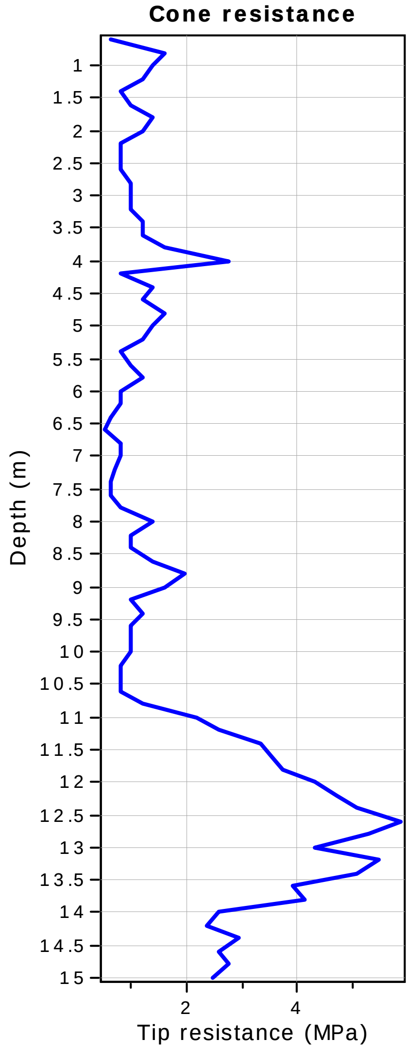


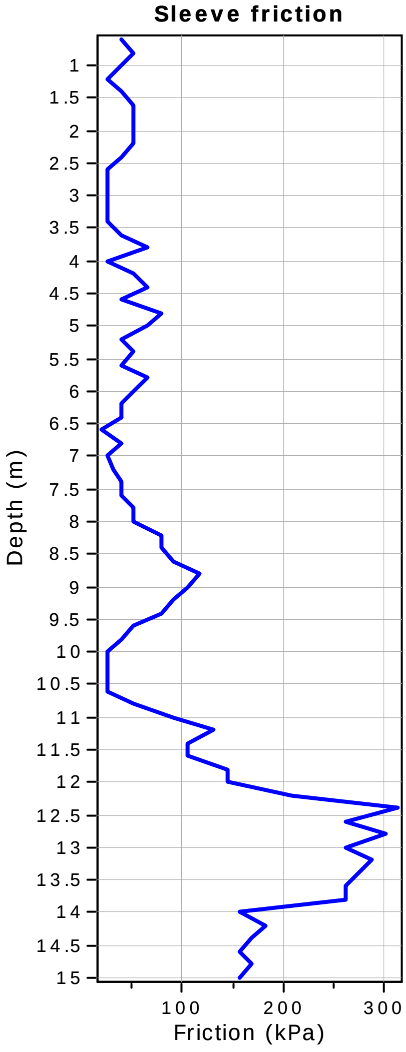
SBT legend

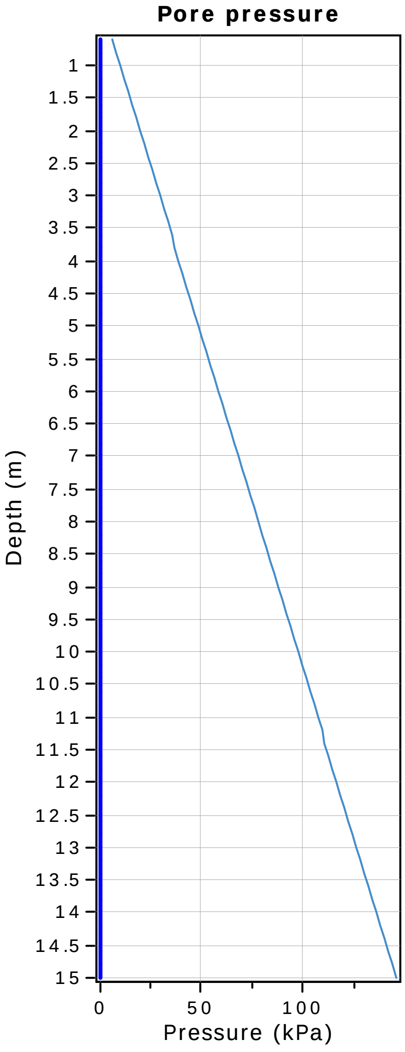
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P183CPT183
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

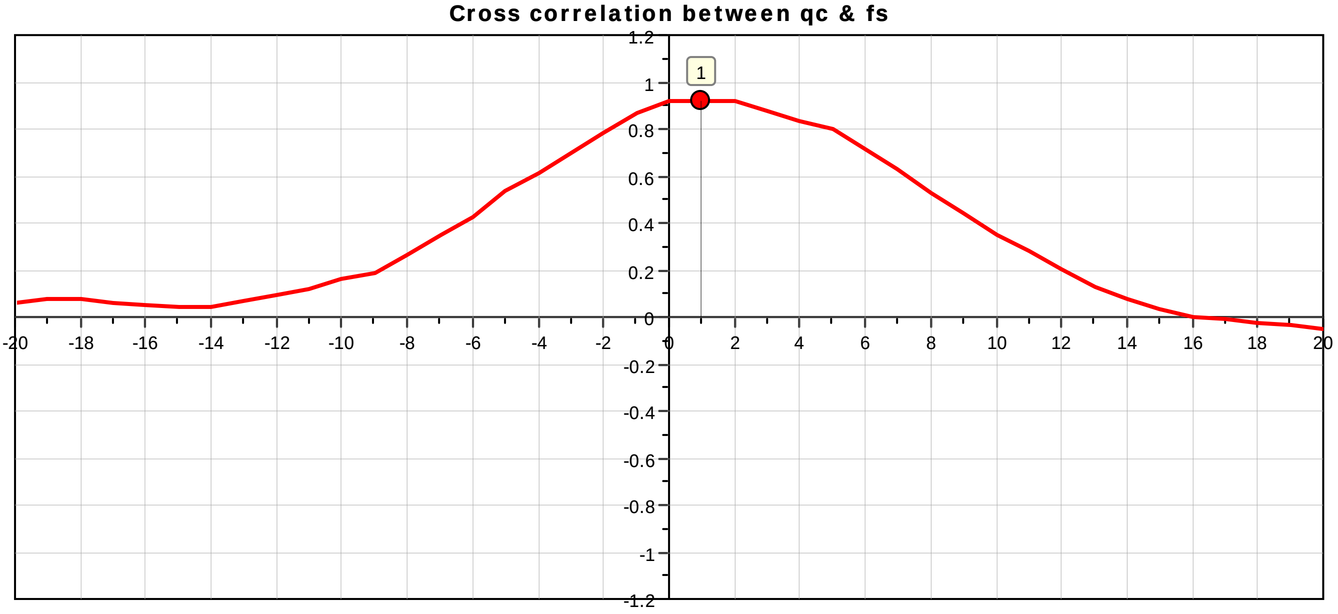
Project:
Location:


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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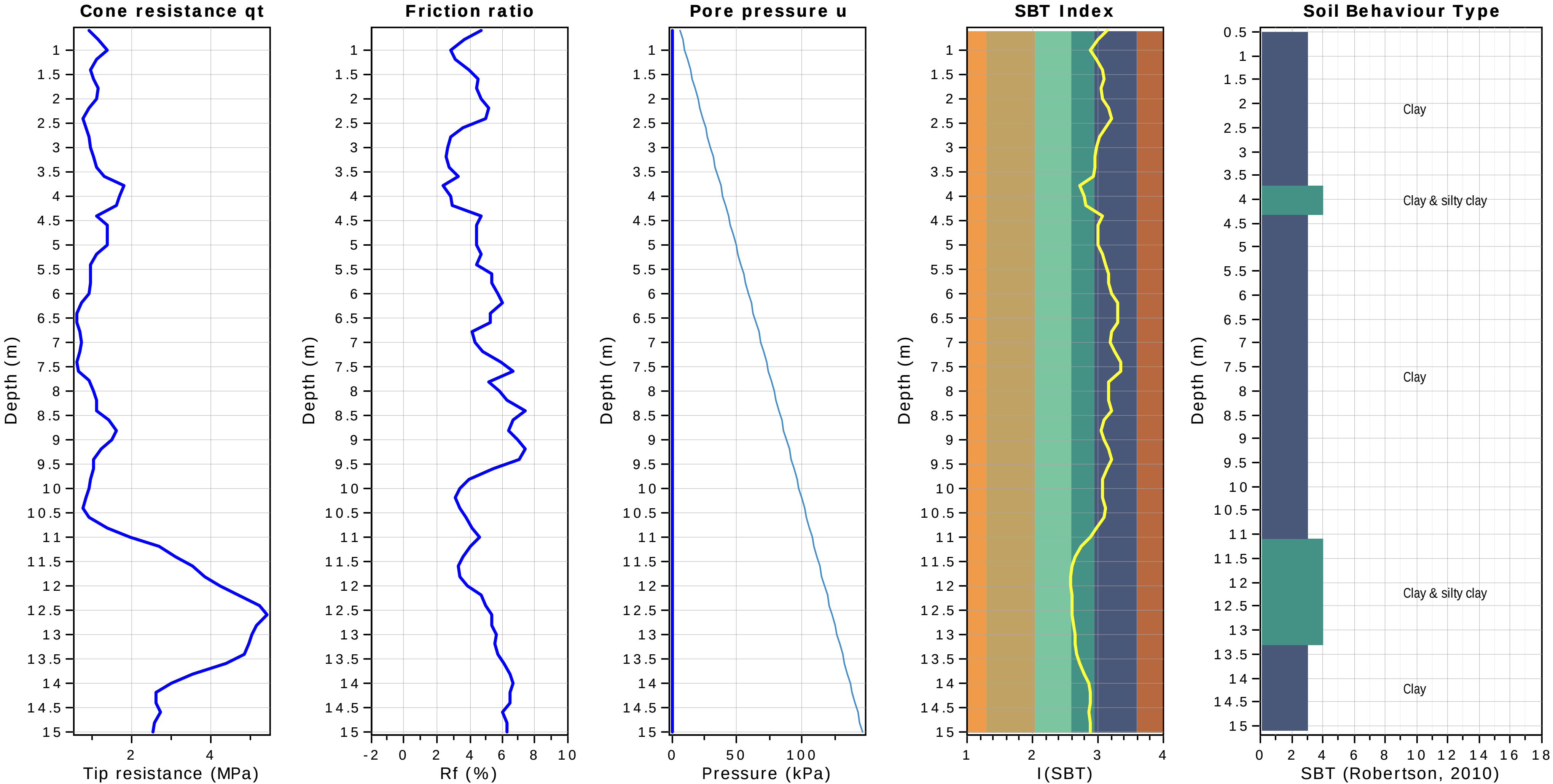
CPT: 036021P183CPT183
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



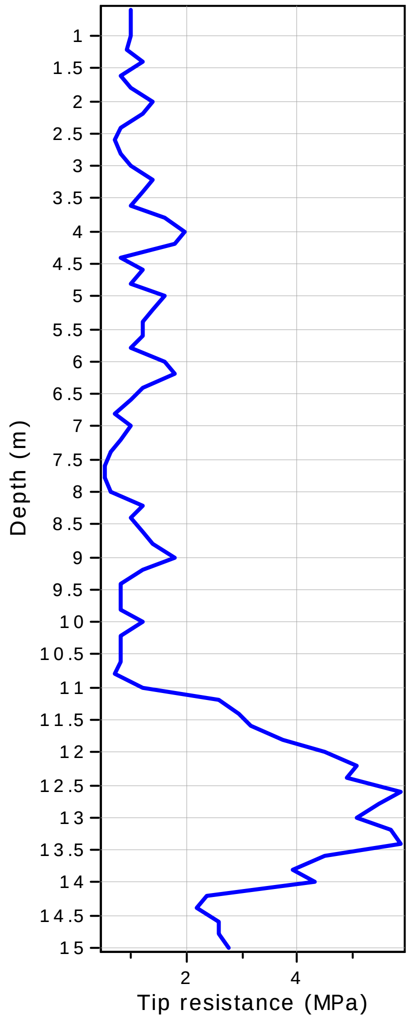
SBT legend

🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟫 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

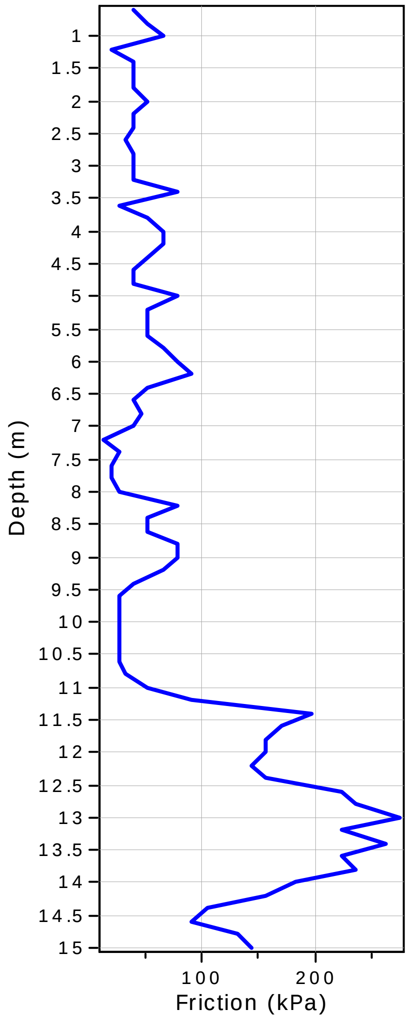
CPT: 036021P184CPT184
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

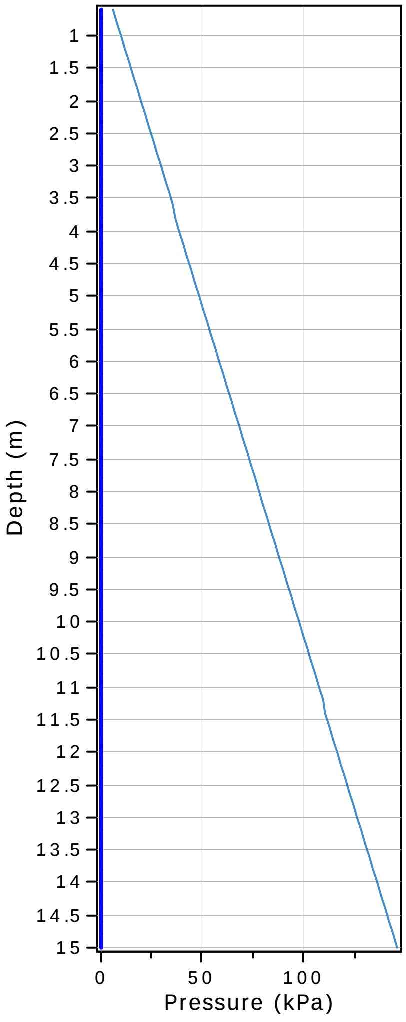
Cone resistance



Sleeve friction

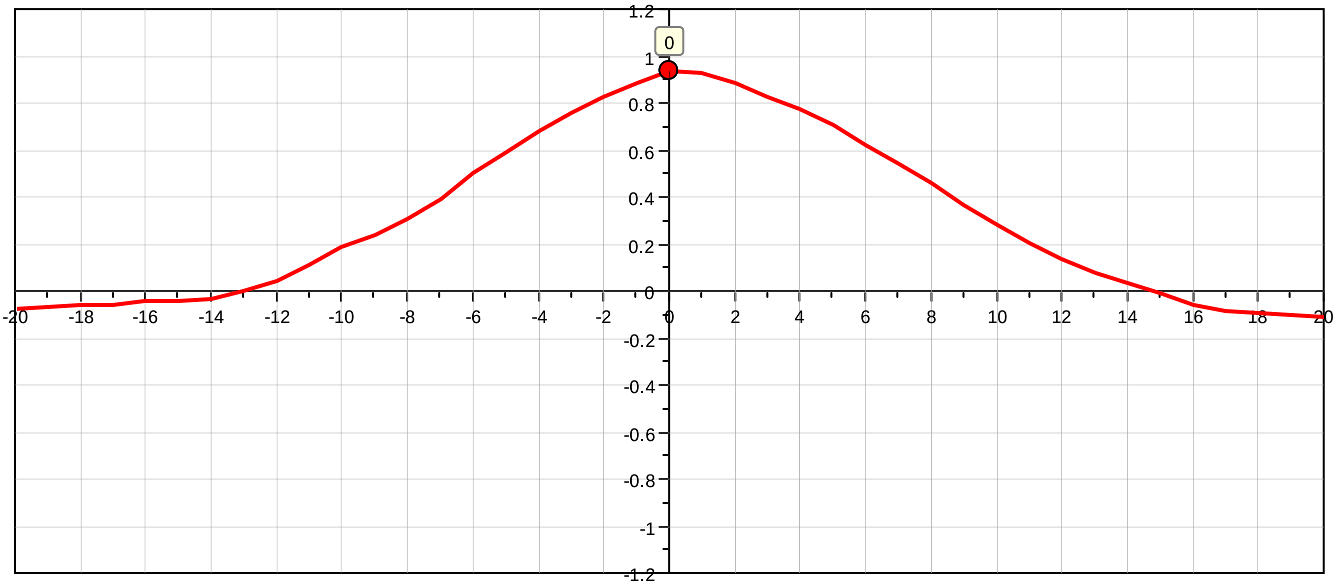


Pore pressure



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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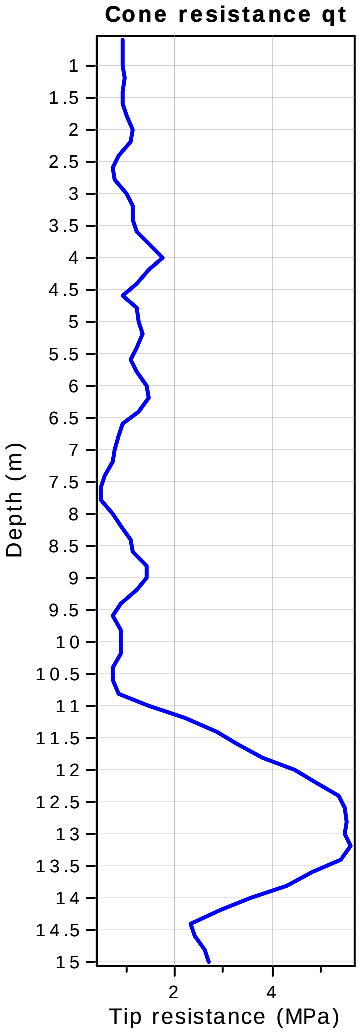
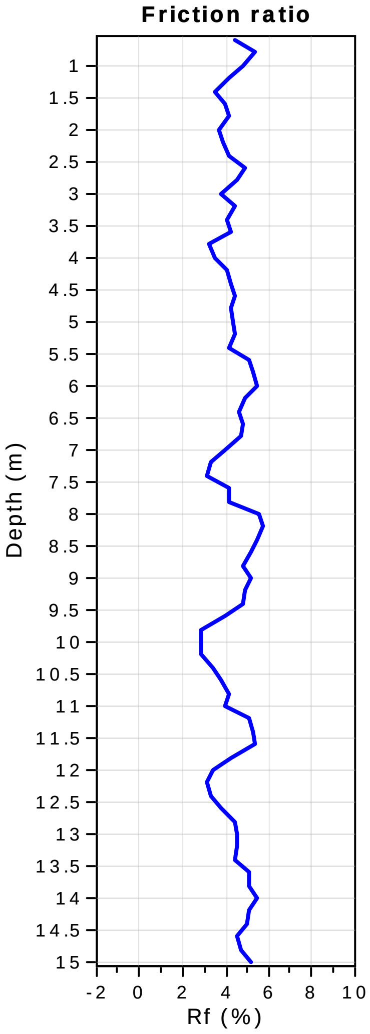
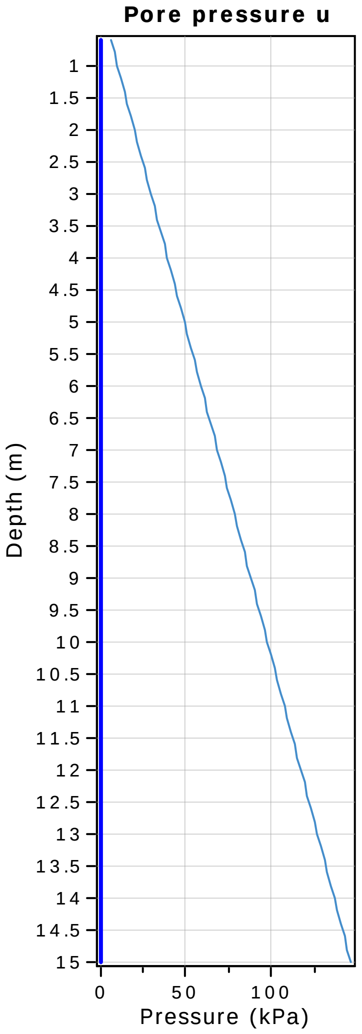
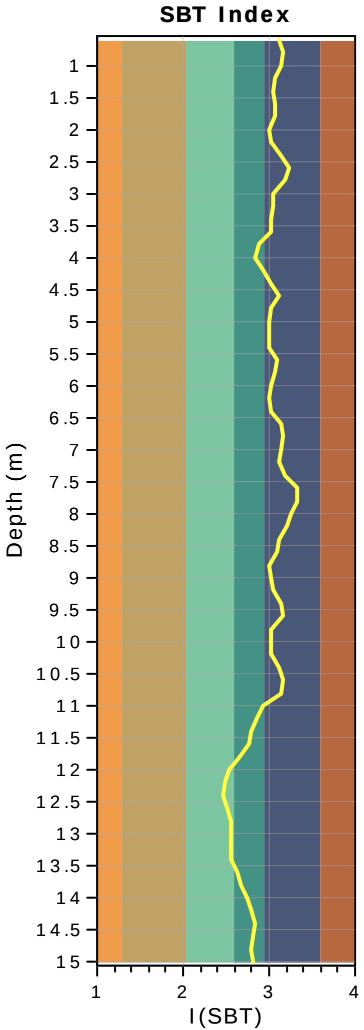
CPT: 036021P184CPT184
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

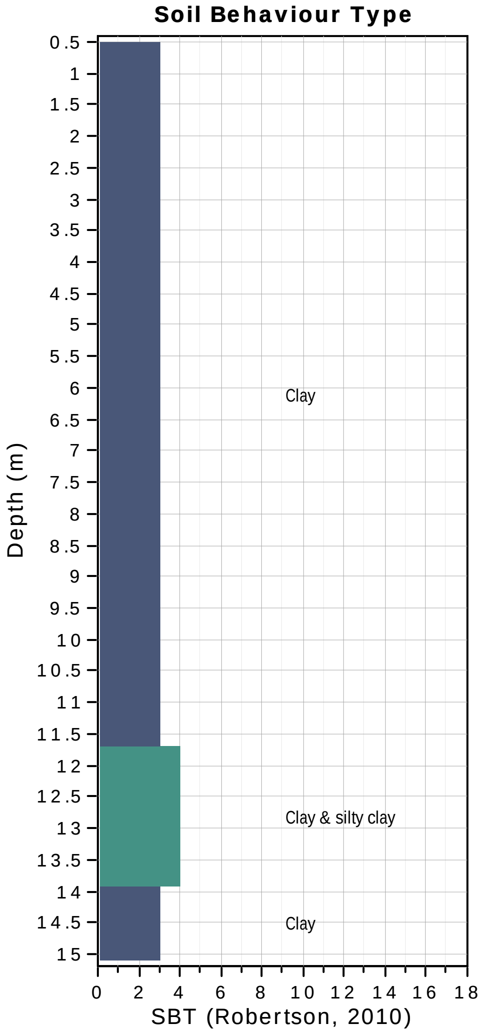
Project:
Location:


Cone resistance qt


Friction ratio


Pore pressure u


SBT Index


Soil Behaviour Type

SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬛ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

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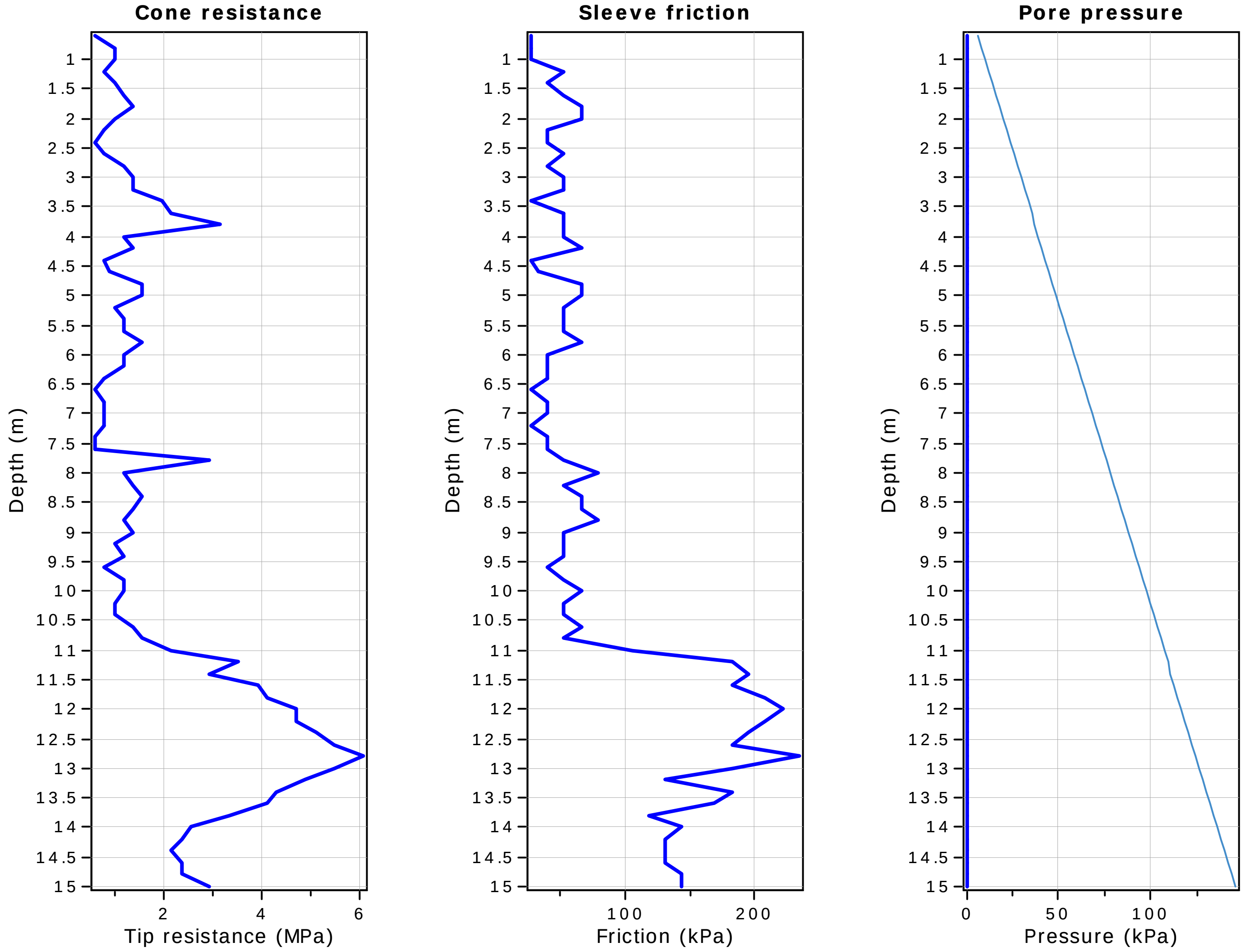
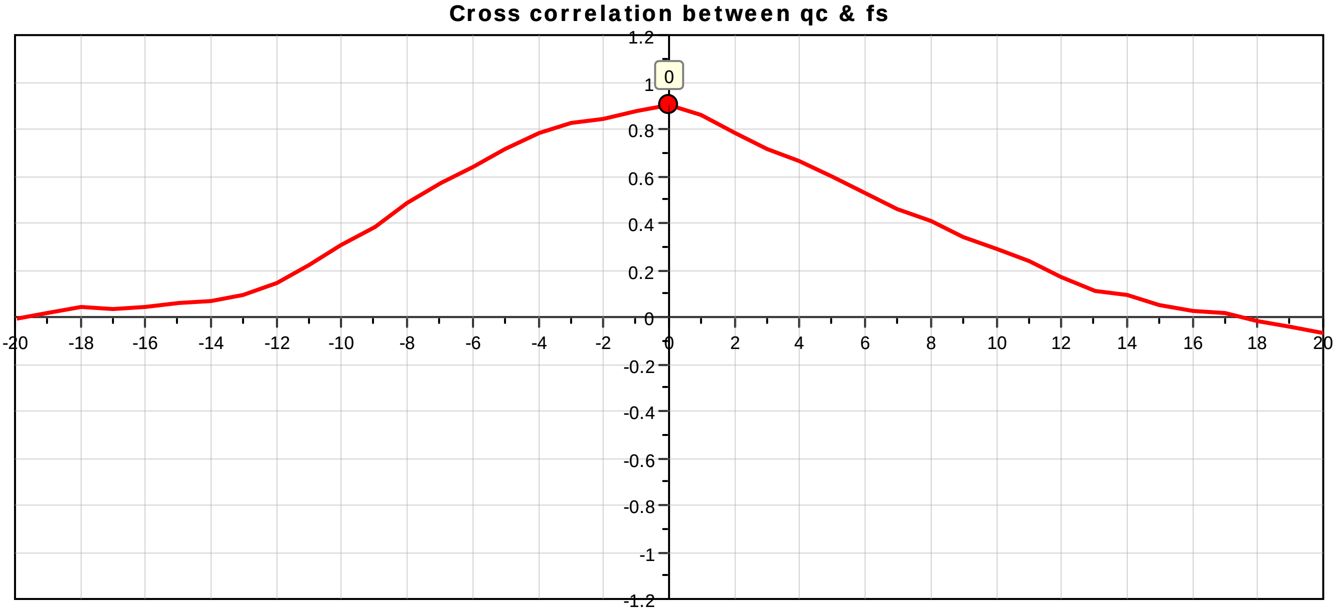
CPT: 036021P185CPT185
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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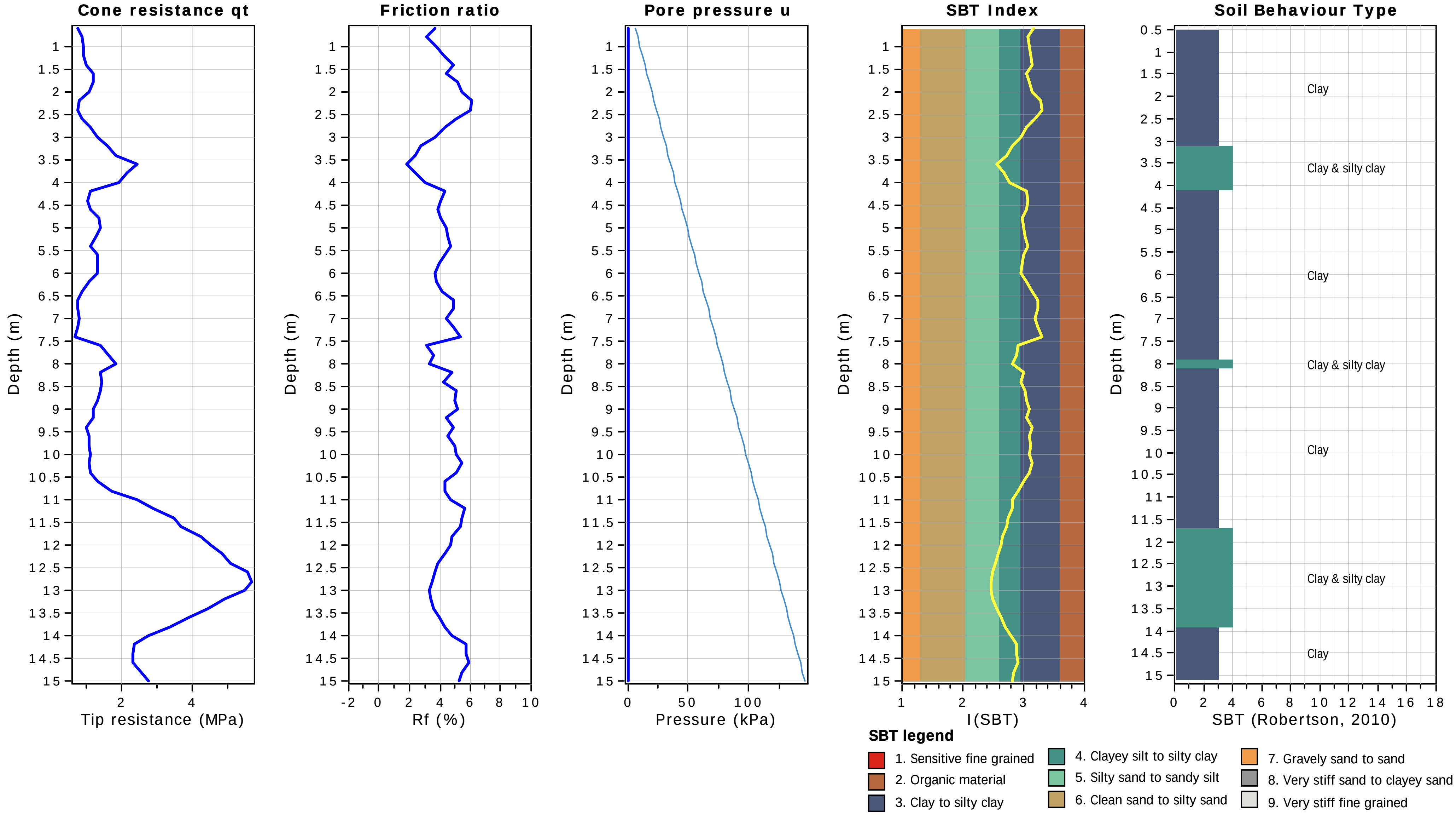
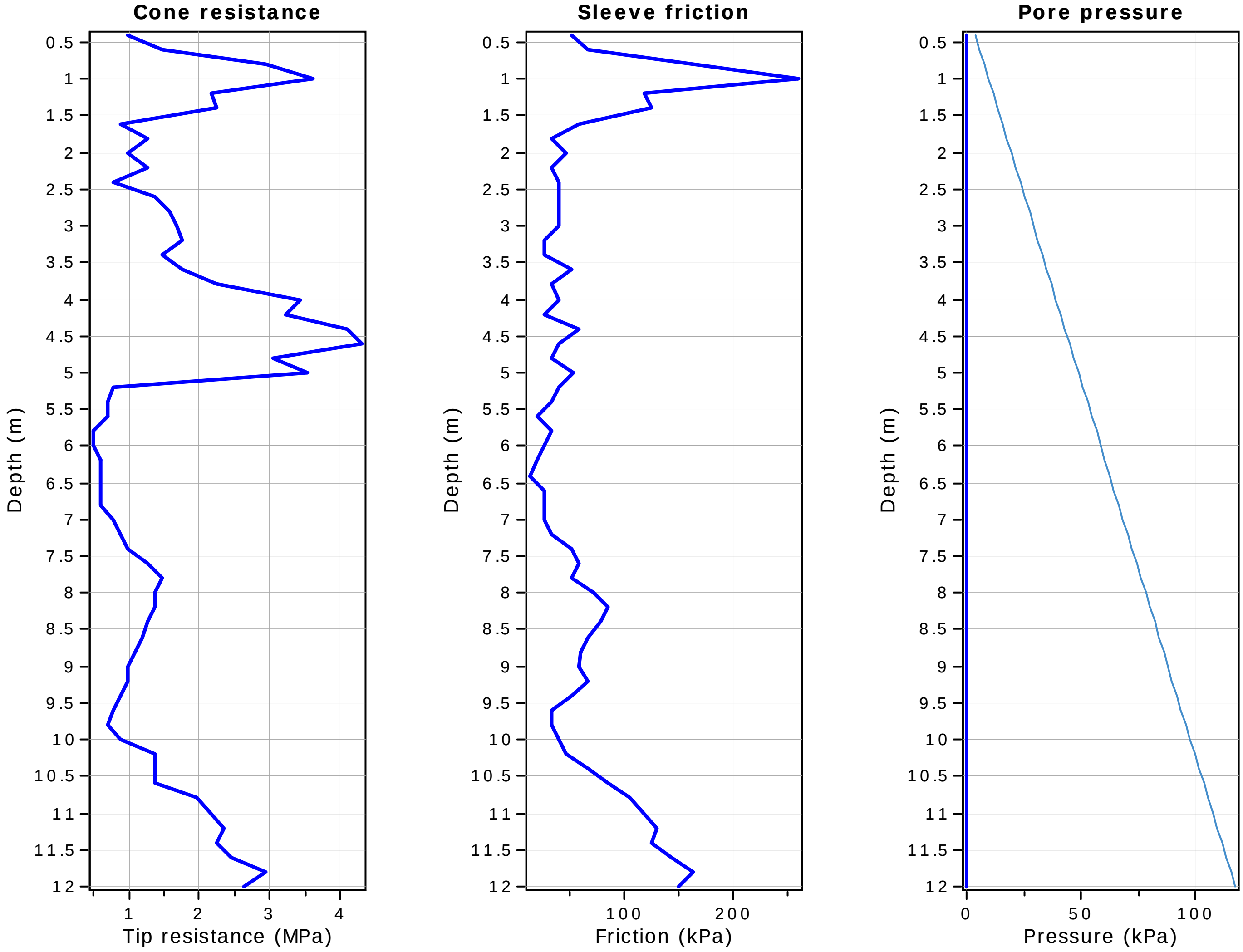
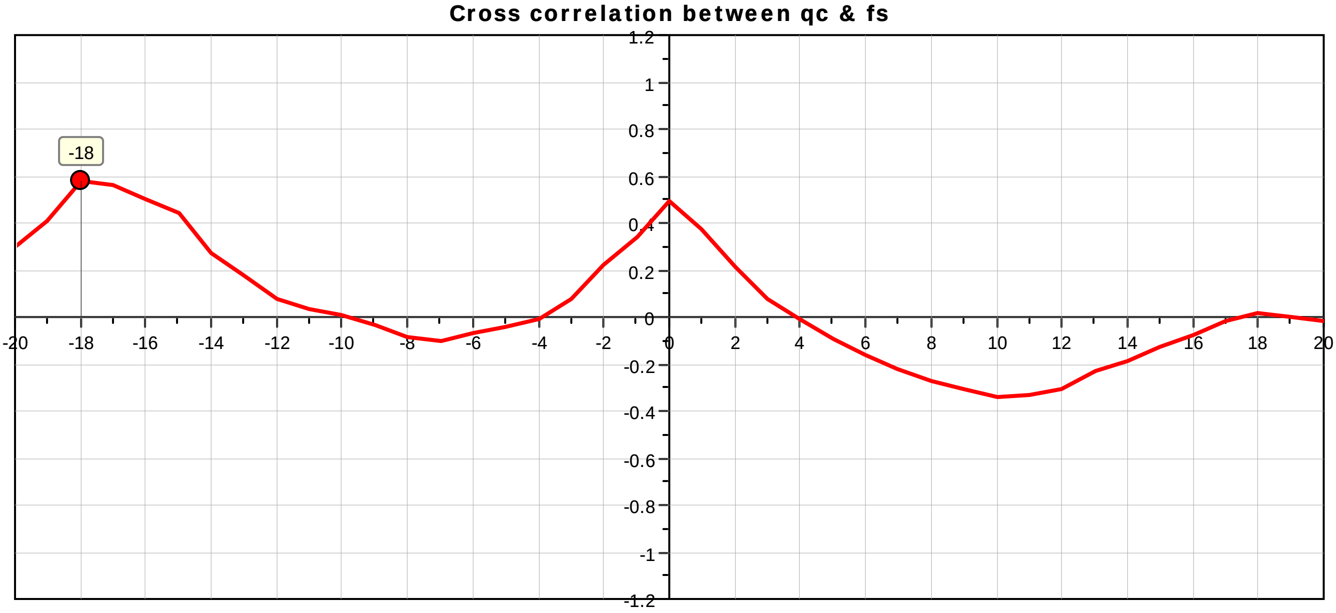
CPT: 036021P185CPT185
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:





The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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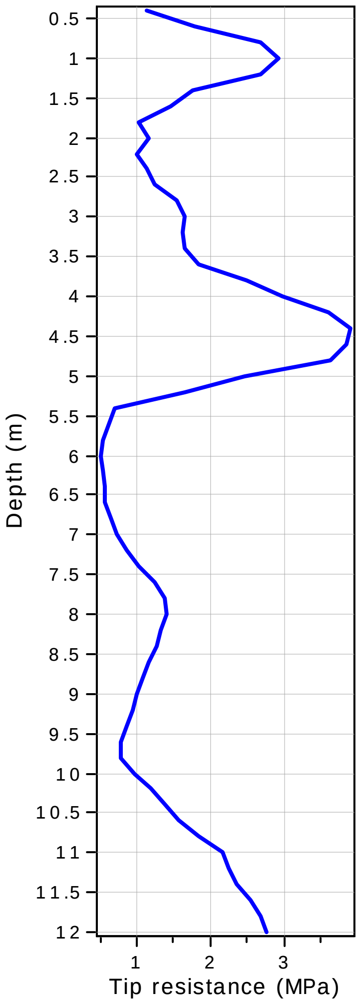
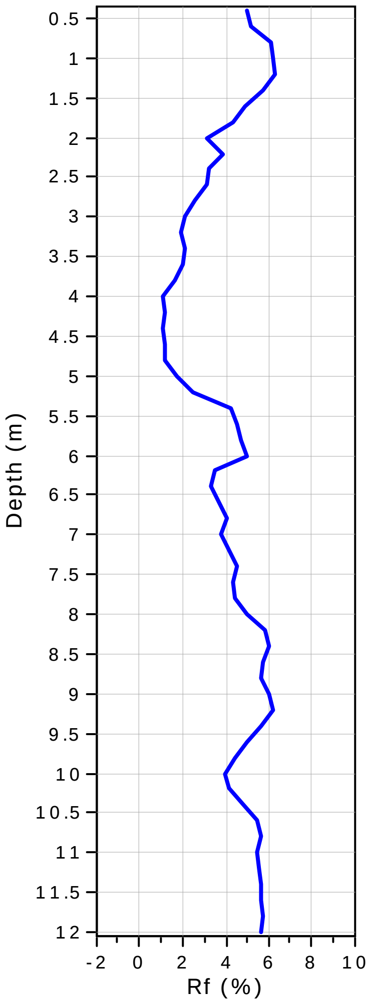
CPT: 036021P186CPT186
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

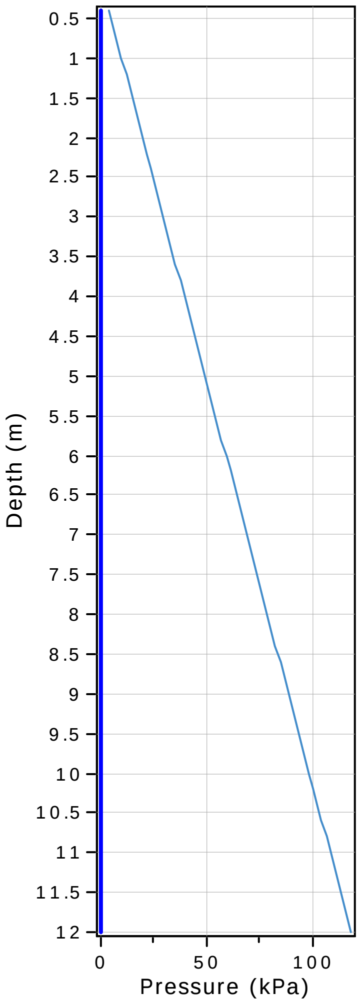
Cone resistance qt



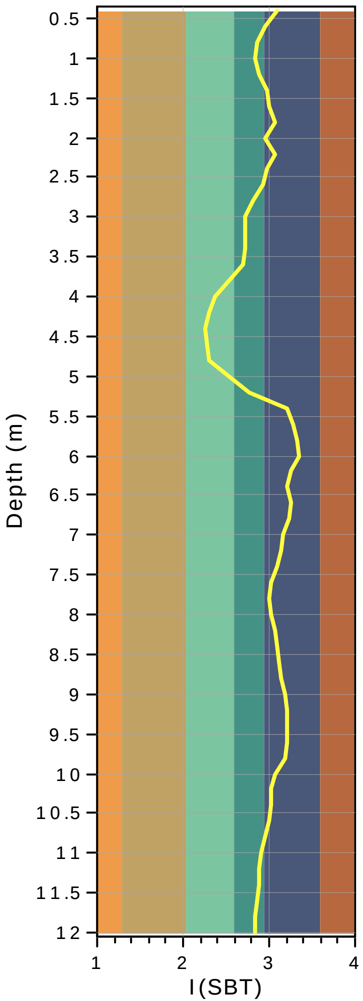
Friction ratio



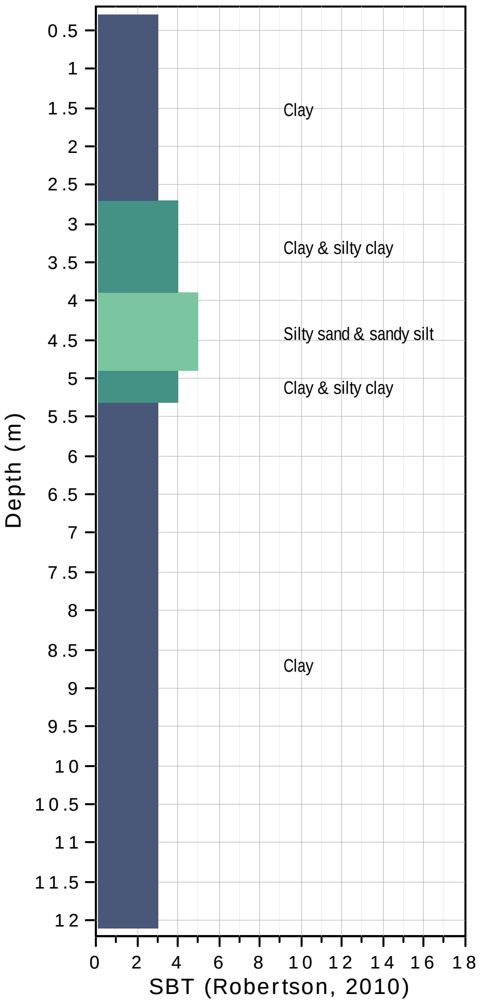
Pore pressure u



SBT Index



Soil Behaviour Type

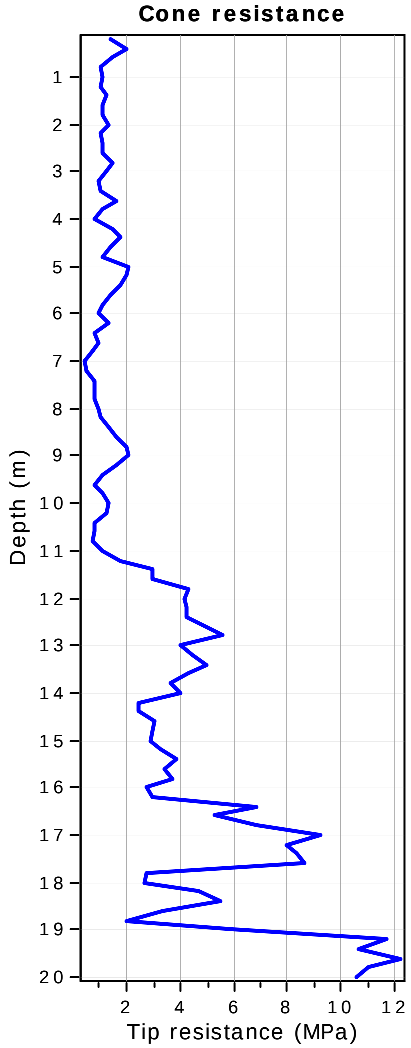


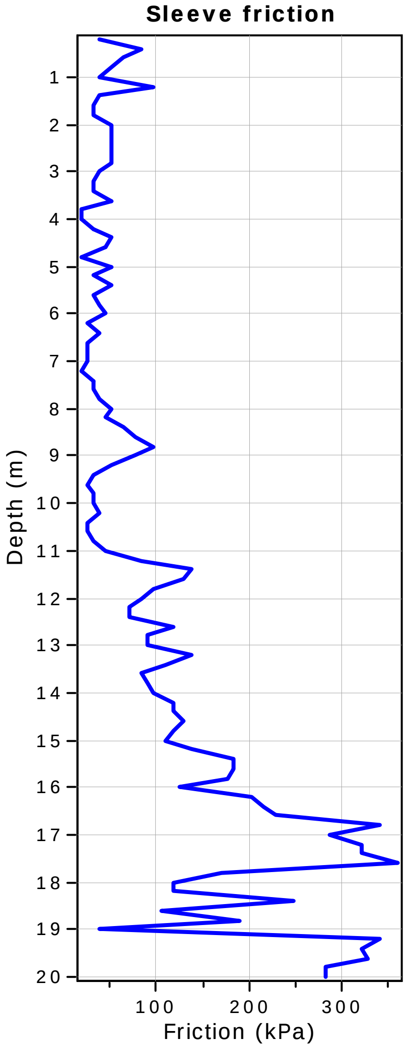
SBT legend

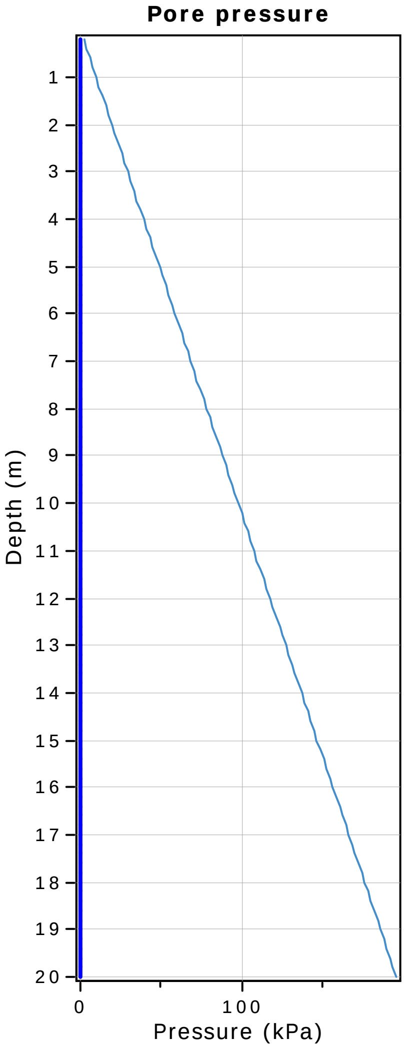
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravelly sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P187CPT187
Total depth: 20.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

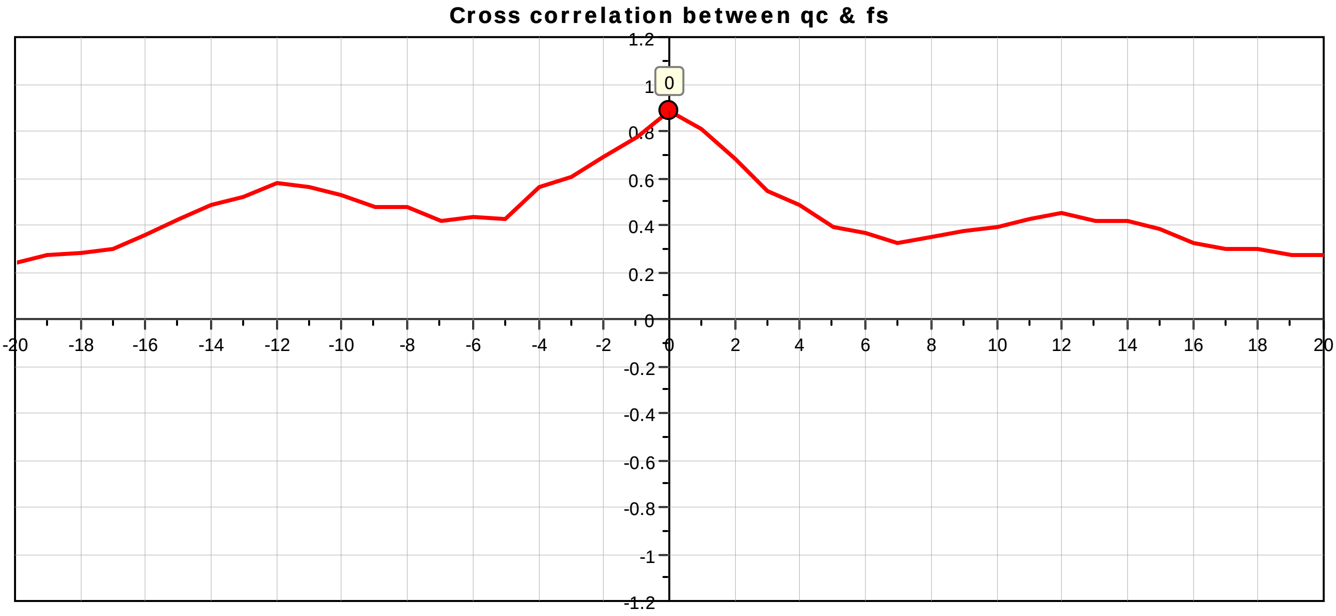
Project:
Location:


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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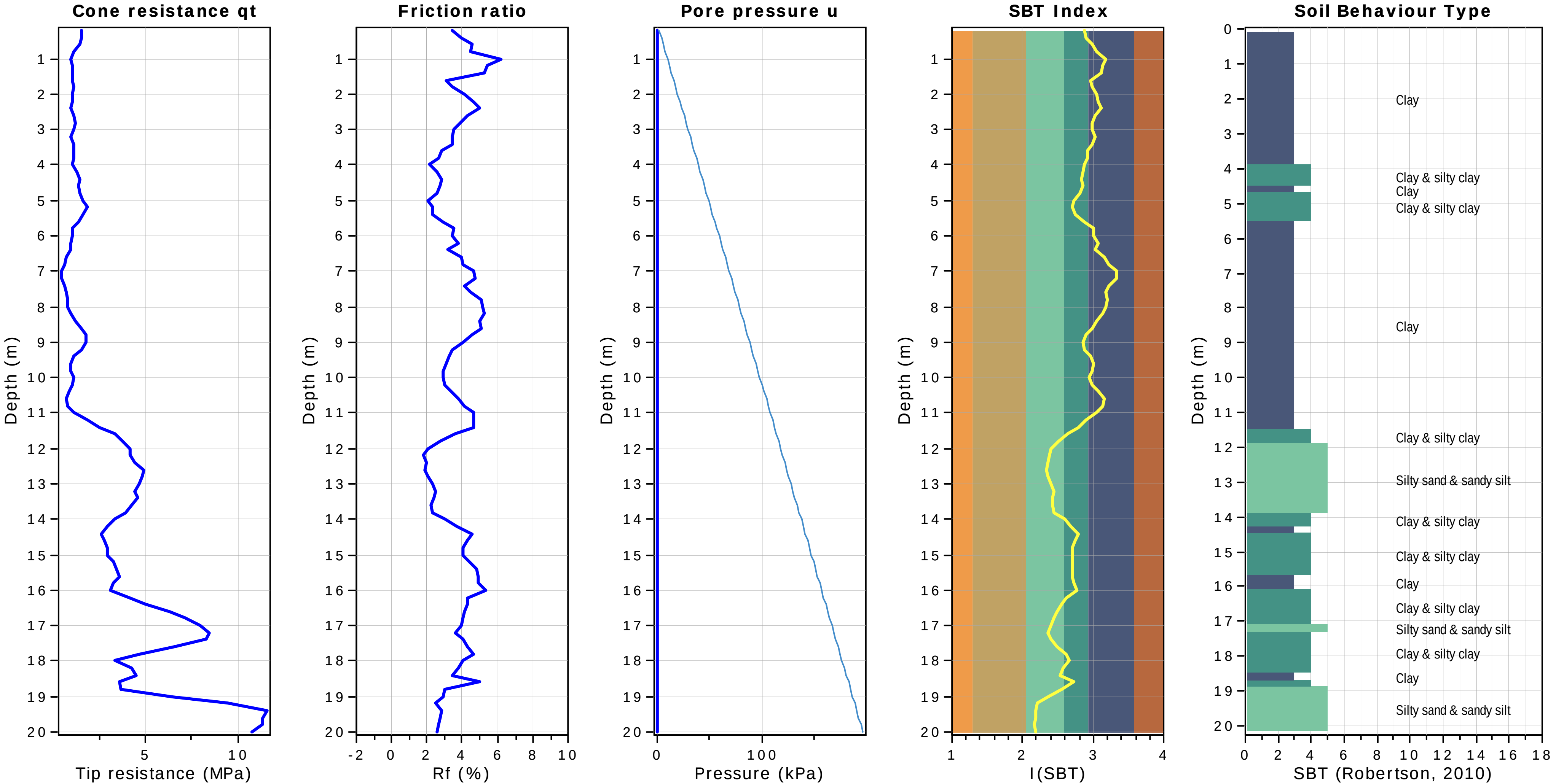
CPT: 036021P187CPT187
Total depth: 20.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

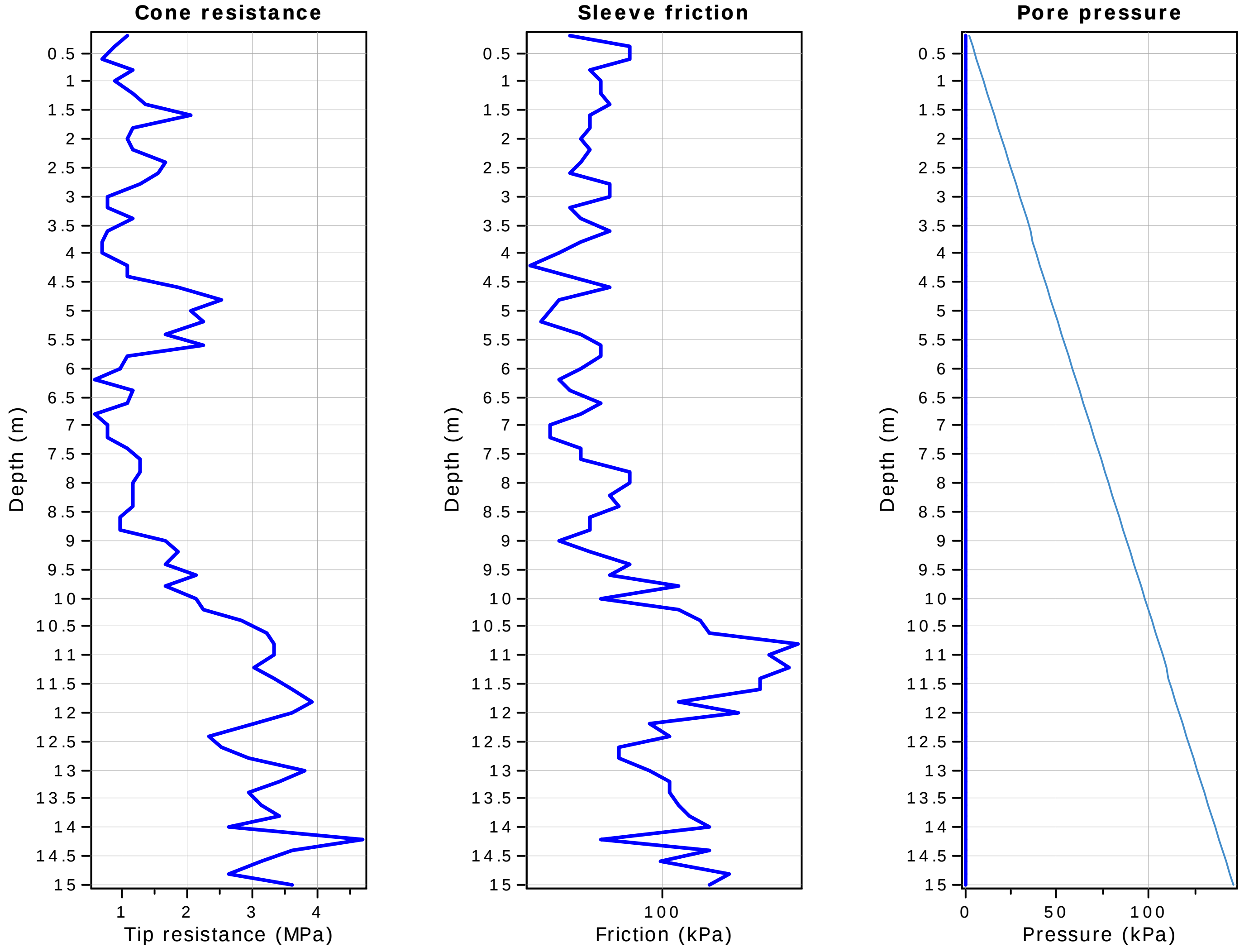


SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

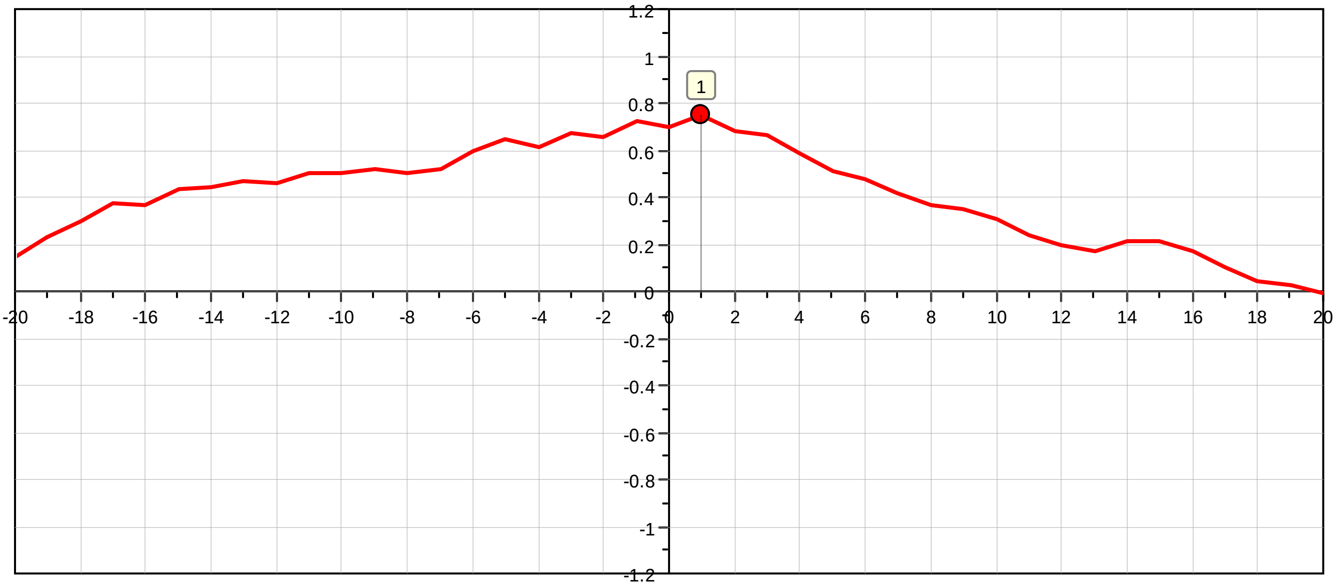
CPT: 036021P188CPT188
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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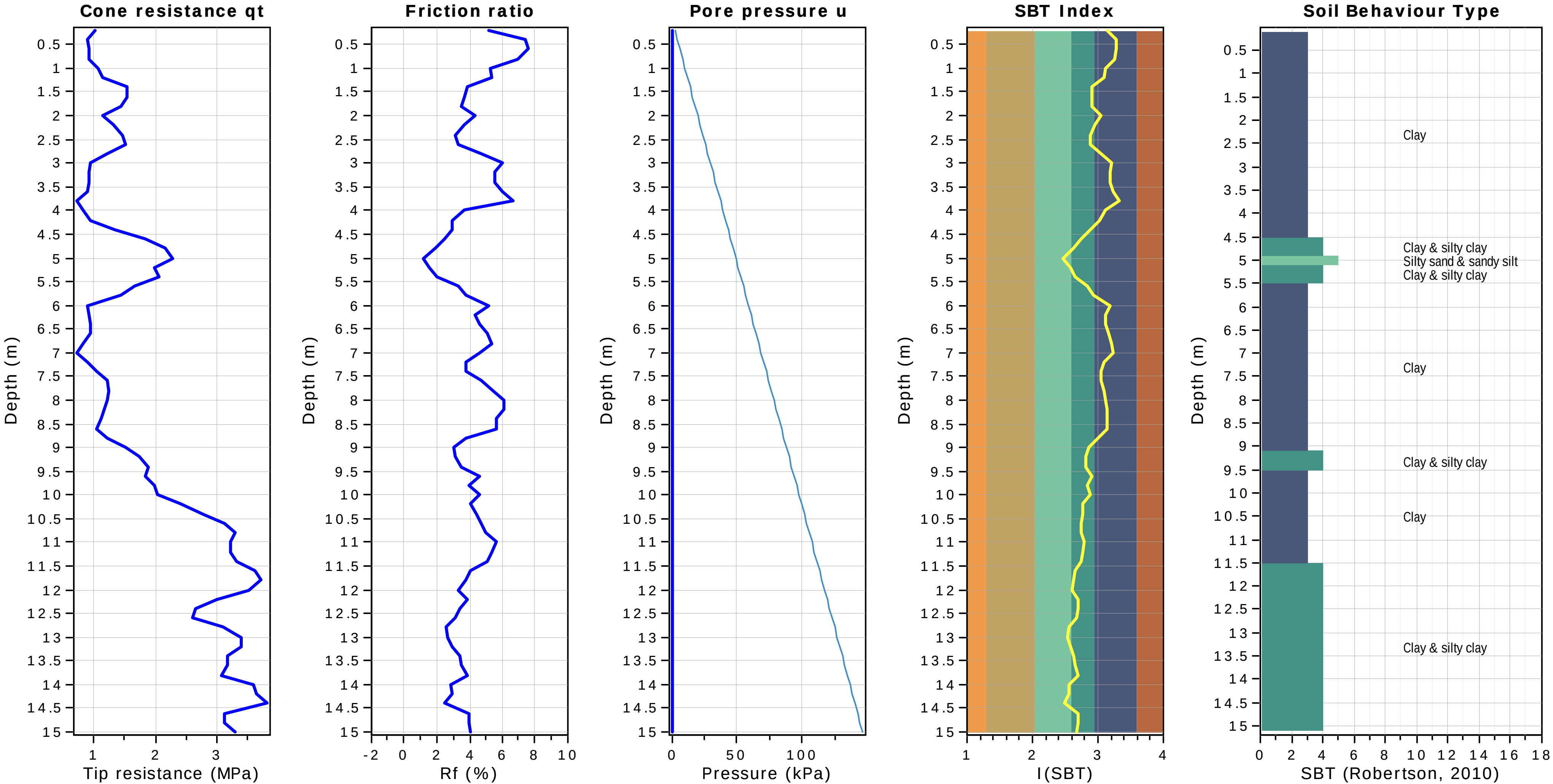
CPT: 036021P188CPT188
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
⬛ 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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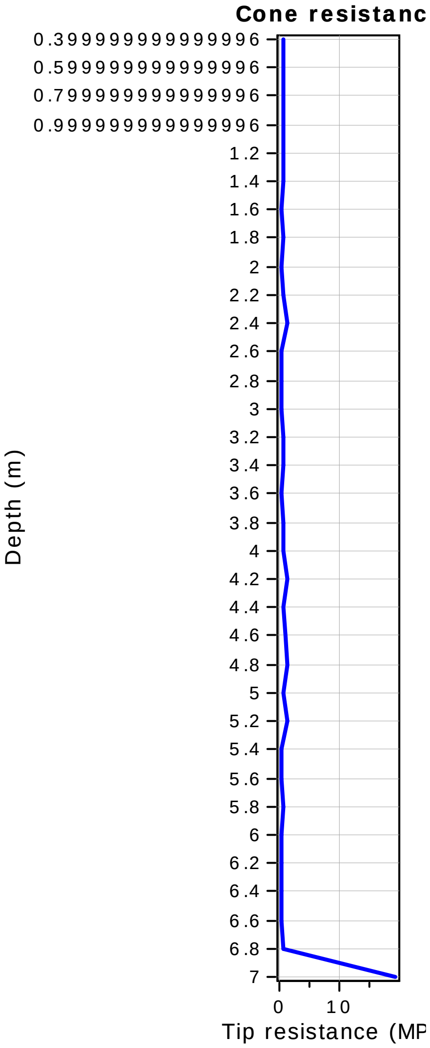
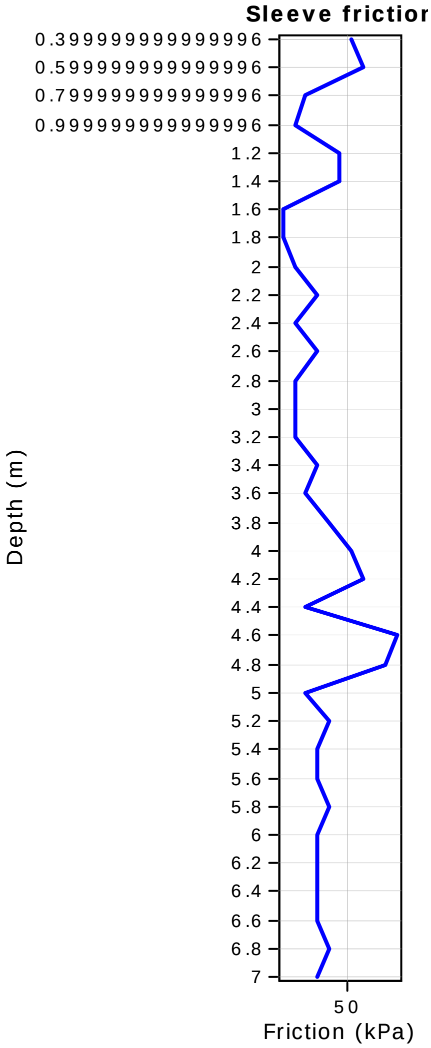
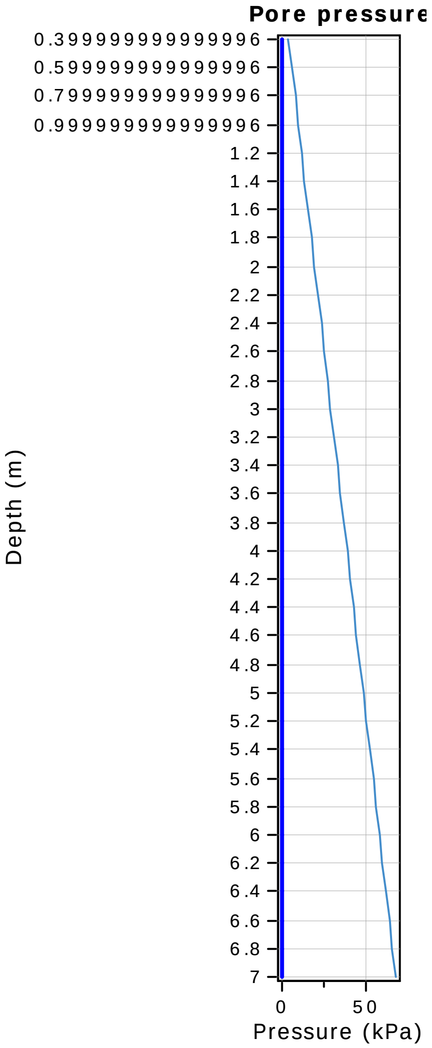
CPT: 036021P189CPT189
Total depth: 7.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

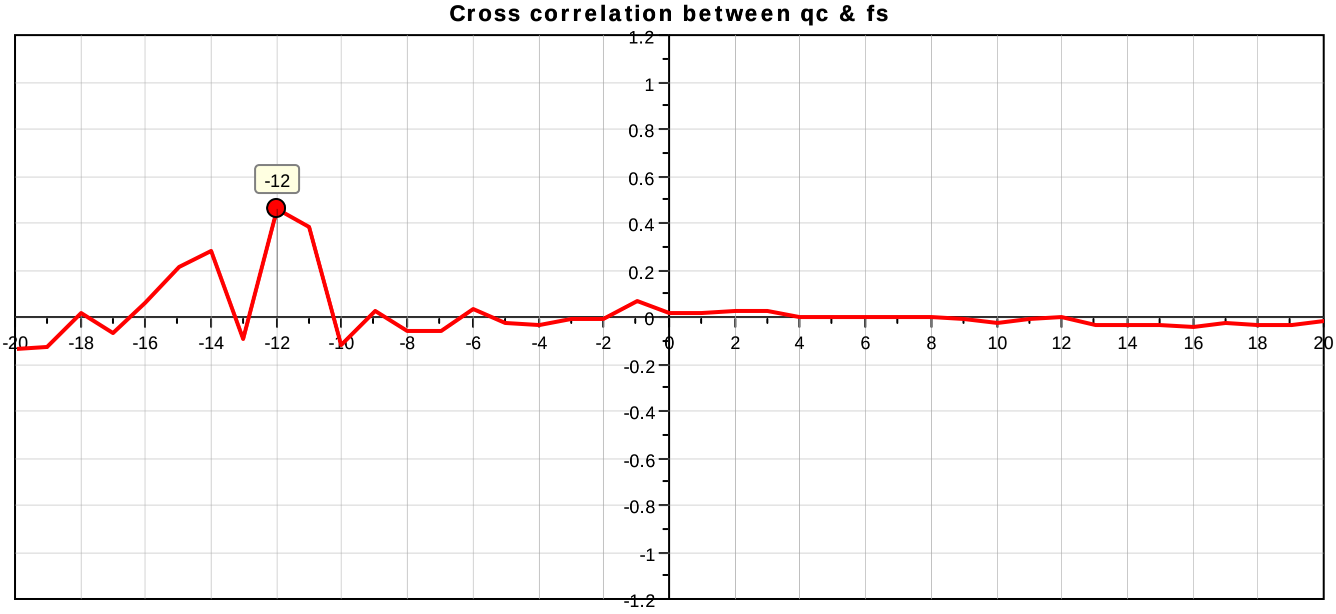
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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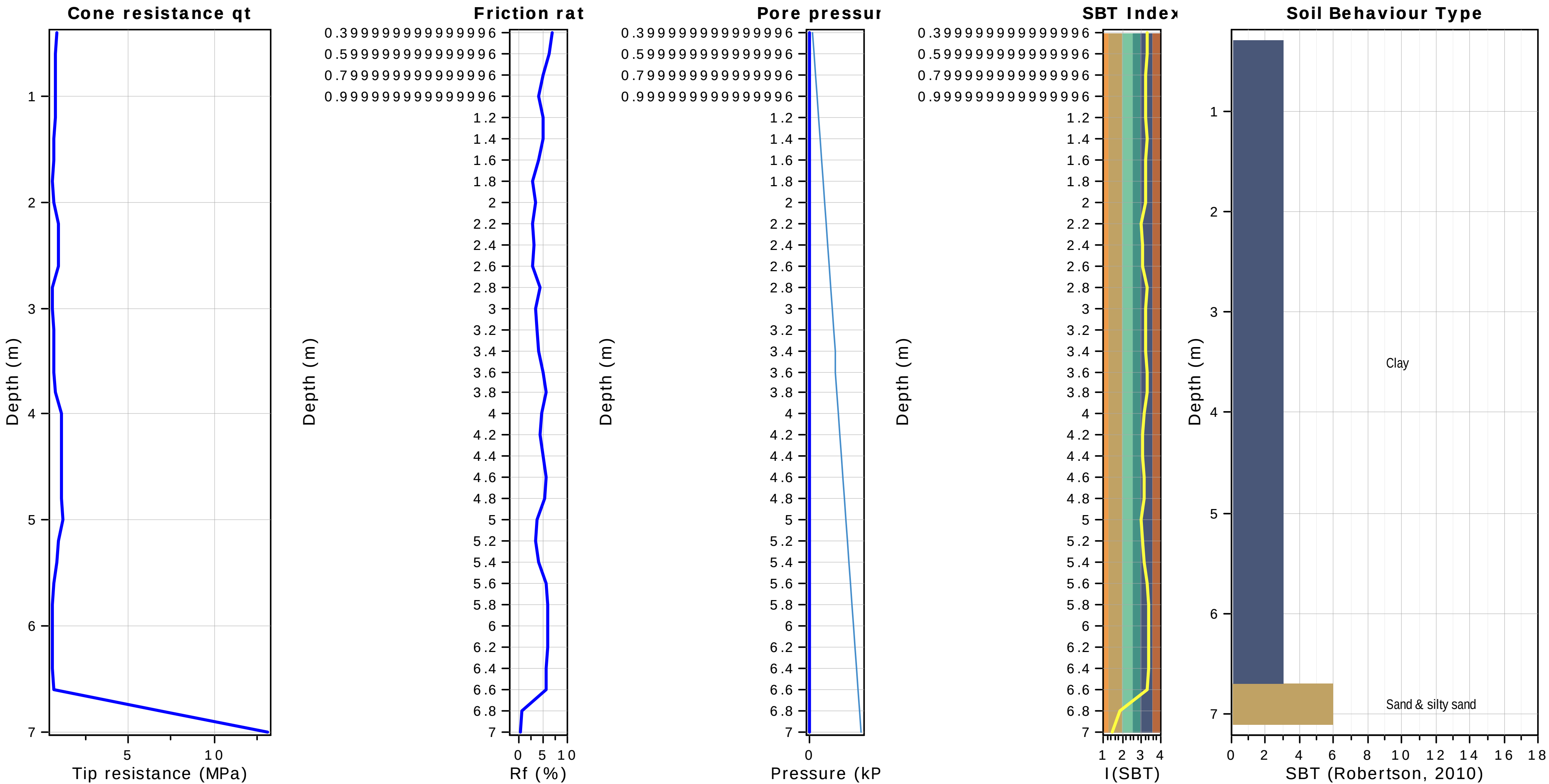
CPT: 036021P189CPT189

Total depth: 7.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

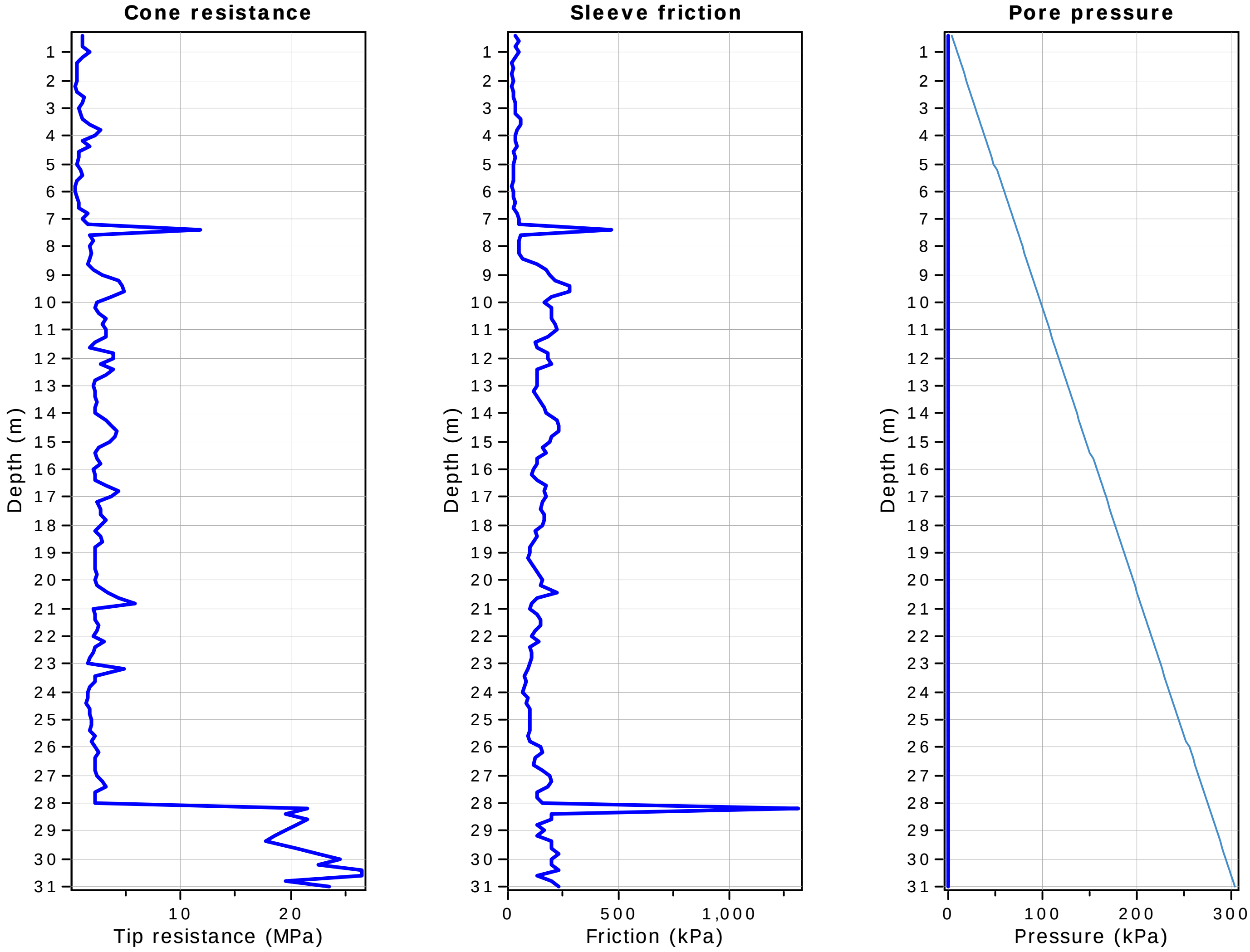


SBT legend

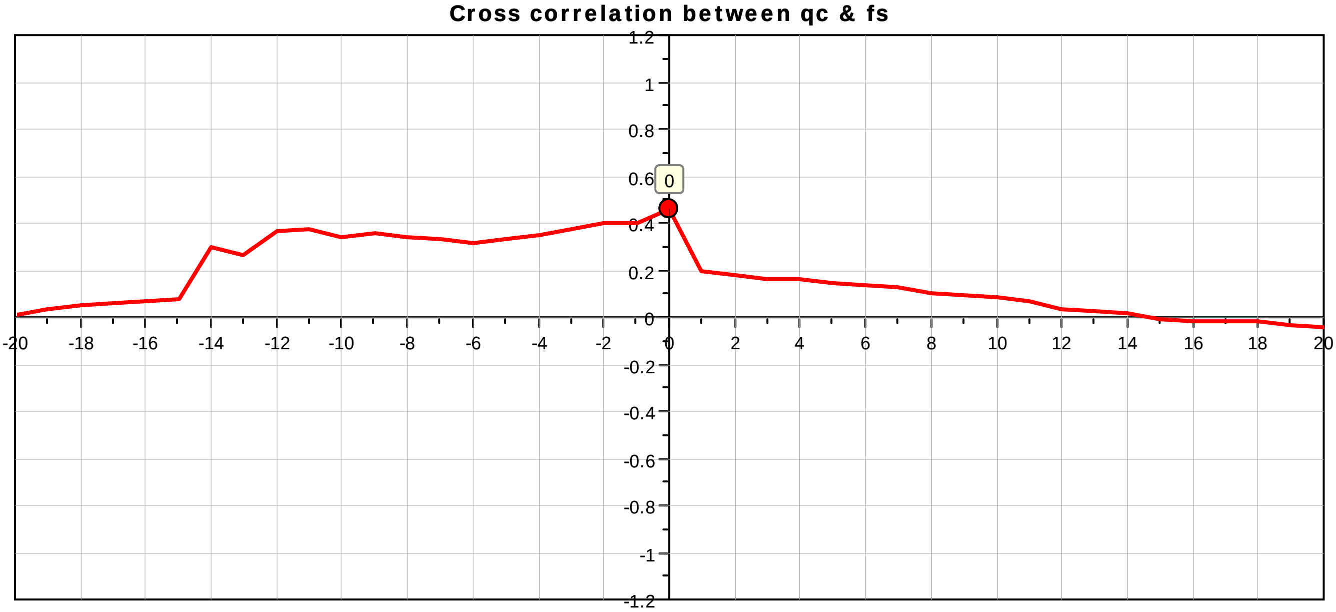
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬛ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

CPT: 036021P190CPT190
Total depth: 31.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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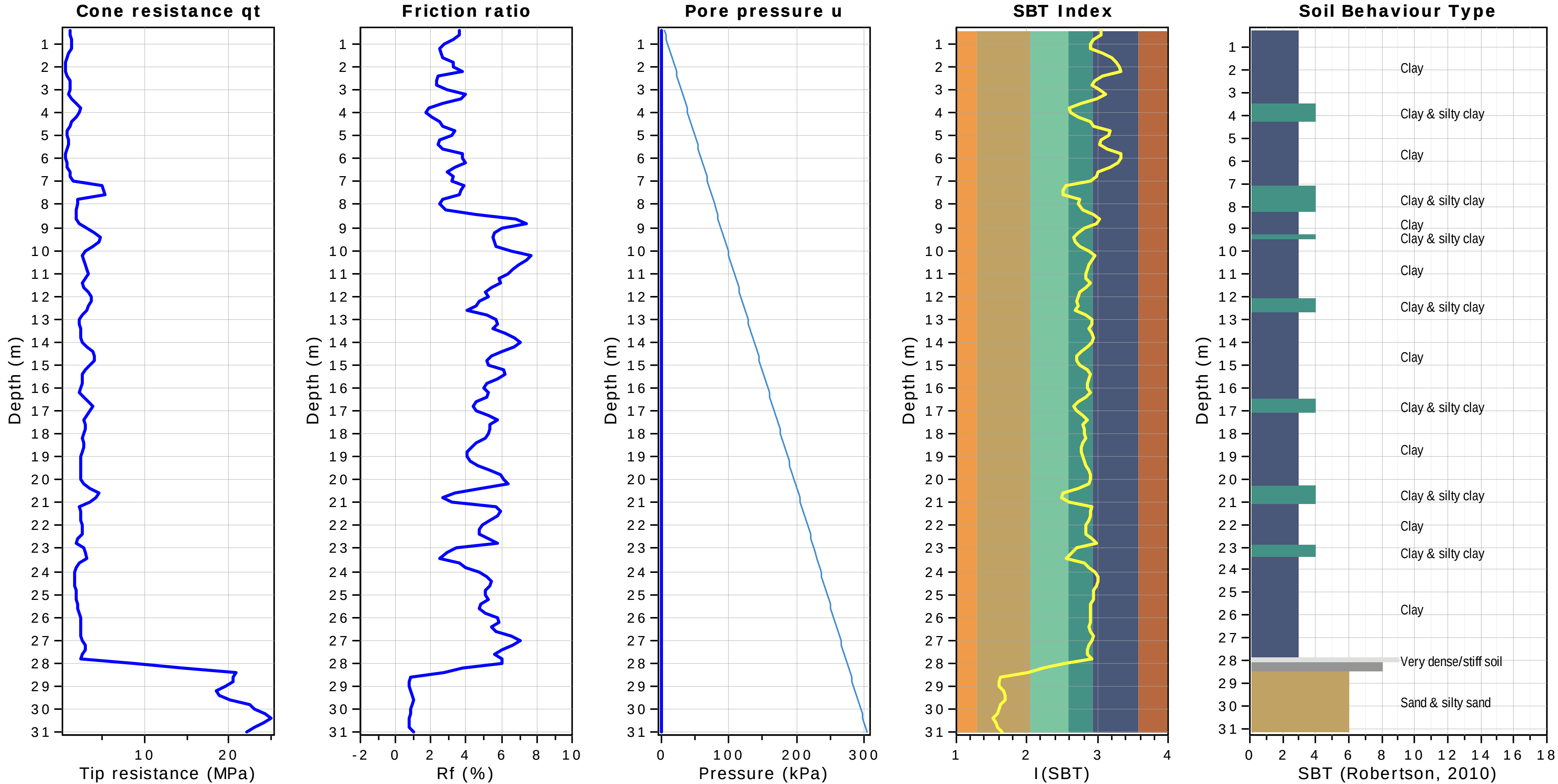
CPT: 036021P190CPT190
Total depth: 31.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



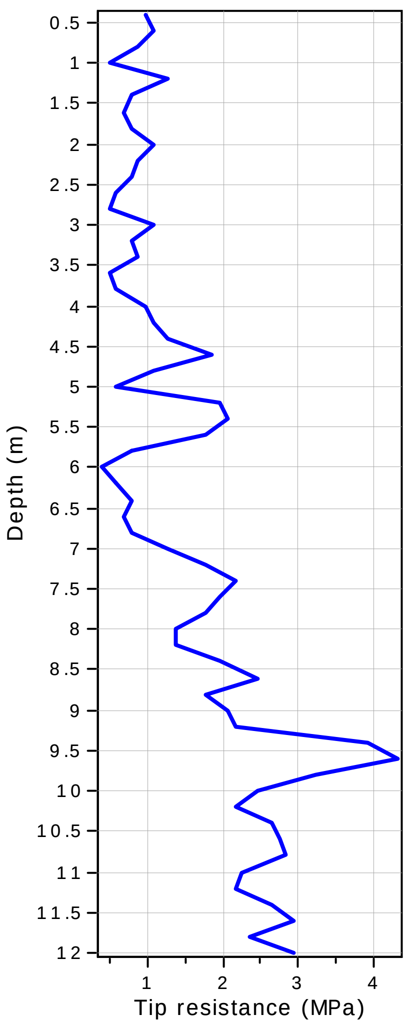
SBT legend

🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬛ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟨 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

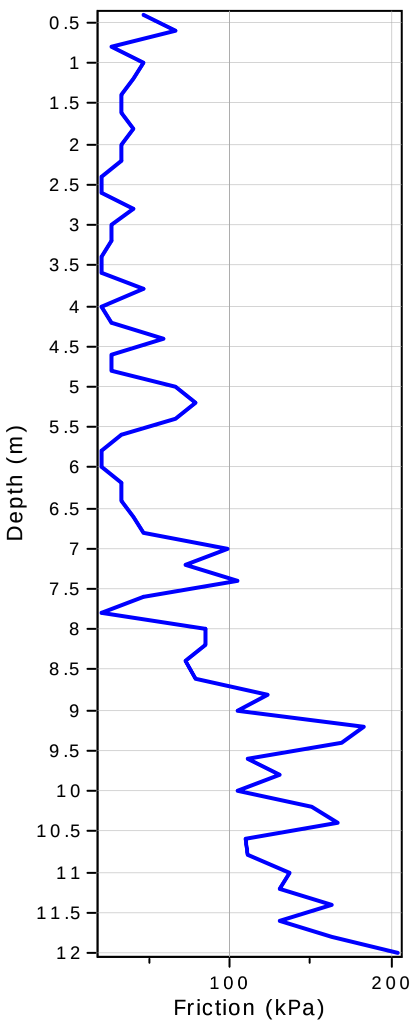
CPT: 036021P191CPT191
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

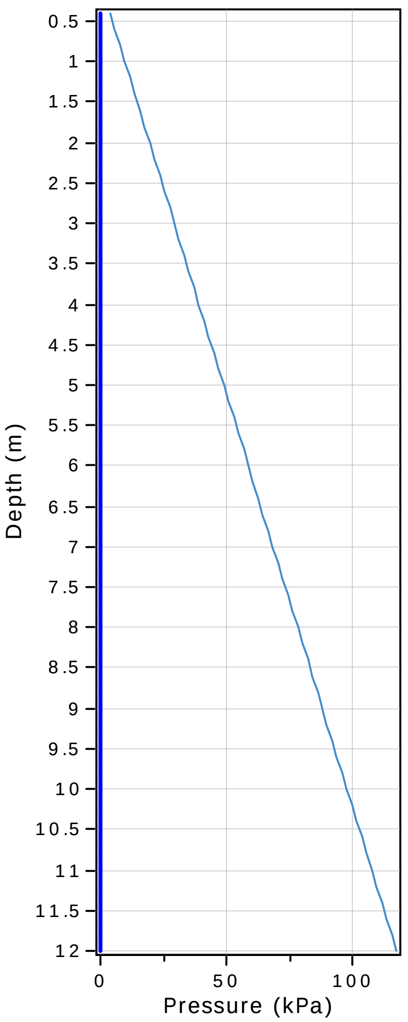
Cone resistance



Sleeve friction

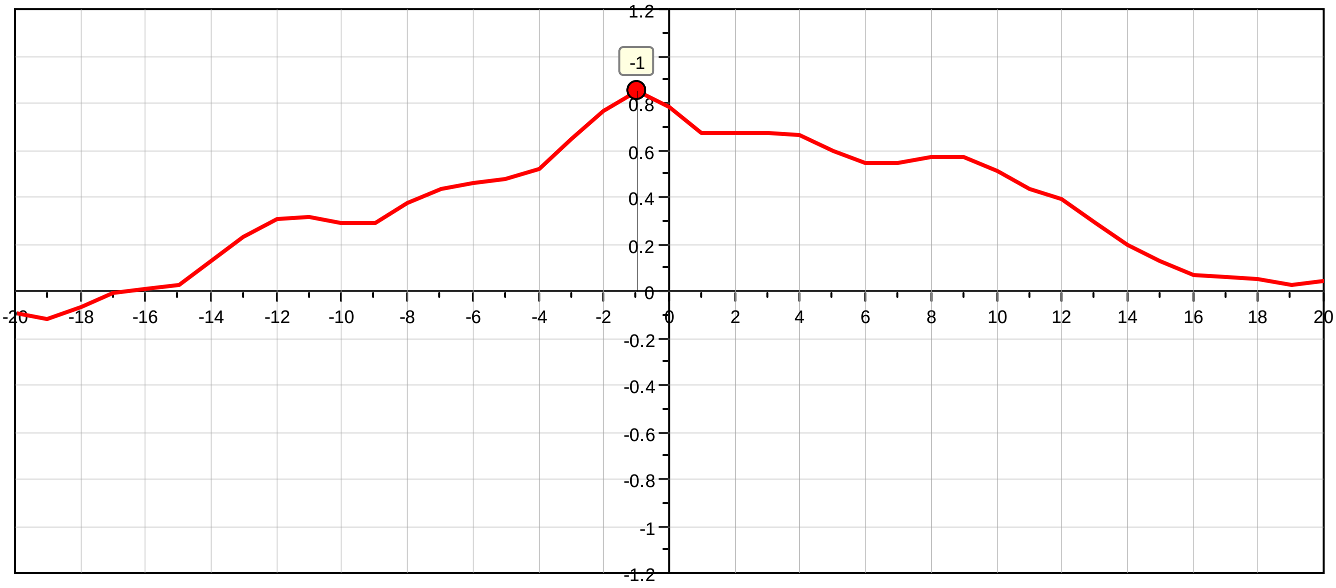


Pore pressure



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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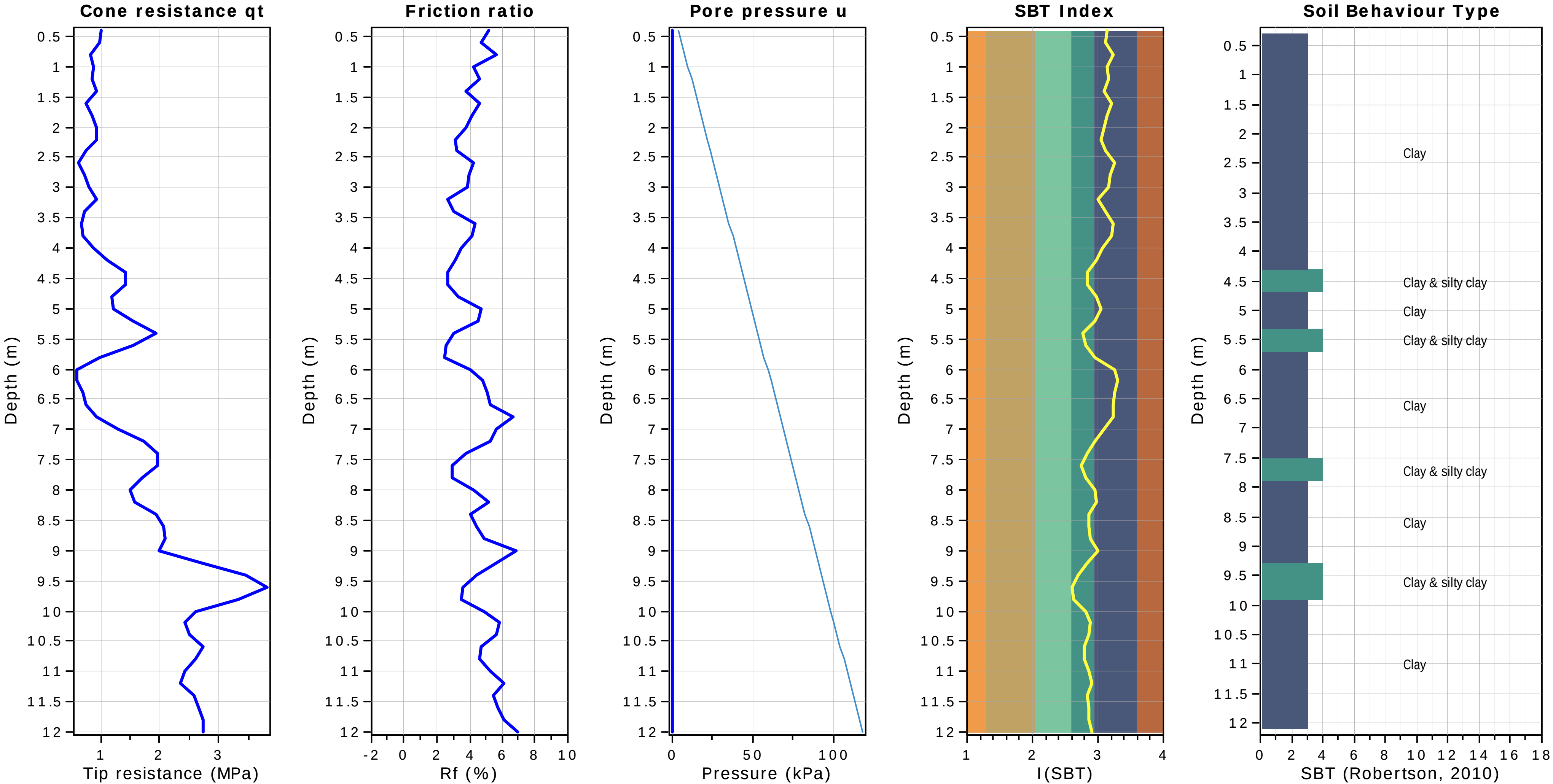
CPT: 036021P191CPT191
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

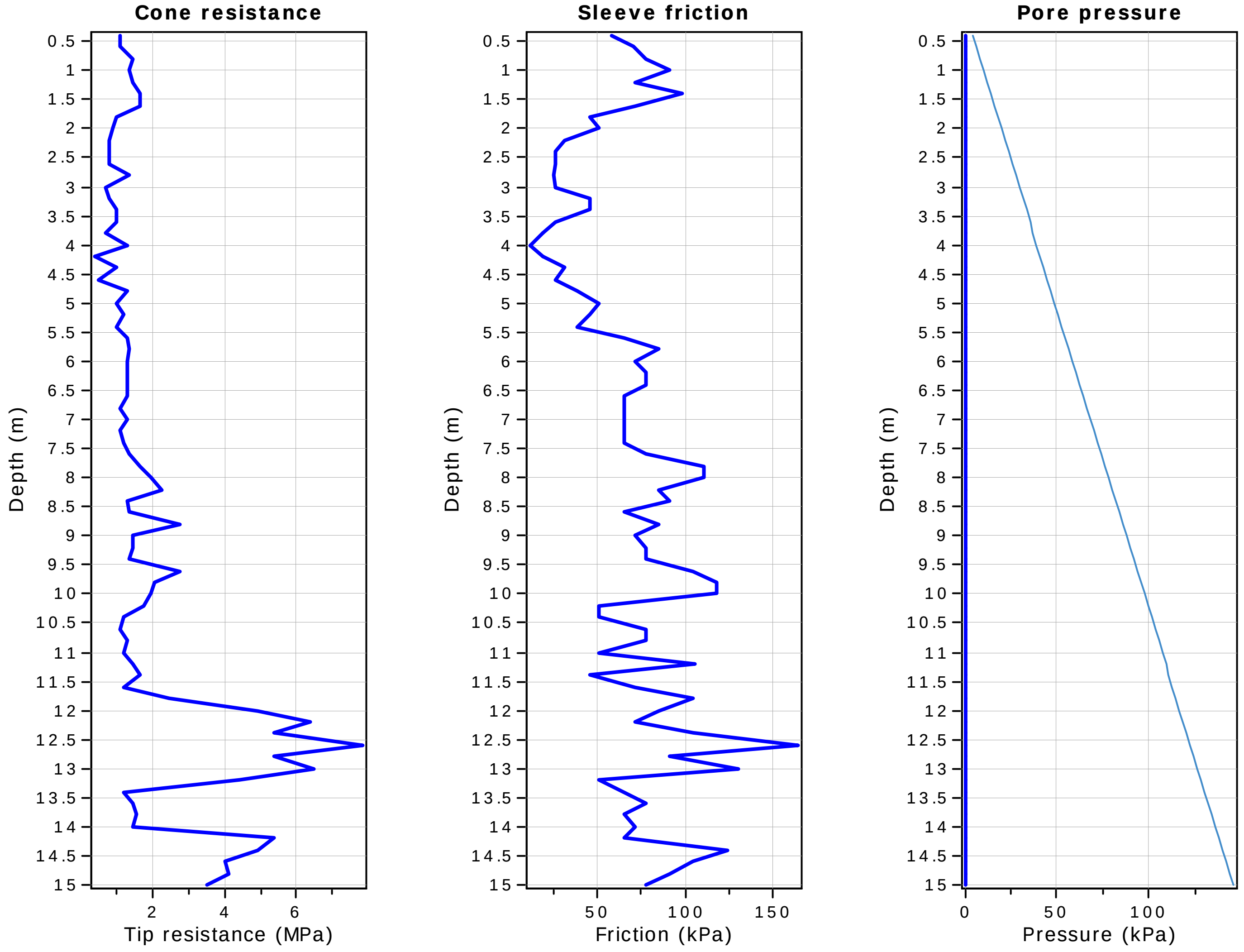


SBT legend

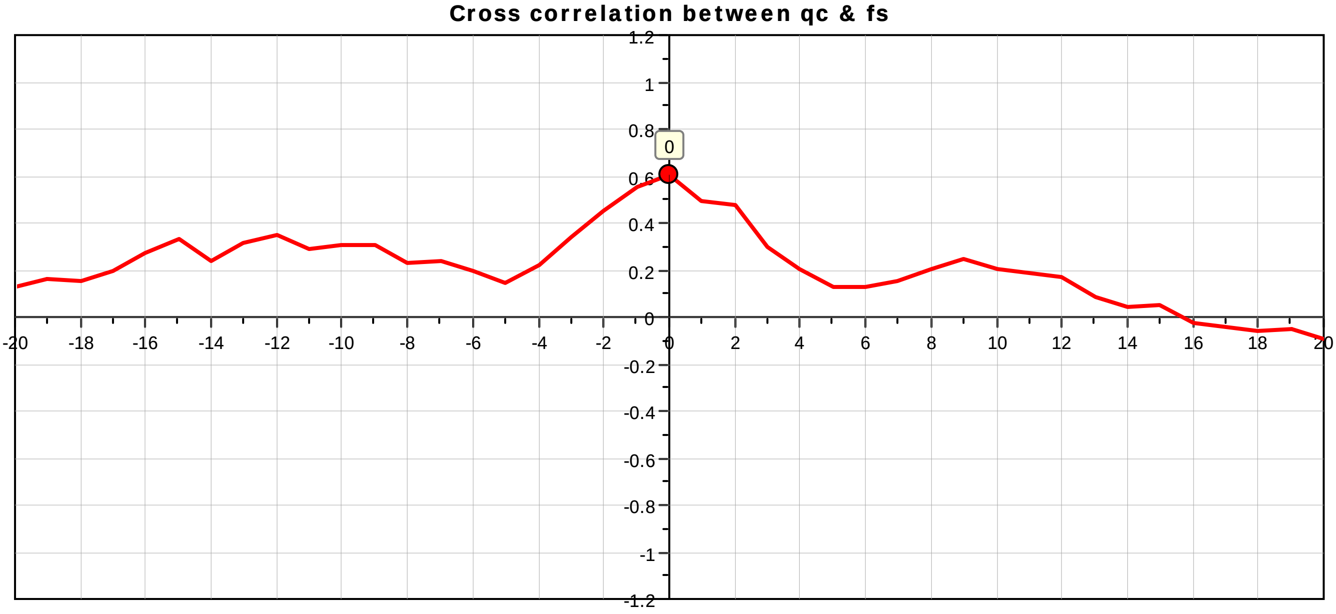
🟥 1. Sensitive fine grained	4. Clayey silt to silty clay	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to clayey sand
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

CPT: 036021P192CPT192
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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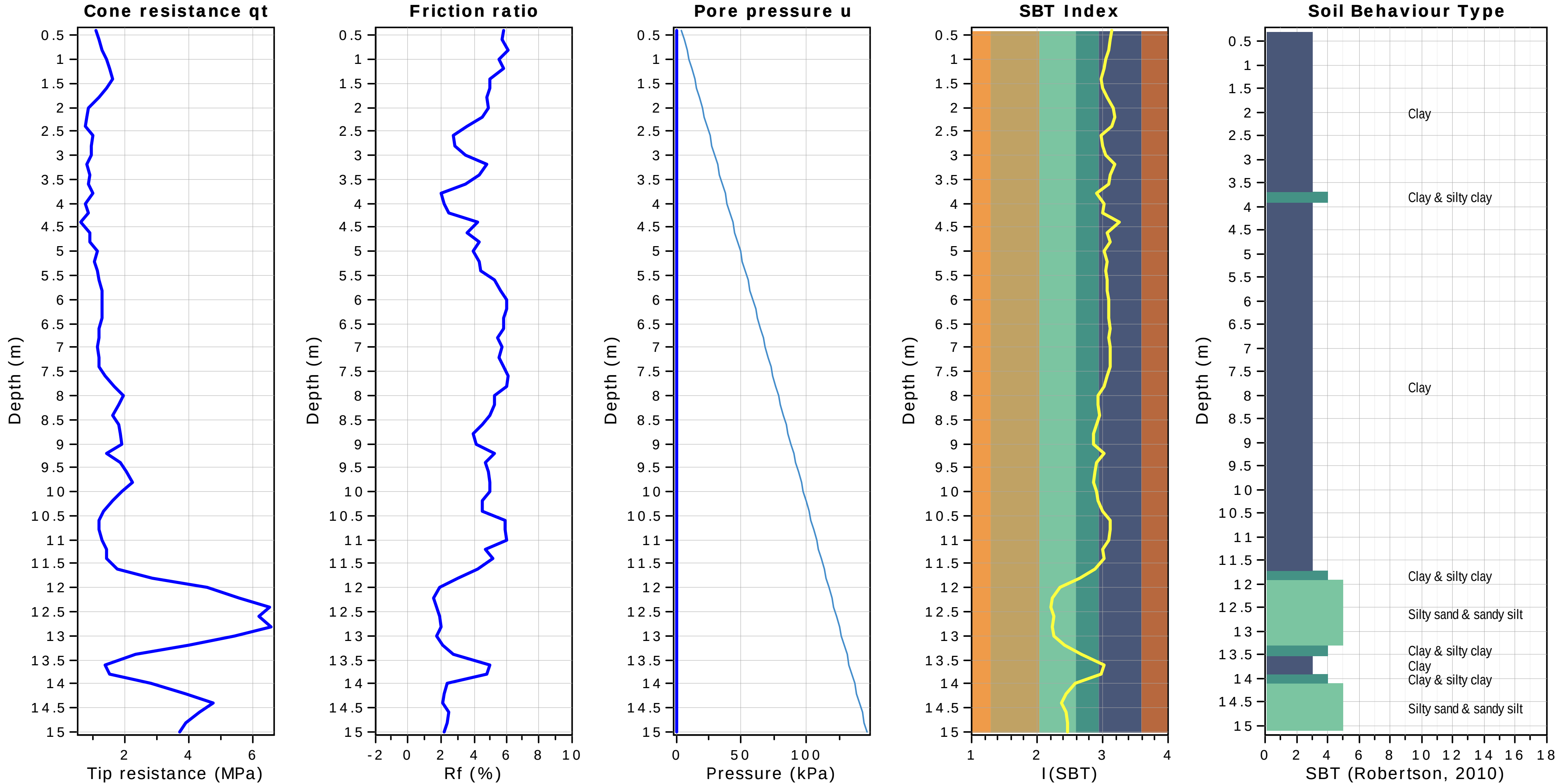
CPT: 036021P192CPT192
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

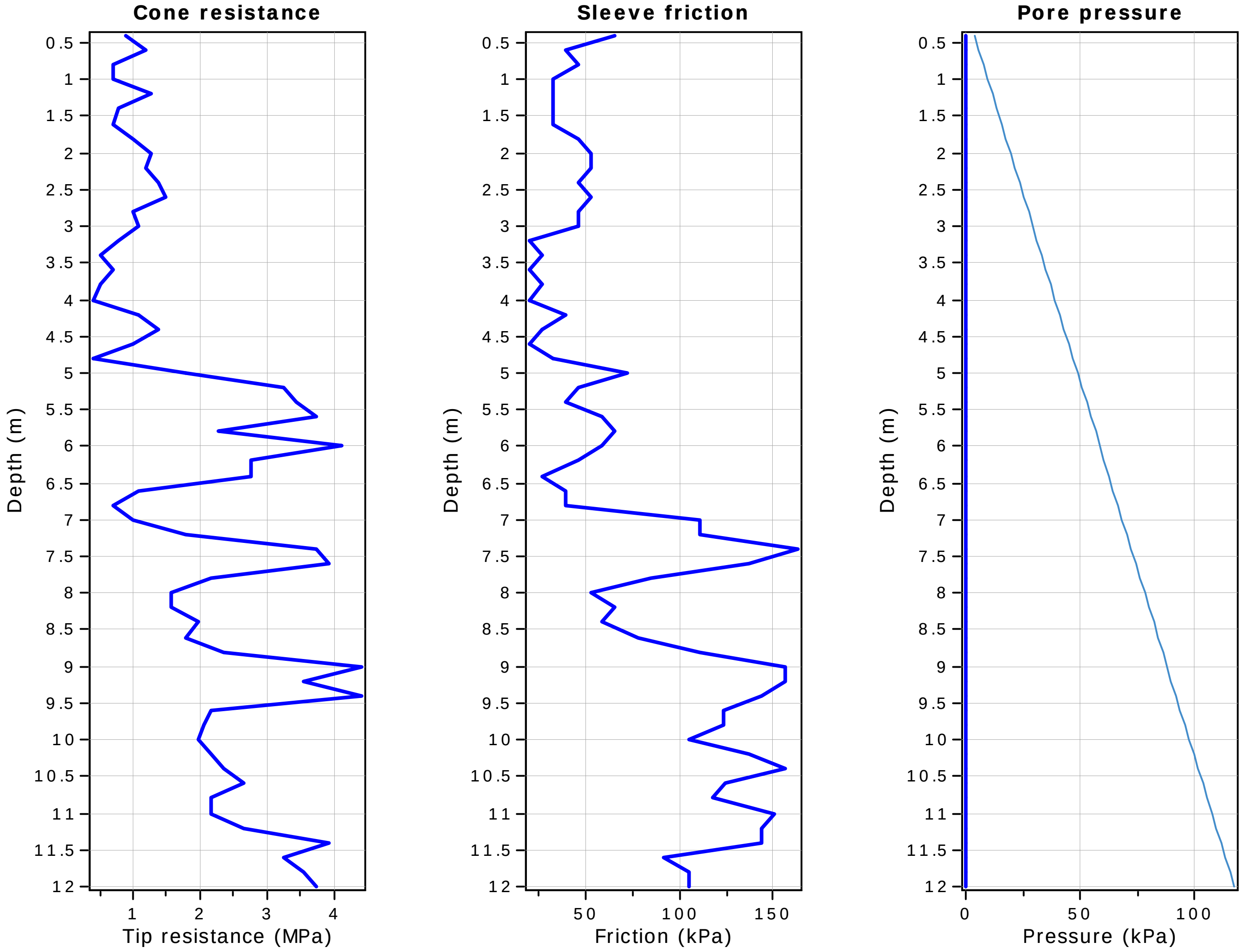


SBT legend

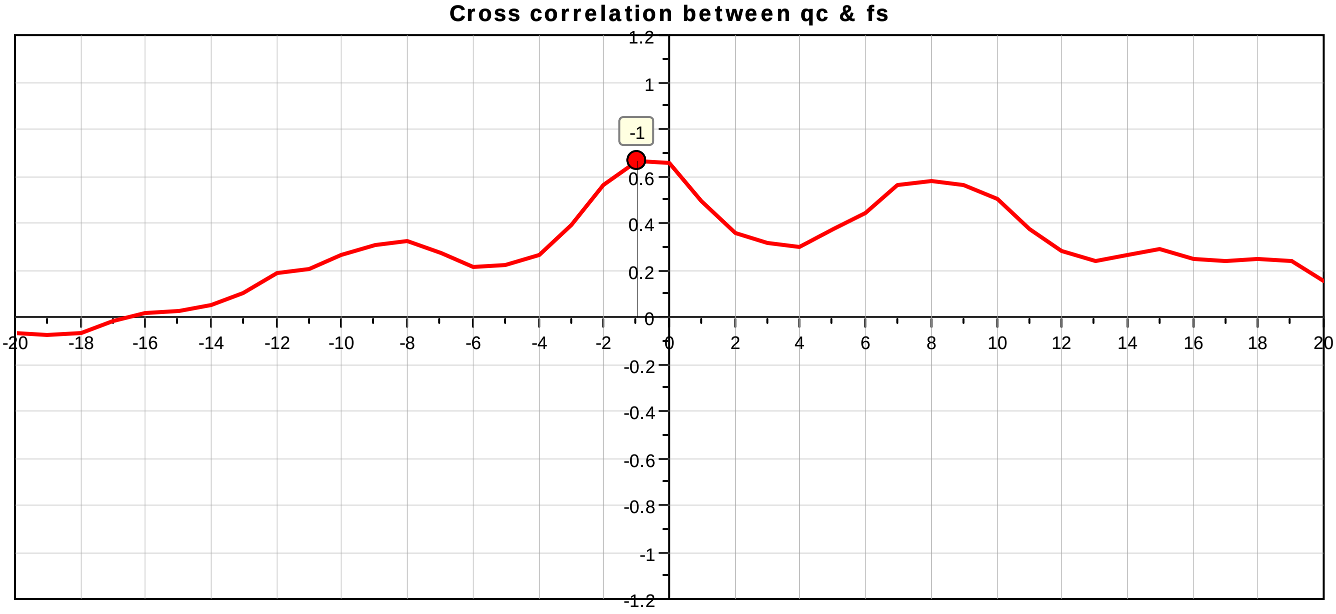
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P193CPT193
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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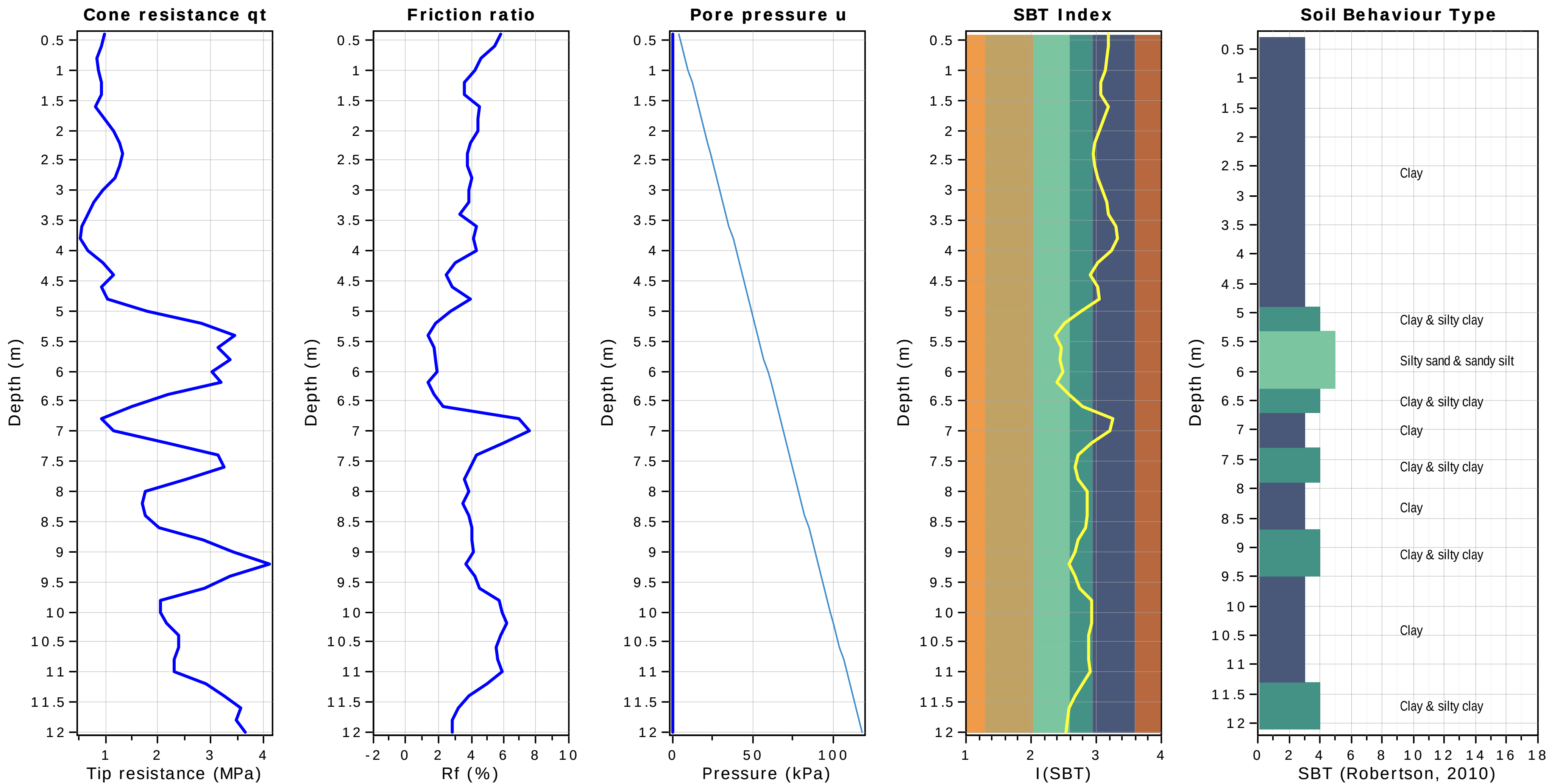
CPT: 036021P193CPT193
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟫 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

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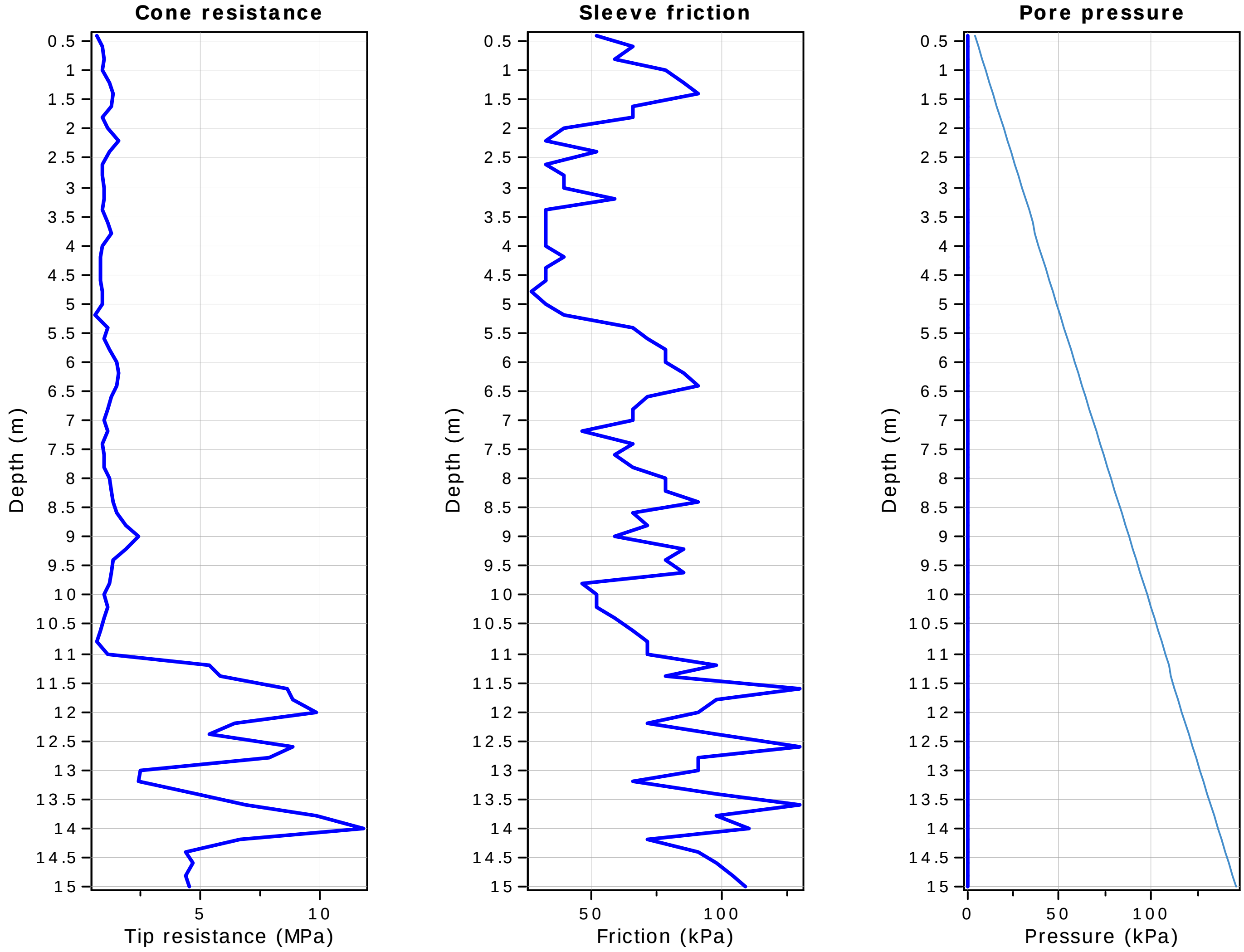
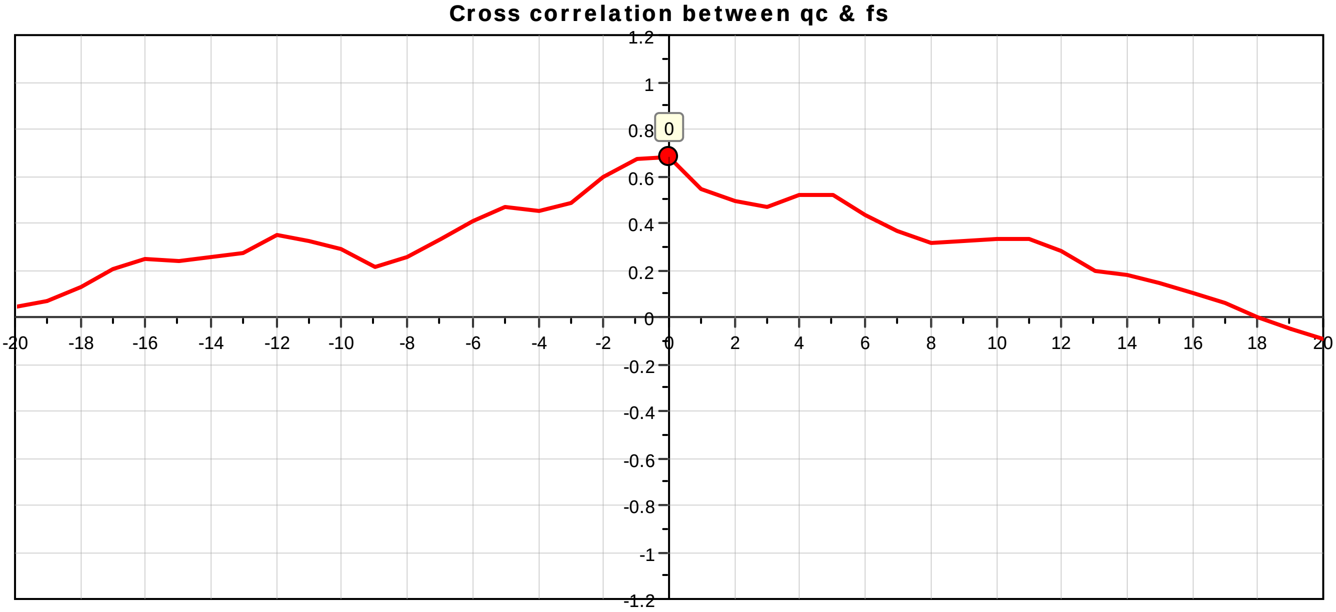
CPT: 036021P195CPT195
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:


Cone resistance
Sleeve friction
Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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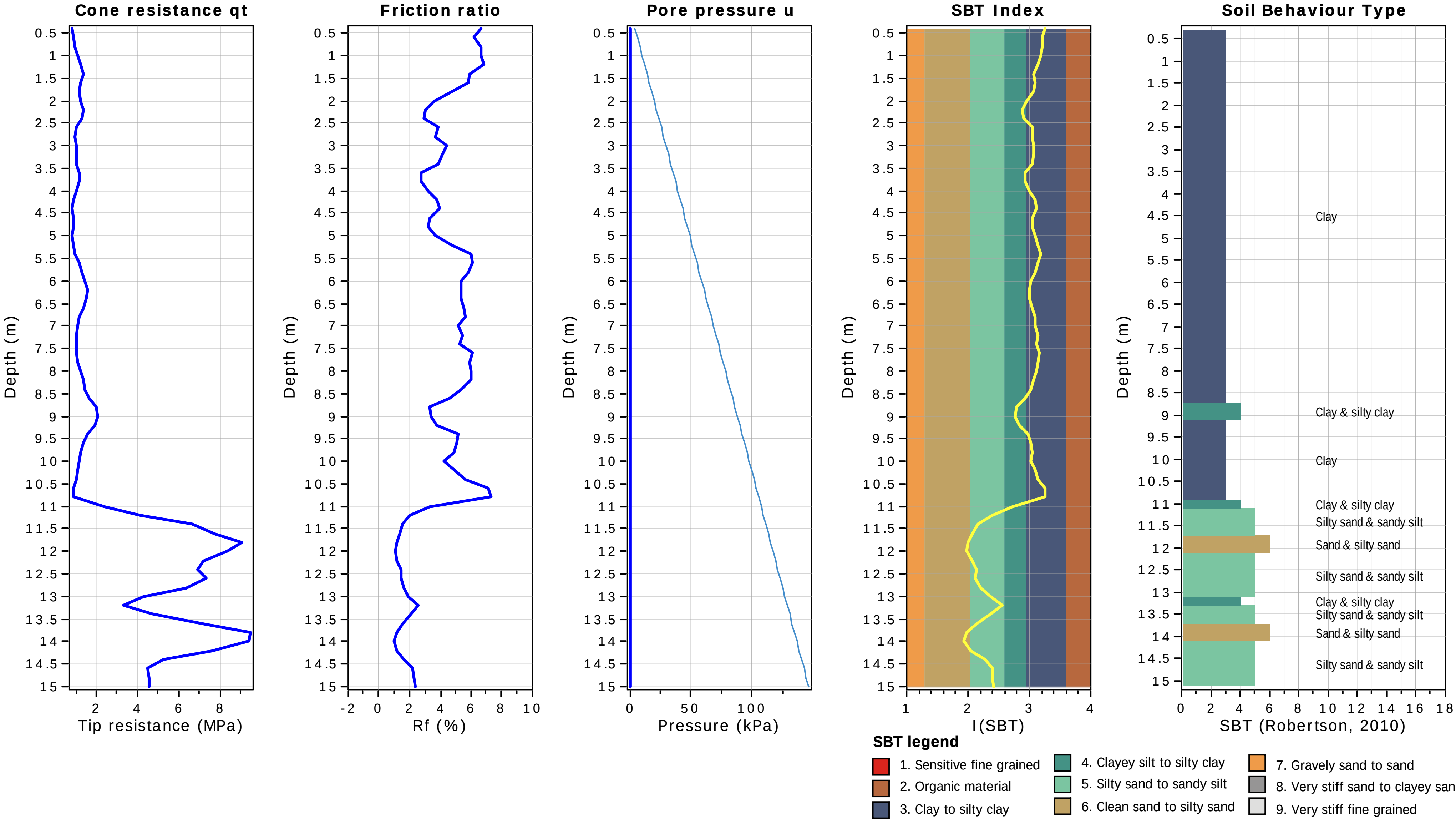
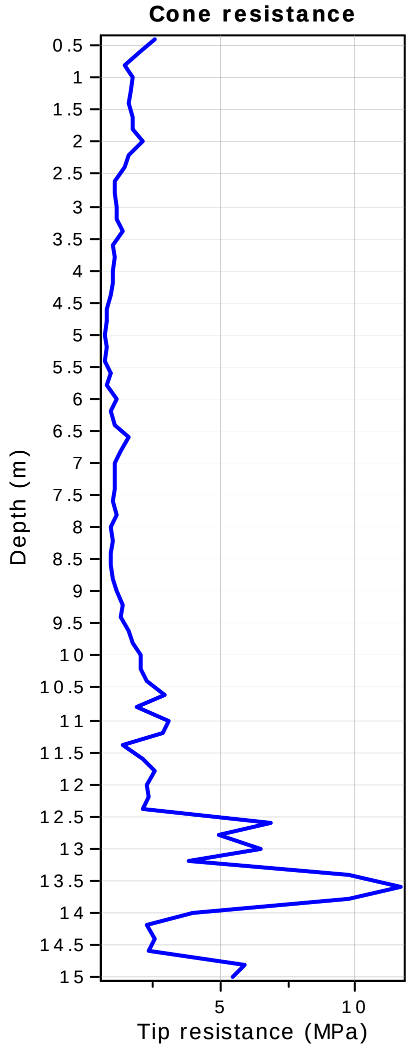
CPT: 036021P195CPT195
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

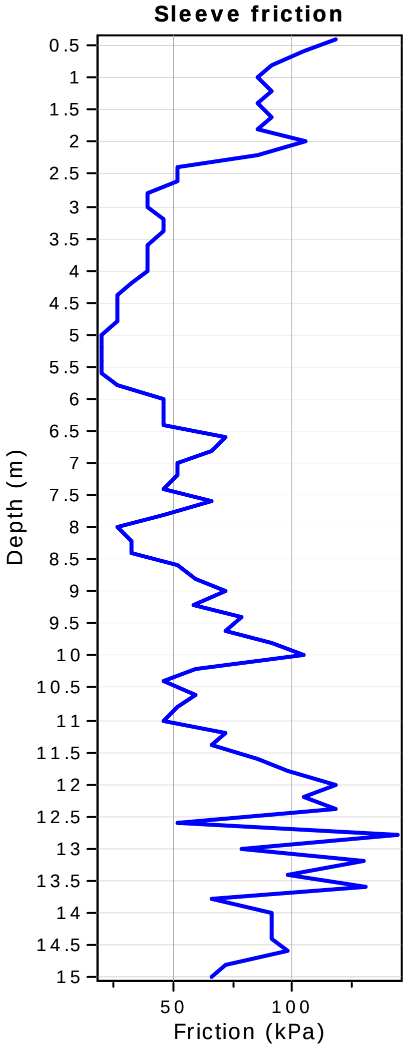
Project:
Location:

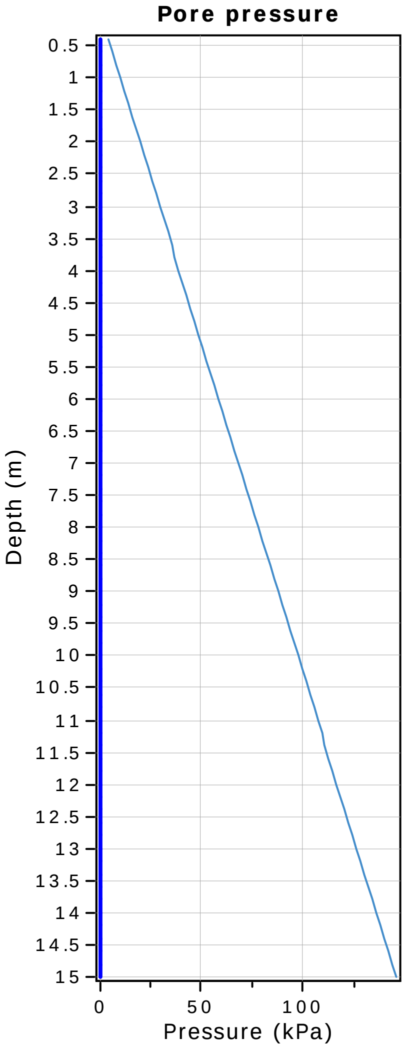


CPT: 036021P196CPT196
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

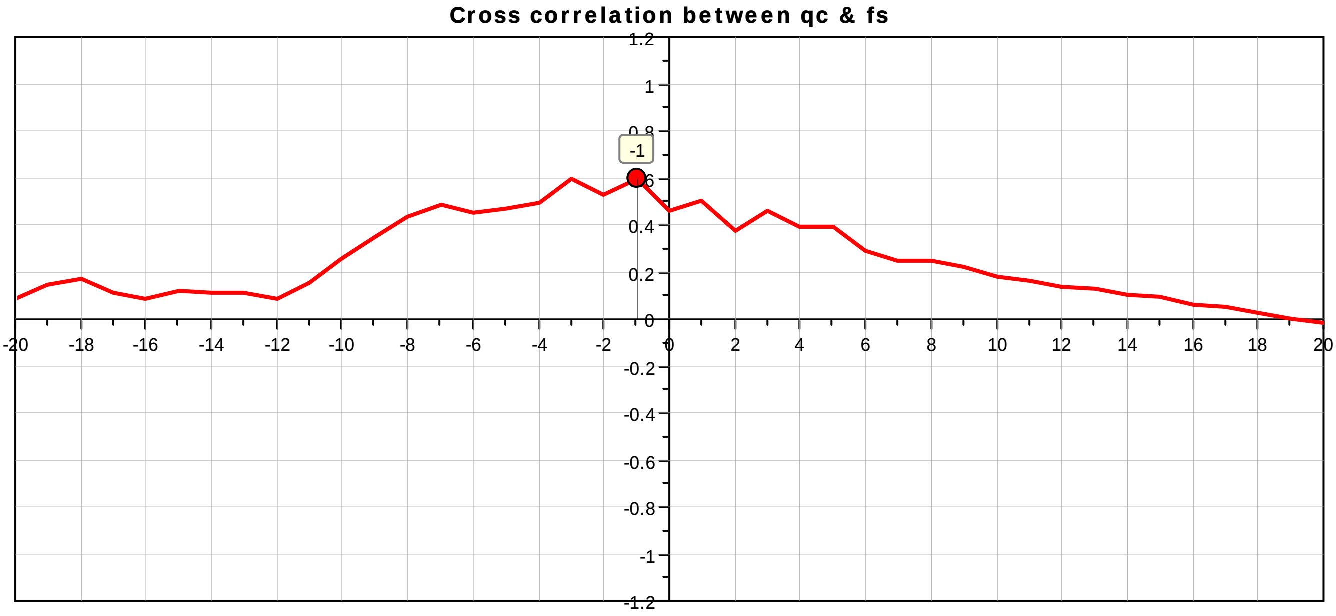
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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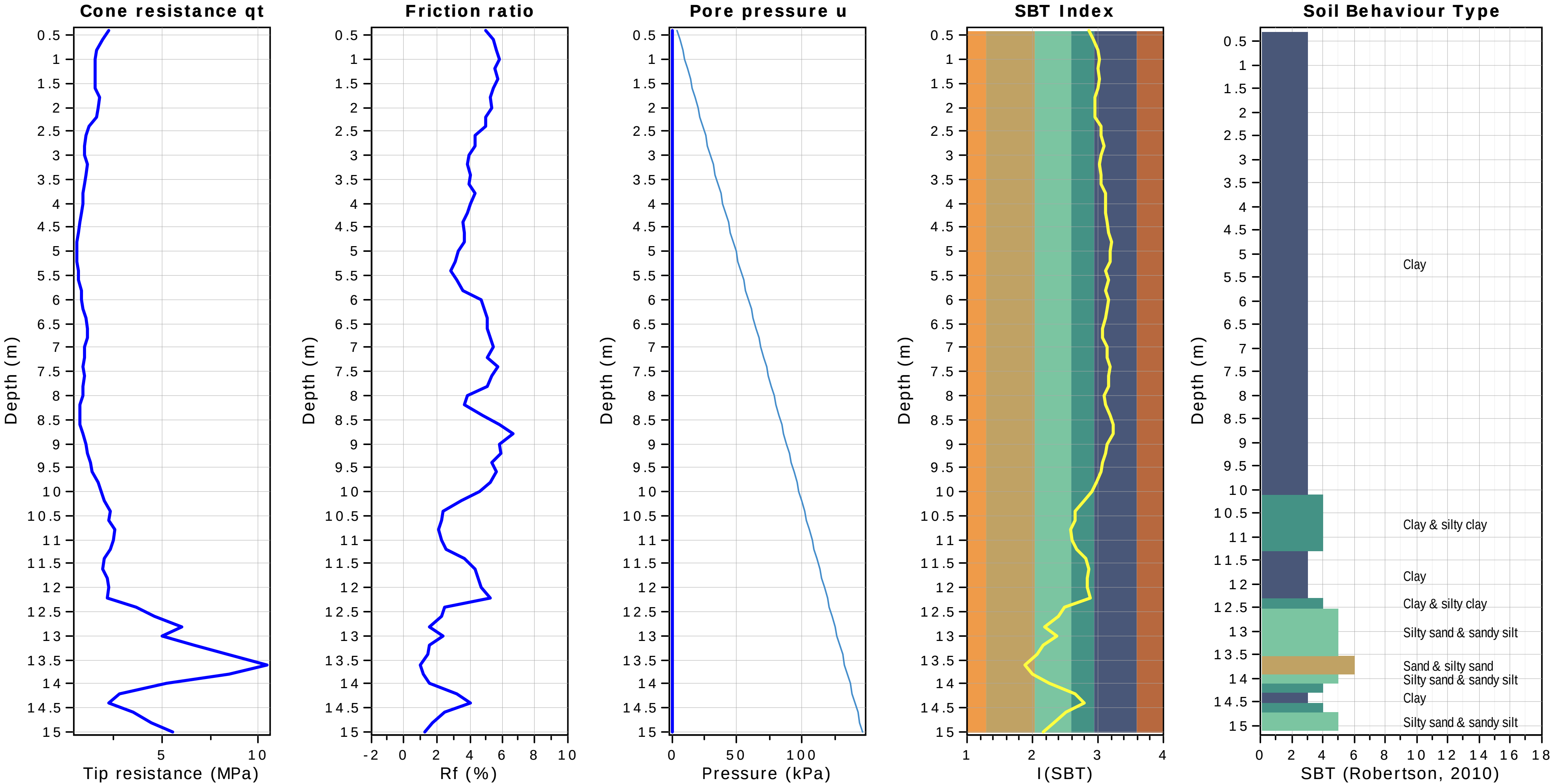
CPT: 036021P196CPT196
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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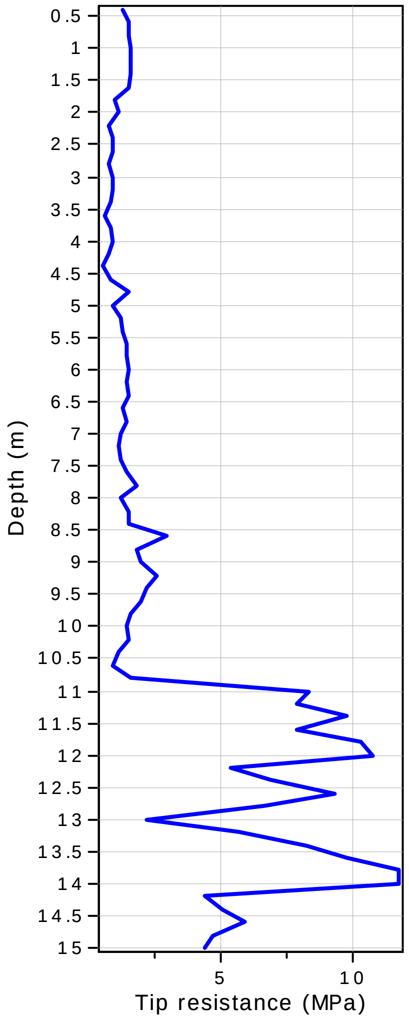
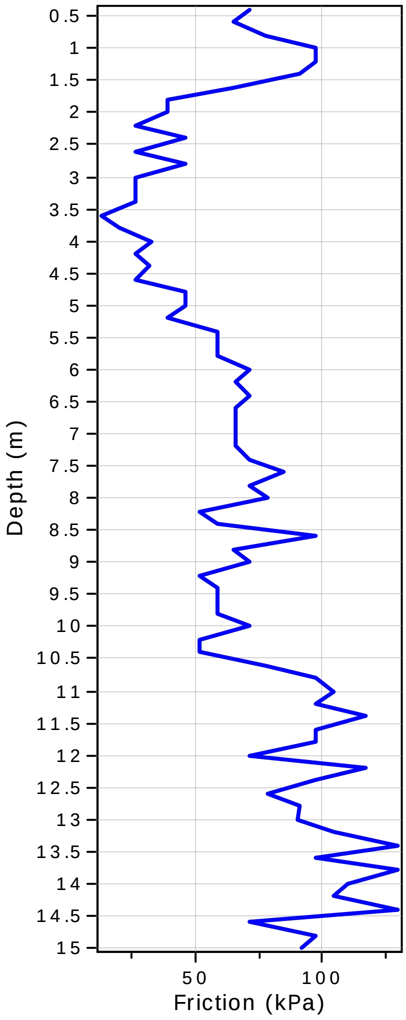
CPT: 036021P197CPT197
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

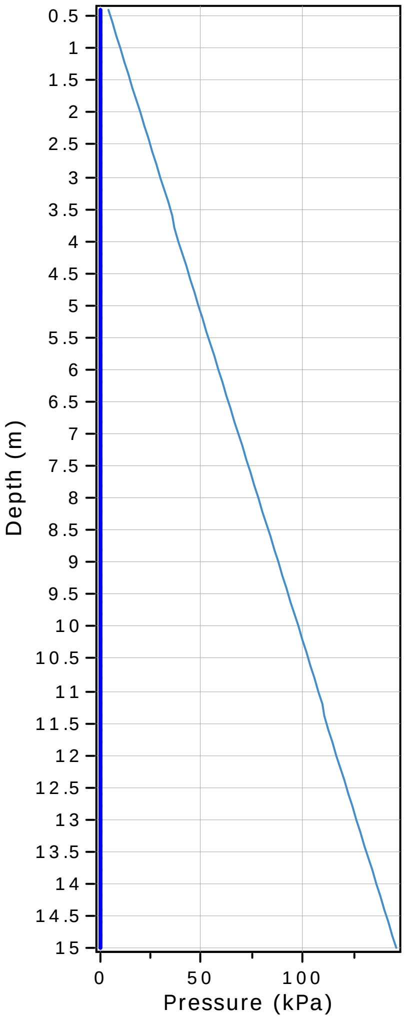
Cone resistance



Sleeve friction

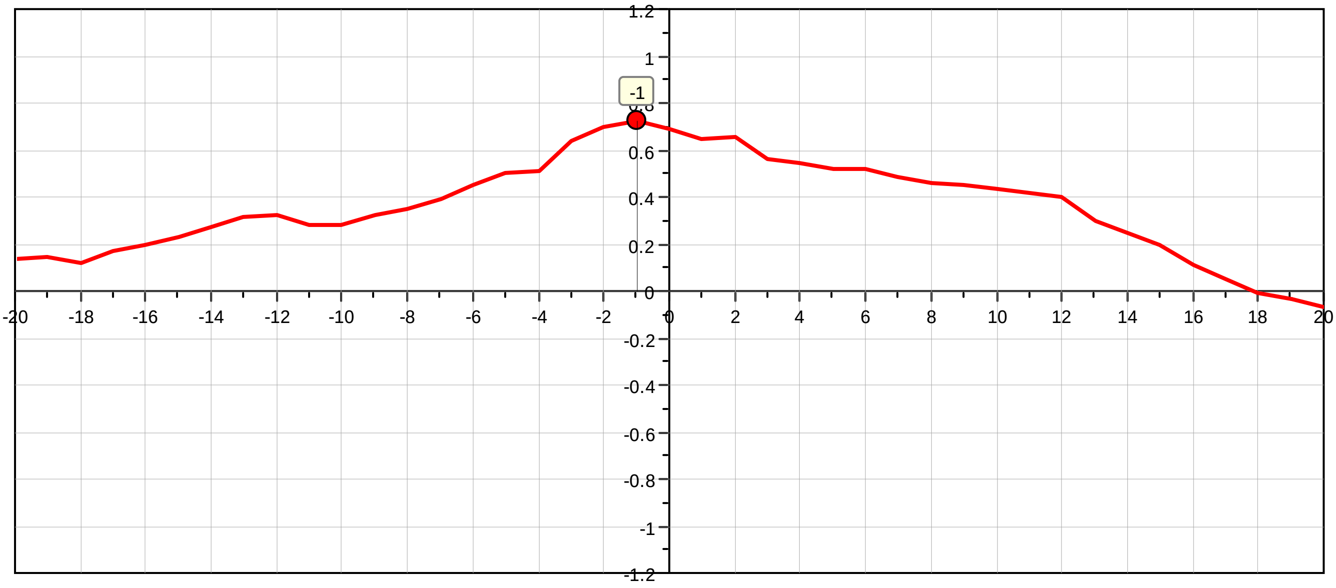


Pore pressure



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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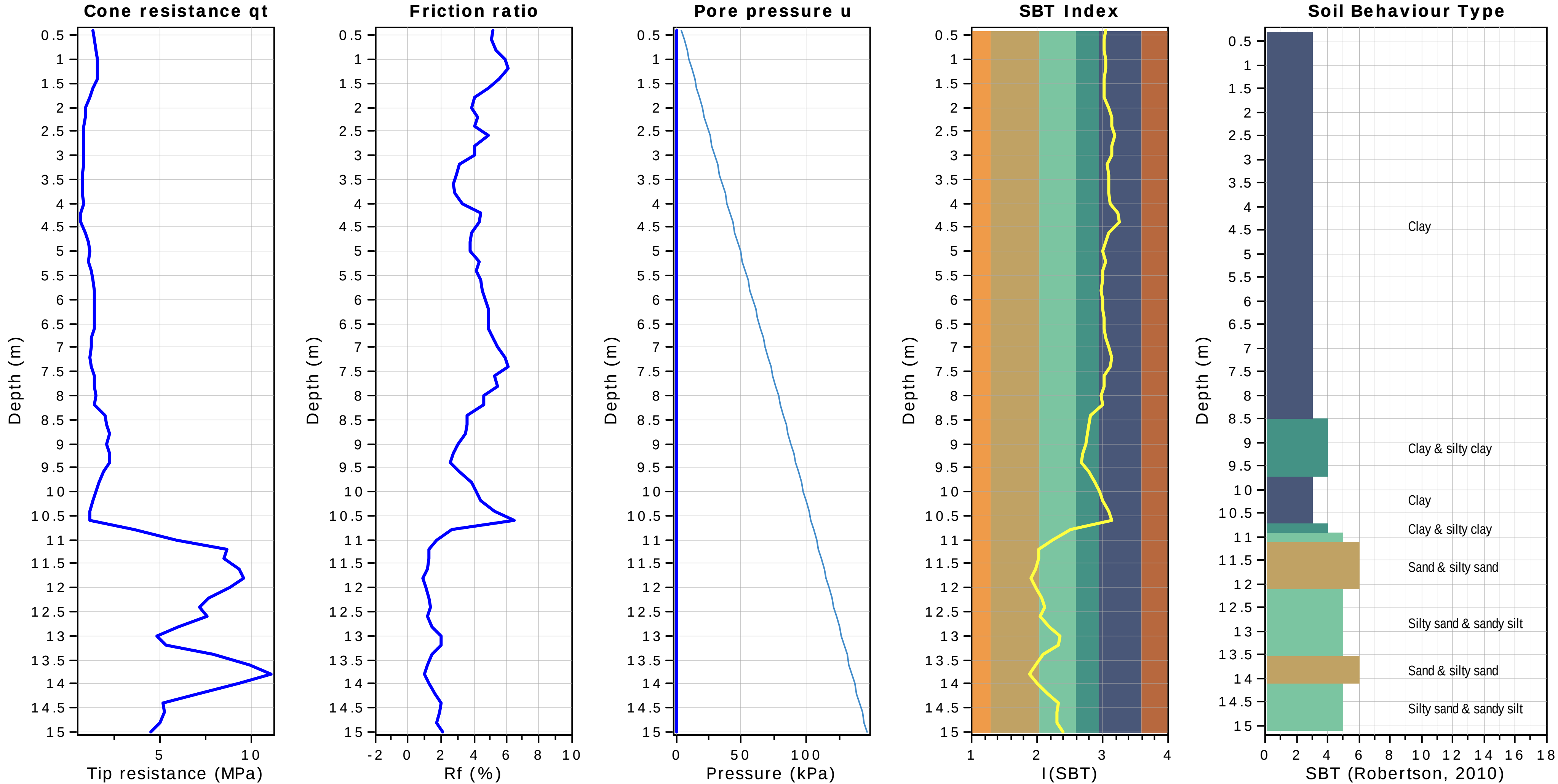
CPT: 036021P197CPT197
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:

Location:



SBT legend

🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟫 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

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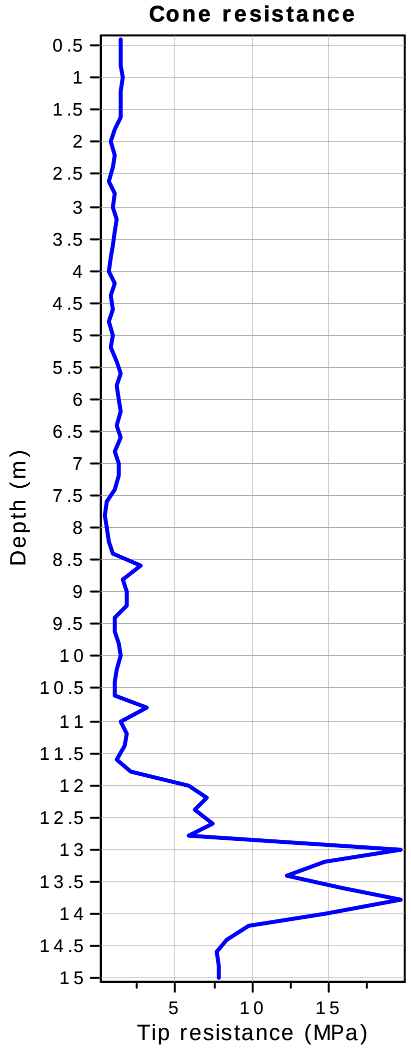
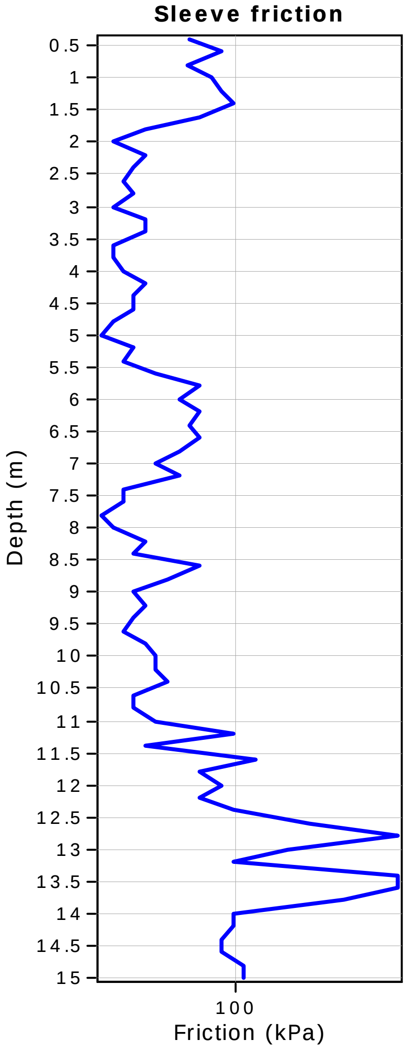
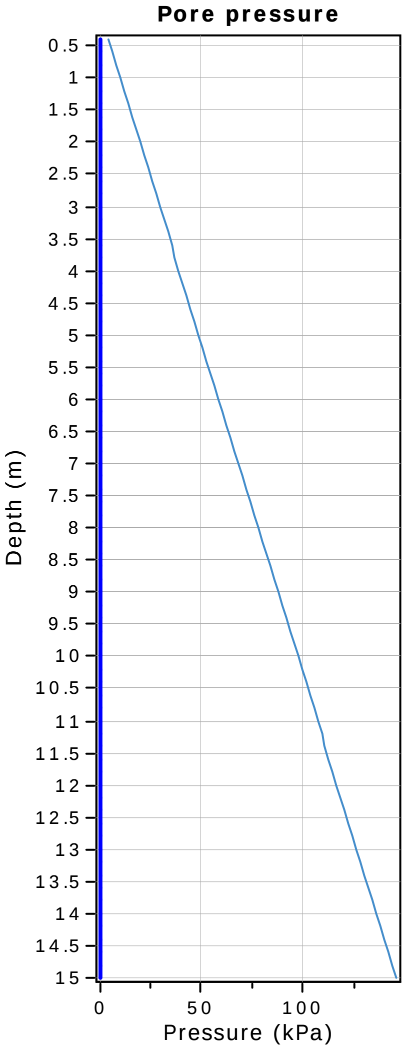
CPT: 036021P199CPT199
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

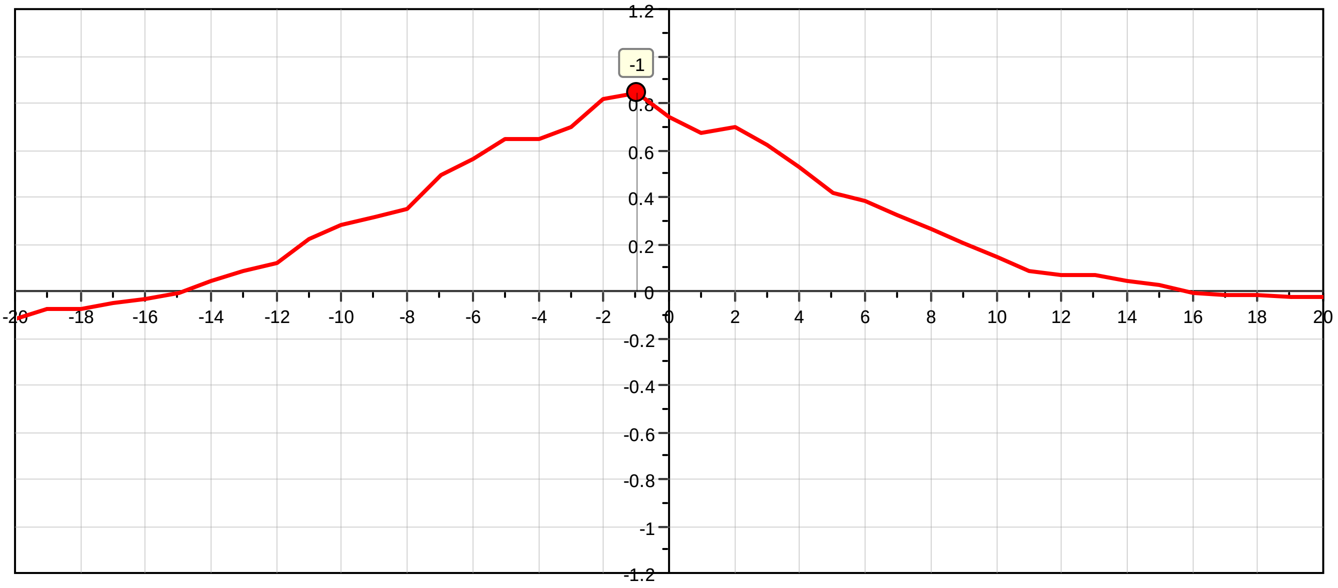






The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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Via Cesare Costa 182
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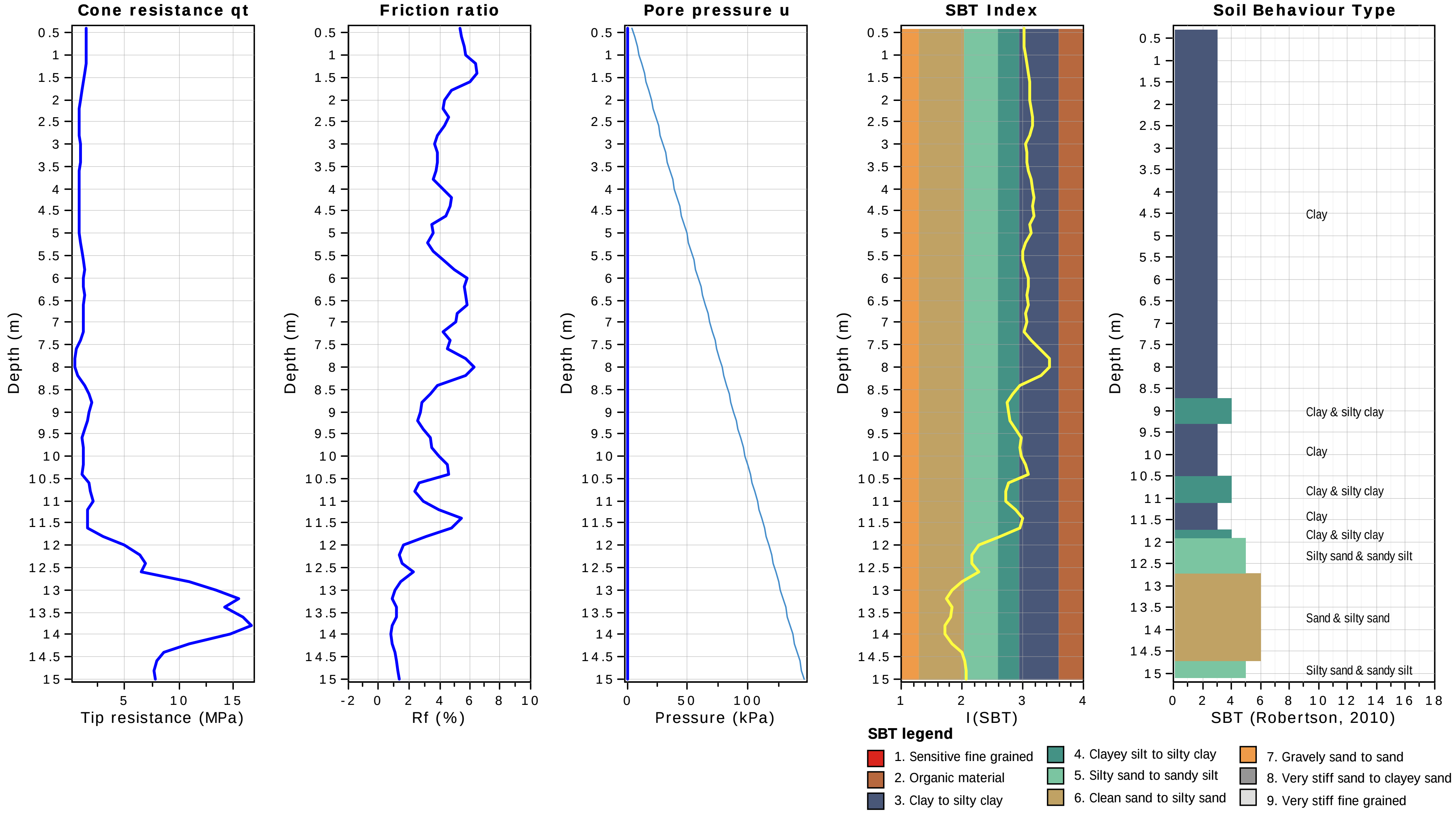
CPT: 036021P199CPT199
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



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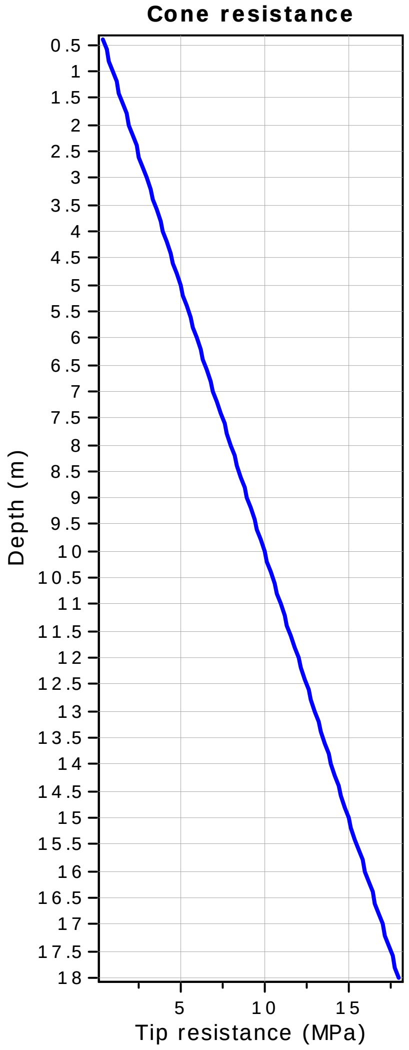
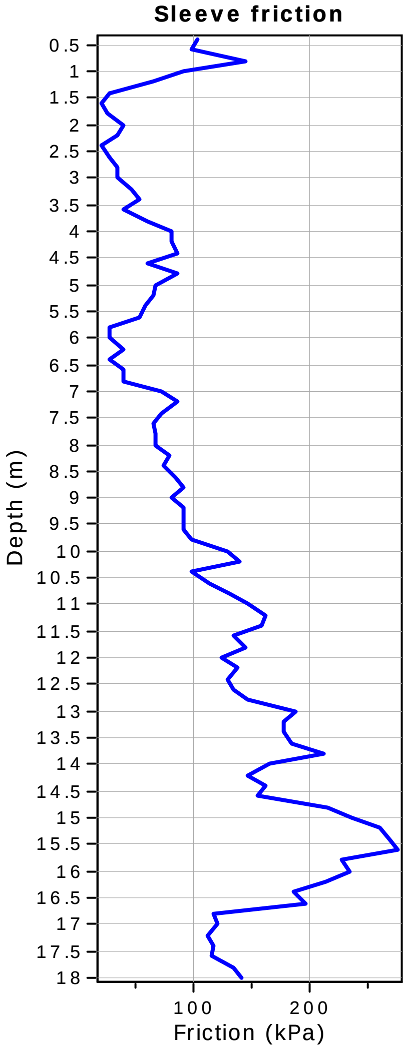
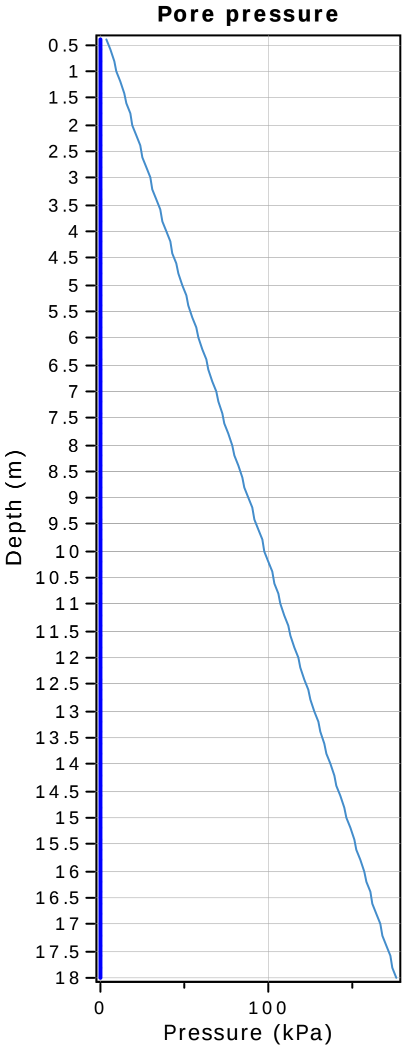
CPT: 036021P19CPT19
Total depth: 18.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

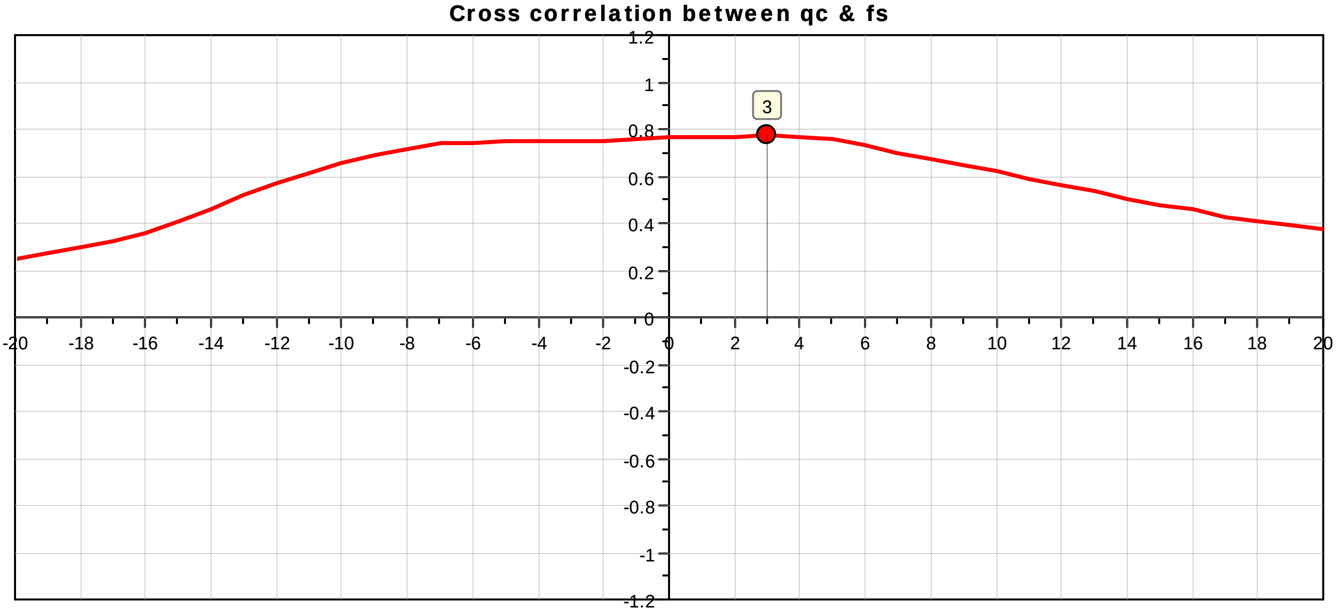
Project:
Location:


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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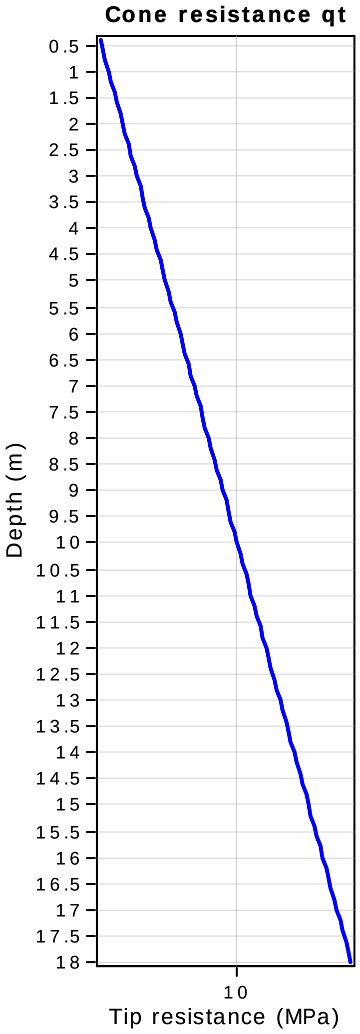
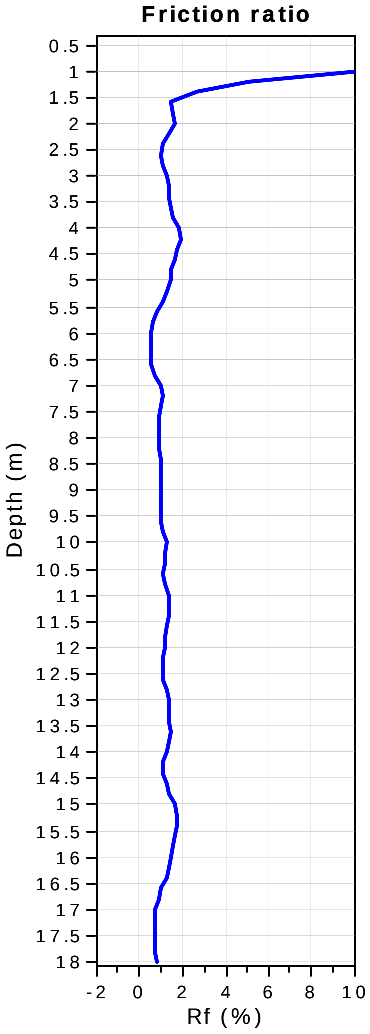
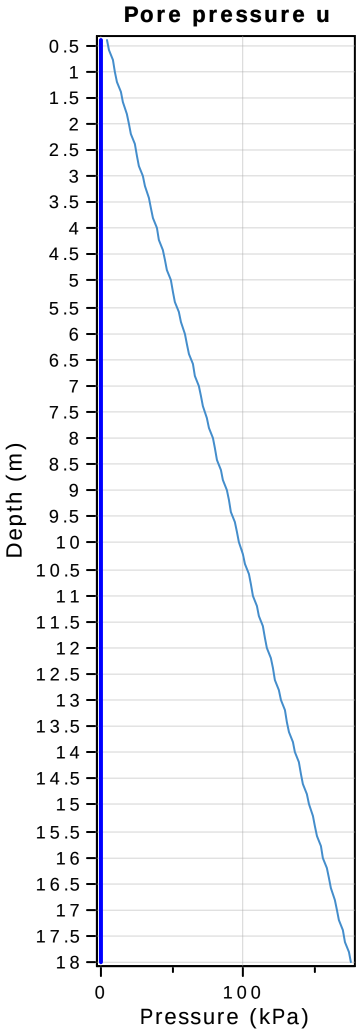
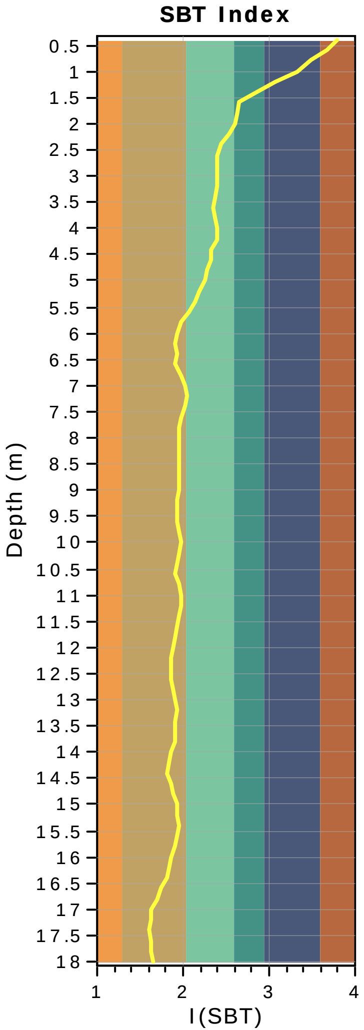
CPT: 036021P19CPT19
Total depth: 18.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

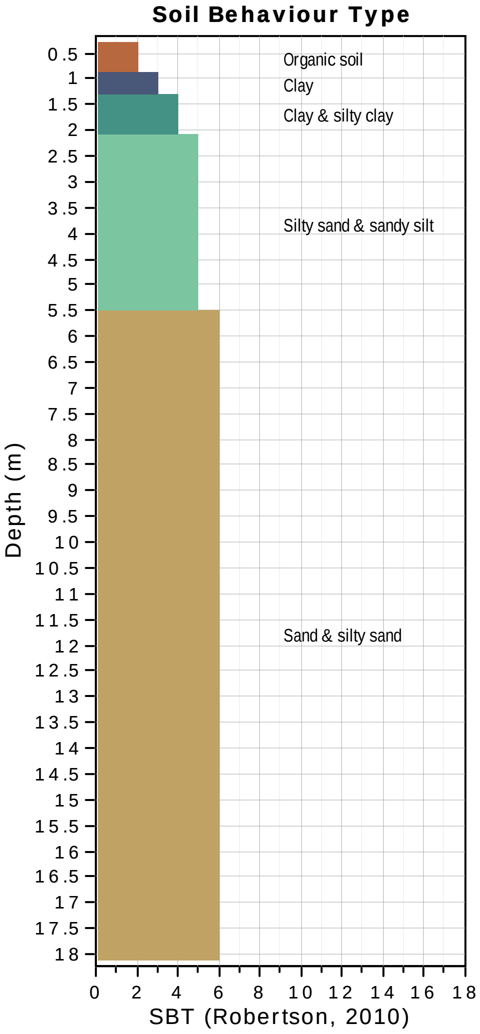
Project:
Location:


Cone resistance qt


Friction ratio


Pore pressure u


SBT Index

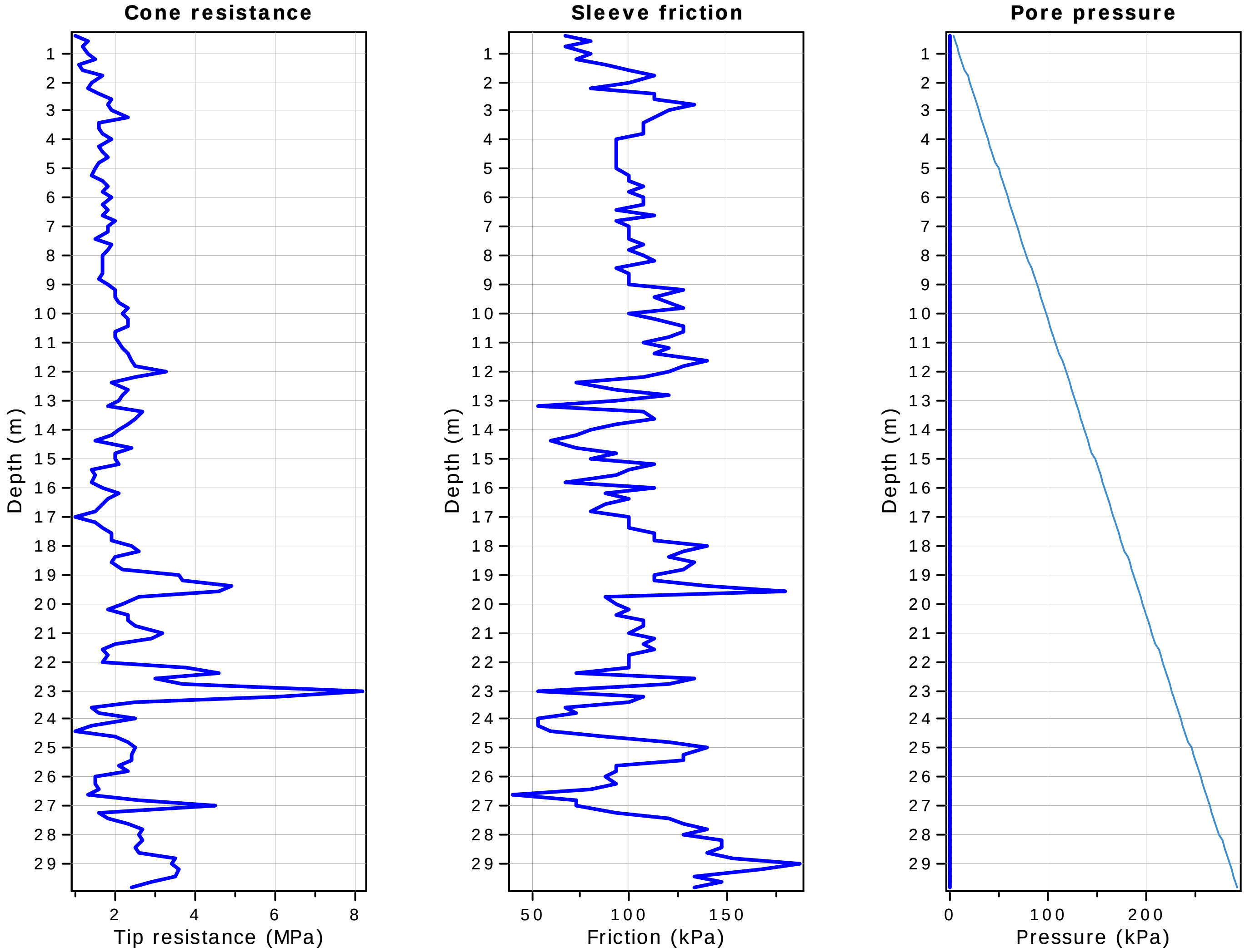

Soil Behaviour Type

SBT legend

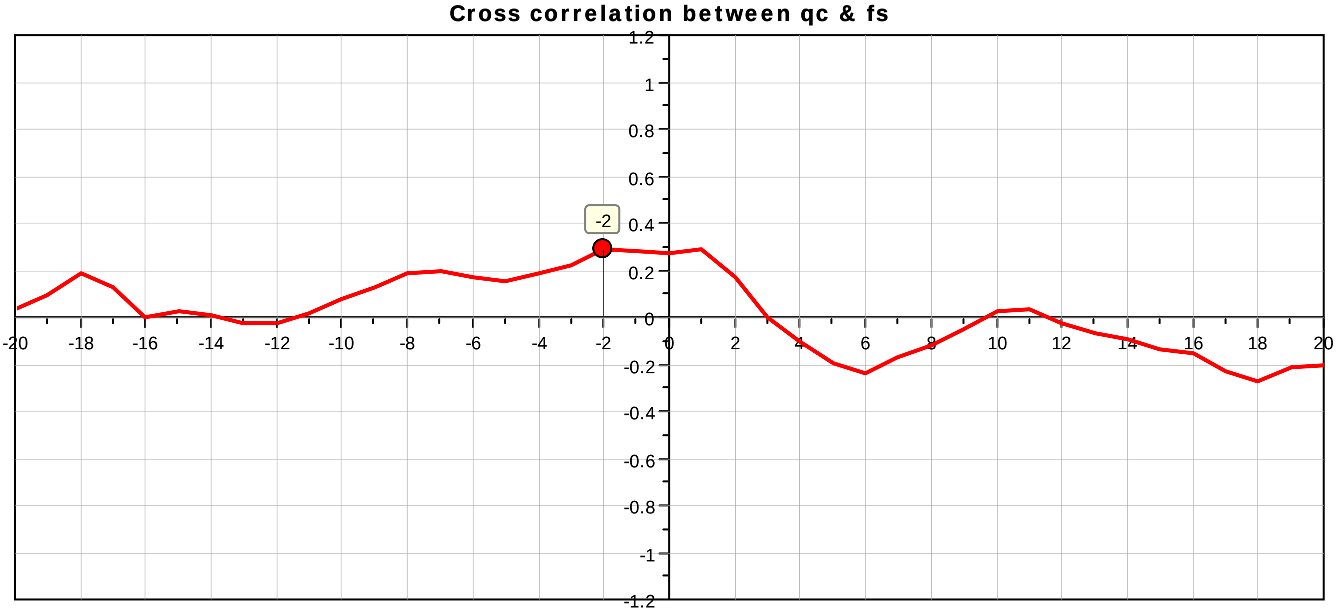
🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟫 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

CPT: 036021P1CPT1
Total depth: 29.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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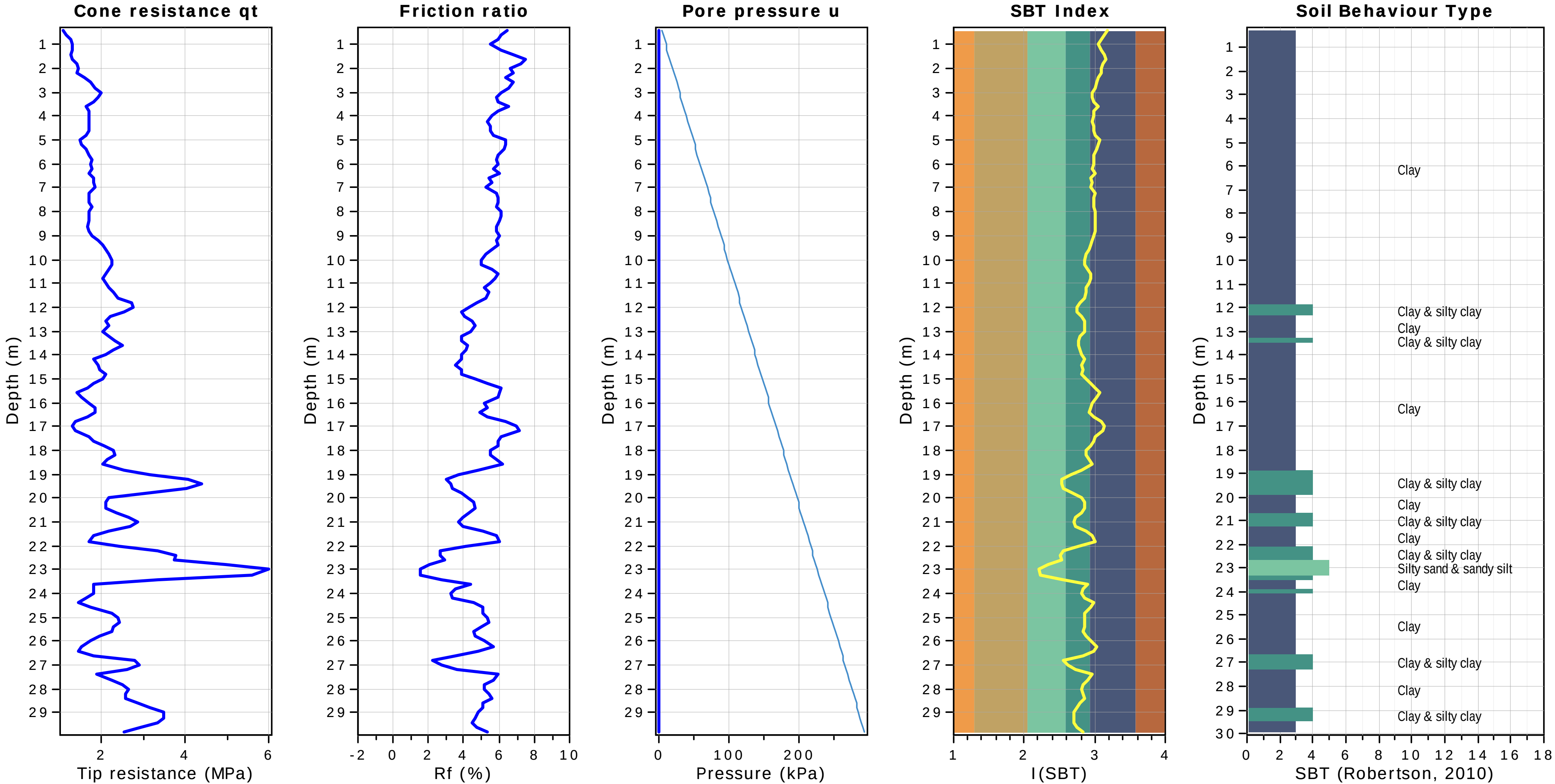
CPT: 036021P1CPT1
Total depth: 29.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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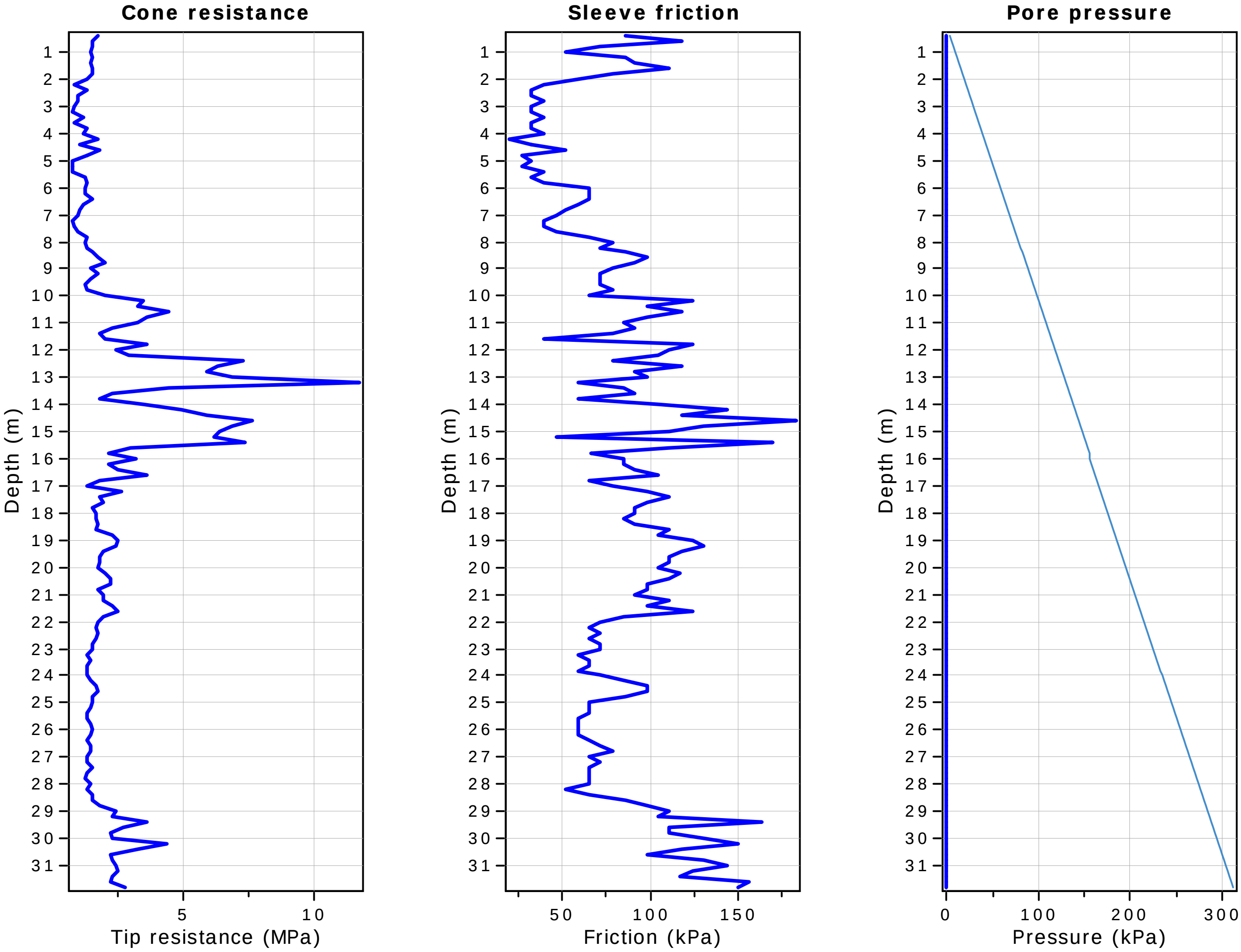
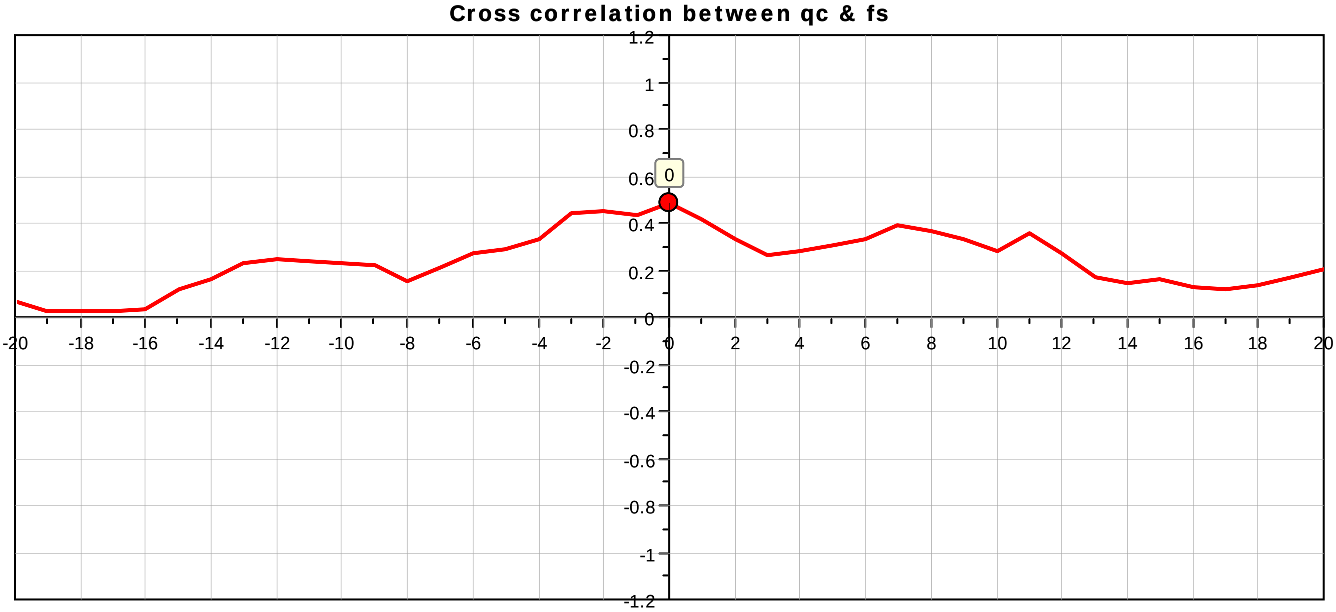
CPT: 036021P200CPT200
Total depth: 31.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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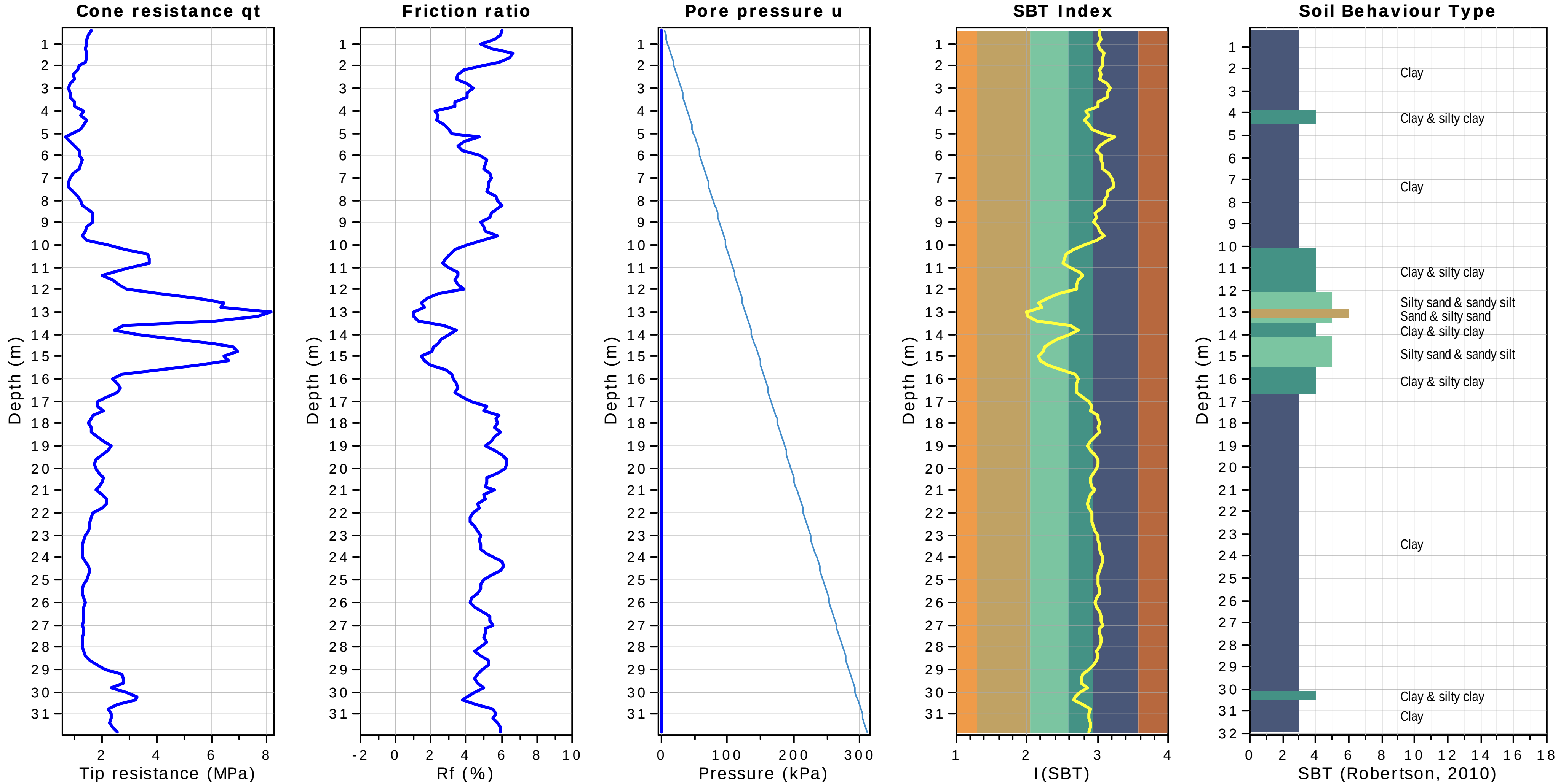
CPT: 036021P200CPT200
Total depth: 31.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

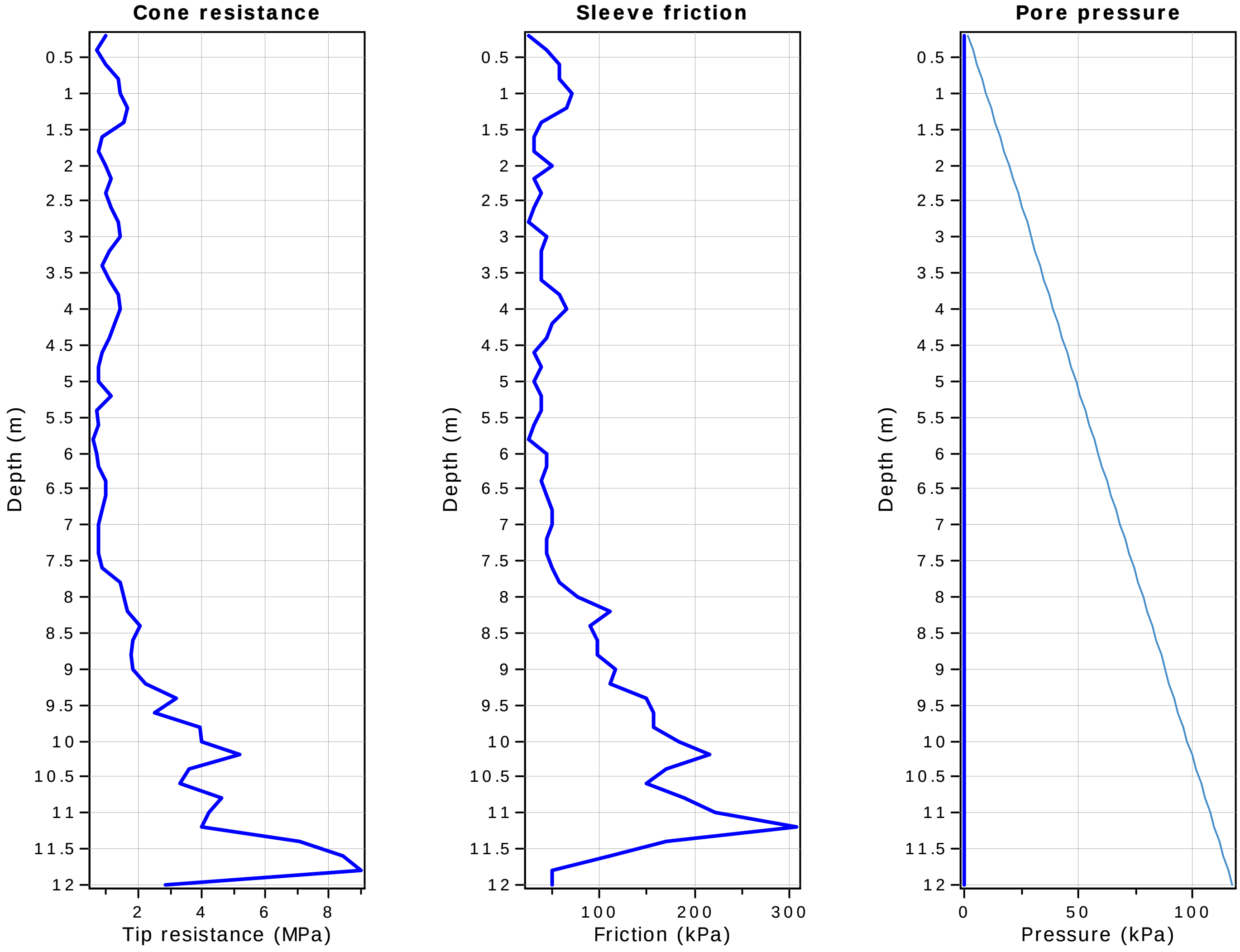


SBT legend

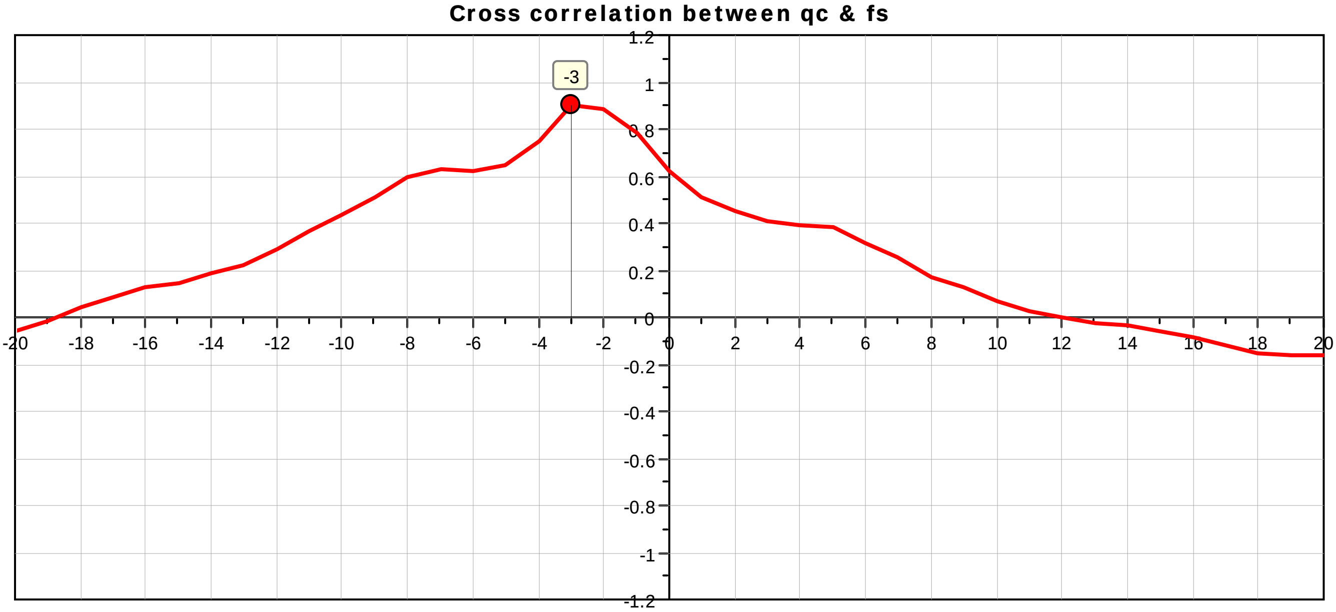
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P201CPT201
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

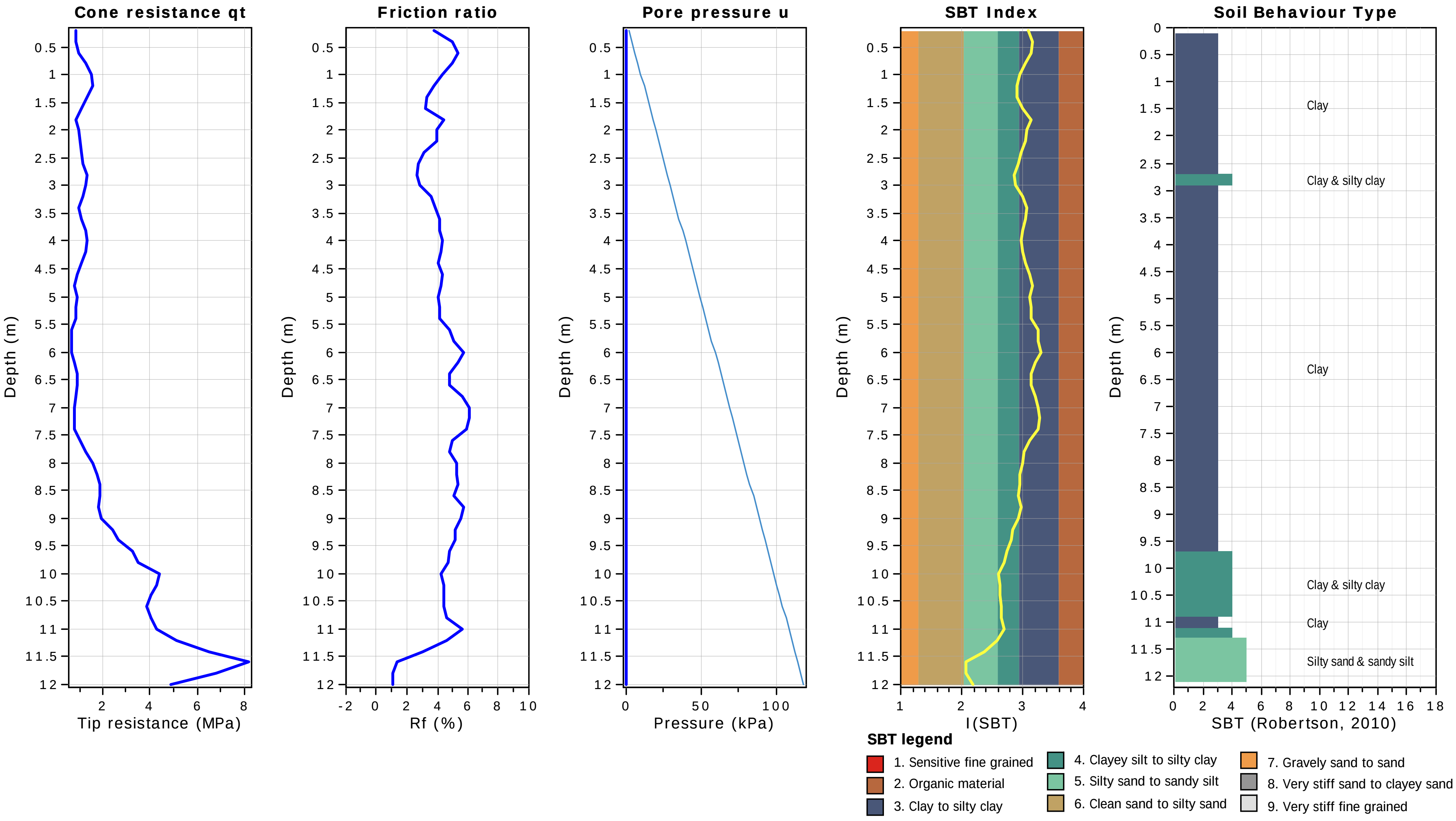


The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT: 036021P201CPT201
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



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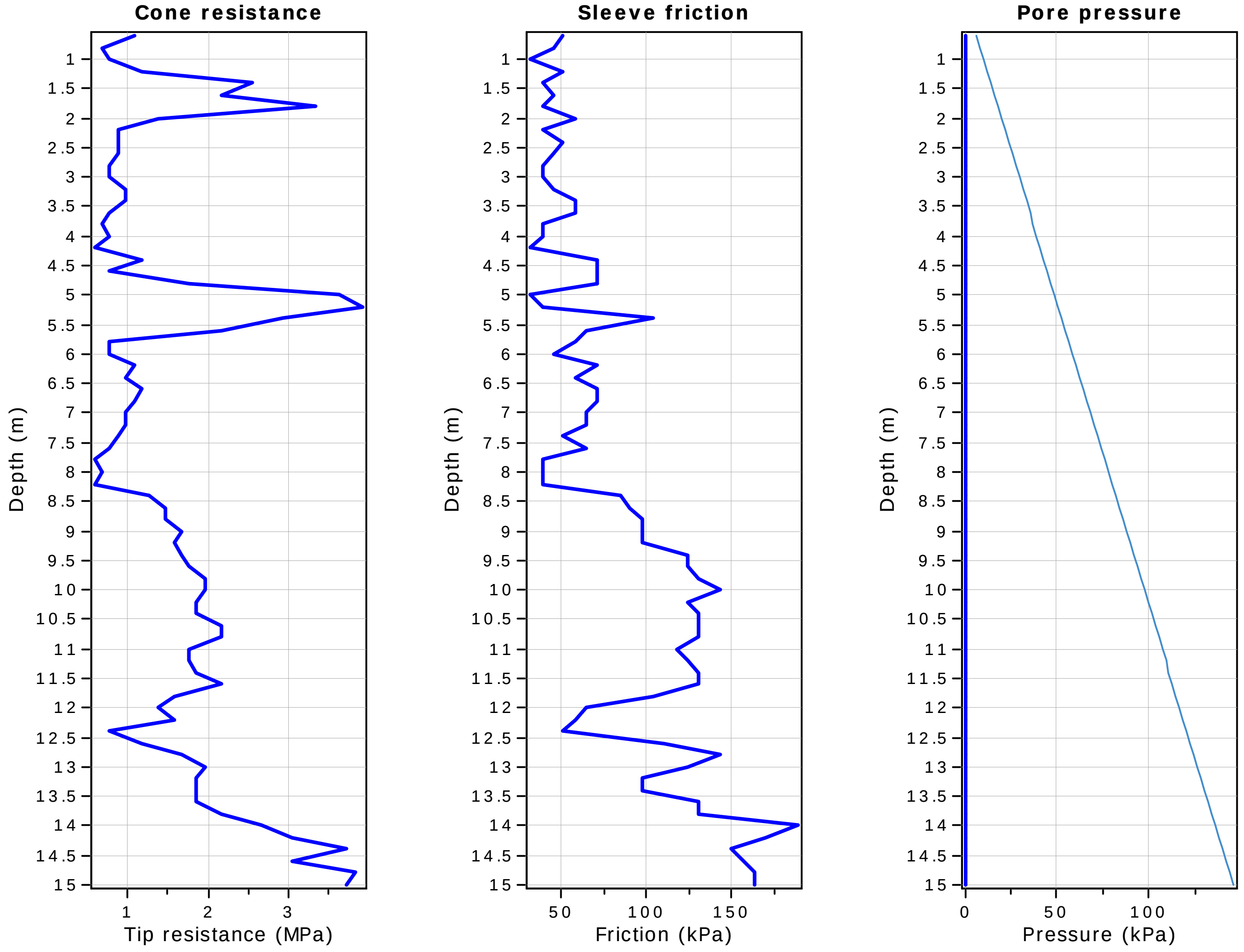
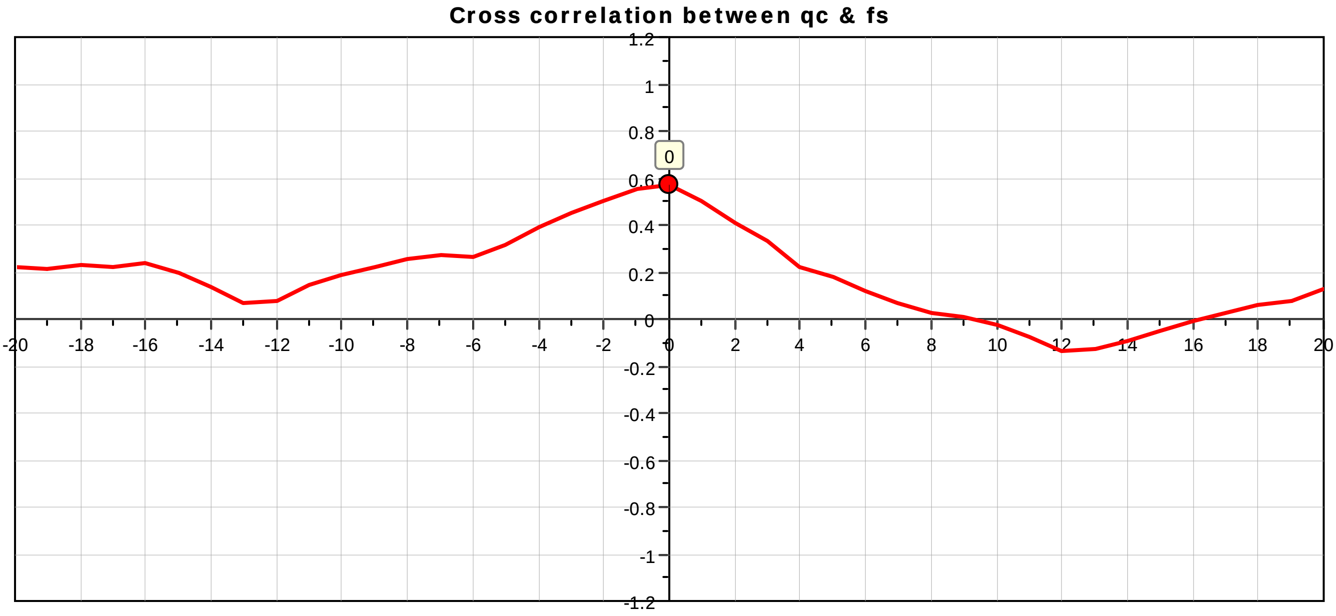
CPT: 036021P202CPT202
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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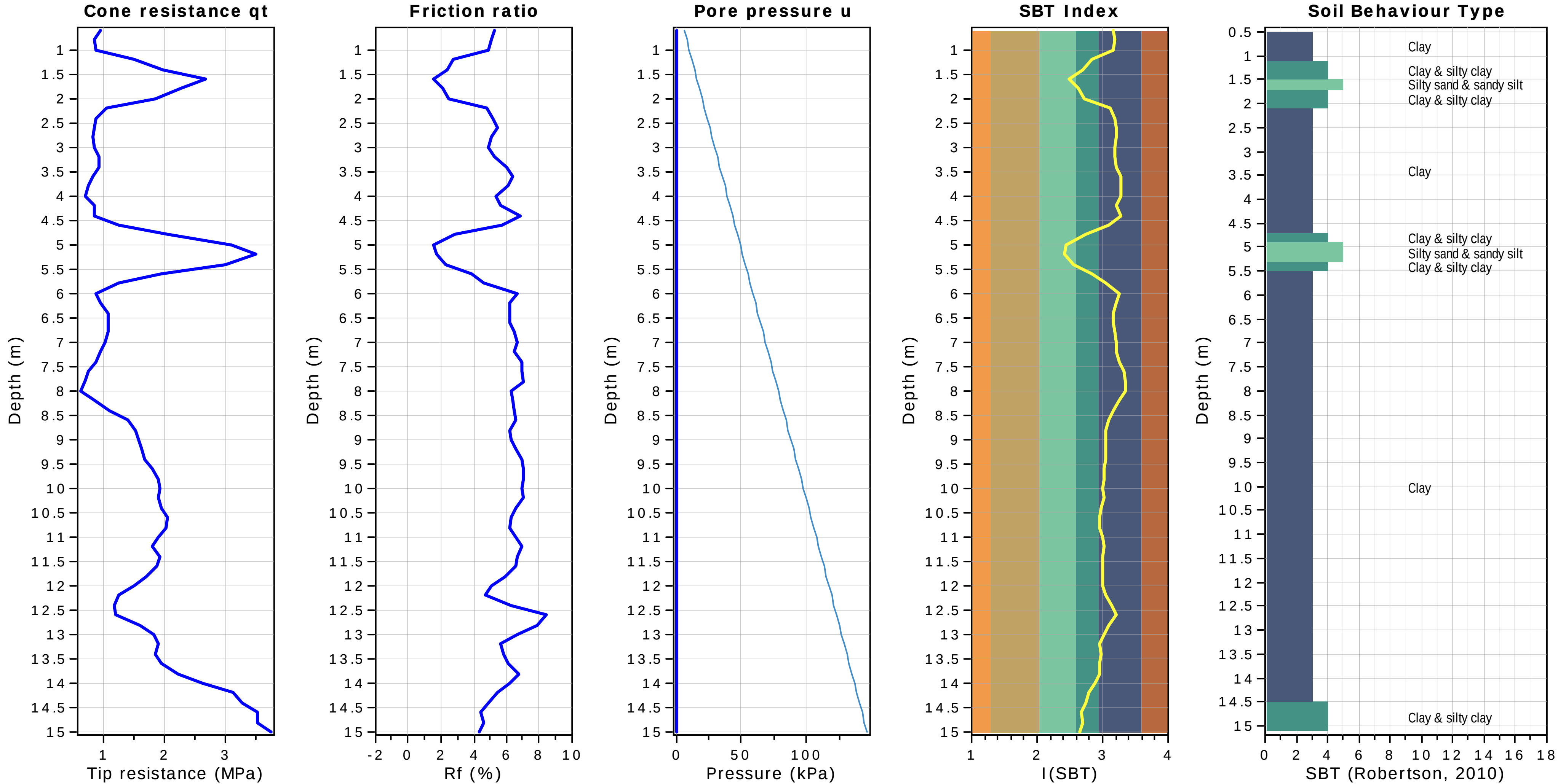
CPT: 036021P202CPT202
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

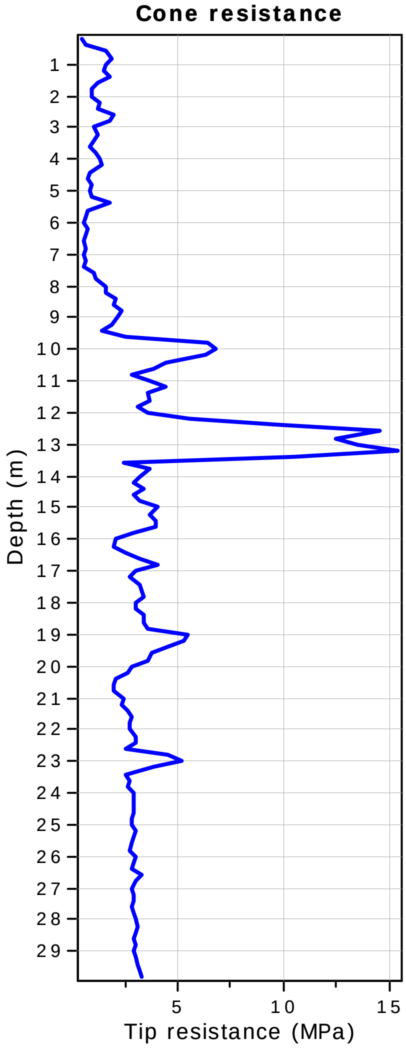


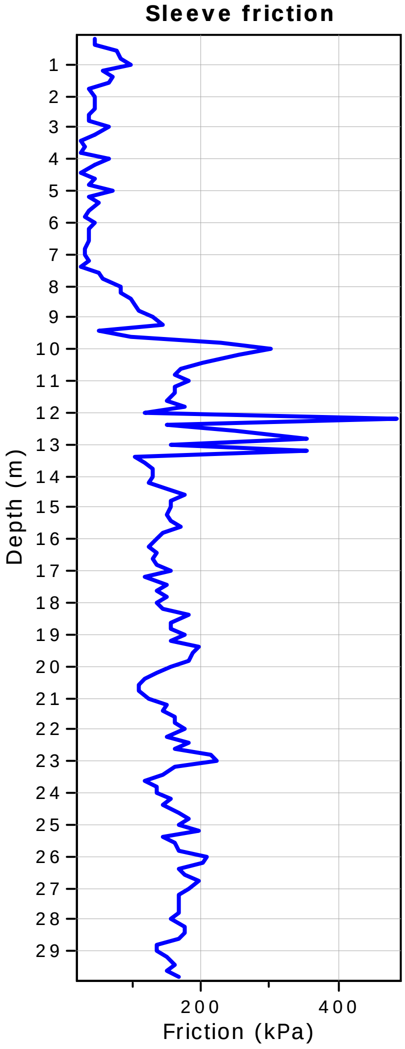
SBT legend

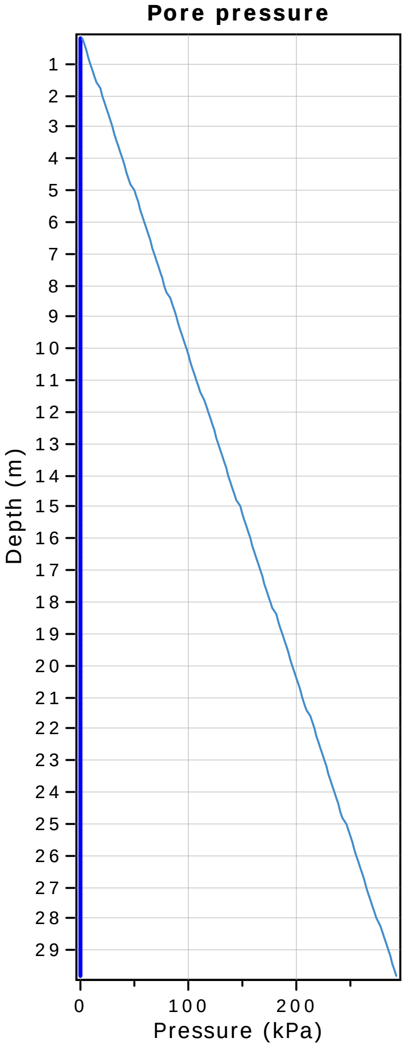
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P204CPT204
Total depth: 29.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

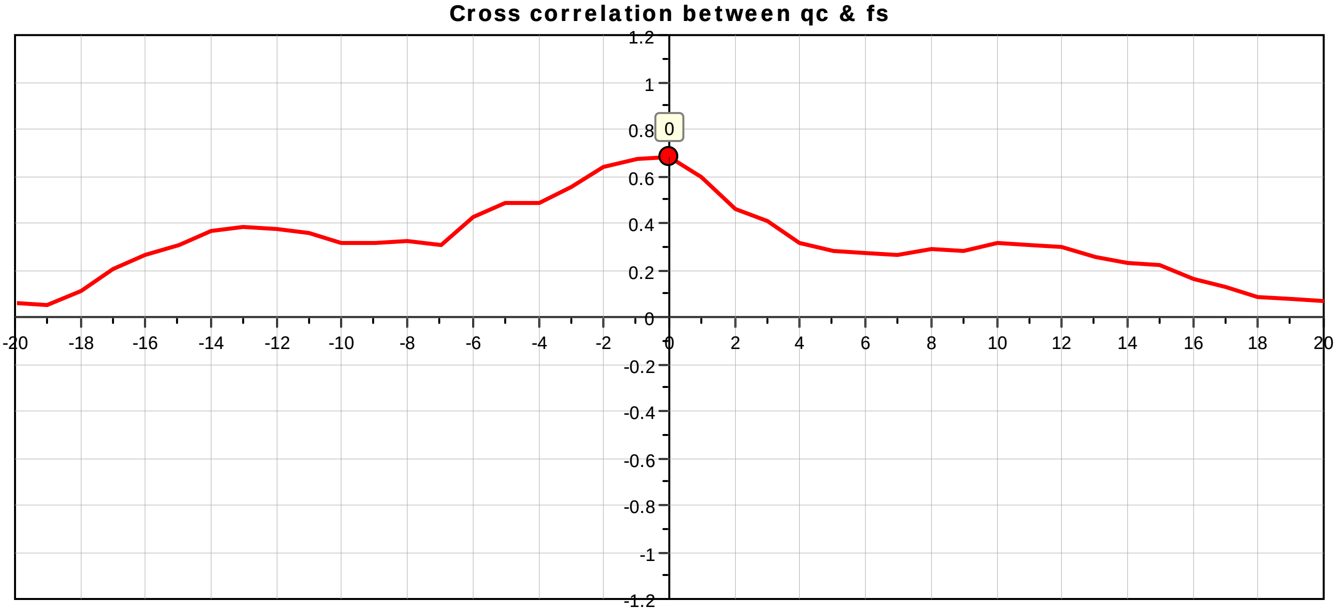
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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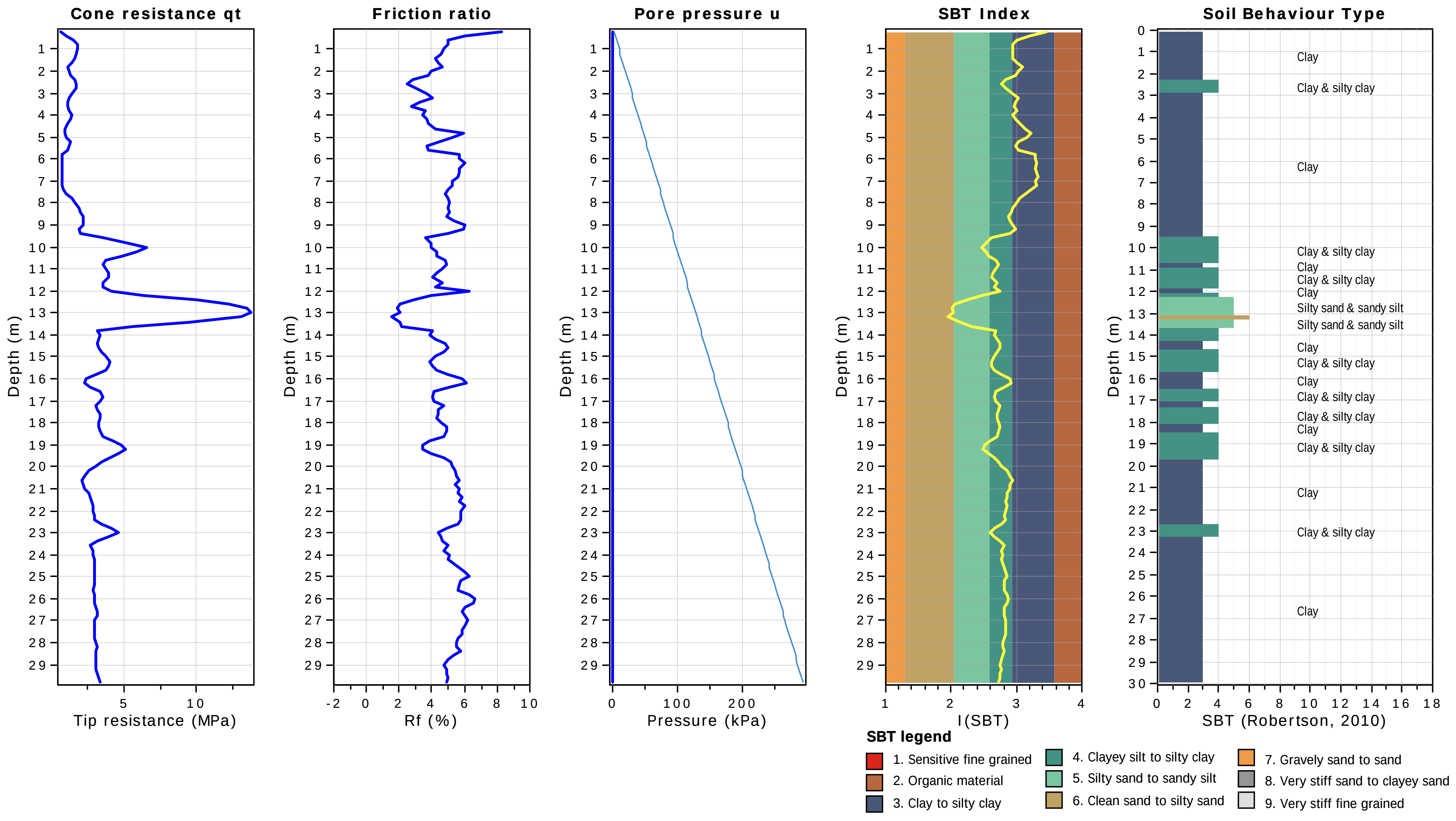
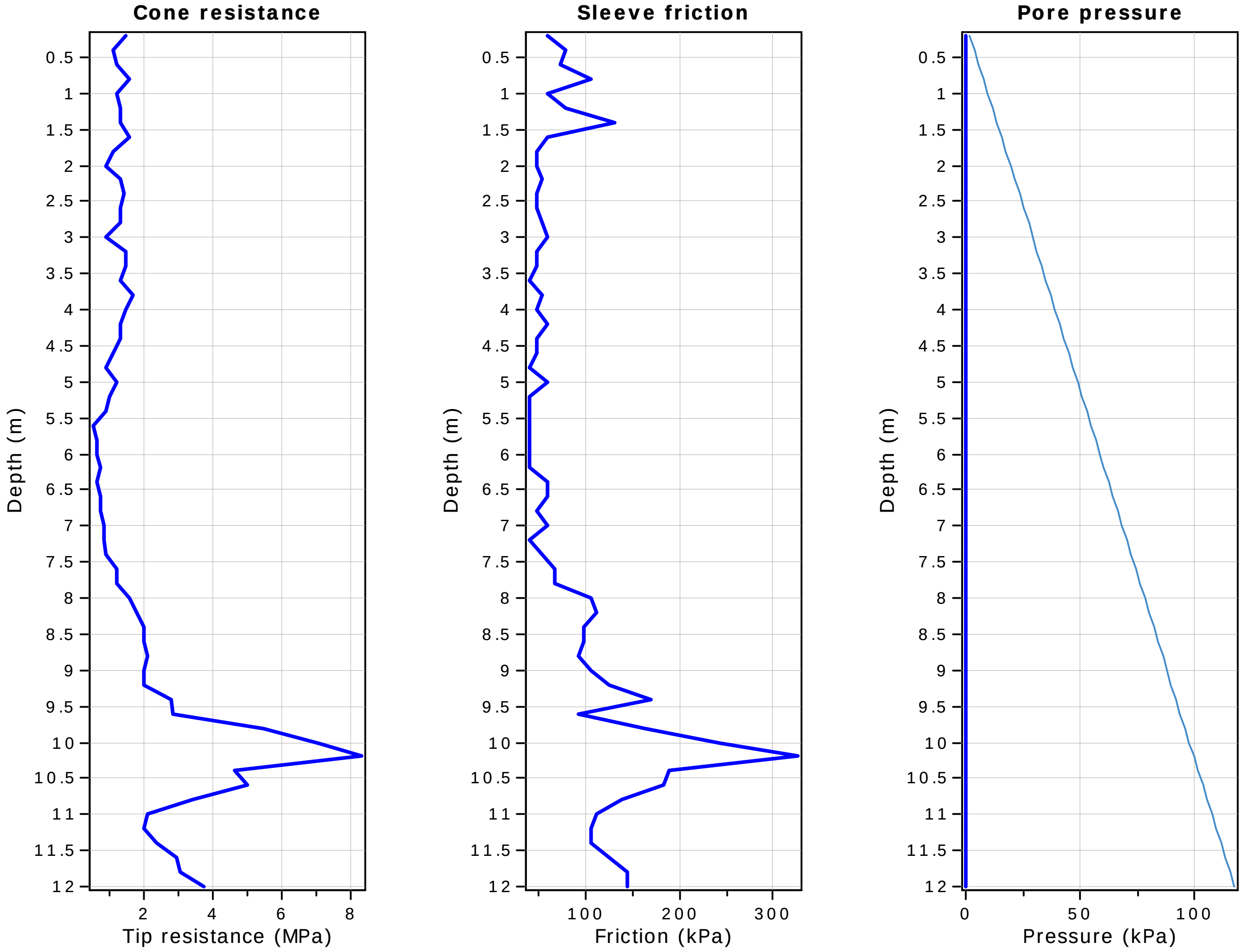
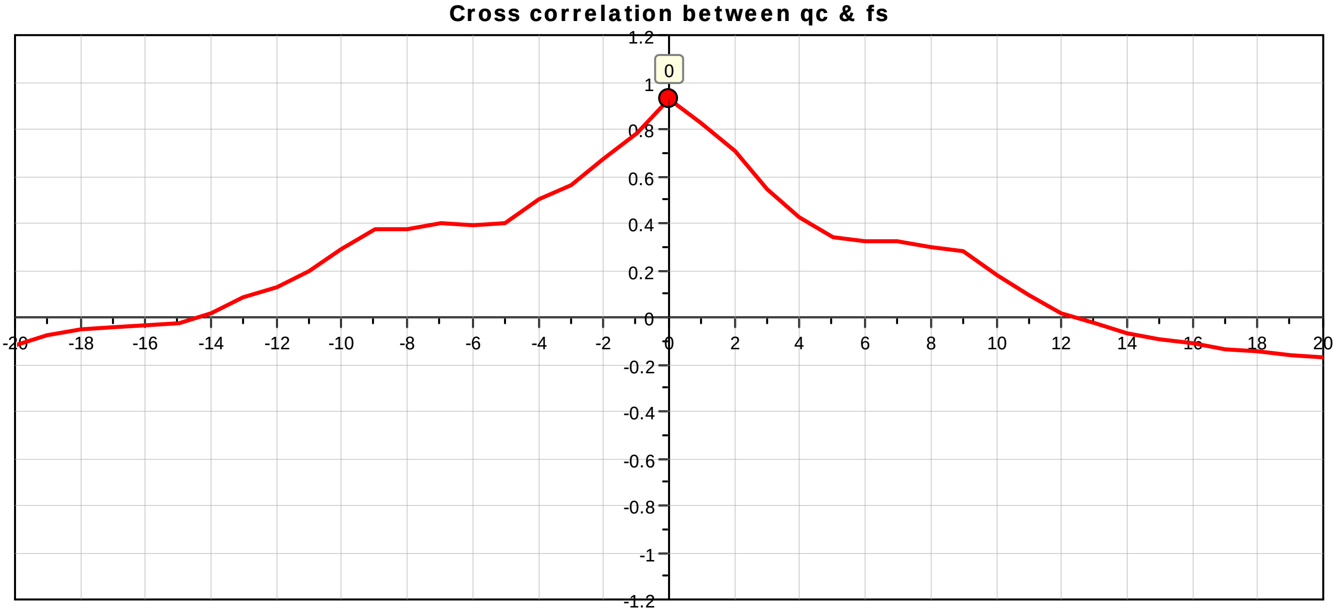
CPT: 036021P204CPT204
Total depth: 29.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:





The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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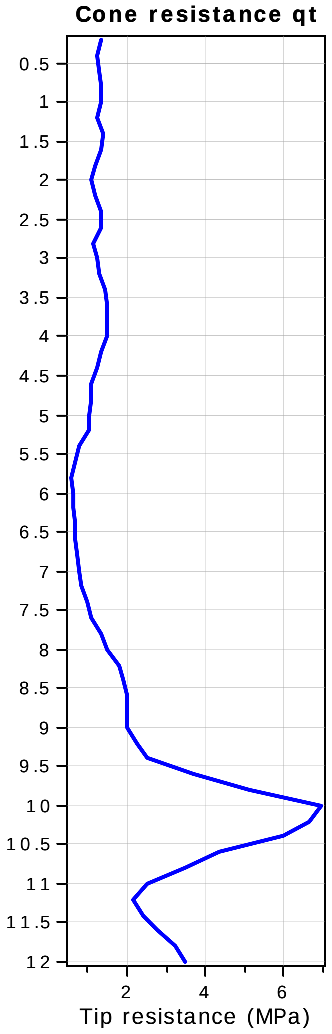
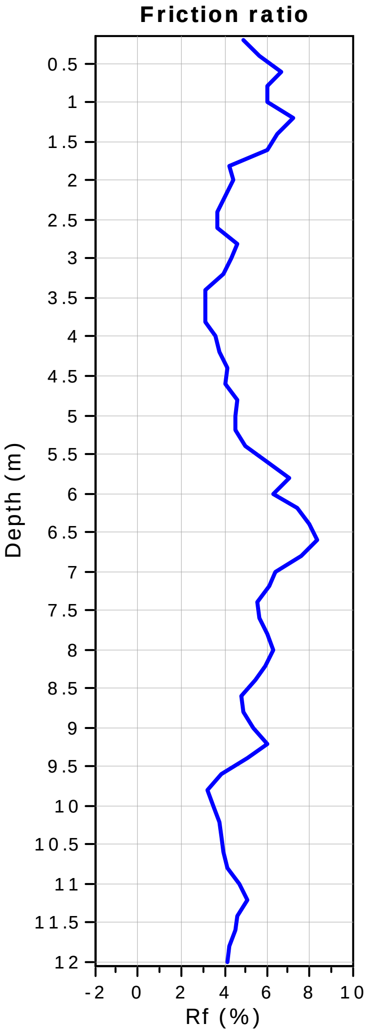
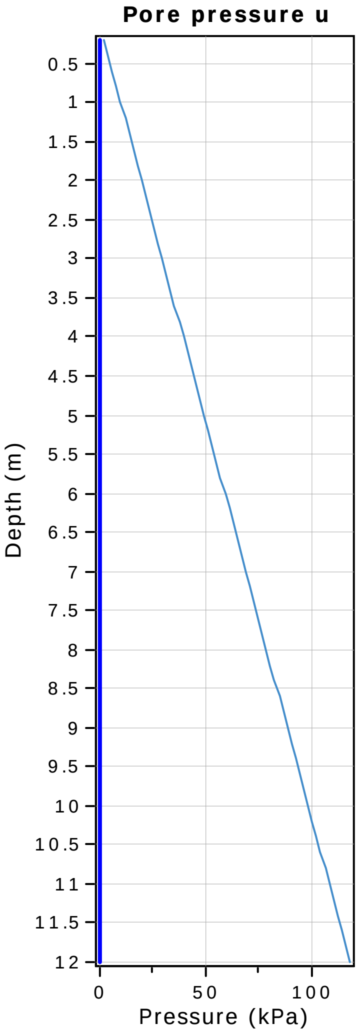
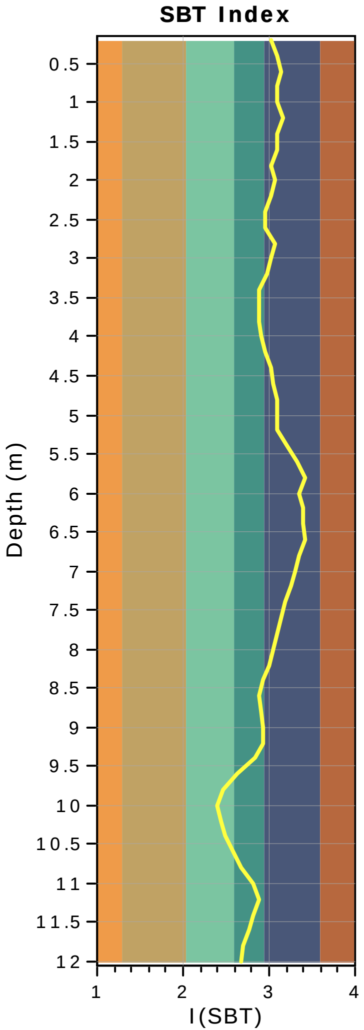
CPT: 036021P205CPT205
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

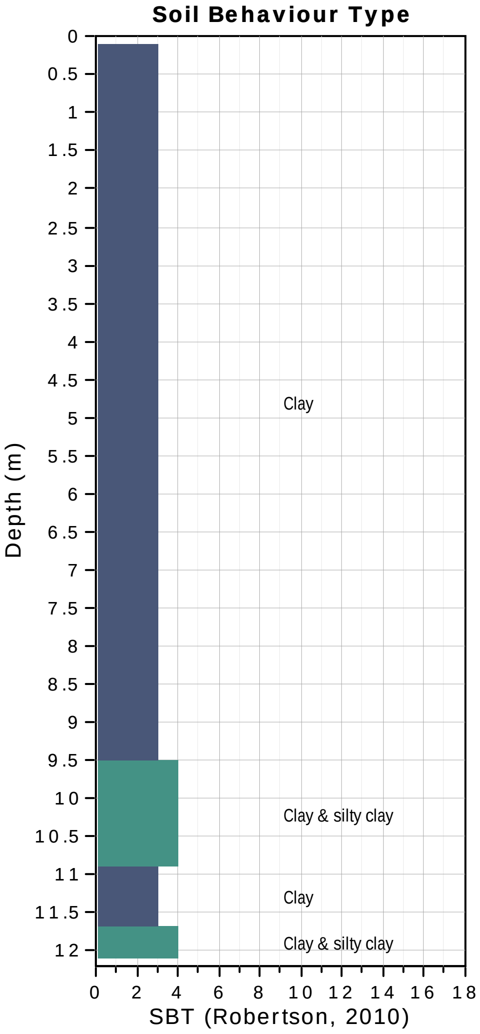
Project:
Location:









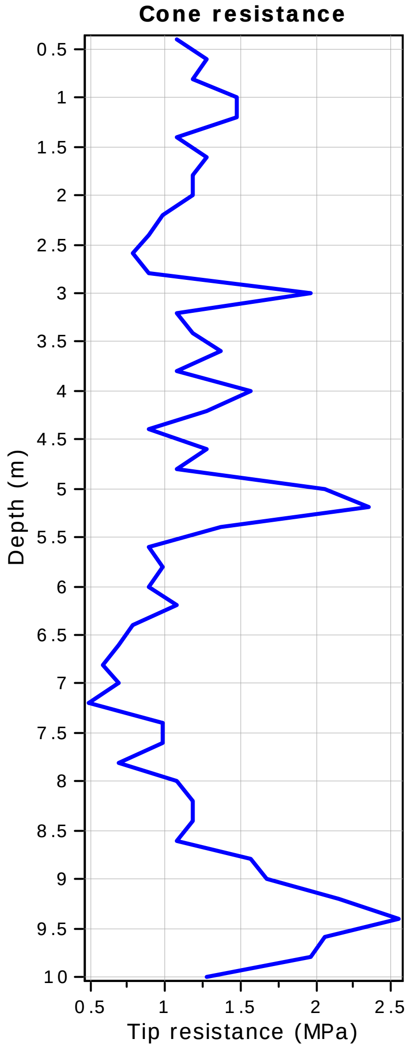


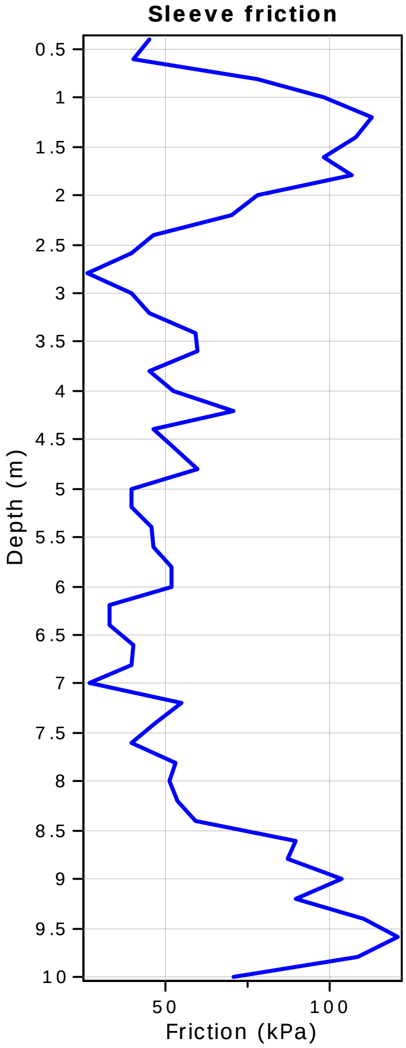
SBT legend

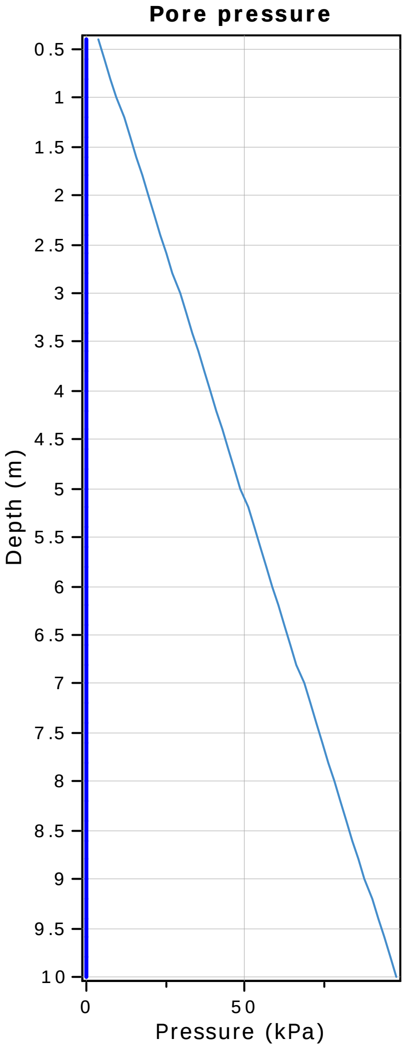
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬛ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

CPT: 036021P206CPT206
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

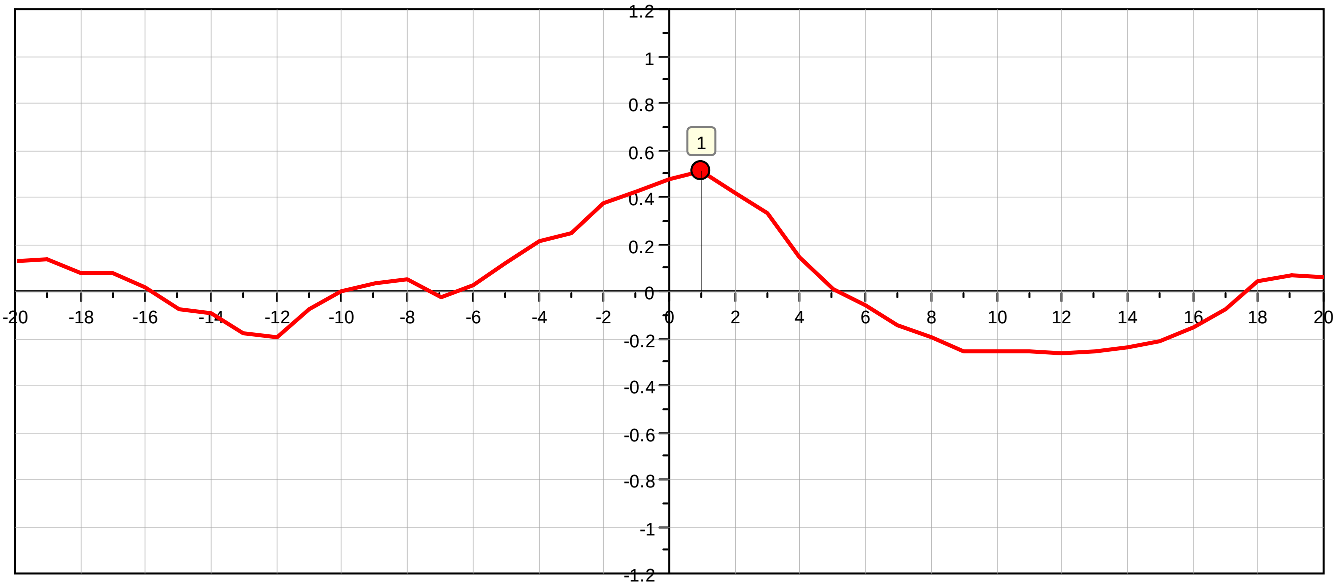






The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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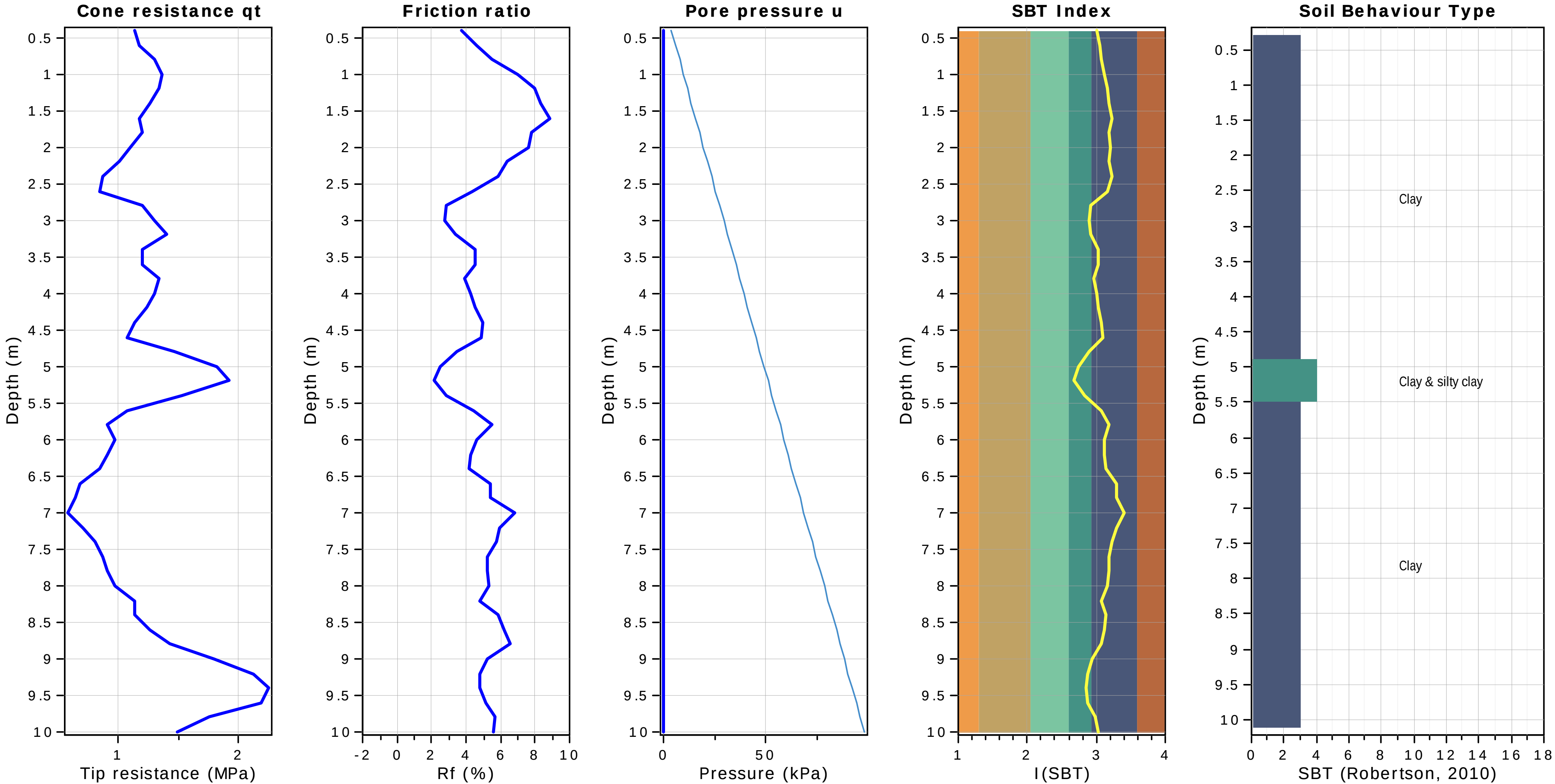
CPT: 036021P206CPT206
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

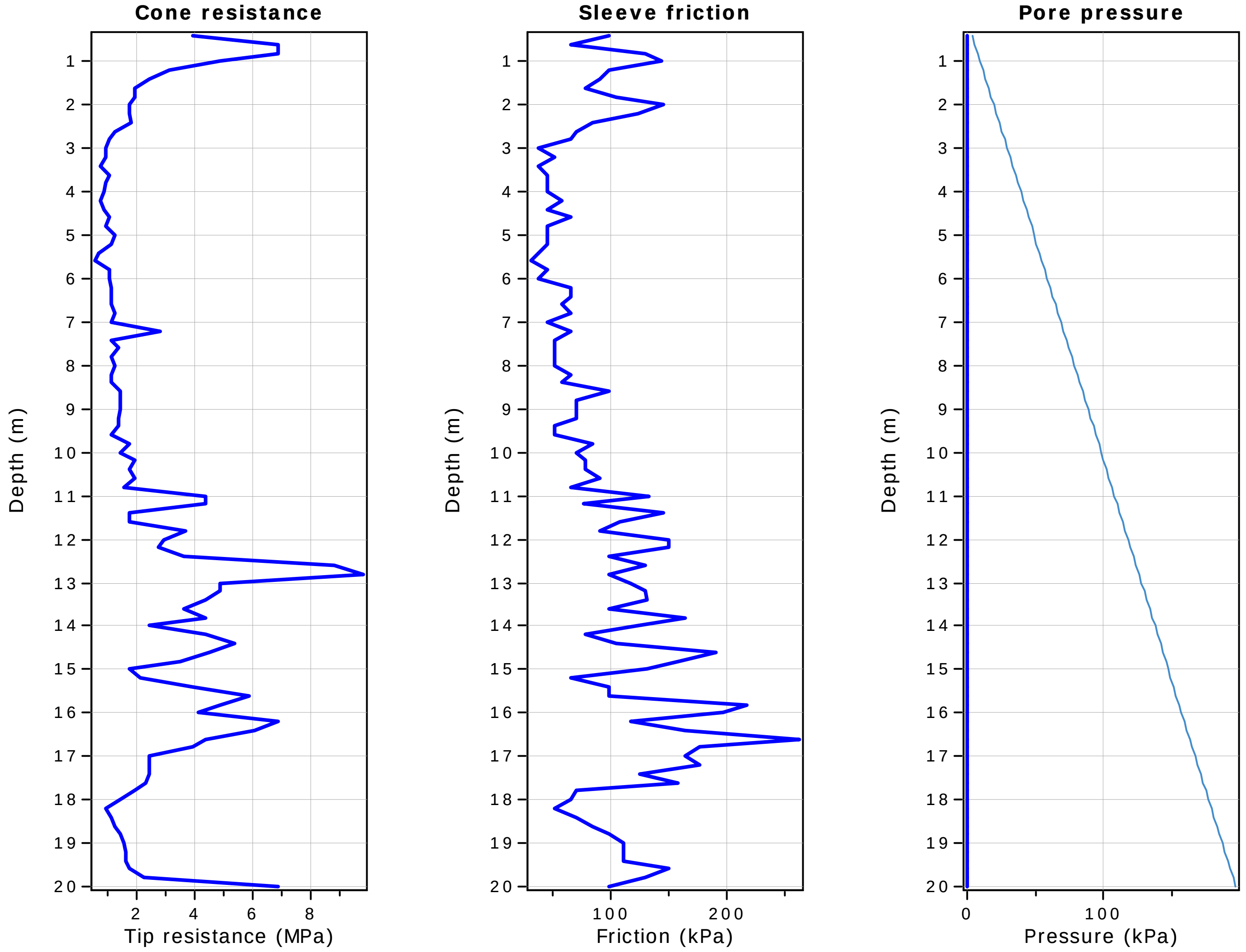


SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

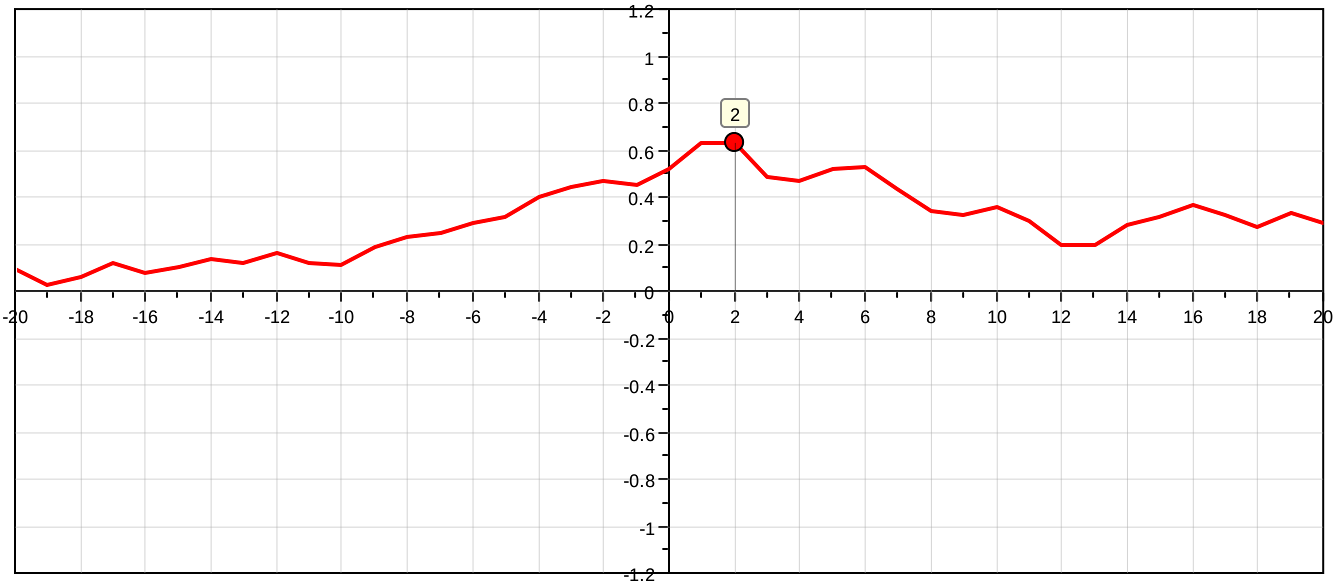
CPT: 036021P207CPT207
Total depth: 20.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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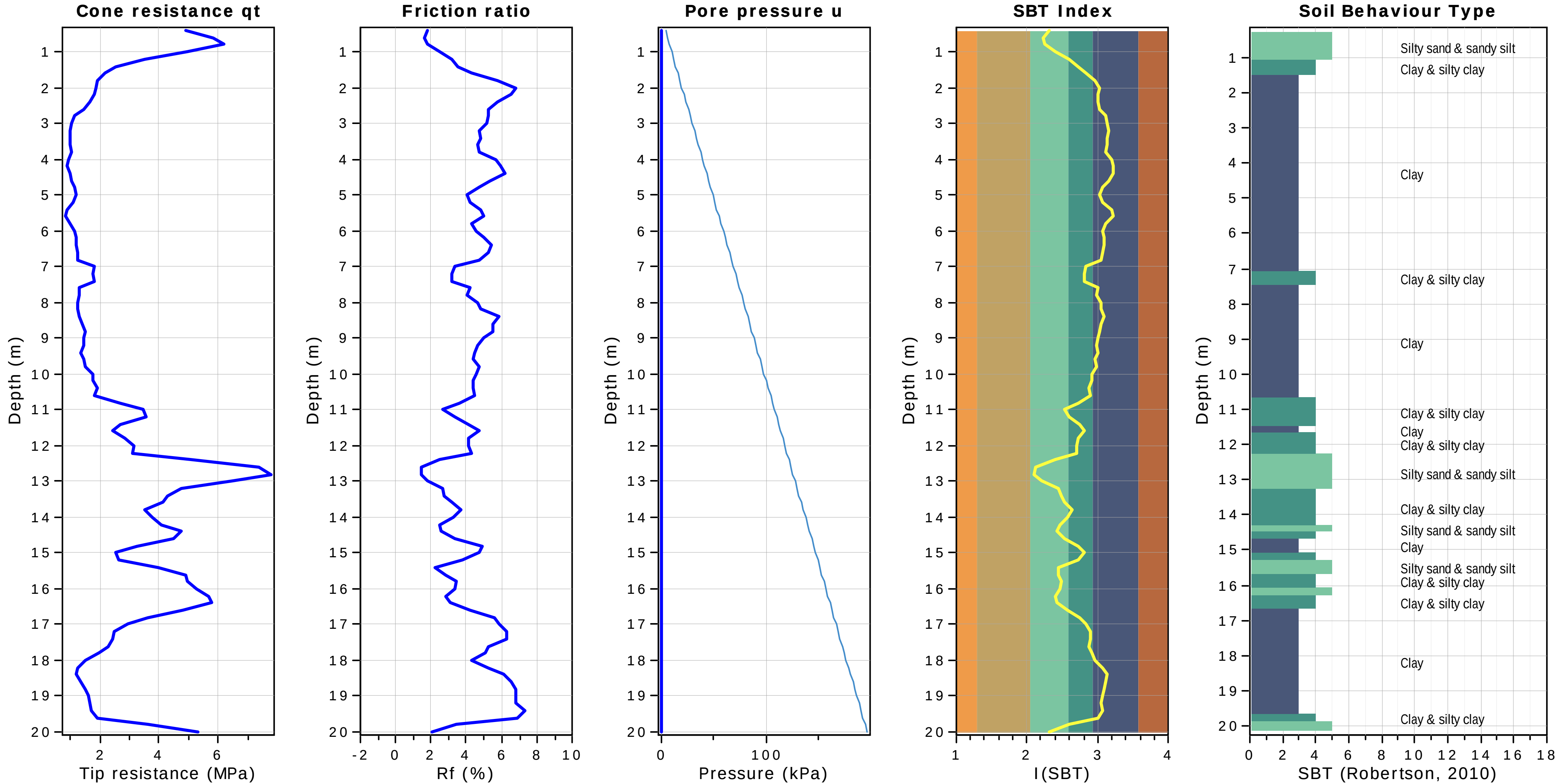
CPT: 036021P207CPT207
Total depth: 20.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

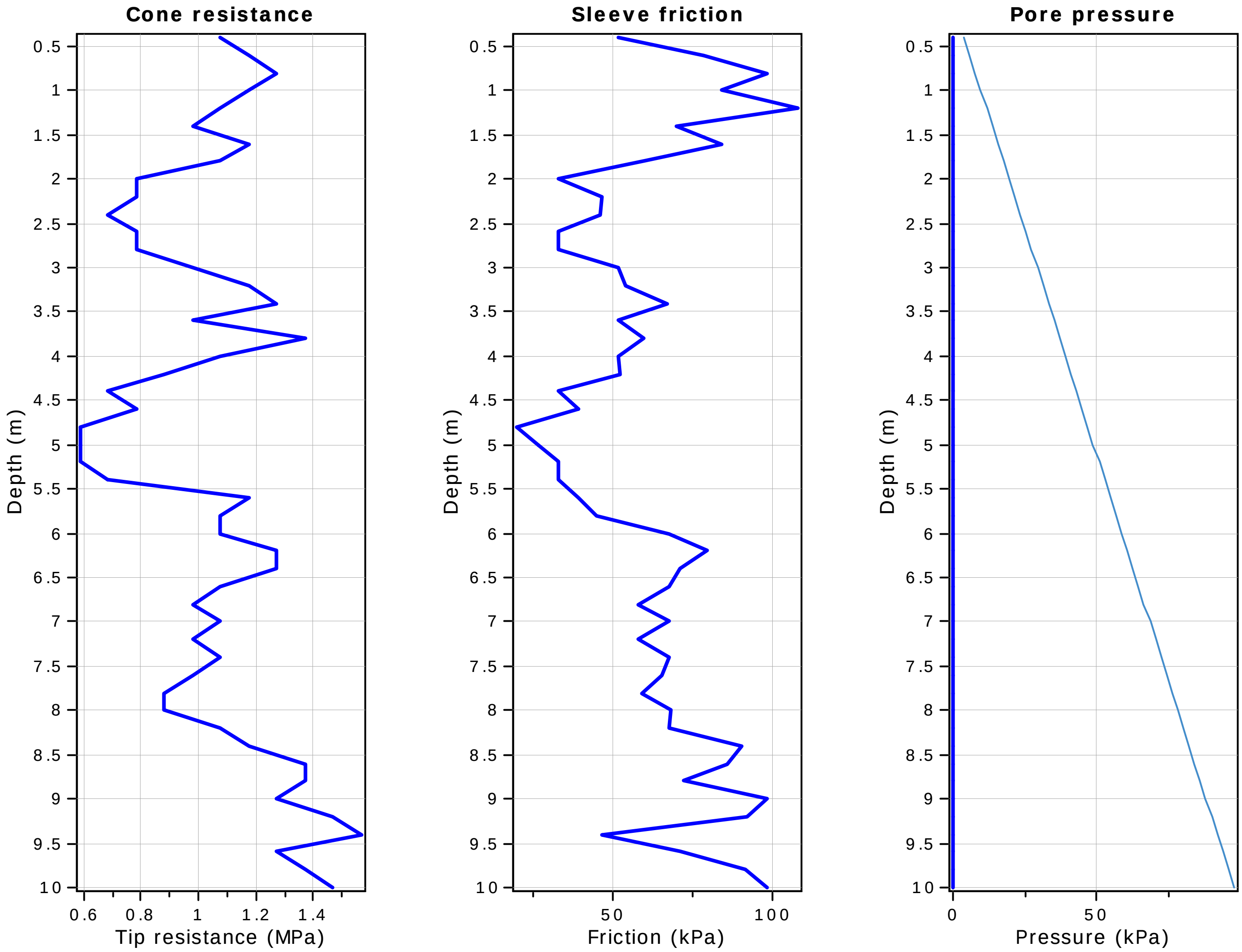


SBT legend

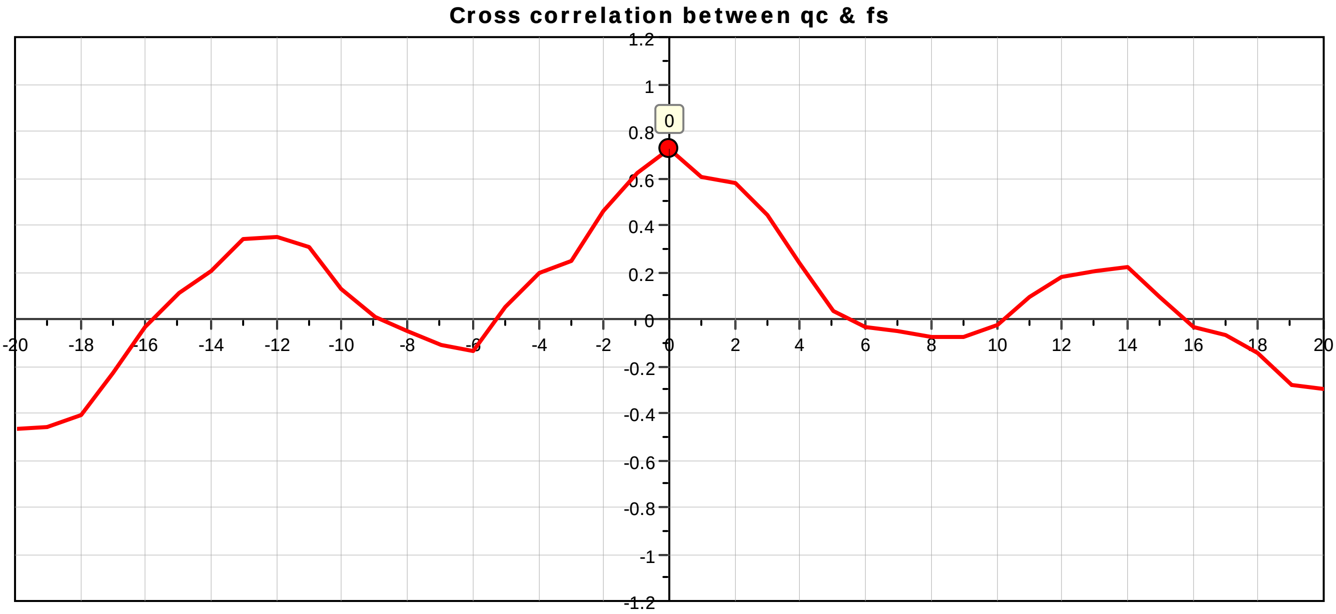
🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟫 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

CPT: 036021P208CPT208
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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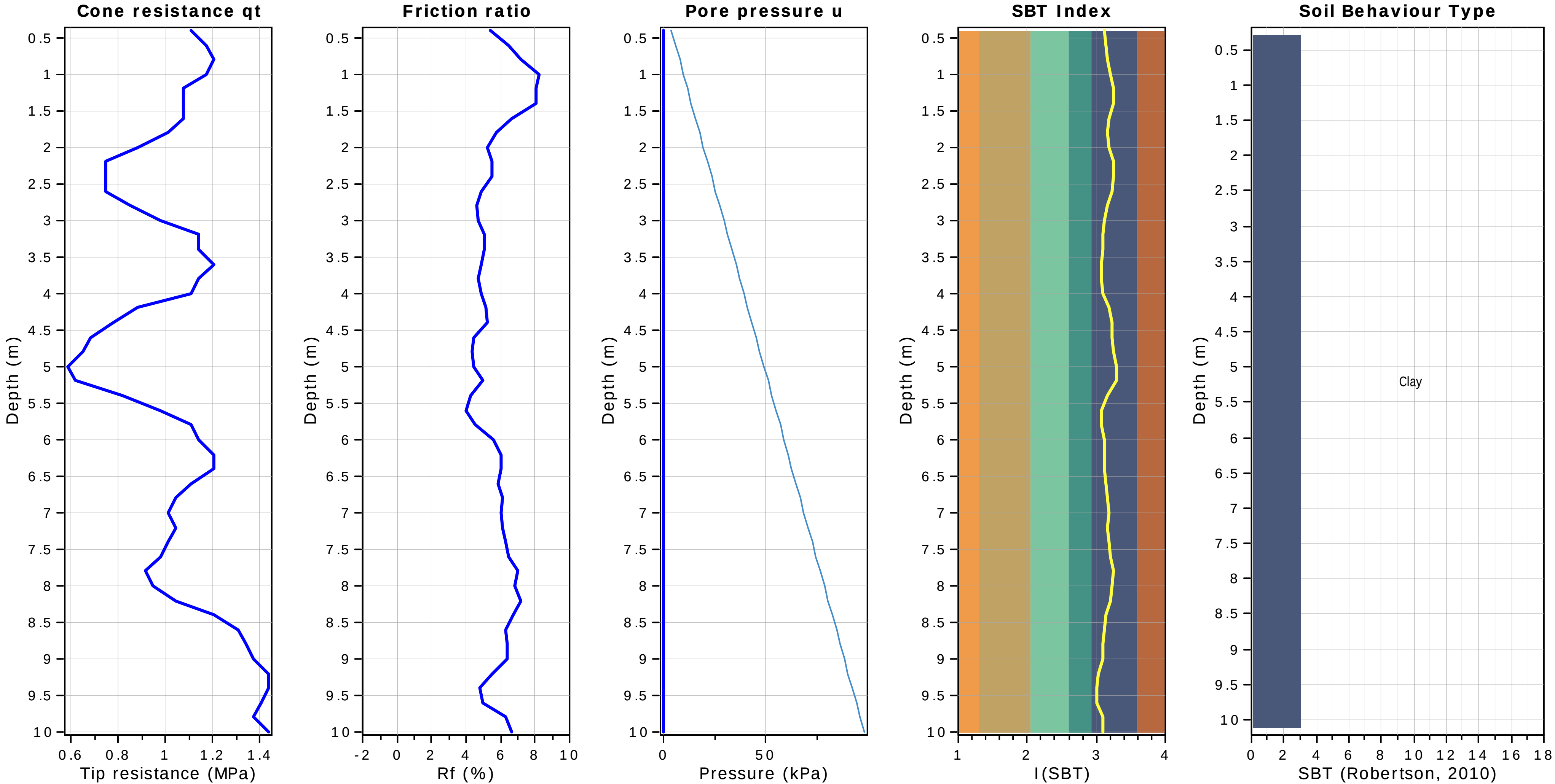
CPT: 036021P208CPT208
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
■ 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
■ 8. Very stiff sand to clayey sand
□ 9. Very stiff fine grained

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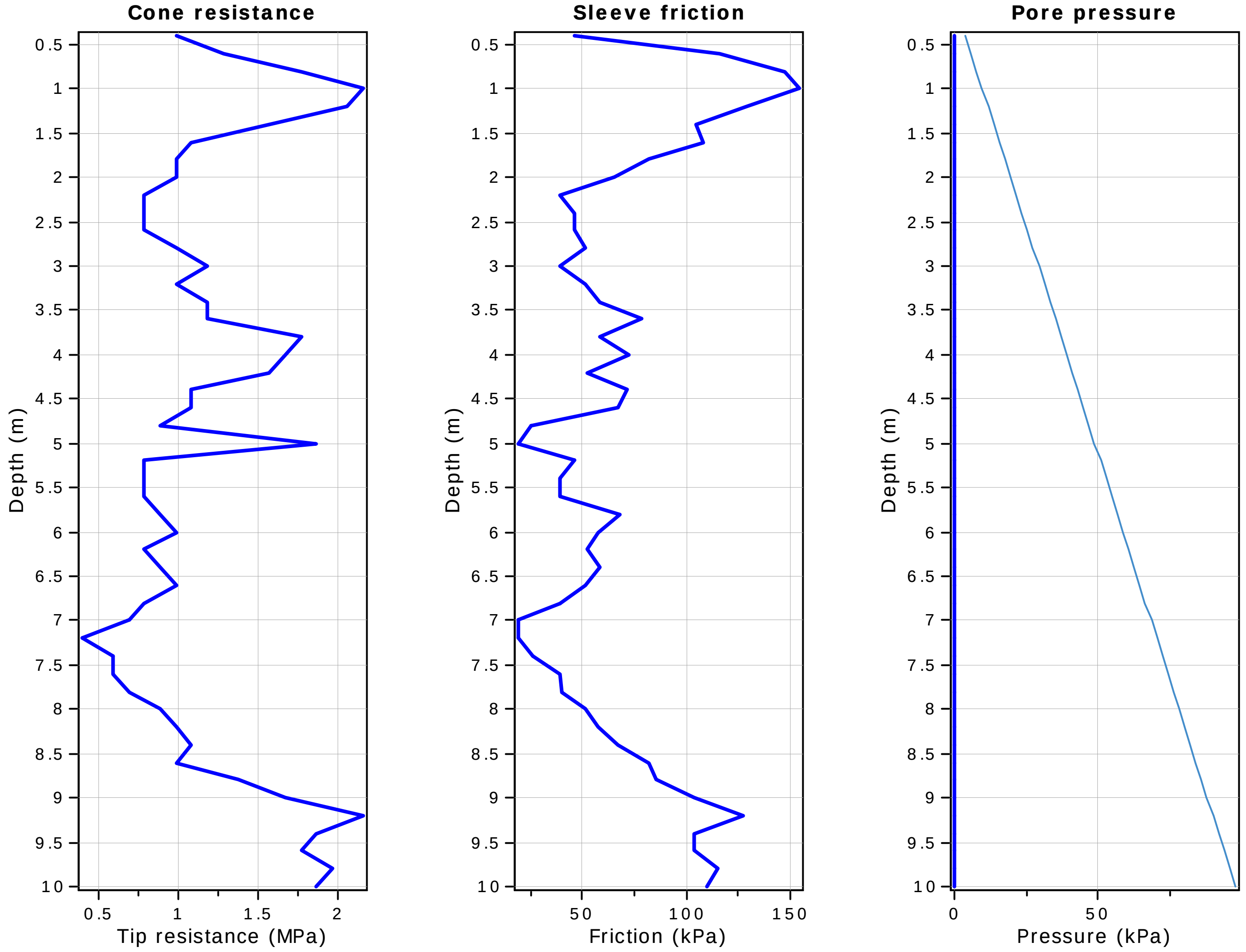
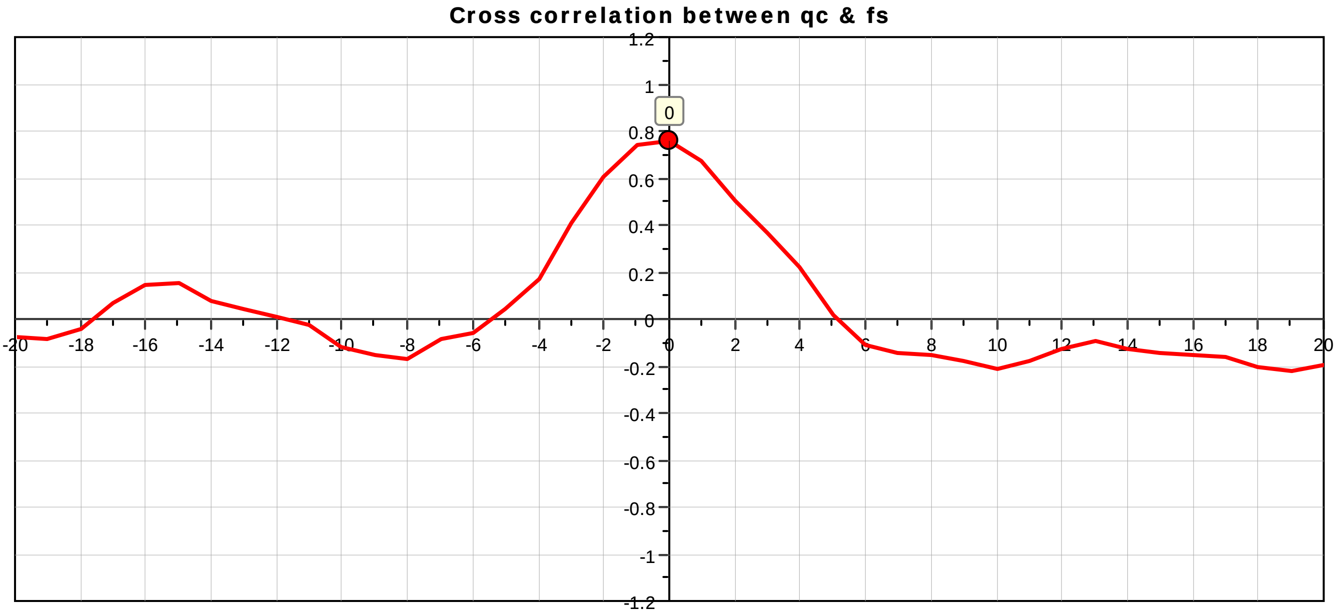
CPT: 036021P209CPT209
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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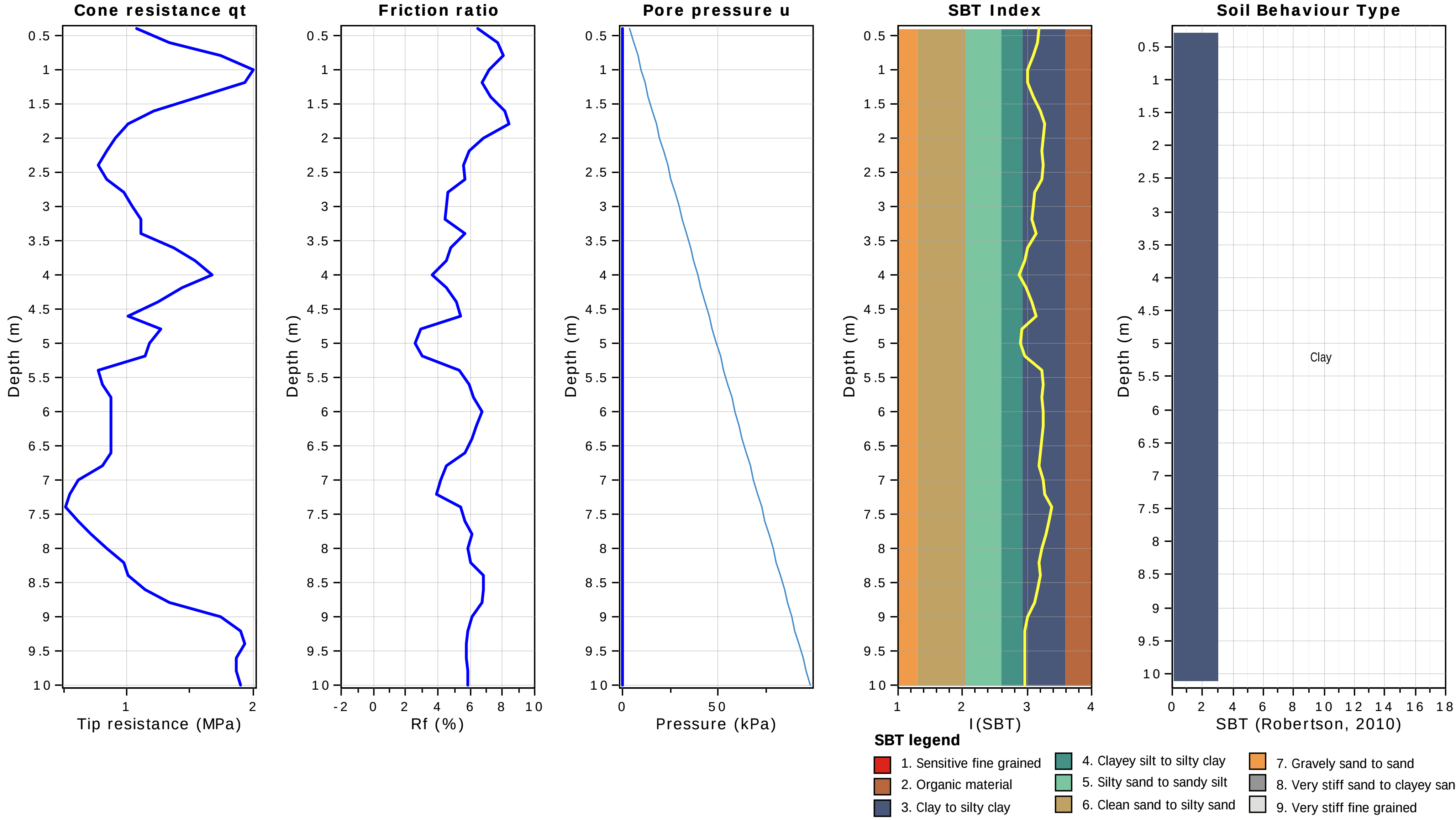
CPT: 036021P209CPT209
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



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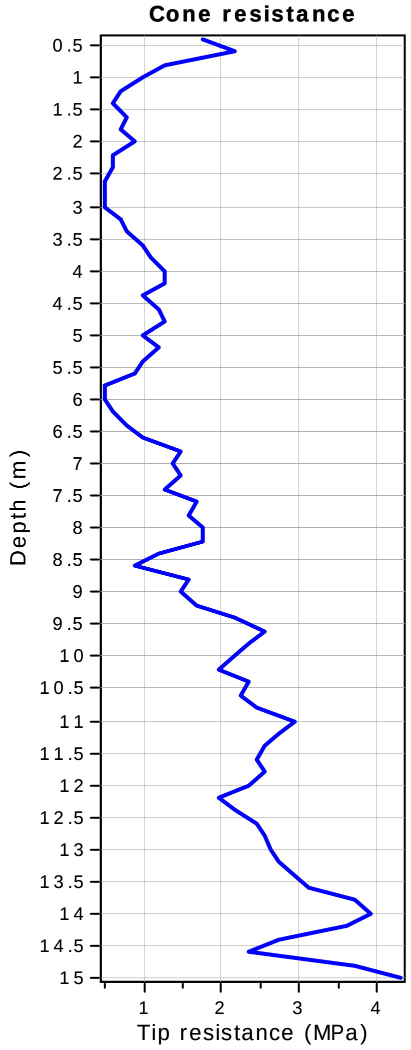
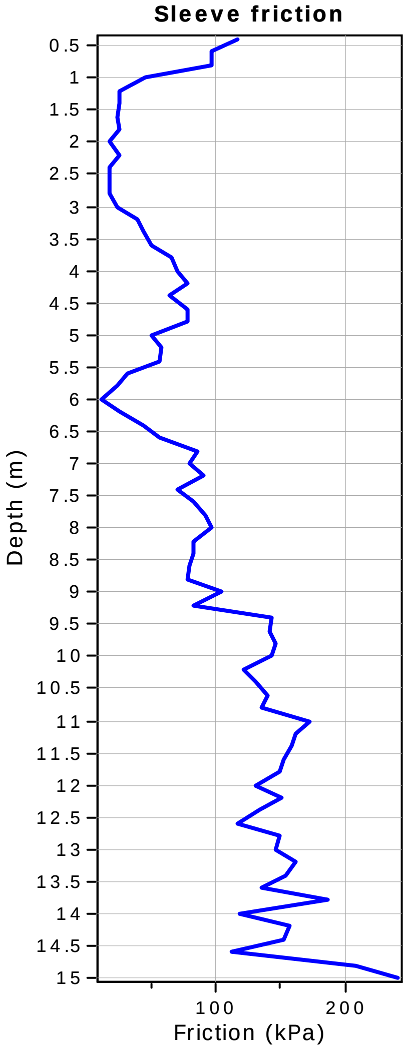
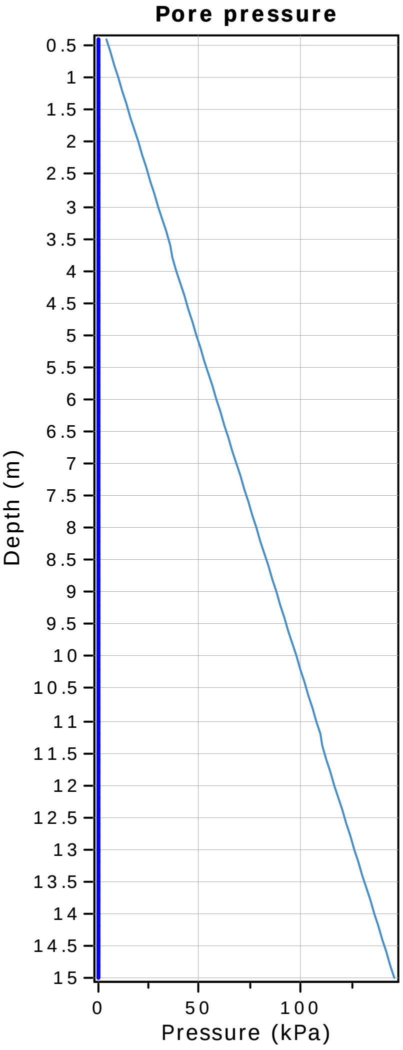
CPT: 036021P20CPT20
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

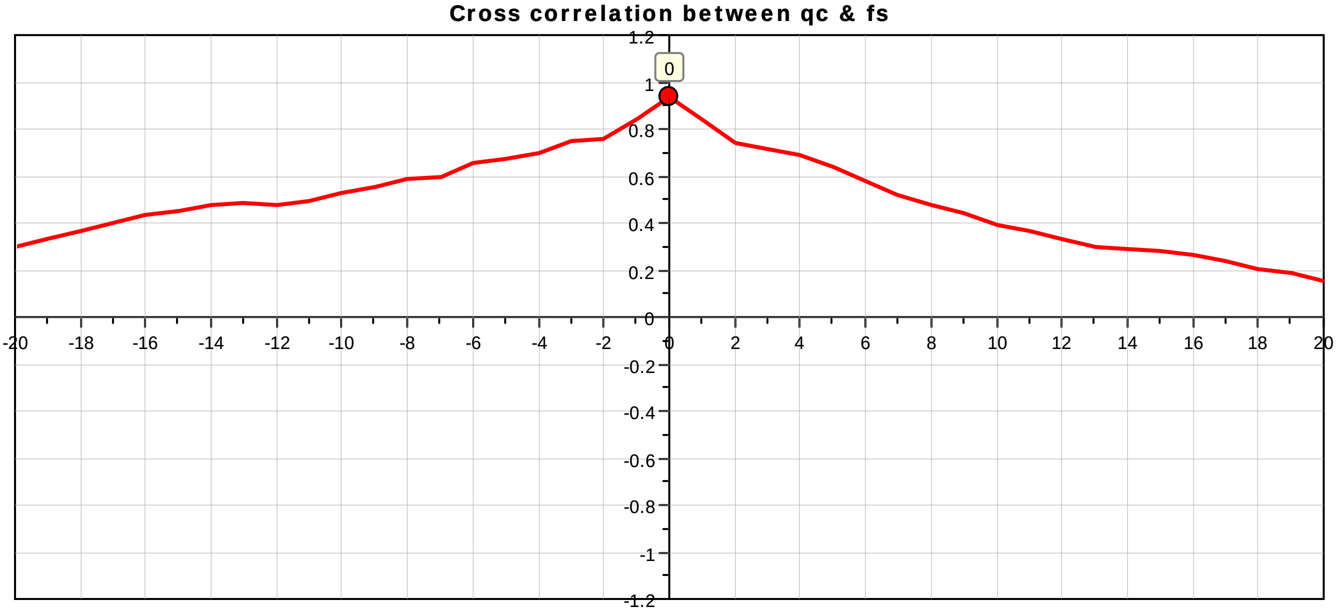
Project:
Location:


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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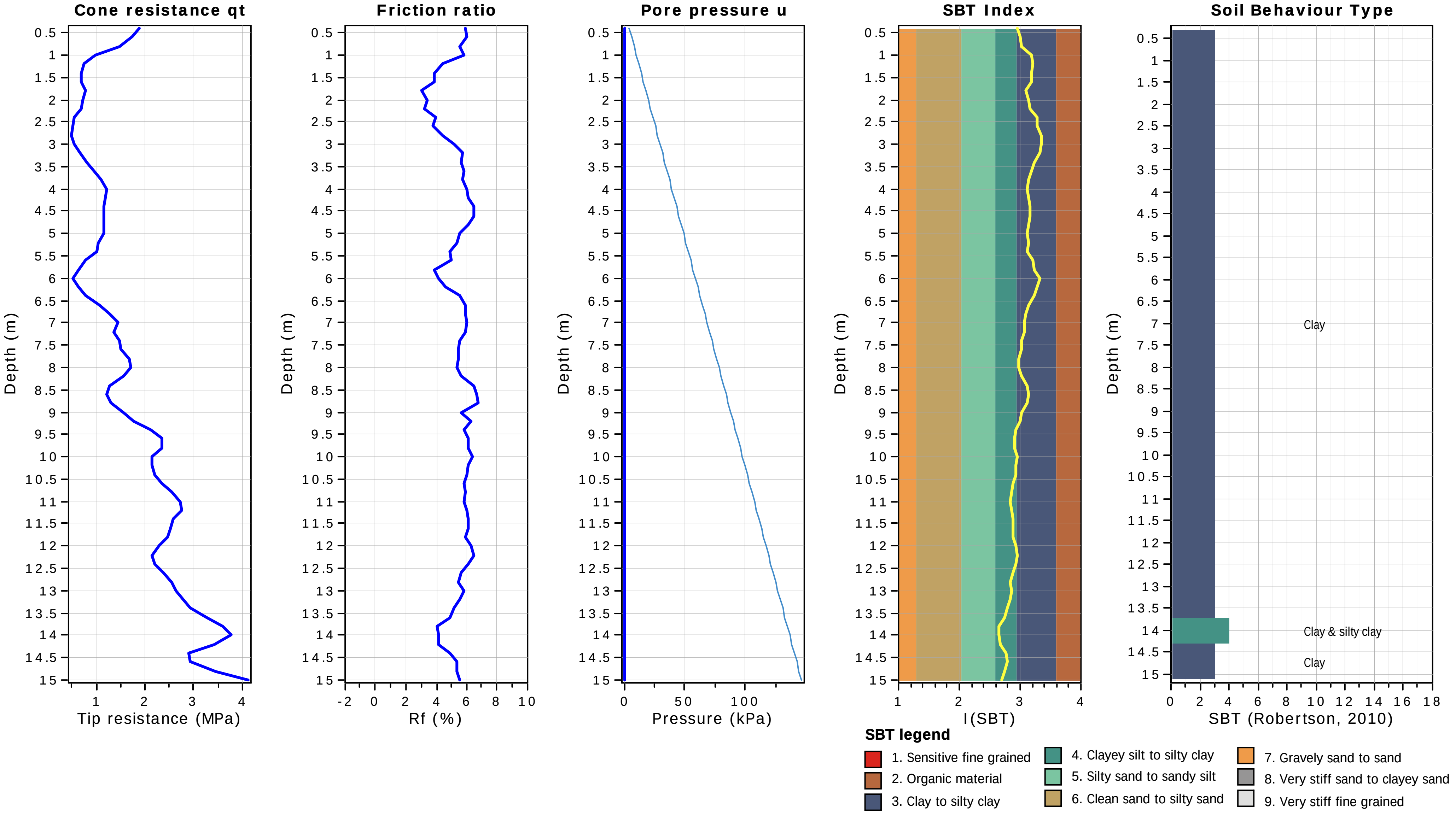
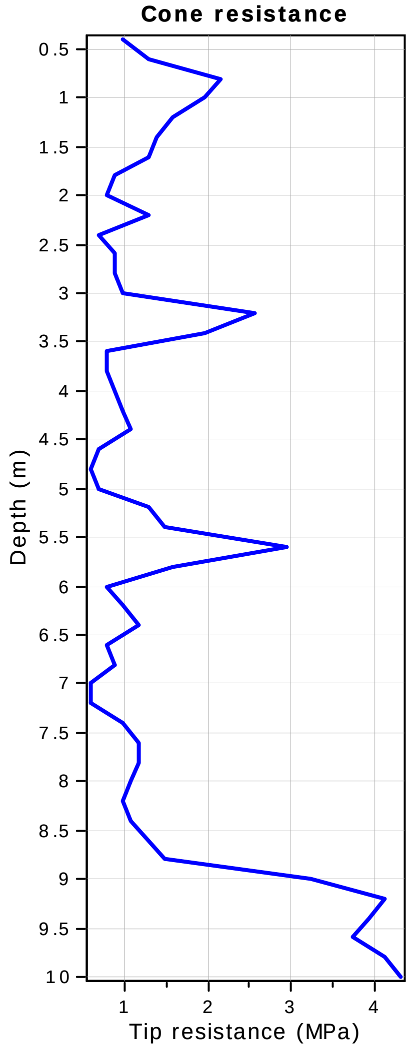
CPT: 036021P20CPT20
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

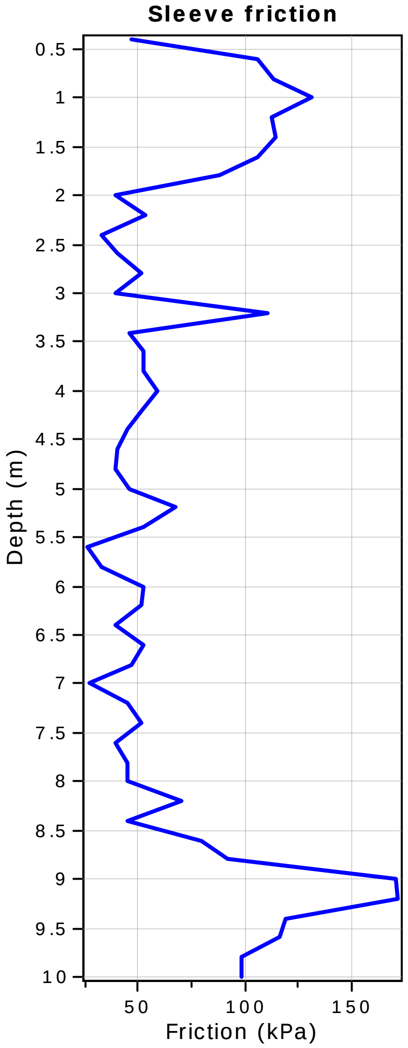
Project:
Location:

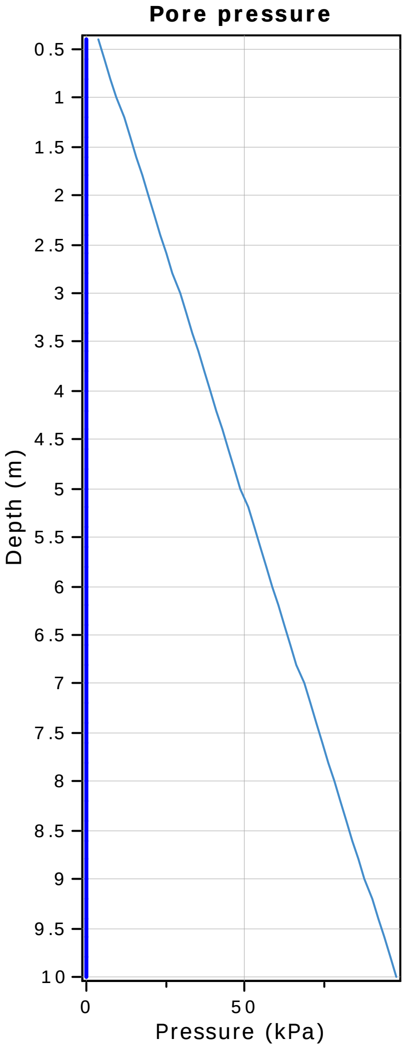


CPT: 036021P211CPT211
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

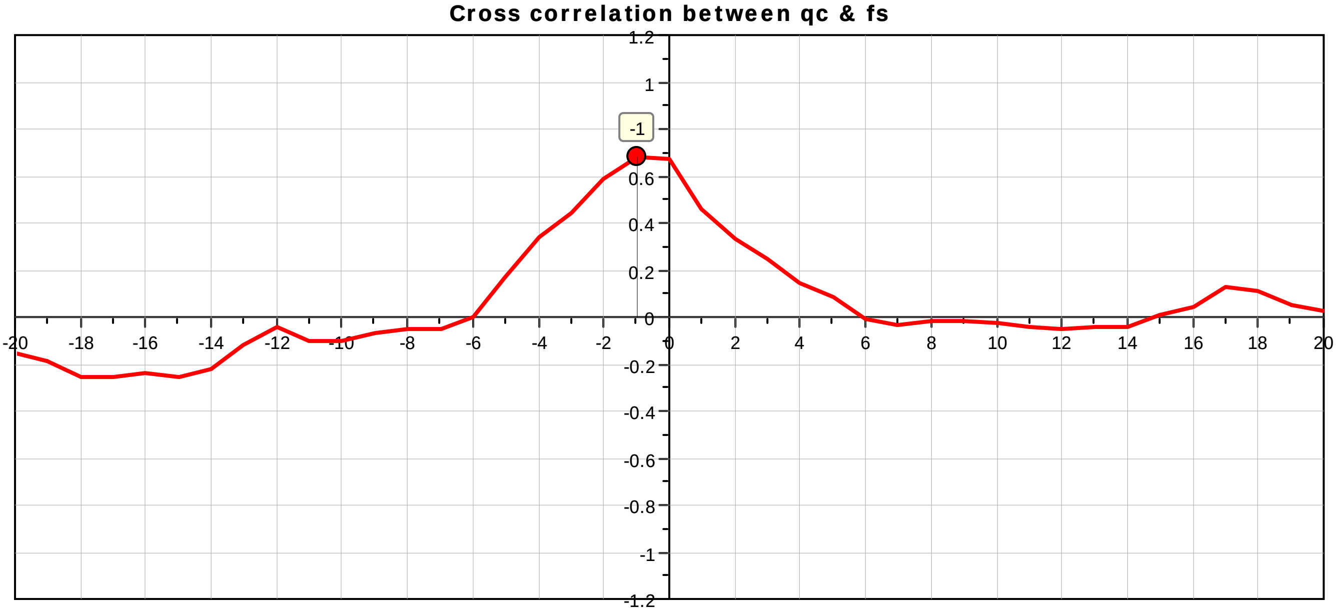
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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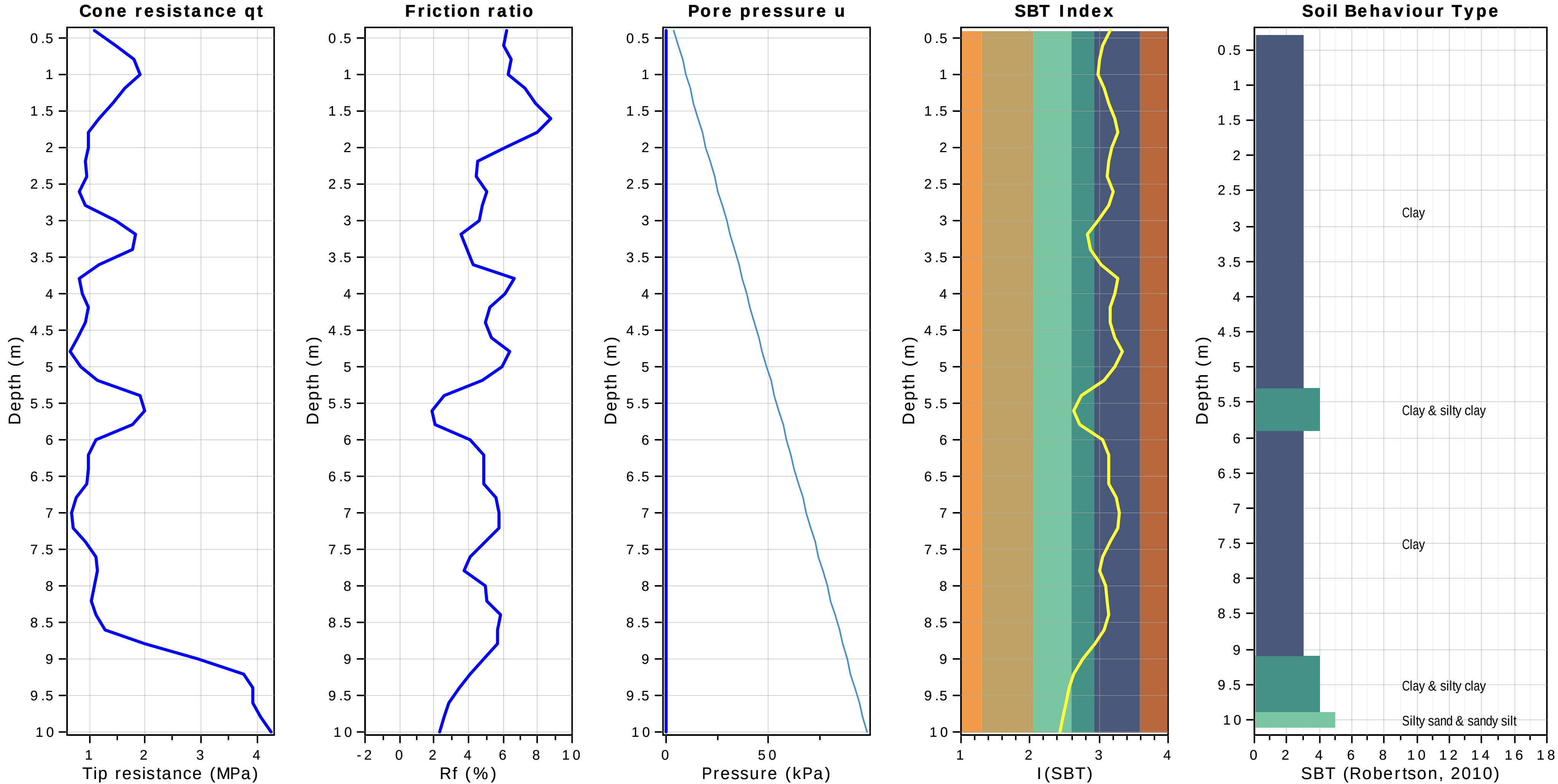
CPT: 036021P211CPT211
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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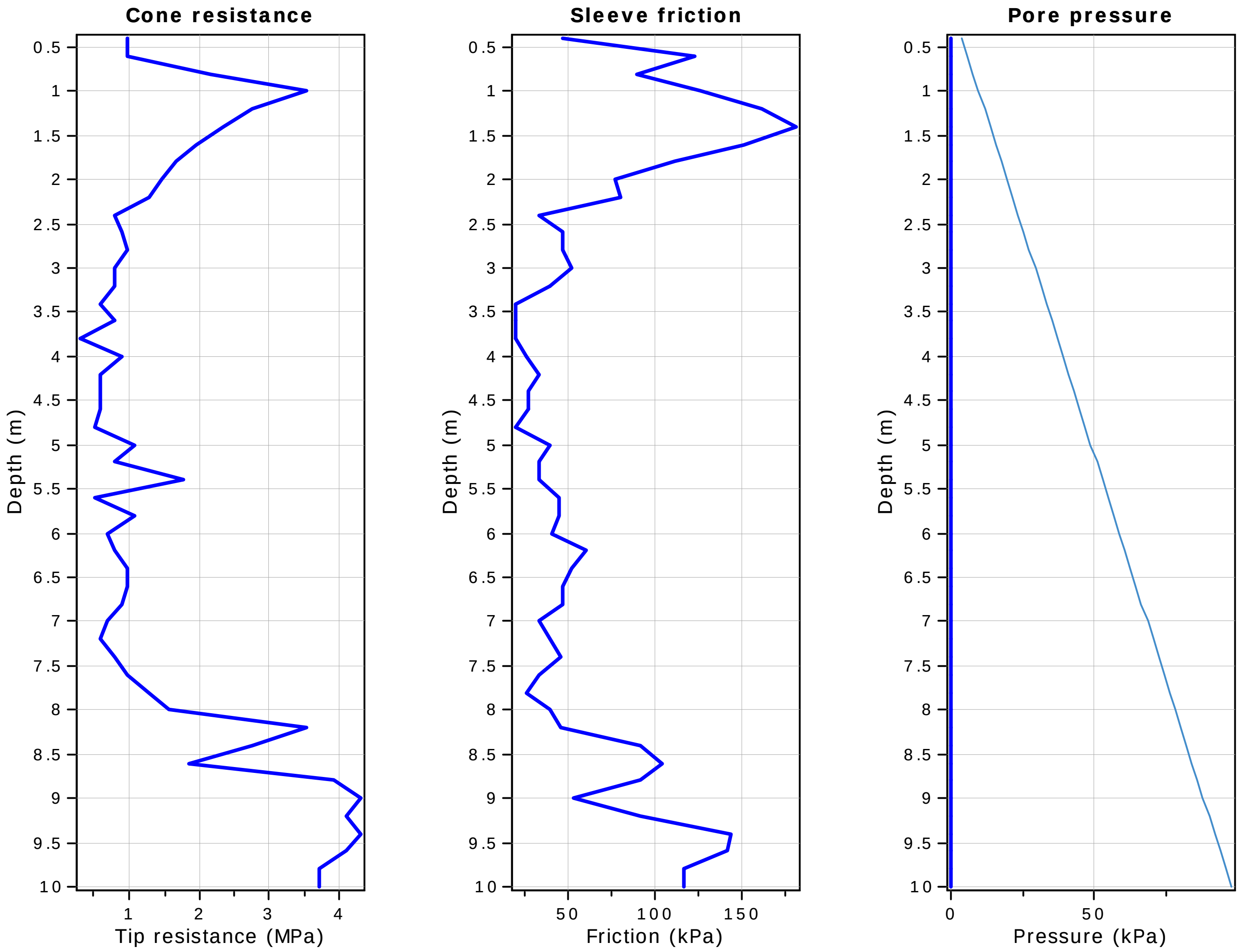
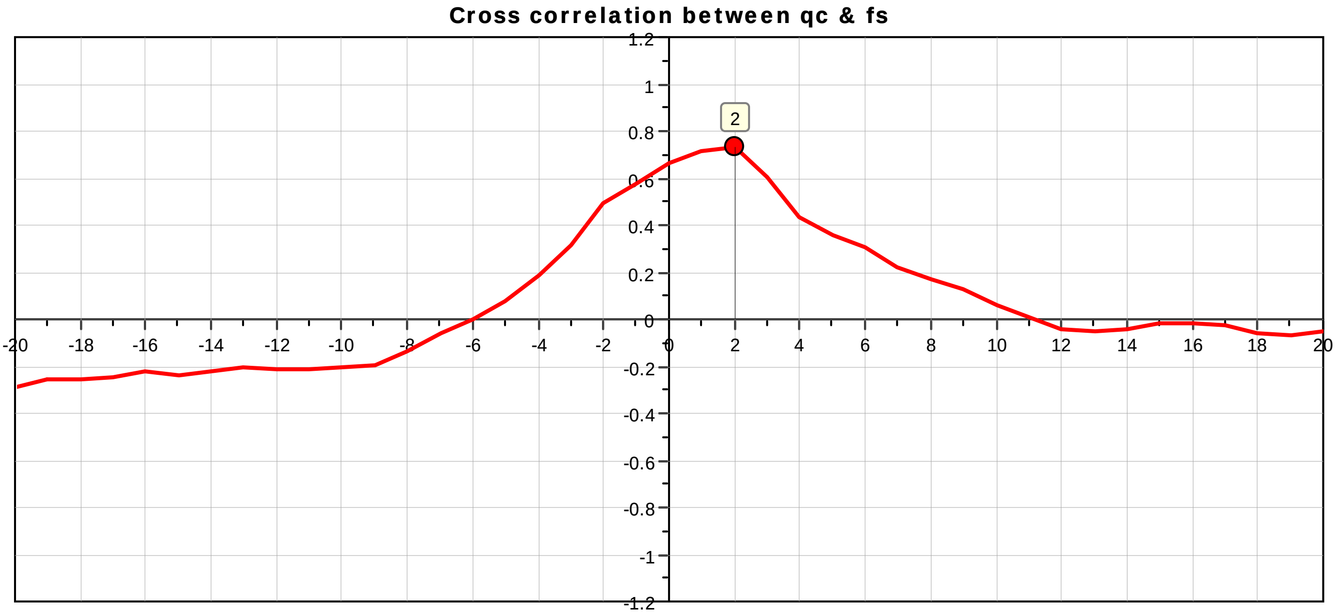
CPT: 036021P212CPT212
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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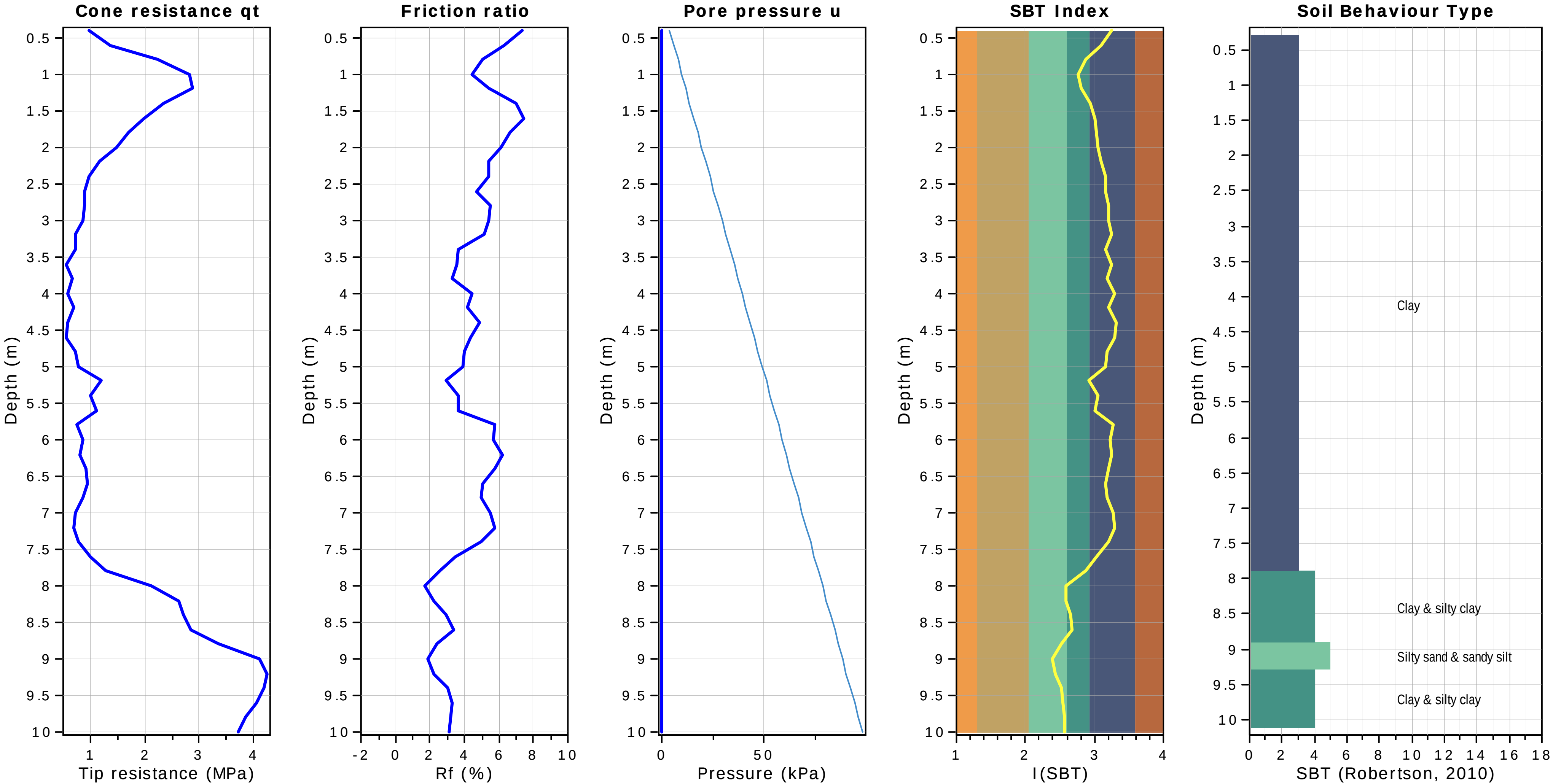
CPT: 036021P212CPT212
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

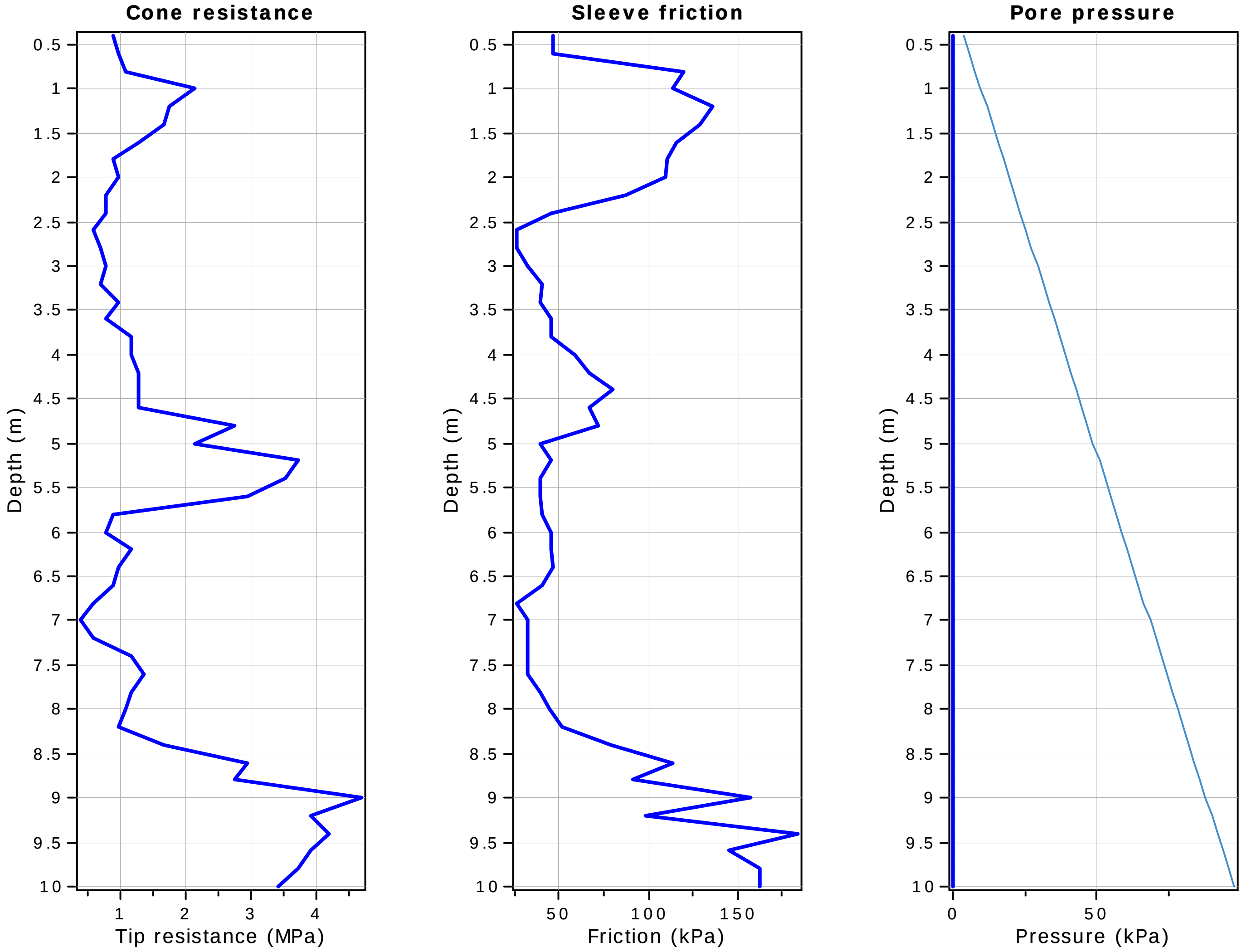


SBT legend

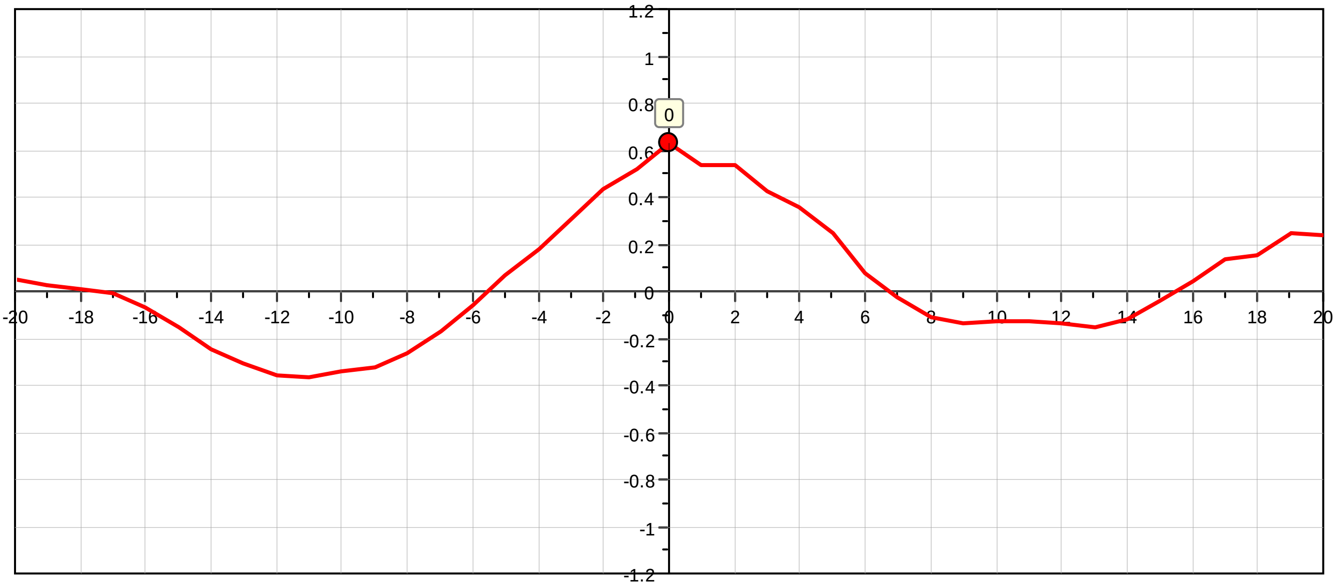
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P213CPT213
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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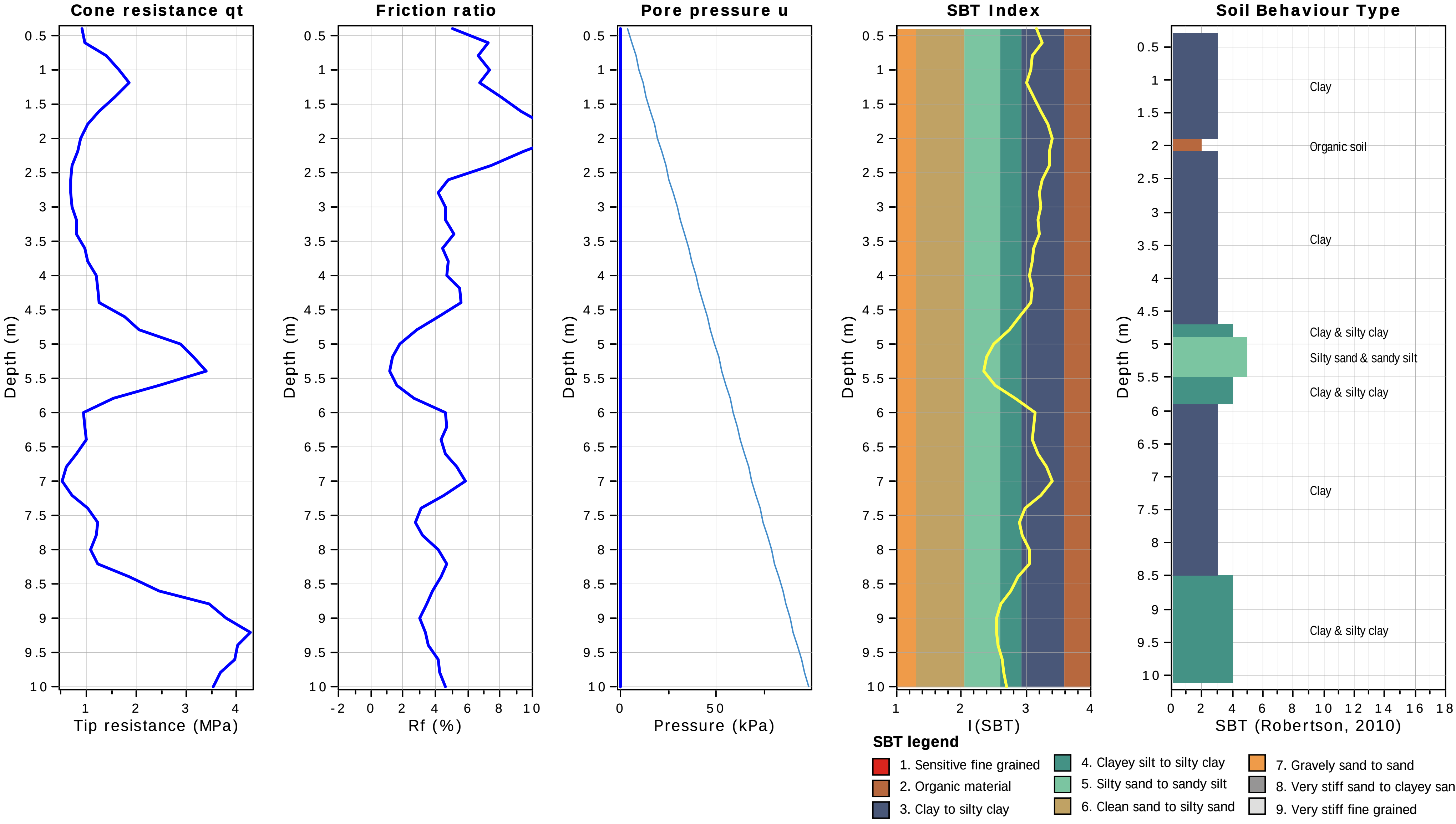
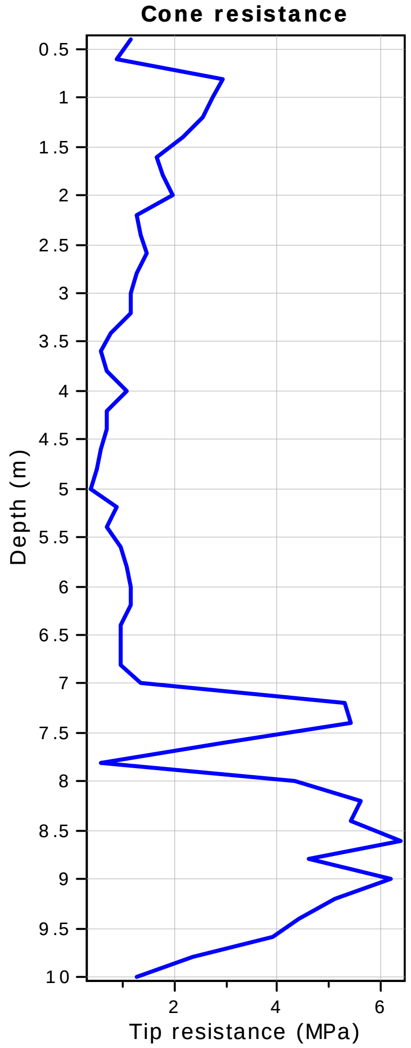
CPT: 036021P213CPT213
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

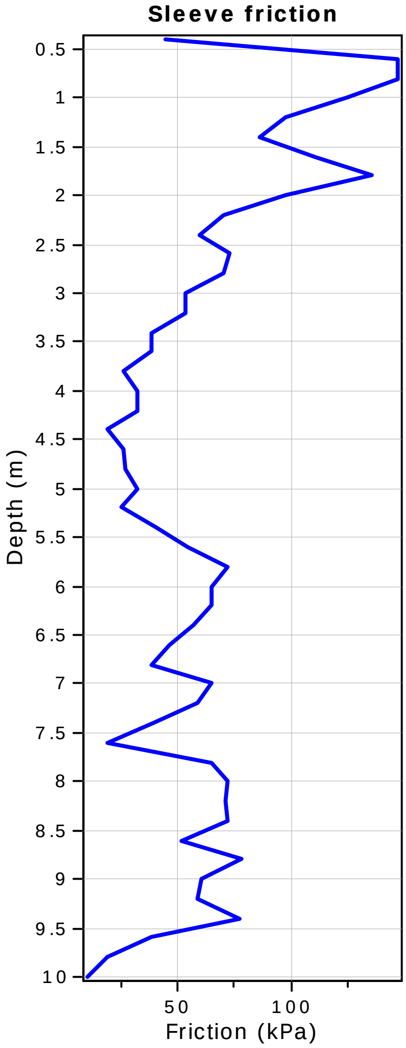
Project:
Location:

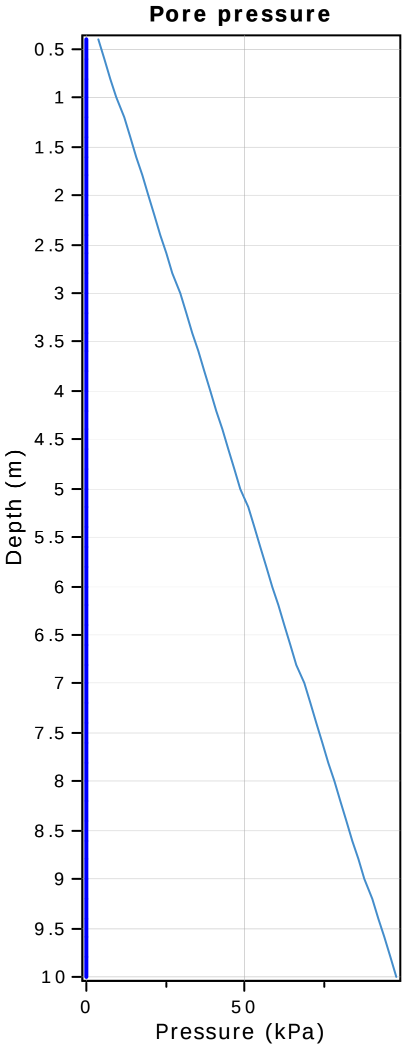


CPT: 036021P214CPT214
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

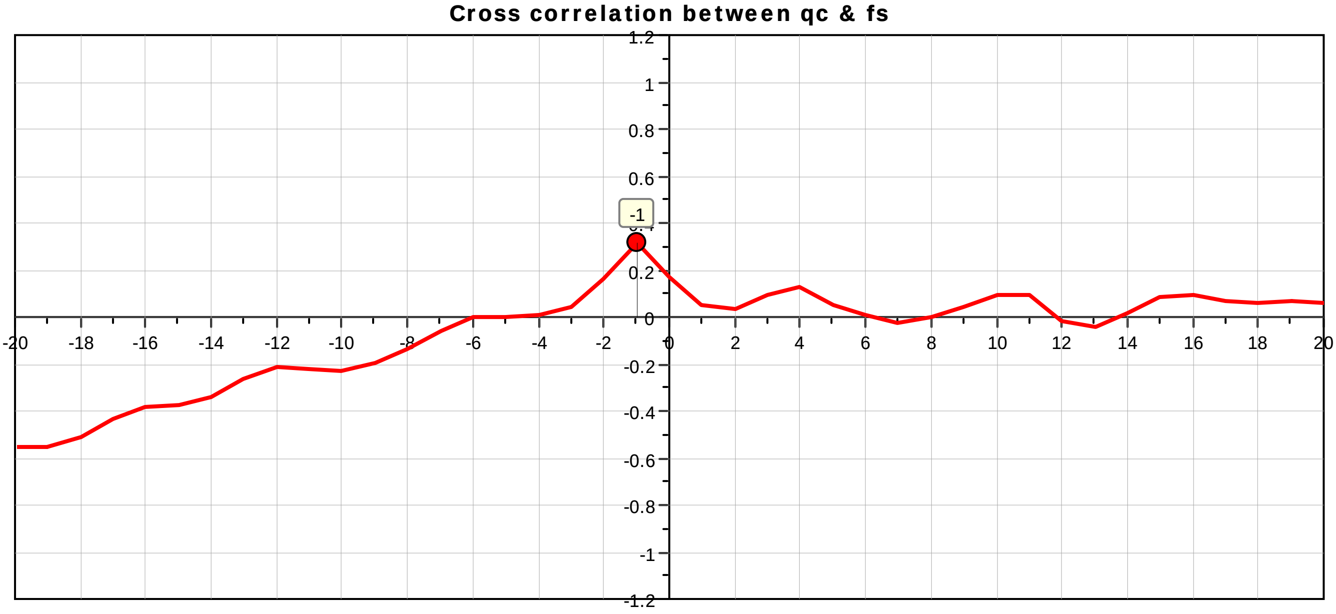
Project:
Location:







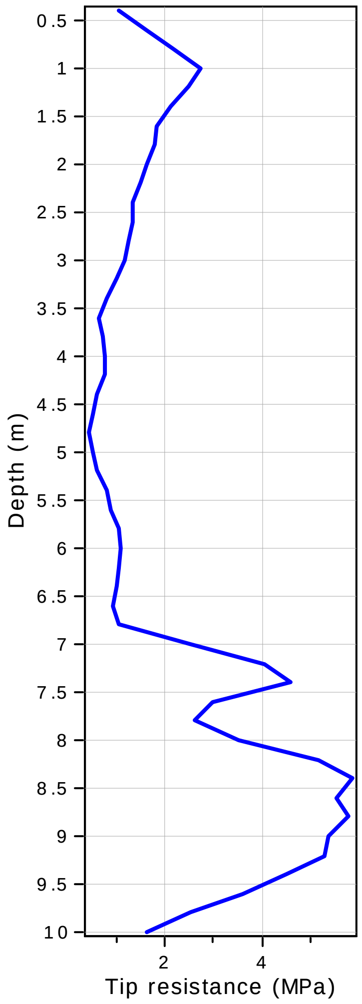
The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



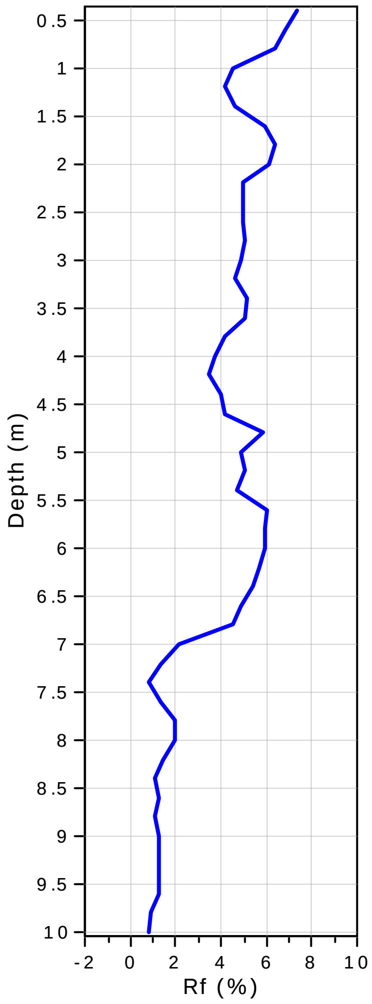
CPT: 036021P214CPT214
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

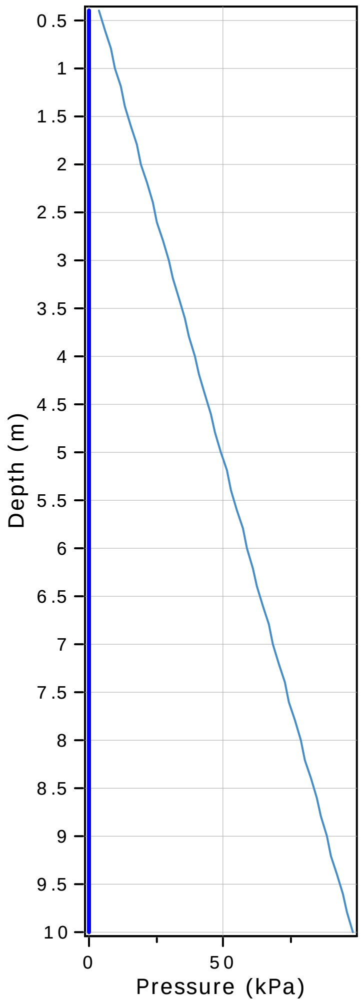
Cone resistance qt



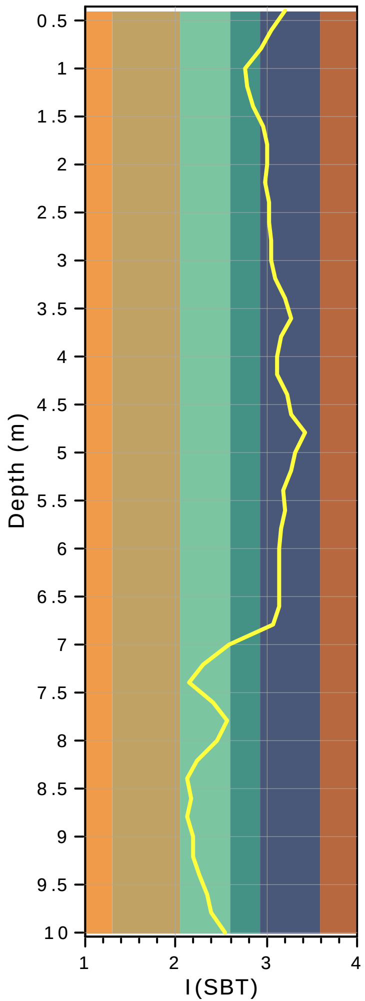
Friction ratio



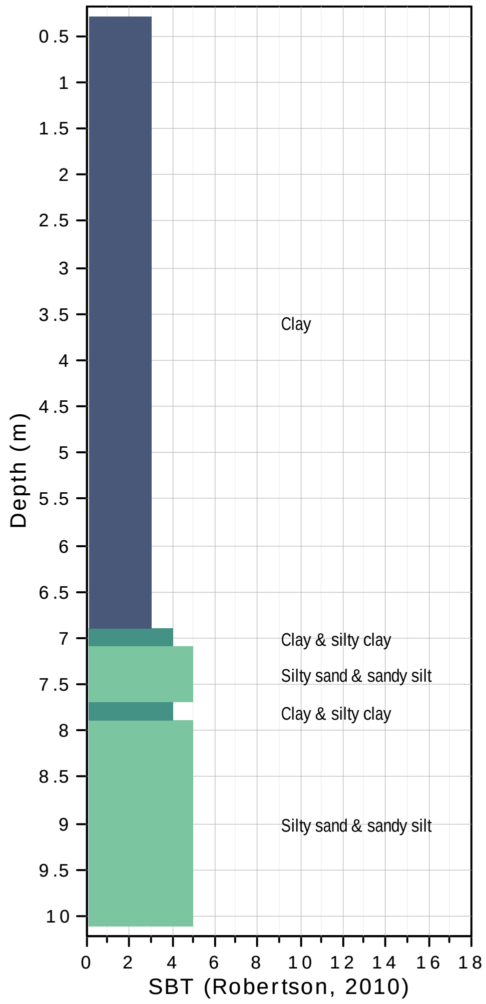
Pore pressure u



SBT Index



Soil Behaviour Type

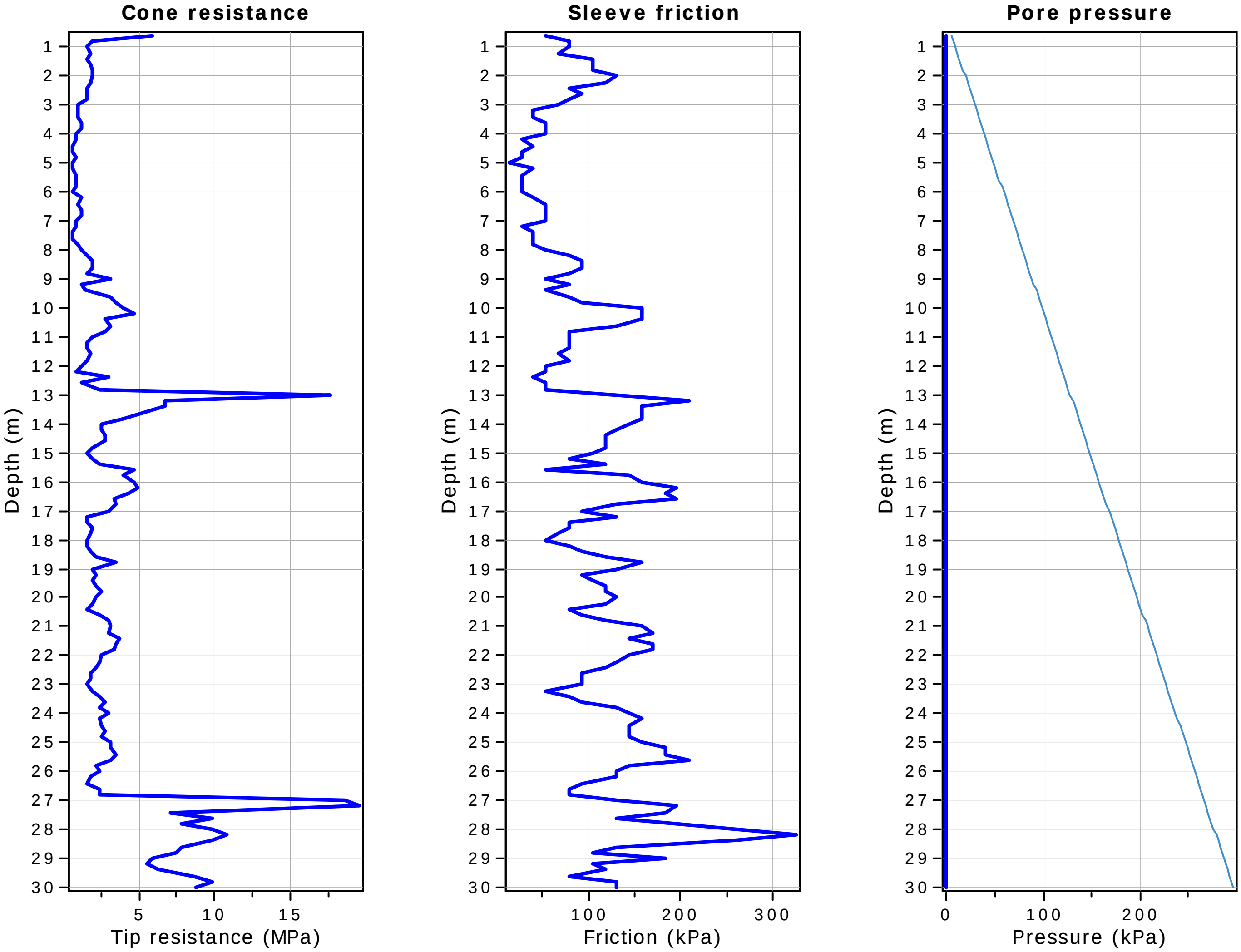


SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟫 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

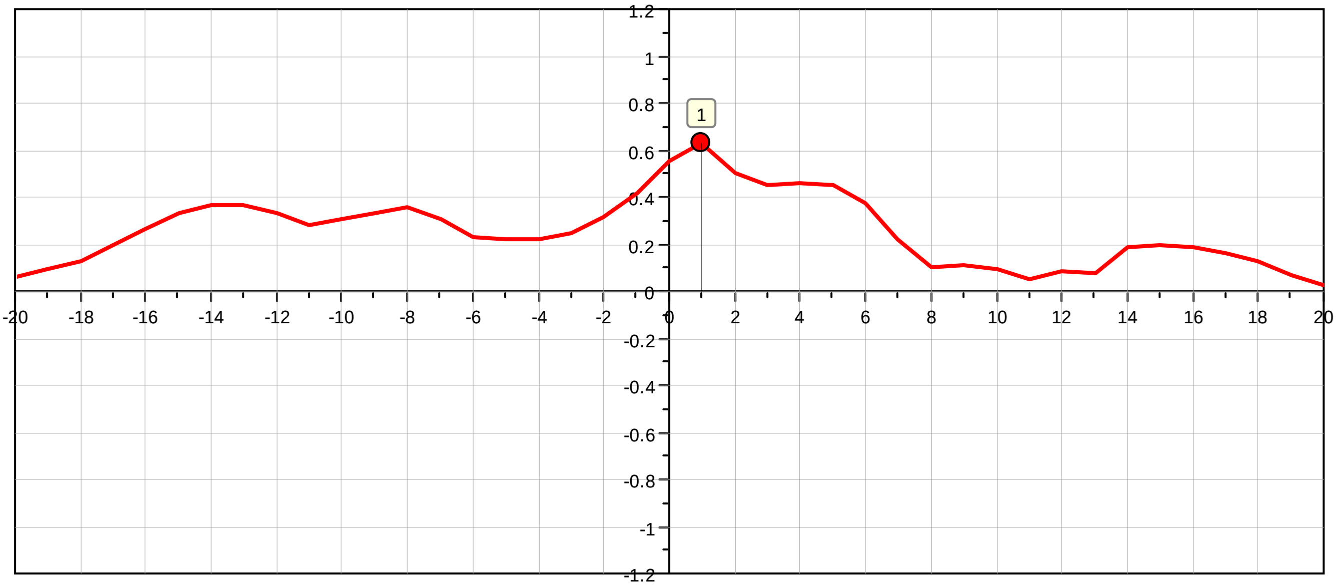
CPT: 036021P215CPT215
Total depth: 30.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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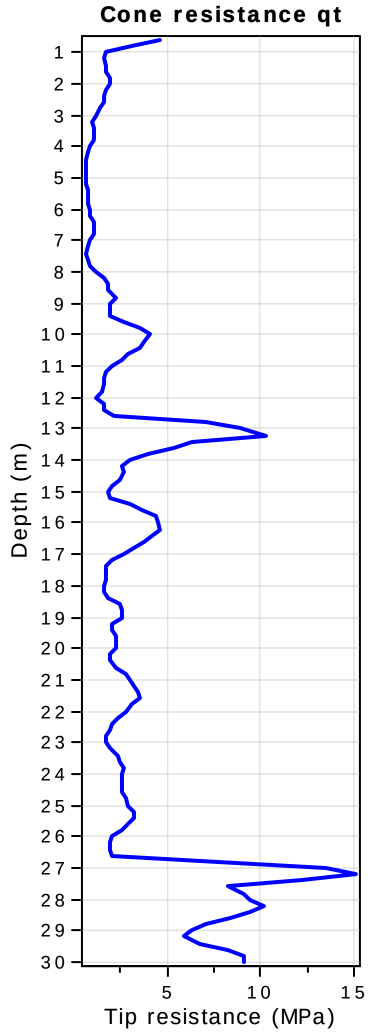
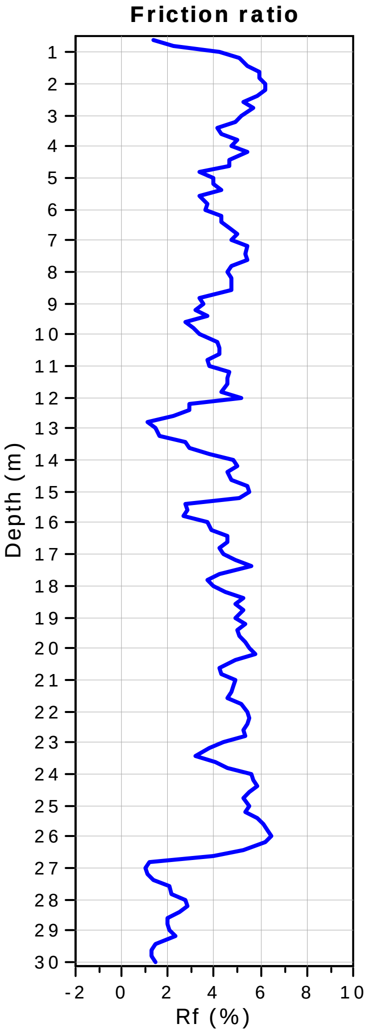
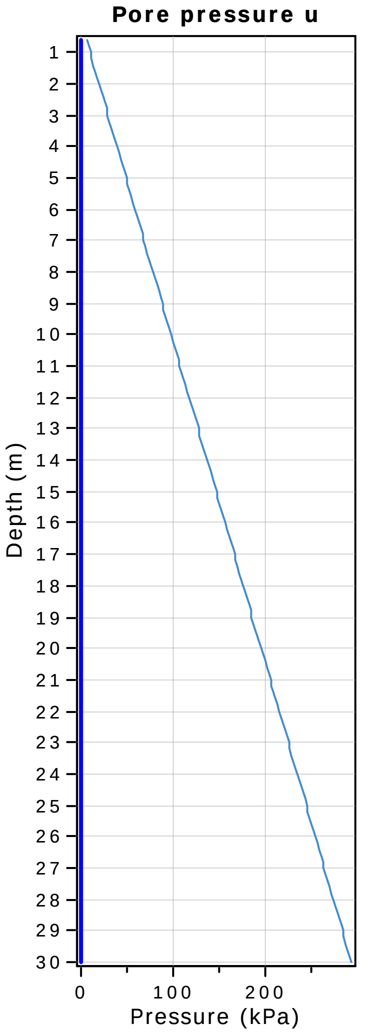
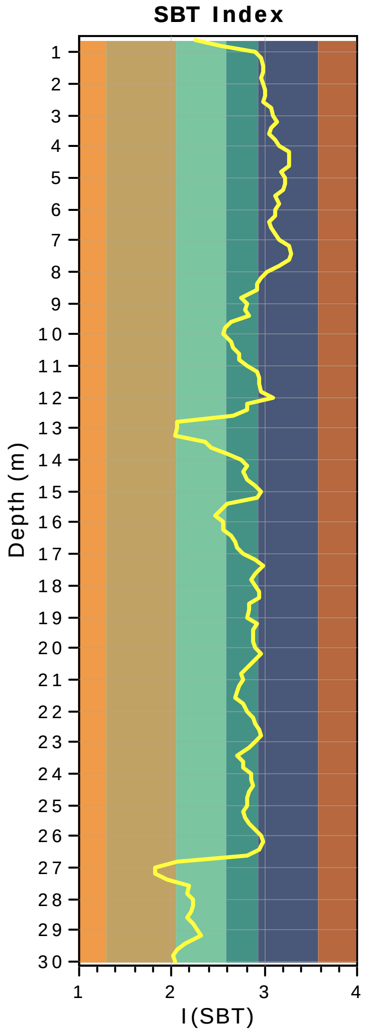
CPT: 036021P215CPT215
Total depth: 30.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

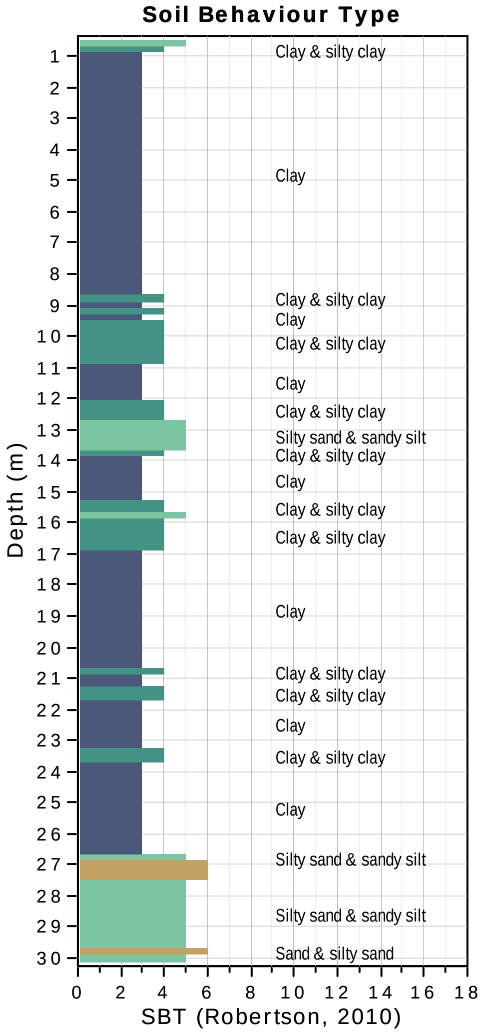
Project:
Location:









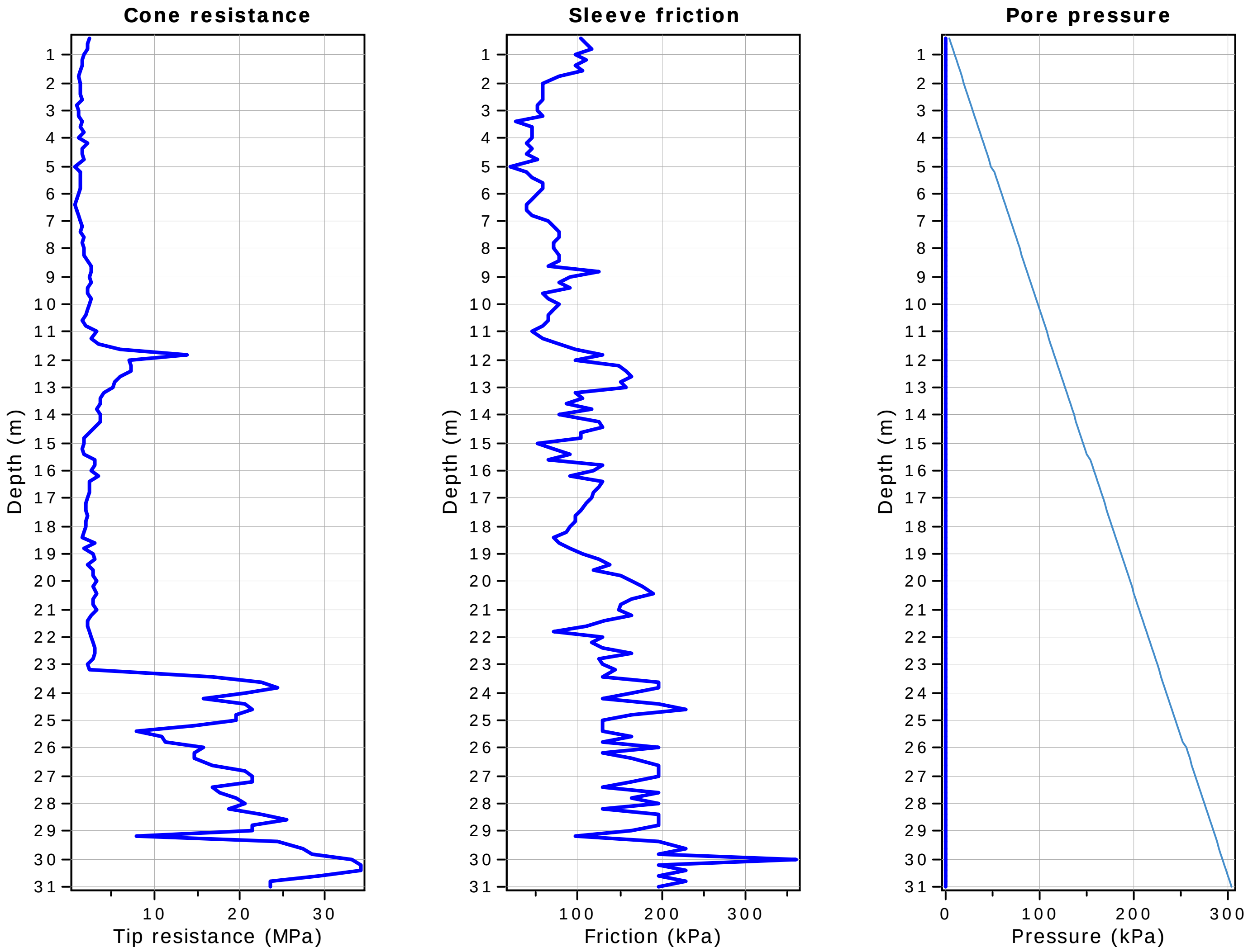


SBT legend

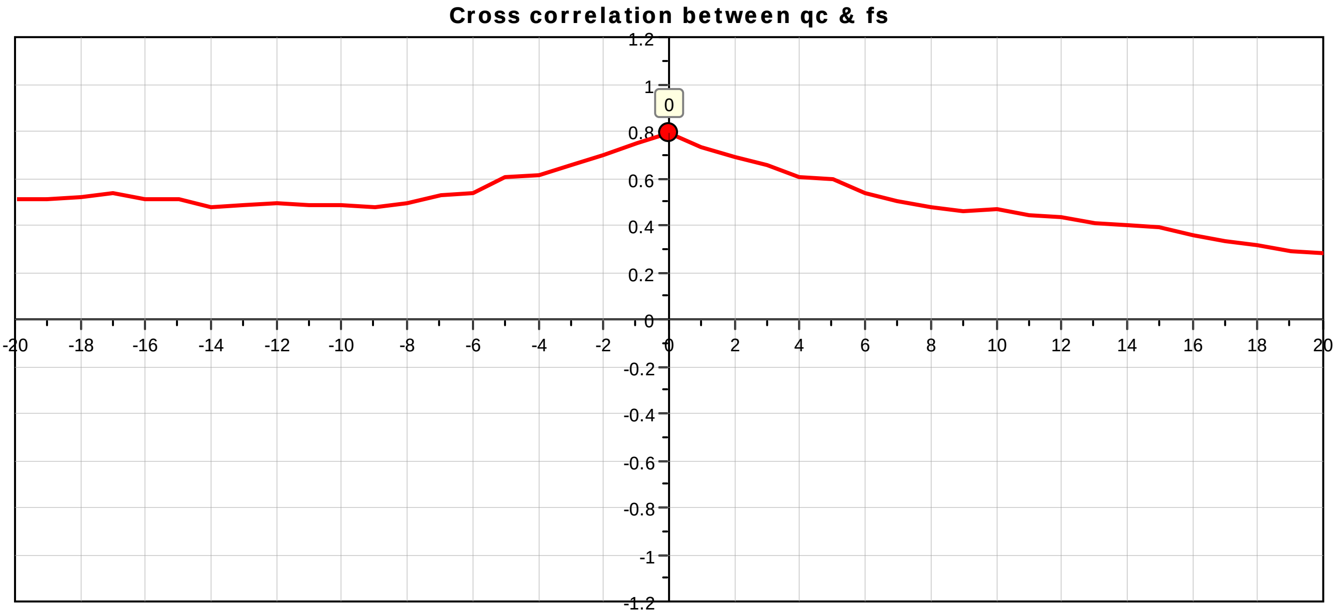
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P216CPT216
Total depth: 31.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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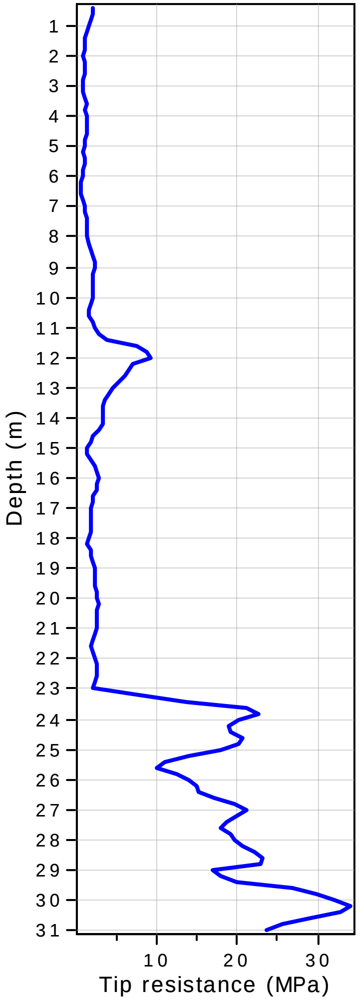
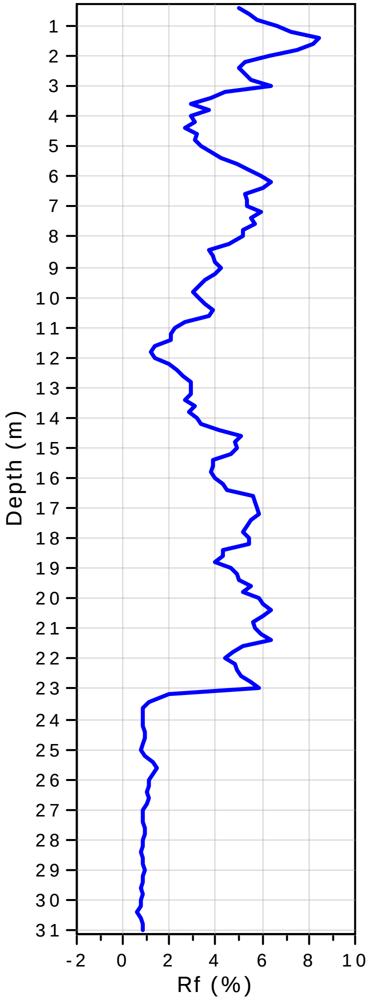
CPT: 036021P216CPT216
Total depth: 31.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

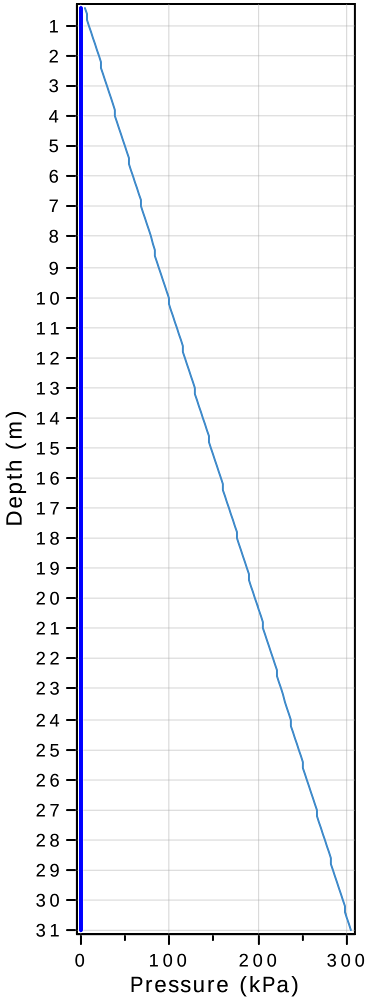
Cone resistance qt



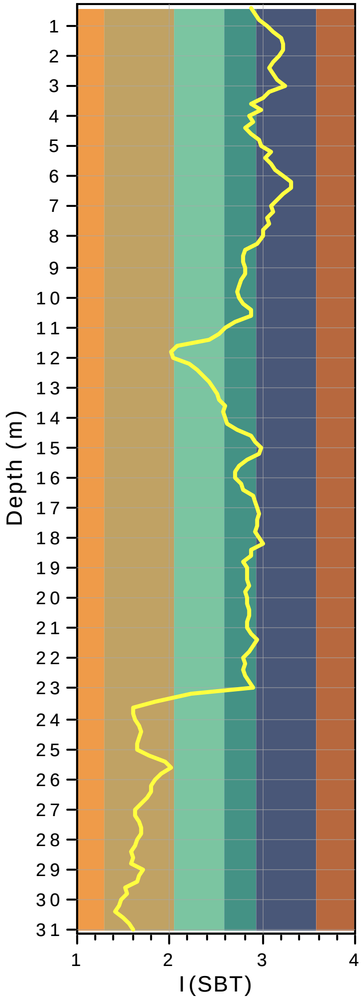
Friction ratio



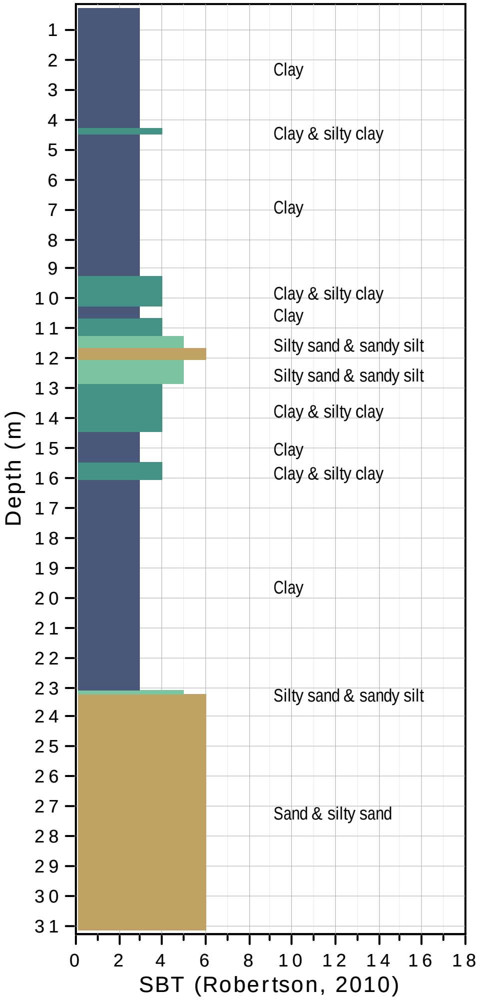
Pore pressure u



SBT Index



Soil Behaviour Type

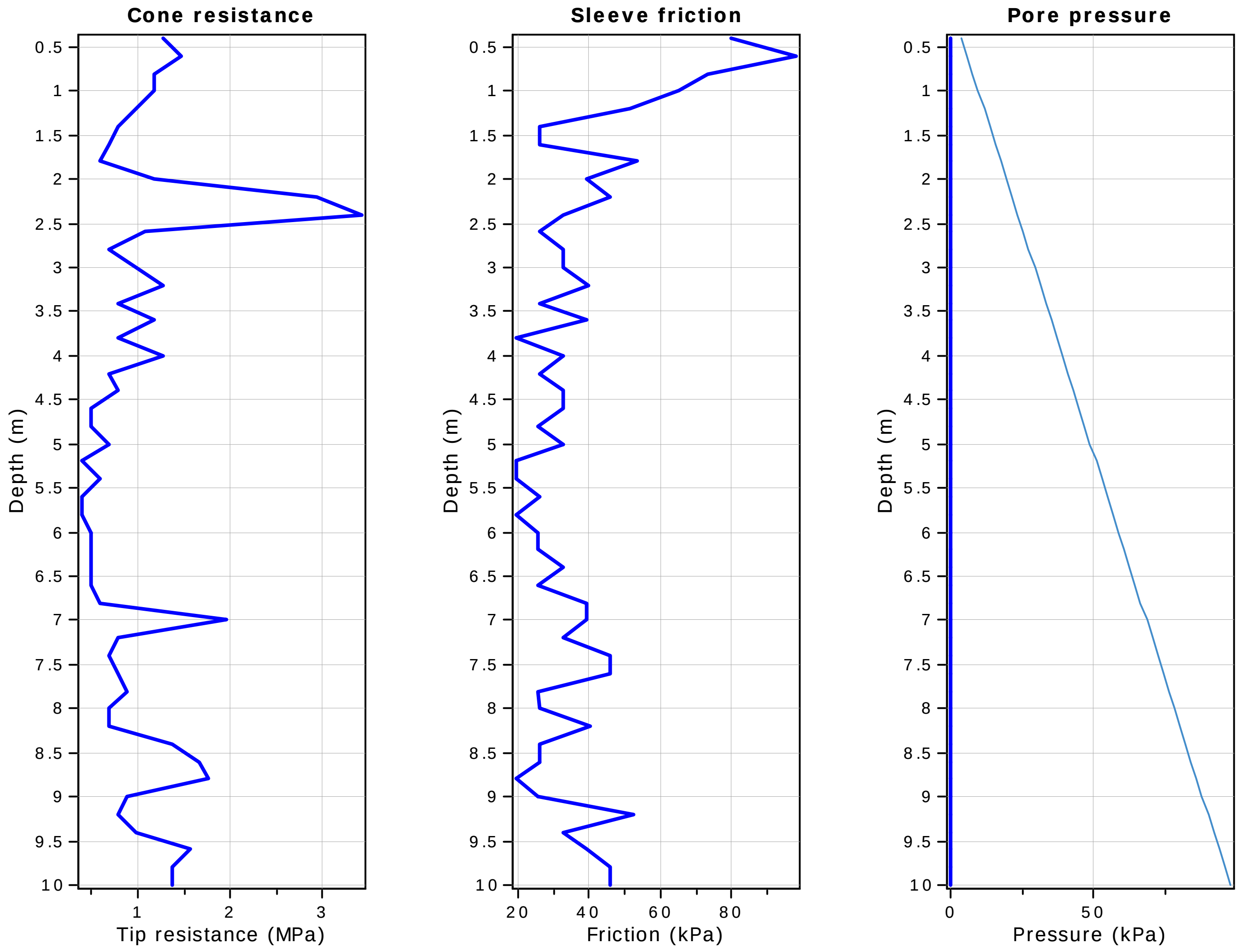


SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

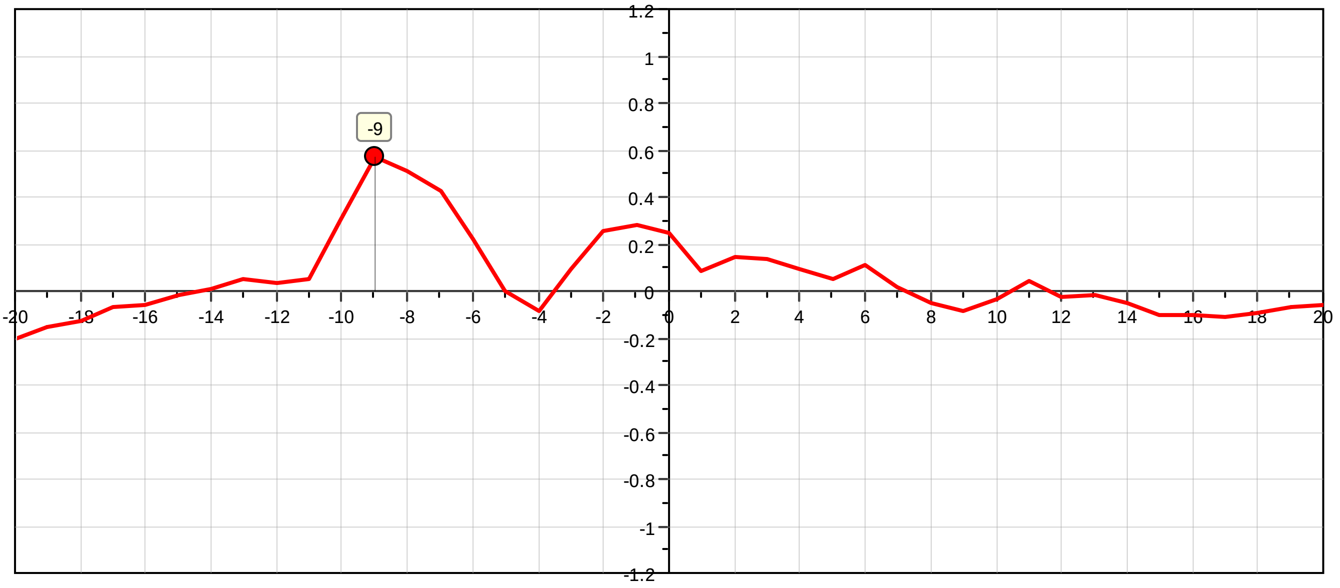
CPT: 036021P217CPT217
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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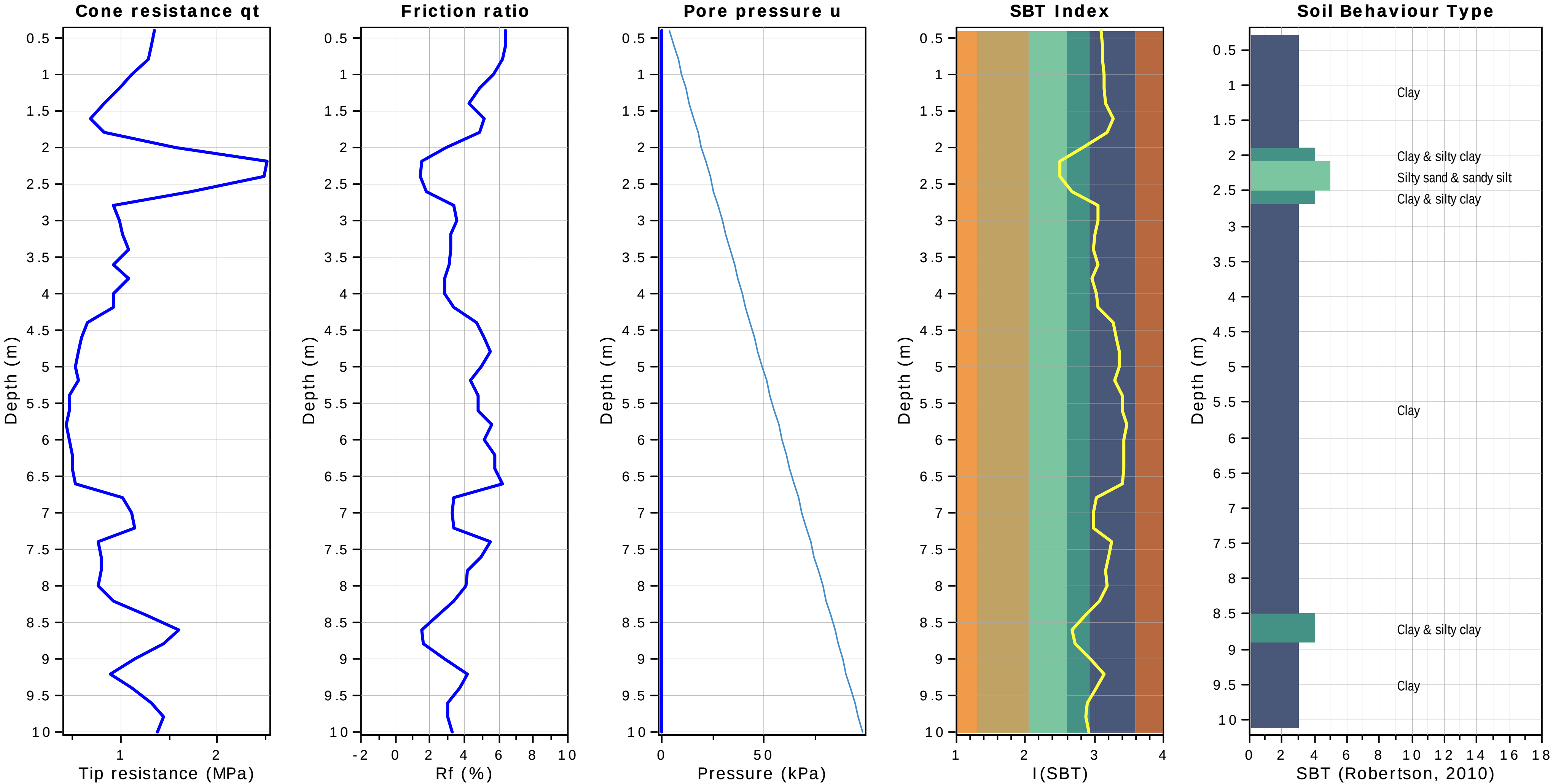
CPT: 036021P217CPT217
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

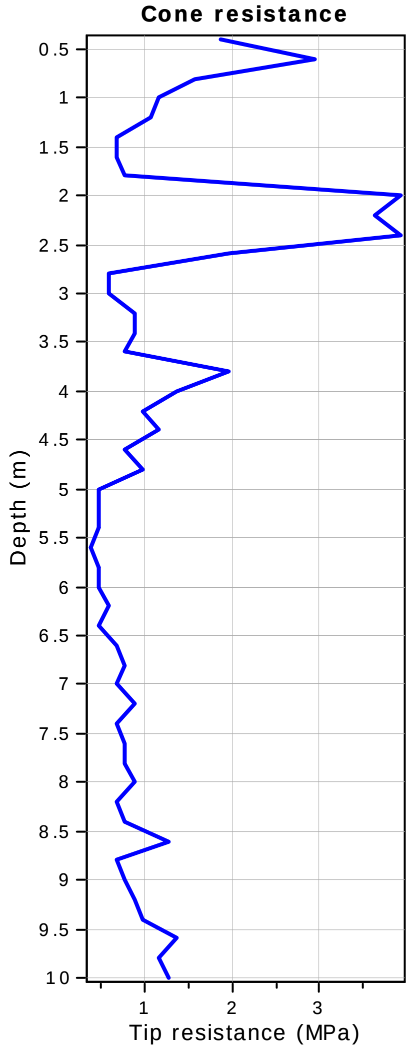


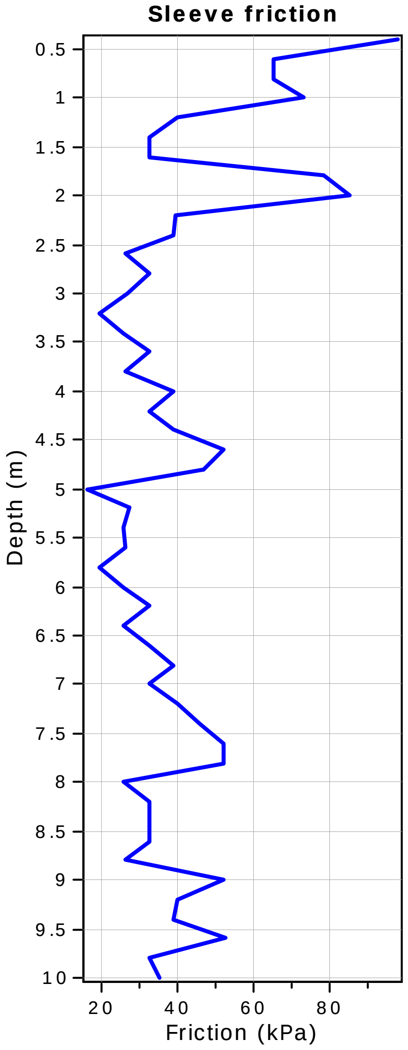
SBT legend

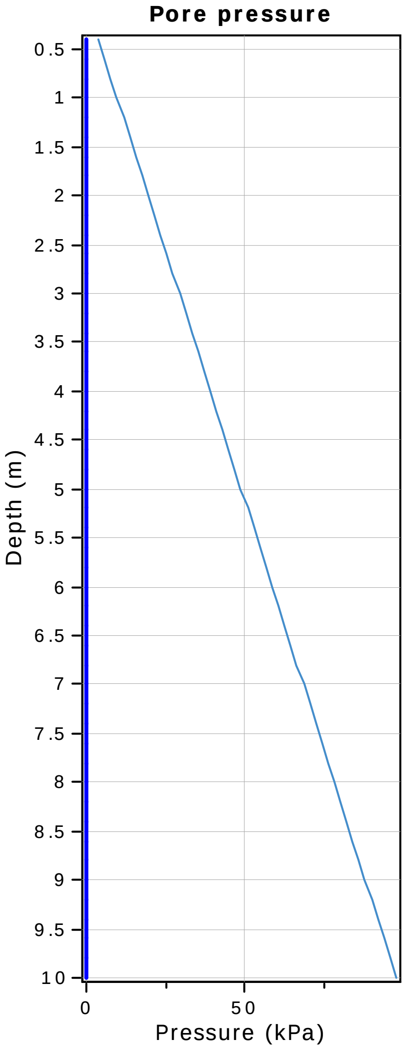
🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟫 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

CPT: 036021P218CPT218
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

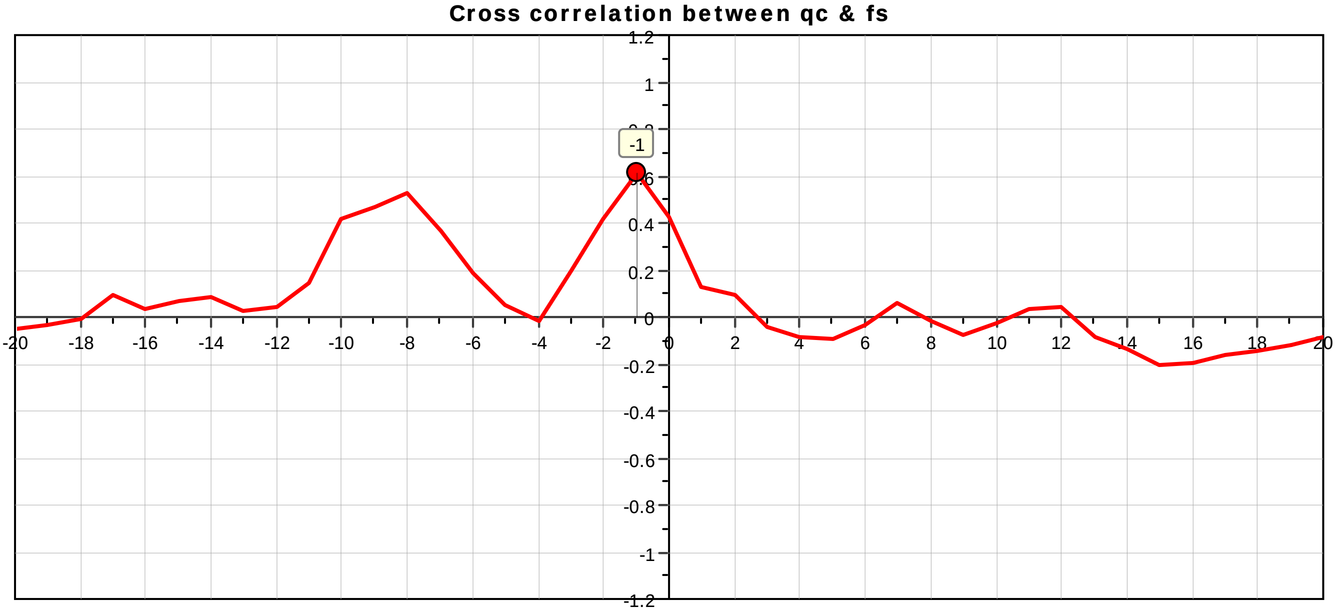
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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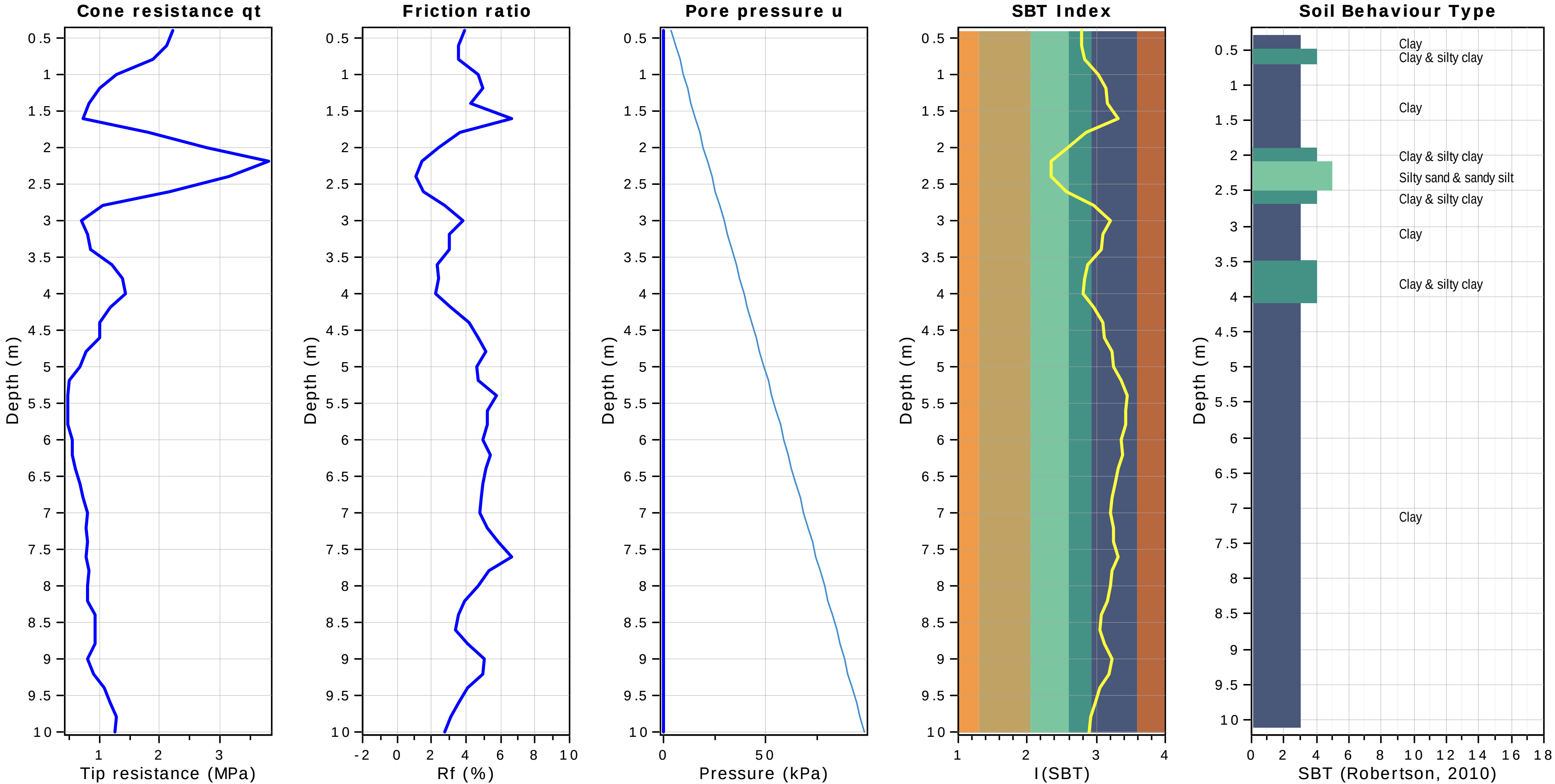
CPT: 036021P218CPT218
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟫 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

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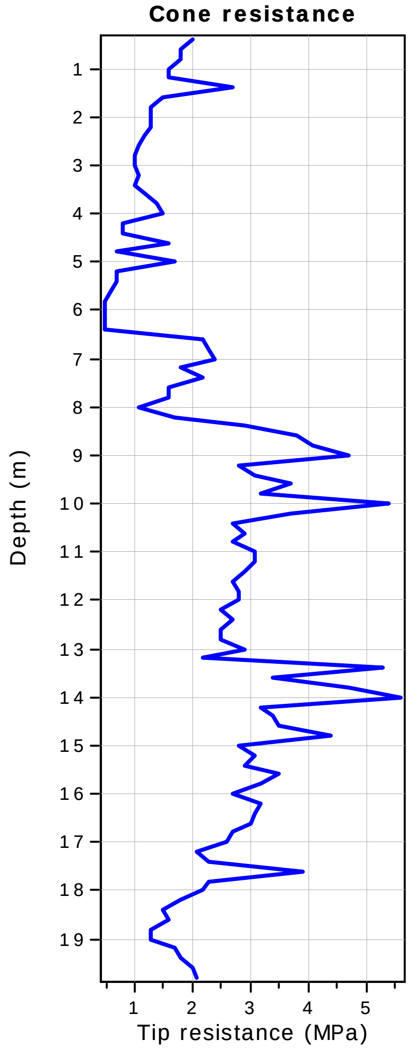
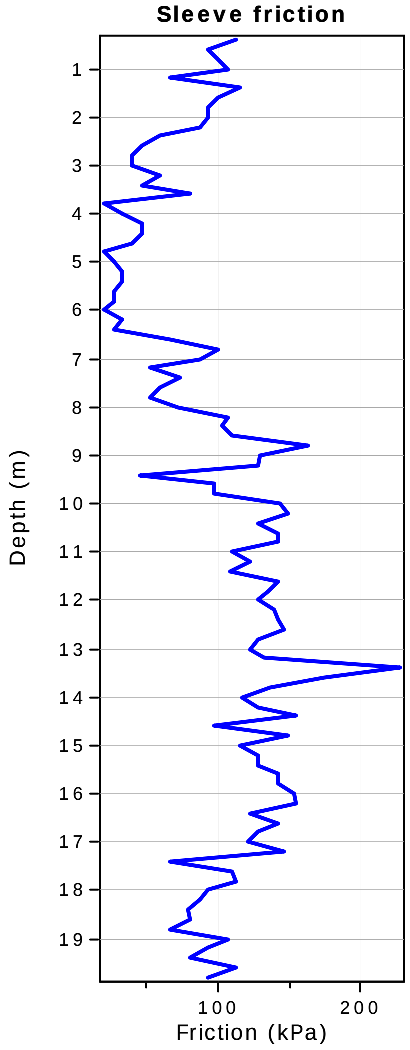
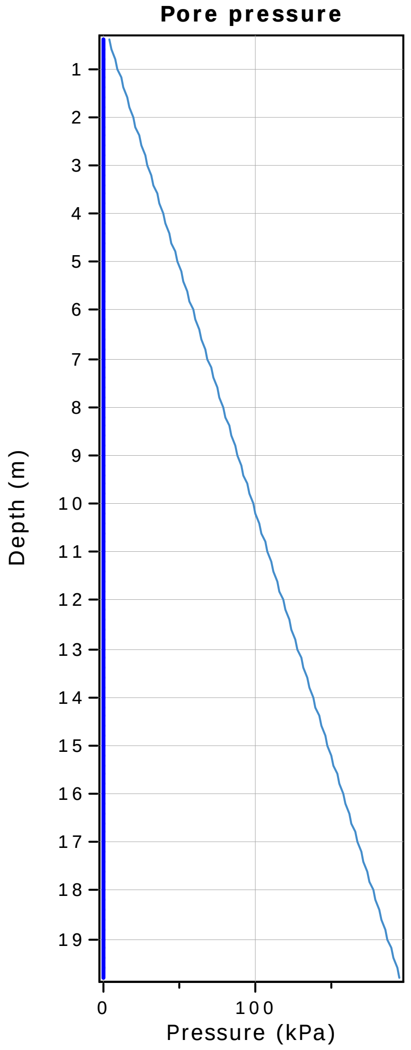
CPT: 036021P219CPT219
Total depth: 19.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

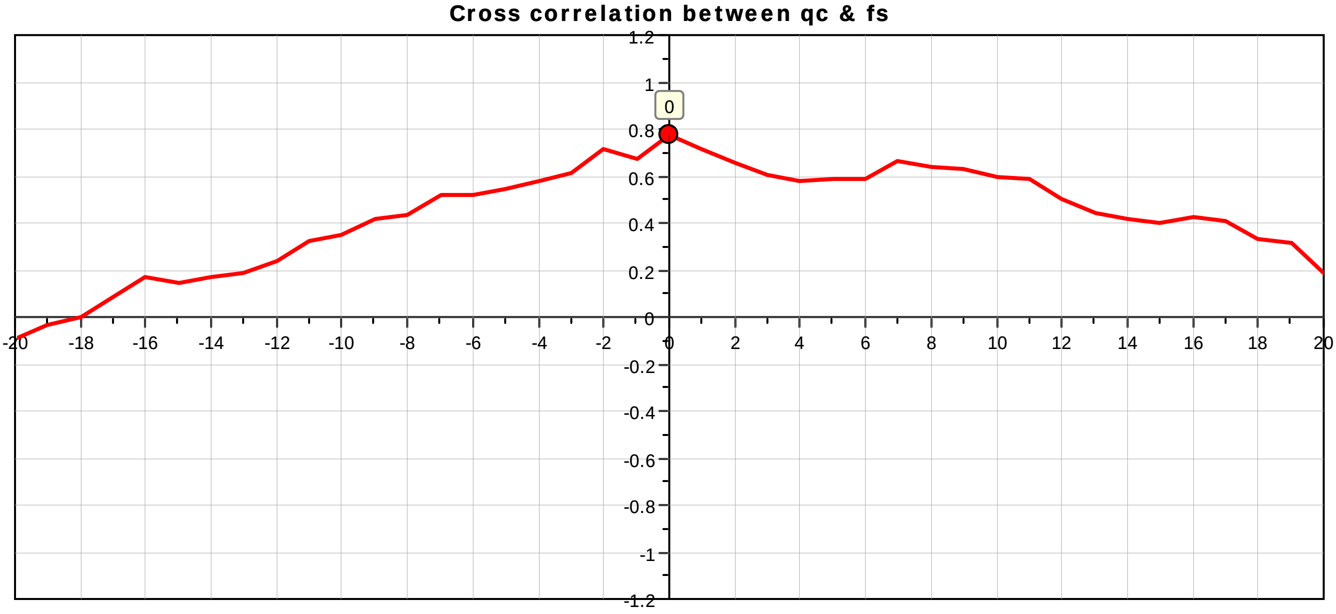
Project:
Location:


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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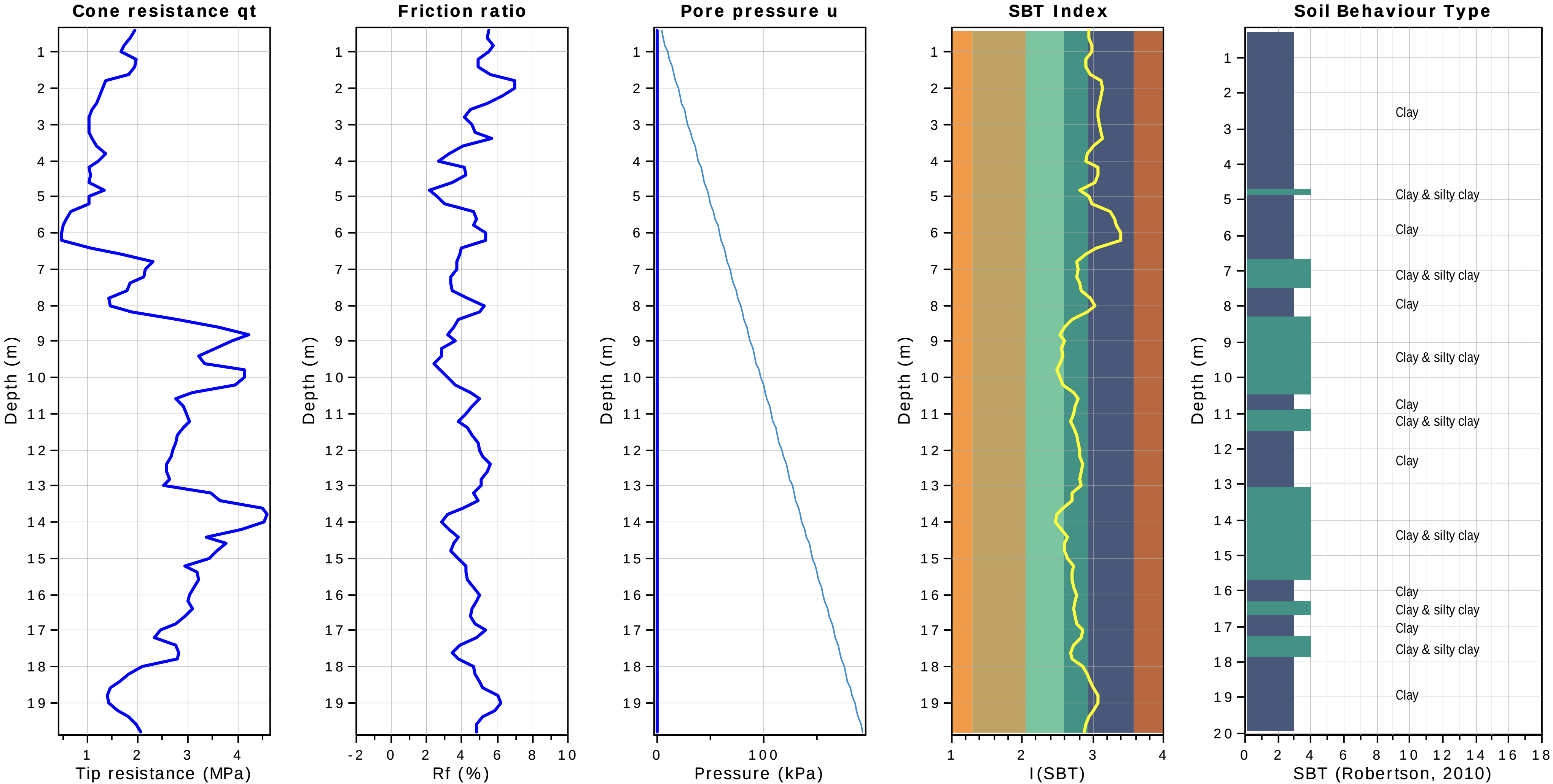
CPT: 036021P219CPT219
Total depth: 19.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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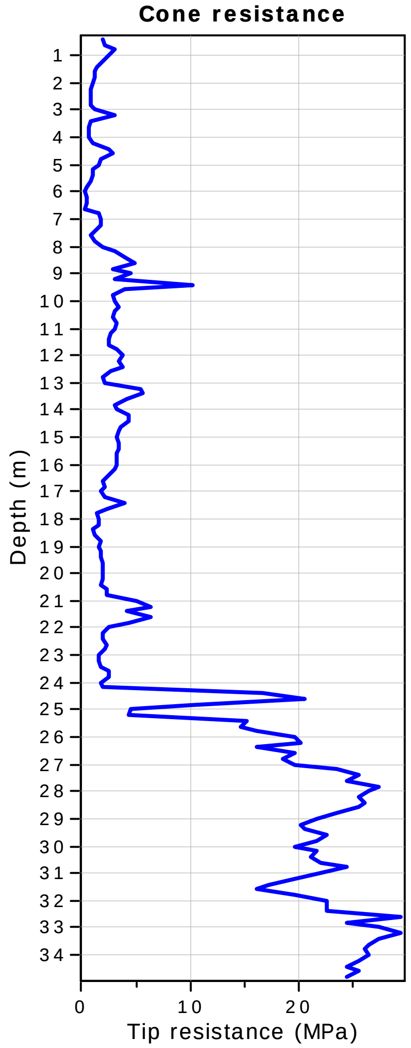
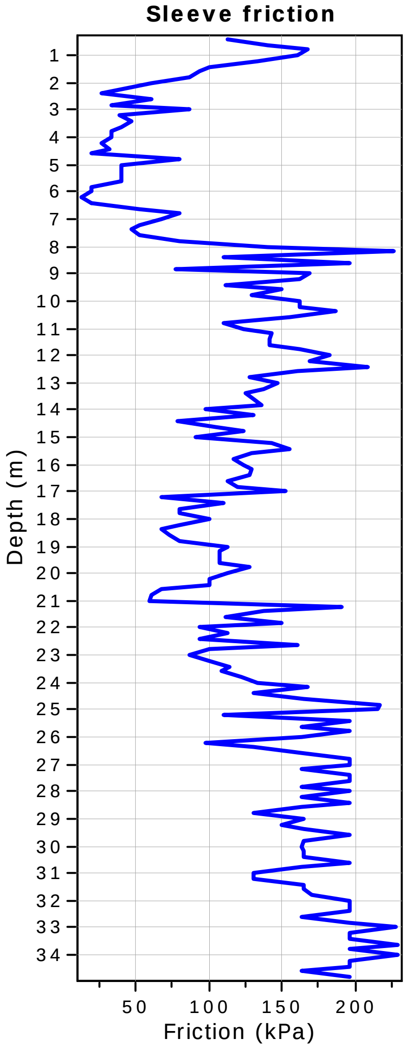
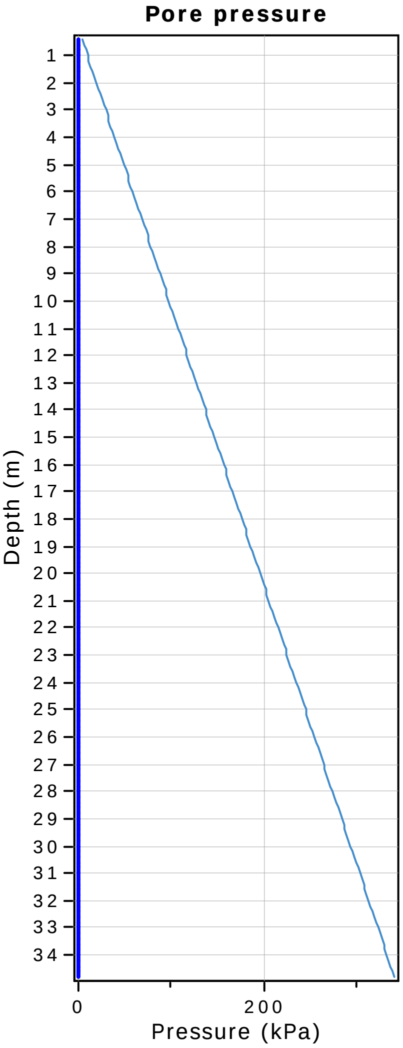
CPT: 036021P220CPT220
Total depth: 34.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

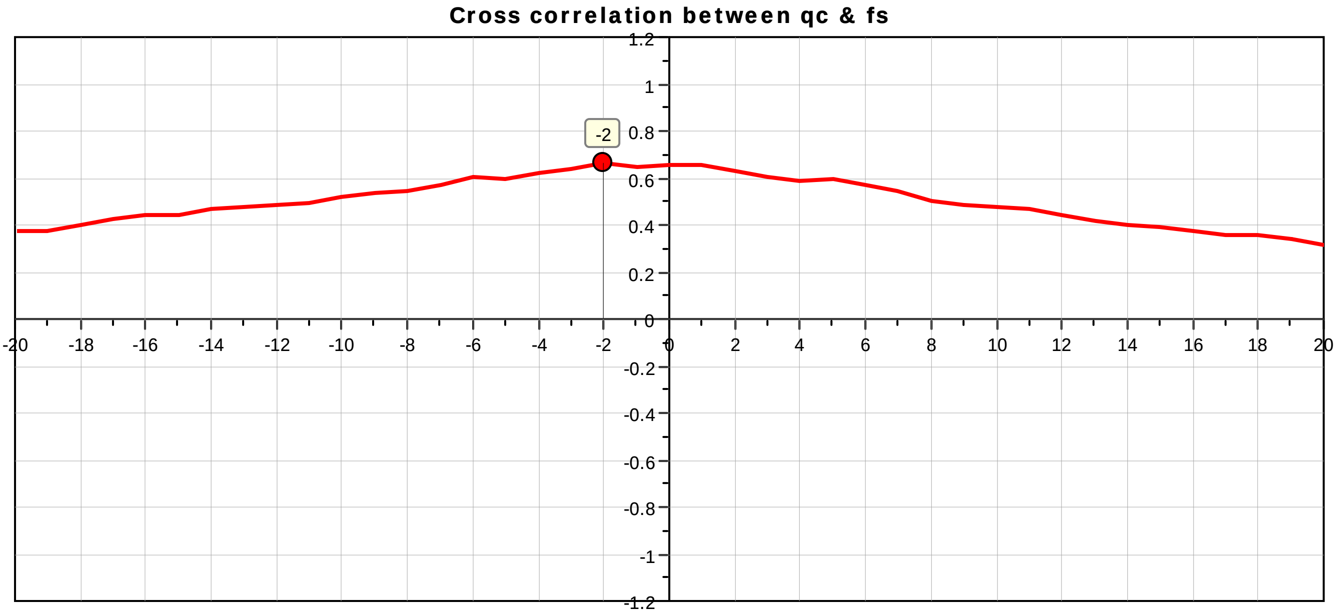
Project:
Location:







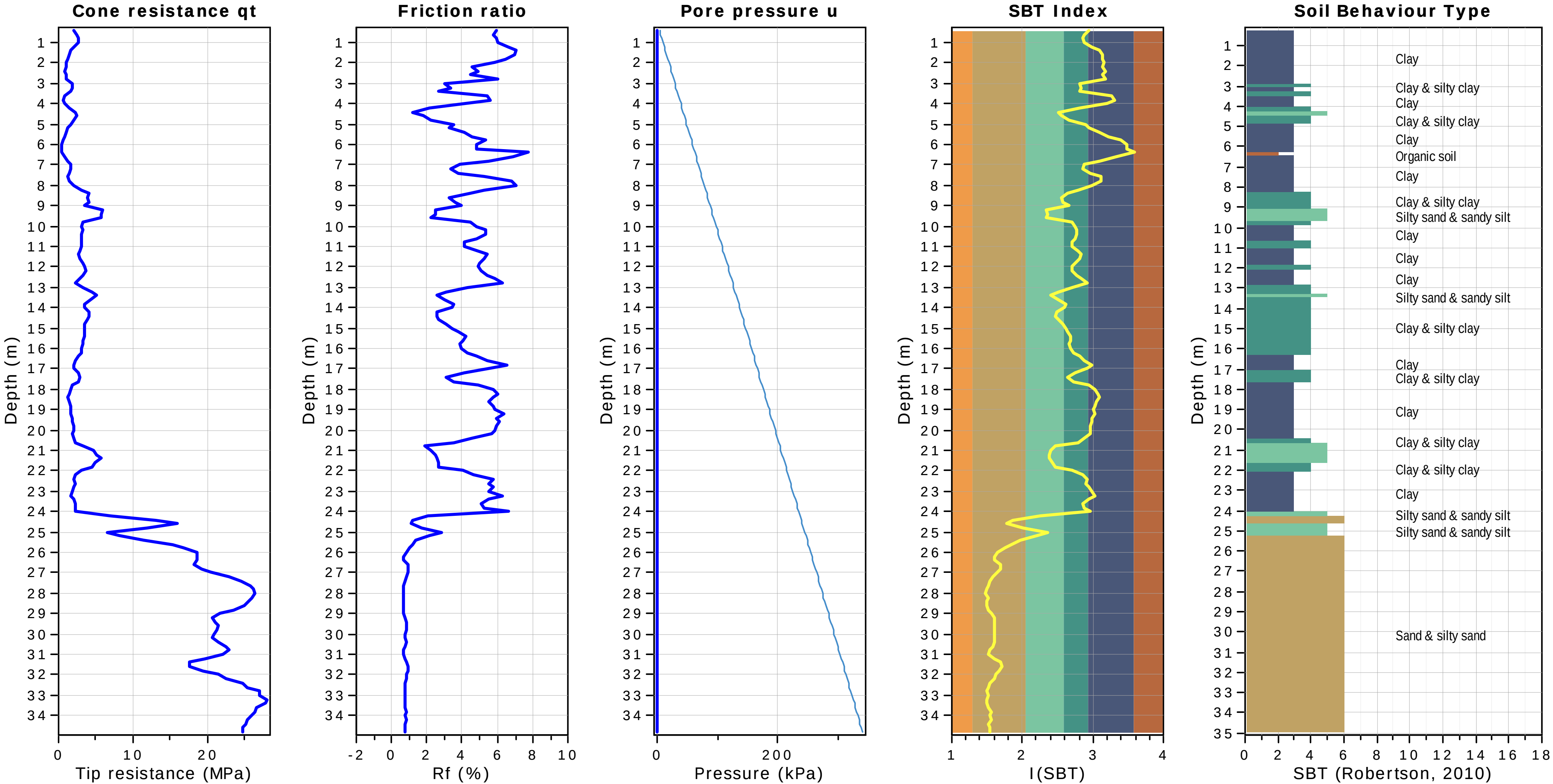
The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



Geo Group Srl
GEOLOGIA E AMBIENTE
Via Cesare Costa 182
www.geogroupmodena.it

CPT: 036021P220CPT220
Total depth: 34.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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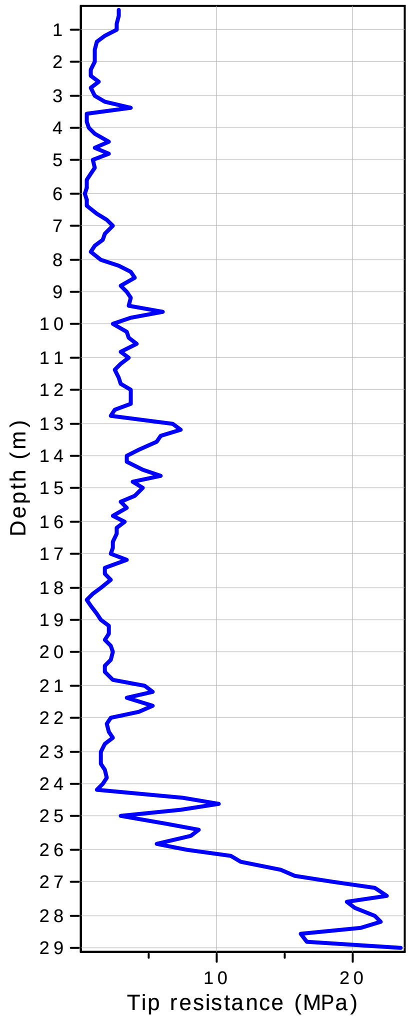
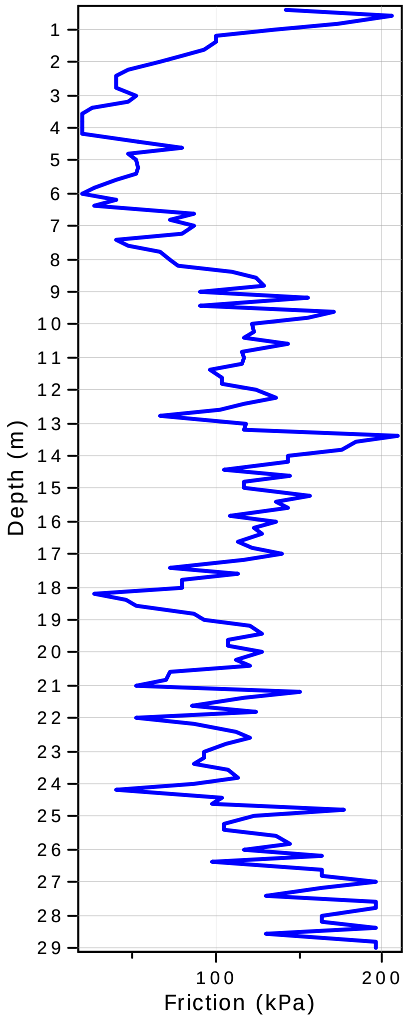
CPT: 036021P221CPT221
Total depth: 29.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

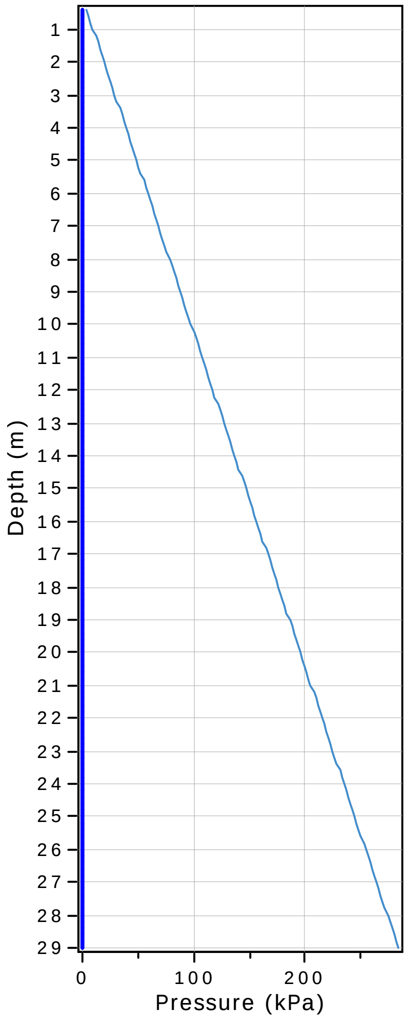
Cone resistance



Sleeve friction

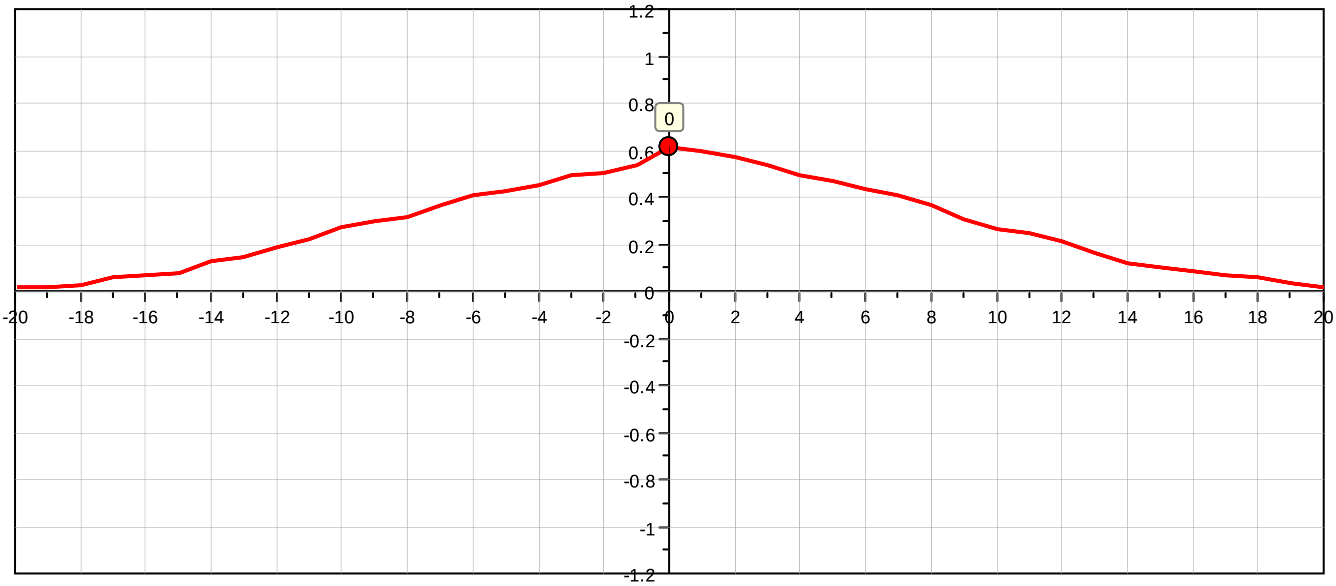


Pore pressure



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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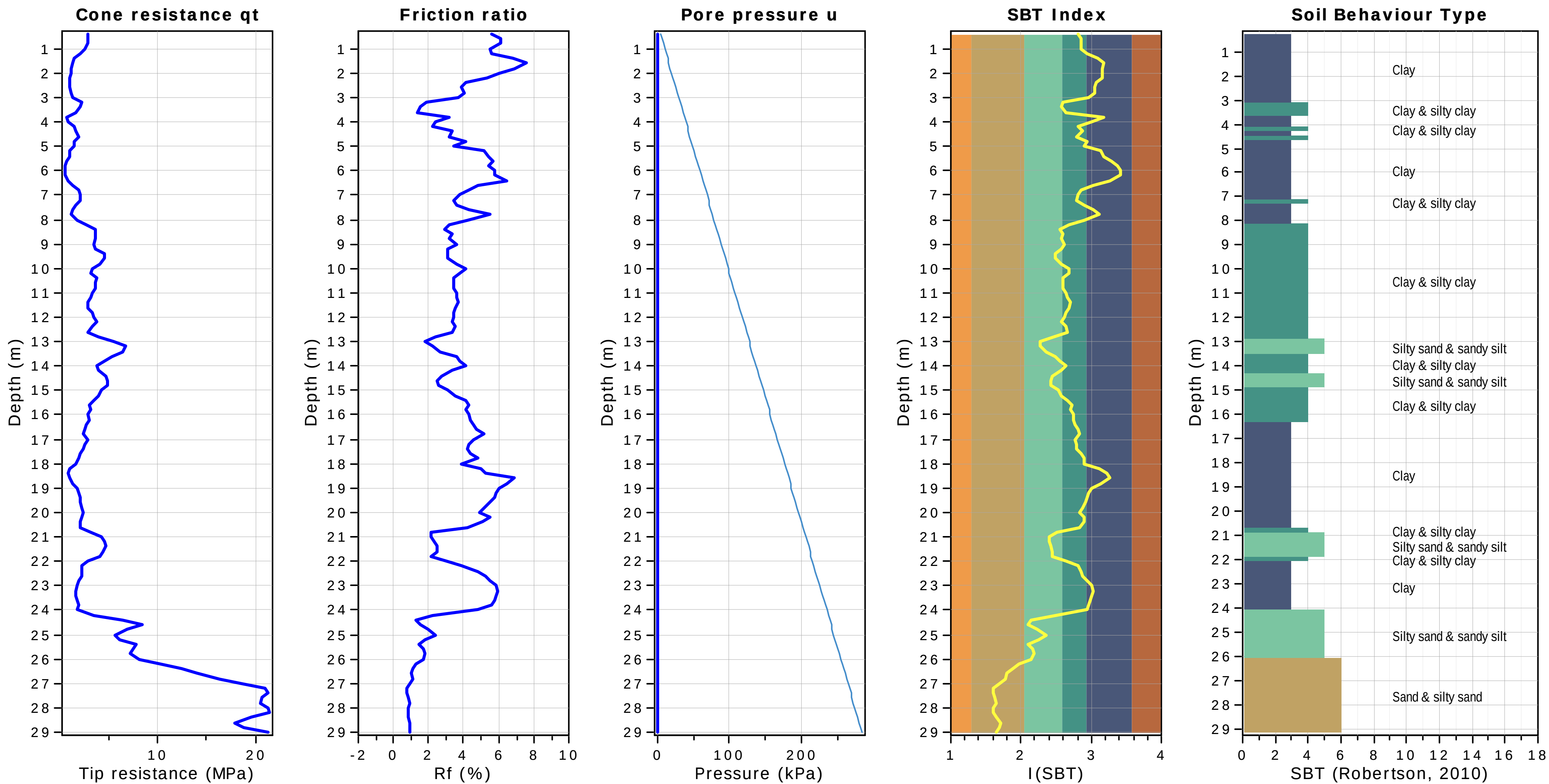
CPT: 036021P221CPT221
Total depth: 29.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟨 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

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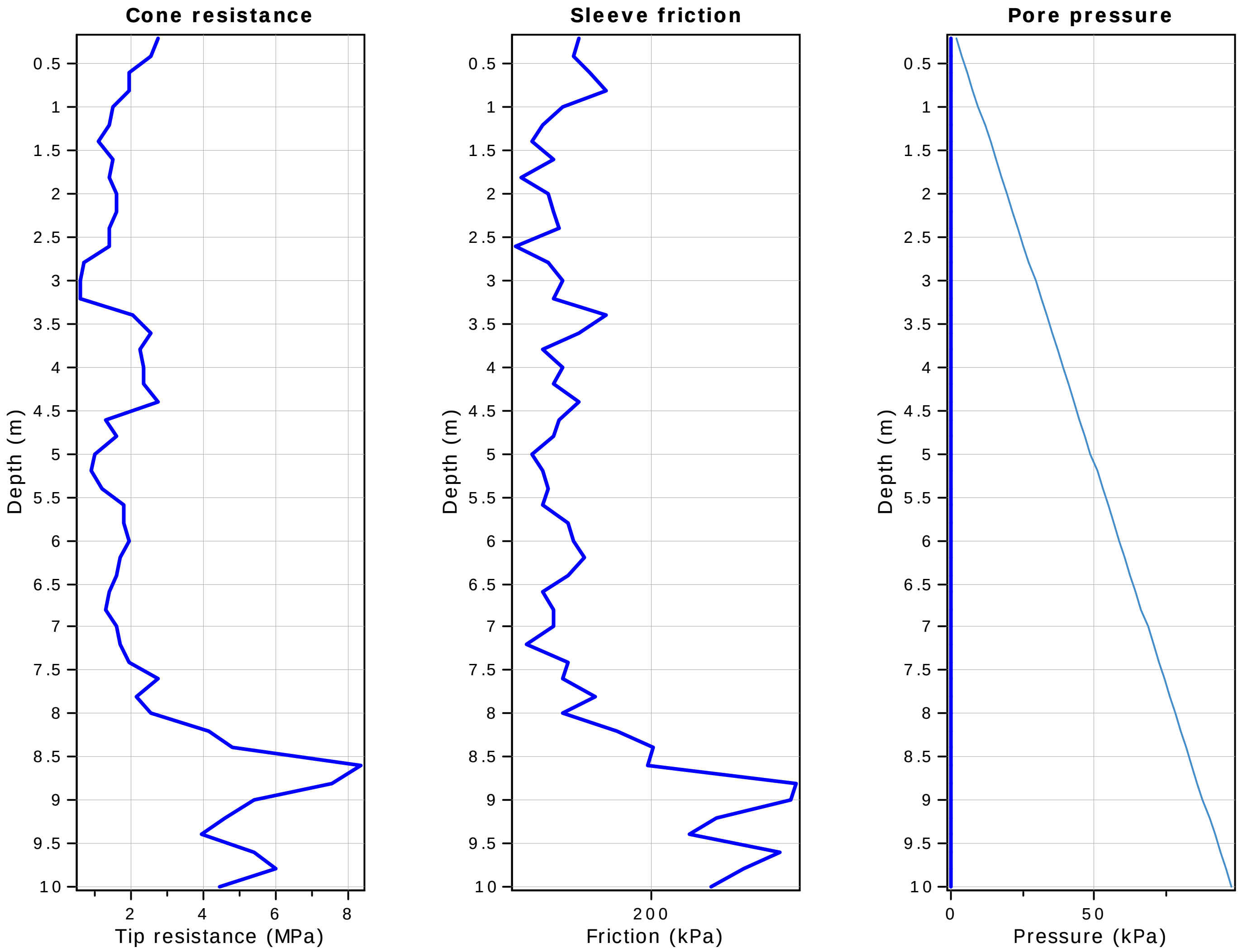
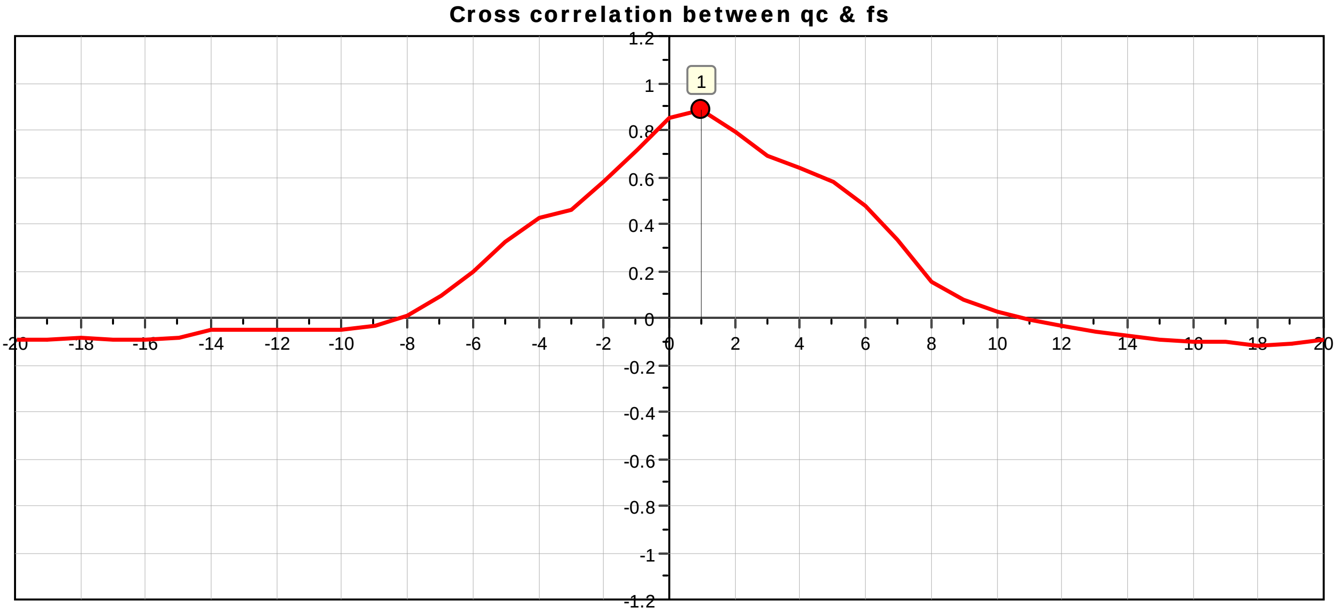
CPT: 036021P222CPT222
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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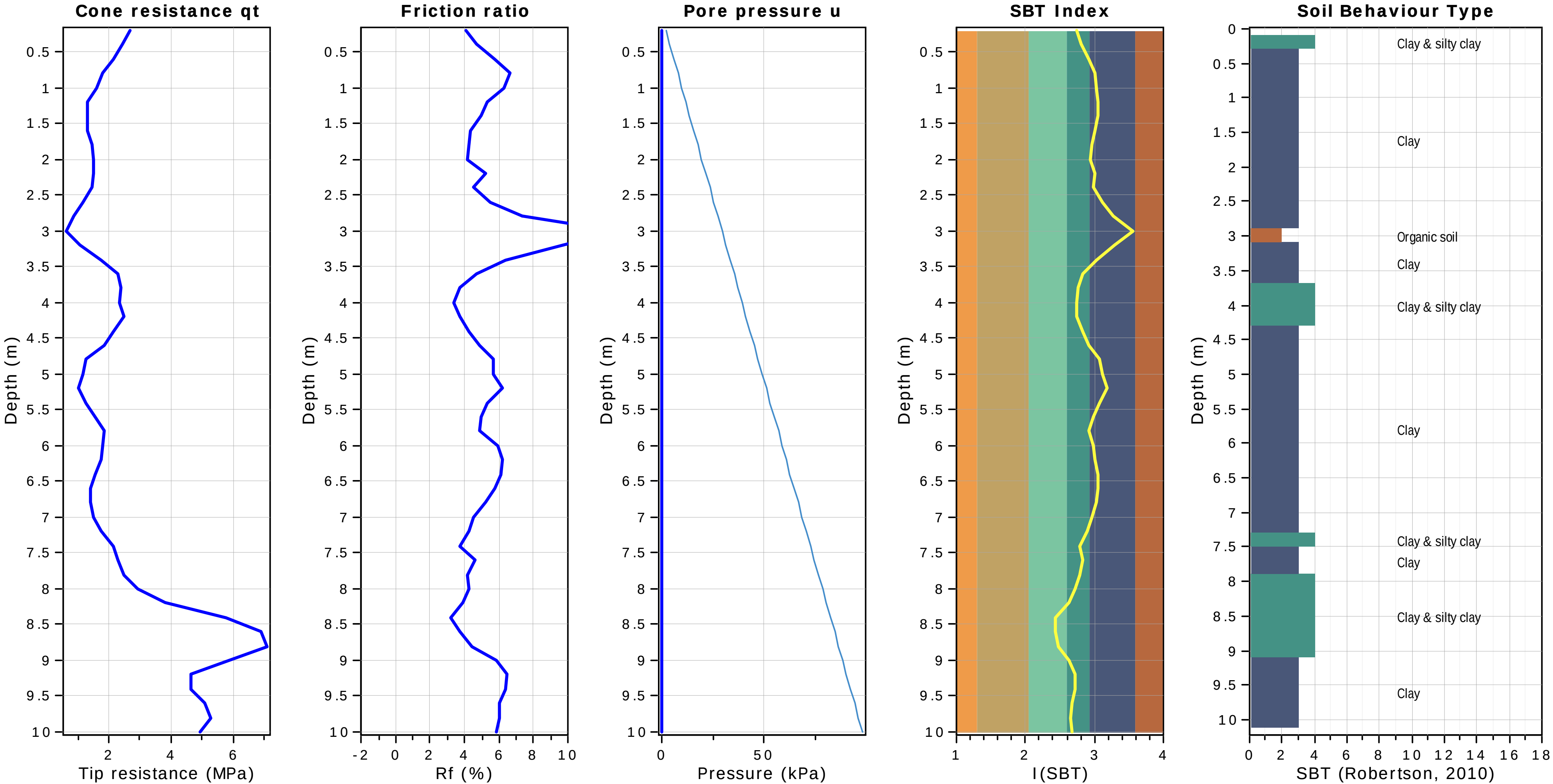
CPT: 036021P222CPT222
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

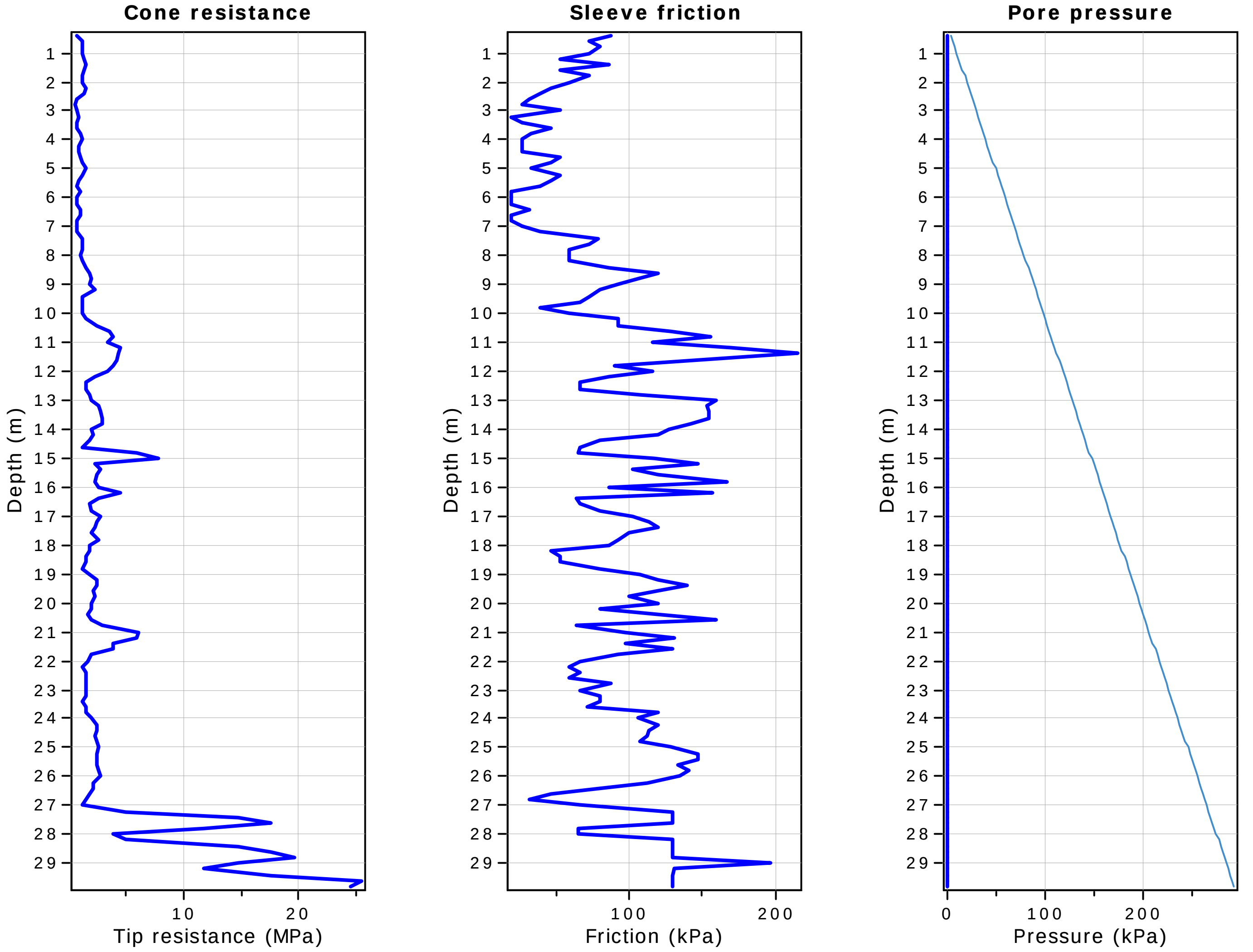


SBT legend

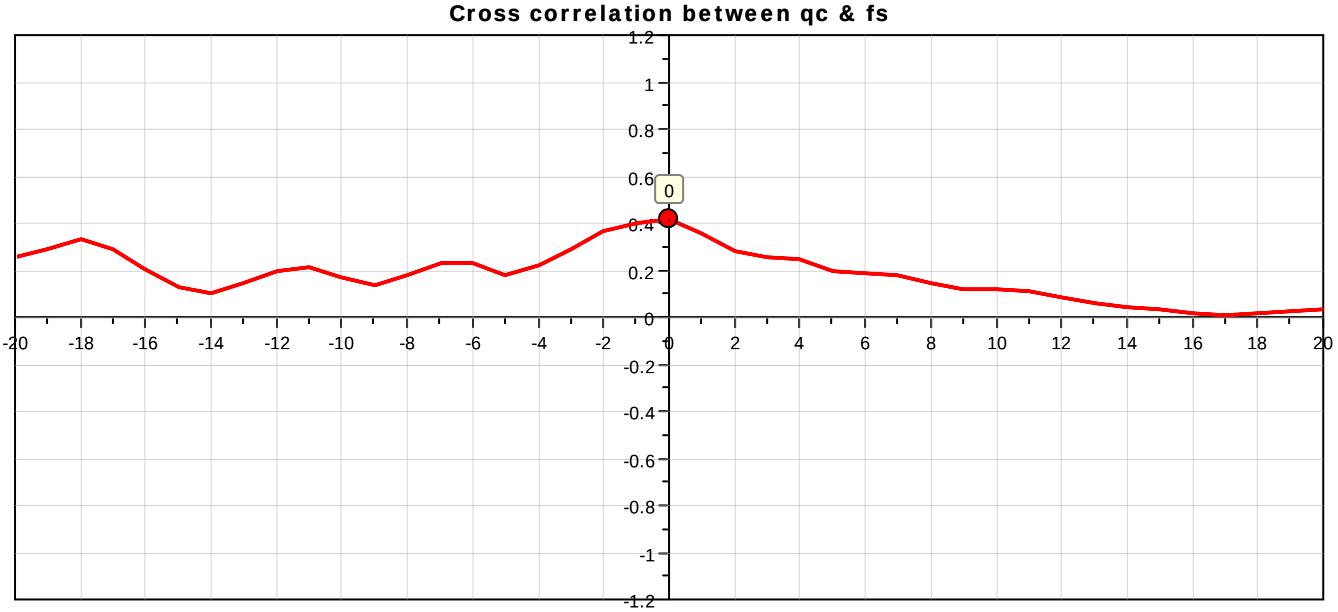
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬛ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

CPT: 036021P227CPT227
Total depth: 29.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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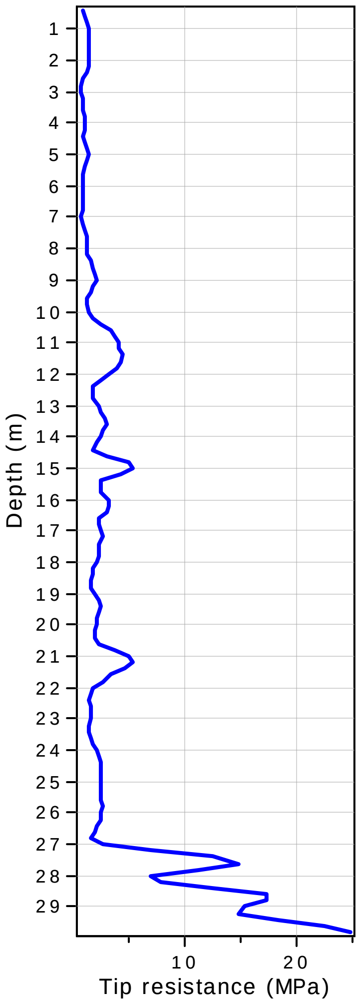
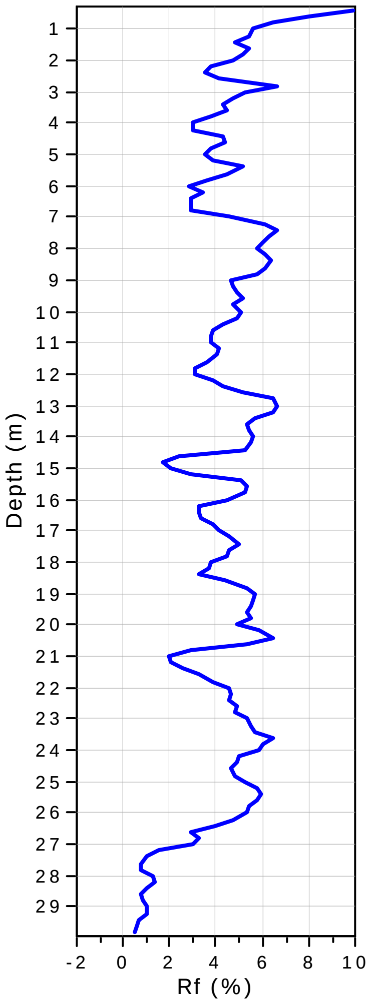
CPT: 036021P227CPT227
Total depth: 29.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

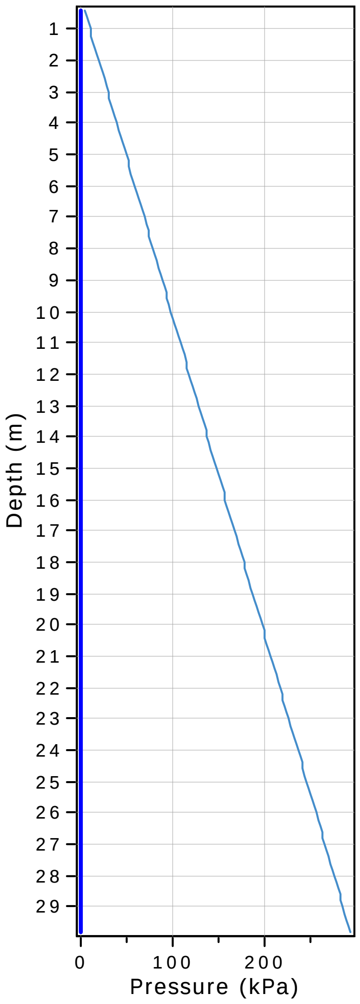
Cone resistance qt



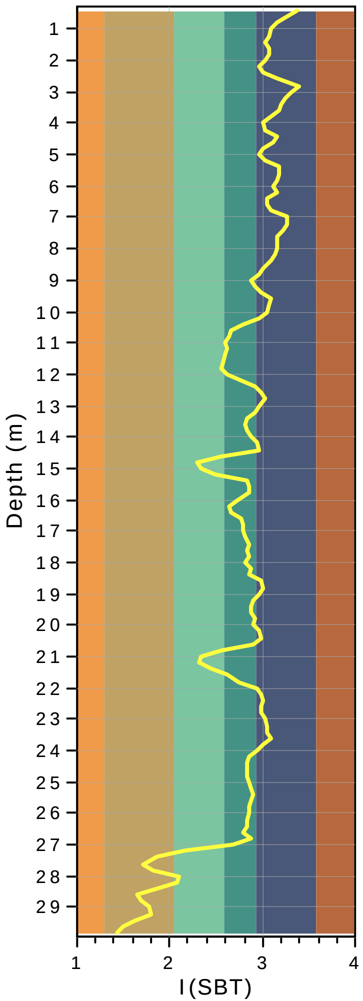
Friction ratio



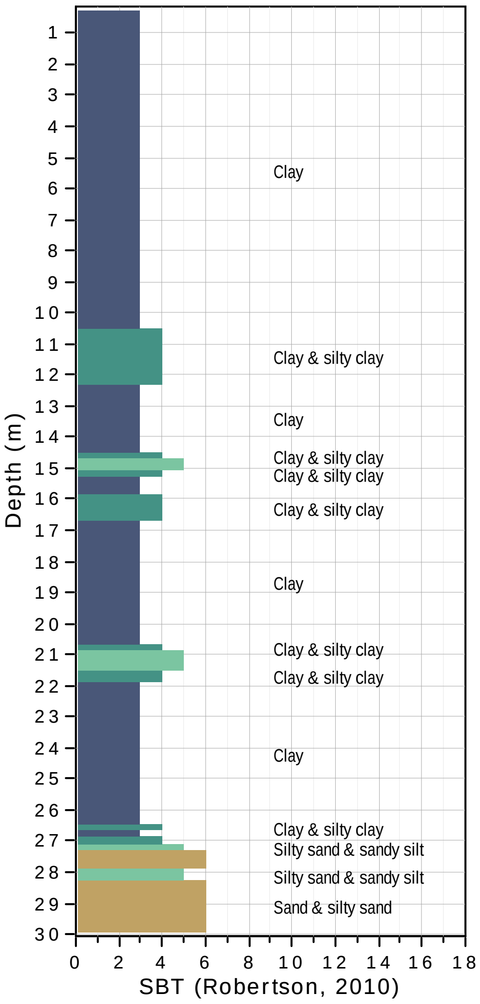
Pore pressure u



SBT Index



Soil Behaviour Type

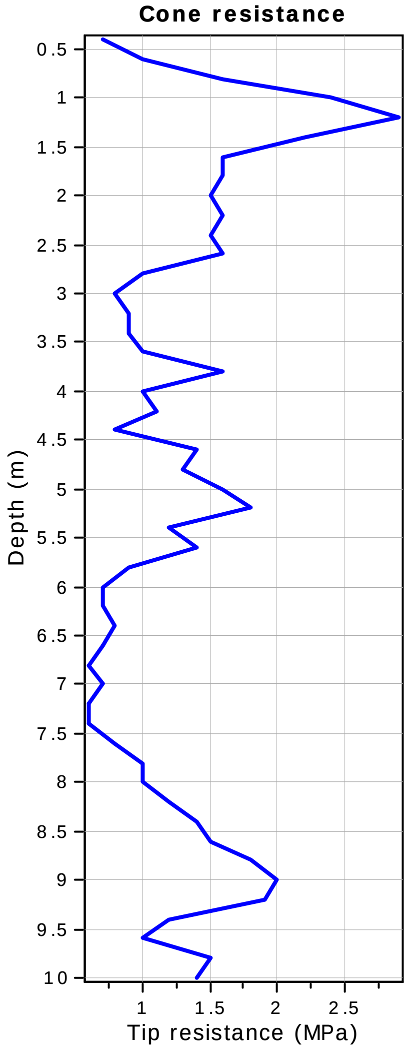


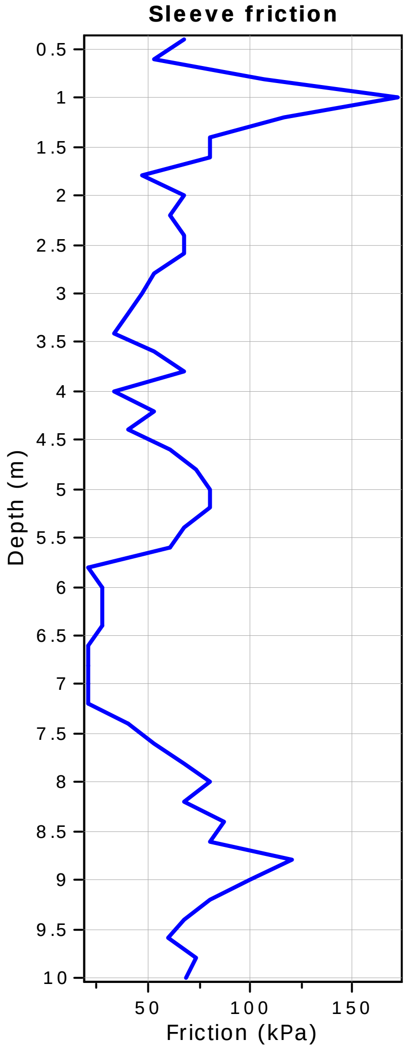
SBT legend

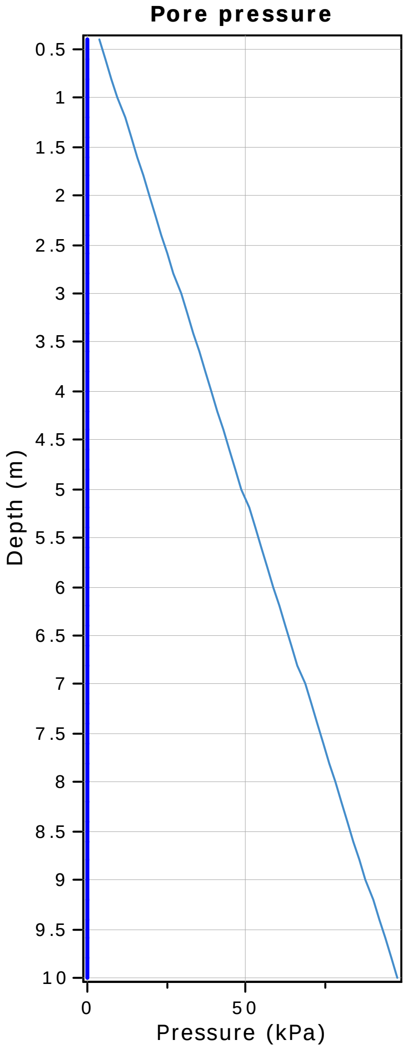
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟫 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

CPT: 036021P228CPT228
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

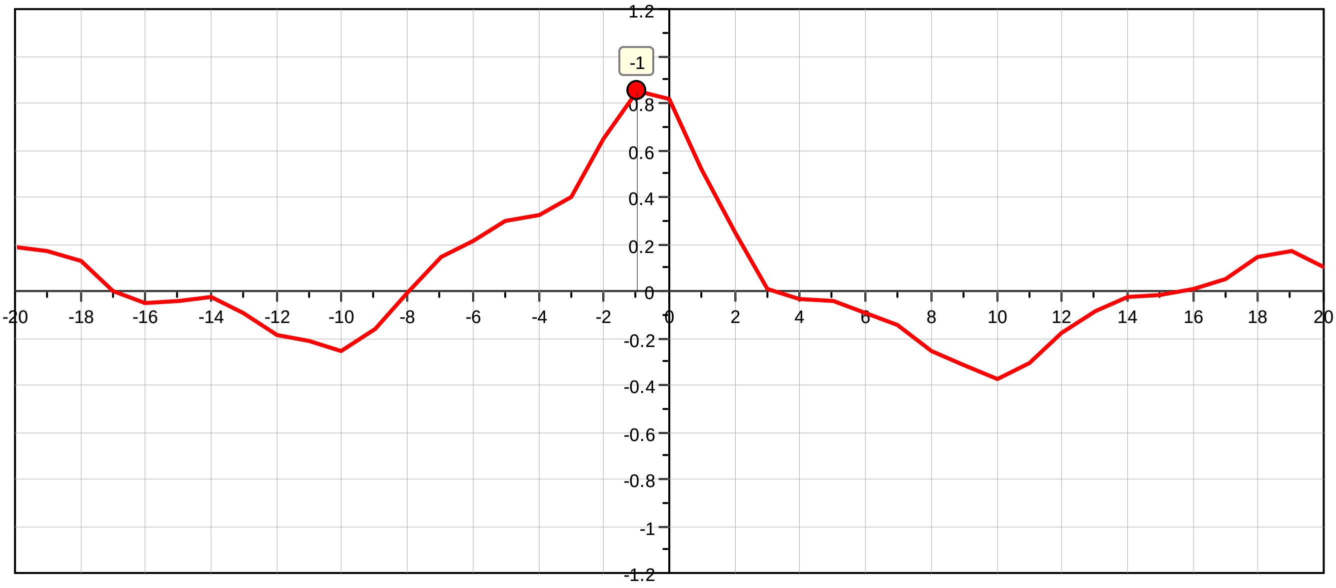
Project:
Location:


Cone resistance


Sleeve friction

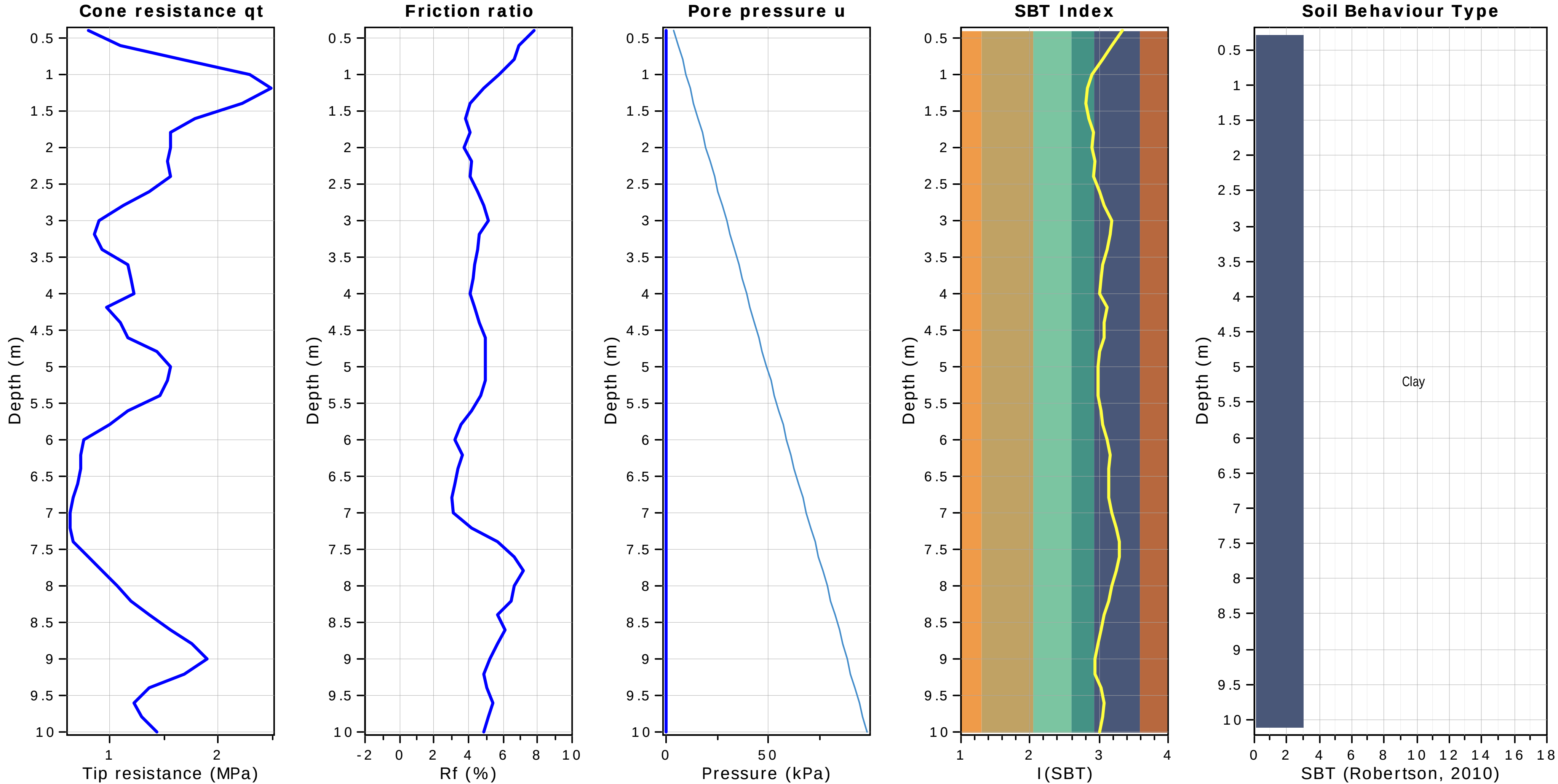

Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

CPT: 036021P228CPT228
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



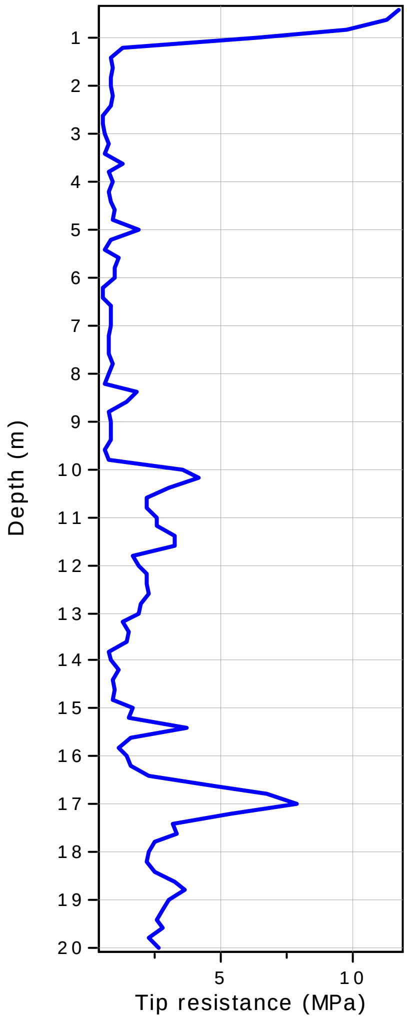
SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

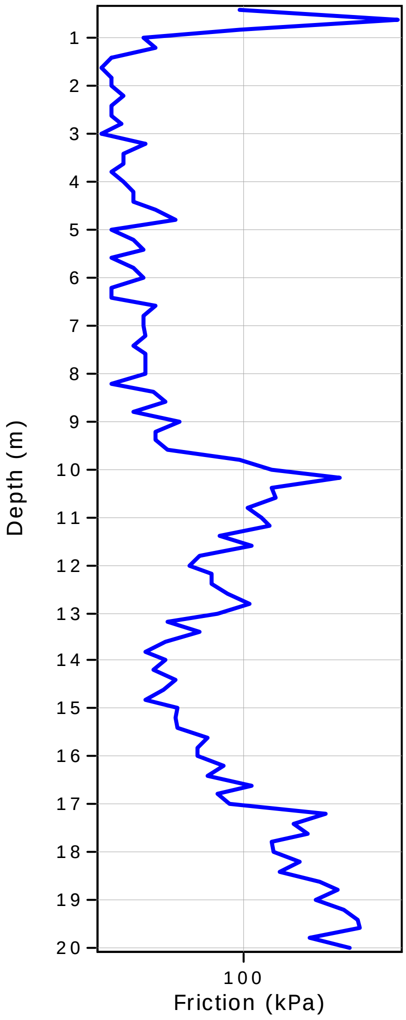
CPT: 036021P235CPT235
Total depth: 20.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

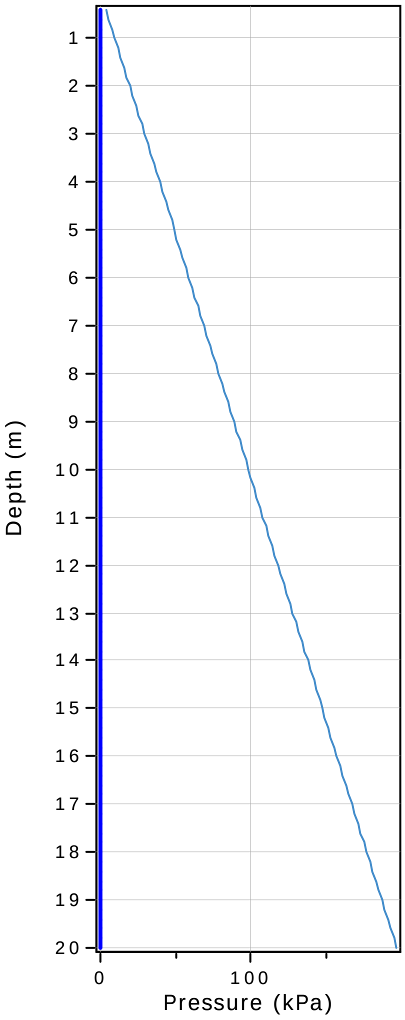
Cone resistance



Sleeve friction

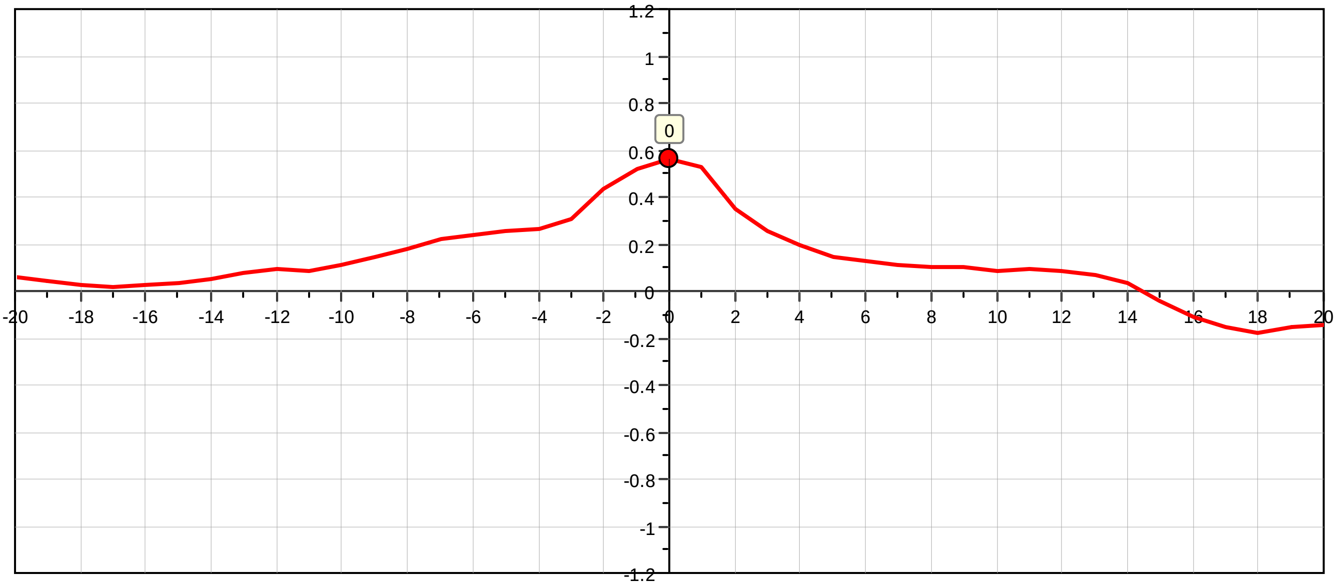


Pore pressure



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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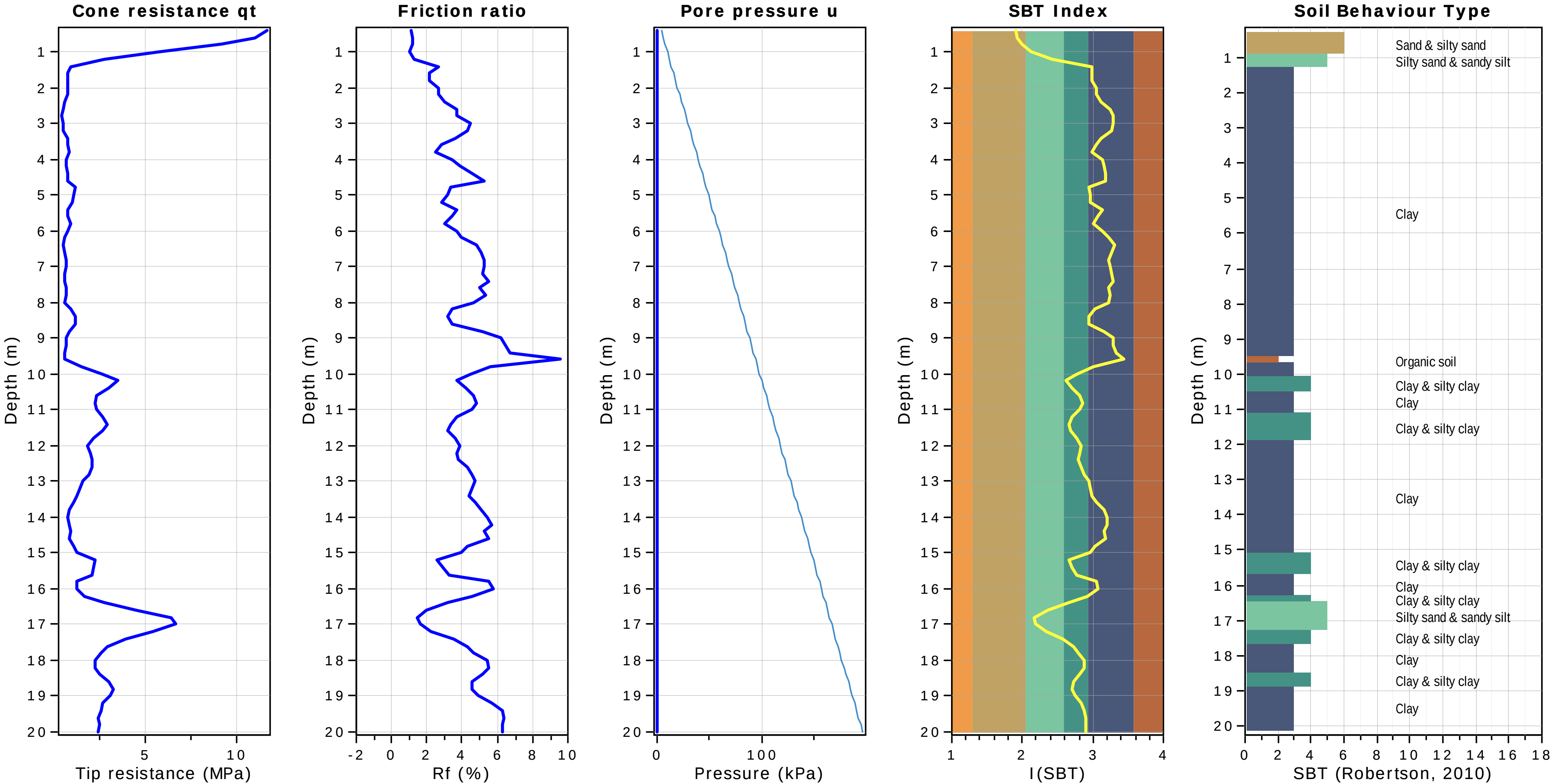
CPT: 036021P235CPT235
Total depth: 20.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

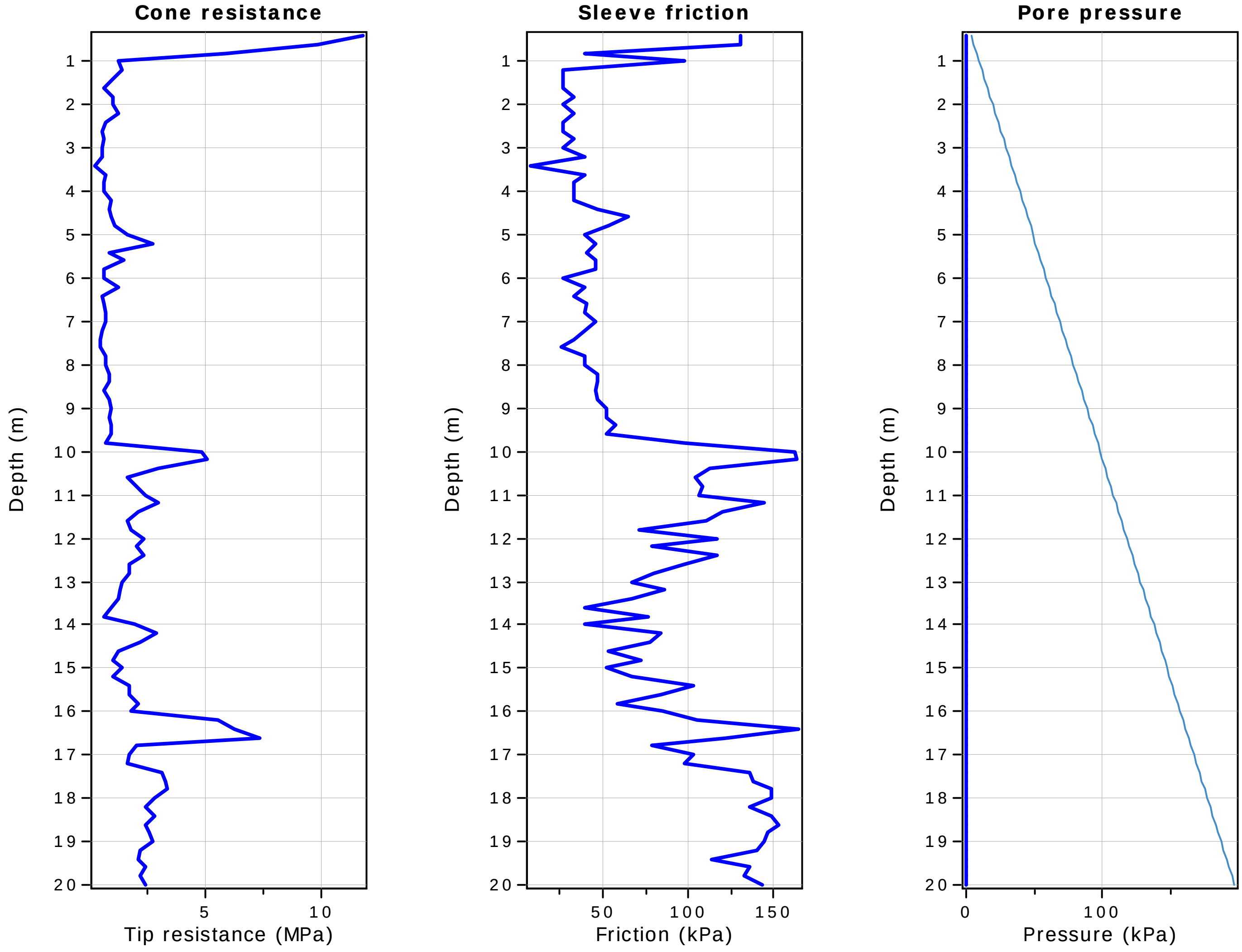


SBT legend

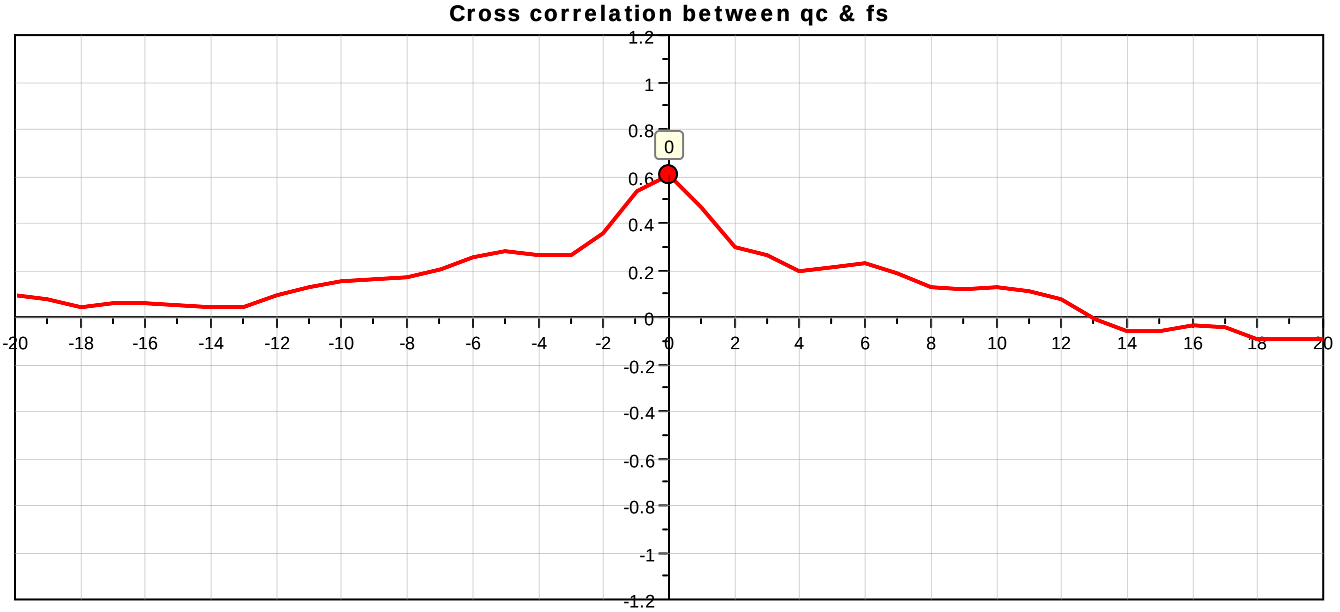
🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟨 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

CPT: 036021P236CPT236
Total depth: 20.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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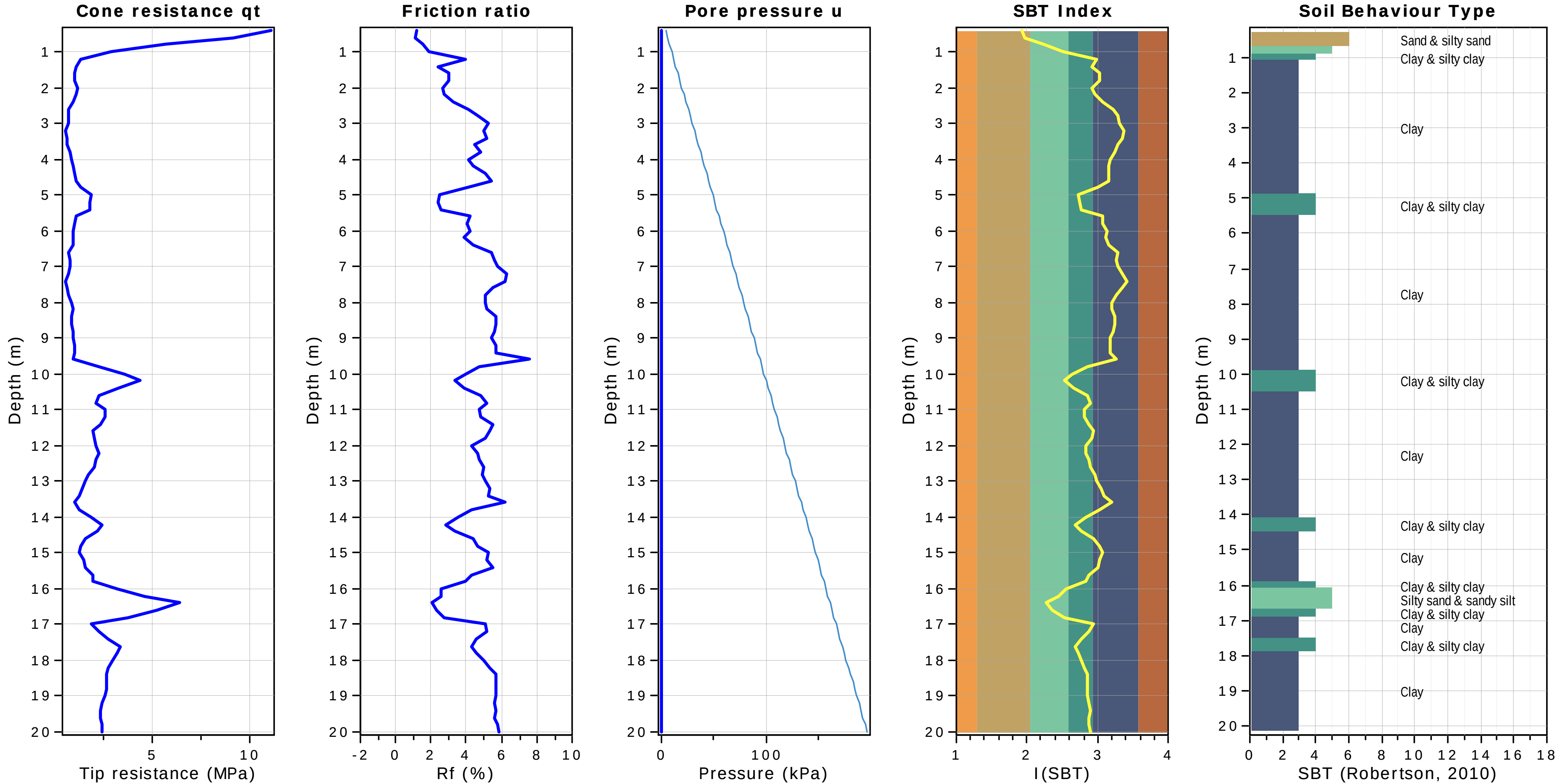
CPT: 036021P236CPT236
Total depth: 20.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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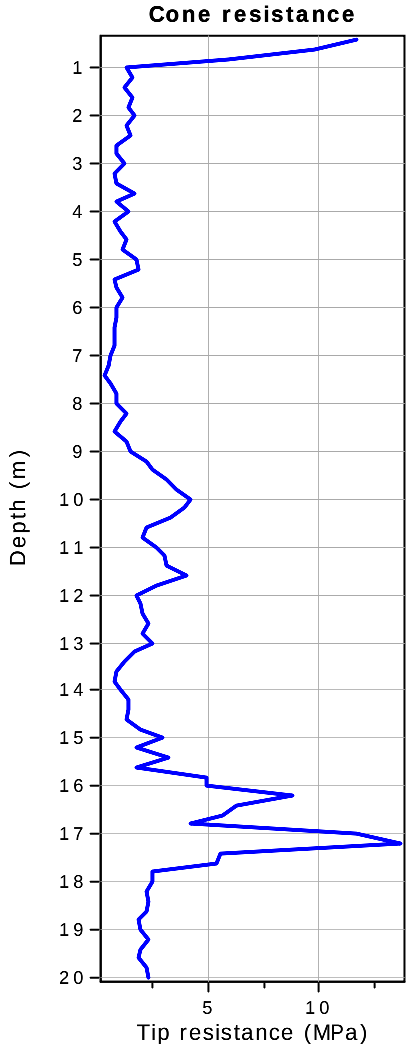
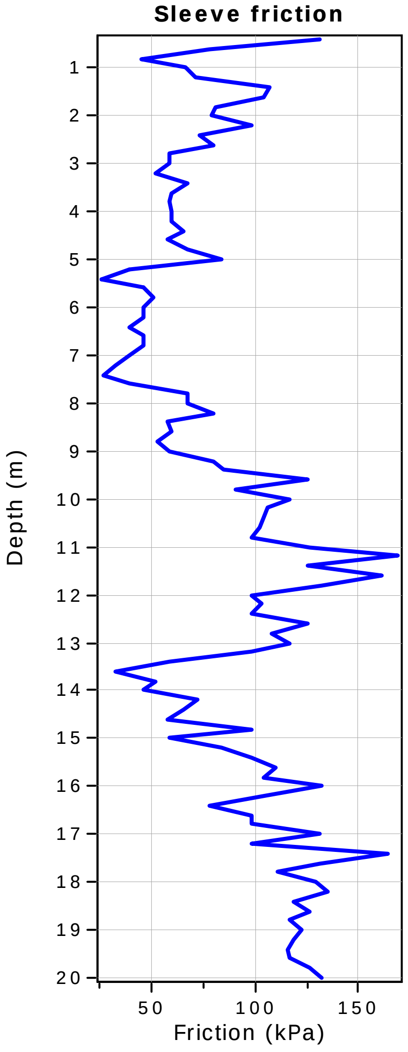
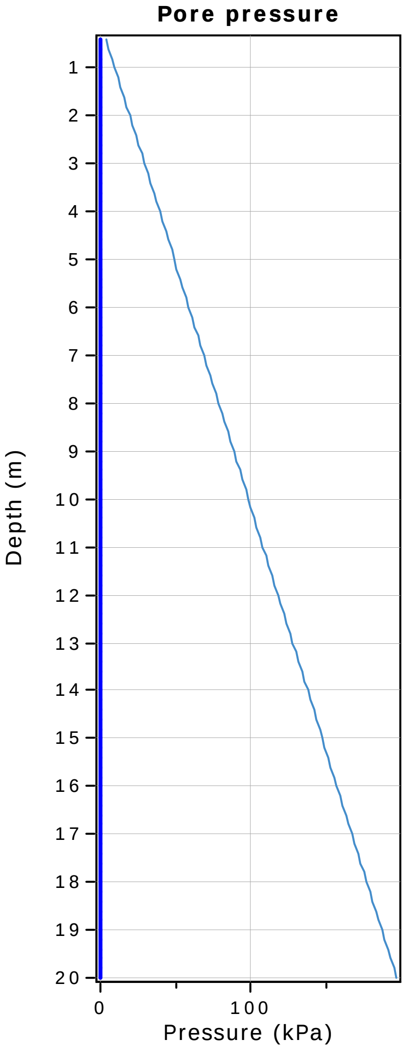
CPT: 036021P237CPT237
Total depth: 20.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:

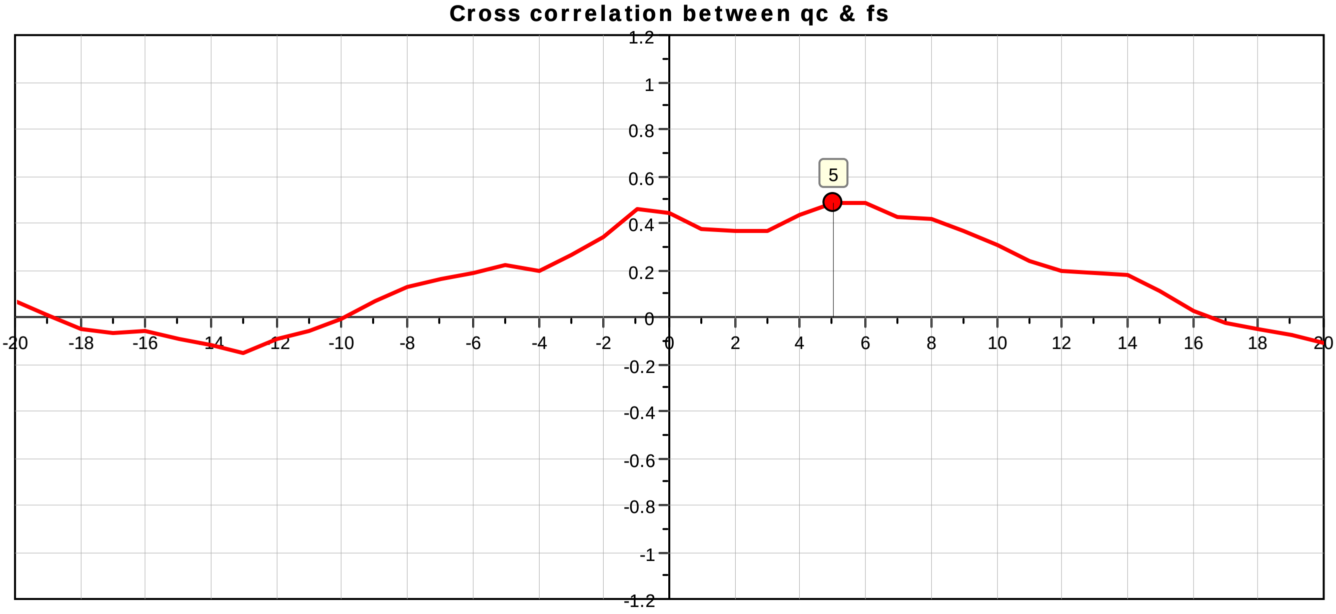
Location:





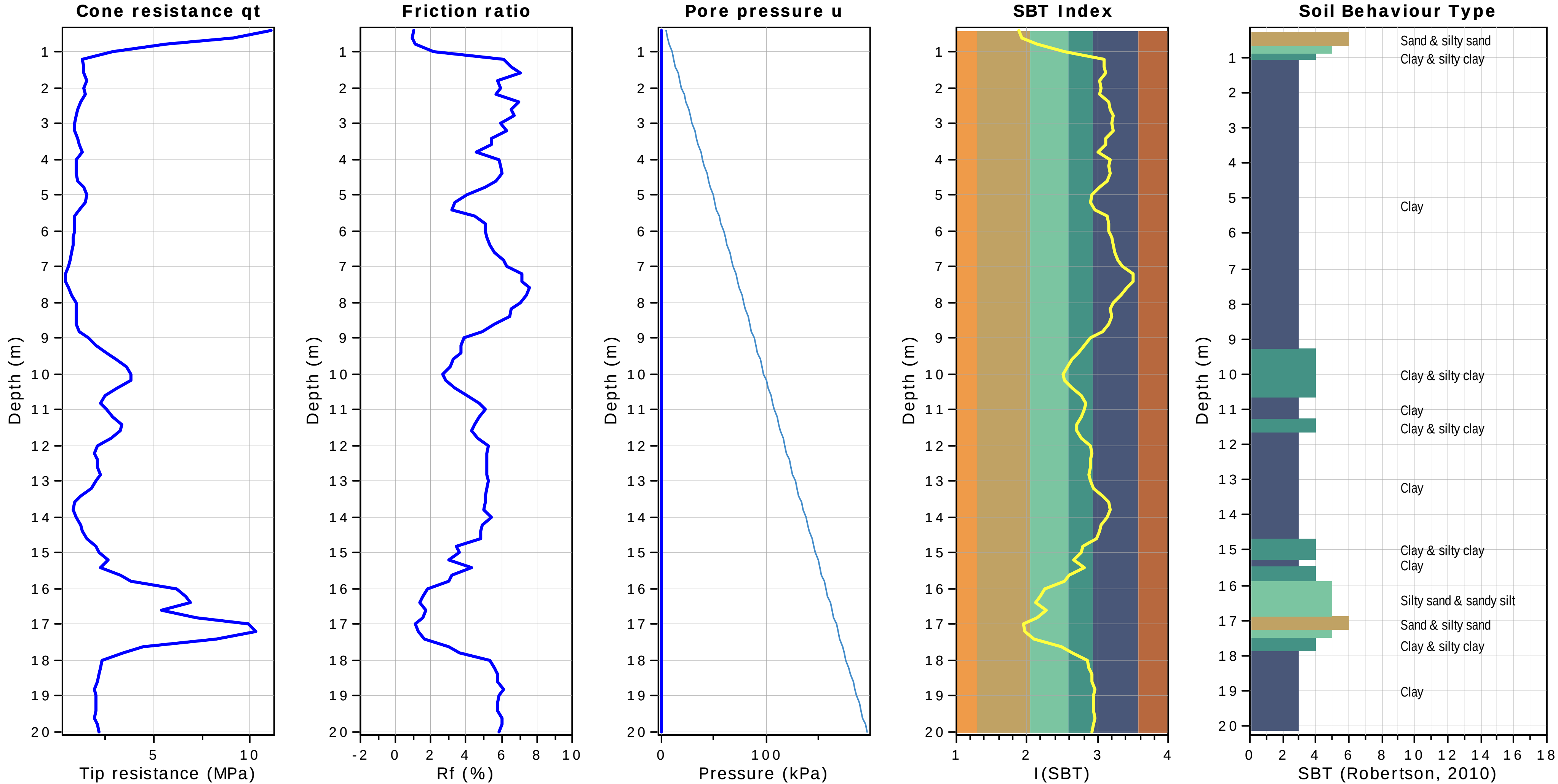


The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT: 036021P237CPT237
Total depth: 20.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



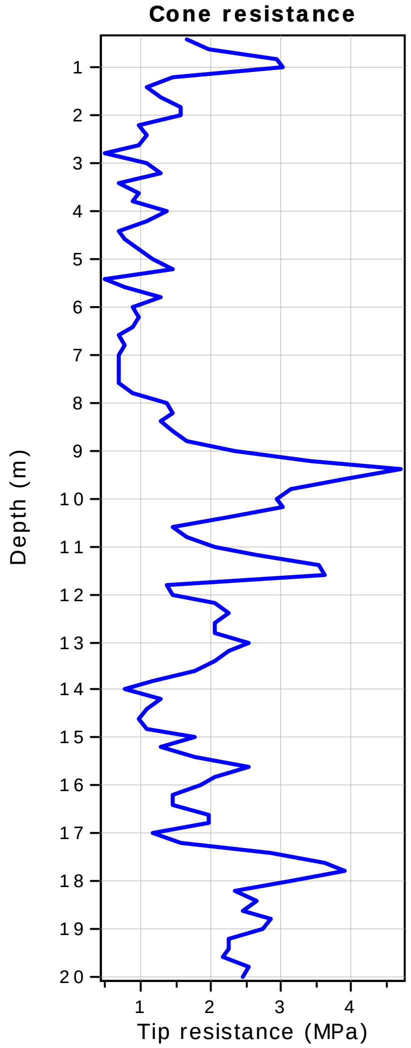
SBT legend

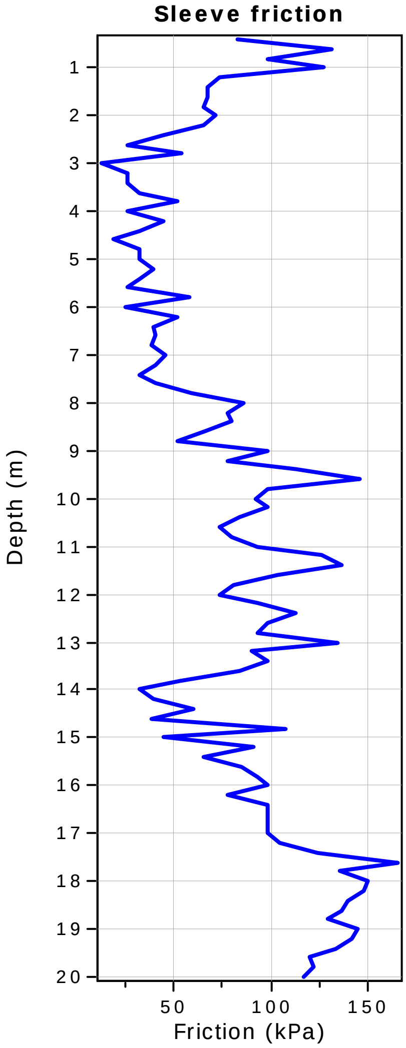
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬛ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

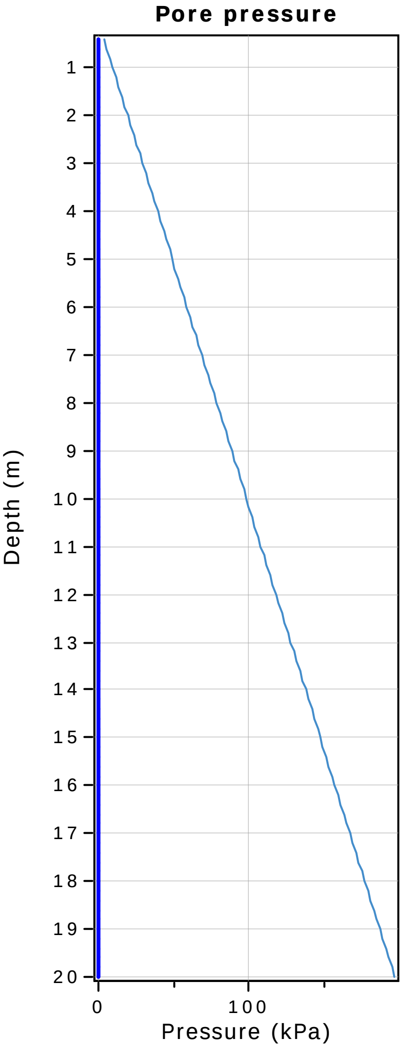
CPT: 036021P239CPT239

Total depth: 20.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

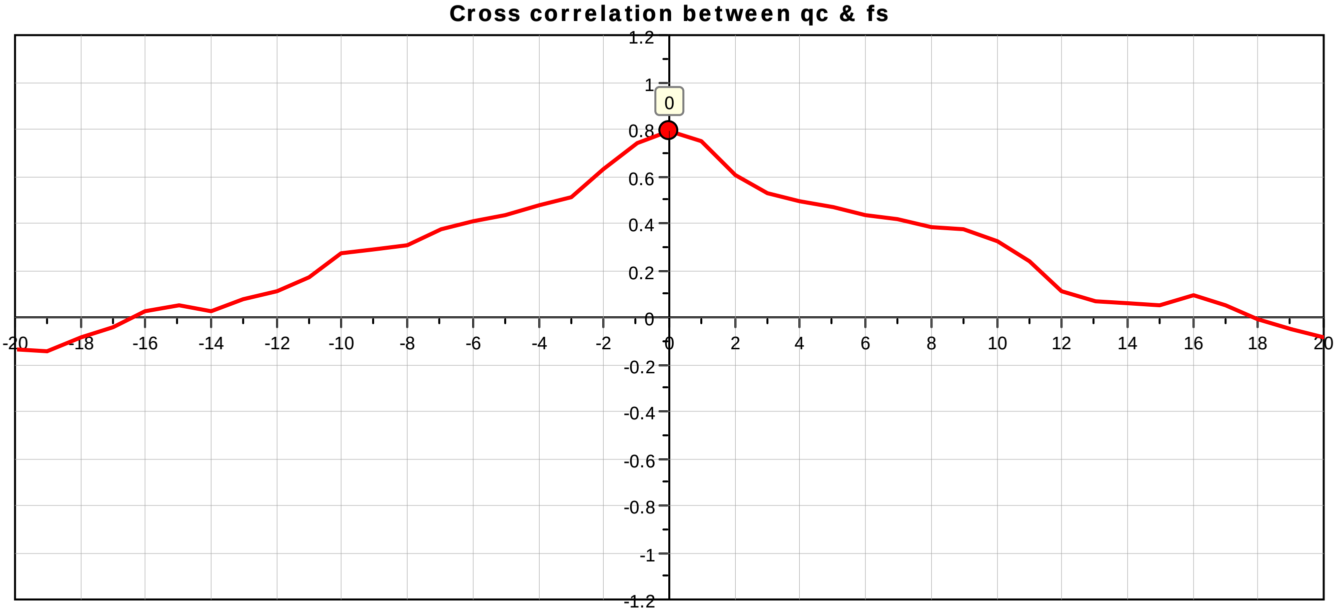
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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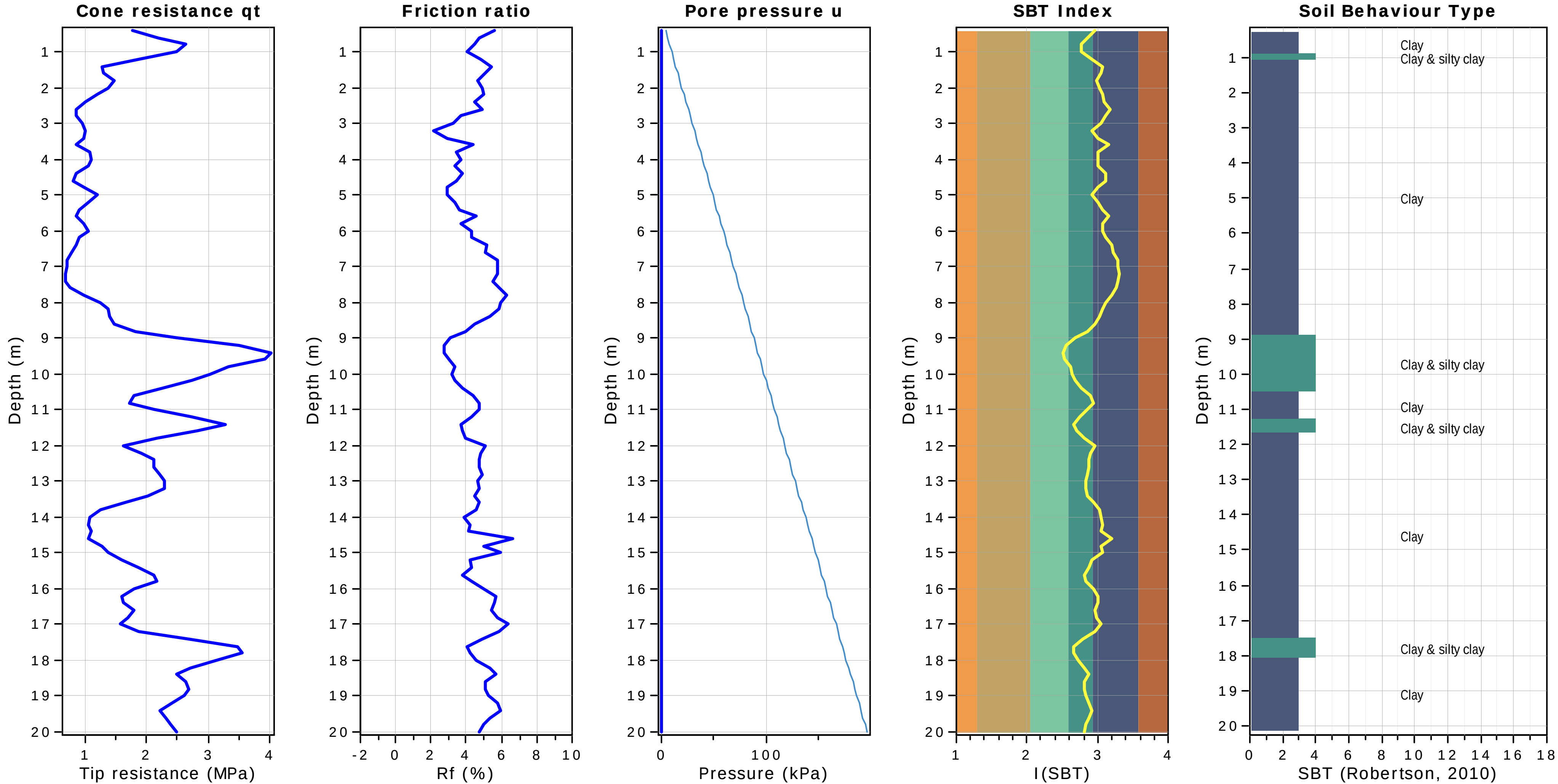
CPT: 036021P239CPT239
Total depth: 20.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟫 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

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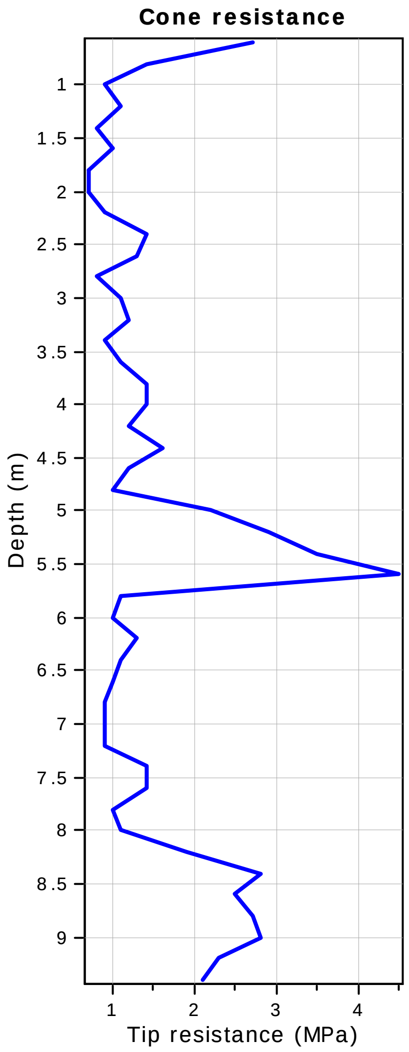
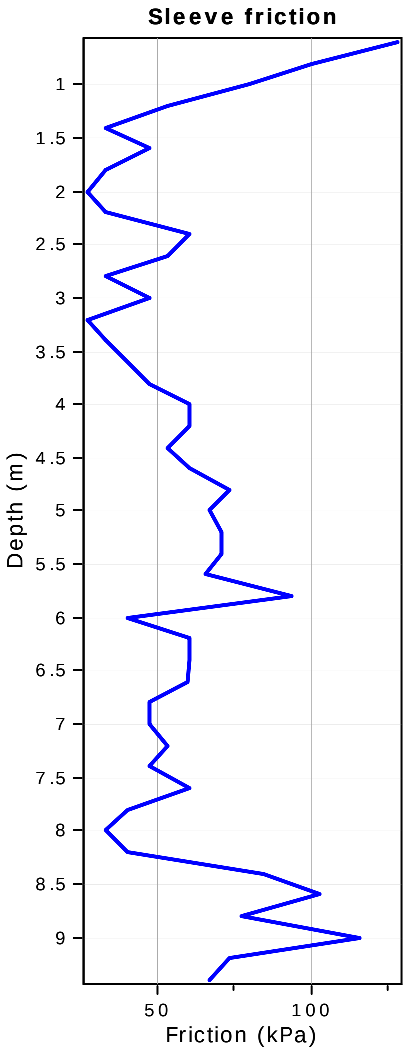
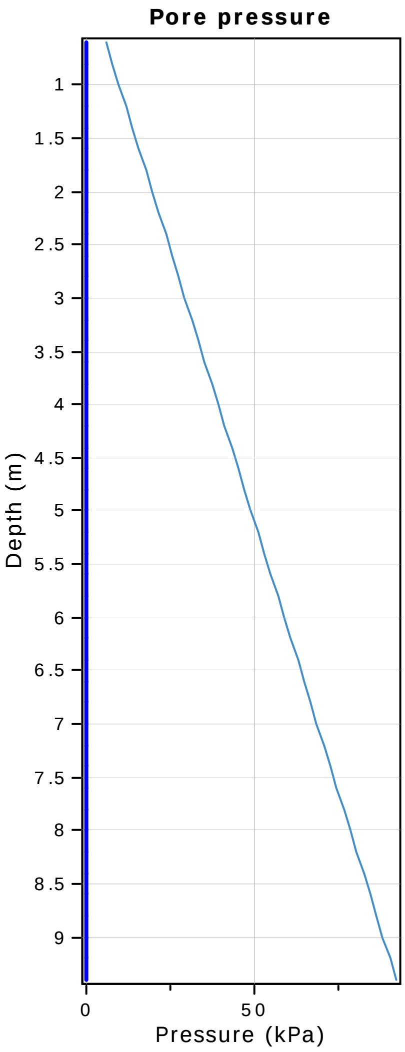
CPT: 036021P241CPT241
Total depth: 9.40 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

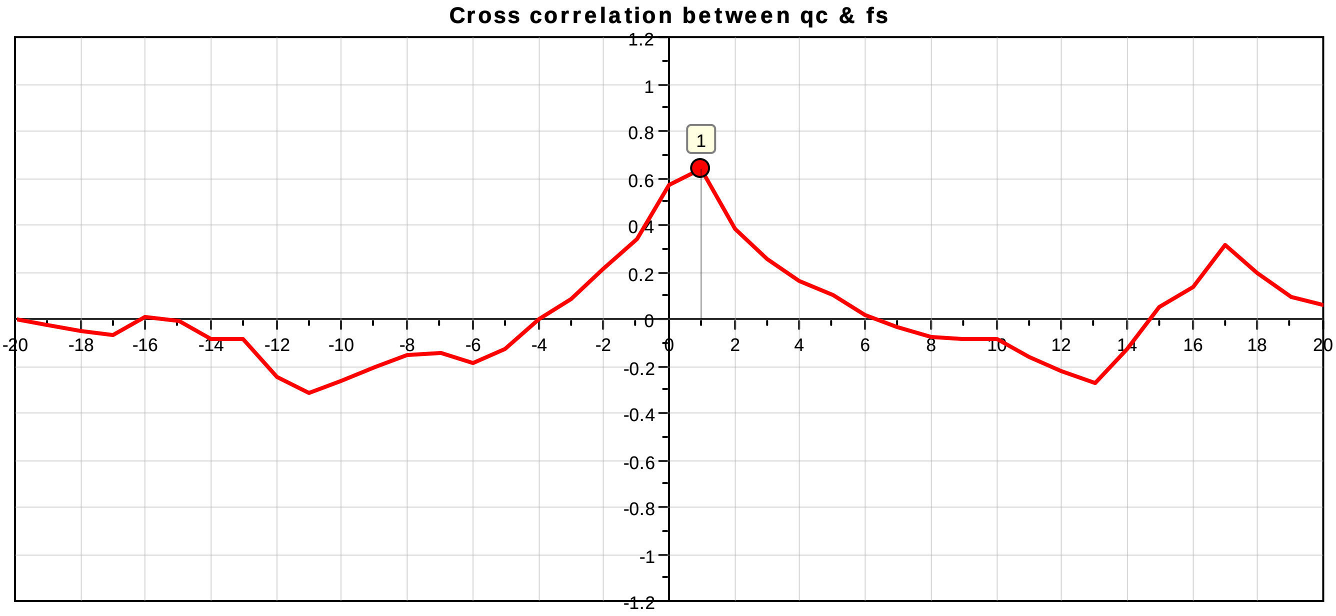
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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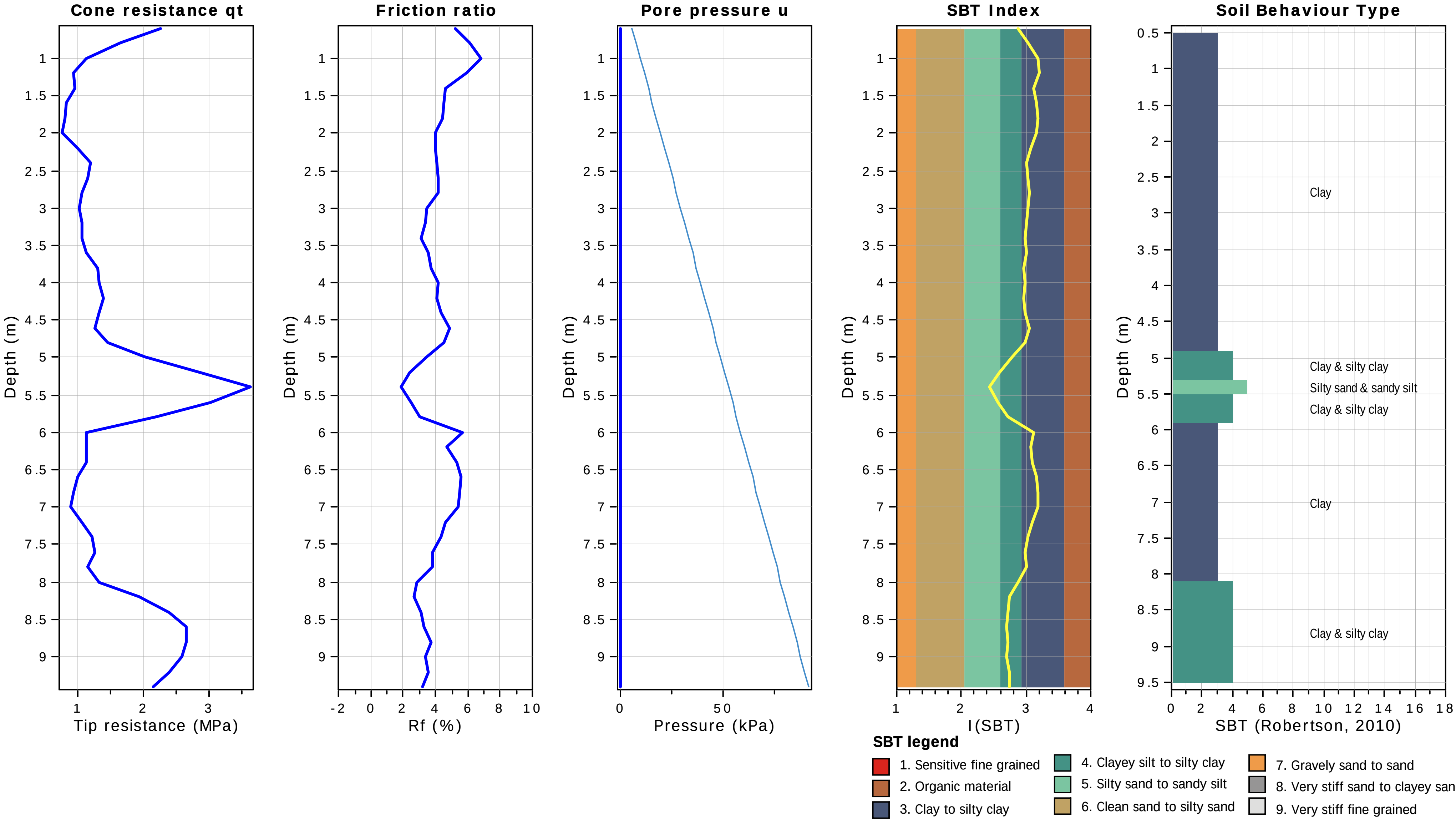
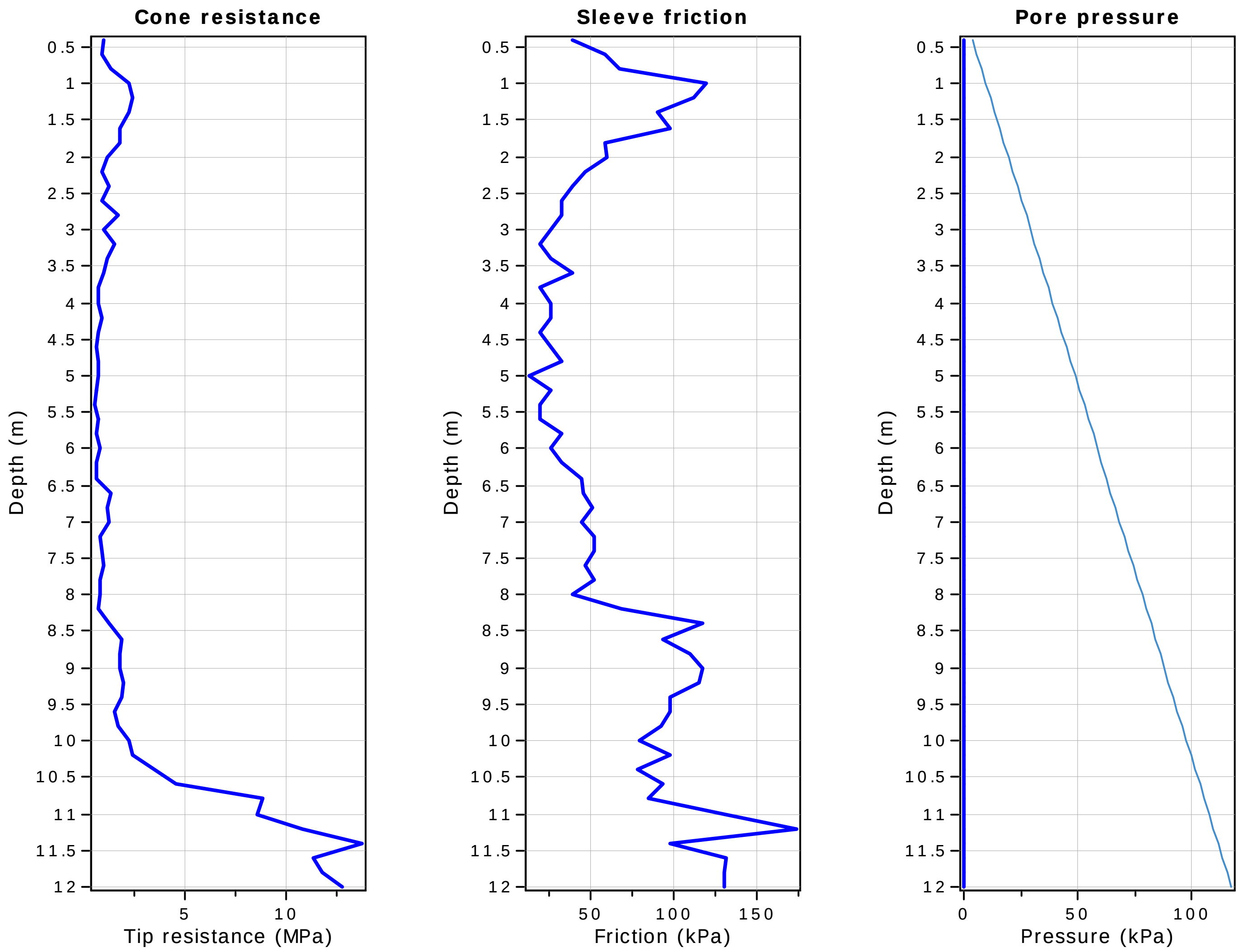
CPT: 036021P241CPT241
Total depth: 9.40 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

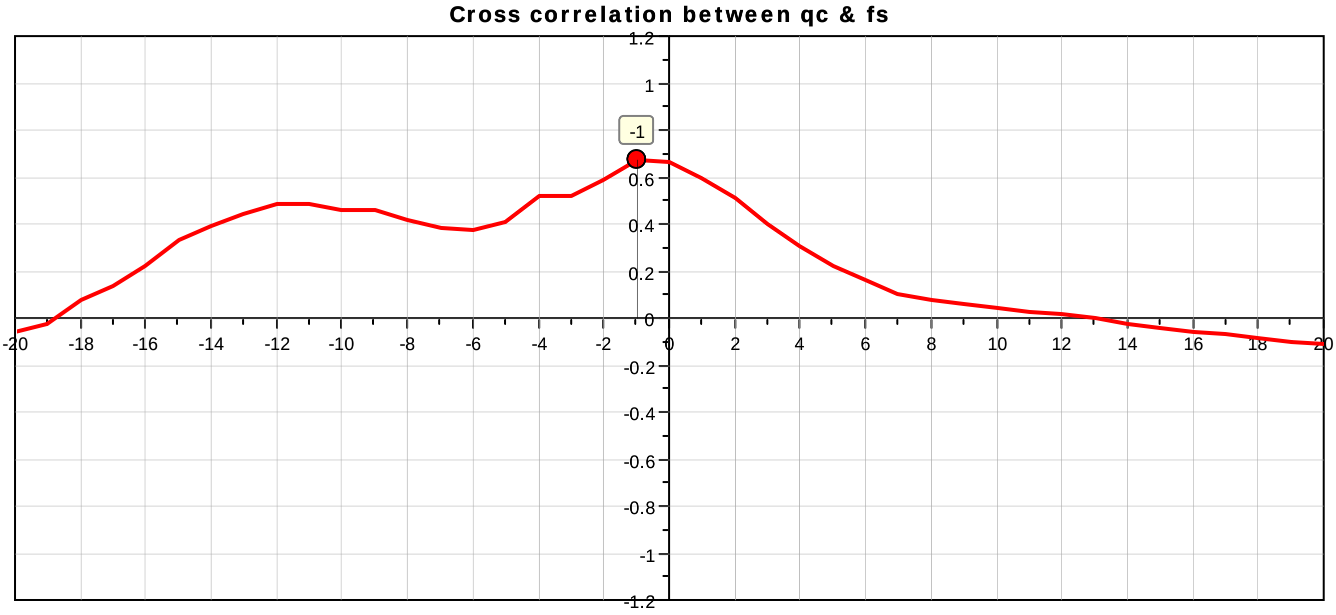


CPT: 036021P242CPT242
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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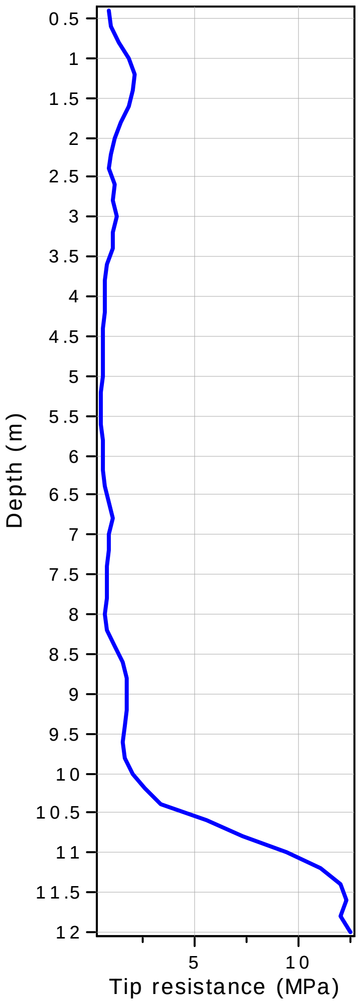
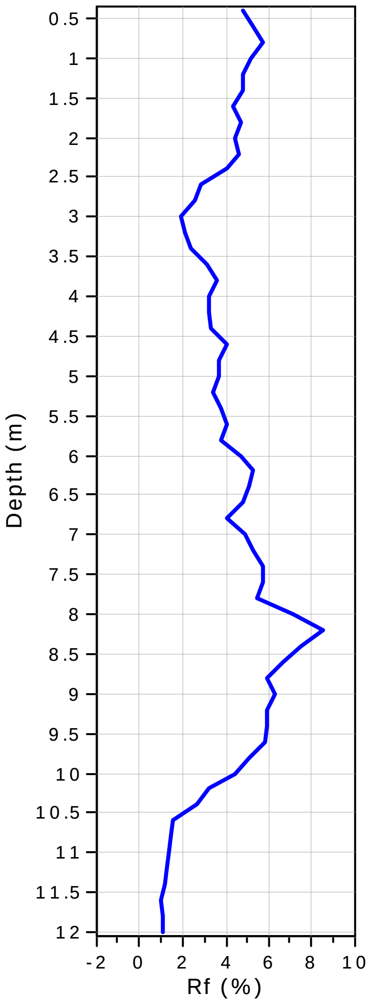
CPT: 036021P242CPT242
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

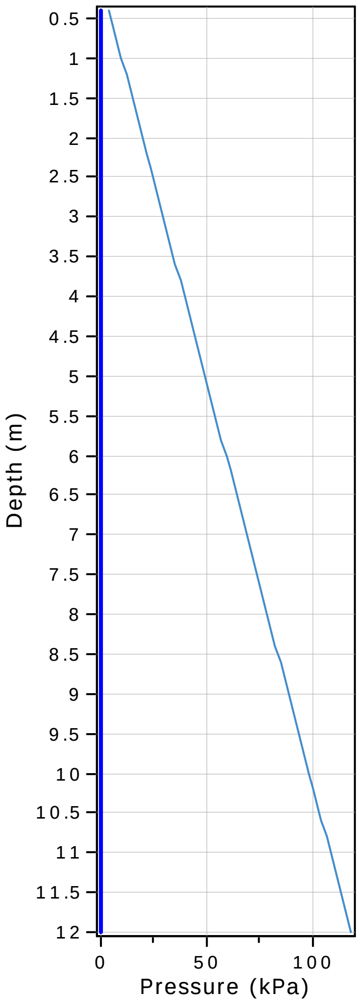
Cone resistance qt



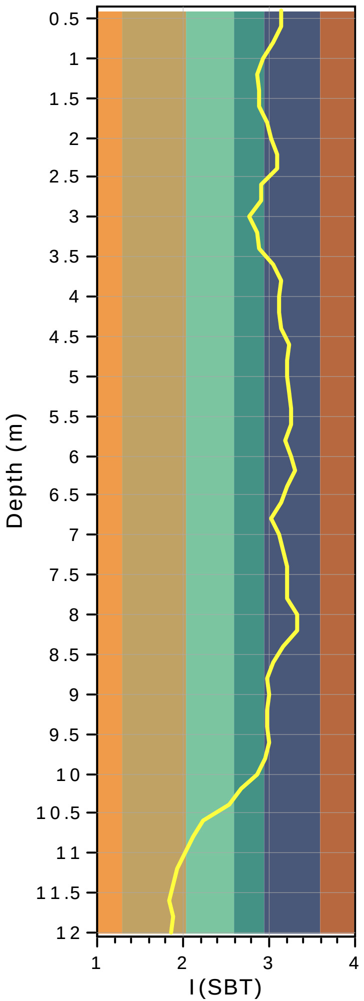
Friction ratio



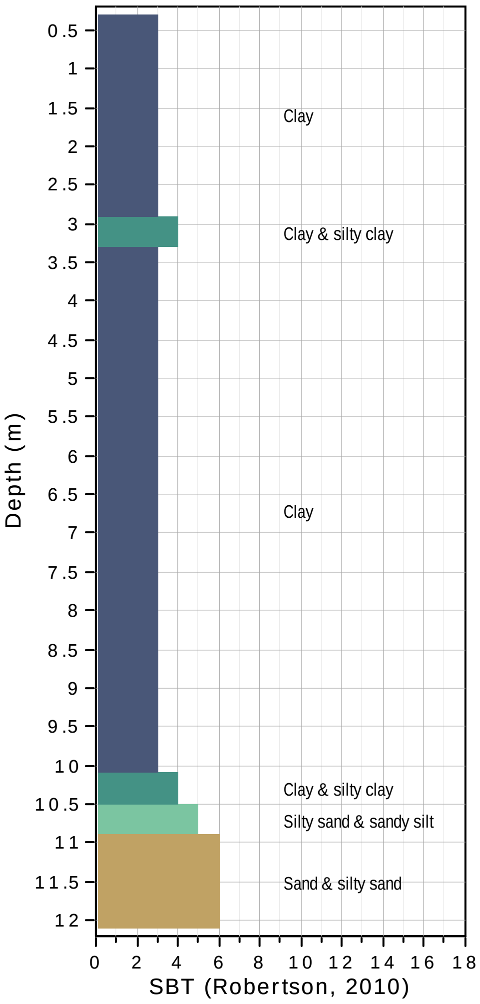
Pore pressure u



SBT Index



Soil Behaviour Type

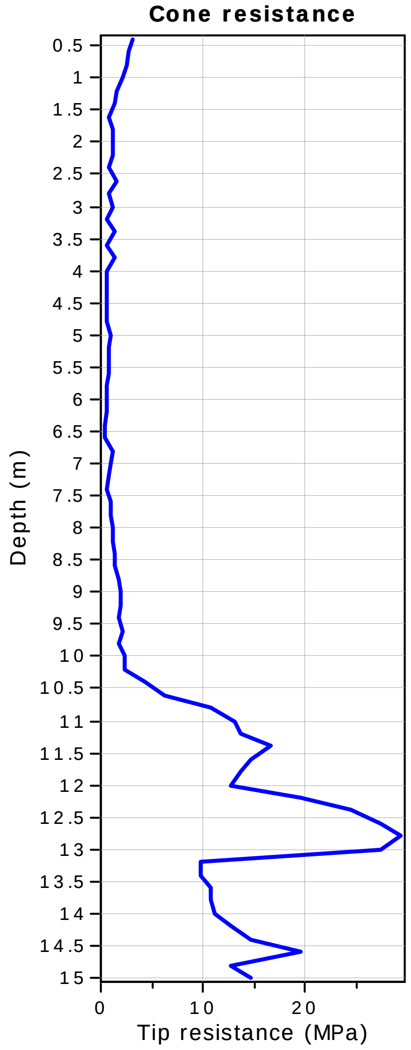


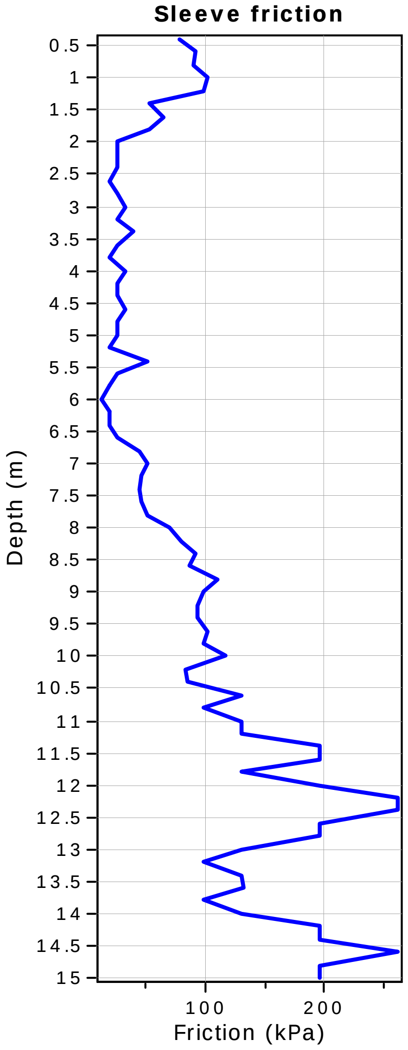
SBT legend

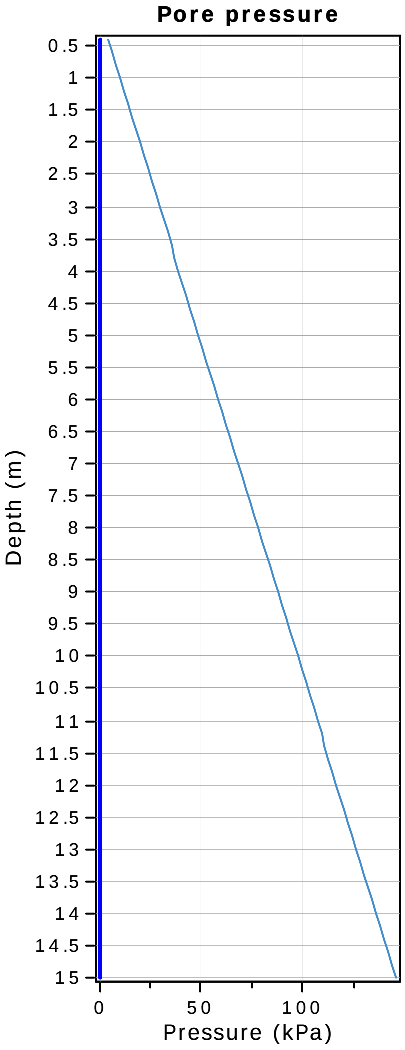
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

CPT: 036021P243CPT243
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

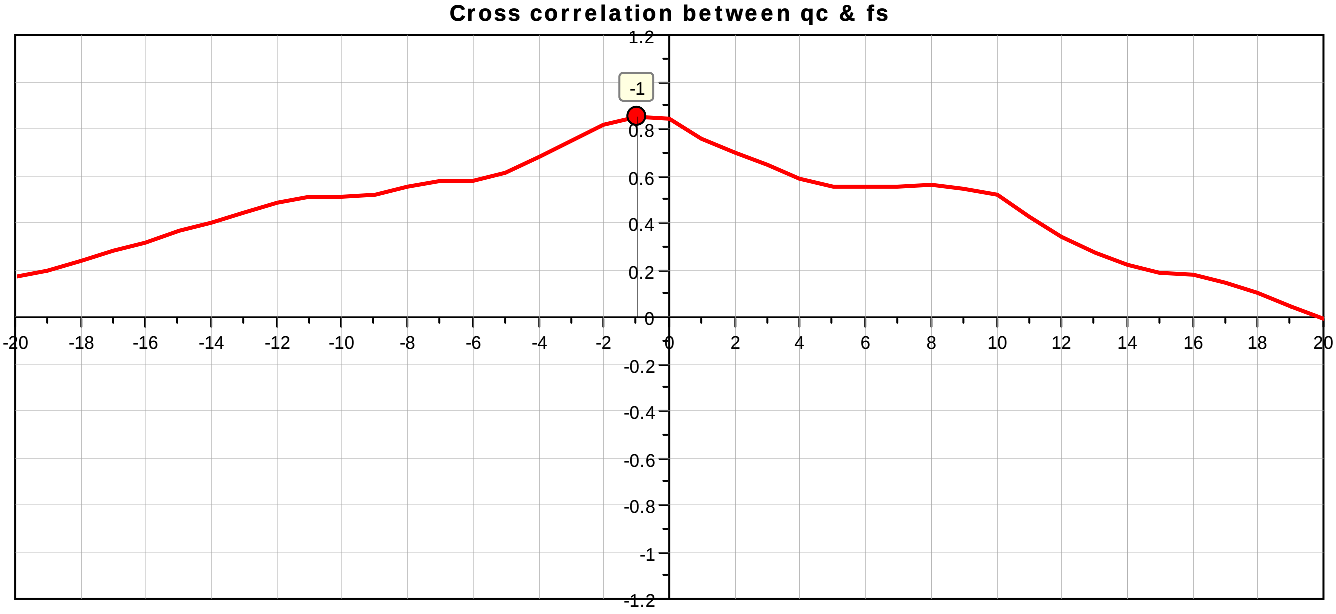
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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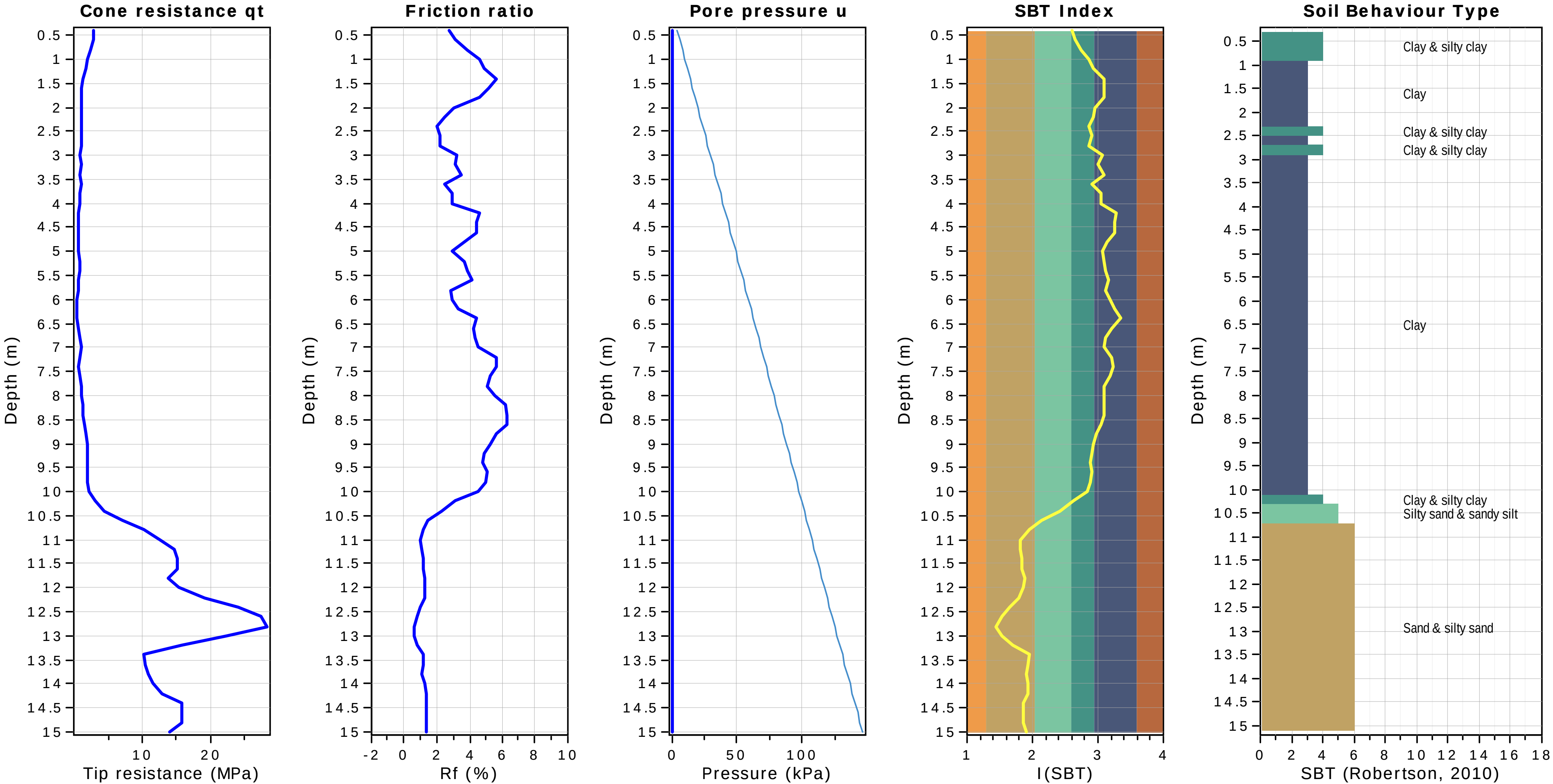
CPT: 036021P243CPT243
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

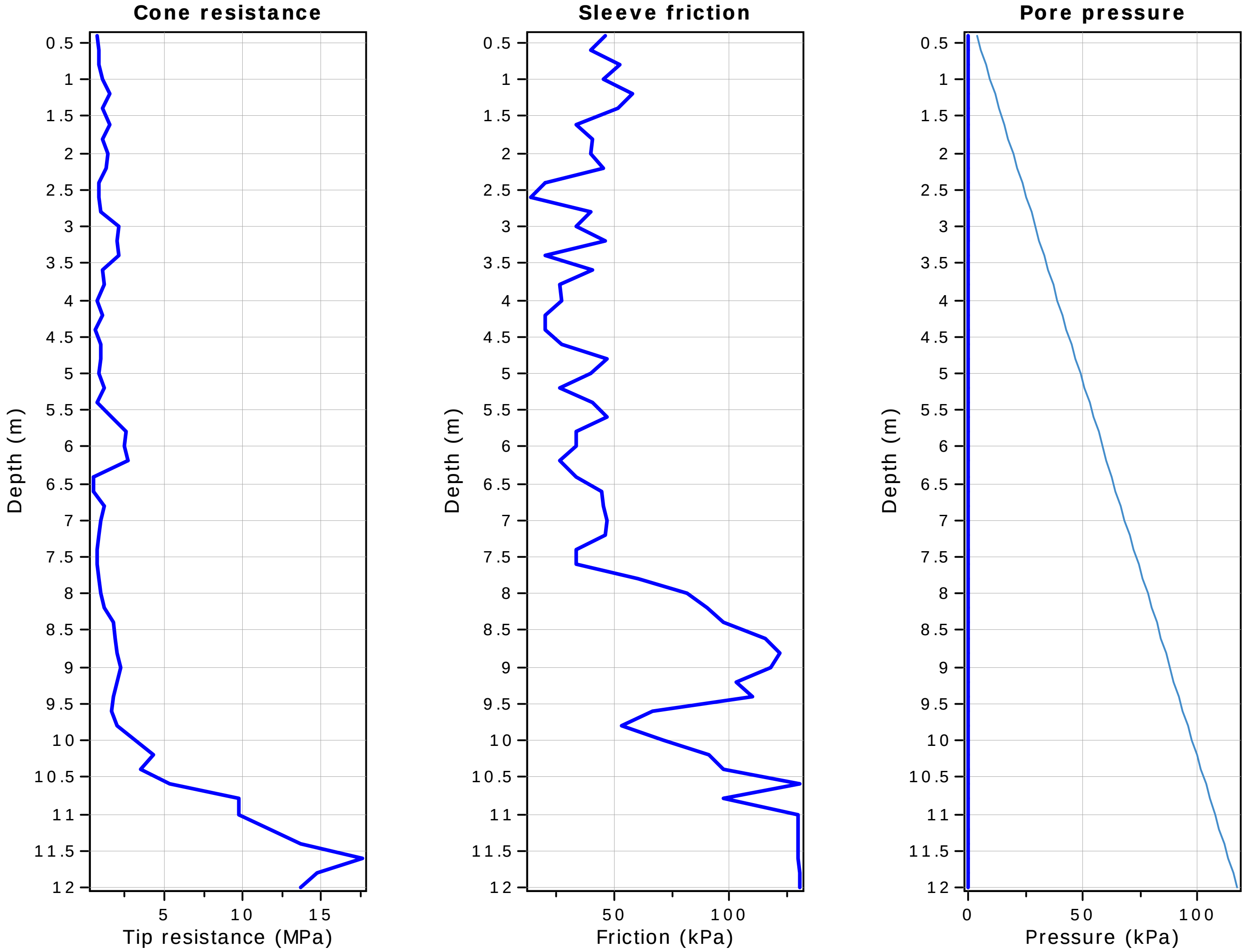


SBT legend

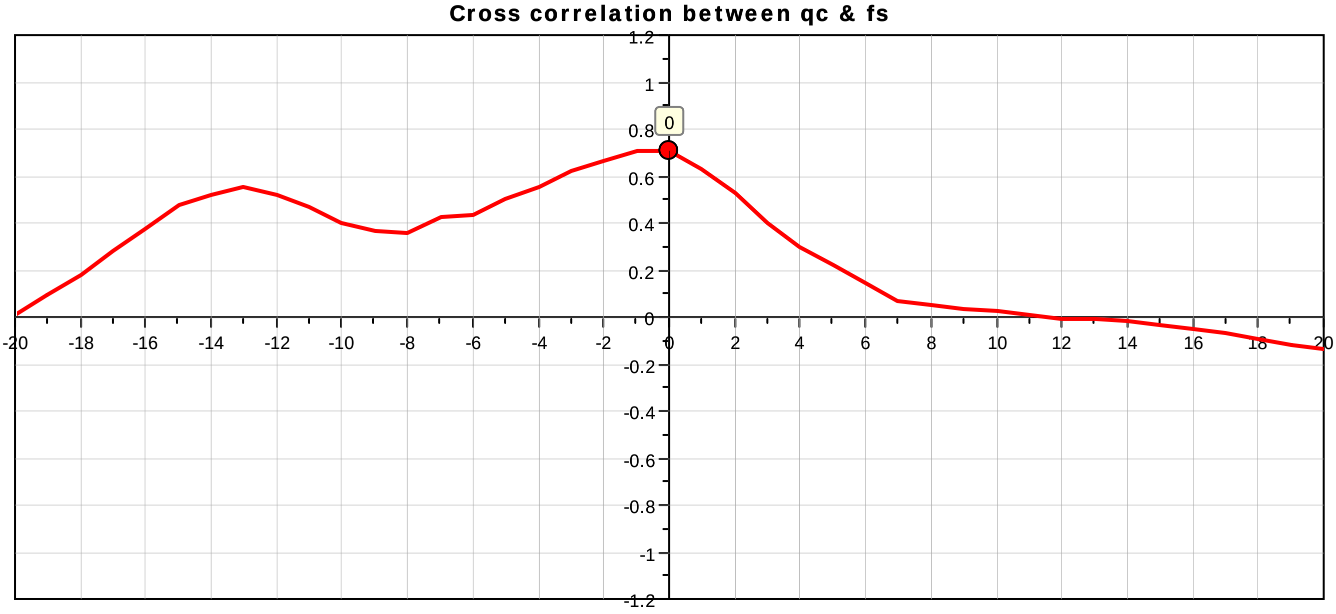
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P244CPT244
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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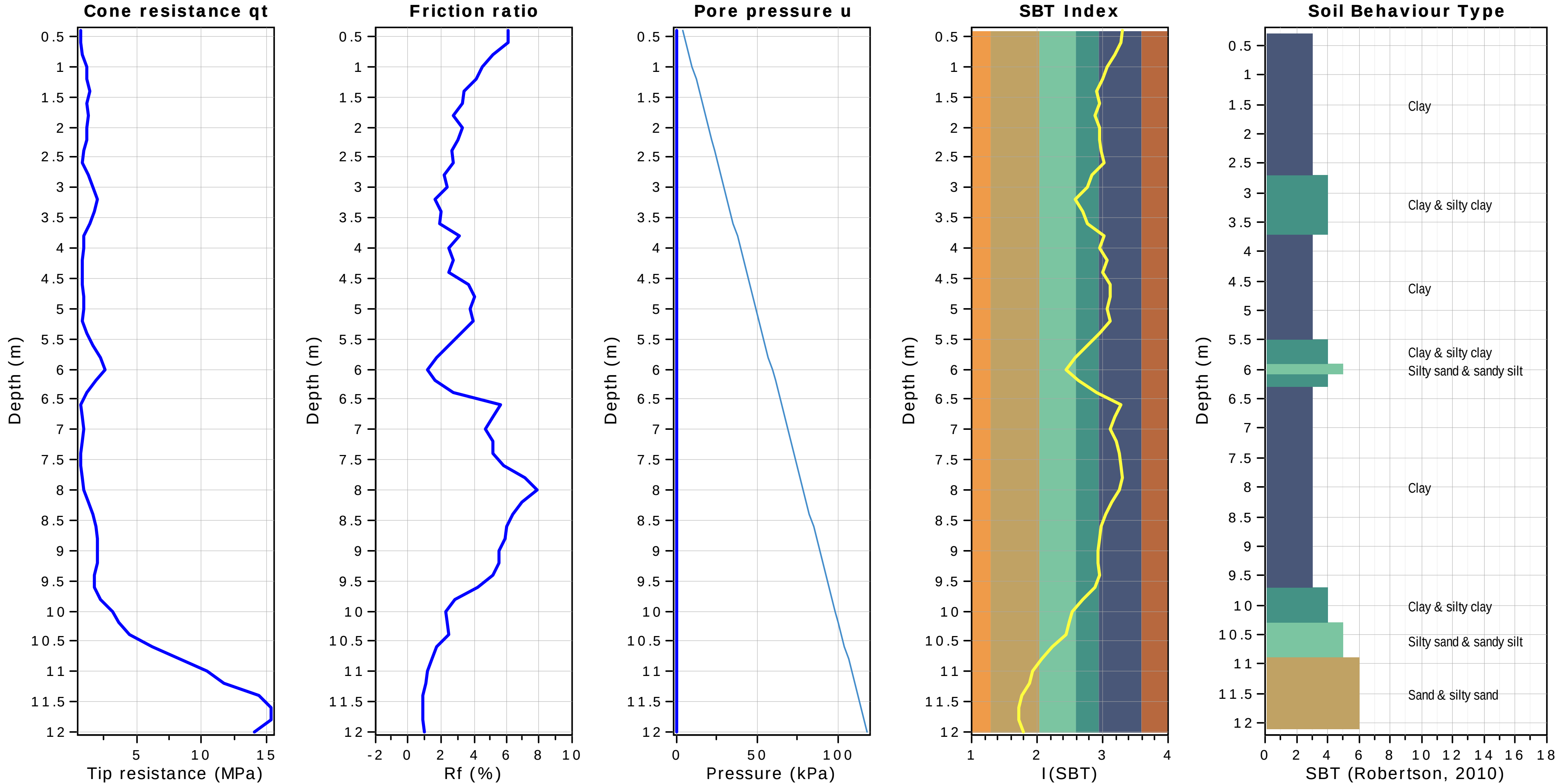
CPT: 036021P244CPT244
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

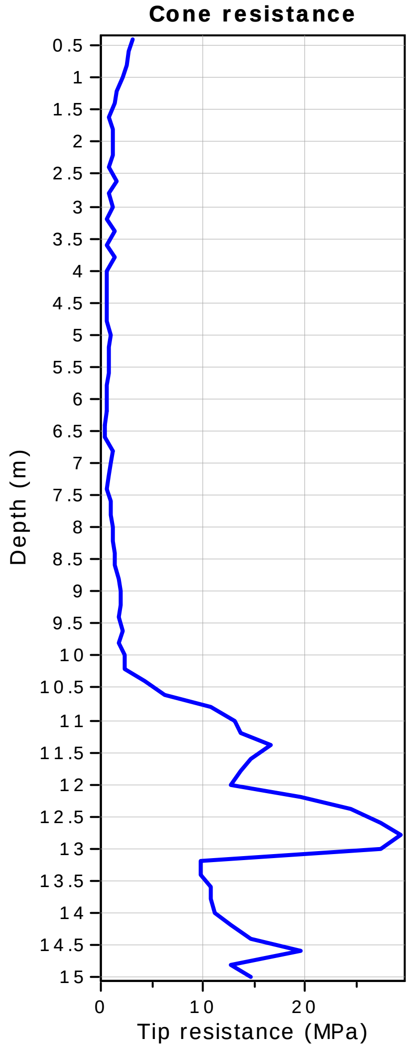


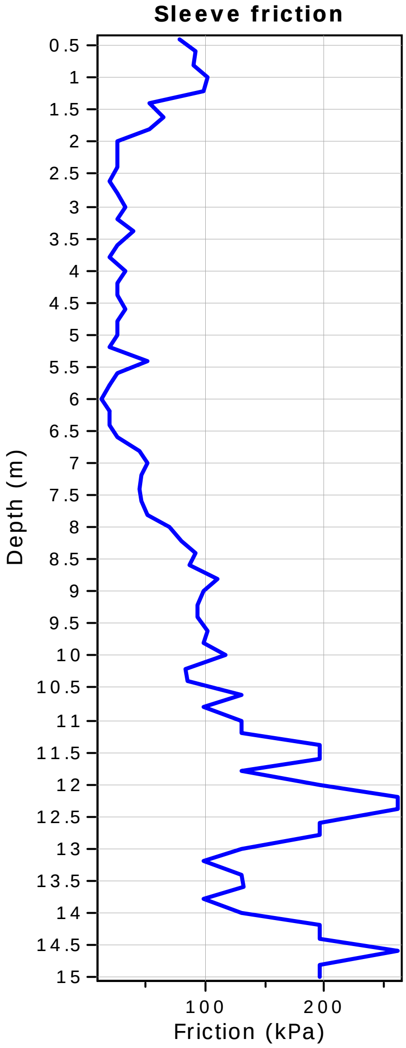
SBT legend

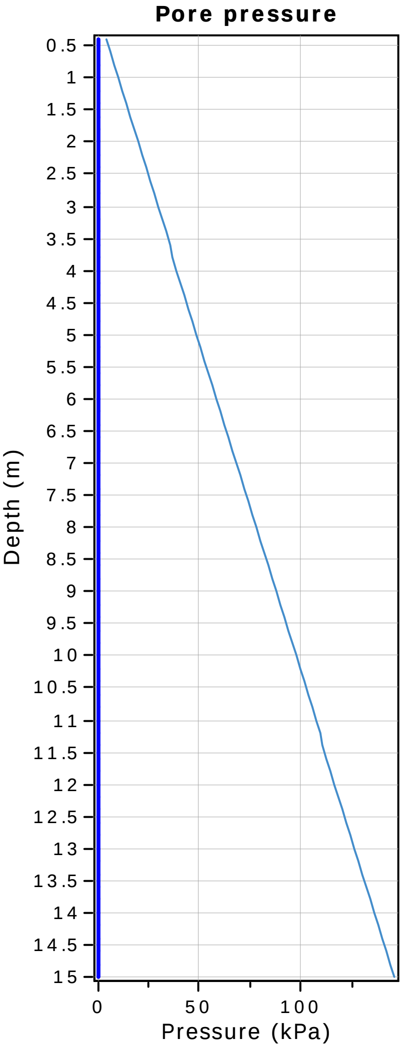
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬛ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

CPT: 036021P245CPT245
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

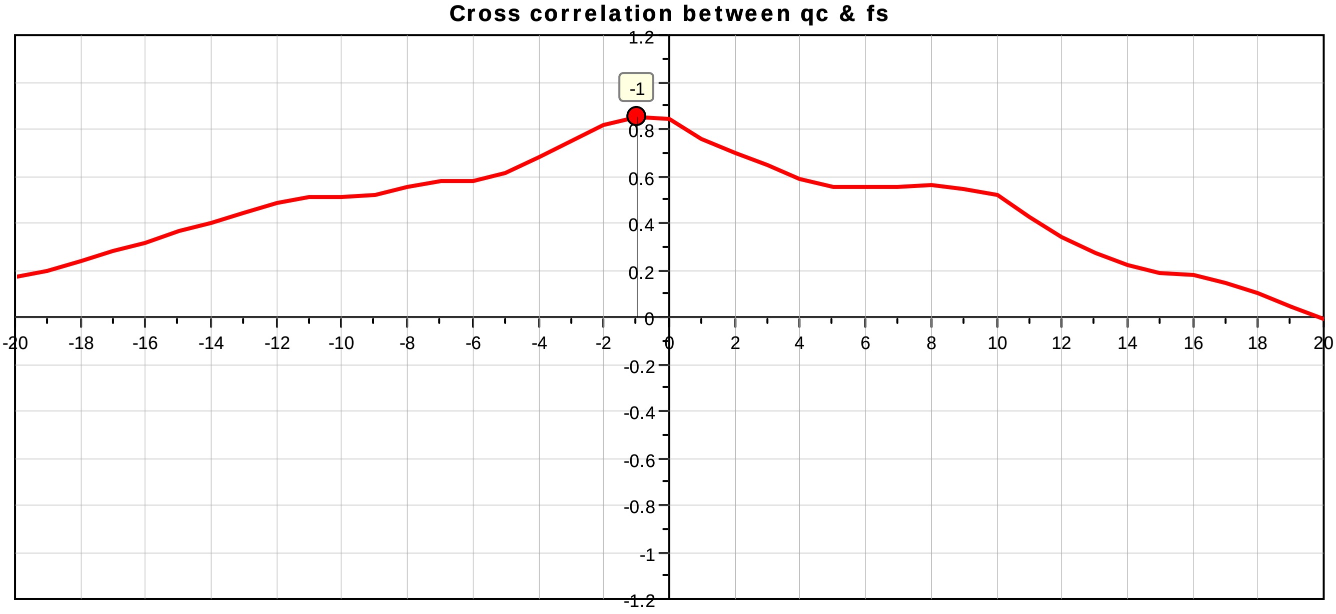
Project:
Location:


Cone resistance


Sleeve friction

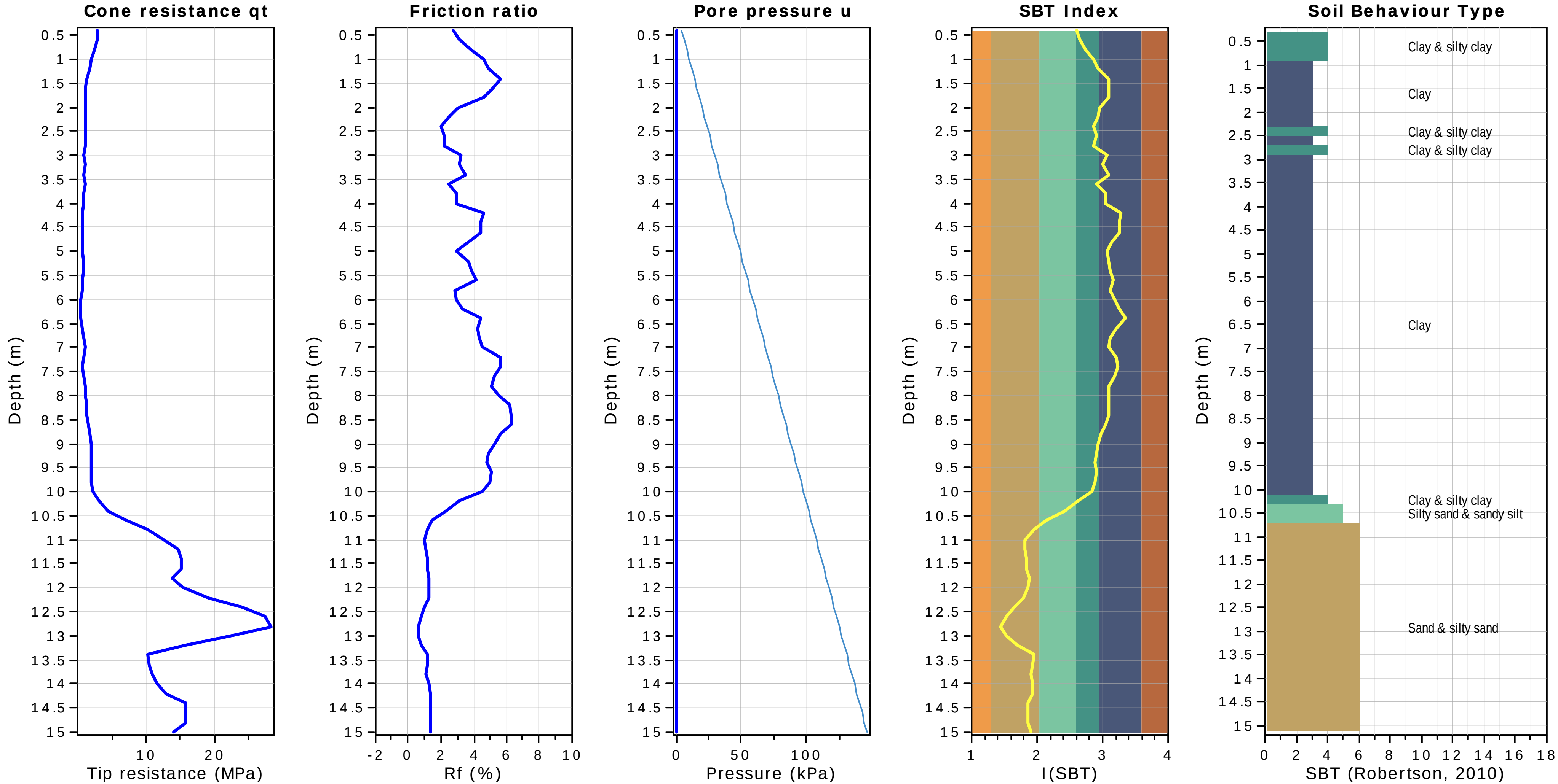

Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

CPT: 036021P245CPT245
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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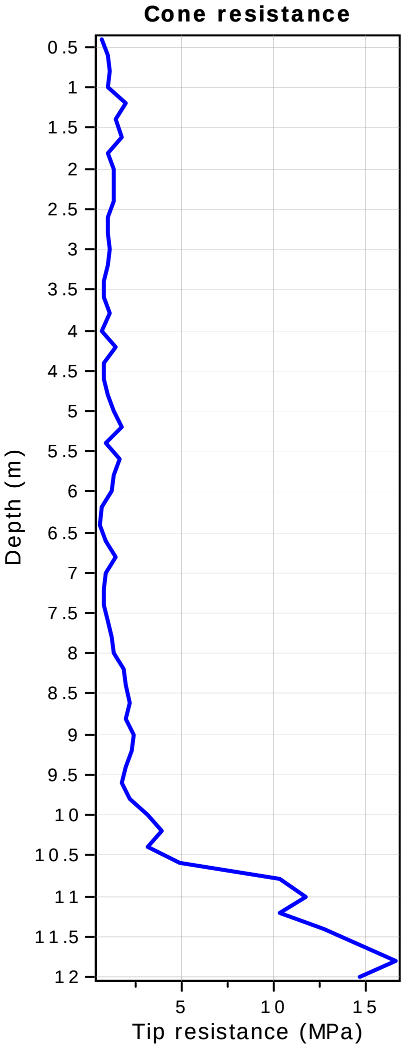
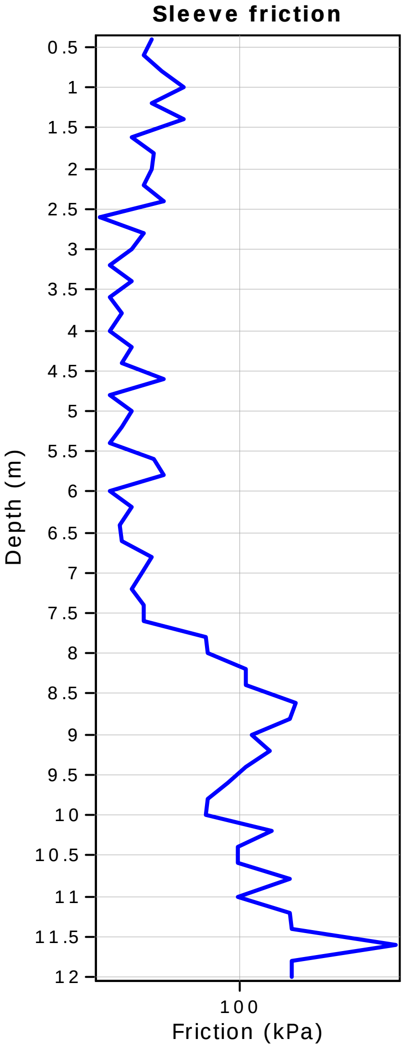
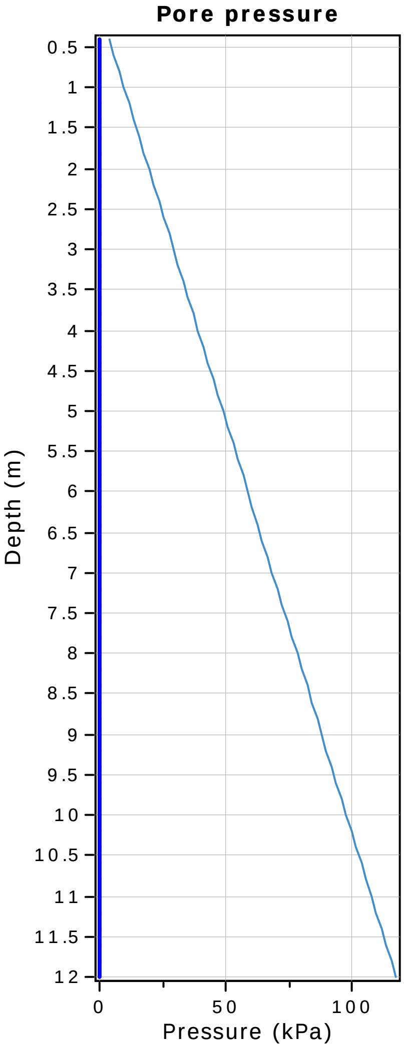
CPT: 036021P246CPT246
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

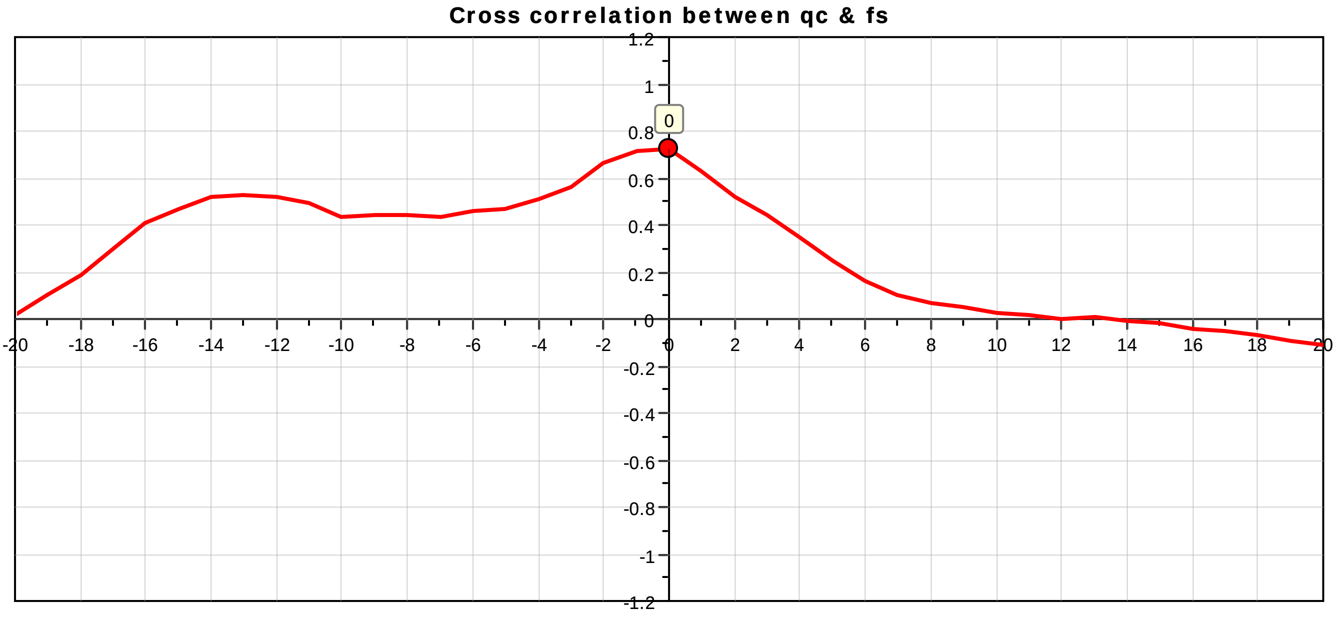
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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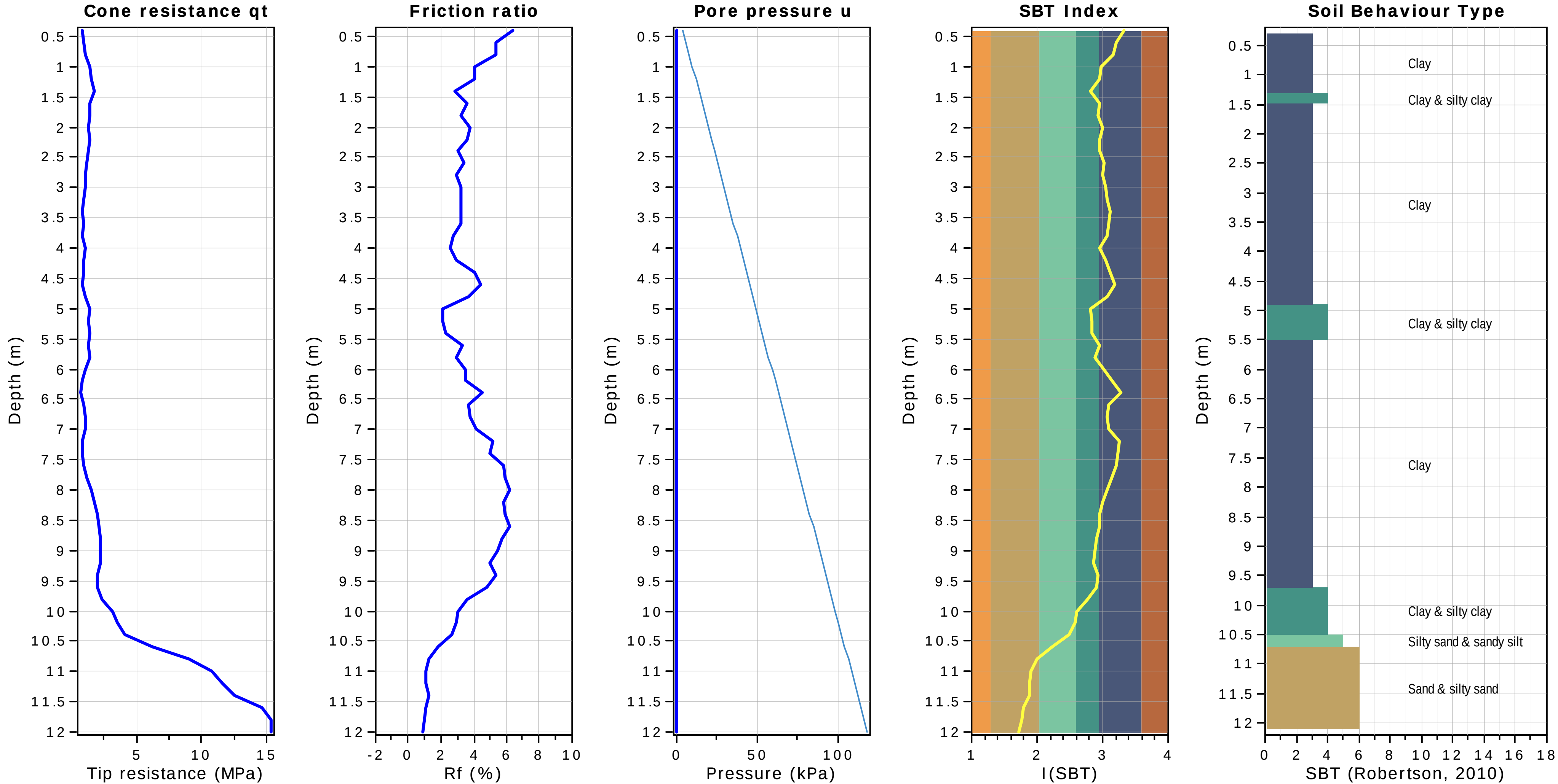
CPT: 036021P246CPT246
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

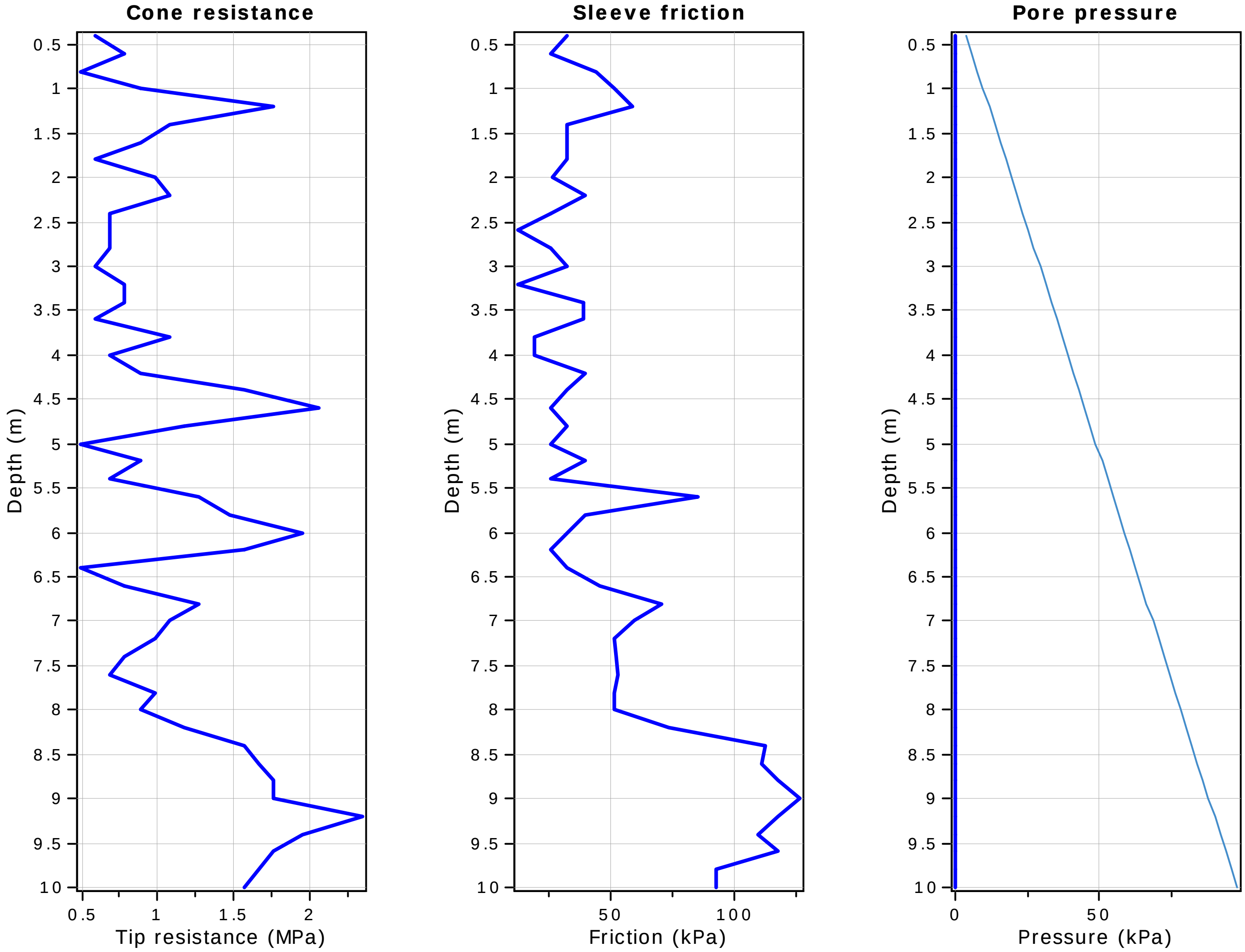


SBT legend

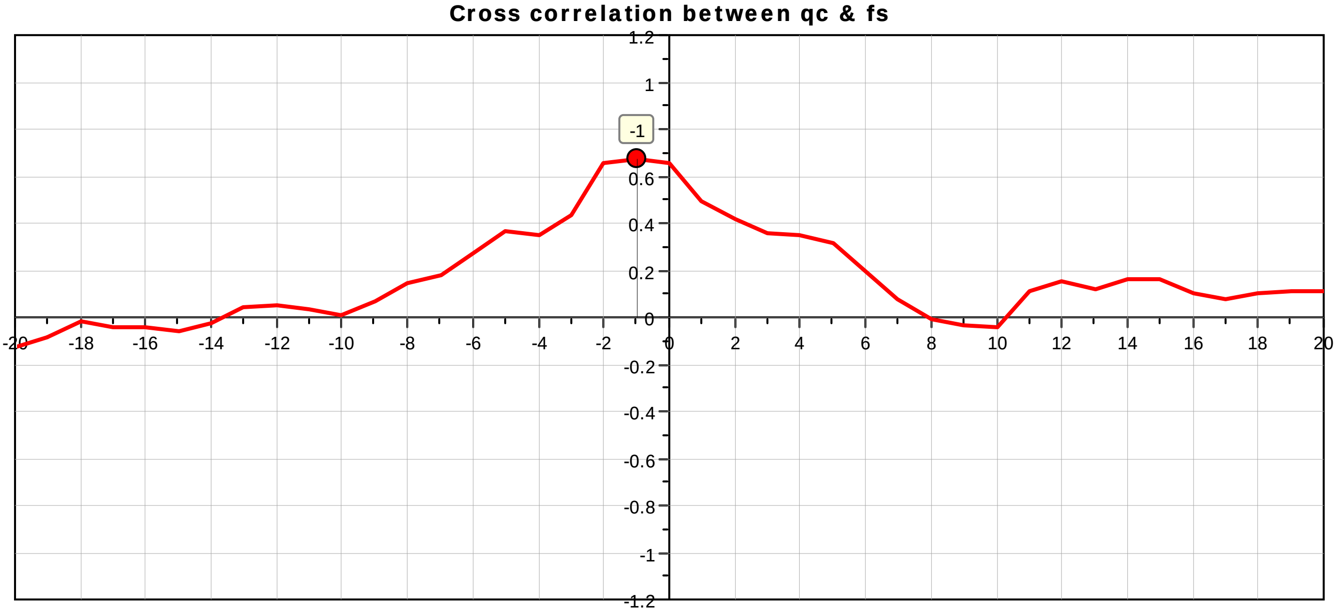
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P247CPT247
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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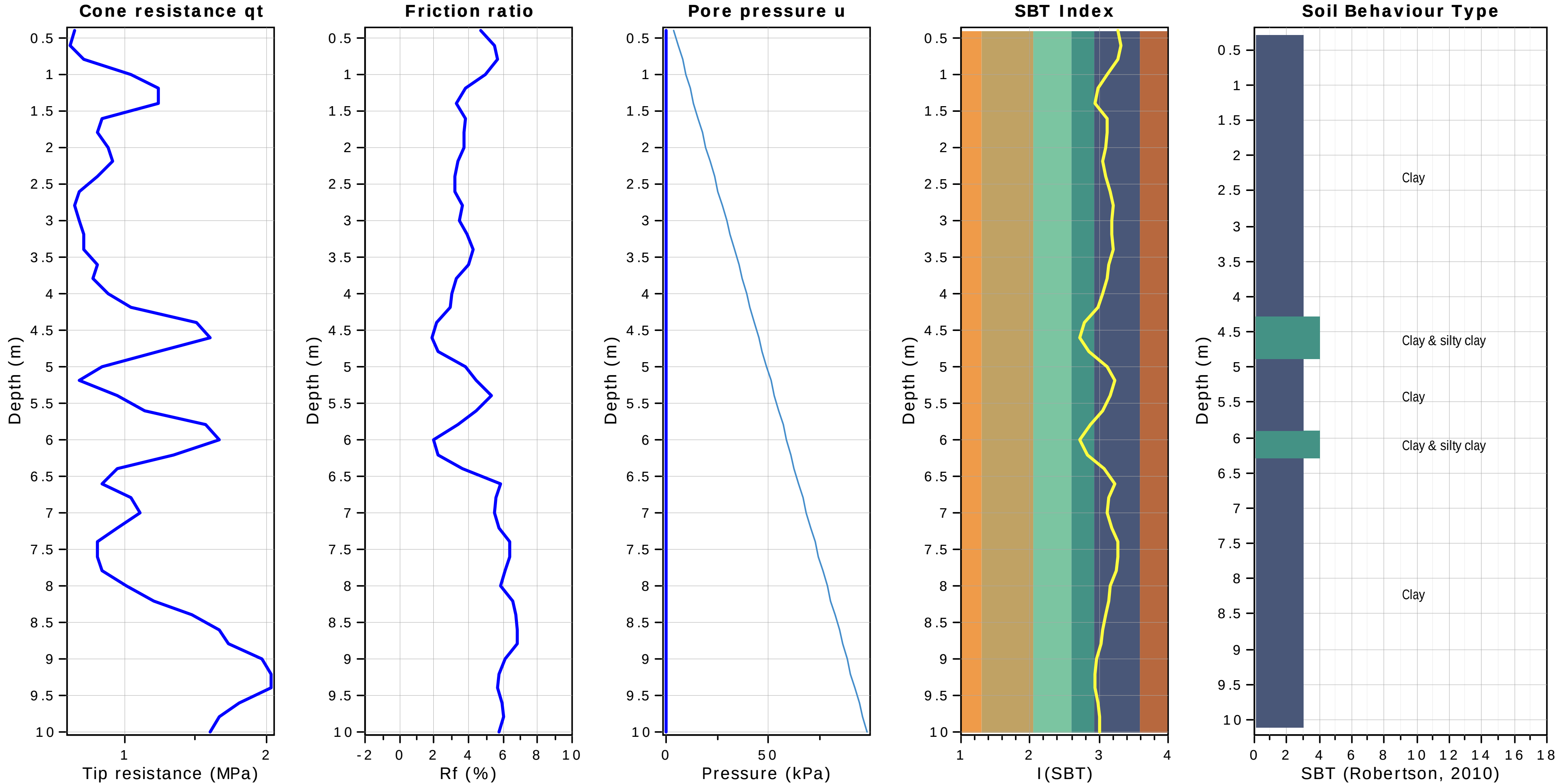
CPT: 036021P247CPT247
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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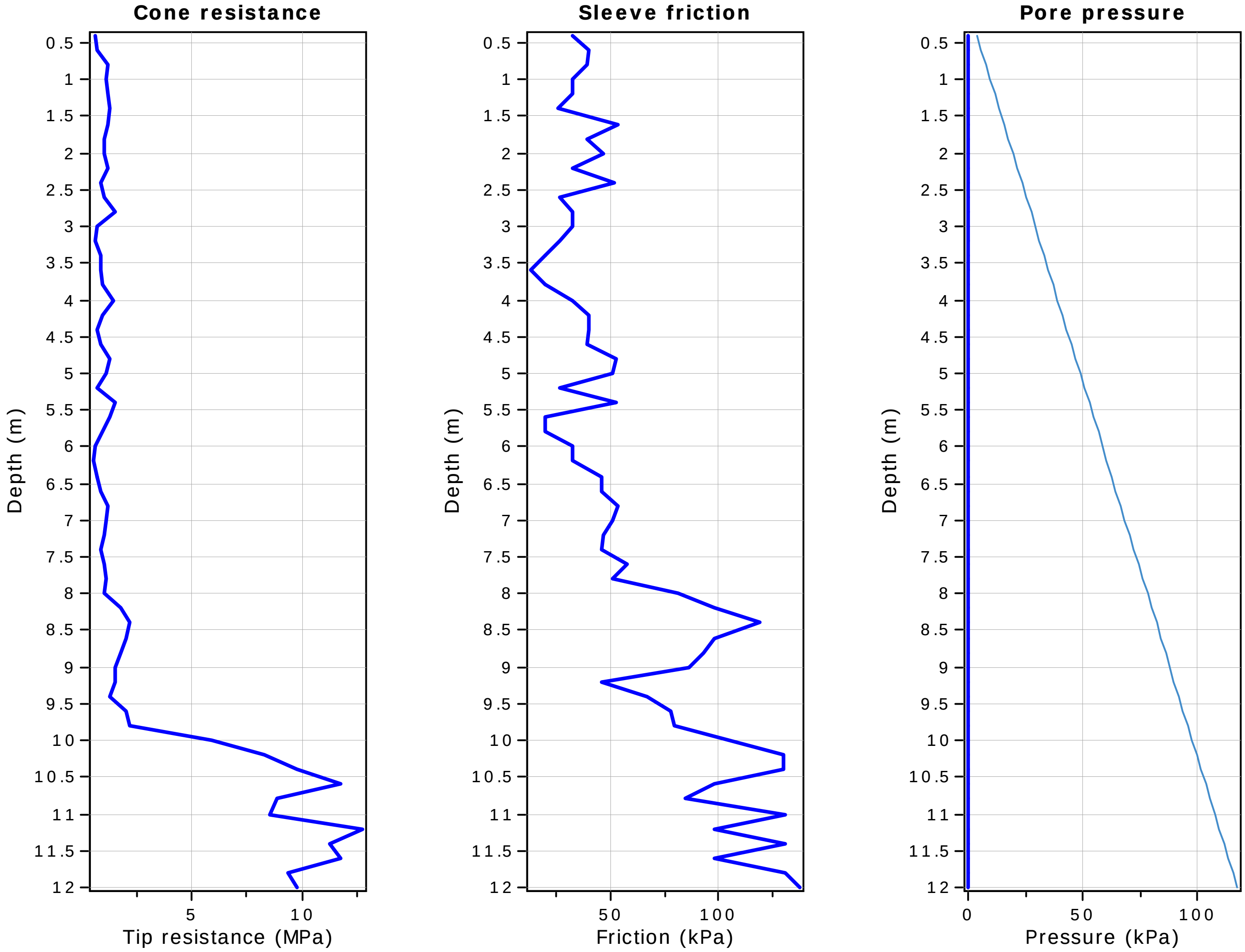
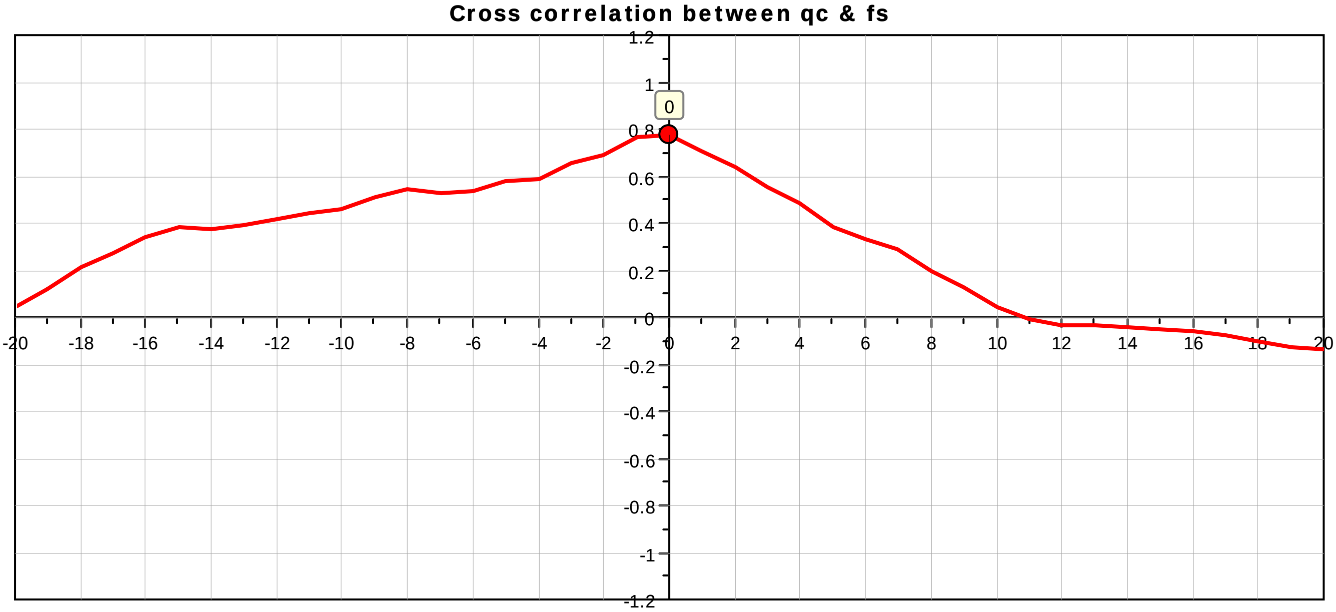
CPT: 036021P248CPT248
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

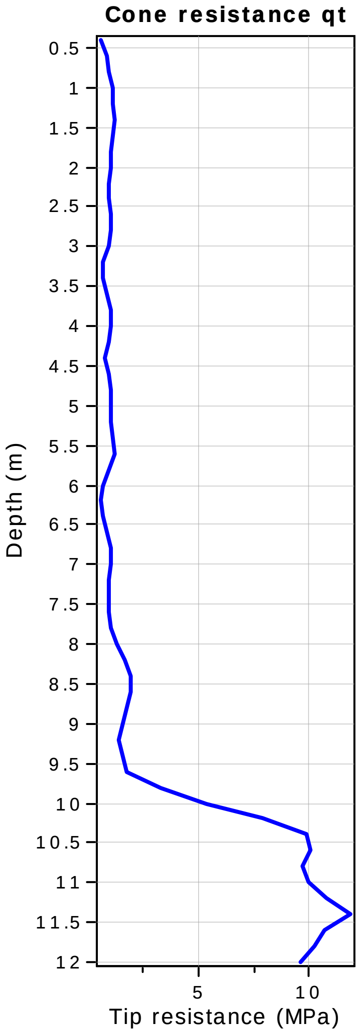


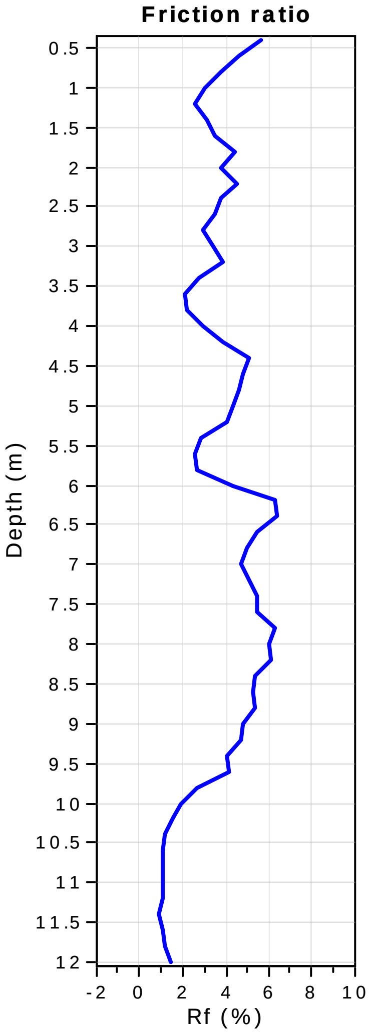
The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

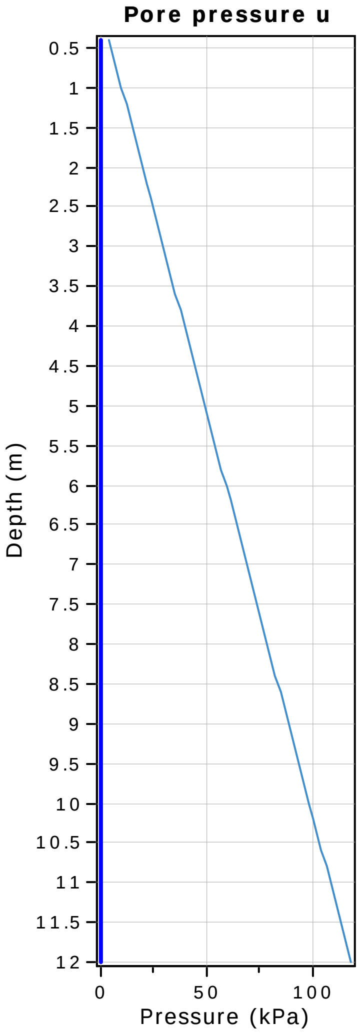


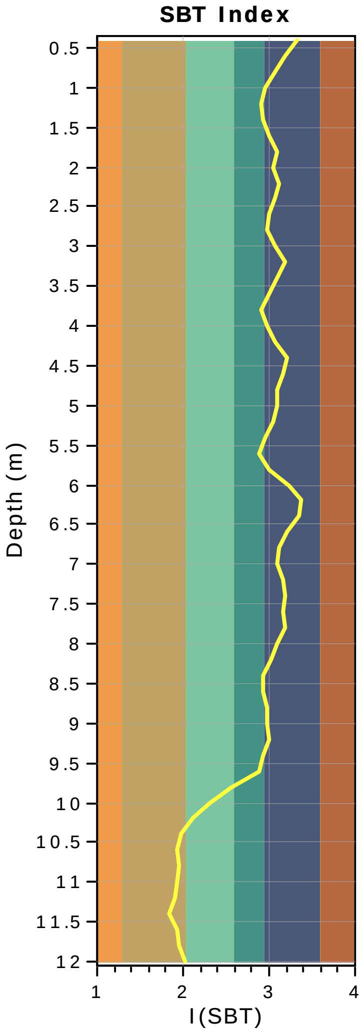
CPT: 036021P248CPT248
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

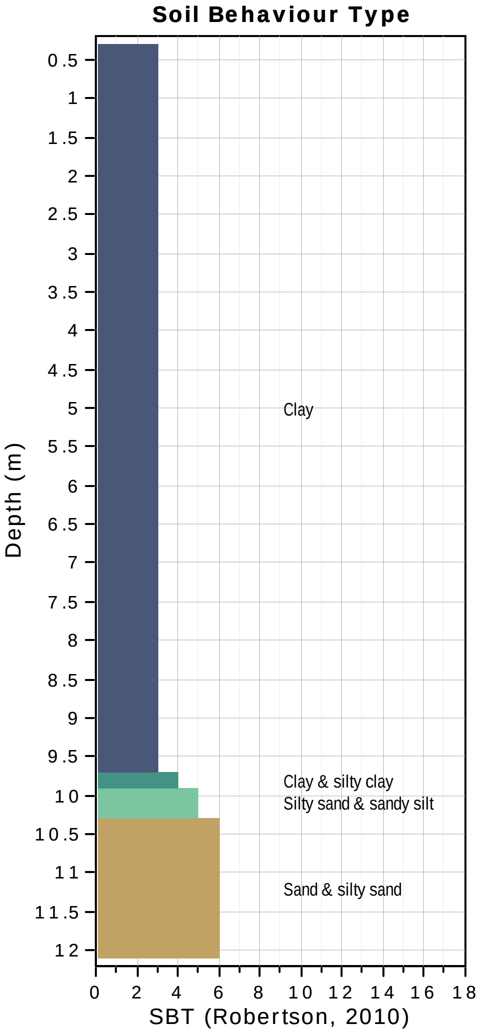
Project:
Location:


Cone resistance qt


Friction ratio


Pore pressure u


SBT Index

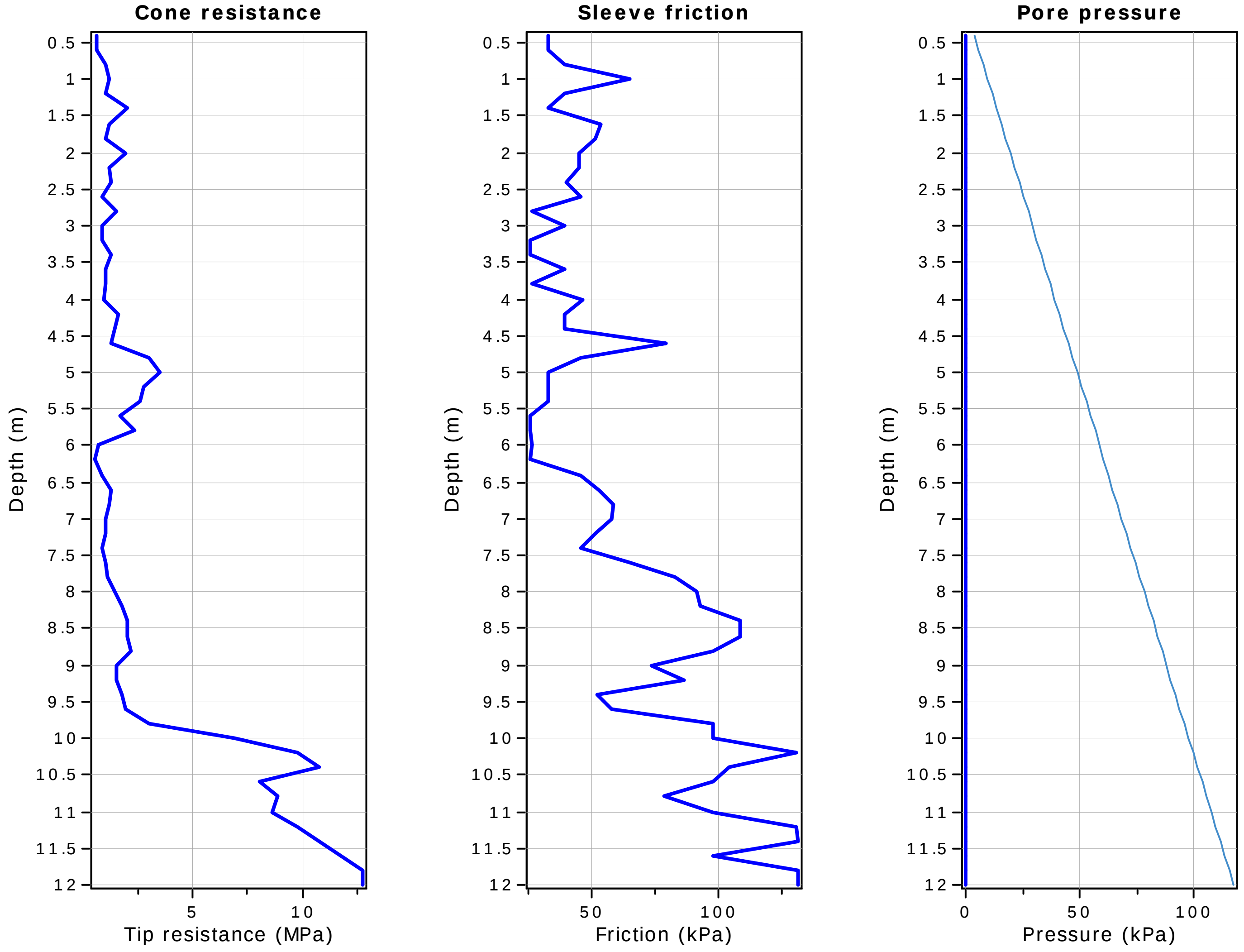

Soil Behaviour Type

SBT legend

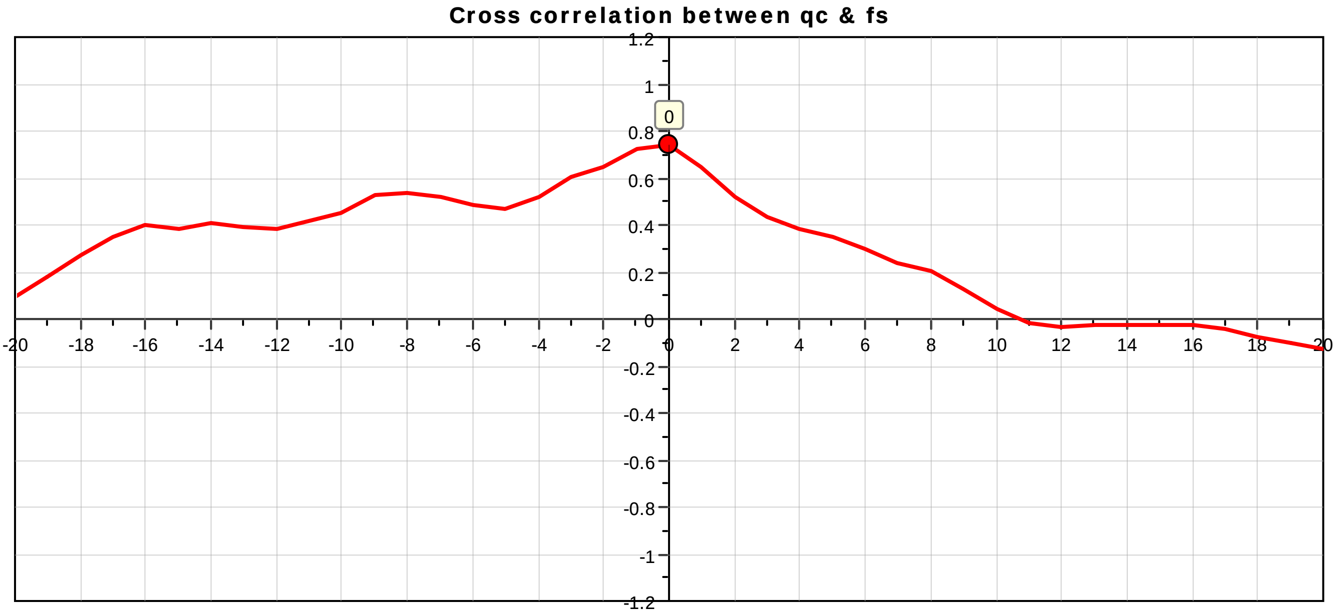
🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬛ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟨 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

CPT: 036021P249CPT249
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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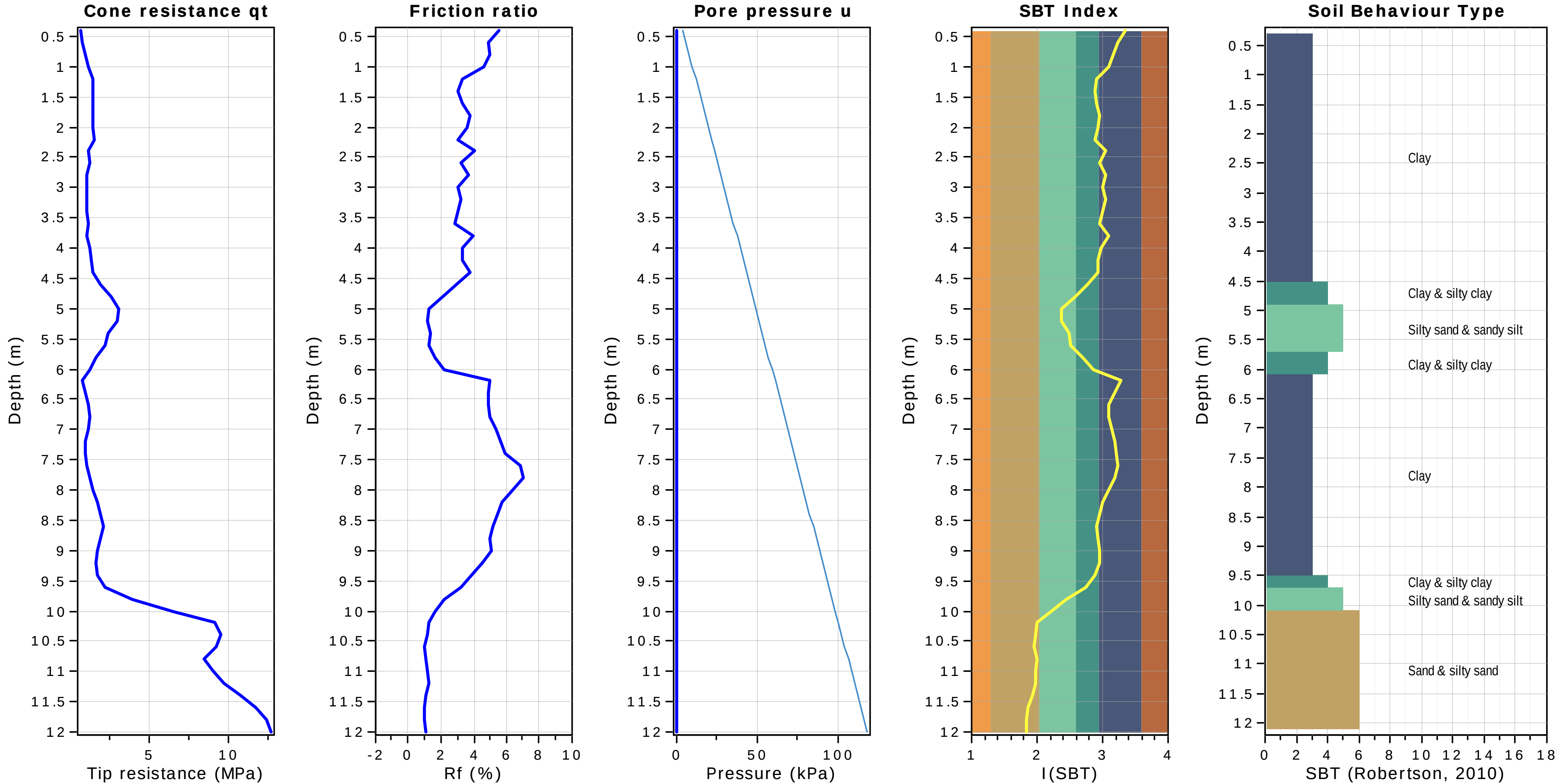
CPT: 036021P249CPT249
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained	🟫 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟫 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

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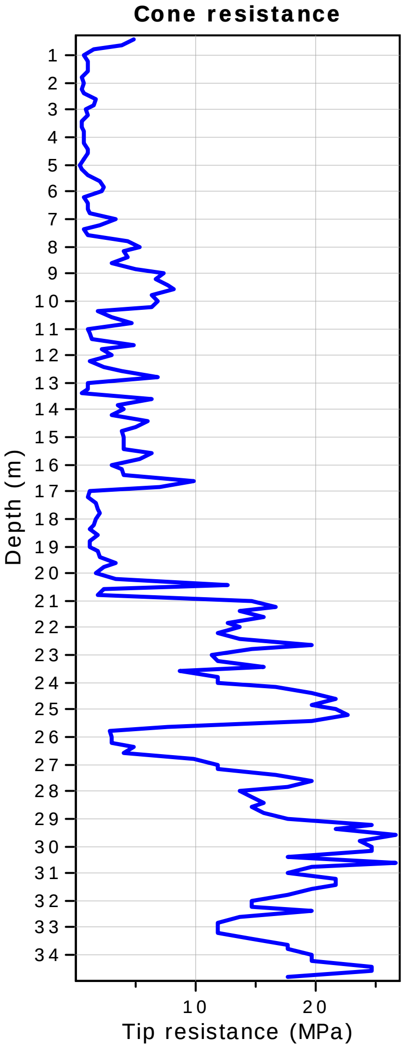
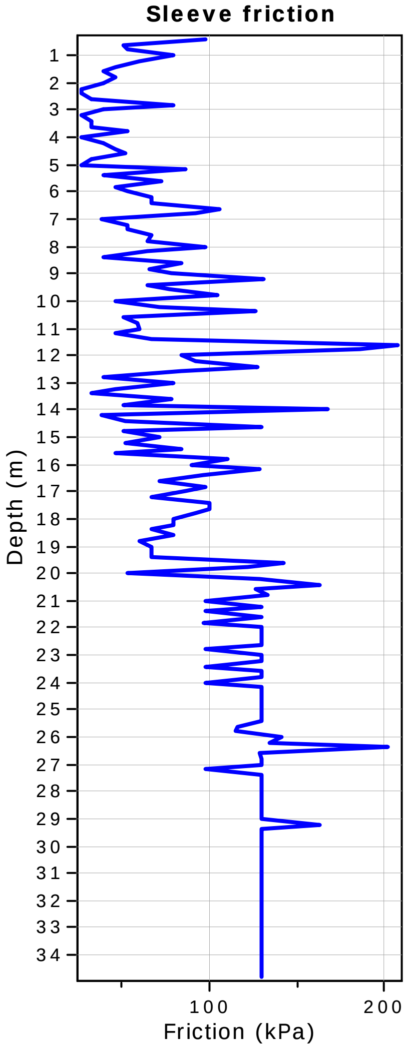
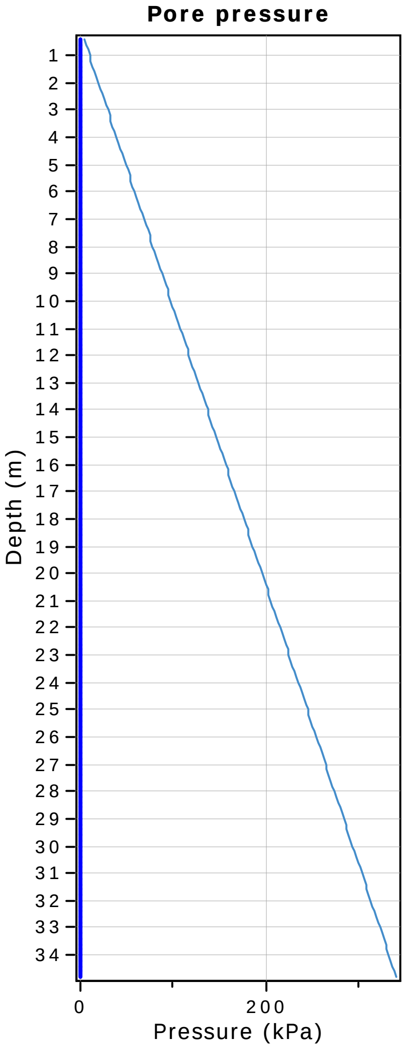
CPT: 036021P250CPT250
Total depth: 34.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

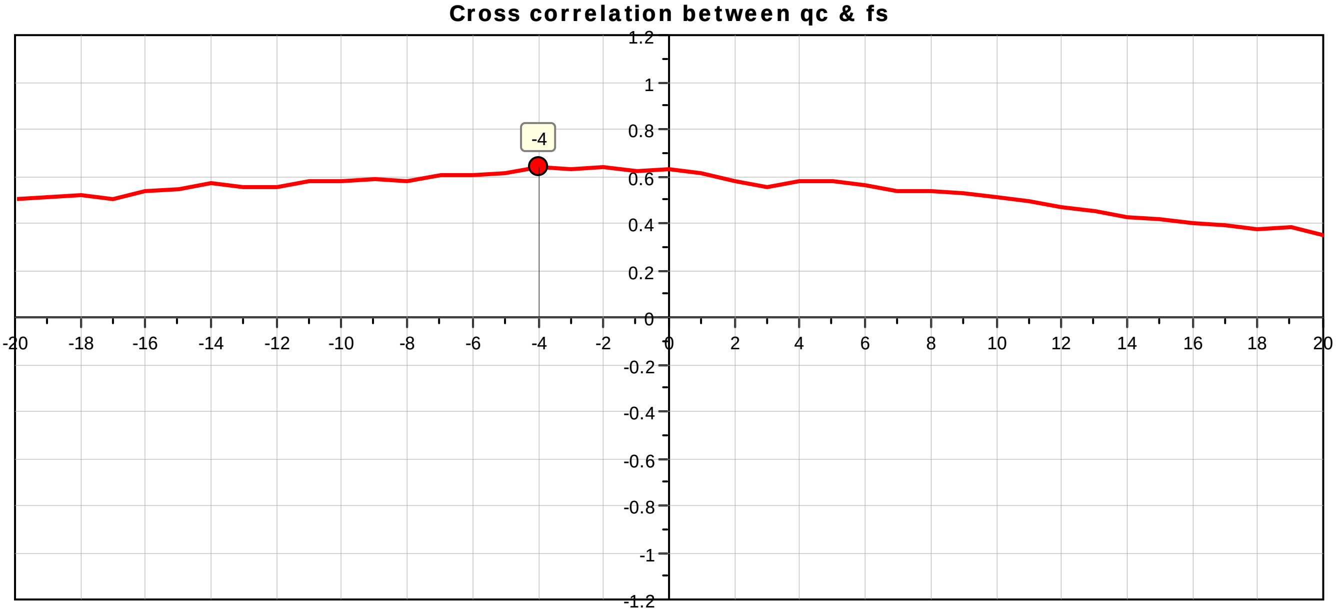
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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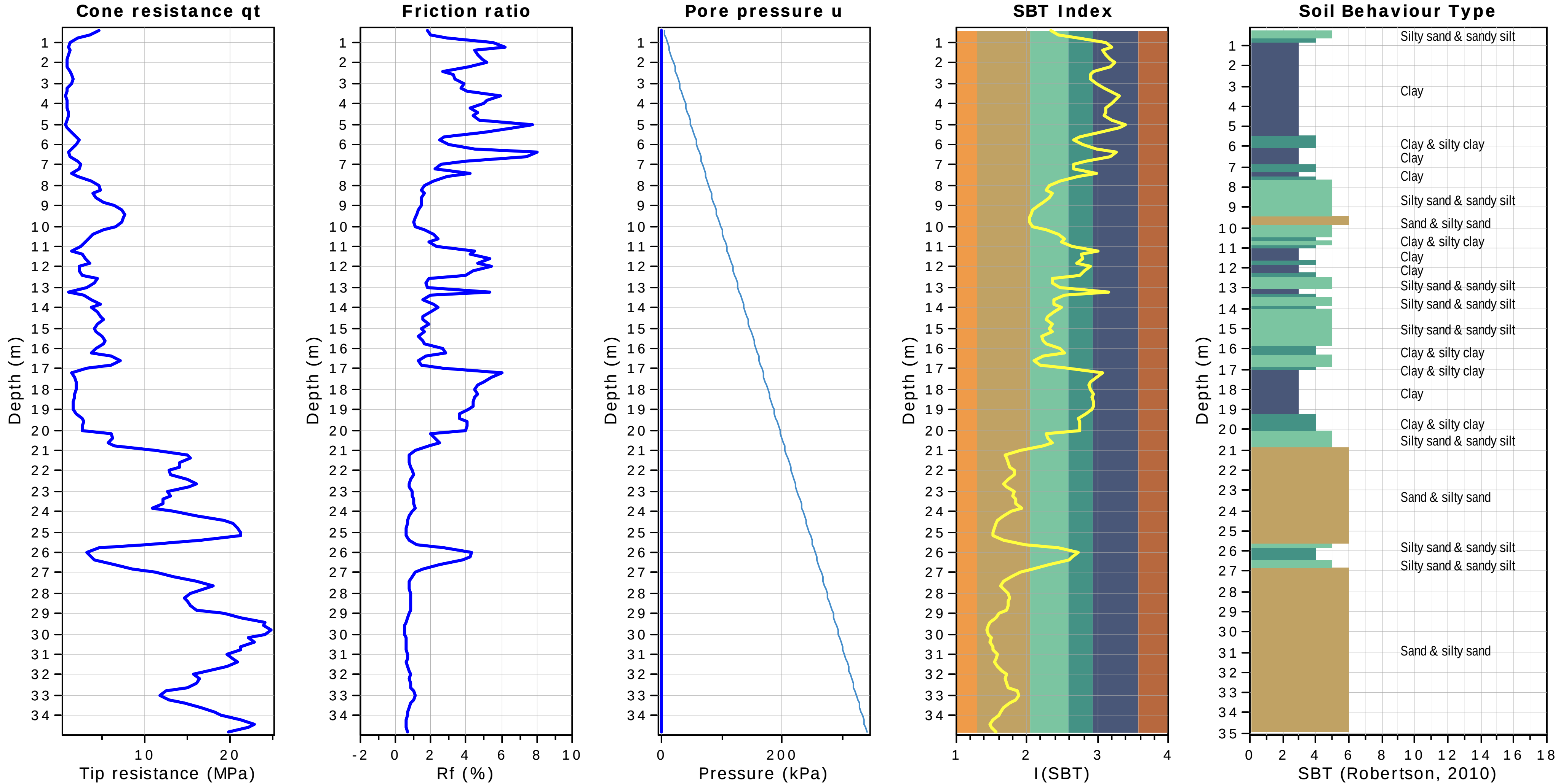
CPT: 036021P250CPT250
Total depth: 34.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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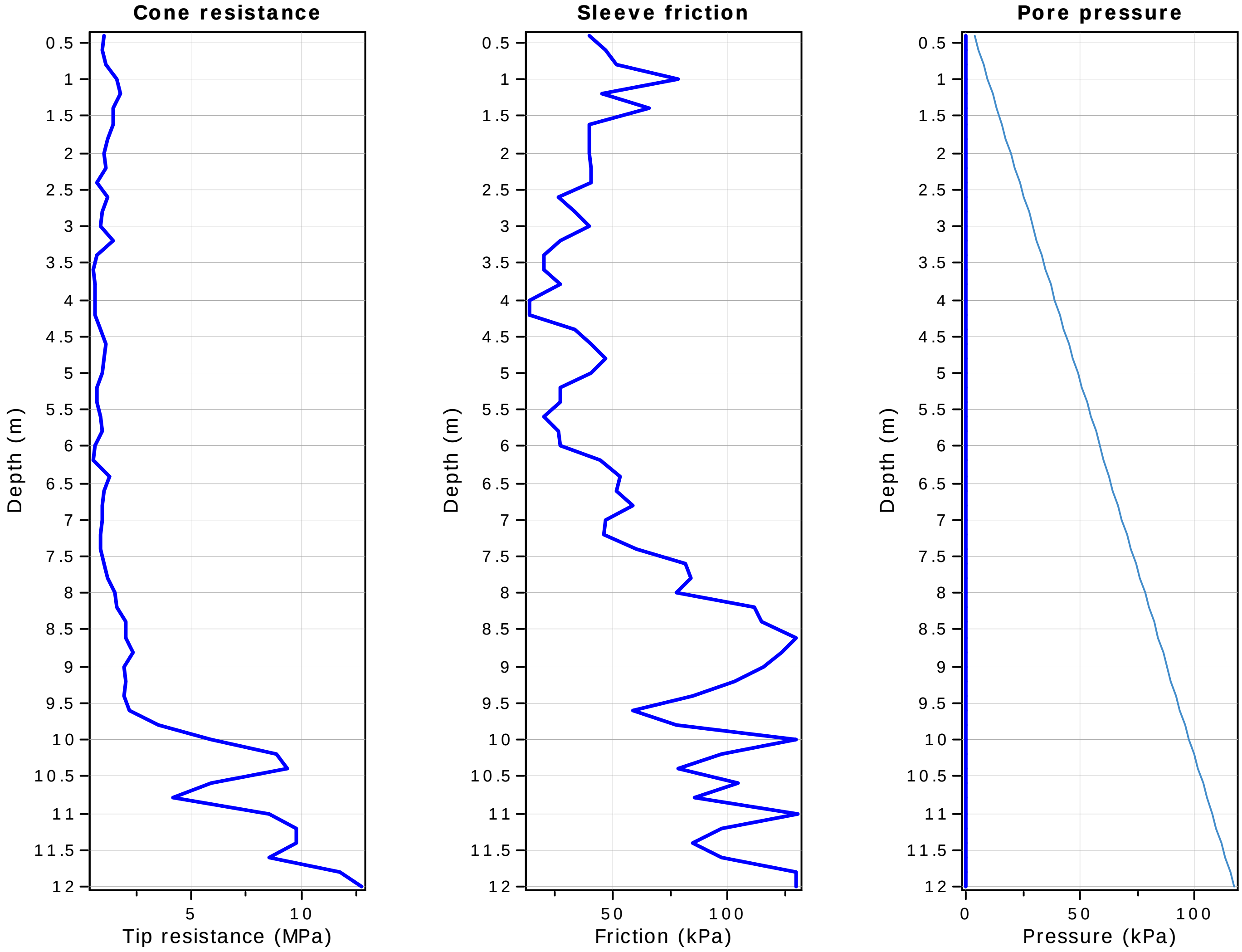
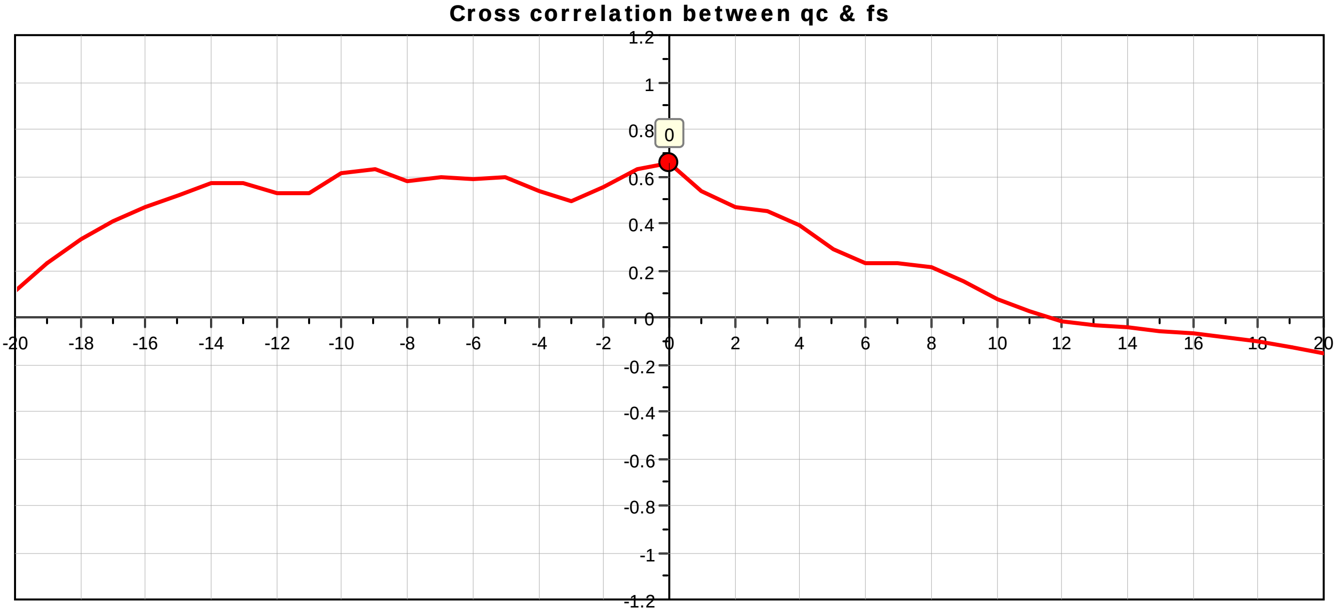
CPT: 036021P251CPT251
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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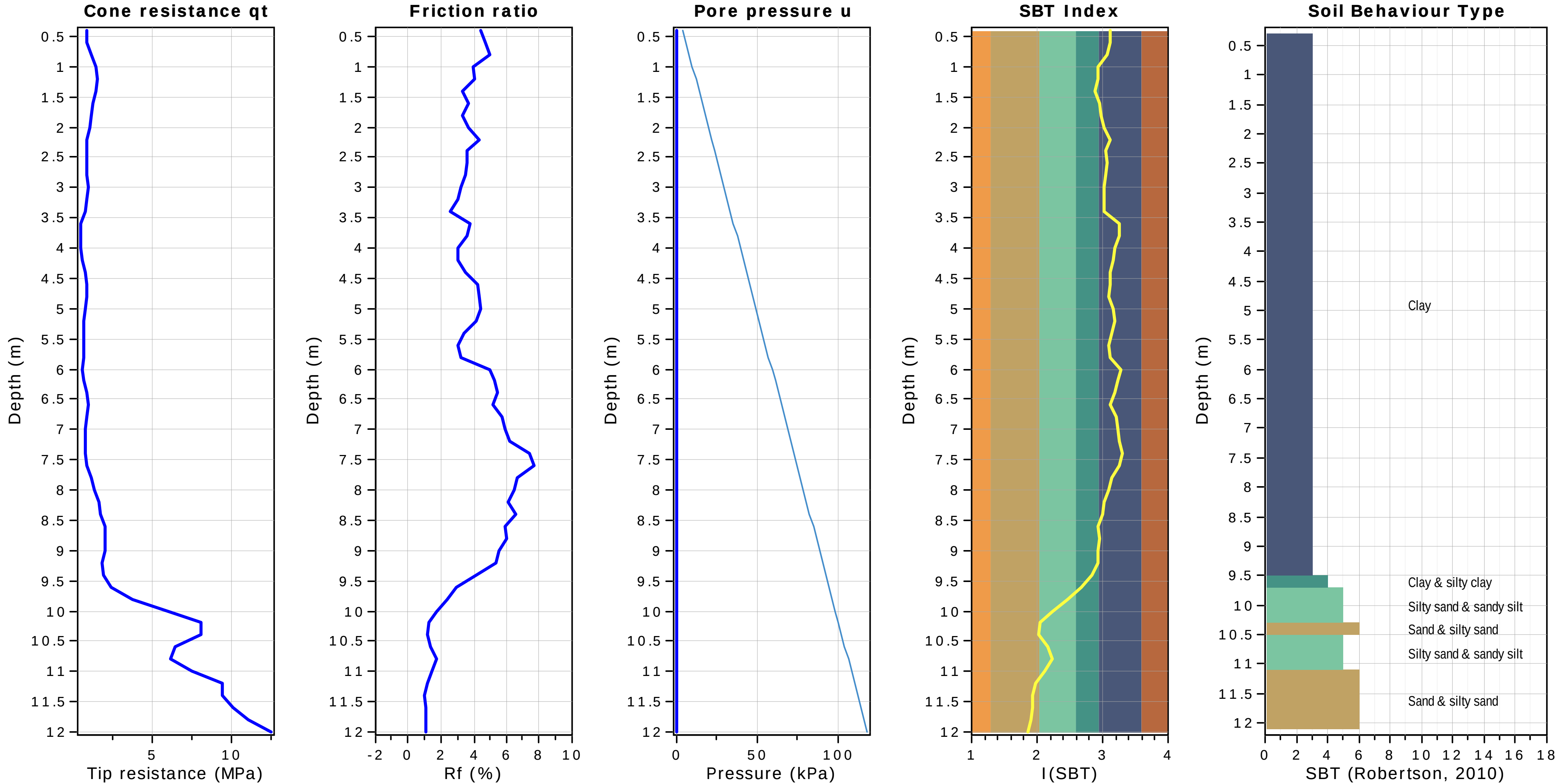
CPT: 036021P251CPT251
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

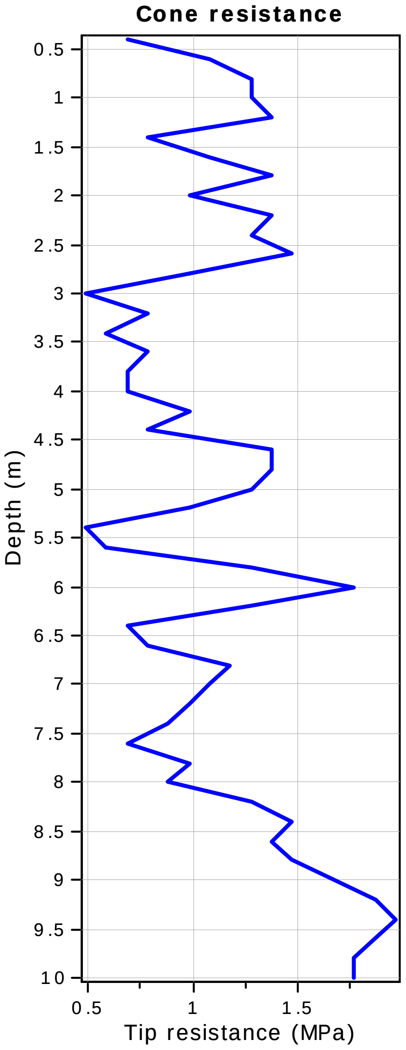


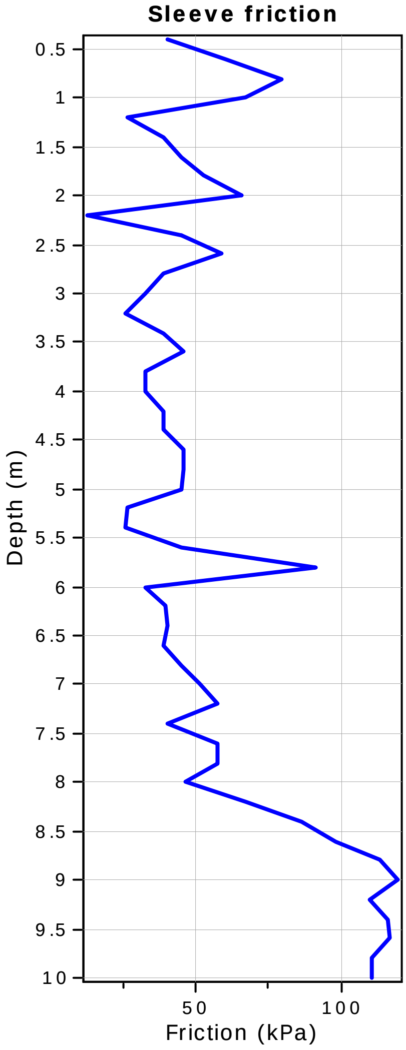
SBT legend

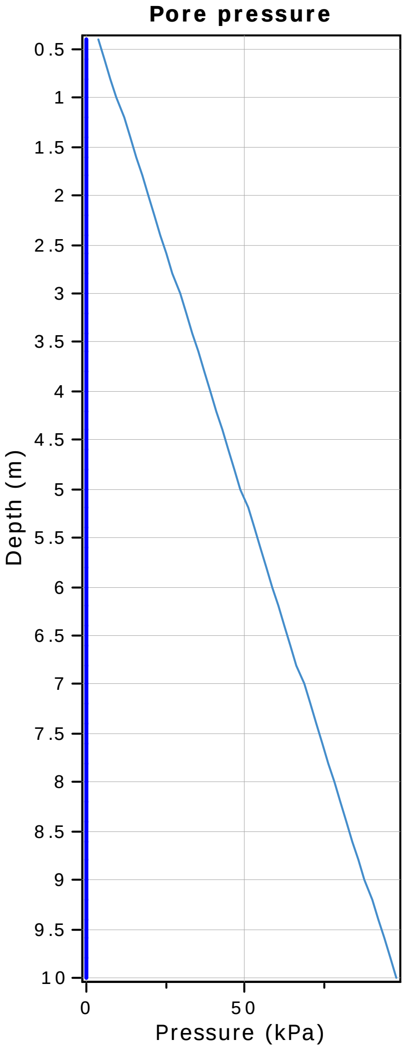
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P252CPT252
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

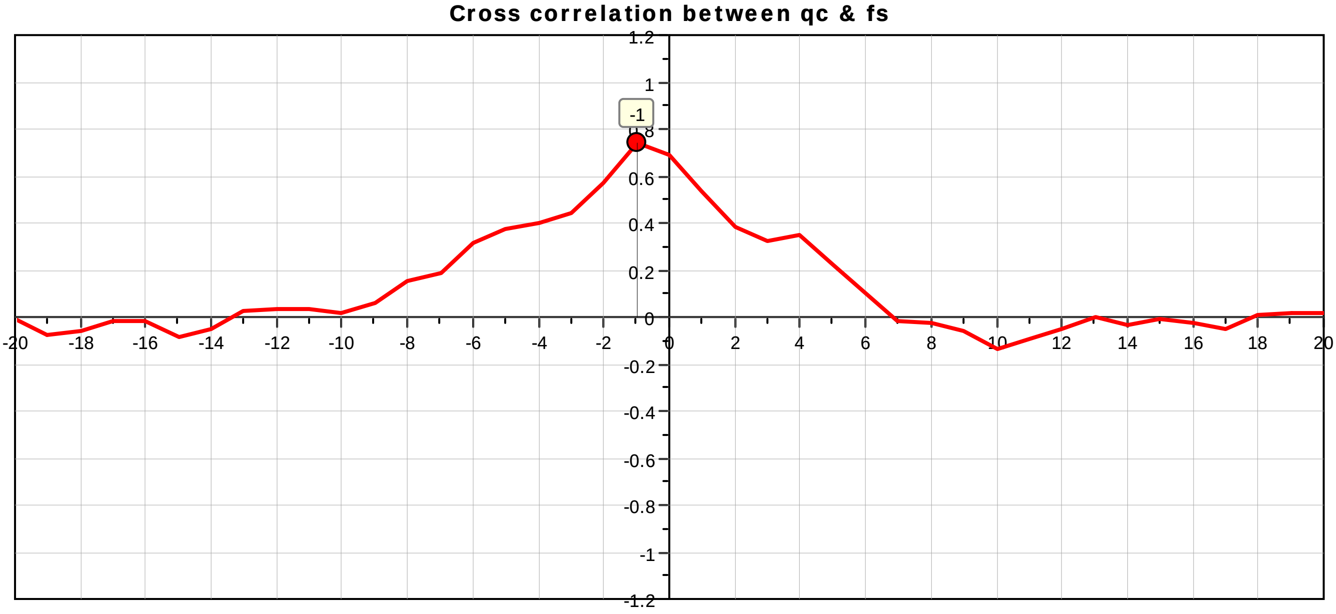
Project:
Location:


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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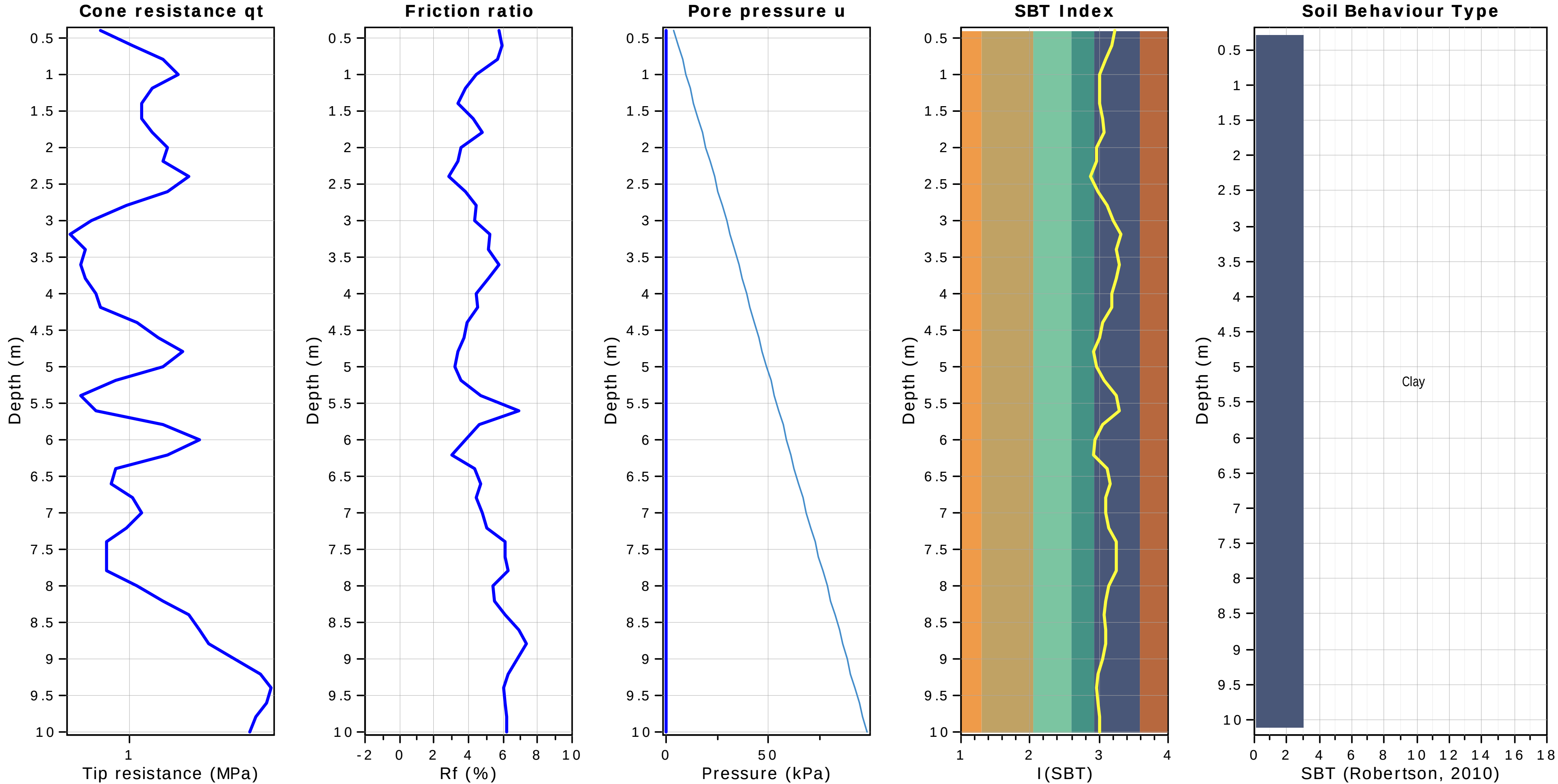
CPT: 036021P252CPT252
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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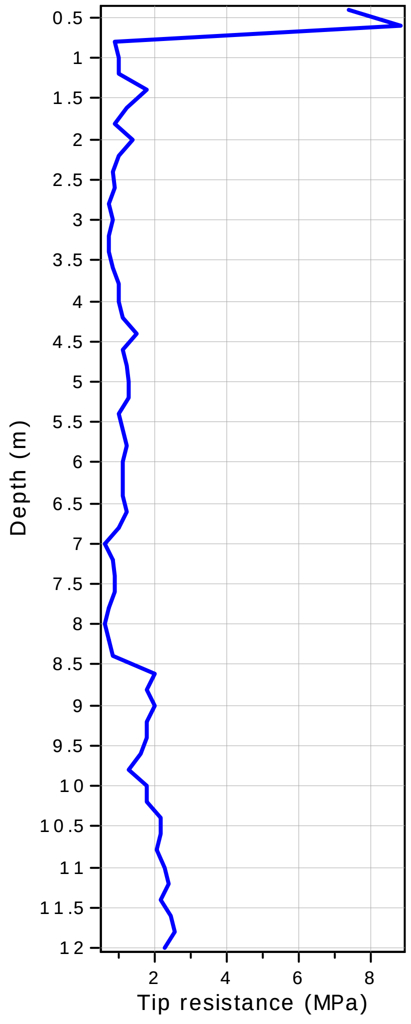
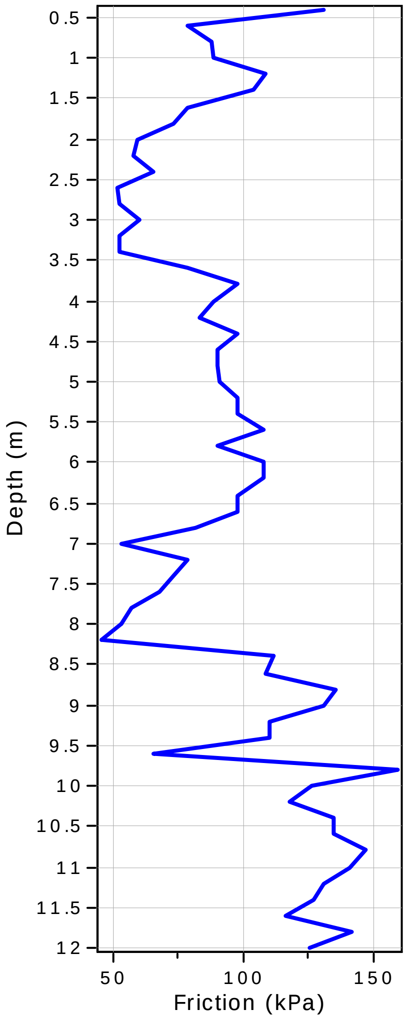
CPT: 036021P25CPT25
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

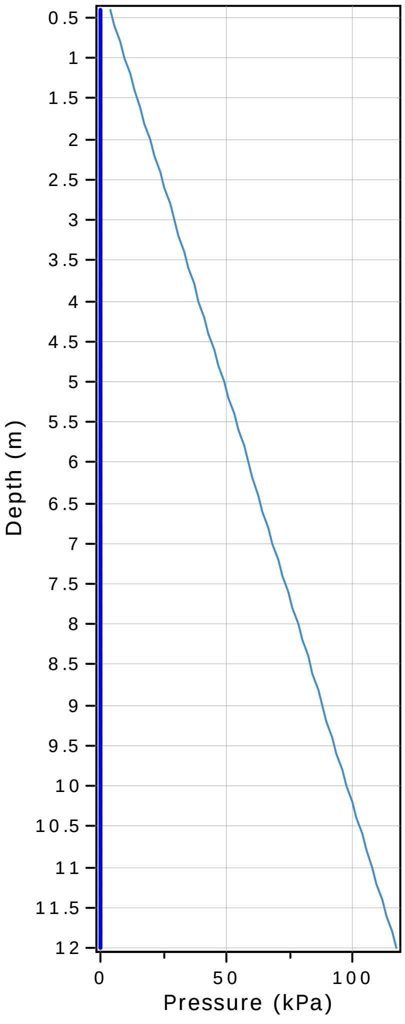
Cone resistance



Sleeve friction

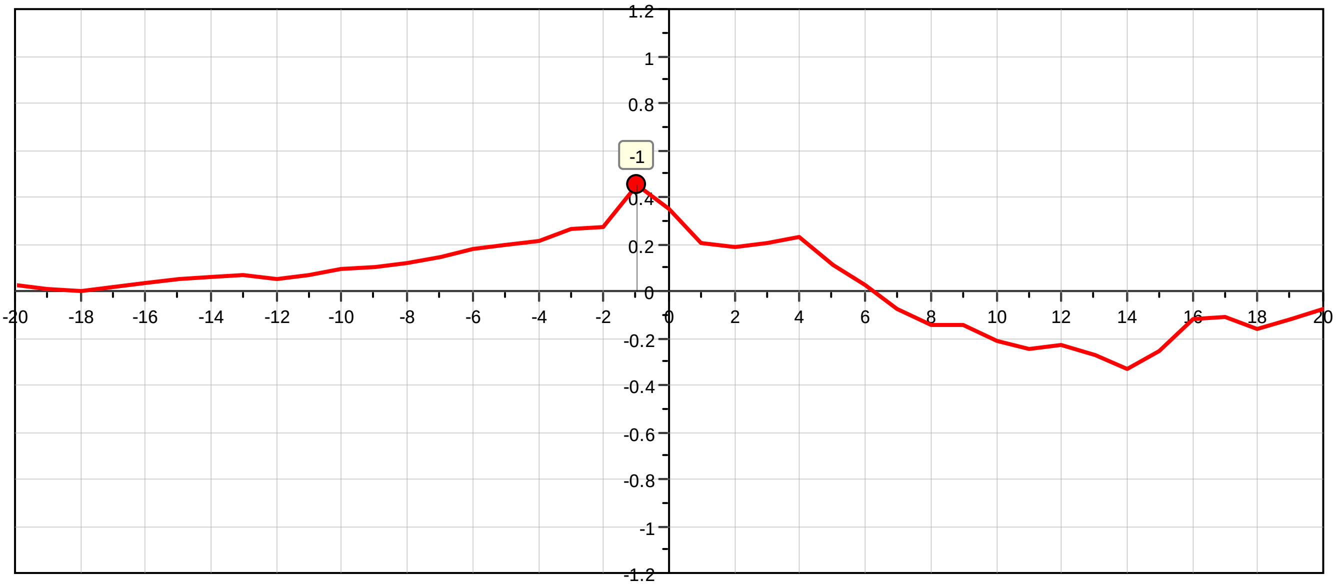


Pore pressure



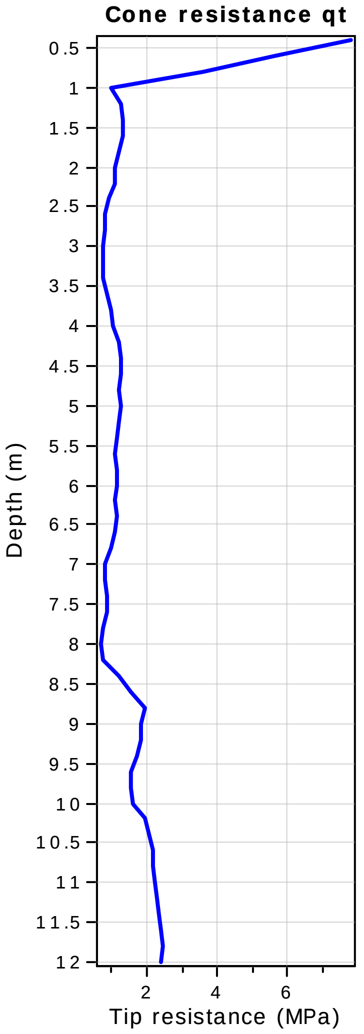
The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

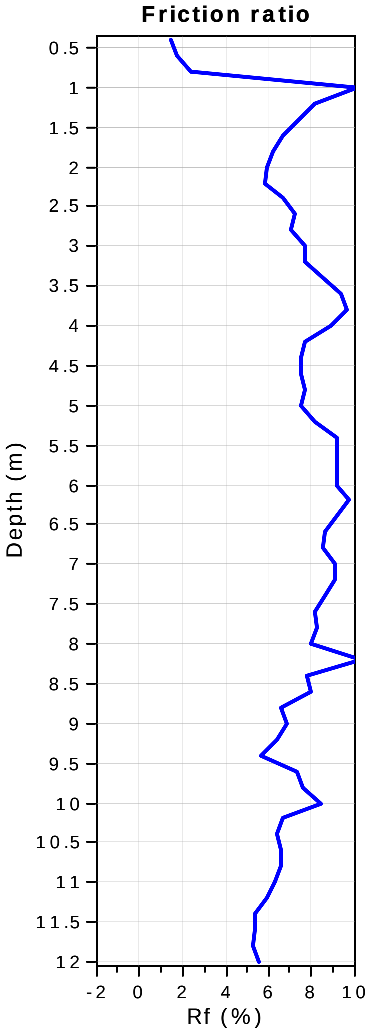
Cross correlation between qc & fs

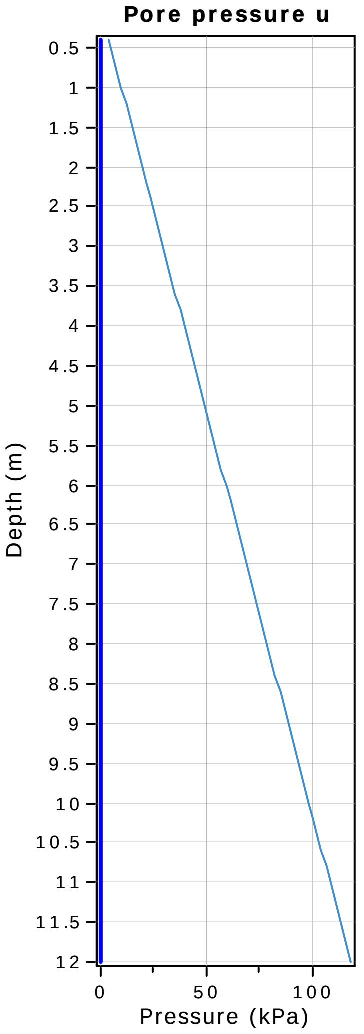


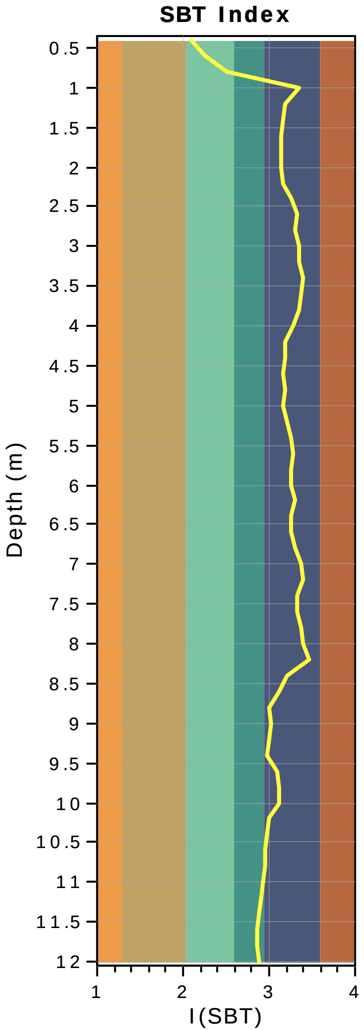
CPT: 036021P25CPT25
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

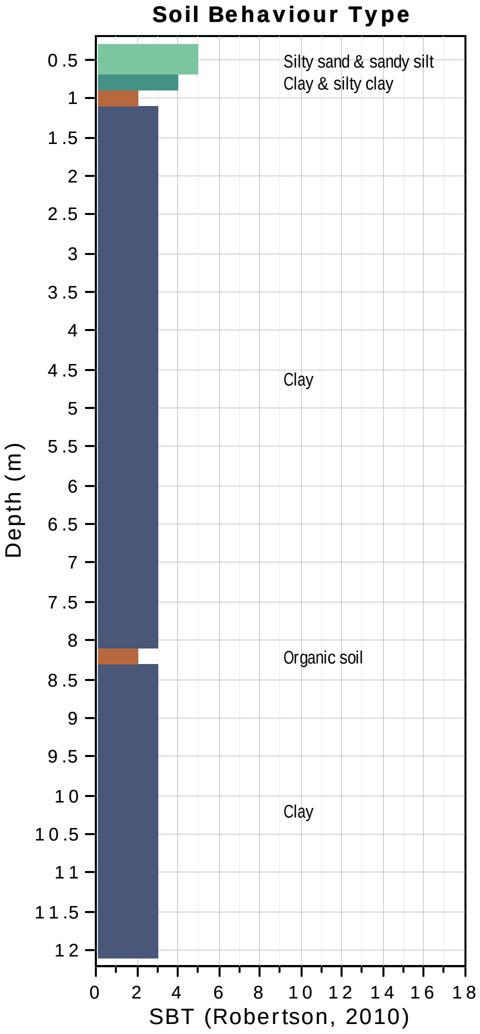
Project:
Location:





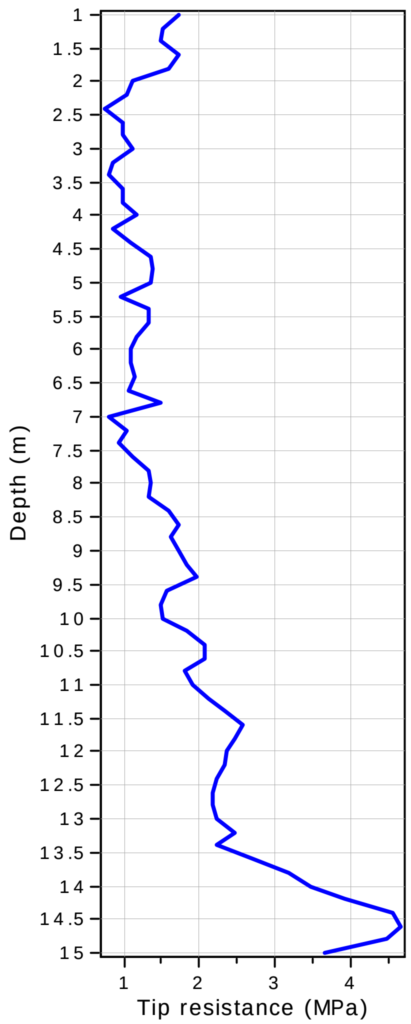


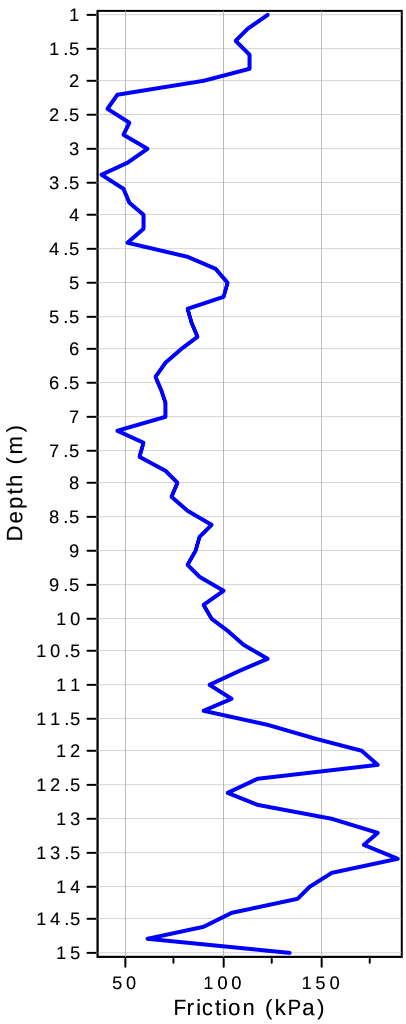


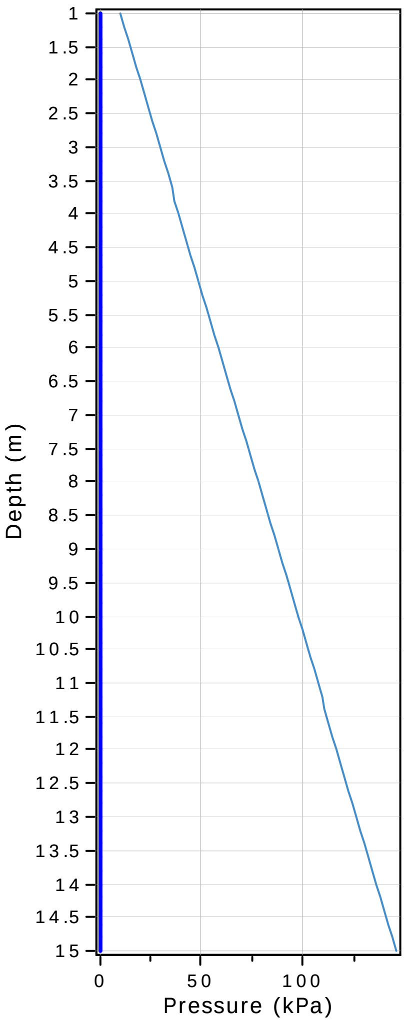


SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

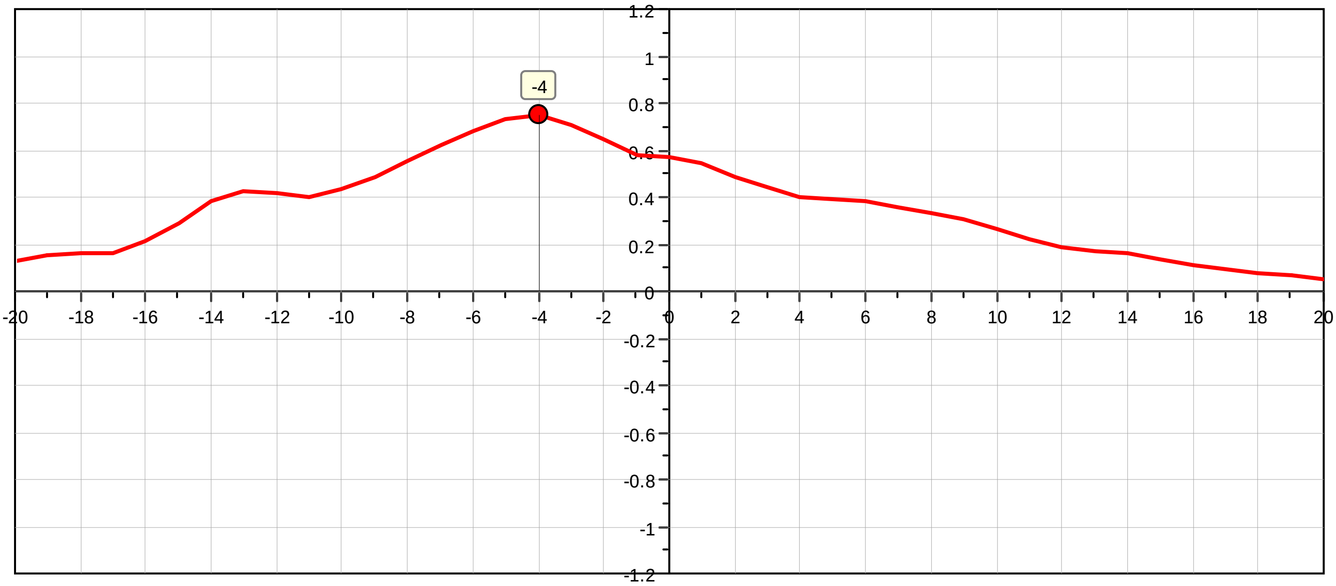

Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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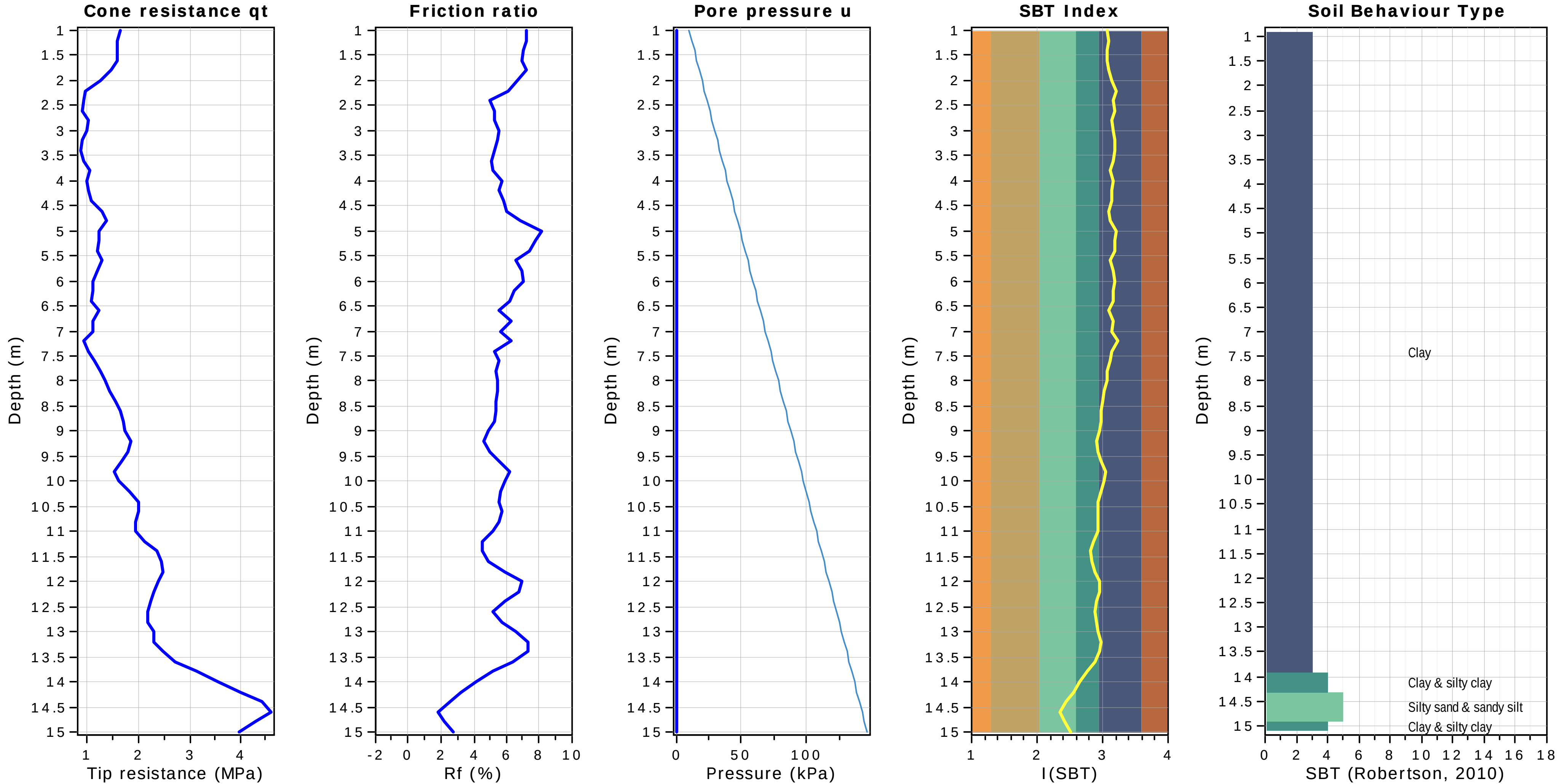
CPT: 036021P26CPT26
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

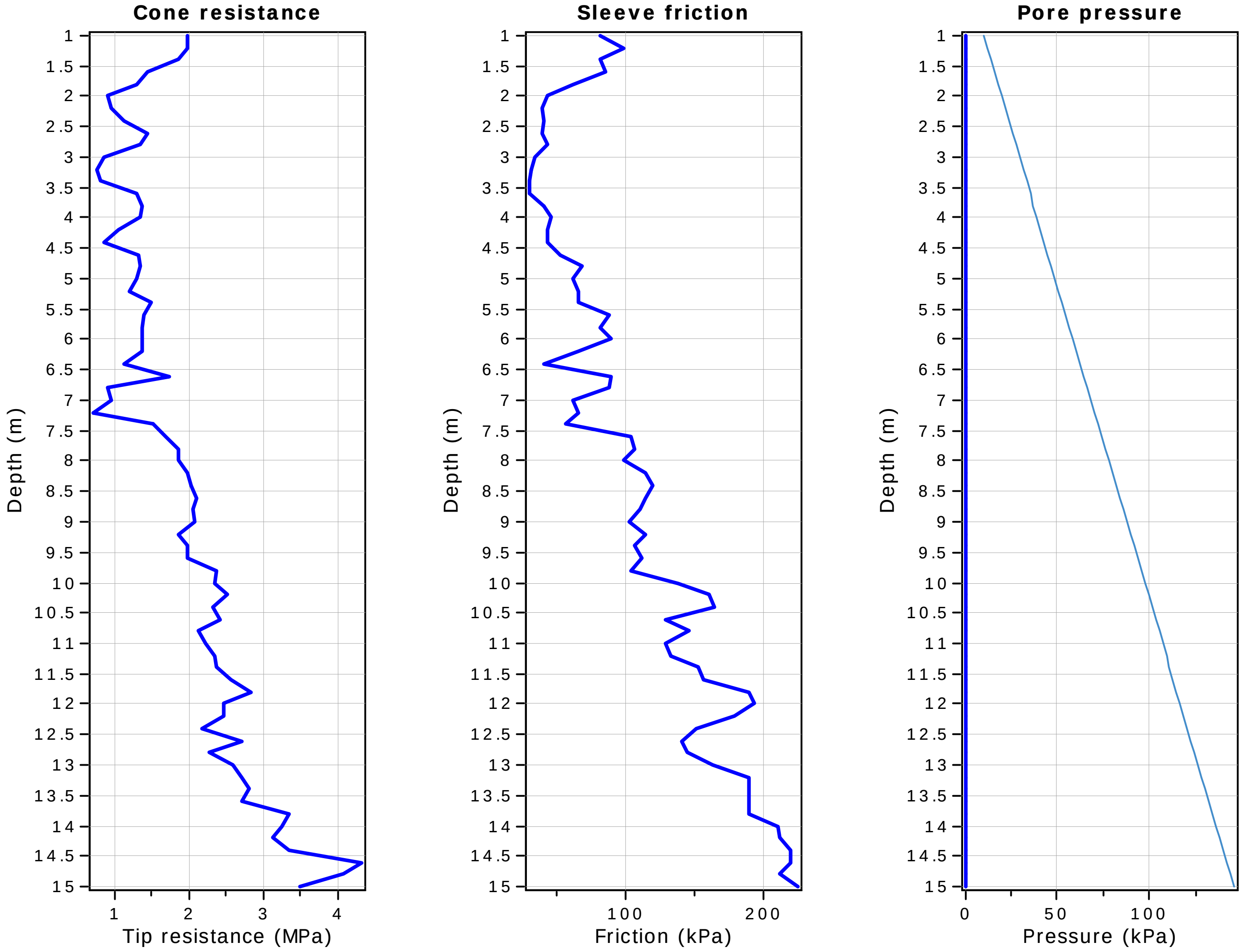


SBT legend

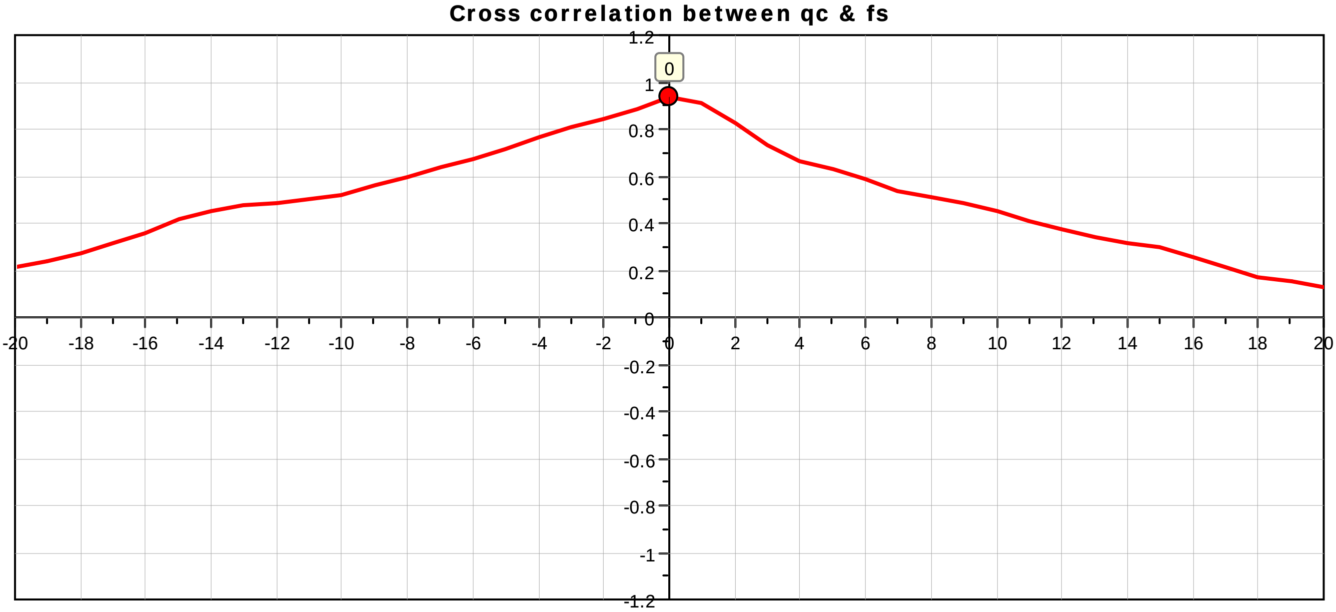
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟫 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬛ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

CPT: 036021P27CPT27
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

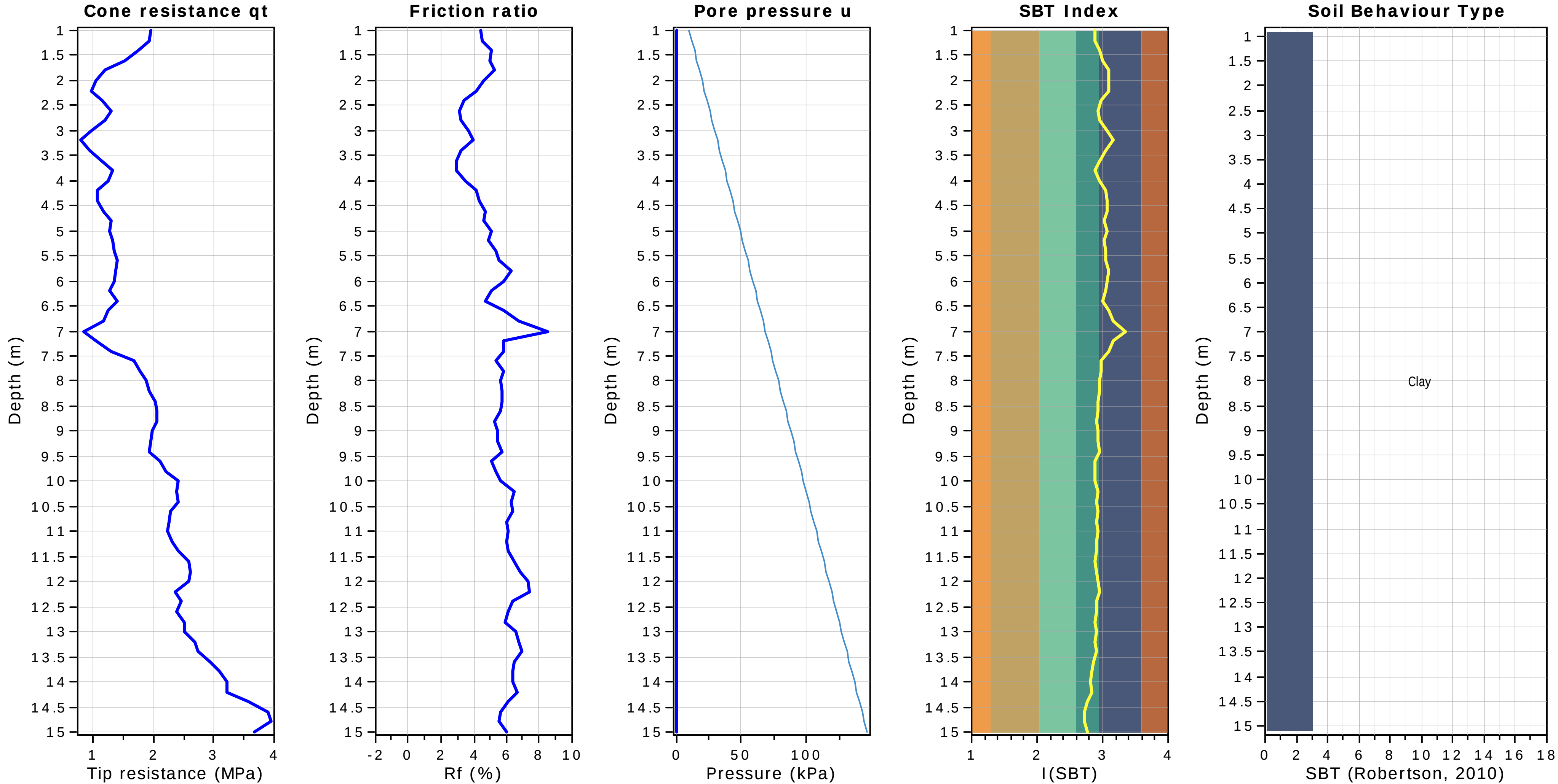


The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT: 036021P27CPT27
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

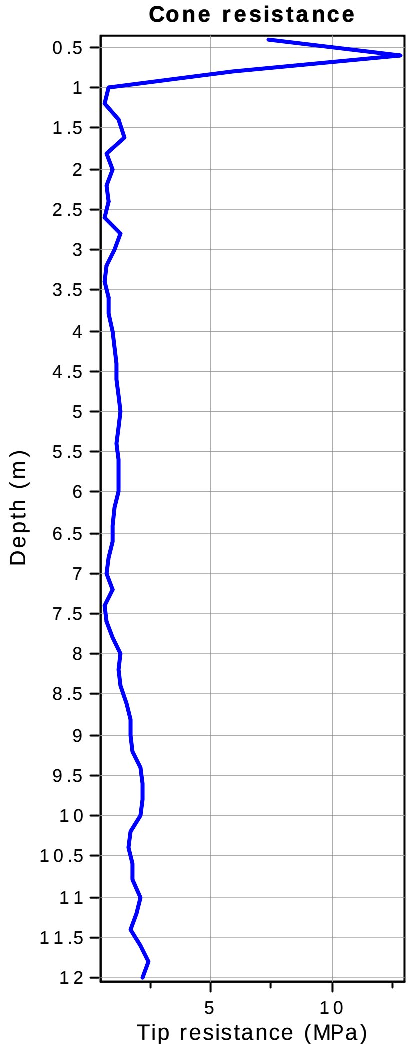


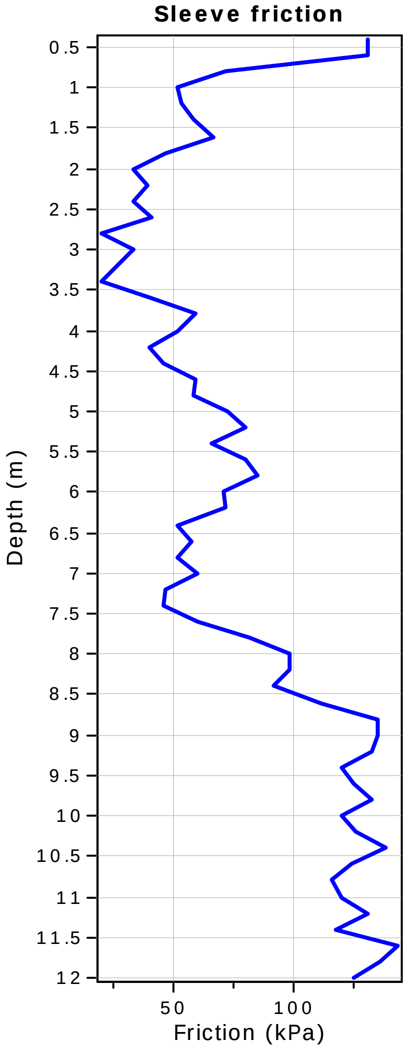
SBT legend

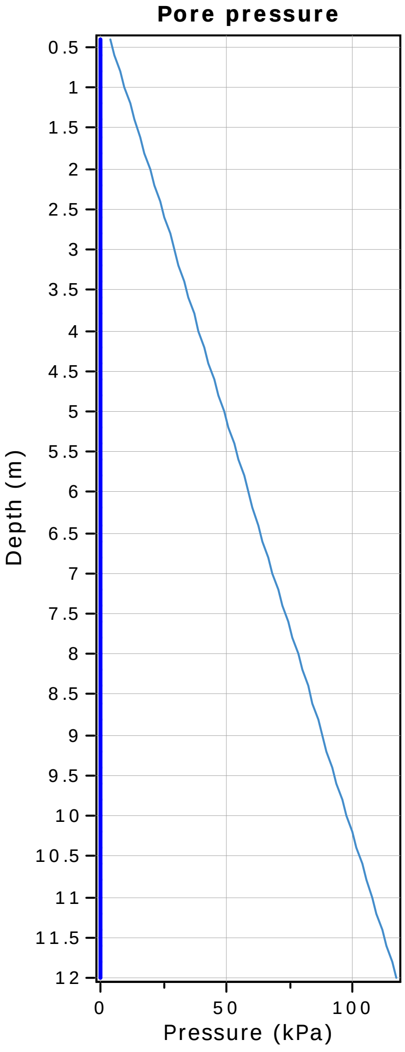
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P28CPT28
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

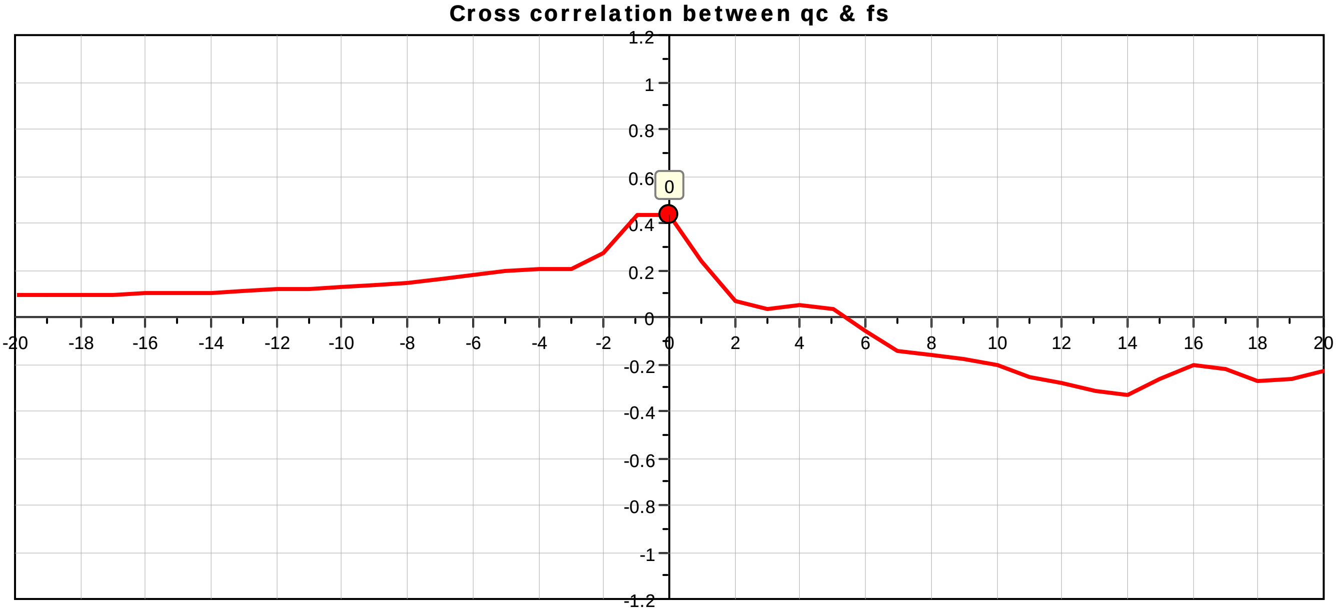
Project:
Location:


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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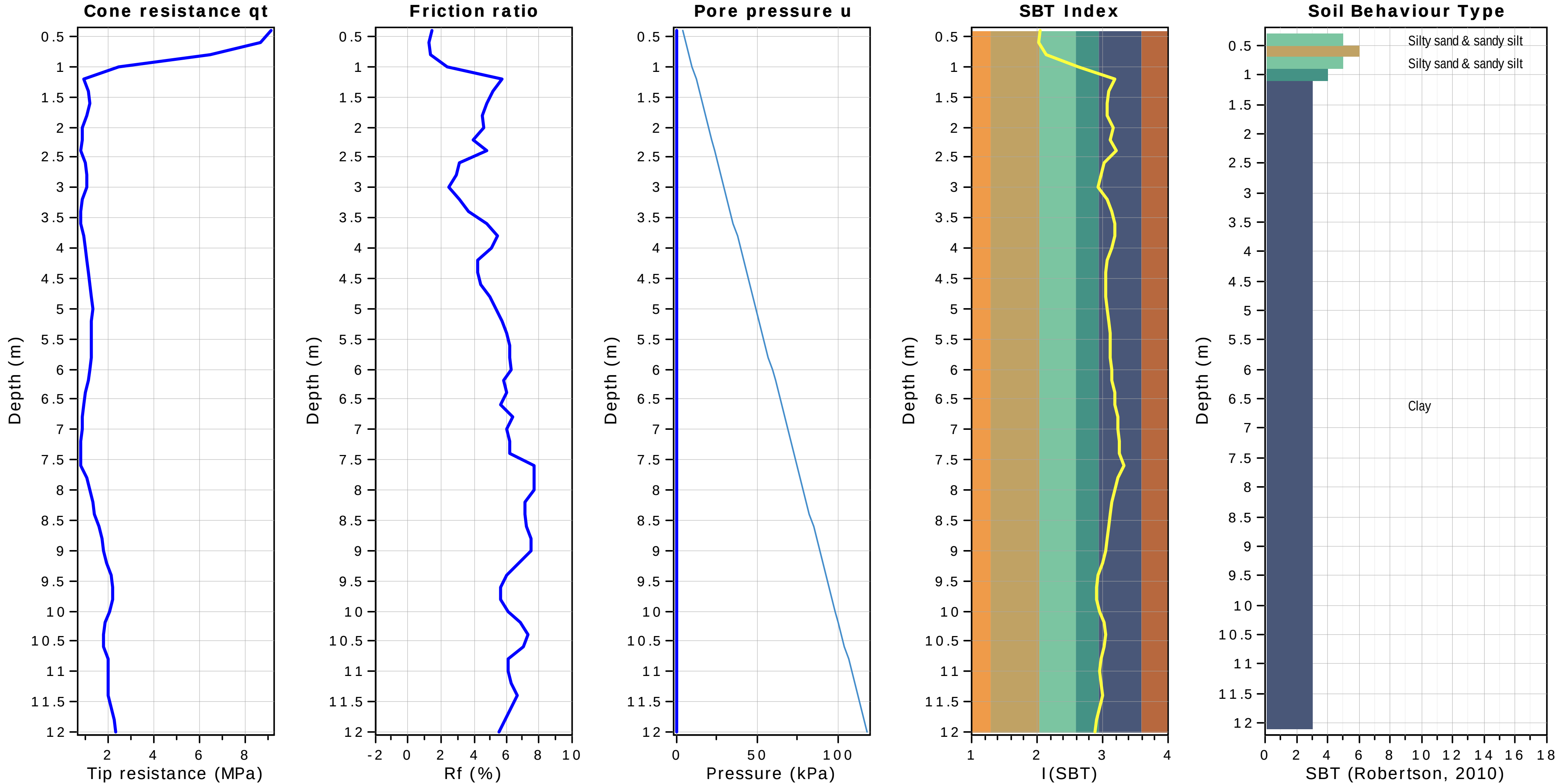
CPT: 036021P28CPT28
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

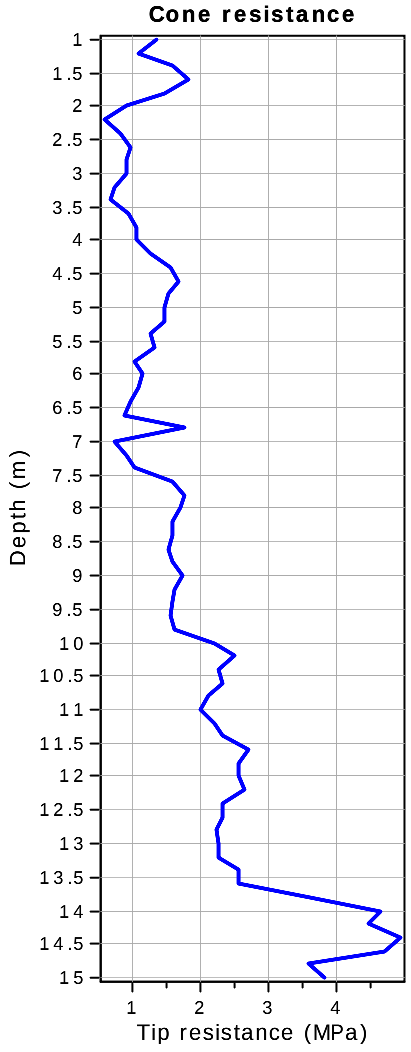


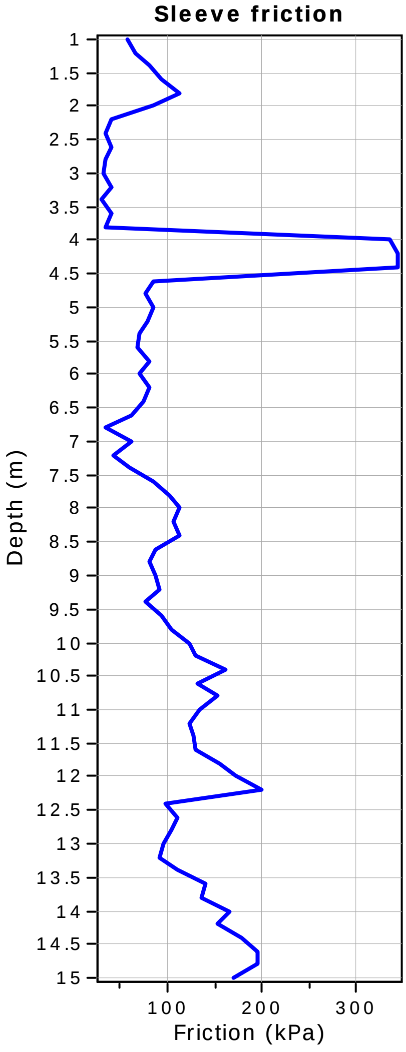
SBT legend

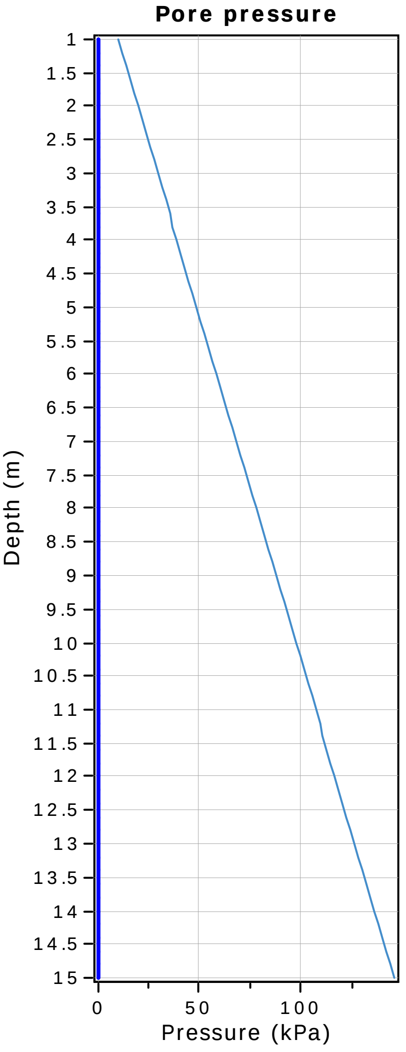
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬛ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

CPT: 036021P29CPT29
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

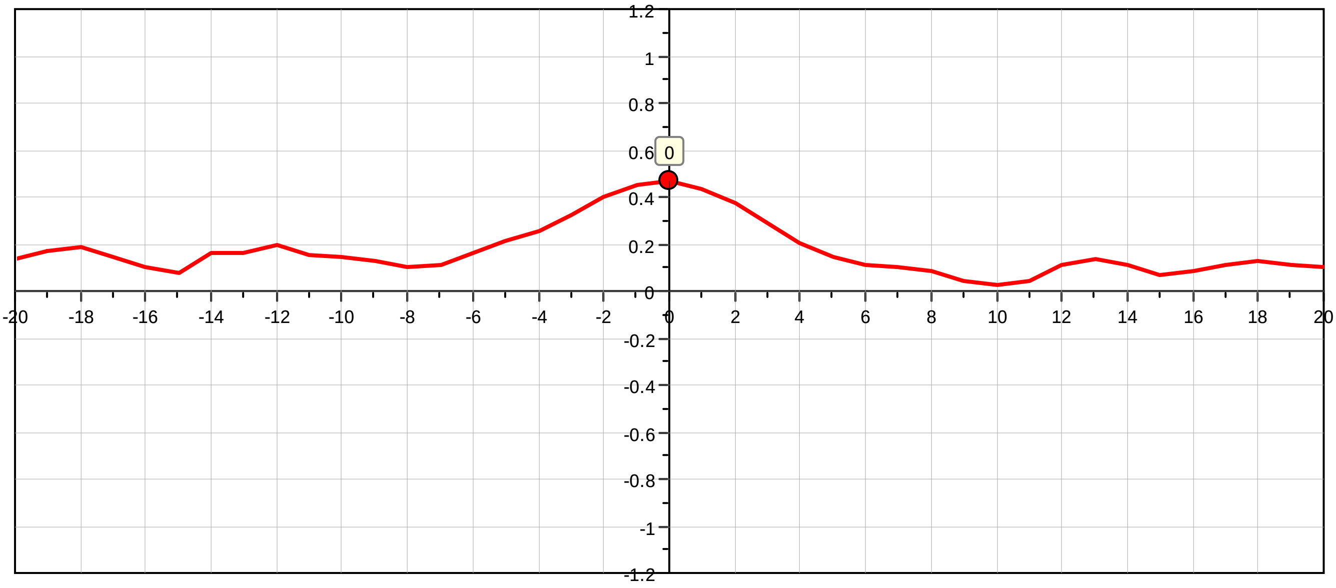






The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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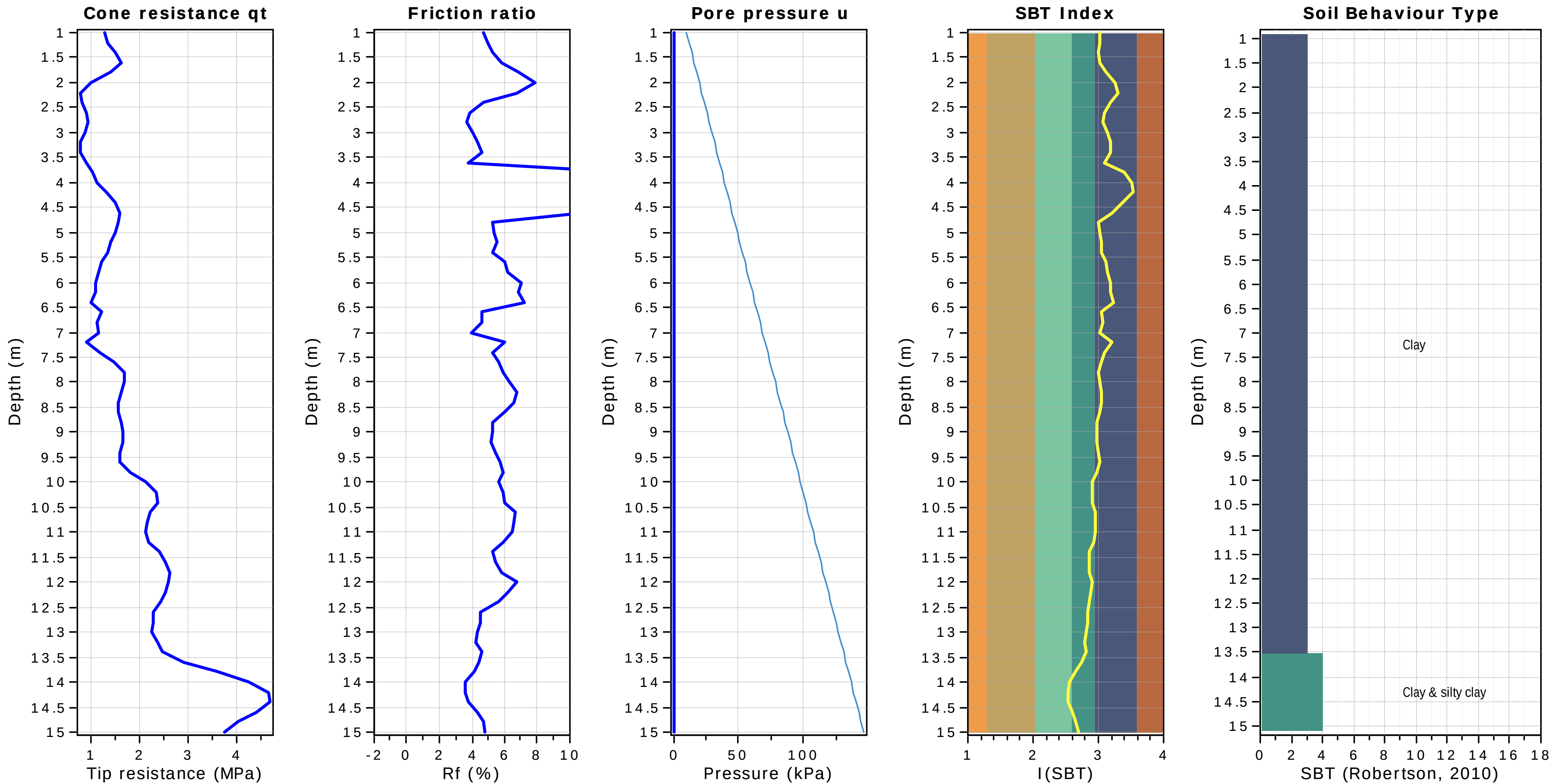
CPT: 036021P29CPT29
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬛ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

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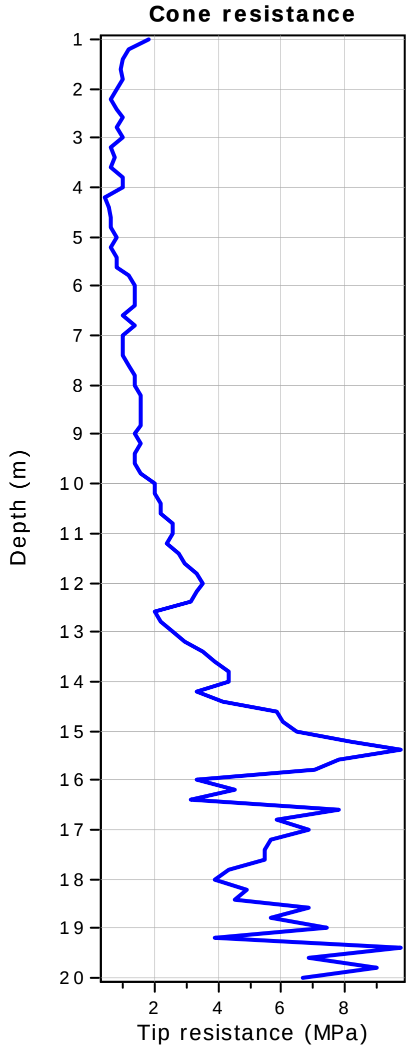
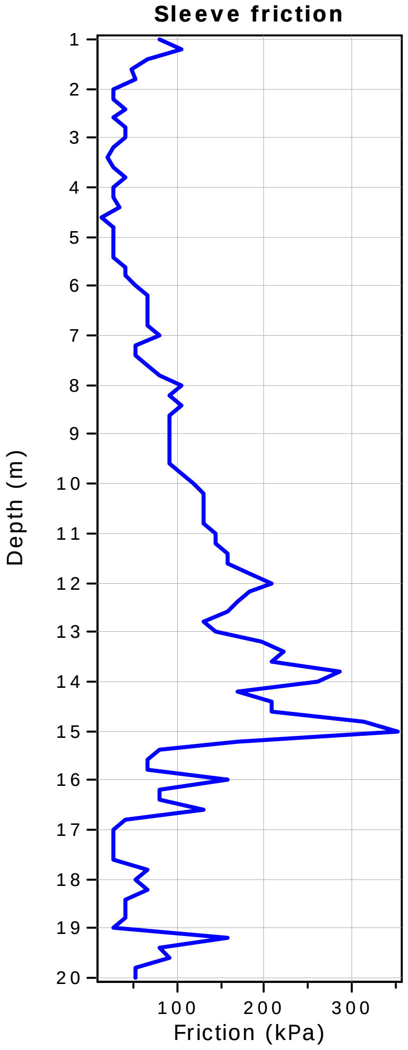
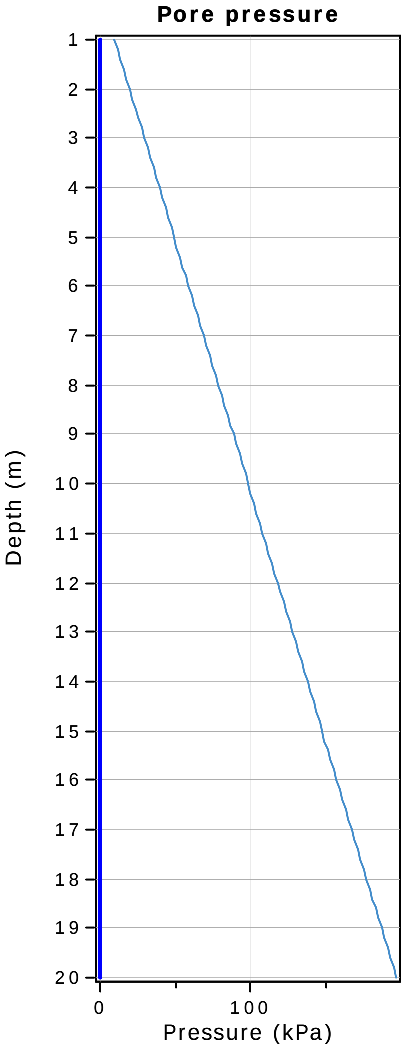
CPT: 036021P30CPT30
Total depth: 20.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

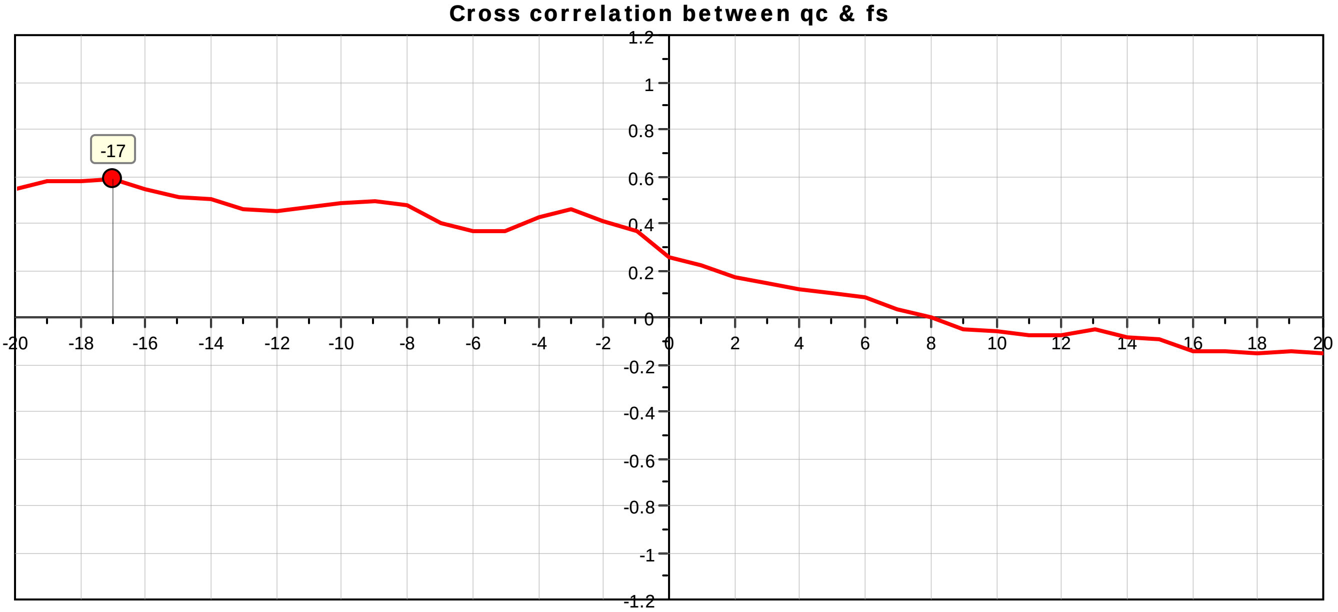
Project:
Location:


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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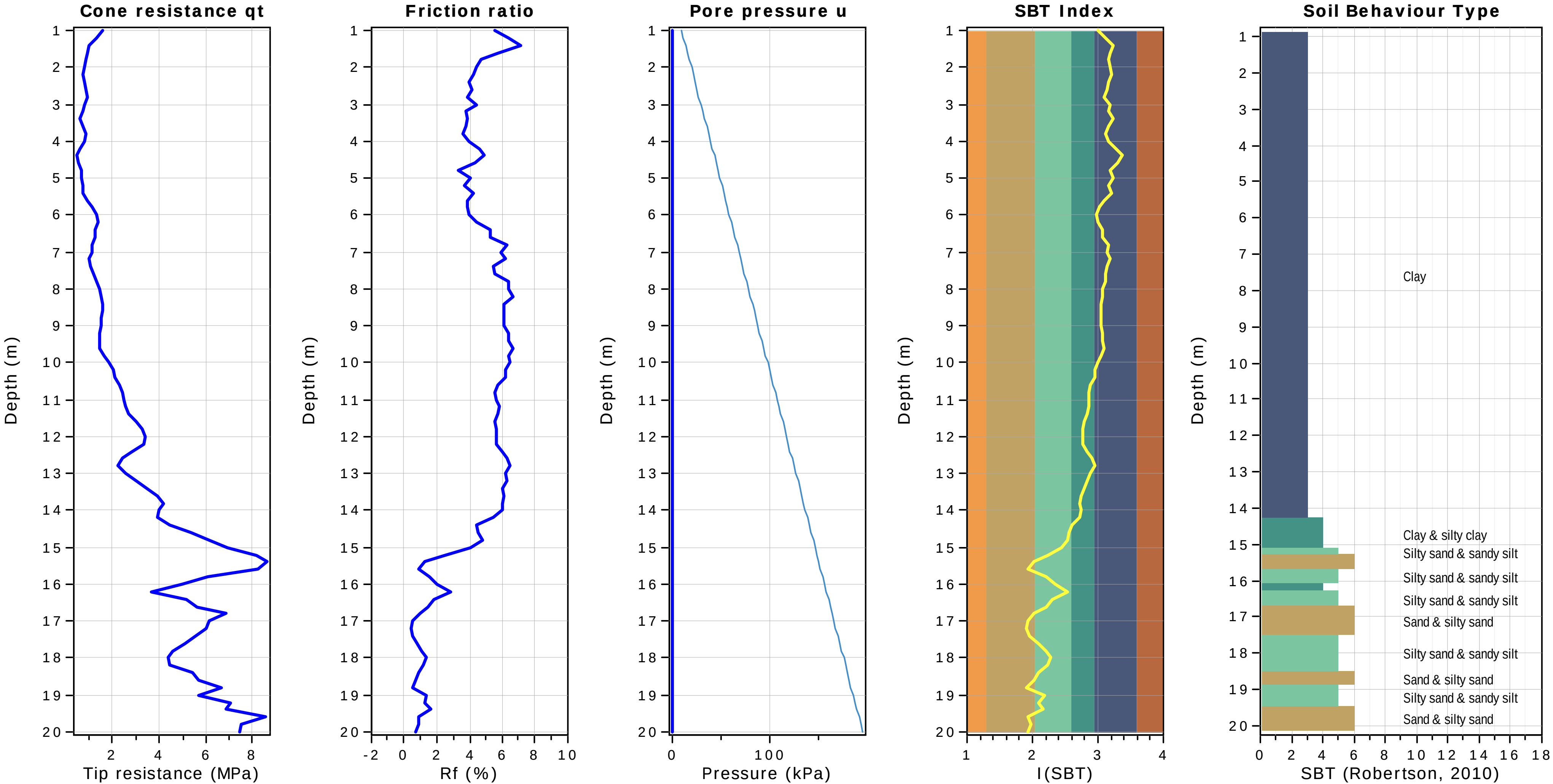
CPT: 036021P30CPT30
Total depth: 20.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

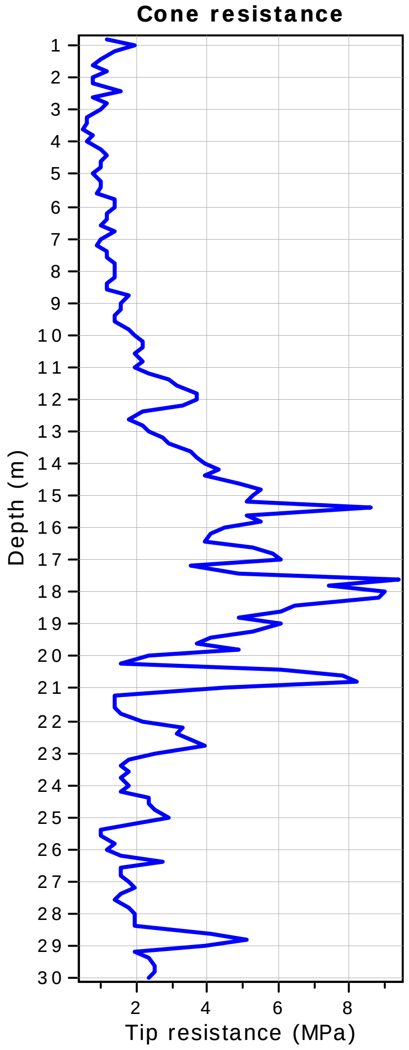


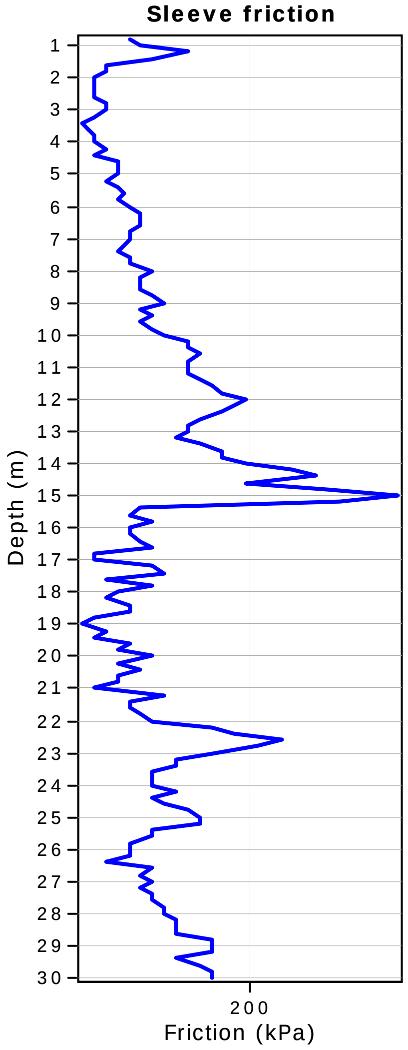
SBT legend

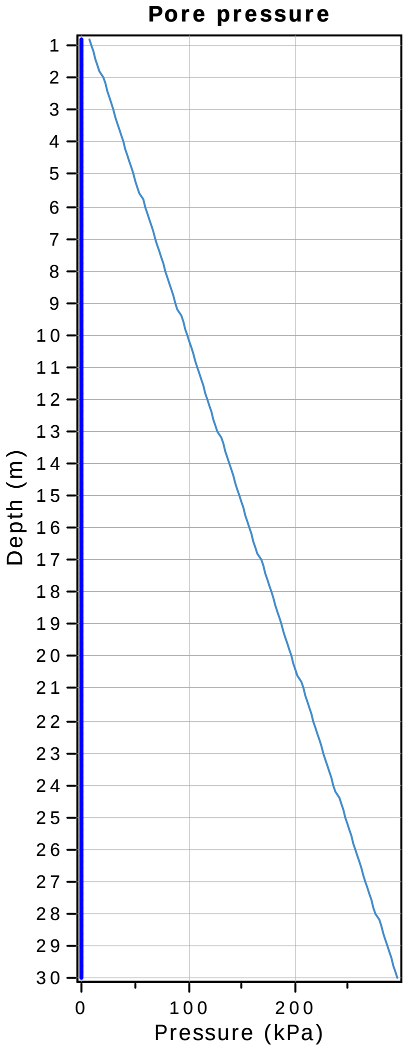
🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬛ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟫 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

CPT: 036021P31CPT31
Total depth: 30.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

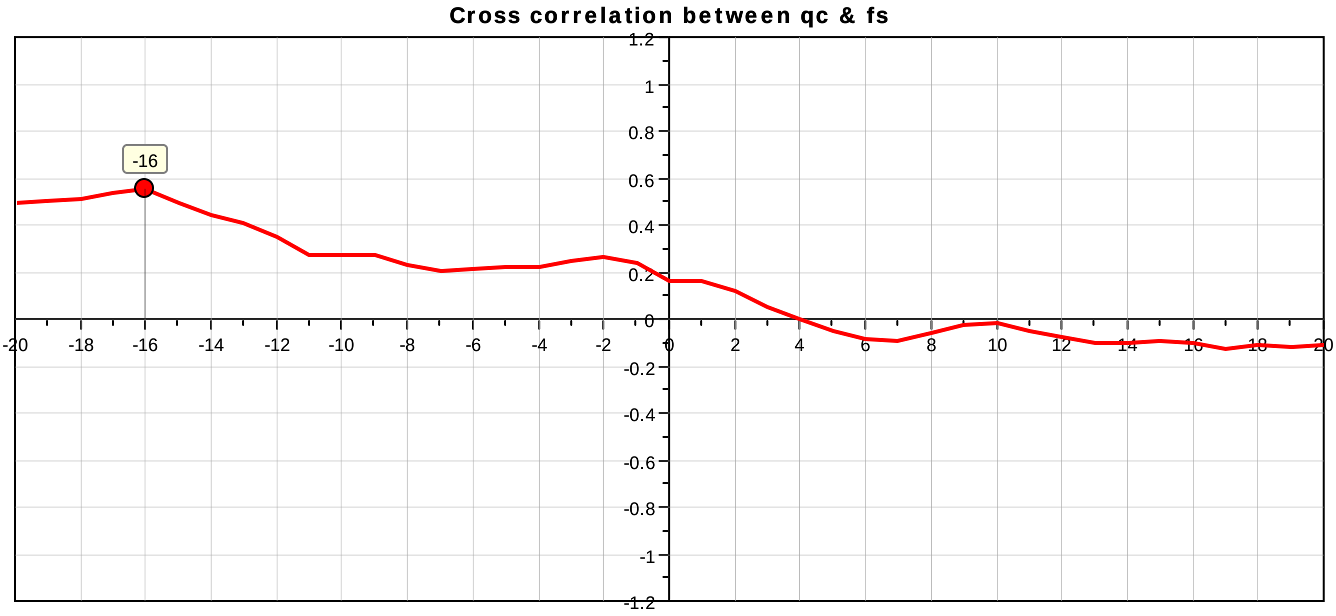
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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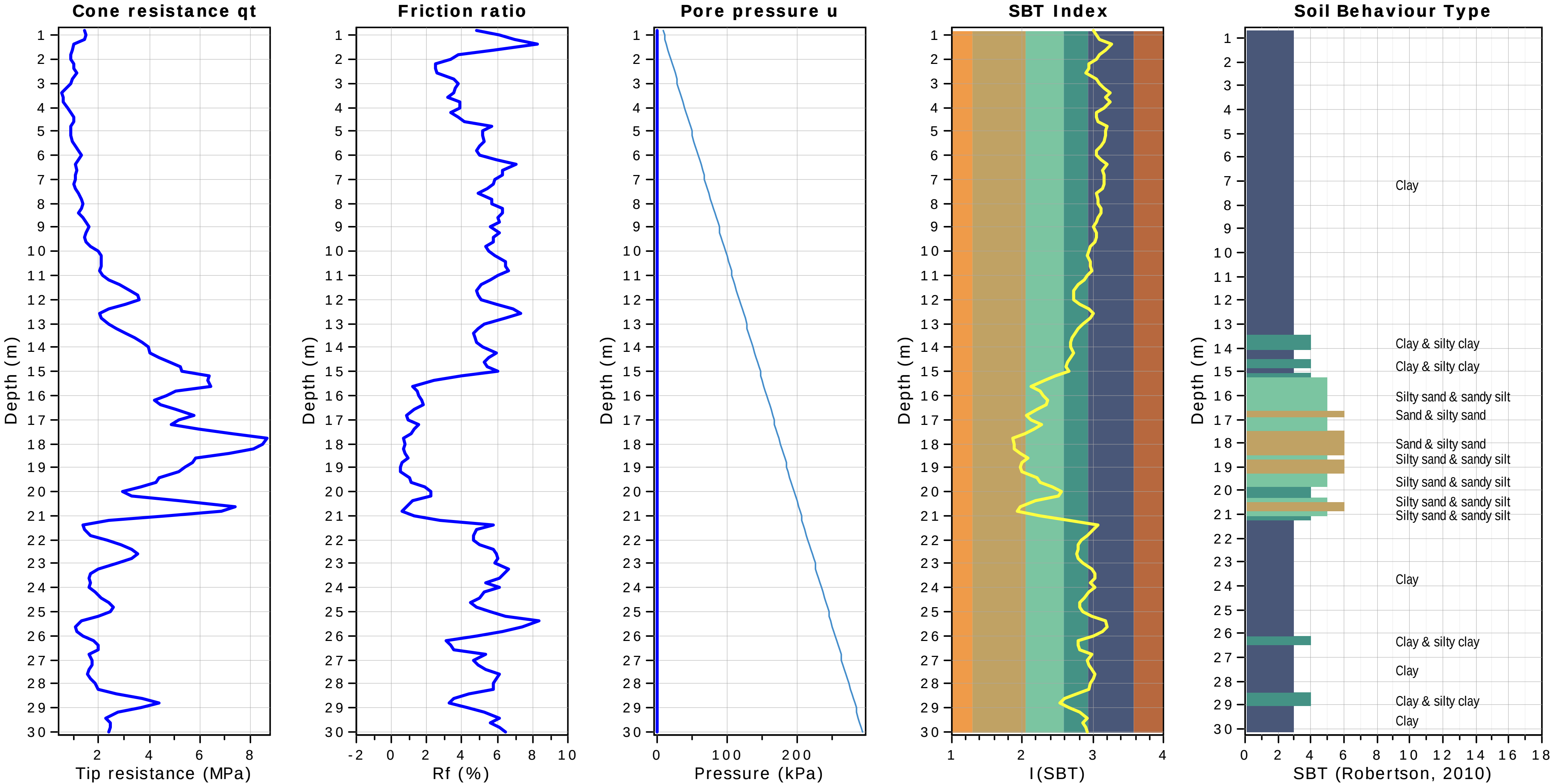
CPT: 036021P31CPT31
Total depth: 30.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

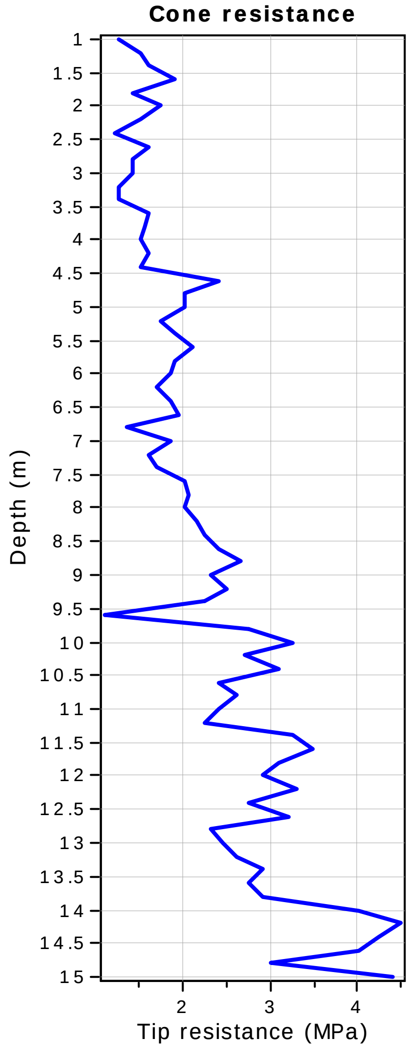


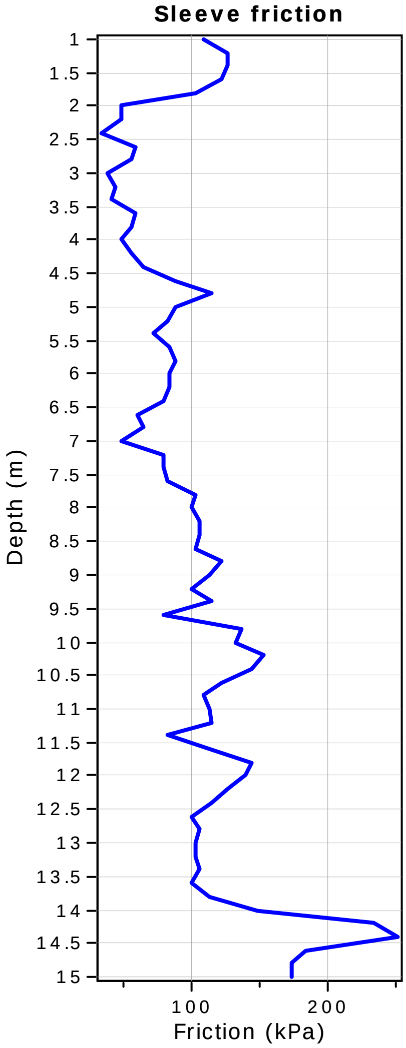
SBT legend

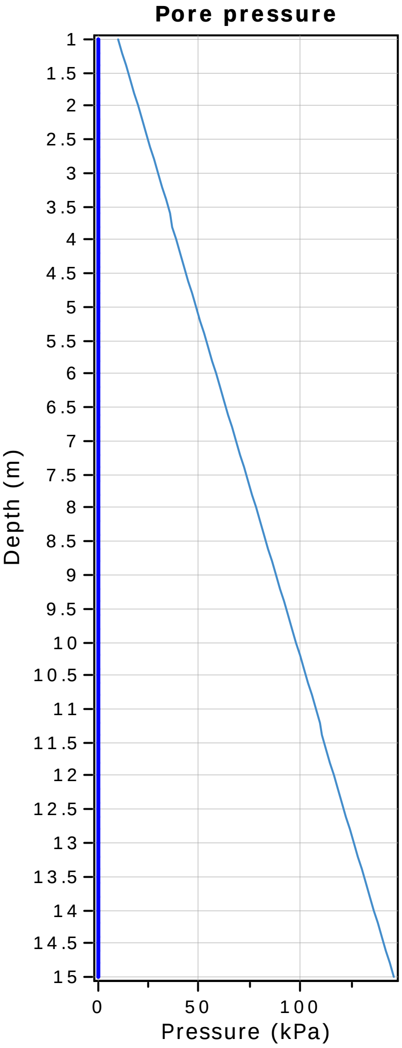
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

CPT: 036021P32CPT32
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

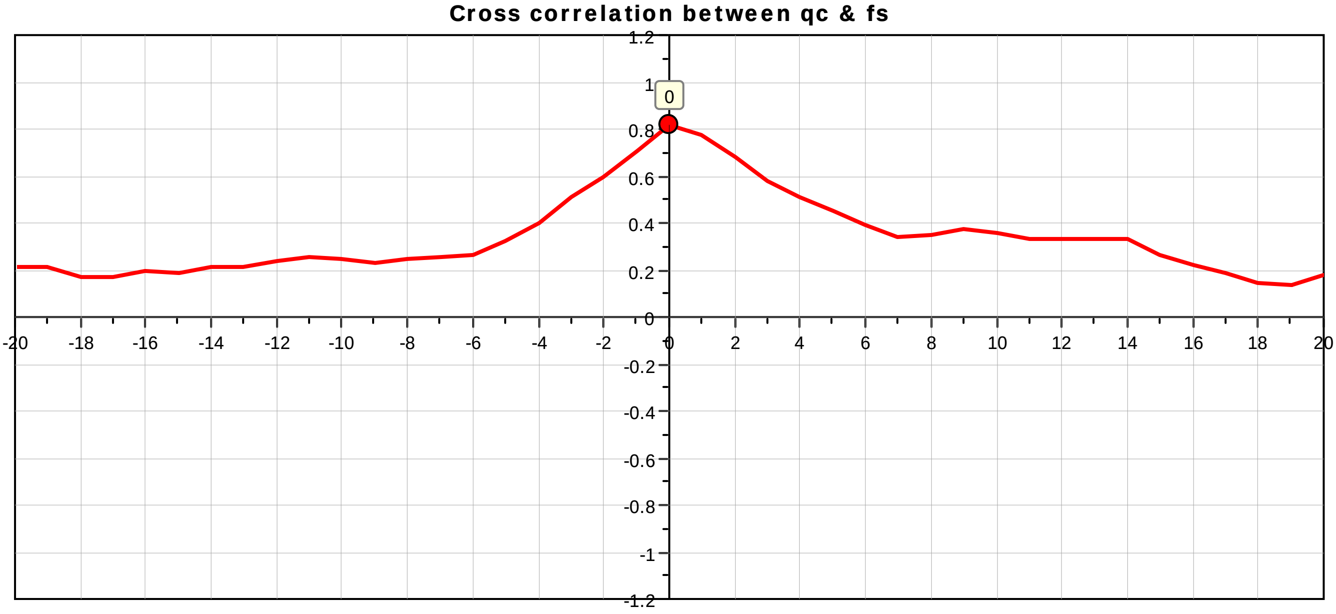
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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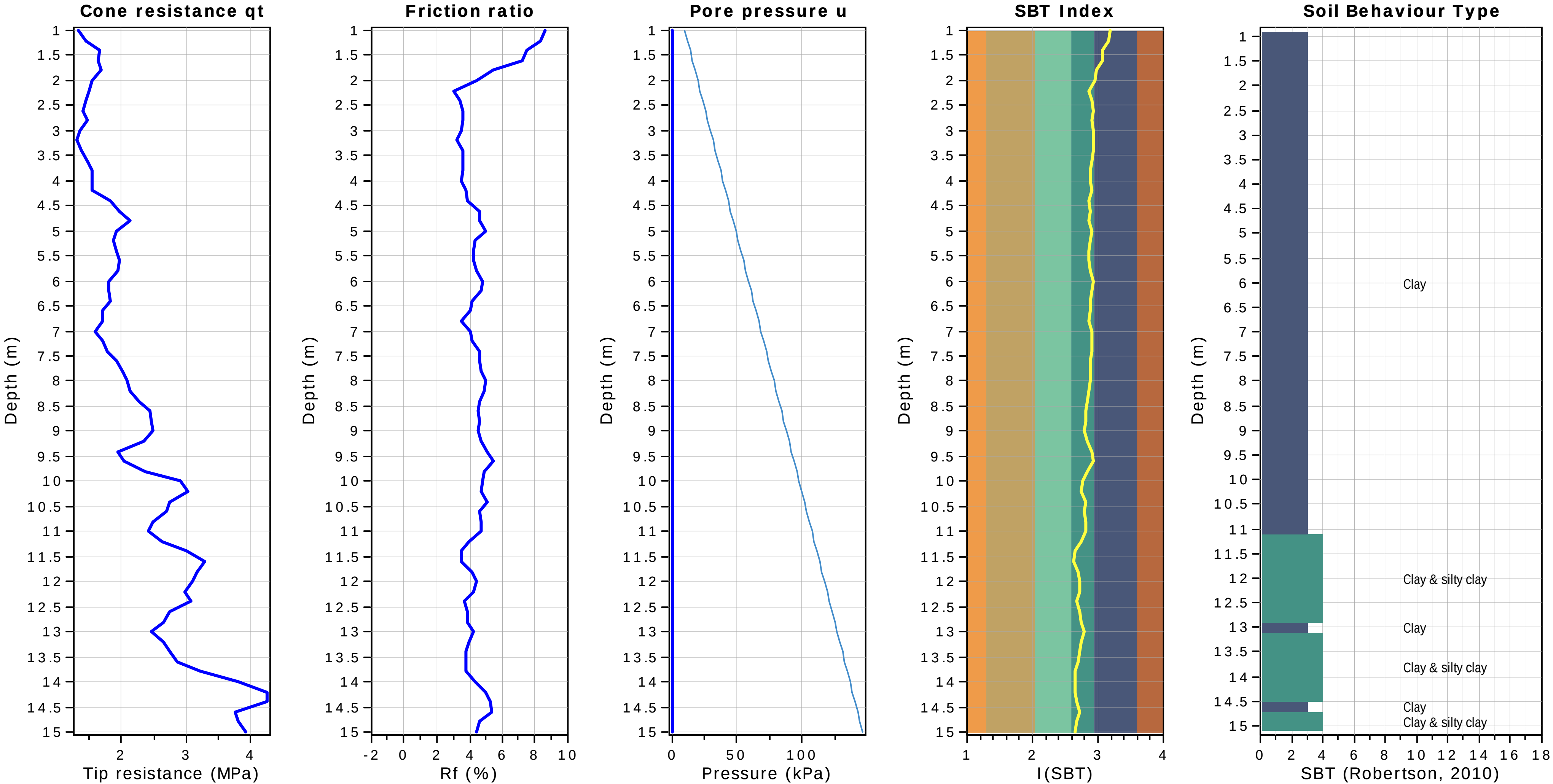
CPT: 036021P32CPT32
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

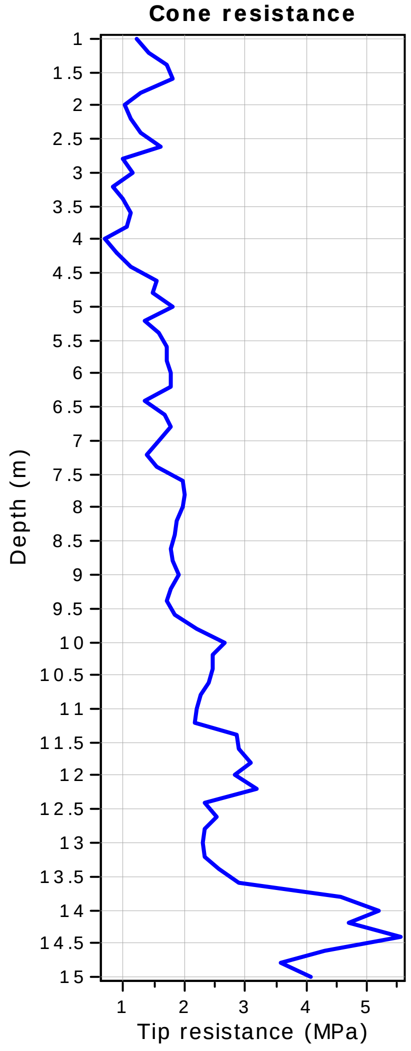


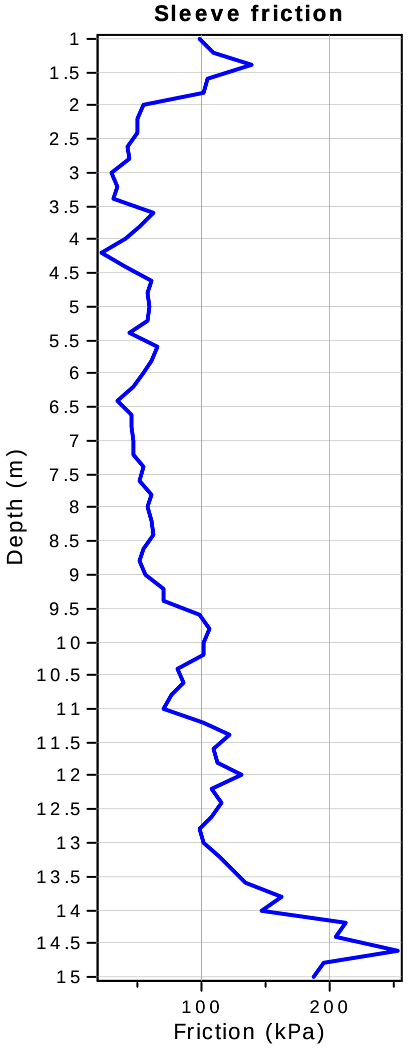
SBT legend

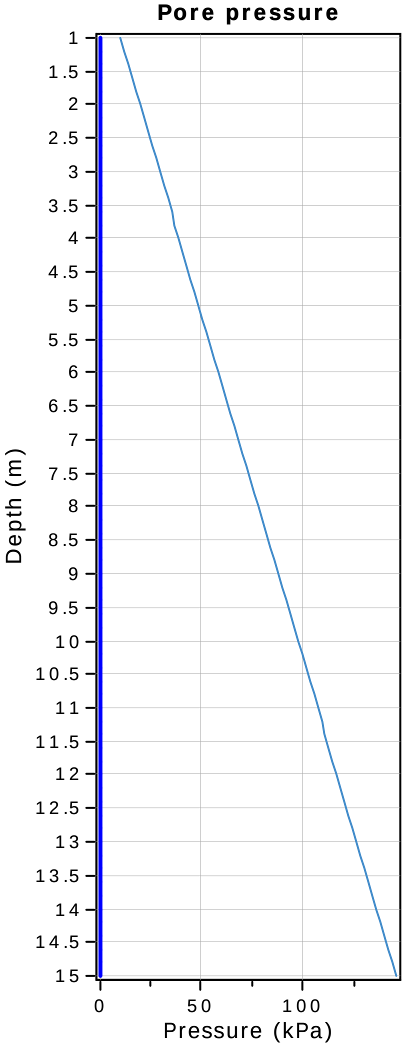
🟥 1. Sensitive fine grained
▨ 2. Organic material
▨ 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
▨ 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
▨ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P33CPT33
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

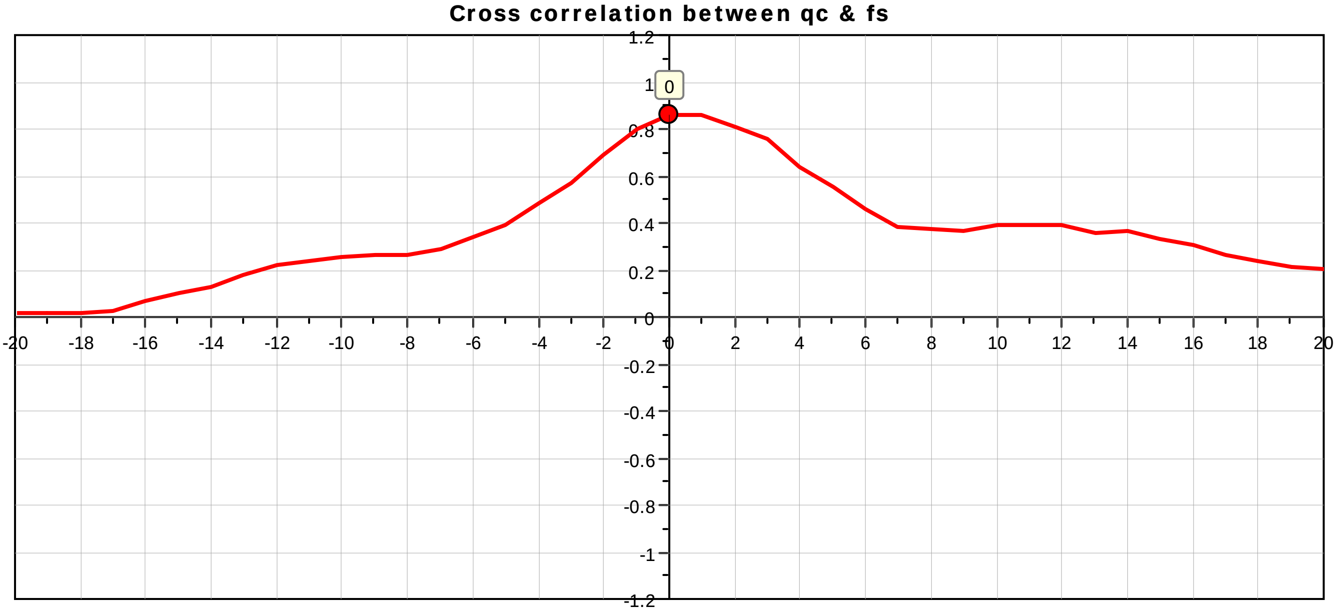
Project:
Location:





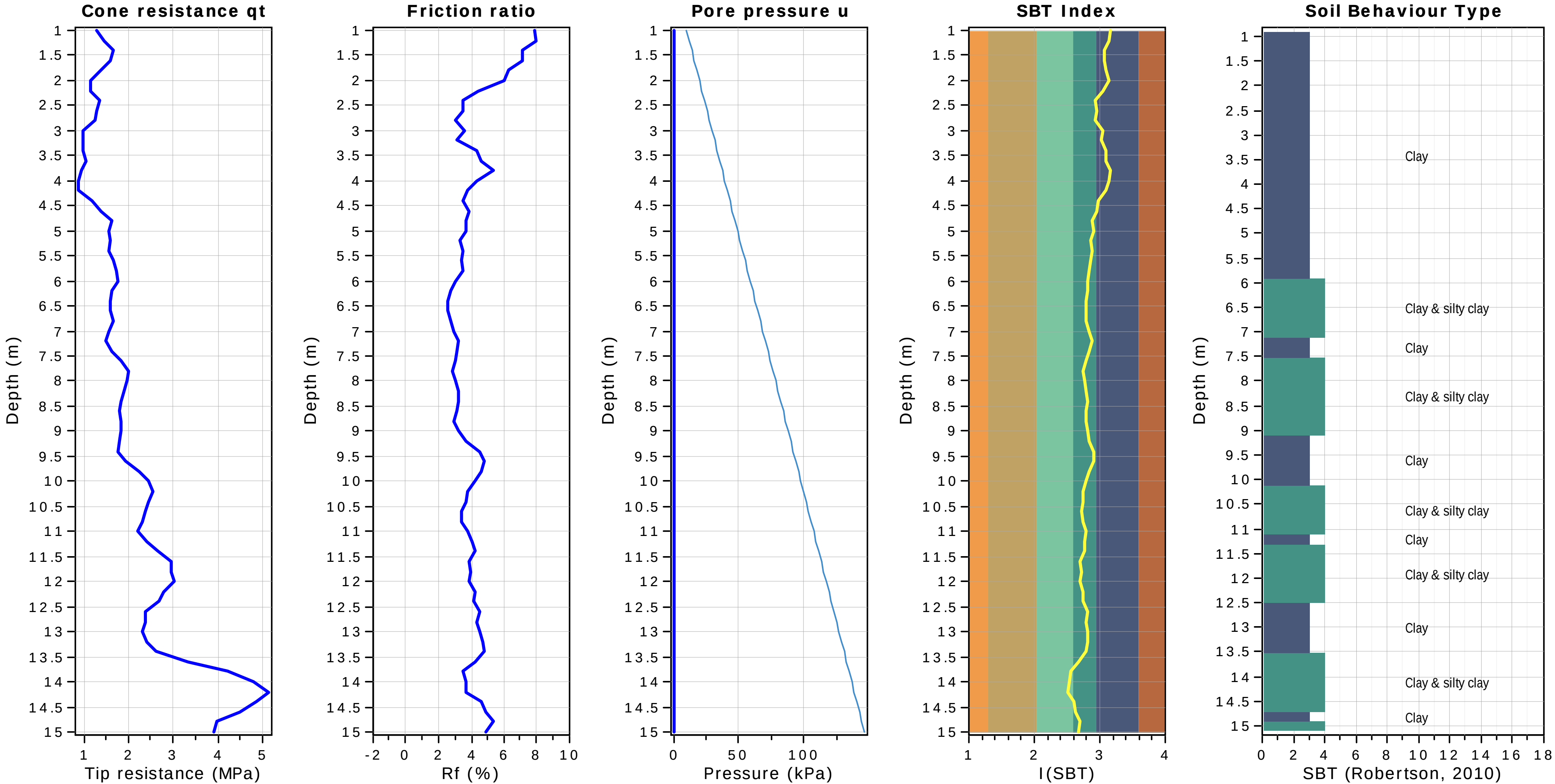


The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT: 036021P33CPT33
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

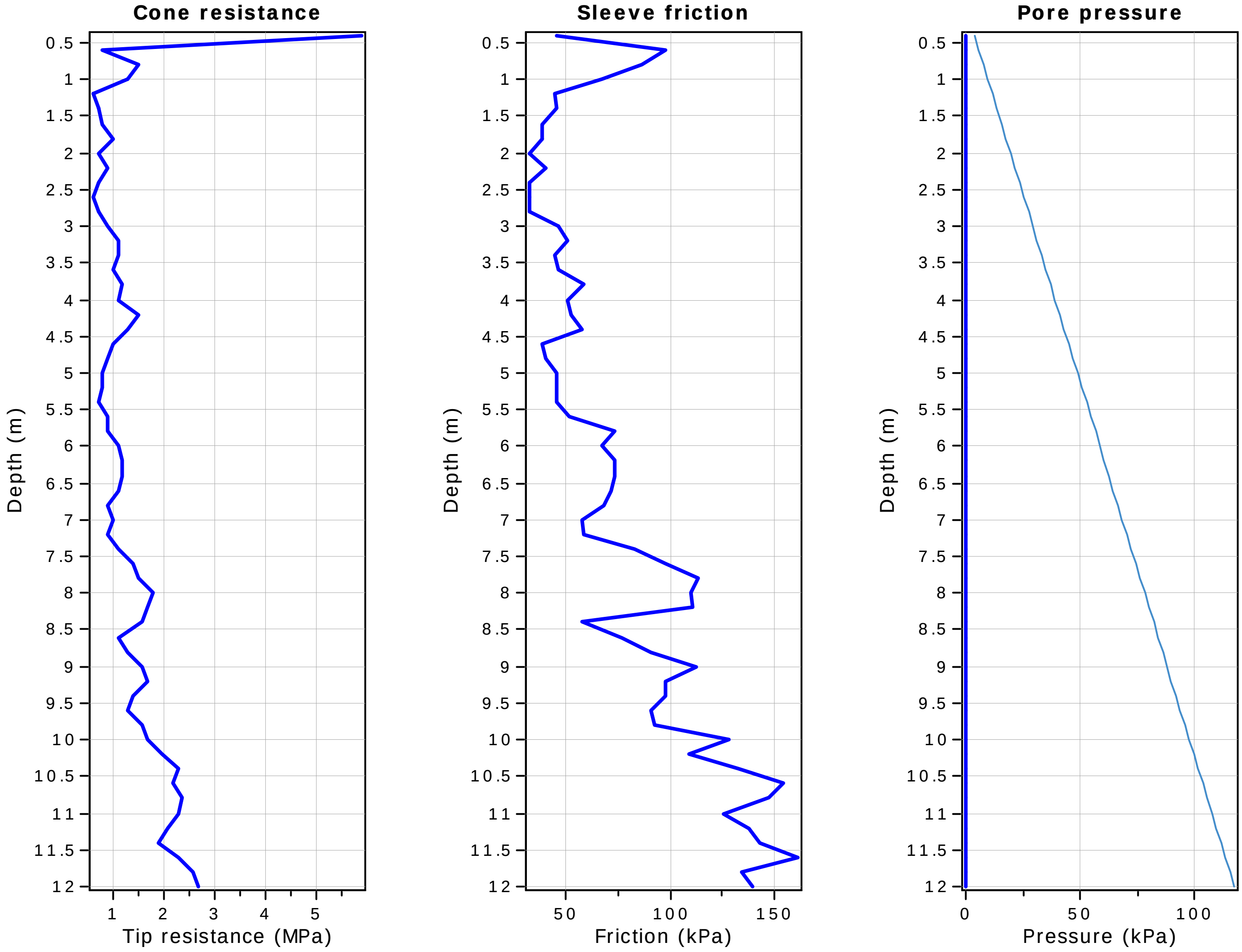


SBT legend

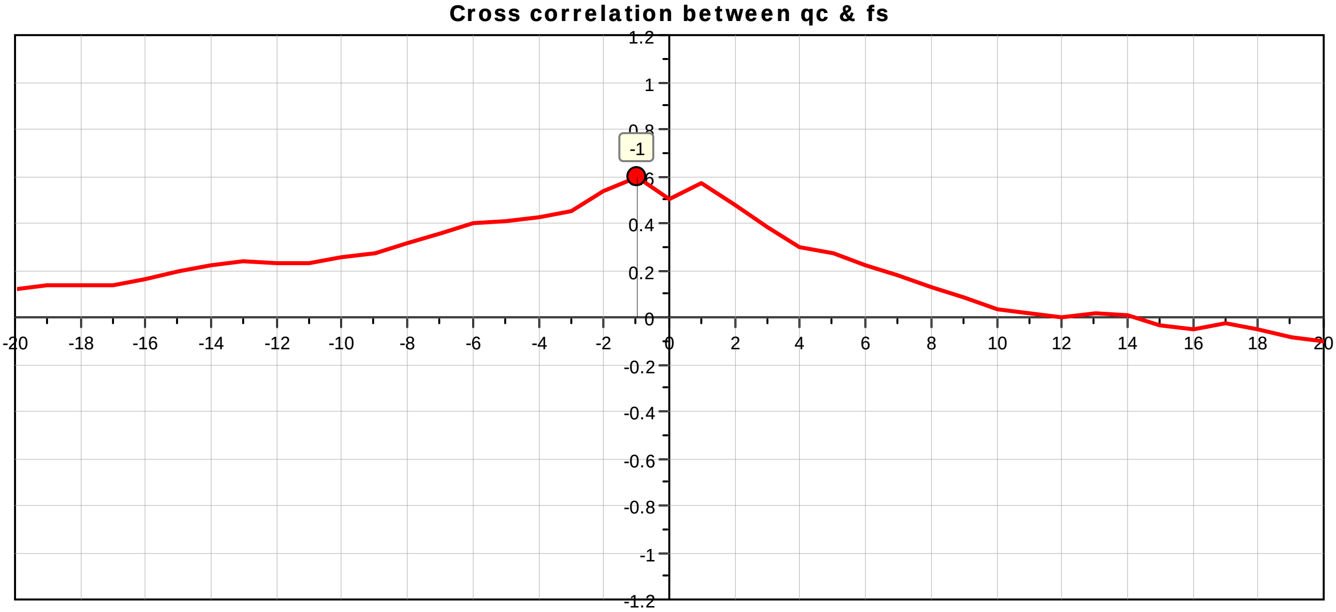
🟥 1. Sensitive fine grained	4. Clayey silt to silty clay	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to clayey sand
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

CPT: 036021P34CPT34
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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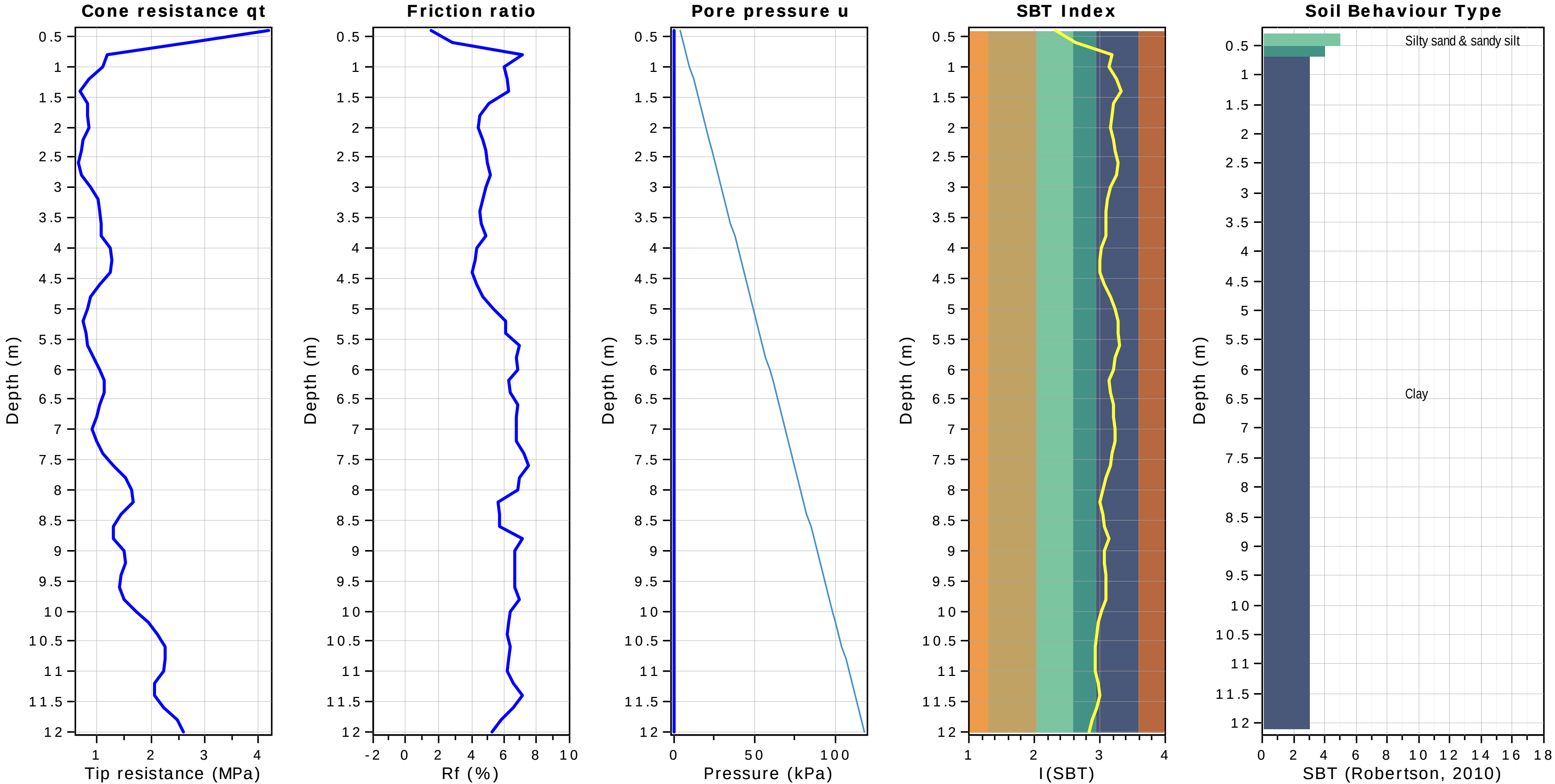
CPT: 036021P34CPT34
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

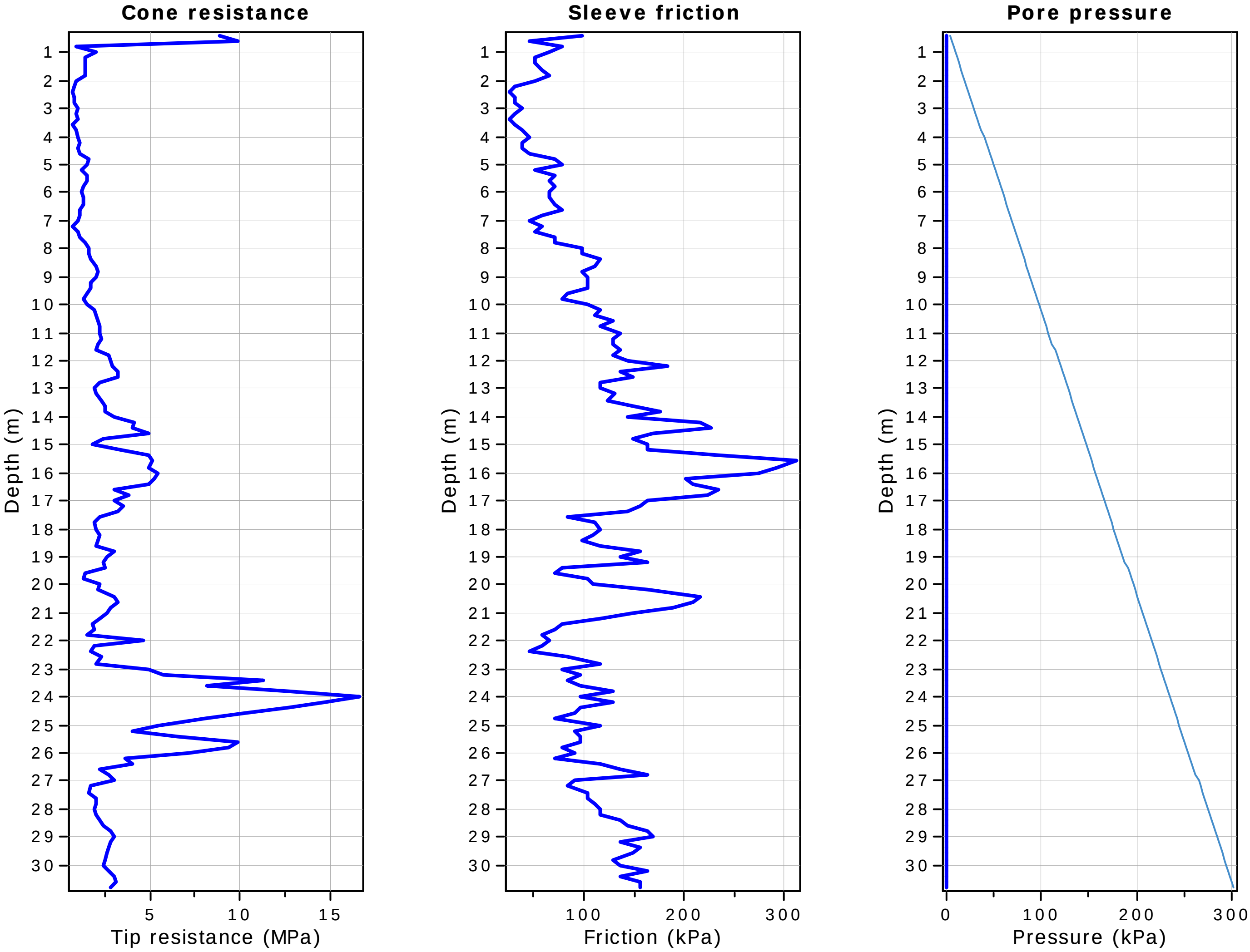


SBT legend

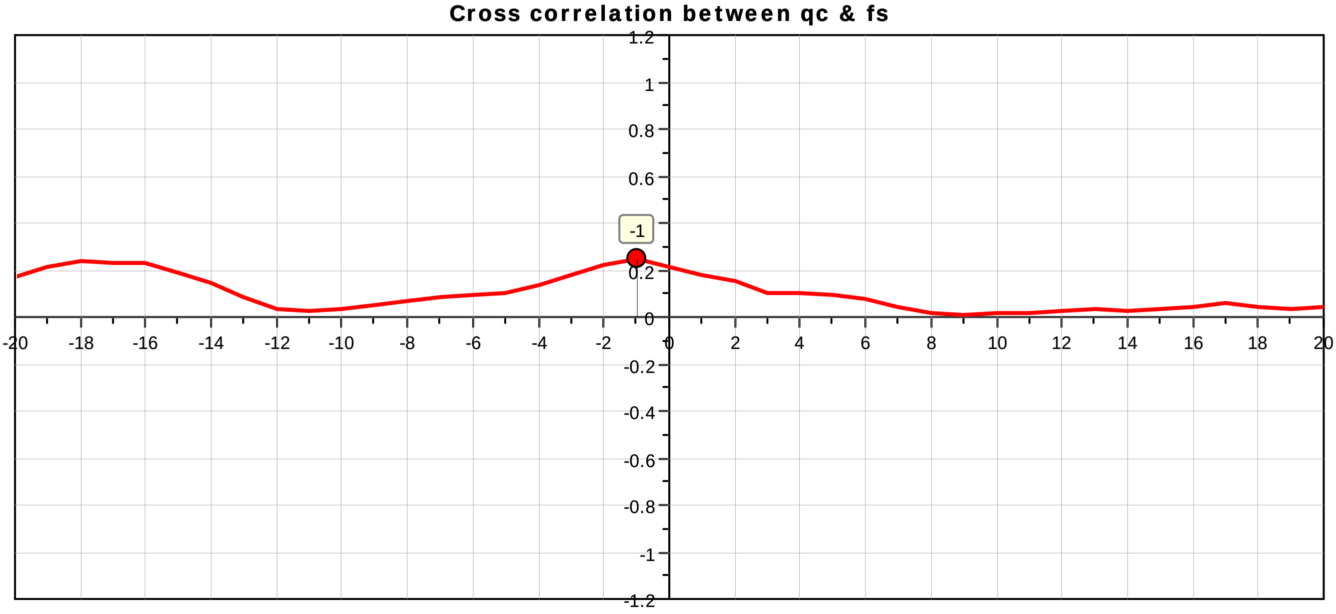
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟫 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

CPT: 036021P35CPT35
Total depth: 30.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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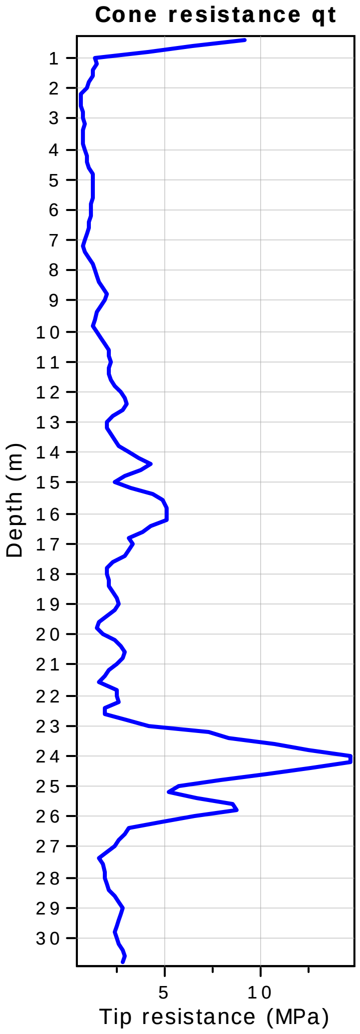
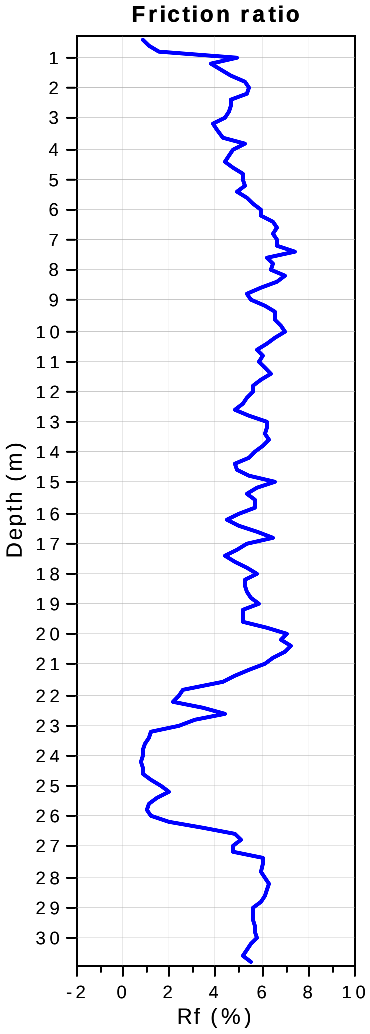
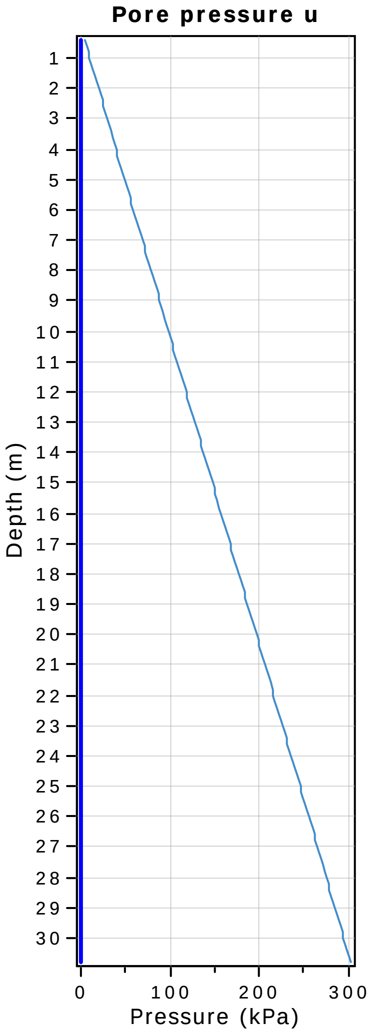
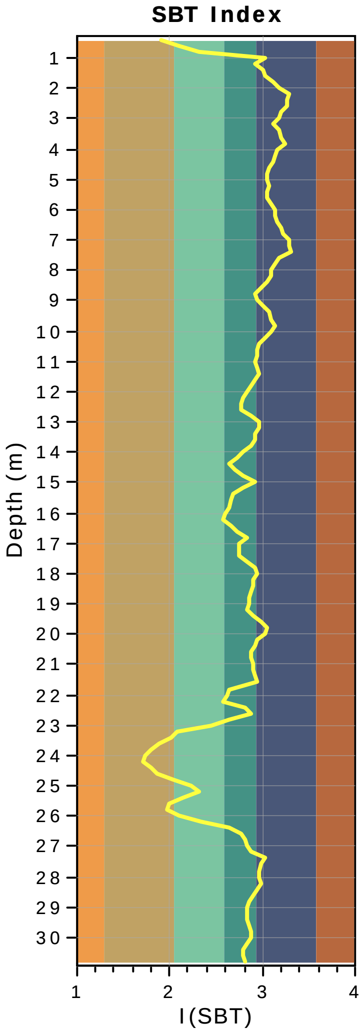
CPT: 036021P35CPT35
Total depth: 30.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

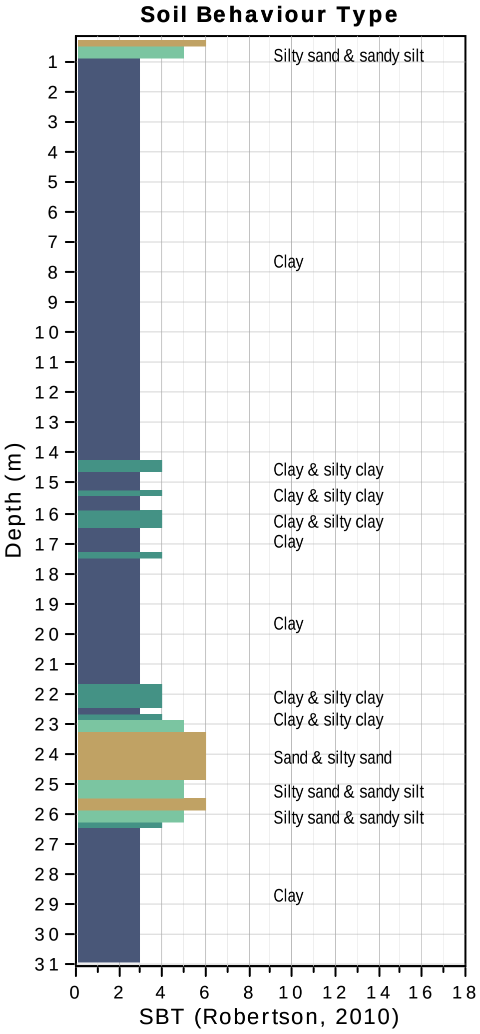
Project:
Location:









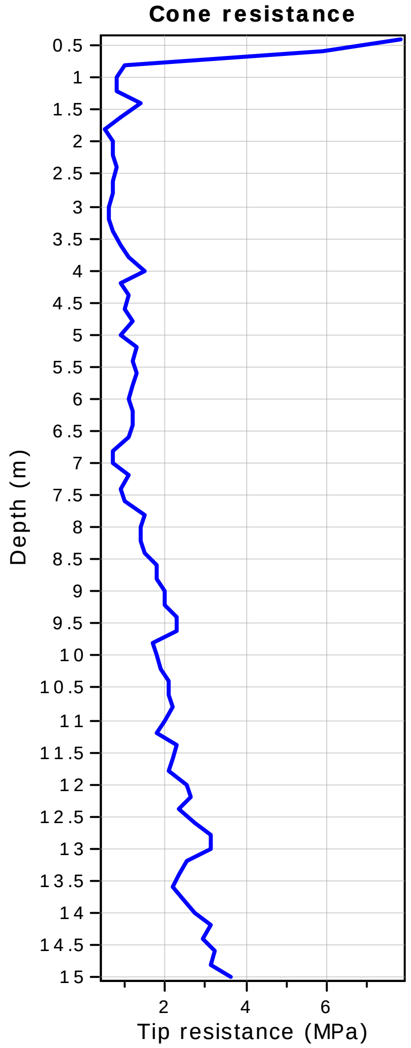


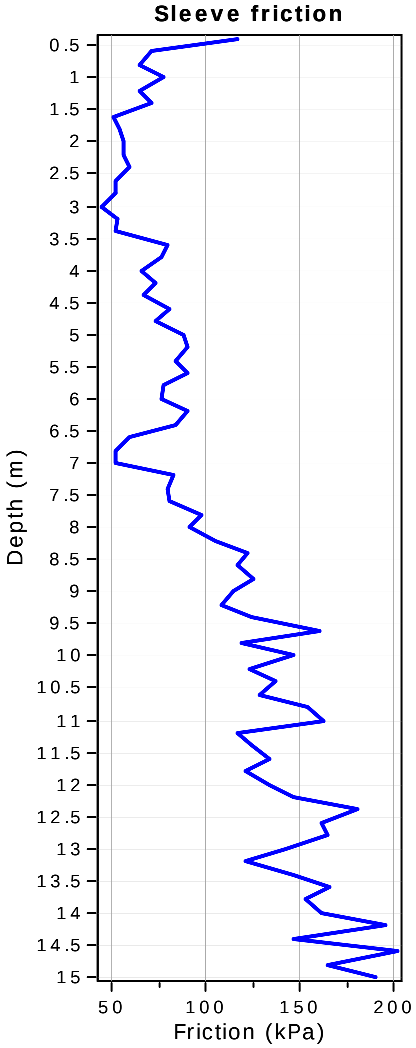
SBT legend

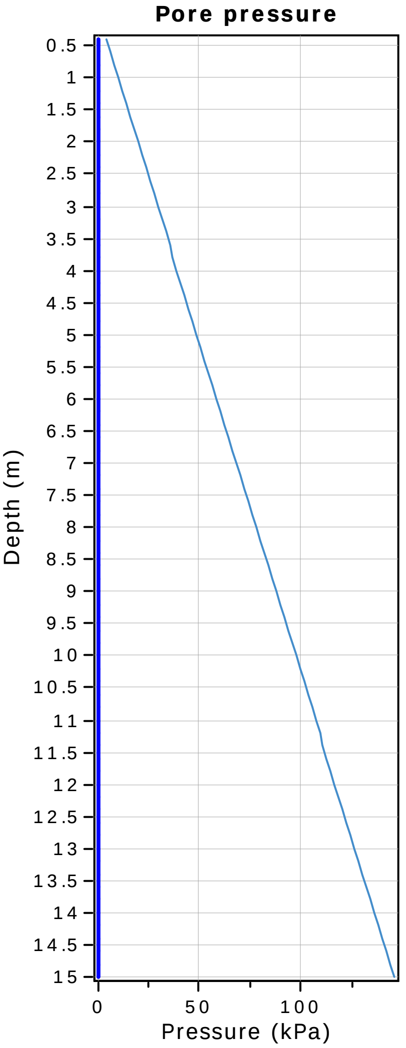
🟥 1. Sensitive fine grained	■ 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	■ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	■ 6. Clean sand to silty sand	☐ 9. Very stiff fine grained

CPT: 036021P36CPT36
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

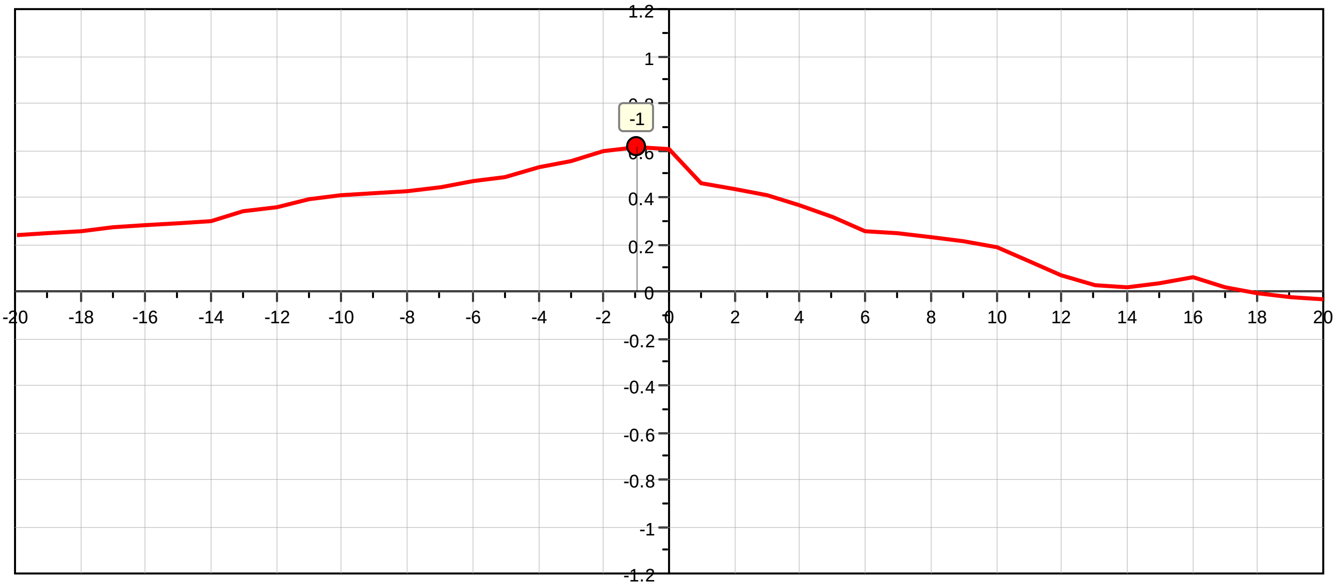

Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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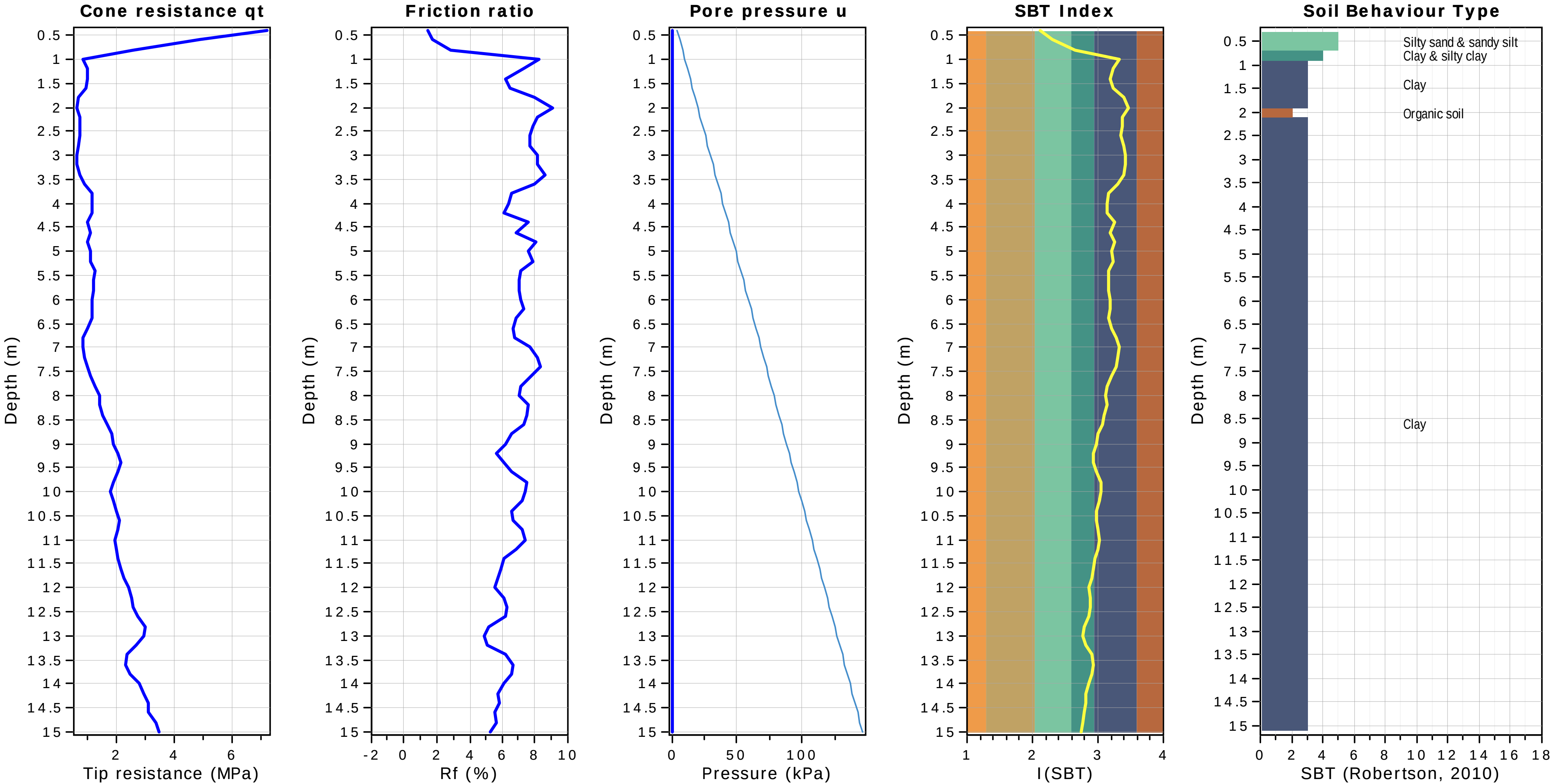
CPT: 036021P36CPT36
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

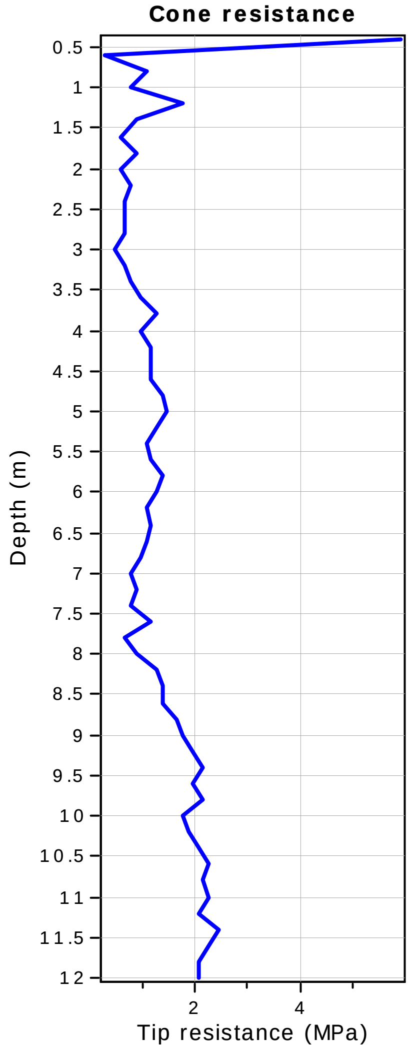


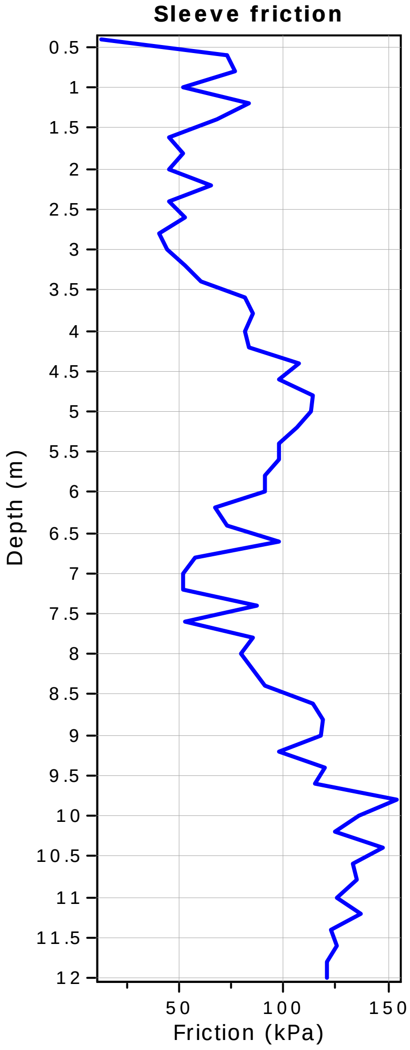
SBT legend

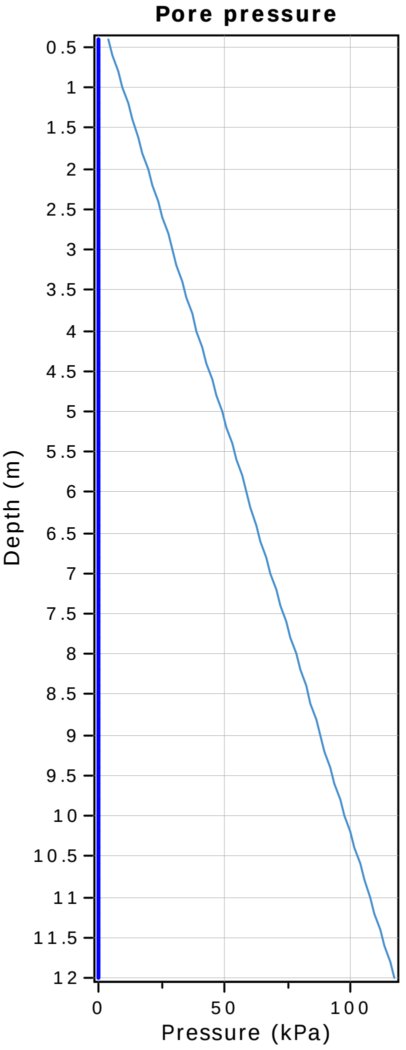
🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟫 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

CPT: 036021P37CPT37
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

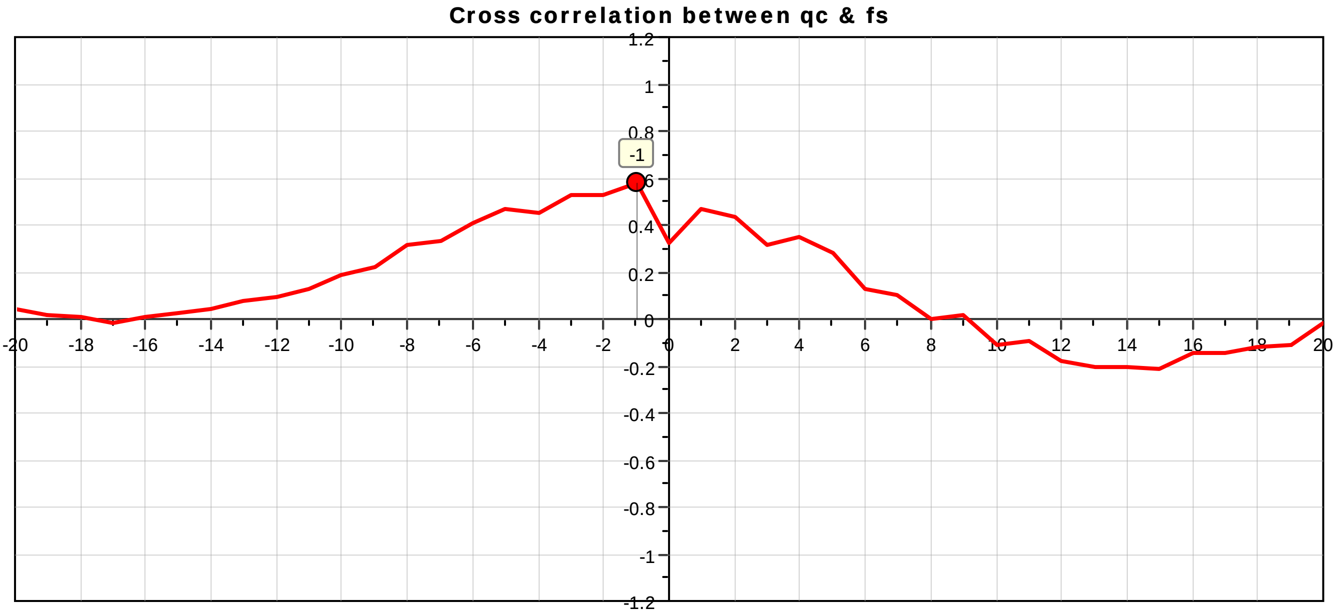
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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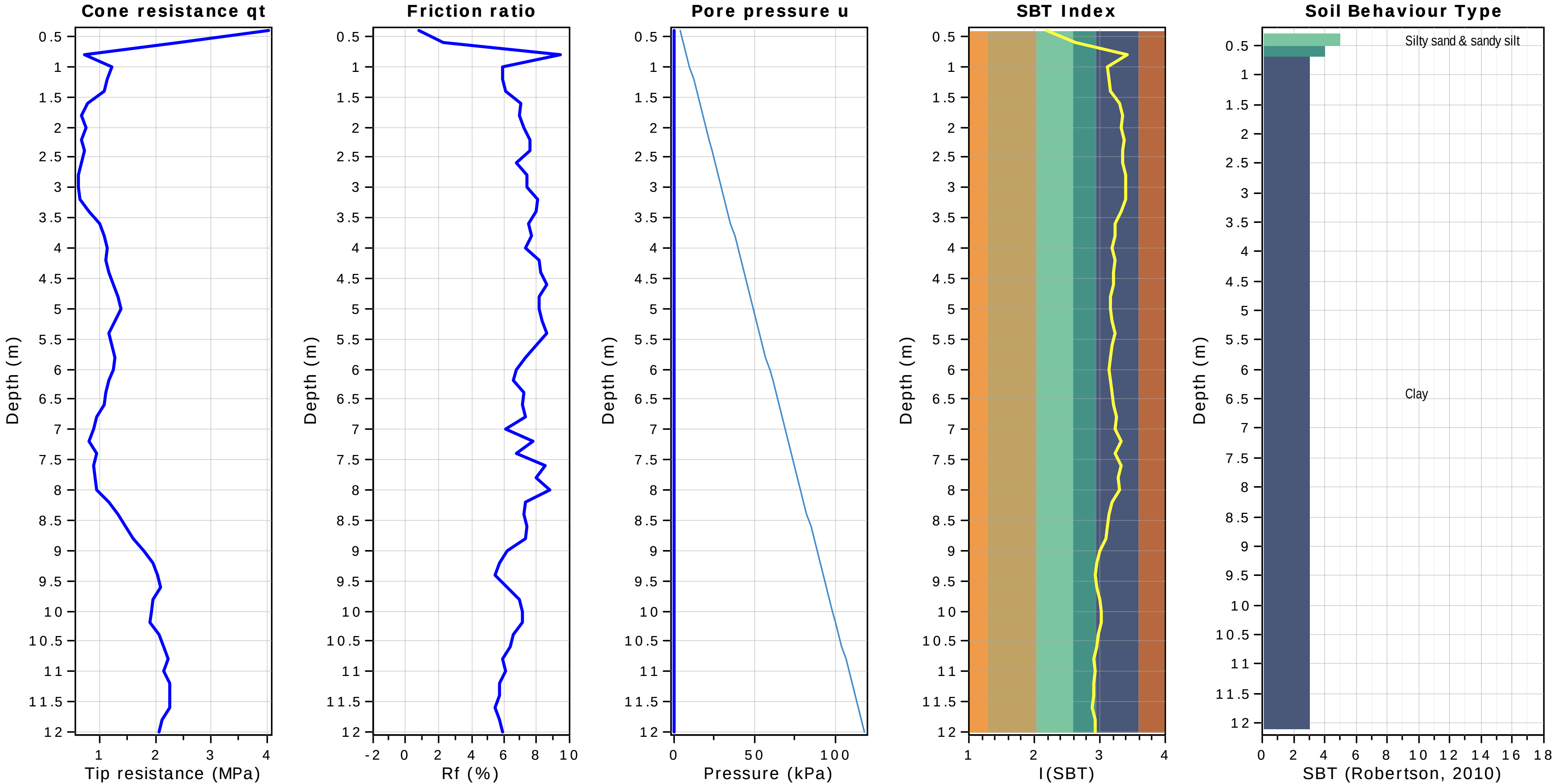
CPT: 036021P37CPT37
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

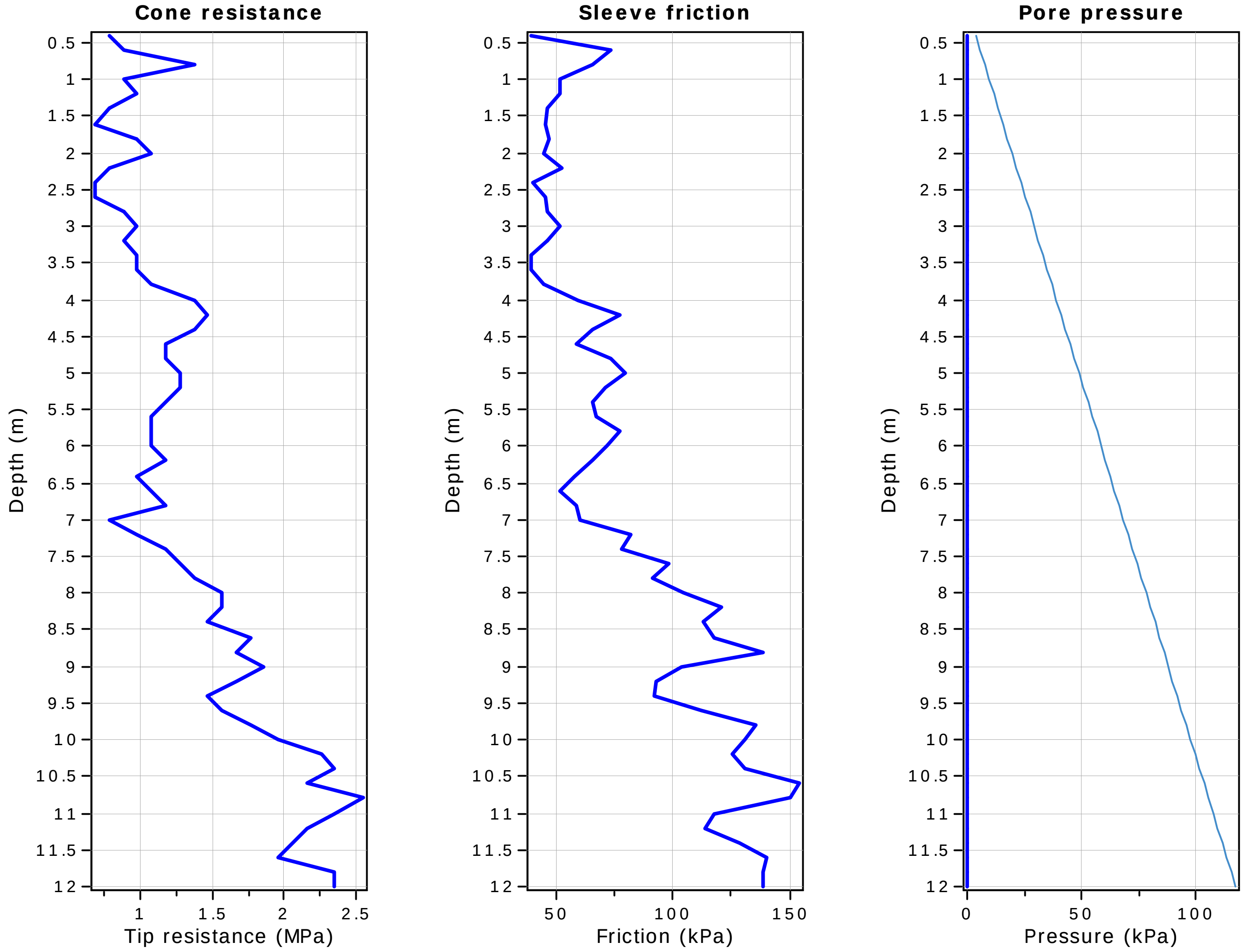


SBT legend

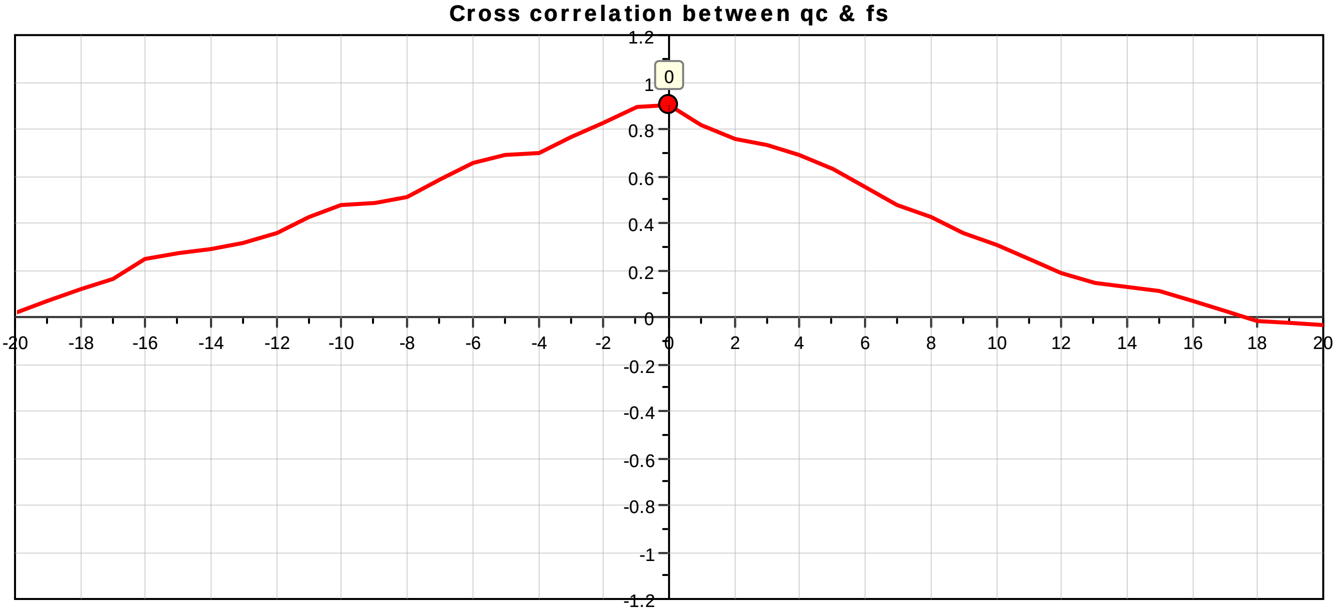
🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟨 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

CPT: 036021P38CPT38
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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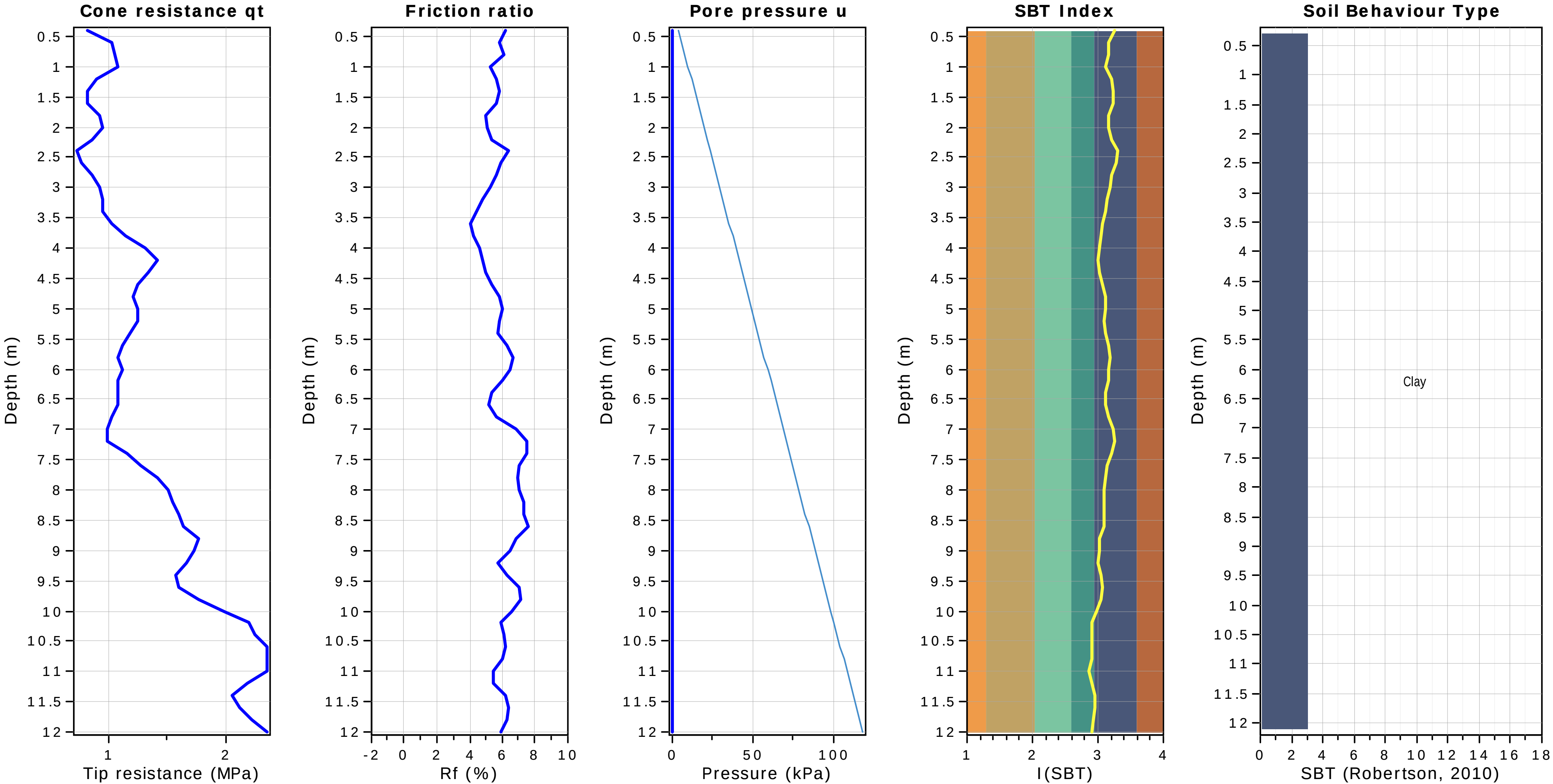
CPT: 036021P38CPT38
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬛ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

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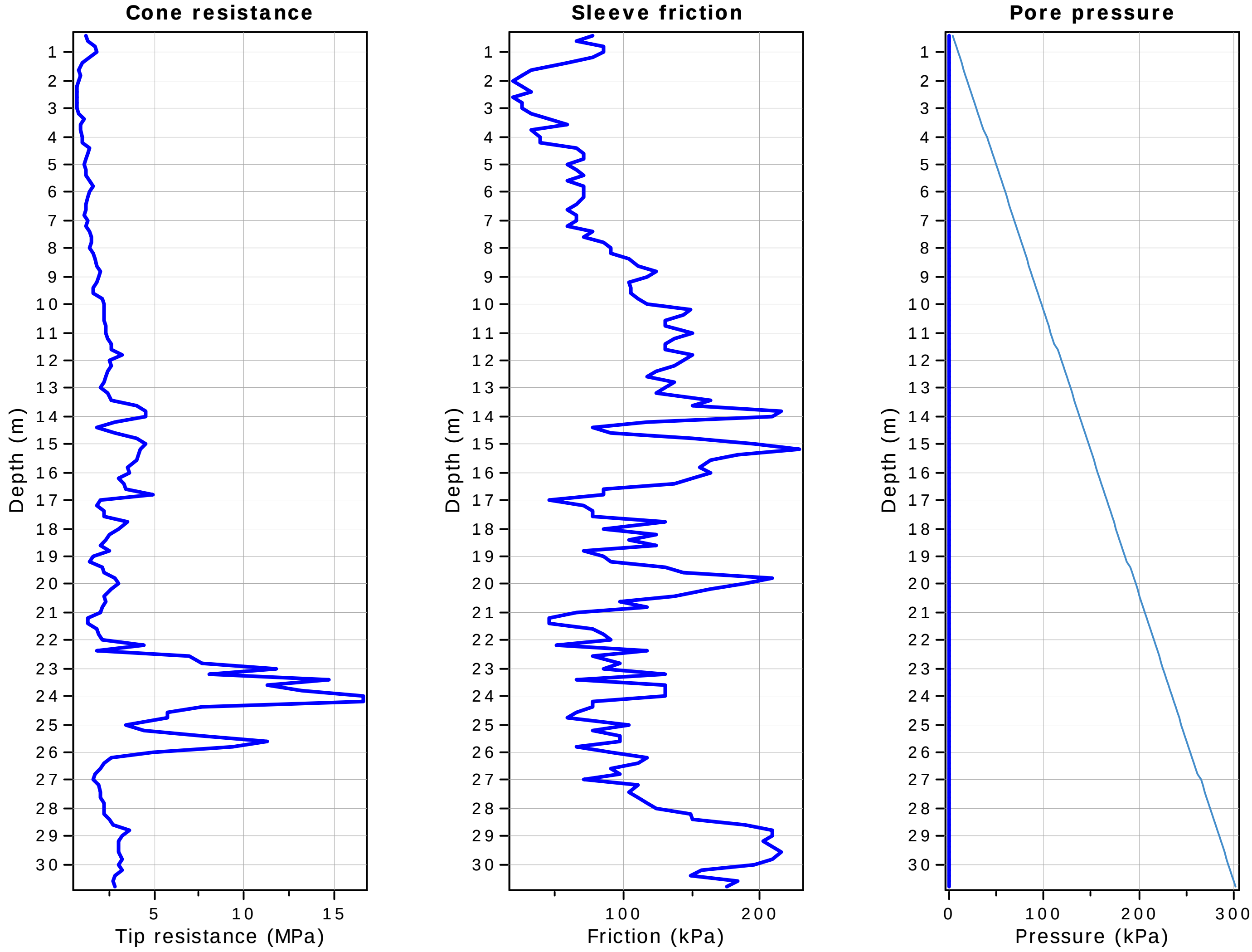
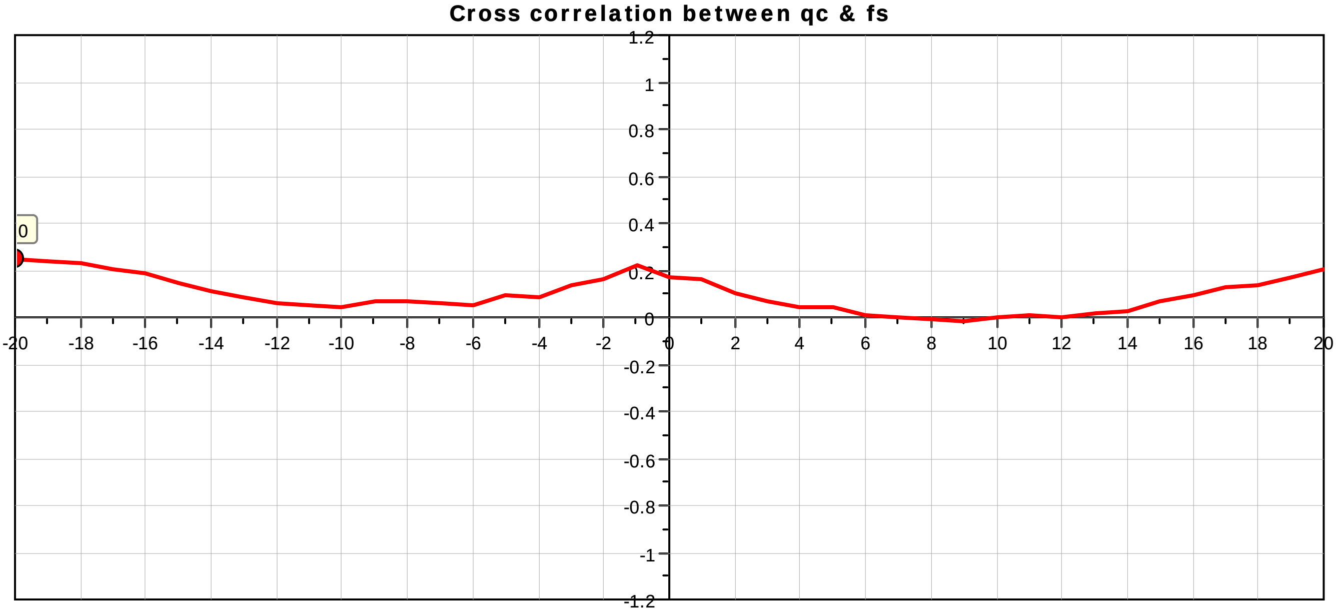
CPT: 036021P39CPT39
Total depth: 30.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:


Cone resistance
Sleeve friction
Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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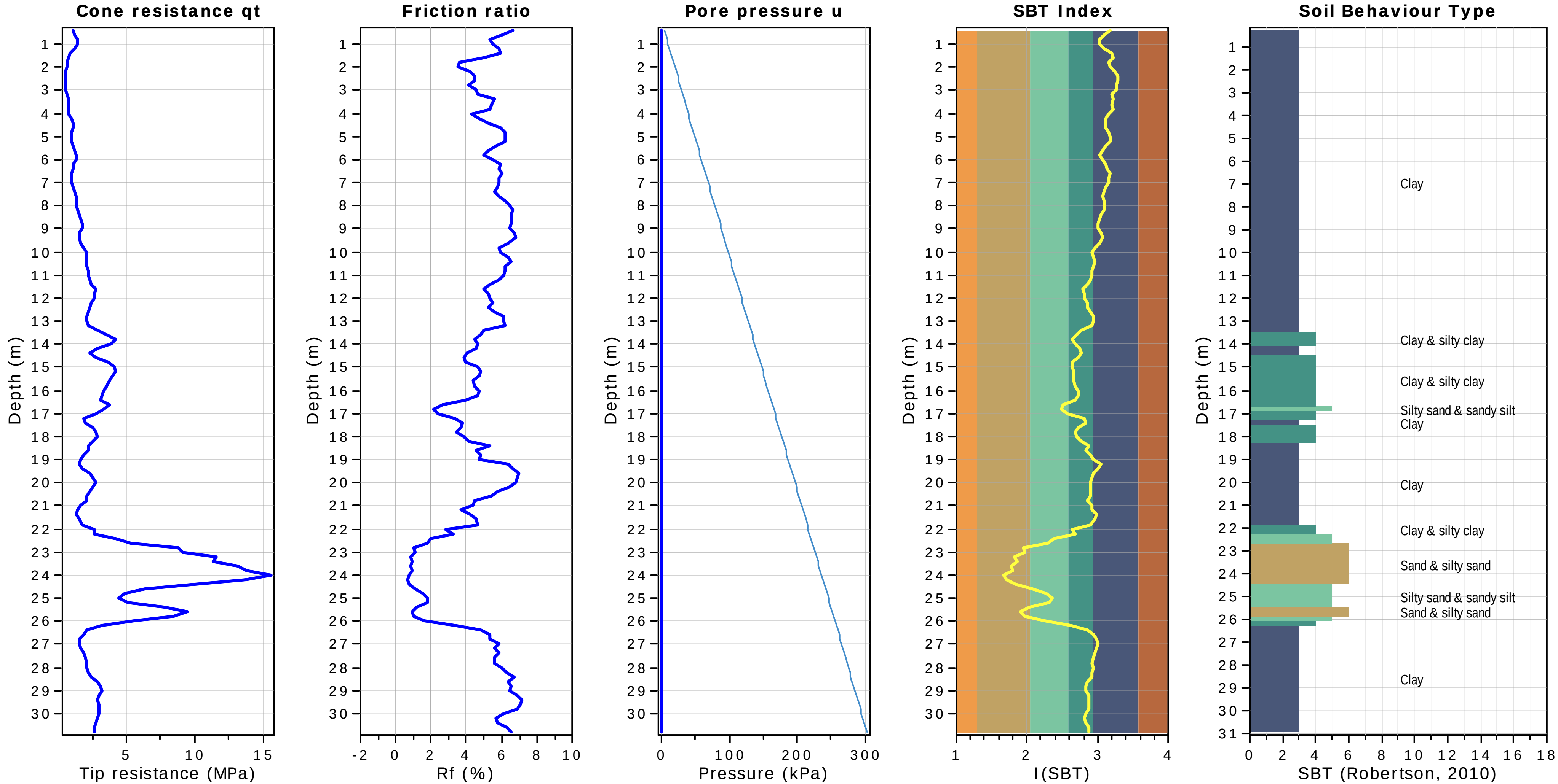
CPT: 036021P39CPT39
Total depth: 30.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

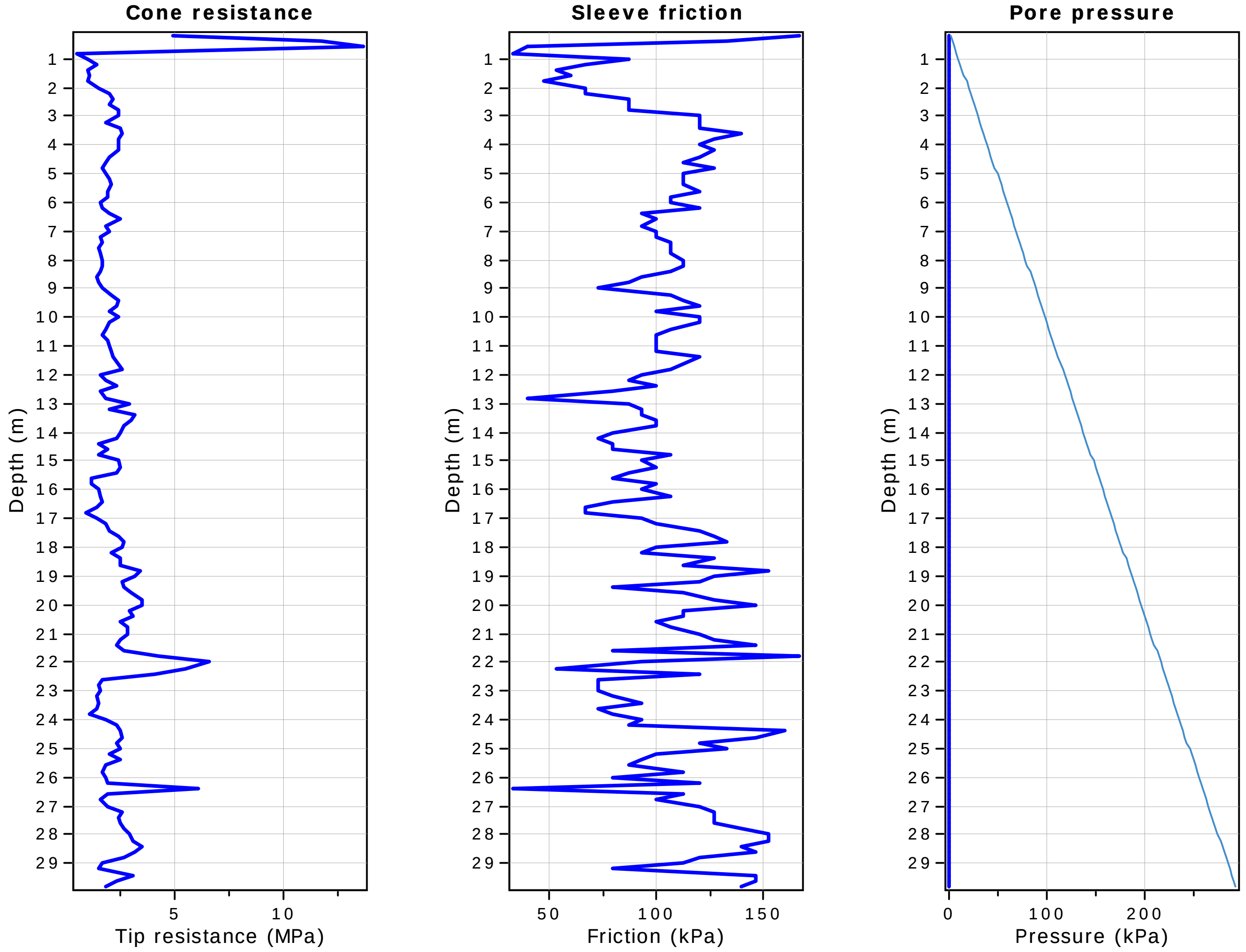


SBT legend

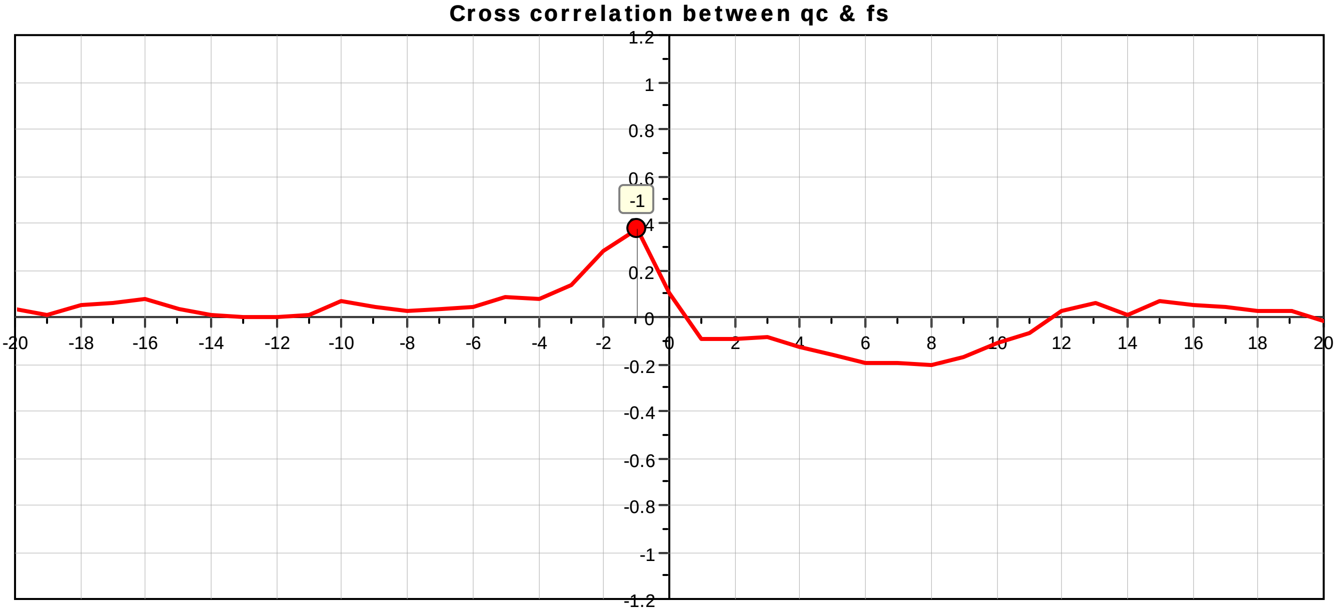
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P3CPT3
Total depth: 29.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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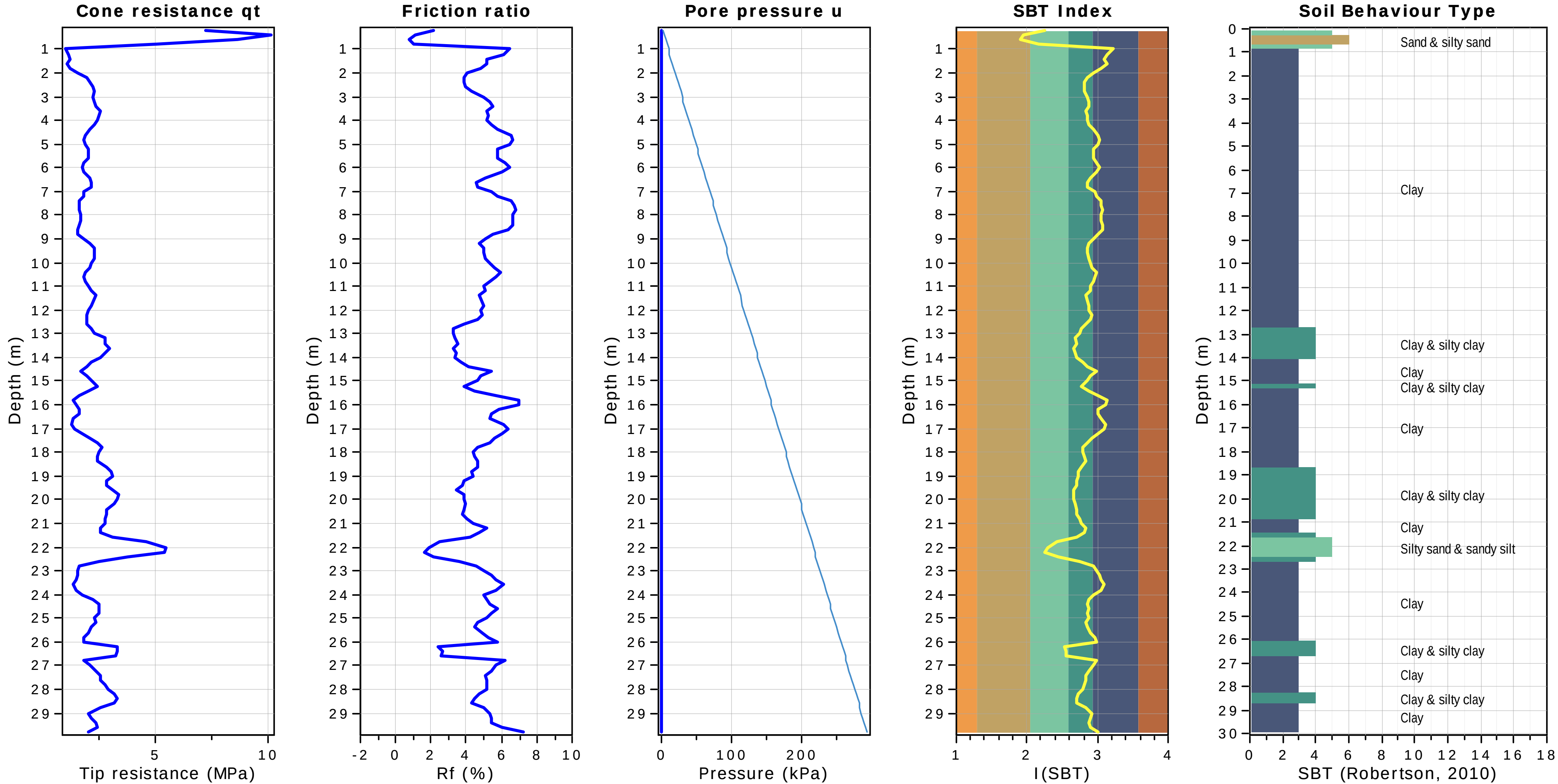
CPT: 036021P3CPT3
Total depth: 29.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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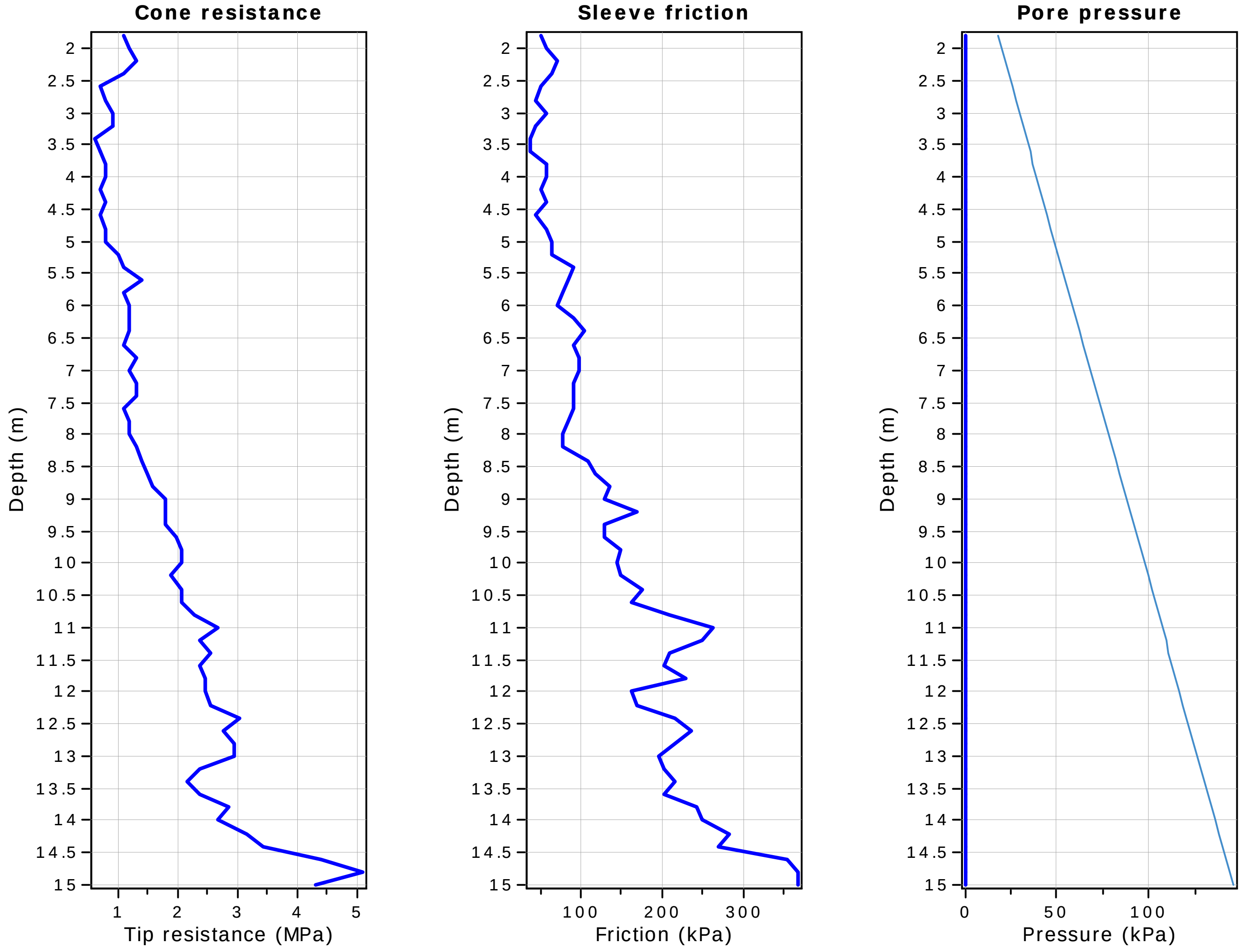
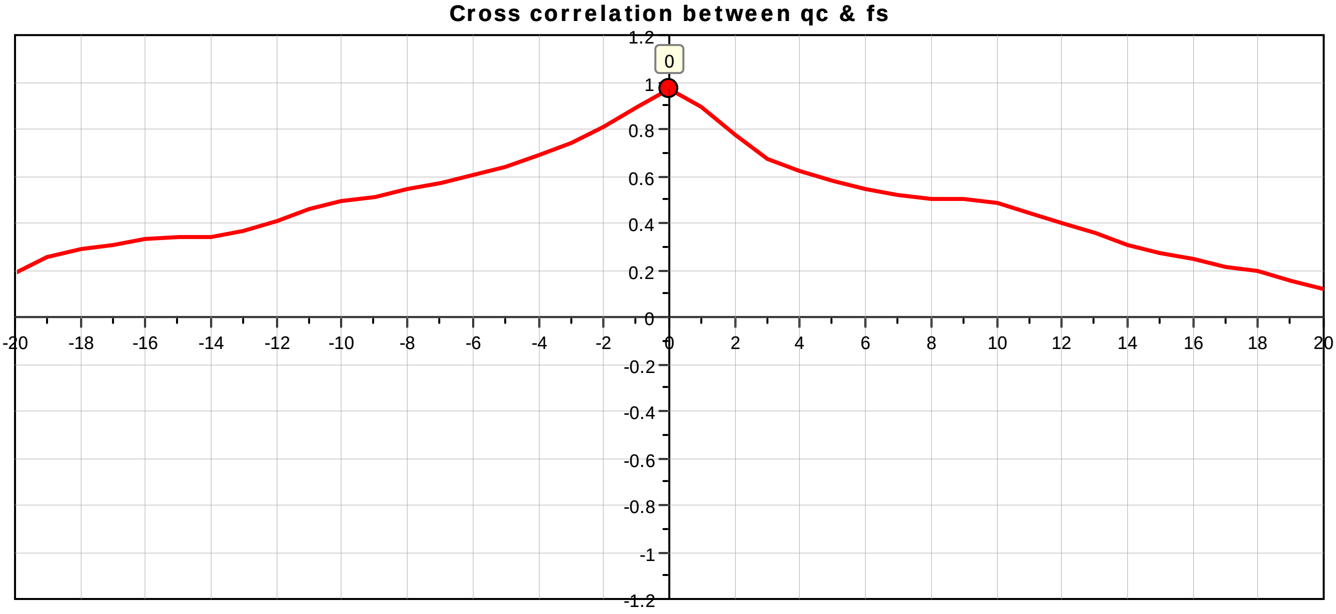
CPT: 036021P40CPT40
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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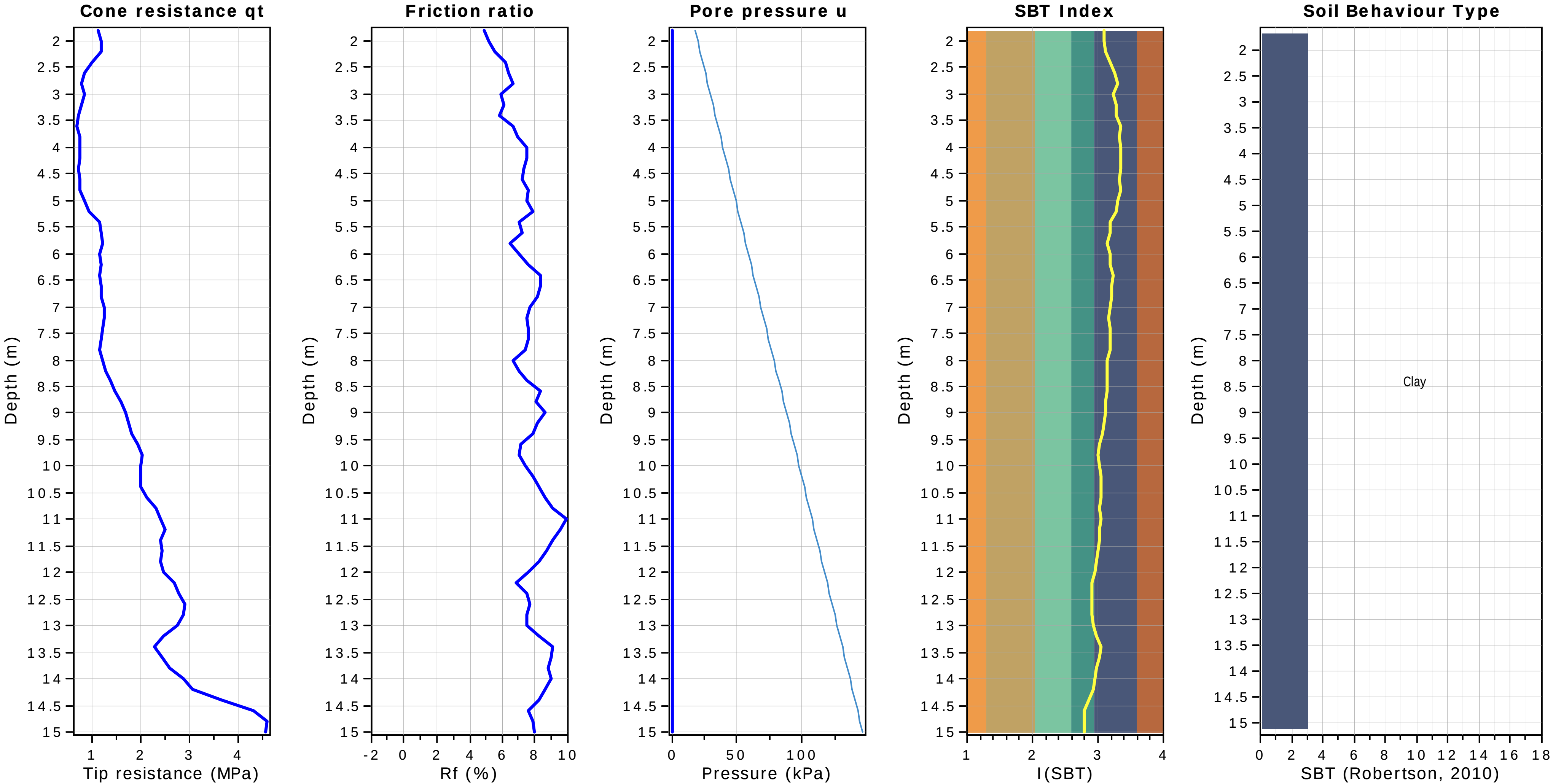
CPT: 036021P40CPT40
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

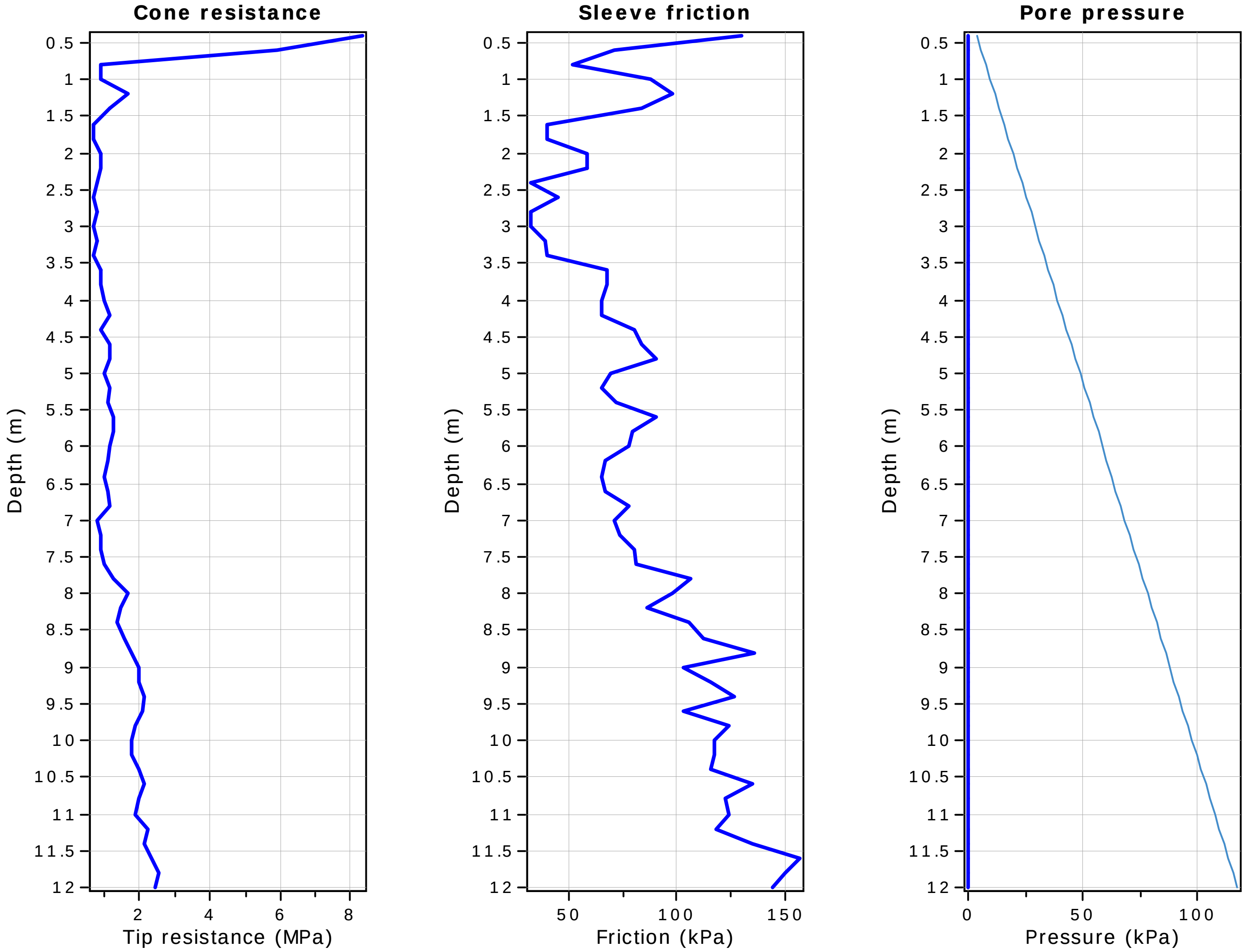


SBT legend

🟥 1. Sensitive fine grained
▨ 2. Organic material
▨ 3. Clay to silty clay
▨ 4. Clayey silt to silty clay
▨ 5. Silty sand to sandy silt
▨ 6. Clean sand to silty sand
▨ 7. Gravely sand to sand
▨ 8. Very stiff sand to clayey sand
☐ 9. Very stiff fine grained

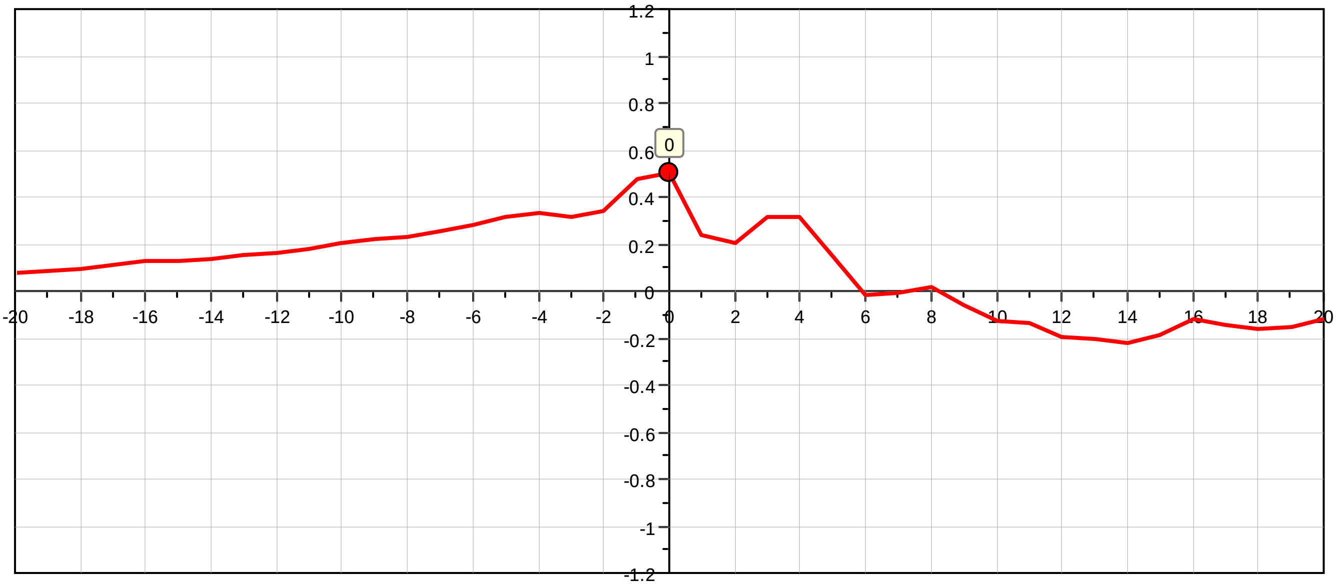
CPT: 036021P41CPT41
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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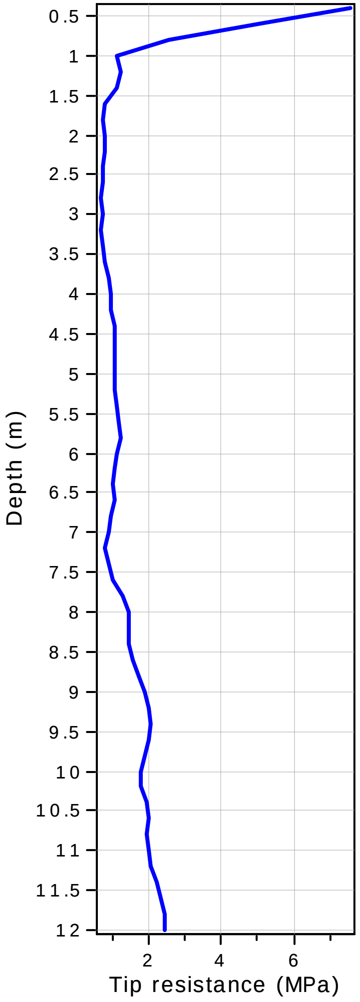
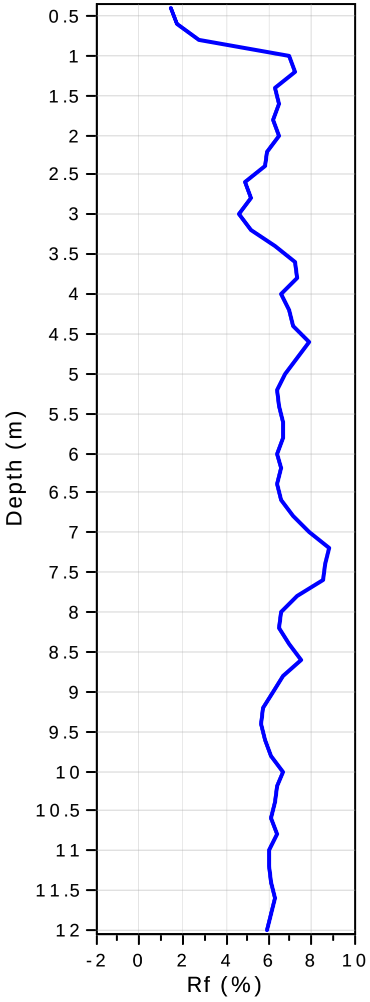
CPT: 036021P41CPT41
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

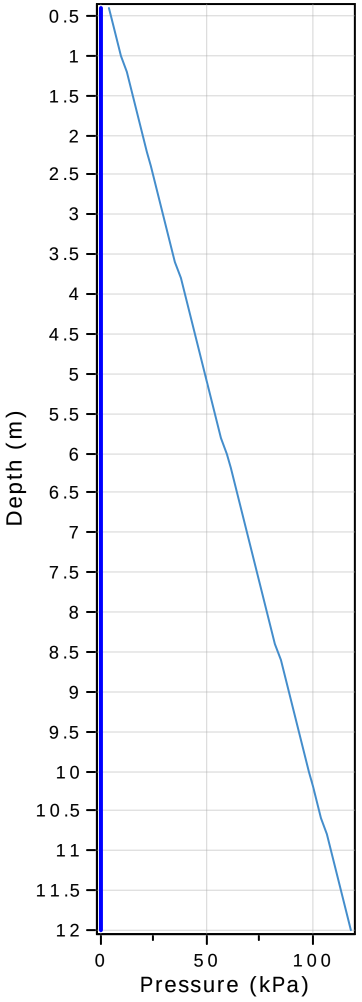
Cone resistance qt



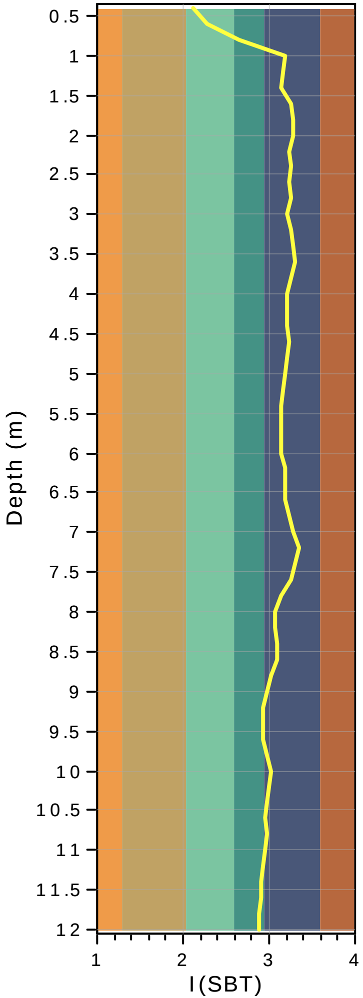
Friction ratio



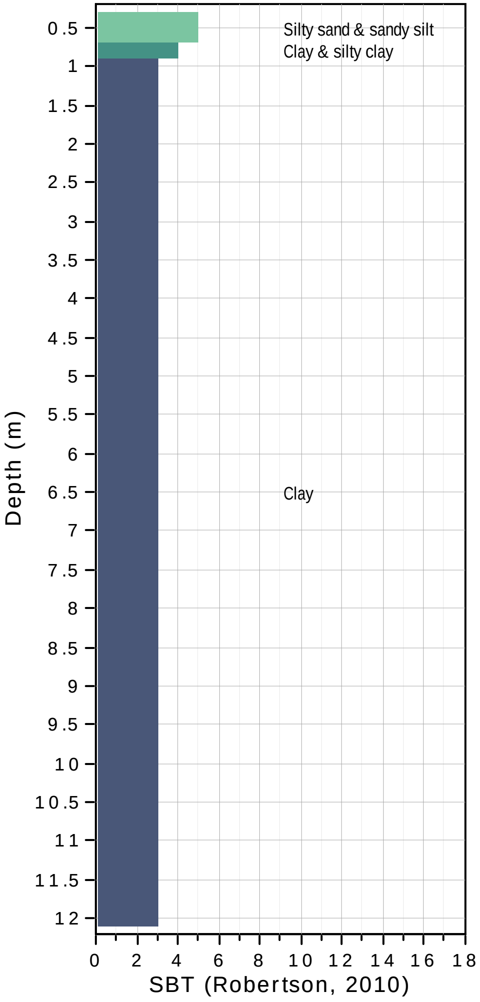
Pore pressure u



SBT Index



Soil Behaviour Type

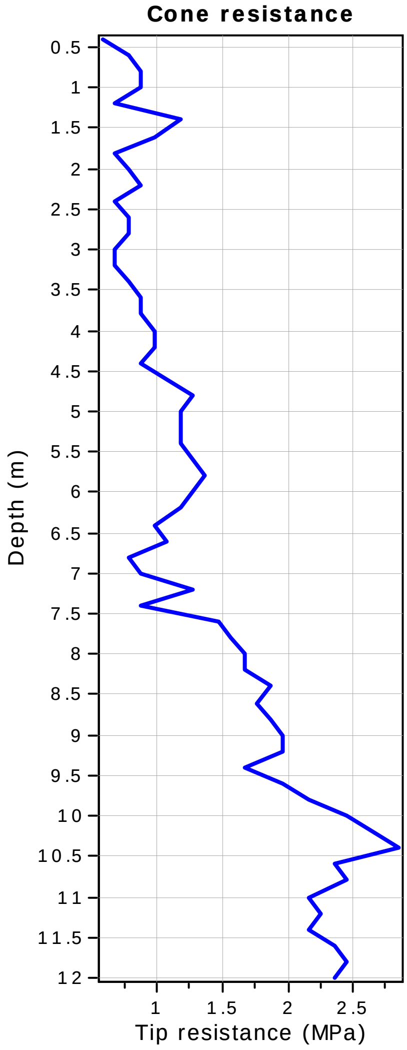


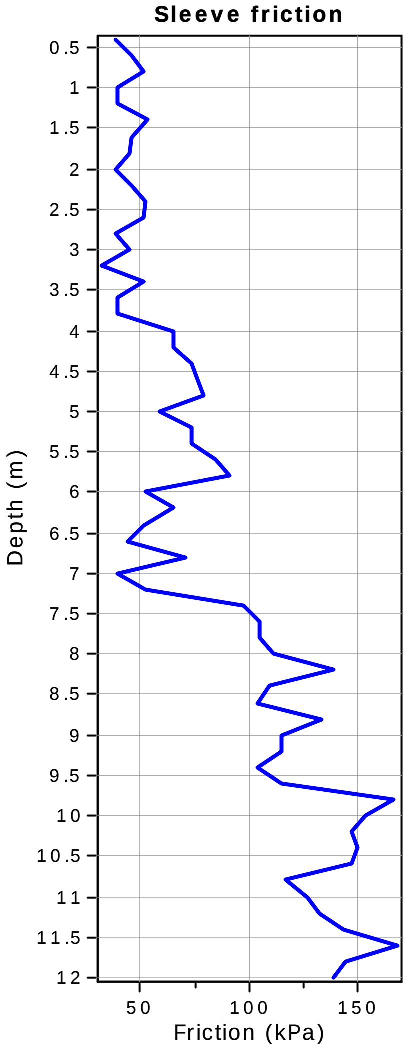
SBT legend

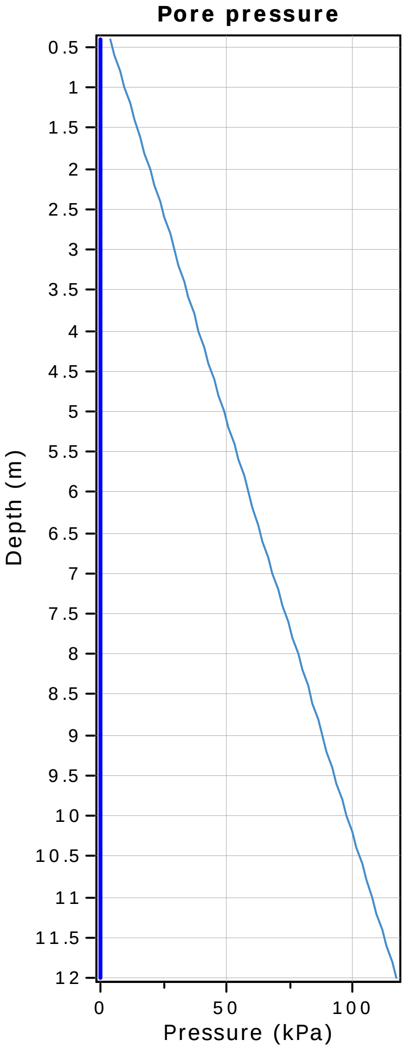
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟫 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

CPT: 036021P42CPT42
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

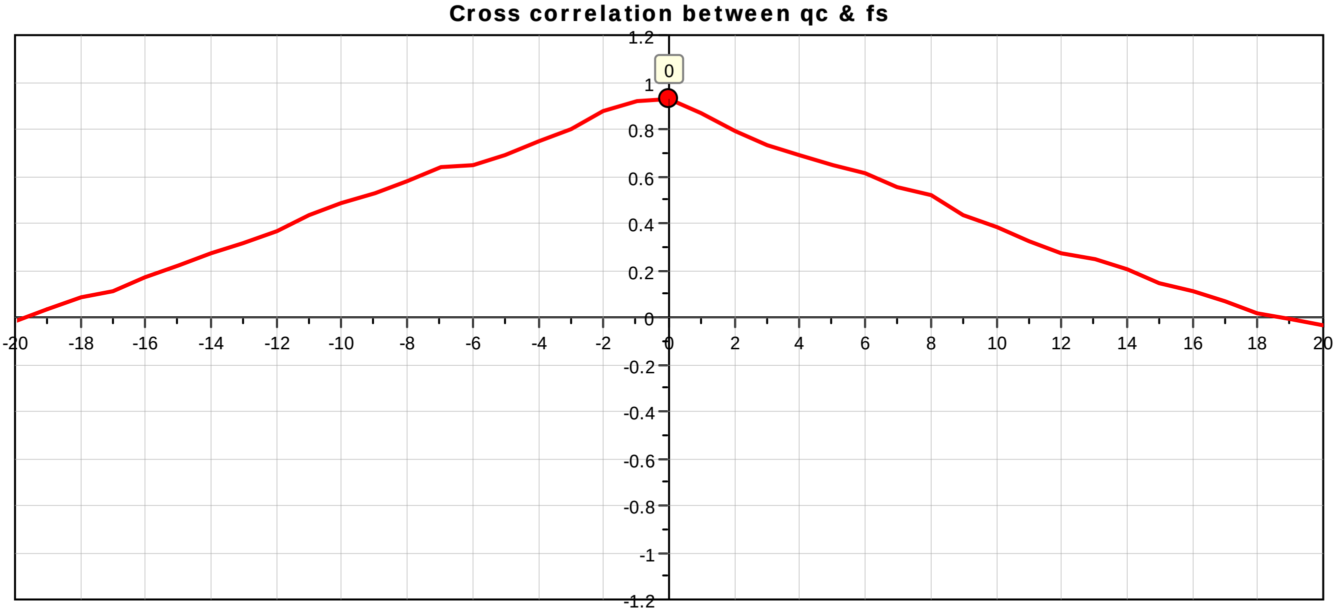
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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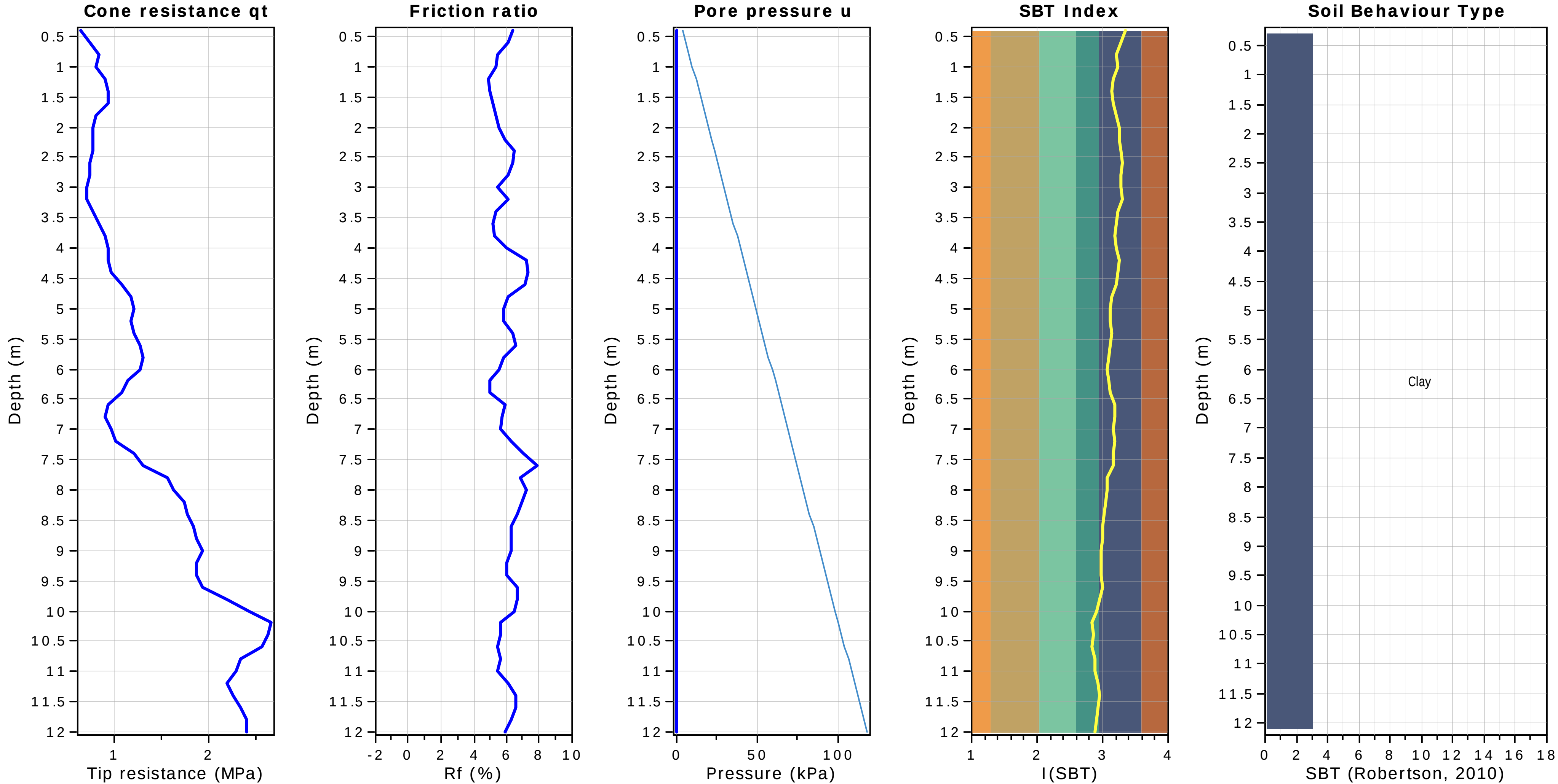
CPT: 036021P42CPT42
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

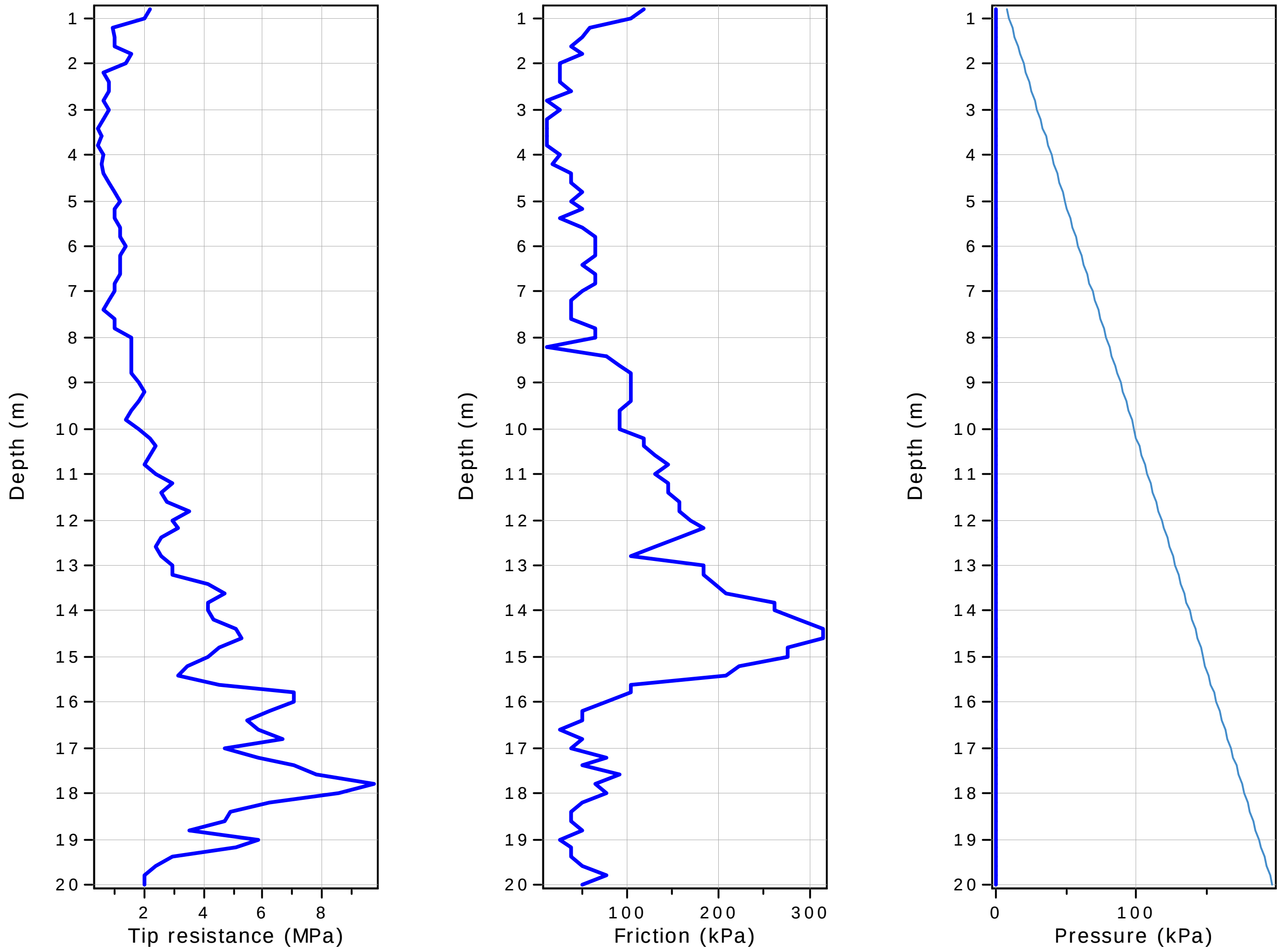


SBT legend

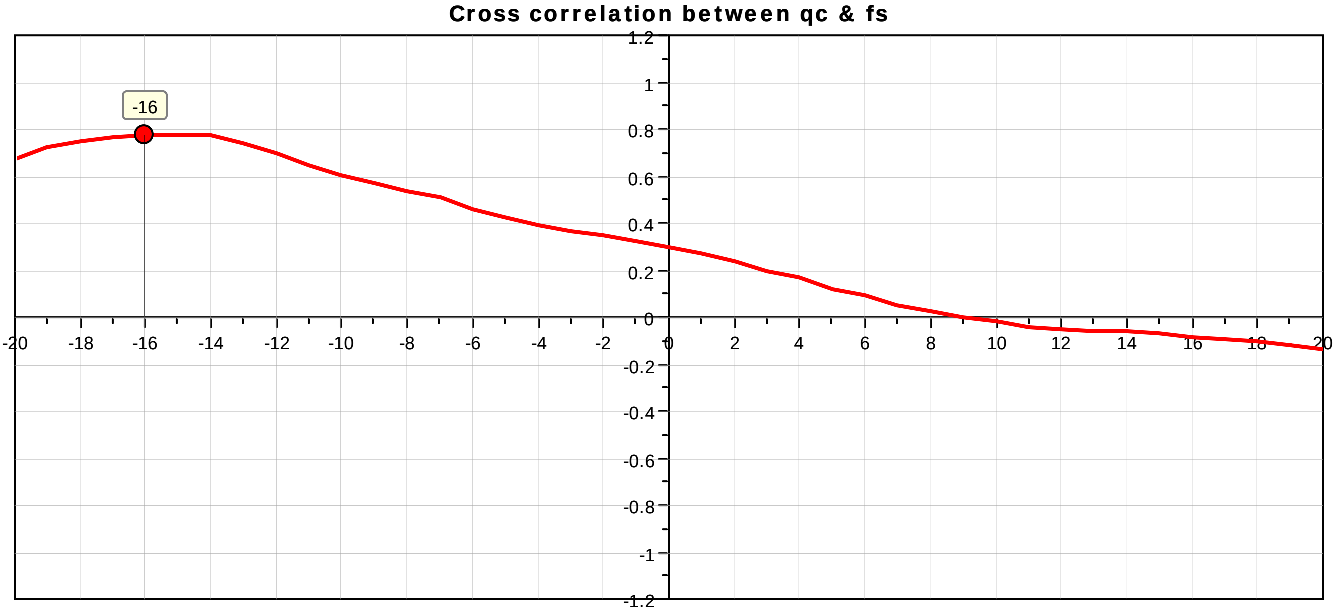
🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟫 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

CPT: 036021P43CPT43
Total depth: 20.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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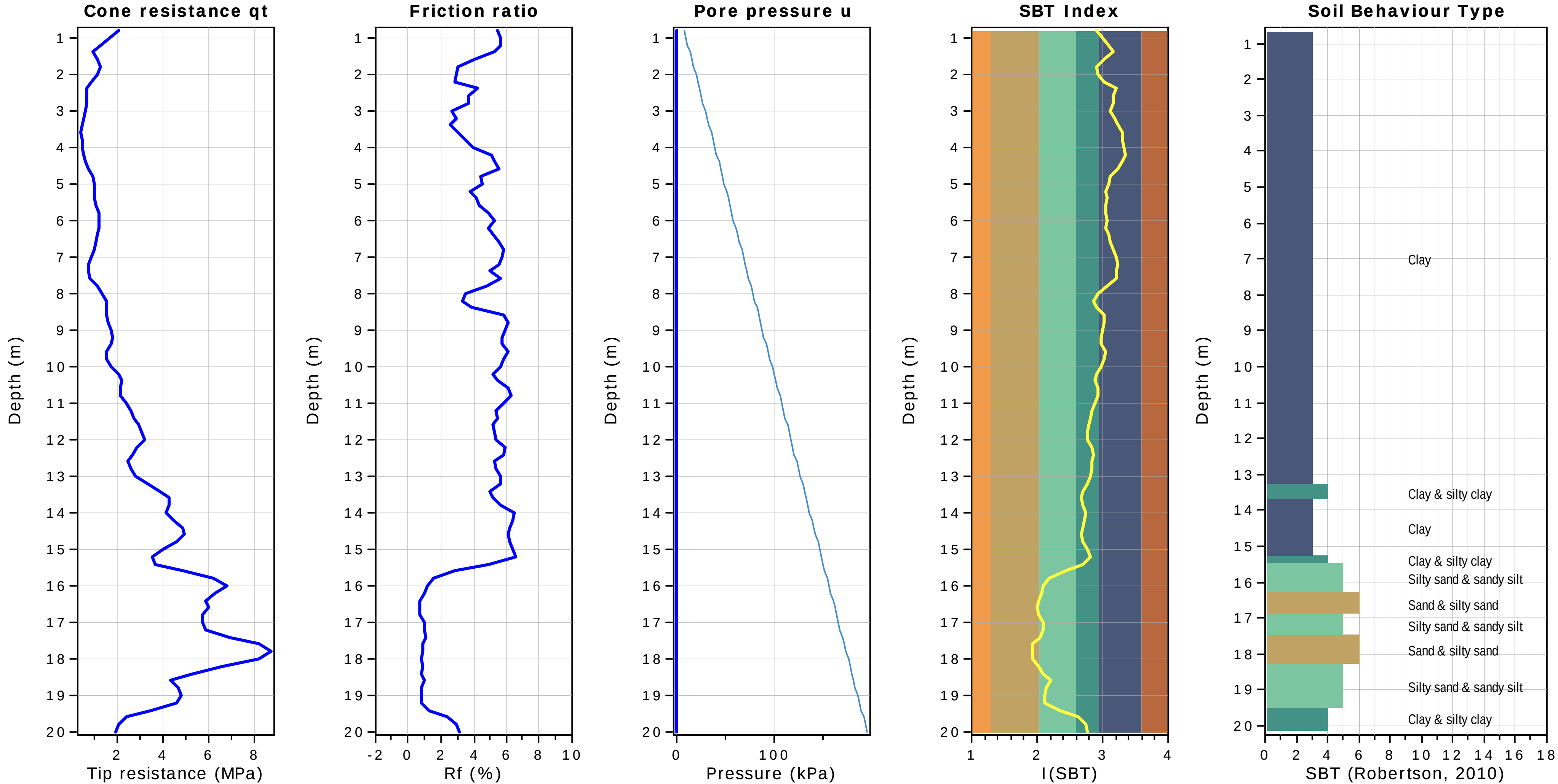
CPT: 036021P43CPT43
Total depth: 20.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

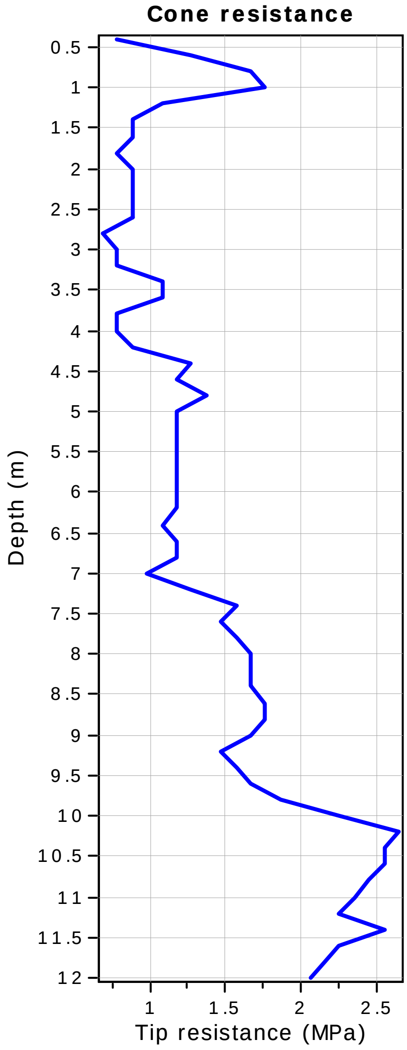


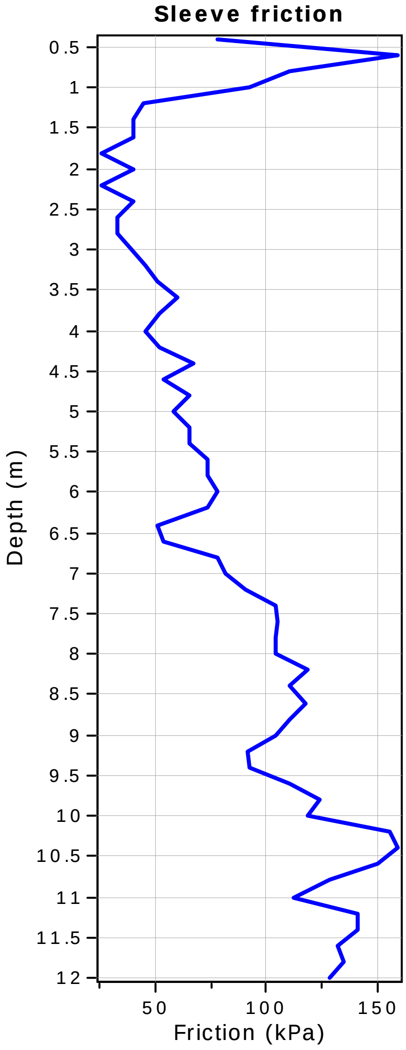
SBT legend

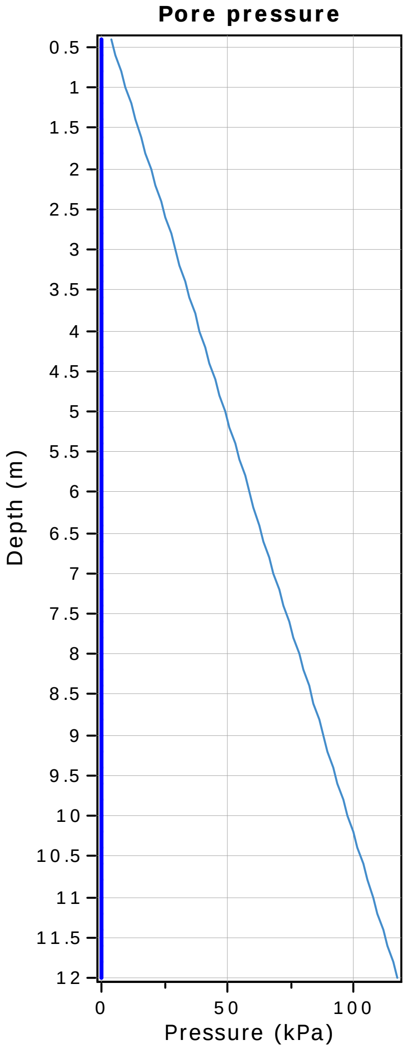
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P44CPT44
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

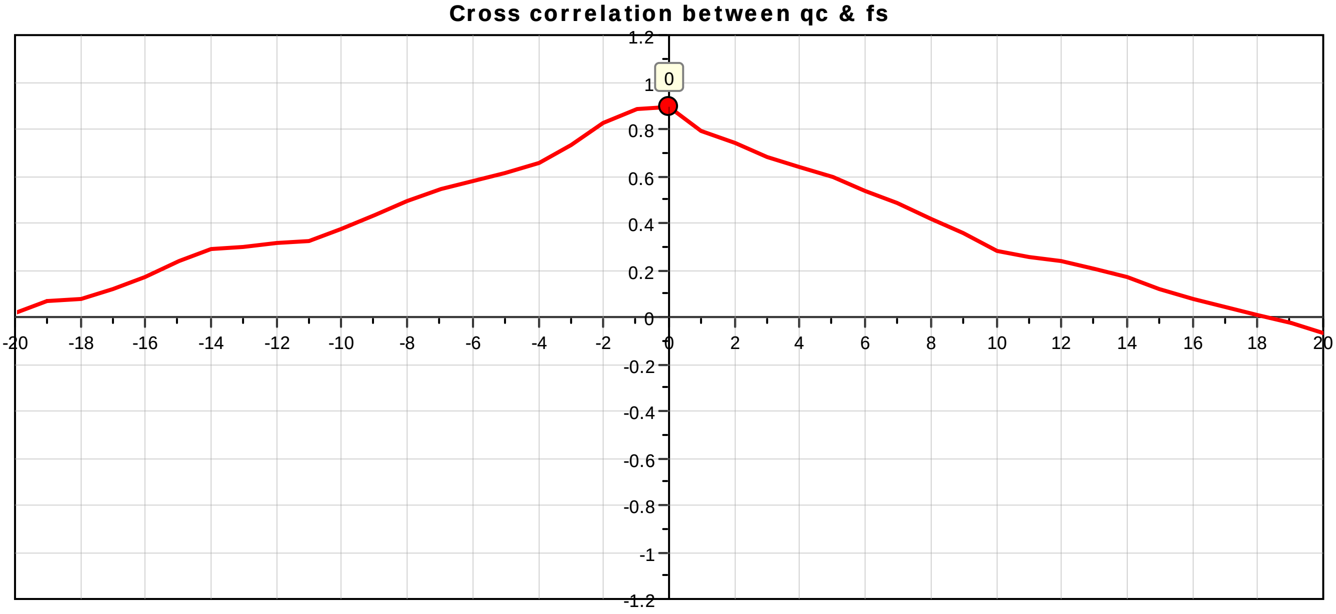
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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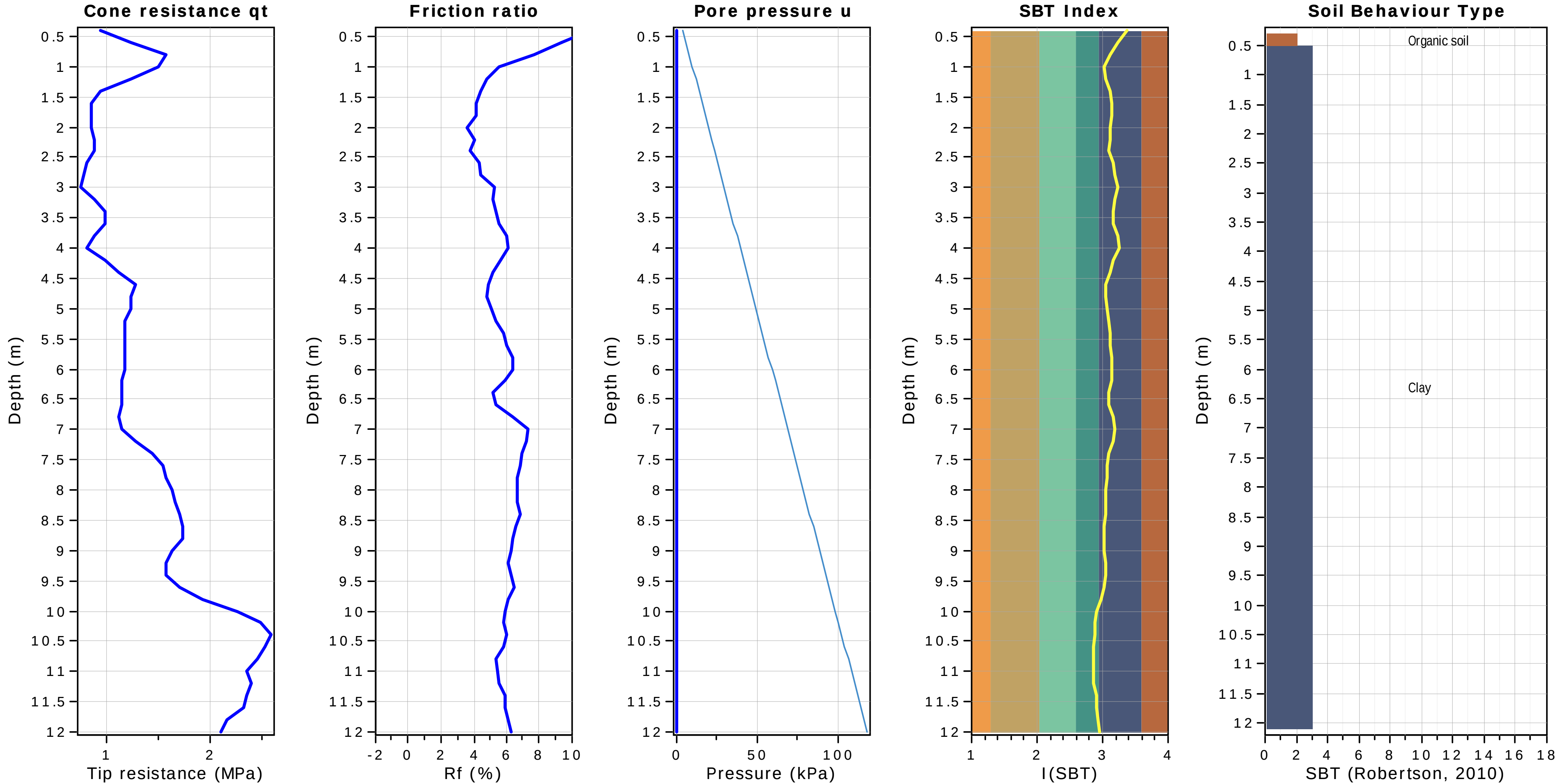
CPT: 036021P44CPT44
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

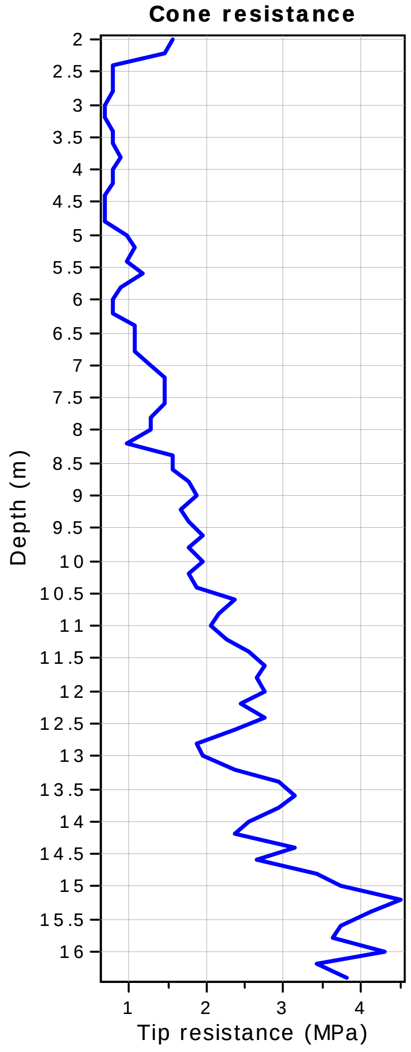


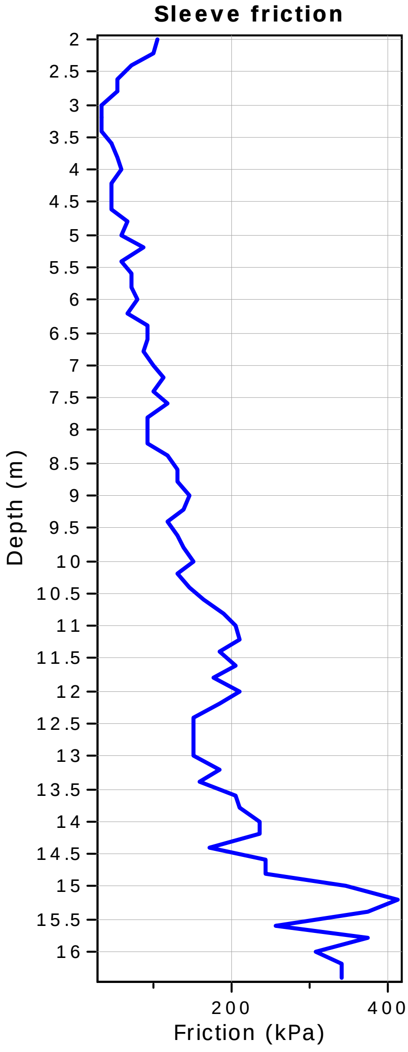
SBT legend

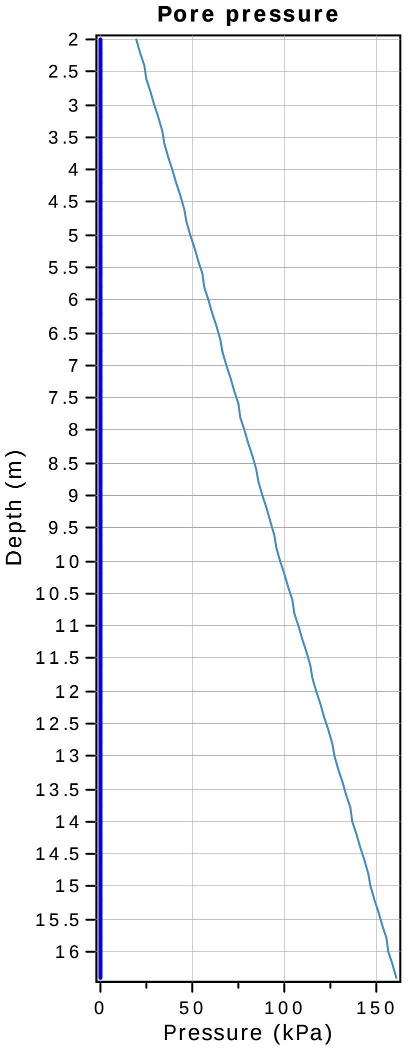
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟫 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

CPT: 036021P45CPT45
Total depth: 16.40 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

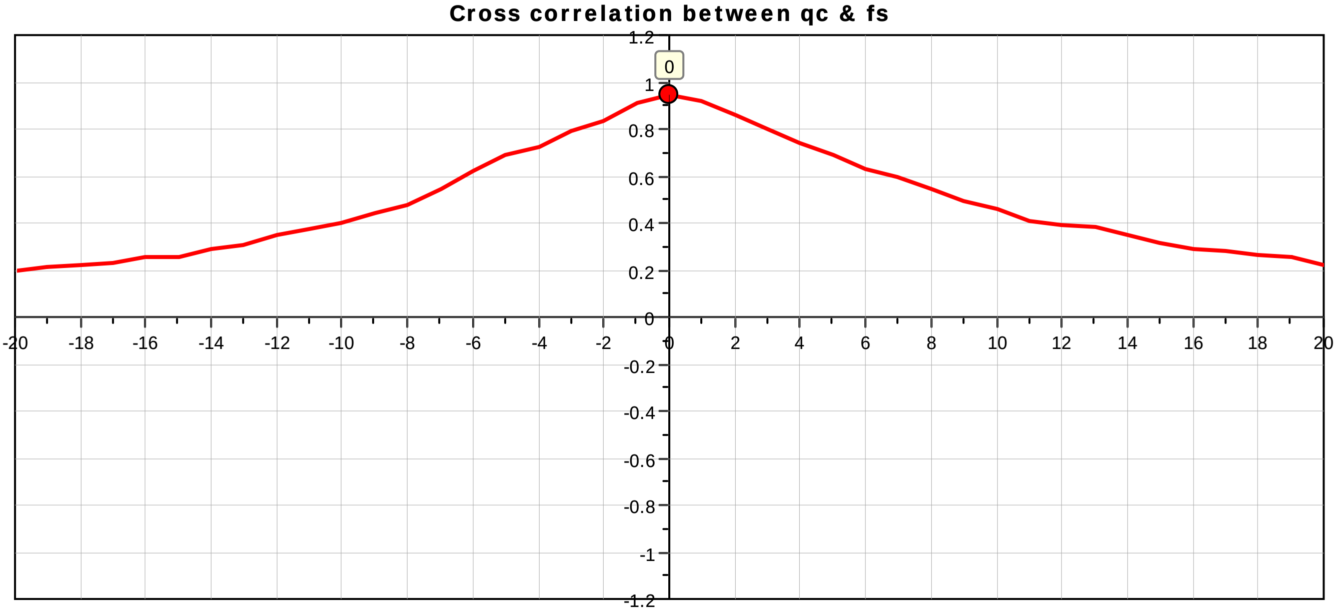
Project:
Location:





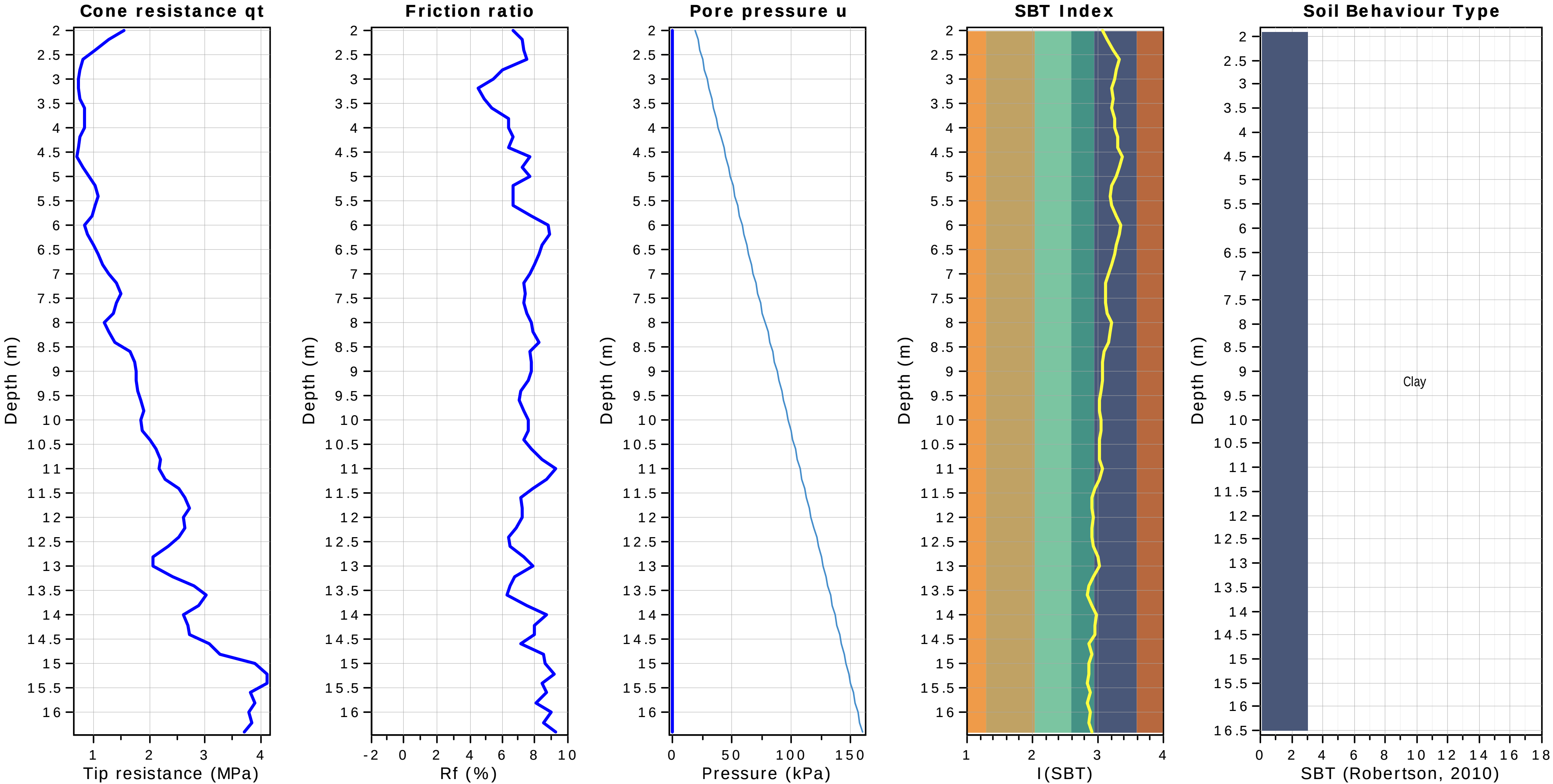


The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT: 036021P45CPT45
Total depth: 16.40 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

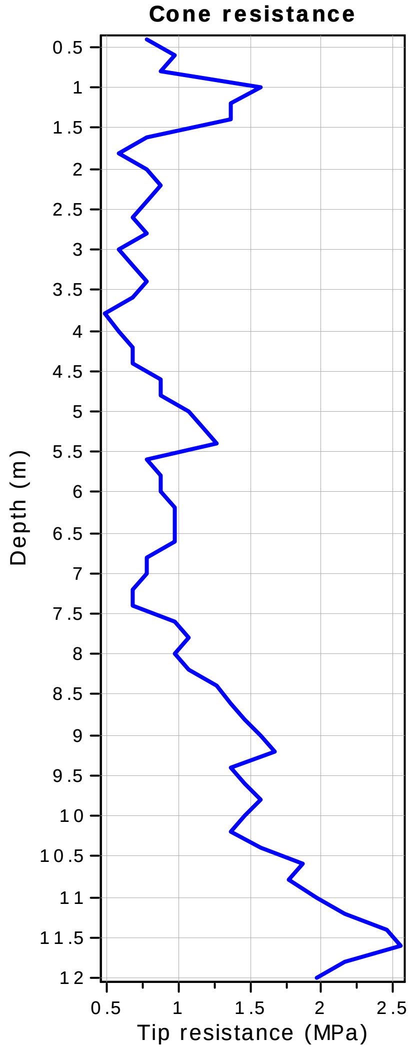


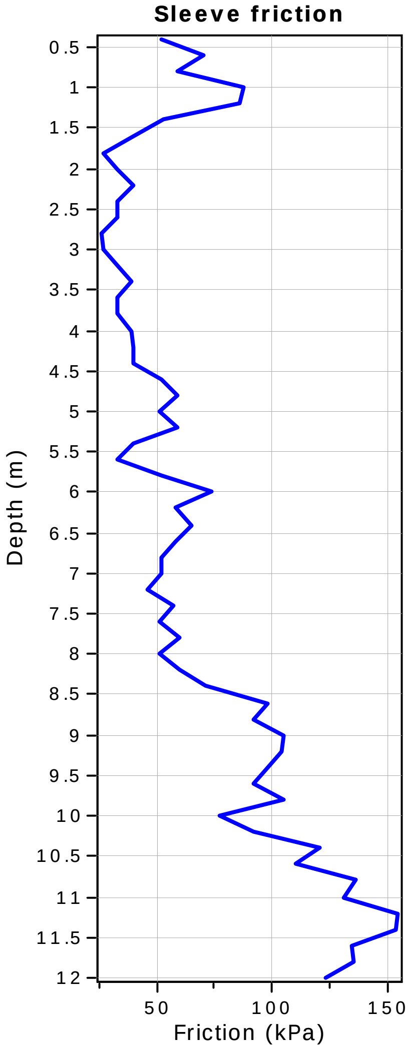
SBT legend

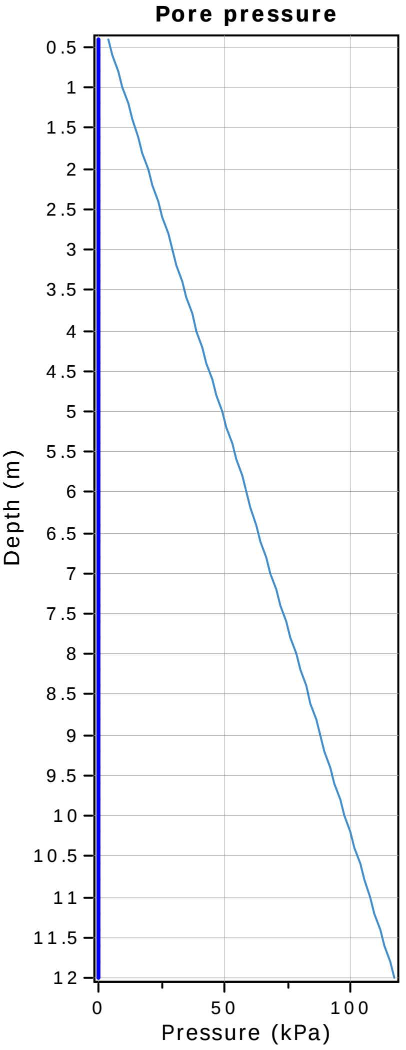
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟫 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬛ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

CPT: 036021P46CPT46
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

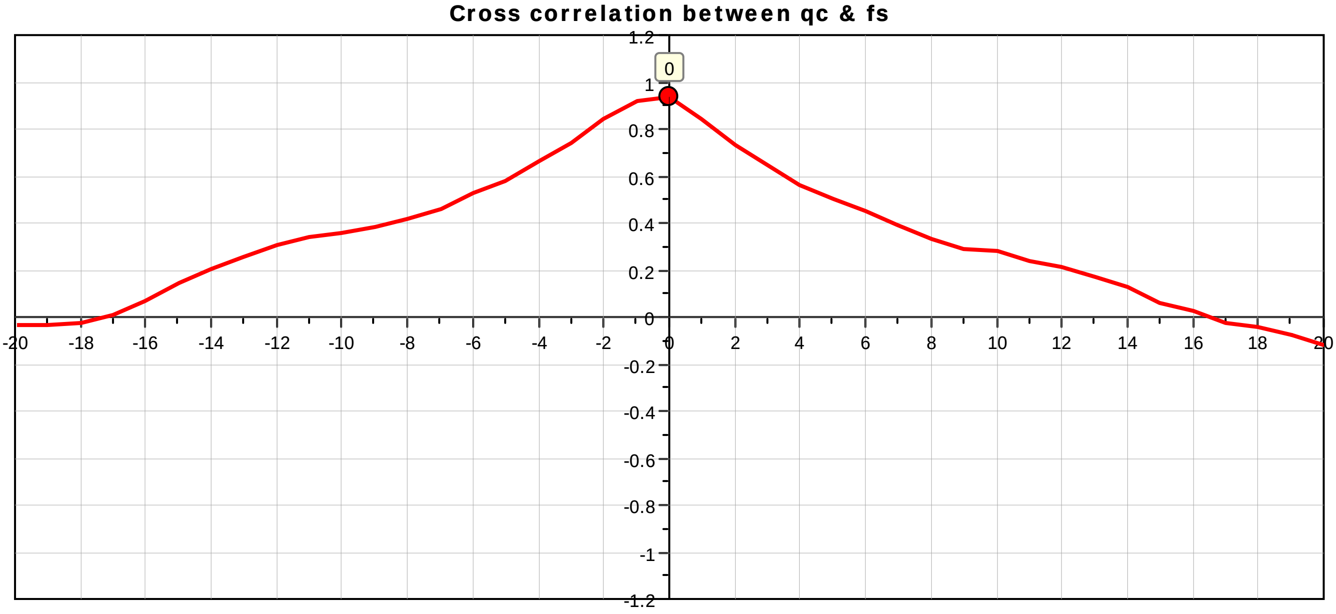
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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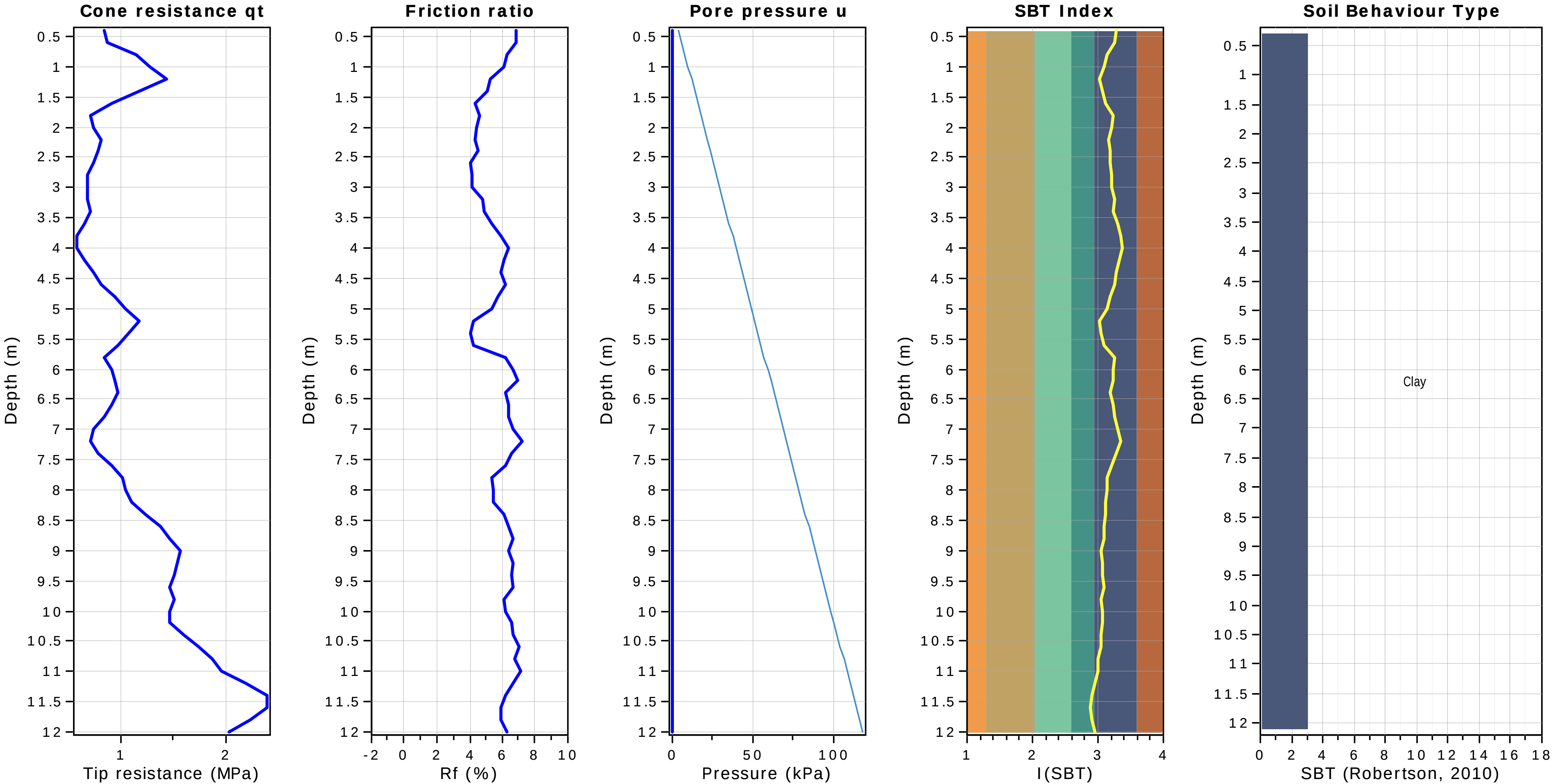
CPT: 036021P46CPT46
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

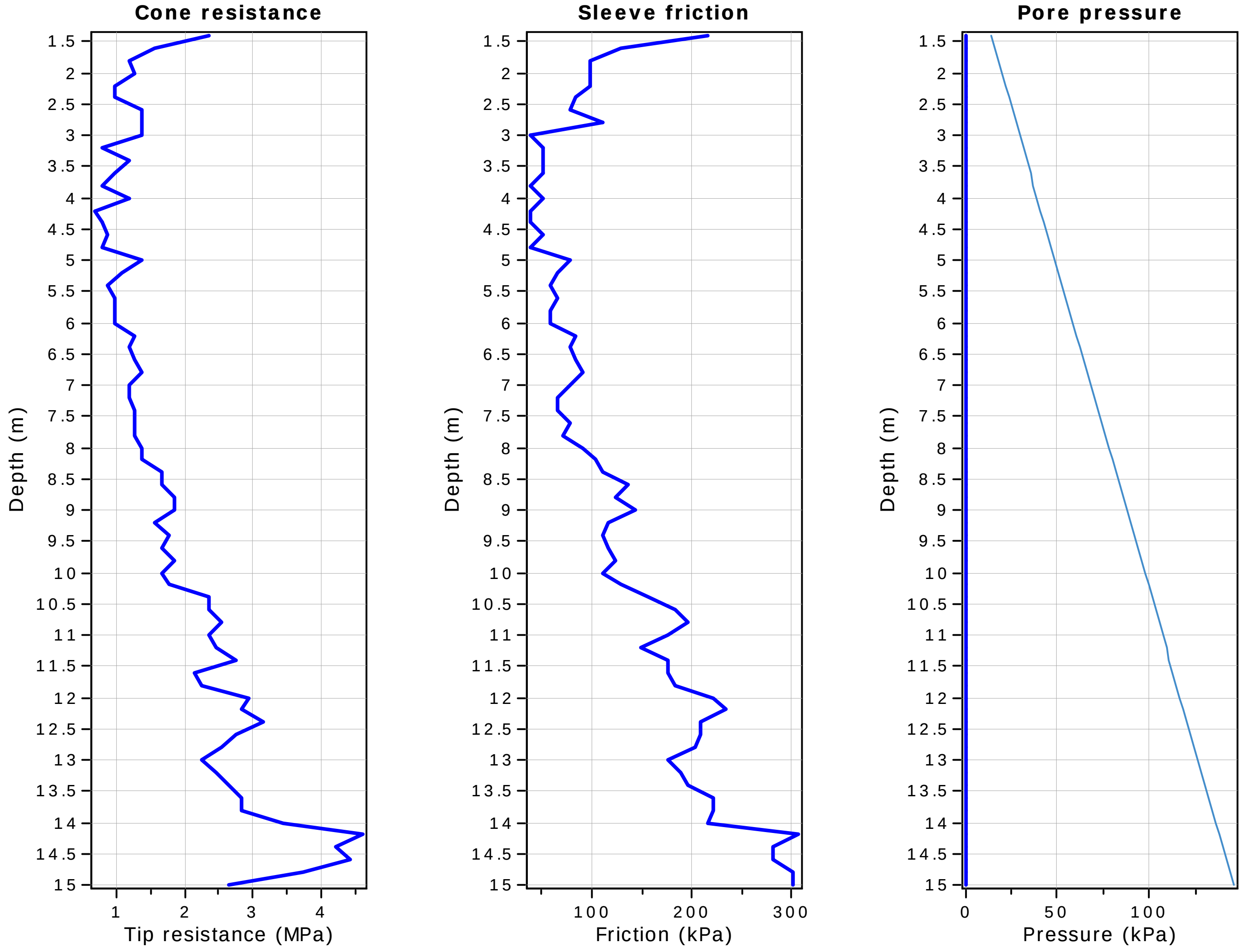


SBT legend

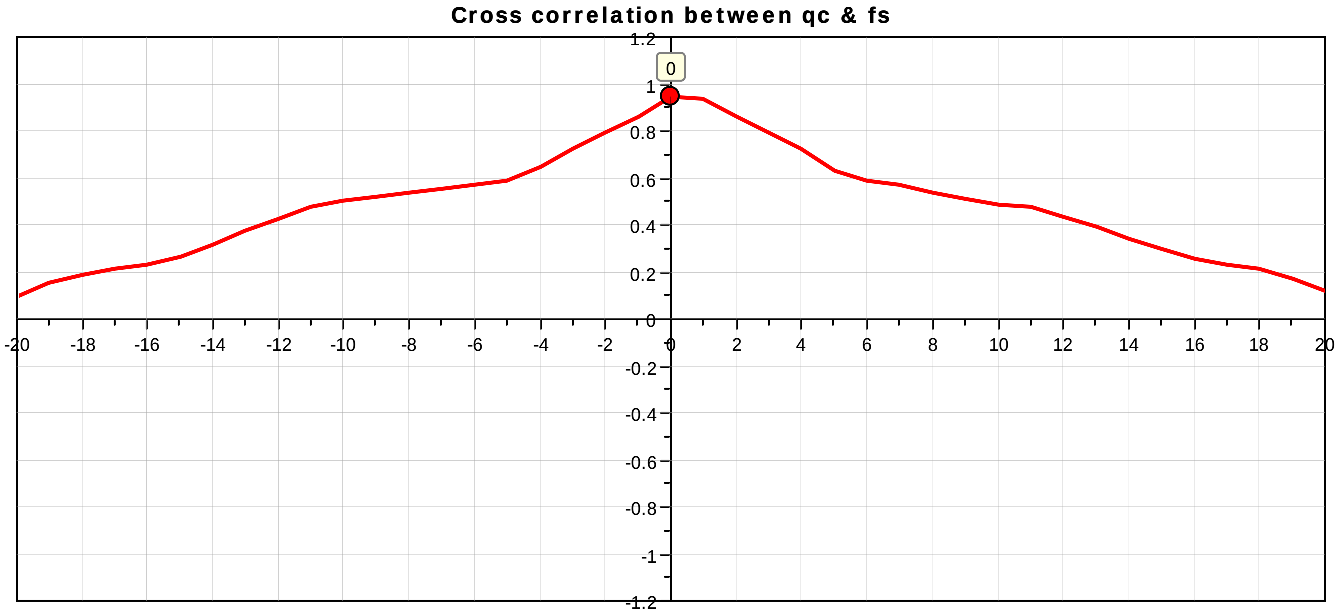
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P47CPT47
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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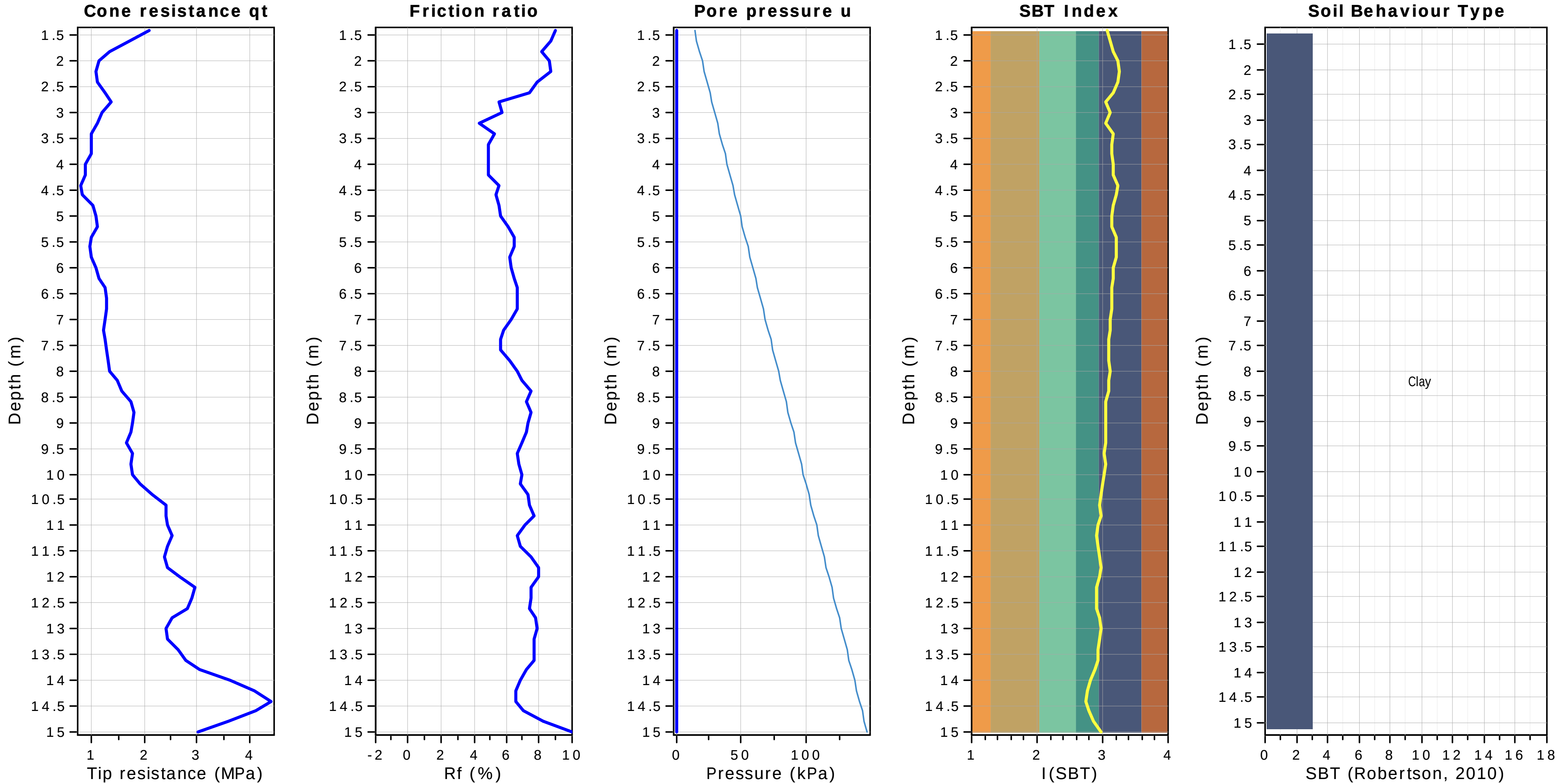
CPT: 036021P47CPT47
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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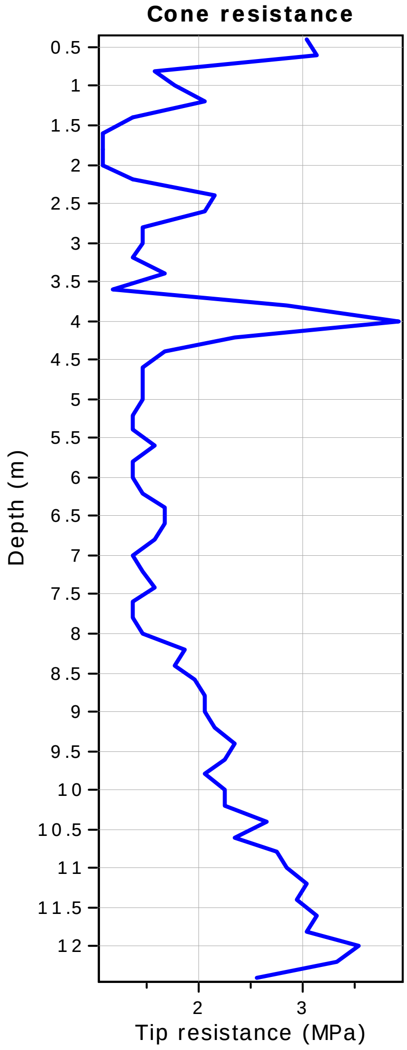
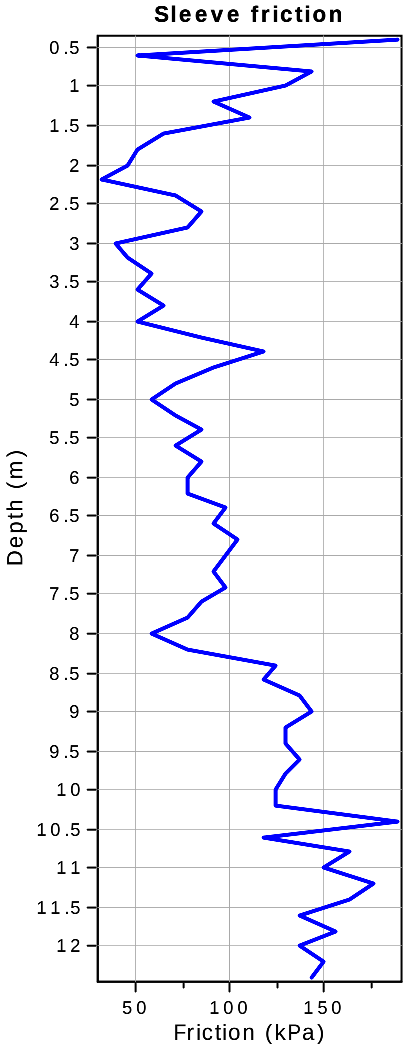
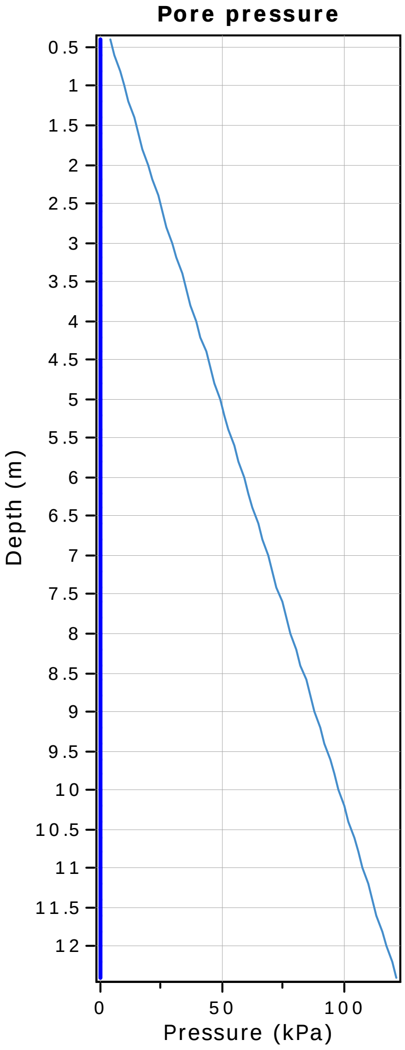
CPT: 036021P48CPT48
Total depth: 12.40 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

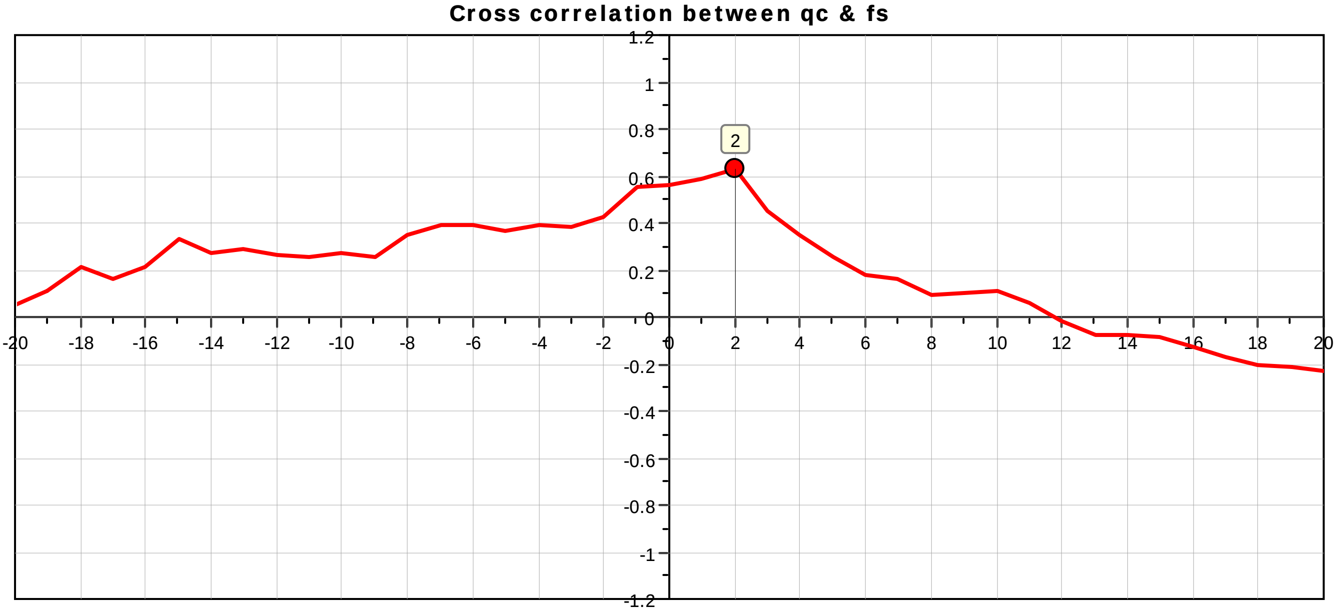
Project:
Location:


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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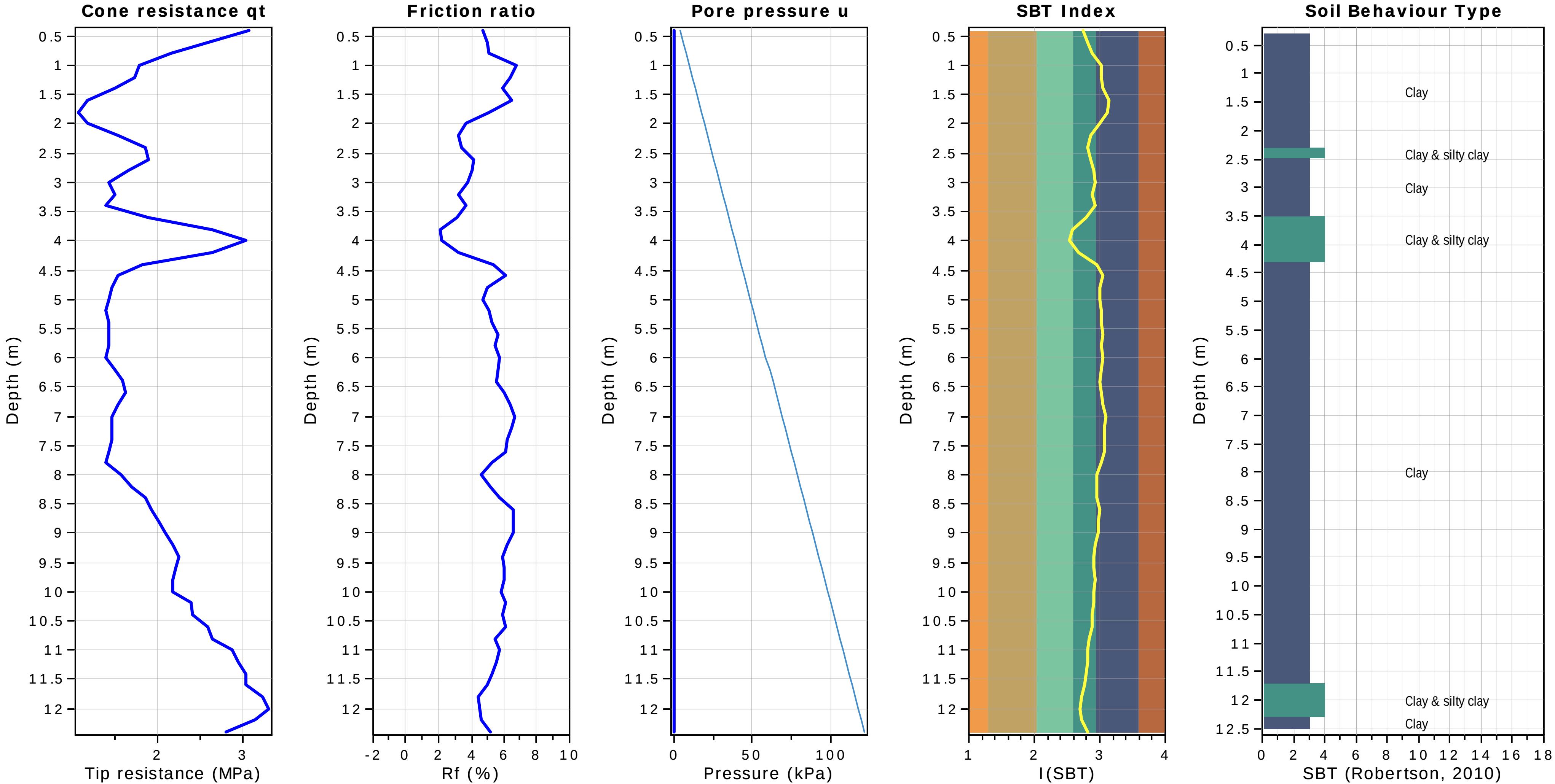
CPT: 036021P48CPT48
Total depth: 12.40 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬛ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟨 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

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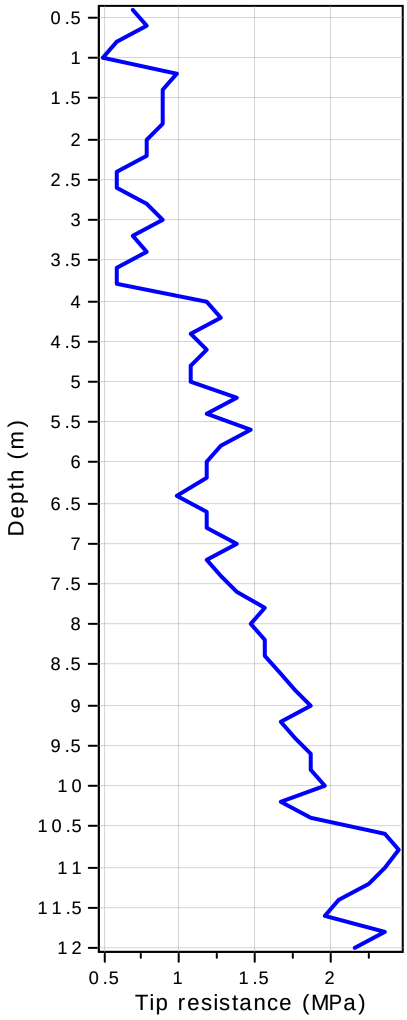
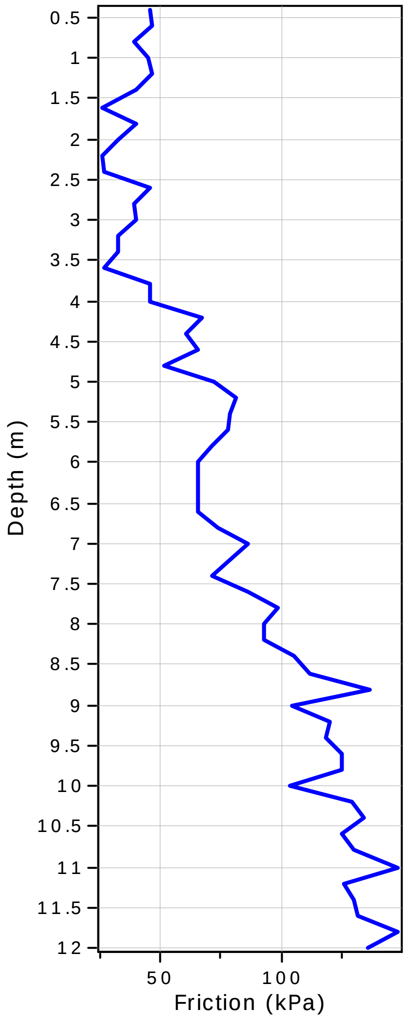
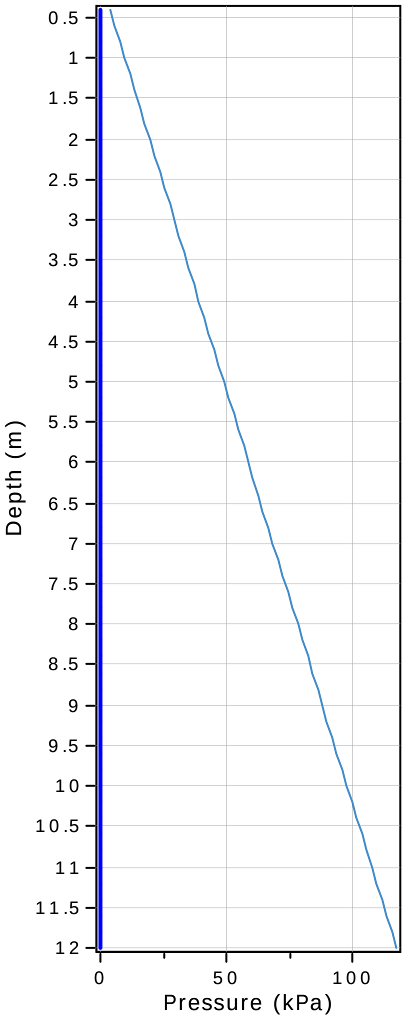
CPT: 036021P50CPT50
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

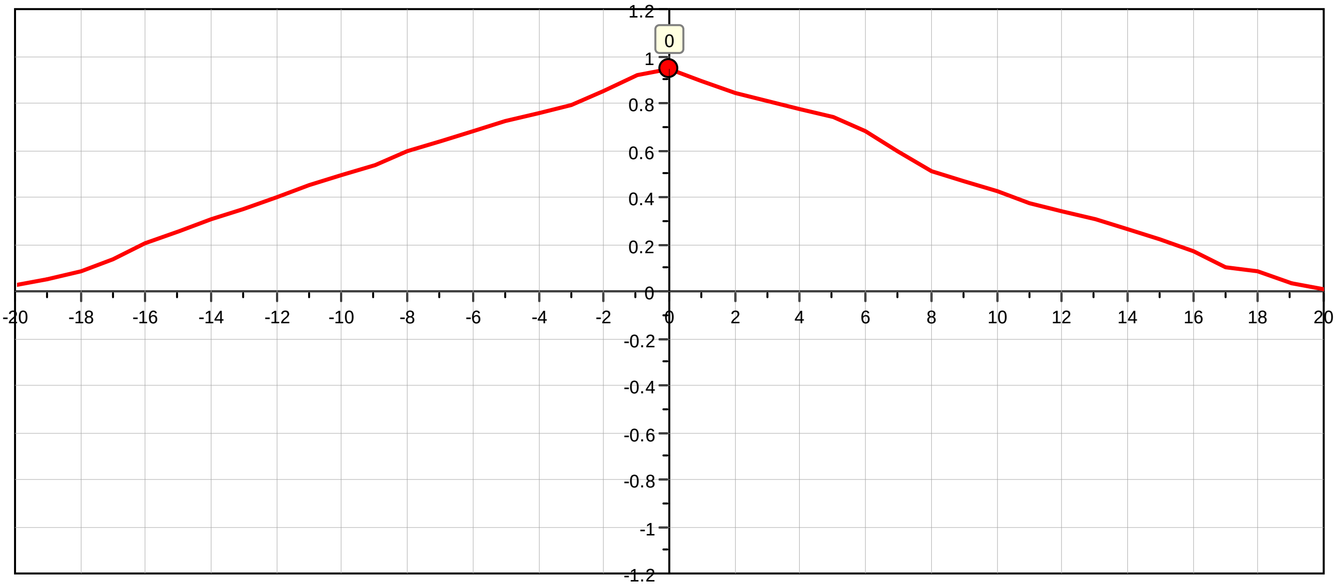
Project:
Location:


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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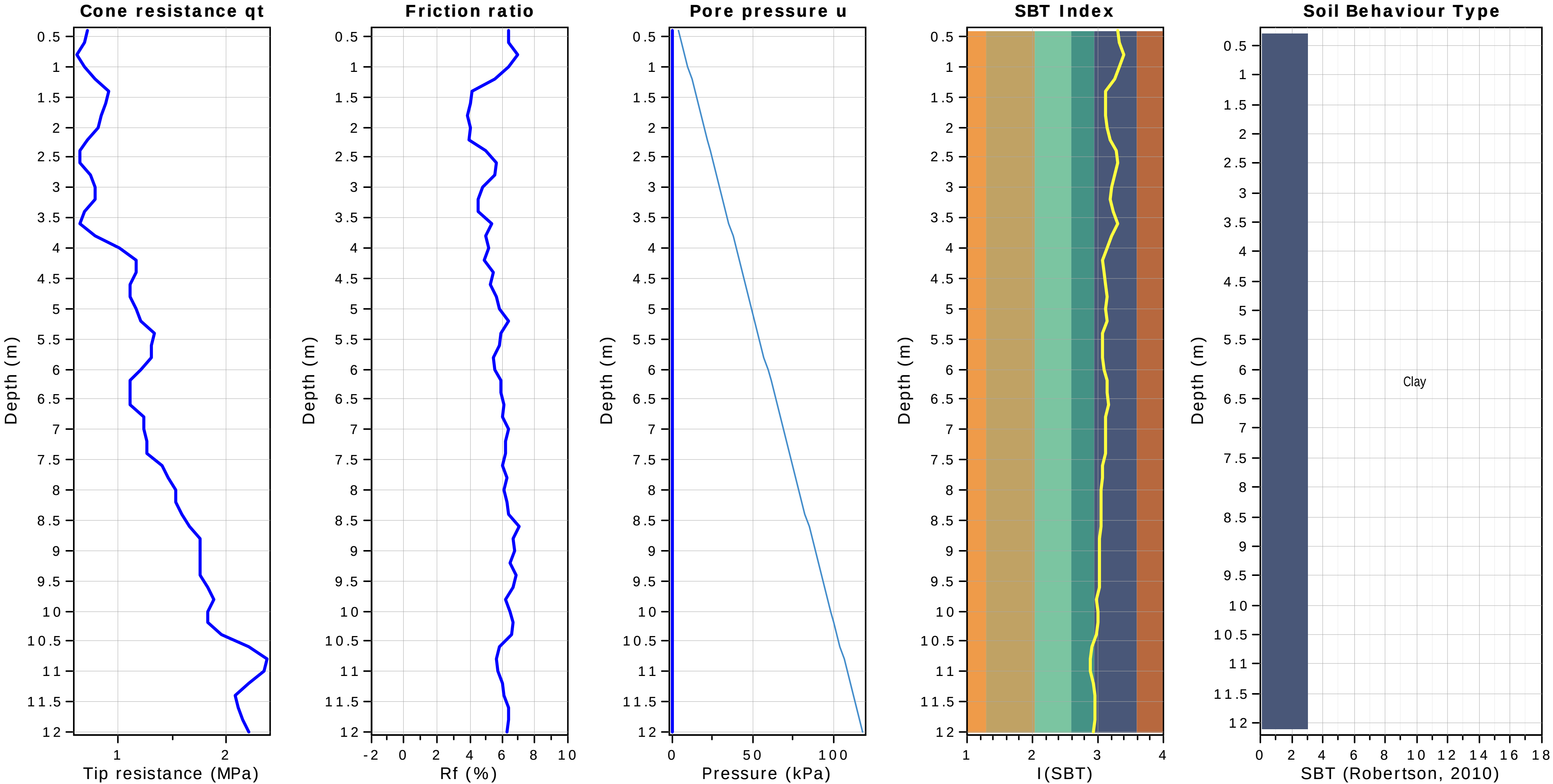
CPT: 036021P50CPT50
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend
🟥 1. Sensitive fine grained
🟫 2. Organic material
■ 3. Clay to silty clay
■ 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
■ 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
■ 8. Very stiff sand to clayey sand
□ 9. Very stiff fine grained

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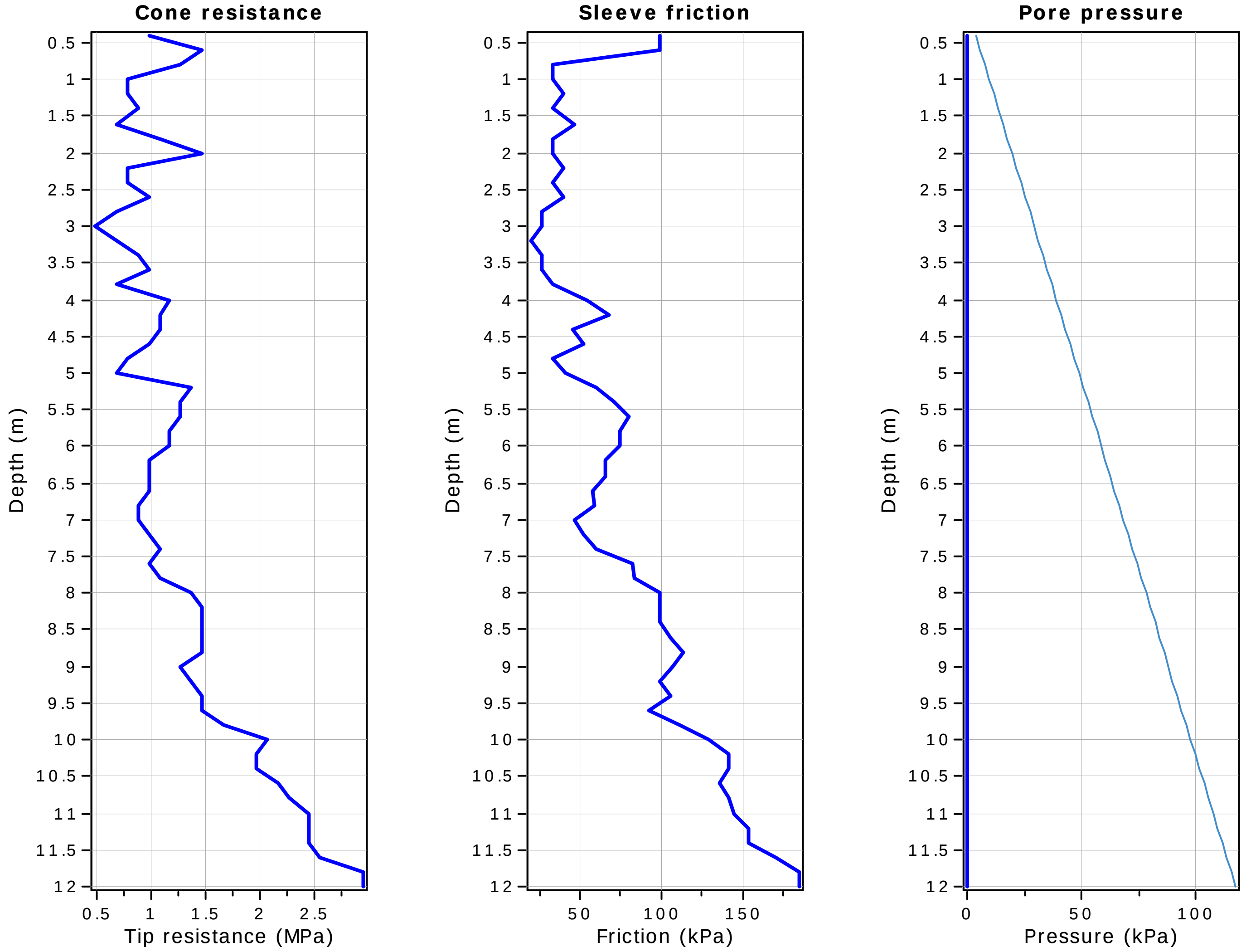
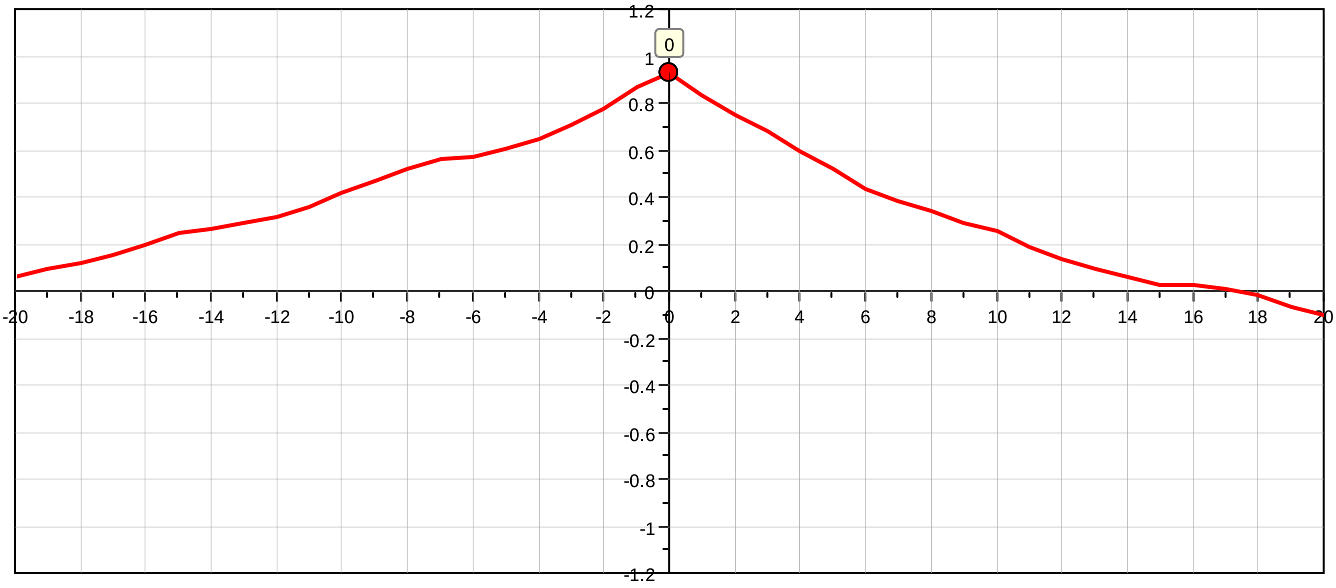
CPT: 036021P51CPT51
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



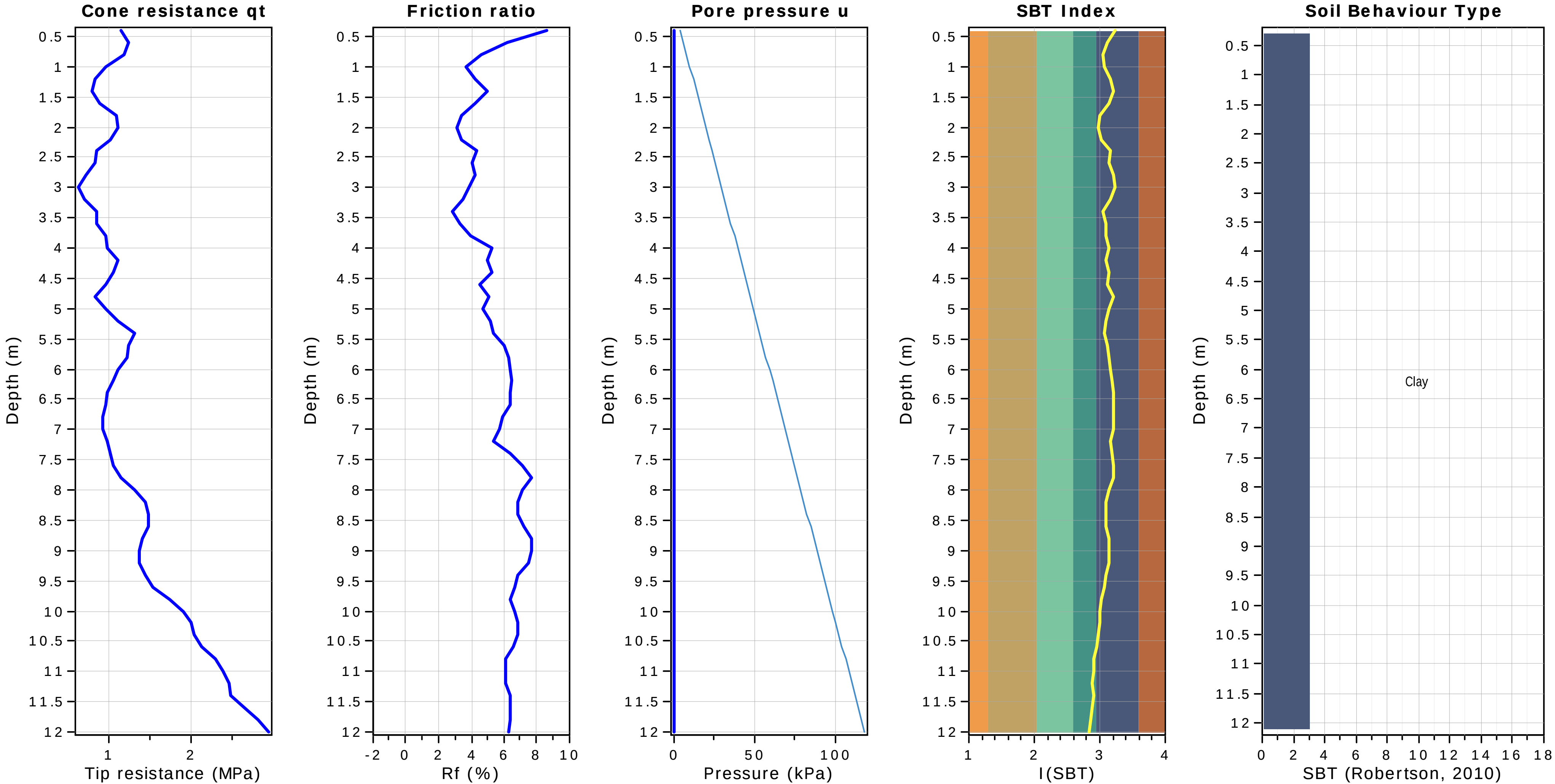
The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



CPT: 036021P51CPT51
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
◼ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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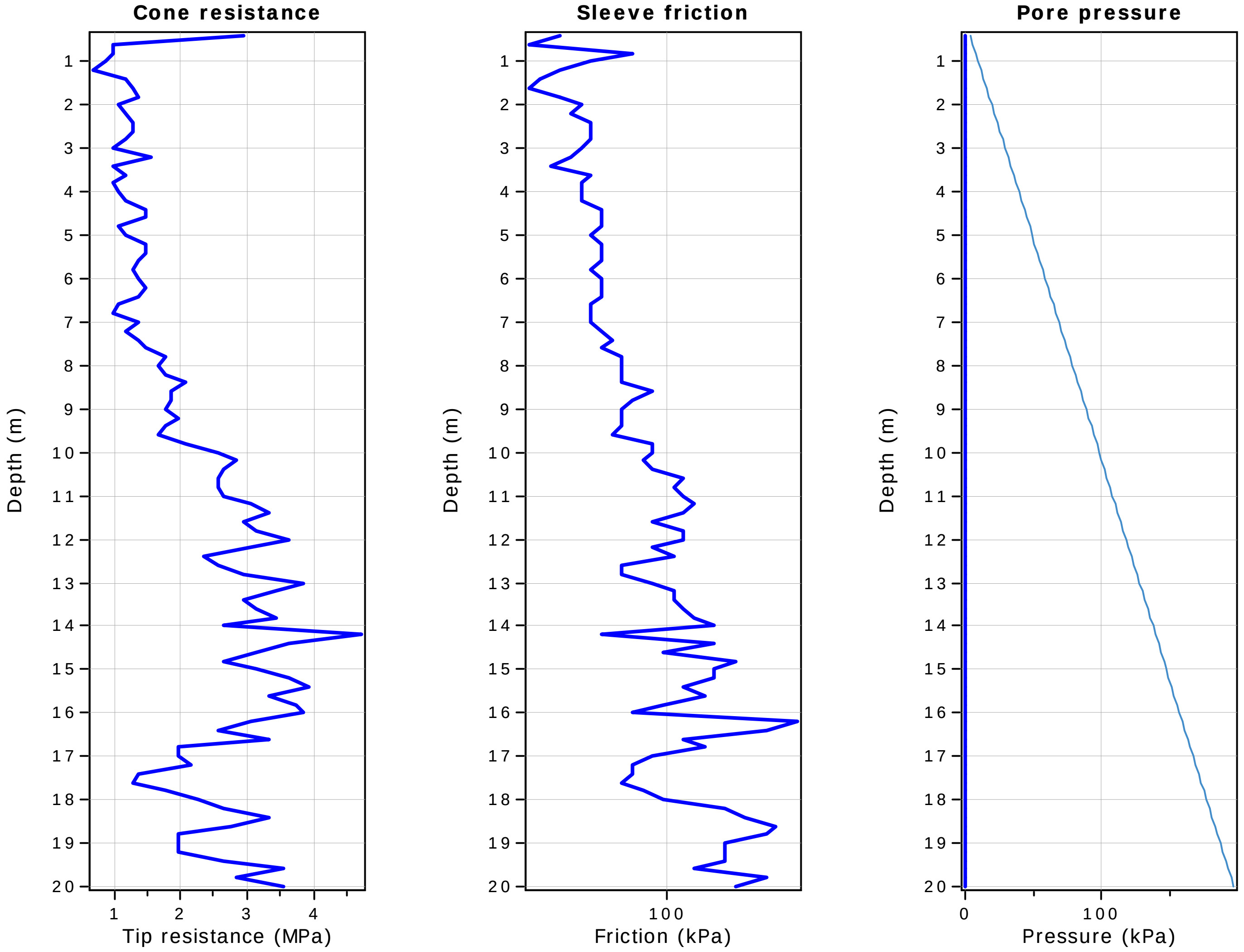
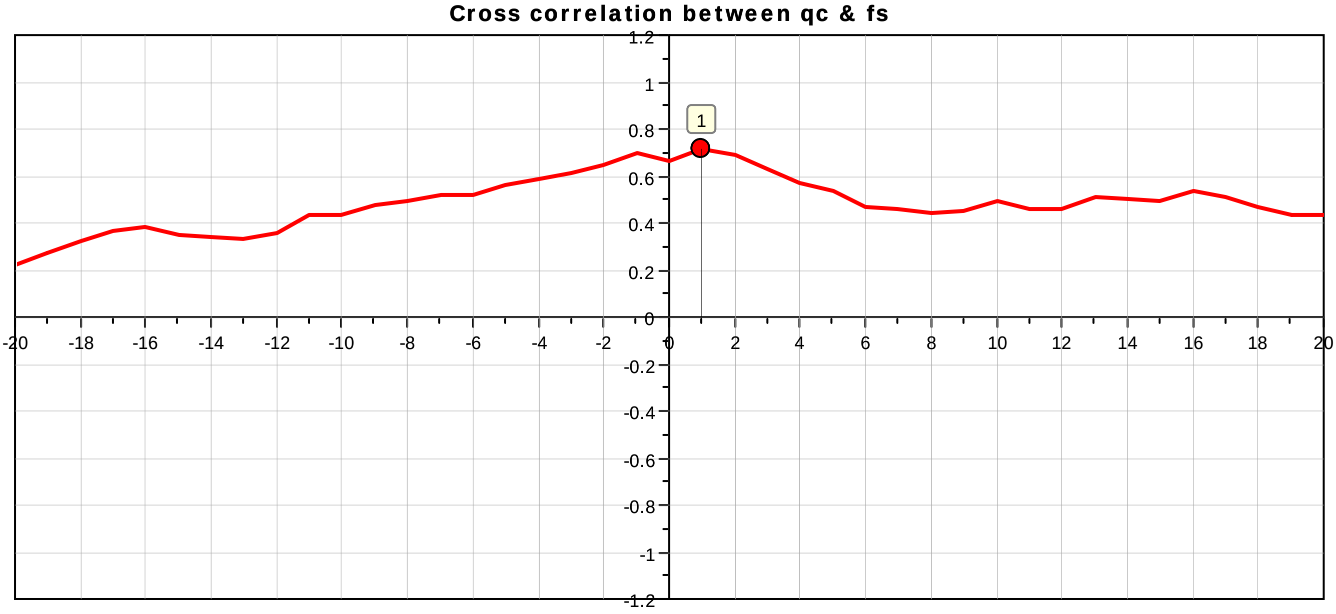
CPT: 036021P52CPT52
Total depth: 20.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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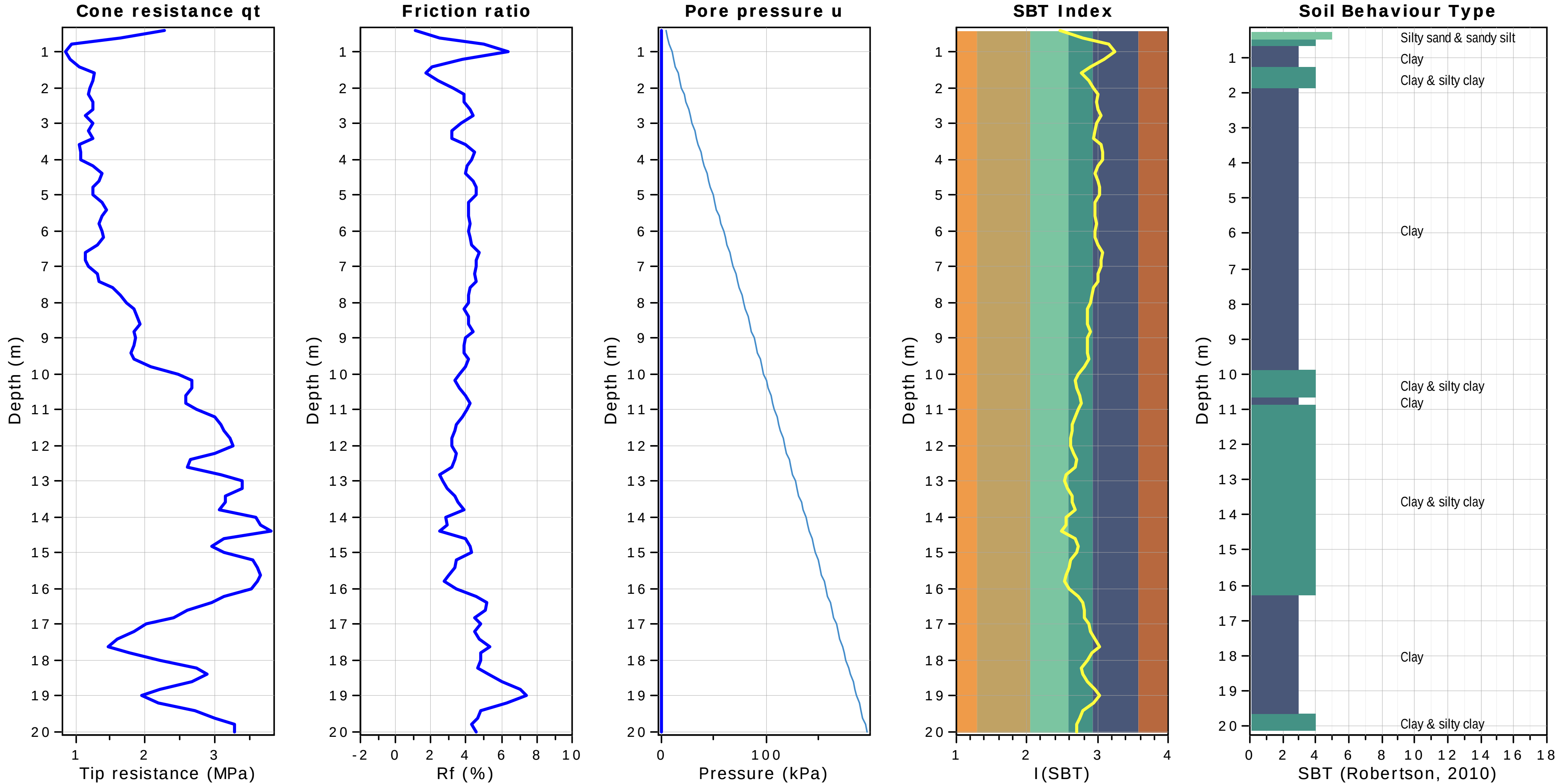
CPT: 036021P52CPT52
Total depth: 20.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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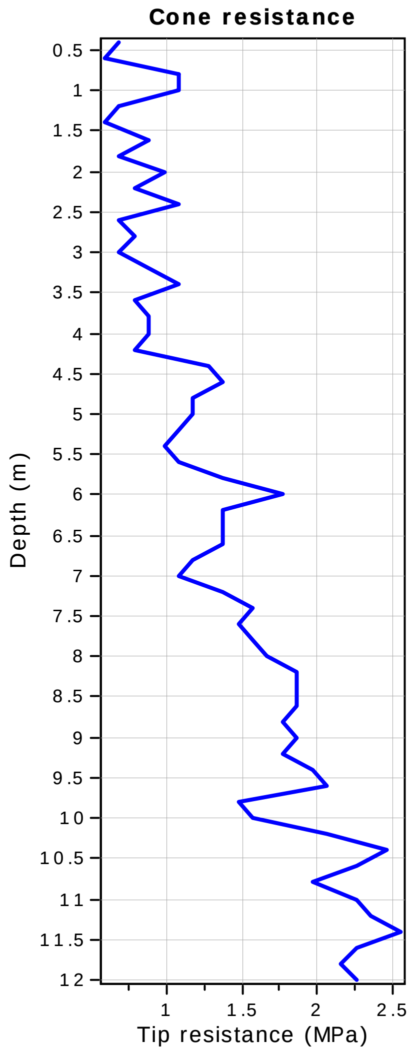
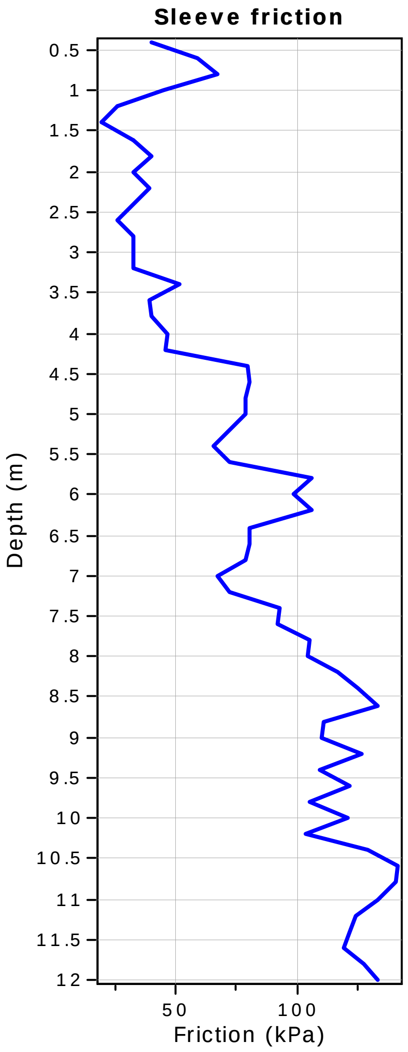
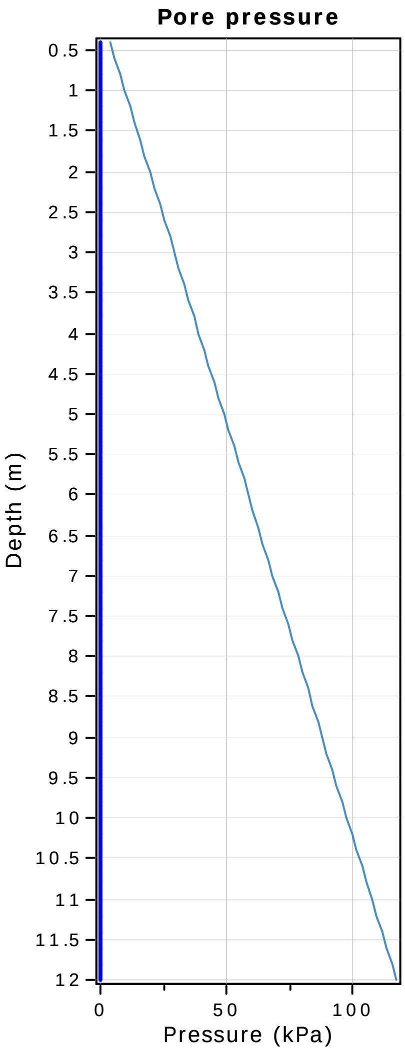
CPT: 036021P53CPT53
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

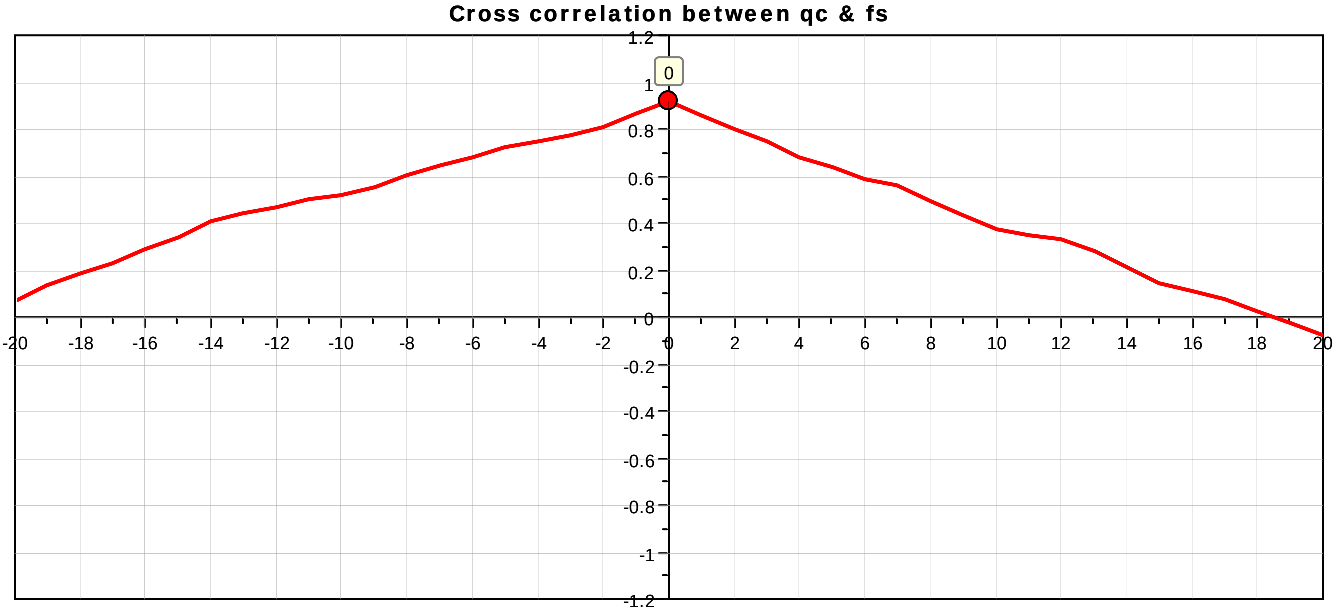
Project:
Location:







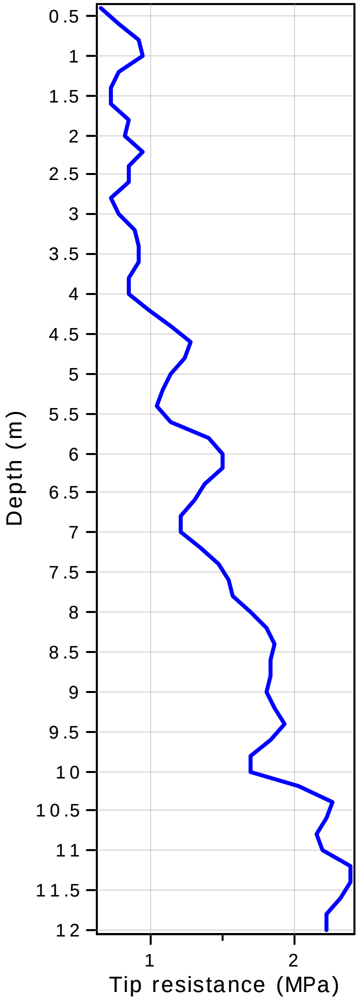
The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



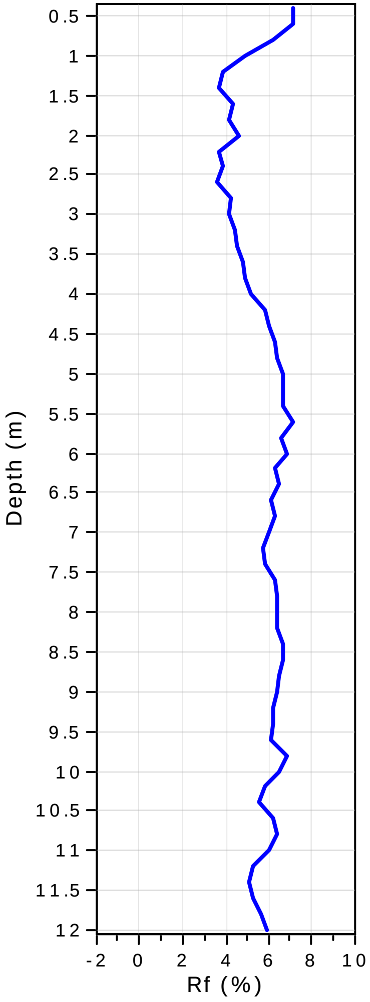
CPT: 036021P53CPT53
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

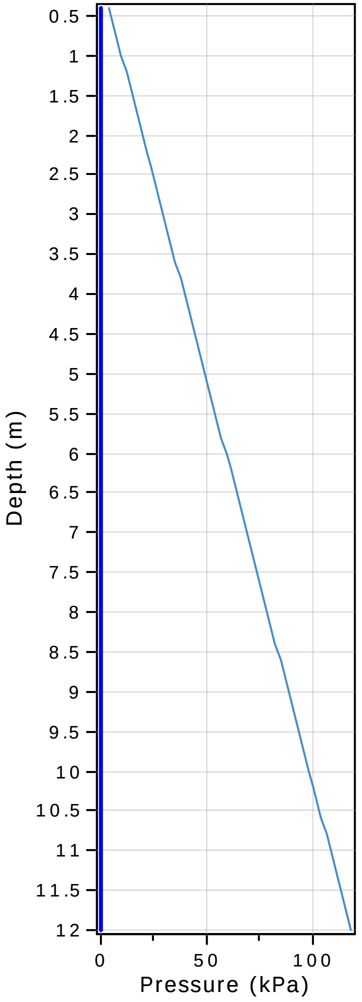
Cone resistance qt



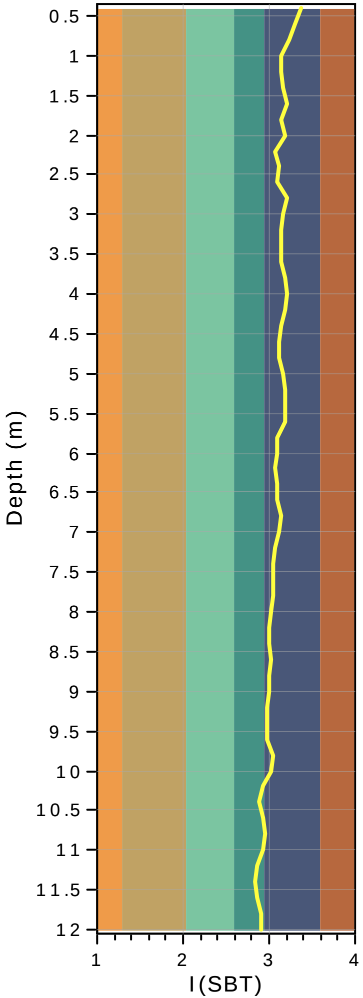
Friction ratio



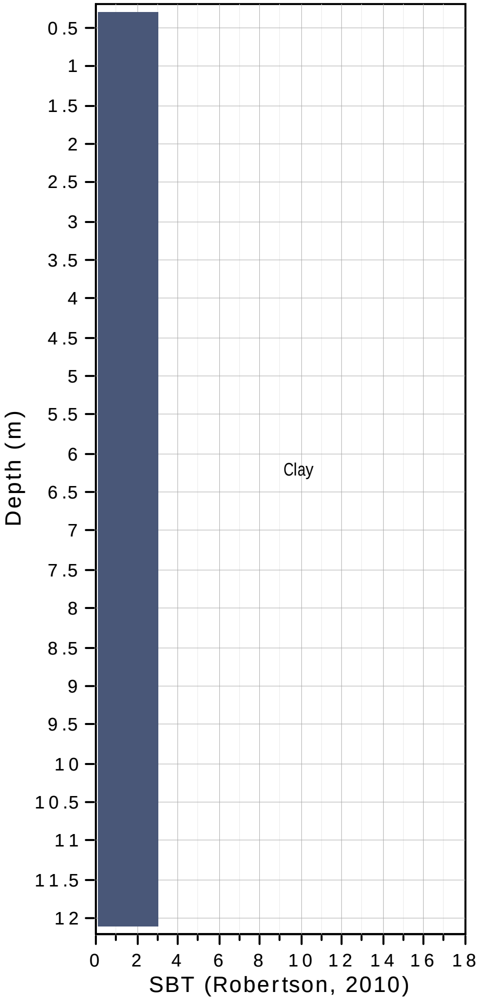
Pore pressure u



SBT Index



Soil Behaviour Type



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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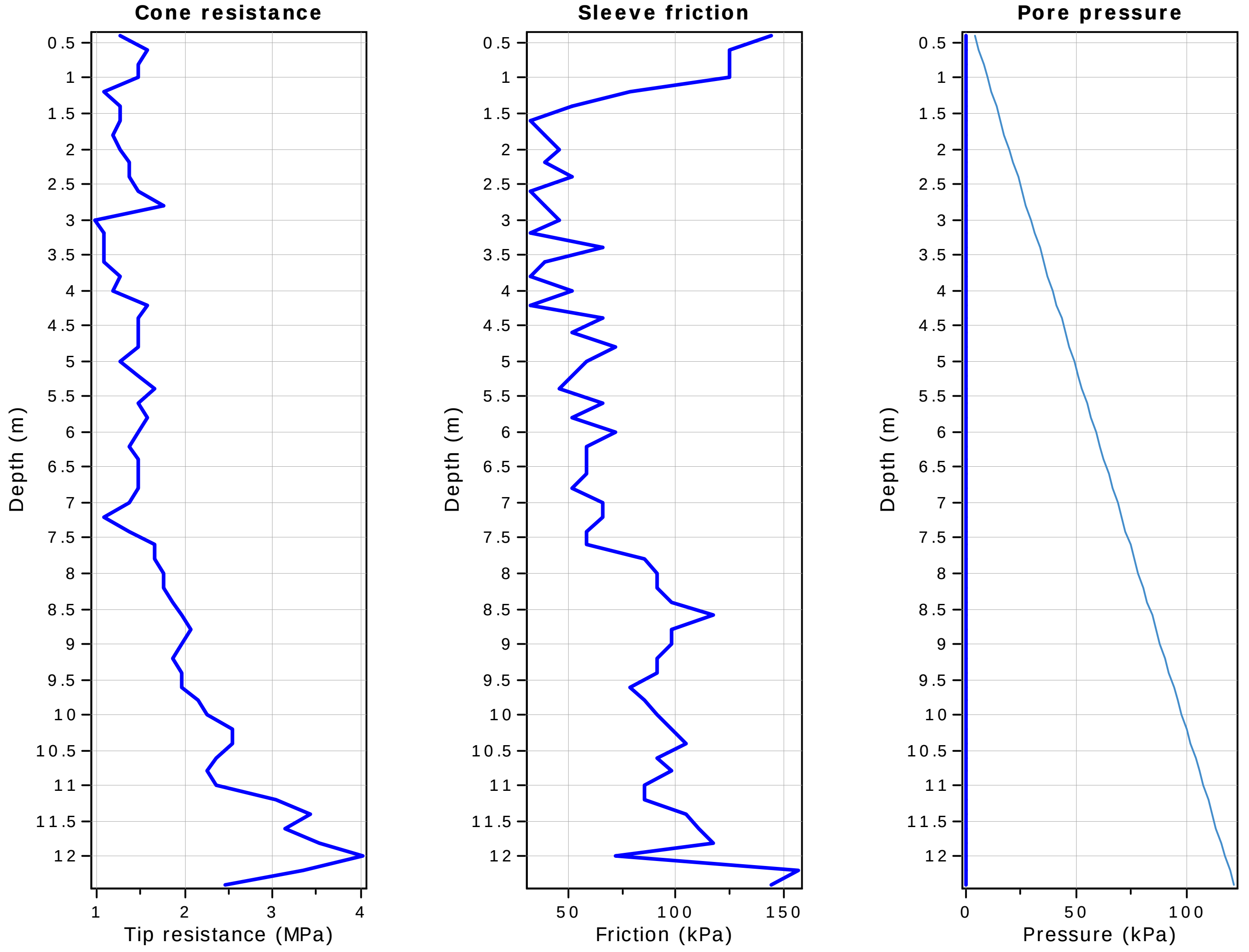
CPT: 036021P54CPT54

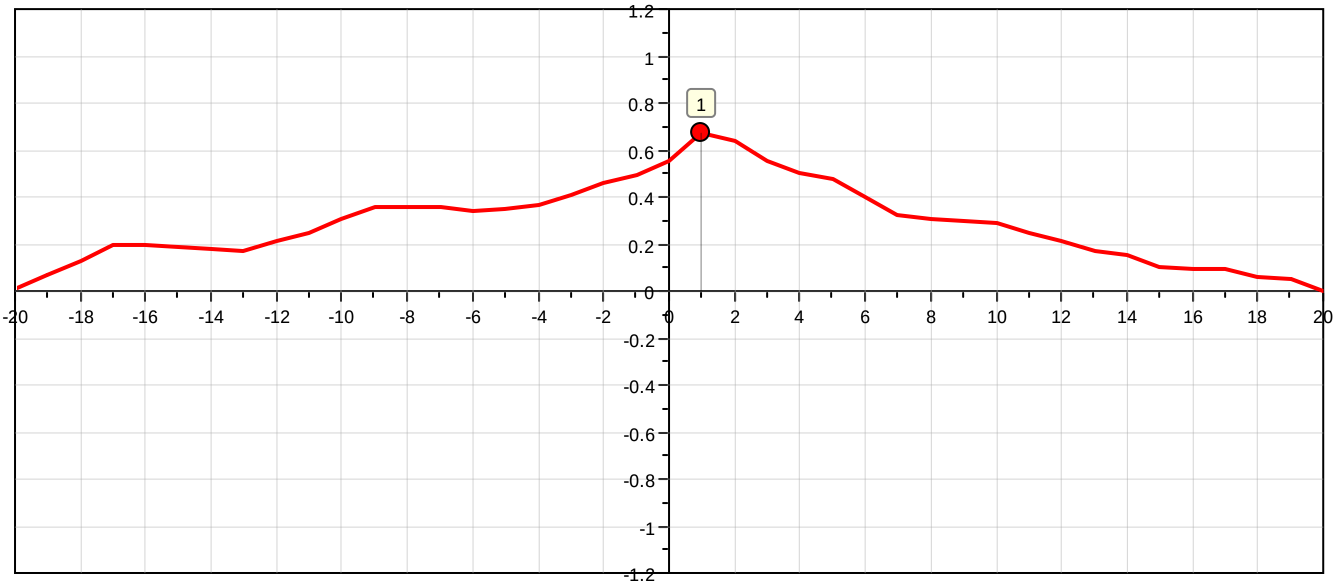
Total depth: 12.40 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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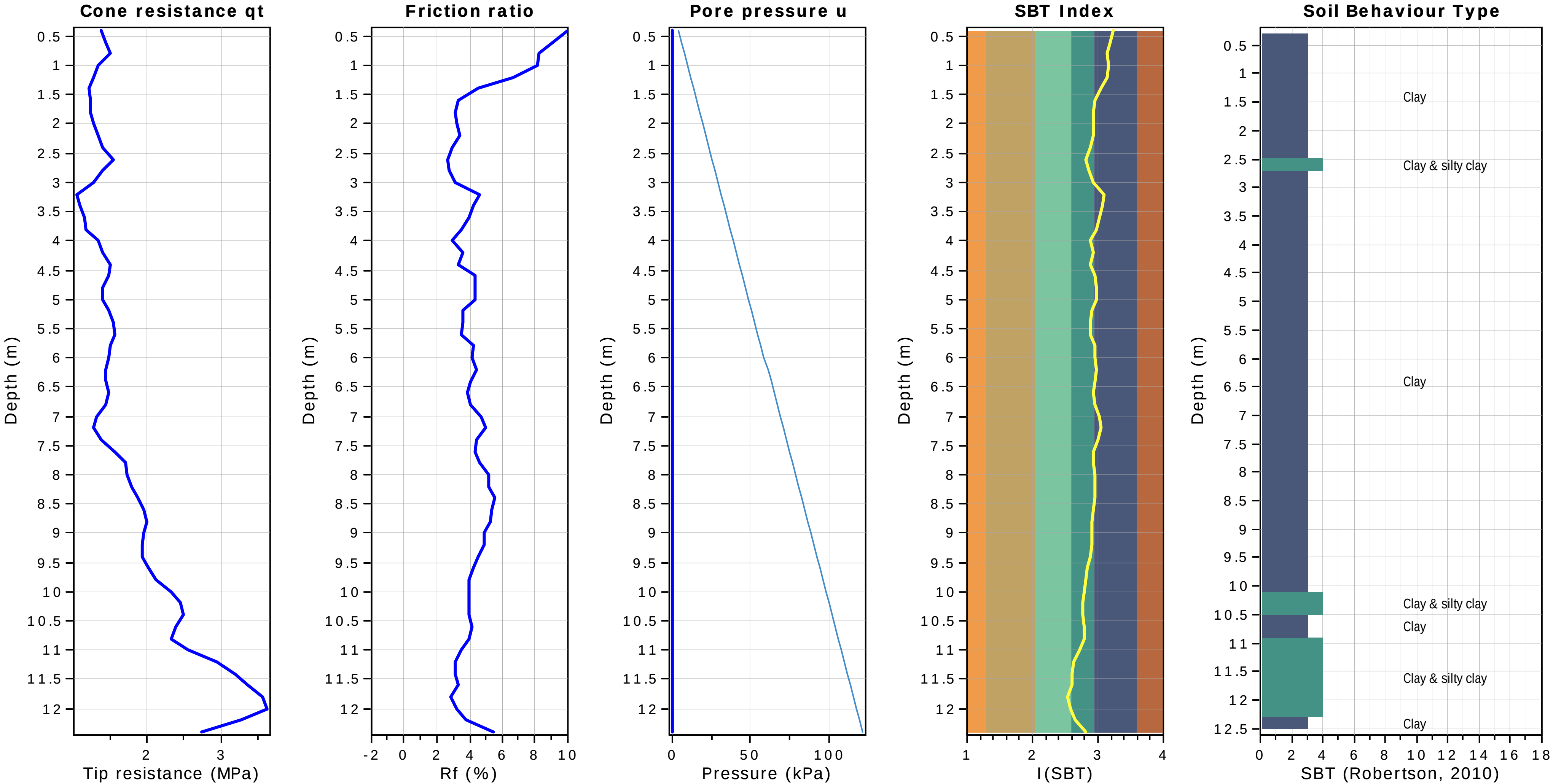
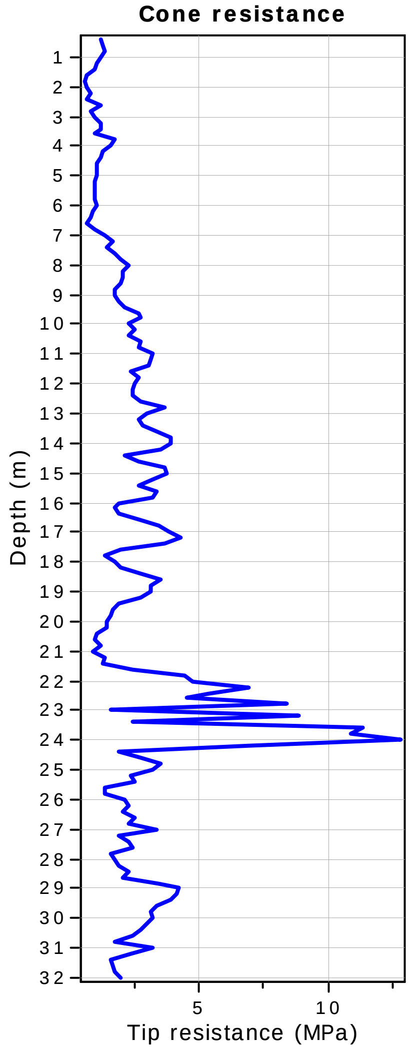
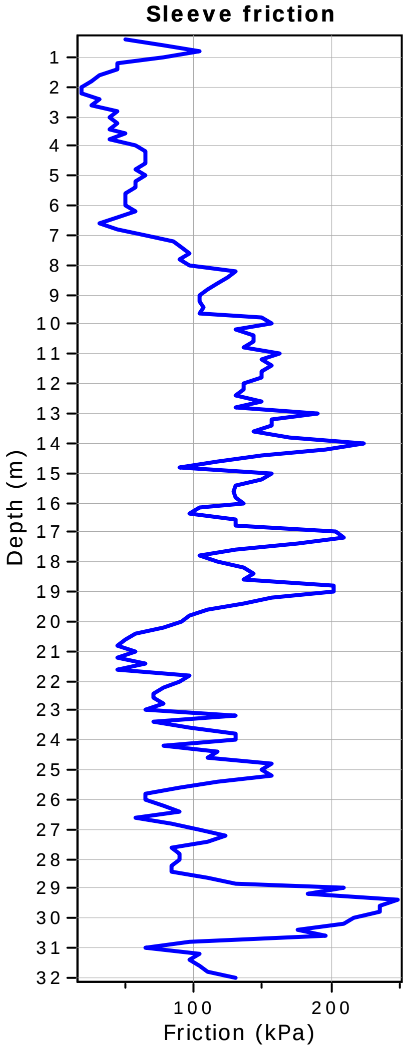
CPT: 036021P54CPT54
Total depth: 12.40 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

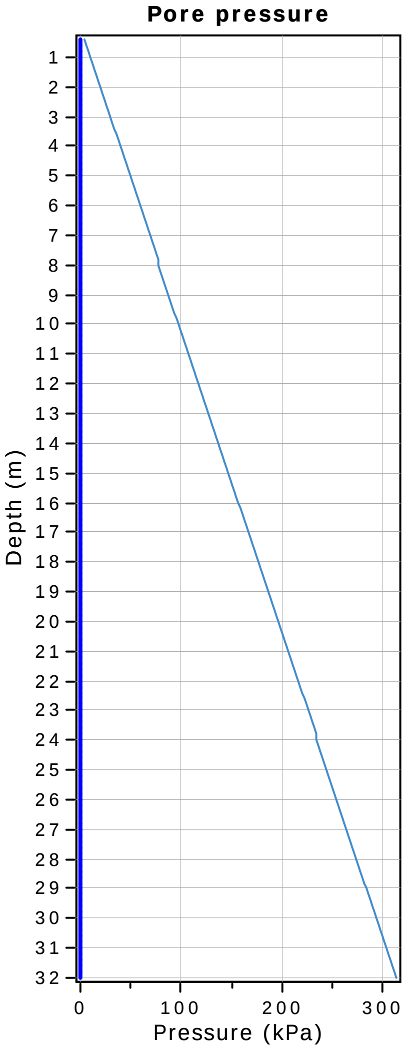
Project:
Location:



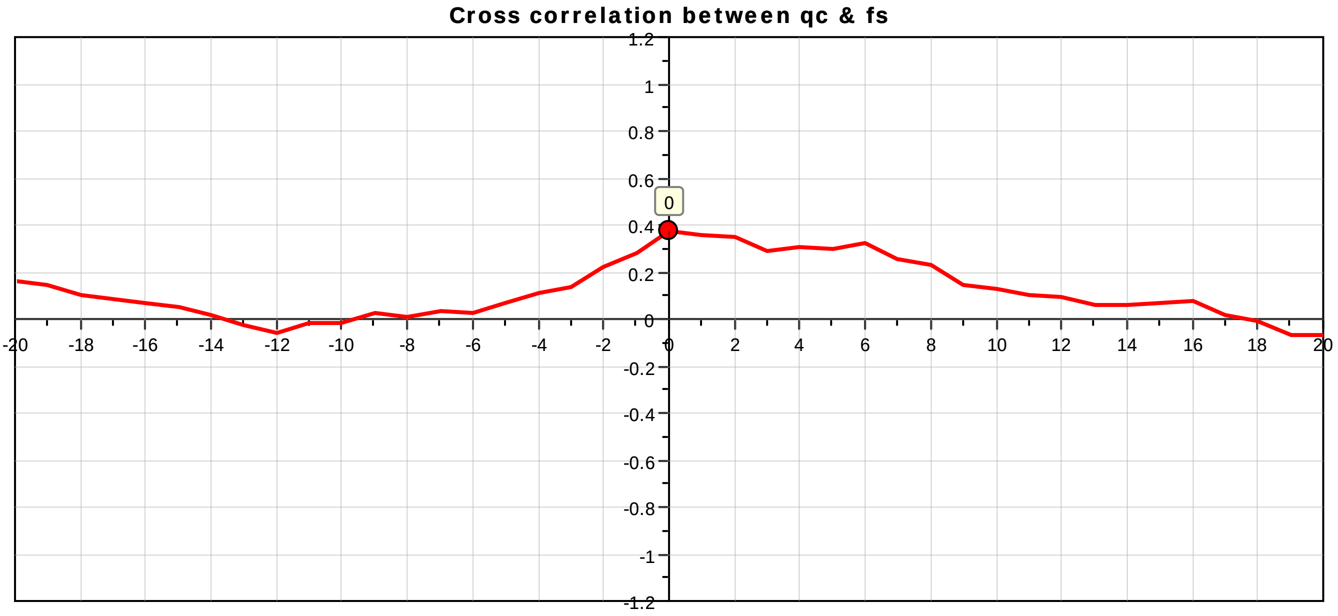
SBT legend
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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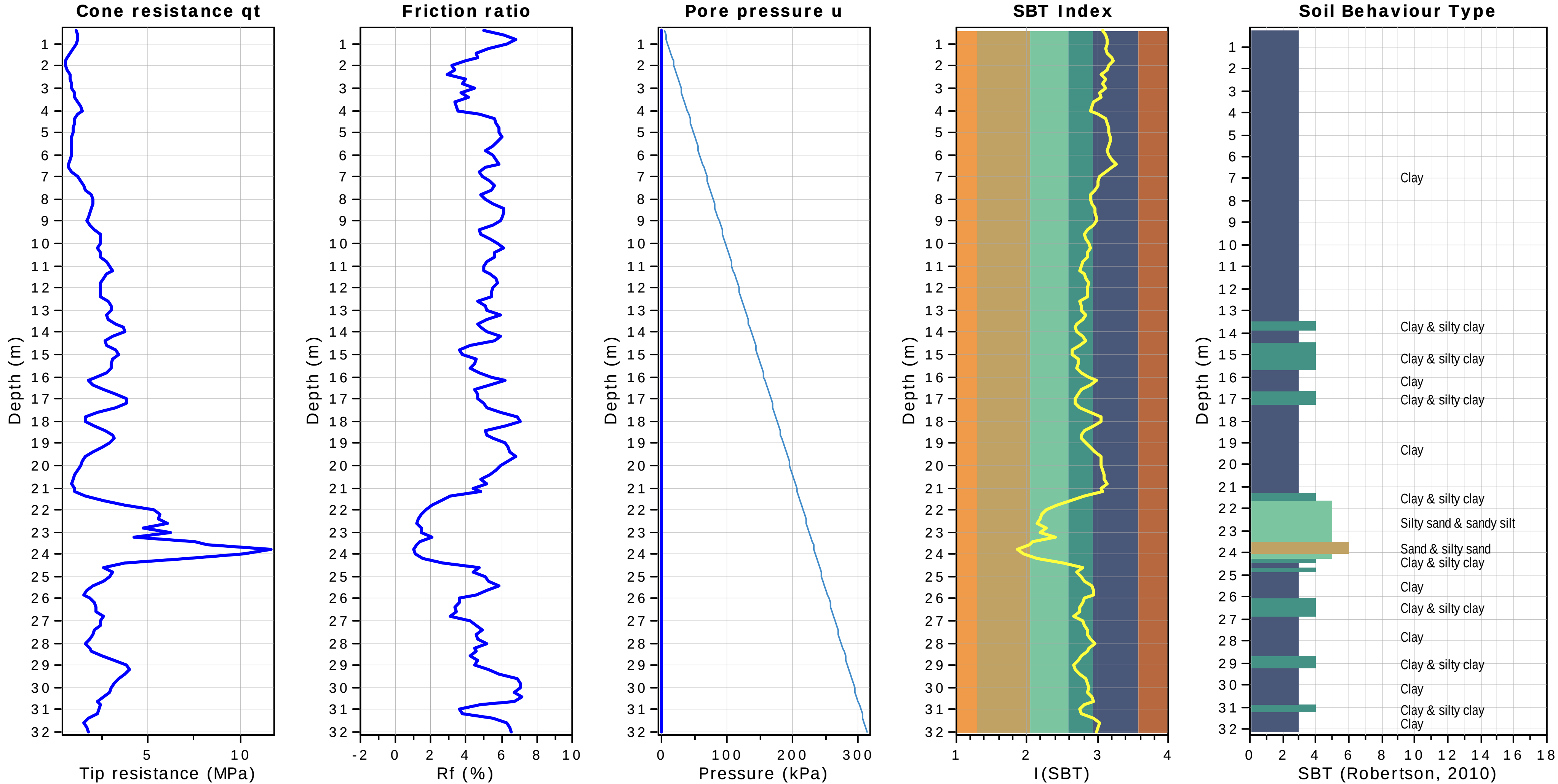
CPT: 036021P58CPT58
Total depth: 32.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

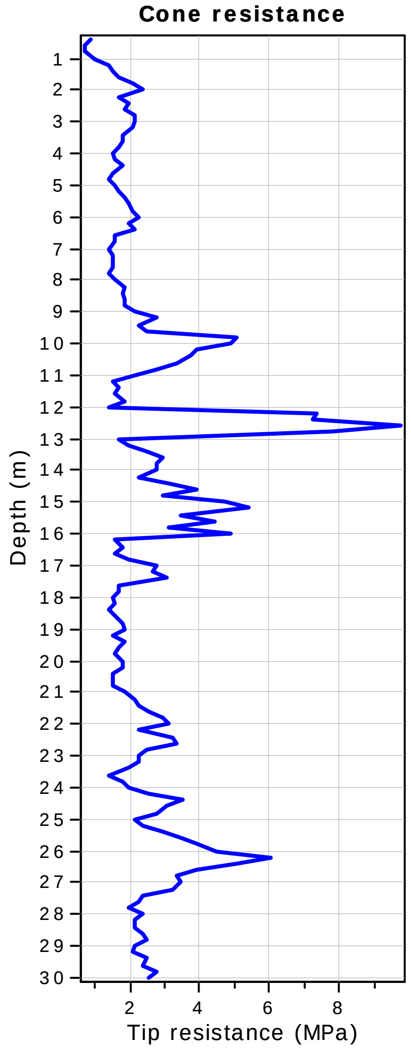


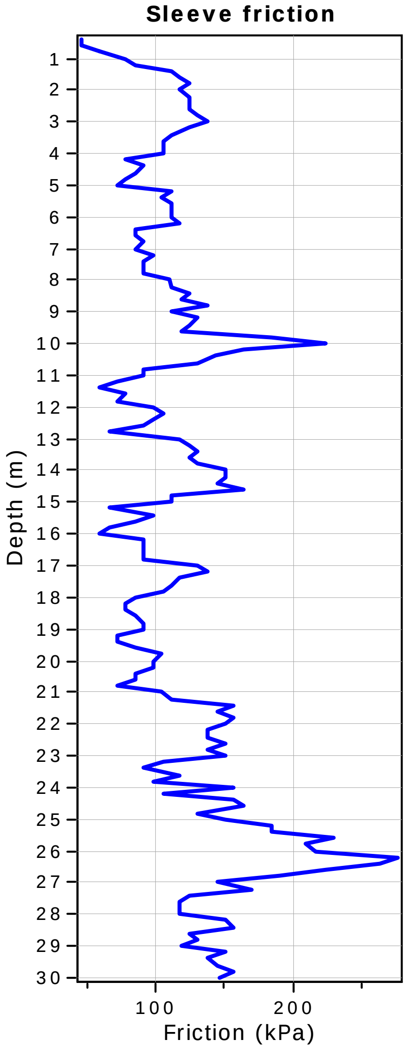
SBT legend

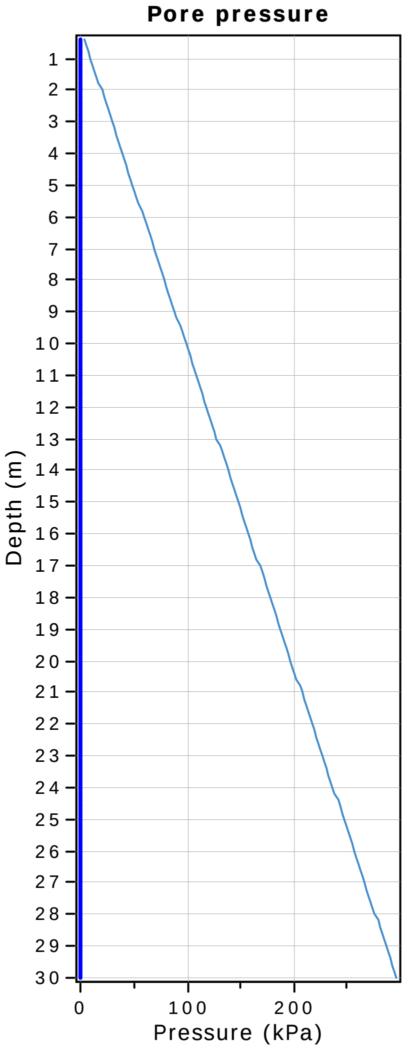
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

CPT: 036021P59CPT59
Total depth: 30.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

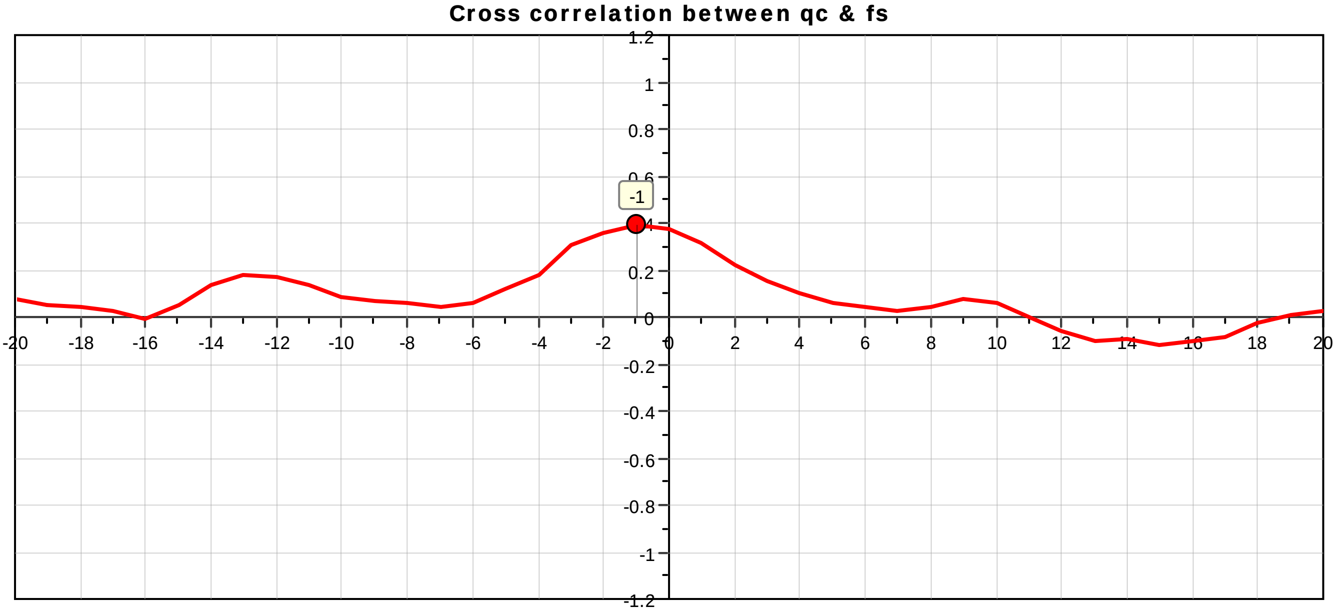
Project:
Location:





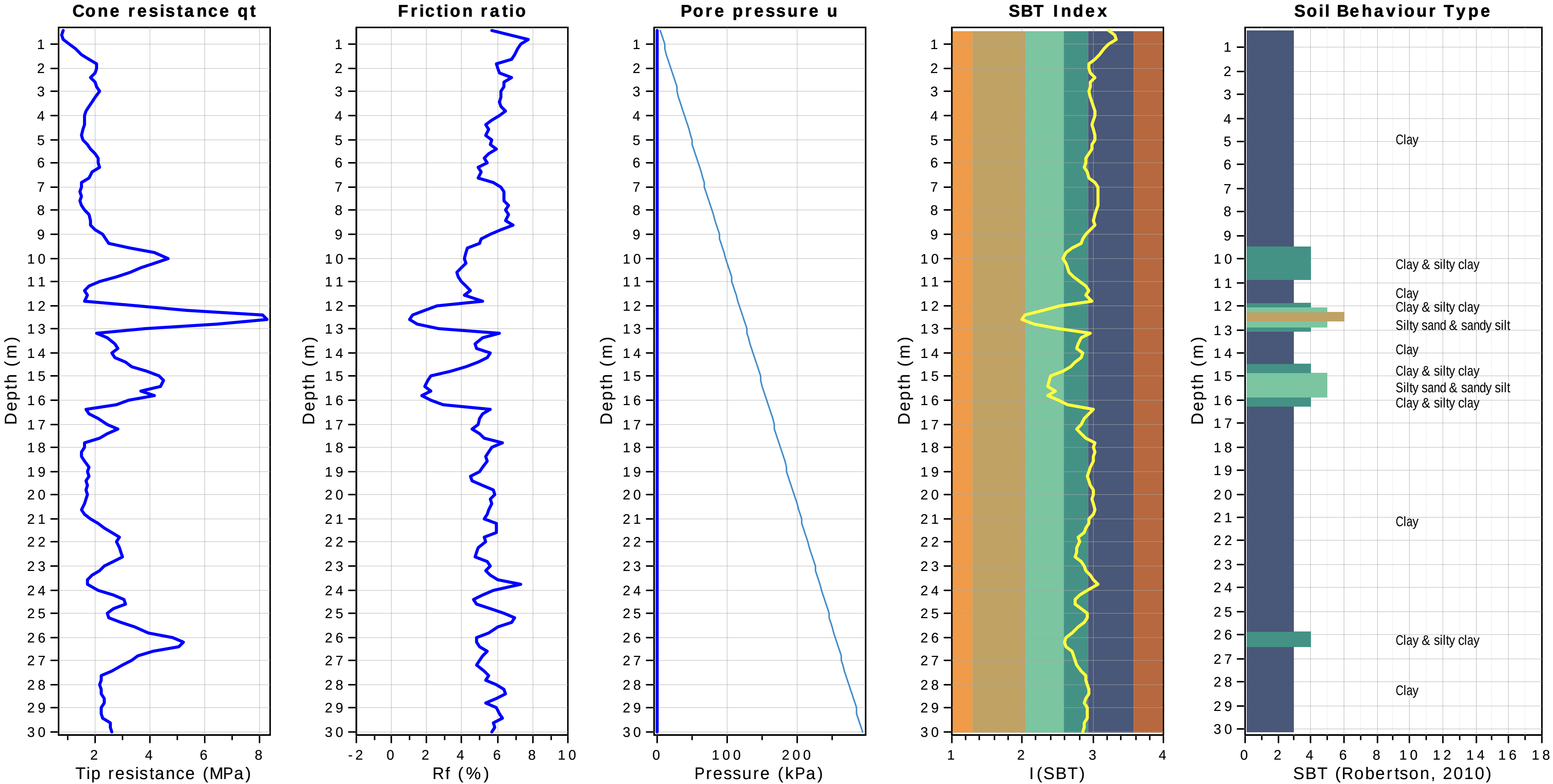


The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT: 036021P59CPT59
Total depth: 30.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬛ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

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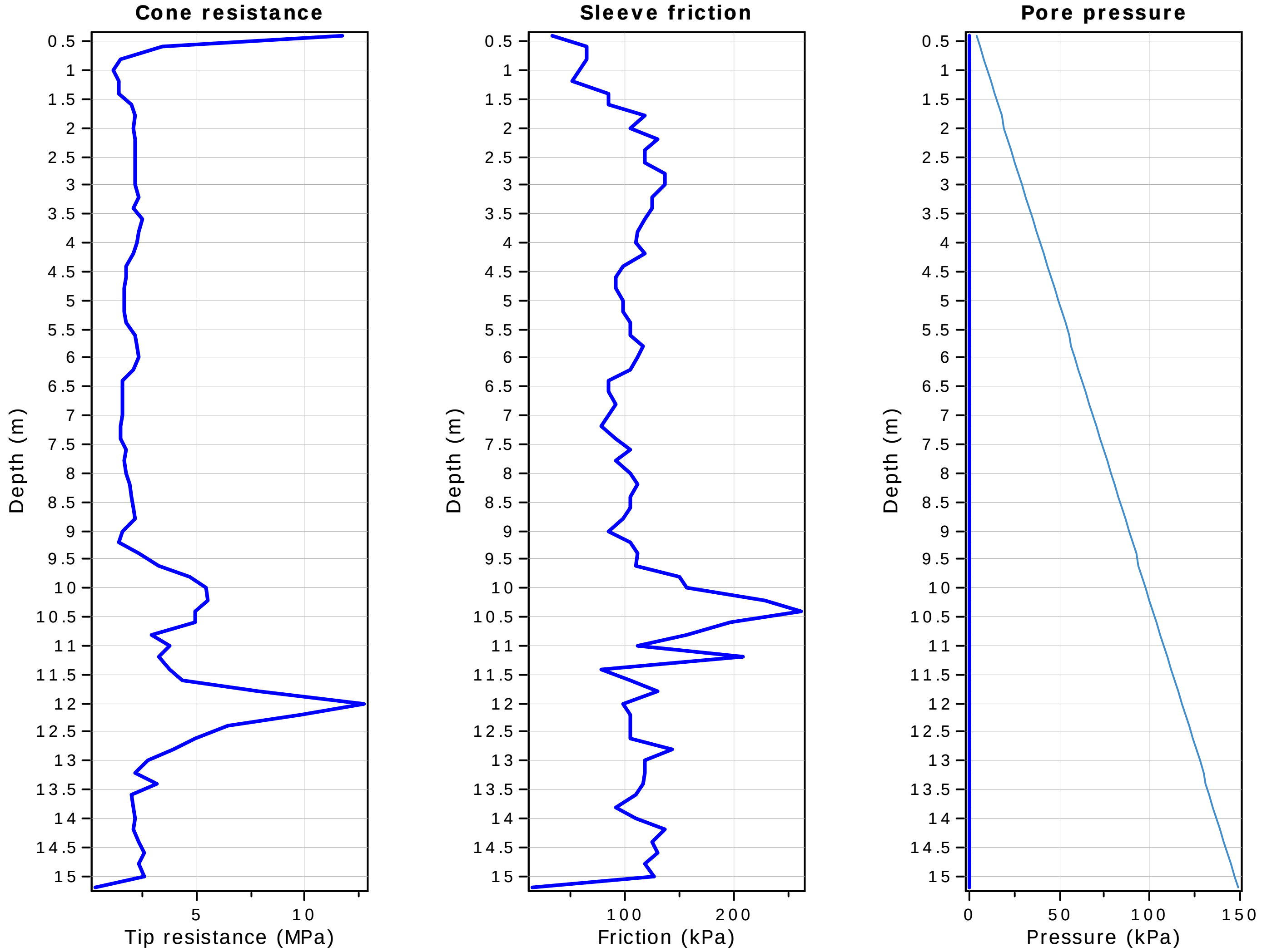
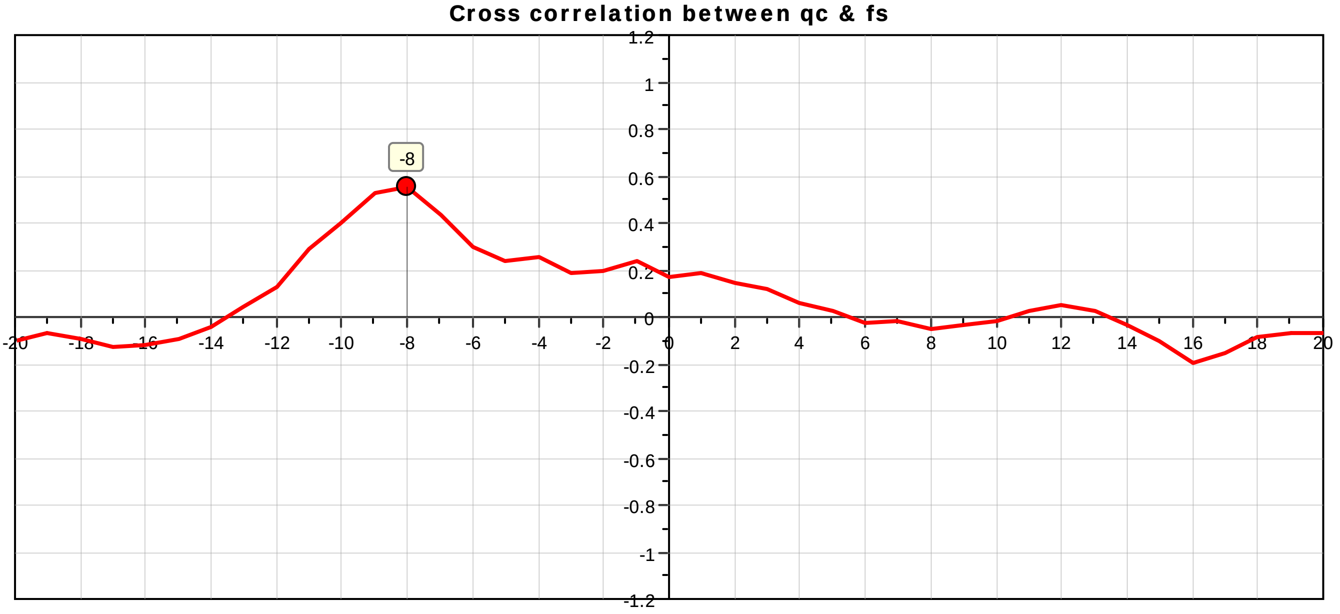
CPT: 036021P60CPT60
Total depth: 15.20 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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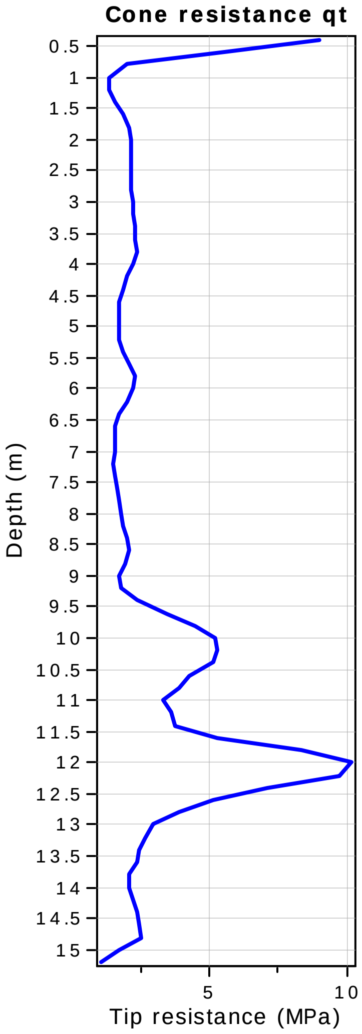
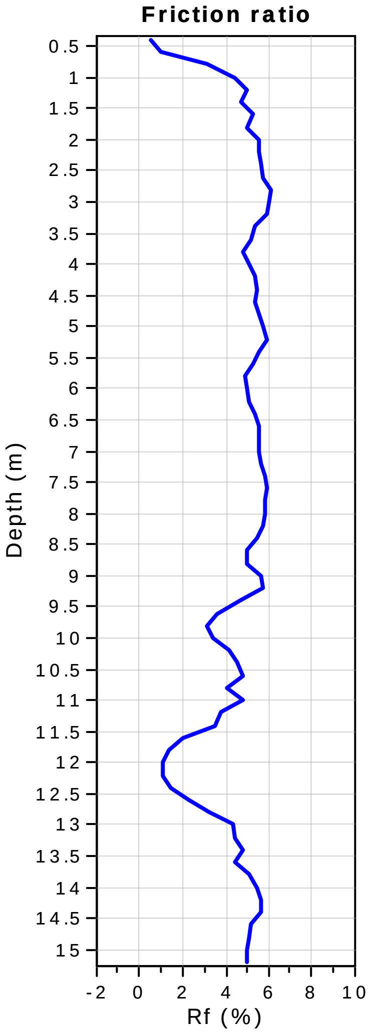
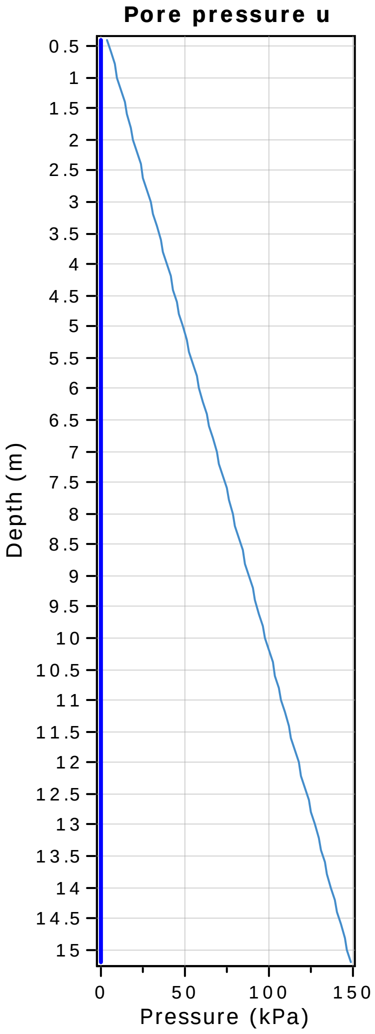
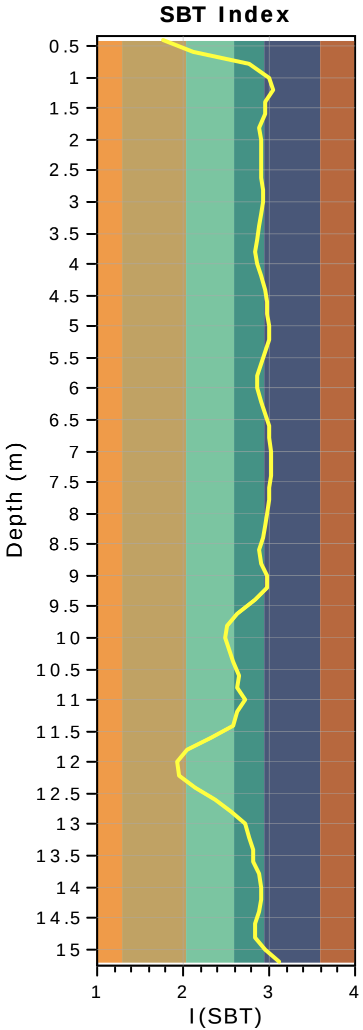
CPT: 036021P60CPT60
Total depth: 15.20 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

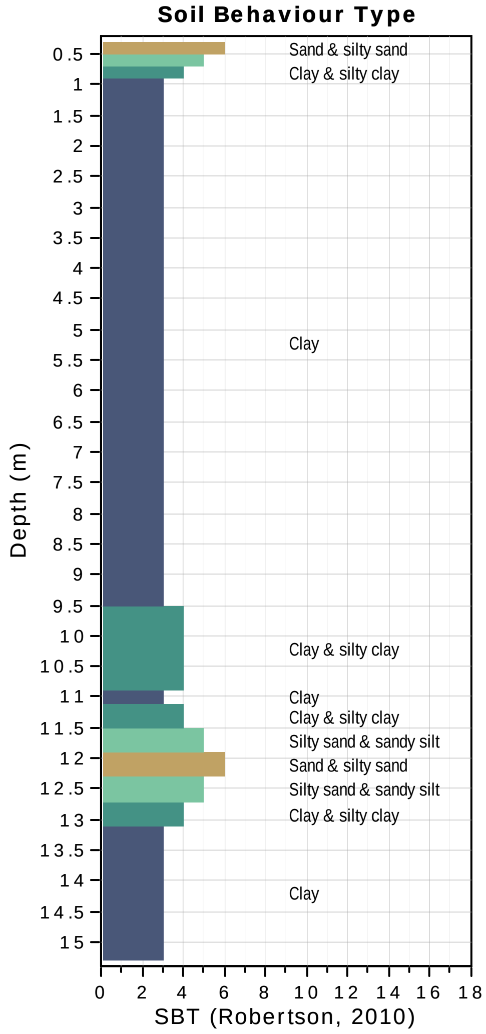
Project:
Location:









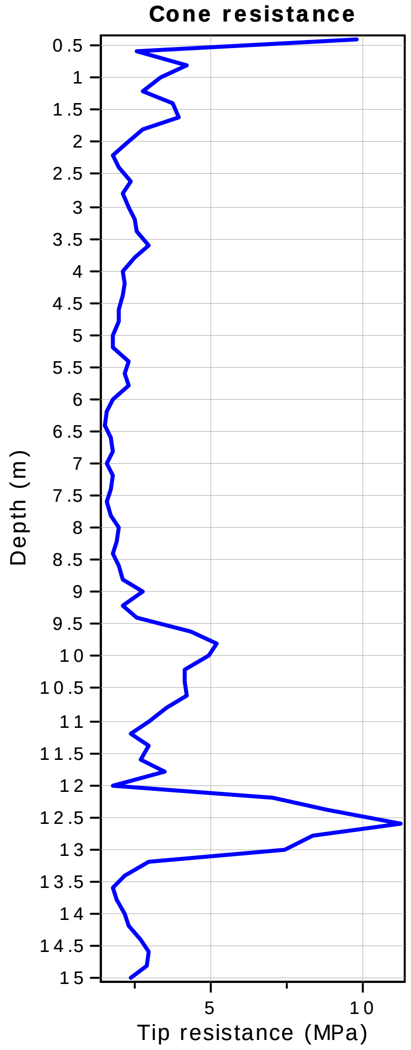


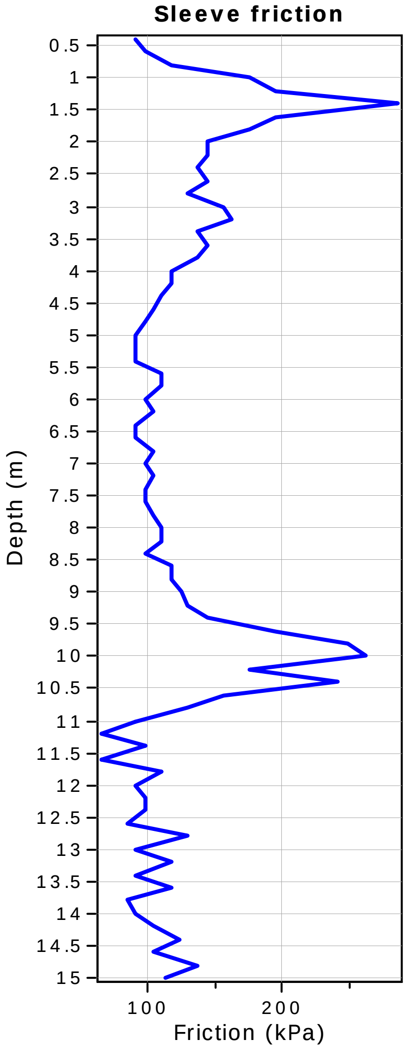
SBT legend

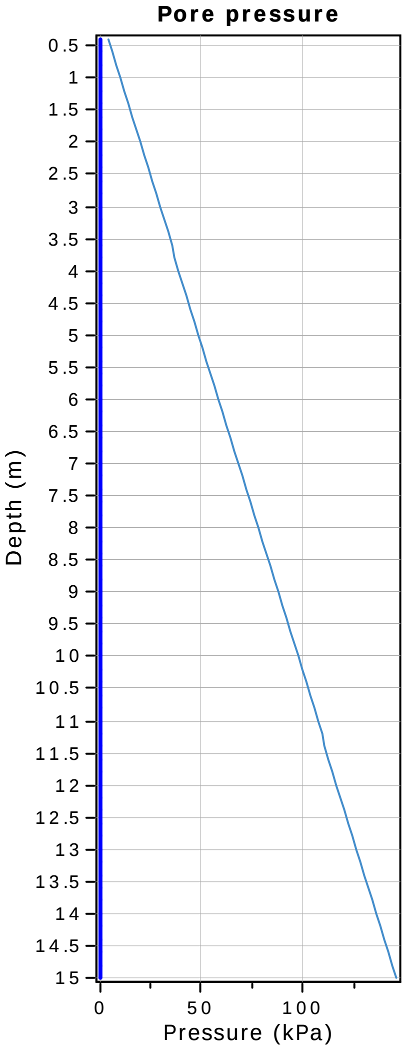
🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟫 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

CPT: 036021P61CPT61
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

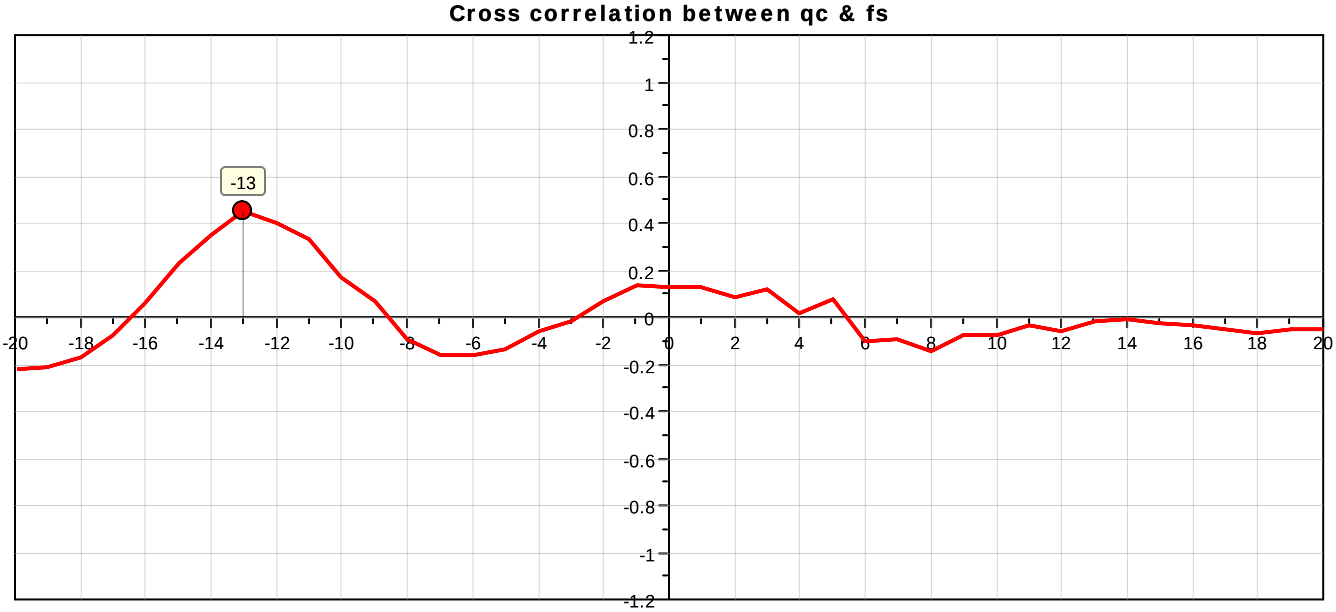
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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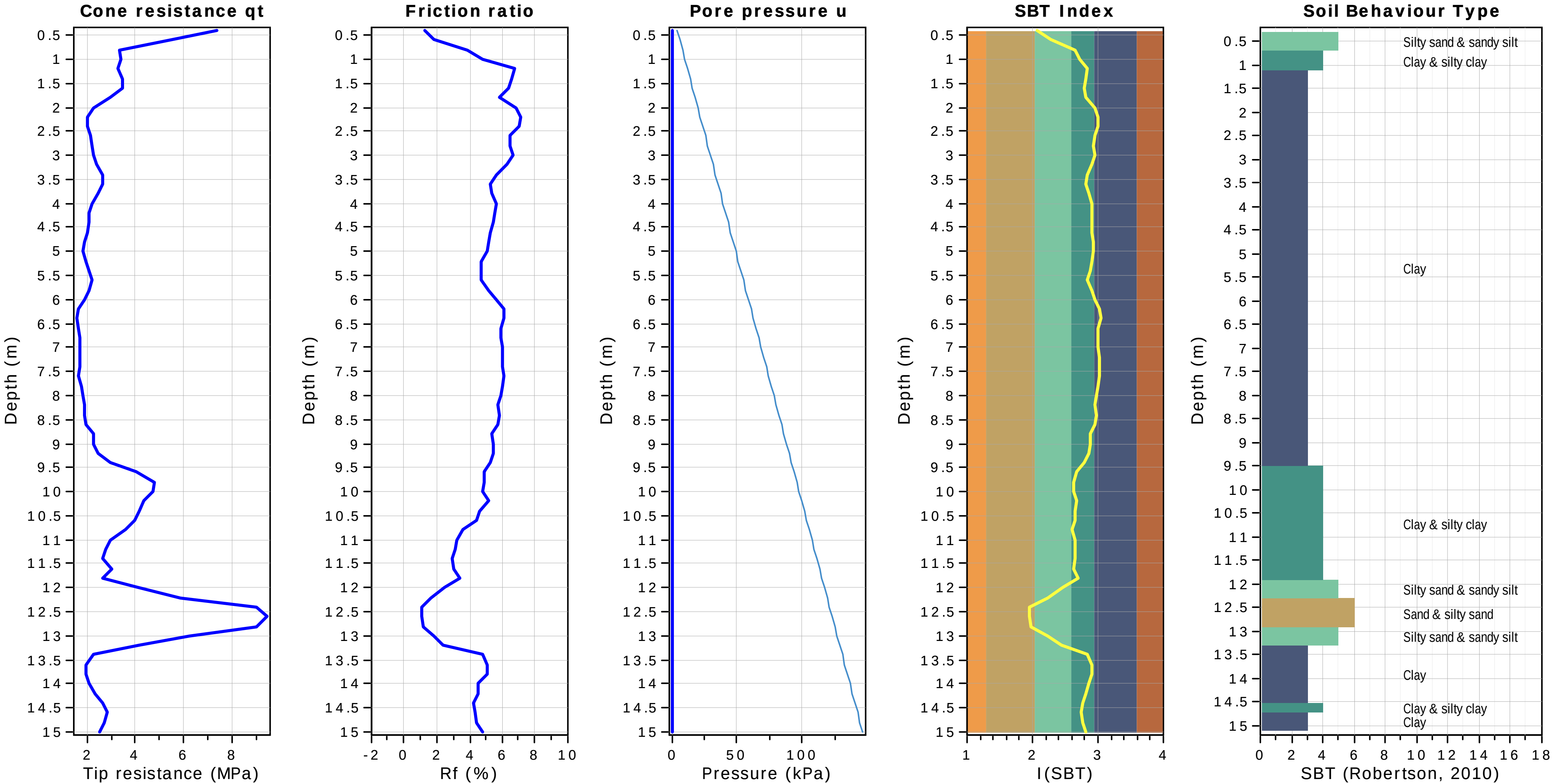
CPT: 036021P61CPT61
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

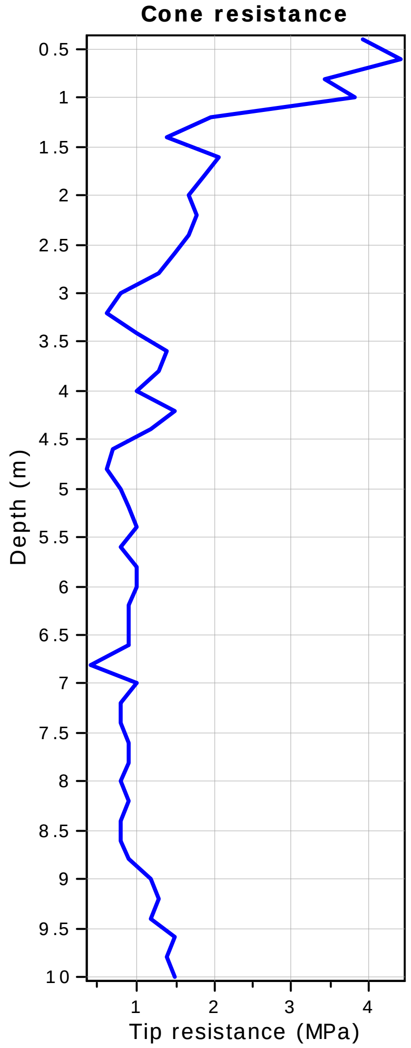


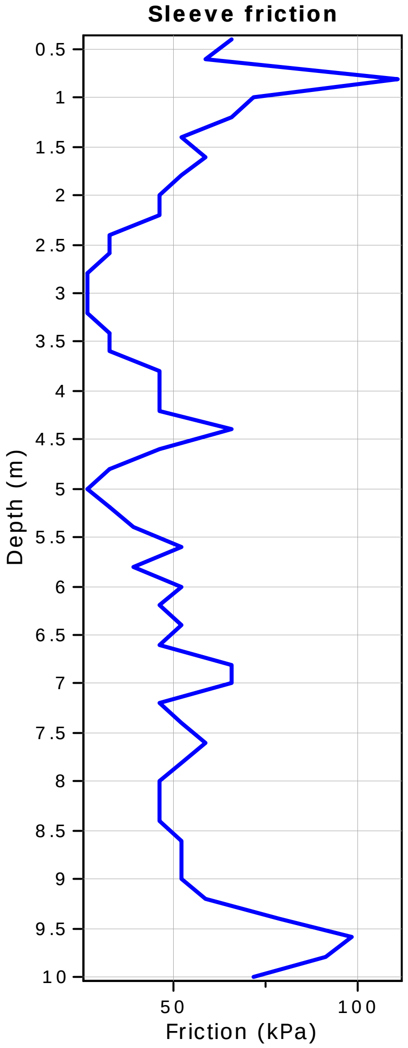
SBT legend

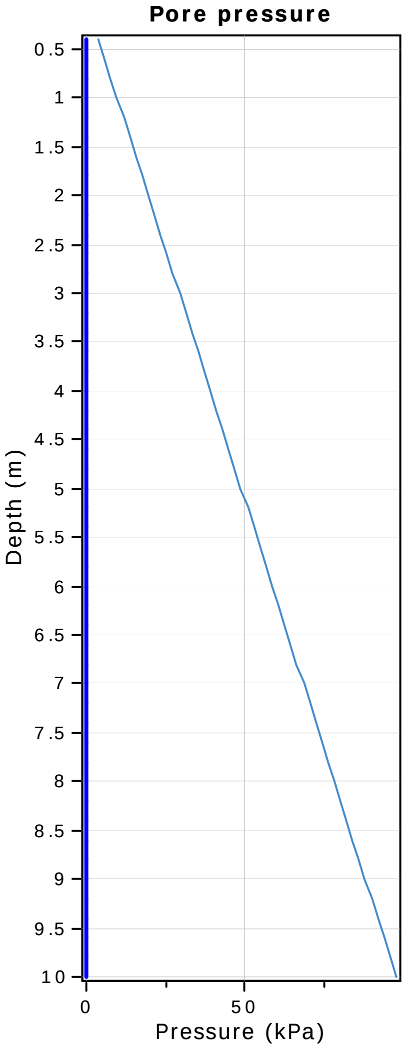
🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟫 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

CPT: 036021P62CPT62
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

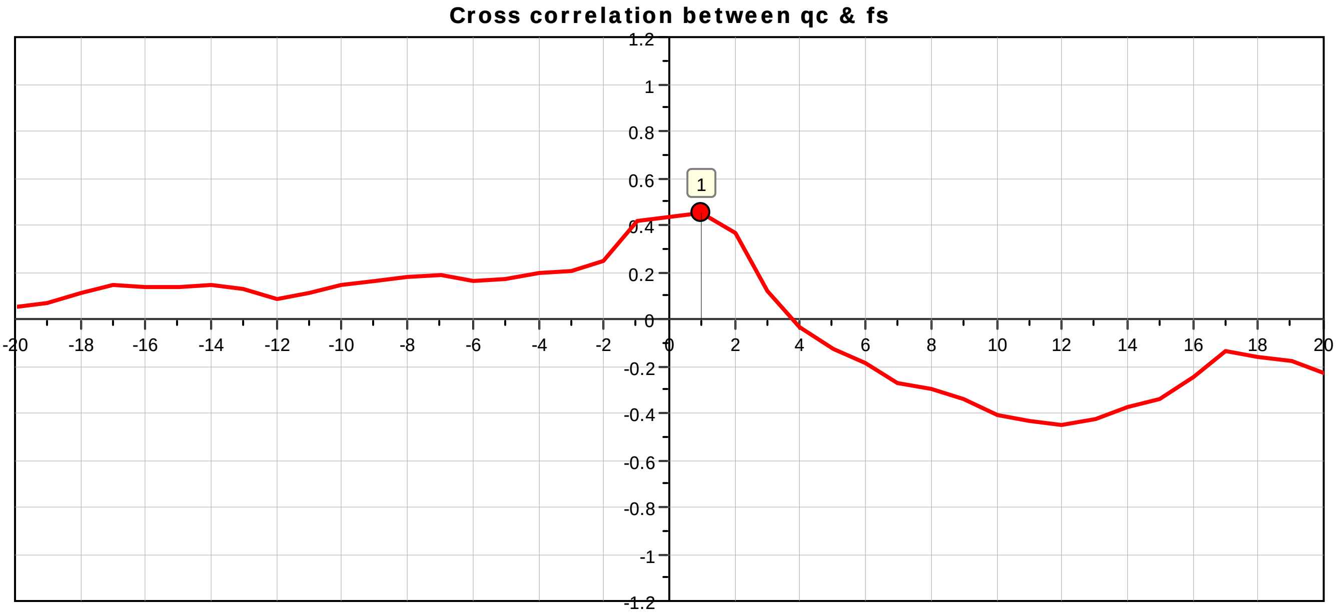
Project:
Location:


Cone resistance


Sleeve friction

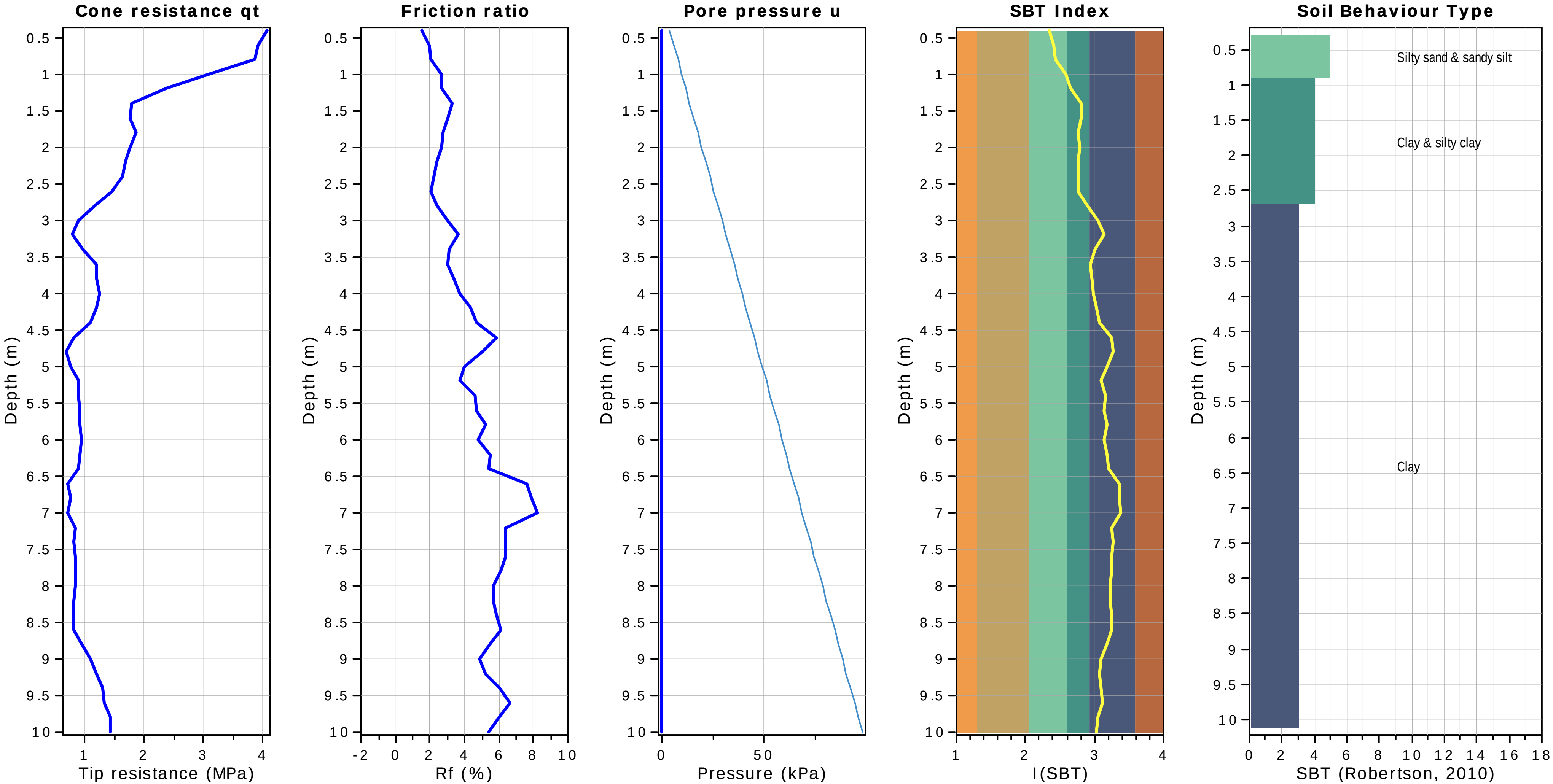

Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

CPT: 036021P62CPT62
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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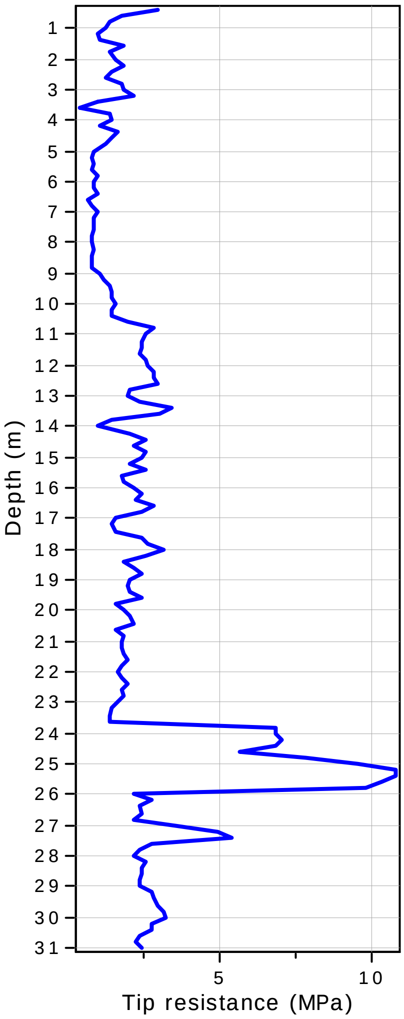
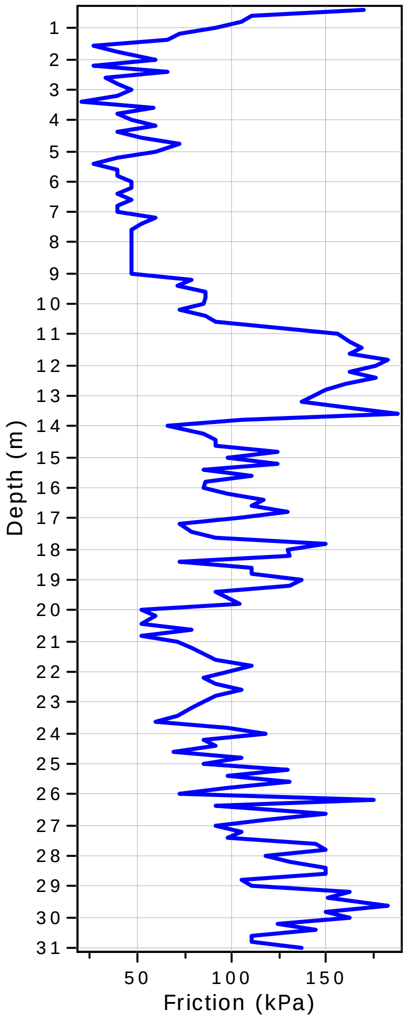
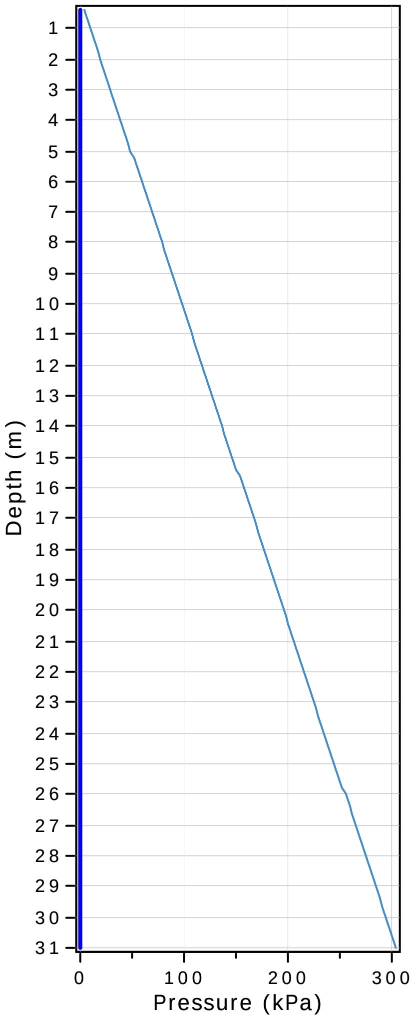
CPT: 036021P64CPT64
Total depth: 31.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

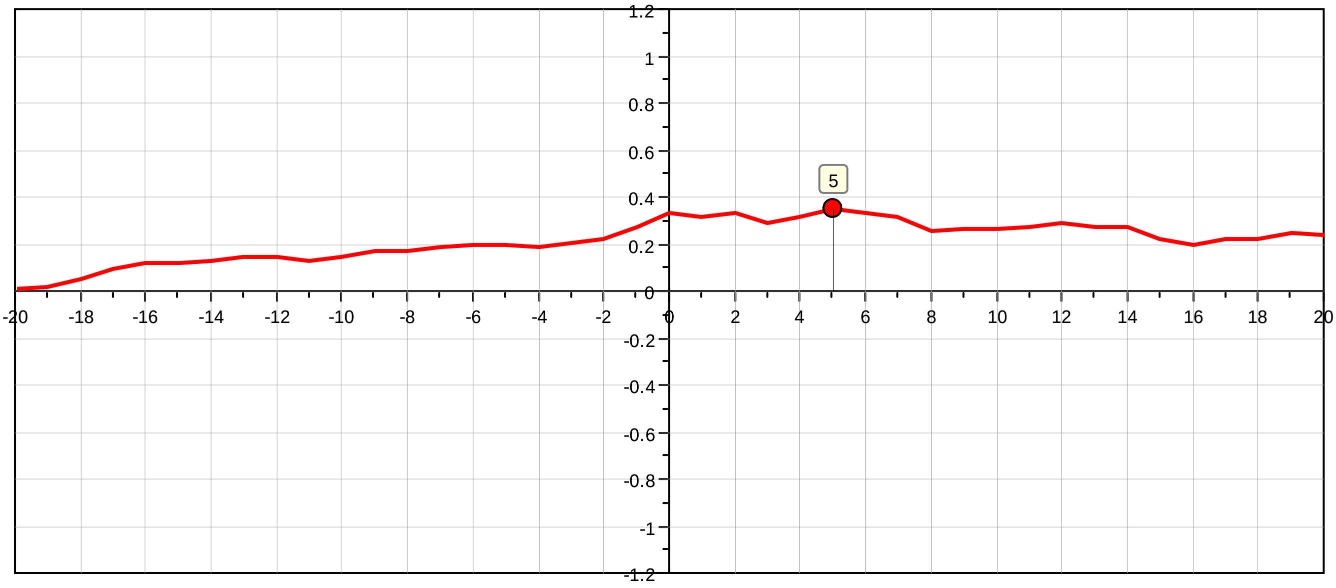
Project:
Location:


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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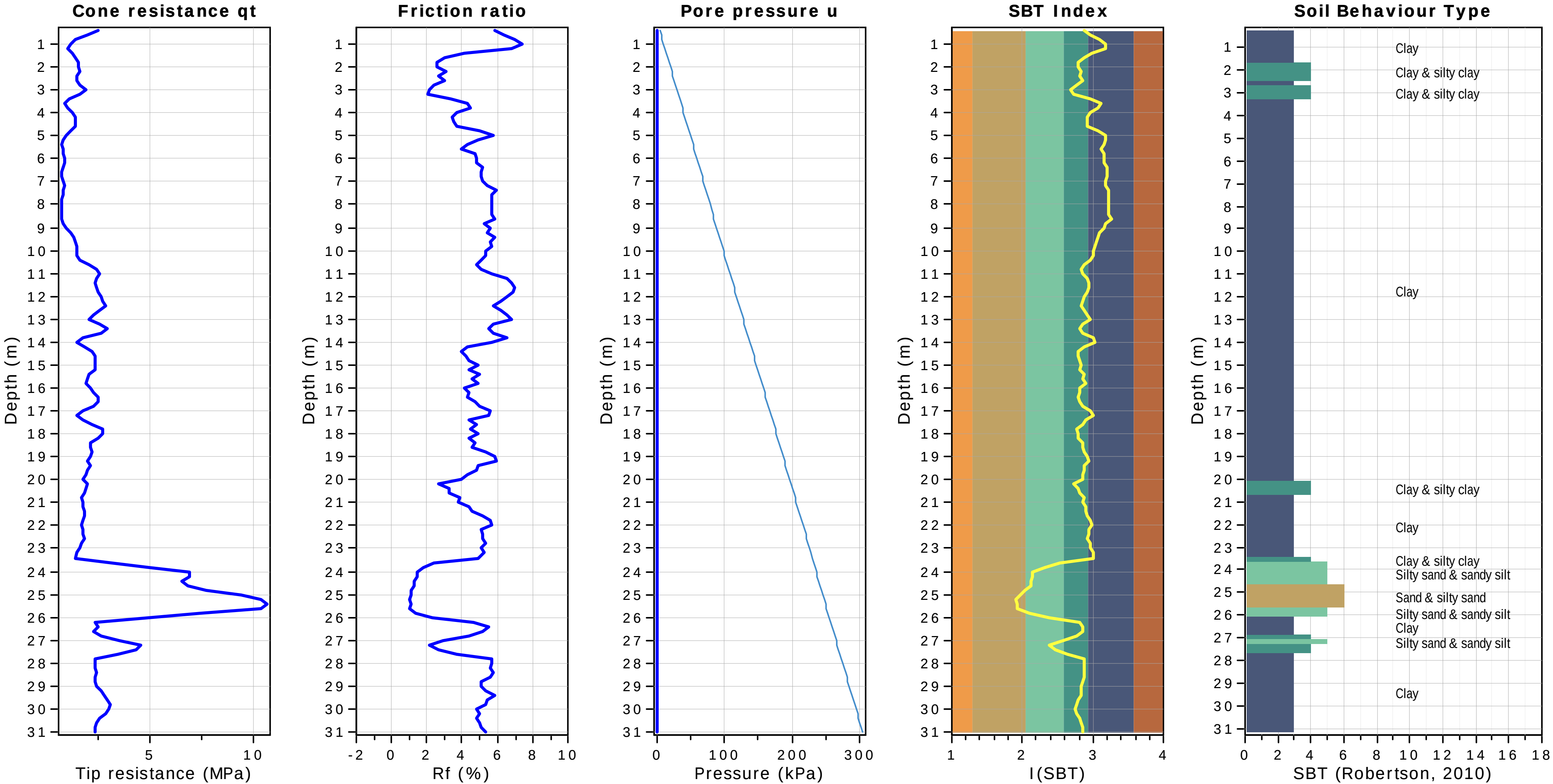
CPT: 036021P64CPT64
Total depth: 31.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

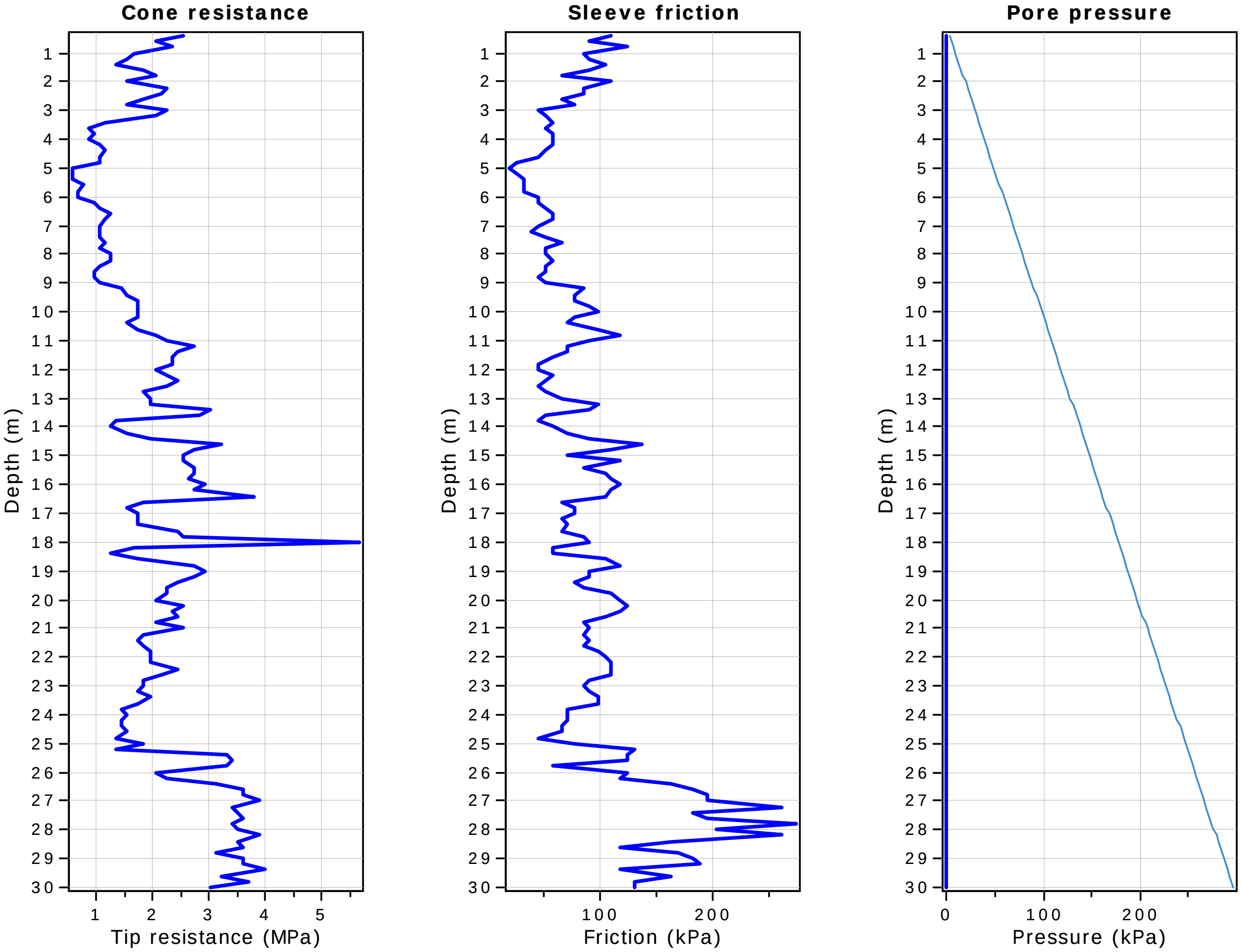


SBT legend

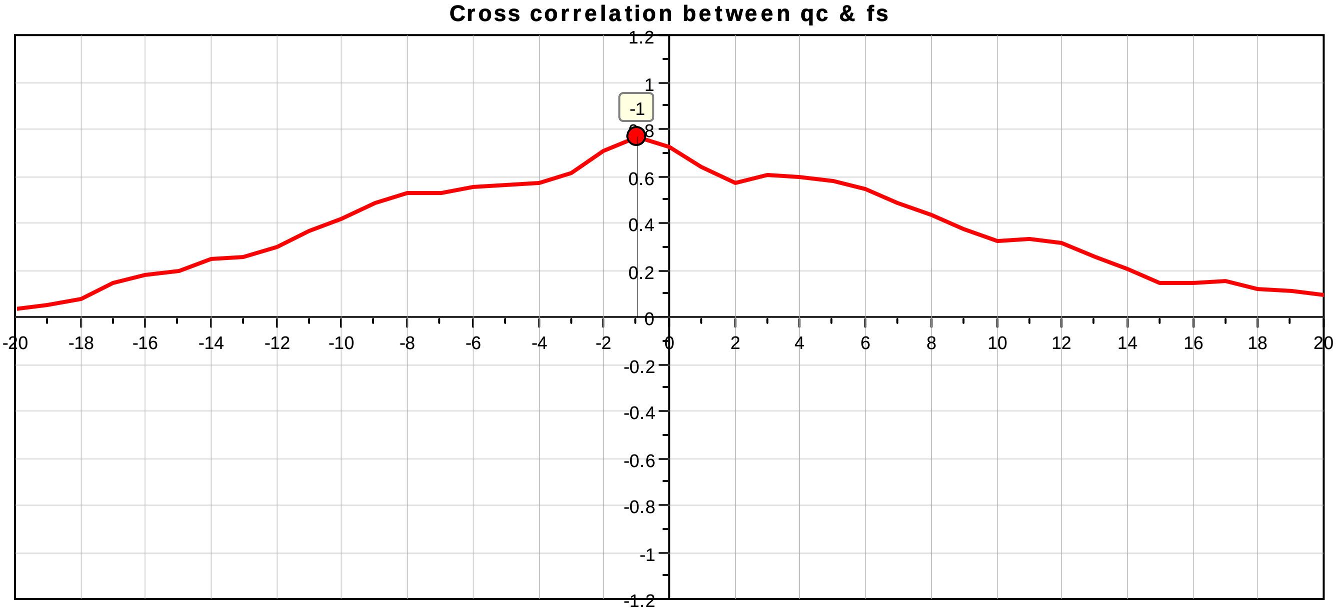
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬛ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

CPT: 036021P65CPT65
Total depth: 30.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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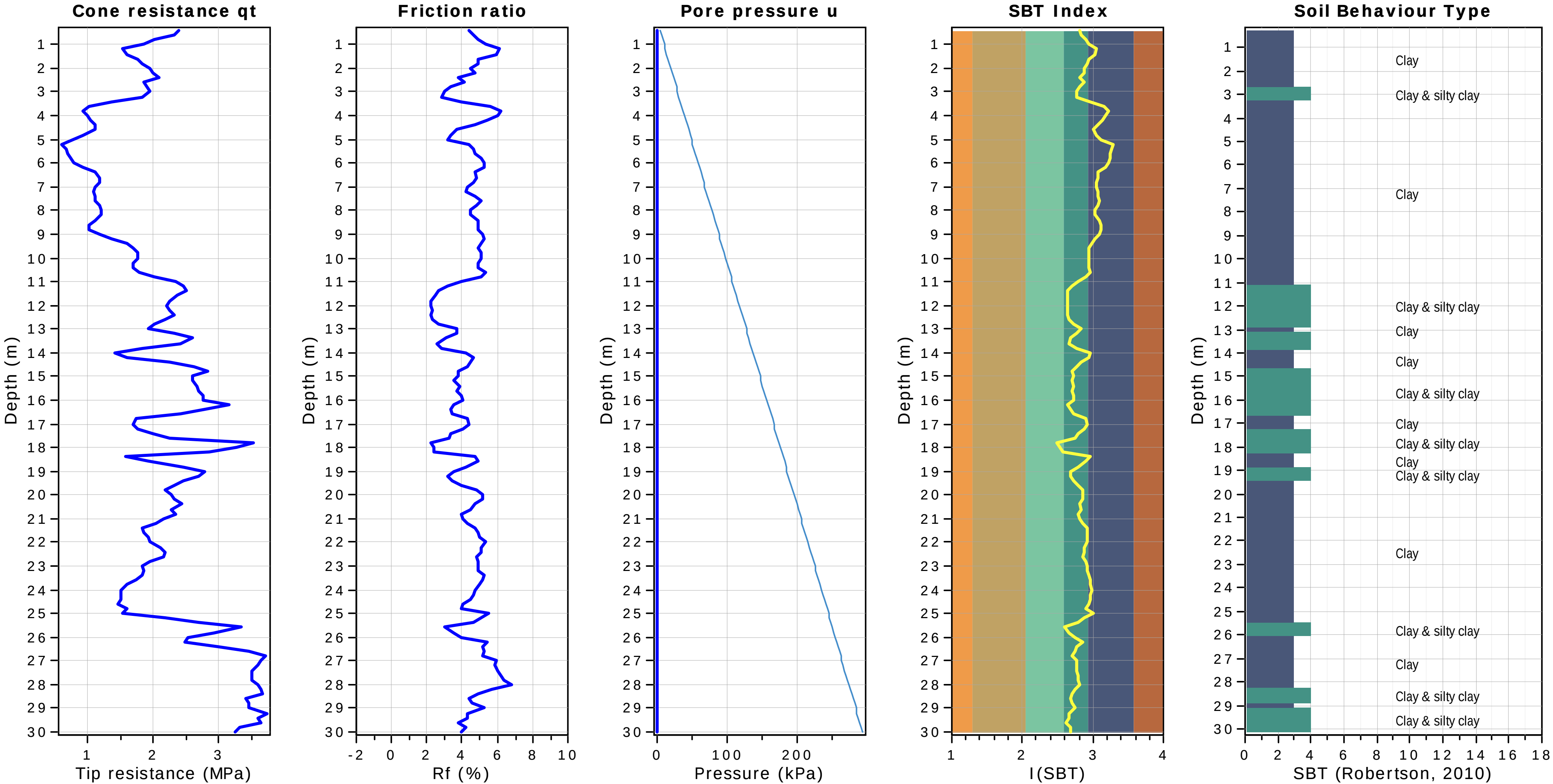
CPT: 036021P65CPT65
Total depth: 30.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

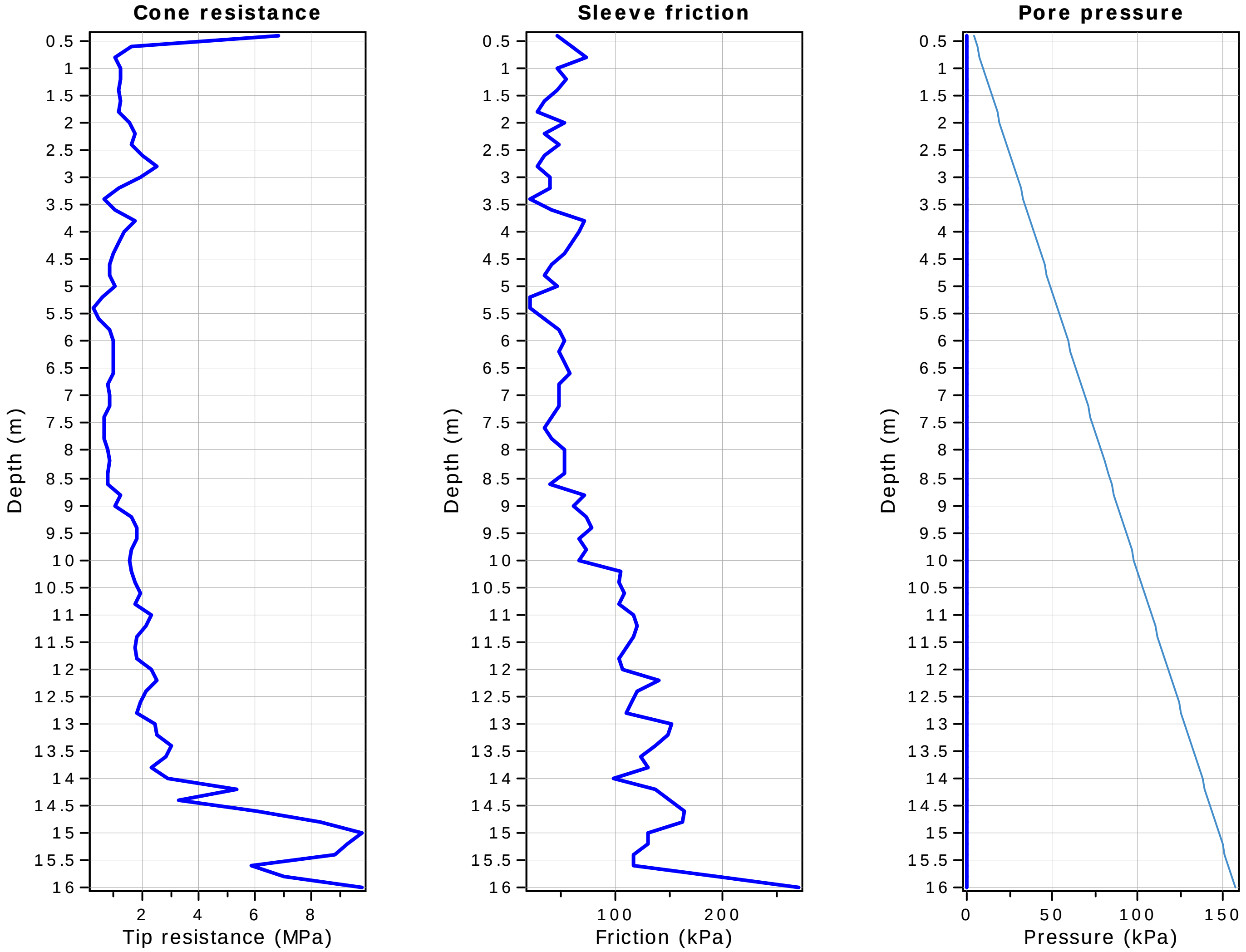


SBT legend

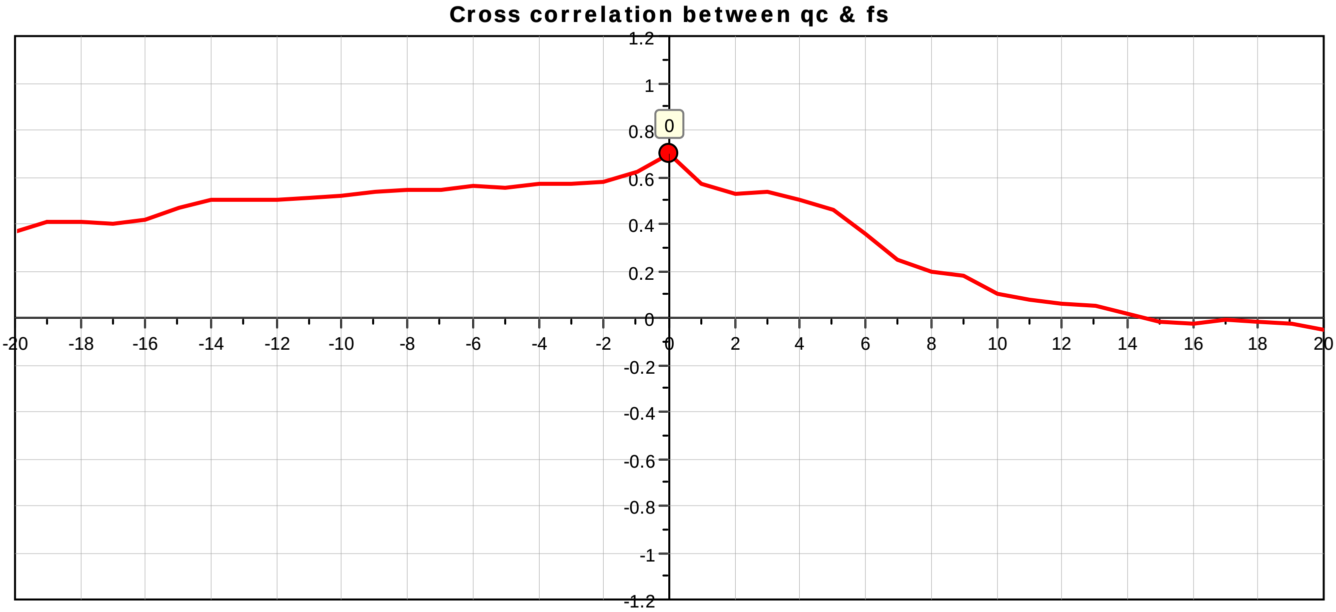
🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟫 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

CPT: 036021P66CPT66
Total depth: 16.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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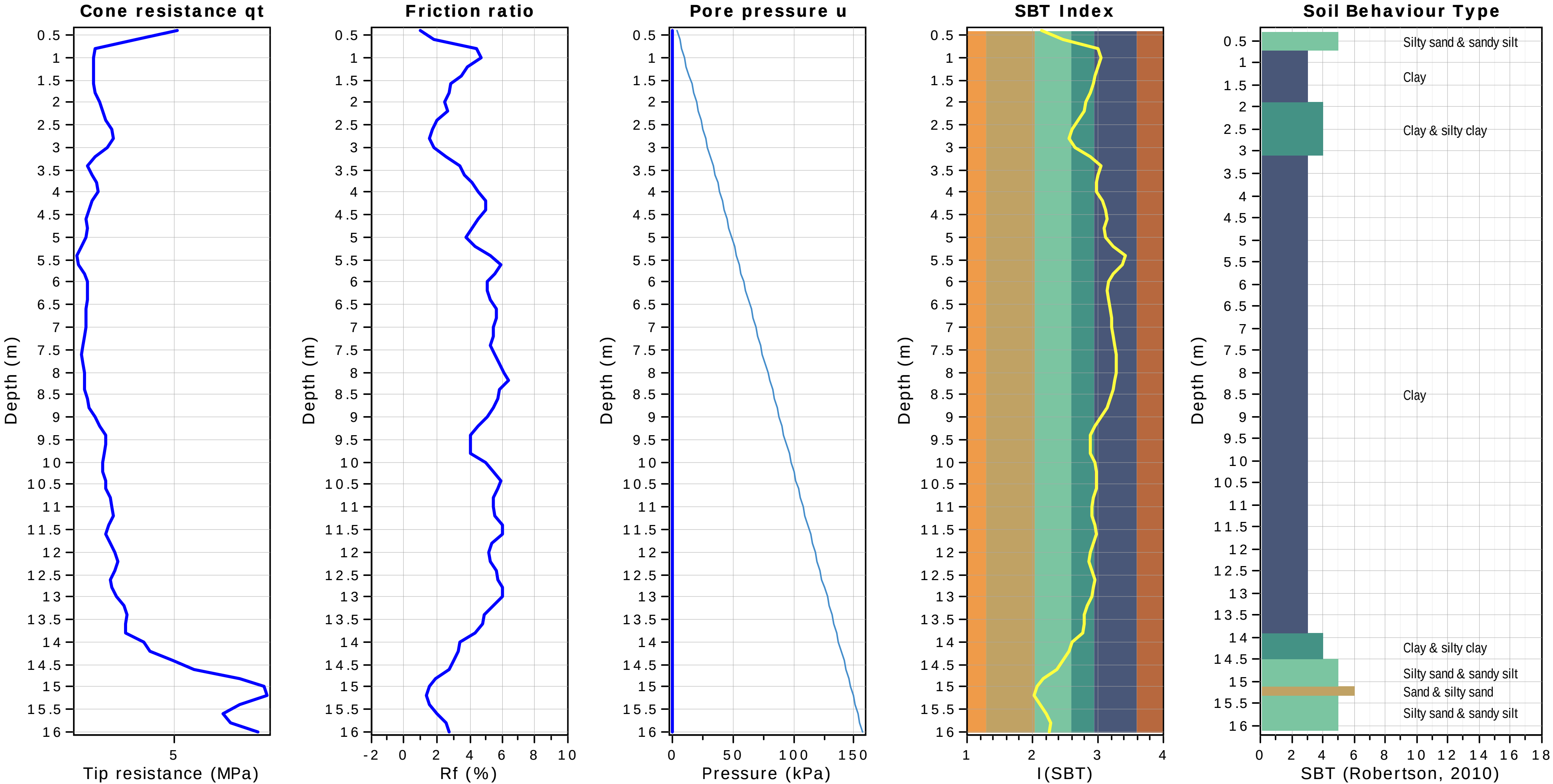
CPT: 036021P66CPT66
Total depth: 16.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



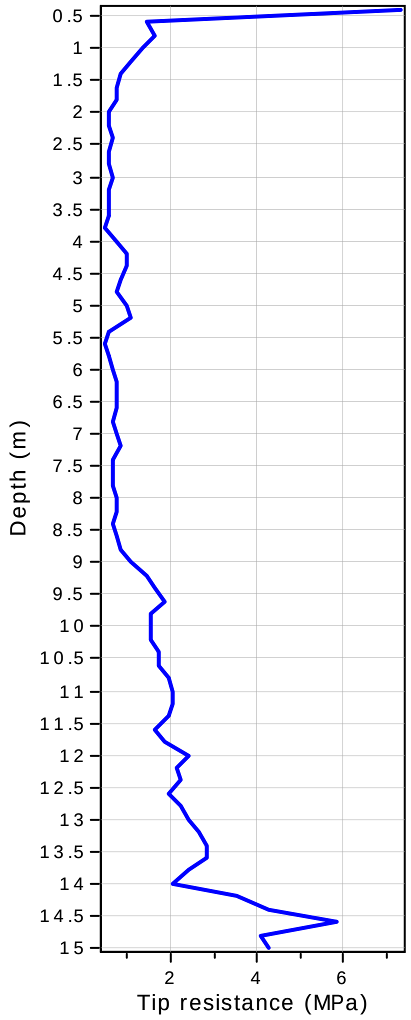
SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

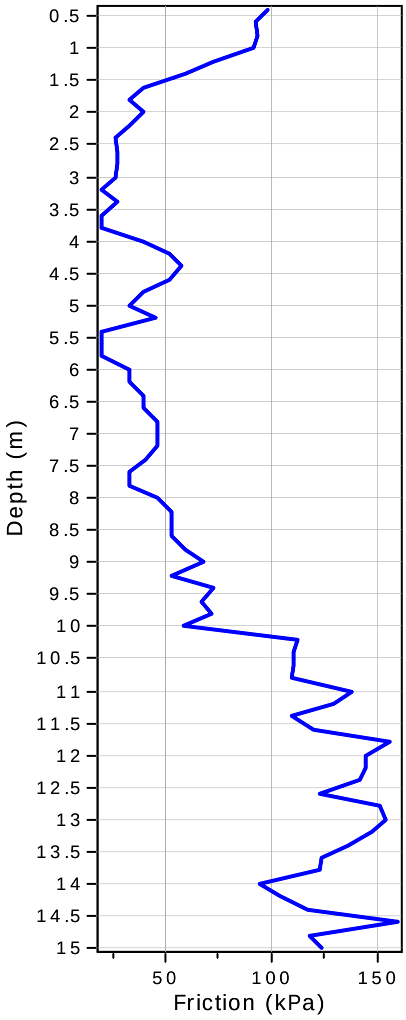
CPT: 036021P67CPT67
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

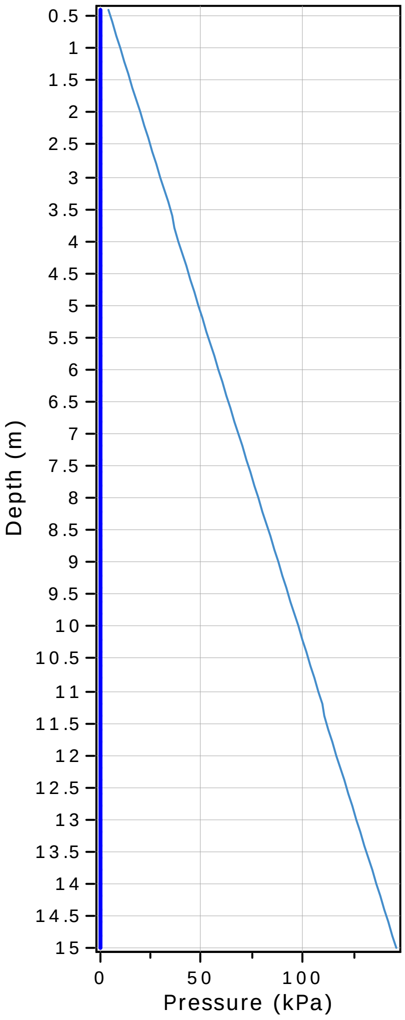
Cone resistance



Sleeve friction

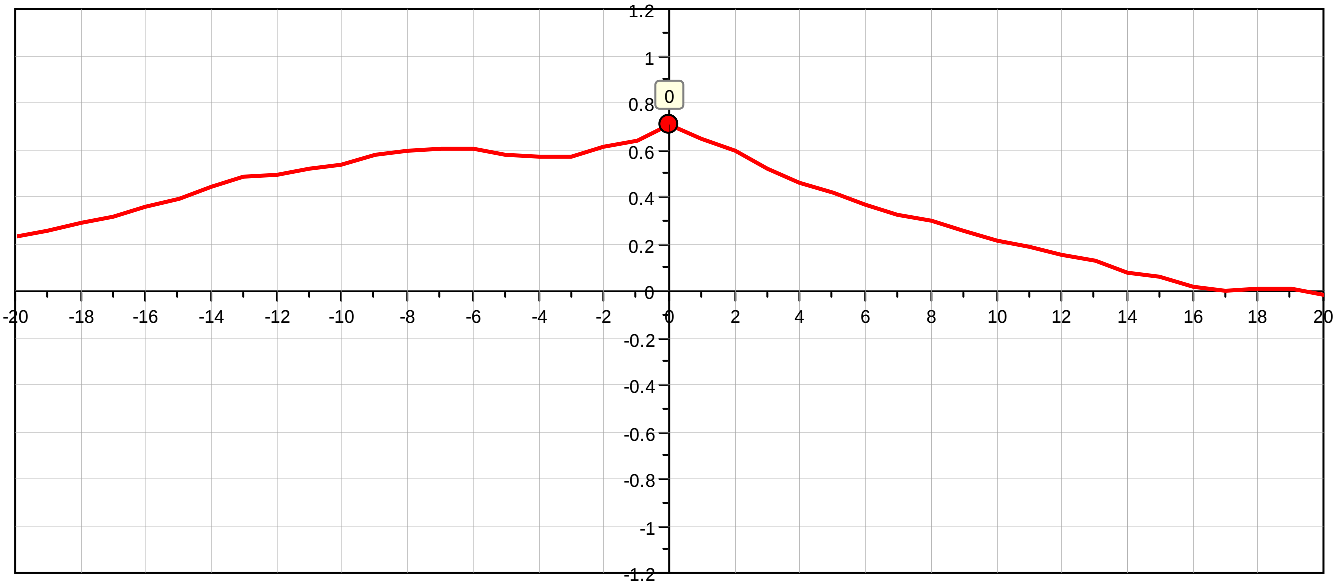


Pore pressure



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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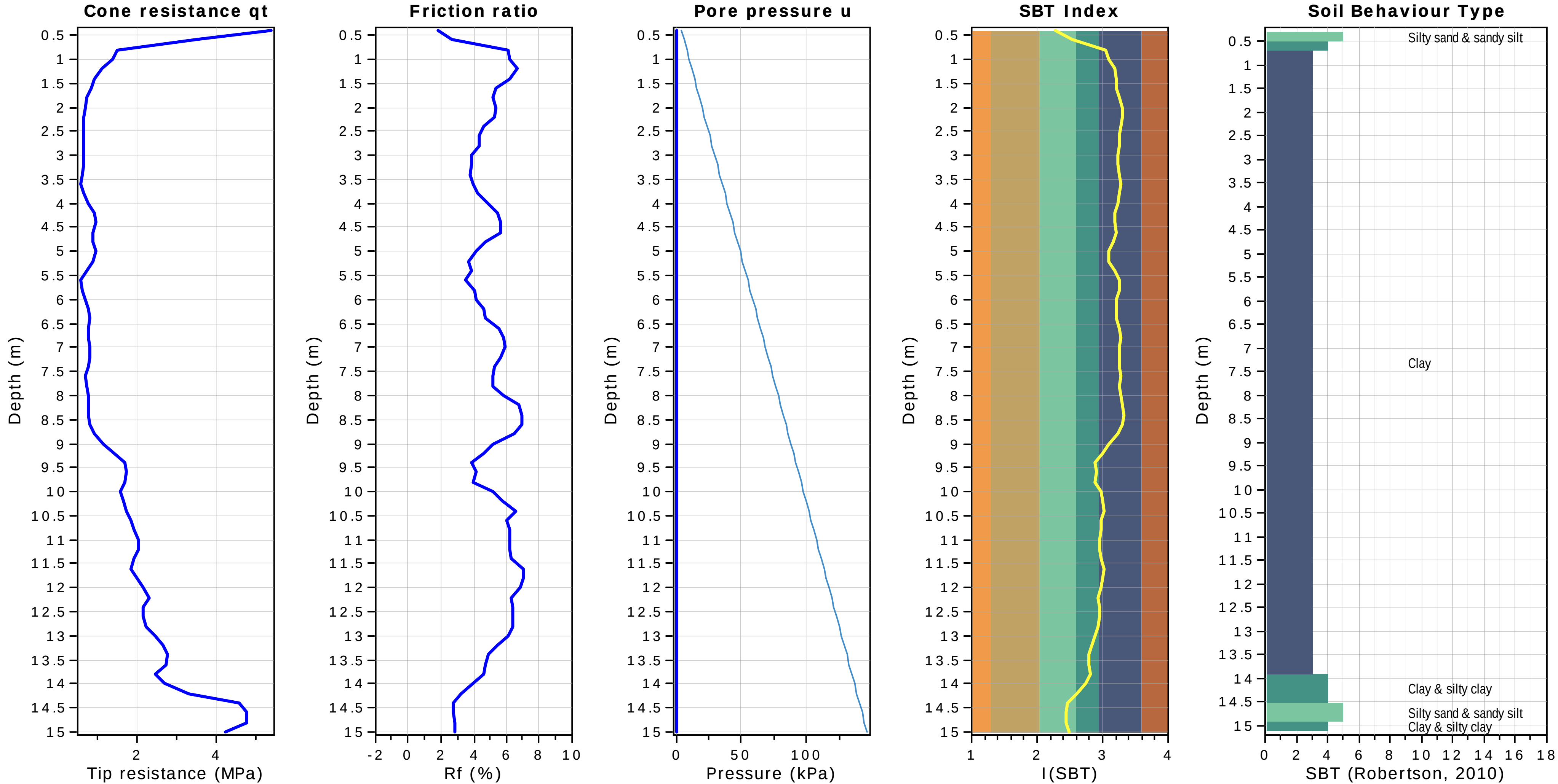
CPT: 036021P67CPT67
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

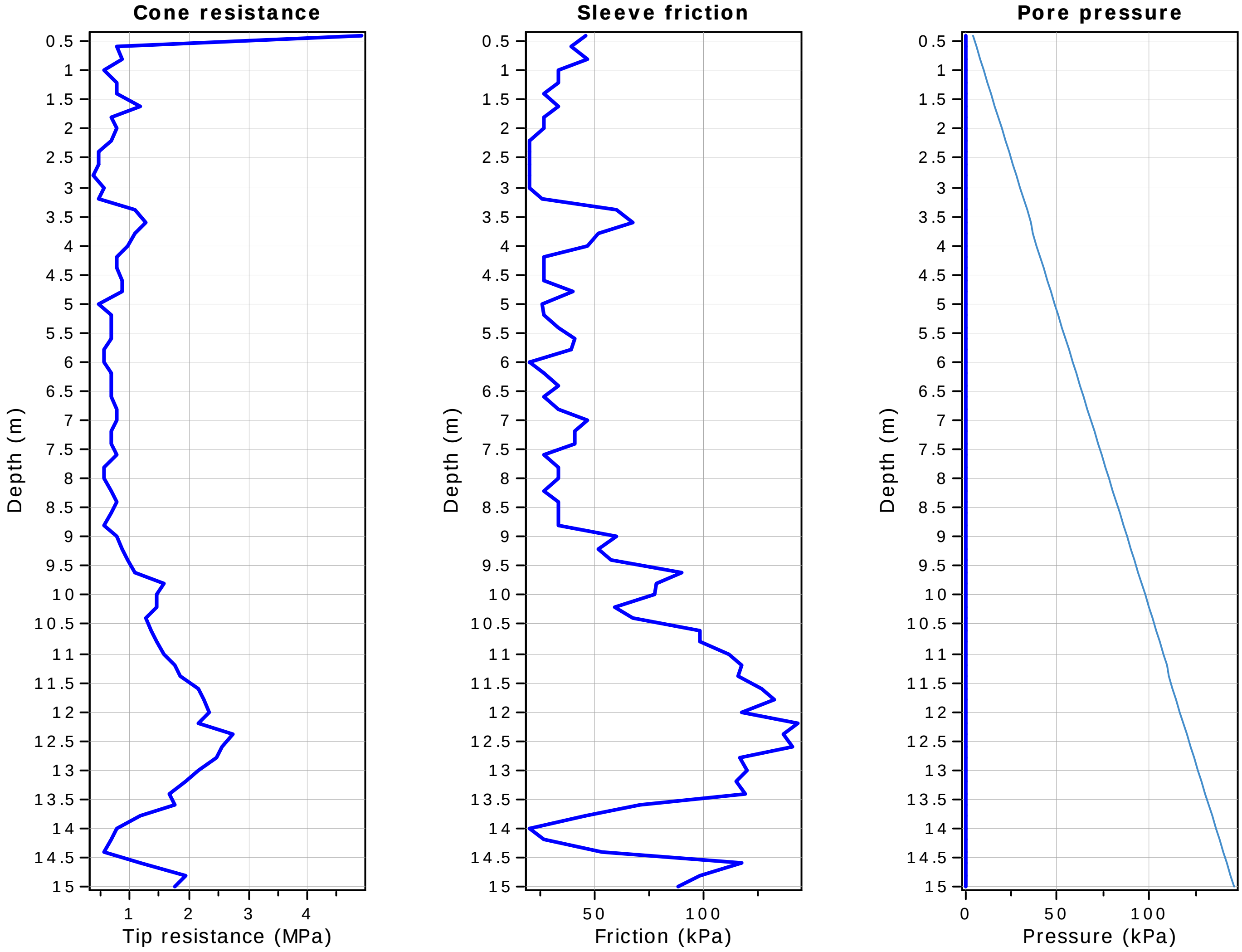


SBT legend

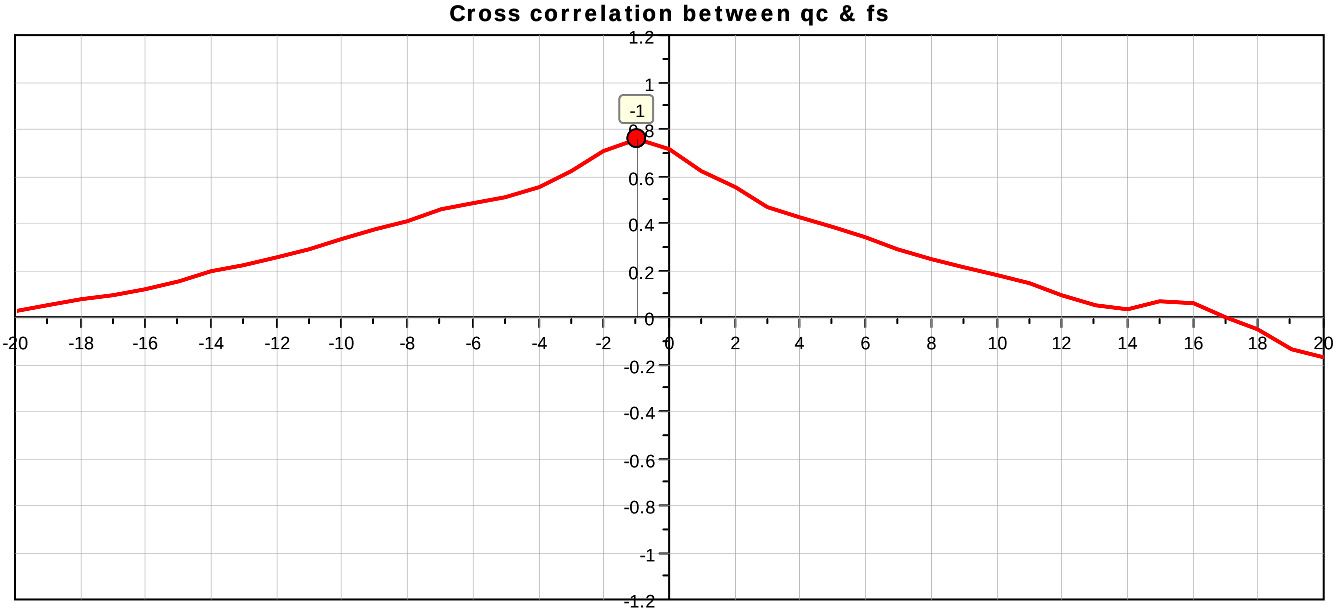
🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟫 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

CPT: 036021P68CPT68
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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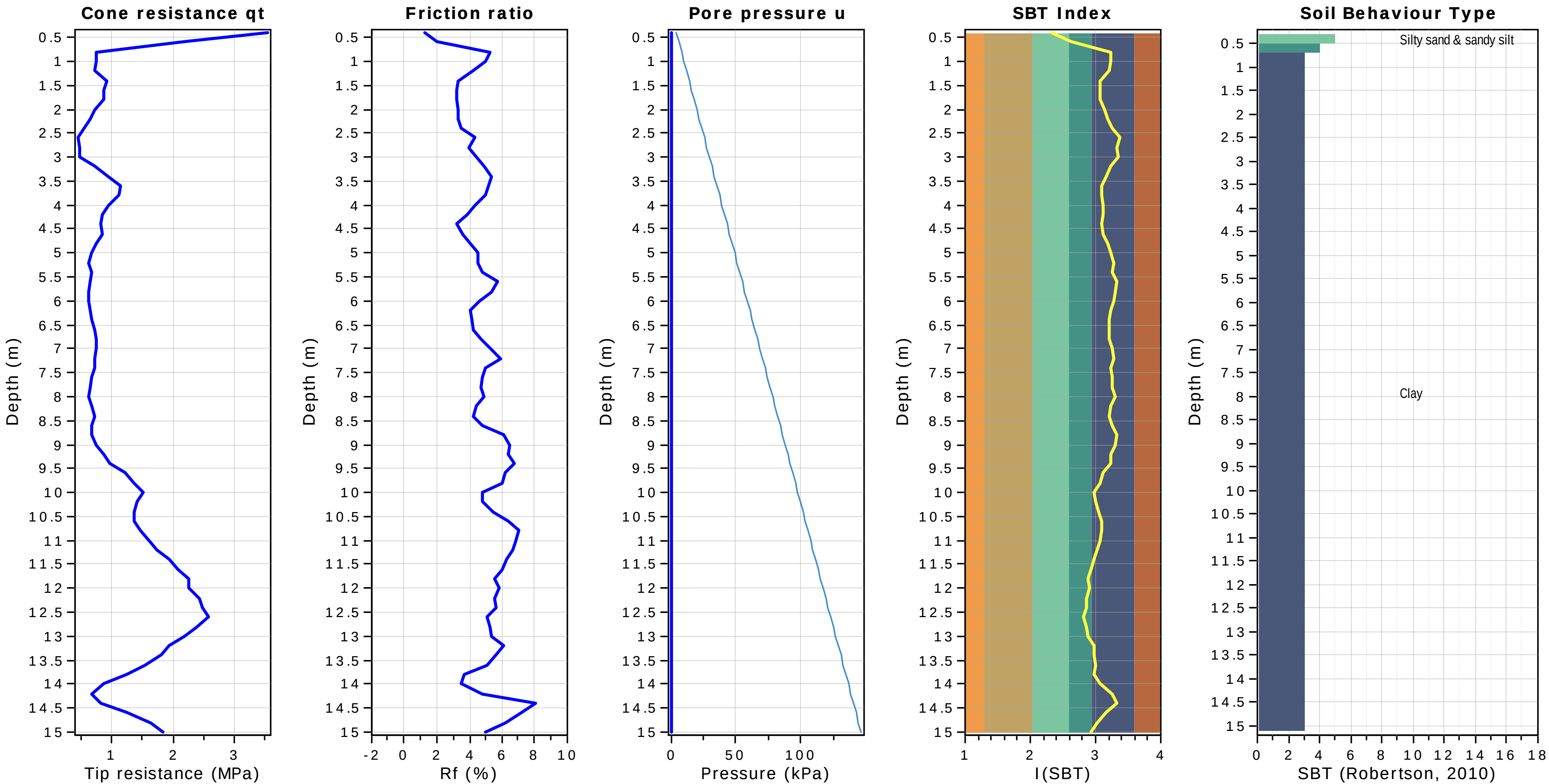
CPT: 036021P68CPT68
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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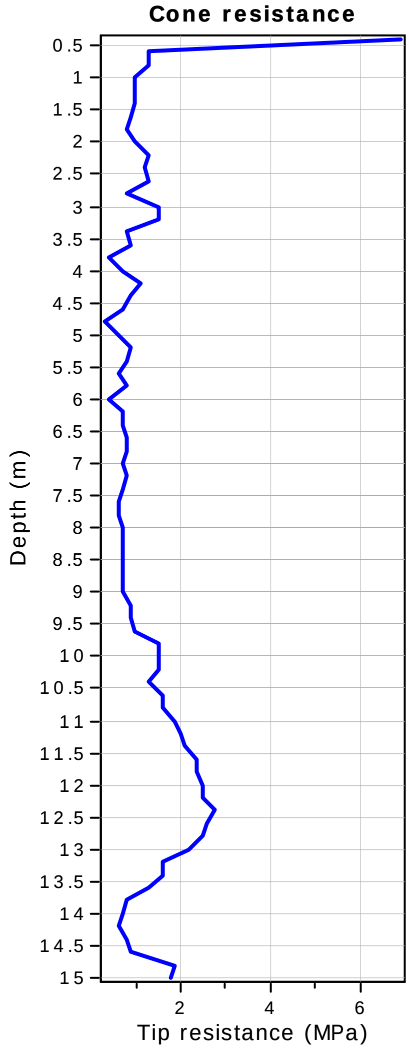
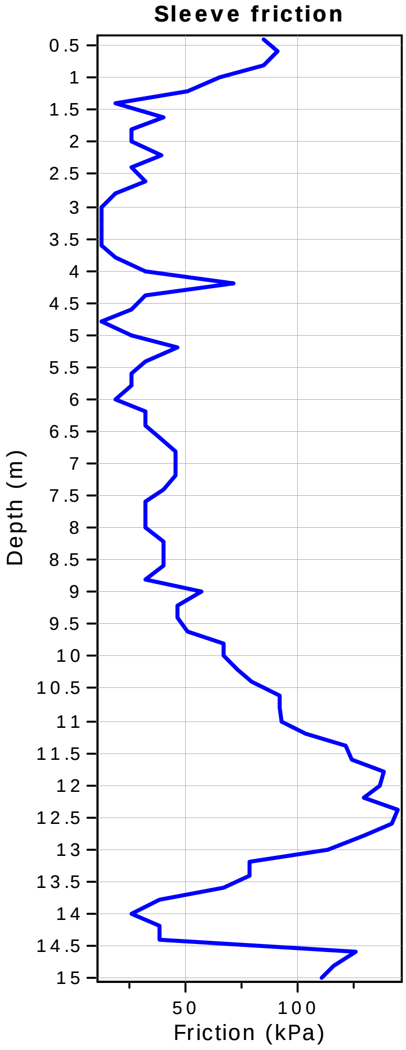
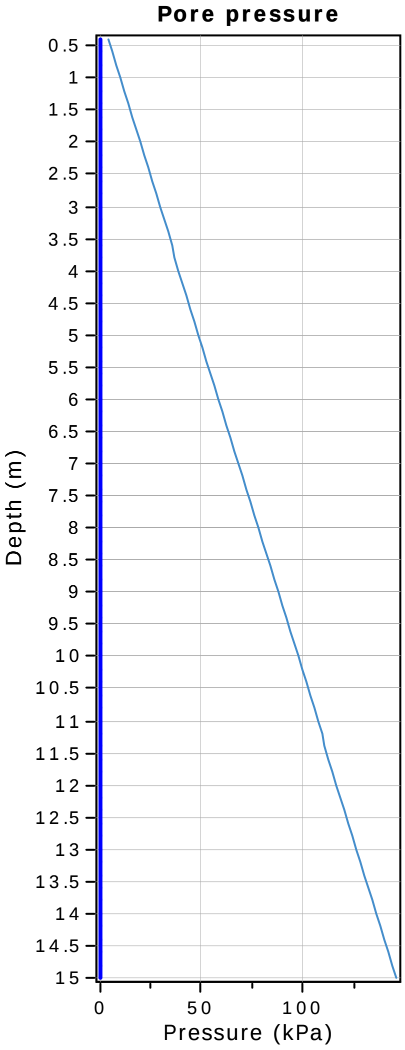
CPT: 036021P69CPT69
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

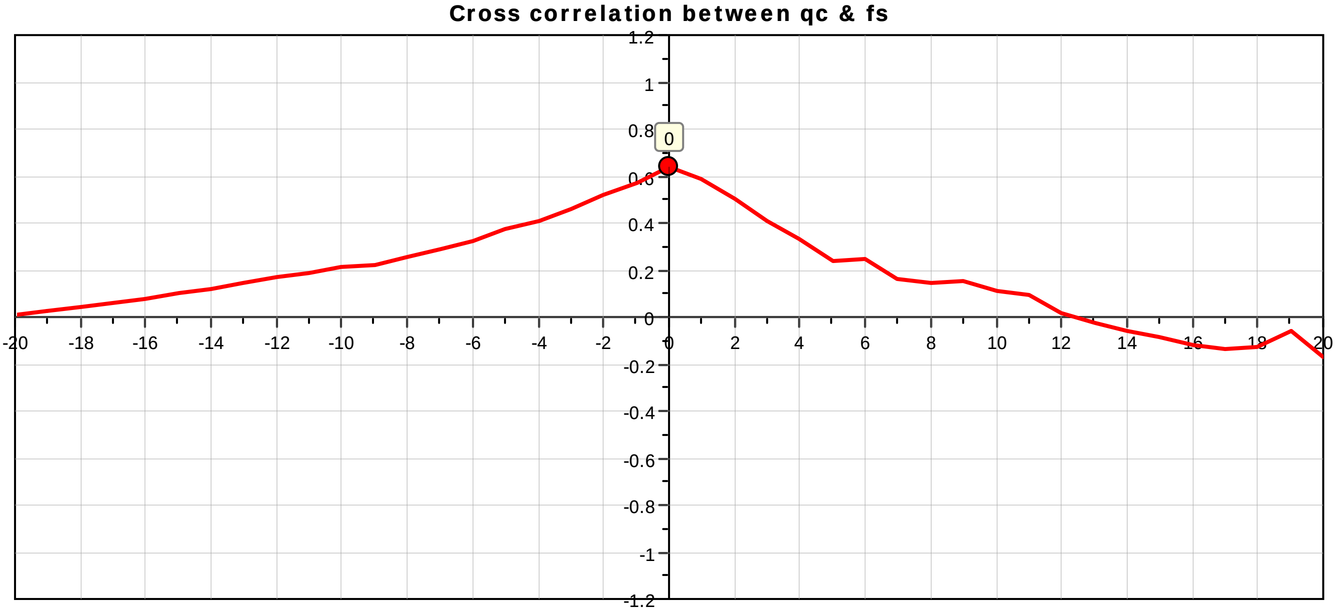
Project:
Location:


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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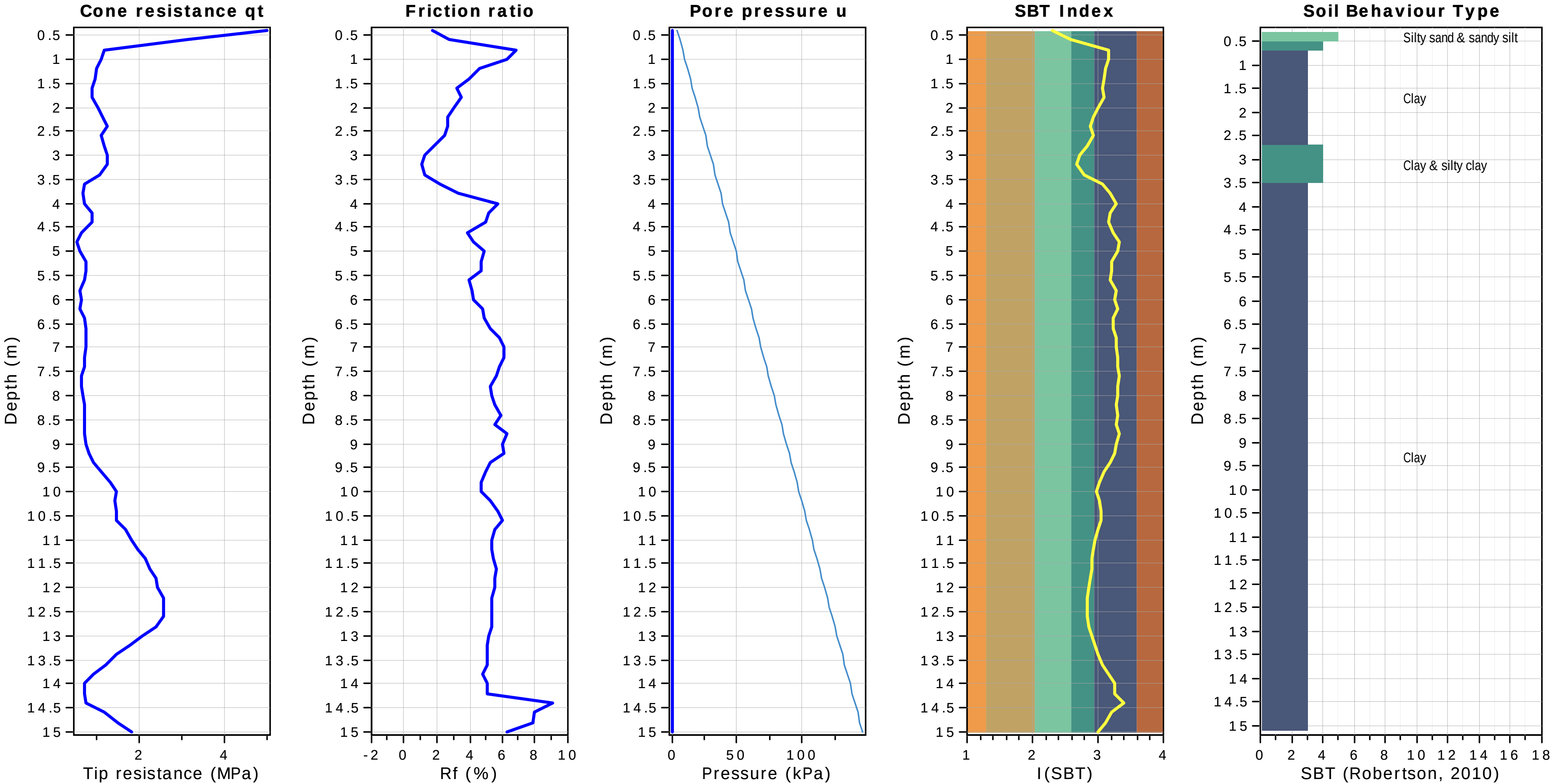
CPT: 036021P69CPT69
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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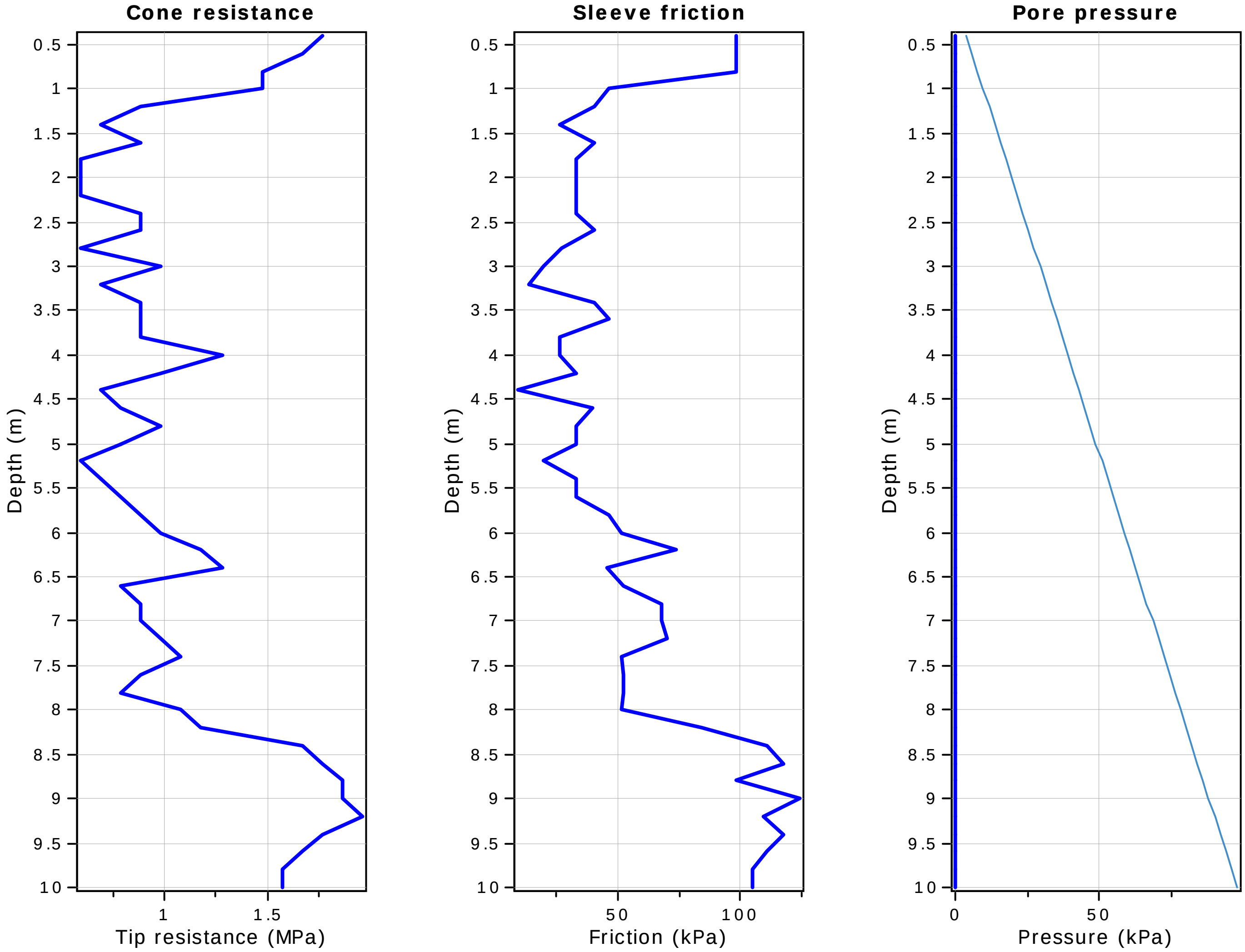
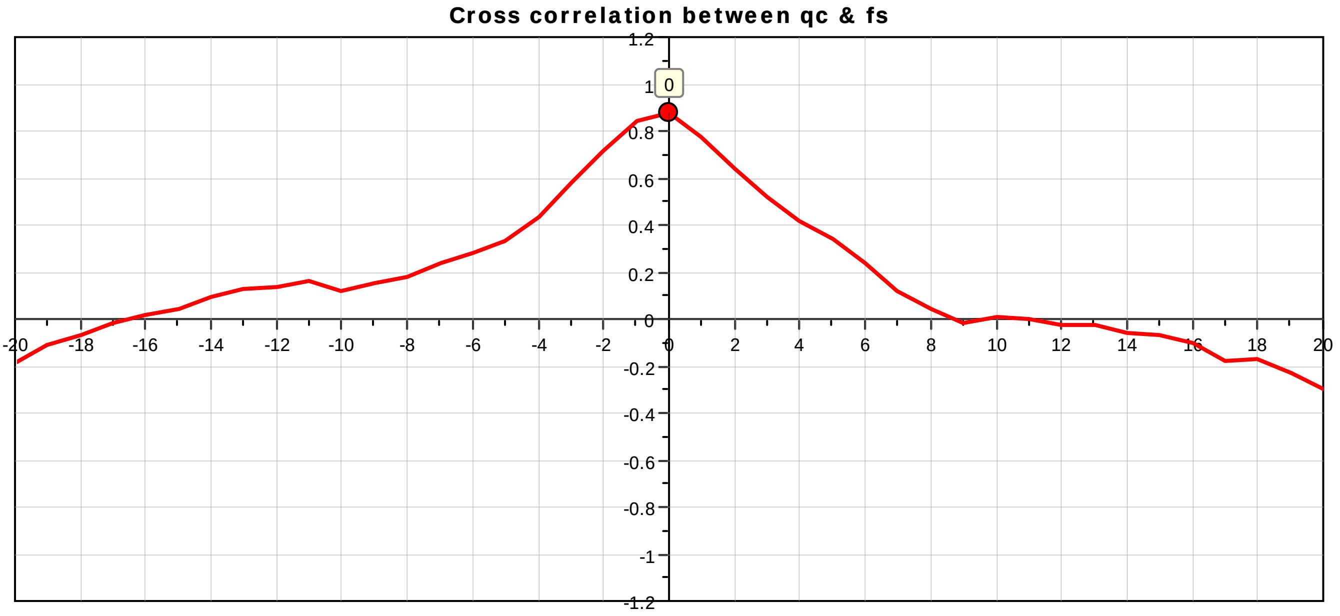
CPT: 036021P74CPT74
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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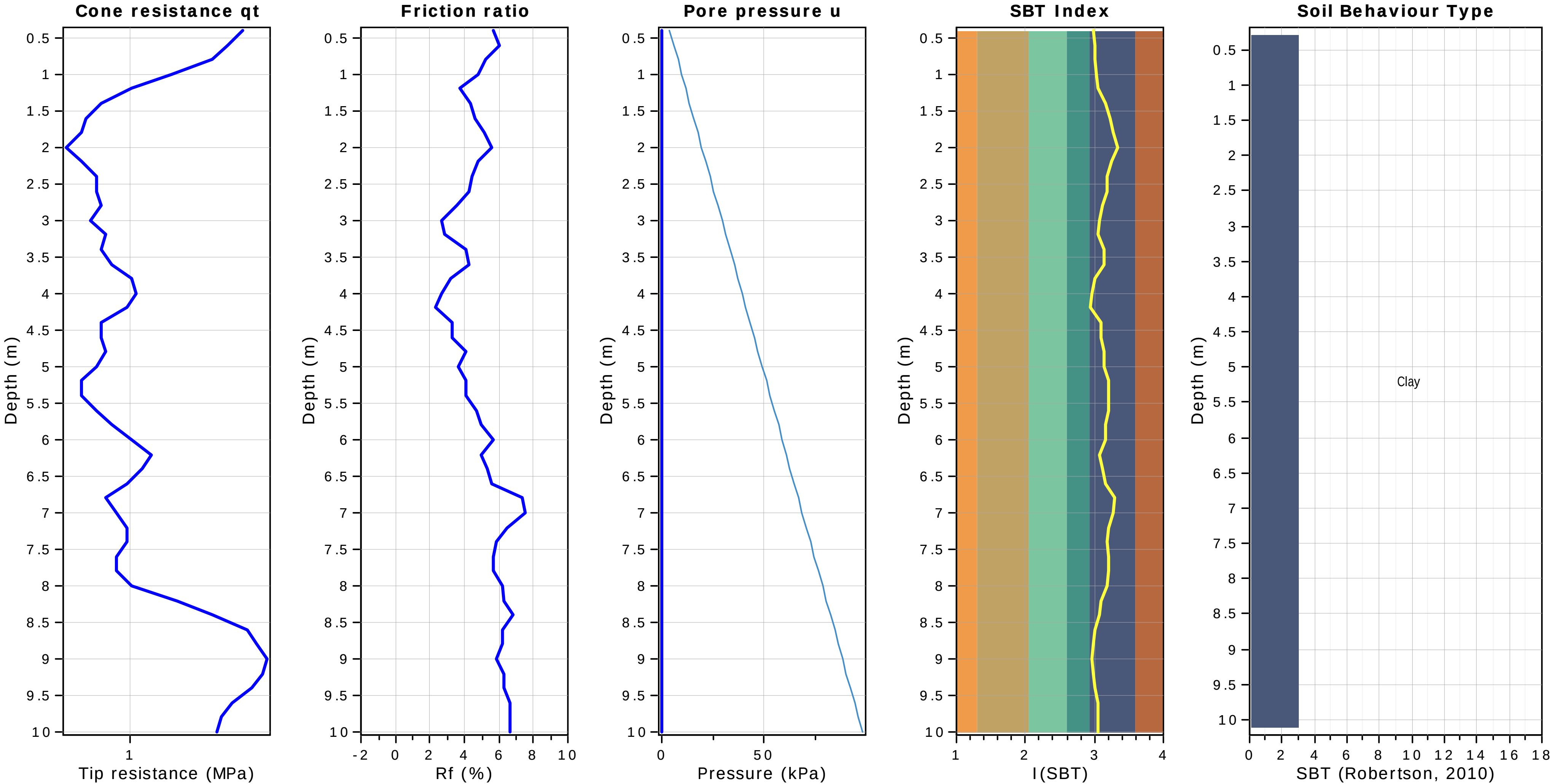
CPT: 036021P74CPT74
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

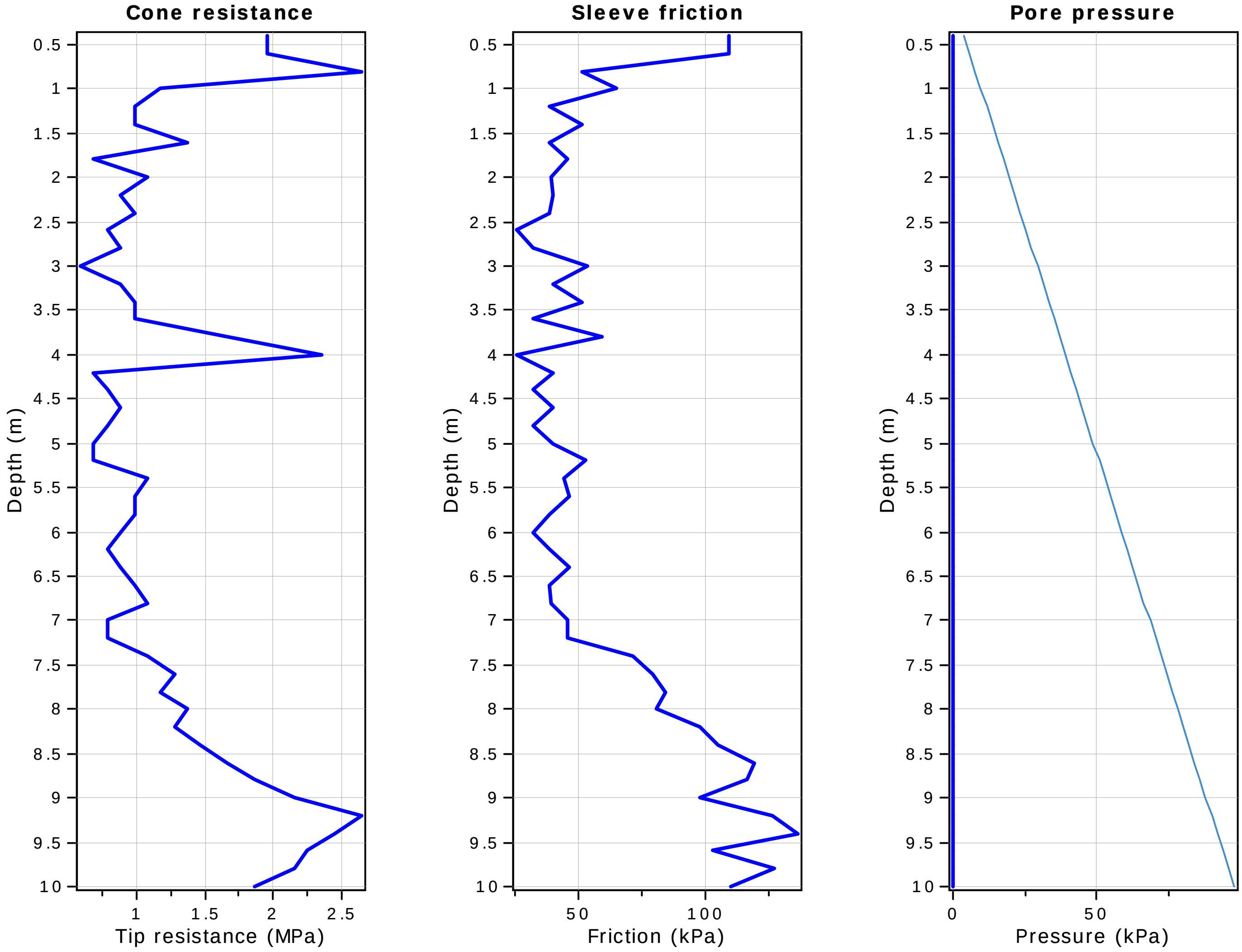


SBT legend

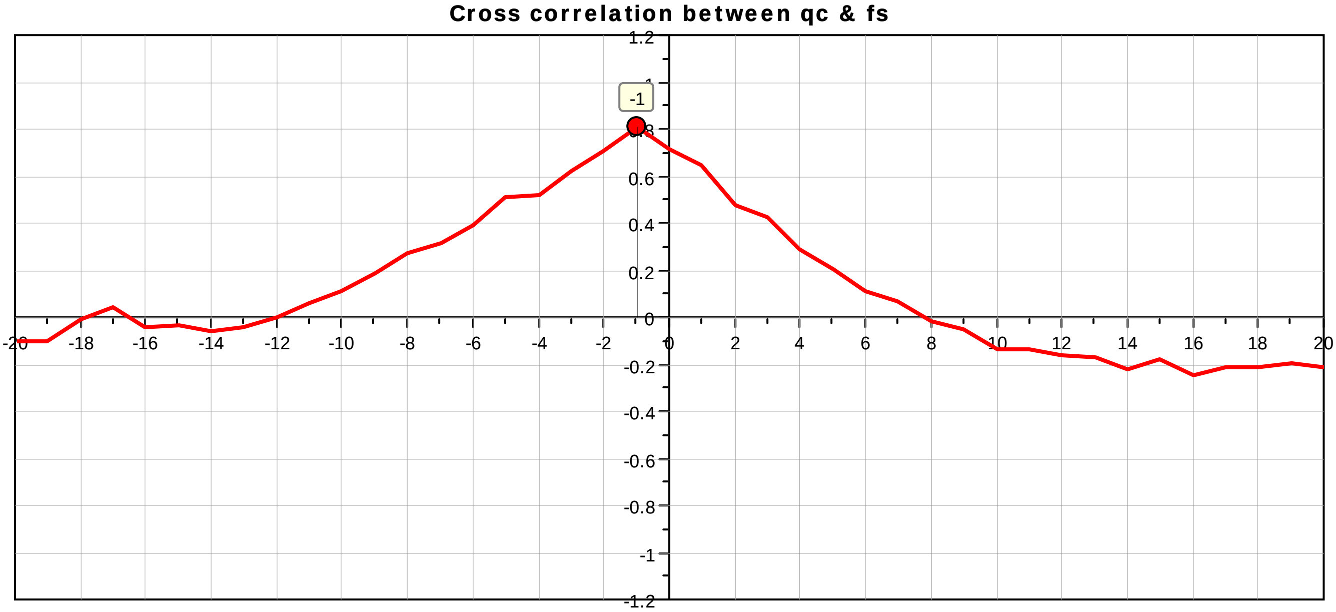
🟥 1. Sensitive fine grained	■ 4. Clayey silt to silty clay	■ 7. Gravely sand to sand
■ 2. Organic material	■ 5. Silty sand to sandy silt	■ 8. Very stiff sand to clayey sand
■ 3. Clay to silty clay	■ 6. Clean sand to silty sand	□ 9. Very stiff fine grained

CPT: 036021P75CPT75
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

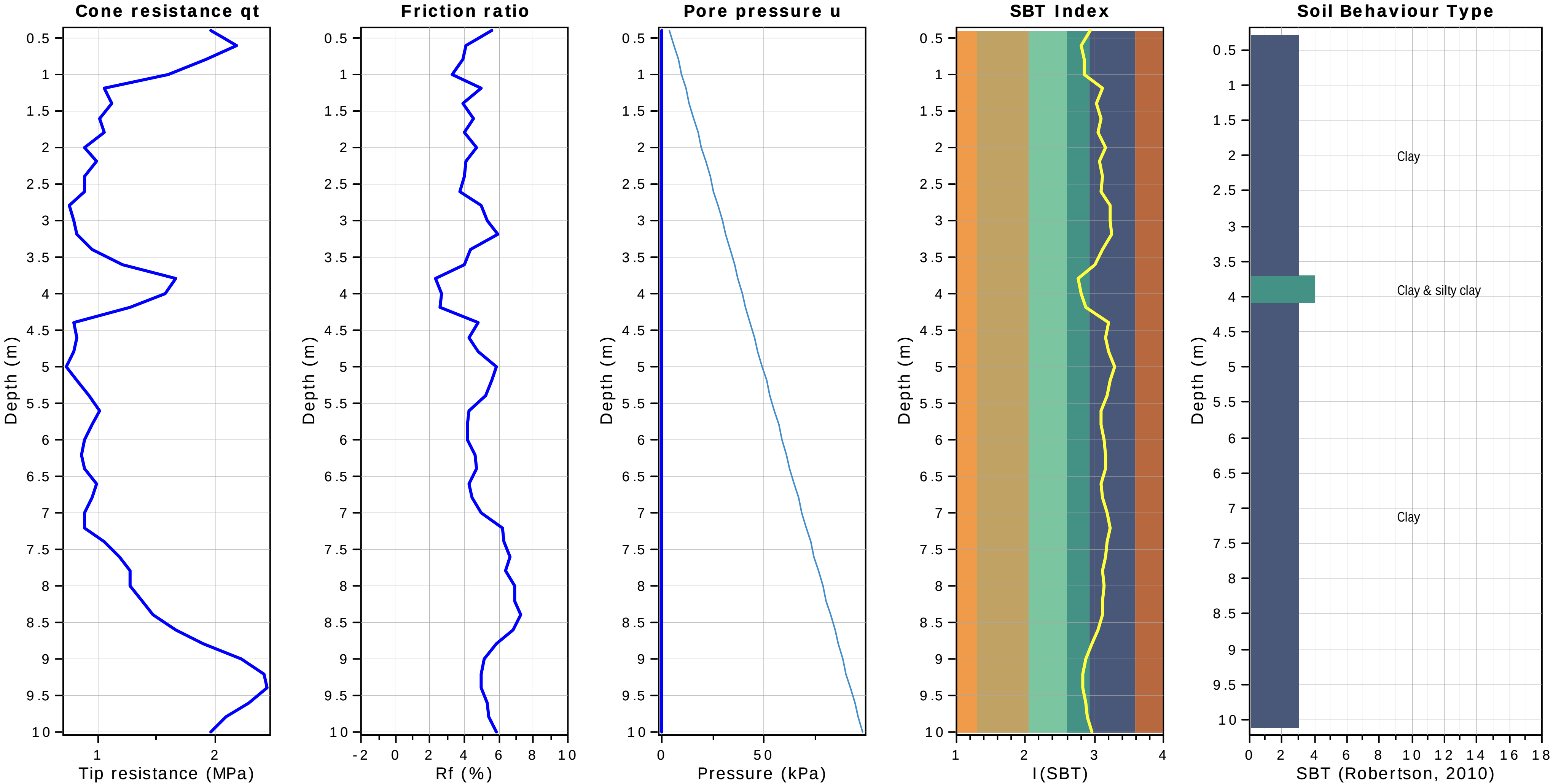


The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT: 036021P75CPT75
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

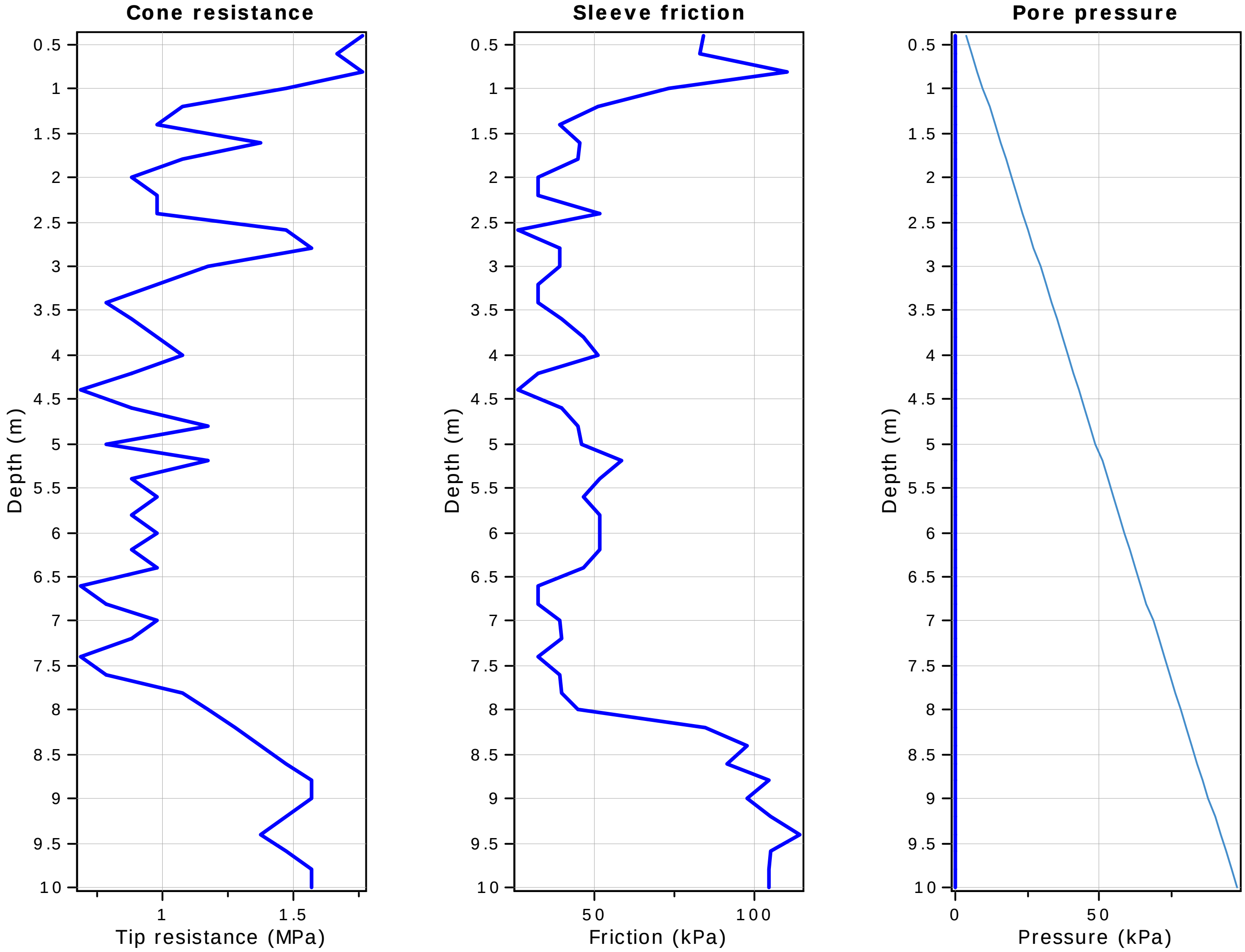


SBT legend

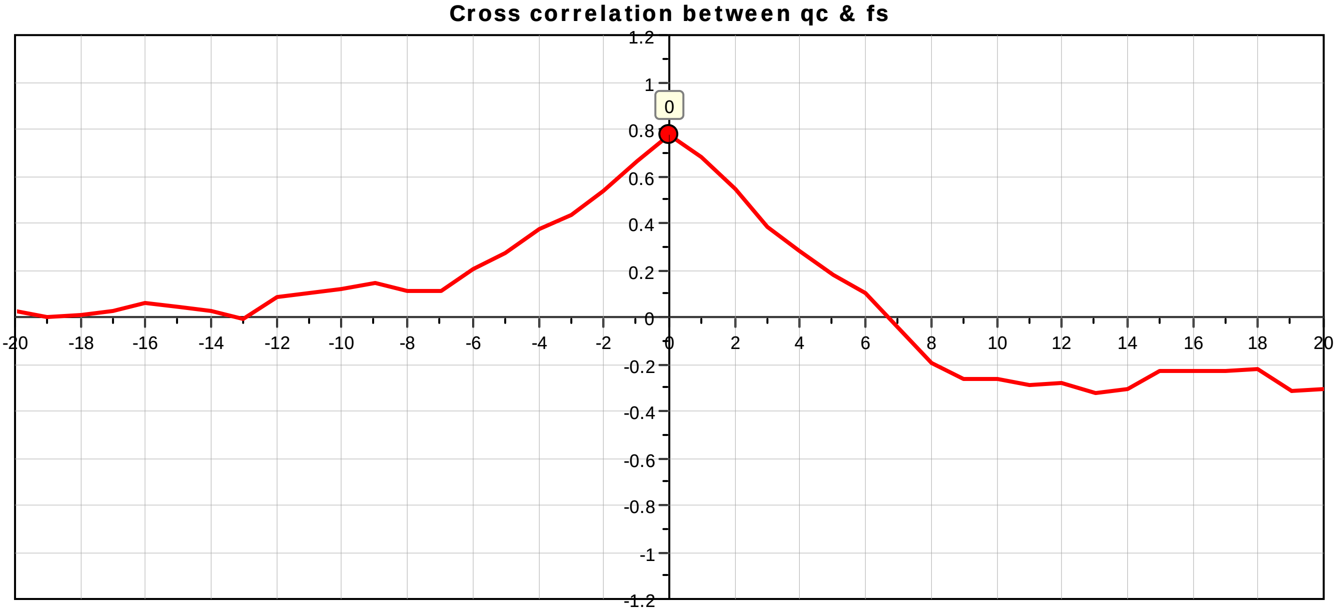
🟥 1. Sensitive fine grained	4. Clayey silt to silty clay	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to clayey sand
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

CPT: 036021P76CPT76
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

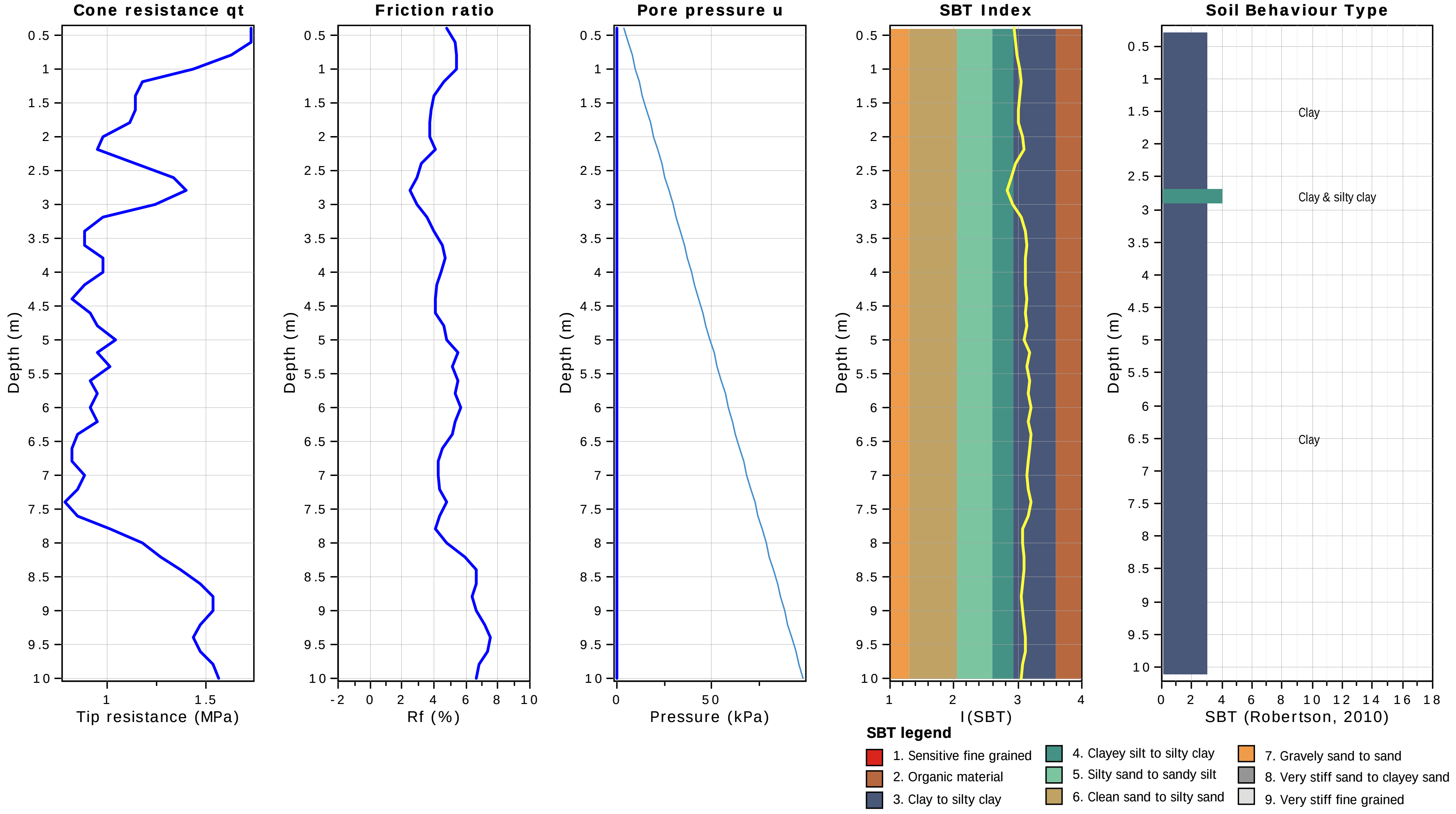


The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



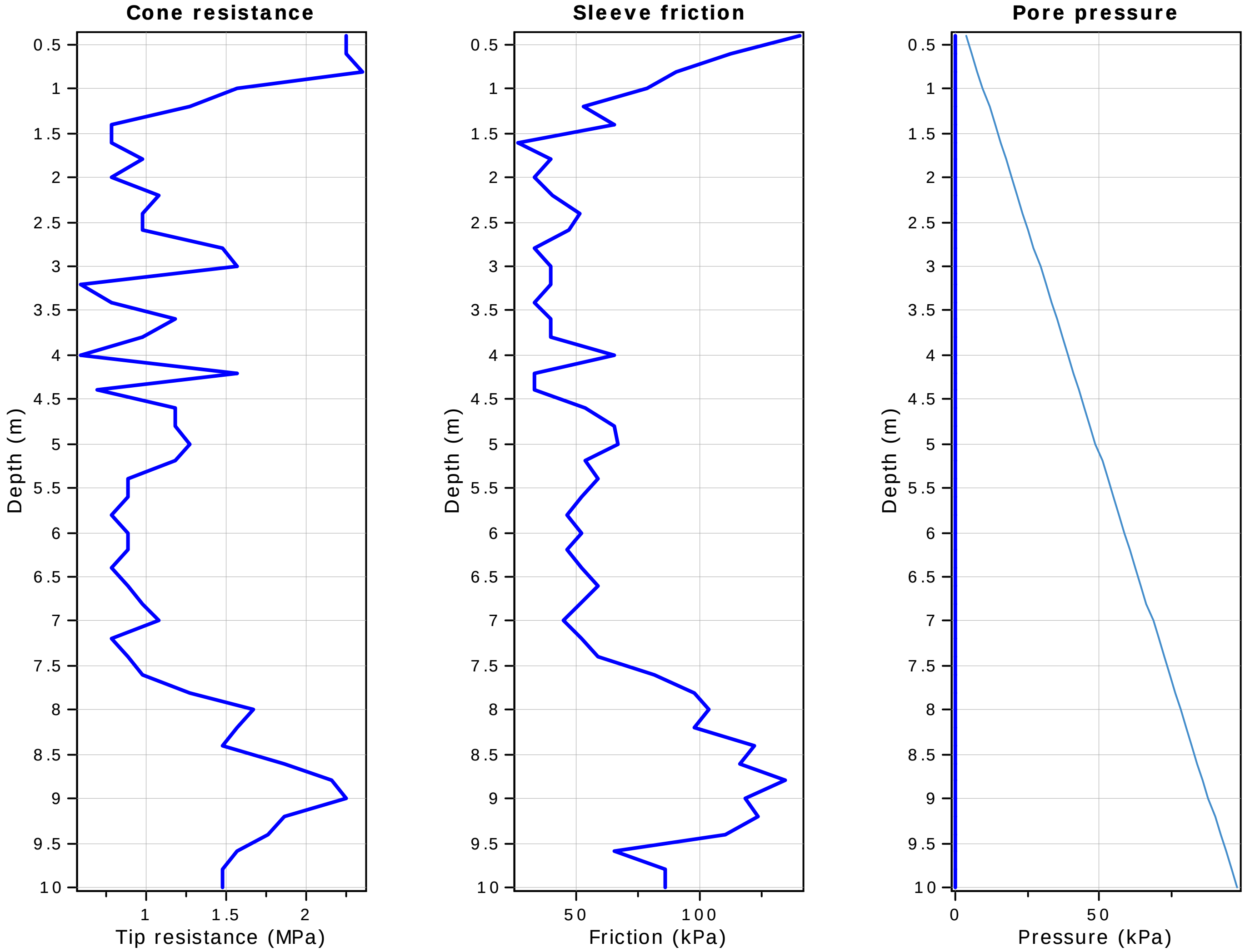
CPT: 036021P76CPT76
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

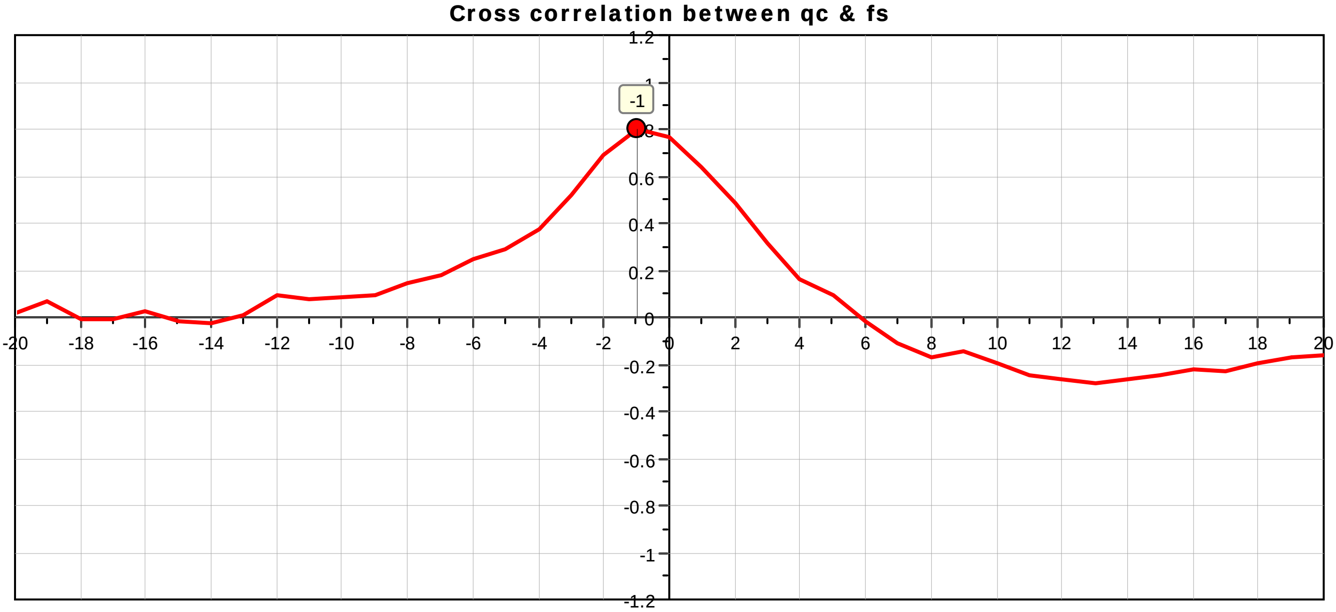


CPT: 036021P77CPT77
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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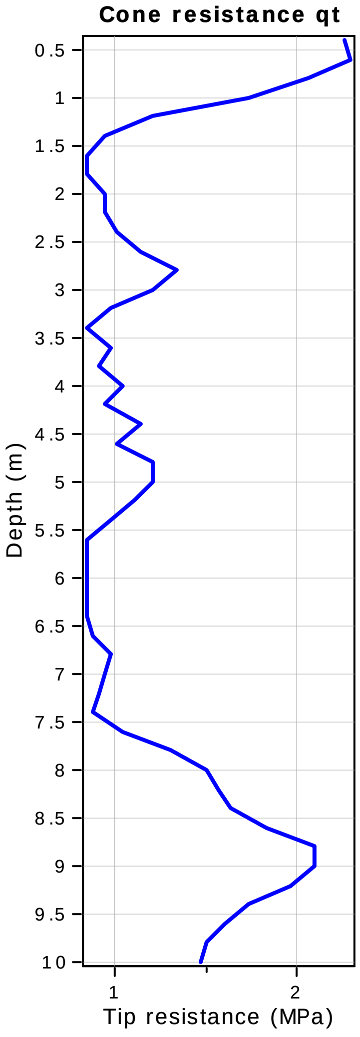
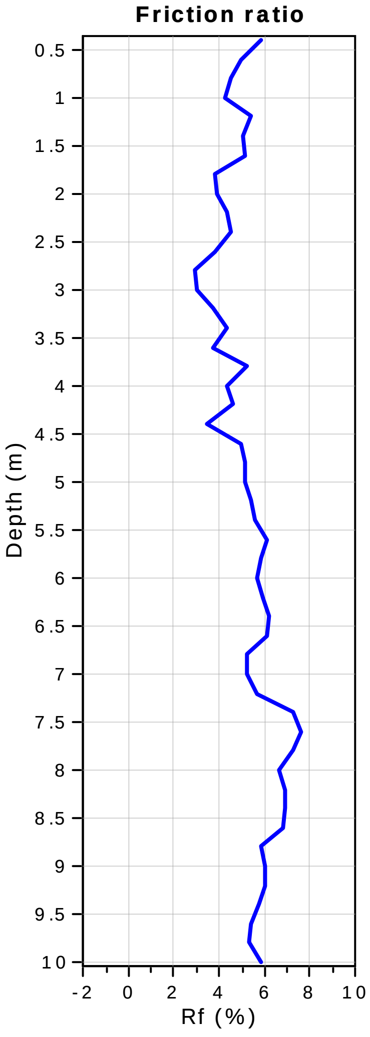
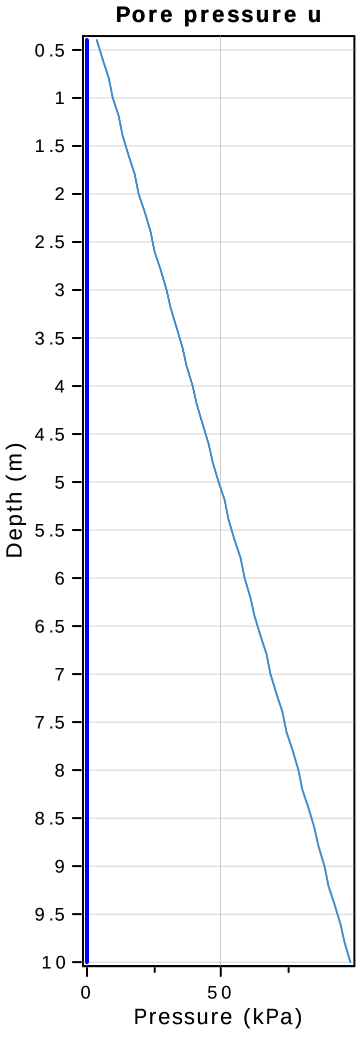
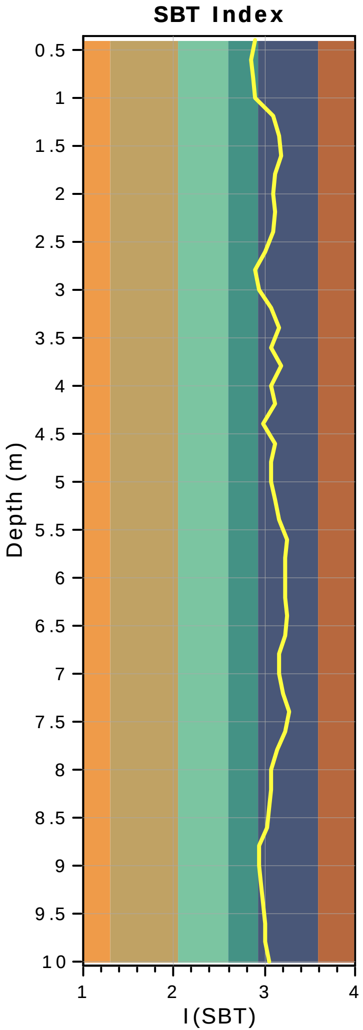
CPT: 036021P77CPT77
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

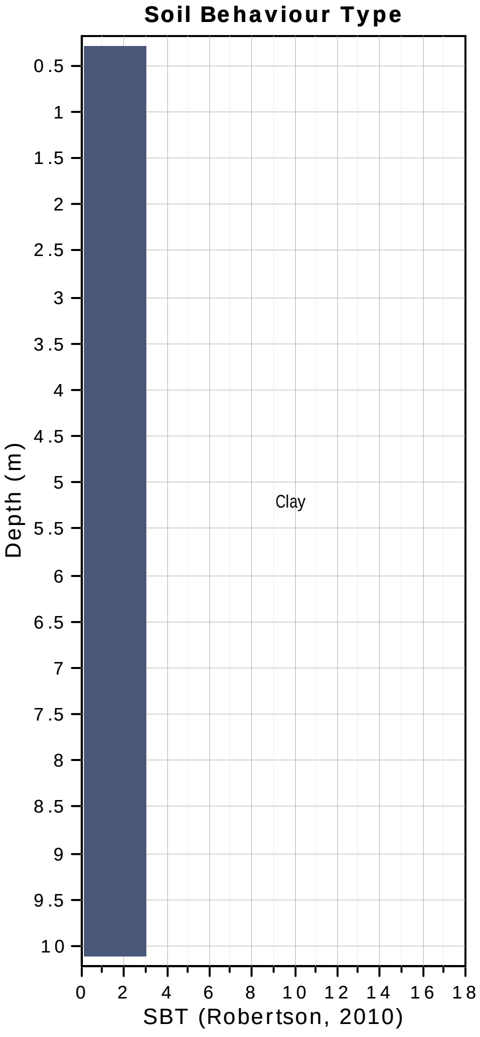
Project:
Location:









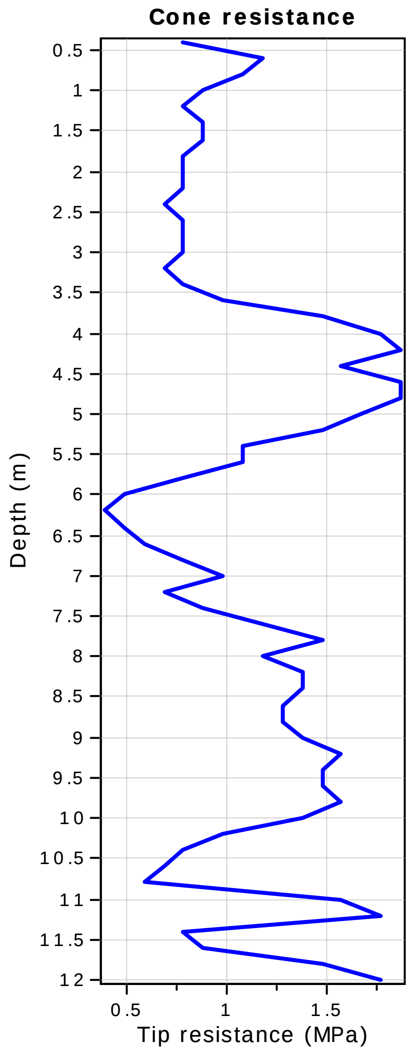


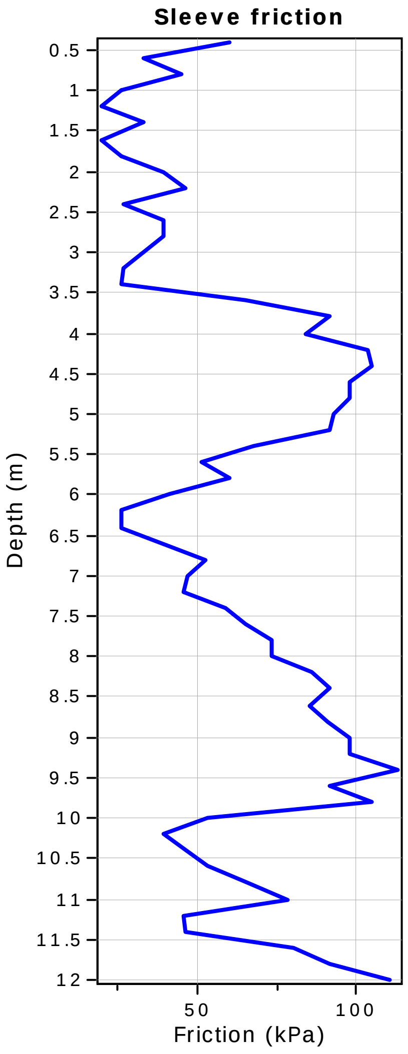
SBT legend

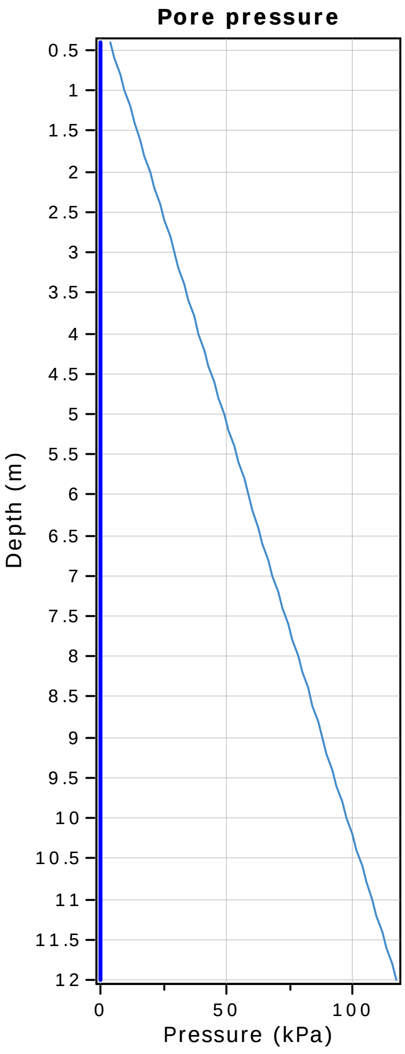
- ■ 1. Sensitive fine grained
- ■ 2. Organic material
- ■ 3. Clay to silty clay
- ■ 4. Clayey silt to silty clay
- ■ 5. Silty sand to sandy silt
- ■ 6. Clean sand to silty sand
- ■ 7. Gravely sand to sand
- ■ 8. Very stiff sand to clayey sand
- □ 9. Very stiff fine grained

CPT: 036021P78CPT78
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

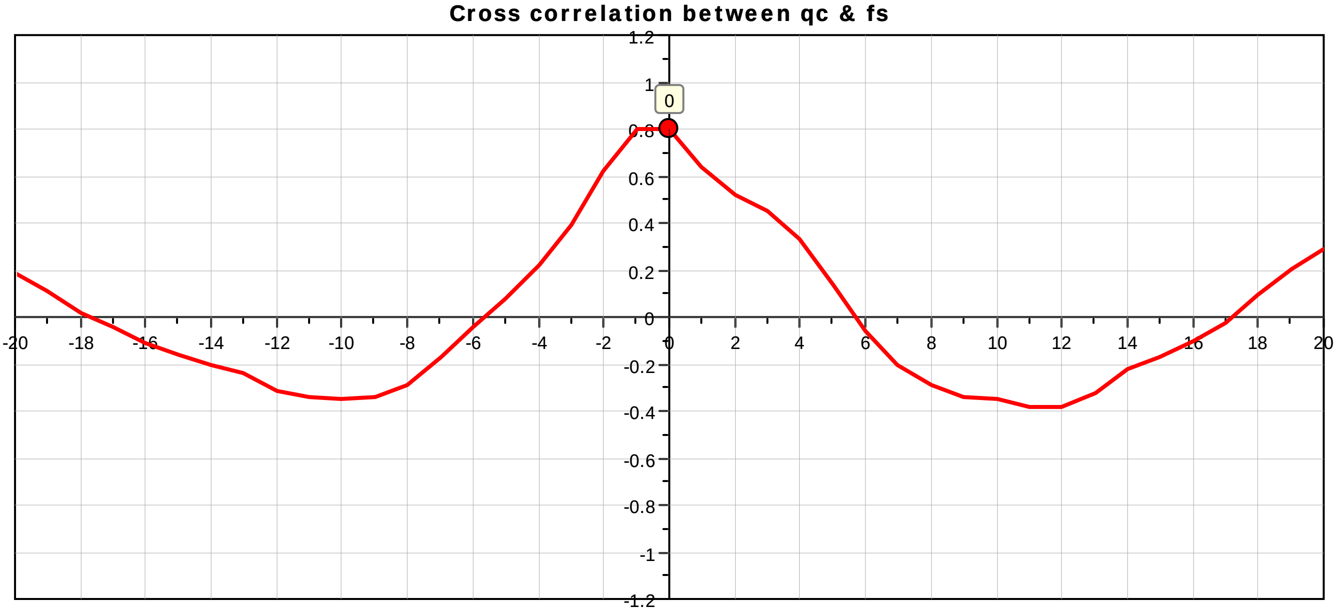
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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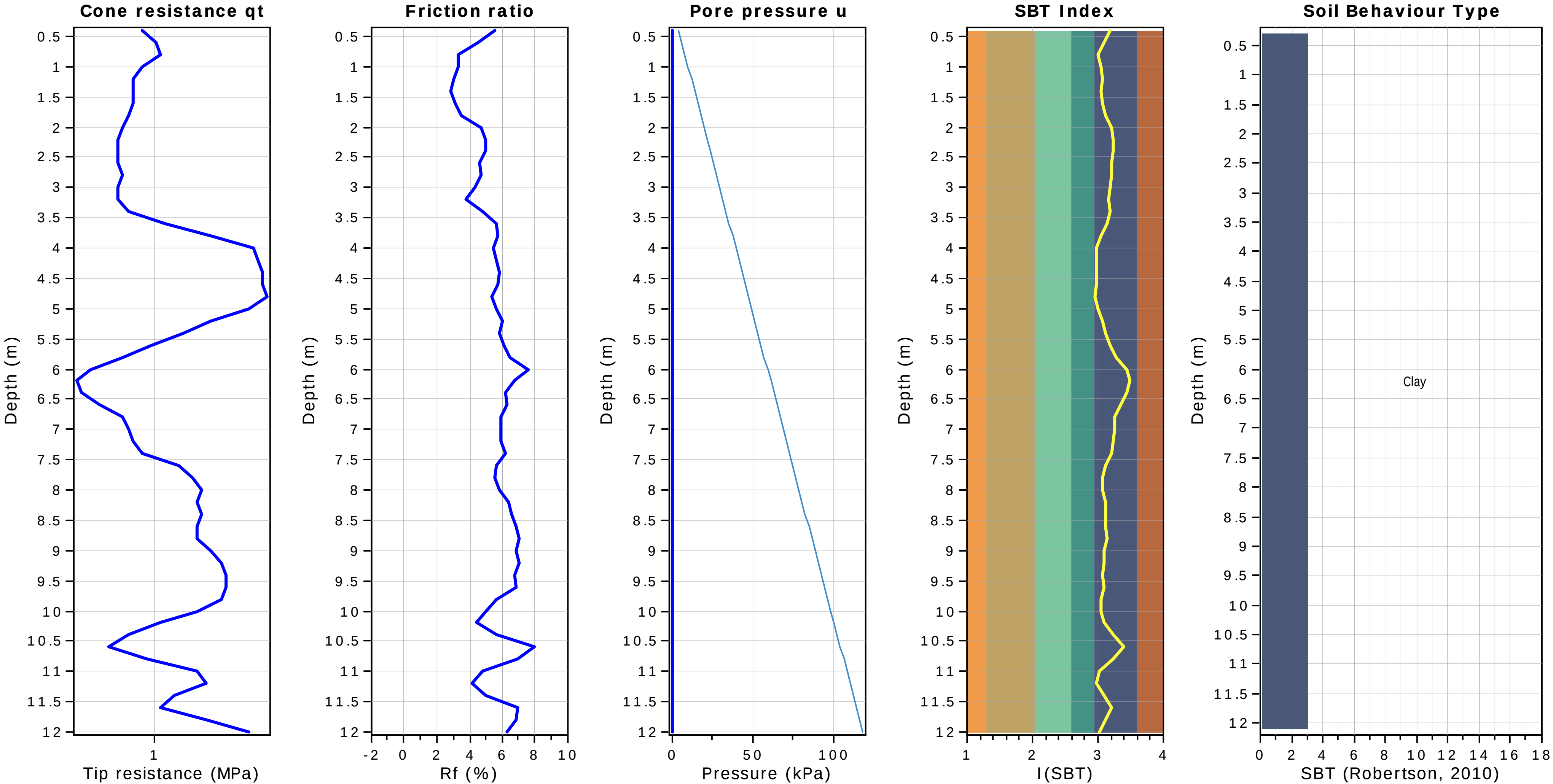
CPT: 036021P78CPT78
Total depth: 12.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

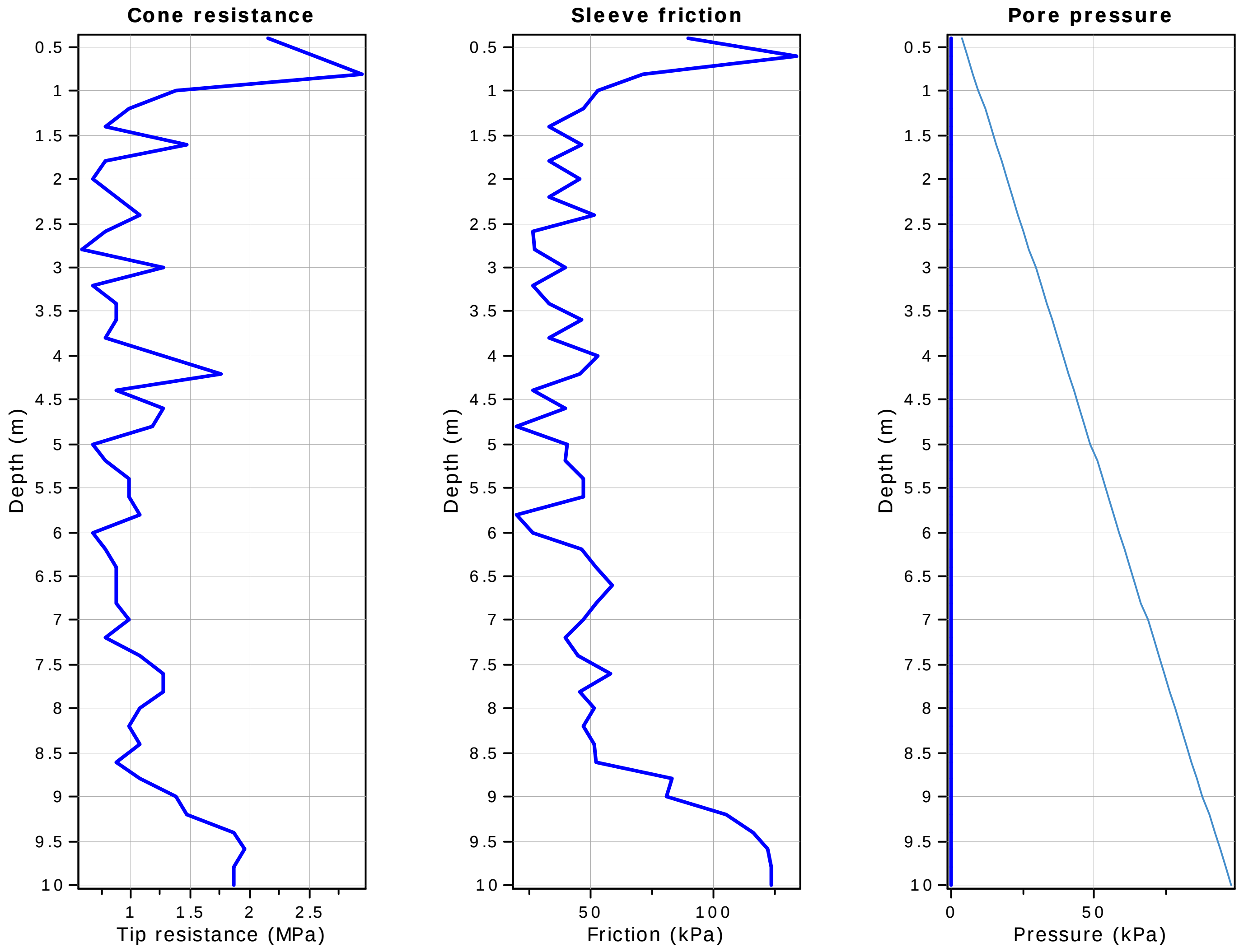


SBT legend

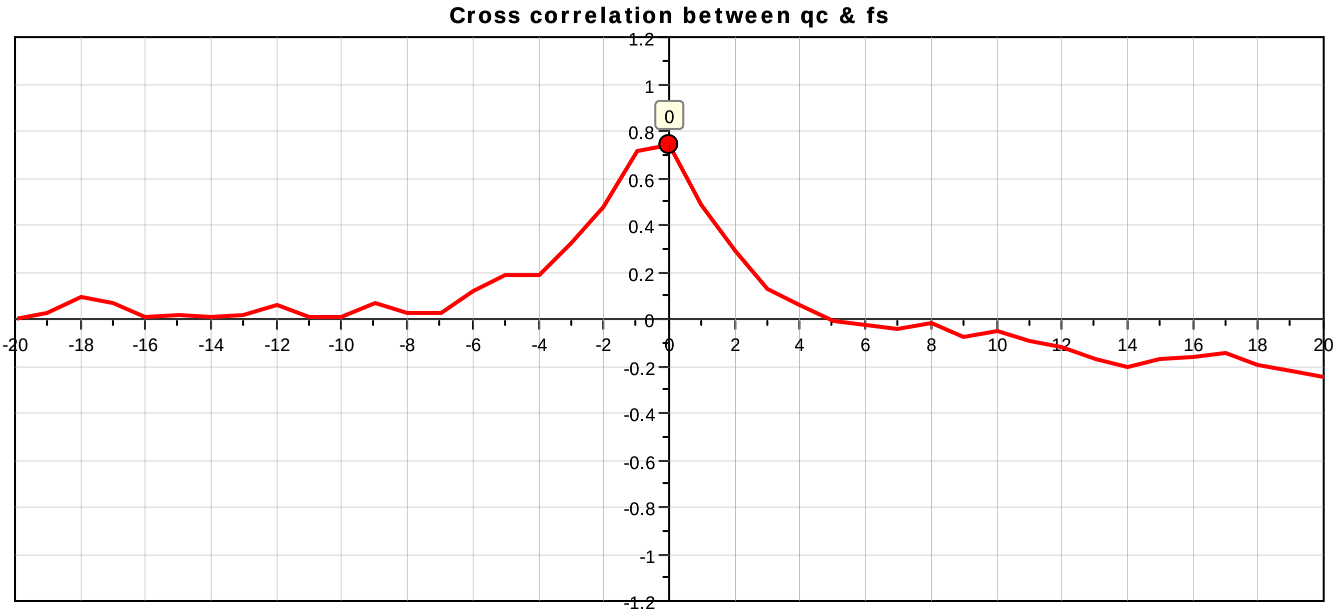
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬛ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

CPT: 036021P79CPT79
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

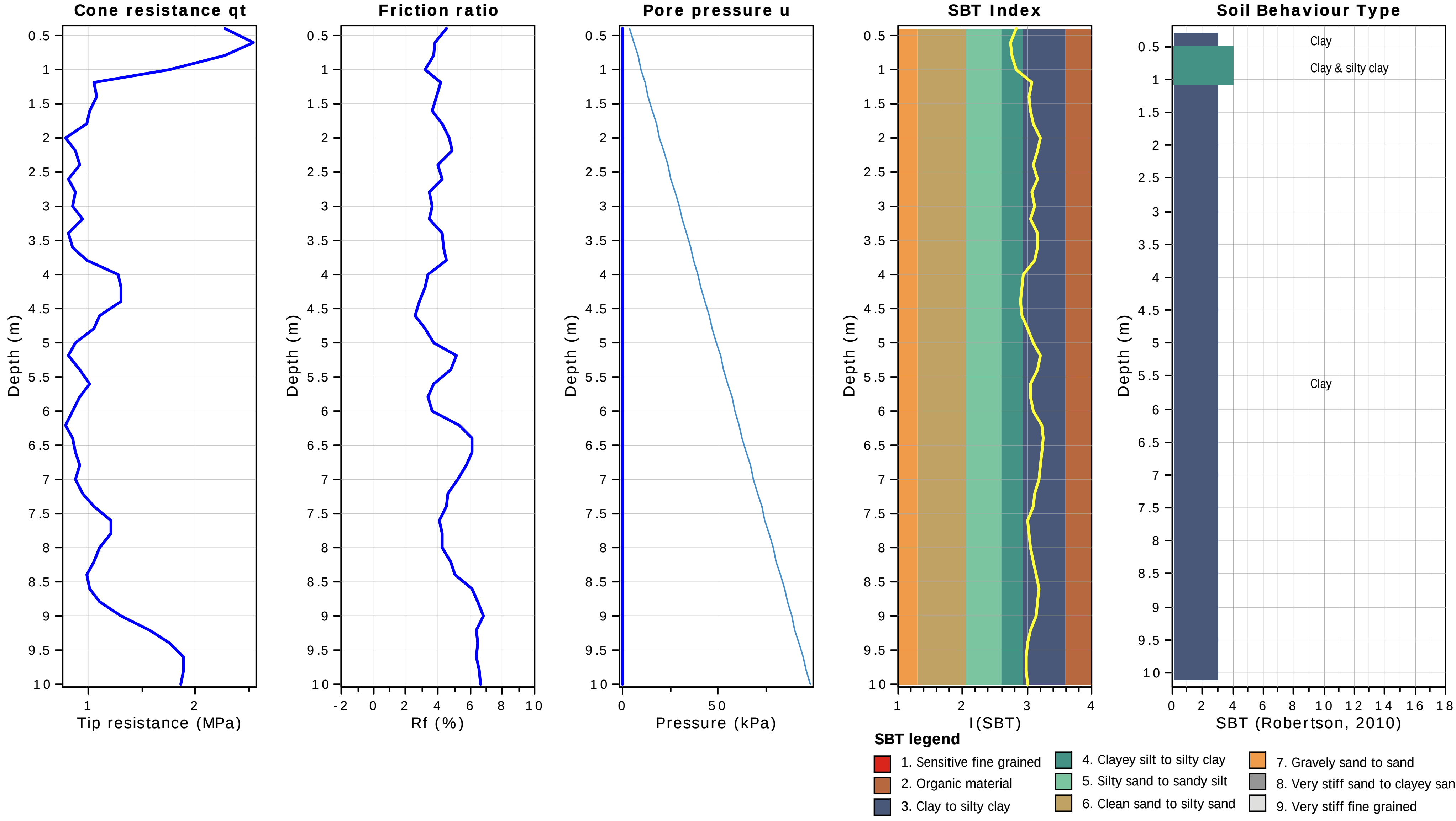


The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



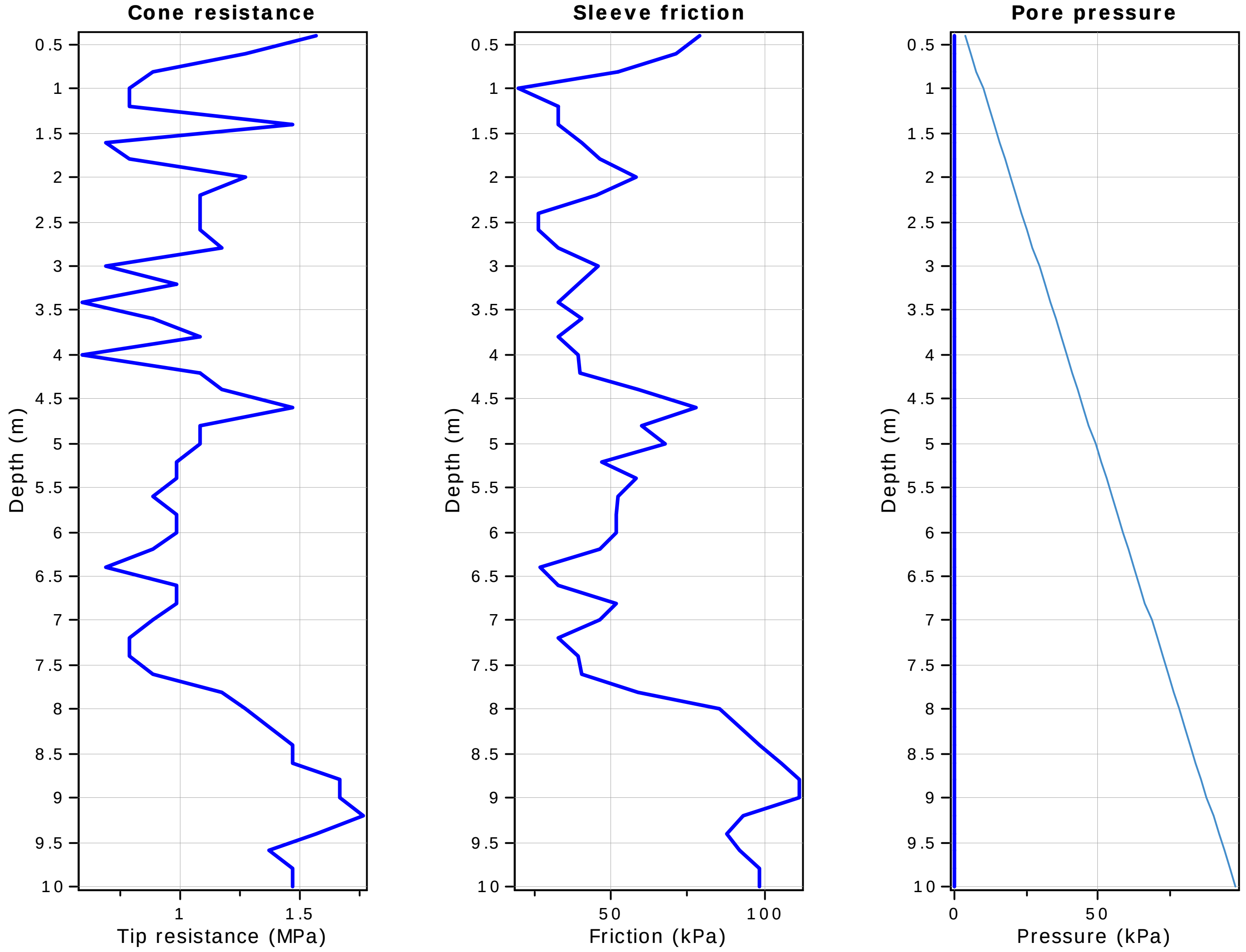
CPT: 036021P79CPT79
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

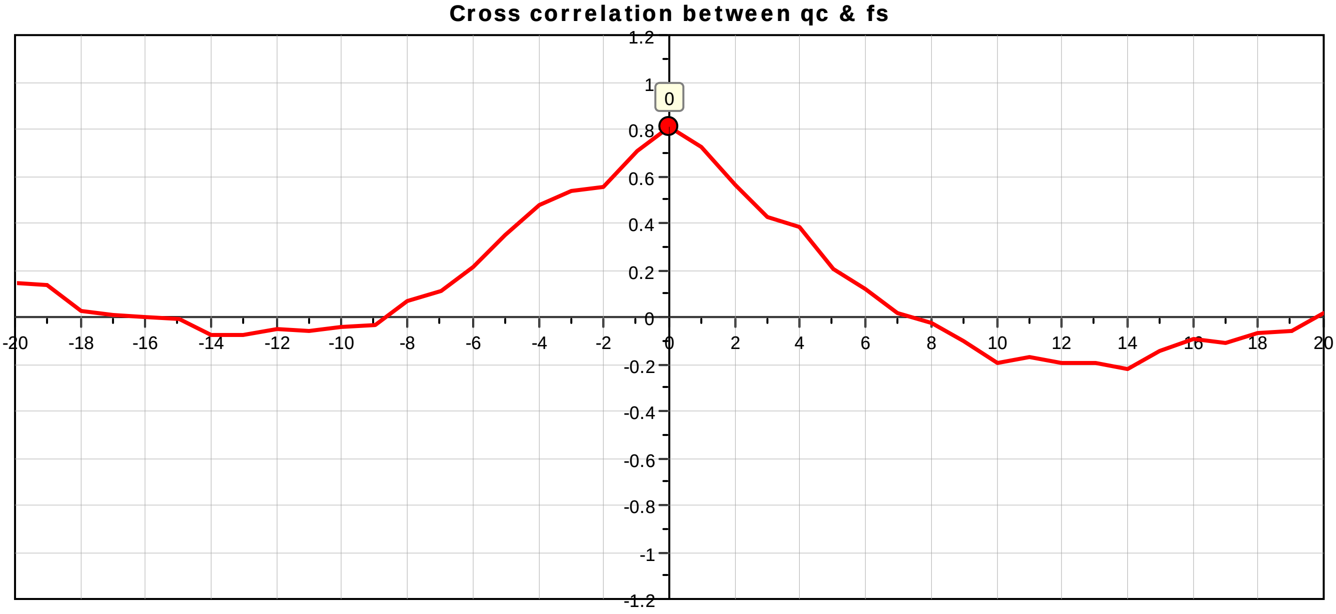


CPT: 036021P80CPT80
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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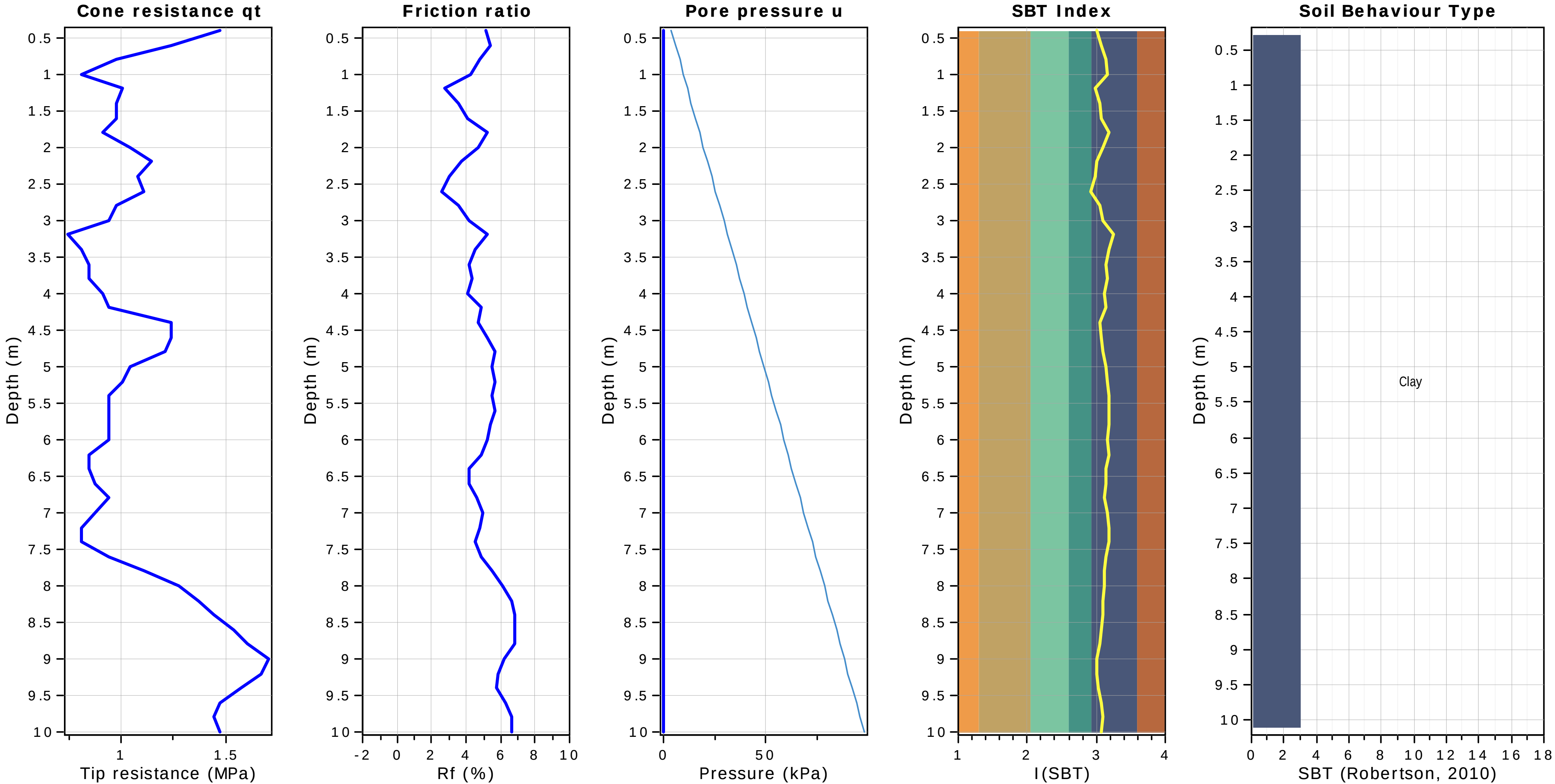
CPT: 036021P80CPT80
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



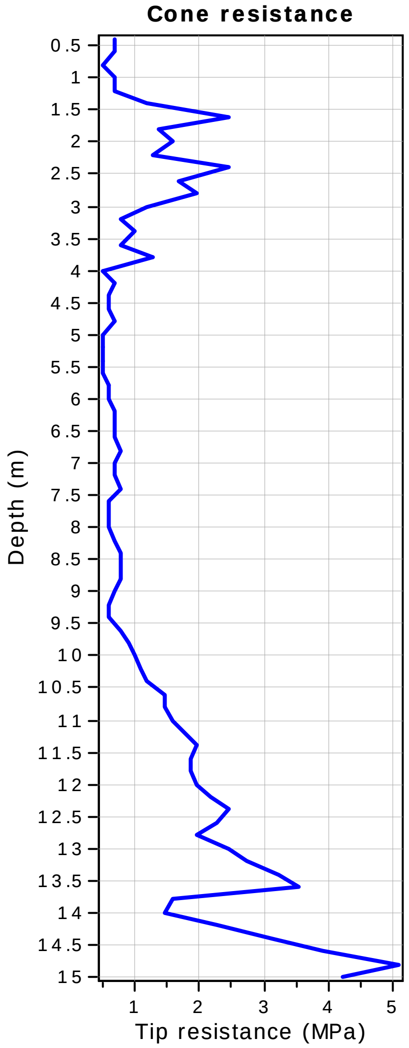
SBT legend

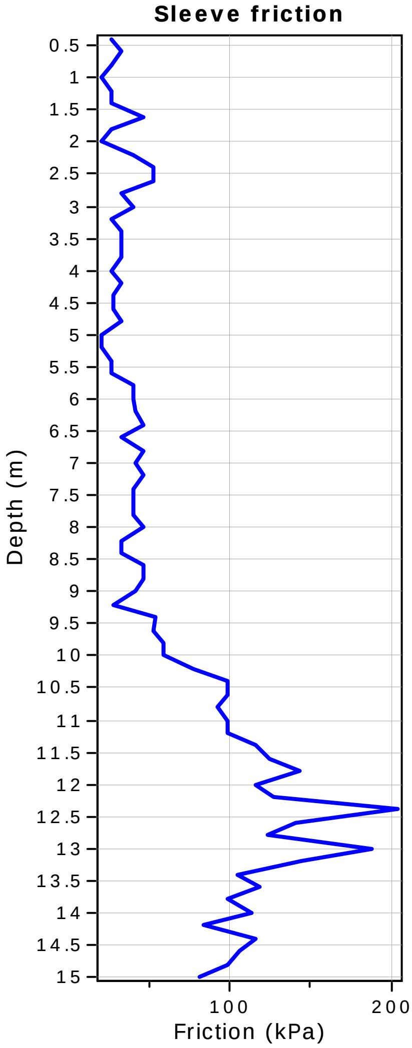
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

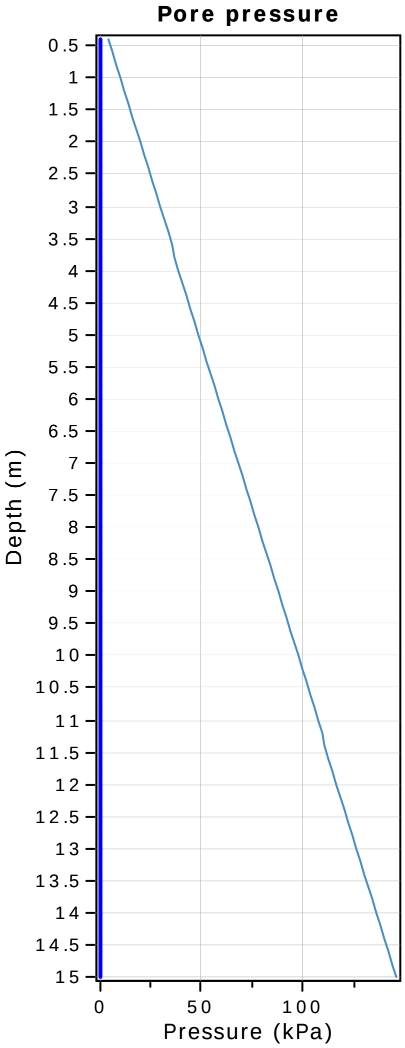
CPT: 036021P81CPT81

Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

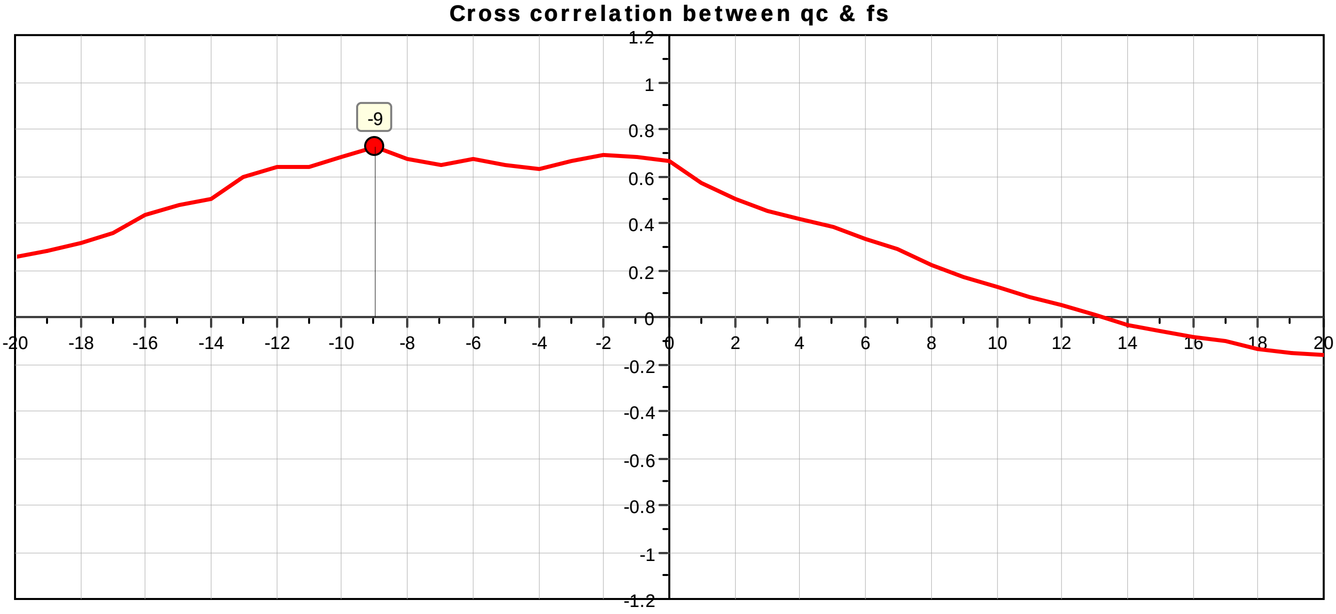
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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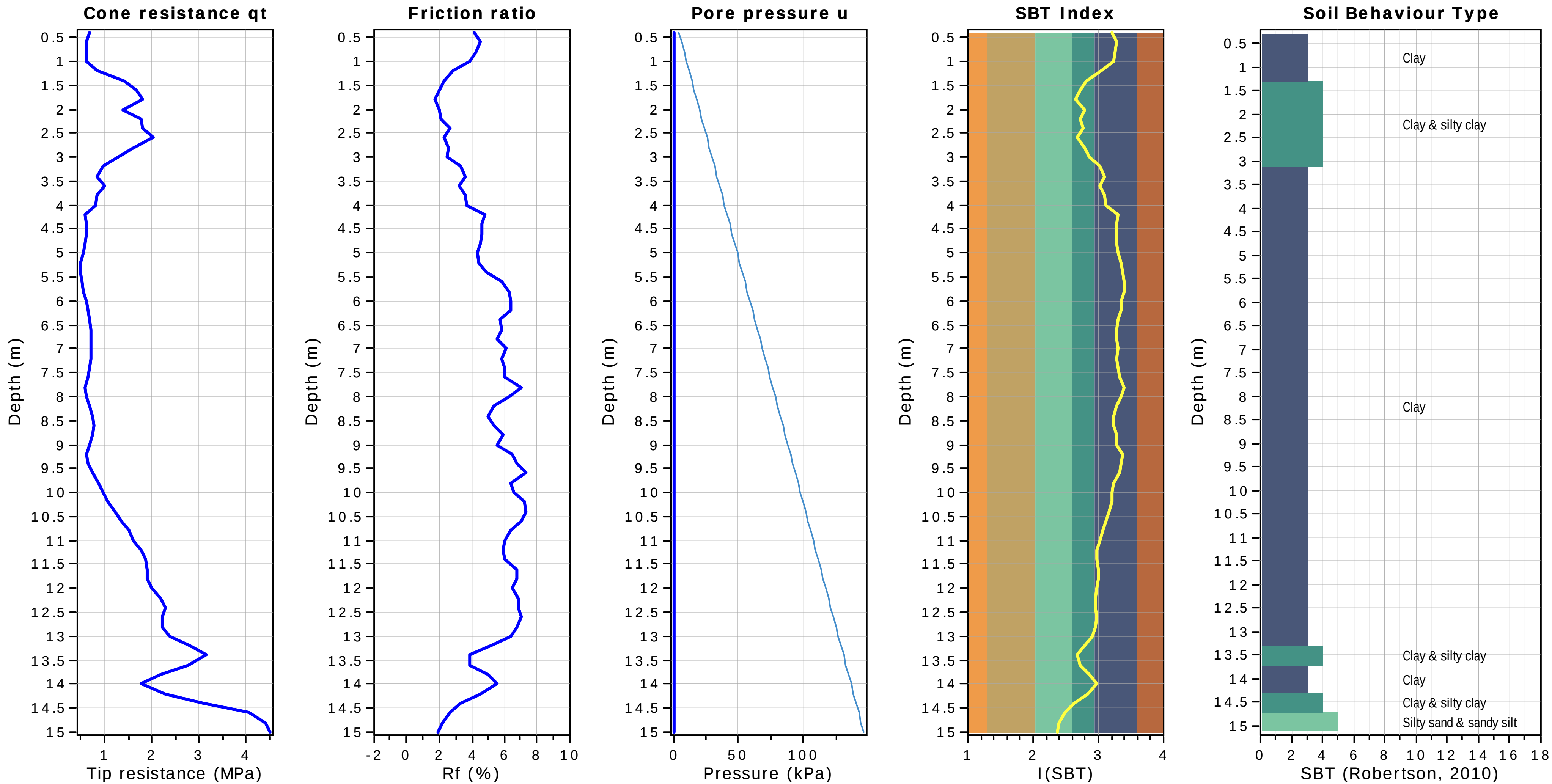
CPT: 036021P81CPT81
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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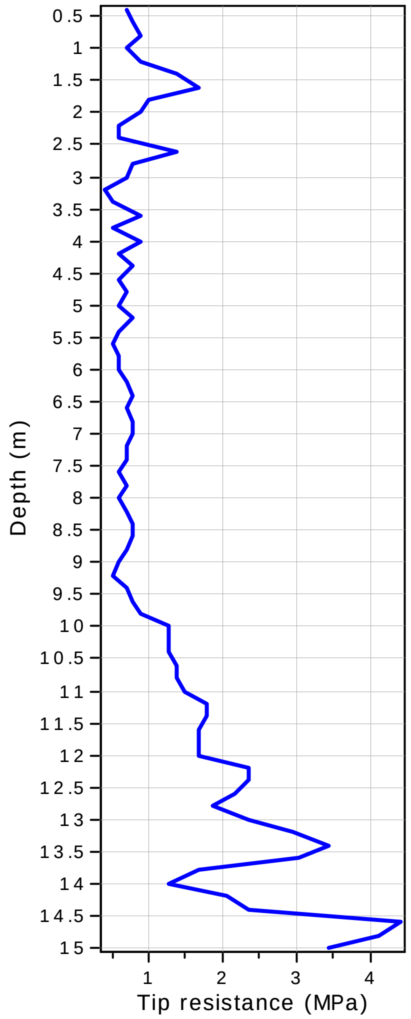
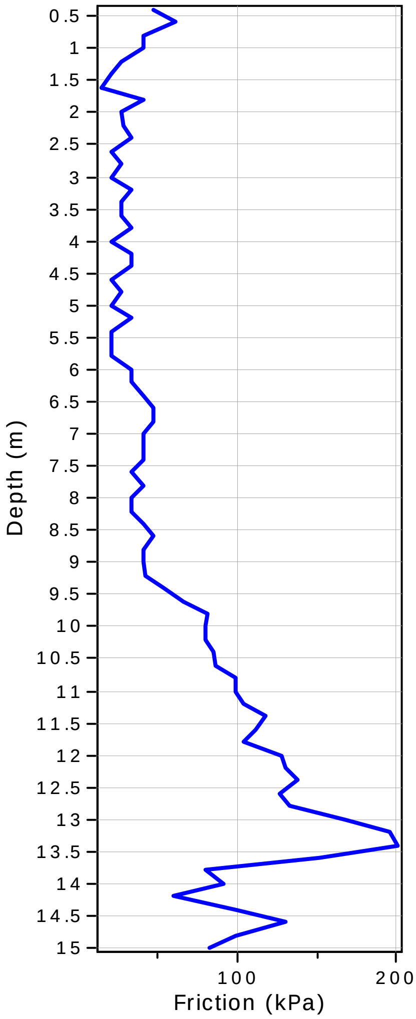
CPT: 036021P82CPT82
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

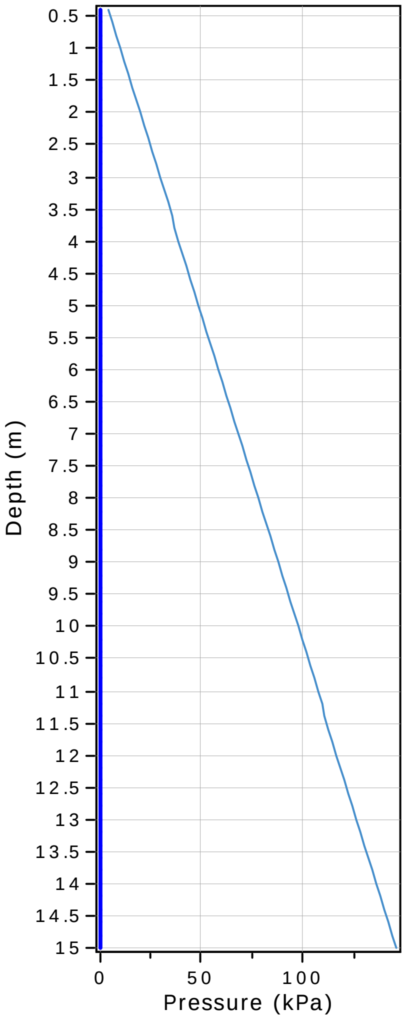
Cone resistance



Sleeve friction

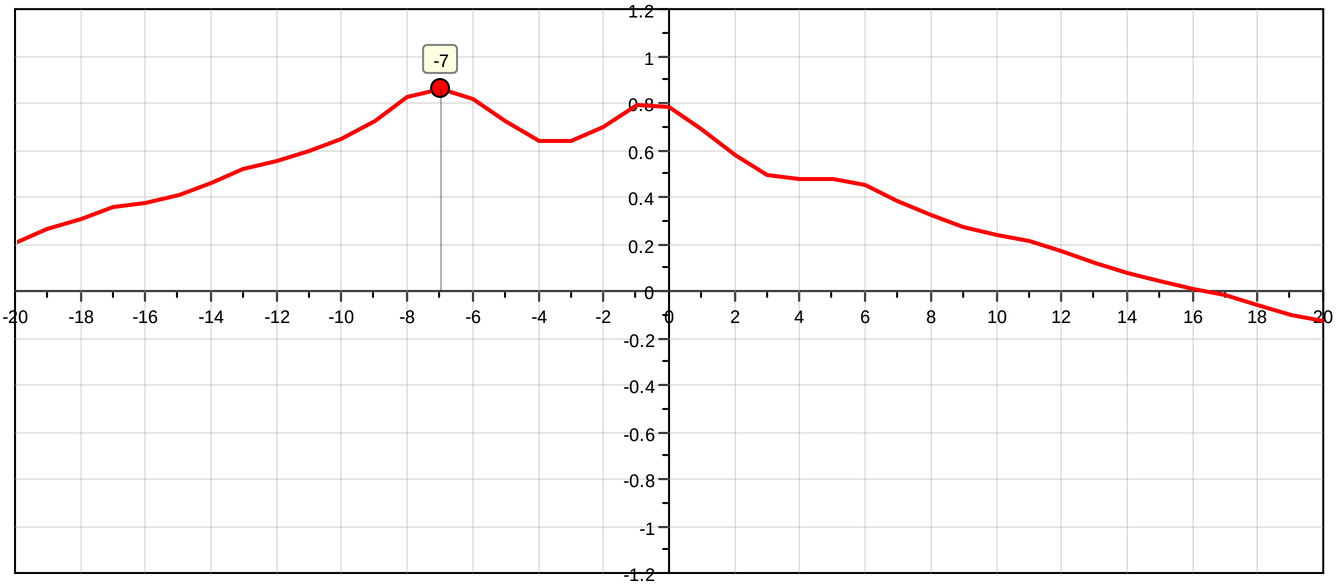


Pore pressure



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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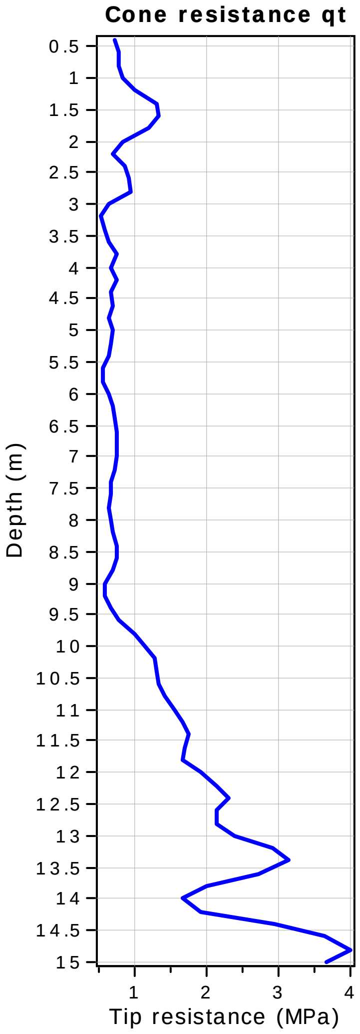
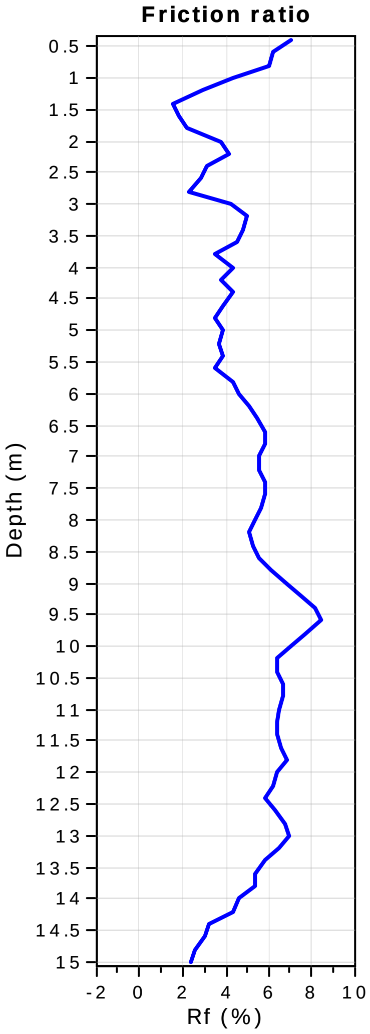
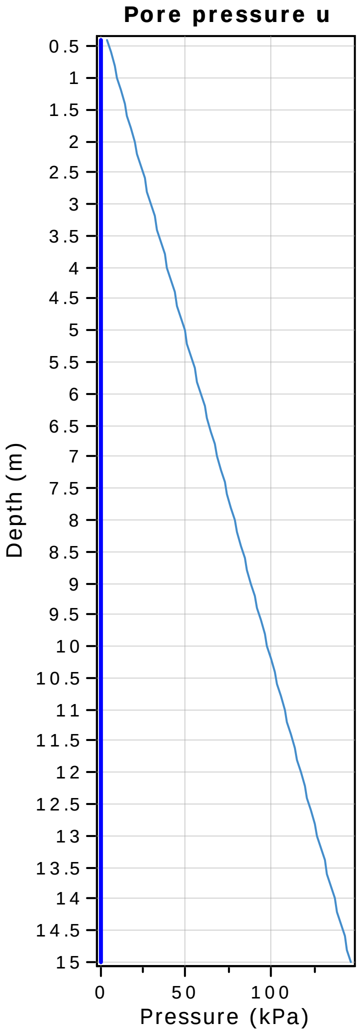
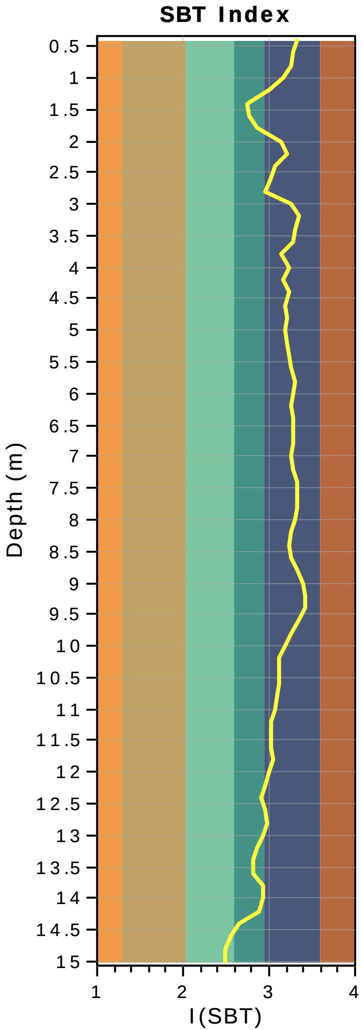
CPT: 036021P82CPT82
Total depth: 15.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

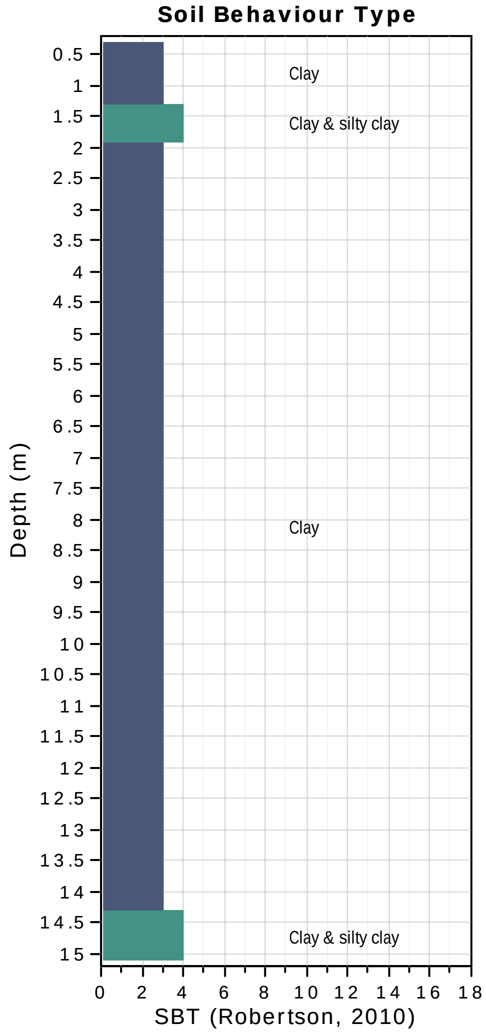
Project:
Location:


Cone resistance qt


Friction ratio


Pore pressure u


SBT Index


Soil Behaviour Type

SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟫 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

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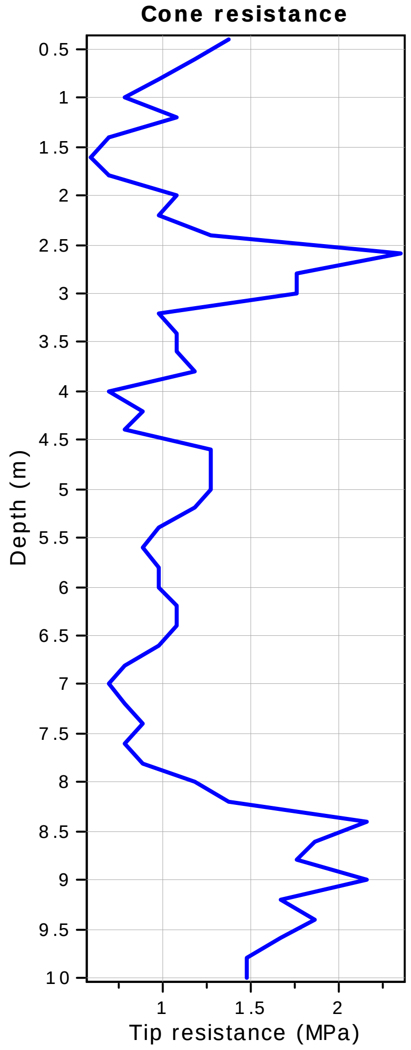
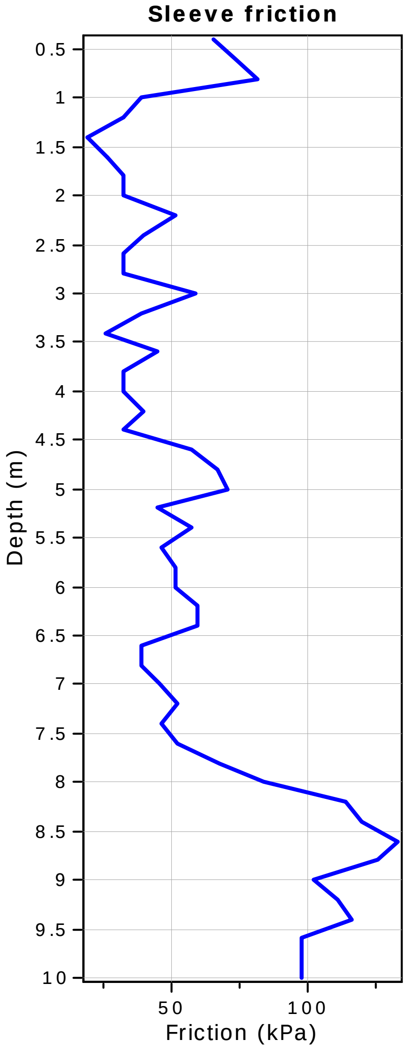
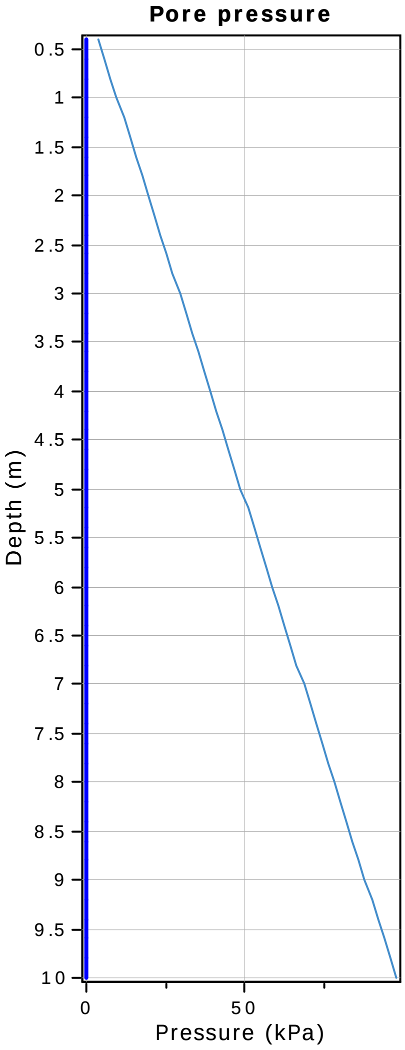
CPT: 036021P83CPT83
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

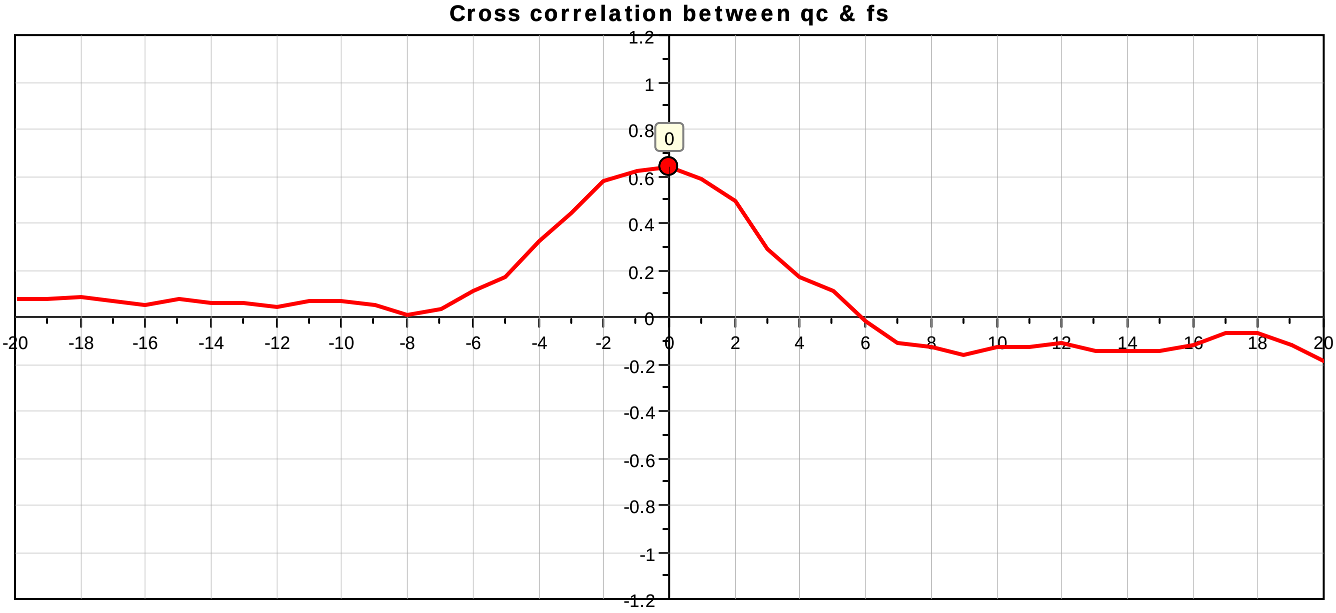
Project:
Location:







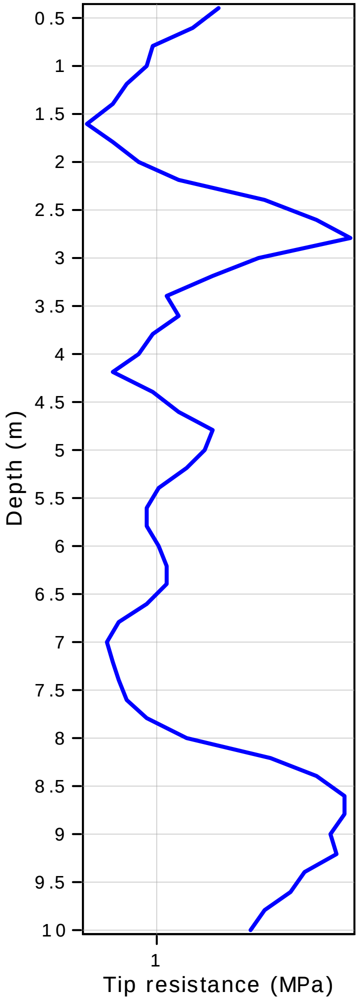
The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



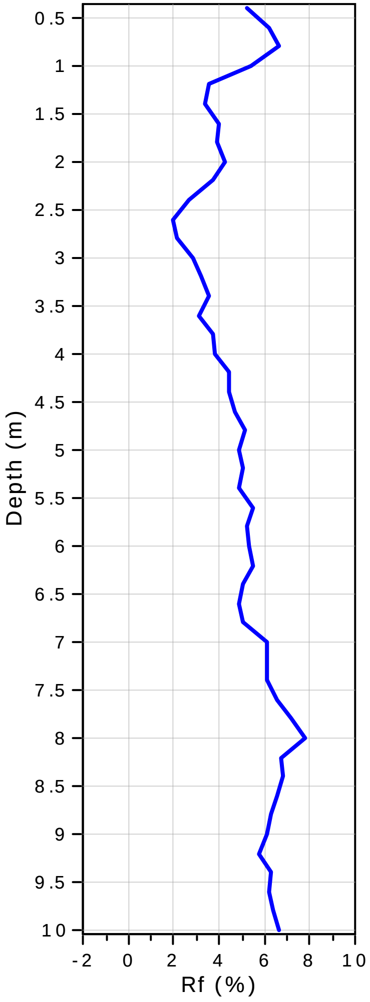
CPT: 036021P83CPT83
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

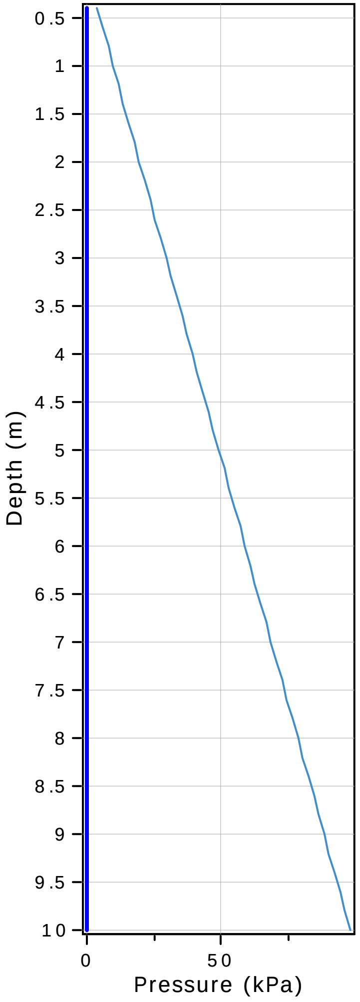
Cone resistance qt



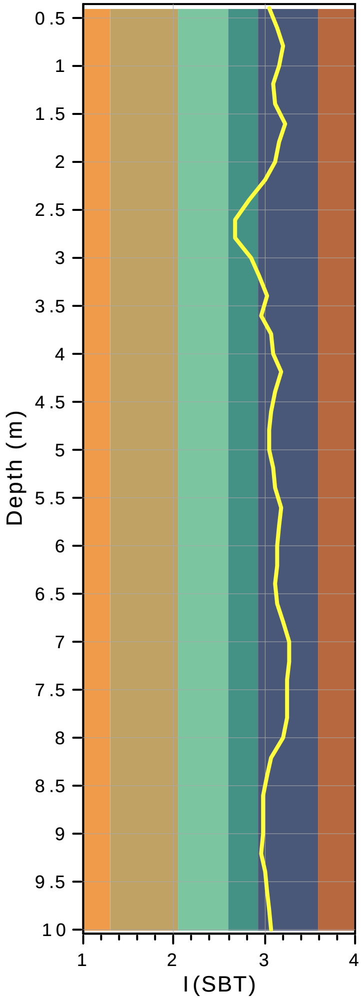
Friction ratio



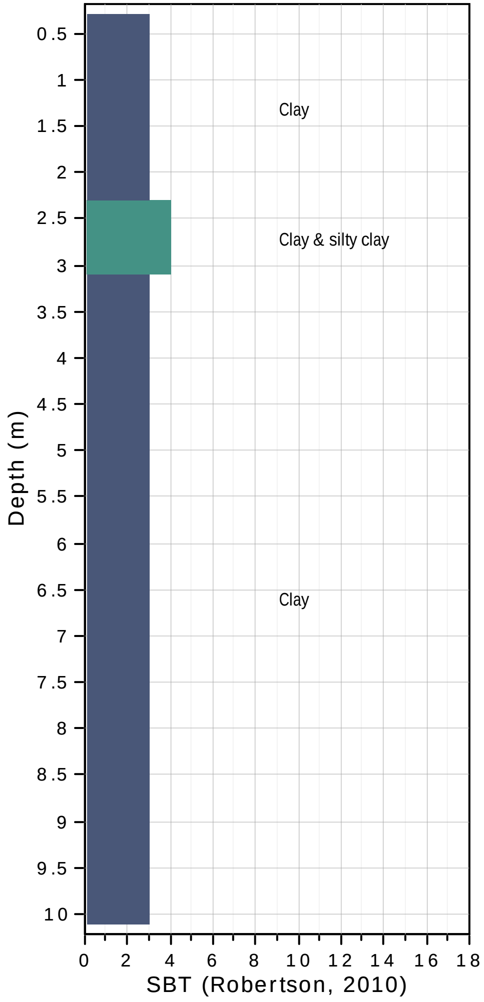
Pore pressure u



SBT Index



Soil Behaviour Type

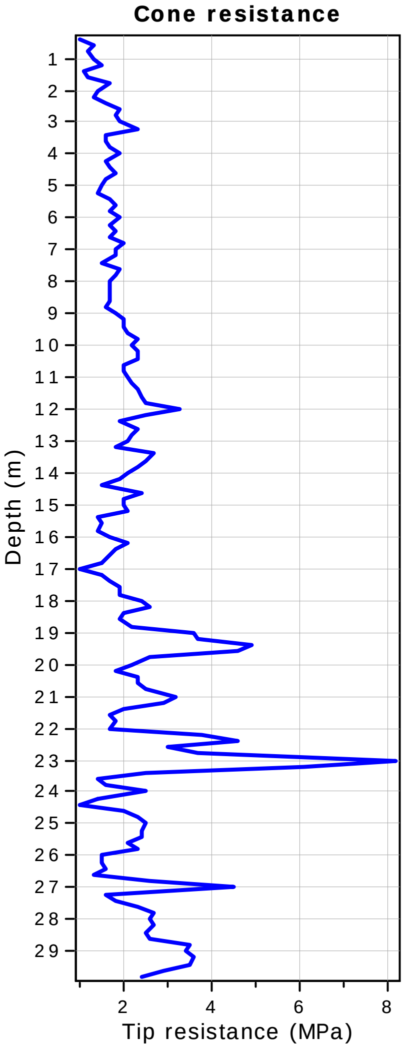


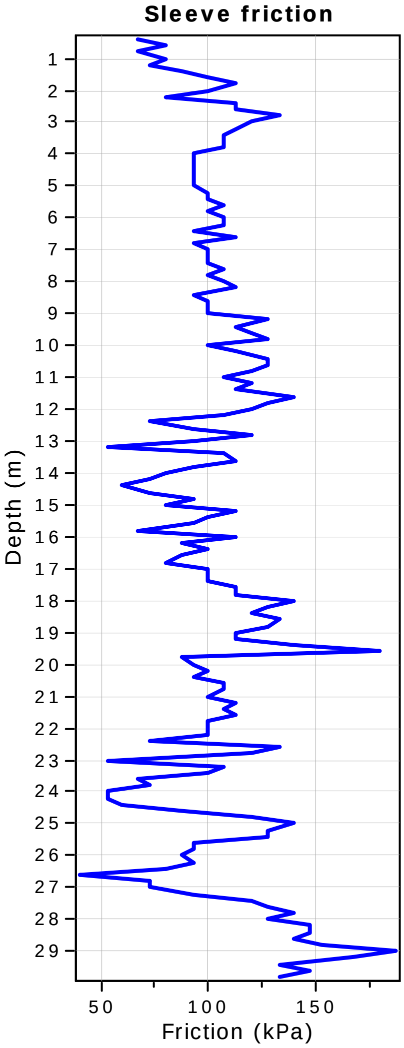
SBT legend

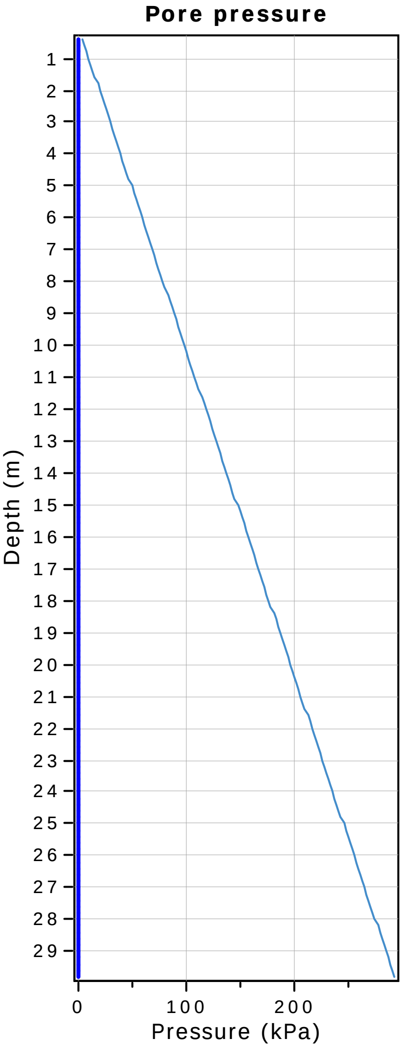
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P84CPT84
Total depth: 29.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

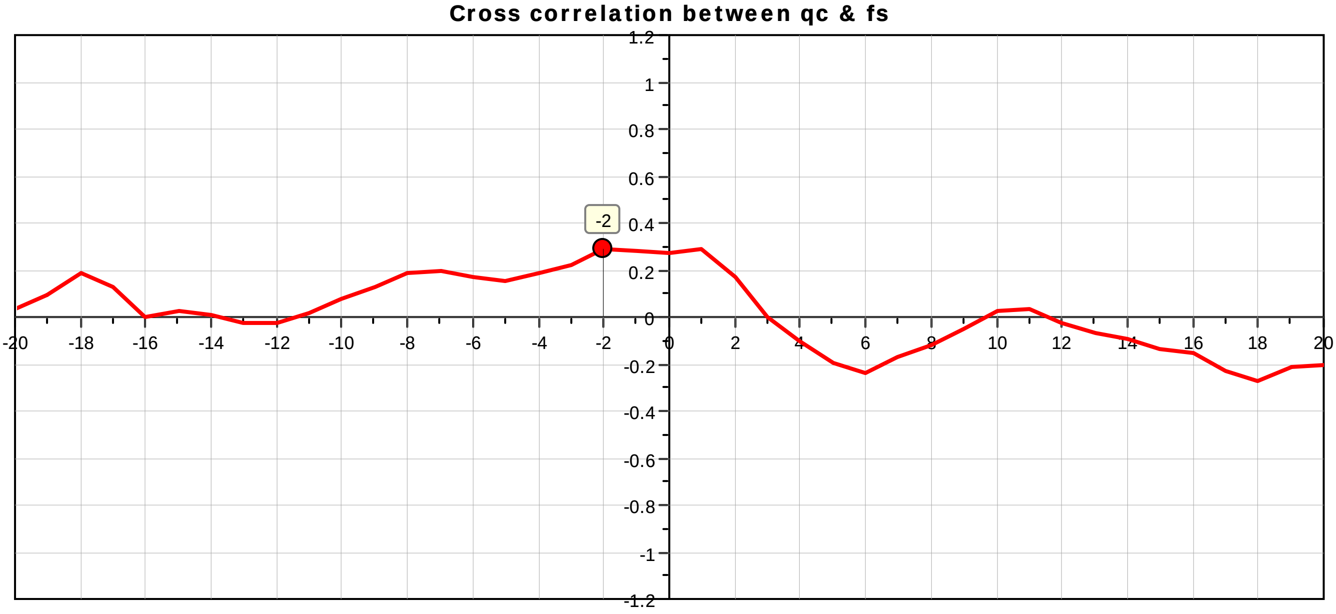
Project:
Location:





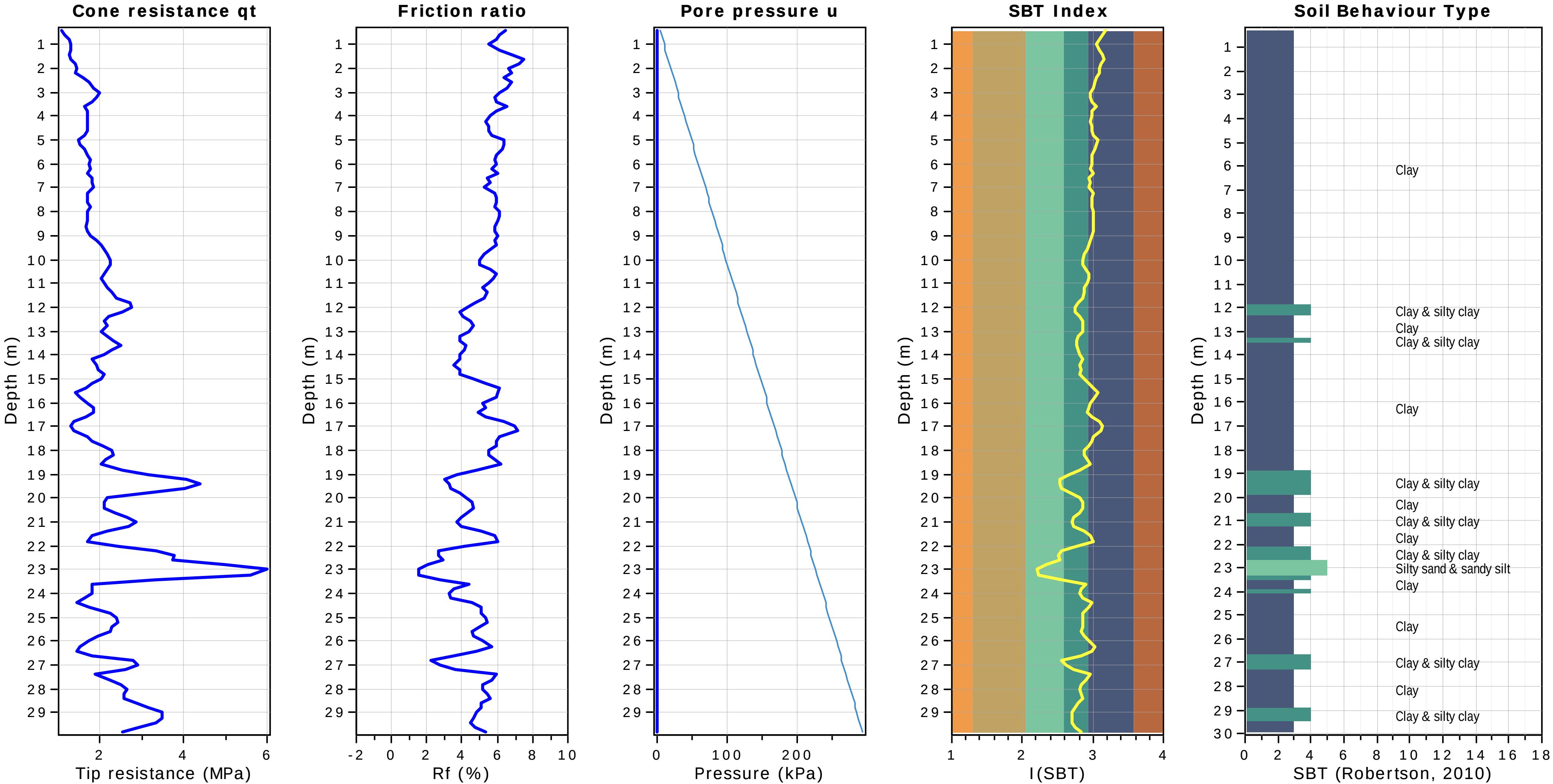


The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT: 036021P84CPT84
Total depth: 29.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟫 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

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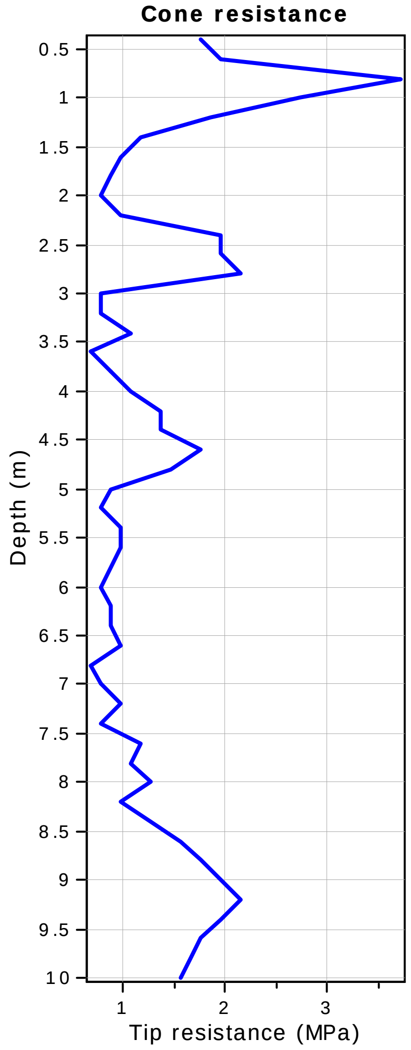
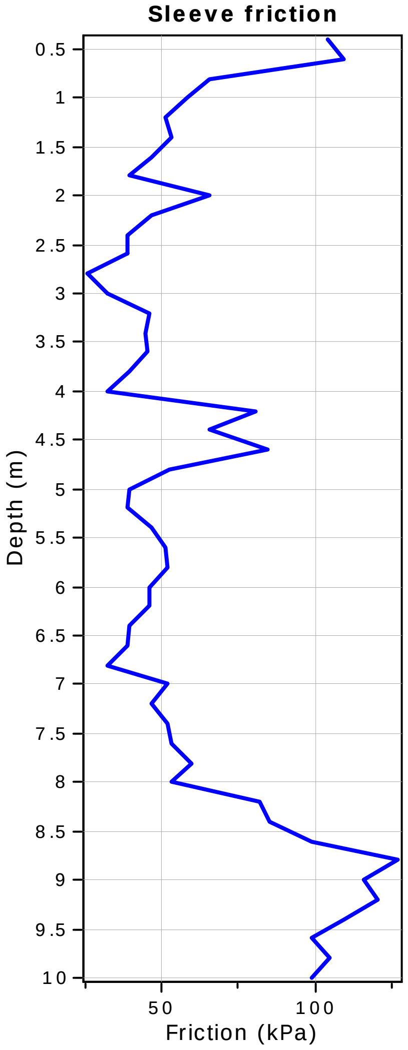
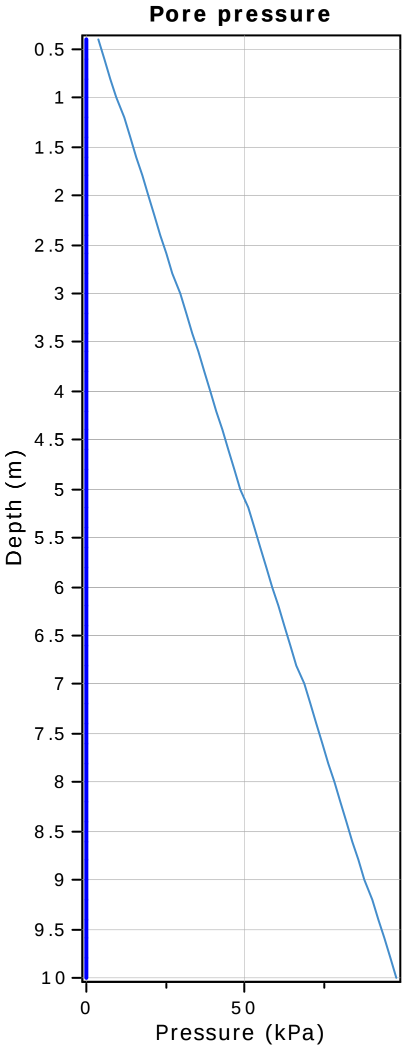
CPT: 036021P85CPT85
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

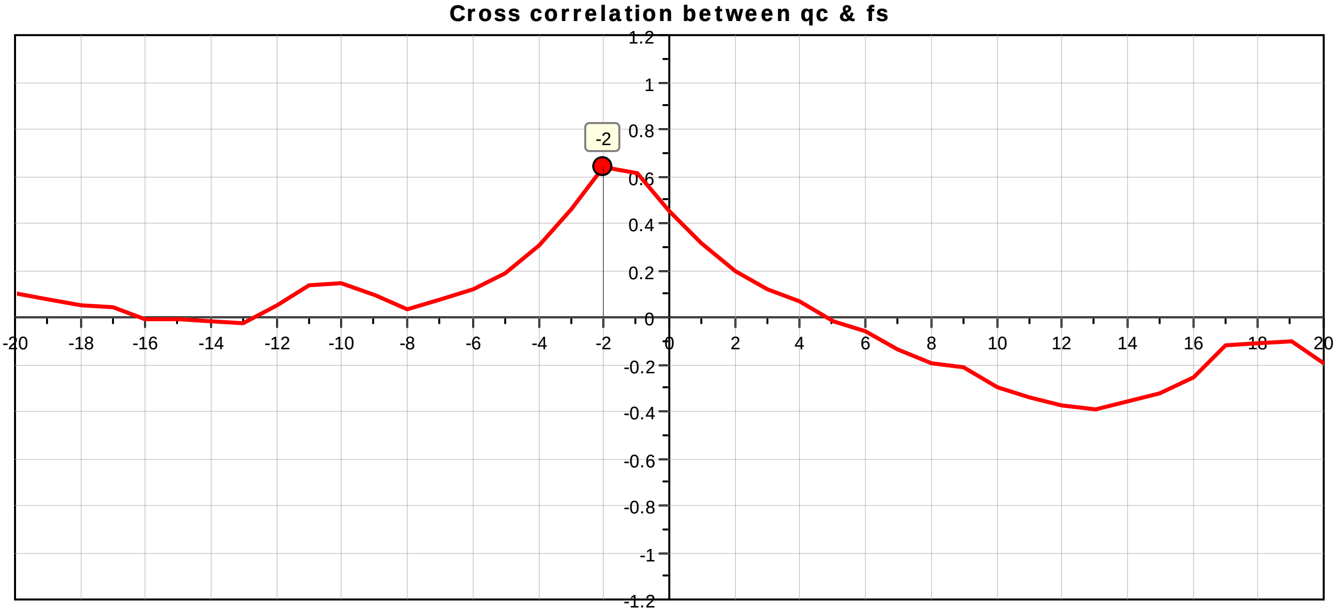
Project:
Location:


Cone resistance


Sleeve friction

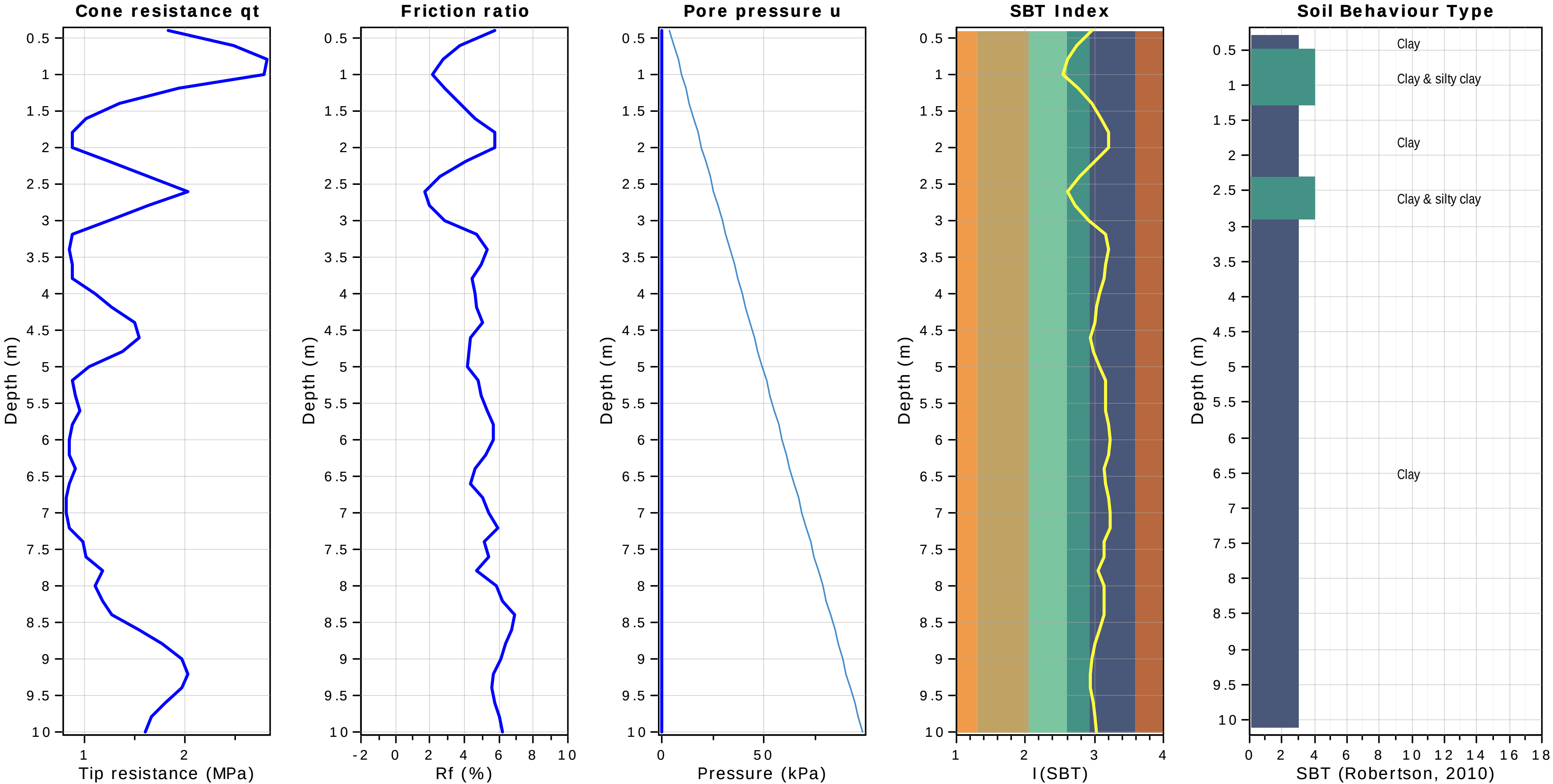

Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

CPT: 036021P85CPT85
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

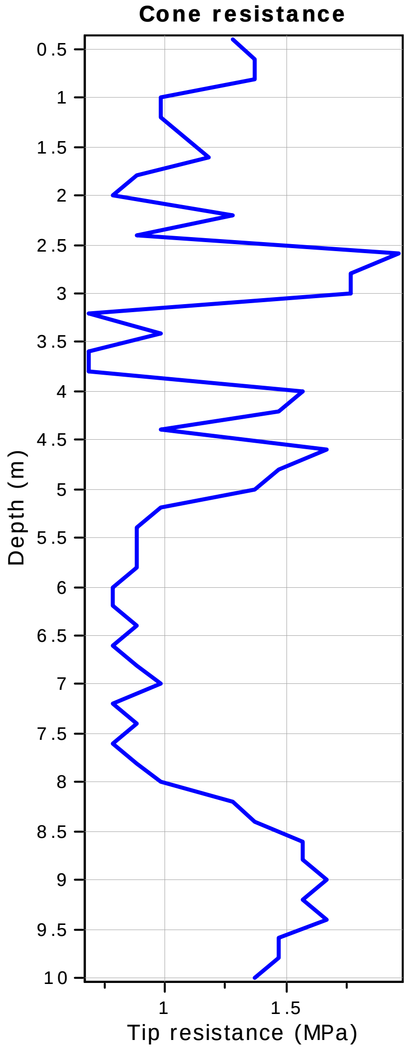


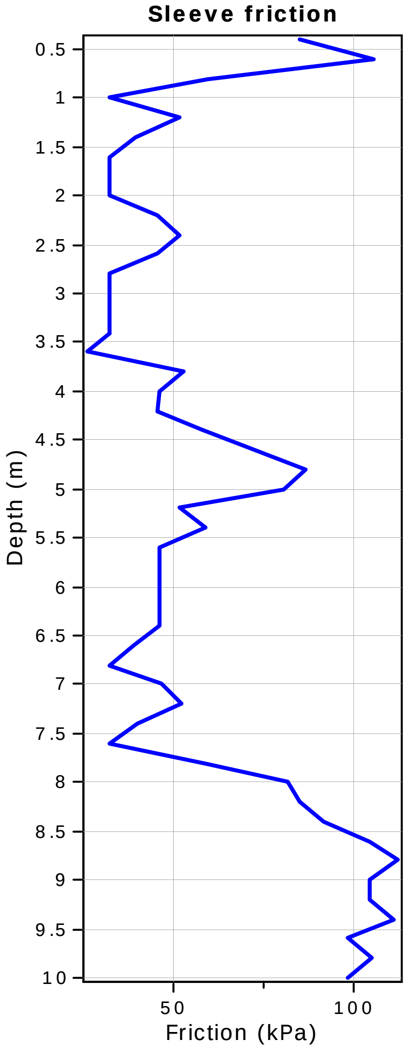
SBT legend

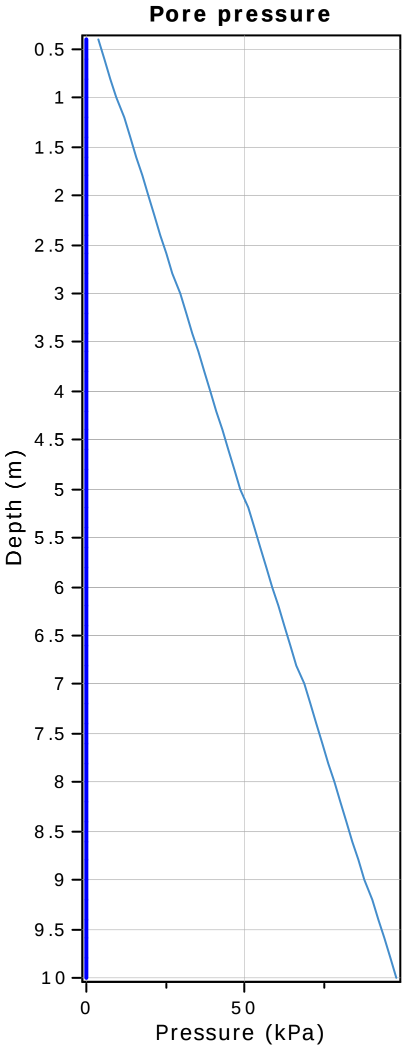
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟫 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

CPT: 036021P86CPT86
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

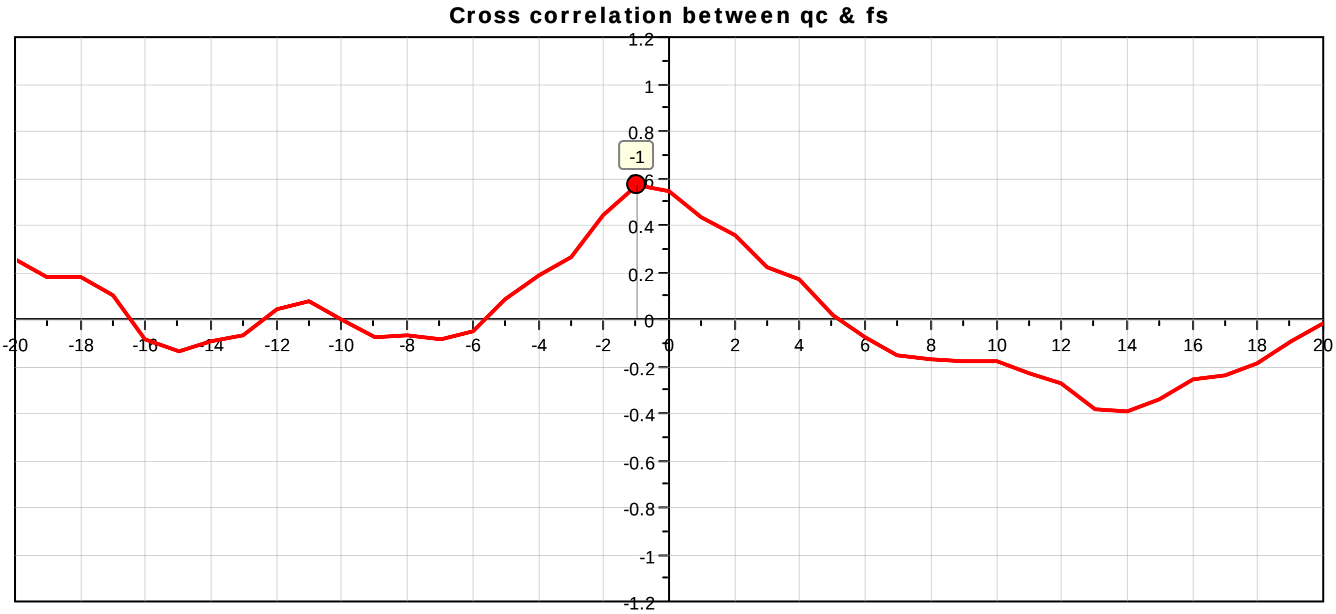
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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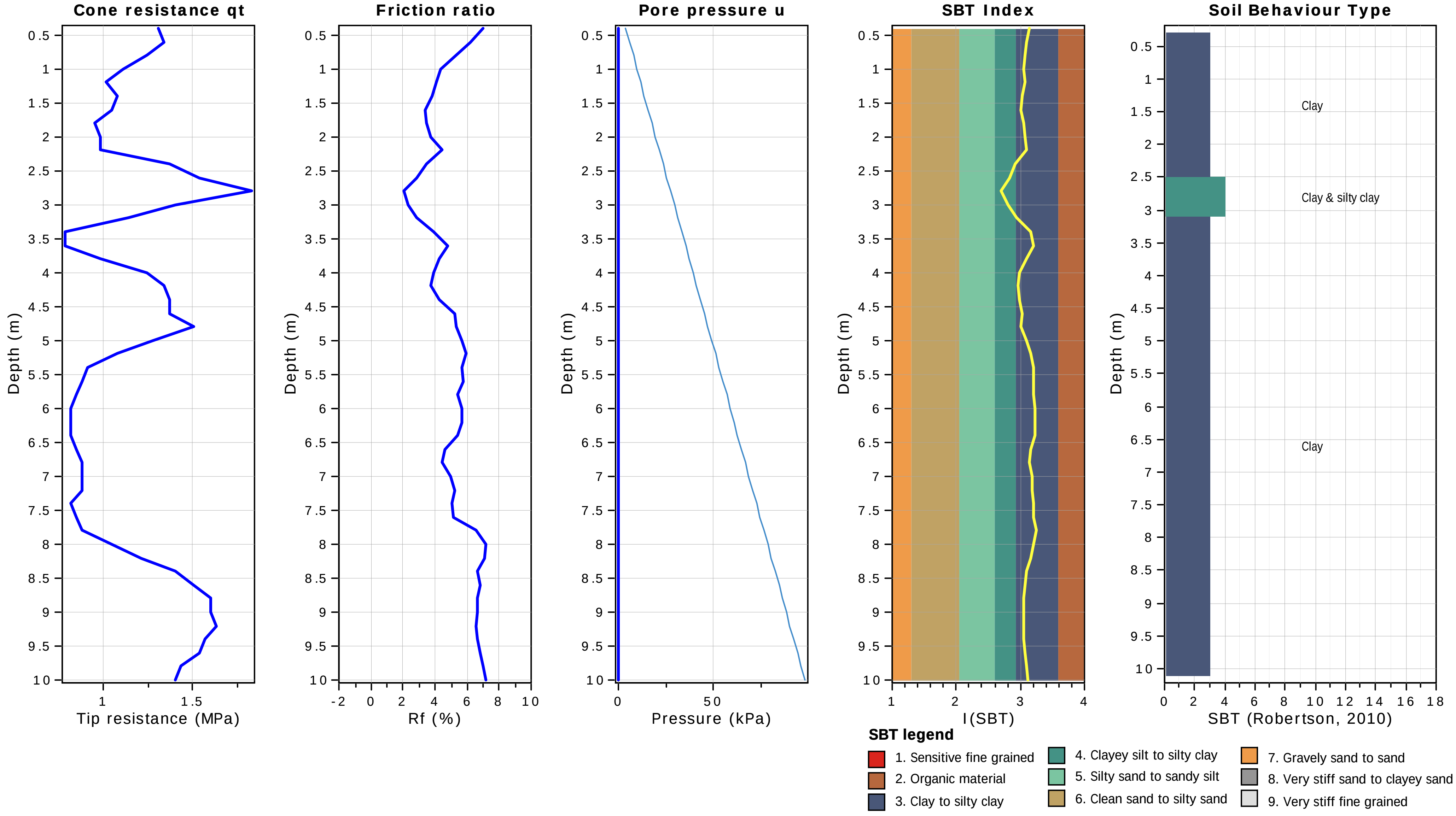
CPT: 036021P86CPT86
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



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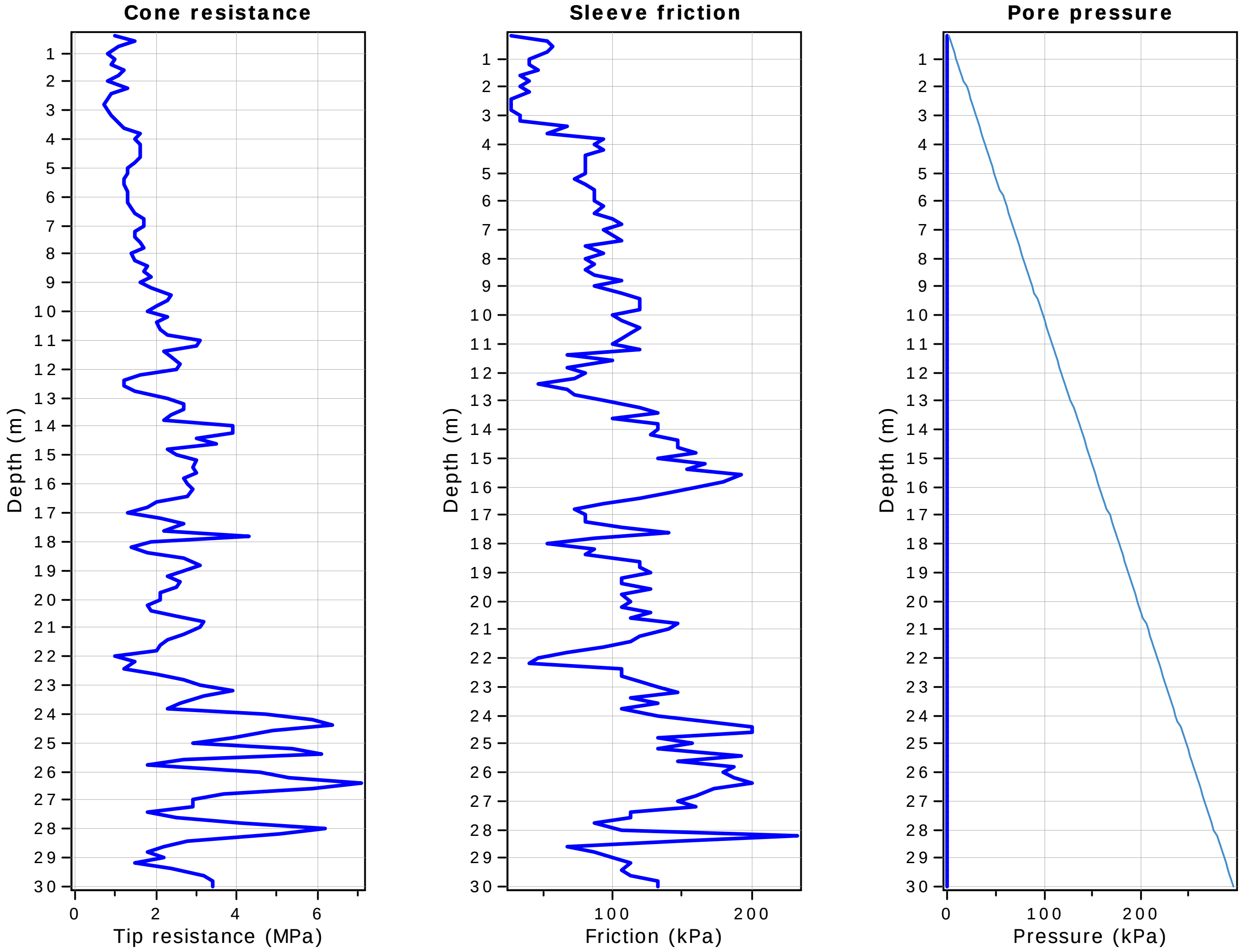
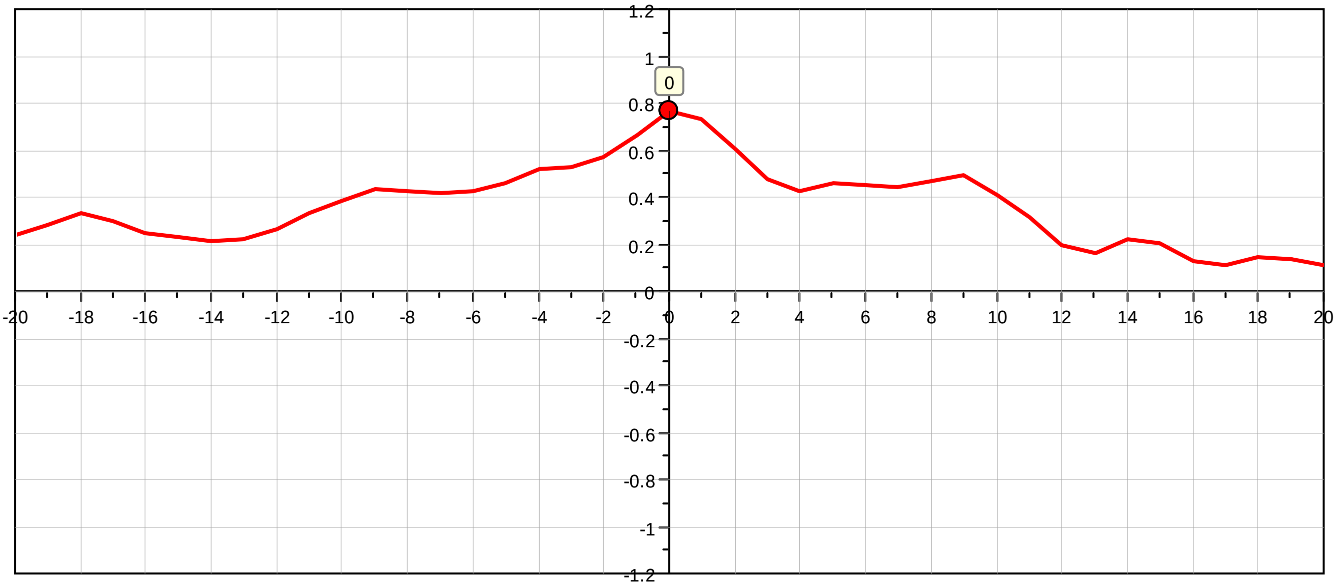
CPT: 036021P87CPT87
Total depth: 30.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



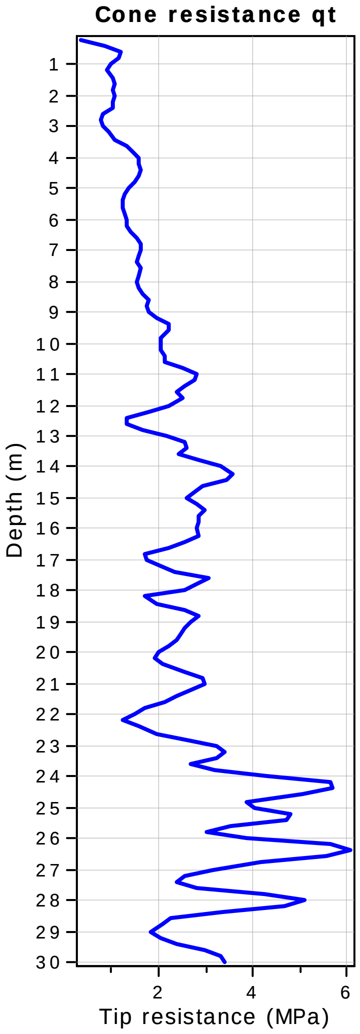
The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

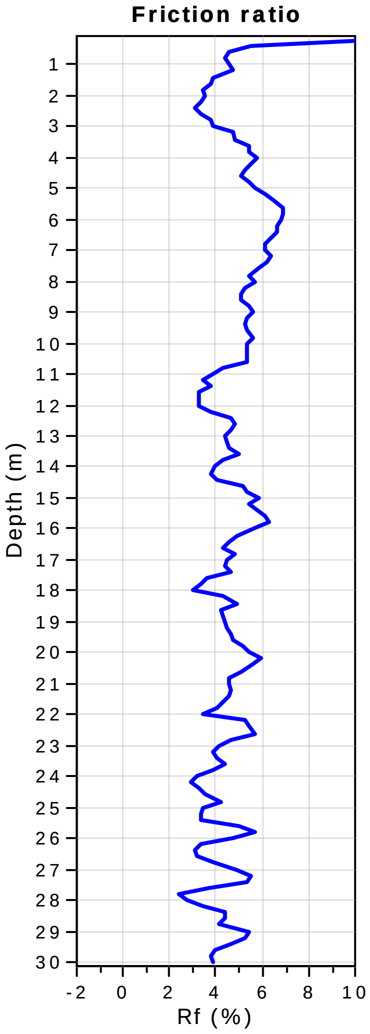
Cross correlation between qc & fs

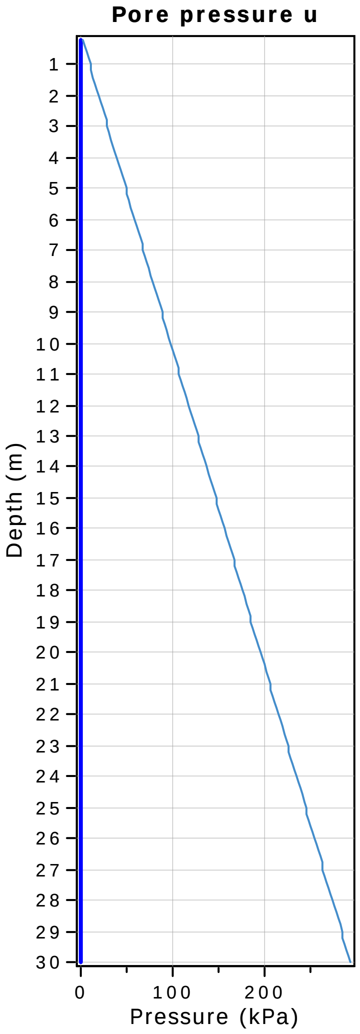


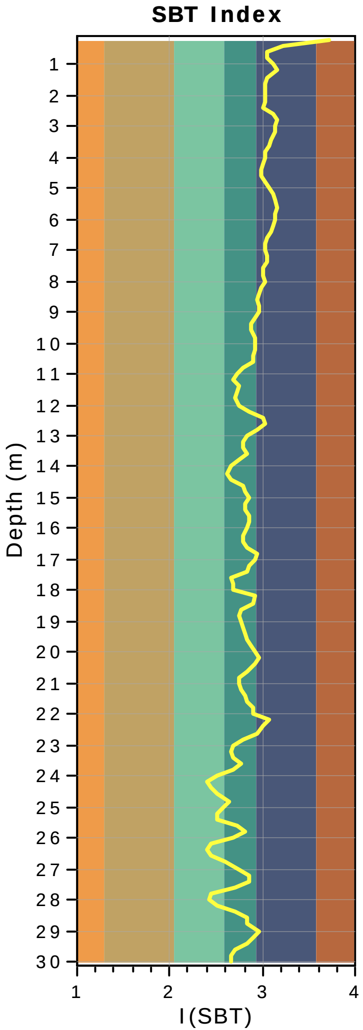
CPT: 036021P87CPT87
Total depth: 30.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

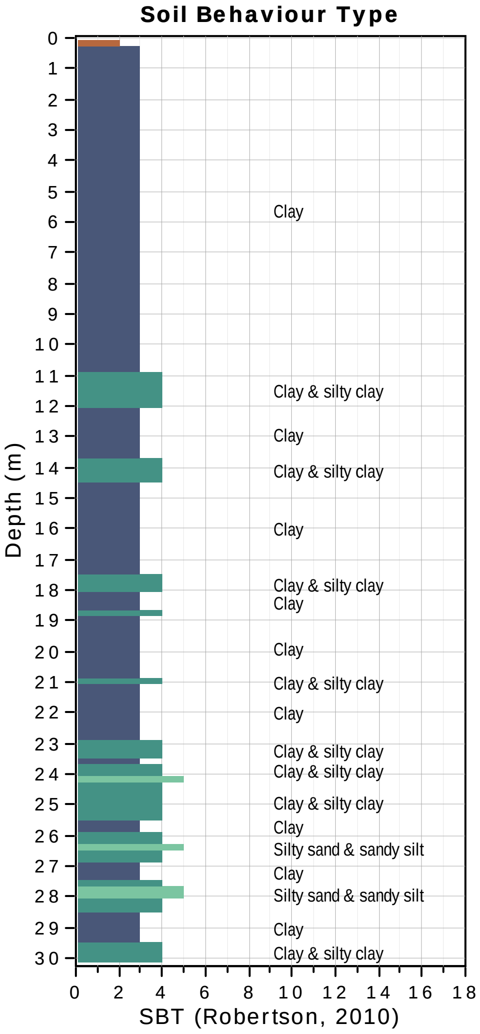
Project:
Location:











SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬛ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

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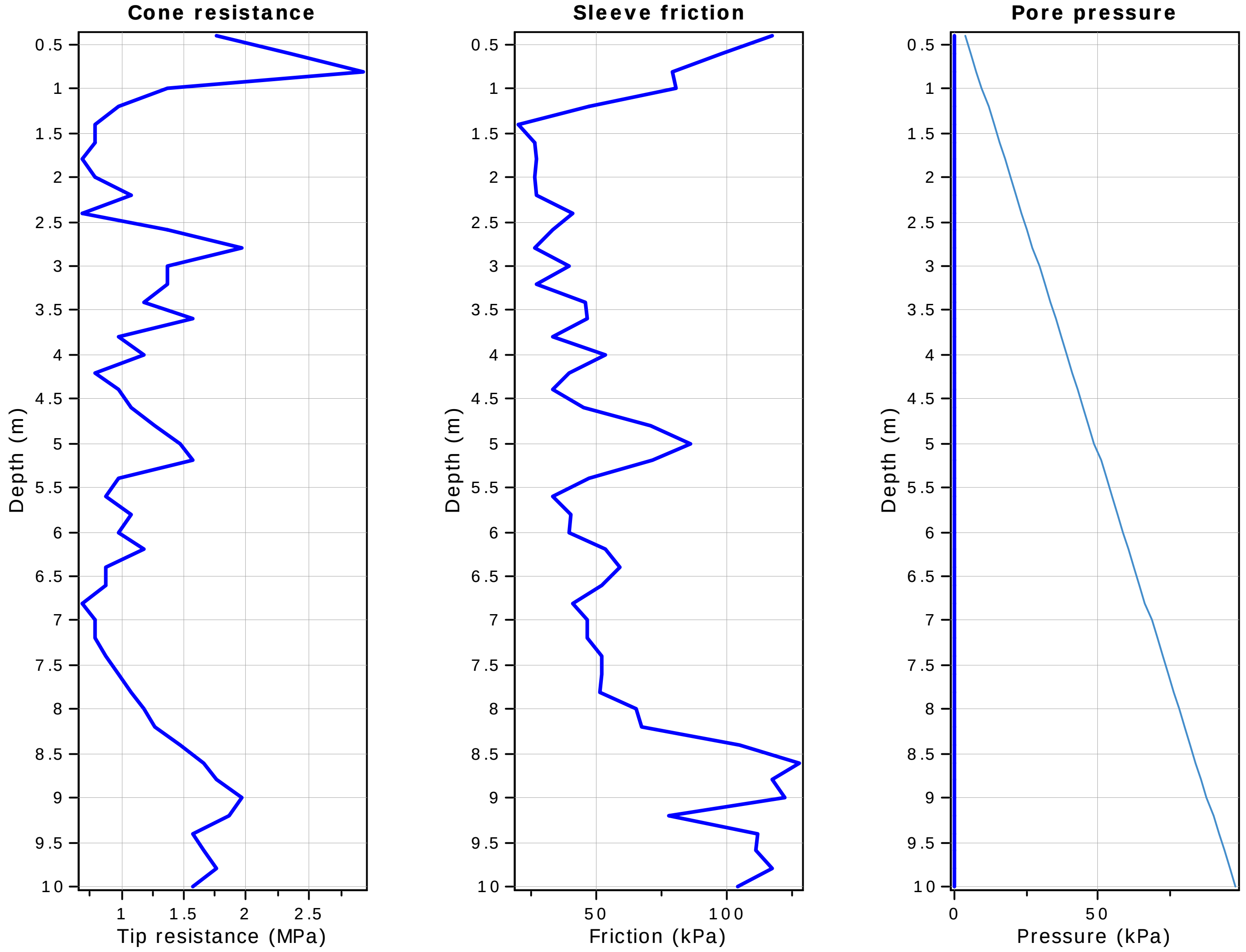
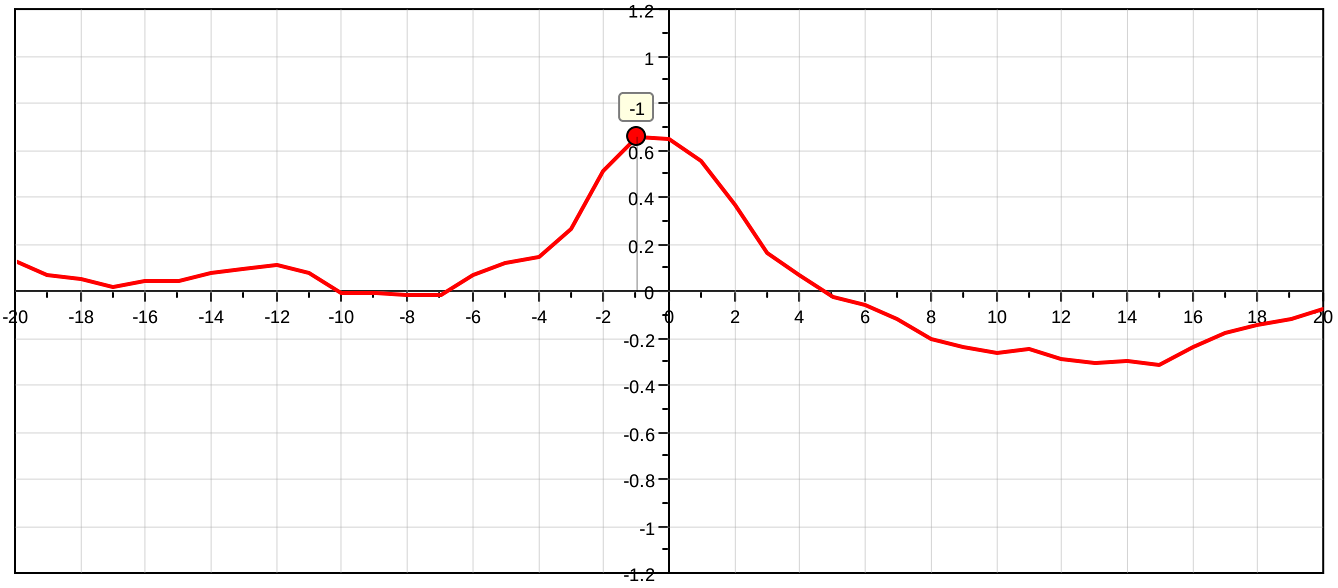
CPT: 036021P88CPT88
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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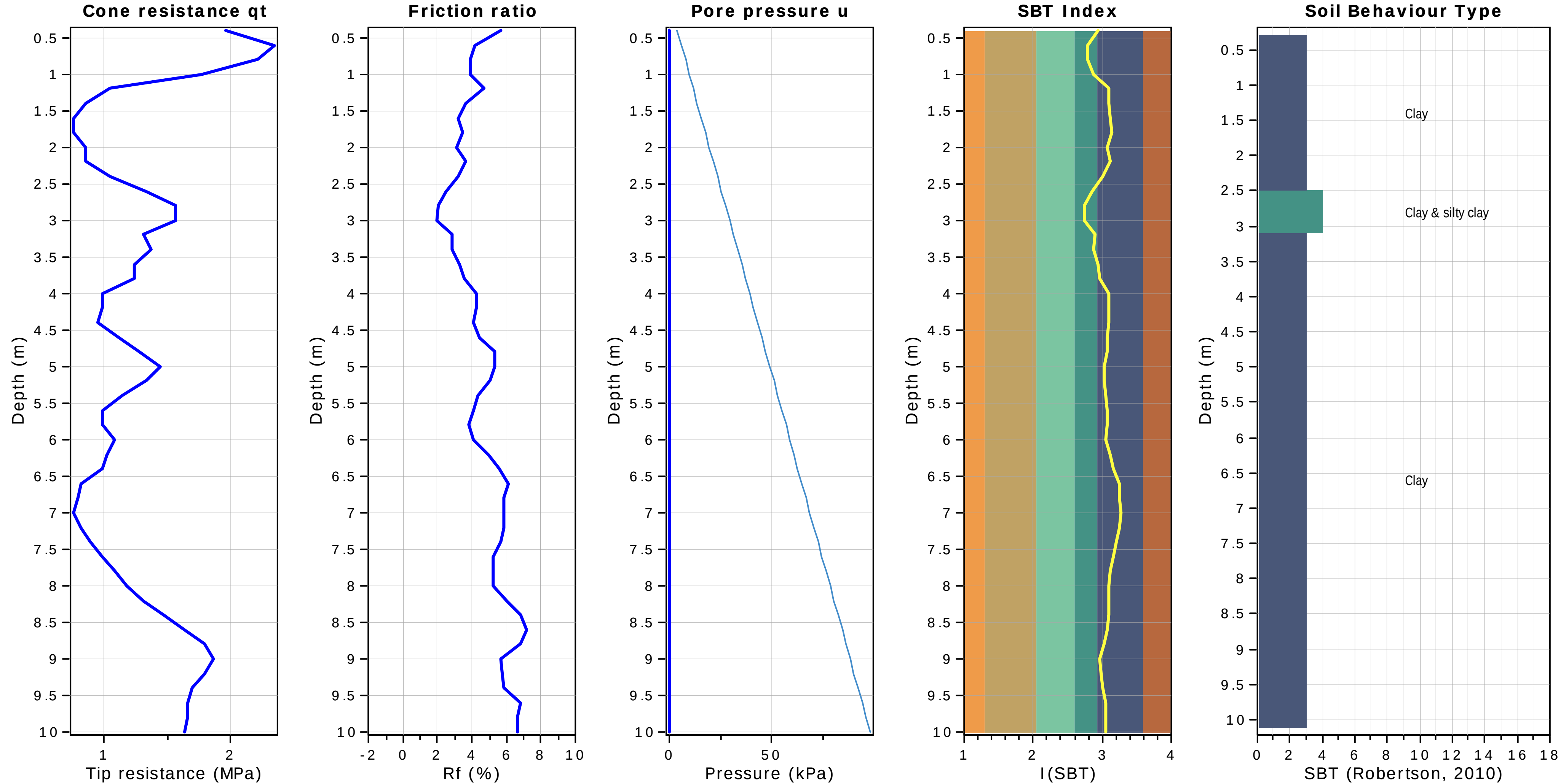
CPT: 036021P88CPT88
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

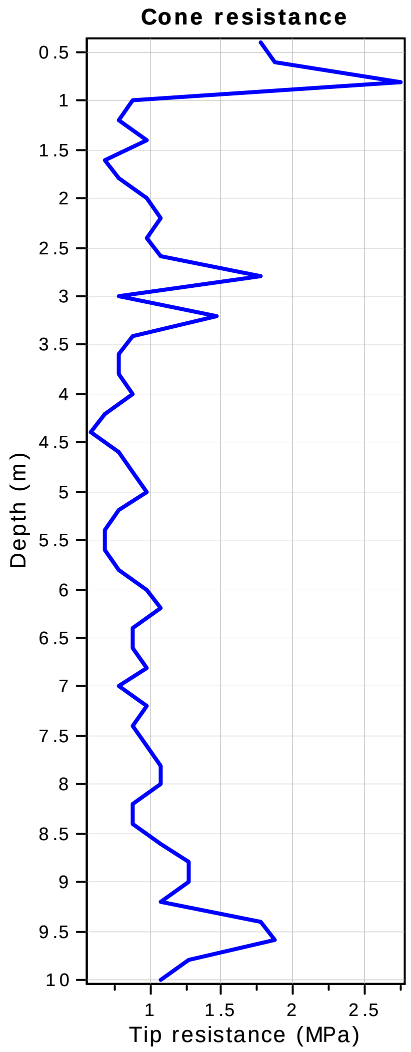


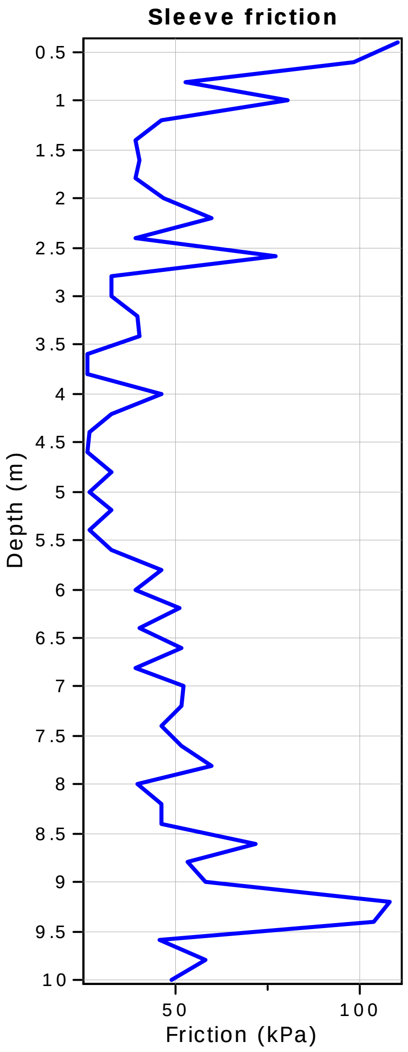
SBT legend

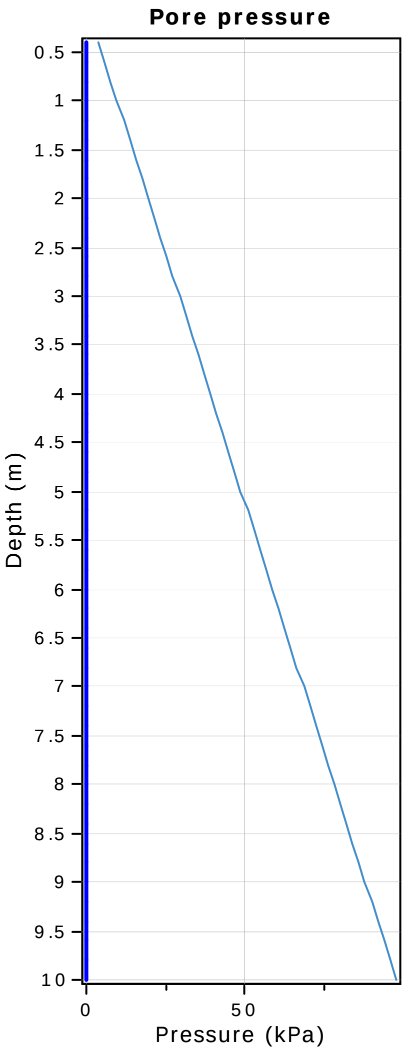
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟫 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

CPT: 036021P89CPT89
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

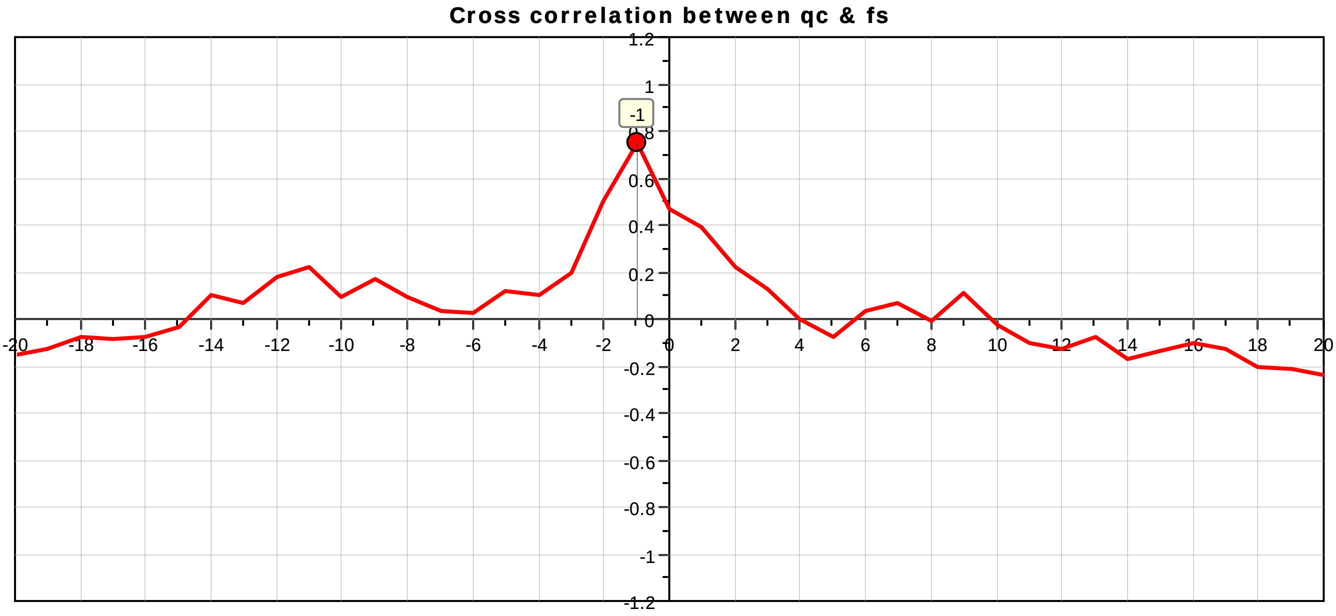
Project:
Location:





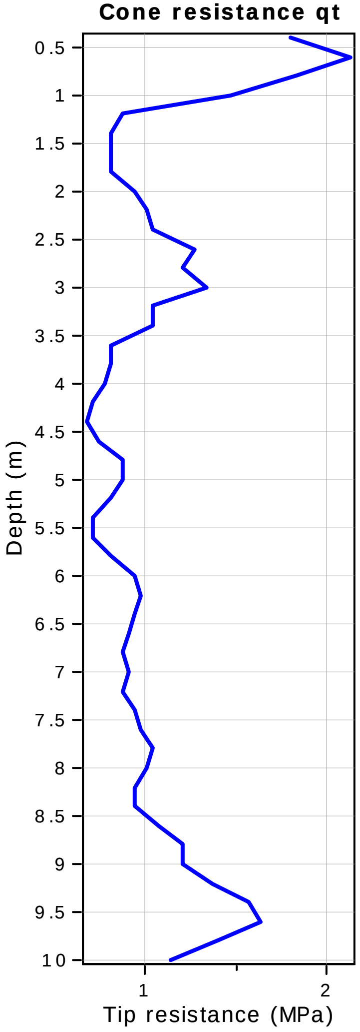


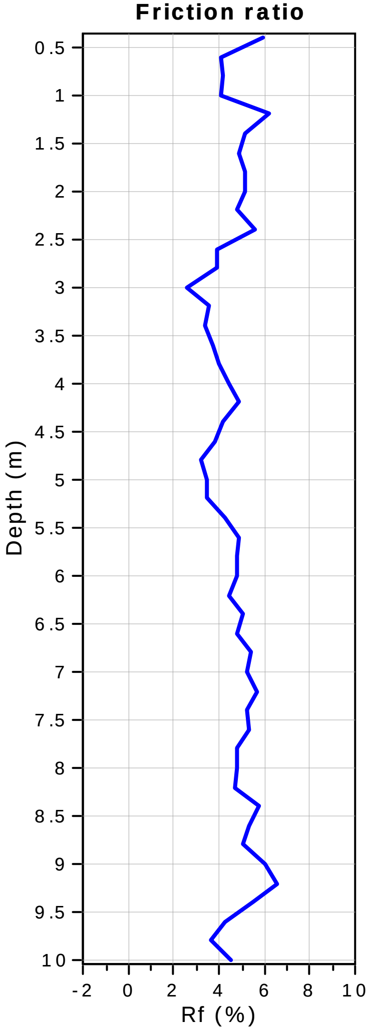
The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

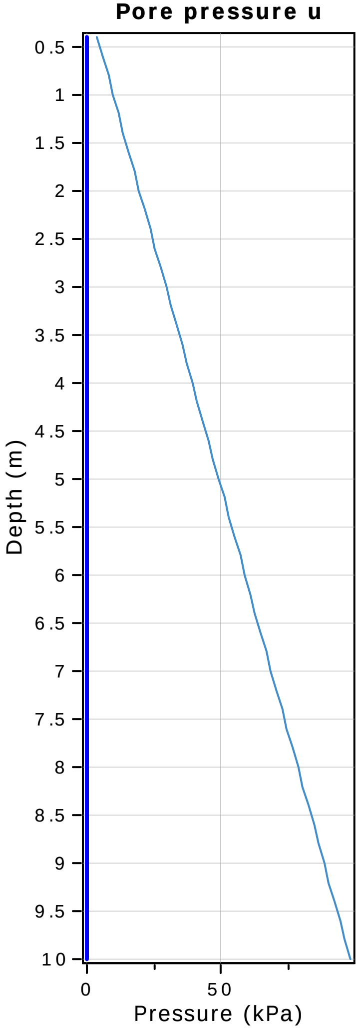


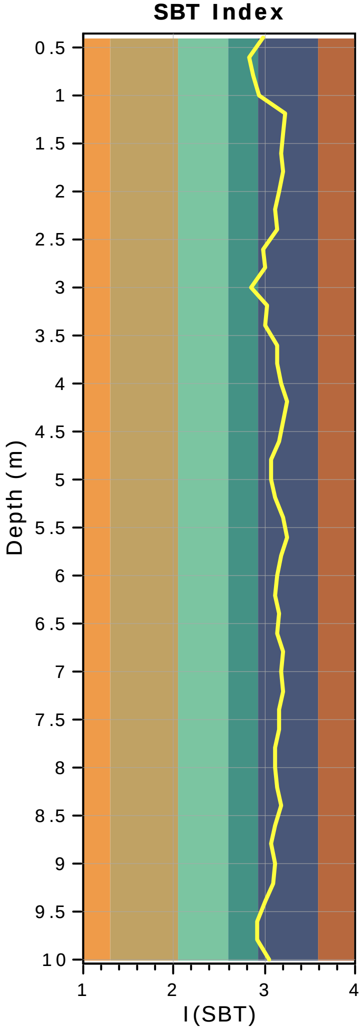
CPT: 036021P89CPT89
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

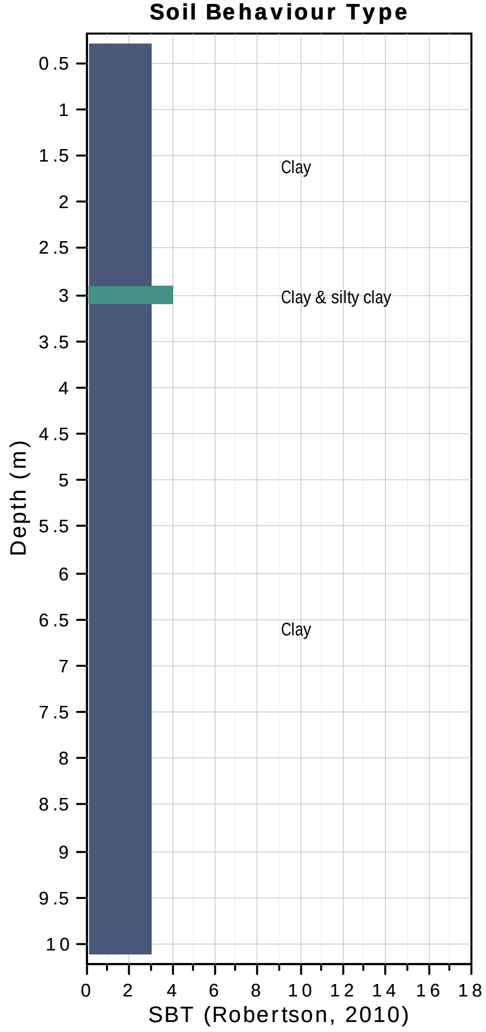
Project:
Location:


Cone resistance qt


Friction ratio


Pore pressure u


SBT Index


Soil Behaviour Type

SBT legend

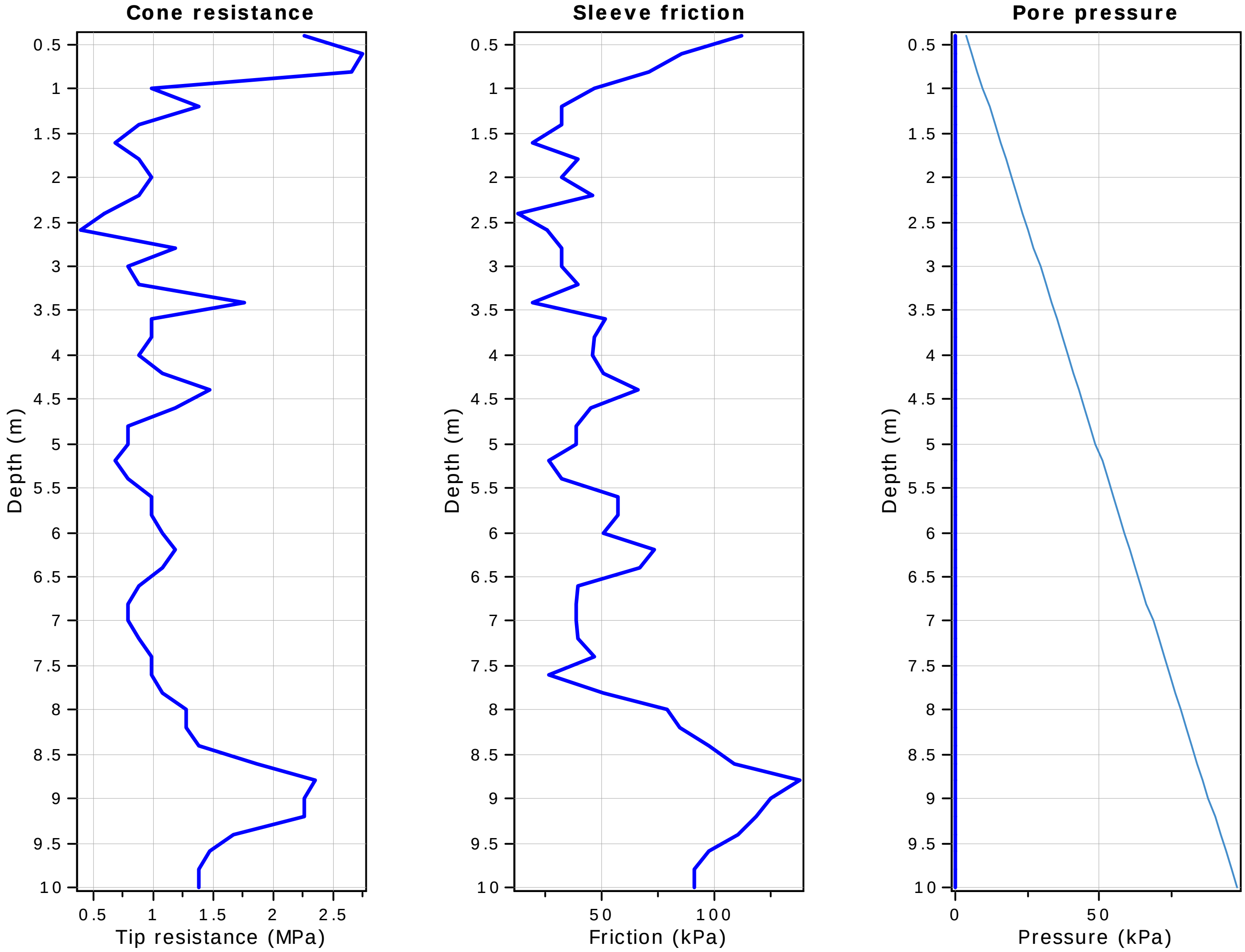
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P90CPT90

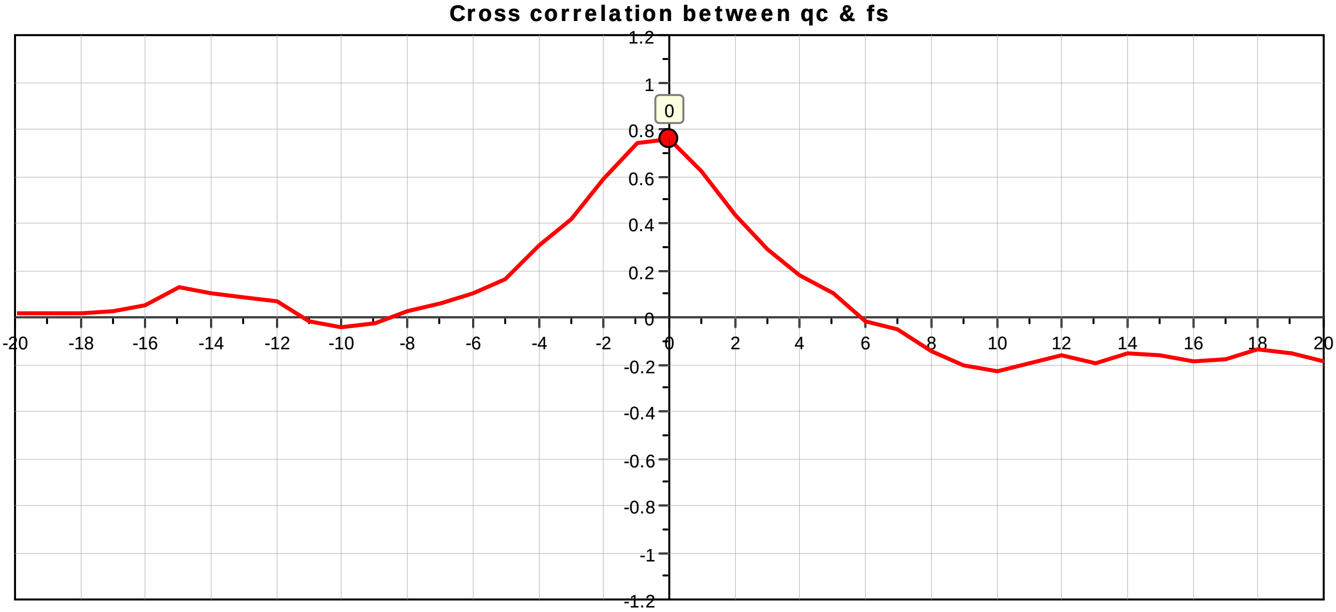
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:

Location:

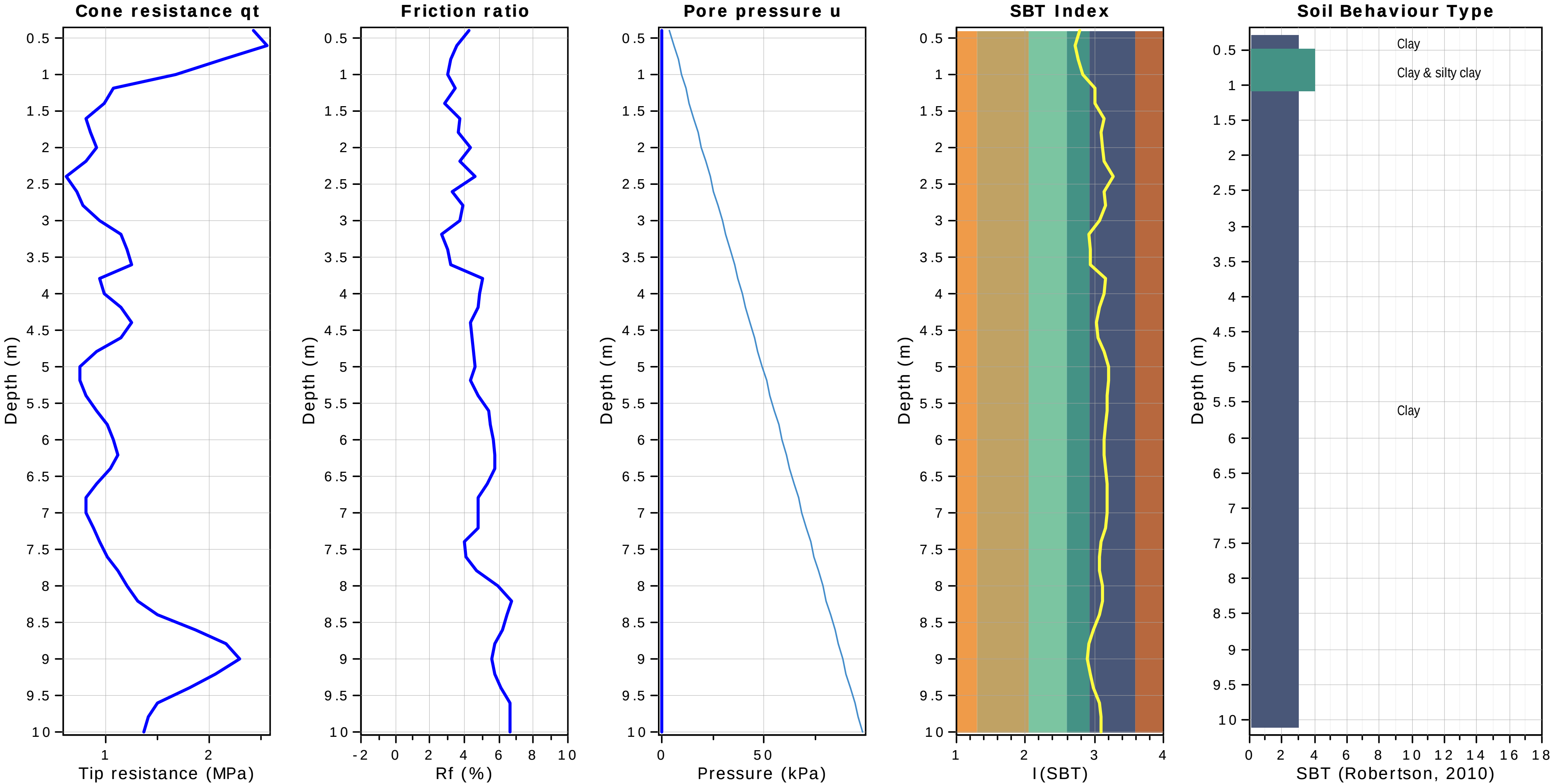


The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT: 036021P90CPT90
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

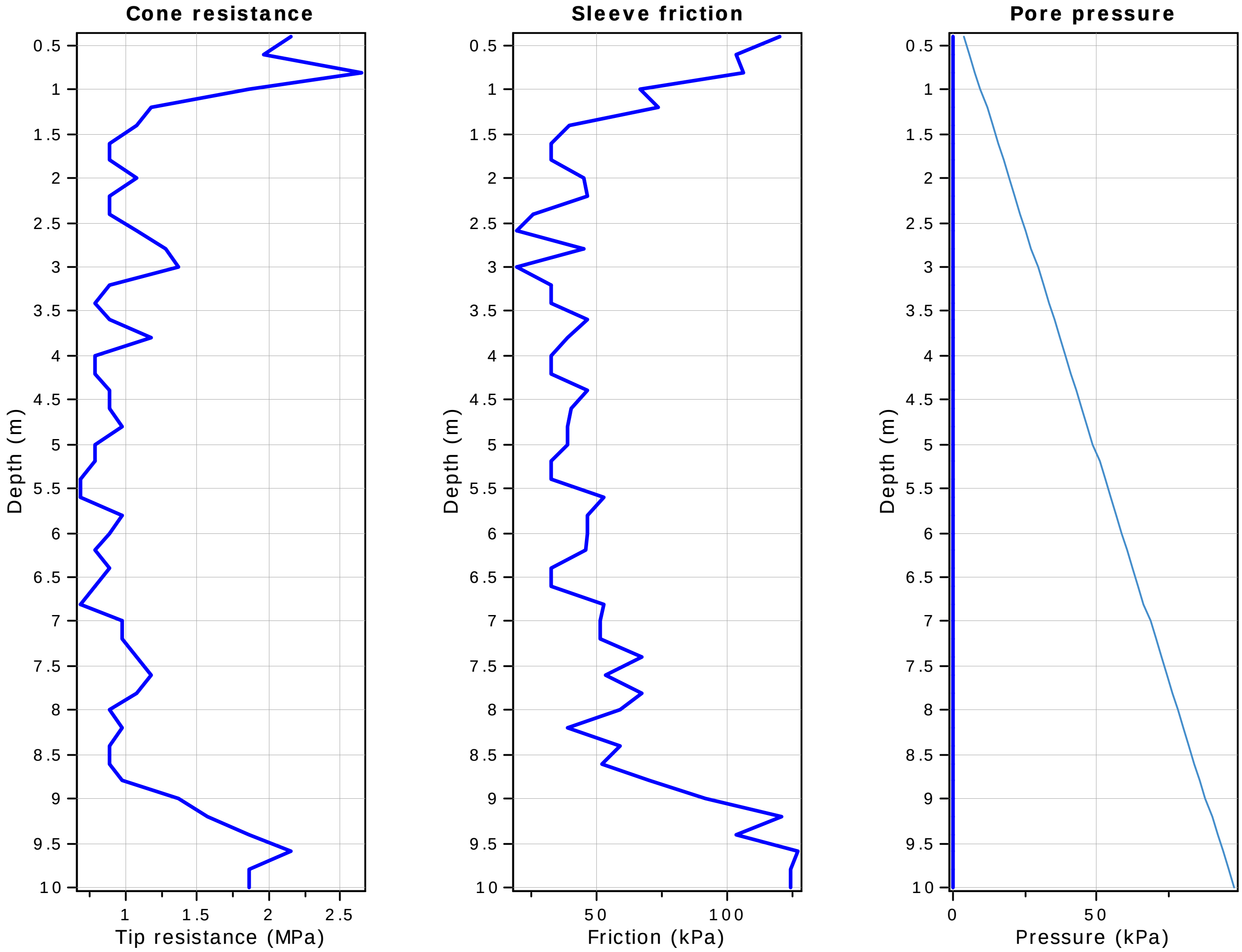


SBT legend

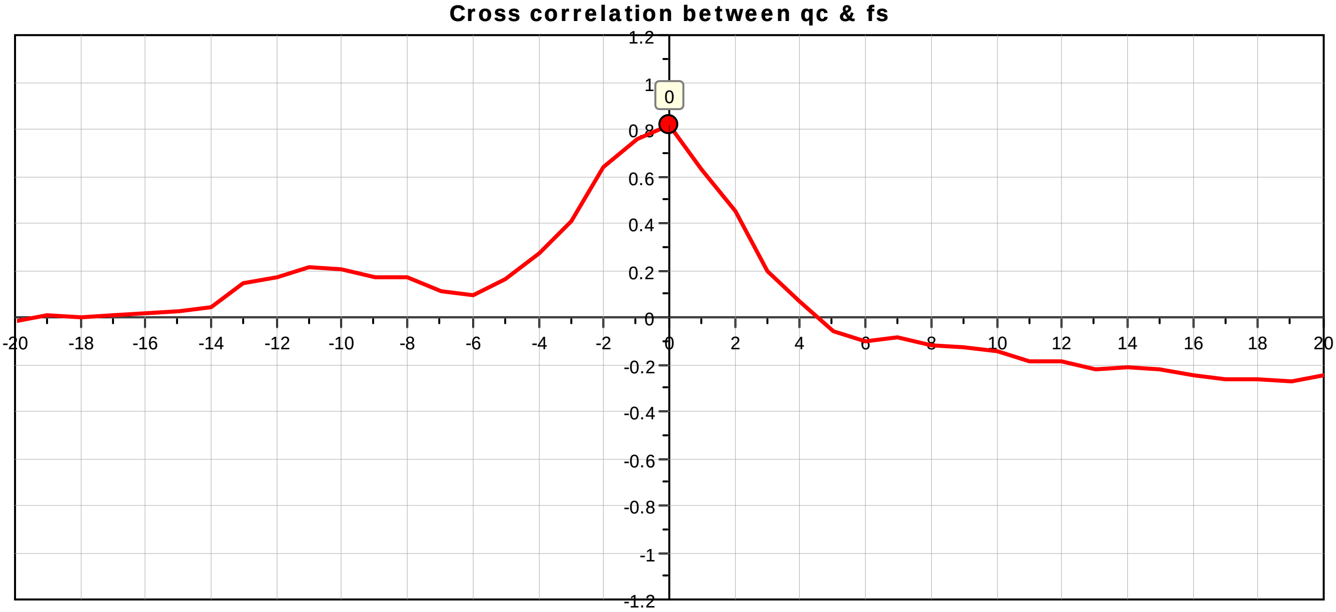
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P91CPT91
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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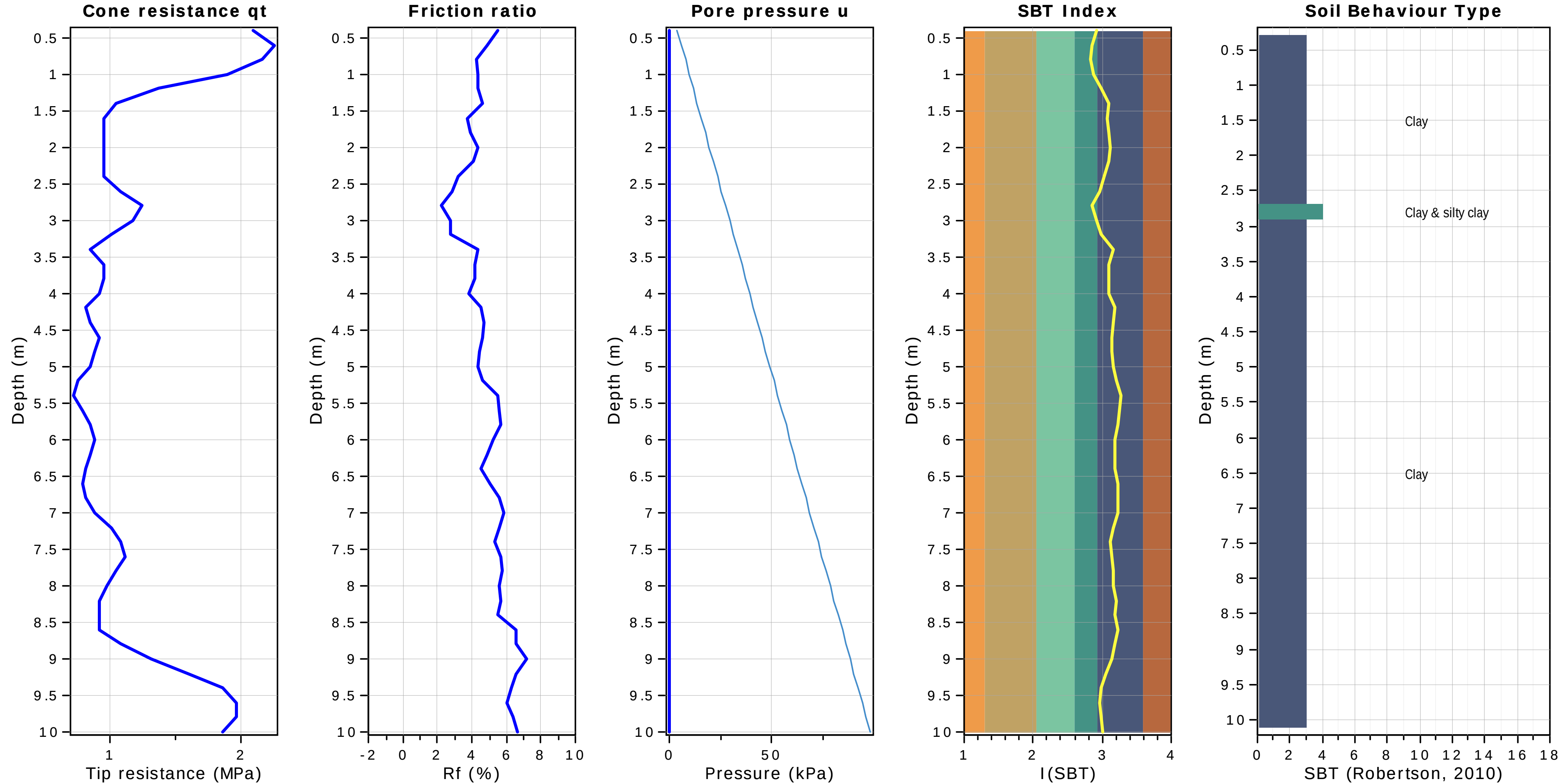
CPT: 036021P91CPT91
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

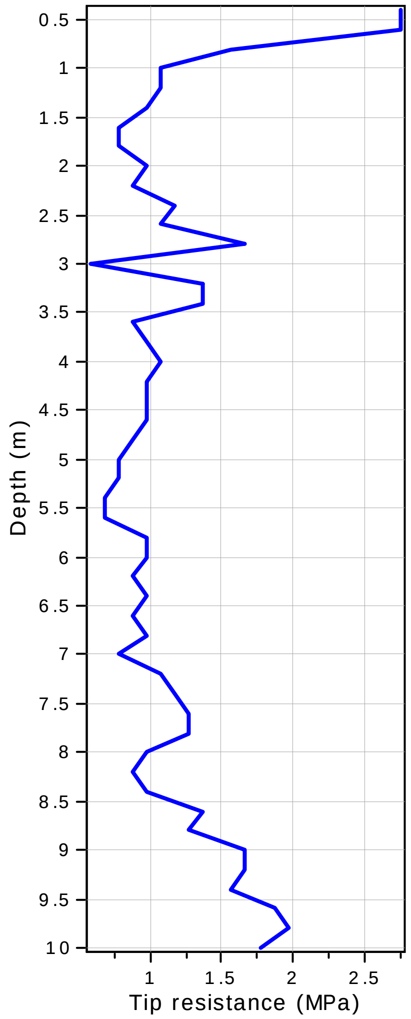


SBT legend
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬛ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

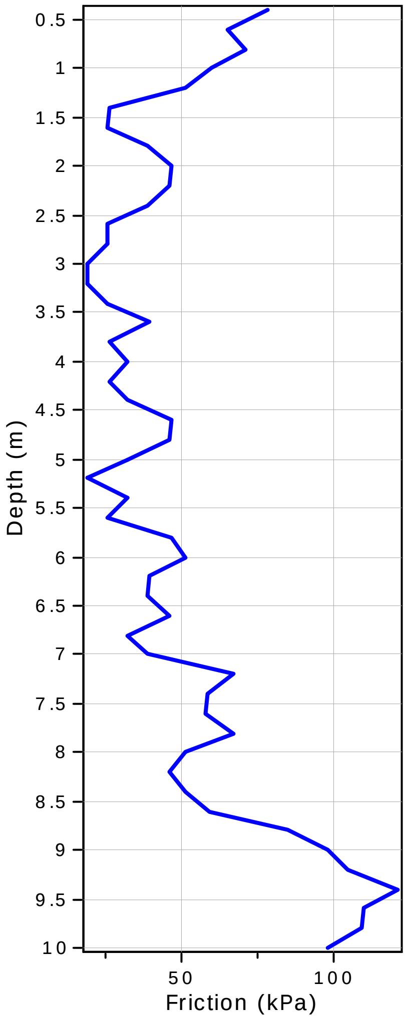
CPT: 036021P92CPT92
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

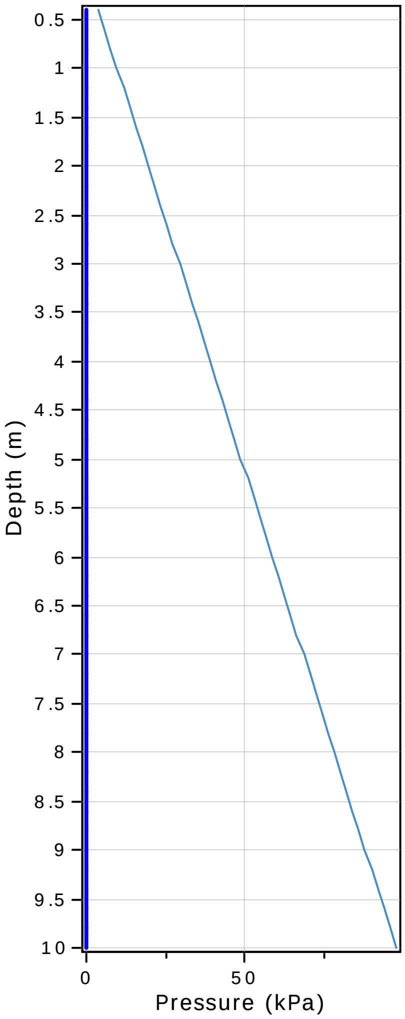
Cone resistance



Sleeve friction

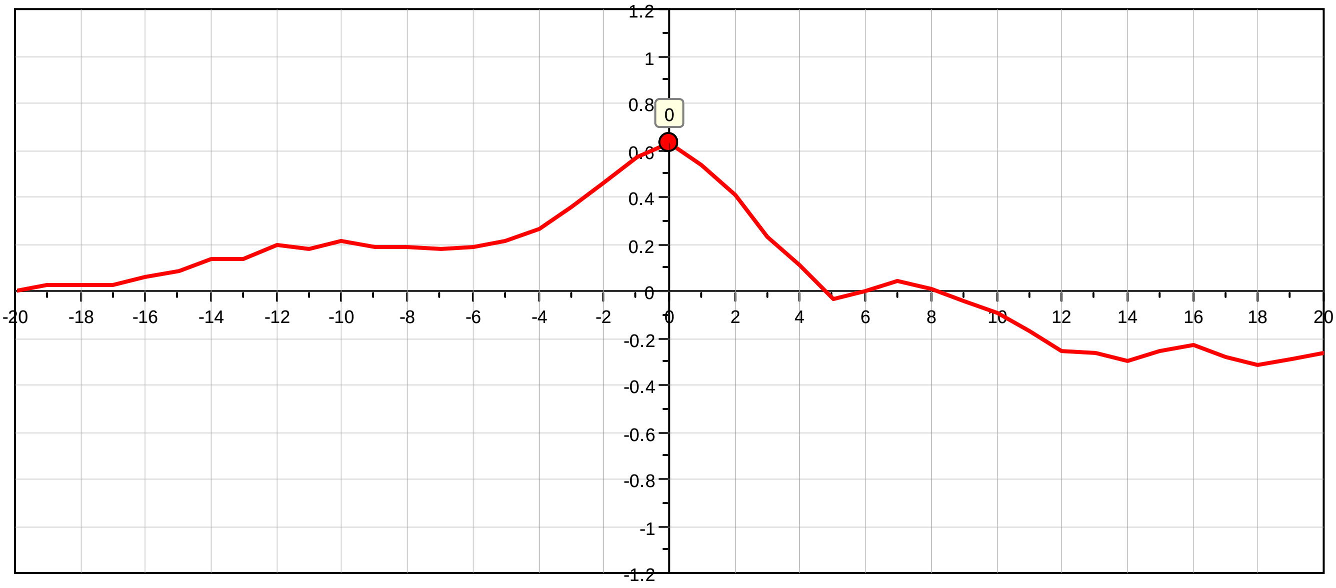


Pore pressure



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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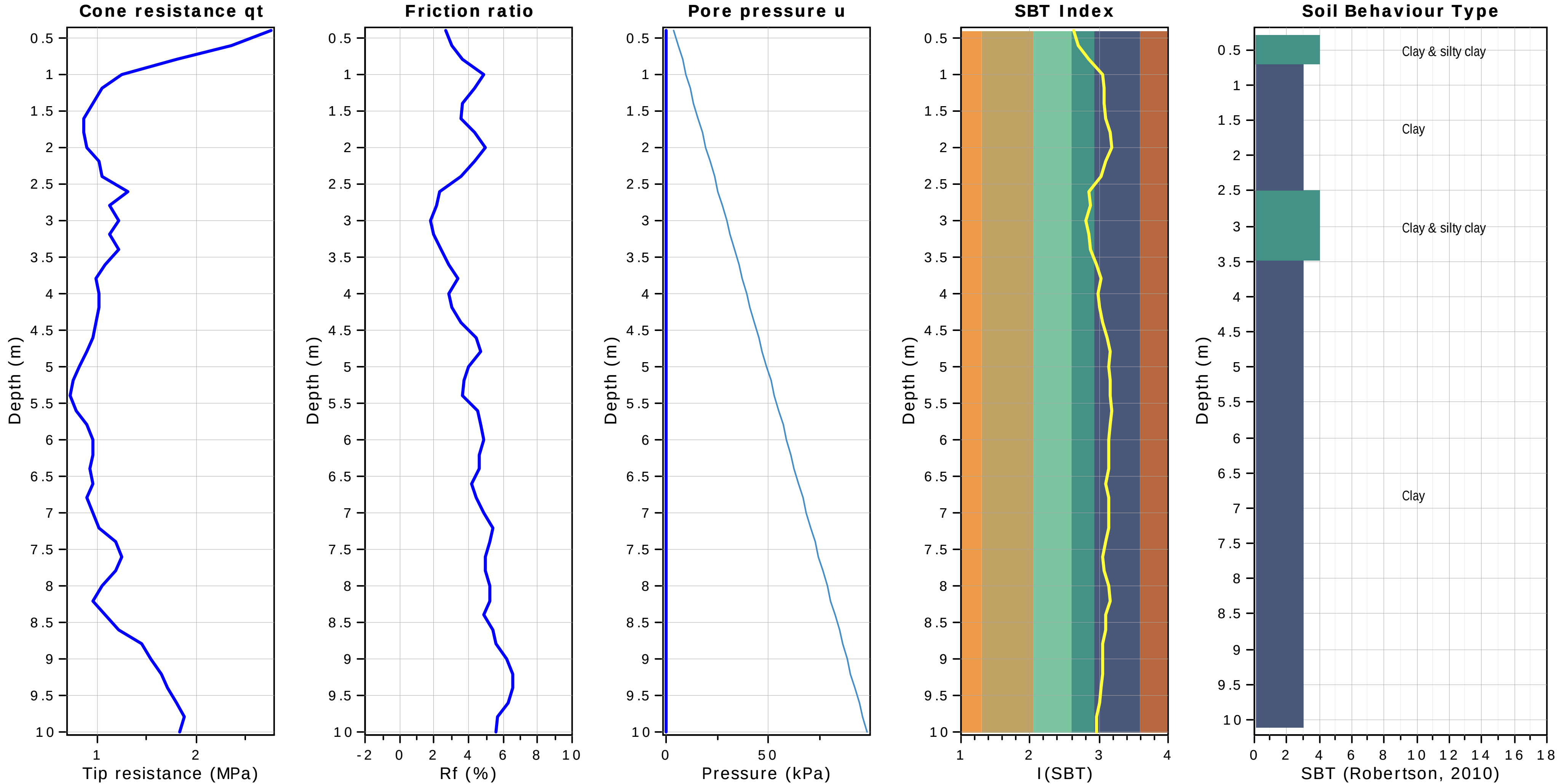
CPT: 036021P92CPT92
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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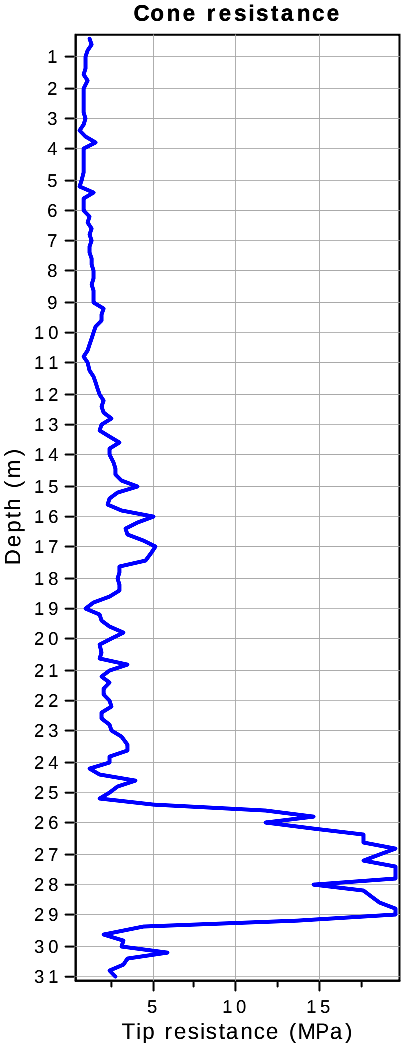
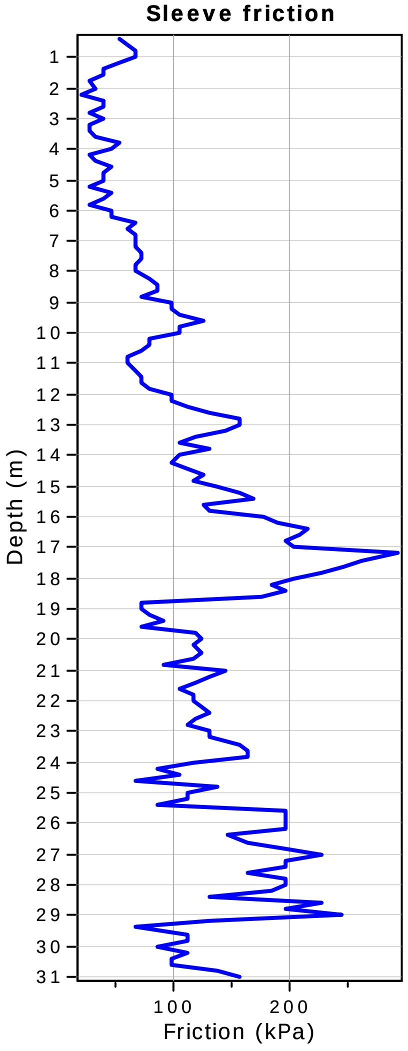
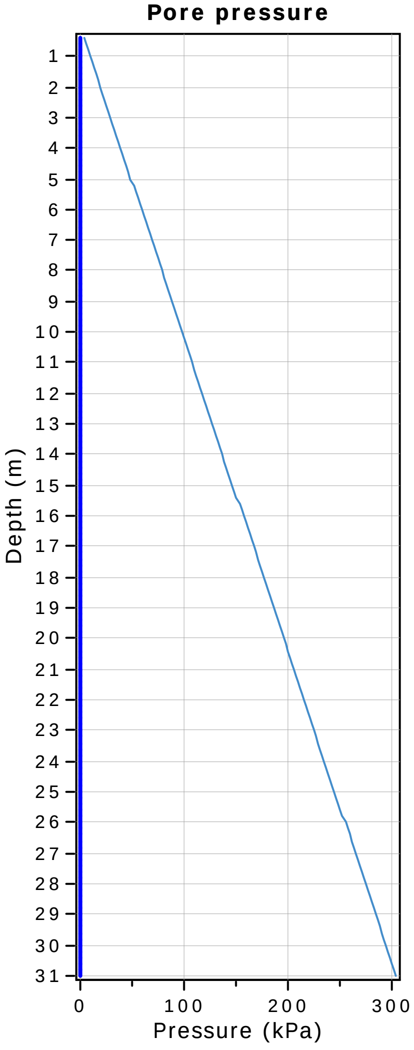
CPT: 036021P93CPT93
Total depth: 31.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

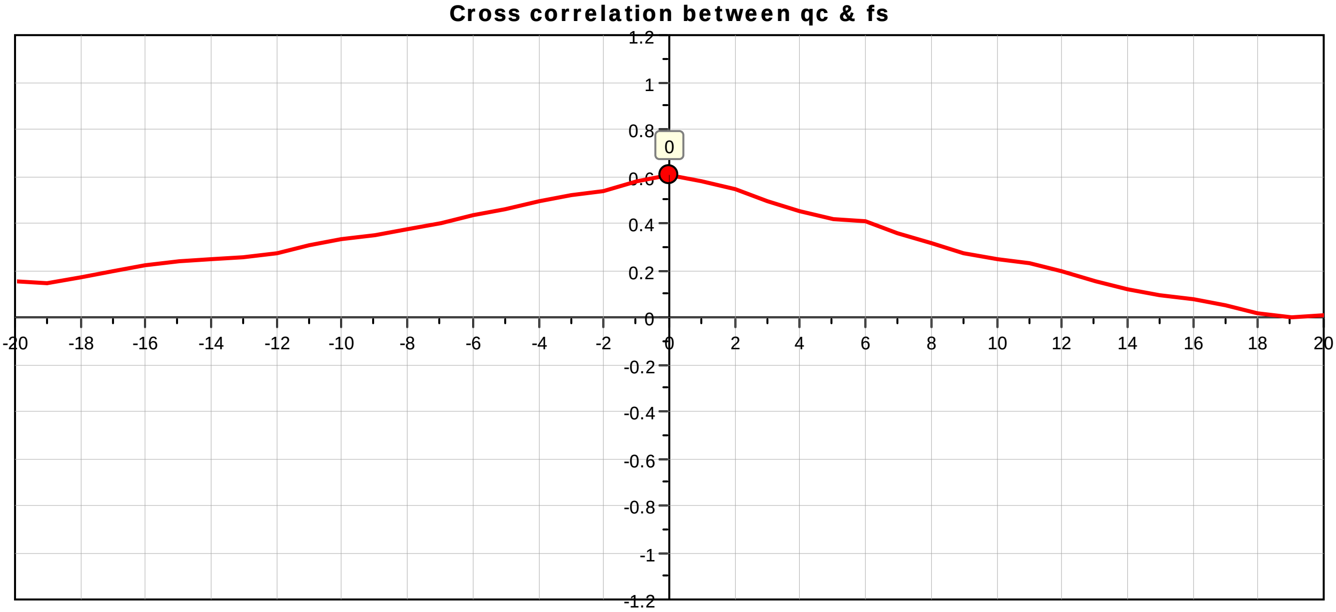
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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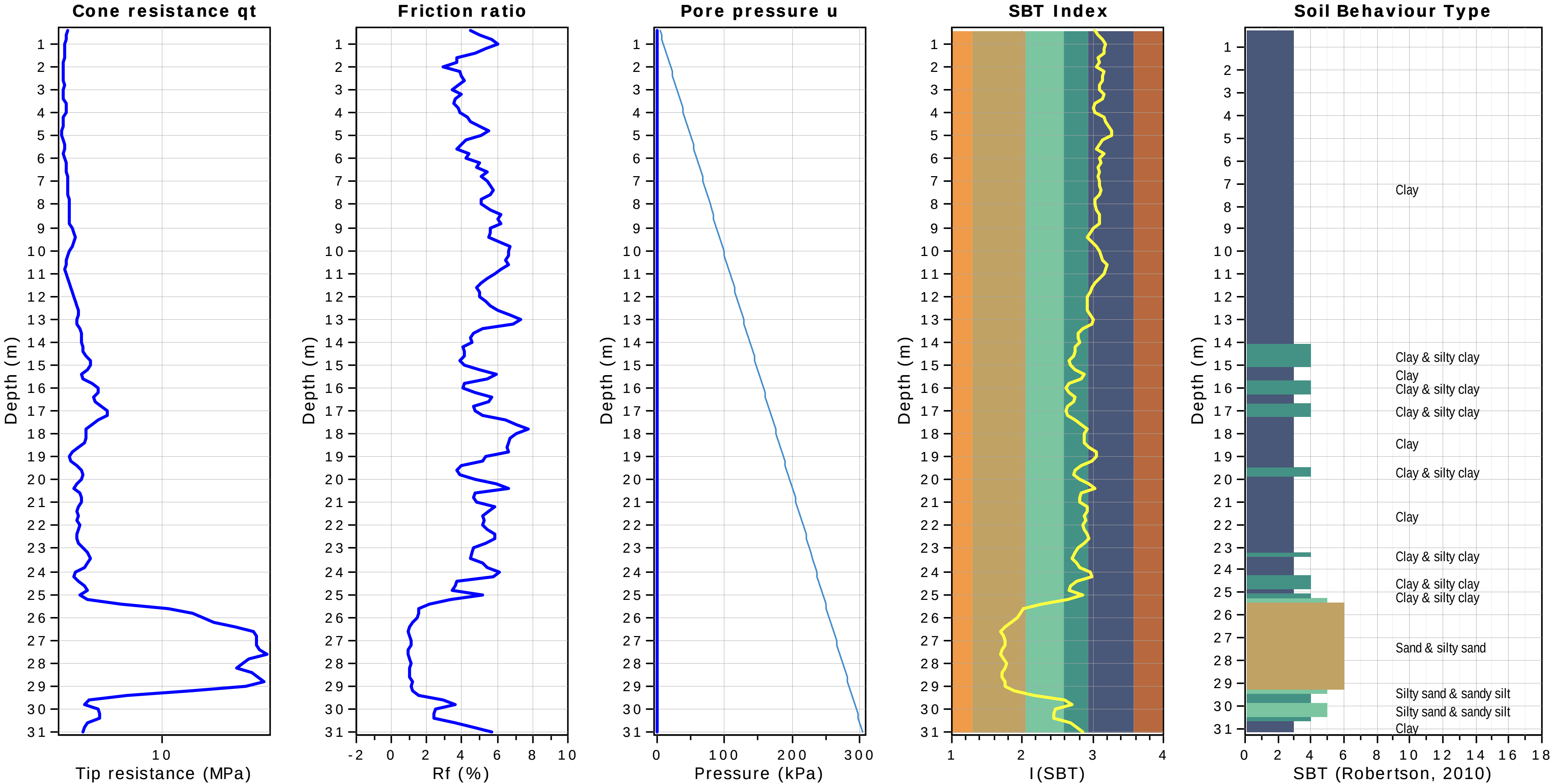
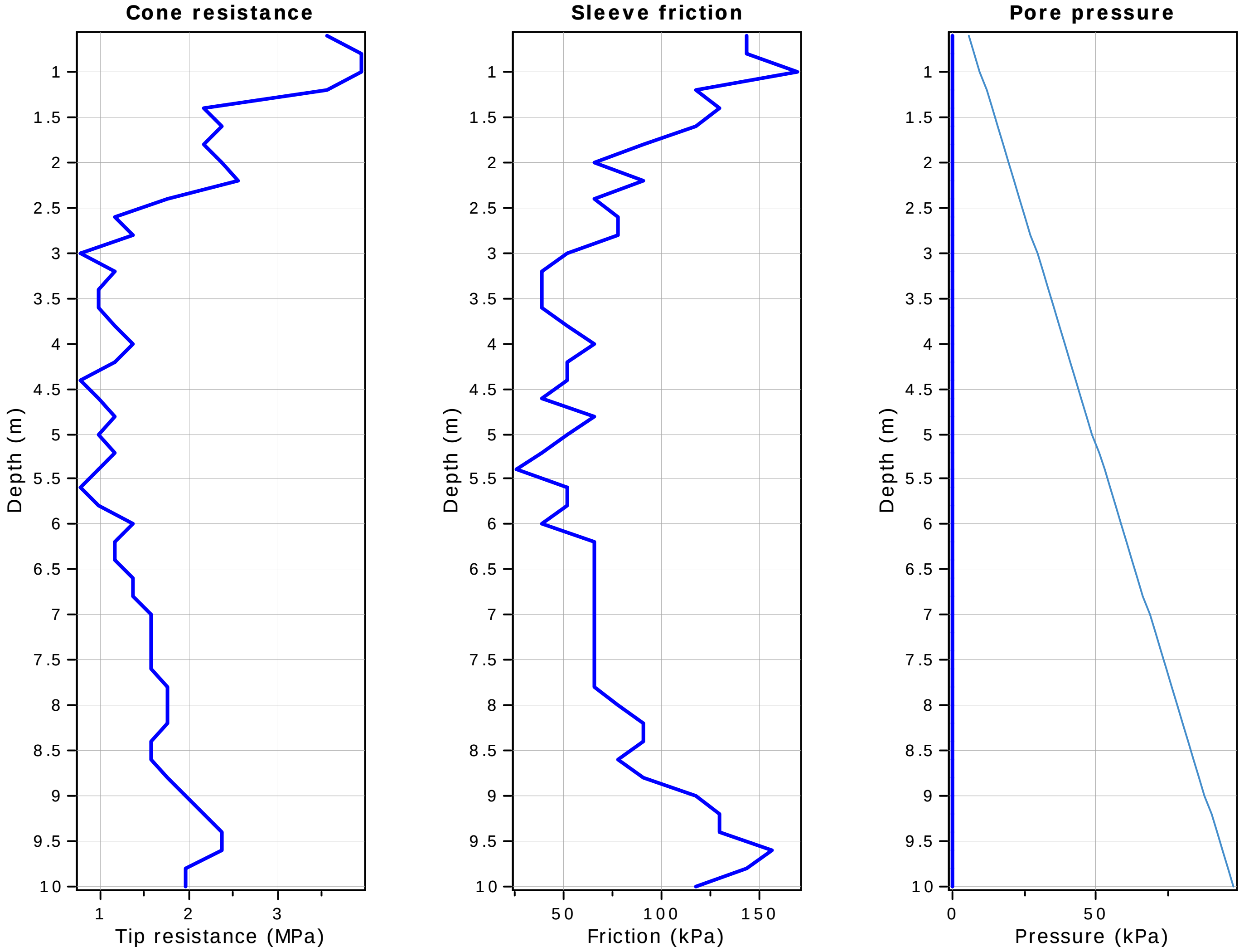
CPT: 036021P93CPT93
Total depth: 31.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

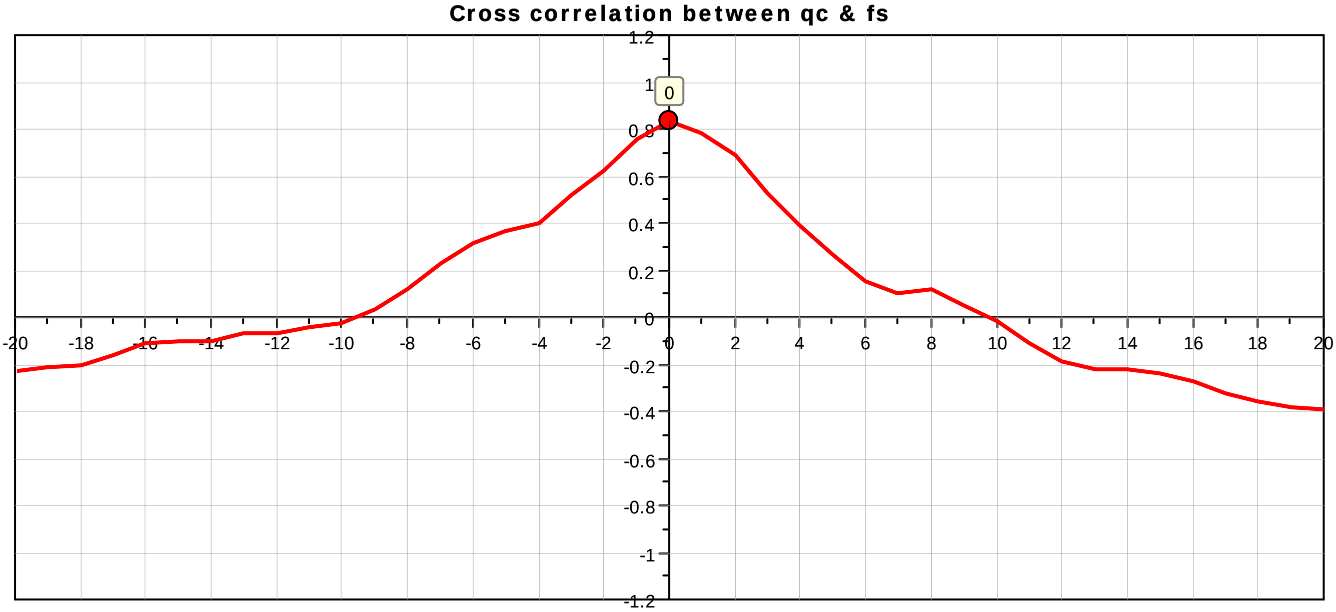


SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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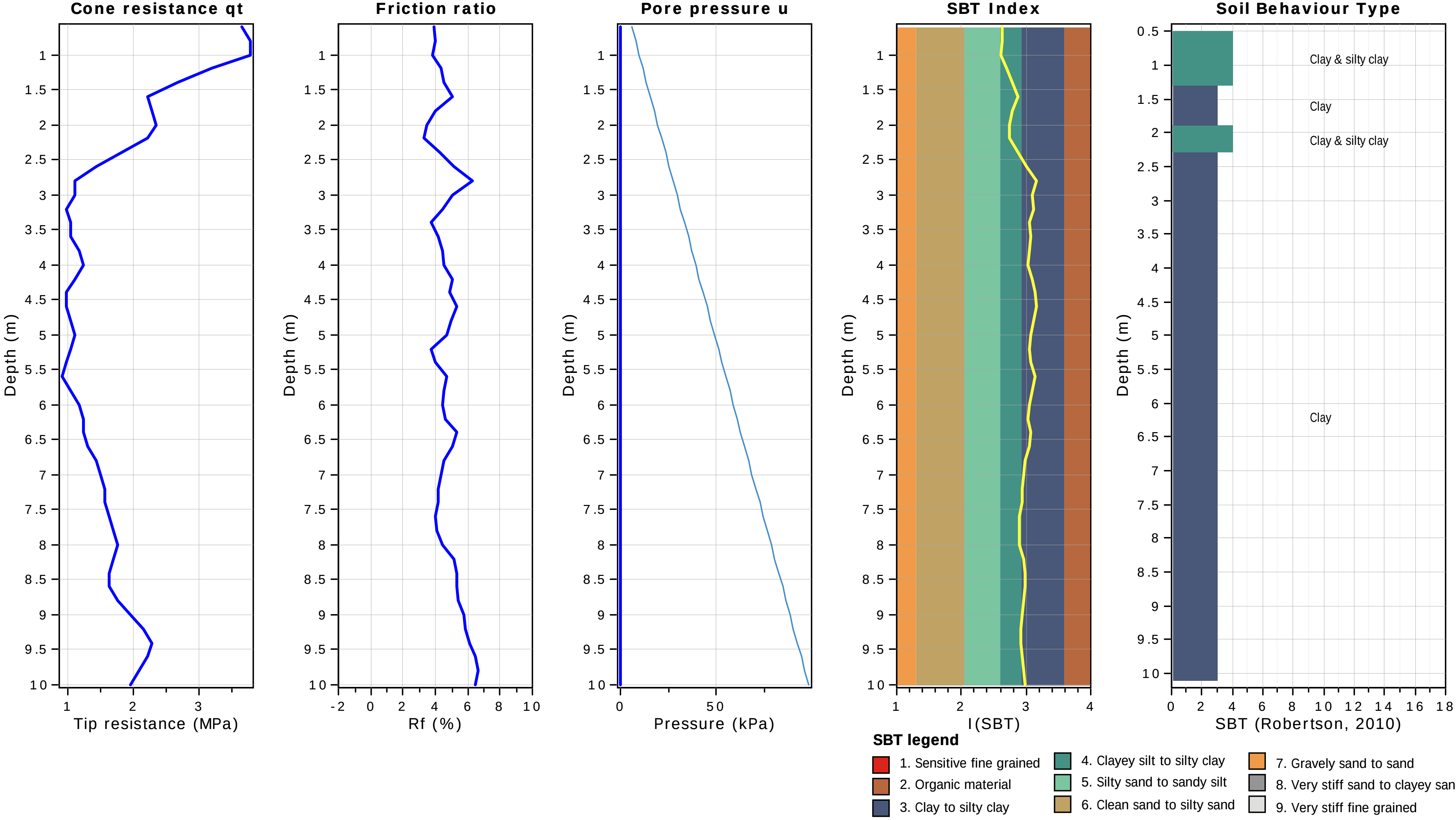
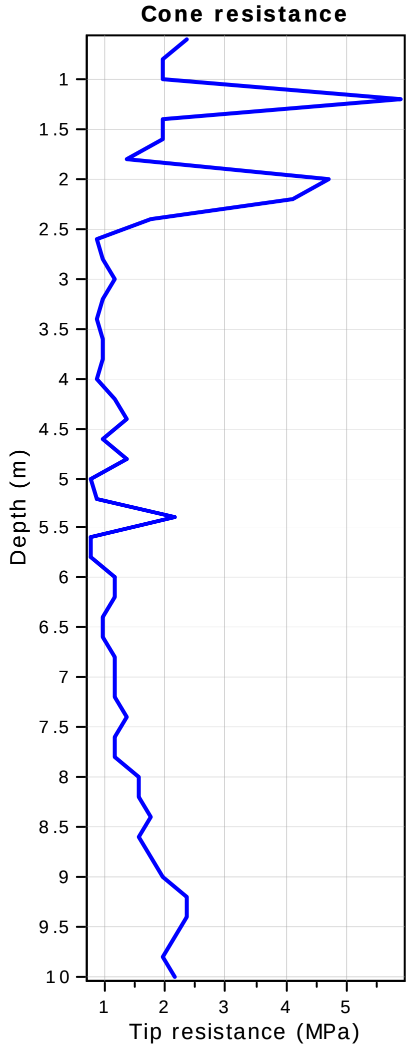
CPT: 036021P95CPT95
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

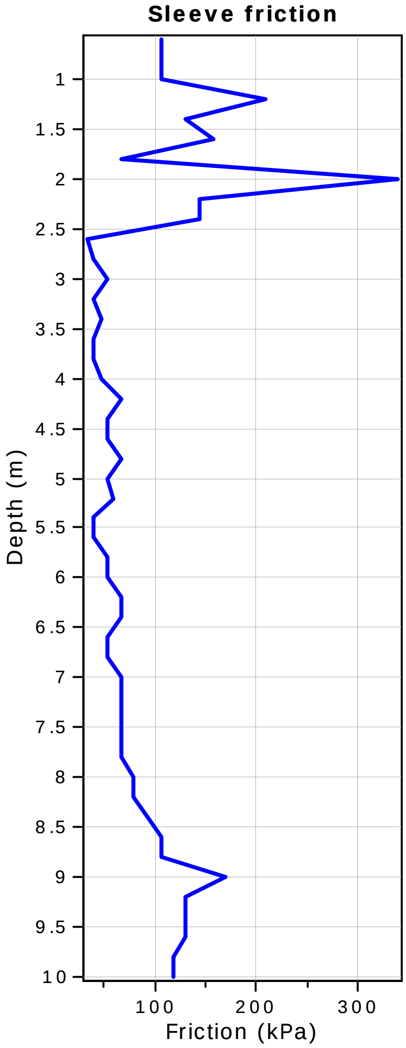
Project:
Location:

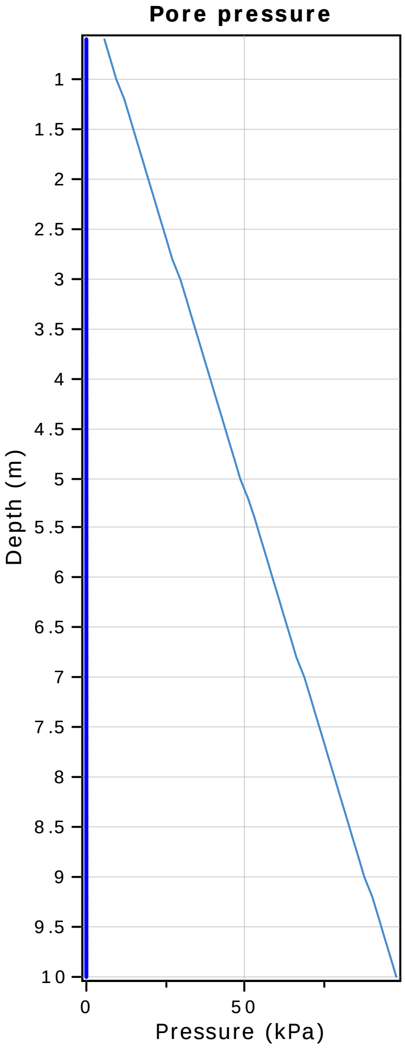


CPT: 036021P96CPT96
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

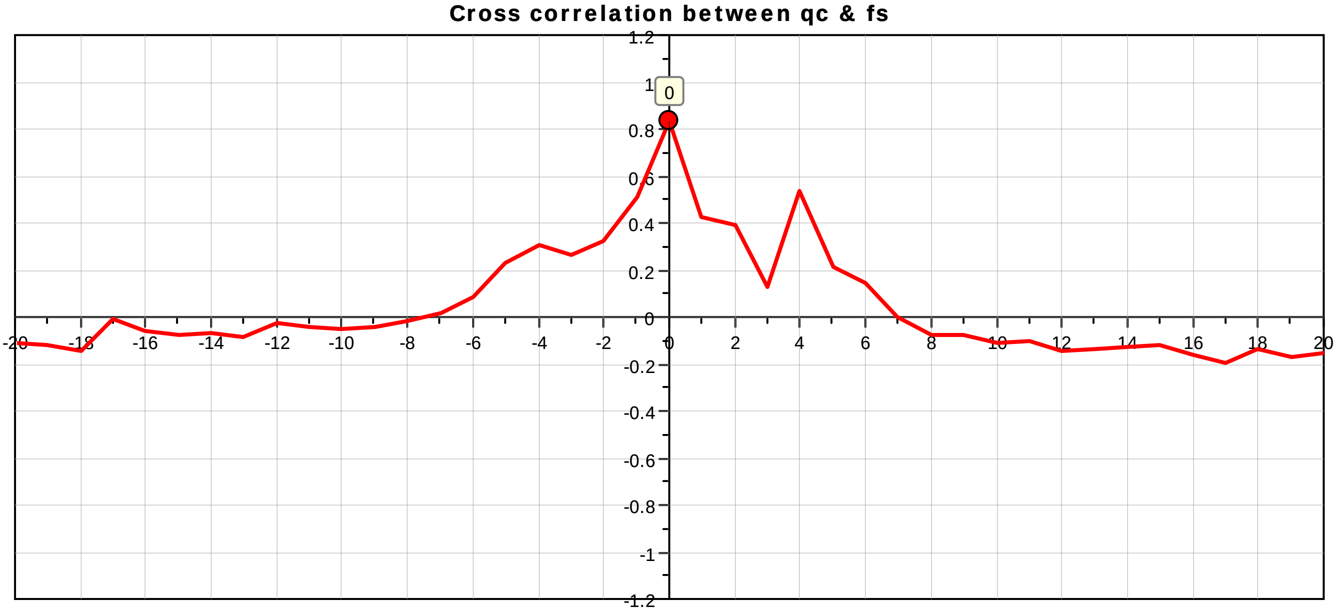
Project:
Location:


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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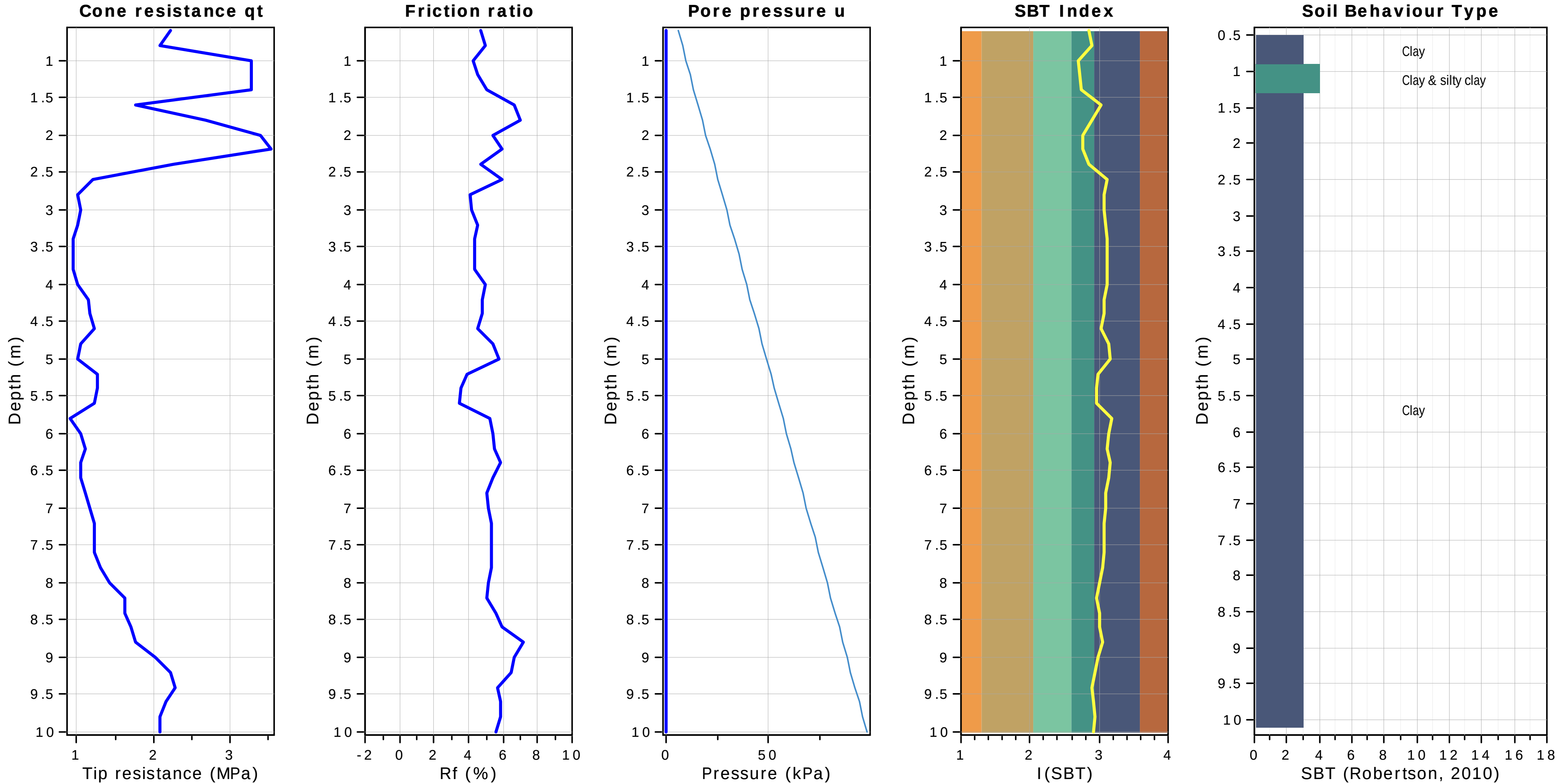
CPT: 036021P96CPT96
Total depth: 10.00 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

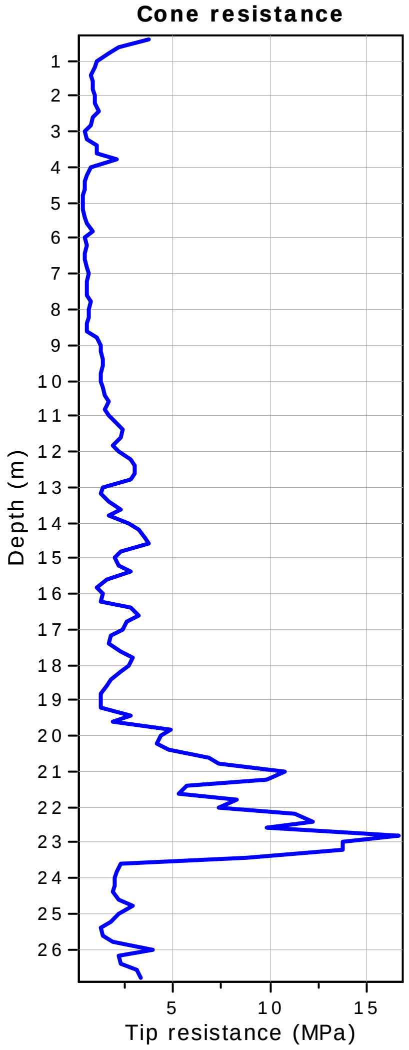


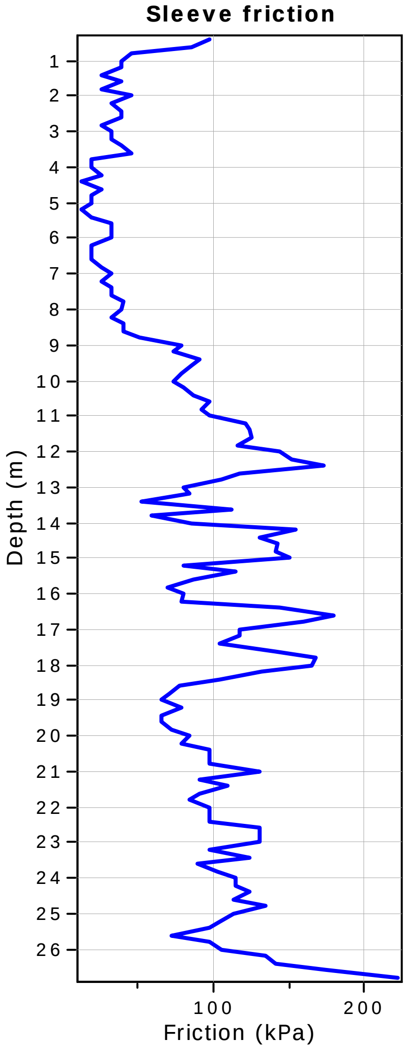
SBT legend

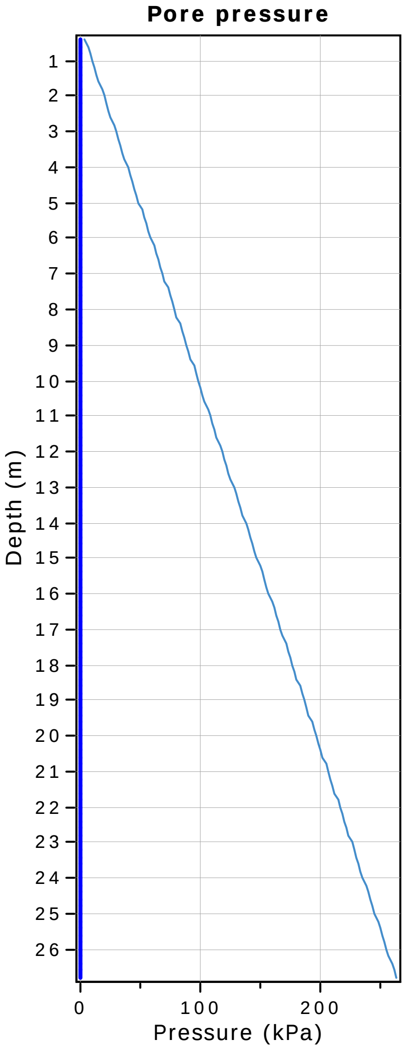
🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟨 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

CPT: 036021P98CPT98
Total depth: 26.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

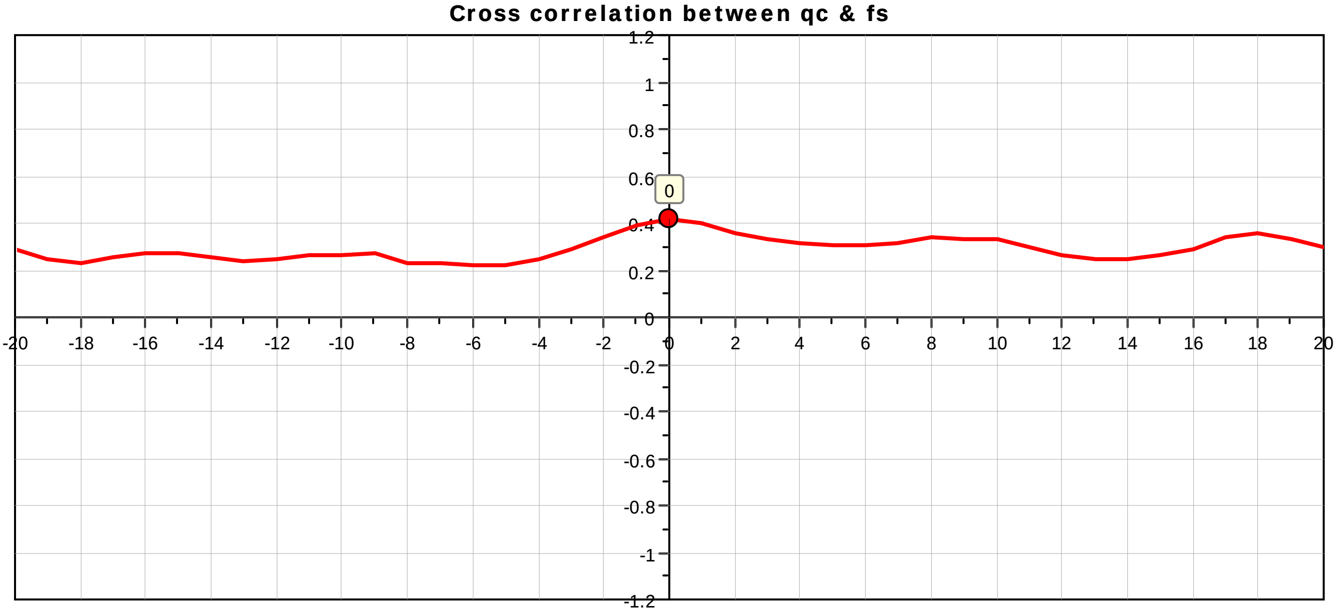
Project:
Location:


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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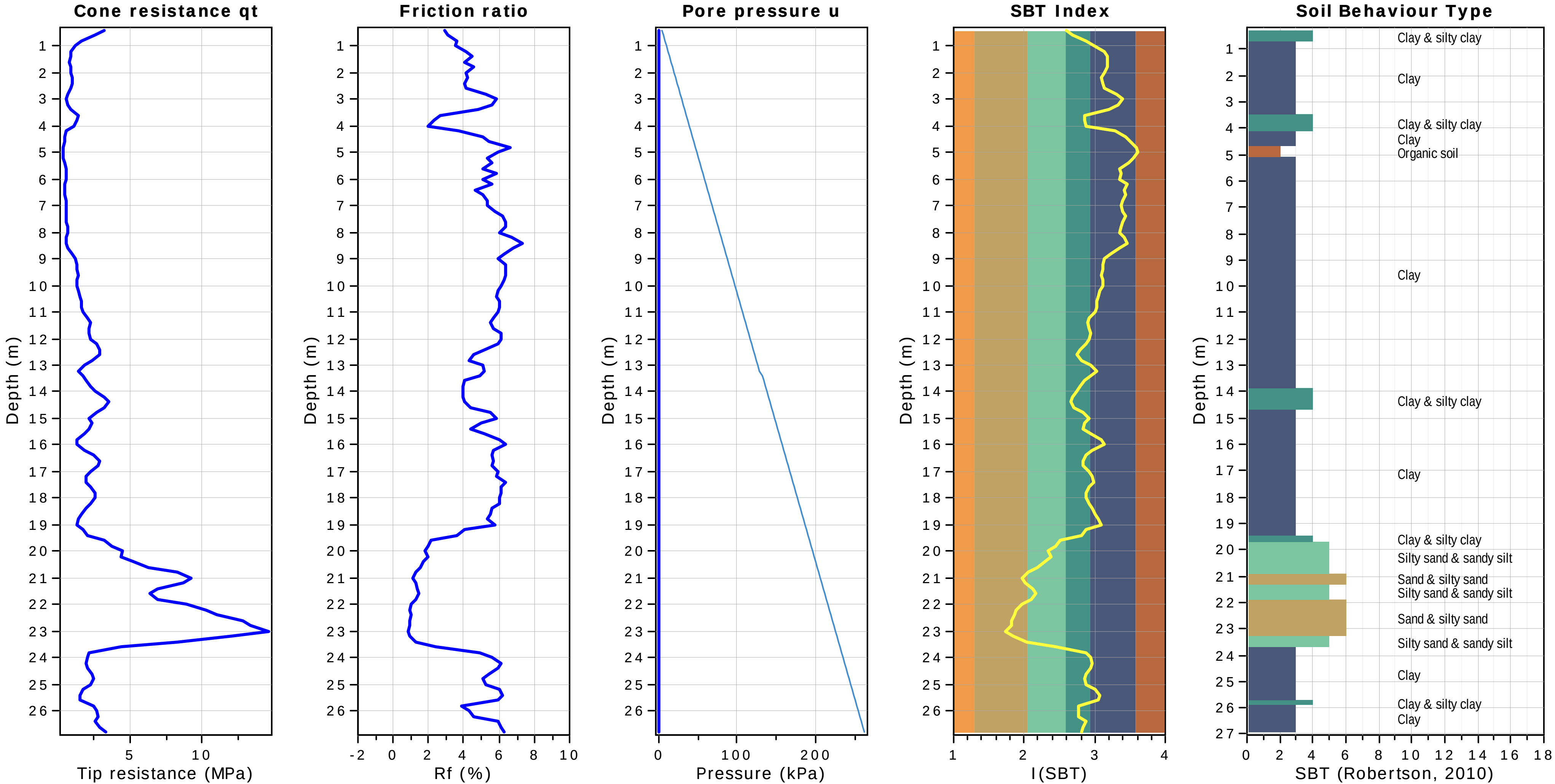
CPT: 036021P98CPT98
Total depth: 26.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



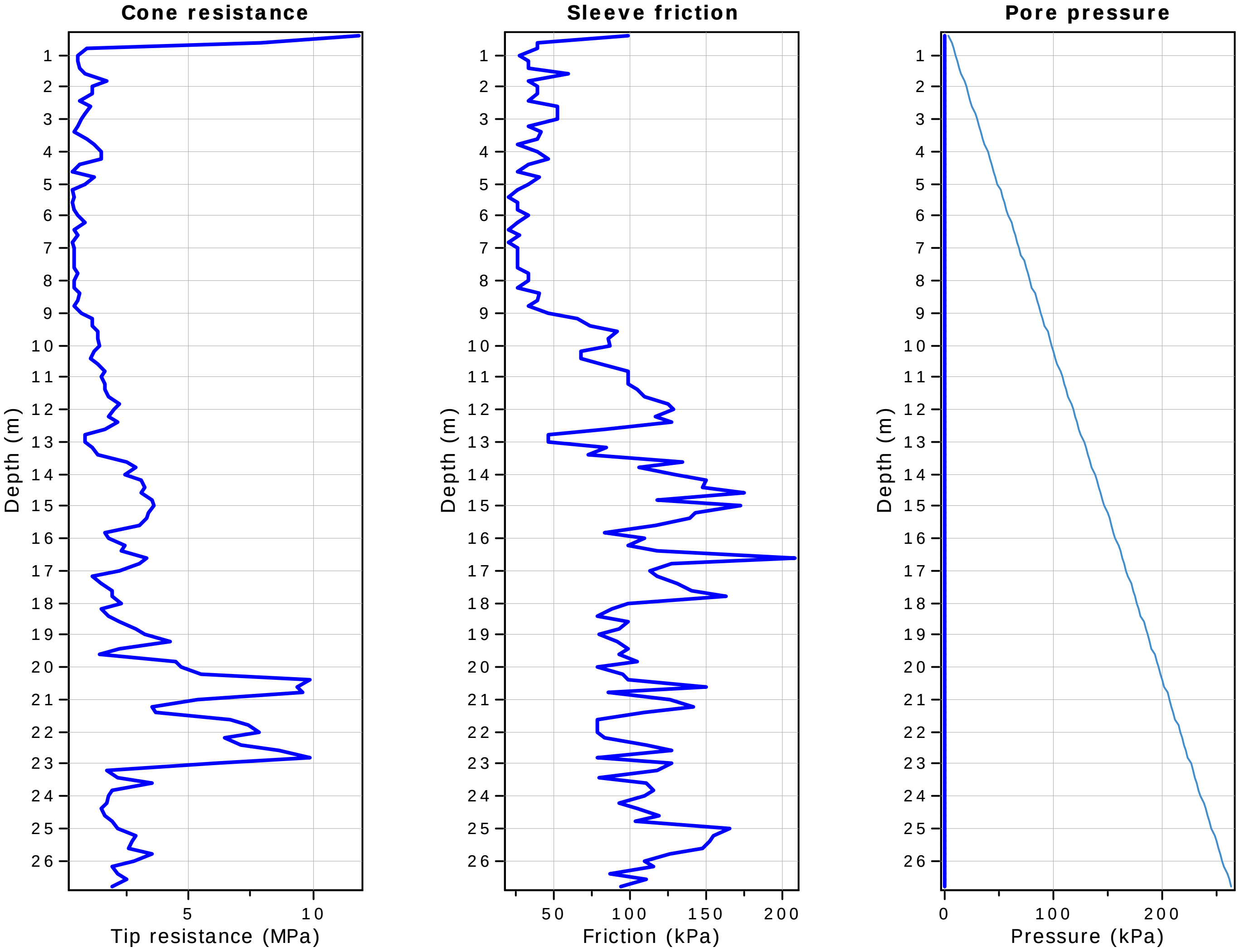
SBT legend

🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟫 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

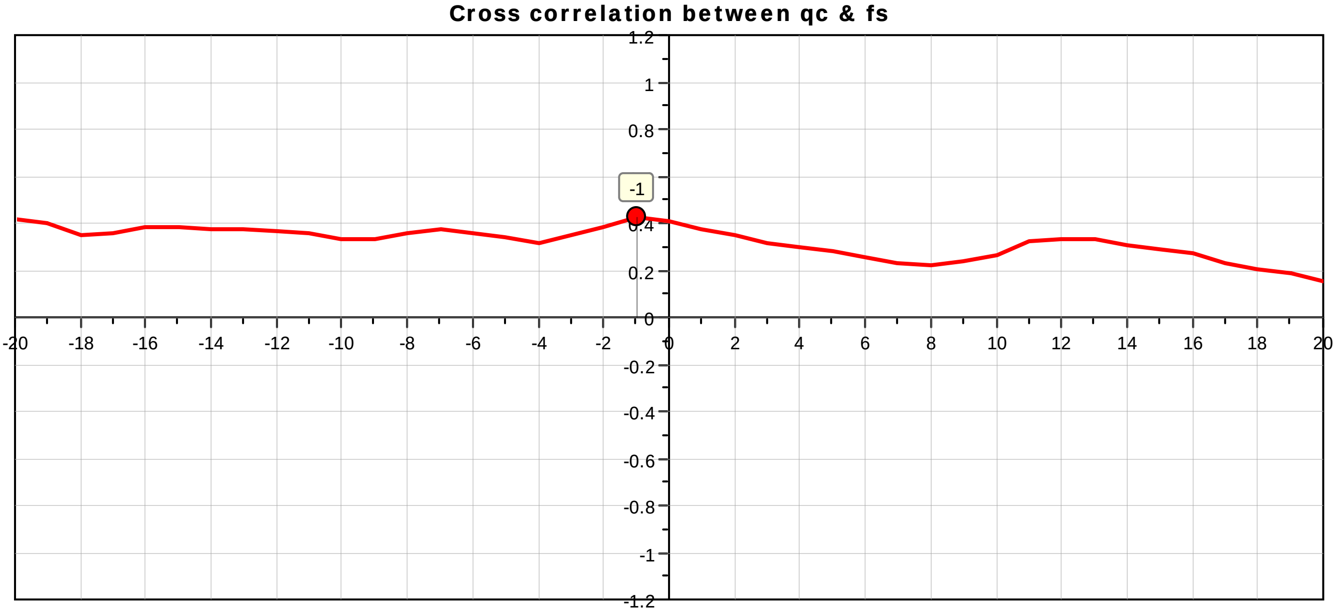
CPT: 036021P99CPT99

Total depth: 26.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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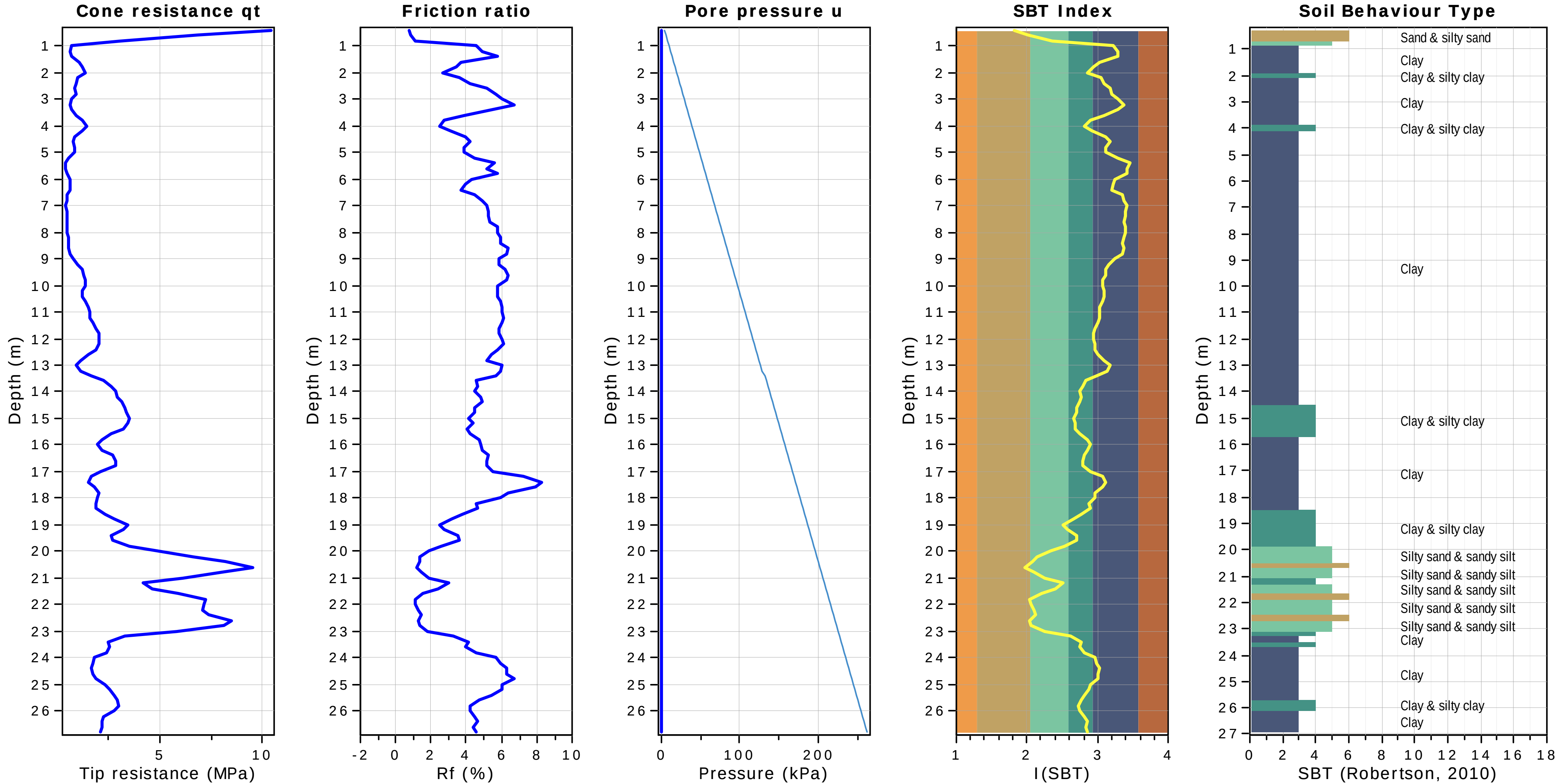
CPT: 036021P99CPT99
Total depth: 26.80 m, Date: 08/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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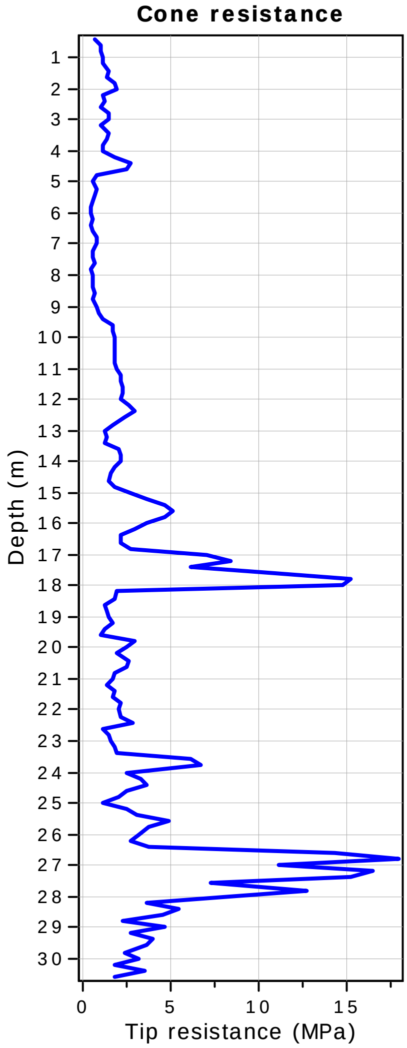
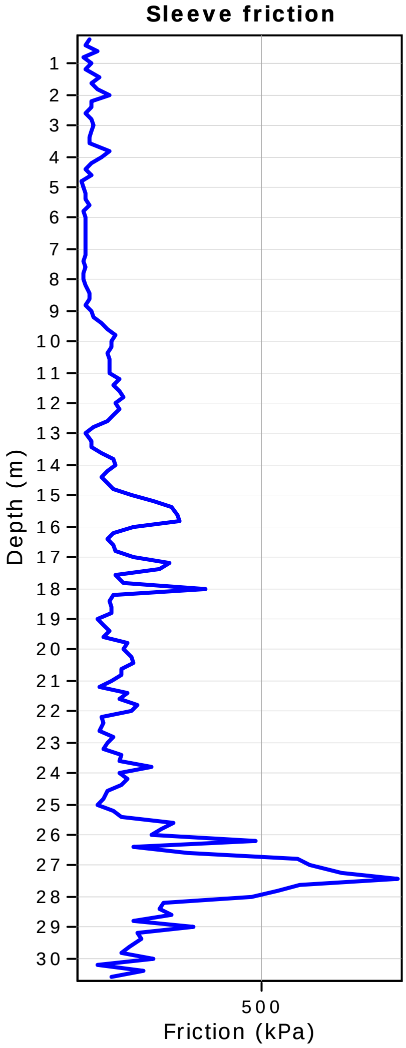
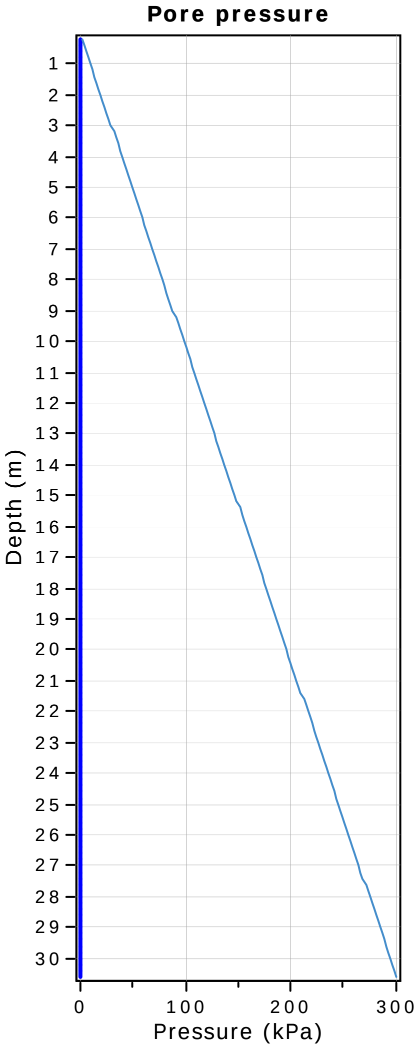
CPT: 036021P272CPT272
Total depth: 30.60 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

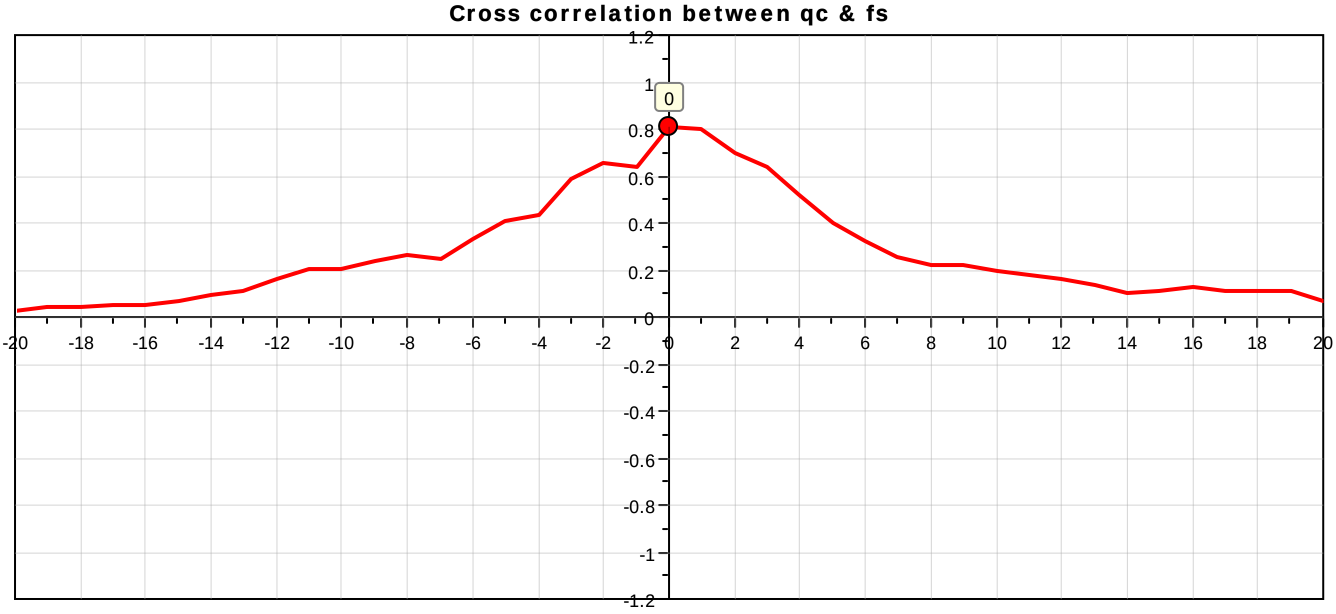
Project:
Location:


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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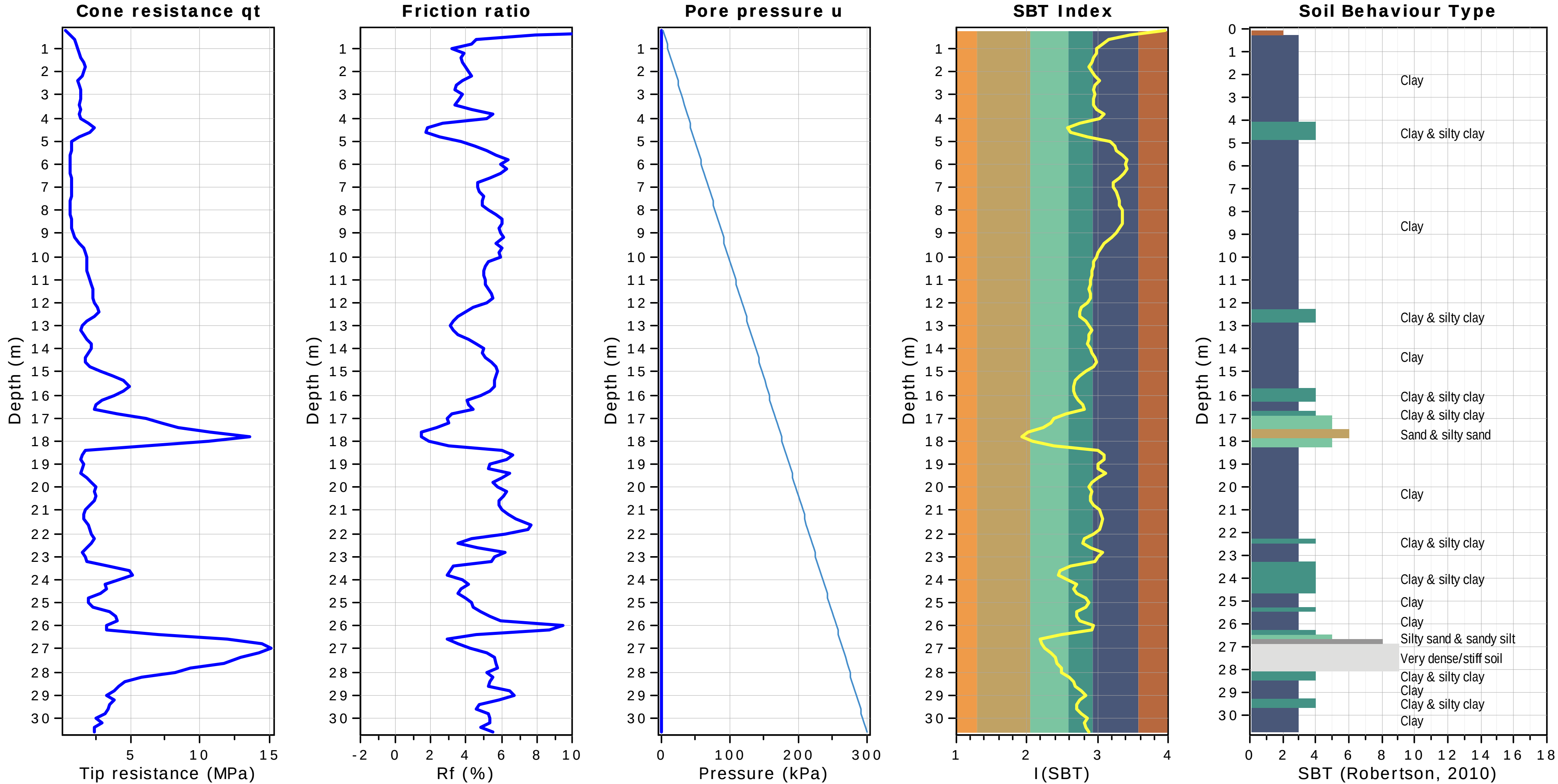
CPT: 036021P272CPT272
Total depth: 30.60 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



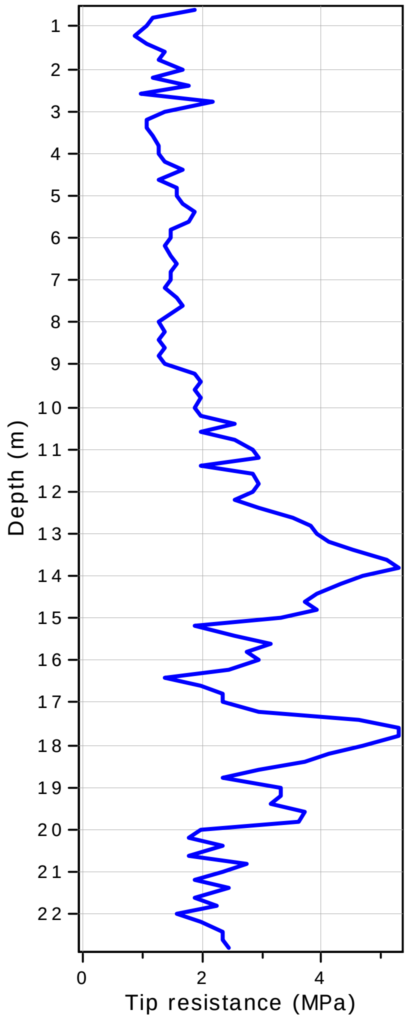
SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

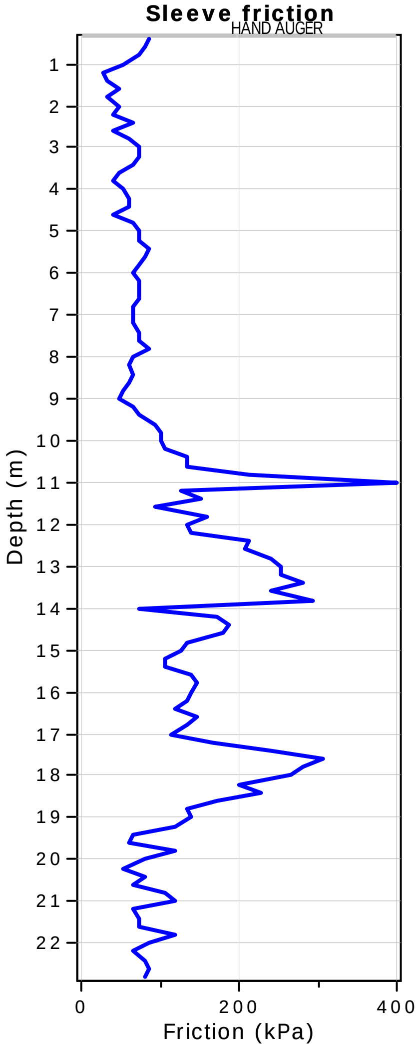
CPT: 036021P273CPT273
Total depth: 22.80 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

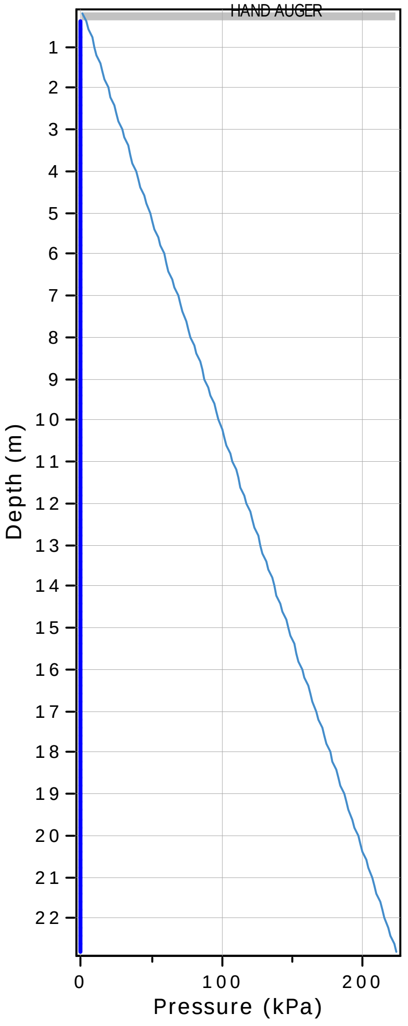
Cone resistance



Sleeve friction

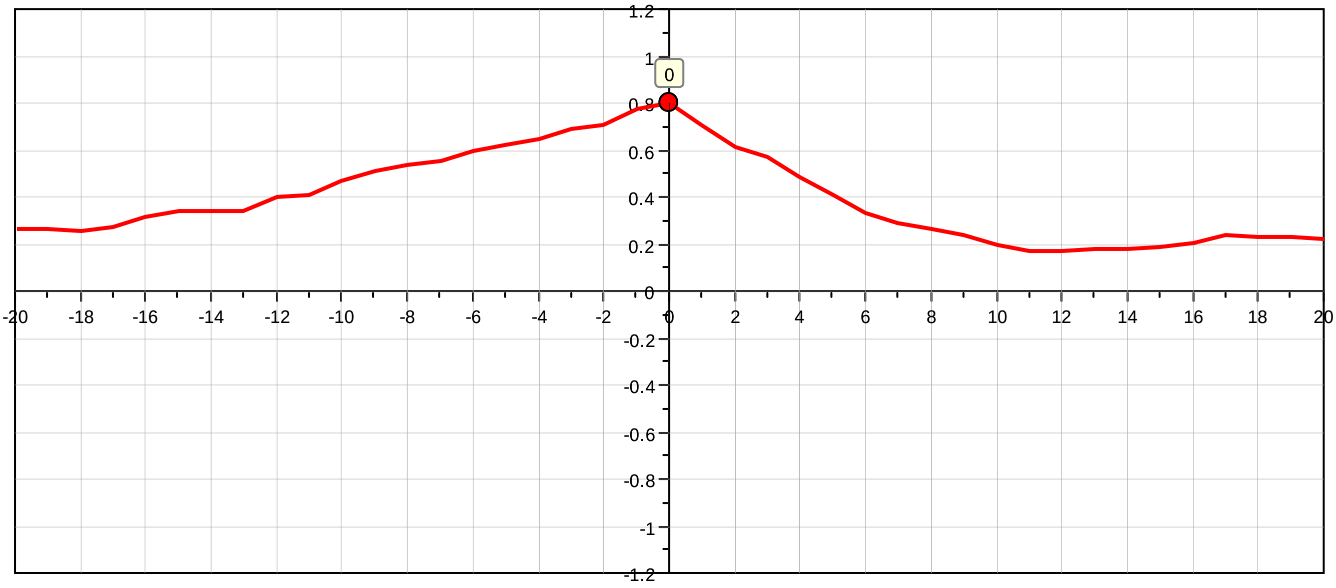


Pore pressure



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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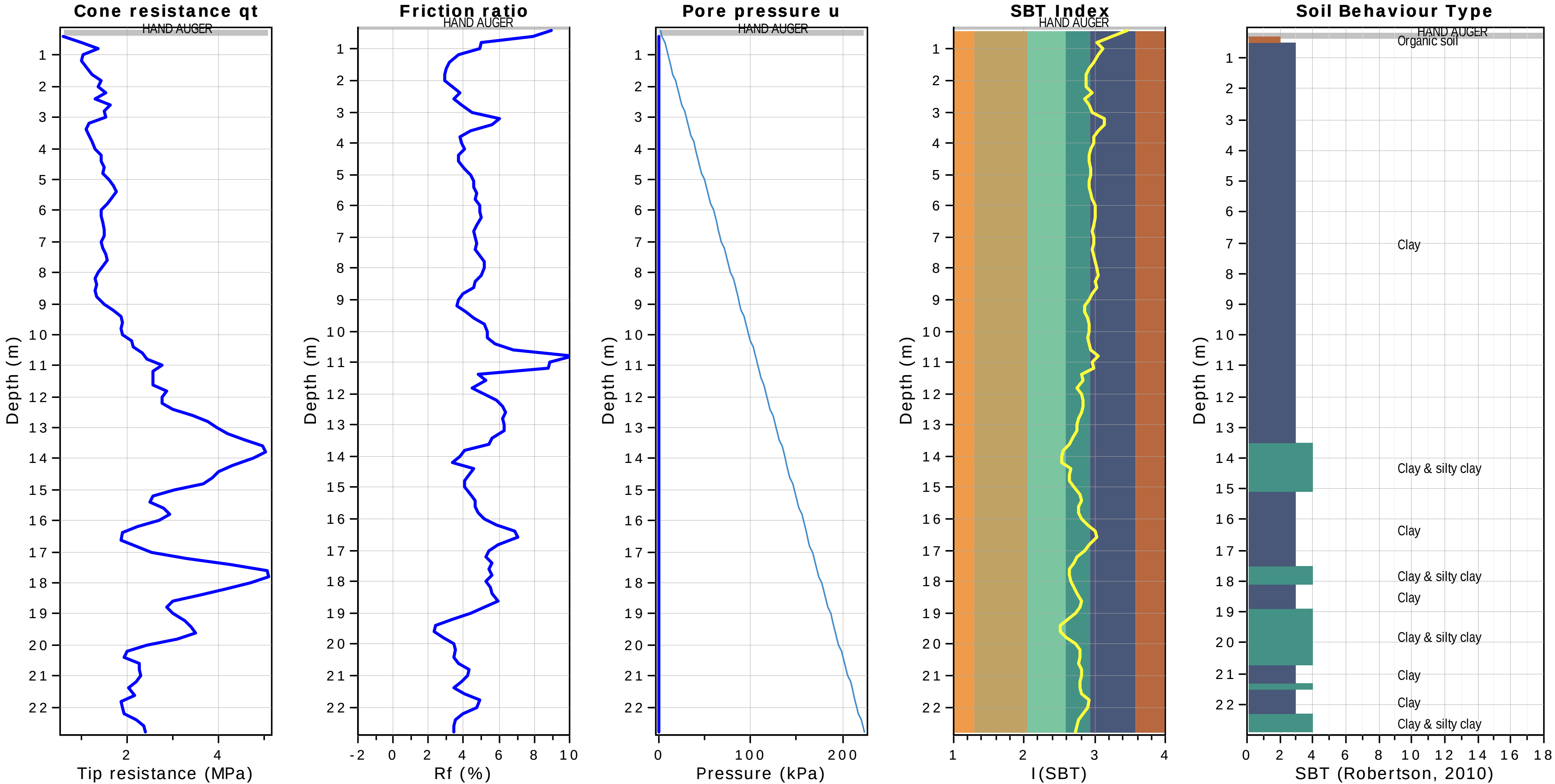
CPT: 036021P273CPT273
Total depth: 22.80 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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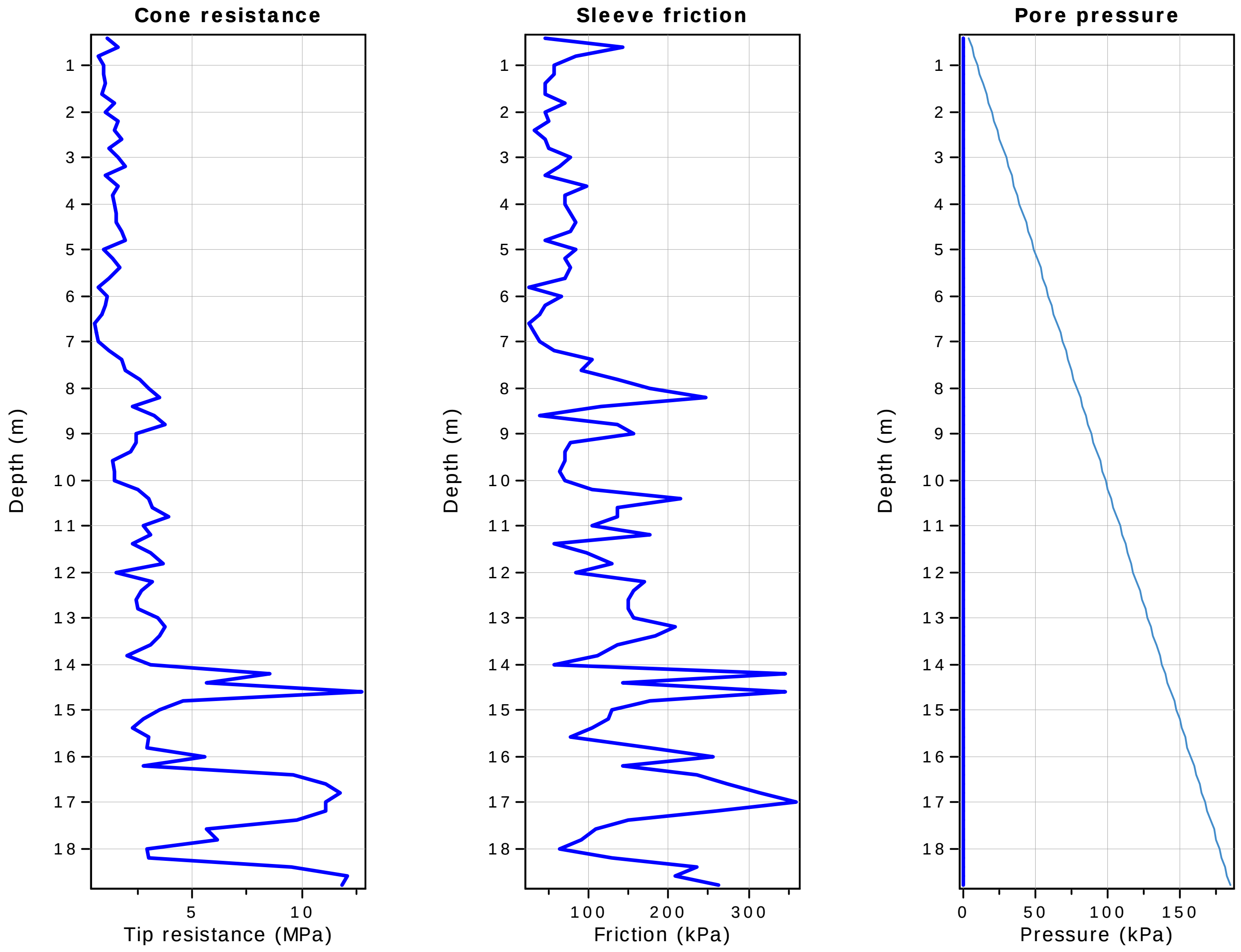
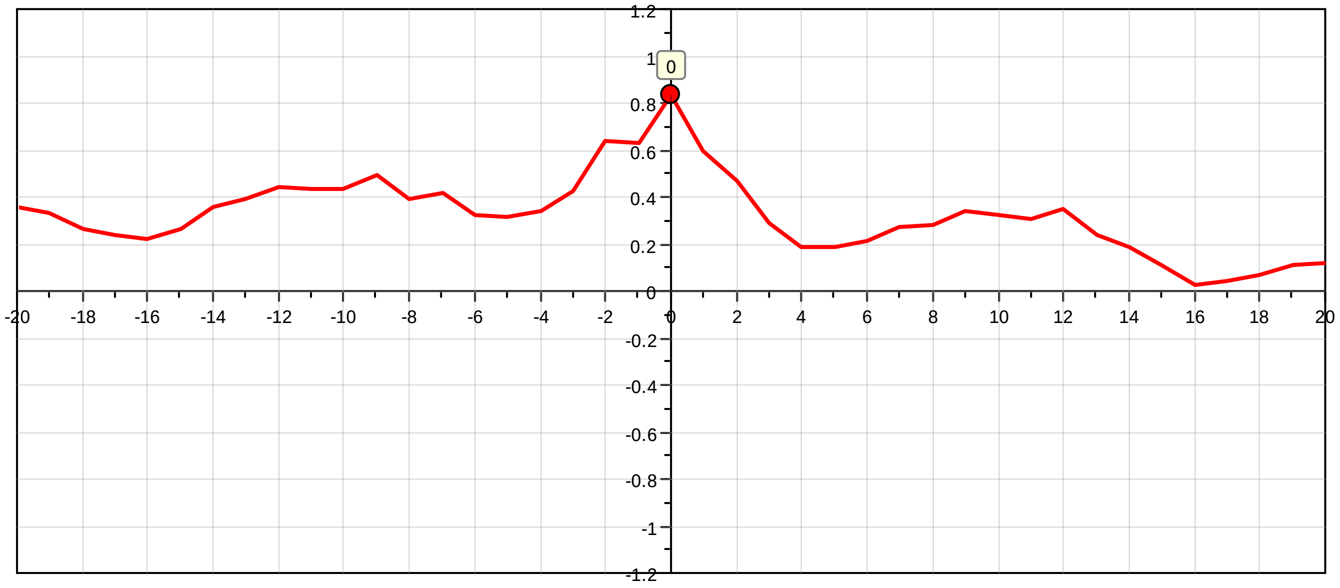
CPT: 036021P274CPT274
Total depth: 18.80 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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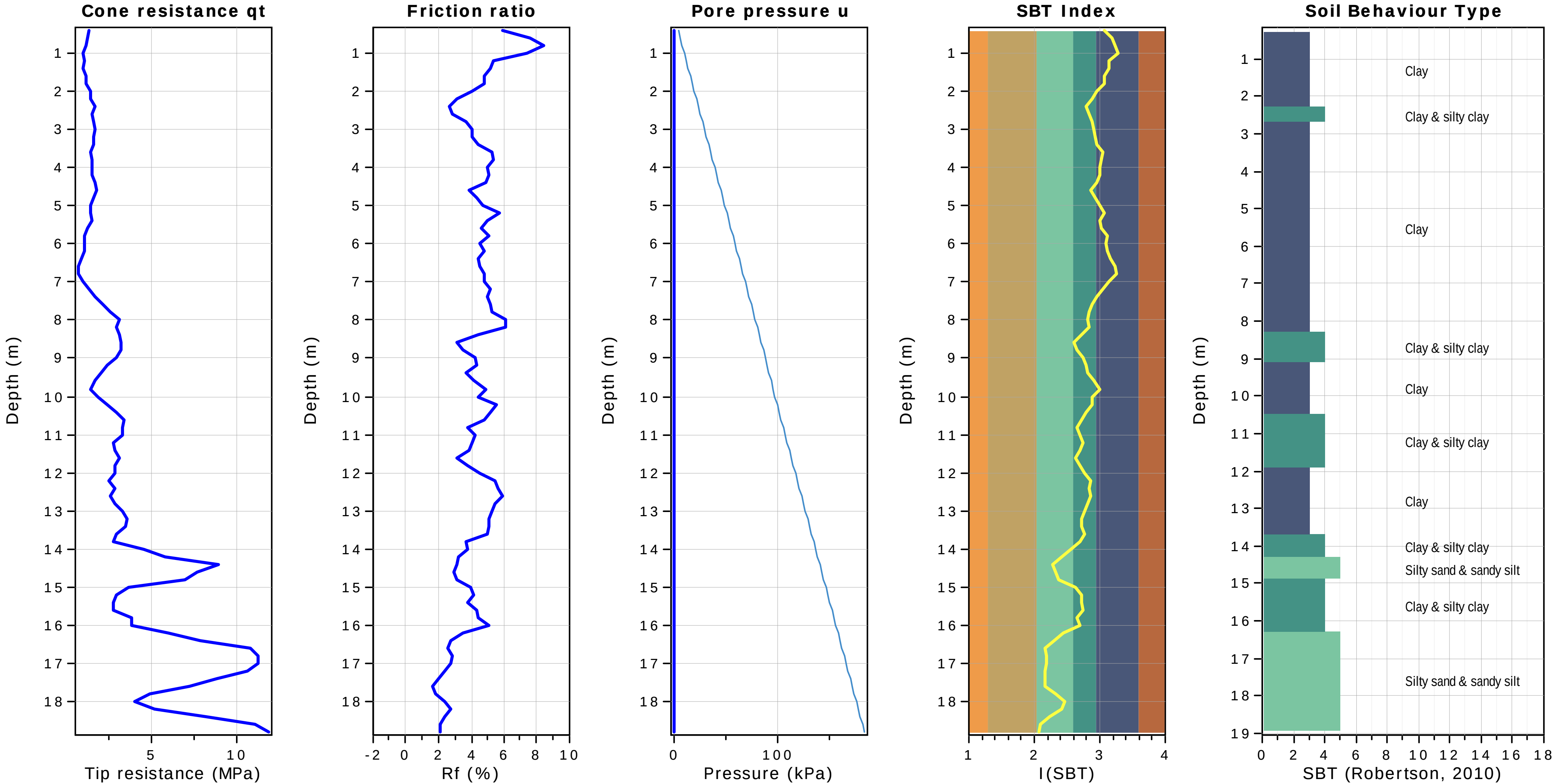
CPT: 036021P274CPT274
Total depth: 18.80 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

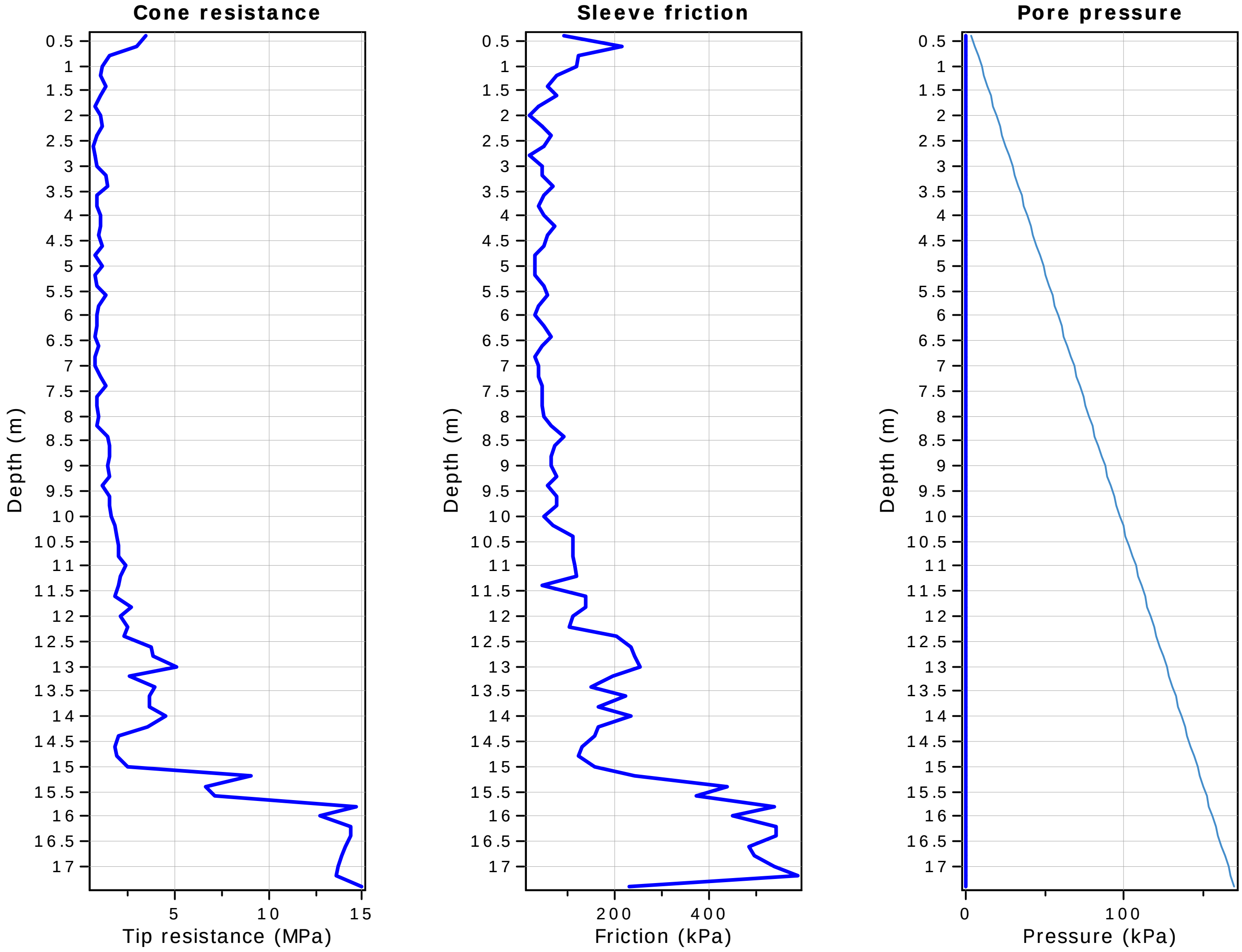


SBT legend

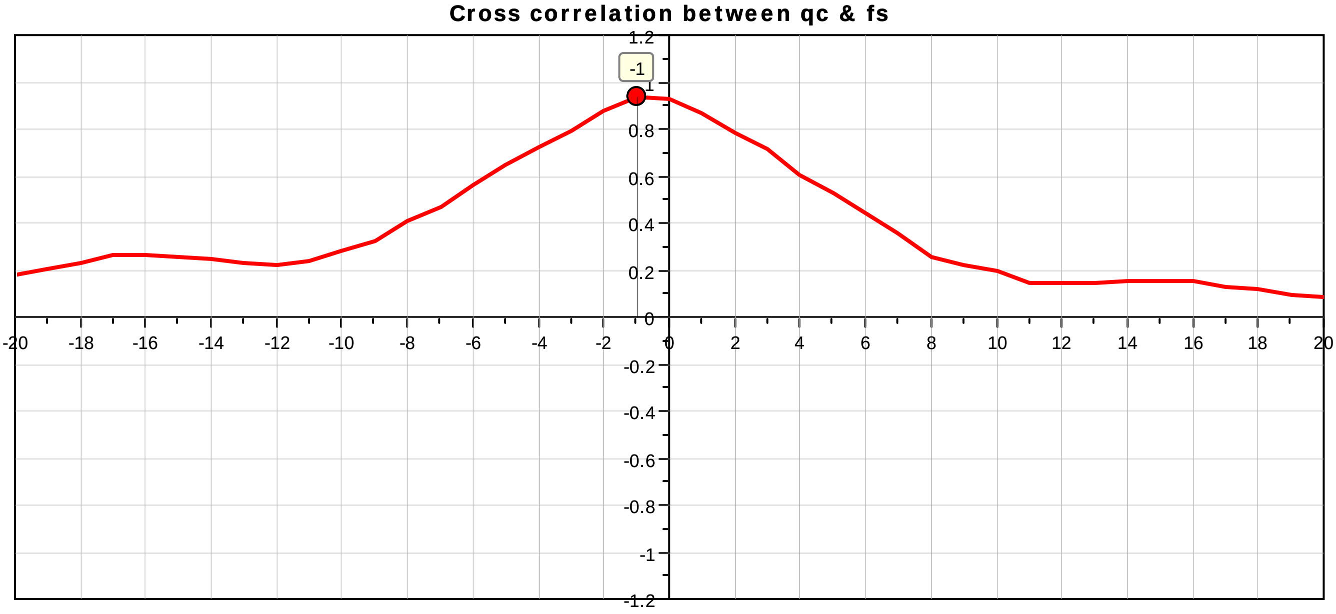
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P275CPT275
Total depth: 17.40 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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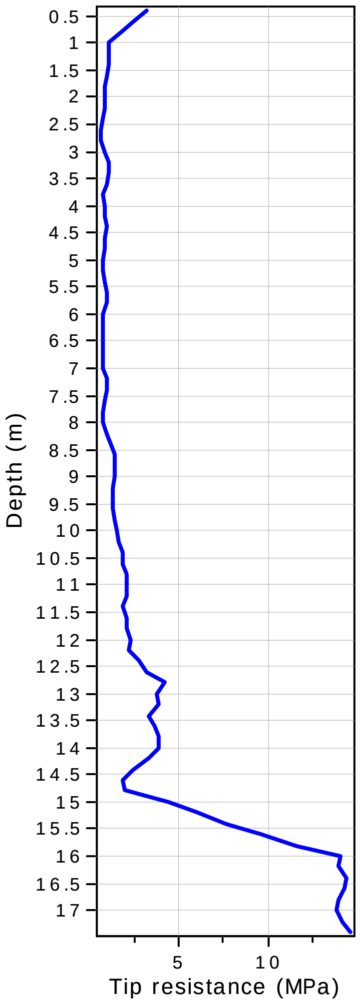
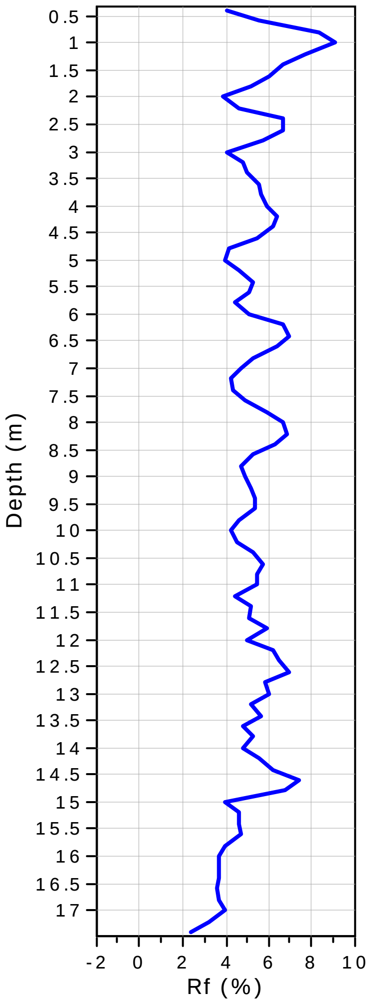
CPT: 036021P275CPT275
Total depth: 17.40 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

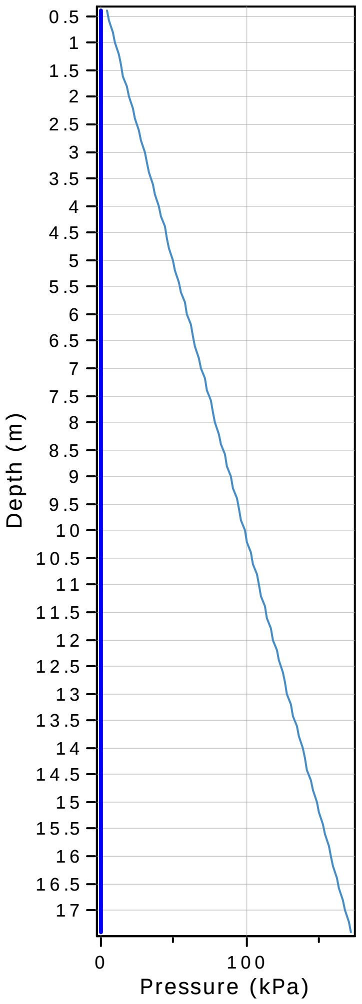
Cone resistance qt



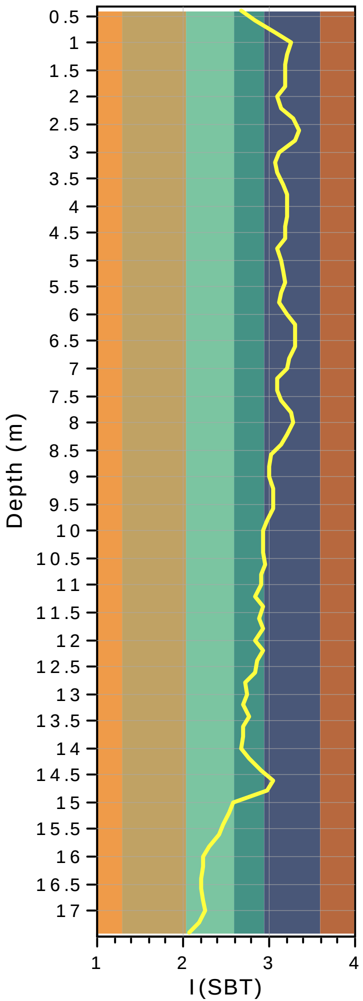
Friction ratio



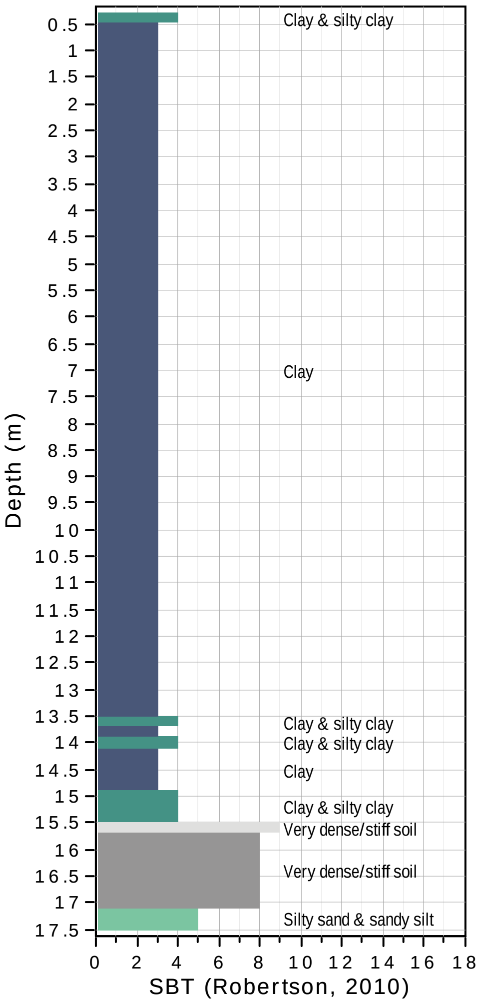
Pore pressure u



SBT Index



Soil Behaviour Type

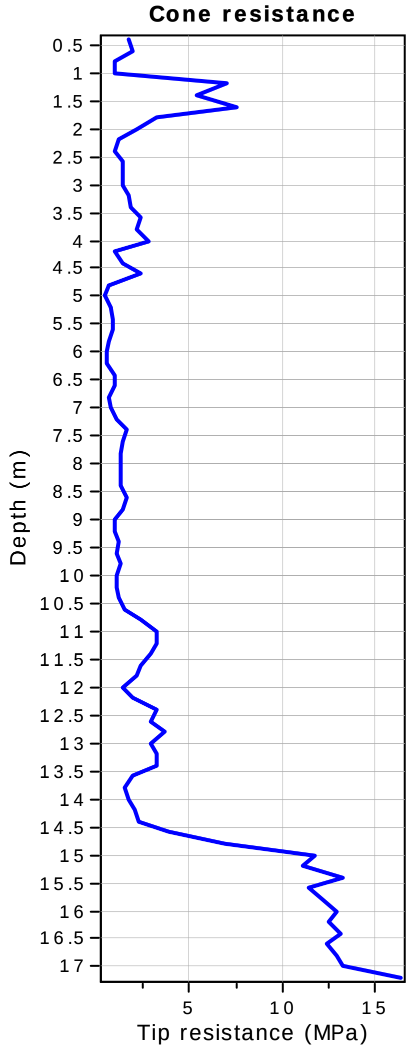


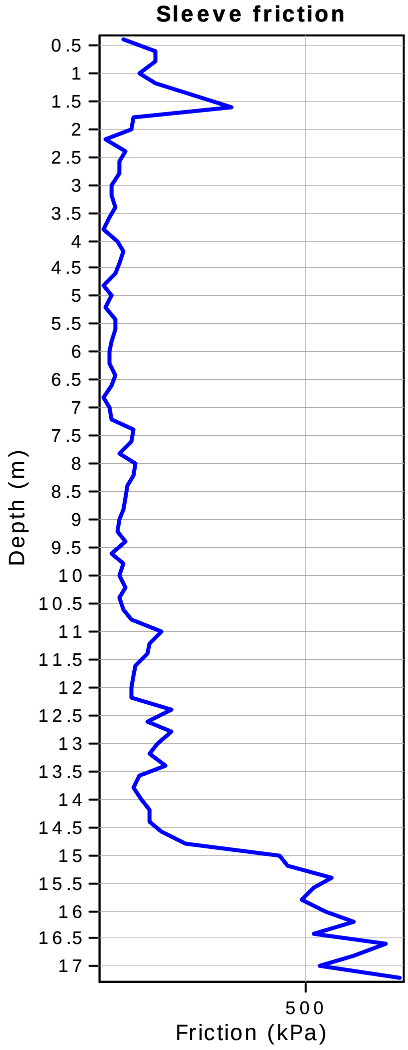
SBT legend

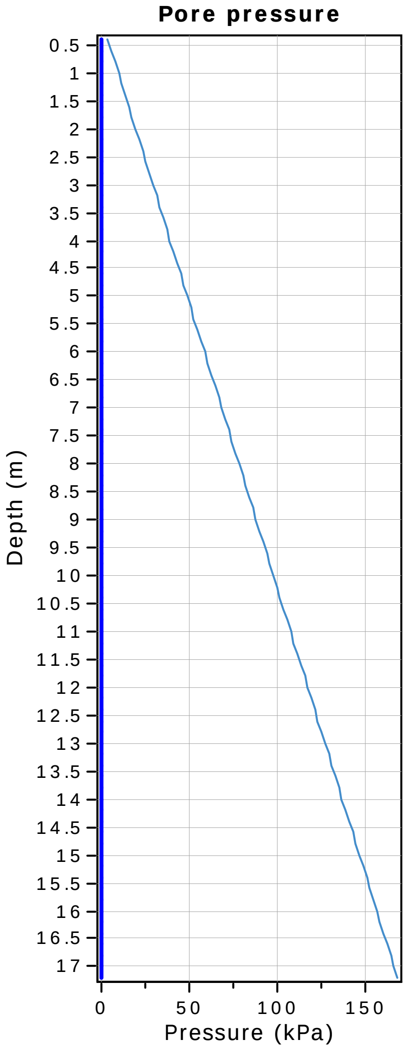
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P276CPT276
Total depth: 17.20 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

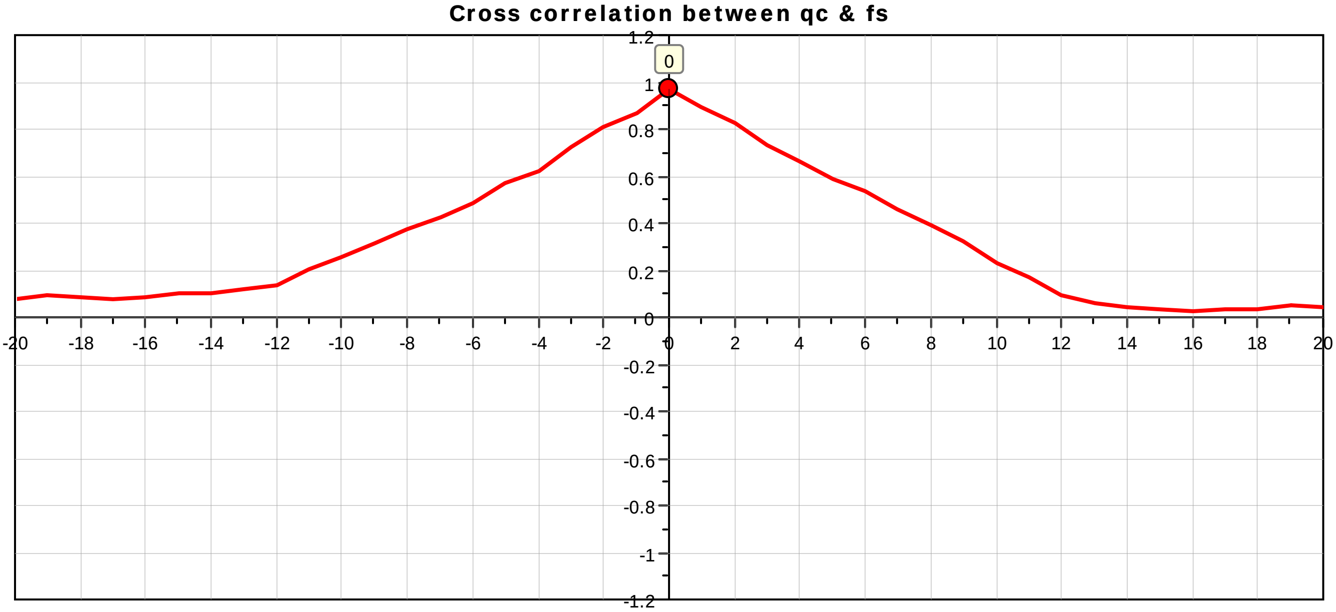
Project:
Location:





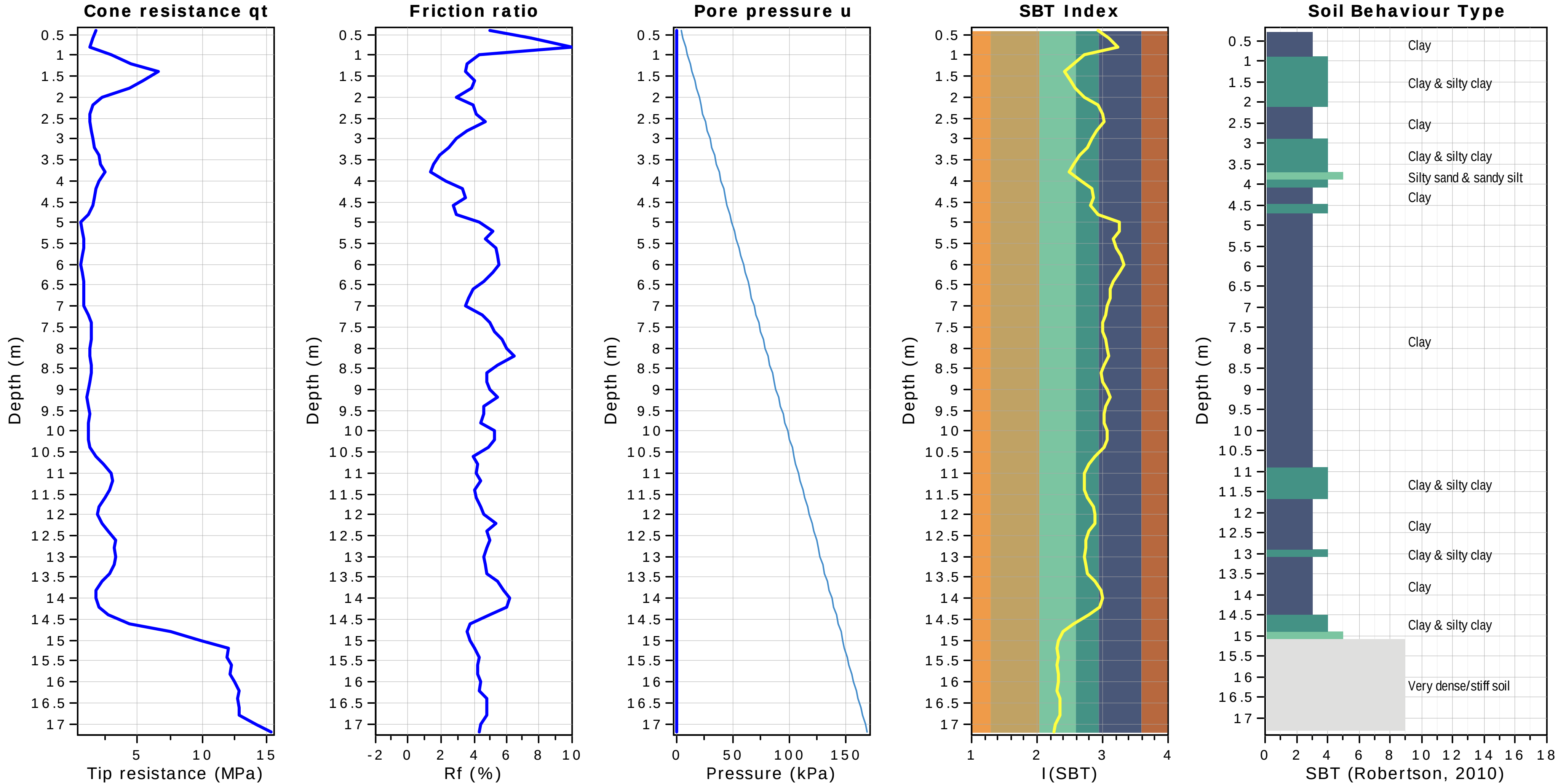


The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



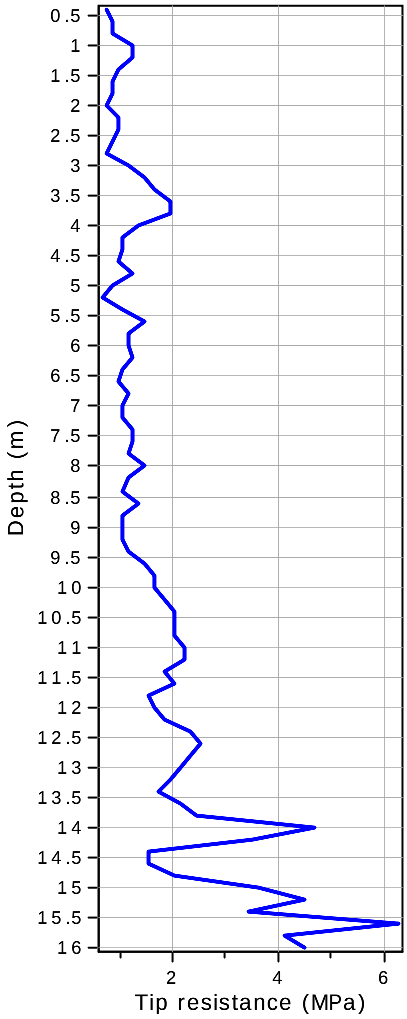
CPT: 036021P276CPT276
Total depth: 17.20 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

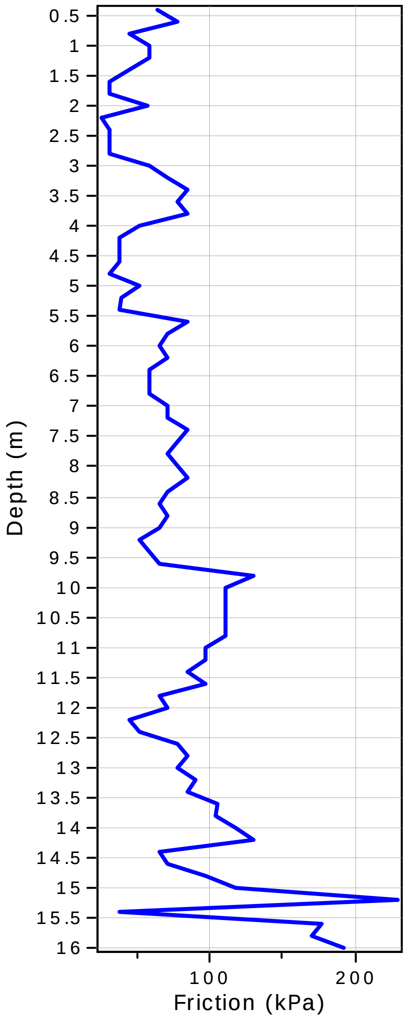
Project:
Location:

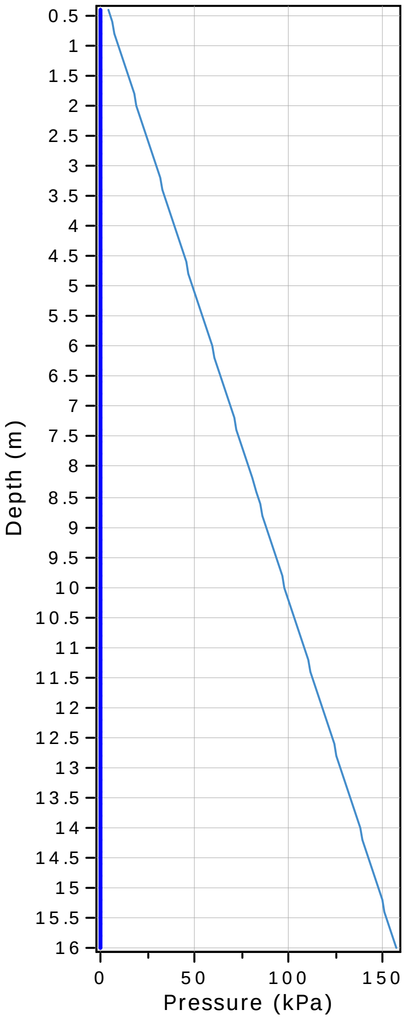


SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- ■ 3. Clay to silty clay
- ■ 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- ■ 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ■ 8. Very stiff sand to clayey sand
- ☐ 9. Very stiff fine grained

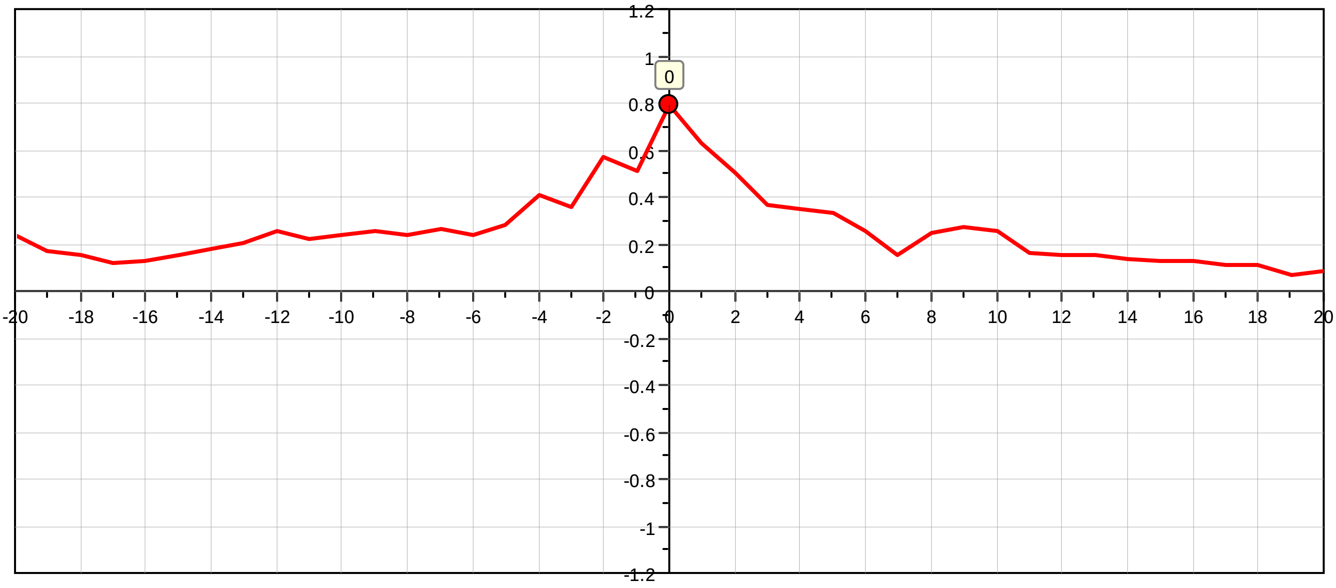

Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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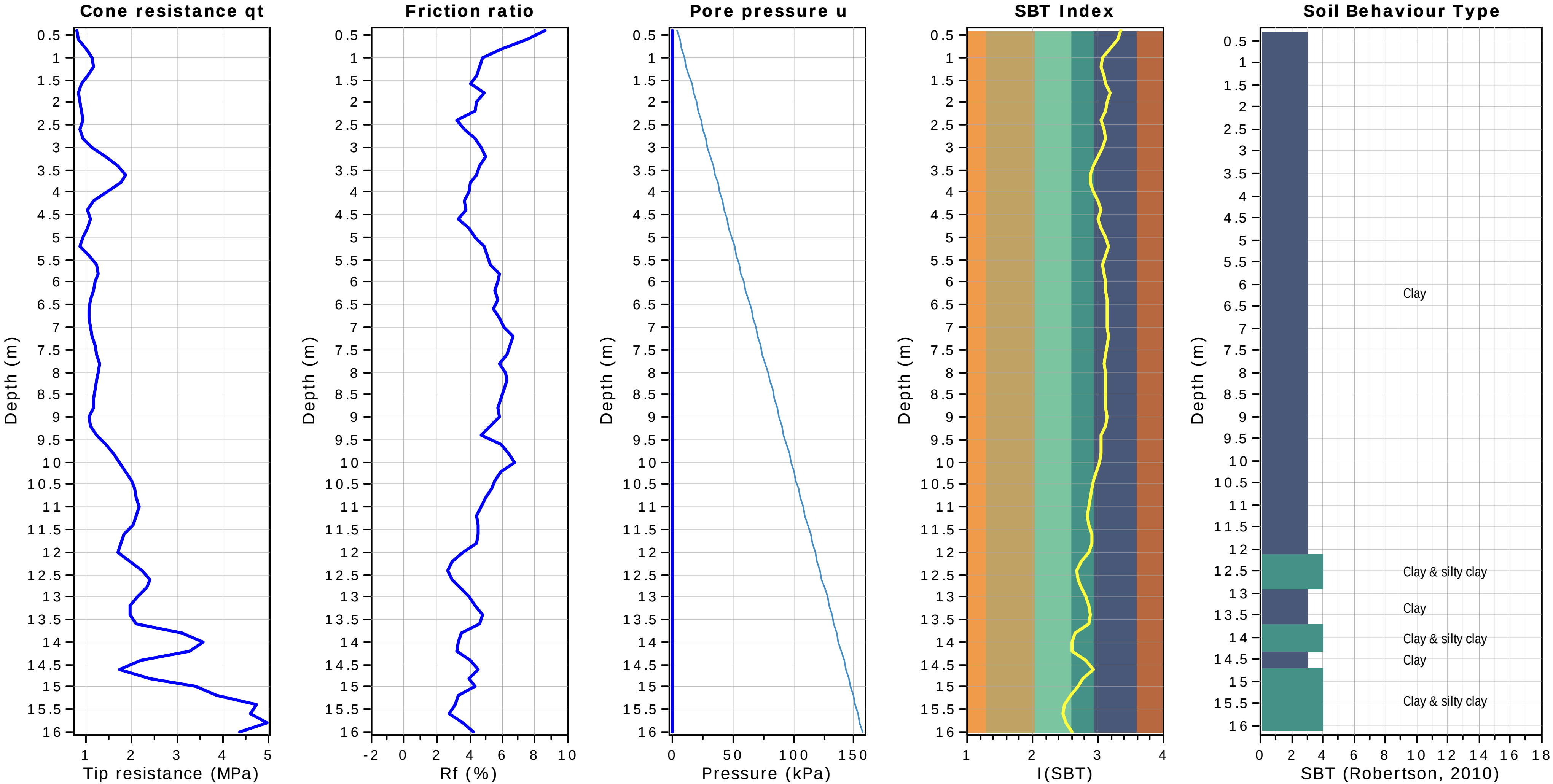
CPT: 036021P277CPT277
Total depth: 16.00 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

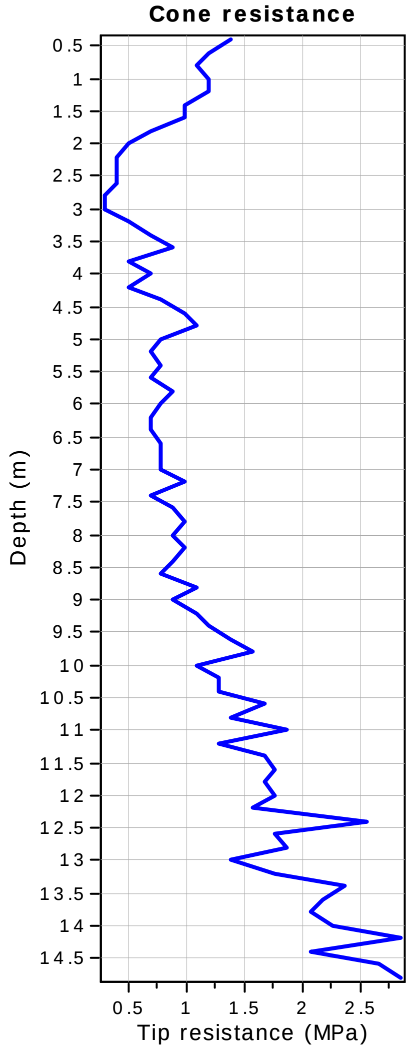


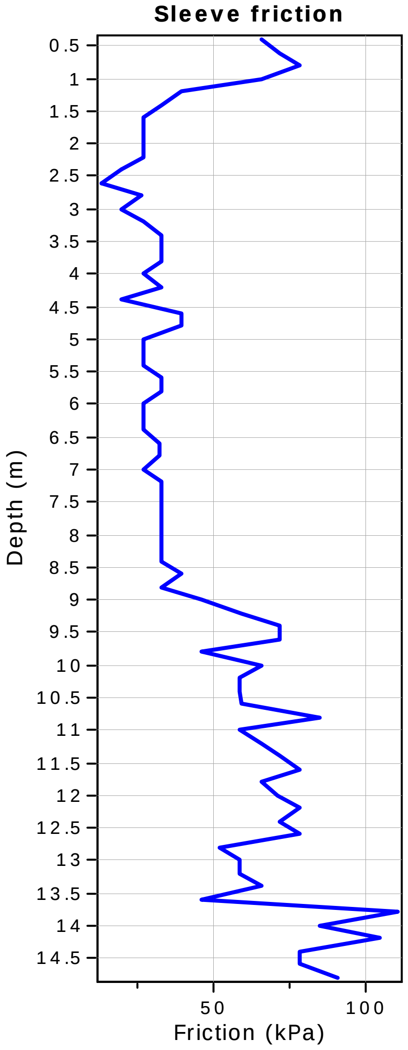
SBT legend

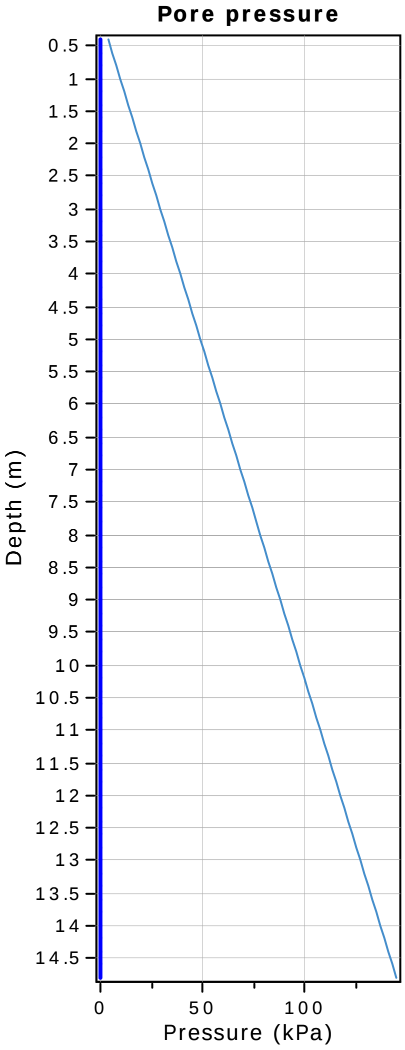
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P278CPT278
Total depth: 14.80 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

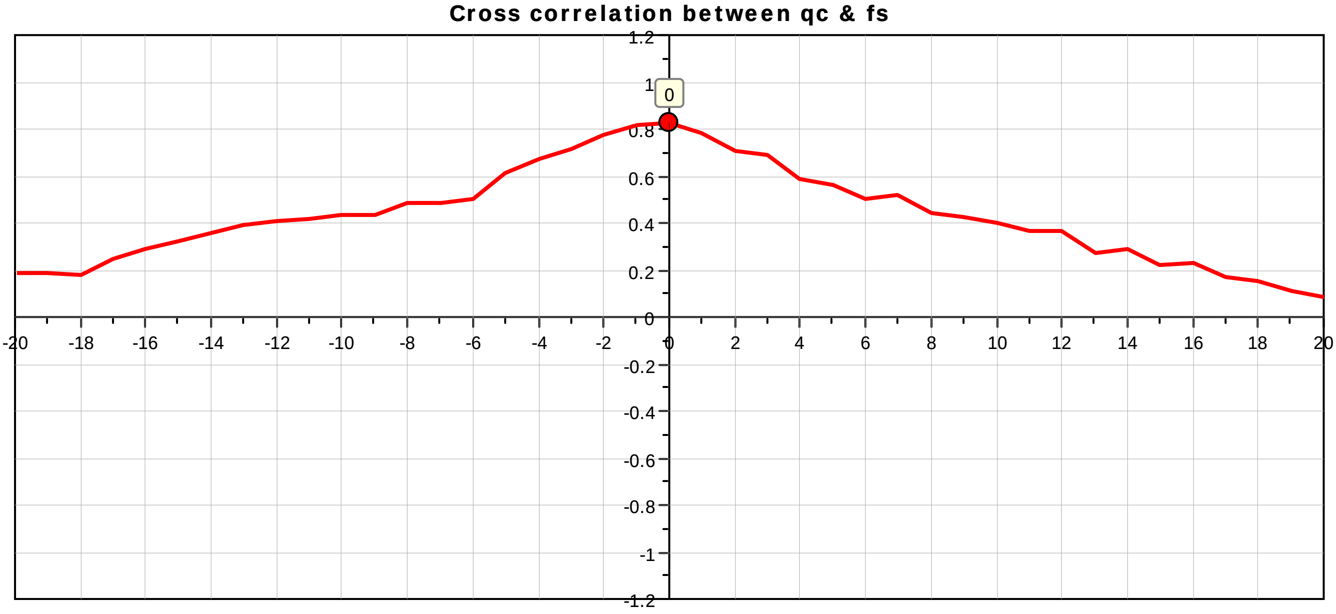
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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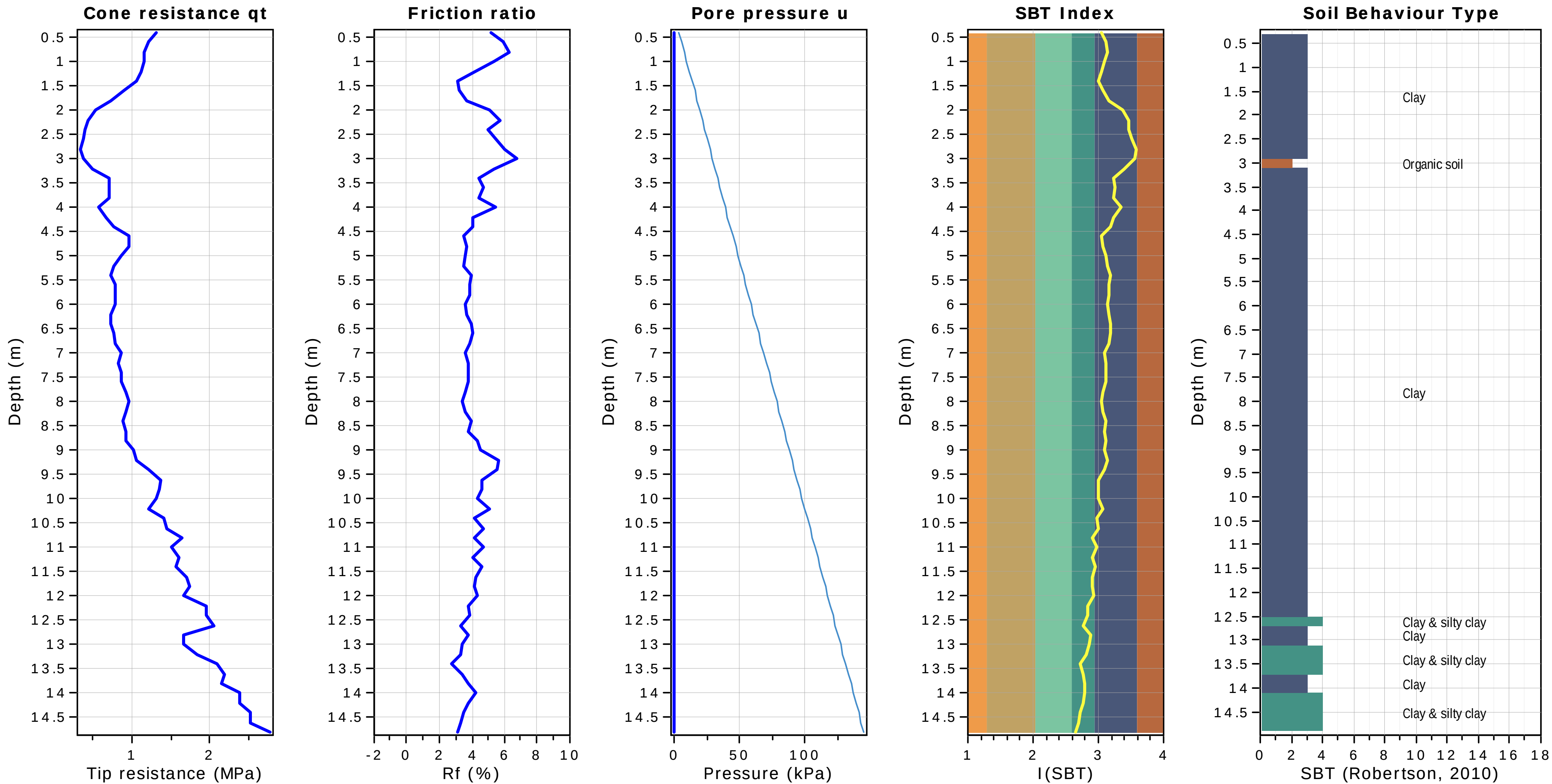
CPT: 036021P278CPT278
Total depth: 14.80 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

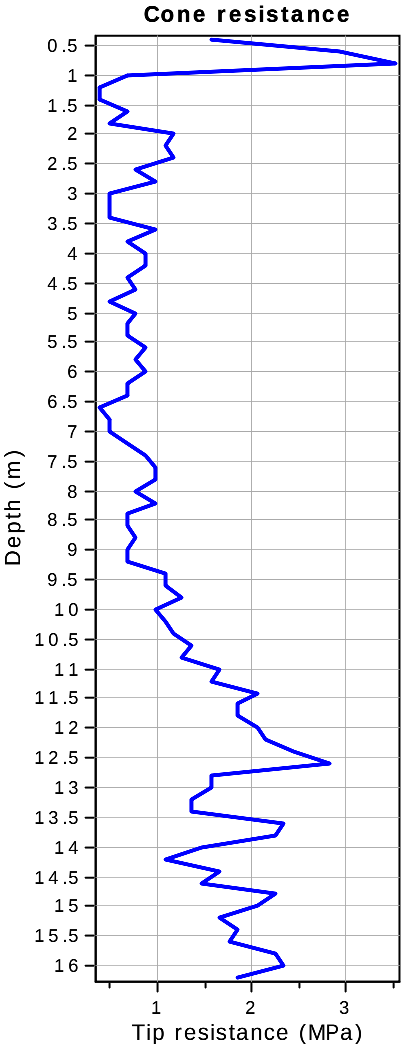


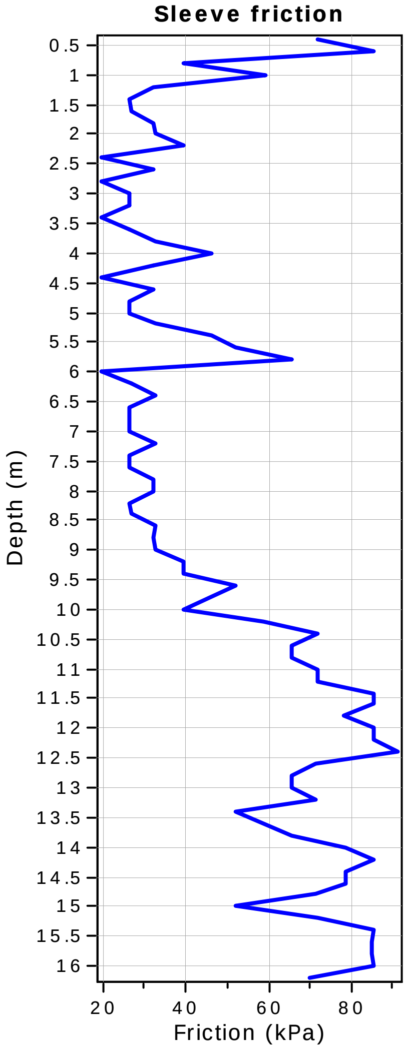
SBT legend

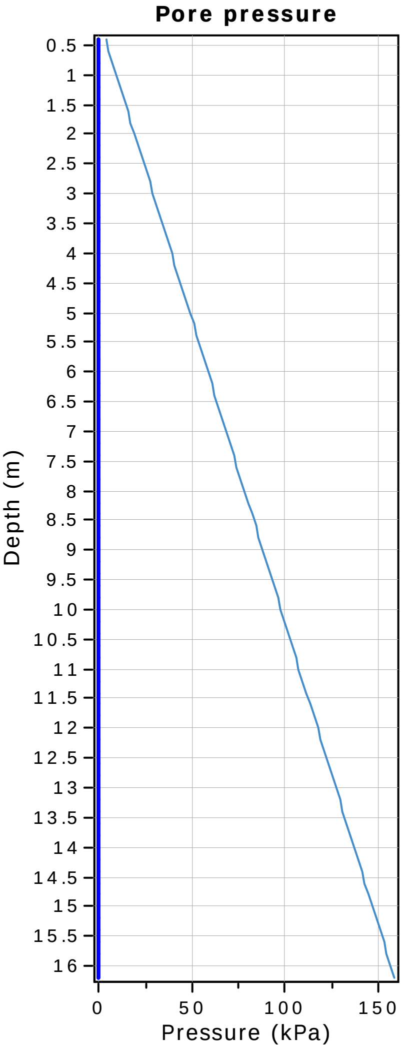
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P279CPT279
Total depth: 16.20 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

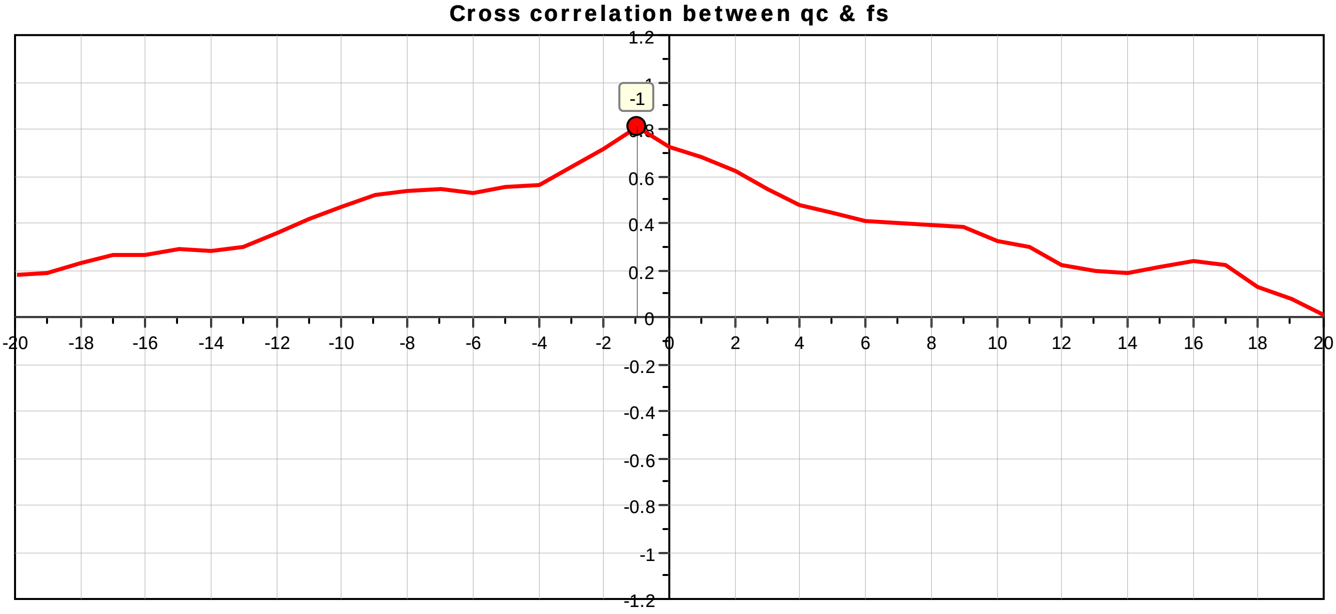
Project:
Location:





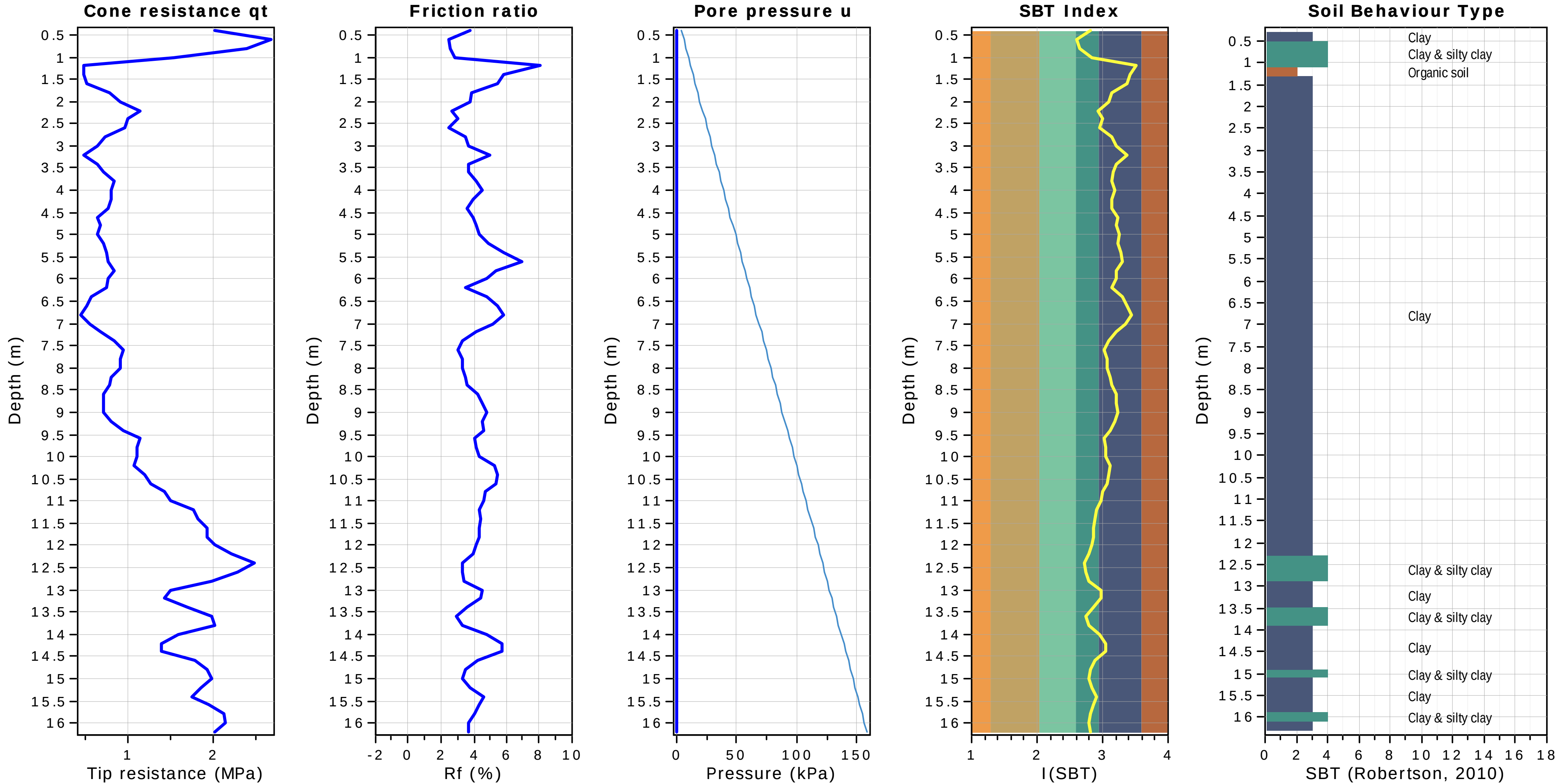


The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT: 036021P279CPT279
Total depth: 16.20 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

■ 1. Sensitive fine grained
■ 2. Organic material
■ 3. Clay to silty clay
■ 4. Clayey silt to silty clay
■ 5. Silty sand to sandy silt
■ 6. Clean sand to silty sand
■ 7. Gravely sand to sand
■ 8. Very stiff sand to clayey sand
■ 9. Very stiff fine grained

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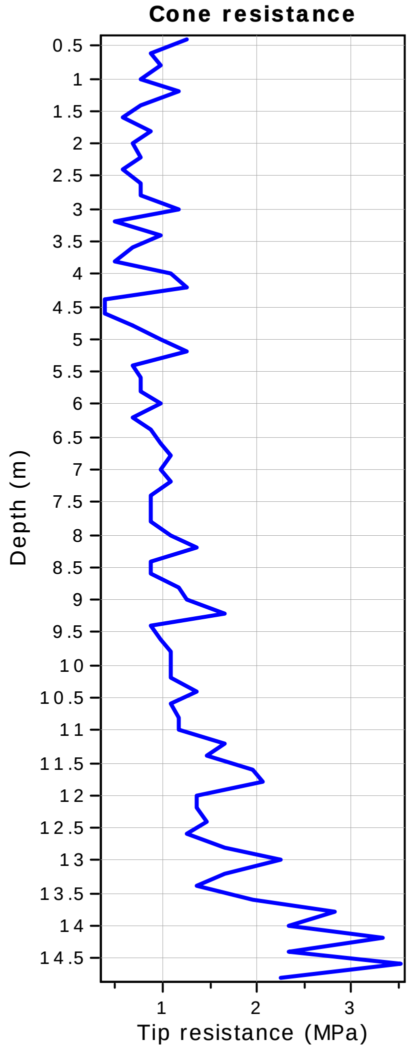
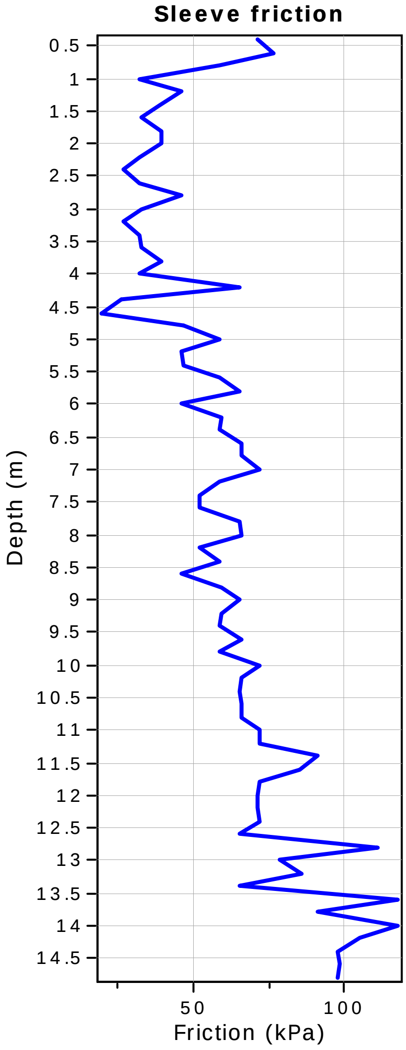
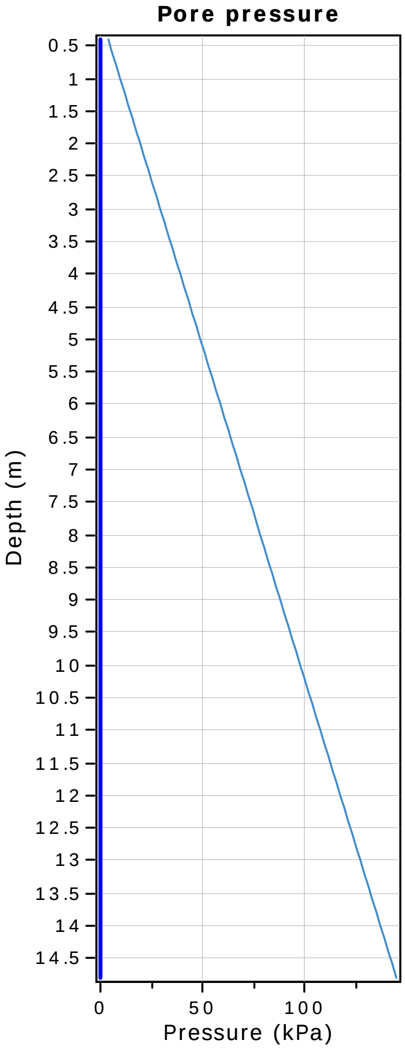
CPT: 036021P280CPT280
Total depth: 14.80 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

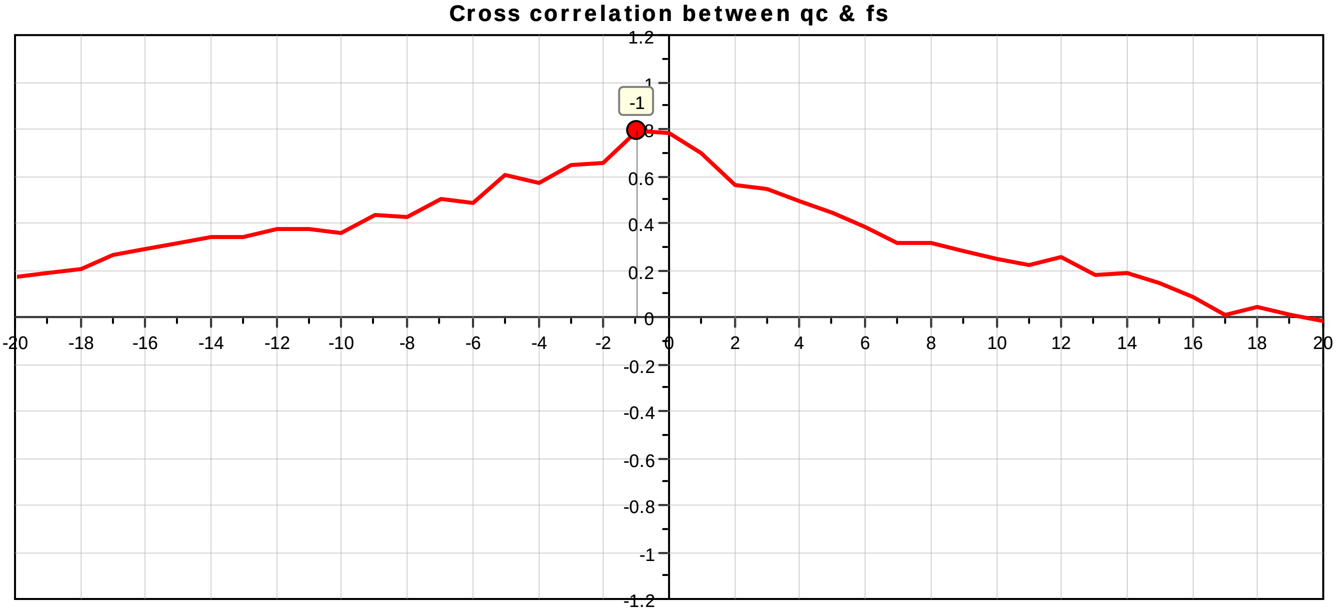
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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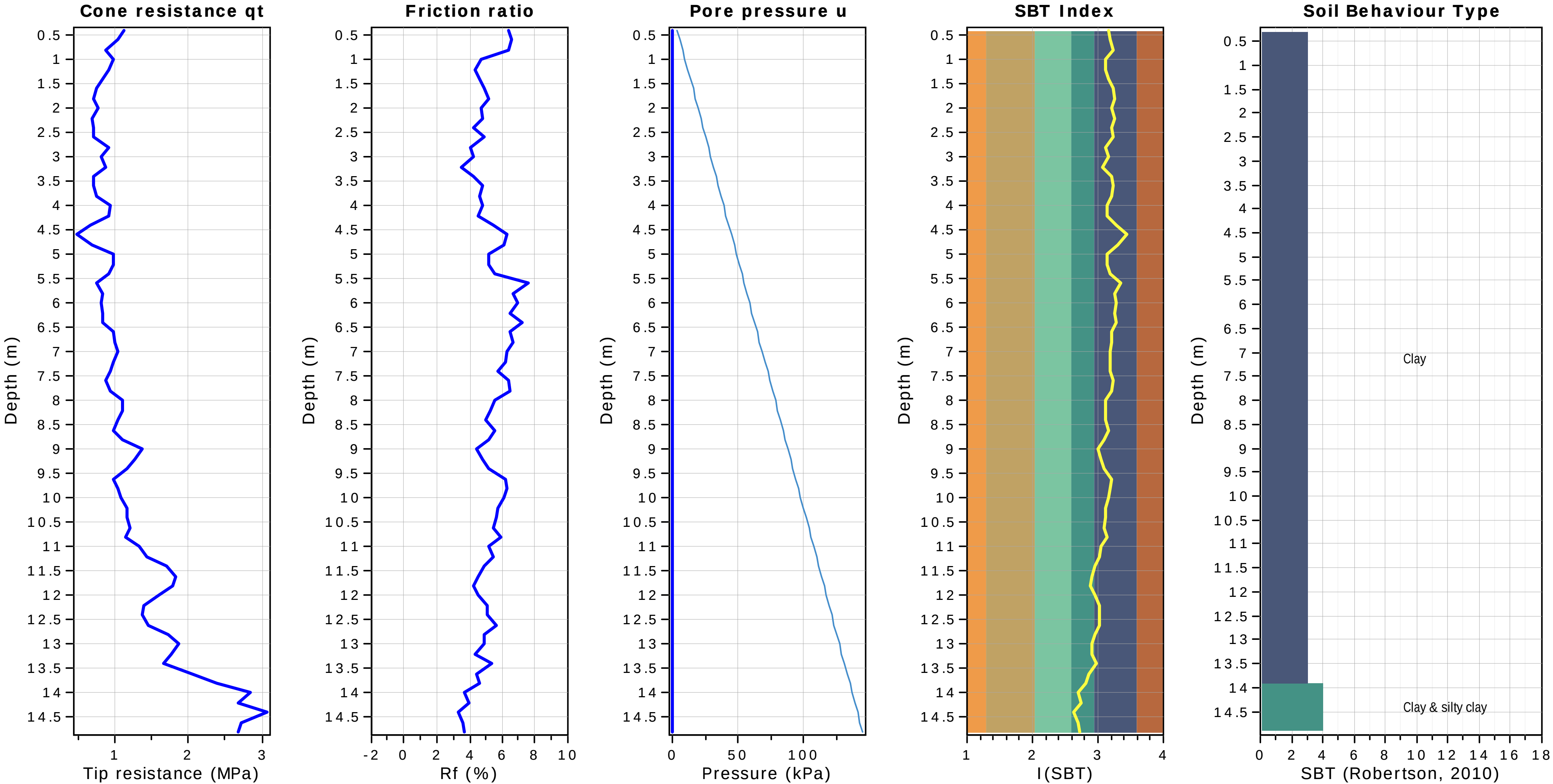
CPT: 036021P280CPT280
Total depth: 14.80 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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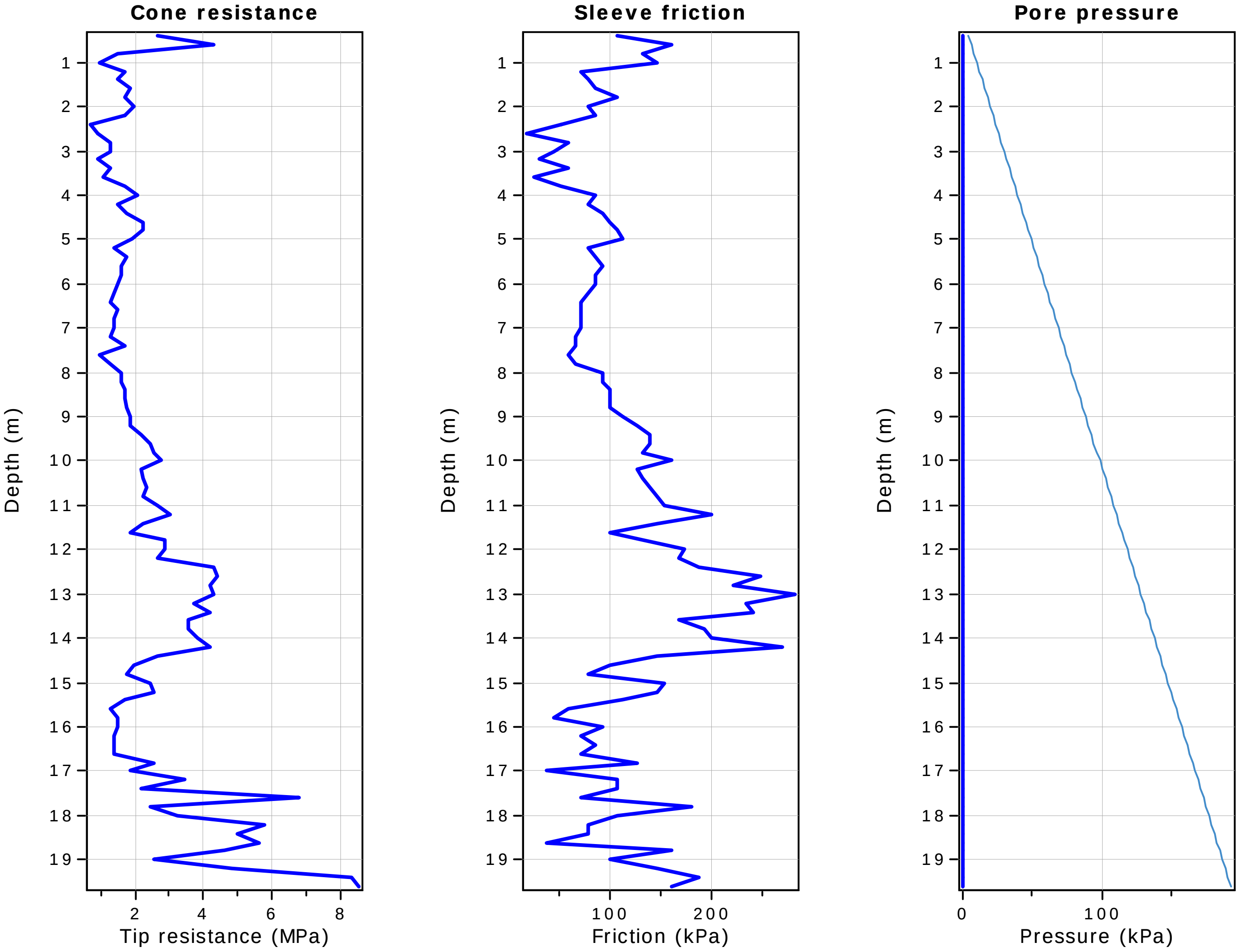
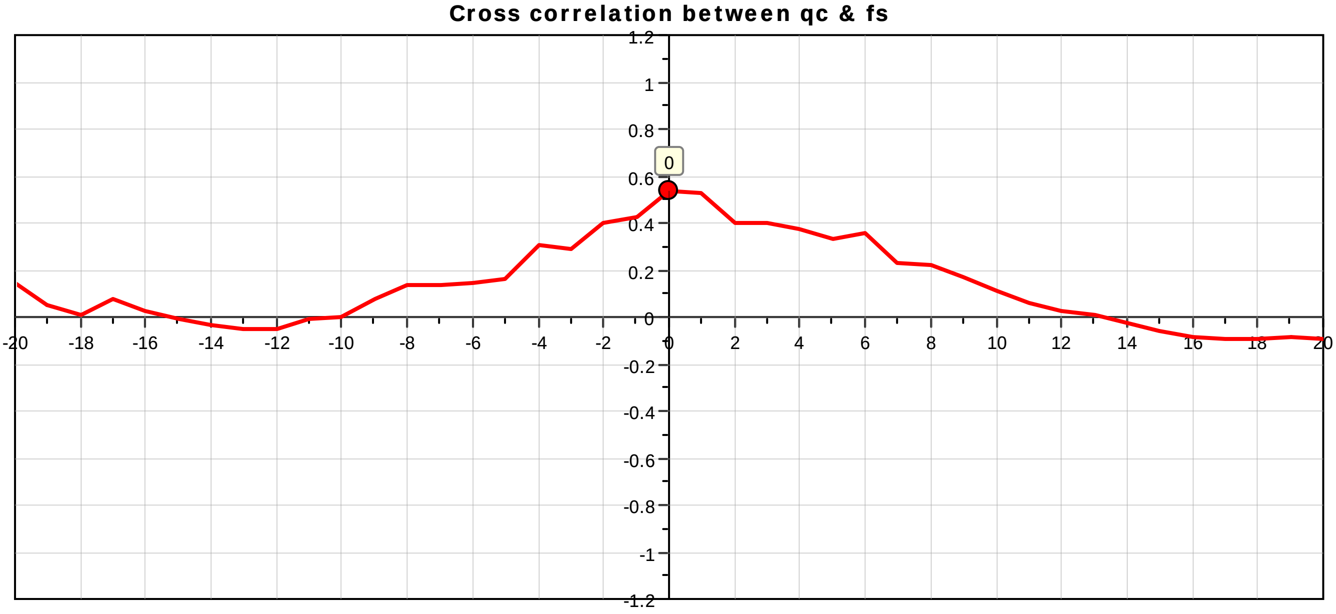
CPT: 036021P281CPT281
Total depth: 19.60 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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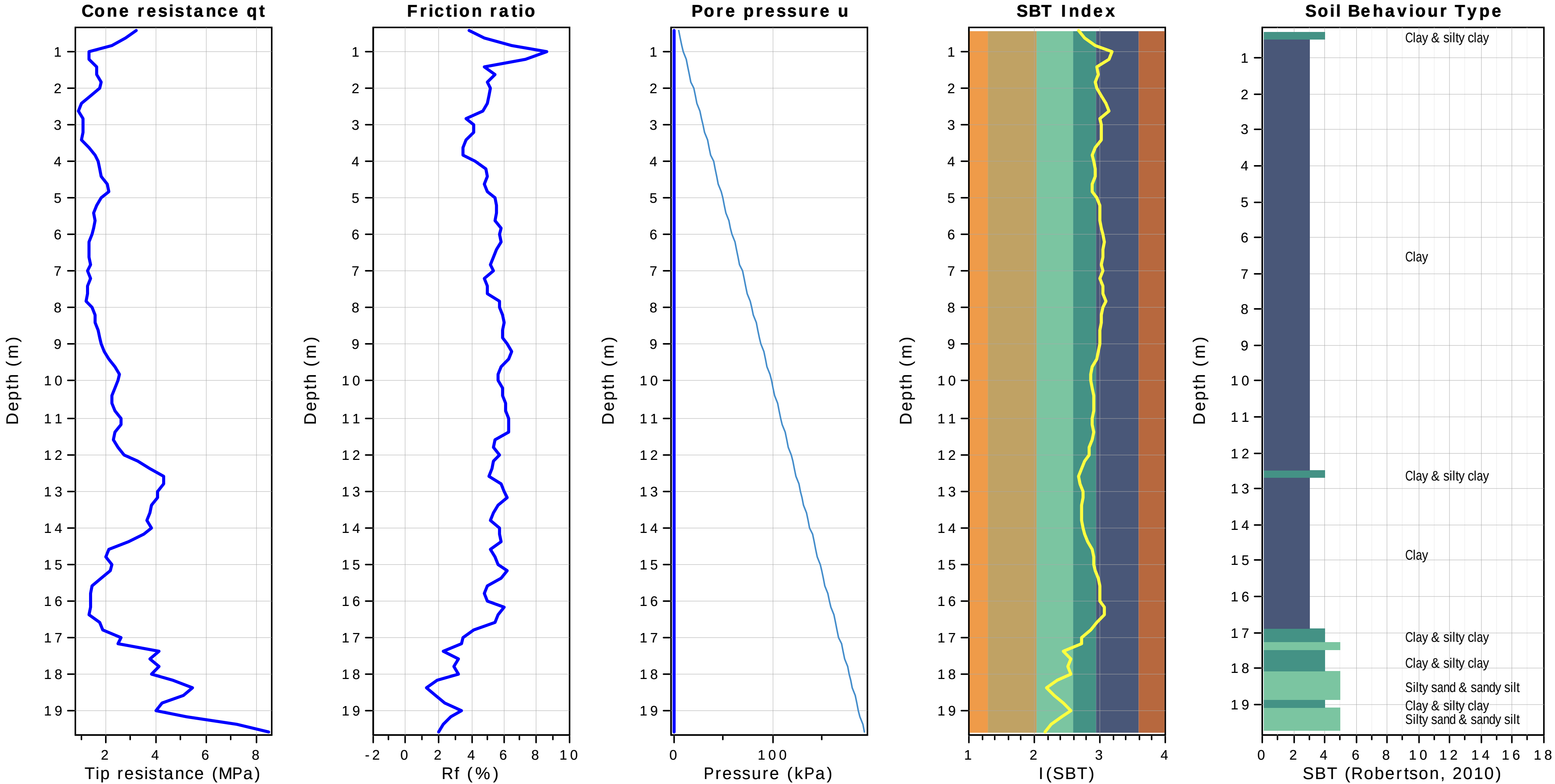
CPT: 036021P281CPT281
Total depth: 19.60 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

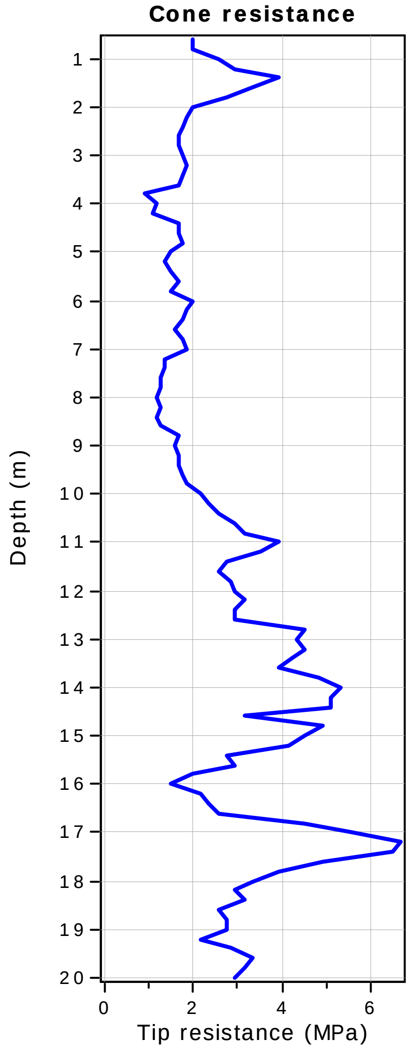


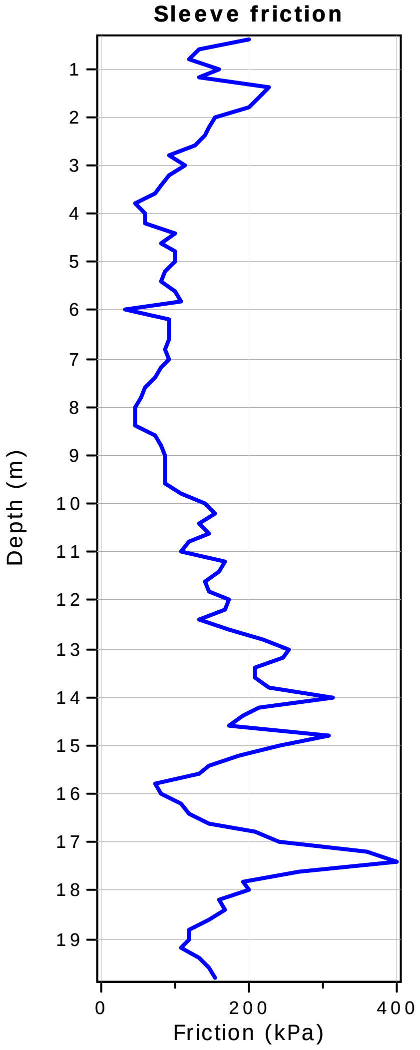
SBT legend

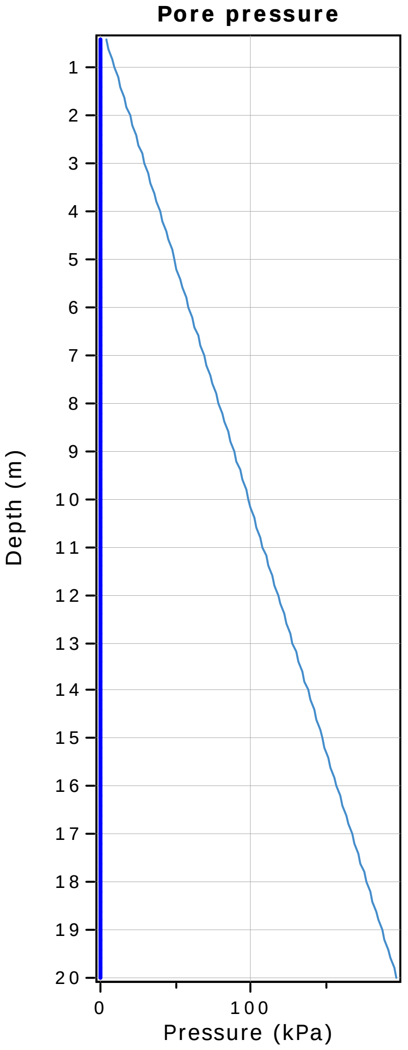
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P282CPT282
Total depth: 20.00 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

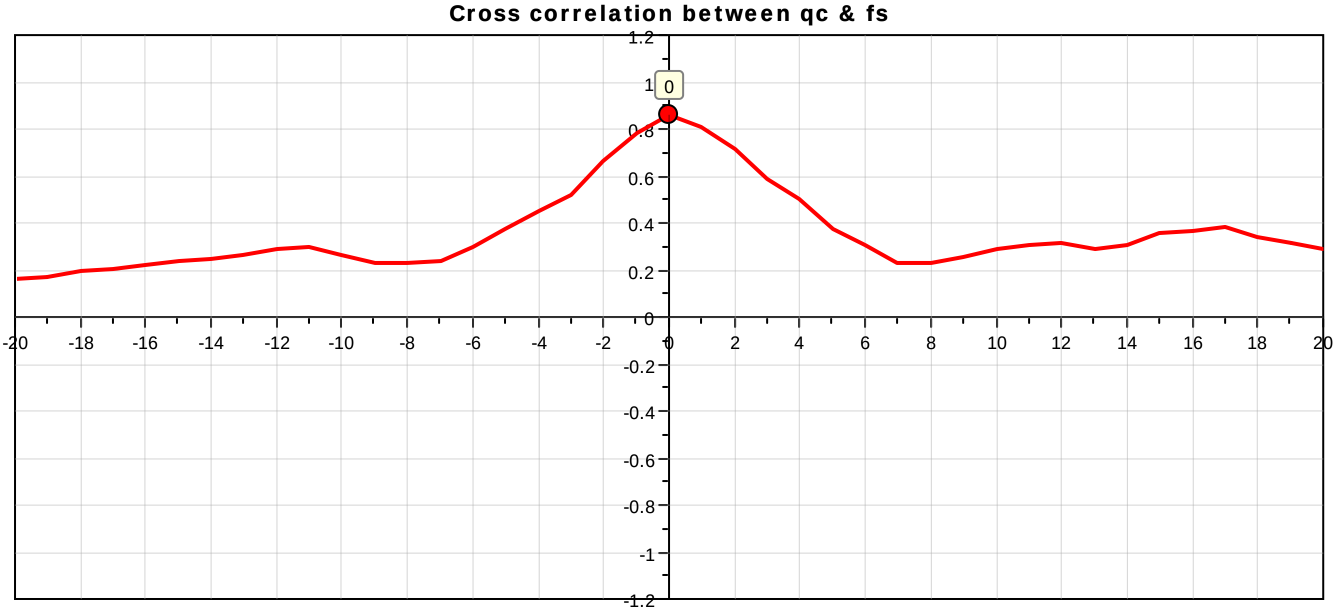
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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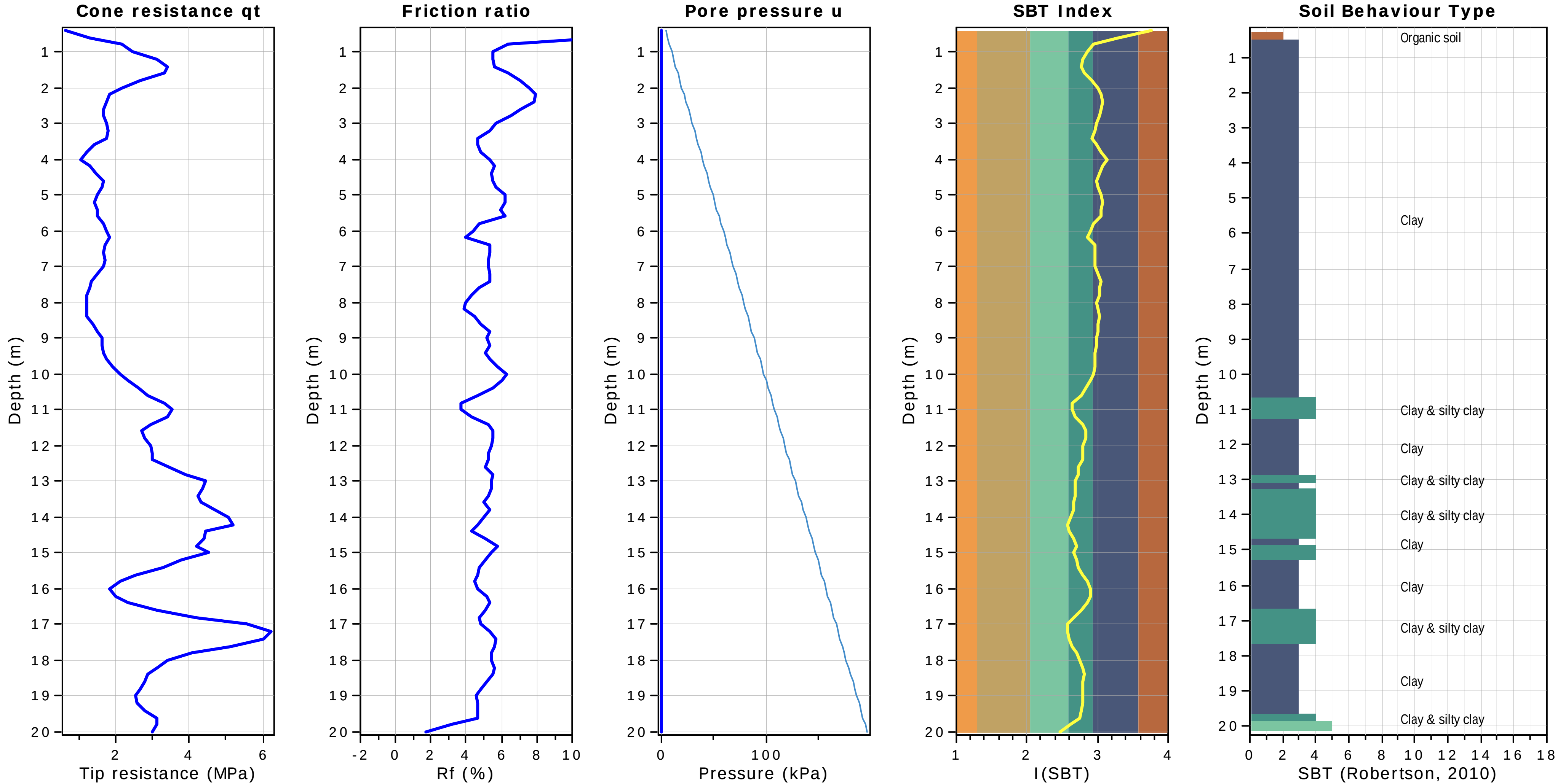
CPT: 036021P282CPT282
Total depth: 20.00 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

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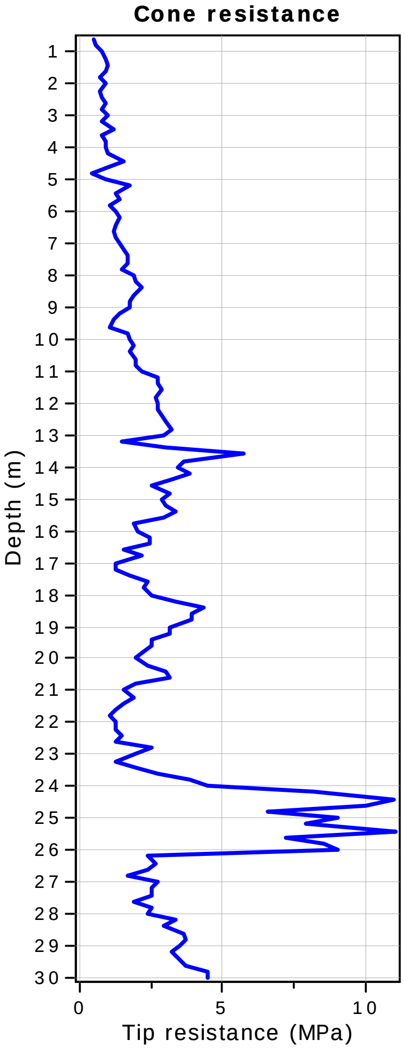
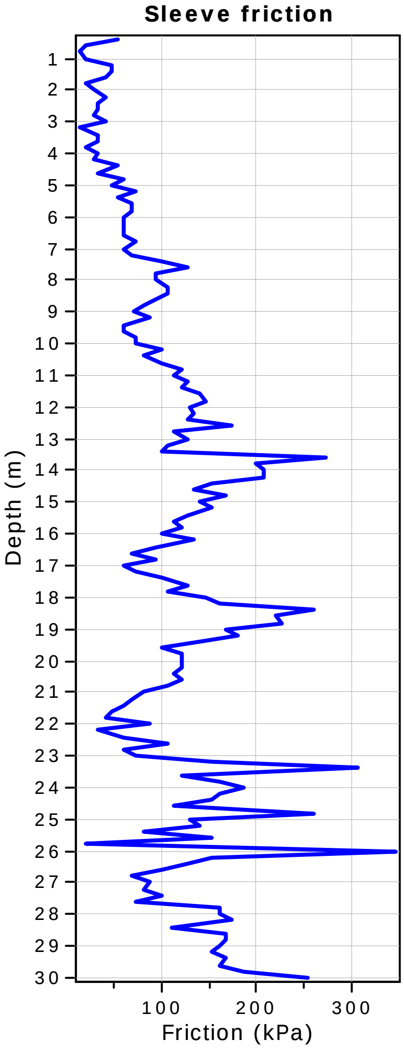
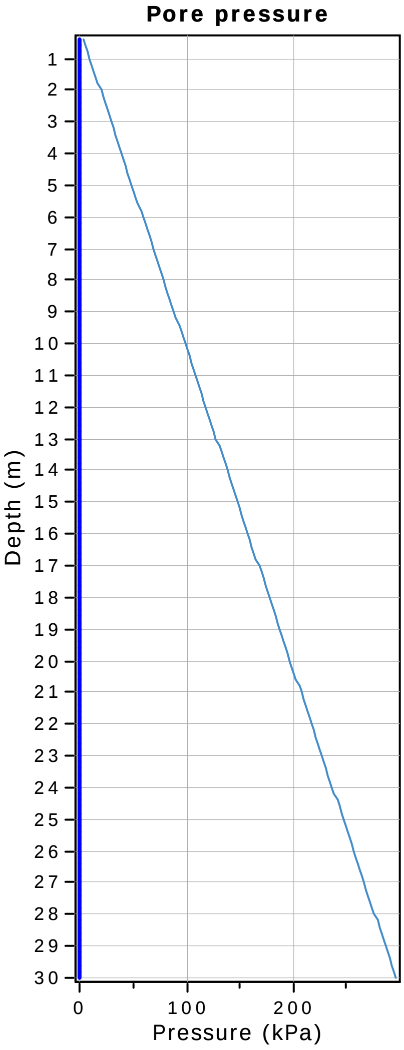
CPT: 036021P271CPT271
Total depth: 30.00 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

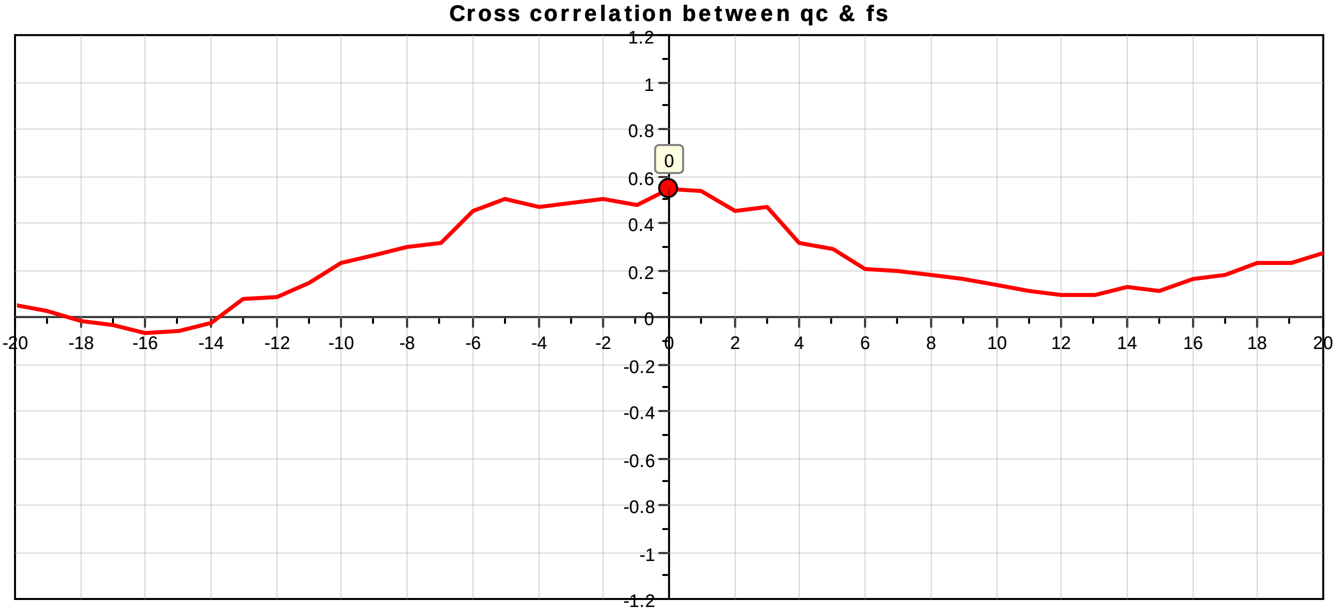
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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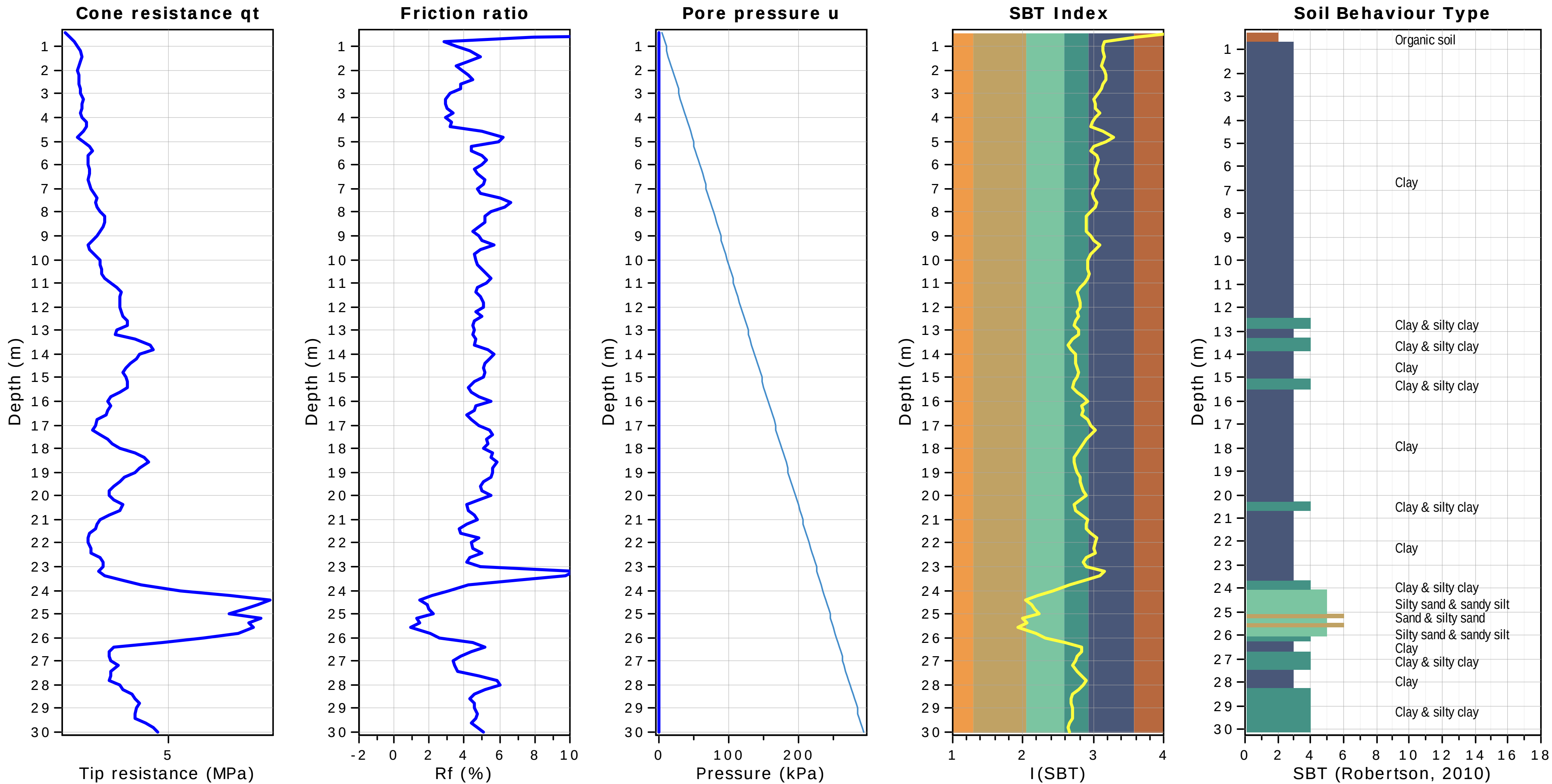
CPT: 036021P271CPT271
Total depth: 30.00 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

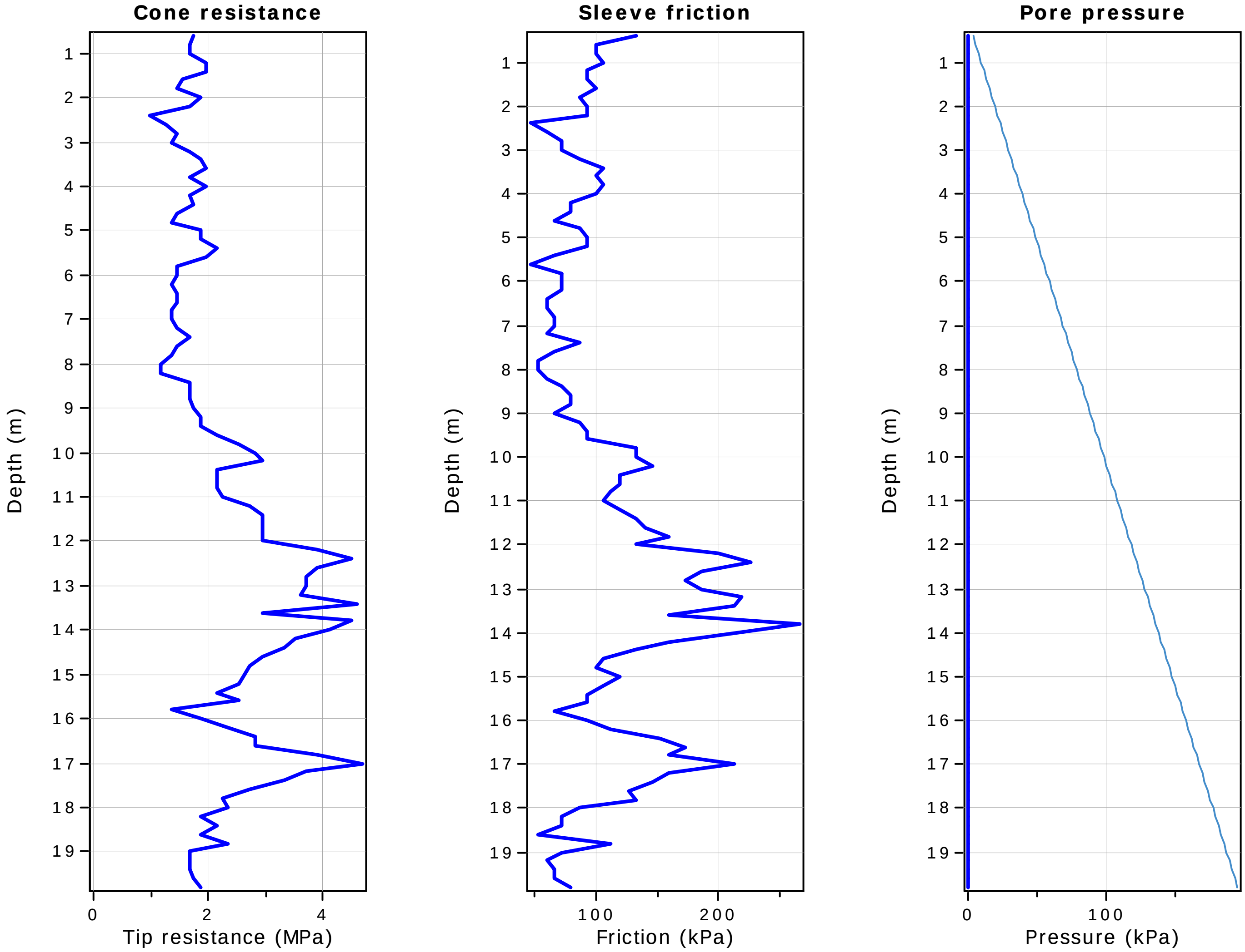


SBT legend

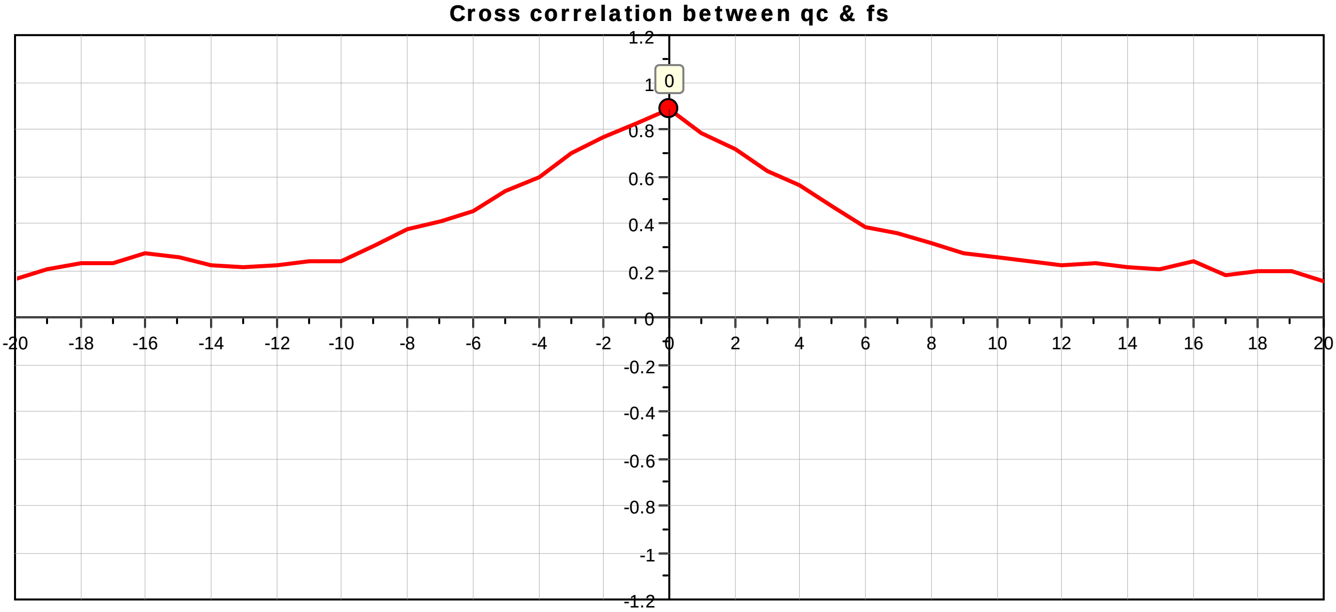
🟥 1. Sensitive fine grained	4. Clayey silt to silty clay	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to clayey sand
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

CPT: 036021P283CPT283
Total depth: 19.80 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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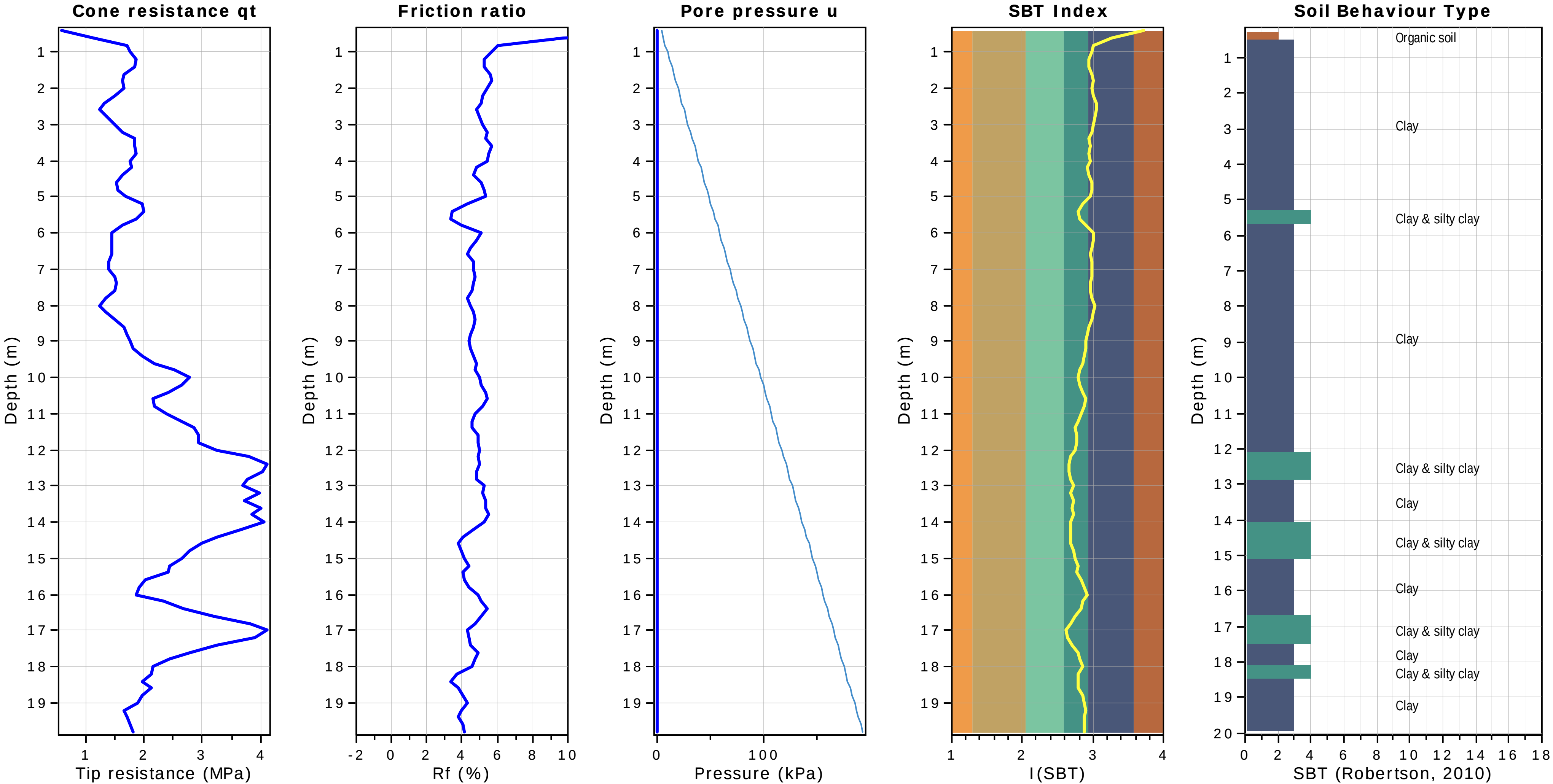
CPT: 036021P283CPT283
Total depth: 19.80 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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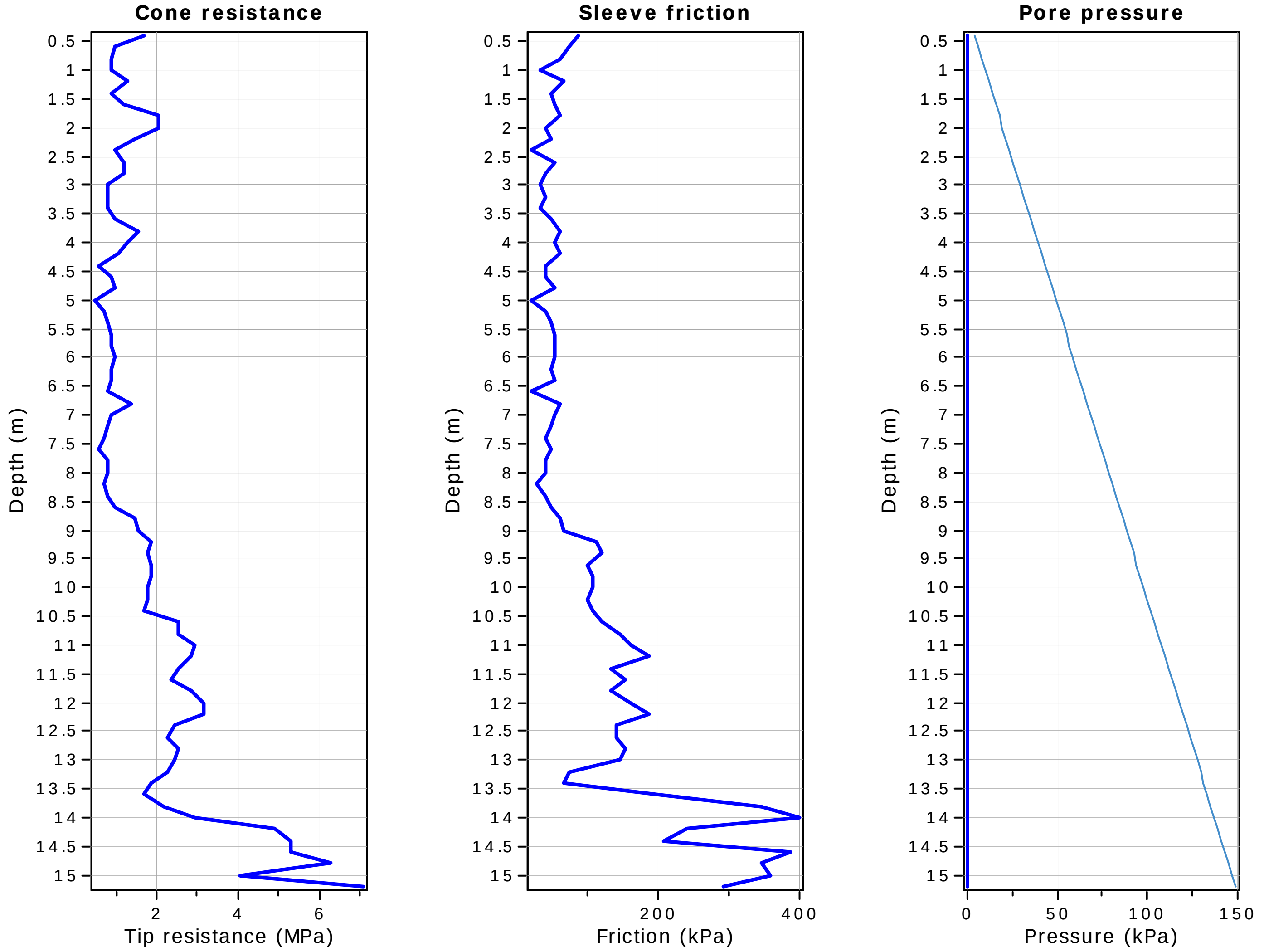
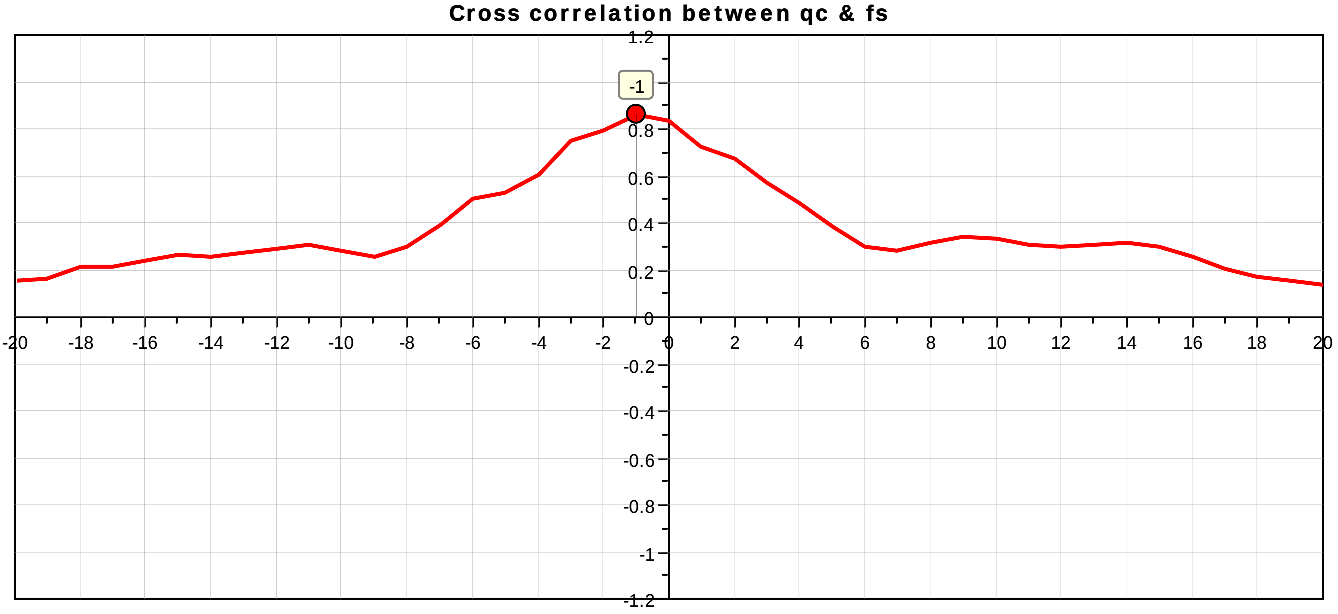
CPT: 036021P284CPT284
Total depth: 15.20 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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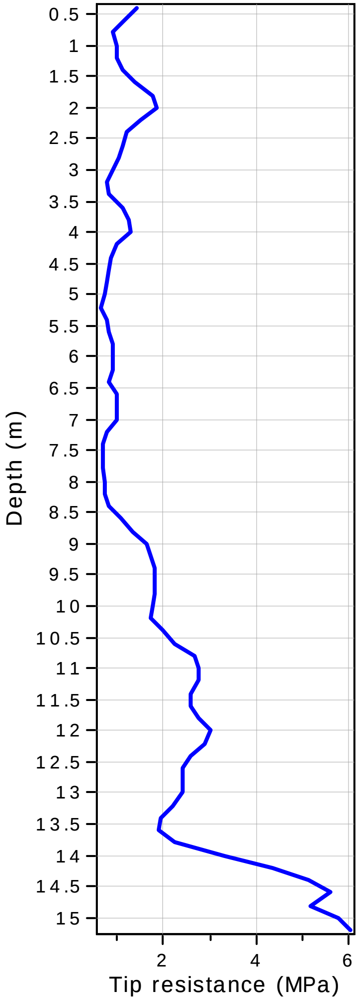
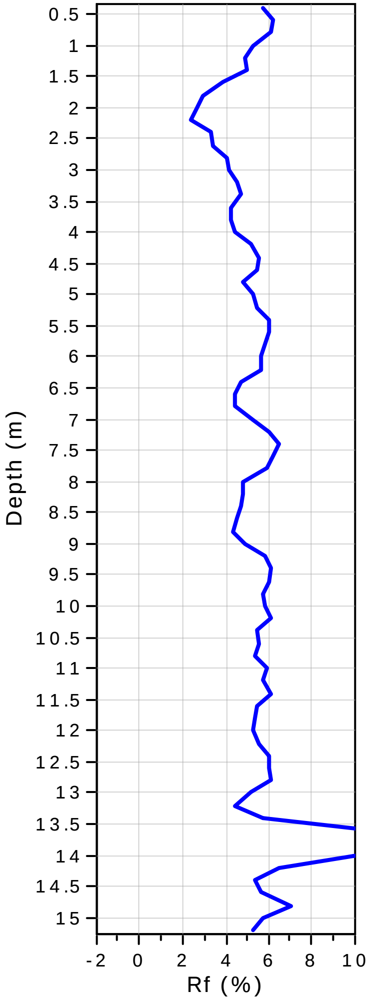
CPT: 036021P284CPT284
Total depth: 15.20 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

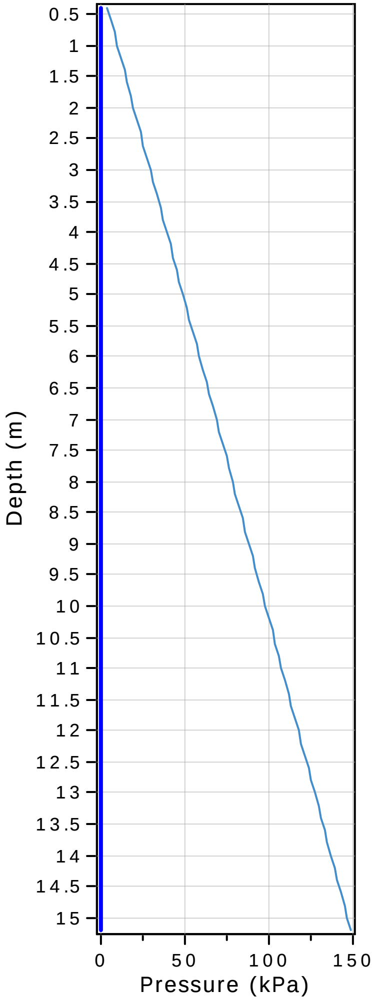
Cone resistance qt



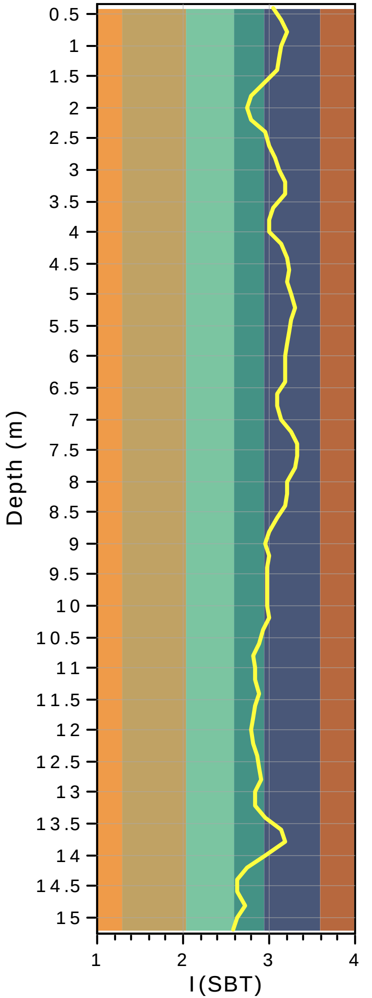
Friction ratio



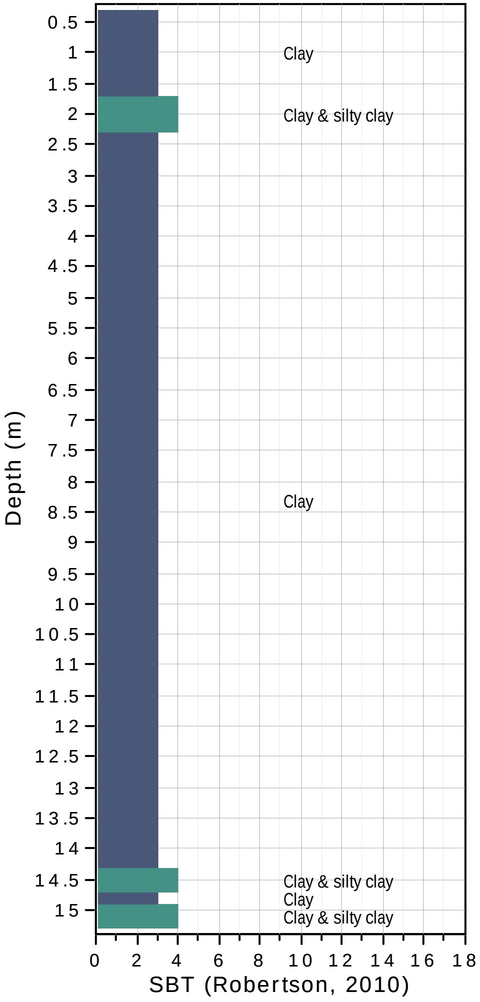
Pore pressure u



SBT Index



Soil Behaviour Type



SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- ■ 3. Clay to silty clay
- ■ 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- ■ 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ■ 8. Very stiff sand to clayey sand
- ■ 9. Very stiff fine grained

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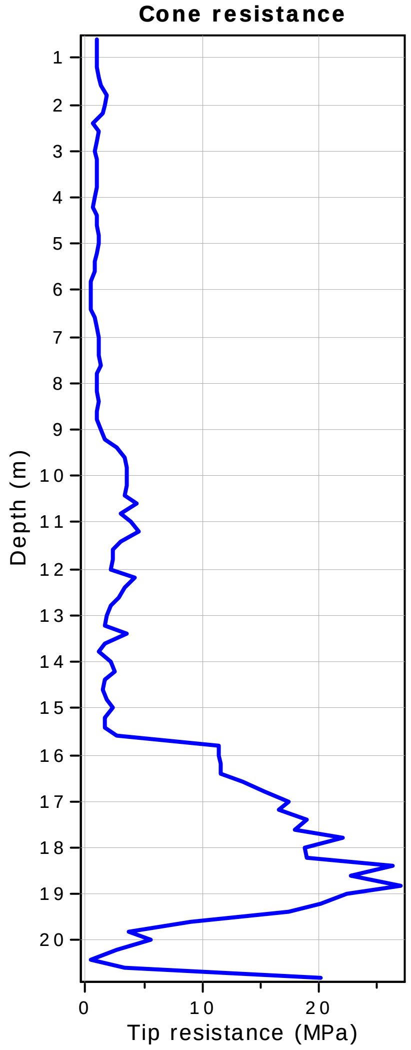
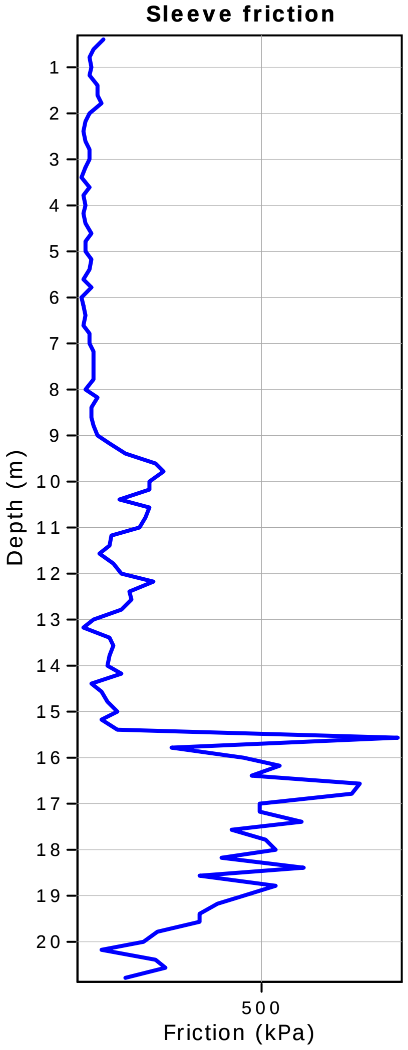
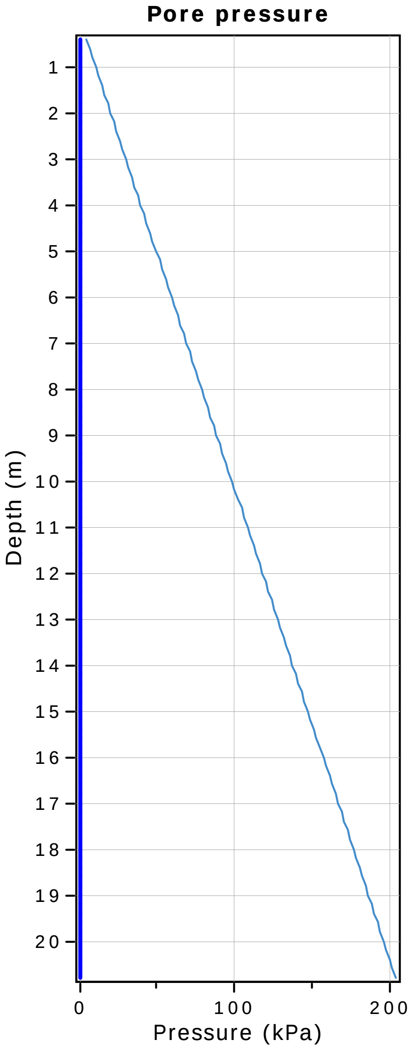
CPT: 036021P285CPT285
Total depth: 20.80 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

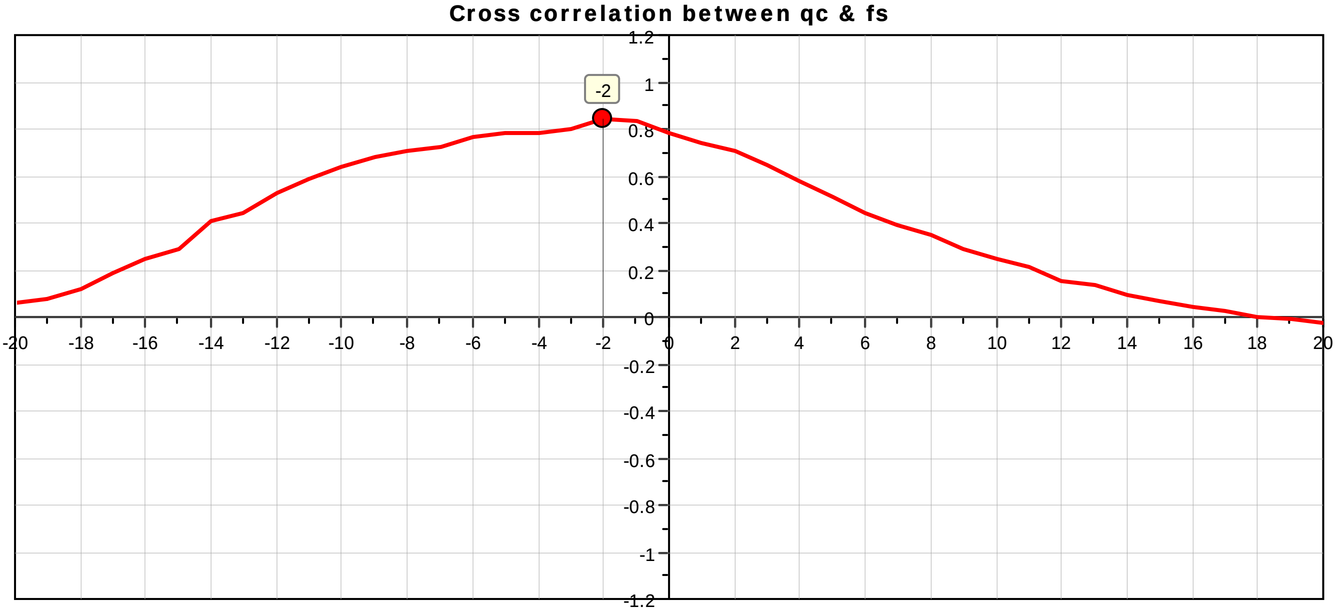
Project:
Location:


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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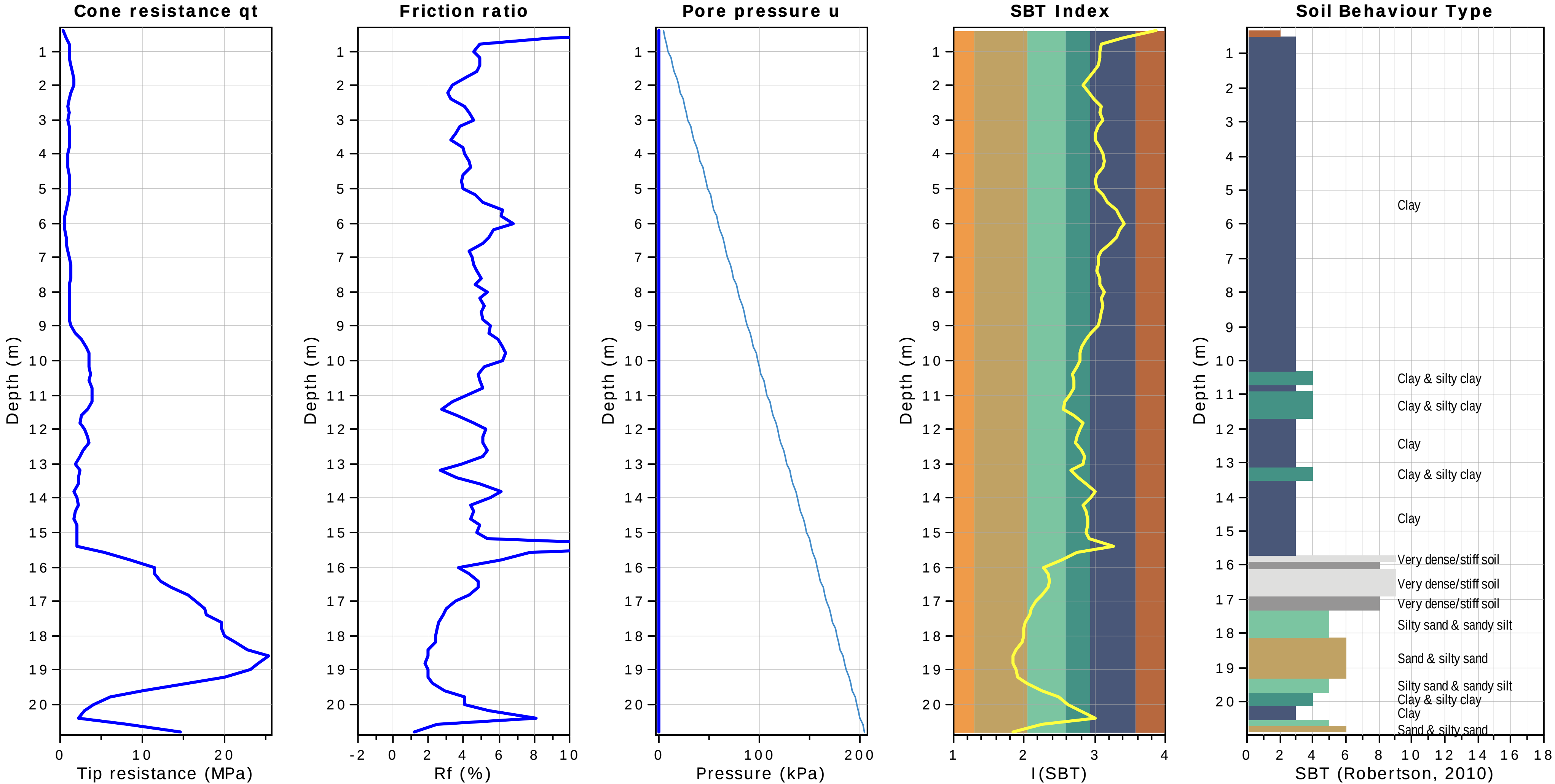
CPT: 036021P285CPT285
Total depth: 20.80 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



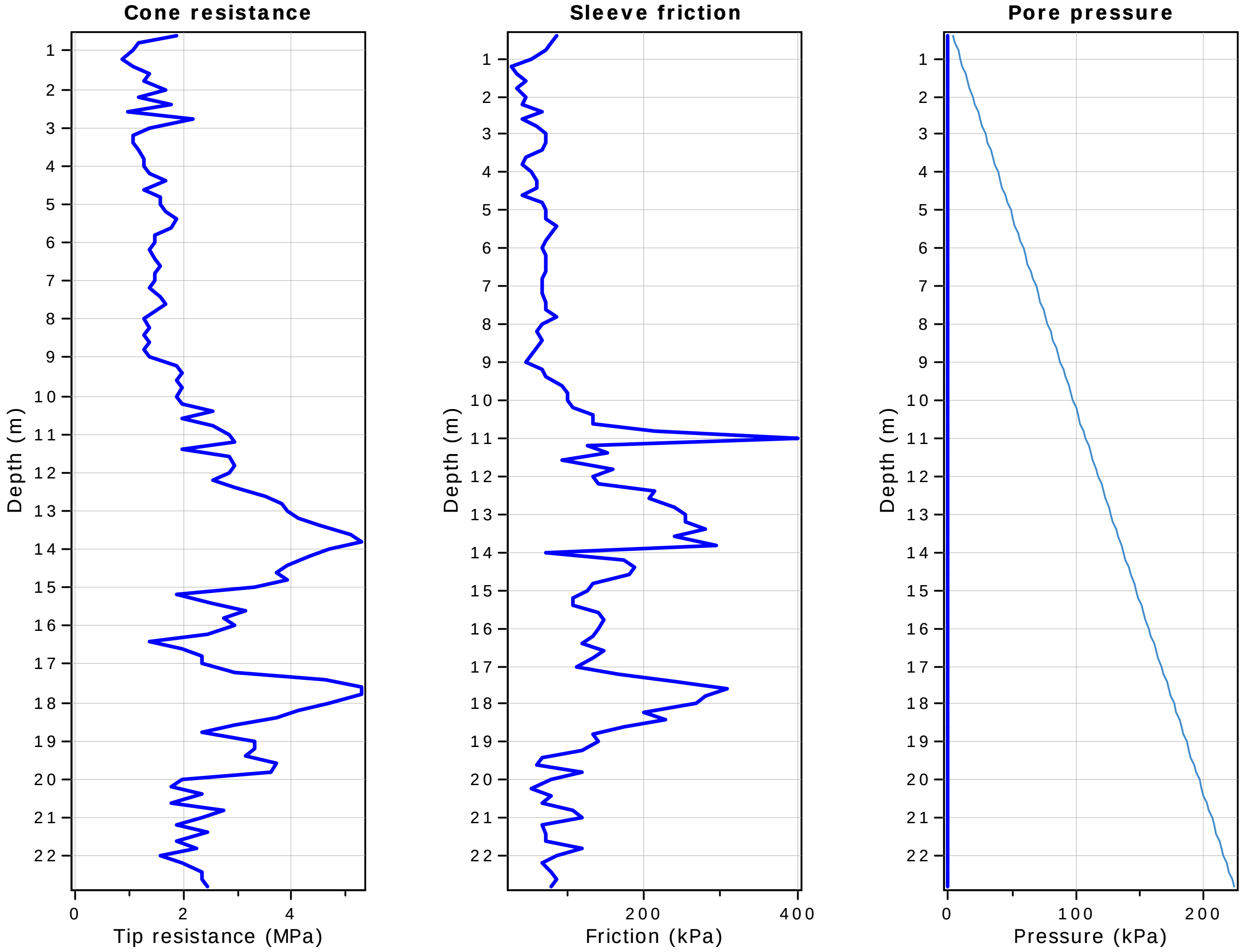
SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

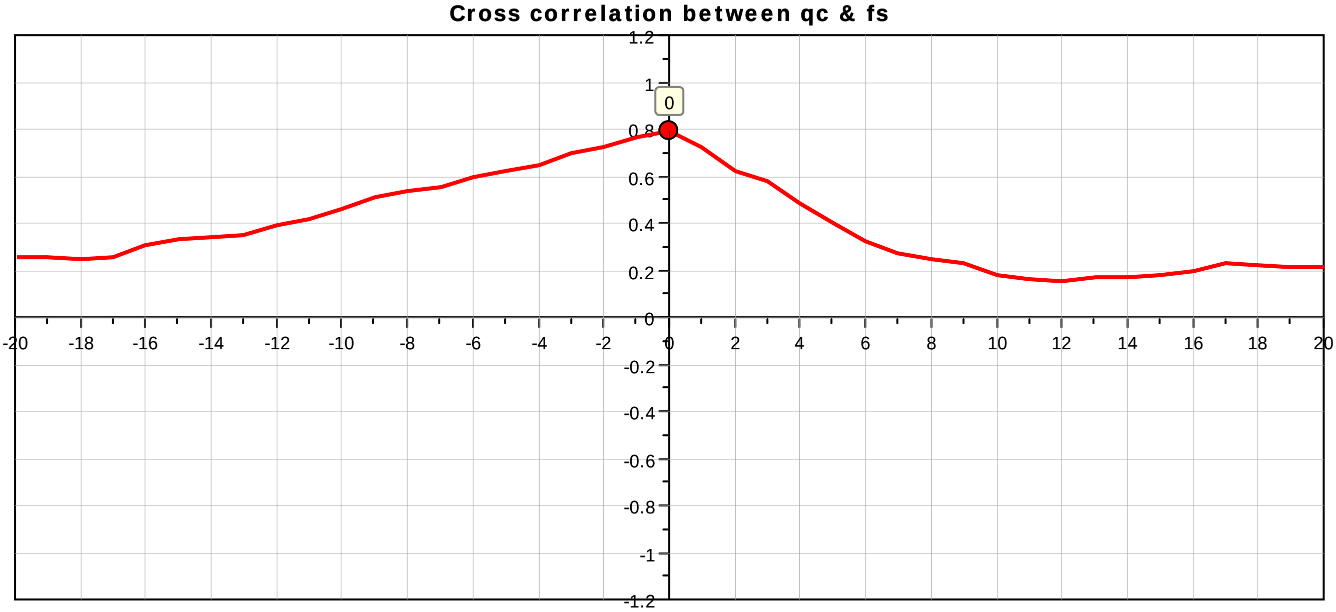
CPT: 036021P286CPT286

Total depth: 22.80 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

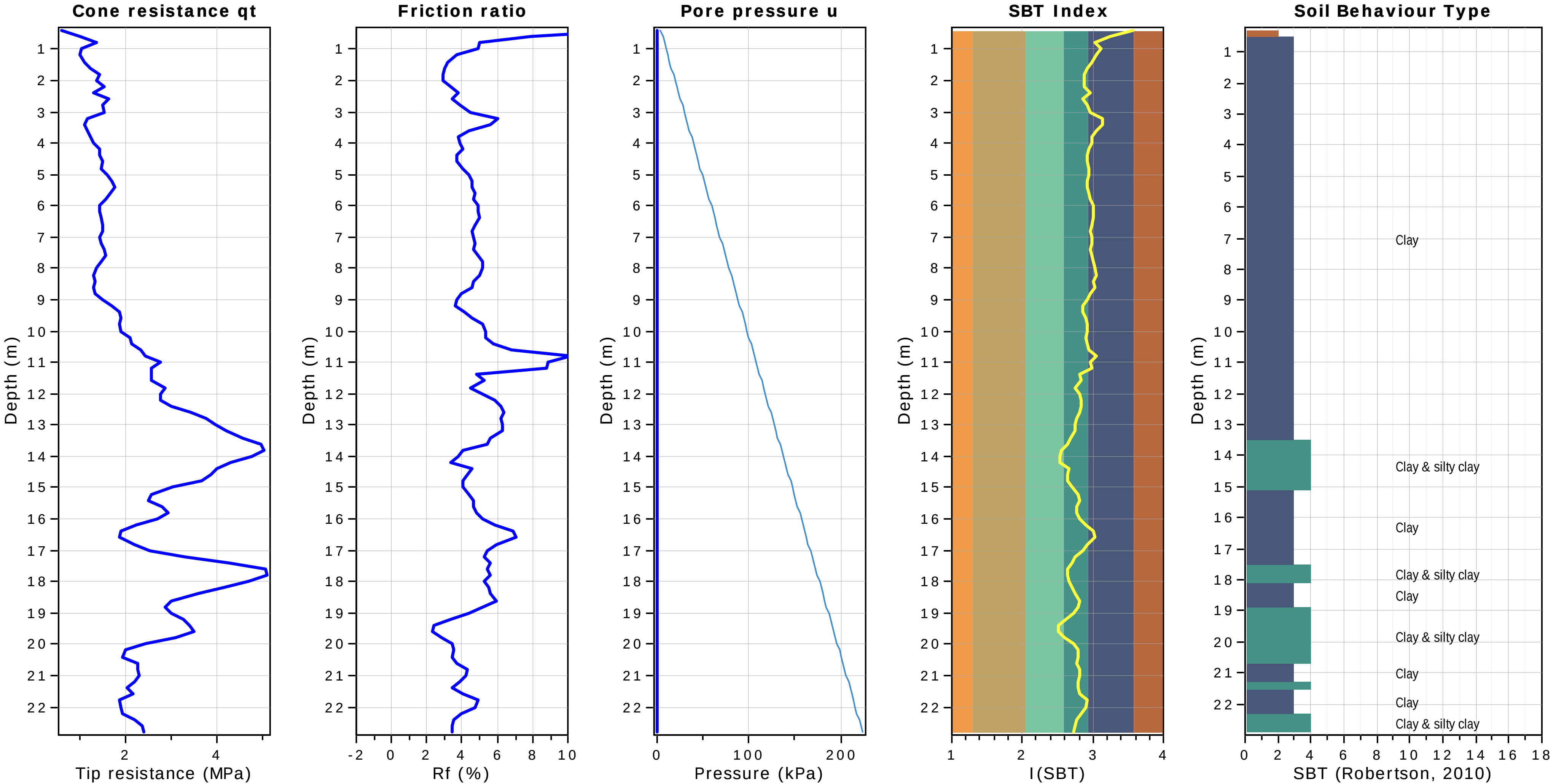


The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT: 036021P286CPT286
Total depth: 22.80 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ▨ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

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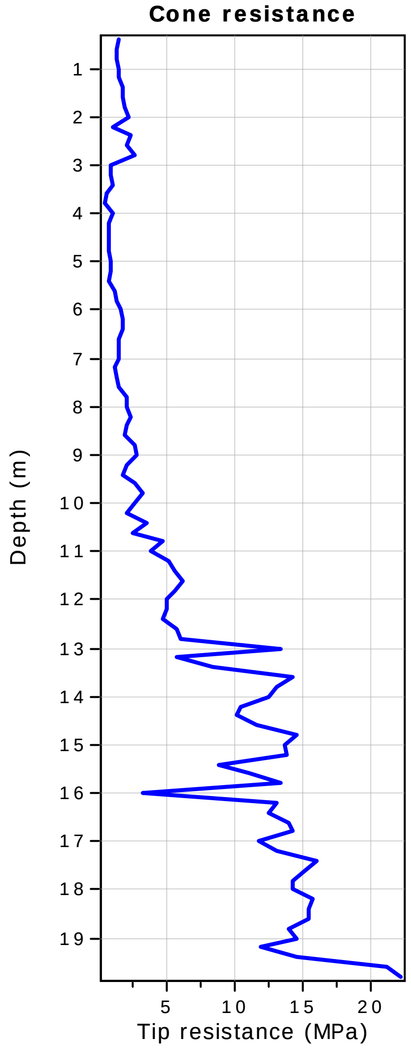
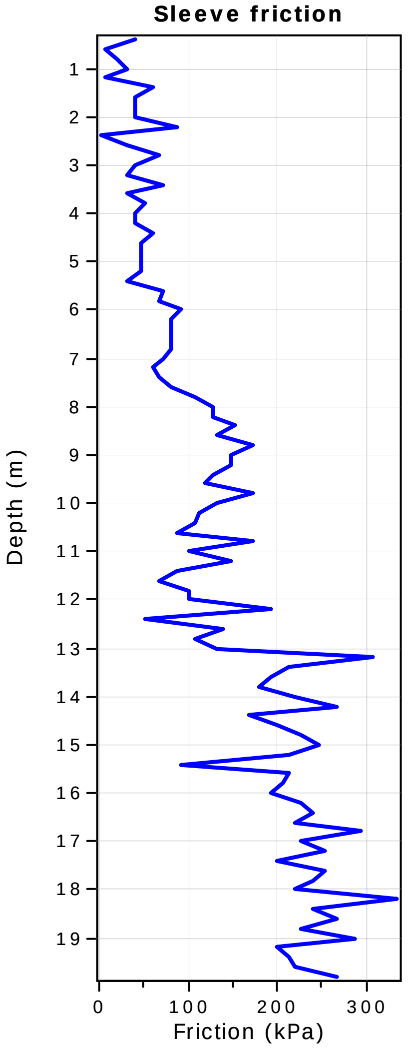
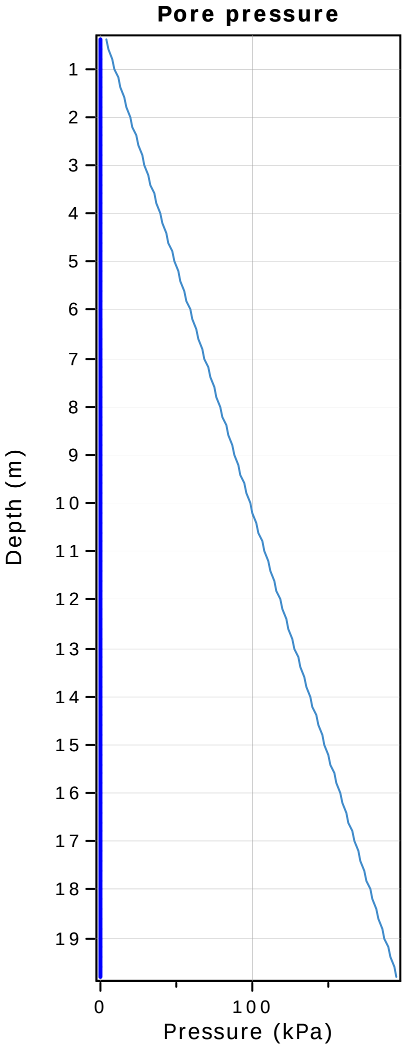
CPT: 036021P287CPT287
Total depth: 19.80 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

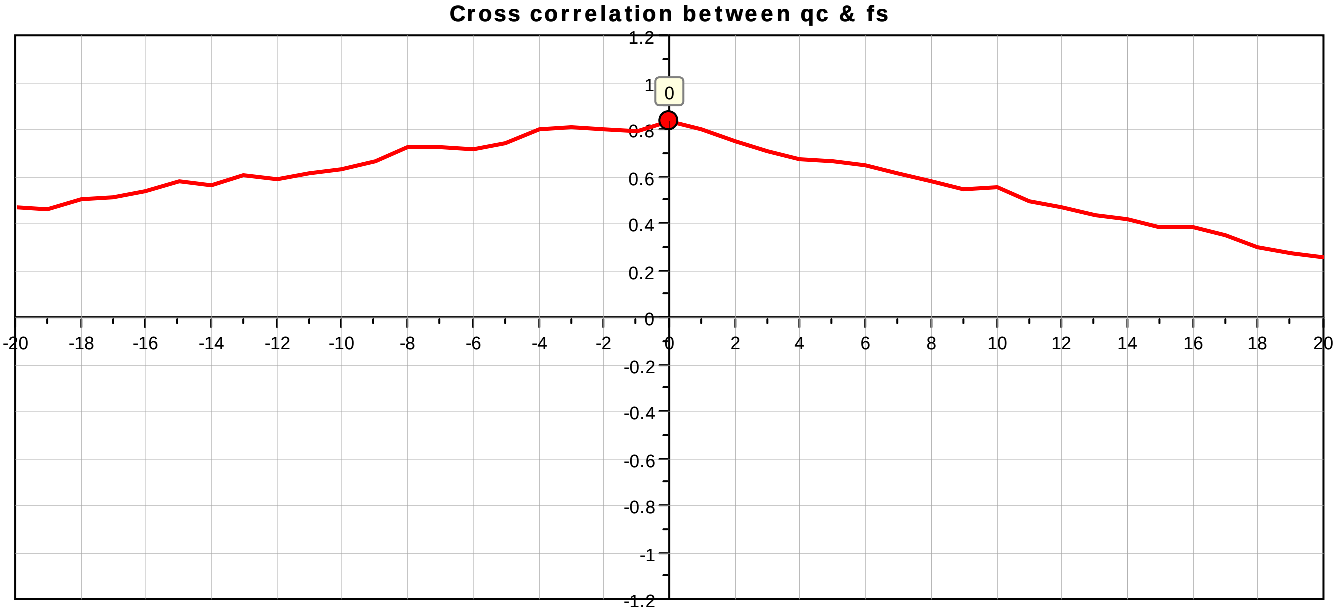
Project:
Location:


Cone resistance


Sleeve friction

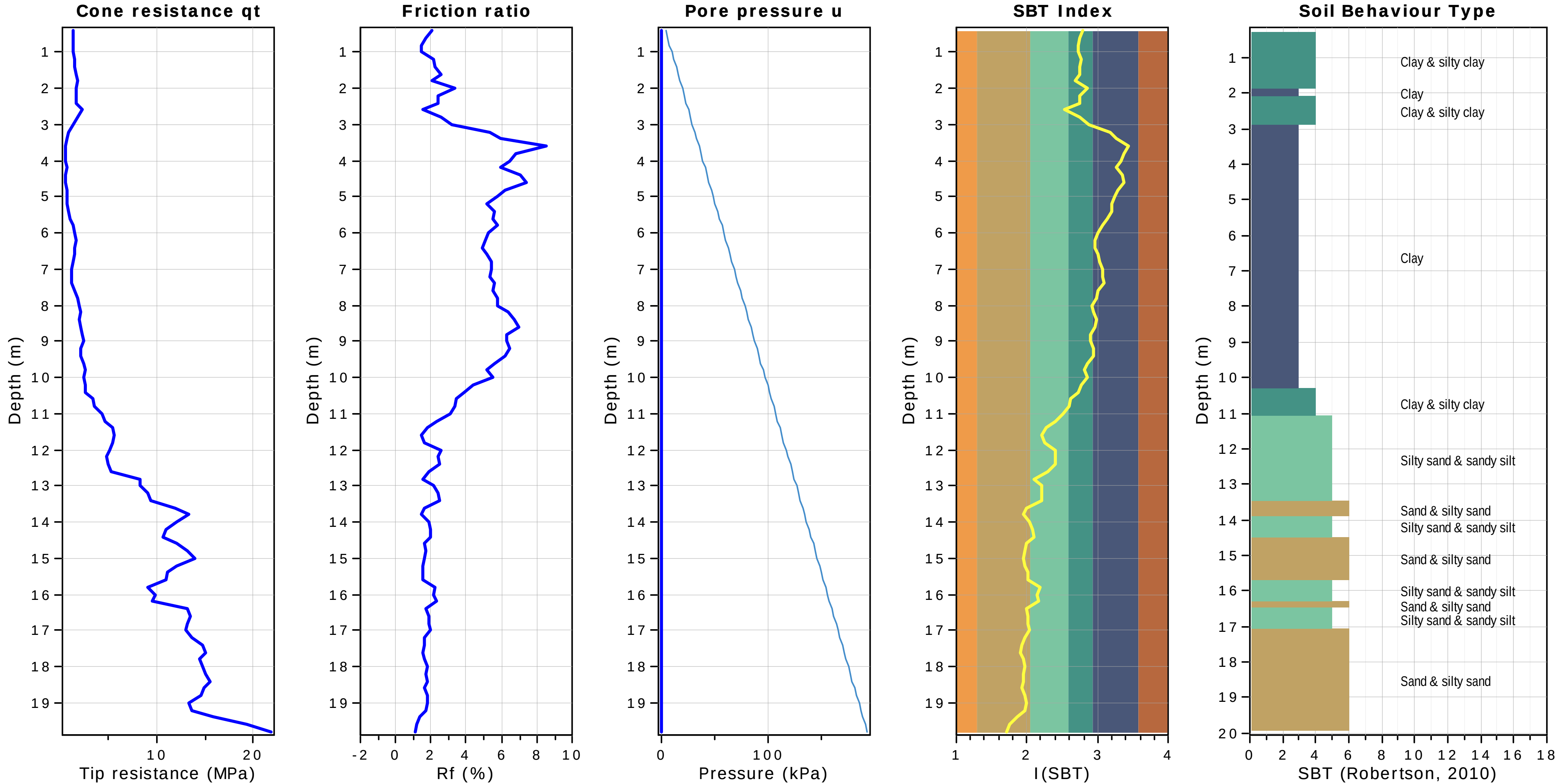

Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

CPT: 036021P287CPT287
Total depth: 19.80 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

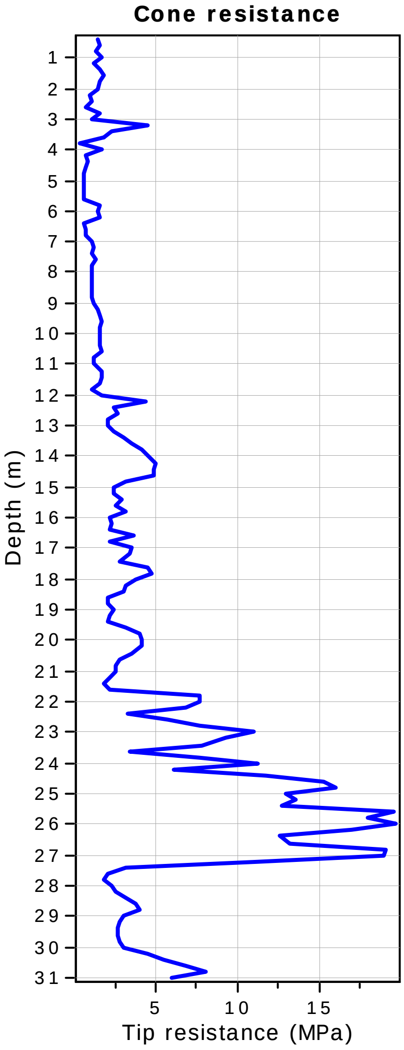


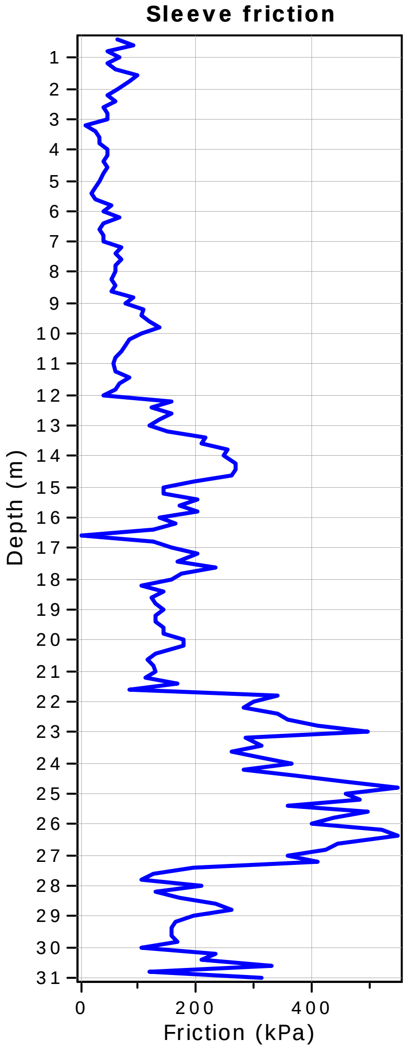
SBT legend

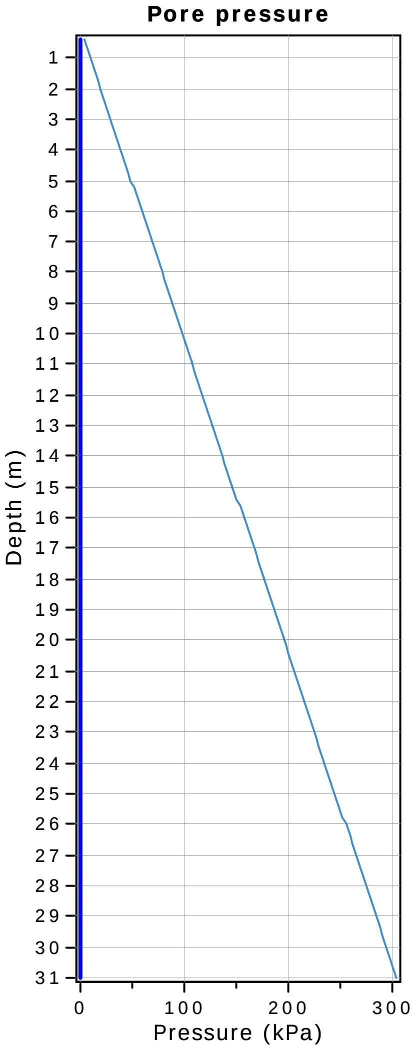
🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟨 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

CPT: 036021P288CPT288
Total depth: 31.00 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

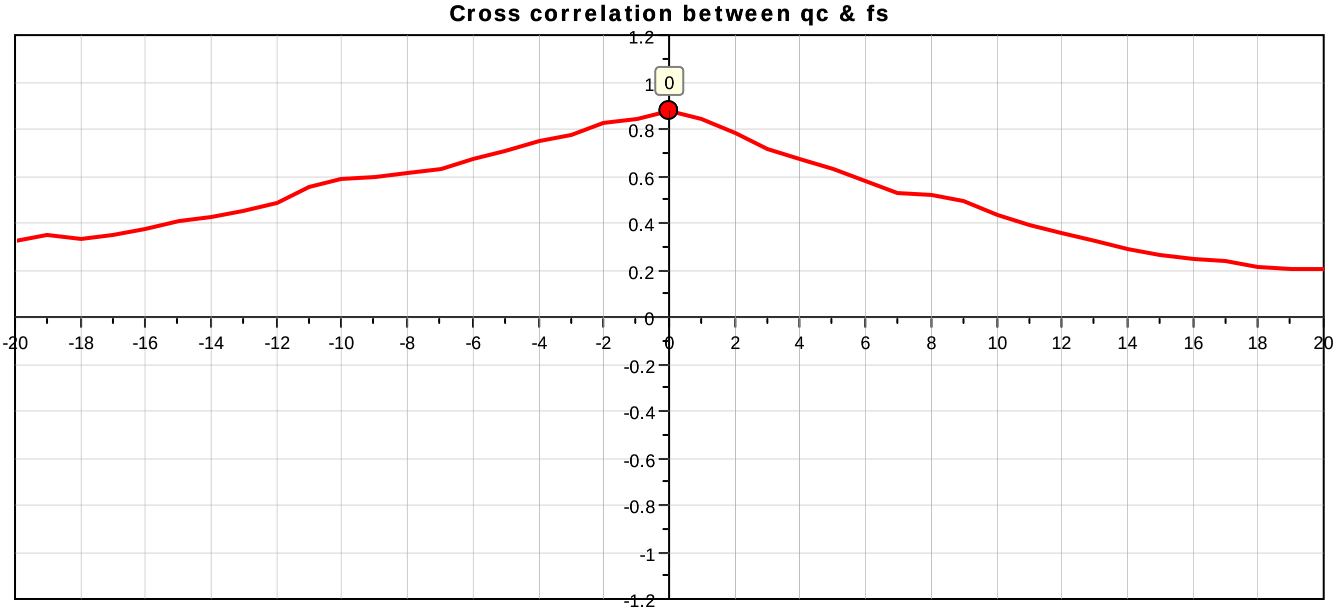
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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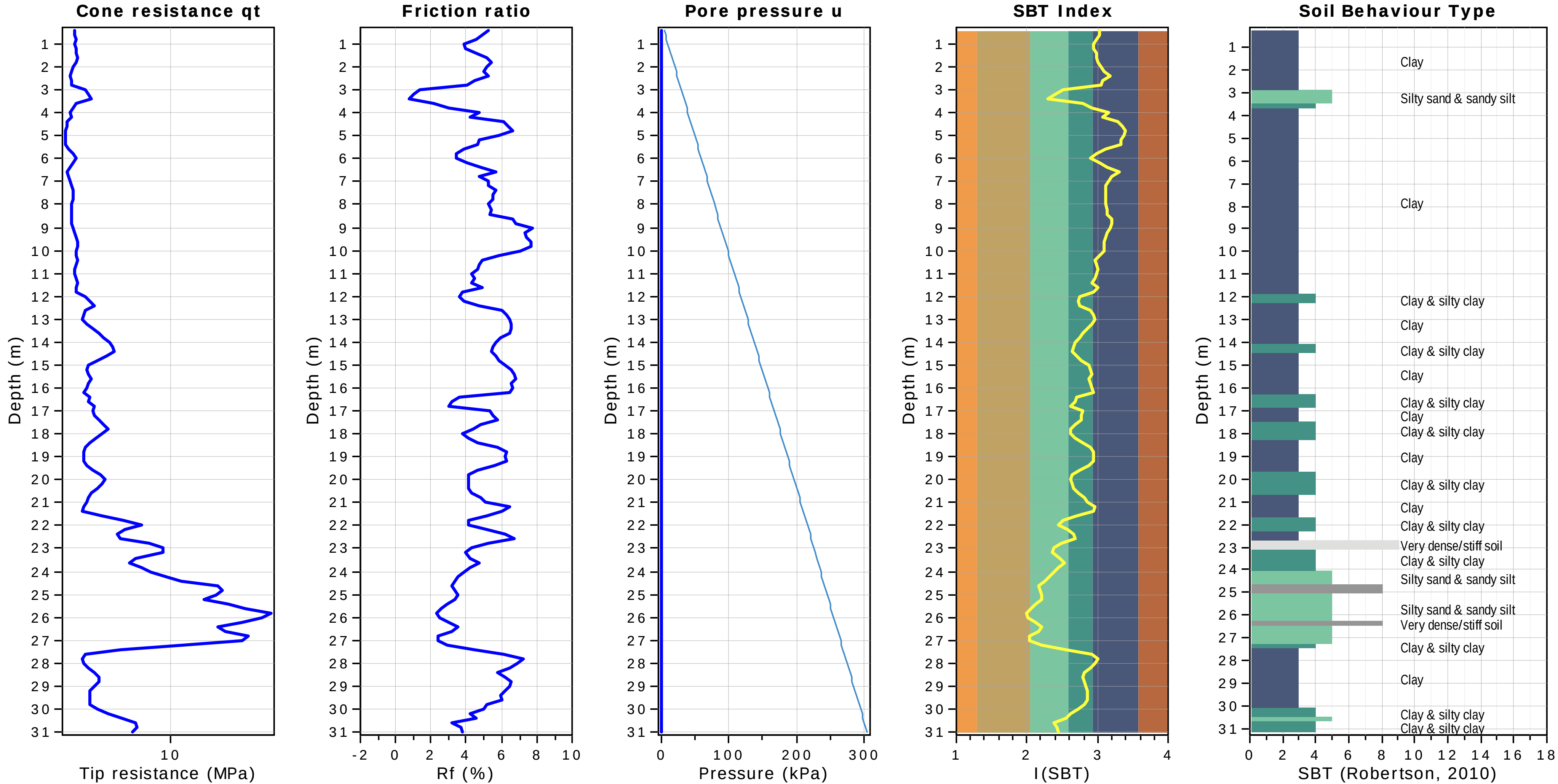
CPT: 036021P288CPT288
Total depth: 31.00 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

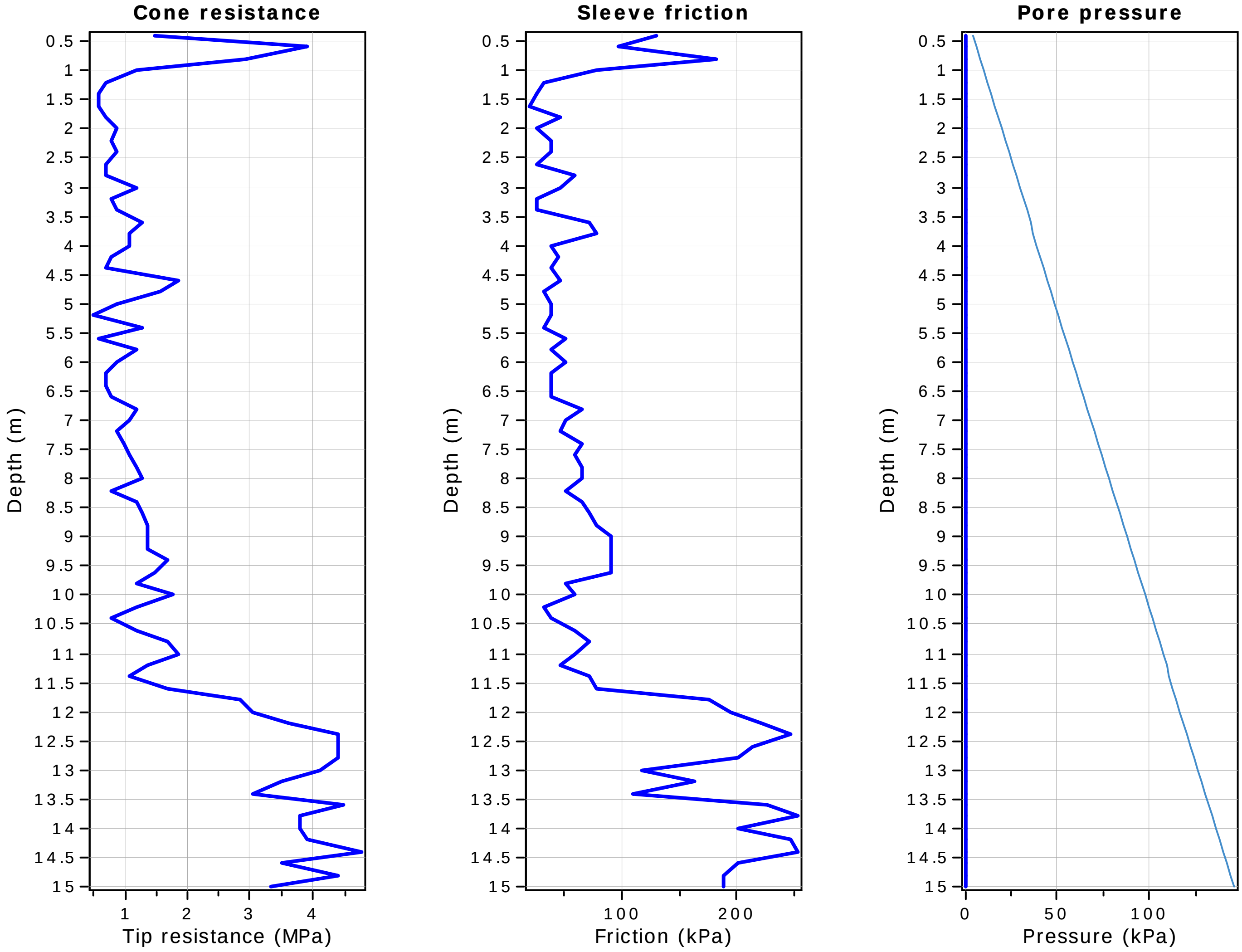


SBT legend

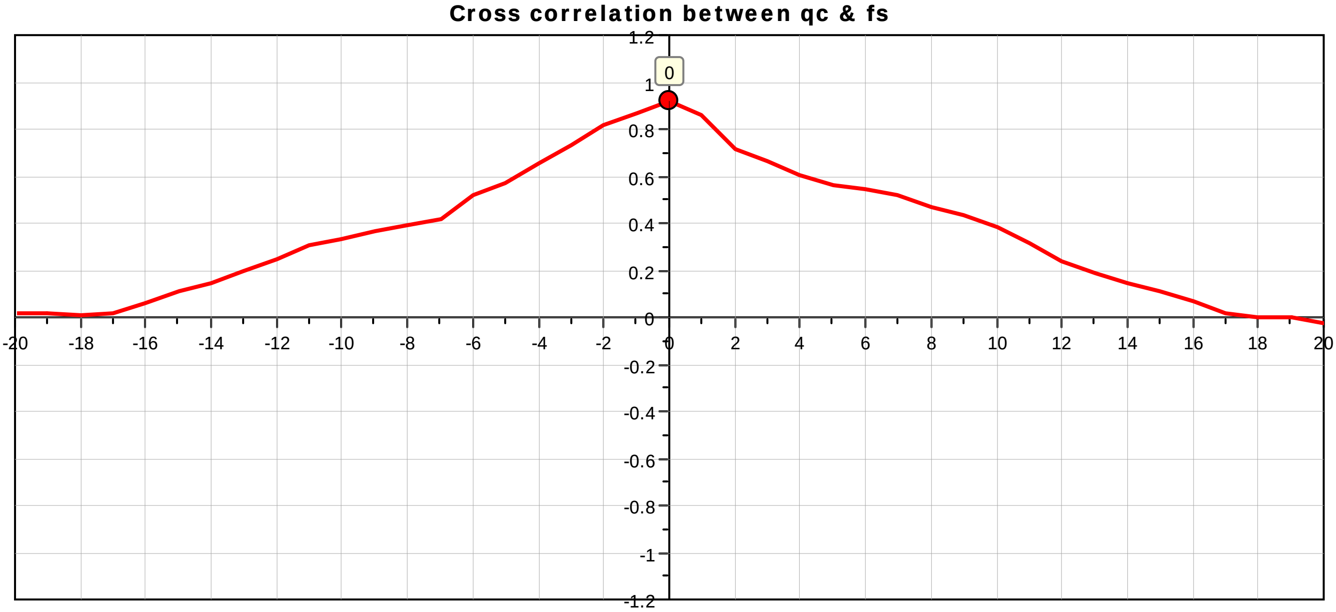
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P289CPT289
Total depth: 15.00 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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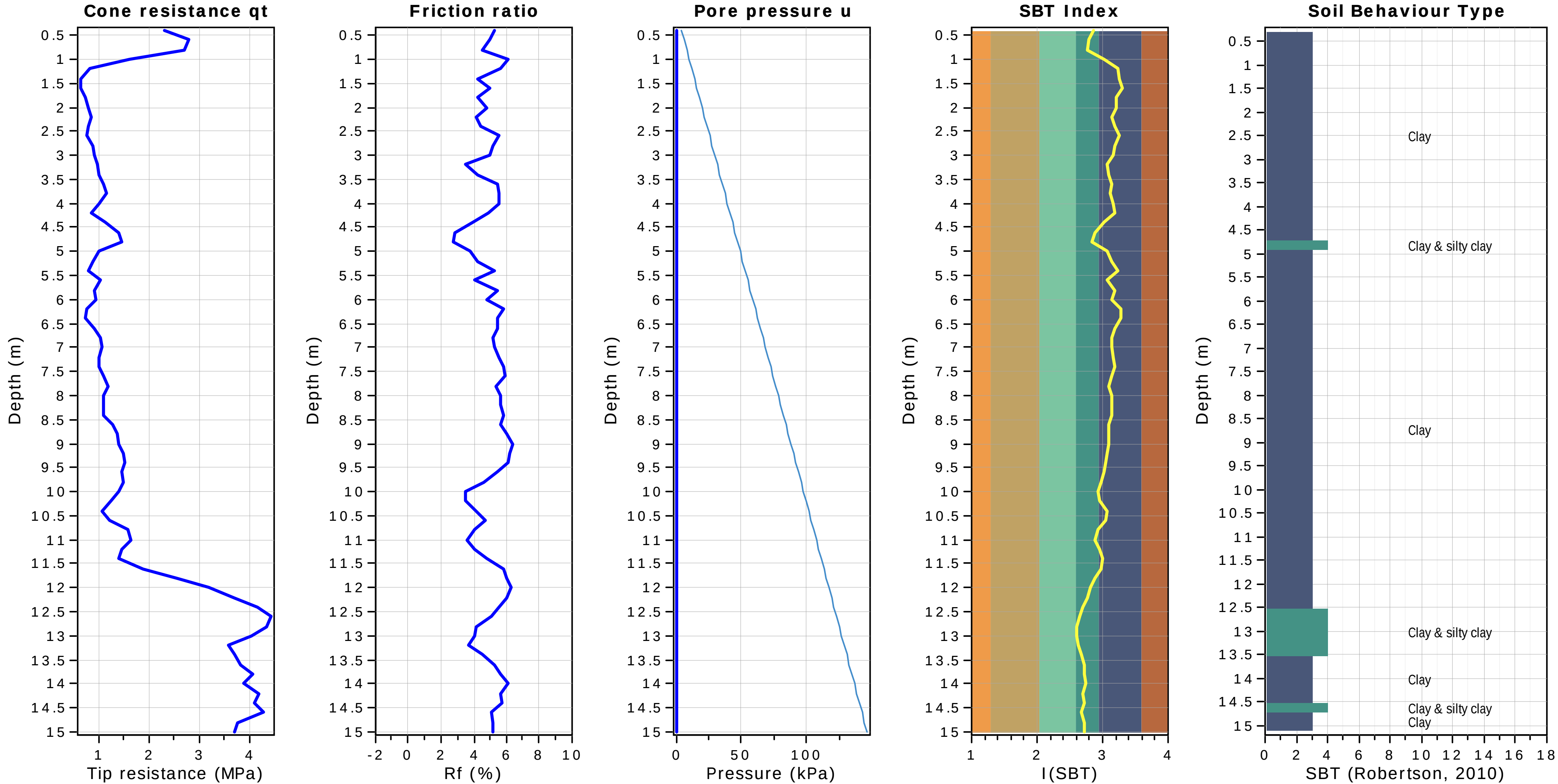
CPT: 036021P289CPT289
Total depth: 15.00 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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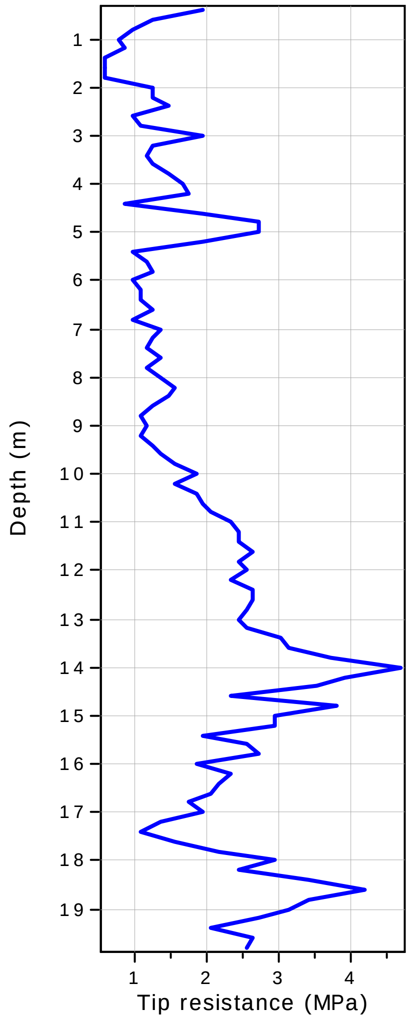
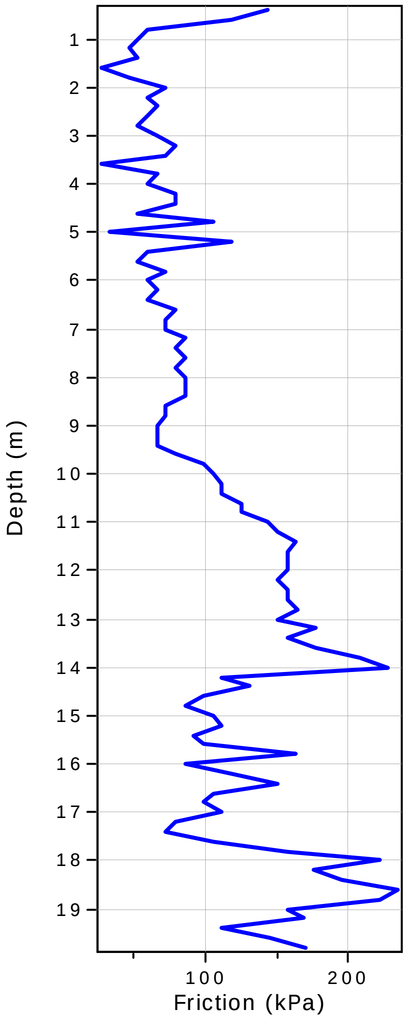
CPT: 036021P290CPT290
Total depth: 19.80 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

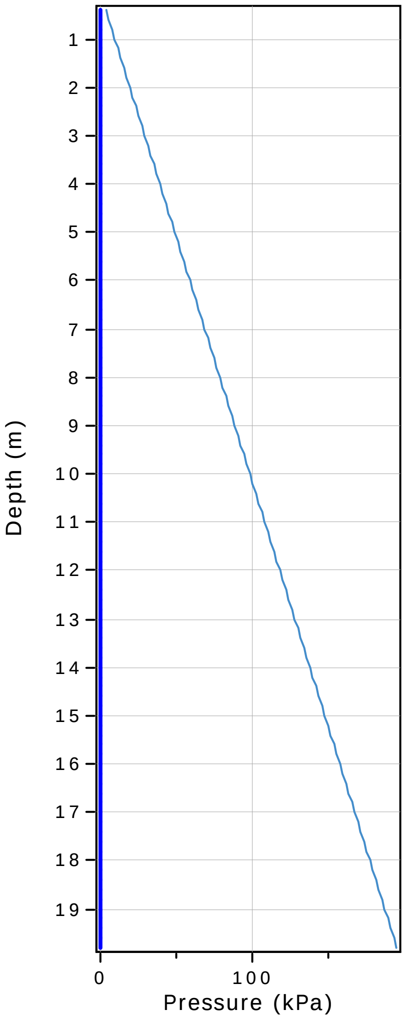
Cone resistance



Sleeve friction

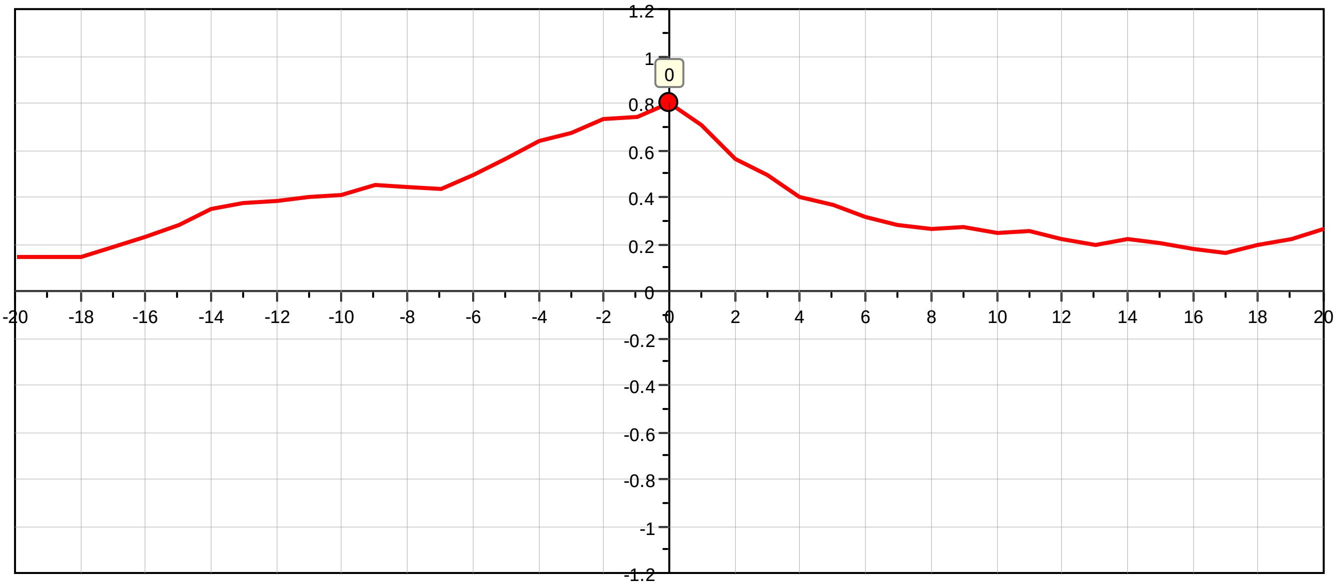


Pore pressure



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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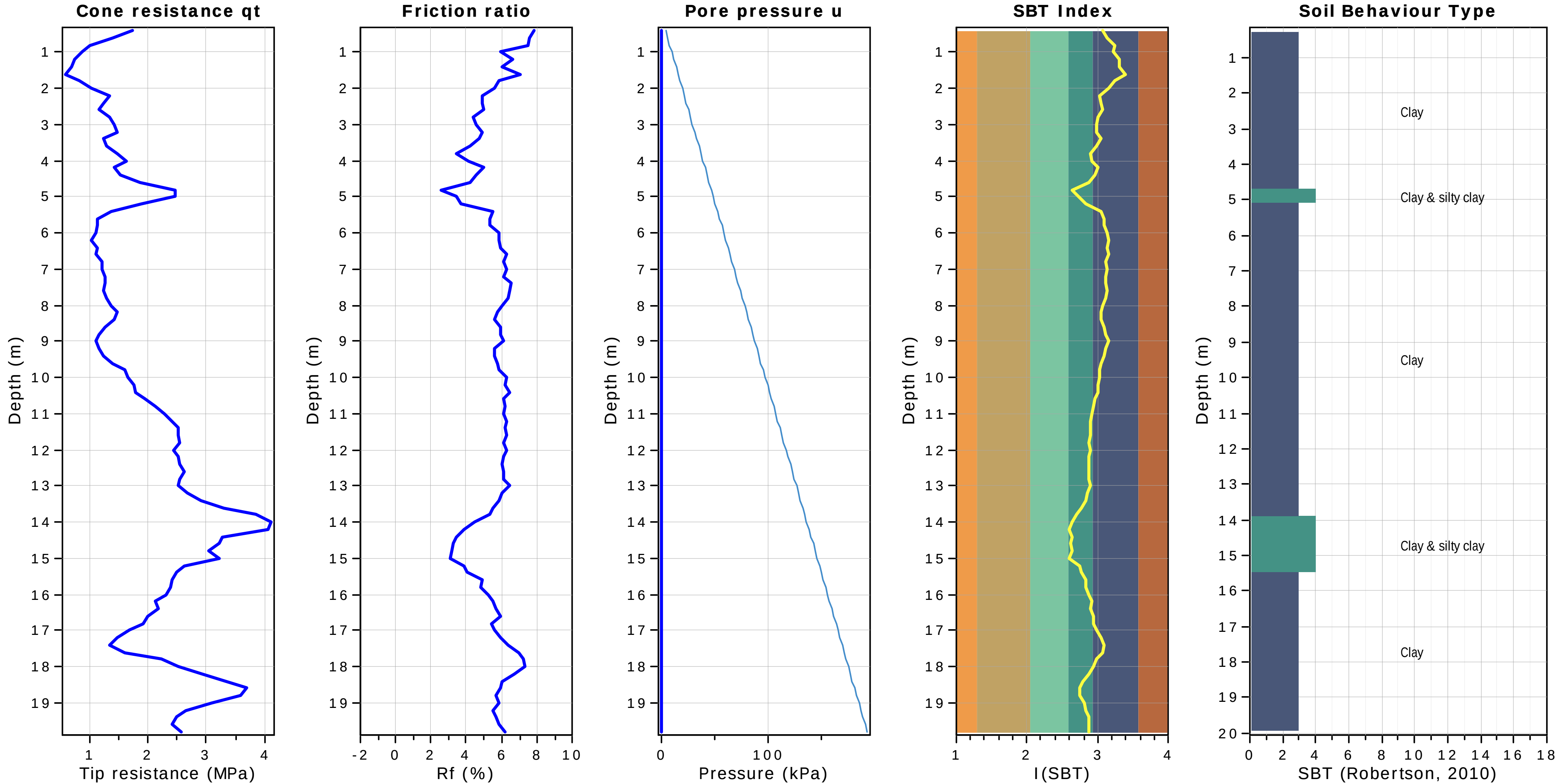
CPT: 036021P290CPT290
Total depth: 19.80 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

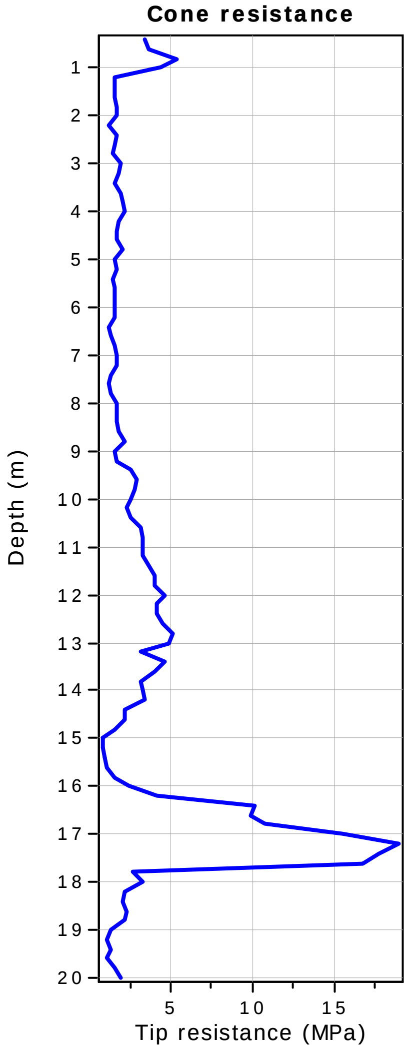


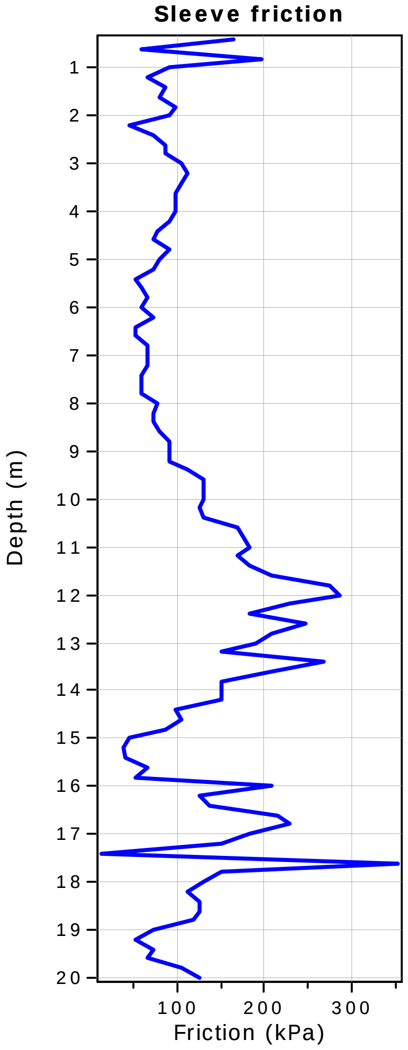
SBT legend

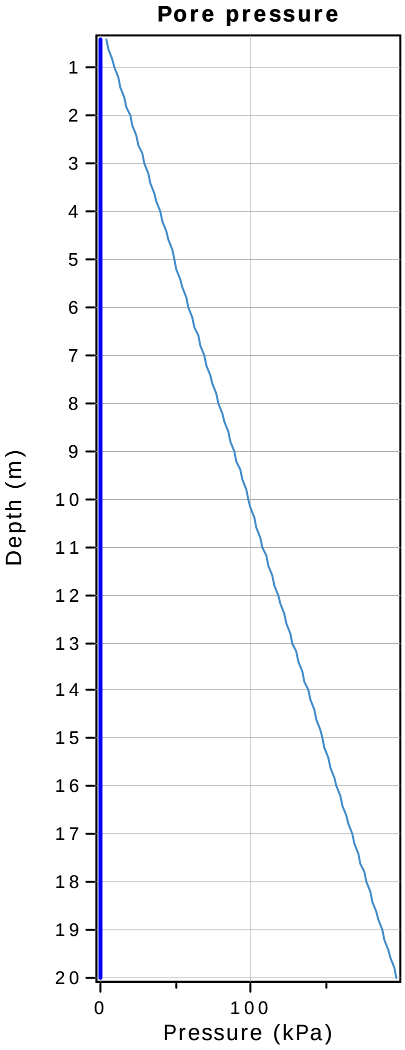
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P291CPT291
Total depth: 20.00 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

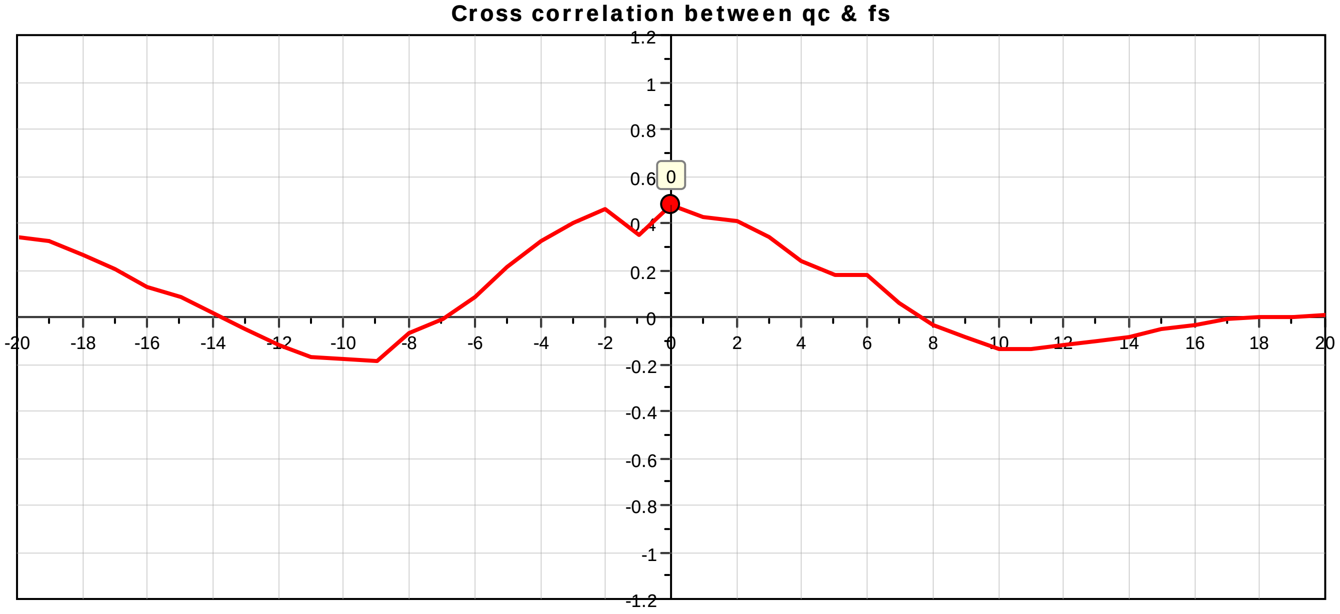
Project:
Location:





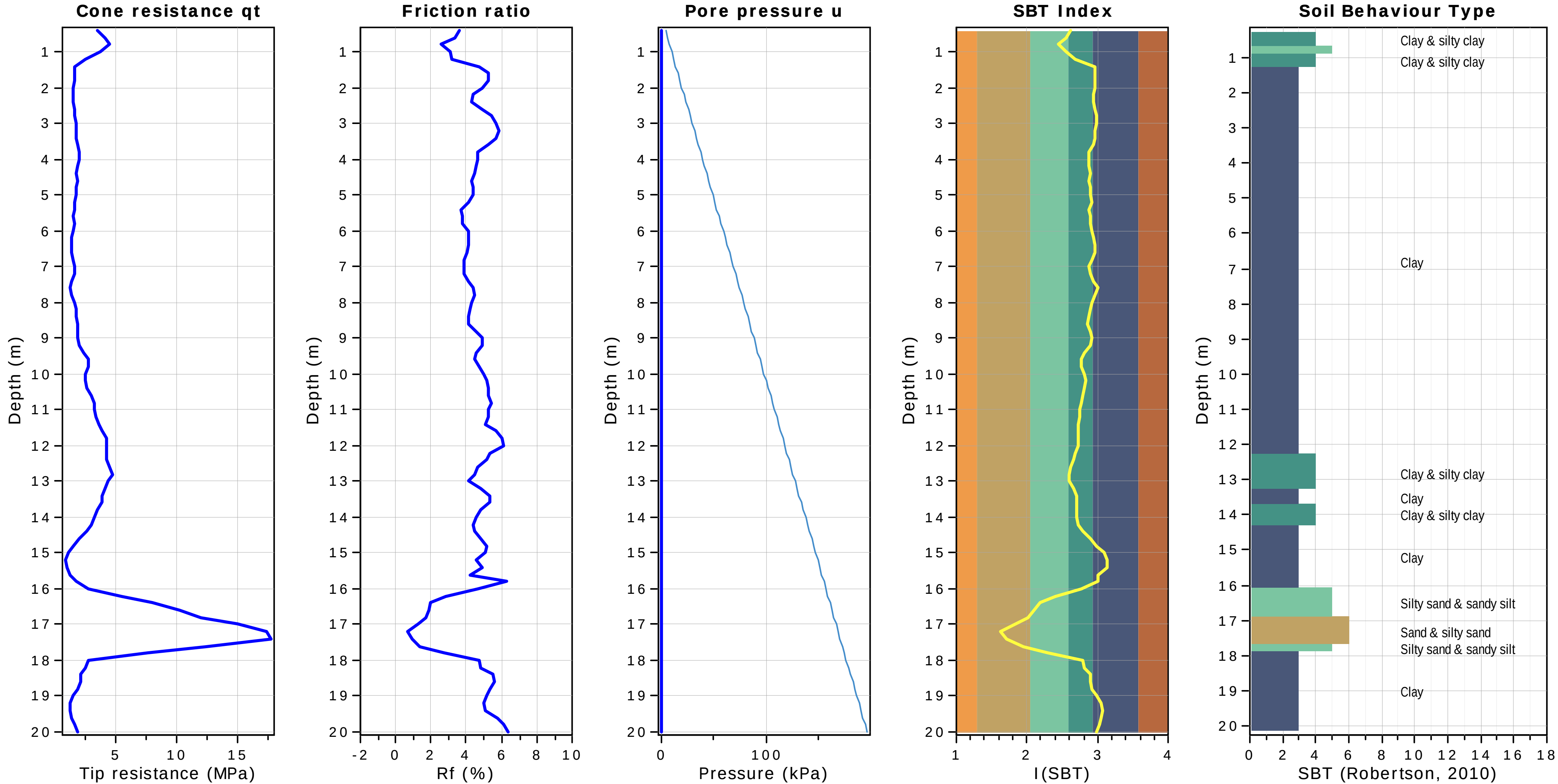


The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT: 036021P291CPT291
Total depth: 20.00 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

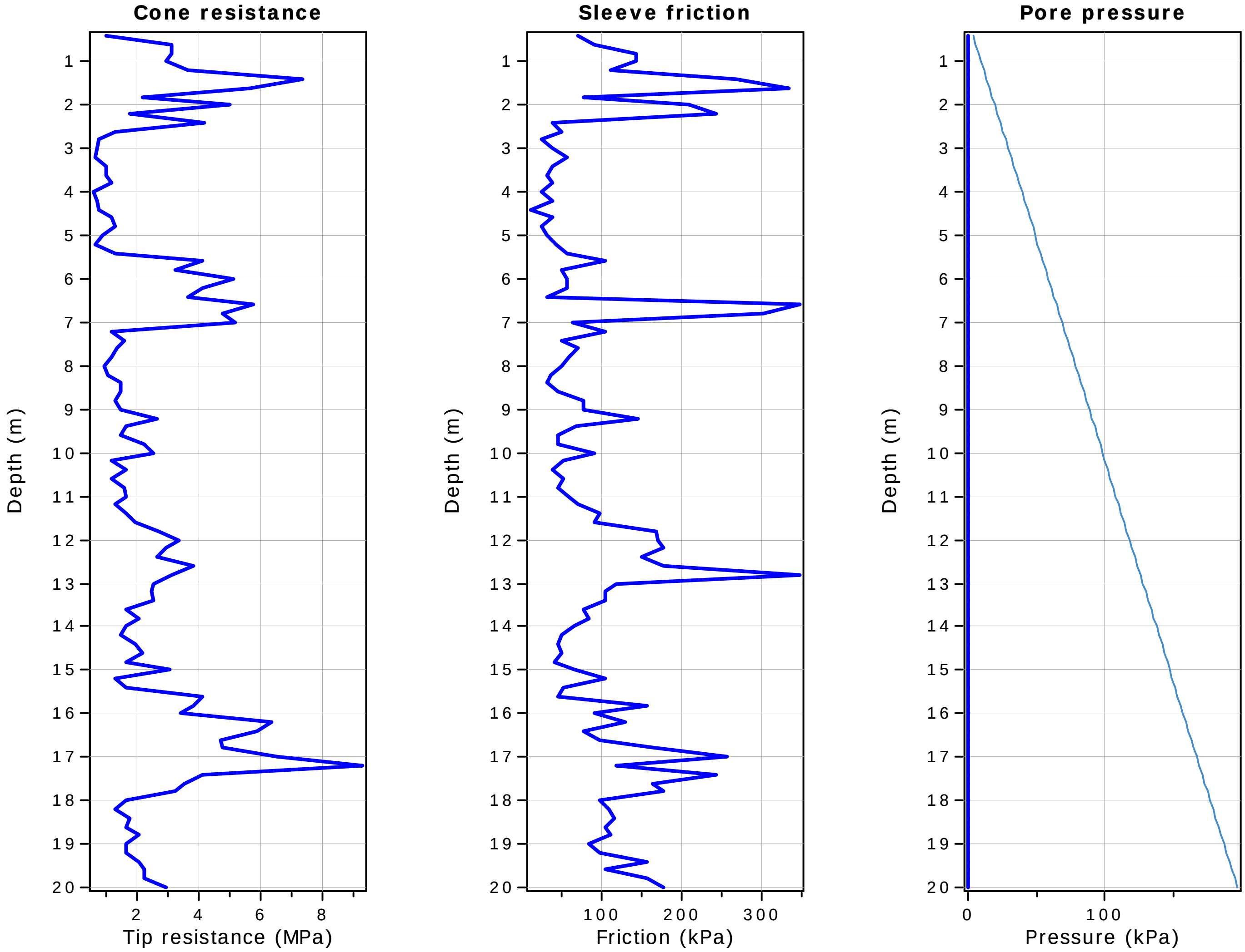


SBT legend

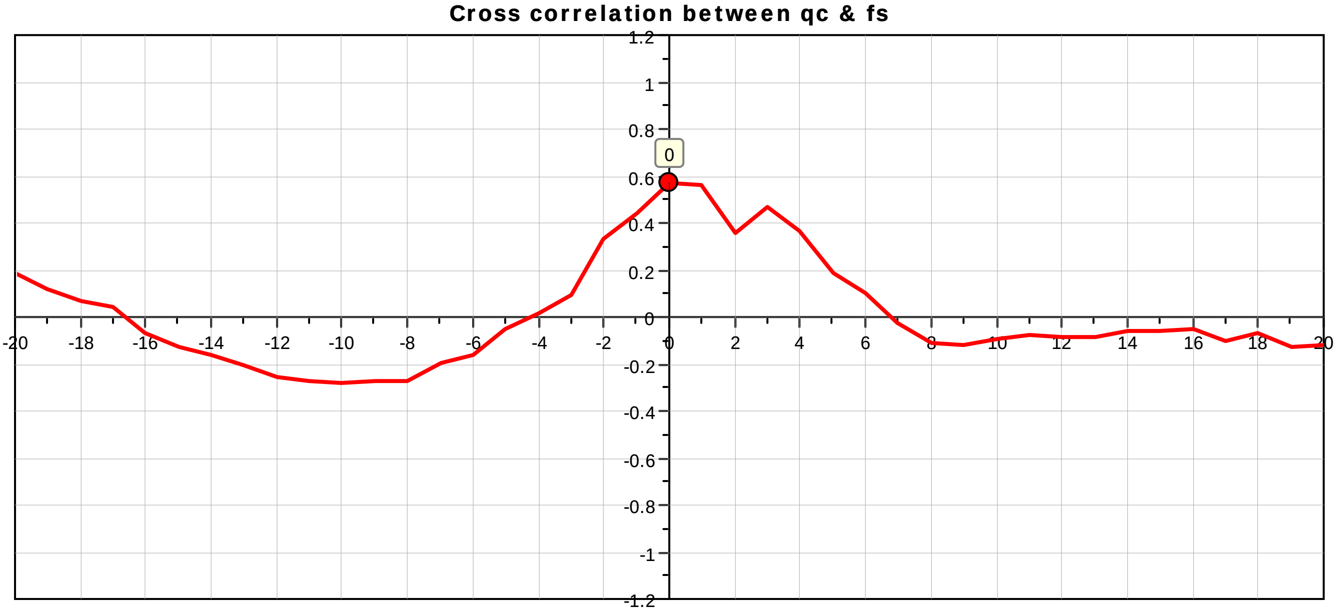
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P292CPT292
Total depth: 20.00 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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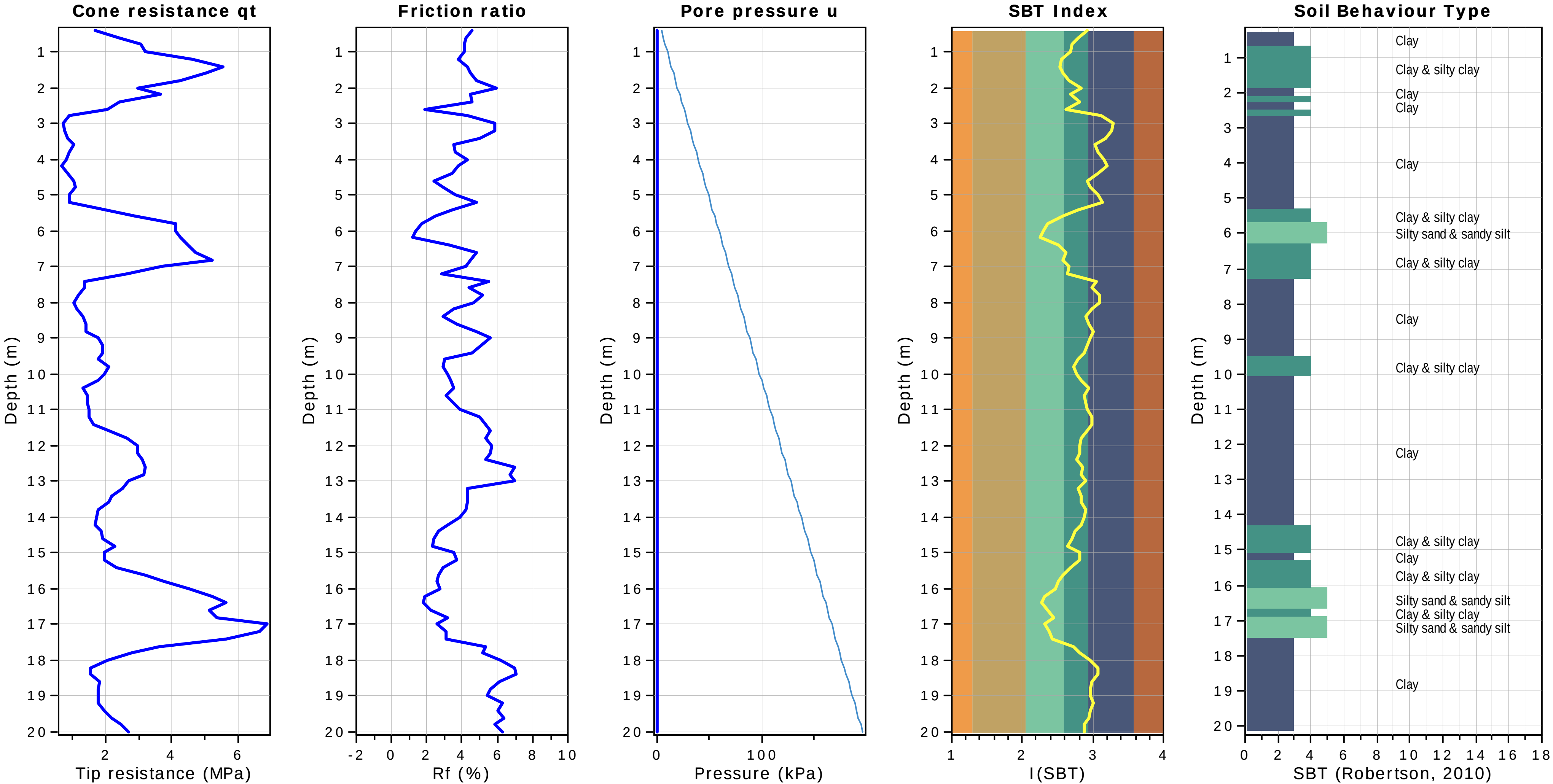
CPT: 036021P292CPT292
Total depth: 20.00 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

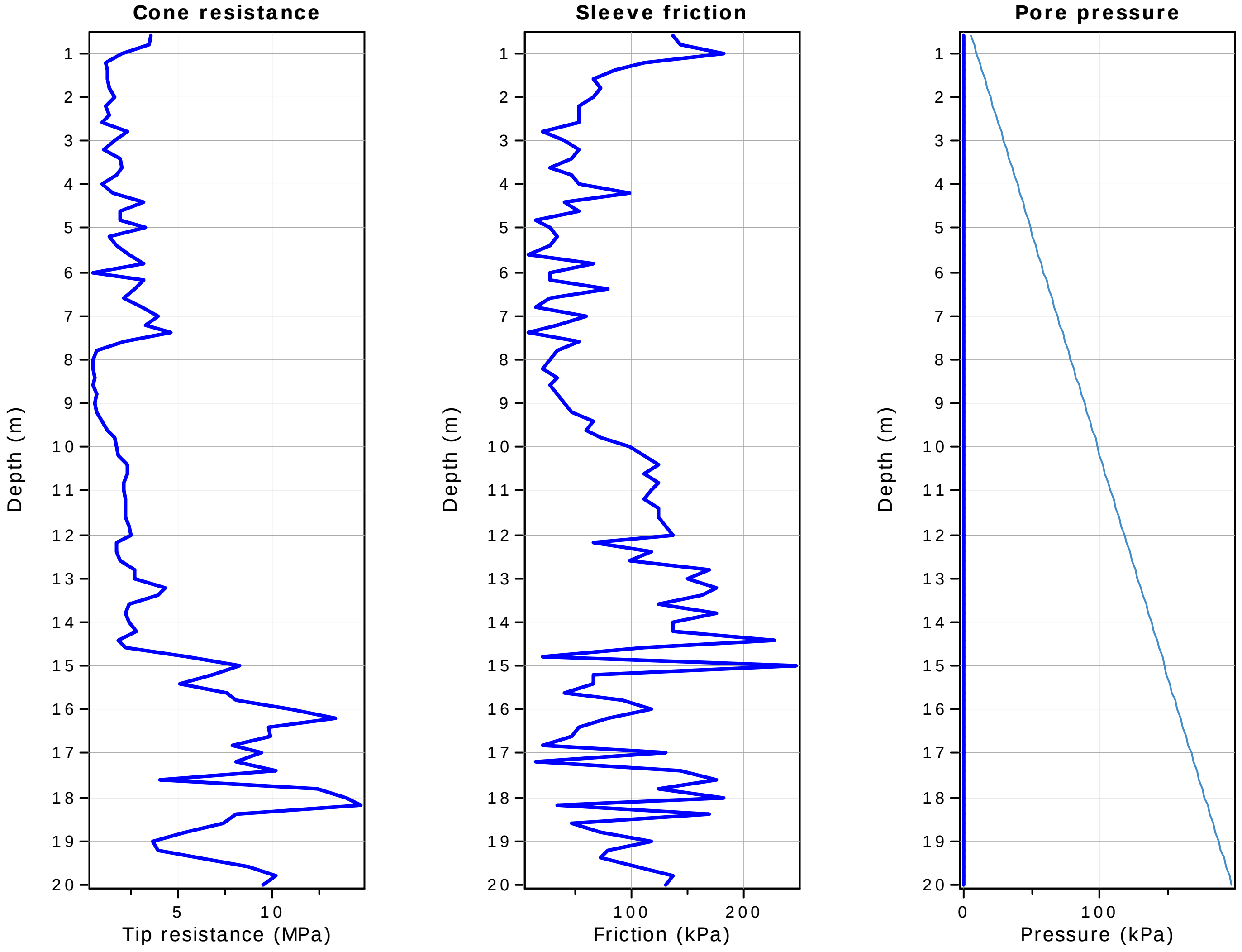


SBT legend

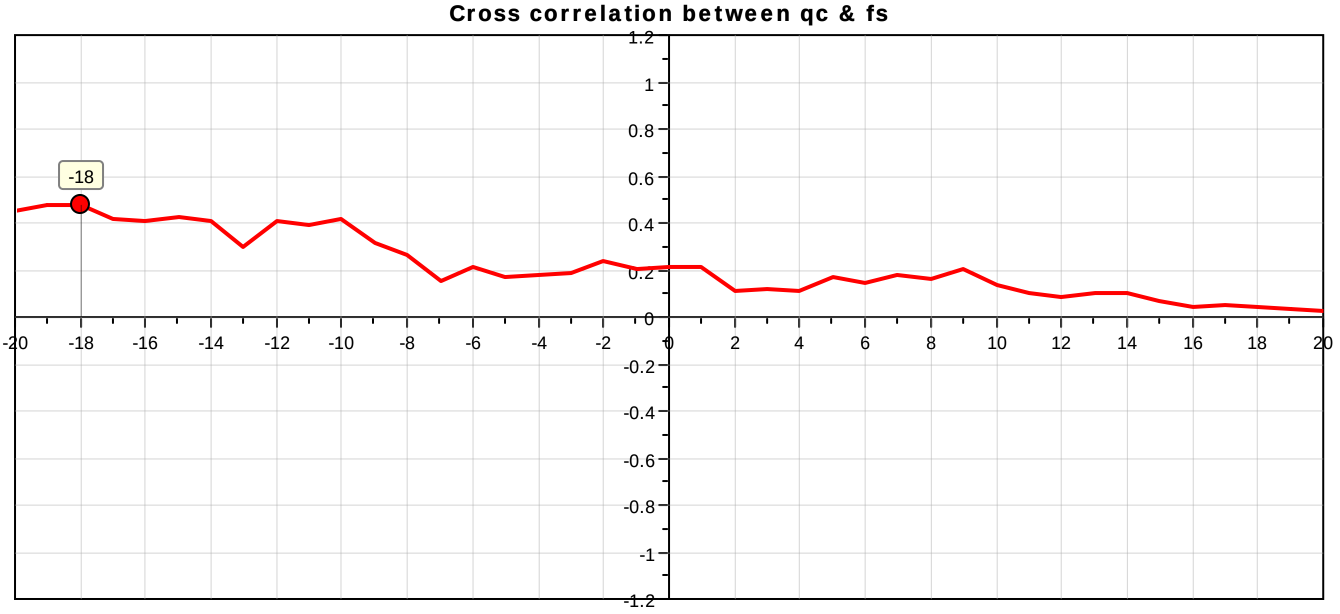
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P293CPT293
Total depth: 20.00 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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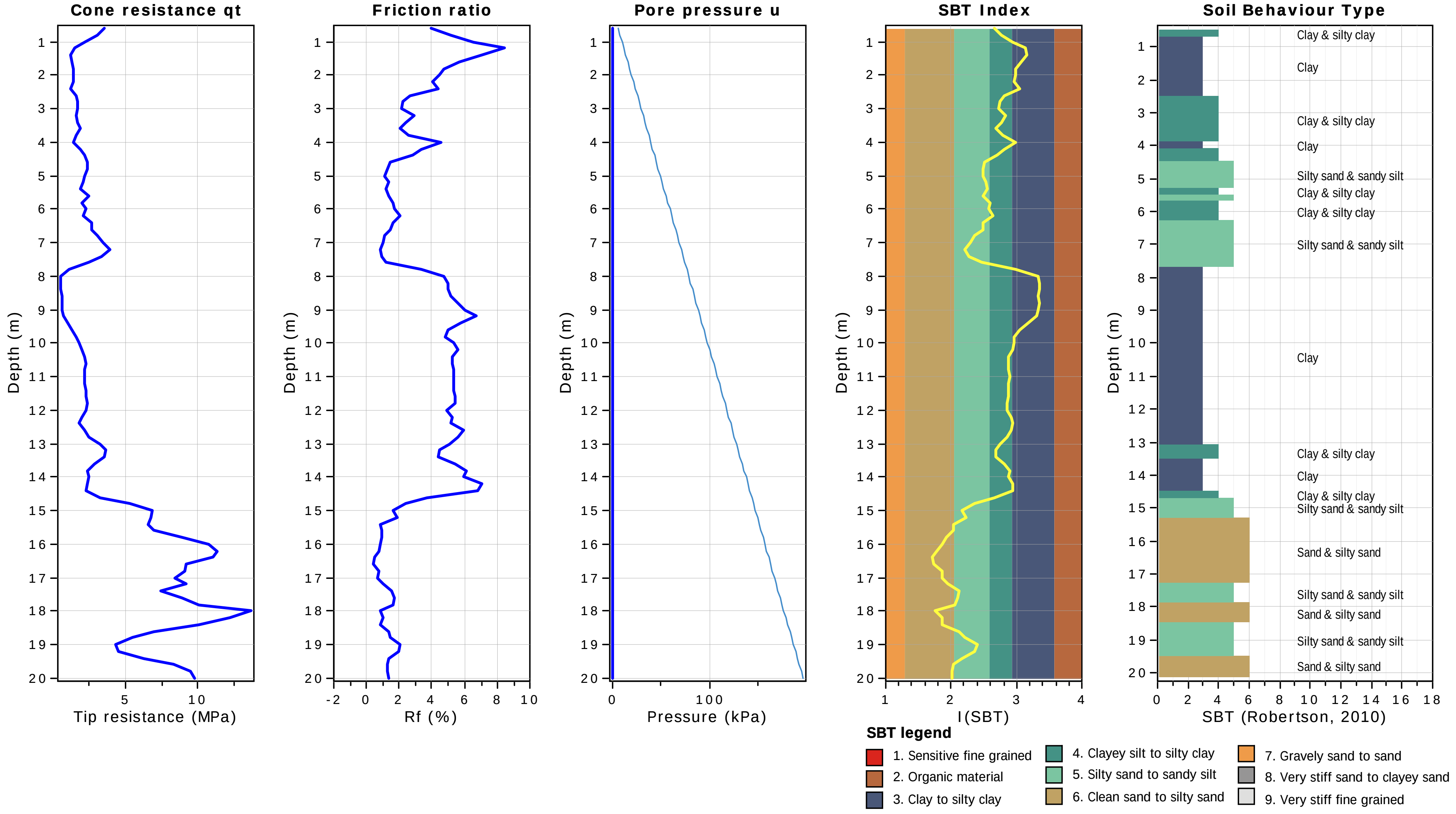
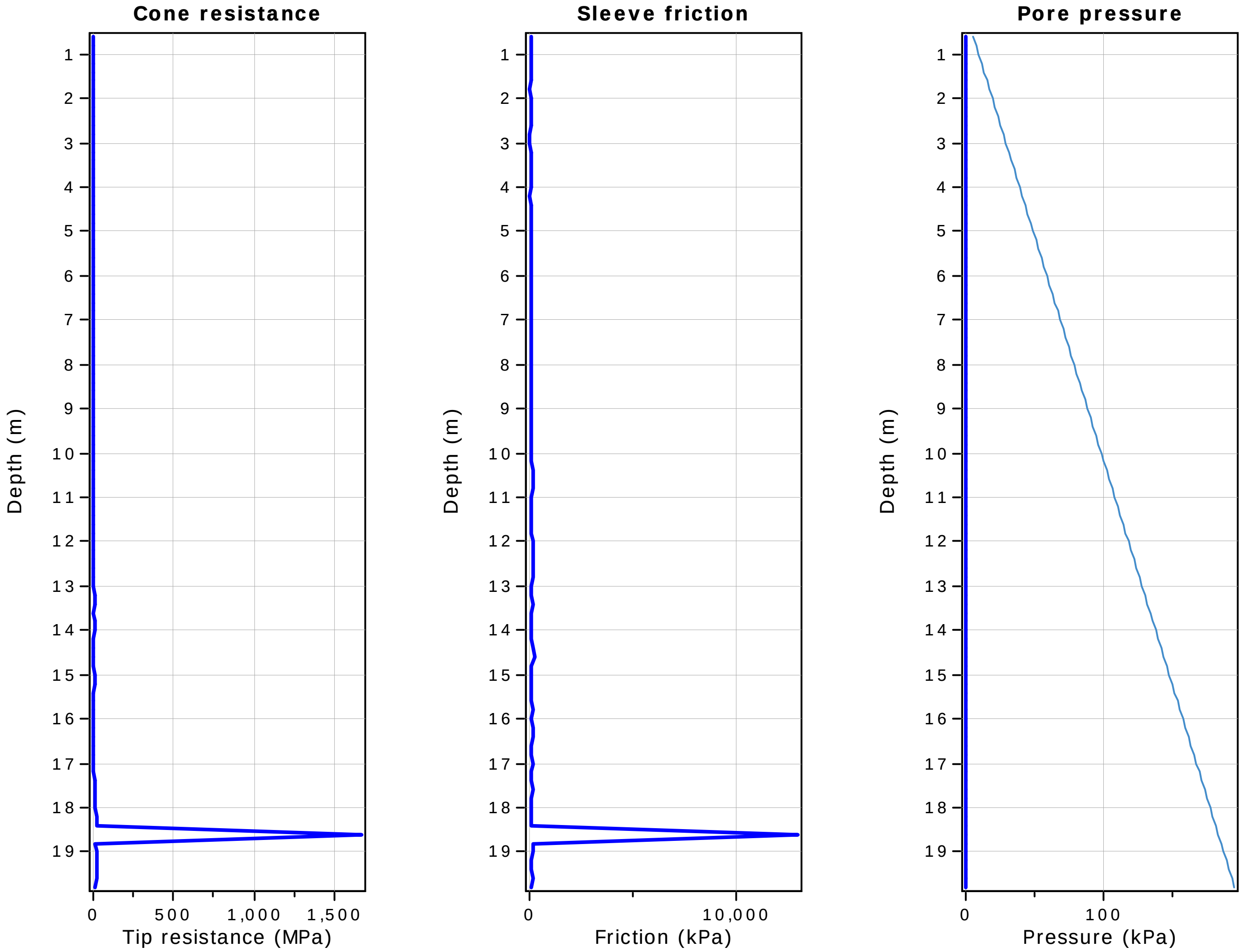
CPT: 036021P293CPT293
Total depth: 20.00 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

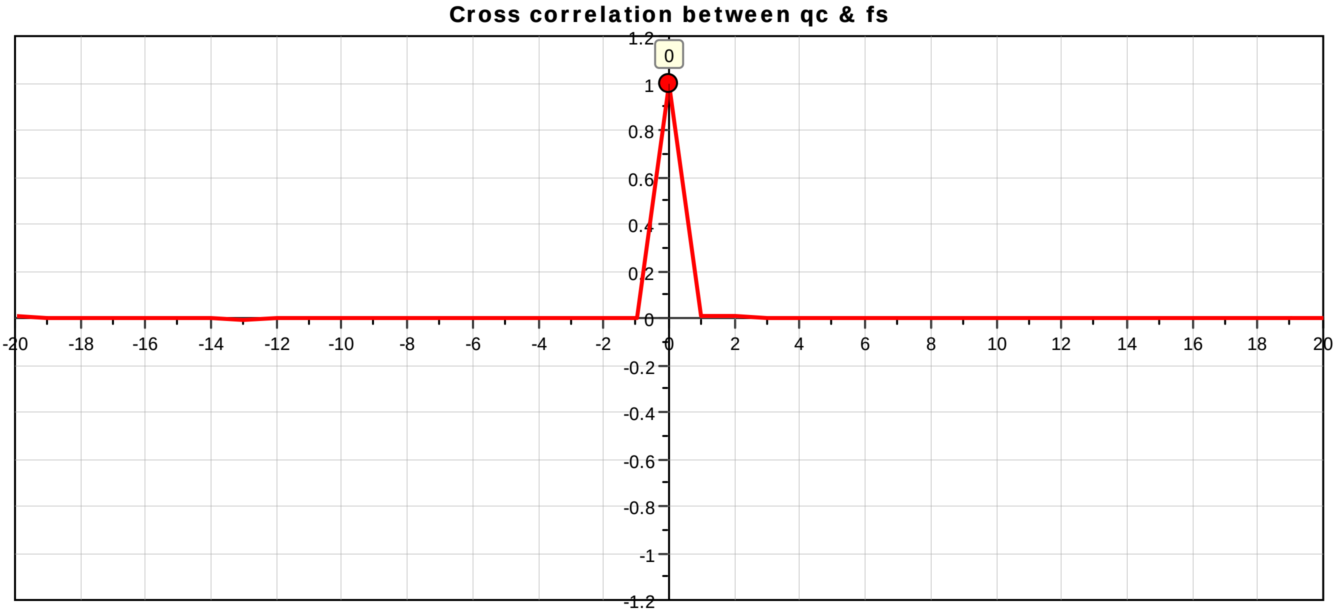


CPT: 036021P294CPT294
Total depth: 19.80 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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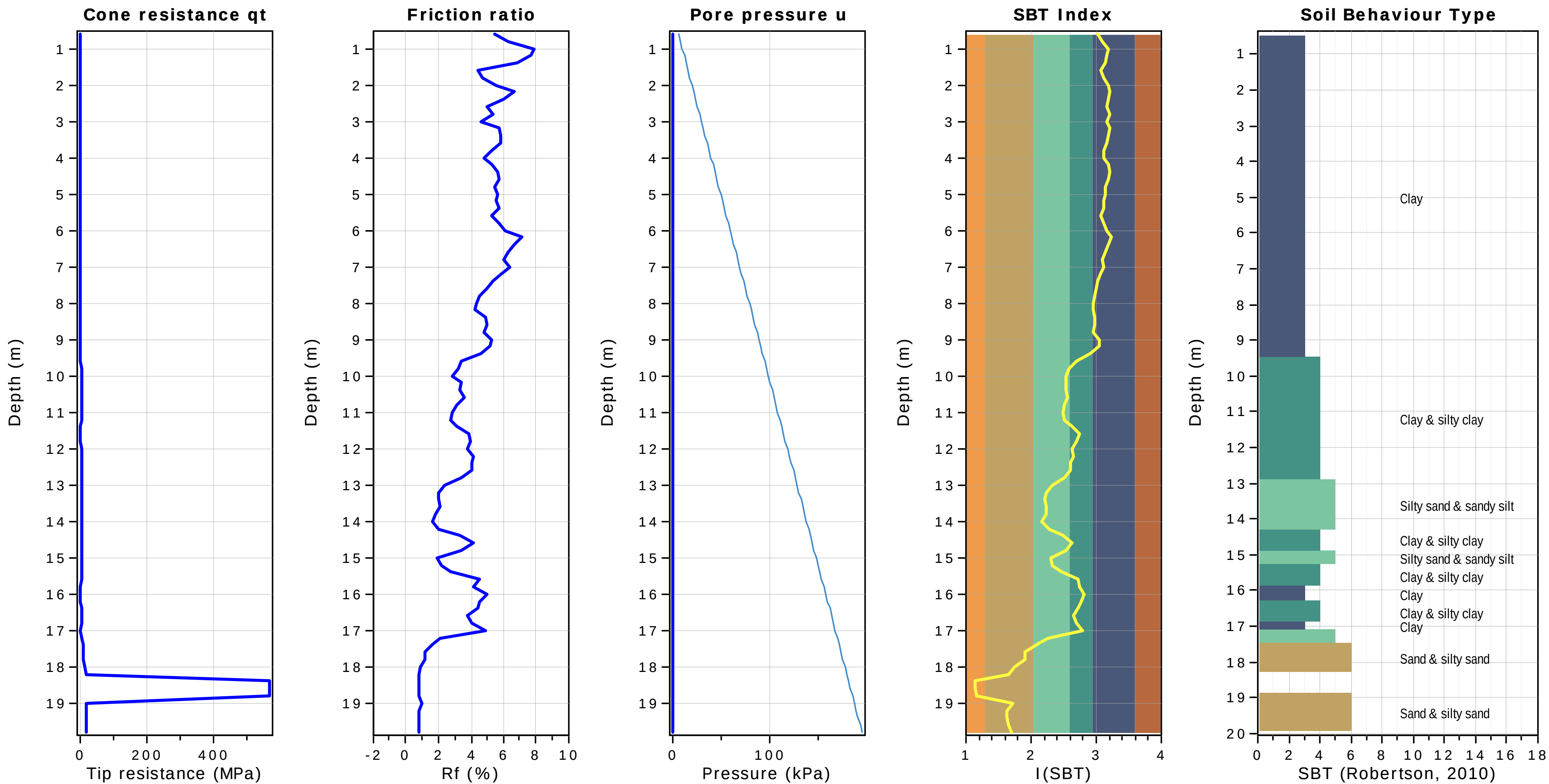
CPT: 036021P294CPT294
Total depth: 19.80 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

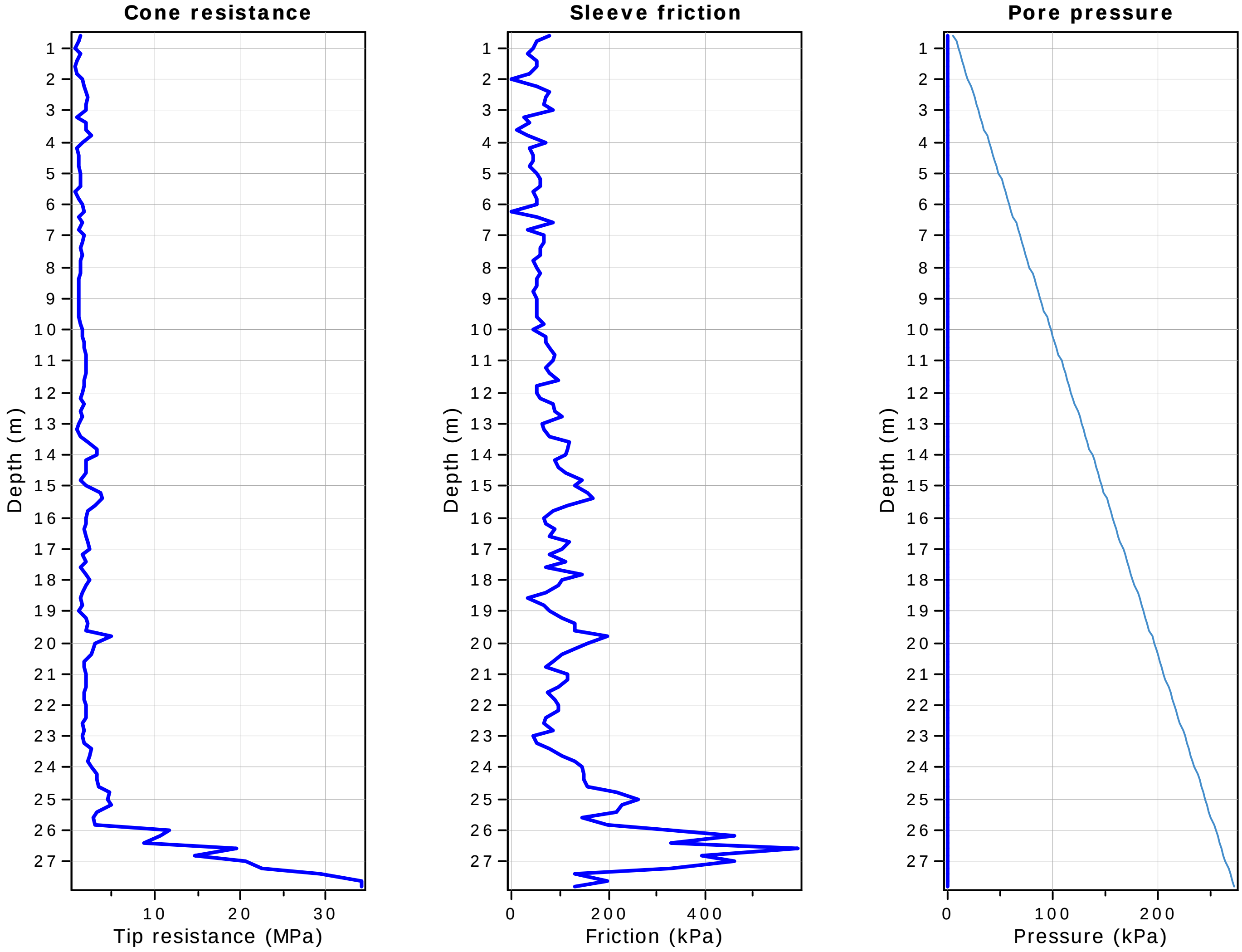


SBT legend

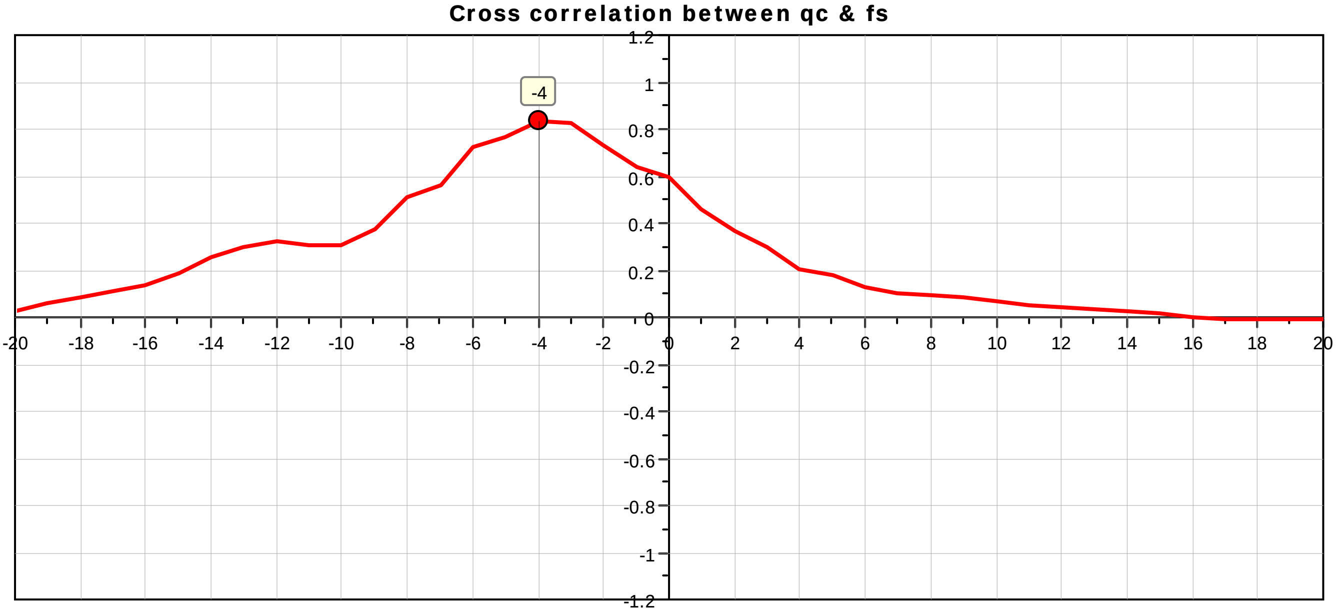
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟫 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

CPT: 036021P295CPT295
Total depth: 27.80 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

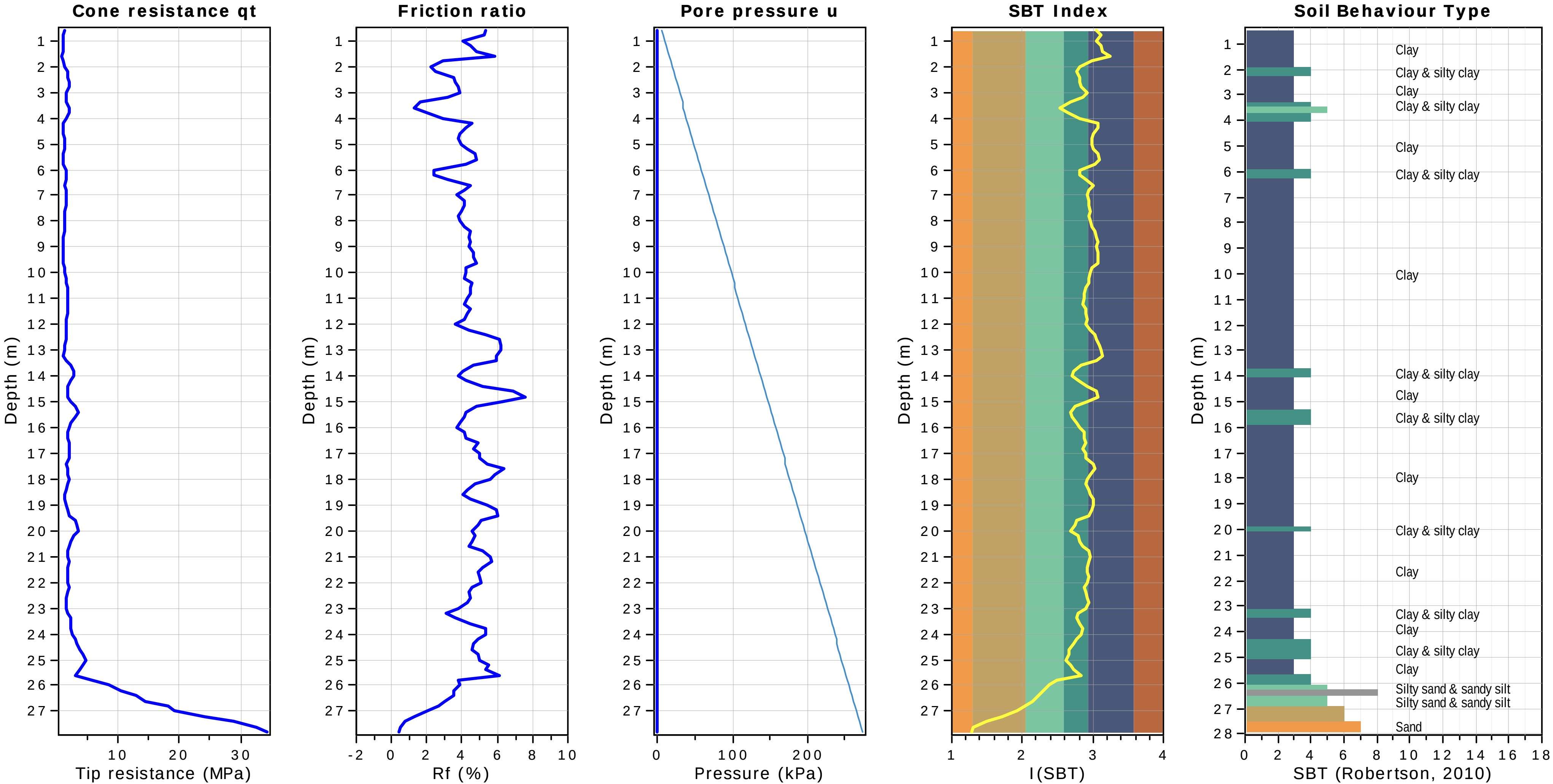


The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT: 036021P295CPT295
Total depth: 27.80 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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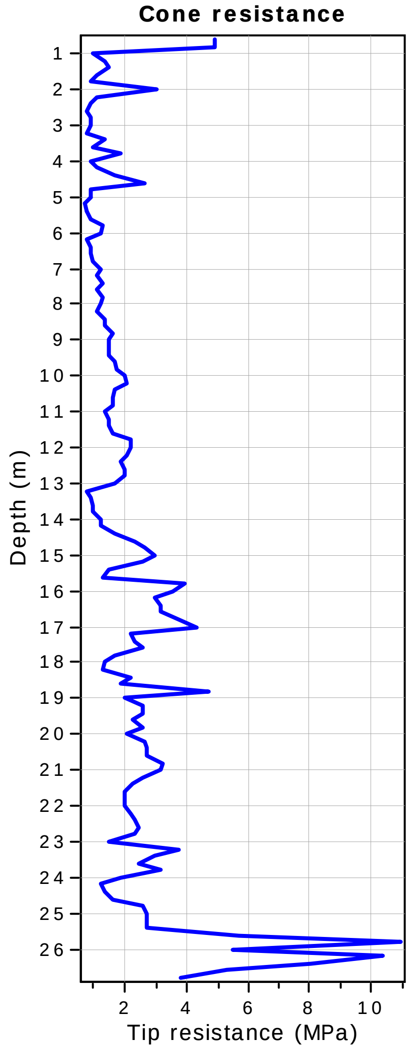
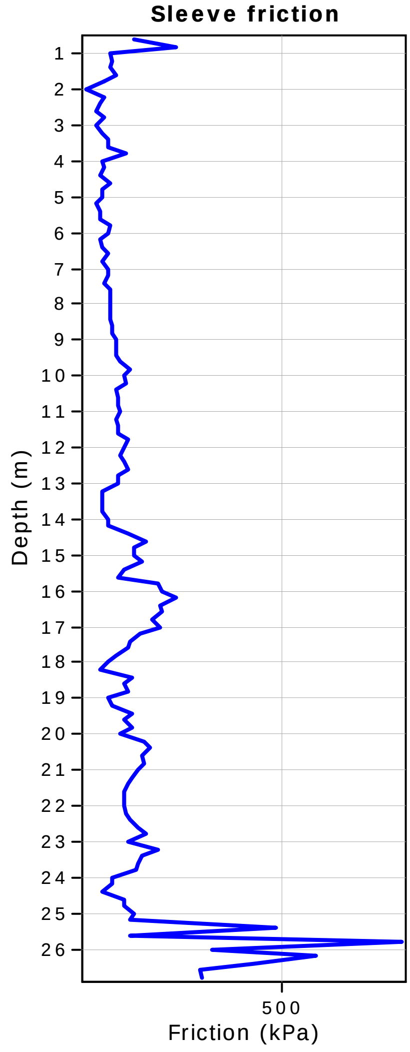
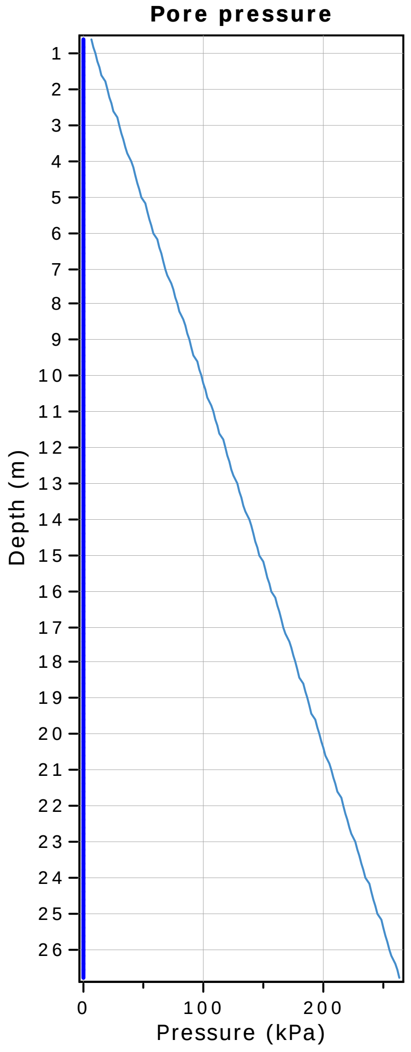
CPT: 036021P296CPT296
Total depth: 26.80 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

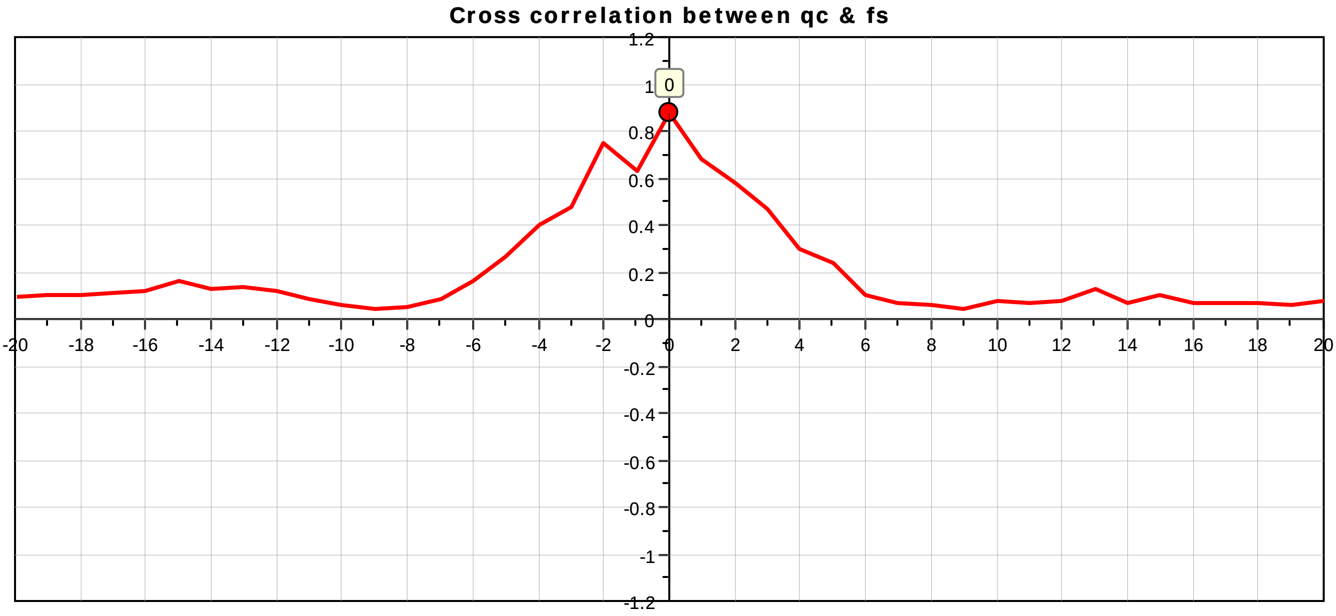
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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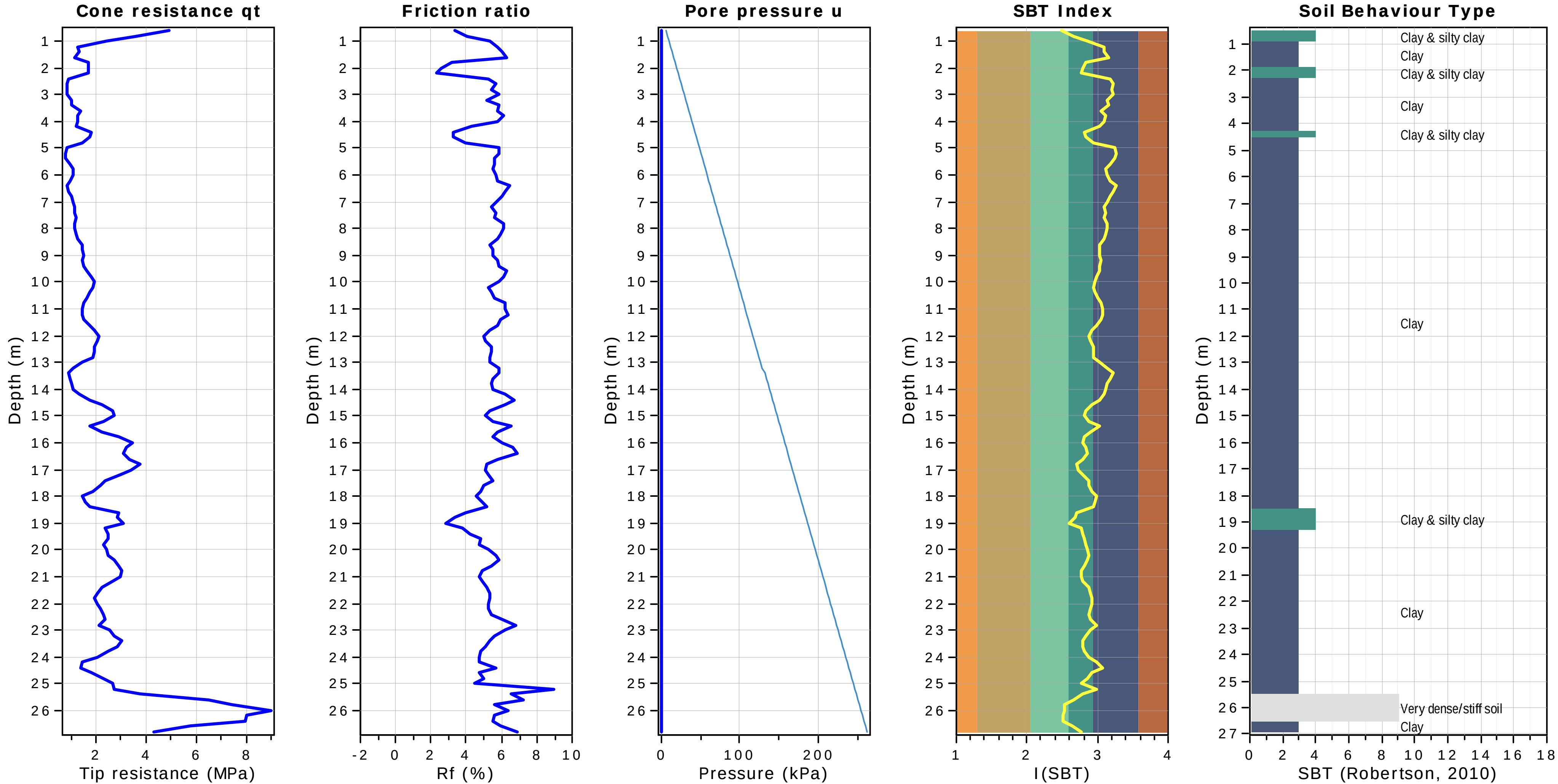
CPT: 036021P296CPT296
Total depth: 26.80 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

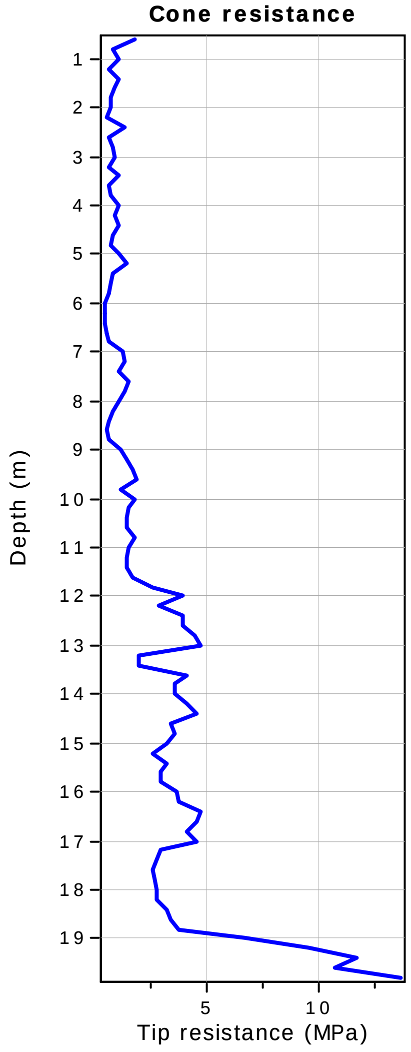
Project:
Location:

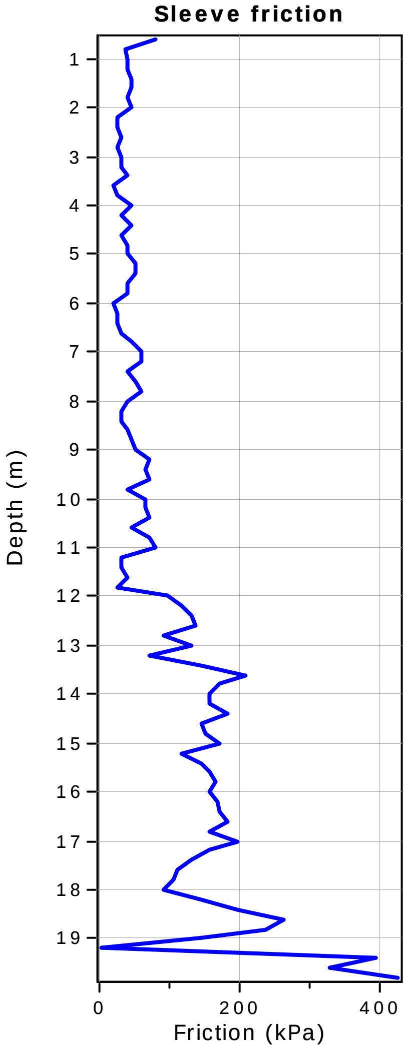


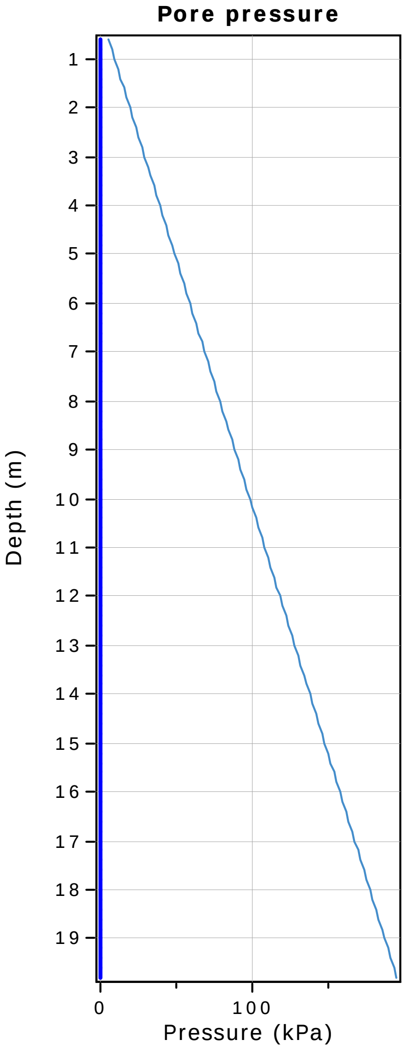
SBT legend
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P297CPT297
Total depth: 19.80 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

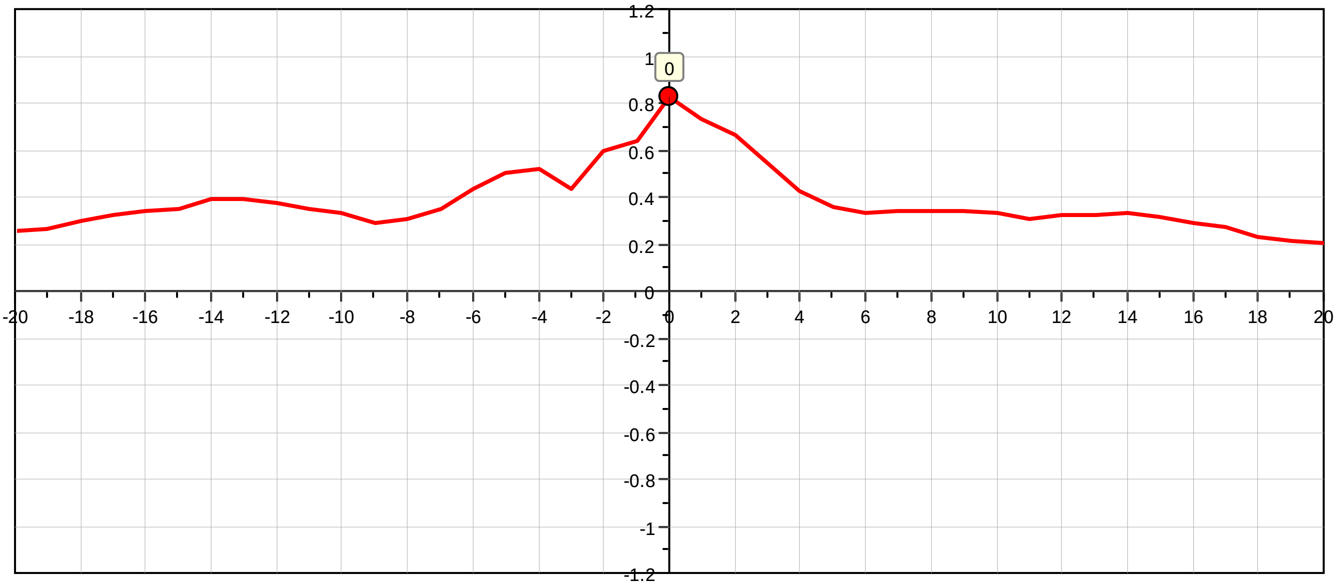






The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

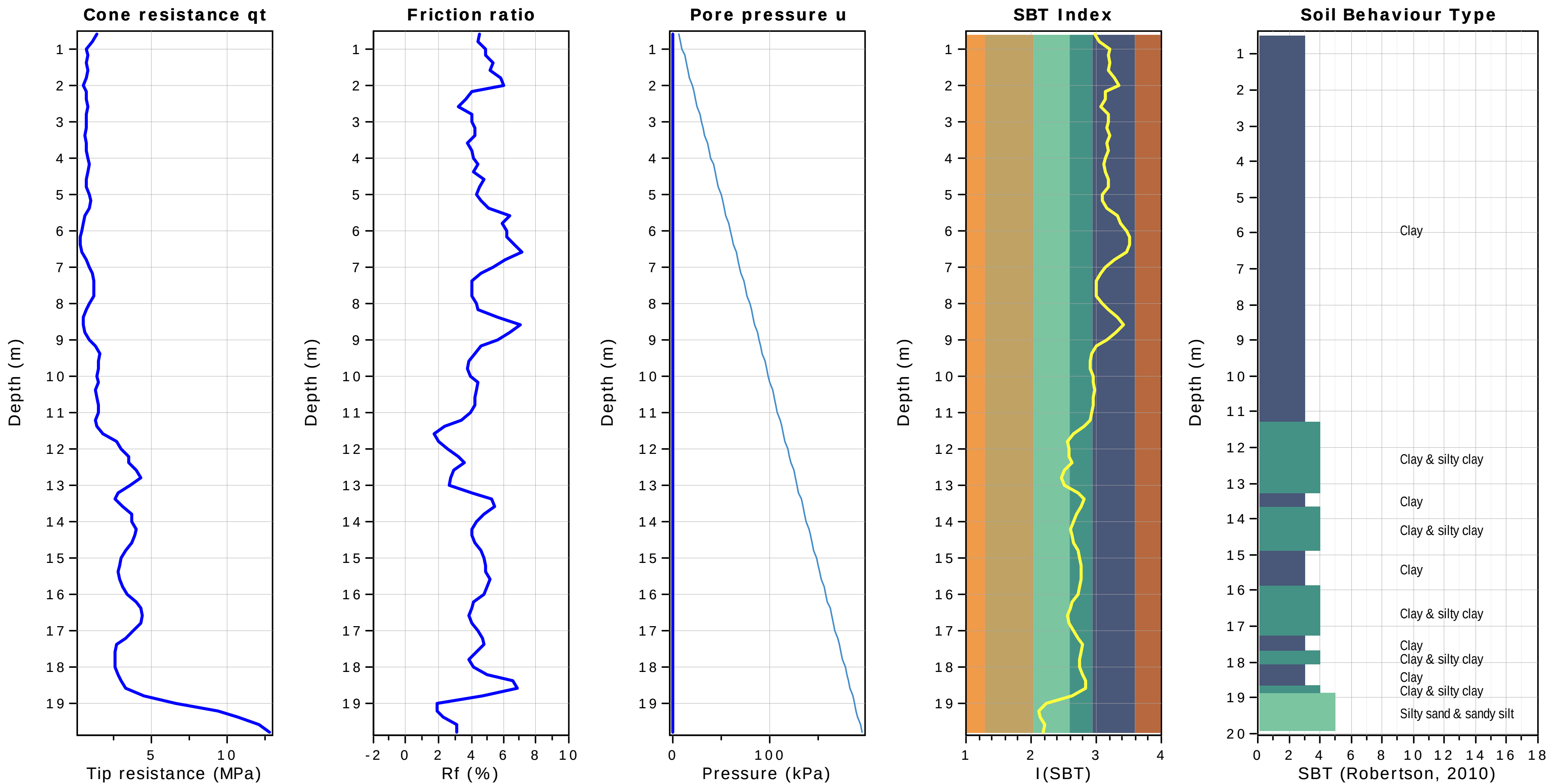
Cross correlation between qc & fs



CPT: 036021P297CPT297

Total depth: 19.80 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬛ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

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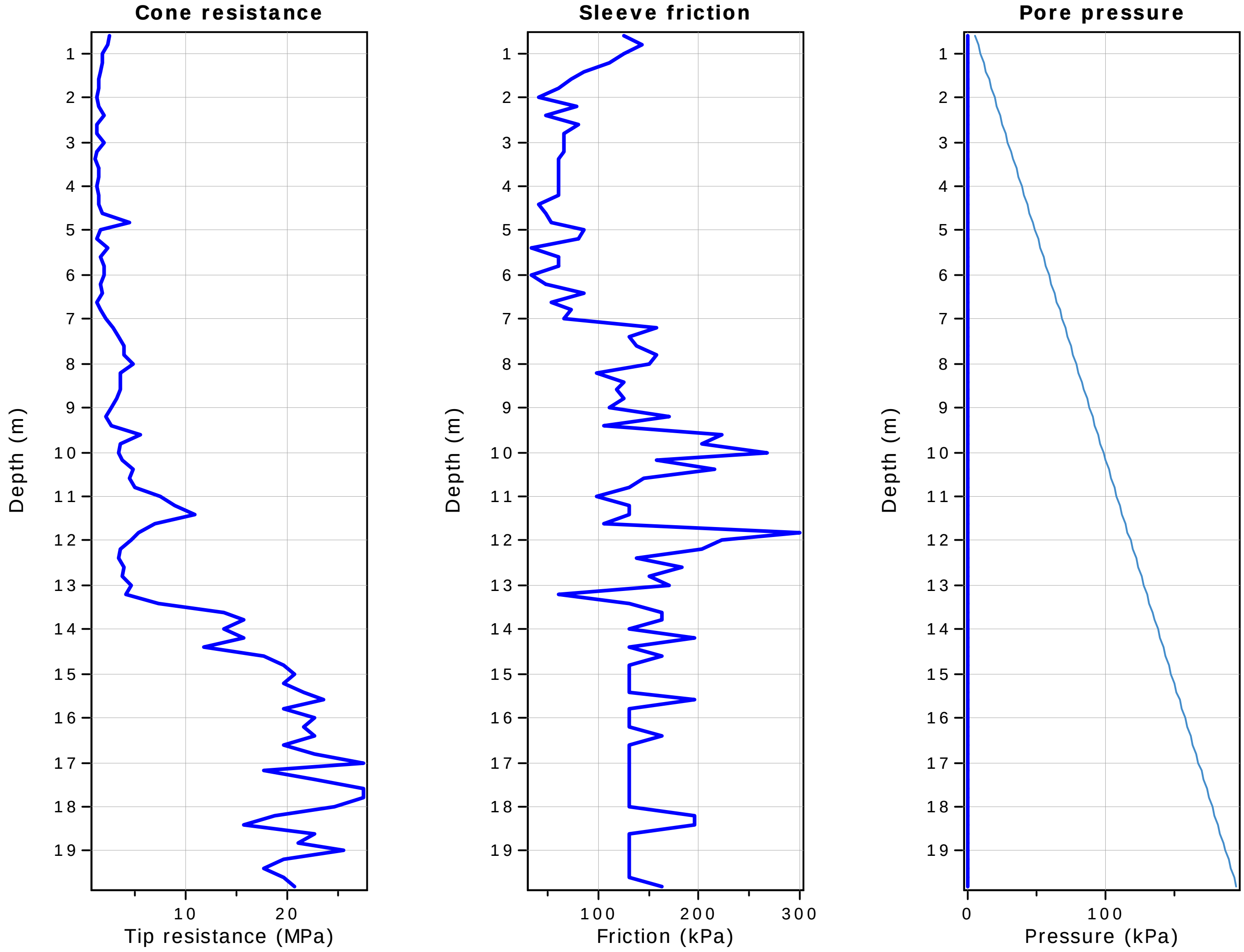
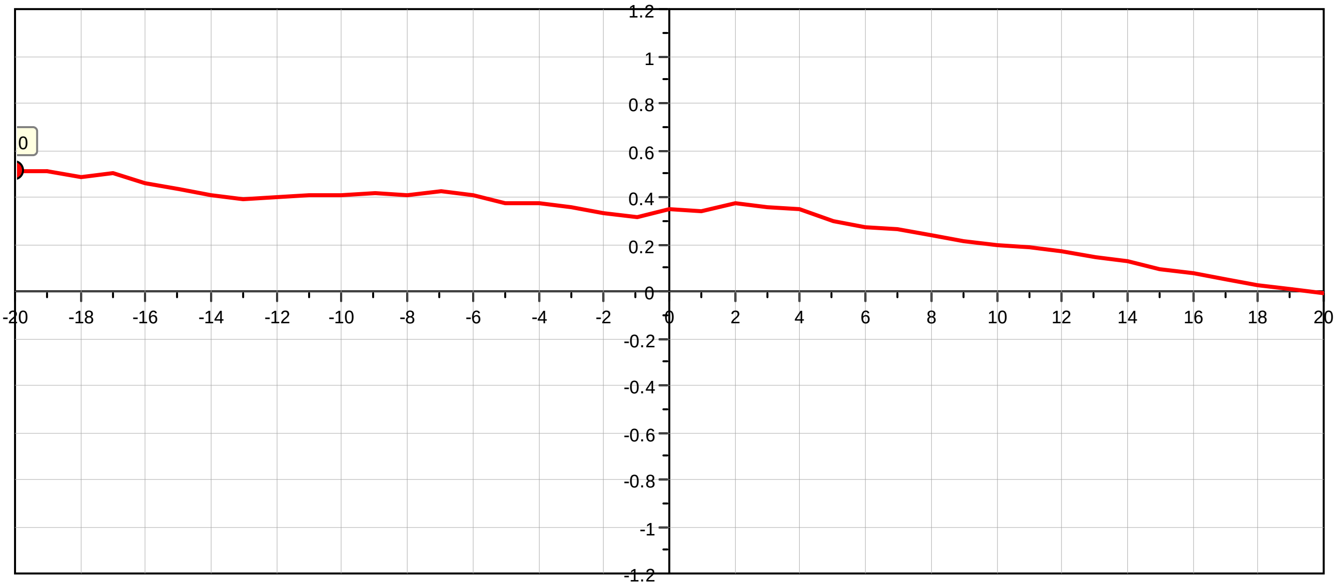
CPT: 036021P298CPT298
Total depth: 19.80 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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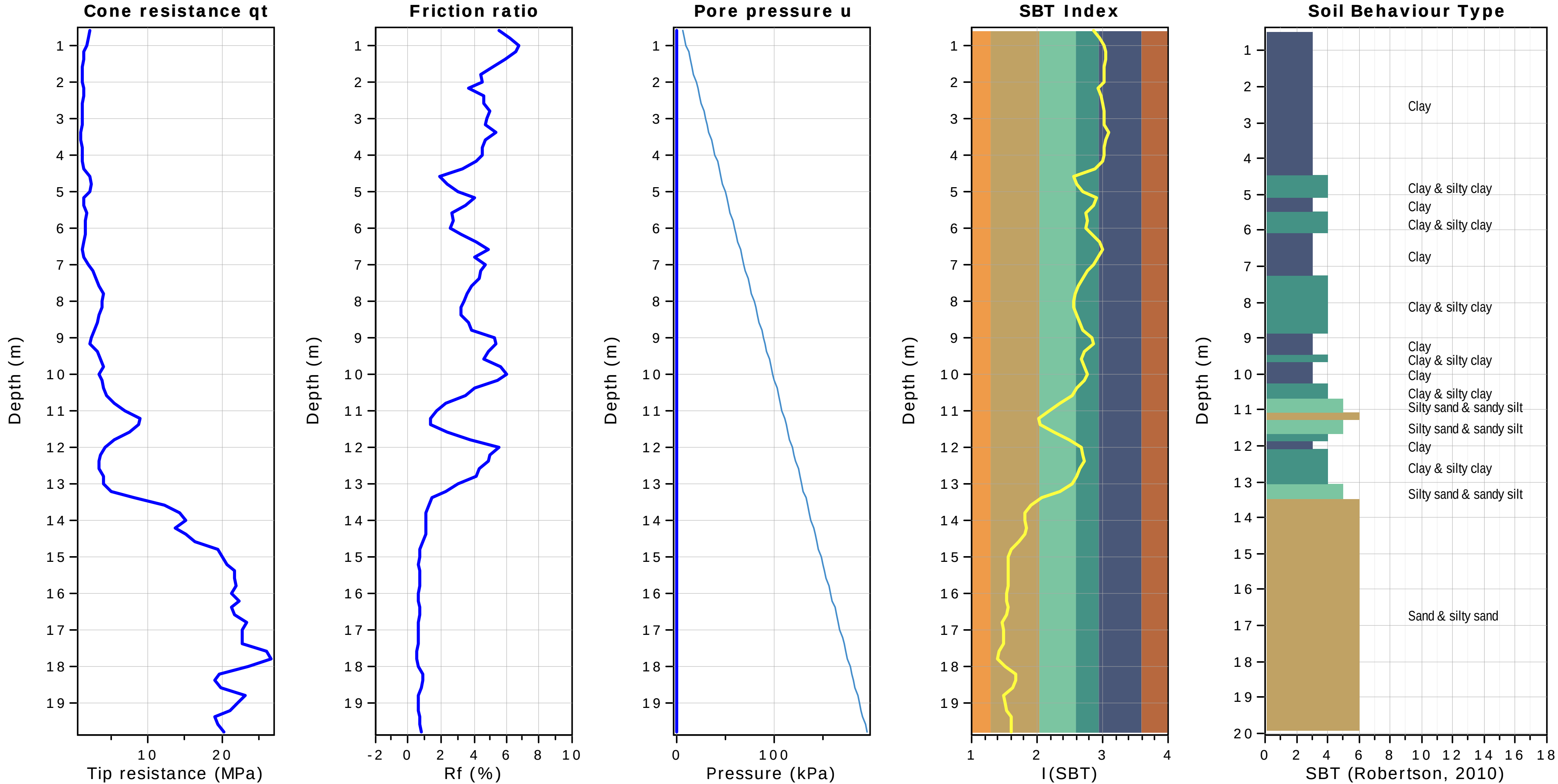
CPT: 036021P298CPT298
Total depth: 19.80 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

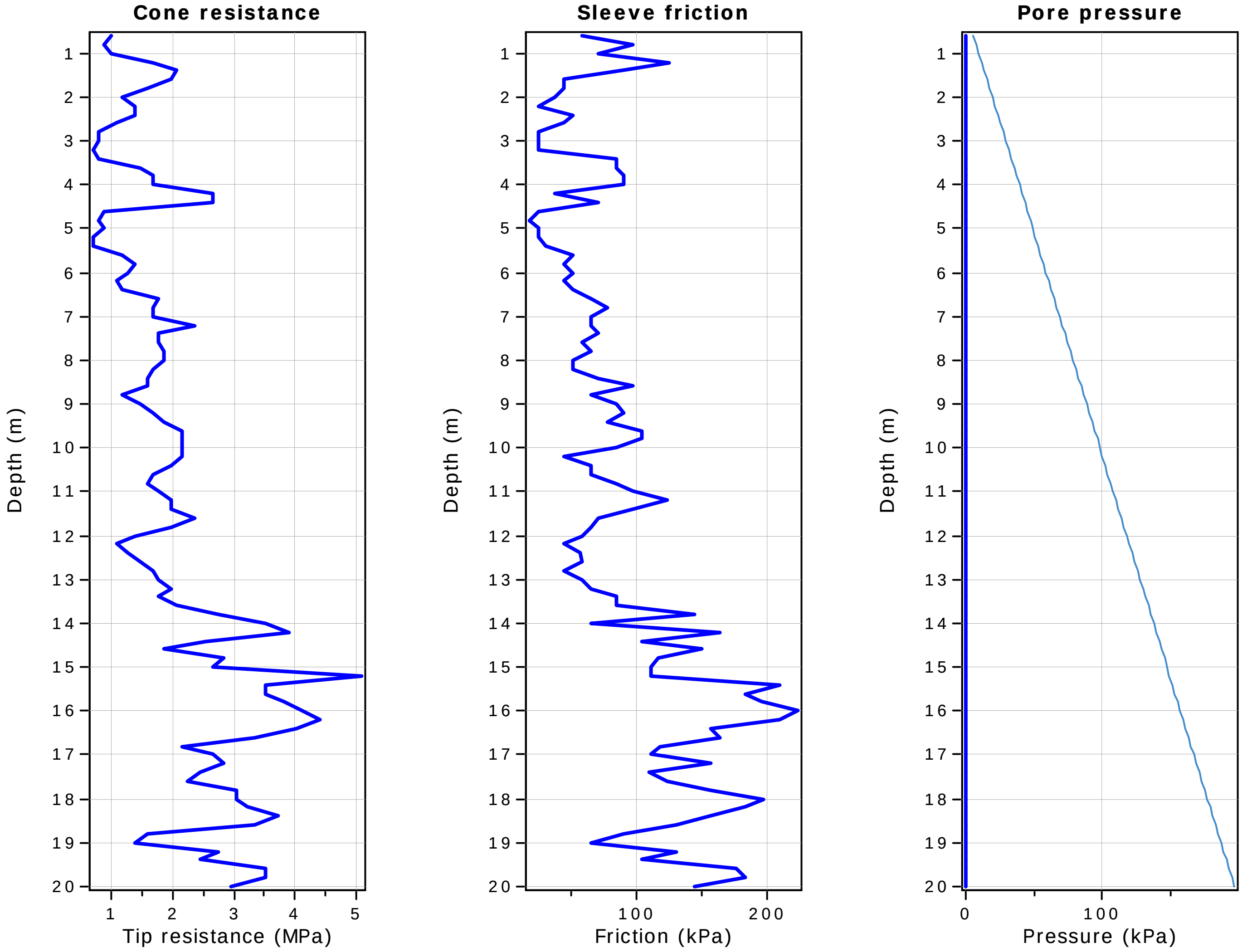


SBT legend

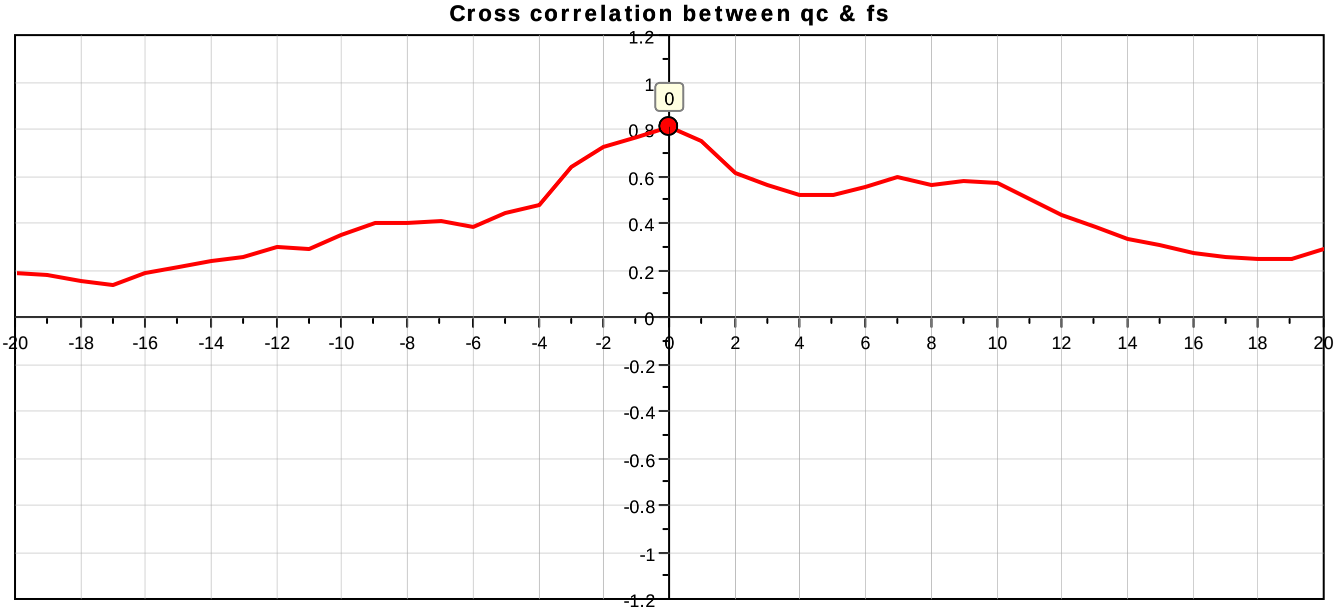
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟫 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

CPT: 036021P299CPT299
Total depth: 20.00 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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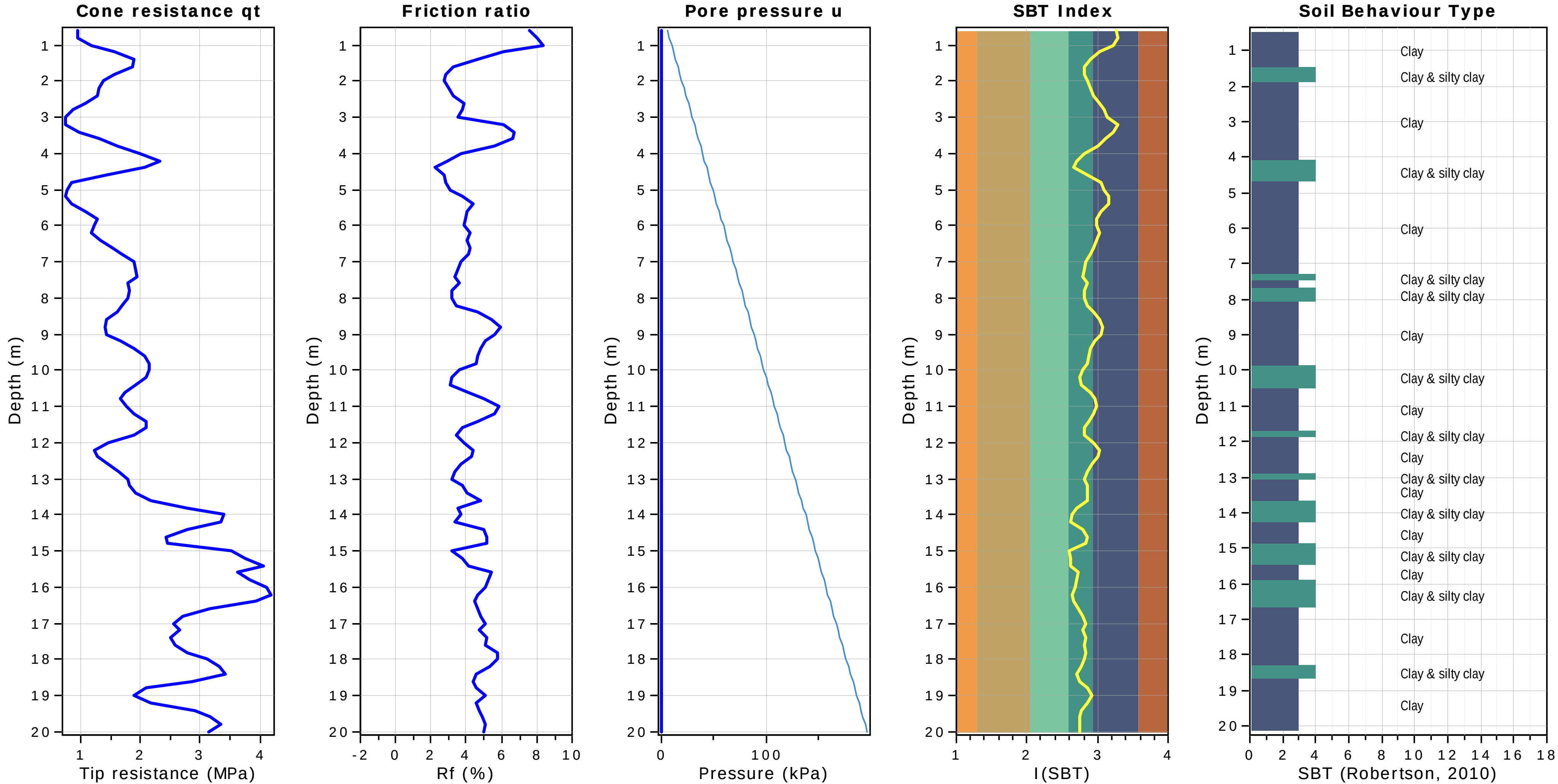
CPT: 036021P299CPT299
Total depth: 20.00 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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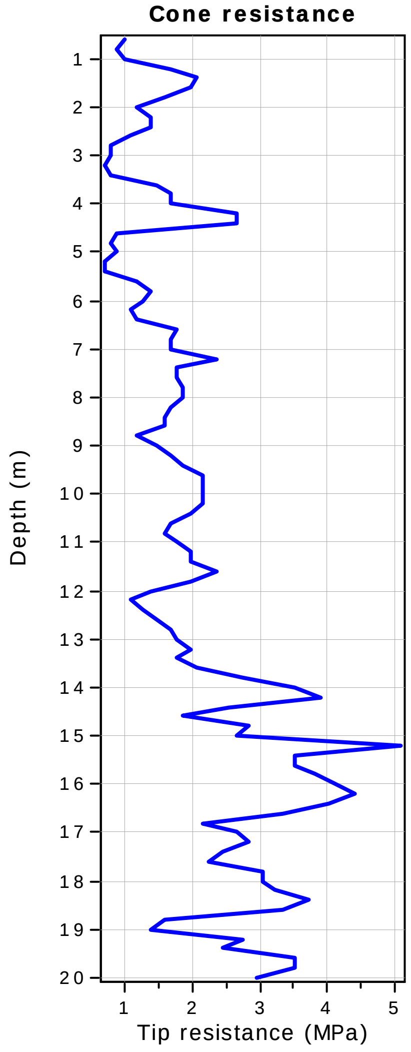
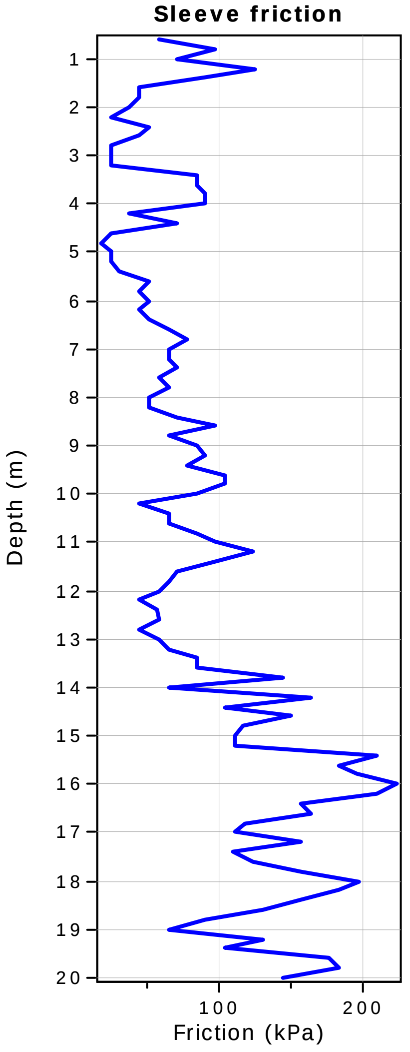
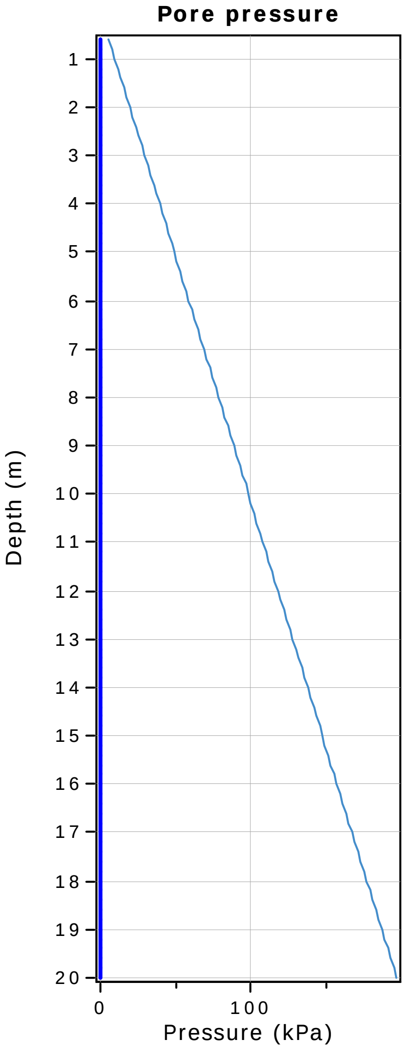
CPT: 036021P300CPT300
Total depth: 20.00 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

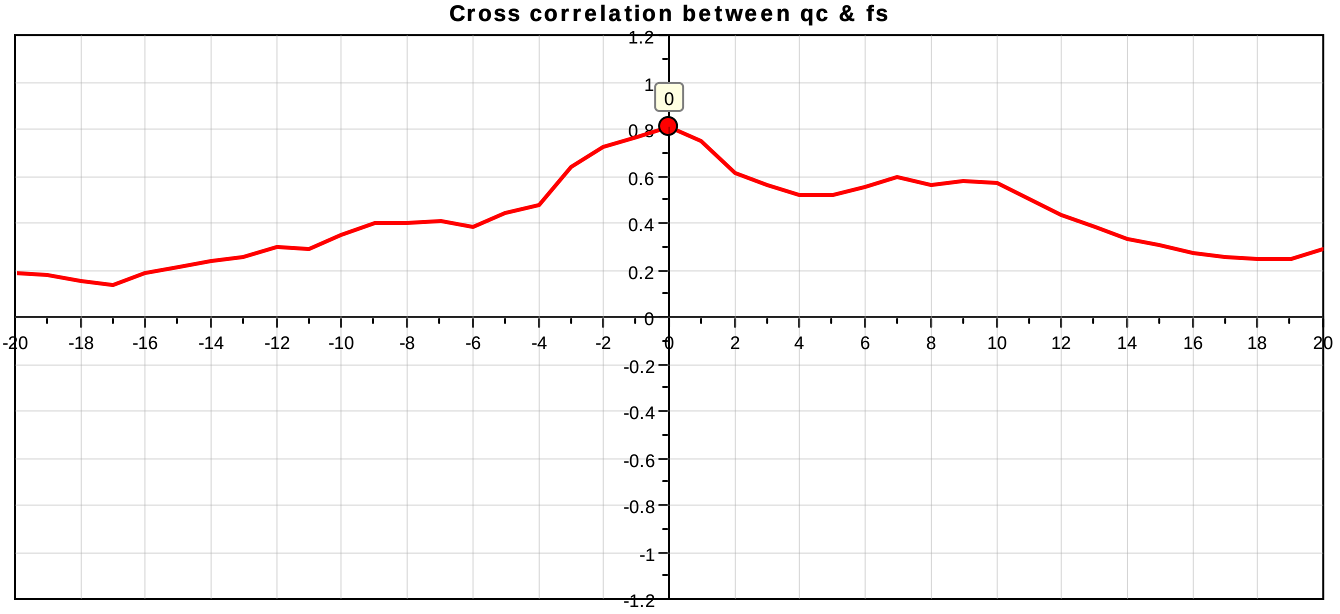
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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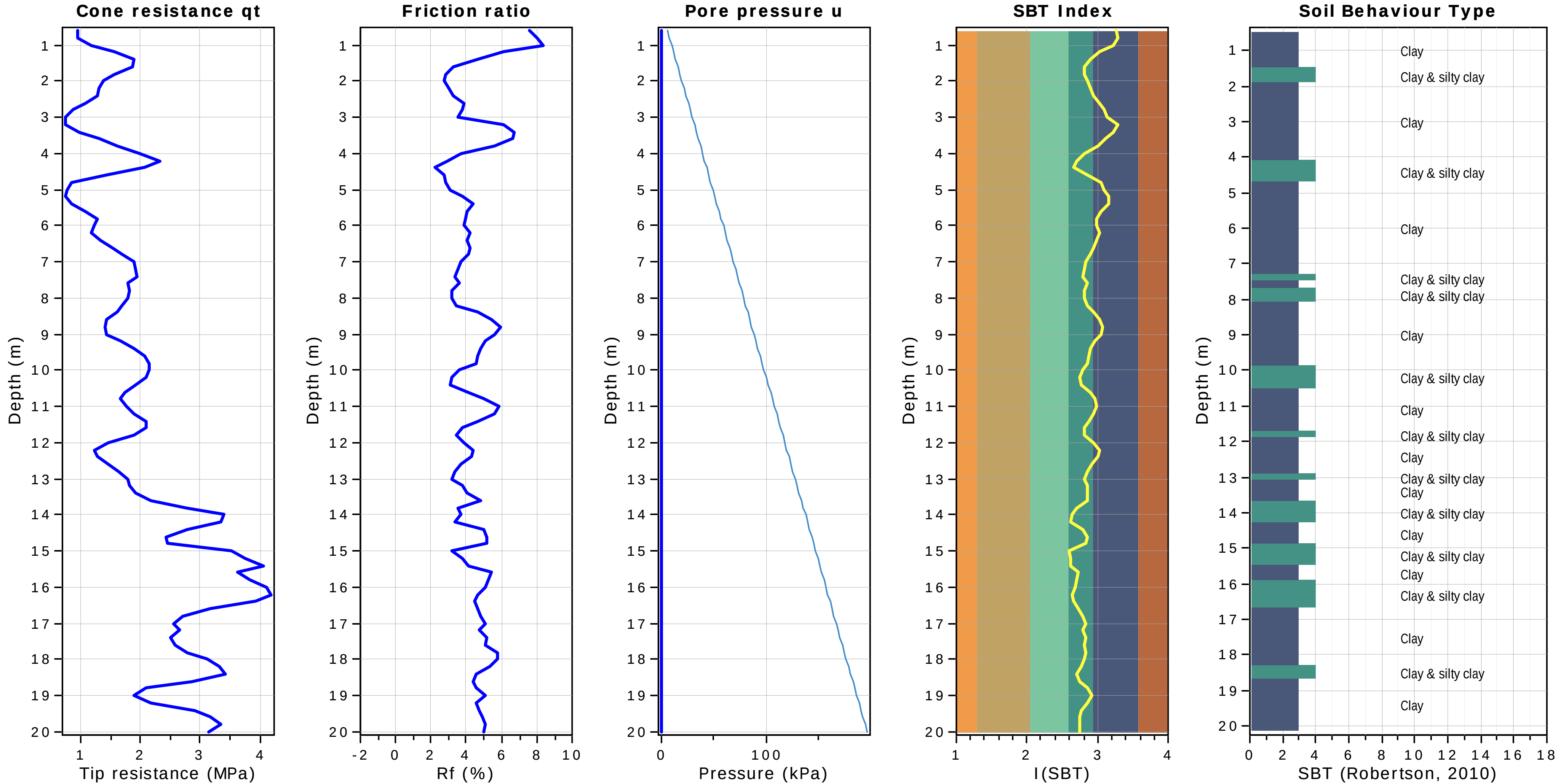
CPT: 036021P300CPT300
Total depth: 20.00 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

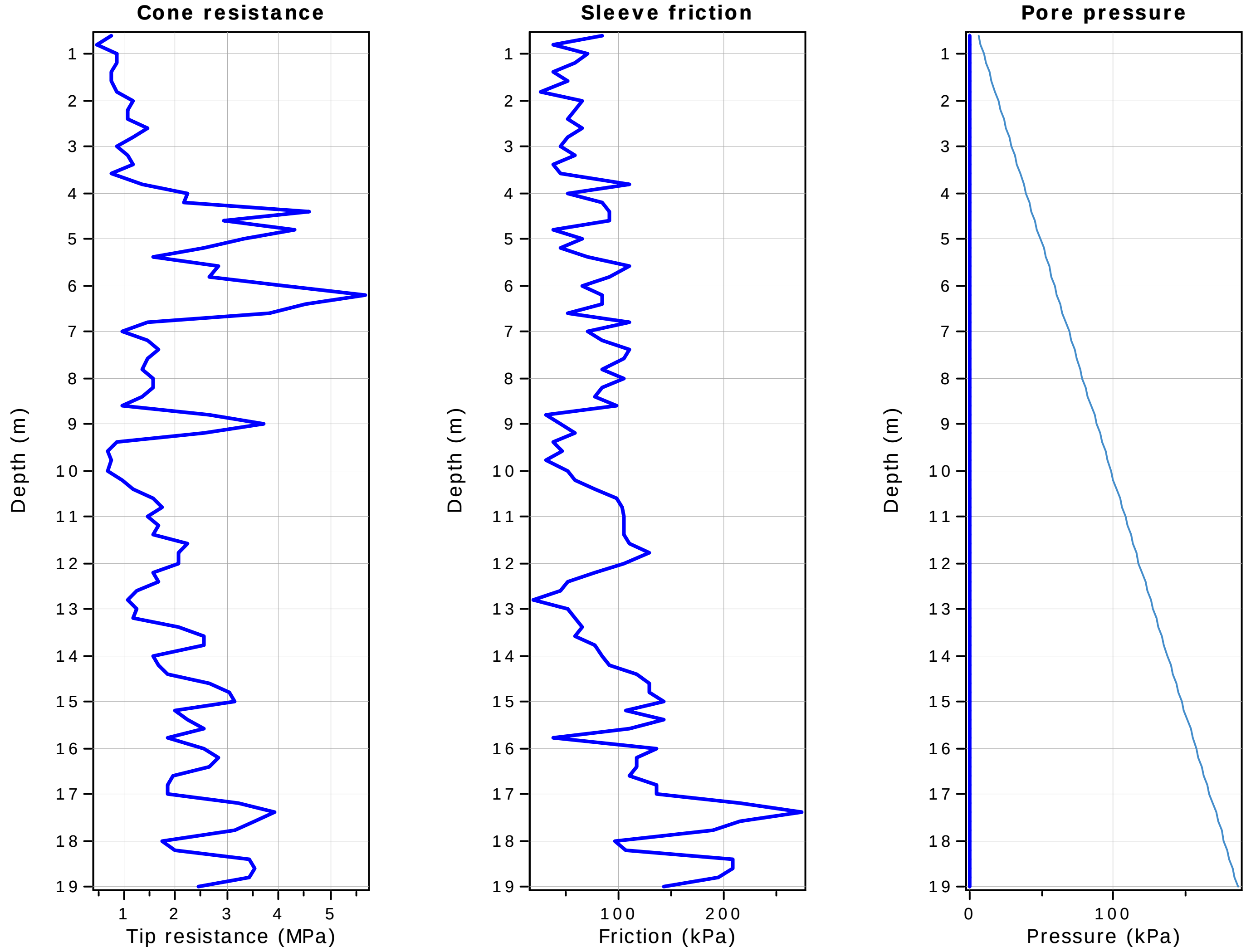


SBT legend

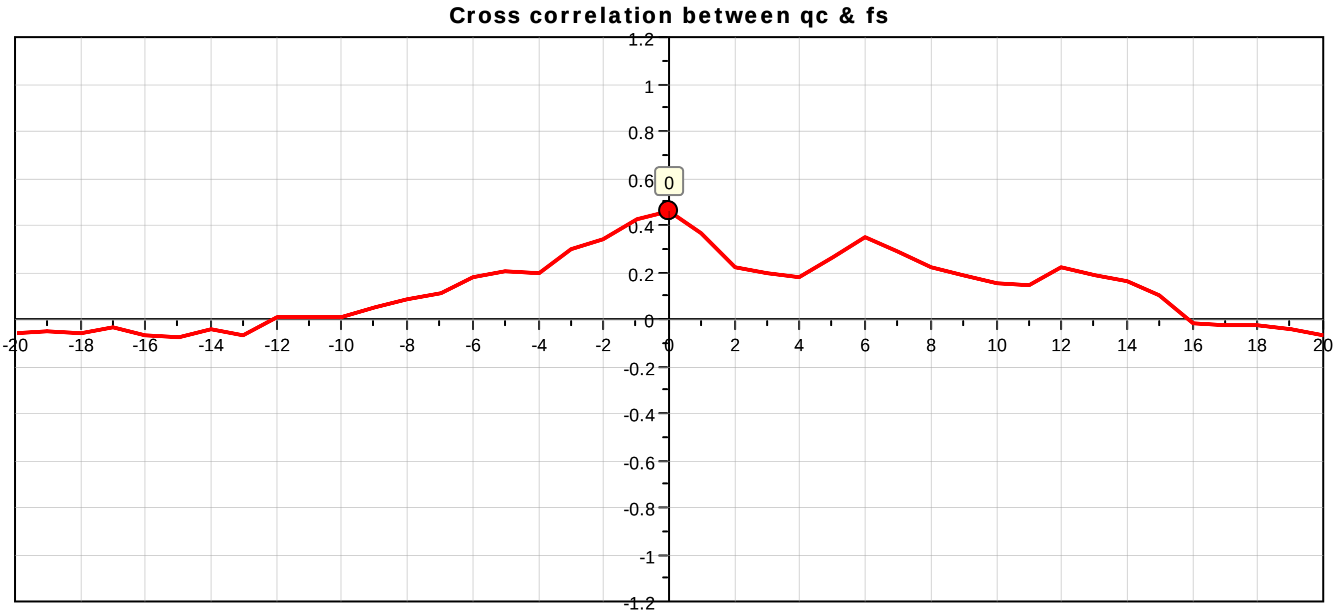
🟥 1. Sensitive fine grained
🟫 2. Organic material
▨ 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
▨ 8. Very stiff sand to clayey sand
☐ 9. Very stiff fine grained

CPT: 036021P301CPT301
Total depth: 19.00 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

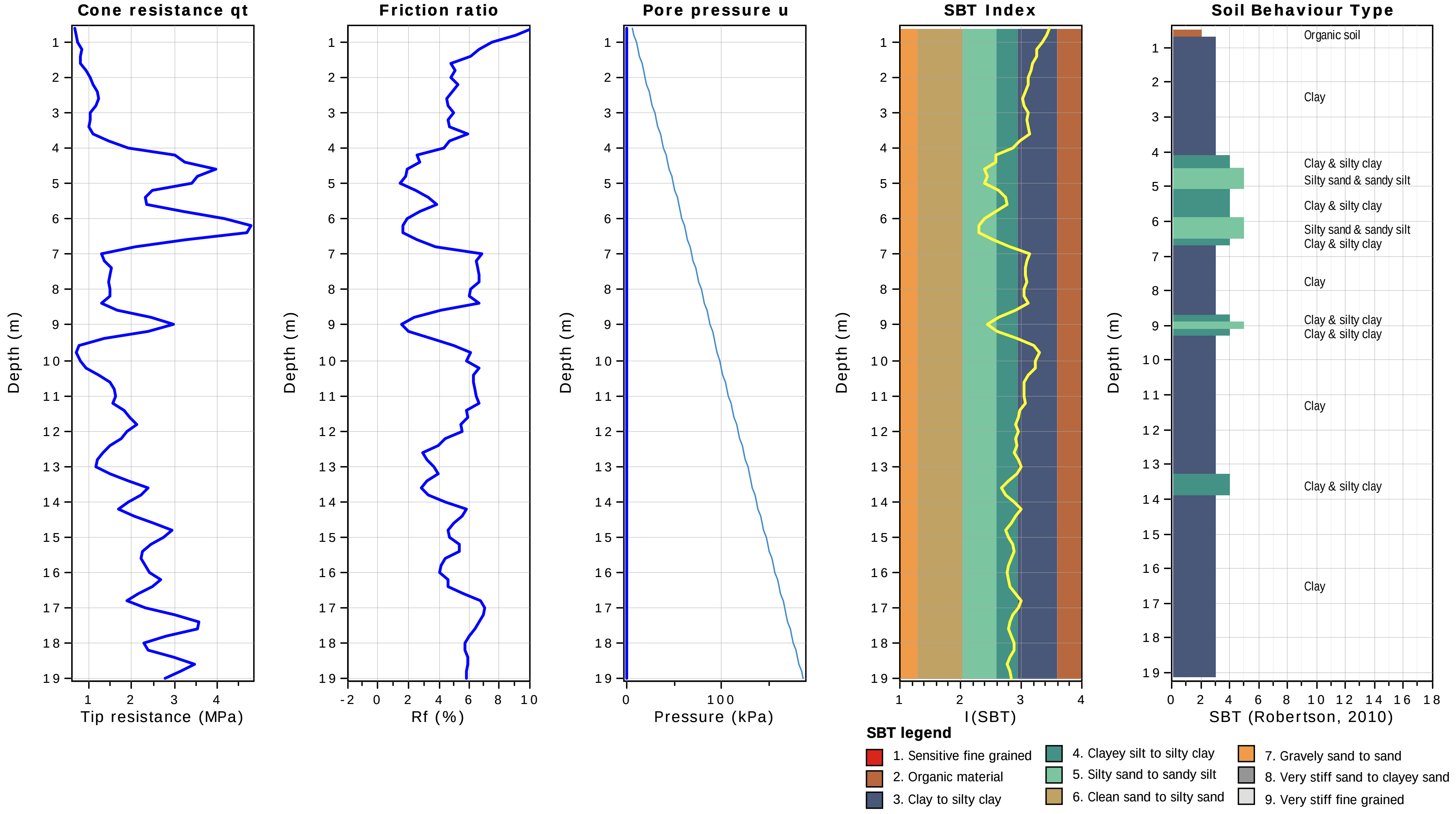


The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



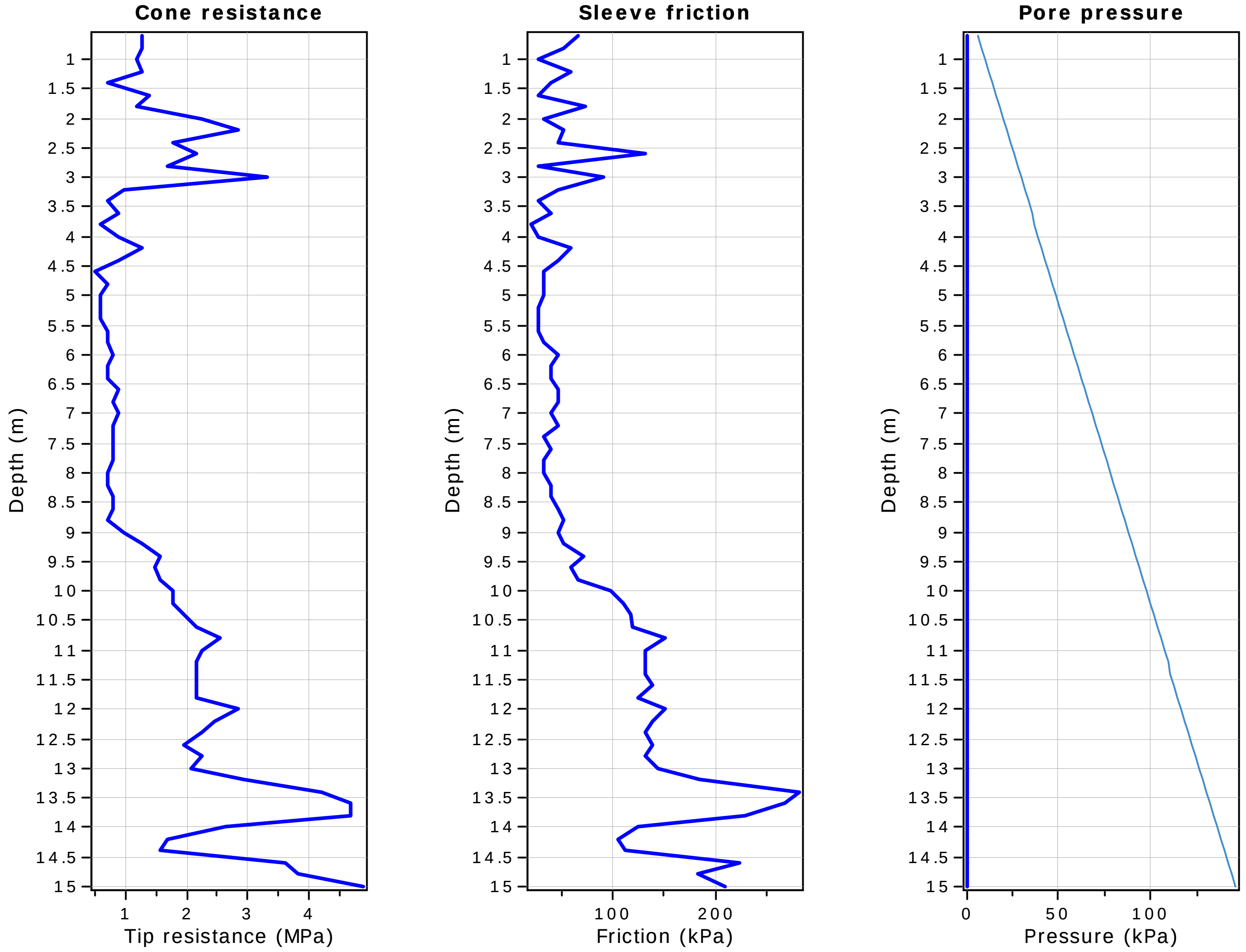
CPT: 036021P301CPT301
Total depth: 19.00 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

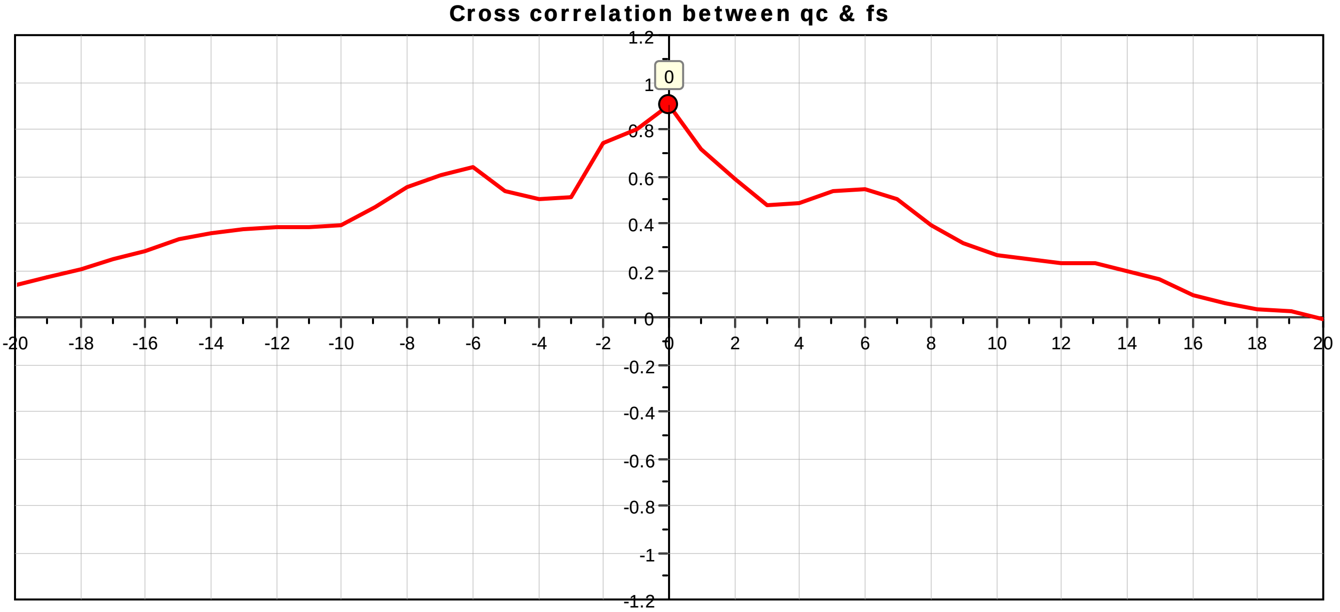


CPT: 036021P302CPT302
Total depth: 15.00 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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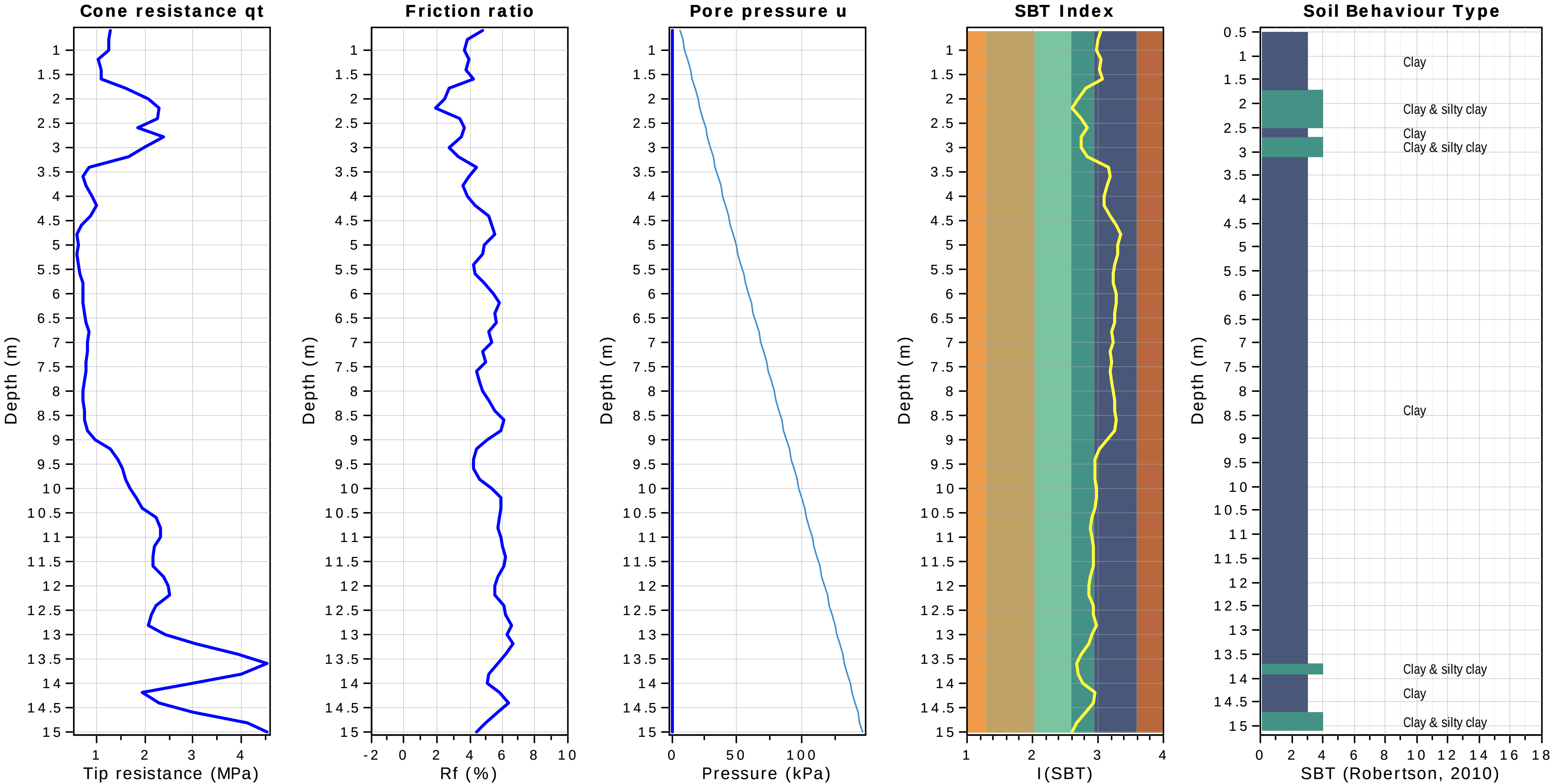
CPT: 036021P302CPT302
Total depth: 15.00 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained	▨ 4. Clayey silt to silty clay	▨ 7. Gravely sand to sand
▨ 2. Organic material	▨ 5. Silty sand to sandy silt	▨ 8. Very stiff sand to clayey sand
▨ 3. Clay to silty clay	▨ 6. Clean sand to silty sand	☐ 9. Very stiff fine grained

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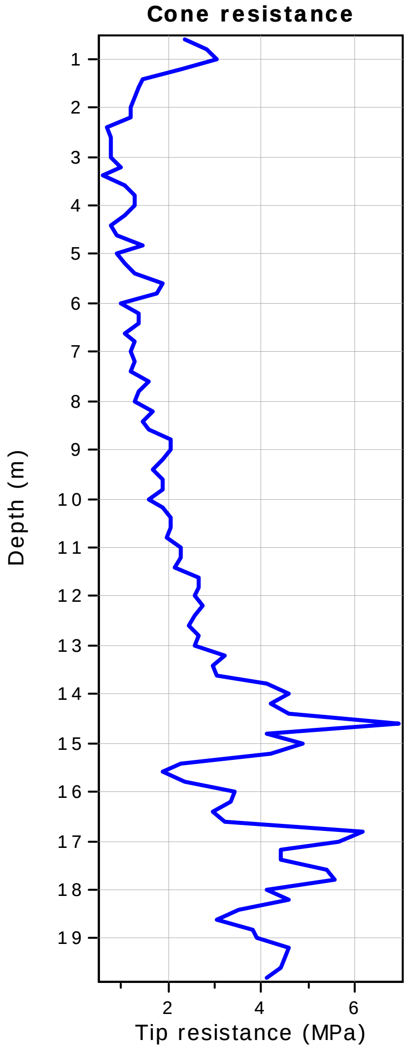
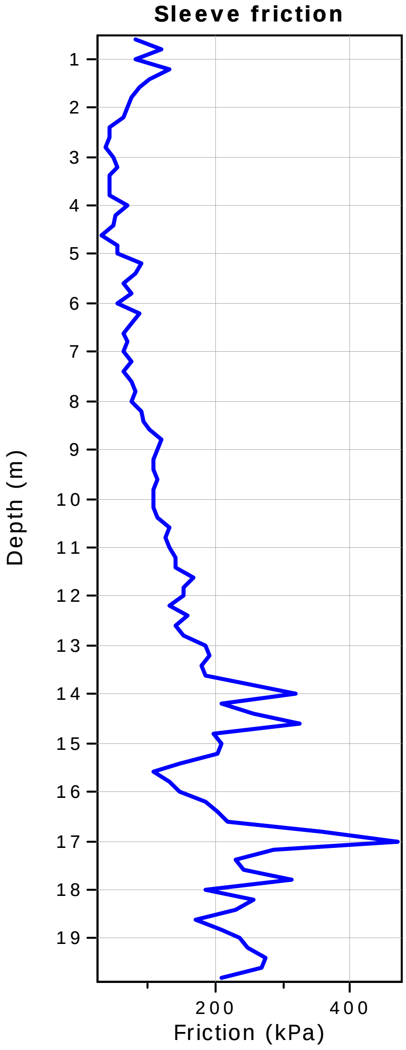
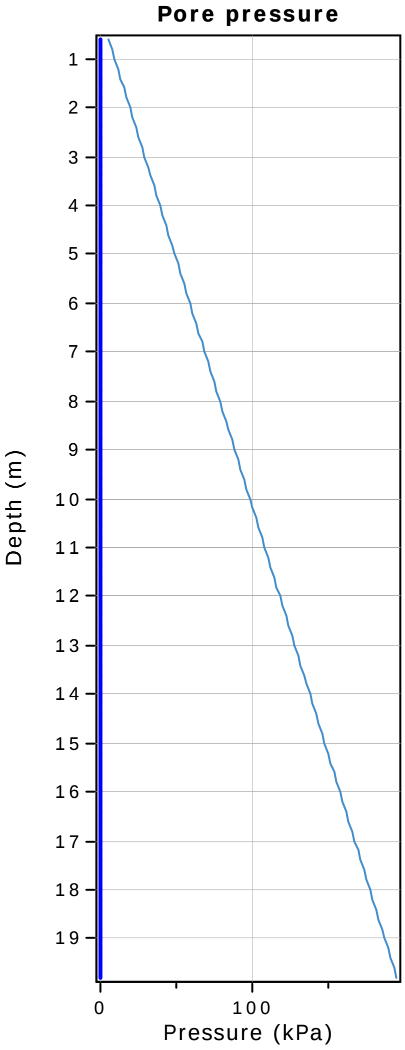
CPT: 036021P303CPT303
Total depth: 19.80 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

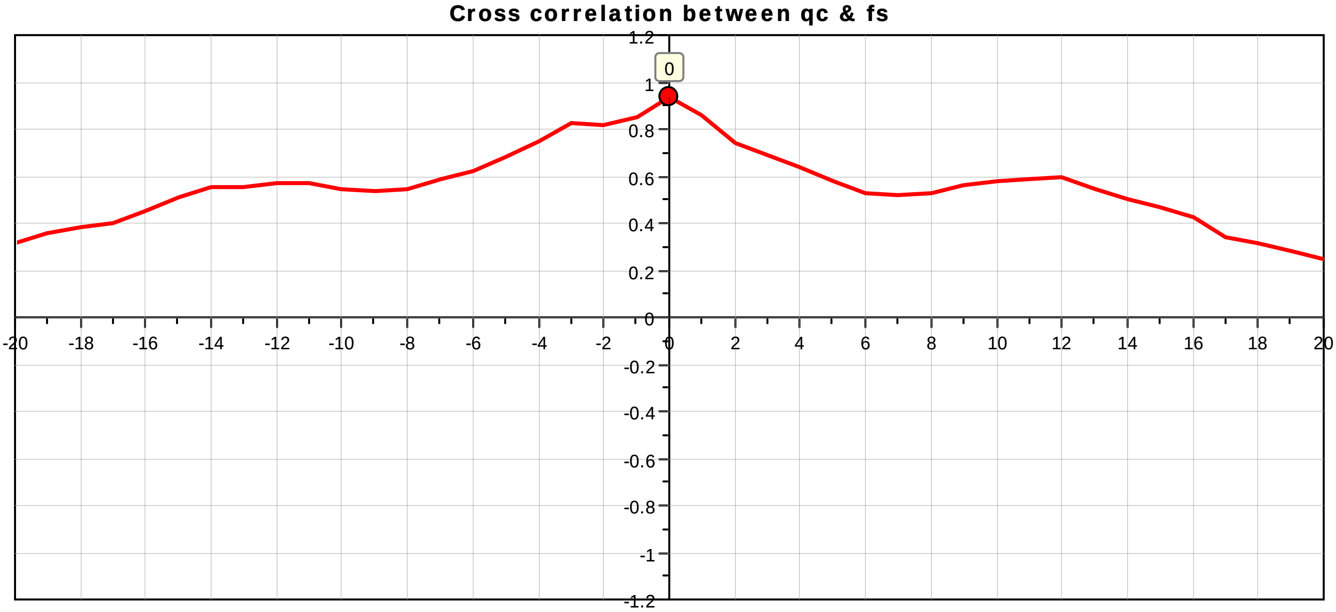
Project:
Location:


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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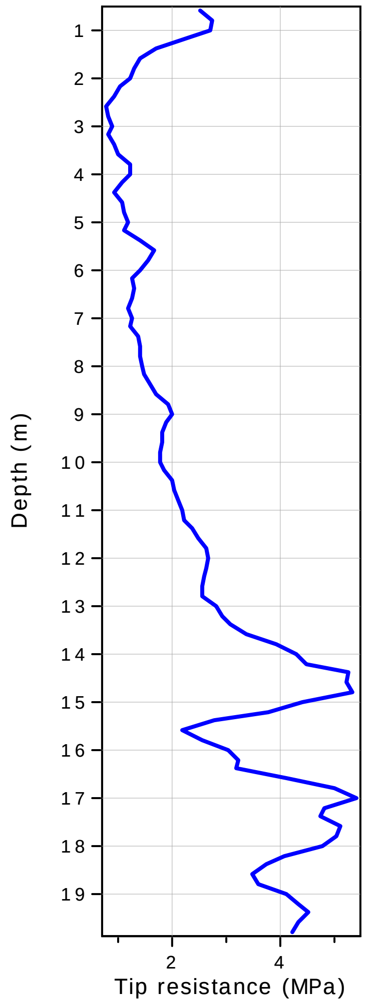
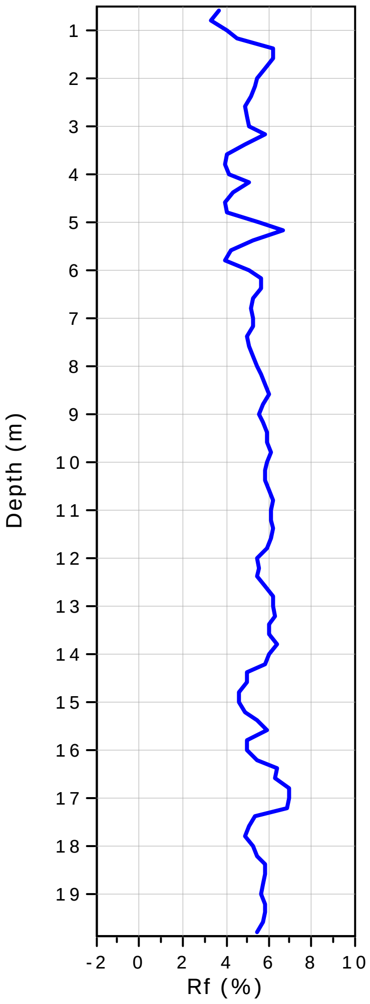
CPT: 036021P303CPT303
Total depth: 19.80 m, Date: 01/06/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

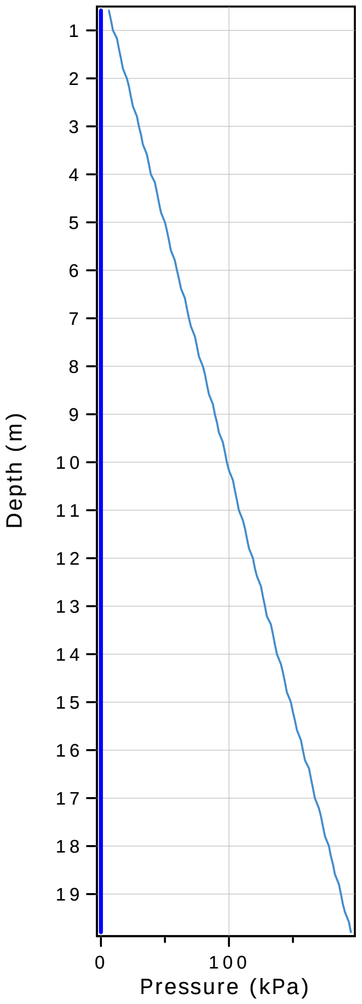
Cone resistance qt



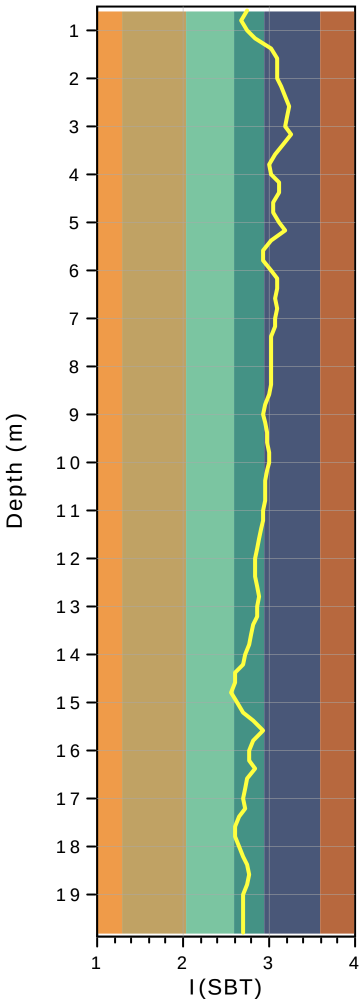
Friction ratio



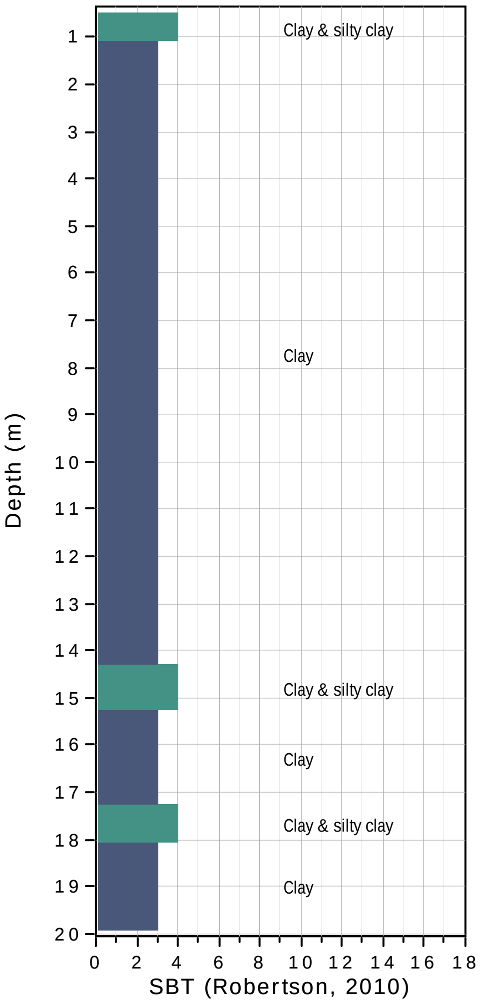
Pore pressure u



SBT Index



Soil Behaviour Type



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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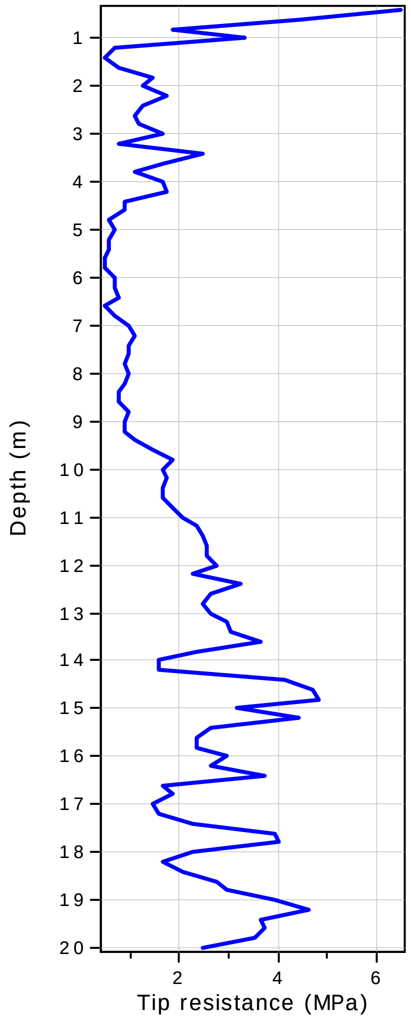
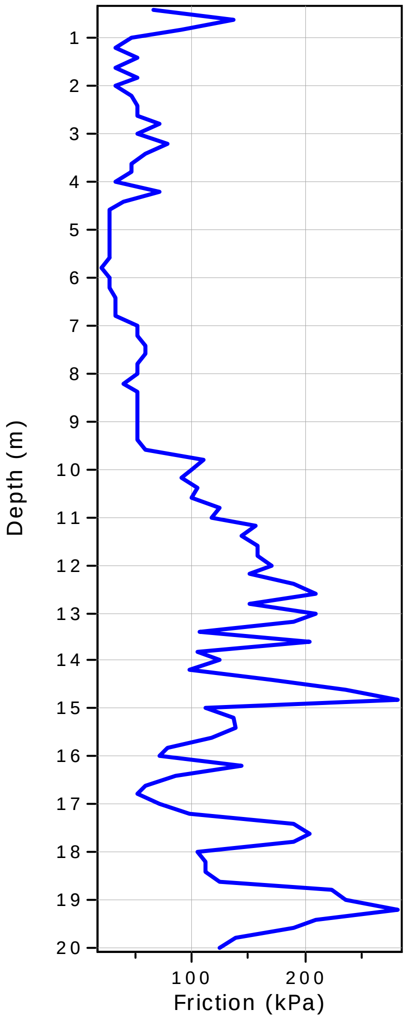
CPT: 036021P305CPT304
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

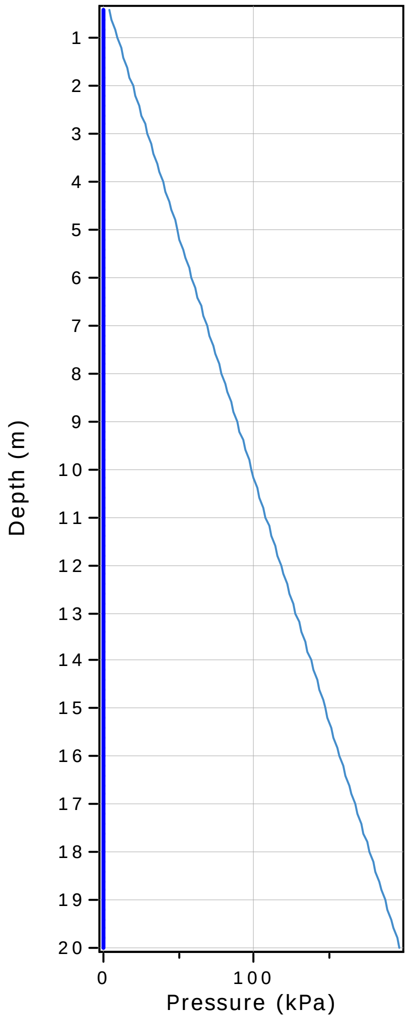
Cone resistance



Sleeve friction

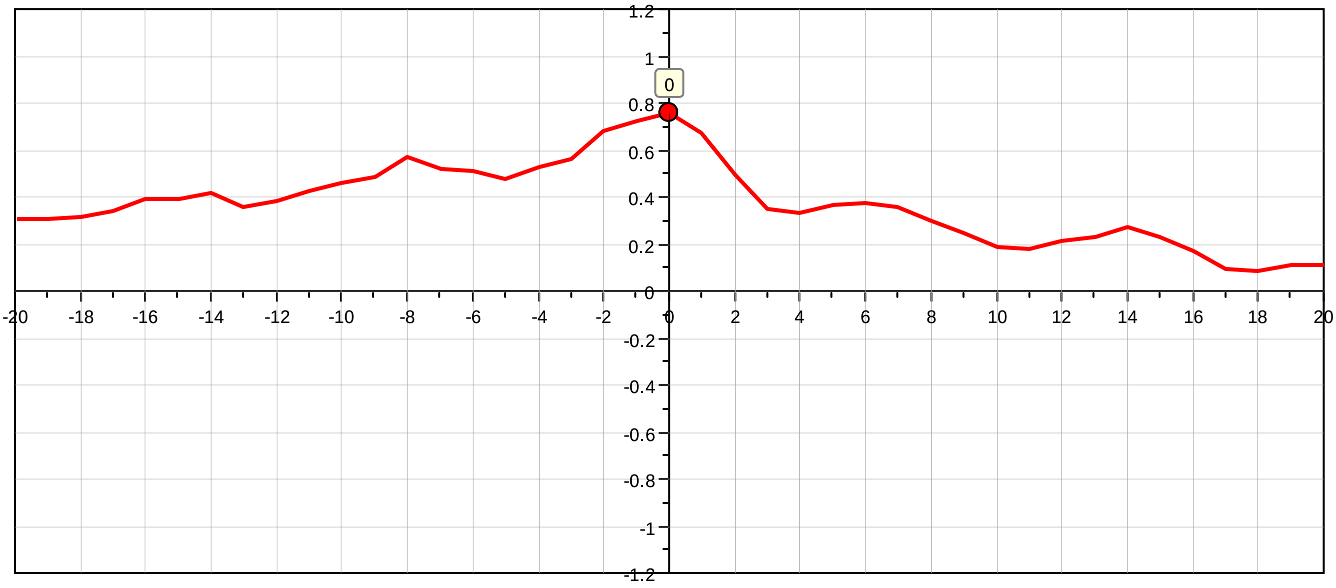


Pore pressure



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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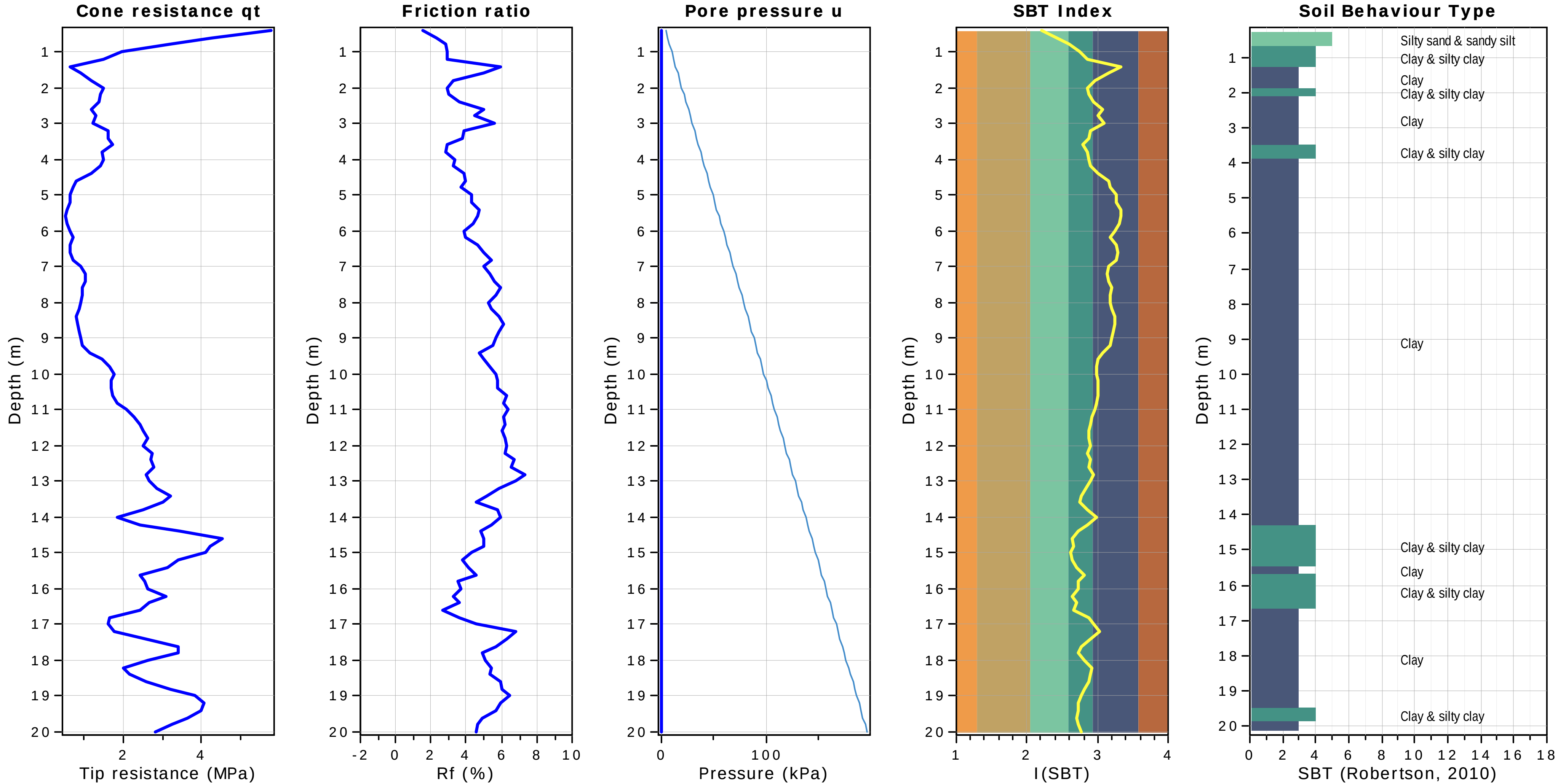
CPT: 036021P305CPT304
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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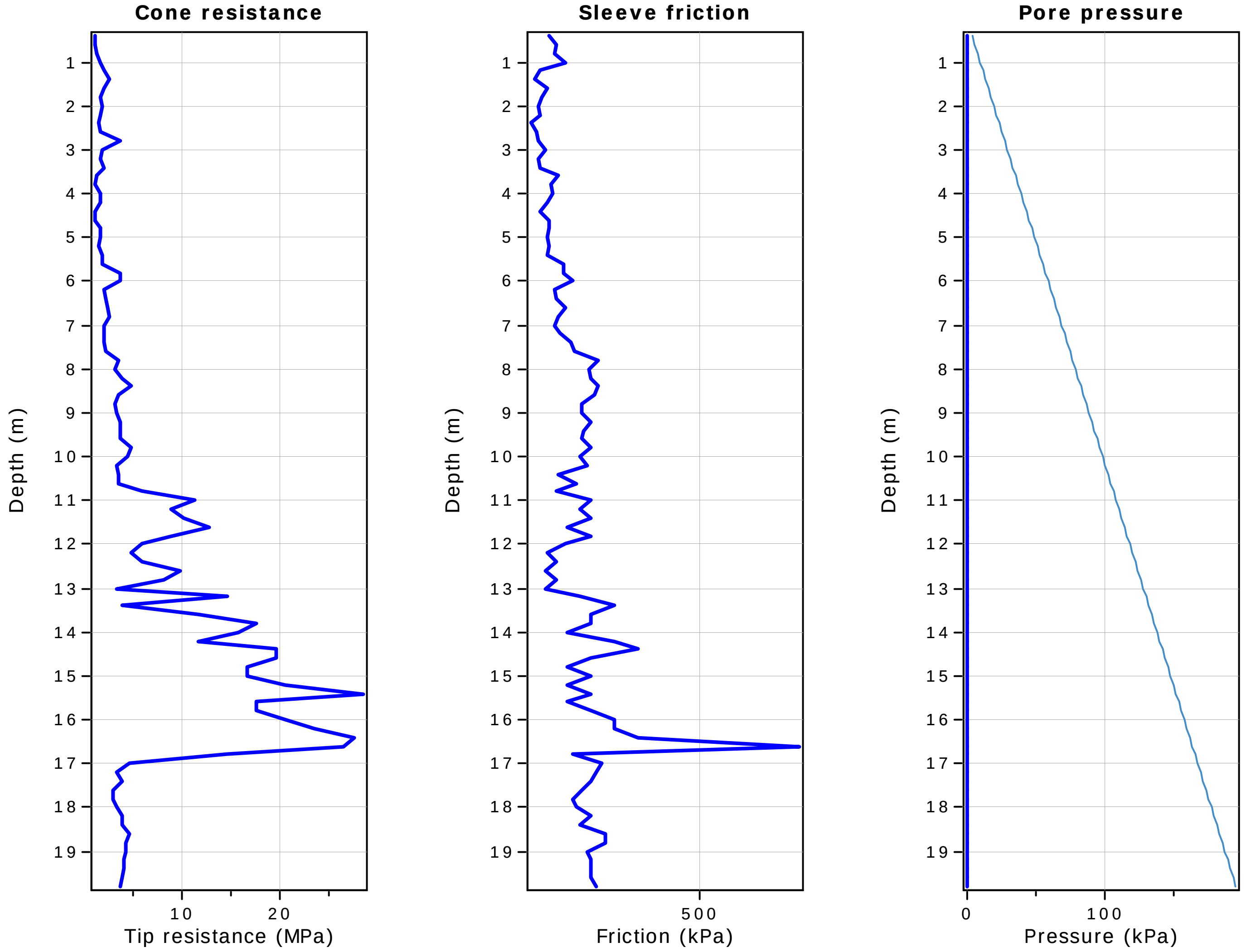
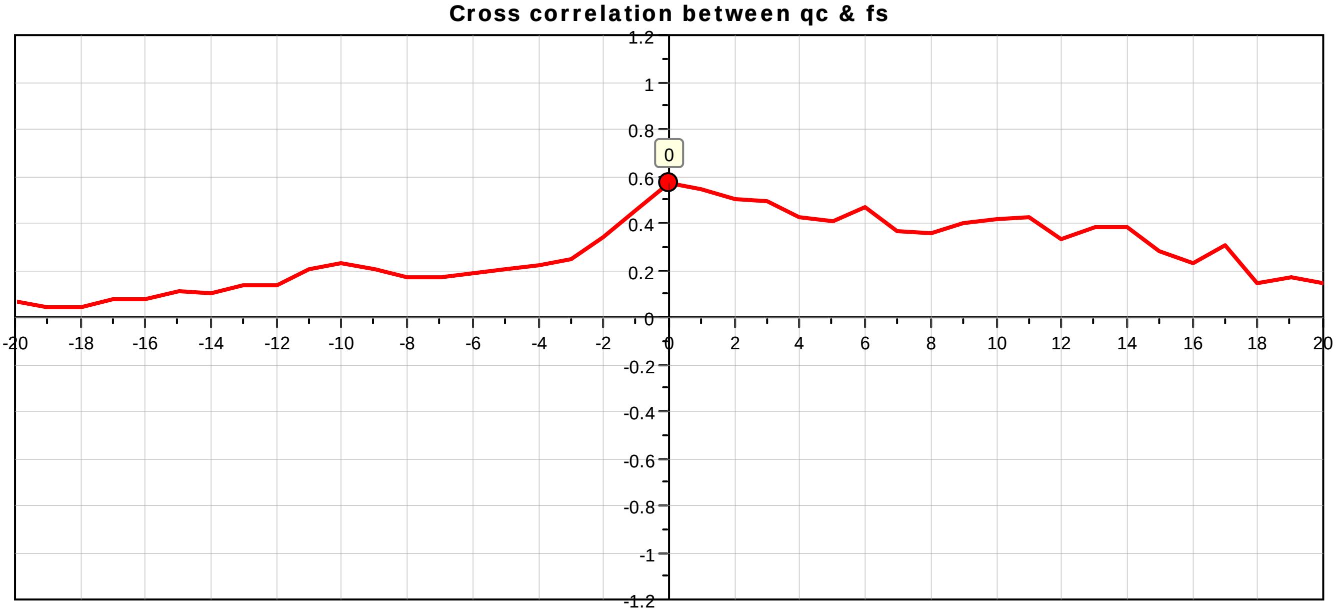
CPT: 036021P305CPT305
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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Via Cesare Costa 182
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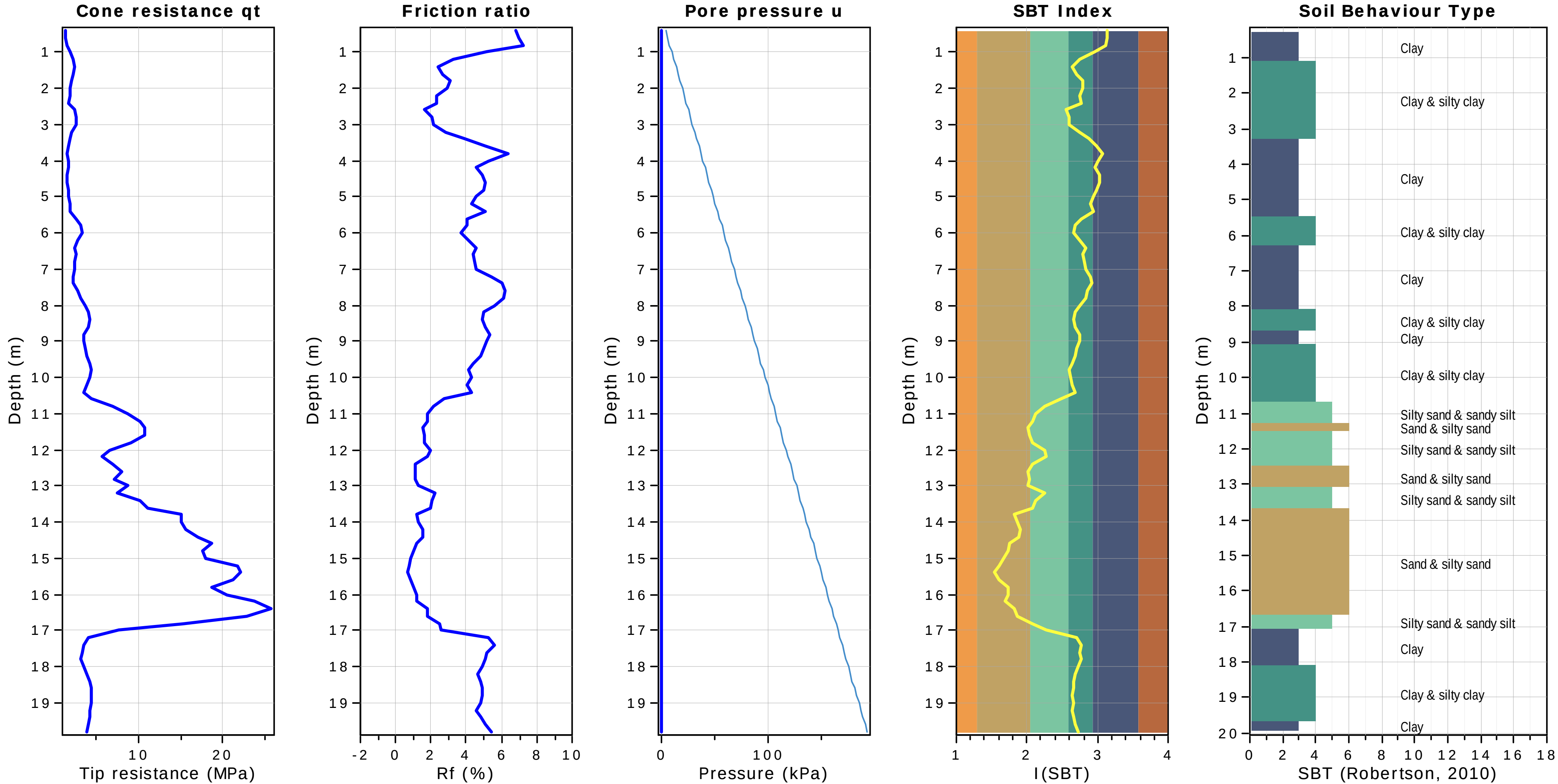
CPT: 036021P305CPT305
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

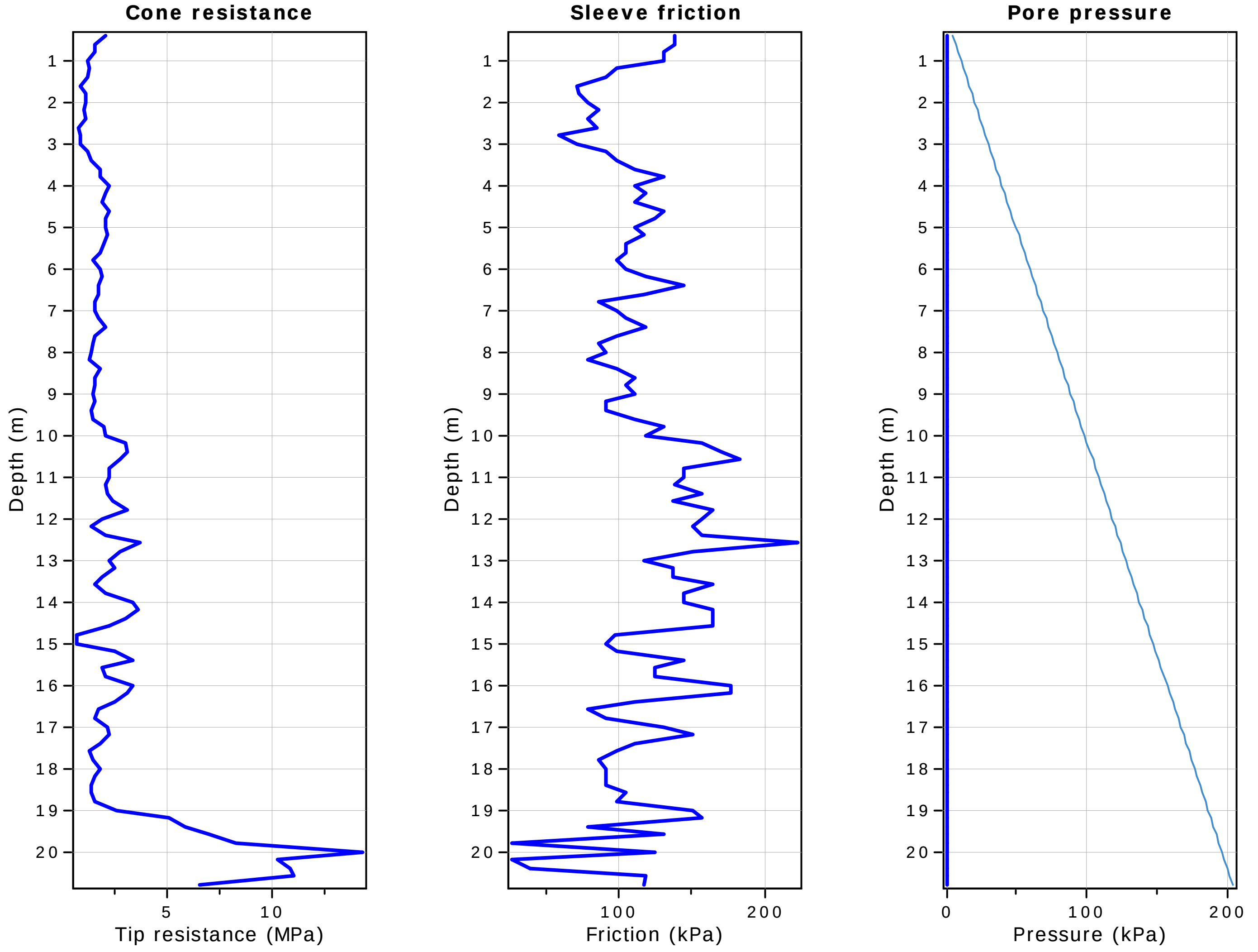


SBT legend

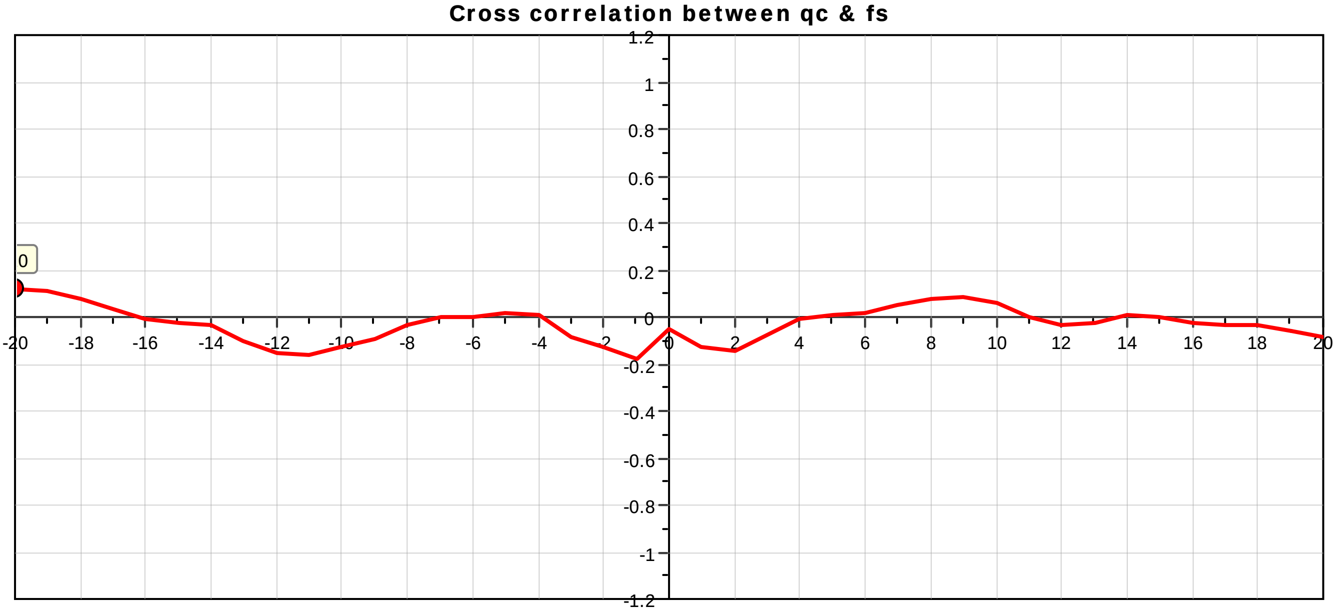
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P314CPT306
Total depth: 20.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:


Cone resistance **Sleeve friction** **Pore pressure**

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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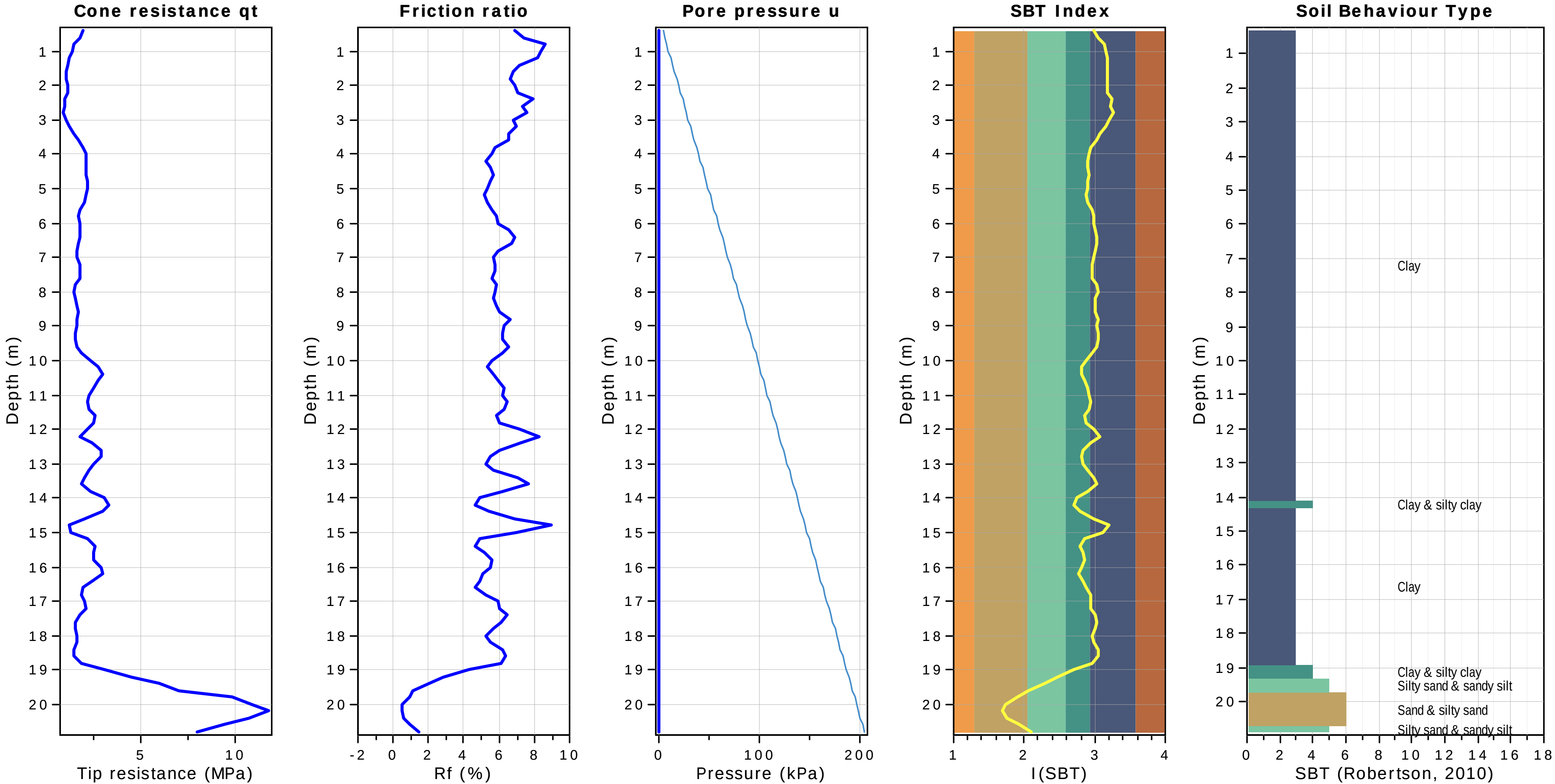
CPT: 036021P314CPT306
Total depth: 20.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

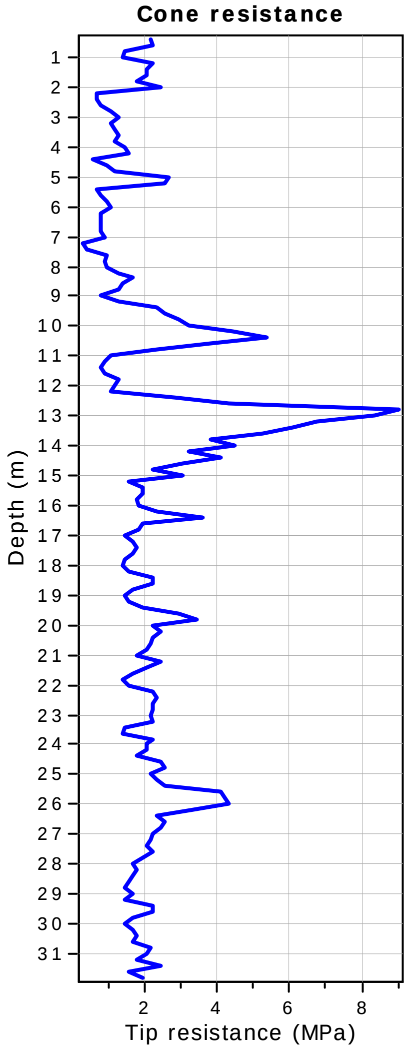


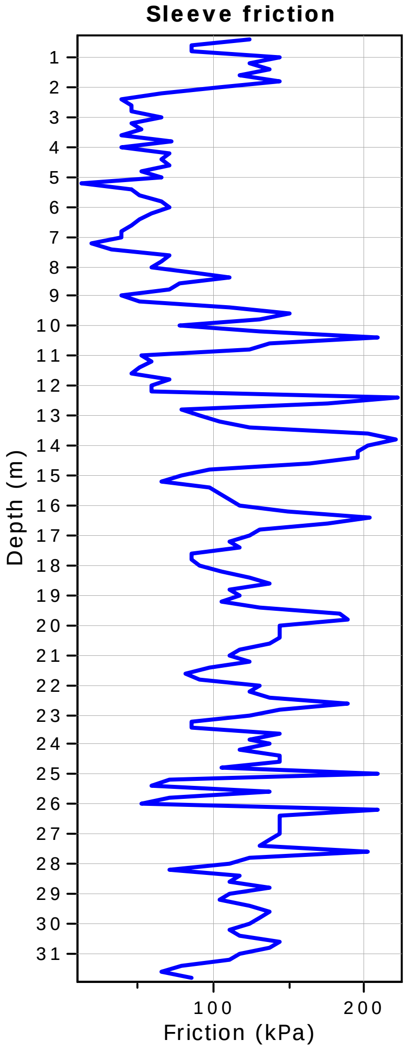
SBT legend

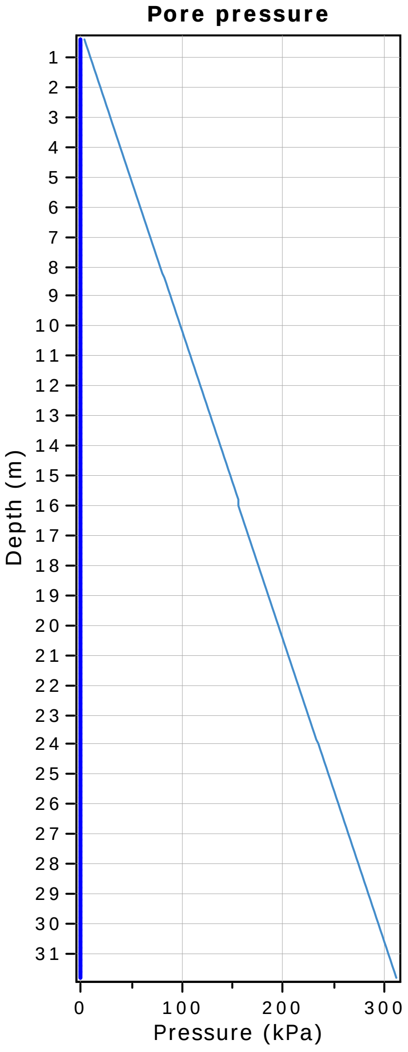
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- ■ 3. Clay to silty clay
- ■ 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- ■ 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ■ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

CPT: 036021P314CPT307
Total depth: 31.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

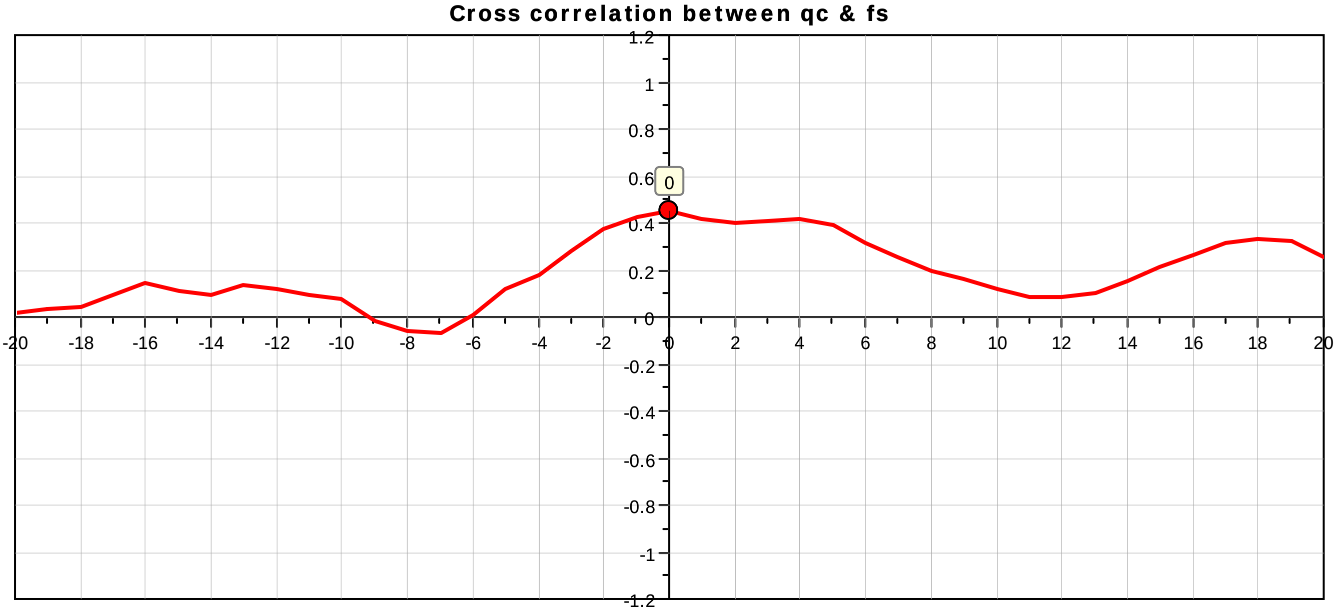
Project:
Location:





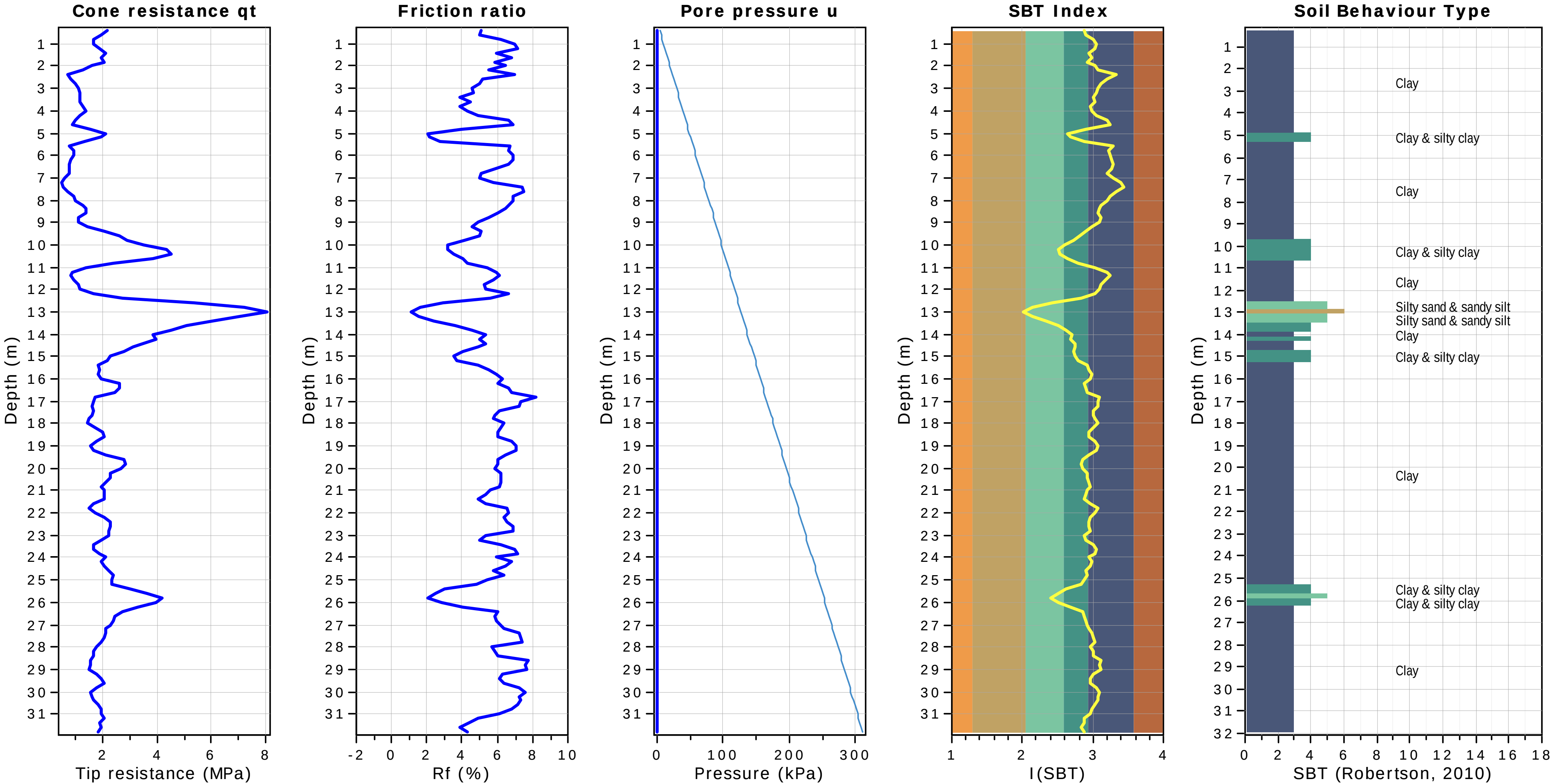


The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT: 036021P314CPT307
Total depth: 31.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

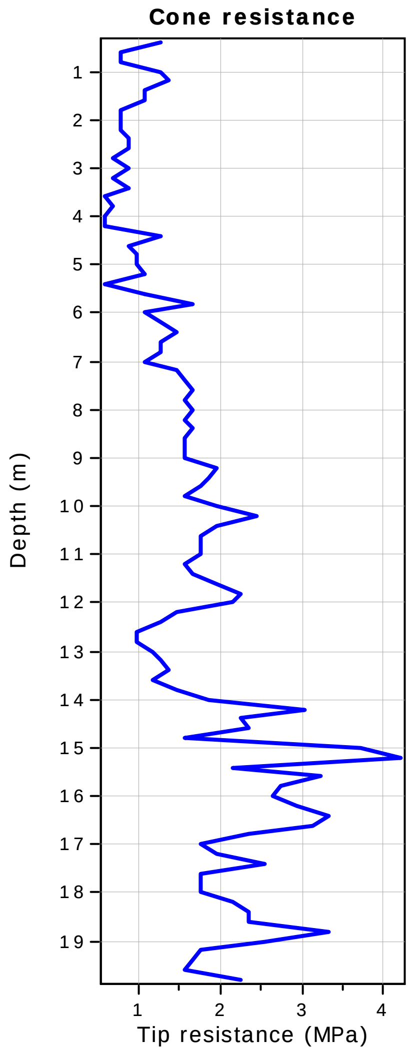


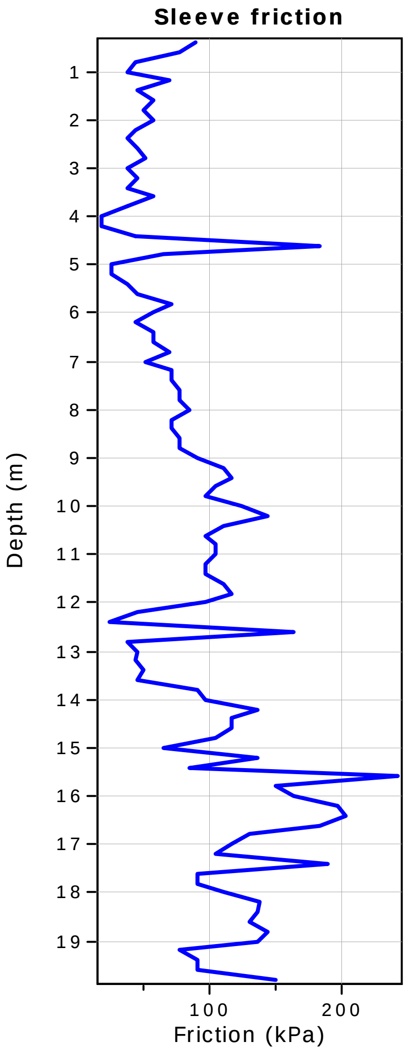
SBT legend

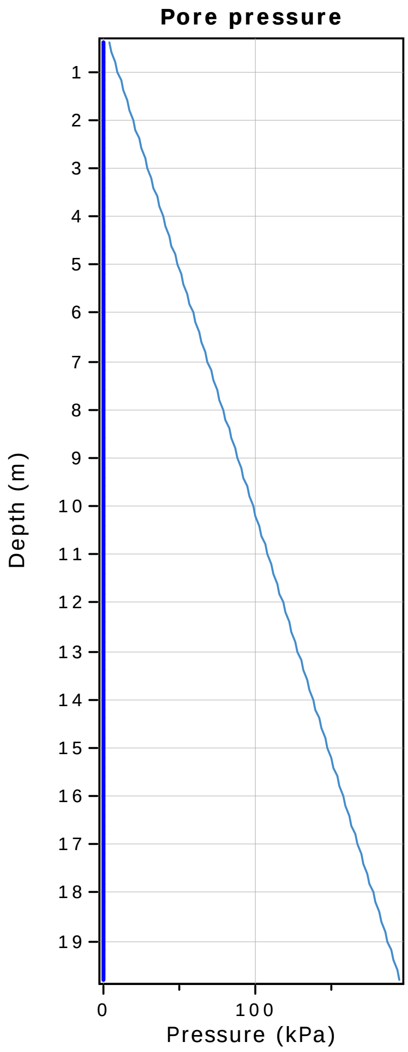
🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟫 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

CPT: 036021P314CPT309
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

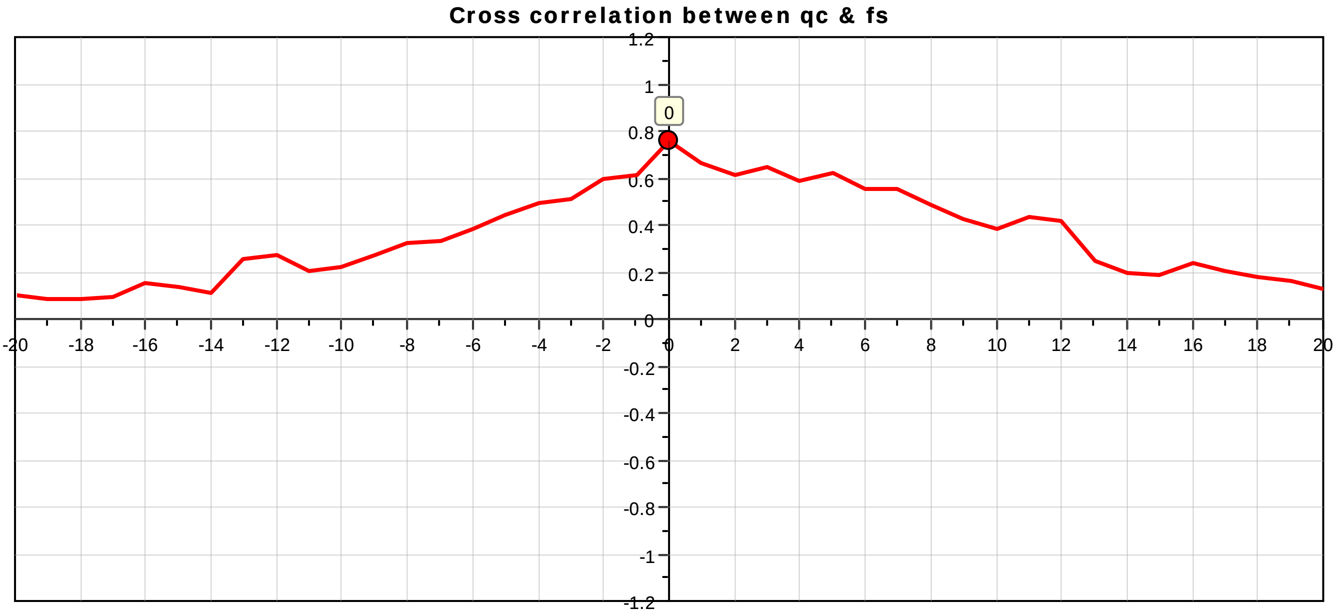
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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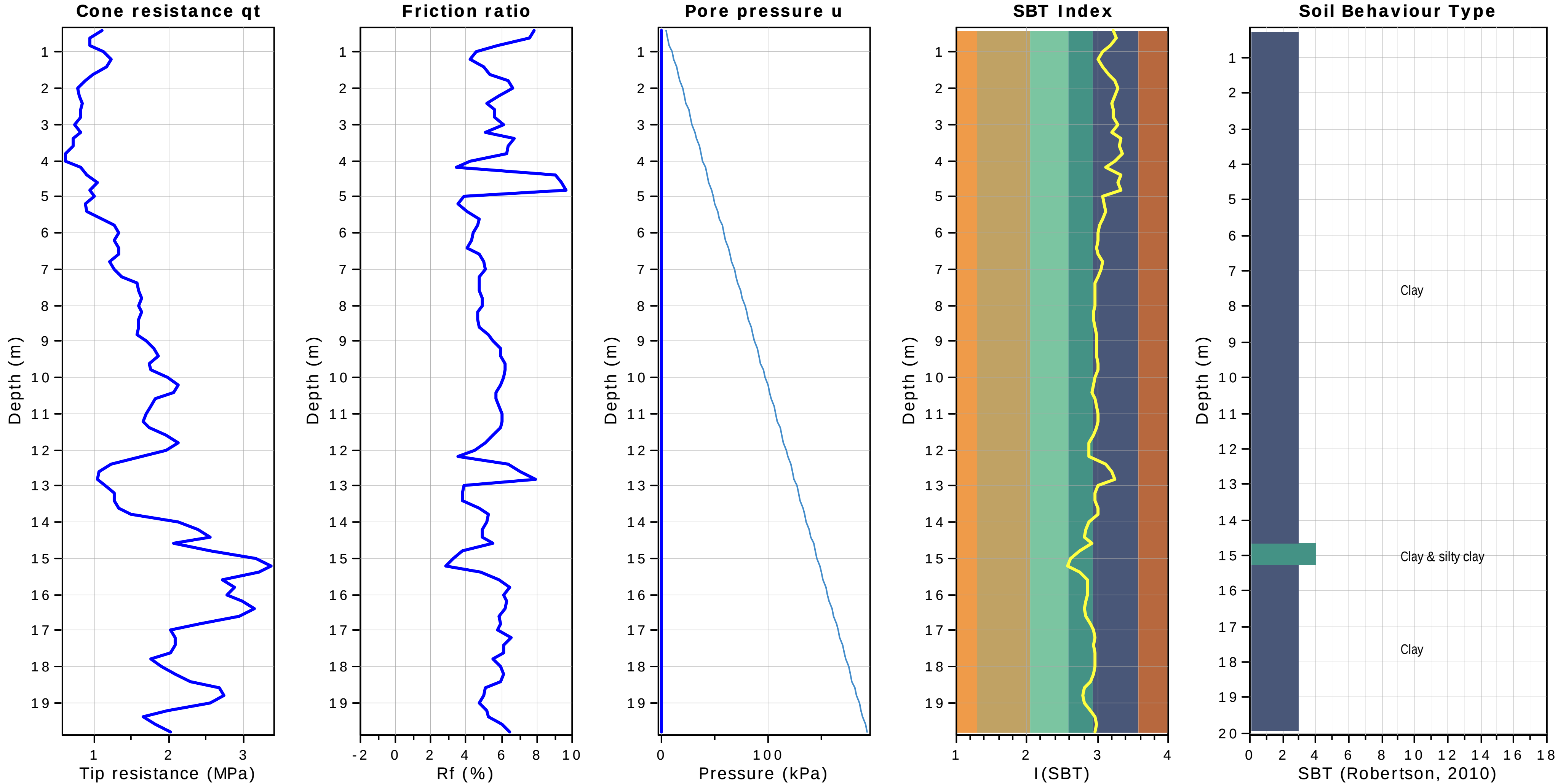
CPT: 036021P314CPT309
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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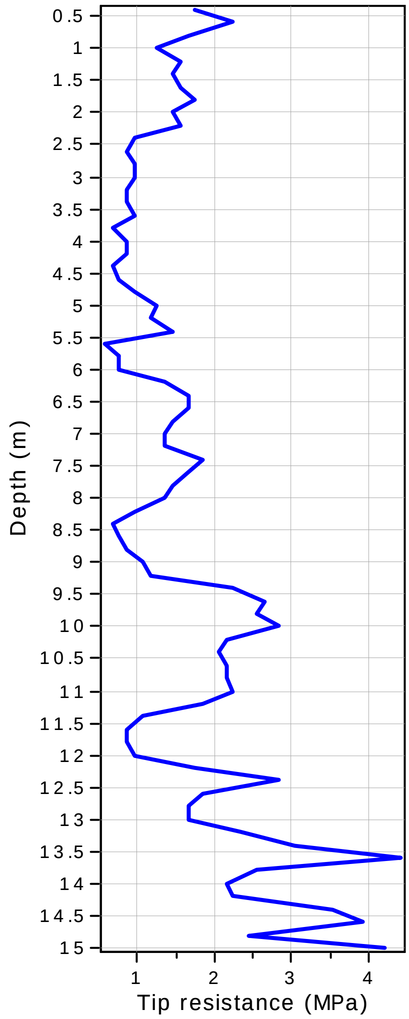
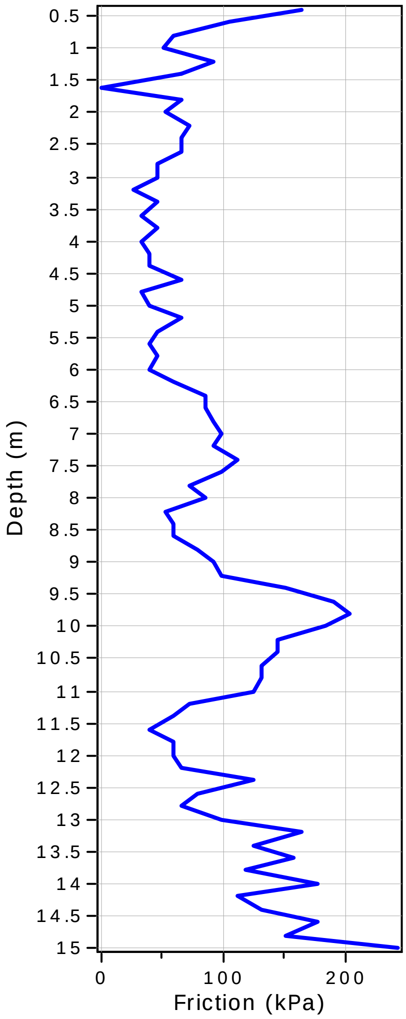
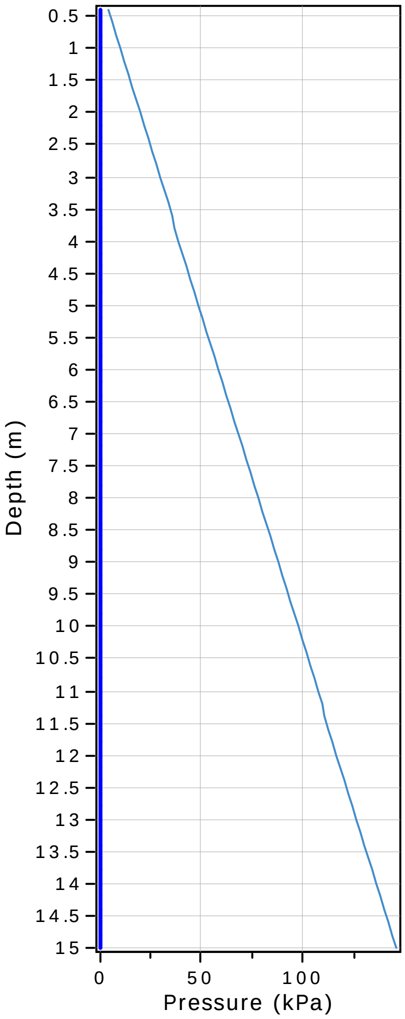
CPT: 036021P314CPT310
Total depth: 15.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

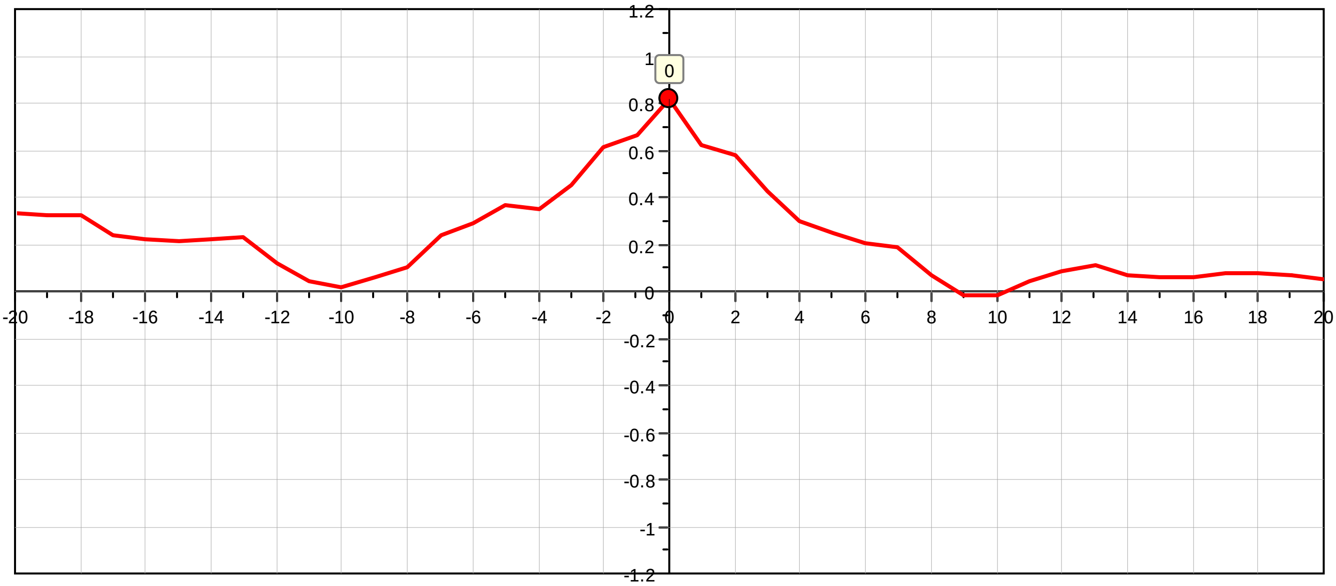
Project:
Location:


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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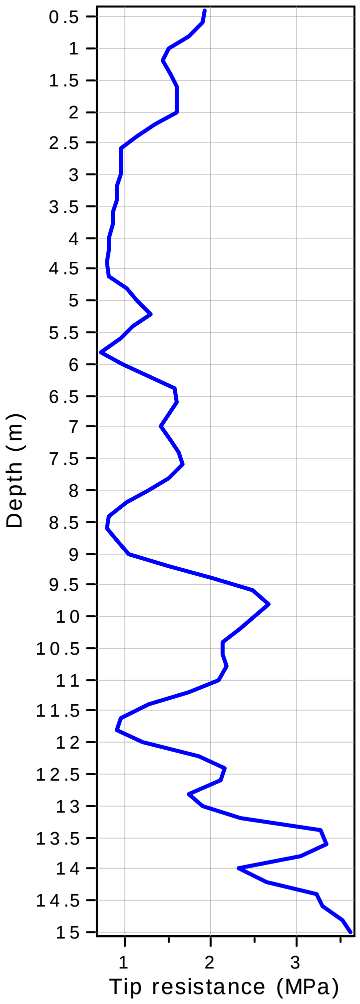
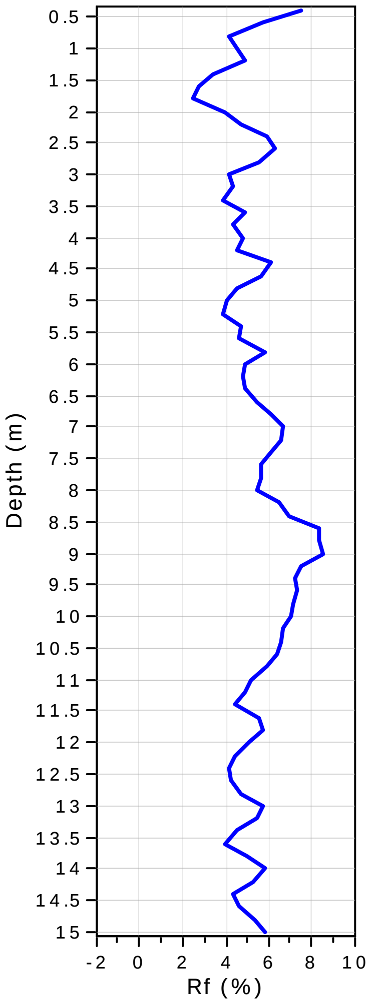
CPT: 036021P314CPT310
Total depth: 15.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

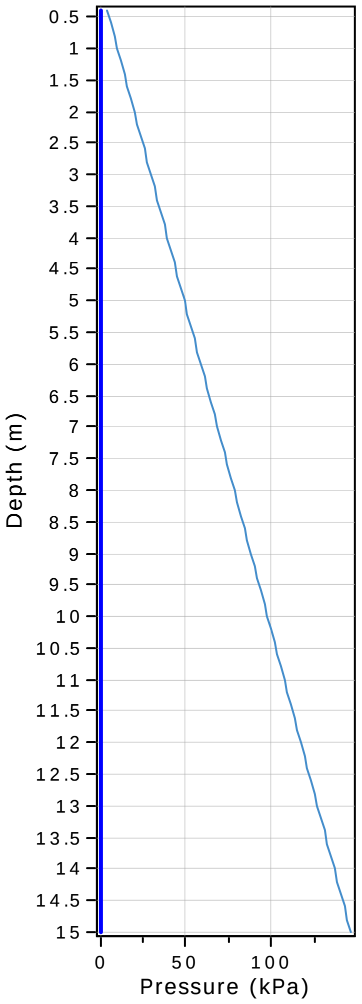
Cone resistance qt



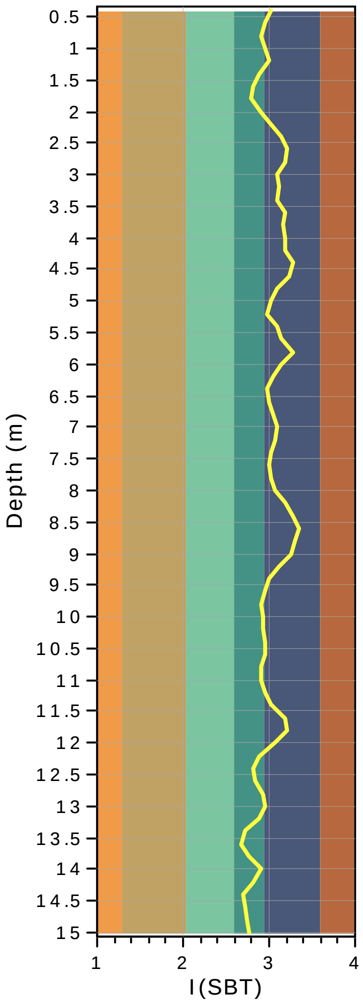
Friction ratio



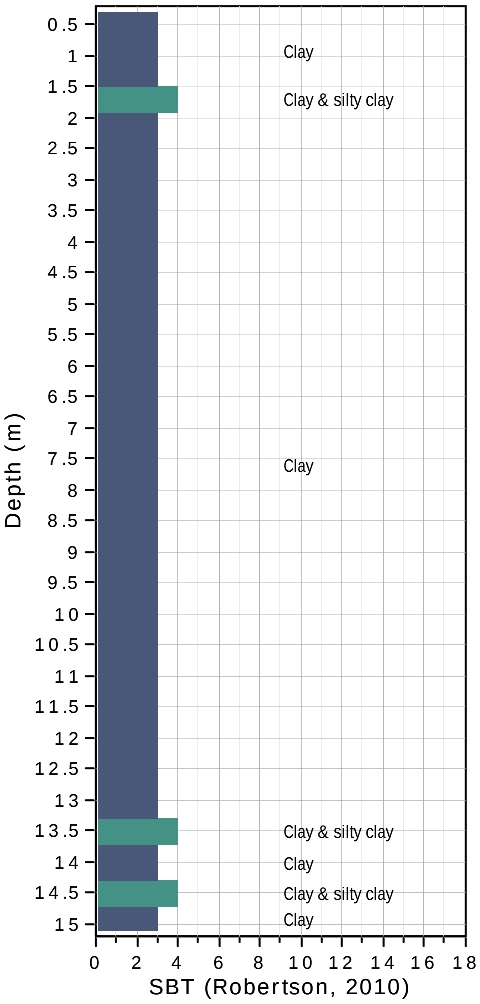
Pore pressure u



SBT Index



Soil Behaviour Type



SBT legend

🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟨 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

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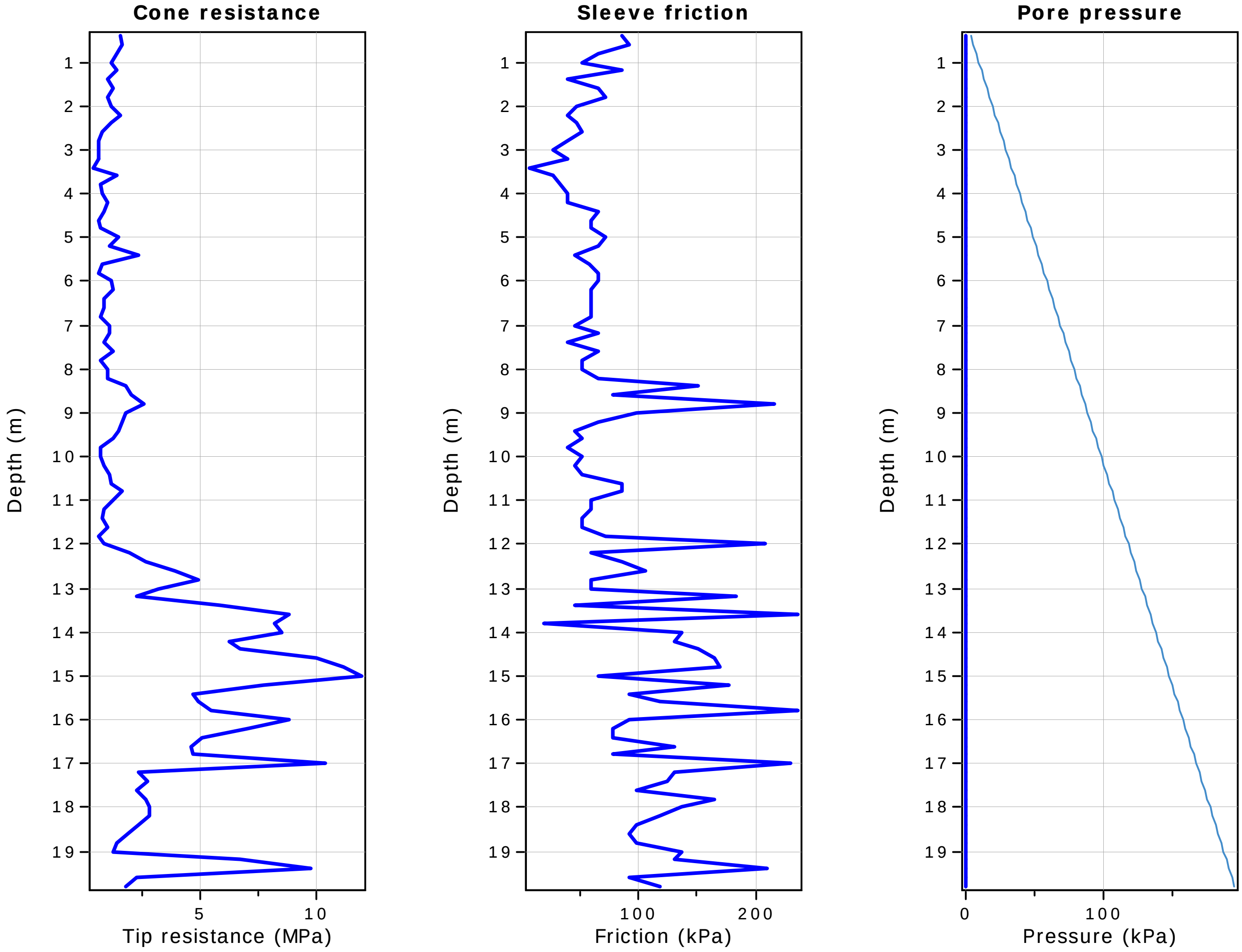
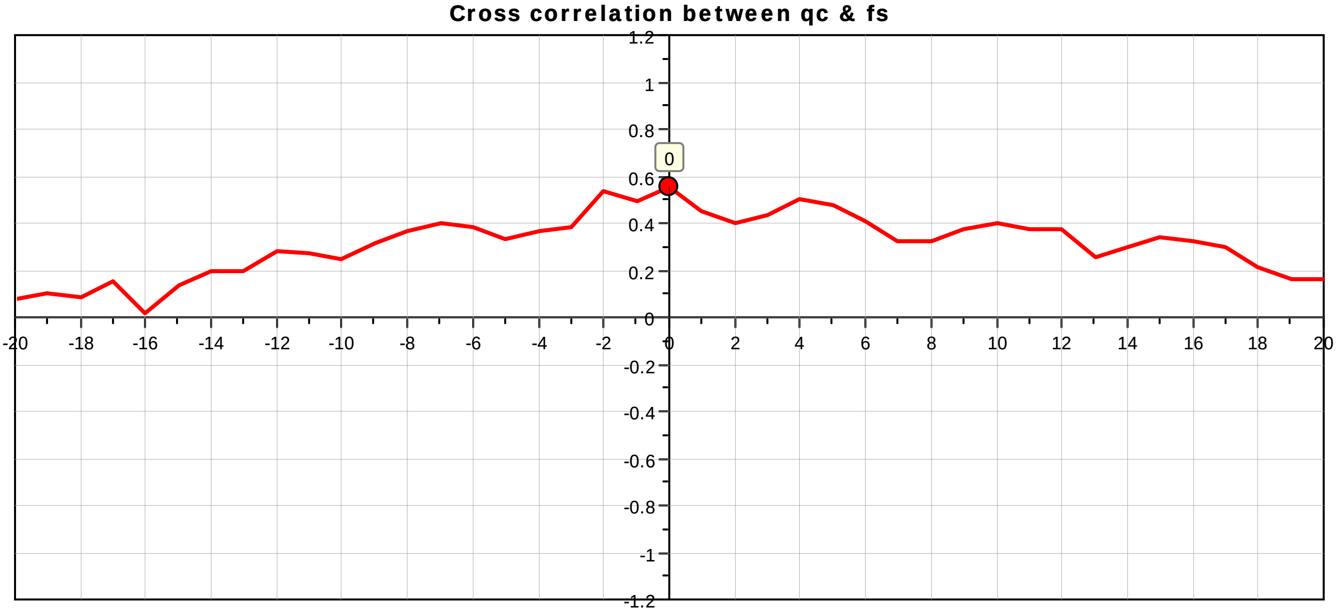
CPT: 036021P314CPT311
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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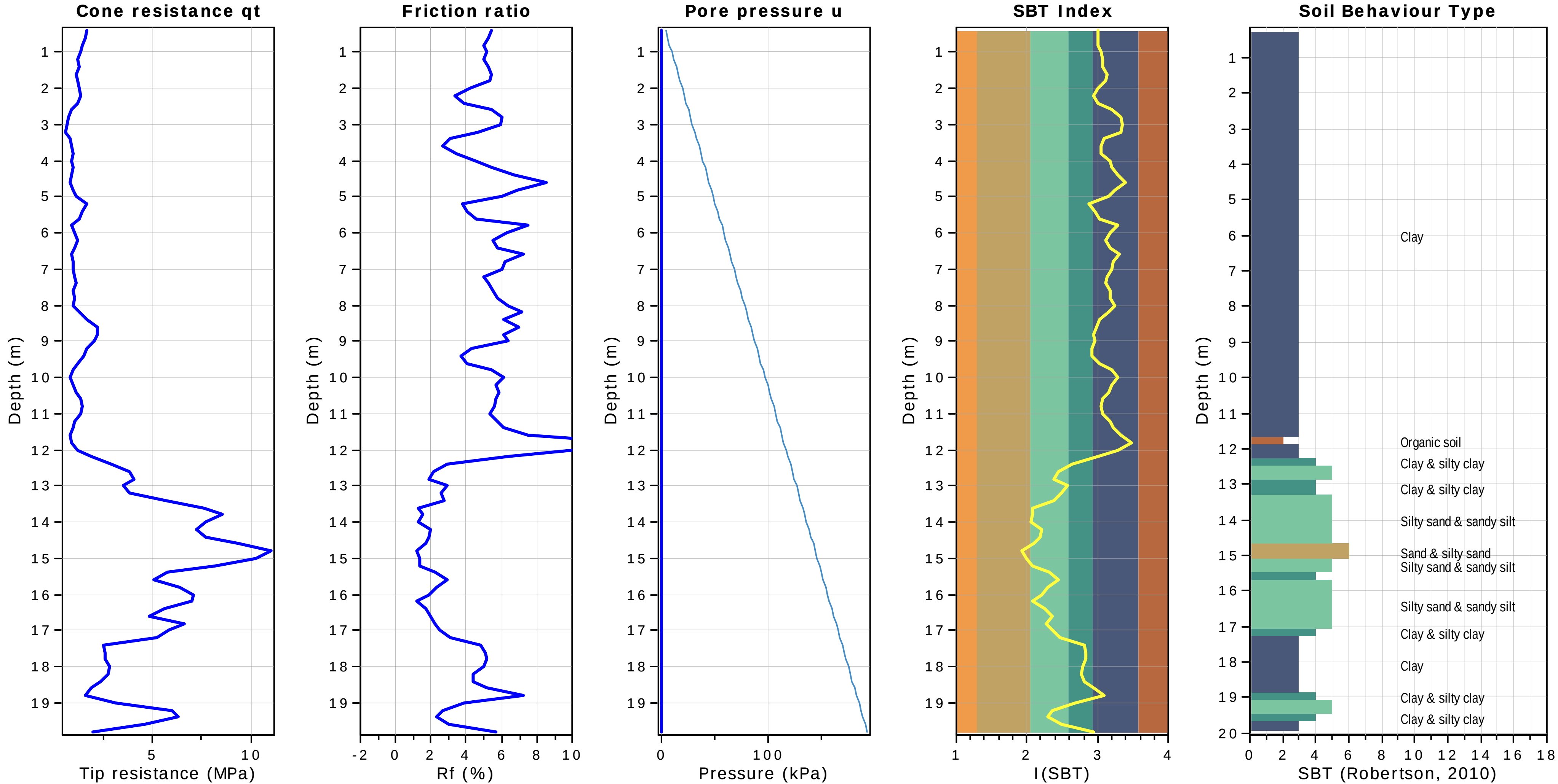
CPT: 036021P314CPT311
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

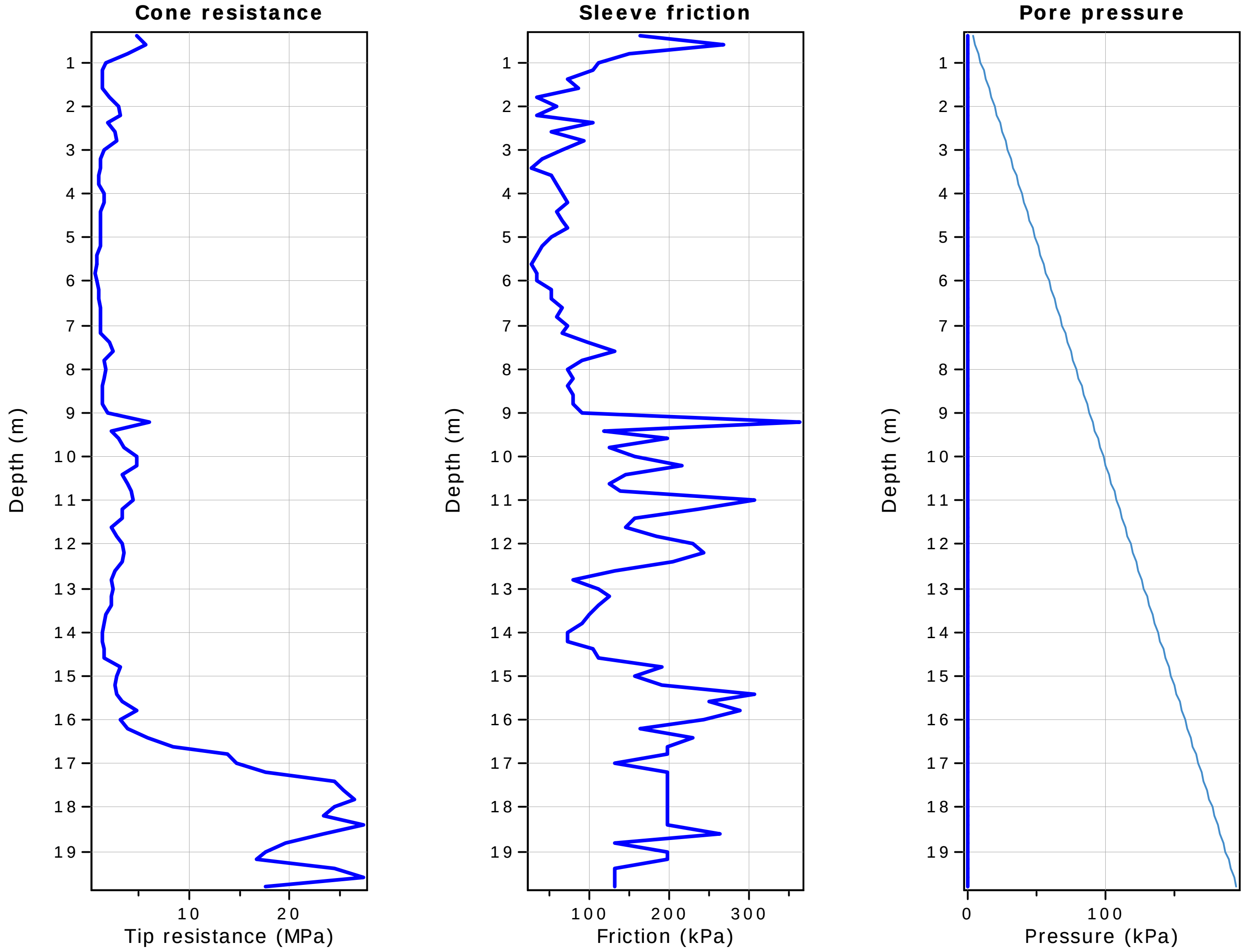


SBT legend

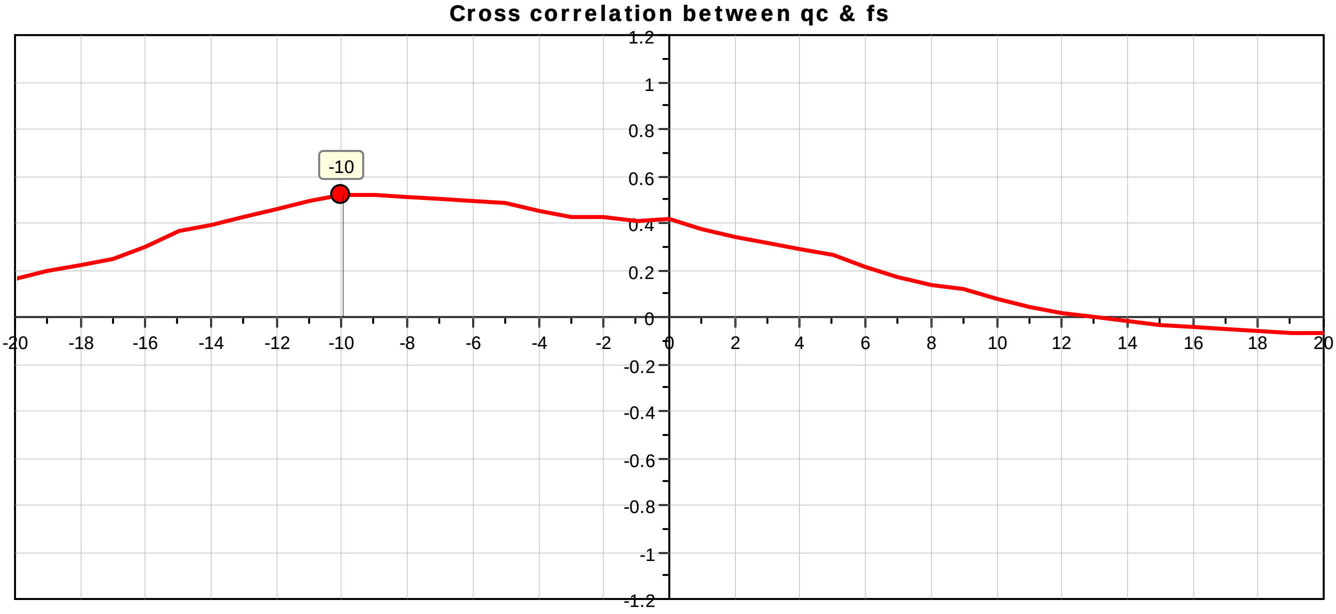
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P314CPT312
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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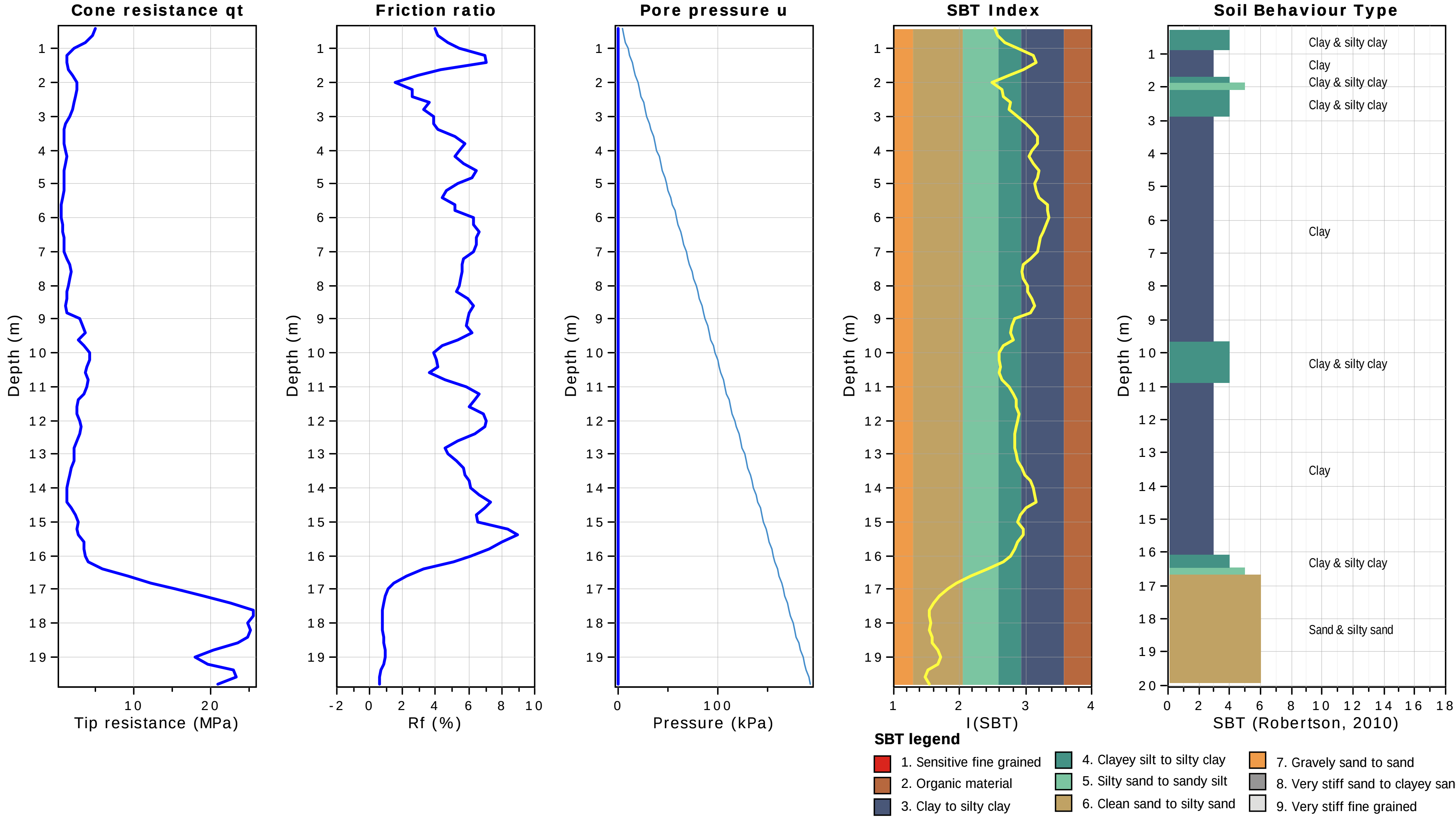
CPT: 036021P314CPT312
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



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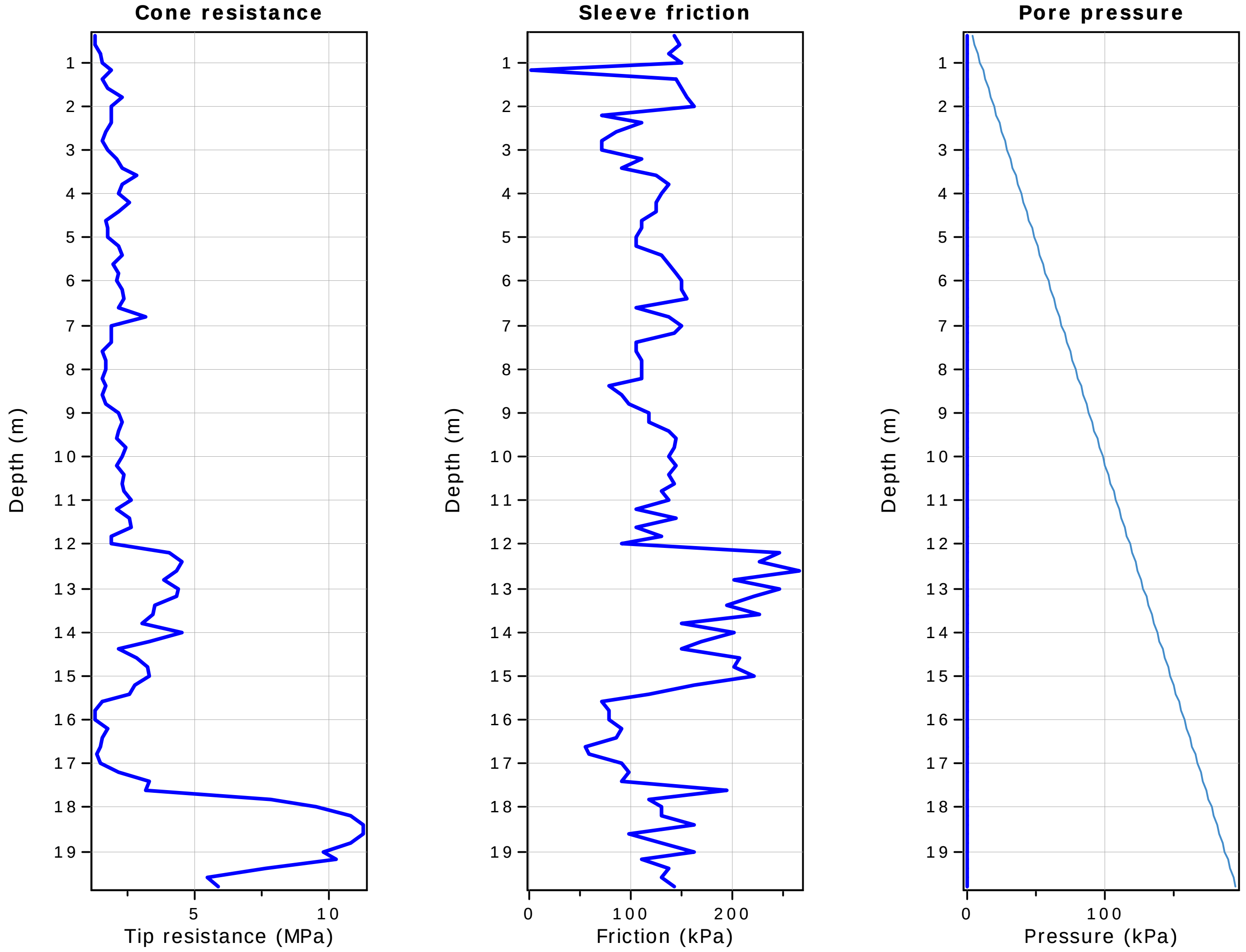
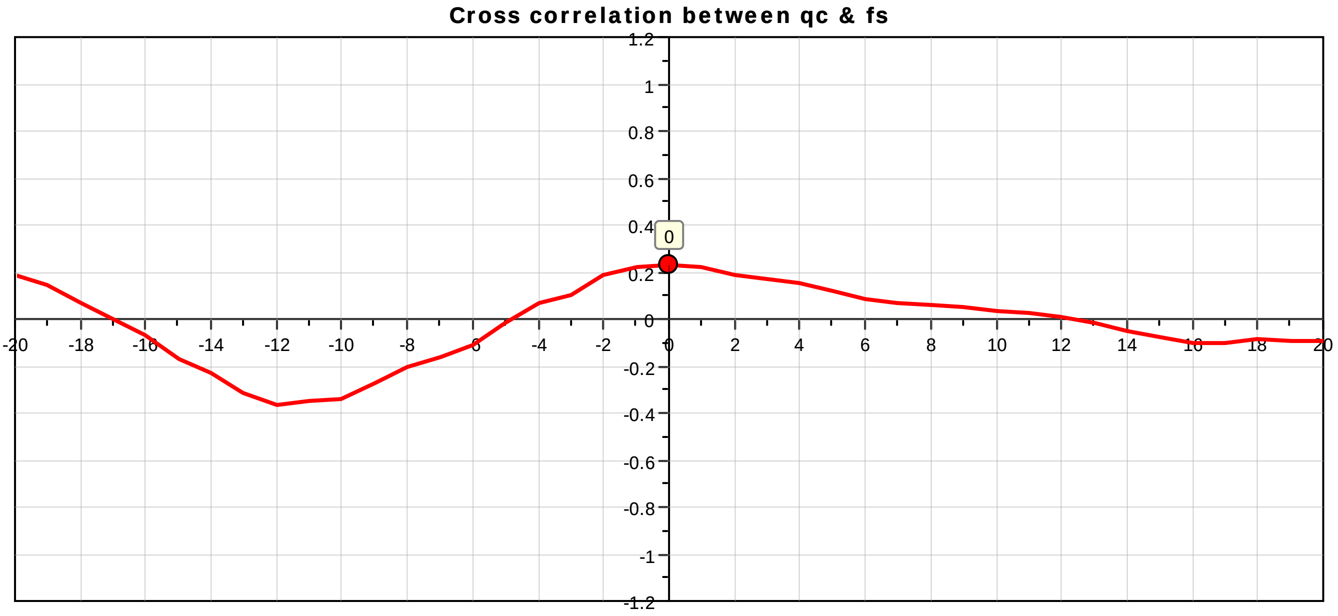
CPT: 036021P314CPT313
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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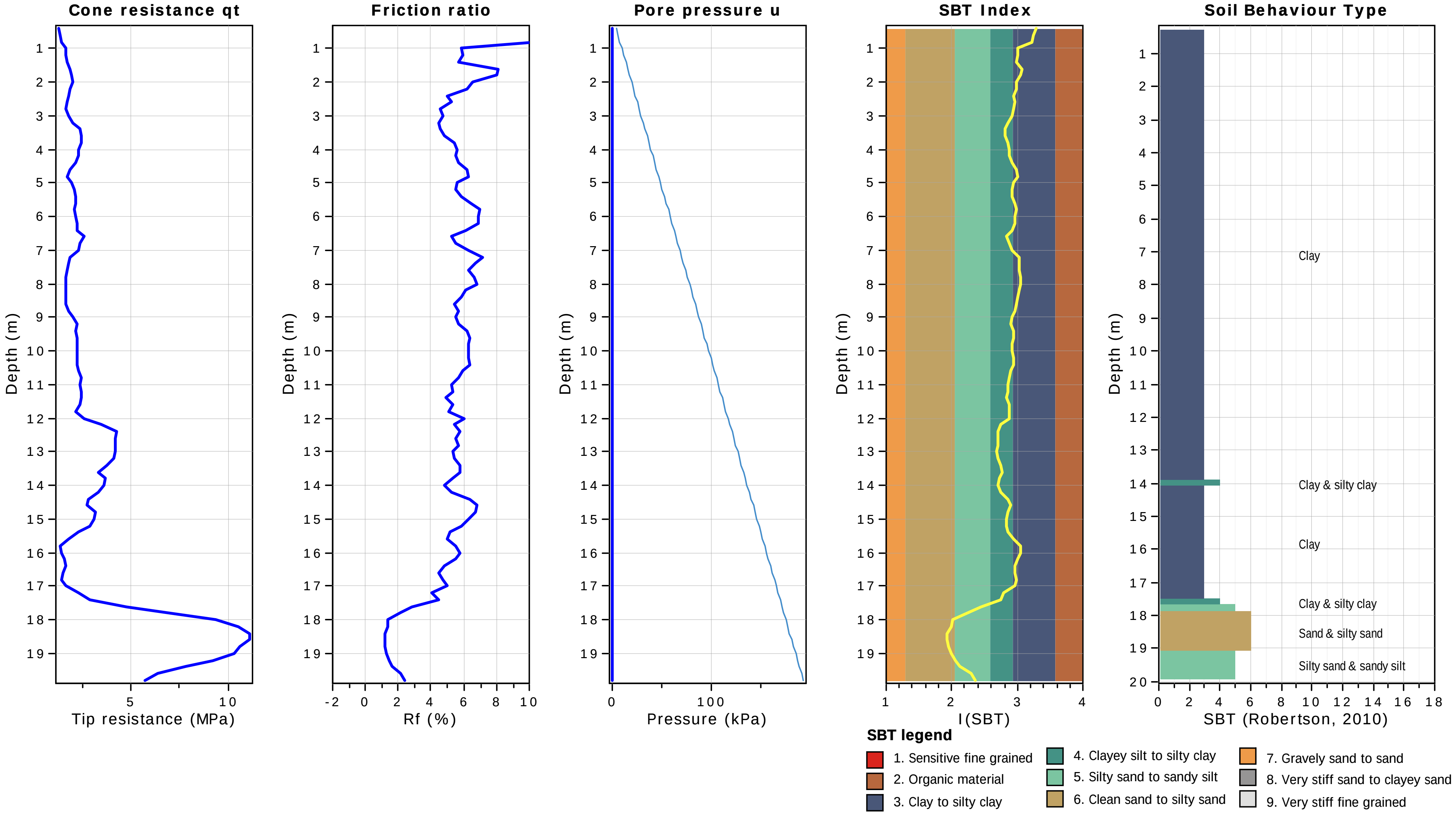
CPT: 036021P314CPT313
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

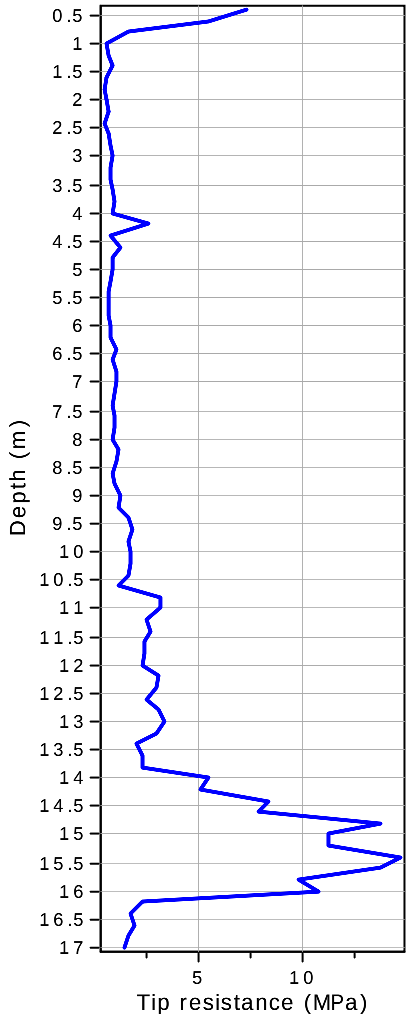
Project:
Location:



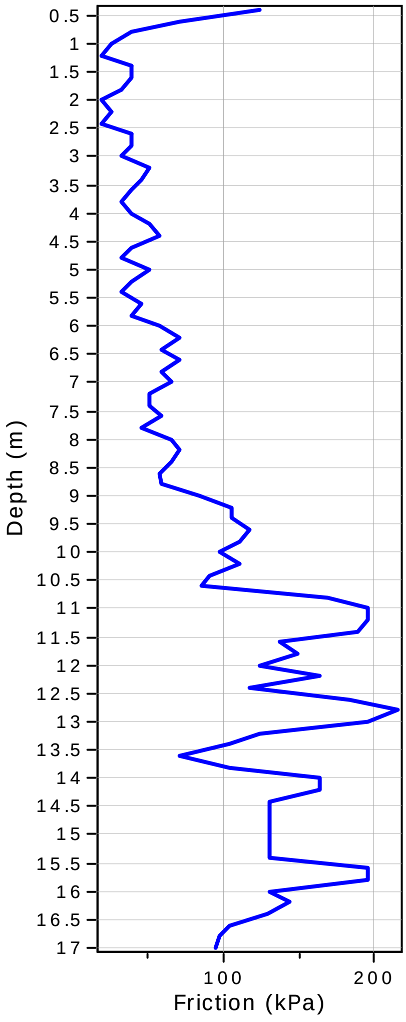
CPT: 036021P314CPT314
Total depth: 17.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

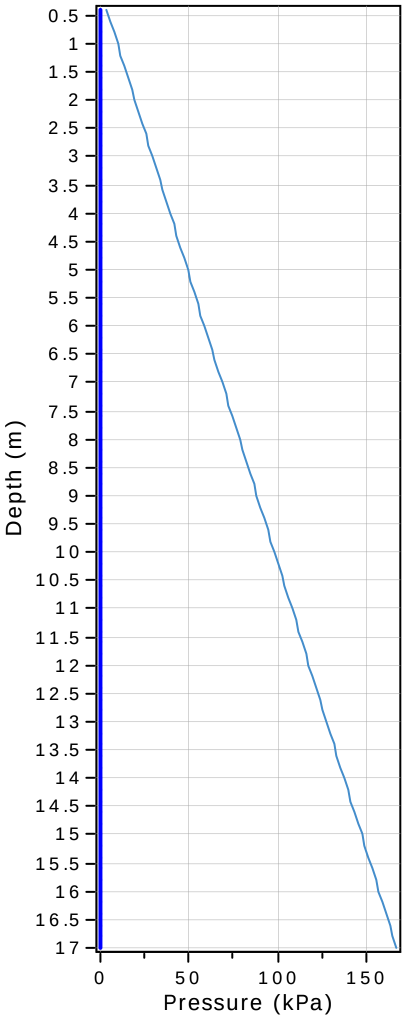
Cone resistance



Sleeve friction

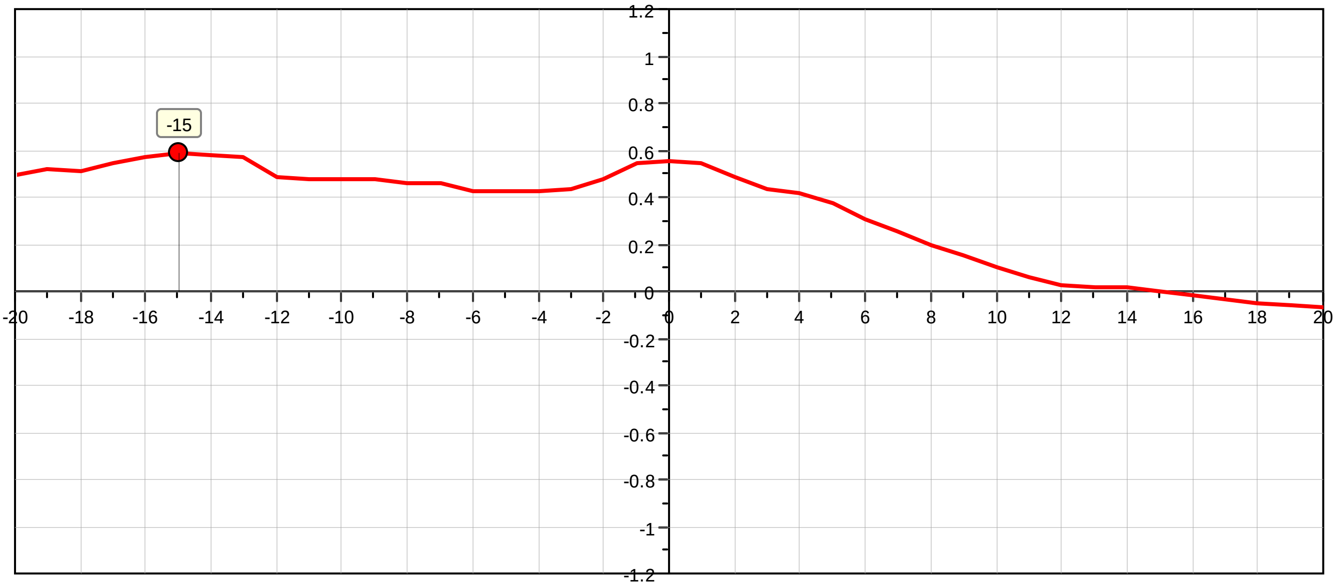


Pore pressure



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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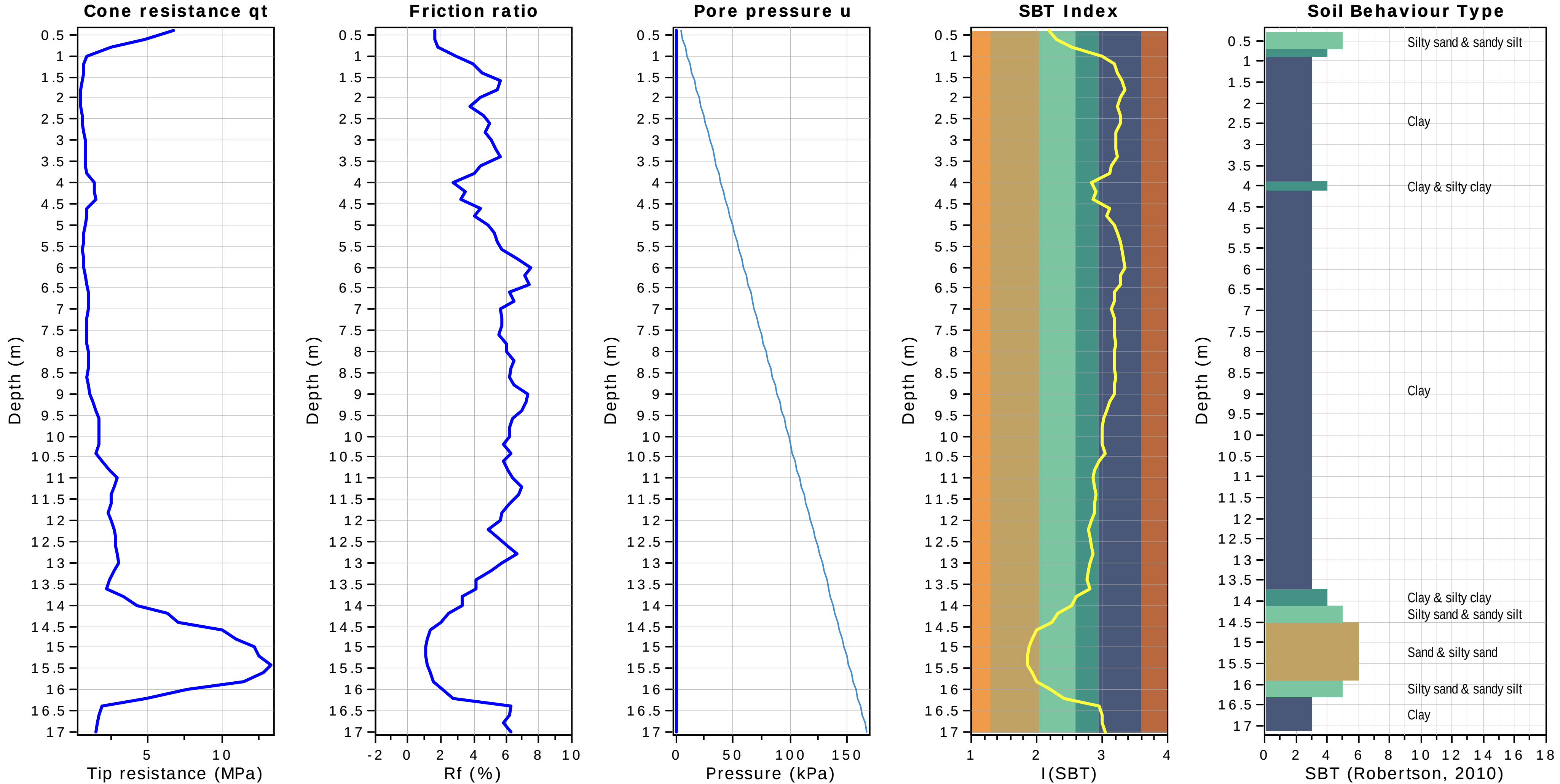
CPT: 036021P314CPT314
Total depth: 17.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟨 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

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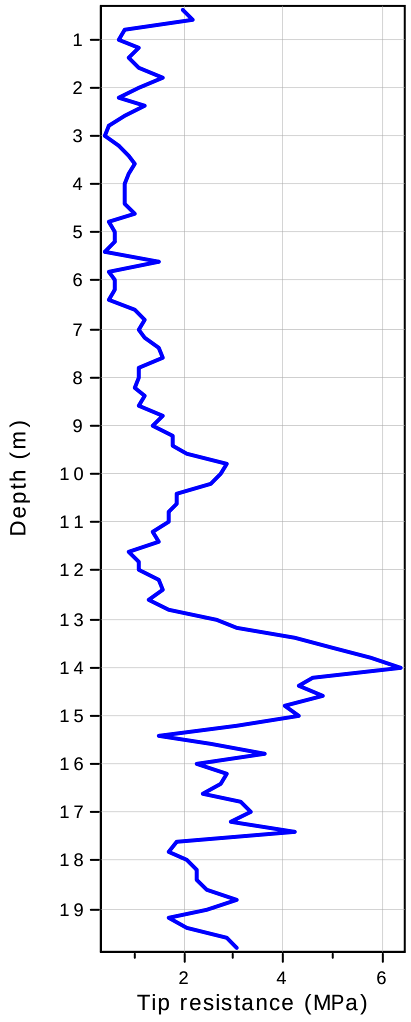
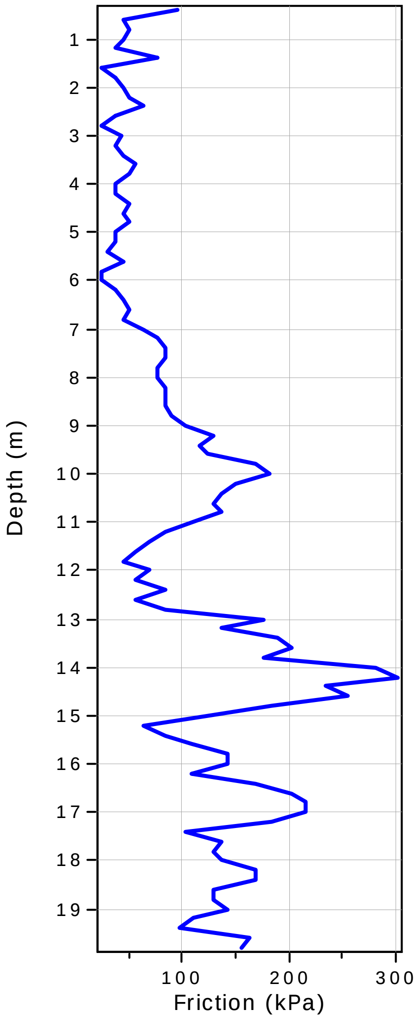
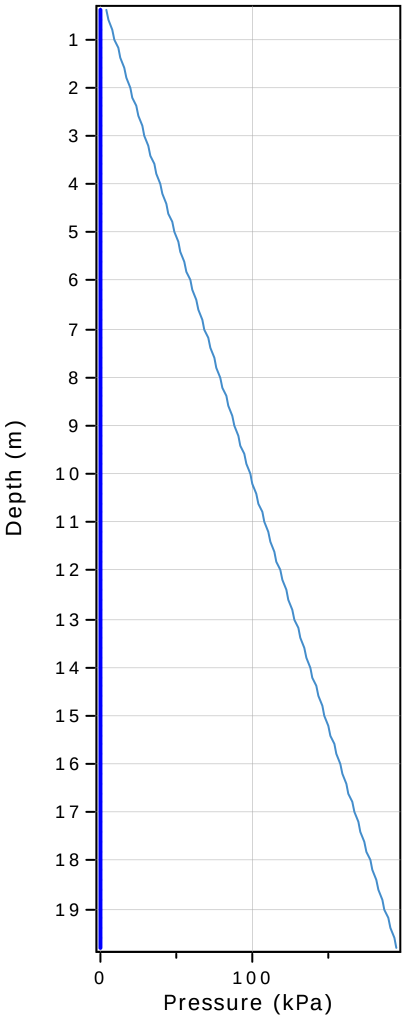
CPT: 036021P316CPT315
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

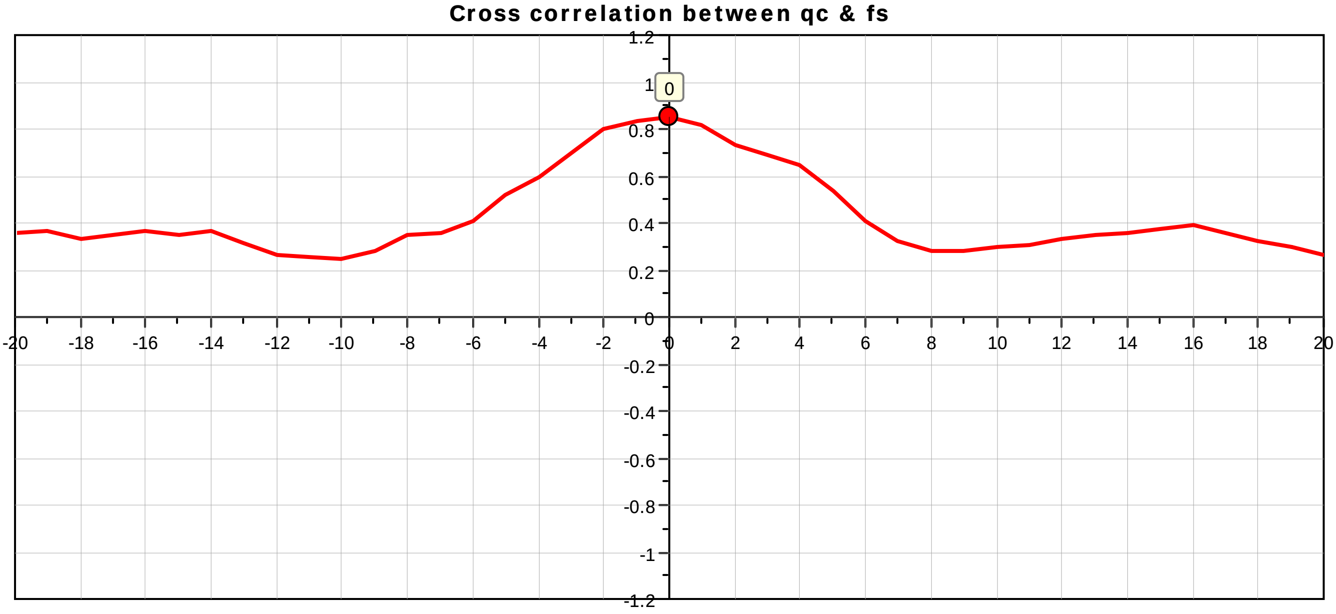
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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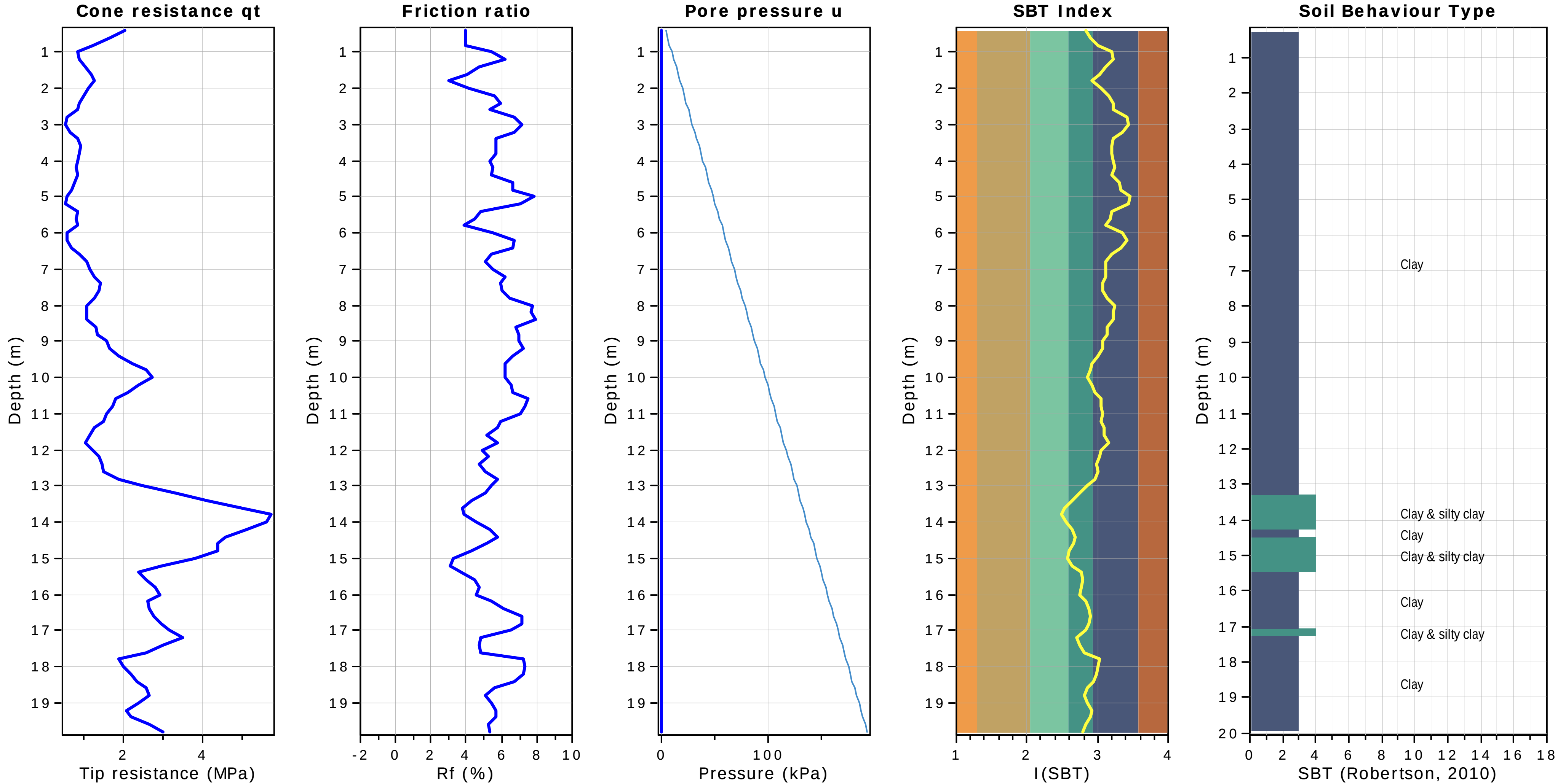
CPT: 036021P316CPT315
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



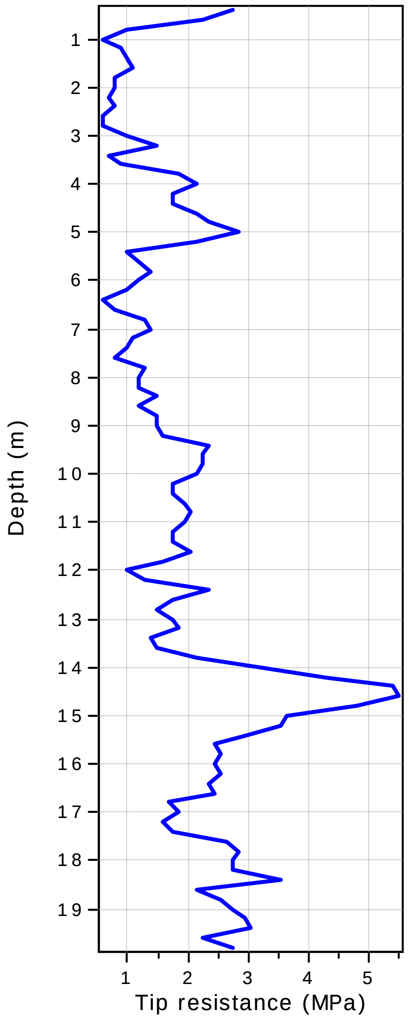
SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟫 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬛ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

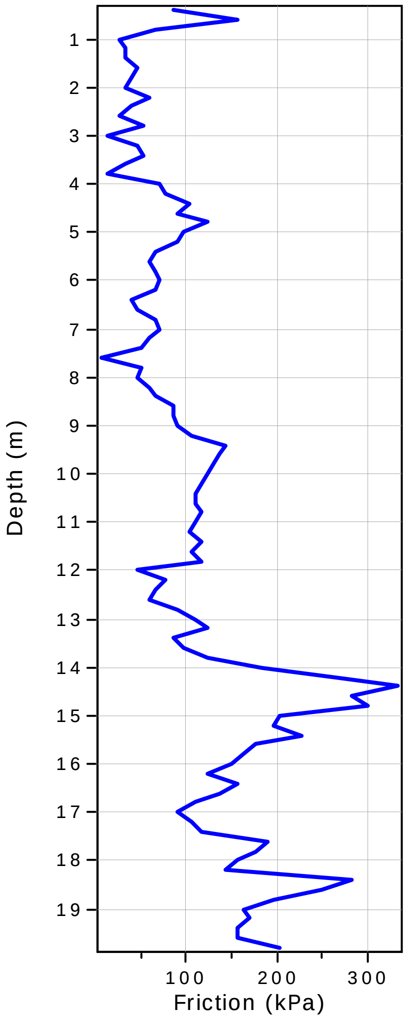
CPT: 036021P316CPT316
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

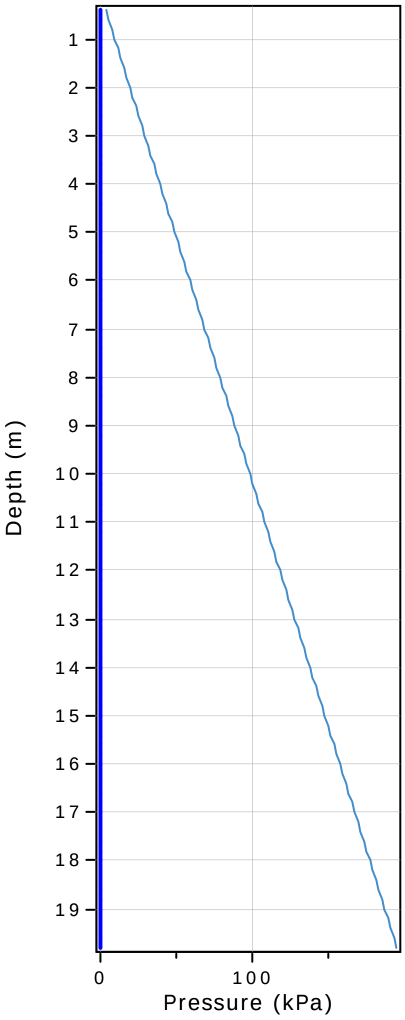
Cone resistance



Sleeve friction

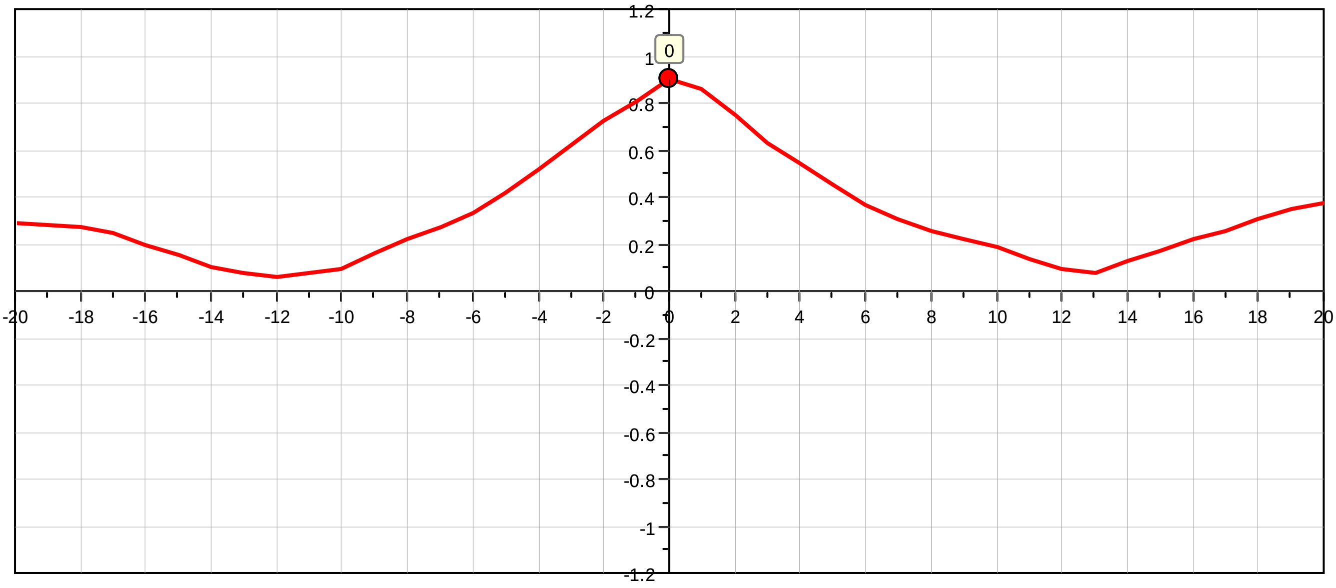


Pore pressure



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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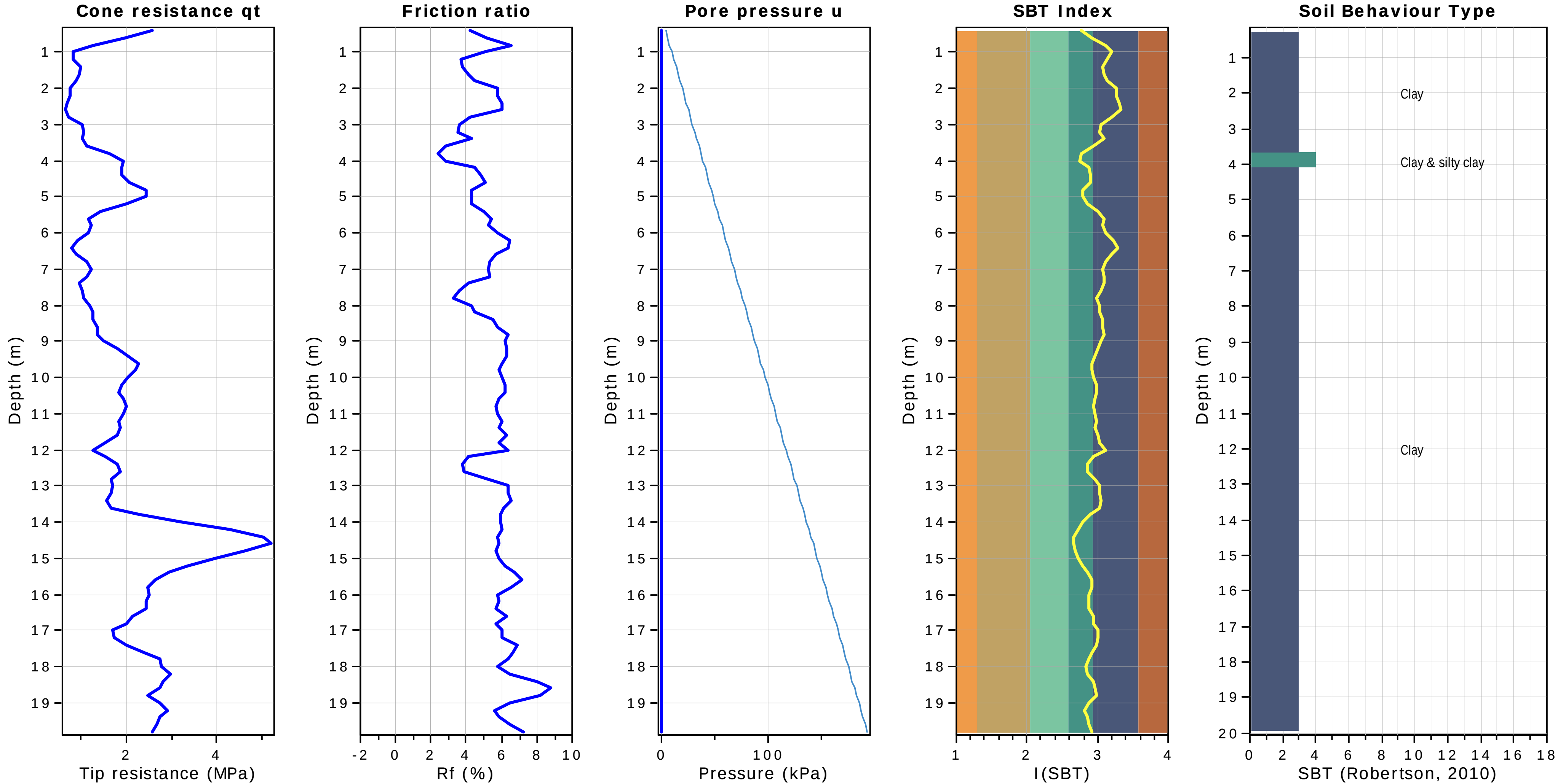
CPT: 036021P316CPT316
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

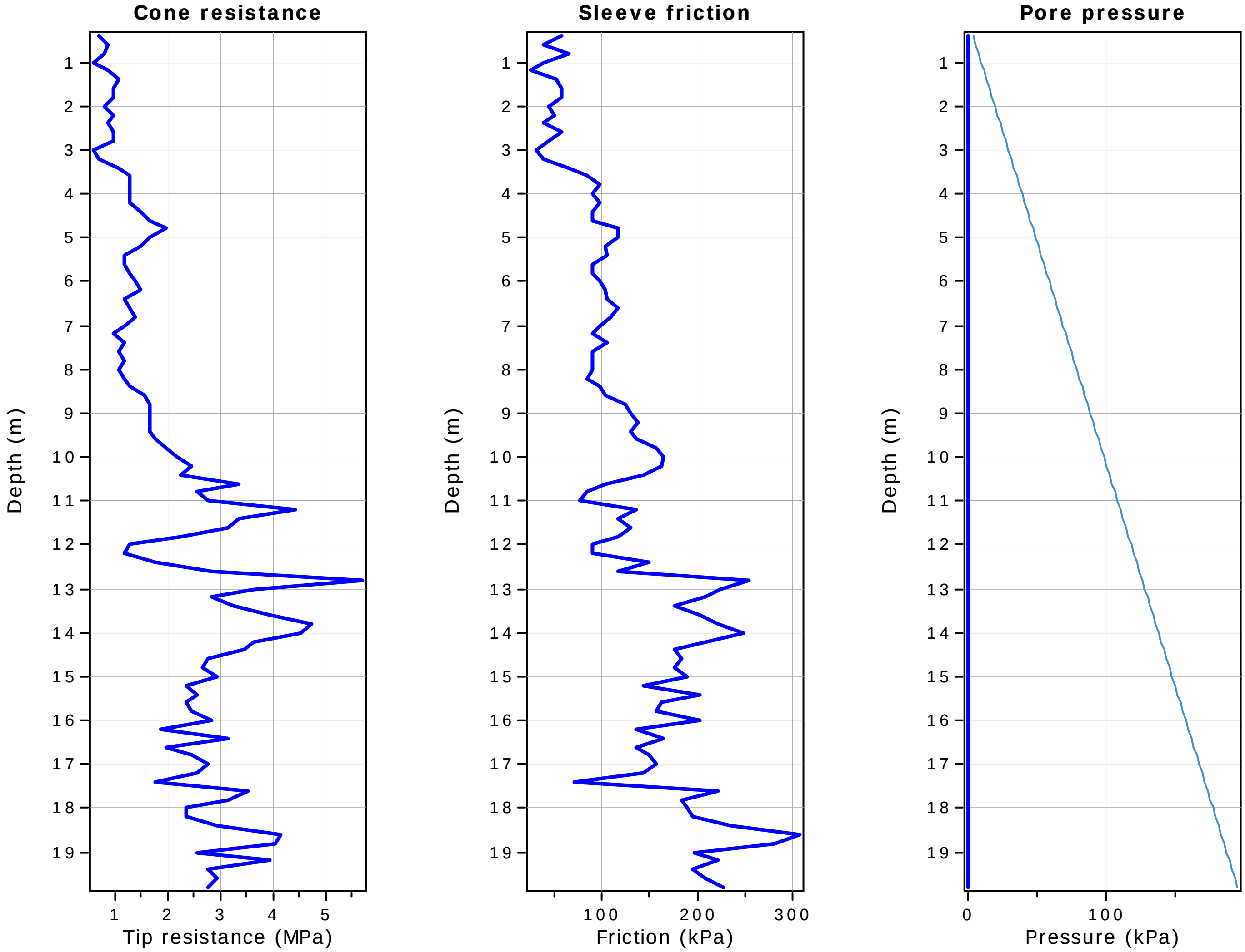


SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P317CPT317
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



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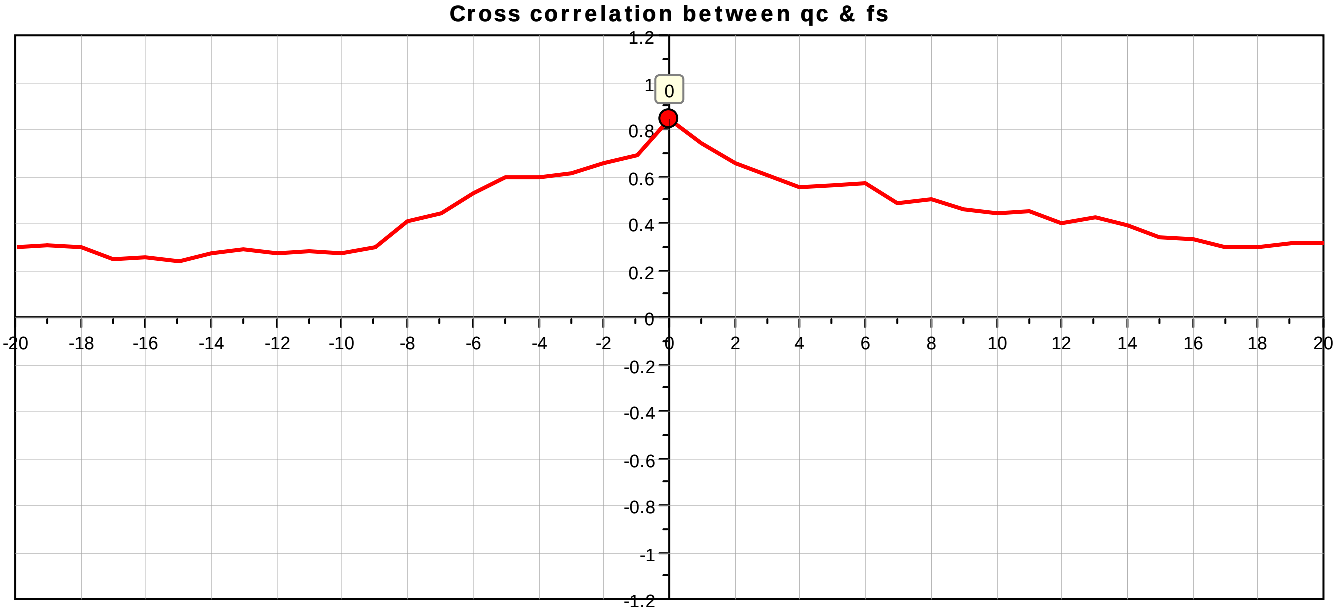

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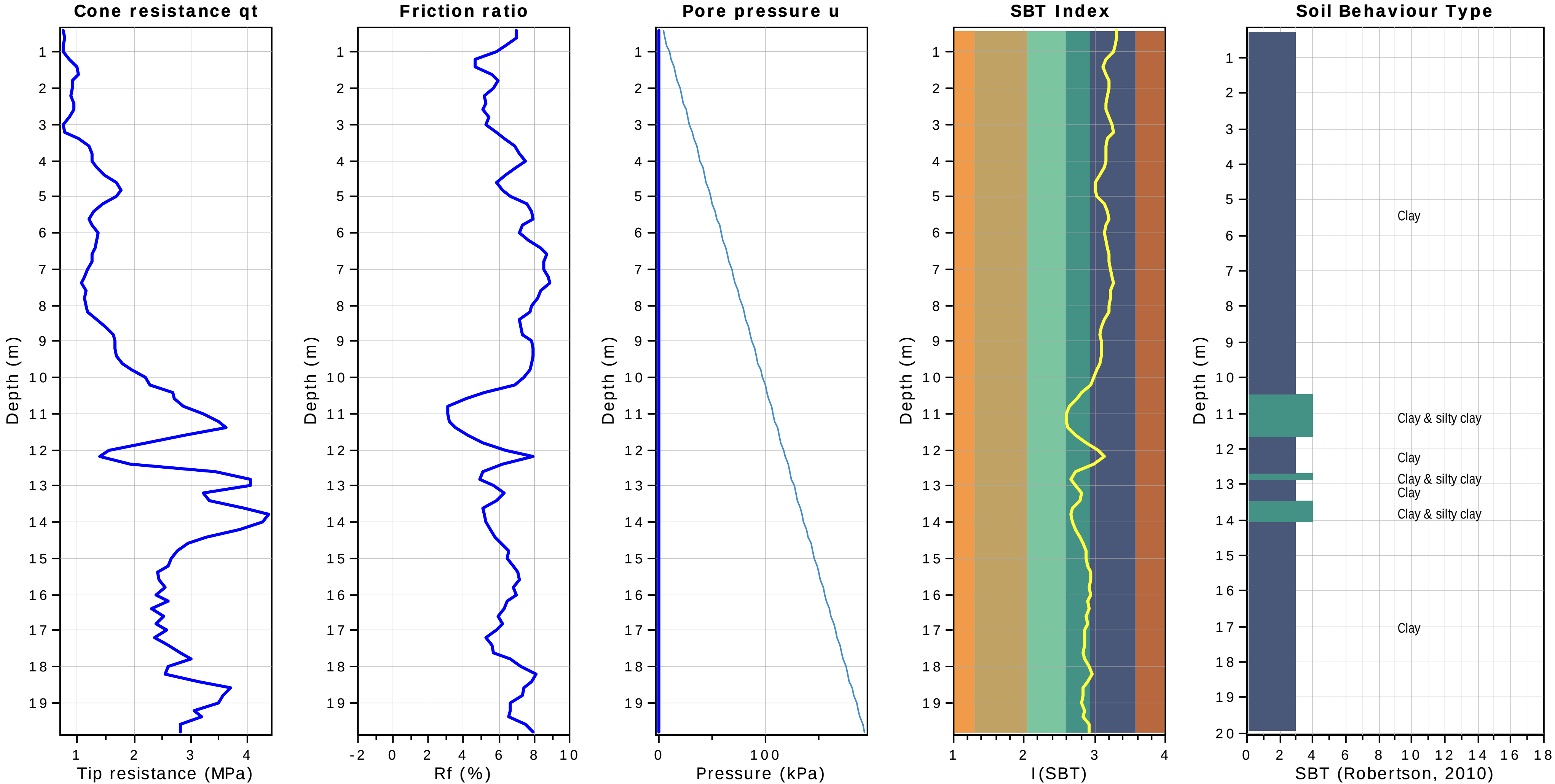
CPT: 036021P317CPT317
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

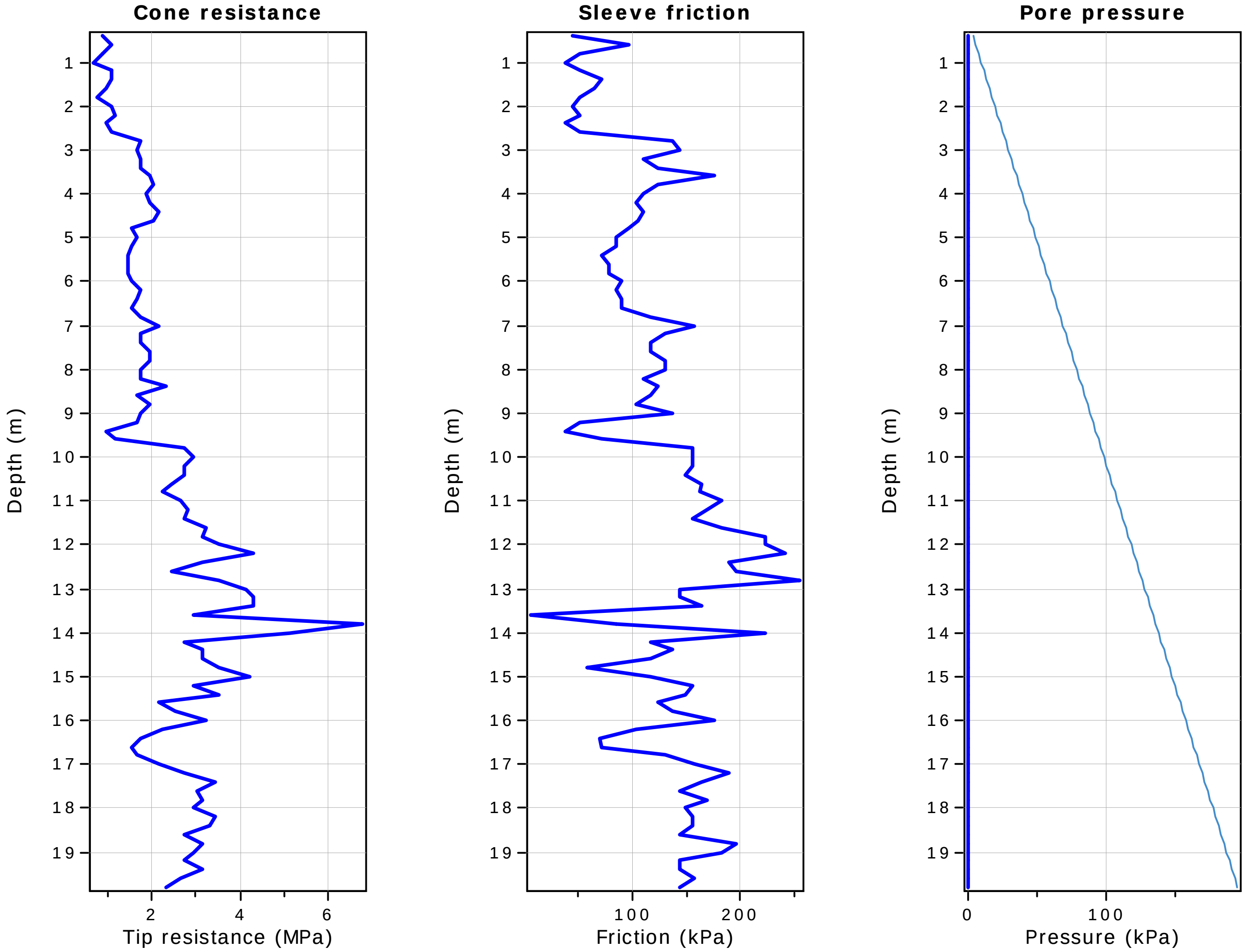


SBT legend

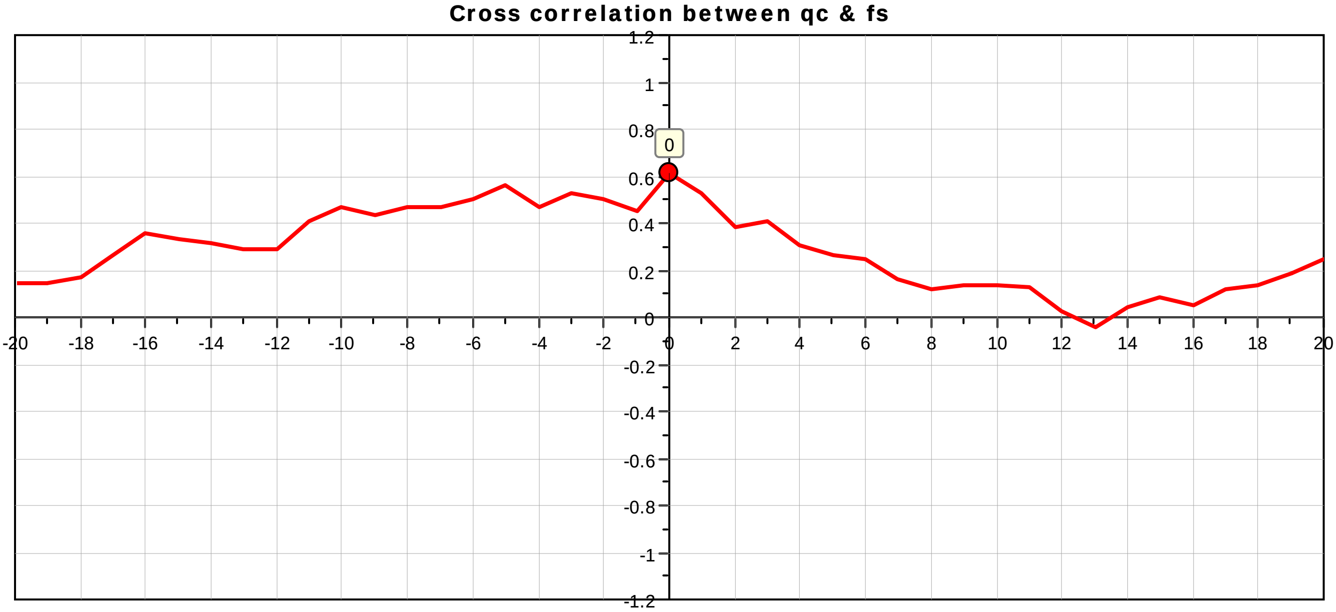
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P318CPT318
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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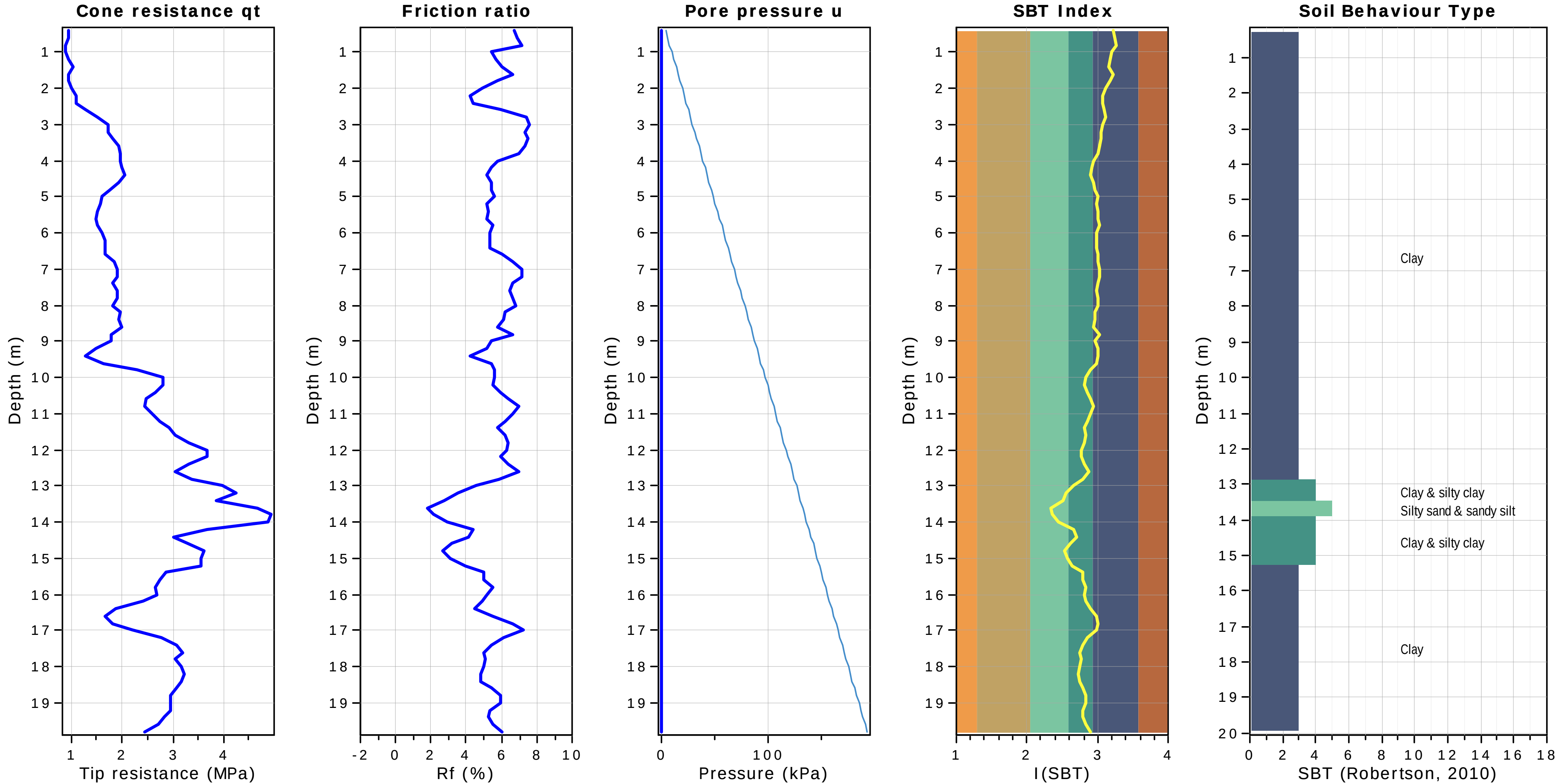
CPT: 036021P318CPT318
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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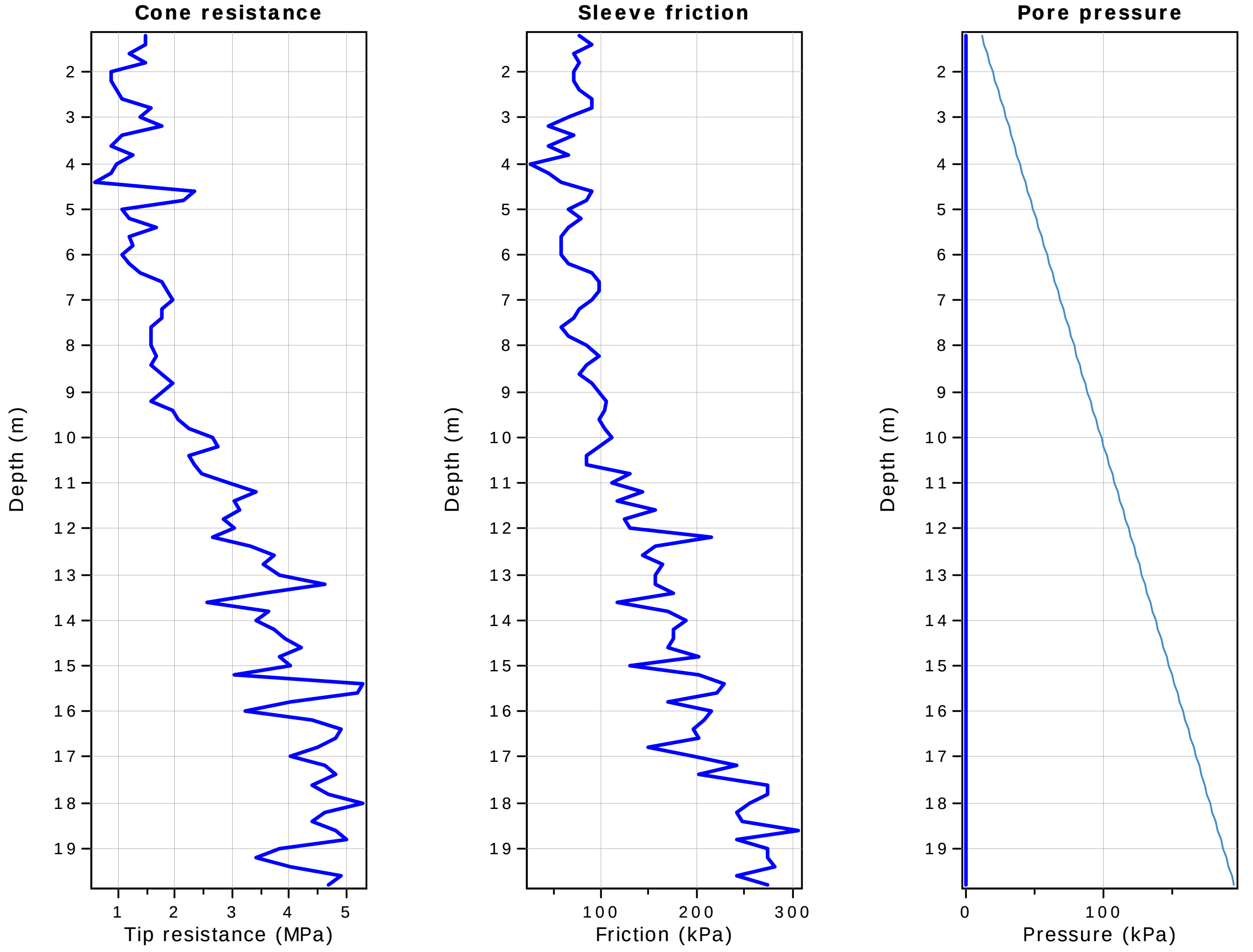
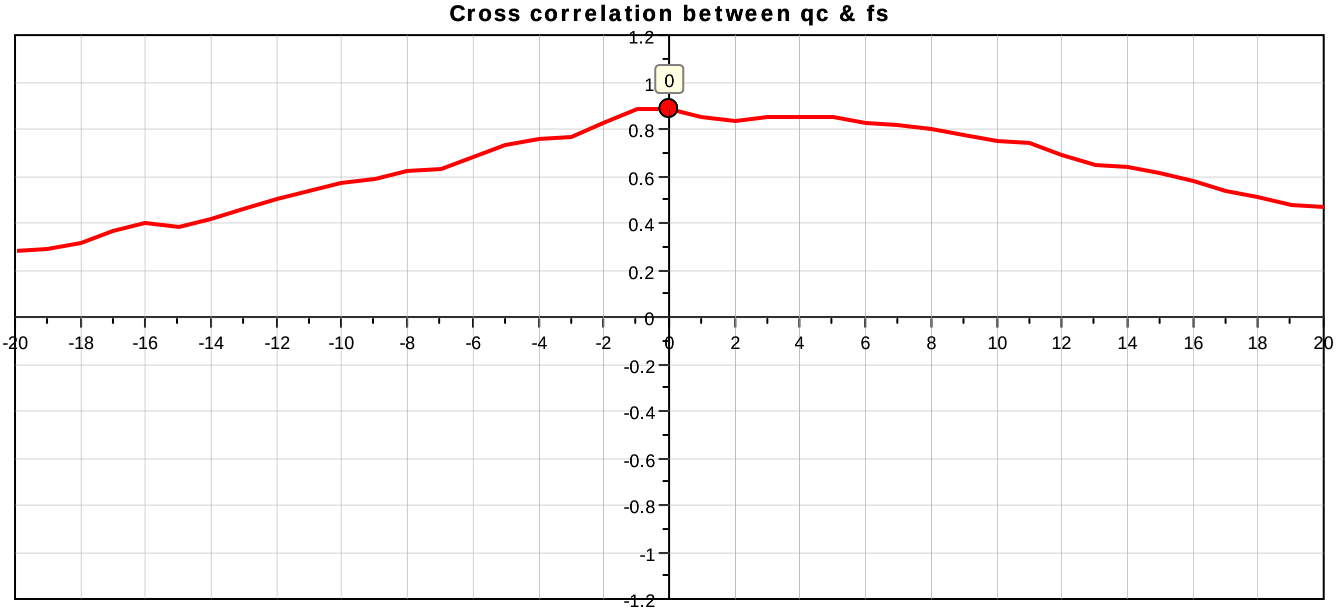
CPT: 036021P319CPT319
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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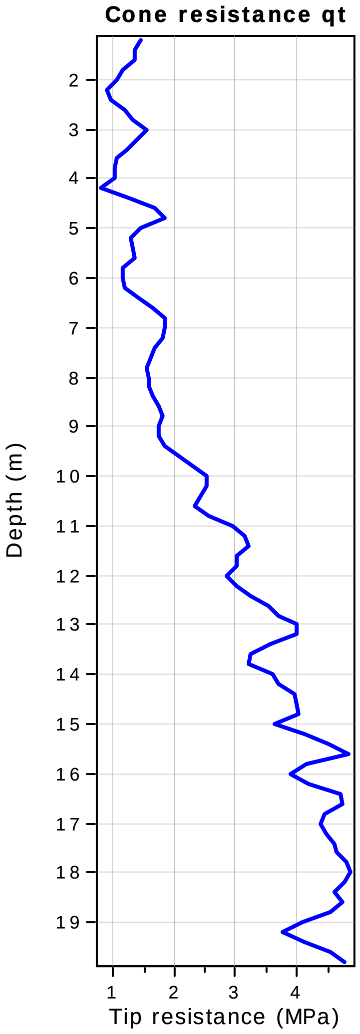
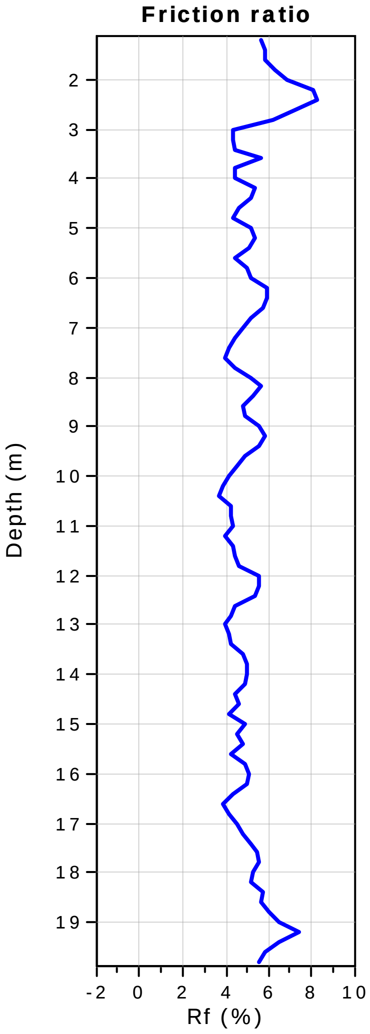
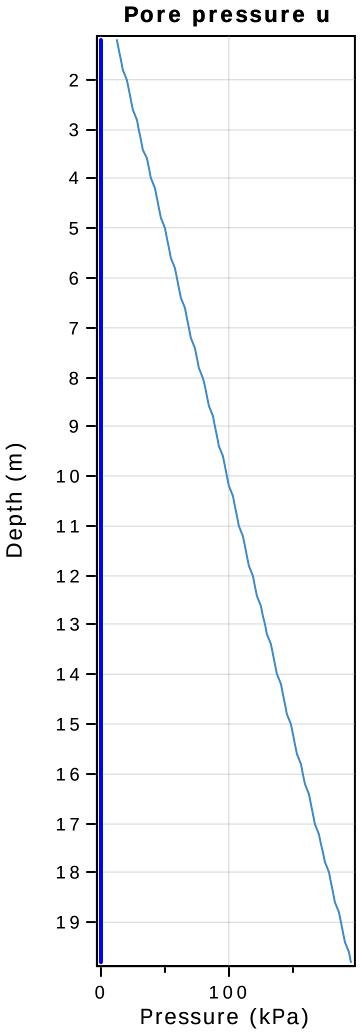
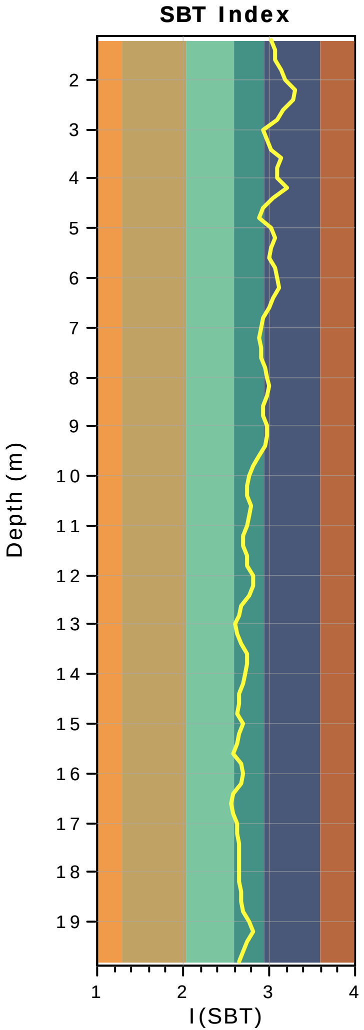
CPT: 036021P319CPT319
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

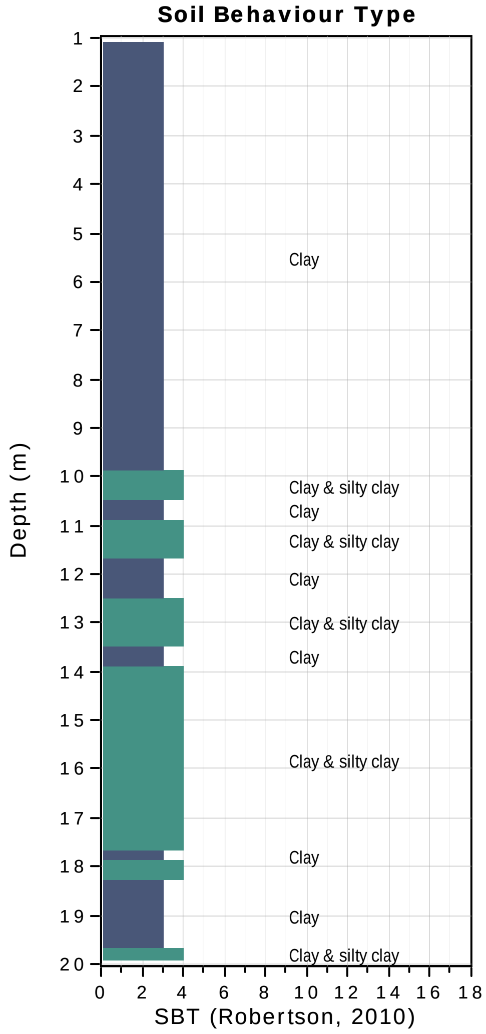
Project:
Location:









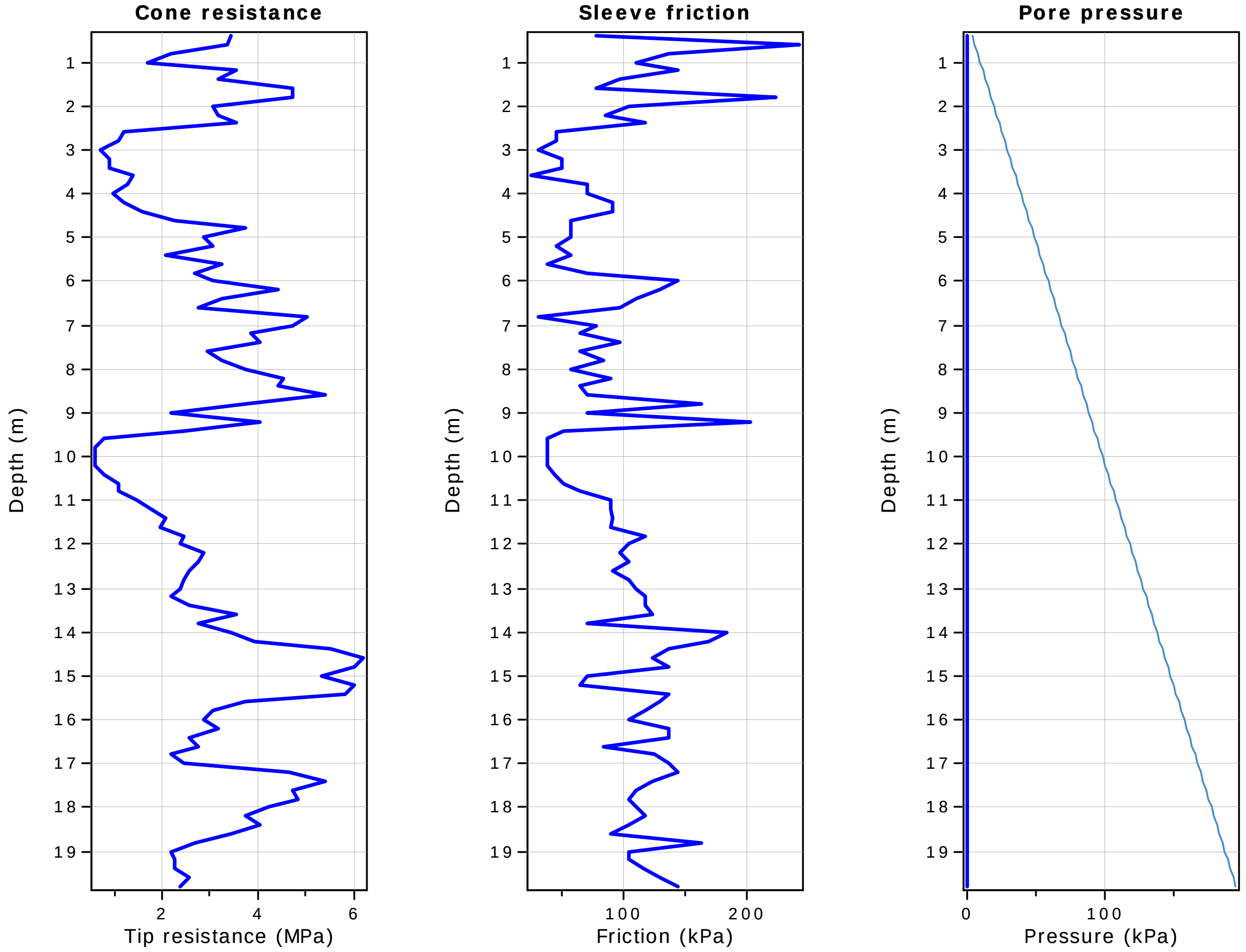


SBT legend

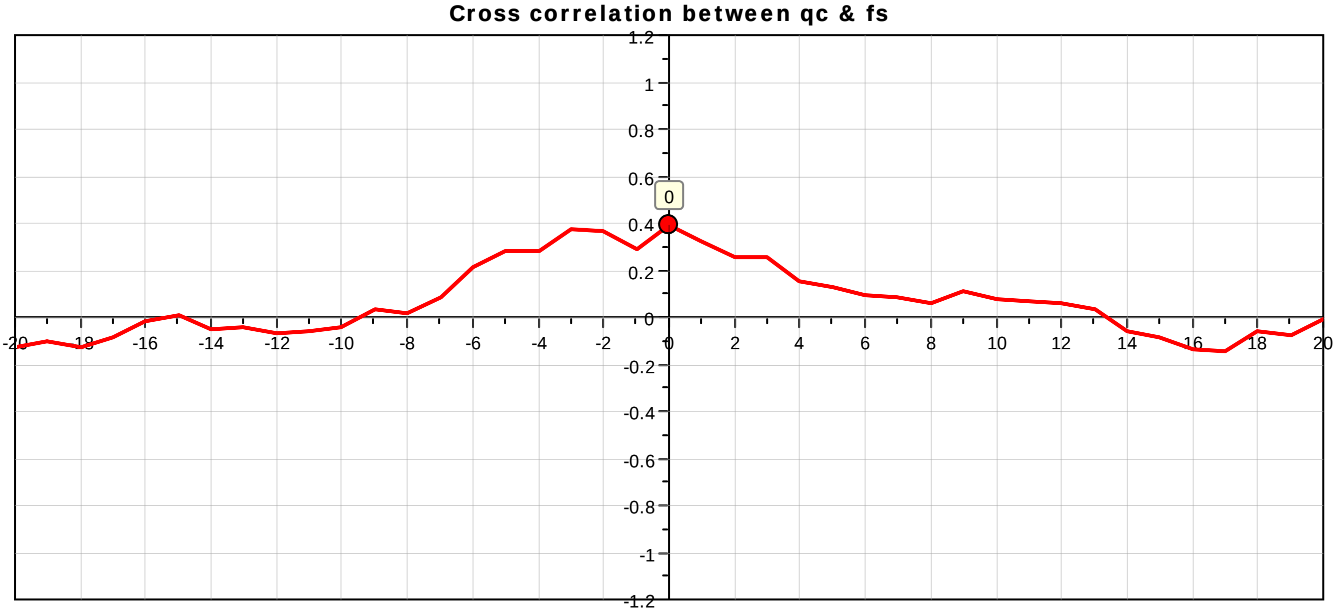
🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟫 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

CPT: 036021P325CPT320
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

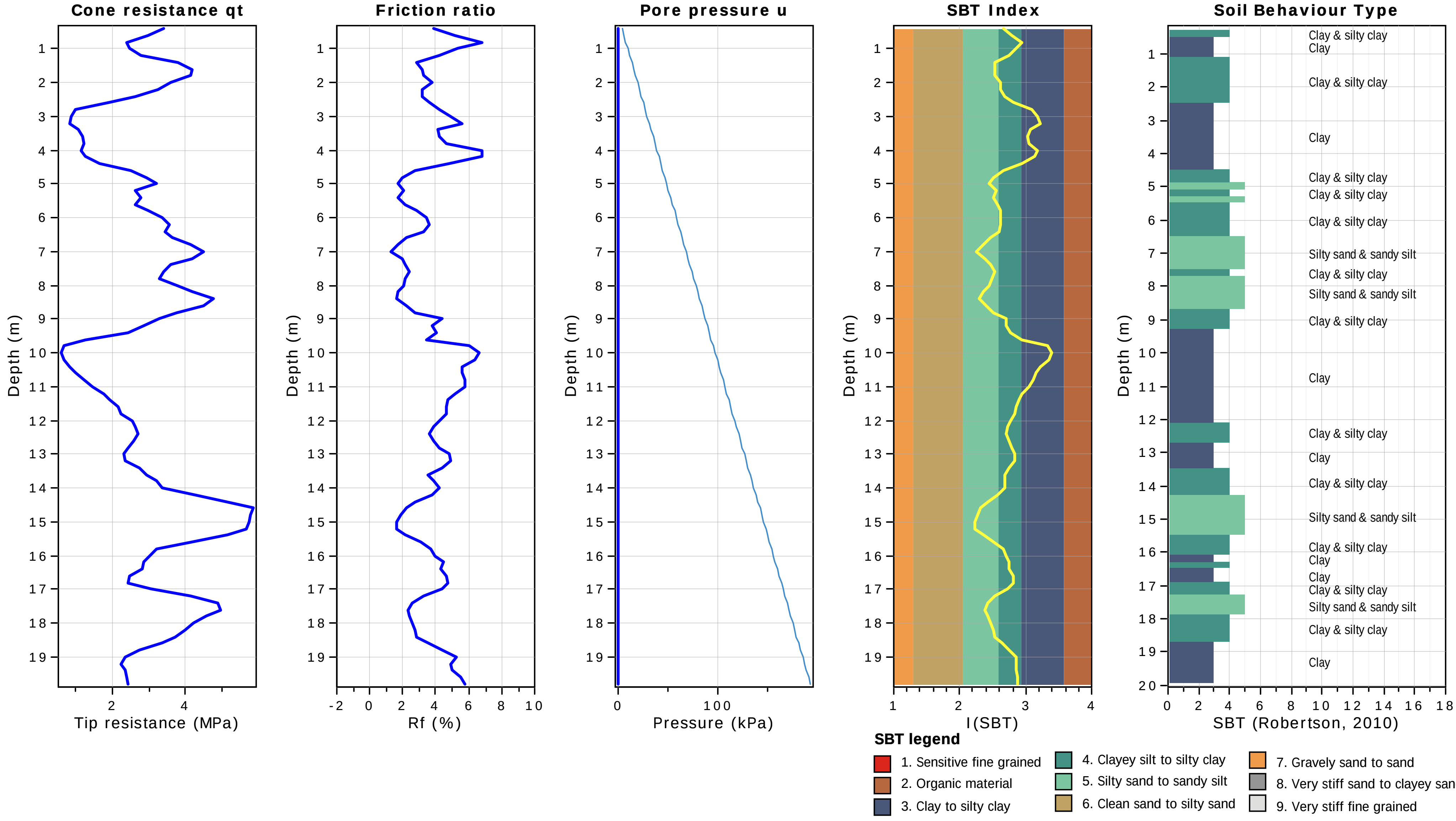


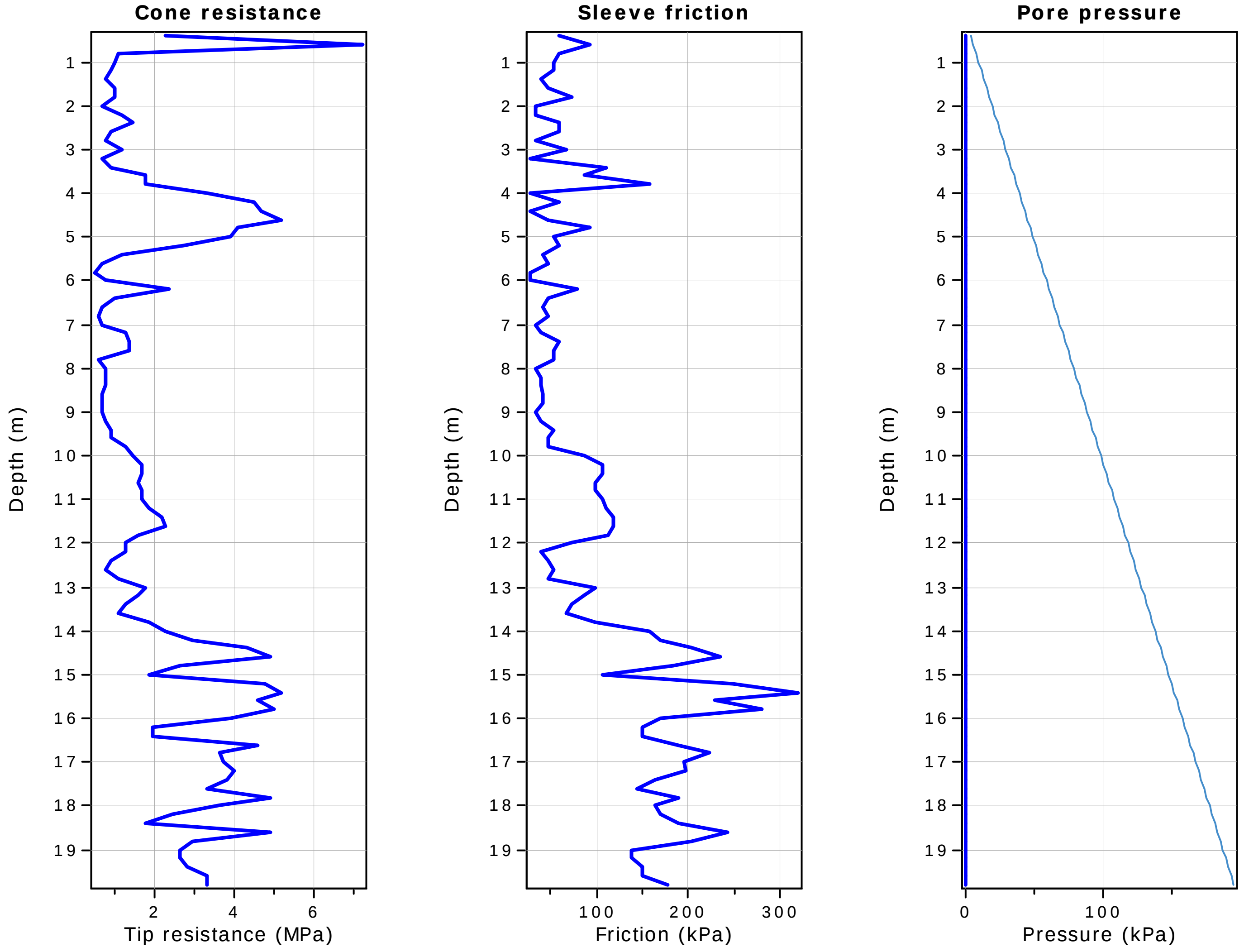
The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



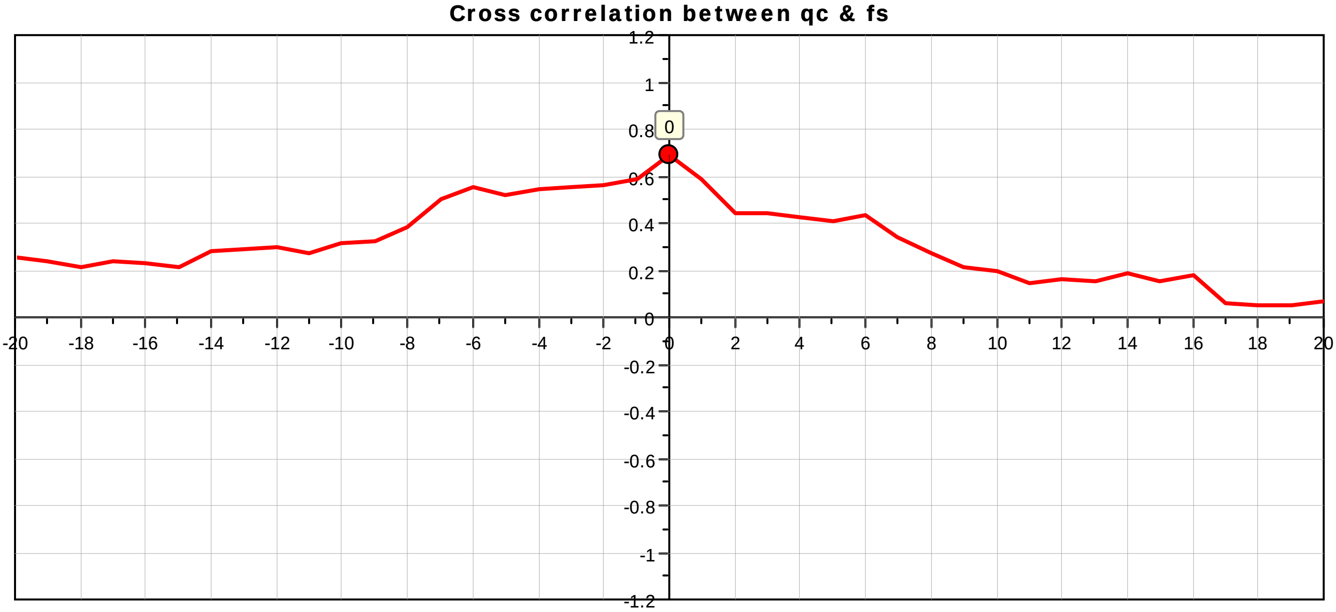
CPT: 036021P325CPT320
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



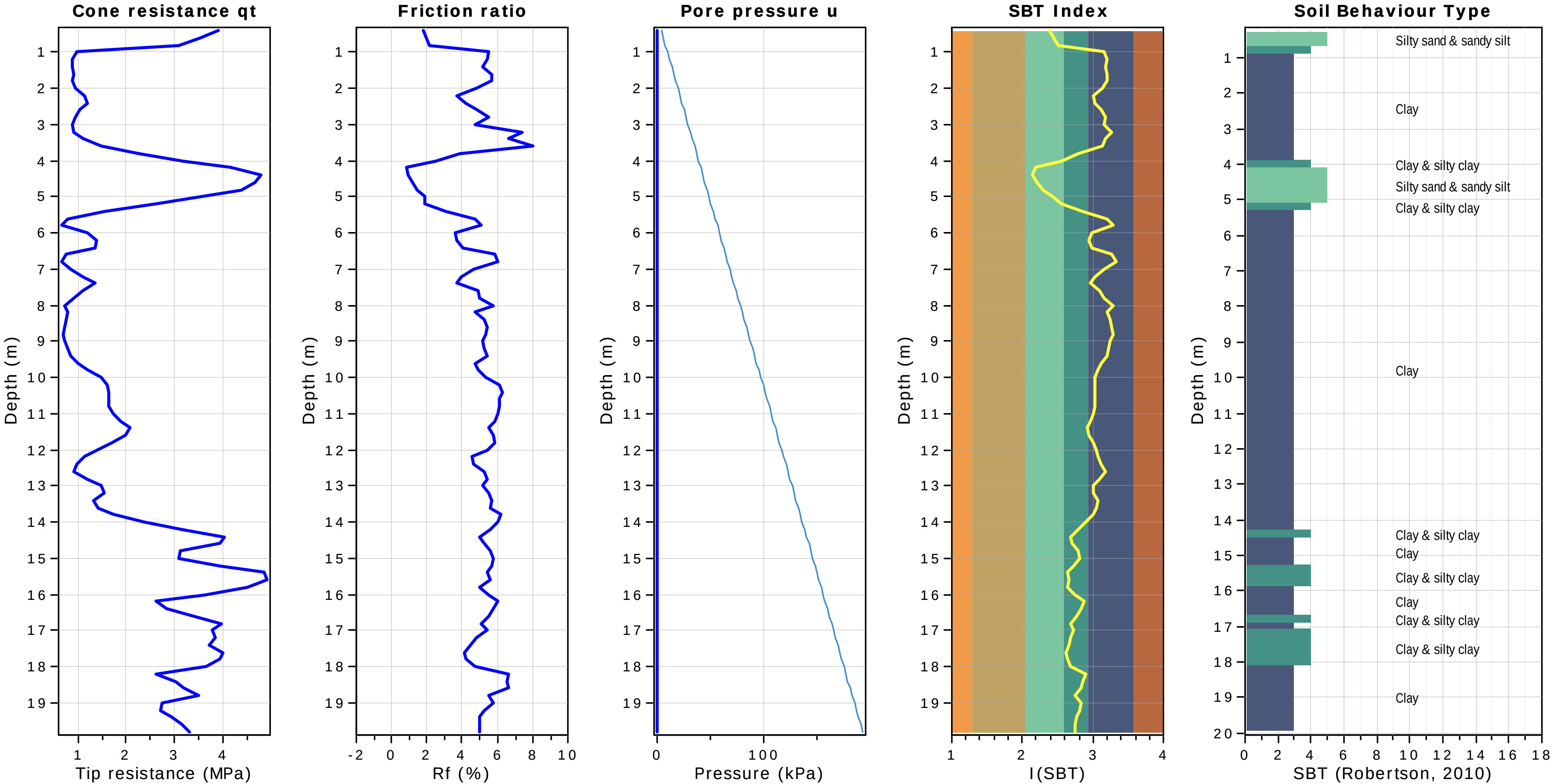


The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT: 036021P325CPT321
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

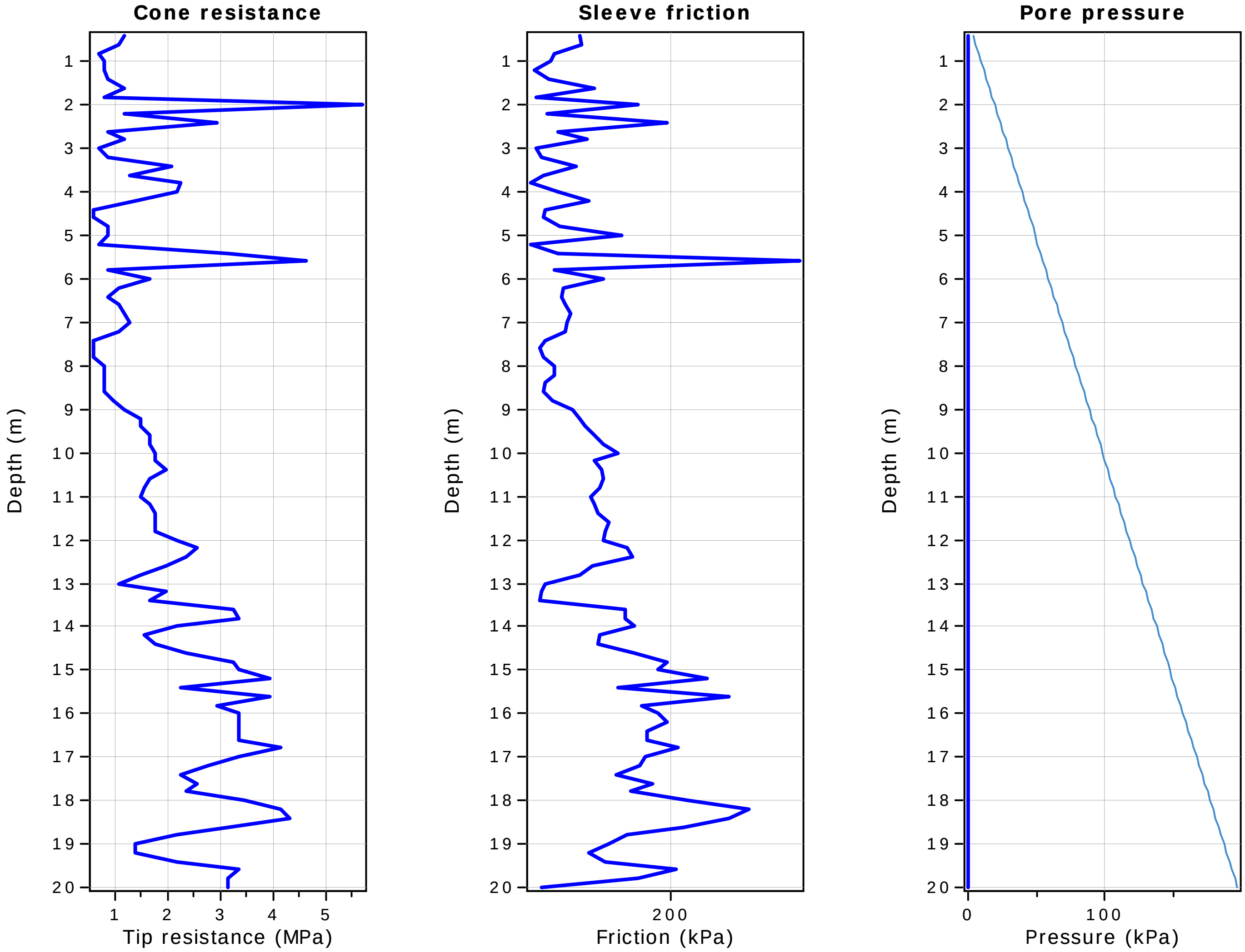


SBT legend

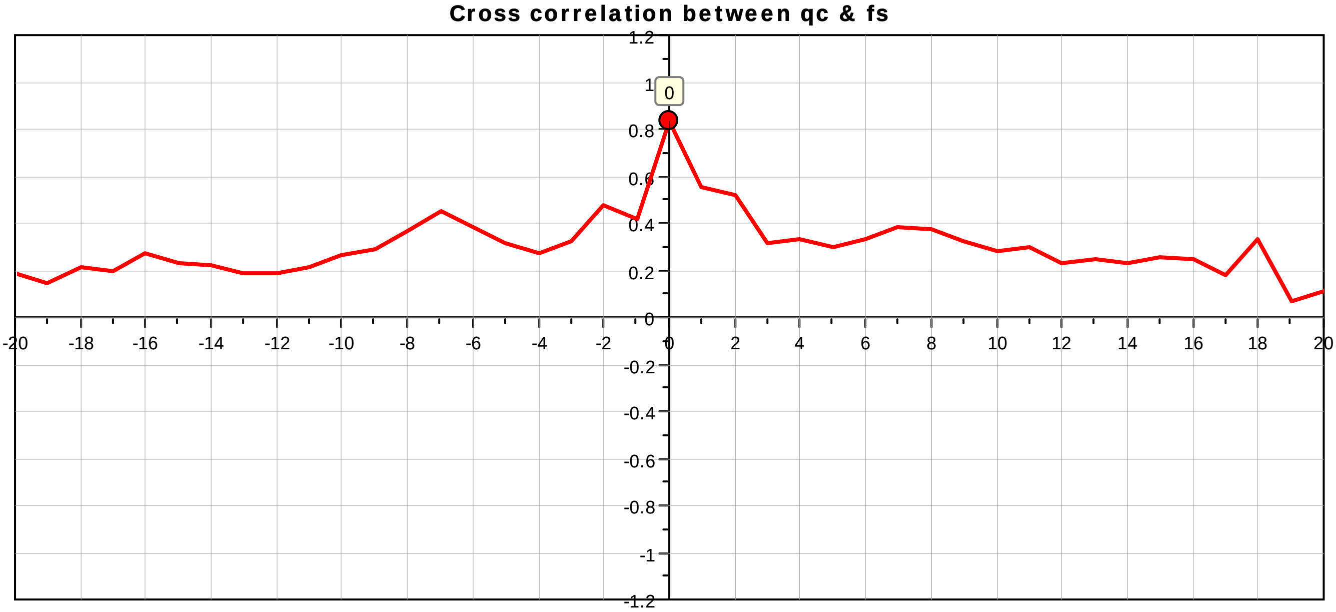
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬛ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

CPT: 036021P325CPT322
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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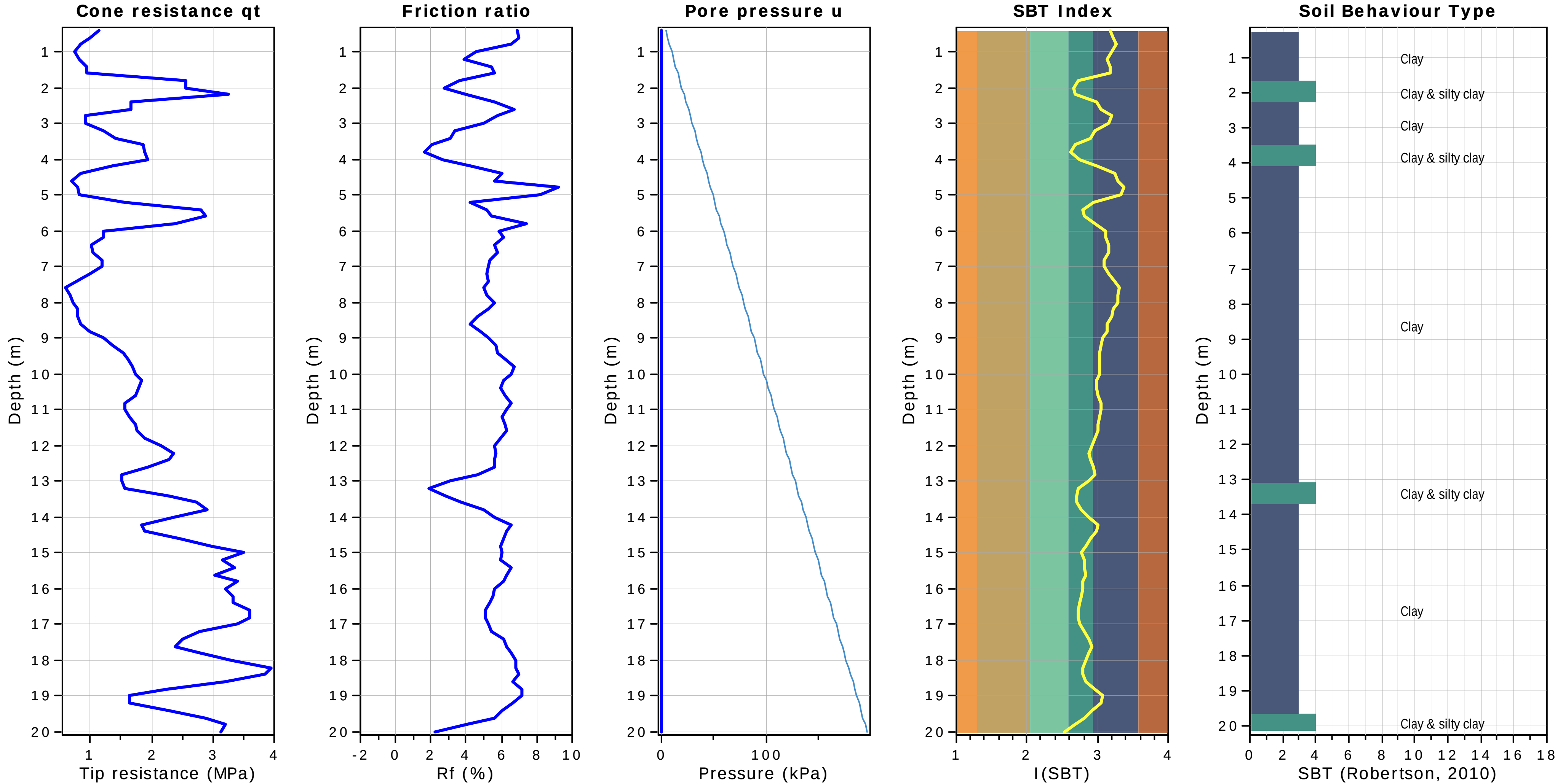
CPT: 036021P325CPT322
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



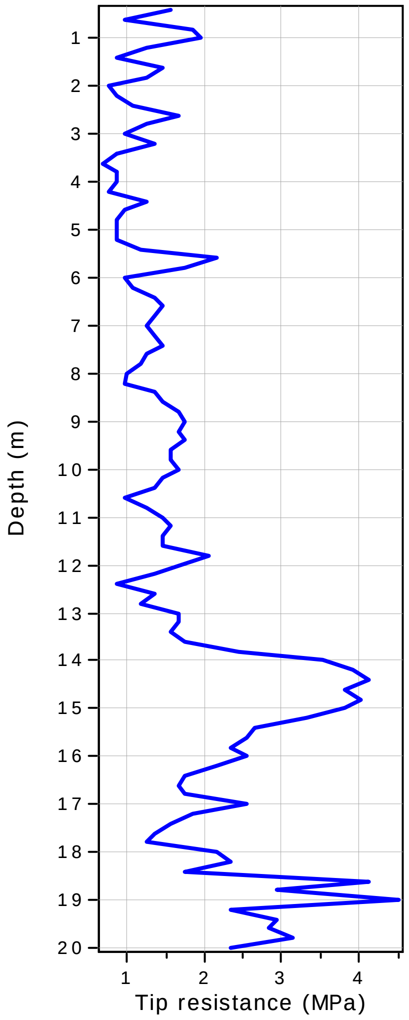
SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

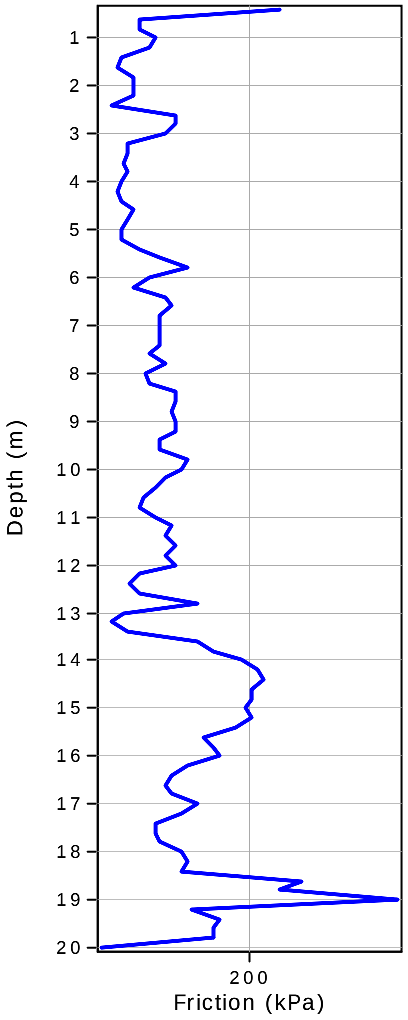
CPT: 036021P325CPT323
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

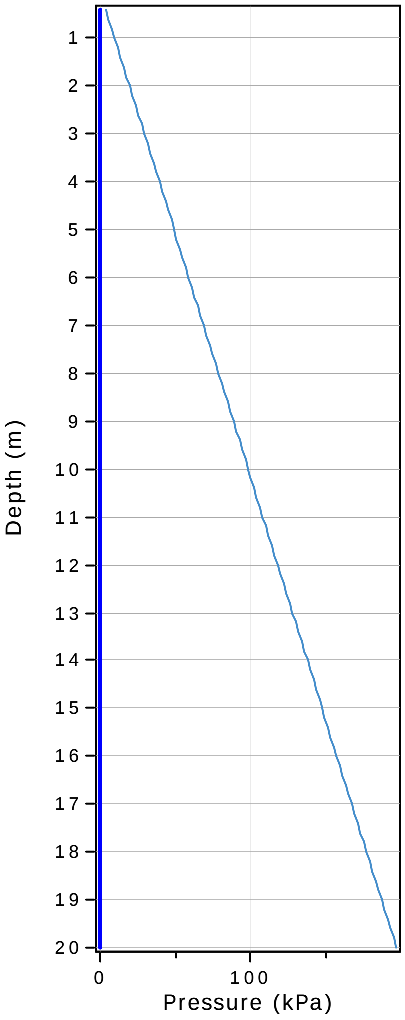
Cone resistance



Sleeve friction

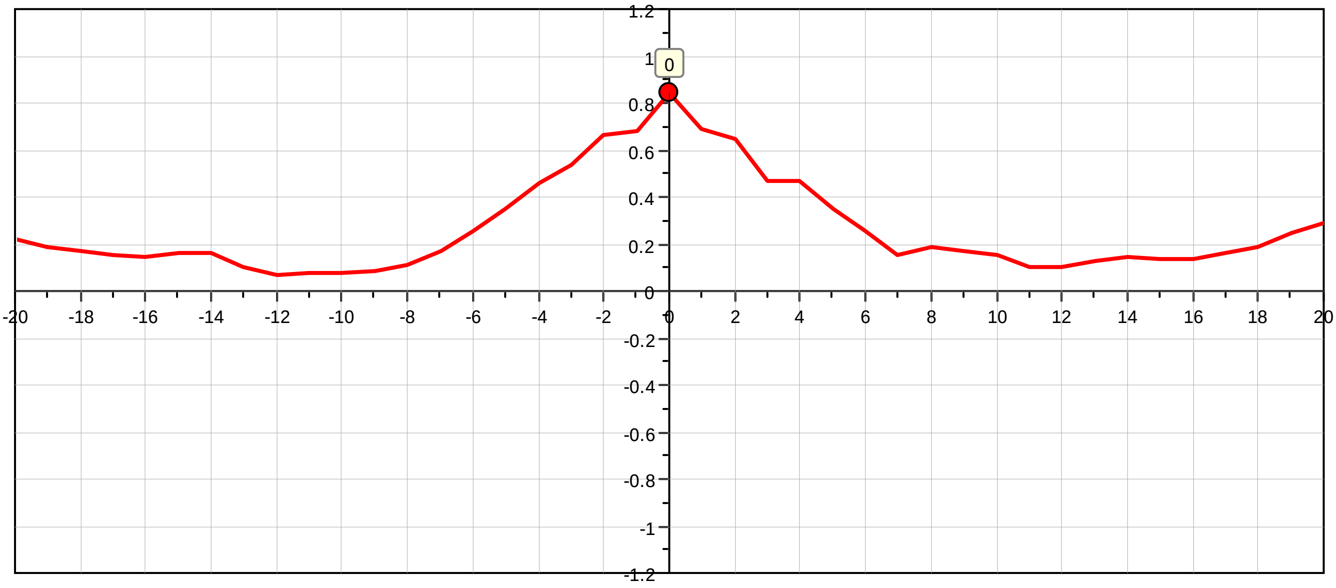


Pore pressure



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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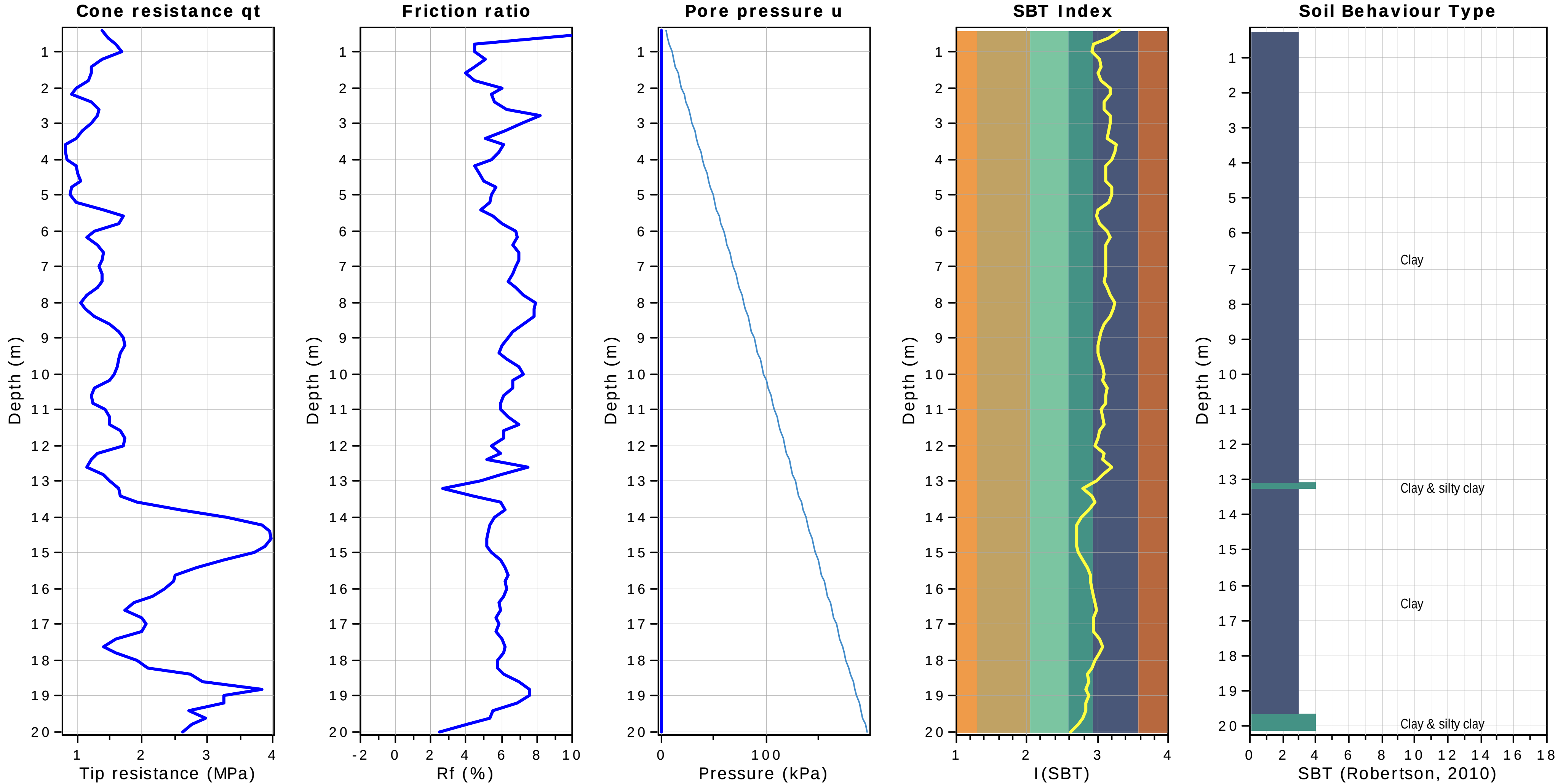
CPT: 036021P325CPT323
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

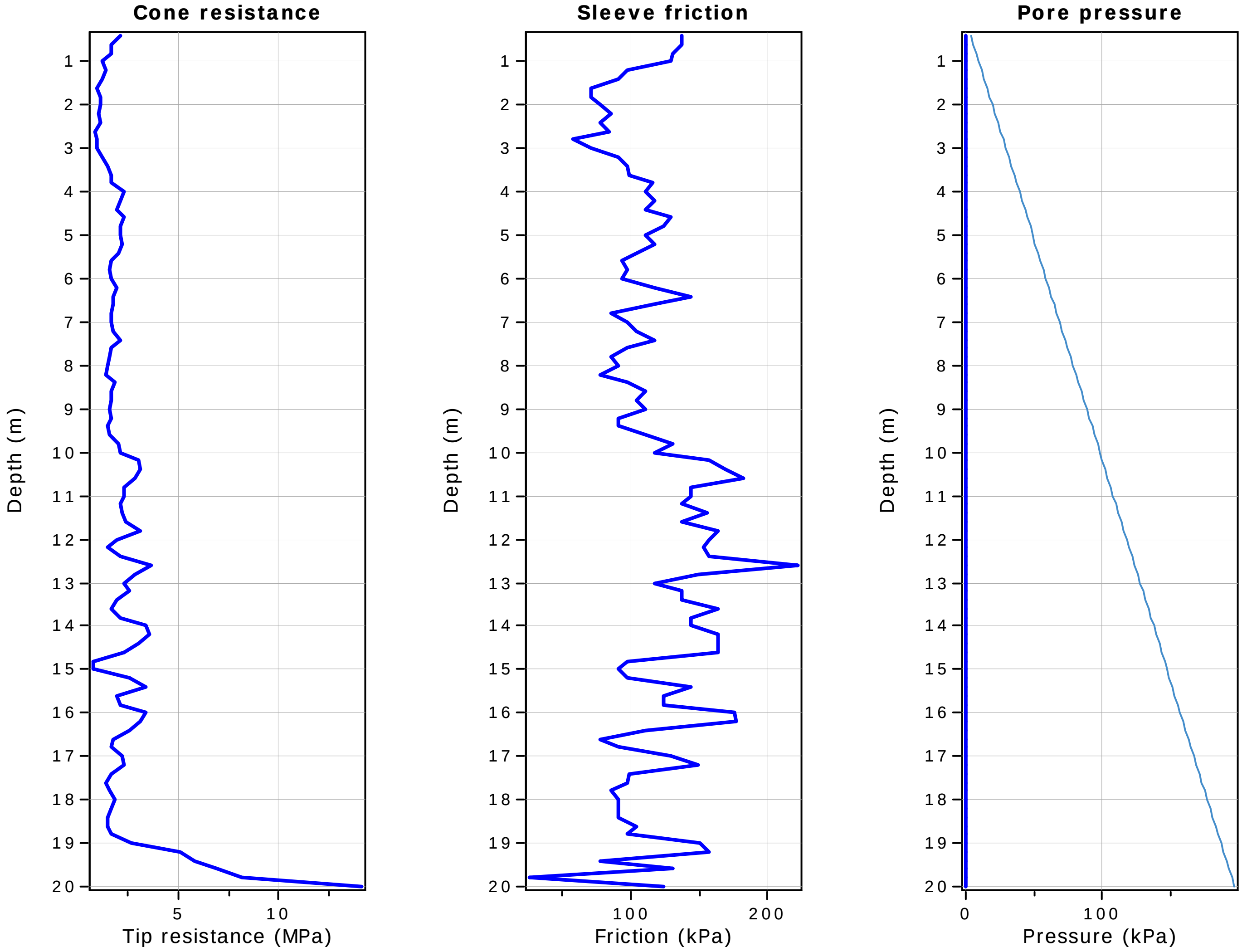


SBT legend

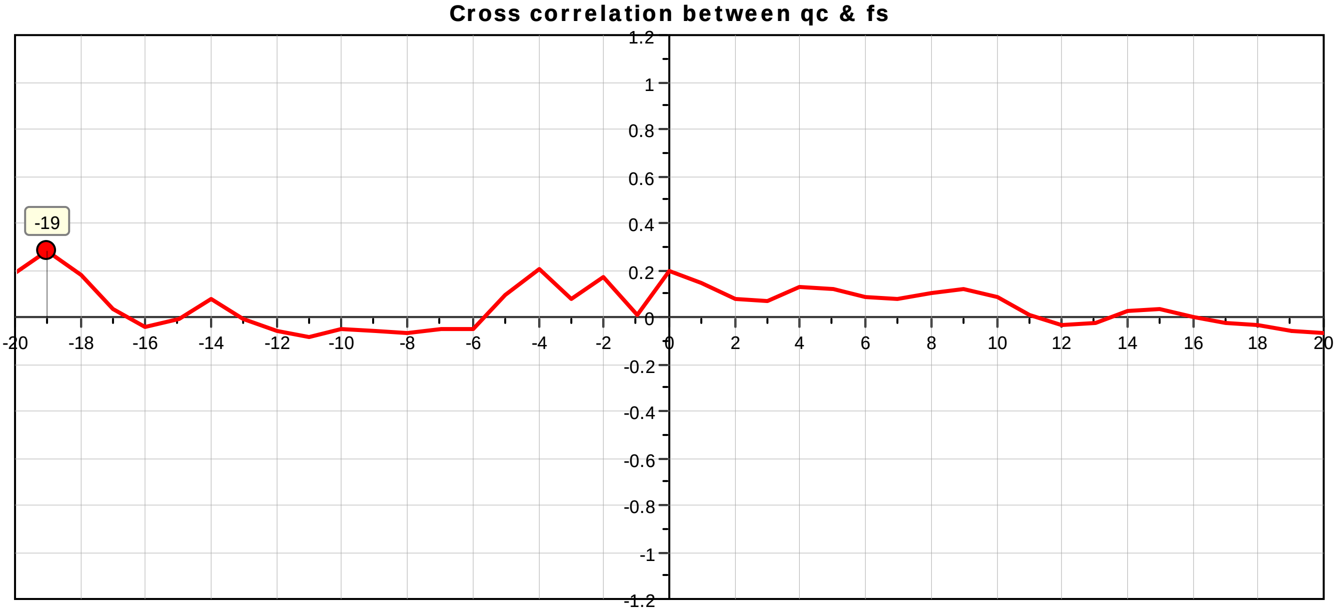
■ 1. Sensitive fine grained
■ 2. Organic material
■ 3. Clay to silty clay
■ 4. Clayey silt to silty clay
■ 5. Silty sand to sandy silt
■ 6. Clean sand to silty sand
■ 7. Gravely sand to sand
■ 8. Very stiff sand to clayey sand
□ 9. Very stiff fine grained

CPT: 036021P325CPT324
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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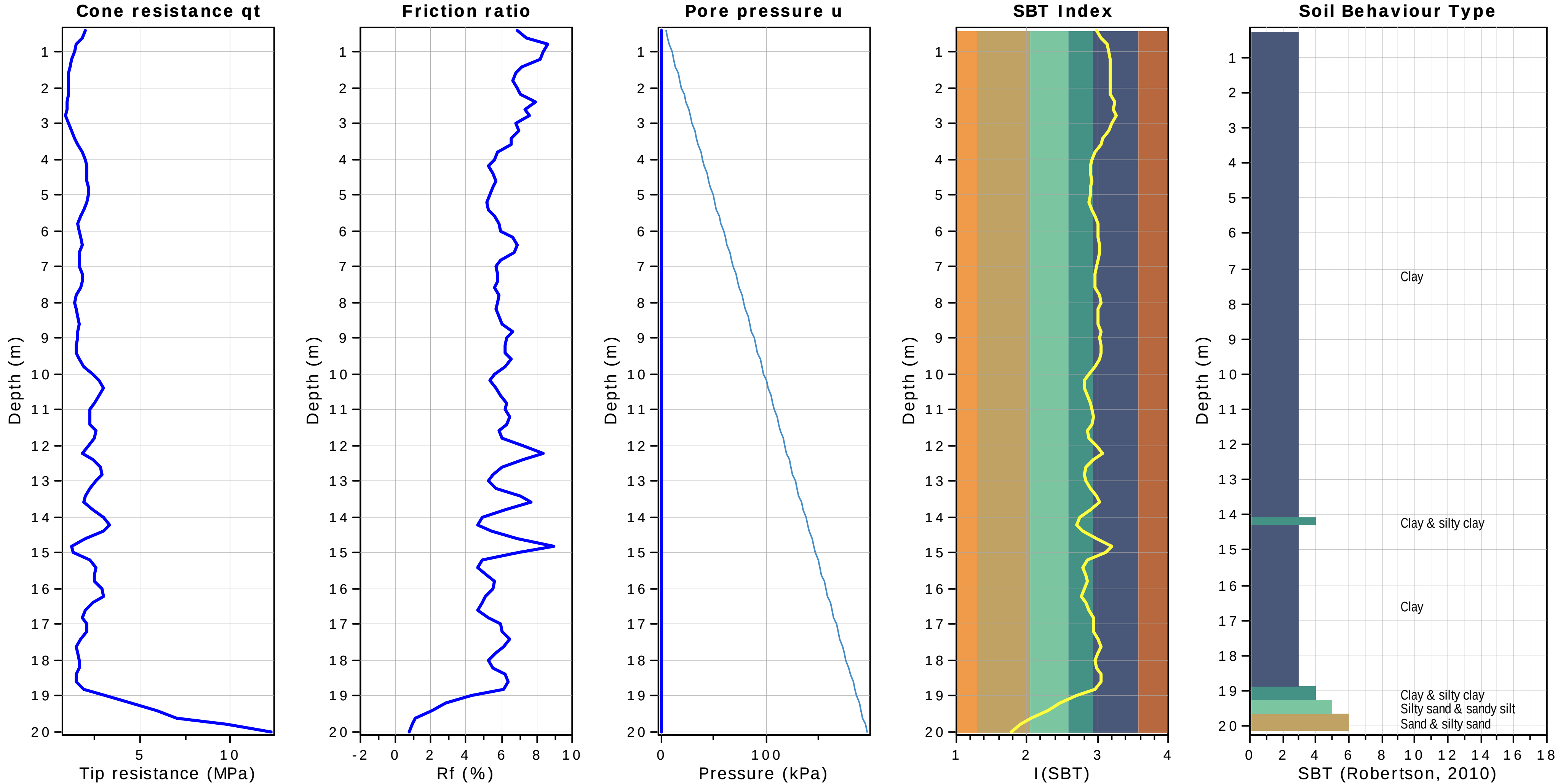
CPT: 036021P325CPT324
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

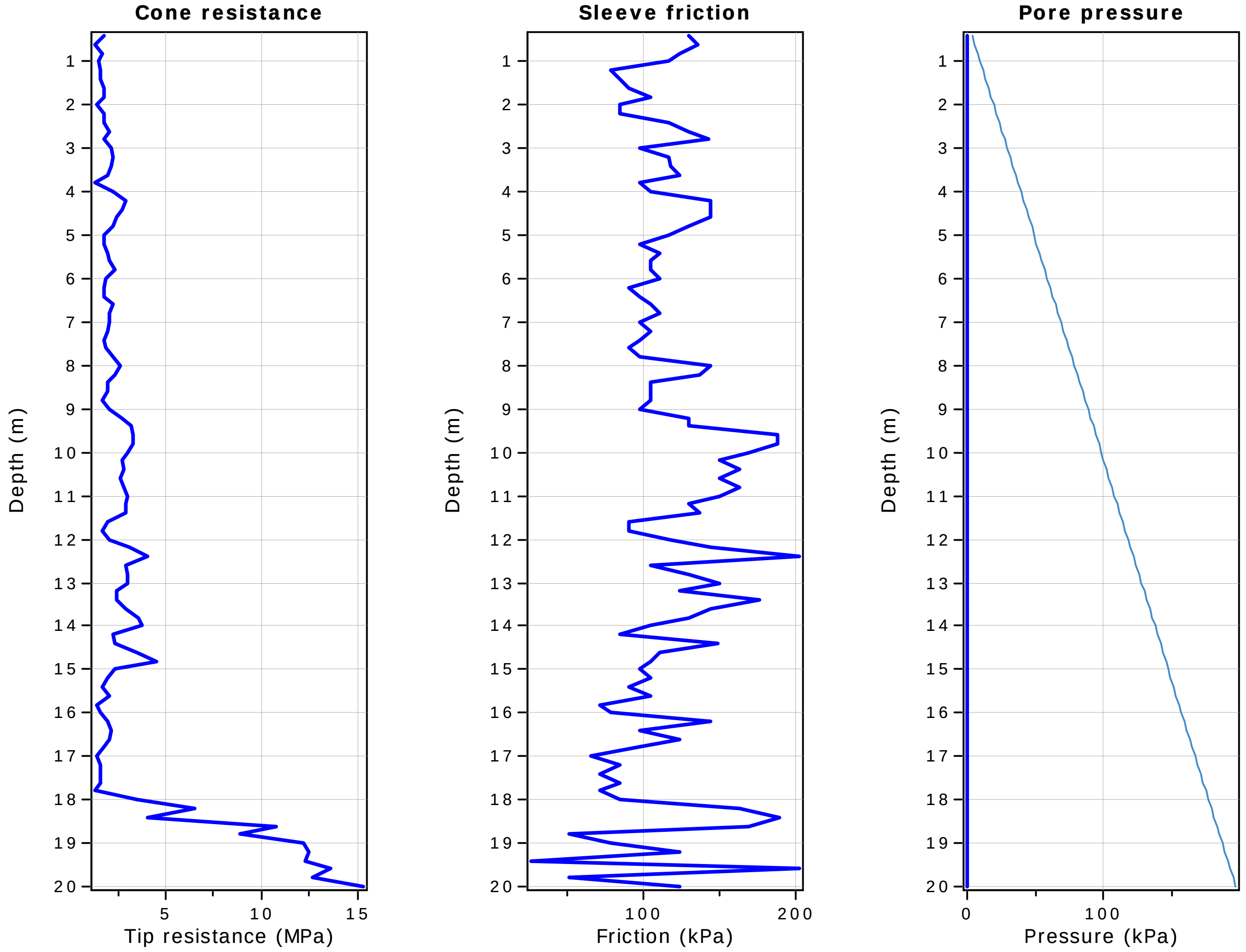


SBT legend

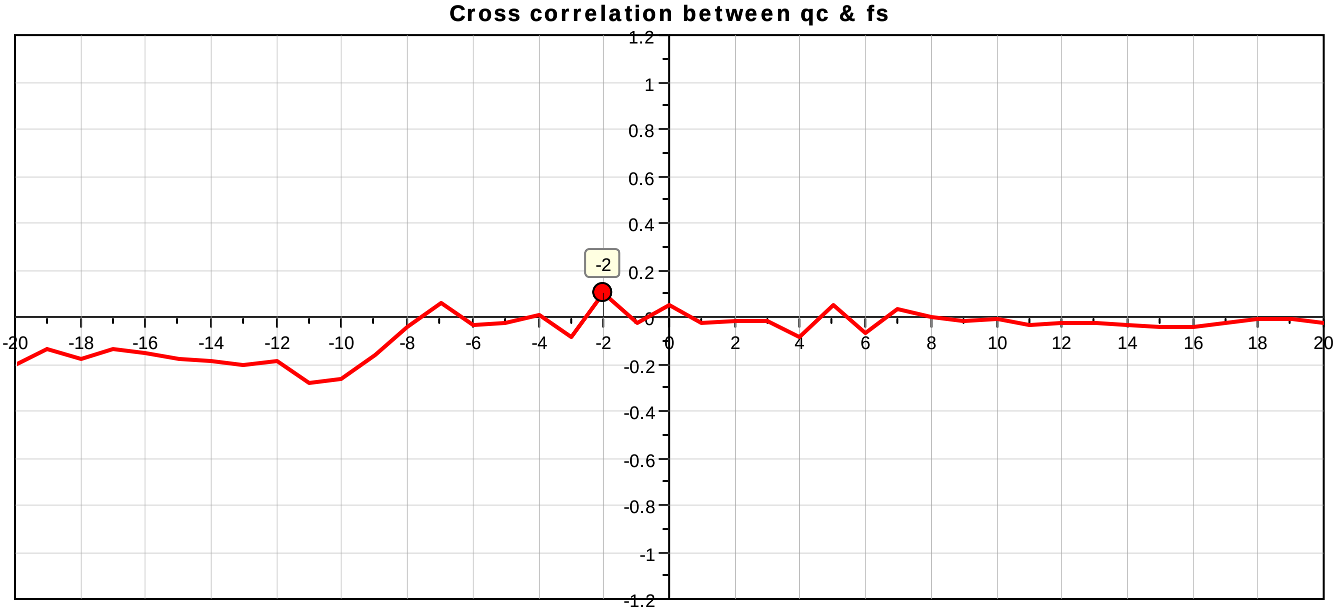
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P325CPT325
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

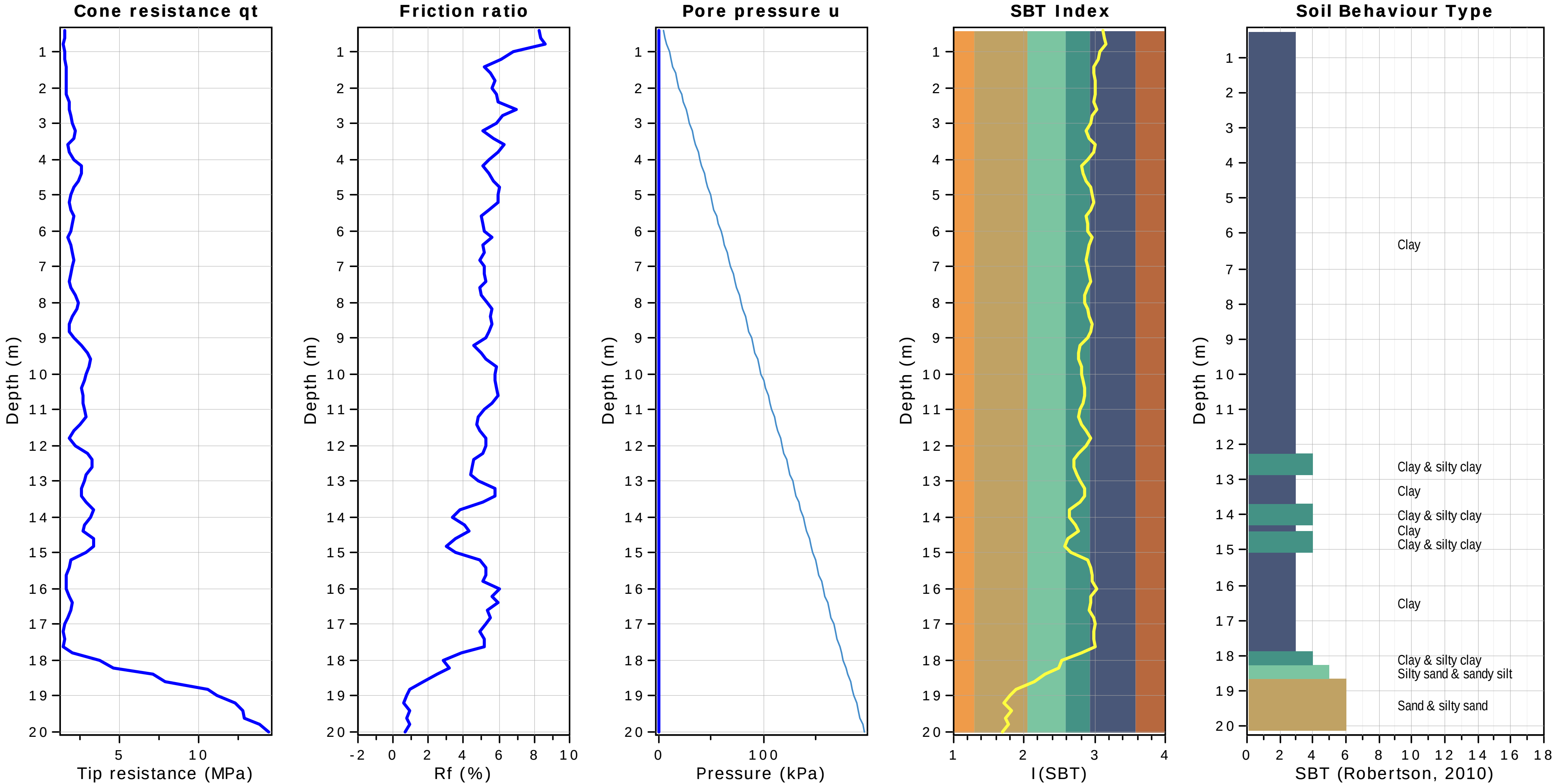


The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT: 036021P325CPT325
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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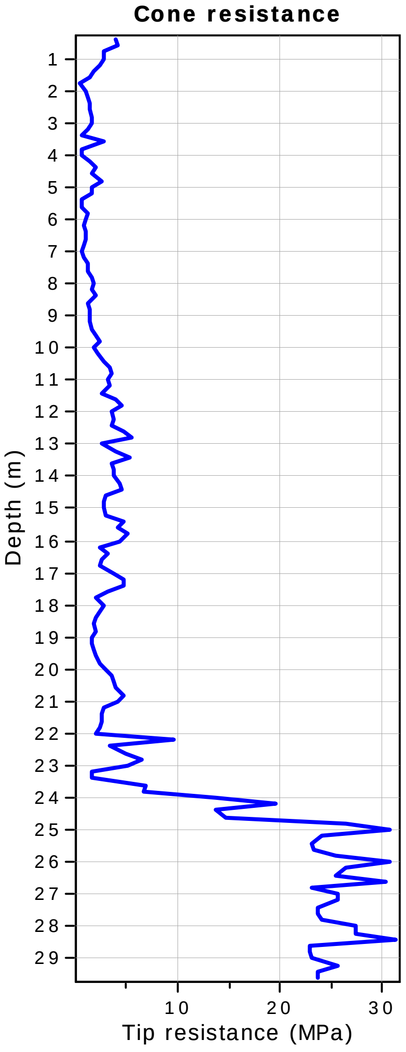
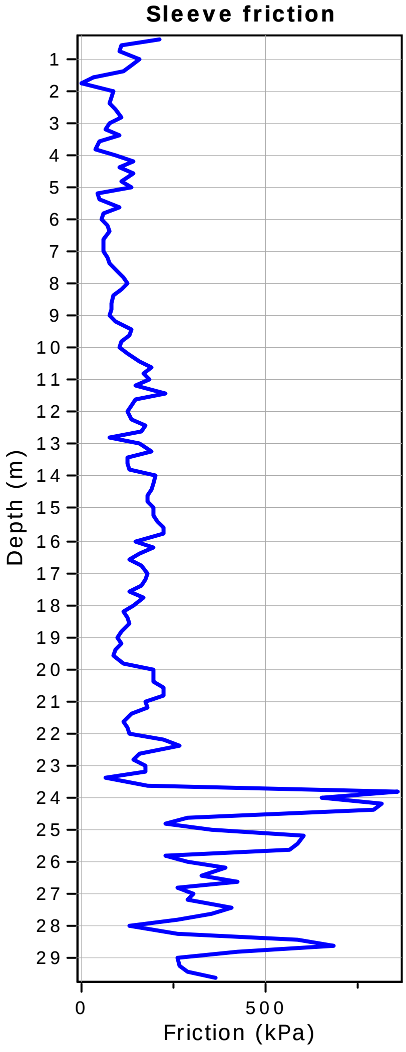
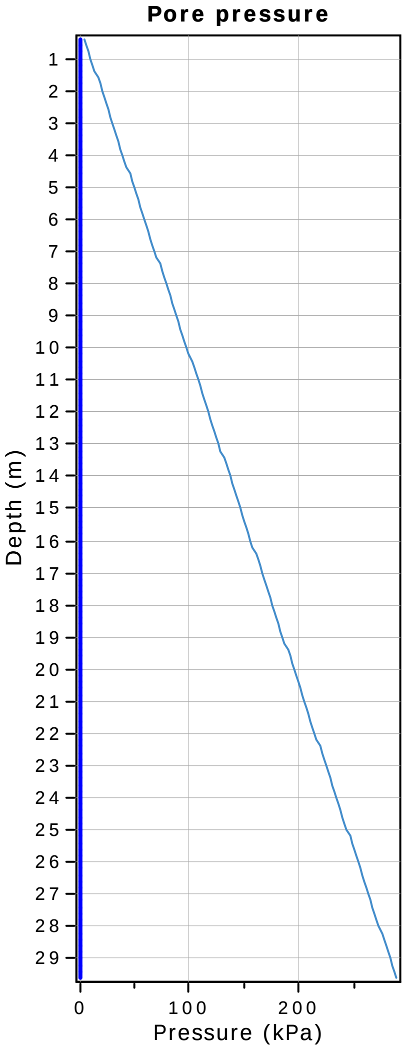
CPT: 036021P326CPT326
Total depth: 29.60 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

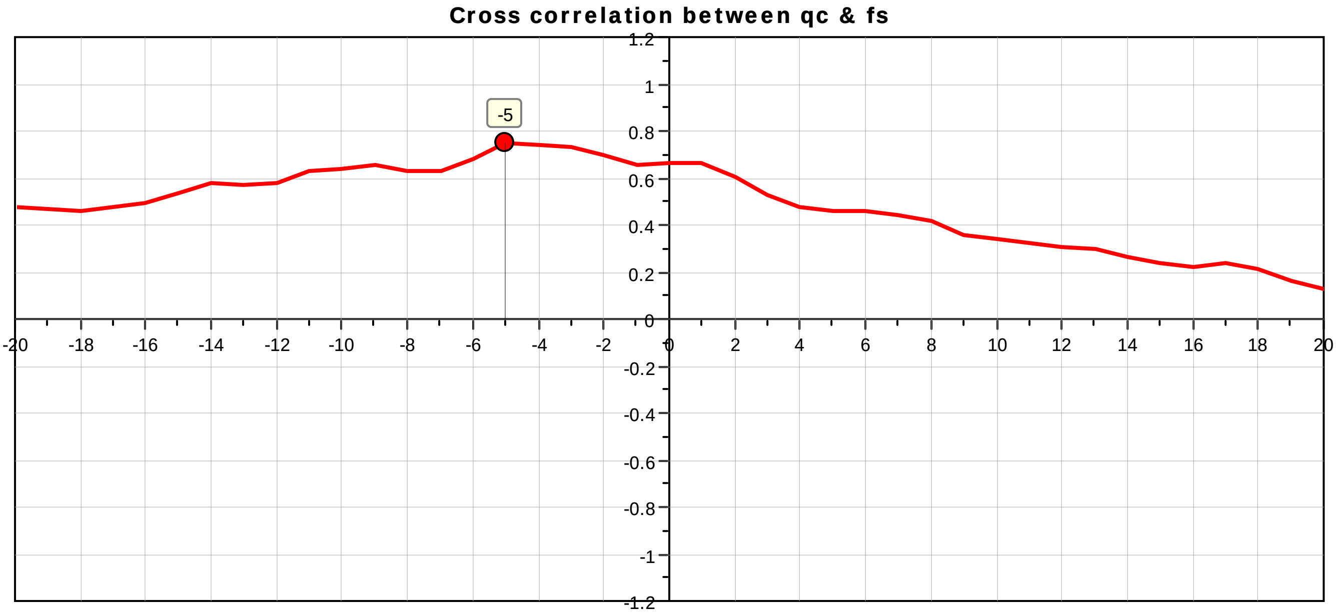
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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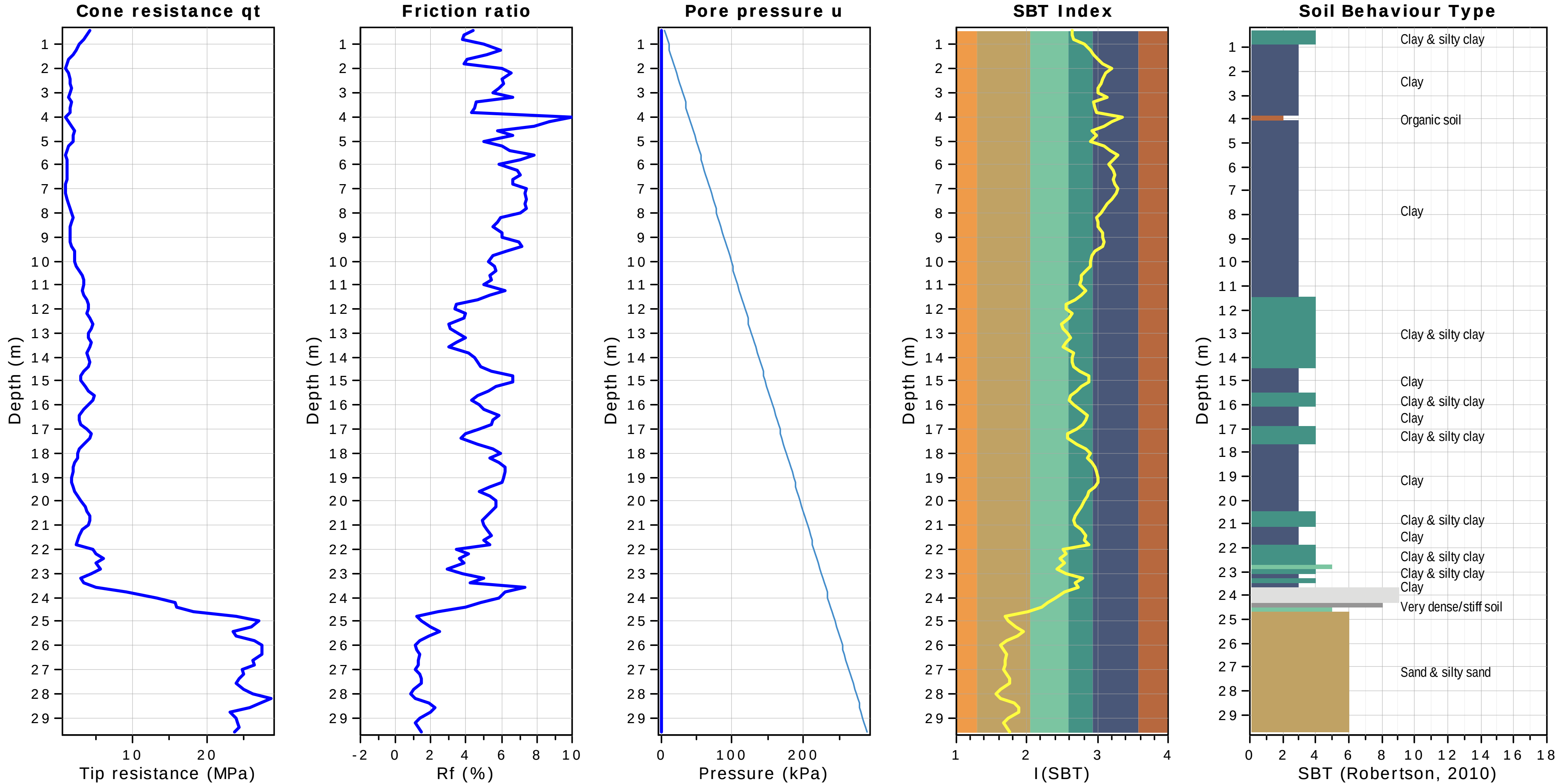
CPT: 036021P326CPT326
Total depth: 29.60 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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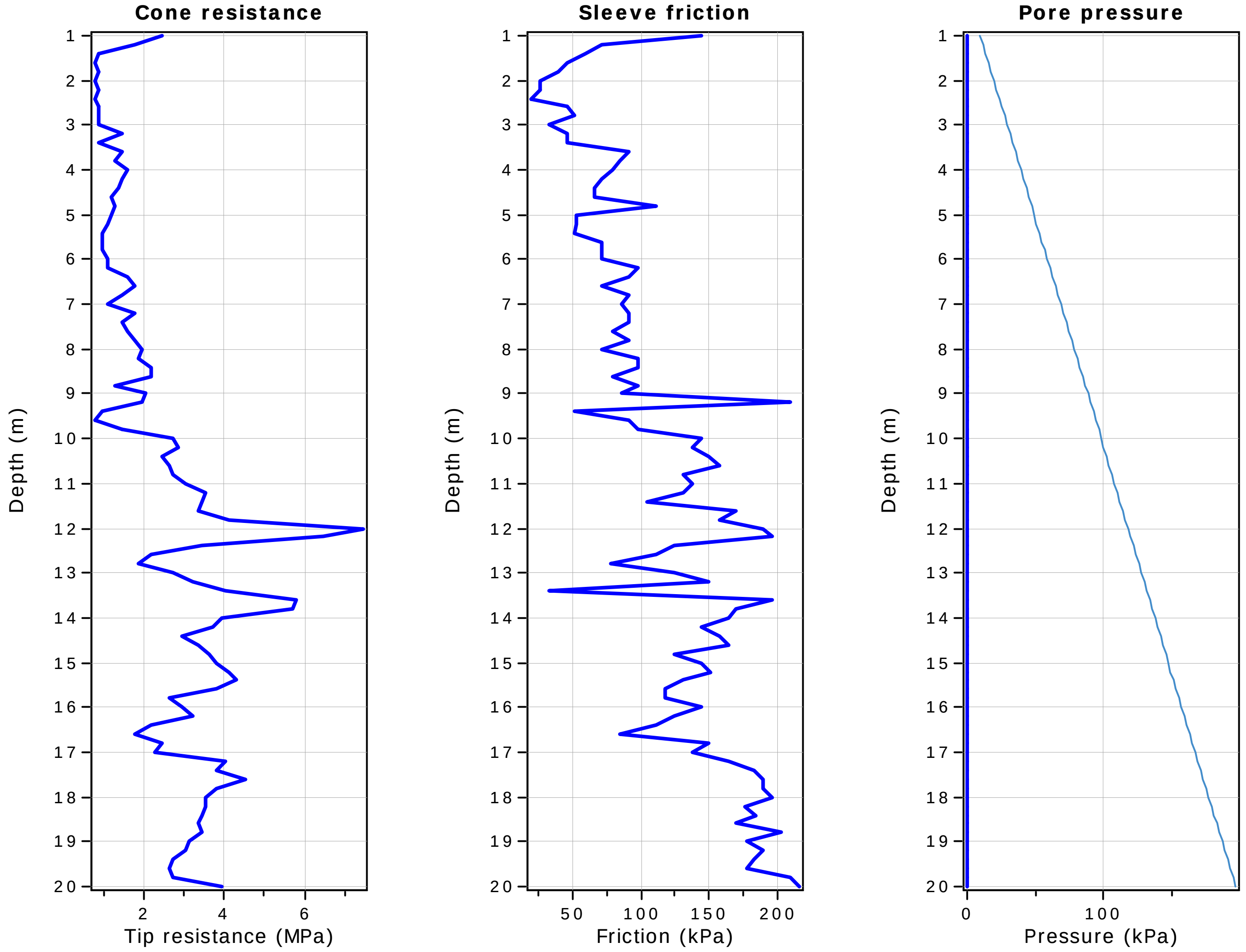
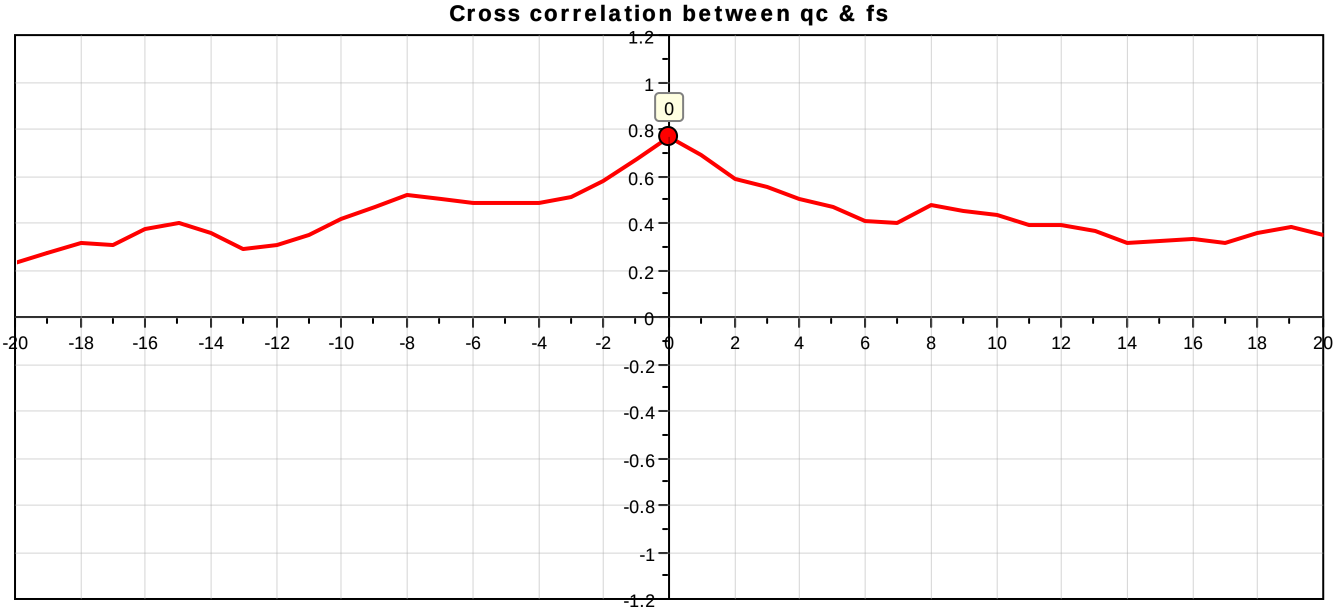
CPT: 036021P327CPT327
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

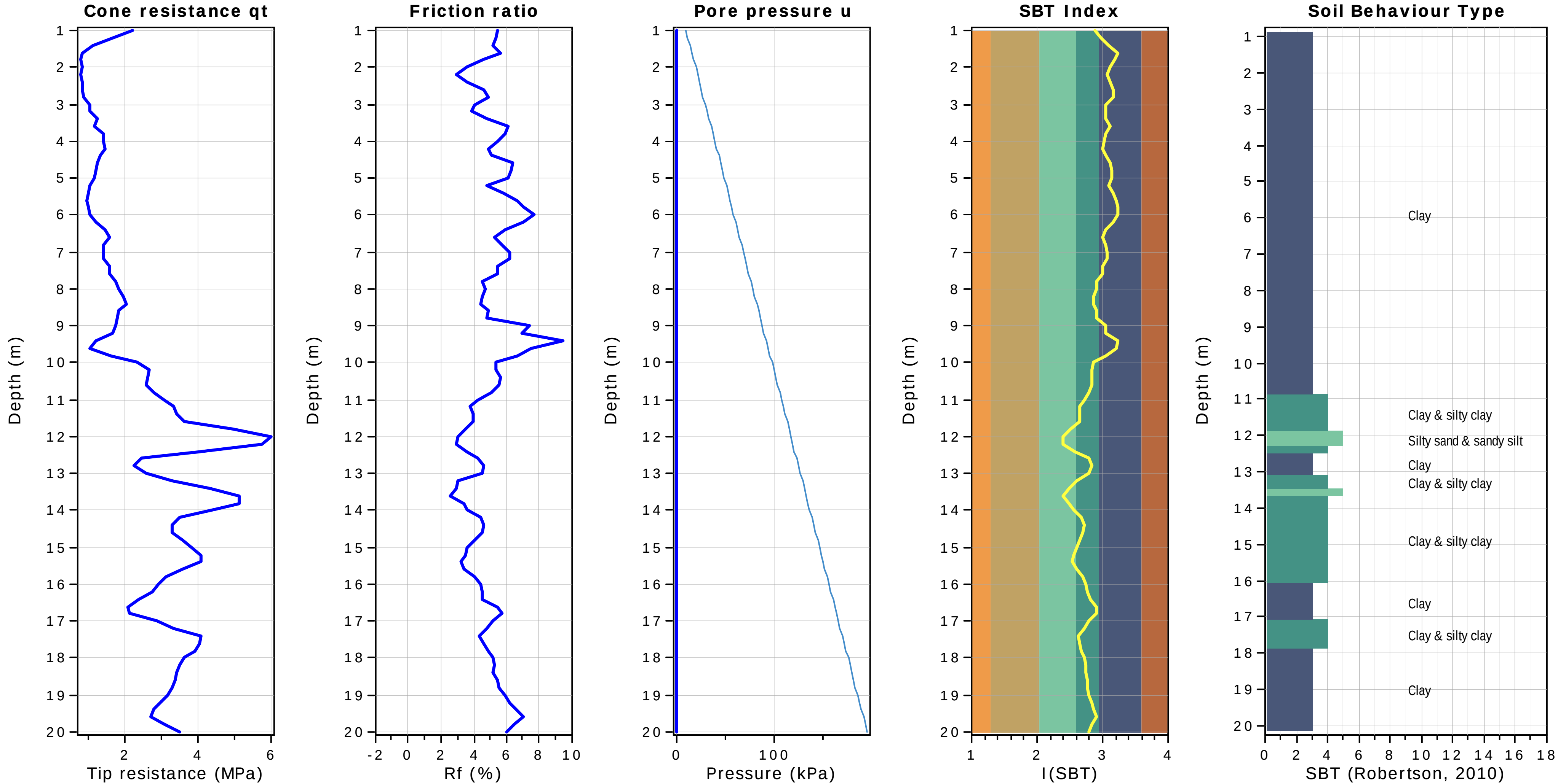


The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT: 036021P327CPT327
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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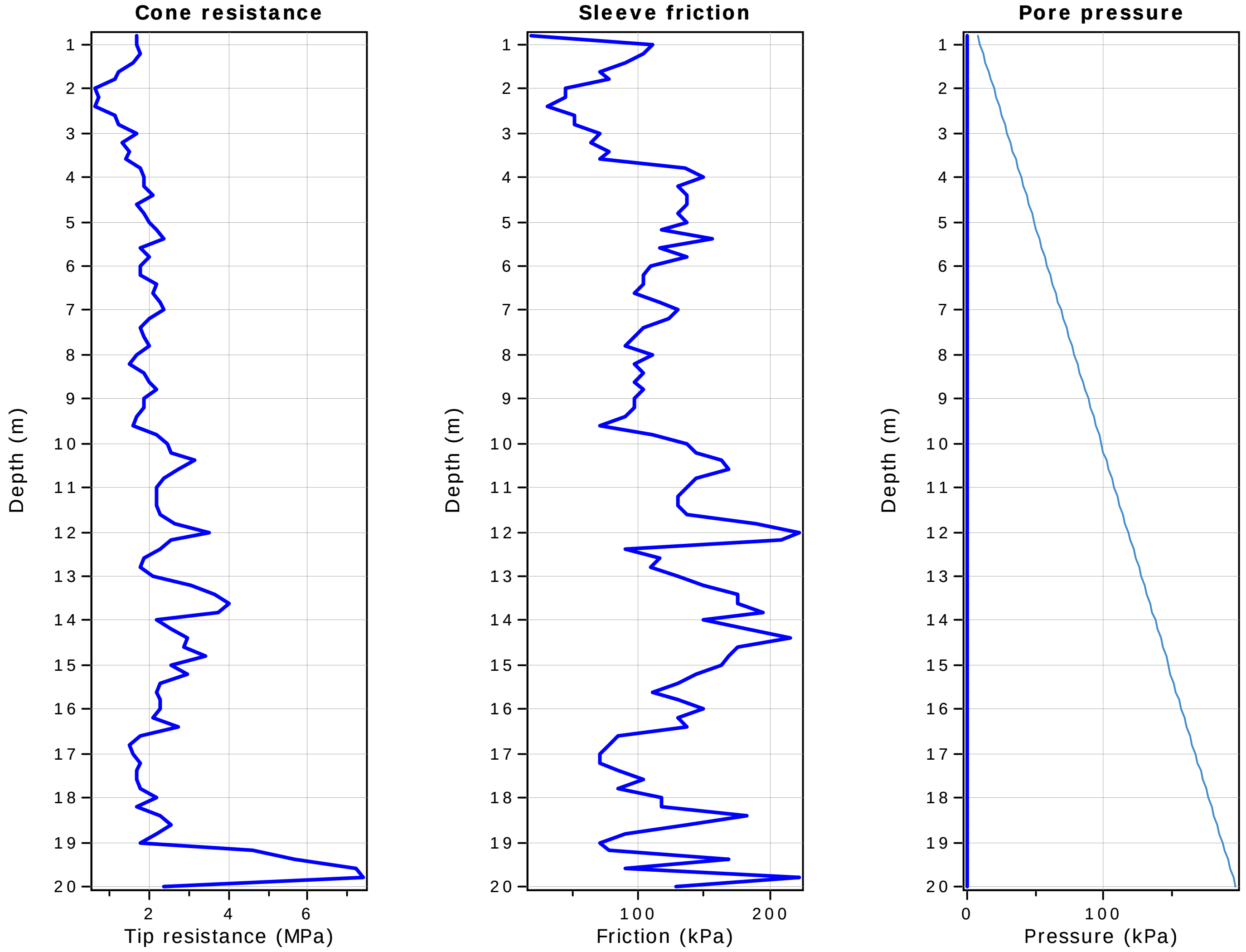
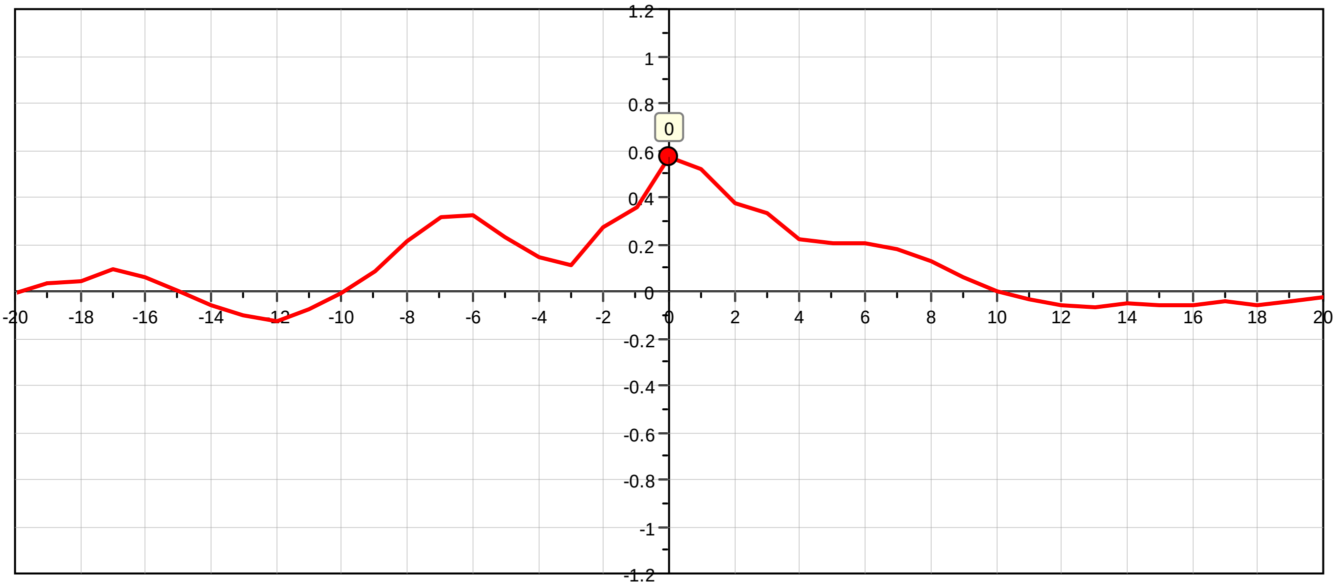
CPT: 036021P328CPT328
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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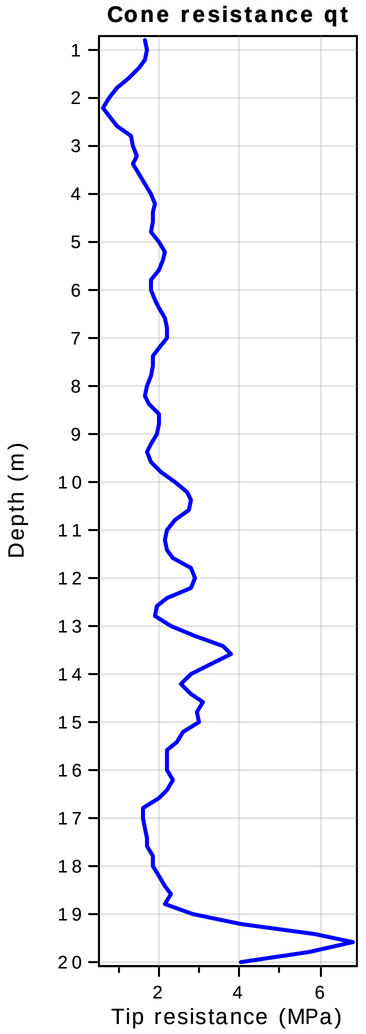
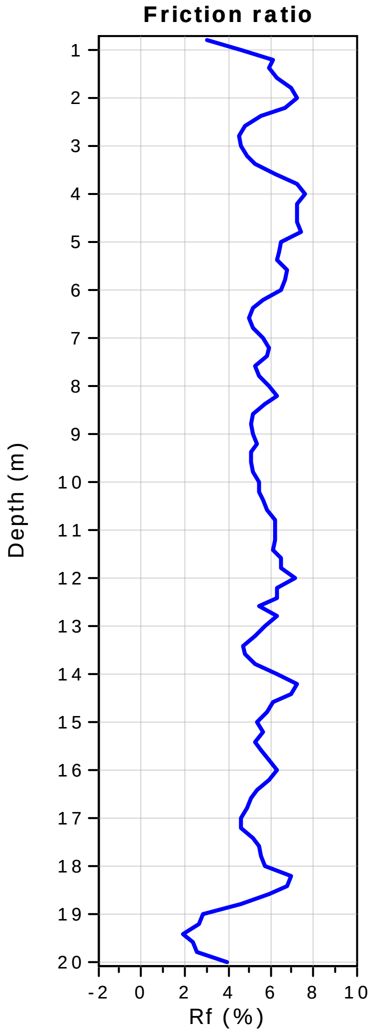
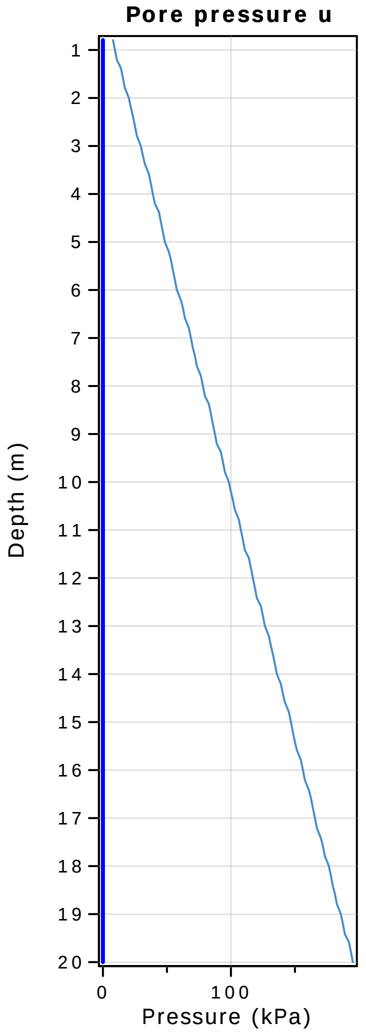
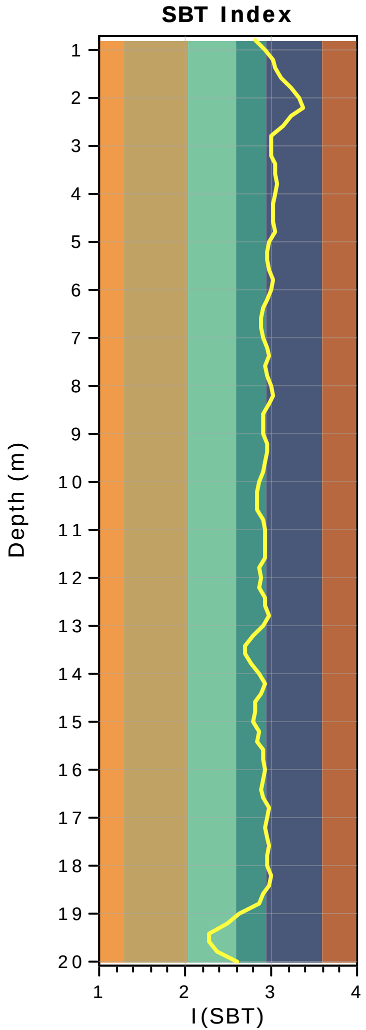
CPT: 036021P328CPT328
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

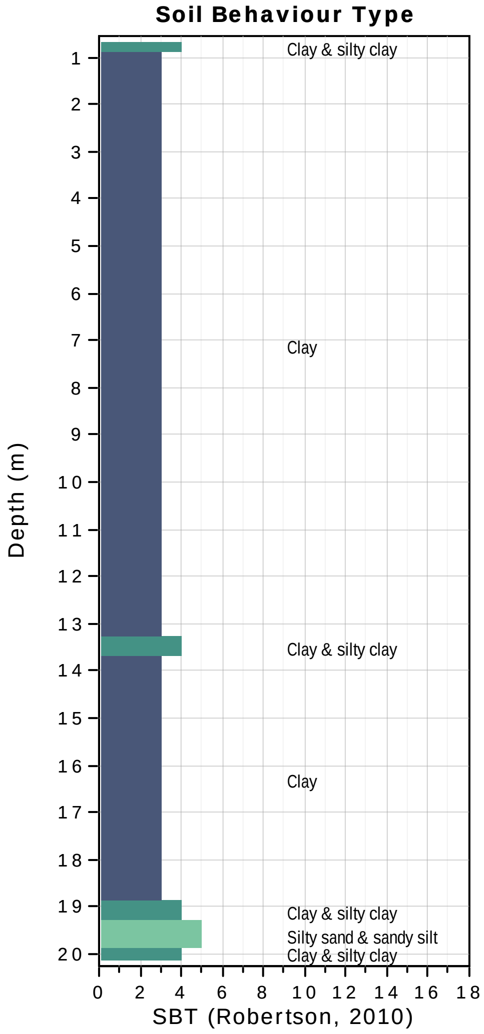
Project:
Location:











SBT legend

🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟨 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

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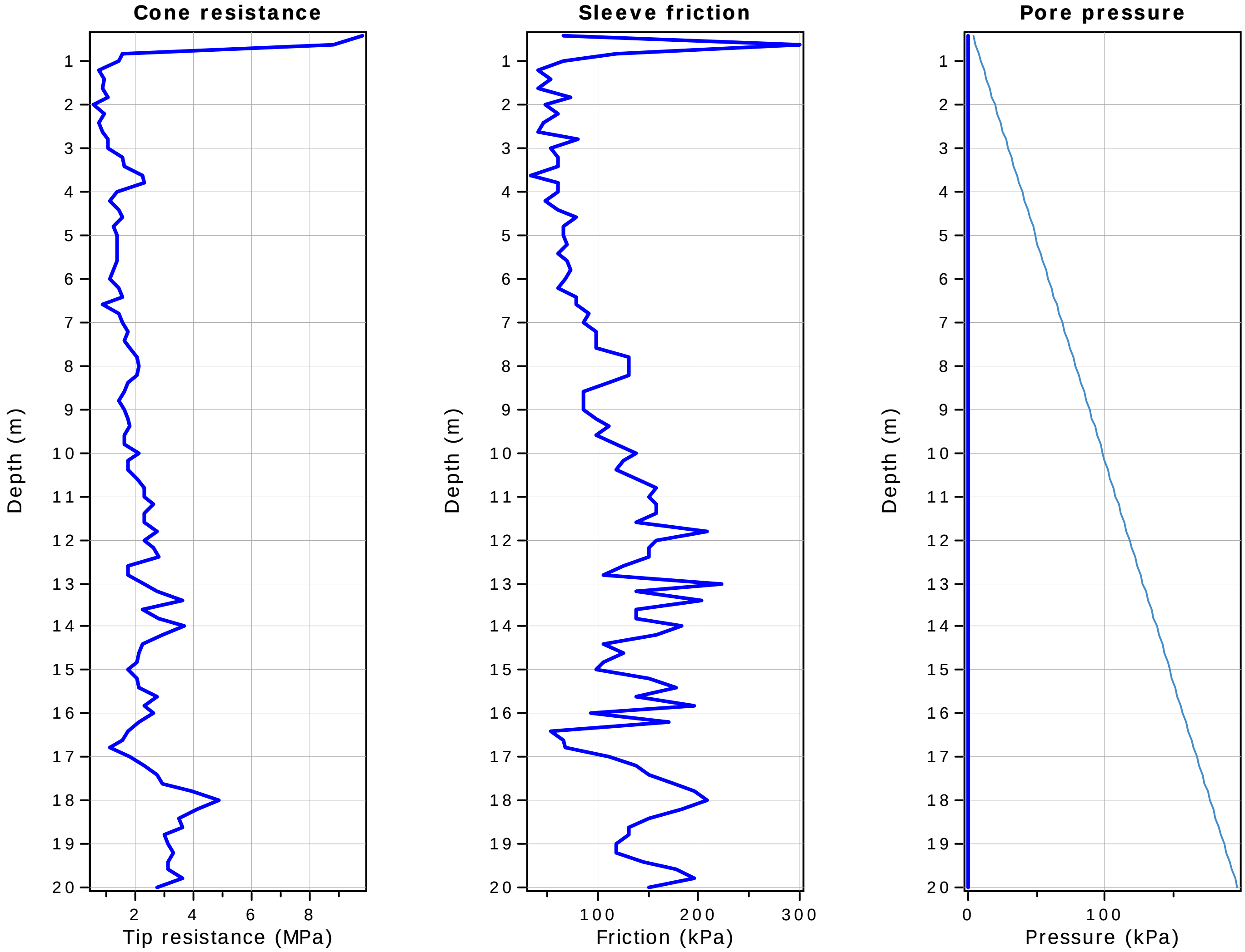
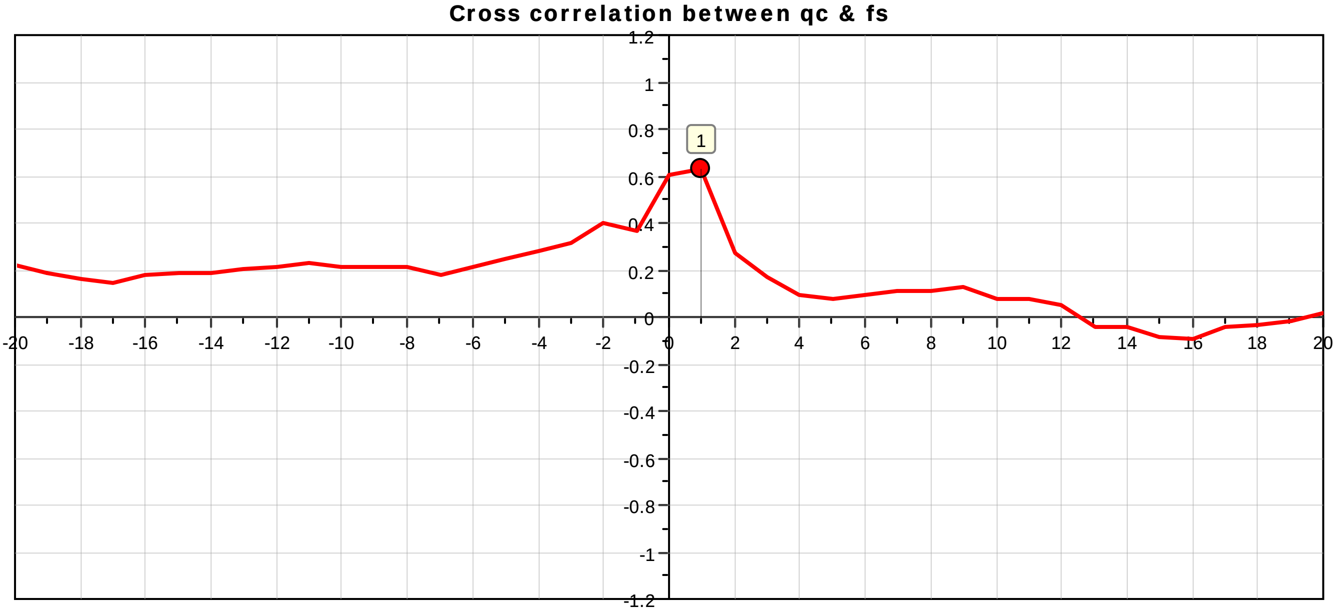
CPT: 036021P329CPT329
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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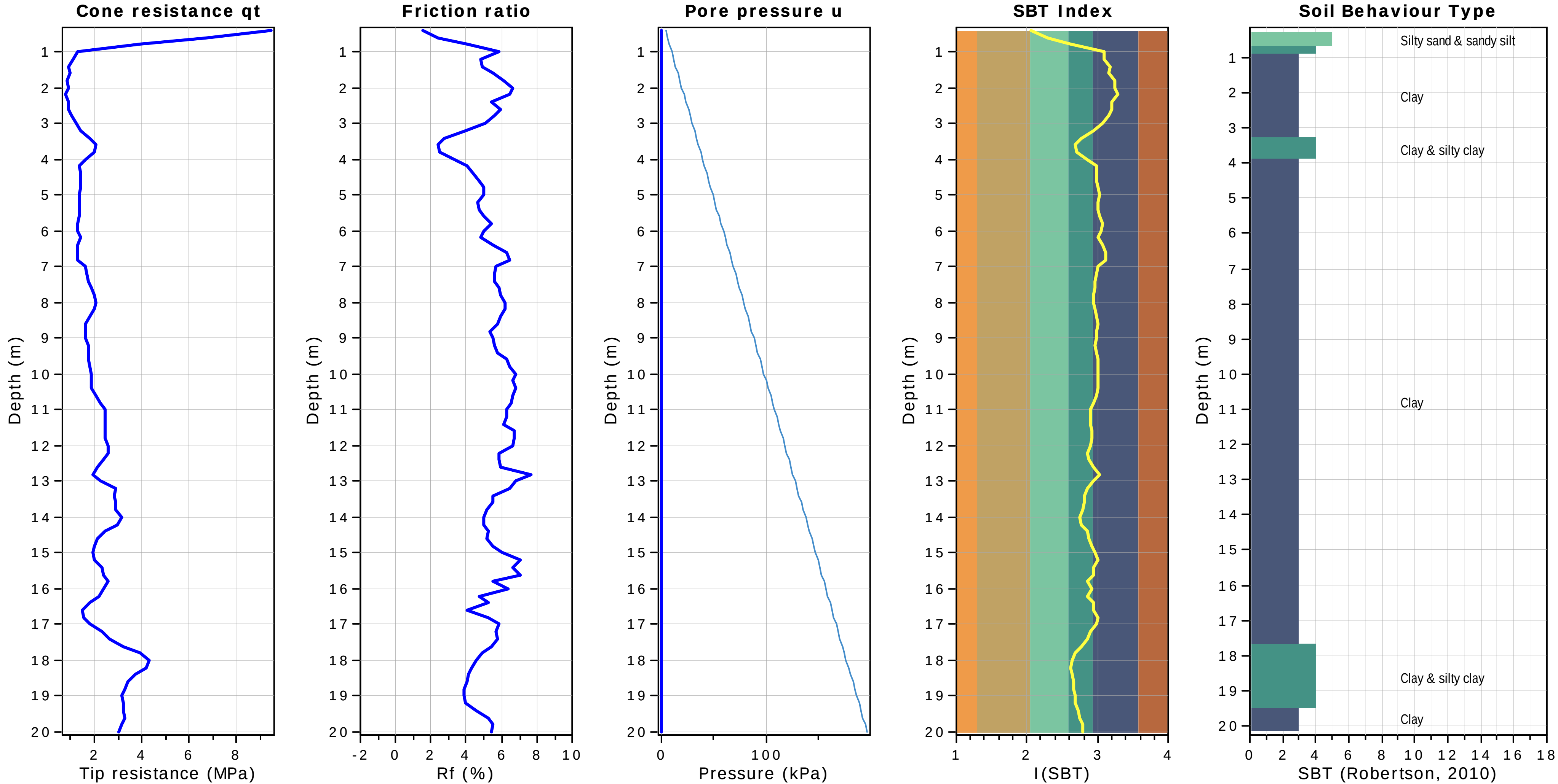
CPT: 036021P329CPT329
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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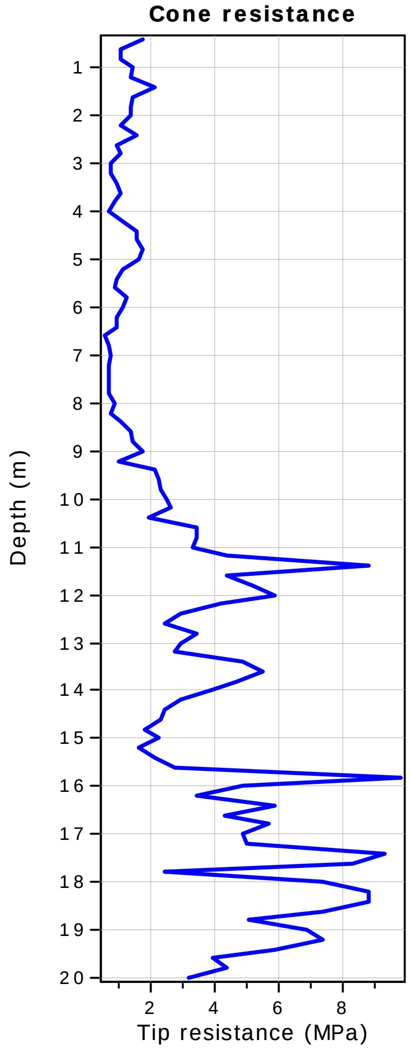
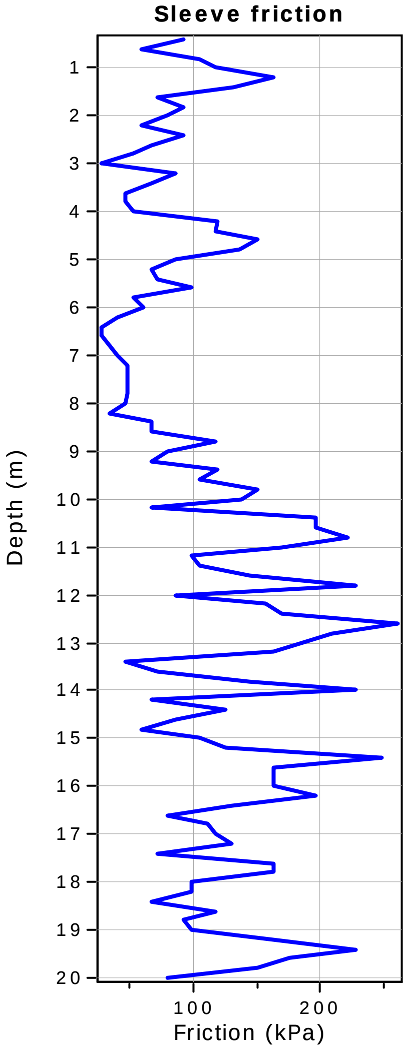
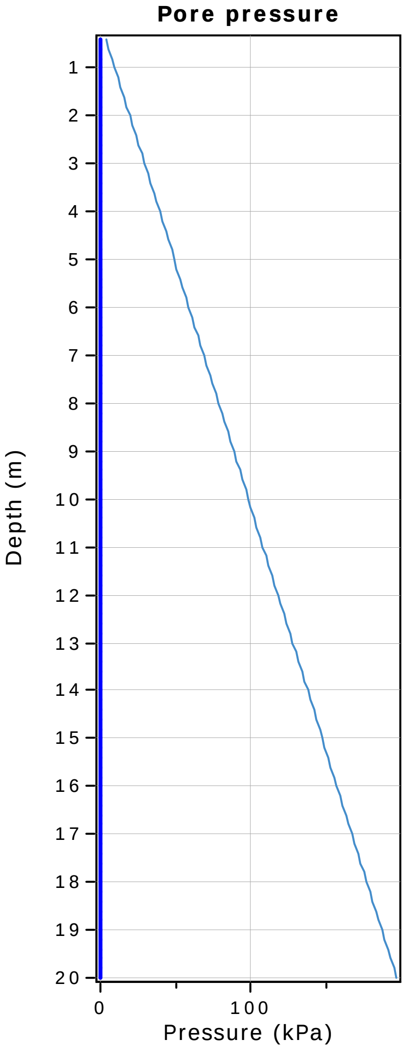
CPT: 036021P330CPT330
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

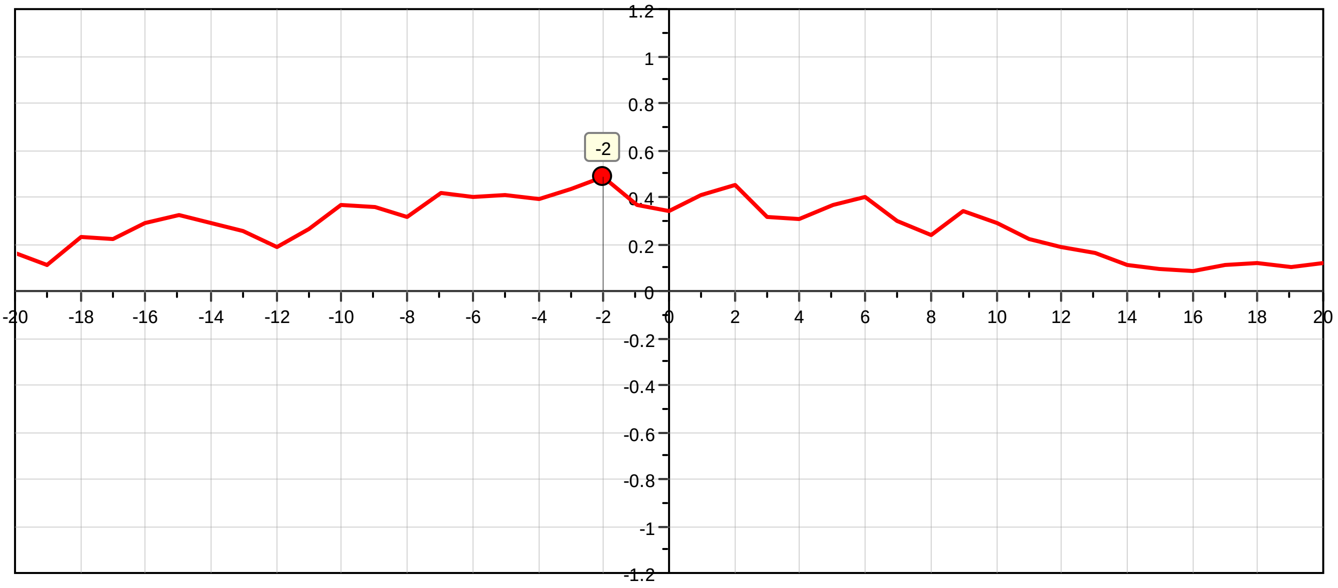
Project:
Location:


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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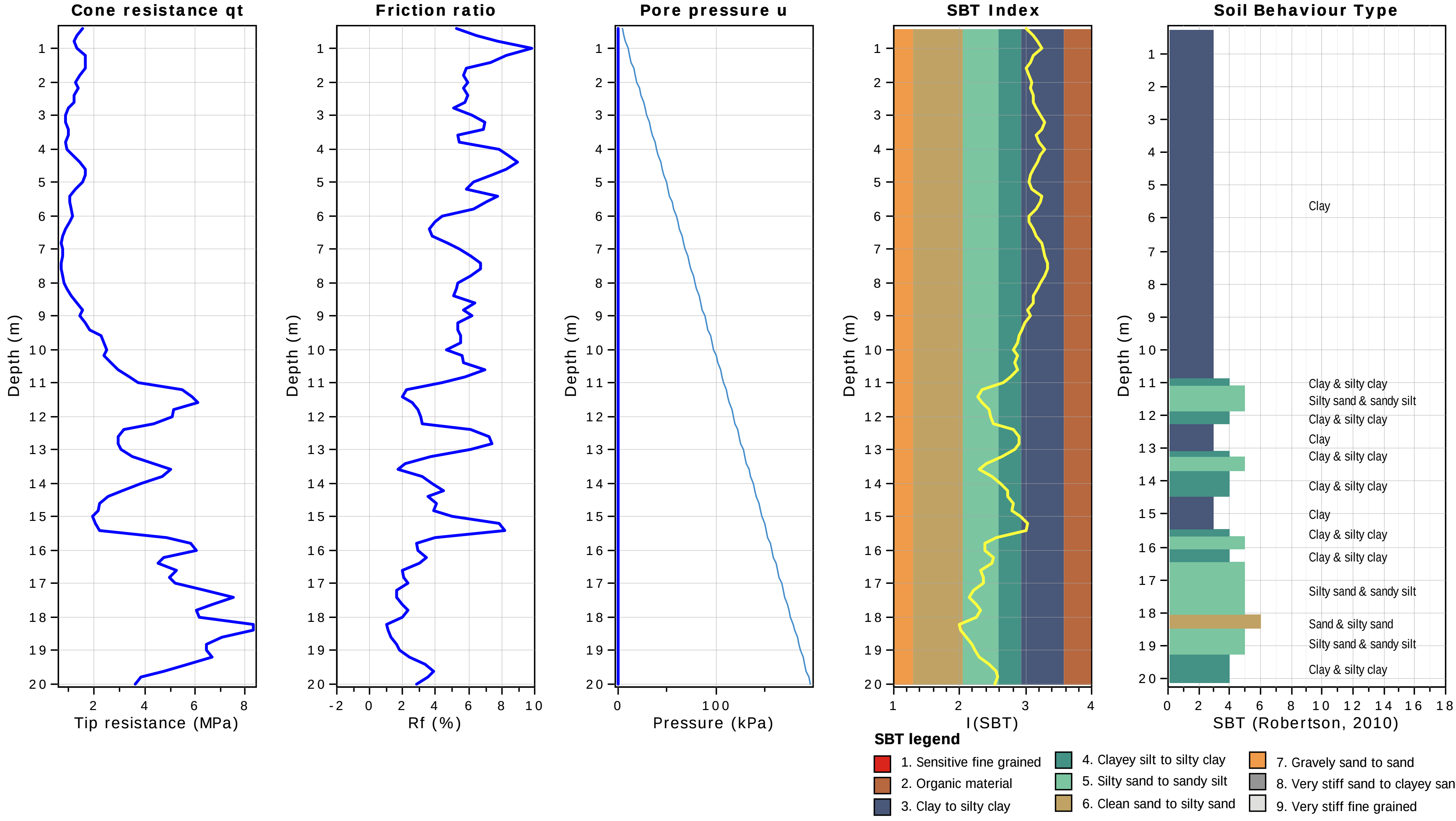
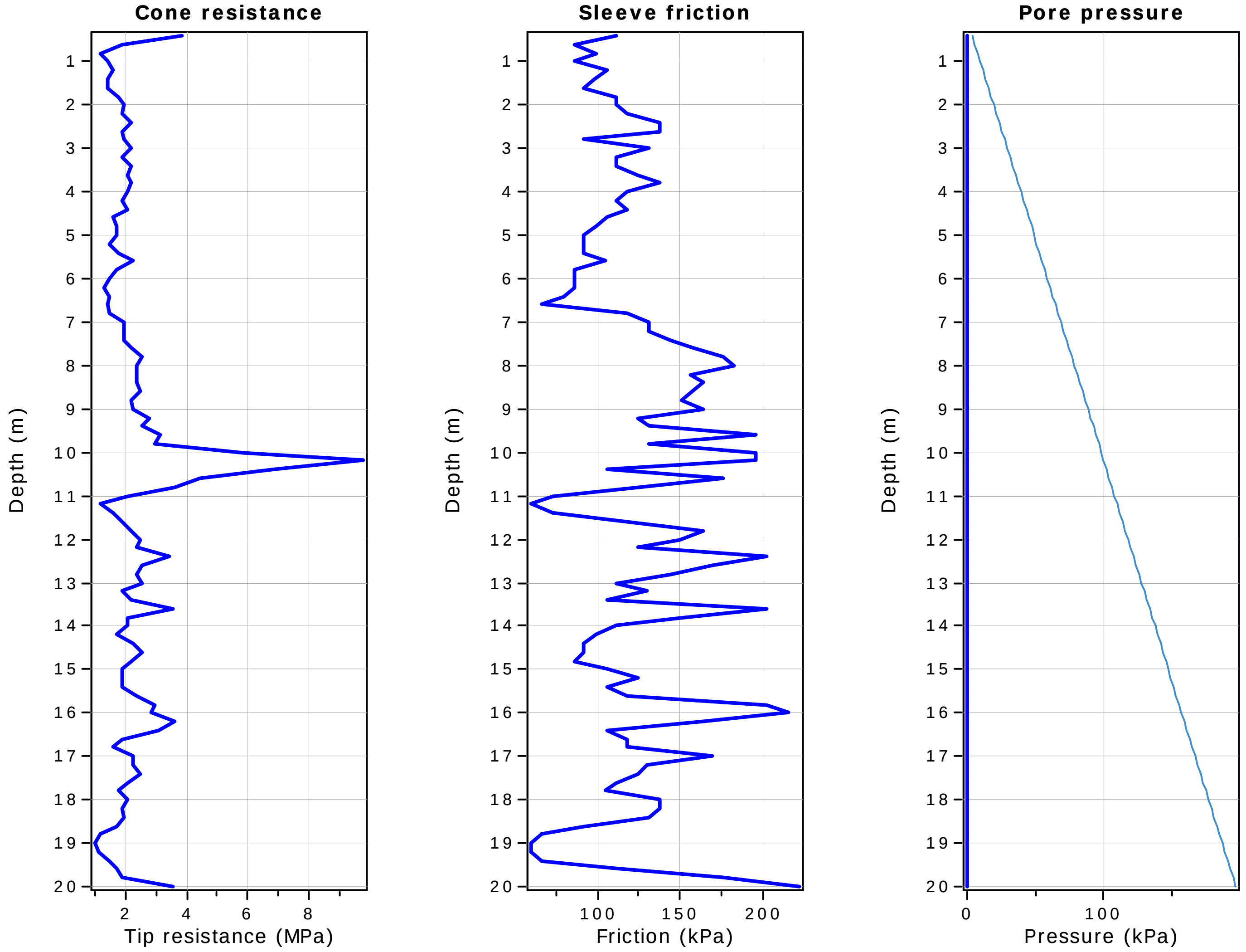
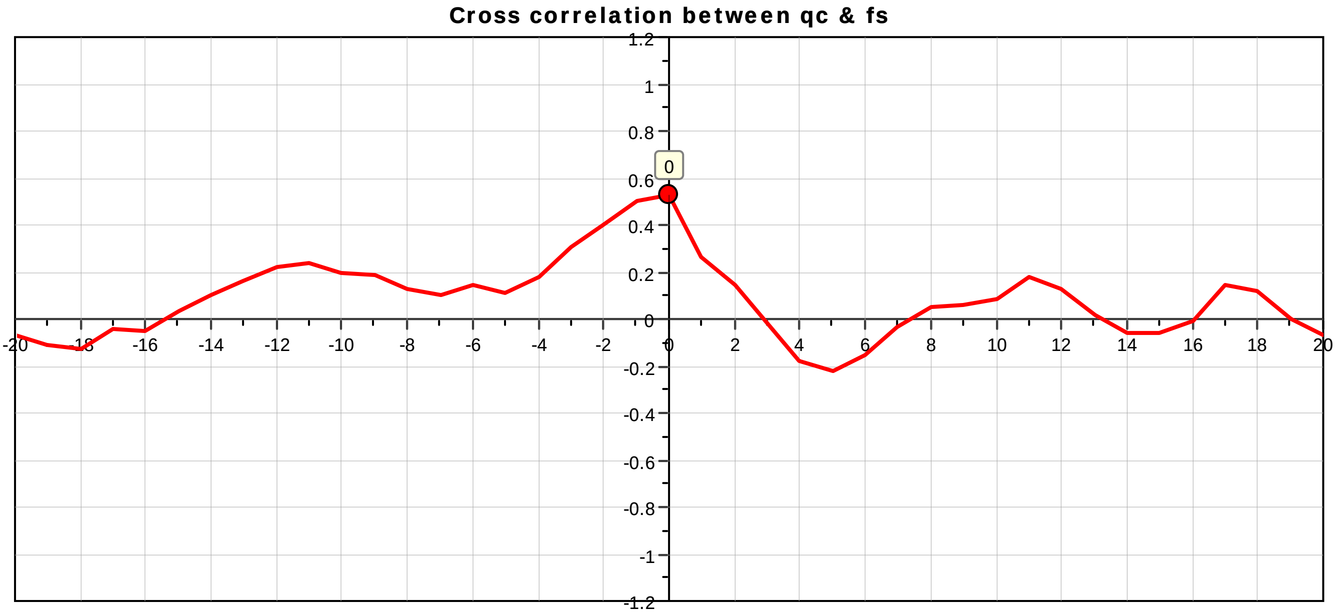
CPT: 036021P330CPT330
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:





The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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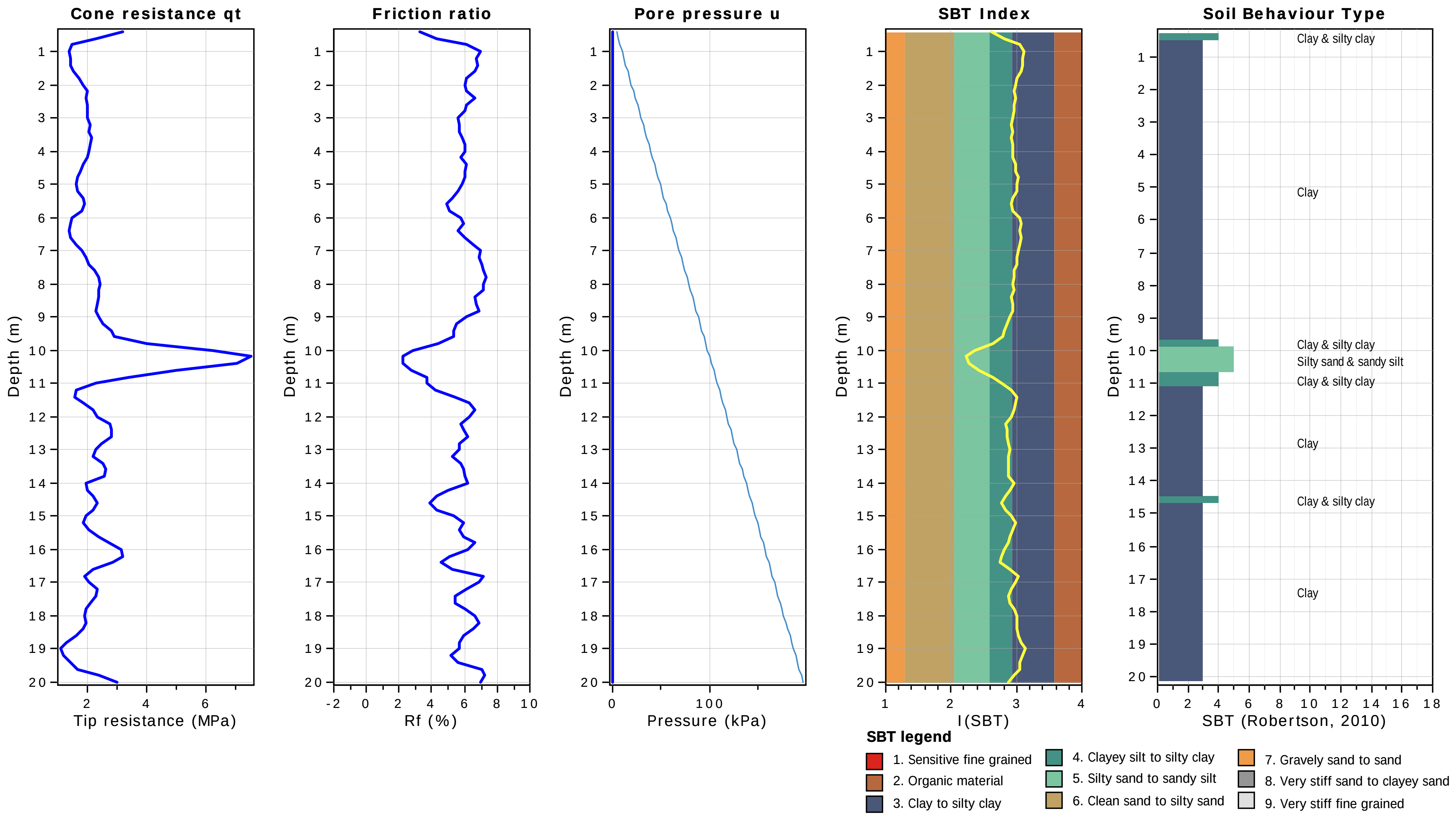
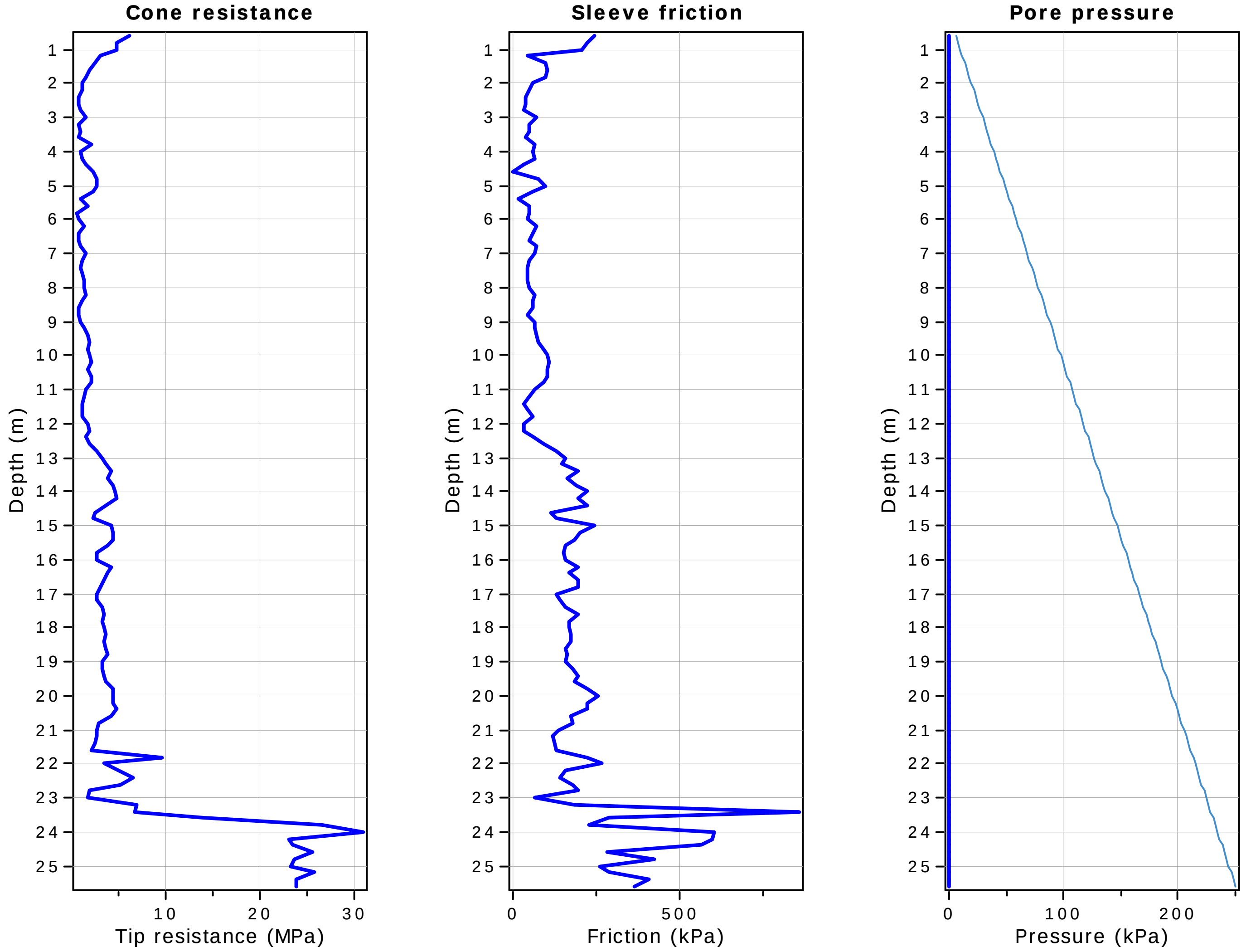
CPT: 036021P331CPT331
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

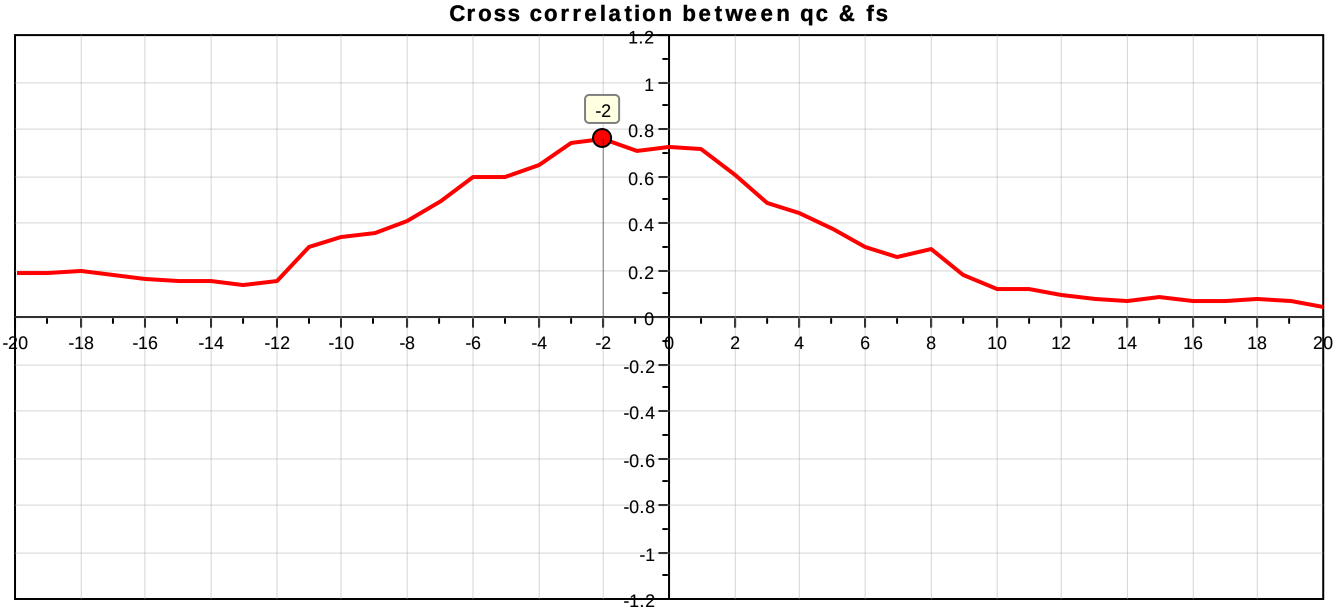


CPT: 036021P332CPT332
Total depth: 25.60 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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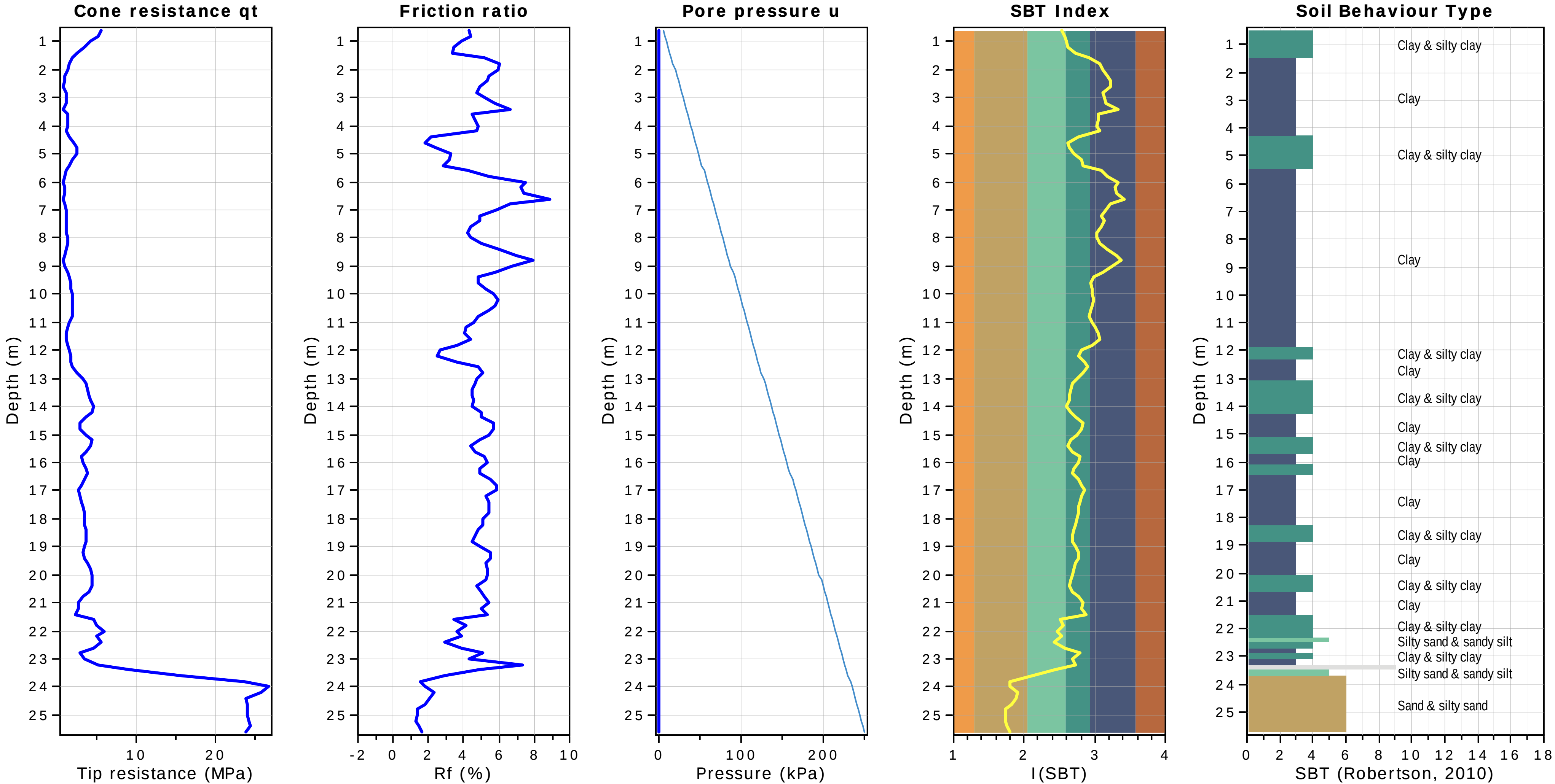
Project:
Location:

CPT: 036021P332CPT332
Total depth: 25.60 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

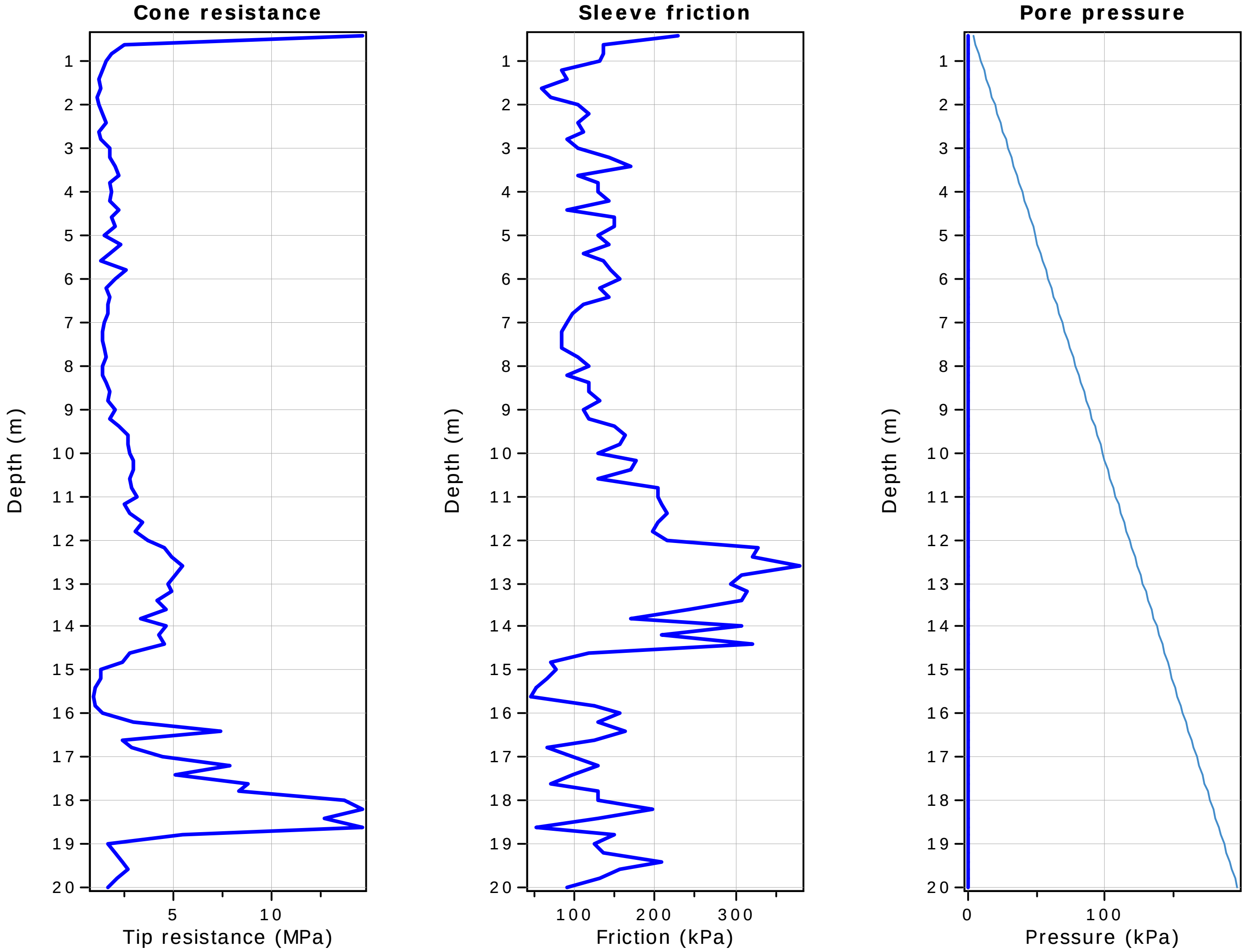


SBT legend

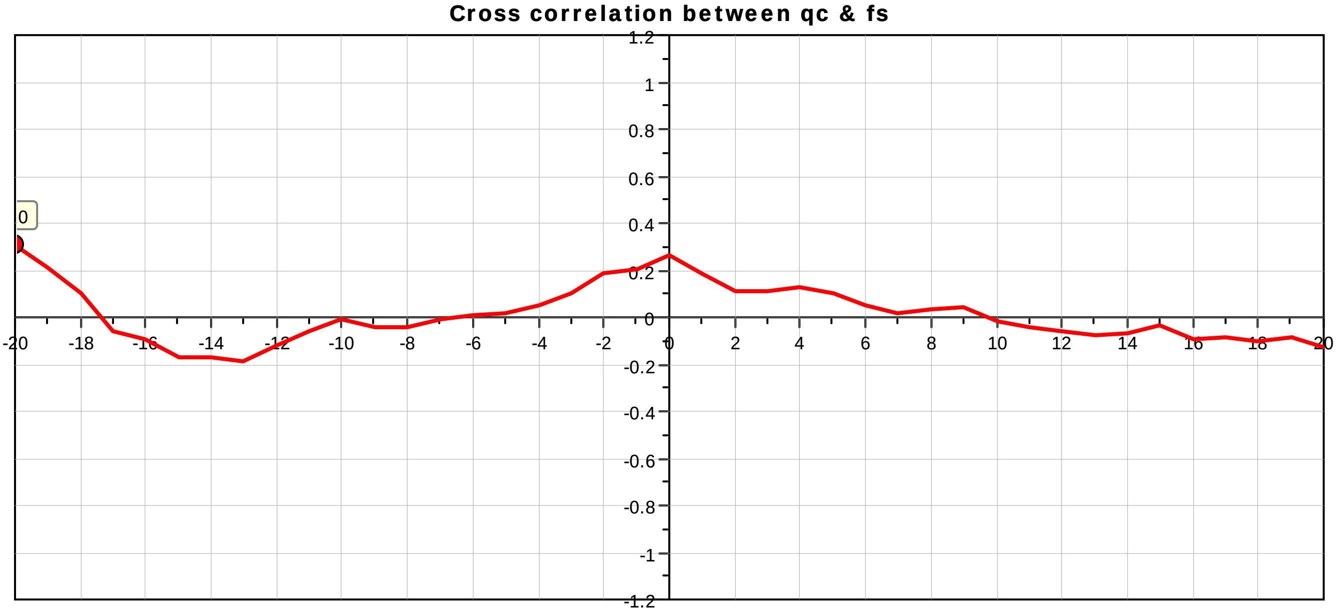
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟫 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

CPT: 036021P333CPT333
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

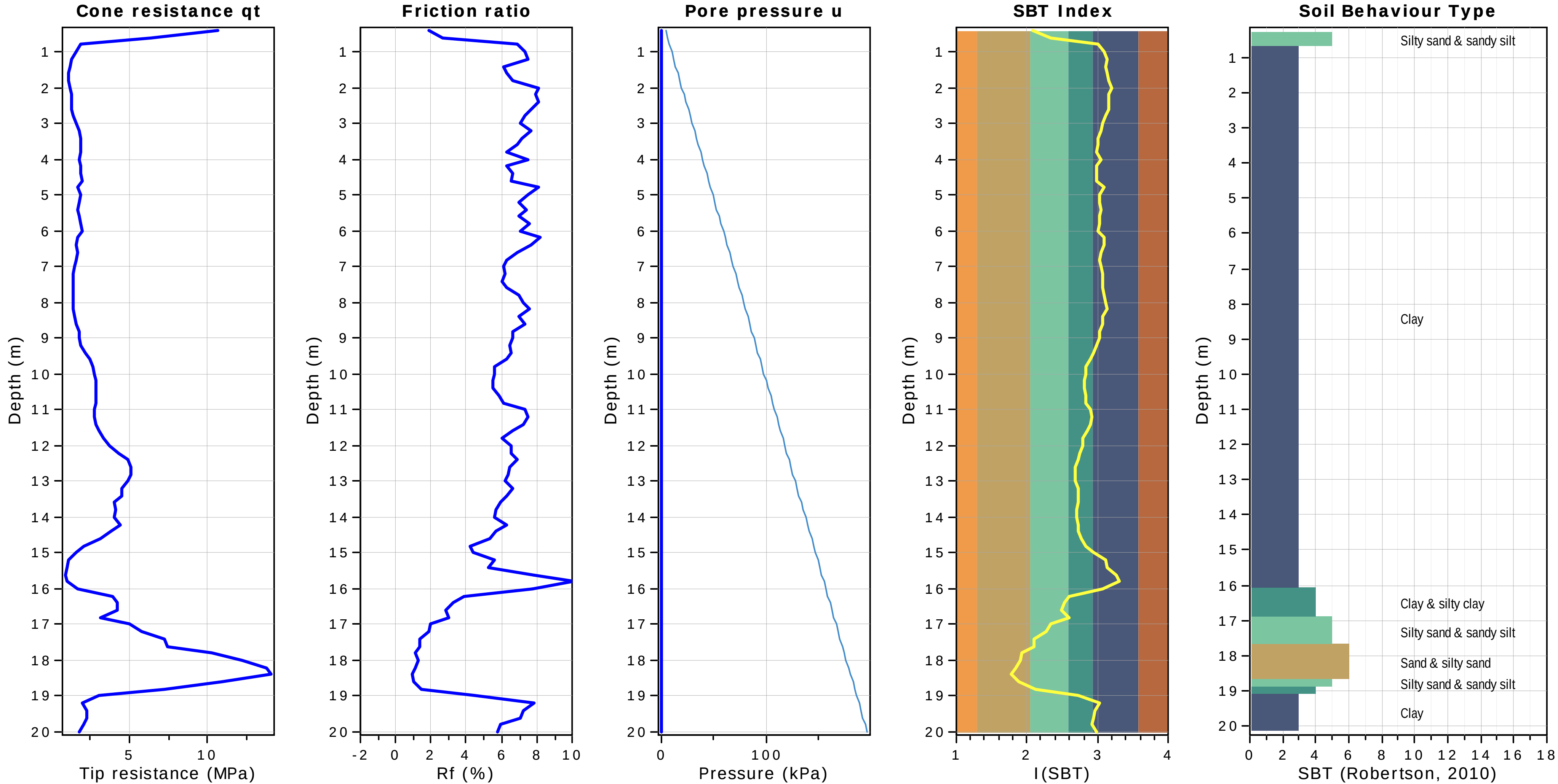


The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT: 036021P333CPT333
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

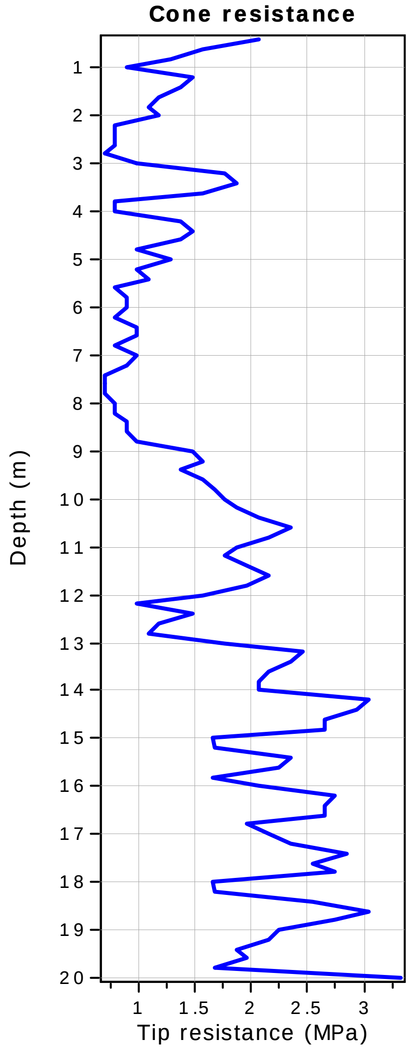


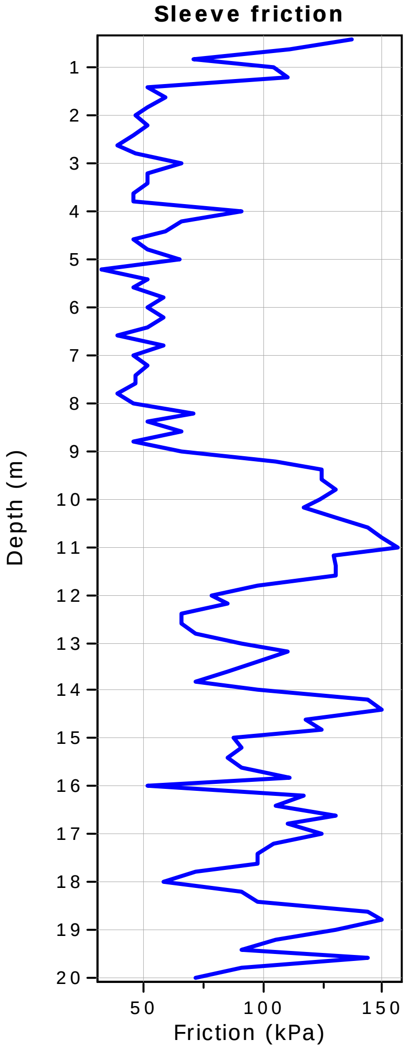
SBT legend

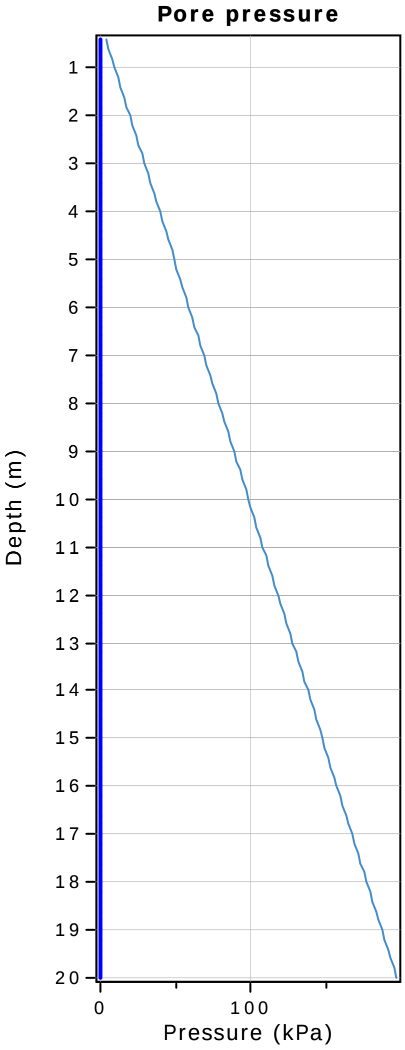
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P334CPT334
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

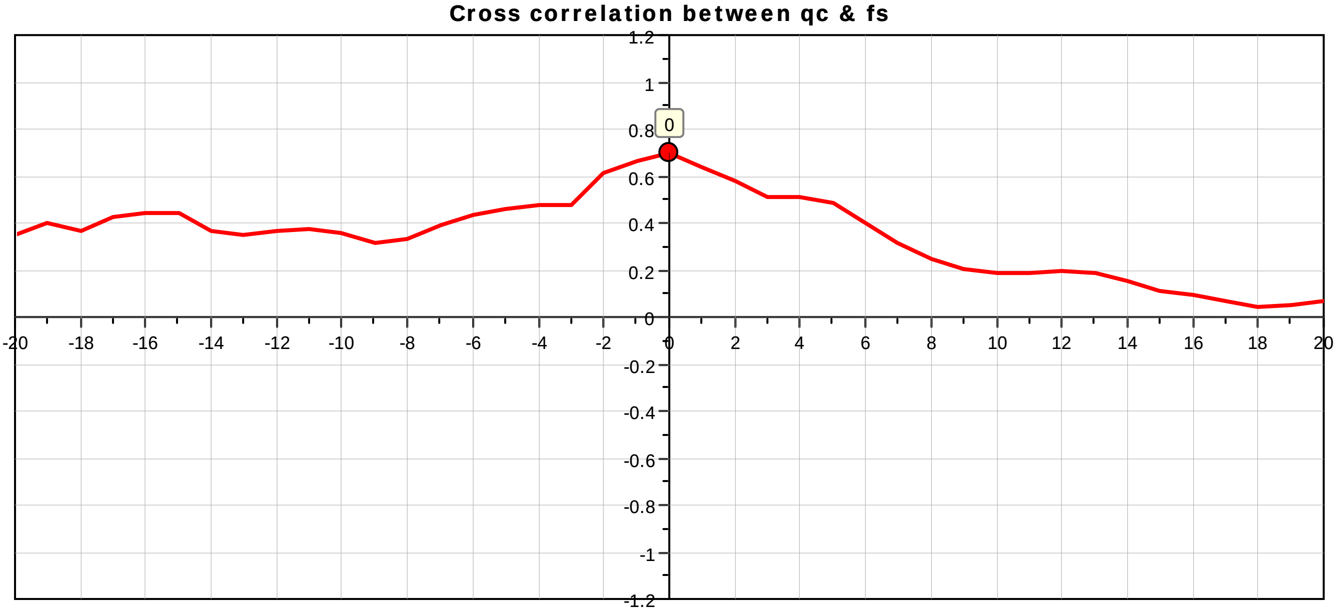
Project:
Location:


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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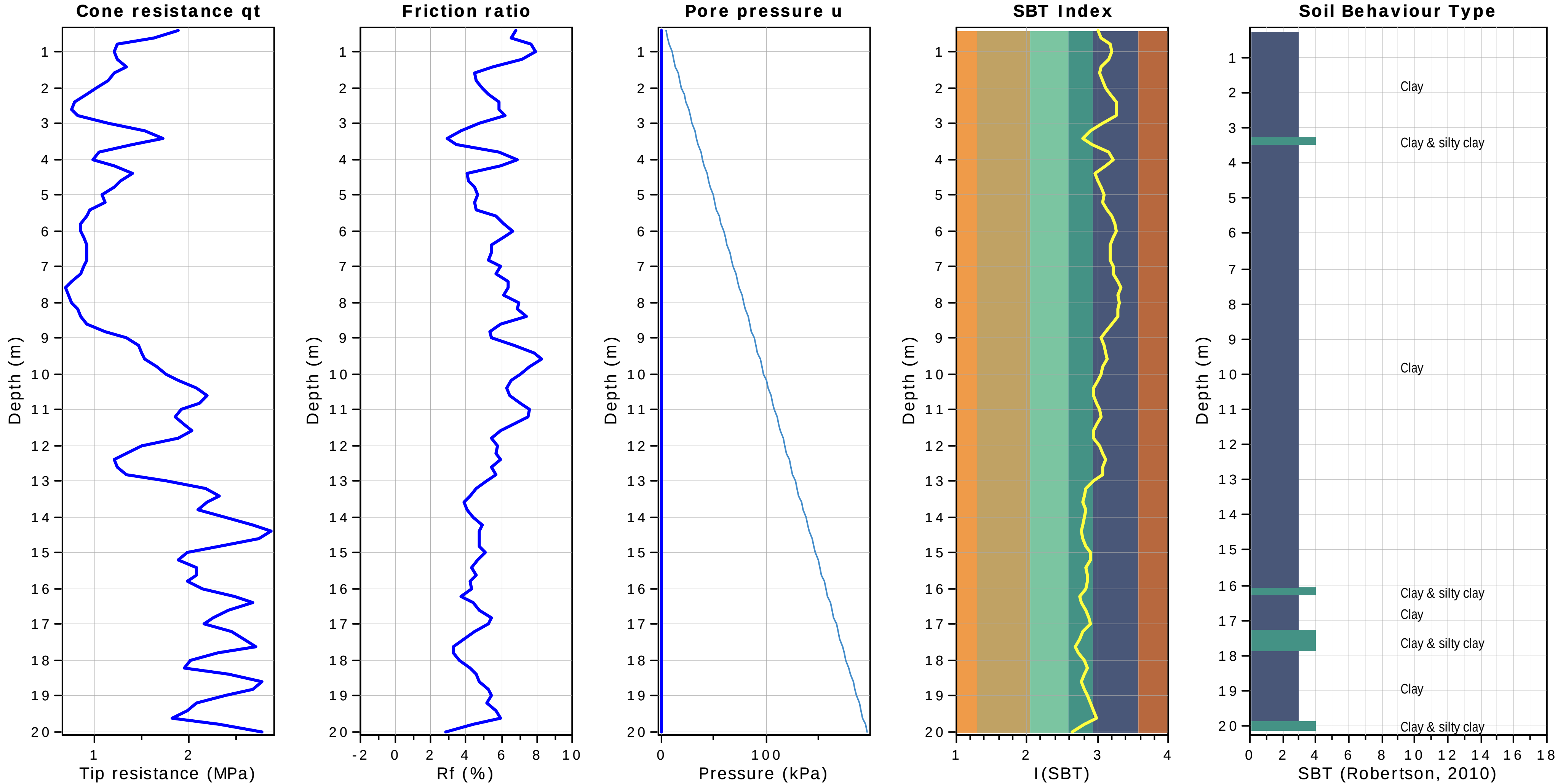
CPT: 036021P334CPT334
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟫 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

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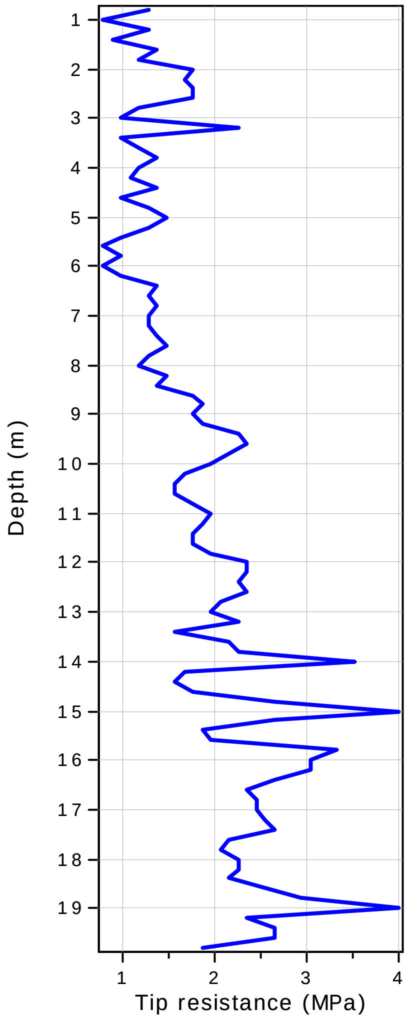
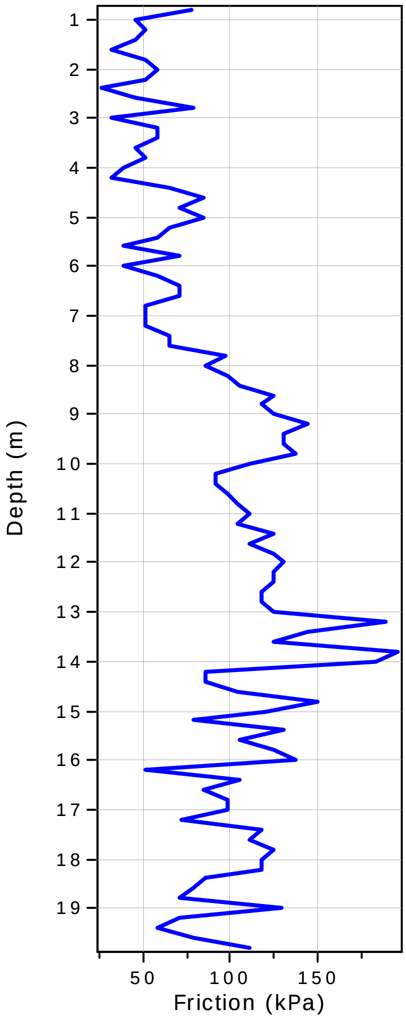
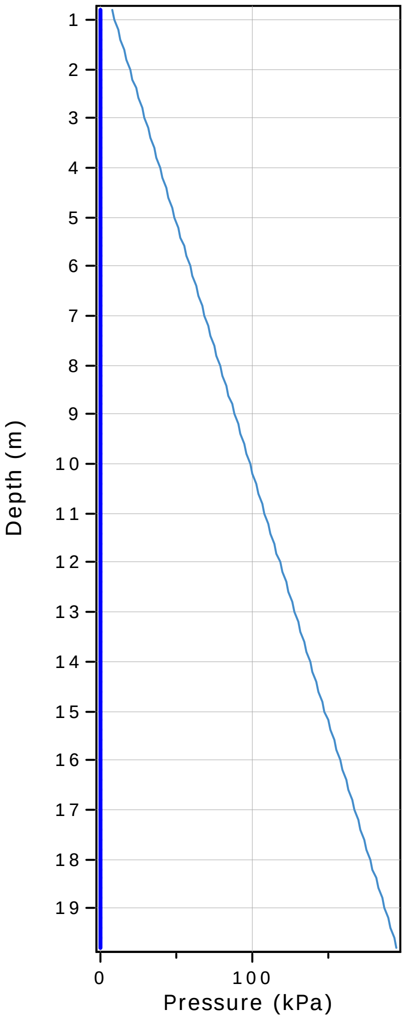
CPT: 036021P335CPT335
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

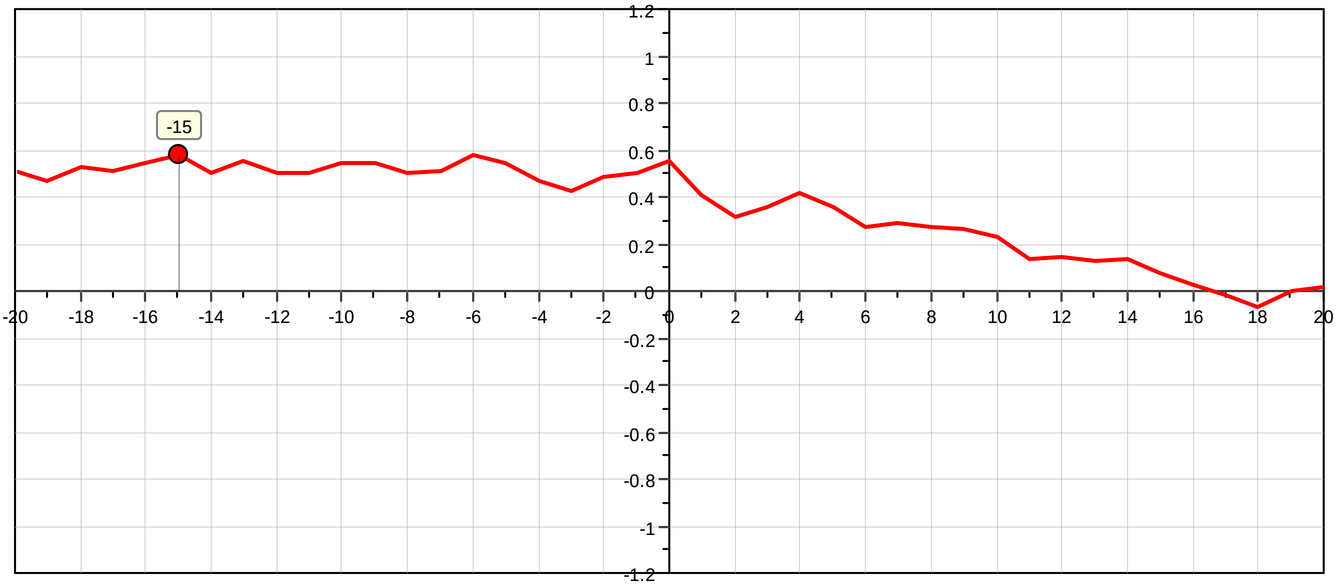
Project:
Location:


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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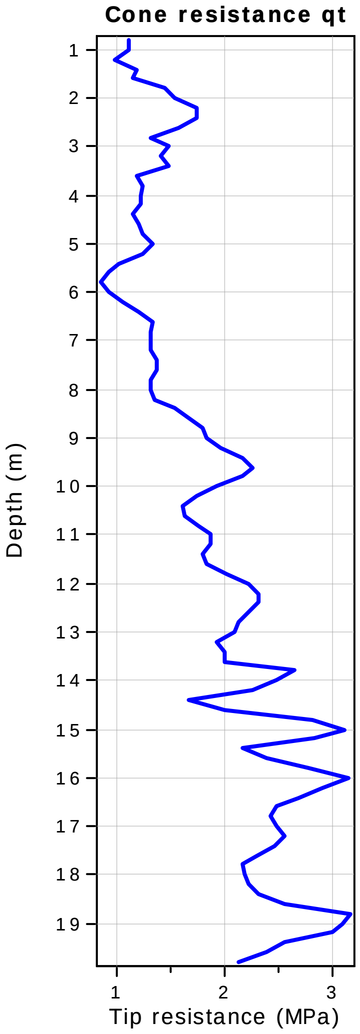
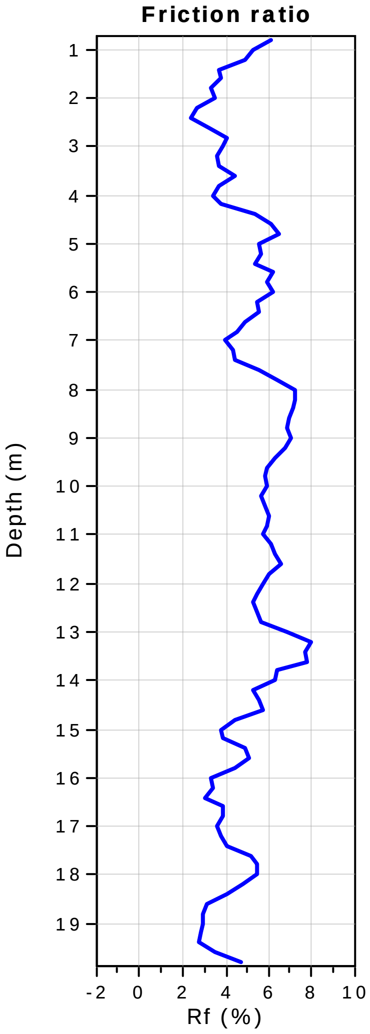
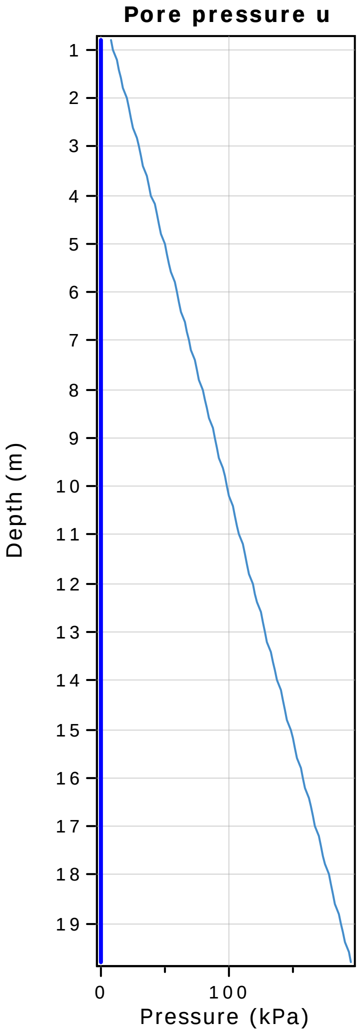
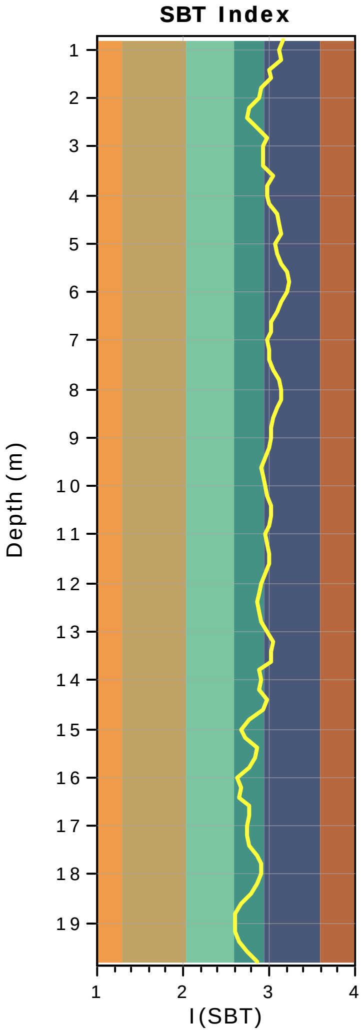
CPT: 036021P335CPT335
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

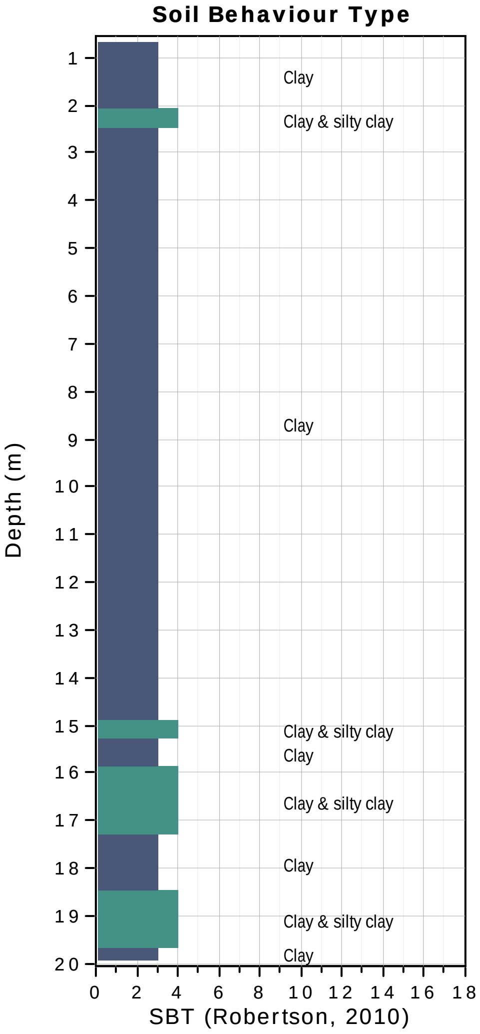
Project:
Location:


Cone resistance qt


Friction ratio


Pore pressure u


SBT Index

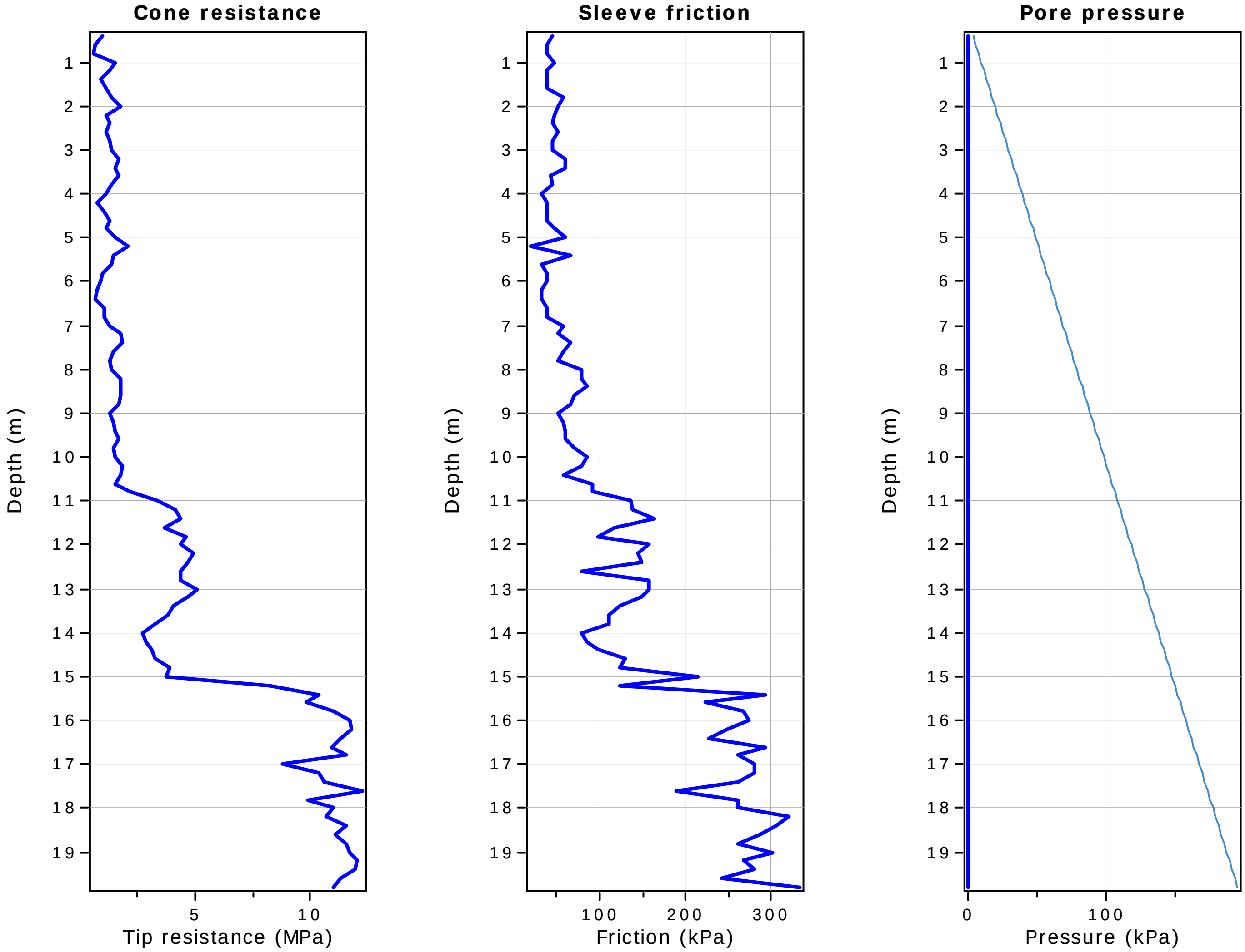

Soil Behaviour Type

SBT legend

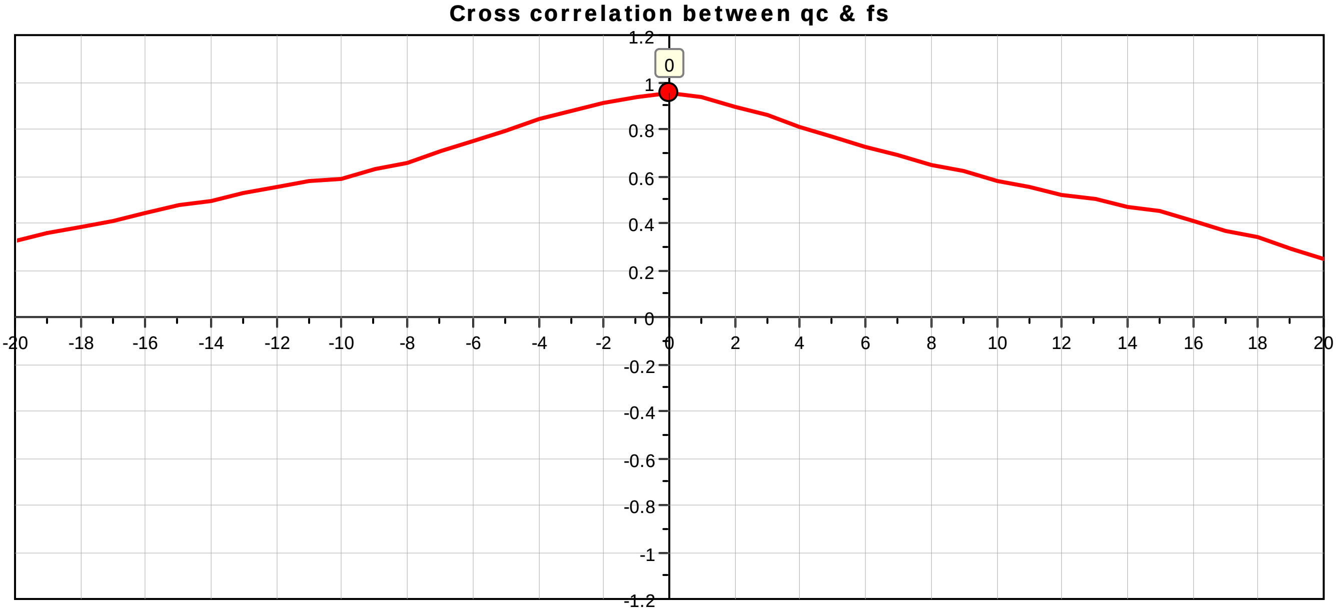
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P336CPT336
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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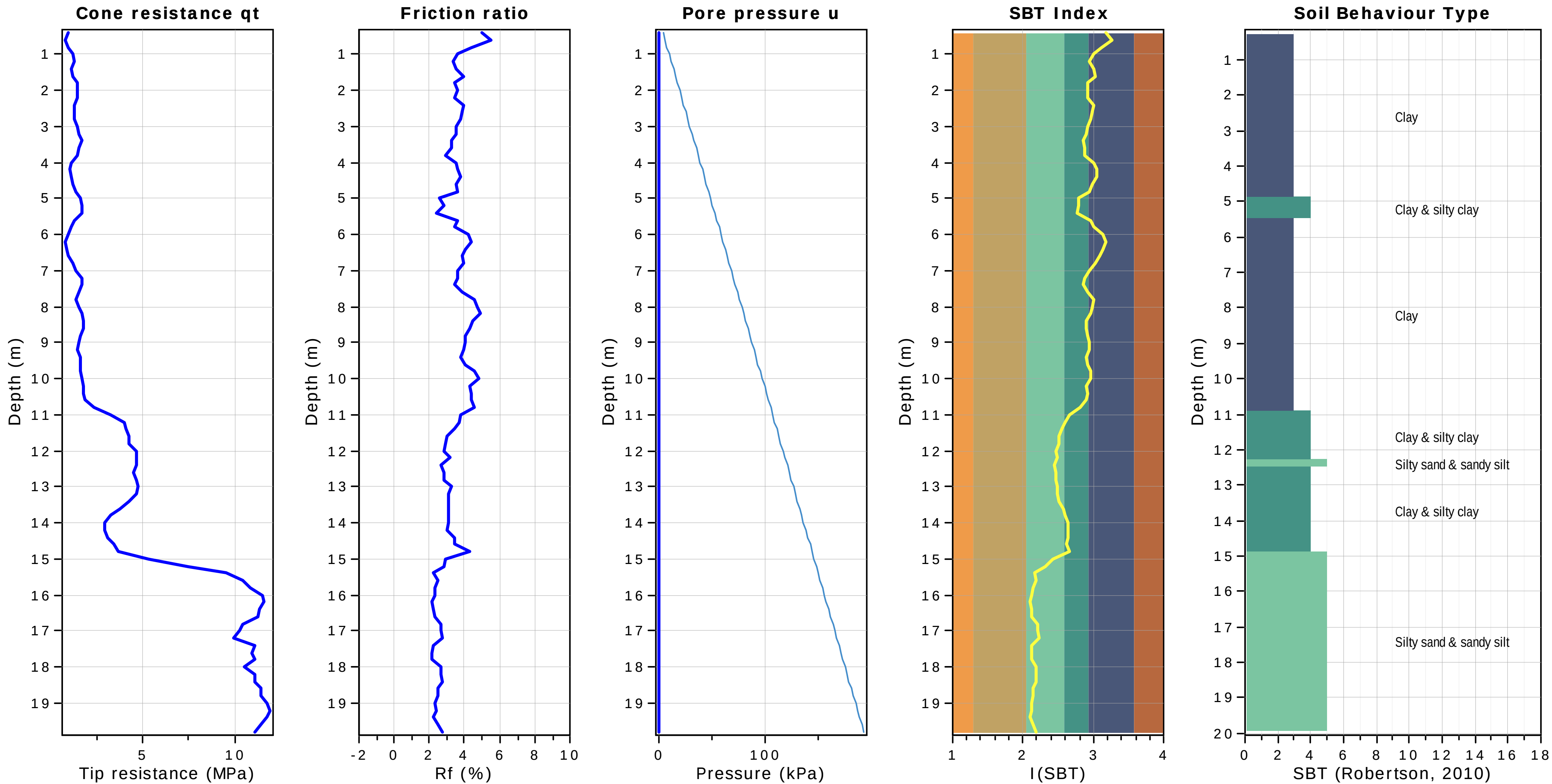
CPT: 036021P336CPT336
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟫 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

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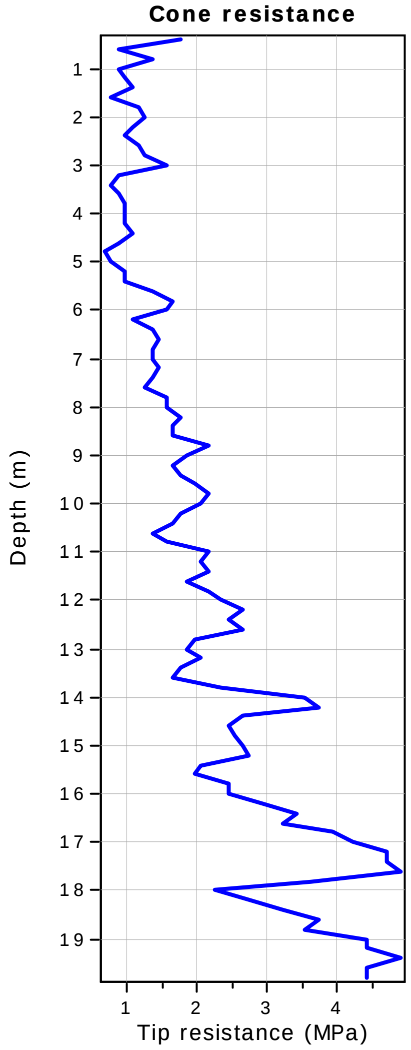
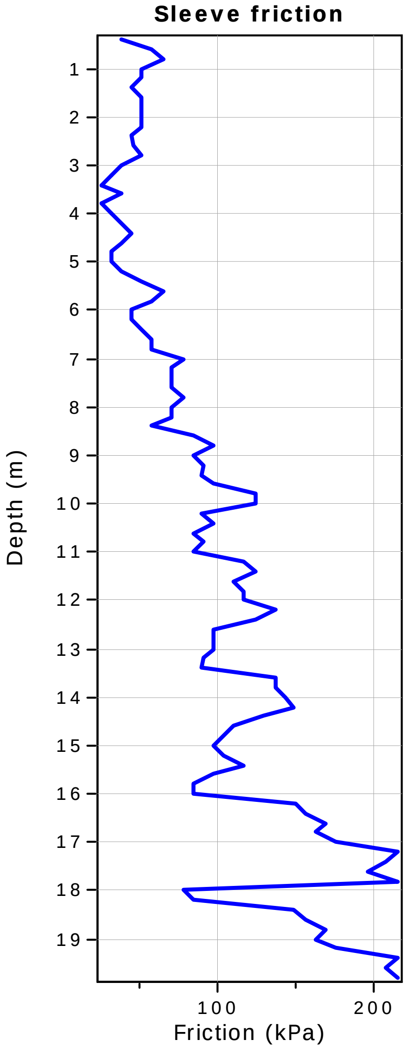
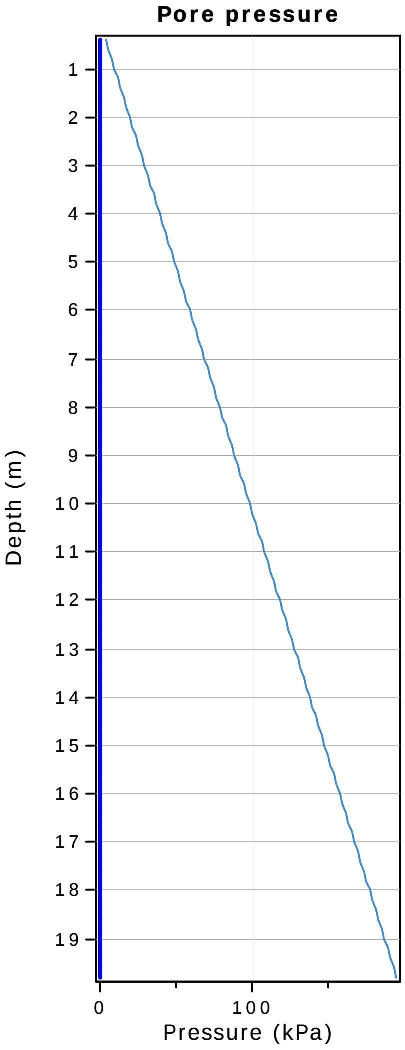
CPT: 036021P337CPT337
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

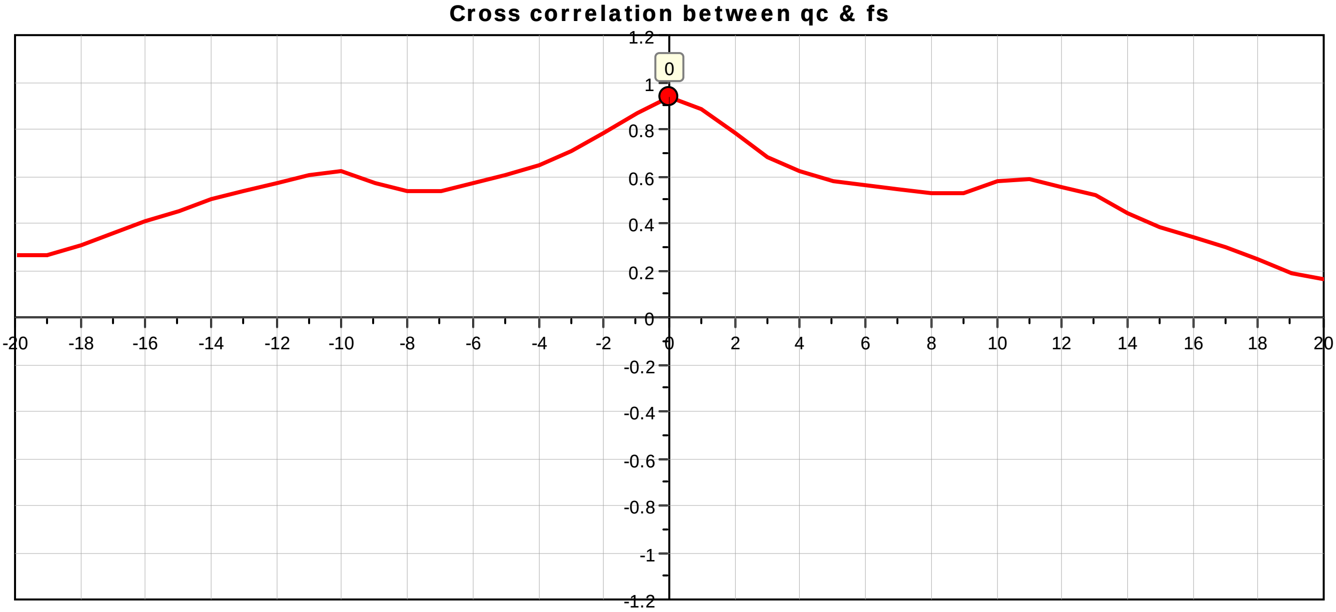
Project:
Location:





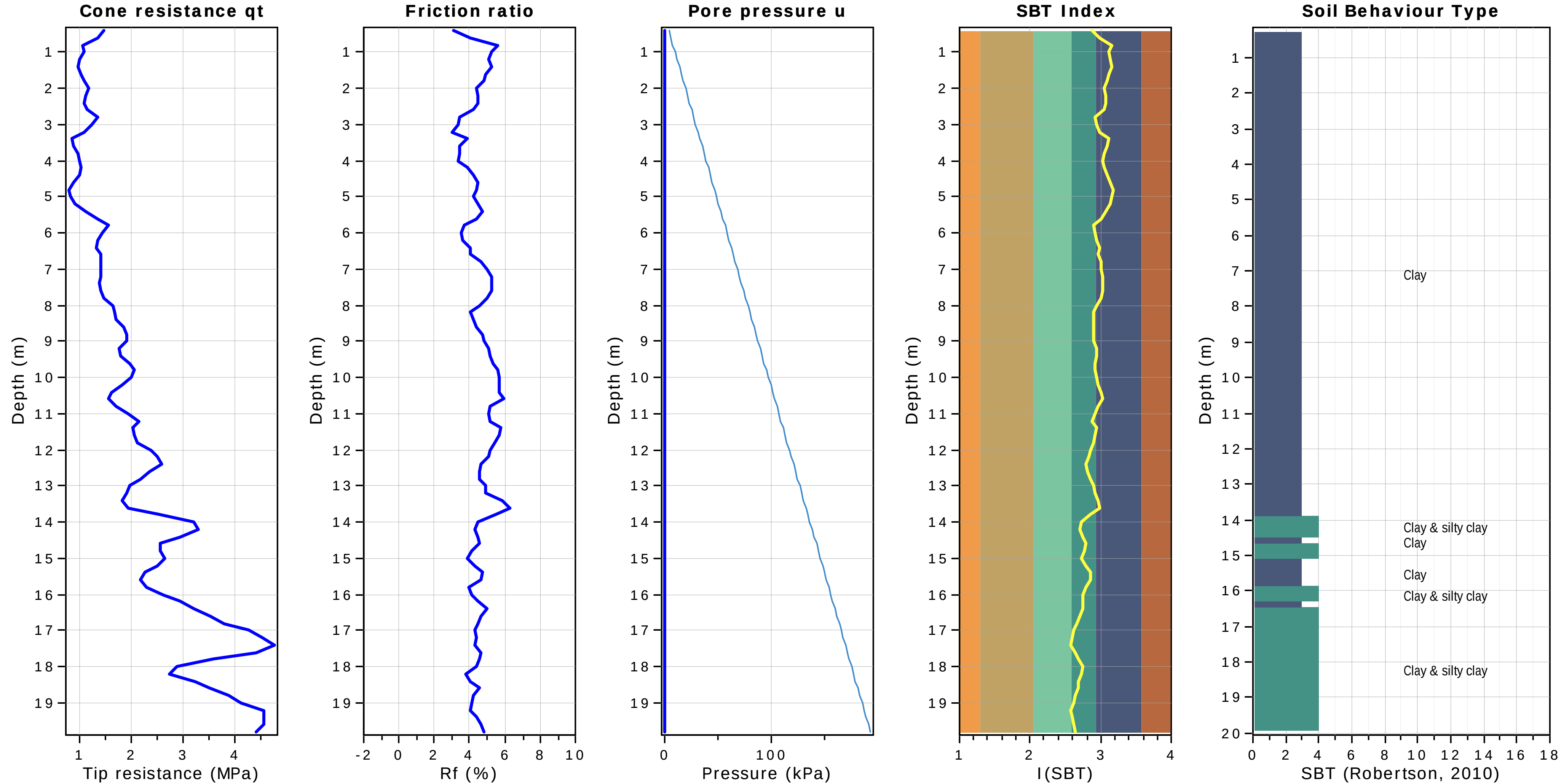


The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT: 036021P337CPT337
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



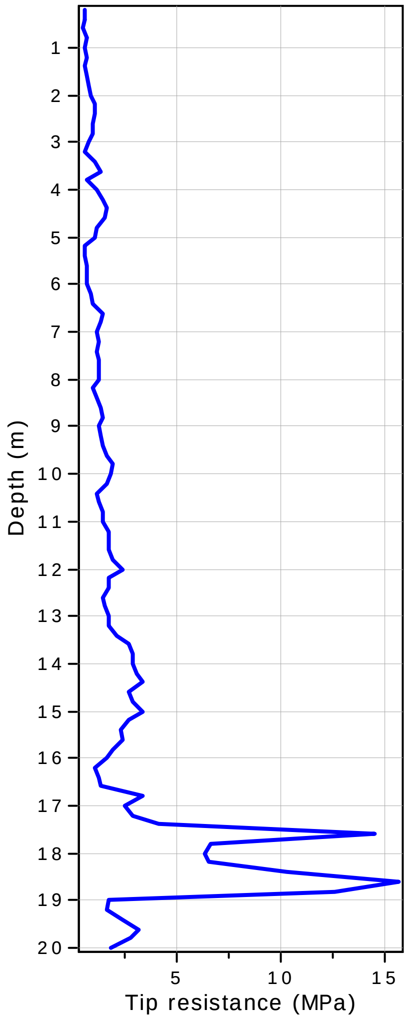
SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

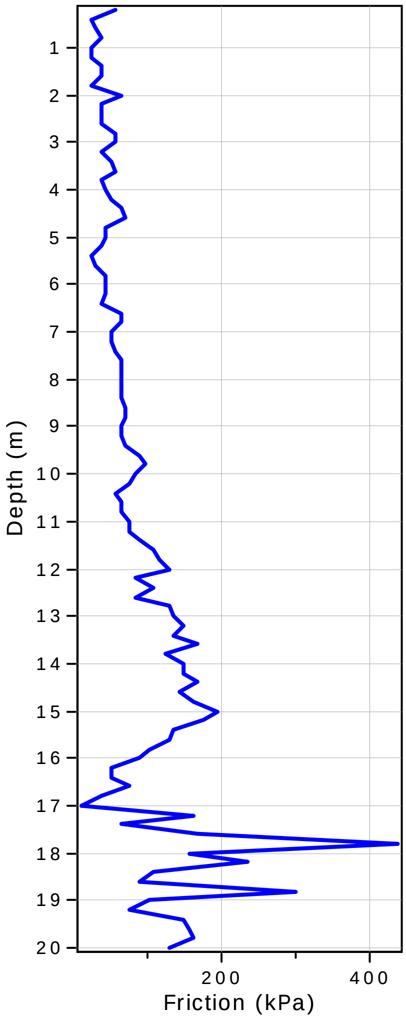
CPT: 036021P338CPT338
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

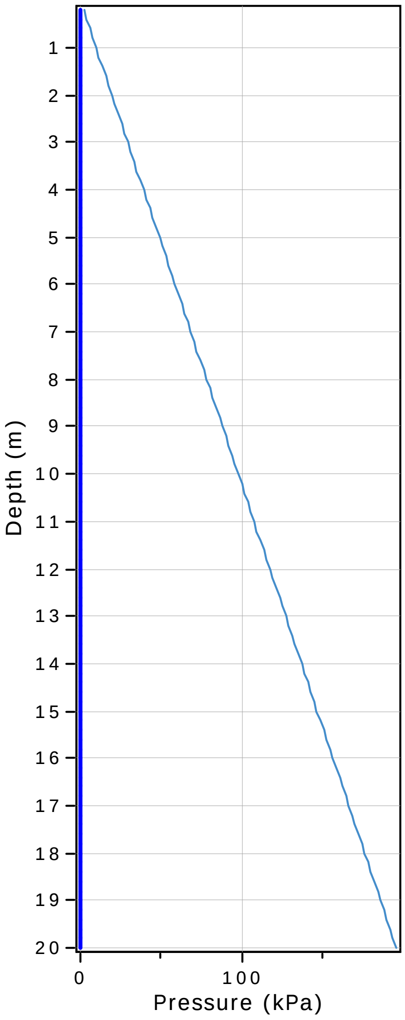
Cone resistance



Sleeve friction

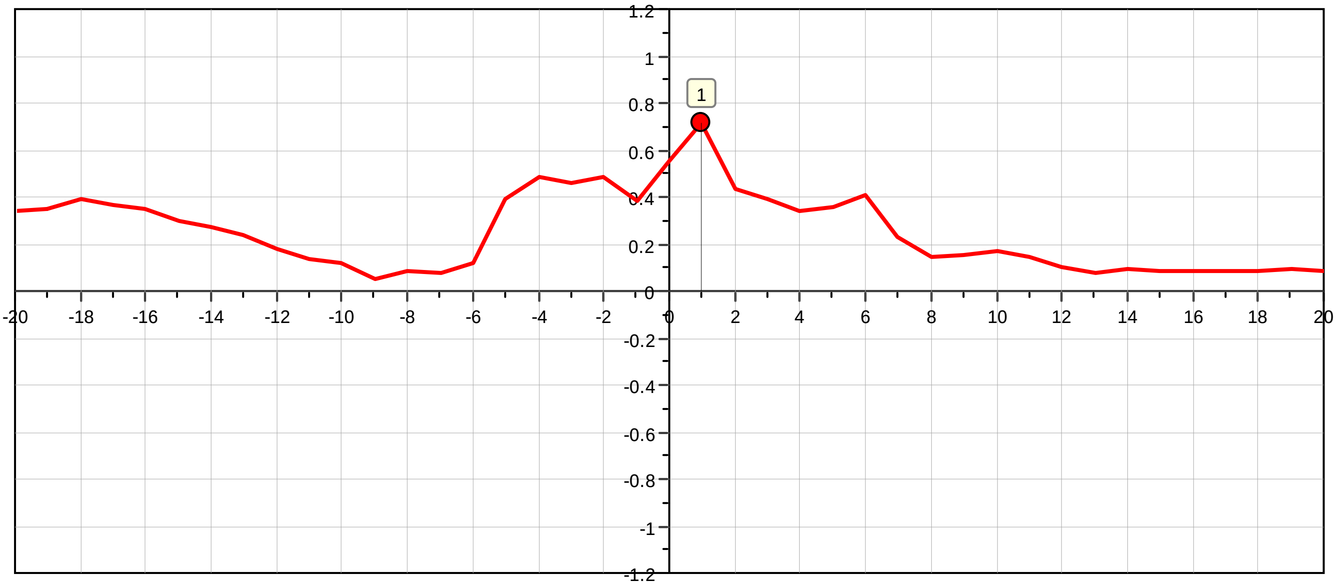


Pore pressure



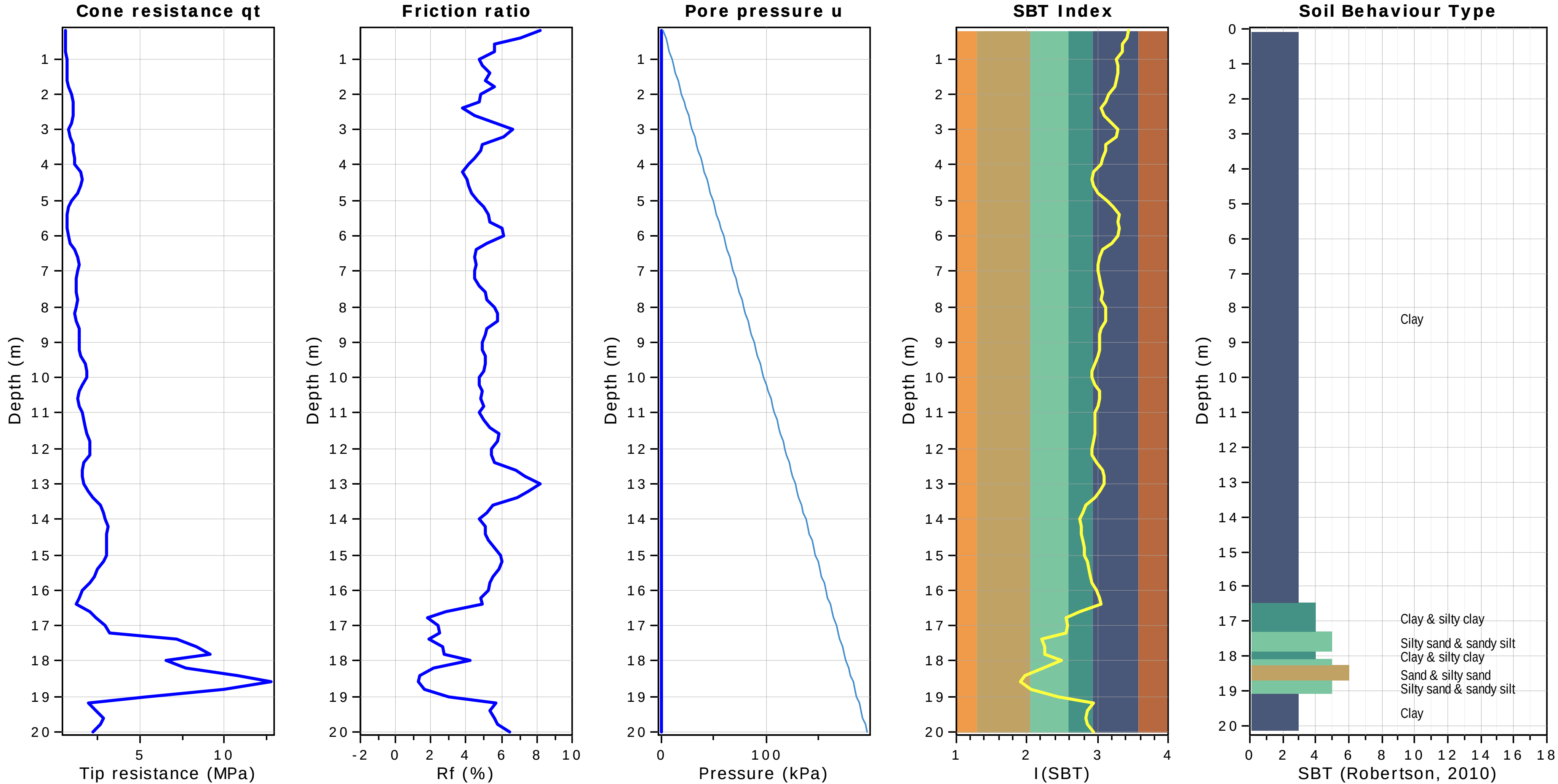
The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



CPT: 036021P338CPT338
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

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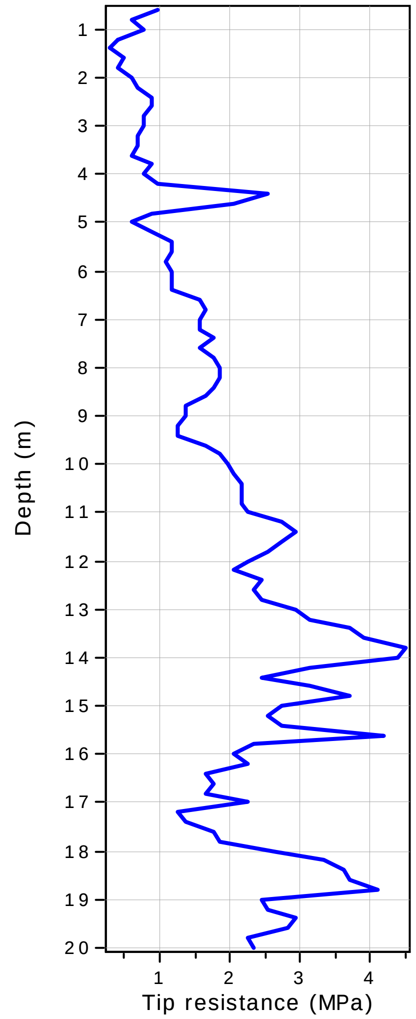
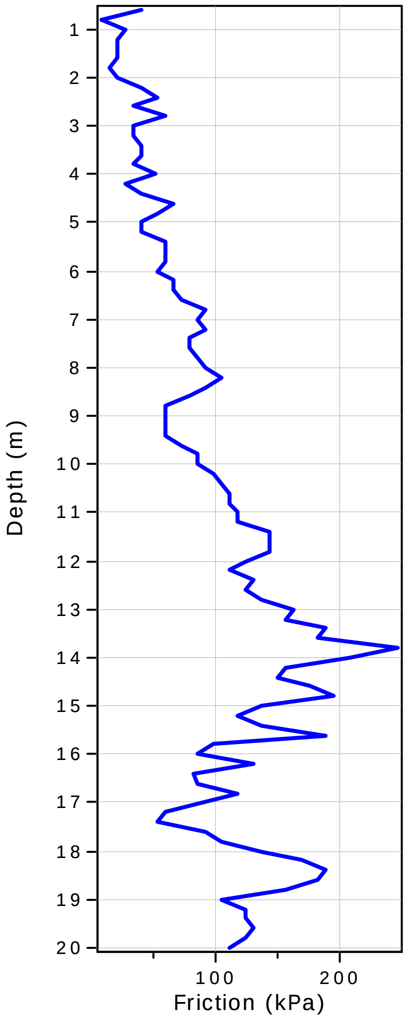
CPT: 036021P339CPT339
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

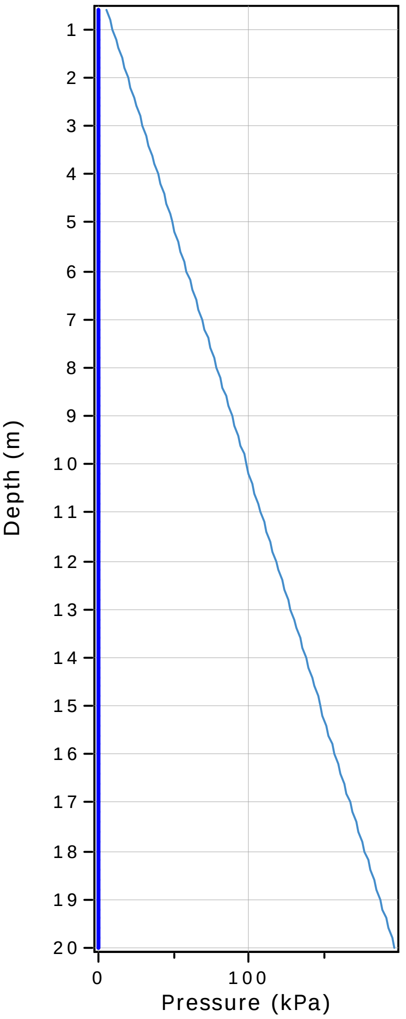
Cone resistance



Sleeve friction

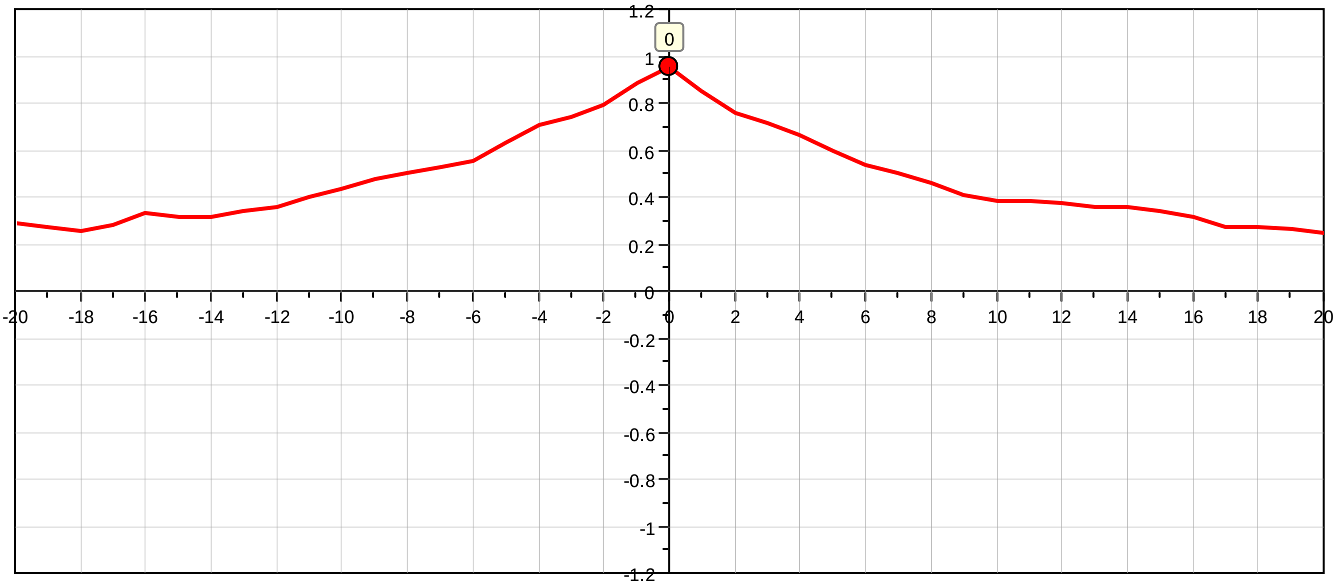


Pore pressure



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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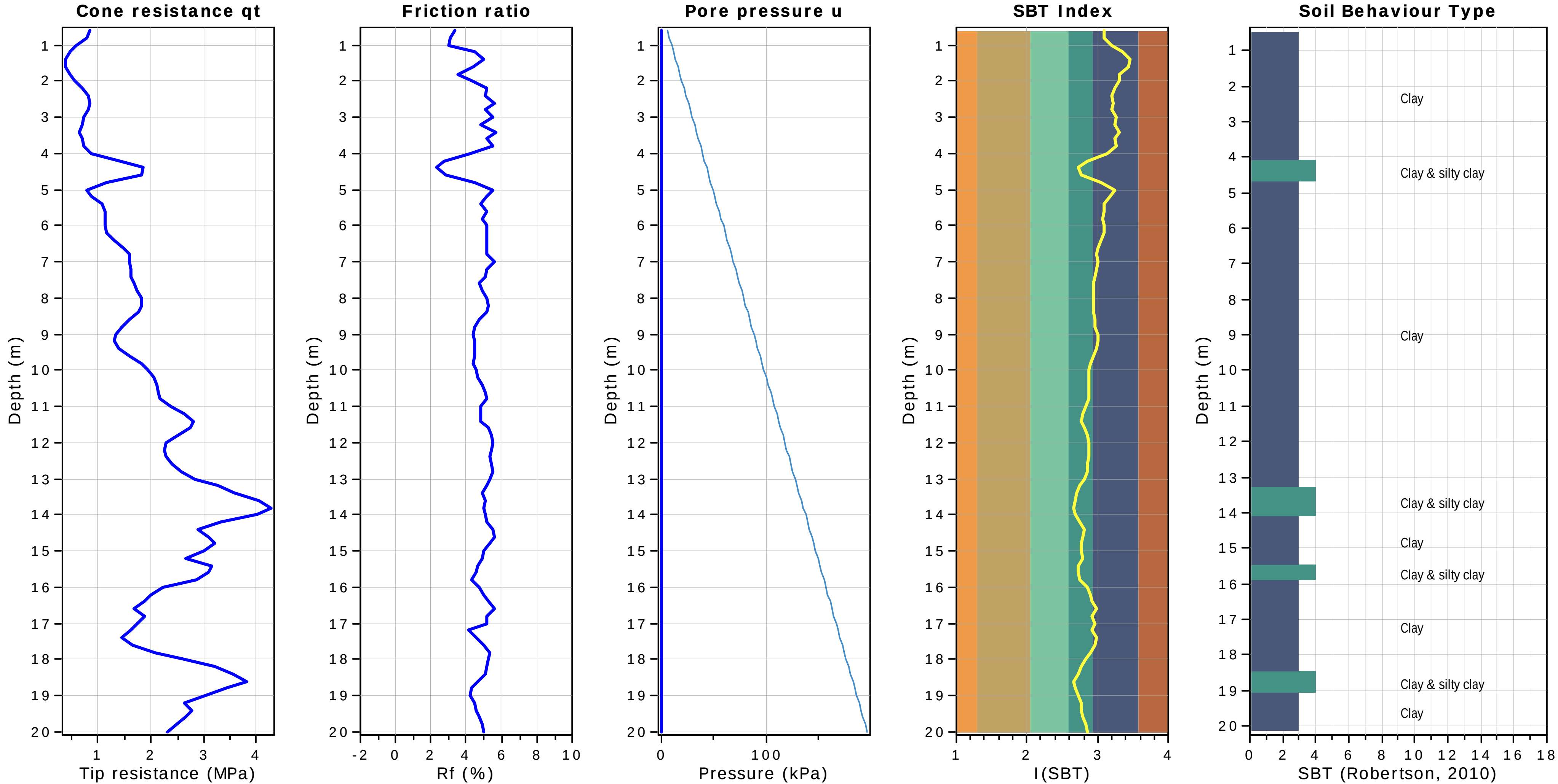
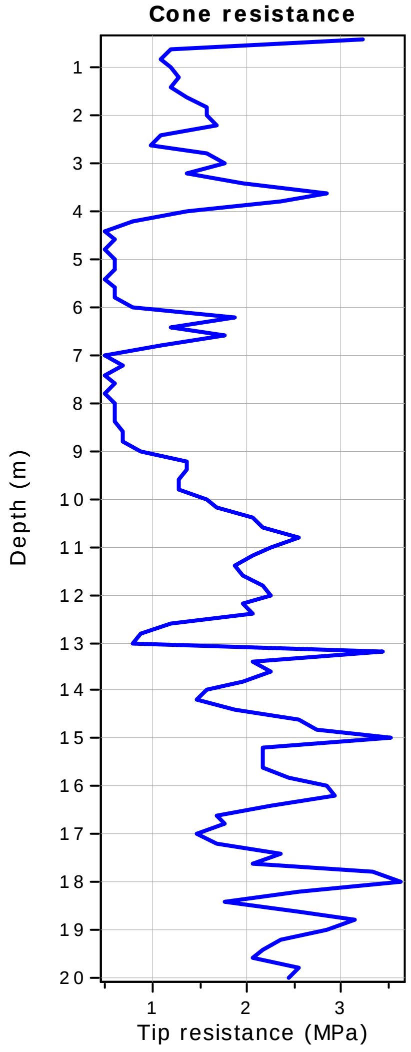
CPT: 036021P339CPT339
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

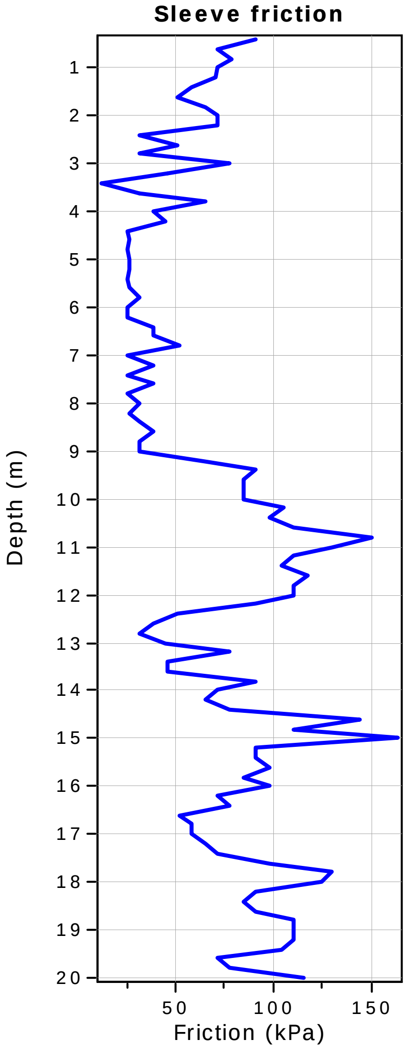
Project:
Location:

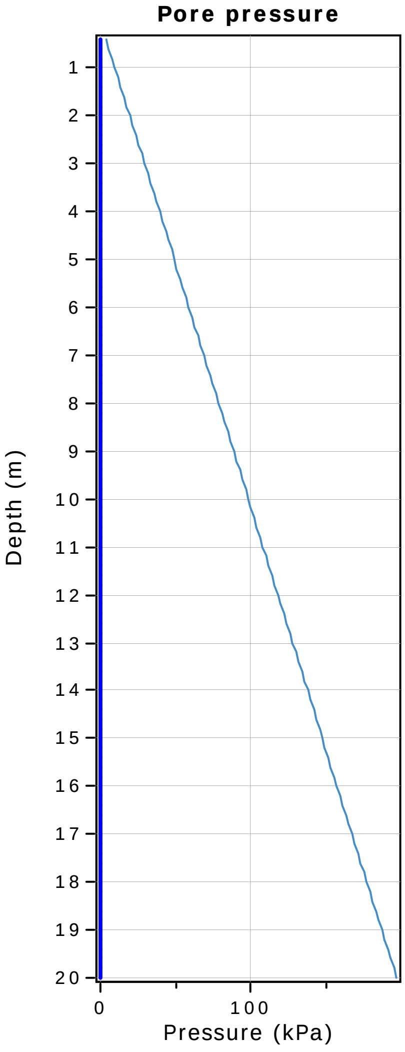


SBT legend

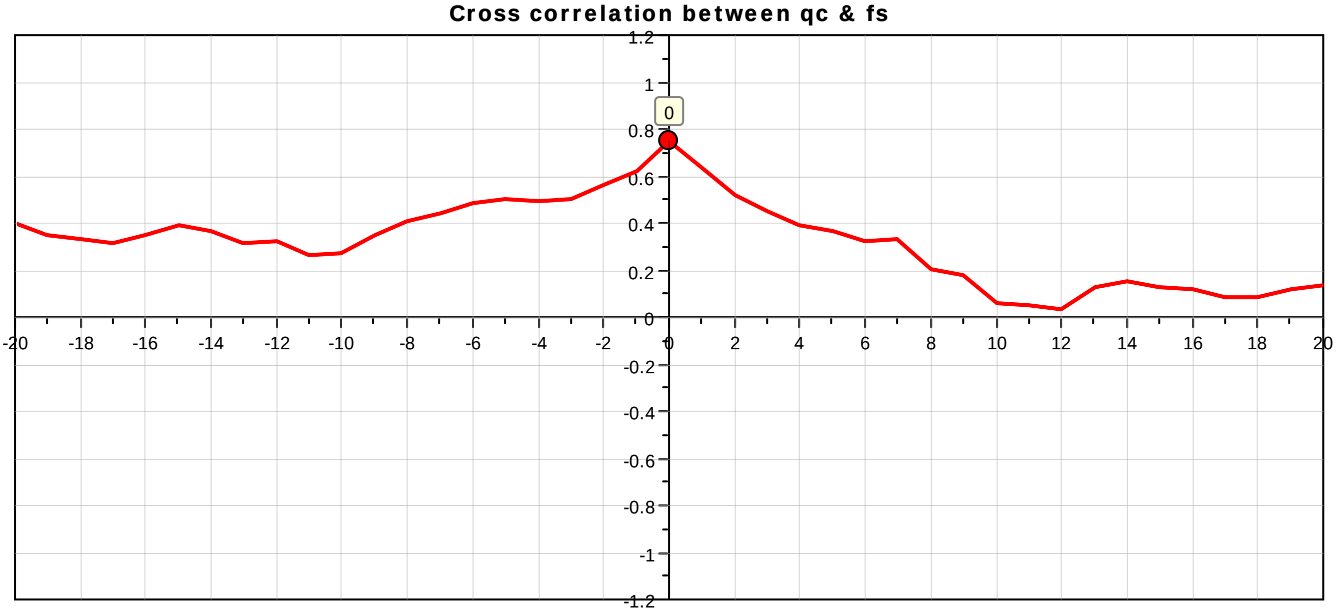
🟥 1. Sensitive fine grained	4. Clayey silt to silty clay	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to clayey sand
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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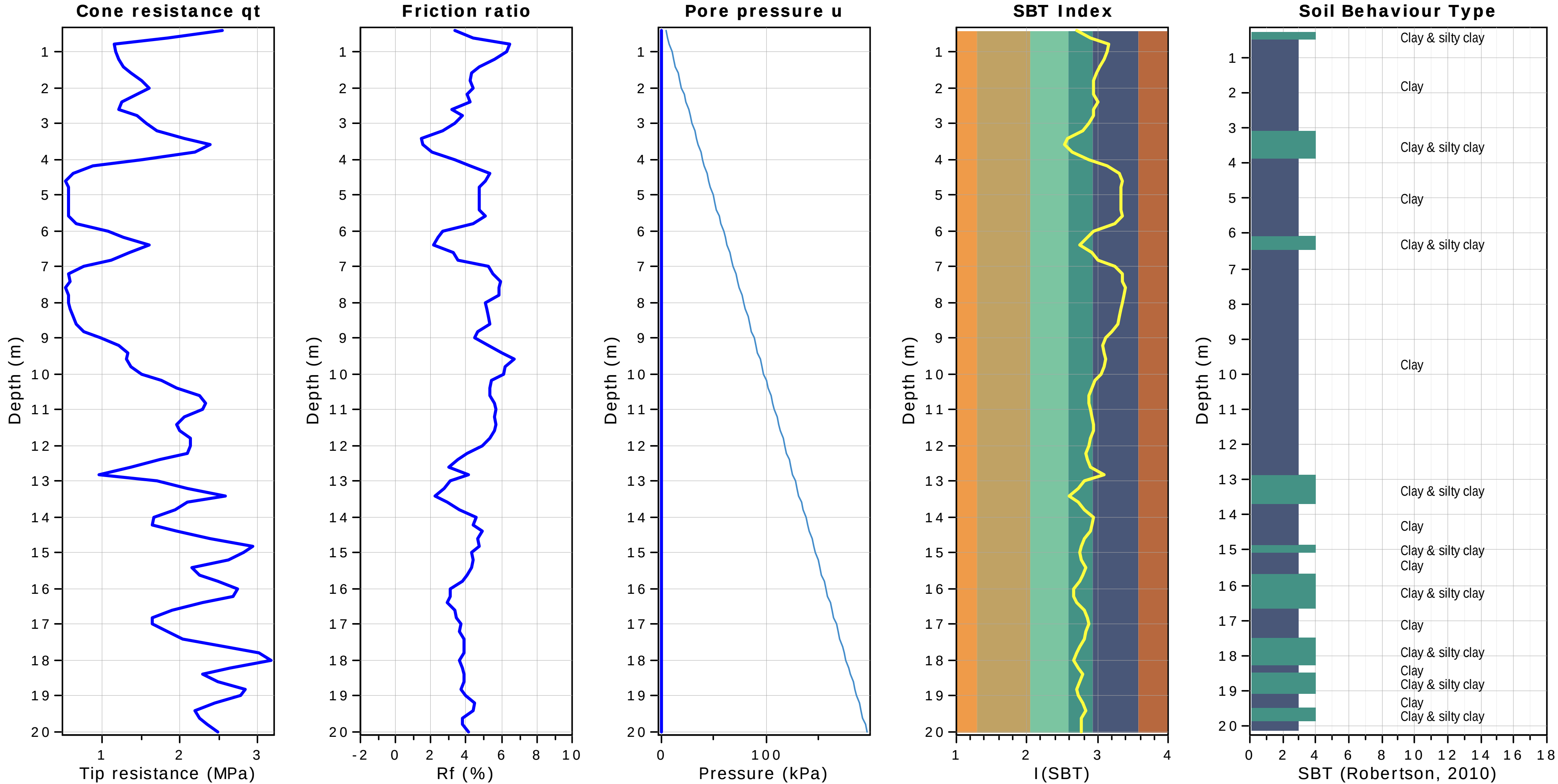
CPT: 036021P340CPT340
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

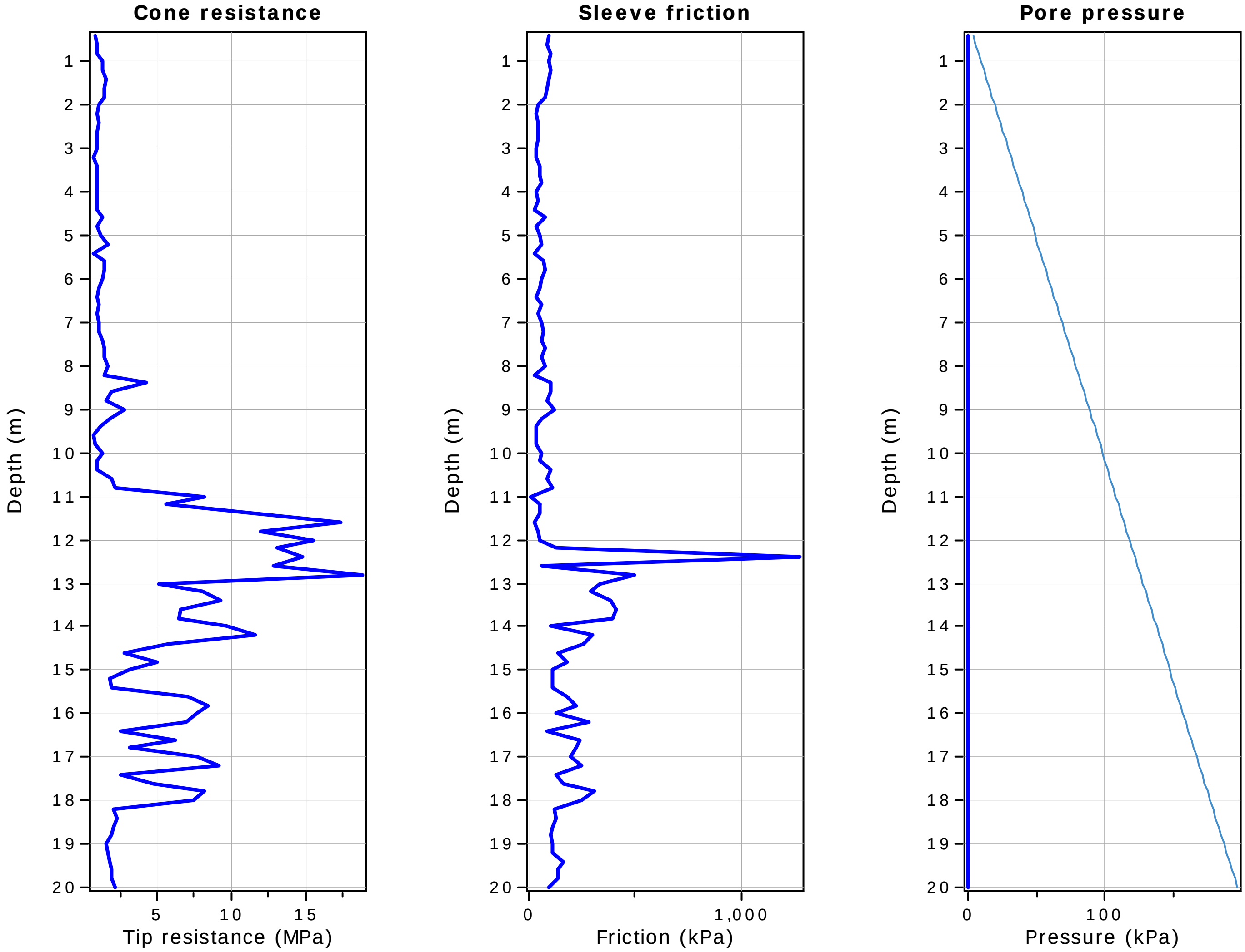


SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

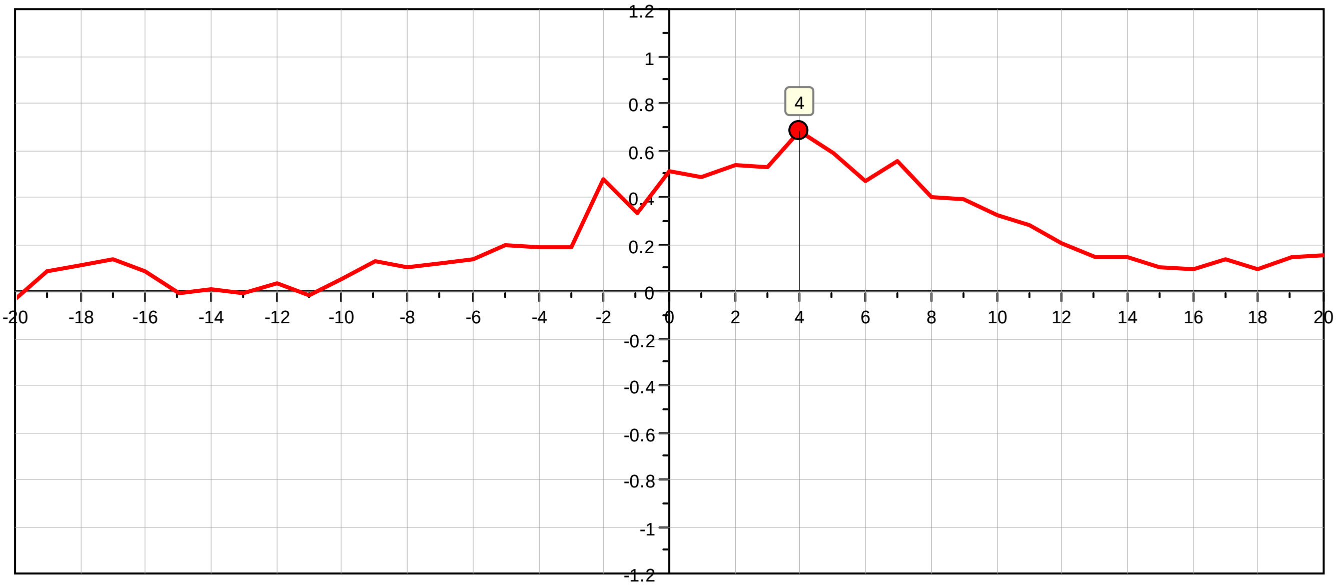
CPT: 036021P341CPT341
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



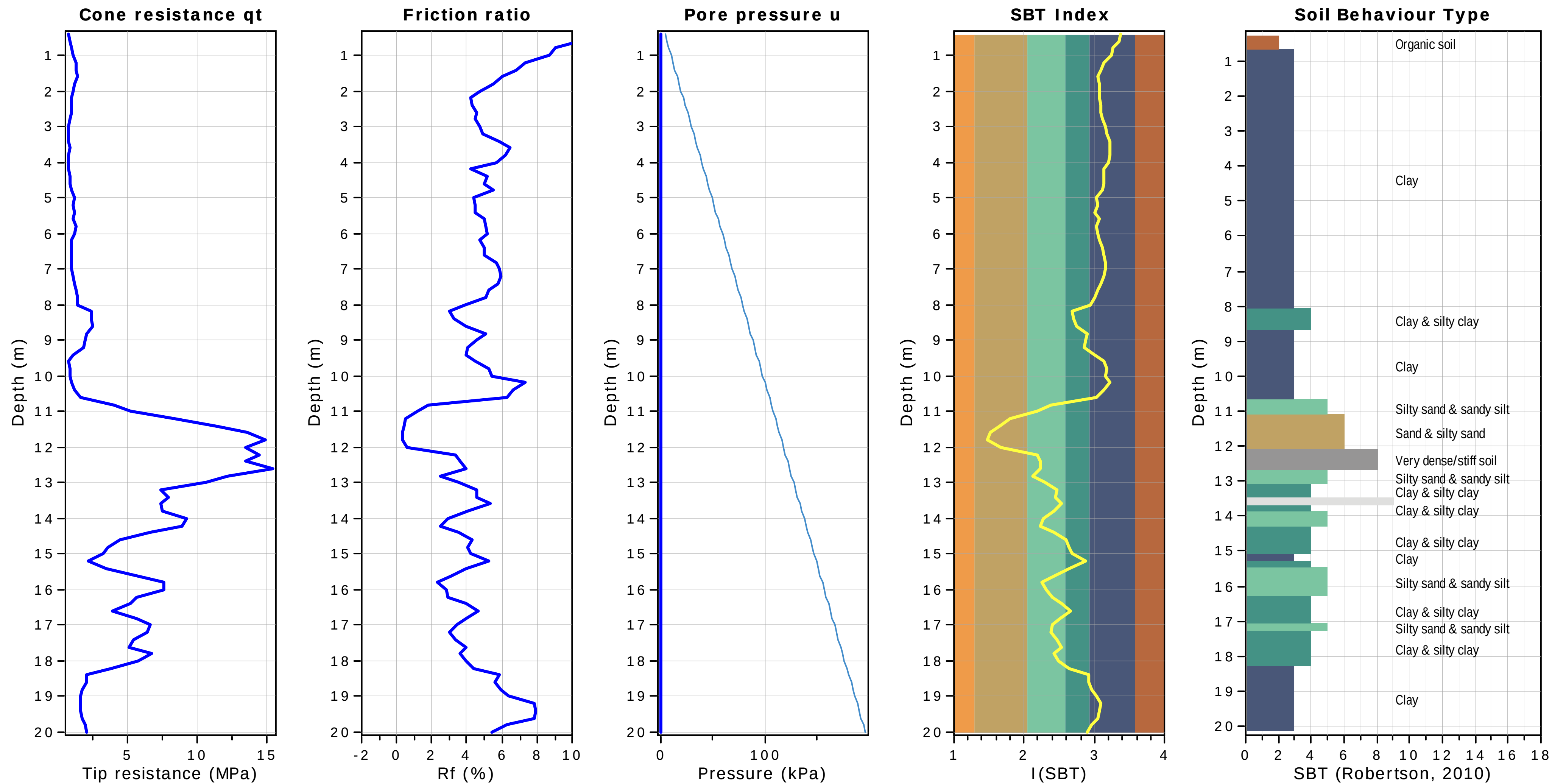
The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



CPT: 036021P341CPT341
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

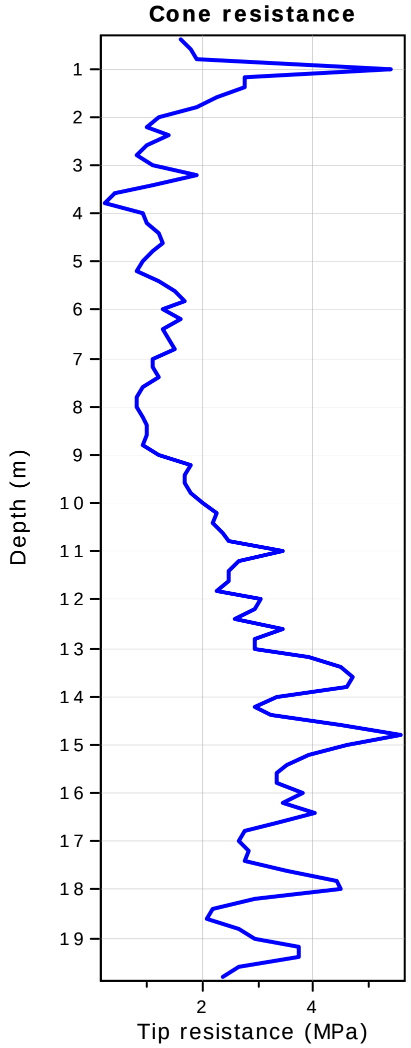


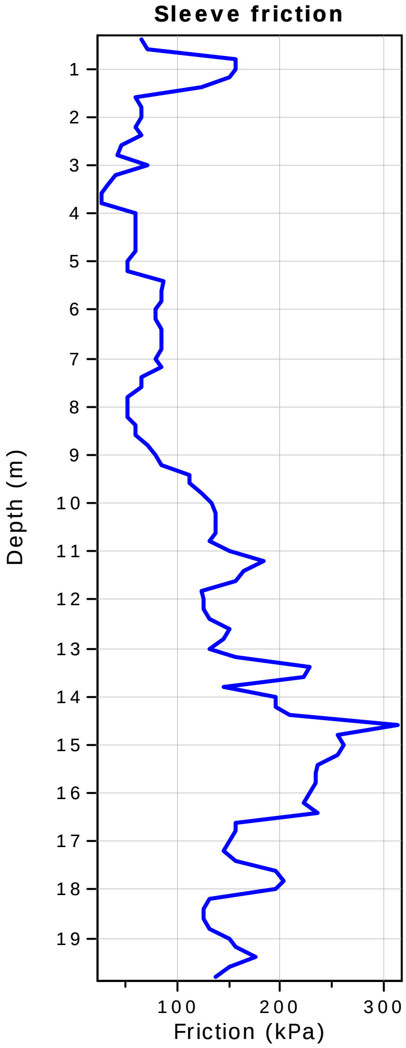
SBT legend

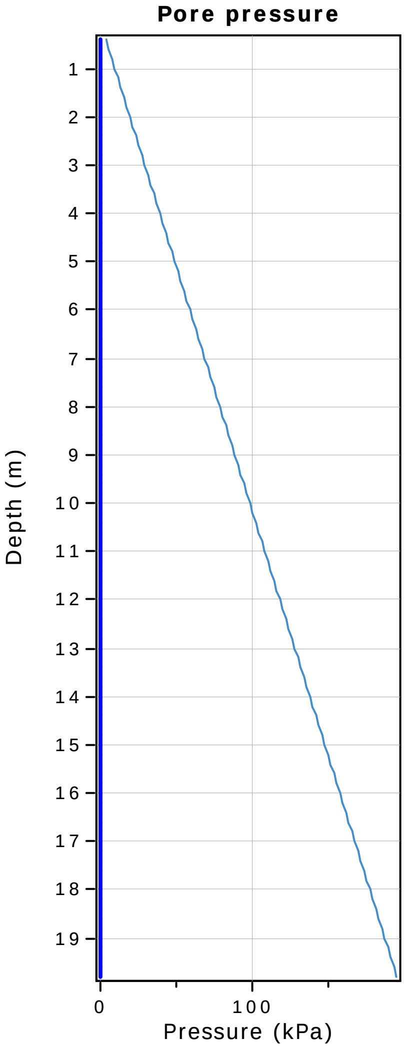
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P342CPT342
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

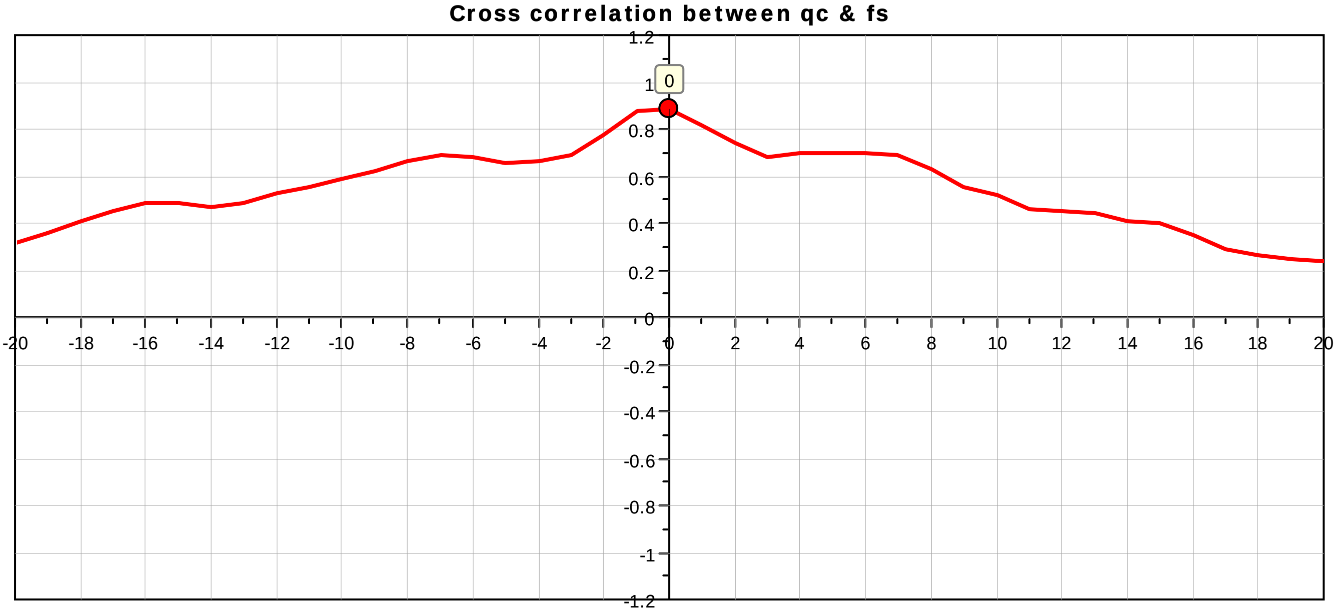
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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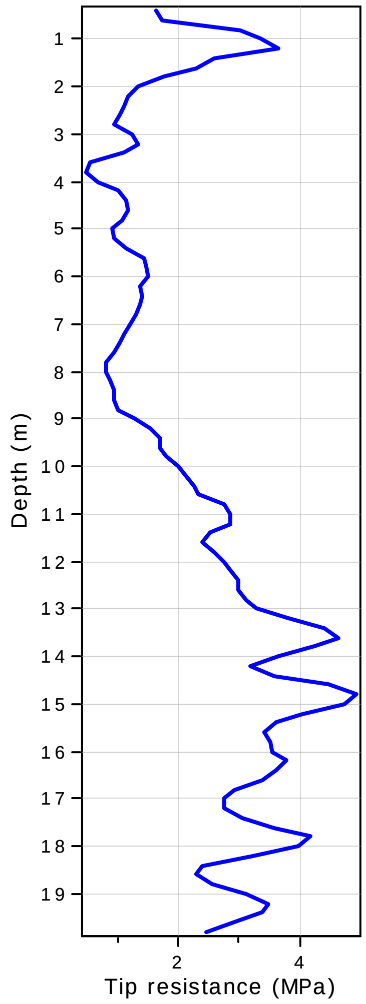
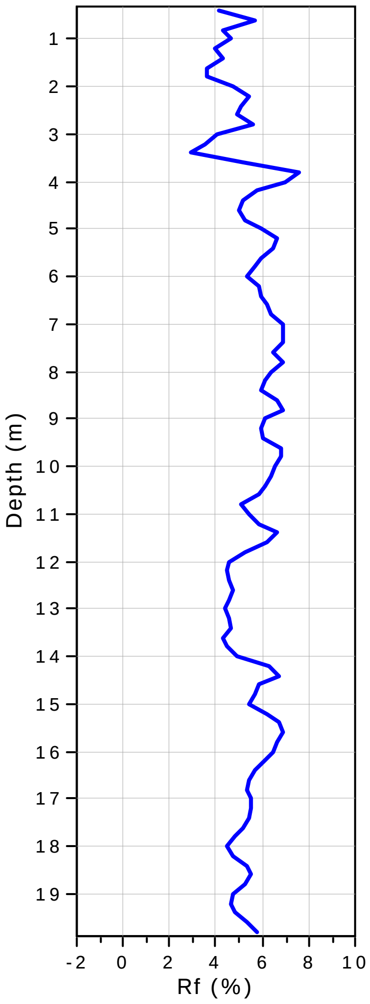
CPT: 036021P342CPT342
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

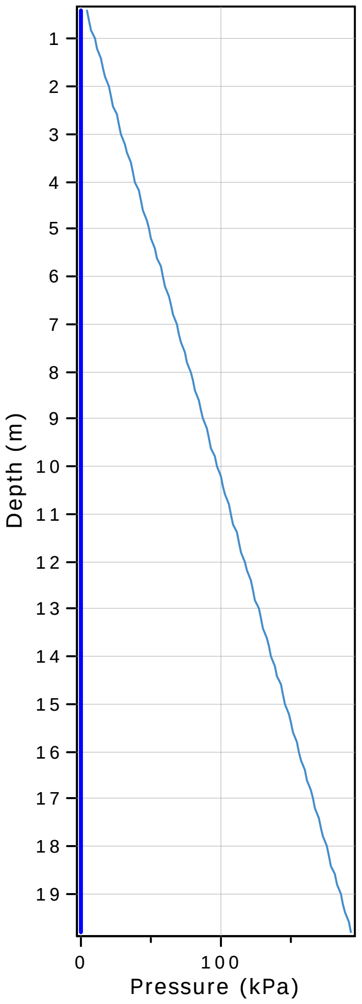
Cone resistance qt



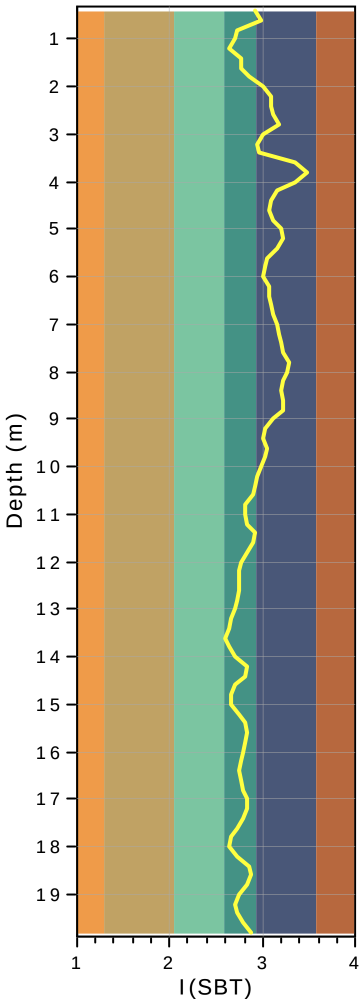
Friction ratio



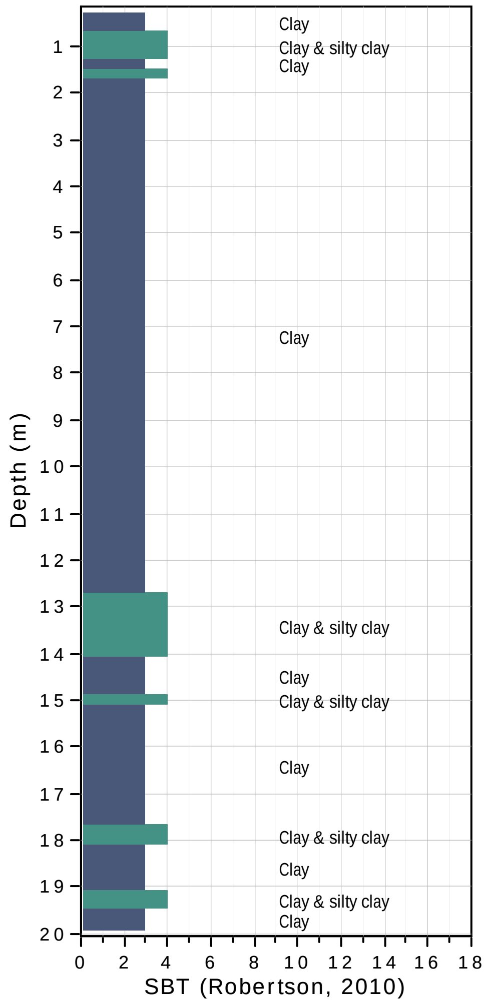
Pore pressure u



SBT Index



Soil Behaviour Type



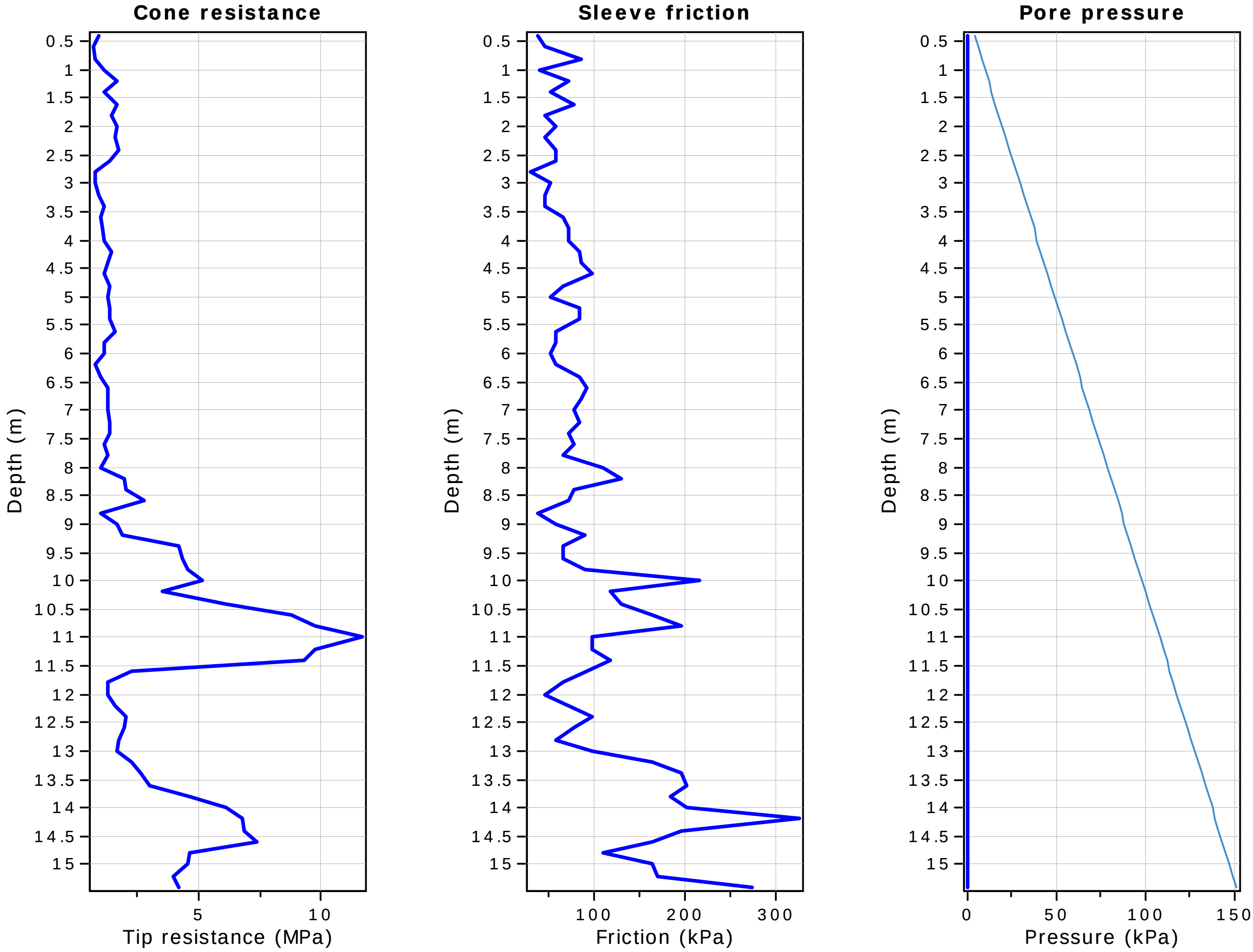
SBT legend

🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟫 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

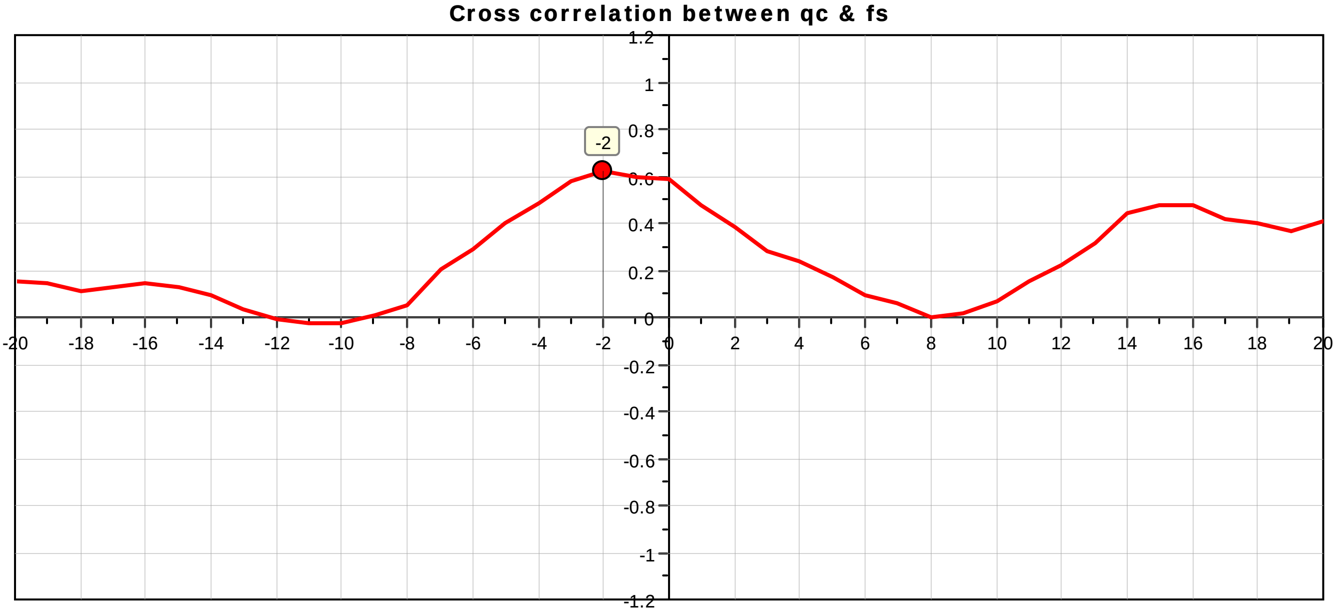
CPT: 036021P344CPT344

Total depth: 15.40 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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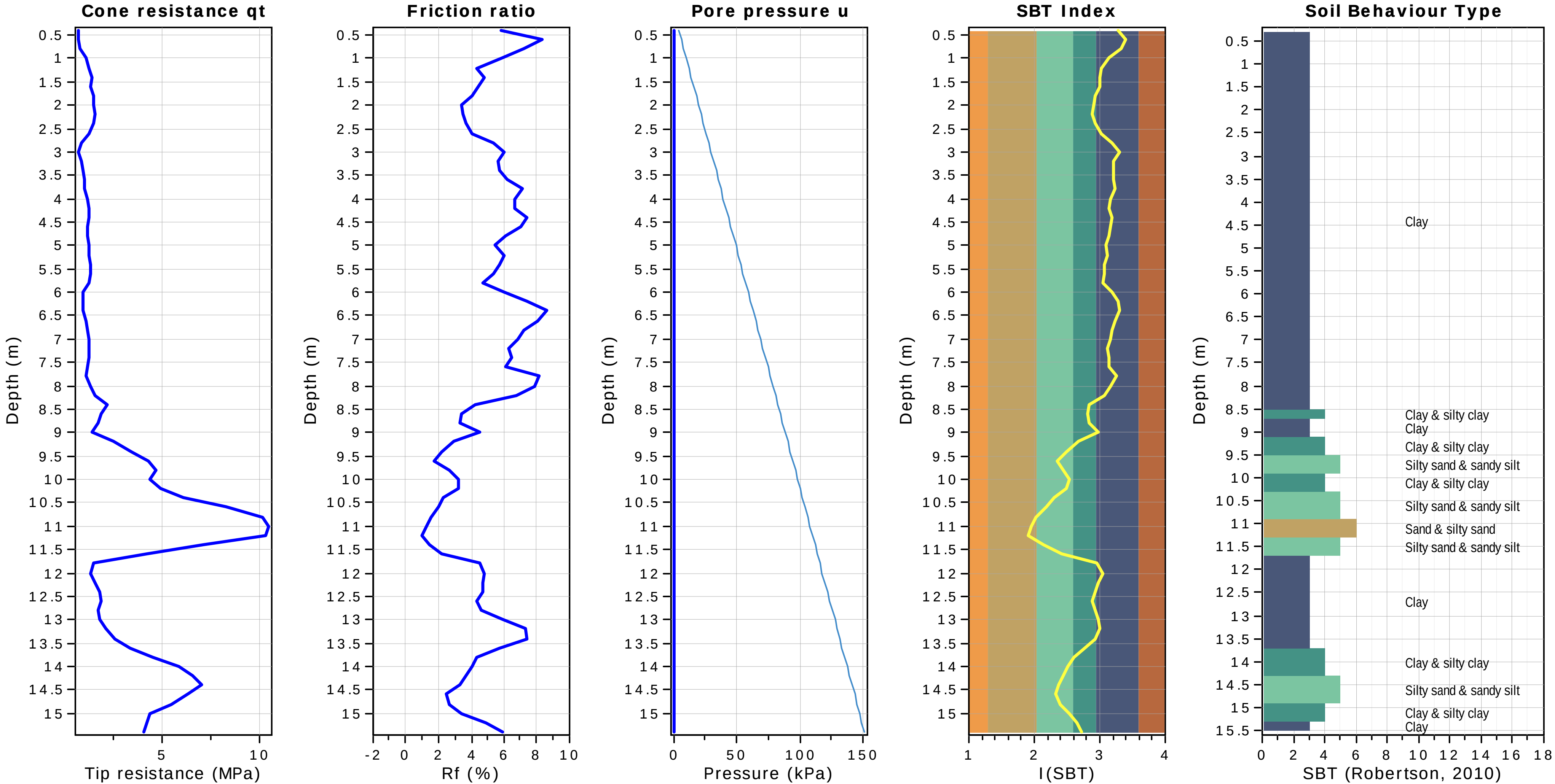
CPT: 036021P344CPT344
Total depth: 15.40 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟫 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

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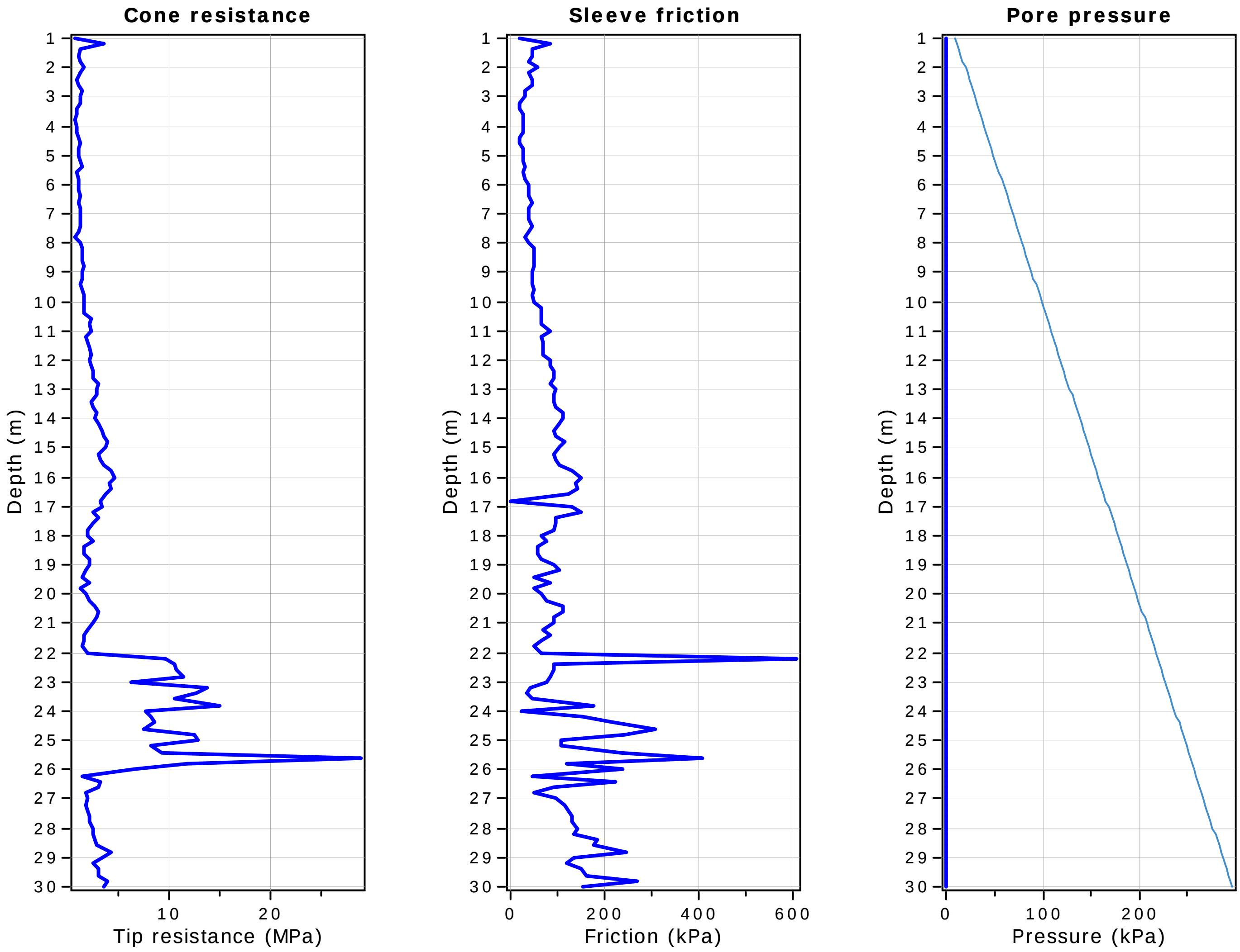
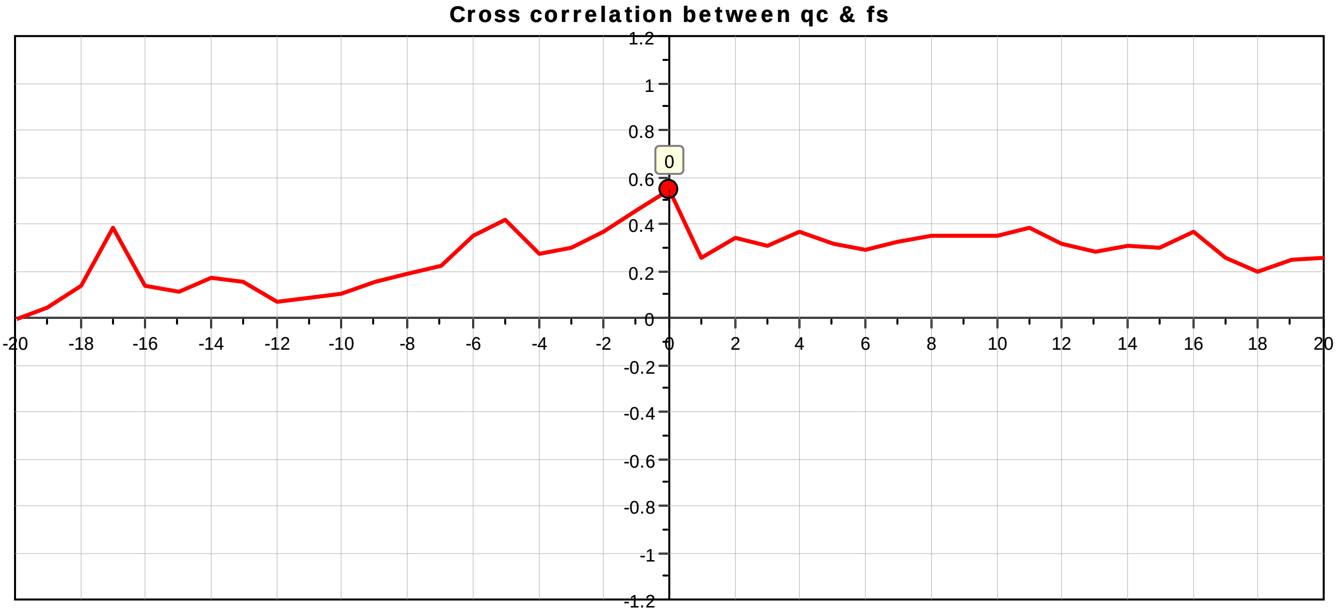
CPT: 036021P345CPT345
Total depth: 30.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



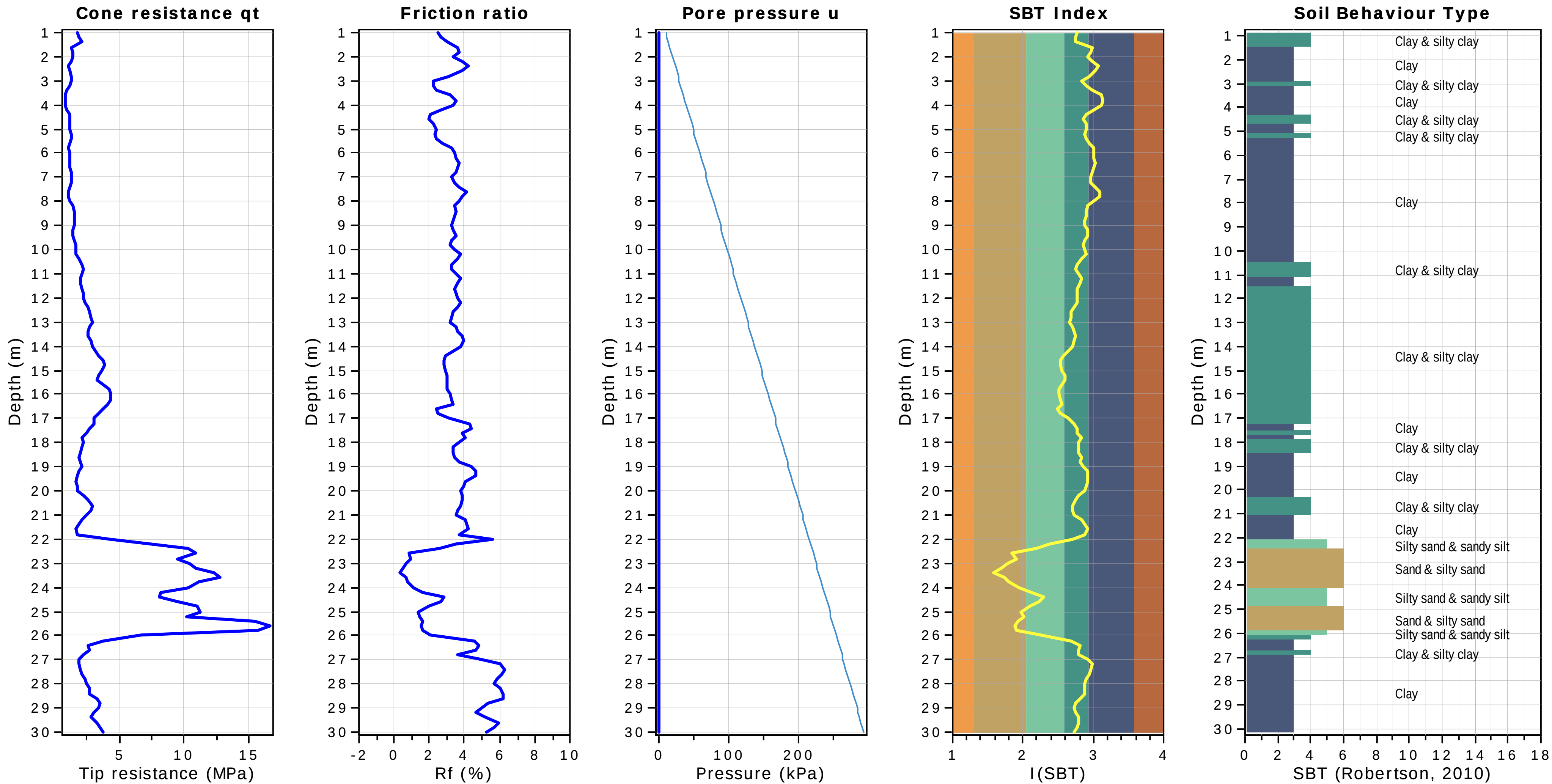
The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT: 036021P345CPT345

Total depth: 30.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

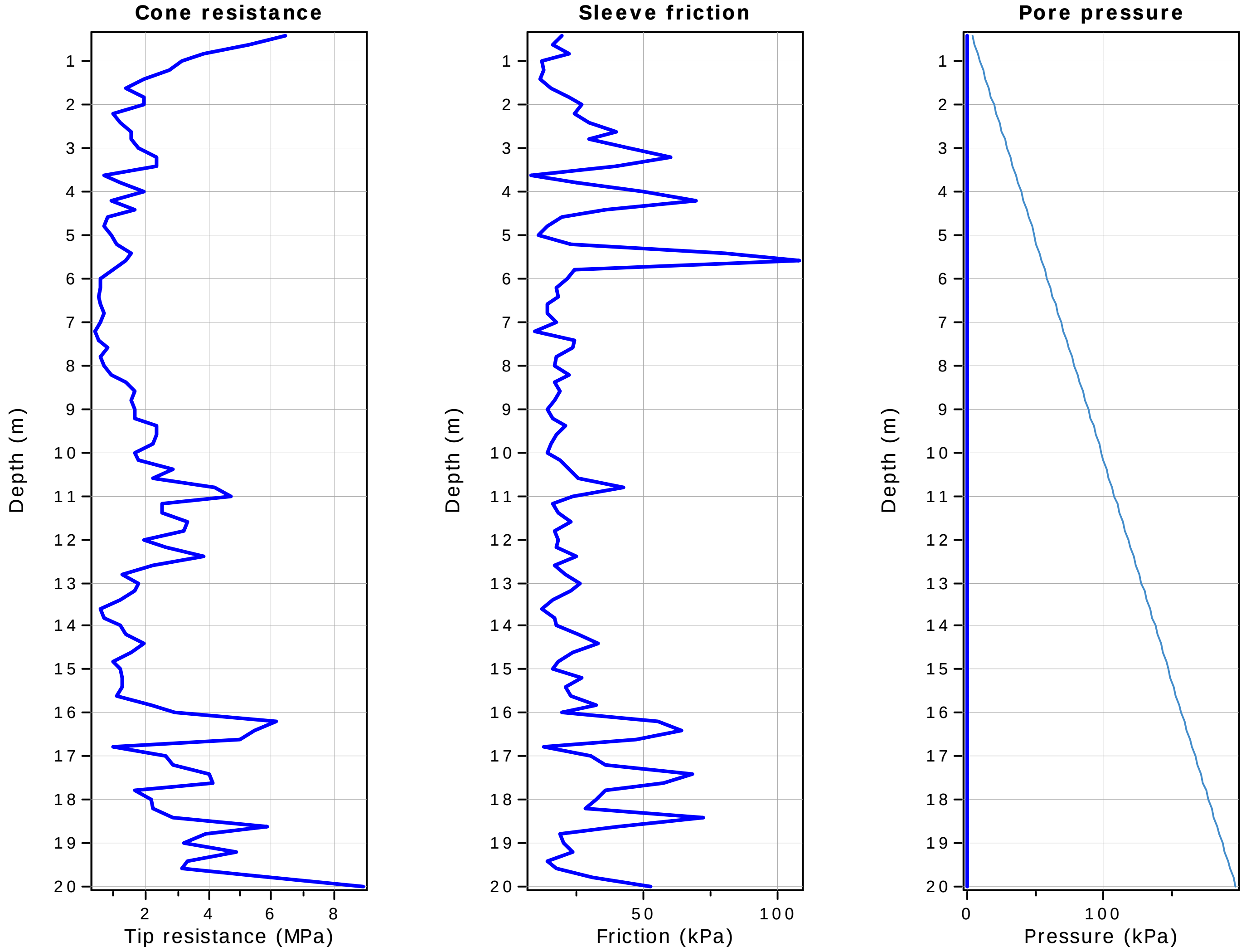


SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

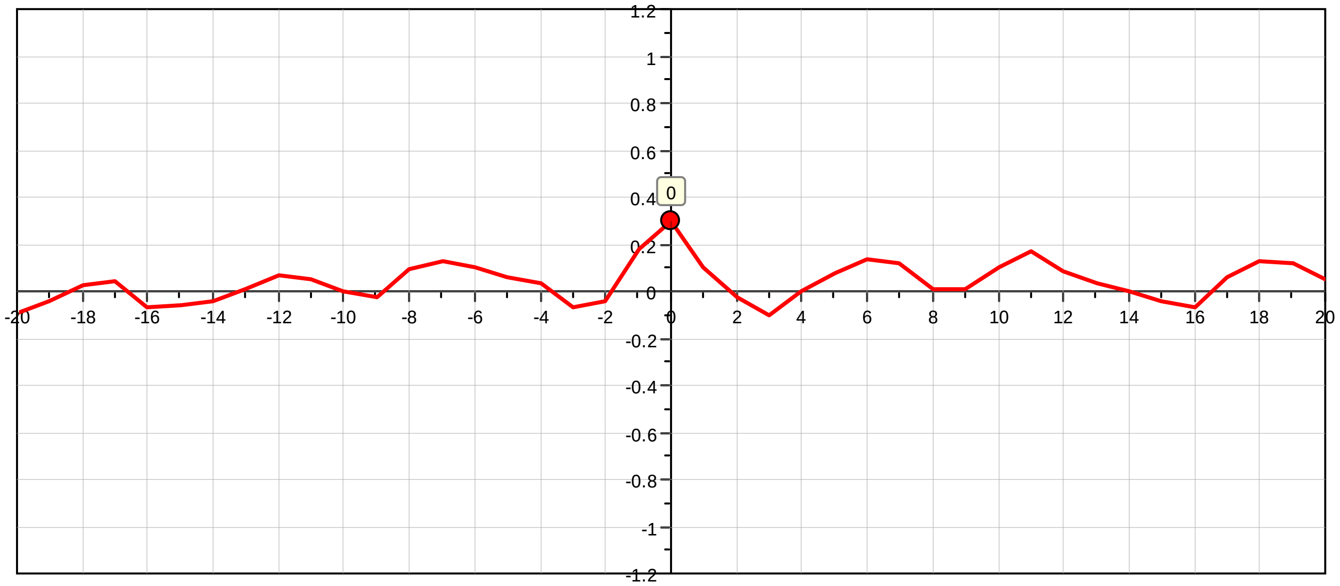
CPT: 036021P346CPT346
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

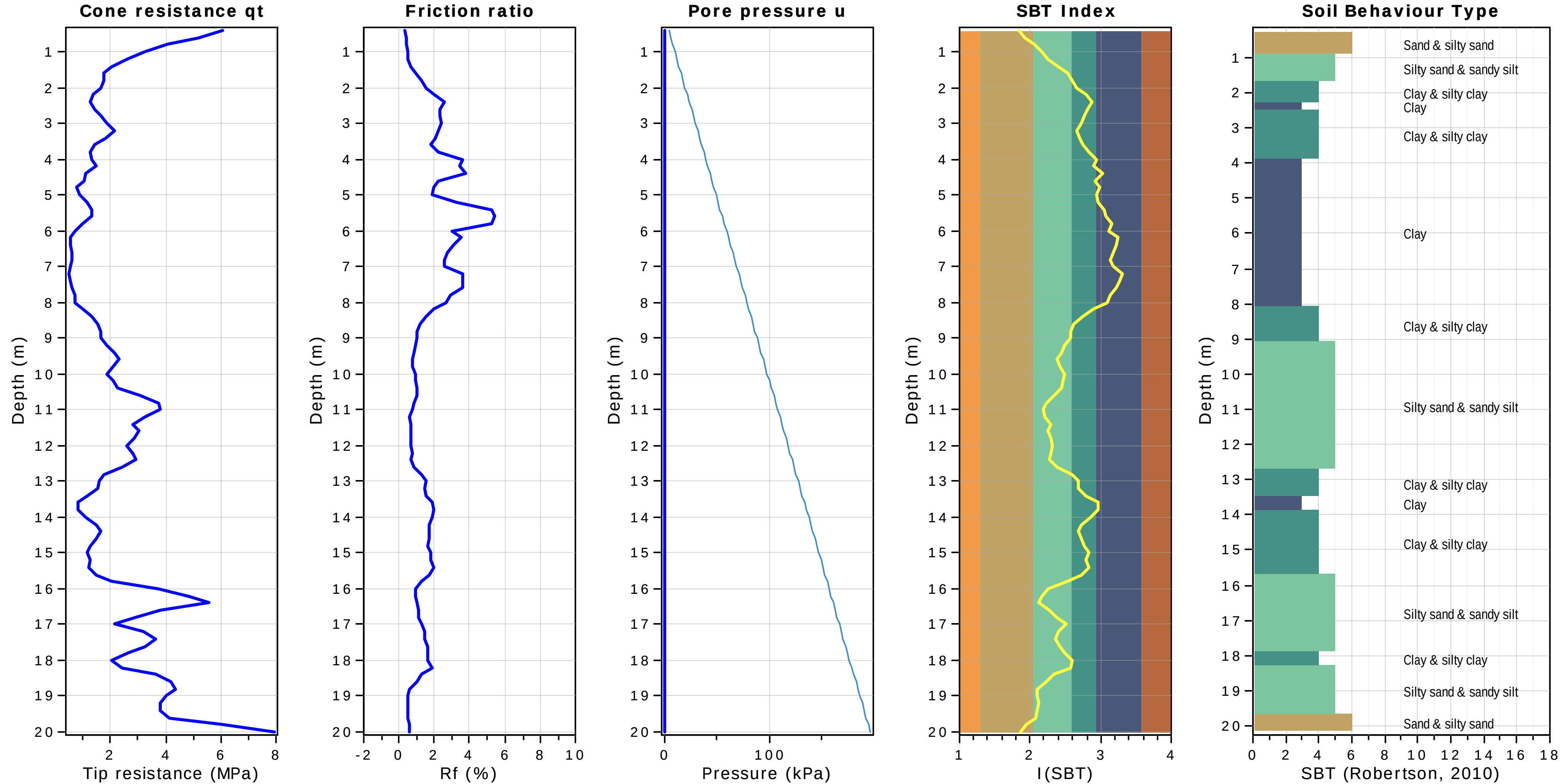
Cross correlation between qc & fs



CPT: 036021P346CPT346

Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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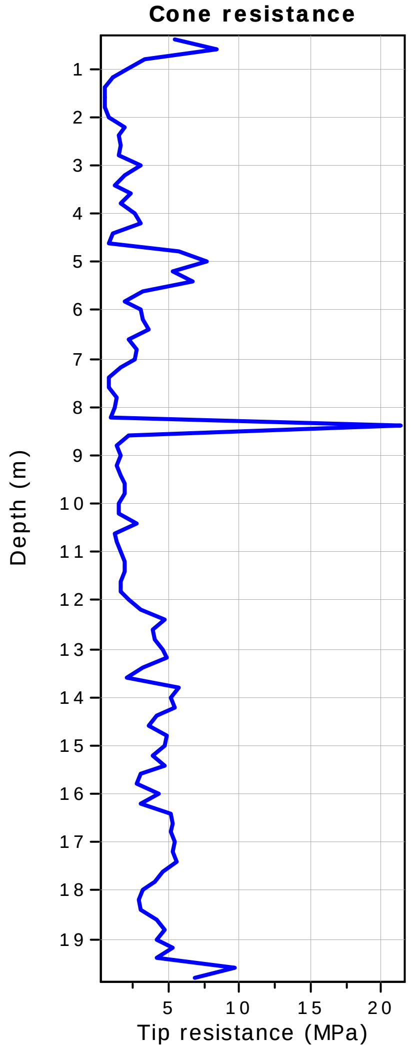
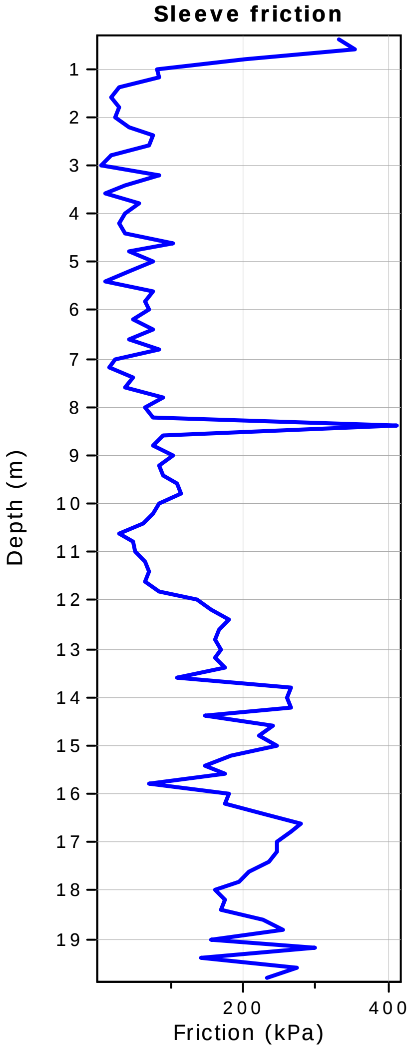
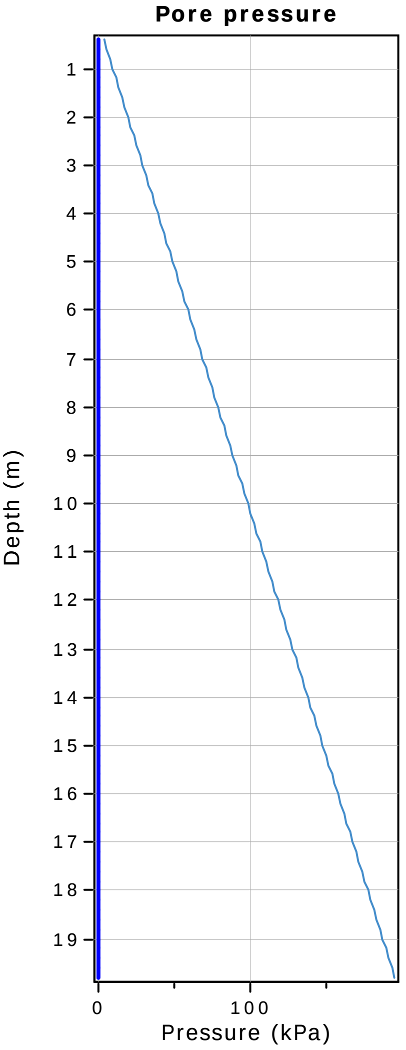
CPT: 036021P347CPT347
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

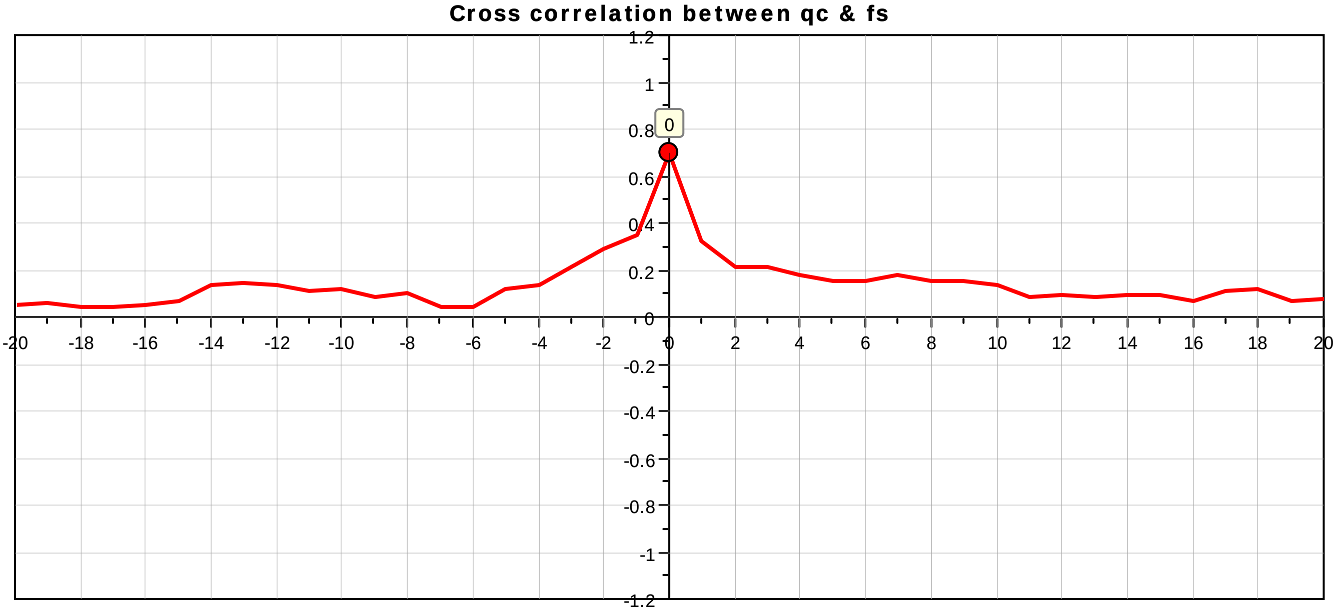
Project:
Location:


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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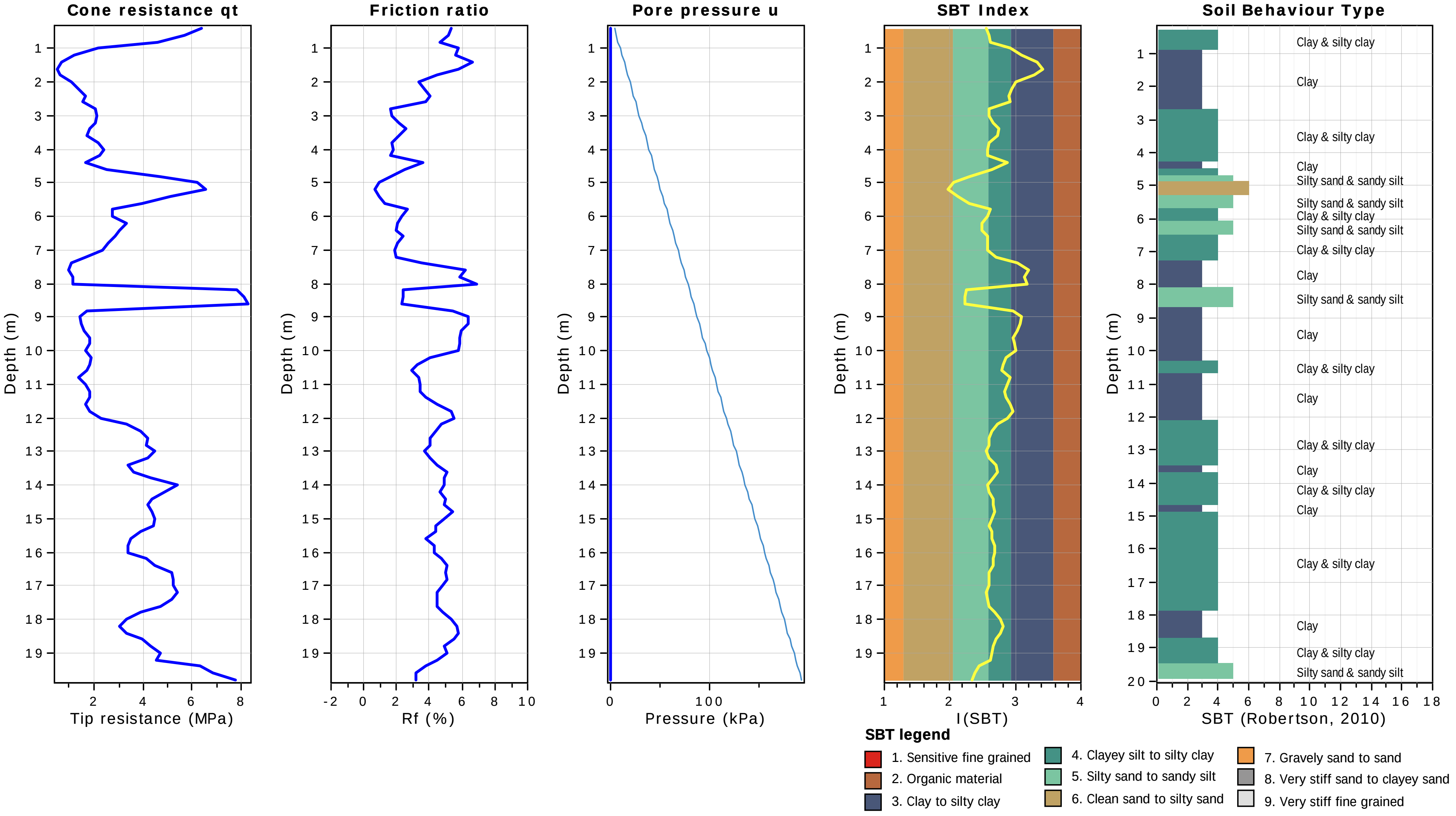
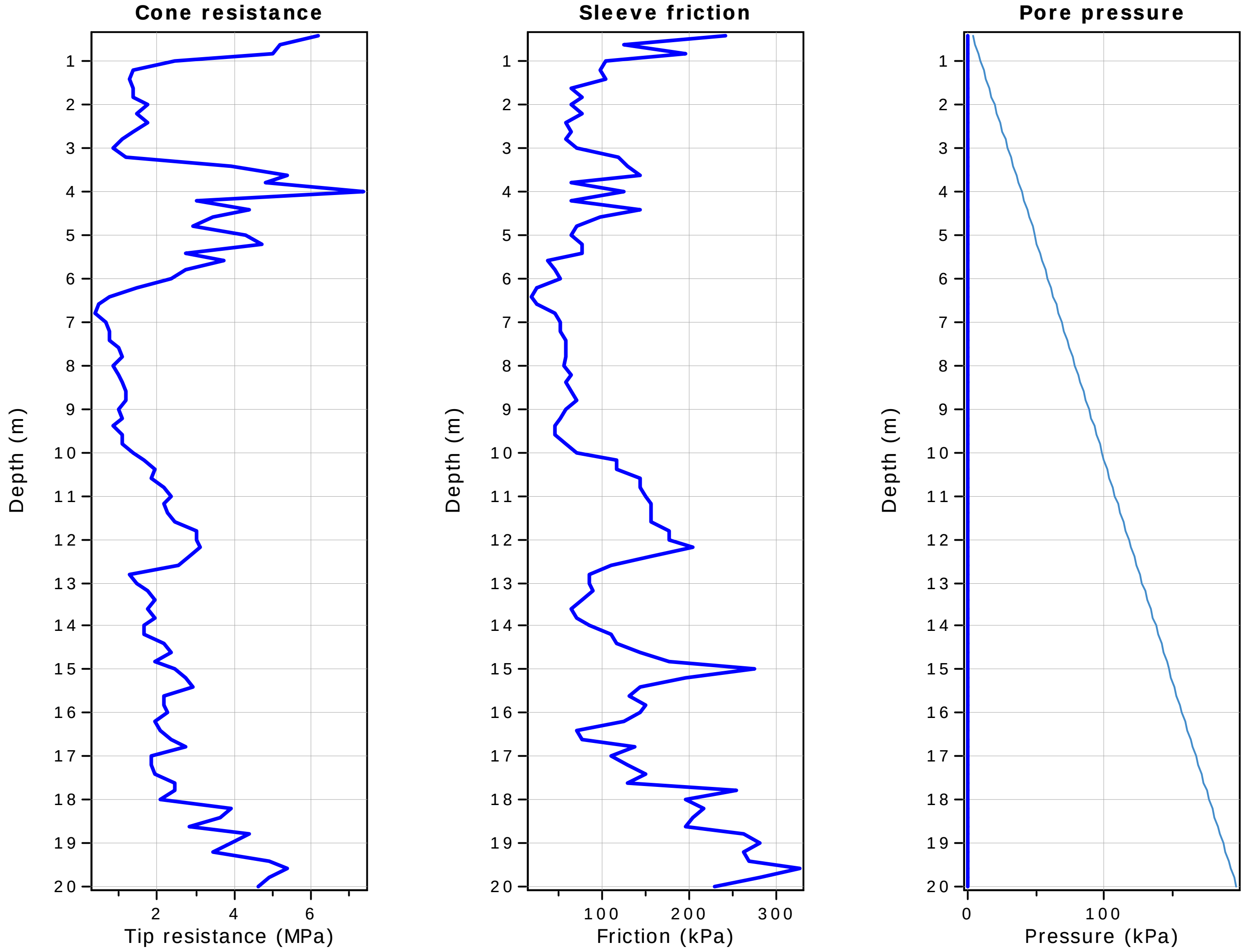
CPT: 036021P347CPT347
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

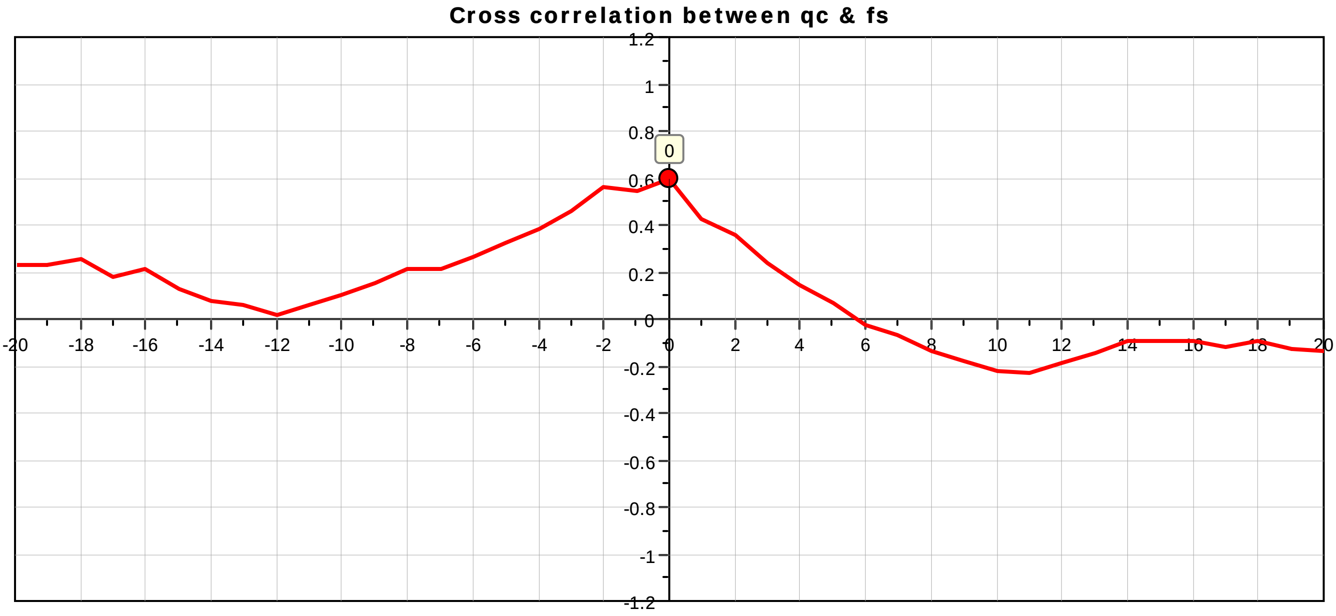


CPT: 036021P348CPT348
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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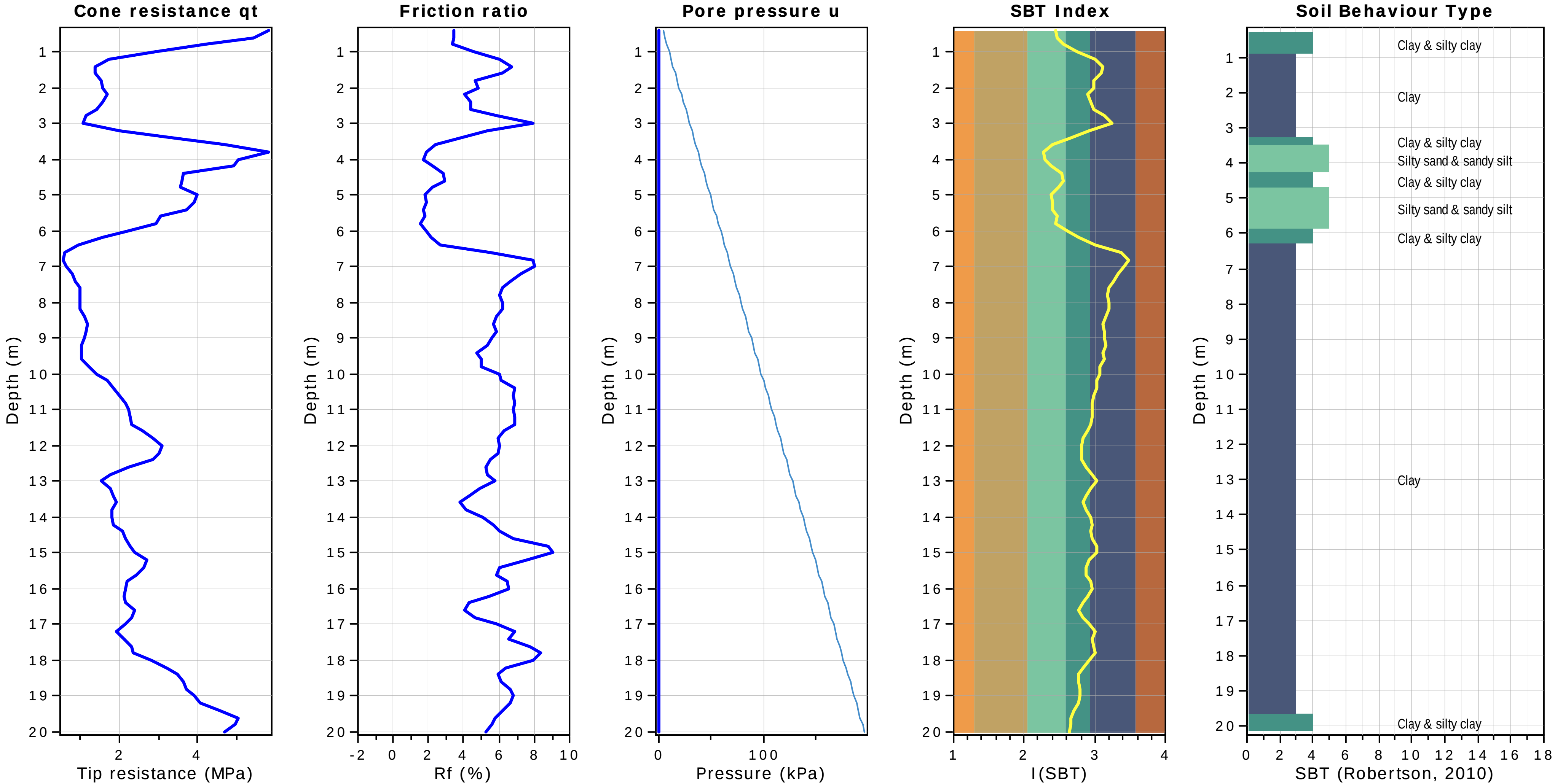
CPT: 036021P348CPT348
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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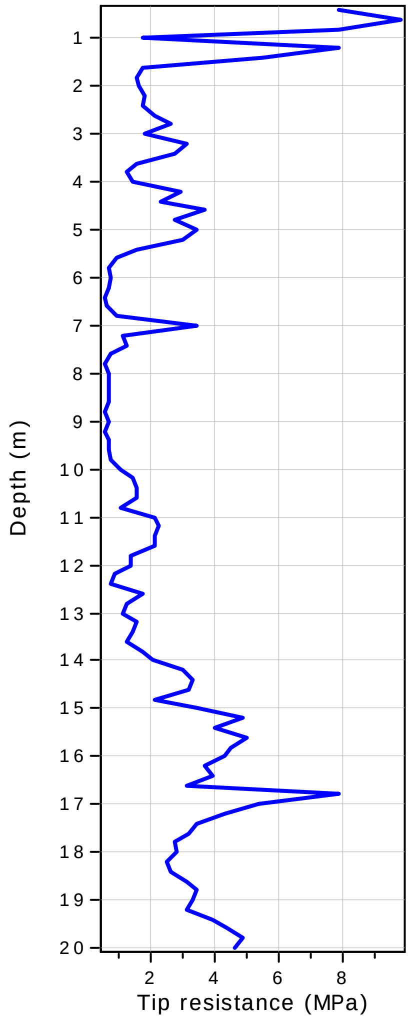
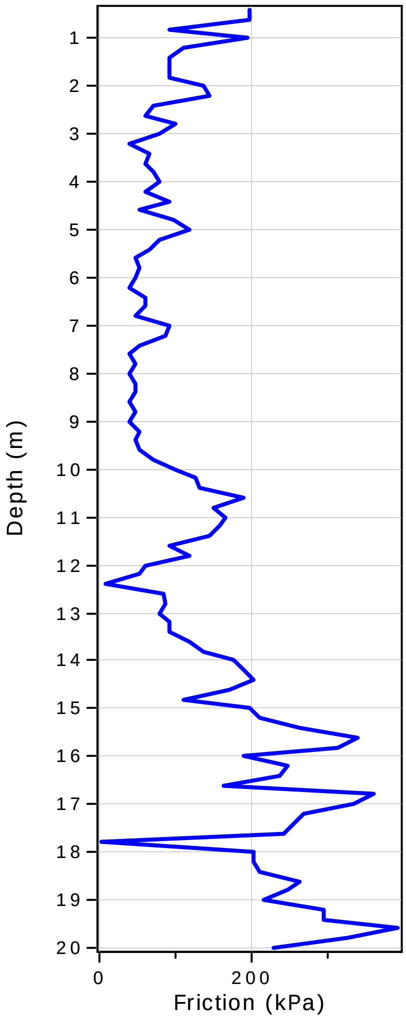
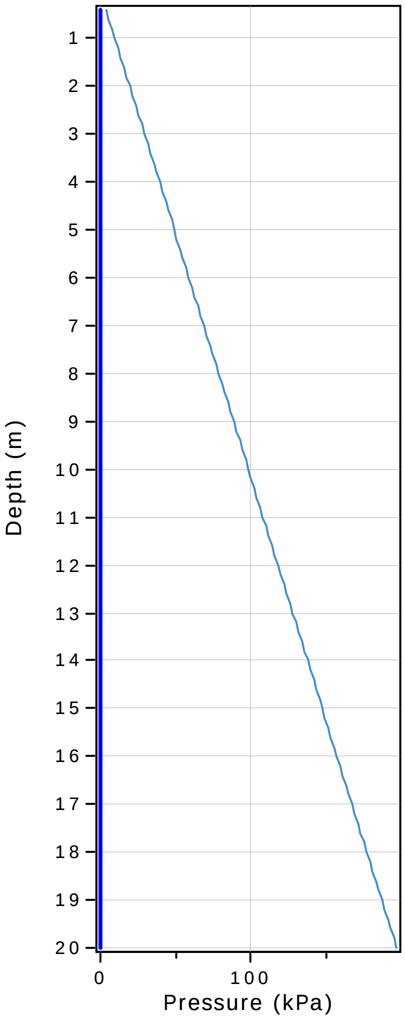
CPT: 036021P349CPT349
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

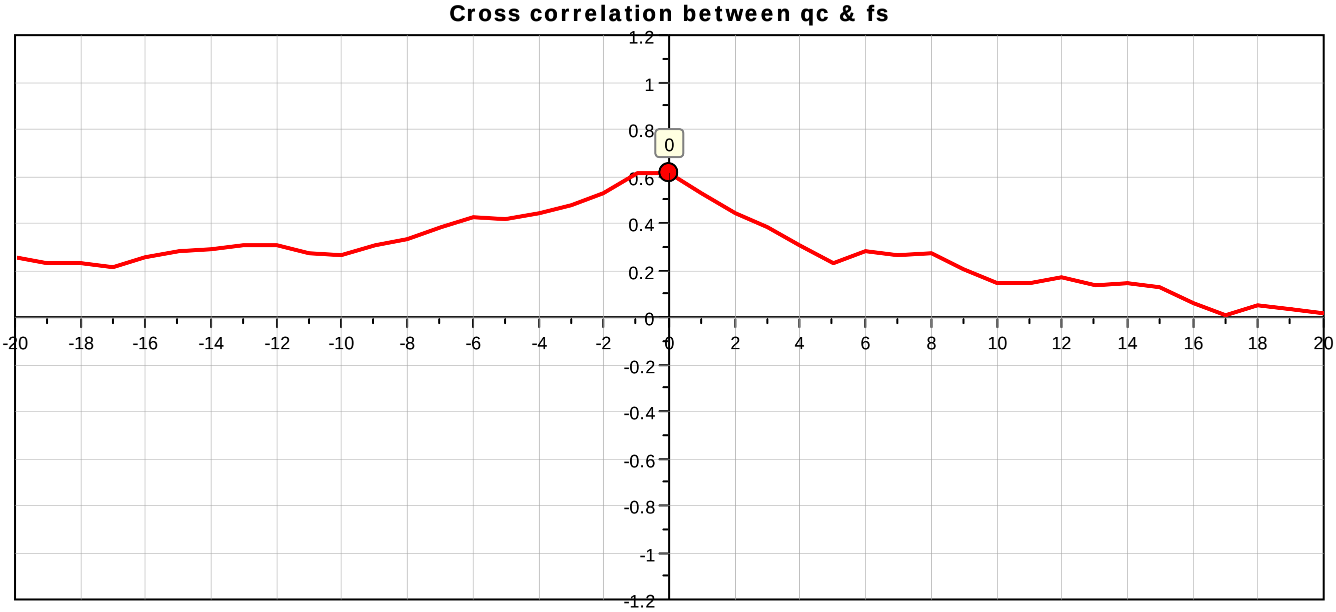
Project:
Location:


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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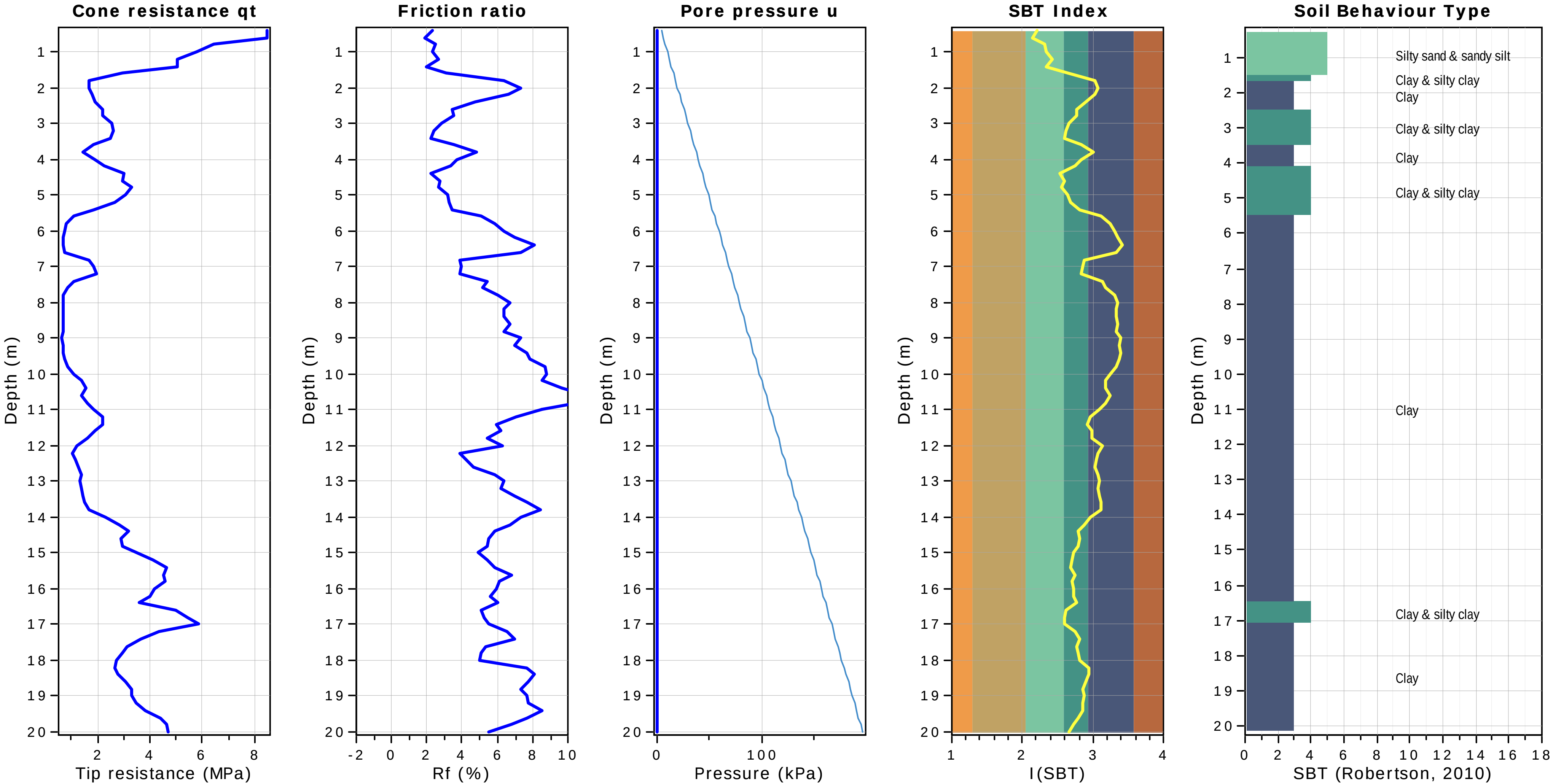
CPT: 036021P349CPT349
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



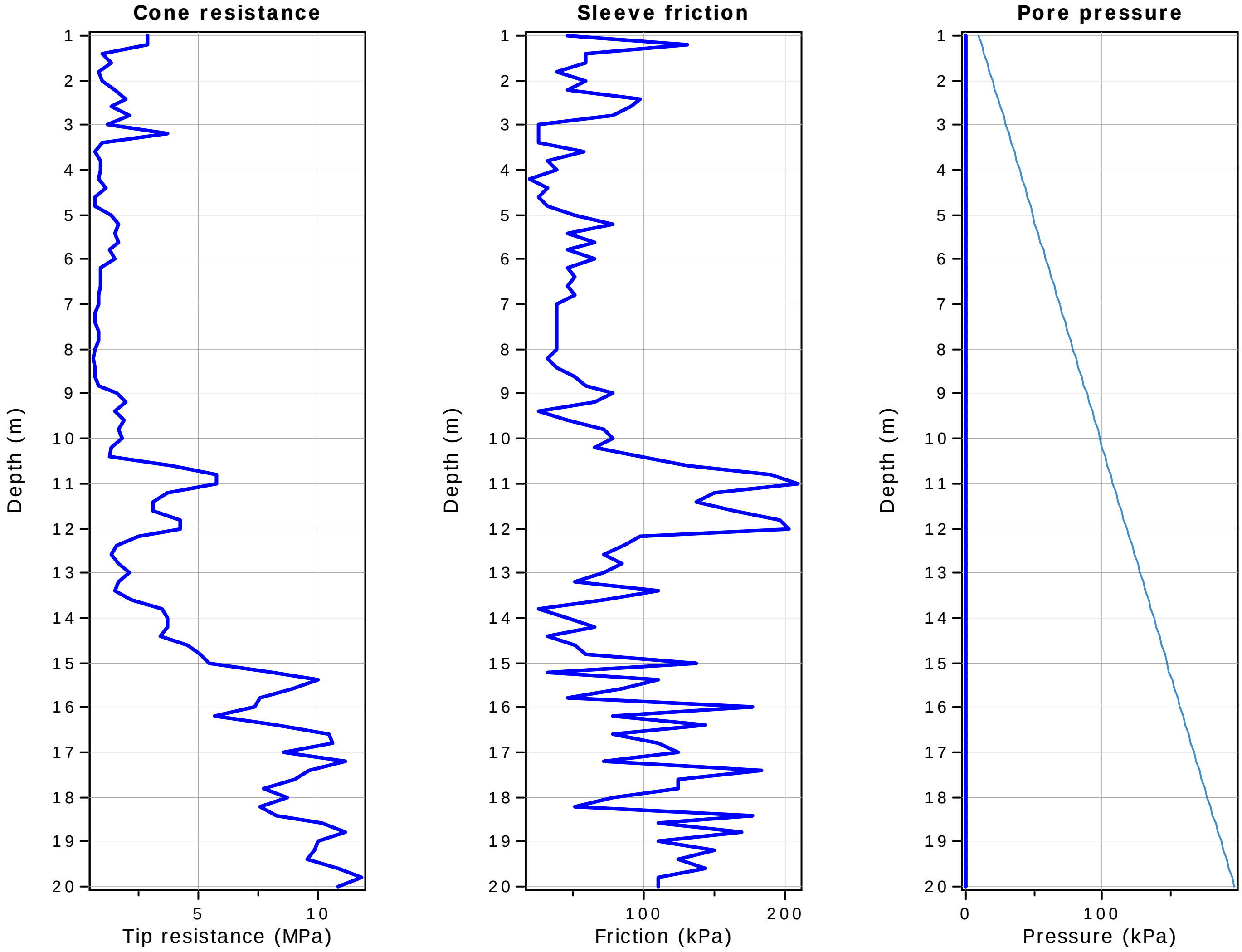
SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

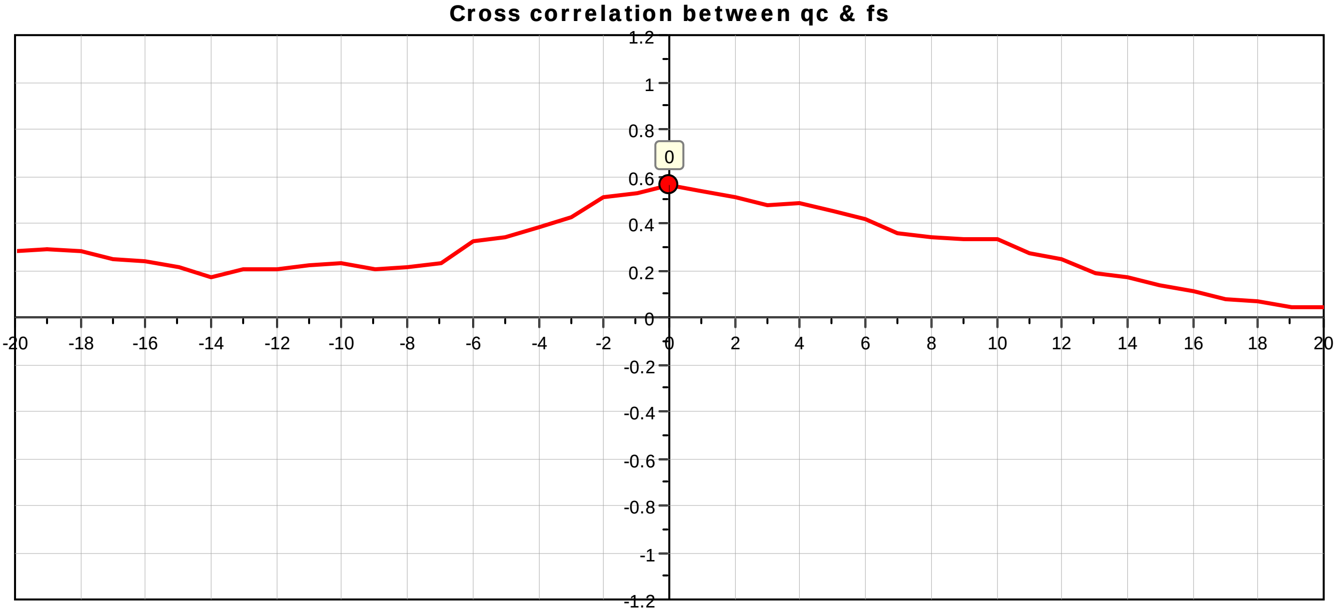
CPeT-IT v.3.0.3.2 - CPTU data presentation & interpretation software - Report created on: 21/11/2021, 12:42:37
Project file: C:\Users\ghira\Google Drive\GEOGROUP\MEDOLLA MS\INDAGINI\DATI\CPT\GEOGROUP_ARC\2018\2018.cpt

CPT: 036021P350CPT350
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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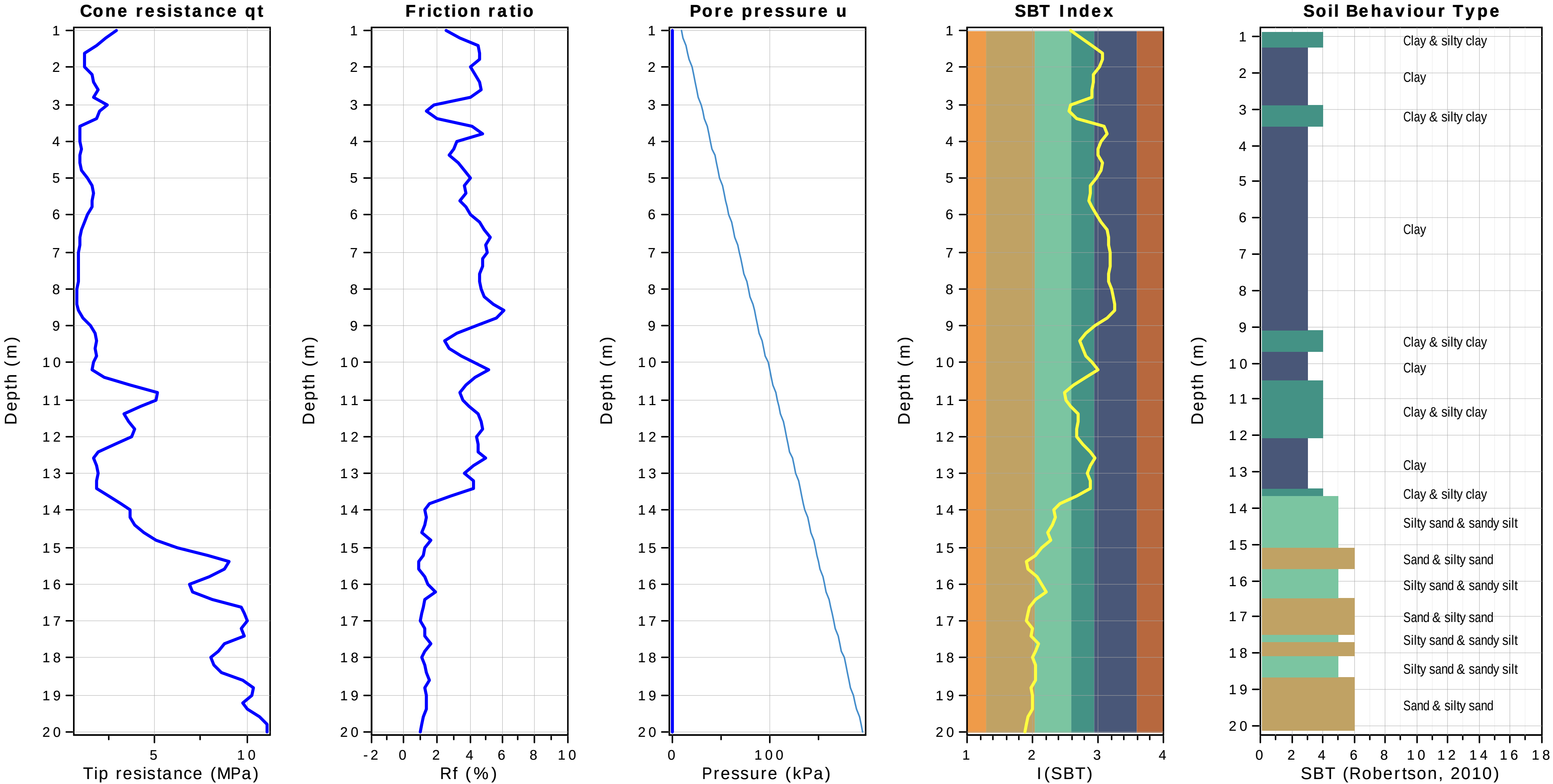
CPT: 036021P350CPT350
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

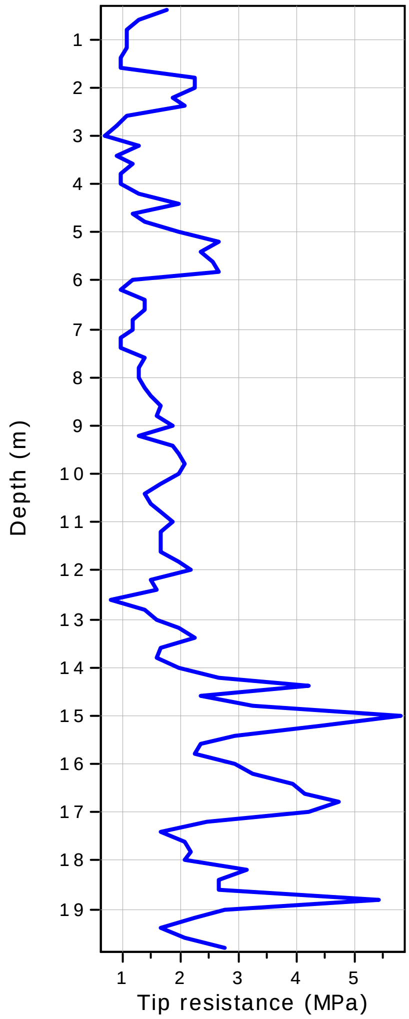


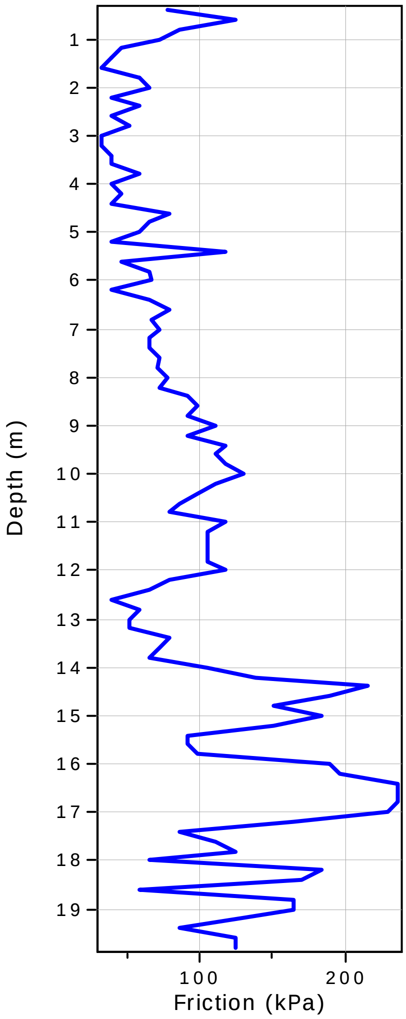
SBT legend

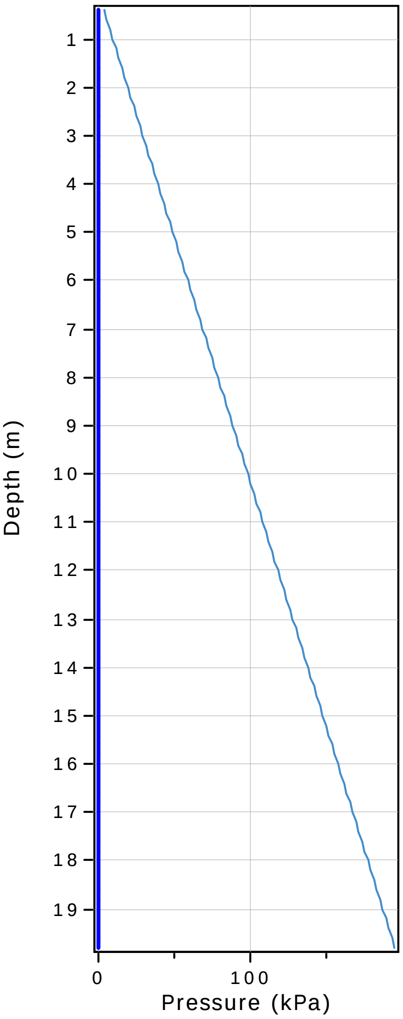
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P351CPT351
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

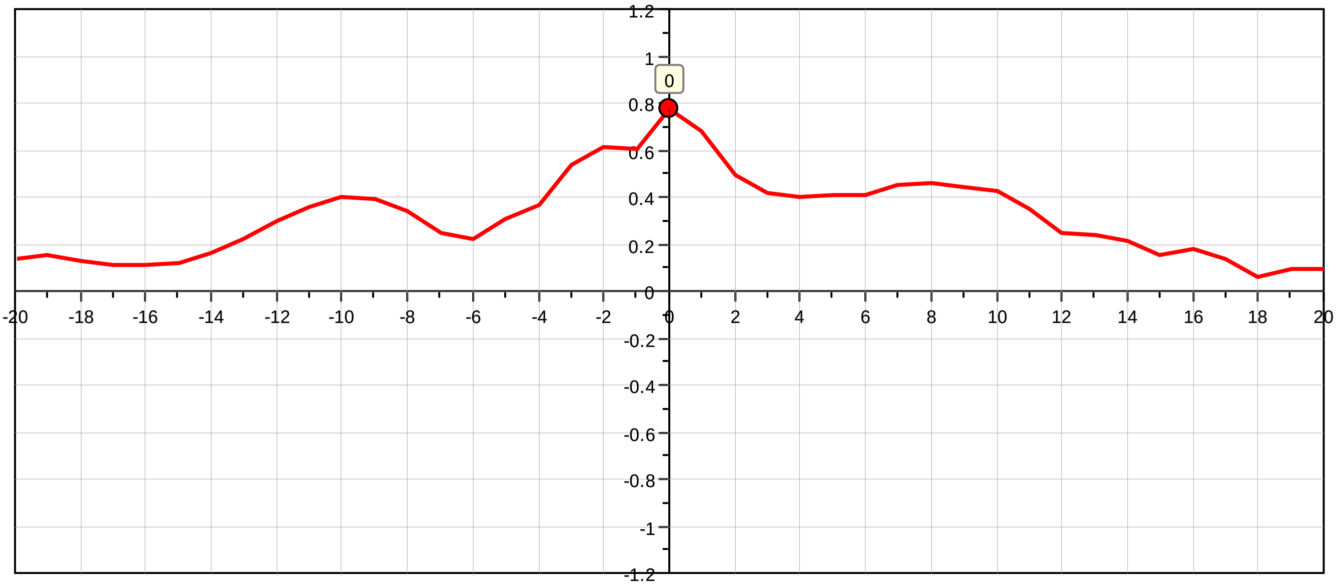
Project:
Location:


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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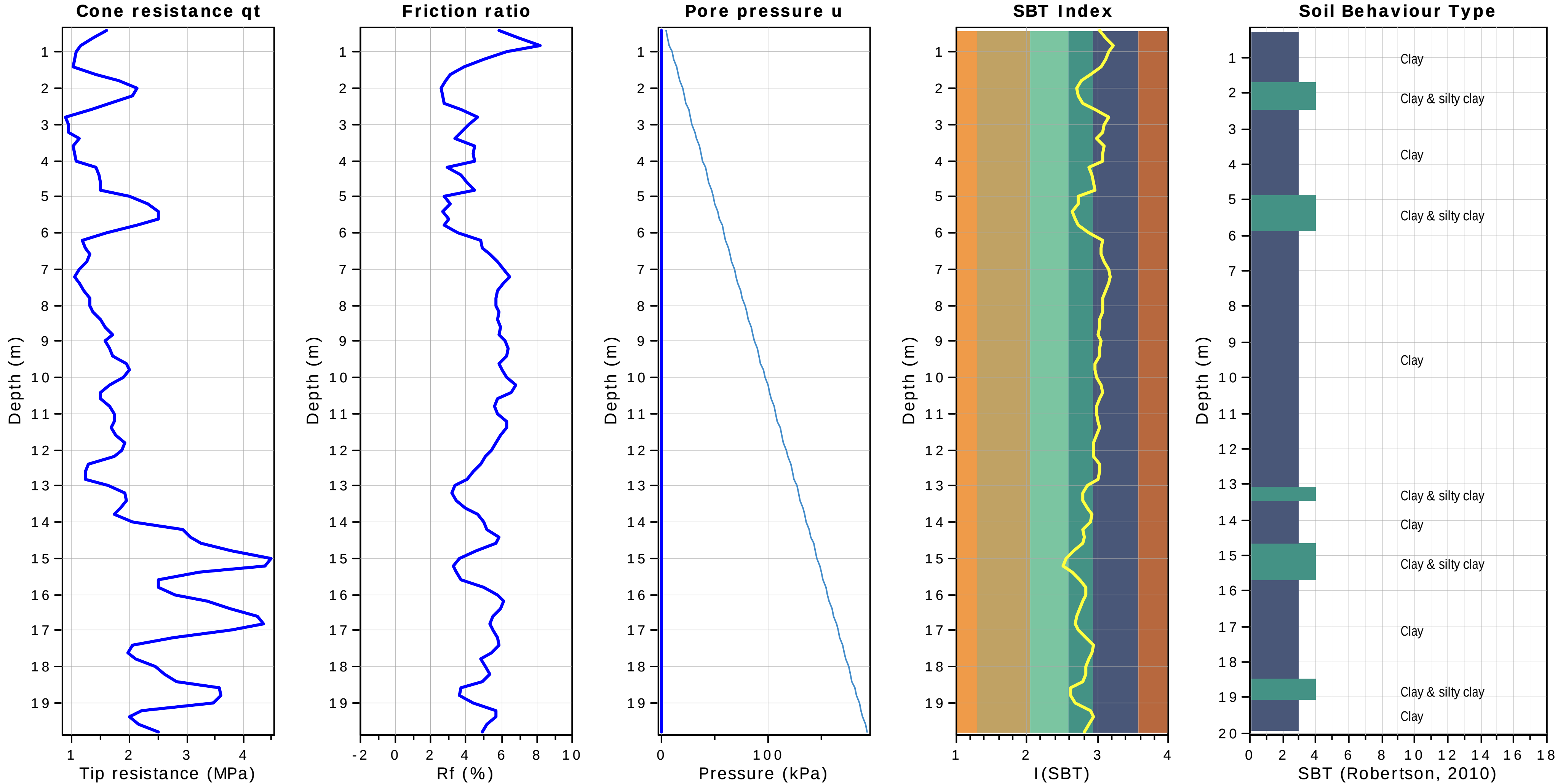
CPT: 036021P351CPT351
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬛ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

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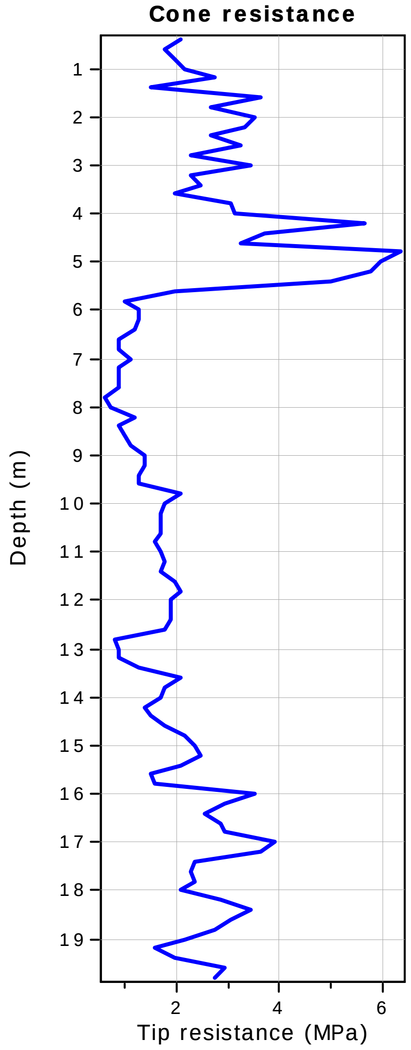
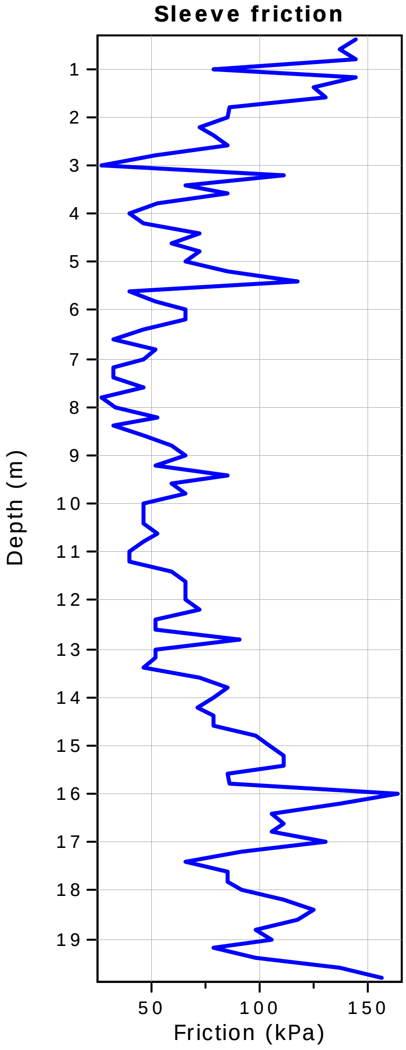
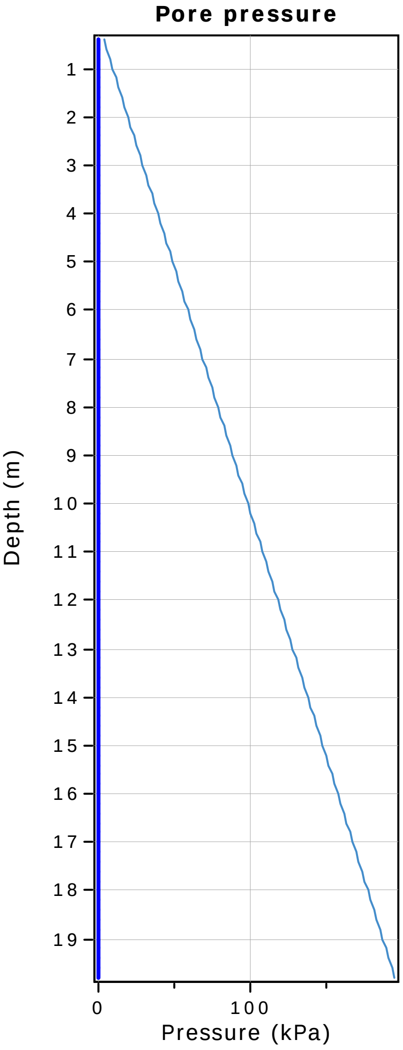
CPT: 036021P352CPT352
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

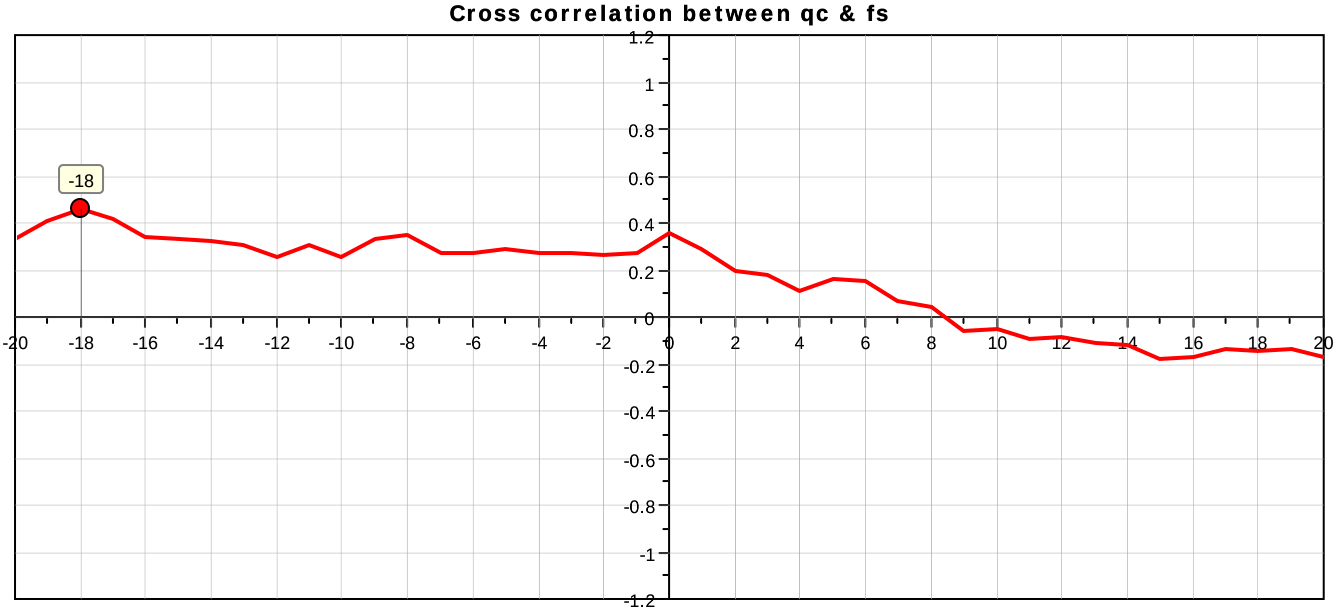
Project:
Location:







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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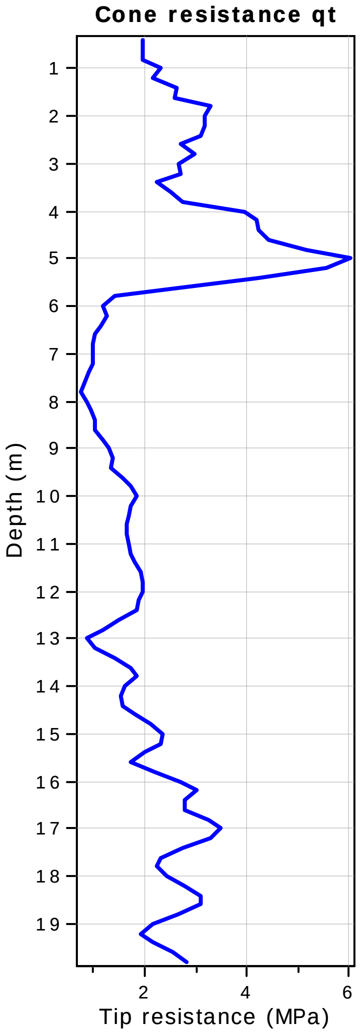
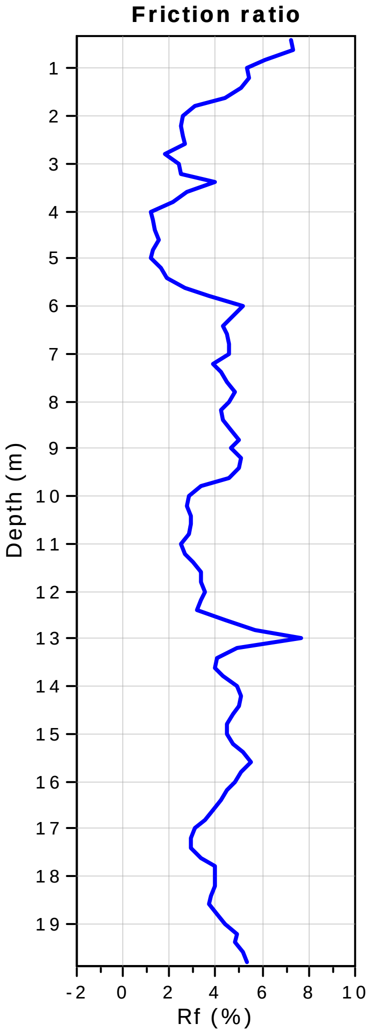
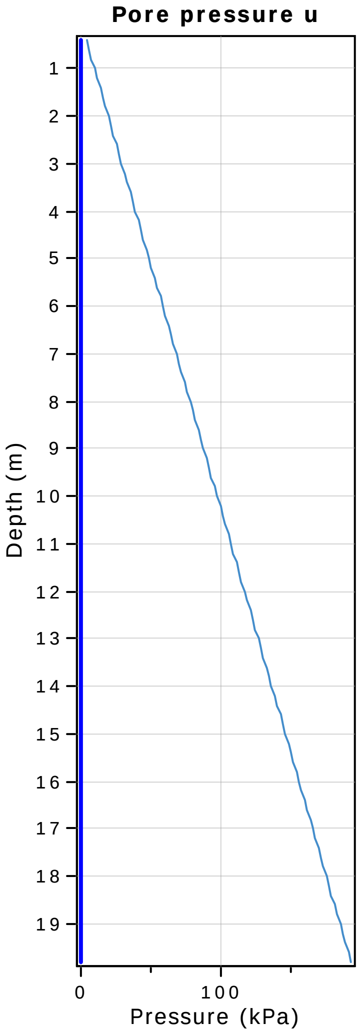
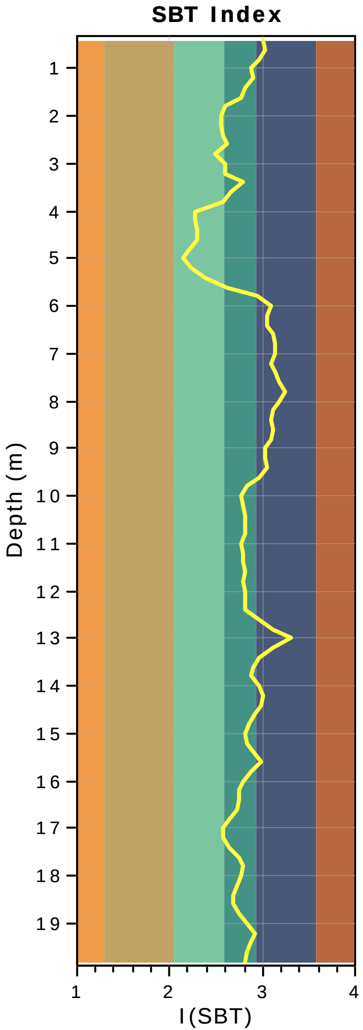
CPT: 036021P352CPT352
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

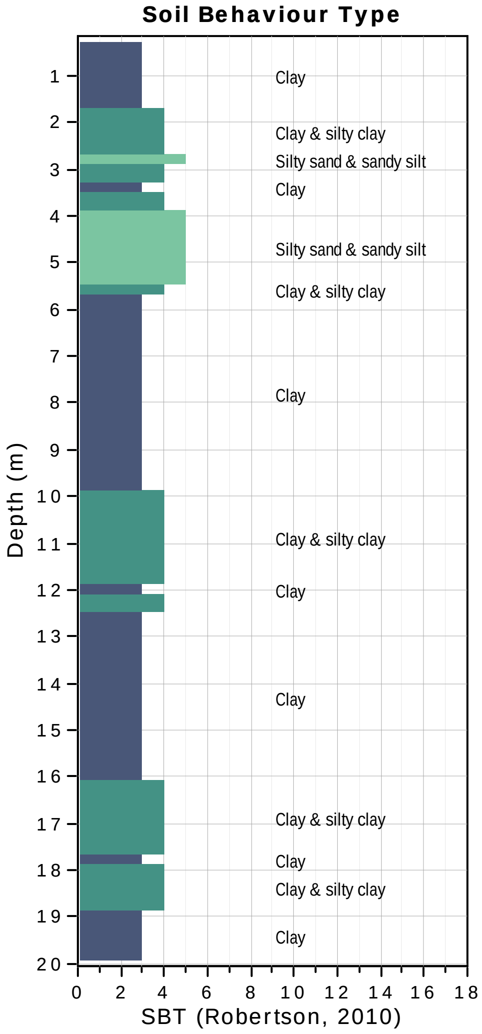
Project:
Location:











SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

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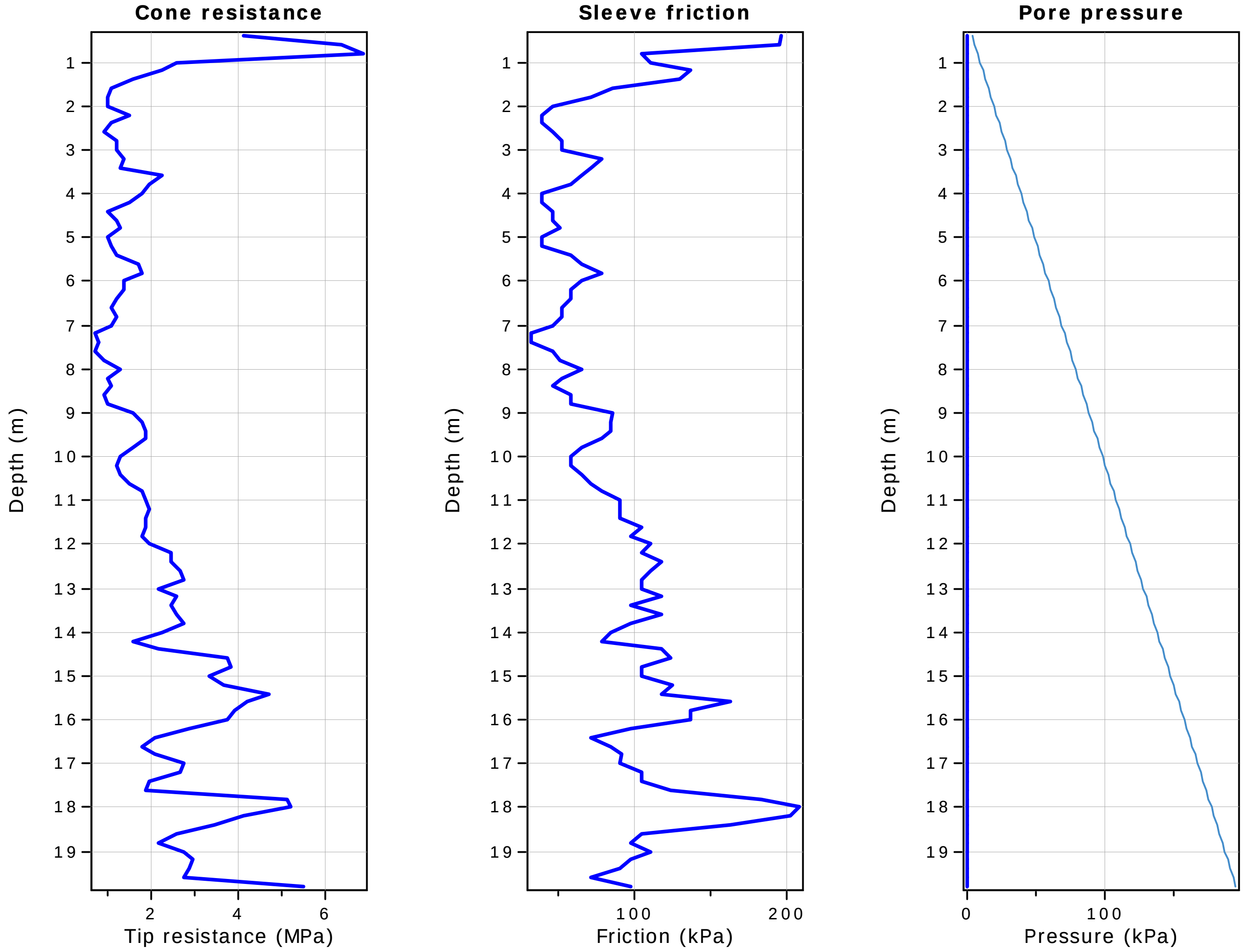
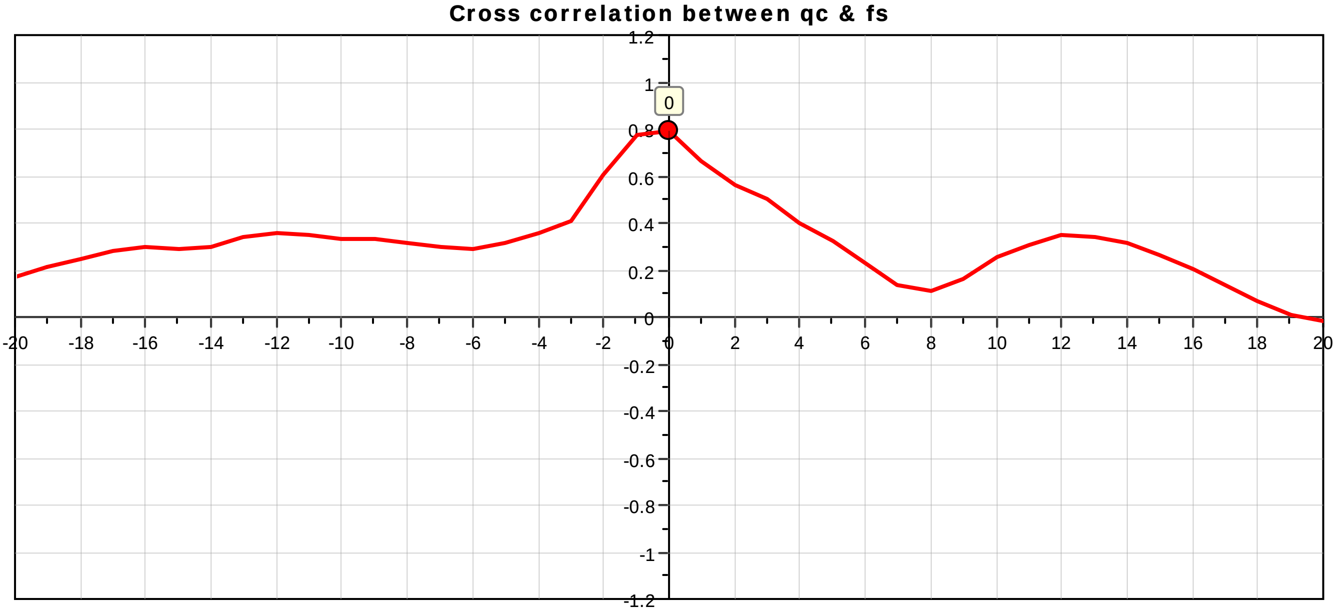
CPT: 036021P353CPT353
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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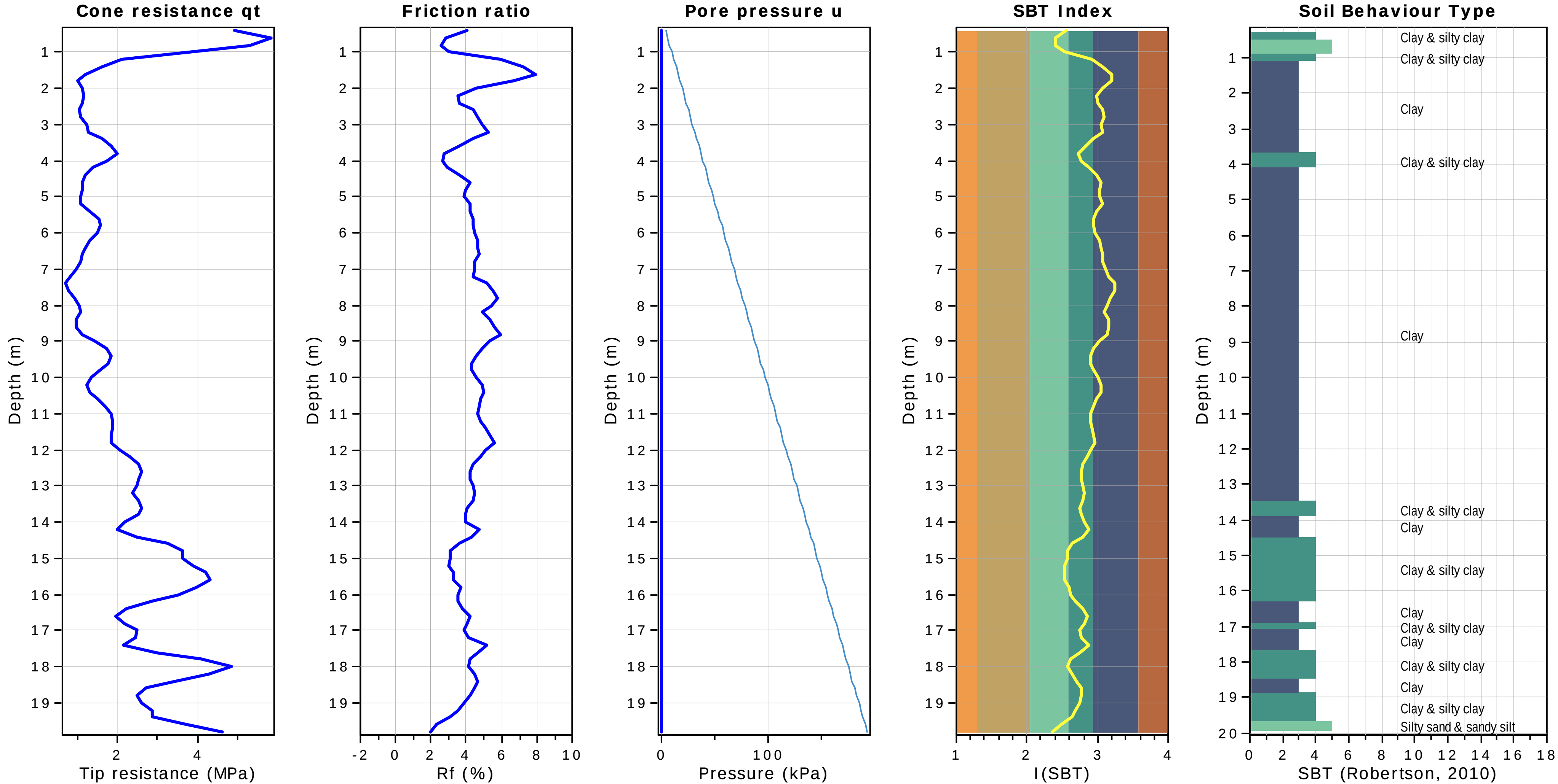
CPT: 036021P353CPT353
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟫 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

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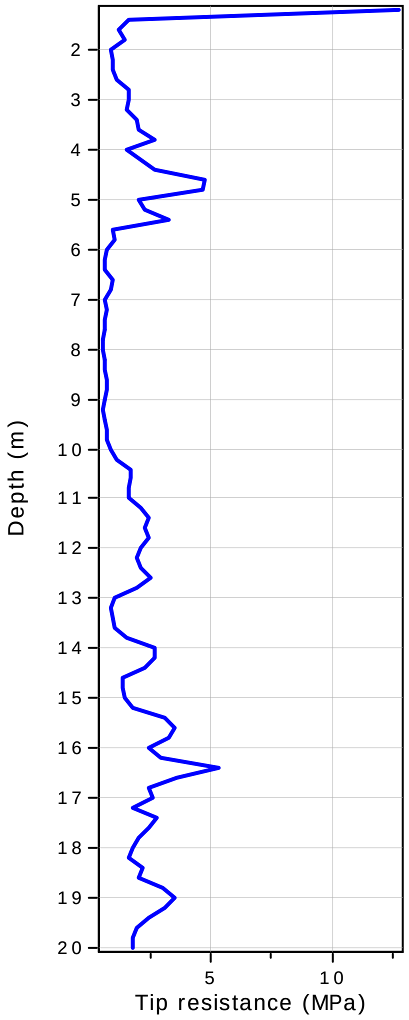
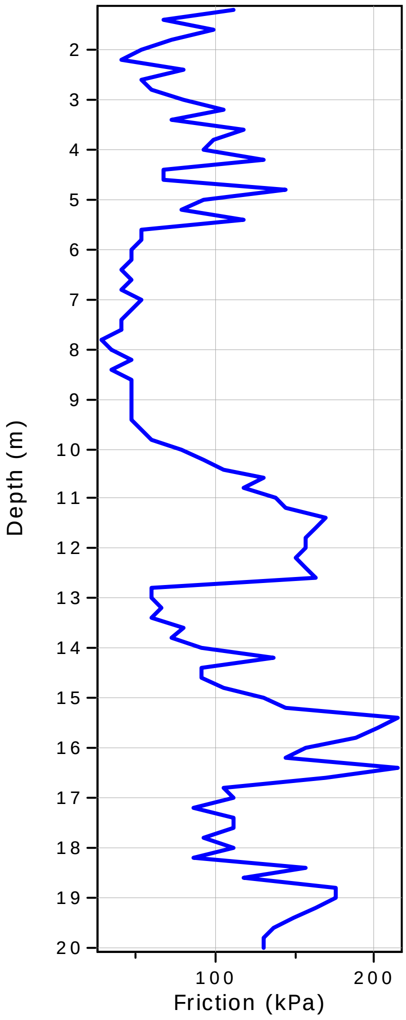
CPT: 036021P353CPT354
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:

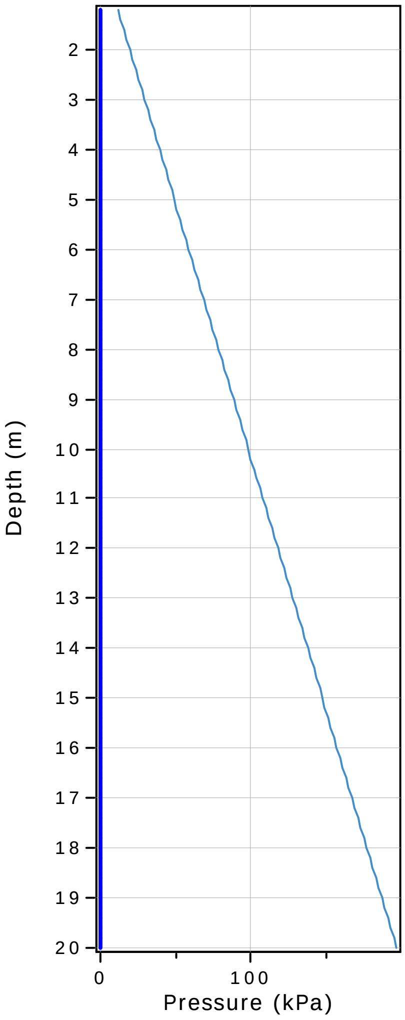
Cone resistance



Sleeve friction

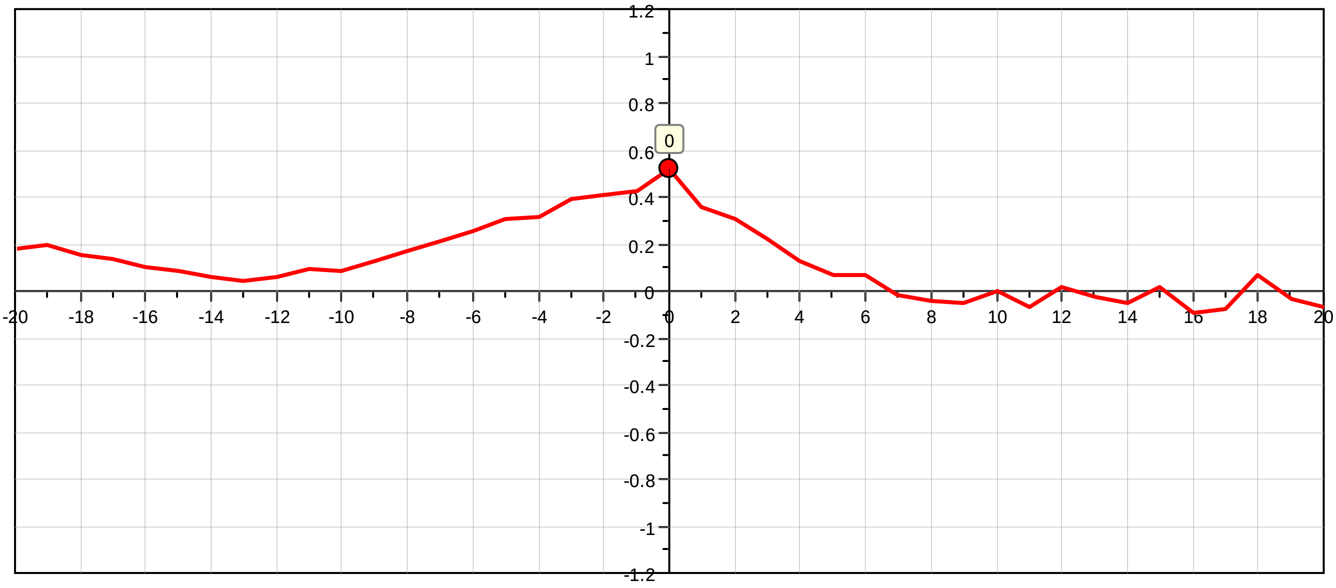


Pore pressure



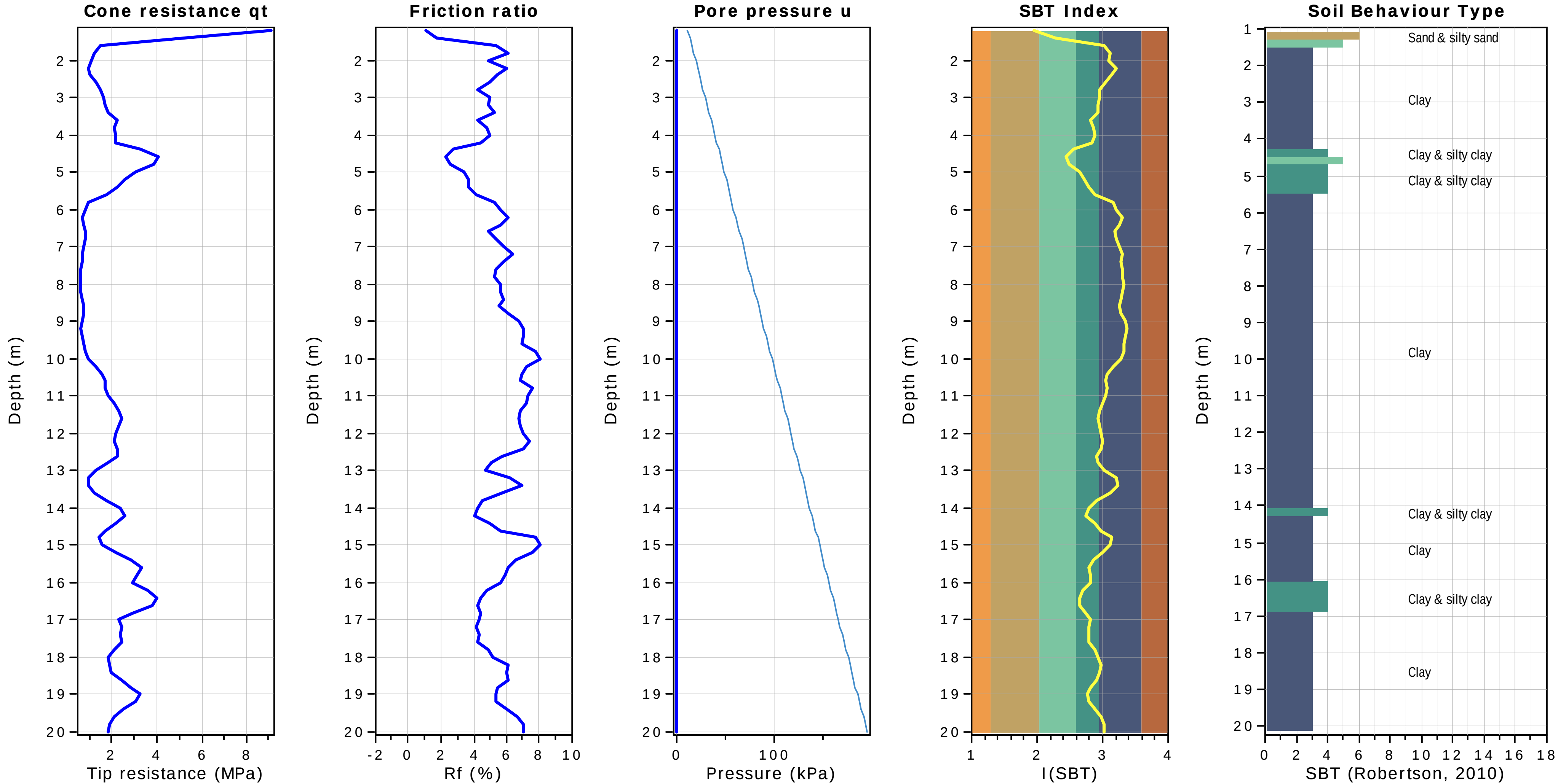
The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



CPT: 036021P353CPT354
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟫 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

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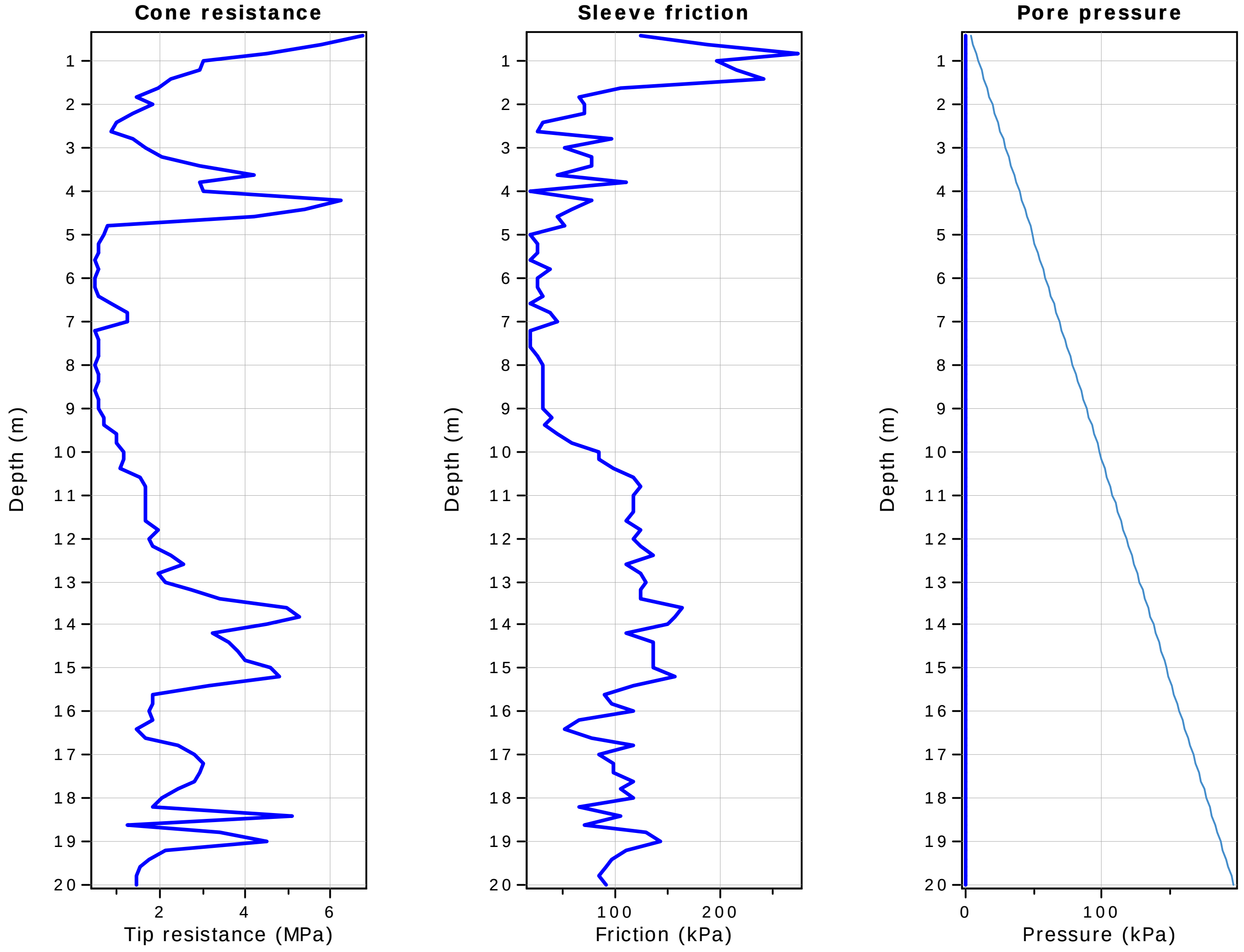
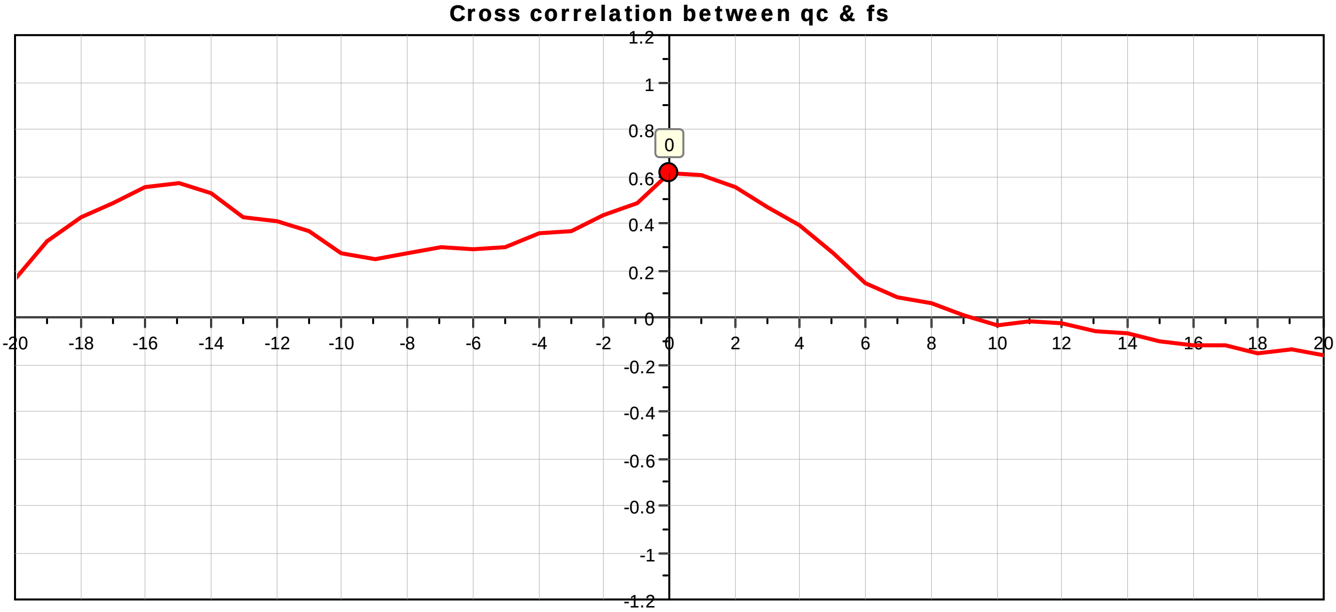
CPT: 036021P357CPT357
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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Via Cesare Costa 182
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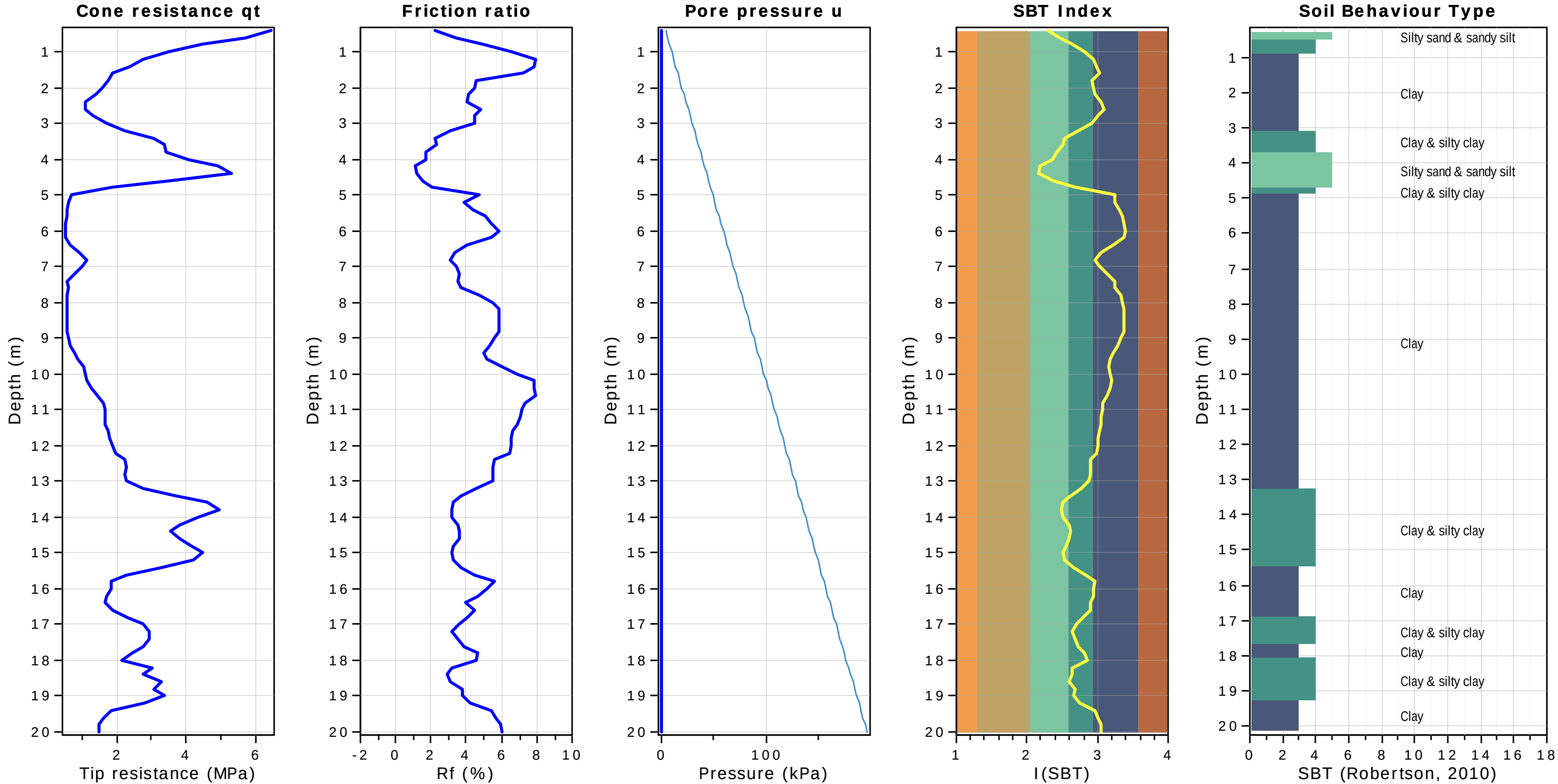
CPT: 036021P357CPT357
Total depth: 20.00 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟫 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

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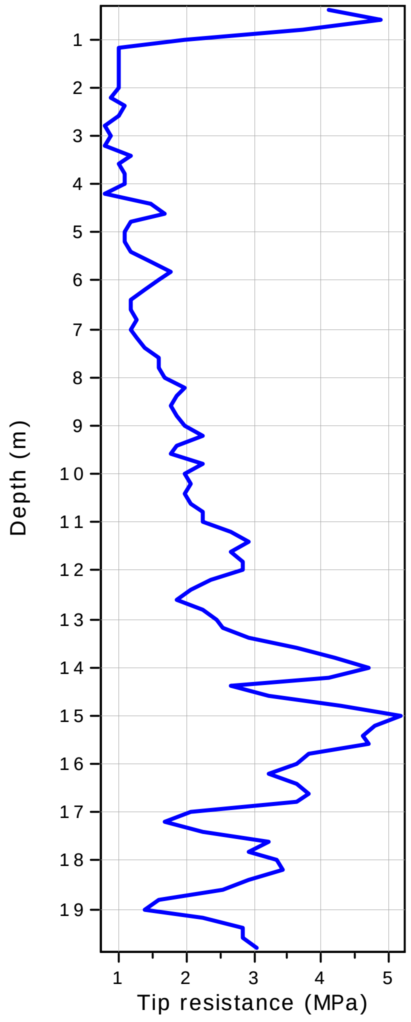
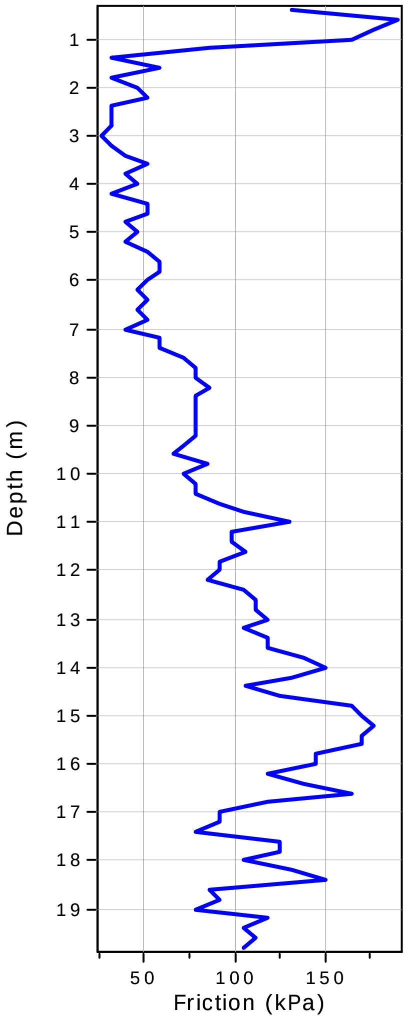
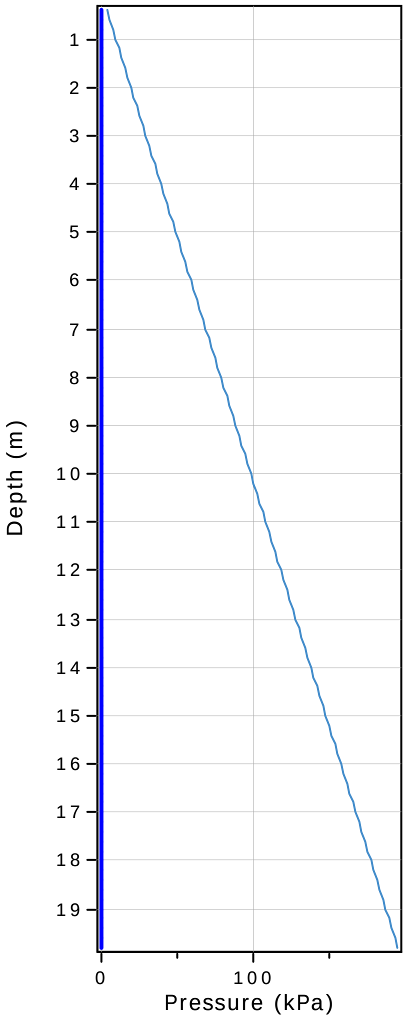
CPT: 036021P358CPT358
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

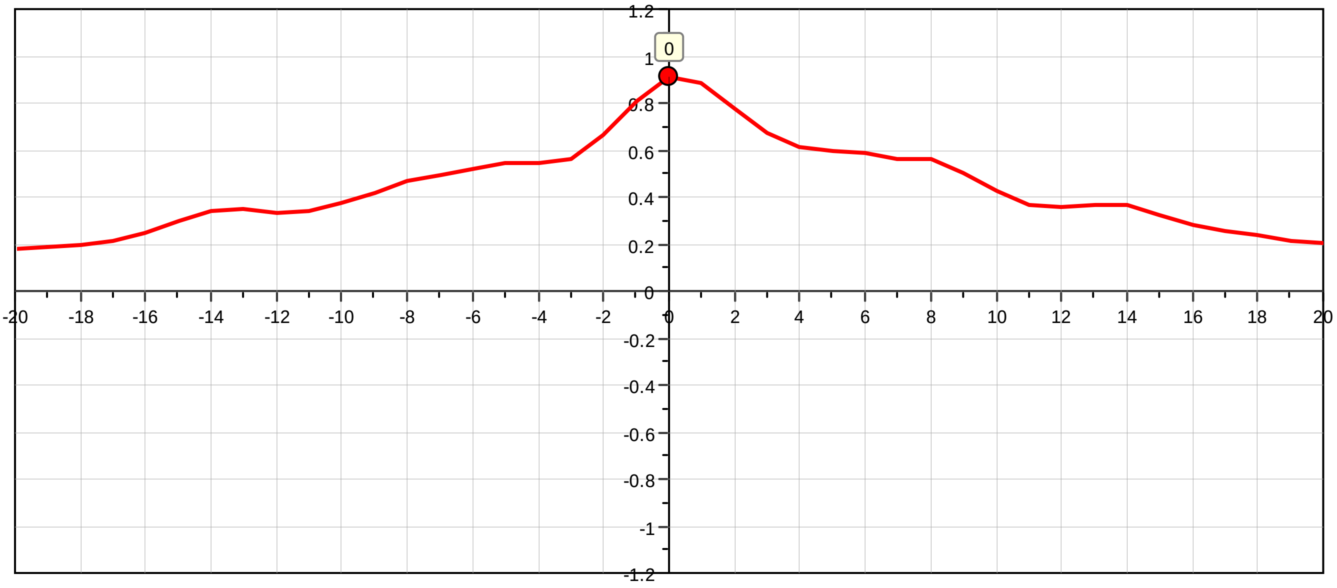
Project:
Location:


Cone resistance


Sleeve friction

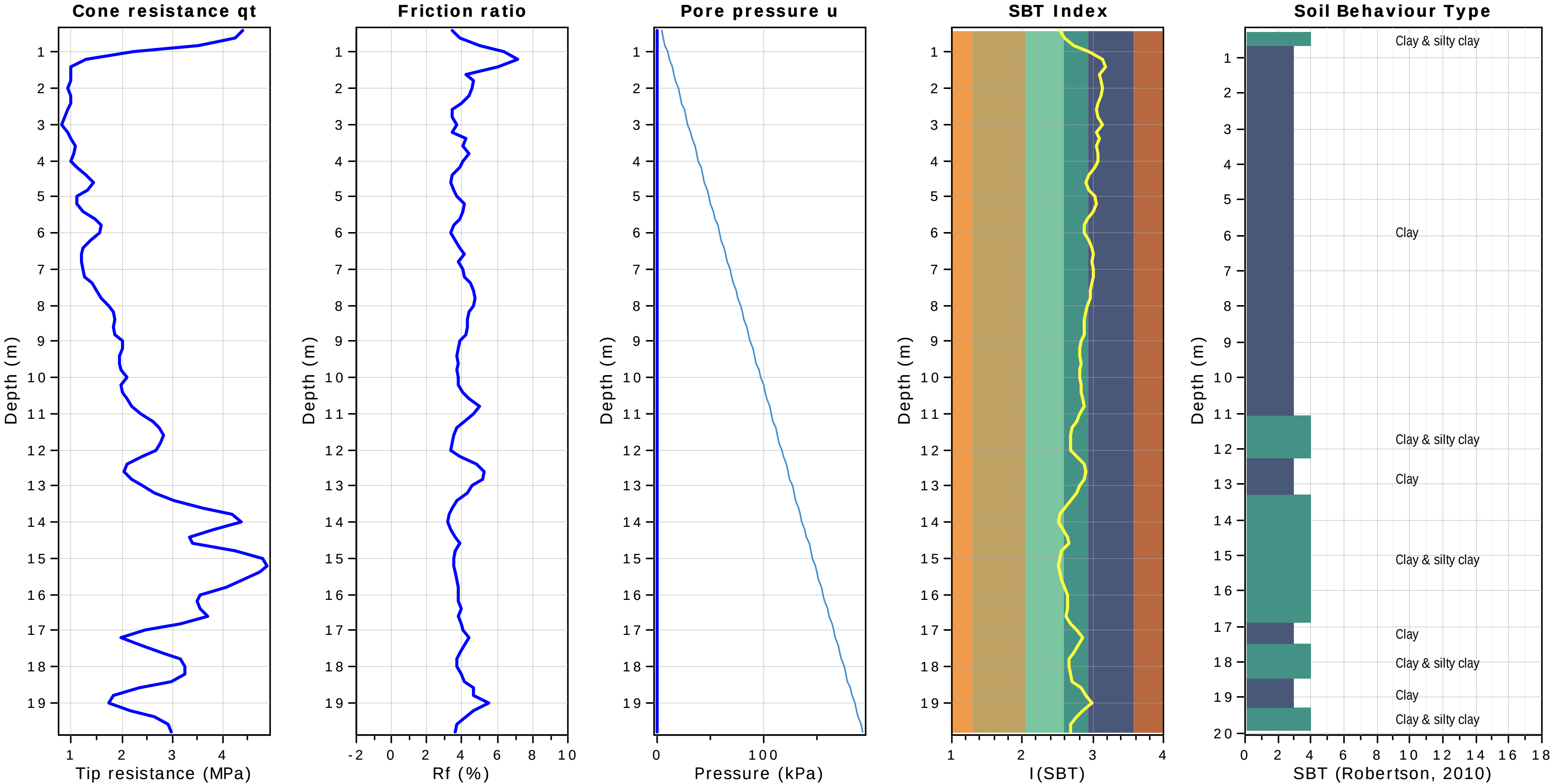

Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

CPT: 036021P358CPT358
Total depth: 19.80 m, Date: 01/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project:
Location:



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

Prove penetrometriche statiche con punta elettrica CPTU/SCPTU

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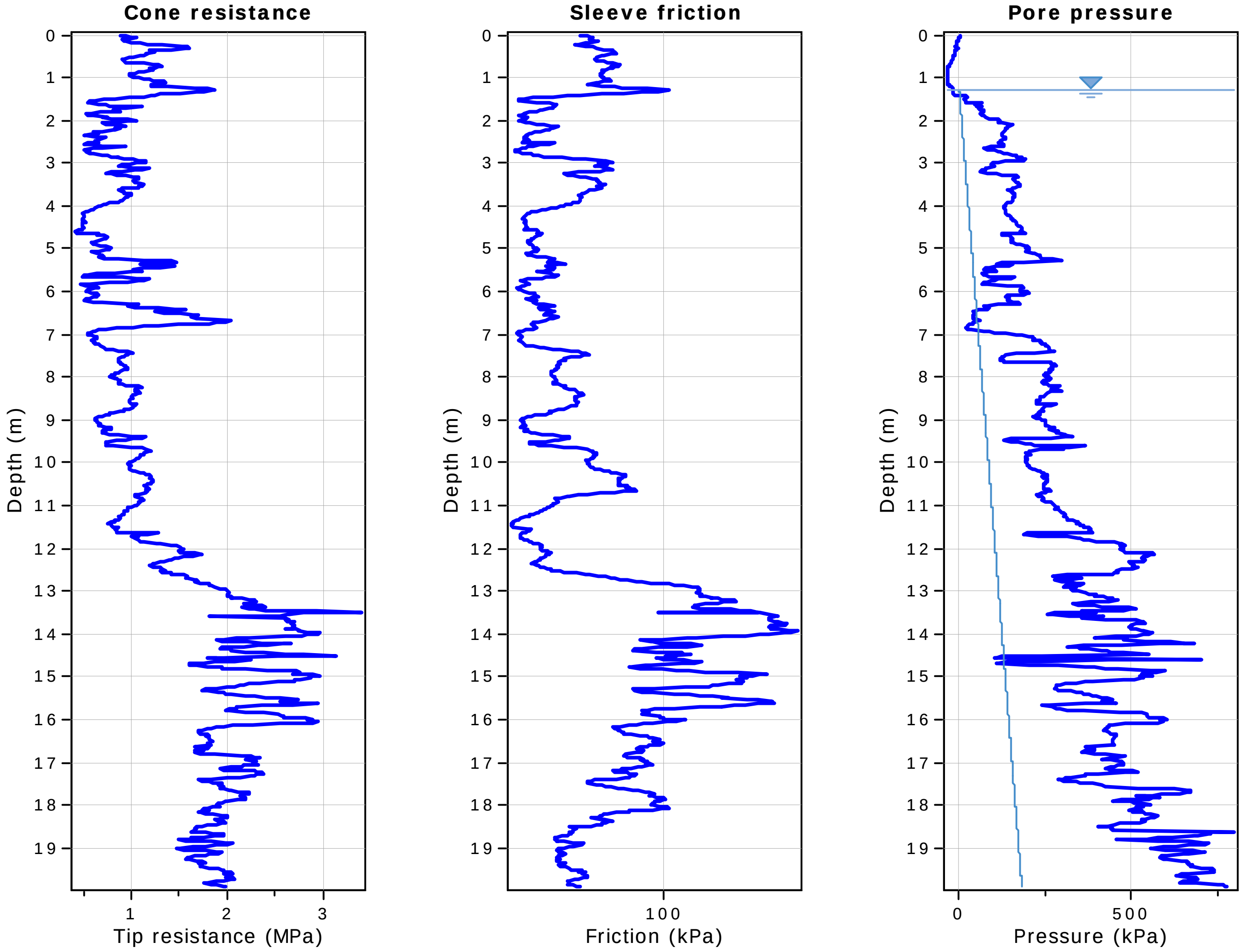
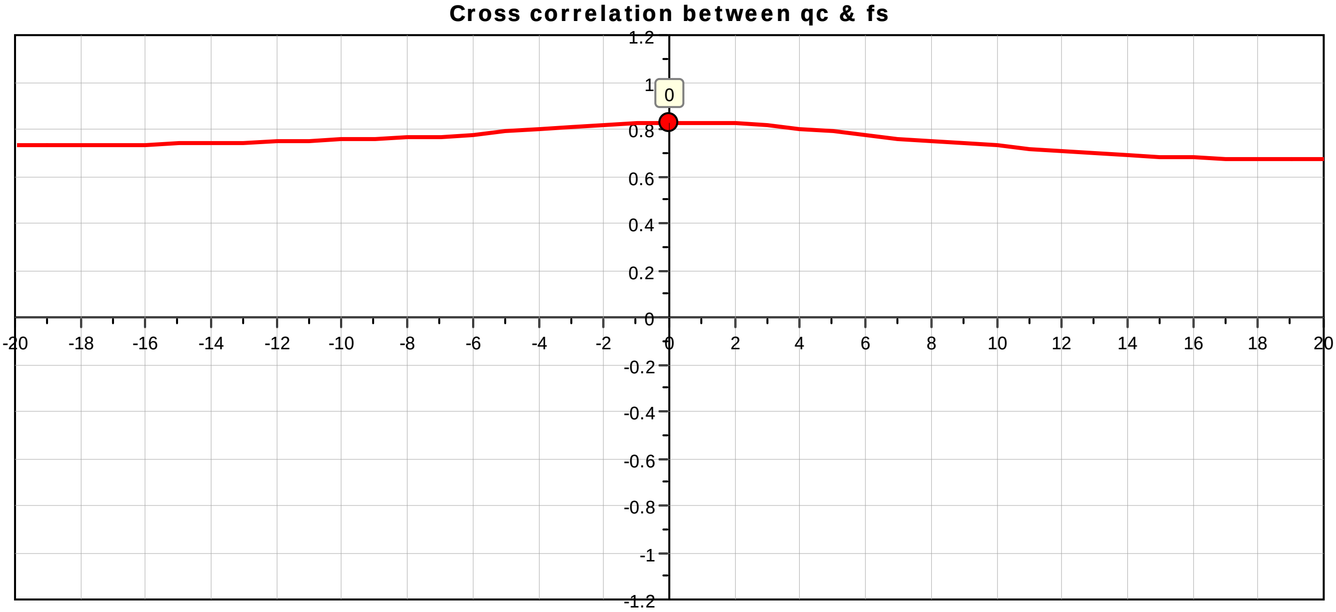
CPT: 036021P258CPTU258
Total depth: 19.90 m, Date: 30/01/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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Via Cesare Costa 182
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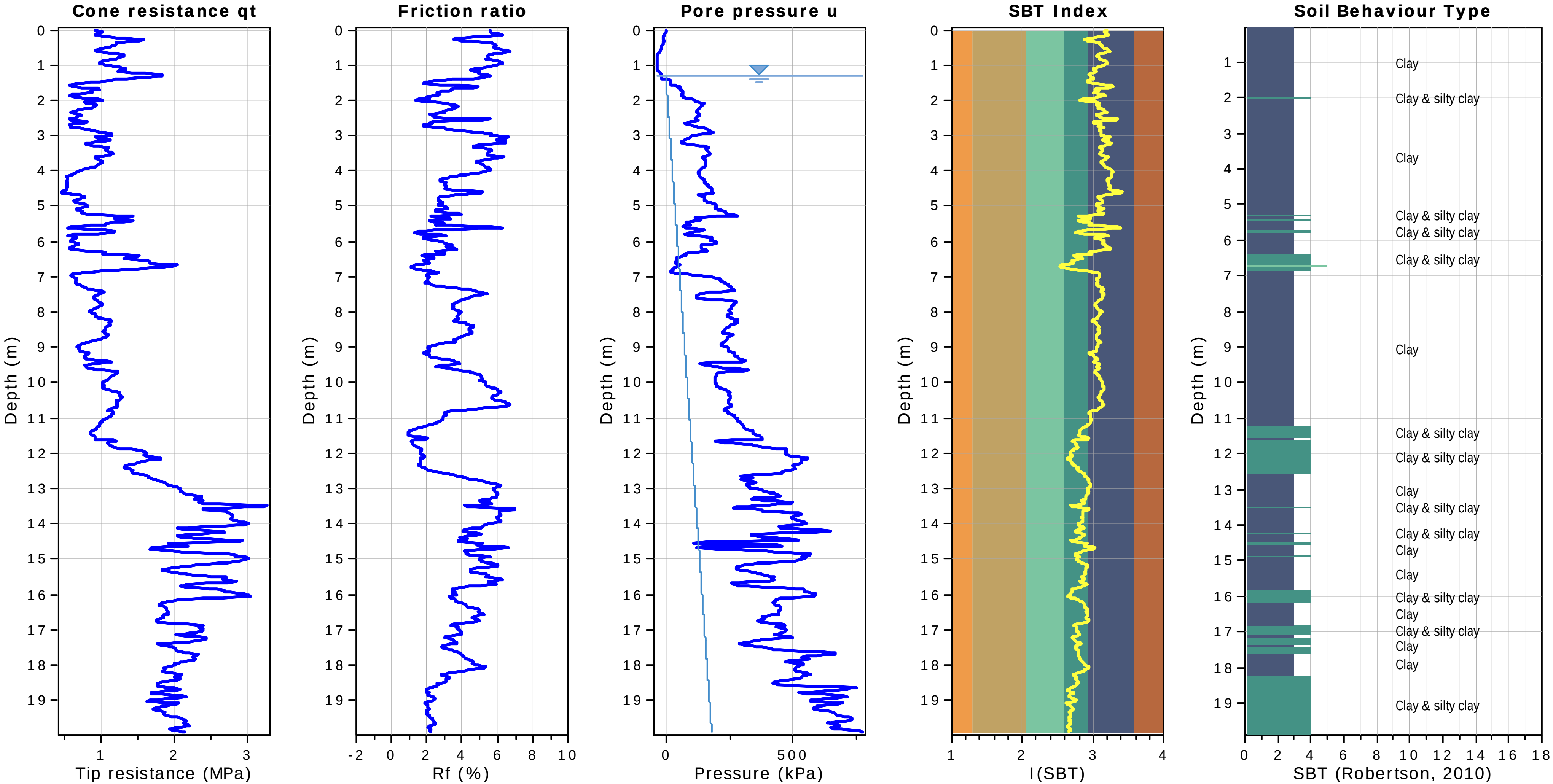
CPT: 036021P258CPTU258
Total depth: 19.90 m, Date: 30/01/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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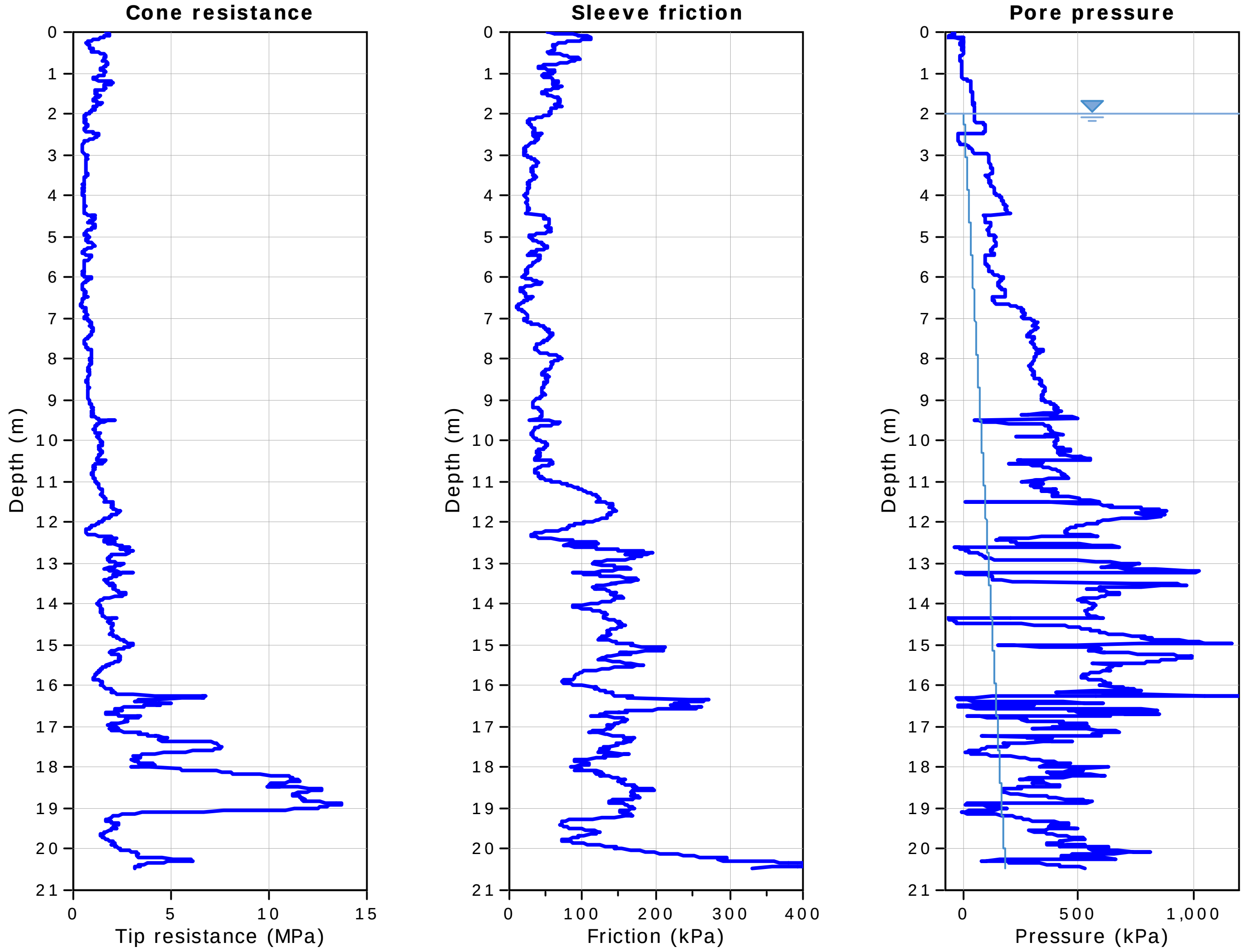
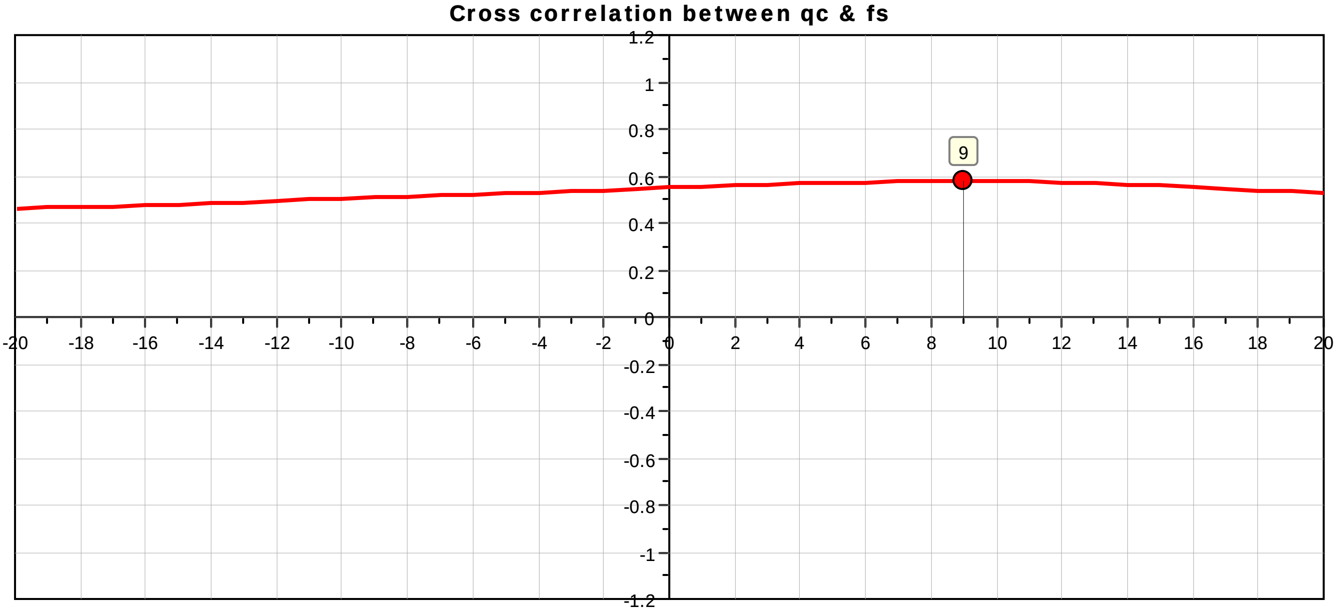
CPT: 036021P267CPTU267

Total depth: 20.45 m, Date: 18/12/2013
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type: TGAS07B
Cone Operator: Dott. Geol. Salvatore Mucci

Project: **MS MEDOLLA**
Location: **MEDOLLA**



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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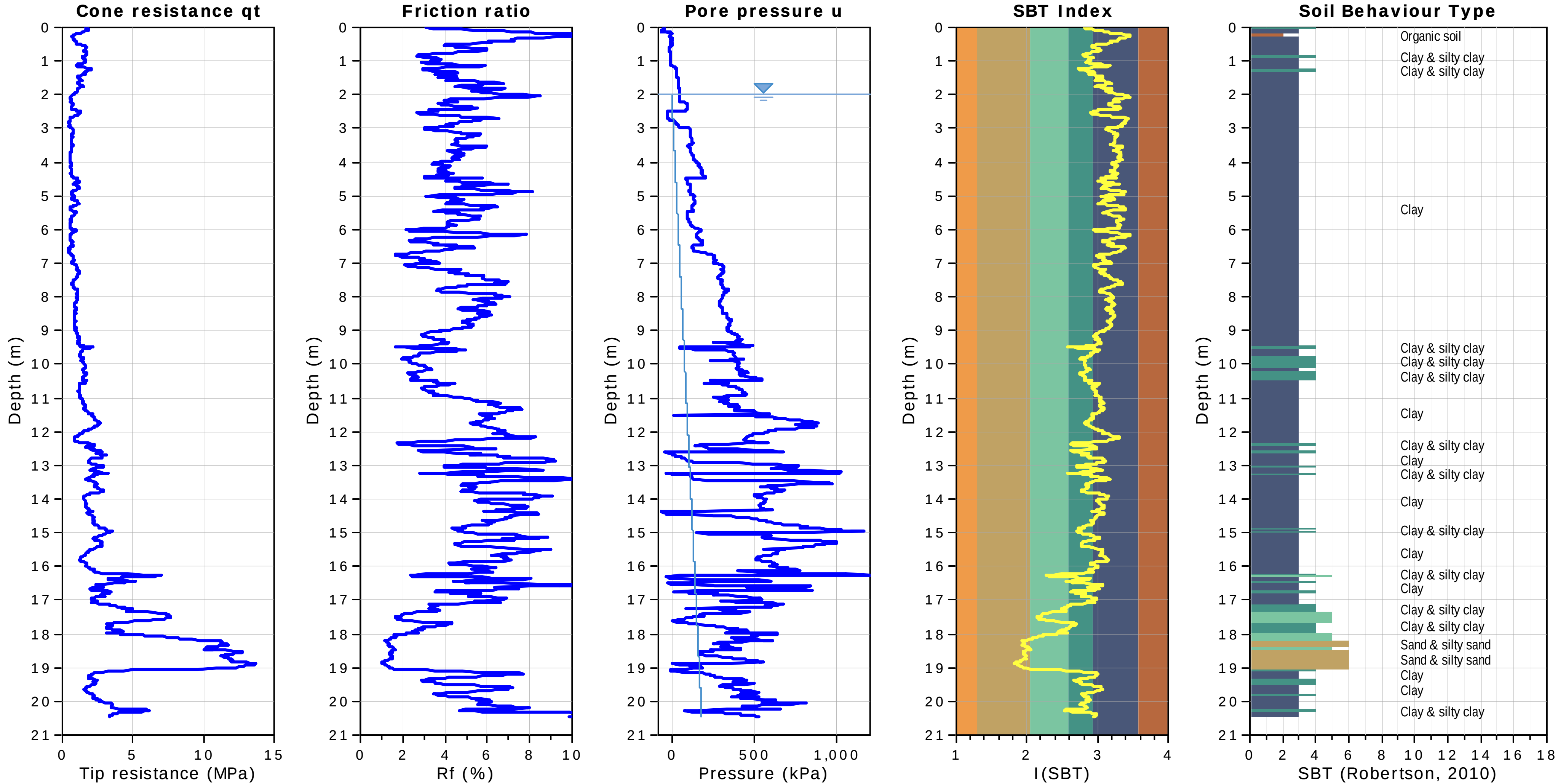
CPT: 036021P267CPTU267
Total depth: 20.45 m, Date: 18/12/2013
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type: TGAS07B
Cone Operator: Dott. Geol. Salvatore Mucci

Project: **MS MEDOLLA**
Location: **MEDOLLA**



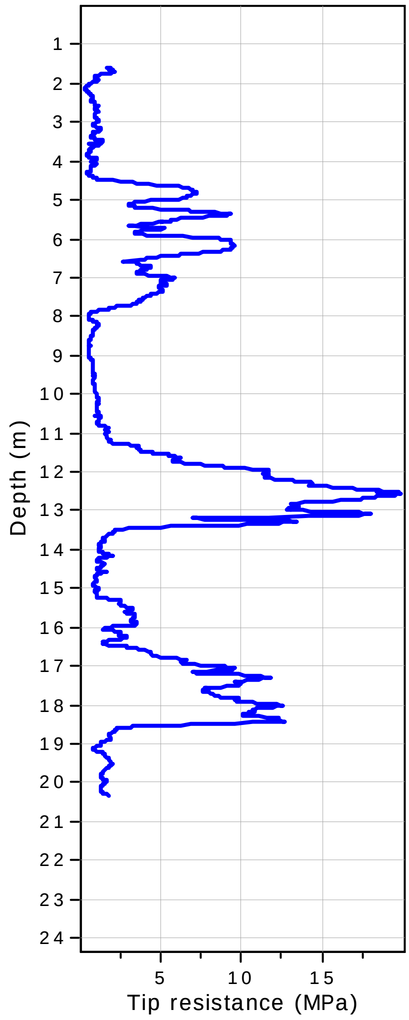
SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

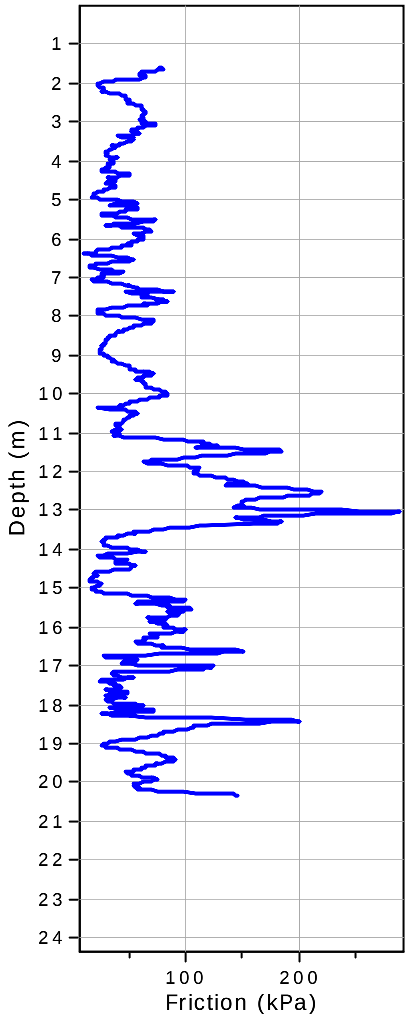
CPT: 036021P268CPTU268
Total depth: 20.33 m, Date: 24/04/2015
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**

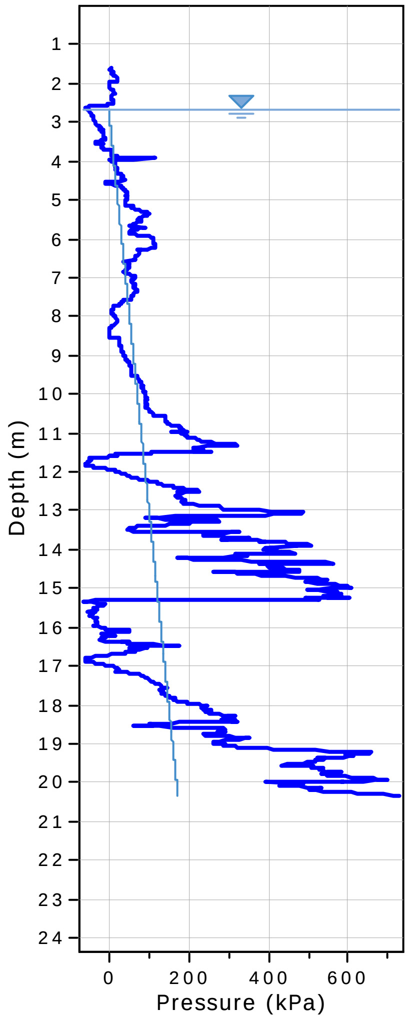
Cone resistance



Sleeve friction

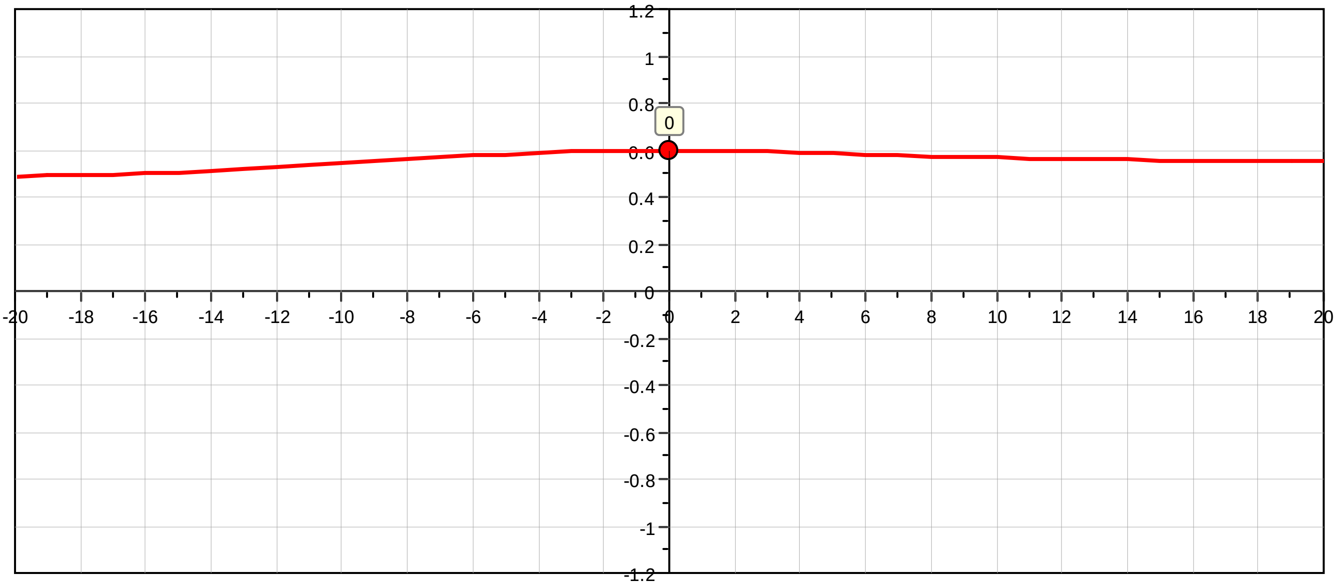


Pore pressure



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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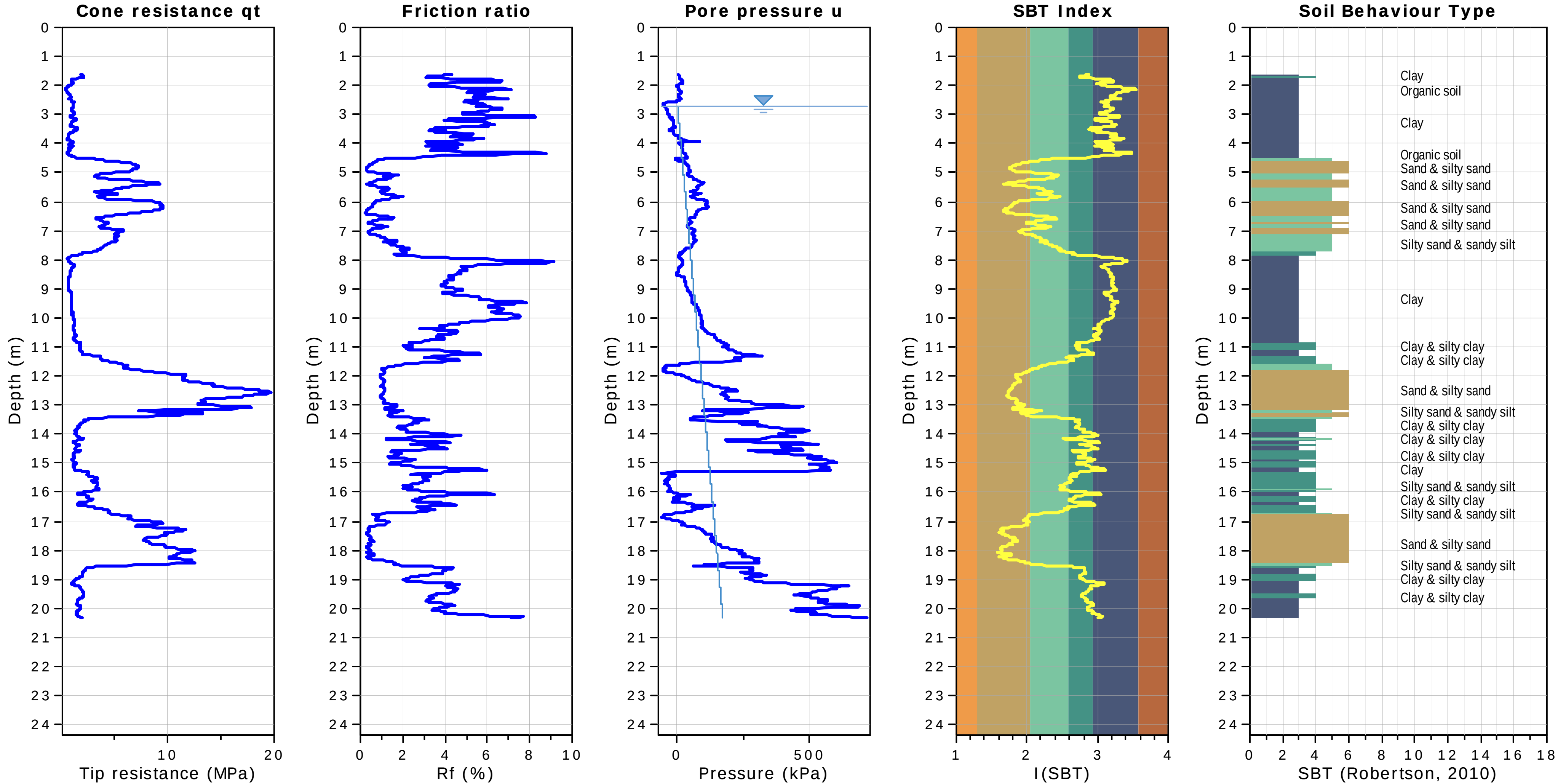
CPT: 036021P268CPTU268
Total depth: 20.33 m, Date: 24/04/2015
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**



SBT legend

🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟨 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

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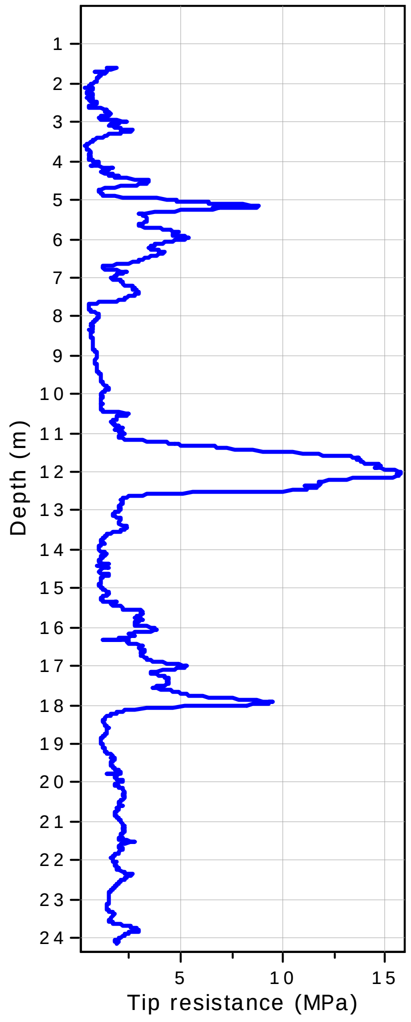
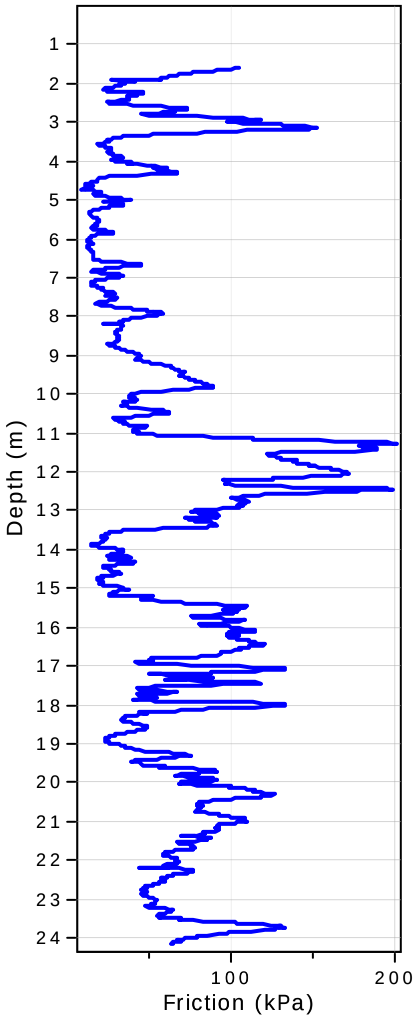
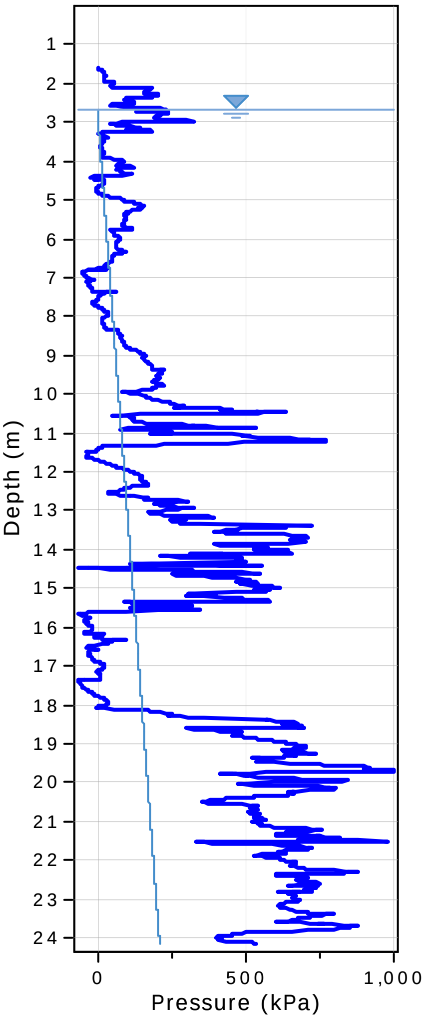
CPT: 036021P269CPTU269
Total depth: 24.14 m, Date: 24/04/2015
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

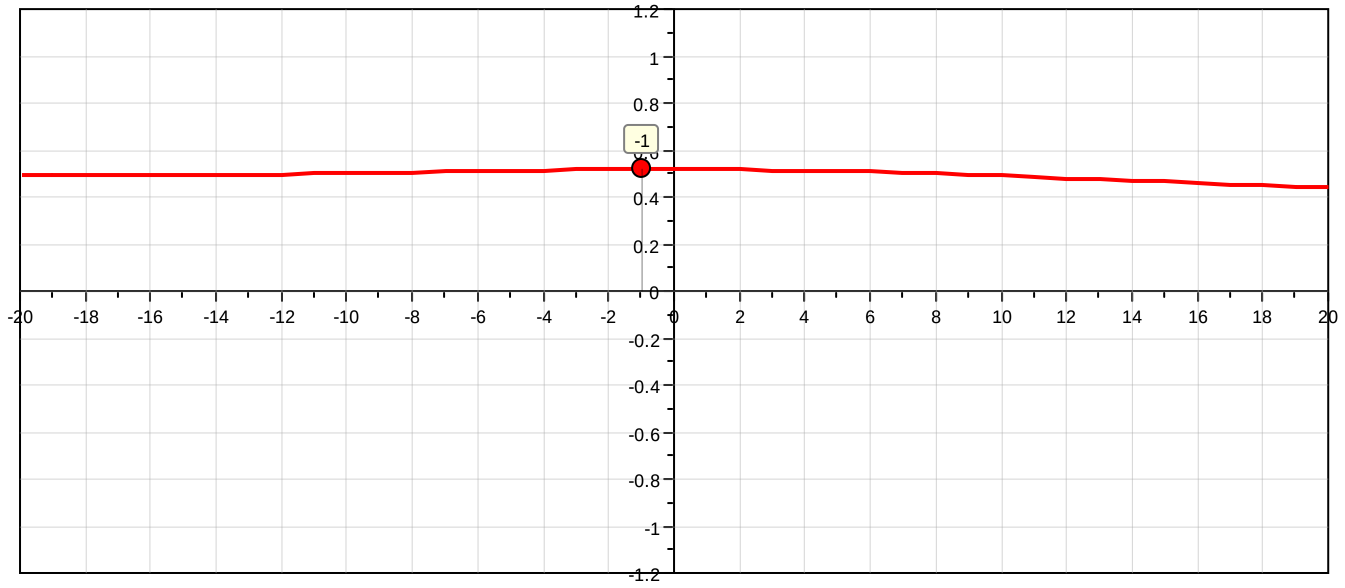
Project: **MS MEDOLLA**
Location: **MEDOLLA**


Cone resistance


Sleeve friction

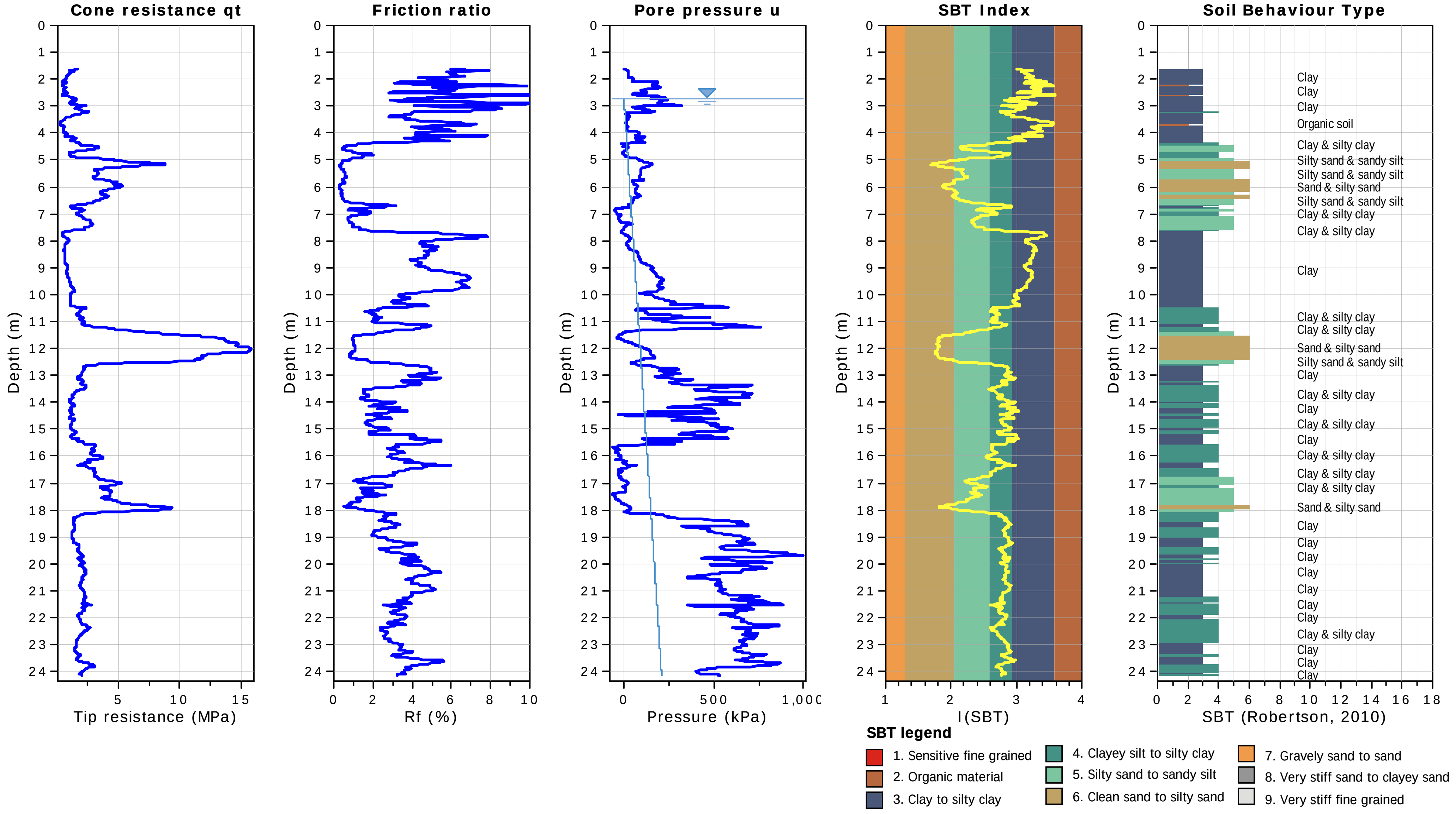

Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

CPT: 036021P269CPTU269
Total depth: 24.14 m, Date: 24/04/2015
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**



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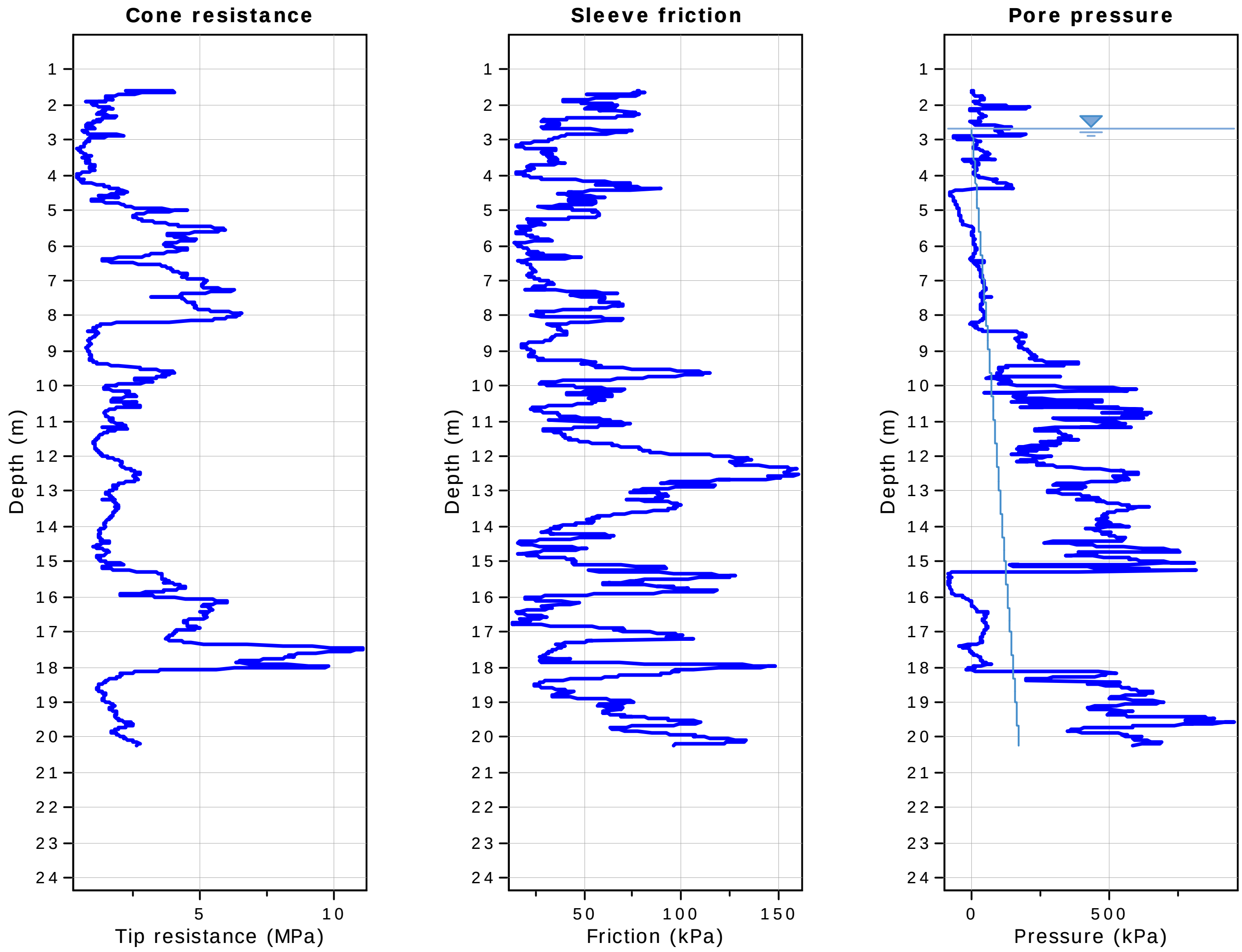
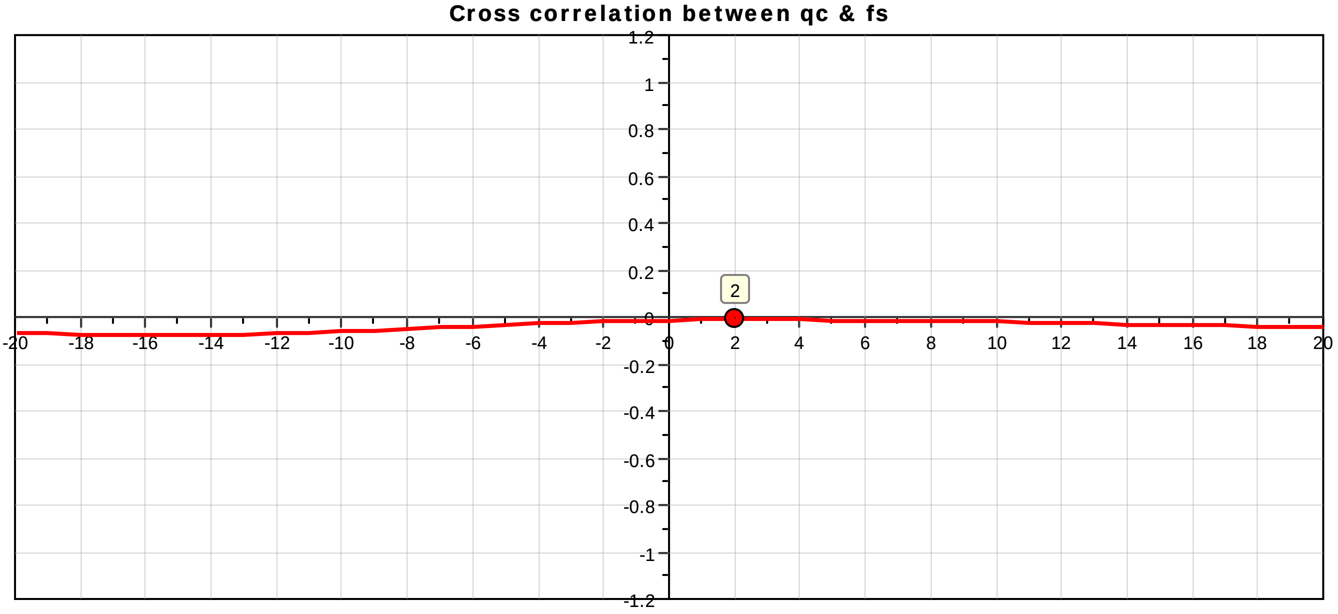
CPT: 036021P270CPTU270
Total depth: 20.22 m, Date: 24/04/2015
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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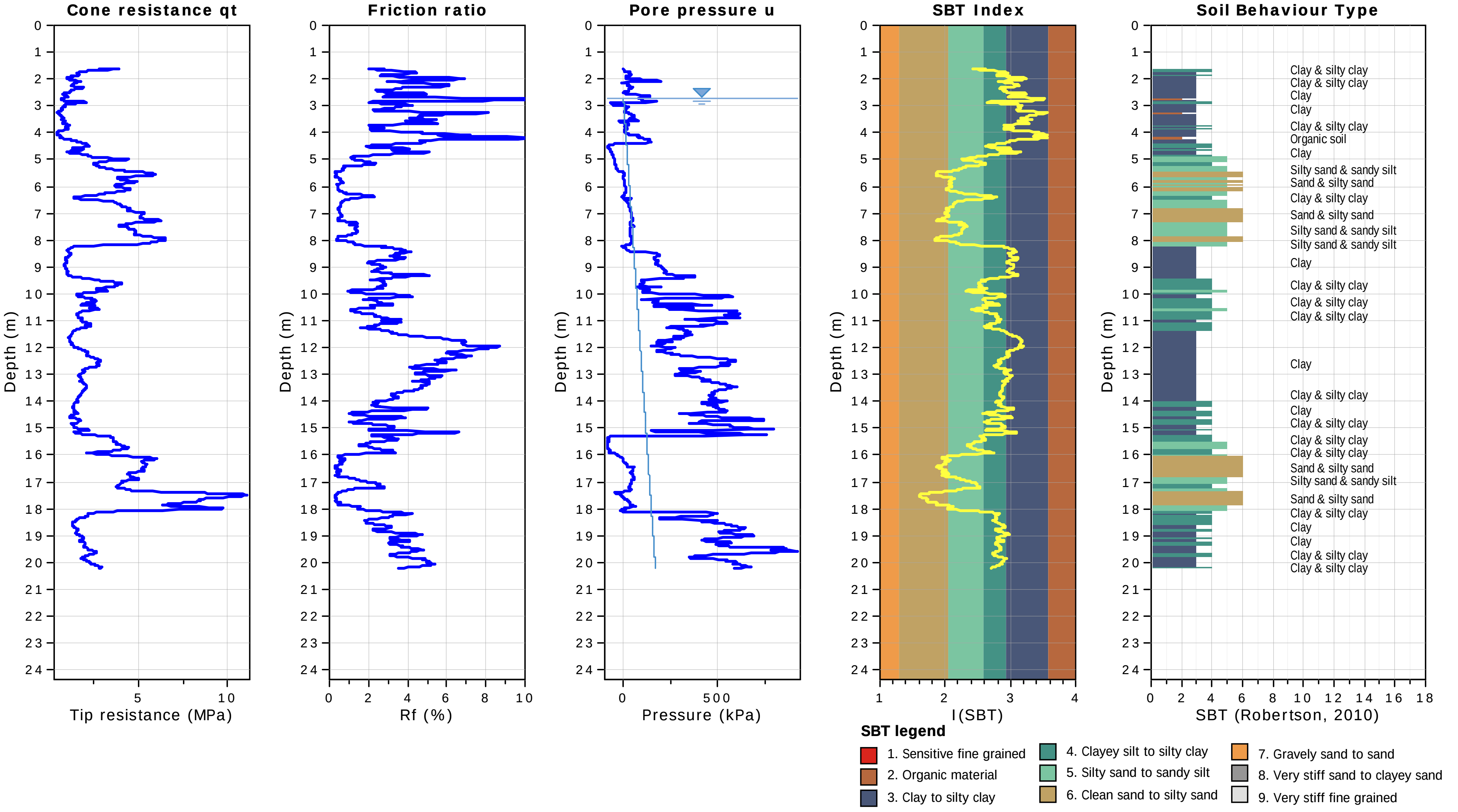
CPT: 036021P270CPTU270
Total depth: 20.22 m, Date: 24/04/2015
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**



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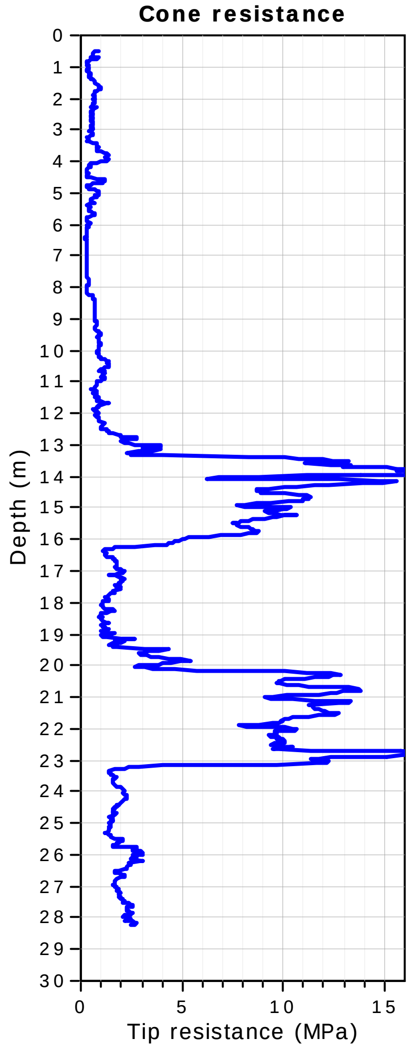
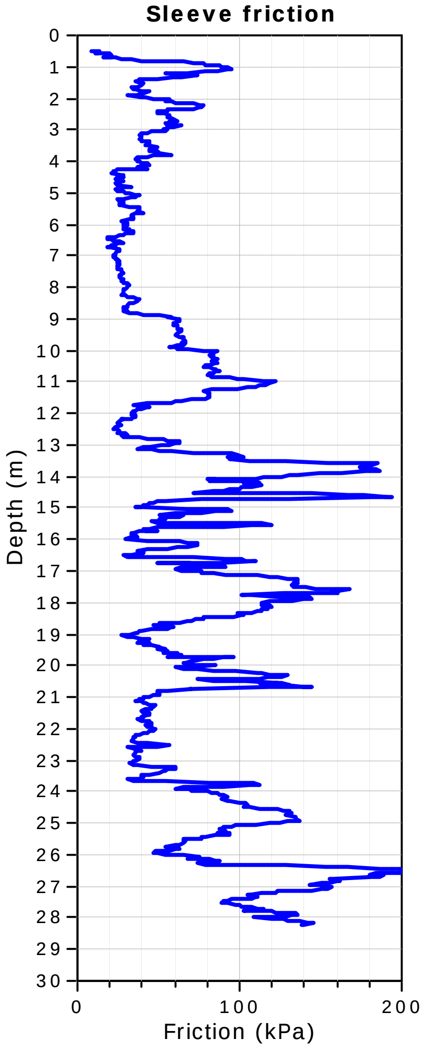
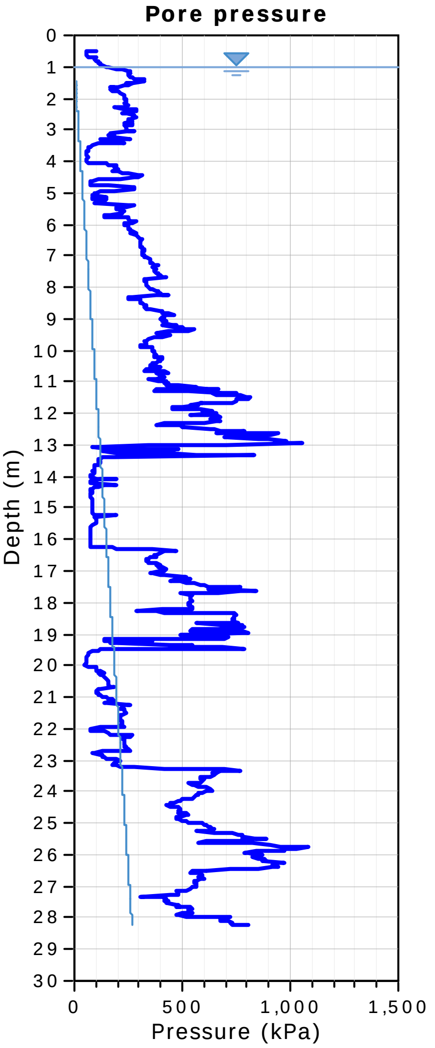
CPT: 036021P259CPTU259
Total depth: 28.20 m, Date: 09/04/2013
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type: GEOTECH AB
Cone Operator: Dott. Geol. Paolo Calicetti

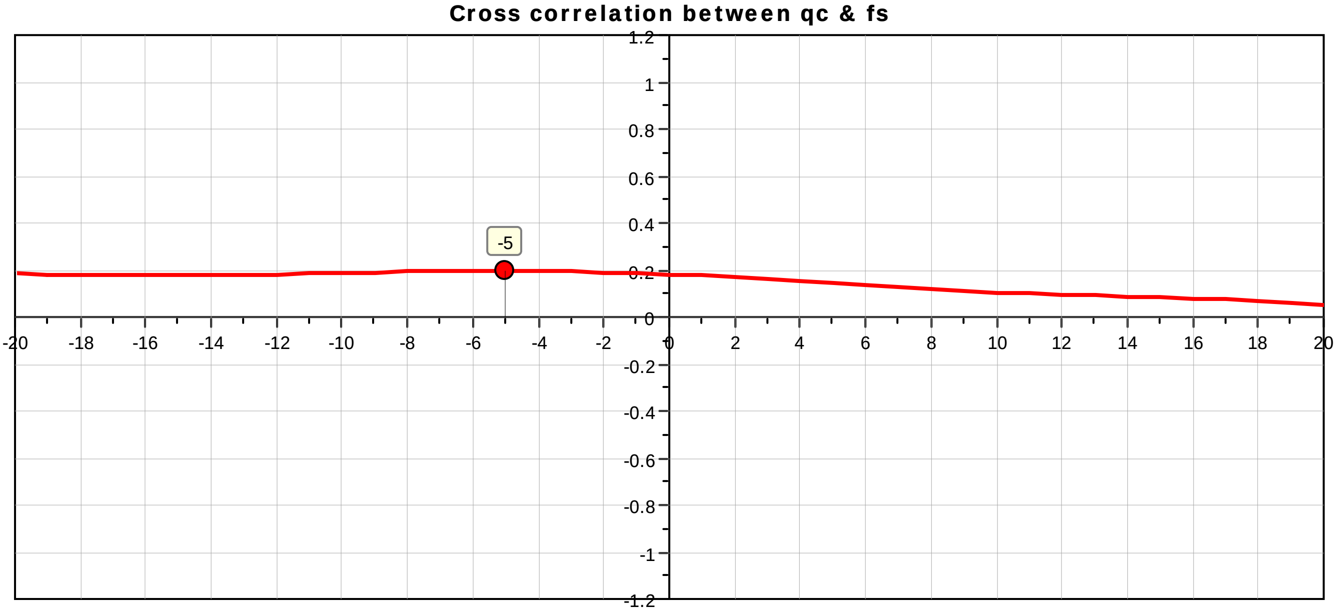
Project: **MS MEDOLLA**
Location: **MEDOLLA**


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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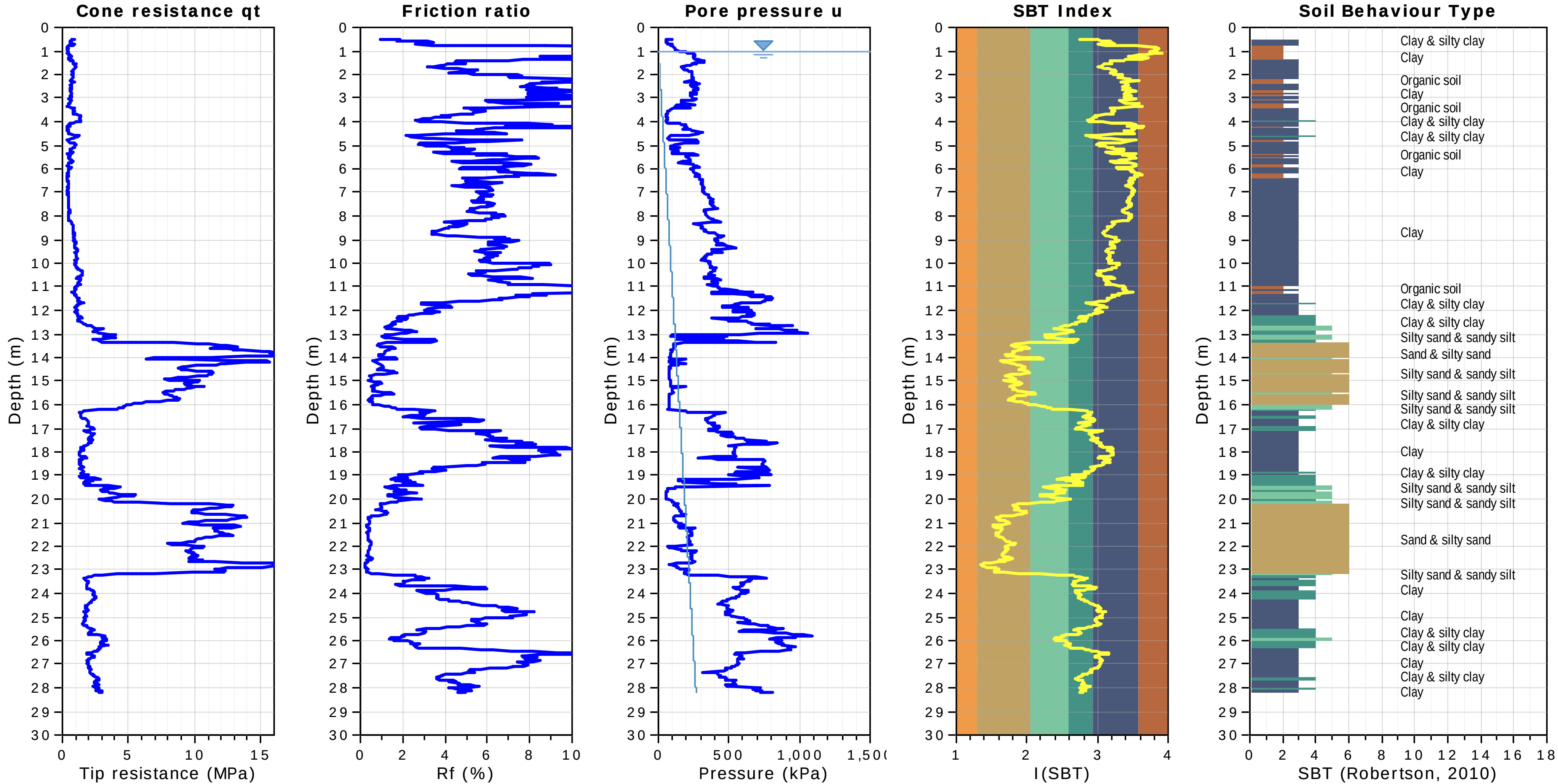
CPT: 036021P259CPTU259
Total depth: 28.20 m, Date: 09/04/2013
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type: GEOTECH AB
Cone Operator: Dott. Geol. Paolo Calicetti

Project: **MS MEDOLLA**
Location: **MEDOLLA**



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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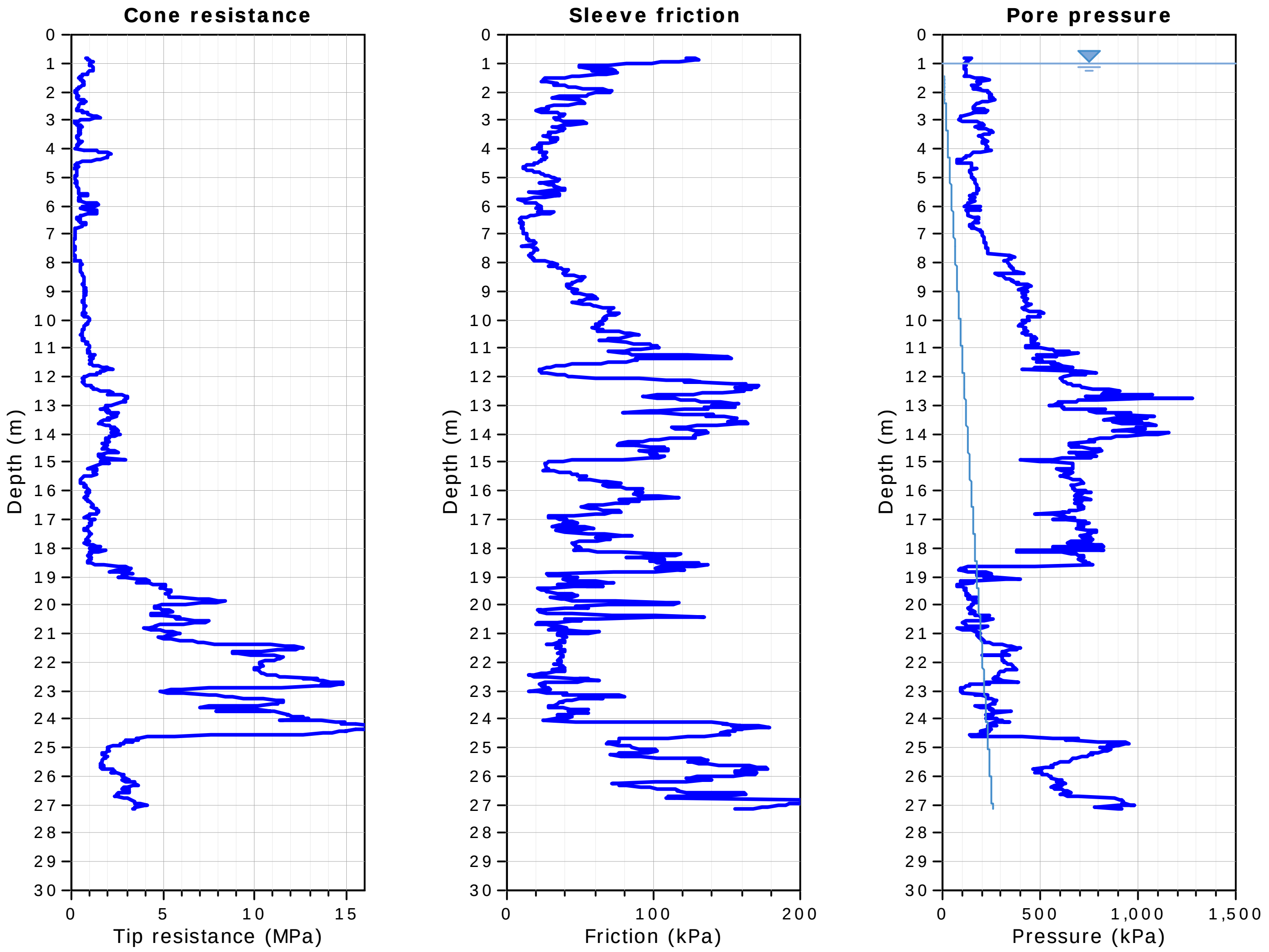
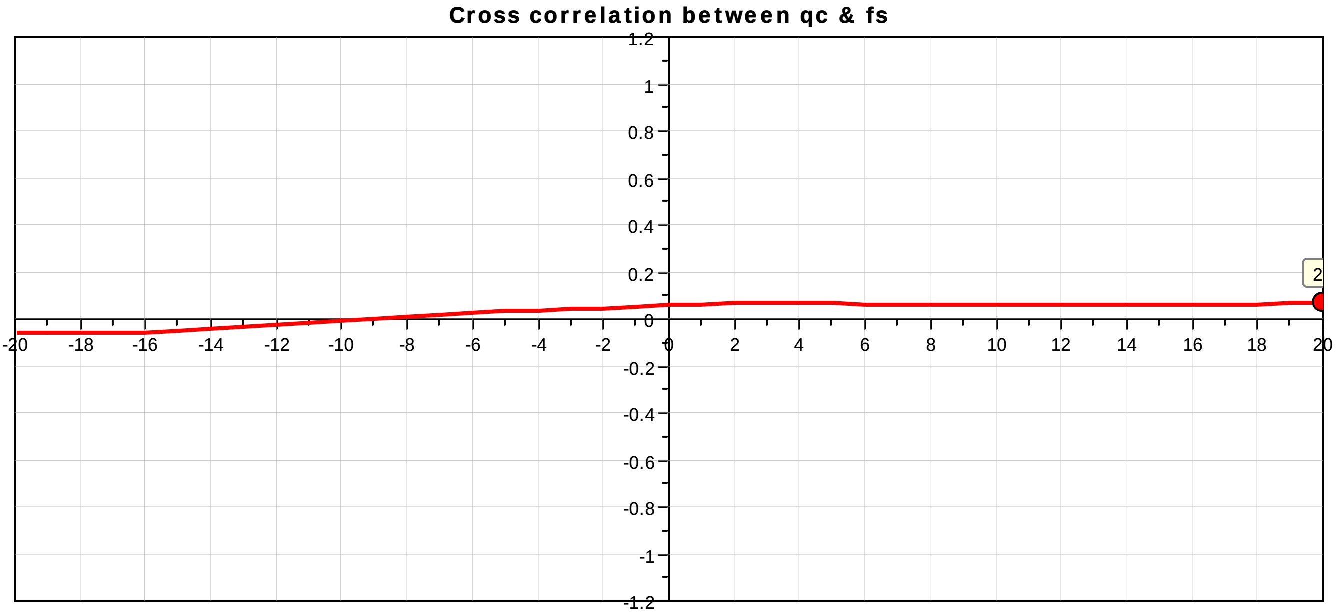
CPT: 036021P260CPTU260
Total depth: 27.15 m, Date: 09/04/2013
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type: GEOTECH AB
Cone Operator: Dott. Geol. Paolo Calicetti

Project: **MS MEDOLLA**
Location: **MEDOLLA**



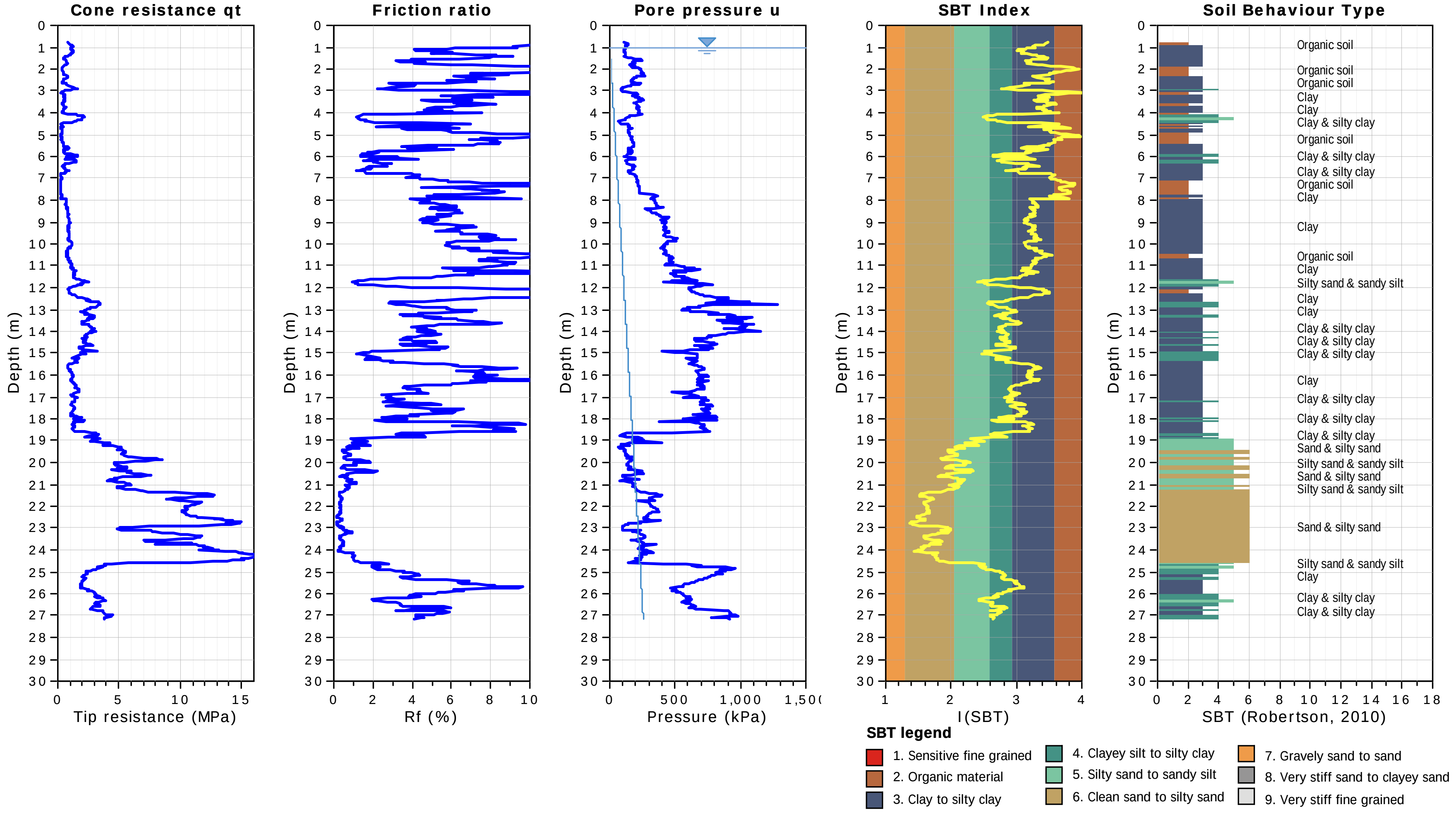
The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

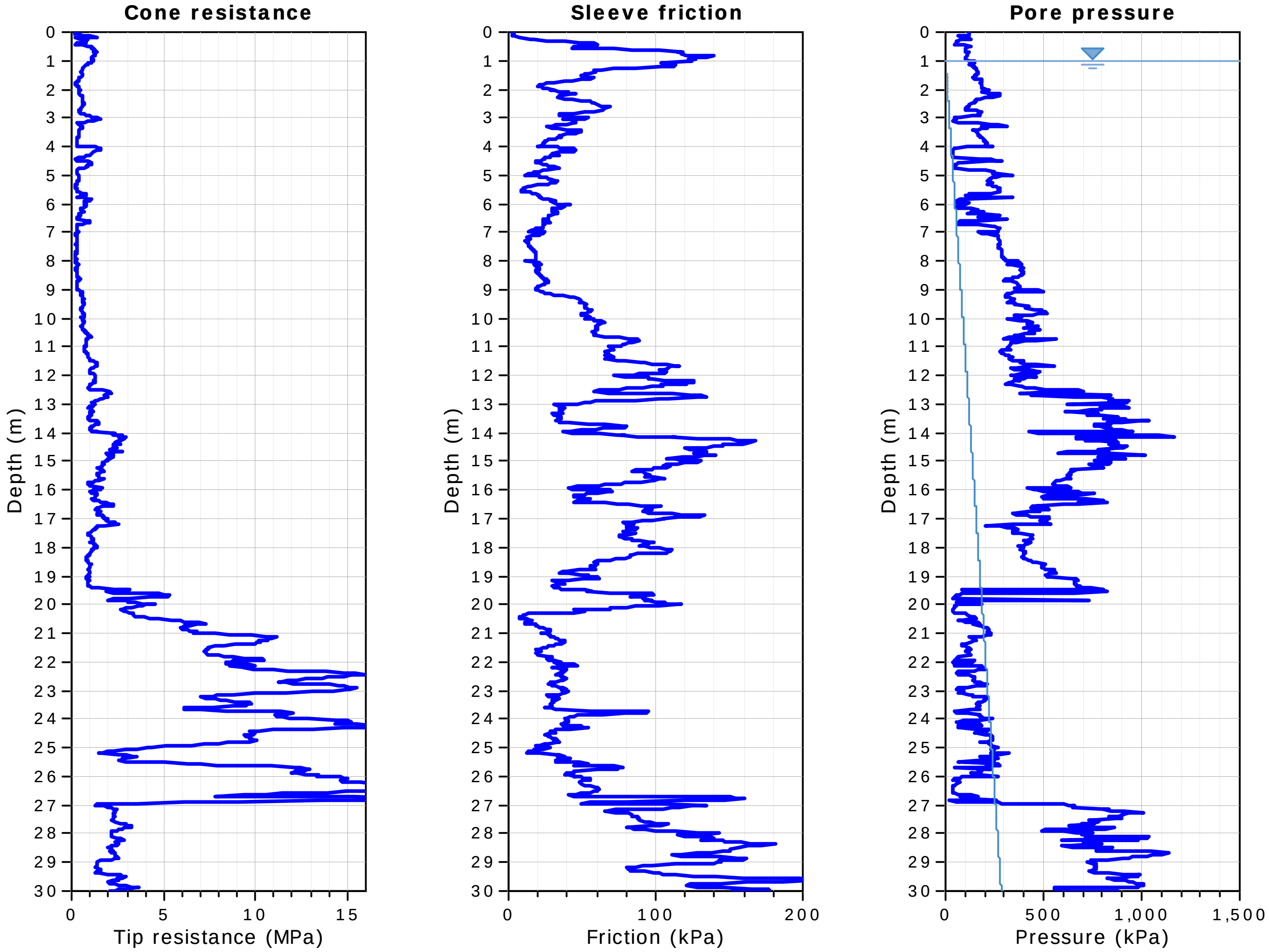


CPT: 036021P260CPTU260

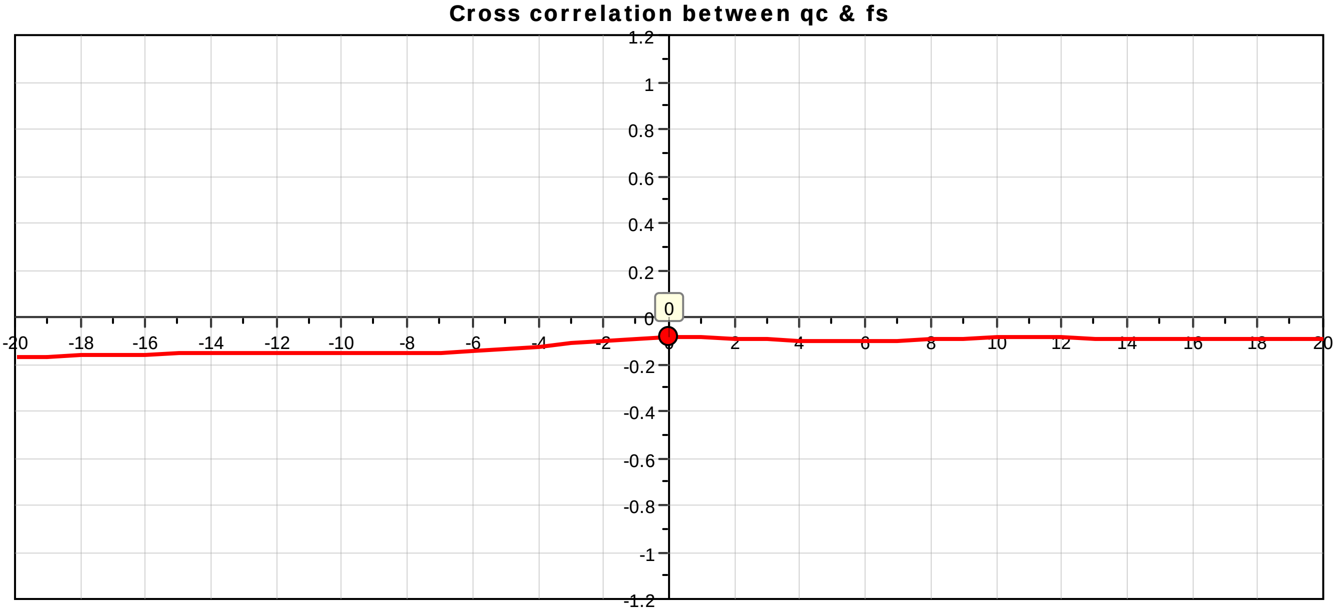
Total depth: 27.15 m, Date: 09/04/2013
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type: GEOTECH AB
Cone Operator: Dott. Geol. Paolo Calicetti

Project: **MS MEDOLLA**
Location: **MEDOLLA**





The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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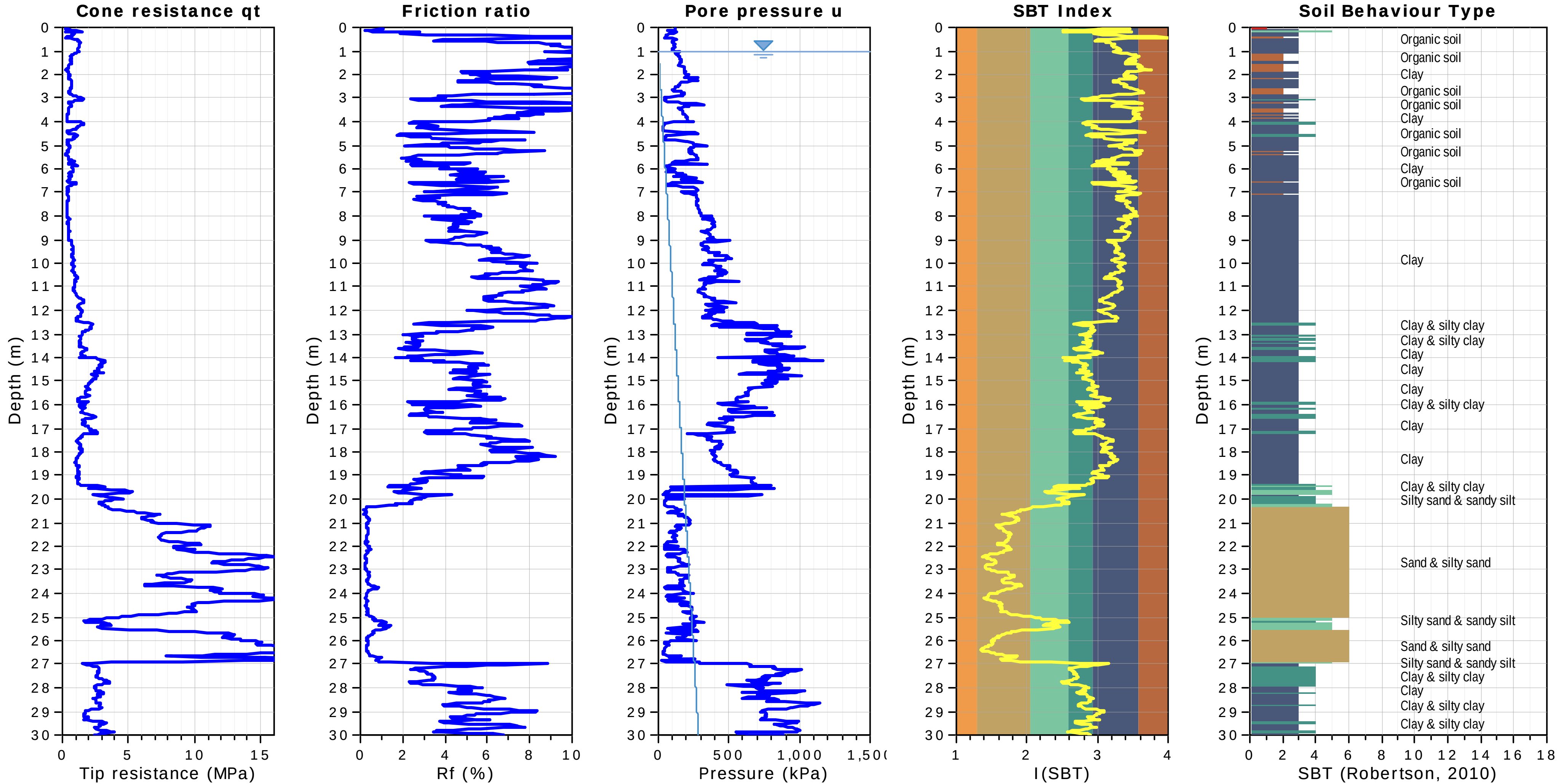
CPT: 036021P261CPTU261
Total depth: 30.00 m, Date: 10/04/2013
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type: GEOTECH AB
Cone Operator: Dott. Geol. Paolo Calicetti

Project: **MS MEDOLLA**
Location: **MEDOLLA**



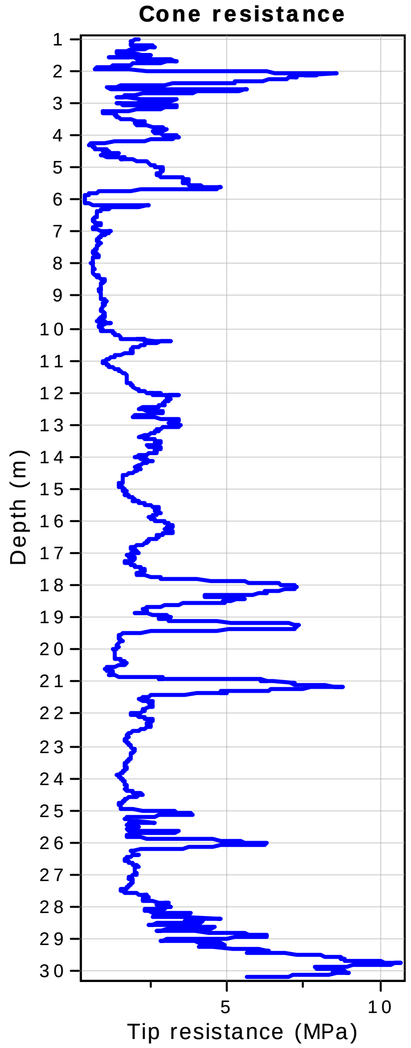
SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

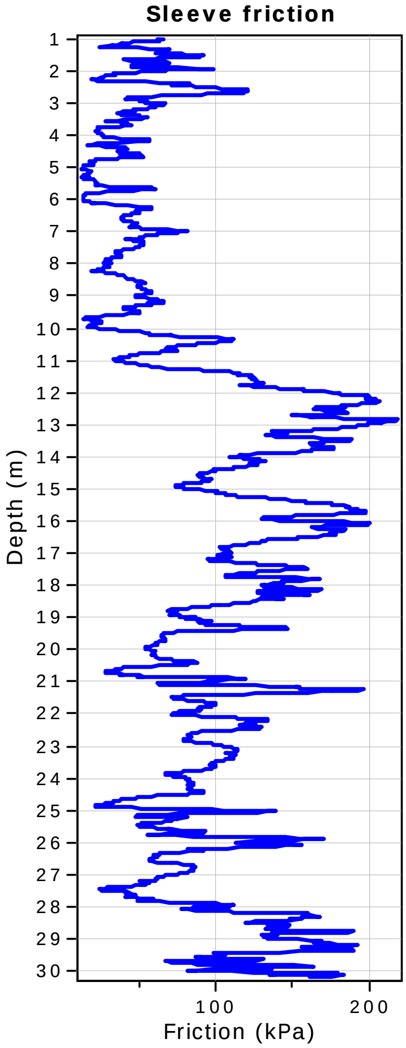
CPT: 036021P263CPTU263
Total depth: 30.18 m, Date: 30/01/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**

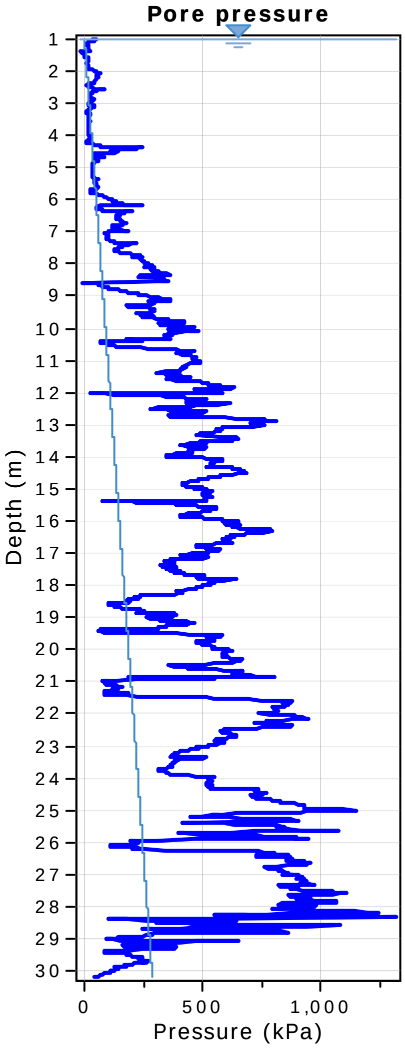
Cone resistance



Sleeve friction

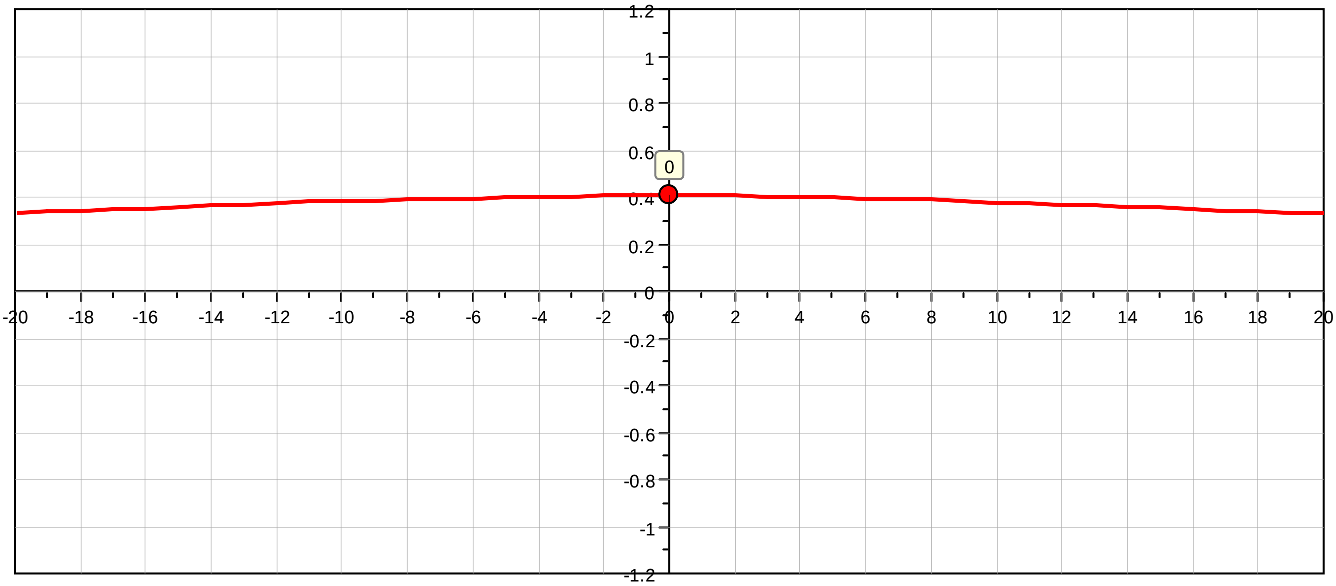


Pore pressure



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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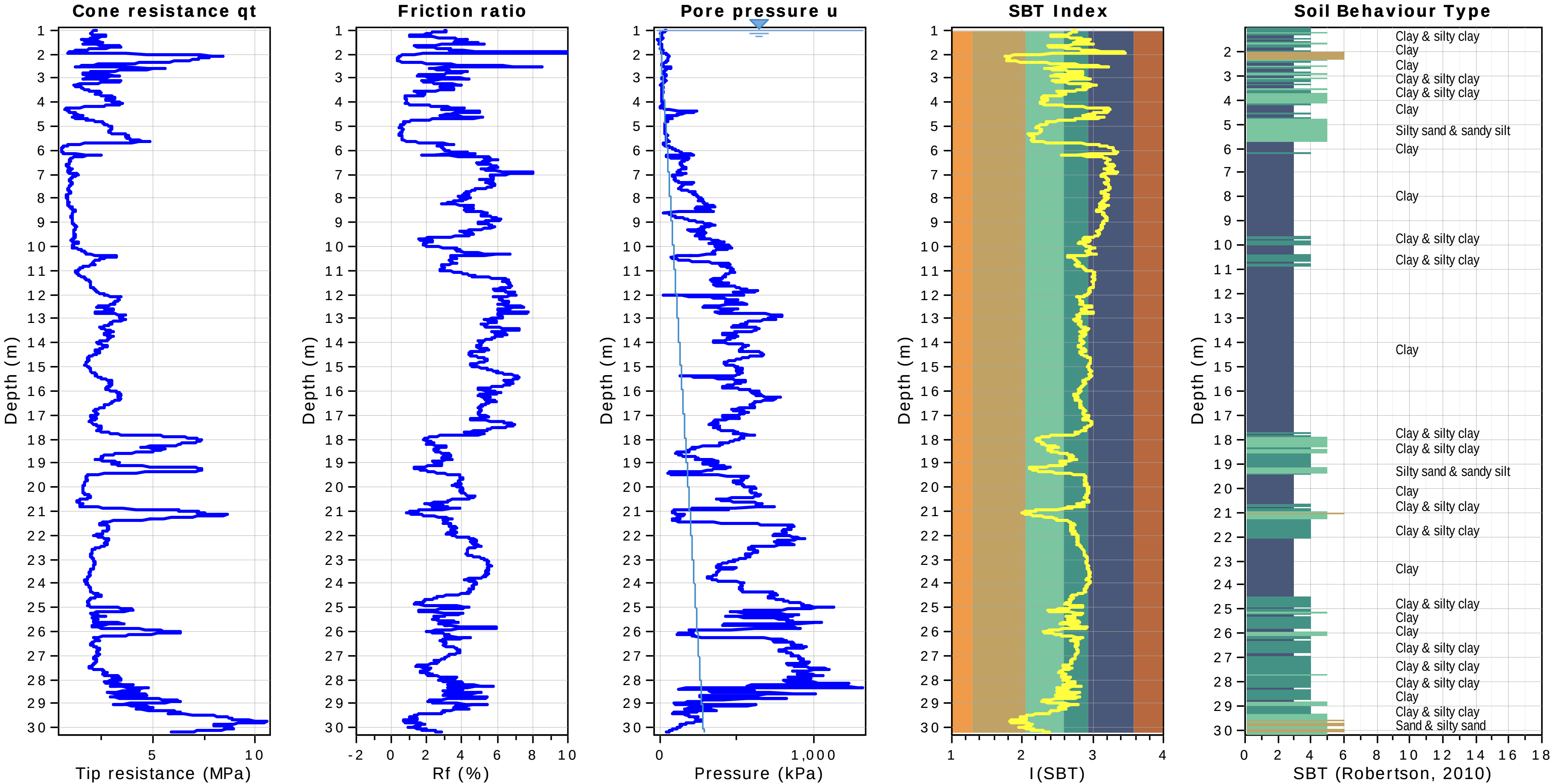
CPT: 036021P263CPTU263
Total depth: 30.18 m, Date: 30/01/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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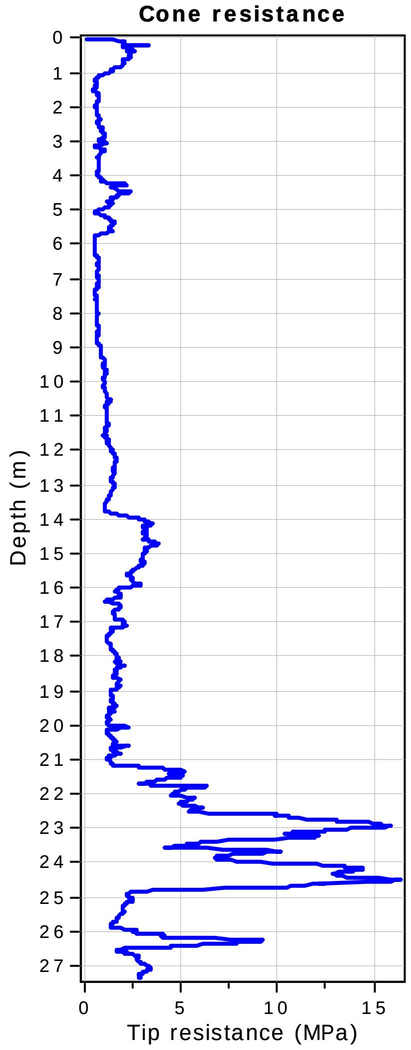
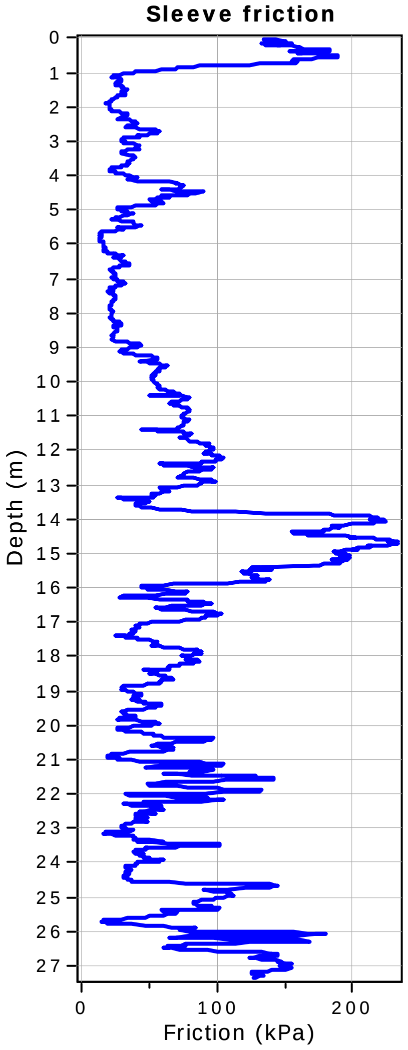
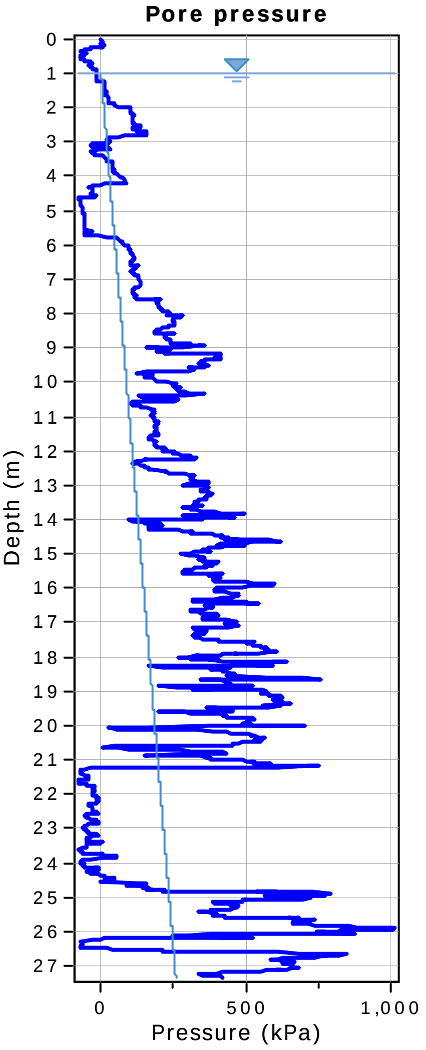
CPT: 036021P264CPTU264
Total depth: 27.35 m, Date: 30/01/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

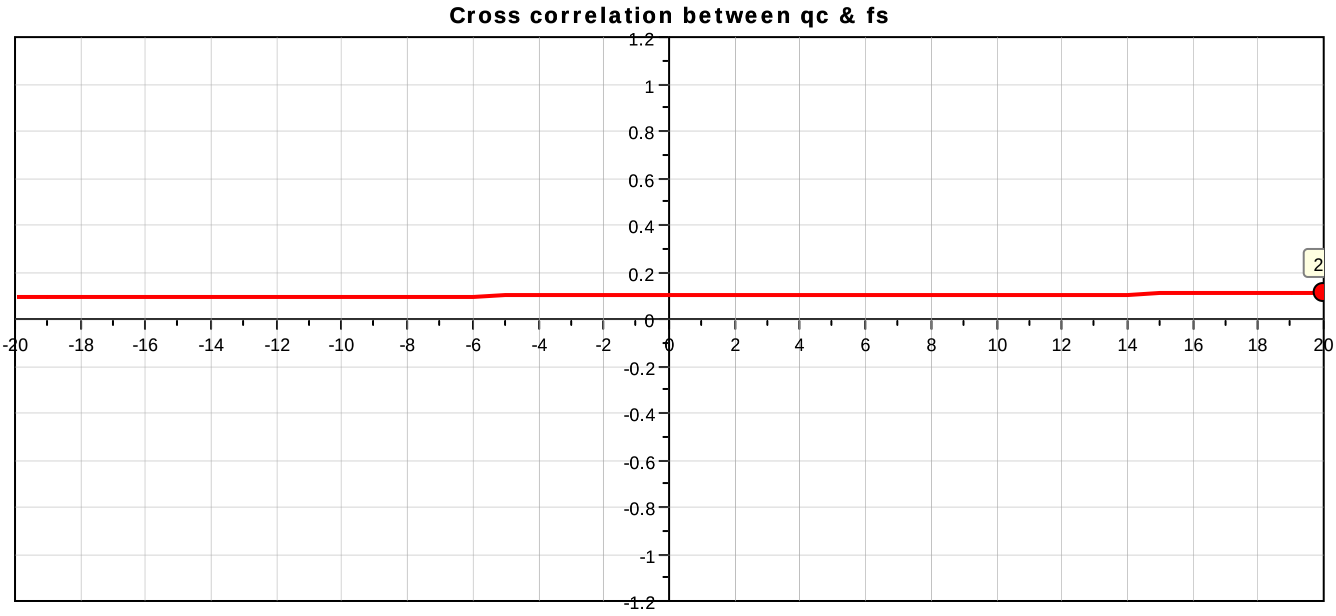
Project: **MS MEDOLLA**
Location: **MEDOLLA**


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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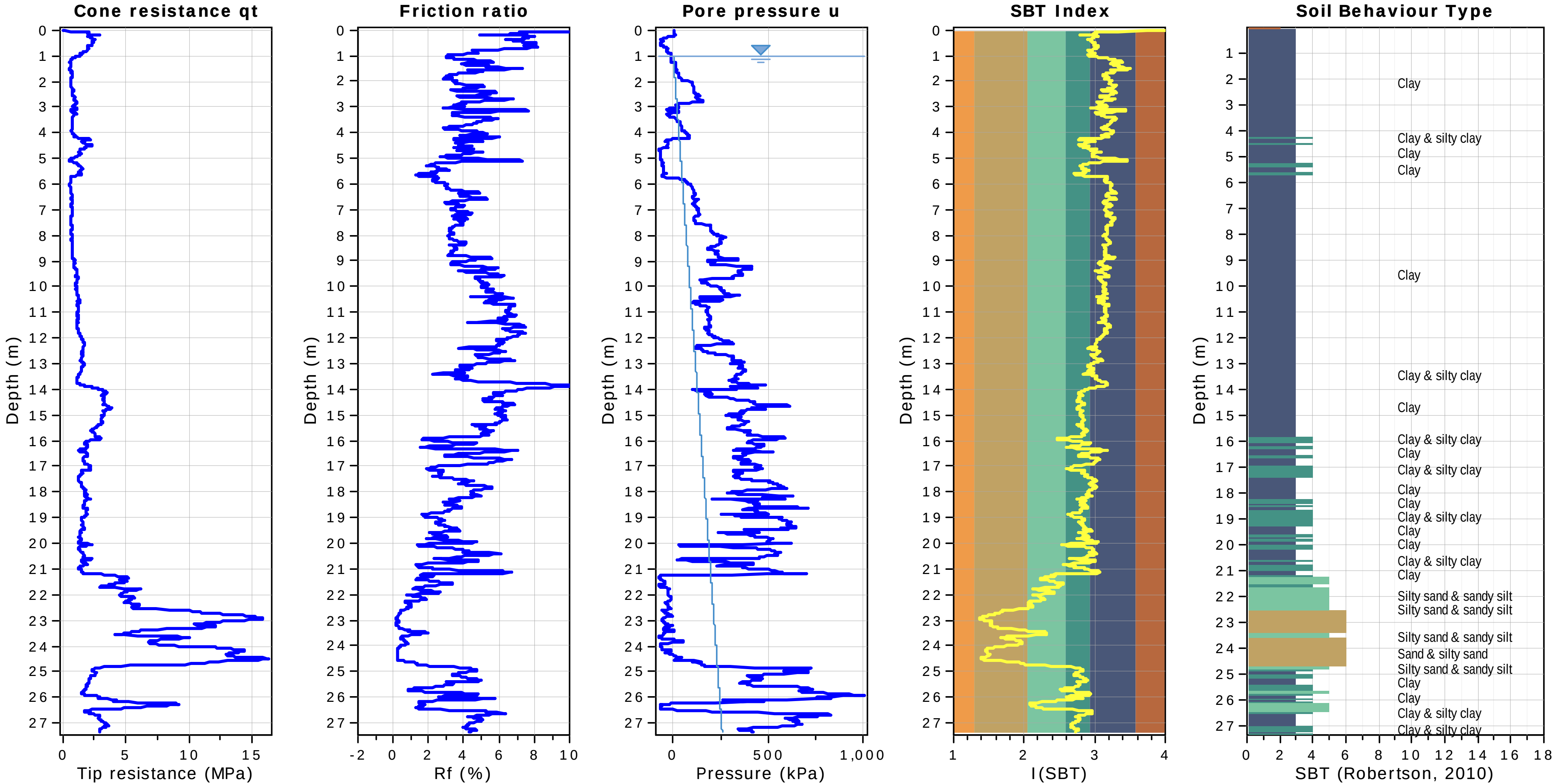
CPT: 036021P264CPTU264
Total depth: 27.35 m, Date: 30/01/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**



SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

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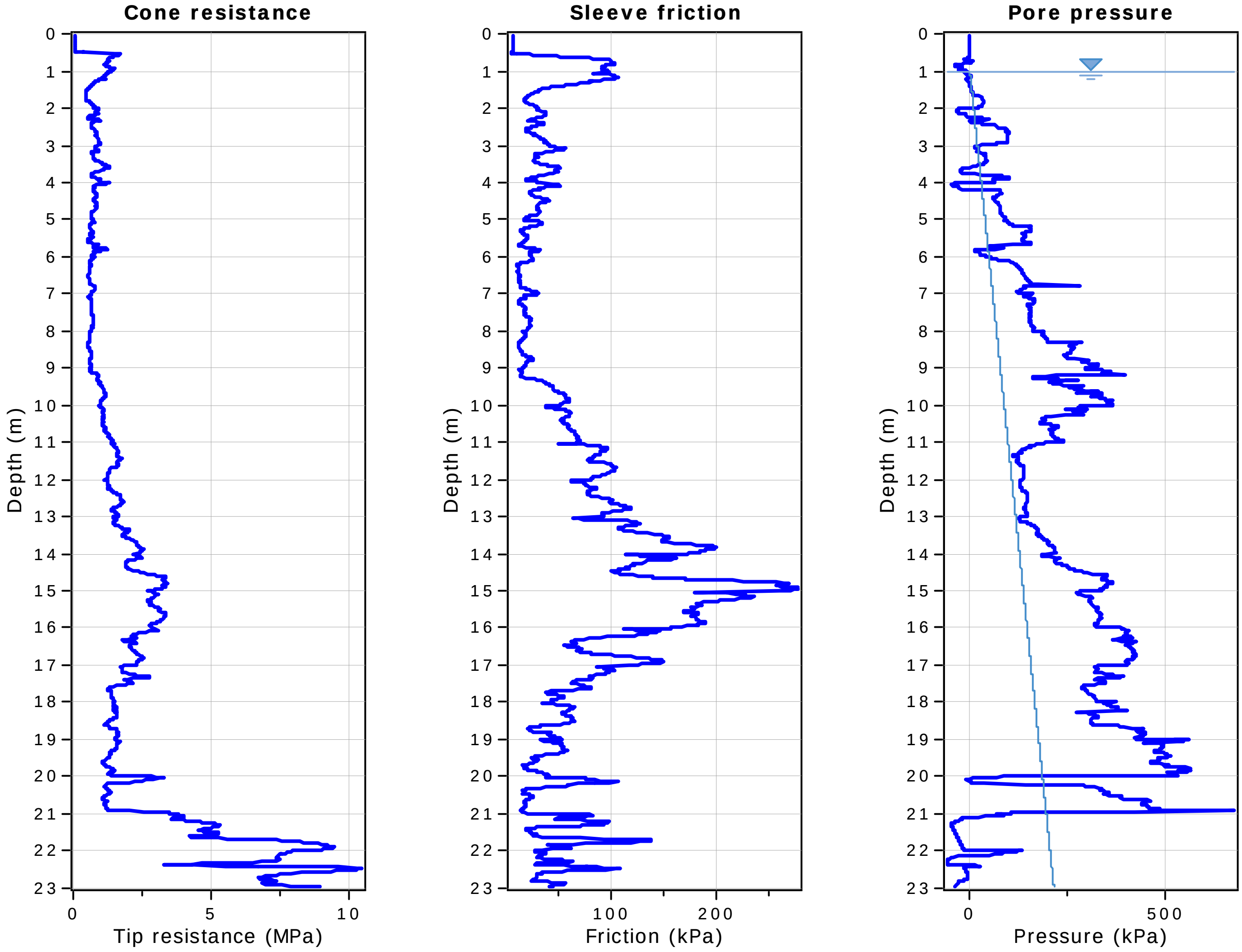
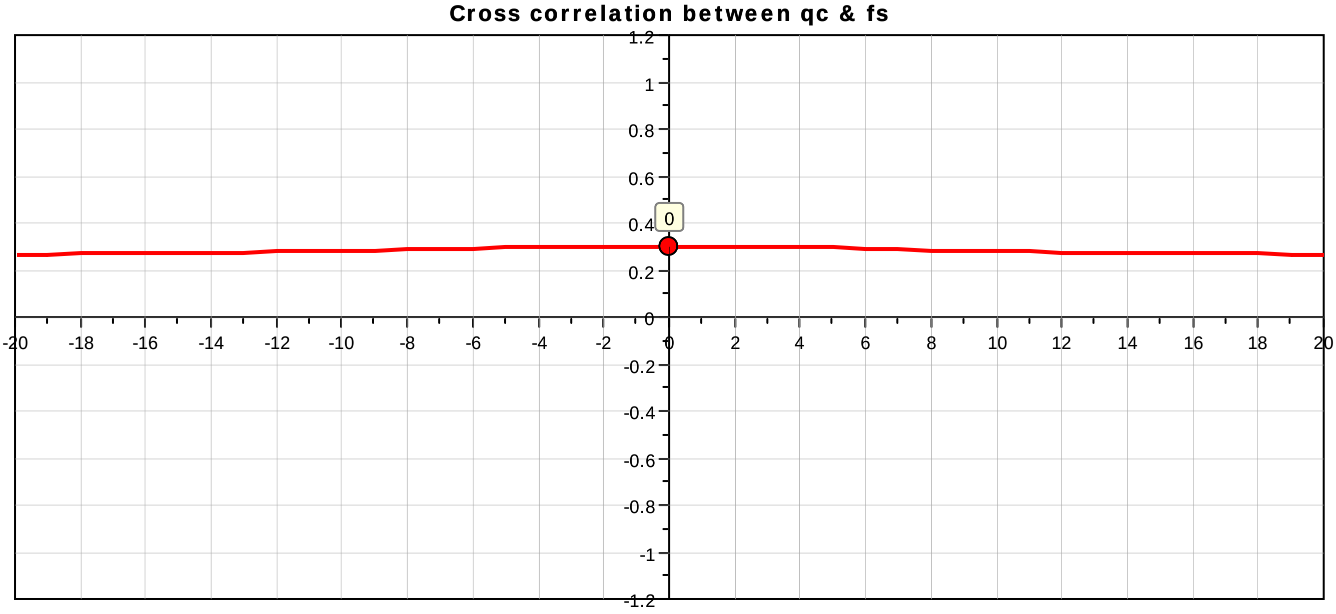
CPT: 036021P265CPTU265
Total depth: 22.97 m, Date: 30/01/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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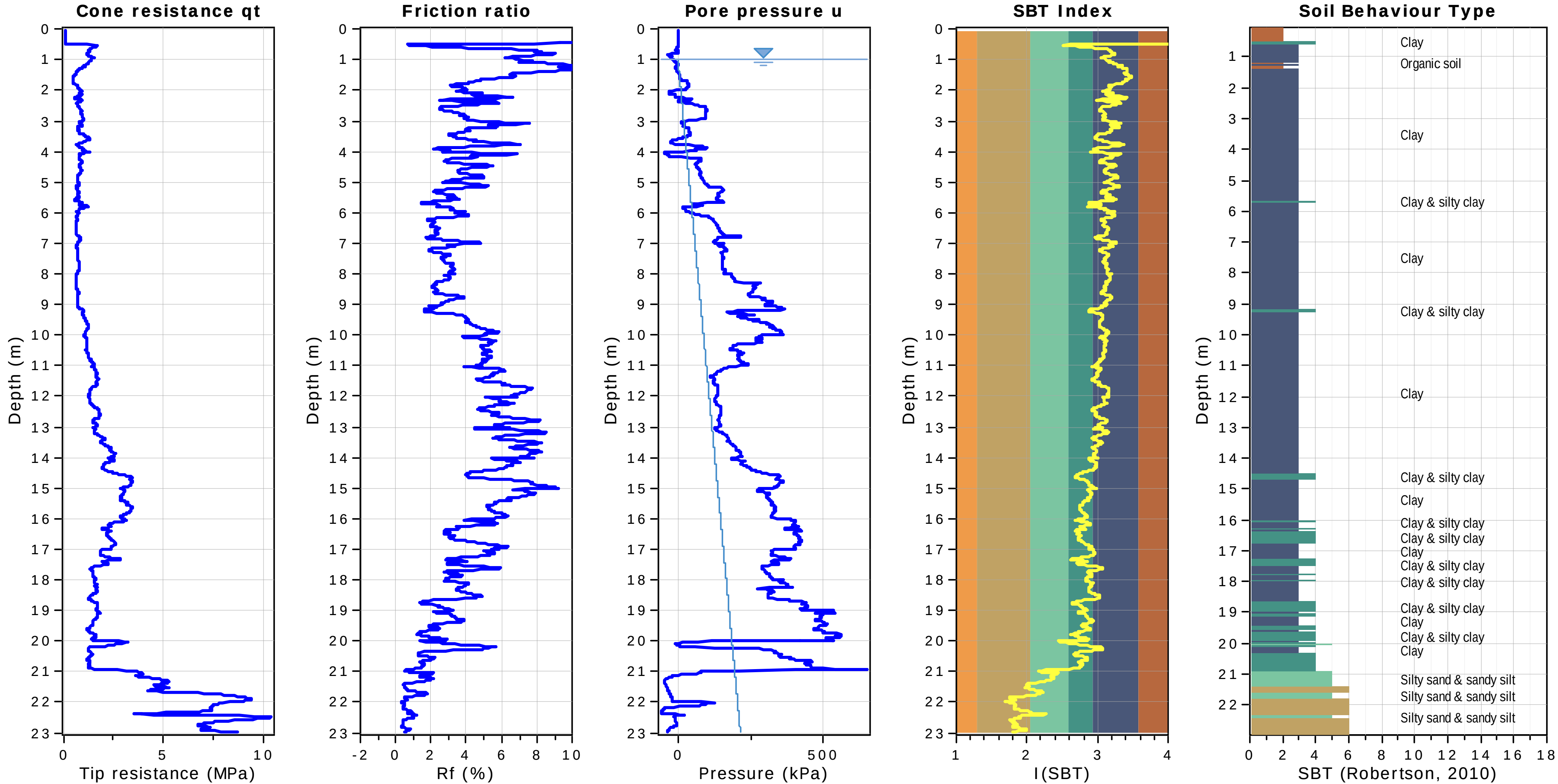
CPT: 036021P265CPTU265
Total depth: 22.97 m, Date: 30/01/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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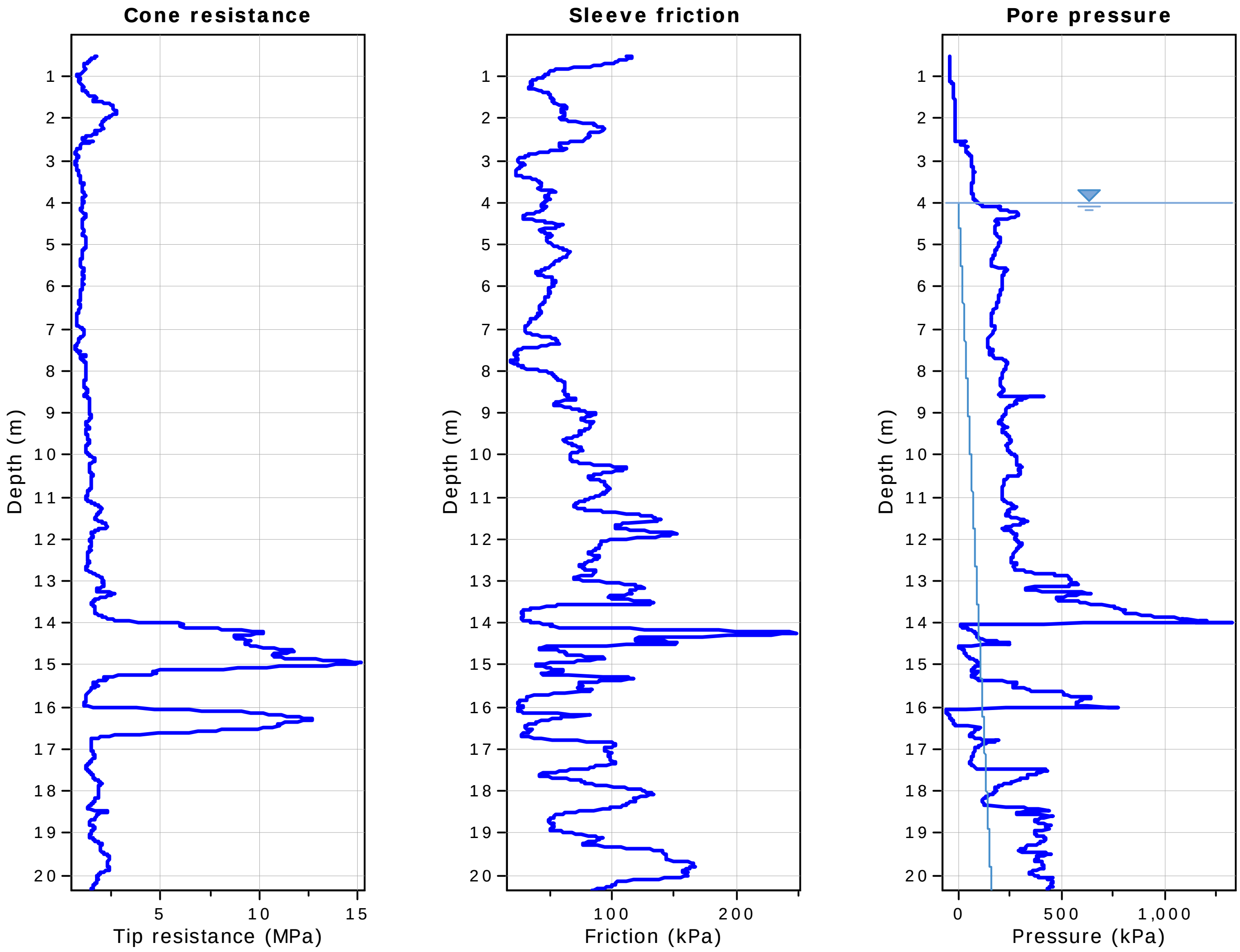
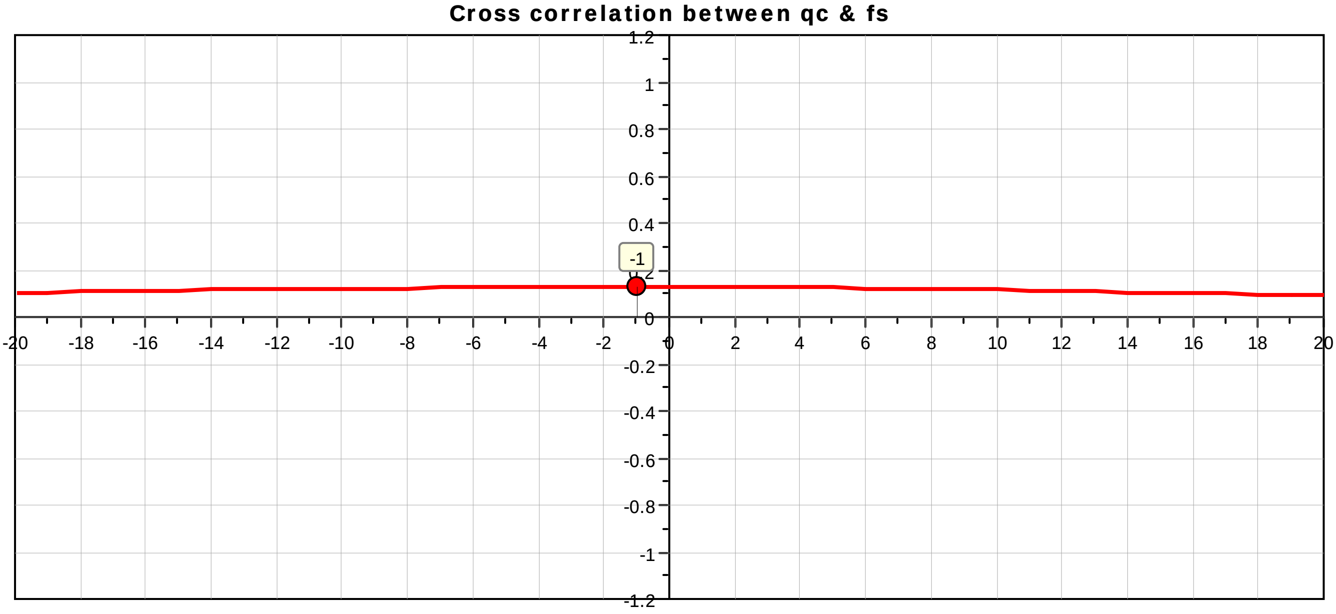
CPT: 036021P266CPTU266
Total depth: 20.35 m, Date: 27/11/2019
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type: Uknown
Cone Operator: Uknown

Project: **MS MEDOLLA**
Location: **MEDOLLA**



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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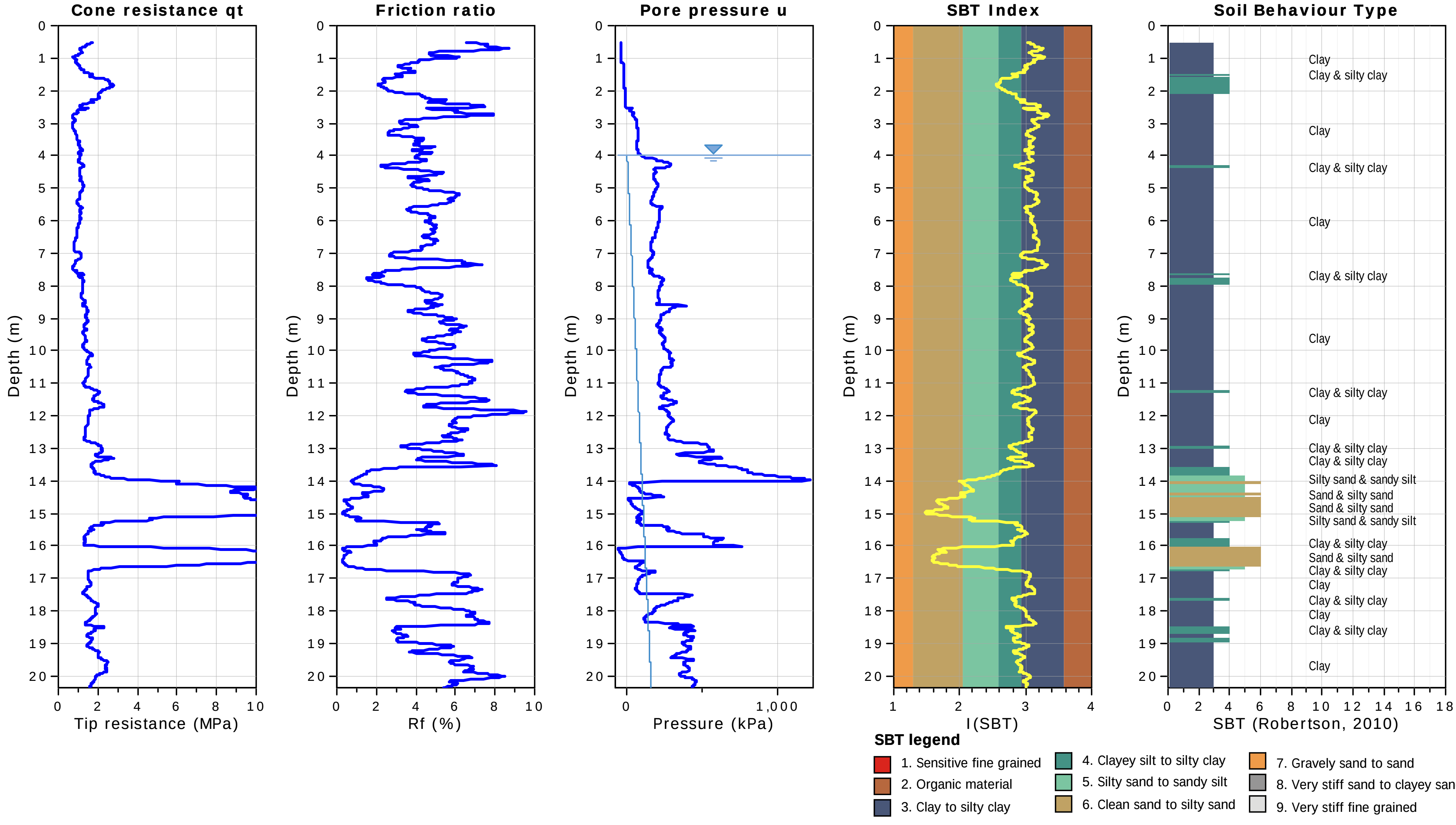
Project: **MS MEDOLLA**
Location: **MEDOLLA**

CPT: 036021P266CPTU266
Total depth: 20.35 m, Date: 27/11/2019
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type: Uknown
Cone Operator: Uknown



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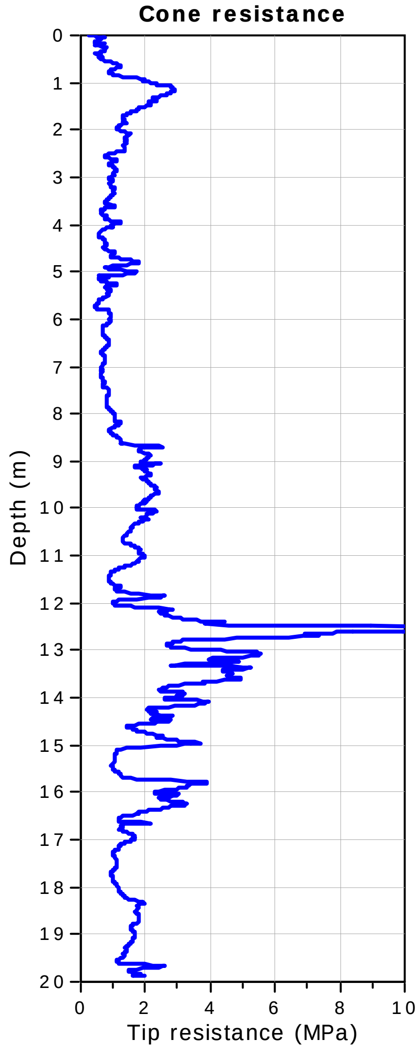
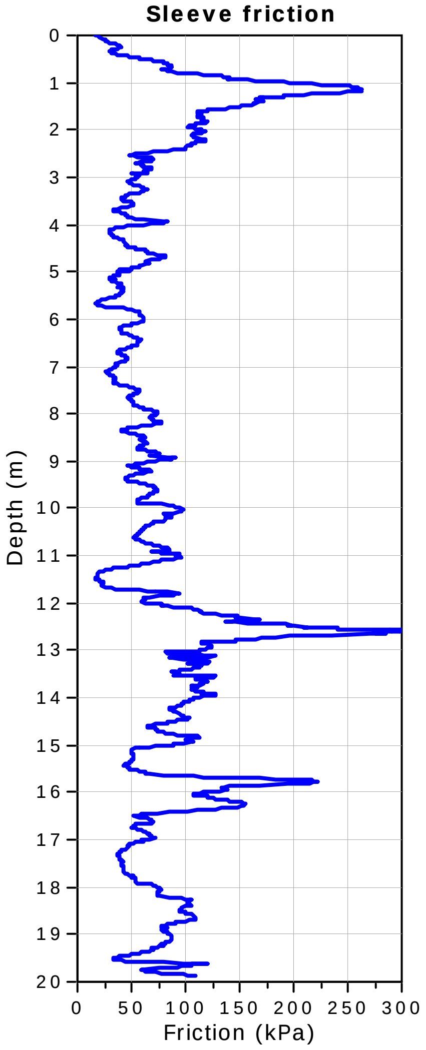
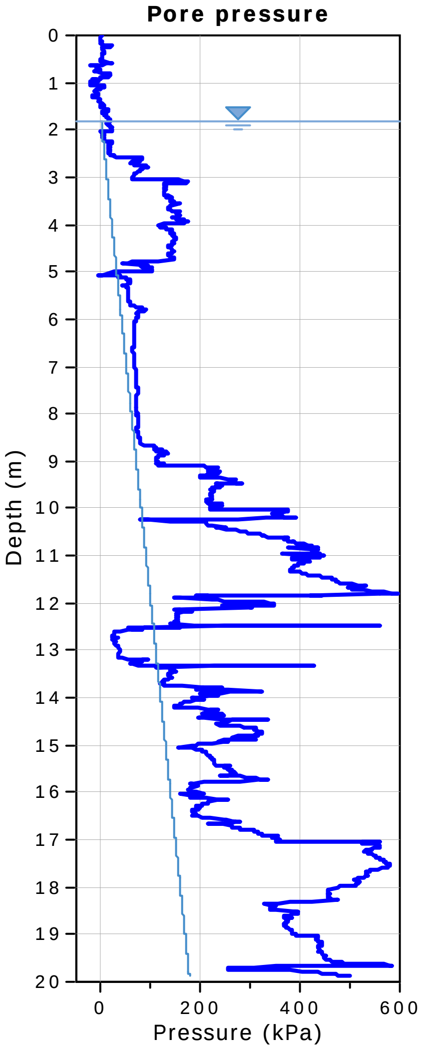
CPT: 036021P308CPTU308
Total depth: 19.88 m, Date: 11/11/2014
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type: MH297
Cone Operator: Dott. Geol. Leonardo Calzolari

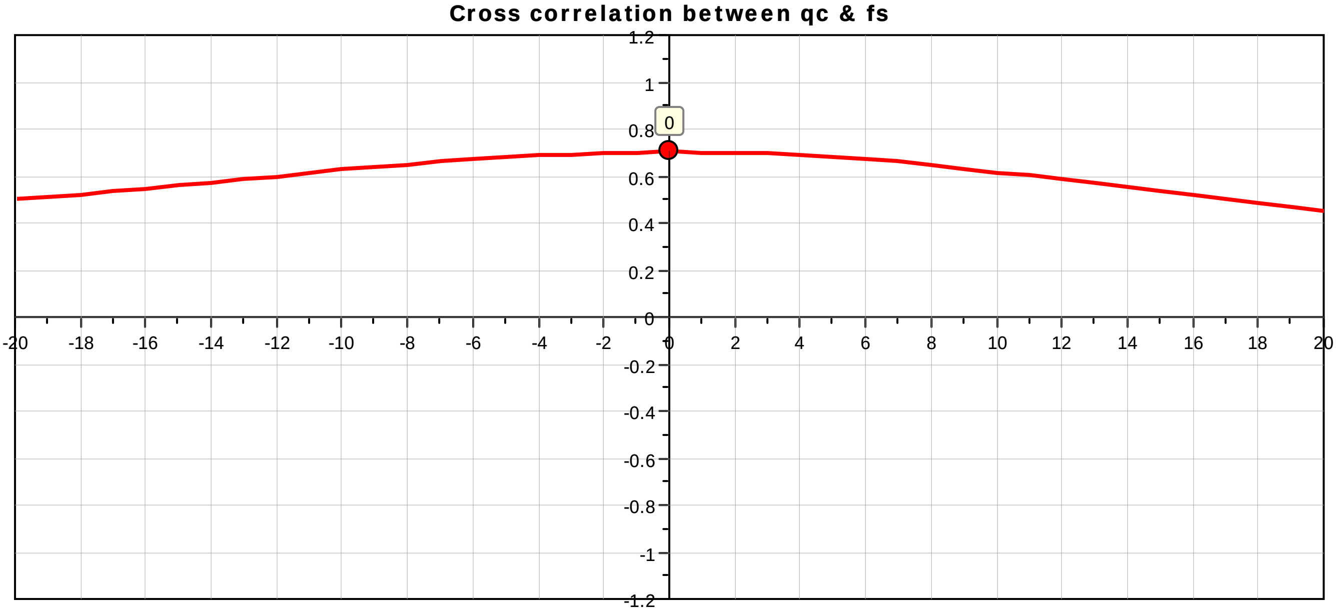
Project: **MS MEDOLLA**
Location: **MEDOLLA**


Cone resistance


Sleeve friction

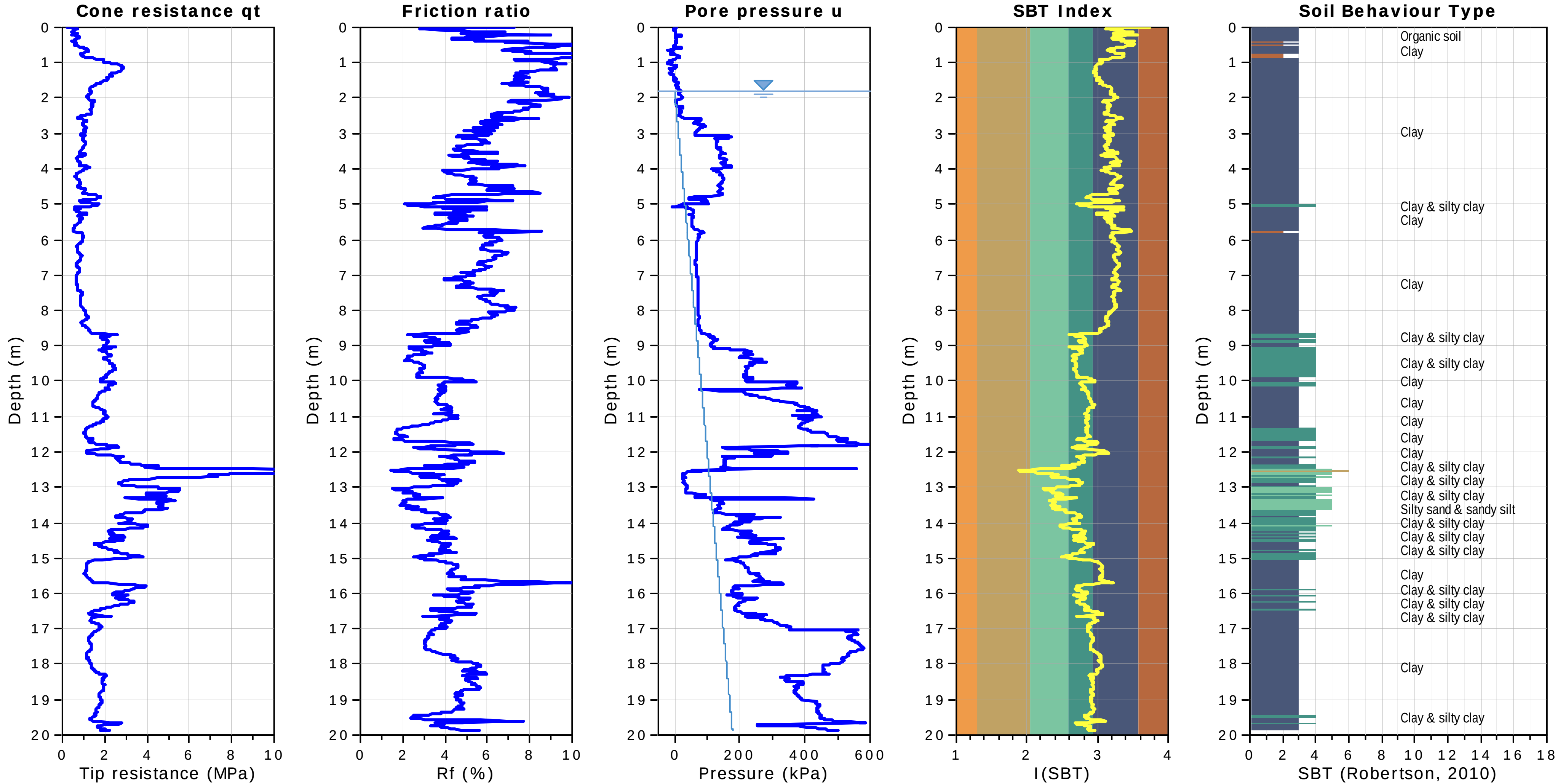

Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

CPT: 036021P308CPTU308
Total depth: 19.88 m, Date: 11/11/2014
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type: MH297
Cone Operator: Dott. Geol. Leonardo Calzolari

Project: **MS MEDOLLA**
Location: **MEDOLLA**



SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟫 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

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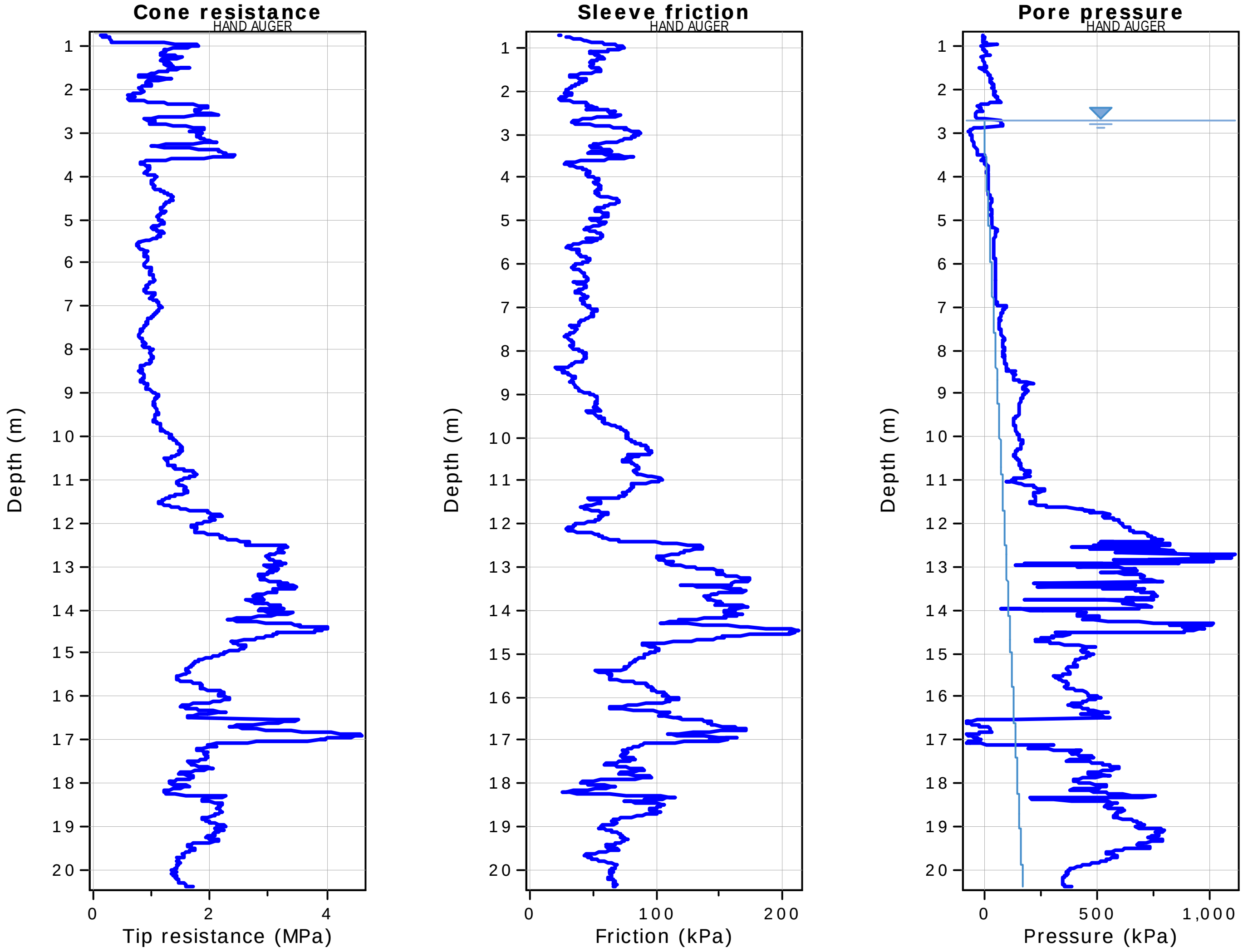
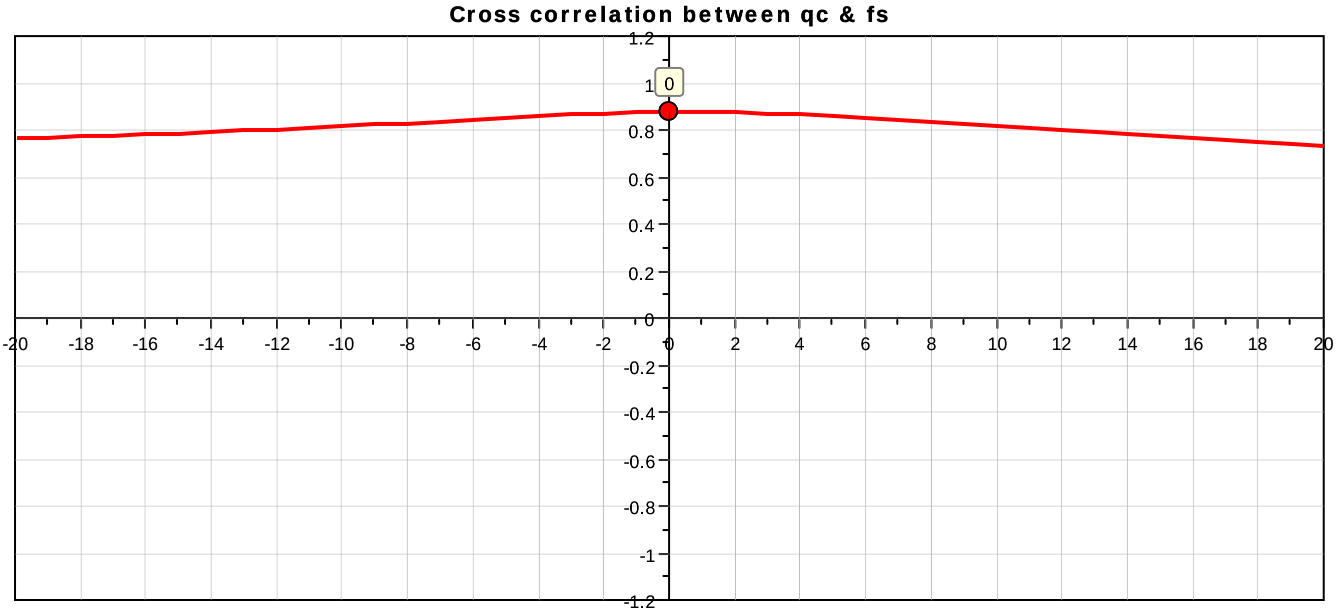
CPT: 036021P343CPTU343
Total depth: 20.38 m, Date: 03/02/2016
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type: Uknown
Cone Operator: Uknown

Project: **MS MEDOLLA**
Location: **MEDOLLA**



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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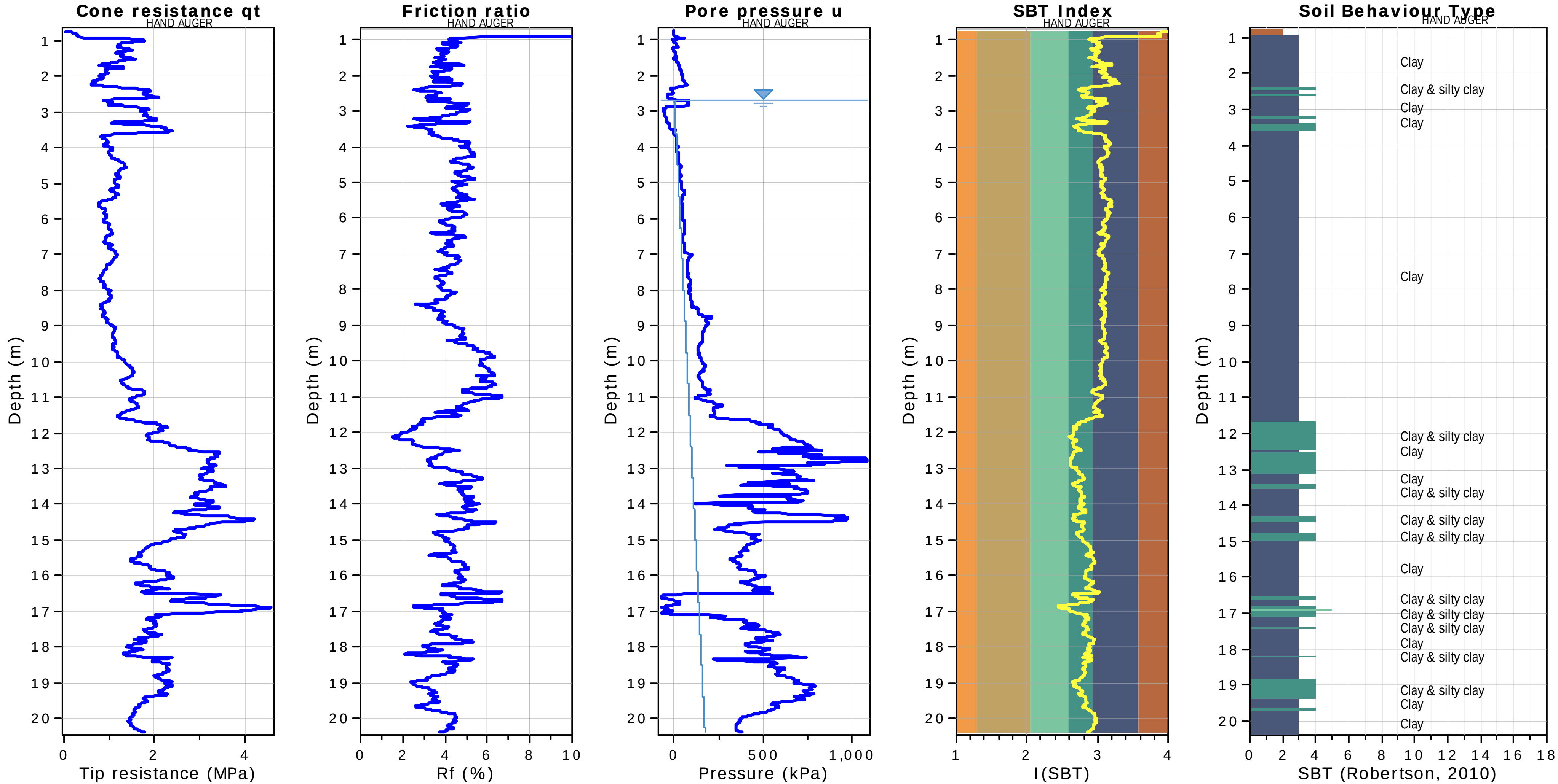
Project: **MS MEDOLLA**
Location: **MEDOLLA**

CPT: 036021P343CPTU343
Total depth: 20.38 m, Date: 03/02/2016
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type: Uknown
Cone Operator: Uknown



SBT legend

🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟨 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

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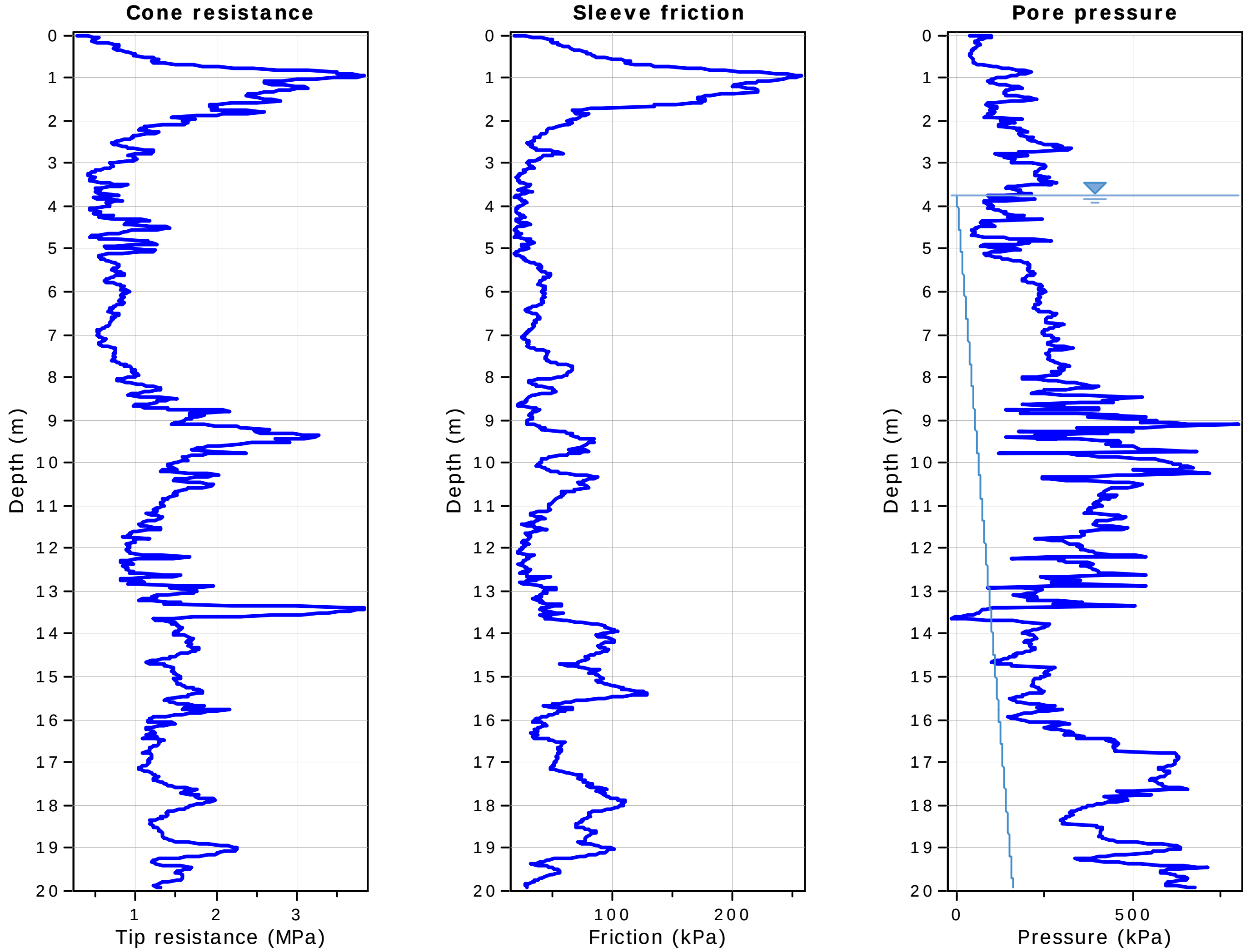
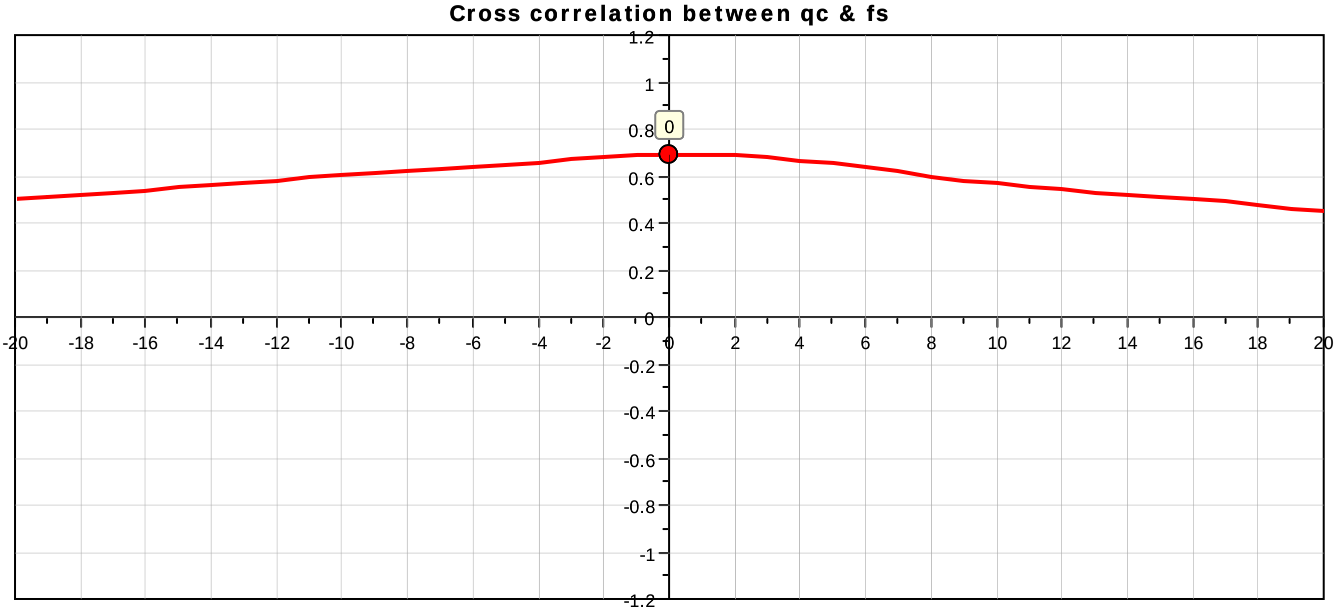
CPT: 036021P355CPTU355
Total depth: 19.92 m, Date: 06/02/2019
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type: Uknown
Cone Operator: Uknown

Project: **MS MEDOLLA**
Location: **MEDOLLA**



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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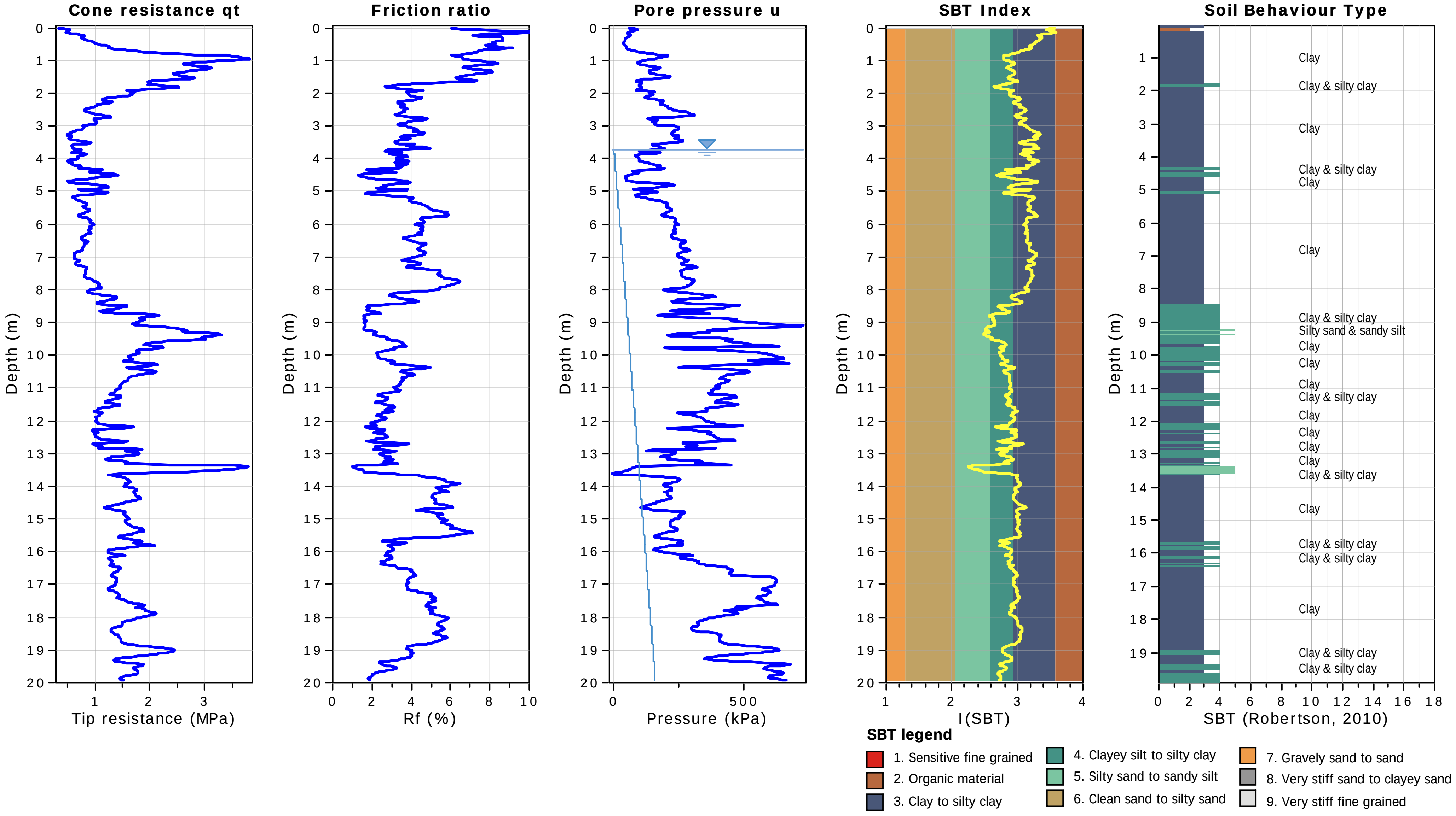
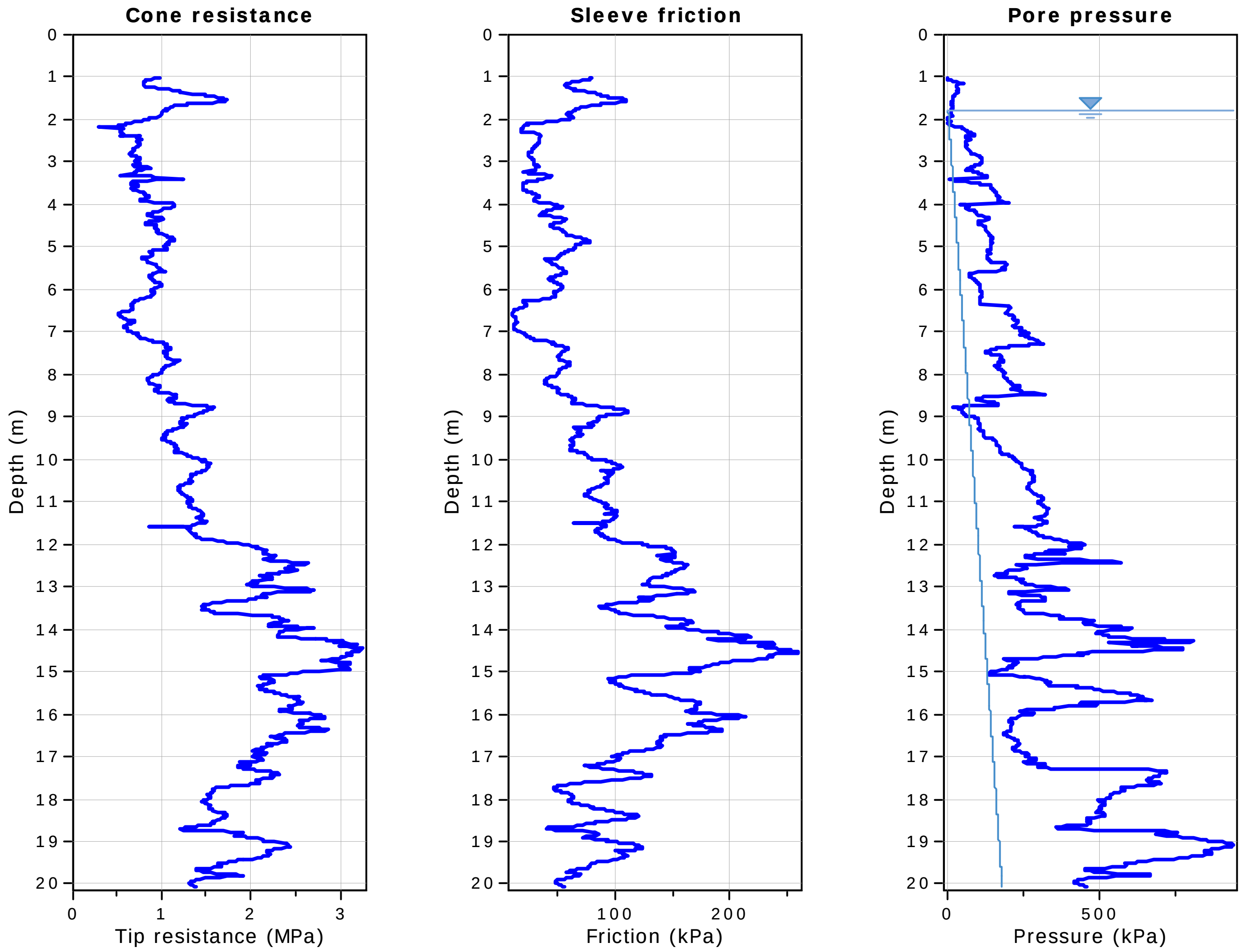
CPT: 036021P355CPTU355
Total depth: 19.92 m, Date: 06/02/2019
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type: Uknown
Cone Operator: Uknown

Project: **MS MEDOLLA**
Location: **MEDOLLA**



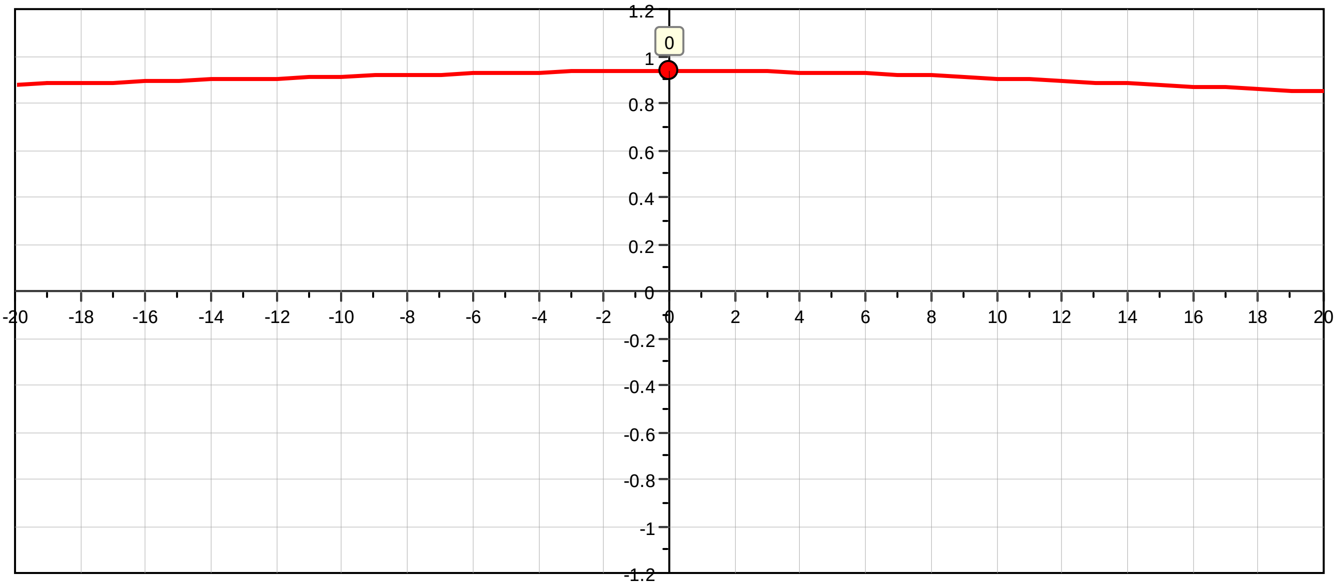
CPT: 036021P356CPTU356
Total depth: 20.06 m, Date: 18/03/2019
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type: Uknown
Cone Operator: Uknown

Project: **MS MEDOLLA**
Location: **MEDOLLA**



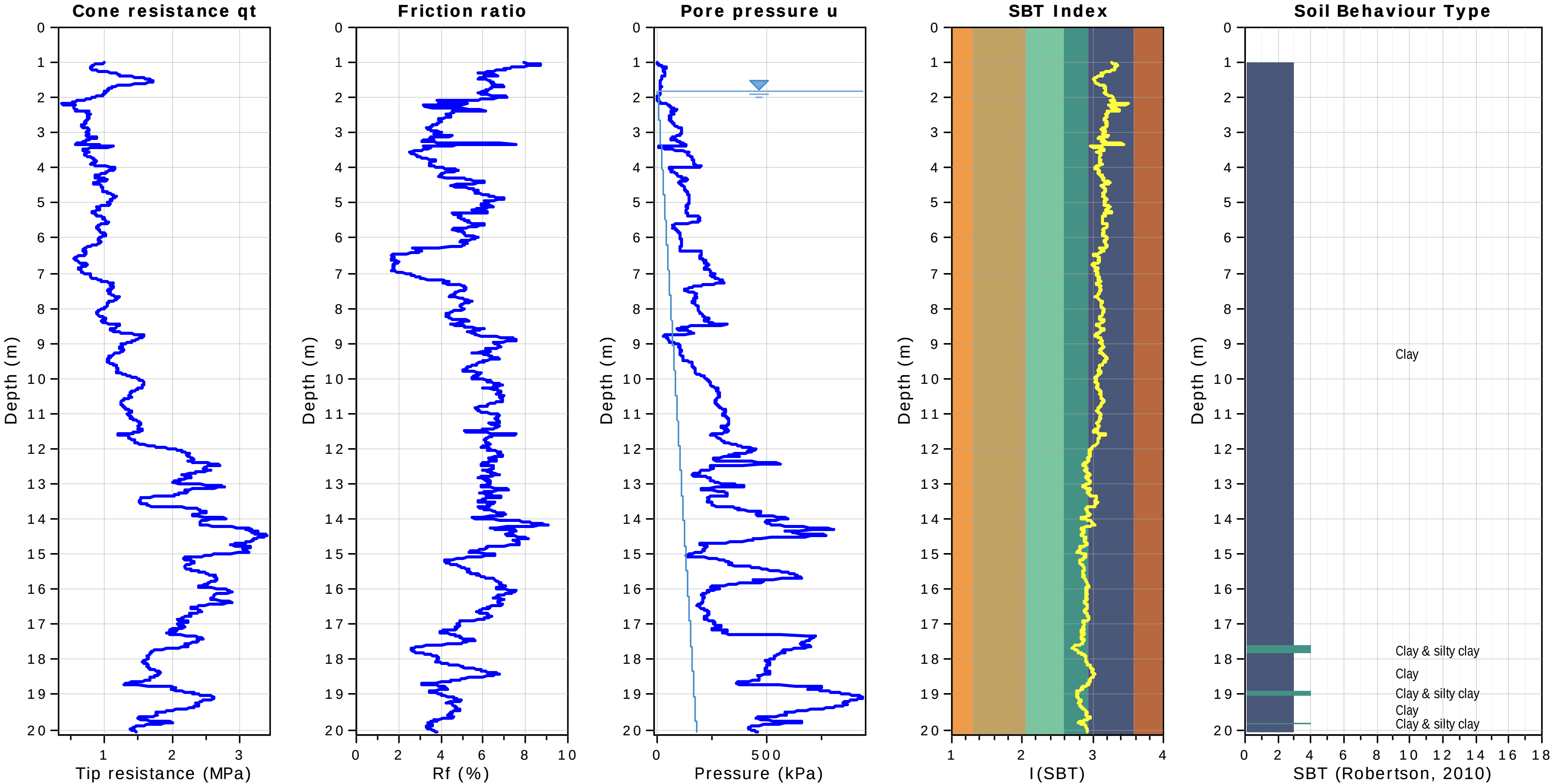
The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



CPT: 036021P356CPTU356
Total depth: 20.06 m, Date: 18/03/2019
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type: Uknown
Cone Operator: Uknown

Project: **MS MEDOLLA**
Location: **MEDOLLA**

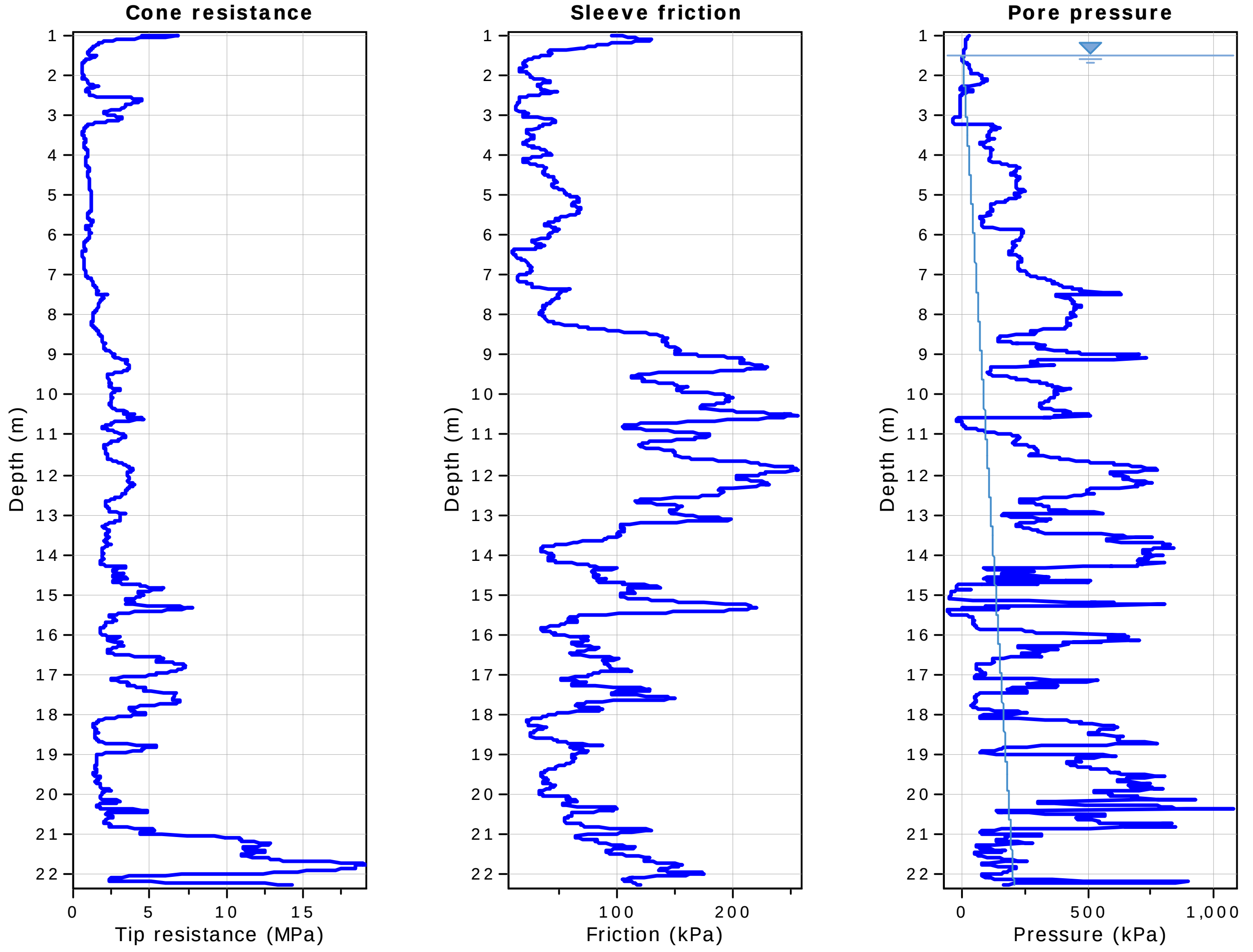


SBT legend

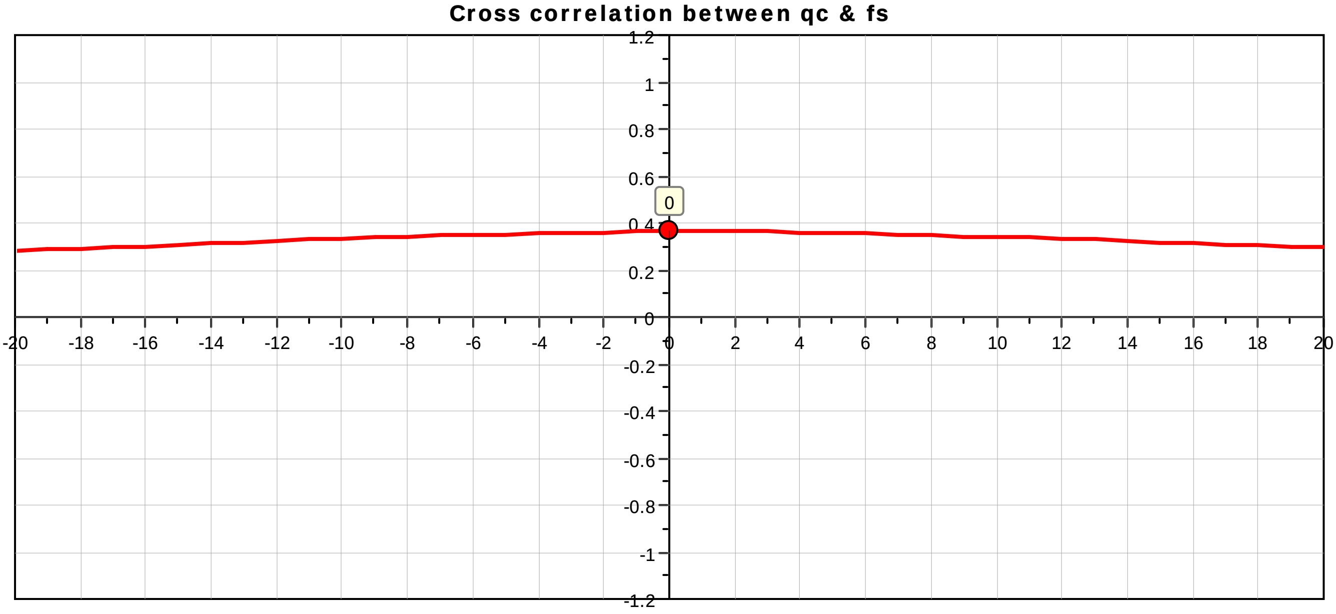
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬛ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

CPT: 036021P359CPTU359
Total depth: 22.26 m, Date: 14/05/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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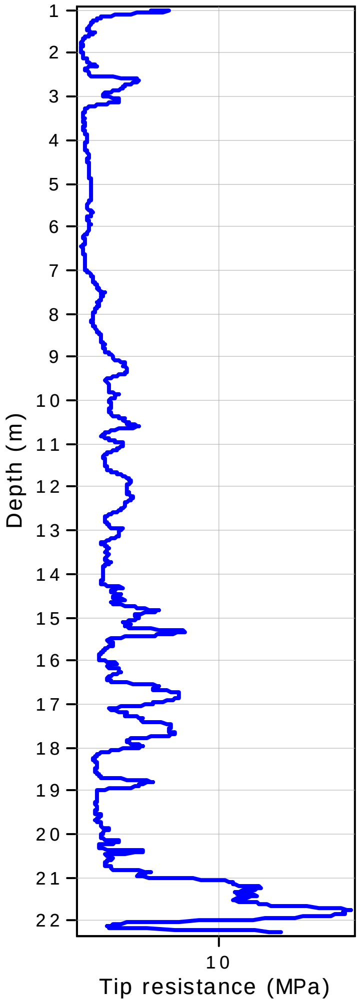
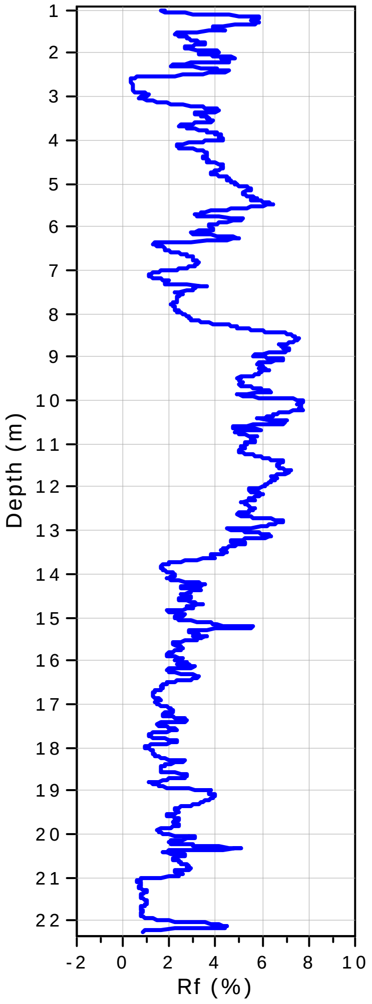
CPT: 036021P359CPTU359
Total depth: 22.26 m, Date: 14/05/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**

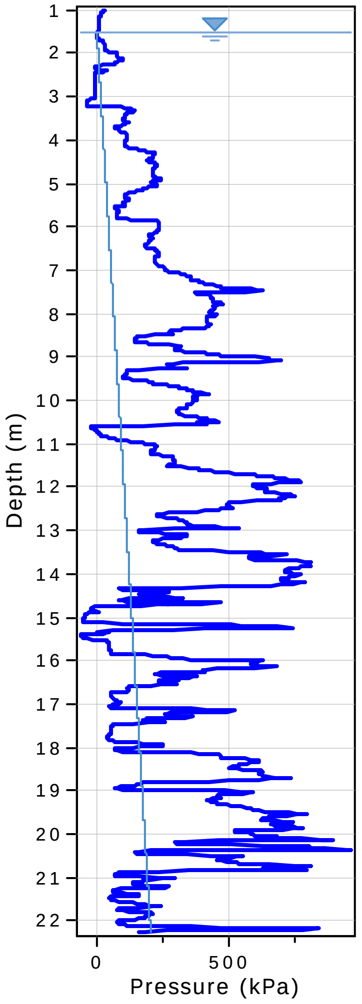
Cone resistance qt



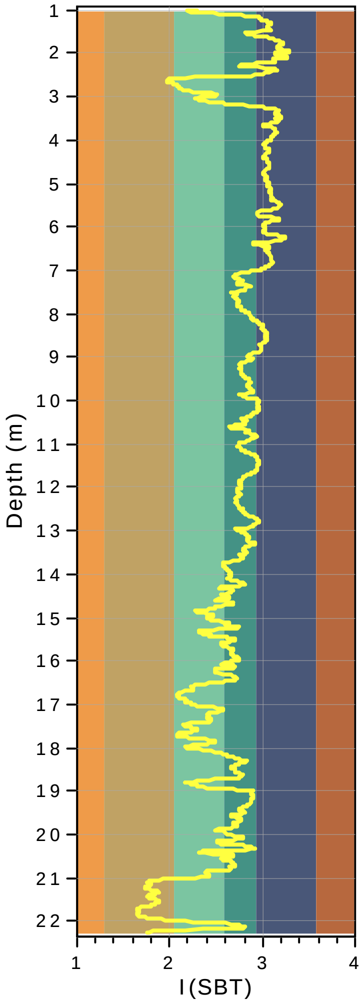
Friction ratio



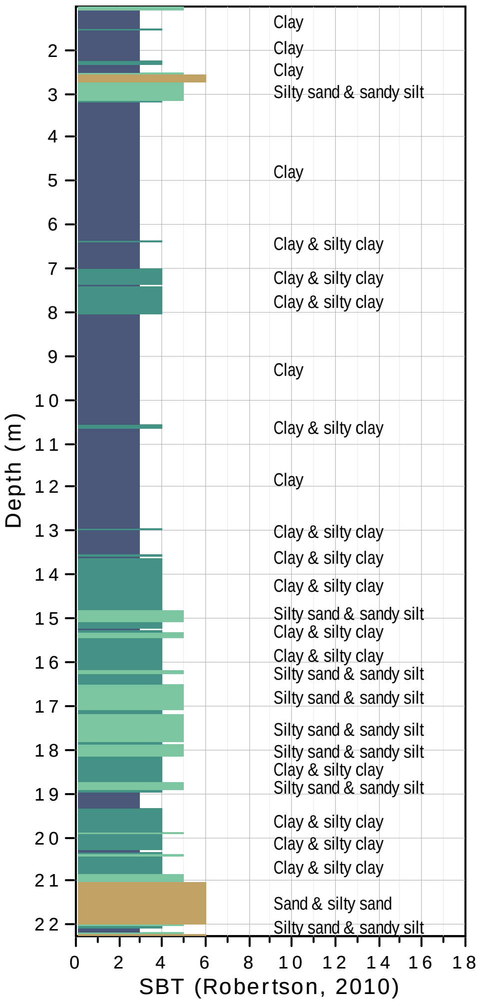
Pore pressure u



SBT Index



Soil Behaviour Type



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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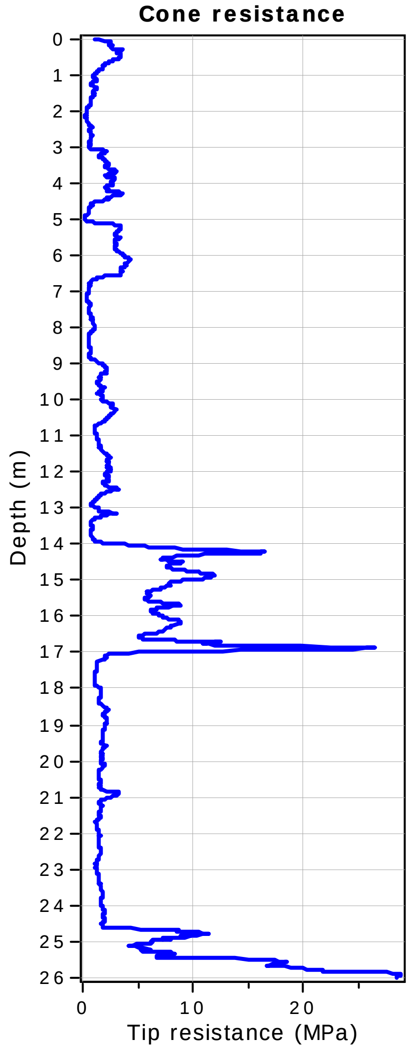
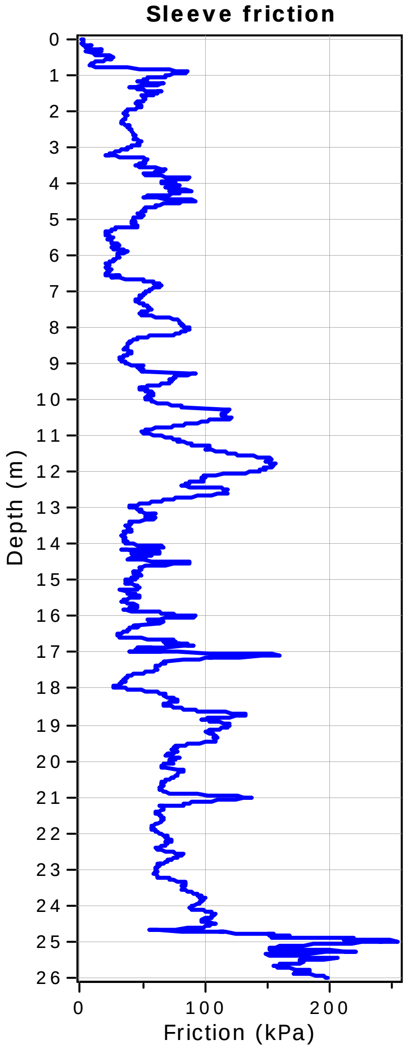
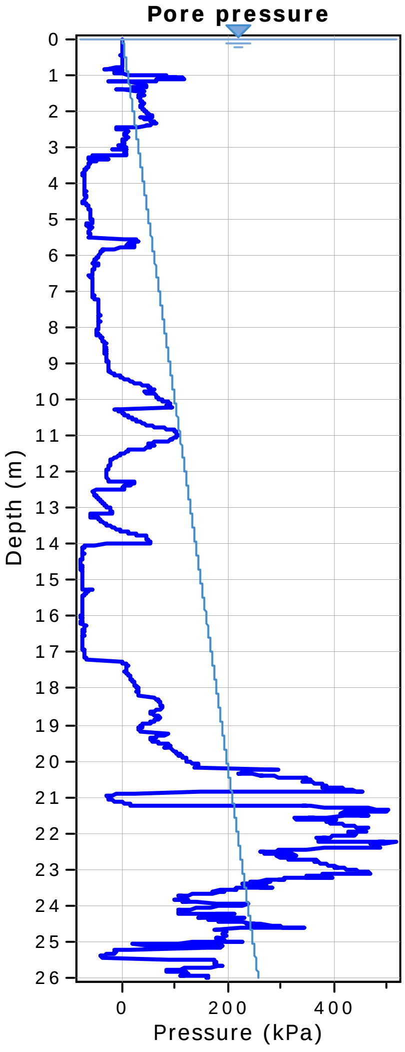
CPT: 036021P234CPTU234
Total depth: 26.01 m, Date: 14/05/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

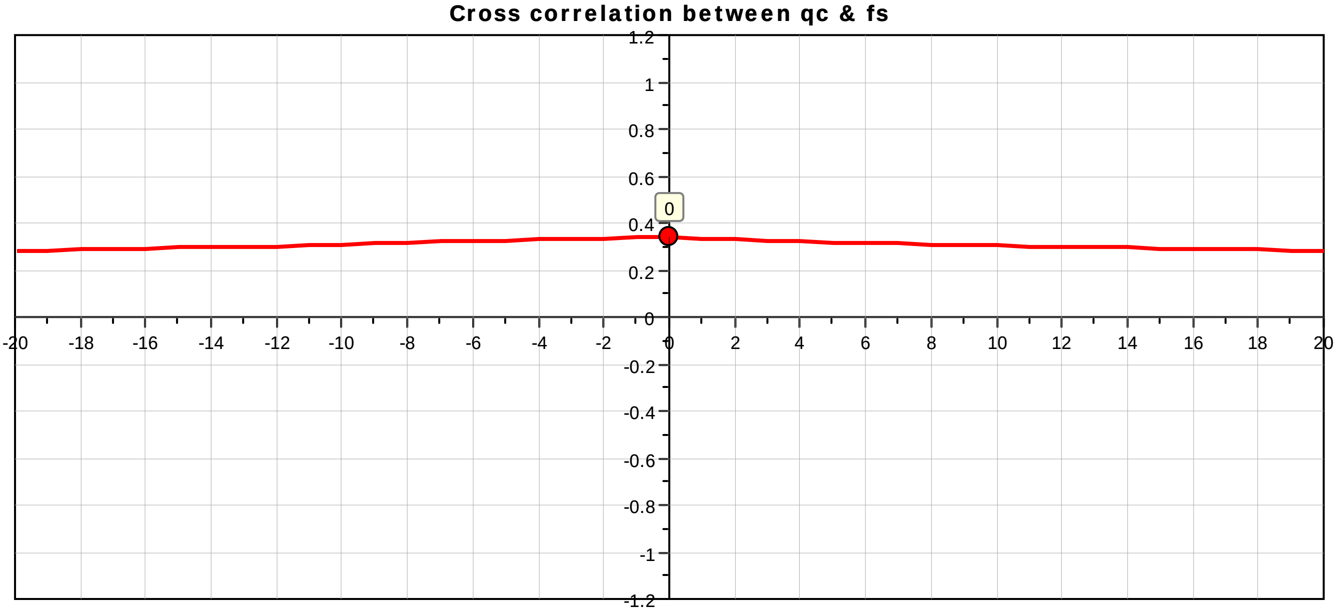
Project: **MS MEDOLLA**
Location: **MEDOLLA**


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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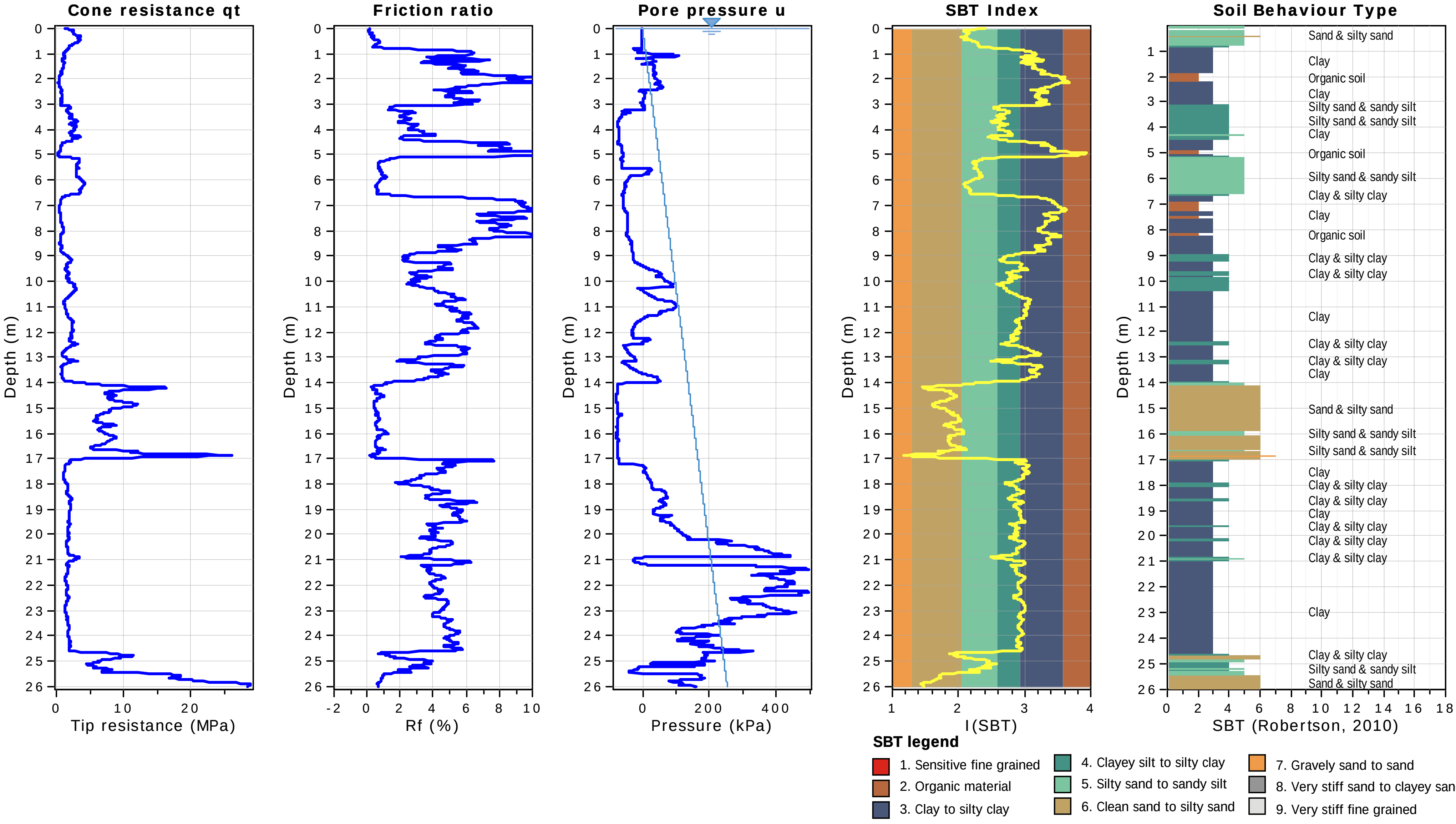
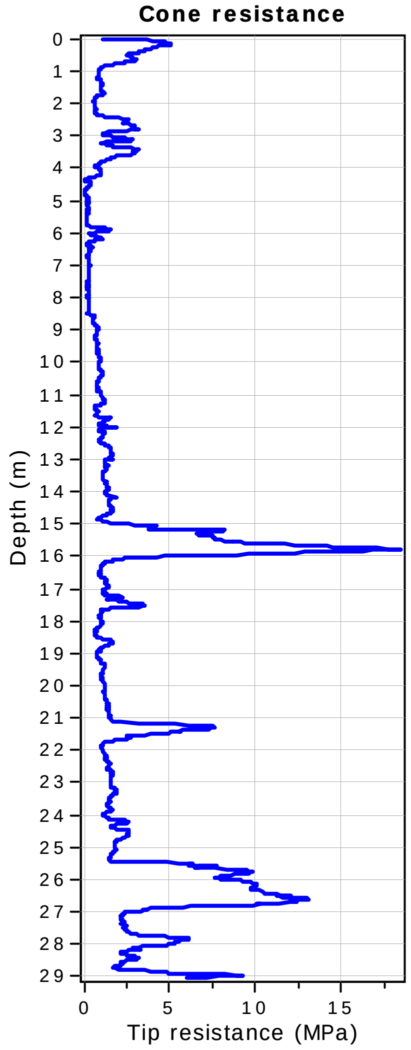
CPT: 036021P234CPTU234
Total depth: 26.01 m, Date: 14/05/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

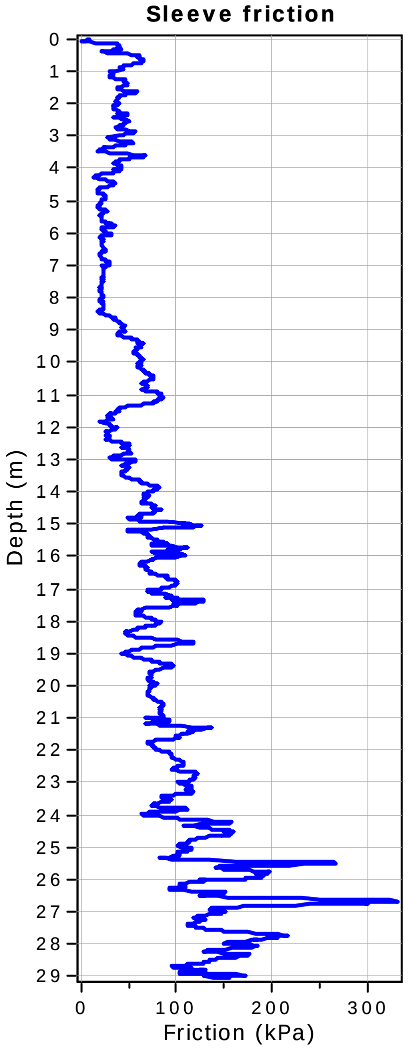
Project: **MS MEDOLLA**
Location: **MEDOLLA**

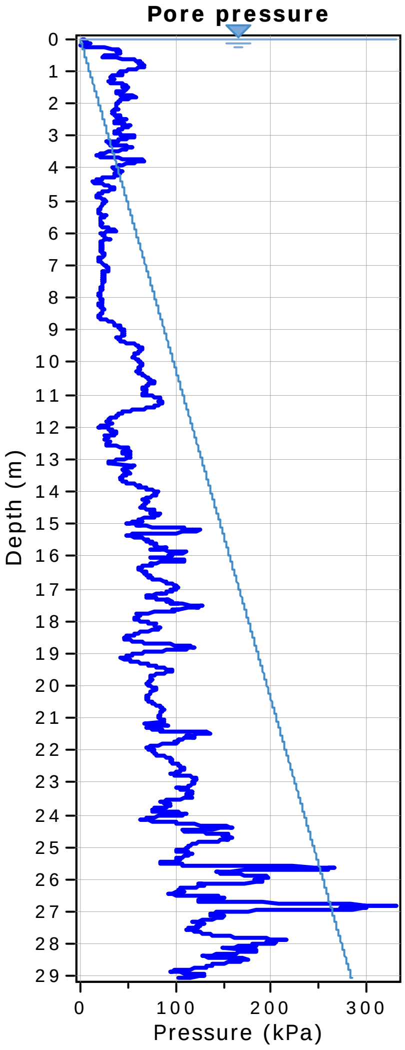


CPT: 036021P128CPTU128
Total depth: 29.04 m, Date: 14/05/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

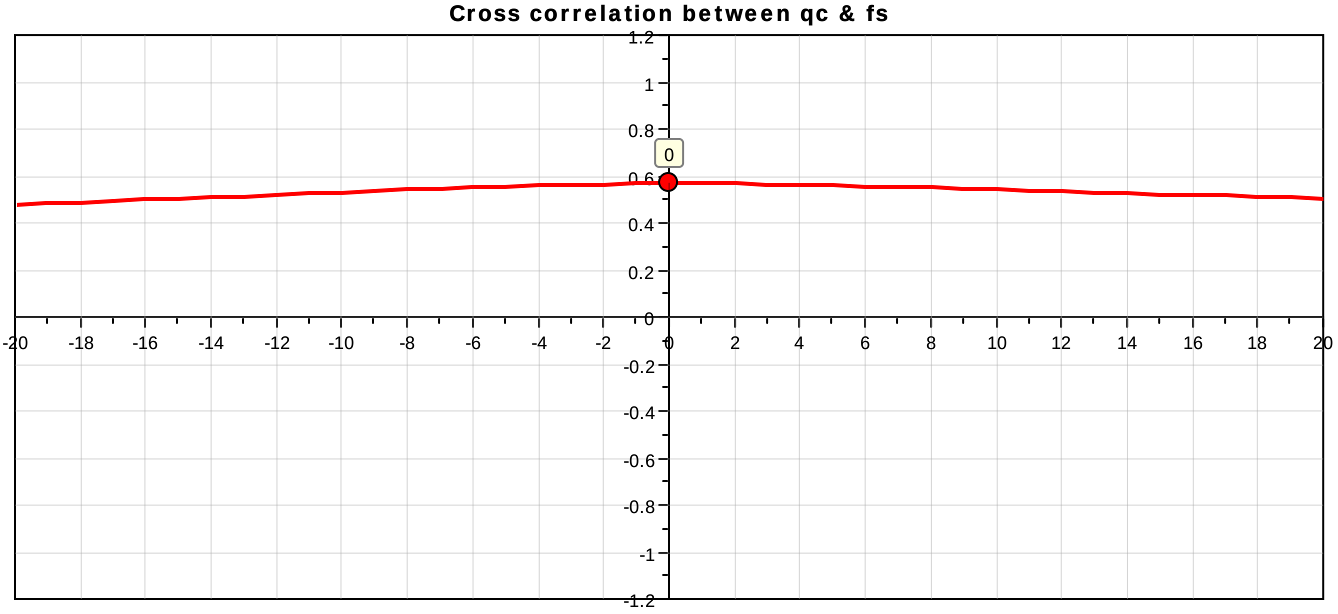
Project: **MS MEDOLLA**
Location: **MEDOLLA**


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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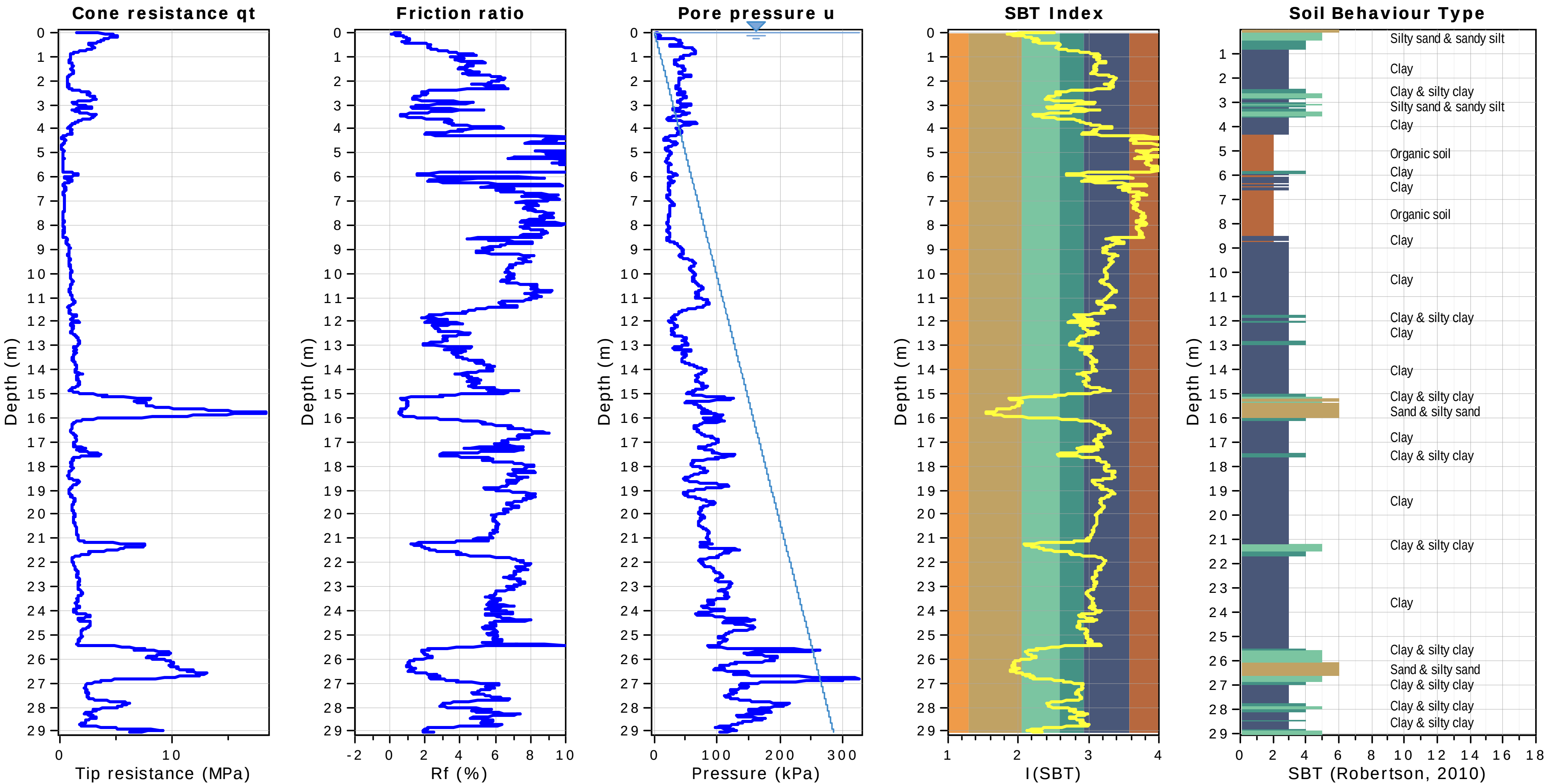
CPT: 036021P128CPTU128
Total depth: 29.04 m, Date: 14/05/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**

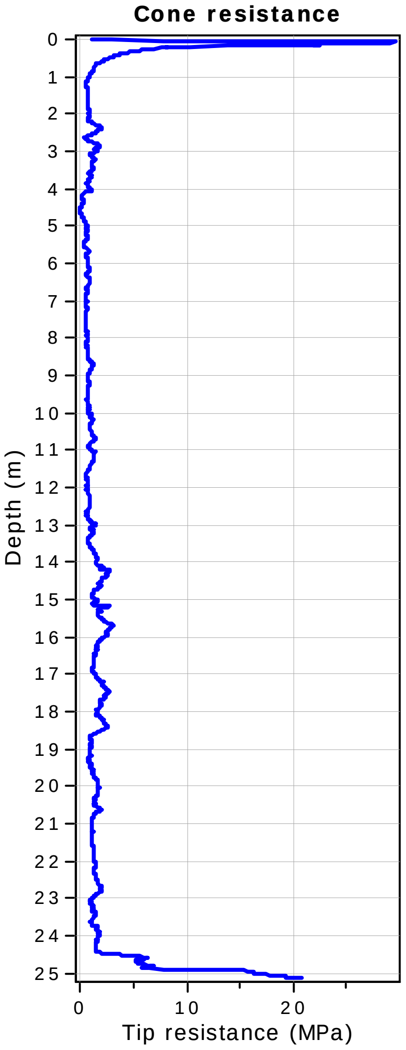


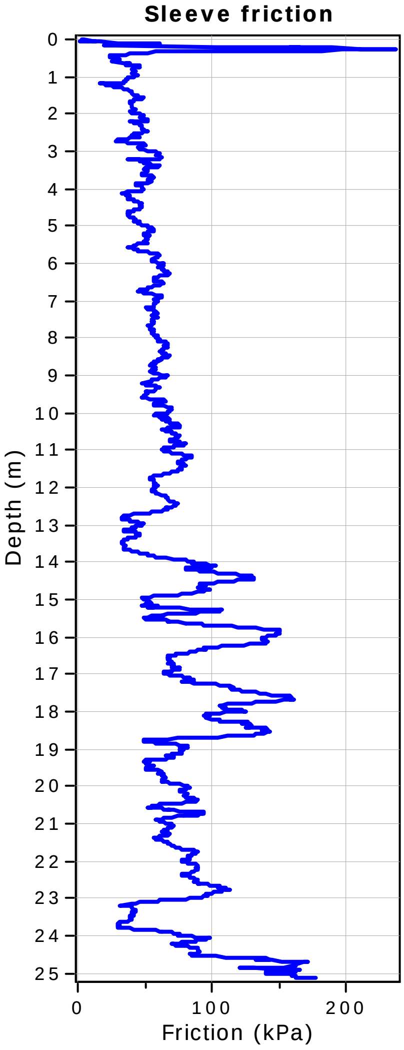
SBT legend

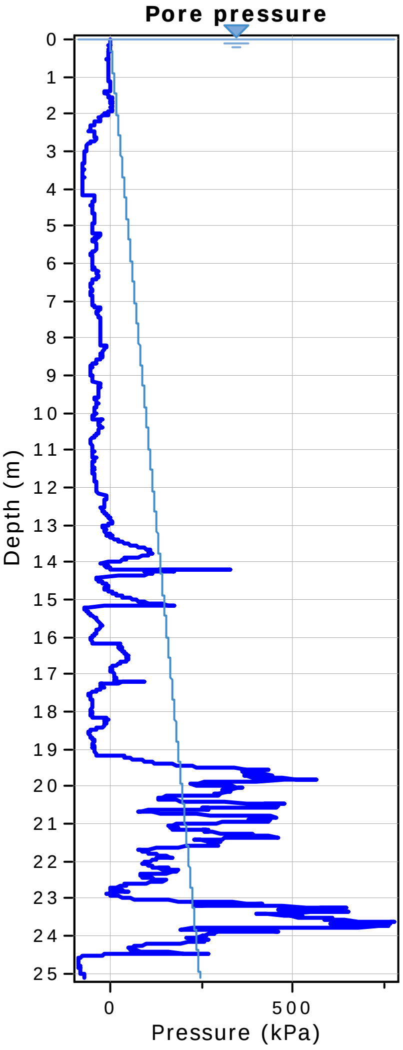
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

CPT: 036021P94CPTU94
Total depth: 25.13 m, Date: 14/05/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

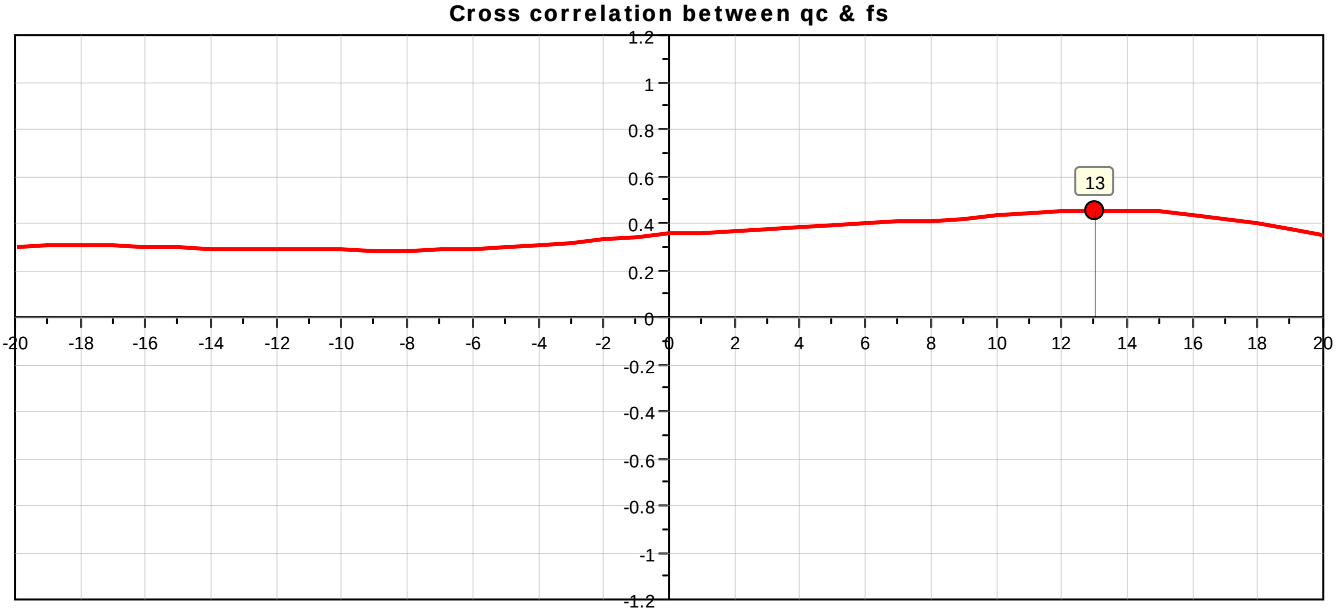
Project: **MS MEDOLLA**
Location: **MEDOLLA**


Cone resistance


Sleeve friction


Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

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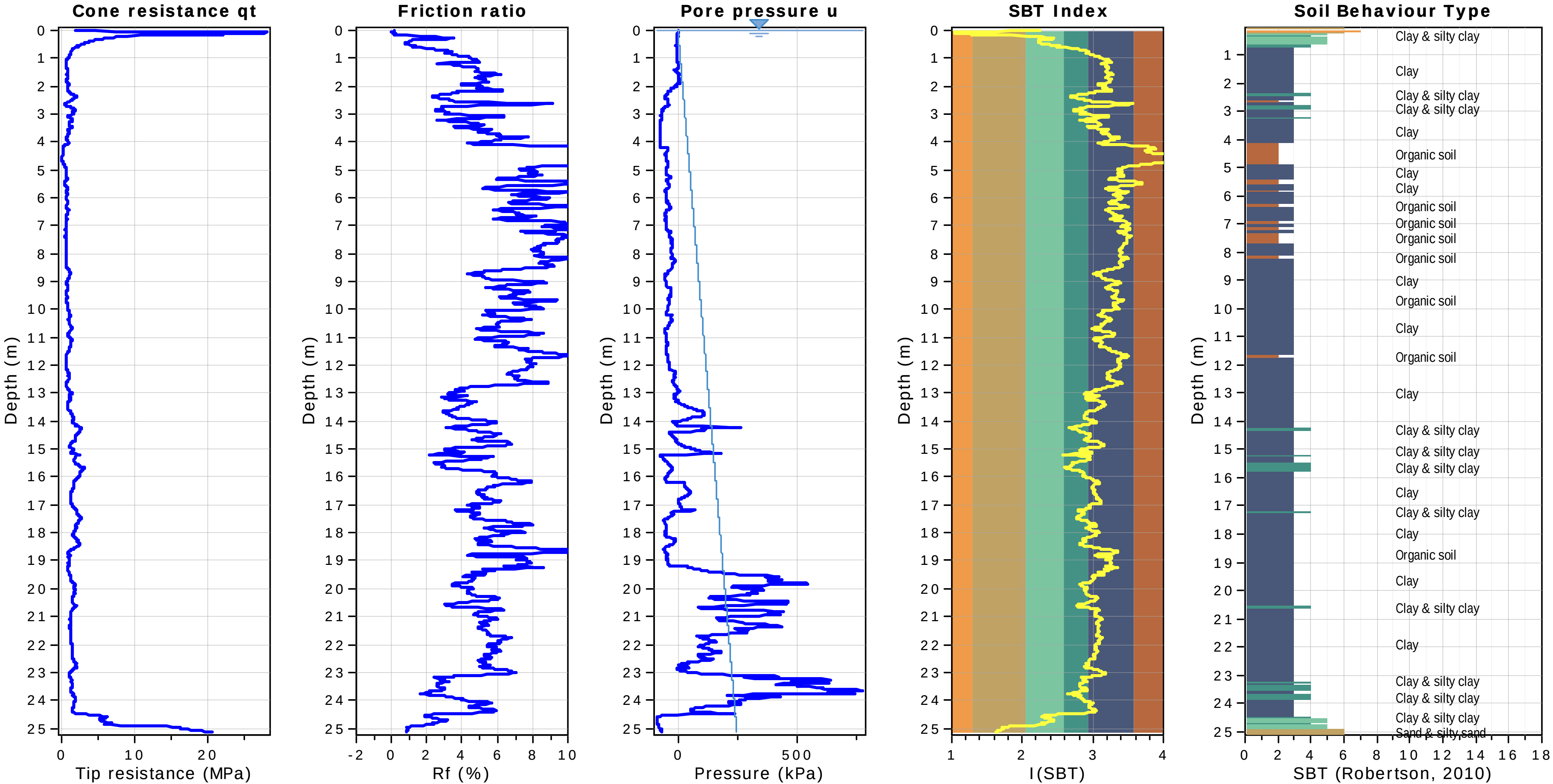
CPT: 036021P94CPTU94
Total depth: 25.13 m, Date: 14/05/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**

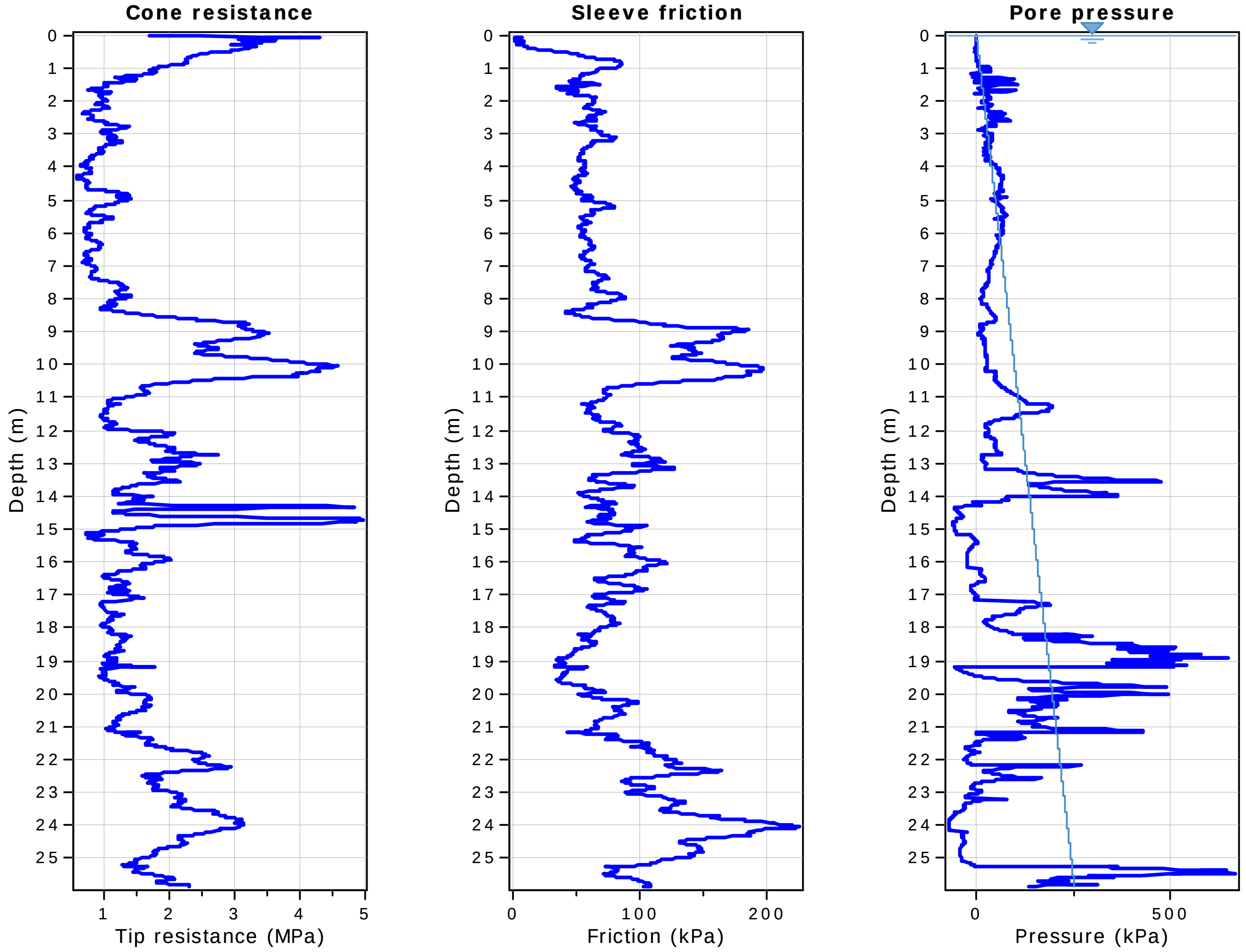


SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
▨ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

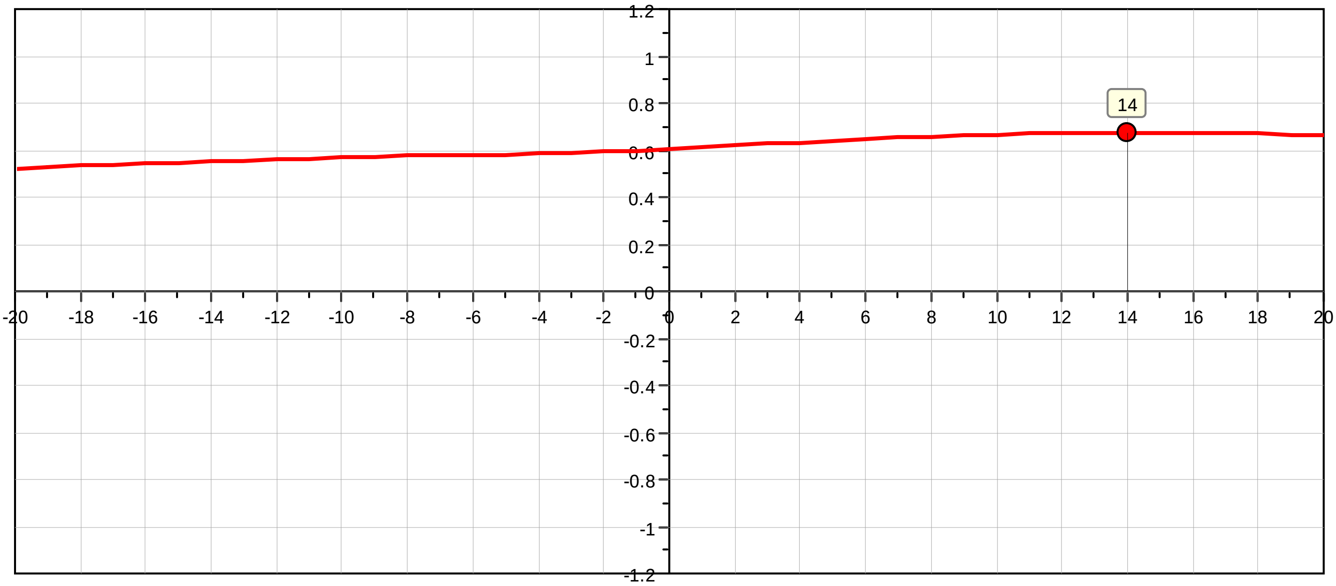
CPT: 036021P71CPTU71
Total depth: 25.86 m, Date: 14/05/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).

Cross correlation between qc & fs



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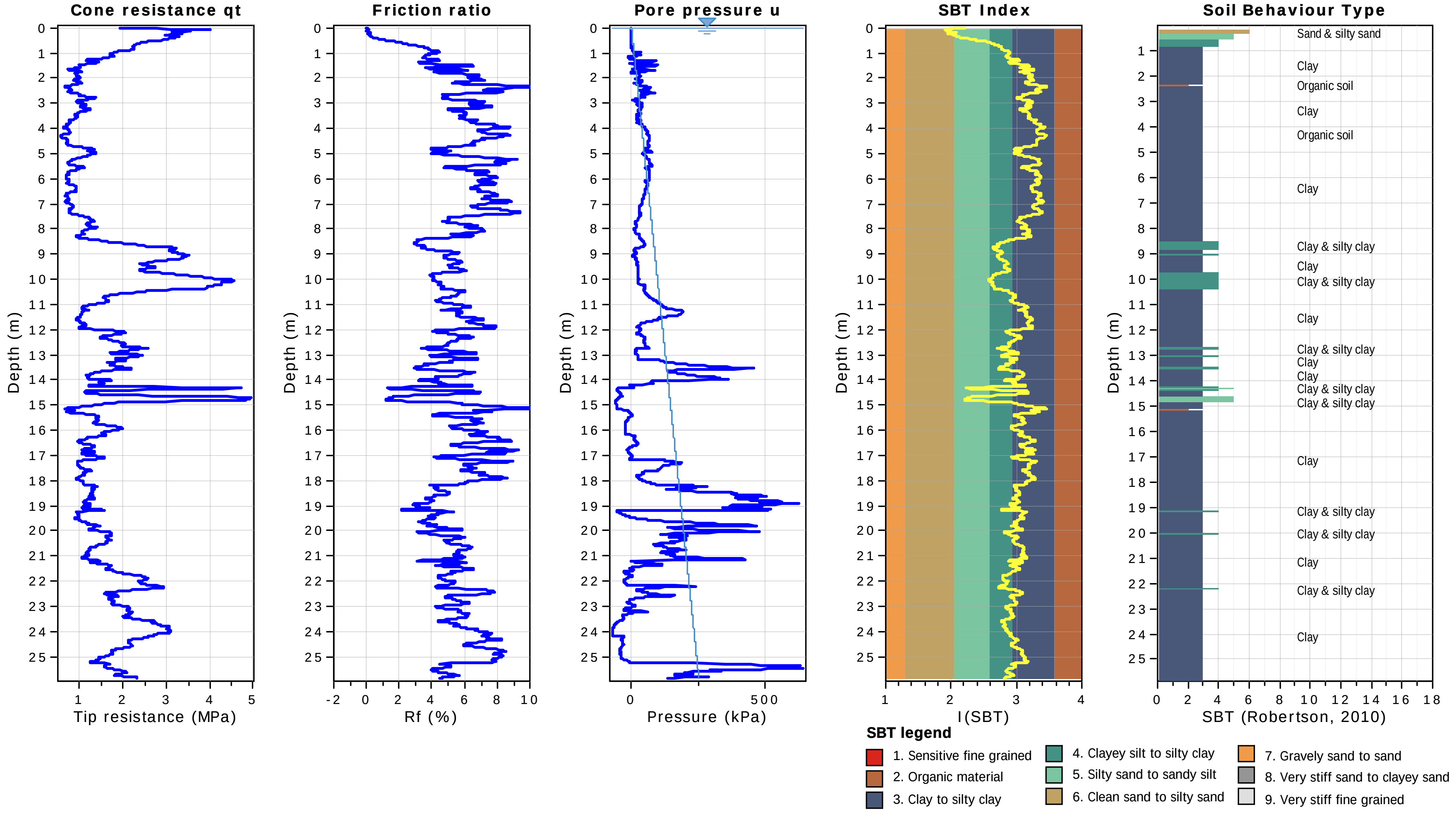
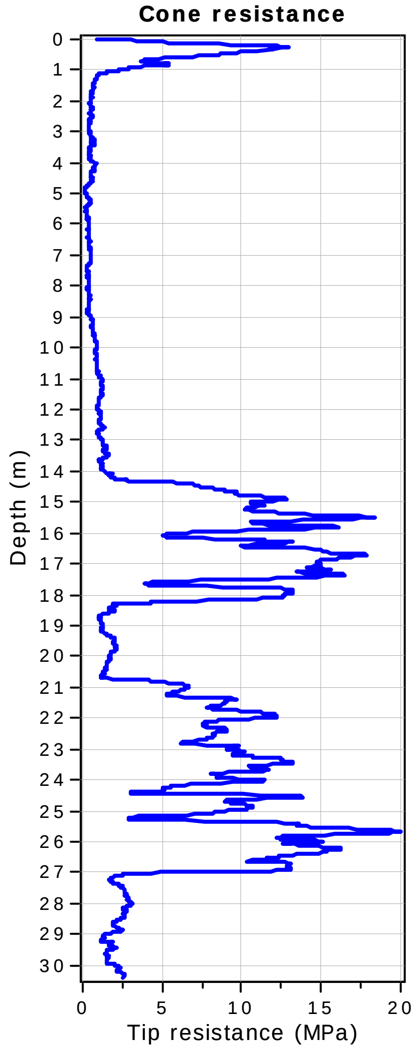
CPT: 036021P71CPTU71
Total depth: 25.86 m, Date: 14/05/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

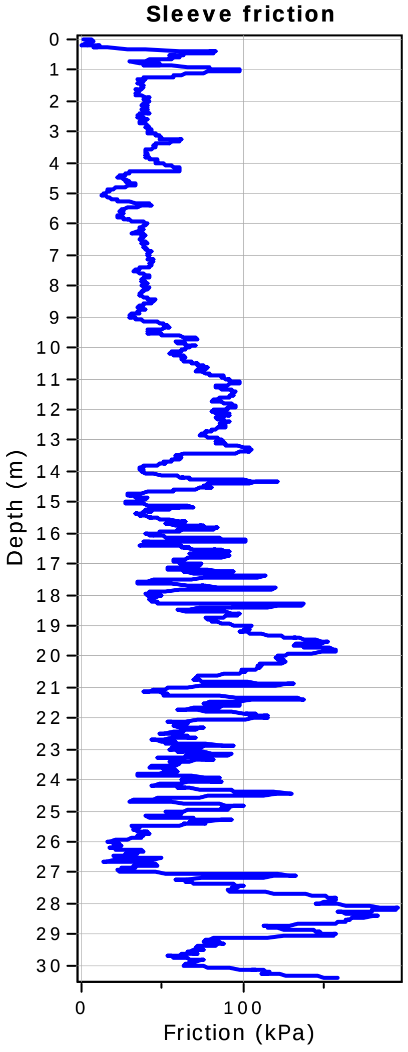
Project: **MS MEDOLLA**
Location: **MEDOLLA**

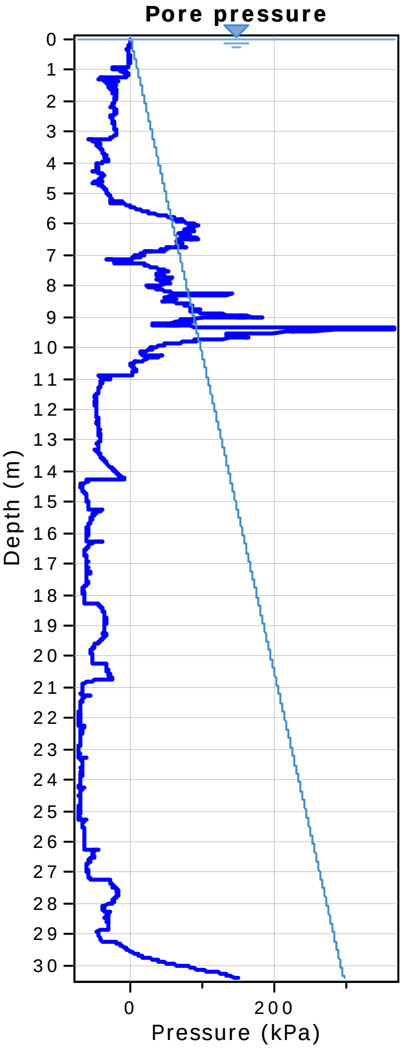


CPT: 036021P70CPTU70
Total depth: 30.41 m, Date: 14/05/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

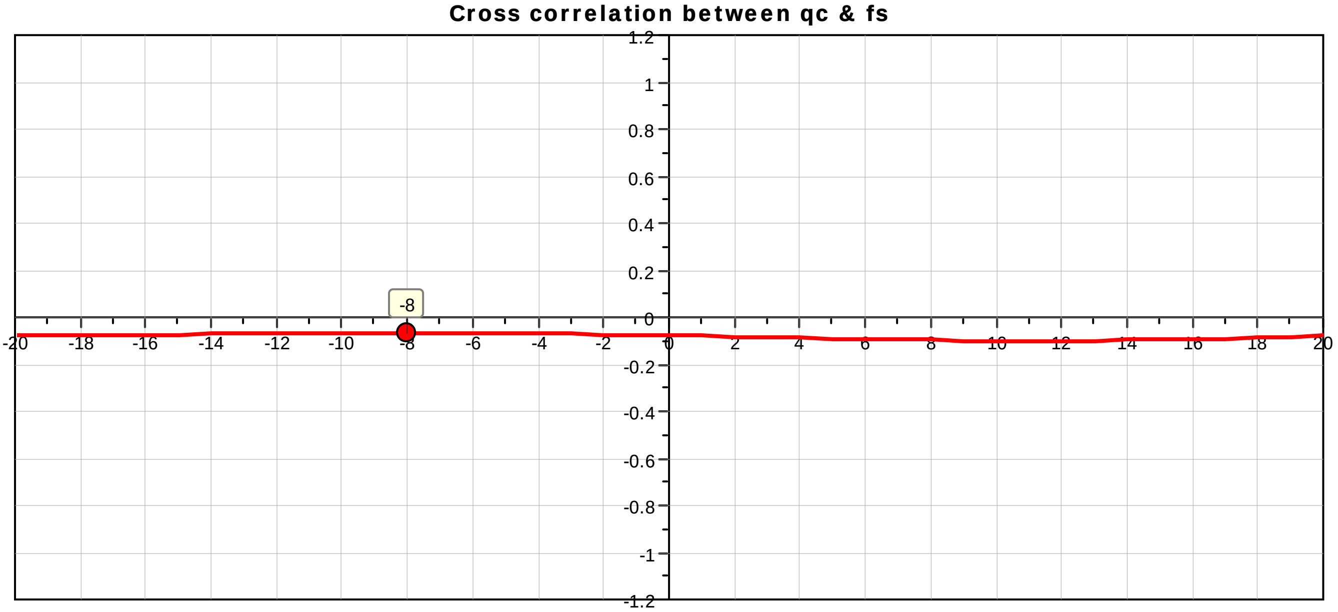
Project: MS MEDOLLA
Location: MEDOLLA







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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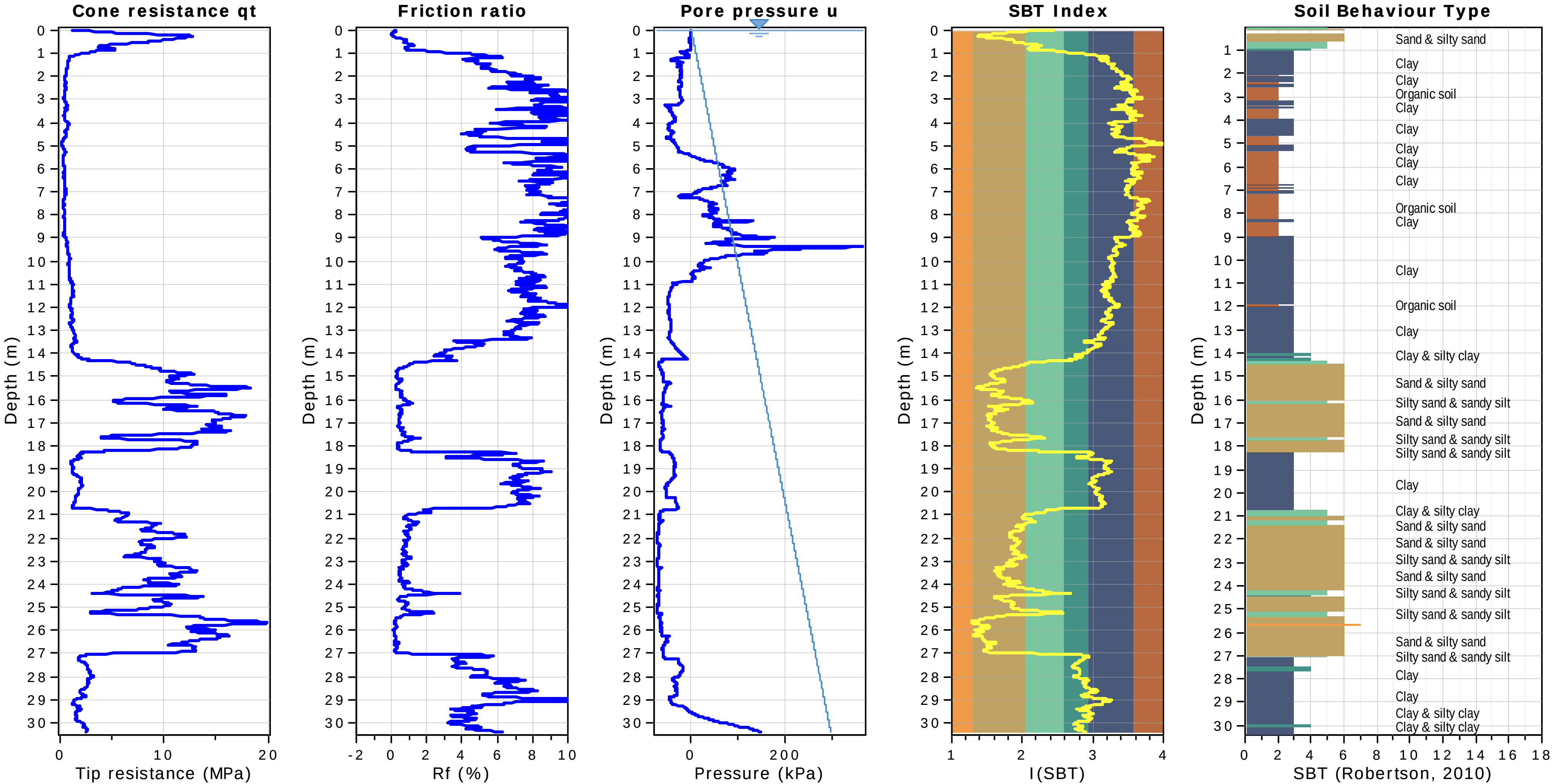
CPT: 036021P70CPTU70
Total depth: 30.41 m, Date: 14/05/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**

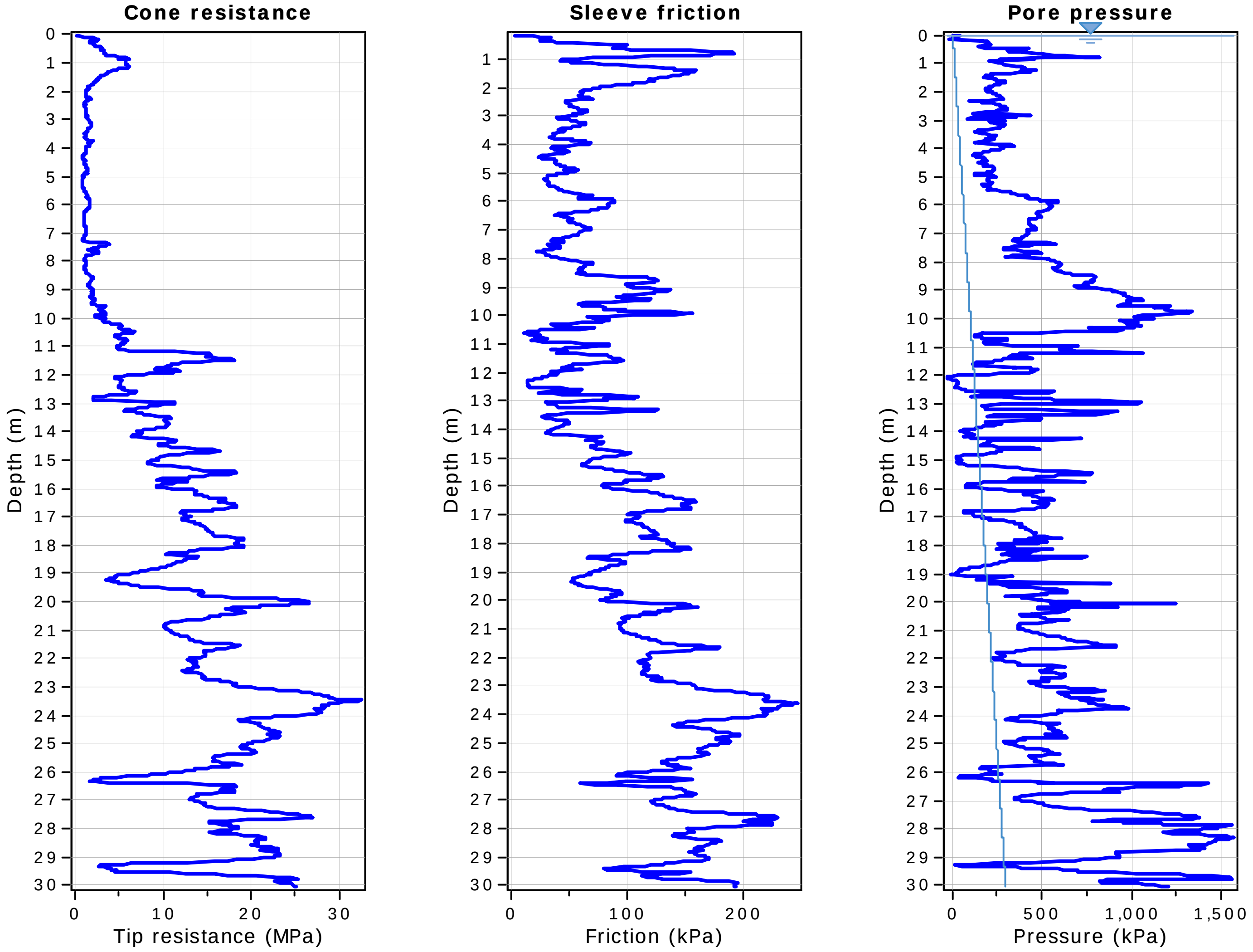


SBT legend

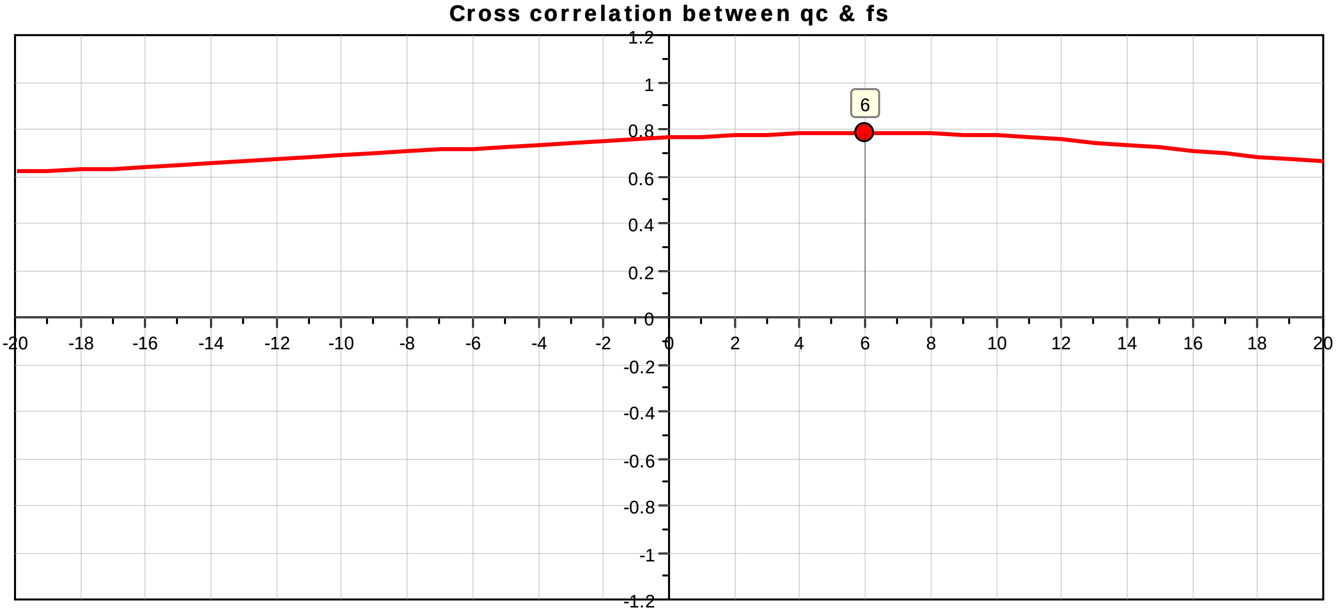
🟥 1. Sensitive fine grained	4. Clayey silt to silty clay	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to clayey sand
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

CPT: 036021P257SCPT257
Total depth: 30.04 m, Date: 14/05/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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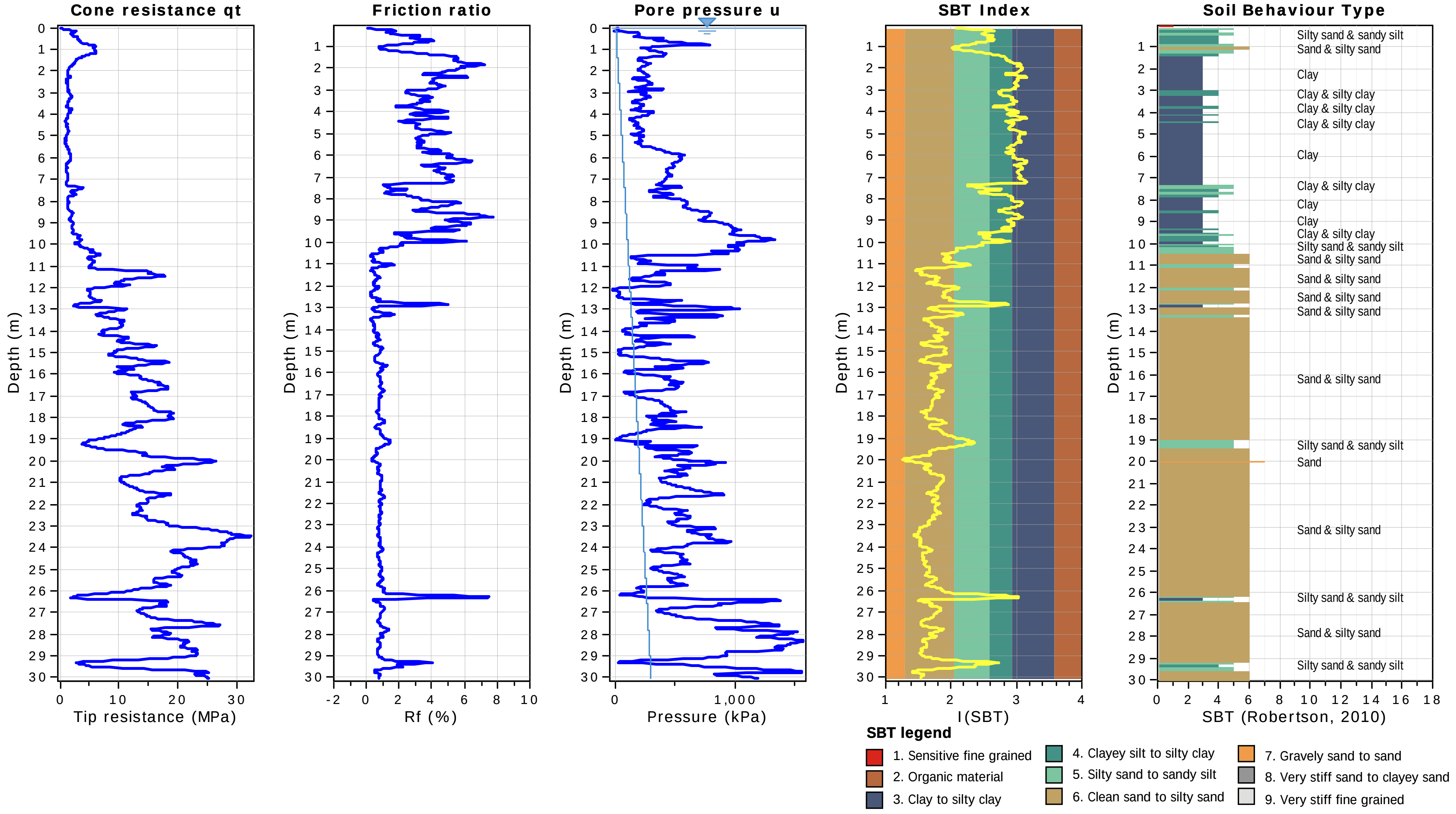
CPT: 036021P257SCPT257
Total depth: 30.04 m, Date: 14/05/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**



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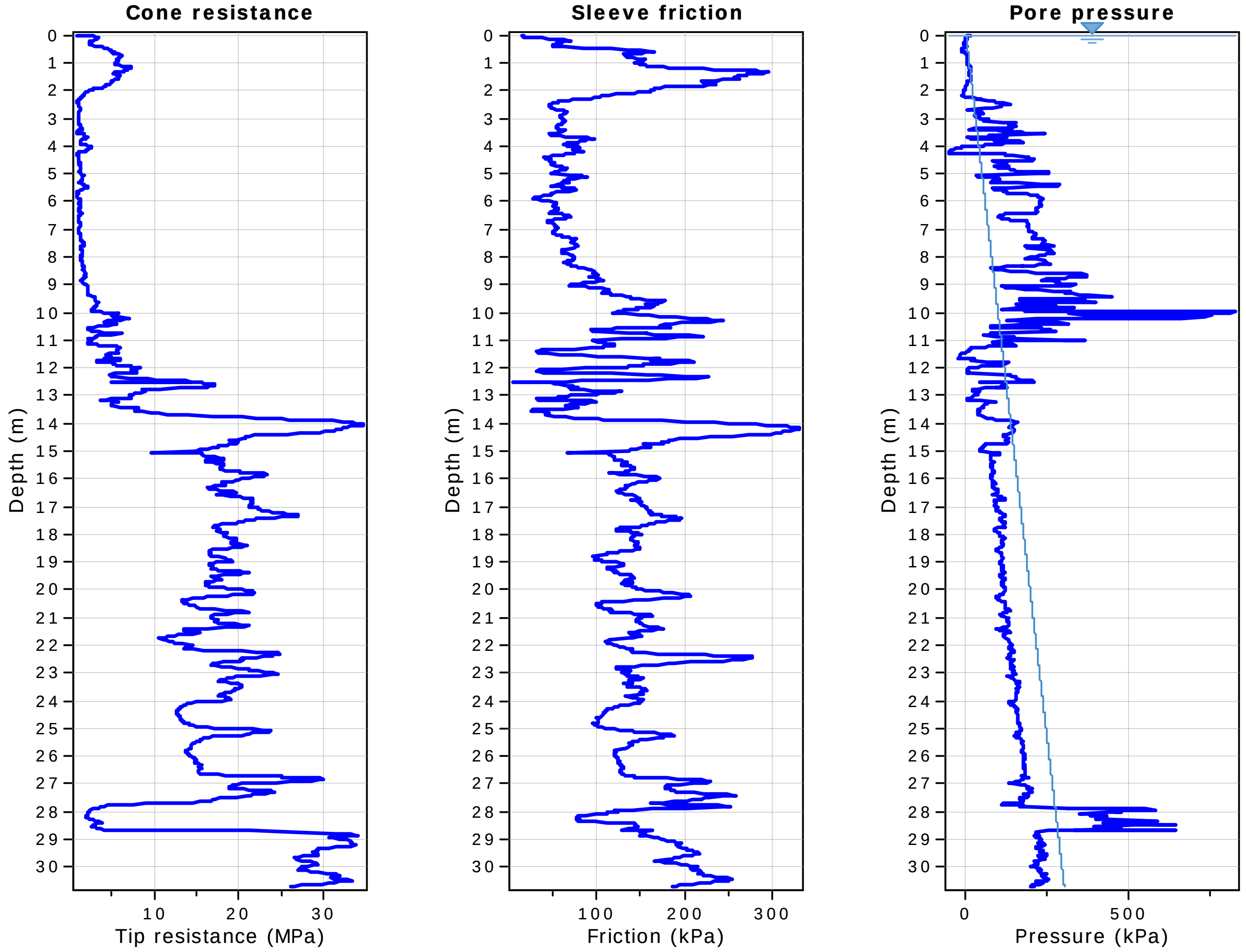
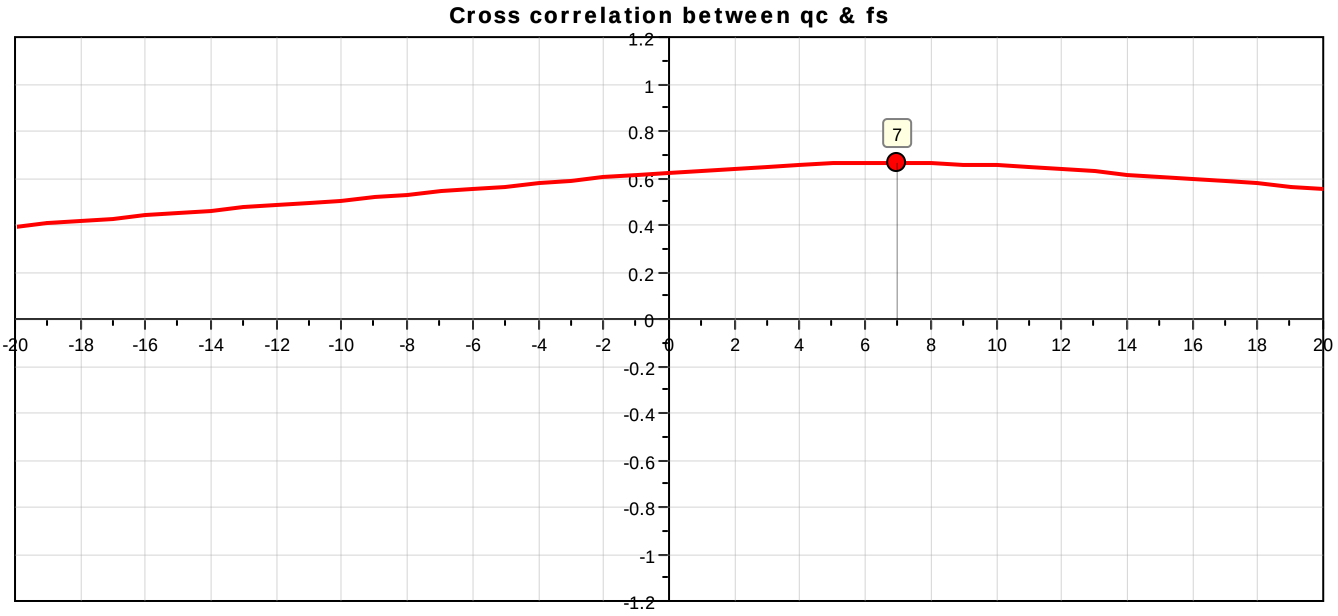
CPT: 036021P255SCPT255
Total depth: 30.70 m, Date: 14/05/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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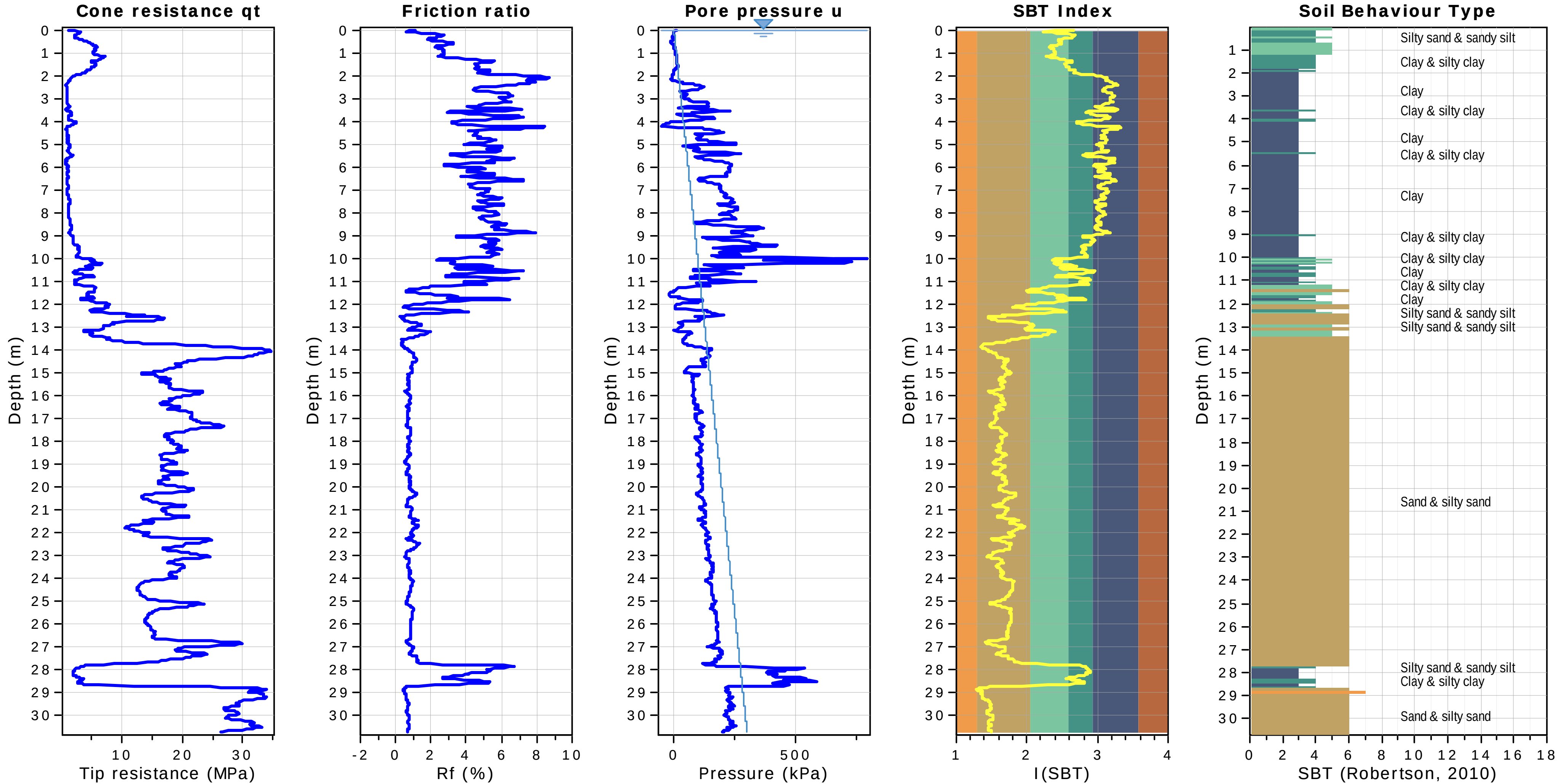
CPT: 036021P255SCPT255
Total depth: 30.70 m, Date: 14/05/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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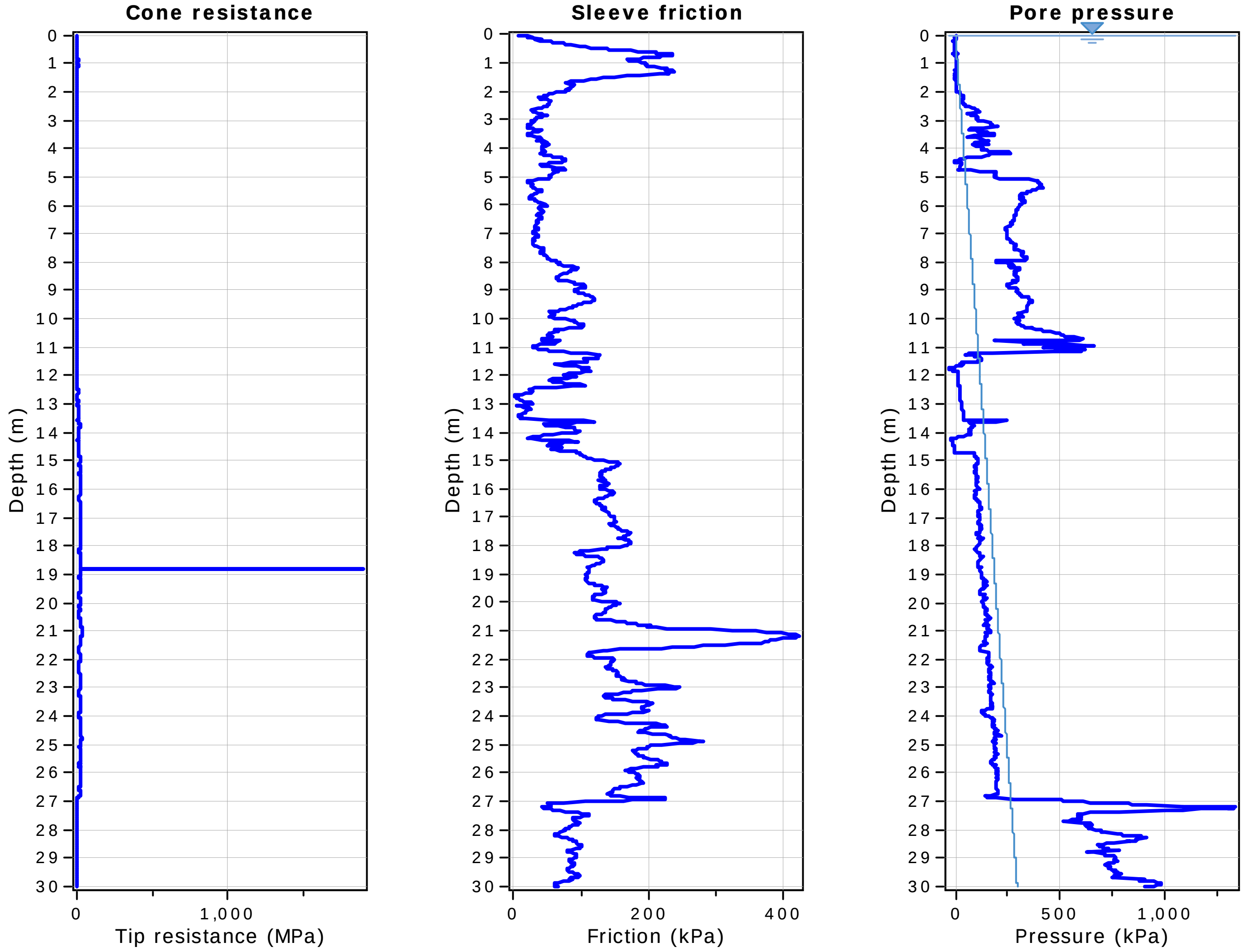
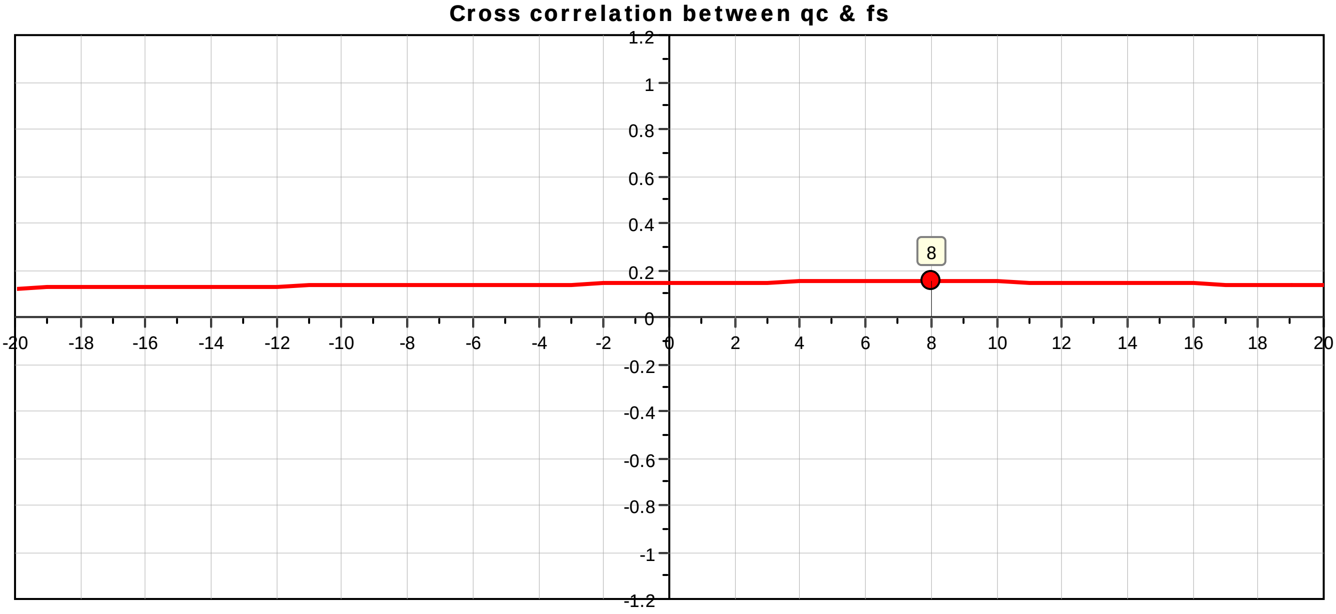
CPT: 036021P255SCPT253
Total depth: 30.00 m, Date: 14/05/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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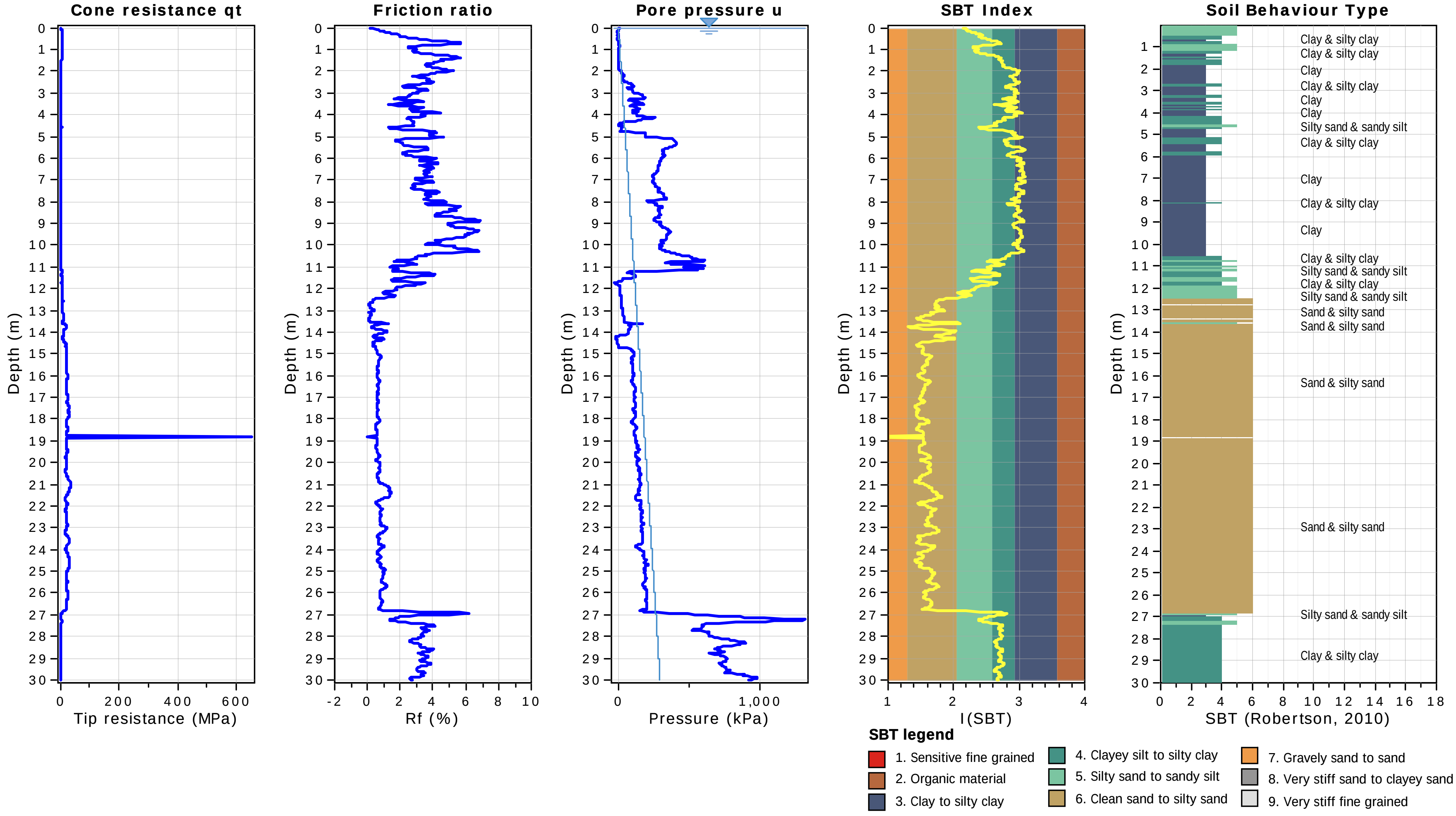
CPT: 036021P255SCPT253
Total depth: 30.00 m, Date: 14/05/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**



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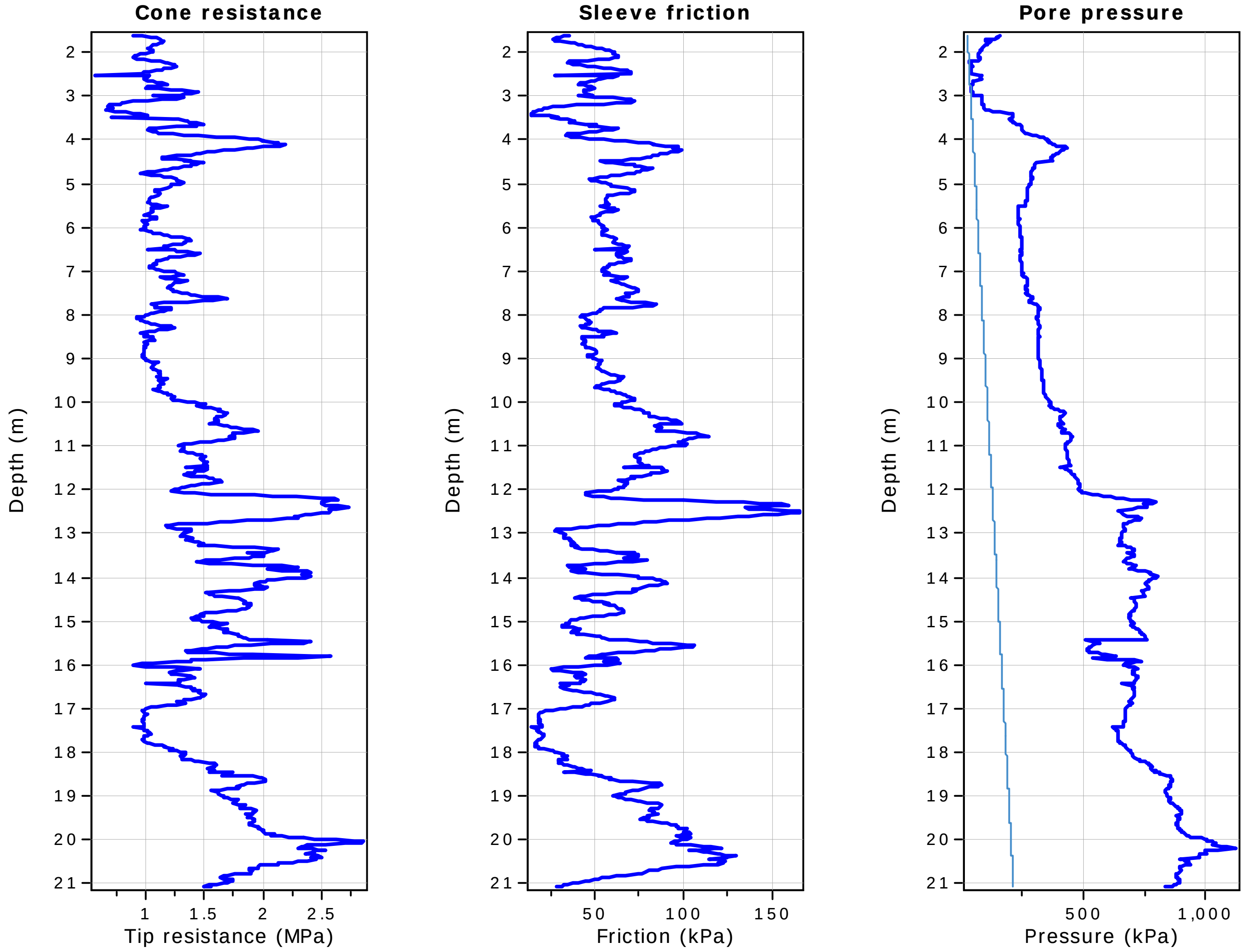
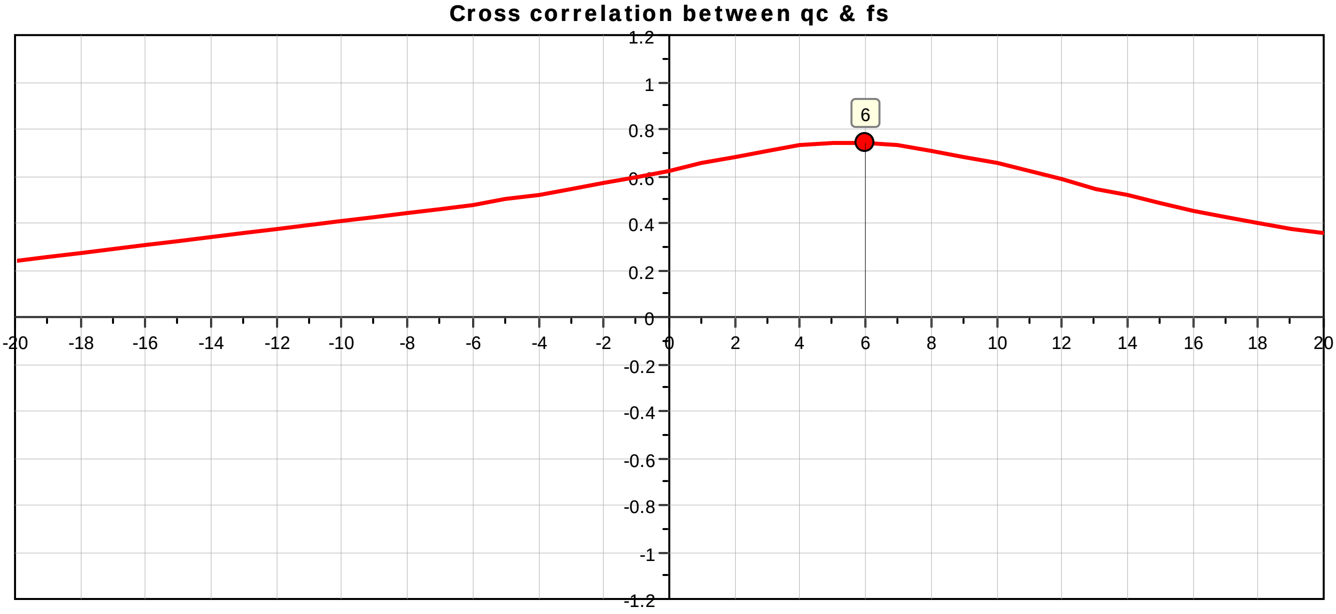
CPT: 036021P6SCPT6
Total depth: 21.07 m, Date: 14/05/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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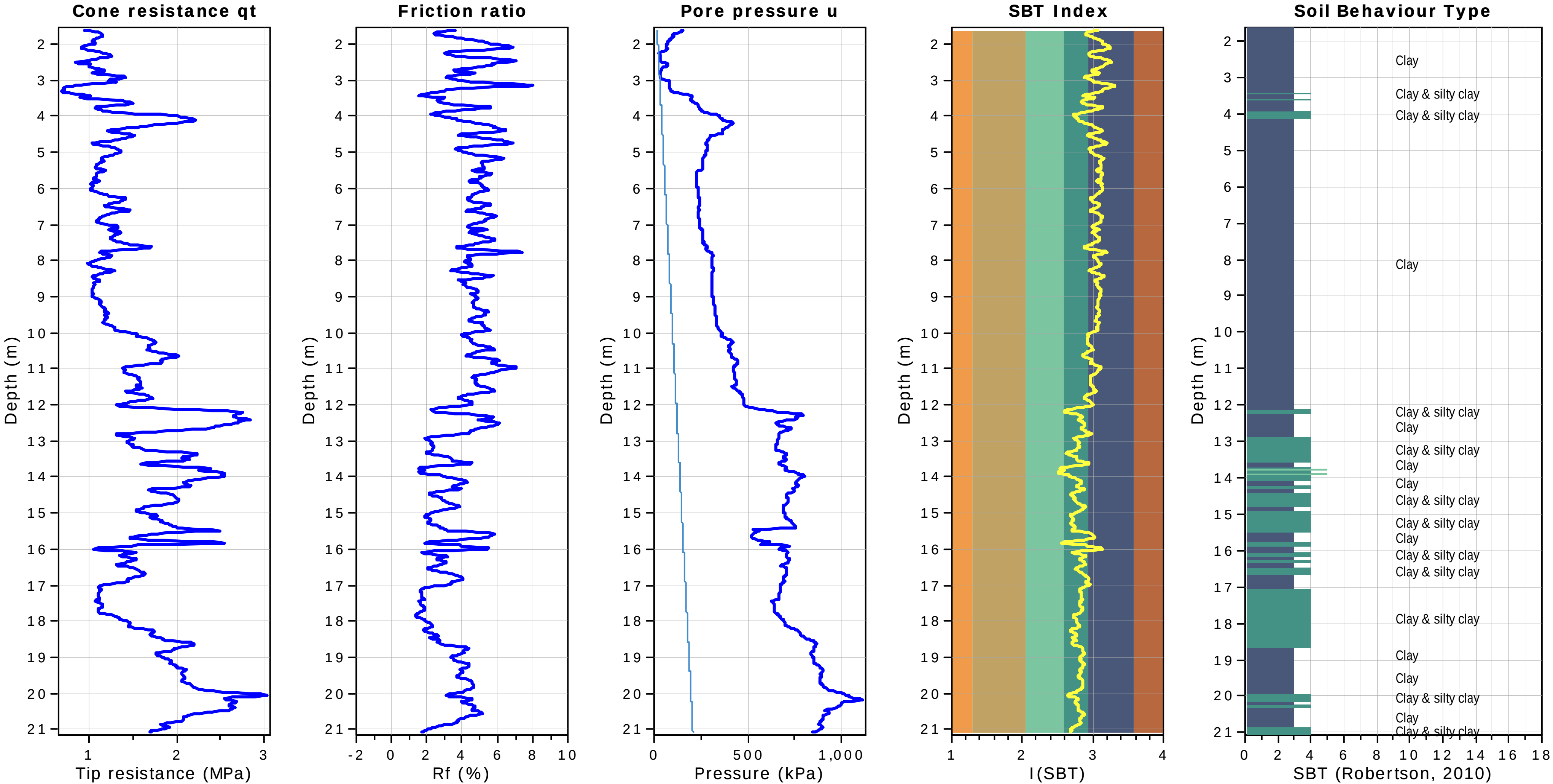
CPT: 036021P6SCPT6
Total depth: 21.07 m, Date: 14/05/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**

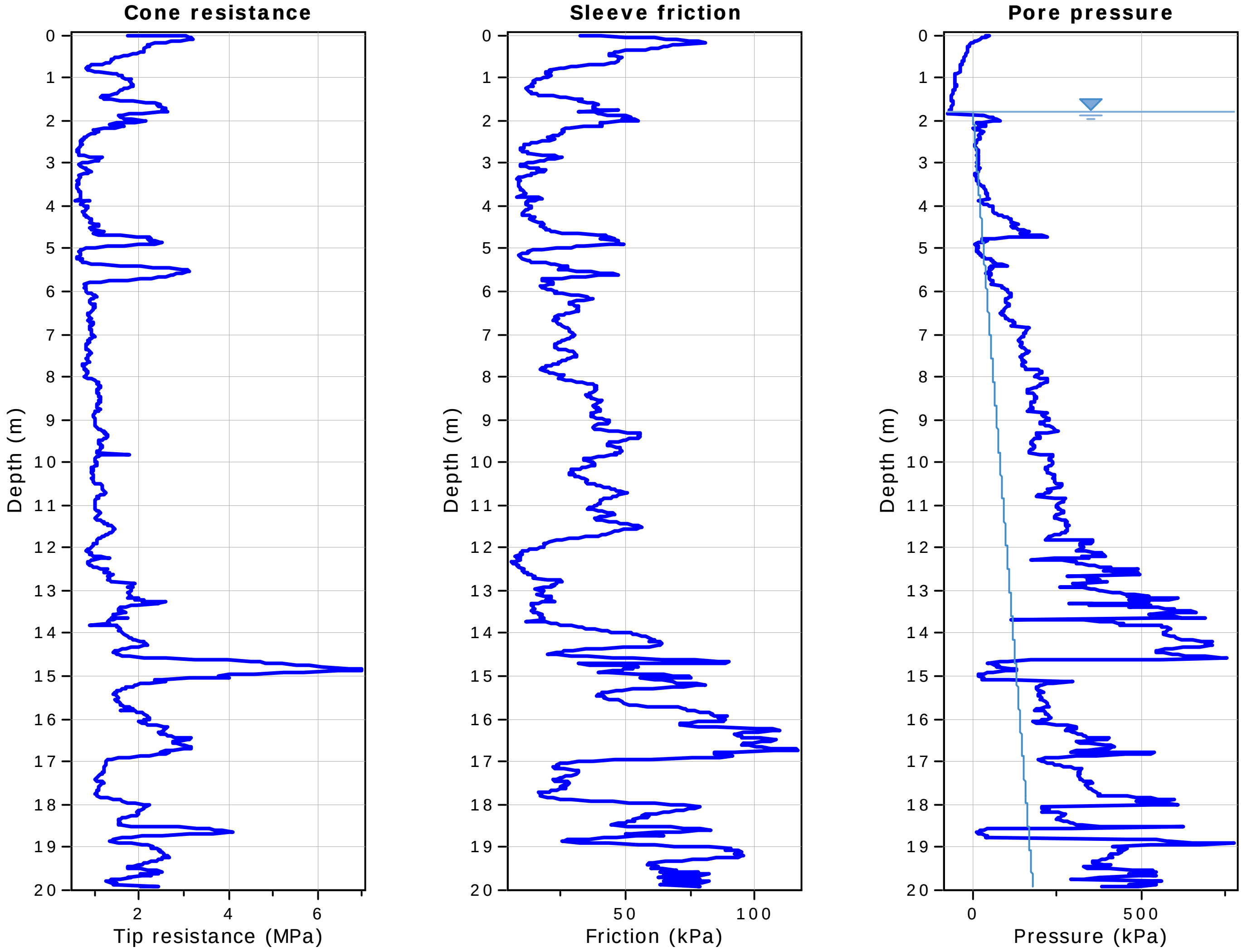


SBT legend

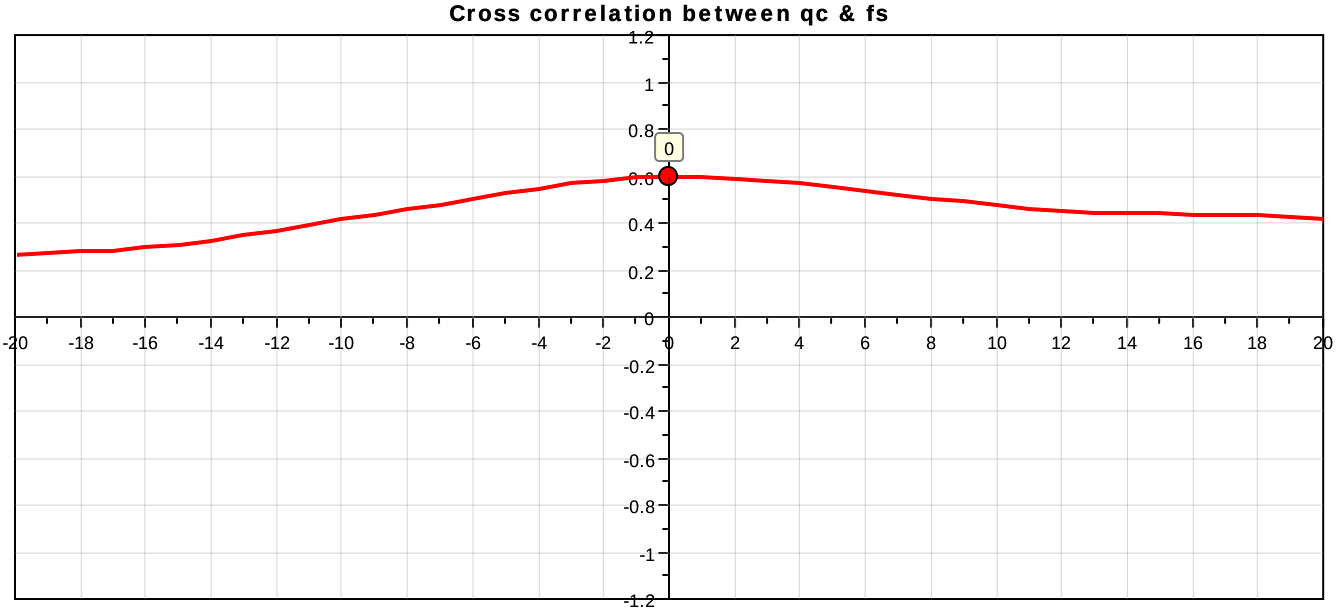
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

CPT: 036021P415CPTU415
Total depth: 19.92 m, Date: 13/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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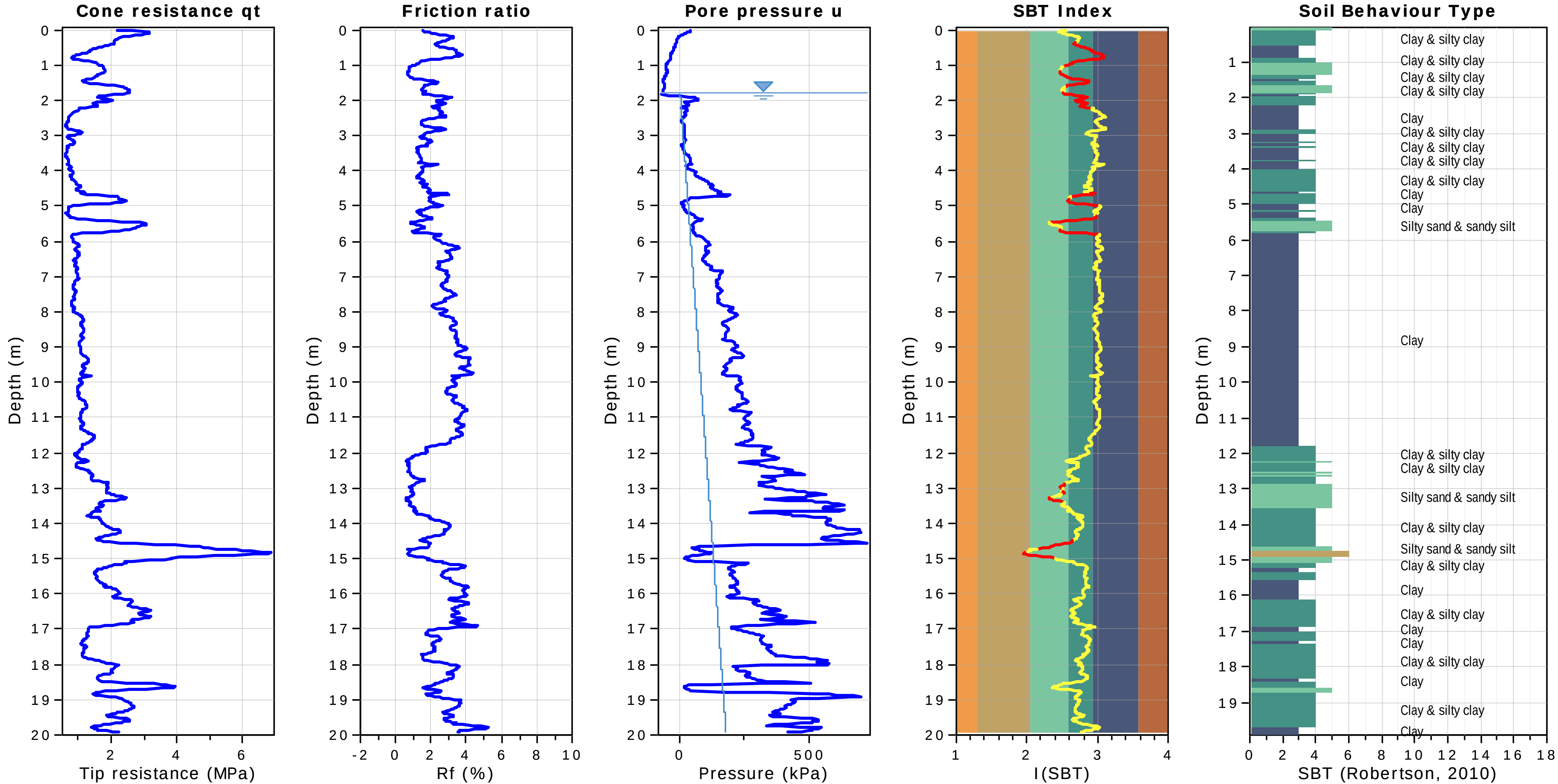
CPT: 036021P415CPTU415
Total depth: 19.92 m, Date: 13/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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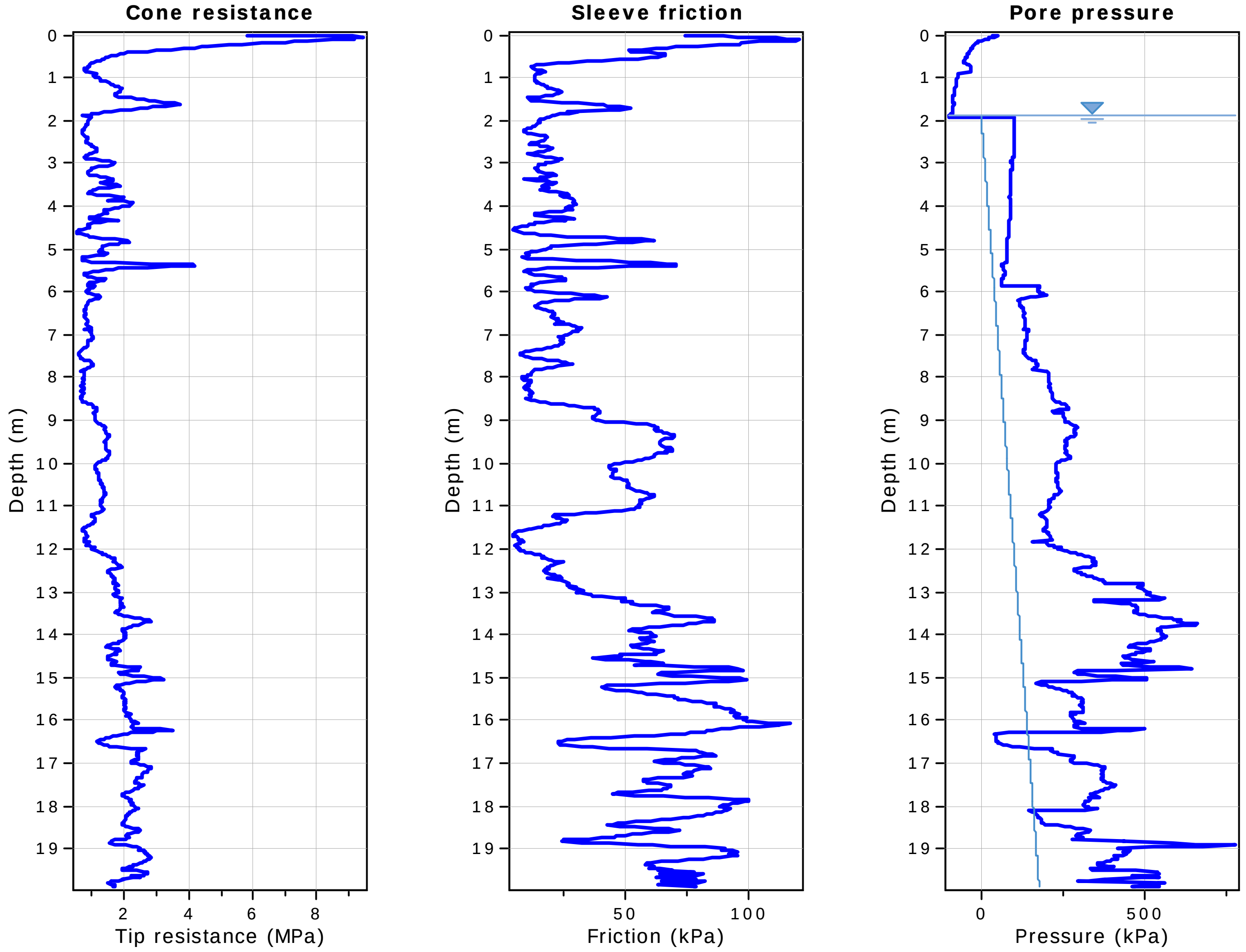
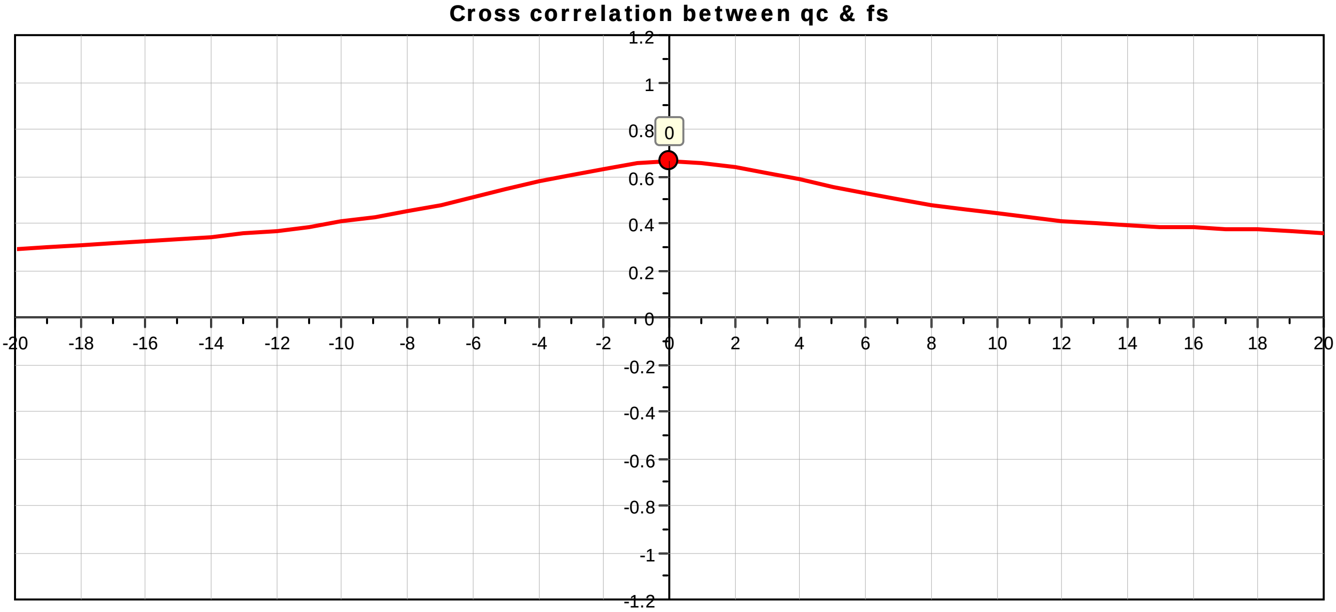
CPT: 036021P416CPTU416
Total depth: 19.88 m, Date: 13/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**

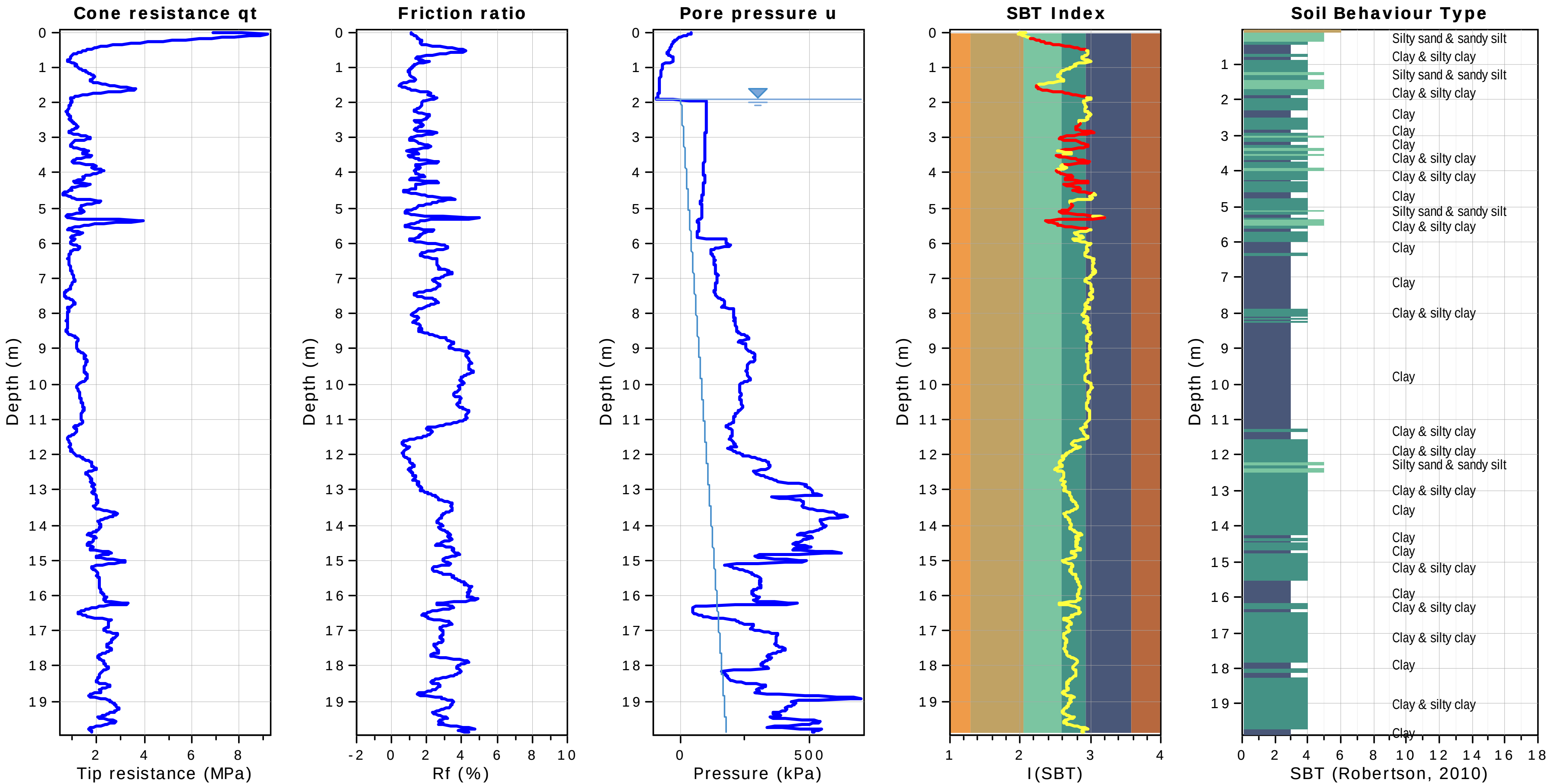


The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



CPT: 036021P416CPTU416
Total depth: 19.88 m, Date: 13/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**

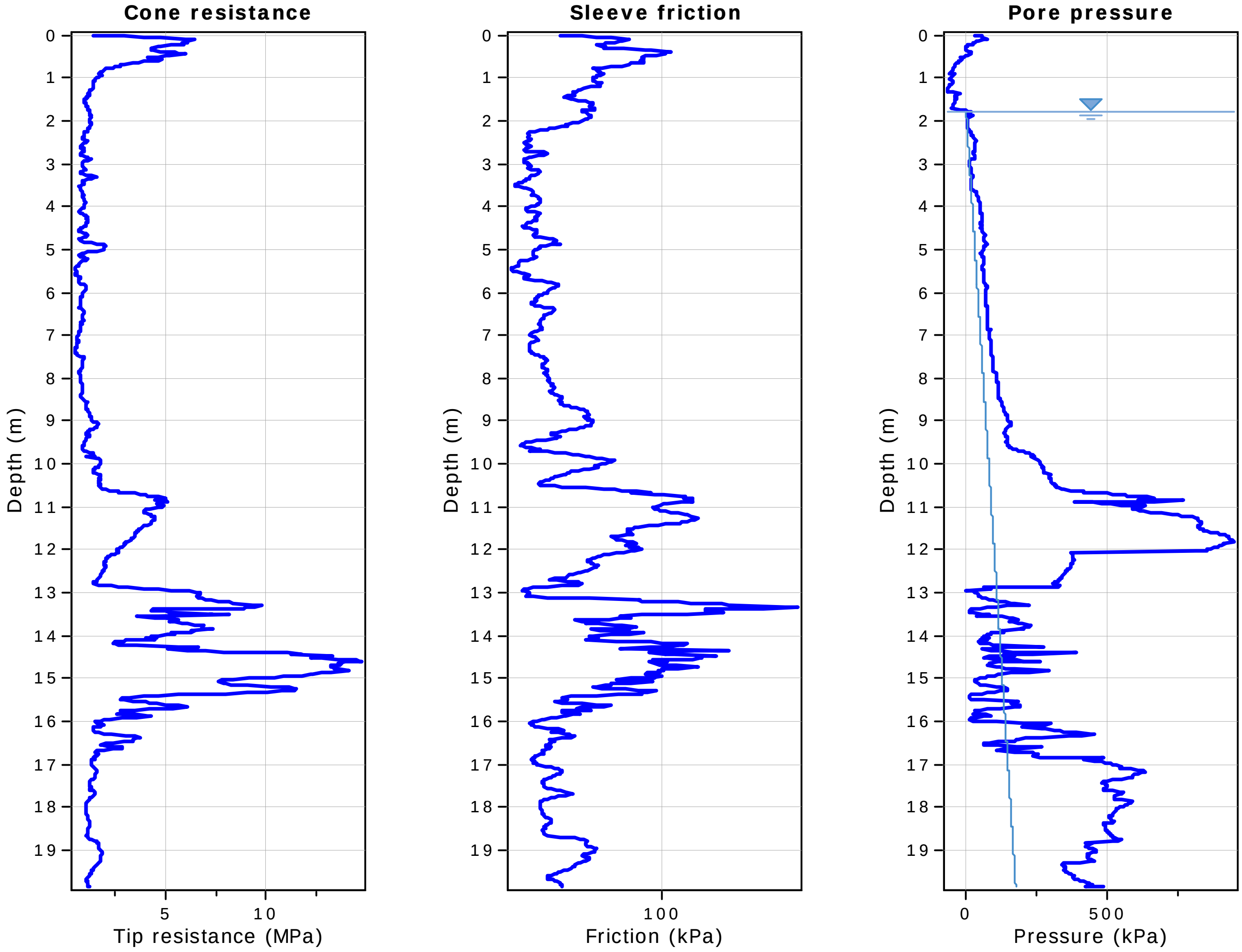


SBT legend

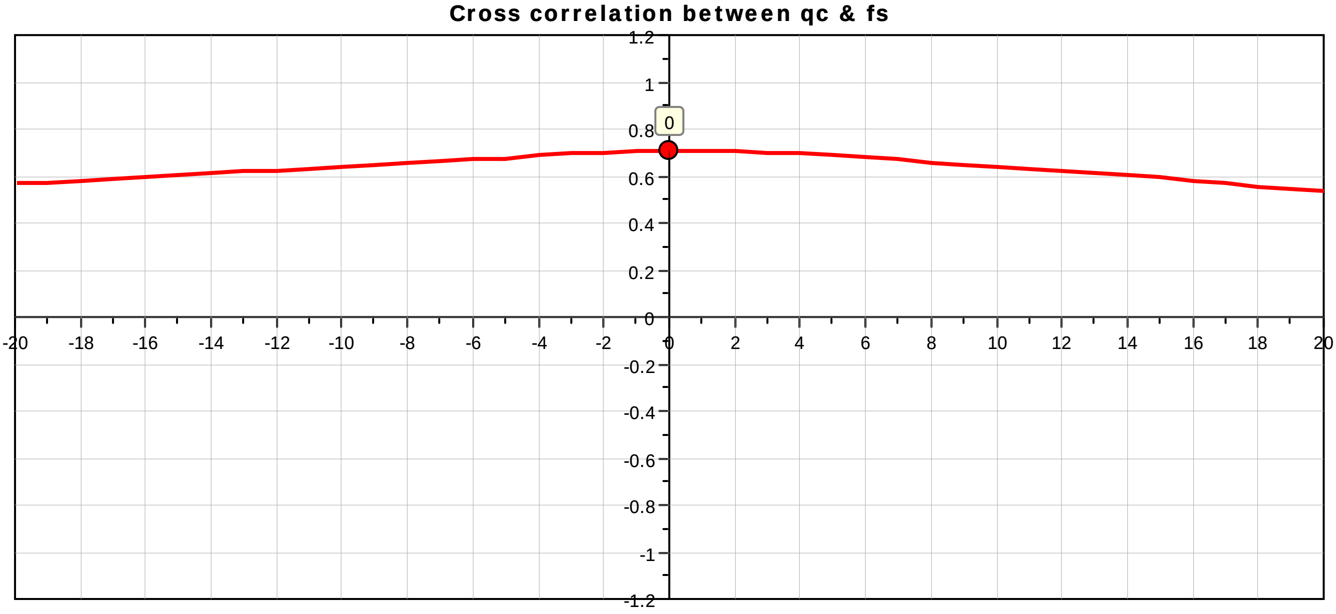
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P417CPTU417
Total depth: 19.84 m, Date: 13/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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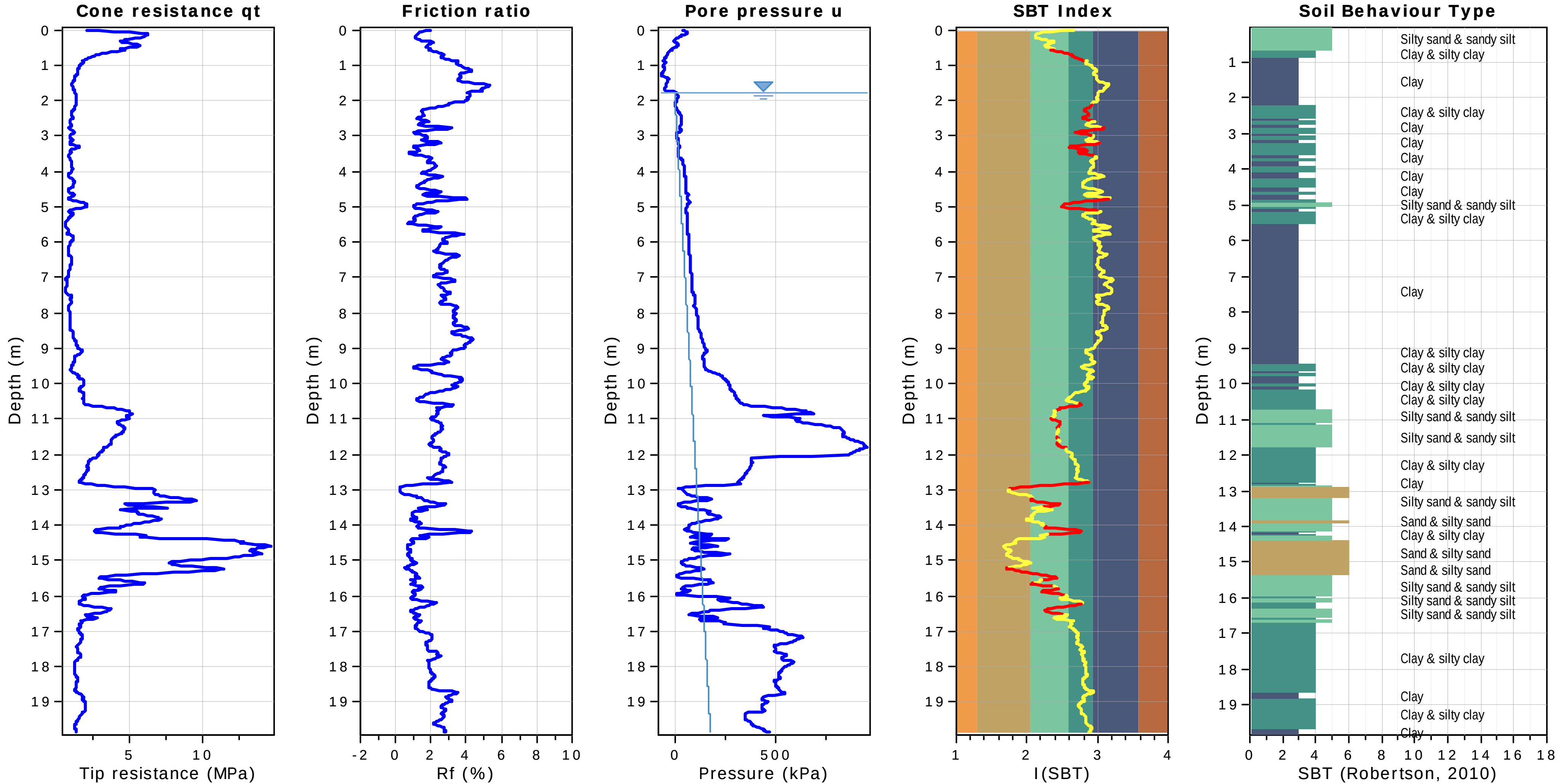
CPT: 036021P417CPTU417
Total depth: 19.84 m, Date: 13/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

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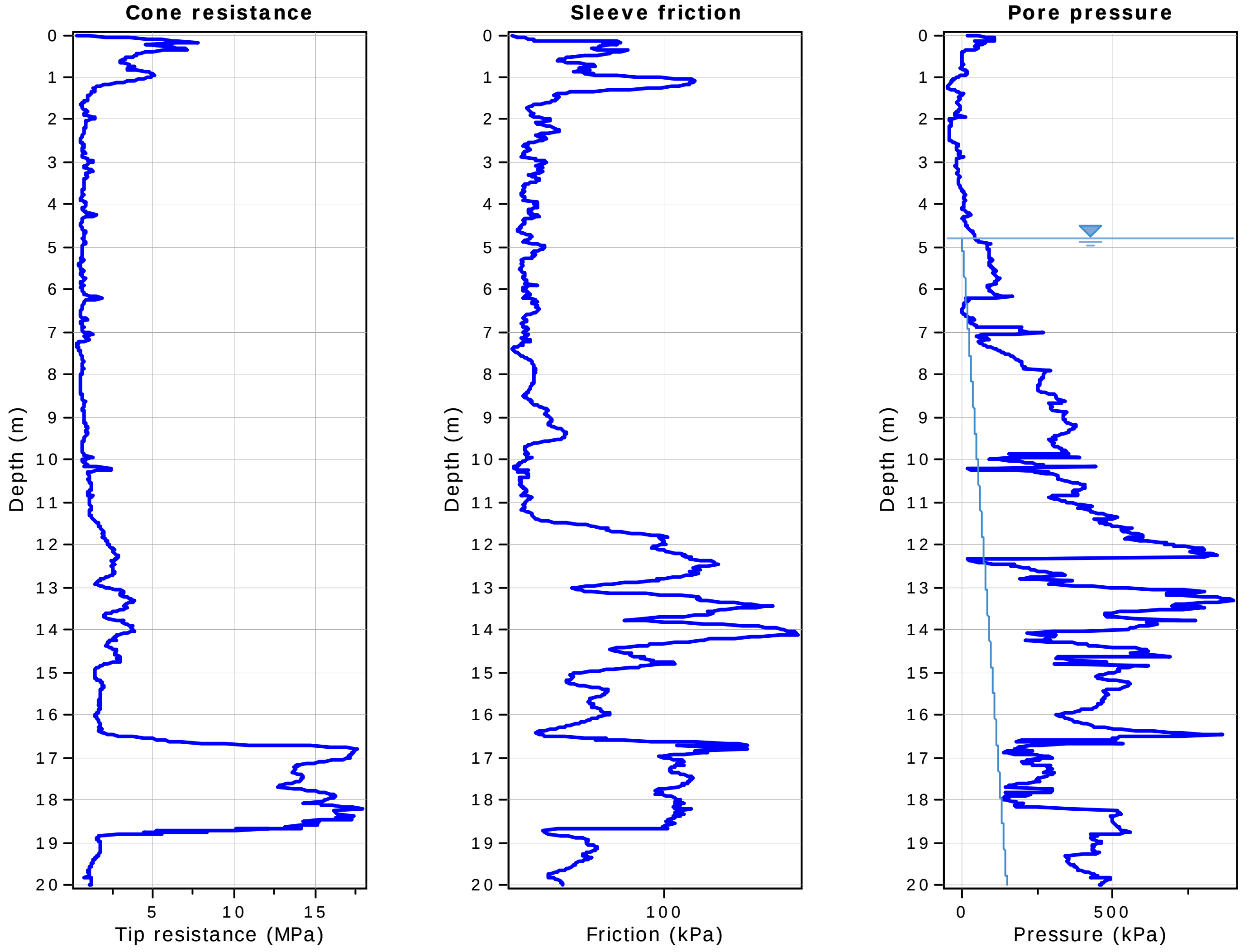
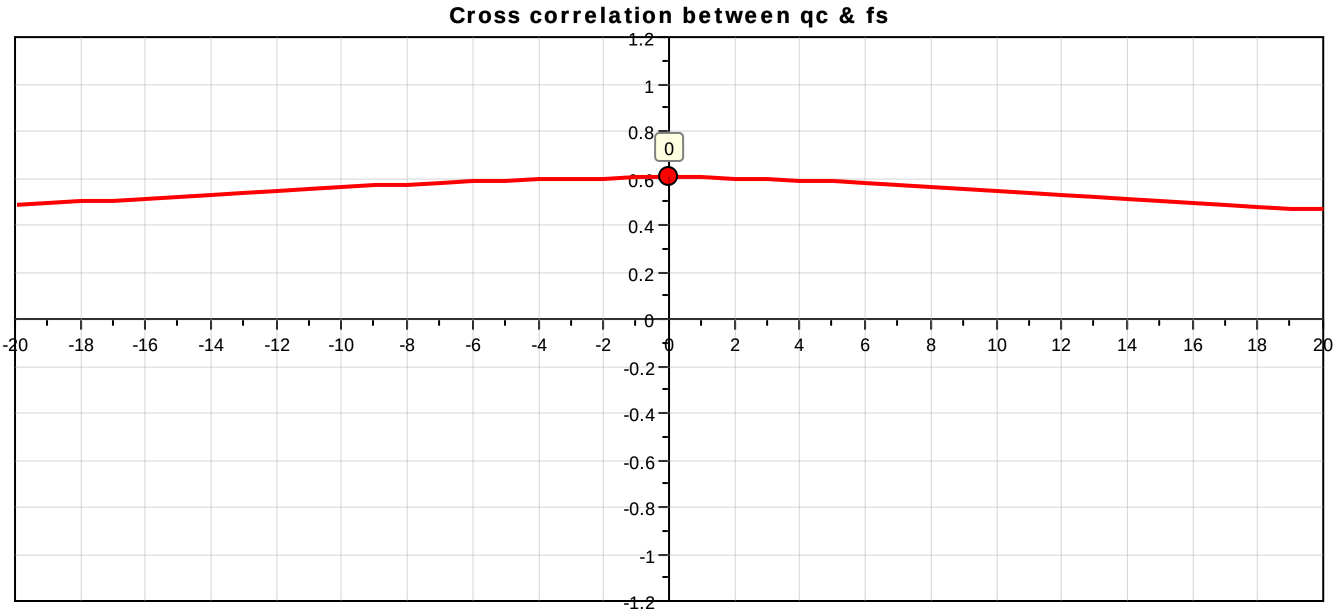
CPT: 036021P418CPTU418
Total depth: 20.00 m, Date: 13/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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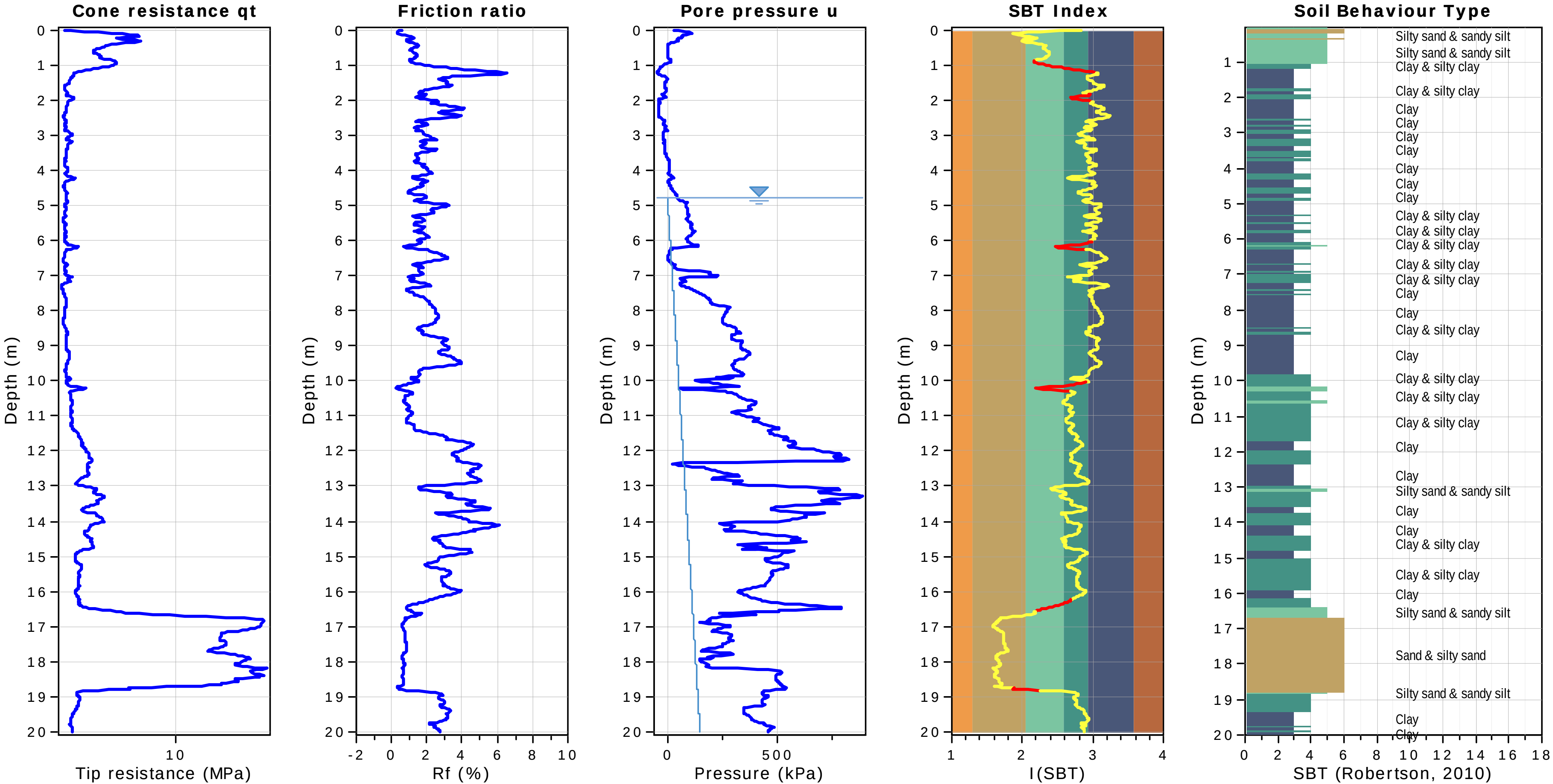
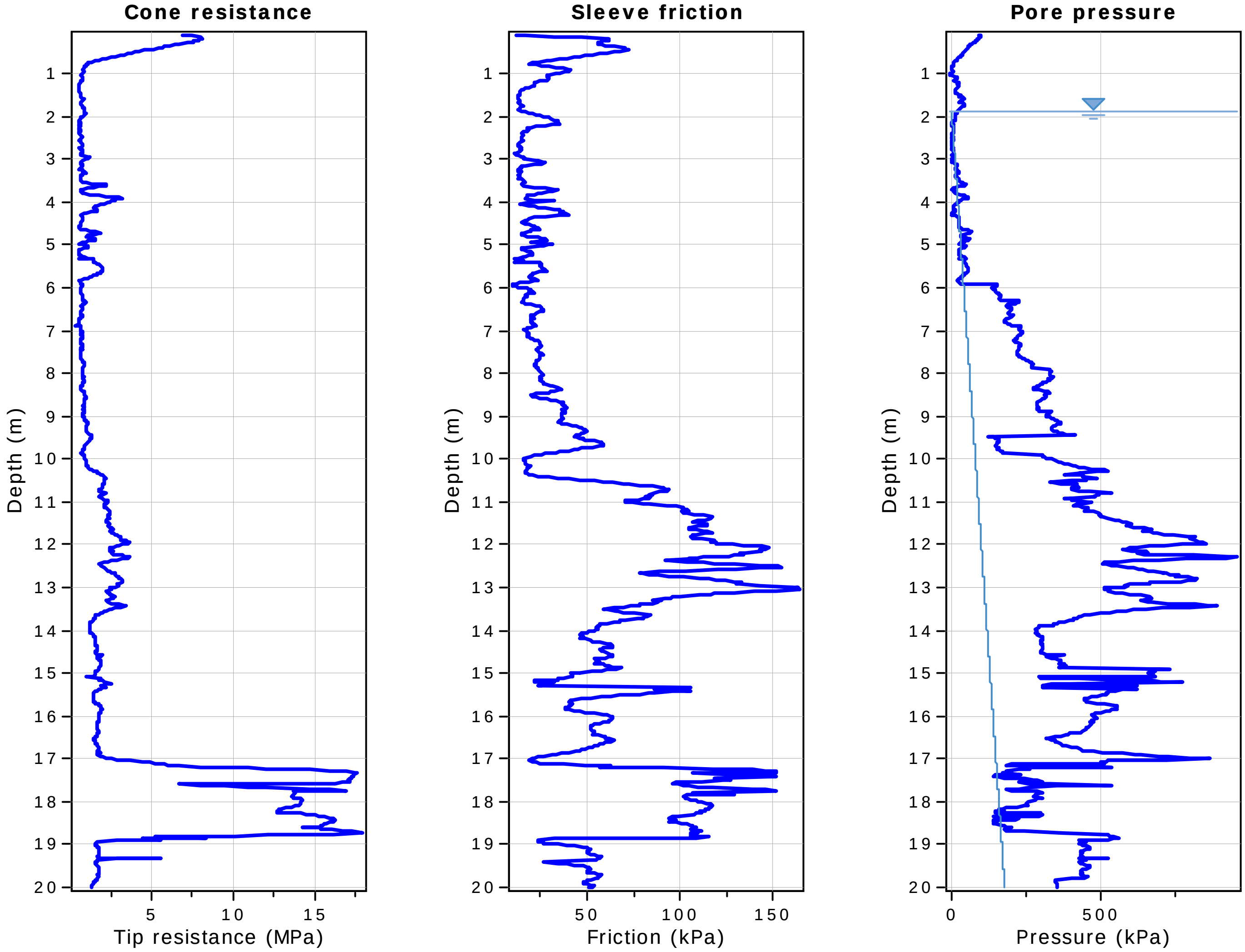
CPT: 036021P418CPTU418
Total depth: 20.00 m, Date: 13/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**

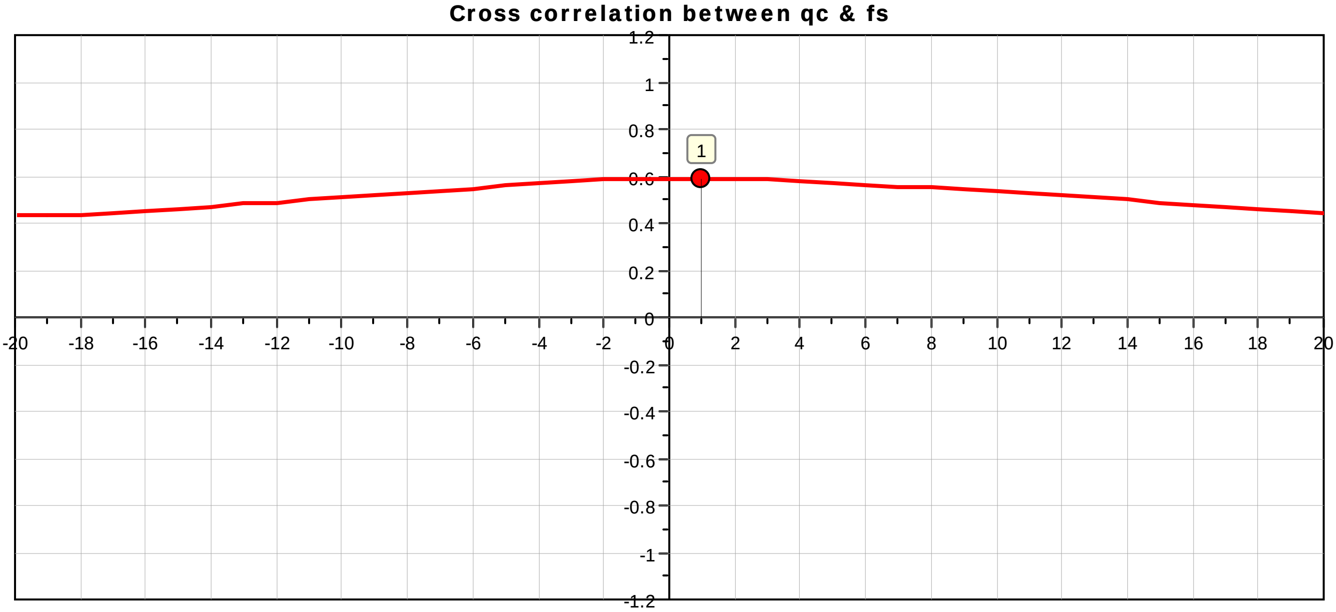


SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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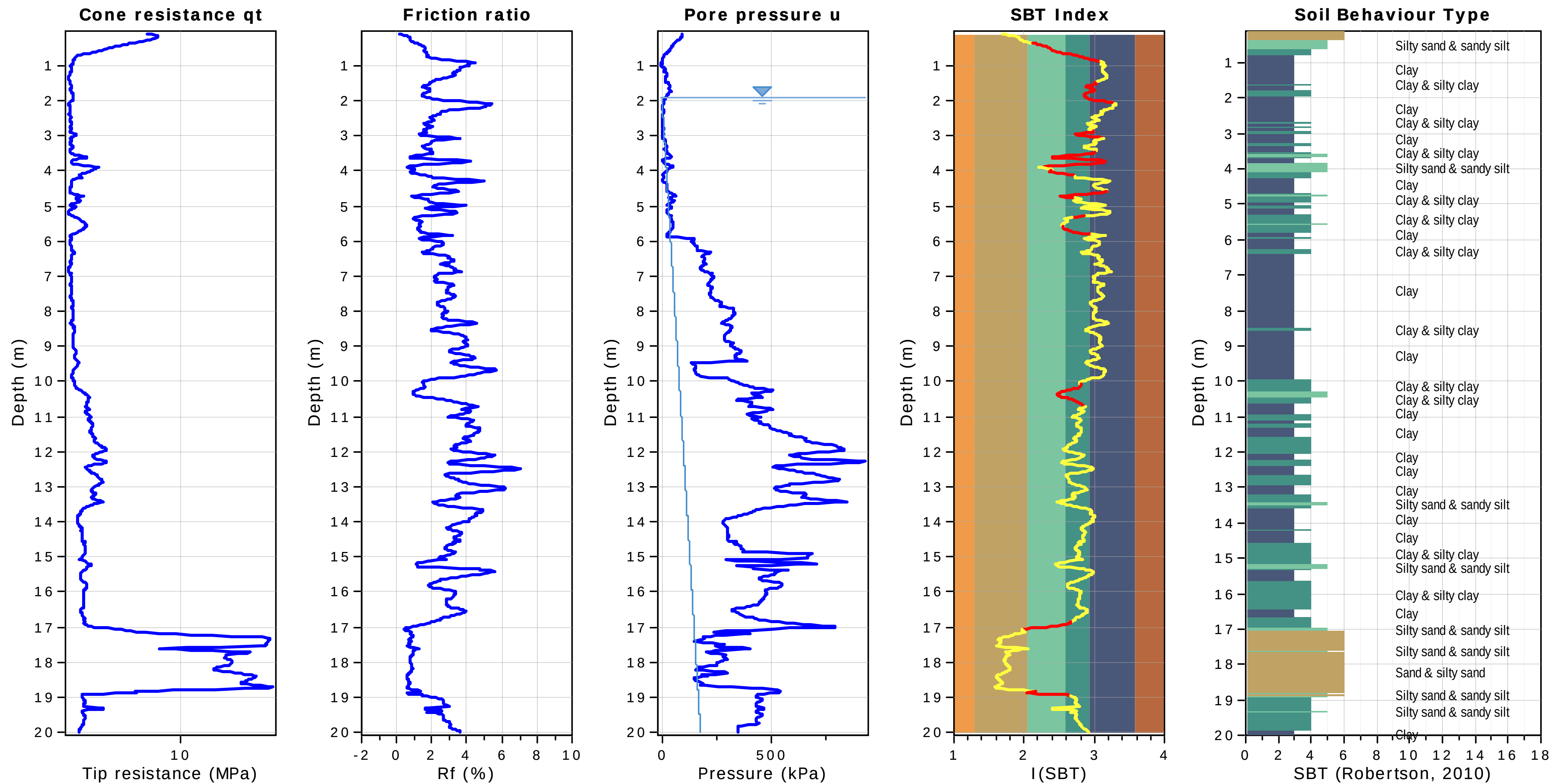
CPT: 036021P419CPTU419
Total depth: 20.00 m, Date: 13/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: MS MEDOLLA
Location: MEDOLLA

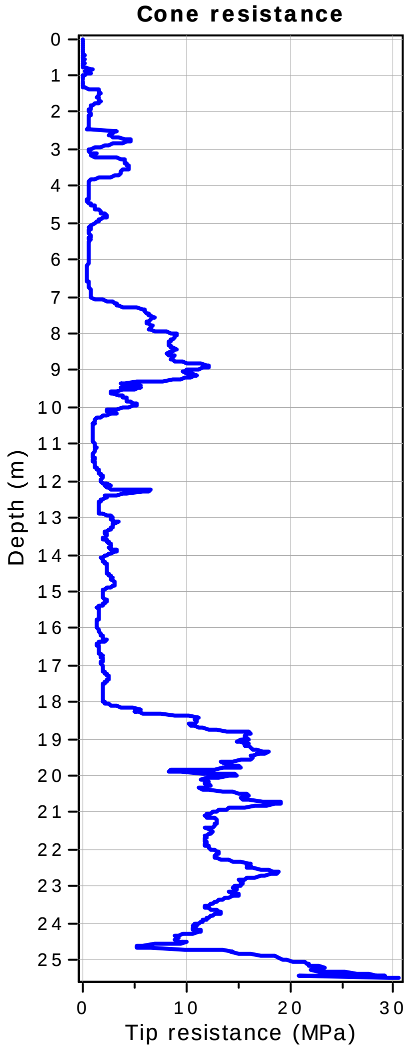


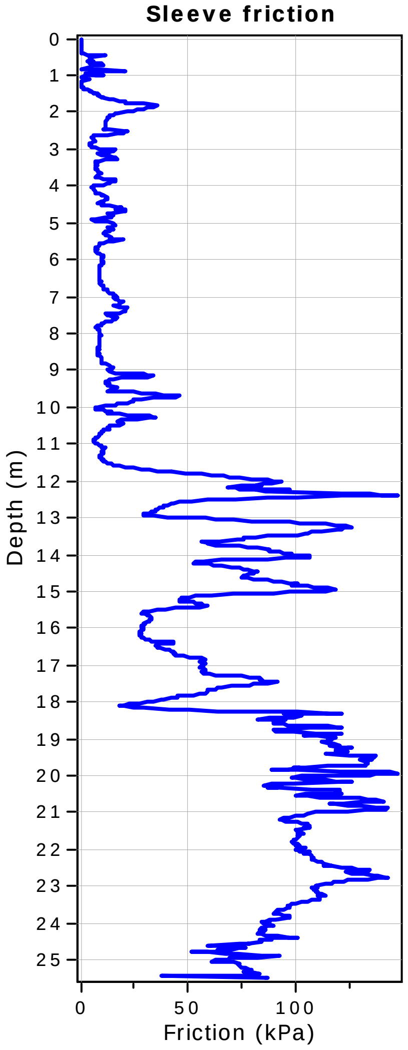
SBT legend

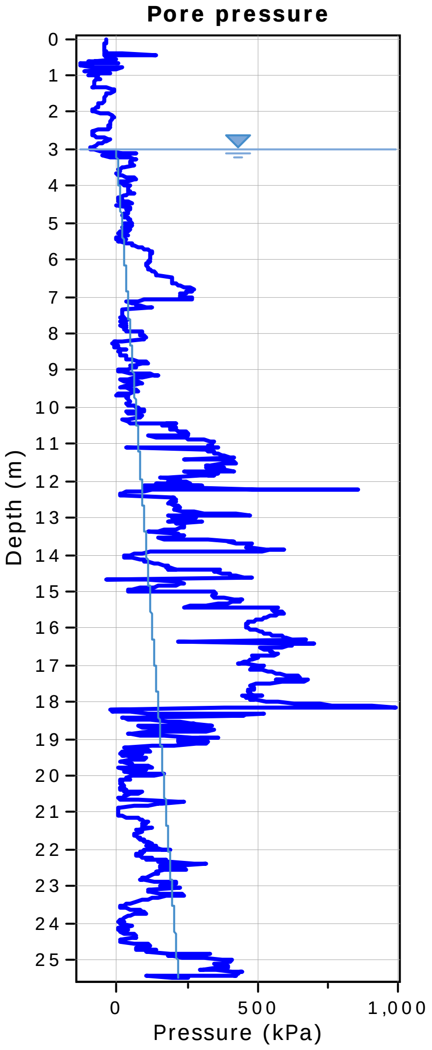
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P414SCPTU414
Total depth: 25.48 m, Date: 13/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

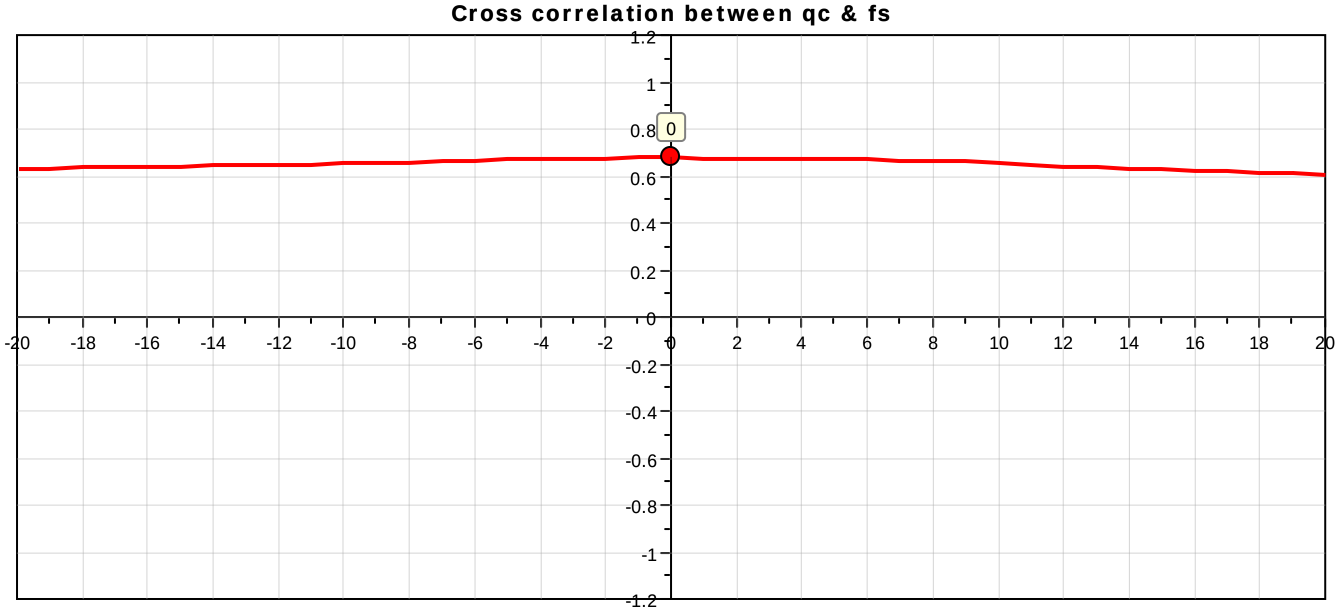
Project: **MS MEDOLLA**
Location: **MEDOLLA**







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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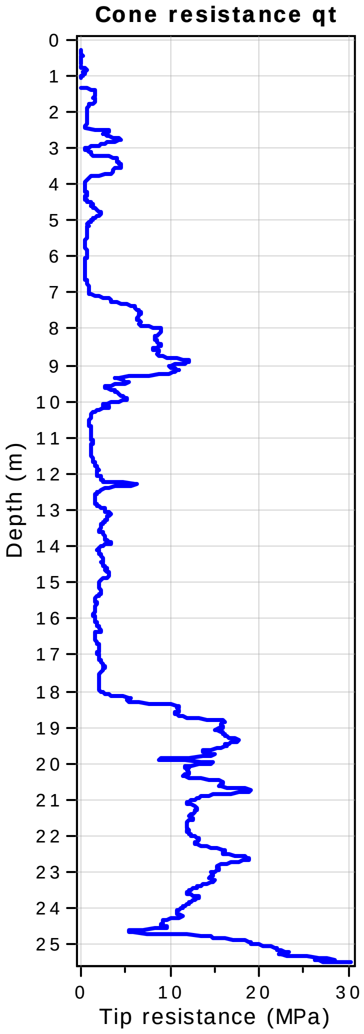
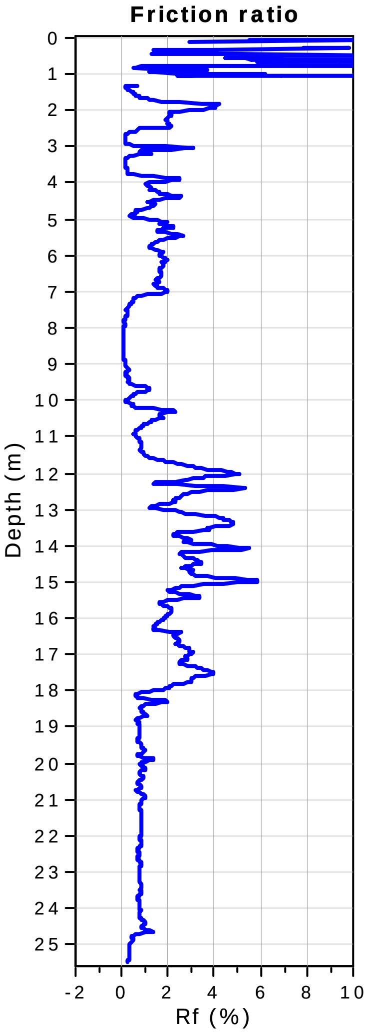
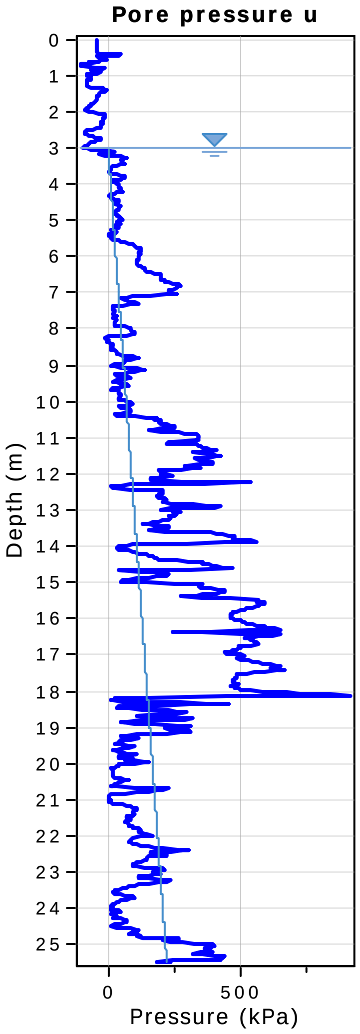
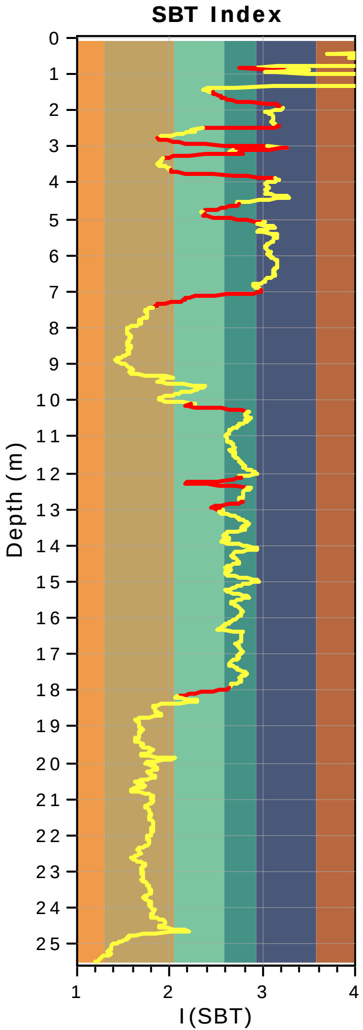
CPT: 036021P414SCPTU414
Total depth: 25.48 m, Date: 13/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

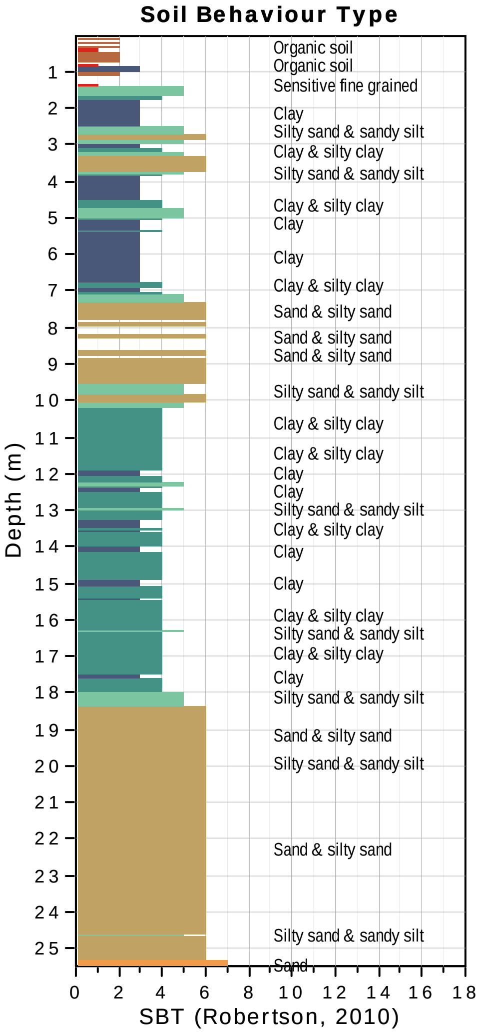
Project: **MS MEDOLLA**
Location: **MEDOLLA**











SBT legend

🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟫 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

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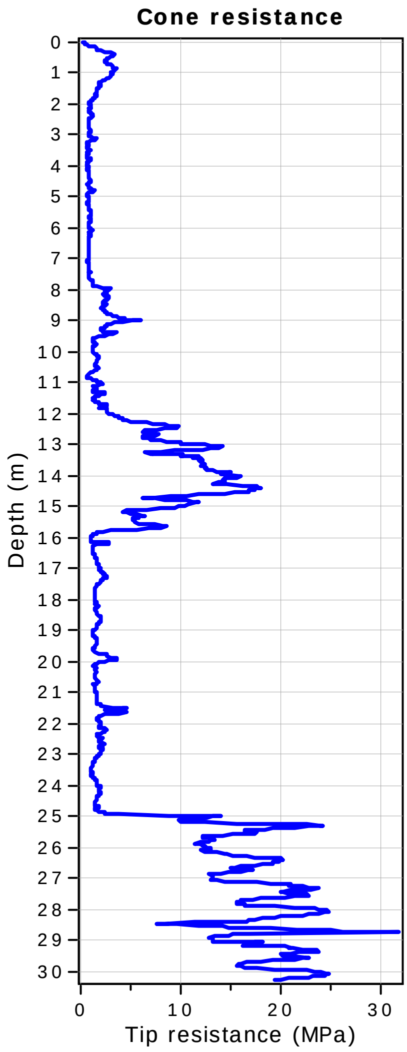
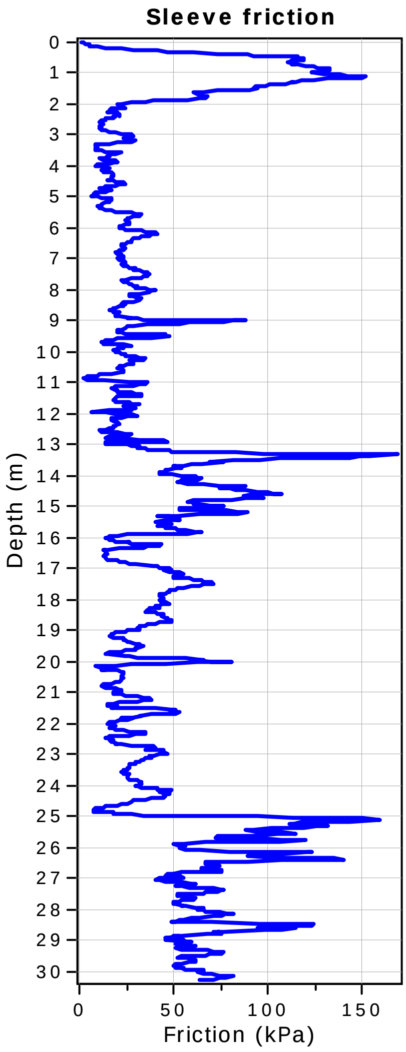
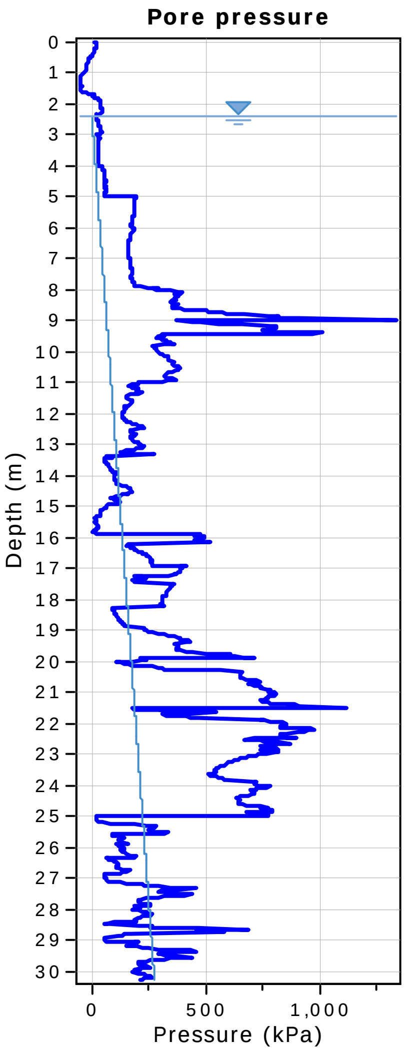
CPT: 036021P423SCPT423
Total depth: 30.28 m, Date: 13/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

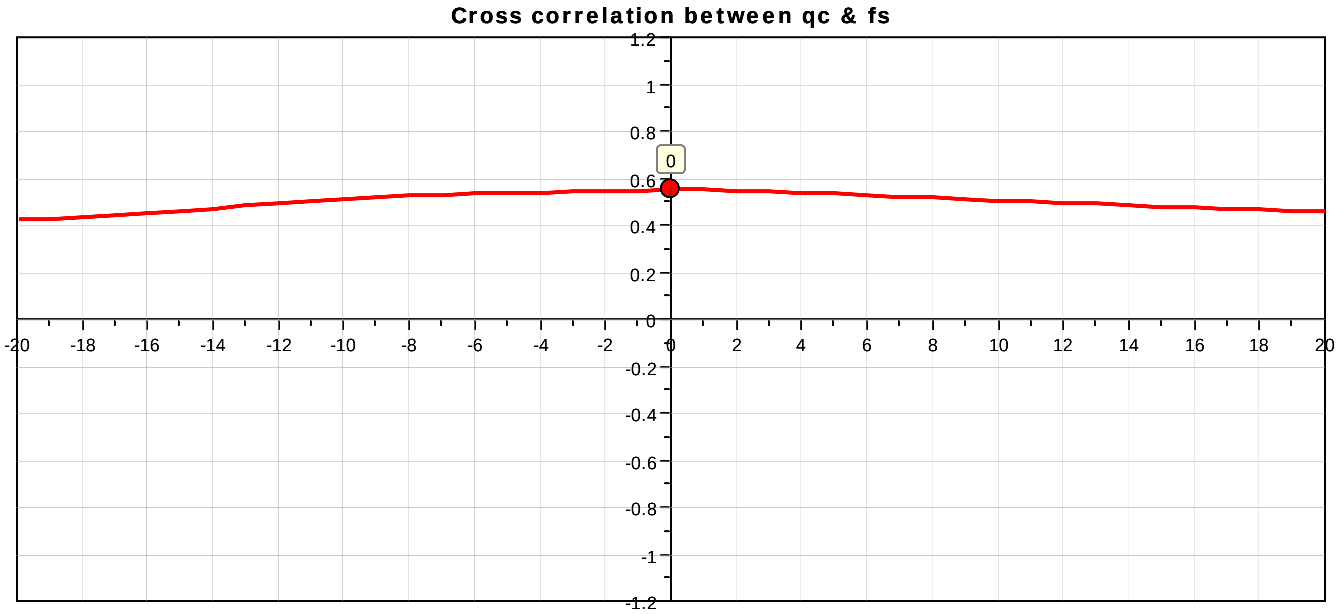
Project: **MS MEDOLLA**
Location: **MEDOLLA**







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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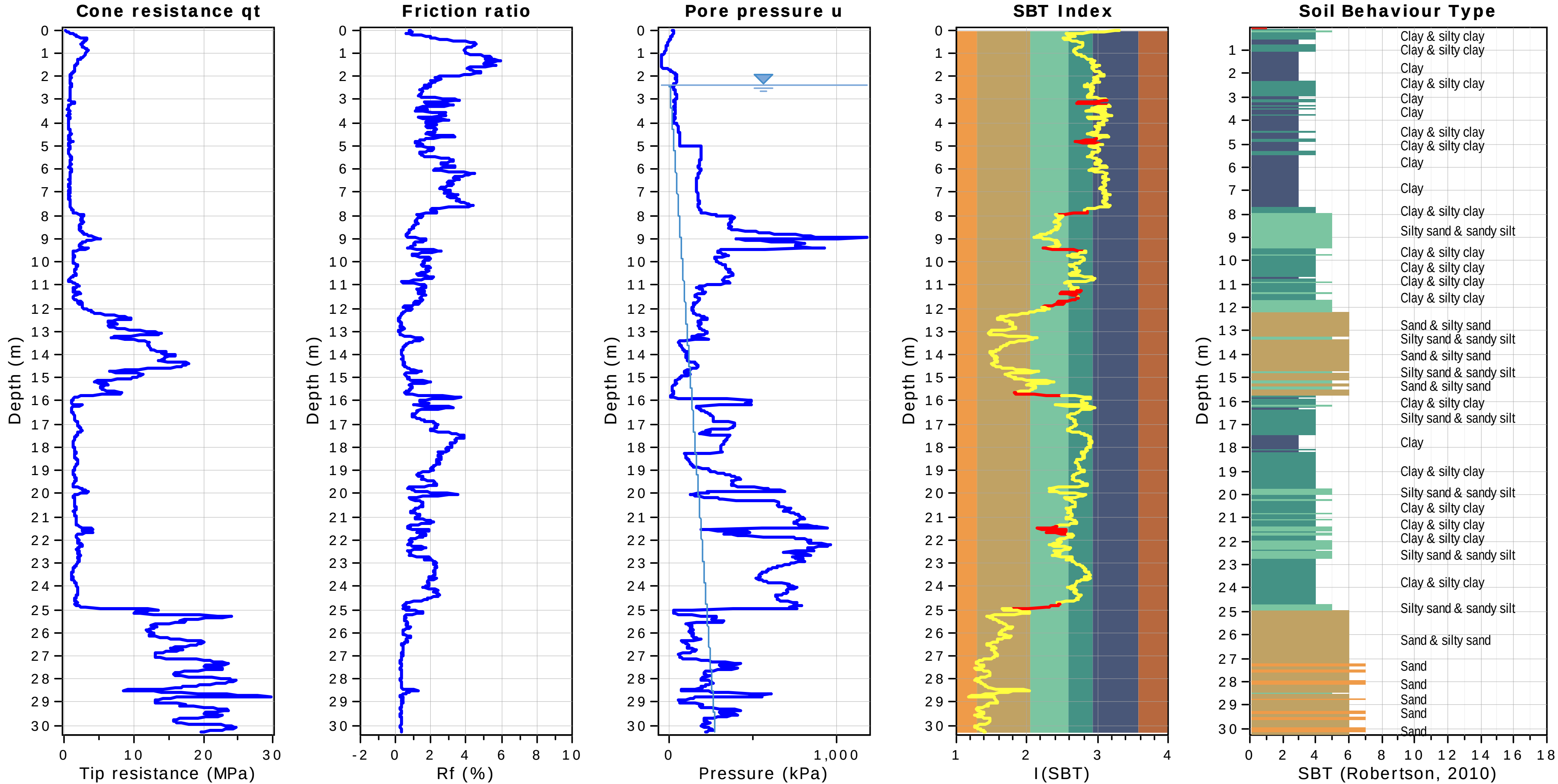
CPT: 036021P423SCPT423
Total depth: 30.28 m, Date: 13/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**

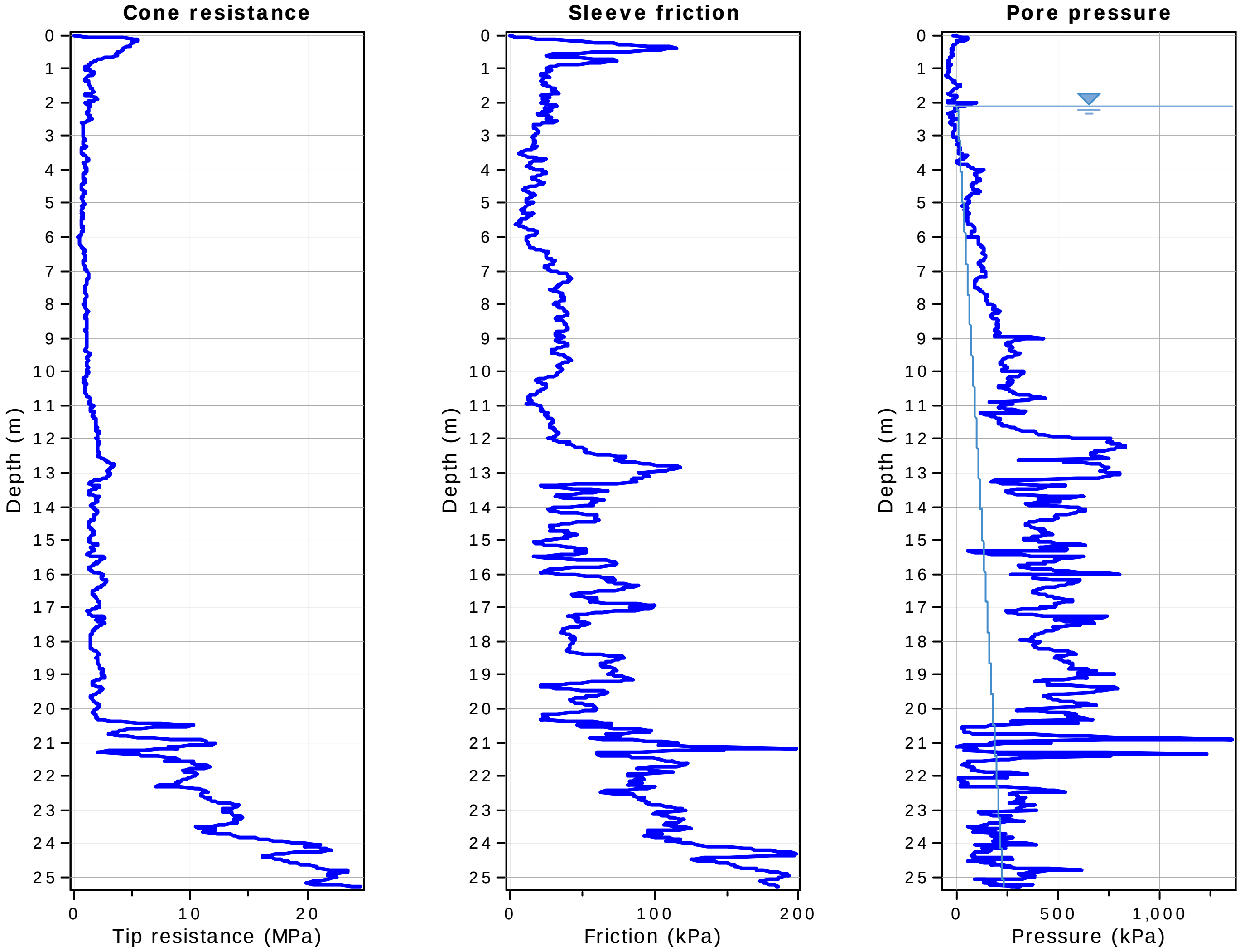


SBT legend

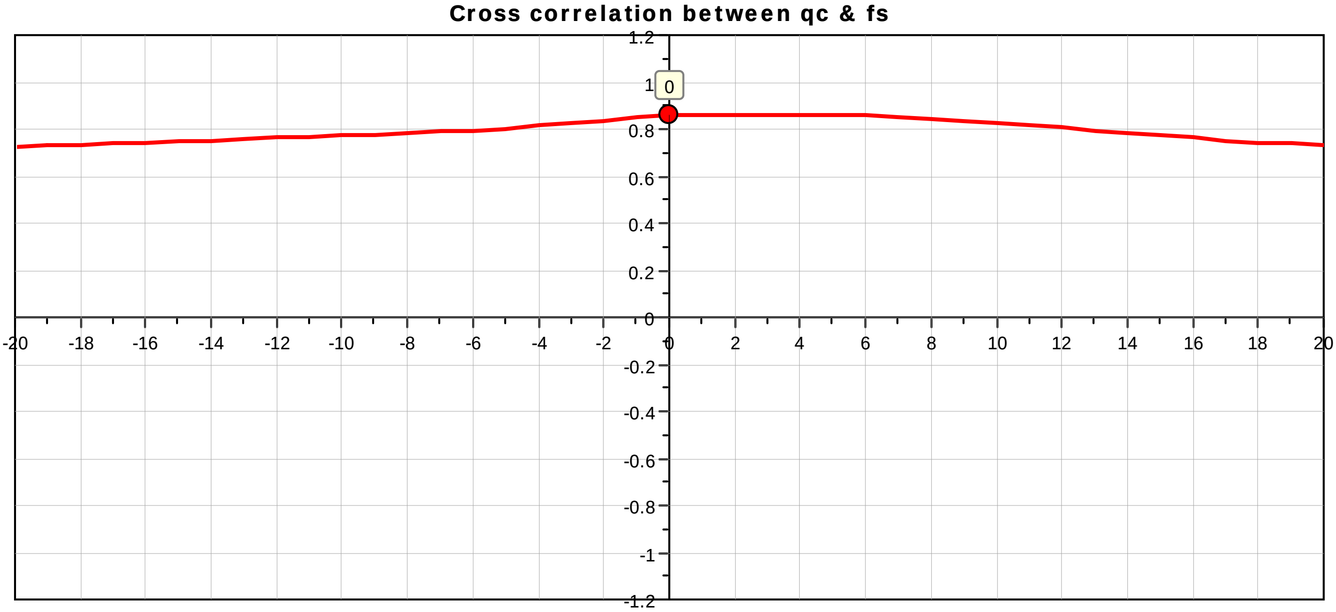
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

CPT: 036021P420SCPT420
Total depth: 25.28 m, Date: 13/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**



The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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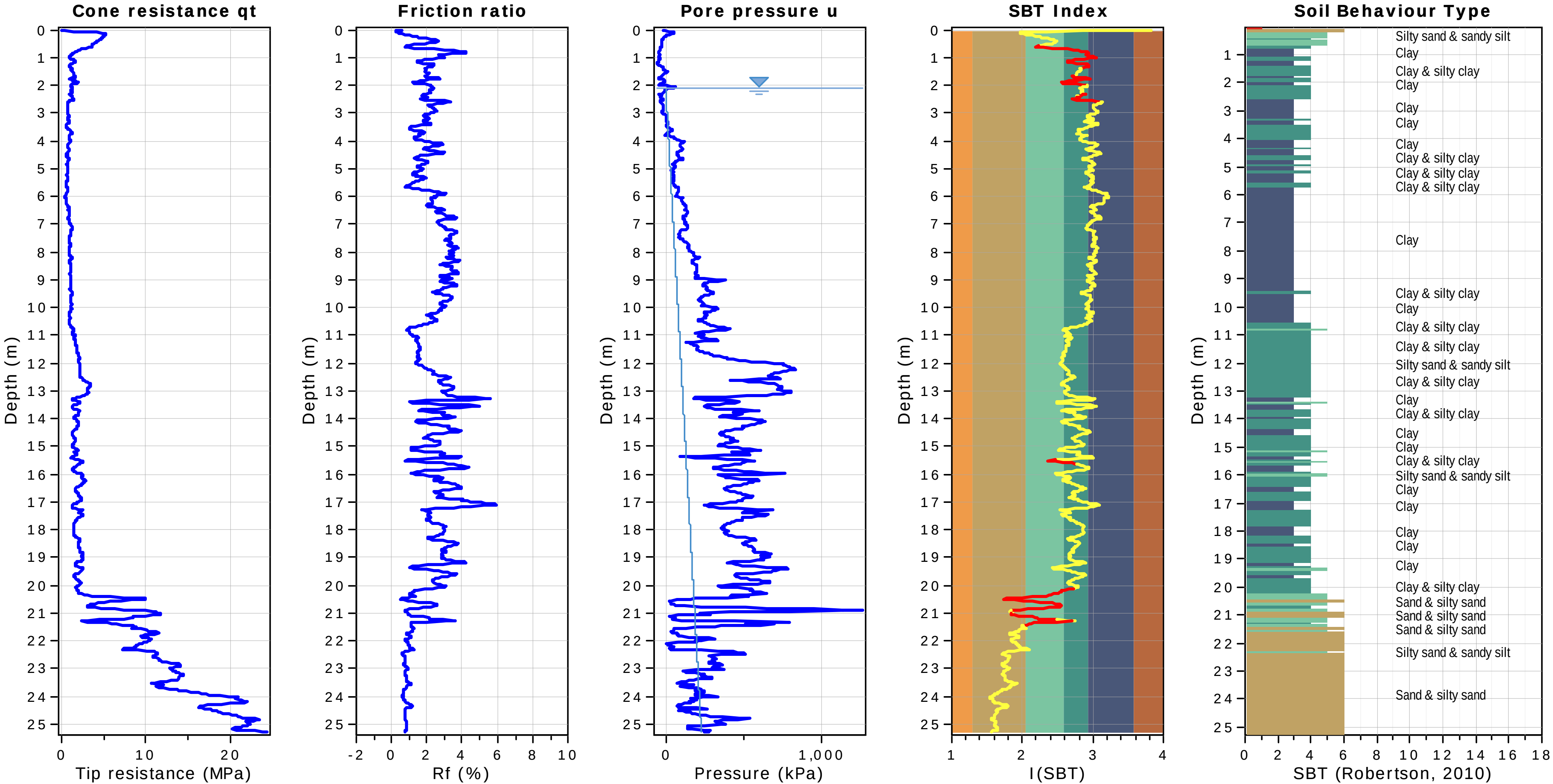
CPT: 036021P420SCPT420
Total depth: 25.28 m, Date: 13/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**

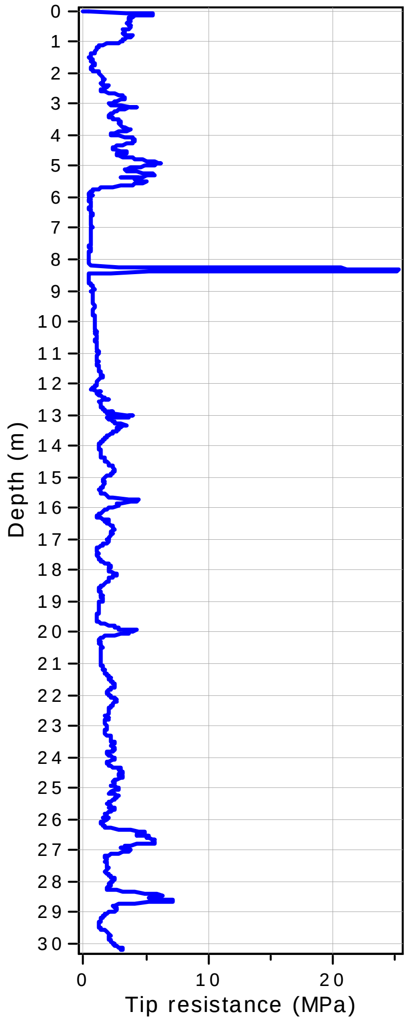


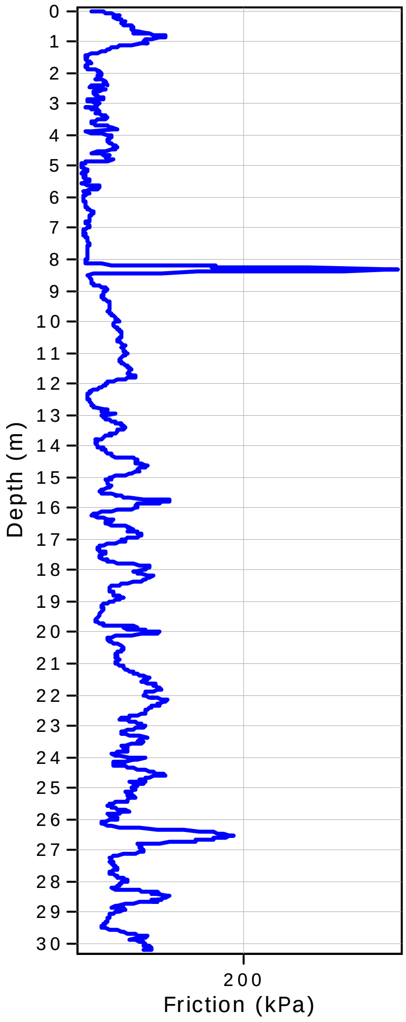
SBT legend

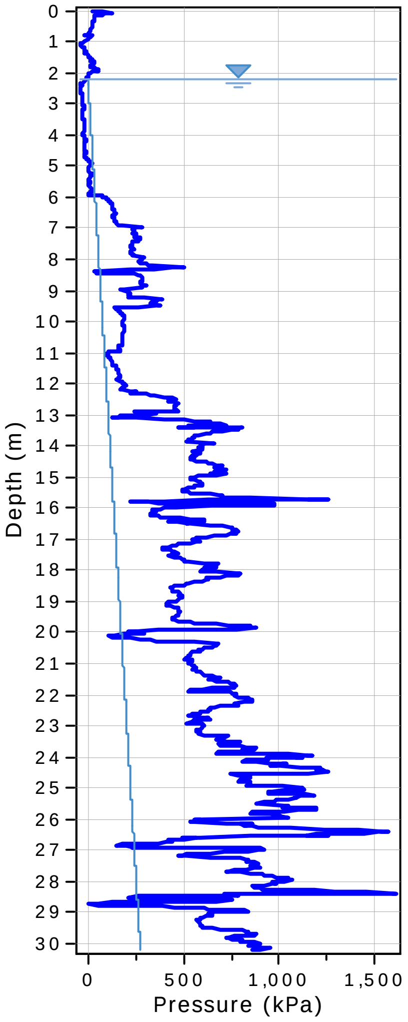
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬜ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

CPT: 036021P421SCPT421
Total depth: 30.20 m, Date: 13/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

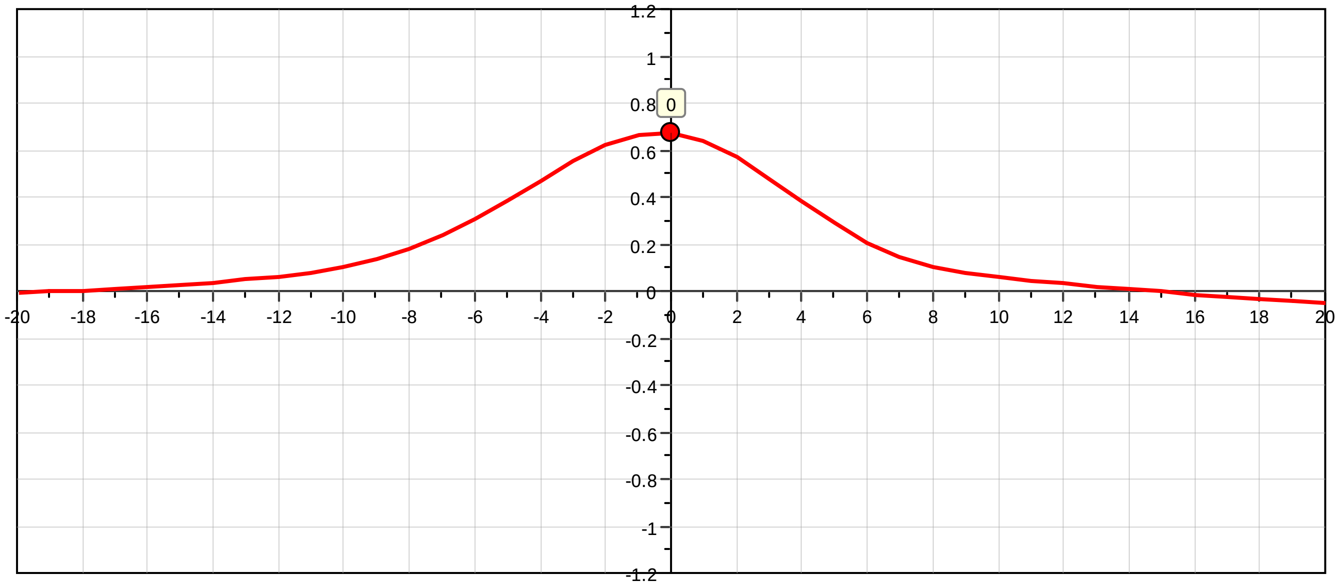
Project: **MS MEDOLLA**
Location: **MEDOLLA**


Cone resistance


Sleeve friction

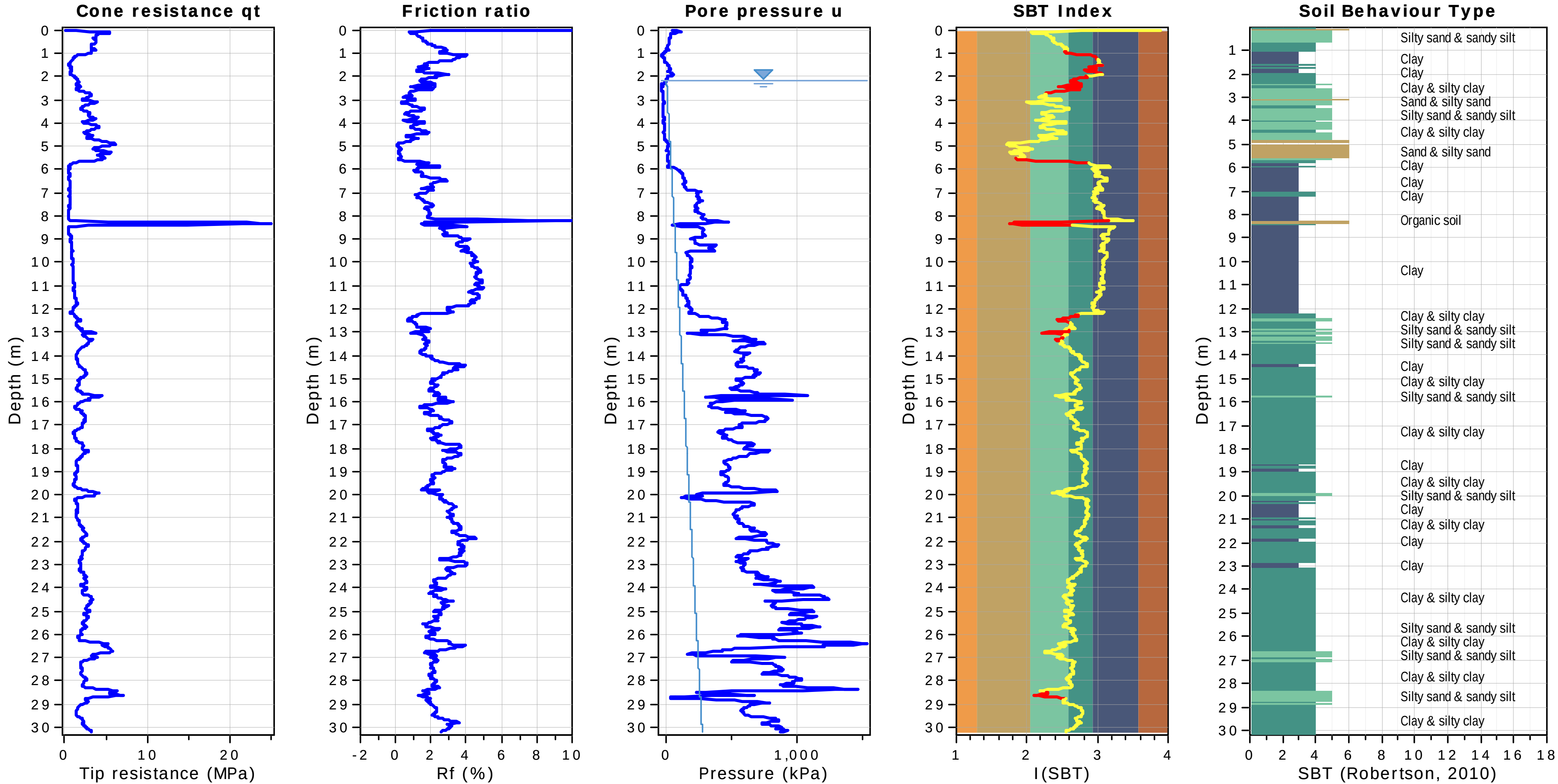

Pore pressure

The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).


Cross correlation between qc & fs

CPT: 036021P421SCPT421
Total depth: 30.20 m, Date: 13/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**



SBT legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- ■ 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟫 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ■ 8. Very stiff sand to clayey sand
- ☐ 9. Very stiff fine grained

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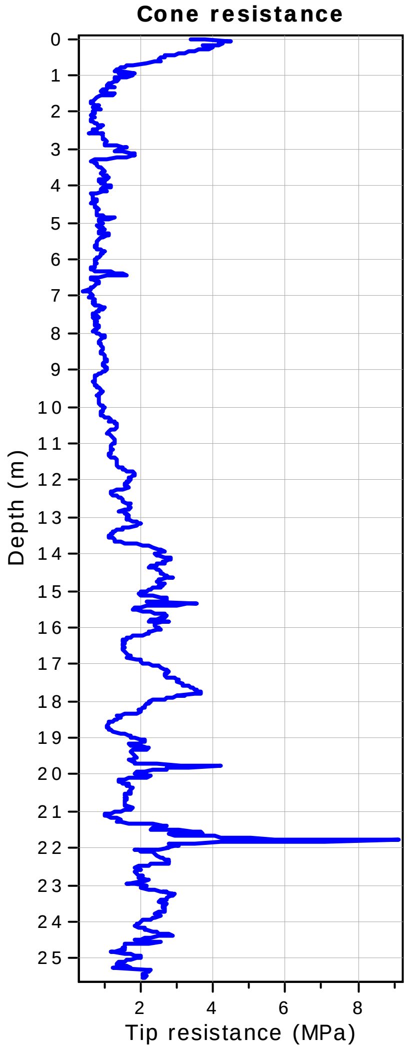
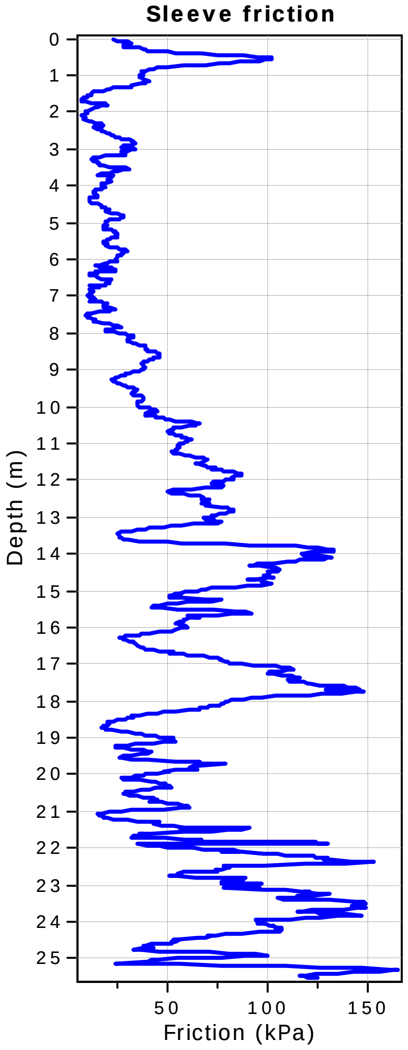
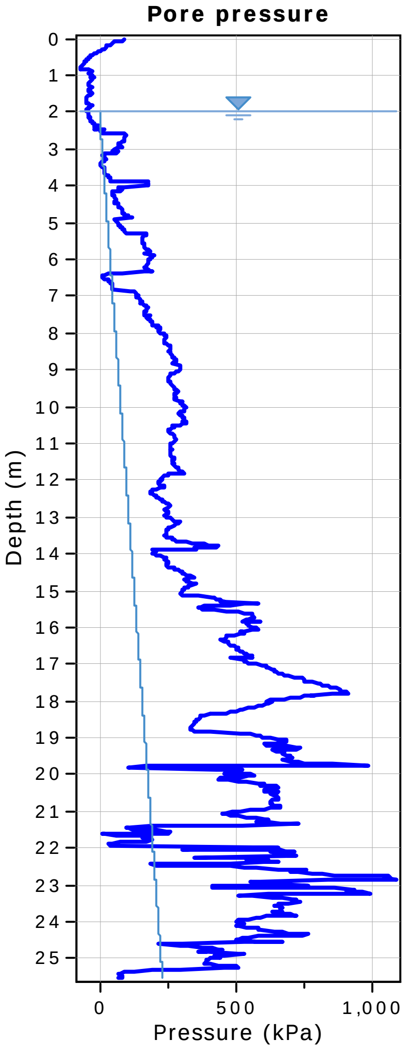
CPT: 036021P422SCPT422
Total depth: 25.52 m, Date: 13/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

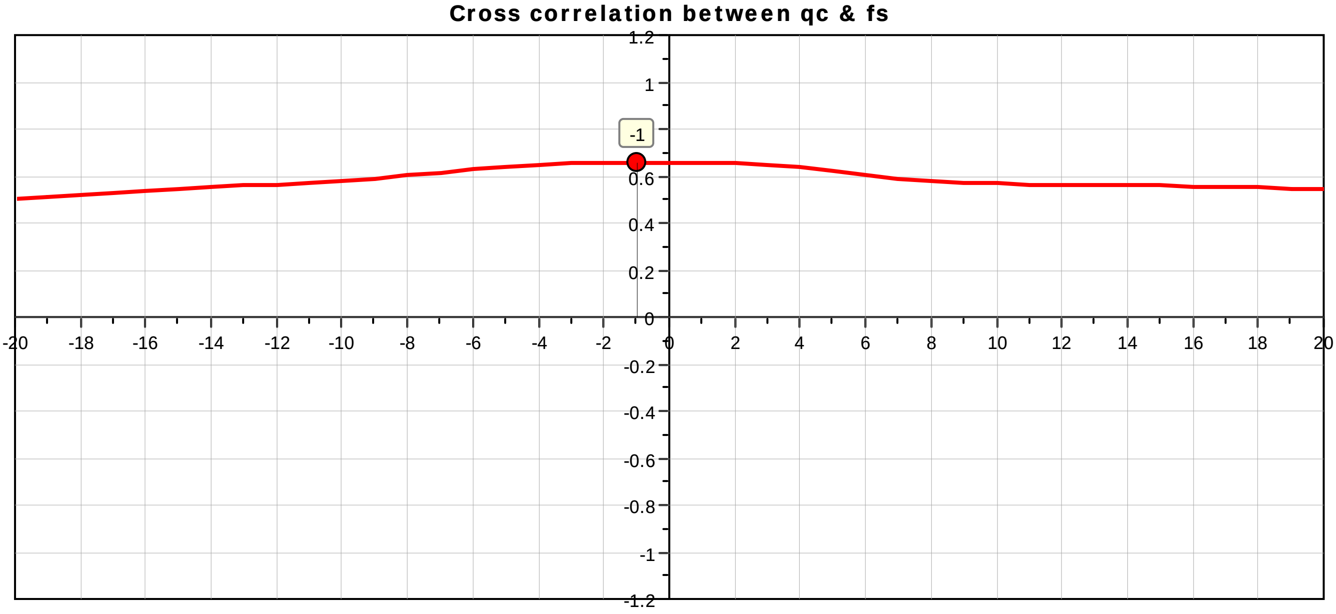
Project: **MS MEDOLLA**
Location: **MEDOLLA**







The plot below presents the cross correlation coeficient between the raw qc and fs values (as measured on the field). X axes presents the lag distance (one lag is the distance between two sucessive CPT measurements).



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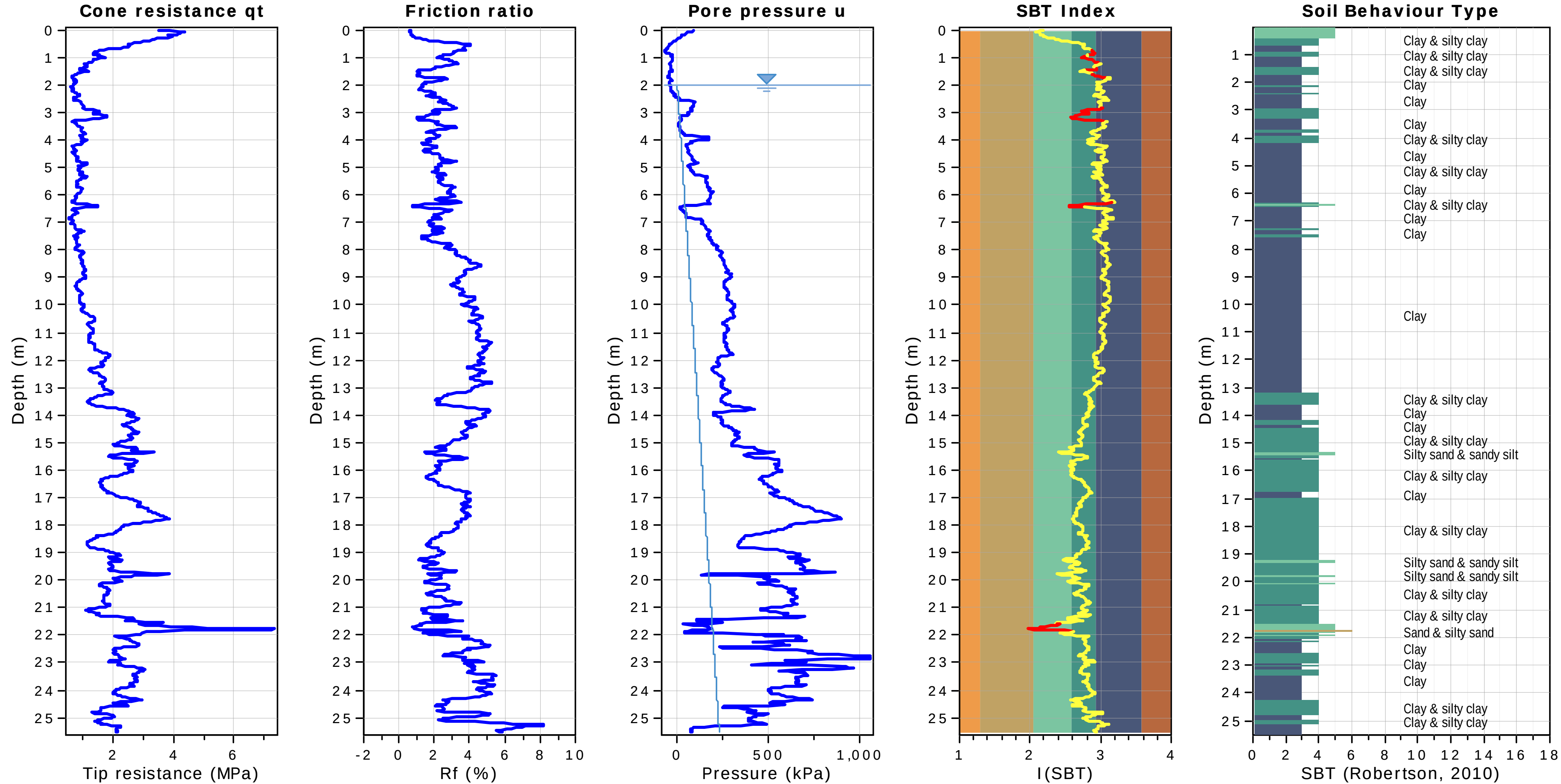
CPT: 036021P422SCPT422
Total depth: 25.52 m, Date: 13/07/2021
Surface Elevation: 0.00 m
Coords: X:0.00, Y:0.00
Cone Type:
Cone Operator:

Project: **MS MEDOLLA**
Location: **MEDOLLA**



SBT legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
▨ 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
▨ 8. Very stiff sand to clayey sand
☐ 9. Very stiff fine grained

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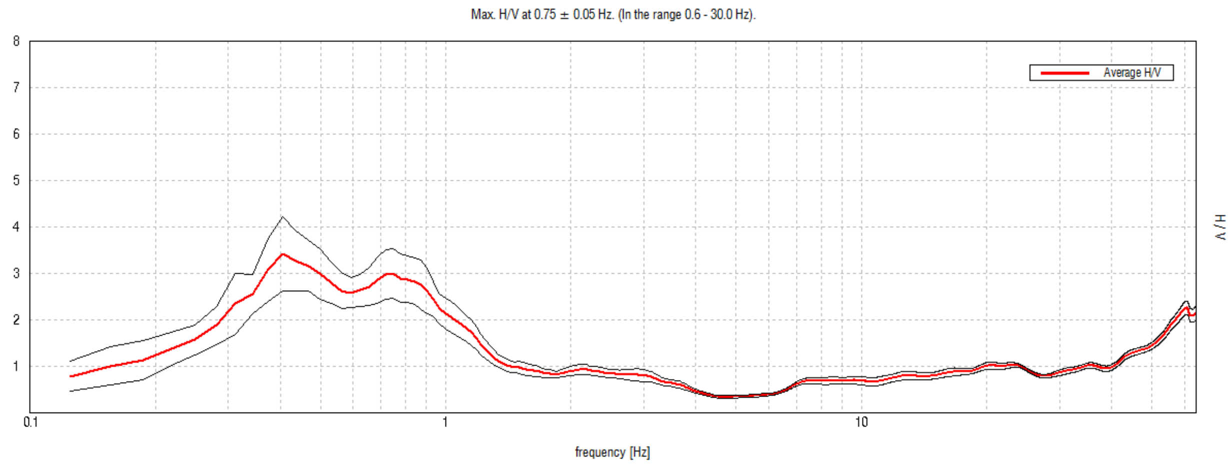
HVSR360

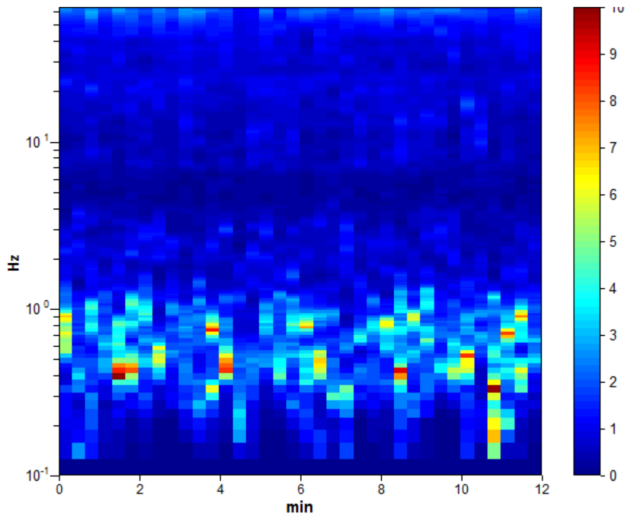
Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 29/05/2020 09:41:12 End recording: 29/05/2020 09:53:12
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS data not available

Trace length: 0h12'00". Analyzed 100% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

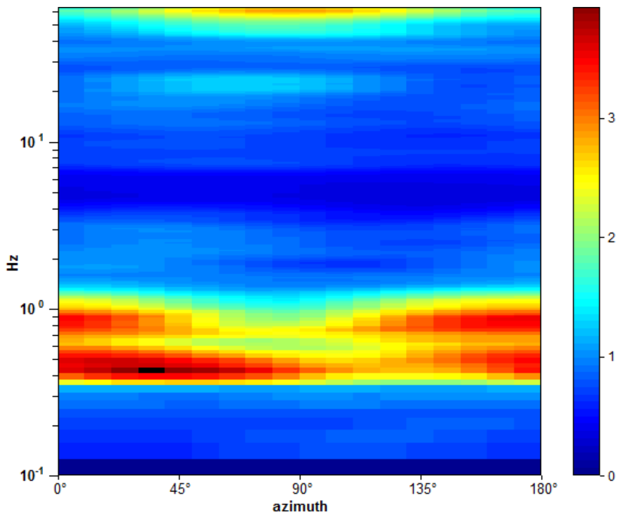
HORIZONTAL TO VERTICAL SPECTRAL RATIO



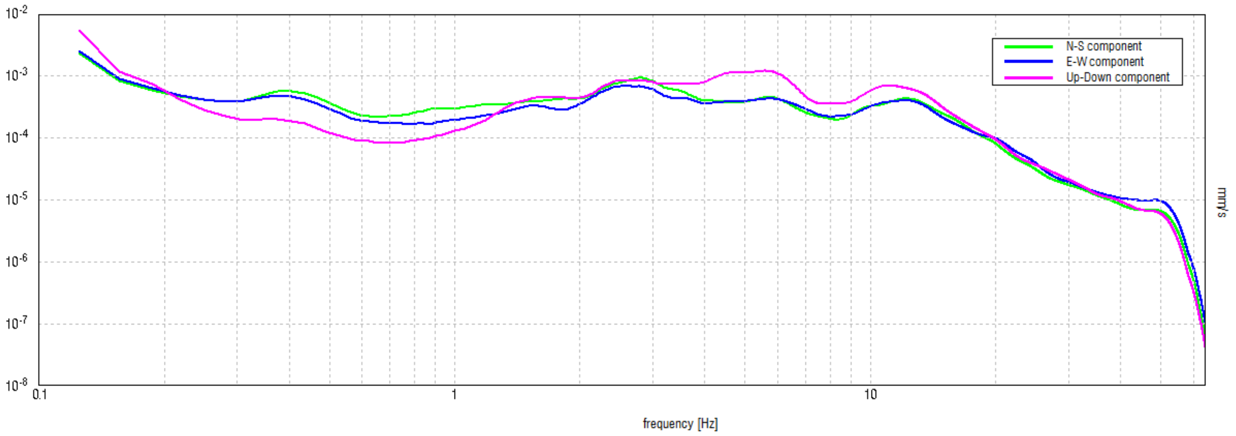
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables**.]

Max. H/V at 0.75 ± 0.05 Hz (in the range 0.6 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	0.75 > 0.50	OK	
$n_c(f_0) > 200$	540.0 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 37 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$	0.219 Hz	OK	
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.219 Hz	OK	
$A_0 > 2$	3.00 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.06172| < 0.05		NO
$\sigma_f < \varepsilon(f_0)$	0.04629 < 0.1125	OK	
$\sigma_A(f_0) < \theta(f_0)$	0.5372 < 2.0	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$					
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

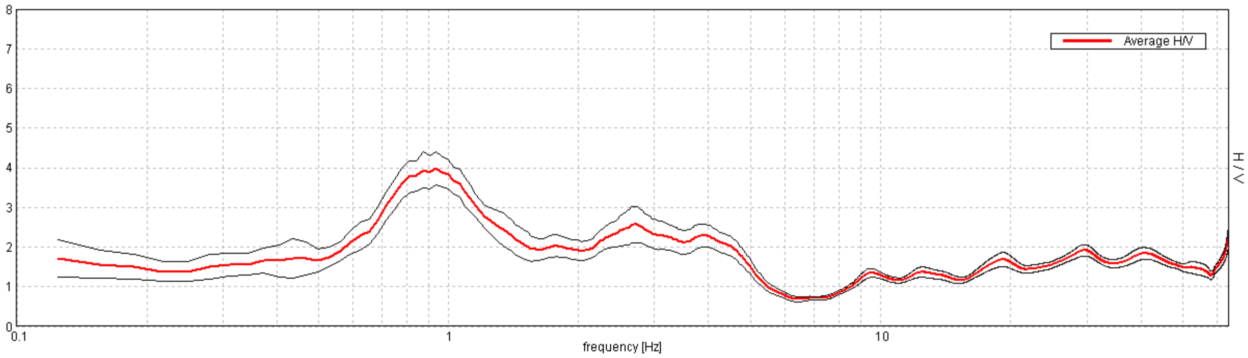
HVSR361

Instrument: TE3-0303/01-17
Data format: 32 byte
Full scale [mV]: 51
Start recording: 17/04/18 08:42:42 End recording: 17/04/18 09:02:42
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS data not available

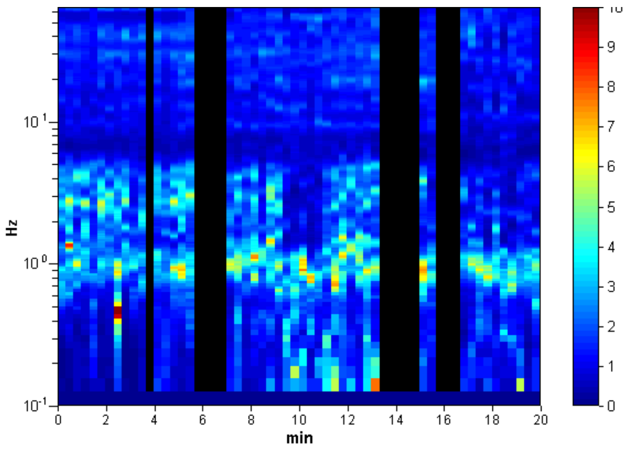
Trace length: 0h20'00". Analyzed 78% trace (manual window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

HORIZONTAL TO VERTICAL SPECTRAL RATIO

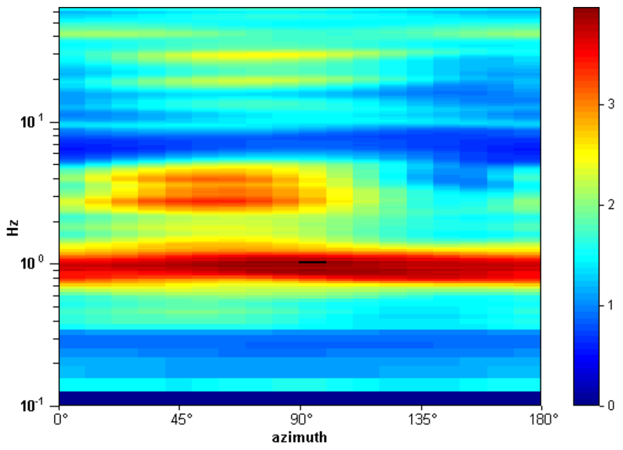
Max. H/V at 0.94 ± 0.76 Hz. (In the range 0.0 - 30.0 Hz).



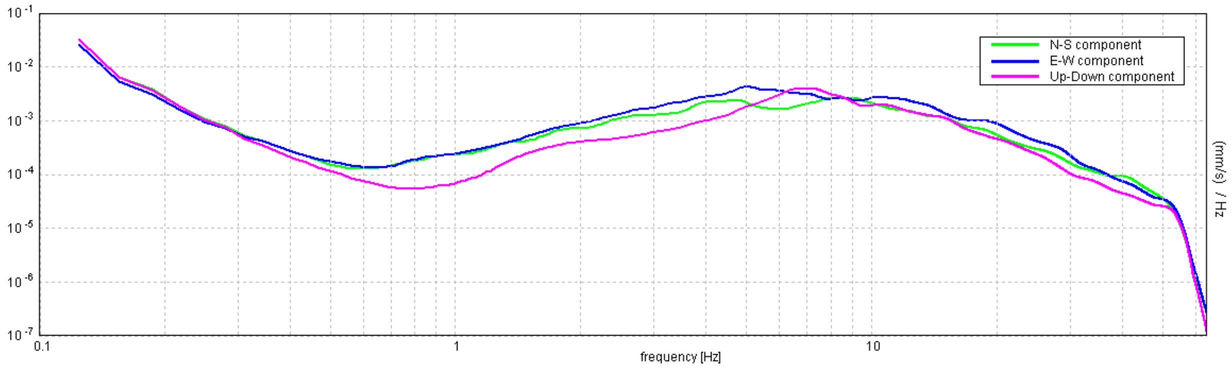
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables.**]

Max. H/V at 0.94 ± 0.76 Hz (in the range 0.0 - 30.0 Hz).

Criteria for a reliable H/V curve [All 3 should be fulfilled]			
$f_0 > 10 / L_w$	0.94 > 0.50	OK	
$n_c(f_0) > 200$	881.3 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 46 times	OK	
Criteria for a clear H/V peak [At least 5 out of 6 should be fulfilled]			
Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$	0.563 Hz	OK	
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.563 Hz	OK	
$A_0 > 2$	3.99 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.80829| < 0.05		NO
$\sigma_f < \varepsilon(f_0)$	0.75777 < 0.14063		NO
$\sigma_A(f_0) < \theta(f_0)$	0.4198 < 2.0	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

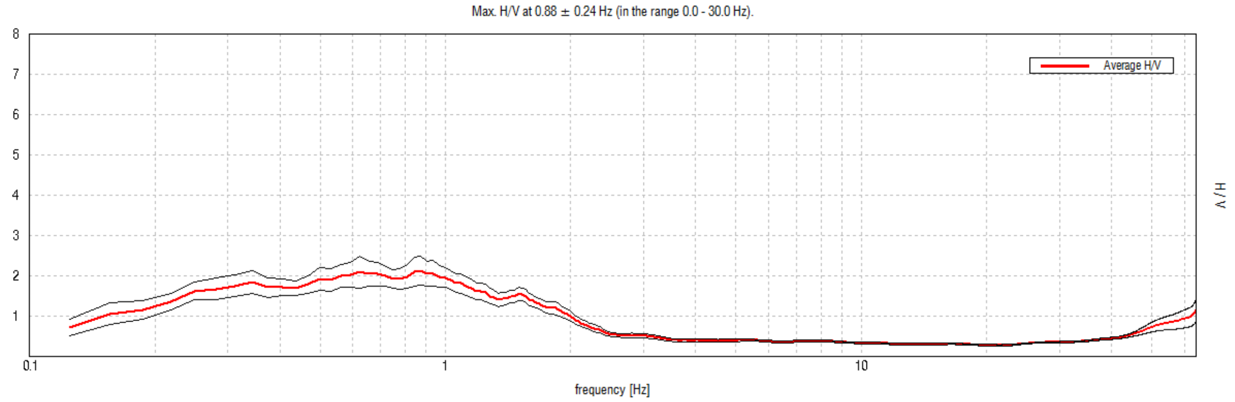
Threshold values for σ_f and $\sigma_A(f_0)$					
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

HVSR362

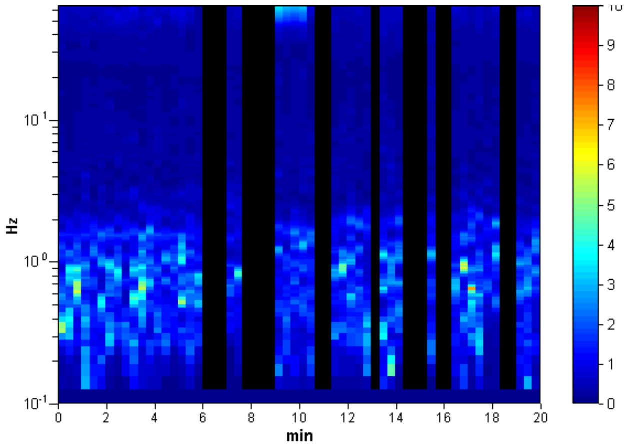
Instrument: TE3-0303/01-17
Data format: 32 byte
Full scale [mV]: 51
Start recording: 27/11/17 14:17:01 End recording: 27/11/17 14:37:01
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS data not available

Trace length: 0h20'00". Analyzed 72% trace (manual window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

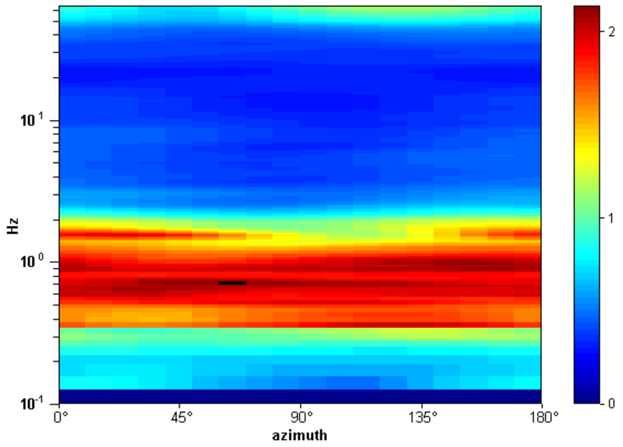
HORIZONTAL TO VERTICAL SPECTRAL RATIO



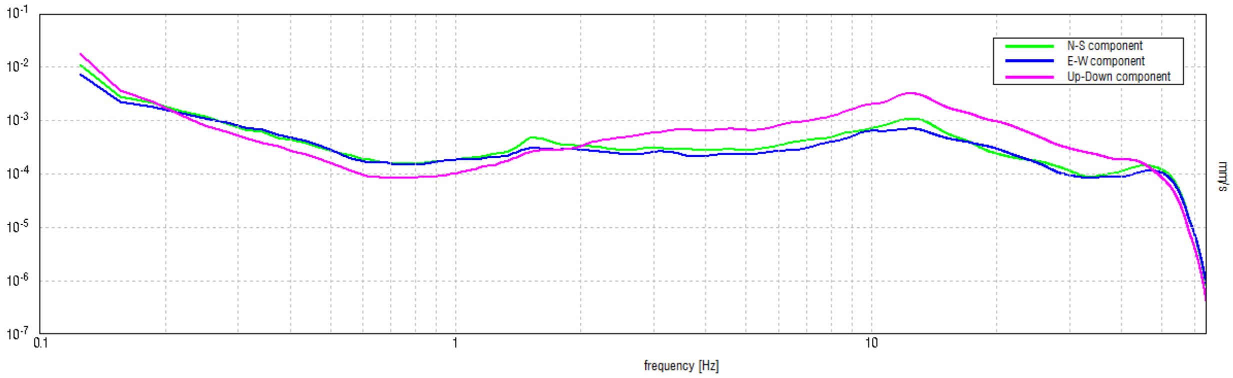
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables**.]

Max. H/V at 0.88 ± 0.24 Hz (in the range 0.0 - 30.0 Hz).

Criteria for a reliable H/V curve
[All 3 should be fulfilled]

$f_0 > 10 / L_w$	0.88 > 0.50	OK	
$n_c(f_0) > 200$	752.5 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 43 times	OK	

Criteria for a clear H/V peak
[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$			NO
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.969 Hz	OK	
$A_0 > 2$	2.13 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.27798| < 0.05		NO
$\sigma_f < \varepsilon(f_0)$	0.24323 < 0.13125		NO
$\sigma_A(f_0) < \theta(f_0)$	0.3608 < 2.0	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$

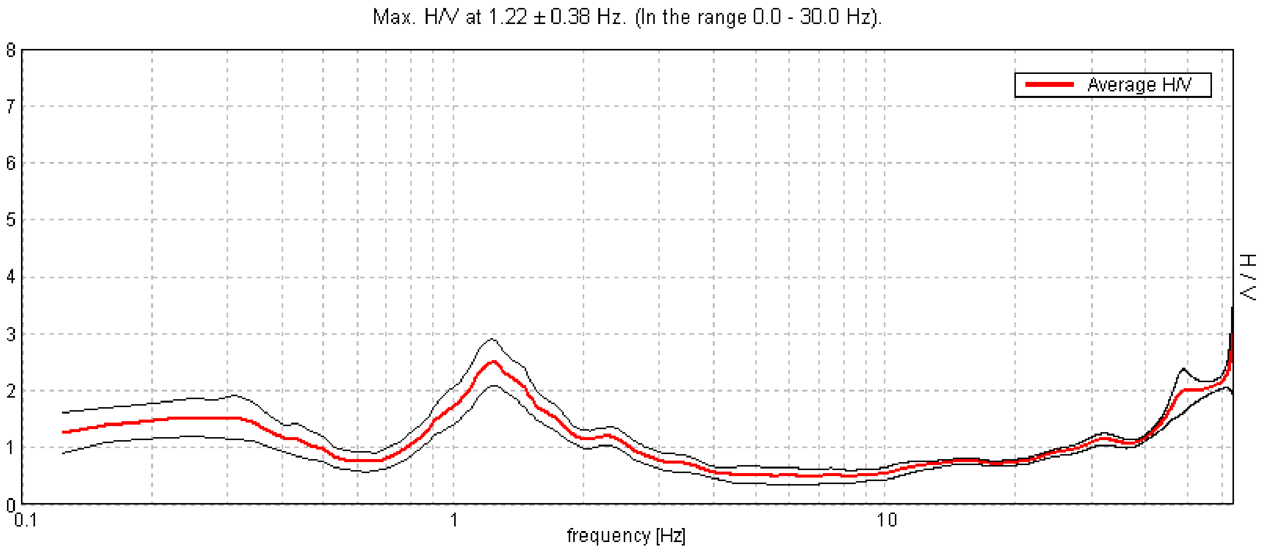
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

HVSR363

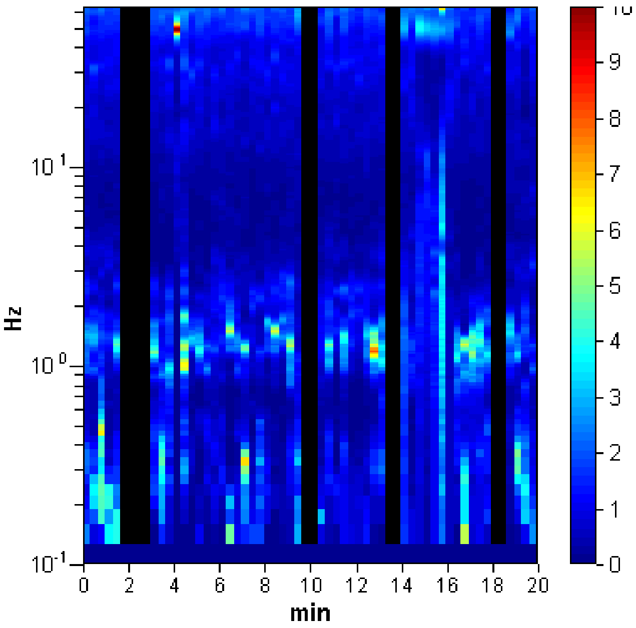
Instrument: TE3-0303/01-17
Data format: 32 byte
Full scale [mV]: 51
Start recording: 28/03/18 12:14:32 End recording: 28/03/18 12:34:32
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS data not available

Trace length: 0h20'00". Analyzed 83% trace (manual window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

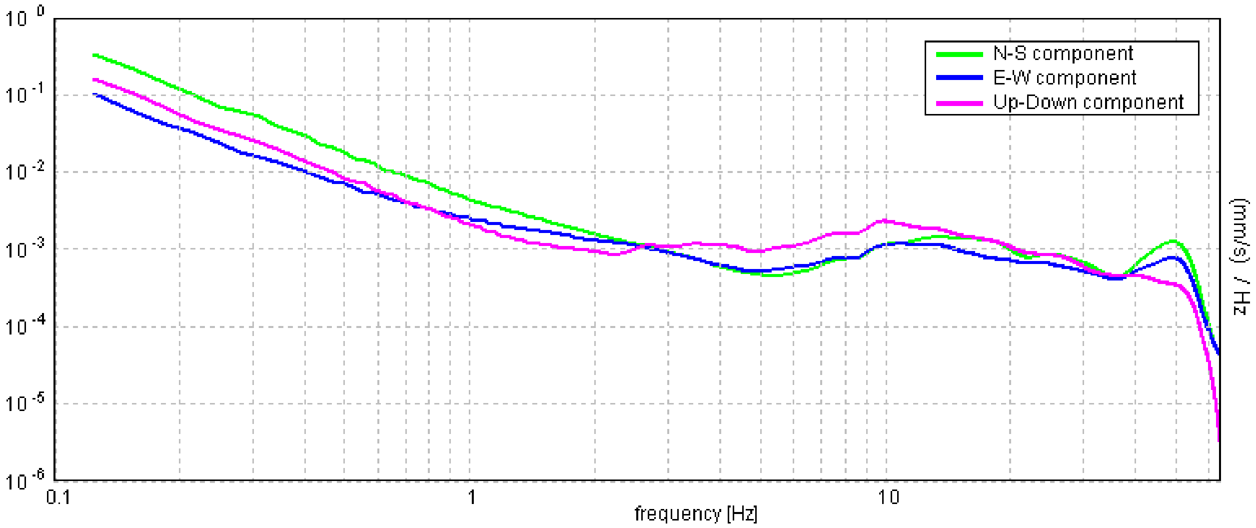
HORIZONTAL TO VERTICAL SPECTRAL RATIO



H/V TIME HISTORY



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the *Grilla* manual before interpreting the following tables.**]

Max. H/V at 1.22 ± 0.38 Hz (in the range 0.0 - 30.0 Hz).

Criteria for a reliable H/V curve
[All 3 should be fulfilled]

$f_0 > 10 / L_w$	1.22 > 0.50	OK	
$n_c(f_0) > 200$	1218.8 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ $\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$	Exceeded 0 out of 60 times	OK	

Criteria for a clear H/V peak
[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0] \mid A_{H/V}(f^-) < A_0 / 2$	0.844 Hz	OK	
Exists f^+ in $[f_0, 4f_0] \mid A_{H/V}(f^+) < A_0 / 2$	1.875 Hz	OK	
$A_0 > 2$	2.50 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	$\lvert 0.30874 \rvert < 0.05$		NO
$\sigma_f < \varepsilon(f_0)$	0.37627 < 0.12188		NO
$\sigma_A(f_0) < \theta(f_0)$	0.4086 < 1.78	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$

Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	$0.25\ f_0$	$0.2\ f_0$	$0.15\ f_0$	$0.10\ f_0$	$0.05\ f_0$
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

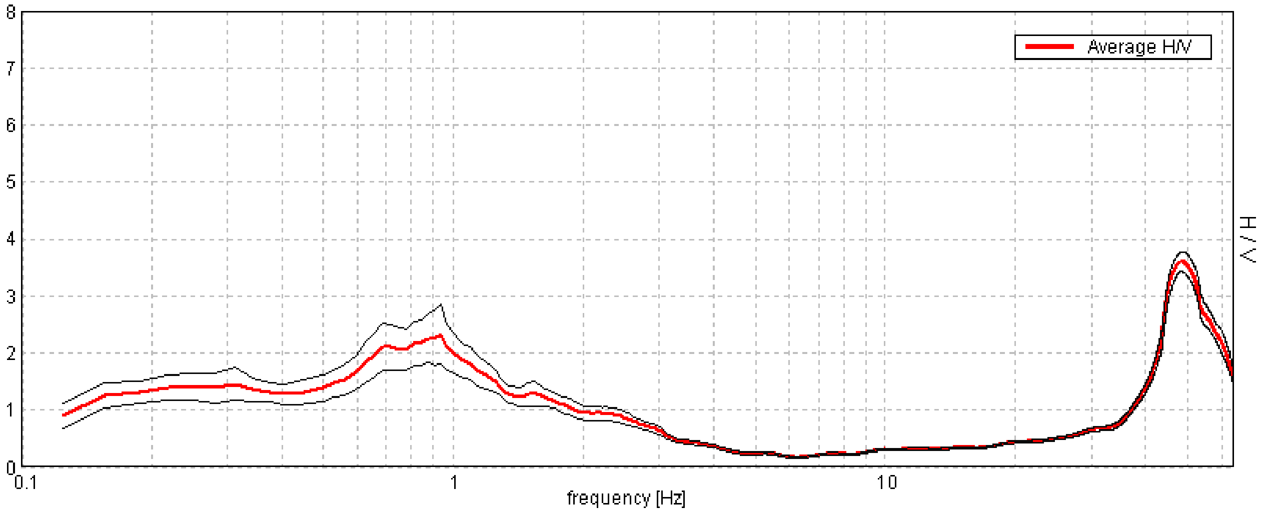
HVSR364

Instrument: TE3-0303/01-17
Data format: 16 byte
Full scale [mV]: 51
Start recording: 31/07/18 12:28:50 End recording: 31/07/18 12:48:50
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS data not available

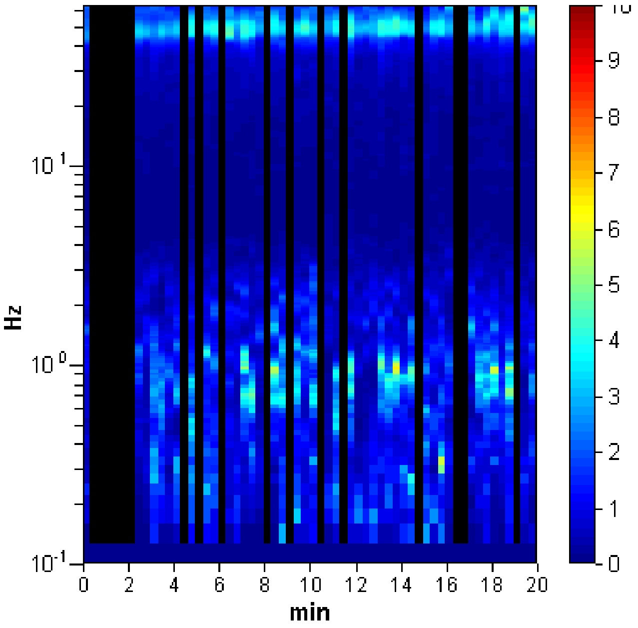
Trace length: 0h20'00". Analyzed 72% trace (manual window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

HORIZONTAL TO VERTICAL SPECTRAL RATIO

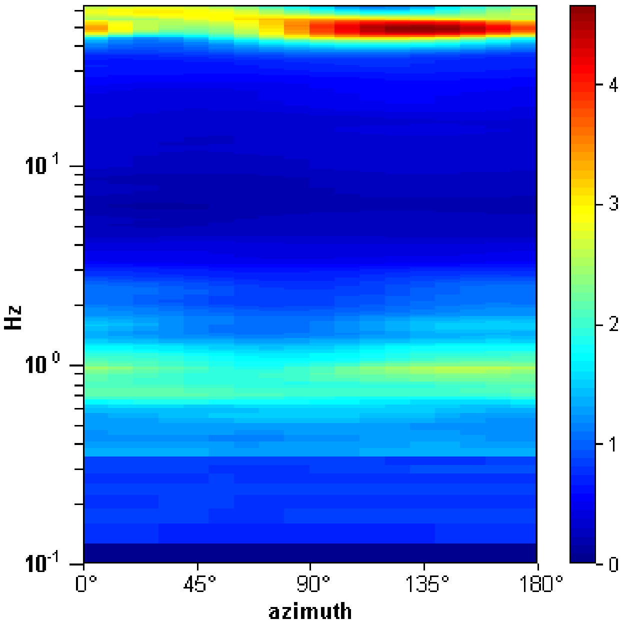
Max. H/V at 0.94 ± 0.18 Hz. (In the range 0.0 - 30.0 Hz).



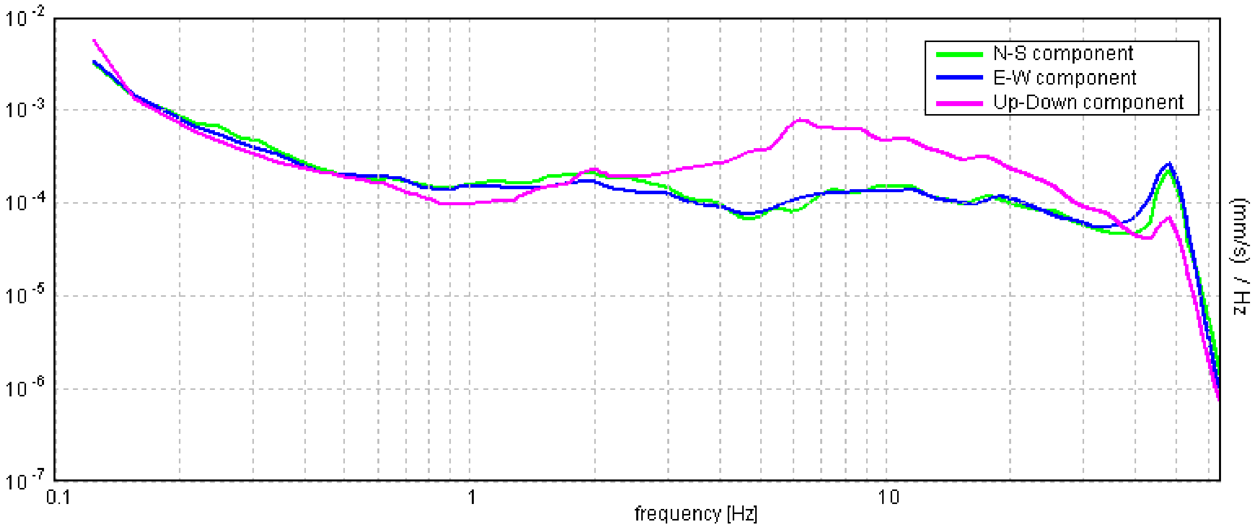
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables.**]

Max. H/V at 0.94 ± 0.18 Hz (in the range 0.0 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	0.94 > 0.50	OK	
$n_c(f_0) > 200$	806.3 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 46 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$			NO
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.719 Hz	OK	
$A_0 > 2$	2.33 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.18972| < 0.05		NO
$\sigma_f < \varepsilon(f_0)$	0.17787 < 0.14063		NO
$\sigma_A(f_0) < \theta(f_0)$	0.5156 < 2.0	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$					
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

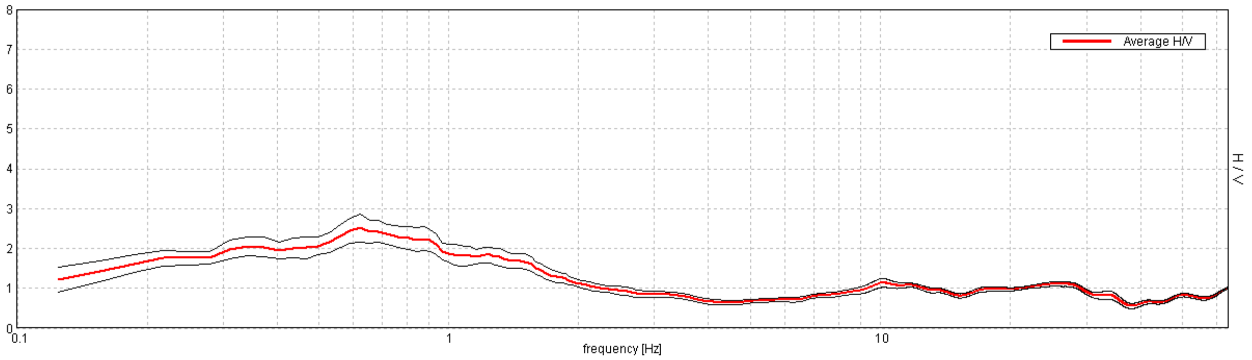
HVSR366

Instrument:	TE3-0303/01-17
Data format: 16 byte
Full scale [mV]: 51
Start recording: 26/11/19 12:02:24		End recording:	26/11/19 12:22:24
Channel labels:	NORTH SOUTH;	EAST WEST ;	UP	DOWN
GPS data not available

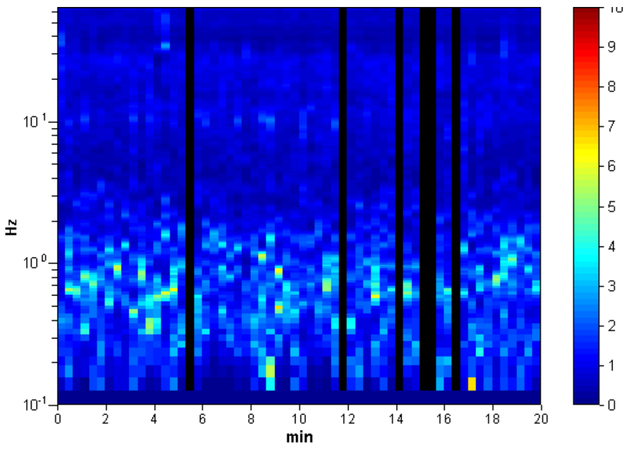
Trace length:	0h20'00".	Analyzed 90% trace (manual window selection)
Sampling rate:	128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

HORIZONTAL TO VERTICAL SPECTRAL RATIO

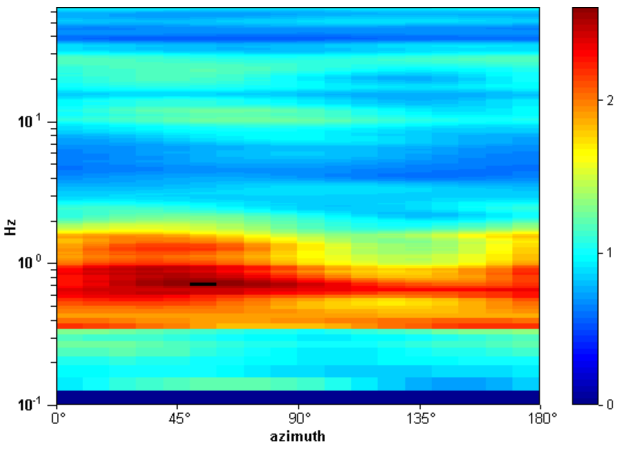
Max. H/V at 0.63 ± 0.06 Hz. (In the range 0.0 - 30.0 Hz).



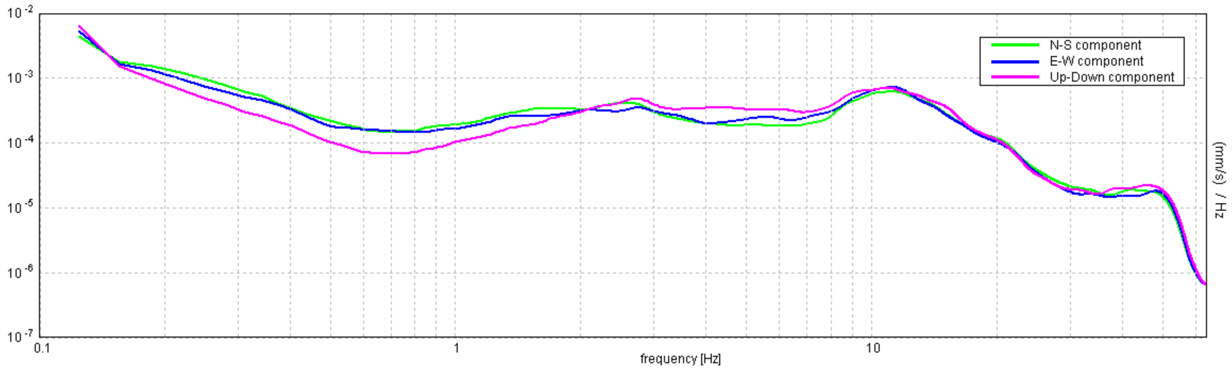
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables**.]

Max. H/V at 0.63 ± 0.06 Hz (in the range 0.0 - 30.0 Hz).

Criteria for a reliable H/V curve [All 3 should be fulfilled]			
$f_0 > 10 / L_w$	0.63 > 0.50	OK	
$n_c(f_0) > 200$	675.0 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5$Hz **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5$Hz**	Exceeded 0 out of 31 times	OK	
Criteria for a clear H/V peak [At least 5 out of 6 should be fulfilled]			
Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$			NO
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.875 Hz	OK	
$A_0 > 2$	2.51 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.09255| < 0.05		NO
$\sigma_f < \varepsilon(f_0)$	0.05784 < 0.09375	OK	
$\sigma_A(f_0) < \theta(f_0)$	0.3488 < 2.0	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

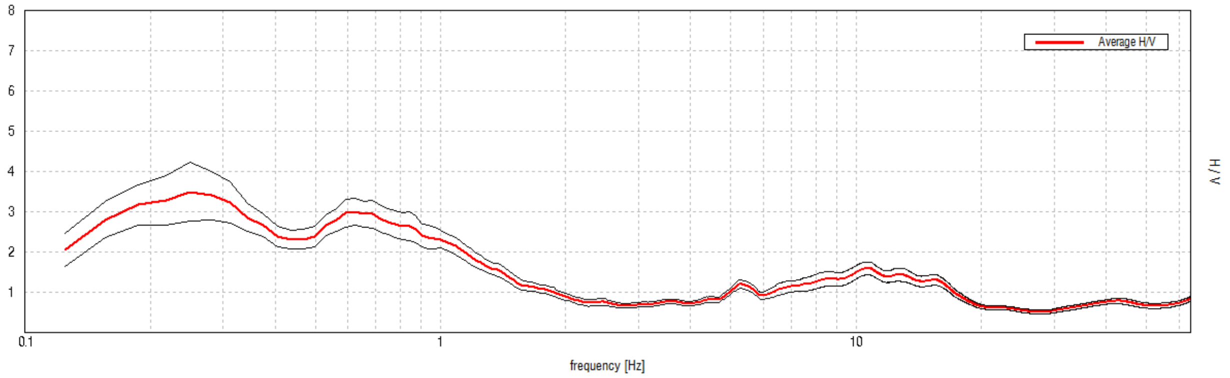
Threshold values for σ_f and $\sigma_A(f_0)$					
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

HVSR366

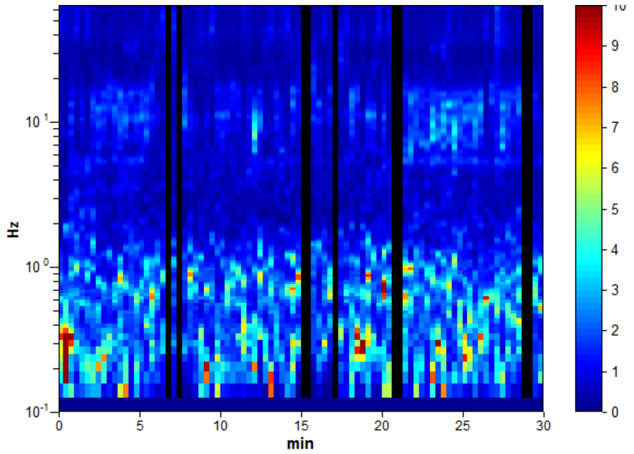
Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 18/02/2021 10:00:34 End recording: 18/02/2021 10:30:34
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°03.8846 E, 44°49.0499 N (7.4 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 8
Trace length: 0h30'00". Analyzed 90% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

HORIZONTAL TO VERTICAL SPECTRAL RATIO

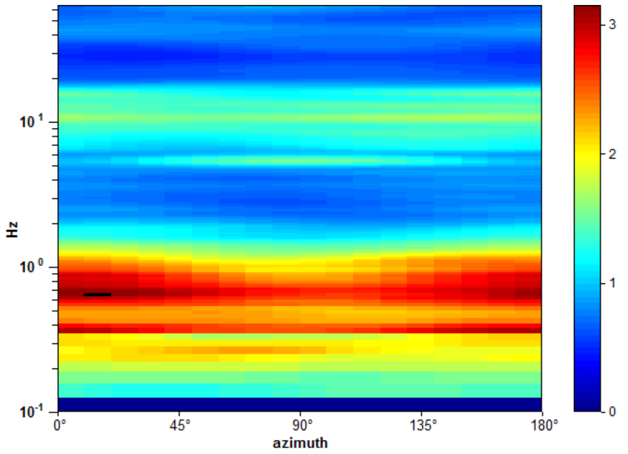
Max. H/V at 0.63 ± 0.11 Hz (in the range 0.6 - 30.0 Hz).



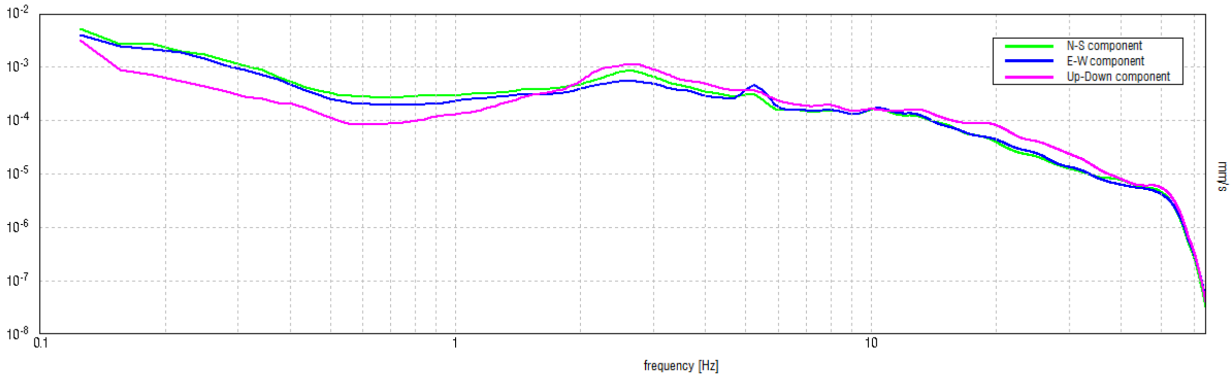
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables**.]

Max. H/V at 0.63 ± 0.11 Hz (in the range 0.6 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	0.63 > 0.50	OK	
$n_c(f_0) > 200$	1012.5 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 31 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$			NO
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.438 Hz	OK	
$A_0 > 2$	3.01 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.18113| < 0.05		NO
$\sigma_f < \varepsilon(f_0)$	0.11321 < 0.09375		NO
$\sigma_A(f_0) < \theta(f_0)$	0.3324 < 2.0	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

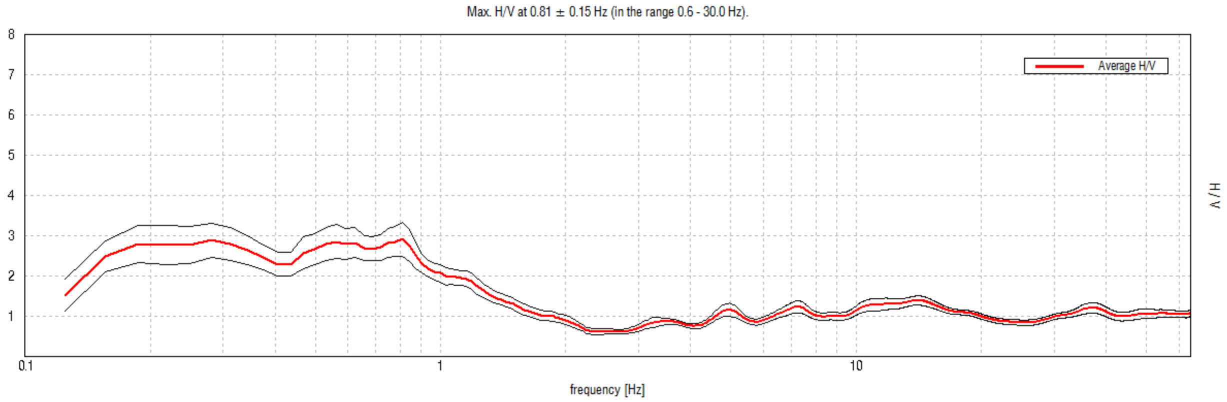
Threshold values for σ_f and $\sigma_A(f_0)$

Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

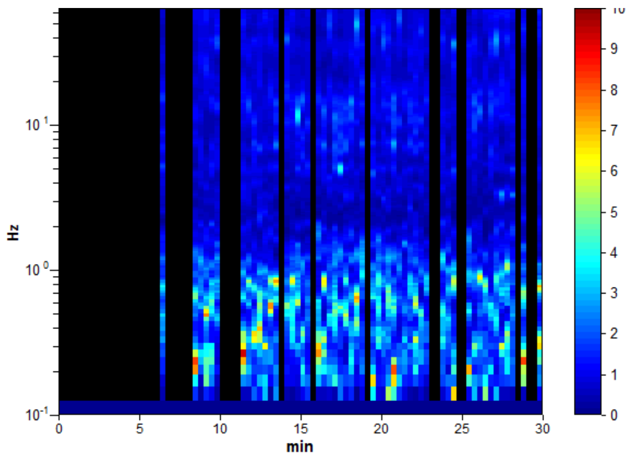
HVSR367

Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 18/02/2021 10:35:14 End recording: 18/02/2021 11:05:14
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°03.5288 E, 44°49.1871 N (-4.2 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 7
Trace length: 0h30'00''. Analyzed 58% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

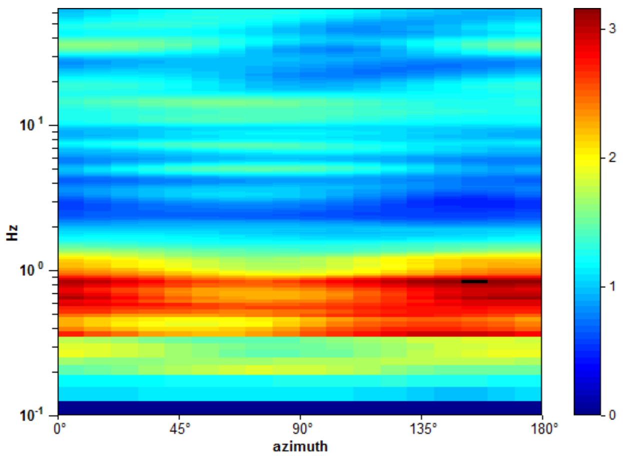
HORIZONTAL TO VERTICAL SPECTRAL RATIO



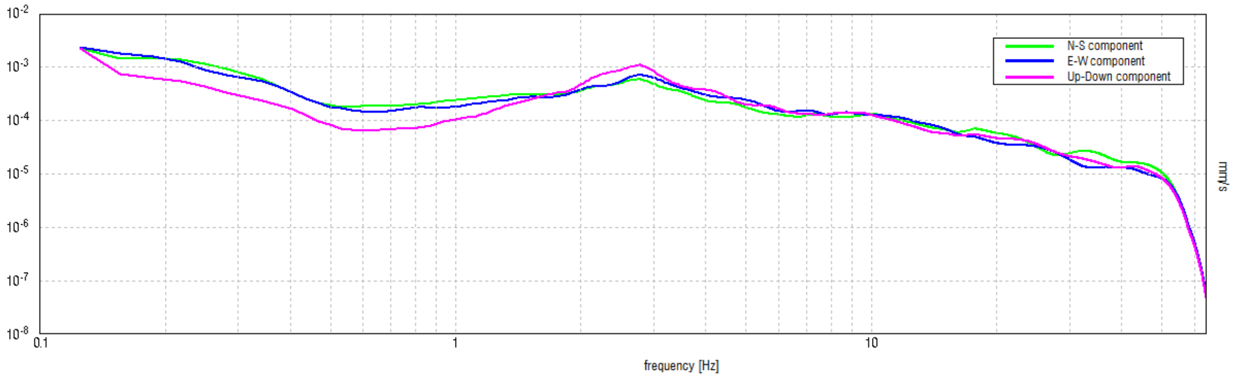
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables.**]

Max. H/V at 0.81 ± 0.15 Hz (in the range 0.6 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	0.81 > 0.50	OK	
$n_c(f_0) > 200$	845.0 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 40 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0] \mid A_{H/V}(f^-) < A_0 / 2$			NO
Exists f^+ in $[f_0, 4f_0] \mid A_{H/V}(f^+) < A_0 / 2$	1.375 Hz	OK	
$A_0 > 2$	2.92 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.17874| < 0.05		NO
$\sigma_f < \varepsilon(f_0)$	0.14522 < 0.12188		NO
$\sigma_A(f_0) < \theta(f_0)$	0.4231 < 2.0	OK	

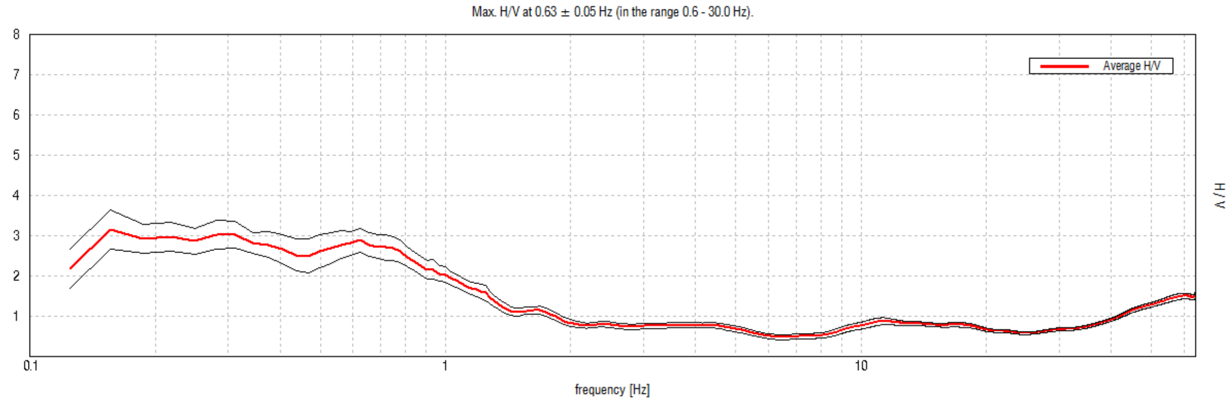
L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$					
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

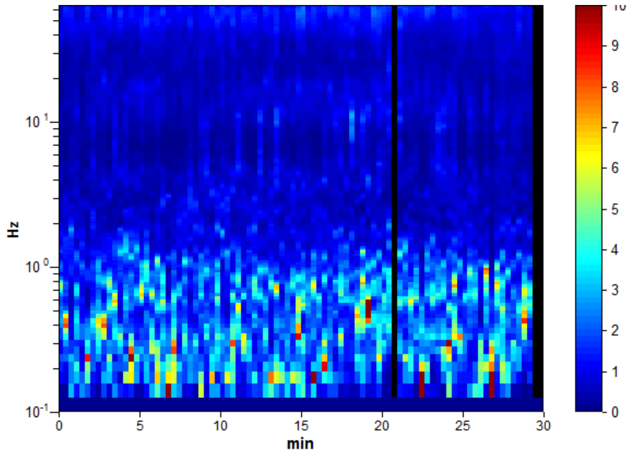
HVSR368

Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 18/02/2021 11:13:01 End recording: 18/02/2021 11:43:01
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°04.5768 E, 44°49.1749 N (-2.9 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 6
Trace length: 0h30'00''. Analyzed 97% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

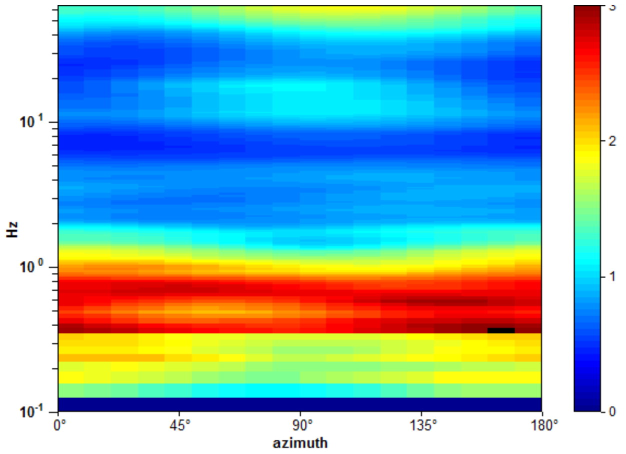
HORIZONTAL TO VERTICAL SPECTRAL RATIO


Max. H/V at 0.63 ± 0.05 Hz (in the range 0.6 - 30.0 Hz).

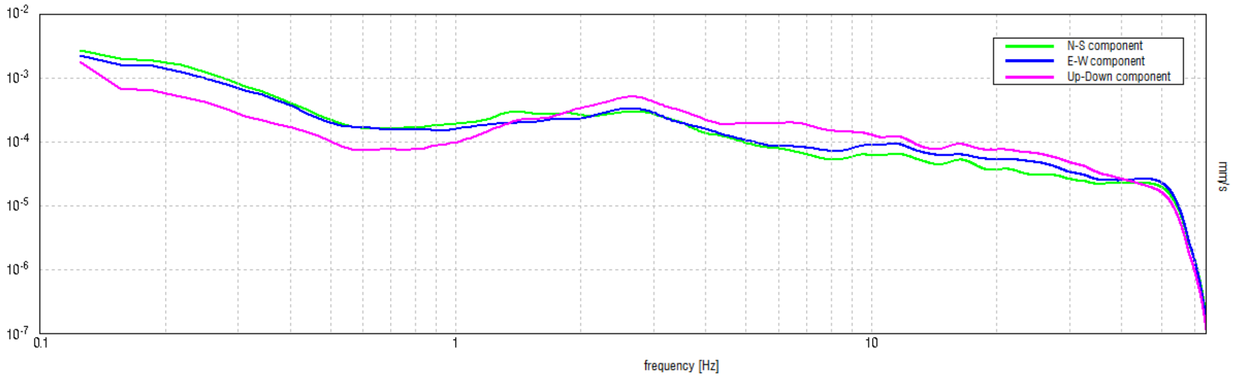
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables.**]

Max. H/V at 0.63 ± 0.05 Hz (in the range 0.6 - 30.0 Hz).

Criteria for a reliable H/V curve [All 3 should be fulfilled]			
$f_0 > 10 / L_w$	0.63 > 0.50	OK	
$n_c(f_0) > 200$	1087.5 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ $\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$	Exceeded 0 out of 31 times	OK	
Criteria for a clear H/V peak [At least 5 out of 6 should be fulfilled]			
Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$			NO
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.313 Hz	OK	
$A_0 > 2$	2.89 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.07619| < 0.05		NO
$\sigma_f < \varepsilon(f_0)$	0.04762 < 0.09375	OK	
$\sigma_A(f_0) < \theta(f_0)$	0.305 < 2.0	OK	

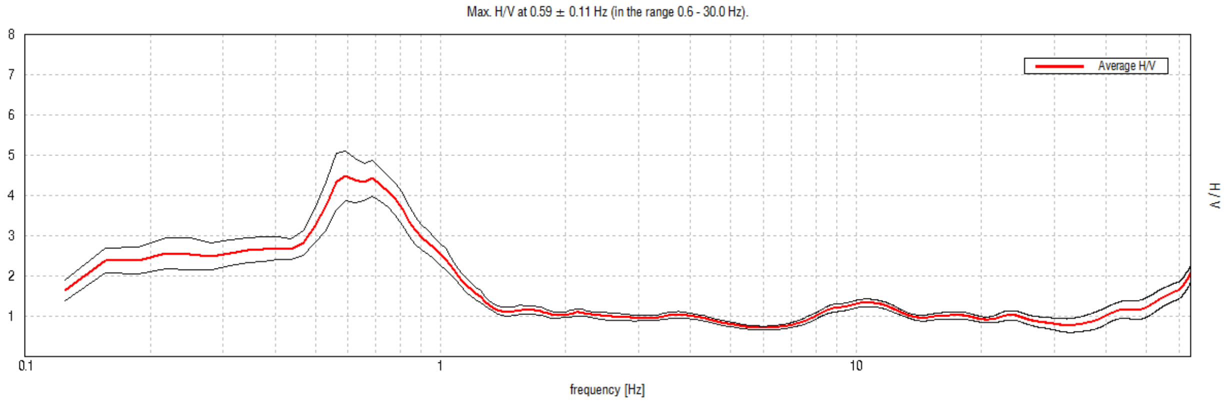
L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$					
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

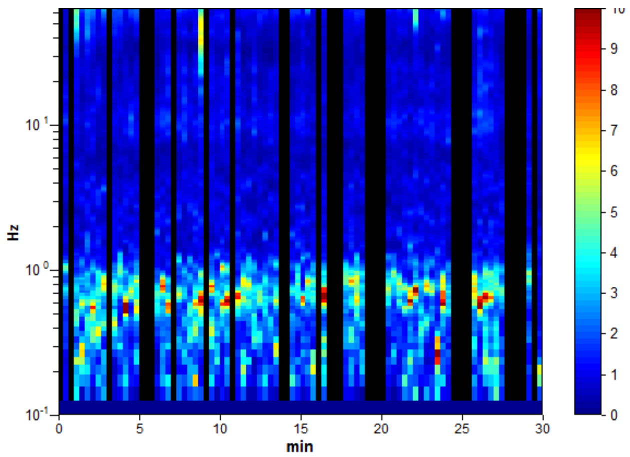
HG37, MEDOLLA 0004

Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 18/02/2021 12:56:33 End recording: 18/02/2021 13:26:33
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°04.6176 E, 44°50.6025 N (7.5 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 7
Trace length: 0h30'00". Analyzed 69% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

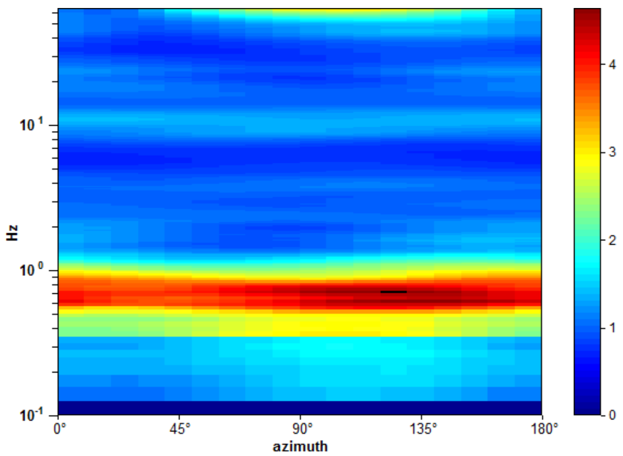
HORIZONTAL TO VERTICAL SPECTRAL RATIO



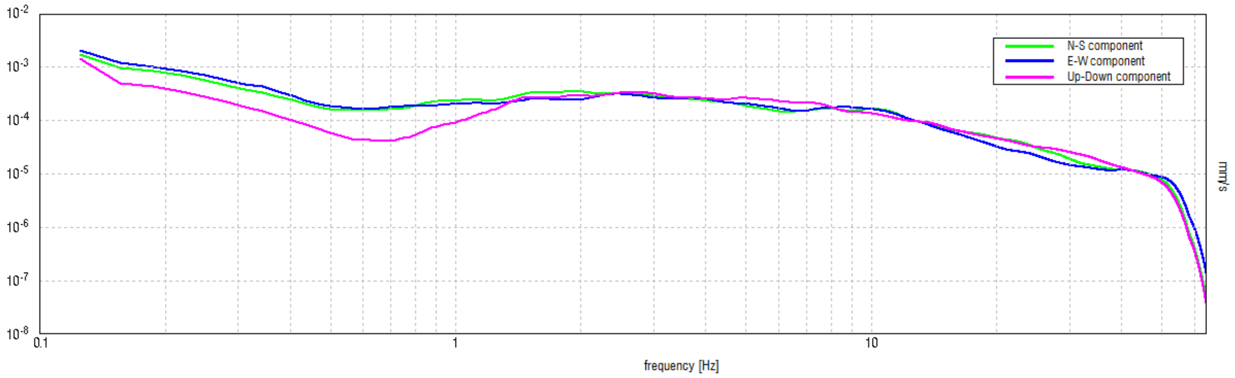
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables.**]

Max. H/V at 0.59 ± 0.11 Hz (in the range 0.6 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	0.59 > 0.50	OK	
$n_c(f_0) > 200$	736.3 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5\text{Hz}$ $\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5\text{Hz}$	Exceeded 0 out of 30 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0] \mid A_{H/V}(f^-) < A_0 / 2$			NO
Exists f^+ in $[f_0, 4f_0] \mid A_{H/V}(f^+) < A_0 / 2$	1.094 Hz	OK	
$A_0 > 2$	4.48 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.17723| < 0.05		NO
$\sigma_f < \varepsilon(f_0)$	0.10523 < 0.08906		NO
$\sigma_A(f_0) < \theta(f_0)$	0.6136 < 2.0	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

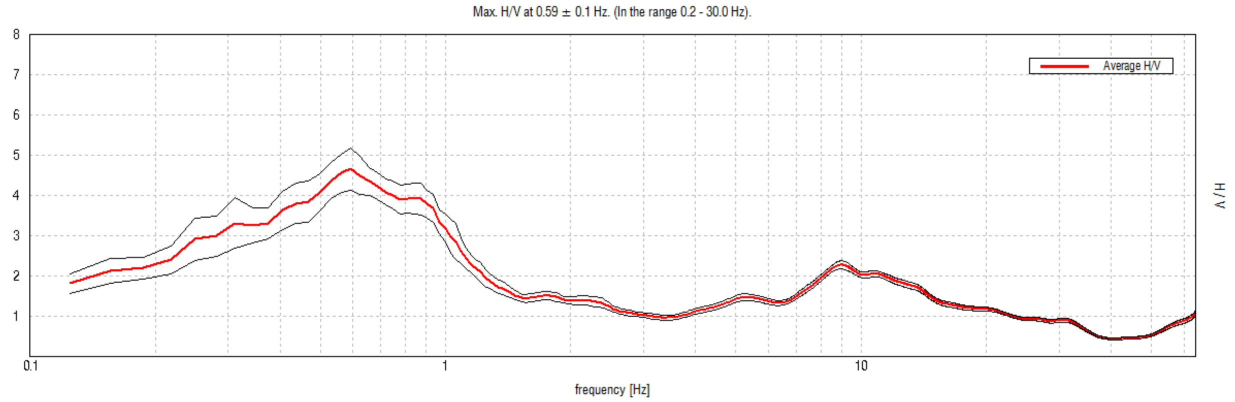
Threshold values for σ_f and $\sigma_A(f_0)$

Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

HVSR370

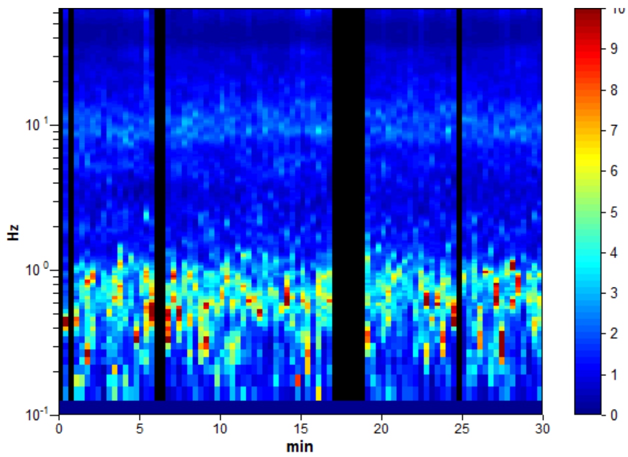
Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 12/03/2021 10:16:09 End recording: 12/03/2021 10:46:09
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°05.3010 E, 44°52.2567 N (12.6 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 8
Trace length: 0h30'00". Analyzed 88% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

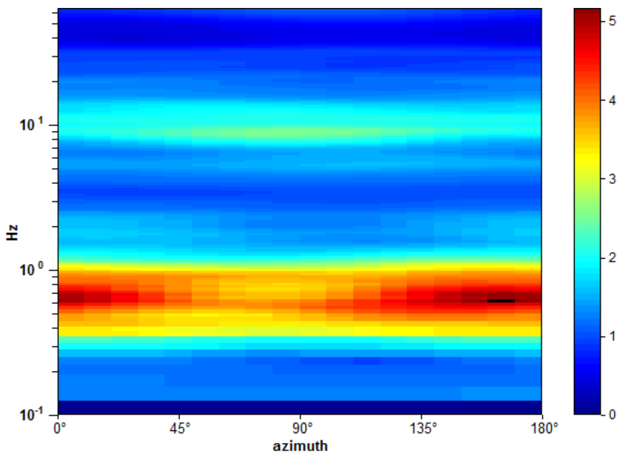
HORIZONTAL TO VERTICAL SPECTRAL RATIO



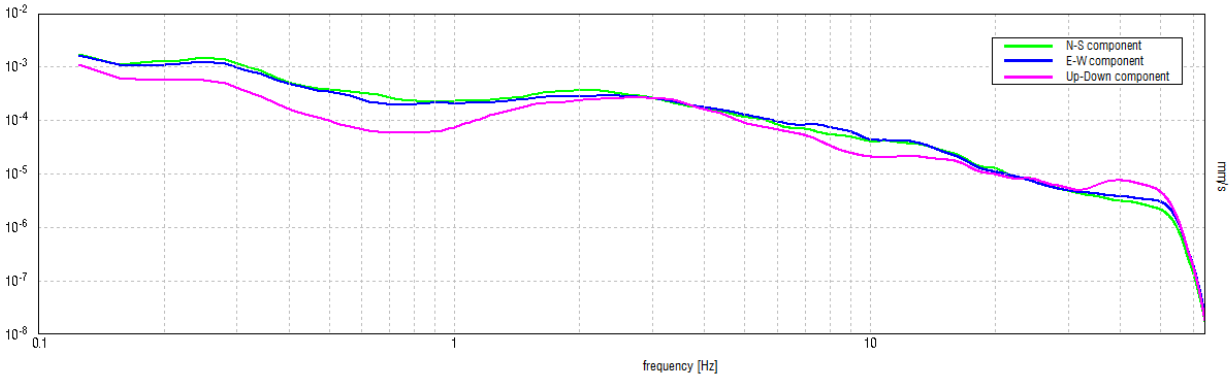
H/V TIME HISTORY

DIRECTIONAL H/V





SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables.**]

Max. H/V at 0.59 ± 0.1 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	0.59 > 0.50	OK	
$n_c(f_0) > 200$	938.1 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 30 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$	0.188 Hz	OK	
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.156 Hz	OK	
$A_0 > 2$	4.65 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.16591| < 0.05		NO
$\sigma_f < \varepsilon(f_0)$	0.09851 < 0.08906		NO
$\sigma_A(f_0) < \theta(f_0)$	0.5198 < 2.0	OK	

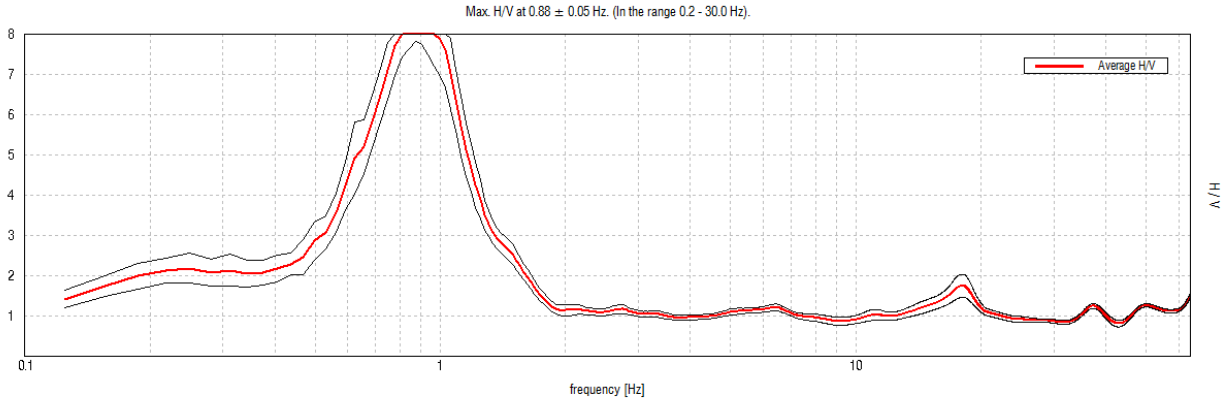
L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$					
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

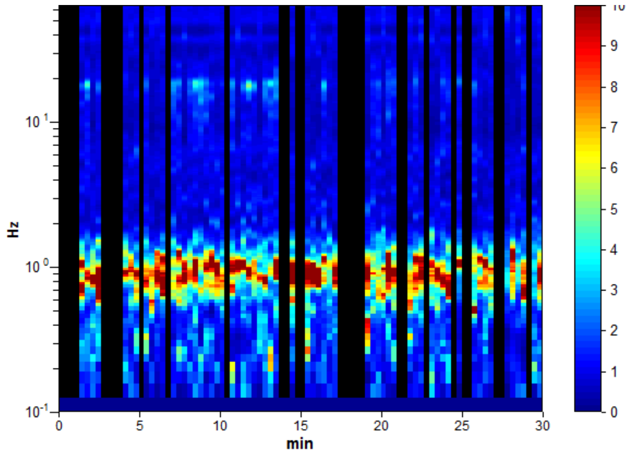
HVSR371

Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 12/03/2021 09:30:40 End recording: 12/03/2021 10:00:40
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°04.4872 E, 44°51.8511 N (23.4 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 8
Trace length: 0h30'00". Analyzed 68% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

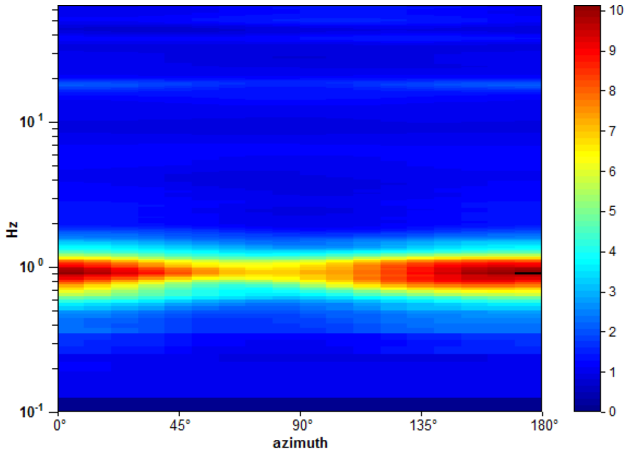
HORIZONTAL TO VERTICAL SPECTRAL RATIO



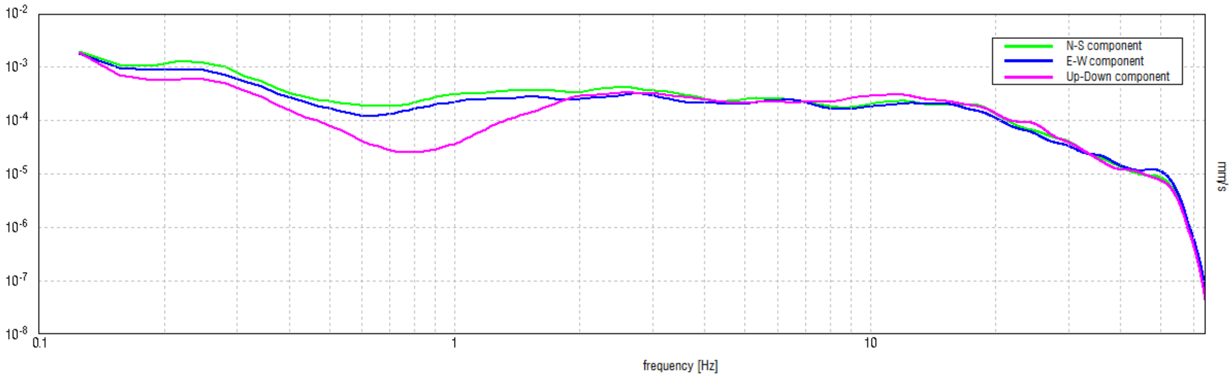
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the *Grilla* manual before interpreting the following tables.**]

Max. H/V at 0.88 ± 0.05 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	0.88 > 0.50	OK	
$n_c(f_0) > 200$	1067.5 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 43 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$	0.594 Hz	OK	
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.219 Hz	OK	
$A_0 > 2$	8.78 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.05194| < 0.05		NO
$\sigma_f < \varepsilon(f_0)$	0.04544 < 0.13125	OK	
$\sigma_A(f_0) < \theta(f_0)$	0.9772 < 2.0	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

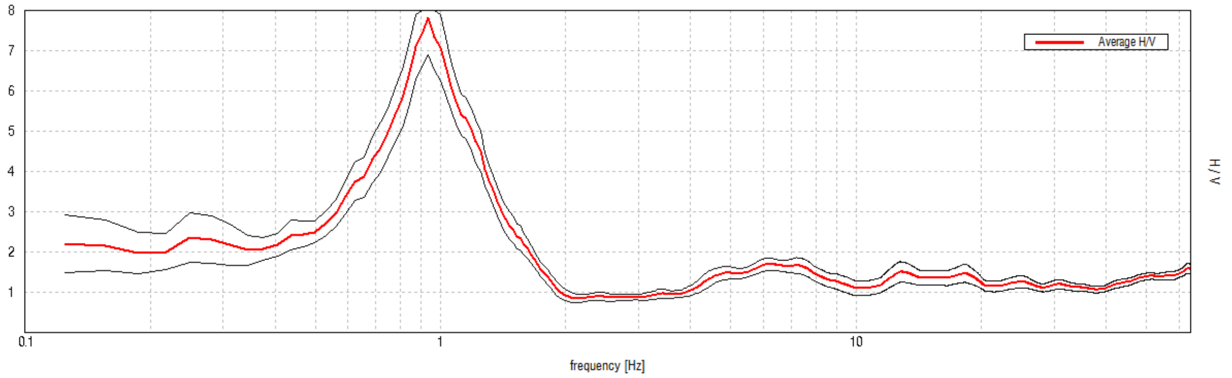
Threshold values for σ_f and $\sigma_A(f_0)$					
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

HVSR372

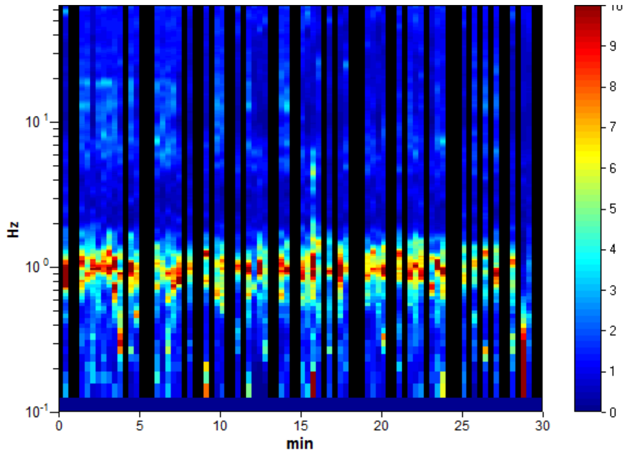
Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 12/03/2021 08:55:36 End recording: 12/03/2021 09:25:36
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°04.6139 E, 44°51.5824 N (0.9 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 8
Trace length: 0h30'00''. Analyzed 58% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

HORIZONTAL TO VERTICAL SPECTRAL RATIO

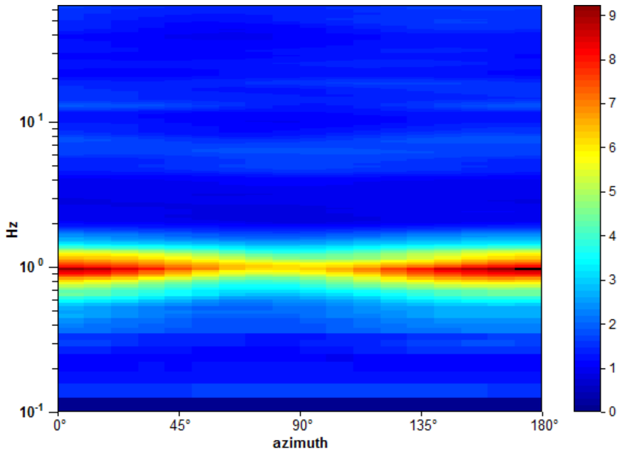
Max. H/V at 0.94 ± 0.04 Hz. (In the range 0.2 - 30.0 Hz).



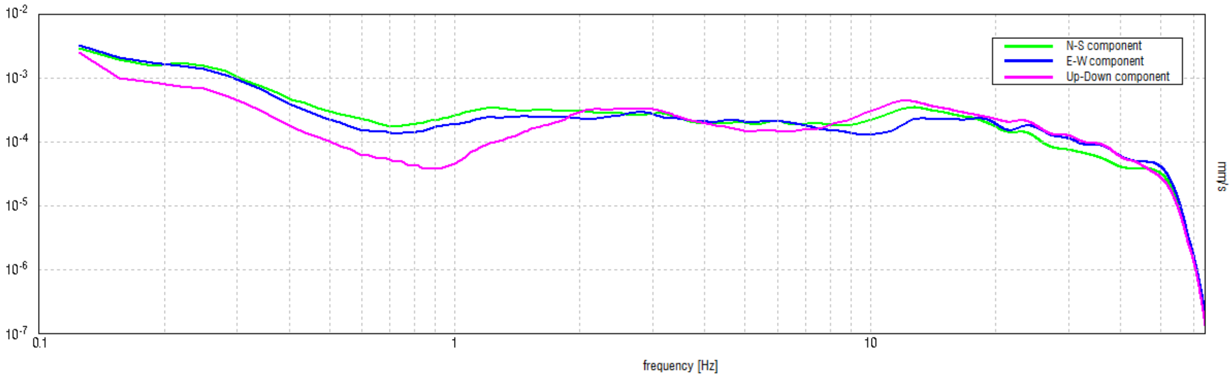
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the *Grilla* manual before interpreting the following tables.**]

Max. H/V at 0.94 ± 0.04 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	0.94 > 0.50	OK	
$n_c(f_0) > 200$	975.0 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 46 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$	0.656 Hz	OK	
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.313 Hz	OK	
$A_0 > 2$	7.81 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.04003| < 0.05	OK	
$\sigma_f < \varepsilon(f_0)$	0.03753 < 0.14063	OK	
$\sigma_A(f_0) < \theta(f_0)$	0.9353 < 2.0	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

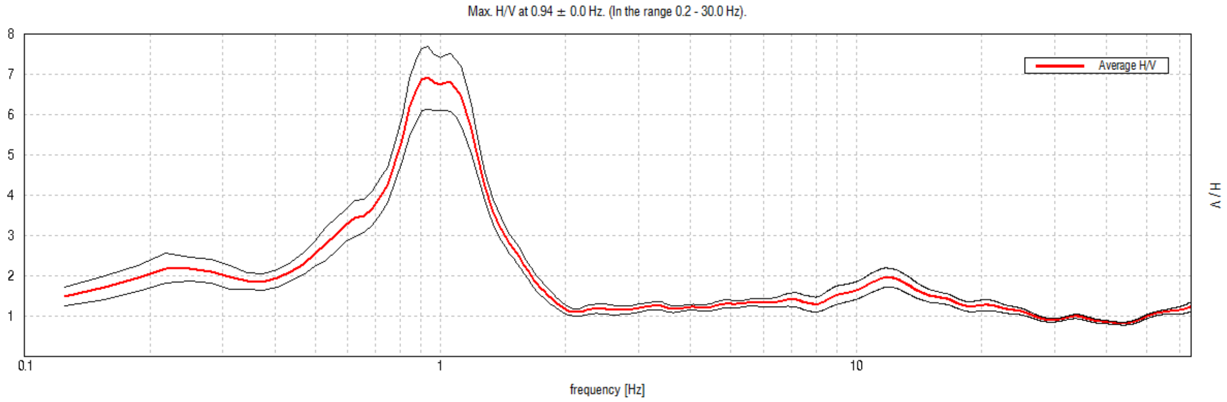
Threshold values for σ_f and $\sigma_A(f_0)$

Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

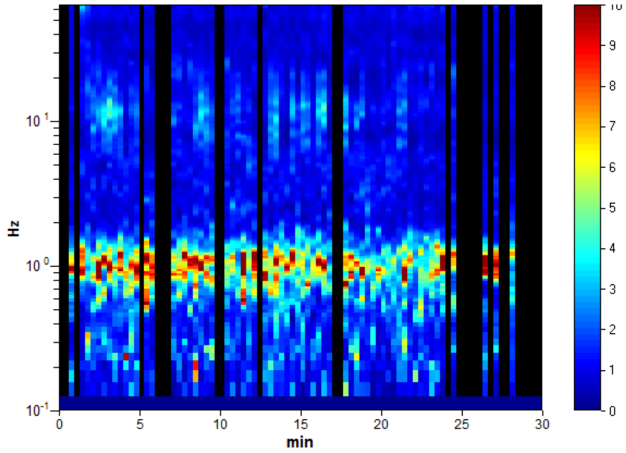
HVSR373

Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 12/03/2021 11:04:04 End recording: 12/03/2021 11:34:04
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°04.0139 E, 44°51.4549 N (9.3 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 6
Trace length: 0h30'00''. Analyzed 71% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

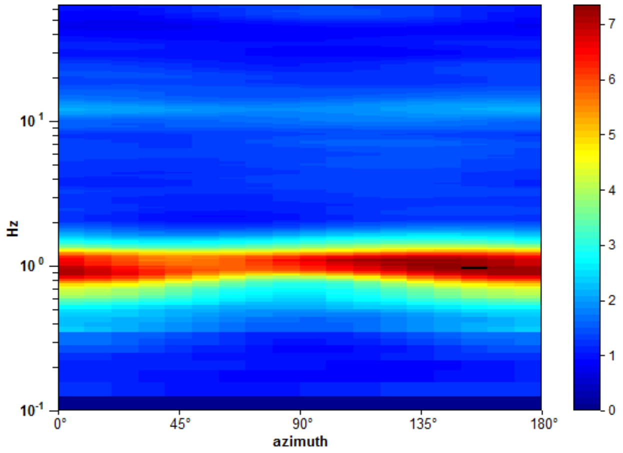
HORIZONTAL TO VERTICAL SPECTRAL RATIO



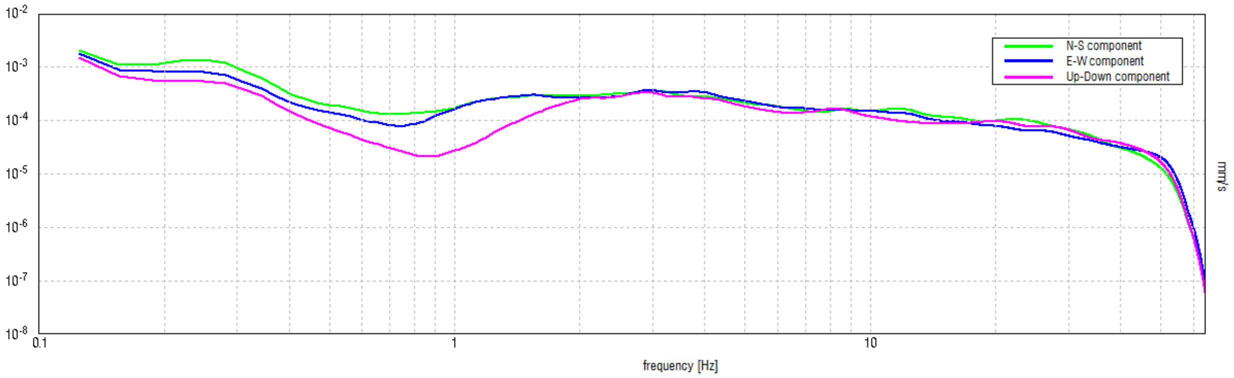
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables**.]

Max. H/V at 0.94 ± 0.0 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	0.94 > 0.50	OK	
$n_c(f_0) > 200$	1200.0 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5\text{Hz}$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5\text{Hz}$**	Exceeded 0 out of 46 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$	0.625 Hz	OK	
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.375 Hz	OK	
$A_0 > 2$	6.90 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.0| < 0.05	OK	
$\sigma_f < \varepsilon(f_0)$	0.0 < 0.14063	OK	
$\sigma_A(f_0) < \theta(f_0)$	0.7753 < 2.0	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

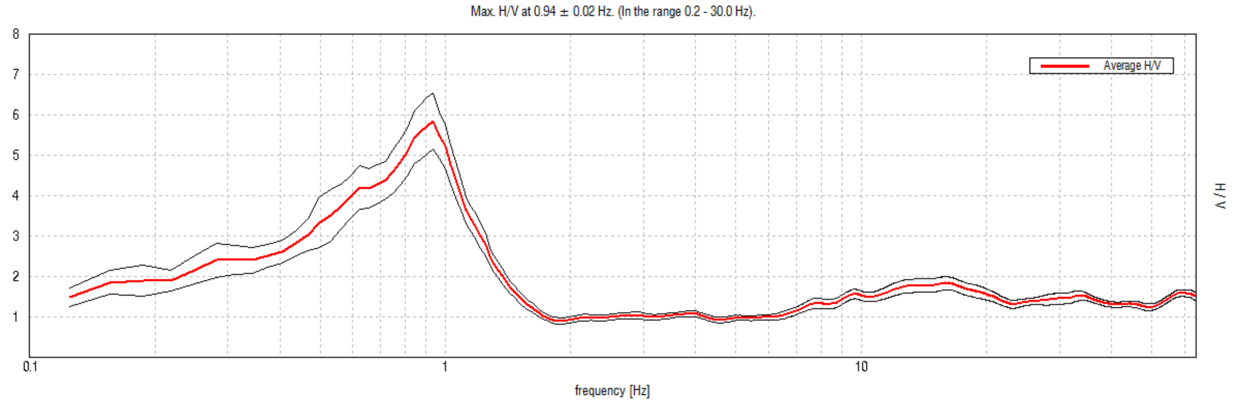
Threshold values for σ_f and $\sigma_A(f_0)$

Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

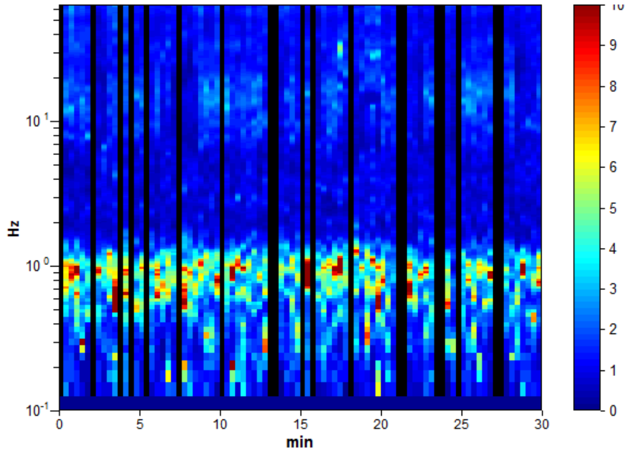
HVSR374

Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 12/03/2021 12:26:15 End recording: 12/03/2021 12:56:15
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°04.7127 E, 44°51.0772 N (19.8 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 6
Trace length: 0h30'00". Analyzed 79% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

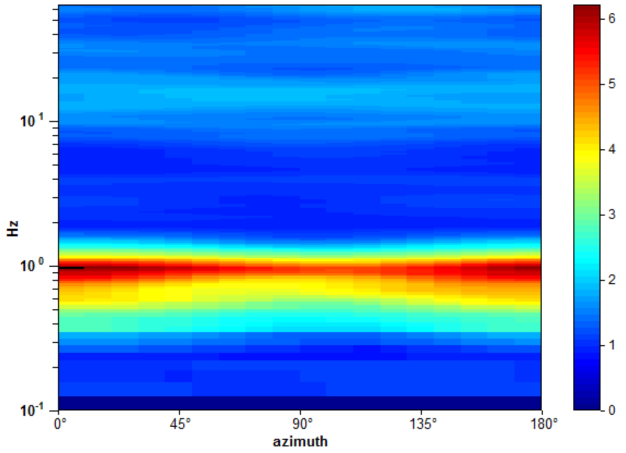
HORIZONTAL TO VERTICAL SPECTRAL RATIO



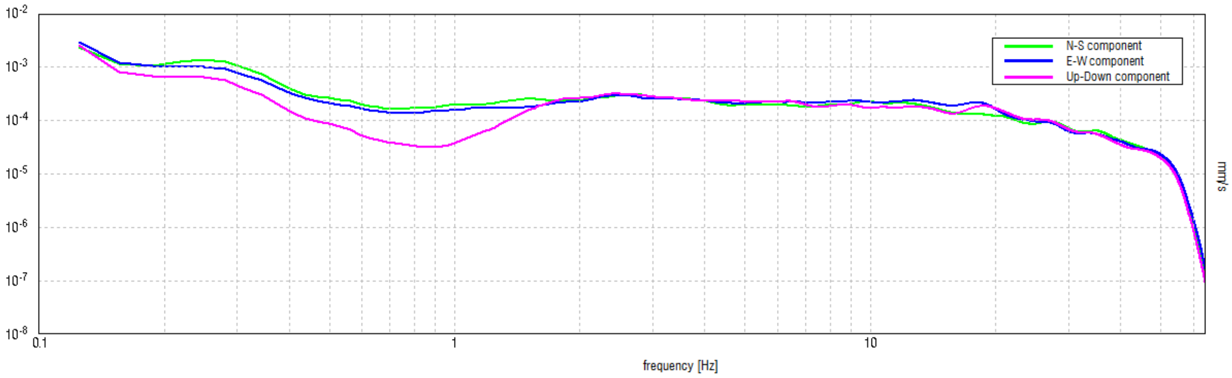
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables**.]

Max. H/V at 0.94 ± 0.02 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve [All 3 should be fulfilled]			
$f_0 > 10 / L_w$	0.94 > 0.50	**OK**	
$n_c(f_0) > 200$	1331.3 > 200	**OK**	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 46 times	**OK**	
Criteria for a clear H/V peak [At least 5 out of 6 should be fulfilled]			
Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$	0.438 Hz	**OK**	
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.25 Hz	**OK**	
$A_0 > 2$	5.84 > 2	**OK**	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.0234| < 0.05	**OK**	
$\sigma_f < \varepsilon(f_0)$	0.02194 < 0.14063	**OK**	
$\sigma_A(f_0) < \theta(f_0)$	0.6938 < 2.0	**OK**	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

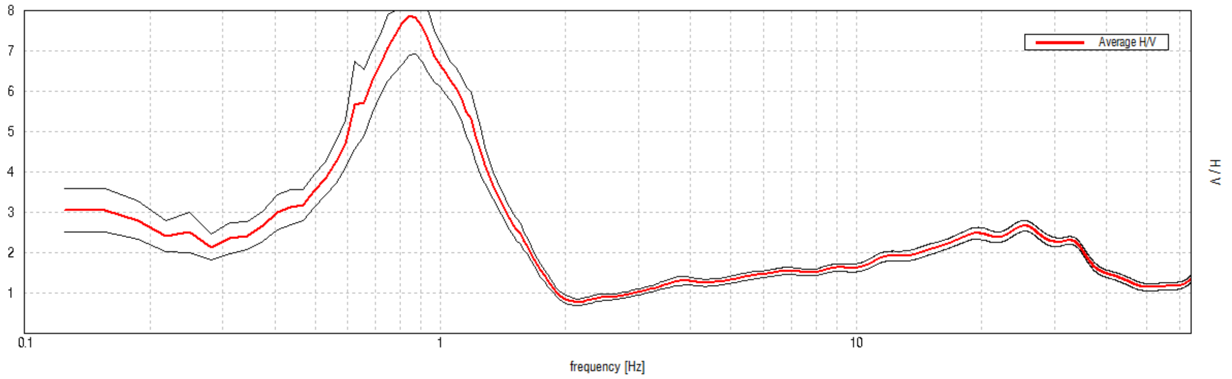
Threshold values for σ_f and $\sigma_A(f_0)$					
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

HVSR375

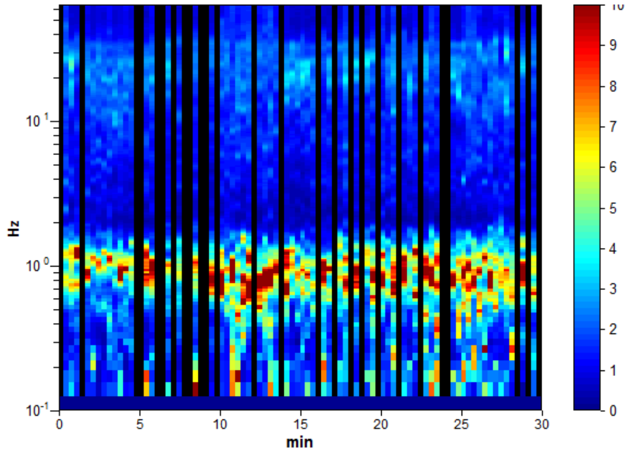
Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 12/03/2021 13:02:55 End recording: 12/03/2021 13:32:55
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°05.2583 E, 44°51.4775 N (9.0 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 5
Trace length: 0h30'00". Analyzed 71% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

HORIZONTAL TO VERTICAL SPECTRAL RATIO

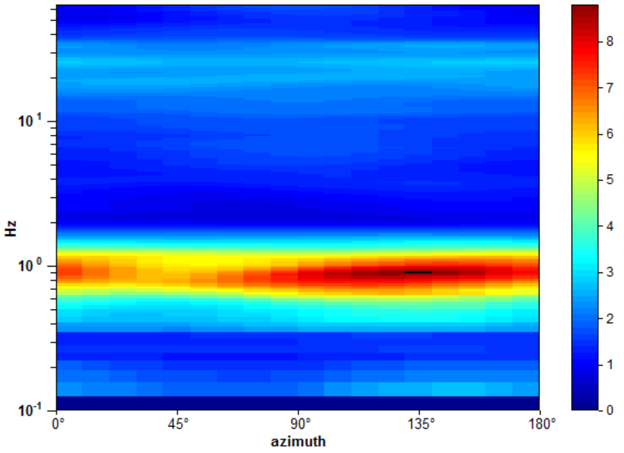
Max. H/V at 0.84 ± 0.15 Hz. (In the range 0.2 - 30.0 Hz).



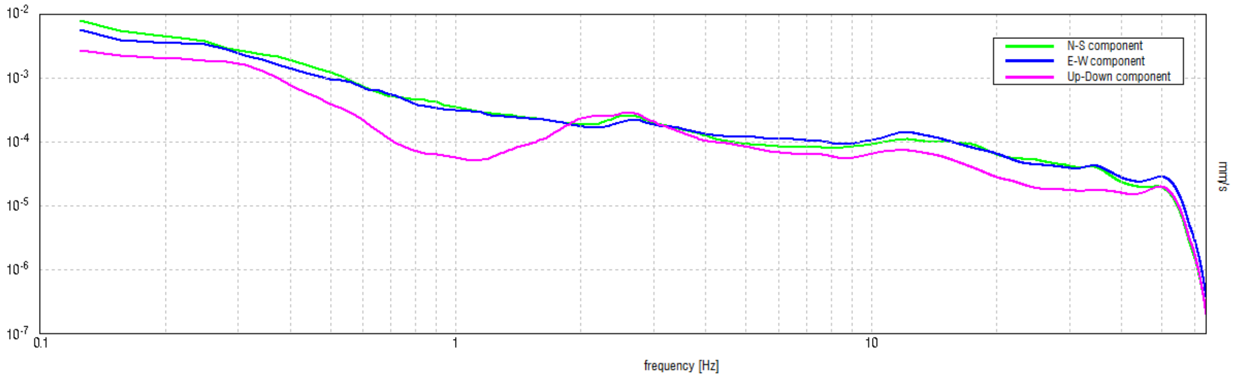
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the *Grilla* manual before interpreting the following tables.**]

Max. H/V at 0.84 ± 0.15 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	0.84 > 0.50	OK	
$n_c(f_0) > 200$	1080.0 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 42 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$	0.531 Hz	OK	
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.313 Hz	OK	
$A_0 > 2$	7.85 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.18002| < 0.05		NO
$\sigma_f < \varepsilon(f_0)$	0.15189 < 0.12656		NO
$\sigma_A(f_0) < \theta(f_0)$	0.9766 < 2.0	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

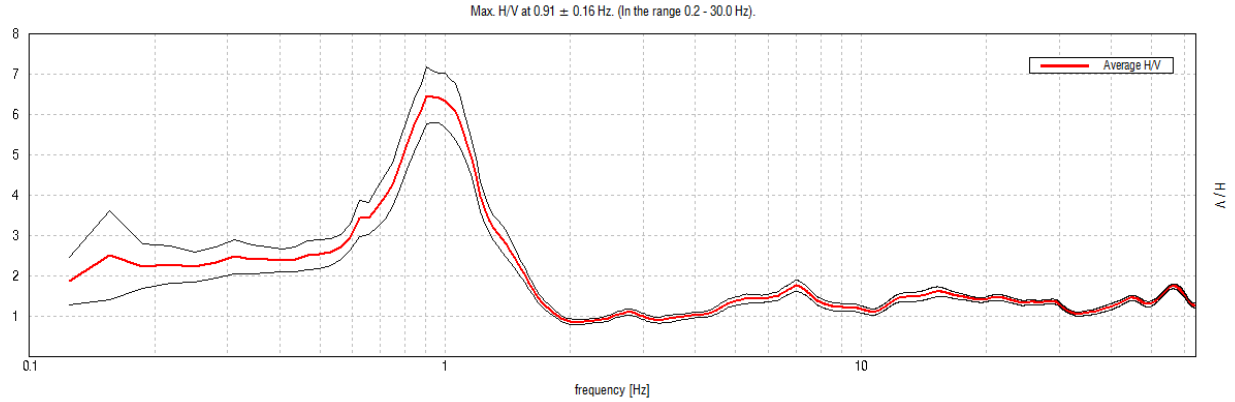
Threshold values for σ_f and $\sigma_A(f_0)$

Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

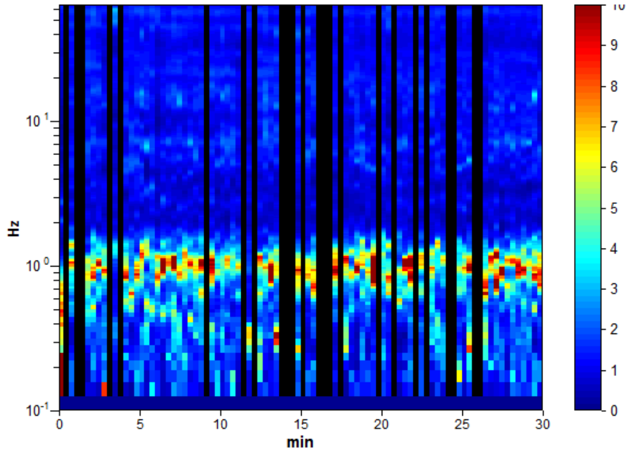
HVSR376

Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 12/03/2021 13:37:33 End recording: 12/03/2021 14:07:33
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°05.6310 E, 44°51.0890 N (16.6 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 6
Trace length: 0h30'00''. Analyzed 73% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

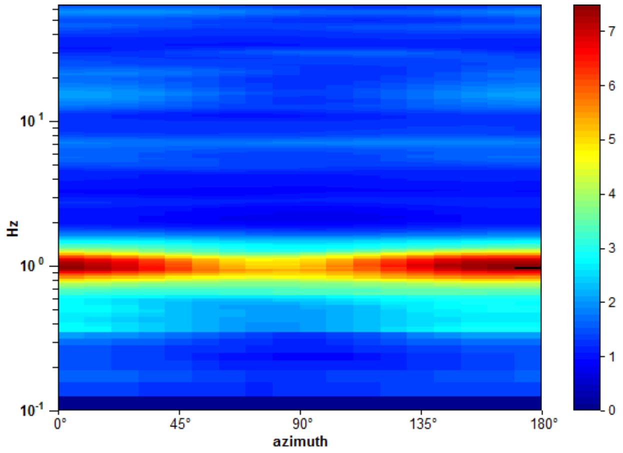
HORIZONTAL TO VERTICAL SPECTRAL RATIO



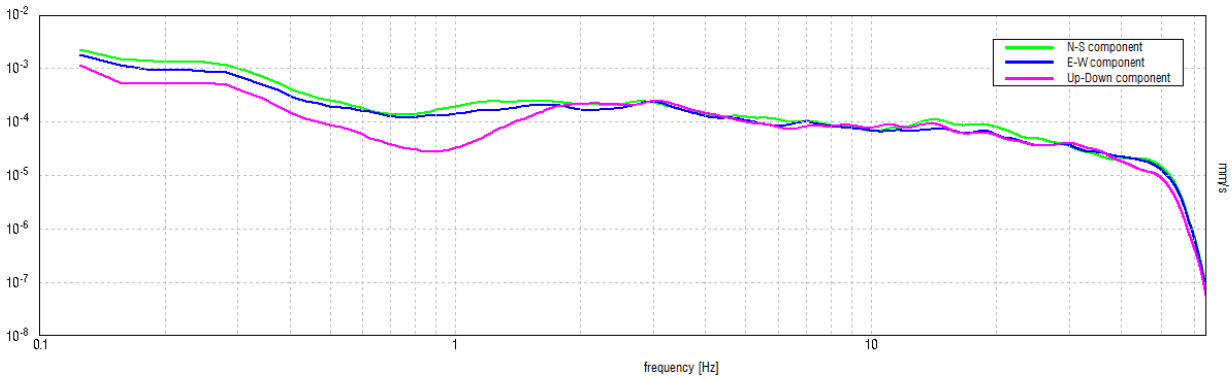
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the *Grilla* manual before interpreting the following tables.**]

Max. H/V at 0.91 ± 0.16 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	0.91 > 0.50	OK	
$n_c(f_0) > 200$	1196.3 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5$Hz **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5$Hz**	Exceeded 0 out of 44 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$	0.594 Hz	OK	
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.313 Hz	OK	
$A_0 > 2$	6.46 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.17872| < 0.05		NO
$\sigma_f < \varepsilon(f_0)$	0.16197 < 0.13594		NO
$\sigma_A(f_0) < \theta(f_0)$	0.6993 < 2.0	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$

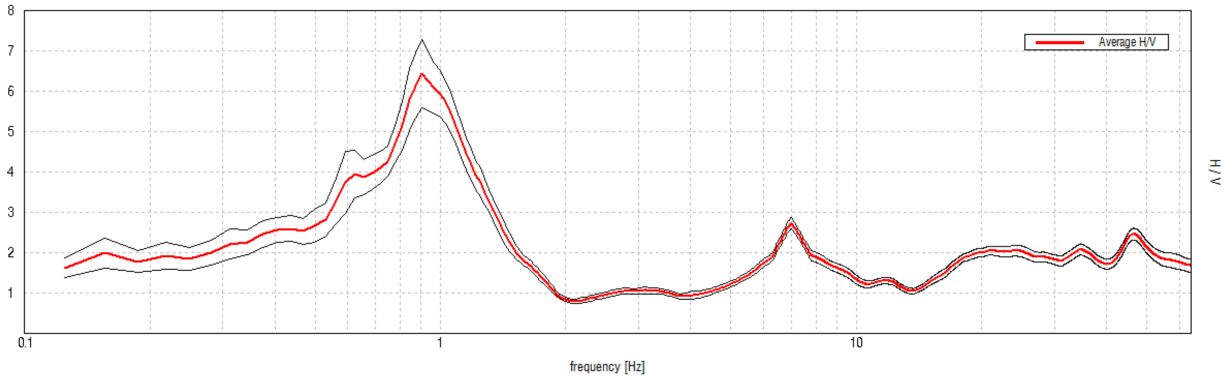
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

HVSR377

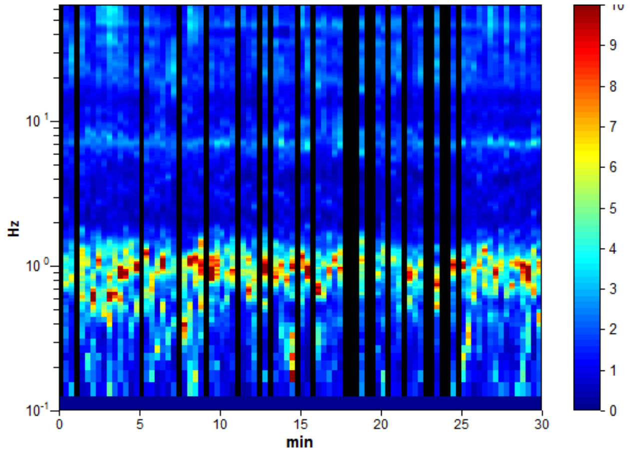
Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 12/03/2021 14:14:33 End recording: 12/03/2021 14:44:33
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°06.3470 E, 44°51.0101 N (6.6 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 6
Trace length: 0h30'00". Analyzed 76% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

HORIZONTAL TO VERTICAL SPECTRAL RATIO

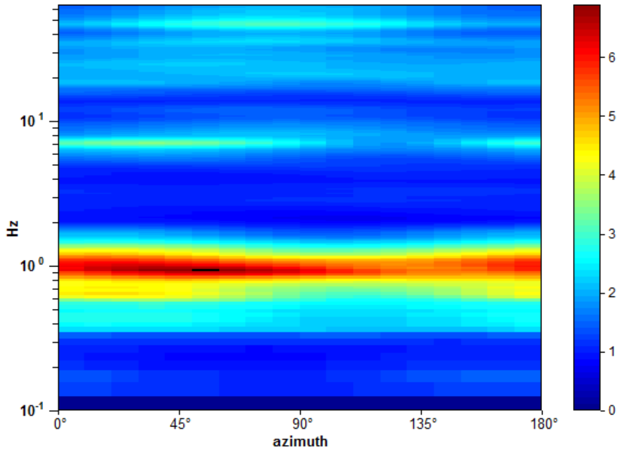
Max. H/V at 0.91 ± 0.11 Hz. (In the range 0.2 - 30.0 Hz).



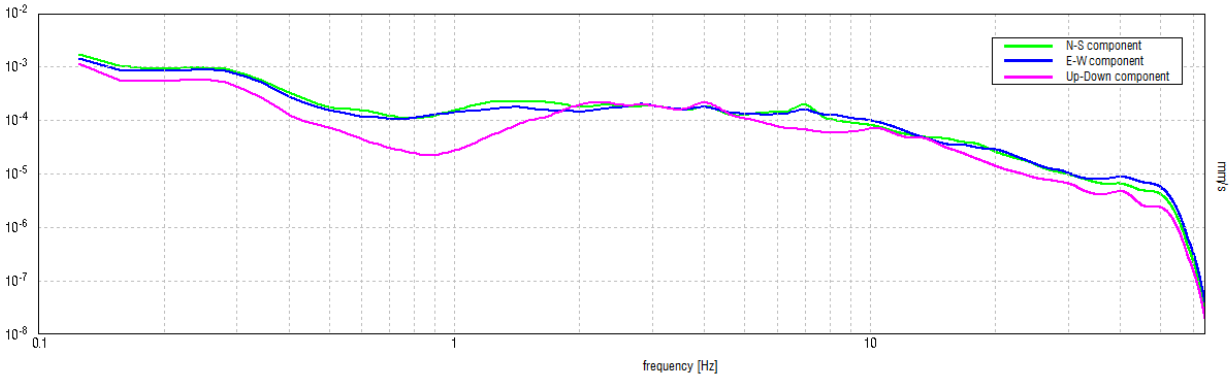
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables**.]

Max. H/V at 0.91 ± 0.11 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve [All 3 should be fulfilled]			
$f_0 > 10 / L_w$	$0.91 > 0.50$	OK	
$n_c(f_0) > 200$	$1232.5 > 200$	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 44 times	OK	
Criteria for a clear H/V peak [At least 5 out of 6 should be fulfilled]			
Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$	0.531 Hz	OK	
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.344 Hz	OK	
$A_0 > 2$	$6.43 > 2$	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	$\|0.12369\| < 0.05$		NO
$\sigma_f < \varepsilon(f_0)$	$0.1121 < 0.13594$	OK	
$\sigma_A(f_0) < \theta(f_0)$	$0.8432 < 2.0$	OK	

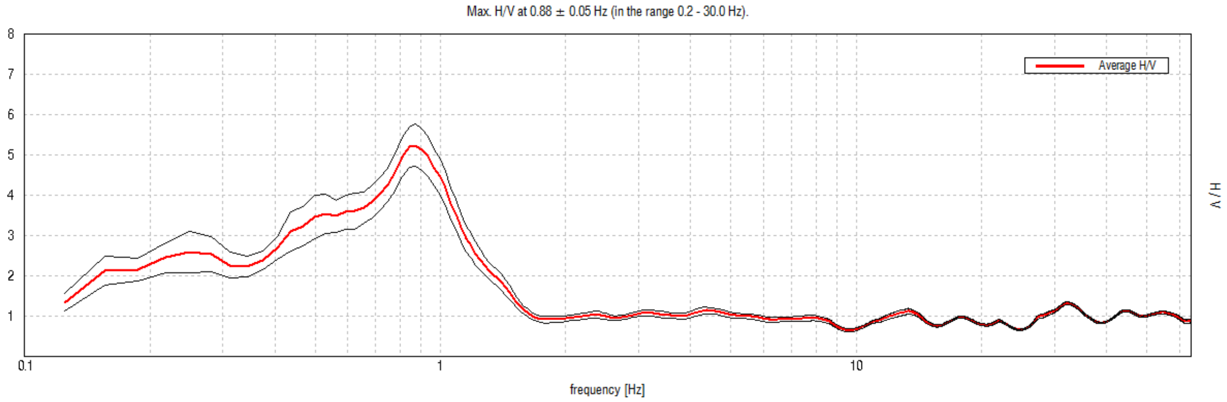
L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$					
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

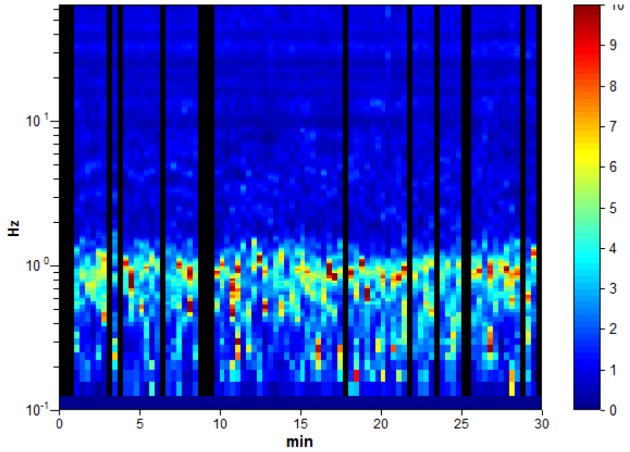
HVSR378

Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 12/03/2021 14:50:33 End recording: 12/03/2021 15:20:33
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°05.0341 E, 44°50.9267 N (4.9 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 6
Trace length: 0h30'00". Analyzed 82% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

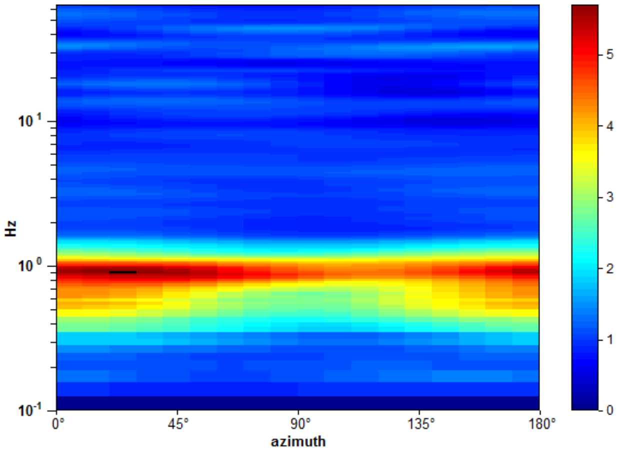
HORIZONTAL TO VERTICAL SPECTRAL RATIO



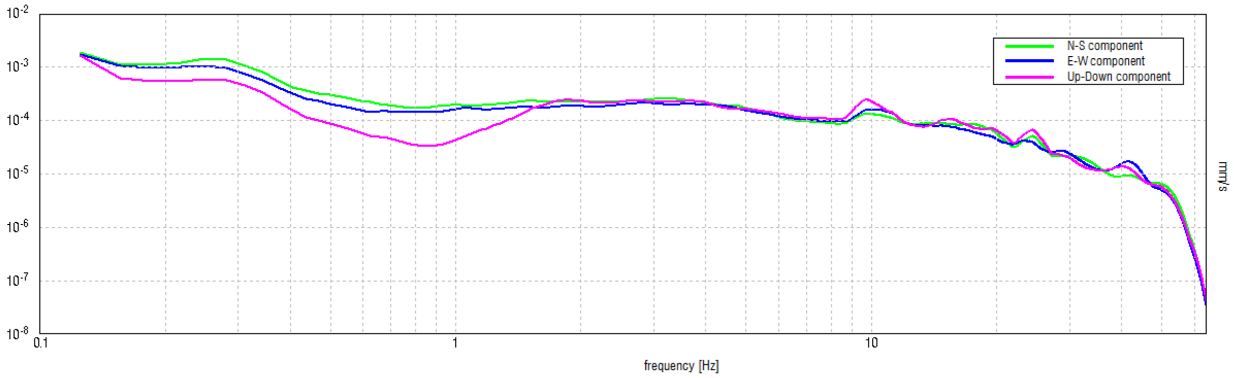
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables**.]

Max. H/V at 0.88 ± 0.05 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	0.88 > 0.50	OK	
$n_c(f_0) > 200$	1295.0 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 43 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$	0.375 Hz	OK	
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.219 Hz	OK	
$A_0 > 2$	5.24 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.05601| < 0.05		NO
$\sigma_f < \varepsilon(f_0)$	0.04901 < 0.13125	OK	
$\sigma_A(f_0) < \theta(f_0)$	0.5179 < 2.0	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$

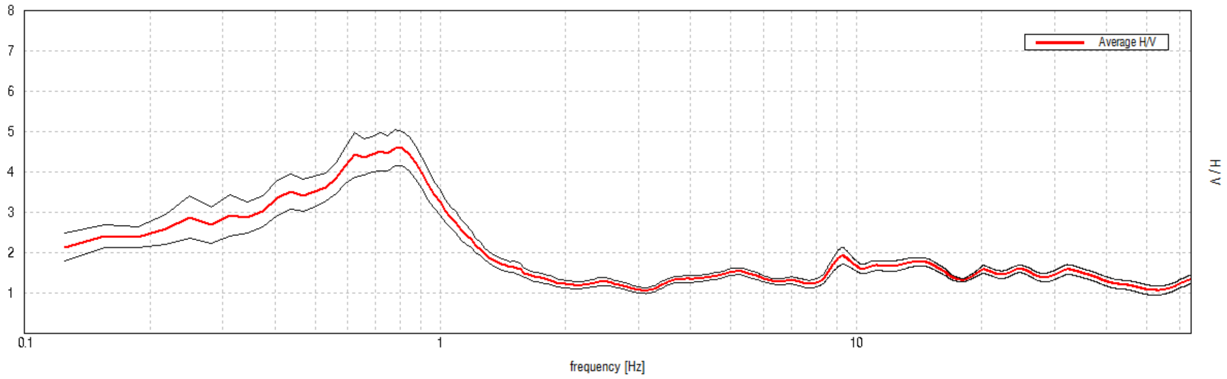
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

HVSR379

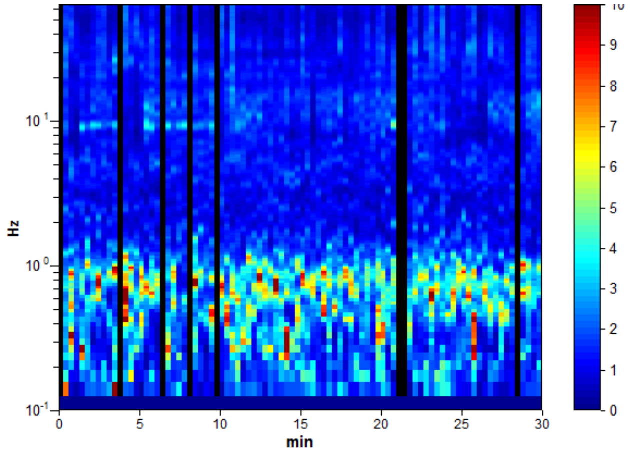
Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 12/03/2021 15:24:08 End recording: 12/03/2021 15:54:08
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°05.5990 E, 44°50.6964 N (-2.4 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 5
Trace length: 0h30'00". Analyzed 91% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

HORIZONTAL TO VERTICAL SPECTRAL RATIO

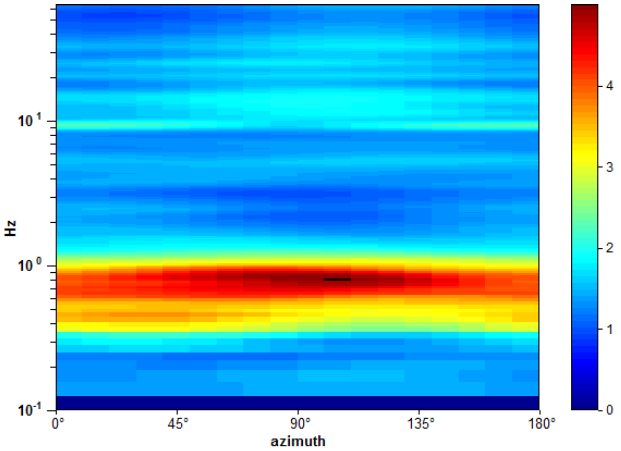
Max. H/V at 0.78 ± 0.12 Hz. (In the range 0.2 - 30.0 Hz).



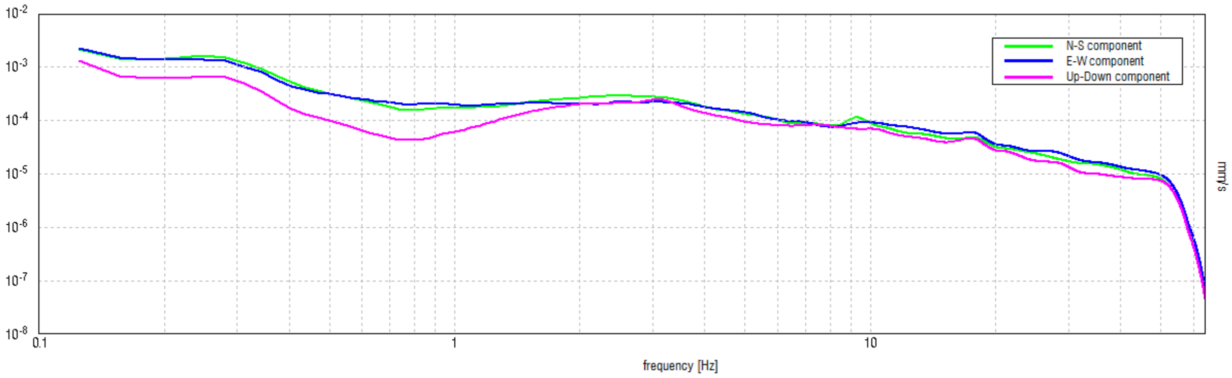
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables.**]

Max. H/V at 0.78 ± 0.12 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	$0.78 > 0.50$	OK	
$n_c(f_0) > 200$	$1281.3 > 200$	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5\text{Hz}$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5\text{Hz}$**	Exceeded 0 out of 38 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$			NO
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.219 Hz	OK	
$A_0 > 2$	$4.60 > 2$	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	$\|0.14757\| < 0.05$		NO
$\sigma_f < \varepsilon(f_0)$	$0.11529 < 0.11719$	OK	
$\sigma_A(f_0) < \theta(f_0)$	$0.4473 < 2.0$	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$

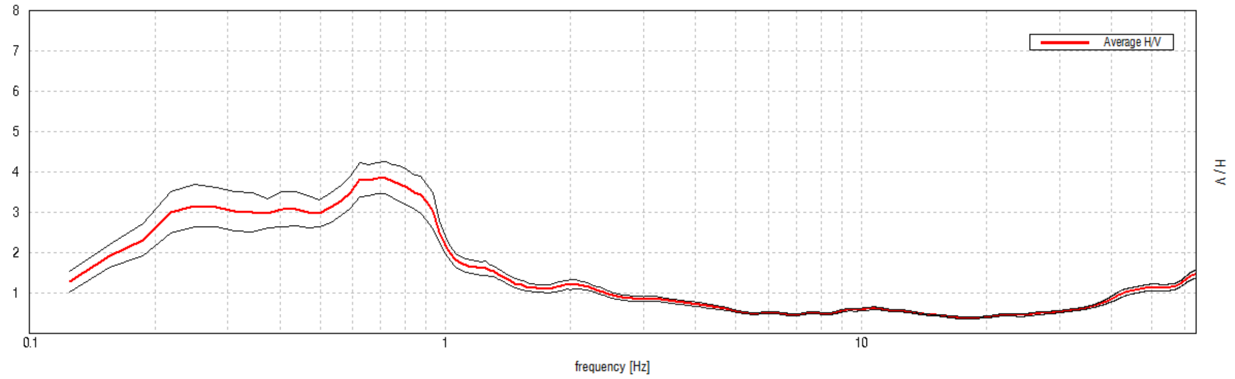
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	$0.25 f_0$	$0.2 f_0$	$0.15 f_0$	$0.10 f_0$	$0.05 f_0$
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

HVSR380

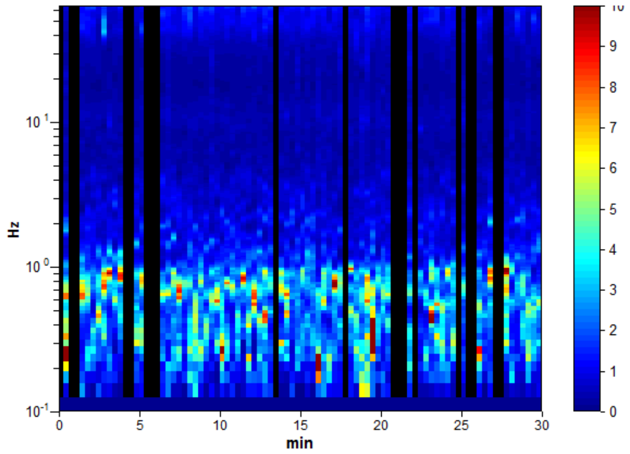
Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 12/03/2021 16:04:45 End recording: 12/03/2021 16:34:45
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°05.0889 E, 44°50.4501 N (46.9 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 5
Trace length: 0h30'00''. Analyzed 79% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

HORIZONTAL TO VERTICAL SPECTRAL RATIO

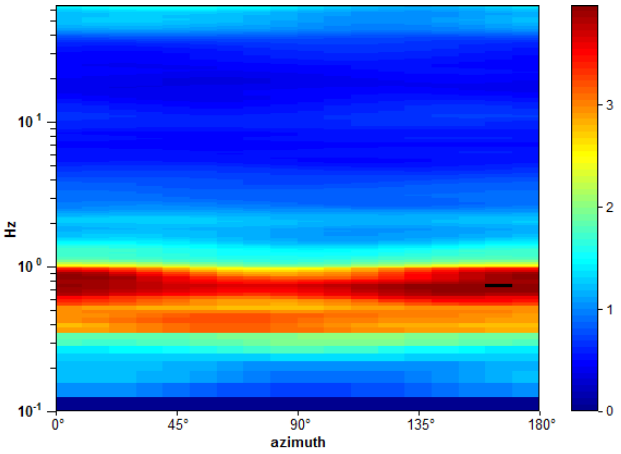
Max. H/V at 0.72 ± 0.08 Hz. (In the range 0.2 - 30.0 Hz).



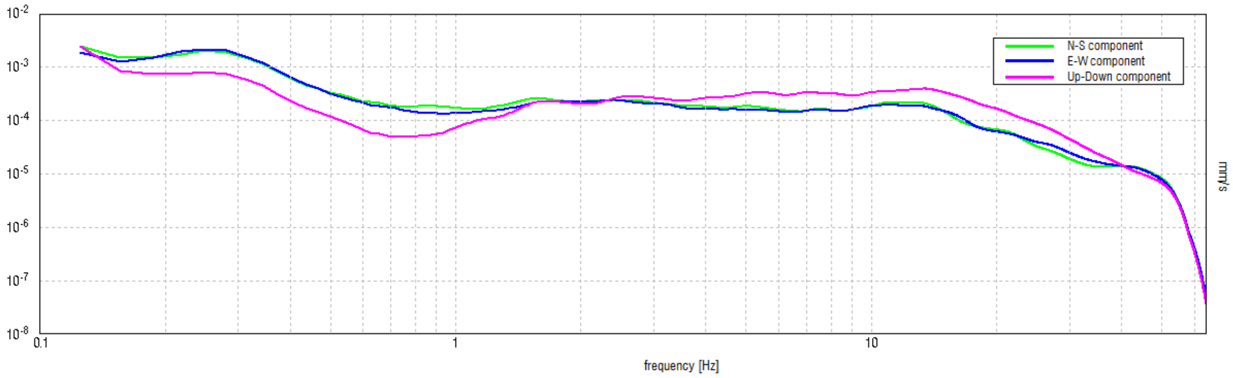
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables**.]

Max. H/V at 0.72 ± 0.08 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	0.72 > 0.50	**OK**	
$n_c(f_0) > 200$	1020.6 > 200	**OK**	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 36 times	**OK**	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$			**NO**
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.063 Hz	**OK**	
$A_0 > 2$	3.86 > 2	**OK**	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.10662| < 0.05		**NO**
$\sigma_f < \varepsilon(f_0)$	0.07664 < 0.10781	**OK**	
$\sigma_A(f_0) < \theta(f_0)$	0.4081 < 2.0	**OK**	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

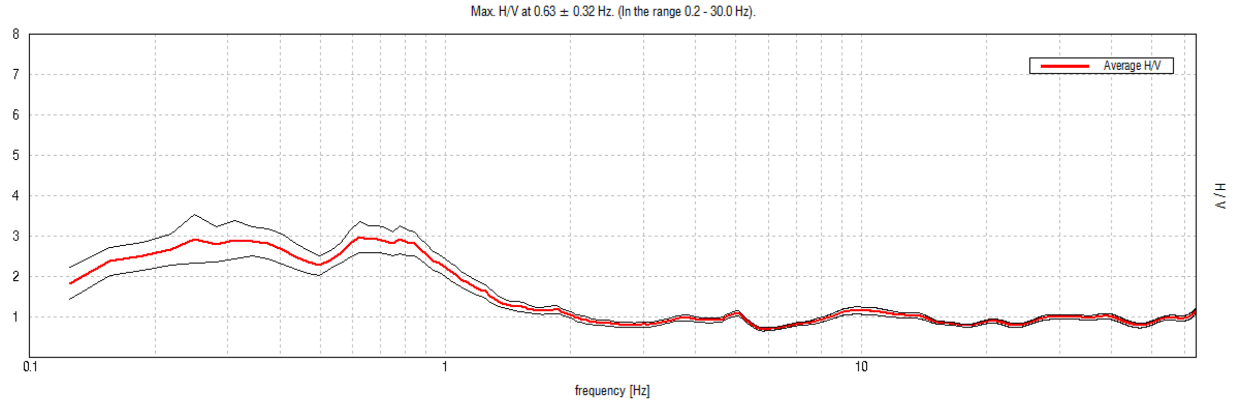
Threshold values for σ_f and $\sigma_A(f_0)$

Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

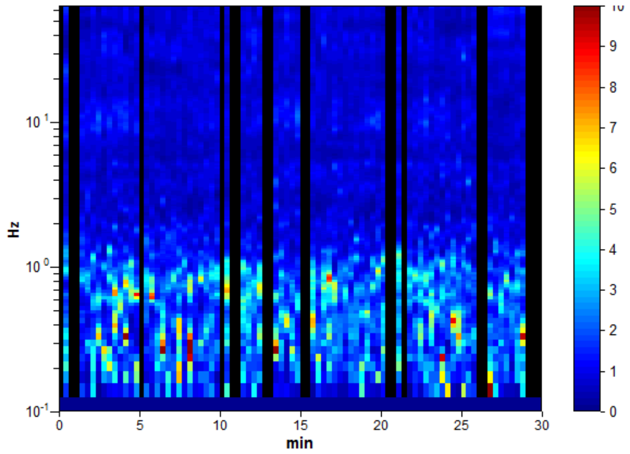
HVSR381

Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 22/03/2021 08:44:14 End recording: 22/03/2021 09:14:14
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°04.5131 E, 44°50.2022 N (6.4 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 5
Trace length: 0h30'00". Analyzed 79% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

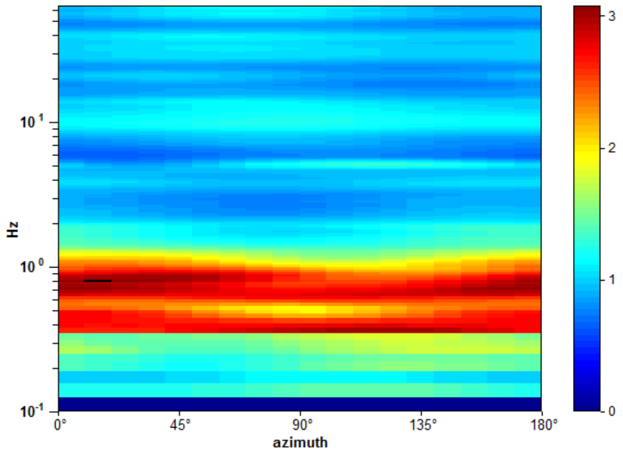
HORIZONTAL TO VERTICAL SPECTRAL RATIO



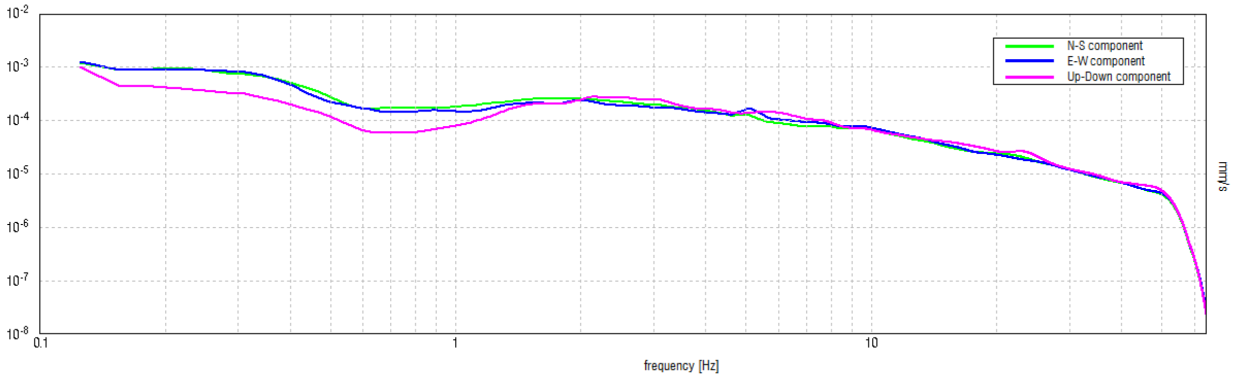
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables**.]

Max. H/V at 0.63 ± 0.32 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	0.63 > 0.50	OK	
$n_c(f_0) > 200$	887.5 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 31 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$			NO
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.313 Hz	OK	
$A_0 > 2$	2.97 > 2		
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$		OK	
$\sigma_f < \varepsilon(f_0)$	|0.5041| < 0.05		NO
$\sigma_A(f_0) < \theta(f_0)$	0.31506 < 0.09375		NO
	0.3782 < 2.0	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

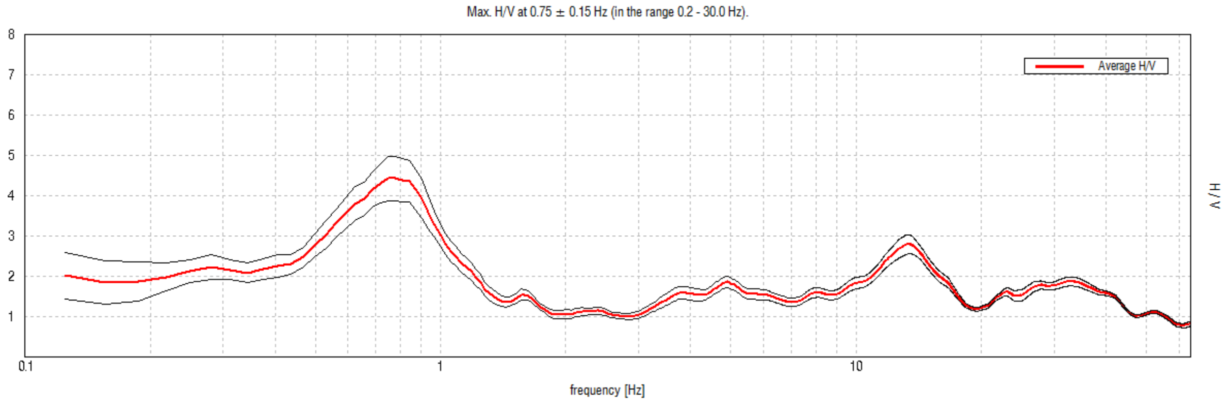
Threshold values for σ_f and $\sigma_A(f_0)$

Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

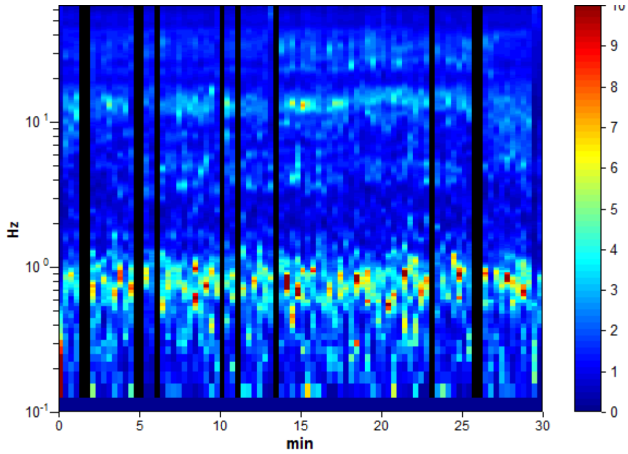
HG40, 1 0002

Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 22/03/2021 08:04:38 End recording: 22/03/2021 08:34:38
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°06.0263 E, 44°50.6665 N (15.0 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 6
Trace length: 0h30'00''. Analyzed 88% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

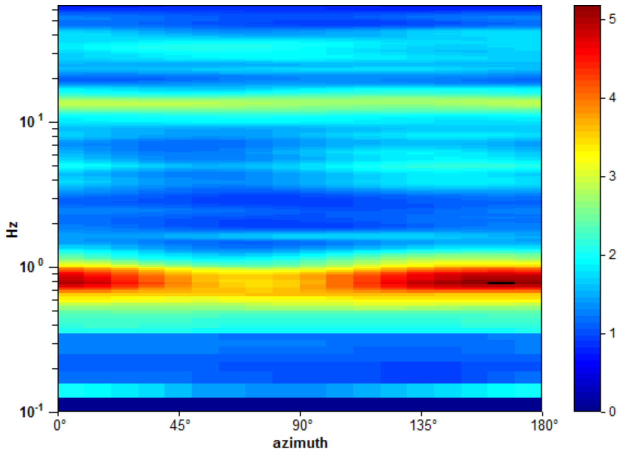
HORIZONTAL TO VERTICAL SPECTRAL RATIO



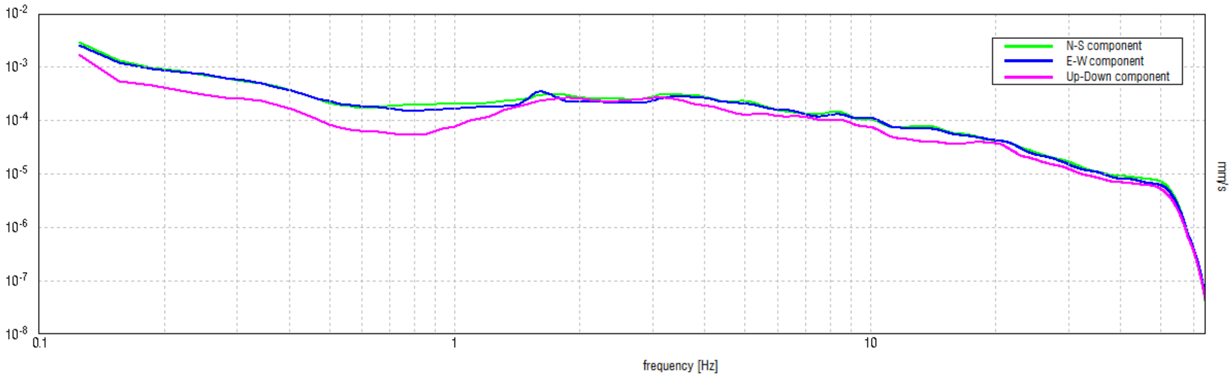
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables.**]

Max. H/V at 0.75 ± 0.15 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve [All 3 should be fulfilled]			
$f_0 > 10 / L_w$	0.75 > 0.50	OK	
$n_c(f_0) > 200$	1185.0 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ $\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$	Exceeded 0 out of 37 times	OK	
Criteria for a clear H/V peak [At least 5 out of 6 should be fulfilled]			
Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$	0.375 Hz	OK	
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.188 Hz	OK	
$A_0 > 2$	4.43 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.19611| < 0.05		NO
$\sigma_f < \varepsilon(f_0)$	0.14708 < 0.1125		NO
$\sigma_A(f_0) < \theta(f_0)$	0.5521 < 2.0	OK	

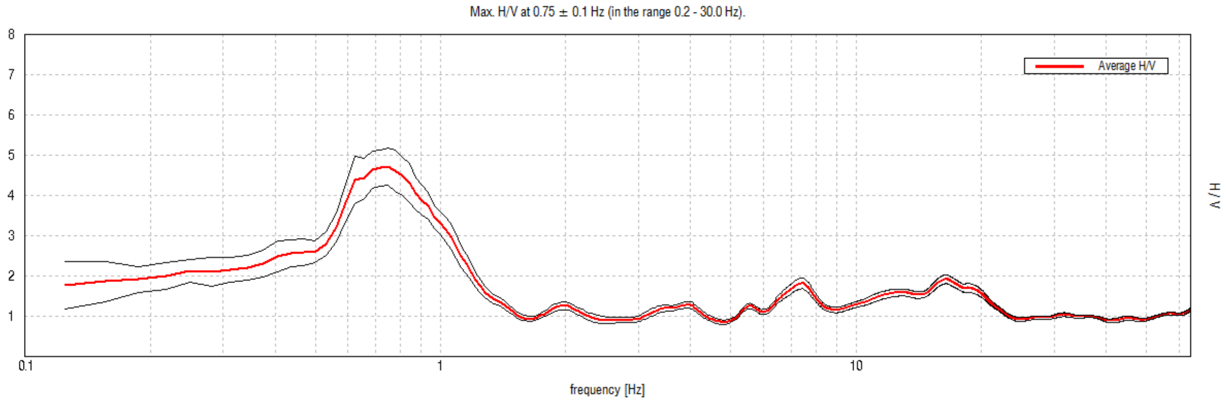
L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$					
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

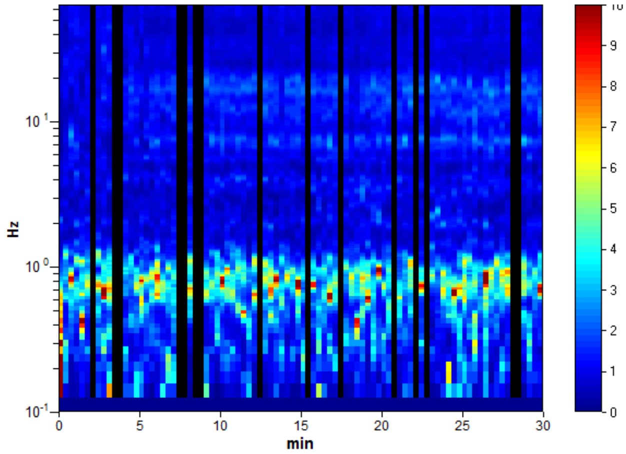
HG41, 1 0001

Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 22/03/2021 07:28:34 End recording: 22/03/2021 07:58:34
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°06.4164 E, 44°50.6264 N (12.7 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 6
Trace length: 0h30'00''. Analyzed 83% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

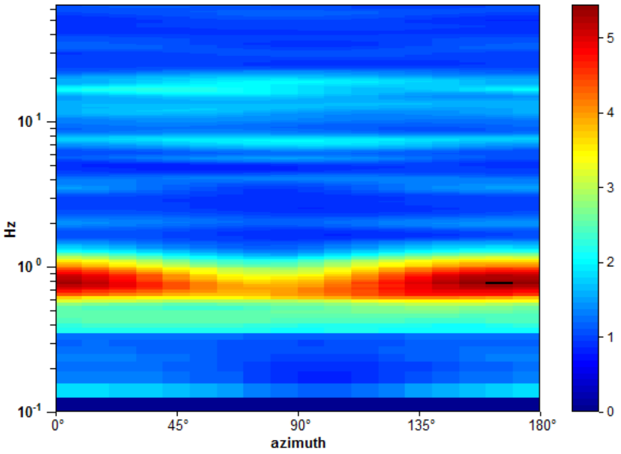
HORIZONTAL TO VERTICAL SPECTRAL RATIO



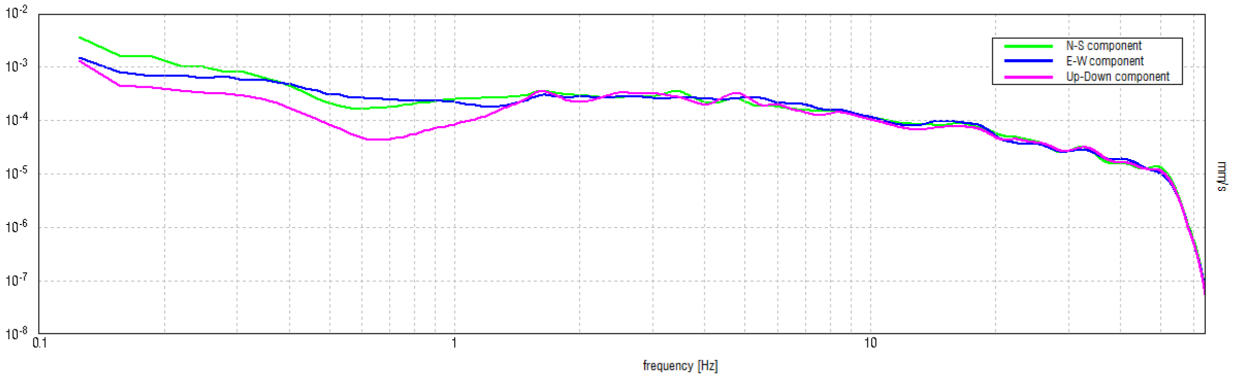
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the *Grilla* manual before interpreting the following tables.**]

Max. H/V at 0.75 ± 0.1 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve [All 3 should be fulfilled]			
$f_0 > 10 / L_w$	$0.75 > 0.50$	OK	
$n_c(f_0) > 200$	$1125.0 > 200$	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5$Hz **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5$Hz**	Exceeded 0 out of 37 times	OK	
Criteria for a clear H/V peak [At least 5 out of 6 should be fulfilled]			
Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$	0.375 Hz	OK	
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.156 Hz	OK	
$A_0 > 2$	$4.72 > 2$	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	$\|0.1342\| < 0.05$		NO
$\sigma_f < \varepsilon(f_0)$	$0.10065 < 0.1125$	OK	
$\sigma_A(f_0) < \theta(f_0)$	$0.4717 < 2.0$	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$					
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

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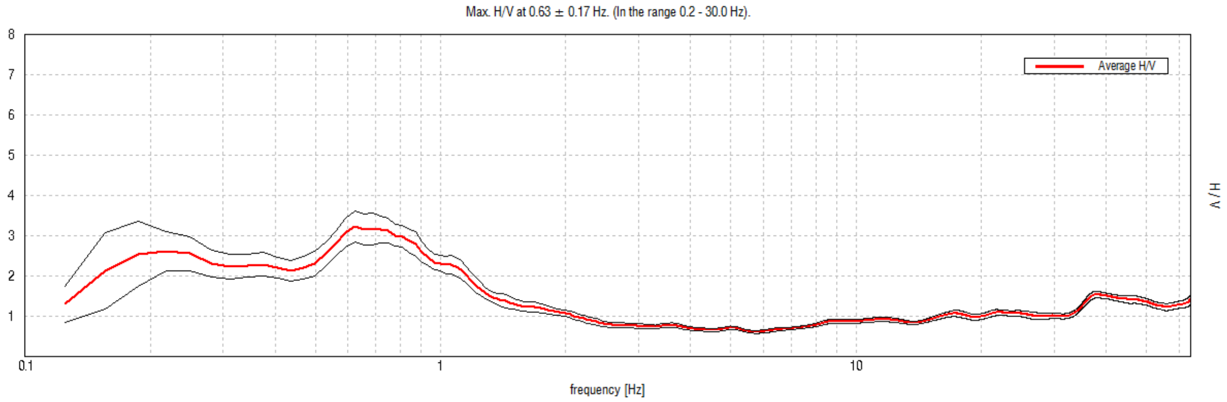
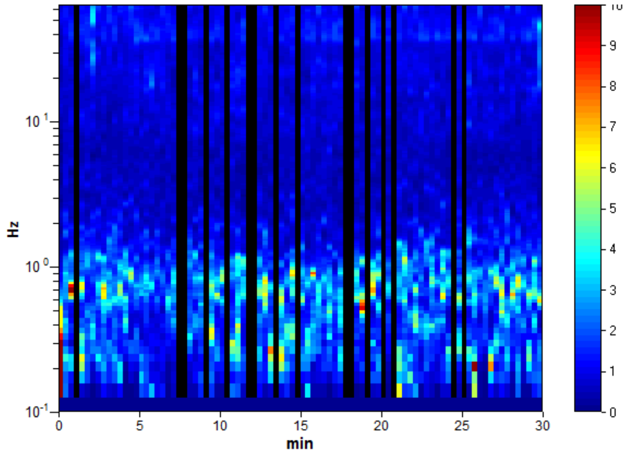
HG8, MEDOLLA 0001

Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 26/03/2021 09:11:46 End recording: 26/03/2021 09:41:46
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°02.2599 E, 44°49.3648 N (10.8 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 5
Trace length: 0h30'00". Analyzed 82% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

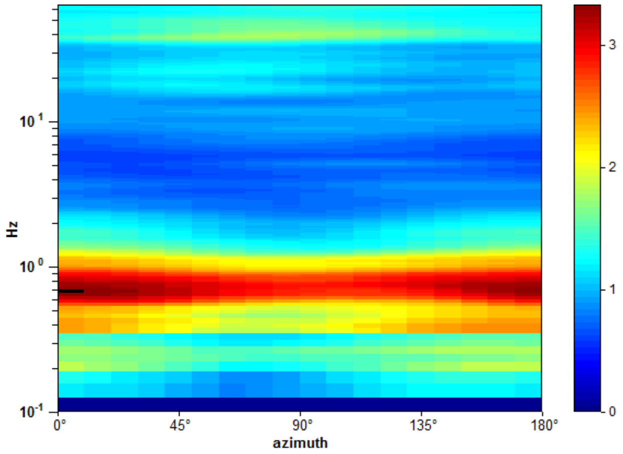
HORIZONTAL TO VERTICAL SPECTRAL RATIO



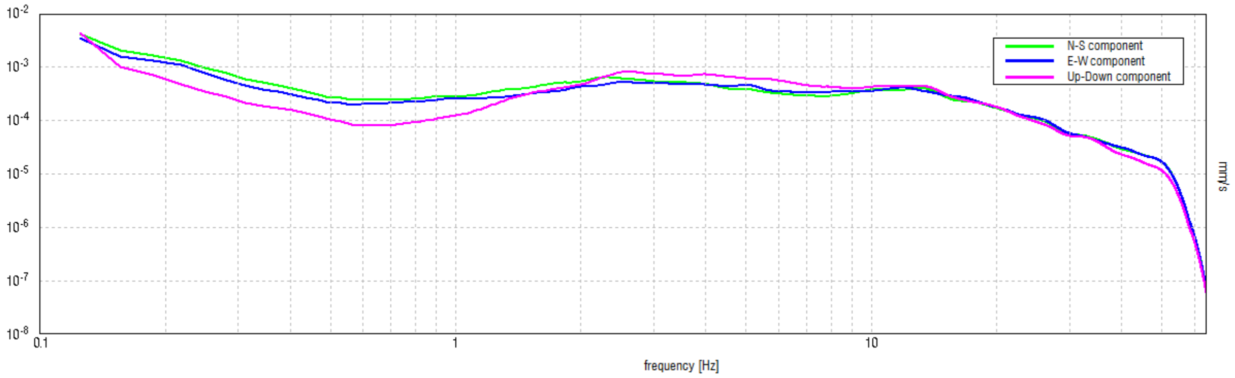
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables.**]

Max. H/V at 0.63 ± 0.17 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	0.63 > 0.50	OK	
$n_c(f_0) > 200$	925.0 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 31 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$			NO
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.281 Hz	OK	
$A_0 > 2$	3.23 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.27802| < 0.05		NO
$\sigma_f < \varepsilon(f_0)$	0.17376 < 0.09375		NO
$\sigma_A(f_0) < \theta(f_0)$	0.3733 < 2.0	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

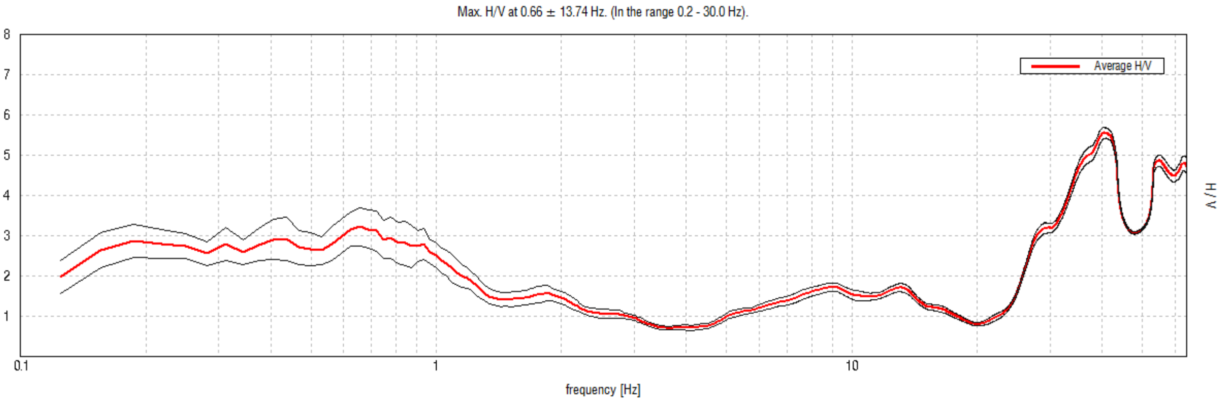
Threshold values for σ_f and $\sigma_A(f_0)$

Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

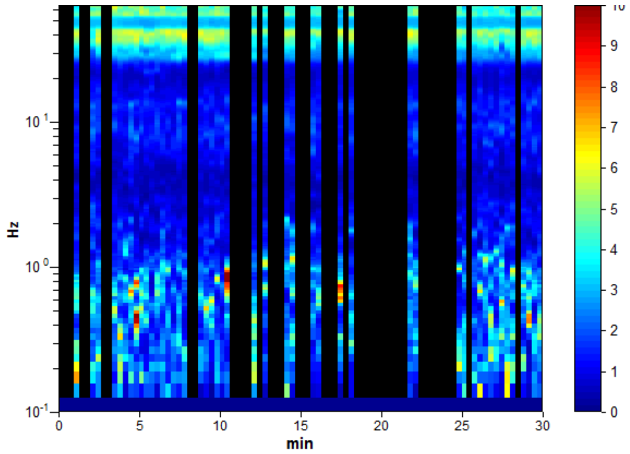
HG16, MEDOLLA 0002

Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 26/03/2021 09:50:10 End recording: 26/03/2021 10:20:10
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°02.6633 E, 44°50.1357 N (-15.3 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 5
Trace length: 0h30'00". Analyzed 52% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

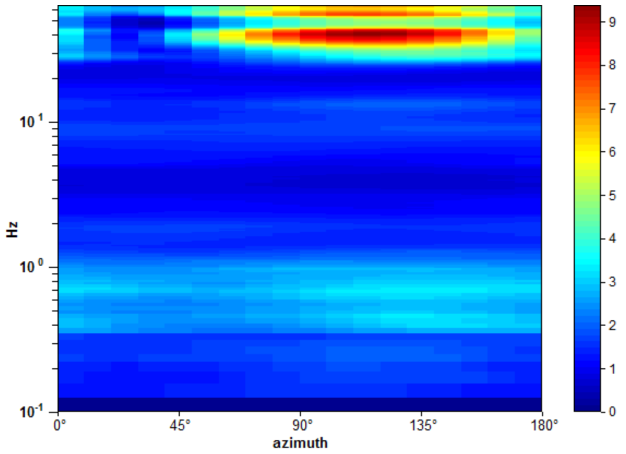
HORIZONTAL TO VERTICAL SPECTRAL RATIO



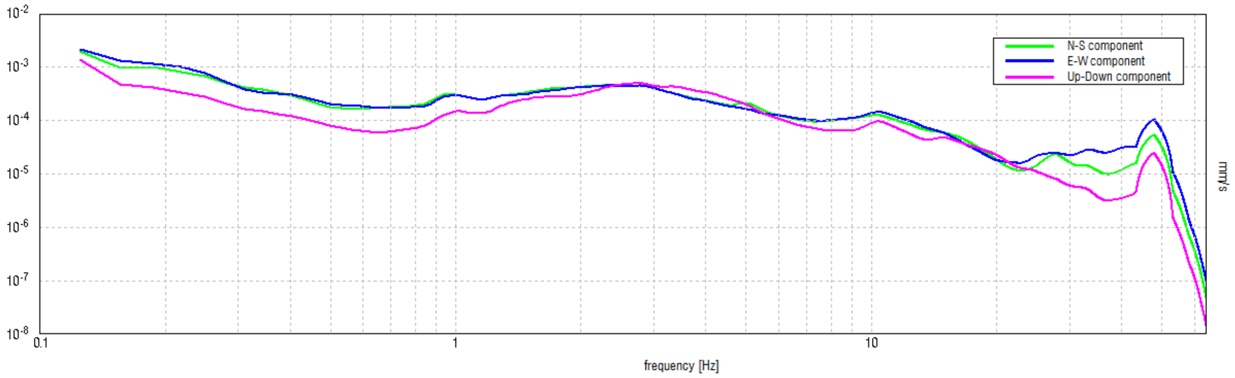
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables**.]

Max. H/V at 0.66 ± 13.74 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	0.66 > 0.50	OK	
$n_c(f_0) > 200$	616.9 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 32 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$			NO
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.313 Hz	OK	
$A_0 > 2$	3.22 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$			
$\sigma_f < \varepsilon(f_0)$			
$\sigma_A(f_0) < \theta(f_0)$			

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$

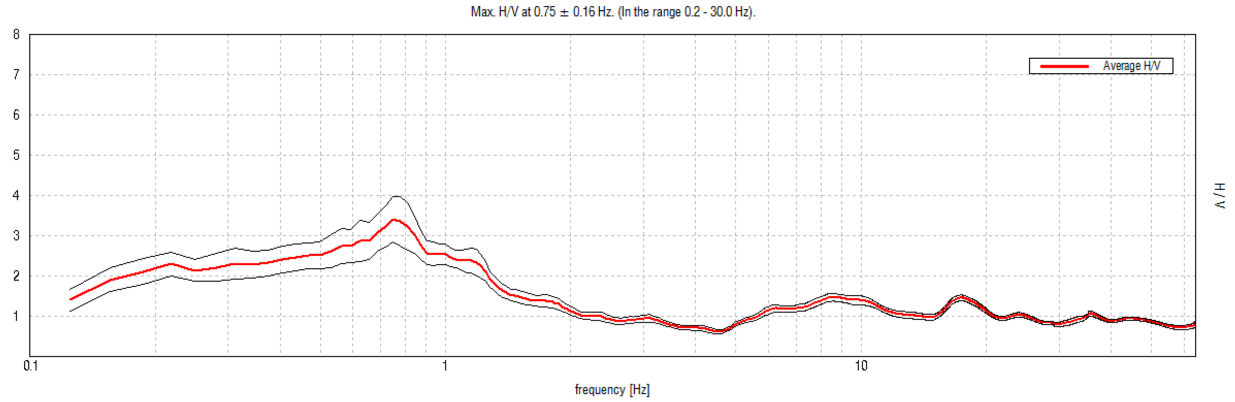
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

|20.94096| < 0.05NO13.74251 < 0.09844NO0.4759 < 2.0OK

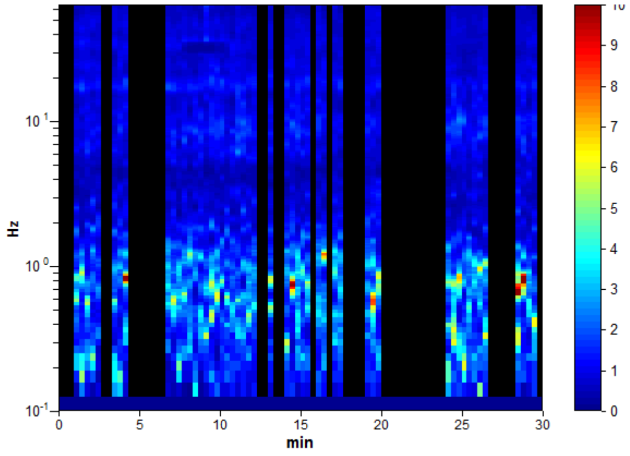
HG24, MEDOLLA 0003

Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 26/03/2021 10:25:45 End recording: 26/03/2021 10:55:45
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°02.9809 E, 44°50.3236 N (5.1 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 6
Trace length: 0h30'00". Analyzed 56% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

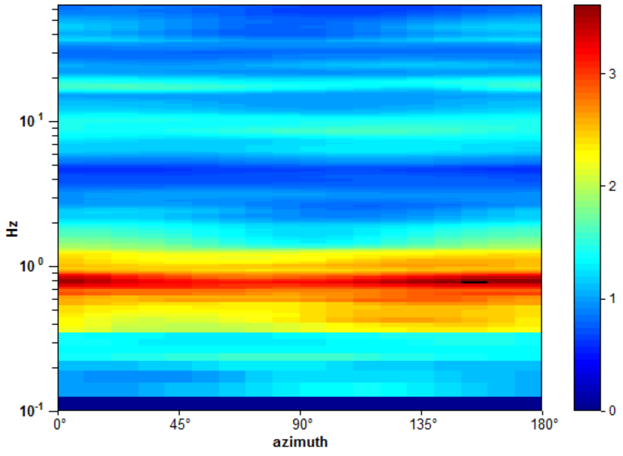
HORIZONTAL TO VERTICAL SPECTRAL RATIO



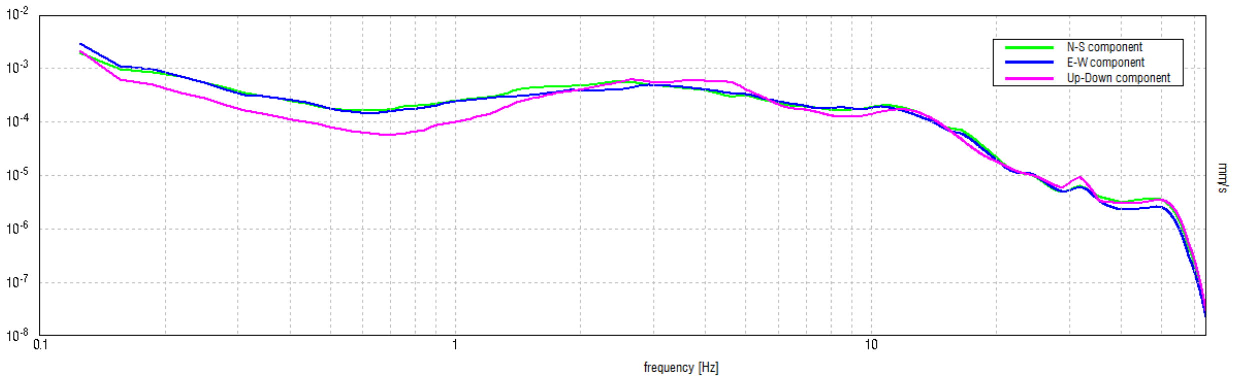
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables**.]

Max. H/V at 0.75 ± 0.16 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	0.75 > 0.50	OK	
$n_c(f_0) > 200$	750.0 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 37 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0] \mid A_{H/V}(f^-) < A_0 / 2$			NO
Exists f^+ in $[f_0, 4f_0] \mid A_{H/V}(f^+) < A_0 / 2$	1.375 Hz	OK	
$A_0 > 2$	3.41 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	$\lvert 0.2095 \rvert < 0.05$		NO
$\sigma_f < \varepsilon(f_0)$	0.15712 < 0.1125		NO
$\sigma_A(f_0) < \theta(f_0)$	0.5575 < 2.0	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

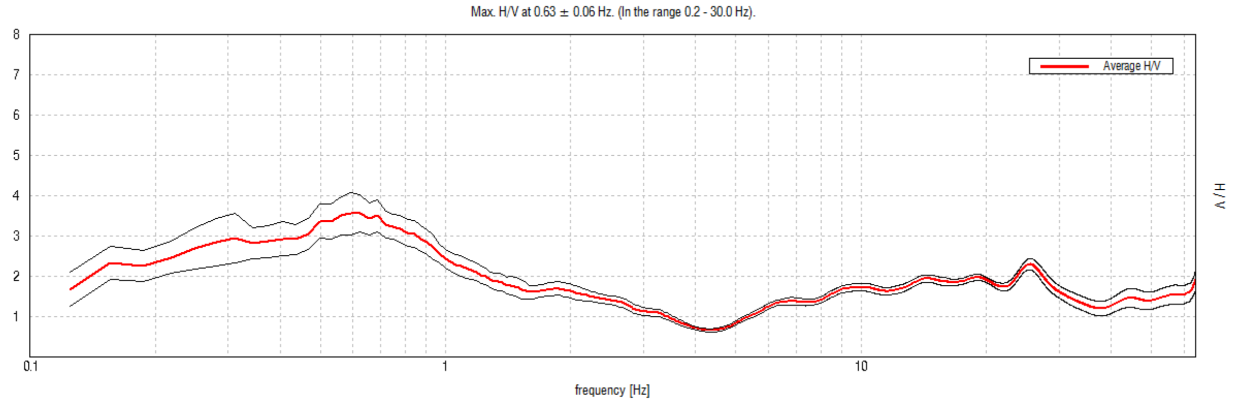
Threshold values for σ_f and $\sigma_A(f_0)$

Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

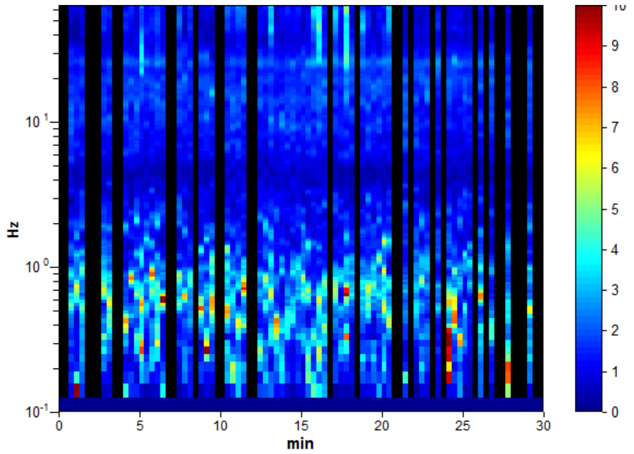
HG34, MEDOLLA 0004

Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 26/03/2021 11:03:16 End recording: 26/03/2021 11:33:16
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°03.2474 E, 44°50.7138 N (17.8 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 5
Trace length: 0h30'00". Analyzed 67% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

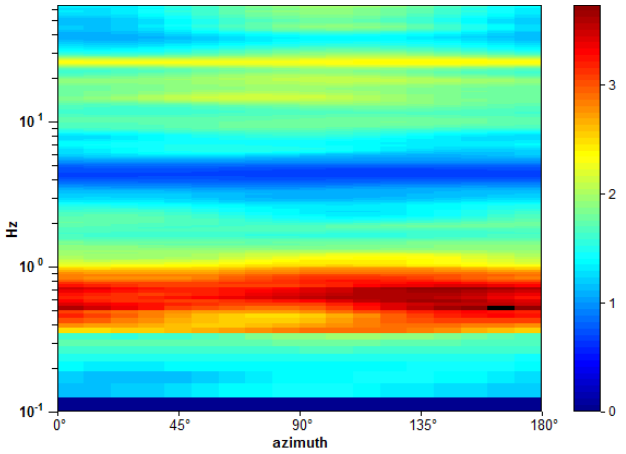
HORIZONTAL TO VERTICAL SPECTRAL RATIO



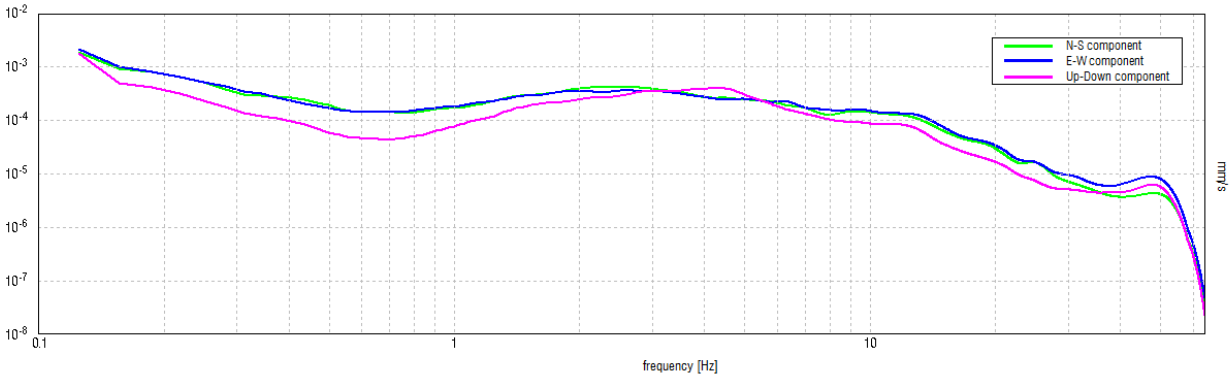
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables**.]

Max. H/V at 0.63 ± 0.06 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	$0.63 > 0.50$	OK	
$n_c(f_0) > 200$	$750.0 > 200$	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 31 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$			NO
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.469 Hz	OK	
$A_0 > 2$	$3.56 > 2$	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	$\|0.10062\| < 0.05$		NO
$\sigma_f < \varepsilon(f_0)$	$0.06289 < 0.09375$	OK	
$\sigma_A(f_0) < \theta(f_0)$	$0.4685 < 2.0$	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

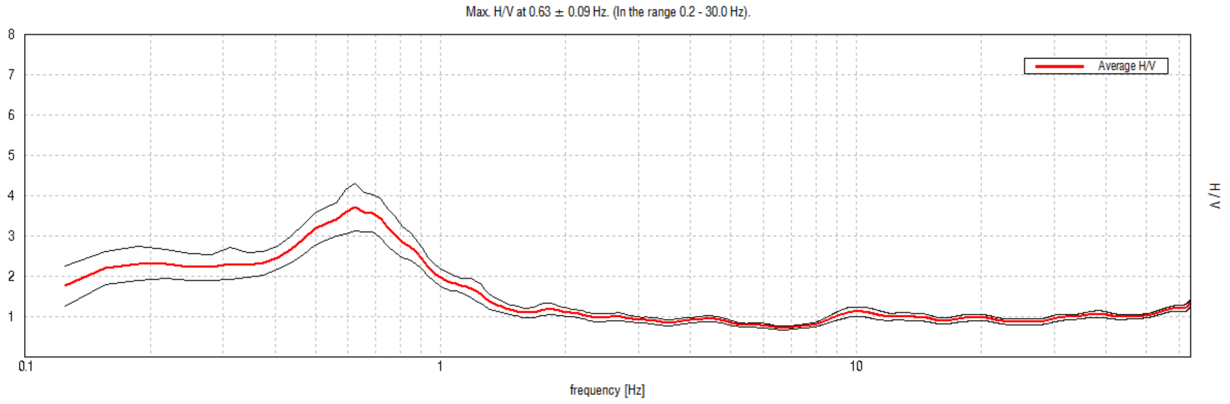
Threshold values for σ_f and $\sigma_A(f_0)$

Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	$0.25 f_0$	$0.2 f_0$	$0.15 f_0$	$0.10 f_0$	$0.05 f_0$
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

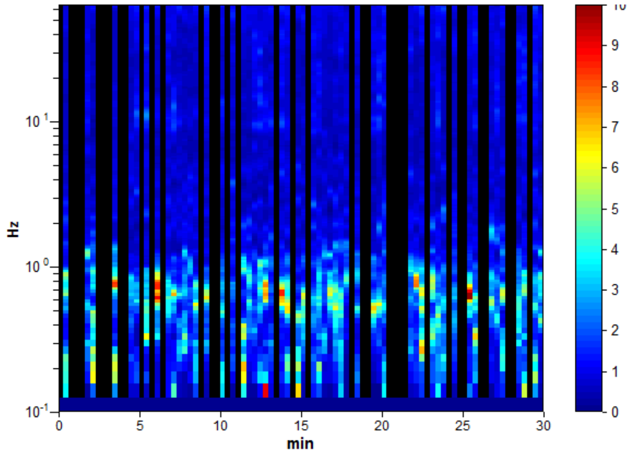
HG36, MEDOLLA 0005

Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 26/03/2021 11:41:23 End recording: 26/03/2021 12:11:23
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°04.2163 E, 44°50.6446 N (12.3 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 4
Trace length: 0h30'00". Analyzed 60% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

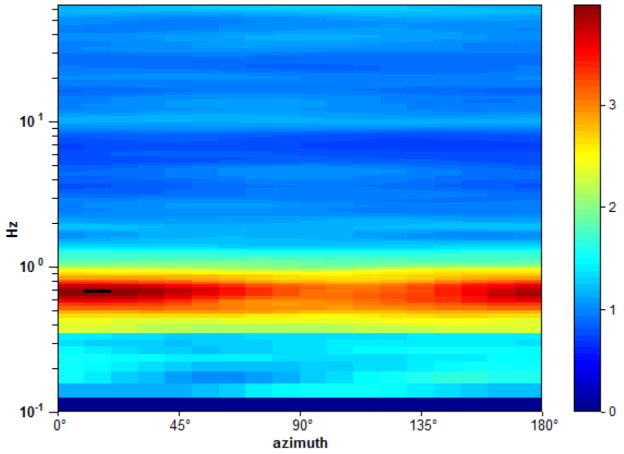
HORIZONTAL TO VERTICAL SPECTRAL RATIO



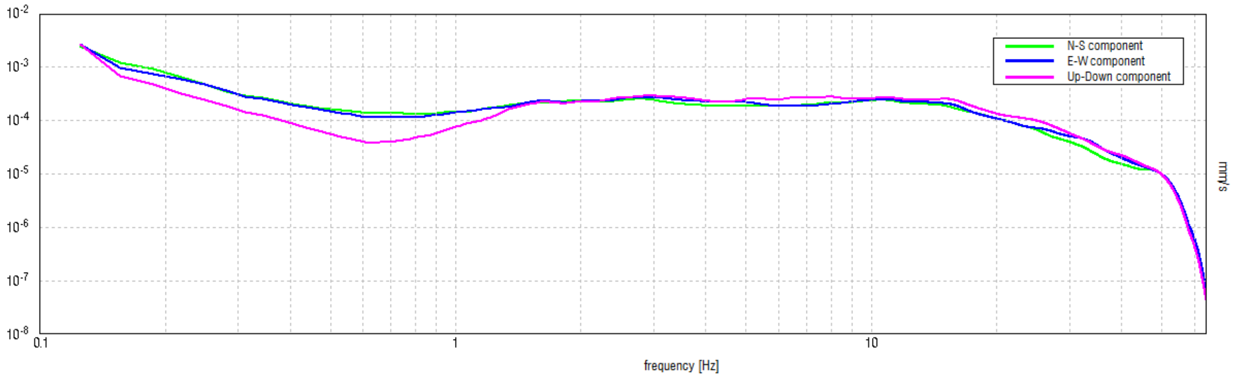
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the *Grilla* manual before interpreting the following tables.**]

Max. H/V at 0.63 ± 0.09 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	0.63 > 0.50	OK	
$n_c(f_0) > 200$	675.0 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 31 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$			NO
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.094 Hz	OK	
$A_0 > 2$	3.72 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.14907| < 0.05		NO
$\sigma_f < \varepsilon(f_0)$	0.09317 < 0.09375	OK	
$\sigma_A(f_0) < \theta(f_0)$	0.5867 < 2.0	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

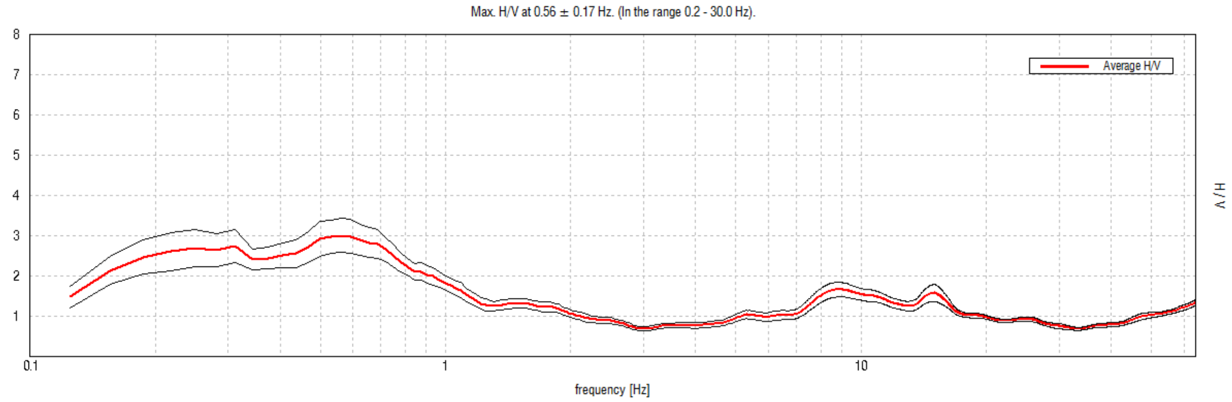
Threshold values for σ_f and $\sigma_A(f_0)$

Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

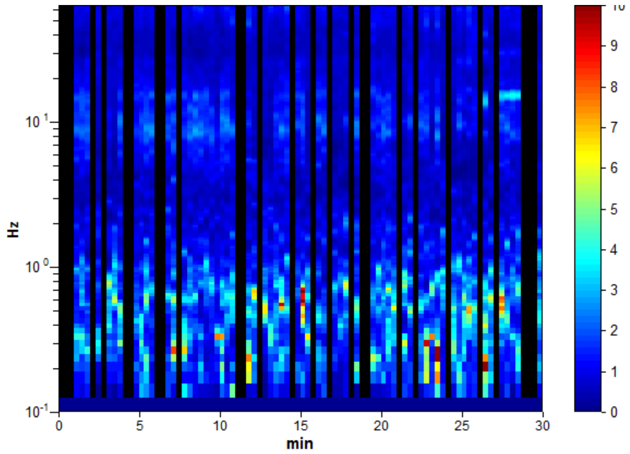
HG27, MEDOLLA 0006

Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 26/03/2021 12:16:15 End recording: 26/03/2021 12:46:15
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°03.9144 E, 44°50.1865 N (11.7 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 5
Trace length: 0h30'00". Analyzed 70% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

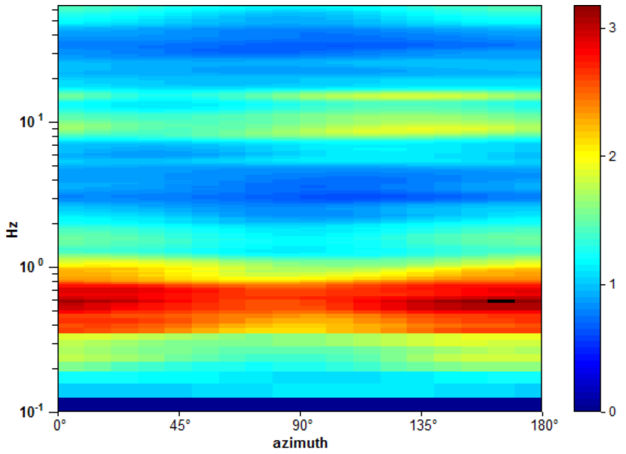
HORIZONTAL TO VERTICAL SPECTRAL RATIO


Max. H/V at 0.56 ± 0.17 Hz. (In the range 0.2 - 30.0 Hz).

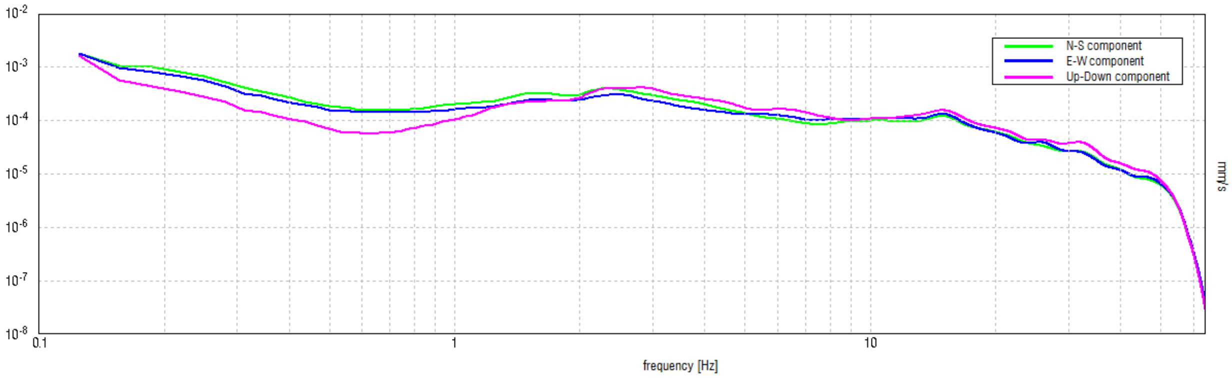
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables**.]

Max. H/V at 0.56 ± 0.17 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	$0.56 > 0.50$	OK	
$n_c(f_0) > 200$	$708.8 > 200$	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5\text{Hz}$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5\text{Hz}$**	Exceeded 0 out of 28 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$	0.125 Hz	OK	
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.156 Hz	OK	
$A_0 > 2$	$3.02 > 2$	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	$\|0.31011\| < 0.05$		NO
$\sigma_f < \varepsilon(f_0)$	$0.17444 < 0.08438$		NO
$\sigma_A(f_0) < \theta(f_0)$	$0.4314 < 2.0$	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

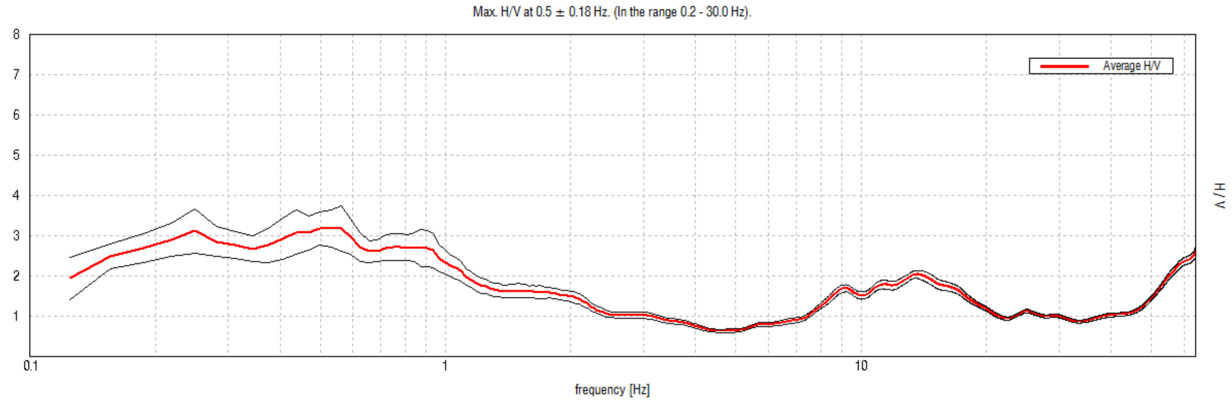
Threshold values for σ_f and $\sigma_A(f_0)$

Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

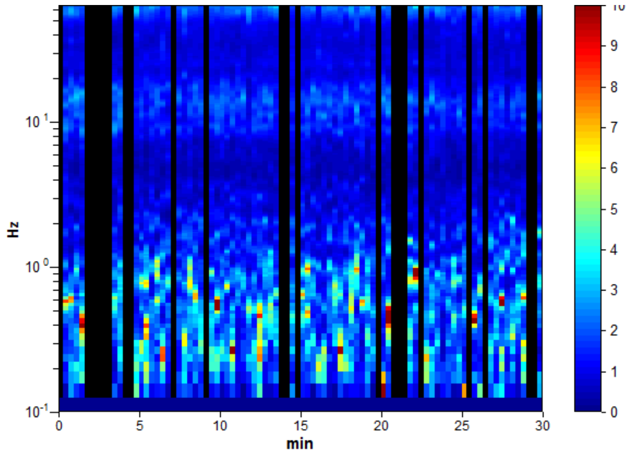
HG26, MEDOLLA 0007

Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 26/03/2021 13:02:08 End recording: 26/03/2021 13:32:08
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°03.7437 E, 44°50.3449 N (-30.3 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 5
Trace length: 0h30'00''. Analyzed 76% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

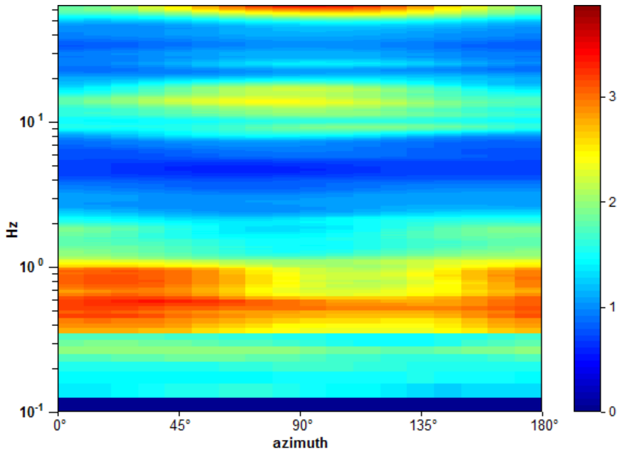
HORIZONTAL TO VERTICAL SPECTRAL RATIO



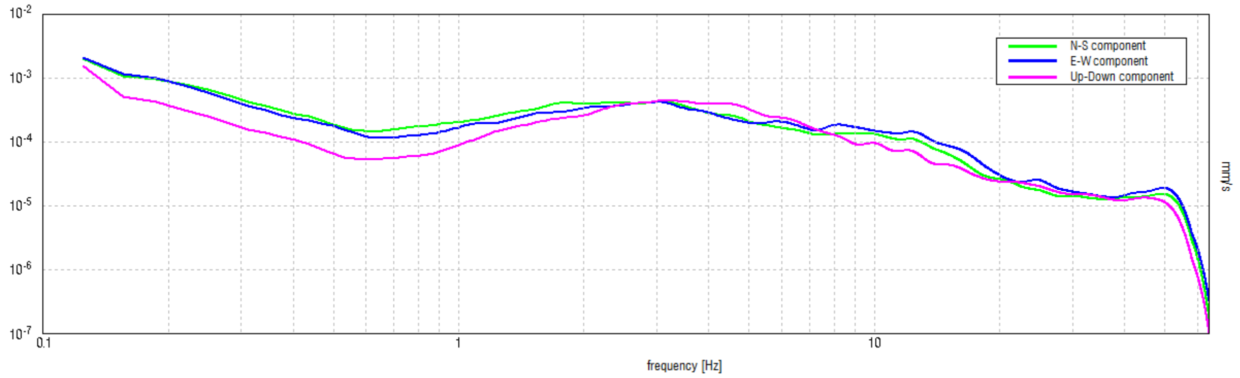
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables.**]

Max. H/V at 0.5 ± 0.18 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	$0.50 > 0.50$		NO
$n_c(f_0) > 200$	$680.0 > 200$	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 25 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0] \mid A_{H/V}(f^-) < A_0 / 2$			NO
Exists f^+ in $[f_0, 4f_0] \mid A_{H/V}(f^+) < A_0 / 2$	1.719 Hz	OK	
$A_0 > 2$	$3.19 > 2$	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	$\lvert 0.36757 \rvert < 0.05$		NO
$\sigma_f < \varepsilon(f_0)$	$0.18379 < 0.075$		NO
$\sigma_A(f_0) < \theta(f_0)$	$0.4119 < 2.0$	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

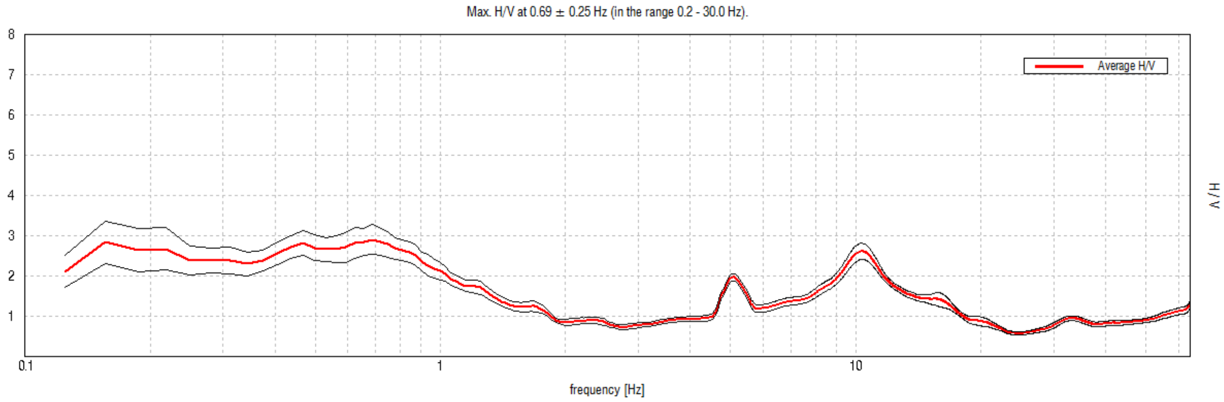
Threshold values for σ_f and $\sigma_A(f_0)$

Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	$0.25 f_0$	$0.2 f_0$	$0.15 f_0$	$0.10 f_0$	$0.05 f_0$
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

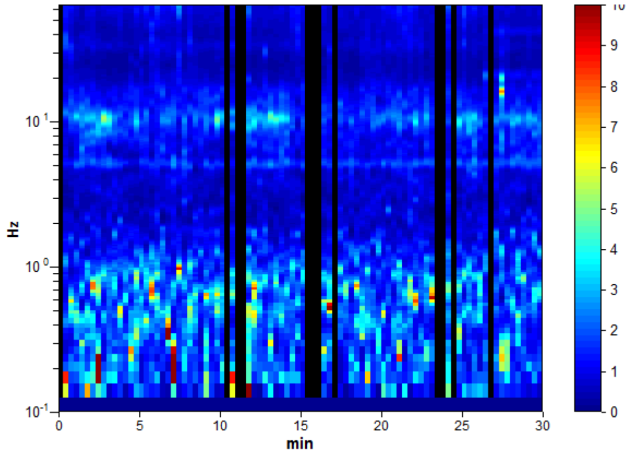
HG18, MEDOLLA 0008

Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 26/03/2021 13:46:04 End recording: 26/03/2021 14:16:04
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°03.8417 E, 44°49.8957 N (-7.9 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 6
Trace length: 0h30'00". Analyzed 87% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

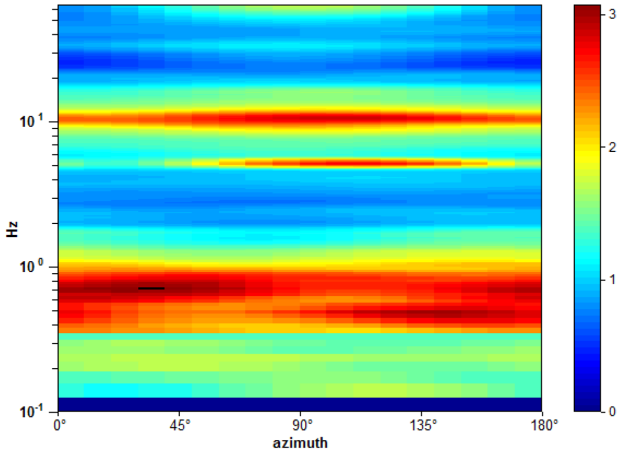
HORIZONTAL TO VERTICAL SPECTRAL RATIO



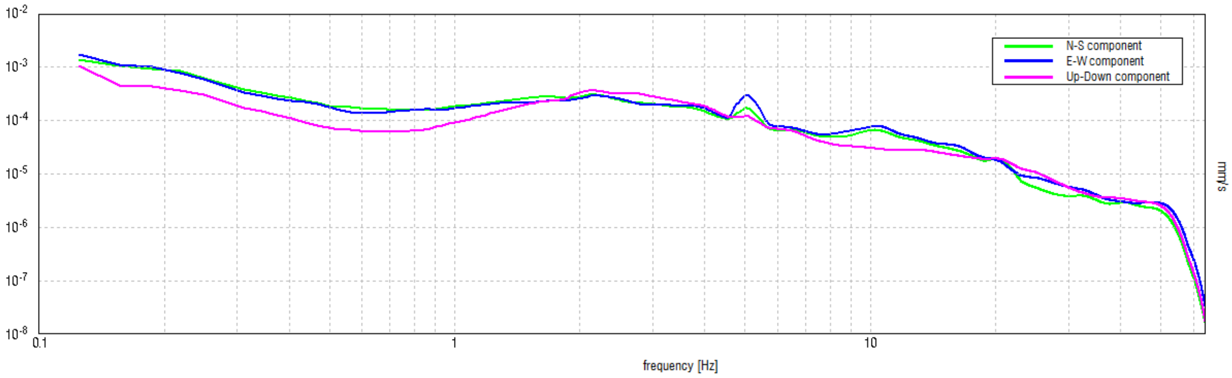
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables.**]

Max. H/V at 0.69 ± 0.25 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	0.69 > 0.50	OK	
$n_c(f_0) > 200$	1072.5 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 34 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$			NO
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.375 Hz	OK	
$A_0 > 2$	2.91 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.364| < 0.05		NO
$\sigma_f < \varepsilon(f_0)$	0.25025 < 0.10313		NO
$\sigma_A(f_0) < \theta(f_0)$	0.3688 < 2.0	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

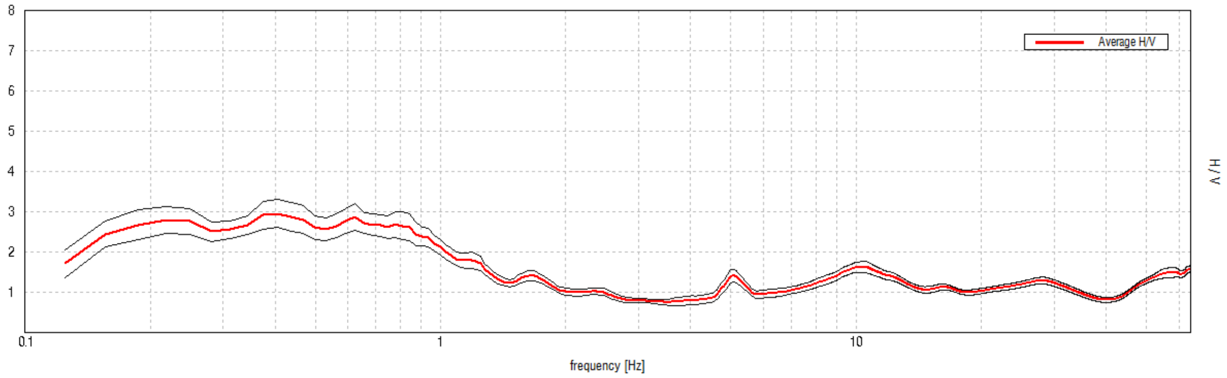
Threshold values for σ_f and $\sigma_A(f_0)$					
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

HG19, MEDOLLA 0009

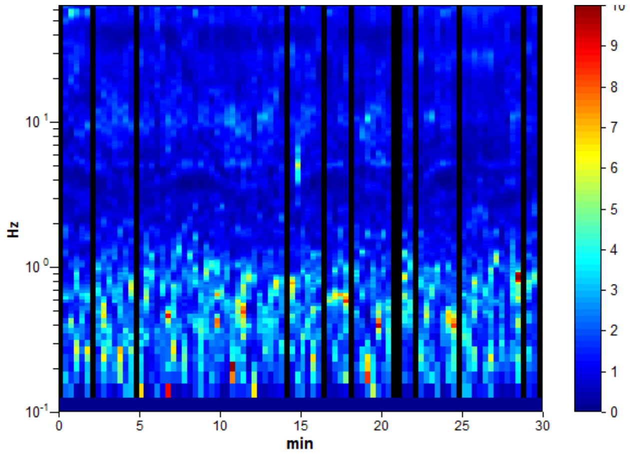
Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 26/03/2021 14:21:01 End recording: 26/03/2021 14:51:01
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°04.4044 E, 44°49.7820 N (9.7 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 6
Trace length: 0h30'00". Analyzed 87% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

HORIZONTAL TO VERTICAL SPECTRAL RATIO

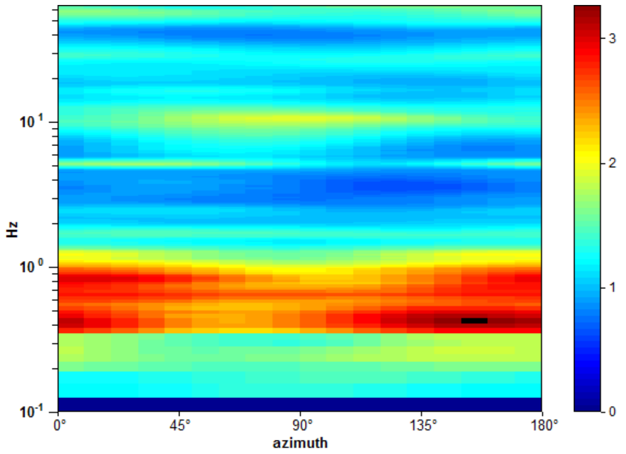
Max. H/V at 0.41 ± 0.12 Hz. (In the range 0.2 - 30.0 Hz).



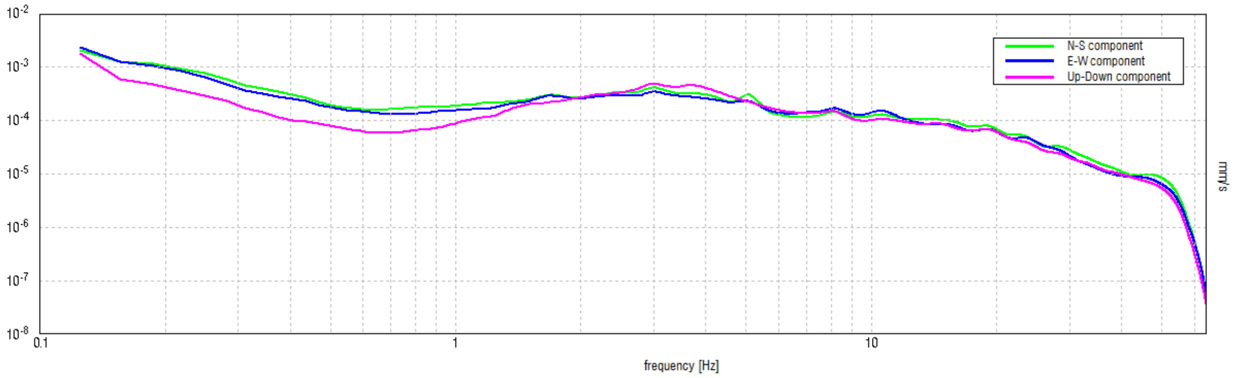
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the *Grilla* manual before interpreting the following tables.**]

Max. H/V at 0.41 ± 0.12 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve [All 3 should be fulfilled]			
$f_0 > 10 / L_w$	0.41 > 0.50		NO
$n_c(f_0) > 200$	633.8 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5\text{Hz}$ $\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5\text{Hz}$	Exceeded 0 out of 20 times	OK	
Criteria for a clear H/V peak [At least 5 out of 6 should be fulfilled]			
Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$	0.094 Hz	OK	
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.344 Hz	OK	
$A_0 > 2$	2.96 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.29549| < 0.05		NO
$\sigma_f < \varepsilon(f_0)$	0.12004 < 0.08125		NO
$\sigma_A(f_0) < \theta(f_0)$	0.3485 < 2.5	OK	

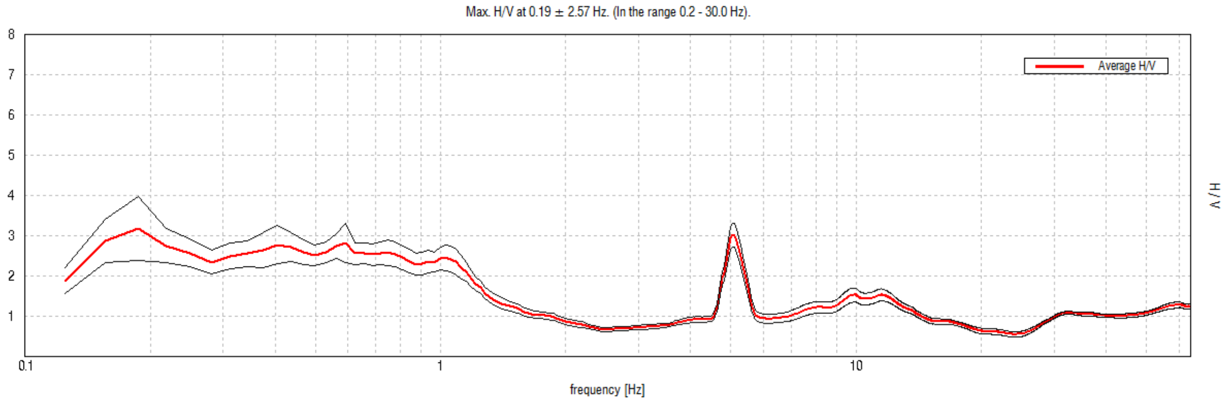
L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$					
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

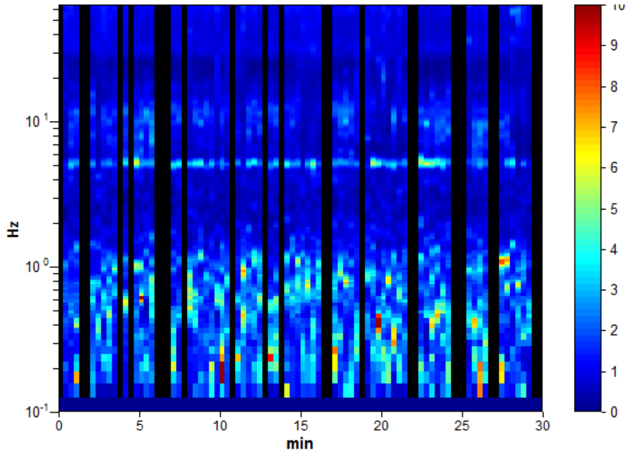
HG12, MEDOLLA 0010

Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 26/03/2021 14:57:16 End recording: 26/03/2021 15:27:16
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°04.1375 E, 44°49.3320 N (-4.8 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 4
Trace length: 0h30'00". Analyzed 73% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

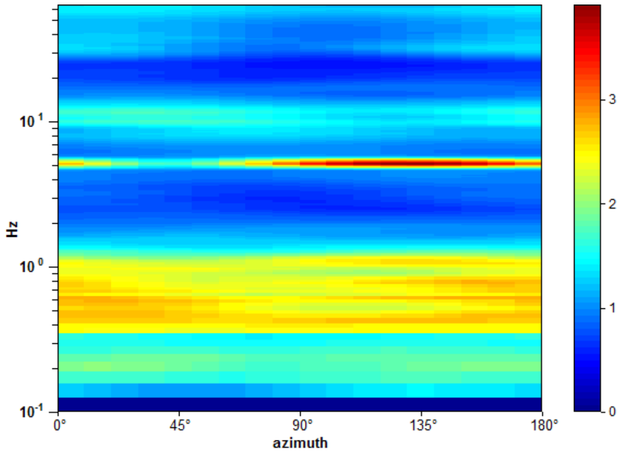
HORIZONTAL TO VERTICAL SPECTRAL RATIO



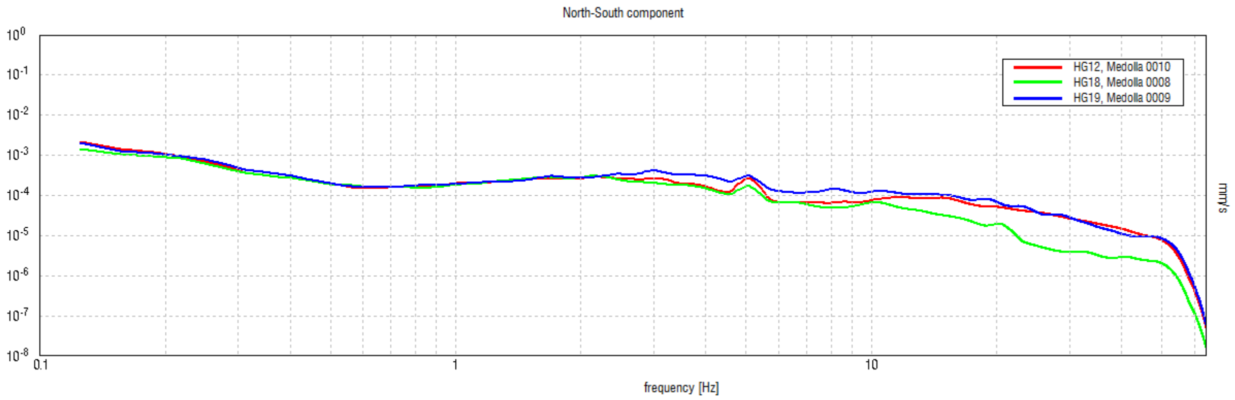
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables**.]

Max. H/V at 0.19 ± 2.57 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	0.19 > 0.50		NO
$n_c(f_0) > 200$	247.5 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5$Hz **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5$Hz**	Exceeded 0 out of 10 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0] \mid A_{H/V}(f^-) < A_0 / 2$	0.094 Hz	OK	
Exists f^+ in $[f_0, 4f_0] \mid A_{H/V}(f^+) < A_0 / 2$			NO
$A_0 > 2$	3.18 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|13.69134| < 0.05		NO
$\sigma_f < \varepsilon(f_0)$	2.56713 < 0.04688		NO
$\sigma_A(f_0) < \theta(f_0)$	0.786 < 3.0	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

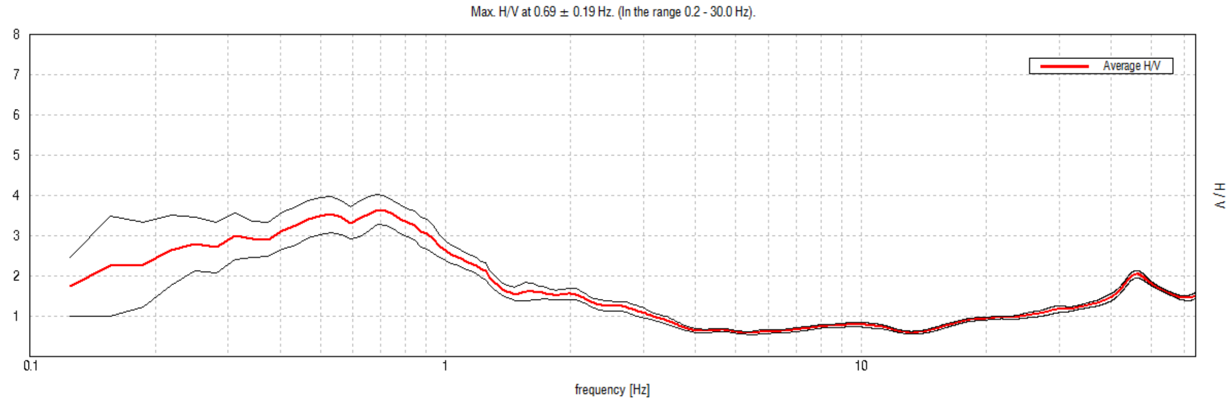
Threshold values for σ_f and $\sigma_A(f_0)$

Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

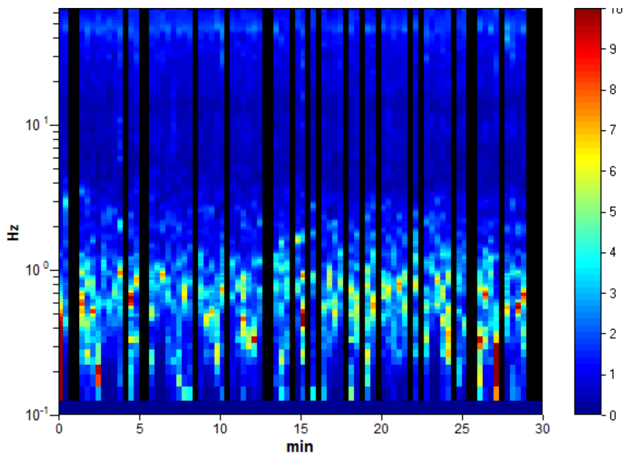
HG33, MEDOLLA

Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 02/04/2021 07:43:15 End recording: 02/04/2021 08:13:15
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°02.4205 E, 44°50.5984 N (8.2 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 11
Trace length: 0h30'00''. Analyzed 73% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

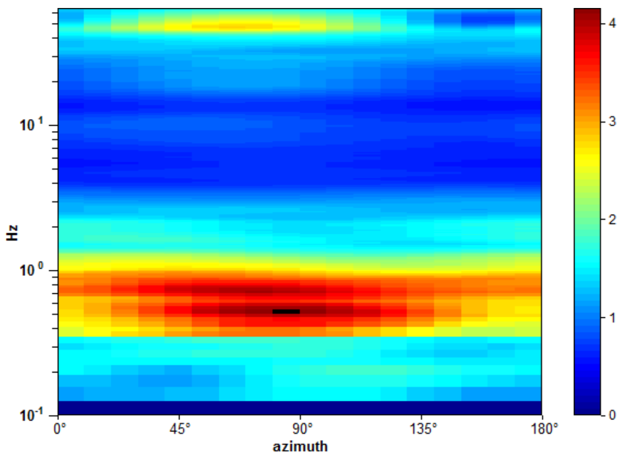
HORIZONTAL TO VERTICAL SPECTRAL RATIO



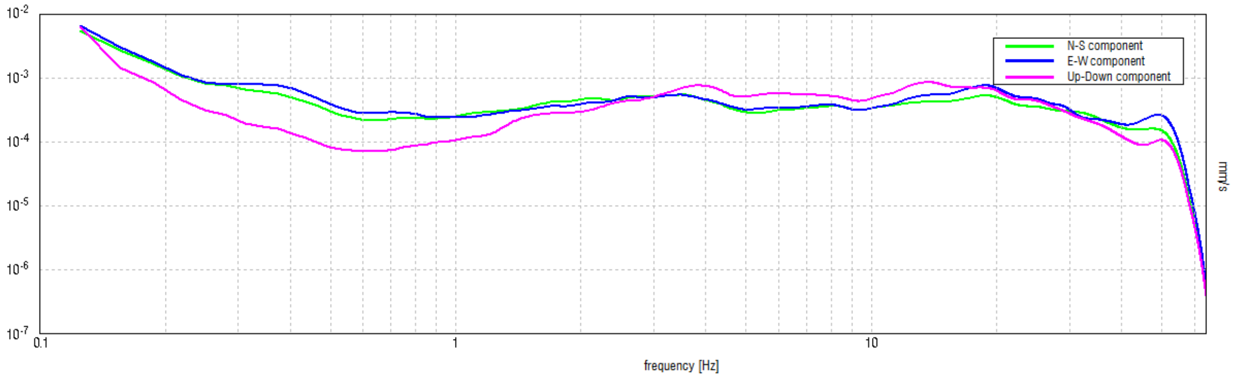
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables**.]

Max. H/V at 0.69 ± 0.19 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve [All 3 should be fulfilled]			
$f_0 > 10 / L_w$	0.69 > 0.50	OK	
$n_c(f_0) > 200$	907.5 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 34 times	OK	
Criteria for a clear H/V peak [At least 5 out of 6 should be fulfilled]			
Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$			NO
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.344 Hz	OK	
$A_0 > 2$	3.65 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.28031| < 0.05		NO
$\sigma_f < \varepsilon(f_0)$	0.19271 < 0.10313		NO
$\sigma_A(f_0) < \theta(f_0)$	0.3726 < 2.0	OK	

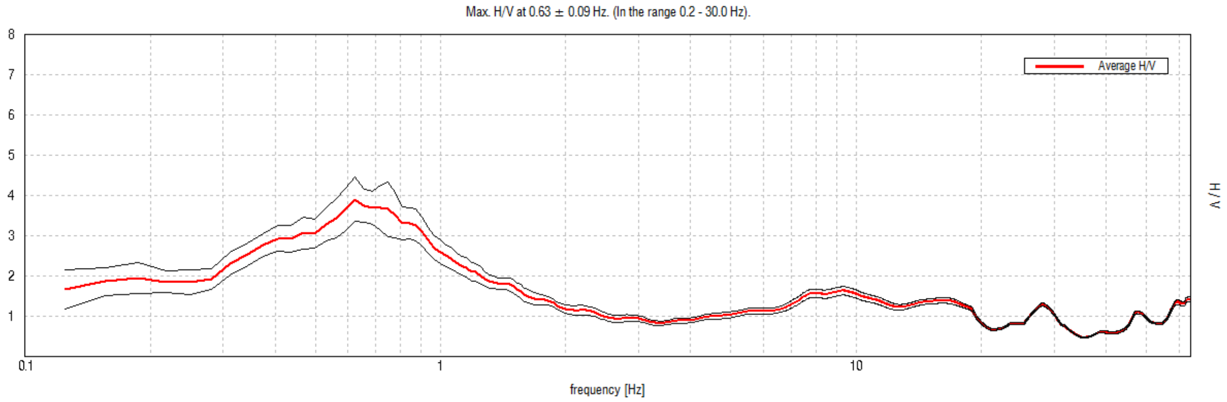
L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$					
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

HG42, MEDOLLA

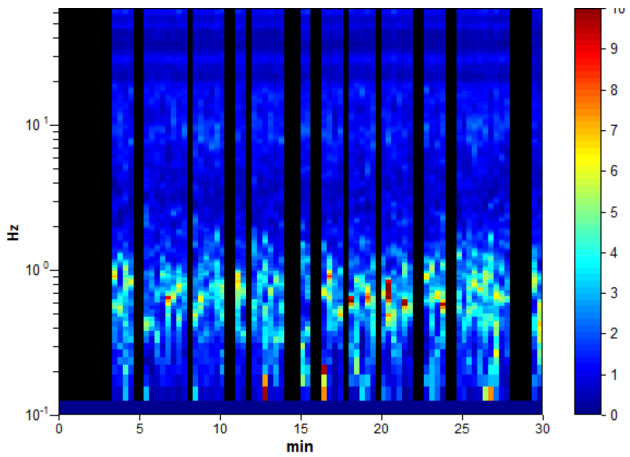
Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 02/04/2021 08:30:43 End recording: 02/04/2021 09:00:43
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°03.2106 E, 44°51.0229 N (4.4 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 9
Trace length: 0h30'00''. Analyzed 66% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

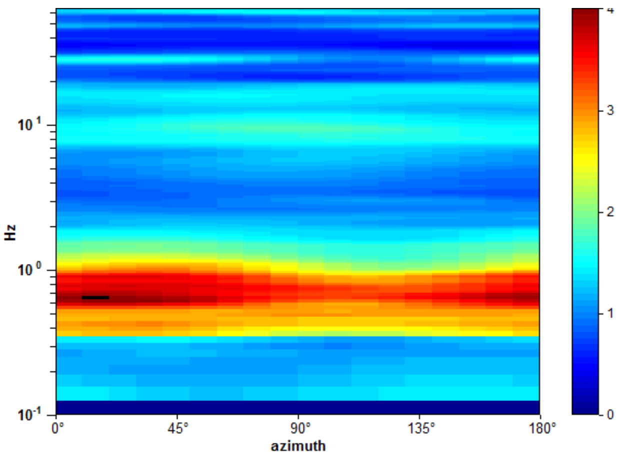
HORIZONTAL TO VERTICAL SPECTRAL RATIO



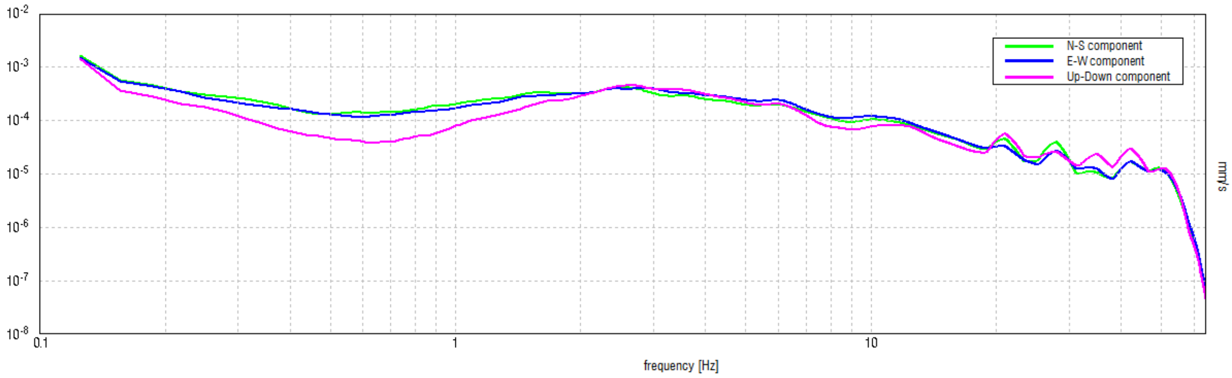
H/V TIME HISTORY

DIRECTIONAL H/V





SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables.**]

Max. H/V at 0.63 ± 0.09 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	0.63 > 0.50	OK	
$n_c(f_0) > 200$	737.5 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 31 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0] \mid A_{H/V}(f^-) < A_0 / 2$	0.281 Hz	OK	
Exists f^+ in $[f_0, 4f_0] \mid A_{H/V}(f^+) < A_0 / 2$	1.281 Hz	OK	
$A_0 > 2$	3.91 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	$\lvert 0.13685 \rvert < 0.05$		NO
$\sigma_f < \varepsilon(f_0)$	0.08553 < 0.09375	OK	
$\sigma_A(f_0) < \theta(f_0)$	0.5552 < 2.0	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$

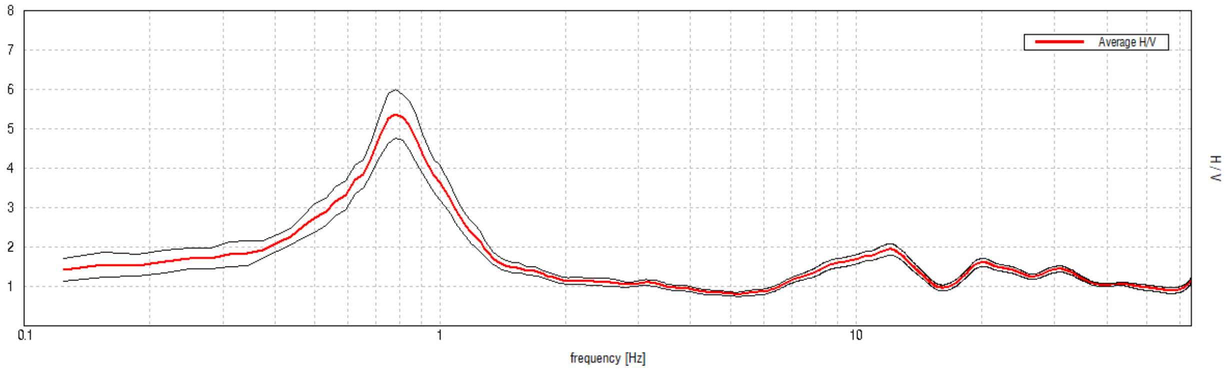
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

HG43, MEDOLLA

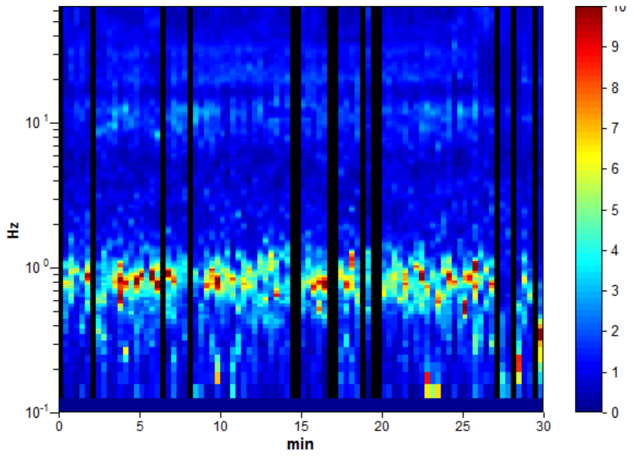
Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 02/04/2021 09:10:25 End recording: 02/04/2021 09:40:25
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°03.6998 E, 44°51.0854 N (9.1 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 5
Trace length: 0h30'00". Analyzed 84% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

HORIZONTAL TO VERTICAL SPECTRAL RATIO

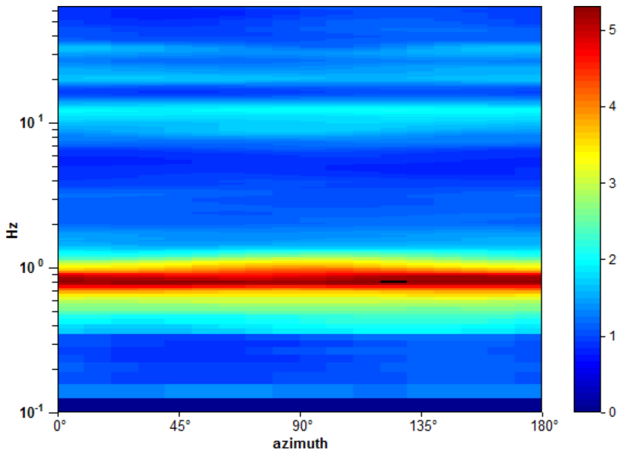
Max. H/V at 0.78 ± 0.03 Hz (in the range 0.2 - 30.0 Hz).



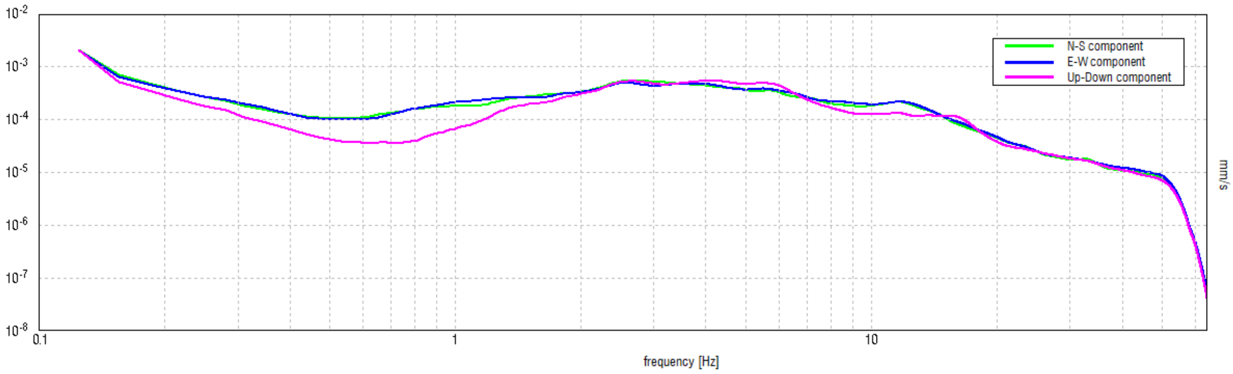
H/V TIME HISTORY



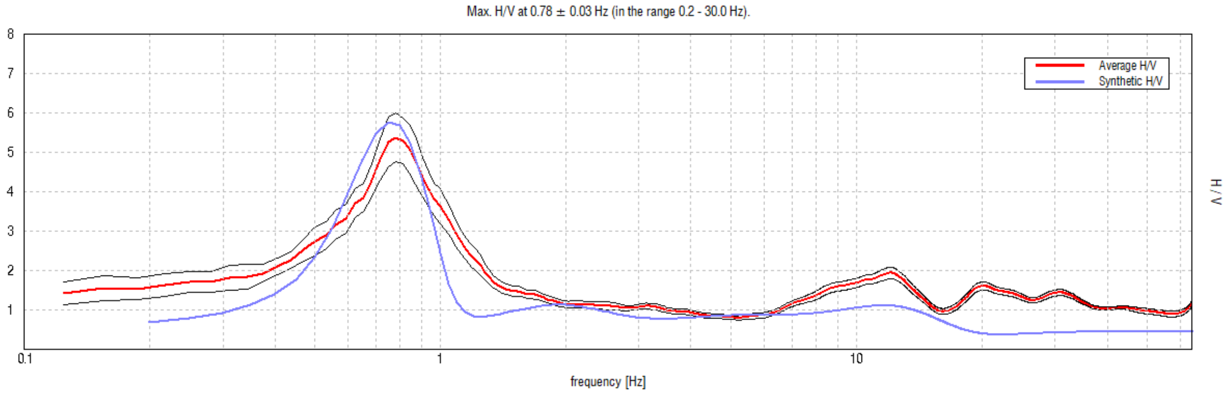
DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA

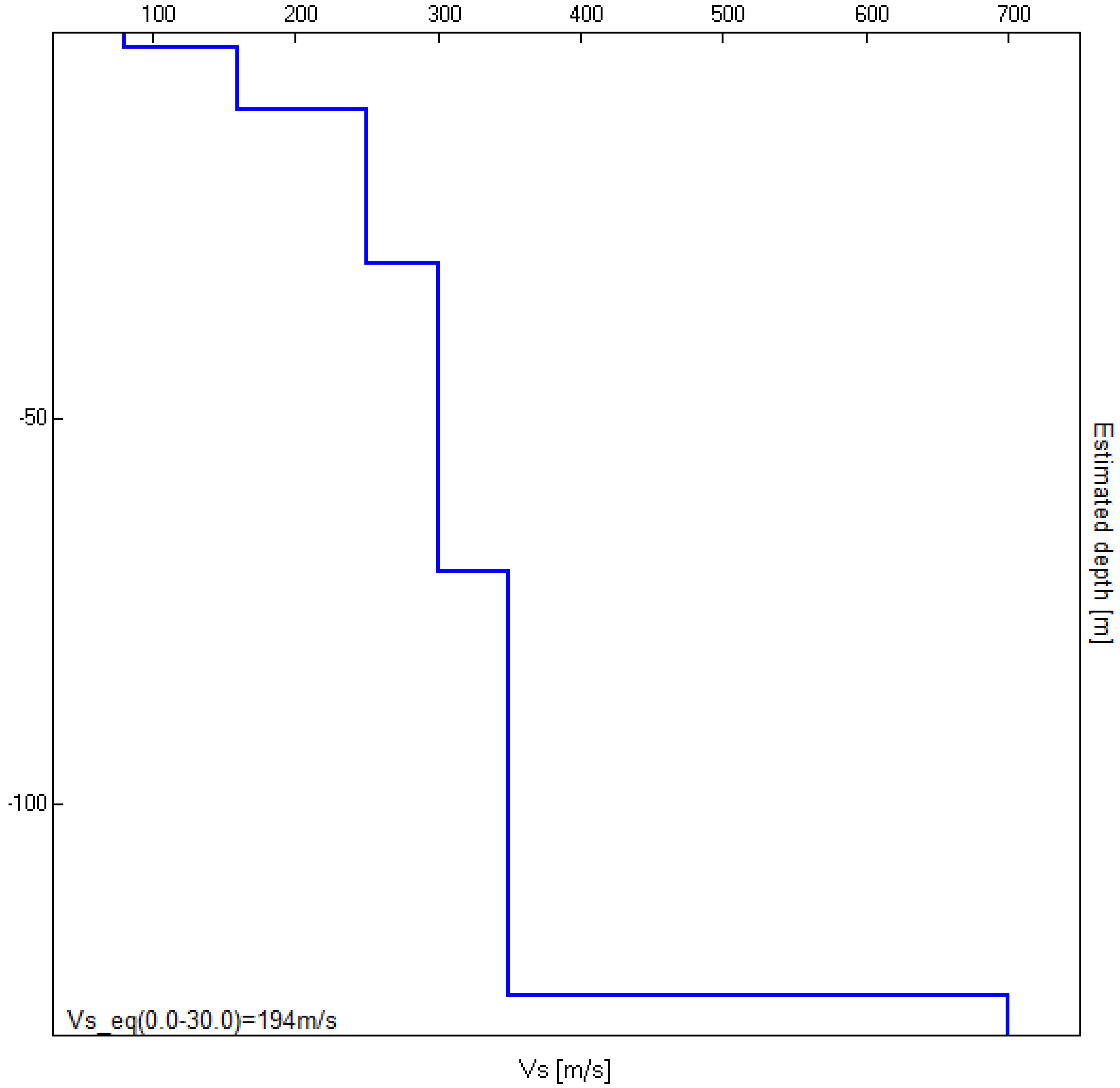


EXPERIMENTAL vs. SYNTHETIC H/V



Depth at the bottom of the layer [m]	Thickness [m]	Vs [m/s]	Poisson ratio
2.00	2.00	80	0.42
10.00	8.00	160	0.42
30.00	20.00	250	0.42
70.00	40.00	300	0.35
125.00	55.00	350	0.35
inf.	inf.	700	0.35

Vs_eq(0.0-0.0)=m/s


100
200
300
400
500
600
700
-50
-100
Estimated depth [m]
Vs_eq(0.0-30.0)=194m/s
Vs [m/s]

[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables**.]

Max. H/V at 0.78 ± 0.03 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	0.78 > 0.50	**OK**	
$n_c(f_0) > 200$	1187.5 > 200	**OK**	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 38 times	**OK**	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$	0.469 Hz	**OK**	
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.156 Hz	**OK**	
$A_0 > 2$	5.37 > 2	**OK**	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.04329| < 0.05	**OK**	
$\sigma_f < \varepsilon(f_0)$	0.03382 < 0.11719	**OK**	
$\sigma_A(f_0) < \theta(f_0)$	0.6147 < 2.0	**OK**	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

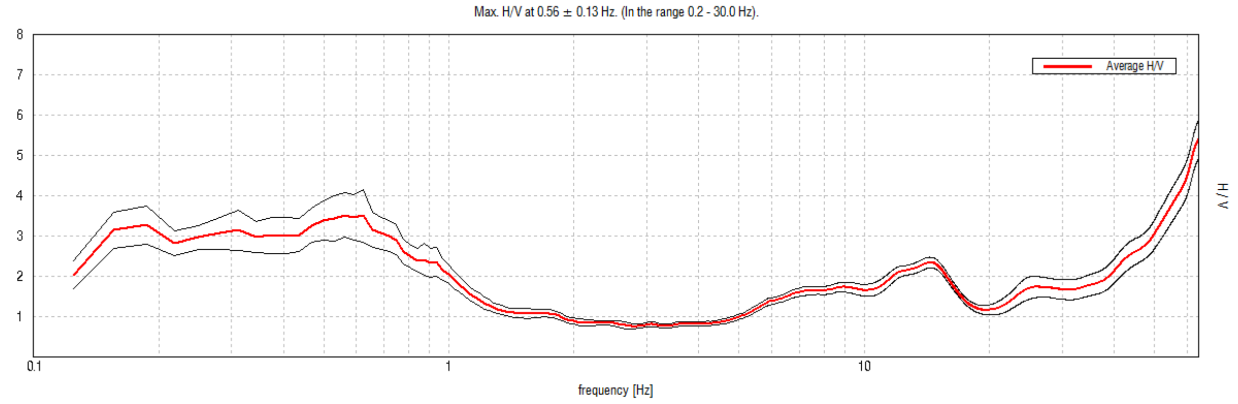
Threshold values for σ_f and $\sigma_A(f_0)$

Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

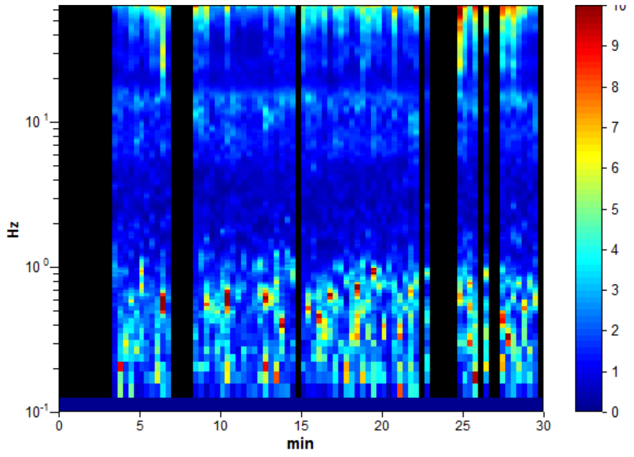
HG10, MEDOLLA

Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 02/04/2021 10:10:09 End recording: 02/04/2021 10:40:09
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°03.2694 E, 44°49.5487 N (-2.7 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 9
Trace length: 0h30'00". Analyzed 72% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

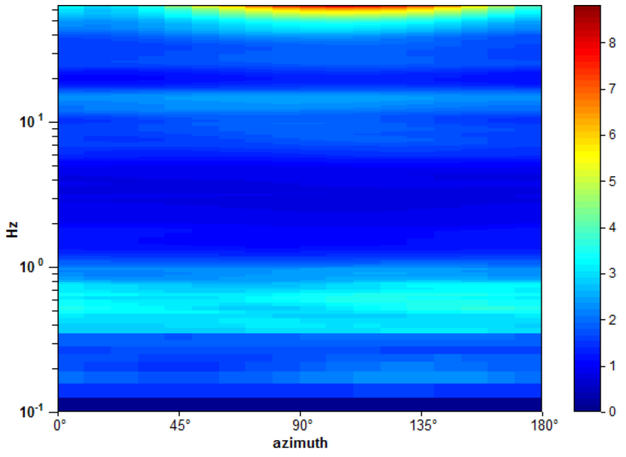
HORIZONTAL TO VERTICAL SPECTRAL RATIO



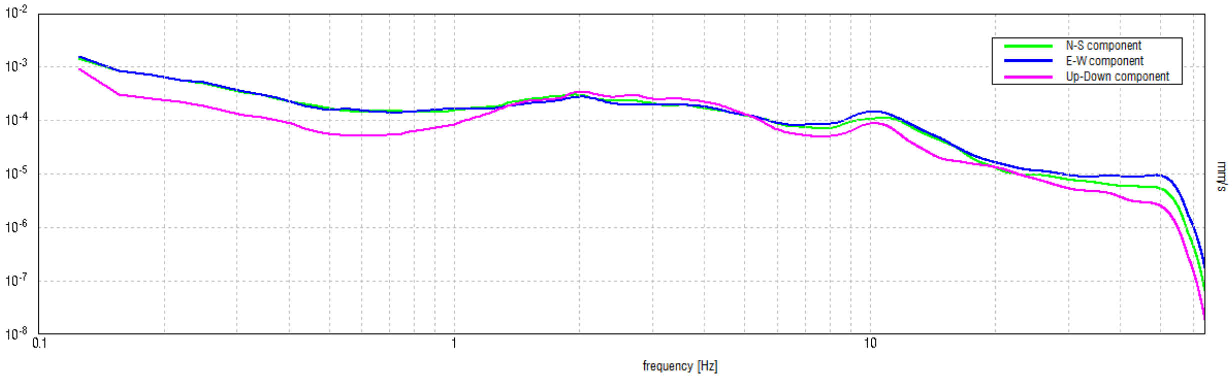
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables.**]

Max. H/V at 0.56 ± 0.13 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	$0.56 > 0.50$	OK	
$n_c(f_0) > 200$	$731.3 > 200$	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5$Hz **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5$Hz**	Exceeded 0 out of 28 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$			NO
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.094 Hz	OK	
$A_0 > 2$	$3.52 > 2$	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	$\|0.22896\| < 0.05$		NO
$\sigma_f < \varepsilon(f_0)$	$0.12879 < 0.08438$		NO
$\sigma_A(f_0) < \theta(f_0)$	$0.5445 < 2.0$	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$

Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

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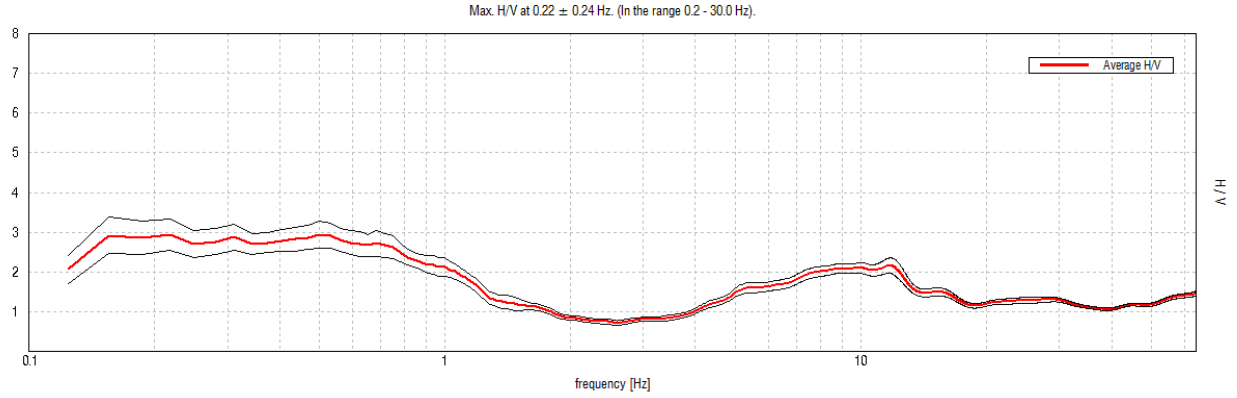
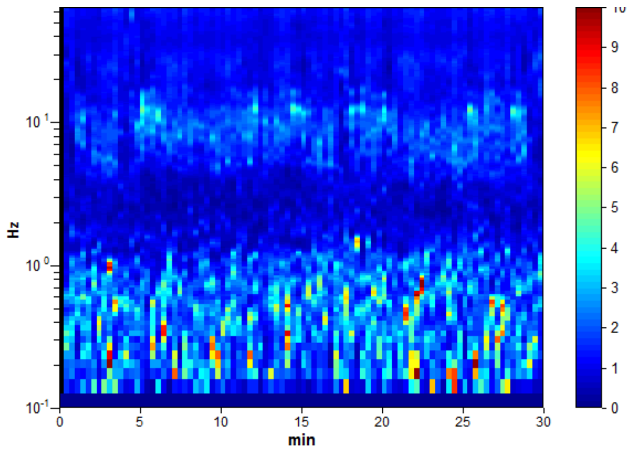
HG11, 036021P398HVSR398

Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 02/04/2021 10:48:14 End recording: 02/04/2021 11:18:14
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°03.7351 E, 44°49.4296 N (10.9 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 7
Trace length: 0h30'00". Analyzed 99% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

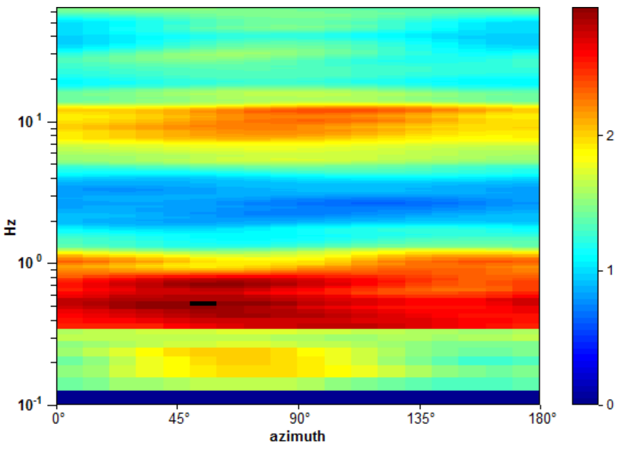
HORIZONTAL TO VERTICAL SPECTRAL RATIO



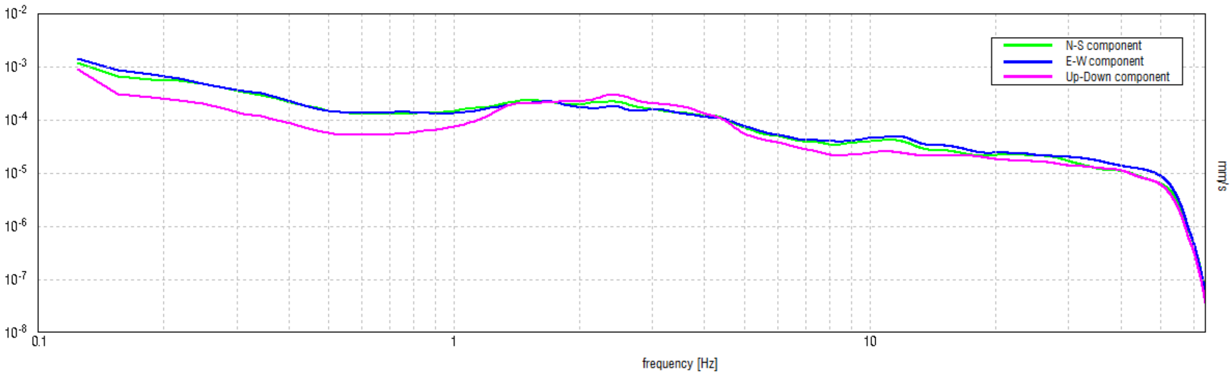
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the *Grilla* manual before interpreting the following tables.**]

Max. H/V at 0.22 ± 0.24 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve [All 3 should be fulfilled]			
$f_0 > 10 / L_w$	0.22 > 0.50		NO
$n_c(f_0) > 200$	389.4 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ $\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$	Exceeded 0 out of 12 times	OK	
Criteria for a clear H/V peak [At least 5 out of 6 should be fulfilled]			
Exists f^- in $[f_0/4, f_0] \mid A_{H/V}(f^-) < A_0 / 2$	0.094 Hz	OK	
Exists f^+ in $[f_0, 4f_0] \mid A_{H/V}(f^+) < A_0 / 2$			NO
$A_0 > 2$	2.95 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	$\lvert 1.08639 \rvert < 0.05$		NO
$\sigma_f < \varepsilon(f_0)$	0.23765 < 0.04375		NO
$\sigma_A(f_0) < \theta(f_0)$	0.3916 < 2.5	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

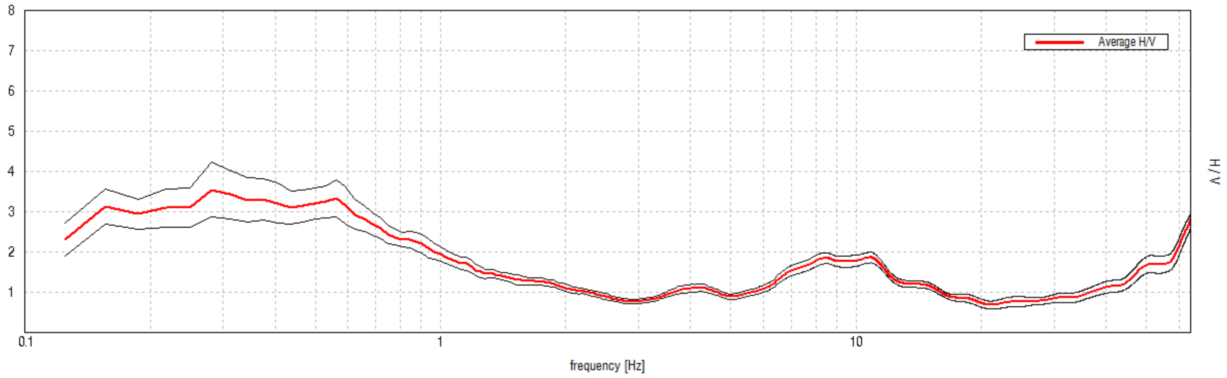
Threshold values for σ_f and $\sigma_A(f_0)$					
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

HG13, MEDOLLA

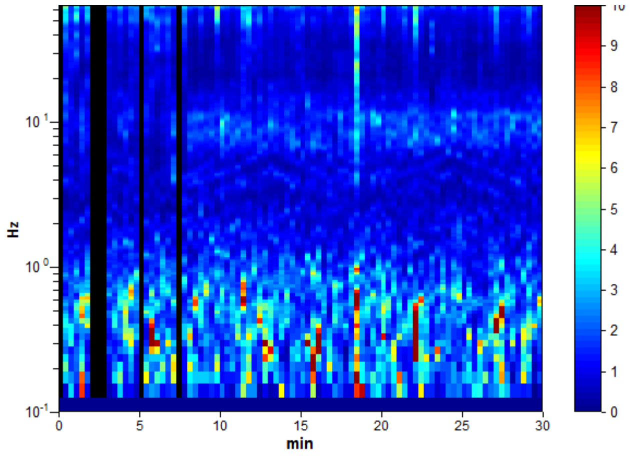
Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 02/04/2021 11:34:20 End recording: 02/04/2021 12:04:20
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°04.5880 E, 44°49.4526 N (6.6 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 6
Trace length: 0h30'00''. Analyzed 93% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

HORIZONTAL TO VERTICAL SPECTRAL RATIO

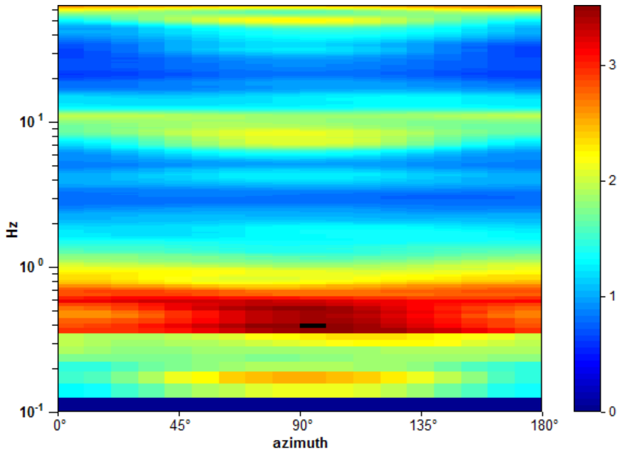
Max. H/V at 0.28 ± 0.12 Hz. (In the range 0.2 - 30.0 Hz).



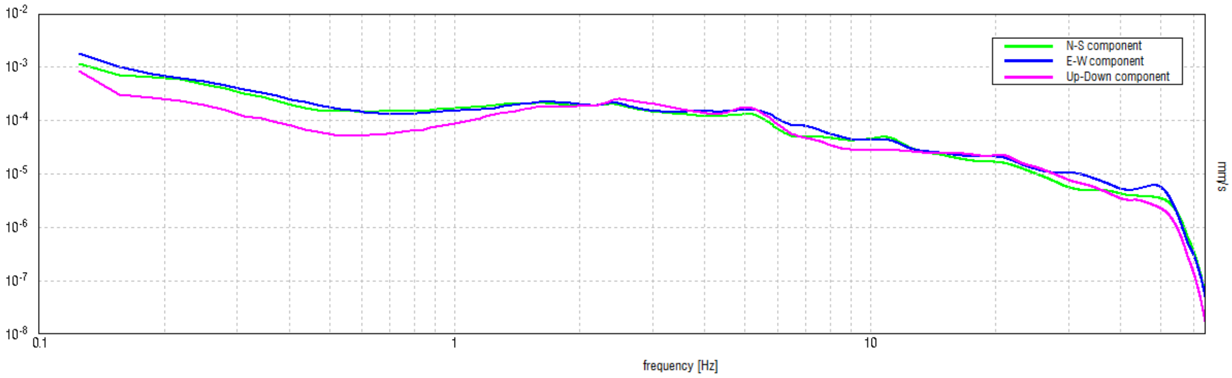
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables**.]

Max. H/V at 0.28 ± 0.12 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	0.28 > 0.50		NO
$n_c(f_0) > 200$	472.5 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 14 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$	0.094 Hz	OK	
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.094 Hz	OK	
$A_0 > 2$	3.55 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.43979| < 0.05		NO
$\sigma_f < \varepsilon(f_0)$	0.12369 < 0.05625		NO
$\sigma_A(f_0) < \theta(f_0)$	0.6875 < 2.5	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

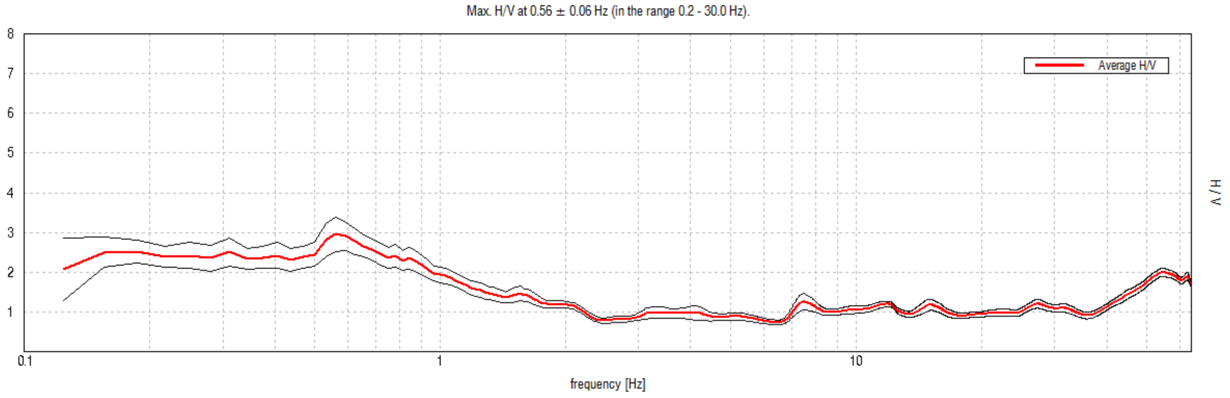
Threshold values for σ_f and $\sigma_A(f_0)$

Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

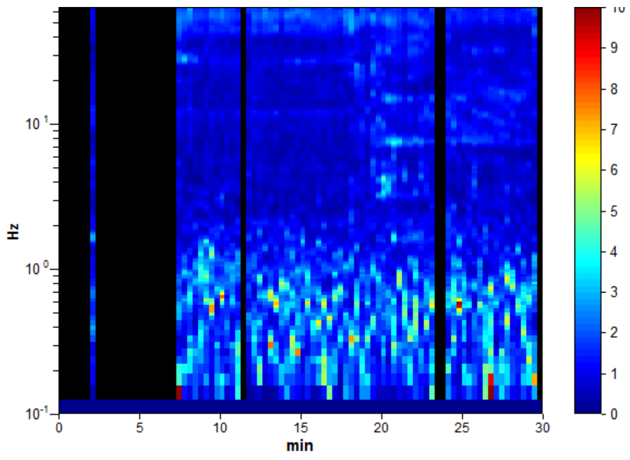
HG6, MEDOLLA

Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 02/04/2021 12:19:09 End recording: 02/04/2021 12:49:09
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°05.0646 E, 44°48.9801 N (8.1 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 6
Trace length: 0h30'00". Analyzed 72% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

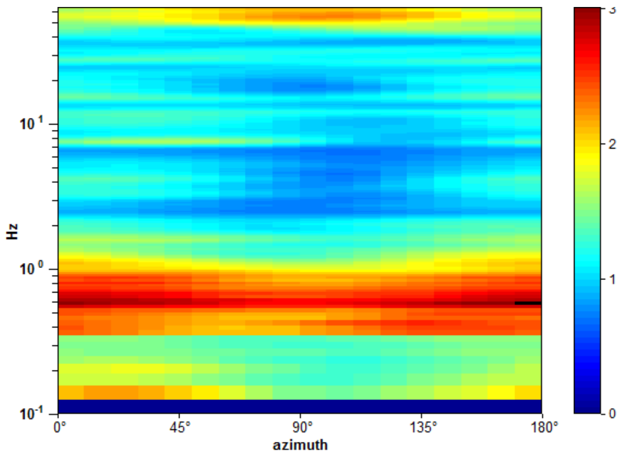
HORIZONTAL TO VERTICAL SPECTRAL RATIO



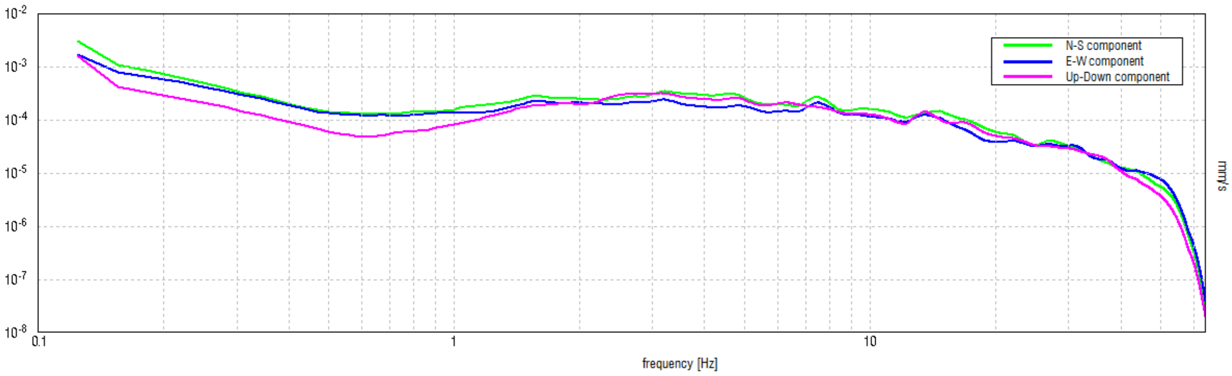
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables**.]

Max. H/V at 0.56 ± 0.06 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve [All 3 should be fulfilled]			
$f_0 > 10 / L_w$	0.56 > 0.50	OK	
$n_c(f_0) > 200$	731.3 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 28 times	OK	
Criteria for a clear H/V peak [At least 5 out of 6 should be fulfilled]			
Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$			NO
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.313 Hz	OK	
$A_0 > 2$	2.96 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.10653| < 0.05		NO
$\sigma_f < \varepsilon(f_0)$	0.05992 < 0.08438	OK	
$\sigma_A(f_0) < \theta(f_0)$	0.4354 < 2.0	OK	

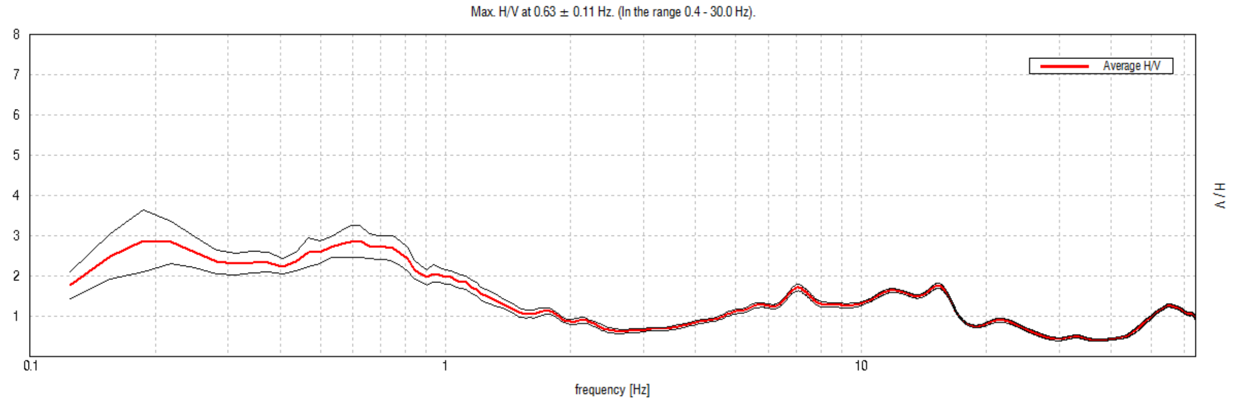
L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$					
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

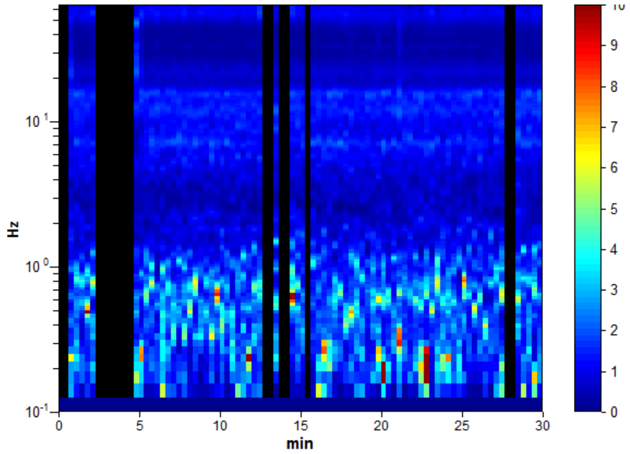
HG7, MEDOLLA

Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 02/04/2021 13:03:02 End recording: 02/04/2021 13:33:02
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°05.6369 E, 44°49.0269 N (-4.9 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 5
Trace length: 0h30'00". Analyzed 82% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

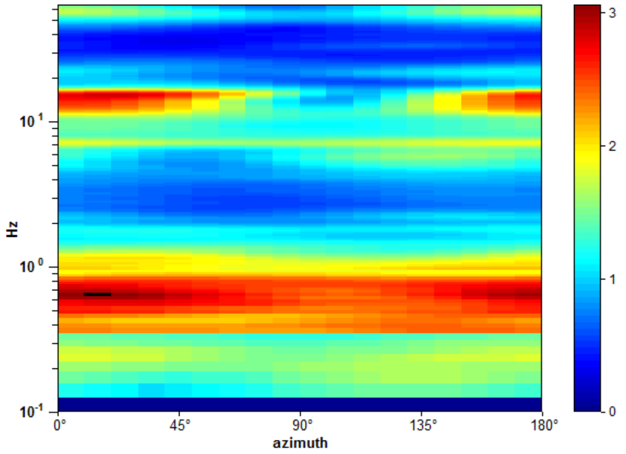
HORIZONTAL TO VERTICAL SPECTRAL RATIO



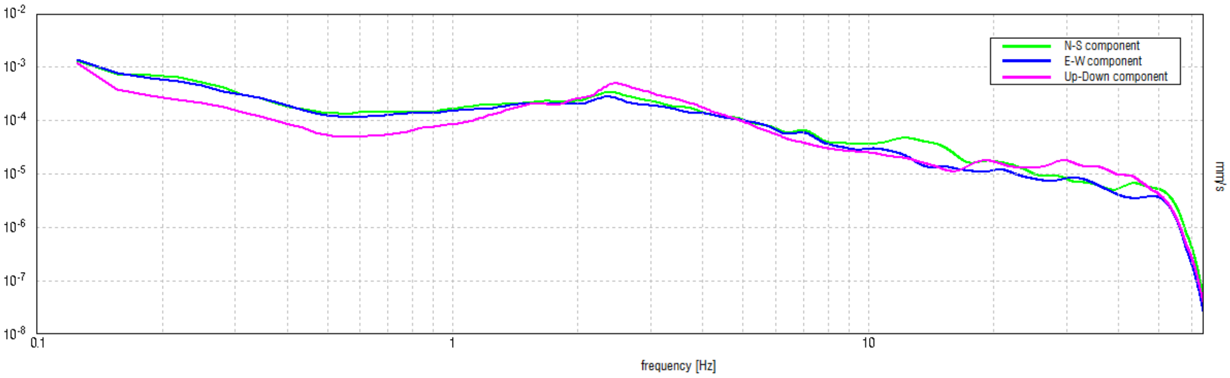
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables.**]

Max. H/V at 0.63 ± 0.11 Hz (in the range 0.4 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	$0.63 > 0.50$	OK	
$n_c(f_0) > 200$	$925.0 > 200$	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 31 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$			NO
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.313 Hz	OK	
$A_0 > 2$	$2.87 > 2$	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	$\|0.17716\| < 0.05$		NO
$\sigma_f < \varepsilon(f_0)$	$0.11072 < 0.09375$		NO
$\sigma_A(f_0) < \theta(f_0)$	$0.3892 < 2.0$	OK	

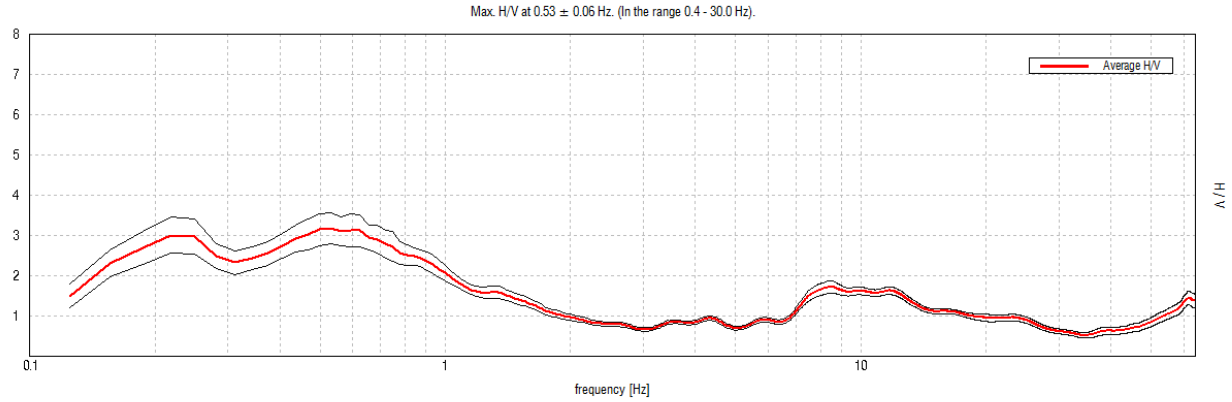
L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$					
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

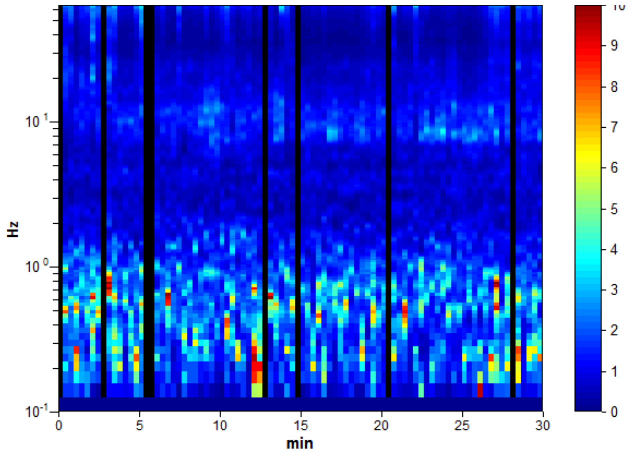
HG14, MEDOLLA

Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 02/04/2021 13:51:15 End recording: 02/04/2021 14:21:15
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°05.0997 E, 44°49.4279 N (7.1 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 7
Trace length: 0h30'00''. Analyzed 91% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

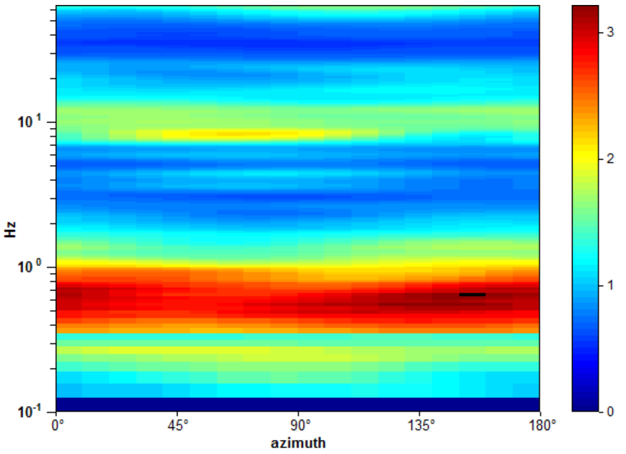
HORIZONTAL TO VERTICAL SPECTRAL RATIO



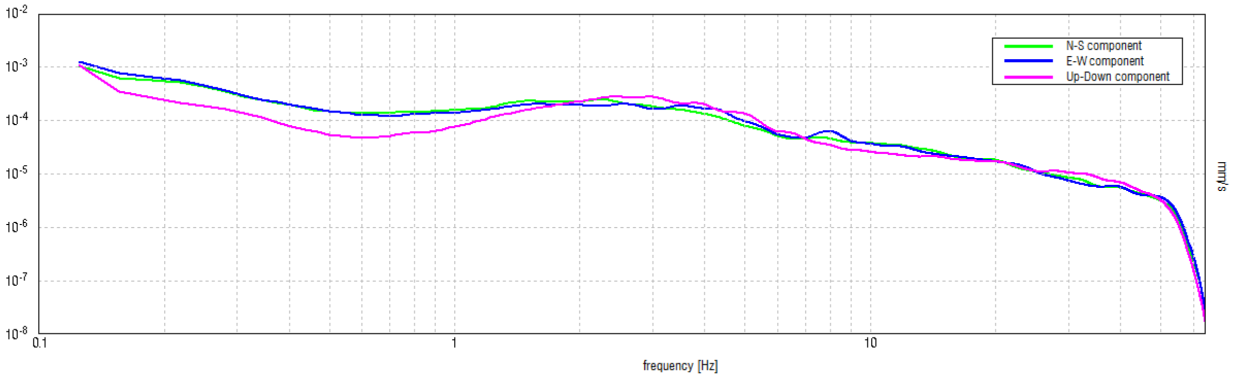
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the *Grilla* manual before interpreting the following tables.**]

Max. H/V at 0.53 ± 0.06 Hz (in the range 0.4 - 30.0 Hz).

Criteria for a reliable H/V curve [All 3 should be fulfilled]			
$f_0 > 10 / L_w$	0.53 > 0.50	OK	
$n_c(f_0) > 200$	871.3 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 26 times	OK	
Criteria for a clear H/V peak [At least 5 out of 6 should be fulfilled]			
Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$	0.125 Hz	OK	
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.25 Hz	OK	
$A_0 > 2$	3.18 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.11711| < 0.05		NO
$\sigma_f < \varepsilon(f_0)$	0.06221 < 0.07969	OK	
$\sigma_A(f_0) < \theta(f_0)$	0.3925 < 2.0	OK	

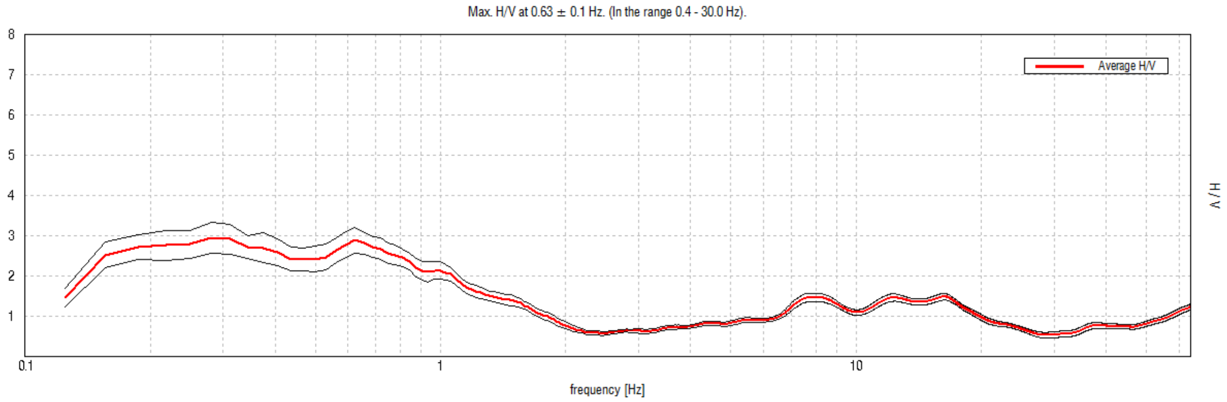
L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$					
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

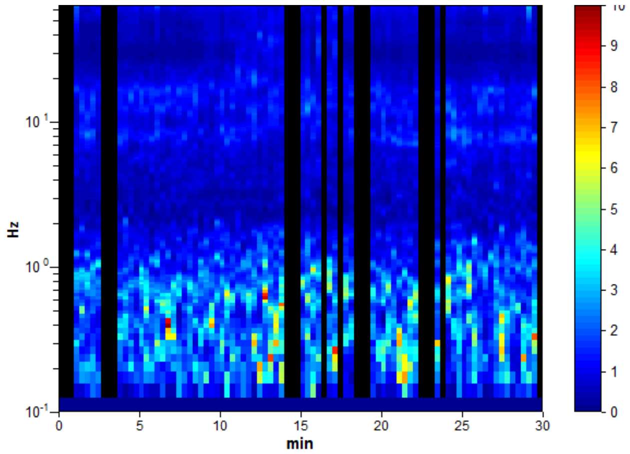
HG2, MEDOLLA

Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 02/04/2021 14:35:42 End recording: 02/04/2021 15:05:42
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°05.1397 E, 44°48.6865 N (3.4 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 5
Trace length: 0h30'00''. Analyzed 79% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

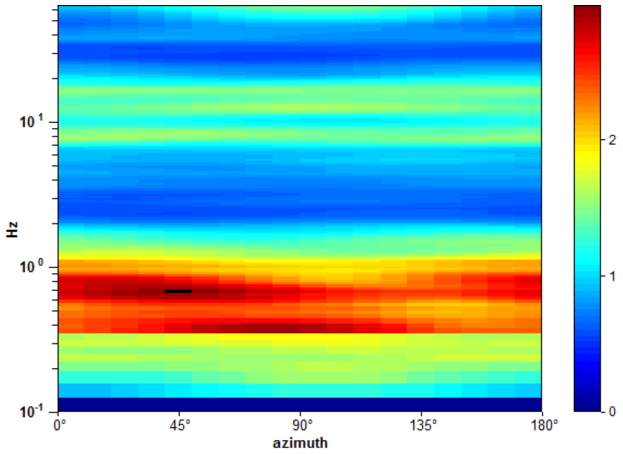
HORIZONTAL TO VERTICAL SPECTRAL RATIO



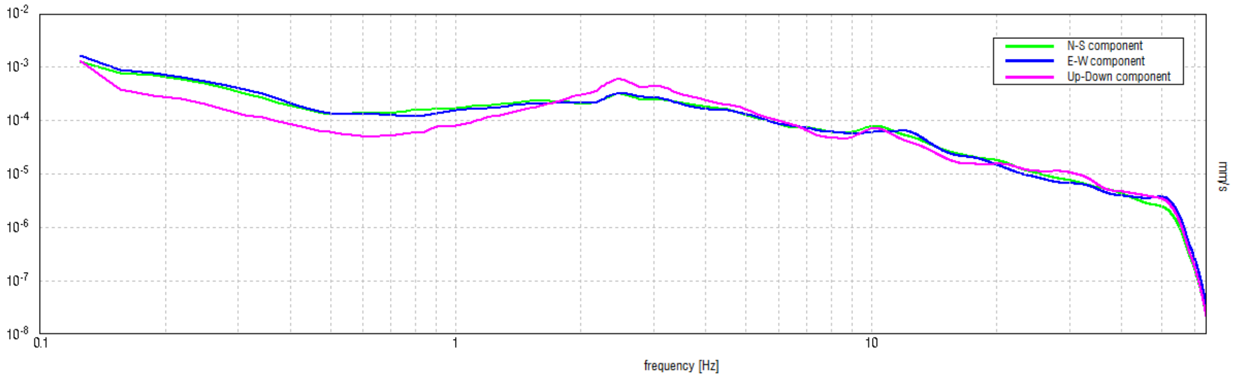
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables**.]

Max. H/V at 0.63 ± 0.1 Hz (in the range 0.4 - 30.0 Hz).

Criteria for a reliable H/V curve [All 3 should be fulfilled]			
$f_0 > 10 / L_w$	0.63 > 0.50	OK	
$n_c(f_0) > 200$	887.5 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5\text{Hz}$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5\text{Hz}$**	Exceeded 0 out of 31 times	OK	
Criteria for a clear H/V peak [At least 5 out of 6 should be fulfilled]			
Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$			NO
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.406 Hz	OK	
$A_0 > 2$	2.89 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.15553| < 0.05		NO
$\sigma_f < \varepsilon(f_0)$	0.09721 < 0.09375		NO
$\sigma_A(f_0) < \theta(f_0)$	0.3171 < 2.0	OK	

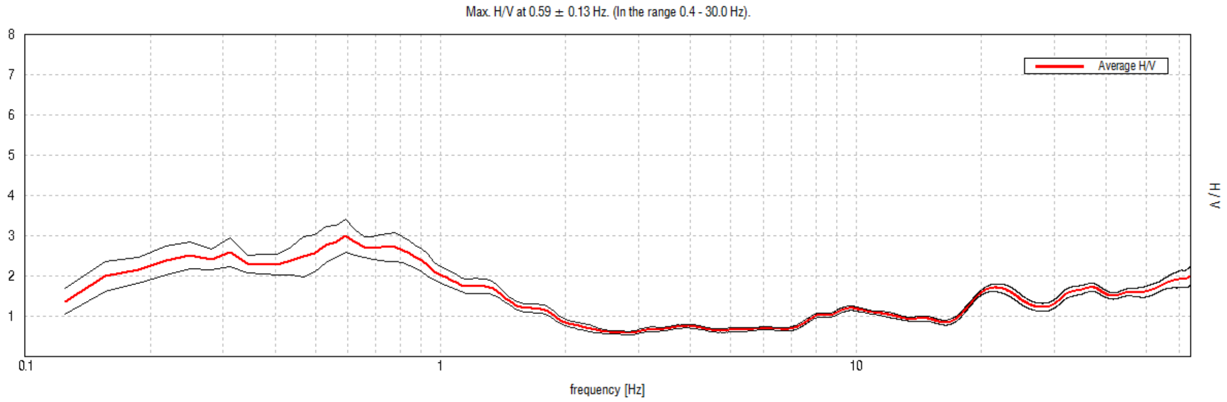
L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$					
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

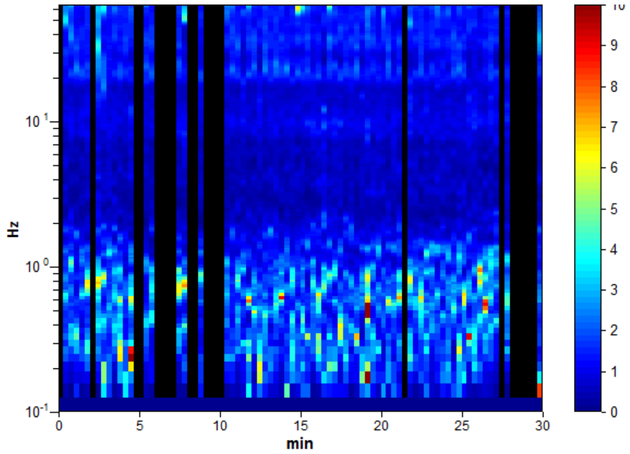
HG1, MEDOLLA

Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 02/04/2021 15:16:06 End recording: 02/04/2021 15:46:06
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS location: 011°04.5730 E, 44°48.6271 N (-2.3 m)
(UTC time synchronized to the first recording sample): not available in this acquisition mode + 0 + 0 samples
Satellite no.: 7
Trace length: 0h30'00". Analyzed 77% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

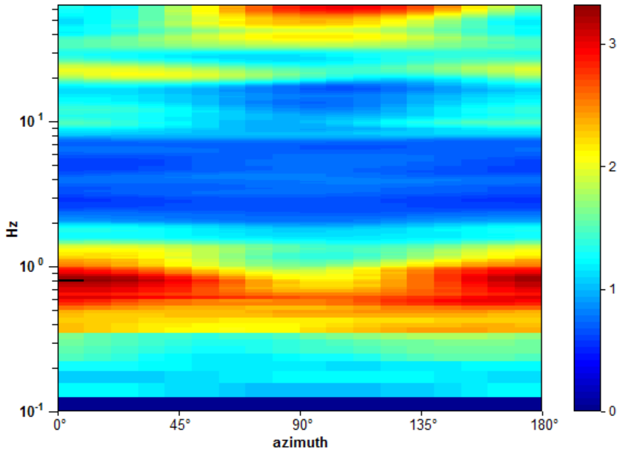
HORIZONTAL TO VERTICAL SPECTRAL RATIO



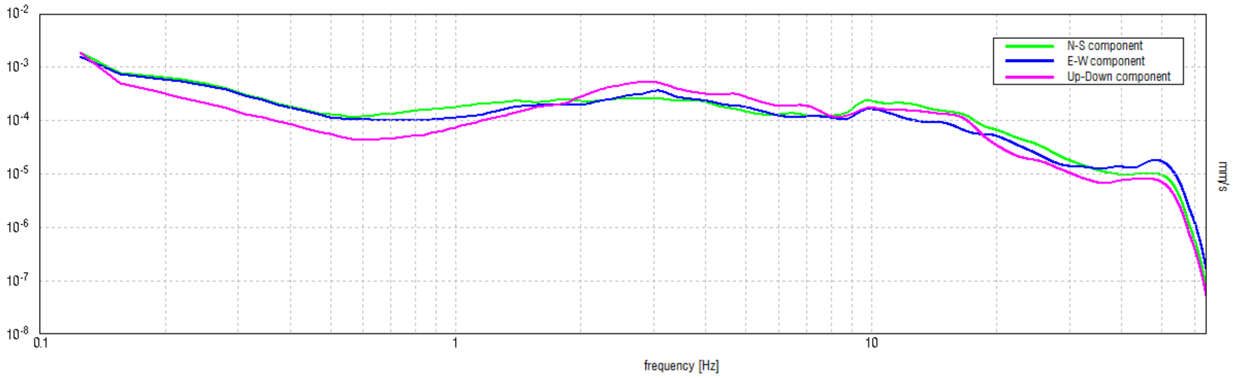
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the *Grilla* manual before interpreting the following tables.**]

Max. H/V at 0.59 ± 0.13 Hz (in the range 0.4 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	$0.59 > 0.50$	OK	
$n_c(f_0) > 200$	$819.4 > 200$	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 30 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$			NO
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.438 Hz	OK	
$A_0 > 2$	$3.00 > 2$	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	$\lvert 0.21148 \rvert < 0.05$		NO
$\sigma_f < \varepsilon(f_0)$	$0.12556 < 0.08906$		NO
$\sigma_A(f_0) < \theta(f_0)$	$0.4071 < 2.0$	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

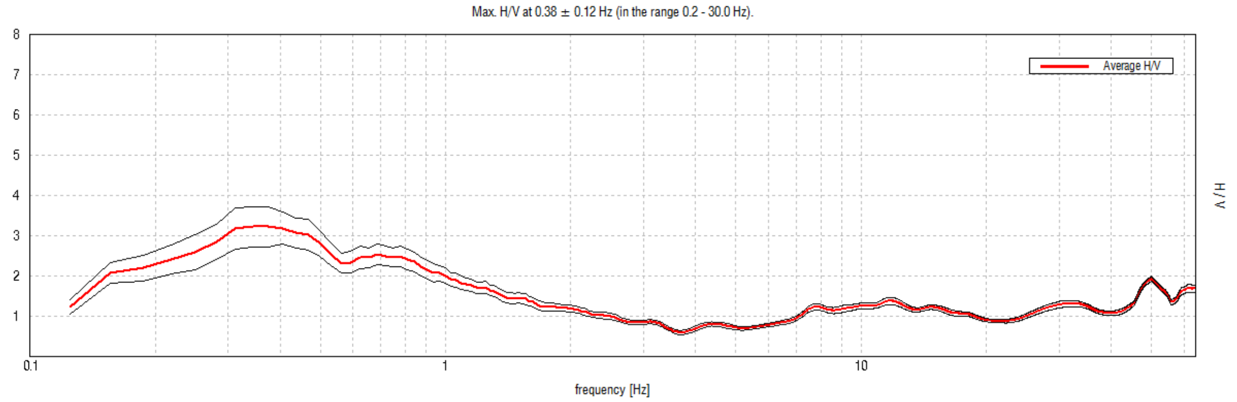
Threshold values for σ_f and $\sigma_A(f_0)$					
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	$0.25 f_0$	$0.2 f_0$	$0.15 f_0$	$0.10 f_0$	$0.05 f_0$
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

HG20, 1 0001

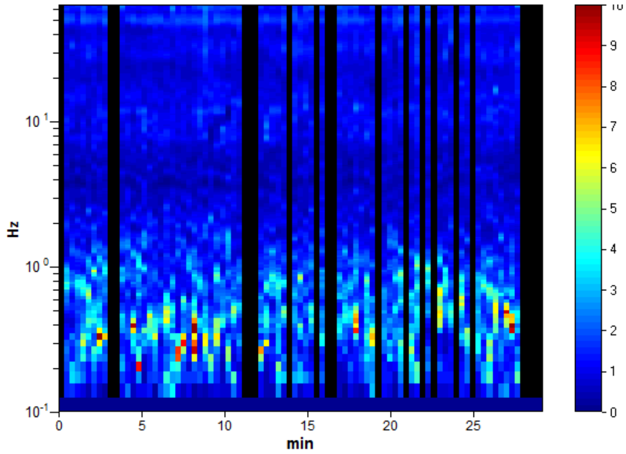
Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 16/04/2021 08:13:39 End recording: 16/04/2021 08:42:59
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS data not available

Trace length: 0h29'12". Analyzed 77% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

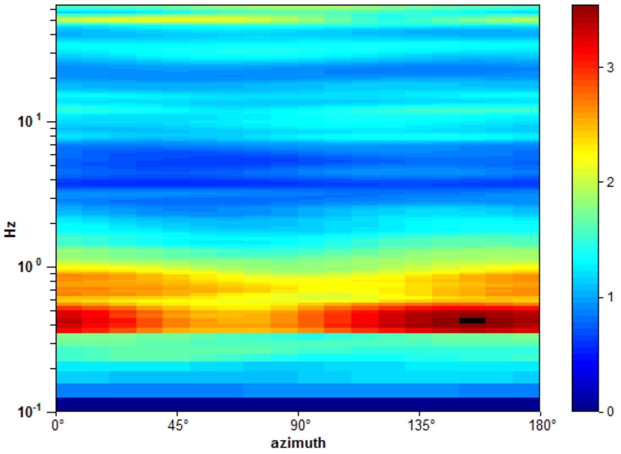
HORIZONTAL TO VERTICAL SPECTRAL RATIO



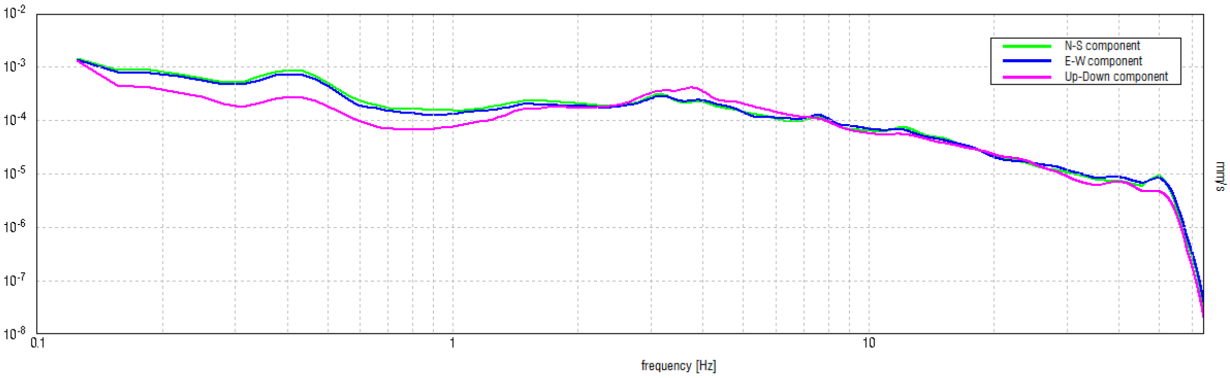
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables.**]

Max. H/V at 0.38 ± 0.12 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve [All 3 should be fulfilled]			
$f_0 > 10 / L_w$	0.38 > 0.50		**NO**
$n_c(f_0) > 200$	502.5 > 200	**OK**	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 19 times	**OK**	
Criteria for a clear H/V peak [At least 5 out of 6 should be fulfilled]			
Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$	0.125 Hz	**OK**	
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.344 Hz	**OK**	
$A_0 > 2$	3.23 > 2	**OK**	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.32387| < 0.05		**NO**
$\sigma_f < \varepsilon(f_0)$	0.12145 < 0.075		**NO**
$\sigma_A(f_0) < \theta(f_0)$	0.4976 < 2.5	**OK**	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

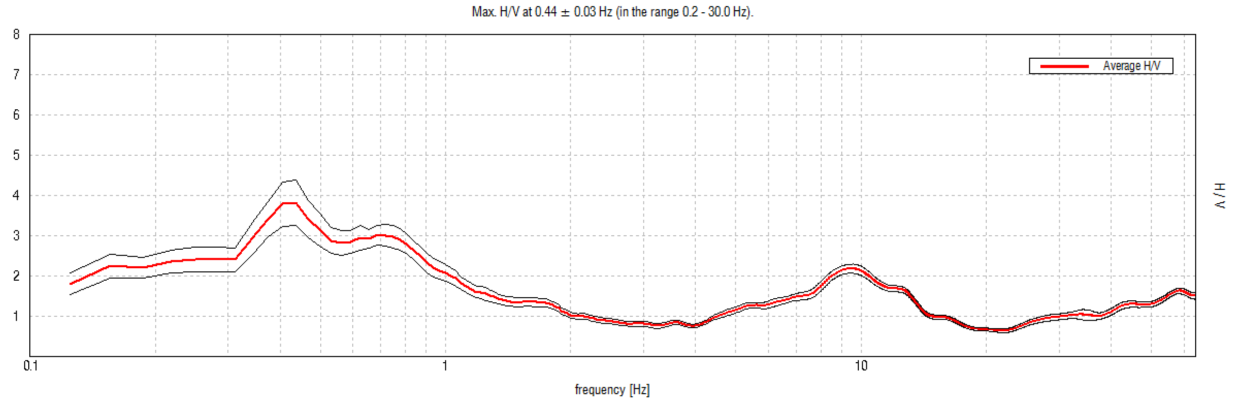
Threshold values for σ_f and $\sigma_A(f_0)$					
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

HG21, 1 0002

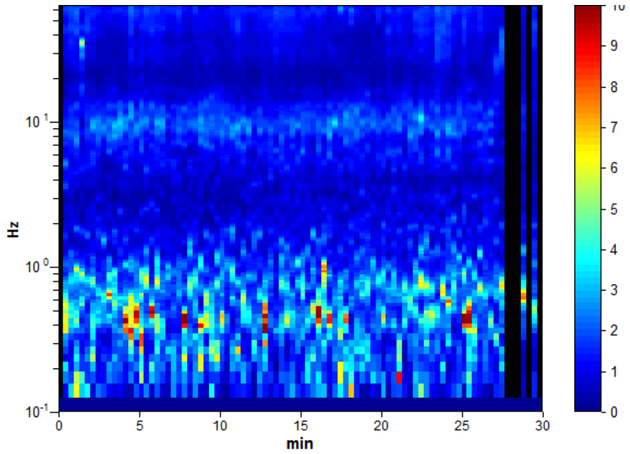
Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 16/04/2021 09:02:11 End recording: 16/04/2021 09:32:11
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS data not available

Trace length: 0h30'00". Analyzed 93% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

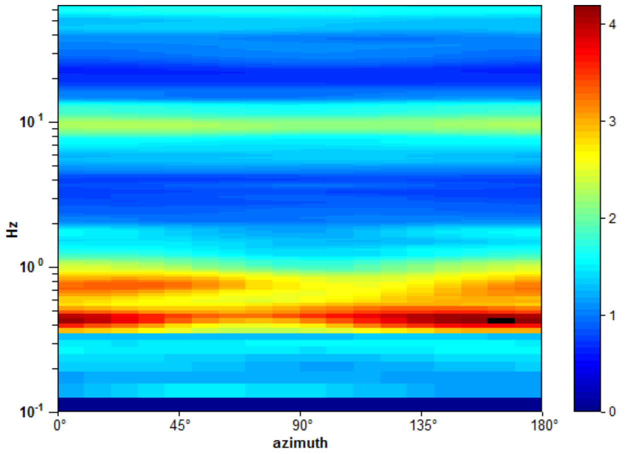
HORIZONTAL TO VERTICAL SPECTRAL RATIO



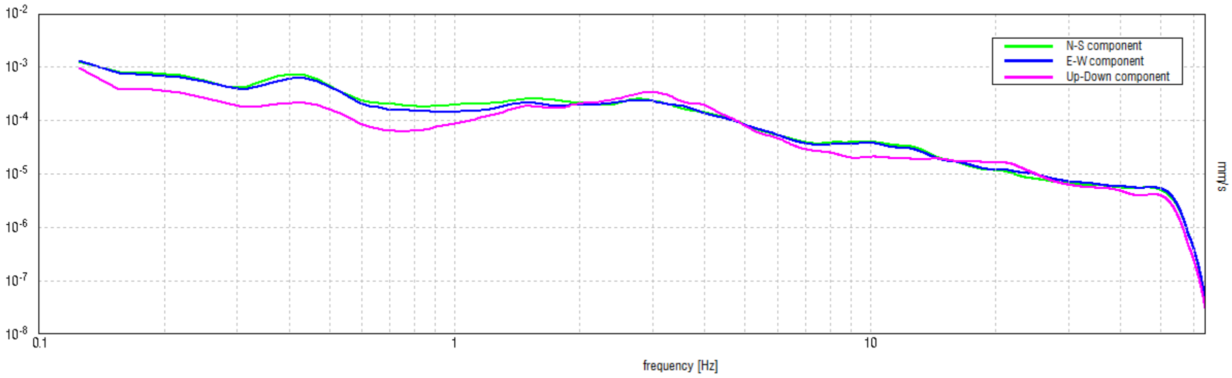
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables**.]

Max. H/V at 0.44 ± 0.03 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	0.44 > 0.50		**NO**
$n_c(f_0) > 200$	735.0 > 200	**OK**	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 22 times	**OK**	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0] \mid A_{H/V}(f^-) < A_0 / 2$	0.125 Hz	**OK**	
Exists f^+ in $[f_0, 4f_0] \mid A_{H/V}(f^+) < A_0 / 2$	1.094 Hz	**OK**	
$A_0 > 2$	3.82 > 2	**OK**	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.07596| < 0.05		**NO**
$\sigma_f < \varepsilon(f_0)$	0.03323 < 0.0875	**OK**	
$\sigma_A(f_0) < \theta(f_0)$	0.5599 < 2.5	**OK**	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$

Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

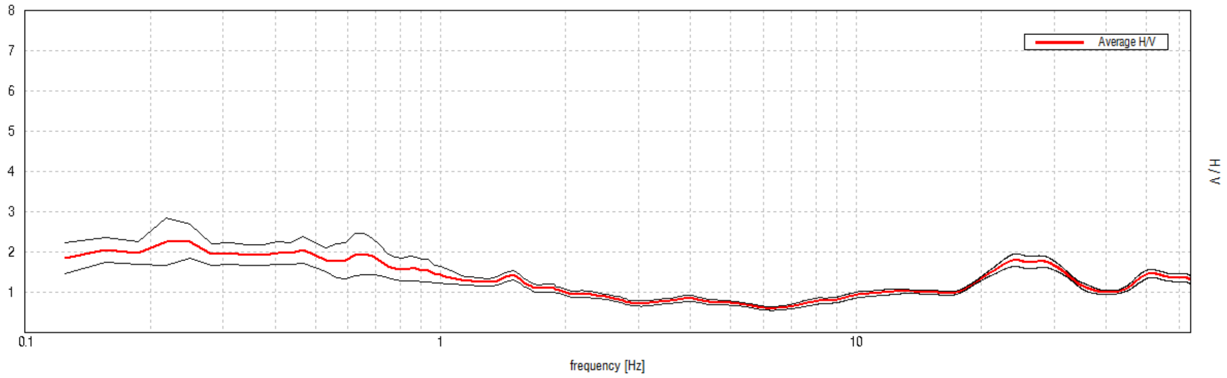
HG30, 1 0003

Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 16/04/2021 09:46:47 End recording: 16/04/2021 10:16:47
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS data not available

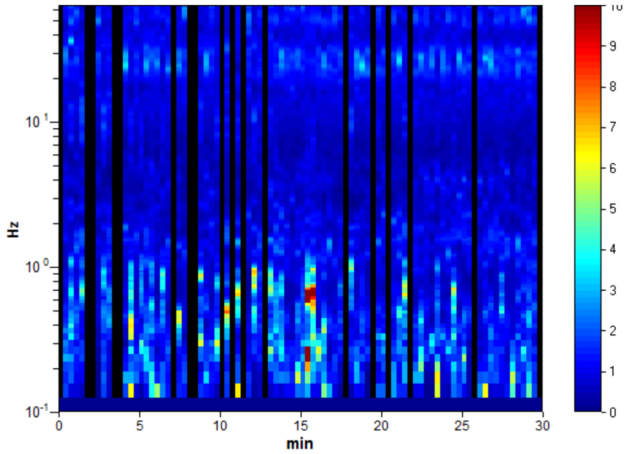
Trace length: 0h30'00". Analyzed 80% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

HORIZONTAL TO VERTICAL SPECTRAL RATIO

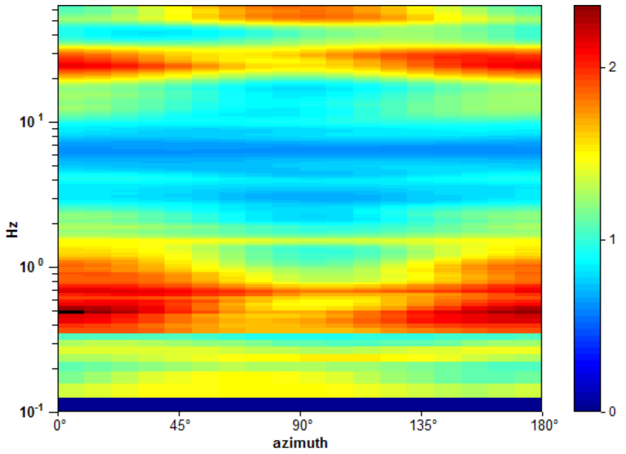
Max. H/V at 0.47 ± 3.37 Hz. (In the range 0.4 - 30.0 Hz).



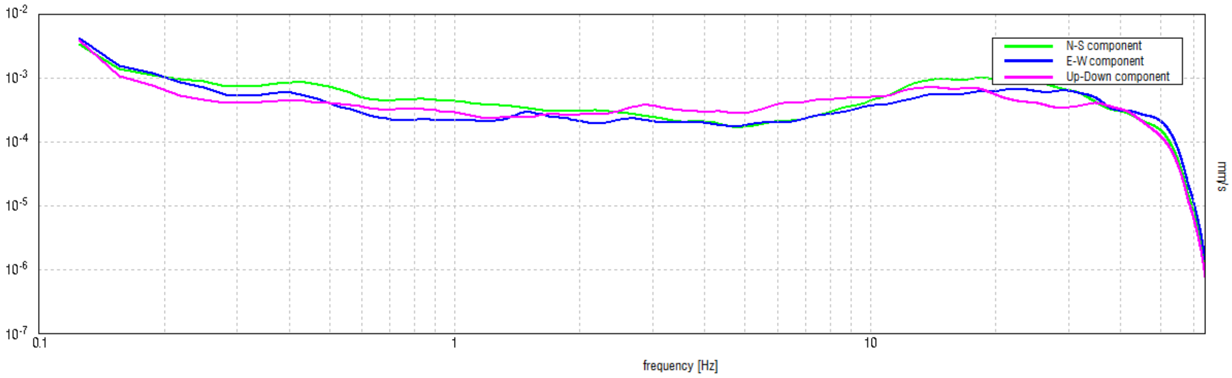
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables.**]

Max. H/V at 0.47 ± 3.37 Hz (in the range 0.4 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	0.47 > 0.50		NO
$n_c(f_0) > 200$	675.0 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5$Hz **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5$Hz**	Exceeded 0 out of 24 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$			NO
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$			NO
$A_0 > 2$	2.06 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|7.18505| < 0.05		NO
$\sigma_f < \varepsilon(f_0)$	3.36799 < 0.09375		NO
$\sigma_A(f_0) < \theta(f_0)$	0.3258 < 2.5	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$

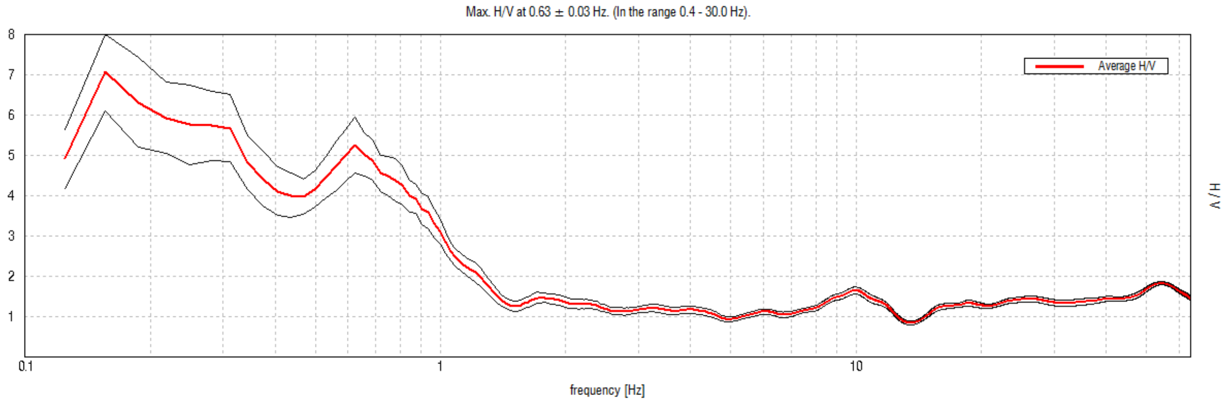
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

HG29, 1 0004

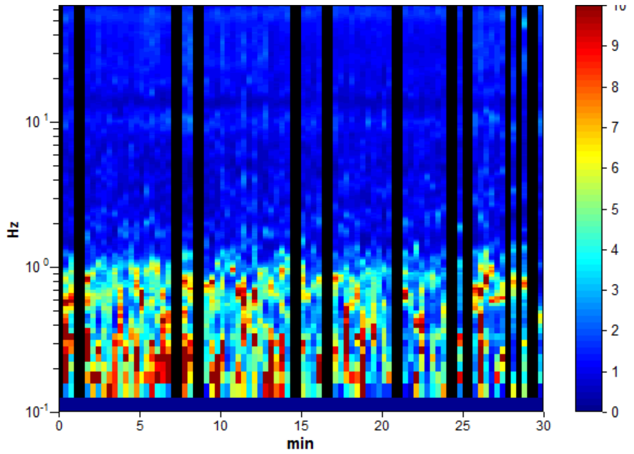
Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 16/04/2021 10:33:38 End recording: 16/04/2021 11:03:38
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS data not available

Trace length: 0h30'00''. Analyzed 77% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

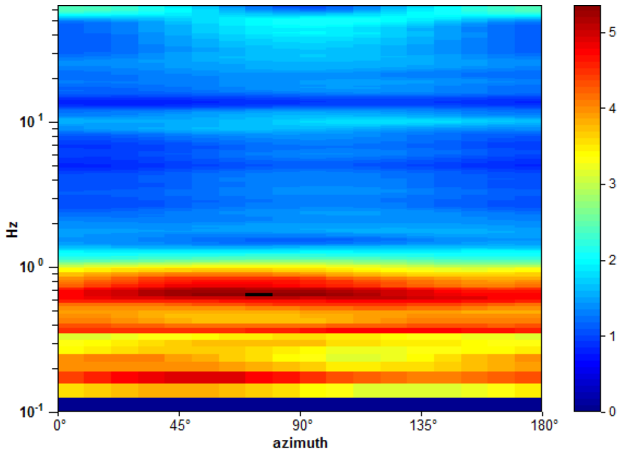
HORIZONTAL TO VERTICAL SPECTRAL RATIO



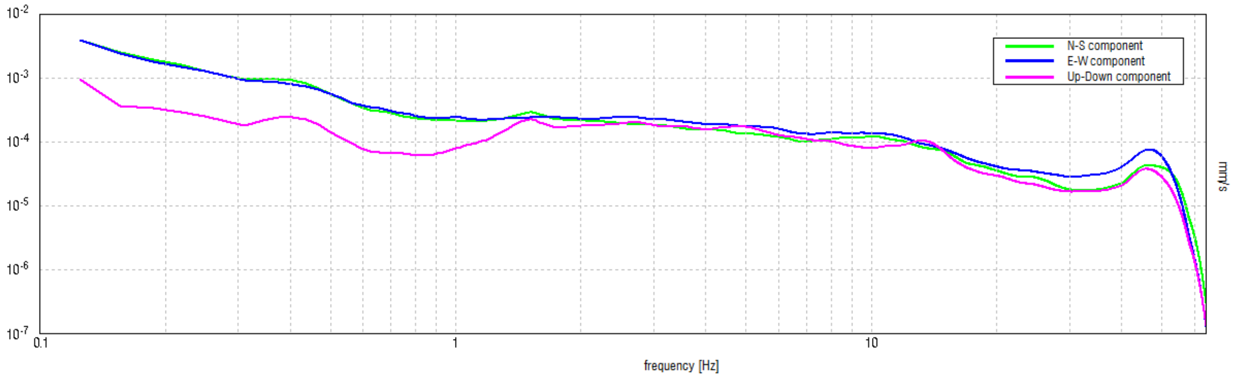
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables.**]

Max. H/V at 0.63 ± 0.03 Hz (in the range 0.4 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	$0.63 > 0.50$	OK	
$n_c(f_0) > 200$	$862.5 > 200$	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5\text{Hz}$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5\text{Hz}$**	Exceeded 0 out of 31 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$			NO
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.063 Hz	OK	
$A_0 > 2$	$5.25 > 2$	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	$\|0.04341\| < 0.05$	OK	
$\sigma_f < \varepsilon(f_0)$			
$\sigma_A(f_0) < \theta(f_0)$			

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$

Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	$0.25\ f_0$	$0.2\ f_0$	$0.15\ f_0$	$0.10\ f_0$	$0.05\ f_0$
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

0.02713 < 0.09375OK0.6992 < 2.0OK

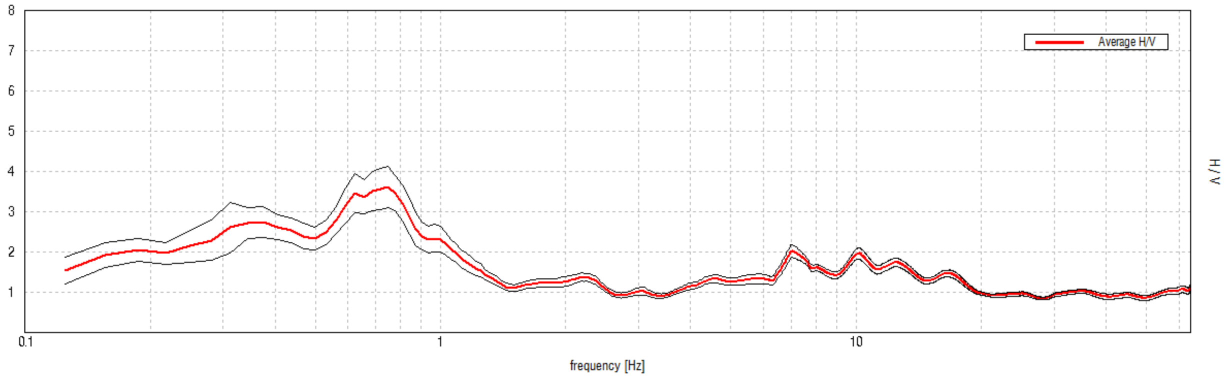
HG31, 1 0005

Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 16/04/2021 11:53:49 End recording: 16/04/2021 12:23:49
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS data not available

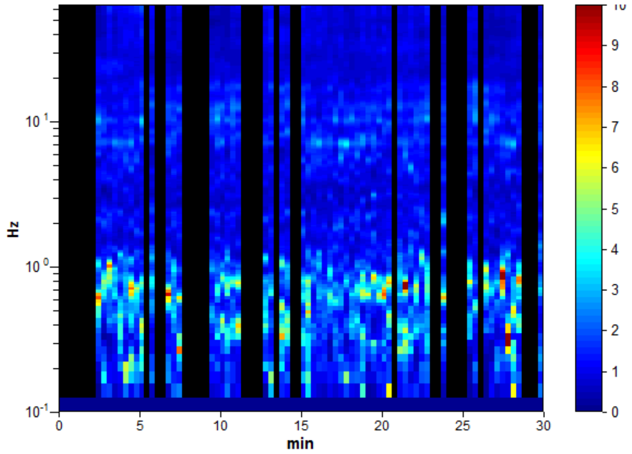
Trace length: 0h30'00". Analyzed 63% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

HORIZONTAL TO VERTICAL SPECTRAL RATIO

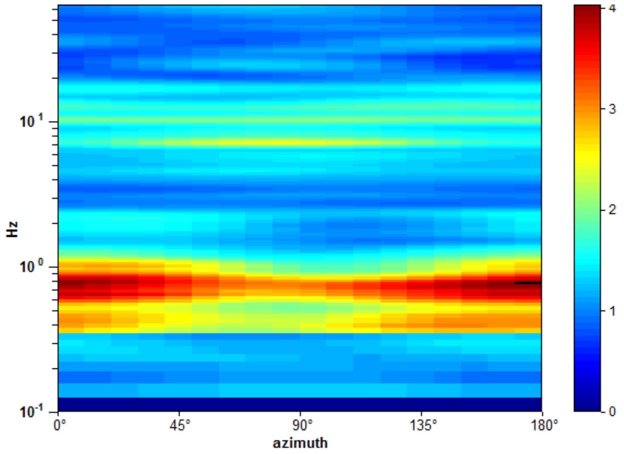
Max. H/V at 0.75 ± 0.11 Hz. (In the range 0.4 - 30.0 Hz).



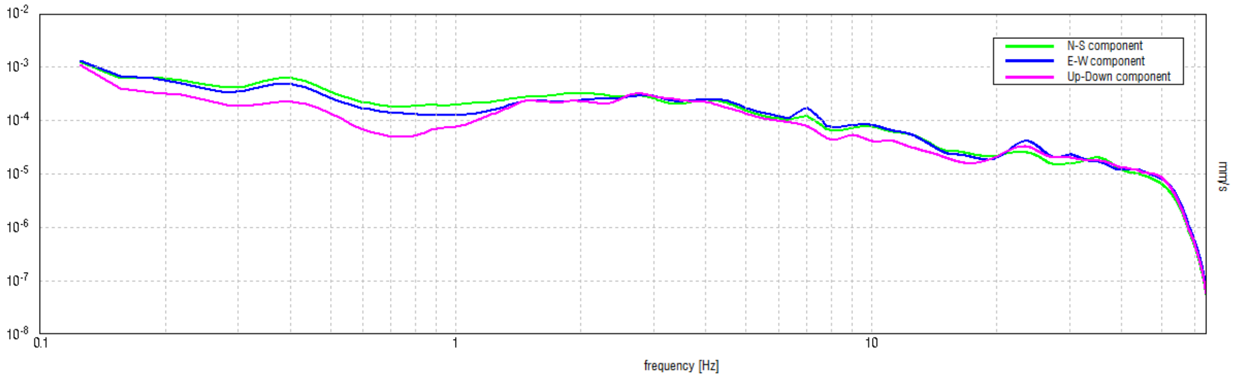
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables.**]

Max. H/V at 0.75 ± 0.11 Hz (in the range 0.4 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	$0.75 > 0.50$	OK	
$n_c(f_0) > 200$	$855.0 > 200$	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 37 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$			NO
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.156 Hz	OK	
$A_0 > 2$	$3.62 > 2$	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	$\|0.14768\| < 0.05$		NO
$\sigma_f < \varepsilon(f_0)$	$0.11076 < 0.1125$	OK	
$\sigma_A(f_0) < \theta(f_0)$	$0.5061 < 2.0$	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$

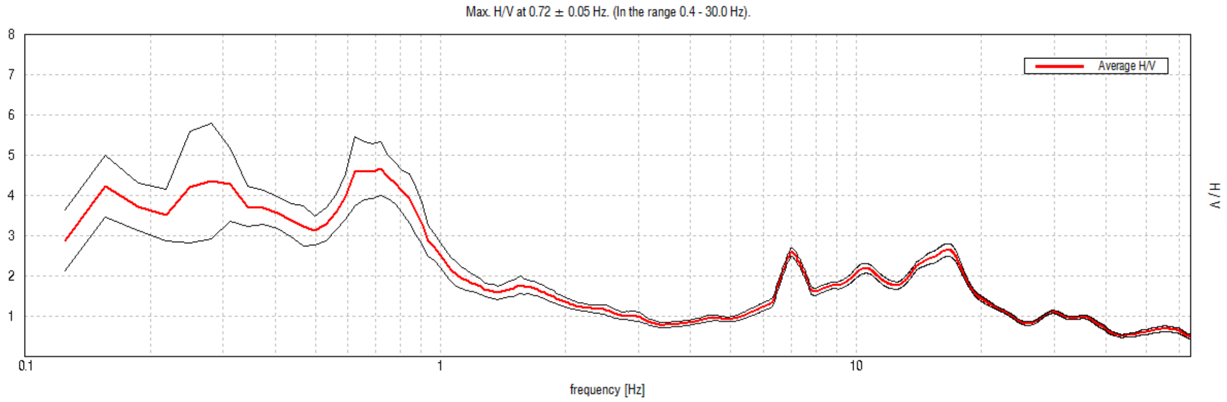
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	$0.25 f_0$	$0.2 f_0$	$0.15 f_0$	$0.10 f_0$	$0.05 f_0$
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

HG32, 1 0006

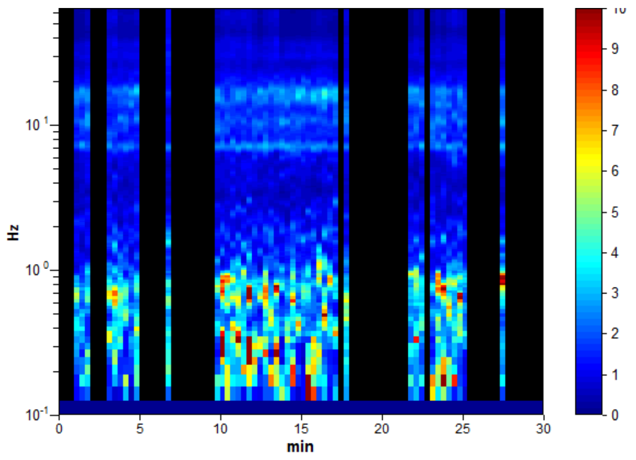
Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 16/04/2021 12:37:07 End recording: 16/04/2021 13:07:07
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS data not available

Trace length: 0h30'00''. Analyzed 50% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

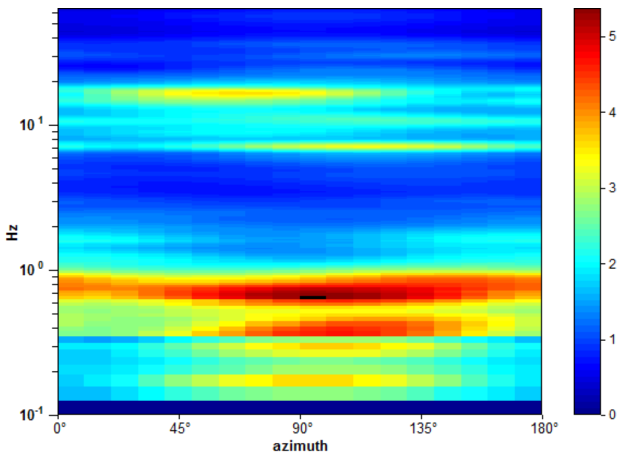
HORIZONTAL TO VERTICAL SPECTRAL RATIO



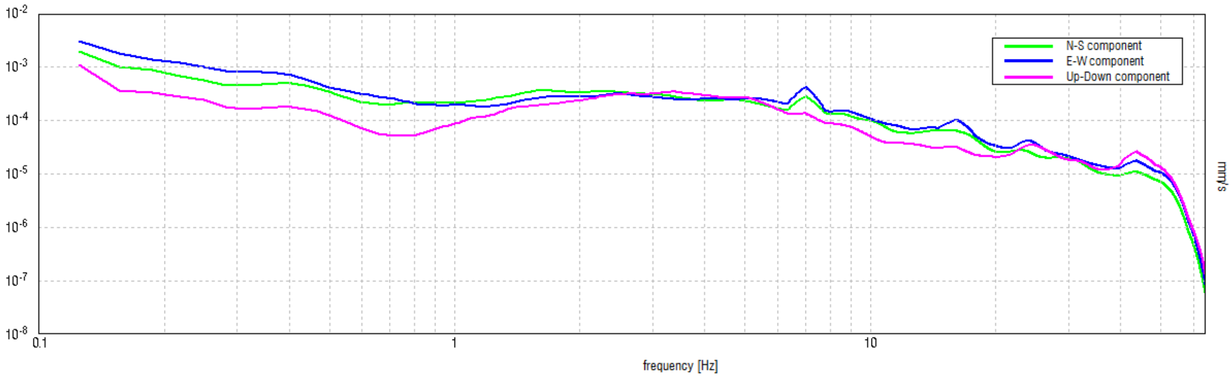
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables.**]

Max. H/V at 0.72 ± 0.05 Hz (in the range 0.4 - 30.0 Hz).

Criteria for a reliable H/V curve [All 3 should be fulfilled]			
$f_0 > 10 / L_w$	0.72 > 0.50	OK	
$n_c(f_0) > 200$	646.9 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 36 times	OK	
Criteria for a clear H/V peak [At least 5 out of 6 should be fulfilled]			
Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$			NO
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.063 Hz	OK	
$A_0 > 2$	4.66 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.0661| < 0.05		NO
$\sigma_f < \varepsilon(f_0)$	0.04751 < 0.10781	OK	
$\sigma_A(f_0) < \theta(f_0)$	0.6714 < 2.0	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

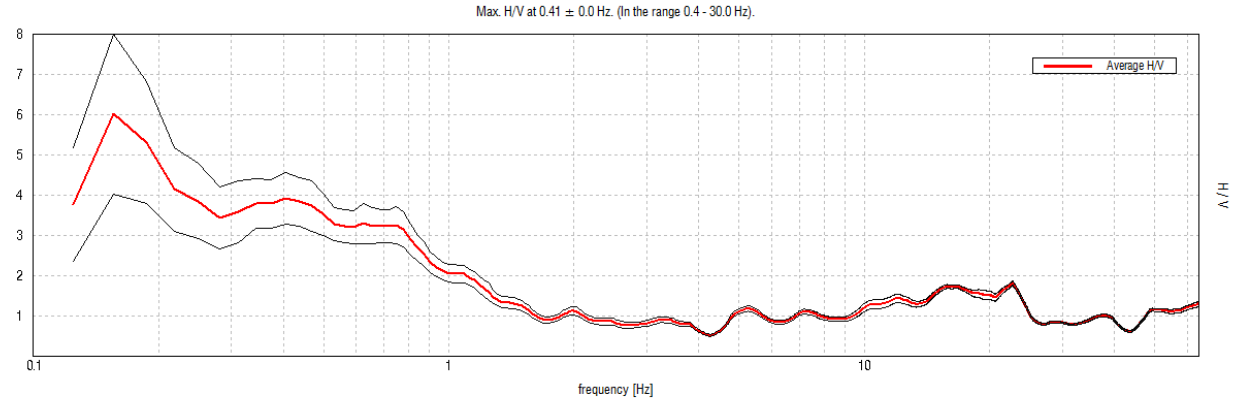
Threshold values for σ_f and $\sigma_A(f_0)$					
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

HG23, 1 0007

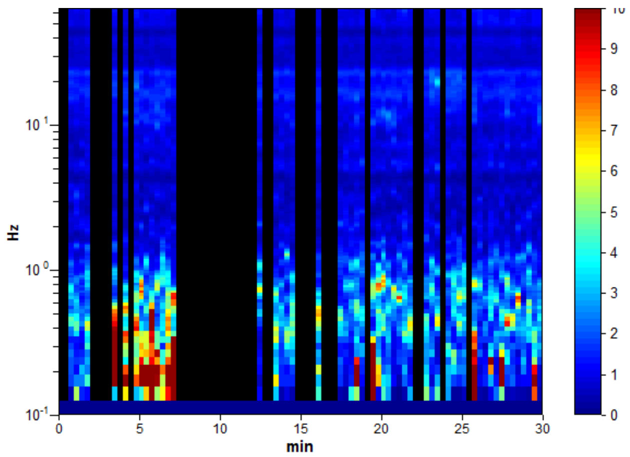
Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 16/04/2021 13:21:42 End recording: 16/04/2021 13:51:42
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS data not available

Trace length: 0h30'00". Analyzed 59% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

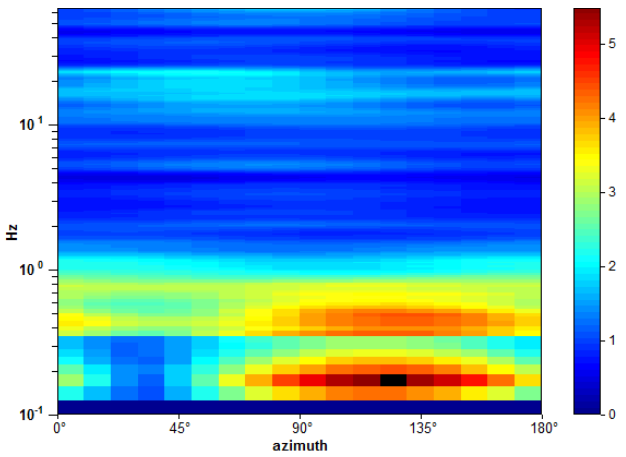
HORIZONTAL TO VERTICAL SPECTRAL RATIO



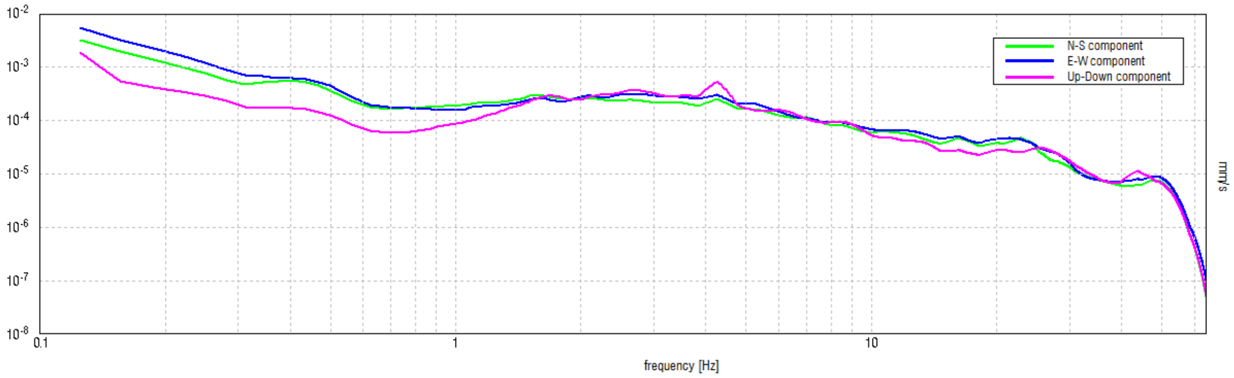
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables.**]

Max. H/V at 0.41 ± 0.0 Hz (in the range 0.4 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	0.41 > 0.50		**NO**
$n_c(f_0) > 200$	430.6 > 200	**OK**	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5$Hz **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5$Hz**	Exceeded 0 out of 20 times	**OK**	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0] \mid A_{H/V}(f^-) < A_0 / 2$	0.094 Hz	**OK**	
Exists f^+ in $[f_0, 4f_0] \mid A_{H/V}(f^+) < A_0 / 2$	1.156 Hz	**OK**	
$A_0 > 2$	3.93 > 2	**OK**	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	$\lvert 0.01057 \rvert < 0.05$	**OK**	
$\sigma_f < \varepsilon(f_0)$	0.00429 < 0.08125	**OK**	
$\sigma_A(f_0) < \theta(f_0)$	0.6349 < 2.5	**OK**	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$

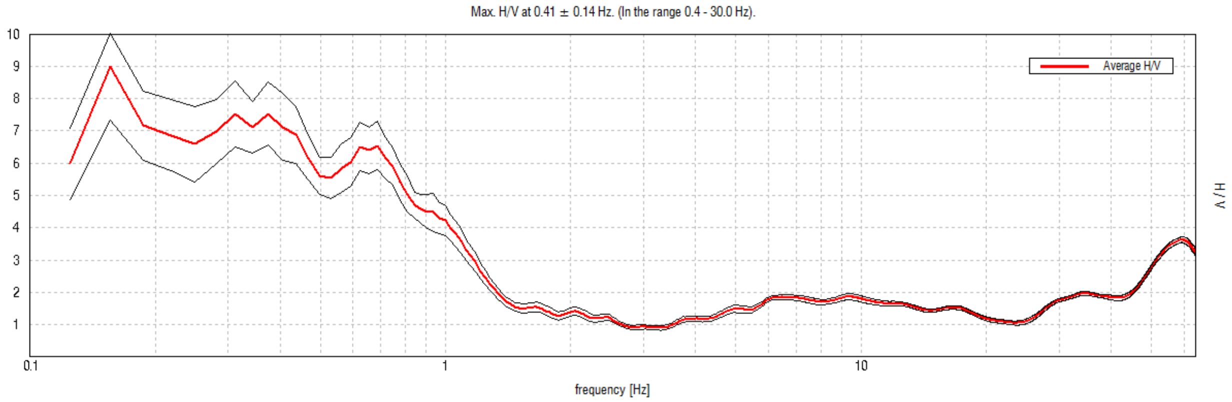
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

HG22, 1 0008

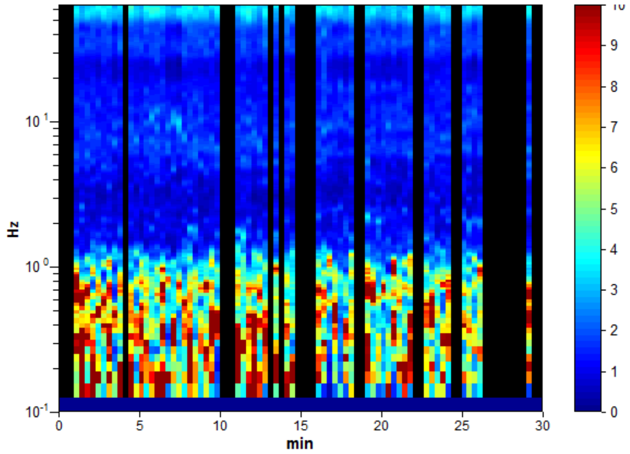
Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 16/04/2021 14:08:51 End recording: 16/04/2021 14:38:51
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS data not available

Trace length: 0h30'00". Analyzed 68% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

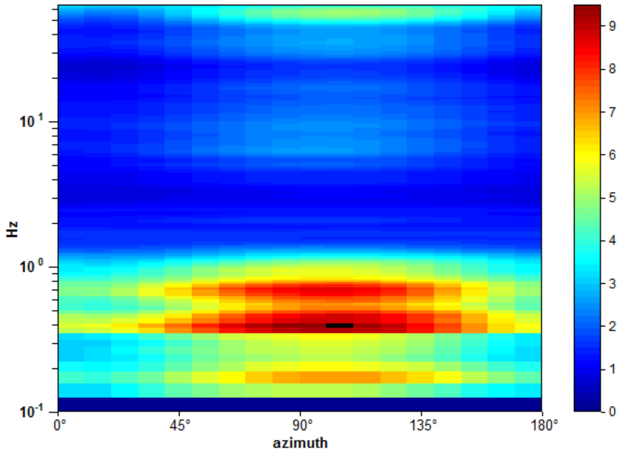
HORIZONTAL TO VERTICAL SPECTRAL RATIO


Max. H/V at 0.41 ± 0.14 Hz. (In the range 0.4 - 30.0 Hz).

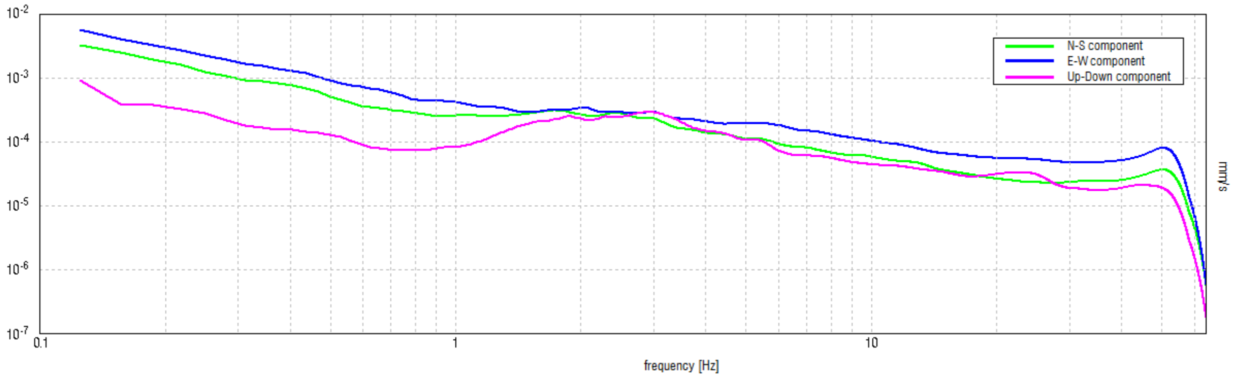
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables.**]

Max. H/V at 0.41 ± 0.14 Hz (in the range 0.4 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	0.41 > 0.50		NO
$n_c(f_0) > 200$	495.6 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5$Hz **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5$Hz**	Exceeded 0 out of 20 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0] \mid A_{H/V}(f^-) < A_0 / 2$	0.094 Hz	OK	
Exists f^+ in $[f_0, 4f_0] \mid A_{H/V}(f^+) < A_0 / 2$	1.125 Hz	OK	
$A_0 > 2$	7.12 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	$\lvert 0.35057 \rvert < 0.05$		NO
$\sigma_f < \varepsilon(f_0)$	0.14242 < 0.08125		NO
$\sigma_A(f_0) < \theta(f_0)$	1.032 < 2.5	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$

Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

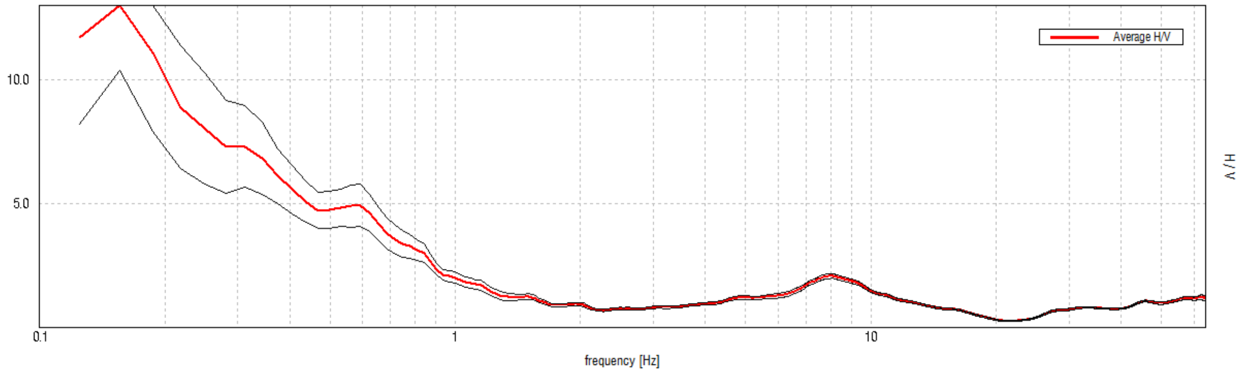
HG15, 1 0009

Instrument: TE3-0303/01-17
Data format: 32 bit
Full scale [mV]: 51
Start recording: 16/04/2021 15:05:39 End recording: 16/04/2021 15:35:39
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS data not available

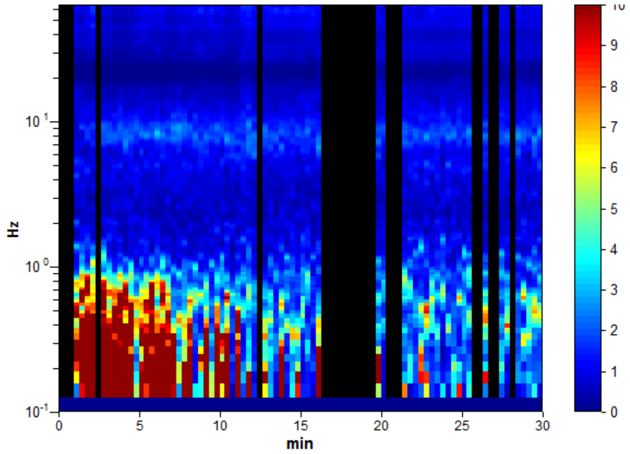
Trace length: 0h30'00''. Analyzed 74% trace (automatic window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

HORIZONTAL TO VERTICAL SPECTRAL RATIO

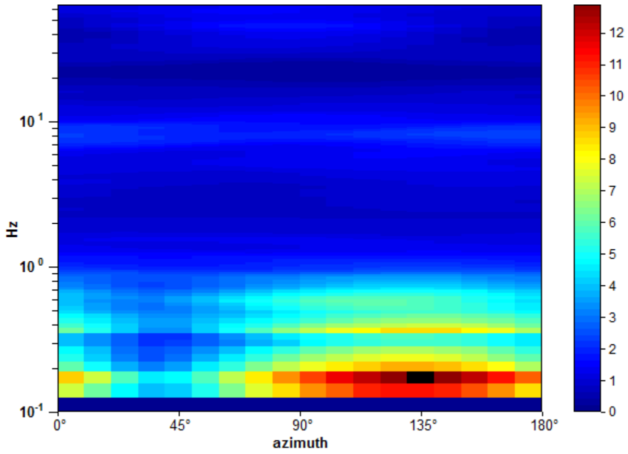
Max. H/V at 0.41 ± 0.01 Hz. (In the range 0.4 - 30.0 Hz).



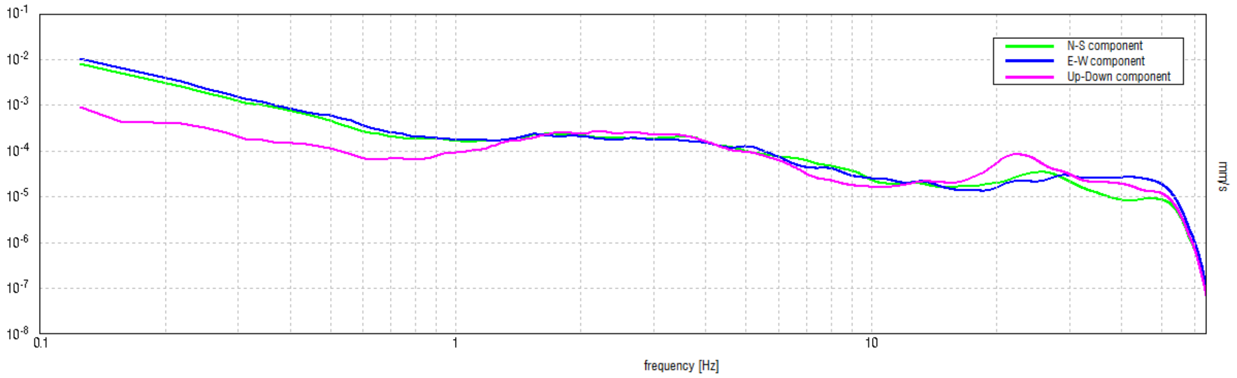
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables.**]

Max. H/V at 0.41 ± 0.01 Hz (in the range 0.4 - 30.0 Hz).

Criteria for a reliable H/V curve [All 3 should be fulfilled]			
$f_0 > 10 / L_w$	0.41 > 0.50		NO
$n_c(f_0) > 200$	544.4 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 1 out of 20 times		NO
Criteria for a clear H/V peak [At least 5 out of 6 should be fulfilled]			
Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$	0.094 Hz	OK	
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	0.875 Hz	OK	
$A_0 > 2$	5.57 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.0188| < 0.05	OK	
$\sigma_f < \varepsilon(f_0)$	0.00764 < 0.08125	OK	
$\sigma_A(f_0) < \theta(f_0)$	0.9786 < 2.5	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$					
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

Indagini sismiche SCPTU

Geo.Fe.
INDAGINI GEOLOGICHE

Committente: Geogroup
Cantiere: Medolla (MO)
Data: 06/07/2021

ID Prova: SCPTU 1
Profondita falda: a mt 3.20 da p.c.
Preforo: -

Profondità massima raggiunta: 30.30 mt
Punta sismica: Tecnopenta CPLSD
RIF. 89/21GF

Prova eseguita da:
GEO.FE. S.n.c.
via dell'Artigianato ,3 44030 - Ro Ferrarese (FE)
tel 3383646278 - info@geofe.it - www.geofe.it
Responsabile dati: Dott.Geol.Zanella Fabio
Responsabile cantiere: Sig. Mangherini Alberto

Prof.	RP	RL	PN	Incl.	V.avanz	Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz
metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec
0.020	0.057	0.000	-38.698	4.735	1.542	1.660	16.222	0.149	-0.425	0.430	1.944	3.300	41.505	0.112	0.653	0.120	1.810	4.940	15.020	0.066	0.469	0.357	1.907	6.580	4.852	0.090	1.989	1.088	2.162
0.040	0.089	0.001	-39.036	4.637	1.674	1.680	16.521	0.185	-0.429	0.391	1.831	3.320	41.179	0.084	0.518	0.111	2.007	4.960	14.181	0.105	0.499	0.374	2.246	6.600	4.924	0.092	2.012	1.101	2.153
0.060	0.022	0.000	-39.289	4.762	1.590	1.700	17.111	0.202	-0.431	0.380	1.822	3.340	41.071	0.068	0.485	0.116	1.935	4.980	13.269	0.124	0.524	0.371	2.054	6.620	5.396	0.090	2.049	1.116	2.344
0.080	0.161	0.001	-39.543	4.689	1.573	1.720	16.498	0.209	-0.479	0.353	1.840	3.360	41.473	0.064	0.500	0.130	1.833	5.000	11.520	0.149	0.581	0.381	2.176	6.640	5.540	0.090	2.115	1.116	2.293
0.100	0.086	0.001	-39.796	4.605	1.485	1.740	16.617	0.215	-0.533	0.345	1.871	3.380	42.130	0.070	0.539	0.127	1.820	5.020	11.625	0.158	0.257	0.381	2.176	6.660	5.794	0.091	2.136	1.126	2.141
0.120	0.086	0.000	-40.050	4.662	1.568	1.760	15.573	0.249	-0.587	0.345	1.947	3.400	42.388	0.075	0.560	0.115	1.898	5.040	11.297	0.157	0.298	0.385	2.235	6.680	6.085	0.094	2.208	1.138	2.147
0.140	0.049	0.000	-40.388	4.683	1.547	1.780	12.383	0.297	-0.628	0.322	1.963	3.420	43.263	0.072	0.590	0.123	1.825	5.060	8.713	0.166	0.512	0.388	2.181	6.700	6.010	0.101	2.274	1.147	2.231
0.160	0.049	0.001	-40.641	4.807	1.542	1.800	9.449	0.361	-0.661	0.322	1.974	3.440	44.211	0.072	0.639	0.113	1.836	5.080	6.927	0.150	0.547	0.404	2.234	6.720	6.082	0.109	2.327	1.155	2.177
0.180	0.157	0.001	-40.895	4.900	1.613	1.820	8.635	0.366	-0.672	0.322	1.868	3.460	45.268	0.072	0.652	0.118	1.977	5.100	6.780	0.140	0.476	0.411	2.126	6.740	6.227	0.108	2.478	1.164	2.063
0.200	0.025	0.001	-41.148	4.942	1.593	1.840	8.261	0.345	-0.692	0.317	1.875	3.480	44.573	0.068	0.267	0.090	1.856	5.120	7.617	0.129	0.325	0.407	2.220	6.760	6.553	0.106	2.637	1.184	2.386
0.220	0.084	0.000	-41.402	3.907	1.622	1.860	8.320	0.329	-0.714	0.310	1.961	3.500	45.594	0.067	0.194	0.095	1.924	5.140	8.490	0.126	0.228	0.416	2.193	6.780	7.171	0.107	2.789	1.187	2.474
0.240	0.011	0.001	-41.655	4.389	1.648	1.880	7.983	0.311	-0.748	0.301	1.849	3.520	45.195	0.070	0.144	0.098	1.769	5.160	8.671	0.142	0.314	0.431	2.140	6.800	8.188	0.113	2.740	1.203	2.206
0.260	0.010	0.000	-41.824	4.708	1.496	1.900	7.543	0.293	-0.792	0.291	1.743	3.540	43.084	0.074	0.037	0.095	1.981	5.180	7.321	0.151	0.421	0.448	2.377	6.820	8.223	0.124	2.747	1.213	2.163
0.280	0.155	0.001	-42.162	4.982	1.434	1.920	7.361	0.286	-0.835	0.296	2.031	3.560	40.315	0.079	0.076	0.086	1.796	5.200	5.899	0.144	0.470	0.453	2.246	6.840	7.893	0.129	2.527	1.239	2.424
0.300	0.119	0.001	-42.247	4.864	1.650	1.940	6.624	0.266	-0.868	0.286	1.907	3.580	38.094	0.076	0.134	0.092	1.802	5.220	5.533	0.131	0.393	0.449	2.126	6.860	7.928	0.127	2.752	1.248	2.069
0.320	0.010	0.001	-42.500	4.767	1.565	1.960	6.812	0.252	-0.899	0.288	1.759	3.600	37.327	0.075	0.135	0.102	1.949	5.240	5.931	0.112	0.118	0.471	2.022	6.880	7.927	0.128	2.628	1.254	2.138
0.340	0.191	0.001	-42.500	4.839	1.565	1.980	6.737	0.233	-0.908	0.273	1.759	3.620	37.179	0.081	0.108	0.104	1.807	5.260	6.183	0.109	0.032	0.480	2.317	6.900	7.852	0.134	2.554	1.267	2.305
0.360	0.100	0.001	-39.712	4.824	1.565	2.000	6.814	0.219	-0.806	0.252	1.802	3.640	37.322	0.096	0.059	0.087	1.891	5.280	6.398	0.113	0.172	0.489	2.144	6.920	7.595	0.145	2.352	1.276	2.305
0.380	0.154	0.001	-41.655	4.791	1.554	2.020	8.206	0.169	-0.560	0.144	1.996	3.660	37.500	0.098	0.021	0.099	1.932	5.300	6.651	0.116	0.274	0.496	2.123	6.940	7.593	0.153	2.332	1.285	2.305
0.400	0.211	0.004	-30.164	4.633	1.557	2.040	7.808	0.163	-0.290	0.133	1.982	3.680	37.497	0.089	0.020	0.108	1.940	5.320	7.340	0.113	0.406	0.517	2.277	6.960	7.517	0.157	2.368	1.307	2.170
0.420	0.358	0.005	23.405	4.093	1.524	2.060	7.118	0.149	-0.183	0.123	1.946	3.700	35.600	0.081	0.082	0.105	1.789	5.340	8.066	0.114	0.406	0.525	2.282	6.980	7.624	0.166	2.309	1.325	2.246
0.440	1.863	0.024	144.399	3.758	1.470	2.080	6.864	0.140	-0.134	0.098	1.851	3.720	32.066	0.073	0.209	0.113	1.789	5.360	8.138	0.129	0.317	0.536	2.282	7.000	7.987	0.168	2.280	1.341	2.274
0.460	1.134	0.028	-35.403	3.551	1.583	2.100	6.648	0.137	-0.138	0.101	1.873	3.740	26.819	0.070	0.369	0.117	1.789	5.380	7.336	0.146	0.109	0.546	2.207	7.020	7.803	0.162	2.479	1.348	2.286
0.480	0.081	0.110	-45.288	3.628	1.547	2.120	6.285	0.134	-0.116	0.095	1.945	3.760	21.028	0.070	0.531	0.117	1.852	5.400	6.571	0.145	0.072	0.532	2.057	7.040	8.346	0.156	2.758	1.372	2.124
0.500	0.479	0.040	-35.065	3.646	1.513	2.140	6.178	0.132	-0.122	0.079	1.865	3.780	14.836	0.083	0.651	0.113	1.993	5.420	5.952	0.141	0.018	0.561	1.987	7.060	10.854	0.163	2.769	1.389	2.231
0.520	0.624	0.045	-15.378	3.650	1.761	2.160	5.998	0.124	-0.165	0.073	1.857	3.800	11.265	0.104	0.696	0.126	1.950	5.440	5.076	0.138	0.018	0.553	2.305	7.080	14.709	0.160	1.208	1.421	2.218
0.540	0.916	0.045	-21.546	3.644	1.571	2.180	5.964	0.120	-0.150	0.073	1.960	3.820	9.586	0.135	0.657	0.118	1.966	5.460	7.074	0.197	0.367	0.581	2.276	7.100	19.441	0.170	0.981	1.424	2.156
0.560	1.060	0.051	-0.676	3.606	1.475	2.200	6.114	0.120	-0.162	0.056	1.966	3.840	8.236	0.164	0.610	0.141	1.841	5.480	6.527	0.150	0.167	0.583	2.078	7.120	24.209	0.183	0.768	1.437	2.248
0.580	1.280	0.049	1.098	3.540	1.490	2.220	5.755	0.112	-0.195	0.062	1.890	3.860	6.667	0.164	0.454	0.125	1.821	5.500	5.763	0.139	0.078	0.593	2.172	7.140	29.266	0.203	0.317	1.446	2.257
0.600	0.251	0.029	-79.339	3.502	1.558	2.240	5.798	0.112	-0.199	0.041	1.860	3.880	6.192	0.155	0.324	0.125	1.927	5.520	5.325	0.121	0.109	0.599	2.252	7.160	32.249	0.187	0.554	1.458	2.264
0.620	0.770	0.037	-24.672	3.470	1.542	2.260	5.952	0.110	-0.197	0.034	1.886	3.900	5.604	0.142	0.119	0.143	1.870	5.540	5.434	0.107	0.333	0.598	2.204	7.180	33.630	0.180	0.703	1.475	2.121
0.640	0.249	0.056	-100.293	3.455	1.465	2.280	5.815	0.113	-0.260	0.042	1.831	3.920	5.564	0.131	0.134	0.151	1.815	5.560	5.324	0.098	0.488	0.604	2.078	7.200	33.773	0.179	0.738	1.477	2.275
0.660	1.499	0.039	8.196	3.317	1.571	2.300	5.898	0.114	-0.237	0.036	1.902	3.940	5.379	0.123	0.211	0.148	2.016	5.580	5.177	0.090	0.534	0.620	2.132	7.220	33.842	0.179	0.724	1.482	2.151
0.680	0.790	0.100	-128.852	3.170	1.578	2.320	6.129	0.115	-0.217	0.025	1.902	3.960	5.266	0.103	0.285	0.153	2.016	5.600	5.031	0.086	0.543	0.622	2.251	7.240	33.948	0.167	0.743	1.503	2.163
0.700	0.211	0.102	-88.380	3.177	1.561	2.340	5.960	0.118	-0.231	0.045	1.869	3.980	5.191	0.081	0.297	0.159	1.964	5.620	4.958	0.082	0.670	0.629	2.193	7.260	35.581	0.158	0.862	1.519	2.204
0.720	0.029	0.056	-88.211	3.161	1.415	2.360	5.899	0.119	-0.260	0.042	1.946	4.000	5.261	0.060	0.475	0.154	1.833	5.640	5.103	0.075	0.766	0.640	2.149	7.280	39.071	0.185	1.073	1.544	2.153
0.740	0.285	0.050	-125.557	3.057	1.589	2.380	5.913	0.116	-0.272	0.033	1.831	4.020	5.188	0.053	0.441	0.167	1.785	5.660	5.028	0.069	0.850	0.636	2.102	7.300	45.508	0.200	1.104	1.572	2.346
0.760	0.077	0.046	-88.295	3.188	1.533	2.400	5.416	0.111	-0.299	0.024	1.990	4.040	4.971	0.053	0.423	0.169	2.133	5.680	5.173	0.069	0.941	0.652	2.418	7.320	52.748	0.221	1.279	1.570	2.202
0.780	0.730	0.040	-68.355	3.204	1.504	2.420	5.869	0.114	-0.234	0.012	1.775	4.060	4.936	0.055	0.422	0.165	1.882	5.700	5.247	0.070	0.988	0.664	2.139	7.340	58.614	0.213	0.203	1.583	2.215
0.800	2.186	0.040	19.518	3.014	1.592	2.440	4.864	0.111	-0.332	0.011	1.798	4.080	5.083	0.058	0.419	0.169	1.757	5.720	5.246	0.073	1.042	0.670	2.139	7.360	60.217	0.214	0.182	1.592	2.244
0.820	7.315	0.003	-1.859	2.164	1.543	2.460	4.697	0.103	-0.306	-0.007	1.855	4.100	5.011	0.061	0.440	0.175	1.987	5.740	5.319	0.070	1.145	0.663	2.139	7.380	60.797	0.212	0.189	1.603	2.067
0.840	6.848	0.048	-43.260	1.759	1.612	2.480	7.236	0.133	-0.684	-0.054	1.972	4.120	5.122	0.065	0.460	0.179	1.792	5.760	5.355	0.068	1.226	0.675	2.208	7.400	60.902	0.211	0.193	1.608	2.211
0.860	9.902	0.079	-29.995	1.205	1.509	2.500	33.927	0.215	-0.848	0.102	1.860	4.140	5.197	0.067	0.465	0.199	1.827	5.780	5.464	0.070	1.273	0.674	2.369	7.420	61.406	0.203	0.194	1.617	2.134
0.880	1.383	0.210	-113.052	1.301	1.486	2.520	33.418	0.223	-0.838	0.107	1.916	4.160	5.564	0.068	0.525	0.228	1.973	5.800	5.537	0.071	1.286	0.682	2.189	7.440	62.786	0.182	0.215	1.623	2.178
0.900	2.331	0.037	-31.685	1.148	1.528	2.540	31.815	0.211	-0.846	0.108	1.842	4.180	5.564	0.068	0.525	0.228	1.843	5.820	5.610	0.078	1.288	0.700	2.319	7.460	62.887	0.123	0.207	1.642	2.306
0.920	5.692	0.090	-18.842	1.220	1.524	2.560	29.230	0.198	-0.873	0.109	1.890	4.200	5.825	0.080	0.641	0.216	2.014	5.840	5.756	0.085	1.253	0.694	2.281	7.480	64.420	0.117	0.219	1.660	2.173
0.940	6.901	0.096	-32.614	0.791	1.553	2.580	27.446	0.175	-0.872	0.107	1.851	4.220	6.192	0.084	0.458	0.218	1.791	5.860	5.683	0.094	1.219	0.701	2.047	7.500	65.699	0.125	0.220	1.678	2.143
0.960	4.563	0.019	-81.198	0.759	1.553	2.600	26.281	0.127	-0.849	0.103	1.855	4.240	5.759	0.102	0.335	0.209	1.949	5.880	5.609	0.102	1.211	0.716	2.172	7.520	67.268	0.137	0.235	1.686	2.225
0.980	2.857	0.072	-100.209	0.757	1.815	2.620	26.026	0.078	-0.829	0.099	1.857	4.260	6.053	0.097	0.313	0.216	1.784	5.900	5.681	0.105	1.206	0.719	2.126	7.540	69.057	0.148	0.247	1.698	2.189
1.000	0.780	0.104	-65.651	0.738	1.710	2.640	26.792	0.060	-0.789	0.108	1.907	4.280	6.857	0.104	0.243	0.231	1.755	5.920	5.535	0.103	1.221	0.732	2.126	7.560	70.625	0.162	0.223	1.718	2.219
1.020	0.948	0.021	-65.989	0.705	1.990	2.660	28.576	0.055	-0.725	0.102	1.867	4.300	6.640	0.122	0.105	0.233	1.977	5.940	5.643	0.102	1.234	0.737	2.126	7.580	68.905	0.170	0.168	1.718	2.128
1.040	0.729	0.003	-70.298	0.664	1.872	2.680	32.144	0.050	-0.613	0.114	1.942	4.320	6.350	0.125	0.028	0.237	1.902	5.960	5.824	0.099	1.222	0.751	2.094	7.600	66.711	0.165	0.183	1.737	2.317
1.060	0.328	0.014	-69.369	0.630	1.824	2.700	36.260	0.043	-0.481	0.103	1.834	4.340	5.696	0.125	0.070	0.237	1.805	5.980	5.823	0.099	1.198	0.748	2.166	7.620	66.268	0.158	0.286	1.734	2.165
1.080	0.037	0.030	-61.173	0.605	2.019	2.720	41.029	0.053	-0.315	0.091	1.890	4.360	5.006	0.124	0.177	0.245	2.000	6.000	5.750	0.098	1.192	0.762	2.414	7.640	66.555	0.151	0.433	1.754	2.275
1.100	0.153	0.021	-66.581	0.627	1.778	2.740	43.869	0.056	-0.247	0.086	1.787	4.380	4.171	0.116	0.121	0.242	1.862	6.020	5.712	0.100	1.169	0.774	2.274	7.660	65.927	0.142	0.252	1.768	2.144
1.120	0.004	0.042	-72.073	0.582	1.719	2.760	46.310	0.062	-0.212	0.076	1.767	4.400	4.136	0.106	0.047	0.245	1.753	6.040	5.602	0.102	1.181	0.777	2.270	7.680	63.875	0.126	0.165	1.777	2.277
1.140	0.091	0.003	-77.734	0.584	1.929	2.780	46.420	0.063	-0.340	0.080	1.998	4.420	4.428	0.102	0.343	0.246	1.758	6.060	5.564	0.104	1.210	0.790	2.270	7.700	62.079	0.115	0.168	1.781	2.047
1.160	0.091	0.002	-77.649	0.612	1.879	2.800	42.635	0.060	-0.428	0.081	2.116	4.440	4.865	0.093	0.459	0.247	1.975	6.080	5.235	0.106	1.178	0.792	2.270	7.720	62.437	0.104	0.310	1.783	2.145
1.180	0.054	0.002	-77.565	0.643	1.761	2.820	38.557	0.049	-0.514	0.073	1.863	4.460	5.049	0.078	0.547	0.263	1.826	6.100	5.015	0.102	1.123	0.821	2.207	7.740	65.022	0.093	0.354	1.790	2.134
1.200	0.126	0.002	-77.818	0.608	1.957	2.840	33.971	0.040	-0.597	0.079	1.868	4.480	7.084	0.103	0.286	0.272	1.840	6.120	4.941	0.098	1.096	0.821	2.065	7.760	67.280	0.092	0.312	1.782	2.326
1.220	0.053	0.002	-77.903	0.617	1.935	2.860	29.602	0.038	-0.670	0.081	2.368	4.500	8.358	0.098	0.435	0.269	2.042	6.140	4.722	0.097	1.092	0.833	2.405	7.780	68.552	0.088	0.353	1.794	2.410
1.240	0.016	0.002	-78.072	0.624	1.834	2.880	26.182	0.041	-0.717	0.079	2.368	4.520	10.250	0.110	0.447	0.289	1.867	6.160	4.575	0.091	1.100	0.836	2.233	7.800	68.213	0.072	0.160	1.800	2.287
1.260	0.095	0.001	-78.241	0.624	1.693	2.900	24.034	0.044	-0.735	0.087	2.368	4.540	12.471	0.137	0.019	0.285	1.935	6.180	4.683	0.083	1.101	0.849	2.230	7.820	67.913	0.065	0.255	1.809	2.077
1.280	0.196	0.002	-78.410	0.662	1.915	2.920	21.669	0.047	-0.766	0.086	1.870	4.560	12.689	0.172	0.398	0.285	1.720	6.200	4.608	0.082	1.113	0.857	2.274	7.840	66.992	0.066	0.323	1.820	2.386
1.300	0.085	0.002	-78.579	0.634	1.823	2.940	17.265	0.051	-0.847	0.087	1.793	4.580	12.616	0.192	0.472	0.302	1.863	6.220	4.534	0.085	1.123	0.880	2.168	7.860	66.072	0.072	0.257	1.835	2.043
1.320	0.060	0.001	-82.803	0.639	1.788	2.960	11.549	0.066	-0.929	0.079	1.793	4.600	12.289	0.182	0.496	0.316	1.781	6.240	4.605	0.088	1.139	0.893	2.069	7.880	65.845	0.078	0.245	1.832	2.204
1.340	1.445	0.005	-39.965	0.651	1.923	2.980	8.781	0.085	-0.954	0.085	1.786	4.620	12.216	0.167	0.480	0.314	1.924	6.260	4.748	0.089	1.205	0.882	2.203	7.900	67.628	0.083	0.323	1.840	2.165
1.360	6.396	0.006	-13.265	0.704	1.850	3.000	6.342	0.131	-0.951	0.092	1.786	4.640	14.326	0.178	0.416	0.316	1.880	6.280	4.639	0.088	1.248	0.907	2.376	7.920	71.165	0.086	0.332	1.856	2.165
1.380	11.531	0.019	-9.632	0.693	1.887	3.020	5.212	0.160	-0.841	0.096	1.852	4.660	16.146	0.206	0.380	0.314	1.955	6.300	4.673	0.090	1.317	0.923	2.216	7.940	75.725	0.088	0.570	1.866	2.308
1.400	15.100	0.031	-5.830	0.710	1.785	3.040	4.957	0.158	-0.613	0.096	2.040	4.680	17.128	0.211	0.425	0.312	1.893	6.320	4.673	0.087	1.362	0.932	2.109	7.960	83.242	0.089	0.930	1.872	2.106
1.420	16.631	0.048	-5.915	0.704	1.886	3.060	5.320	0.154	-0.425	0.086	1.928	4.700	17.418	0.205	0.459	0.308	1.813	6.340	4.745	0.084	1.398	0.946	2.371	7.980	87.662	0.084	0.912	1.888	2.269
1.440	15.941	0.042	-10.984	0.778	1.764	3.080	6.411	0.141	-0.157	0.097	1.827	4.720	17.853	0.147	0.419	0.309	1.791	6.360	4.817	0.082	1.417	0.950	2.253	8.000	90.593	0.085	0.894	1.891	2.199
1.460	16.925	0.062	-21.715	0.811	1.873	3.100	8.194	0.126	0.242	0.103	1.763	4.740	19.015	0.120	0.360	0.306	1.787	6.380	4.779	0.082	1.442	0.974	2.046	8.020	92.091	0.087	0.866	1.900	2.246
1.480	16.965	0.060	-27.376	0.744	1.802	3.120	13.251	0.096	0.743	0.115	1.968	4.760	20.796	0.120	0.292	0.301	2.110	6.400	4.742	0.083	1.448	0.982	2.046	8.040	92.267	0.094	0.889	1.901	2.310
1.500	15.548	0.077	-33.797	0.729	1.918	3.140	13.214	0.080	-0.107	0.108	1.831	4.780	23.121	0.151	0.220	0.321	1.850	6.420	4.740	0.084	1.467	0.997	2.410	8.060	90.569	0.094	0.870	1.905	2.108
1.520	15.919	0.083	-33.628	0.806	1.935	3.160	10.265	0.097	-0.422	0.111	1.872	4.800	23.992	0.154	0.199	0.329	1.833	6.440	4.885	0.085	1.491	1.003	2.174	8.080	90.674	0.084	1.009	1.919	2.124
1.540	16.033	0.082	-36.417	0.785	1.905	3.180	8.190	0.128	-0.522	0.111	1.946	4.820	23.188	0.141	0.274	0.343	2.018	6.460	4.817	0.087	2.012	1.023	2.146	8.100	90.777	0.082	1.085	1.918	2.297
1.560	15.895	0.079	-39.627	0.610	1.798	3.200	12.633	0.157	-0.200	0.107	1.972	4.840	22.678	0.139	0.314	0.340	1.799	6.480	4.781	0.088	1.994	1.037	2.399	8.120	89.852	0.084	1.040	1.937	2.225
1.580	14.555	0.094	-45.626	0.579	1.870	3.220	21.915	0.164	0.331	0.116	1.933	4.860	19.726	0.118	0.391	0.354	1.818	6.500	4.854	0.088	1.993	1.036	2.193	8.140	88.669	0.087	0.971	1.944	2.239
1.600	14.489	0.108	-46.387	0.530	1.789	3.240	33.019	0.167	0.482	0.111	1.743	4.880	18.558	0.064	0.423	0.346	1.771	6.520	4.745	0.088	2.018	1.056	2.217	8.160	87.818	0.088	0.973	1.958	2.236
1.620	15.658	0.093	-40.979	0.490	1.899	3.260	38.153	0.169	0.655	0.102	1.984	4.900	17.282	0.055	0.447	0.336	1.907	6.540	4.744	0.089	2.020	1.062	2.178	8.180	86.929	0.089	0.902	1.956	2.109
1.640	15.812	0.136	-40.641	0.462	1.882	3.280	40.412	0.158	0.748	0.110	1.844	4.920	15.969	0.052	0.468	0.357	1.907	6.560	4.780	0.089	1.999	1.064	2.121	8.200	86.005	0.089	0.206	1.968	2.366

Prof.: Profondità RL: - RP: Resistenza di punta - Resistenza all'attrito laterale - Incl.:clinazione - Vavanz: velocità di avanzamento della punta

Geo.Fe.
INDAGINI GEOLOGICHE

Committente: Geogroup
Cantiere: Medolla (MO)
Data: 06/07/2021

ID Prova: SCPTU 1
Profondita falda: a mt 3.20 da p.c.
Preforo: -

Profondità massima raggiunta: 30.30 mt
Punta sismica: Tecnopenta CPLSD
RIF. 89/21GF

Prova eseguita da:
GEO.FE. S.n.c.
via dell'Artigianato ,3 44030 - Ro Ferrarese (FE)
tel 3383646278 - info@geofe.it - www.geofe.it
Responsabile dati: Dott.Geol.Zanella Fabio
Responsabile cantiere: Sig. Mangherini Alberto

Prof.	RP	RL	PN	Incl.	Vavanz
metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec
8.220	84.752	0.089	-0.047	1.977	2.223
8.240	83.977	0.087	-0.043	1.984	1.963
8.260	84.078	0.085	-0.185	2.005	2.114
8.280	84.910	0.084	-0.130	2.005	2.035
8.300	85.668	0.085	0.084	2.028	1.840
8.320	86.282	0.086	0.011	2.032	1.937
8.340	86.383	0.083	-0.094	2.035	2.028
8.360	85.753	0.082	-0.088	2.051	1.922
8.380	86.879	0.075	0.089	2.061	2.165
8.400	89.482	0.076	0.042	2.069	2.085
8.420	92.888	0.081	0.136	2.075	2.198
8.440	91.975	0.084	0.357	2.085	2.166
8.460	90.252	0.076	0.141	2.095	2.064
8.480	88.821	0.077	0.078	2.110	2.358
8.500	86.326	0.078	0.108	2.128	2.111
8.520	83.697	0.079	0.166	2.144	2.048
8.540	82.016	0.082	0.163	2.152	2.182
8.560	81.867	0.077	0.127	2.162	2.188
8.580	85.409	0.080	0.114	2.163	2.201
8.600	89.072	0.085	0.332	2.186	2.241
8.620	90.020	0.086	0.341	2.206	2.254
8.640	89.060	0.096	0.354	2.216	2.106
8.660	88.211	0.098	0.323	2.224	2.071
8.680	87.214	0.093	0.341	2.227	1.974
8.700	87.062	0.096	0.410	2.241	2.440
8.720	88.121	0.099	0.554	2.241	2.255
8.740	90.502	0.098	0.754	2.241	1.951
8.760	93.875	0.093	1.029	2.251	2.212
8.780	97.689	0.094	1.097	2.261	2.303
8.800	103.264	0.096	1.180	2.275	2.175
8.820	110.273	0.102	1.166	2.276	2.175
8.840	117.207	0.116	0.960	2.297	2.175
8.860	121.495	0.133	0.612	2.304	2.128
8.880	123.767	0.134	0.520	2.325	2.024
8.900	124.788	0.143	0.727	2.336	2.092
8.920	122.247	0.154	0.715	2.340	2.103
8.940	117.577	0.149	0.579	2.353	2.103
8.960	113.787	0.139	0.433	2.364	2.002
8.980	107.611	0.127	0.197	2.359	2.305
9.000	101.653	0.129	0.049	2.366	2.254
9.020	99.845	0.130	0.078	2.381	2.104
9.040	99.472	0.137	0.191	2.392	2.005
9.060	101.849	0.166	0.488	2.402	2.141
9.080	103.638	0.198	0.766	2.413	2.142
9.100	108.143	0.295	1.201	2.438	2.062
9.120	110.669	0.313	1.367	2.441	2.218
9.140	111.431	0.329	1.509	2.444	2.176
9.160	110.539	0.343	1.286	2.443	2.131
9.180	107.076	0.318	0.966	2.460	2.073
9.200	104.975	0.267	0.868	2.467	2.128
9.220	101.222	0.195	0.667	2.460	2.093
9.240	96.222	0.155	0.430	2.470	2.085
9.260	88.868	0.130	0.100	2.480	2.043
9.280	78.947	0.122	0.267	2.479	2.229
9.300	64.801	0.113	0.590	2.481	2.143
9.320	53.658	0.112	0.780	2.506	2.042
9.340	42.327	0.113	0.898	2.512	2.048
9.360	36.458	0.126	0.925	2.505	2.184
9.380	38.121	0.137	0.839	2.489	1.981
9.400	49.032	0.128	0.604	2.501	2.071
9.420	57.471	0.123	0.374	2.504	2.227
9.440	37.776	0.177	0.125	2.521	2.068
9.460	57.846	0.144	0.167	2.529	2.136
9.480	54.641	0.160	0.344	2.527	1.980
9.500	51.004	0.153	0.490	2.542	2.212
9.520	47.112	0.149	0.553	2.536	2.063
9.540	39.252	0.143	0.701	2.533	2.032
9.560	32.735	0.123	0.801	2.547	1.990
9.580	28.983	0.178	0.780	2.559	2.147
9.600	27.632	0.246	0.637	2.578	2.115
9.620	27.559	0.283	0.505	2.579	2.037
9.640	29.234	0.357	0.053	2.582	2.301
9.660	34.912	0.394	0.022	2.585	2.121
9.680	37.933	0.439	0.314	2.608	1.926
9.700	38.478	0.473	0.411	2.624	2.013
9.720	39.715	0.448	0.430	2.622	2.146
9.740	40.477	0.426	0.410	2.645	2.126
9.760	42.660	0.348	0.386	2.648	2.300
9.780	42.623	0.288	0.430	2.650	2.026
9.800	43.459	0.248	0.435	2.647	2.121
9.820	44.042	0.250	0.470	2.640	2.213
9.840	44.624	0.250	0.470	2.646	1.995

Prof.	RP	RL	PN	Incl.	Vavanz
metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec
9.860	46.698	0.235	0.488	2.648	2.012
9.880	49.649	0.224	0.416	2.653	2.213
9.900	52.272	0.217	0.378	2.649	2.024
9.920	53.731	0.176	0.360	2.653	2.024
9.940	54.025	0.159	0.411	2.656	2.102
9.960	51.808	0.135	0.514	2.669	2.039
9.980	48.352	0.113	0.620	2.683	2.235
10.000	44.352	0.078	0.709	2.676	2.067
10.020	40.206	0.065	0.784	2.690	2.128
10.040	34.387	0.063	0.873	2.690	2.087
10.060	27.837	0.076	0.959	2.701	2.036
10.080	23.582	0.107	1.001	2.708	1.988
10.100	23.222	0.115	1.000	2.713	2.199
10.120	28.741	0.135	0.369	2.753	2.087
10.140	31.913	0.143	0.368	2.762	2.042
10.160	33.264	0.127	0.438	2.768	2.256
10.180	28.208	0.185	0.703	2.768	2.102
10.200	23.584	0.223	0.804	2.778	1.896
10.220	19.873	0.312	0.904	2.780	2.209
10.240	19.400	0.325	0.915	2.788	2.024
10.260	17.327	0.340	0.843	2.799	2.065
10.280	15.286	0.358	0.857	2.810	2.211
10.300	12.993	0.322	0.814	2.810	2.119
10.320	12.045	0.265	0.412	2.823	2.224
10.340	11.787	0.251	0.226	2.820	2.224
10.360	11.711	0.194	0.226	2.835	2.061
10.380	11.636	0.171	0.394	2.826	2.018
10.400	11.014	0.186	0.447	2.847	1.947
10.420	10.757	0.189	0.522	2.854	2.190
10.440	11.532	0.199	2.149	2.861	2.119
10.460	10.625	0.200	1.815	2.875	2.000
10.480	9.862	0.182	1.664	2.889	2.229
10.500	9.391	0.169	1.779	2.901	2.099
10.520	9.502	0.139	2.013	2.903	1.865
10.540	9.831	0.134	2.166	2.903	2.124
10.560	9.541	0.123	1.967	2.915	2.071
10.580	9.104	0.130	1.937	2.923	1.941
10.600	9.177	0.123	1.986	2.927	2.156
10.620	9.397	0.104	2.135	2.932	2.128
10.640	9.434	0.103	2.239	2.940	2.041
10.660	9.654	0.099	2.411	2.959	2.163
10.680	9.801	0.091	2.546	2.967	1.820
10.700	9.949	0.091	2.631	2.970	2.034
10.720	9.951	0.090	2.552	2.978	2.183
10.740	9.590	0.089	2.570	2.996	2.014
10.760	10.175	0.089	2.613	2.996	2.342
10.780	10.649	0.084	1.174	3.016	2.129
10.800	10.726	0.080	1.411	3.023	2.050
10.820	10.475	0.066	2.165	3.036	1.958
10.840	10.624	0.064	2.516	3.040	2.100
10.860	10.373	0.069	2.611	3.042	2.059
10.880	9.977	0.064	2.958	3.047	2.020
10.900	10.091	0.059	3.189	3.050	2.156
10.920	10.059	0.060	3.359	3.062	2.156
10.940	10.682	0.060	3.556	3.074	2.014
10.960	11.087	0.067	3.500	3.089	2.181
10.980	11.382	0.070	3.464	3.103	2.091
11.000	11.677	0.079	3.477	3.108	2.010
11.020	11.681	0.083	3.477	3.131	2.217
11.040	11.867	0.091	3.403	3.145	1.995
11.060	12.053	0.096	3.358	3.167	2.083
11.080	12.129	0.100	3.490	3.179	2.073
11.100	12.790	0.094	3.663	3.184	1.986
11.120	13.266	0.112	0.327	3.191	2.139
11.140	12.033	0.105	3.088	3.202	2.053
11.160	11.635	0.102	3.252	3.207	2.068
11.180	11.347	0.100	3.305	3.213	2.161
11.200	11.168	0.101	3.481	3.234	2.066
11.220	11.061	0.101	3.513	3.253	1.852
11.240	10.772	0.102	3.530	3.272	2.137
11.260	10.666	0.096	3.610	3.263	2.075
11.280	10.633	0.094	3.650	3.277	1.972
11.300	10.344	0.091	3.866	3.289	2.124
11.320	9.945	0.089	3.889	3.296	2.080
11.340	10.057	0.091	4.105	3.291	2.008
11.360	10.933	0.083	4.119	3.314	1.961
11.380	11.554	0.095	4.287	3.308	2.123
11.400	10.901	0.093	2.418	3.318	1.902
11.420	10.610	0.103	3.626	3.309	2.094
11.440	10.194	0.096	3.804	3.323	2.119
11.460	10.450	0.108	4.033	3.323	1.980
11.480	10.923	0.105	4.276	3.330	2.142

Prof.	RP	RL	PN	Incl.	Vavanz
metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec
11.500	11.360	0.110	4.284	3.343	2.031
11.520	11.834	0.127	4.344	3.346	1.909
11.540	11.725	0.141	3.812	3.355	2.049
11.560	11.871	0.148	3.427	3.373	2.049
11.580	12.416	0.164	3.222	3.372	1.961
11.600	12.670	0.185	3.291	3.373	1.978
11.620	12.634	0.210	3.894	3.380	2.173
11.640	13.034	0.235	3.273	3.370	2.036
11.660	13.652	0.246	3.623	3.367	1.894
11.680	14.379	0.284	3.803	3.376	2.074
11.700	14.958	0.328	3.901	3.374	1.944
11.720	15.502	0.368	4.255	3.389	1.896
11.740	16.336	0.408	3.912	3.400	2.328
11.760	16.551	0.430	2.466	3.399	2.192
11.780	16.583	0.495	2.795	3.411	2.045
11.800	17.268	0.533	3.570	3.419	2.025
11.820	17.773	0.577	3.681	3.418	1.991
11.840	18.166	0.618	3.329	3.428	1.921
11.860	18.925	0.638	3.506	3.435	2.109
11.880	18.955	0.683	3.016	3.449	2.053
11.900	19.094	0.710	1.899	3.451	2.053
11.920	18.827	0.760	1.592	3.441	2.004
11.940	18.709	0.812	2.293	3.446	2.084
11.960	18.334	0.866	2.111	3.442	2.063
11.980	18.323	0.889	2.029	3.441	2.002
12.000	18.385	0.919	1.899	3.442	2.169
12.020	17.969	0.959	2.282	3.447	2.108
12.040	18.351	0.955	2.500	3.439	1.877
12.060	19.355	0.910	2.697	3.458	2.097
12.080	22.689	0.874	1.422	3.458	2.011
12.100	26.672	0.827	3.105	3.465	2.038
12.120	21.126	0.858	0.973	3.462	1.997
12.140	20.816	0.768	1.742	3.477	2.169
12.160	23.929	0.698	2.113	3.487	2.073
12.180	23.589	0.705	0.988	3.495	1.997
12.200	26.230	0.735	2.506	3.506	1.982
12.220	27.092	0.755	5.114	3.520	1.983
12.240	49.409	0.991	8.740	3.601	2.049
12.260	66.326	0.834	1.317	3.661	1.919
12.280	64.818	0.877	1.033	3.703	2.097
12.300	59.672	0.897	0.341	3.724	2.101
12.320	44.036	1.242	0.183	3.783	1.979
12.340	41.845	1.348	0.141	3.818	1.968
12.360	39.724	1.374	0.140	3.868	2.010
12.380	32.835	1.434	0.134	3.905	2.034
12.400	26.190	1.510	0.278	3.919	1.934
12.420	20.773	1.243	0.264	3.937	2.089
12.440	23.140	1.036	2.064	3.944	2.071
12.460	21.214	0.894	2.052	3.949	2.067
12.480	20.415	0.733	2.128	3.958	1.925
12.500	19.429	0.671	2.172	3.952	1.976
12.520	18.177	0.604	2.030	3.949	2.047
12.540	17.834	0.522	2.189	3.935	1.902
12.560	16.988	0.493	2.035	3.929	2.200
12.580	16.654	0.464	1.943	3.914	1.952
12.600	16.506	0.436	1.905	3.903	1.900
12.620	16.323	0.433	1.896	3.892	2.268
12.640	15.962	0.431	1.916	3.889	1.966
12.660	16.038	0.408	2.074	3.877	1.966
12.680	16.299	0.390	2.211	3.853	1.966
12.700	16.380	0.390	2.274	3.847	1.966
12.720	16.425	0.373	2.293	3.839	2.071
12.740	15.741	0.373	2.129	3.824	2.176
12.760	15.421	0.359	2.099	3.816	2.055
12.780	15.065	0.352	2.130	3.812	1.995
12.800	14.890	0.359	2.081	3.794	1.947
12.820	14.861	0.356	2.365	3.791	2.107
12.840	15.596	0.334	2.798	3.782	1.928
12.860	16.478	0.325	3.181	3.780	1.997
12.880	18.015	0.312	3.747	3.761	1.997
12.900	20.132	0.293	4.354	3.739	1.997
12.920	22.833	0.292	4.827	3.739	2.043
12.940	25.391	0.312	2.993	3.729	1.997
12.960	26.817	0.340	1.873	3.714	1.907
12.980	29.446	0.414	2.299	3.689	2.337
13.000	27.310	0.515	2.003	3.676	2.010
13.020	26.917	0.589	2.853	3.665	1.976
13.040	27.033	0.642	2.724	3.647	2.007
13.060	29.367	0.726	2.734	3.625	2.012
13.080	30.175	0.813	1.899	3.612	1.934
13.100	36.185	0.876	2.716	3.586	2.130
13.120	35.671	0.992	3.085	3.571	2.047

Prof.	RP	RL	PN	Incl.	Vavanz
metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec
13.140	31.376	1.044	2.132	3.567	2.019
13.160	30.787	1.126	2.362	3.549	2.146
13.180	30.014	1.172	2.422	3.547	2.047
13.200	29.821	1.213	2.478	3.540	1.916
13.220	29.262	1.260	2.432	3.539	2.052
13.240	29.355	1.292	2.418	3.528	1.980
13.260	28.833	1.281	2.338	3.520	1.980
13.280	28.093	1.256	2.287	3.518	2.051
13.300	27.240	1.246	2.143	3.520	2.034
13.320	26.278	1.240	1.959	3.523	2.034
13.340	24.659	1.227	1.729	3.535	2.034
13.360	23.947	1.152	1.523	3.543	1.978
13.380	23.276	1.115	1.346	3.540	1.888
13.400	22.528	1.098	1.162	3.549	2.135
13.420	21.449	1.082	2.124	3.601	1.952
13.440	22.760	1.072	2.219	3.605	1.970
13.460	22.977	1.037	2.273	3.620	2.140
13.480	23.700	0.985	2.478	3.638	2.067
13.500	23.622	0.890	2.297	3.650	1.993
13.520	22.268	0.832	1.986	3.657	1.846
13.540	20.549	0.795	1.554	3.663	1.980
13.560	19.701	0.777	1.487	3.678	1.999
13.580	20.277	0.777	1.740	3.678	2.026
13.600	23.291	0.745	3.348	3.697	1.911
13.620	24.085	0.656	4.233	3.711	2.165
13.640	24.734	0.576	4.244	3.717	2.049
13.660	24.474	0.571	4.080	3.737	1.795
13.680	24.942	0.617	4.372	3.728	2.058
13.700	26.141	0.607	4.731	3.741	1.965
13.720	26.905	0.606	4.893	3.745	2.079
13.740	26.726	0.643	4.873	3.752	2.280
13.760	27.348	0.693	4.820	3.743	1.886
13.780	27.606	0.753	4.795	3.755	2.029
13.800	26.952	0.797	4.671	3.770	2.175
13.820	26.443	0.838	4.870	3.760	1.846
13.840	28.445	0.900	5.417	3.777	1.985
13.860	32.231	0.903	6.093	3.782	2.112
13.880	33.758	0.891	5.552	3.798	1.956
13.900	32.990	0.897	5.267	3.816	1.956
13.920	34.149	0.943	2.622	3.830	2.202
13.940	30.612	0.951	1.228	3.835	1.962
13.960	27.258	0.964	0.951	3.844	1.972
13.980	25.511	1.005	0.674	3.865	2.179
14.000	24.381	1.008	0.509	3.864	2.115
14.020	22.996	1.040	0.389	3.884	1.923
14.040	20.775	1.091	0.285	3.884	1.928
14.060	19.526	1.093	0.292	3.884	2.128
14.080	18.568	1.050	0.377	3.895	1.995
14.100	18.448	0.976	0.593	3.905	1.998
14.120	19.311	0.886	0.827	3.903	2.115
14.140	20.032	0.776	0.971	3.912	2.088
14.160	20.061	0.670	1.001	3.929	1.976
14.180	20.271	0.587	1.010	3.927	2.050
14.200	20.996	0.546	1.182	3.940	1.923
14.220	22.195	0.539	1.386	3.944	1.977
14.240	22.231	0.581	1.431	3.960	2.088
14.260	22.669	0.615	1.542	3.968	2.003
14.280	23.253	0.629	1.732	3.974	2.040
14.300	23.876	0.642	1.859	3.984	2.016
14.320	24.207	0.671	1.864	3.989	2.005
14.340	23.921	0.721	1.798	3.994	1.913
14.360	23.850	0.757	1.920	4.009	1.980
14.380	24.145	0.775	2.195	4.001	2.032
14.400	23.492	0.781	1.874	4.015	1.845
14.420	23.614	0.791	3.787	4.069	2.154
14.440	23.436	0.818	3.577	4.080	2.006
14.460	22.893	0.839	3.554	4.091	1.969
14.480	23.148	0.834	3.587	4.091	2.068
14.500	24.020	0.820	3.860	4.090	1.871
14.520	25.362	0.802	4.143	4.100	1.913
14.540	25.538	0.799	4.129	4.106	2.073
14.560	26.367	0.783	4.145	4.109	2.068
14.580	27.268	0.777	4.338	4.124	1.864
14.600	28.169	0.767	4.628	4.117	1.950
14.620	28.599	0.776	4.841	4.117	2.072
14.640	30.156	0.793	4.883	4.127	1.976
14.660	27.088	0.822	-0.356	4.132	1.944
14.680	27.007	0.861	0.586	4.138	1.896
14.700	28.493	0.889	1.055	4.145	1.960
14.720	31.906	0.919	2.185	4.142	2.065
14.740	31.753	0.955	2.219	4.160	2.128
14.760	32.328	0.993	2.419	4.165	1.936

Prof.	RP	RL	PN	Incl.	Vavanz
metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec
14.780	32.173	1.029	2.318	4.168	2.126
14.800	32.126	1.013	2.339	4.173	1.919
14.820	31.973	1.001	2.193	4.176	1.842
14.840	30.546	1.057	1.849	4.195	2.183
14.860	28.974	1.084	1.540	4.202	1.896
14.880	27.583	1.113	1.377	4.220	2.064
14.900	25.718	1.147	1.088	4.221	2.064
14.920	23.854	1.173	0.829	4.231	1.851
14.940	21.622	1.214	0.573	4.231	2.193
14.960	20.186	1.203	0.410	4.247	1.971
14.980	19.334	1.169	0.429	4.244	2.075
15.000	19.426	1.099	0.554	4.256	2.034
15.020	19.837	0.999	3.566	4.283	1.894
15.040	20.132	0.921	3.585	4.284	2.025
15.060	20.314	0.834	3.619	4.290	1.970
15.080	20.018	0.725	3.588	4.293	1.896
15.100	19.791	0.622	3.492	4.299	2.138
15.120	19.311	0.549	3.452	4.310	1.993
15.140	19.343	0.516	3.537	4.313	1.938
15.160	19.448	0.495	3.645	4.321	2.069
15.180	19.737	0.476	3.929	4.326	1.977
15.200	21.483	0.479	4.301	4.321	1.816
15.220	22.686	0.484	4.532	4.331	2.130
15.240	22.760	0.472	4.515	4.339	1.964
15.260	22.833	0.473	4.452	4.342	1.816
15.280	22.471	0.511	4.232	4.350	2.184
15.300	22.182	0.532	4.222	4.356	1.989
15.320	22.002	0.541	4.047	4.363	1.989
15.340	20.584	0.576	3.672	4.363	1.989
15.360	18.947	0.580	3.273	4.368	1.989
15.380	18.620	0.581	3.209	4.365	1.897
15.400	16.547	0.599	2.694	4.374	2.044
15.420	15.344	0.565	2.476	4.376	1.905
15.440	14.651	0.454	5.678	4.406	1.866
15.460	15.708	0.449	5.849	4.406	2.085
15.480	15.565	0.403	5.739	4.413	1.926
15.500	15.493	0.362	5.671	4.407	1.923
15.520	15.710	0.329	5.708	4.417	1.831
15.540	15.783	0.318	5.826	4.406	1.986
15.560	16.256	0.294	6.020	4.424	1.972
15.580	16.475	0.283	6.068	4.420	1.922
15.600	16.438	0.290	5.998	4.435	1.962
15.620	16.039	0.303	5.872	4.430	1.991
15.640	16.004	0.314	5.771	4.440	1.947
15.660	15.676	0.322	5.702	4.439	1.861
15.680	15.532	0.324	5.580	4.441	1.866
15.700	15.207	0.334	5.433	4.448	1.916
15.720	14.953	0.338	5.337	4.468	1.892
15.740	14.843	0.337	5.251	4.469	2.305
15.760	14.699	0.332	5.145	4.478	2.305
15.780	14.517	0.329	5.067	4.492	2.305
15.800	14.262	0.327	4.962	4.486	1.961
15.820	14.008	0.323	4.864	4.487	1.944
15.840	13.754	0.315	4.801	4.495	1.911
15.860	13.936	0.301	4.783	4.508	1.841
15.880	13.864	0.301	4.729	4.509	1.841
15.900	13.828	0.297	4.688	4.528	2.045
15.920	13.865	0.294	4.663	4.533	1.761
15.940	14.266	0.288	4.683	4.546	2.100
15.960	14.449	0.289	4.729	4.556	1.929
15.980	14.560	0.289	4.754	4.572	2.061
16.000	14.743	0.296	4.793	4.579	1.987
16.020	14.890	0.292	4.851	4.592	1.974
16.040	15.256	0.290	4.957	4.593	1.878
16.060	15.731	0.284	5.074	4.599	1.980
16.080	16.171	0.284	5.173	4.618	1.970
16.100	16.391	0.278	5.250	4.623	1.886
16.120	16.830	0.274	5.348	4.624	2.051
16.140	17.013	0.283	5.405	4.646	1.966
16.160	17.524	0.280	5.575	4.657	1.894
16.180	17.746	0.281	5.666	4.672	2.088
16.200	18.441	0.279	5.895	4.690	1.831
16.220	18.918	0.284	6.007	4.681	1.993
16.240	19.175	0.284	6.073	4.692	1.952
16.260	19.434	0.293	6.156	4.697	1.885
16.280	19.983	0.302	6.347	4.700	2.032
16.300	21.513	0.313	6.619	4.714	2.068
16.320	23.806	0.326	6.866	4.736	1.777
16.340	22.289	0.331	2.730	4.733	1.968
16.360	17.596	0.418	2.224	4.738	1.855
16.380	15.776	0.442	2.440	4.729	1.779
16.400	15.776	0.442	5.994	4.741	2.083

Geo.Fe.
INDAGINI GEOLOGICHE

Committente: Geogroup
Cantiere: Medolla (MO)
Data: 06/07/2021

ID Prova: SCPTU 1
Profondita falda: a mt 3.20 da p.c.
Preforo: -

Profondità massima raggiunta: 30.30 mt
Punta sismica: Tecnopenta CPLSD
RIF. 89/21GF

Prova eseguita da:
GEO.FE. S.n.c.
via dell'Artigianato ,3 44030 - Ro Ferrarese (FE)
tel 3383646278 - info@geofe.it - www.geofe.it
Responsabile dati: Dott.Geol.Zanella Fabio
Responsabile cantiere: Sig. Mangherini Alberto

Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz
metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec
16.420	14.875	0.377	7.146	4.742	1.875	18.060	26.132	0.229	7.351	5.319	1.889	19.700	142.789	1.359	0.588	5.500	1.868	21.340	129.923	1.083	1.008	5.412	1.915	22.980	152.512	1.124	1.817	5.832	1.862
16.440	14.657	0.366	6.338	4.743	2.056	18.080	28.104	0.201	7.837	5.322	1.801	19.720	148.243	1.300	0.533	5.507	2.035	21.360	129.224	1.089	0.953	5.412	1.651	23.000	148.822	1.131	1.567	5.840	1.773
16.460	14.657	0.356	6.353	4.743	1.992	18.100	30.260	0.180	8.523	5.329	2.004	19.740	153.984	1.175	1.117	5.501	1.901	21.380	128.156	1.091	0.904	5.426	1.884	23.020	148.732	1.125	1.724	5.822	1.790
16.480	14.799	0.360	6.225	4.751	1.875	18.120	32.596	0.198	9.237	5.325	1.868	19.760	155.280	1.070	1.310	5.495	1.866	21.400	127.860	1.060	0.898	5.432	1.718	23.040	150.076	1.102	2.015	5.816	1.856
16.500	14.940	0.373	5.977	4.763	1.918	18.140	37.483	0.246	10.134	5.339	2.075	19.780	150.263	1.013	0.877	5.521	2.003	21.420	120.637	1.093	1.291	5.523	1.937	23.060	151.236	1.117	2.294	5.805	1.641
16.520	15.045	0.363	5.209	4.770	1.820	18.160	49.178	0.294	3.894	5.336	1.845	19.800	138.196	1.043	0.028	5.520	1.762	21.440	126.231	1.037	0.821	5.542	1.810	23.080	151.446	1.113	1.158	5.800	1.924
16.540	15.223	0.373	5.193	4.781	1.824	18.180	56.321	0.420	-0.227	5.347	1.854	19.820	129.151	0.983	0.325	5.512	1.874	21.460	125.836	1.023	0.693	5.551	1.897	23.100	149.931	1.119	1.257	5.800	1.783
16.560	15.255	0.400	5.350	4.788	2.111	18.200	57.279	0.442	0.637	5.349	1.889	19.840	104.273	0.908	0.928	5.514	1.813	21.480	126.392	1.021	0.714	5.572	1.872	23.120	146.945	1.124	1.164	5.788	1.787
16.580	15.652	0.415	5.528	4.791	1.838	18.220	56.121	0.516	0.357	5.334	1.939	19.860	87.625	1.033	1.068	5.515	1.848	21.500	126.945	1.036	0.829	5.584	1.706	23.140	145.689	1.118	1.157	5.777	1.807
16.600	15.974	0.418	5.596	4.793	1.944	18.240	52.854	0.651	-0.127	5.327	1.874	19.880	83.734	1.230	0.921	5.509	1.848	21.520	127.863	1.043	0.919	5.581	1.848	23.160	144.727	1.116	1.200	5.778	1.739
16.620	15.933	0.430	5.563	4.799	2.031	18.260	52.056	0.871	0.118	5.338	1.805	19.900	97.488	1.475	0.287	5.500	1.671	21.540	127.933	1.038	0.943	5.591	1.709	23.180	147.440	1.137	1.563	5.782	1.938
16.640	16.220	0.438	5.638	4.805	1.782	18.280	54.353	1.032	0.491	5.340	2.013	19.920	118.629	1.511	0.753	5.487	1.809	21.560	125.724	1.063	0.741	5.606	1.709	23.200	150.521	1.131	2.016	5.787	1.938
16.660	16.618	0.449	5.713	4.818	1.928	18.300	58.219	1.182	1.149	5.349	1.840	19.940	140.681	1.431	1.711	5.473	1.955	21.580	123.401	1.033	0.675	5.616	1.700	23.220	153.087	1.149	2.415	5.778	1.909
16.680	17.161	0.449	5.731	4.826	1.892	18.320	62.161	1.248	1.943	5.349	1.939	19.960	149.733	1.406	1.711	5.458	1.834	21.600	121.811	1.041	0.661	5.616	1.864	23.240	152.716	1.166	2.431	5.788	1.710
16.700	17.920	0.443	5.871	4.818	1.892	18.340	76.140	0.969	5.354	5.366	1.776	19.980	152.539	1.381	1.383	5.446	1.984	21.620	120.553	1.037	0.609	5.627	1.844	23.260	152.900	1.161	2.462	5.791	1.755
16.720	18.171	0.448	5.746	4.831	1.943	18.360	90.258	1.044	3.992	5.364	1.909	20.000	150.204	1.193	1.100	5.437	1.855	21.640	121.126	1.041	0.724	5.638	1.937	23.280	146.912	1.128	1.796	5.791	1.815
16.740	18.712	0.465	5.681	4.835	2.063	18.380	103.784	1.050	4.595	5.405	1.858	20.020	143.292	1.053	0.541	5.412	1.886	21.660	122.069	1.032	0.810	5.644	1.722	23.300	142.871	1.136	1.497	5.785	1.794
16.760	18.306	0.491	4.934	4.843	2.047	18.400	113.630	1.013	0.821	5.410	1.789	20.040	134.839	1.007	0.349	5.412	1.804	21.680	121.805	1.030	0.860	5.645	1.669	23.320	140.740	1.135	1.314	5.795	1.808
16.780	18.520	0.518	5.011	4.851	1.894	18.420	113.336	1.009	0.229	5.414	1.987	20.060	122.831	1.025	0.349	5.399	1.907	21.700	119.909	1.031	0.776	5.652	1.882	23.340	138.608	1.142	1.135	5.791	1.670
16.800	18.950	0.537	5.073	4.870	1.992	18.440	111.643	0.897	0.284	5.428	1.913	20.080	116.446	1.075	0.473	5.400	1.817	21.720	120.408	1.023	0.873	5.648	1.659	23.360	136.293	1.128	0.994	5.797	1.761
16.820	19.128	0.571	5.103	4.875	1.890	18.460	109.507	0.839	0.419	5.440	1.997	20.100	117.775	1.108	0.241	5.403	1.903	21.740	121.129	1.024	0.979	5.662	2.281	23.380	134.271	1.102	0.924	5.803	1.677
16.840	19.048	0.590	4.909	4.880	1.793	18.480	110.455	0.933	0.834	5.435	1.794	20.120	122.293	1.163	0.139	5.386	1.928	21.760	119.977	1.017	0.915	5.663	1.740	23.400	132.469	1.085	0.746	5.802	1.916
16.860	18.898	0.590	4.814	4.878	1.996	18.500	111.439	0.974	1.247	5.449	1.752	20.140	123.759	1.216	0.159	5.387	1.804	21.780	120.112	1.009	0.980	5.671	1.893	23.420	132.469	1.085	0.747	5.892	1.635
16.880	18.855	0.584	4.743	4.893	1.996	18.520	112.527	0.957	1.892	5.445	1.991	20.160	121.332	1.291	0.143	5.373	2.021	21.800	121.535	1.006	1.179	5.679	1.746	23.440	129.402	1.051	0.729	5.902	1.806
16.900	18.777	0.568	4.714	4.905	1.804	18.540	112.035	0.921	2.292	5.463	1.755	20.180	120.446	1.243	0.183	5.383	1.694	21.820	122.553	1.014	1.310	5.687	1.792	23.460	127.685	1.028	0.526	5.913	1.797
16.920	18.480	0.569	4.609	4.899	2.073	18.560	111.172	0.920	2.717	5.460	2.003	20.200	120.296	1.015	0.125	5.377	1.915	21.840	122.102	1.023	1.246	5.689	1.749	23.480	125.598	1.008	0.378	5.912	1.831
16.940	17.963	0.582	4.450	4.909	1.802	18.580	108.364	0.936	2.797	5.477	1.844	20.220	122.274	0.965	0.155	5.367	1.767	21.860	121.103	1.034	1.142	5.699	1.776	23.500	124.022	0.994	0.276	5.914	1.776
16.960	17.737	0.591	4.389	4.913	2.163	18.600	104.966	0.963	2.746	5.474	1.997	20.240	124.697	0.905	0.216	5.369	1.956	21.880	120.429	1.039	1.072	5.704	1.776	23.520	123.290	0.989	0.241	5.925	1.647
16.980	18.352	0.587	4.726	4.920	1.861	18.620	106.191	0.984	3.437	5.476	1.852	20.260	125.575	0.866	0.250	5.354	1.773	21.900	121.705	1.039	1.248	5.715	1.776	23.540	121.120	0.994	0.163	5.935	1.748
17.000	18.962	0.579	5.138	4.923	1.857	18.640	108.550	1.073	1.647	5.484	1.736	20.280	121.383	0.960	0.202	5.364	1.995	21.920	124.194	1.026	1.473	5.720	1.776	23.560	120.305	0.992	0.114	5.930	1.701
17.020	19.501	0.573	5.319	4.930	2.050	18.660	110.033	1.179	0.819	5.481	1.884	20.300	119.768	0.933	0.162	5.355	1.874	21.940	123.857	1.045	1.461	5.734	1.934	23.580	121.104	0.992	0.232	5.941	1.844
17.040	19.861	0.566	5.248	4.939	1.768	18.680	113.423	1.223	0.916	5.479	1.896	20.320	114.844	0.885	0.244	5.344	1.874	21.960	123.703	1.074	1.421	5.739	1.763	23.600	123.261	0.983	0.375	5.931	1.700
17.060	20.003	0.560	5.039	4.935	2.053	18.700	116.845	1.244	1.690	5.494	1.779	20.340	114.407	0.950	0.155	5.331	1.874	21.980	125.899	1.052	1.687	5.759	1.846	23.620	125.712	0.966	0.474	5.940	1.856
17.080	19.489	0.584	4.913	4.950	1.864	18.720	118.989	1.087	2.097	5.502	2.133	20.360	118.819	1.103	0.134	5.320	1.726	22.000	128.721	1.024	1.945	5.758	1.877	23.640	128.052	0.952	0.544	5.940	1.719
17.100	19.560	0.587	4.871	4.955	1.970	18.740	123.992	0.971	2.892	5.504	1.820	20.380	124.257	1.233	0.384	5.297	1.737	22.020	130.848	1.031	0.981	5.767	1.850	23.660	131.934	0.938	0.836	5.942	1.762
17.120	19.520	0.591	5.033	4.953	1.980	18.760	132.857	0.914	3.512	5.505	2.065	20.400	124.257	1.233	0.277	5.426	1.839	22.040	132.717	1.043	0.942	5.772	1.789	23.680	133.872	0.928	0.956	5.939	1.642
17.140	20.099	0.594	5.264	4.959	2.205	18.780	142.231	0.931	3.255	5.511	1.816	20.420	137.091	1.233	0.277	5.440	1.697	22.060	133.814	1.092	1.023	5.780	1.687	23.700	135.039	0.928	1.021	5.931	1.711
17.160	20.568	0.598	5.472	4.969	1.829	18.800	155.827	0.957	1.956	5.515	1.815	20.440	147.276	1.217	0.959	5.436	2.037	22.080	134.725	1.082	0.869	5.798	1.891	23.720	135.472	0.919	1.082	5.942	1.718
17.180	21.474	0.578	5.552	4.970	1.777	18.820	163.738	1.012	1.177	5.505	1.830	20.460	153.929	1.245	0.773	5.419	1.814	22.100	134.865	1.057	0.961	5.798	1.782	23.740	134.104	0.915	0.929	5.945	1.816
17.200	21.943	0.573	5.657	4.981	1.990	18.840	166.169	1.118	0.566	5.505	1.944	20.480	159.401	1.195	0.612	5.412	1.876	22.120	134.196	1.065	0.837	5.805	1.966	23.760	130.425	0.948	0.677	5.940	1.923
17.220	22.592	0.579	5.799	4.984	1.954	18.860	163.351	1.243	0.411	5.499	1.944	20.500	162.406	1.074	0.466	5.393	1.730	22.140	132.460	1.092	0.750	5.804	1.680	23.780	127.737	0.962	0.477	5.942	1.892
17.240	23.208	0.609	5.908	5.007	1.783	18.880	161.452	1.246	0.472	5.513	1.944	20.520	163.902	1.027	0.378	5.393	1.889	22.160	130.610	1.103	0.722	5.810	1.994	23.800	126.299	0.977	0.410	5.947	1.748
17.260	24.151	0.639	6.165	5.005	2.042	18.900	159.071	1.062	0.875	5.506	1.944	20.540	162.826	1.037	0.367	5.389	1.727	22.180	130.706	1.103	0.863	5.814	1.740	23.820	125.521	0.993	0.450	5.948	1.759
17.280	25.131	0.694	6.556	5.022	1.921	18.920	159.084	1.129	1.724	5.494	2.025	20.560	161.267	1.084	0.266	5.379	2.007	22.200	130.511	1.102	0.941	5.794	1.822	23.840	123.787	0.996	0.312	5.947	1.663
17.300	25.383	0.763	6.610	5.037	1.886	18.940	160.195	1.193	2.756	5.504	1.798	20.580	158.833	1.136	0.246	5.364	1.712	22.220	130.830	1.104	1.021	5.784	1.756	23.860	122.531	0.989	0.246	5.958	1.813
17.320	25.708	0.807	6.644	5.043	2.008	18.960	161.199	1.216	3.694	5.494	1.978	20.600	156.289	1.228	0.222	5.366	1.919	22.240	132.874	1.112	1.298	5.778	1.807	23.880	121.384	0.932	0.216	5.962	1.741
17.340	25.449	0.848	6.540	5.058	1.760	18.980	161.911	1.211	3.018	5.494	1.899	20.620	155.803	1.329	0.083	5.348	1.863	22.260	136.499	1.103	1.046	5.770	1.826	23.900	120.643	0.899	0.171	5.963	1.741
17.360	25.043	0.862	6.332	5.061	1.966	19.000	162.652	1.174	2.332	5.497	1.867	20.640	157.703	1.371	0.125	5.345	1.873	22.280	139.685	1.104	1.354	5.757	1.732	23.920	118.834	0.901	0.127	5.965	1.741
17.380	24.163	0.850	5.789	5.067	1.892	19.020	160.343	1.175	2.234	5.497	1.977	20.660	164.305	1.403	0.767	5.341	1.739	22.300	143.089	1.107	1.815	5.740	1.887	23.940	117.689	0.882	0.091	5.969	1.668
17.400	23.692	0.859	6.934	5.088	1.858	19.040	156.315	1.194	2.210	5.485	1.759	20.680	177.623	1.441	2.232	5.345	1.812	22.320	147.893	1.129	1.547	5.739	1.713	23.960	117.127	0.895	0.310	5.964	1.891
17.420	24.024	0.867	6.800	5.109	2.017	19.060	152.021	1.172	2.202	5.483	2.029	20.700	191.227	1.360	2.232	5.339	1.841	22.340	155.303	1.145	1.968	5.715	1.895	23.980	116.615	0.864	0.219	5.973	1.719
17.440	23.589	0.899	6.503	5.107	1.921	19.080	152.070	1.161	2.822	5.491	1.818	20.720	194.841	1.340	2.464	5.338	1.715	22.360	162.568	1.161	2.815	5.697	1.633	24.000	115.147	0.867	0.108	5.967	1.858
17.460	21.984	0.933	6.035	5.130	2.028	19.100	155.128	1.151	3.293	5.486	1.797	20.740	195.401	1.252	1.642	5.345	2.190	22.380	165.502	1.159	3.259	5.697	1.828	24.020	112.320	0.885	0.108	5.974	1.795
17.480	20.921	0.885	5.534	5.144	1.848	19.120	159.769	1.190	3.243	5.479	2.035	20.760	192.068	1.188	1.457	5.337	2.190	22.400	165.502	1.159	3.259	5.714	1.761	24.040	110.190	0.886	0.123	5.961	1.774
17.500	20.512	0.836	5.308	5.141	1.780	19.140	162.905	1.202	2.886	5.475	1.911	20.780	188.226	1.204	1.488	5.336	2.190	22.420	162.168	1.193	2.144	5.723	1.795	24.060	109.086	0.916	0.547	5.969	1.697
17.520	19.884	0.825	5.026	5.157	1.904	19.160	161.590	1.231	2.127	5.469	1.972	20.800	181.302	1.277	1.143	5.339	1.830	22.440	164.603	1.158	1.857	5.719	1.813	24.080	111.404	0.886	0.549	5.983	1.843
17.540	19.074	0.806	4.822	5.170	1.916	19.180	160.462	1.226	1.850	5.466	1.807	20.820	170.191	1.343	0.635	5.327	1.830	22.460	162.588	1.191	1.601	5.719	1.846	24.100	110.712	0.867	0.314	5.977	1.687
17.560	18.773	0.784	4.940	5.165	1.909	19.200	163.670	1.190	1.271	5.477	2.208	20.840	159.409	1.408	0.166	5.331	1.784	22.480	161.489	1.241	1.562	5.713	1.794	24.120	108.879	0.873	0.138	5.972	1.830
17.580	18.873	0.714	4.925	5.168	1.962	19.220	165.443	1.240	0.283	5.474	1.612	20.860	150.133	1.447	0.103	5.334	1.719	22.500	162.699	1.276	1.820	5.720	1.731	24.140	108.219	0.862	0.057	5.988	1.740
17.600	19.159	0.673	4.971	5.169	2.022	19.240	166.449	1.295	0.531	5.456	1.847	20.880	144.606	1.463	0.053	5.335	1.893	22.520	167.911	1.290	2.474	5.714	1.775	24.160	108.771	0.854	0.052	5.980	1.731
17.620	19.735	0.650	4.959	5.174	1.748	19.260	165.473	1.275	0.606	5.466	1.766	20.900	141.682	1.450	0.039	5.339	1.893	22.540	174.918	1.324	2.533	5.725	1.770	24.180	113.473	0.875	0.314	5.978	1.905
17.640	19.799	0.636	4.960	5.177	2.004	19.280	167.948	1.230	0.874	5.456	2.033	20.920	138.097	1.418	0.028	5.325	1.893	22.560	183.170	1.374	1.763	5.730	1.845	24.200	116.520	0.883	0.408	5.978	1.637
17.660	19.573	0.625	4.889	5.185	1.758	19.300	171.819	1.212	1.129	5.448	1.894	20.940	134.842	1.356	0.034	5.338	1.937	22.580	187.123	1.372	1.454	5.731	1.679	24.220	116.153	0.868	0.206	5.990	1.772
17.680	19.493	0.599	4.789	5.182	1.948	19.320	177.745	1.217	1.218	5.438	1.913	20.960	132.725	1.275	0.055	5.342	1.874	22.600	190.743	1.295	1.437	5.742	1.904	24.240	113.362	0.851	0.124	5.992	1.671
17.700	19.014	0.603	4.789	5.194	1.948	19.340	179.283	1.243	1.230	5.439	1.818	20.980	130.057	1.177	0.070	5.332	1.854	22.620	192.487	1.261	1.480	5.755	1.707	24.260	109.027	0.838	0.307	5.980	1.671
17.720	19.045	0.603	4.866	5.213	1.948	19.360	183.238	1.268	0.174	5.437	1.733	21.000	127.906	1.121	0.083	5.325	1.864	22.640	191.770	1.293	1.503	5.764	1.874	24.280	103.518	0.846	0.508	5.989	1.729
17.740	18.929	0.600	4.784	5.209	1.979	19.380	180.056	1.239	0.145	5.426	1.944	21.020	125.829	1.082	0.064	5.339	1.802	22.660	189.254	1.319	1.538	5.772	1.754	24.300	97.641	0.858	0.667	5.983	1.808
17.760	18.778	0.594	4.822	5.212	1.909	19.400	171.564	1.267	0.953	5.497	1.860	21.040	122.835	1.085	0.028	5.332	1.926	22.680	185.049	1.344	1.388	5.783	1.687	24.320	94.924	0.875	0.723	6.000	1.657
17.780	18.810	0.569	4.808	5.220	1.917	19.420	172.637	1.168	0.414	5.493	1.842	21.060	121.465	1.060	0.049	5.335	1.719	22.700	179.337	1.398	1.211	5.793	1.793	24.340	93.051	0.906	0.726	5.995	1.895
17.800	18.769	0.539	4.957	5.227	1.958	19.440	168.052	1.286	0.271	5.487	2.033	21.080	120.712	1.033	0.095	5.339	1.990	22.720	175.904	1.415	1.229	5.810	1.659	24.360	91.506	0.941	0.747	5.989	1.640
17.820	19.893	0.499	5.261	5.229	1.767	19.460	165.004	1.357	0.218	5.497	1.779	21.100	121.285	1.026	0.178	5.341	1.758	22.740	170.303	1.456	1.108	5.816	2.083	24.380	95.217	0.999	0.644	5.996	1.741
17.840	20.289	0.464	4.580	5.242	1.960	19.480	164.707	1.408	0.383	5.500	2.012	21.120	122.783	0.998	0.316	5.342	1.954	22.760	165.323	1.460	0.959	5.819	1.765	24.400	93.967	1.035	0.748	5.996	1.743
17.860	20.578	0.456	4.879	5.250	1.839	19.500	166.797	1.401	0.792	5.503	1.691	21.140	126.262	0.975	0.522	5.352	1.780	22.780	162.289	1.417	0.999	5.830	1.832	24.420	93.967	0.906	0.541	6.032	1.837
17.880	20.175	0.447	4.701	5.265	1.839	19.520	168.073	1.400	1.111	5.487	1.934	21.160	129.743	0.965	0.754	5.348	2.002	22.800	158.622	1.371	0.919	5.837	1.792	24.440	90.481	0.906	0.121	6.046	1.651
17.900	19.920	0.428	4.880	5.265	1.839	19.540	164.970	1.360	1.025	5.501	1.846	21.180	131.279	0.952	0.873	5.358	1.788	22.820	155.840	1.352	0.892	5.827	1.792	24.460	90.124	0.850	0.178	6.042	1.651
17.920	19.993	0.397	4.995	5.273	1.909	19.560	161.569	1.390	0.929	5.497	1.813	21.200	131.788	0.959	0.957	5.364	1.842	22.840	154.301	1.275	1.018	5.837	1.792	24.480	93.473	0.855	0.127	6.052	1.730
17.940	19.448	0.387	4.864	5.286	1.911	19.580	155.335	1.332	0.525	5.490	1.979	21.220	132.299	0.974	1.035	5.374	1.792	22.860	155.628	1.254	1.379	5.846	1.766	24.500	98.287	0.859	0.134	6.044	1.811
17.960	19.268	0.384	5.076	5.277	1.954	19.600	146.972	1.353	0.166	5.494	1.835	21.240	132.850	0.992	1.119	5.378	1.823	22.880	157.768	1.236	1.836	5.839	1.798	24.520	102.841	0.859	0.101	6.050	1.628
17.980	20.035	0.347	5.427	5.295	2.001	19.620	140.490	1.368	0.215	5.503	1.932	21.260	132.082	1.037	1.097	5.395	1.834	22.900	157.920	1.205	2.193	5.841	1.798	24.540	95.787	0.790	0.672	6.049	1.740
18.000	20.803	0.315	5.840	5.301	2.003	19.640	135.435	1.360	0.199	5.497	1.781	21.280	131.790	1.051	1.104	5.399	1.823	22.920	156.798	1.195	2.177	5.847	1.798	24.560	85.173	0.804	0.929	6.043	1.662
18.020	22.335	0.277	6.422	5.301	1.815	19.660	139.015	1.371	0.398	5.507	1.777	21.300	129.847	1.068	0.959	5.392	1.805	22.940	156.187	1.163	2.063	5.839	1.808	24.580	70.589	0.755	1.129	6.049	1.751
18.040	23.904	0.252	6.871	5.309	1.969	19.680	141.232	1.359	0.588	5.511	1.893	21.320	130.032	1.080	0.974	5.407	1.835	22.960	155.431	1.123	2.043	5.843	1.789	24.600	58.489	0.604	1.223	6.039	1.753

Geo.Fe.
INDAGINI GEOLOGICHE

Committente: Geogroup
Cantiere: Medolla (MO)
Data: 06/07/2021

ID Prova: SCPTU 1
Profondita falda: a mt 3.20 da p.c.
Preforo: -

Profondità massima raggiunta: 30.30 mt
Punta sismica: Tecnopenta CPLSD
RIF. 89/21GF

Prova eseguita da:
GEO.FE. S.n.c.
via dell'Artigianato ,3 44030 - Ro Ferrarese (FE)
tel 3383646278 - info@geofe.it - www.geofe.it
Responsabile dati: Dott.Geol.Zanella Fabio
Responsabile cantiere: Sig. Mangherini Alberto

Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz
metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec
24.620	54.140	0.671	1.219	6.048	1.808	26.260	0.000	0.000	0.000	0.000	0.000	27.900	0.000	0.000	0.000	0.000	0.000	29.540	0.000	0.000	0.000	0.000	0.000						
24.640	53.334	0.717	1.130	6.039	1.703	26.280	0.000	0.000	0.000	0.000	0.000	27.920	0.000	0.000	0.000	0.000	0.000	29.560	0.000	0.000	0.000	0.000	0.000						
24.660	55.550	0.784	1.024	6.057	1.745	26.300	0.000	0.000	0.000	0.000	0.000	27.940	0.000	0.000	0.000	0.000	0.000	29.580	0.000	0.000	0.000	0.000	0.000						
24.680	67.750	0.754	0.746	6.054	1.650	26.320	0.000	0.000	0.000	0.000	0.000	27.960	0.000	0.000	0.000	0.000	0.000	29.600	0.000	0.000	0.000	0.000	0.000						
24.700	99.530	0.721	0.711	6.049	1.759	26.340	0.000	0.000	0.000	0.000	0.000	27.980	0.000	0.000	0.000	0.000	0.000	29.620	0.000	0.000	0.000	0.000	0.000						
24.720	124.465	0.656	1.449	6.041	1.648	26.360	0.000	0.000	0.000	0.000	0.000	28.000	0.000	0.000	0.000	0.000	0.000	29.640	0.000	0.000	0.000	0.000	0.000						
24.740	138.860	0.647	1.131	6.048	1.803	26.380	0.000	0.000	0.000	0.000	0.000	28.020	0.000	0.000	0.000	0.000	0.000	29.660	0.000	0.000	0.000	0.000	0.000						
24.760	148.448	0.659	1.131	6.058	1.870	26.400	0.000	0.000	0.000	0.000	0.000	28.040	0.000	0.000	0.000	0.000	0.000	29.680	0.000	0.000	0.000	0.000	0.000						
24.780	148.266	0.525	1.080	6.040	1.777	26.420	0.000	0.000	0.000	0.000	0.000	28.060	0.000	0.000	0.000	0.000	0.000	29.700	0.000	0.000	0.000	0.000	0.000						
24.800	146.762	0.604	1.066	6.055	1.746	26.440	0.000	0.000	0.000	0.000	0.000	28.080	0.000	0.000	0.000	0.000	0.000	29.720	0.000	0.000	0.000	0.000	0.000						
24.820	154.439	0.689	1.960	6.060	1.782	26.460	0.000	0.000	0.000	0.000	0.000	28.100	0.000	0.000	0.000	0.000	0.000	29.740	0.000	0.000	0.000	0.000	0.000						
24.840	164.798	0.746	3.370	6.057	1.687	26.480	0.000	0.000	0.000	0.000	0.000	28.120	0.000	0.000	0.000	0.000	0.000	29.760	0.000	0.000	0.000	0.000	0.000						
24.860	174.535	0.860	2.861	6.060	1.638	26.500	0.000	0.000	0.000	0.000	0.000	28.140	0.000	0.000	0.000	0.000	0.000	29.780	0.000	0.000	0.000	0.000	0.000						
24.880	181.737	0.949	1.871	6.042	1.728	26.520	0.000	0.000	0.000	0.000	0.000	28.160	0.000	0.000	0.000	0.000	0.000	29.800	0.000	0.000	0.000	0.000	0.000						
24.900	188.827	0.949	1.998	6.063	1.808	26.540	0.000	0.000	0.000	0.000	0.000	28.180	0.000	0.000	0.000	0.000	0.000	29.820	0.000	0.000	0.000	0.000	0.000						
24.920	192.313	0.839	2.404	6.057	1.808	26.560	0.000	0.000	0.000	0.000	0.000	28.200	0.000	0.000	0.000	0.000	0.000	29.840	0.000	0.000	0.000	0.000	0.000						
24.940	193.300	0.749	2.899	6.063	1.818	26.580	0.000	0.000	0.000	0.000	0.000	28.220	0.000	0.000	0.000	0.000	0.000	29.860	0.000	0.000	0.000	0.000	0.000						
24.960	193.990	0.706	3.212	6.051	1.729	26.600	0.000	0.000	0.000	0.000	0.000	28.240	0.000	0.000	0.000	0.000	0.000	29.880	0.000	0.000	0.000	0.000	0.000						
24.980	196.660	0.705	3.829	6.068	1.754	26.620	0.000	0.000	0.000	0.000	0.000	28.260	0.000	0.000	0.000	0.000	0.000	29.900	0.000	0.000	0.000	0.000	0.000						
25.000	201.640	0.637	4.174	6.055	1.873	26.640	0.000	0.000	0.000	0.000	0.000	28.280	0.000	0.000	0.000	0.000	0.000	29.920	0.000	0.000	0.000	0.000	0.000						
25.020	206.845	0.618	4.097	6.062	1.748	26.660	0.000	0.000	0.000	0.000	0.000	28.300	0.000	0.000	0.000	0.000	0.000	29.940	0.000	0.000	0.000	0.000	0.000						
25.040	212.417	0.663	4.027	6.064	1.659	26.680	0.000	0.000	0.000	0.000	0.000	28.320	0.000	0.000	0.000	0.000	0.000	29.960	0.000	0.000	0.000	0.000	0.000						
25.060	218.136	0.724	4.021	6.060	1.757	26.700	0.000	0.000	0.000	0.000	0.000	28.340	0.000	0.000	0.000	0.000	0.000	29.980	0.000	0.000	0.000	0.000	0.000						
25.080	221.002	0.754	3.925	6.059	1.656	26.720	0.000	0.000	0.000	0.000	0.000	28.360	0.000	0.000	0.000	0.000	0.000	30.000	0.000	0.000	0.000	0.000	0.000						
25.100	222.982	0.758	3.888	6.068	1.896	26.740	0.000	0.000	0.000	0.000	0.000	28.380	0.000	0.000	0.000	0.000	0.000	30.020	0.000	0.000	0.000	0.000	0.000						
25.120	222.233	0.749	3.513	6.073	1.896	26.760	0.000	0.000	0.000	0.000	0.000	28.400	0.000	0.000	0.000	0.000	0.000	30.040	0.000	0.000	0.000	0.000	0.000						
25.140	222.482	0.755	3.657	6.074	1.896	26.780	0.000	0.000	0.000	0.000	0.000	28.420	0.000	0.000	0.000	0.000	0.000	30.060	0.000	0.000	0.000	0.000	0.000						
25.160	226.085	0.760	3.890	6.074	1.768	26.800	0.000	0.000	0.000	0.000	0.000	28.440	0.000	0.000	0.000	0.000	0.000	30.080	0.000	0.000	0.000	0.000	0.000						
25.180	233.010	0.757	4.082	6.071	1.969	26.820	0.000	0.000	0.000	0.000	0.000	28.460	0.000	0.000	0.000	0.000	0.000	30.100	0.000	0.000	0.000	0.000	0.000						
25.200	239.084	0.770	4.033	6.071	1.558	26.840	0.000	0.000	0.000	0.000	0.000	28.480	0.000	0.000	0.000	0.000	0.000	30.120	0.000	0.000	0.000	0.000	0.000						
25.220	237.517	0.786	3.590	6.078	1.865	26.860	0.000	0.000	0.000	0.000	0.000	28.500	0.000	0.000	0.000	0.000	0.000	30.140	0.000	0.000	0.000	0.000	0.000						
25.240	231.598	0.800	3.122	6.069	1.677	26.880	0.000	0.000	0.000	0.000	0.000	28.520	0.000	0.000	0.000	0.000	0.000	30.160	0.000	0.000	0.000	0.000	0.000						
25.260	223.936	0.813	3.065	6.056	1.808	26.900	0.000	0.000	0.000	0.000	0.000	28.540	0.000	0.000	0.000	0.000	0.000	30.180	0.000	0.000	0.000	0.000	0.000						
25.280	224.134	0.809	3.609	6.056	1.657	26.920	0.000	0.000	0.000	0.000	0.000	28.560	0.000	0.000	0.000	0.000	0.000	30.200	0.000	0.000	0.000	0.000	0.000						
25.300	232.922	0.783	4.201	6.041	1.864	26.940	0.000	0.000	0.000	0.000	0.000	28.580	0.000	0.000	0.000	0.000	0.000	30.220	0.000	0.000	0.000	0.000	0.000						
25.320	246.324	0.778	4.534	6.025	1.768	26.960	0.000	0.000	0.000	0.000	0.000	28.600	0.000	0.000	0.000	0.000	0.000	30.240	0.000	0.000	0.000	0.000	0.000						
25.340	258.106	0.806	4.495	6.020	1.969	26.980	0.000	0.000	0.000	0.000	0.000	28.620	0.000	0.000	0.000	0.000	0.000	30.260	0.000	0.000	0.000	0.000	0.000						
25.360	270.547	0.852	4.436	6.013	1.558	27.000	0.000	0.000	0.000	0.000	0.000	28.640	0.000	0.000	0.000	0.000	0.000	30.280	0.000	0.000	0.000	0.000	0.000						
25.380	281.002	0.845	4.269	5.992	1.865	27.020	0.000	0.000	0.000	0.000	0.000	28.660	0.000	0.000	0.000	0.000	0.000	30.300	0.000	0.000	0.000	0.000	0.000						
25.400	289.280	0.842	4.279	5.969	1.677	27.040	0.000	0.000	0.000	0.000	0.000	28.680	0.000	0.000	0.000	0.000	0.000												
25.420	298.152	0.840	4.344	5.969	1.808	27.060	0.000	0.000	0.000	0.000	0.000	28.700	0.000	0.000	0.000	0.000	0.000												
25.440	212.699	0.385	1.083	5.962	1.657	27.080	0.000	0.000	0.000	0.000	0.000	28.720	0.000	0.000	0.000	0.000	0.000												
25.460	301.342	0.892	1.995	5.956	1.808	27.100	0.000	0.000	0.000	0.000	0.000	28.740	0.000	0.000	0.000	0.000	0.000												
25.480	311.274	0.877	2.624	5.945	1.657	27.120	0.000	0.000	0.000	0.000	0.000	28.760	0.000	0.000	0.000	0.000	0.000												
25.500	0.000	0.000	0.000	0.000	0.000	27.140	0.000	0.000	0.000	0.000	0.000	28.780	0.000	0.000	0.000	0.000	0.000												
25.520	0.000	0.000	0.000	0.000	0.000	27.160	0.000	0.000	0.000	0.000	0.000	28.800	0.000	0.000	0.000	0.000	0.000												
25.540	0.000	0.000	0.000	0.000	0.000	27.180	0.000	0.000	0.000	0.000	0.000	28.820	0.000	0.000	0.000	0.000	0.000												
25.560	0.000	0.000	0.000	0.000	0.000	27.200	0.000	0.000	0.000	0.000	0.000	28.840	0.000	0.000	0.000	0.000	0.000												
25.580	0.000	0.000	0.000	0.000	0.000	27.220	0.000	0.000	0.000	0.000	0.000	28.860	0.000	0.000	0.000	0.000	0.000												
25.600	0.000	0.000	0.000	0.000	0.000	27.240	0.000	0.000	0.000	0.000	0.000	28.880	0.000	0.000	0.000	0.000	0.000												
25.620	0.000	0.000	0.000	0.000	0.000	27.260	0.000	0.000	0.000	0.000	0.000	28.900	0.000	0.000	0.000	0.000	0.000												
25.640	0.000	0.000	0.000	0.000	0.000	27.280	0.000	0.000	0.000	0.000	0.000	28.920	0.000	0.000	0.000	0.000	0.000												
25.660	0.000	0.000	0.000	0.000	0.000	27.300	0.000	0.000	0.000	0.000	0.000	28.940	0.000	0.000	0.000	0.000	0.000												
25.680	0.000	0.000	0.000	0.000	0.000	27.320	0.000	0.000	0.000	0.000	0.000	28.960	0.000	0.000	0.000	0.000	0.000												
25.700	0.000	0.000	0.000	0.000	0.000	27.340	0.000	0.000	0.000	0.000	0.000	28.980	0.000	0.000	0.000	0.000	0.000												
25.720	0.000	0.000	0.000	0.000	0.000	27.360	0.000	0.000	0.000	0.000	0.000	29.000	0.000	0.000	0.000	0.000	0.000												
25.740	0.000	0.000	0.000	0.000	0.000	27.380	0.000	0.000	0.000	0.000	0.000	29.020	0.000	0.000	0.000	0.000	0.000												
25.760	0.000	0.000	0.000	0.000	0.000	27.400	0.000	0.000	0.000	0.000	0.000	29.040	0.000	0.000	0.000	0.000	0.000												
25.780	0.000	0.000	0.000	0.000	0.000	27.420	0.000	0.000	0.000	0.000	0.000	29.060	0.000	0.000	0.000	0.000	0.000												
25.800	0.000	0.000	0.000	0.000	0.000	27.440	0.000	0.000	0.000	0.000	0.000	29.080	0.000	0.000	0.000	0.000	0.000												
25.820	0.000	0.000	0.000	0.000	0.000	27.460	0.000	0.000	0.000	0.000	0.000	29.100	0.000	0.000	0.000	0.000	0.000												
25.840	0.000	0.000	0.000	0.000	0.000	27.480	0.000	0.000	0.000	0.000	0.000	29.120	0.000	0.000	0.000	0.000	0.000												
25.860	0.000	0.000	0.000	0.000	0.000	27.500	0.000	0.000	0.000	0.000	0.000	29.140	0.000	0.000	0.000	0.000	0.000												
25.880	0.000	0.000	0.000	0.000	0.000	27.520	0.000	0.000	0.000	0.000	0.000	29.160	0.000	0.000	0.000	0.000	0.000												
25.900	0.000	0.000	0.000	0.000	0.000	27.540	0.000	0.000	0.000	0.000	0.000	29.180	0.000	0.000	0.000	0.000	0.000												
25.920	0.000	0.000	0.000	0.000	0.000	27.560	0.000	0.000	0.000	0.000	0.000	29.200	0.000	0.000	0.000	0.000	0.000												
25.940	0.000	0.000	0.000	0.000	0.000	27.580	0.000	0.000	0.000	0.000	0.000	29.220	0.000	0.000	0.000	0.000	0.000												
25.960	0.000	0.000	0.000	0.000	0.000	27.600	0.000	0.000	0.000	0.000	0.000	29.240	0.000	0.000	0.000	0.000	0.000												
25.980	0.000	0.000	0.000	0.000	0.000	27.620	0.000	0.000	0.000	0.000	0.000	29.260	0.000	0.000	0.000	0.000	0.000												
26.000	0.000	0.000	0.000	0.000	0.000	27.640	0.000	0.000	0.000	0.000	0.000	29.280	0.000	0.000	0.000	0.000	0.000												
26.020	0.000	0.000	0.000	0.000	0.000	27.660	0.000	0.000	0.000	0.000	0.000	29.300	0.000	0.000	0.000	0.000	0.000												
26.040	0.000	0.000	0.000	0.000	0.000	27.680	0.000	0.000	0.000	0.000	0.000	29.320	0.000	0.000	0.000	0.000	0.000												
26.060	0.000	0.000	0.000	0.000	0.000	27.700	0.000	0.000	0.000	0.000	0.000	29.340	0.000	0.000	0.000	0.000	0.000												
26.080	0.000	0.000	0.000	0.000	0.000	27.720	0.000	0.000	0.000	0.000	0.000	29.360	0.000	0.000	0.000	0.000	0.000												
26.100	0.000	0.000	0.000	0.000	0.000	27.740	0.000	0.000	0.000	0.000	0.000	29.380	0.000	0.000	0.000	0.000	0.000												
26.120	0.000	0.000	0.000	0.000	0.000	27.760	0.000	0.000	0.000	0.000	0.000	29.400	0.000	0.000	0.000	0.000	0.000												
26.140	0.000	0.000	0.000	0.000	0.000	27.780	0.000	0.000	0.000	0.000	0.000	29.420	0.000	0.000	0.000	0.000	0.000												
26.160	0.000	0.000	0.000	0.000	0.000	27.800	0.000	0.000	0.000	0.000	0.000	29.440	0.000	0.000	0.000	0.000	0.000												
26.180	0.000	0.000	0.000	0.000	0.000	27.820	0.000	0.000	0.000	0.000	0.000	29.460	0.000	0.000	0.000	0.000	0.000												
26.200	0.000	0.000	0.000	0.000	0.000	27.840	0.000	0.000	0.000	0.000	0.000	29.480	0.000	0.000	0.000	0.000	0.000												
26.220	0.000	0.000	0.000	0.000	0.000	27.860	0.000	0.000	0.000	0.000	0.000	29.500	0.000	0.000	0.000	0.000	0.000												
26.240	0.000	0.000	0.000	0.000	0.000	27.880	0.000	0.000	0.000	0.000	0.000	29.520	0.000	0.000	0.000	0.000	0.000												

Geo.Fe.
INDAGINI GEOLOGICHE

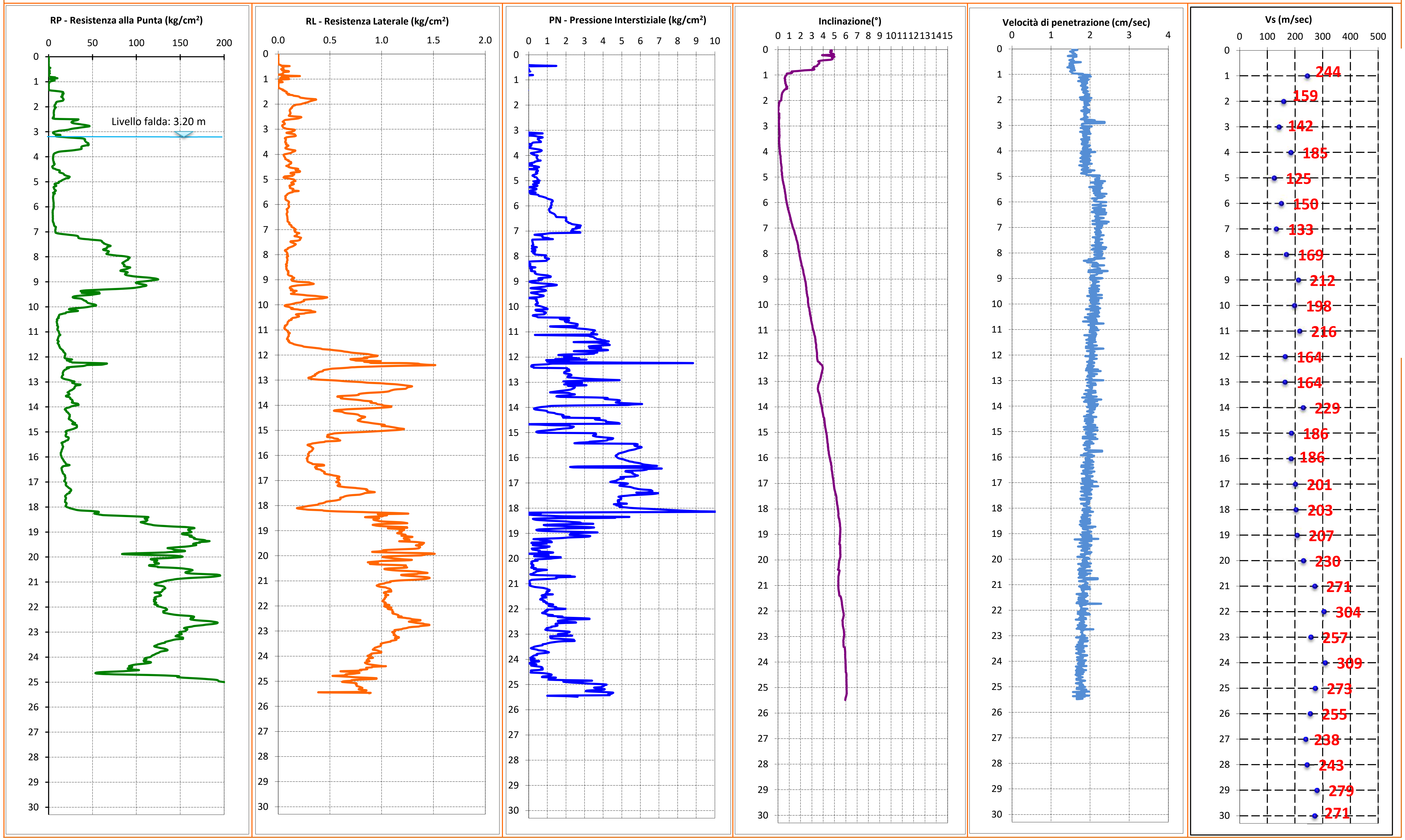
Committente: Geogroup
Cantiere: Medolla (MO)
Data: 06/07/2021

ID Prova: SCPTU 1
Profondita falda: a mt 3.20 da p.c.
Preforo: -

Profondità massima raggiunta: 30.30 mt
Punta sismica: Tecnopenta CPLSD
RIF. 89/21GF

Prova eseguita da:
GEO.FE. S.n.c.
via dell'Artigianato ,3 44030 - Ro Ferrarese (FE)
tel 3383646278 - info@geofe.it - www.geofe.it
Responsabile dati: Dott.Geol.Zanella Fabio
Responsabile cantiere: Sig. Mangherini Alberto

GRAFICI PROVA SCPTU 1



Geo.Fe.
INDAGINI GEOLOGICHE

Committente: Geogroup
Cantiere: Medolla (MO)
Data: 06/07/2021

ID Prova: SCPTU 1
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Responsabile dati: Dott.Geol.Zanella Fabio
Responsabile cantiere: Sig. Mangherini Alberto

Vs 30 e ANAGRAFICA PROVA SCPTU 1

prof. (p)	prof.(cs)	Dist (L)	Tempo (t)	VsP	L2-L1	t2-t1	VsL			**Vs30**
m	m	m	sec	m/sec	m	sec	m/sec			
0.00	0.00	0.00	0.0000							
1.30	1.00	1.8028	0.0074	244	1.80	0.0074	244	1.00	0.00410	
2.30	2.00	2.5000	0.0118	212	0.70	0.0044	159	1.00	0.00630	
3.30	3.00	3.3541	0.0178	189	0.85	0.0060	142	1.00	0.00704	
4.30	4.00	4.2720	0.0228	188	0.92	0.0050	185	1.00	0.00542	
5.30	5.00	5.2202	0.0303	172	0.95	0.0076	125	1.00	0.00799	
6.30	6.00	6.1847	0.0368	168	0.96	0.0064	150	1.00	0.00665	
7.30	7.00	7.1589	0.0441	162	0.97	0.0073	133	1.00	0.00752	
8.30	8.00	8.1394	0.0499	163	0.98	0.0058	169	1.00	0.00593	
9.30	9.00	9.1241	0.0545	167	0.98	0.0046	212	1.00	0.00472	
10.30	10.00	10.1119	0.0595	170	0.99	0.0050	198	1.00	0.00506	
11.30	11.00	11.1018	0.0641	173	0.99	0.0046	216	1.00	0.00462	
12.30	12.00	12.0934	0.0701	172	0.99	0.0060	164	1.00	0.00609	
13.30	13.00	13.0863	0.0762	172	0.99	0.0061	164	1.00	0.00611	
14.30	14.00	14.0801	0.0806	175	0.99	0.0043	229	1.00	0.00437	
15.30	15.00	15.0748	0.0859	176	0.99	0.0053	186	1.00	0.00536	
16.30	16.00	16.0702	0.0913	176	1.00	0.0054	186	1.00	0.00539	
17.30	17.00	17.0660	0.0962	177	1.00	0.0050	201	1.00	0.00498	
18.30	18.00	18.0624	0.1011	179	1.00	0.0049	203	1.00	0.00492	
19.30	19.00	19.0591	0.1059	180	1.00	0.0048	207	1.00	0.00482	
20.30	20.00	20.0562	0.1103	182	1.00	0.0043	230	1.00	0.00435	
21.30	21.00	21.0535	0.1139	185	1.00	0.0037	271	1.00	0.00370	
22.30	22.00	22.0511	0.1172	188	1.00	0.0033	304	1.00	0.00329	
23.30	23.00	23.0489	0.1211	190	1.00	0.0039	257	1.00	0.00390	
24.30	24.00	24.0468	0.1243	193	1.00	0.0032	309	1.00	0.00324	
25.30	25.00	25.0450	0.1280	196	1.00	0.0037	273	1.00	0.00367	
26.30	26.00	26.0432	0.1319	197	1.00	0.0039	255	1.00	0.00393	
27.30	27.00	27.0416	0.1361	199	1.00	0.0042	238	1.00	0.00420	
28.30	28.00	28.0401	0.1402	200	1.00	0.0041	243	1.00	0.00411	
29.30	29.00	29.0388	0.1438	202	1.00	0.0036	279	1.00	0.00358	
30.30	30.00	30.0375	0.1475	204	1.00	0.0037	271	1.00	0.00369	
								30.00	0.14902	**201.3**

prof.(cs): profondità cono sismico
prof. (p): profondità piezocono
prof. (p): profondità piezocono
D1: distanza fra la sorgente del rumore S - geofono triassiale (L)
Tempo (t): tempo d'arrivo dell'onda a S
VsP: velocità del suono nel percorso fra S ed L - Vs puntuale alla profondità
VsL: Vs per ogni livello (L2 - L1)/(t2 - t1)
Nel calcolo delle Vs30 è da intendersi un possibile valore di indeterminatezza del +/- 20% del valore ricavato

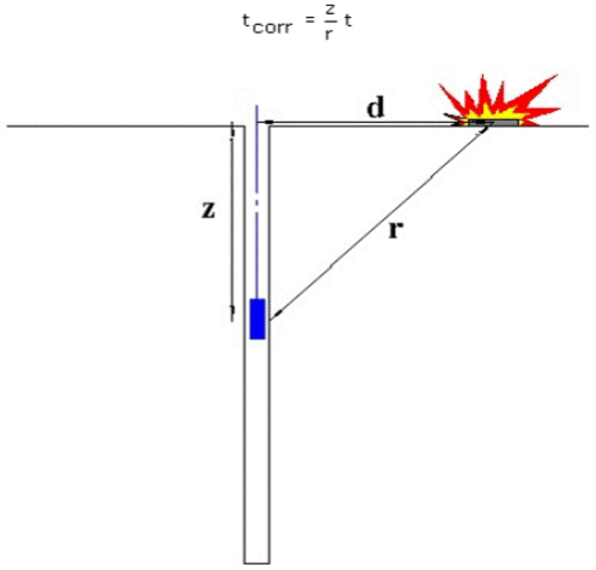


Figura 1 – Schema di down hole con metodo diretto

Geo.Fe.
INDAGINI GEOLOGICHE

Committente: Geogroup
Cantiere: Medolla (MO)
Data: 05/07/2021

ID Prova: SCPTU 7
Profondita falda: a mt 2.10 da p.c.
Preforo: -

Profondità massima raggiunta: 30.30 mt
Punta sismica: Tecnopenta CPLSD
RIF. 89/21GF

Prova eseguita da:
GEO.FE. S.n.c.
via dell'Artigianato ,3 44030 - Ro Ferrarese (FE)
tel 3383646278 - info@geofe.it - www.geofe.it
Responsabile dati: Dott.Geol.Zanella Fabio
Responsabile cantiere: Sig. Mangherini Alberto

Prof.	RP	RL	PN	Incl.	V.avanz	Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz
metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec
0.020	0.076	0.002	-16.730	0.248	1.542	1.660	16.253	0.308	-0.258	0.978	1.944	3.300	10.808	0.159	0.103	1.606	1.810	4.940	7.669	0.118	0.605	2.609	1.907	6.580	9.511	0.252	1.470	3.874	2.162
0.040	1.824	0.000	-12.336	0.108	1.674	1.680	17.512	0.302	-0.293	1.004	1.831	3.320	10.483	0.176	0.022	1.611	2.007	4.960	7.599	0.113	0.572	2.610	2.246	6.600	9.362	0.252	1.431	3.877	2.153
0.060	13.292	0.011	23.236	0.108	1.590	1.700	17.746	0.314	-0.341	1.027	1.822	3.340	8.956	0.194	0.132	1.625	1.935	4.980	7.348	0.116	0.544	2.642	2.054	6.620	9.250	0.259	1.367	3.905	2.344
0.080	32.733	0.032	53.569	0.077	1.573	1.720	15.070	0.333	-0.416	1.046	1.840	3.360	7.685	0.184	0.166	1.632	1.833	5.000	7.277	0.119	0.538	2.655	2.176	6.640	9.321	0.272	1.375	3.941	2.293
0.100	43.327	0.057	52.639	0.140	1.485	1.740	12.759	0.343	-0.455	1.053	1.871	3.380	6.962	0.177	0.128	1.635	1.820	5.020	9.283	0.170	0.485	2.666	2.176	6.660	9.463	0.288	1.342	3.947	2.141
0.120	51.957	0.132	51.963	0.216	1.568	1.760	10.267	0.340	-0.466	1.067	1.947	3.400	6.857	0.157	0.106	1.644	1.898	5.040	7.682	0.139	0.330	2.682	2.235	6.680	9.461	0.297	1.294	3.955	2.147
0.140	55.642	0.197	48.246	0.194	1.547	1.780	9.303	0.311	-0.349	1.080	1.963	3.420	6.605	0.153	0.118	1.668	1.825	5.060	6.772	0.125	0.275	2.695	2.181	6.700	9.167	0.295	1.238	3.976	2.231
0.160	55.172	0.321	32.530	0.227	1.542	1.800	10.816	0.222	-0.216	1.090	1.974	3.440	6.429	0.140	0.084	1.676	1.836	5.080	6.992	0.120	0.327	2.712	2.234	6.720	8.727	0.313	1.149	3.987	2.177
0.180	50.108	0.444	-1.690	0.227	1.613	1.820	14.328	0.258	-0.037	1.095	1.868	3.460	6.834	0.113	0.016	1.686	1.977	5.100	7.757	0.118	0.432	2.721	2.126	6.740	8.325	0.318	1.117	4.002	2.063
0.200	52.550	0.433	2.028	0.182	1.593	1.840	17.110	0.263	-0.068	1.104	1.875	3.480	6.876	0.086	0.041	1.701	1.856	5.120	7.940	0.116	0.491	2.730	2.220	6.760	8.067	0.309	1.104	4.018	2.386
0.220	51.574	0.506	-1.183	0.169	1.622	1.860	19.242	0.283	-0.120	1.129	1.961	3.500	6.955	0.079	0.069	1.702	1.924	5.140	8.051	0.109	0.510	2.747	2.193	6.780	8.173	0.304	1.090	4.032	2.474
0.240	51.216	0.609	-2.788	0.188	1.648	1.880	19.985	0.274	-0.153	1.147	1.849	3.520	7.180	0.071	0.147	1.707	1.769	5.160	7.978	0.107	0.500	2.755	2.140	6.800	8.096	0.311	1.083	4.055	2.206
0.260	51.076	0.680	-7.013	0.209	1.496	1.900	20.437	0.247	-0.188	1.163	1.743	3.540	7.402	0.067	0.247	1.728	1.981	5.180	6.996	0.097	0.399	2.764	2.377	6.820	8.311	0.307	1.126	4.066	2.163
0.280	49.842	0.730	-13.434	0.235	1.434	1.920	19.619	0.234	-0.250	1.176	2.031	3.560	7.626	0.082	0.247	1.746	1.796	5.200	6.633	0.080	0.375	2.776	2.246	6.840	8.853	0.285	1.200	4.086	2.424
0.300	49.409	0.766	-16.730	0.234	1.650	1.940	16.980	0.246	-0.322	1.187	1.907	3.580	8.906	0.085	0.390	1.756	1.802	5.220	6.925	0.083	0.464	2.789	2.126	6.860	9.141	0.271	1.225	4.097	2.069
0.320	48.907	0.844	-17.913	0.256	1.565	1.960	14.052	0.251	-0.406	1.214	1.759	3.600	10.113	0.089	0.472	1.772	1.949	5.240	6.890	0.094	0.497	2.796	2.022	6.880	9.211	0.259	1.242	4.114	2.138
0.340	48.116	0.976	-19.433	0.281	1.565	1.980	12.141	0.270	-0.459	1.237	1.759	3.620	10.773	0.106	0.447	1.789	1.807	5.260	6.891	0.104	0.486	2.822	2.317	6.900	9.571	0.247	1.260	4.125	2.305
0.360	45.726	1.090	-22.475	0.273	1.565	2.000	10.557	0.276	-0.460	1.245	1.802	3.640	11.180	0.132	0.372	1.795	1.891	5.280	7.220	0.102	0.515	2.836	2.144	6.920	9.860	0.247	1.312	4.140	2.305
0.380	43.557	1.135	-24.250	0.285	1.554	2.020	9.729	0.238	0.980	1.193	1.996	3.660	11.914	0.168	0.319	1.813	1.932	5.300	6.929	0.091	0.535	2.850	2.123	6.940	9.855	0.257	1.301	4.164	2.305
0.400	42.369	1.177	-26.024	0.286	1.557	2.040	11.738	0.222	0.504	1.189	1.982	3.680	12.355	0.207	0.231	1.827	1.940	5.320	8.505	0.163	0.618	2.870	2.277	6.960	9.926	0.270	1.273	4.162	2.170
0.420	42.597	1.172	-26.953	0.311	1.524	2.060	12.617	0.266	0.550	1.205	1.946	3.700	12.980	0.250	0.139	1.851	1.789	5.340	7.595	0.150	0.493	2.870	2.282	6.980	10.360	0.278	1.268	4.187	2.246
0.440	42.496	1.120	-26.108	0.330	1.470	2.080	13.900	0.313	0.658	1.205	1.851	3.720	13.205	0.254	0.072	1.879	1.789	5.360	7.231	0.154	0.429	2.880	2.282	7.000	10.940	0.275	1.259	4.199	2.274
0.460	42.064	1.062	-25.517	0.341	1.583	2.100	14.379	0.319	0.294	1.216	1.873	3.740	12.885	0.235	0.040	1.890	1.789	5.380	6.976	0.138	0.435	2.891	2.207	7.020	11.418	0.297	1.394	4.223	2.286
0.480	40.172	0.959	-27.038	0.325	1.547	2.120	14.056	0.334	0.122	1.221	1.945	3.760	11.469	0.207	0.002	1.894	1.852	5.400	7.195	0.126	0.486	2.909	2.057	7.040	11.637	0.317	1.423	4.240	2.124
0.500	38.498	0.837	-28.221	0.346	1.513	2.140	13.442	0.339	-0.011	1.238	1.865	3.780	9.364	0.161	-0.072	1.905	1.993	5.420	7.414	0.116	0.535	2.931	1.987	7.060	12.074	0.337	1.456	4.262	2.231
0.520	38.100	0.787	-28.474	0.350	1.761	2.160	12.717	0.324	-0.065	1.237	1.857	3.800	8.532	0.146	-0.024	1.921	1.950	5.440	7.450	0.116	0.535	2.931	2.305	7.080	12.402	0.349	1.439	4.266	2.218
0.540	37.155	0.589	-28.221	0.372	1.571	2.180	12.213	0.282	-0.090	1.251	1.960	3.820	8.792	0.151	0.170	1.947	1.966	5.460	6.867	0.112	0.454	2.941	2.276	7.100	12.692	0.371	1.393	4.289	2.156
0.560	37.443	0.482	-27.038	0.375	1.475	2.200	12.180	0.250	-0.053	1.259	1.966	3.840	9.815	0.146	0.434	1.970	1.841	5.480	6.103	0.091	0.404	2.971	2.078	7.120	13.055	0.393	1.426	4.283	2.248
0.580	38.605	0.404	-25.517	0.390	1.490	2.220	12.878	0.254	-0.072	1.257	1.890	3.860	10.184	0.145	0.505	1.977	1.821	5.500	6.066	0.079	0.420	2.973	2.172	7.140	13.163	0.414	1.463	4.293	2.257
0.600	38.457	0.303	-25.517	0.396	1.558	2.240	13.028	0.281	-0.119	1.265	1.860	3.880	9.789	0.140	0.527	1.986	1.927	5.520	5.812	0.073	0.447	2.990	2.252	7.160	13.234	0.409	1.394	4.319	2.264
0.620	35.872	0.253	-28.897	0.399	1.542	2.260	13.108	0.289	-0.166	1.273	1.886	3.900	9.503	0.130	0.549	2.002	1.870	5.540	6.066	0.067	0.507	3.008	2.204	7.180	13.196	0.407	1.330	4.334	2.121
0.640	33.175	0.261	-31.093	0.412	1.465	2.280	12.094	0.285	-0.197	1.279	1.831	3.920	9.727	0.121	0.604	2.006	1.815	5.560	6.357	0.072	0.538	3.019	2.078	7.200	13.120	0.411	1.142	4.339	2.275
0.660	29.825	0.301	-34.304	0.415	1.571	2.300	10.900	0.233	-0.230	1.287	1.902	3.940	10.277	0.127	0.692	2.032	2.016	5.580	6.102	0.073	0.550	3.038	2.132	7.220	12.208	0.425	0.983	4.362	2.151
0.680	26.186	0.383	-36.501	0.427	1.578	2.320	10.647	0.239	-0.457	1.158	1.902	3.960	10.755	0.140	0.787	2.044	2.016	5.600	5.847	0.066	0.547	3.048	2.251	7.240	11.513	0.433	0.965	4.371	2.163
0.700	24.003	0.487	-36.754	0.430	1.561	2.340	10.578	0.203	-0.434	1.151	1.869	3.980	11.015	0.160	0.861	2.066	1.964	5.620	5.666	0.061	0.541	3.051	2.193	7.260	11.109	0.434	0.937	4.390	2.204
0.720	22.076	0.587	-38.529	0.441	1.415	2.360	11.309	0.195	-0.358	1.157	1.946	4.000	10.873	0.180	0.874	2.067	1.833	5.640	6.286	0.044	0.696	3.077	2.149	7.280	10.996	0.427	0.926	4.401	2.153
0.740	20.332	0.676	-40.641	0.439	1.589	2.380	12.767	0.196	-0.260	1.156	1.831	4.020	10.961	0.218	1.353	2.056	1.785	5.660	6.941	0.049	0.790	3.092	2.102	7.300	11.138	0.416	0.941	4.429	2.346
0.760	19.607	0.728	-41.233	0.448	1.533	2.400	14.590	0.211	-0.271	1.165	1.990	4.040	10.890	0.227	1.195	2.073	2.133	5.680	7.196	0.059	0.825	3.117	2.418	7.320	11.170	0.421	0.898	4.430	2.202
0.780	18.663	0.761	-42.331	0.456	1.504	2.420	14.846	0.265	-0.314	1.183	1.775	4.060	9.946	0.234	1.085	2.071	1.882	5.700	7.306	0.069	0.834	3.113	2.139	7.340	10.983	0.411	0.868	4.453	2.215
0.800	16.955	0.759	-44.697	0.471	1.592	2.440	13.284	0.278	-0.377	1.197	1.798	4.080	9.510	0.243	1.036	2.087	1.757	5.720	7.124	0.090	0.856	3.139	2.139	7.360	10.795	0.393	0.867	4.472	2.244
0.820	15.101	0.714	-46.978	0.470	1.543	2.460	13.321	0.285	-0.377	1.222	1.855	4.100	8.857	0.251	0.992	2.090	1.987	5.740	7.234	0.102	0.873	3.146	2.139	7.380	10.536	0.373	0.861	4.483	2.067
0.840	14.121	0.641	-47.908	0.472	1.612	2.480	15.507	0.298	-0.147	1.250	1.972	4.120	8.166	0.259	0.950	2.102	1.792	5.760	7.415	0.112	0.878	3.162	2.208	7.400	10.569	0.362	0.898	4.502	2.211
0.860	14.744	0.567	-45.204	0.483	1.509	2.500	16.676	0.252	-0.066	1.257	1.860	4.140	7.949	0.250	0.905	2.104	1.827	5.780	7.271	0.126	0.845	3.186	2.369	7.420	10.819	0.346	0.925	4.523	2.134
0.880	13.876	0.490	-30.080	0.463	1.486	2.520	14.677	0.257	-0.186	1.254	1.916	4.160	7.839	0.237	0.903	2.126	1.973	5.800	7.271	0.146	0.845	3.189	2.189	7.440	10.267	0.354	0.911	4.528	2.178
0.900	13.045	0.412	-30.840	0.476	1.528	2.540	12.642	0.270	-0.257	1.274	1.842	4.180	7.803	0.215	0.935	2.123	1.843	5.820	7.199	0.162	0.844	3.216	2.319	7.460	9.790	0.350	0.866	4.554	2.306
0.920	12.252	0.341	-35.572	0.478	1.524	2.560	10.570	0.309	-0.335	1.283	1.890	4.200	7.840	0.196	0.952	2.145	2.014	5.840	6.981	0.176	0.803	3.227	2.281	7.480	9.677	0.339	0.835	4.567	2.173
0.940	11.570	0.324	-40.472	0.483	1.553	2.580	9.045	0.337	-0.357	1.309	1.851	4.220	7.694	0.180	0.991	2.147	1.791	5.860	6.581	0.186	0.734	3.239	2.047	7.500	9.564	0.337	0.971	4.572	2.143
0.960	9.798	0.316	-45.880	0.487	1.553	2.600	7.739	0.313	-0.364	1.319	1.855	4.240	7.657	0.173	0.998	2.166	1.949	5.880	6.181	0.198	0.702	3.253	2.172	7.520	9.706	0.327	1.070	4.599	2.225
0.980	9.012	0.288	-45.626	0.497	1.815	2.620	7.158	0.264	-0.360	1.316	1.857	4.260	7.874	0.156	0.982	2.159	1.784	5.900	5.853	0.194	0.693	3.271	2.126	7.540	9.558	0.323	1.090	4.599	2.189
1.000	9.061	0.269	-41.064	0.494	1.710	2.640	7.490	0.227	-0.304	1.333	1.907	4.280	8.785	0.152	1.088	2.164	1.755	5.920	5.744	0.185	0.685	3.291	2.126	7.560	9.809	0.305	1.128	4.621	2.219
1.020	9.295	0.263	-40.219	0.494	1.990	2.660	7.566	0.220	-0.245	1.351	1.867	4.300	9.802	0.160	1.176	2.180	1.977	5.940	5.743	0.177	0.683	3.291	2.126	7.580	9.770	0.286	1.150	4.618	2.128
1.040	13.393	0.291	-38.191	0.576	1.872	2.680	7.646	0.197	-0.164	1.357	1.942	4.320	9.730	0.178	1.154	2.188	1.902	5.960	5.488	0.168	0.688	3.310	2.094	7.600	9.513	0.298	1.160	4.630	2.317
1.060	14.130	0.285	-40.219	0.583	1.824	2.700	7.871	0.172	-0.147	1.380	1.834	4.340	9.767	0.188	1.005	2.200	1.805	5.980	5.414	0.158	0.677	3.313	2.166	7.620	9.692	0.314	1.206	4.635	2.165
1.080	14.686	0.282	-40.979	0.585	2.019	2.720	7.911	0.166	-0.148	1.389	1.890	4.360	9.003	0.212	0.928	2.222	2.000	6.000	3.882	0.111	0.560	3.335	2.414	7.640	10.200	0.327	1.282	4.640	2.275
1.100	16.042	0.281	-45.288	0.590	1.778	2.740	8.134	0.167	-0.154	1.392	1.787	4.380	8.386	0.228	0.831	2.232	1.862	6.020	5.093	0.122	1.082	3.348	2.274	7.660	10.124	0.340	1.321	4.647	2.144
1.120	17.033	0.271	-45.711	0.612	1.719	2.760	8.103	0.166	-0.165	1.419	1.767	4.400	7.913	0.238	0.787	2.235	1.753	6.040	5.203	0.123	1.071	3.368	2.270	7.680	10.303	0.355	1.357	4.664	2.277
1.140	17.734	0.261	-46.471	0.622	1.929	2.780	7.997	0.177	-0.160	1.416	1.998	4.420	7.878	0.249	0.766	2.248	1.758	6.060	5.056	0.122	1.079	3.387	2.270	7.700	10.701	0.372	1.446	4.667	2.047
1.160	16.796	0.254	-49.259	0.627	1.879	2.800	8.220	0.177	-0.154	1.427	2.116	4.440	7.152	0.236	0.723	2.265	1.975	6.080	5.347	0.117	1.073	3.400	2.270	7.720	10.916	0.372	1.470	4.673	2.145
1.180	15.168	0.224	-52.386	0.636	1.761	2.820	8.443	0.187	-0.161	1.435	1.863	4.460	6.788	0.214	0.678	2.266	1.826	6.100	5.274	0.120	1.066	3.419	2.207	7.740	11.094	0.359	1.510	4.702	2.134
1.200	13.611	0.223	-55.427	0.654	1.957	2.840	8.376	0.199	-0.162	1.446	1.868	4.480	6.715	0.203	0.659	2.284	1.840	6.120	5.201	0.121	1.052	3.437	2.065	7.760	10.982	0.358	1.517	4.716	2.326
1.220	12.019	0.244	-57.033	0.659	1.935	2.860	8.565	0.194	-0.176	1.460	2.368	4.500	6.861	0.174	0.715	2.294	2.042	6.140	5.310	0.122	1.058	3.444	2.405	7.780	10.980	0.361	1.499	4.726	2.410
1.240	11.301	0.262	-51.541	0.665	1.834	2.880	8.315	0.205	-0.195	1.473	2.368	4.520	6.934	0.136	0.784	2.304	1.867	6.160	5.272	0.123	1.050	3.472	2.233	7.800	10.687	0.371	1.454	4.722	2.287
1.260	10.545	0.277	-49.682	0.688	1.693	2.900	7.812	0.202	-0.211	1.494	2.368	4.540	6.898	0.114	0.782	2.327	1.935	6.180	5.418	0.128	1.060	3.485	2.230	7.820	10.212	0.385	1.398	4.744	2.077
1.280	10.446	0.260	-35.910	0.690	1.915	2.920	7.563	0.201	-0.227	1.489	1.870	4.560	6.681	0.111	0.773	2.342	1.720	6.200	5.562	0.127	1.073	3.496	2.274	7.840	9.848	0.387	1.419	4.755	2.386
1.300	10.237	0.241	-30.502	0.716	1.823	2.940	7.498	0.192	-0.235	1.512	1.793	4.580	6.864	0.107	0.812	2.363	1.863	6.220	5.416	0.132	1.106	3.518	2.168	7.860	9.846	0.384	1.450	4.752	2.043
1.320	9.957	0.233	-26.024	0.717	1.788	2.960	7.360	0.186	-0.245	1.507	1.793	4.600	7.410	0.101	0.979	2.370	1.781	6.240	5.562	0.130	1.139	3.532	2.069	7.880	9.625	0.379	1.471	4.753	2.204
1.340	9.714	0.228	-24.672	0.720	1.923	2.980	7.367	0.181	-0.253	1.523	1.786	4.620	7.994	0.096	1.095	2.386	1.924	6.260	5.890	0.133	1.177	3.539	2.203	7.900	9.695	0.372	1.504	4.770	2.165
1.360	10.486	0.227	-20.194	0.741	1.850	3.000	7.301	0.172	-0.255	1.544	1.786	4.640	8.834	0.100	1.140	2.408	1.880	6.280	6.617	0.141	1.232	3.547	2.376	7.920	9.910	0.355	1.532	4.774	2.165
1.380	12.137	0.226	-14.364	0.755	1.887	3.020	7.309	0.164	-0.251	1.539	1.852	4.660	9.383	0.122	1.073	2.432	1.955	6.300	7.162	0.141	1.285	3.584	2.216	7.940	9.724	0.353	1.532	4.788	2.308
1.400	13.206	0.222	-17.152	0.771	1.785	3.040	8.478	0.159	-0.037	1.525	2.040	4.680	9.457	0.134	1.027	2.439	1.893	6.320	7.562	0.144	1.297	3.603	2.109	7.960	9.758	0.345	1.536	4.789	2.106
1.420	12.527	0.245	-21.968	0.787	1.886	3.060	8.261	0.165	-0.059	1.542	1.928	4.700	9.097	0.145	0.874	2.453	1.813	6.340	7.998	0.156	1.314	3.620	2.371	7.980	9.792	0.325	1.536	4.810	2.269
1.440	12.067	0.252	-14.279	0.819	1.764	3.080	9.174	0.164	0.018	1.540	1.827	4.720	8.553	0.167	0.691	2.467	1.791	6.360	8.544	0.171	1.342	3.647	2.253	8.000	8.340	0.312	1.738	4.858	2.199
1.460	12.082	0.247	-0.338	0.819	1.873	3.100	9.540	0.171	0.010	1.555	1.763	4.740	8.229	0.173	0.669	2.480	1.787	6.380	9.052	0.181	1.374	3.684	2.046	8.020	9.835	0.342	1.867	4.873	2.246
1.480	12.532	0.238	7.858	0.838	1.802	3.120	9.216	0.168	0.034	1.564	1.968	4.760	8.050	0.174	0.663	2.498	2.110	6.400	8.979	0.196	1.349	3.698	2.046	8.040	9.909	0.347	1.864	4.888	2.310
1.500	13.057	0.237	12.843	0.851	1.918	3.140	9.037	0.169	0.022	1.577	1.831	4.780	8.161	0.176	0.639	2.494	1.850	6.420	9.051	0.221	1.333	3.718	2.410	8.060	10.020	0.347	1.867	4.901	2.108
1.520	14.093	0.249	13.603	0.868	1.935	3.160	8.676	0.181	0.011	1.578	1.872	4.800	7.653	0.166	0.568	2.506	1.833	6.440	9.086	0.243	1.318	3.737	2.174	8.080	10.239	0.334	1.865	4.916	2.124
1.540	14.586	0.276	4.985	0.889	1.905	3.180	8.352	0.182	0.029	1.574	1.946	4.820	7.109	0.153	0.504	2.533	2.018	6.460	8.576	0.265	1.271	3.765	2.146	8.100	10.311	0.343	1.835	4.928	2.297
1.560	14.418	0.281	-4.056	0.905	1.798	3.200	8.211	0.177	0.038	1.592	1.972	4.840	6.711	0.142	0.460	2.540	1.799	6.480	8.466	0.268	1.260	3.771	2.399	8.120	10.310	0.356	1.811	4.938	2.225
1.580	15.274	0.301	-9.379	0.932	1.870	3.220	7.848	0.177	0.016	1.583	1.933	4.860	6.495	0.124	0.472	2.545	1.818	6.500	8.719	0.266	1.268	3.795	2.193	8.140	10.383	0.373	1.836	4.952	2.239
1.600	15.254	0.319	-13.519	0.934	1.789	3.240	7.924	0.161	0.003	1.594	1.743	4.880	7.189	0.117	0.555	2.567	1.771	6.520	9.299	0.257	1.402	3.817	2.217	8.160	10.565	0.387	1.949	4.953	2.236
1.620	15.744	0.327	-17.913	0.949	1.899	3.260	8.036	0.163	0.017	1.594	1.984	4.900	7.701	0.118	0.624	2.581	1.907	6.540	9.771	0.254	1.454	3.835	2.178	8.180	11.693	0.390	2.146	4.976	2.109
1.640	15.506	0.324	-21.968	0.965	1.882	3.280	8.803	0.161	0.040	1.599	1.844	4.920	7.630	0.113	0.610	2.596	1.907	6.560	9.695	0.251	1.458	3.858	2.121	8.200	12.093	0.389	2.204	4.969	2.366

Prof.: Profondità RL: - RP: Resistenza di punta - Resistenza all'attrito laterale - Incl.:clinazione - Vavanz: velocità di avanzamento della punt

Geo.Fe.
INDAGINI GEOLOGICHE

Committente: Geogroup
Cantiere: Medolla (MO)
Data: 05/07/2021

ID Prova: SCPTU 7
Profondita falda: a mt 2.10 da p.c.
Preforo: -

Profondità massima raggiunta: 30.30 mt
Punta sismica: Tecnopenta CPLSD
RIF. 89/21GF

Prova eseguita da:
GEO.FE. S.n.c.
via dell'Artigianato ,3 44030 - Ro Ferrarese (FE)
tel 3383646278 - info@geofe.it - www.geofe.it
Responsabile dati: Dott.Geol.Zanella Fabio
Responsabile cantiere: Sig. Mangherini Alberto

Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz
metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec
8.220	12.602	0.387	2.192	4.993	2.223	9.860	12.253	0.334	2.462	5.711	2.012	11.500	18.464	0.306	2.047	6.613	2.031	13.140	28.620	0.952	7.065	7.527	2.019	14.780	16.358	0.398	4.427	8.272	2.126
8.240	11.908	0.399	2.078	4.998	1.963	9.880	12.323	0.342	2.506	5.728	2.213	11.520	18.425	0.301	2.076	6.613	1.909	13.160	26.979	0.932	6.595	7.539	2.146	14.800	16.979	0.382	4.609	8.282	1.919
8.260	11.432	0.409	1.963	5.019	2.114	9.900	12.102	0.349	2.409	5.724	2.024	11.540	18.640	0.300	2.157	6.625	2.049	13.180	25.083	0.908	6.001	7.531	2.047	14.820	17.166	0.408	4.799	8.289	1.842
8.280	10.810	0.409	1.836	5.007	2.035	9.920	11.774	0.360	2.347	5.734	2.024	11.560	18.748	0.298	2.208	6.640	2.049	13.200	22.384	0.875	3.375	7.545	1.916	14.840	15.642	0.479	4.565	8.299	2.183
8.300	10.406	0.413	1.776	5.034	1.840	9.940	11.480	0.370	2.288	5.742	2.102	11.580	18.781	0.289	2.298	6.648	1.961	13.220	20.524	0.866	2.202	7.537	2.052	14.860	14.771	0.475	4.164	8.310	1.896
8.320	10.220	0.412	1.751	5.035	1.937	9.960	11.551	0.368	2.277	5.756	2.039	11.600	18.960	0.286	2.422	6.648	1.978	13.240	18.224	0.871	1.882	7.544	1.980	14.880	13.573	0.429	3.797	8.319	2.064
8.340	9.926	0.416	1.717	5.045	2.028	9.980	11.245	0.365	3.294	5.780	2.235	11.620	19.248	0.282	2.531	6.656	2.173	13.260	16.217	0.879	1.739	7.551	1.980	14.900	13.829	0.385	3.808	8.326	2.064
8.360	9.921	0.393	1.722	5.062	1.922	10.000	11.939	0.362	3.384	5.781	2.067	11.640	19.427	0.278	2.686	6.663	2.036	13.280	14.537	0.902	1.943	7.546	2.051	14.920	13.758	0.398	3.708	8.334	1.851
8.380	10.028	0.368	1.735	5.067	2.165	10.020	12.086	0.362	3.383	5.793	2.128	11.660	19.825	0.284	2.805	6.676	1.894	13.300	13.217	0.877	2.282	7.557	2.034	14.940	12.993	0.408	3.554	8.343	2.193
8.400	10.316	0.339	1.779	5.081	2.085	10.040	11.577	0.340	3.350	5.815	2.087	11.680	20.222	0.296	2.936	6.675	2.074	13.320	13.501	0.755	2.522	7.563	2.034	14.960	12.556	0.361	3.353	8.358	1.971
8.420	10.712	0.330	1.833	5.092	2.198	10.060	11.140	0.332	3.227	5.810	2.036	11.700	19.746	0.311	2.980	6.701	1.944	13.340	13.711	0.621	2.964	7.564	2.034	14.980	12.556	0.361	3.353	8.365	2.075
8.440	11.362	0.329	1.955	5.099	2.166	10.080	11.104	0.334	3.208	5.830	1.988	11.720	19.489	0.316	3.107	6.705	1.896	13.360	16.105	0.471	4.140	7.589	1.978	15.000	13.008	0.285	4.079	8.377	2.034
8.460	11.723	0.326	2.026	5.107	2.064	10.100	11.031	0.334	3.141	5.835	2.199	11.740	19.813	0.311	3.244	6.706	2.328	13.380	19.665	0.338	5.411	7.591	1.888	15.020	12.536	0.256	4.084	8.389	1.894
8.480	11.794	0.331	2.055	5.124	2.358	10.120	10.957	0.334	3.073	5.848	2.087	11.760	20.538	0.316	3.499	6.720	2.192	13.400	21.443	0.232	4.750	7.594	2.135	15.040	13.302	0.214	4.272	8.401	2.025
8.500	11.610	0.345	2.026	5.131	2.111	10.140	10.520	0.304	2.955	5.862	2.042	11.780	21.700	0.315	3.908	6.725	2.045	13.420	21.656	0.215	4.327	7.595	1.952	15.060	14.212	0.184	4.752	8.415	1.970
8.520	11.208	0.371	1.960	5.153	2.048	10.160	9.101	0.285	2.615	5.876	2.256	11.800	22.026	0.324	4.035	6.749	2.025	13.440	21.398	0.246	4.443	7.606	1.970	15.080	15.705	0.161	5.026	8.441	1.896
8.540	10.951	0.385	1.975	5.172	2.182	10.180	8.518	0.269	2.501	5.890	2.102	11.820	21.330	0.344	4.022	6.754	1.991	13.460	19.758	0.346	4.004	7.617	2.140	15.100	18.001	0.180	5.355	8.456	2.138
8.560	10.914	0.391	1.992	5.174	2.188	10.200	8.373	0.245	2.508	5.902	1.896	11.840	20.927	0.352	4.005	6.755	1.921	13.480	17.028	0.453	3.376	7.604	2.067	15.120	19.896	0.218	6.073	8.469	1.993
8.580	11.131	0.388	2.025	5.183	2.201	10.220	8.518	0.221	2.618	5.908	2.209	11.860	20.597	0.349	4.115	6.778	2.109	13.500	15.609	0.493	3.006	7.602	1.993	15.140	20.007	0.228	6.440	8.488	1.938
8.600	11.456	0.398	2.021	5.183	2.241	10.240	8.991	0.200	2.733	5.926	2.024	11.880	20.230	0.337	4.329	6.787	2.053	13.520	13.974	0.571	2.562	7.610	1.846	15.160	18.807	0.240	6.025	8.483	2.069
8.620	11.527	0.397	2.010	5.201	2.254	10.260	9.172	0.186	2.789	5.923	2.065	11.900	19.936	0.333	4.822	6.810	2.053	13.540	12.702	0.663	2.454	7.621	1.980	15.180	16.952	0.271	4.975	8.507	1.977
8.640	11.415	0.398	1.994	5.201	2.106	10.280	9.243	0.191	2.639	5.929	2.211	11.920	19.971	0.311	5.298	6.802	2.004	13.560	12.086	0.690	2.435	7.625	1.999	15.200	15.425	0.330	4.381	8.525	1.816
8.660	11.340	0.392	2.036	5.222	2.071	10.300	9.170	0.199	2.776	5.949	2.119	11.940	20.553	0.311	5.560	6.818	2.084	13.580	12.269	0.648	2.518	7.635	2.026	15.220	14.991	0.411	4.182	8.523	2.130
8.680	11.083	0.401	2.042	5.216	1.974	10.320	7.210	0.192	2.489	5.993	2.224	11.960	20.078	0.319	5.855	6.816	2.063	13.600	12.491	0.589	2.680	7.638	1.911	15.240	15.283	0.440	4.289	8.534	1.964
8.700	10.862	0.412	2.000	5.211	2.440	10.340	10.342	0.219	2.507	5.993	2.224	11.980	19.748	0.312	5.896	6.827	2.002	13.620	13.038	0.516	2.941	7.649	2.165	15.260	17.291	0.506	5.218	8.548	1.816
8.720	10.788	0.416	1.999	5.215	2.255	10.360	10.380	0.229	2.548	6.001	2.061	12.000	20.714	0.273	7.705	6.857	2.169	13.640	13.910	0.432	3.183	7.664	2.049	15.280	17.657	0.532	5.525	8.546	2.184
8.740	10.530	0.416	1.956	5.226	1.951	10.380	10.455	0.245	2.688	6.010	2.018	12.020	21.079	0.310	7.628	6.858	2.108	13.660	15.185	0.355	3.475	7.691	1.795	15.300	17.329	0.542	5.458	8.559	1.989
8.760	10.128	0.414	1.915	5.230	2.212	10.400	10.273	0.257	2.614	6.013	1.947	12.040	21.190	0.313	7.627	6.872	1.877	13.680	18.465	0.336	4.670	7.691	2.058	15.320	17.329	0.542	5.458	8.493	1.989
8.780	9.871	0.402	1.872	5.233	2.303	10.420	10.054	0.257	2.383	6.015	2.190	12.060	21.263	0.324	7.525	6.877	2.097	13.700	21.927	0.329	6.411	7.702	1.965	15.340	15.686	0.463	0.546	8.526	1.989
8.800	10.050	0.379	1.921	5.245	2.175	10.440	9.690	0.255	2.036	6.041	2.119	12.080	21.445	0.352	7.741	6.887	2.011	13.720	21.970	0.319	6.220	7.687	2.079	15.360	13.974	0.483	0.843	8.534	1.989
8.820	10.631	0.357	2.053	5.249	2.175	10.460	9.288	0.262	2.081	6.041	2.000	12.100	21.918	0.371	7.860	6.895	2.038	13.740	21.284	0.339	5.608	7.672	2.280	15.380	12.152	0.538	1.348	8.540	1.897
8.840	11.138	0.334	2.149	5.242	2.175	10.480	9.213	0.258	2.274	6.058	2.229	12.120	20.936	0.418	7.741	6.916	1.997	13.760	20.232	0.386	4.559	7.682	1.886	15.400	11.497	0.532	1.660	8.552	2.044
8.860	11.392	0.320	2.143	5.253	2.128	10.500	9.285	0.251	2.495	6.074	2.099	12.140	21.045	0.411	8.194	6.918	2.169	13.780	19.397	0.478	4.089	7.701	2.029	15.420	11.998	0.463	2.729	8.555	1.905
8.880	11.353	0.317	2.092	5.253	2.024	10.520	9.539	0.231	2.587	6.074	1.865	12.160	21.589	0.403	8.166	6.921	2.073	13.800	19.729	0.589	4.521	7.706	2.175	15.440	13.087	0.412	3.272	8.561	1.866
8.900	11.131	0.321	1.992	5.260	2.092	10.540	9.467	0.228	2.602	6.082	2.124	12.180	21.079	0.428	8.253	6.925	1.997	13.820	20.787	0.668	5.152	7.716	1.846	15.460	14.396	0.353	3.680	8.585	2.085
8.920	10.581	0.342	1.863	5.270	2.103	10.560	9.395	0.223	2.635	6.102	2.071	12.200	21.295	0.450	8.479	6.929	1.982	13.840	20.898	0.614	5.170	7.729	1.985	15.480	20.580	0.256	5.043	8.619	1.926
8.940	10.579	0.361	1.866	5.281	2.103	10.580	9.467	0.216	2.703	6.111	1.941	12.220	21.330	0.447	8.470	6.951	1.983	13.860	19.518	0.618	4.650	7.725	2.112	15.500	25.492	0.171	6.403	8.646	1.923
8.960	10.723	0.379	1.958	5.270	2.002	10.600	9.793	0.202	2.779	6.139	2.156	12.240	21.254	0.463	8.400	6.949	2.049	13.880	18.648	0.580	4.050	7.746	1.956	15.520	26.506	0.172	5.698	8.664	1.831
8.980	10.723	0.379	3.639	5.320	2.305	10.620	9.975	0.194	2.862	6.151	2.128	12.260	20.887	0.484	8.026	6.955	1.919	13.900	16.905	0.605	3.696	7.764	1.956	15.540	25.194	0.260	5.232	8.680	1.986
9.000	11.692	0.382	4.316	5.335	2.254	10.640	10.229	0.189	2.799	6.173	2.041	12.280	20.484	0.512	7.881	6.973	2.097	13.920	15.961	0.573	3.501	7.767	2.202	15.560	24.281	0.375	4.989	8.683	1.972
9.020	11.913	0.365	3.879	5.330	2.104	10.660	10.485	0.193	3.076	6.184	2.163	12.300	20.768	0.521	7.760	6.981	2.101	13.940	15.342	0.561	3.463	7.779	1.962	15.580	23.806	0.479	4.935	8.708	1.922
9.040	11.551	0.350	3.414	5.339	2.005	10.680	10.704	0.177	3.354	6.178	1.820	12.320	21.164	0.528	7.776	6.997	1.979	13.960	14.579	0.585	3.581	7.787	1.972	15.600	22.203	0.642	5.102	8.711	1.962
9.060	11.078	0.335	3.008	5.338	2.141	10.700	11.649	0.152	3.656	6.197	2.034	12.340	21.377	0.535	7.346	7.014	1.968	13.980	14.579	0.585	4.626	7.871	2.179	15.620	21.437	0.685	4.949	8.729	1.991
9.080	11.115	0.323	2.850	5.346	2.142	10.720	11.868	0.139	3.787	6.198	2.183	12.360	21.045	0.545	6.995	7.034	2.010	14.000	16.444	0.521	5.730	7.879	2.115	15.640	21.182	0.720	4.687	8.738	1.947
9.100	10.896	0.327	2.694	5.355	2.062	10.740	12.267	0.127	4.118	6.191	2.014	12.380	21.404	0.541	6.918	7.041	2.034	14.020	17.065	0.419	5.983	7.895	1.923	15.660	19.396	0.751	4.352	8.753	1.861
9.120	10.822	0.345	2.549	5.371	2.218	10.760	12.813	0.125	4.092	6.213	2.342	12.400	21.982	0.530	6.965	7.058	1.934	14.040	17.321	0.351	6.127	7.905	1.928	15.680	20.087	0.735	4.444	8.760	1.866
9.140	10.530	0.379	2.500	5.371	2.176	10.780	13.869	0.138	4.449	6.233	2.129	12.420	21.980	0.537	6.774	7.081	2.089	14.060	17.833	0.303	6.254	7.919	2.128	15.700	17.133	0.754	3.514	8.759	1.916
9.160	10.712	0.390	2.459	5.379	2.131	10.800	14.998	0.140	4.022	6.259	2.050	12.440	21.503	0.570	6.818	7.096	2.071	14.080	18.782	0.281	6.476	7.936	1.995	15.720	17.308	0.744	3.579	8.755	1.892
9.180	10.748	0.403	2.431	5.383	2.073	10.820	14.706	0.131	3.140	6.263	1.958	12.460	21.461	0.621	6.702	7.131	2.067	14.100	19.111	0.269	6.445	7.950	1.998	15.740	15.589	0.742	3.152	8.766	2.305
9.200	10.602	0.413	2.416	5.380	2.128	10.840	14.053	0.132	3.240	6.284	2.100	12.480	21.167	0.656	6.697	7.147	1.925	14.120	19.440	0.268	6.489	7.957	2.115	15.760	15.107	0.740	3.061	8.789	2.305
9.220	10.747	0.416	2.536	5.398	2.093	10.860	14.455	0.153	3.665	6.301	2.059	12.500	21.310	0.706	6.785	7.164	1.976	14.140	19.915	0.285	6.120	7.965	2.088	15.780	14.916	0.706	3.152	8.808	2.305
9.240	10.709	0.409	2.665	5.398	2.085	10.880	13.655	0.155	1.573	6.298	2.020	12.520	21.999	0.753	7.089	7.170	2.047	14.160	20.390	0.319	5.959	7.975	1.976	15.800	13.702	0.632	3.151	8.822	1.961
9.260	10.925	0.385	2.769	5.399	2.043	10.900	13.512	0.150	2.074	6.308	2.156	12.540	22.470	0.789	7.161	7.177	1.902	14.180	20.174	0.362	5.946	7.992	2.050	15.820	13.003	0.563	3.348	8.810	1.944
9.280	11.178	0.355	2.736	5.407	2.229	10.920	12.822	0.147	2.104	6.315	2.156	12.560	23.666	0.820	7.562	7.195	2.200	14.200	20.067	0.417	5.953	7.998	1.923	15.840	12.739	0.446	3.768	8.822	1.911
9.300	10.740	0.337	2.673	5.406	2.143	10.940	12.753	0.141	2.286	6.333	2.014	12.580	25.591	0.814	7.654	7.220	1.952	14.220	19.668	0.479	5.577	8.006	1.977	15.860	13.240	0.363	4.259	8.827	1.841
9.320	10.264	0.329	2.691	5.406	2.042	10.960	11.991	0.129	2.458	6.325	2.181	12.600	26.275	0.775	3.101	7.222	1.900	14.240	18.869	0.534	5.393	8.010	2.088	15.880	14.105	0.315	4.705	8.837	1.841
9.340	9.643	0.318	2.643	5.411	2.048	10.980	12.574	0.114	2.785	6.319	2.091	12.620	26.232	0.771	4.312	7.253	2.268	14.260	17.962	0.596	5.014	8.003	2.003	15.900	14.134	0.278	4.948	8.844	2.045
9.360	9.786	0.296	2.620	5.415	2.184	11.000	17.494	0.173	2.199	6.348	2.010	12.640	28.337	0.750	5.339	7.249	1.966	14.280	17.452	0.618	4.889	8.030	2.040	15.920	15.584	0.254	5.566	8.853	1.761
9.380	10.075	0.292	2.677	5.427	1.981	11.020	17.312	0.212	2.117	6.348	2.217	12.660	28.657	0.755	5.352	7.267	1.966	14.300	17.853	0.615	5.011	8.043	2.016	15.940	17.289	0.243	6.225	8.849	2.100
9.400	11.091	0.301	2.853	5.424	2.071	11.040	16.511	0.217	2.169	6.363	1.995	12.680	29.523	0.791	5.608	7.268	1.966	14.320	18.144	0.604	5.069	8.057	2.005	15.960	21.688	0.227	7.654	8.849	1.929
9.420	12.109	0.306	3.012	5.442	2.227	11.060	14.655	0.220	2.039	6.353	2.083	12.700	30.680	0.835	6.219	7.284	1.966	14.340	18.178	0.605	5.064	8.068	1.913	15.980	21.246	0.215	7.356	8.869	2.061
9.440	13.127	0.299	3.128	5.454	2.068	11.080	14.327	0.220	2.357	6.378	2.073	12.720	32.275	0.892	6.745	7.293	2.071	14.360	17.994	0.619	4.990	8.085	1.980	16.000	24.840	0.273	8.196	8.873	1.987
9.460	13.670	0.315	3.165	5.467	2.136	11.100	14.254	0.223	2.473	6.388	1.986	12.740	34.231	0.936	7.215	7.305	2.176	14.380	17.410	0.619	4.830	8.082	2.032	16.020	24.222	0.353	2.671	8.883	1.974
9.480	13.558	0.337	3.068	5.485	1.980	11.120	14.290	0.226	2.825	6.408	2.139	12.760	34.514	0.986	7.259	7.324	2.055	14.400	16.571	0.610	4.455	8.102	1.845	16.040	24.733	0.400	3.713	8.891	1.878
9.500	13.446	0.352	2.982	5.489	2.212	11.140	14.945	0.213	3.142	6.412	2.053	12.780	34.760	1.040	7.237	7.332	1.995	14.420	15.079	0.624	4.136	8.112	2.154	16.060	25.208	0.457	3.892	8.903	1.980
9.520	13.079	0.370	2.914	5.513	2.063	11.160	15.927	0.216	3.318	6.432	2.068	12.800	34.242	1.118	7.267	7.347	1.947	14.440	14.021	0.622	3.903	8.116	2.006	16.080	24.591	0.543	3.876	8.900	1.970
9.540	12.532	0.379	2.781	5.517	2.032	11.180	17.020	0.227	3.465	6.449	2.161	12.820	32.997	1.186	7.453	7.369	2.107	14.460	12.927	0.600	3.729	8.127	1.969	16.100	24.155	0.624	3.883	8.908	1.886
9.560	11.878	0.391	2.670	5.532	1.990	11.200	17.130	0.233	3.362	6.441	2.066	12.840	32.589	1.209	7.559	7.372	1.928	14.480	12.632	0.529	3.648	8.120	2.068	16.120	23.829	0.673	3.838	8.921	2.051
9.580	11.695	0.389	2.552	5.536	2.147	11.220	17.713	0.253	2.911	6.451	1.852	12.860	32.254	1.195	7.659	7.369	1.997	14.500	12.444	0.470	3.562	8.121	1.871	16.140	23.319	0.715	3.884	8.938	1.966
9.600	11.803	0.395	2.427	5.547	2.115	11.240	16.912	0.267	1.176	6.464	2.137	12.880	31.299	1.202	7.471	7.389	1.997	14.520	12.076	0.427	3.481	8.132	1.913	16.160	25.138	0.725	4.813	8.955	1.894
9.620	11.838	0.412	2.326	5.561	2.037	11.260	16.329	0.252	1.418	6.479	2.075	12.900	30.526	1.160	7.478	7.399	1.997	14.540	11.999	0.376	3.469	8.138	2.073	16.180	26.556	0.749	5.862	8.965	2.088
9.640	11.945	0.421	2.274	5.587	2.301	11.280	16.257	0.245	1.474	6.492	1.972	12.920	30.409	1.130	7.284	7.403	2.043	14.560	12.177	0.328	3.525	8.143	2.068	16.200	28.300	0.705	6.157	8.978	1.831
9.660	12.052	0.438	2.255	5.597	2.121	11.300	16.110	0.244	1.614	6.500	2.124	12.940	29.745	1.106	7.231	7.424	1.997	14.580	12.646	0.289	3.606	8.159	1.864	16.220	28.549	0.677	6.093	8.982	1.993
9.680	12.158	0.431	2.230	5.621	1.926	11.320	16.182	0.246	1.715	6.511	2.080	12.960	29.080	1.089	7.396	7.428	1.907	14.600	13.153	0.279	3.725	8.164	1.950	16.240	28.363	0.696	6.003	9.004	1.952
9.700	11.938	0.420	2.218	5.636	2.013	11.340	16.982	0.259	1.882	6.531	2.008	12.980	29.549	1.059	7.512	7.419	2.337	14.620	13.770	0.279	3.814	8.172	2.072	16.260	27.447	0.732	5.864	9.009	1.885
9.720	11.536	0.417	2.168	5.652	2.146	11.360	17.707	0.271	1.984	6.550	1.961	13.000	30.664	0.929	8.090	7.465	2.010	14.640	13.587	0.293	3.811	8.180	1.976	16.280	26.603	0.751	5.616	9.041	2.032
9.740	11.135	0.406	2.122	5.657	2.126	11.380	18.400	0.274	2.084	6.553	2.123	13.020	31.030	0.910	8.161	7.472	1.976	14.660	14.568	0.308	4.048	8.192	1.944	16.300	26.379	0.773	5.546	9.045	2.068
9.760	10.915	0.387	2.182	5.686	2.300	11.400	18.727	0.288	2.132	6.570	1.902	13.040	31.213	0.934	8.202	7.485	2.007	14.680	15.114	0.305	4.313	8.197	1.896	16.320	25.571	0.805	5.470	9.056	1.777
9.780	11.132	0.361	2.238	5.684	2.026	11.420	18.872	0.300	2.118	6.575	2.094	13.060	31.430	0.948	8.123	7.492	2.012	14.700	15.733	0.289	4.481	8.216	1.960	16.340	25.091	0.860	5.290	9.074	1.968
9.800	10.984	0.354	2.310	5.688	2.121	11.440	18.797	0.308	2.062	6.582	2.119	13.080	30.699	0.964	7.850	7.517	1.934	14.720	16.826	0.286	4.266	8.235	2.065	16.360	24.210	0.914	5.146	9.072	1.855
9.820	11.165	0.338	2.383	5.691	2.213	11.460	18.650	0.311	2.051	6.597	1.980	13.100	30.008	0.974	7.679	7.527	2.130	14.740	16.683	0.348	4.150	8.244	2.128	16.380	23.073	0.913	4.919	9.089	1.779
9.840	11.600	0.331	2.435	5.699	1.995	11.480	18.467	0.307	2.042	6.606	2.142	13.120	29.314	0.992	7.424	7.529	2.047	14.760	15.847	0.412	4.274	8.258	1.936	16.400	21.755	0.878	4.613	9.105	2.083

Geo.Fe.
INDAGINI GEOLOGICHE

Committente: Geogroup
Cantiere: Medolla (MO)
Data: 05/07/2021

ID Prova: SCPTU 7
Profondita falda: a mt 2.10 da p.c.
Preforo: -

Profondità massima raggiunta: 30.30 mt
Punta sismica: Tecnopenta CPLSD
RIF. 89/21GF

Prova eseguita da:
GEO.FE. S.n.c.
via dell'Artigianato ,3 44030 - Ro Ferrarese (FE)
tel 3383646278 - info@geofe.it - www.geofe.it
Responsabile dati: Dott.Geol.Zanella Fabio
Responsabile cantiere: Sig. Mangherini Alberto

Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz
metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec
16.420	20.690	0.852	4.425	9.111	1.875	18.060	14.247	0.455	3.970	9.927	1.889	19.700	15.194	0.503	4.714	10.611	1.868	21.340	46.008	0.611	12.625	11.287	1.915	22.980	129.859	1.204	2.949	12.462	1.862
16.440	20.173	0.806	4.210	9.129	2.056	18.080	13.885	0.452	3.891	9.925	1.801	19.720	15.665	0.466	4.841	10.626	2.035	21.360	57.495	0.638	2.074	11.296	1.651	23.000	129.291	1.221	3.248	12.478	1.773
16.460	19.108	0.805	4.045	9.141	1.992	18.100	13.703	0.435	3.835	9.947	2.004	19.740	16.028	0.434	4.989	10.626	1.901	21.380	58.798	0.614	6.349	11.291	1.884	23.020	133.350	1.222	4.023	12.492	1.790
16.480	17.570	0.799	3.941	9.149	1.875	18.120	13.921	0.422	3.838	9.947	1.868	19.760	16.790	0.424	5.228	10.643	1.866	21.400	62.551	0.642	7.070	11.312	1.718	23.040	133.350	1.222	4.023	12.586	1.856
16.500	16.940	0.744	3.889	9.163	1.918	18.140	13.702	0.428	3.844	9.947	2.075	19.780	17.589	0.438	5.527	10.649	2.003	21.420	72.071	0.742	7.709	11.314	1.937	23.060	129.807	1.244	1.079	12.583	1.641
16.520	15.617	0.687	3.781	9.167	1.820	18.160	14.247	0.424	3.944	9.965	1.845	19.800	18.207	0.449	5.821	10.653	1.762	21.440	82.767	0.843	3.932	11.323	1.810	23.080	137.307	1.106	1.145	12.607	1.924
16.540	15.242	0.635	3.787	9.172	1.824	18.180	14.683	0.421	4.019	9.990	1.854	19.820	18.859	0.452	6.034	10.663	1.874	21.460	85.755	0.862	3.761	11.325	1.897	23.100	137.128	1.037	1.175	12.611	1.783
16.560	15.559	0.577	3.913	9.166	2.111	18.200	14.864	0.423	4.080	9.983	1.889	19.840	19.585	0.466	6.292	10.668	1.813	21.480	88.572	0.974	3.273	11.328	1.872	23.120	137.645	1.019	1.373	12.636	1.787
16.580	15.917	0.527	4.026	9.183	1.838	18.220	15.372	0.427	4.328	10.002	1.939	19.860	20.930	0.485	6.588	10.675	1.848	21.500	90.698	1.020	2.633	11.341	1.706	23.140	137.647	1.019	1.492	12.646	1.807
16.600	16.129	0.495	4.218	9.188	1.944	18.240	16.318	0.414	4.624	10.015	1.874	19.880	21.657	0.519	6.855	10.677	1.848	21.520	91.939	1.062	2.202	11.330	1.848	23.160	139.999	1.057	1.811	12.655	1.739
16.620	17.470	0.450	4.427	9.212	2.031	18.260	17.227	0.411	4.886	10.028	1.805	19.900	22.056	0.545	6.979	10.678	1.671	21.540	81.234	1.062	1.274	11.330	1.709	23.180	143.816	1.077	2.336	12.668	1.938
16.640	18.193	0.435	4.532	9.215	1.782	18.280	18.099	0.400	5.160	10.039	2.013	19.920	22.673	0.541	6.386	10.684	1.809	21.560	78.482	1.108	0.558	11.448	1.709	23.200	146.382	1.108	2.726	12.691	1.938
16.660	18.952	0.451	4.664	9.227	1.928	18.300	19.153	0.403	5.545	10.043	1.840	19.940	22.563	0.585	5.922	10.684	1.955	21.580	104.538	1.159	0.534	11.424	1.700	23.220	146.961	1.122	2.365	12.691	1.909
16.680	19.382	0.485	4.812	9.239	1.892	18.320	20.135	0.403	5.689	10.043	1.939	19.960	21.434	0.607	5.676	10.697	1.834	21.600	103.693	1.145	0.580	11.437	1.864	23.240	146.329	1.128	2.167	12.710	1.710
16.700	19.633	0.517	4.912	9.254	1.892	18.340	20.788	0.430	5.851	10.057	1.776	19.980	21.434	0.607	3.977	10.760	1.984	21.620	102.737	1.211	0.543	11.441	1.844	23.260	144.850	1.155	2.332	12.732	1.755
16.720	19.556	0.556	4.954	9.250	1.943	18.360	21.515	0.447	5.981	10.062	1.909	20.000	19.870	0.591	3.665	10.767	1.855	21.640	104.421	1.263	0.435	11.429	1.937	23.280	142.487	1.200	2.524	12.744	1.815
16.740	19.700	0.593	5.120	9.258	2.063	18.380	21.076	0.531	5.899	10.066	1.858	20.020	18.887	0.609	3.556	10.787	1.886	21.660	106.433	1.239	0.243	11.459	1.722	23.300	139.901	1.231	2.613	12.763	1.794
16.760	20.062	0.620	5.558	9.264	2.047	18.400	20.857	0.583	5.648	10.081	1.789	20.040	18.195	0.611	3.018	10.788	1.804	21.680	114.910	1.246	0.297	11.470	1.669	23.320	140.073	1.221	3.034	12.772	1.808
16.780	20.206	0.621	5.780	9.269	1.894	18.420	20.528	0.637	5.323	10.098	1.987	20.060	18.194	0.598	3.600	10.801	1.907	21.700	118.683	1.233	0.535	11.466	1.882	23.340	141.641	1.208	3.318	12.789	1.670
16.800	20.675	0.608	5.788	9.267	1.992	18.440	20.490	0.700	5.223	10.091	1.913	20.080	17.794	0.566	4.080	10.823	1.817	21.720	118.307	1.181	0.583	11.493	1.659	23.360	142.251	1.200	2.563	12.813	1.761
16.820	21.873	0.583	5.592	9.281	1.890	18.460	19.979	0.755	5.023	10.095	1.997	20.100	16.226	0.527	4.642	10.813	1.903	21.740	118.150	1.161	0.832	11.504	2.281	23.380	142.019	1.209	2.115	12.817	1.677
16.840	22.854	0.569	5.426	9.281	1.793	18.480	19.758	0.791	4.895	10.090	1.794	20.120	16.733	0.490	5.438	10.833	1.928	21.760	114.649	0.996	0.917	11.512	1.740	23.400	140.938	1.178	1.826	12.836	1.916
16.860	22.669	0.597	5.027	9.294	1.996	18.500	19.829	0.805	4.939	10.102	1.752	20.140	18.258	0.422	5.958	10.840	1.804	21.780	106.223	0.898	0.675	11.532	1.893	23.420	137.030	1.130	1.647	12.857	1.635
16.880	22.848	0.678	4.984	9.295	1.996	18.520	20.404	0.785	5.099	10.122	1.991	20.160	18.144	0.335	5.452	10.827	2.021	21.800	101.652	0.921	0.730	11.550	1.746	23.440	131.797	1.104	1.496	12.868	1.806
16.900	22.883	0.772	4.949	9.307	1.804	18.540	20.432	0.781	5.169	10.133	1.755	20.180	18.614	0.285	5.608	10.848	1.694	21.820	97.115	0.976	0.726	11.567	1.792	23.460	127.188	1.087	1.370	12.894	1.797
16.920	22.590	0.894	4.966	9.309	2.073	18.560	20.354	0.774	5.270	10.148	2.003	20.200	18.974	0.234	5.544	10.859	1.915	21.840	95.226	0.992	0.923	11.577	1.749	23.480	120.155	1.120	1.044	12.894	1.831
16.940	22.951	0.974	4.992	9.303	1.802	18.580	20.423	0.747	5.402	10.155	1.844	20.220	18.862	0.255	5.703	10.893	1.767	21.860	96.600	1.011	1.451	11.591	1.776	23.500	112.280	1.150	0.694	12.916	1.776
16.960	22.803	1.024	4.916	9.316	2.163	18.600	20.640	0.722	5.608	10.158	1.997	20.240	19.438	0.255	5.927	10.901	1.956	21.880	101.207	1.118	2.216	11.610	1.776	23.520	106.056	1.157	0.516	12.932	1.647
16.980	18.976	0.851	4.158	9.322	1.861	18.620	20.565	0.702	5.585	10.175	1.852	20.260	20.017	0.255	6.287	10.908	1.773	21.900	105.002	1.152	2.737	11.618	1.776	23.540	109.493	1.227	0.912	12.962	1.748
17.000	20.075	1.018	4.657	9.385	1.857	18.640	20.525	0.683	5.669	10.186	1.736	20.280	19.760	0.271	6.334	10.906	1.995	21.920	108.030	1.117	3.360	11.624	1.776	23.560	118.110	1.277	1.681	12.984	1.701
17.020	18.804	1.019	4.148	9.397	2.050	18.660	20.597	0.678	5.727	10.189	1.884	20.300	20.706	0.236	6.691	10.920	1.874	21.940	107.454	0.931	3.512	11.645	1.934	23.580	123.824	1.252	2.069	13.000	1.844
17.040	17.787	0.987	3.664	9.416	1.768	18.680	21.247	0.659	5.785	10.193	1.896	20.320	20.998	0.233	6.843	10.933	1.874	21.960	106.846	0.892	2.868	11.655	1.763	23.600	123.662	1.264	1.663	13.003	1.700
17.060	16.150	0.979	3.244	9.435	2.053	18.700	21.569	0.646	5.783	10.187	1.779	20.340	25.372	0.217	6.200	10.952	1.874	21.980	106.052	0.833	2.168	11.678	1.846	23.620	120.453	1.200	1.276	13.033	1.856
17.080	14.585	0.954	2.930	9.448	1.864	18.720	21.597	0.649	5.793	10.208	2.133	20.360	32.436	0.258	2.741	10.945	1.726	22.000	104.381	0.839	1.844	11.681	1.877	23.640	113.133	0.973	0.822	13.055	1.719
17.100	12.836	0.890	2.616	9.467	1.970	18.740	21.879	0.646	5.808	10.214	1.820	20.380	34.112	0.396	4.040	10.960	1.737	22.020	104.381	0.839	1.844	11.802	1.850	23.660	113.133	0.973	0.822	13.055	1.762
17.120	11.888	0.816	2.463	9.502	1.980	18.760	22.344	0.659	5.783	10.223	2.065	20.400	40.591	0.480	5.975	10.991	1.839	22.040	101.751	0.925	2.493	11.824	1.789	23.680	114.209	0.973	1.280	13.075	1.642
17.140	12.174	0.740	2.518	9.512	2.205	18.780	22.118	0.686	5.746	10.223	1.816	20.420	55.698	0.589	6.077	10.991	1.697	22.060	100.394	0.923	0.078	11.834	1.687	23.700	124.847	1.016	2.465	13.097	1.711
17.160	12.931	0.661	2.782	9.533	1.829	18.800	22.005	0.709	5.666	10.226	1.815	20.440	76.626	0.672	3.668	11.026	2.037	22.080	98.630	0.939	0.053	11.840	1.891	23.720	130.748	1.056	2.328	13.075	1.718
17.180	13.293	0.607	3.084	9.544	1.777	18.820	22.655	0.749	6.066	10.238	1.830	20.460	94.271	0.715	2.124	11.020	1.814	22.100	96.278	0.948	0.066	11.862	1.782	23.740	136.203	1.076	2.038	13.091	1.816
17.200	13.396	0.541	3.470	9.543	1.990	18.840	24.689	0.727	6.545	10.236	1.944	20.480	103.745	0.722	1.901	11.024	1.876	22.120	94.732	0.928	0.116	11.893	1.966	23.760	139.458	0.995	1.905	13.088	1.923
17.220	14.118	0.503	3.830	9.550	1.954	18.860	25.050	0.744	6.721	10.256	1.944	20.500	104.551	0.566	1.706	11.045	1.730	22.140	92.892	0.889	0.140	11.890	1.680	23.780	140.363	0.955	1.712	13.077	1.892
17.240	15.752	0.468	4.360	9.580	1.783	18.880	25.045	0.757	6.972	10.250	1.944	20.520	97.422	0.481	1.402	11.041	1.889	22.160	91.123	0.870	0.219	11.919	1.994	23.800	144.137	0.979	2.230	13.088	1.748
17.260	20.481	0.440	6.006	9.568	2.042	18.900	24.640	0.737	6.843	10.264	1.944	20.540	84.580	0.501	0.671	11.046	1.727	22.180	90.638	0.853	0.327	11.920	1.740	23.820	150.188	1.033	2.780	13.091	1.759
17.280	24.992	0.414	7.584	9.568	1.921	18.920	23.507	0.716	6.300	10.262	2.025	20.560	70.294	0.583	0.227	11.041	2.007	22.200	91.104	0.890	0.509	11.956	1.822	23.840	157.745	1.086	2.552	13.091	1.663
17.300	26.226	0.430	7.291	9.568	1.886	18.940	23.283	0.729	6.134	10.271	1.798	20.580	58.490	0.672	0.227	11.054	1.712	22.220	89.366	0.932	0.485	11.961	1.756	23.860	161.776	1.126	2.148	13.085	1.813
17.320	22.655	0.485	5.681	9.574	2.008	18.960	23.283	0.729	6.134	10.328	1.978	20.600	50.868	0.737	0.335	11.056	1.919	22.240	86.891	0.920	0.479	11.973	1.807	23.880	164.745	1.153	1.925	13.089	1.741
17.340	20.397	0.481	5.013	9.579	1.760	18.980	23.307	0.693	7.905	10.327	1.899	20.620	47.620	0.801	0.291	11.041	1.863	22.260	81.580	0.837	0.333	11.994	1.826	23.900	169.182	1.204	1.949	13.099	1.741
17.360	19.267	0.480	4.935	9.564	1.966	19.000	24.436	0.715	6.371	10.314	1.867	20.640	43.314	0.903	0.331	11.037	1.873	22.280	75.171	0.850	0.172	11.994	1.732	23.920	173.439	1.139	1.904	13.094	1.741
17.380	20.176	0.464	5.145	9.584	1.892	19.020	25.017	0.713	6.067	10.322	1.977	20.660	40.027	0.978	0.341	11.038	1.739	22.300	71.249	0.891	0.169	12.006	1.887	23.940	177.807	1.113	1.769	13.113	1.668
17.400	20.903	0.470	5.432	9.576	1.858	19.040	26.292	0.740	6.118	10.334	1.759	20.680	37.282	1.005	0.303	11.049	1.812	22.320	75.214	0.940	0.756	12.023	1.713	23.960	182.432	1.108	2.095	13.110	1.891
17.420	23.376	0.479	6.191	9.576	2.017	19.060	26.182	0.796	6.477	10.331	2.029	20.700	35.553	0.992	0.592	11.078	1.841	22.340	92.616	1.022	2.397	12.036	1.895	23.980	191.169	1.166	2.803	13.125	1.719
17.440	25.232	0.511	6.788	9.596	1.921	19.080	25.268	0.816	6.572	10.353	1.818	20.720	33.825	0.922	0.616	11.080	1.715	22.360	105.417	1.015	3.738	12.032	1.633	24.000	200.754	1.230	3.456	13.135	1.858
17.460	26.358	0.524	6.882	9.614	2.028	19.100	24.389	0.813	6.015	10.343	1.797	20.740	31.224	0.873	0.830	11.089	2.190	22.380	109.039	0.975	3.975	12.055	1.828	24.020	210.042	1.279	3.953	13.135	1.795
17.480	24.644	0.558	6.303	9.599	1.848	19.120	22.673	0.841	5.389	10.353	2.035	20.760	29.640	0.783	2.293	11.094	2.190	22.400	112.218	0.918	4.507	12.060	1.761	24.040	214.626	1.320	2.470	13.163	1.774
17.500	23.405	0.561	6.217	9.613	1.780	19.140	20.374	0.869	4.954	10.360	1.911	20.780	33.156	0.686	3.832	11.098	2.190	22.420	113.416	0.832	4.757	12.084	1.795	24.060	214.626	1.320	0.838	13.289	1.697
17.520	23.185	0.525	6.118	9.631	1.904	19.160	18.622	0.830	4.377	10.363	1.972	20.800	39.294	0.677	5.138	11.129	1.830	22.440	114.612	0.752	4.947	12.098	1.813	24.080	200.729	1.320	2.407	13.301	1.843
17.540	21.983	0.515	5.690	9.624	1.916	19.180	16.905	0.812	3.865	10.375	1.807	20.820	46.305	0.744	6.524	11.141	1.830	22.460	116.841	0.675	5.452	12.114	1.846	24.100	212.965	1.397	1.686	13.297	1.687
17.560	19.870	0.503	5.109	9.659	1.909	19.200	16.244	0.780	3.871	10.383	2.208	20.840	55.357	0.782	8.212	11.161	1.784	22.480	114.810	0.640	5.161	12.123	1.794	24.120	213.852	1.439	1.944	13.319	1.830
17.580	18.451	0.486	4.845	9.651	1.962	19.220	16.418	0.700	4.466	10.383	1.612	20.860	63.668	0.768	9.755	11.172	1.719	22.500	112.560	0.651	3.012	12.131	1.731	24.140	215.726	1.534	2.437	13.332	1.740
17.600	18.815	0.451	4.974	9.664	2.022	19.240	16.406	0.578	4.633	10.393	1.847	20.880	70.050	0.658	11.021	11.182	1.893	22.520	110.858	0.645	2.652	12.153	1.775	24.160	219.659	1.652	1.253	13.343	1.731
17.620	18.671	0.420	5.091	9.673	1.748	19.260	16.323	0.501	4.569	10.394	1.766	20.900	84.066	0.570	13.864	11.199	1.893	22.540	110.410	0.742	2.748	12.161	1.770	24.180	223.789	1.711	1.636	13.335	1.905
17.640	18.234	0.388	5.039	9.694	2.004	19.280	15.690	0.429	4.581	10.404	2.033	20.920	100.786	0.660	13.624	11.202	1.893	22.560	110.179	0.841	2.980	12.180	1.845	24.200	225.407	1.735	1.574	13.352	1.637
17.660	17.799	0.372	4.838	9.706	1.758	19.300	16.518	0.348	4.905	10.407	1.894	20.940	111.426	0.745	7.412	11.216	1.937	22.580	110.682	0.869	3.007	12.196	1.679	24.220	221.891	1.793	1.689	13.346	1.772
17.680	16.853	0.388	4.563	9.722	1.948	19.320	18.148	0.274	5.647	10.409	1.913	20.960	114.943	0.866	3.123	11.218	1.874	22.600	111.627	0.883	3.049	12.203	1.904	24.240	214.887	1.851	1.551	13.367	1.671
17.700	15.981	0.389	4.416	9.714	1.948	19.340	21.017	0.218	6.692	10.422	1.818	20.980	115.853	0.964	2.008	11.230	1.854	22.620	113.749	0.871	3.053	12.221	1.707	24.260	205.247	1.893	1.260	13.374	1.671
17.720	15.619	0.374	4.372	9.738	1.948	19.360	23.304	0.222	7.504	10.443	1.733	21.000	116.284	1.082	1.579	11.243	1.864	22.640	116.566	0.913	3.338	12.241	1.874	24.280	192.372	1.947	0.899	13.378	1.729
17.740	15.329	0.359	4.313	9.741	1.979	19.380	24.500	0.258	7.933	10.454	1.944	21.020	115.622	1.197	4.764	11.233	1.802	22.660	118.869	0.947	3.400	12.260	1.754	24.300	183.169	1.994	0.803	13.369	1.808
17.760	15.404	0.364	4.269	9.757	1.909	19.400	25.480	0.288	8.087	10.458	1.860	21.040	123.299	1.096	2.426	11.242	1.926	22.680	118.820	0.934	3.018	12.284	1.687	24.320	175.578	2.028	0.758	13.376	1.657
17.780	15.260	0.375	4.126	9.774	1.917	19.420	25.442	0.316	7.903	10.475	1.842	21.060	119.700	1.125	1.504	11.244	1.719	22.700	117.485	0.924	2.965	12.303	1.793	24.340	170.742	2.015	0.796	13.381	1.895
17.800	14.824	0.394	3.976	9.786	1.958	19.440	24.021	0.420	7.324	10.478	2.033	21.080	110.663	1.119	0.722	11.276	1.990	22.720	118.354	0.909	3.154	12.320	1.659	24.360	165.719	2.011	0.729	13.385	1.640
17.820	14.170	0.421	3.855	9.801	1.767	19.460	23.112	0.499	7.088	10.489	1.779	21.100	100.963	1.051	0.327	11.281	1.758	22.740	120.692	0.913	3.362	12.329	2.083	24.380	163.846	1.953	0.890	13.377	1.741
17.840	14.391	0.427	3.880	9.798	1.960	19.480	22.422	0.587	6.981	10.494	2.012	21.120	91.668	1.143	0.003	11.300	1.954	22.760	123.469	0.960	3.014	12.354	1.765	24.400	165.393	1.850	0.773	13.380	1.743
17.860	14.101	0.440	3.800	9.811	1.839	19.500	21.950	0.662	6.903	10.514	1.691	21.140	82.287	1.285	0.247	11.307	1.780	22.780	127.058	0.959	2.655	12.364	1.832	24.420	167.989	1.554	2.626	13.439	1.837
17.880	13.884	0.455	3.708	9.837	1.839	19.520	21.622	0.672	6.816	10.525	1.934	21.160	88.539	1.479	0.403	11.312	2.002	22.800	130.935	0.986	2.820	12.370	1.792	24.440	172.765	1.433	2.742	13.450	1.651
17.900	13.702	0.459	3.709	9.842	1.839	19.540	21.259	0.691	6.856	10.539	1.846	21.180	90.701	2.003	0.990	11.309	1.788	22.820	136.430	0.974	3.101	12.403	1.792	24.460	175.520	1.367	2.809	13.459	1.651
17.920	14.211	0.444	3.775	9.842	1.909	19.560	18.420	0.694	5.364	10.533	1.813	21.200	73.713	2.026	0.541	11.268	1.842	22.840	140.568	0.967	3.550	12.414	1.792	24.480	179.963	1.305	1.031	13.461	1.730
17.940	14.320	0.429	3.767	9.854	1.911	19.580	16.853	0.672	4.814	10.543	1.979	21.220	62.403	1.416	0.352	11.227	1.792	22.860	143.787	0.998	3.859	12.413	1.766	24.500	182.828	1.282	0.535	13.466	1.811
17.960	14.321	0.436	3.732	9.877	1.954	19.600	15.613	0.646	4.472	10.561	1.835	21.240	44.156	1.514	0.506	11.251	1.823	22.880	144.546	1.034	3.650	12.424	1.798	24.520	185.618	1.341	0.880	13.483	1.628
17.980	14.321	0.436	3.199	9.906	2.001	19.620	14.554	0.622	4.392	10.568	1.932	21.260	29.938	1.347	0.442	11.293	1.834	22.900	142.917	1.059	3.248	12.446	1.798	24.540	186.753	1.396	1.096	13.471	1.740
18.000	14.241	0.459	4.072	9.911	2.003	19.640	14.877	0.564	4.512	10.586	1.781	21.280	22.631	1.162	2.063	11.268	1.823	22.920	140.921	1.101	3.187	12.449	1.798	24.560	188.362	1.454	1.324	13.486	1.662
18.020	14.754	0.450	4.157	9.912	1.815	19.660	14.803	0.542	4.532	10.592	1.777	21.300	20.787	0.921	3.966	11.271	1.805	22.940	137.601	1.145	3.075	12.441	1.808	24.580	190.555	1.480	1.611	13.484	1.751
18.040	14.246	0.454	4.073	9.926	1.969	19.680	15.053	0.535	4.598	10.604	1.893	21.320	24.951	0.646	7.579	11.268	1.835	22.960	134.210	1.178	2.959	12.456	1.789	24.600	193.920	1.483	1.872	13.489	1.753

Geo.Fe.
INDAGINI GEOLOGICHE

Committente: Geogroup
Cantiere: Medolla (MO)
Data: 05/07/2021

ID Prova: SCPTU 7
Profondita falda: a mt 2.10 da p.c.
Preforo: -

Profondità massima raggiunta: 30.30 mt
Punta sismica: Tecnopenta CPLSD
RIF. 89/21GF

Prova eseguita da:
GEO.FE. S.n.c.
via dell'Artigianato ,3 44030 - Ro Ferrarese (FE)
tel 3383646278 - info@geofe.it - www.geofe.it
Responsabile dati: Dott.Geol.Zanella Fabio
Responsabile cantiere: Sig. Mangherini Alberto

Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz
metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec
24.620	197.245	1.534	1.787	13.501	1.808	26.260	0.000	0.000	0.000	0.000	0.000	27.900	0.000	0.000	0.000	0.000	0.000	29.540	0.000	0.000	0.000	0.000	0.000						
24.640	200.680	1.569	1.723	13.498	1.703	26.280	0.000	0.000	0.000	0.000	0.000	27.920	0.000	0.000	0.000	0.000	0.000	29.560	0.000	0.000	0.000	0.000	0.000						
24.660	206.532	1.582	2.310	13.519	1.745	26.300	0.000	0.000	0.000	0.000	0.000	27.940	0.000	0.000	0.000	0.000	0.000	29.580	0.000	0.000	0.000	0.000	0.000						
24.680	210.550	1.594	2.733	13.494	1.650	26.320	0.000	0.000	0.000	0.000	0.000	27.960	0.000	0.000	0.000	0.000	0.000	29.600	0.000	0.000	0.000	0.000	0.000						
24.700	212.182	1.594	2.247	13.500	1.759	26.340	0.000	0.000	0.000	0.000	0.000	27.980	0.000	0.000	0.000	0.000	0.000	29.620	0.000	0.000	0.000	0.000	0.000						
24.720	212.565	1.609	2.952	13.506	1.648	26.360	0.000	0.000	0.000	0.000	0.000	28.000	0.000	0.000	0.000	0.000	0.000	29.640	0.000	0.000	0.000	0.000	0.000						
24.740	213.131	1.647	3.625	13.499	1.803	26.380	0.000	0.000	0.000	0.000	0.000	28.020	0.000	0.000	0.000	0.000	0.000	29.660	0.000	0.000	0.000	0.000	0.000						
24.760	215.168	1.710	4.670	13.500	1.870	26.400	0.000	0.000	0.000	0.000	0.000	28.040	0.000	0.000	0.000	0.000	0.000	29.680	0.000	0.000	0.000	0.000	0.000						
24.780	223.058	1.745	6.248	13.508	1.777	26.420	0.000	0.000	0.000	0.000	0.000	28.060	0.000	0.000	0.000	0.000	0.000	29.700	0.000	0.000	0.000	0.000	0.000						
24.800	233.218	1.740	5.535	13.518	1.746	26.440	0.000	0.000	0.000	0.000	0.000	28.080	0.000	0.000	0.000	0.000	0.000	29.720	0.000	0.000	0.000	0.000	0.000						
24.820	239.465	1.749	4.638	13.511	1.782	26.460	0.000	0.000	0.000	0.000	0.000	28.100	0.000	0.000	0.000	0.000	0.000	29.740	0.000	0.000	0.000	0.000	0.000						
24.840	239.146	1.800	4.005	13.517	1.687	26.480	0.000	0.000	0.000	0.000	0.000	28.120	0.000	0.000	0.000	0.000	0.000	29.760	0.000	0.000	0.000	0.000	0.000						
24.860	235.687	1.847	3.653	13.508	1.638	26.500	0.000	0.000	0.000	0.000	0.000	28.140	0.000	0.000	0.000	0.000	0.000	29.780	0.000	0.000	0.000	0.000	0.000						
24.880	230.167	1.894	3.337	13.513	1.728	26.520	0.000	0.000	0.000	0.000	0.000	28.160	0.000	0.000	0.000	0.000	0.000	29.800	0.000	0.000	0.000	0.000	0.000						
24.900	224.605	1.922	3.280	13.503	1.808	26.540	0.000	0.000	0.000	0.000	0.000	28.180	0.000	0.000	0.000	0.000	0.000	29.820	0.000	0.000	0.000	0.000	0.000						
24.920	220.927	1.947	3.037	13.517	1.808	26.560	0.000	0.000	0.000	0.000	0.000	28.200	0.000	0.000	0.000	0.000	0.000	29.840	0.000	0.000	0.000	0.000	0.000						
24.940	221.982	1.961	3.218	13.514	1.818	26.580	0.000	0.000	0.000	0.000	0.000	28.220	0.000	0.000	0.000	0.000	0.000	29.860	0.000	0.000	0.000	0.000	0.000						
24.960	225.705	1.976	3.928	13.521	1.729	26.600	0.000	0.000	0.000	0.000	0.000	28.240	0.000	0.000	0.000	0.000	0.000	29.880	0.000	0.000	0.000	0.000	0.000						
24.980	227.669	1.976	3.814	13.513	1.754	26.620	0.000	0.000	0.000	0.000	0.000	28.260	0.000	0.000	0.000	0.000	0.000	29.900	0.000	0.000	0.000	0.000	0.000						
25.000	229.220	1.933	3.888	13.508	1.873	26.640	0.000	0.000	0.000	0.000	0.000	28.280	0.000	0.000	0.000	0.000	0.000	29.920	0.000	0.000	0.000	0.000	0.000						
25.020	226.896	1.922	3.566	13.510	1.748	26.660	0.000	0.000	0.000	0.000	0.000	28.300	0.000	0.000	0.000	0.000	0.000	29.940	0.000	0.000	0.000	0.000	0.000						
25.040	221.740	1.894	3.244	13.503	1.659	26.680	0.000	0.000	0.000	0.000	0.000	28.320	0.000	0.000	0.000	0.000	0.000	29.960	0.000	0.000	0.000	0.000	0.000						
25.060	221.740	1.894	0.885	13.612	1.757	26.700	0.000	0.000	0.000	0.000	0.000	28.340	0.000	0.000	0.000	0.000	0.000	29.980	0.000	0.000	0.000	0.000	0.000						
25.080	221.740	1.871	1.458	13.628	1.656	26.720	0.000	0.000	0.000	0.000	0.000	28.360	0.000	0.000	0.000	0.000	0.000	30.000	0.000	0.000	0.000	0.000	0.000						
25.100	212.943	1.831	1.860	13.622	1.896	26.740	0.000	0.000	0.000	0.000	0.000	28.380	0.000	0.000	0.000	0.000	0.000	30.020	0.000	0.000	0.000	0.000	0.000						
25.120	212.439	1.774	1.497	13.647	1.896	26.760	0.000	0.000	0.000	0.000	0.000	28.400	0.000	0.000	0.000	0.000	0.000	30.040	0.000	0.000	0.000	0.000	0.000						
25.140	208.736	1.776	1.368	13.652	1.896	26.780	0.000	0.000	0.000	0.000	0.000	28.420	0.000	0.000	0.000	0.000	0.000	30.060	0.000	0.000	0.000	0.000	0.000						
25.160	204.185	1.803	1.318	13.655	1.768	26.800	0.000	0.000	0.000	0.000	0.000	28.440	0.000	0.000	0.000	0.000	0.000	30.080	0.000	0.000	0.000	0.000	0.000						
25.180	203.154	1.798	1.562	13.659	1.969	26.820	0.000	0.000	0.000	0.000	0.000	28.460	0.000	0.000	0.000	0.000	0.000	30.100	0.000	0.000	0.000	0.000	0.000						
25.200	209.173	1.813	2.259	13.667	1.558	26.840	0.000	0.000	0.000	0.000	0.000	28.480	0.000	0.000	0.000	0.000	0.000	30.120	0.000	0.000	0.000	0.000	0.000						
25.220	220.741	1.834	3.845	13.656	1.865	26.860	0.000	0.000	0.000	0.000	0.000	28.500	0.000	0.000	0.000	0.000	0.000	30.140	0.000	0.000	0.000	0.000	0.000						
25.240	233.162	1.847	1.615	13.677	1.677	26.880	0.000	0.000	0.000	0.000	0.000	28.520	0.000	0.000	0.000	0.000	0.000	30.160	0.000	0.000	0.000	0.000	0.000						
25.260	242.295	1.873	3.145	13.672	1.808	26.900	0.000	0.000	0.000	0.000	0.000	28.540	0.000	0.000	0.000	0.000	0.000	30.180	0.000	0.000	0.000	0.000	0.000						
25.280	250.061	1.899	2.710	13.683	1.657	26.920	0.000	0.000	0.000	0.000	0.000	28.560	0.000	0.000	0.000	0.000	0.000	30.200	0.000	0.000	0.000	0.000	0.000						
25.300	254.949	1.893	3.589	13.677	1.864	26.940	0.000	0.000	0.000	0.000	0.000	28.580	0.000	0.000	0.000	0.000	0.000	30.220	0.000	0.000	0.000	0.000	0.000						
25.320	0.000	0.000	0.000	0.000	0.000	26.960	0.000	0.000	0.000	0.000	0.000	28.600	0.000	0.000	0.000	0.000	0.000	30.240	0.000	0.000	0.000	0.000	0.000						
25.340	0.000	0.000	0.000	0.000	0.000	26.980	0.000	0.000	0.000	0.000	0.000	28.620	0.000	0.000	0.000	0.000	0.000	30.260	0.000	0.000	0.000	0.000	0.000						
25.360	0.000	0.000	0.000	0.000	0.000	27.000	0.000	0.000	0.000	0.000	0.000	28.640	0.000	0.000	0.000	0.000	0.000	30.280	0.000	0.000	0.000	0.000	0.000						
25.380	0.000	0.000	0.000	0.000	0.000	27.020	0.000	0.000	0.000	0.000	0.000	28.660	0.000	0.000	0.000	0.000	0.000	30.300	0.000	0.000	0.000	0.000	0.000						
25.400	0.000	0.000	0.000	0.000	0.000	27.040	0.000	0.000	0.000	0.000	0.000	28.680	0.000	0.000	0.000	0.000	0.000												
25.420	0.000	0.000	0.000	0.000	0.000	27.060	0.000	0.000	0.000	0.000	0.000	28.700	0.000	0.000	0.000	0.000	0.000												
25.440	0.000	0.000	0.000	0.000	0.000	27.080	0.000	0.000	0.000	0.000	0.000	28.720	0.000	0.000	0.000	0.000	0.000												
25.460	0.000	0.000	0.000	0.000	0.000	27.100	0.000	0.000	0.000	0.000	0.000	28.740	0.000	0.000	0.000	0.000	0.000												
25.480	0.000	0.000	0.000	0.000	0.000	27.120	0.000	0.000	0.000	0.000	0.000	28.760	0.000	0.000	0.000	0.000	0.000												
25.500	0.000	0.000	0.000	0.000	0.000	27.140	0.000	0.000	0.000	0.000	0.000	28.780	0.000	0.000	0.000	0.000	0.000												
25.520	0.000	0.000	0.000	0.000	0.000	27.160	0.000	0.000	0.000	0.000	0.000	28.800	0.000	0.000	0.000	0.000	0.000												
25.540	0.000	0.000	0.000	0.000	0.000	27.180	0.000	0.000	0.000	0.000	0.000	28.820	0.000	0.000	0.000	0.000	0.000												
25.560	0.000	0.000	0.000	0.000	0.000	27.200	0.000	0.000	0.000	0.000	0.000	28.840	0.000	0.000	0.000	0.000	0.000												
25.580	0.000	0.000	0.000	0.000	0.000	27.220	0.000	0.000	0.000	0.000	0.000	28.860	0.000	0.000	0.000	0.000	0.000												
25.600	0.000	0.000	0.000	0.000	0.000	27.240	0.000	0.000	0.000	0.000	0.000	28.880	0.000	0.000	0.000	0.000	0.000												
25.620	0.000	0.000	0.000	0.000	0.000	27.260	0.000	0.000	0.000	0.000	0.000	28.900	0.000	0.000	0.000	0.000	0.000												
25.640	0.000	0.000	0.000	0.000	0.000	27.280	0.000	0.000	0.000	0.000	0.000	28.920	0.000	0.000	0.000	0.000	0.000												
25.660	0.000	0.000	0.000	0.000	0.000	27.300	0.000	0.000	0.000	0.000	0.000	28.940	0.000	0.000	0.000	0.000	0.000												
25.680	0.000	0.000	0.000	0.000	0.000	27.320	0.000	0.000	0.000	0.000	0.000	28.960	0.000	0.000	0.000	0.000	0.000												
25.700	0.000	0.000	0.000	0.000	0.000	27.340	0.000	0.000	0.000	0.000	0.000	28.980	0.000	0.000	0.000	0.000	0.000												
25.720	0.000	0.000	0.000	0.000	0.000	27.360	0.000	0.000	0.000	0.000	0.000	29.000	0.000	0.000	0.000	0.000	0.000												
25.740	0.000	0.000	0.000	0.000	0.000	27.380	0.000	0.000	0.000	0.000	0.000	29.020	0.000	0.000	0.000	0.000	0.000												
25.760	0.000	0.000	0.000	0.000	0.000	27.400	0.000	0.000	0.000	0.000	0.000	29.040	0.000	0.000	0.000	0.000	0.000												
25.780	0.000	0.000	0.000	0.000	0.000	27.420	0.000	0.000	0.000	0.000	0.000	29.060	0.000	0.000	0.000	0.000	0.000												
25.800	0.000	0.000	0.000	0.000	0.000	27.440	0.000	0.000	0.000	0.000	0.000	29.080	0.000	0.000	0.000	0.000	0.000												
25.820	0.000	0.000	0.000	0.000	0.000	27.460	0.000	0.000	0.000	0.000	0.000	29.100	0.000	0.000	0.000	0.000	0.000												
25.840	0.000	0.000	0.000	0.000	0.000	27.480	0.000	0.000	0.000	0.000	0.000	29.120	0.000	0.000	0.000	0.000	0.000												
25.860	0.000	0.000	0.000	0.000	0.000	27.500	0.000	0.000	0.000	0.000	0.000	29.140	0.000	0.000	0.000	0.000	0.000												
25.880	0.000	0.000	0.000	0.000	0.000	27.520	0.000	0.000	0.000	0.000	0.000	29.160	0.000	0.000	0.000	0.000	0.000												
25.900	0.000	0.000	0.000	0.000	0.000	27.540	0.000	0.000	0.000	0.000	0.000	29.180	0.000	0.000	0.000	0.000	0.000												
25.920	0.000	0.000	0.000	0.000	0.000	27.560	0.000	0.000	0.000	0.000	0.000	29.200	0.000	0.000	0.000	0.000	0.000												
25.940	0.000	0.000	0.000	0.000	0.000	27.580	0.000	0.000	0.000	0.000	0.000	29.220	0.000	0.000	0.000	0.000	0.000												
25.960	0.000	0.000	0.000	0.000	0.000	27.600	0.000	0.000	0.000	0.000	0.000	29.240	0.000	0.000	0.000	0.000	0.000												
25.980	0.000	0.000	0.000	0.000	0.000	27.620	0.000	0.000	0.000	0.000	0.000	29.260	0.000	0.000	0.000	0.000	0.000												
26.000	0.000	0.000	0.000	0.000	0.000	27.640	0.000	0.000	0.000	0.000	0.000	29.280	0.000	0.000	0.000	0.000	0.000												
26.020	0.000	0.000	0.000	0.000	0.000	27.660	0.000	0.000	0.000	0.000	0.000	29.300	0.000	0.000	0.000	0.000	0.000												
26.040	0.000	0.000	0.000	0.000	0.000	27.680	0.000	0.000	0.000	0.000	0.000	29.320	0.000	0.000	0.000	0.000	0.000												
26.060	0.000	0.000	0.000	0.000	0.000	27.700	0.000	0.000	0.000	0.000	0.000	29.340	0.000	0.000	0.000	0.000	0.000												
26.080	0.000	0.000	0.000	0.000	0.000	27.720	0.000	0.000	0.000	0.000	0.000	29.360	0.000	0.000	0.000	0.000	0.000												
26.100	0.000	0.000	0.000	0.000	0.000	27.740	0.000	0.000	0.000	0.000	0.000	29.380	0.000	0.000	0.000	0.000	0.000												
26.120	0.000	0.000	0.000	0.000	0.000	27.760	0.000	0.000	0.000	0.000	0.000	29.400	0.000	0.000	0.000	0.000	0.000												
26.140	0.000	0.000	0.000	0.000	0.000	27.780	0.000	0.000	0.000	0.000	0.000	29.420	0.000	0.000	0.000	0.000	0.000												
26.160	0.000	0.000	0.000	0.000	0.000	27.800	0.000	0.000	0.000	0.000	0.000	29.440	0.000	0.000	0.000	0.000	0.000												
26.180	0.000	0.000	0.000	0.000	0.000	27.820	0.000	0.000	0.000	0.000	0.000	29.460	0.000	0.000	0.000	0.000	0.000												
26.200	0.000	0.000	0.000	0.000	0.000	27.840	0.000	0.000	0.000	0.000	0.000	29.480	0.000	0.000	0.000	0.000	0.000												
26.220	0.000	0.000	0.000	0.000	0.000	27.860	0.000	0.000	0.000	0.000	0.000	29.500	0.000	0.000	0.000	0.000	0.000												
26.240	0.000	0.000	0.000	0.000	0.000	27.880	0.000	0.000	0.000	0.000	0.000	29.520	0.000	0.000	0.000	0.000	0.000												

Geo.Fe.
INDAGINI GEOLOGICHE

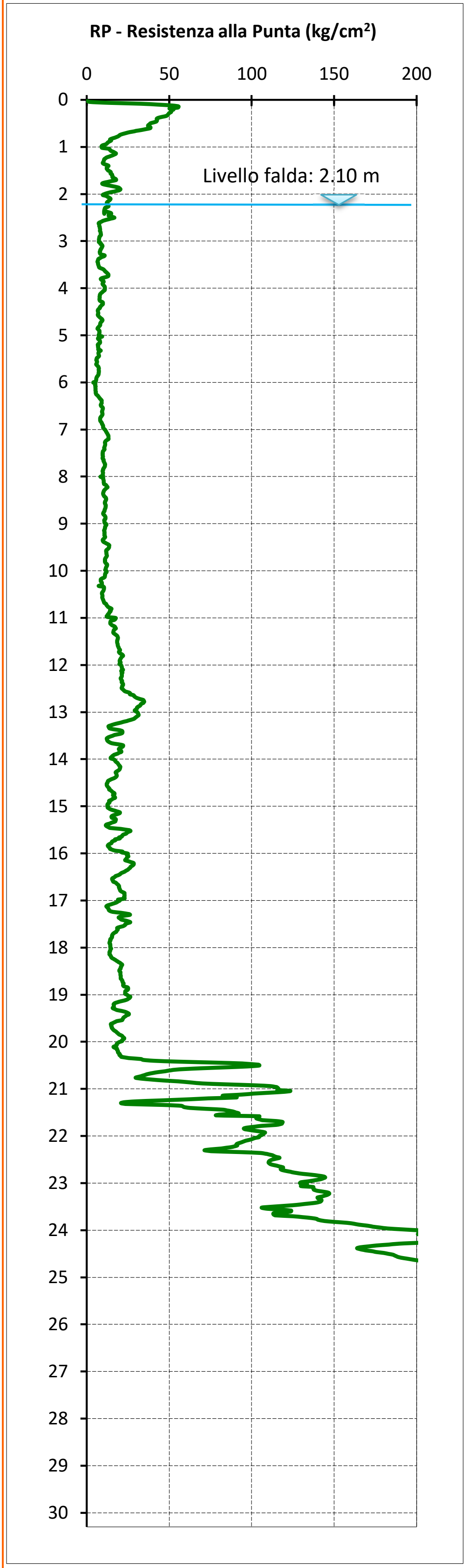
Committente: Geogroup
Cantiere: Medolla (MO)
Data: 05/07/2021

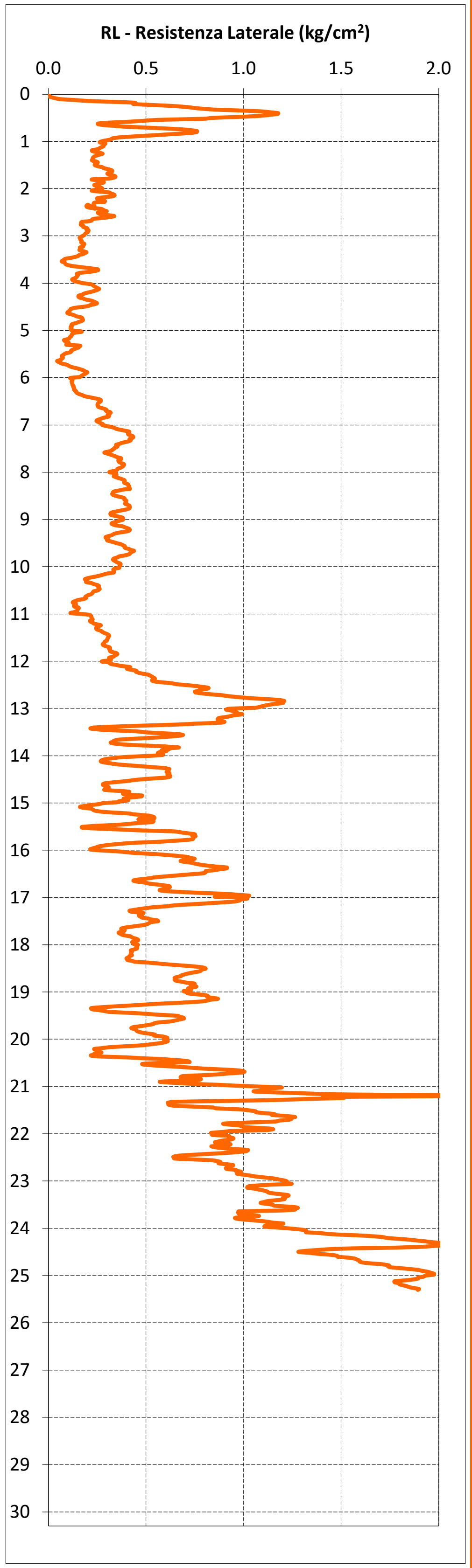
ID Prova: SCPTU 7
Profondita falda: a mt 2.10 da p.c.
Preforo: -

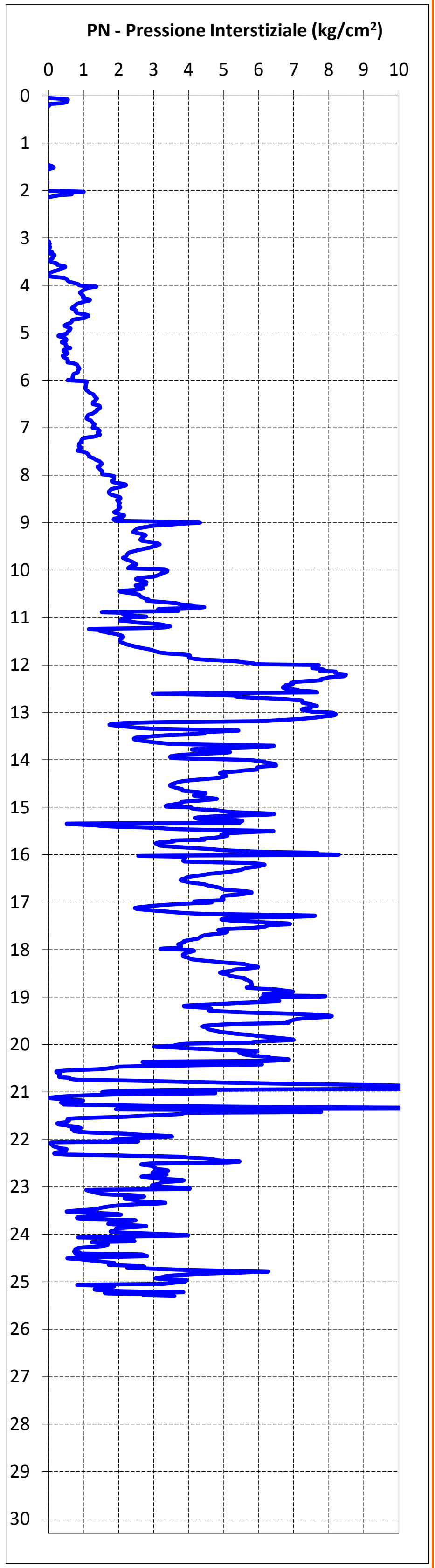
Profondità massima raggiunta: 30.30 mt
Punta sismica: Tecnopenta CPLSD
RIF. 89/21GF

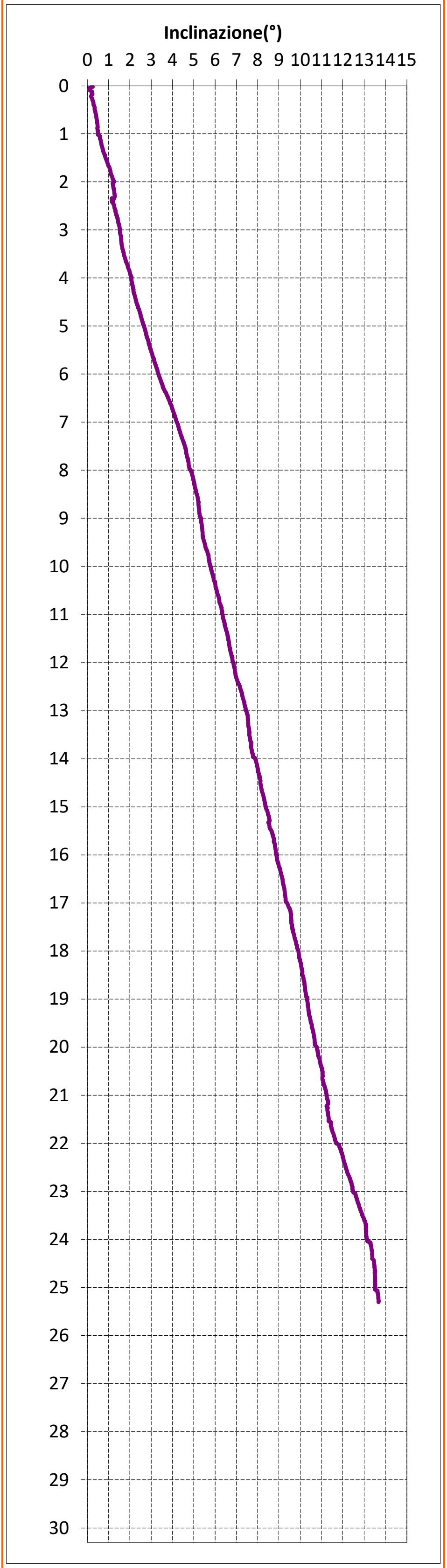
Prova eseguita da:
GEO.FE. S.n.c.
via dell'Artigianato ,3 44030 - Ro Ferrarese (FE)
tel 3383646278 - info@geofe.it - www.geofe.it
Responsabile dati: Dott.Geol.Zanella Fabio
Responsabile cantiere: Sig. Mangherini Alberto

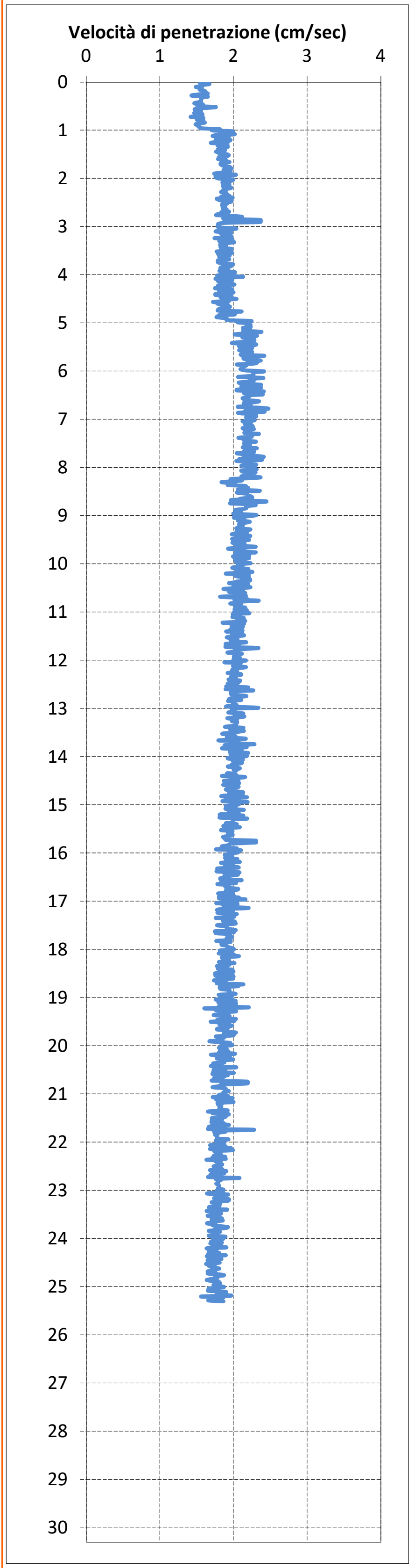
GRAFICI PROVA SCPTU 7

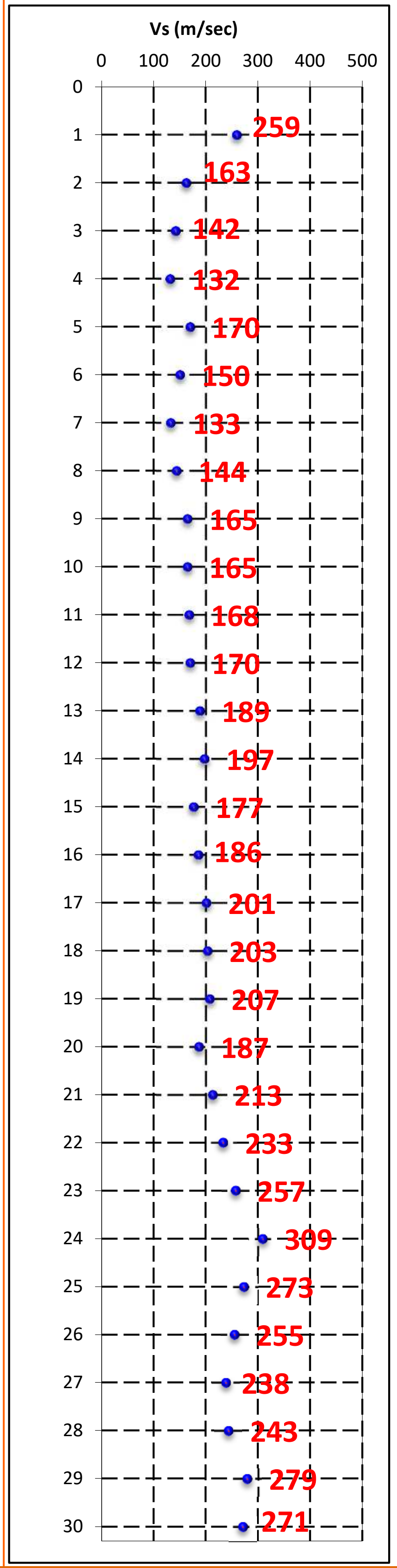

RP - Resistenza alla Punta (kg/cm²)


RL - Resistenza Laterale (kg/cm²)


PN - Pressione Interstiziale (kg/cm²)


Inclinazione(°)


Velocità di penetrazione (cm/sec)


Vs (m/sec)

Geo.Fe.
INDAGINI GEOLOGICHE

Committente: Geogroup
Cantiere: Medolla (MO)
Data: 05/07/2021

ID Prova: SCPTU 7
Profondita falda: a mt 2.10 da p.c.
Preforo: -

Profondità massima raggiunta: 30.30 mt
Punta sismica: Tecnopenta CPLSD
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GEO.FE. S.n.c.
via dell'Artigianato ,3 44030 - Ro Ferrarese (FE)
tel 3383646278 - info@geofe.it - www.geofe.it
Responsabile dati: Dott.Geol.Zanella Fabio
Responsabile cantiere: Sig. Mangherini Alberto

Vs 30 e ANAGRAFICA PROVA SCPTU 7

prof. (p)	prof.(cs)	Dist (L)	Tempo (t)	VsP	L2-L1	t2-t1	VsL			**Vs30**
m	m	m	sec	m/sec	m	sec	m/sec			
0.00	0.00	0.00	0.0000							
1.30	1.00	1.8028	0.0070	259	1.80	0.0070	259	1.00	0.00386	
2.30	2.00	2.5000	0.0112	222	0.70	0.0043	163	1.00	0.00615	
3.30	3.00	3.3541	0.0173	194	0.85	0.0060	142	1.00	0.00704	
4.30	4.00	4.2720	0.0242	176	0.92	0.0070	132	1.00	0.00760	
5.30	5.00	5.2202	0.0298	175	0.95	0.0056	170	1.00	0.00589	
6.30	6.00	6.1847	0.0362	171	0.96	0.0064	150	1.00	0.00665	
7.30	7.00	7.1589	0.0436	164	0.97	0.0073	133	1.00	0.00752	
8.30	8.00	8.1394	0.0504	162	0.98	0.0068	144	1.00	0.00695	
9.30	9.00	9.1241	0.0563	162	0.98	0.0060	165	1.00	0.00606	
10.30	10.00	10.1119	0.0623	162	0.99	0.0060	165	1.00	0.00607	
11.30	11.00	11.1018	0.0682	163	0.99	0.0059	168	1.00	0.00595	
12.30	12.00	12.0934	0.0741	163	0.99	0.0058	170	1.00	0.00589	
13.30	13.00	13.0863	0.0793	165	0.99	0.0053	189	1.00	0.00530	
14.30	14.00	14.0801	0.0844	167	0.99	0.0050	197	1.00	0.00507	
15.30	15.00	15.0748	0.0900	167	0.99	0.0056	177	1.00	0.00566	
16.30	16.00	16.0702	0.0954	169	1.00	0.0054	186	1.00	0.00539	
17.30	17.00	17.0660	0.1003	170	1.00	0.0050	201	1.00	0.00498	
18.30	18.00	18.0624	0.1052	172	1.00	0.0049	203	1.00	0.00492	
19.30	19.00	19.0591	0.1100	173	1.00	0.0048	207	1.00	0.00482	
20.30	20.00	20.0562	0.1154	174	1.00	0.0053	187	1.00	0.00535	
21.30	21.00	21.0535	0.1201	175	1.00	0.0047	213	1.00	0.00470	
22.30	22.00	22.0511	0.1243	177	1.00	0.0043	233	1.00	0.00429	
23.30	23.00	23.0489	0.1282	180	1.00	0.0039	257	1.00	0.00390	
24.30	24.00	24.0468	0.1315	183	1.00	0.0032	309	1.00	0.00324	
25.30	25.00	25.0450	0.1351	185	1.00	0.0037	273	1.00	0.00367	
26.30	26.00	26.0432	0.1390	187	1.00	0.0039	255	1.00	0.00393	
27.30	27.00	27.0416	0.1432	189	1.00	0.0042	238	1.00	0.00420	
28.30	28.00	28.0401	0.1473	190	1.00	0.0041	243	1.00	0.00411	
29.30	29.00	29.0388	0.1509	192	1.00	0.0036	279	1.00	0.00358	
30.30	30.00	30.0375	0.1546	194	1.00	0.0037	271	1.00	0.00369	
								30.00	0.15642	**191.8**

prof.(cs): profondità cono sismico
prof. (p): profondità piezocono
prof. (p): profondità piezocono
D1: distanza fra la sorgente del rumore S - geofono triassiale (L)
Tempo (t): tempo d'arrivo dell'onda a S
VsP: velocità del suono nel percorso fra S ed L - Vs puntuale alla profondità
VsL: Vs per ogni livello (L2 - L1)/(t2 - t1)
Nel calcolo delle Vs30 è da intendersi un possibile valore di indeterminatezza del +/- 20% del valore ricavato

$$t_{corr} = \frac{z}{r} t$$

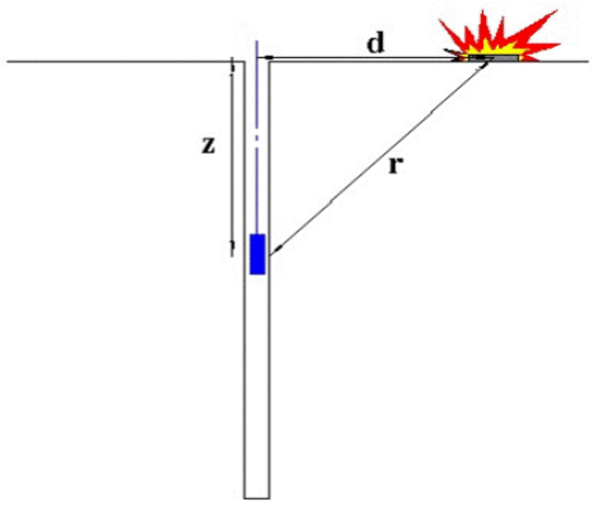

Figura 1 – Schema di down hole con metodo diretto

Geo.Fe.
INDAGINI GEOLOGICHE

Committente: Geogroup
Cantiere: Medolla (MO)
Data: 05/07/2021

ID Prova: SCPTU 8
Profondita falda: a mt 2.20 da p.c.
Preforo: -

Profondità massima raggiunta: 30.30 mt
Punta sismica: Tecnopenta CPLSD
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Prof.	RP	RL	PN	Incl.	V.avanz
metri	kg/cm²	kg/cm²	kg/cm²	Gradi °	cm/sec
0.020	0.341	0.010	23.658	0.322	1.542
0.040	5.221	0.017	77.818	0.377	1.674
0.060	36.748	0.034	132.823	0.281	1.590
0.080	52.186	0.041	115.502	0.324	1.573
0.100	56.894	0.064	81.367	0.279	1.485
0.120	56.602	0.164	74.692	0.259	1.568
0.140	53.501	0.319	57.624	0.259	1.547
0.160	44.690	0.351	36.163	0.283	1.542
0.180	43.056	0.375	35.234	0.274	1.613
0.200	40.511	0.419	32.783	0.268	1.593
0.220	38.551	0.470	31.262	0.313	1.622
0.240	38.409	0.509	30.333	0.271	1.648
0.260	38.199	0.504	29.995	0.293	1.496
0.280	39.375	0.494	32.952	0.288	1.434
0.300	38.068	0.504	30.755	0.276	1.650
0.320	38.912	0.463	32.614	0.242	1.565
0.340	39.534	0.449	34.304	0.239	1.565
0.360	37.246	0.492	27.122	0.265	1.565
0.380	35.612	0.514	24.081	0.269	1.554
0.400	36.053	0.548	23.574	0.249	1.557
0.420	38.276	0.551	26.700	0.267	1.524
0.440	37.955	0.592	24.081	0.285	1.470
0.460	39.054	0.583	24.081	0.289	1.583
0.480	38.260	0.565	22.053	0.293	1.547
0.500	38.812	0.541	23.827	0.305	1.513
0.520	39.328	0.574	24.081	0.313	1.761
0.540	39.846	0.581	24.418	0.317	1.571
0.560	38.618	0.615	19.940	0.332	1.475
0.580	37.789	0.627	16.814	0.340	1.490
0.600	34.487	0.671	10.900	0.359	1.558
0.620	32.792	0.696	16.223	0.348	1.542
0.640	33.934	0.694	15.462	0.356	1.465
0.660	34.893	0.680	13.181	0.373	1.571
0.680	34.645	0.675	10.477	0.372	1.578
0.700	33.708	0.682	5.830	0.392	1.561
0.720	33.606	0.666	4.225	0.386	1.415
0.740	32.665	0.705	2.366	0.386	1.589
0.760	33.001	0.708	2.028	0.396	1.533
0.780	34.175	0.755	3.549	0.396	1.504
0.800	33.767	0.856	-19.856	0.393	1.592
0.820	41.019	0.689	28.052	0.376	1.543
0.840	39.424	0.726	13.688	0.361	1.612
0.860	35.542	0.882	7.351	0.365	1.509
0.880	35.299	0.945	4.225	0.354	1.486
0.900	34.471	1.011	1.014	0.353	1.528
0.920	33.825	1.079	-1.436	0.352	1.524
0.940	33.506	1.086	-2.957	0.349	1.553
0.960	33.466	1.097	-18.842	0.384	1.553
0.980	33.655	1.020	-20.532	0.387	1.815
1.000	31.988	0.920	-23.067	0.397	1.710
1.020	29.701	0.885	-26.362	0.385	1.990
1.040	26.105	0.847	-30.249	0.389	1.872
1.060	22.835	0.830	-33.206	0.385	1.824
1.080	19.455	0.836	-35.741	0.386	2.019
1.100	16.696	0.832	-37.937	0.398	1.778
1.120	14.844	0.842	-39.543	0.384	1.719
1.140	13.867	0.860	-39.627	0.402	1.929
1.160	13.073	0.864	-33.459	0.400	1.879
1.180	12.239	0.800	-19.264	0.398	1.761
1.200	11.808	0.680	-13.519	0.400	1.957
1.220	11.884	0.582	-14.448	0.408	1.935
1.240	11.528	0.527	-16.730	0.420	1.834
1.260	11.025	0.488	-17.744	0.420	1.693
1.280	10.633	0.438	-16.307	0.425	1.915
1.300	10.099	0.411	-13.434	0.425	1.823
1.320	9.675	0.404	-11.914	0.434	1.788
1.340	9.361	0.385	-11.745	0.444	1.923
1.360	8.757	0.370	-13.941	0.434	1.850
1.380	8.083	0.351	-13.265	0.450	1.887
1.400	7.593	0.325	-6.759	0.453	1.785
1.420	7.393	0.297	2.366	0.457	1.886
1.440	6.905	0.243	3.464	0.457	1.764
1.460	6.638	0.217	3.464	0.476	1.873
1.480	6.367	0.192	3.295	0.483	1.802
1.500	6.097	0.168	8.111	0.485	1.918
1.520	5.942	0.133	7.942	0.498	1.935
1.540	6.404	0.115	12.927	0.503	1.905
1.560	7.961	0.107	24.165	0.518	1.798
1.580	9.225	0.098	23.236	0.530	1.870
1.600	8.563	0.106	13.265	0.535	1.789
1.620	7.646	0.118	7.689	0.557	1.899
1.640	7.237	0.111	20.447	0.572	1.882
1.660	7.885	0.098	0.313	0.585	1.944
1.680	8.611	0.111	0.378	0.600	1.831
1.700	9.477	0.131	0.362	0.615	1.822
1.720	10.089	0.136	0.338	0.605	1.840
1.740	10.013	0.137	0.255	0.625	1.871
1.760	8.984	0.147	0.155	0.638	1.947
1.780	7.920	0.164	0.082	0.653	1.963
1.800	7.291	0.155	0.080	0.655	1.974
1.820	6.996	0.127	0.169	0.677	1.868
1.840	7.023	0.116	0.322	0.688	1.875
1.860	7.305	0.104	0.416	0.703	1.961
1.880	7.847	0.107	0.507	0.709	1.849
1.900	7.987	0.101	0.467	0.717	1.743
1.920	7.900	0.111	0.468	0.739	2.031
1.940	8.658	0.116	0.491	0.750	1.907
1.960	10.437	0.118	0.540	0.754	1.759
1.980	13.355	0.202	0.215	0.747	1.759
2.000	13.035	0.234	0.127	0.736	1.802
2.020	12.752	0.262	0.075	0.751	1.996
2.040	13.162	0.256	0.061	0.742	1.982
2.060	14.262	0.257	0.058	0.750	1.946
2.080	14.707	0.278	0.040	0.745	1.851
2.100	15.479	0.298	0.022	0.744	1.873
2.120	16.323	0.300	0.008	0.752	1.945
2.140	16.694	0.302	-0.022	0.754	1.865
2.160	16.667	0.302	-0.054	0.762	1.857
2.180	16.892	0.288	-0.067	0.758	1.960
2.200	17.994	0.258	-0.078	0.778	1.966
2.220	18.365	0.241	-0.091	0.774	1.890
2.240	17.429	0.240	-0.125	0.778	1.860
2.260	16.745	0.239	-0.151	0.767	1.886
2.280	16.789	0.247	-0.159	0.773	1.831
2.300	16.727	0.251	-0.171	0.781	1.902
2.320	16.386	0.222	-0.377	0.433	1.902
2.340	15.733	0.290	-0.391	0.432	1.869
2.360	15.406	0.341	-0.396	0.453	1.946
2.380	17.009	0.358	-0.381	0.460	1.831
2.400	19.267	0.358	-0.361	0.478	1.990
2.420	21.270	0.366	-0.350	0.463	1.775
2.440	20.397	0.356	-0.359	0.469	1.798
2.460	18.903	0.333	-0.371	0.468	1.855
2.480	18.100	0.315	-0.377	0.468	1.972
2.500	17.442	0.259	-0.384	0.480	1.860
2.520	16.712	0.175	-0.389	0.485	1.916
2.540	15.656	0.146	-0.397	0.468	1.842
2.560	15.292	0.166	-0.400	0.472	1.890
2.580	15.366	0.222	-0.398	0.491	1.851
2.600	16.279	0.271	-0.389	0.482	1.855
2.620	18.865	0.331	-0.372	0.494	1.857
2.640	21.270	0.359	-0.352	0.504	1.907
2.660	24.005	0.312	-0.331	0.507	1.867
2.680	26.047	0.263	-0.316	0.515	1.942
2.700	29.218	0.206	-0.295	0.512	1.834
2.720	31.478	0.191	-0.281	0.512	1.890
2.740	33.082	0.189	-0.267	0.523	1.787
2.760	33.413	0.198	-0.264	0.530	1.767
2.780	34.036	0.204	-0.260	0.528	1.998
2.800	34.257	0.213	-0.259	0.539	2.116
2.820	34.552	0.239	-0.257	0.532	1.863
2.840	33.575	0.239	-0.263	0.528	1.868
2.860	31.325	0.260	-0.275	0.525	2.368
2.880	31.143	0.263	-0.277	0.535	2.368
2.900	28.496	0.313	-0.295	0.549	2.368
2.920	27.337	0.317	-0.299	0.542	1.870
2.940	26.725	0.292	-0.303	0.519	1.793
2.960	24.776	0.141	-0.284	0.531	1.793
2.980	23.251	0.124	-0.298	0.505	1.786
3.000	21.692	0.122	-0.293	0.498	1.786
3.020	23.188	0.144	-0.294	0.485	1.852
3.040	24.462	0.186	-0.289	0.476	2.040
3.060	31.199	0.228	-0.242	0.482	1.928
3.080	39.500	0.263	-0.185	0.477	1.827
3.100	43.541	0.256	-0.160	0.477	1.763
3.120	42.560	0.246	-0.170	0.482	1.968
3.140	38.048	0.256	-0.206	0.487	1.831
3.160	34.372	0.247	-0.232	0.491	1.872
3.180	31.425	0.198	-0.247	0.490	1.946
3.200	29.353	0.142	-0.257	0.478	1.972
3.220	28.444	0.109	-0.261	0.489	1.933
3.240	27.428	0.142	-0.266	0.489	1.743
3.260	26.120	0.164	-0.274	0.482	1.984
3.280	24.632	0.209	-0.282	0.482	1.844
3.300	23.433	0.255	-0.290	0.479	1.810
3.320	22.887	0.284	-0.291	0.479	2.007
3.340	22.016	0.271	-0.295	0.459	1.935
3.360	21.581	0.246	-0.297	0.477	1.833
3.380	20.963	0.225	-0.298	0.463	1.820
3.400	21.037	0.236	-0.299	0.465	1.898
3.420	21.949	0.264	-0.291	0.468	1.825
3.440	23.734	0.298	-0.277	0.462	1.836
3.460	24.281	0.322	-0.270	0.477	1.977
3.480	25.484	0.345	-0.262	0.484	1.856
3.500	27.559	0.349	-0.251	0.500	1.924
3.520	29.127	0.361	-0.239	0.500	1.769
3.540	29.893	0.369	-0.233	0.490	1.981
3.560	30.987	0.365	-0.225	0.482	1.796
3.580	31.788	0.345	-0.221	0.463	1.802
3.600	31.789	0.289	-0.221	0.474	1.949
3.620	30.951	0.256	-0.226	0.475	1.807
3.640	30.333	0.220	-0.230	0.477	1.891
3.660	30.659	0.186	-0.228	0.464	1.932
3.680	30.731	0.176	-0.228	0.482	1.940
3.700	30.622	0.163	-0.226	0.480	1.789
3.720	30.876	0.168	-0.225	0.484	1.789
3.740	32.078	0.190	-0.216	0.479	1.789
3.760	32.517	0.221	-0.211	0.472	1.852
3.780	34.701	0.275	-0.196	0.474	1.993
3.800	37.397	0.318	-0.173	0.459	1.950
3.820	39.728	0.371	-0.156	0.470	1.966
3.840	39.401	0.387	-0.159	0.464	1.841
3.860	36.674	0.410	-0.180	0.457	1.821
3.880	33.254	0.422	-0.205	0.462	1.927
3.900	29.214	0.506	-0.232	0.454	1.870
3.920	26.085	0.453	-0.251	0.463	1.815
3.940	24.592	0.437	-0.259	0.457	2.016
3.960	22.292	0.183	-0.251	0.438	2.016
3.980	22.986	0.106	-0.250	0.448	1.964
4.000	24.262	0.109	-0.244	0.445	1.833
4.020	26.121	0.180	-0.237	0.439	1.785
4.040	29.325	0.244	-0.216	0.450	2.133
4.060	34.678	0.310	-0.184	0.442	1.882
4.080	38.609	0.362	-0.159	0.440	1.757
4.100	40.395	0.431	-0.149	0.439	1.987
4.120	41.670	0.426	-0.138	0.429	1.792
4.140	42.836	0.425	-0.130	0.422	1.827
4.160	43.091	0.413	-0.127	0.433	1.973
4.180	42.838	0.394	-0.129	0.416	1.843
4.200	42.147	0.394	-0.135	0.421	2.014
4.220	41.019	0.395	-0.143	0.422	1.791
4.240	40.181	0.396	-0.147	0.408	1.949
4.260	38.287	0.370	-0.160	0.405	1.784
4.280	35.810	0.368	-0.175	0.413	1.755
4.300	33.552	0.362	-0.187	0.408	1.977
4.320	31.257	0.379	-0.198	0.408	1.902
4.340	29.581	0.406	-0.209	0.404	1.805
4.360	27.250	0.414	-0.219	0.400	2.000
4.380	26.555	0.425	-0.223	0.392	1.862
4.400	25.533	0.458	-0.228	0.391	1.753
4.420	25.021	0.479	-0.225	0.411	1.758
4.440	25.455	0.473	-0.215	0.392	1.975
4.460	25.889	0.484	-0.209	0.398	1.826
4.480	26.832	0.498	-0.201	0.394	1.840
4.500	30.469	0.472	-0.173	0.396	2.042
4.520	34.722	0.455	-0.139	0.406	1.867
4.540	35.848	0.467	-0.129	0.402	1.935
4.560	36.062	0.461	-0.128	0.396	1.720
4.580	33.509	0.414	-0.151	0.394	1.863
4.600	30.593	0.344	-0.171	0.389	1.781
4.620	28.443	0.311	-0.183	0.385	1.924
4.640	27.747	0.244	-0.186	0.382	1.880
4.660	28.254	0.164	-0.177	0.389	1.955
4.680	30.362	0.183	-0.159	0.384	1.893
4.700	32.144	0.215	-0.142	0.389	1.813
4.720	36.765	0.286	-0.109	0.392	1.791
4.740	41.240	0.320	-0.076	0.376	1.787
4.760	43.277	0.387	-0.060	0.378	2.110
4.780	45.933	0.376	-0.038	0.353	1.850
4.800	49.863	0.359	-0.002	0.369	1.833
4.820	52.664	0.355	0.027	0.381	2.018
4.840	56.305	0.356	0.064	0.376	1.799
4.860	58.969	0.365	0.095	0.400	1.818
4.880	62.696	0.406	0.139	0.401	1.771
4.900	63.867	0.435	0.154	0.388	1.907
4.920	63.357	0.381	0.158	0.374	1.907
4.940	60.393	0.161	0.215	0.369	1.907
4.960	58.312	0.104	0.179	0.353	2.246
4.980	56.088	0.092	0.149	0.371	2.054
5.000	51.211	0.082	0.099	0.378	2.176
5.020	47.828	0.075	0.063	0.382	2.176
5.040	42.587	0.062	0.017	0.388	2.235
5.060	38.838	0.059	0.012	0.394	2.181
5.080	35.998	0.053	0.037	0.397	2.234
5.100	34.724	0.051	0.044	0.404	2.126
5.120	34.905	0.052	0.038	0.401	2.220
5.140	36.469	0.062	0.018	0.406	2.193
5.160	39.271	0.077	0.011	0.417	2.140
5.180	41.528	0.093	0.031	0.420	2.377
5.200	45.021	0.110	0.069	0.419	2.246
5.220	48.879	0.122	0.109	0.428	2.126
5.240	53.684	0.125	0.170	0.442	2.022
5.260	57.398	0.117	0.216	0.441	2.317
5.280	58.896	0.094	0.240	0.451	2.144
5.300	57.068	0.070	0.219	0.441	2.123
5.320	52.627	0.061	0.172	0.443	2.277
5.340	49.605	0.053	0.142	0.438	2.282
5.360	31.667	0.094	0.142	0.457	2.282
5.380	46.230	0.075	0.081	0.455	2.207
5.400	44.374	0.087	0.059	0.462	2.057
5.420	43.355	0.103	0.048	0.472	1.987
5.440	43.866	0.095	0.053	0.482	2.305
5.460	45.396	0.095	0.072	0.485	2.276
5.480	48.892	0.085	0.107	0.485	2.078
5.500	51.405	0.096	0.135	0.488	2.172
5.520	51.987	0.110	0.145	0.487	2.252
5.540	49.474	0.149	0.115	0.488	2.204
5.560	45.942	0.162	0.078	0.481	2.078
5.580	43.391	0.144	0.054	0.473	2.132
5.600	41.497	0.127	0.034	0.487	2.251
5.620	37.126	0.096	0.046	0.477	2.193
5.640	31.700	0.067	0.052	0.485	2.149
5.660	23.908	0.056	0.125	0.481	2.102
5.680	18.993	0.066	0.157	0.483	2.418
5.700	14.805	0.120	0.180	0.485	2.139
5.720	12.729	0.176	0.197	0.499	2.139
5.740	9.778	0.264	0.210	0.514	2.139
5.760	9.193	0.269	0.208	0.516	2.208
5.780	8.316	0.274	0.215	0.510	2.369
5.800	7.438	0.262	0.215	0.531	2.189
5.820	6.817	0.243	0.178	0.543	2.319
5.840	6.123	0.204	0.145	0.537	2.281
5.860	5.976	0.147	0.121	0.539	2.047
5.880	5.352	0.102	0.074	0.533	2.172
5.900	5.714	0.083	0.074	0.549	2.126
5.920	5.676	0.078	0.044	0.545	2.126
5.940	8.088	0.138	0.792	0.563	2.126
5.960	7.070	0.150	0.718	0.575	2.094
5.980	6.089	0.145	0.724	0.576	2.166
6.000	5.763	0.132	0.784	0.583	2.414
6.020	5.763	0.104	0.935	0.584	2.274
6.040	6.273	0.087	1.023	0.600	2.270
6.060	6.382	0.085	1.035	0.598	2.270
6.080	6.200	0.087	1.037	0.594	2.270
6.100	5.691	0.077	1.071	0.615	2.207
6.120	5.656	0.072	1.118	0.592	2.065
6.140	5.838	0.066	1.173	0.609	2.405
6.160	6.274	0.066	1.211	0.614	2.233
6.180	6.492	0.071	1.237	0.632	2.230
6.200	6.639	0.074	1.287	0.623	2.274
6.220	6.748	0.082	1.317	0.631	2.168
6.240	7.075	0.088	1.323	0.627	2.069
6.260	7.186	0.097	1.339	0.647	2.203
6.280	6.859	0.106	1.343	0.652	2.376
6.300	6.278	0.106	1.305	0.660	2.216
6.320	5.987	0.111	1.260	0.665	2.109
6.340	5.843	0.109	1.254	0.661	2.371
6.360	5.809	0.102	1.275	0.671	2.253
6.380	5.664	0.098	1.319	0.682	2.046
6.400	5.883	0.100	1.353	0.679	2.046
6.420	6.030	0.110	1.368	0.686	2.410
6.440	6.177	0.118	1.360	0.690	2.174
6.460	6.323	0.127	1.364	0.704	2.146
6.480	6.470	0.137	1.384	0.703	2.399
6.500	6.728	0.154	1.441	0.707	2.193
6.520	7.566	0.162	1.536	0.713	2.217
6.540	8.186	0.169	1.526	0.737	2.178
6.560	8.041	0.186	1.445	0.737	2.121
6.580	7.533	0.201	1.376	0.727	2.162
6.600	7.423	0.200	1.344	0.734	2.153
6.620	7.460	0.192	1.307	0.740	2.344
6.640	7.242	0.183	1.312	0.737	2.293
6.660	7.277	0.177	1.348	0.753	2.141
6.680	7.422	0.170	1.412	0.761	2.147
6.700	7.459	0.158	1.451	0.754	2.231
6.720	7.239	0.141	1.423	0.757	2.177
6.740	6.947	0.146	1.384	0.773	2.063
6.760	6.875	0.156	1.387	0.773	2.386
6.780	6.839	0.160	1.501	0.767	2.474
6.800	7.273	0.162	1.564	0.781	2.206
6.820	6.837	0.156	1.528	0.783	2.163
6.840	6.474	0.155	1.495	0.779	2.424
6.860	6.073	0.156	1.505	0.791	2.069
6.880	6.109	0.132	1.619	0.790	2.138
6.900	6.728	0.108	1.738	0.798	2.305
6.920	7.381	0.089	1.830	0.792	2.305
6.940	8.137	0.112	2.959	0.806	2.305
6.960	8.029	0.131	2.749	0.813	2.170
6.980	7.410	0.144	2.577	0.825	2.246
7.000	6.901	0.144	2.452	0.814	2.274
7.020	6.465	0.150	2.346	0.817	2.286
7.040	6.138	0.152	2.377	0.833	2.124
7.060	6.283	0.151	2.462	0.825	2.231
7.080	6.356	0.145	2.478	0.831	2.218
7.100	6.392	0.130	2.461	0.845	2.156
7.120	6.282	0.108	2.434	0.841	2.248
7.140	6.136	0.095	2.364	0.855	2.257
7.160	6.135	0.078	2.418	0.862	2.264
7.180	6.533	0.075	2.534	0.877	2.121
7.200	6.750	0.078	2.558	0.885	2.275
7.220	6.860	0.076	2.559	0.882	2.151
7.240	6.351	0.082	2.478	0.893	2.163
7.260	6.314	0.090	2.459	0.890	2.204
7.280	6.350	0.087	2.538	0.900	2.153
7.300	6.713	0.089	2.637	0.909	2.346
7.320	7.259	0.086	2.768	0.923	2.202
7.340	7.550	0.090	2.811	0.934	2.215
7.360	7.441	0.104	2.747	0.945	2.244
7.380	7.295	0.107	2.692	0.948	2.067
7.400	7.186	0.112	2.641	0.960	2.211
7.420	6.931	0.120	2.533	0.964	2.134
7.440	6.639	0.126	2.422	0.978	2.178
7.460	6.457	0.126	2.359	0.995	2.306
7.480	6.457	0.125	2.361	1.008	2.173
7.500	6.711	0.123	2.393	1.011	2.143
7.520	6.783	0.123	2.392	1.016	2.225
7.540	6.418	0.128	2.325	1.027	2.189
7.560	6.054	0.141	2.273	1.031	2.219
7.580	5.945	0.144	2.245	1.035	2.128
7.600	6.017	0.148	2.264	1.042	2.317
7.620	6.380	0.154	2.299	1.050	2.165
7.640	6.779	0.147	2.405	1.069	2.275
7.660	6.597	0.141	2.501	1.075	2.144
7.680	6.669	0.135	2.486	1.080	2.277
7.700	6.522	0.134	2.398	1.086	2.047
7.720	6.157	0.129	2.294	1.094	2.145
7.740	5.865	0.120	2.233	1.099	2.134
7.760	5.936	0.117	2.225	1.105	2.326
7.780	5.681	0.116	2.255	1.108	2.410
7.800	5.679	0.118	2.320	1.124	2.287
7.820	5.714	0.119	2.378	1.129	2.077
7.840	5.750	0.119	2.430	1.124	2.386
7.860	5.858	0.119	2.457	1.140	2.043
7.880	5.711	0.119	2.435	1.147	2.204
7.900	5.529	0.121	2.416	1.146	2.165
7.920	5.458	0.115	3.024	1.165	2.165
7.940	5.567	0.115	2.975	1.168	2.308
7.960	5.530	0.117	2.918	1.176	2.106
7.980	5.422	0.119	2.880	1.187	2.269
8.000	5.385	0.119	2.854	1.192	2.199
8.020	5.312	0.118	2.829	1.189	2.246
8.040	5.349	0.118	2.816	1.209	2.310
8.060	5.312	0.116	2.791	1.195	2.108
8.080	5.202	0.114	2.736	1.204	2.124
8.100	5.166	0.109	2.759	1.217	2.297
8.120	5.274	0.106	2.829	1.225	2.225
8.140	5.457	0.105	2.946	1.230	2.239
8.160	5.820	0.102	3.079	1.236	2.236
8.180	6.074	0.105	3.241	1.245	2.109
8.200	6.801	0.105	3.347	1.252	2.366

Prof.: Profondità RL: - RP: Resistenza di punta - Resistenza all'attrito laterale - Incl.:clinazione - Vavanz: velocità di avanzamento della punta

Geo.Fe.
INDAGINI GEOLOGICHE

Committente: Geogroup
Cantiere: Medolla (MO)
Data: 05/07/2021

ID Prova: SCPTU 8
Profondita falda: a mt 2.20 da p.c.
Preforo: -

Profondità massima raggiunta: 30.30 mt
Punta sismica: Tecnopenta CPLSD
RIF. 89/21GF

Prova eseguita da:
GEO.FE. S.n.c.
via dell'Artigianato ,3 44030 - Ro Ferrarese (FE)
tel 3383646278 - info@geofe.it - www.geofe.it
Responsabile dati: Dott.Geol.Zanella Fabio
Responsabile cantiere: Sig. Mangherini Alberto

Prof.	RP	RL	PN	Incl.	Vavanz
metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec
8.220	7.454	0.105	3.475	1.271	2.223
8.240	29.475	0.177	5.137	1.269	1.963
8.260	124.779	0.303	4.771	1.390	2.114
8.280	209.630	0.421	4.559	1.489	2.035
8.300	215.291	0.821	3.507	1.524	1.840
8.320	246.373	1.698	3.344	1.519	1.937
8.340	257.133	1.660	2.223	1.545	2.028
8.360	256.141	2.603	0.428	1.563	1.922
8.380	143.278	2.844	0.324	1.557	2.165
8.400	54.223	3.903	0.648	1.552	2.085
8.420	22.754	3.955	0.427	1.571	2.198
8.440	14.887	3.844	0.635	1.568	2.166
8.460	5.695	3.292	2.307	1.604	2.064
8.480	5.062	2.438	2.450	1.619	2.358
8.500	4.893	1.486	2.703	1.617	2.111
8.520	4.860	1.034	2.824	1.633	2.048
8.540	4.783	0.471	2.849	1.633	2.182
8.560	5.024	0.278	2.896	1.642	2.188
8.580	5.099	0.201	2.925	1.652	2.201
8.600	5.203	0.135	2.954	1.646	2.241
8.620	5.600	0.134	2.912	1.664	2.254
8.640	5.809	0.138	2.873	1.652	2.106
8.660	5.881	0.142	2.859	1.652	2.071
8.680	5.876	0.151	2.856	1.647	1.974
8.700	5.880	0.156	2.825	1.661	2.440
8.720	5.664	0.168	2.809	1.650	2.255
8.740	5.785	0.174	2.813	1.658	1.951
8.760	5.797	0.176	2.800	1.657	2.212
8.780	5.740	0.178	2.794	1.659	2.303
8.800	6.373	0.181	2.846	1.656	2.175
8.820	7.234	0.183	3.006	1.658	2.175
8.840	8.419	0.185	3.113	1.644	2.175
8.860	7.716	0.182	2.959	1.661	2.128
8.880	8.069	0.182	2.837	1.655	2.024
8.900	8.681	0.195	2.860	1.657	2.092
8.920	9.148	0.208	2.866	1.653	2.103
8.940	9.487	0.226	1.960	1.699	2.103
8.960	9.381	0.266	1.892	1.696	2.002
8.980	8.878	0.306	1.779	1.724	2.305
9.000	7.939	0.341	2.041	1.743	2.254
9.020	7.614	0.356	2.205	1.756	2.104
9.040	7.764	0.361	2.187	1.768	2.005
9.060	7.985	0.368	2.206	1.762	2.141
9.080	7.987	0.370	2.214	1.790	2.142
9.100	7.880	0.358	2.228	1.797	2.062
9.120	7.918	0.341	2.194	1.809	2.218
9.140	8.248	0.337	2.208	1.817	2.176
9.160	8.505	0.330	2.267	1.837	2.131
9.180	8.762	0.315	2.285	1.836	2.073
9.200	8.474	0.311	2.210	1.850	2.128
9.220	8.186	0.316	2.445	1.866	2.093
9.240	8.589	0.312	3.012	1.874	2.085
9.260	8.920	0.317	4.013	1.875	2.043
9.280	9.176	0.302	3.900	1.887	2.229
9.300	9.252	0.302	3.717	1.896	2.143
9.320	9.000	0.327	3.646	1.895	2.042
9.340	8.930	0.327	3.558	1.900	2.048
9.360	9.114	0.326	3.487	1.914	2.184
9.380	9.117	0.335	3.468	1.914	1.981
9.400	9.228	0.350	3.315	1.916	2.071
9.420	8.939	0.382	3.319	1.937	2.227
9.440	9.122	0.396	3.529	1.934	2.068
9.460	9.524	0.403	3.776	1.942	2.136
9.480	10.072	0.408	3.851	1.944	1.980
9.500	10.037	0.401	3.636	1.956	2.212
9.520	10.113	0.398	2.679	1.970	2.063
9.540	10.079	0.403	1.391	1.965	2.032
9.560	9.717	0.398	1.448	1.974	1.990
9.580	9.244	0.394	1.527	1.987	2.147
9.600	8.773	0.394	1.532	1.991	2.115
9.620	8.591	0.402	1.600	2.000	2.037
9.640	8.556	0.402	1.602	2.017	2.301
9.660	8.628	0.400	1.632	2.023	2.121
9.680	8.484	0.399	1.649	2.026	1.926
9.700	8.593	0.390	1.680	2.044	2.013
9.720	8.738	0.386	1.728	2.052	2.146
9.740	8.629	0.390	1.792	2.063	2.126
9.760	8.666	0.384	1.837	2.076	2.300
9.780	9.066	0.386	1.873	2.069	2.026
9.800	9.321	0.387	1.915	2.090	2.121
9.820	9.686	0.391	1.931	2.105	2.213
9.840	9.978	0.402	1.924	2.110	1.995
9.860	10.051	0.419	1.973	2.114	2.012
9.880	10.306	0.429	1.971	2.117	2.213
9.900	10.523	0.440	1.982	2.131	2.024
9.920	10.749	0.451	1.974	2.145	2.024
9.940	10.606	0.468	1.936	2.159	2.102
9.960	10.427	0.470	1.906	2.166	2.039
9.980	10.428	0.473	1.880	2.177	2.235
10.000	10.282	0.484	1.852	2.181	2.067
10.020	10.537	0.492	1.854	2.183	2.128
10.040	10.500	0.498	1.860	2.203	2.087
10.060	10.500	0.506	1.875	2.230	2.036
10.080	9.845	0.511	1.857	2.238	1.988
10.100	9.845	0.494	1.891	2.233	2.199
10.120	9.989	0.472	1.911	2.250	2.087
10.140	10.316	0.458	1.916	2.256	2.042
10.160	10.349	0.452	1.924	2.272	2.256
10.180	10.455	0.450	1.936	2.285	2.102
10.200	10.742	0.443	1.939	2.310	1.896
10.220	10.777	0.442	1.931	2.313	2.209
10.240	10.812	0.453	1.931	2.314	2.024
10.260	10.738	0.471	1.930	2.322	2.065
10.280	10.881	0.482	1.935	2.335	2.211
10.300	11.024	0.488	1.928	2.346	2.119
10.320	10.877	0.497	1.925	2.342	2.224
10.340	10.965	0.512	1.910	2.340	2.224
10.360	11.112	0.521	1.869	2.351	2.061
10.380	10.895	0.525	1.843	2.356	2.018
10.400	10.896	0.532	1.833	2.374	1.947
10.420	11.151	0.542	1.848	2.376	2.190
10.440	11.477	0.546	1.858	2.379	2.119
10.460	11.549	0.545	1.855	2.392	2.000
10.480	11.402	0.543	1.853	2.394	2.229
10.500	11.146	0.549	1.825	2.399	2.099
10.520	11.070	0.544	1.813	2.409	1.865
10.540	10.994	0.541	1.811	2.412	2.124
10.560	10.918	0.540	1.814	2.406	2.071
10.580	10.731	0.536	1.813	2.417	1.941
10.600	10.728	0.538	1.812	2.415	2.156
10.620	10.723	0.528	1.830	2.426	2.128
10.640	11.047	0.513	1.846	2.413	2.041
10.660	11.009	0.509	1.851	2.423	2.163
10.680	11.298	0.514	1.861	2.418	1.820
10.700	11.586	0.502	1.881	2.426	2.034
10.720	11.909	0.499	1.869	2.432	2.183
10.740	11.796	0.509	1.826	2.440	2.014
10.760	11.719	0.513	1.627	2.441	2.342
10.780	11.170	0.539	1.628	2.456	2.129
10.800	11.310	0.543	1.648	2.464	2.050
10.820	11.087	0.557	1.652	2.455	1.958
10.840	10.941	0.575	1.664	2.487	2.100
10.860	11.229	0.583	1.673	2.476	2.059
10.880	11.334	0.573	1.659	2.484	2.020
10.900	11.658	0.568	1.679	2.497	2.156
10.920	12.259	0.545	1.771	2.508	2.156
10.940	12.587	0.560	1.749	2.511	2.014
10.960	12.478	0.567	1.208	2.525	2.181
10.980	12.734	0.562	1.129	2.523	2.091
11.000	12.805	0.564	1.062	2.530	2.010
11.020	13.023	0.568	1.061	2.544	2.217
11.040	12.801	0.570	0.993	2.554	1.995
11.060	12.215	0.584	0.988	2.553	2.083
11.080	11.702	0.597	0.982	2.568	2.073
11.100	11.410	0.601	1.009	2.584	1.986
11.120	11.373	0.610	1.050	2.588	2.139
11.140	11.300	0.604	1.101	2.599	2.053
11.160	11.337	0.603	1.135	2.596	2.068
11.180	11.663	0.597	1.168	2.601	2.161
11.200	11.842	0.586	1.194	2.607	2.066
11.220	11.875	0.570	1.217	2.618	1.852
11.240	12.016	0.554	1.245	2.639	2.137
11.260	12.487	0.546	1.297	2.625	2.075
11.280	12.810	0.536	1.317	2.643	1.972
11.300	12.953	0.527	1.351	2.629	2.124
11.320	12.294	0.532	1.271	2.644	2.080
11.340	12.179	0.530	1.279	2.631	2.008
11.360	12.209	0.526	1.286	2.646	1.961
11.380	12.349	0.532	1.308	2.626	2.123
11.400	12.525	0.543	1.352	2.632	1.902
11.420	12.593	0.557	1.428	2.638	2.094
11.440	12.628	0.576	1.512	2.628	2.119
11.460	12.954	0.582	1.537	2.626	1.980
11.480	13.170	0.592	1.552	2.634	2.142
11.500	13.422	0.591	1.554	2.629	2.031
11.520	13.709	0.601	1.563	2.643	1.909
11.540	13.704	0.616	1.571	2.645	2.049
11.560	13.955	0.626	1.580	2.648	2.049
11.580	14.096	0.637	1.608	2.660	1.961
11.600	13.912	0.655	1.605	2.669	1.978
11.620	14.237	0.659	1.614	2.676	2.173
11.640	14.161	0.657	1.614	2.684	2.036
11.660	14.413	0.655	1.629	2.689	1.894
11.680	14.848	0.651	1.677	2.684	2.074
11.700	14.881	0.640	1.701	2.683	1.944
11.720	14.696	0.634	1.736	2.691	1.896
11.740	15.421	0.620	1.780	2.684	2.328
11.760	16.365	0.617	1.759	2.681	2.192
11.780	16.507	0.636	1.729	2.654	2.045
11.800	15.486	0.672	1.689	2.662	2.025
11.820	15.044	0.678	1.645	2.666	1.991
11.840	13.804	0.706	1.587	2.654	1.921
11.860	13.254	0.717	1.562	2.649	2.109
11.880	12.777	0.717	1.531	2.634	2.053
11.900	11.950	0.641	1.777	2.636	2.053
11.920	12.352	0.631	1.780	2.641	2.004
11.940	12.279	0.591	1.805	2.648	2.084
11.960	11.877	0.539	1.851	2.645	2.063
11.980	11.622	0.485	1.915	2.658	2.002
12.000	11.659	0.437	1.961	2.664	2.169
12.020	11.623	0.395	1.984	2.666	2.108
12.040	11.041	0.374	2.034	2.667	1.877
12.060	10.895	0.360	2.052	2.672	2.097
12.080	10.168	0.357	1.989	2.678	2.011
12.100	9.295	0.349	1.924	2.683	2.038
12.120	8.459	0.341	1.849	2.688	1.997
12.140	7.913	0.342	1.800	2.698	2.169
12.160	7.588	0.341	1.758	2.699	2.073
12.180	7.625	0.324	1.747	2.696	1.997
12.200	8.500	0.306	1.826	2.710	1.982
12.220	11.740	0.281	2.241	2.695	1.983
12.240	14.581	0.267	2.618	2.672	2.049
12.260	13.236	0.261	2.490	2.664	1.919
12.280	11.673	0.245	2.311	2.656	2.097
12.300	11.310	0.212	2.674	2.673	2.101
12.320	12.804	0.155	2.950	2.683	1.979
12.340	12.226	0.163	3.126	2.701	1.968
12.360	13.540	0.169	3.354	2.706	2.010
12.380	14.745	0.153	3.589	2.738	2.034
12.400	14.785	0.152	3.563	2.782	1.934
12.420	15.880	0.147	4.030	2.811	2.089
12.440	16.905	0.126	4.442	2.835	2.071
12.460	17.565	0.138	4.556	2.860	2.067
12.480	18.808	0.138	4.744	2.881	1.925
12.500	21.107	0.131	4.272	2.890	1.976
12.520	16.744	0.122	4.351	2.912	2.047
12.540	15.186	0.123	4.576	2.928	1.902
12.560	14.027	0.130	4.312	2.946	2.200
12.580	13.814	0.137	4.426	2.976	1.952
12.600	14.002	0.141	4.613	2.995	1.900
12.620	14.153	0.142	4.744	3.002	2.268
12.640	14.596	0.144	4.792	3.015	1.966
12.660	14.603	0.154	4.735	3.040	1.966
12.680	14.603	0.154	4.735	3.040	1.966
12.700	14.719	0.156	4.723	3.081	1.966
12.720	15.051	0.166	4.657	3.103	2.071
12.740	15.565	0.178	4.641	3.123	2.176
12.760	15.933	0.183	4.600	3.145	2.055
12.780	16.813	0.185	4.590	3.163	1.995
12.800	16.964	0.188	4.582	3.191	1.947
12.820	17.442	0.197	4.621	3.205	2.107
12.840	18.211	0.196	4.690	3.226	1.928
12.860	18.979	0.203	4.803	3.236	1.997
12.880	19.165	0.220	4.799	3.249	1.997
12.900	25.279	0.351	4.081	3.276	1.997
12.920	22.332	0.373	2.430	3.289	2.043
12.940	19.858	0.345	2.573	3.302	1.997
12.960	20.695	0.325	2.956	3.322	1.907
12.980	24.301	0.326	3.647	3.327	2.337
13.000	36.825	0.307	3.006	3.335	2.010
13.020	40.540	0.363	3.006	3.370	1.976
13.040	37.224	0.370	1.776	3.352	2.007
13.060	37.074	0.388	1.661	3.325	2.012
13.080	27.207	0.478	1.340	3.353	1.934
13.100	20.508	0.336	2.556	3.371	2.130
13.120	21.271	0.309	4.082	3.398	2.047
13.140	21.997	0.311	4.692	3.405	2.019
13.160	22.614	0.331	5.174	3.402	2.146
13.180	23.959	0.345	5.644	3.411	2.047
13.200	25.812	0.346	6.141	3.424	1.916
13.220	26.903	0.339	6.460	3.424	2.052
13.240	27.121	0.346	6.484	3.424	1.980
13.260	26.934	0.391	6.394	3.429	1.980
13.280	27.366	0.412	6.488	3.453	2.051
13.300	30.854	0.450	7.050	3.473	2.034
13.320	36.388	0.449	7.347	3.484	2.034
13.340	33.507	0.479	5.658	3.487	2.034
13.360	32.996	0.470	5.333	3.483	1.978
13.380	31.791	0.541	5.664	3.486	1.888
13.400	30.114	0.509	4.817	3.497	2.135
13.420	28.473	0.555	8.217	3.503	1.952
13.440	28.578	0.559	7.049	3.511	1.970
13.460	28.939	0.577	7.466	3.516	2.140
13.480	28.496	0.584	8.019	3.521	2.067
13.500	28.415	0.591	7.691	3.531	1.993
13.520	27.351	0.585	7.173	3.530	1.846
13.540	25.668	0.577	6.744	3.538	1.980
13.560	25.042	0.510	6.620	3.553	1.999
13.580	24.671	0.504	6.556	3.554	2.026
13.600	24.373	0.488	6.434	3.561	1.911
13.620	23.747	0.487	6.309	3.581	2.165
13.640	22.212	0.495	5.948	3.582	2.049
13.660	20.786	0.489	5.681	3.588	1.795
13.680	20.126	0.463	5.701	3.603	2.058
13.700	19.318	0.429	5.717	3.611	1.965
13.720	19.022	0.404	5.646	3.616	2.079
13.740	18.654	0.413	5.560	3.612	2.280
13.760	18.066	0.392	5.533	3.634	1.886
13.780	17.588	0.357	5.558	3.642	2.029
13.800	17.002	0.326	5.540	3.646	2.175
13.820	16.197	0.335	5.371	3.648	1.846
13.840	15.864	0.321	5.410	3.665	1.985
13.860	15.533	0.310	5.391	3.660	2.112
13.880	14.692	0.296	5.265	3.670	1.956
13.900	15.472	0.236	6.794	3.668	1.956
13.920	15.036	0.247	6.583	3.672	2.202
13.940	13.911	0.248	6.224	3.683	1.962
13.960	13.112	0.238	6.065	3.700	1.972
13.980	12.859	0.229	6.000	3.695	2.179
14.000	13.081	0.224	6.077	3.709	2.115
14.020	13.846	0.213	6.146	3.716	1.923
14.040	13.811	0.231	6.069	3.723	1.928
14.060	13.519	0.244	5.928	3.750	2.128
14.080	13.739	0.251	6.089	3.766	1.995
14.100	14.140	0.241	6.123	3.772	1.998
14.120	15.016	0.249	6.083	3.790	2.115
14.140	15.237	0.277	6.095	3.804	2.088
14.160	14.692	0.306	5.568	3.816	1.976
14.180	14.585	0.325	5.870	3.816	2.050
14.200	15.204	0.304	5.986	3.816	1.923
14.220	14.949	0.315	5.998	3.827	1.977
14.240	14.950	0.338	6.035	3.845	2.088
14.260	15.604	0.348	5.892	3.855	2.003
14.280	15.241	0.341	5.754	3.875	2.040
14.300	14.951	0.355	5.556	3.860	2.016
14.320	14.878	0.362	5.433	3.884	2.005
14.340	15.060	0.394	5.494	3.880	1.913
14.360	15.386	0.416	5.727	3.894	1.980
14.380	16.840	0.413	5.612	3.907	2.032
14.400	17.494	0.427	5.579	3.913	1.845
14.420	17.529	0.469	5.461	3.920	2.154
14.440	17.673	0.534	5.468	3.946	2.006
14.460	17.780	0.596	5.591	3.945	1.969
14.480	18.577	0.637	5.779	3.970	2.068
14.500	19.302	0.682	6.018	3.977	1.871
14.520	20.392	0.729	6.288	3.983	1.913
14.540	21.153	0.742	6.467	3.993	2.073
14.560	21.546	0.740	6.627	3.993	2.068
14.580	21.538	0.731	6.678	3.994	1.864
14.600	21.895	0.724	6.884	4.002	1.950
14.620	22.944	0.729	7.128	3.999	2.072
14.640	24.430	0.729	7.120	4.005	1.976
14.660	25.409	0.753	7.032	4.015	1.944
14.680	25.112	0.789	6.795	4.019	1.896
14.700	24.449	0.851	6.837	4.030	1.960
14.720	25.024	0.870	7.119	4.036	2.065
14.740	26.507	0.826	7.276	4.035	2.128
14.760	26.570	0.837	7.278	4.046	1.936
14.780	26.744	0.827	7.373	4.057	2.126
14.800	26.771	0.796	7.325	4.060	1.919
14.820	25.706	0.764	6.957	4.071	1.842
14.840	24.935	0.754	6.726	4.076	2.183
14.860	25.109	0.748	6.878	4.074	1.896
14.880	24.447	0.742	6.576	4.092	2.064
14.900	23.850	0.761	7.430	4.097	2.064
14.920	22.358	0.731	6.831	4.095	1.851
14.940	21.376	0.717	6.528	4.127	2.193
14.960	20.211	0.680	6.140	4.136	1.971
14.980	19.301	0.660	5.934	4.133	2.075
15.000	18.681	0.633	5.676	4.151	2.034
15.020	17.843	0.607	5.516	4.170	1.894
15.040	17.477	0.575	5.503	4.174	2.025
15.060	16.746	0.540	5.444	4.188	1.970
15.080	16.454	0.482	5.607	4.199	1.896
15.100	17.000	0.419	5.734	4.189	2.138
15.120	17.726	0.387	5.879	4.215	1.993
15.140	17.945	0.392	5.915	4.221	1.938
15.160	17.398	0.414	5.997	4.232	2.069
15.180	17.579	0.384	6.023	4.222	1.977
15.200	17.469	0.358	6.012	4.237	1.816
15.220	17.579	0.362	6.077	4.240	2.130
15.240	17.398	0.369	6.072	4.254	1.964
15.260	17.071	0.374	5.996	4.272	1.816
15.280	16.525	0.369	5.872	4.281	2.184
15.300	16.054	0.372	5.685	4.253	1.989
15.320	16.054	0.372	5.685	4.313	1.989
15.340	16.142	0.390	5.715	4.319	1.989
15.360	15.269	0.415	5.366	4.339	1.989
15.380	14.432	0.426	5.125	4.347	1.897
15.400	14.030	0.411	5.001	4.366	2.044
15.420	14.029	0.401	5.020	4.383	1.905
15.440	14.174	0.383	5.082	4.391	1.866
15.460	14.428	0.363	5.182	4.400	2.085
15.480	15.009	0.334	5.311	4.397	1.926
15.500	15.337	0.311	5.493	4.409	1.923
15.520	16.209	0.302	5.870	4.404	1.831
15.540	17.372	0.279	6.126	4.429	1.986
15.560	18.571	0.291	6.505	4.422	1.972
15.580	19.918	0.300	7.046	4.437	1.922
15.600	20.100	0.308	7.127	4.439	1.962
15.620	20.501	0.331	7.089	4.456	1.991
15.640	21.192	0.362	7.163	4.457	1.947
15.660	22.285	0.422	7.548	4.476	1.861
15.680	25.268	0.498	8.637	4.482	1.866
15.700	37.353	0.463	11.723	4.507	1.916
15.720	45.760	0.547	12.830	4.527	1.892
15.740	46.563	0.579	6.422	4.517	2.305
15.760	44.886	0.587	4.125	4.501	2.305
15.780	44.410	0.635	2.305	4.514	2.305
15.800	38.766	0.814	3.205	4.532	1.961
15.820	31.811	1.052	3.772	4.542	1.944
15.840	30.496	1.129	4.259	4.556	1.911
15.860	29.724	1.128	4.518	4.563	1.841
15.880	28.591	1.101	9.916	4.575	1.841
15.900	30.047	1.047	9.979	4.574	2.045
15.920	28.446	1.004	9.787	4.598	1.761
15.940	29.284	0.921	6.671	4.605	2.100
15.960	24.219	0.786	4.763	4.614	1.929
15.980	22.651	0.732	4.475	4.602	2.061
16.000	20.684	0.726	4.083	4.612	1.987
16.020	19.663	0.743	3.891	4.637	1.974
16.040	18.639	0.746	3.676	4.631	1.878
16.060	17.503	0.754	3.474	4.623	1.980
16.080	16.984	0.747	3.447	4.632	1.970
16.100	16.611	0.707	3.500	4.640	1.886
16.120	16.456	0.658	3.648	4.632	2.051
16.140	15.537	0.571	3.558	4.632	1.966
16.160	14.253	0.489	3.376	4.639	1.894
16.180	14.136	0.419	3.313	4.654	2.088
16.200	13.873	0.344	3.304	4.666	1.831
16.220	13.174	0.293	3.381	4.673	1.993
16.240	12.514	0.247	3.552	4.679	1.952
16.260	11.965	0.228	3.762	4.687	1.885
16.280	12.180	0.221	3.915	4.693	2.032
16.300	13.343	0.197	4.361	4.682	2.068
16.320	15.307	0.178	4.945	4.700	1.777
16.340	16.982	0.176	5.420	4.704	1.968
16.360	19.168	0.201	5.966	4.711	1.855
16.380	20.773	0.240	6.222	4.717	1.779
16.400	21.433	0.284	6.224	4.725	2.083

Geo.Fe.
INDAGINI GEOLOGICHE

Committente: Geogroup
Cantiere: Medolla (MO)
Data: 05/07/2021

ID Prova: SCPTU 8
Profondita falda: a mt 2.20 da p.c.
Preforo: -

Profondità massima raggiunta: 30.30 mt
Punta sismica: Tecnopenta CPLSD
RIF. 89/21GF

Prova eseguita da:
GEO.FE. S.n.c.
via dell'Artigianato ,3 44030 - Ro Ferrarese (FE)
tel 3383646278 - info@geofe.it - www.geofe.it
Responsabile dati: Dott.Geol.Zanella Fabio
Responsabile cantiere: Sig. Mangherini Alberto

Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz
metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec
16.420	19.981	0.318	4.768	4.729	1.875	18.060	22.824	0.849	6.813	5.360	1.889	19.700	15.585	0.233	6.053	5.792	1.868	21.340	19.289	0.647	6.070	6.531	1.915	22.980	19.271	0.716	6.193	7.179	1.862
16.440	18.311	0.384	4.262	4.749	2.056	18.080	26.016	0.849	8.139	5.369	1.801	19.720	16.898	0.234	6.487	5.797	2.035	21.360	19.285	0.685	6.188	6.554	1.651	23.000	19.382	0.749	6.140	7.199	1.773
16.460	19.481	0.436	4.722	4.759	1.992	18.100	26.477	0.809	7.844	5.370	2.004	19.740	18.393	0.238	6.852	5.811	1.901	21.380	20.299	0.689	6.401	6.556	1.884	23.020	19.274	0.788	6.091	7.207	1.790
16.480	20.505	0.451	5.376	4.769	1.875	18.120	28.176	0.729	8.167	5.378	1.868	19.760	20.981	0.253	7.525	5.822	1.866	21.400	21.494	0.699	6.653	6.574	1.718	23.040	19.310	0.795	6.097	7.218	1.856
16.500	20.363	0.422	5.283	4.770	1.918	18.140	28.238	0.694	8.060	5.392	2.075	19.780	23.496	0.271	8.229	5.832	2.003	21.420	22.181	0.717	6.898	6.587	1.937	23.060	19.637	0.797	6.102	7.212	1.641
16.520	21.605	0.417	5.433	4.776	1.820	18.160	26.442	0.732	7.636	5.402	1.845	19.800	26.267	0.300	8.711	5.824	1.762	21.440	22.830	0.736	7.028	6.595	1.810	23.080	19.890	0.794	6.093	7.222	1.924
16.540	23.427	0.418	6.497	4.789	1.824	18.180	25.377	0.748	7.389	5.398	1.854	19.820	26.817	0.319	8.570	5.842	1.874	21.460	22.132	0.778	6.715	6.608	1.897	23.100	19.670	0.821	5.959	7.217	1.783
16.560	23.137	0.351	6.509	4.798	2.111	18.200	24.532	0.762	7.028	5.403	1.889	19.840	27.184	0.310	8.517	5.849	1.813	21.480	22.019	0.806	6.543	6.624	1.872	23.120	19.486	0.834	5.883	7.213	1.787
16.580	23.938	0.343	7.142	4.798	1.838	18.220	23.796	0.802	6.701	5.419	1.939	19.860	29.482	0.326	8.959	5.860	1.848	21.500	22.123	0.824	6.468	6.619	1.706	23.140	18.935	0.813	5.770	7.225	1.807
16.600	24.231	0.346	7.641	4.808	1.944	18.240	23.027	0.855	6.470	5.420	1.874	19.880	29.482	0.326	7.962	5.862	1.848	21.520	21.934	0.861	6.488	6.637	1.848	23.160	18.421	0.786	5.802	7.227	1.739
16.620	24.160	0.371	7.699	4.820	2.031	18.260	21.671	0.940	6.277	5.422	1.805	19.900	44.090	0.688	7.962	5.872	1.671	21.540	22.364	0.871	6.696	6.637	1.709	23.180	18.598	0.727	5.951	7.234	1.938
16.640	24.928	0.412	7.764	4.824	1.782	18.280	21.553	0.943	6.392	5.427	2.013	19.920	43.473	0.740	3.805	5.878	1.809	21.560	23.086	0.881	6.901	6.645	1.709	23.200	18.593	0.692	6.039	7.236	1.938
16.660	25.585	0.481	7.755	4.825	1.928	18.300	21.799	0.894	6.414	5.421	1.840	19.940	40.305	0.666	2.477	5.888	1.955	21.580	23.988	0.869	7.212	6.655	1.700	23.220	18.515	0.648	6.025	7.265	1.909
16.680	24.788	0.593	7.788	4.834	1.892	18.320	21.752	0.882	6.323	5.427	1.939	19.960	37.210	0.562	2.263	5.901	1.834	21.600	24.526	0.865	7.453	6.642	1.864	23.240	18.292	0.609	6.007	7.258	1.710
16.700	24.099	0.655	7.920	4.836	1.892	18.340	21.194	0.896	6.116	5.421	1.776	19.980	35.133	0.628	2.205	5.907	1.984	21.620	24.990	0.845	7.602	6.646	1.844	23.260	17.960	0.573	5.939	7.277	1.755
16.720	24.791	0.614	8.081	4.846	1.943	18.360	20.711	0.870	5.886	5.426	1.909	20.000	36.841	0.765	2.825	5.915	1.855	21.640	25.493	0.818	7.655	6.657	1.937	23.280	18.430	0.557	5.901	7.296	1.815
16.740	24.392	0.644	8.010	4.855	2.063	18.380	19.828	0.851	5.656	5.444	1.858	20.020	37.856	0.840	3.054	5.905	1.886	21.660	25.959	0.813	7.856	6.667	1.722	23.300	19.556	0.572	6.165	7.319	1.794
16.760	23.482	0.685	7.820	4.861	2.047	18.400	18.943	0.828	5.396	5.428	1.789	20.040	36.066	0.819	2.648	5.955	1.804	21.680	26.605	0.793	7.960	6.679	1.669	23.320	20.972	0.571	6.715	7.319	1.808
16.780	23.261	0.689	7.718	4.868	1.894	18.420	18.280	0.824	5.267	5.430	1.987	20.060	31.547	0.855	1.923	5.945	1.907	21.700	26.124	0.820	7.809	6.677	1.882	23.340	23.298	0.556	7.464	7.329	1.670
16.800	23.550	0.676	7.748	4.872	1.992	18.440	17.870	0.794	5.215	5.436	1.913	20.080	26.080	0.970	1.389	5.967	1.817	21.720	26.152	0.861	7.716	6.680	1.659	23.360	23.444	0.562	7.253	7.340	1.761
16.820	24.750	0.628	7.893	4.879	1.890	18.460	16.804	0.763	5.134	5.447	1.997	20.100	20.722	1.027	1.169	5.975	1.903	21.740	25.891	0.922	7.725	6.680	2.281	23.380	23.588	0.605	7.087	7.355	1.677
16.840	23.799	0.664	7.580	4.888	1.793	18.480	16.138	0.704	5.027	5.449	1.794	20.120	17.982	0.985	1.104	5.994	1.928	21.760	25.229	0.970	7.787	6.674	1.740	23.400	23.369	0.651	6.997	7.368	1.916
16.860	23.359	0.697	7.352	4.901	1.996	18.500	15.475	0.623	4.817	5.458	1.752	20.140	16.116	0.884	1.329	6.003	1.804	21.780	24.385	0.962	7.295	6.678	1.893	23.420	23.477	0.696	7.016	7.381	1.635
16.880	22.804	0.736	6.960	4.937	1.996	18.520	14.630	0.578	4.606	5.457	1.991	20.160	14.941	0.780	1.787	6.014	2.021	21.800	23.503	0.932	6.634	6.681	1.746	23.440	23.586	0.756	6.878	7.401	1.806
16.900	23.498	0.753	6.758	4.938	1.804	18.540	14.187	0.537	4.474	5.477	1.755	20.180	14.237	0.659	2.311	6.025	1.694	21.820	22.878	0.955	6.110	6.682	1.792	23.460	23.078	0.855	7.017	7.409	1.797
16.920	21.679	0.790	6.270	4.940	2.073	18.560	13.673	0.517	4.449	5.471	2.003	20.200	13.535	0.549	2.807	6.030	1.915	21.840	21.374	1.001	5.621	6.695	1.749	23.480	23.843	0.855	7.378	7.432	1.831
16.940	20.660	0.799	5.914	4.955	1.802	18.580	13.777	0.472	4.545	5.486	1.844	20.220	13.050	0.462	3.125	6.039	1.767	21.860	20.709	1.013	5.420	6.704	1.776	23.500	24.899	0.814	7.760	7.445	1.776
16.960	20.767	0.800	5.771	4.959	2.163	18.600	13.736	0.441	4.555	5.482	1.997	20.240	13.043	0.413	3.355	6.043	1.956	21.880	20.336	1.010	5.403	6.698	1.776	23.520	26.537	0.757	8.117	7.439	1.647
16.980	20.908	0.779	5.652	4.967	1.861	18.620	13.586	0.417	4.553	5.491	1.852	20.260	13.177	0.379	3.640	6.053	1.773	21.900	20.336	1.010	5.403	6.722	1.776	23.540	25.806	0.789	7.916	7.459	1.748
17.000	20.468	0.775	5.606	4.980	1.857	18.640	13.475	0.394	4.530	5.489	1.736	20.280	13.896	0.371	3.902	6.061	1.995	21.920	19.491	1.048	7.556	6.729	1.776	23.560	24.820	0.778	7.410	7.464	1.701
17.020	20.898	0.746	5.682	4.986	2.050	18.660	13.545	0.386	4.532	5.487	1.884	20.300	14.251	0.373	4.059	6.052	1.874	21.940	19.750	1.046	7.687	6.745	1.934	23.580	24.670	0.755	7.103	7.486	1.844
17.040	21.328	0.677	5.833	4.990	1.768	18.680	13.908	0.387	4.644	5.496	1.896	20.320	14.251	0.373	5.692	6.064	1.874	21.960	20.155	0.996	7.837	6.759	1.763	23.600	23.975	0.787	6.941	7.492	1.700
17.060	21.721	0.623	5.991	4.999	2.053	18.700	14.601	0.393	4.807	5.498	1.779	20.340	13.524	0.375	6.853	6.049	1.874	21.980	20.922	0.928	7.916	6.747	1.846	23.620	23.754	0.824	7.101	7.491	1.856
17.080	21.968	0.605	6.055	5.006	1.864	18.720	14.712	0.397	4.892	5.507	2.133	20.360	14.764	0.401	7.011	6.061	1.726	22.000	21.540	0.865	7.896	6.754	1.877	23.640	23.496	0.791	7.522	7.511	1.719
17.100	20.760	0.583	5.768	4.995	1.970	18.740	15.152	0.399	4.961	5.498	1.820	20.380	14.764	0.407	6.940	6.072	1.737	22.020	22.010	0.848	7.788	6.753	1.850	23.660	24.331	0.755	8.130	7.502	1.762
17.120	19.953	0.553	5.461	5.006	1.980	18.760	15.337	0.406	4.882	5.490	2.065	20.400	14.945	0.410	6.898	6.077	1.839	22.040	22.589	0.850	7.868	6.765	1.789	23.680	25.128	0.704	8.453	7.522	1.642
17.140	18.965	0.546	5.179	4.998	2.205	18.780	15.376	0.425	4.845	5.498	1.816	20.420	15.236	0.431	6.834	6.094	1.697	22.060	23.351	0.854	8.019	6.761	1.687	23.700	25.853	0.670	8.884	7.535	1.711
17.160	17.213	0.591	4.880	5.016	1.829	18.800	15.926	0.440	4.978	5.493	1.815	20.440	15.564	0.450	6.798	6.104	2.037	22.080	23.857	0.852	8.088	6.774	1.891	23.720	25.959	0.587	8.994	7.535	1.718
17.180	15.933	0.567	4.773	5.019	1.777	18.820	15.820	0.447	5.033	5.494	1.830	20.460	15.998	0.464	6.670	6.101	1.814	22.100	25.125	0.828	8.418	6.779	1.782	23.740	25.701	0.553	8.884	7.543	1.816
17.200	15.310	0.515	4.714	5.027	1.990	18.840	15.386	0.449	5.036	5.499	1.944	20.480	16.031	0.493	6.487	6.129	1.876	22.120	26.650	0.812	8.603	6.784	1.966	23.760	25.445	0.554	8.288	7.538	1.923
17.220	14.178	0.459	4.536	5.027	1.954	18.860	15.498	0.444	5.003	5.495	1.944	20.500	15.300	0.534	6.205	6.121	1.730	22.140	27.448	0.852	8.694	6.804	1.680	23.780	25.881	0.576	8.486	7.550	1.892
17.240	12.826	0.427	4.302	5.028	1.783	18.880	15.498	0.444	5.003	5.546	1.944	20.520	14.968	0.553	6.070	6.123	1.889	22.160	27.225	0.894	8.740	6.808	1.994	23.800	24.974	0.626	8.786	7.557	1.748
17.260	12.021	0.377	4.150	5.031	2.042	18.900	16.031	0.491	4.966	5.537	1.944	20.540	15.108	0.556	5.984	6.136	1.727	22.180	27.145	0.935	8.811	6.823	1.740	23.820	22.318	0.606	8.209	7.560	1.759
17.280	11.398	0.317	4.022	5.040	1.921	18.920	15.852	0.504	4.869	5.543	2.025	20.560	15.142	0.562	5.928	6.137	2.007	22.200	27.829	0.924	8.742	6.836	1.822	23.840	19.987	0.582	7.079	7.569	1.663
17.300	11.067	0.283	3.979	5.048	1.886	18.940	15.818	0.519	4.865	5.539	1.798	20.580	15.611	0.564	5.975	6.154	1.712	22.220	27.421	0.986	8.659	6.841	1.756	23.860	19.405	0.604	6.915	7.580	1.813
17.320	11.065	0.278	4.042	5.052	2.008	18.960	15.892	0.547	4.790	5.550	1.978	20.600	15.135	0.570	5.841	6.170	1.919	22.240	26.214	1.043	8.361	6.859	1.807	23.880	19.113	0.630	6.814	7.589	1.741
17.340	11.210	0.267	4.222	5.063	1.760	18.980	16.001	0.566	4.736	5.556	1.899	20.620	14.986	0.567	5.722	6.175	1.863	22.260	24.207	1.102	7.829	6.862	1.826	23.900	19.113	0.630	8.274	7.607	1.741
17.360	11.537	0.255	4.353	5.049	1.966	19.000	14.326	0.557	4.391	5.565	1.867	20.640	14.763	0.542	5.559	6.174	1.873	22.280	24.348	1.104	7.866	6.858	1.732	23.920	19.319	0.507	10.711	7.607	1.741
17.380	11.793	0.256	4.464	5.060	1.892	19.020	14.034	0.527	4.316	5.576	1.977	20.660	14.538	0.542	5.461	6.178	1.739	22.300	24.814	1.090	7.905	6.879	1.887	23.940	21.943	0.485	11.770	7.616	1.668
17.400	11.759	0.249	4.480	5.069	1.858	19.040	13.339	0.511	4.163	5.580	1.759	20.680	14.790	0.539	5.434	6.205	1.812	22.320	25.060	1.081	8.004	6.871	1.713	23.960	23.073	0.489	11.933	7.629	1.891
17.420	12.272	0.251	4.624	5.060	2.017	19.060	13.446	0.477	4.251	5.596	2.029	20.700	15.040	0.528	5.425	6.206	1.841	22.340	24.978	1.067	7.979	6.869	1.895	23.980	23.804	0.468	11.123	7.653	1.719
17.440	12.931	0.260	4.801	5.073	1.921	19.080	13.116	0.440	4.256	5.605	1.818	20.720	15.216	0.507	5.506	6.215	1.715	22.360	24.600	1.024	7.609	6.875	1.633	24.000	24.824	0.441	11.089	7.657	1.858
17.460	12.788	0.272	4.746	5.075	2.028	19.100	12.968	0.414	4.234	5.619	1.797	20.740	14.885	0.500	5.426	6.226	2.190	22.380	23.679	1.012	7.044	6.869	1.828	24.020	26.607	0.432	11.414	7.686	1.795
17.480	12.427	0.280	4.557	5.085	1.848	19.120	12.895	0.403	4.244	5.627	2.035	20.760	14.807	0.486	5.360	6.227	2.190	22.400	22.534	0.999	6.747	6.859	1.761	24.040	25.806	0.477	9.549	7.687	1.774
17.500	12.395	0.300	4.367	5.091	1.780	19.140	12.892	0.380	4.335	5.633	1.911	20.780	15.167	0.470	5.367	6.234	2.190	22.420	21.794	1.003	6.584	6.868	1.795	24.060	26.099	0.482	9.605	7.710	1.697
17.520	12.181	0.336	4.304	5.098	1.904	19.160	13.146	0.348	4.449	5.634	1.972	20.800	14.762	0.470	5.260	6.241	1.830	22.440	21.747	0.963	6.535	6.867	1.813	24.080	25.700	0.525	8.856	7.721	1.843
17.540	12.150	0.359	4.344	5.103	1.916	19.180	13.362	0.318	4.616	5.644	1.807	20.820	14.759	0.481	5.235	6.248	1.830	22.460	21.633	0.941	6.447	6.878	1.846	24.100	24.027	0.644	8.500	7.727	1.687
17.560	12.954	0.341	4.613	5.107	1.909	19.200	13.507	0.302	4.690	5.663	2.208	20.840	14.390	0.490	5.176	6.247	1.784	22.480	21.953	0.917	6.486	6.880	1.794	24.120	21.953	0.800	8.242	7.733	1.830
17.580	13.323	0.326	4.827	5.114	1.962	19.220	13.689	0.292	4.775	5.669	1.612	20.860	14.752	0.492	5.187	6.256	1.719	22.500	22.056	0.911	6.452	6.872	1.731	24.140	20.537	0.847	8.266	7.746	1.740
17.600	13.437	0.310	4.895	5.123	2.022	19.240	13.688	0.294	4.845	5.690	1.847	20.880	14.824	0.485	5.139	6.252	1.893	22.520	22.123	0.895	6.413	6.875	1.775	24.160	20.502	0.741	8.492	7.756	1.731
17.620	13.808	0.287	5.014	5.130	1.748	19.260	13.616	0.288	4.873	5.680	1.766	20.900	14.406	0.472	5.563	6.272	1.893	22.540	21.934	0.880	6.265	6.875	1.770	24.180	20.647	0.680	9.041	7.767	1.905
17.640	14.103	0.275	5.081	5.131	2.004	19.280	13.580	0.291	4.870	5.696	2.033	20.920	14.952	0.501	5.601	6.288	1.893	22.560	21.311	0.870	6.035	6.894	1.845	24.200	20.354	0.685	9.698	7.753	1.637
17.660	14.545	0.269	5.138	5.139	1.758	19.300	13.472	0.303	4.848	5.696	1.894	20.940	14.915	0.507	5.498	6.301	1.937	22.580	21.306	0.854	5.958	6.912	1.679	24.220	21.696	0.588	10.559	7.776	1.772
17.680	14.876	0.280	5.184	5.140	1.948	19.320	13.291	0.313	4.885	5.700	1.913	20.960	14.842	0.512	5.374	6.312	1.874	22.600	21.157	0.841	5.790	6.915	1.904	24.240	21.400	0.485	10.394	7.785	1.671
17.700	14.877	0.284	5.186	5.143	1.948	19.340	13.111	0.320	4.895	5.709	1.818	20.980	14.694	0.511	5.391	6.313	1.854	22.620	20.716	0.848	5.580	6.941	1.707	24.260	20.922	0.449	10.044	7.785	1.671
17.720	15.468	0.329	5.201	5.158	1.948	19.360	12.712	0.323	4.866	5.704	1.733	21.000	14.582	0.503	5.415	6.329	1.864	22.640	19.837	0.854	5.462	6.942	1.874	24.280	21.064	0.441	9.789	7.800	1.729
17.740	16.781	0.346	5.409	5.178	1.979	19.380	12.567	0.318	4.871	5.710	1.944	21.020	14.908	0.487	5.484	6.330	1.802	22.660	19.649	0.847	5.415	6.965	1.754	24.300	22.697	0.453	10.283	7.848	1.808
17.760	18.934	0.375	6.184	5.186	1.909	19.400	12.423	0.307	4.843	5.707	1.860	21.040	15.378	0.472	5.627	6.358	1.926	22.680	18.806	0.846	5.377	6.981	1.687	24.320	24.913	0.451	11.343	7.851	1.657
17.780	20.867	0.359	6.918	5.203	1.917	19.420	12.170	0.296	4.801	5.706	1.842	21.060	16.029	0.466	5.720	6.356	1.719	22.700	18.182	0.820	5.420	7.000	1.793	24.340	27.716	0.441	12.267	7.878	1.895
17.800	21.452	0.372	6.958	5.197	1.958	19.440	12.027	0.287	4.780	5.706	2.033	21.080	16.499	0.470	5.730	6.368	1.990	22.720	19.599	0.781	6.055	7.013	1.659	24.360	30.483	0.446	12.445	7.895	1.640
17.820	21.711	0.415	6.720	5.221	1.767	19.460	11.811	0.274	4.740	5.726	1.779	21.100	16.858	0.483	5.697	6.393	1.758	22.740	21.053	0.737	6.390	7.023	2.083	24.380	30.448	0.545	12.285	7.927	1.741
17.840	22.040	0.451	6.757	5.225	1.960	19.480	11.593	0.269	4.678	5.723	2.012	21.120	16.893	0.505	5.632	6.406	1.954	22.760	19.999	0.691	6.281	7.014	1.765	24.400	31.030	0.590	12.467	7.949	1.743
17.860	22.516	0.499	6.813	5.249	1.839	19.500	11.268	0.261	4.595	5.718	1.691	21.140	17.183	0.518	5.741	6.420	1.780	22.780	20.728	0.655	6.496	7.035	1.832	24.420	30.267	0.629	12.231	7.952	1.837
17.880	22.516	0.499	6.813	5.312	1.839	19.520	11.160	0.267	4.523	5.715	1.934	21.160	17.401	0.535	5.608	6.439	2.002	22.800	19.454	0.640	5.893	7.048	1.792	24.440	30.377	0.668	12.489	7.992	1.651
17.900	22.636	0.683	6.472	5.309	1.839	19.540	11.163	0.266	4.495	5.724	1.846	21.180	17.583	0.562	5.543	6.463	1.788	22.820	18.653	0.642	5.640	7.043	1.792	24.460	31.360	0.683	12.708	7.999	1.651
17.920	22.528	0.768	6.371	5.321	1.909	19.560	11.092	0.267	4.483	5.737	1.813	21.200	17.361	0.579	5.658	6.474	1.842	22.840	17.703	0.572	5.551	7.042	1.792	24.480	32.237	0.735	12.787	8.024	1.730
17.940	21.983	0.862	6.204	5.332	1.911	19.580	10.949	0.269	4.539	5.735	1.979	21.220	17.754	0.572	5.798	6.482	1.792	22.860	18.067	0.536	5.546	7.056	1.766	24.500	32.237	0.794	12.868	8.039	1.811
17.960	21.908	0.887	6.172	5.346	1.954	19.600	11.424	0.258	4.633	5.745	1.835	21.240	17.822	0.572	5.816	6.488	1.823	22.880	18.360	0.529	5.539	7.054	1.798	24.520	32.818	0.789	11.767	8.062	1.628
17.980	21.906	0.894	6.182	5.343	2.001	19.620	11.863	0.255	4.820	5.745	1.932	21.260	17.779	0.592	5.931	6.496	1.834	22.900	18.360	0.529	5.221	7.135	1.798	24.540	31.288	0.839	7.593	8.071	1.740
18.000	21.503	0.885	6.080	5.347	2.003	19.640	12.630	0.244	5.088	5.760	1.781	21.280	18.137	0.612	6.035	6.508	1.823	22.920	18.537	0.609	6.115	7.149	1.798	24.560	29.972	0.890	7.636	8.098	1.662
18.020	21.604	0.844	5.986	5.361	1.815	19.660	13.396	0.236	5.423	5.768	1.777	21.300	18.533	0.616	6.079	6.504	1.805	22.940	18.612	0.651	6.064	7.152	1.808	24.580	30.258	0.922	8.002	8.114	1.751
18.040	21.269	0.862	6.173	5.360	1.969	19.680	14.381	0.223	5.708	5.790	1.893	21.320	19.038	0.620	6.058	6.525	1.835	22.960	18.506	0.700	6.120	7.160	1.789	24.600	30.871	0.931	8.173	8.134	1.753

Geo.Fe.
INDAGINI GEOLOGICHE

Committente: Geogroup
Cantiere: Medolla (MO)
Data: 05/07/2021

ID Prova: SCPTU 8
Profondita falda: a mt 2.20 da p.c.
Preforo: -

Profondità massima raggiunta: 30.30 mt
Punta sismica: Tecnopenta CPLSD
RIF. 89/21GF

Prova eseguita da:
GEO.FE. S.n.c.
via dell'Artigianato ,3 44030 - Ro Ferrarese (FE)
tel 3383646278 - info@geofe.it - www.geofe.it
Responsabile dati: Dott.Geol.Zanella Fabio
Responsabile cantiere: Sig. Mangherini Alberto

Prof.	RP	RL	PN	Incl.	Vavanz
metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec
24.620	32.904	0.954	8.656	8.151	1.808
24.640	32.095	1.011	8.441	8.173	1.703
24.660	31.722	1.068	8.713	8.199	1.745
24.680	30.402	1.083	8.644	8.209	1.650
24.700	28.103	0.993	8.173	8.230	1.759
24.720	28.277	0.936	8.314	8.236	1.648
24.740	27.613	0.882	8.404	8.242	1.803
24.760	26.694	0.837	8.120	8.258	1.870
24.780	25.450	0.833	8.071	8.268	1.777
24.800	25.478	0.850	8.420	8.276	1.746
24.820	25.945	0.793	8.638	8.287	1.782
24.840	26.557	0.766	8.571	8.289	1.687
24.860	25.787	0.851	8.548	8.286	1.638
24.880	25.781	0.846	8.637	8.289	1.728
24.900	24.647	0.798	8.415	8.297	1.808
24.920	23.266	0.656	9.761	8.271	1.808
24.940	25.708	0.743	10.374	8.279	1.818
24.960	27.966	0.808	11.326	8.301	1.729
24.980	29.094	0.752	11.442	8.311	1.754
25.000	29.167	0.690	11.449	8.324	1.873
25.020	29.094	0.691	11.520	8.325	1.748
25.040	28.438	0.731	11.590	8.346	1.659
25.060	27.235	0.729	11.268	8.360	1.757
25.080	25.777	0.670	10.569	8.358	1.656
25.100	23.737	0.679	9.862	8.379	1.896
25.120	23.409	0.710	9.668	8.382	1.896
25.140	22.642	0.710	9.684	8.385	1.896
25.160	21.510	0.715	9.647	8.383	1.768
25.180	23.328	0.690	10.412	8.394	1.969
25.200	26.381	0.678	11.502	8.387	1.558
25.220	28.379	0.660	12.098	8.404	1.865
25.240	29.247	0.604	11.802	8.428	1.677
25.260	27.822	0.626	11.358	8.446	1.808
25.280	27.380	0.629	11.163	8.451	1.657
25.300	26.795	0.659	10.969	8.452	1.864
25.320	26.795	0.659	10.969	8.459	1.864
25.340	26.870	0.629	11.076	8.457	1.864
25.360	26.798	0.701	10.656	8.461	1.603
25.380	25.194	0.719	10.296	8.475	1.691
25.400	24.428	0.682	10.101	8.483	1.629
25.420	23.440	0.668	9.950	8.491	1.838
25.440	22.961	0.645	9.705	8.485	1.838
25.460	22.227	0.629	9.370	8.503	1.832
25.480	21.383	0.622	9.027	8.500	1.829
25.500	20.501	0.626	9.011	8.509	1.708
25.520	20.391	0.625	9.061	8.514	1.708
25.540	22.489	0.506	10.531	8.536	1.708
25.560	22.846	0.476	10.725	8.541	1.678
25.580	22.803	0.450	10.667	8.550	1.710
25.600	22.252	0.445	10.416	8.555	1.694
25.620	22.793	0.408	10.708	8.570	1.734
25.640	24.173	0.386	11.401	8.576	1.803
25.660	25.880	0.377	12.170	8.593	1.625
25.680	25.621	0.412	12.160	8.614	1.772
25.700	24.817	0.433	11.716	8.637	1.679
25.720	24.124	0.448	11.202	8.646	1.695
25.740	23.723	0.440	10.532	8.647	1.697
25.760	22.048	0.477	9.434	8.669	1.780
25.780	20.664	0.498	8.756	8.683	1.782
25.800	20.190	0.529	8.700	8.692	1.839
25.820	19.353	0.600	9.132	8.712	1.634
25.840	18.331	0.654	9.734	8.703	1.837
25.860	19.350	0.622	10.298	8.706	1.668
25.880	19.966	0.551	10.313	8.717	1.748
25.900	19.344	0.529	10.137	8.719	1.716
25.920	19.414	0.498	10.087	8.714	1.683
25.940	16.548	0.365	10.656	8.733	1.683
25.960	20.446	0.421	10.686	8.756	1.683
25.980	20.810	0.413	10.533	8.770	1.779
26.000	20.008	0.403	5.702	8.791	1.701
26.020	20.117	0.425	5.978	8.812	1.875
26.040	19.462	0.460	5.921	8.823	1.751
26.060	17.169	0.498	5.636	8.826	1.784
26.080	16.440	0.479	5.470	8.830	1.811
26.100	15.165	0.500	5.548	8.832	1.636
26.120	15.416	0.431	7.381	8.826	1.720
26.140	16.176	0.400	8.737	8.801	1.761
26.160	16.426	0.351	8.185	8.802	1.761
26.180	16.860	0.302	8.350	8.781	1.761
26.200	16.965	0.287	8.417	8.777	1.740
26.220	17.142	0.293	8.386	8.760	1.615
26.240	17.649	0.307	8.752	8.750	1.720
26.260	18.448	0.330	9.151	8.741	1.785
26.280	19.649	0.363	9.554	8.739	1.720
26.300	23.508	0.396	10.774	8.731	1.740
26.320	29.733	0.402	12.672	8.717	1.736
26.340	34.029	0.426	13.198	8.698	1.781
26.360	39.746	0.509	14.450	8.698	1.697
26.380	46.010	0.584	15.723	8.698	1.656
26.400	50.380	0.763	15.988	8.709	1.665
26.420	51.327	0.995	15.523	8.709	1.780
26.440	50.161	1.186	14.803	8.719	1.677
26.460	47.247	1.316	13.779	8.719	1.736
26.480	43.895	1.498	12.201	8.721	1.737
26.500	43.525	1.617	11.625	8.745	1.753
26.520	47.628	1.671	12.883	8.751	1.635
26.540	50.891	1.728	12.818	8.756	1.677
26.560	53.456	1.772	8.666	8.756	1.652
26.580	53.252	1.796	5.991	8.747	1.679
26.600	52.059	1.874	5.086	8.761	1.642
26.620	54.211	1.918	5.809	8.776	1.805
26.640	57.860	1.893	5.116	8.780	1.596
26.660	58.963	1.880	4.382	8.795	1.922
26.680	57.027	1.823	4.294	8.798	1.591
26.700	57.912	1.766	4.538	8.810	1.612
26.720	58.690	1.682	4.226	8.819	1.612
26.740	58.690	1.682	4.226	8.819	1.612
26.760	59.141	1.539	3.725	8.837	1.612
26.780	56.417	1.472	3.200	8.836	1.953
26.800	51.034	1.451	2.450	8.841	1.708
26.820	44.744	1.345	1.846	8.841	1.703
26.840	38.895	1.135	1.570	8.842	1.659
26.860	35.084	1.020	1.564	8.847	1.605
26.880	34.044	0.934	2.088	8.846	1.786
26.900	34.239	0.821	2.523	8.855	1.650
26.920	31.965	0.739	2.389	8.875	1.793
26.940	35.683	0.773	9.194	8.864	1.793
26.960	38.637	0.775	9.458	8.873	1.793
26.980	38.788	0.795	9.252	8.895	1.743
27.000	38.974	0.790	9.105	8.908	1.710
27.020	37.703	0.784	8.556	8.922	1.812
27.040	35.265	0.777	7.884	8.942	1.679
27.060	33.082	0.808	7.334	8.949	1.775
27.080	29.881	0.813	6.506	8.973	1.613
27.100	27.844	0.825	6.031	9.003	1.768
27.120	25.262	0.813	5.529	9.023	1.682
27.140	23.115	0.805	5.280	9.026	1.783
27.160	21.041	0.775	4.997	9.046	1.743
27.180	19.293	0.726	4.861	9.059	1.789
27.200	18.819	0.682	5.283	9.069	1.769
27.220	18.418	0.633	6.534	9.081	1.757
27.240	18.709	0.575	7.626	9.102	1.651
27.260	19.183	0.506	8.186	9.104	1.716
27.280	19.329	0.461	8.425	9.120	1.725
27.300	19.440	0.438	8.495	9.134	1.765
27.320	19.296	0.425	8.529	9.143	1.659
27.340	19.007	0.406	8.530	9.176	1.701
27.360	18.610	0.404	8.504	9.185	1.842
27.380	18.870	0.413	8.575	9.200	1.612
27.400	19.494	0.426	8.856	9.218	1.738
27.420	20.010	0.426	9.073	9.225	1.650
27.440	20.236	0.409	9.073	9.249	1.740
27.460	20.025	0.417	8.877	9.244	1.729
27.480	19.851	0.435	8.737	9.254	1.791
27.500	19.640	0.442	8.718	9.262	1.800
27.520	20.157	0.440	8.999	9.262	1.745
27.540	20.603	0.428	9.157	9.260	1.616
27.560	21.083	0.441	9.238	9.251	1.616
27.580	21.346	0.457	8.848	9.250	1.616
27.600	20.333	0.467	8.432	9.259	1.719
27.620	19.903	0.465	8.117	9.271	1.679
27.640	19.581	0.473	7.812	9.266	1.696
27.660	18.931	0.492	7.516	9.284	1.824
27.680	18.679	0.503	7.438	9.282	1.824
27.700	18.432	0.508	7.621	9.293	1.824
27.720	18.911	0.486	8.189	9.311	1.562
27.740	19.861	0.455	8.682	9.328	1.837
27.760	20.448	0.433	9.080	9.336	1.623
27.780	21.034	0.399	9.331	9.352	1.623
27.800	21.221	0.402	9.409	9.352	1.774
27.820	21.626	0.407	9.698	9.362	1.814
27.840	22.578	0.398	9.852	9.373	1.666
27.860	23.564	0.414	10.076	9.382	1.645
27.880	24.697	0.443	10.371	9.406	1.638
27.900	26.267	0.476	10.677	9.418	1.787
27.920	26.091	0.499	10.411	9.432	1.639
27.940	26.091	0.499	10.411	9.488	1.639
27.960	25.484	0.495	10.885	9.495	1.639
27.980	24.904	0.533	10.467	9.512	1.714
28.000	23.778	0.582	10.090	9.531	1.748
28.020	23.124	0.591	9.877	9.550	1.817
28.040	22.578	0.611	9.876	9.549	1.730
28.060	22.176	0.617	9.937	9.570	1.773
28.080	22.830	0.611	10.053	9.575	1.631
28.100	23.008	0.600	9.870	9.581	1.753
28.120	22.495	0.577	9.453	9.607	1.696
28.140	21.580	0.556	9.058	9.610	1.767
28.160	20.776	0.554	8.829	9.621	1.643
28.180	20.190	0.545	8.904	9.632	1.886
28.200	19.931	0.527	9.029	9.635	1.736
28.220	19.890	0.521	9.220	9.653	1.760
28.240	19.995	0.519	9.358	9.660	1.760
28.260	21.519	0.490	9.896	9.679	1.803
28.280	24.318	0.465	11.112	9.690	1.803
28.300	27.445	0.429	12.118	9.710	1.850
28.320	32.574	0.426	13.184	9.722	1.700
28.340	36.467	0.477	13.870	9.728	1.793
28.360	42.508	0.574	14.911	9.754	1.703
28.380	50.333	0.672	16.468	9.779	1.731
28.400	59.662	0.759	8.398	9.780	1.562
28.420	61.122	0.802	7.266	9.800	1.712
28.440	66.090	0.927	7.998	9.810	1.673
28.460	64.848	0.993	4.511	9.801	1.795
28.480	60.792	1.015	2.654	9.798	1.795
28.500	56.297	0.907	2.123	9.814	1.795
28.520	55.054	0.975	2.383	9.828	1.635
28.540	54.283	1.103	3.157	9.846	1.640
28.560	57.628	1.102	3.903	9.841	1.661
28.580	63.319	1.133	4.883	9.844	1.664
28.600	67.548	1.078	6.221	9.858	1.718
28.620	73.747	1.055	7.739	9.858	1.719
28.640	73.406	1.060	6.894	9.873	1.721
28.660	62.945	1.023	2.442	9.868	1.678
28.680	53.557	0.997	1.280	9.879	1.799
28.700	42.731	1.033	0.532	9.890	1.545
28.720	36.713	0.920	0.266	9.915	1.778
28.740	28.798	0.939	0.065	9.931	1.657
28.760	26.134	0.994	0.608	9.932	1.657
28.780	24.913	0.758	3.091	9.940	1.657
28.800	25.227	0.689	3.990	9.949	1.650
28.820	26.381	0.657	4.566	9.967	1.777
28.840	27.097	0.592	5.564	9.980	1.719
28.860	27.631	0.495	6.024	9.992	1.756
28.880	28.642	0.485	6.204	9.996	1.558
28.900	27.467	0.473	6.473	9.995	1.775
28.920	28.045	0.434	6.609	10.002	1.672
28.940	28.045	0.463	8.397	10.013	1.672
28.960	26.366	0.555	8.523	10.025	1.672
28.980	24.405	0.561	7.442	10.019	1.670
29.000	21.314	0.599	6.646	10.042	1.751
29.020	20.551	0.600	6.542	10.044	1.751
29.040	18.335	0.561	6.398	10.065	1.751
29.060	18.226	0.525	6.622	10.077	1.744
29.080	17.790	0.498	6.657	10.085	1.674
29.100	16.989	0.471	6.438	10.094	1.672
29.120	16.659	0.442	6.285	10.102	1.650
29.140	16.112	0.421	6.103	10.119	1.848
29.160	15.636	0.409	6.059	10.131	1.683
29.180	15.490	0.395	6.015	10.137	1.755
29.200	15.562	0.399	6.019	10.148	1.840
29.220	15.416	0.406	6.012	10.159	1.822
29.240	15.161	0.398	5.898	10.177	1.588
29.260	14.688	0.396	5.806	10.189	1.643
29.280	14.326	0.386	5.848	10.208	1.776
29.300	14.036	0.382	5.874	10.210	1.776
29.320	13.747	0.384	5.949	10.230	1.776
29.340	13.931	0.371	6.037	10.239	1.705
29.360	13.823	0.369	6.011	10.246	1.725
29.380	13.716	0.365	6.018	10.243	1.745
29.400	13.573	0.354	6.017	10.264	1.615
29.420	13.574	0.343	6.026	10.275	1.737
29.440	13.613	0.340	6.064	10.304	1.681
29.460	13.543	0.334	6.134	10.298	1.693
29.480	13.837	0.333	6.270	10.316	1.722
29.500	13.875	0.332	6.412	10.322	1.722
29.520	14.679	0.321	6.638	10.340	1.645
29.540	15.555	0.311	7.030	10.352	1.645
29.560	16.870	0.309	7.683	10.370	1.674
29.580	18.656	0.309	8.240	10.368	1.668
29.600	19.570	0.330	8.490	10.409	1.702
29.620	20.448	0.336	8.569	10.404	1.717
29.640	20.561	0.395	8.574	10.418	1.734
29.660	20.711	0.431	8.469	10.431	1.745
29.680	20.825	0.488	8.578	10.453	1.633
29.700	21.629	0.546	8.946	10.463	1.769
29.720	22.398	0.562	8.913	10.485	1.578
29.740	22.837	0.574	8.606	10.494	1.763
29.760	22.402	0.618	8.098	10.509	1.582
29.780	22.112	0.658	7.766	10.522	1.809
29.800	21.710	0.707	7.539	10.545	1.777
29.820	21.382	0.737	7.411	10.543	1.842
29.840	21.454	0.785	7.463	10.566	1.716
29.860	21.997	0.839	7.705	10.592	1.707
29.880	22.103	0.876	7.975	10.597	1.606
29.900	23.047	0.835	8.193	10.608	1.679
29.920	23.771	0.772	8.179	10.627	1.719
29.940	23.657	0.739	8.155	10.631	1.720
29.960	22.775	0.649	8.930	10.653	1.720
29.980	25.906	0.719	9.242	10.656	1.540
30.000	25.979	0.725	8.961	10.686	1.744
30.020	25.432	0.771	8.641	10.704	1.623
30.040	25.541	0.817	8.603	10.732	1.870
30.060	25.685	0.826	8.604	10.762	1.770
30.080	27.212	0.826	9.148	10.786	1.639
30.100	28.152	0.838	8.899	10.817	1.719
30.120	29.894	0.852	9.286	10.844	1.646
30.140	31.671	0.821	9.732	10.868	1.680
30.160	32.975	0.810	9.706	10.882	1.766
30.180	32.057	0.879	9.182	10.898	1.617
30.200	31.396	0.884	8.766	10.916	1.843
30.220	29.497	0.905	8.231	10.918	1.753
30.240	27.558	0.925	7.816	10.932	1.659
30.260	26.641	0.918	7.692	10.947	1.665
30.280	25.797	0.906	7.852	10.965	1.720
30.300	26.334	0.829	8.040	10.976	1.625

Geo.Fe.
INDAGINI GEOLOGICHE

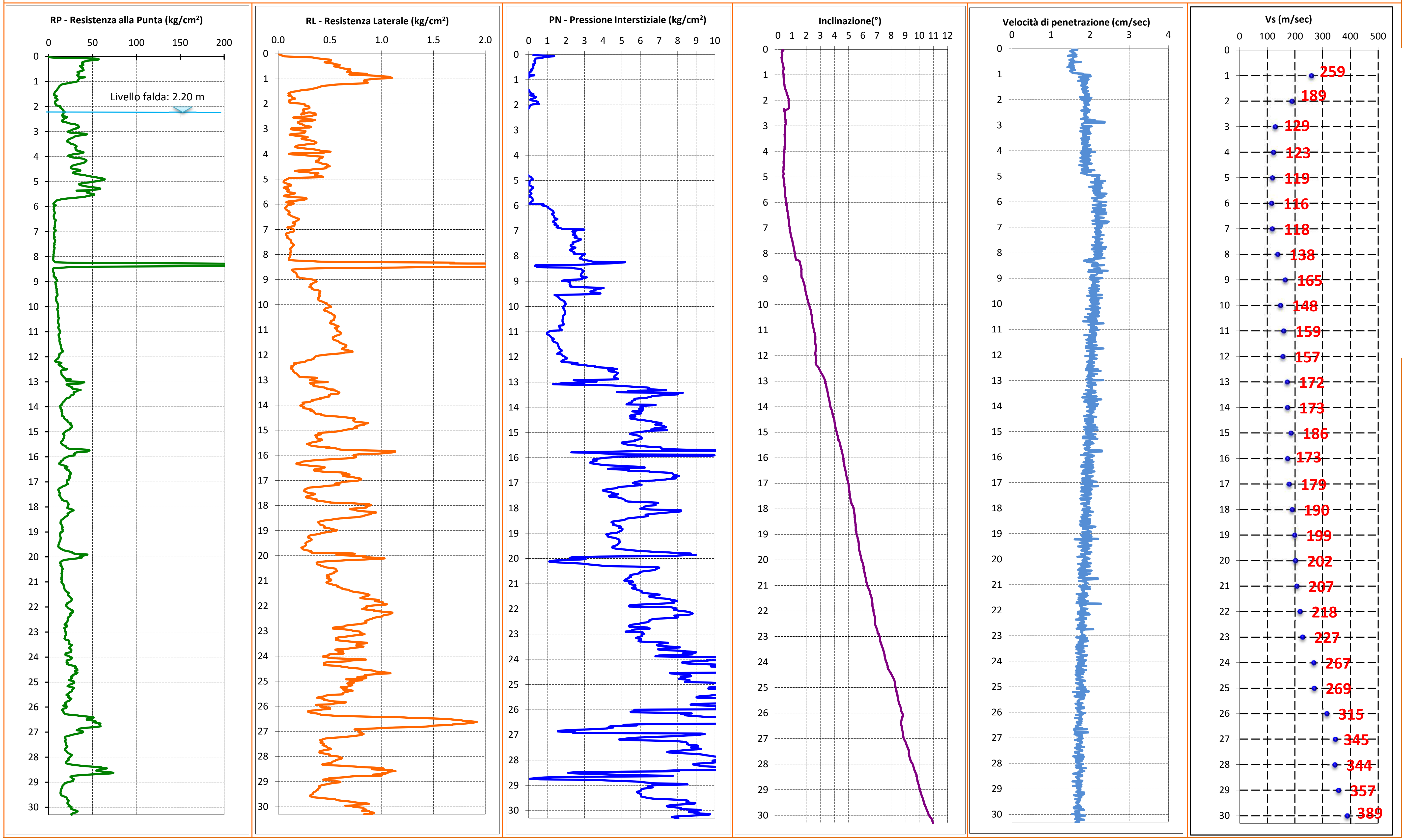
Committente: Geogroup
Cantiere: Medolla (MO)
Data: 05/07/2021

ID Prova: SCPTU 8
Profondita falda: a mt 2.20 da p.c.
Preforo: -

Profondità massima raggiunta: 30.30 mt
Punta sismica: Tecnopenta CPLSD
RIF. 89/21GF

Prova eseguita da:
GEO.FE. S.n.c.
via dell'Artigianato ,3 44030 - Ro Ferrarese (FE)
tel 3383646278 - info@geofe.it - www.geofe.it
Responsabile dati: Dott.Geol.Zanella Fabio
Responsabile cantiere: Sig. Mangherini Alberto

GRAFICI PROVA SCPTU 8



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Vs 30 e ANAGRAFICA PROVA SCPTU 8

prof. (p)	prof.(cs)	Dist (L)	Tempo (t)	VsP	L2-L1	t2-t1	VsL			**Vs30**
m	m	m	sec	m/sec	m	sec	m/sec			
0.00	0.00	0.00	0.0000							
1.30	1.00	1.8028	0.0070	259	1.80	0.0070	259	1.00	0.00386	
2.30	2.00	2.5000	0.0106	235	0.70	0.0037	189	1.00	0.00528	
3.30	3.00	3.3541	0.0173	194	0.85	0.0066	129	1.00	0.00775	
4.30	4.00	4.2720	0.0247	173	0.92	0.0075	123	1.00	0.00814	
5.30	5.00	5.2202	0.0327	160	0.95	0.0080	119	1.00	0.00841	
6.30	6.00	6.1847	0.0410	151	0.96	0.0083	116	1.00	0.00863	
7.30	7.00	7.1589	0.0493	145	0.97	0.0082	118	1.00	0.00845	
8.30	8.00	8.1394	0.0564	144	0.98	0.0071	138	1.00	0.00726	
9.30	9.00	9.1241	0.0623	146	0.98	0.0060	165	1.00	0.00606	
10.30	10.00	10.1119	0.0690	147	0.99	0.0067	148	1.00	0.00676	
11.30	11.00	11.1018	0.0752	148	0.99	0.0062	159	1.00	0.00627	
12.30	12.00	12.0934	0.0816	148	0.99	0.0063	157	1.00	0.00639	
13.30	13.00	13.0863	0.0873	150	0.99	0.0058	172	1.00	0.00581	
14.30	14.00	14.0801	0.0931	151	0.99	0.0057	173	1.00	0.00578	
15.30	15.00	15.0748	0.0984	153	0.99	0.0054	186	1.00	0.00538	
16.30	16.00	16.0702	0.1042	154	1.00	0.0057	173	1.00	0.00577	
17.30	17.00	17.0660	0.1097	156	1.00	0.0056	179	1.00	0.00558	
18.30	18.00	18.0624	0.1150	157	1.00	0.0053	190	1.00	0.00527	
19.30	19.00	19.0591	0.1200	159	1.00	0.0050	199	1.00	0.00504	
20.30	20.00	20.0562	0.1249	161	1.00	0.0049	202	1.00	0.00495	
21.30	21.00	21.0535	0.1298	162	1.00	0.0048	207	1.00	0.00484	
22.30	22.00	22.0511	0.1343	164	1.00	0.0046	218	1.00	0.00459	
23.30	23.00	23.0489	0.1387	166	1.00	0.0044	227	1.00	0.00440	
24.30	24.00	24.0468	0.1425	169	1.00	0.0037	267	1.00	0.00374	
25.30	25.00	25.0450	0.1462	171	1.00	0.0037	269	1.00	0.00372	
26.30	26.00	26.0432	0.1493	174	1.00	0.0032	315	1.00	0.00318	
27.30	27.00	27.0416	0.1522	178	1.00	0.0029	345	1.00	0.00289	
28.30	28.00	28.0401	0.1551	181	1.00	0.0029	344	1.00	0.00291	
29.30	29.00	29.0388	0.1579	184	1.00	0.0028	357	1.00	0.00280	
30.30	30.00	30.0375	0.1605	187	1.00	0.0026	389	1.00	0.00257	
								30.00	0.16246	**184.7**

prof.(cs): profondità cono sismico
prof. (p): profondità piezocono
prof. (p): profondità piezocono
D1: distanza fra la sorgente del rumore S - geofono triassiale (L)
Tempo (t): tempo d'arrivo dell'onda a S
VsP: velocità del suono nel percorso fra S ed L - Vs puntuale alla profondità
VsL: Vs per ogni livello (L2 - L1)/(t2 - t1)
Nel calcolo delle Vs30 è da intendersi un possibile valore di indeterminatezza del +/- 20% del valore ricavato

$$t_{corr} = \frac{z}{r} t$$

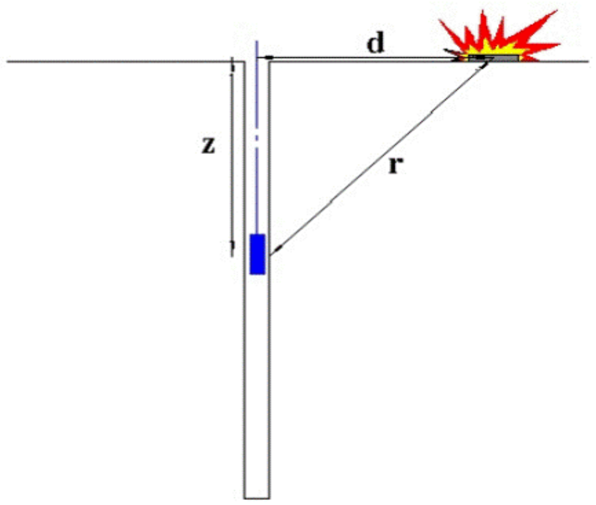


Figura 1 – Schema di down hole con metodo diretto

Geo.Fe.
INDAGINI GEOLOGICHE

Committente: Geogroup
Cantiere: Medolla (MO)
Data: 21/06/2021

ID Prova: SCPTU 9
Profondita falda: a mt 2.00 da p.c.
Preforo: -

Profondità massima raggiunta: 30.30 mt
Punta sismica: Tecnopenta CPLSD
RIF. 89/21GF

Prova eseguita da:
GEO.FE. S.n.c.
via dell'Artigianato ,3 44030 - Ro Ferrarese (FE)
tel 3383646278 - info@geofe.it - www.geofe.it
Responsabile dati: Dott.Geol.Zanella Fabio
Responsabile cantiere: Sig. Mangherini Alberto

Prof.	RP	RL	PN	Incl.	V.avanz
metri	kg/cm²	kg/cm²	kg/cm²	Gradi °	cm/sec
0.020	34.329	0.148	90.408	0.384	2.637
0.040	38.553	0.164	88.126	0.361	2.490
0.060	44.851	0.178	85.591	0.453	2.741
0.080	45.648	0.210	68.524	0.396	2.542
0.100	42.993	0.233	51.879	0.387	2.443
0.120	42.047	0.253	47.063	0.407	2.202
0.140	43.176	0.246	49.090	0.394	2.477
0.160	42.375	0.230	43.176	0.421	2.490
0.180	39.572	0.232	30.671	0.446	2.236
0.200	37.863	0.254	23.574	0.434	2.344
0.220	39.139	0.251	26.277	0.416	2.578
0.240	40.744	0.300	28.897	0.463	2.505
0.260	40.676	0.319	25.348	0.495	2.344
0.280	39.635	0.284	19.349	0.497	2.235
0.300	36.626	0.294	8.196	0.514	2.606
0.320	35.292	0.282	2.788	0.500	2.502
0.340	33.851	0.289	-2.197	0.497	2.400
0.360	33.683	0.287	-4.563	0.491	2.305
0.380	32.790	0.332	-9.632	0.546	2.695
0.400	31.569	0.363	-14.871	0.530	2.524
0.420	30.743	0.383	-19.264	0.545	2.272
0.440	29.889	0.395	-23.827	0.547	2.516
0.460	28.632	0.404	-27.629	0.582	2.482
0.480	27.308	0.465	-31.262	0.579	2.508
0.500	26.928	0.504	-33.966	0.584	2.295
0.520	26.144	0.551	-37.261	0.596	2.807
0.540	25.299	0.612	-40.557	0.604	2.491
0.560	25.213	0.677	-42.753	0.582	2.534
0.580	25.391	0.760	-45.542	0.602	2.406
0.600	26.038	0.833	-47.739	0.637	2.458
0.620	26.095	0.895	-49.175	0.628	2.765
0.640	24.381	0.966	-52.808	0.642	2.536
0.660	21.940	1.037	-56.779	0.666	2.490
0.680	21.940	1.037	-56.779	0.666	2.465
0.700	18.211	1.029	-62.271	0.705	2.518
0.720	17.153	1.008	-64.130	0.698	2.696
0.740	16.310	0.978	-65.736	0.714	2.462
0.760	15.689	0.939	-67.510	0.728	2.506
0.780	15.207	0.879	-68.777	0.746	2.343
0.800	14.654	0.828	-69.622	0.754	2.437
0.820	14.136	0.771	-68.693	0.789	2.755
0.840	13.837	0.707	-68.270	0.793	2.546
0.860	13.399	0.642	-37.599	0.813	2.546
0.880	13.138	0.589	-25.939	0.820	2.546
0.900	14.400	0.505	-32.614	1.064	2.188
0.920	18.308	0.459	-34.980	1.074	2.188
0.940	13.845	0.460	-41.233	1.086	2.188
0.960	13.863	0.432	-37.853	1.093	2.437
0.980	17.152	0.434	-27.038	1.096	2.561
1.000	18.040	0.420	-26.784	1.084	2.446
1.020	18.160	0.392	-29.657	1.117	2.589
1.040	16.427	0.379	-21.630	1.115	2.482
1.060	14.254	0.382	-29.488	1.100	2.828
1.080	13.180	0.375	-31.262	1.119	2.668
1.100	13.050	0.373	-29.150	1.114	2.502
1.120	14.085	0.378	-27.714	1.123	2.483
1.140	13.736	0.366	-29.742	1.144	2.521
1.160	12.877	0.382	-32.699	1.142	2.802
1.180	12.713	0.366	-35.825	1.154	2.563
1.200	12.038	0.376	-38.698	1.172	2.695
1.220	11.692	0.374	-39.881	1.163	2.679
1.240	11.018	0.381	-41.317	1.180	2.581
1.260	10.823	0.389	-43.091	1.175	2.520
1.280	10.552	0.417	-41.655	1.177	2.657
1.300	12.981	0.415	-29.319	1.166	2.717
1.320	11.760	0.383	-33.882	1.179	2.560
1.340	10.466	0.398	-32.783	1.185	2.697
1.360	10.418	0.388	-33.290	1.205	2.772
1.380	10.109	0.370	-35.825	1.191	2.791
1.400	9.763	0.328	-38.360	1.200	2.509
1.420	8.839	0.323	-40.050	1.212	2.535
1.440	8.749	0.322	-35.149	1.210	2.434
1.460	8.910	0.301	-31.093	1.204	2.848
1.480	11.043	0.226	-27.122	1.209	2.617
1.500	12.739	0.215	-28.305	1.212	2.592
1.520	12.396	0.202	-34.473	1.212	2.557
1.540	10.419	0.201	-41.233	1.233	2.856
1.560	8.912	0.179	-43.683	1.238	2.600
1.580	8.020	0.160	-44.612	1.246	2.546
1.600	7.899	0.133	-45.035	1.243	2.610
1.620	7.739	0.119	-45.795	1.251	2.610
1.640	7.469	0.119	-46.556	1.255	2.546

Prof.	RP	RL	PN	Incl.	Vavanz
metri	kg/cm²	kg/cm²	kg/cm²	Gradi °	cm/sec
1.660	7.056	0.120	-0.485	1.266	2.691
1.680	6.612	0.114	-0.495	1.279	2.691
1.700	6.522	0.103	-0.497	1.273	2.463
1.720	6.368	0.097	-0.497	1.283	2.492
1.740	6.247	0.090	-0.485	1.305	2.645
1.760	6.458	0.077	-0.452	1.298	2.690
1.780	6.587	0.077	-0.383	1.313	2.658
1.800	7.412	0.070	-0.330	1.325	2.375
1.820	8.273	0.068	-0.291	1.328	2.375
1.840	7.648	0.073	-0.337	1.355	2.675
1.860	7.053	0.086	-0.378	1.344	2.567
1.880	6.424	0.116	-0.360	1.369	2.688
1.900	8.737	0.186	-0.498	1.005	2.442
1.920	7.723	0.188	-0.485	0.990	2.801
1.940	7.255	0.186	-0.465	0.985	2.801
1.960	6.821	0.197	-0.453	0.996	2.458
1.980	7.078	0.174	-0.444	0.983	2.434
2.000	7.264	0.151	-0.416	0.988	2.639
2.020	7.268	0.140	-0.394	0.977	2.751
2.040	6.615	0.122	-0.402	0.983	2.542
2.060	6.146	0.115	-0.409	0.983	2.751
2.080	5.893	0.114	-0.389	0.971	2.578
2.100	6.298	0.098	-0.382	0.978	2.467
2.120	6.994	0.090	-0.363	0.964	2.727
2.140	7.290	0.091	-0.366	0.971	2.576
2.160	6.857	0.096	-0.375	0.973	2.704
2.180	6.354	0.092	-0.365	0.969	2.666
2.200	6.140	0.079	-0.351	0.981	2.538
2.220	6.110	0.071	-0.327	0.974	2.504
2.240	6.371	0.074	-0.305	0.983	2.805
2.260	6.670	0.083	-0.289	0.978	2.502
2.280	7.080	0.084	-0.261	0.969	2.693
2.300	7.996	0.075	-0.219	0.979	2.487
2.320	8.402	0.074	-0.172	0.986	2.487
2.340	8.628	0.074	-0.133	0.977	2.635
2.360	9.258	0.081	-0.074	0.980	2.546
2.380	8.940	0.112	-0.071	1.002	2.567
2.400	9.051	0.114	-0.079	0.994	2.490
2.420	8.374	0.141	-0.128	1.004	2.317
2.440	7.731	0.166	-0.150	1.007	2.918
2.460	7.304	0.175	-0.162	1.004	2.426
2.480	6.805	0.177	0.160	1.018	2.503
2.500	6.849	0.163	0.122	1.024	2.530
2.520	7.330	0.141	0.049	1.018	2.609
2.540	7.923	0.129	0.049	1.040	2.813
2.560	5.749	0.129	0.108	1.033	2.619
2.580	9.437	0.154	0.936	1.007	2.355
2.600	9.151	0.160	0.949	1.002	2.654
2.620	9.265	0.165	0.998	1.010	2.626
2.640	9.378	0.167	0.973	1.019	2.672
2.660	9.563	0.170	0.957	1.027	2.662
2.680	9.457	0.181	0.935	1.040	2.429
2.700	9.280	0.204	0.930	1.051	2.597
2.720	9.540	0.202	0.929	1.050	2.534
2.740	9.871	0.209	0.926	1.044	2.662
2.760	10.020	0.219	0.929	1.046	2.590
2.780	10.462	0.233	0.900	1.050	2.503
2.800	10.720	0.246	0.857	1.042	2.520
2.820	10.505	0.254	0.820	1.051	2.582
2.840	10.327	0.264	0.768	1.048	2.524
2.860	10.075	0.271	0.721	1.058	2.810
2.880	9.824	0.291	0.697	1.067	2.616
2.900	12.112	0.317	0.771	0.961	2.420
2.920	13.315	0.330	0.814	0.972	2.522
2.940	15.317	0.325	0.847	0.984	2.522
2.960	16.228	0.327	0.773	0.997	2.403
2.980	15.612	0.341	0.674	1.005	2.513
3.000	14.376	0.345	0.580	1.009	2.557
3.020	13.829	0.325	0.559	1.024	2.724
3.040	12.954	0.292	0.507	1.035	2.672
3.060	13.683	0.281	0.609	1.043	2.672
3.080	15.393	0.284	0.696	1.055	2.520
3.100	17.614	0.274	0.604	1.064	2.371
3.120	17.941	0.324	0.378	1.068	2.452
3.140	18.341	0.341	0.173	1.076	2.648
3.160	18.271	0.327	0.153	1.078	2.431
3.180	18.346	0.300	0.143	1.074	2.652
3.200	17.728	0.289	0.153	1.092	2.637
3.220	16.237	0.273	0.170	1.099	2.723
3.240	13.400	0.285	0.197	1.098	2.494
3.260	10.416	0.277	0.230	1.117	2.351
3.280	8.815	0.293	0.242	1.124	2.748

Prof.	RP	RL	PN	Incl.	Vavanz
metri	kg/cm²	kg/cm²	kg/cm²	Gradi °	cm/sec
3.300	7.141	0.293	0.213	1.113	2.453
3.320	6.343	0.209	0.190	1.119	2.527
3.340	6.273	0.191	0.168	1.128	2.465
3.360	6.711	0.157	0.125	1.150	2.559
3.380	7.478	0.133	0.058	1.147	2.710
3.400	7.556	0.123	0.058	1.150	2.601
3.420	7.704	0.120	0.058	1.153	2.376
3.440	7.889	0.123	0.058	1.159	2.381
3.460	8.001	0.134	0.046	1.172	2.686
3.480	8.186	0.146	0.079	1.180	2.493
3.500	8.661	0.146	0.145	1.192	2.546
3.520	8.882	0.154	0.178	1.183	2.602
3.540	9.249	0.155	0.186	1.190	2.521
3.560	9.651	0.159	0.192	1.198	2.647
3.580	9.654	0.174	0.191	1.212	2.475
3.600	9.840	0.184	0.187	1.220	2.596
3.620	9.514	0.210	0.174	1.243	2.345
3.640	9.189	0.251	0.172	1.239	2.348
3.660	9.447	0.292	0.176	1.267	2.706
3.680	9.342	0.313	0.197	1.275	2.707
3.700	9.784	0.305	0.232	1.272	2.585
3.720	10.296	0.283	0.291	1.298	2.319
3.740	10.664	0.255	0.340	1.301	2.590
3.760	10.849	0.232	0.353	1.317	2.591
3.780	10.924	0.207	0.377	1.325	2.564
3.800	10.454	0.191	0.388	1.323	2.591
3.820	9.873	0.165	0.385	1.340	2.556
3.840	8.640	0.153	0.381	1.337	2.409
3.860	8.460	0.148	0.406	1.356	2.409
3.880	9.944	0.236	1.752	1.367	2.450
3.900	9.436	0.223	1.826	1.375	2.359
3.920	9.037	0.211	1.788	1.386	2.359
3.940	9.149	0.200	1.782	1.398	2.281
3.960	9.842	0.210	1.811	1.393	2.527
3.980	10.315	0.208	1.790	1.399	2.632
4.000	11.843	0.202	1.772	1.398	2.343
4.020	11.515	0.223	0.967	1.424	2.645
4.040	10.606	0.216	0.738	1.429	2.617
4.060	9.407	0.193	0.740	1.438	2.611
4.080	9.116	0.181	0.730	1.439	2.409
4.100	9.373	0.170	0.788	1.456	2.479
4.120	10.248	0.171	0.884	1.462	2.675
4.140	10.394	0.179	0.797	1.473	2.538
4.160	9.411	0.187	0.505	1.490	2.513
4.180	7.847	0.173	0.475	1.491	2.509
4.200	6.466	0.184	0.464	1.511	2.628
4.220	6.104	0.166	0.486	1.506	2.568
4.240	6.617	0.141	0.515	1.513	2.470
4.260	6.764	0.138	0.540	1.519	2.483
4.280	6.876	0.134	0.567	1.533	2.474
4.300	6.841	0.125	0.576	1.535	2.519
4.320	6.843	0.125	0.579	1.541	2.732
4.340	6.627	0.136	0.577	1.548	2.624
4.360	6.884	0.139	0.601	1.546	2.618
4.380	7.761	0.144	0.631	1.560	2.586
4.400	7.836	0.149	0.639	1.550	2.256
4.420	7.583	0.154	0.622	1.553	2.668
4.440	6.602	0.146	0.591	1.576	2.491
4.460	6.314	0.118	0.594	1.582	2.499
4.480	6.425	0.108	0.626	1.594	2.450
4.500	7.374	0.108	0.690	1.581	2.419
4.520	7.304	0.107	0.701	1.585	2.419
4.540	7.123	0.112	0.702	1.591	2.667
4.560	7.235	0.107	0.730	1.594	2.369
4.580	7.382	0.106	0.761	1.602	2.587
4.600	7.602	0.117	0.802	1.598	2.524
4.620	8.477	0.131	0.841	1.594	2.673
4.640	8.587	0.146	0.853	1.605	2.635
4.660	8.080	0.170	0.852	1.597	2.622
4.680	7.718	0.172	0.853	1.601	2.463
4.700	8.048	0.167	0.873	1.598	2.484
4.720	7.757	0.174	0.871	1.602	2.434
4.740	8.047	0.186	0.891	1.599	2.490
4.760	7.903	0.191	0.924	1.601	2.426
4.780	7.976	0.198	0.935	1.619	2.396
4.800	8.413	0.206	0.972	1.621	2.748
4.820	9.505	0.203	1.048	1.632	2.763
4.840	10.233	0.196	1.101	1.640	2.582
4.860	10.959	0.187	1.110	1.645	2.513
4.880	12.703	0.224	1.204	1.640	2.346
4.900	11.102	0.257	0.545	1.663	2.780
4.920	9.720	0.277	0.586	1.665	2.780

Prof.	RP	RL	PN	Incl.	Vavanz
metri	kg/cm²	kg/cm²	kg/cm²	Gradi °	cm/sec
4.940	8.448	0.284	0.585	1.663	2.349
4.960	8.230	0.280	0.611	1.678	2.657
4.980	8.667	0.285	0.654	1.673	2.564
5.000	9.212	0.286	0.687	1.701	2.668
5.020	9.283	0.274	0.718	1.708	2.488
5.040	8.773	0.260	0.718	1.728	2.413
5.060	8.445	0.228	0.716	1.737	2.413
5.080	8.044	0.211	0.735	1.746	2.487
5.100	7.861	0.200	0.755	1.760	2.367
5.120	8.222	0.190	0.800	1.766	2.606
5.140	9.349	0.189	0.858	1.782	2.423
5.160	9.602	0.189	0.886	1.785	2.755
5.180	10.002	0.193	0.896	1.804	2.641
5.200	9.926	0.199	0.915	1.834	2.468
5.220	9.417	0.182	0.927	1.834	2.567
5.240	9.016	0.182	0.936	1.842	2.301
5.260	8.580	0.181	0.953	1.846	2.740
5.280	8.578	0.180	0.992	1.856	2.487
5.300	9.305	0.176	1.050	1.875	2.527
5.320	11.400	0.202	1.748	1.864	2.527
5.340	11.400	0.217	1.742	1.893	2.257
5.360	10.709	0.230	1.674	1.897	2.346
5.380	9.764	0.241	1.607	1.919	2.598
5.400	9.217	0.232	1.579	1.932	2.346
5.420	8.853	0.241	1.577	1.950	2.415
5.440	8.635	0.247	1.594	1.954	2.285
5.460	8.417	0.255	1.614	1.971	2.434
5.480	8.125	0.249	1.622	1.979	2.623
5.500	7.871	0.243	1.612	2.001	2.431
5.520	7.761	0.248	1.611	2.002	2.471
5.540	7.833	0.244	1.637	2.002	2.384
5.560	7.905	0.222	1.661	2.015	2.552
5.580	7.758	0.214	1.669	2.021	2.472
5.600	7.940	0.208	1.678	2.021	2.542
5.620	7.720	0.198	1.678	2.041	2.465
5.640	7.318	0.188	1.664	2.054	2.489
5.660	7.500	0.177	1.665	2.067	2.585
5.680	7.463	0.179	1.658	2.083	2.531
5.700	7.570	0.190	1.662	2.104	2.434
5.720	7.896	0.200	1.715	2.112	2.384
5.740	8.879	0.198	1.807	2.115	2.321
5.760	9.716	0.193	1.873	2.114	2.585
5.780	9.899	0.192	1.857	2.132	2.611
5.800	9.498	0.213	1.806	2.123	2.661
5.820	9.242	0.234	1.761	2.125	2.519
5.840	9.204	0.250	1.731	2.137	2.499
5.860	8.947	0.265	1.702	2.159	2.656
5.880	9.087	0.291	2.077	2.192	2.533
5.900	8.868	0.304	2.011	2.194	2.589
5.920	8.577	0.301	1.985	2.211	2.589
5.940	8.359	0.281	1.949	2.213	2.352
5.960	7.996	0.278	1.917	2.215	2.356
5.980	7.921	0.276	1.896	2.237	2.538
6.000	7.447	0.272	1.867	2.241	2.755
6.020	7.519	0.268	1.855	2.234	2.437
6.040	7.227	0.256	1.835	2.252	2.597
6.060	7.118	0.248	1.826	2.275	2.437
6.080	7.479	0.249	1.850	2.276	2.386
6.100	7.551	0.247	1.859	2.286	2.637
6.120	7.513	0.241	1.849	2.292	2.502
6.140	7.074	0.238	1.783	2.299	2.546
6.160	6.963	0.241	1.759	2.307	2.403
6.180	7.034	0.250	1.765	2.320	2.625
6.200	7.070	0.235	1.784	2.319	2.542
6.220	6.376	0.215	1.717	2.334	2.561
6.240	6.083	0.199	1.710	2.344	2.267
6.260	6.082	0.187	1.732	2.351	2.412
6.280	6.627	0.161	1.805	2.363	2.608
6.300	7.281	0.143	1.880	2.367	2.608
6.320	9.101	0.148	1.979	2.364	2.546
6.340	11.684	0.162	1.698	2.372	2.469
6.360	13.139	0.188	0.848	2.381	2.434
6.380	13.830	0.224	0.773	2.377	2.392
6.400	14.956	0.232	0.359	2.382	2.435
6.420	16.118	0.246	0.185	2.386	2.366
6.440	13.712	0.239	0.145	2.396	2.458
6.460	10.908	0.204	0.110	2.403	2.458
6.480	8.214	0.143	0.100	2.414	2.682
6.500	6.175	0.150	0.123	2.429	2.533
6.520	6.249	0.130	0.210	2.433	2.556
6.540	6.649	0.106	0.301	2.444	2.460
6.560	6.868	0.107	0.335	2.438	2.228

Prof.	RP	RL	PN	Incl.	Vavanz
metri	kg/cm²	kg/cm²	kg/cm²	Gradi °	cm/sec
6.580	7.668	0.115	0.366	2.458	2.731
6.600	7.776	0.137	0.387	2.460	2.506
6.620	8.139	0.150	0.415	2.470	2.413
6.640	8.285	0.153	0.437	2.477	2.506
6.660	8.139	0.173	0.451	2.492	2.340
6.680	7.666	0.203	0.453	2.494	2.558
6.700	7.374	0.218	0.460	2.499	2.594
6.720	7.084	0.213	0.461	2.506	2.358
6.740	6.609	0.208	0.463	2.509	2.469
6.760	6.390	0.213	0.473	2.515	2.311
6.780	6.207	0.208	0.480	2.515	2.345
6.800	6.207	0.199	0.491	2.528	2.773
6.820	5.987	0.195	0.498	2.531	2.589
6.840	5.804	0.186	0.506	2.550	2.502
6.860	3.854	0.108	1.185	2.577	2.350
6.880	5.749	0.156	1.320	2.583	2.350
6.900	5.967	0.143	1.348	2.585	2.341
6.920	6.150	0.129	1.380	2.592	2.330
6.940	6.223	0.117	1.406	2.589	2.439
6.960	6.405	0.113	1.411	2.602	2.590
6.980	6.515	0.122	1.417	2.616	2.471
7.000	6.114	0.131	1.397	2.630	2.542
7.020	5.532	0.127	1.372	2.633	2.389
7.040	5.532	0.124	1.383	2.625	2.625
7.060	6.298	0.117	1.456	2.623	2.573
7.080	7.207	0.110	1.531	2.626	2.281
7.100	7.209	0.111	1.540	2.640	2.401
7.120	6.737	0.117	1.538	2.638	2.442
7.140	7.027	0.101	1.581	2.641	2.623
7.160	7.099	0.105	1.583	2.651	2.421
7.180	7.097	0.119	1.565	2.659	2.518
7.200	6.841	0.132	1.573	2.679	2.489
7.220	6.950	0.137	1.599	2.677	2.319
7.240	7.350	0.129	1.646	2.689	2.549
7.260	8.514	0.113	1.732	2.717	2.341
7.280	9.242	0.127	1.772	2.712	2.482
7.300	9.972	0.174	1.837	2.730	2.342
7.320	10.228	0.178	1.852	2.746	2.504
7.340	9.610	0.184	1.777	2.758	2.542
7.360	8.918	0.200	1.729	2.765	2.493
7.380	8.373	0.192	1.743	2.773	2.347
7.400	8.446	0.179	1.763	2.780	2.238
7.420	8.156	0.182	1.734	2.790	2.581
7.440	7.717	0.190	1.698	2.807	2.447
7.460	7.136	0.208	1.661	2.804	2.418
7.480	6.444	0.237	1.642	2.814	2.395
7.500	6.517	0.234	1.670	2.827	2.419
7.520	7.136	0.224	1.786	2.828	2.672
7.540	8.046	0.215	1.891	2.831	2.431
7.560	8.154	0.179	1.836	2.847	2.395
7.580	7.424	0.159	1.768	2.846	2.446
7.600	6.875	0.122	1.784	2.862	2.414
7.620	7.202	0.095	1.860	2.871	2.539
7.640	7.709	0.085	1.911	2.876	2.432
7.660	7.889	0.092	1.921	2.888	2.487
7.680	7.487	0.109	1.917	2.905	2.474
7.700	7.742	0.104	1.972	2.916	2.313
7.720	7.850	0.102	1.987	2.925	2.344
7.740	7.595	0.104	1.968	2.926	2.577
7.760	7.267	0.124	1.943	2.947	2.466
7.780	7.013	0.135	1.961	2.958	2.467
7.800	7.850	0.138	2.080	2.951	2.488
7.820	8.469	0.133	2.164	2.972	2.431
7.840	8.542	0.141	2.152	2.994	2.546
7.860	7.657	0.176	2.295	3.014	2.575
7.880	7.730	0.185	2.258	3.016	2.429
7.900	7.294	0.211	2.215	3.021	2.429
7.920	7.076	0.228	2.195	3.030	2.389
7.940	6.931	0.242	2.183	3.032	2.389
7.960	6.894	0.256	2.184	3.043	2.795
7.980	7.004	0.269	2.217	3.058	2.689
8.000	7.695	0.246	2.295	3.063	2.599
8.020	8.276	0.221	2.390	3.076	2.695
8.040	8.930	0.205	2.460	3.087	2.695
8.060	9.218	0.194	2.478	3.094	2.719
8.080	9.872	0.192	2.512	3.110	2.655
8.100	10.162	0.202	2.524	3.115	2.528
8.120	10.015	0.228	2.508	3.120	2.593
8.140	9.468	0.265	2.461	3.150	2.593
8.160	9.065	0.292	2.428	3.161	2.767
8.180	8.991	0.308	2.422	3.163	2.763
8.200	8.806	0.323	2.406	3.176	2.655

Prof.: Profondità RL: - RP: Resistenza di punta - Resistenza all'attrito laterale - Incl.:clinazione - Vavanz: velocità di avanzamento della punta

Geo.Fe.
INDAGINI GEOLOGICHE

Committente: Geogroup
Cantiere: Medolla (MO)
Data: 21/06/2021

ID Prova: SCPTU 9
Profondita falda: a mt 2.00 da p.c.
Preforo: -

Profondità massima raggiunta: 30.30 mt
Punta sismica: Tecnopenta CPLSD
RIF. 89/21GF

Prova eseguita da:
GEO.FE. S.n.c.
via dell'Artigianato ,3 44030 - Ro Ferrarese (FE)
tel 3383646278 - info@geofe.it - www.geofe.it
Responsabile dati: Dott.Geol.Zanella Fabio
Responsabile cantiere: Sig. Mangherini Alberto

Prof.	RP	RL	PN	Incl.	Vavanz
metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec
8.220	8.404	0.335	2.393	3.189	2.568
8.240	8.549	0.336	2.414	3.207	2.466
8.260	8.366	0.329	2.431	3.211	2.466
8.280	8.509	0.317	2.461	3.217	2.579
8.300	8.799	0.307	2.496	3.228	2.770
8.320	8.906	0.311	2.537	3.242	2.669
8.340	9.123	0.307	2.588	3.235	2.528
8.360	9.157	0.306	2.618	3.253	2.735
8.380	9.445	0.312	2.643	3.264	2.703
8.400	9.403	0.330	2.612	3.260	2.631
8.420	9.256	0.345	2.615	3.261	2.632
8.440	9.507	0.348	2.630	3.277	2.687
8.460	9.578	0.363	2.623	3.289	2.531
8.480	9.137	0.386	2.596	3.293	2.614
8.500	9.207	0.392	2.626	3.297	2.614
8.520	9.166	0.395	2.623	3.300	2.711
8.540	9.200	0.391	2.644	3.313	2.549
8.560	9.452	0.392	2.663	3.301	2.521
8.580	9.558	0.399	2.682	3.325	2.635
8.600	9.808	0.402	2.695	3.324	2.859
8.620	9.913	0.406	2.726	3.323	2.467
8.640	9.836	0.422	2.736	3.327	2.881
8.660	9.832	0.444	2.749	3.342	2.491
8.680	10.083	0.457	2.768	3.337	2.646
8.700	10.114	0.468	2.795	3.348	2.474
8.720	10.549	0.471	2.849	3.348	2.686
8.740	10.619	0.471	2.868	3.370	2.601
8.760	10.359	0.467	2.852	3.372	2.579
8.780	10.063	0.463	2.826	3.380	2.560
8.800	9.802	0.451	2.774	3.391	2.721
8.820	9.687	0.437	2.748	3.390	2.468
8.840	9.429	0.433	2.713	3.398	2.627
8.860	9.335	0.417	3.013	3.400	2.698
8.880	9.519	0.417	3.005	3.389	2.677
8.900	9.809	0.409	3.013	3.403	2.677
8.920	9.919	0.393	2.991	3.403	2.607
8.940	10.282	0.386	2.997	3.411	2.673
8.960	10.465	0.385	3.016	3.420	2.743
8.980	10.573	0.376	3.029	3.426	2.579
9.000	10.537	0.380	3.012	3.424	2.635
9.020	10.135	0.386	2.962	3.436	2.599
9.040	10.097	0.386	2.910	3.450	2.599
9.060	9.623	0.387	2.844	3.444	2.542
9.080	9.221	0.385	2.784	3.452	2.633
9.100	8.492	0.391	2.709	3.452	2.573
9.120	8.236	0.387	2.679	3.463	2.475
9.140	8.017	0.375	2.663	3.474	2.475
9.160	7.726	0.365	2.643	3.466	2.708
9.180	7.362	0.346	2.614	3.476	2.637
9.200	7.214	0.334	2.599	3.480	2.657
9.220	7.319	0.317	2.606	3.483	2.356
9.240	7.315	0.305	2.601	3.494	2.896
9.260	7.311	0.297	2.588	3.499	2.616
9.280	7.127	0.289	2.587	3.508	2.607
9.300	7.197	0.280	2.596	3.507	2.566
9.320	7.087	0.271	2.601	3.509	2.513
9.340	6.904	0.257	2.618	3.519	2.755
9.360	7.195	0.240	2.656	3.520	2.707
9.380	7.411	0.232	2.677	3.519	2.406
9.400	7.410	0.228	2.701	3.516	2.406
9.420	7.628	0.225	2.728	3.516	2.406
9.440	7.846	0.230	2.755	3.535	2.509
9.460	7.883	0.237	2.788	3.523	2.542
9.480	8.063	0.246	2.809	3.535	2.646
9.500	8.571	0.250	2.832	3.522	2.542
9.520	8.789	0.260	2.829	3.531	2.734
9.540	8.824	0.278	2.858	3.535	2.590
9.560	8.860	0.293	2.897	3.546	2.485
9.580	9.224	0.298	2.926	3.542	2.481
9.600	9.333	0.303	2.921	3.537	2.524
9.620	9.005	0.317	2.882	3.554	2.785
9.640	8.823	0.332	2.837	3.539	2.585
9.660	8.533	0.339	2.808	3.542	2.521
9.680	8.314	0.344	2.796	3.546	2.433
9.700	7.987	0.350	2.805	3.558	2.723
9.720	8.095	0.346	2.825	3.561	2.431
9.740	8.531	0.333	2.834	3.557	2.701
9.760	8.457	0.325	2.813	3.561	2.430
9.780	8.493	0.325	2.806	3.566	2.548
9.800	8.564	0.325	2.804	3.570	2.813
9.820	8.344	0.337	2.794	3.580	2.636
9.840	8.326	0.358	3.055	3.631	2.564
9.860	8.509	0.376	3.072	3.633	2.536
9.880	8.474	0.388	3.057	3.635	2.510
9.900	8.295	0.386	3.049	3.643	2.510
9.920	8.261	0.389	3.042	3.655	2.428
9.940	8.553	0.386	3.081	3.661	2.428
9.960	8.952	0.380	3.131	3.675	2.561
9.980	9.388	0.374	3.188	3.686	2.704
10.000	9.715	0.368	3.219	3.692	2.521
10.020	10.041	0.351	3.217	3.709	2.428
10.040	9.857	0.354	3.192	3.712	2.428
10.060	9.638	0.356	3.179	3.714	2.552
10.080	9.493	0.356	3.181	3.713	2.606
10.100	9.421	0.351	3.199	3.712	2.560
10.120	9.566	0.350	3.156	3.710	2.593
10.140	9.274	0.362	3.070	3.716	2.521
10.160	8.691	0.389	3.004	3.706	2.521
10.180	8.907	0.411	2.976	3.693	2.770
10.200	8.830	0.430	2.975	3.696	2.607
10.220	9.008	0.443	3.005	3.694	2.461
10.240	9.187	0.451	3.053	3.677	2.524
10.260	9.441	0.452	3.075	3.677	2.895
10.280	10.094	0.443	3.081	3.695	2.611
10.300	10.565	0.420	3.147	3.704	2.635
10.320	10.943	0.392	3.195	3.713	2.635
10.340	11.854	0.404	3.195	3.735	2.499
10.360	11.855	0.409	3.135	3.742	2.641
10.380	11.017	0.396	3.107	3.766	2.386
10.400	11.963	0.445	3.216	3.770	2.446
10.420	12.692	0.451	3.229	3.791	2.446
10.440	13.164	0.466	3.238	3.805	2.431
10.460	13.346	0.484	3.127	3.806	2.546
10.480	13.420	0.497	3.079	3.838	2.537
10.500	13.603	0.518	3.004	3.842	2.538
10.520	13.748	0.544	2.874	3.852	2.538
10.540	13.491	0.590	2.755	3.854	2.527
10.560	13.271	0.629	2.779	3.871	2.460
10.580	13.196	0.659	2.748	3.890	2.482
10.600	12.827	0.670	2.651	3.893	2.468
10.620	12.570	0.659	2.618	3.918	2.468
10.640	11.875	0.652	2.543	3.922	2.512
10.660	11.361	0.640	2.537	3.943	2.463
10.680	11.067	0.621	2.555	3.927	2.315
10.700	10.920	0.578	2.580	3.946	2.724
10.720	10.847	0.543	2.639	3.944	2.403
10.740	11.170	0.534	2.697	3.957	2.564
10.760	11.709	0.529	2.775	3.946	2.410
10.780	11.741	0.526	2.802	3.952	2.734
10.800	12.027	0.509	2.829	3.943	2.472
10.820	12.277	0.508	2.759	3.934	2.643
10.840	12.218	0.504	2.805	3.930	2.446
10.860	12.547	0.518	2.816	3.947	2.353
10.880	12.766	0.535	2.851	3.947	2.664
10.900	13.131	0.550	2.869	3.944	2.664
10.920	13.057	0.560	2.837	3.940	2.598
10.940	13.019	0.578	2.807	3.943	2.468
10.960	13.164	0.585	2.794	3.940	2.555
10.980	13.162	0.595	2.757	3.940	2.563
11.000	12.940	0.603	2.711	3.937	2.463
11.020	12.316	0.622	2.653	3.936	2.731
11.040	11.839	0.627	2.635	3.931	2.495
11.060	12.017	0.614	2.635	3.931	2.441
11.080	11.760	0.611	2.636	3.938	2.433
11.100	11.719	0.603	2.650	3.927	2.774
11.120	11.751	0.594	2.655	3.927	2.462
11.140	11.713	0.583	2.675	3.938	2.549
11.160	12.144	0.565	2.694	3.947	2.449
11.180	11.812	0.561	2.674	3.944	2.441
11.200	11.810	0.566	2.652	3.938	2.741
11.220	11.767	0.566	2.648	3.946	2.413
11.240	11.691	0.567	2.643	3.950	2.426
11.260	11.650	0.556	2.630	3.958	2.354
11.280	11.465	0.555	2.627	3.949	2.640
11.300	11.389	0.552	2.614	3.946	2.531
11.320	11.457	0.548	2.624	3.954	2.431
11.340	11.489	0.545	2.649	3.951	2.493
11.360	11.920	0.539	2.694	3.936	2.625
11.380	12.462	0.533	2.737	3.927	2.293
11.400	12.748	0.538	2.764	3.936	2.406
11.420	13.252	0.555	2.789	3.933	2.336
11.440	13.285	0.569	2.764	3.938	2.564
11.460	13.499	0.597	2.738	3.944	2.455
11.480	13.496	0.622	2.739	3.946	2.444
11.500	13.382	0.656	2.749	3.964	2.488
11.520	13.379	0.681	2.761	3.986	2.331
11.540	13.448	0.695	2.756	4.000	2.501
11.560	13.555	0.705	2.754	4.003	2.453
11.580	13.298	0.711	2.769	4.014	2.356
11.600	13.514	0.710	2.789	4.022	2.343
11.620	13.655	0.693	2.824	4.039	2.656
11.640	13.944	0.688	2.856	4.052	2.389
11.660	14.230	0.673	2.884	4.061	2.342
11.680	14.919	0.656	2.924	4.053	2.202
11.700	15.317	0.666	2.927	4.067	2.684
11.720	15.786	0.694	2.910	4.094	2.219
11.740	16.400	0.706	2.991	4.104	2.400
11.760	17.704	0.699	3.099	4.120	2.318
11.780	17.991	0.712	3.121	4.132	2.611
11.800	18.281	0.743	3.160	4.138	2.437
11.820	18.388	0.750	3.148	4.148	2.437
11.840	18.606	0.733	2.573	4.188	2.324
11.860	18.717	0.787	2.542	4.197	2.324
11.880	18.572	0.798	2.457	4.201	2.324
11.900	18.172	0.816	2.389	4.208	2.004
11.920	17.516	0.846	2.316	4.209	2.529
11.940	17.044	0.862	2.322	4.234	2.327
11.960	17.116	0.873	2.246	4.233	2.411
11.980	17.478	0.882	2.299	4.241	2.453
12.000	17.293	0.884	2.312	4.253	2.415
12.020	16.815	0.876	2.290	4.259	2.471
12.040	16.518	0.855	2.284	4.261	2.256
12.060	16.659	0.841	2.222	4.265	2.389
12.080	16.252	0.847	2.230	4.266	2.389
12.100	15.626	0.848	2.226	4.277	2.305
12.120	15.474	0.826	2.288	4.272	2.309
12.140	16.014	0.804	2.358	4.273	2.591
12.160	16.410	0.791	2.386	4.275	2.378
12.180	16.621	0.780	2.393	4.277	2.287
12.200	16.869	0.744	2.355	4.290	2.471
12.220	16.680	0.730	2.281	4.289	2.251
12.240	15.440	0.745	2.132	4.312	2.299
12.260	14.708	0.779	2.067	4.294	2.199
12.280	13.610	0.782	2.007	4.299	2.199
12.300	12.439	0.798	1.945	4.302	2.278
12.320	11.779	0.784	1.917	4.302	2.236
12.340	11.589	0.743	1.919	4.305	2.236
12.360	11.509	0.698	1.930	4.308	2.284
12.380	11.938	0.631	1.977	4.319	2.100
12.400	12.368	0.569	2.018	4.332	2.207
12.420	12.797	0.537	2.055	4.333	2.529
12.440	13.411	0.508	2.107	4.349	2.212
12.460	13.989	0.507	2.143	4.360	2.205
12.480	14.639	0.530	2.209	4.380	2.205
12.500	15.146	0.554	2.253	4.396	2.313
12.520	15.179	0.589	2.274	4.430	2.193
12.540	15.395	0.619	2.311	4.428	2.325
12.560	15.355	0.650	2.338	4.440	2.372
12.580	15.389	0.669	2.380	4.458	2.211
12.600	15.424	0.692	2.430	4.469	2.295
12.620	16.406	0.688	2.519	4.480	2.404
12.640	16.880	0.687	2.559	4.489	2.297
12.660	17.170	0.709	2.608	4.505	2.212
12.680	16.951	0.723	2.615	4.505	2.212
12.700	17.096	0.717	2.633	4.502	2.305
12.720	16.985	0.711	2.571	4.510	2.200
12.740	17.348	0.692	2.568	4.517	2.107
12.760	17.236	0.683	2.538	4.517	2.536
12.780	16.689	0.699	2.457	4.535	2.225
12.800	16.214	0.722	2.429	4.549	2.199
12.820	15.920	0.724	2.412	4.540	2.410
12.840	14.289	0.702	2.469	4.600	2.126
12.860	15.894	0.782	2.576	4.609	2.108
12.880	15.896	0.795	2.540	4.639	2.108
12.900	16.225	0.813	2.515	4.638	2.160
12.920	16.299	0.821	2.488	4.639	2.160
12.940	16.590	0.824	2.482	4.660	2.196
12.960	16.154	0.849	2.447	4.669	2.309
12.980	16.556	0.841	2.472	4.702	2.270
13.000	16.913	0.821	2.524	4.719	2.194
13.020	16.943	0.801	2.570	4.710	2.363
13.040	16.502	0.788	2.659	4.718	2.325
13.060	16.464	0.771	2.704	4.729	2.126
13.080	16.973	0.752	2.745	4.720	2.126
13.100	17.808	0.731	2.825	4.730	2.447
13.120	18.680	0.734	2.924	4.730	2.215
13.140	19.223	0.739	2.984	4.746	2.254
13.160	19.546	0.718	2.937	4.740	2.355
13.180	20.231	0.692	2.943	4.750	2.254
13.200	19.499	0.706	2.835	4.752	2.162
13.220	19.167	0.746	2.786	4.761	2.061
13.240	18.837	0.753	2.774	4.770	2.424
13.260	17.049	0.777	2.653	4.773	2.200
13.280	15.989	0.783	2.640	4.792	2.100
13.300	15.330	0.768	2.608	4.804	2.408
13.320	15.073	0.753	2.583	4.805	2.175
13.340	14.045	0.643	2.517	4.831	2.278
13.360	13.494	0.580	2.511	4.847	2.037
13.380	12.980	0.531	2.488	4.858	2.224
13.400	12.468	0.489	2.476	4.859	2.177
13.420	12.138	0.449	2.500	4.881	2.177
13.440	12.098	0.417	2.506	4.889	2.327
13.460	11.915	0.396	2.464	4.908	2.106
13.480	11.515	0.371	2.463	4.919	2.224
13.500	11.187	0.350	2.455	4.925	2.350
13.520	10.967	0.329	2.472	4.931	2.181
13.540	11.259	0.295	2.510	4.953	2.104
13.560	11.550	0.268	2.610	4.954	2.248
13.580	12.423	0.249	2.687	4.970	2.251
13.600	12.681	0.248	2.735	4.977	2.145
13.620	12.901	0.261	2.802	4.987	2.121
13.640	12.975	0.266	2.906	4.995	2.235
13.660	13.560	0.264	3.075	5.016	2.163
13.680	14.728	0.265	3.263	5.029	2.025
13.700	15.459	0.272	3.482	5.042	2.273
13.720	17.284	0.275	3.725	5.067	2.139
13.740	18.927	0.280	3.931	5.076	2.093
13.760	20.569	0.306	4.083	5.080	2.173
13.780	21.885	0.361	4.288	5.102	2.379
13.800	22.436	0.448	4.428	5.124	2.170
13.820	23.423	0.507	4.381	5.141	2.107
13.840	23.548	0.579	3.545	5.214	2.256
13.860	25.226	0.677	3.614	5.229	2.160
13.880	26.029	0.810	2.029	5.237	2.160
13.900	26.104	0.923	1.962	5.239	2.181
13.920	27.197	1.022	2.135	5.255	2.181
13.940	27.014	1.161	2.149	5.279	2.119
13.960	26.395	1.226	2.057	5.276	2.164
13.980	24.899	1.275	1.966	5.295	2.393
14.000	24.312	1.327	2.009	5.302	2.160
14.020	24.416	1.343	2.068	5.319	2.199
14.040	24.736	1.361	2.150	5.351	2.297
14.060	25.274	1.359	2.303	5.357	2.078
14.080	27.232	1.308	2.454	5.368	2.129
14.100	28.389	1.252	2.492	5.374	2.117
14.120	28.701	1.201	2.490	5.382	2.412
14.140	28.506	1.190	2.456	5.398	2.106
14.160	27.903	1.199	2.459	5.423	2.111
14.180	28.035	1.206	2.491	5.439	2.487
14.200	27.215	1.285	2.508	5.450	2.192
14.220	26.726	1.350	2.553	5.454	1.917
14.240	26.973	1.327	2.605	5.465	2.269
14.260	25.940	1.323	2.524	5.465	2.188
14.280	24.726	1.309	2.487	5.480	2.138
14.300	24.931	1.231	2.524	5.477	2.147
14.320	23.931	1.180	2.467	5.504	2.229
14.340	23.077	1.162	2.515	5.516	2.238
14.360	22.773	1.119	2.542	5.513	2.090
14.380	23.083	1.054	2.633	5.533	2.042
14.400	23.945	1.002	2.763	5.535	2.172
14.420	24.515	0.964	2.831	5.555	1.984
14.440	25.262	0.945	2.924	5.554	2.305
14.460	26.086	0.932	2.998	5.579	2.136
14.480	26.183	0.975	3.050	5.583	2.115
14.500	25.696	1.038	3.087	5.586	2.161
14.520	26.122	1.041	3.087	5.596	2.141
14.540	25.931	1.065	3.086	5.615	2.030
14.560	26.395	1.085	3.173	5.618	2.121
14.580	27.224	1.076	3.262	5.631	2.178
14.600	27.582	1.072	3.364	5.642	2.059
14.620	28.411	1.057	3.508	5.664	2.100
14.640	29.243	1.019	3.564	5.669	2.218
14.660	27.598	1.026	3.391	5.673	2.172
14.680	26.135	1.030	3.207	5.679	1.963
14.700	25.582	1.034	3.201	5.691	1.947
14.720	25.940	1.007	3.272	5.698	2.169
14.740	25.351	1.005	3.262	5.716	2.059
14.760	24.760	1.039	3.283	5.735	1.968
14.780	24.646	1.052	3.334	5.752	2.312
14.800	25.661	1.025	3.483	5.769	2.141
14.820	26.895	0.962	3.607	5.786	2.128
14.840	26.051	0.916	3.403	5.870	2.138
14.860	26.200	0.994	3.396	5.869	2.062
14.880	25.619	1.003	3.349	5.900	1.936
14.900	25.729	0.986	3.299	5.914	1.936
14.920	25.035	0.998	3.245	5.920	2.192
14.940	23.905	1.030	3.206	5.917	2.024
14.960	22.923	1.042	3.148	5.923	2.155
14.980	22.449	0.989	3.130	5.935	2.262
15.000	21.717	0.945	3.097	5.942	2.050
15.020	20.946	0.916	3.093	5.941	2.230
15.040	20.397	0.860	3.066	5.940	2.244
15.060	20.029	0.792	3.038	5.944	2.055
15.080	19.950	0.736	3.028	5.956	2.055
15.100	19.797	0.701	3.004	5.954	2.055
15.120	20.483	0.679	3.096	5.968	2.055
15.140	22.117	0.665	3.395	5.977	2.042
15.160	23.861	0.628	3.723	5.980	2.042
15.180	26.004	0.602	4.182	5.979	2.241
15.200	27.455	0.570	4.321	5.994	2.169
15.220	27.596	0.581	4.368	6.002	2.169
15.240	27.483	0.552	4.400	6.022	1.994
15.260	27.661	0.525	4.498	6.027	2.195
15.280	27.476	0.513	4.559	6.039	2.191
15.300	27.729	0.522	4.649	6.046	1.955
15.320	21.915	0.522	4.499	6.065	2.091
15.340	36.083	0.580	5.934	6.091	2.061
15.360	33.248	0.706	5.401	6.090	2.012
15.380	30.267	0.766	4.873	6.096	2.149
15.400	25.683	0.784	4.284	6.113	2.093
15.420	22.157	0.733	3.919	6.114	1.954
15.440	20.526	0.648	3.747	6.121	2.107
15.460	19.145	0.607	3.727	6.131	1.968
15.480	18.346	0.557	3.742	6.132	1.905
15.500	17.727	0.506	3.835	6.134	2.128
15.520	18.161	0.462	4.020	6.135	2.065
15.540	18.957	0.445	4.312	6.135	1.893
15.560	20.592	0.438	4.708	6.144	2.206
15.580	22.811	0.425	5.161	6.160	2.126
15.600	24.194	0.434	5.424	6.170	1.853
15.620	25.903	0.474	5.632	6.181	2.212
15.640	26.923	0.560	5.698	6.198	1.863
15.660	26.922	0.655	5.689	6.216	1.976
15.680	27.250	0.744	5.679	6.217	1.976
15.700	27.322	0.856	5.696	6.240	1.968
15.720	26.994	0.912	5.765	6.245	2.135
15.740	26.630	0.934	5.756	6.254	2.004
15.760	25.752	0.886	5.686	6.273	2.036
15.780	24.512	0.831	5.560	6.277	2.133
15.800	23.127	0.760	5.472	6.273	2.093
15.820	22.649	0.672	5.369	6.283	2.088
15.840	28.098	0.612	6.038	6.272	2.098
15.860	26.315	0.648	5.620	6.283	1.903
15.880	24.385	0.676	5.520	6.293	2.115
15.900	24.058	0.621	5.491	6.294	2.001
15.920	24.385	0.600	5.546	6.310	2.087
15.940	24.385	0.589	5.552	6.300	1.868
15.960	24.275	0.590	5.575	6.319	2.241
15.980	24.674	0.584	5.673	6.338	2.046
16.000	25.182	0.567	5.777	6.328	1.991
16.020	25.617	0.544	5.892	6.347	2.018
16.040	25.979	0.547	5.911	6.345	1.919
16.060	25.612	0.563	5.850	6.340	2.085
16.080	24.954	0.581	5.700	6.349	1.987
16.100	23.314	0.603	5.377	6.352	2.000
16.120	22.801	0.612	5.293	6.361	2.103
16.140	22.653	0.607	5.331	6.372	2.030
16.160	22.432	0.578	5.401	6.378	1.832
16.180	21.809	0.547	5.264	6.389	1.993
16.200	20.568	0.547	5.066	6.383	1.999
16.220	19.327	0.547	4.895	6.389	1.987
16.240	18.121	0.528	4.768	6.407	1.987
16.260	17.570	0.496	4.713	6.414	1.987
16.280	17.056	0.465	4.728	6.419	1.996
16.300	16.506	0.417	4.730	6.420	1.944
16.320	16.065	0.375	4.639	6.445	2.054
16.340	15.115	0.363	4.543	6.444	1.967
16.360	15.040	0.336	4.646	6.445	2.000
16.380	15.545	0.296	4.783	6.453	2.106
16.400	15.654	0.283	4.826	6.457	1.948

Geo.Fe.
INDAGINI GEOLOGICHE

Committente: Geogroup
Cantiere: Medolla (MO)
Data: 21/06/2021

ID Prova: SCPTU 9
Profondita falda: a mt 2.00 da p.c.
Preforo: -

Profondità massima raggiunta: 30.30 mt
Punta sismica: Tecnopenta CPLSD
RIF. 89/21GF

Prova eseguita da:
GEO.FE. S.n.c.
via dell'Artigianato ,3 44030 - Ro Ferrarese (FE)
tel 3383646278 - info@geofe.it - www.geofe.it
Responsabile dati: Dott.Geol.Zanella Fabio
Responsabile cantiere: Sig. Mangherini Alberto

Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz
metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec
16.420	15.542	0.266	4.832	6.473	1.858	18.060	22.423	0.937	6.333	7.092	2.590	19.700	20.450	0.275	7.829	7.603	2.859	21.340	20.065	0.227	7.450	8.309	2.524	22.980	18.424	0.848	6.455	8.825	2.324
16.440	14.884	0.274	4.787	6.475	2.131	18.080	22.015	0.892	6.212	7.093	2.471	19.720	24.639	0.326	8.667	7.609	2.467	21.360	23.780	0.256	7.328	8.306	2.895	23.000	21.763	0.887	7.818	8.827	2.004
16.460	14.957	0.280	4.811	6.476	2.036	18.100	21.351	0.868	6.074	7.092	2.542	19.740	31.739	0.387	10.002	7.621	2.881	21.380	26.730	0.299	5.299	8.314	2.611	23.020	21.790	0.897	7.391	8.826	2.529
16.480	14.919	0.294	4.869	6.485	1.718	18.120	21.495	0.832	6.061	7.088	2.389	19.760	40.547	0.409	2.365	7.636	2.491	21.400	27.606	0.352	1.967	8.335	2.635	23.040	21.059	0.785	4.177	8.829	2.327
16.500	14.918	0.318	4.915	6.495	2.015	18.140	21.487	0.815	5.929	7.084	2.625	19.780	42.916	0.550	1.762	7.624	2.646	21.420	26.990	0.428	1.077	8.334	2.635	23.060	21.059	0.785	4.177	8.835	2.411
16.520	15.063	0.331	5.019	6.505	1.995	18.160	21.521	0.802	5.805	7.081	2.573	19.800	33.925	0.672	1.111	7.646	2.474	21.440	25.172	0.468	1.017	8.361	2.499	23.080	21.059	0.785	4.177	8.835	2.453
16.540	15.501	0.322	5.080	6.514	1.949	18.180	20.862	0.809	5.634	7.087	2.281	19.820	27.481	0.686	1.111	7.668	2.686	21.460	23.682	0.449	1.054	8.354	2.641	23.100	20.431	0.994	8.732	8.848	2.415
16.560	15.429	0.339	5.147	6.530	2.045	18.200	20.752	0.795	5.527	7.075	2.401	19.840	27.481	0.686	4.356	7.698	2.601	21.480	23.357	0.441	1.225	8.368	2.386	23.120	22.235	0.912	9.461	8.852	2.471
16.580	15.430	0.347	5.146	6.539	1.966	18.220	20.205	0.787	5.368	7.090	2.442	19.860	25.336	0.801	4.664	7.705	2.579	21.500	26.015	0.434	1.632	8.383	2.446	23.140	24.232	0.821	9.533	8.857	2.256
16.600	15.250	0.346	5.107	6.541	1.913	18.240	19.911	0.773	5.322	7.075	2.623	19.880	23.408	0.670	5.307	7.707	2.560	21.520	30.710	0.473	2.111	8.381	2.446	23.160	25.744	0.809	9.183	8.861	2.389
16.620	15.324	0.350	5.154	6.542	2.068	18.260	20.052	0.746	5.245	7.090	2.421	19.900	21.515	0.675	5.248	7.727	2.721	21.540	34.968	0.536	2.499	8.377	2.431	23.180	27.335	0.924	9.742	8.854	2.389
16.640	15.581	0.356	5.267	6.552	1.851	18.280	20.416	0.726	5.097	7.095	2.518	19.920	20.058	0.645	5.028	7.734	2.468	21.560	37.150	0.587	2.632	8.377	2.546	23.200	26.749	0.981	9.835	8.873	2.305
16.660	15.875	0.354	5.350	6.561	1.905	18.300	19.976	0.708	4.870	7.111	2.489	19.940	19.363	0.617	4.759	7.752	2.627	21.580	37.877	0.574	2.568	8.367	2.537	23.220	29.446	0.839	10.100	8.878	2.309
16.680	15.805	0.370	5.357	6.575	1.905	18.320	19.246	0.682	4.726	7.111	2.319	19.960	18.488	0.651	4.649	7.759	2.698	21.600	29.240	0.924	0.120	8.367	2.538	23.240	28.282	0.794	9.525	8.884	2.591
16.700	16.316	0.381	5.418	6.567	1.939	18.340	18.081	0.671	4.493	7.125	2.549	19.980	19.503	0.665	5.050	7.773	2.677	21.620	28.361	0.888	0.165	8.352	2.538	23.260	30.076	0.997	6.312	8.885	2.378
16.720	16.499	0.396	5.467	6.593	2.060	18.360	15.787	0.675	4.152	7.157	2.341	20.000	21.499	0.635	5.636	7.764	2.677	21.640	29.993	0.887	0.664	8.361	2.527	23.280	29.243	1.112	5.165	8.890	2.287
16.740	16.793	0.423	5.571	6.592	1.917	18.380	14.694	0.646	3.927	7.156	2.482	20.020	22.654	0.550	5.810	7.783	2.607	21.660	34.867	0.817	1.908	8.372	2.460	23.300	28.459	1.198	5.710	8.902	2.471
16.760	17.232	0.440	5.682	6.607	1.945	18.400	13.712	0.618	3.756	7.178	2.342	20.040	22.795	0.484	5.560	7.795	2.673	21.680	40.944	0.734	1.832	8.378	2.482	23.320	27.877	1.231	6.475	8.906	2.251
16.780	17.453	0.466	5.683	6.618	2.183	18.420	13.749	0.548	3.755	7.175	2.504	20.060	22.095	0.518	5.277	7.806	2.743	21.700	43.124	0.594	1.632	8.389	2.468	23.340	27.755	1.209	6.549	8.926	2.299
16.800	17.526	0.507	5.650	6.615	1.970	18.440	14.406	0.485	3.779	7.196	2.542	20.080	20.086	0.512	4.976	7.817	2.579	21.720	46.327	0.428	1.642	8.383	2.468	23.360	27.550	1.276	6.860	8.997	2.199
16.820	17.601	0.535	5.673	6.631	2.112	18.460	14.225	0.452	3.765	7.211	2.493	20.100	17.021	0.456	4.549	7.836	2.635	21.740	51.531	0.369	1.780	8.389	2.512	23.380	27.447	1.337	7.237	9.034	2.199
16.840	16.525	0.518	4.904	6.652	1.899	18.480	13.537	0.438	3.687	7.217	2.347	20.120	15.523	0.417	4.405	7.836	2.599	21.760	57.984	0.383	1.957	8.407	2.463	23.400	26.484	1.342	7.356	9.045	2.278
16.860	19.329	0.586	5.319	6.666	1.858	18.500	13.031	0.407	3.647	7.229	2.238	20.140	14.938	0.393	4.571	7.847	2.599	21.780	93.188	0.402	1.996	8.414	2.315	23.420	25.740	1.255	7.189	9.050	2.236
16.880	19.586	0.615	5.339	6.670	2.073	18.520	12.782	0.365	3.622	7.220	2.581	20.160	14.206	0.387	4.845	7.845	2.542	21.800	72.387	0.404	1.754	8.419	2.724	23.440	25.420	1.171	7.230	9.068	2.236
16.900	19.987	0.654	5.406	6.670	1.855	18.540	12.278	0.341	3.580	7.229	2.447	20.180	14.275	0.349	5.206	7.860	2.633	21.820	54.994	0.338	1.246	8.420	2.403	23.460	25.533	1.159	7.295	9.079	2.284
16.920	19.988	0.692	5.426	6.683	1.970	18.560	12.030	0.327	3.556	7.248	2.418	20.200	14.673	0.320	5.514	7.866	2.573	21.840	42.730	0.320	0.759	8.445	2.564	23.480	25.522	1.180	7.460	9.085	2.100
16.940	20.351	0.723	5.493	6.686	2.124	18.580	11.420	0.332	3.527	7.238	2.395	20.220	15.290	0.305	5.901	7.861	2.475	21.860	35.598	0.363	0.517	8.444	2.410	23.500	27.158	1.073	7.057	9.095	2.207
16.960	20.895	0.752	5.579	6.690	1.899	18.600	11.248	0.304	3.525	7.245	2.419	20.240	16.489	0.270	6.151	7.879	2.475	21.880	30.109	0.501	0.359	8.445	2.734	23.520	27.511	1.102	6.704	9.096	2.529
16.980	21.622	0.764	5.727	6.693	2.073	18.620	10.932	0.293	3.509	7.238	2.672	20.260	16.852	0.282	6.163	7.890	2.708	21.900	28.442	0.589	0.320	8.453	2.472	23.540	26.897	1.223	6.723	9.092	2.212
17.000	22.347	0.786	5.870	6.710	1.864	18.640	11.015	0.283	3.525	7.258	2.431	20.280	16.851	0.318	6.049	7.887	2.637	21.920	30.888	0.681	0.437	8.457	2.643	23.560	26.263	1.337	6.524	9.093	2.205
17.020	23.544	0.786	6.075	6.719	1.813	18.660	10.880	0.247	3.461	7.264	2.395	20.300	16.561	0.368	5.980	7.904	2.657	21.940	30.060	0.636	0.387	8.473	2.446	23.580	26.312	1.468	6.674	9.092	2.205
17.040	24.961	0.776	6.169	6.712	1.987	18.680	10.745	0.233	3.437	7.270	2.446	20.320	16.973	0.424	6.570	7.970	2.356	21.960	27.581	1.253	6.671	8.475	2.353	23.600	26.638	1.495	6.739	9.093	2.313
17.060	25.138	0.800	6.216	6.725	1.925	18.700	10.537	0.232	3.414	7.268	2.414	20.340	17.702	0.447	6.702	7.979	2.896	21.980	28.160	1.263	6.229	8.476	2.664	23.620	26.832	1.513	6.827	9.092	2.193
17.080	25.679	0.819	6.247	6.717	1.818	18.720	10.874	0.205	3.411	7.287	2.539	20.360	17.592	0.469	6.518	7.991	2.616	22.000	27.942	1.274	4.868	8.485	2.664	23.640	27.025	1.524	6.768	9.088	2.325
17.100	25.892	0.829	6.301	6.734	2.066	18.740	11.102	0.203	3.385	7.300	2.432	20.380	17.774	0.493	6.549	8.013	2.607	22.020	25.187	1.327	3.127	8.495	2.598	23.660	26.815	1.500	6.723	9.084	2.372
17.120	27.234	0.853	6.454	6.734	1.947	18.760	11.293	0.206	3.381	7.314	2.487	20.400	17.699	0.486	6.370	8.022	2.566	22.040	18.431	0.358	6.748	8.505	2.468	23.680	27.164	1.451	6.777	9.081	2.211
17.140	27.446	0.887	6.528	6.743	1.744	18.780	11.484	0.214	3.399	7.312	2.474	20.420	17.476	0.503	6.182	8.039	2.513	22.060	19.497	0.402	6.726	8.514	2.555	23.700	27.205	1.461	6.827	9.087	2.295
17.160	27.803	0.953	6.540	6.756	1.944	18.800	11.749	0.198	3.437	7.328	2.313	20.440	16.999	0.513	6.173	8.052	2.755	22.080	20.487	0.463	6.966	8.530	2.563	23.720	26.487	1.469	6.694	9.075	2.404
17.180	28.196	0.996	6.502	6.752	1.775	18.820	12.196	0.184	3.543	7.334	2.344	20.460	16.961	0.523	6.282	8.061	2.707	22.100	22.110	0.505	7.284	8.539	2.463	23.740	25.517	1.495	6.455	9.090	2.297
17.200	28.007	1.064	6.634	6.761	1.900	18.840	12.196	0.184	4.123	7.341	2.577	20.480	17.466	0.527	6.664	8.082	2.406	22.120	23.834	0.546	6.410	8.541	2.731	23.760	24.323	1.522	6.655	9.075	2.212
17.220	28.254	1.090	6.628	6.768	1.830	18.860	14.877	0.165	5.270	7.351	2.466	20.500	17.535	0.472	6.612	8.103	2.406	22.140	23.966	0.639	6.715	8.542	2.495	23.780	24.310	1.485	6.899	9.090	2.212
17.240	27.664	1.130	6.664	6.766	1.784	18.880	15.024	0.194	5.479	7.340	2.467	20.520	17.021	0.446	6.460	8.107	2.406	22.160	24.196	0.693	6.806	8.552	2.441	23.800	24.811	1.407	7.126	9.095	2.305
17.260	27.366	1.155	6.816	6.764	1.974	18.900	15.861	0.188	5.652	7.352	2.488	20.540	15.963	0.419	6.411	8.110	2.509	22.180	25.007	0.739	7.019	8.561	2.433	23.820	25.836	1.242	7.308	9.111	2.200
17.280	27.173	1.138	6.851	6.763	1.886	18.920	16.808	0.200	5.818	7.345	2.431	20.560	15.776	0.373	6.526	8.127	2.542	22.200	25.039	0.846	7.266	8.575	2.774	23.840	26.055	1.193	7.329	9.111	2.107
17.300	26.801	1.126	6.914	6.780	1.825	18.940	17.246	0.224	5.900	7.344	2.546	20.580	15.918	0.329	6.630	8.119	2.646	22.220	24.838	0.878	7.348	8.567	2.462	23.860	25.721	1.176	6.244	9.125	2.536
17.320	27.012	1.094	7.041	6.771	1.843	18.960	17.537	0.271	6.022	7.349	2.575	20.600	16.058	0.299	6.706	8.132	2.542	22.240	26.011	0.784	3.540	8.593	2.549	23.880	24.476	1.263	6.036	9.157	2.225
17.340	27.551	1.057	7.241	6.780	1.806	18.980	17.610	0.302	6.064	7.344	2.429	20.620	15.873	0.295	6.705	8.142	2.734	22.260	26.565	0.889	3.688	8.592	2.449	23.900	23.404	1.289	5.863	9.156	2.199
17.360	27.940	1.029	7.341	6.791	1.811	19.000	18.191	0.349	6.199	7.338	2.429	20.640	16.090	0.296	6.709	8.148	2.590	22.280	26.392	0.996	5.607	8.607	2.441	23.920	22.963	1.310	5.537	9.178	2.410
17.380	30.002	1.015	7.546	6.809	1.764	19.020	18.664	0.362	6.402	7.350	2.389	20.660	16.160	0.285	6.661	8.162	2.485	22.300	26.927	1.072	6.324	8.618	2.741	23.940	21.810	1.416	5.195	9.175	2.126
17.400	30.646	1.043	7.630	6.804	1.956	19.040	20.010	0.375	6.711	7.359	2.389	20.680	15.759	0.293	6.545	8.158	2.481	22.320	28.134	1.110	5.503	8.615	2.413	23.960	20.918	1.499	5.174	9.196	2.108
17.420	30.745	1.050	7.641	6.802	1.690	19.060	21.211	0.400	6.949	7.342	2.795	20.700	15.759	0.317	6.487	8.158	2.524	22.340	28.336	1.170	6.001	8.631	2.426	23.980	20.455	1.462	5.106	9.211	2.108
17.440	30.732	1.089	7.637	6.809	1.845	19.080	21.391	0.435	6.945	7.356	2.689	20.720	15.649	0.350	6.371	8.173	2.785	22.360	27.581	1.253	6.671	8.652	2.354	24.000	20.168	1.379	5.114	9.217	2.160
17.460	30.319	1.141	7.679	6.825	1.731	19.100	21.061	0.449	6.890	7.369	2.599	20.740	15.577	0.383	6.401	8.175	2.585	22.380	28.160	1.263	6.229	8.666	2.640	24.020	20.086	1.285	5.167	9.229	2.160
17.480	30.344	1.158	7.743	6.827	1.609	19.120	20.914	0.466	6.842	7.377	2.695	20.760	15.758	0.408	6.411	8.184	2.521	22.400	27.942	1.274	4.868	8.670	2.531	24.040	19.578	1.218	5.173	9.220	2.196
17.500	30.515	1.186	7.911	6.826	1.816	19.140	19.892	0.499	6.581	7.378	2.695	20.780	15.576	0.438	6.413	8.191	2.433	22.420	25.187	1.327	3.127	8.670	2.431	24.060	19.393	1.136	5.420	9.229	2.309
17.520	31.925	1.153	8.173	6.829	1.662	19.160	18.105	0.539	6.254	7.376	2.719	20.800	15.759	0.444	6.459	8.186	2.723	22.440	23.085	1.304	1.886	8.683	2.493	24.080	19.209	1.005	5.188	9.248	2.270
17.540	32.354	1.153	8.260	6.835	1.769	19.180	17.047	0.534	6.122	7.395	2.655	20.820	15.867	0.458	6.465	8.202	2.431	22.460	22.247	1.349	2.144	8.686	2.625	24.100	19.003	0.957	5.132	9.238	2.194
17.560	31.983	1.172	8.310	6.835	1.705	19.200	17.552	0.526	6.246	7.400	2.528	20.840	15.867	0.458	6.465	8.205	2.701	22.480	21.303	1.455	3.621	8.690	2.293	24.120	18.754	0.968	5.208	9.245	2.363
17.580	33.283	1.122	8.522	6.848	1.800	19.220	18.713	0.551	6.585	7.401	2.593	20.860	16.115	0.418	6.775	8.222	2.430	22.500	19.673	1.560	4.918	8.693	2.406	24.140	19.489	0.966	5.454	9.238	2.325
17.600	33.856	1.130	8.550	6.852	1.698	19.240	20.273	0.512	6.988	7.413	2.593	20.880	17.790	0.441	6.739	8.215	2.548	22.520	18.667	1.548	5.421	8.710	2.336	24.160	20.098	0.970	5.712	9.258	2.126
17.620	34.138	1.169	8.630	6.857	1.748	19.260	22.124	0.486	7.336	7.423	2.767	20.900	18.007	0.479	6.590	8.219	2.813	22.540	18.755	1.419	5.881	8.719	2.564	24.180	21.141	0.970	5.922	9.264	2.126
17.640	34.453	1.205	8.735	6.861	1.597	19.280	22.554	0.435	7.461	7.431	2.763	20.920	17.934	0.510	6.377	8.225	2.636	22.560	19.655	1.329	6.685	8.712	2.455	24.200	21.248	1.007	5.921	9.270	2.447
17.660	34.809	1.225	8.859	6.854	1.597	19.300	21.747	0.395	7.319	7.425	2.655	20.940	17.532	0.558	6.177	8.229	2.564	22.580	19.977	1.211	7.586	8.725	2.444	24.220	21.402	1.032	5.936	9.268	2.215
17.680	35.710	1.233	8.974	6.873	1.597	19.320	19.339	0.345	6.702	7.440	2.568	20.960	16.765	0.594	5.932	8.245	2.536	22.600	19.365	1.004	7.699	8.717	2.488	24.240	21.803	1.049	6.014	9.287	2.254
17.700	36.285	1.291	9.004	6.878	1.625	19.340	17.804	0.299	6.458	7.438	2.466	20.980	15.706	0.613	5.608	8.241	2.510	22.620	19.264	0.795	7.354	8.734	2.331	24.260	23.518	1.038	6.522	9.300	2.355
17.720	35.949	1.381	8.992	6.884	1.740	19.360	17.510	0.270	6.630	7.448	2.466	21.000	14.390	0.612	5.239	8.254	2.510	22.640	18.965	0.791	7.136	8.734	2.501	24.280	24.504	1.076	6.836	9.314	2.254
17.740	36.416	1.406	9.061	6.885	1.671	19.380	17.472	0.244	6.810	7.462	2.579	21.020	13.112	0.619	4.945	8.255	2.428	22.660	18.532	0.828	7.353	8.743	2.453	24.300	25.364	1.082	7.031	9.312	2.162
17.760	37.025	1.434	9.228	6.890	1.509	19.400	17.579	0.242	6.874	7.471	2.770	21.040	11.831	0.603	4.673	8.261	2.428	22.680	19.230	0.818	7.958	8.756	2.356	24.320	26.554	1.089	7.311	9.328	2.061
17.780	37.453	1.445	9.265	6.902	1.880	19.420	17.797	0.278	6.890	7.471	2.669	21.060	10.696	0.578	4.585	8.252	2.561	22.700	19.214	0.788	8.348	8.752	2.343	24.340	28.073	1.095	7.793	9.334	2.424
17.800	37.298	1.473	9.073	6.906	1.566	19.440	18.014	0.322	6.830	7.485	2.528	21.080	10.253	0.491	4.709	8.246	2.704	22.720	19.857	0.752	8.757	8.761	2.656	24.360	29.383	1.059	7.583	9.341	2.200
17.820	35.467	1.490	8.703	6.926	1.717	19.460	18.487	0.372	6.959	7.499	2.735	21.100	10.211	0.413	4.849	8.250	2.521	22.740	20.582	0.762	10.027	8.768	2.389	24.380	27.917	1.091	6.470	9.351	2.100
17.840	30.700	1.318	7.848	6.997	2.469	19.480	18.670	0.389	7.091	7.498	2.703	21.120	10.167	0.322	5.017	8.267	2.428	22.760	20.215	0.765	10.757	8.766	2.342	24.400	25.413	1.086	5.966	9.340	2.408
17.860	32.924	1.511	8.005	7.034	2.311	19.500	18.779	0.408	7.097	7.511	2.631	21.140	10.743	0.269	5.189	8.255	2.428	22.780	19.974	0.694	10.858	8.764	2.202	24.420	22.859	0.981	5.560	9.352	2.175
17.880	30.632	1.507	7.660	7.045	2.345	19.520	18.853	0.424	7.122	7.523	2.632	21.160	11.720	0.211	5.477	8.262	2.552	22.800	19.964	0.593	10.762	8.763	2.684	24.440	21.442	0.891	5.347	9.345	2.278
17.900	29.360	1.474	7.464	7.050	2.773	19.540	19.071	0.427	7.189	7.525	2.687	21.180	13.316	0.170	5.865	8.266	2.606	22.820	20.158	0.561	10.622	8.780	2.219	24.460	20.404	0.824	5.173	9.344	2.037
17.920	27.828	1.399	7.141	7.068	2.589	19.560	18.561	0.407	7.138	7.526	2.531	21.200	14.698	0.145	6.245	8.274	2.560	22.840	22.153	0.584	11.078	8.771	2.400	24.480	19.343	0.807	5.117	9.349	2.224
17.940	26.988	1.339	6.915	7.079	2.502	19.580	17.760	0.372	7.007	7.531	2.614	21.220	14.590	0.146	6.301	8.276	2.593	22.860	22.523	0.583	10.720	8.780	2.318	24.500	18.740	0.753	5.188	9.344	2.177
17.960	25.597	1.293	6.642	7.085	2.350	19.600	16.957	0.326	6.868	7.547	2.614	21.240	14.009	0.156	6.143	8.275	2.521	22.880	22.429	0.519	8.536	8.791	2.611	24.520	20.883	0.711	5.874	9.338	2.177
17.980	23.916	1.237	6.372	7.095	2.350	19.620	16.954	0.305	6.841	7.544	2.711	21.260	13.209	0.180	5.844	8.278	2.521	22.900	21.095	0.551	6.007	8.809	2.437	24.540	25.047	0.736	6.820	9.350	2.327
18.000	22.486	1.148	6.199	7.096	2.341	19.640	18.008	0.280	7.121	7.577	2.549	21.280	13.247	0.184	5.868	8.274	2.770	22.920	19.914	0.647	5.646	8.804	2.437	24.560	25.830	0.703	5.405	9.359	2.106
18.020	22.914	1.063	6.319	7.092	2.330	19.660	18.628	0.267	7.417	7.583	2.521	21.300	14.707	0.181	6.250	8.283	2.607	22.940	17.118	0.872	6.376	8.802	2.324	24.580	22.464	0.664	3.058	9.342	2.224
18.040	23.233	0.985	6.442	7.093	2.439	19.680	18.629	0.271	7.675	7.581	2.635	21.320	16.713	0.200	6.777	8.299	2.461	22.960	16.399	0.907	6.160	8.809	2.324	24.600	18.565	0.546	2.500	9.356	2.350

Geo.Fe.
INDAGINI GEOLOGICHE

Committente: Geogroup
Cantiere: Medolla (MO)
Data: 21/06/2021

ID Prova: SCPTU 9
Profondita falda: a mt 2.00 da p.c.
Preforo: -

Profondità massima raggiunta: 30.30 mt
Punta sismica: Tecnopenta CPLSD
RIF. 89/21GF

Prova eseguita da:
GEO.FE. S.n.c.
via dell'Artigianato ,3 44030 - Ro Ferrarese (FE)
tel 3383646278 - info@geofe.it - www.geofe.it
Responsabile dati: Dott.Geol.Zanella Fabio
Responsabile cantiere: Sig. Mangherini Alberto

Prof.	RP	RL	PN	Incl.	Vavanz
metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec
24.620	15.936	0.537	2.221	9.369	2.181
24.640	15.634	0.567	3.019	9.377	2.104
24.660	15.769	0.546	3.339	9.378	2.248
24.680	15.478	0.530	3.857	9.376	2.251
24.700	15.264	0.539	4.020	9.395	2.145
24.720	15.450	0.525	4.221	9.400	2.121
24.740	15.556	0.480	4.447	9.401	2.235
24.760	15.506	0.425	4.583	9.413	2.163
24.780	14.568	0.394	4.326	9.423	2.025
24.800	13.100	0.387	3.985	9.431	2.273
24.820	11.839	0.416	3.715	9.425	2.139
24.840	12.217	0.434	4.039	9.440	2.093
24.860	15.680	0.384	5.172	9.438	2.173
24.880	17.428	0.339	5.442	9.448	2.379
24.900	18.742	0.336	4.626	9.462	2.170
24.920	19.578	0.375	4.388	9.471	2.107
24.940	20.287	0.471	4.252	9.471	2.256
24.960	20.185	0.620	4.486	9.485	2.160
24.980	19.754	0.727	4.215	9.499	2.160
25.000	18.845	0.821	4.118	9.498	2.181
25.020	17.481	0.959	4.063	9.511	2.181
25.040	16.523	1.024	3.970	9.523	2.119
25.060	15.546	0.980	3.970	9.525	2.164
25.080	14.767	0.910	4.000	9.526	2.393
25.100	14.164	0.781	3.981	9.531	2.160
25.120	13.713	0.668	3.924	9.547	2.199
25.140	13.561	0.558	4.007	9.544	2.297
25.160	13.278	0.454	4.171	9.577	2.078
25.180	13.728	0.426	4.445	9.583	2.129
25.200	14.987	0.407	4.829	9.581	2.117
25.220	16.121	0.390	5.102	9.603	2.412
25.240	17.639	0.392	5.149	9.609	2.106
25.260	12.393	0.241	4.697	9.621	2.111
25.280	21.783	0.519	3.003	9.636	2.487
25.300	22.467	0.566	3.045	9.624	2.192
25.320	23.076	0.782	1.984	9.646	1.917
25.340	22.391	0.949	1.291	9.668	2.269
25.360	22.112	1.111	1.169	9.698	2.188
25.380	21.959	1.287	0.911	9.705	2.138
25.400	21.199	1.505	0.752	9.707	2.147
25.420	20.721	1.648	0.738	9.727	2.229
25.440	20.898	1.686	0.784	9.734	2.238
25.460	21.305	1.660	0.803	9.752	2.090
25.480	22.014	1.590	0.869	9.759	2.042
25.500	21.597	1.552	0.853	9.773	2.172
25.520	21.056	1.460	0.742	9.764	1.984
25.540	20.768	1.378	0.750	9.783	2.305
25.560	20.827	1.270	0.730	9.795	2.136
25.580	20.988	1.217	0.675	9.806	2.115
25.600	20.997	1.179	0.572	9.817	2.161
25.620	20.097	1.205	0.475	9.836	2.141
25.640	20.037	1.226	0.430	9.836	2.030
25.660	18.807	1.275	0.355	9.847	2.121
25.680	0.000	0.000	0.000	0.000	0.000
25.700	0.000	0.000	0.000	0.000	0.000
25.720	0.000	0.000	0.000	0.000	0.000
25.740	0.000	0.000	0.000	0.000	0.000
25.760	0.000	0.000	0.000	0.000	0.000
25.780	0.000	0.000	0.000	0.000	0.000
25.800	0.000	0.000	0.000	0.000	0.000
25.820	0.000	0.000	0.000	0.000	0.000
25.840	0.000	0.000	0.000	0.000	0.000
25.860	0.000	0.000	0.000	0.000	0.000
25.880	0.000	0.000	0.000	0.000	0.000
25.900	0.000	0.000	0.000	0.000	0.000
25.920	0.000	0.000	0.000	0.000	0.000
25.940	0.000	0.000	0.000	0.000	0.000
25.960	0.000	0.000	0.000	0.000	0.000
25.980	0.000	0.000	0.000	0.000	0.000
26.000	0.000	0.000	0.000	0.000	0.000
26.020	0.000	0.000	0.000	0.000	0.000
26.040	0.000	0.000	0.000	0.000	0.000
26.060	0.000	0.000	0.000	0.000	0.000
26.080	0.000	0.000	0.000	0.000	0.000
26.100	0.000	0.000	0.000	0.000	0.000
26.120	0.000	0.000	0.000	0.000	0.000
26.140	0.000	0.000	0.000	0.000	0.000
26.160	0.000	0.000	0.000	0.000	0.000
26.180	0.000	0.000	0.000	0.000	0.000
26.200	0.000	0.000	0.000	0.000	0.000
26.220	0.000	0.000	0.000	0.000	0.000
26.240	0.000	0.000	0.000	0.000	0.000
26.260	0.000	0.000	0.000	0.000	0.000
26.280	0.000	0.000	0.000	0.000	0.000
26.300	0.000	0.000	0.000	0.000	0.000
26.320	0.000	0.000	0.000	0.000	0.000
26.340	0.000	0.000	0.000	0.000	0.000
26.360	0.000	0.000	0.000	0.000	0.000
26.380	0.000	0.000	0.000	0.000	0.000
26.400	0.000	0.000	0.000	0.000	0.000
26.420	0.000	0.000	0.000	0.000	0.000
26.440	0.000	0.000	0.000	0.000	0.000
26.460	0.000	0.000	0.000	0.000	0.000
26.480	0.000	0.000	0.000	0.000	0.000
26.500	0.000	0.000	0.000	0.000	0.000
26.520	0.000	0.000	0.000	0.000	0.000
26.540	0.000	0.000	0.000	0.000	0.000
26.560	0.000	0.000	0.000	0.000	0.000
26.580	0.000	0.000	0.000	0.000	0.000
26.600	0.000	0.000	0.000	0.000	0.000
26.620	0.000	0.000	0.000	0.000	0.000
26.640	0.000	0.000	0.000	0.000	0.000
26.660	0.000	0.000	0.000	0.000	0.000
26.680	0.000	0.000	0.000	0.000	0.000
26.700	0.000	0.000	0.000	0.000	0.000
26.720	0.000	0.000	0.000	0.000	0.000
26.740	0.000	0.000	0.000	0.000	0.000
26.760	0.000	0.000	0.000	0.000	0.000
26.780	0.000	0.000	0.000	0.000	0.000
26.800	0.000	0.000	0.000	0.000	0.000
26.820	0.000	0.000	0.000	0.000	0.000
26.840	0.000	0.000	0.000	0.000	0.000
26.860	0.000	0.000	0.000	0.000	0.000
26.880	0.000	0.000	0.000	0.000	0.000
26.900	0.000	0.000	0.000	0.000	0.000
26.920	0.000	0.000	0.000	0.000	0.000
26.940	0.000	0.000	0.000	0.000	0.000
26.960	0.000	0.000	0.000	0.000	0.000
26.980	0.000	0.000	0.000	0.000	0.000
27.000	0.000	0.000	0.000	0.000	0.000
27.020	0.000	0.000	0.000	0.000	0.000
27.040	0.000	0.000	0.000	0.000	0.000
27.060	0.000	0.000	0.000	0.000	0.000
27.080	0.000	0.000	0.000	0.000	0.000
27.100	0.000	0.000	0.000	0.000	0.000
27.120	0.000	0.000	0.000	0.000	0.000
27.140	0.000	0.000	0.000	0.000	0.000
27.160	0.000	0.000	0.000	0.000	0.000
27.180	0.000	0.000	0.000	0.000	0.000
27.200	0.000	0.000	0.000	0.000	0.000
27.220	0.000	0.000	0.000	0.000	0.000
27.240	0.000	0.000	0.000	0.000	0.000
27.260	0.000	0.000	0.000	0.000	0.000
27.280	0.000	0.000	0.000	0.000	0.000
27.300	0.000	0.000	0.000	0.000	0.000
27.320	0.000	0.000	0.000	0.000	0.000
27.340	0.000	0.000	0.000	0.000	0.000
27.360	0.000	0.000	0.000	0.000	0.000
27.380	0.000	0.000	0.000	0.000	0.000
27.400	0.000	0.000	0.000	0.000	0.000
27.420	0.000	0.000	0.000	0.000	0.000
27.440	0.000	0.000	0.000	0.000	0.000
27.460	0.000	0.000	0.000	0.000	0.000
27.480	0.000	0.000	0.000	0.000	0.000
27.500	0.000	0.000	0.000	0.000	0.000
27.520	0.000	0.000	0.000	0.000	0.000
27.540	0.000	0.000	0.000	0.000	0.000
27.560	0.000	0.000	0.000	0.000	0.000
27.580	0.000	0.000	0.000	0.000	0.000
27.600	0.000	0.000	0.000	0.000	0.000
27.620	0.000	0.000	0.000	0.000	0.000
27.640	0.000	0.000	0.000	0.000	0.000
27.660	0.000	0.000	0.000	0.000	0.000
27.680	0.000	0.000	0.000	0.000	0.000
27.700	0.000	0.000	0.000	0.000	0.000
27.720	0.000	0.000	0.000	0.000	0.000
27.740	0.000	0.000	0.000	0.000	0.000
27.760	0.000	0.000	0.000	0.000	0.000
27.780	0.000	0.000	0.000	0.000	0.000
27.800	0.000	0.000	0.000	0.000	0.000
27.820	0.000	0.000	0.000	0.000	0.000
27.840	0.000	0.000	0.000	0.000	0.000
27.860	0.000	0.000	0.000	0.000	0.000
27.880	0.000	0.000	0.000	0.000	0.000
27.900	0.000	0.000	0.000	0.000	0.000
27.920	0.000	0.000	0.000	0.000	0.000
27.940	0.000	0.000	0.000	0.000	0.000
27.960	0.000	0.000	0.000	0.000	0.000
27.980	0.000	0.000	0.000	0.000	0.000
28.000	0.000	0.000	0.000	0.000	0.000
28.020	0.000	0.000	0.000	0.000	0.000
28.040	0.000	0.000	0.000	0.000	0.000
28.060	0.000	0.000	0.000	0.000	0.000
28.080	0.000	0.000	0.000	0.000	0.000
28.100	0.000	0.000	0.000	0.000	0.000
28.120	0.000	0.000	0.000	0.000	0.000
28.140	0.000	0.000	0.000	0.000	0.000
28.160	0.000	0.000	0.000	0.000	0.000
28.180	0.000	0.000	0.000	0.000	0.000
28.200	0.000	0.000	0.000	0.000	0.000
28.220	0.000	0.000	0.000	0.000	0.000
28.240	0.000	0.000	0.000	0.000	0.000
28.260	0.000	0.000	0.000	0.000	0.000
28.280	0.000	0.000	0.000	0.000	0.000
28.300	0.000	0.000	0.000	0.000	0.000
28.320	0.000	0.000	0.000	0.000	0.000
28.340	0.000	0.000	0.000	0.000	0.000
28.360	0.000	0.000	0.000	0.000	0.000
28.380	0.000	0.000	0.000	0.000	0.000
28.400	0.000	0.000	0.000	0.000	0.000
28.420	0.000	0.000	0.000	0.000	0.000
28.440	0.000	0.000	0.000	0.000	0.000
28.460	0.000	0.000	0.000	0.000	0.000
28.480	0.000	0.000	0.000	0.000	0.000
28.500	0.000	0.000	0.000	0.000	0.000
28.520	0.000	0.000	0.000	0.000	0.000
28.540	0.000	0.000	0.000	0.000	0.000
28.560	0.000	0.000	0.000	0.000	0.000
28.580	0.000	0.000	0.000	0.000	0.000
28.600	0.000	0.000	0.000	0.000	0.000
28.620	0.000	0.000	0.000	0.000	0.000
28.640	0.000	0.000	0.000	0.000	0.000
28.660	0.000	0.000	0.000	0.000	0.000
28.680	0.000	0.000	0.000	0.000	0.000
28.700	0.000	0.000	0.000	0.000	0.000
28.720	0.000	0.000	0.000	0.000	0.000
28.740	0.000	0.000	0.000	0.000	0.000
28.760	0.000	0.000	0.000	0.000	0.000
28.780	0.000	0.000	0.000	0.000	0.000
28.800	0.000	0.000	0.000	0.000	0.000
28.820	0.000	0.000	0.000	0.000	0.000
28.840	0.000	0.000	0.000	0.000	0.000
28.860	0.000	0.000	0.000	0.000	0.000
28.880	0.000	0.000	0.000	0.000	0.000
28.900	0.000	0.000	0.000	0.000	0.000
28.920	0.000	0.000	0.000	0.000	0.000
28.940	0.000	0.000	0.000	0.000	0.000
28.960	0.000	0.000	0.000	0.000	0.000
28.980	0.000	0.000	0.000	0.000	0.000
29.000	0.000	0.000	0.000	0.000	0.000
29.020	0.000	0.000	0.000	0.000	0.000
29.040	0.000	0.000	0.000	0.000	0.000
29.060	0.000	0.000	0.000	0.000	0.000
29.080	0.000	0.000	0.000	0.000	0.000
29.100	0.000	0.000	0.000	0.000	0.000
29.120	0.000	0.000	0.000	0.000	0.000
29.140	0.000	0.000	0.000	0.000	0.000
29.160	0.000	0.000	0.000	0.000	0.000
29.180	0.000	0.000	0.000	0.000	0.000
29.200	0.000	0.000	0.000	0.000	0.000
29.220	0.000	0.000	0.000	0.000	0.000
29.240	0.000	0.000	0.000	0.000	0.000
29.260	0.000	0.000	0.000	0.000	0.000
29.280	0.000	0.000	0.000	0.000	0.000
29.300	0.000	0.000	0.000	0.000	0.000
29.320	0.000	0.000	0.000	0.000	0.000
29.340	0.000	0.000	0.000	0.000	0.000
29.360	0.000	0.000	0.000	0.000	0.000
29.380	0.000	0.000	0.000	0.000	0.000
29.400	0.000	0.000	0.000	0.000	0.000
29.420	0.000	0.000	0.000	0.000	0.000
29.440	0.000	0.000	0.000	0.000	0.000
29.460	0.000	0.000	0.000	0.000	0.000
29.480	0.000	0.000	0.000	0.000	0.000
29.500	0.000	0.000	0.000	0.000	0.000
29.520	0.000	0.000	0.000	0.000	0.000
29.540	0.000	0.000	0.000	0.000	0.000
29.560	0.000	0.000	0.000	0.000	0.000
29.580	0.000	0.000	0.000	0.000	0.000
29.600	0.000	0.000	0.000	0.000	0.000
29.620	0.000	0.000	0.000	0.000	0.000
29.640	0.000	0.000	0.000	0.000	0.000
29.660	0.000	0.000	0.000	0.000	0.000
29.680	0.000	0.000	0.000	0.000	0.000
29.700	0.000	0.000	0.000	0.000	0.000
29.720	0.000	0.000	0.000	0.000	0.000
29.740	0.000	0.000	0.000	0.000	0.000
29.760	0.000	0.000	0.000	0.000	0.000
29.780	0.000	0.000	0.000	0.000	0.000
29.800	0.000	0.000	0.000	0.000	0.000
29.820	0.000	0.000	0.000	0.000	0.000
29.840	0.000	0.000	0.000	0.000	0.000
29.860	0.000	0.000	0.000	0.000	0.000
29.880	0.000	0.000	0.000	0.000	0.000
29.900	0.000	0.000	0.000	0.000	0.000
29.920	0.000	0.000	0.000	0.000	0.000
29.940	0.000	0.000	0.000	0.000	0.000
29.960	0.000	0.000	0.000	0.000	0.000
29.980	0.000	0.000	0.000	0.000	0.000
30.000	0.000	0.000	0.000	0.000	0.000
30.020	0.000	0.000	0.000	0.000	0.000
30.040	0.000	0.000	0.000	0.000	0.000
30.060	0.000	0.000	0.000	0.000	0.000
30.080	0.000	0.000	0.000	0.000	0.000
30.100	0.000	0.000	0.000	0.000	0.000
30.120	0.000	0.000	0.000	0.000	0.000
30.140	0.000	0.000	0.000	0.000	0.000
30.160	0.000	0.000	0.000	0.000	0.000
30.180	0.000	0.000	0.000	0.000	0.000
30.200	0.000	0.000	0.000	0.000	0.000
30.220	0.000	0.000	0.000	0.000	0.000
30.240	0.000	0.000	0.000	0.000	0.000
30.260	0.000	0.000	0.000	0.000	0.000
30.280	0.000	0.000	0.000	0.000	0.000
30.300	0.000	0.000	0.000	0.000	0.000

Geo.Fe.
INDAGINI GEOLOGICHE

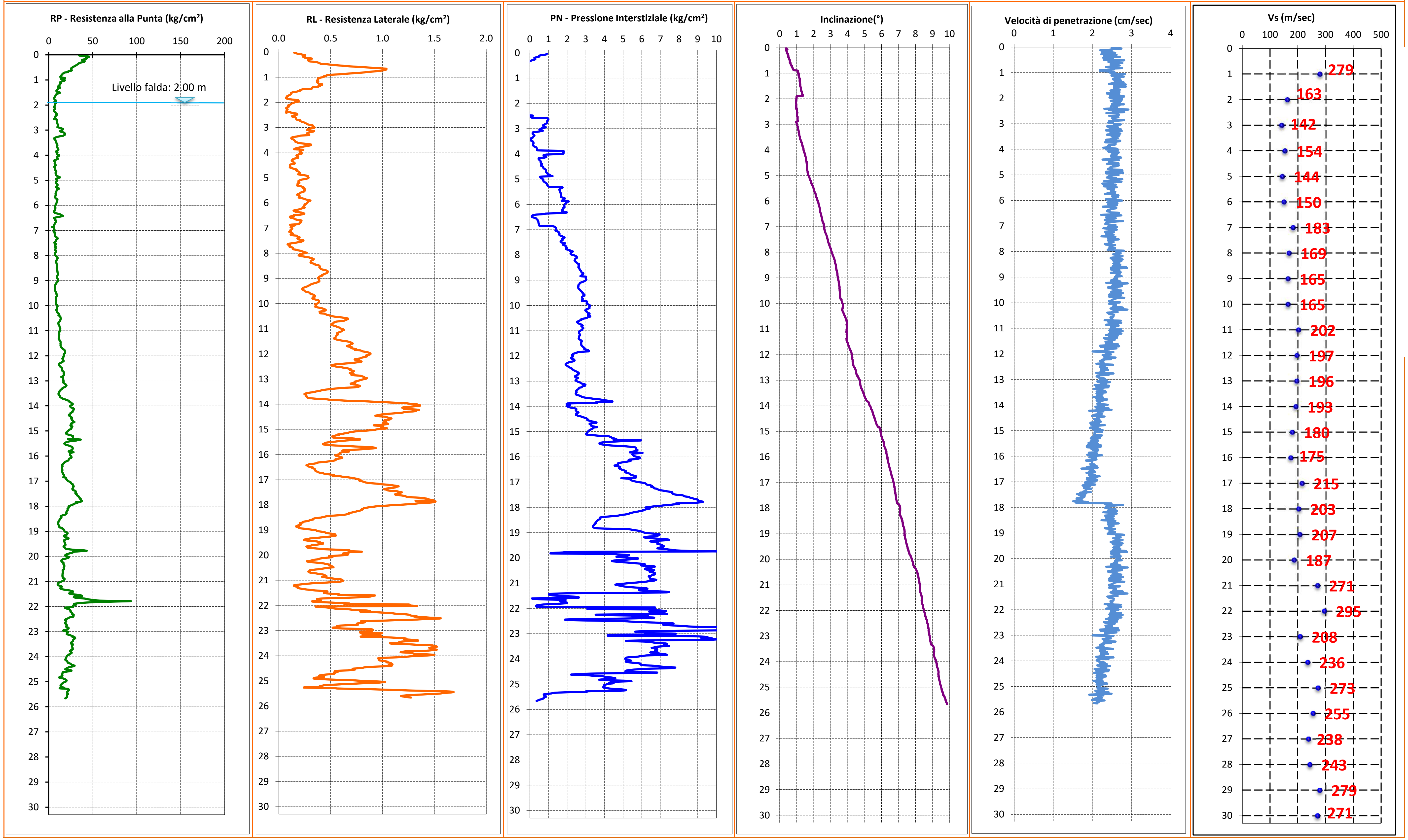
Committente: Geogroup
Cantiere: Medolla (MO)
Data: 21/06/2021

ID Prova: SCPTU 9
Profondita falda: a mt 2.00 da p.c.
Preforo: -

Profondità massima raggiunta: 30.30 mt
Punta sismica: Tecnopenta CPLSD
RIF. 89/21GF

Prova eseguita da:
GEO.FE. S.n.c.
via dell'Artigianato ,3 44030 - Ro Ferrarese (FE)
tel 3383646278 - info@geofe.it - www.geofe.it
Responsabile dati: Dott.Geol.Zanella Fabio
Responsabile cantiere: Sig. Mangherini Alberto

GRAFICI PROVA SCPTU 9



Geo.Fe.
INDAGINI GEOLOGICHE

Committente: Geogroup
Cantiere: Medolla (MO)
Data: 21/06/2021

ID Prova: SCPTU 9
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Vs 30 e ANAGRAFICA PROVA SCPTU 9

prof. (p)	prof.(cs)	Dist (L)	Tempo (t)	VsP	L2-L1	t2-t1	VsL			Vs30
m	m	m	sec	m/sec	m	sec	m/sec			
0.00	0.00	0.00	0.0000							
1.30	1.00	1.8028	0.0065	279	1.80	0.0065	279	1.00	0.00359	
2.30	2.00	2.5000	0.0108	232	0.70	0.0043	163	1.00	0.00615	
3.30	3.00	3.3541	0.0168	200	0.85	0.0060	142	1.00	0.00704	
4.30	4.00	4.2720	0.0227	188	0.92	0.0060	154	1.00	0.00651	
5.30	5.00	5.2202	0.0293	178	0.95	0.0066	144	1.00	0.00694	
6.30	6.00	6.1847	0.0357	173	0.96	0.0064	150	1.00	0.00665	
7.30	7.00	7.1589	0.0411	174	0.97	0.0053	183	1.00	0.00547	
8.30	8.00	8.1394	0.0469	174	0.98	0.0058	169	1.00	0.00593	
9.30	9.00	9.1241	0.0528	173	0.98	0.0060	165	1.00	0.00606	
10.30	10.00	10.1119	0.0588	172	0.99	0.0060	165	1.00	0.00607	
11.30	11.00	11.1018	0.0637	174	0.99	0.0049	202	1.00	0.00494	
12.30	12.00	12.0934	0.0688	176	0.99	0.0050	197	1.00	0.00508	
13.30	13.00	13.0863	0.0738	177	0.99	0.0051	196	1.00	0.00510	
14.30	14.00	14.0801	0.0790	178	0.99	0.0052	193	1.00	0.00518	
15.30	15.00	15.0748	0.0845	178	0.99	0.0055	180	1.00	0.00555	
16.30	16.00	16.0702	0.0902	178	1.00	0.0057	175	1.00	0.00572	
17.30	17.00	17.0660	0.0948	180	1.00	0.0046	215	1.00	0.00465	
18.30	18.00	18.0624	0.0997	181	1.00	0.0049	203	1.00	0.00492	
19.30	19.00	19.0591	0.1045	182	1.00	0.0048	207	1.00	0.00482	
20.30	20.00	20.0562	0.1099	183	1.00	0.0053	187	1.00	0.00535	
21.30	21.00	21.0535	0.1136	185	1.00	0.0037	271	1.00	0.00370	
22.30	22.00	22.0511	0.1169	189	1.00	0.0034	295	1.00	0.00339	
23.30	23.00	23.0489	0.1217	189	1.00	0.0048	208	1.00	0.00480	
24.30	24.00	24.0468	0.1260	191	1.00	0.0042	236	1.00	0.00424	
25.30	25.00	25.0450	0.1296	193	1.00	0.0037	273	1.00	0.00367	
26.30	26.00	26.0432	0.1335	195	1.00	0.0039	255	1.00	0.00393	
27.30	27.00	27.0416	0.1377	196	1.00	0.0042	238	1.00	0.00420	
28.30	28.00	28.0401	0.1418	198	1.00	0.0041	243	1.00	0.00411	
29.30	29.00	29.0388	0.1454	200	1.00	0.0036	279	1.00	0.00358	
30.30	30.00	30.0375	0.1491	201	1.00	0.0037	271	1.00	0.00369	
								30.00	0.15102	198.6

prof.(cs): profondità cono sismico
prof. (p): profondità piezocono
prof. (p): profondità piezocono
D1: distanza fra la sorgente del rumore S - geofono triassiale (L)
Tempo (t): tempo d'arrivo dell'onda a S
VsP: velocità del suono nel percorso fra S ed L - Vs puntuale alla profondità
VsL: Vs per ogni livello (L2 - L1)/(t2 - t1)
Nel calcolo delle Vs30 è da intendersi un possibile valore di indeterminatezza del +/- 20% del valore ricavato

$$t_{corr} = \frac{z}{r}\, t$$

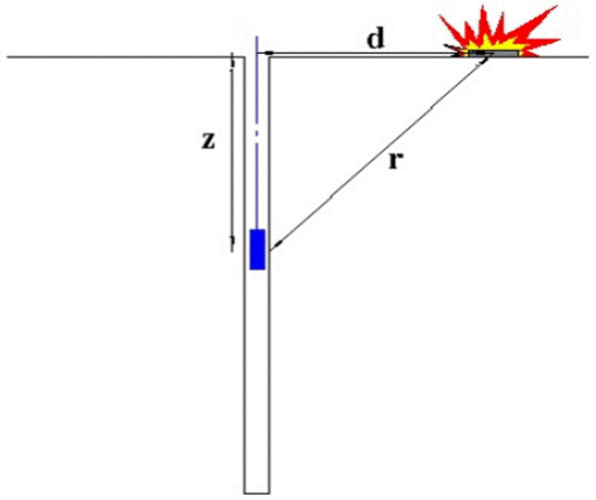


Figura 1 – Schema di down hole con metodo diretto

Geo.Fe.
INDAGINI GEOLOGICHE

Committente: Geogroup
Cantiere: Medolla (MO)
Data: 06/07/2021

ID Prova: SCPTU 10
Profondita falda: a mt 1.70 da p.c.
Preforo: -

Profondità massima raggiunta: 30.30 mt
Punta sismica: Tecnopenta CPLSD
RIF. 89/21GF

Prova eseguita da:
GEO.FE. S.n.c.
via dell'Artigianato ,3 44030 - Ro Ferrarese (FE)
tel 3383646278 - info@geofe.it - www.geofe.it
Responsabile dati: Dott.Geol.Zanella Fabio
Responsabile cantiere: Sig. Mangherini Alberto

Prof.	RP	RL	PN	Incl.	V.avanz	Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz	Prof.	RP	RL	PN	Incl.	Vavanz
metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec	metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec
0.020	1.918	0.011	12.420	0.698	1.542	1.660	15.473	0.621	-0.272	0.274	1.944	3.300	5.672	0.165	0.276	0.308	1.810	4.940	5.679	0.093	0.570	0.737	1.907	6.580	7.681	0.235	1.640	1.250	2.162
0.040	2.977	0.016	21.715	0.410	1.674	1.680	15.019	0.622	-0.141	0.272	1.831	3.320	6.256	0.115	0.280	0.310	2.007	4.960	5.789	0.100	0.572	0.734	2.246	6.600	7.606	0.232	1.638	1.256	2.153
0.060	3.381	0.022	21.630	0.446	1.590	1.700	15.591	0.638	0.006	0.283	1.822	3.340	7.640	0.097	0.293	0.322	1.935	4.980	6.229	0.084	0.579	0.737	2.054	6.620	7.603	0.234	1.632	1.258	2.344
0.080	5.279	0.035	21.968	0.324	1.573	1.720	15.978	0.658	0.140	0.277	1.840	3.360	7.715	0.087	0.294	0.325	1.833	5.000	7.795	0.072	0.605	0.747	2.176	6.640	7.455	0.242	1.626	1.265	2.293
0.100	5.463	0.035	22.222	0.299	1.485	1.740	15.424	0.657	0.082	0.283	1.871	3.380	6.843	0.089	0.285	0.326	1.820	5.020	8.912	0.101	1.953	0.756	2.176	6.660	7.379	0.247	1.622	1.274	2.141
0.120	8.268	0.057	23.067	0.278	1.568	1.760	15.337	0.654	0.065	0.277	1.947	3.400	5.865	0.097	0.273	0.332	1.898	5.040	8.621	0.107	1.942	0.763	2.235	6.680	7.270	0.249	1.618	1.285	2.147
0.140	10.707	0.062	21.039	0.358	1.547	1.780	14.858	0.689	0.081	0.285	1.963	3.420	5.359	0.107	0.266	0.334	1.825	5.060	8.221	0.126	1.918	0.773	2.181	6.700	7.268	0.250	1.622	1.282	2.231
0.160	12.964	0.069	20.616	0.356	1.542	1.800	14.341	0.695	0.081	0.288	1.974	3.440	5.183	0.099	0.264	0.337	1.836	5.080	7.783	0.166	1.897	0.781	2.234	6.720	7.232	0.238	1.624	1.284	2.177
0.180	14.678	0.068	18.757	0.356	1.613	1.820	14.084	0.683	0.161	0.292	1.868	3.460	6.971	0.092	0.281	0.341	1.977	5.100	7.747	0.179	1.905	0.796	2.126	6.740	7.376	0.227	1.628	1.288	2.063
0.200	15.881	0.102	16.983	0.347	1.593	1.840	13.058	0.686	0.319	0.284	1.875	3.480	9.490	0.089	0.307	0.357	1.856	5.120	7.783	0.177	1.914	0.806	2.220	6.760	7.304	0.219	1.629	1.295	2.386
0.220	16.685	0.147	15.293	0.244	1.622	1.860	12.285	0.648	0.319	0.306	1.961	3.500	8.986	0.088	0.306	0.357	1.924	5.140	7.638	0.169	1.917	0.814	2.193	6.780	7.375	0.218	1.628	1.304	2.474
0.240	16.652	0.201	13.603	0.311	1.648	1.880	11.883	0.589	0.318	0.301	1.849	3.520	7.719	0.098	0.296	0.361	1.769	5.160	7.639	0.172	1.911	0.826	2.140	6.800	7.737	0.213	1.627	1.314	2.206
0.260	17.202	0.237	11.660	0.261	1.496	1.900	11.185	0.550	0.389	0.311	1.743	3.540	6.815	0.120	0.285	0.368	1.981	5.180	7.055	0.171	1.899	0.857	2.377	6.820	8.099	0.204	1.634	1.326	2.163
0.280	17.975	0.293	9.548	0.262	1.434	1.920	10.451	0.477	0.387	0.328	2.031	3.560	6.240	0.147	0.281	0.376	1.796	5.200	6.872	0.159	1.891	0.859	2.246	6.840	8.136	0.202	1.637	1.343	2.424
0.300	20.316	0.354	8.872	0.271	1.650	1.940	9.208	0.408	0.369	0.303	1.907	3.580	7.083	0.173	0.284	0.390	1.802	5.220	6.835	0.143	1.885	0.869	2.126	6.860	8.063	0.208	1.638	1.350	2.069
0.320	24.377	0.421	8.787	0.292	1.565	1.960	8.844	0.361	0.360	0.315	1.759	3.600	8.294	0.211	0.291	0.379	1.949	5.240	6.833	0.126	1.886	0.878	2.022	6.880	7.808	0.222	1.636	1.356	2.138
0.340	28.370	0.482	8.534	0.206	1.565	1.980	8.804	0.336	0.398	0.319	1.759	3.620	7.900	0.236	0.290	0.384	1.807	5.260	7.014	0.128	1.891	0.896	2.317	6.900	7.663	0.227	1.630	1.361	2.305
0.360	30.950	0.570	7.689	0.265	1.565	2.000	8.584	0.290	0.419	0.319	1.802	3.640	7.469	0.203	0.285	0.396	1.891	5.280	7.451	0.122	1.900	0.901	2.144	6.920	7.445	0.230	1.628	1.370	2.305
0.380	34.012	0.624	6.168	0.257	1.554	2.020	9.098	0.233	0.415	0.329	1.996	3.660	6.601	0.189	0.275	0.398	1.932	5.300	7.486	0.122	1.906	0.899	2.123	6.940	7.410	0.236	1.626	1.392	2.305
0.400	33.874	0.750	3.549	0.214	1.557	2.040	9.098	0.233	0.353	0.339	1.982	3.680	5.733	0.169	0.266	0.409	1.940	5.320	7.435	0.101	1.883	0.912	2.277	6.960	7.374	0.241	1.625	1.389	2.170
0.420	33.915	0.835	1.267	0.244	1.524	2.060	10.397	0.210	0.361	0.359	1.946	3.700	5.447	0.160	0.261	0.420	1.789	5.340	7.181	0.107	1.866	0.921	2.282	6.980	7.448	0.241	1.634	1.405	2.246
0.440	33.381	0.913	-0.845	0.189	1.470	2.080	10.043	0.227	0.376	0.341	1.851	3.720	5.488	0.162	0.261	0.409	1.789	5.360	7.181	0.113	1.866	0.921	2.282	7.000	7.448	0.241	1.639	1.440	2.274
0.460	31.788	0.939	-3.380	0.181	1.583	2.100	9.651	0.229	0.370	0.347	1.873	3.740	6.222	0.154	0.271	0.419	1.789	5.380	7.691	0.109	1.892	0.933	2.207	7.020	7.747	0.220	1.728	1.455	2.286
0.480	30.412	1.040	-5.746	0.171	1.547	2.120	9.480	0.233	0.367	0.350	1.945	3.760	8.448	0.141	0.291	0.423	1.852	5.400	8.091	0.110	1.910	0.921	2.057	7.040	7.566	0.213	1.716	1.452	2.124
0.500	29.757	1.117	-7.520	0.171	1.513	2.140	8.948	0.258	0.411	0.368	1.865	3.780	9.689	0.119	0.303	0.409	1.993	5.420	8.565	0.126	1.921	0.943	1.987	7.060	7.165	0.216	1.703	1.457	2.231
0.520	27.930	1.183	-9.210	0.160	1.761	2.160	9.287	0.247	0.438	0.368	1.857	3.800	9.257	0.109	0.301	0.438	1.950	5.440	9.876	0.144	1.929	0.928	2.305	7.080	6.837	0.226	1.689	1.470	2.218
0.540	27.161	1.182	-10.731	0.149	1.571	2.180	9.371	0.224	0.470	0.373	1.960	3.820	8.315	0.132	0.293	0.433	1.966	5.460	10.312	0.167	1.934	0.951	2.276	7.100	6.509	0.241	1.687	1.478	2.156
0.560	26.933	1.188	-11.829	0.139	1.475	2.200	8.911	0.182	0.467	0.380	1.966	3.840	7.482	0.171	0.286	0.418	1.841	5.480	10.784	0.183	1.933	0.947	2.078	7.120	6.799	0.249	1.692	1.483	2.248
0.580	26.309	1.217	-13.603	0.172	1.490	2.220	8.450	0.168	0.458	0.384	1.890	3.860	6.688	0.202	0.278	0.429	1.821	5.500	10.856	0.201	1.905	0.969	2.172	7.140	7.014	0.252	1.706	1.491	2.257
0.600	26.043	1.214	-14.786	0.154	1.558	2.240	7.772	0.195	0.447	0.383	1.860	3.880	6.656	0.208	0.276	0.441	1.927	5.520	10.491	0.258	1.892	0.982	2.252	7.160	7.596	0.251	1.717	1.497	2.264
0.620	25.342	1.190	-15.800	0.180	1.542	2.260	7.715	0.182	0.441	0.393	1.886	3.900	7.243	0.198	0.278	0.440	1.870	5.540	10.235	0.282	1.883	0.984	2.204	7.180	7.886	0.249	1.733	1.507	2.121
0.640	25.330	1.153	-16.899	0.162	1.465	2.280	8.461	0.172	0.435	0.397	1.831	3.920	7.212	0.213	0.278	0.449	1.815	5.560	10.233	0.306	1.880	0.989	2.078	7.200	7.703	0.241	1.740	1.510	2.275
0.660	26.193	1.141	-17.744	0.184	1.571	2.300	9.386	0.157	0.445	0.406	1.902	3.940	6.998	0.203	0.275	0.455	2.016	5.580	10.376	0.320	1.880	1.006	2.132	7.220	7.481	0.231	1.740	1.509	2.151
0.680	25.821	1.153	-18.757	0.197	1.578	2.320	11.791	0.214	0.200	0.165	1.902	3.960	5.690	0.153	0.263	0.455	2.016	5.600	10.193	0.329	1.870	1.006	2.251	7.240	7.371	0.241	1.739	1.521	2.163
0.700	26.650	1.130	-19.602	0.201	1.561	2.340	11.247	0.220	0.192	0.178	1.869	3.980	5.838	0.104	0.263	0.454	1.964	5.620	9.644	0.337	1.852	1.015	2.193	7.260	7.334	0.252	1.740	1.520	2.204
0.720	26.349	1.175	-20.701	0.211	1.415	2.360	10.885	0.219	0.189	0.184	1.946	4.000	6.387	0.107	0.272	0.468	1.833	5.640	9.059	0.331	1.835	1.014	2.149	7.280	7.368	0.266	1.743	1.527	2.153
0.740	27.422	1.157	-20.954	0.197	1.589	2.380	11.252	0.212	0.190	0.180	1.831	4.020	6.863	0.094	0.278	0.468	1.785	5.660	8.654	0.315	1.822	1.019	2.102	7.300	7.549	0.275	1.746	1.531	2.346
0.760	29.665	1.152	-21.461	0.220	1.533	2.400	11.836	0.195	0.193	0.190	1.990	4.040	7.703	0.136	0.439	0.457	2.133	5.680	8.759	0.293	1.823	1.030	2.418	7.320	7.873	0.286	1.756	1.526	2.202
0.780	31.506	1.185	-21.715	0.214	1.504	2.420	12.276	0.191	0.193	0.183	1.775	4.060	7.085	0.145	0.436	0.469	1.882	5.700	8.825	0.278	1.816	1.032	2.139	7.340	7.945	0.302	1.763	1.530	2.215
0.800	31.783	1.225	-22.644	0.218	1.592	2.440	10.860	0.195	0.187	0.184	1.798	4.080	6.394	0.151	0.437	0.474	1.757	5.720	9.147	0.273	1.813	1.033	2.139	7.360	8.306	0.300	1.772	1.555	2.244
0.820	32.132	1.250	-23.574	0.230	1.543	2.460	9.333	0.185	0.177	0.194	1.855	4.100	6.175	0.162	0.441	0.481	1.987	5.740	9.469	0.269	1.817	1.047	2.139	7.380	8.667	0.299	1.778	1.568	2.067
0.840	32.693	1.268	-24.334	0.233	1.612	2.480	8.608	0.181	0.179	0.206	1.972	4.120	6.612	0.142	0.457	0.481	1.792	5.760	9.719	0.269	1.817	1.058	2.208	7.400	8.989	0.306	1.782	1.572	2.211
0.860	34.463	1.286	-24.841	0.214	1.509	2.500	8.540	0.166	0.209	0.202	1.860	4.140	7.414	0.134	0.493	0.498	1.827	5.780	9.823	0.256	1.814	1.069	2.369	7.420	8.984	0.329	1.782	1.572	2.134
0.880	35.616	1.341	-25.686	0.218	1.486	2.520	8.836	0.151	0.239	0.202	1.916	4.160	7.524	0.128	0.509	0.493	1.973	5.800	9.708	0.260	1.806	1.076	2.189	7.440	9.089	0.348	1.786	1.582	2.178
0.900	34.580	1.349	-26.531	0.237	1.528	2.540	8.805	0.143	0.254	0.195	1.842	4.180	7.743	0.130	0.515	0.495	1.843	5.820	9.375	0.274	1.795	1.083	2.319	7.460	9.050	0.358	1.784	1.587	2.306
0.920	34.348	1.344	-27.460	0.210	1.524	2.560	8.702	0.138	0.272	0.206	1.890	4.200	7.817	0.133	0.516	0.514	2.014	5.840	8.643	0.278	1.780	1.088	2.281	7.480	9.010	0.369	1.781	1.599	2.173
0.940	34.073	1.359	-28.052	0.215	1.553	2.580	8.127	0.122	0.278	0.206	1.851	4.220	7.636	0.140	0.520	0.517	1.791	5.860	8.204	0.274	1.767	1.101	2.047	7.500	8.969	0.377	1.778	1.616	2.143
0.960	32.638	1.349	-29.235	0.196	1.553	2.600	8.026	0.114	0.287	0.219	1.855	4.240	7.674	0.150	0.524	0.520	1.949	5.880	7.800	0.277	1.759	1.104	2.172	7.520	8.819	0.378	1.768	1.621	2.225
0.980	31.965	1.289	-30.164	0.201	1.815	2.620	7.852	0.113	0.293	0.206	1.857	4.260	7.529	0.178	0.529	0.511	1.784	5.900	7.323	0.265	1.748	1.117	2.126	7.540	8.269	0.375	1.755	1.646	2.189
1.000	31.438	1.254	-30.924	0.200	1.710	2.640	7.933	0.122	0.299	0.223	1.907	4.280	8.076	0.184	0.541	0.533	1.755	5.920	7.066	0.265	1.740	1.117	2.126	7.560	8.083	0.376	1.745	1.654	2.219
1.020	31.635	1.274	-31.600	0.185	1.990	2.660	8.453	0.133	0.315	0.206	1.867	4.300	8.223	0.190	0.548	0.536	1.977	5.940	7.171	0.254	1.736	1.111	2.126	7.580	7.861	0.365	1.735	1.680	2.128
1.040	31.970	1.259	-44.950	0.239	1.872	2.680	8.681	0.126	0.320	0.216	1.942	4.320	8.551	0.185	0.554	0.541	1.902	5.960	7.857	0.233	1.742	1.134	2.094	7.600	7.784	0.361	1.729	1.678	2.317
1.060	30.999	1.318	-45.373	0.212	1.824	2.700	8.255	0.126	0.328	0.227	1.834	4.340	8.479	0.185	0.555	0.540	1.805	5.980	8.873	0.216	1.768	1.143	2.166	7.620	7.597	0.353	1.730	1.694	2.165
1.080	30.828	1.380	-45.626	0.218	2.019	2.720	8.369	0.116	0.333	0.231	1.890	4.360	8.369	0.185	0.555	0.543	2.000	6.000	8.873	0.216	1.822	1.153	2.414	7.640	8.067	0.342	1.739	1.705	2.275
1.100	29.670	1.405	-46.133	0.237	1.778	2.740	8.166	0.120	0.352	0.243	1.787	4.380	8.042	0.178	0.553	0.542	1.862	6.020	10.940	0.221	1.899	1.156	2.274	7.660	8.863	0.310	1.763	1.712	2.144
1.120	30.295	1.452	-46.471	0.216	1.719	2.760	8.139	0.120	0.358	0.242	1.767	4.400	7.677	0.180	0.550	0.556	1.753	6.040	10.903	0.236	1.888	1.170	2.270	7.680	10.097	0.285	1.792	1.734	2.277
1.140	30.041	1.517	-46.894	0.234	1.929	2.780	8.588	0.124	0.372	0.246	1.998	4.420	8.114	0.179	0.555	0.552	1.758	6.060	11.048	0.248	1.892	1.180	2.270	7.700	11.112	0.257	1.812	1.738	2.047
1.160	27.858	1.548	-47.316	0.218	1.879	2.800	8.636	0.126	0.378	0.251	2.116	4.440	9.424	0.178	0.585	0.560	1.975	6.080	11.230	0.256	1.887	1.181	2.270	7.720	11.365	0.247	1.823	1.753	2.145
1.180	26.731	1.522	-47.654	0.225	1.761	2.820	8.974	0.117	0.391	0.260	1.863	4.460	9.934	0.167	0.602	0.556	1.826	6.100	10.793	0.292	1.865	1.188	2.207	7.740	11.762	0.234	1.825	1.772	2.134
1.200	25.927	1.470	-47.908	0.230	1.957	2.840	9.205	0.118	0.411	0.271	1.868	4.480	10.443	0.160	0.610	0.560	1.840	6.120	10.102	0.335	1.833	1.201	2.065	7.760	12.270	0.242	1.850	1.777	2.326
1.220	25.234	1.347	-48.246	0.223	1.935	2.860	9.288	0.120	0.421	0.275	2.368	4.500	10.152	0.179	0.610	0.566	2.042	6.140	9.483	0.365	1.808	1.199	2.405	7.780	12.995	0.248	1.897	1.801	2.410
1.240	24.578	1.268	-48.583	0.228	1.834	2.880	9.737	0.120	0.424	0.281	2.368	4.520	9.606	0.185	0.609	0.563	1.867	6.160	8.937	0.391	1.777	1.194	2.233	7.800	12.958	0.259	1.914	1.803	2.287
1.260	22.939	1.226	-49.006	0.226	1.693	2.900	9.894	0.142	0.425	0.279	2.368	4.540	8.878	0.196	0.604	0.577	1.935	6.180	9.080	0.403	1.766	1.210	2.230	7.820	12.703	0.270	1.915	1.813	2.077
1.280	20.714	1.198	-49.513	0.235	1.915	2.920	9.177	0.170	0.418	0.285	1.870	4.560	7.969	0.216	0.596	0.572	1.720	6.200	9.005	0.420	1.754	1.224	2.274	7.840	12.737	0.282	1.922	1.838	2.386
1.300	19.838	1.167	-49.851	0.206	1.823	2.940	8.861	0.186	0.412	0.276	1.793	4.580	7.206	0.244	0.590	0.576	1.863	6.220	9.002	0.423	1.744	1.213	2.168	7.860	12.737	0.282	1.922	1.832	2.043
1.320	19.402	1.147	-50.104	0.220	1.788	2.960	8.801	0.197	0.409	0.286	1.793	4.600	6.878	0.249	0.587	0.587	1.781	6.240	9.289	0.409	1.744	1.236	2.069	7.880	12.409	0.301	1.919	1.852	2.204
1.340	19.075	1.158	-50.104	0.213	1.923	2.980	8.228	0.229	0.401	0.295	1.786	4.620	6.951	0.235	0.585	0.600	1.924	6.260	9.065	0.396	1.731	1.225	2.203	7.900	13.029	0.312	1.965	1.869	2.165
1.360	19.226	1.149	-49.344	0.218	1.850	3.000	7.912	0.259	0.392	0.298	1.786	4.640	7.204	0.225	0.585	0.601	1.880	6.280	8.731	0.380	1.713	1.233	2.376	7.920	17.031	0.309	2.124	1.874	2.165
1.380	19.778	1.117	-48.668	0.221	1.887	3.020	7.912	0.259	0.242	0.244	1.852	4.660	8.331	0.197	0.600	0.623	1.955	6.300	8.506	0.361	1.700	1.234	2.216	7.940	23.003	0.317	2.528	1.891	2.308
1.400	20.074	1.076	-47.908	0.213	1.785	3.040	7.599	0.285	0.261	0.243	2.040	4.680	8.257	0.170	0.604	0.615	1.893	6.320	8.682	0.336	1.692	1.240	2.109	7.960	26.716	0.312	2.981	1.895	2.106
1.420	20.554	1.028	-47.401	0.214	1.886	3.060	8.110	0.298	0.262	0.231	1.928	4.700	7.381	0.148	0.596	0.624	1.813	6.340	8.749	0.325	1.691	1.235	2.371	7.980	30.939	0.328	2.660	1.927	2.269
1.440	20.052	1.013	-45.964	0.223	1.764	3.080	9.530	0.283	0.275	0.239	1.827	4.720	7.017	0.137	0.591	0.627	1.791	6.360	8.816	0.304	1.695	1.239	2.253	8.000	28.936	0.360	2.863	1.937	2.199
1.460	19.040	1.004	-45.711	0.221	1.873	3.100	13.023	0.261	0.304	0.260	1.763	4.740	8.110	0.117	0.604	0.632	1.787	6.380	8.410	0.292	1.689	1.253	2.046	8.020	25.696	0.385	2.996	1.954	2.246
1.480	18.247	0.952	-46.218	0.233	1.802	3.120	15.641	0.245	0.332	0.270	1.968	4.760	9.673	0.117	0.616	0.643	2.110	6.400	7.932	0.291	1.679	1.263	2.046	8.040	24.093	0.414	3.517	1.963	2.310
1.500	17.930	0.943	-46.640	0.241	1.918	3.140	16.187	0.247	0.342	0.270	1.831	4.780	11.822	0.140	0.635	0.660	1.850	6.420	7.562	0.283	1.666	1.249	2.410	8.060	23.912	0.403	3.825	1.970	2.108
1.520	16.924	0.945	-47.485	0.234	1.935	3.160	13.820	0.255	0.335	0.273	1.872	4.800	14.117	0.161	0.652	0.668	1.833	6.440	7.377	0.285	1.654	1.260	2.174	8.080	25.549	0.372	3.978	1.992	2.124
1.540	15.702	0.963	-48.077	0.245	1.905	3.180	11.854	0.264	0.321	0.284	1.946	4.820	14.445	0.178	0.648	0.679	2.018	6.460	7.300	0.283	1.648	1.243	2.146	8.100	26.715	0.386	4.009	2.003	2.297
1.560	15.318	0.917	-48.161	0.260	1.798	3.200	10.362	0.288	0.311	0.285	1.972	4.840	12.591	0.164	0.632	0.677	1.799	6.480	7.369	0.279	1.648	1.247	2.399	8.120	27.297	0.386	3.988	2.000	2.225
1.580	15.771	0.837	-47.654	0.257	1.870	3.220	8.470	0.303	0.300	0.290	1.933	4.860	9.459	0.145	0.604	0.683	1.818	6.500	7.693	0.270	1.650	1.252	2.193	8.140	25.112	0.333	3.838	2.008	2.239
1.600	16.150	0.807	-46.978	0.271	1.789	3.240	7.852	0.291	0.297	0.293	1.743	4.880	7.457	0.103	0.584	0.709	1.771	6.520	7.836	0.262	1.651	1.249	2.217	8.160	23.508	0.313	3.703	2.019	2.236
1.620	16.420	0.747	-45.626	0.259	1.899	3.260	6.507	0.248	0.286	0.310	1.984	4.900	5.930	0.090	0.572	0.708	1.907	6.540	7.760	0.253	1.644	1.247	2.178	8.180	22.448	0.300	3.636	2.031	2.109
1.640	16.147	0.671	-45.035	0.273	1.882	3.280	5.744	0.214	0.279	0.310	1.844	4.920	5.714	0.084	0.570	0.713	1.907	6.560	7.831	0.247	1.642	1.256	2.121	8.200	23.865	0.271	3.752	2.041	2.366

Prof.: Profondità RL: - RP: Resistenza di punta - Resistenza all'attrito laterale - Incl.:clinazione - Vavanz: velocità di avanzamento della punta

Geo.Fe.
INDAGINI GEOLOGICHE

Committente: Geogroup
Cantiere: Medolla (MO)
Data: 06/07/2021

ID Prova: SCPTU 10
Profondita falda: a mt 1.70 da p.c.
Preforo: -

Profondità massima raggiunta: 30.30 mt
Punta sismica: Tecnopenta CPLSD
RIF. 89/21GF

Prova eseguita da:
GEO.FE. S.n.c.
via dell'Artigianato ,3 44030 - Ro Ferrarese (FE)
tel 3383646278 - info@geofe.it - www.geofe.it
Responsabile dati: Dott.Geol.Zanella Fabio
Responsabile cantiere: Sig. Mangherini Alberto

Prof.	RP	RL	PN	Incl.	Vavanz
metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec
8.220	25.029	0.279	3.813	2.034	2.223
8.240	27.464	0.303	3.794	2.044	1.963
8.260	28.043	0.297	3.780	2.067	2.114
8.280	29.170	0.316	3.755	2.091	2.035
8.300	27.641	0.335	3.683	2.085	1.840
8.320	26.219	0.334	3.730	2.110	1.937
8.340	26.254	0.333	3.774	2.104	2.028
8.360	24.431	0.332	3.558	2.123	1.922
8.380	23.264	0.328	3.535	2.154	2.165
8.400	22.752	0.292	3.590	2.175	2.085
8.420	21.913	0.270	3.574	2.194	2.198
8.440	22.273	0.239	3.629	2.222	2.166
8.460	22.522	0.236	3.718	2.241	2.064
8.480	23.280	0.256	3.833	2.250	2.358
8.500	25.970	0.249	3.891	2.282	2.111
8.520	24.659	0.237	3.620	2.326	2.048
8.540	23.350	0.248	3.653	2.344	2.182
8.560	21.494	0.235	3.599	2.353	2.188
8.580	21.093	0.225	3.620	2.379	2.201
8.600	21.784	0.204	3.788	2.419	2.241
8.620	21.892	0.189	3.900	2.435	2.254
8.640	21.890	0.184	4.092	2.450	2.106
8.660	23.963	0.181	4.553	2.480	2.071
8.680	24.910	0.171	5.131	2.502	1.974
8.700	24.581	0.182	5.233	2.505	2.440
8.720	25.053	0.199	5.485	2.529	2.255
8.740	25.598	0.190	5.629	2.557	1.951
8.760	26.141	0.217	5.840	2.568	2.212
8.780	26.103	0.199	6.027	2.597	2.303
8.800	28.179	0.195	6.398	2.620	2.175
8.820	29.781	0.199	6.827	2.625	2.175
8.840	33.021	0.202	7.840	2.636	2.175
8.860	35.641	0.203	8.315	2.662	2.128
8.880	35.969	0.218	8.221	2.677	2.024
8.900	38.734	0.223	8.359	2.687	2.092
8.920	42.083	0.282	9.169	2.712	2.103
8.940	44.814	0.263	9.204	2.743	2.103
8.960	42.593	0.313	13.450	2.761	2.002
8.980	42.155	0.350	13.567	2.790	2.305
9.000	60.539	0.802	3.944	2.798	2.254
9.020	52.518	0.898	3.738	2.825	2.104
9.040	43.454	0.832	4.476	2.839	2.005
9.060	39.372	0.777	4.650	2.850	2.141
9.080	34.958	0.701	4.838	2.868	2.142
9.100	31.054	0.600	5.610	2.883	2.062
9.120	29.953	0.542	6.269	2.902	2.218
9.140	27.175	0.474	6.712	2.911	2.176
9.160	25.890	0.373	7.954	2.922	2.131
9.180	25.409	0.296	8.187	2.937	2.073
9.200	24.562	0.279	8.237	2.954	2.128
9.220	23.427	0.261	8.197	2.975	2.093
9.240	22.295	0.254	8.054	2.992	2.085
9.260	20.832	0.255	7.827	2.998	2.043
9.280	20.172	0.248	7.733	3.023	2.229
9.300	20.789	0.234	7.710	3.034	2.143
9.320	21.661	0.225	7.634	3.058	2.042
9.340	21.878	0.211	7.664	3.092	2.048
9.360	22.824	0.219	7.695	3.098	2.184
9.380	26.244	0.236	8.286	3.121	1.981
9.400	35.963	0.209	10.230	3.127	2.071
9.420	31.666	0.229	9.865	3.144	2.227
9.440	32.357	0.256	4.436	3.152	2.068
9.460	27.443	0.378	3.124	3.174	2.136
9.480	23.401	0.467	3.086	3.190	1.980
9.500	21.654	0.467	3.208	3.201	2.212
9.520	18.380	0.465	3.006	3.211	2.063
9.540	14.195	0.491	2.893	3.214	2.032
9.560	12.921	0.392	2.902	3.221	1.990
9.580	12.338	0.333	2.951	3.239	2.147
9.600	12.043	0.271	3.060	3.245	2.115
9.620	12.075	0.210	3.175	3.245	2.037
9.640	12.507	0.185	3.269	3.261	2.301
9.660	12.469	0.170	3.313	3.281	2.121
9.680	12.502	0.145	3.350	3.280	1.926
9.700	12.391	0.136	3.375	3.286	2.013
9.720	13.592	0.127	3.490	3.295	2.146
9.740	14.792	0.131	3.559	3.316	2.126
9.760	16.540	0.139	3.663	3.336	2.300
9.780	16.323	0.152	3.245	3.341	2.026
9.800	14.213	0.245	2.700	3.347	2.121
9.820	12.940	0.283	2.779	3.348	2.213
9.840	12.141	0.261	2.797	3.363	1.995
9.860	11.887	0.245	2.797	3.374	2.012
9.880	11.853	0.242	2.838	3.400	2.213
9.900	12.109	0.239	2.869	3.404	2.024
9.920	11.892	0.246	2.885	3.420	2.024
9.940	12.037	0.215	2.894	3.426	2.102
9.960	11.929	0.211	2.888	3.448	2.039
9.980	11.338	0.188	2.852	3.497	2.235
10.000	12.468	0.197	2.921	3.500	2.067
10.020	12.653	0.205	2.955	3.507	2.128
10.040	13.090	0.222	3.006	3.534	2.087
10.060	14.328	0.218	3.073	3.540	2.036
10.080	15.202	0.234	3.116	3.552	1.988
10.100	16.257	0.248	3.168	3.573	2.199
10.120	17.167	0.253	3.235	3.604	2.087
10.140	17.858	0.257	3.303	3.601	2.042
10.160	18.802	0.265	3.395	3.612	2.256
10.180	18.802	0.270	3.411	3.636	2.102
10.200	18.291	0.307	3.402	3.638	1.896
10.220	17.891	0.326	3.399	3.647	2.209
10.240	17.380	0.345	3.388	3.658	2.024
10.260	16.905	0.361	3.382	3.664	2.065
10.280	16.648	0.351	3.375	3.675	2.211
10.300	16.392	0.339	3.385	3.675	2.119
10.320	16.398	0.275	3.675	3.698	2.224
10.340	16.071	0.296	3.676	3.703	2.224
10.360	15.196	0.289	3.641	3.722	2.061
10.380	14.870	0.291	3.622	3.725	2.018
10.400	14.430	0.296	3.604	3.721	1.947
10.420	13.992	0.301	3.582	3.735	2.190
10.440	14.245	0.270	3.618	3.739	2.119
10.460	14.717	0.264	3.671	3.751	2.000
10.480	15.953	0.245	3.778	3.761	2.229
10.500	16.896	0.224	3.870	3.773	2.099
10.520	17.258	0.234	3.911	3.791	1.865
10.540	17.328	0.221	3.944	3.799	2.124
10.560	16.379	0.214	3.893	3.810	2.071
10.580	15.833	0.224	3.874	3.809	1.941
10.600	15.140	0.243	3.858	3.825	2.156
10.620	13.647	0.245	3.774	3.818	2.128
10.640	11.825	0.244	3.565	3.828	2.041
10.660	10.476	0.242	3.464	3.832	2.163
10.680	9.710	0.237	3.412	3.842	1.820
10.700	8.106	0.234	3.337	3.850	2.034
10.720	7.666	0.182	3.308	3.859	2.183
10.740	7.482	0.149	3.283	3.859	2.014
10.760	7.261	0.133	3.278	3.871	2.342
10.780	6.749	0.115	3.268	3.871	2.129
10.800	6.457	0.098	3.259	3.875	2.050
10.820	6.419	0.074	3.267	3.891	1.958
10.840	6.783	0.049	3.304	3.881	2.100
10.860	7.803	0.035	3.389	3.878	2.059
10.880	9.696	0.037	3.552	3.900	2.020
10.900	12.135	0.032	3.726	3.902	2.156
10.920	13.919	0.048	3.774	3.915	2.156
10.940	15.195	0.089	3.444	3.920	2.014
10.960	15.998	0.130	3.100	3.920	2.181
10.980	20.166	0.278	2.698	3.950	2.091
11.000	19.657	0.300	2.118	3.951	2.010
11.020	19.875	0.343	2.049	3.956	2.217
11.040	21.367	0.375	2.090	3.966	1.995
11.060	21.692	0.356	1.987	3.978	2.083
11.080	19.470	0.348	1.793	3.986	2.073
11.100	16.956	0.330	1.650	3.993	1.986
11.120	14.149	0.295	1.621	3.992	2.139
11.140	12.764	0.237	1.718	4.004	2.053
11.160	13.597	0.195	1.829	4.010	2.068
11.180	14.613	0.187	1.942	4.032	2.161
11.200	15.956	0.180	2.038	4.029	2.066
11.220	15.624	0.182	2.045	4.049	1.852
11.240	13.800	0.201	1.980	4.056	2.137
11.260	11.758	0.213	1.970	4.068	2.075
11.280	12.629	0.210	2.023	4.070	1.972
11.300	15.101	0.212	2.111	4.098	2.124
11.320	19.467	0.240	2.247	4.107	2.080
11.340	23.504	0.262	2.286	4.117	2.008
11.360	24.993	0.291	2.075	4.114	1.961
11.380	23.934	0.312	1.851	4.139	2.123
11.400	20.725	0.327	1.674	4.143	1.902
11.420	18.356	0.341	1.569	4.156	2.094
11.440	16.169	0.336	1.517	4.152	2.119
11.460	14.311	0.281	1.504	4.177	1.980
11.480	13.617	0.214	1.507	4.172	2.142
11.500	12.631	0.199	1.541	4.188	2.031
11.520	13.173	0.200	1.579	4.204	1.909
11.540	14.334	0.203	1.730	4.201	2.049
11.560	13.713	0.187	1.747	4.215	2.049
11.580	13.091	0.202	1.736	4.231	1.961
11.600	13.343	0.201	1.763	4.233	1.978
11.620	15.015	0.202	1.832	4.256	2.173
11.640	16.213	0.200	1.835	4.267	2.036
11.660	17.449	0.243	1.767	4.256	1.894
11.680	19.048	0.280	1.743	4.279	2.074
11.700	22.722	0.286	1.744	4.272	1.944
11.720	26.360	0.298	1.717	4.288	1.896
11.740	26.941	0.324	1.641	4.297	2.328
11.760	23.809	0.255	1.529	4.284	2.192
11.780	20.602	0.247	1.459	4.306	2.045
11.800	19.144	0.261	1.443	4.315	2.025
11.820	23.000	0.278	1.504	4.322	1.991
11.840	25.656	0.308	1.507	4.349	1.921
11.860	26.203	0.297	1.492	4.368	2.109
11.880	26.567	0.287	1.493	4.374	2.053
11.900	26.894	0.245	1.492	4.386	2.053
11.920	26.856	0.202	1.477	4.394	2.004
11.940	26.744	0.164	1.462	4.412	2.084
11.960	26.399	0.075	1.404	4.412	2.063
11.980	27.055	0.089	1.386	4.425	2.002
12.000	27.457	0.151	1.362	4.429	2.169
12.020	29.096	0.198	1.361	4.433	2.108
12.040	31.645	0.252	1.364	4.450	1.877
12.060	33.648	0.290	1.366	4.457	2.097
12.080	35.432	0.315	1.373	4.470	2.011
12.100	37.725	0.320	1.395	4.481	2.038
12.120	38.817	0.263	1.401	4.490	1.997
12.140	39.797	0.231	1.406	4.494	2.169
12.160	41.287	0.214	1.422	4.498	2.073
12.180	42.341	0.188	1.438	4.509	1.997
12.200	43.357	0.175	1.454	4.511	1.982
12.220	45.248	0.173	1.479	4.521	1.983
12.240	47.756	0.177	1.515	4.535	2.049
12.260	51.721	0.176	1.563	4.552	1.919
12.280	59.114	0.195	1.654	4.562	2.097
12.300	66.418	0.208	1.751	4.548	2.101
12.320	73.538	0.210	1.846	4.576	1.979
12.340	79.014	0.219	1.922	4.586	1.968
12.360	85.147	0.216	2.013	4.601	2.010
12.380	89.978	0.208	2.093	4.628	2.034
12.400	92.839	0.197	2.145	4.642	1.934
12.420	96.250	0.199	2.207	4.660	2.089
12.440	99.294	0.197	2.279	4.691	2.071
12.460	98.775	0.191	2.305	4.708	2.067
12.480	94.472	0.192	2.258	4.730	1.925
12.500	85.987	0.177	2.127	4.734	1.976
12.520	76.699	0.164	1.839	4.728	2.047
12.540	70.372	0.143	1.762	4.736	1.902
12.560	65.687	0.121	1.721	4.753	2.200
12.580	63.302	0.110	1.717	4.742	1.952
12.600	64.717	0.126	1.744	4.760	1.900
12.620	67.957	0.167	1.803	4.769	2.268
12.640	73.645	0.214	1.903	4.772	1.966
12.660	79.913	0.254	1.975	4.781	1.966
12.680	79.573	0.278	1.950	4.798	1.966
12.700	75.615	0.287	1.881	4.799	1.966
12.720	71.475	0.268	1.819	4.802	2.071
12.740	66.166	0.250	1.760	4.793	2.176
12.760	63.564	0.218	1.742	4.788	2.055
12.780	63.006	0.172	1.748	4.778	1.995
12.800	65.261	0.145	1.788	4.779	1.947
12.820	69.928	0.190	1.798	4.775	2.107
12.840	72.149	0.232	1.801	4.784	1.928
12.860	76.266	0.333	1.819	4.801	1.997
12.880	81.665	0.380	1.845	4.799	1.997
12.900	88.385	0.462	1.915	4.798	1.997
12.920	95.685	0.483	2.017	4.814	2.043
12.940	101.553	0.425	2.114	4.815	1.997
12.960	101.553	0.142	2.114	4.818	1.907
12.980	112.069	0.142	2.137	4.825	2.337
13.000	120.740	0.181	2.171	4.824	2.010
13.020	126.324	0.225	2.195	4.819	1.976
13.040	132.716	0.265	2.243	4.841	2.007
13.060	139.398	0.283	2.319	4.861	2.012
13.080	143.950	0.311	2.304	4.879	1.934
13.100	141.412	0.325	2.230	4.893	2.130
13.120	137.771	0.321	2.150	4.892	2.047
13.140	132.917	0.355	2.006	4.893	2.019
13.160	125.015	0.361	1.868	4.875	2.146
13.180	114.907	0.373	1.746	4.899	2.047
13.200	95.579	0.384	1.553	4.913	1.916
13.220	80.647	0.496	1.395	4.972	2.052
13.240	75.196	0.499	1.345	5.004	1.980
13.260	64.887	0.600	1.260	5.024	1.980
13.280	71.924	0.843	1.467	5.033	2.051
13.300	72.646	0.997	1.470	5.045	2.034
13.320	89.447	1.106	2.784	5.062	2.034
13.340	103.454	1.226	2.784	5.057	2.034
13.360	103.932	1.720	1.047	5.017	1.978
13.380	102.629	1.568	0.879	4.976	1.888
13.400	120.877	1.367	0.615	4.966	2.135
13.420	114.233	1.511	0.882	4.924	1.952
13.440	118.148	1.457	0.516	4.887	1.970
13.460	122.871	1.217	0.539	4.856	2.140
13.480	125.049	1.088	0.558	4.824	2.067
13.500	122.919	0.972	0.558	4.780	1.993
13.520	120.742	0.869	0.566	4.755	1.846
13.540	122.385	0.835	0.587	4.745	1.980
13.560	122.128	0.708	0.602	4.728	1.999
13.580	122.354	0.709	0.620	4.718	2.026
13.600	123.846	0.762	0.644	4.713	1.911
13.620	125.195	0.784	0.667	4.711	2.165
13.640	125.662	0.667	0.689	4.702	2.049
13.660	123.412	0.619	0.696	4.696	1.795
13.680	122.890	0.604	0.707	4.700	2.058
13.700	124.460	0.565	0.733	4.682	1.965
13.720	127.279	0.516	0.766	4.678	2.079
13.740	128.265	0.526	0.787	4.671	2.280
13.760	127.269	0.552	0.804	4.686	1.886
13.780	127.078	0.554	0.821	4.682	2.029
13.800	127.954	0.520	0.840	4.660	2.175
13.820	131.141	0.475	0.876	4.667	1.846
13.840	134.331	0.467	0.910	4.666	1.985
13.860	138.916	0.476	0.953	4.662	2.112
13.880	145.410	0.473	1.015	4.653	1.956
13.900	152.713	0.453	1.083	4.663	1.956
13.920	151.643	0.447	1.100	4.662	2.202
13.940	146.205	0.438	1.080	4.675	1.962
13.960	141.871	0.440	1.091	4.665	1.972
13.980	141.871	0.487	1.004	4.733	2.179
14.000	160.013	0.502	1.004	4.741	2.115
14.020	162.701	0.557	1.035	4.756	1.923
14.040	162.740	0.591	1.048	4.774	1.928
14.060	158.777	0.631	1.032	4.760	2.128
14.080	153.011	0.643	1.001	4.763	1.995
14.100	146.138	0.659	0.968	4.758	1.998
14.120	144.622	0.659	0.980	4.769	2.115
14.140	146.741	0.642	1.015	4.774	2.088
14.160	147.608	0.613	1.043	4.793	1.976
14.180	146.967	0.575	1.061	4.793	2.050
14.200	146.511	0.552	1.077	4.807	1.923
14.220	144.728	0.541	1.087	4.791	1.977
14.240	139.896	0.533	1.074	4.790	2.088
14.260	135.144	0.545	1.052	4.798	2.003
14.280	138.283	0.582	1.098	4.797	2.040
14.300	149.322	0.609	1.206	4.801	2.016
14.320	164.399	0.678	1.367	4.810	2.005
14.340	174.739	0.765	1.486	4.813	1.913
14.360	179.021	0.846	1.546	4.813	1.980
14.380	181.613	0.902	1.586	4.829	2.032
14.400	183.505	0.860	1.628	4.840	1.845
14.420	181.472	0.765	1.656	4.832	2.154
14.440	177.968	0.801	1.674	4.816	2.006
14.460	176.886	0.816	1.699	4.824	1.969
14.480	172.606	0.849	1.705	4.829	2.068
14.500	171.117	0.883	1.740	4.832	1.871
14.520	171.356	0.901	1.789	4.831	1.913
14.540	163.398	0.968	1.723	4.823	2.073
14.560	156.950	1.008	1.681	4.821	2.068
14.580	146.088	1.020	1.573	4.827	1.864
14.600	139.893	1.047	1.586	4.813	1.950
14.620	120.216	1.094	1.345	4.813	2.072
14.640	108.107	0.942	1.229	4.826	1.976
14.660	99.601	0.893	1.157	4.832	1.944
14.680	90.907	0.896	1.066	4.821	1.896
14.700	73.104	0.886	0.907	4.808	1.960
14.720	62.197	0.999	0.827	4.804	2.065
14.740	65.613	0.980	0.864	4.804	2.128
14.760	76.001	0.951	0.921	4.787	1.936
14.780	86.544	0.897	1.002	4.788	2.126
14.800	98.760	0.823	1.114	4.793	1.919
14.820	108.371	0.764	1.174	4.785	1.842
14.840	113.321	0.625	1.220	4.782	2.183
14.860	119.377	0.589	1.286	4.779	1.896
14.880	117.206	0.631	1.243	4.780	2.064
14.900	109.932	0.620	1.150	4.781	2.064
14.920	109.932	0.620	0.703	4.835	1.851
14.940	109.860	0.616	0.703	4.834	2.193
14.960	106.892	0.649	0.681	4.832	1.971
14.980	101.278	0.716	0.647	4.833	2.075
15.000	99.848	0.780	0.635	4.845	2.034
15.020	99.555	0.729	0.631	4.849	1.894
15.040	96.612	0.647	0.614	4.858	2.025
15.060	89.186	0.643	0.576	4.873	1.970
15.080	80.651	0.659	0.530	4.884	1.896
15.100	66.867	0.547	0.460	4.896	2.138
15.120	56.485	0.545	0.410	4.898	1.993
15.140	46.683	0.567	0.360	4.900	1.938
15.160	43.257	0.794	0.343	4.910	2.069
15.180	45.071	0.858	0.351	4.917	1.977
15.200	47.757	0.900	0.364	4.915	1.816
15.220	50.511	0.908	0.375	4.914	2.130
15.240	53.669	0.861	0.384	4.925	1.964
15.260	57.270	0.755	0.397	4.927	1.816
15.280	63.439	0.648	0.424	4.933	2.184
15.300	66.158	0.535	0.219	4.997	1.989
15.320	64.117	0.503	0.204	4.992	1.989
15.340	59.956	0.431	0.188	4.999	1.989
15.360	59.519	0.487	0.185	5.012	1.989
15.380	55.904	0.540	0.168	5.014	1.897
15.400	52.771	0.546	0.157	5.013	2.044
15.420	53.497	0.499	0.160	5.018	1.905
15.440	55.060	0.528	0.163	5.027	1.866
15.460	54.802	0.544	0.160	5.020	2.085
15.480	55.055	0.469	0.159	5.029	1.926
15.500	55.124	0.419	0.157	5.041	1.923
15.520	55.084	0.412	0.155	5.050	1.831
15.540	58.180	0.474	0.165	5.055	1.986
15.560	62.414	0.506	0.181	5.057	1.972
15.580	66.320	0.498	0.195	5.066	1.922
15.600	74.574	0.502	0.223	5.075	1.962
15.620	82.498	0.465	0.255	5.079	1.991
15.640	86.989	0.426	0.272	5.079	1.947
15.660	86.984	0.455	0.273	5.078	1.861
15.680	82.304	0.470	0.259	5.083	1.866
15.700	78.139	0.472	0.245	5.090	1.916
15.720	69.078	0.492	0.216	5.095	1.892
15.740	56.110	0.518	0.173	5.103	2.305
15.760	42.712	0.529	0.128	5.095	2.305
15.780	29.498	0.541	0.085	5.104	2.305
15.800	22.178	0.579	0.060	5.104	1.961
15.820	18.790	0.630	0.048	5.106	1.944
15.840	17.147	0.658	0.119	5.118	1.911
15.860	15.684	0.641	0.221	5.121	1.841
15.880	14.366	0.584	0.409	5.125	1.841
15.900	13.047	0.507	1.039	5.136	2.045
15.920	12.772	0.331	4.799	5.150	1.761
15.940	11.283	0.266	4.554	5.156	2.100
15.960	10.775	0.208	4.920	5.159	1.929
15.980	10.560	0.180	5.016	5.163	2.061
16.000	10.452	0.164	5.039	5.162	1.987
16.020	10.525	0.151	5.043	5.172	1.974
16.040	10.561	0.151	4.943	5.178	1.878
16.060	10.381	0.161	4.854	5.190	1.980
16.080	10.347	0.170	4.716	5.207	1.970
16.100	10.131	0.180	4.609	5.196	1.886
16.120	10.352	0.193	4.589	5.200	2.051
16.140	10.683	0.205	4.588	5.206	1.966
16.160	18.698	0.241	5.247	5.198	1.894
16.180	29.444	0.274	5.247	5.190	2.088
16.200	28.026	0.260	1.938	5.206	1.831
16.220	21.950	0.285	1.795	5.205	1.993
16.240	17.039	0.390	1.656	5.207	1.952
16.260	13.113	0.444	1.573	5.215	1.885
16.280	11.370	0.440	1.607	5.208	2.032
16.300	11.117	0.397	1.699	5.215	2.068
16.320	11.338	0.370	1.757	5.210	1.777
16.340	11.483	0.348	1.796	5.202	1.968
16.360	11.663	0.281	1.855	5.200	1.855
16.380	11.665	0.224	1.892	5.210	1.779
16.400	11.449	0.156	1.922	5.211	2.083

Geo.Fe.
INDAGINI GEOLOGICHE

Committente: Geogroup
Cantiere: Medolla (MO)
Data: 06/07/2021

ID Prova: SCPTU 10
Profondita falda: a mt 1.70 da p.c.
Preforo: -

Profondità massima raggiunta: 30.30 mt
Punta sismica: Tecnopenta CPLSD
RIF. 89/21GF

Prova eseguita da:
GEO.FE. S.n.c.
via dell'Artigianato ,3 44030 - Ro Ferrarese (FE)
tel 3383646278 - info@geofe.it - www.geofe.it
Responsabile dati: Dott.Geol.Zanella Fabio
Responsabile cantiere: Sig. Mangherini Alberto

Prof.	RP	RL	PN	Incl.	Vavanz
metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec
16.420	11.233	0.130	1.961	5.208	1.875
16.440	11.310	0.139	2.012	5.208	2.056
16.460	11.278	0.148	2.081	5.218	1.992
16.480	11.610	0.151	2.150	5.218	1.875
16.500	12.088	0.150	2.217	5.230	1.918
16.520	12.349	0.148	2.285	5.238	1.820
16.540	12.720	0.151	2.349	5.231	1.824
16.560	13.271	0.150	2.404	5.240	2.111
16.580	13.932	0.141	2.458	5.256	1.838
16.600	14.413	0.139	2.498	5.255	1.944
16.620	14.673	0.141	2.542	5.277	2.031
16.640	15.042	0.143	2.589	5.277	1.782
16.660	15.631	0.143	2.636	5.295	1.928
16.680	15.636	0.147	2.642	5.306	1.892
16.700	15.387	0.149	2.632	5.301	1.892
16.720	15.321	0.160	2.624	5.308	1.943
16.740	16.056	0.177	2.649	5.317	2.063
16.760	16.172	0.191	2.667	5.331	2.047
16.780	15.887	0.208	2.658	5.337	1.894
16.800	15.495	0.225	2.637	5.345	1.992
16.820	15.685	0.244	2.638	5.346	1.890
16.840	16.130	0.257	2.653	5.348	1.793
16.860	16.866	0.271	2.686	5.359	1.996
16.880	18.036	0.286	2.706	5.355	1.996
16.900	18.658	0.306	2.699	5.364	1.804
16.920	19.112	0.400	4.178	5.369	2.073
16.940	18.858	0.413	3.900	5.365	1.802
16.960	19.149	0.429	3.932	5.363	2.163
16.980	19.731	0.439	4.025	5.380	1.861
17.000	19.659	0.454	3.989	5.393	1.857
17.020	19.621	0.479	3.967	5.396	2.050
17.040	19.181	0.496	3.934	5.400	1.768
17.060	19.686	0.502	3.959	5.391	2.053
17.080	20.007	0.477	3.941	5.416	1.864
17.100	21.127	0.458	3.929	5.406	1.970
17.120	22.177	0.486	3.879	5.419	1.980
17.140	23.265	0.508	3.861	5.416	2.205
17.160	23.732	0.540	3.740	5.444	1.829
17.180	23.251	0.568	3.682	5.459	1.777
17.200	24.152	0.546	3.785	5.469	1.990
17.220	24.727	0.547	3.439	5.493	1.954
17.240	25.302	0.509	1.890	5.500	1.783
17.260	25.443	0.514	2.237	5.511	2.042
17.280	25.763	0.511	2.459	5.507	1.921
17.300	24.994	0.514	2.472	5.511	1.886
17.320	23.314	0.546	2.455	5.518	2.008
17.340	22.836	0.569	2.405	5.520	1.760
17.360	21.810	0.602	2.333	5.515	1.966
17.380	20.164	0.624	1.836	5.536	1.892
17.400	20.412	0.624	1.869	5.537	1.858
17.420	19.895	0.668	1.878	5.544	2.017
17.440	19.705	0.677	1.885	5.565	1.921
17.460	19.336	0.684	1.870	5.570	2.028
17.480	18.528	0.719	3.666	5.567	1.848
17.500	17.541	0.730	3.656	5.567	1.780
17.520	16.514	0.718	3.599	5.571	1.904
17.540	15.995	0.674	3.570	5.563	1.916
17.560	15.693	0.651	3.557	5.575	1.909
17.580	15.284	0.642	3.537	5.574	1.962
17.600	15.239	0.627	3.520	5.582	2.022
17.620	14.974	0.609	3.502	5.566	1.748
17.640	15.073	0.564	3.489	5.566	2.004
17.660	15.063	0.541	3.465	5.570	1.758
17.680	14.690	0.533	3.422	5.587	1.948
17.700	14.099	0.525	3.387	5.588	1.948
17.720	13.729	0.500	3.367	5.593	1.948
17.740	13.504	0.488	3.350	5.594	1.979
17.760	13.354	0.487	3.327	5.596	1.909
17.780	13.423	0.487	3.319	5.604	1.917
17.800	13.674	0.483	3.309	5.618	1.958
17.820	13.820	0.471	3.298	5.622	1.767
17.840	13.857	0.458	3.293	5.629	1.960
17.860	13.785	0.436	3.280	5.640	1.839
17.880	13.421	0.434	3.259	5.646	1.839
17.900	13.621	0.448	3.182	5.665	1.839
17.920	13.770	0.444	3.168	5.662	1.909
17.940	13.627	0.452	3.145	5.688	1.911
17.960	13.700	0.454	3.142	5.675	1.954
17.980	13.772	0.459	3.145	5.696	2.001
18.000	14.170	0.461	3.147	5.709	2.003
18.020	14.459	0.459	3.153	5.705	1.815
18.040	15.148	0.448	3.178	5.720	1.969
18.060	15.072	0.442	3.168	5.738	1.889
18.080	14.815	0.446	3.156	5.748	1.801
18.100	15.395	0.457	3.167	5.742	2.004
18.120	15.831	0.472	3.151	5.750	1.868
18.140	15.140	0.495	3.075	5.747	2.075
18.160	15.140	0.488	3.087	5.759	1.845
18.180	15.501	0.477	3.111	5.753	1.854
18.200	15.751	0.452	3.143	5.758	1.889
18.220	16.185	0.441	3.201	5.747	1.939
18.240	18.548	0.415	3.262	5.745	1.874
18.260	15.996	0.425	0.873	5.767	1.805
18.280	14.901	0.439	0.900	5.762	2.013
18.300	15.152	0.397	0.927	5.767	1.840
18.320	14.860	0.388	0.949	5.784	1.939
18.340	14.968	0.379	0.963	5.780	1.776
18.360	15.112	0.374	0.977	5.795	1.909
18.380	15.185	0.367	0.986	5.800	1.858
18.400	15.223	0.356	0.998	5.816	1.789
18.420	15.514	0.369	1.009	5.800	1.987
18.440	15.698	0.411	1.024	5.819	1.913
18.460	16.246	0.414	1.041	5.822	1.997
18.480	16.574	0.421	1.053	5.826	1.794
18.500	17.194	0.429	1.066	5.838	1.752
18.520	17.959	0.456	1.087	5.838	1.991
18.540	18.615	0.462	1.110	5.852	1.755
18.560	19.561	0.448	1.132	5.854	2.003
18.580	20.035	0.451	1.157	5.857	1.844
18.600	20.145	0.472	1.176	5.856	1.997
18.620	20.109	0.479	1.195	5.864	1.852
18.640	20.291	0.481	1.217	5.868	1.736
18.660	20.508	0.480	1.242	5.866	1.884
18.680	20.108	0.486	1.253	5.872	1.896
18.700	19.453	0.505	1.263	5.873	1.779
18.720	18.653	0.502	1.273	5.871	2.133
18.740	18.653	0.479	1.298	5.881	1.820
18.760	18.288	0.452	1.344	5.878	2.065
18.780	18.288	0.435	1.383	5.885	1.816
18.800	17.778	0.413	1.395	5.889	1.815
18.820	17.085	0.392	1.415	5.881	1.830
18.840	16.392	0.370	1.423	5.890	1.944
18.860	15.956	0.362	1.439	5.888	1.944
18.880	15.774	0.354	1.462	5.898	1.944
18.900	16.011	0.328	2.299	5.910	1.944
18.920	15.686	0.329	2.324	5.918	2.025
18.940	15.653	0.322	2.350	5.925	1.798
18.960	14.853	0.331	2.341	5.923	1.978
18.980	14.125	0.331	2.343	5.939	1.899
19.000	13.178	0.314	2.378	5.932	1.867
19.020	12.813	0.294	2.421	5.949	1.977
19.040	12.593	0.269	2.490	5.953	1.759
19.060	12.300	0.248	2.601	5.957	2.029
19.080	12.188	0.234	2.731	5.957	1.818
19.100	12.769	0.197	2.937	5.966	1.797
19.120	12.986	0.184	3.149	5.966	2.035
19.140	12.950	0.176	3.274	5.973	1.911
19.160	13.059	0.177	3.407	5.981	1.972
19.180	13.169	0.177	3.541	5.983	1.807
19.200	13.971	0.170	3.710	5.991	2.208
19.220	14.629	0.171	3.832	5.987	1.612
19.240	15.176	0.186	3.916	5.999	1.847
19.260	15.725	0.223	3.952	6.000	1.766
19.280	15.327	0.248	3.982	6.015	2.033
19.300	15.402	0.247	4.048	6.019	1.894
19.320	15.370	0.247	4.138	6.011	1.913
19.340	15.918	0.244	4.262	6.030	1.818
19.360	16.758	0.252	4.386	6.040	1.733
19.380	16.724	0.263	4.431	6.038	1.944
19.400	17.199	0.261	4.221	6.043	1.860
19.420	15.927	0.276	3.700	6.041	1.842
19.440	15.236	0.306	3.789	6.052	2.033
19.460	15.238	0.320	3.854	6.049	1.779
19.480	15.129	0.327	3.871	6.057	2.012
19.500	14.947	0.338	3.894	6.060	1.691
19.520	14.291	0.349	3.875	6.064	1.934
19.540	14.034	0.347	3.879	6.068	1.846
19.560	13.960	0.322	3.875	6.072	1.813
19.580	13.228	0.309	3.810	6.078	1.979
19.600	12.317	0.318	3.780	6.087	1.835
19.620	11.842	0.308	3.766	6.077	1.932
19.640	12.022	0.303	3.828	6.088	1.781
19.660	12.492	0.287	3.973	6.100	1.777
19.680	13.908	0.250	4.170	6.098	1.893
19.700	14.016	0.229	4.276	6.117	1.868
19.720	14.598	0.203	4.463	6.110	2.035
19.740	17.836	0.166	5.127	6.126	1.901
19.760	23.479	0.143	5.816	6.118	1.866
19.780	25.701	0.150	6.145	6.138	2.003
19.800	25.957	0.155	5.972	6.131	1.762
19.820	25.412	0.254	5.983	6.147	1.874
19.840	27.307	0.259	6.324	6.152	1.813
19.860	29.823	0.276	6.776	6.155	1.848
19.880	33.068	0.321	7.133	6.147	1.848
19.900	35.158	0.331	7.281	6.167	1.671
19.920	35.923	0.485	2.149	6.176	1.809
19.940	36.180	0.579	2.334	6.172	1.955
19.960	34.472	0.663	2.392	6.188	1.834
19.980	28.427	0.673	2.276	6.185	1.984
20.000	23.765	0.626	1.817	6.202	1.855
20.020	20.229	0.712	1.106	6.203	1.886
20.040	17.641	0.826	1.251	6.199	1.804
20.060	15.848	0.647	1.479	6.217	1.907
20.080	15.222	0.464	1.544	6.221	1.817
20.100	14.047	0.359	1.618	6.215	1.903
20.120	13.090	0.288	1.806	6.227	1.928
20.140	12.860	0.202	2.024	6.241	1.804
20.160	13.503	0.157	2.374	6.250	2.021
20.180	14.260	0.128	2.738	6.253	1.694
20.200	15.271	0.096	2.937	6.276	1.915
20.220	15.411	0.122	3.052	6.276	1.767
20.240	14.825	0.136	3.158	6.296	1.956
20.260	14.567	0.129	3.223	6.290	1.773
20.280	14.384	0.150	3.304	6.297	1.995
20.300	14.384	0.127	5.698	6.293	1.874
20.320	15.357	0.212	6.666	6.290	1.874
20.340	15.358	0.228	6.669	6.304	1.874
20.360	15.247	0.238	6.678	6.307	1.726
20.380	14.736	0.244	6.595	6.312	1.737
20.400	14.989	0.247	6.641	6.323	1.839
20.420	14.624	0.248	6.637	6.311	1.697
20.440	14.441	0.245	6.633	6.318	2.037
20.460	14.510	0.245	6.647	6.321	1.814
20.480	14.582	0.237	6.648	6.325	1.876
20.500	14.433	0.235	6.652	6.332	1.730
20.520	14.321	0.235	6.613	6.322	1.889
20.540	14.100	0.240	6.589	6.325	1.727
20.560	14.462	0.240	6.705	6.347	2.007
20.580	15.188	0.229	6.909	6.321	1.712
20.600	16.677	0.229	7.213	6.341	1.919
20.620	17.148	0.235	7.335	6.334	1.863
20.640	17.690	0.230	7.475	6.346	1.873
20.660	17.322	0.226	7.435	6.360	1.739
20.680	16.483	0.217	7.281	6.358	1.812
20.700	15.206	0.201	7.134	6.353	1.841
20.720	14.041	0.177	7.015	6.361	1.715
20.740	13.021	0.169	6.933	6.364	2.190
20.760	12.801	0.147	7.019	6.359	2.190
20.780	13.163	0.132	7.216	6.371	2.190
20.800	13.781	0.122	7.446	6.386	1.830
20.820	13.853	0.121	7.538	6.377	1.830
20.840	14.071	0.126	7.579	6.376	1.784
20.860	14.217	0.144	7.566	6.391	1.719
20.880	14.109	0.164	7.529	6.388	1.893
20.900	14.593	0.198	7.895	6.397	1.893
20.920	14.705	0.219	7.911	6.404	1.893
20.940	14.742	0.228	7.899	6.419	1.937
20.960	15.068	0.229	7.901	6.419	1.874
20.980	14.957	0.227	7.889	6.432	1.854
21.000	15.575	0.211	8.003	6.441	1.864
21.020	16.155	0.192	8.125	6.444	1.802
21.040	16.627	0.191	8.219	6.458	1.926
21.060	16.735	0.190	8.256	6.463	1.719
21.080	17.060	0.199	8.211	6.463	1.990
21.100	16.877	0.229	8.122	6.477	1.758
21.120	17.058	0.254	7.990	6.487	1.954
21.140	16.729	0.286	7.908	6.492	1.780
21.160	16.983	0.323	7.865	6.499	2.002
21.180	16.872	0.350	7.832	6.493	1.788
21.200	17.160	0.367	7.792	6.506	1.842
21.220	16.938	0.383	7.666	6.500	1.792
21.240	16.387	0.392	7.560	6.509	1.823
21.260	16.129	0.389	7.525	6.512	1.834
21.280	15.976	0.351	7.601	6.532	1.823
21.300	16.225	0.318	7.735	6.532	1.805
21.320	16.438	0.287	7.824	6.533	1.835
21.340	16.322	0.259	7.875	6.542	1.915
21.360	16.533	0.226	7.984	6.551	1.651
21.380	18.348	0.186	8.362	6.561	1.884
21.400	20.530	0.163	9.040	6.564	1.718
21.420	20.708	0.152	9.168	6.562	1.937
21.440	20.122	0.152	8.741	6.566	1.810
21.460	20.884	0.201	8.876	6.574	1.897
21.480	31.624	0.208	11.373	6.578	1.872
21.500	45.927	0.178	3.660	6.583	1.706
21.520	42.215	0.277	1.798	6.588	1.848
21.540	36.173	0.412	1.902	6.589	1.709
21.560	29.331	0.515	2.178	6.591	1.709
21.580	25.910	0.512	2.129	6.600	1.700
21.600	23.618	0.528	2.943	6.612	1.864
21.620	27.950	0.490	3.612	6.623	1.844
21.640	39.747	0.499	4.843	6.635	1.937
21.660	47.062	0.503	5.572	6.628	1.722
21.680	37.704	0.544	4.310	6.637	1.669
21.700	31.912	0.525	3.488	6.641	1.882
21.720	24.954	0.448	3.161	6.644	1.659
21.740	19.999	0.394	3.286	6.662	2.281
21.760	17.701	0.328	3.922	6.668	1.740
21.780	17.586	0.341	4.205	6.679	1.893
21.800	17.435	0.341	4.432	6.687	1.746
21.820	17.393	0.280	4.613	6.701	1.792
21.840	16.913	0.245	4.695	6.719	1.749
21.860	16.653	0.232	4.770	6.724	1.776
21.880	15.744	0.301	7.694	6.748	1.776
21.900	18.331	0.266	7.533	6.748	1.776
21.920	17.968	0.256	7.667	6.769	1.776
21.940	18.587	0.221	7.997	6.774	1.934
21.960	19.388	0.194	8.250	6.789	1.763
21.980	19.897	0.191	8.469	6.804	1.846
22.000	20.224	0.172	8.662	6.812	1.877
22.020	19.277	0.158	8.492	6.822	1.850
22.040	19.641	0.175	8.611	6.831	1.789
22.060	19.641	0.167	8.625	6.847	1.687
22.080	18.986	0.184	8.504	6.842	1.891
22.100	18.295	0.200	8.412	6.862	1.782
22.120	17.969	0.180	8.420	6.864	1.966
22.140	19.607	0.173	8.805	6.871	1.680
22.160	21.719	0.175	9.238	6.877	1.994
22.180	24.378	0.172	9.718	6.885	1.740
22.200	25.687	0.186	9.899	6.896	1.822
22.220	25.687	0.198	9.818	6.900	1.756
22.240	24.996	0.222	9.605	6.893	1.807
22.260	24.051	0.247	9.459	6.893	1.826
22.280	22.667	0.274	9.320	6.905	1.732
22.300	22.012	0.292	9.210	6.910	1.887
22.320	19.356	0.359	8.671	6.921	1.713
22.340	17.899	0.366	8.473	6.929	1.895
22.360	17.133	0.339	8.362	6.926	1.633
22.380	17.238	0.311	8.390	6.958	1.828
22.400	17.635	0.279	8.589	6.946	1.761
22.420	17.559	0.228	8.598	6.964	1.795
22.440	16.645	0.185	8.523	6.968	1.813
22.460	18.099	0.167	8.637	6.970	1.846
22.480	21.521	0.160	9.149	6.992	1.794
22.500	22.359	0.141	7.199	7.002	1.731
22.520	20.760	0.170	6.783	7.006	1.775
22.540	18.759	0.190	6.917	7.012	1.770
22.560	18.362	0.163	7.485	7.022	1.845
22.580	18.619	0.164	7.654	7.022	1.679
22.600	19.241	0.178	7.903	7.027	1.904
22.620	21.207	0.187	8.346	7.025	1.707
22.640	23.720	0.193	8.830	7.031	1.874
22.660	24.665	0.206	8.832	7.048	1.754
22.680	23.172	0.205	8.270	7.056	1.687
22.700	21.751	0.233	7.762	7.046	1.793
22.720	19.348	0.286	7.562	7.058	1.659
22.740	19.130	0.314	7.515	7.069	2.083
22.760	18.583	0.365	7.513	7.074	1.765
22.780	19.095	0.404	7.689	7.080	1.832
22.800	19.749	0.412	7.926	7.090	1.792
22.820	21.603	0.395	8.239	7.096	1.792
22.840	22.001	0.369	8.289	7.102	1.792
22.860	20.506	0.360	7.898	7.118	1.766
22.880	19.412	0.407	7.479	7.129	1.798
22.900	19.491	0.458	8.280	7.137	1.798
22.920	20.366	0.463	8.324	7.154	1.798
22.940	20.147	0.463	8.199	7.156	1.808
22.960	19.742	0.457	7.797	7.160	1.789
22.980	18.866	0.484	7.565	7.186	1.862
23.000	18.424	0.483	7.489	7.185	1.773
23.020	18.527	0.442	7.444	7.194	1.790
23.040	17.541	0.432	7.308	7.208	1.856
23.060	16.587	0.402	7.134	7.218	1.641
23.080	15.855	0.404	7.003	7.225	1.924
23.100	15.810	0.387	6.886	7.233	1.783
23.120	14.603	0.396	6.657	7.238	1.787
23.140	14.234	0.383	6.600	7.236	1.807
23.160	14.155	0.365	6.536	7.230	1.739
23.180	13.931	0.353	6.447	7.255	1.938
23.200	13.452	0.345	6.341	7.266	1.938
23.220	13.154	0.335	6.244	7.260	1.909
23.240	12.822	0.329	6.177	7.269	1.710
23.260	12.526	0.308	6.100	7.278	1.755
23.280	12.304	0.308	6.034	7.302	1.815
23.300	12.081	0.306	6.002	7.293	1.794
23.320	12.151	0.293	5.988	7.315	1.808
23.340	12.293	0.283	5.977	7.325	1.670
23.360	12.035	0.280	5.901	7.334	1.761
23.380	11.560	0.279	5.821	7.345	1.677
23.400	11.194	0.278	5.727	7.354	1.916
23.420	10.937	0.275	5.660	7.368	1.635
23.440	10.827	0.270	5.614	7.376	1.806
23.460	10.644	0.271	5.563	7.390	1.797
23.480	10.461	0.268	5.527	7.390	1.831
23.500	10.242	0.259	5.486	7.410	1.776
23.520	10.170	0.250	5.474	7.412	1.647
23.540	10.060	0.248	5.489	7.405	1.748
23.560	10.169	0.244	5.512	7.425	1.701
23.580	10.424	0.236	5.521	7.423	1.844
23.600	11.733	0.233	5.590	7.442	1.700
23.620	12.461	0.242	5.383	7.465	1.856
23.640	11.843	0.244	5.251	7.466	1.719
23.660	10.205	0.269	5.185	7.477	1.762
23.680	10.207	0.272	5.279	7.488	1.642
23.700	11.300	0.261	5.459	7.519	1.711
23.720	12.138	0.265	5.572	7.526	1.718
23.740	12.867	0.266	5.674	7.531	1.816
23.760	13.559	0.266	5.765	7.541	1.923
23.780	14.141	0.269	5.828	7.556	1.892
23.800	14.795	0.265	5.919	7.571	1.748
23.820	15.231	0.279	5.983	7.579	1.759
23.840	15.486	0.296	6.012	7.597	1.663
23.860	15.523	0.316	6.033	7.595	1.813
23.880	15.951	0.317	7.276	7.626	1.741
23.900	16.317	0.327	7.288	7.638	1.741
23.920	16.573	0.332	7.273	7.648	1.741
23.940	16.282	0.341	7.239	7.648	1.668
23.960	16.355	0.333	7.234	7.658	1.891
23.980	16.135	0.337	7.247	7.670	1.719
24.000	17.078	0.334	7.377	7.672	1.858
24.020	18.714	0.333	7.776	7.694	1.795
24.040	19.877	0.312	7.916	7.687	1.774
24.060	19.547	0.322	7.754	7.692	1.697
24.080	19.144	0.341	7.564	7.700	1.843
24.100	19.104	0.381	7.371	7.714	1.687
24.120	18.630	0.428	7.285	7.718	1.830
24.140	18.554	0.430	7.228	7.727	1.740
24.160	18.660	0.436	7.164	7.733	1.731
24.180	18.656	0.489	7.087	7.732	1.905
24.200	19.124	0.501	7.152	7.753	1.637
24.220	19.556	0.488	7.240	7.769	1.772
24.240	19.695	0.459	7.248	7.778	1.671
24.260	19.654	0.441	7.232	7.780	1.671
24.280	19.284	0.475	7.163	7.798	1.729
24.300	18.768	0.489	7.108	7.793	1.808
24.320	18.324	0.465	7.014	7.799	1.657
24.340	17.625	0.462	6.834	7.823	1.895
24.360	17.147	0.468	6.640	7.834	1.640
24.380	16.485	0.473	6.498	7.836	1.741
24.400	16.114	0.454	6.469	7.850	1.743
24.420	15.852	0.427	6.471	7.845	1.837
24.440	15.519	0.399	6.519	7.854	1.651
24.460	15.660	0.391	6.559	7.869	1.651
24.480	15.363	0.363	6.595	7.876	1.730
24.500	15.576	0.327	6.611	7.862	1.811
24.520	15.170	0.296	6.565	7.879	1.628
24.540	14.948	0.287	6.534	7.895	1.740
24.560	14.400	0.289	6.514	7.897	1.662
24.580	14.180	0.286	6.538	7.908	1.751
24.600	14.106	0.269	6.598	7.916	1.753

Geo.Fe.
INDAGINI GEOLOGICHE

Committente: Geogroup
Cantiere: Medolla (MO)
Data: 06/07/2021

ID Prova: SCPTU 10
Profondita falda: a mt 1.70 da p.c.
Preforo: -

Profondità massima raggiunta: 30.30 mt
Punta sismica: Tecnopenta CPLSD
RIF. 89/21GF

Prova eseguita da:
GEO.FE. S.n.c.
via dell'Artigianato ,3 44030 - Ro Ferrarese (FE)
tel 3383646278 - info@geofe.it - www.geofe.it
Responsabile dati: Dott.Geol.Zanella Fabio
Responsabile cantiere: Sig. Mangherini Alberto

Prof.	RP	RL	PN	Incl.	Vavanz
metri	kg/cm^2	kg/cm^2	kg/cm^2	Gradi °	cm/sec
24.620	14.359	0.251	6.736	7.916	1.808
24.640	14.940	0.234	6.915	7.932	1.703
24.660	15.669	0.210	7.158	7.955	1.745
24.680	17.707	0.174	7.553	7.974	1.650
24.700	18.948	0.148	7.838	7.995	1.759
24.720	17.532	0.131	7.754	8.002	1.648
24.740	16.262	0.116	7.629	8.001	1.803
24.760	15.064	0.112	7.553	8.012	1.870
24.780	14.960	0.093	7.631	8.019	1.777
24.800	15.076	0.085	7.821	8.050	1.746
24.820	16.028	0.081	8.065	8.051	1.782
24.840	18.073	0.089	8.065	8.075	1.687
24.860	19.610	0.081	8.065	8.084	1.638
24.880	25.272	0.091	6.897	8.127	1.728
24.900	24.947	0.185	7.103	8.135	1.808
24.920	26.186	0.185	7.830	8.145	1.808
24.940	37.693	0.213	7.830	8.172	1.818
24.960	88.708	0.291	7.830	8.203	1.729
24.980	133.514	0.346	3.112	8.219	1.754
25.000	143.132	0.575	0.590	8.193	1.873
25.020	134.396	0.780	0.239	8.165	1.748
25.040	128.444	0.961	0.222	8.176	1.659
25.060	126.903	1.155	0.235	8.187	1.757
25.080	121.541	1.404	0.229	8.166	1.656
25.100	111.913	1.525	0.215	8.179	1.896
25.120	104.662	1.623	0.210	8.195	1.896
25.140	100.602	1.627	0.227	8.199	1.896
25.160	101.089	1.617	0.255	8.190	1.768
25.180	107.955	1.458	0.327	8.209	1.969
25.200	125.697	1.290	0.476	8.231	1.558
25.220	159.004	1.198	0.803	8.245	1.865
25.240	202.380	1.159	1.387	8.259	1.677
25.260	229.719	1.141	1.917	8.270	1.808
25.280	244.371	1.156	2.387	8.279	1.657
25.300	247.295	1.231	2.687	8.286	1.864
25.320	244.278	1.284	2.856	8.292	1.864
25.340	233.393	1.344	2.887	8.302	1.864
25.360	218.934	1.287	2.762	8.285	1.603
25.380	206.408	1.214	2.647	8.298	1.691
25.400	196.192	1.144	2.628	8.301	1.629
25.420	186.635	1.042	2.601	8.297	1.838
25.440	175.418	0.947	2.561	8.292	1.838
25.460	166.300	0.916	2.556	8.298	1.832
25.480	166.432	0.903	2.774	8.295	1.829
25.500	175.567	0.964	3.263	8.300	1.708
25.520	178.647	1.030	3.444	8.302	1.708
25.540	176.766	1.097	3.213	8.284	1.708
25.560	172.396	1.175	2.903	8.287	1.678
25.580	163.131	1.170	0.949	8.284	1.710
25.600	154.030	1.144	0.952	8.292	1.694
25.620	145.285	1.069	0.952	8.300	1.734
25.640	133.234	0.933	1.004	8.297	1.803
25.660	124.605	0.810	1.192	8.302	1.625
25.680	123.977	0.751	1.310	8.311	1.772
25.700	129.161	0.734	1.480	8.315	1.679
25.720	134.529	0.809	1.262	8.314	1.695
25.740	135.607	0.968	1.256	8.309	1.697
25.760	134.921	1.099	1.224	8.326	1.780
25.780	132.366	1.204	1.237	8.326	1.782
25.800	131.281	1.226	1.275	8.325	1.839
25.820	129.940	1.086	1.304	8.319	1.634
25.840	127.059	0.864	1.324	8.319	1.837
25.860	123.070	0.713	1.314	8.322	1.668
25.880	116.572	0.688	1.614	8.381	1.748
25.900	118.718	0.566	1.084	8.399	1.716
25.920	122.582	0.510	1.145	8.400	1.683
25.940	123.691	0.510	1.176	8.406	1.683
25.960	125.168	0.549	1.213	8.432	1.683
25.980	126.936	0.578	1.250	8.436	1.779
26.000	128.371	0.576	1.301	8.447	1.701
26.020	131.087	0.570	1.367	8.445	1.875
26.040	132.625	0.553	1.417	8.448	1.751
26.060	133.133	0.547	1.467	8.472	1.784
26.080	127.544	0.578	1.379	8.480	1.811
26.100	122.361	0.596	1.298	8.482	1.636
26.120	125.883	0.650	1.388	8.487	1.720
26.140	128.191	0.811	1.427	8.490	1.761
26.160	133.473	1.045	1.430	8.503	1.761
26.180	139.488	1.251	1.477	8.506	1.761
26.200	146.017	1.233	1.512	8.509	1.740
26.220	146.962	1.107	1.537	8.516	1.615
26.240	148.976	0.997	1.554	8.533	1.720
26.260	155.463	0.966	1.725	8.540	1.785
26.280	161.647	1.011	1.844	8.534	1.720
26.300	168.969	0.945	1.946	8.555	1.740
26.320	176.887	0.914	1.864	8.560	1.736
26.340	195.452	1.070	0.663	8.555	1.781
26.360	203.263	1.232	0.705	8.574	1.697
26.380	204.975	1.377	0.762	8.572	1.656
26.400	204.484	1.430	0.790	8.580	1.665
26.420	205.536	1.401	0.855	8.593	1.780
26.440	204.601	1.315	0.922	8.610	1.677
26.460	201.826	1.092	0.977	8.611	1.736
26.480	197.065	0.914	1.000	8.631	1.737
26.500	196.671	0.812	1.081	8.628	1.753
26.520	195.032	0.689	1.148	8.647	1.635
26.540	191.597	0.681	1.183	8.653	1.677
26.560	185.263	0.710	1.181	8.661	1.652
26.580	178.198	0.749	1.152	8.667	1.679
26.600	169.293	0.758	1.095	8.676	1.642
26.620	162.116	0.733	1.055	8.682	1.805
26.640	156.185	0.710	1.053	8.684	1.596
26.660	153.342	0.688	1.076	8.691	1.922
26.680	155.015	0.675	1.156	8.698	1.591
26.700	162.599	0.662	1.347	8.699	1.612
26.720	170.921	0.663	1.551	8.716	1.612
26.740	175.166	0.678	1.713	8.723	1.612
26.760	171.920	0.724	1.687	8.739	1.612
26.780	162.983	0.772	1.553	8.732	1.953
26.800	155.591	0.766	1.442	8.750	1.708
26.820	151.658	0.691	1.390	8.745	1.703
26.840	143.061	0.555	1.276	8.752	1.659
26.860	136.593	0.512	1.179	8.757	1.605
26.880	131.281	0.544	0.514	8.837	1.786
26.900	134.120	0.485	0.561	8.854	1.650
26.920	134.202	0.466	0.571	8.869	1.793
26.940	134.502	0.493	0.581	8.871	1.793
26.960	134.762	0.543	0.591	8.877	1.793
26.980	134.542	0.562	0.595	8.896	1.743
27.000	133.693	0.531	0.601	8.897	1.710
27.020	133.504	0.473	0.608	8.906	1.812
27.040	132.798	0.436	0.613	8.907	1.679
27.060	134.553	0.412	0.640	8.922	1.775
27.080	138.732	0.412	0.685	8.929	1.613
27.100	147.137	0.433	0.775	8.932	1.768
27.120	159.619	0.468	0.935	8.950	1.682
27.140	178.492	0.511	1.238	8.946	1.783
27.160	193.140	0.560	1.553	8.955	1.743
27.180	208.707	0.610	2.004	8.963	1.789
27.200	213.291	0.632	2.224	8.976	1.769
27.220	211.962	0.600	2.327	8.984	1.757
27.240	216.365	0.540	2.537	8.996	1.651
27.260	225.608	0.525	2.963	8.998	1.716
27.280	233.018	0.551	3.464	9.009	1.725
27.300	236.480	0.601	3.878	9.013	1.765
27.320	241.269	0.671	4.426	9.035	1.659
27.340	242.294	0.700	4.667	9.042	1.701
27.360	233.982	0.724	3.883	9.047	1.842
27.380	222.235	0.769	3.386	9.062	1.612
27.400	213.208	0.781	3.107	9.079	1.738
27.420	205.810	0.775	2.950	9.095	1.650
27.440	203.952	0.750	3.066	9.099	1.740
27.460	206.282	0.710	3.334	9.104	1.729
27.480	211.813	0.685	3.700	9.111	1.791
27.500	213.099	0.678	3.772	9.120	1.800
27.520	229.989	0.551	4.451	9.144	1.745
27.540	233.246	0.529	4.100	9.148	1.616
27.560	231.339	0.534	3.764	9.170	1.616
27.580	226.261	0.546	3.535	9.176	1.616
27.600	217.133	0.583	3.228	9.163	1.719
27.620	208.633	0.608	2.996	9.166	1.679
27.640	195.387	0.619	2.640	9.188	1.696
27.660	183.911	0.632	2.386	9.191	1.824
27.680	174.488	0.635	2.186	9.184	1.824
27.700	168.629	0.618	2.110	9.197	1.824
27.720	164.055	0.598	2.074	9.191	1.562
27.740	162.642	0.561	2.101	9.207	1.837
27.760	160.935	0.544	2.117	9.216	1.623
27.780	159.524	0.526	2.132	9.239	1.623
27.800	159.769	0.511	2.177	9.250	1.774
27.820	161.521	0.508	2.287	9.240	1.814
27.840	163.606	0.518	2.396	9.254	1.666
27.860	166.974	0.526	2.563	9.254	1.645
27.880	166.974	0.526	2.563	9.324	1.638
27.900	179.632	0.561	2.214	9.338	1.787
27.920	198.738	0.551	1.858	9.344	1.639
27.940	217.255	0.577	2.063	9.357	1.639
27.960	229.388	0.636	2.144	9.363	1.639
27.980	238.689	0.677	1.956	9.380	1.714
28.000	242.083	0.674	1.823	9.383	1.748
28.020	244.182	0.644	1.837	9.391	1.817
28.040	250.557	0.636	2.068	9.404	1.730
28.060	253.164	0.679	2.277	9.413	1.773
28.080	251.082	0.684	2.379	9.399	1.631
28.100	248.152	0.716	2.456	9.416	1.753
28.120	242.967	0.761	2.481	9.423	1.696
28.140	238.742	0.802	2.539	9.421	1.767
28.160	236.210	0.839	2.617	9.423	1.643
28.180	231.979	0.838	2.662	9.426	1.886
28.200	225.353	0.798	2.577	9.438	1.736
28.220	212.365	0.775	2.361	9.437	1.760
28.240	203.856	0.760	2.232	9.446	1.760
28.260	198.134	0.730	2.191	9.450	1.803
28.280	193.814	0.654	2.183	9.449	1.803
28.300	185.960	0.613	2.065	9.464	1.850
28.320	176.358	0.608	1.923	9.473	1.700
28.340	173.209	0.569	1.951	9.459	1.793
28.360	170.363	0.554	1.963	9.469	1.703
28.380	169.388	0.545	2.005	9.483	1.731
28.400	165.295	0.526	1.960	9.476	1.562
28.420	151.396	0.499	1.654	9.492	1.712
28.440	116.344	0.547	1.033	9.485	1.673
28.460	85.156	0.716	0.646	9.501	1.795
28.480	76.783	0.972	0.531	9.505	1.795
28.500	97.769	1.126	0.860	9.506	1.795
28.520	119.349	1.270	2.092	9.505	1.635
28.540	133.031	1.259	2.474	9.506	1.640
28.560	143.998	1.182	2.690	9.501	1.661
28.580	150.874	1.100	2.630	9.503	1.664
28.600	169.012	0.960	3.356	9.505	1.718
28.620	192.921	1.050	4.739	9.514	1.719
28.640	220.656	1.166	6.775	9.534	1.721
28.660	239.549	1.098	6.970	9.553	1.678
28.680	254.123	1.037	4.671	9.557	1.799
28.700	266.667	1.007	4.782	9.570	1.545
28.720	281.981	0.777	5.246	9.594	1.778
28.740	299.585	0.747	5.648	9.590	1.657
28.760	324.196	0.761	5.927	9.605	1.657
28.780	171.920	0.724	1.687	9.047	1.753
28.800	162.983	0.772	1.553	9.062	1.808
28.820	155.591	0.766	1.442	9.079	1.703
28.840	151.658	0.691	1.390	9.095	1.745
28.860	143.061	0.555	1.276	9.099	1.650
28.880	136.593	0.512	1.179	9.104	1.759
28.900	131.281	0.544	0.514	9.111	1.648
28.920	134.120	0.485	0.561	9.120	1.803
28.940	134.202	0.466	0.571	9.144	1.870
28.960	134.502	0.493	0.581	9.148	1.777
28.980	134.762	0.543	0.591	9.170	1.746
29.000	134.542	0.562	0.595	9.176	1.782
29.020	133.693	0.531	0.601	9.163	1.687
29.040	133.504	0.473	0.608	9.166	1.638
29.060	185.960	0.613	2.065	9.188	1.728
29.080	176.358	0.608	1.923	9.191	1.808
29.100	173.209	0.569	1.951	9.184	1.808
29.120	170.363	0.554	1.963	9.197	1.818
29.140	169.388	0.545	2.005	9.191	1.729
29.160	165.295	0.526	1.960	9.207	1.754
29.180	193.140	0.560	1.553	9.216	1.873
29.200	208.707	0.610	2.004	9.239	1.748
29.220	213.291	0.632	2.224	9.250	1.659
29.240	211.962	0.600	2.327	9.240	1.757
29.260	216.365	0.540	2.537	9.254	1.656
29.280	225.608	0.525	2.963	9.254	1.896
29.300	233.018	0.551	3.464	9.324	1.896
29.320	236.480	0.601	3.878	9.338	1.896
29.340	241.269	0.671	4.426	9.344	1.768
29.360	242.294	0.700	4.667	9.357	1.969
29.380	233.982	0.724	3.883	9.363	1.558
29.400	222.235	0.769	3.386	9.380	1.865
29.420	213.208	0.781	3.107	9.383	1.677
29.440	205.810	0.775	2.950	9.391	1.808
29.460	203.952	0.750	3.066	9.404	1.657
29.480	206.282	0.710	3.334	9.413	1.864
29.500	211.813	0.685	3.700	9.399	1.864
29.520	213.099	0.678	3.772	9.416	1.864
29.540	229.989	0.551	4.451	9.423	1.603
29.560	233.246	0.529	4.100	9.421	1.691
29.580	231.339	0.534	3.764	9.423	1.629
29.600	226.261	0.546	3.535	9.426	1.838
29.620	217.133	0.583	3.228	9.438	1.838
29.640	208.633	0.608	2.996	9.437	1.832
29.660	195.387	0.619	2.640	9.446	1.829
29.680	183.911	0.632	2.386	9.450	1.708
29.700	174.488	0.635	2.186	9.449	1.708
29.720	168.629	0.618	2.110	9.464	1.708
29.740	164.055	0.598	2.074	9.473	1.678
29.760	162.642	0.561	2.101	9.459	1.710
29.780	160.935	0.544	2.117	9.469	1.694
29.800	159.524	0.526	2.132	9.483	1.734
29.820	159.769	0.511	2.177	9.476	1.803
29.840	161.521	0.508	2.287	9.492	1.625
29.860	163.606	0.518	2.396	9.485	1.772
29.880	166.974	0.526	2.563	9.501	1.679
29.900	166.974	0.526	2.563	9.505	1.695
29.920	179.632	0.561	2.214	9.506	1.697
29.940	198.738	0.551	1.858	9.505	1.780
29.960	217.255	0.577	2.063	9.506	1.782
29.980	229.388	0.636	2.144	9.501	1.839
30.000	238.689	0.677	1.956	9.503	1.634
30.020	242.083	0.674	1.823	9.505	1.837
30.040	244.182	0.644	1.837	9.514	1.668
30.060	250.557	0.636	2.068	9.534	1.748
30.080	253.164	0.679	2.277	9.553	1.716
30.100	251.082	0.684	2.379	9.557	1.683
30.120	248.152	0.716	2.456	9.570	1.683
30.140	242.967	0.761	2.481	9.594	1.683
30.160	238.742	0.802	2.539	9.438	1.779
30.180	236.210	0.839	2.617	9.437	1.701
30.200	231.979	0.838	2.662	9.446	1.875
30.220	225.353	0.798	2.577	9.450	1.751
30.240	212.365	0.775	2.361	9.449	1.784
30.260	203.856	0.760	2.232	9.464	1.811
30.280	198.134	0.730	2.191	9.473	1.636
30.300	193.814	0.654	2.183	9.459	1.720

Geo.Fe.
INDAGINI GEOLOGICHE

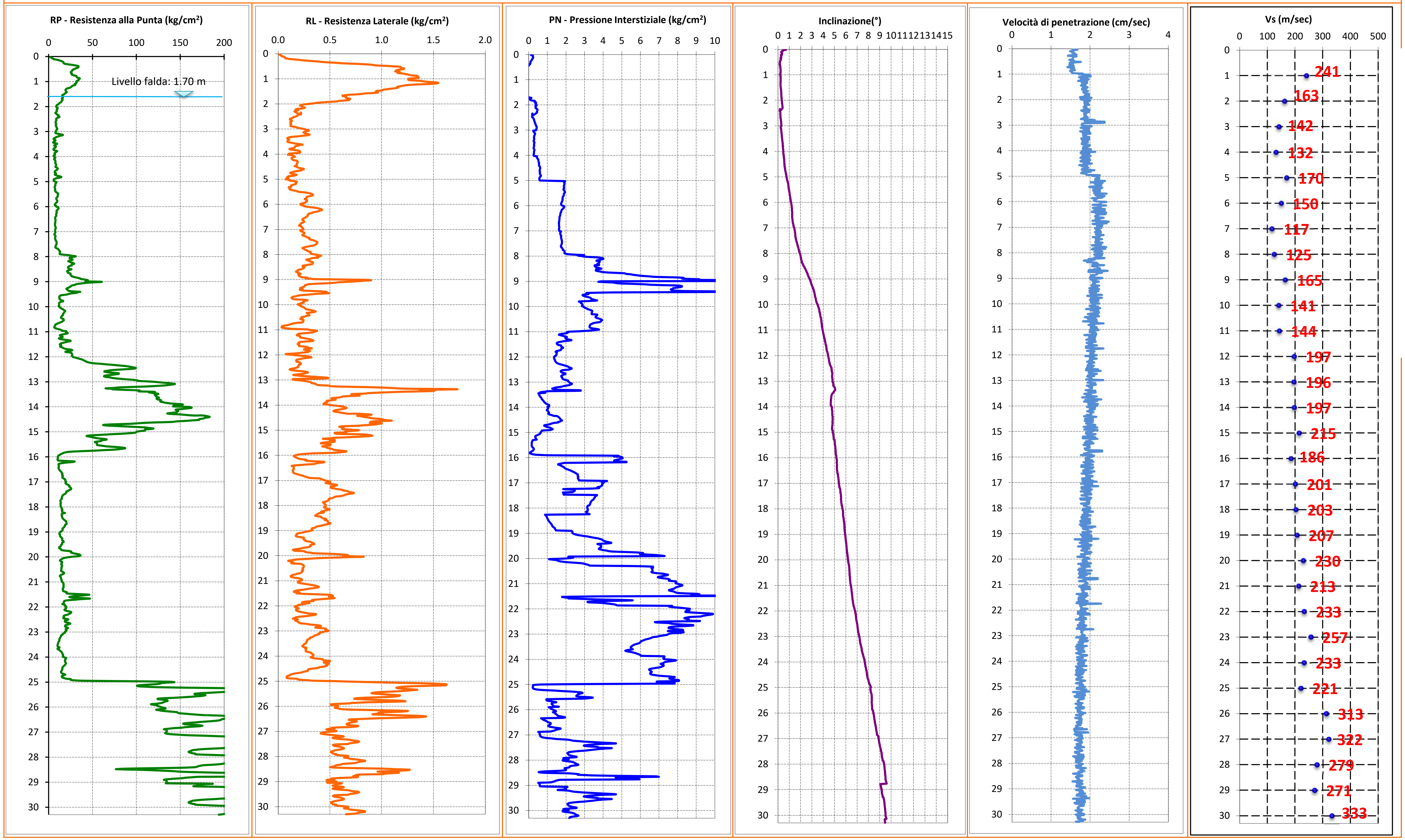
Committente: Geogroup
Cantiere: Medolla (MO)
Data: 06/07/2021

ID Prova: SCPTU 10
Profondita falda: a mt 1.70 da p.c.
Preforo: -

Profondità massima raggiunta: 30.30 mt
Punta sismica: Tecnopenta CPLSD
RIF. 89/21GF

Prova eseguita da:
GEO.FE. S.n.c.
via dell'Artigianato ,3 44030 - Ro Ferrarese (FE)
tel 3383646278 - info@geofe.it - www.geofe.it
Responsabile dati: Dott.Geol.Zanella Fabio
Responsabile cantiere: Sig. Mangherini Alberto

GRAFICI PROVA SCPTU 10



Geo.Fe.
INDAGINI GEOLOGICHE

Committente: Geogroup
Cantiere: Medolla (MO)
Data: 06/07/2021

ID Prova: SCPTU 10
Profondita falda: a mt 1.70 da p.c.
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Responsabile dati: Dott.Geol.Zanella Fabio
Responsabile cantiere: Sig. Mangherini Alberto

Vs 30 e ANAGRAFICA PROVA SCPTU 10

prof. (p)	prof.(cs)	Dist (L)	Tempo (t)	VsP	L2-L1	t2-t1	VsL			**Vs30**
m	m	m	sec	m/sec	m	sec	m/sec			
0.00	0.00	0.00	0.0000							
1.30	1.00	1.8028	0.0075	241	1.80	0.0075	241	1.00	0.00415	
2.30	2.00	2.5000	0.0118	212	0.70	0.0043	163	1.00	0.00615	
3.30	3.00	3.3541	0.0178	189	0.85	0.0060	142	1.00	0.00704	
4.30	4.00	4.2720	0.0248	173	0.92	0.0070	132	1.00	0.00760	
5.30	5.00	5.2202	0.0303	172	0.95	0.0056	170	1.00	0.00589	
6.30	6.00	6.1847	0.0367	168	0.96	0.0064	150	1.00	0.00665	
7.30	7.00	7.1589	0.0451	159	0.97	0.0083	117	1.00	0.00855	
8.30	8.00	8.1394	0.0529	154	0.98	0.0078	125	1.00	0.00797	
9.30	9.00	9.1241	0.0589	155	0.98	0.0060	165	1.00	0.00606	
10.30	10.00	10.1119	0.0658	154	0.99	0.0070	141	1.00	0.00708	
11.30	11.00	11.1018	0.0727	153	0.99	0.0069	144	1.00	0.00696	
12.30	12.00	12.0934	0.0778	155	0.99	0.0050	197	1.00	0.00508	
13.30	13.00	13.0863	0.0828	158	0.99	0.0051	196	1.00	0.00510	
14.30	14.00	14.0801	0.0879	160	0.99	0.0050	197	1.00	0.00507	
15.30	15.00	15.0748	0.0925	163	0.99	0.0046	215	1.00	0.00466	
16.30	16.00	16.0702	0.0979	164	1.00	0.0054	186	1.00	0.00539	
17.30	17.00	17.0660	0.1028	166	1.00	0.0050	201	1.00	0.00498	
18.30	18.00	18.0624	0.1077	168	1.00	0.0049	203	1.00	0.00492	
19.30	19.00	19.0591	0.1126	169	1.00	0.0048	207	1.00	0.00482	
20.30	20.00	20.0562	0.1169	172	1.00	0.0043	230	1.00	0.00435	
21.30	21.00	21.0535	0.1216	173	1.00	0.0047	213	1.00	0.00470	
22.30	22.00	22.0511	0.1259	175	1.00	0.0043	233	1.00	0.00429	
23.30	23.00	23.0489	0.1297	178	1.00	0.0039	257	1.00	0.00390	
24.30	24.00	24.0468	0.1340	179	1.00	0.0043	233	1.00	0.00430	
25.30	25.00	25.0450	0.1386	181	1.00	0.0045	221	1.00	0.00453	
26.30	26.00	26.0432	0.1417	184	1.00	0.0032	313	1.00	0.00320	
27.30	27.00	27.0416	0.1448	187	1.00	0.0031	322	1.00	0.00311	
28.30	28.00	28.0401	0.1484	189	1.00	0.0036	279	1.00	0.00358	
29.30	29.00	29.0388	0.1521	191	1.00	0.0037	271	1.00	0.00370	
30.30	30.00	30.0375	0.1551	194	1.00	0.0030	333	1.00	0.00300	
								30.00	0.15676	**191.4**

prof.(cs): profondità cono sismico
prof. (p): profondità piezocono
prof. (p): profondità piezocono
D1: distanza fra la sorgente del rumore S - geofono triassiale (L)
Tempo (t): tempo d'arrivo dell'onda a S
VsP: velocità del suono nel percorso fra S ed L - Vs puntuale alla profondità
VsL: Vs per ogni livello (L2 - L1)/(t2 - t1)
Nel calcolo delle Vs30 è da intendersi un possibile valore di indeterminatezza del +/- 20% del valore ricavato

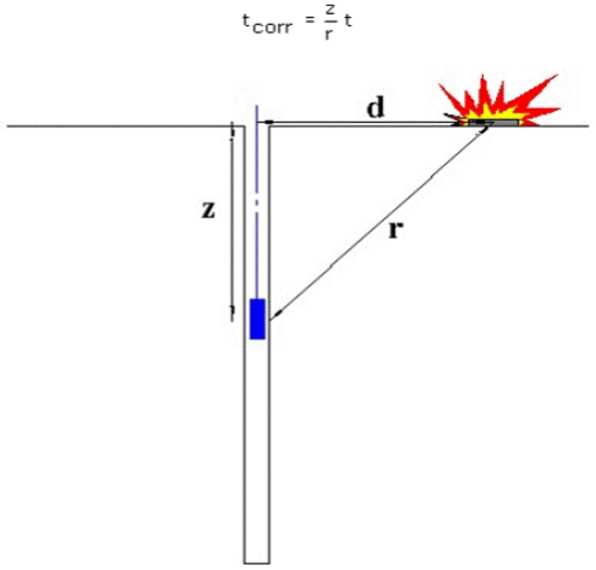


Figura 1 – Schema di down hole con metodo diretto

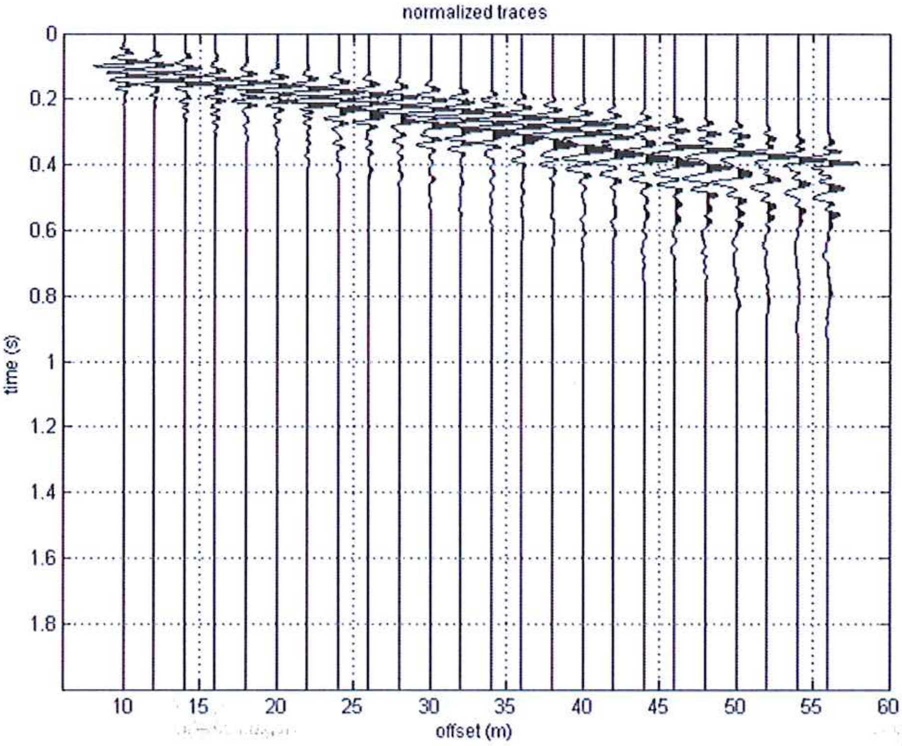
Indagini sismiche MASW

GEO GROUP s.r.l.
Sede Legale: via C. Costa, 182 – 41124 Modena
Sede operativa: via per Modena, 12 – 41051 Castelnuovo Rangone (MO)
Tel. 059-39.67.169 - Fax . 059-53.32.019
p.IVA e C.F. 02981500362 – www.geogroupmodena.it - e-mail: info@geogroupmodena.it

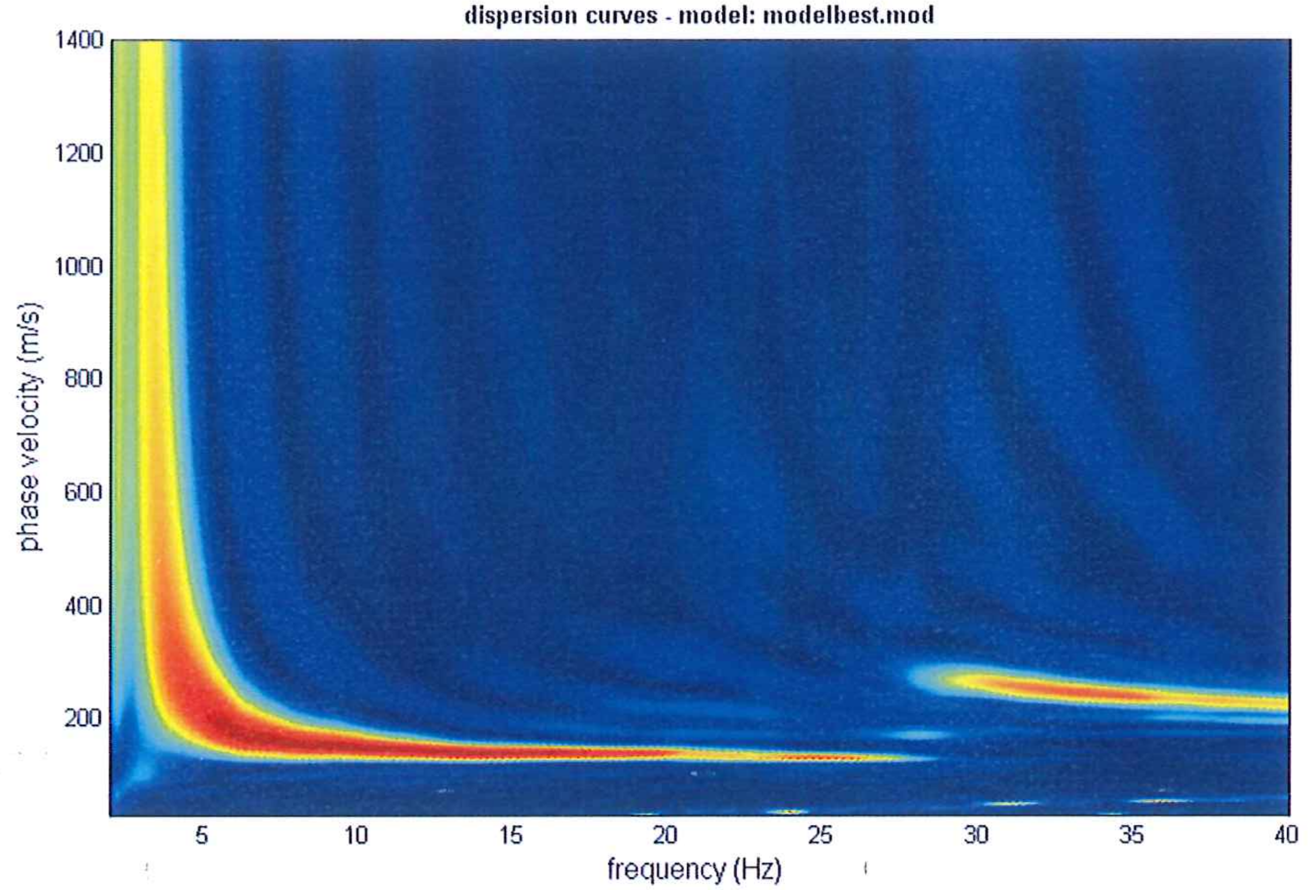
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

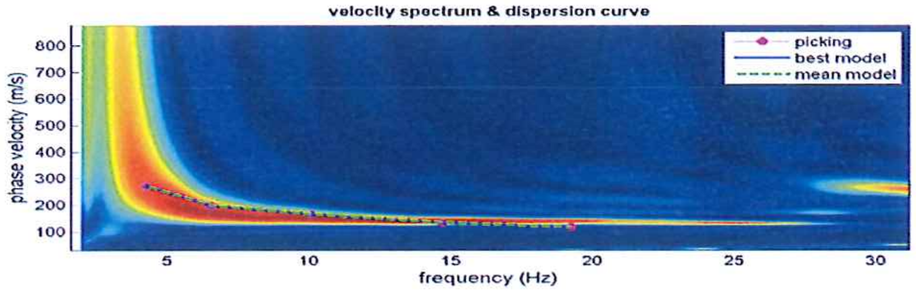
Cantiere:	Medolla, via Grande
Operatore:	Dott.ssa Geol. Alessandra M. Tagliavini, D.ssa Sonia Gilioli
Data:	12/02/2015
Lavoro:	Studio del terreno di fondazione
Elaborazione:	Dott. ssa Sonia Gilioli
Responsabile:	Dott. Geol. Pier Luigi Dallari

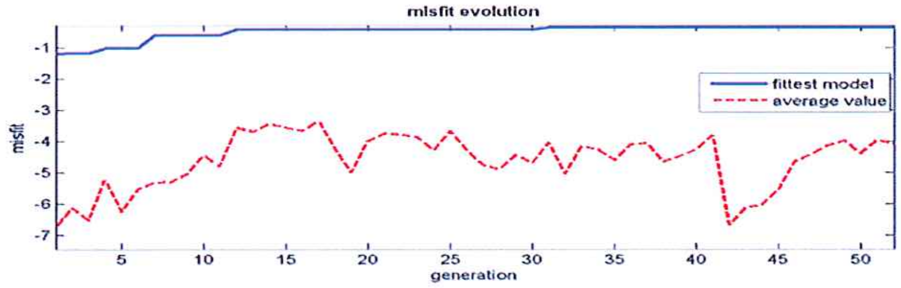
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



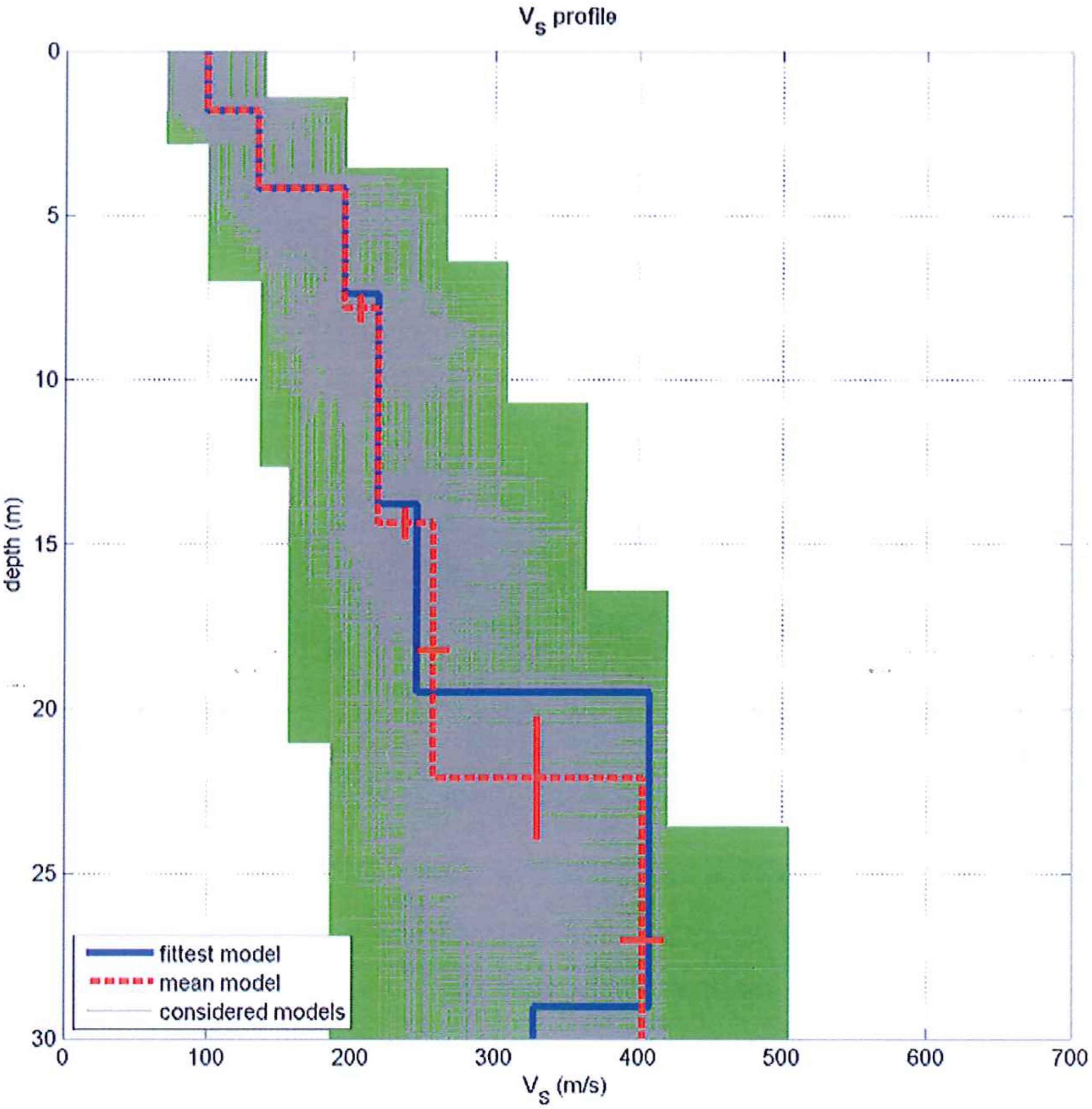
SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE







MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA



dataset: 369-10.dat

dispersion curve: PICK.cdp

Vs30 (best model): 229 m/s

Vs30 (mean model): 224 m/s

BEST MODEL
Vs30 = 229 m/s

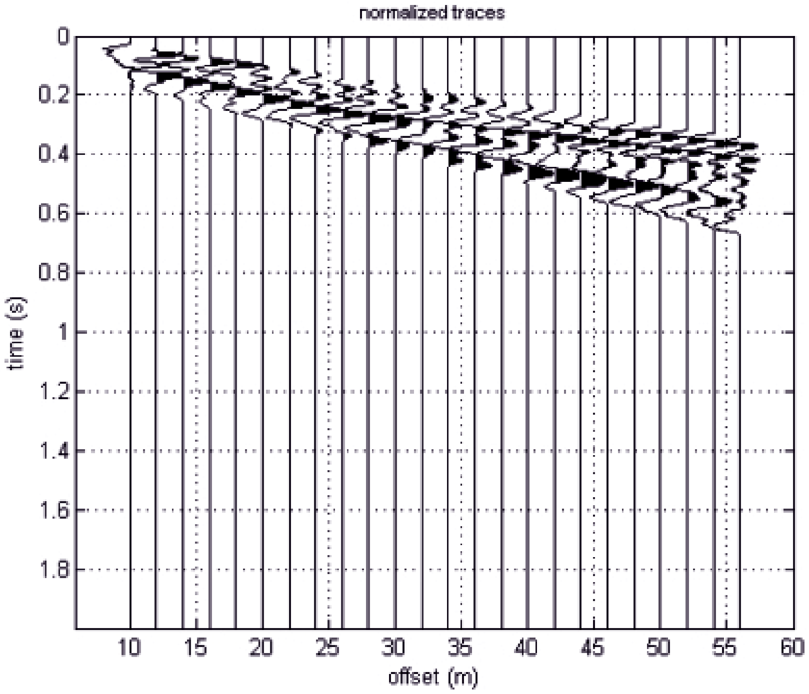
GEO GROUP s.r.l.
Sede Legale: via C. Costa, 182 – 41124 Modena
Sede operativa: via per Modena, 12 – 41051 Castelnuovo Rangone (MO)
Tel. 059-39.67.169 - Fax . 059-53.32.019
p.IVA e C.F. 02981500362 – www.geogroupmodena.it - e-mail: info@geogroupmodena.it

ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

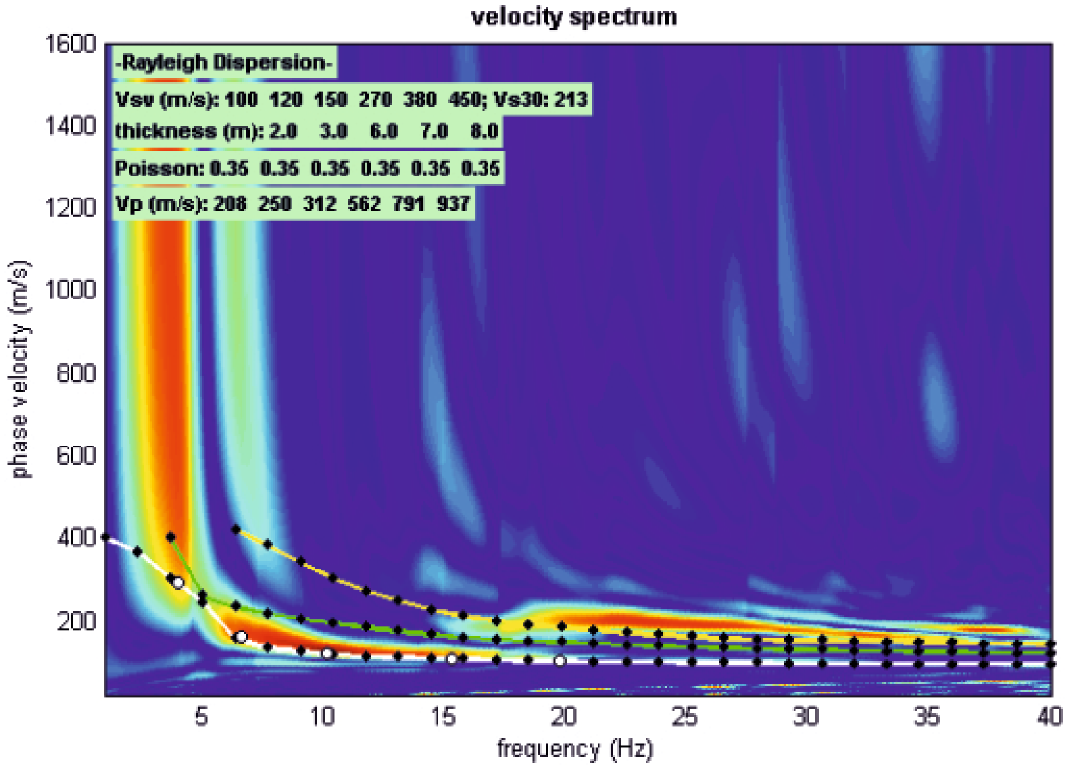
Cantiere: Medolla, s.statale 468
Operatori:D.ssa Linda Veratti
Lavoro: Studio terreno di fondazione
Elaborazione: D.ssa Sonia Gilioli
Responsabile: Dott. Geol. Pier Luigi Dallari

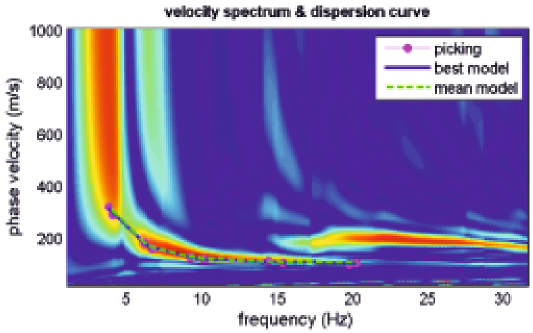
RIFERIMENTO
Rif. 105/14

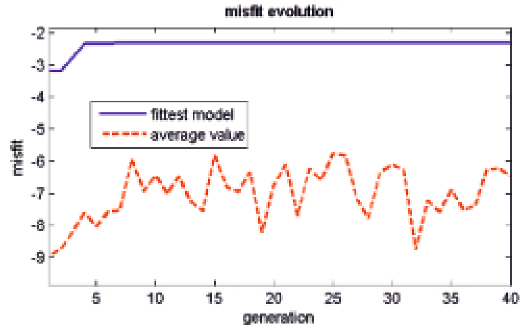
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



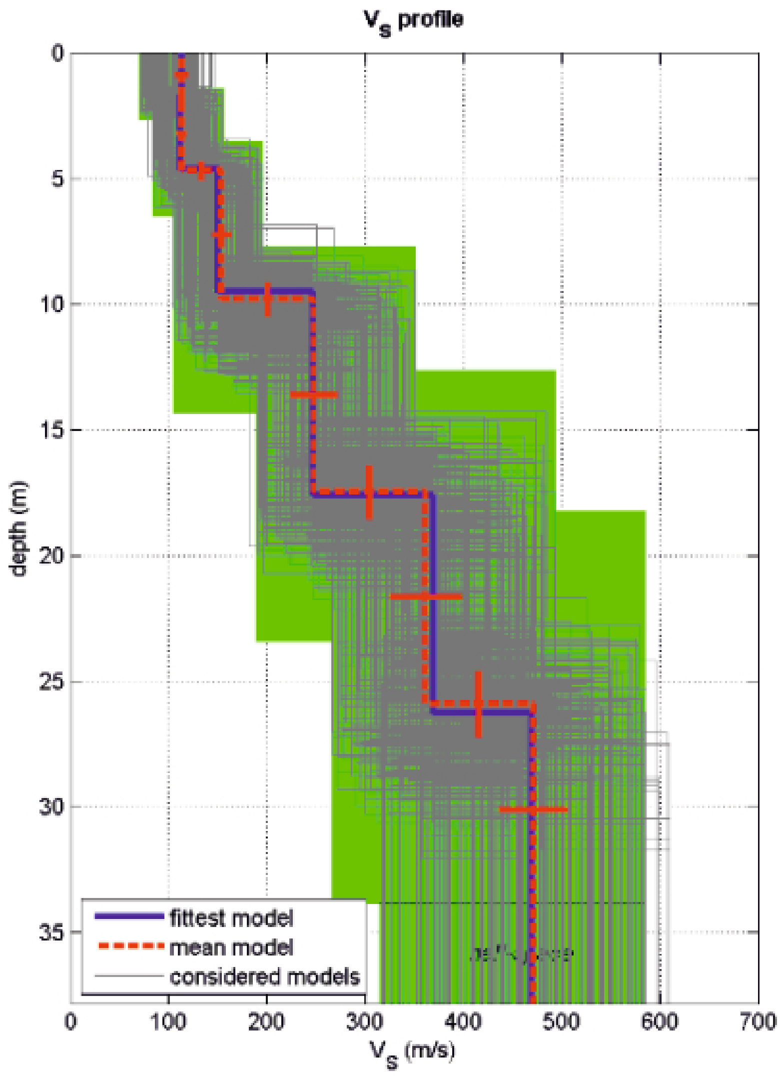
SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE

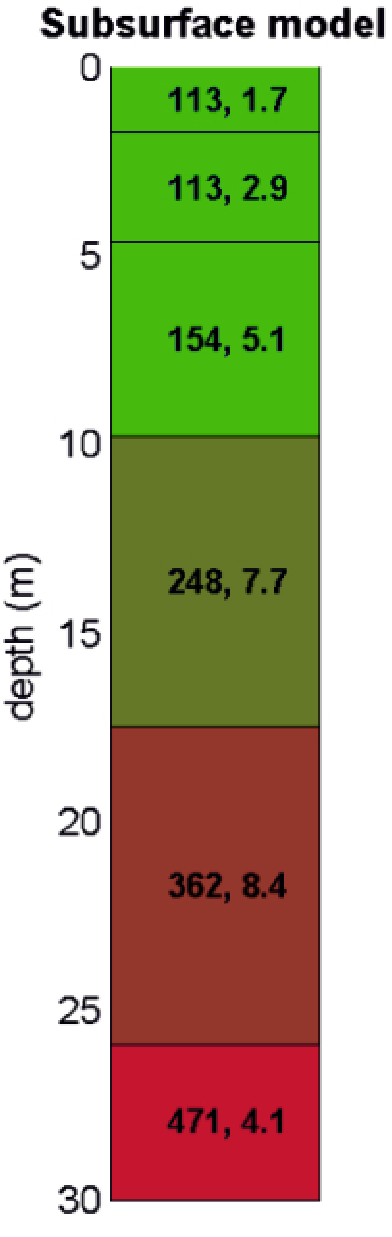






MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA





dataset: 555.dat

dispersion curve: pick.cdp

Vs30 (best model): 218 m/s

Vs30 (mean model): 218 m/s

BEST MODEL
Vs30 = 218 m/s

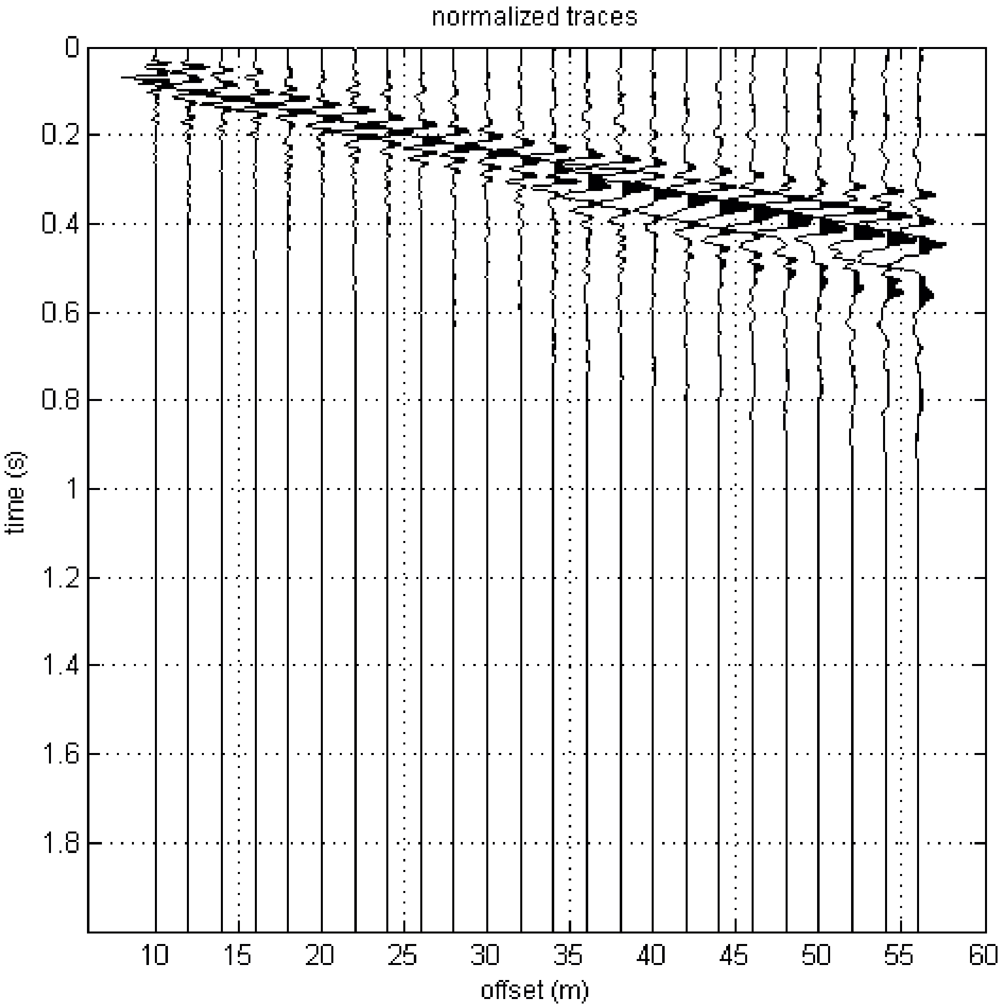
V_S	density	thickness
(m/s)	(gr/cm^3)	(m)

ALLEGATO N° 3

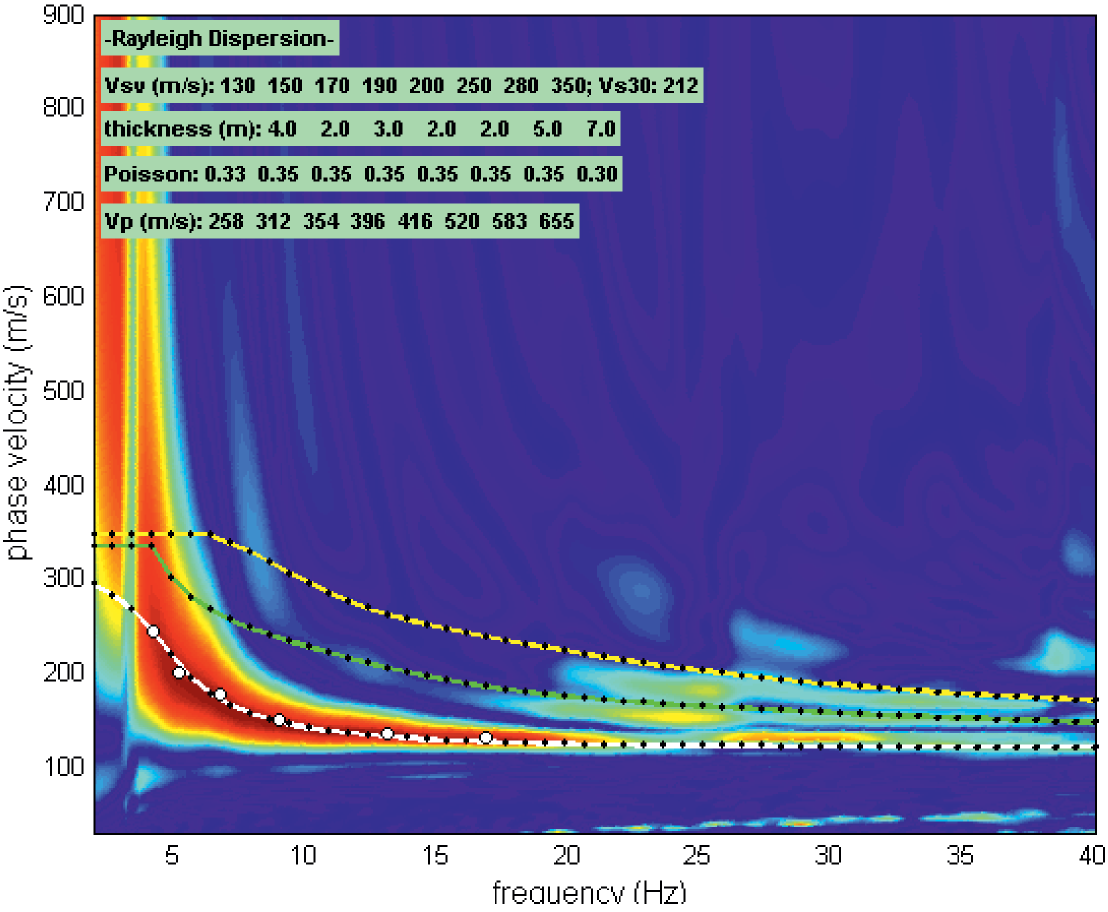
Indagine sismica – tecnica MASW

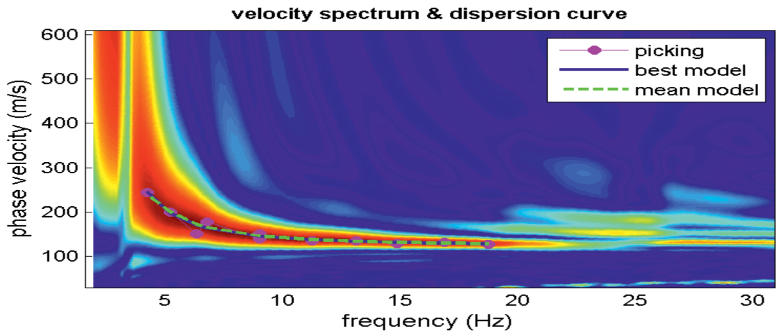
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

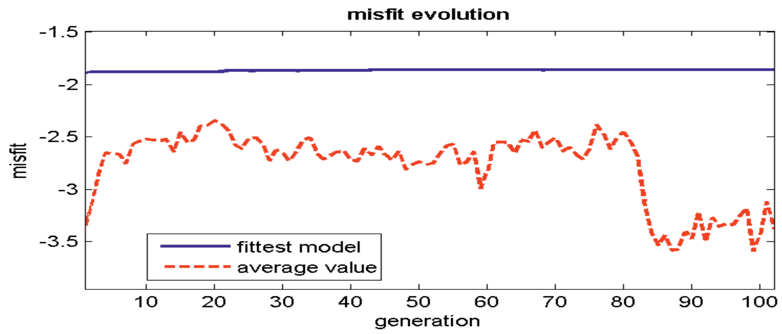
Cantiere: Medolla, Via Romana
Lavoro: Studio del terreno di fondazione
Elaborazione: Dott.ssa Sonia Gilioli
Responsabile: Dott. Geol. Pier Luigi Dallari



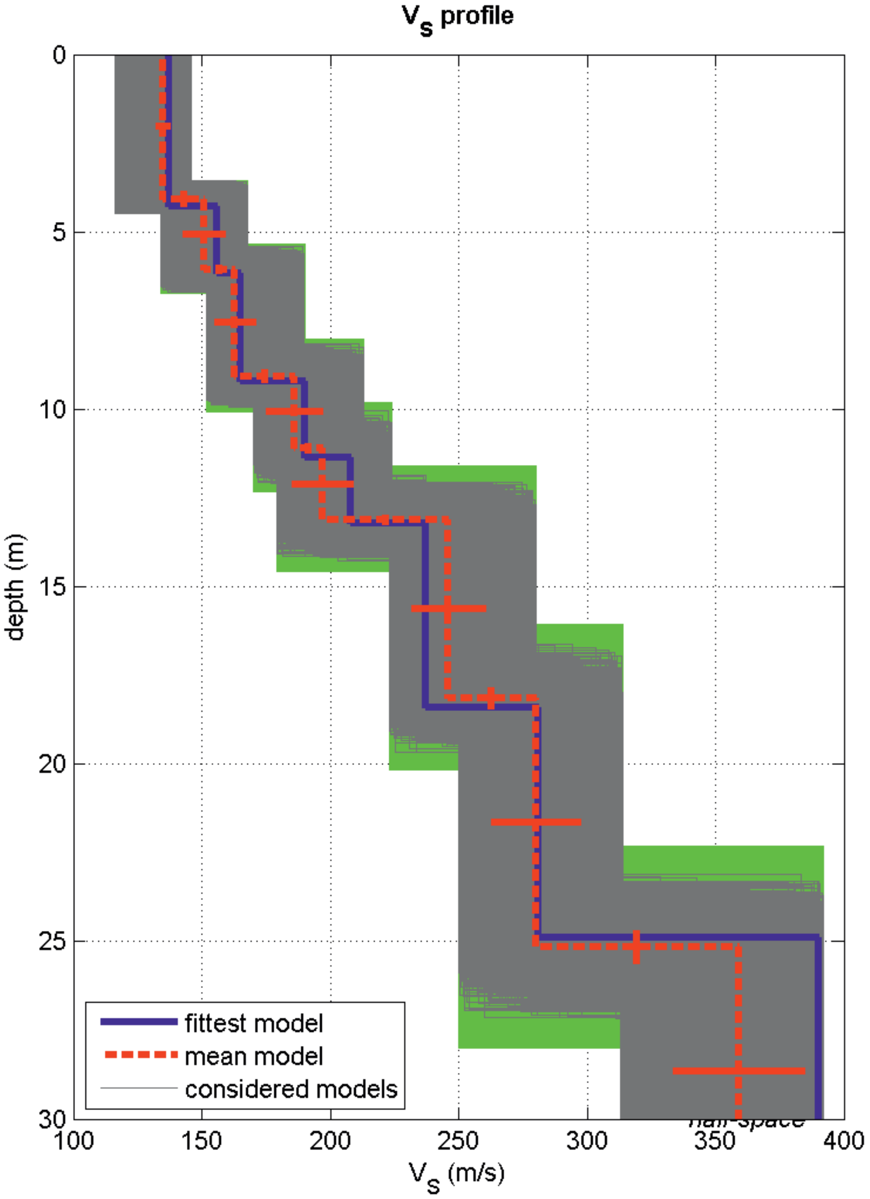
SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE







MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA



dataset: 4$_1$0.dat

dispersion curve: pick.cdp

Vs30 (best model): 214 m/s

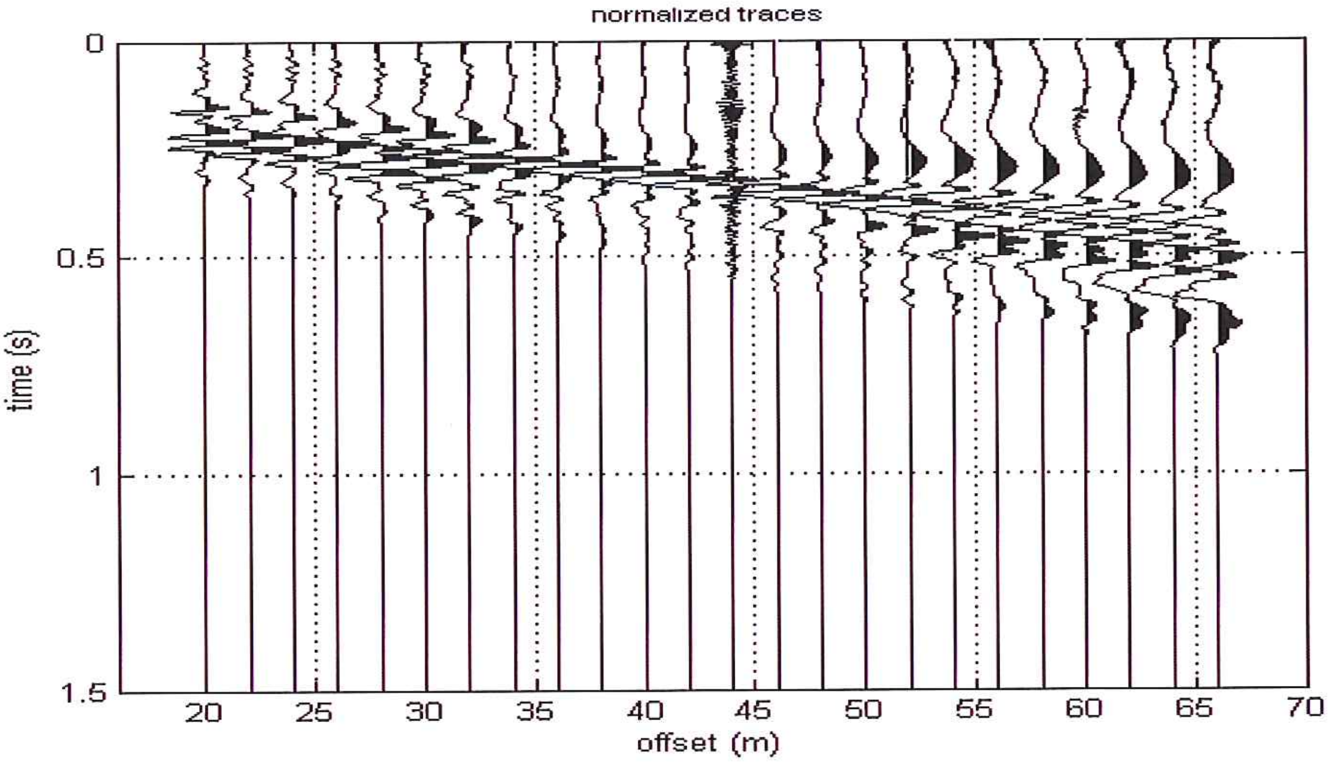
Vs30 (mean model): 211 m/s

BEST MODEL
Vs30 = 214 m/s

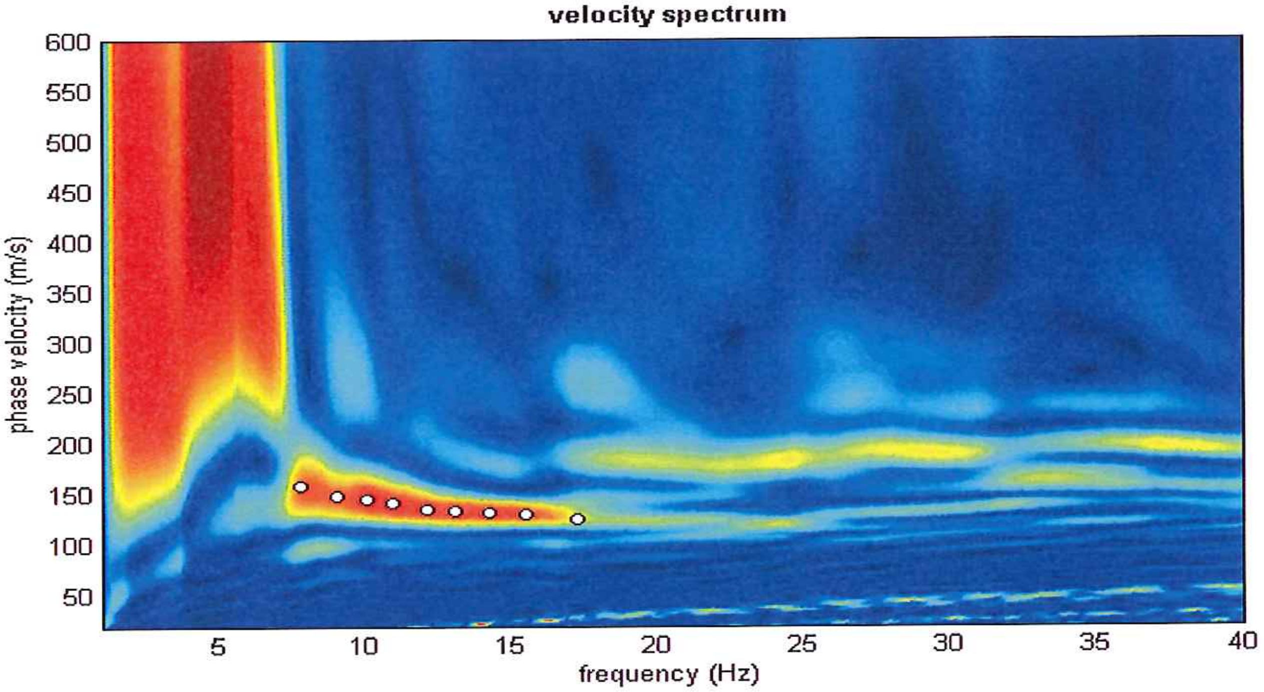
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

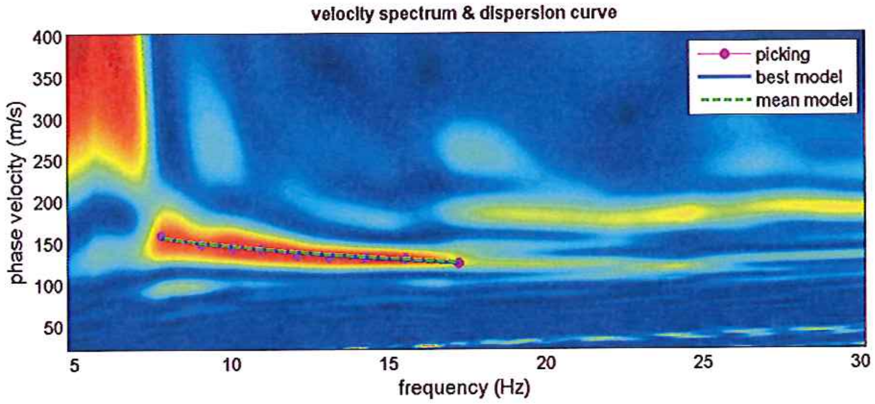
Cantiere:	Medolla via della Saliceta 15
Operatori:	Dott.sse Parmeggiani-Casarini
Data:	16/01/2014
Lavoro:	Studio del terreno di fondazione
Elaborazione:	Dott. Ghirardini Gabriele
Responsabile:	Dott. Dallari Pier Luigi

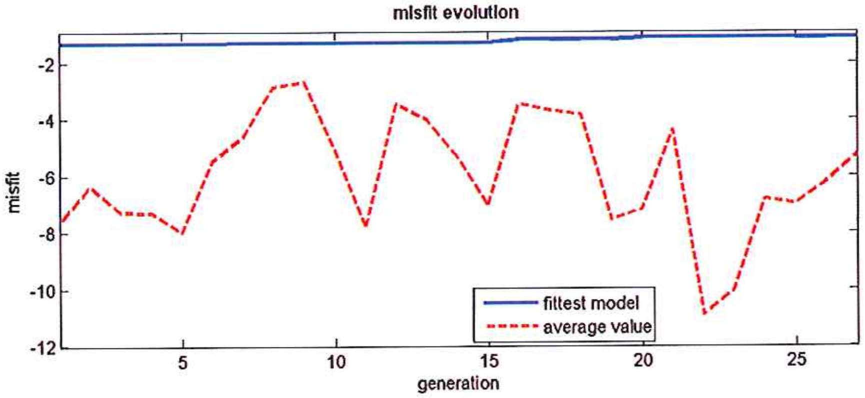
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



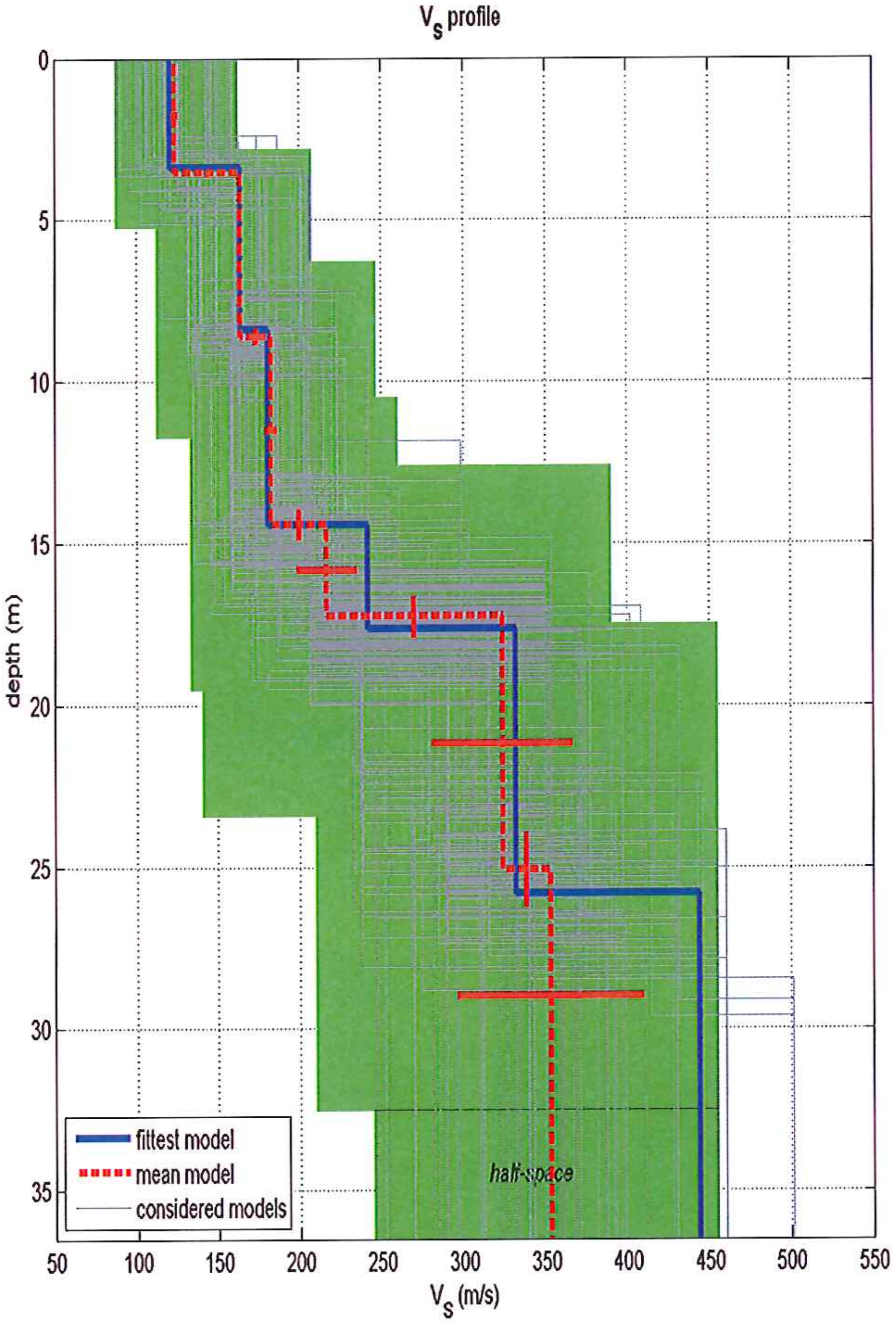
SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE

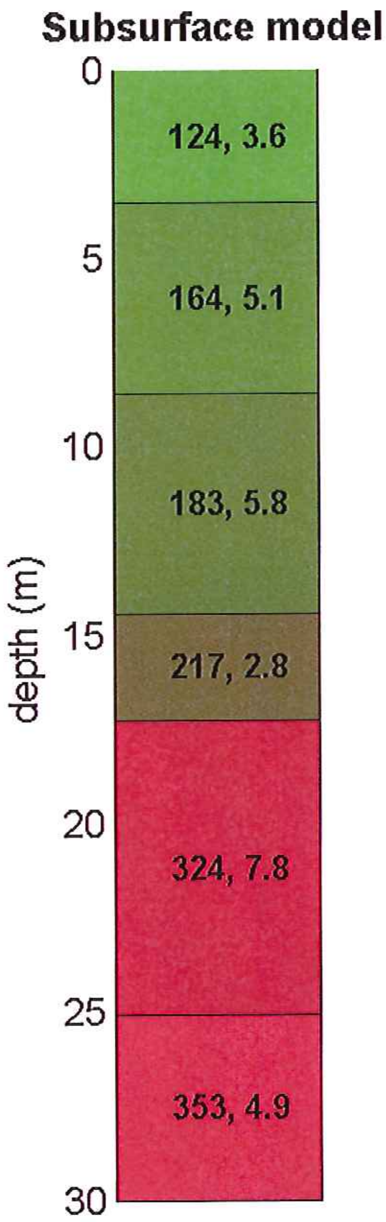






MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA





BEST MODEL
Vs30 = 216 m/s

V_S	density	thickness
(m/s)	(gr/cm^3)	(m)

GEO GROUP s.r.l.
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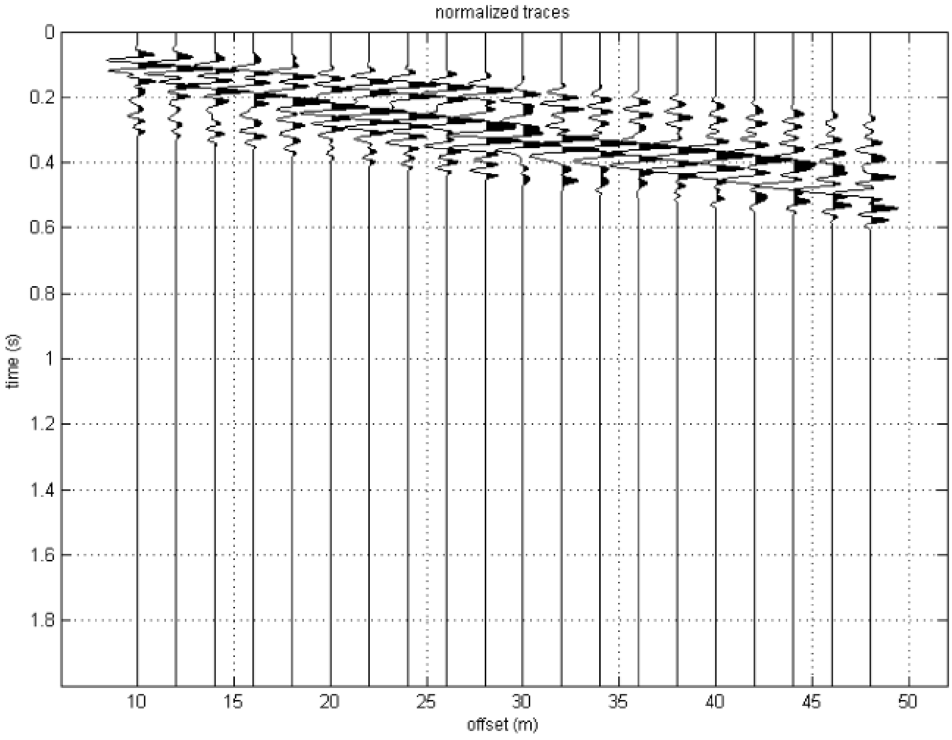
p. IVA e C.F. 02981500362 – www.geogroupmodena.it - e-mail: info@geogroupmodena.it

ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

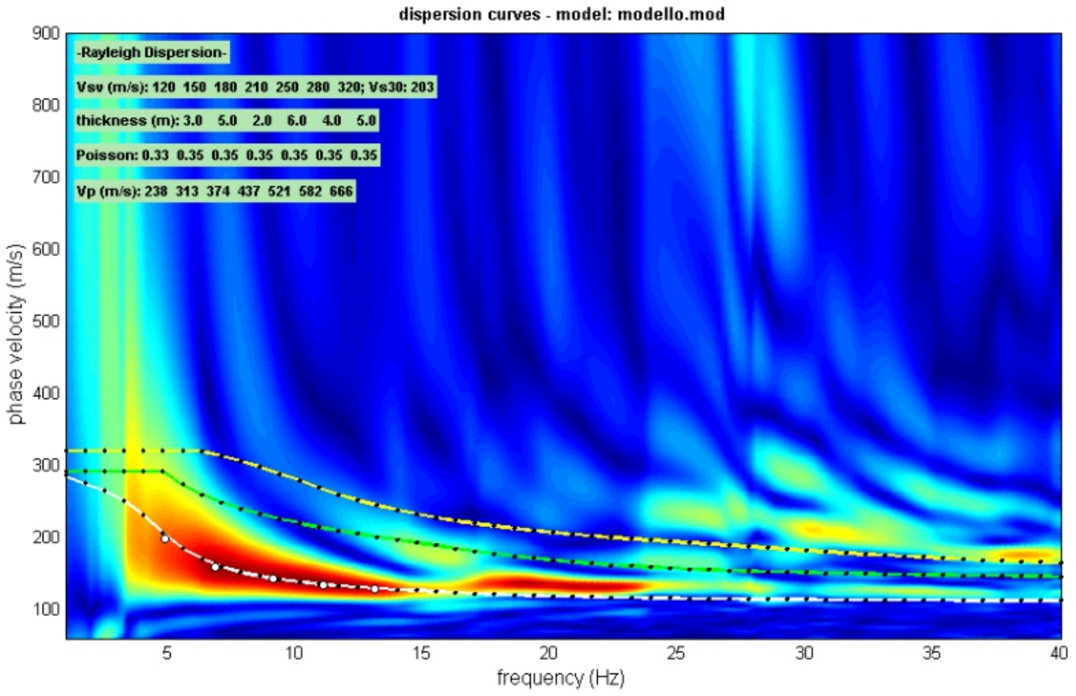
Cantiere: Medolla, Piazza Salvo d'Acquisto
Operatori :Dott. Luca Pattuzzi e Dott.ssa Linda Veratti
Lavoro: Studio del terreno di fondazione
Data: 10/03/17
Elaborazione: Dott.ssa Linda Veratti
Responsabile: Dott. Geol. Pier Luigi Dallari

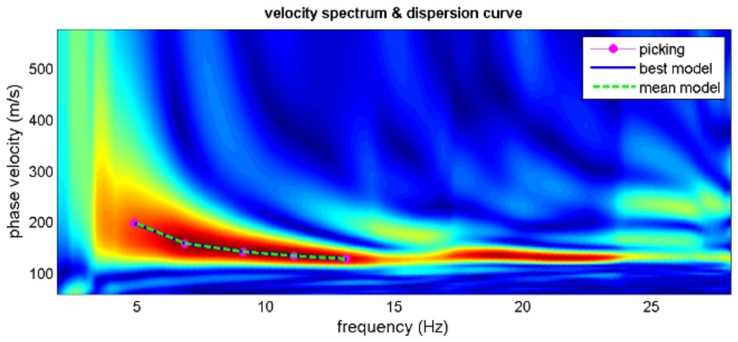
MASW
Rif. 117/17

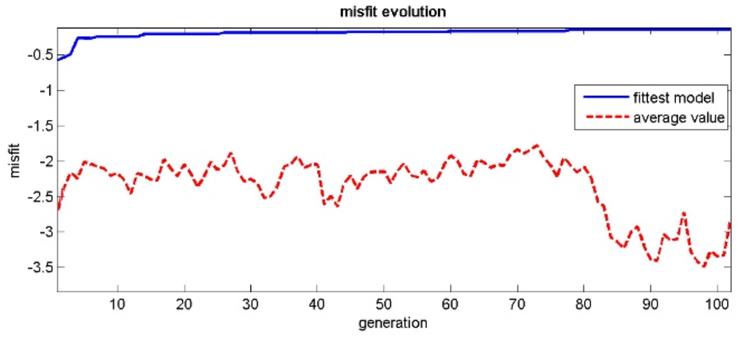
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



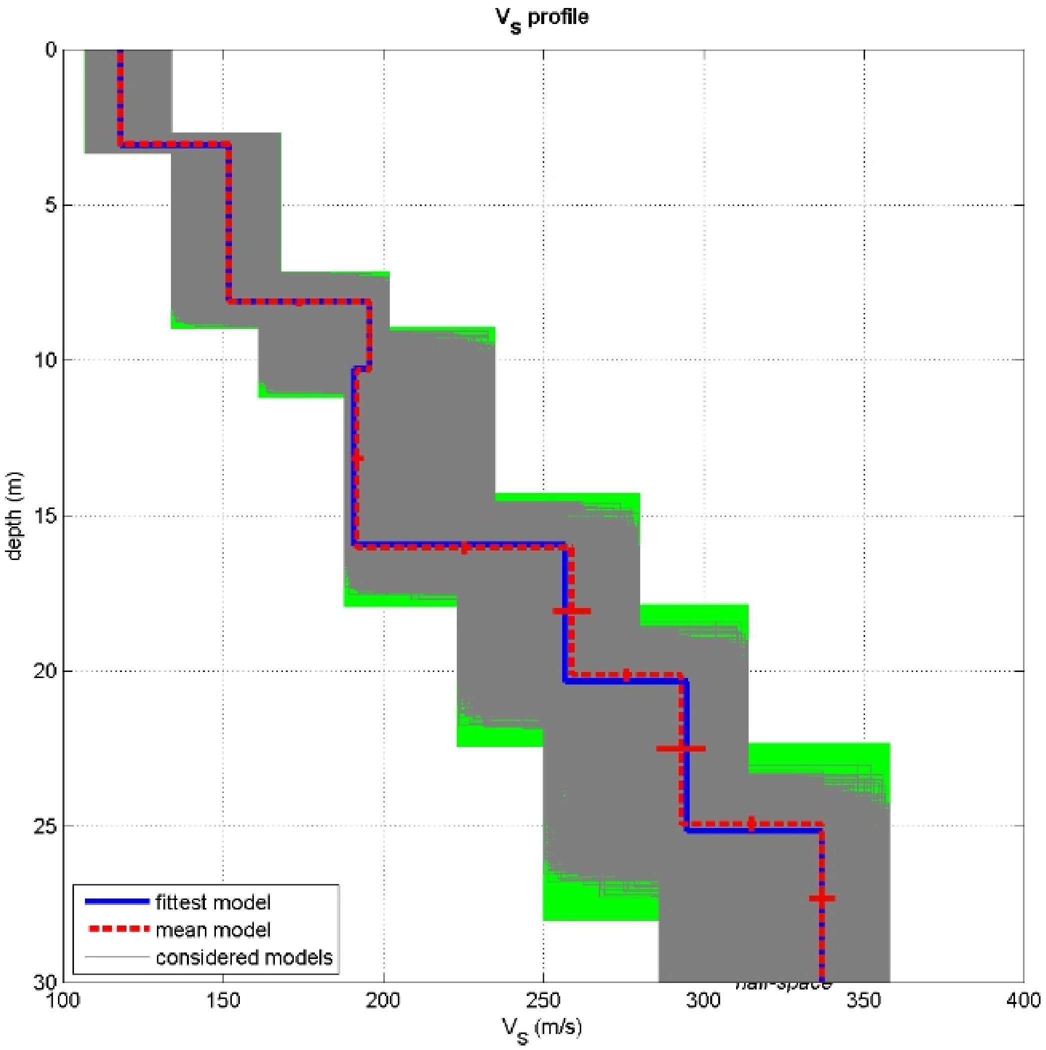
SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE







MODELLO Vs30 DERIVATO DALL’INDAGINE MASW ESEGUITA



dataset: 296.dat

dispersion curve: picking.cdp

Vs30 (best model): 203 m/s

Vs30 (mean model): 203 m/s

BEST MODEL
Vs30 = 203 m/s

GEO GROUP s.r.l.
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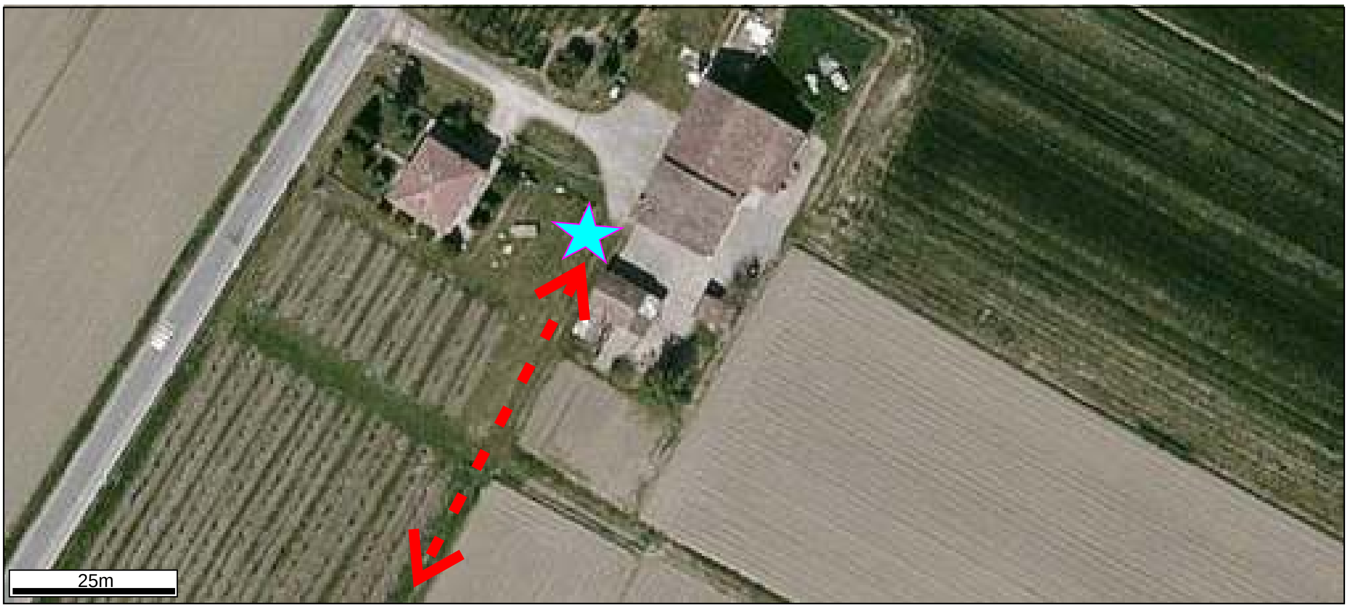
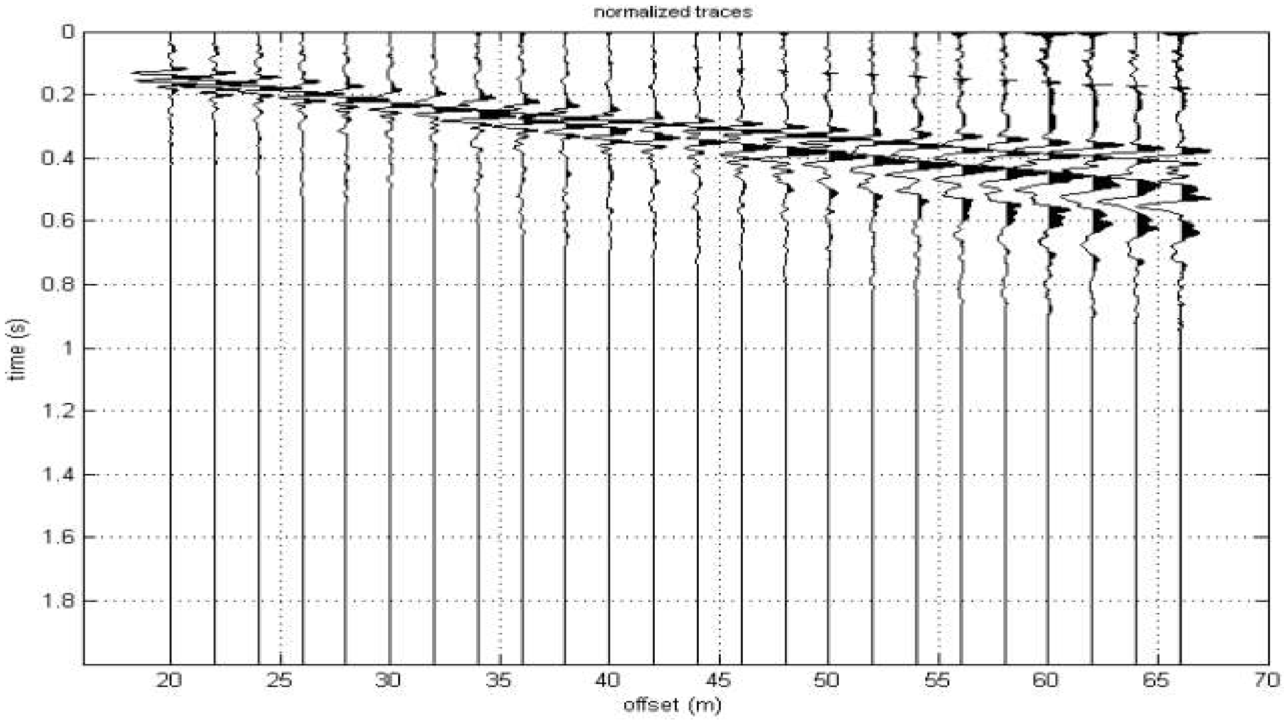
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

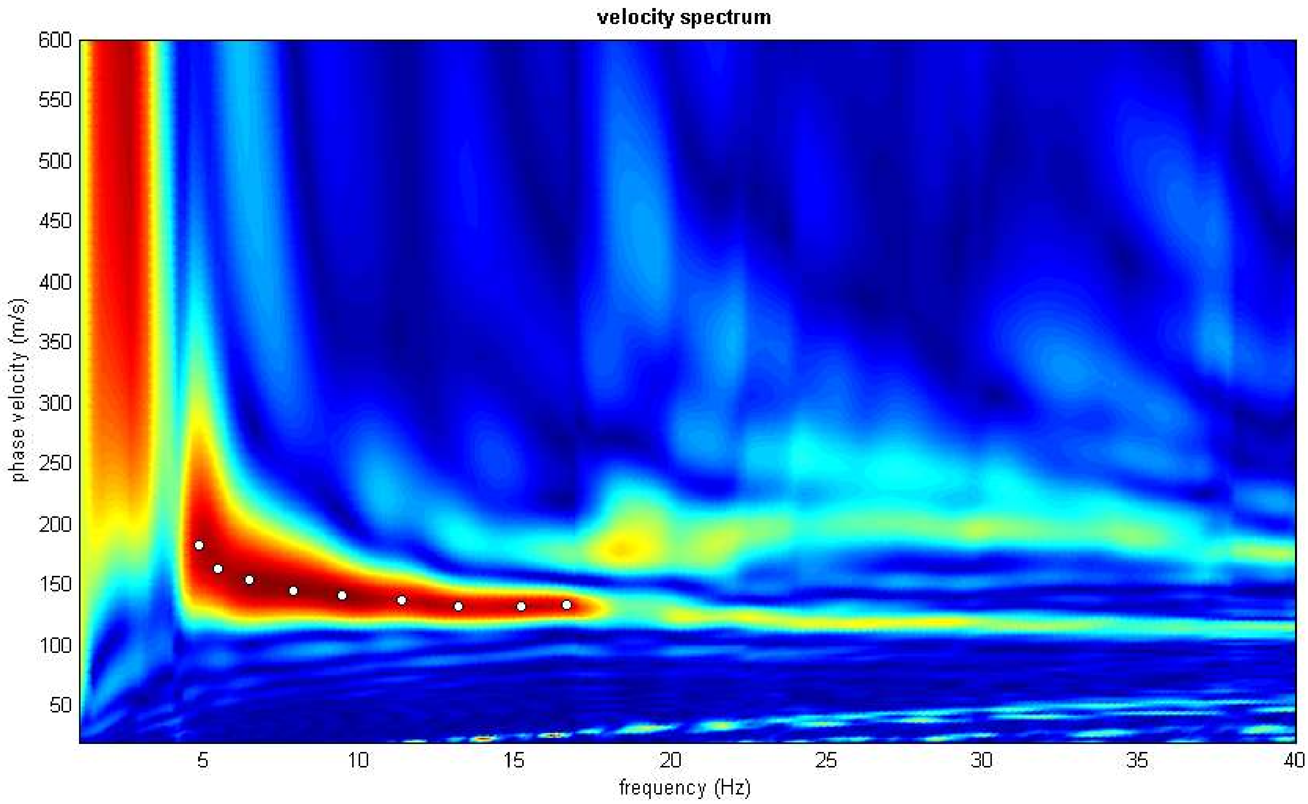
Cantiere:	Medolla, Via Roncaglio n° 13
Operatori:	Dott.ssa Linda Veratti
Data:	10/01/2014
Lavoro:	Studio del terreno di fondazione
Elaborazione:	Dott. Gabriele Ghirardini
Responsabile:	Dott. Geol. Pier Luigi Dallari

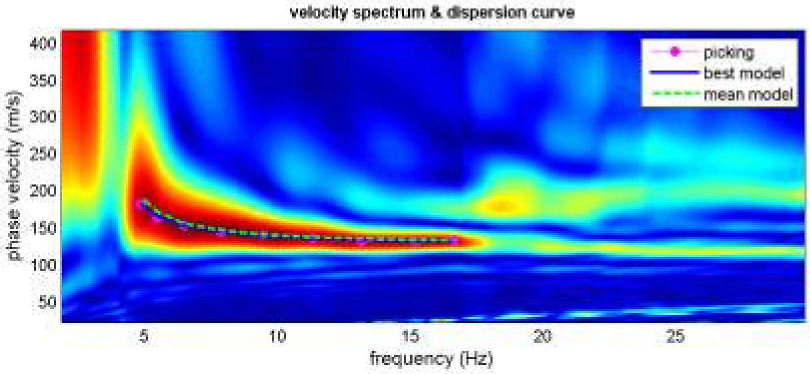


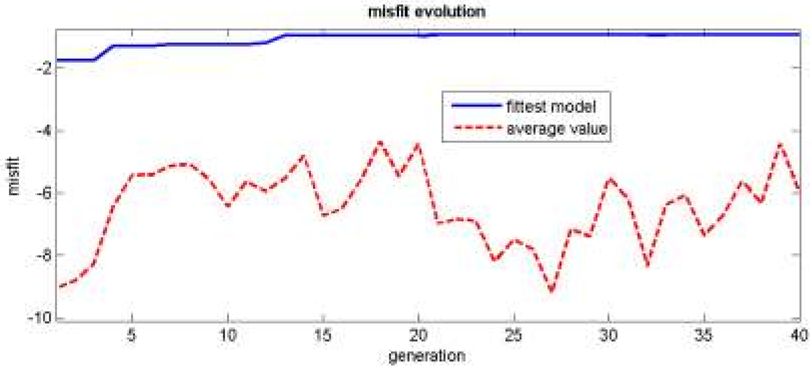
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



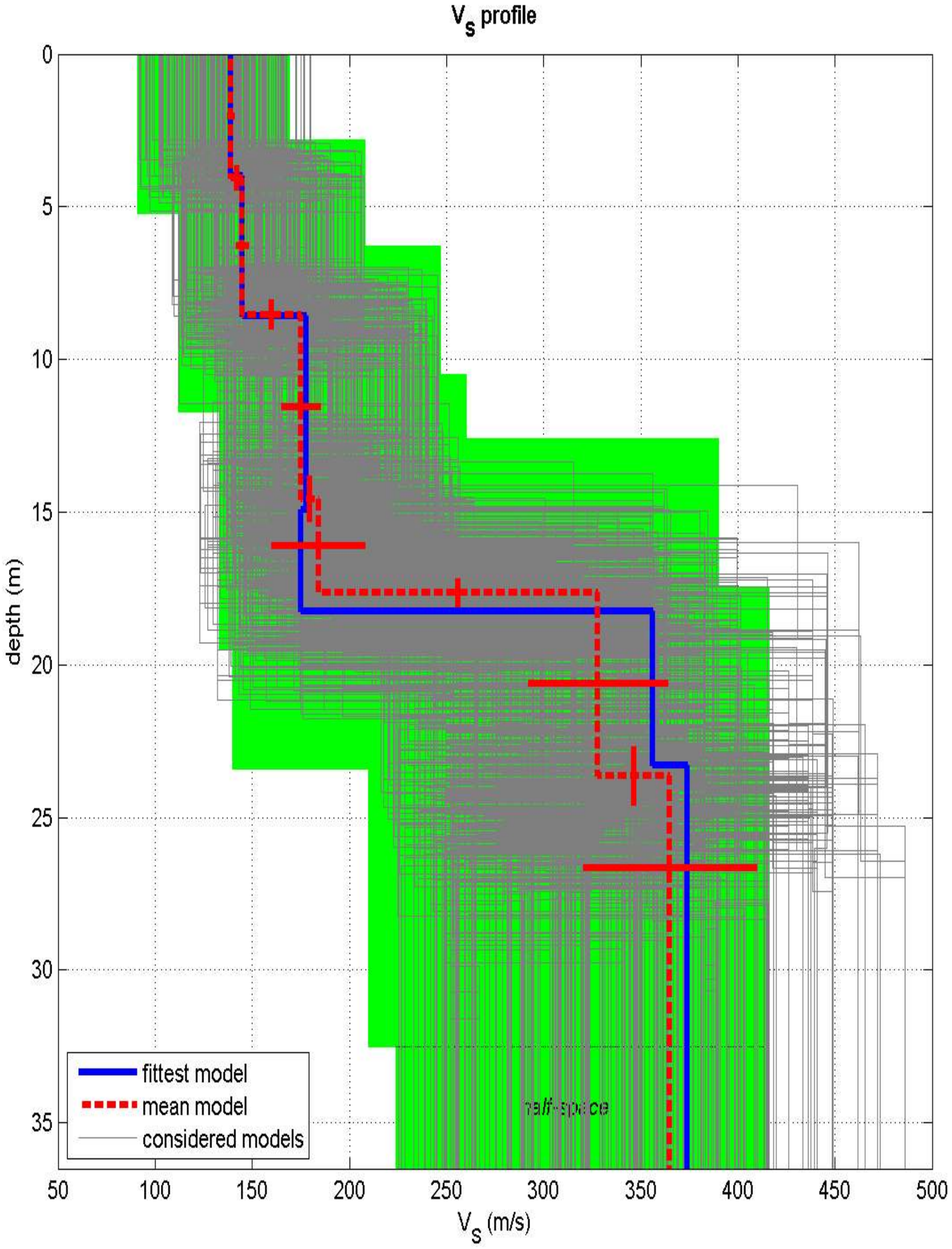
SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE

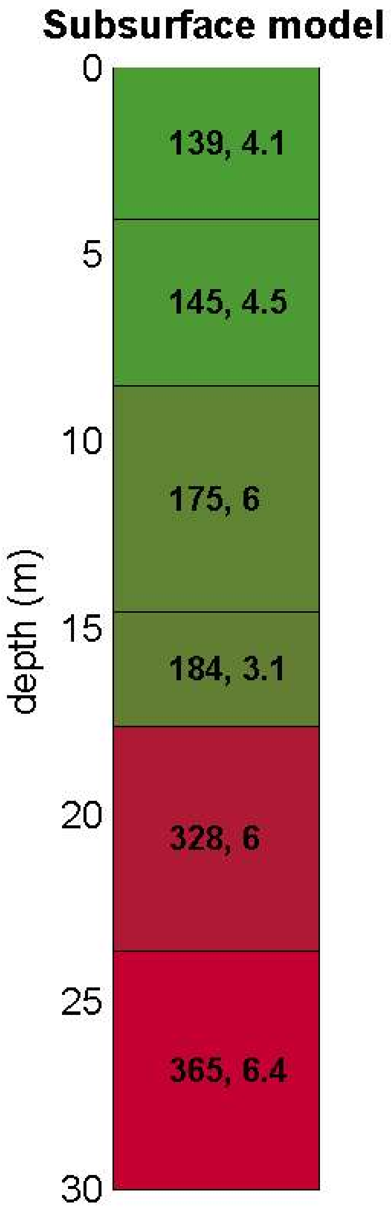






MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA





BEST MODEL

Vs30 = 204 m/s

V_S	density	thickness
(m/s)	(gr/cm^3)	(m)

GEO GROUP s.r.l.
Sede Legale: via C. Costa, 182 – 41124 Modena
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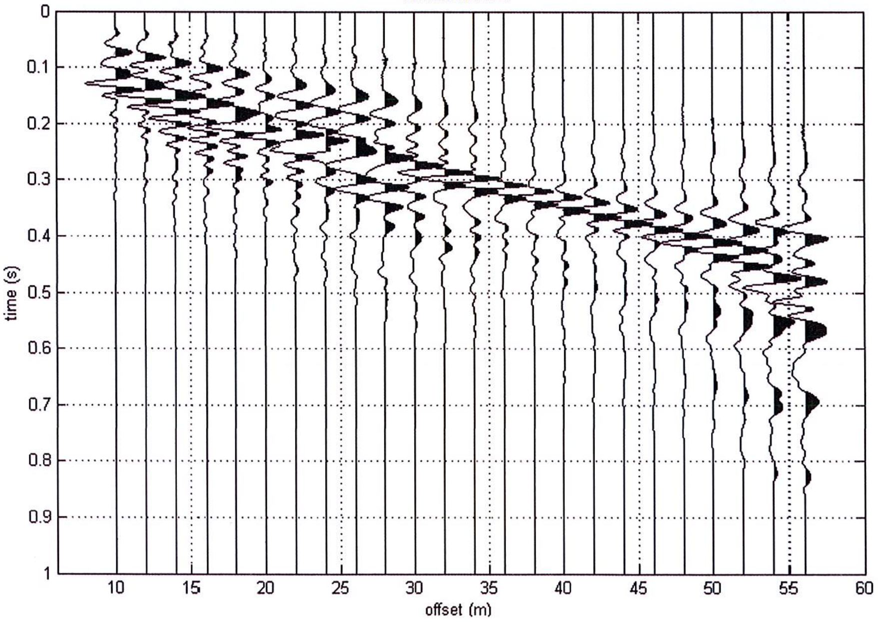
SISTEMA DI GESTIONE PER LA QUALITÀ CERTIFICATO
UNI EN ISO 9001:2008
SINCERT DNV

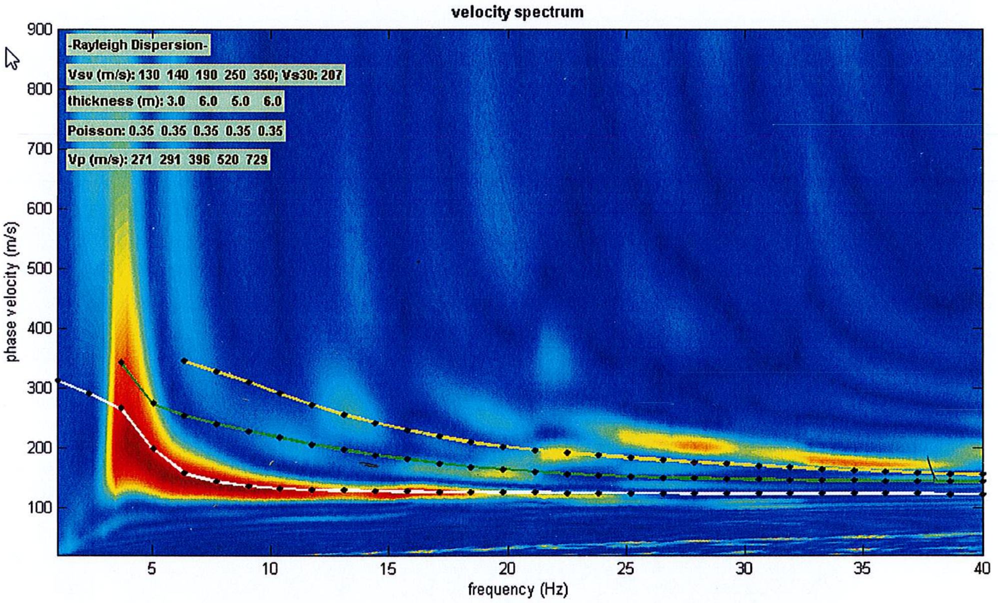
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

Cantiere:	Medolla (MO), Via Romana n.120
Operatori:	Dott. ssa Erika Parmeggiani
Data:	15/02/13
Lavoro:	Studio del terreno di fondazione
Elaborazione:	Dott.ssa Mazzoli Monica
Responsabile:	Dott. Geol. Pier Luigi Dallari

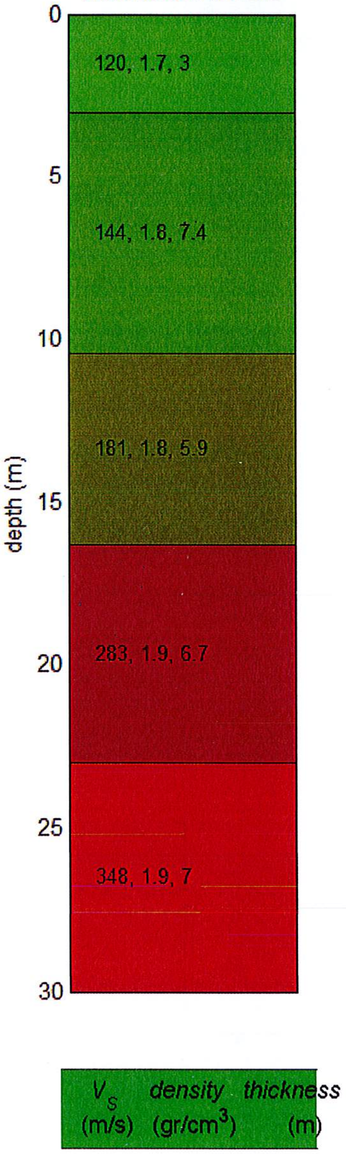
CERTIFICATO: 062_M_1~~2~~3

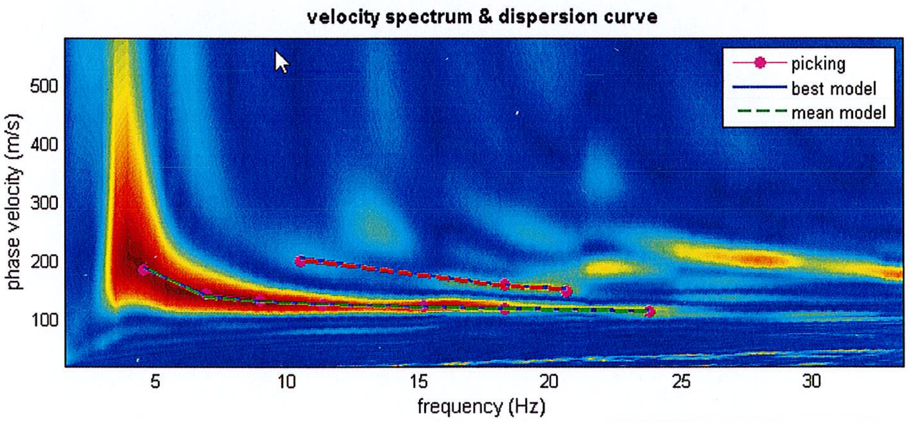
ELABORAZIONE

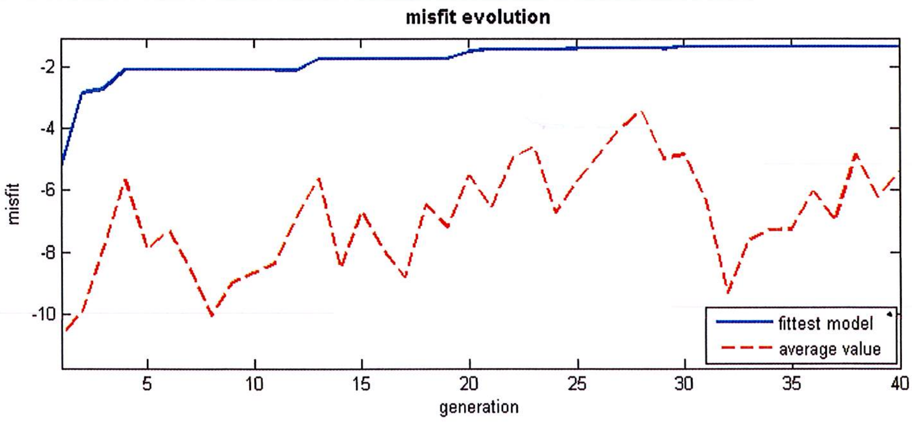




Subsurface model

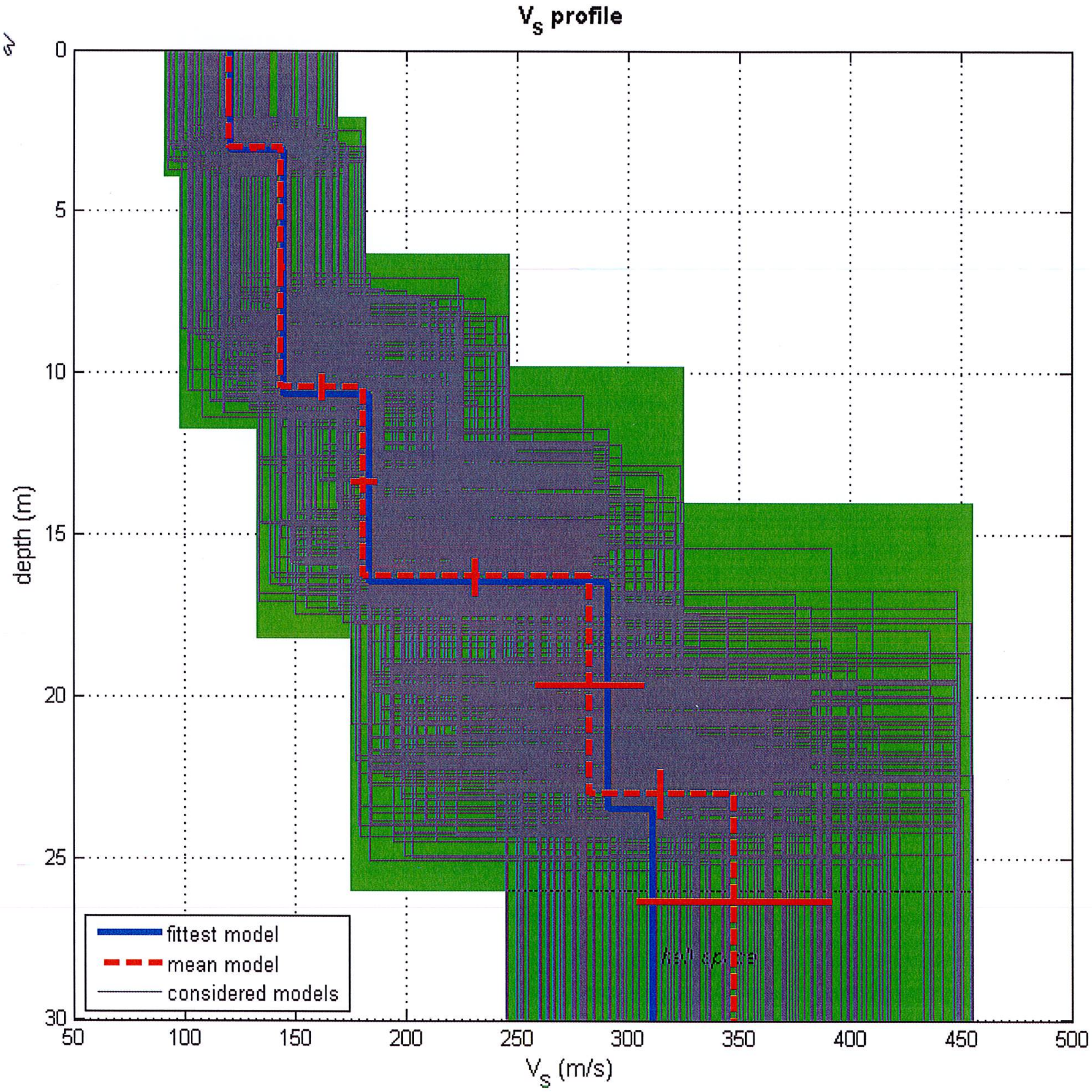






[MODELLO FINALE]

Vs$_{30}$ = 194 m/s



dataset: 76.dat

dispersion curve: p1.cdp

Vs30 (best model): 194 m/s

Vs30 (mean model): 196 m/s

ALLEGATO N° 3

Indagine sismica MASW

GEO GROUP s.r.l.
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Sede operativa: via per Modena, 12 – 41051 Castelnuovo Rangone (MO)
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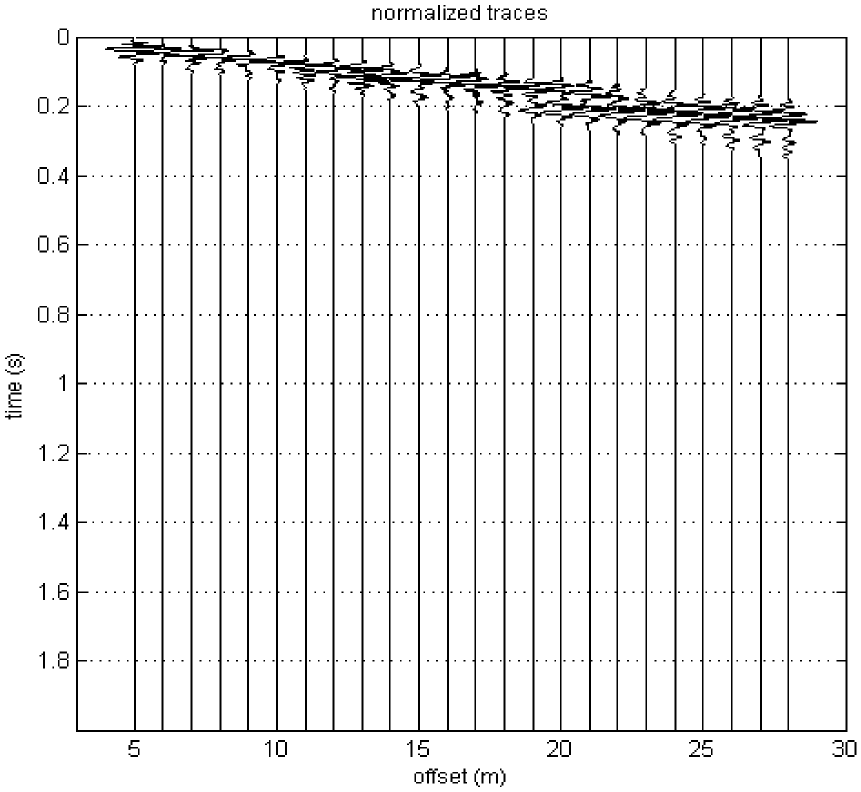
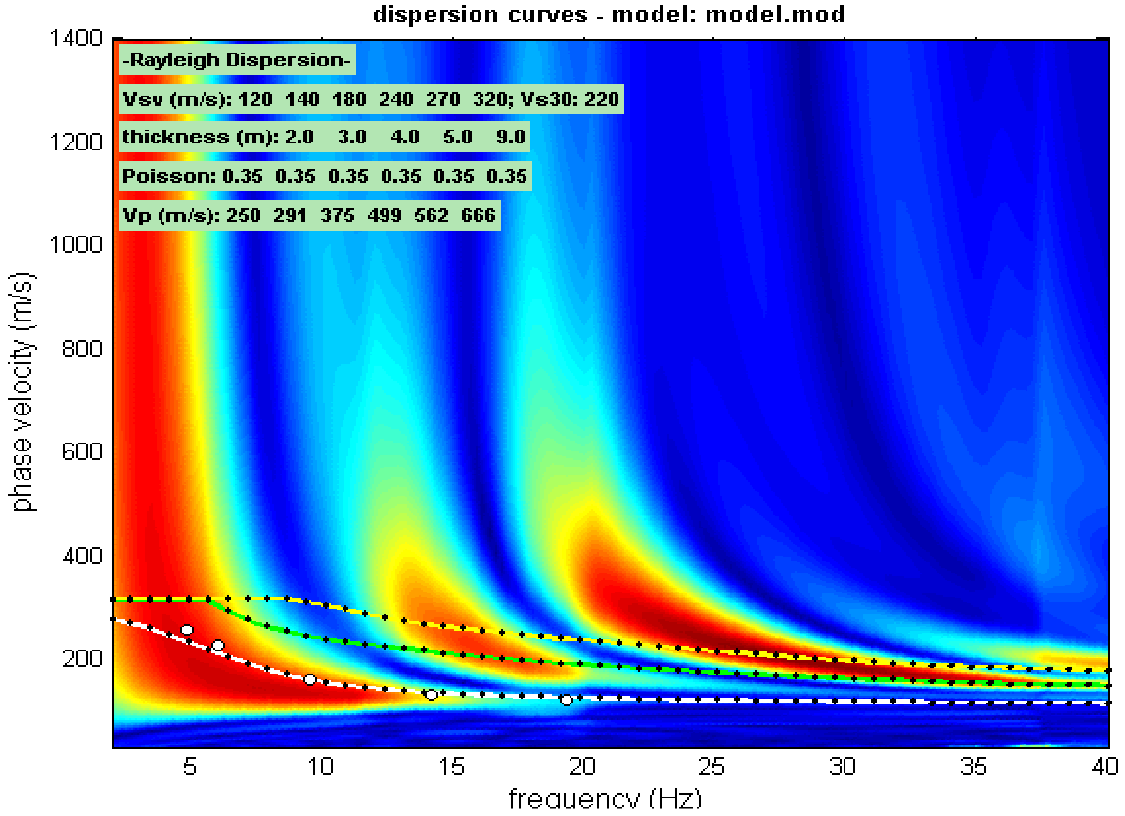
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

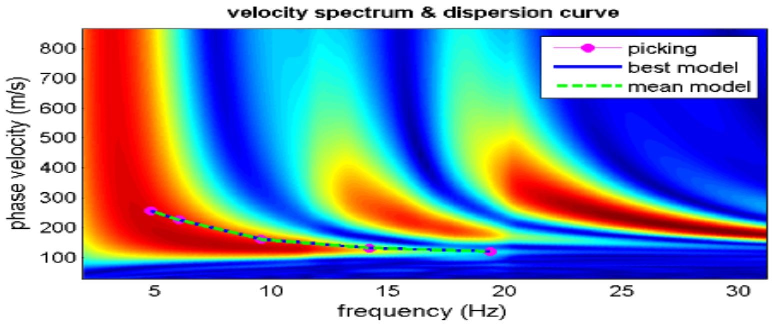
Cantiere:	Medolla(MO), Via Matteotti
Data:	25/03/16
Lavoro:	Studio del terreno di fondazione
Elaborazione:	Dott. ssa Sonia Gilioli
Responsabile:	Dott. Geol. Pier Luigi Dallari

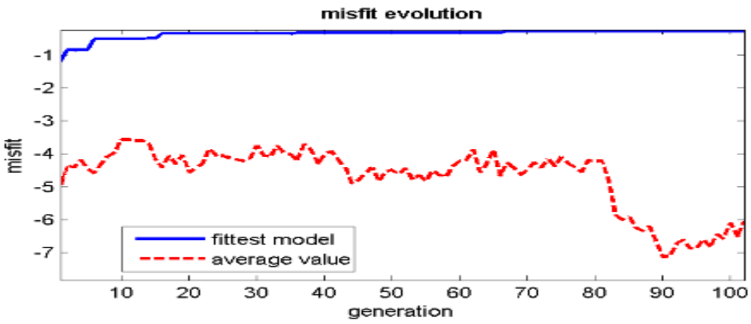
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE







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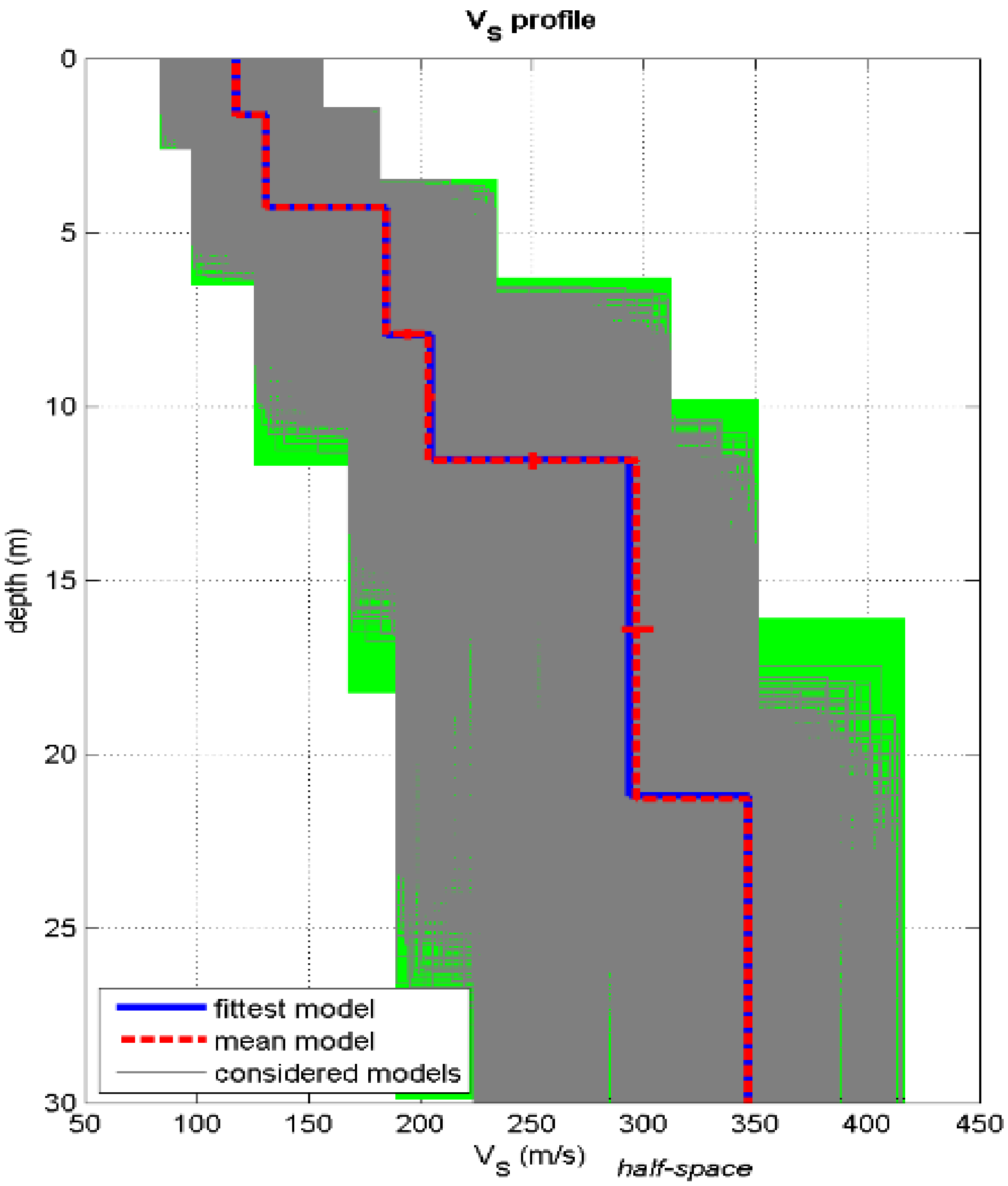
MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA



dataset: 1758.dat

dispersion curve: pick.cdp

Vs30 (best model): 232 m/s

Vs30 (mean model): 232 m/s

BEST MODEL
Vs30 = 232 m/s

GEO GROUP s.r.l.
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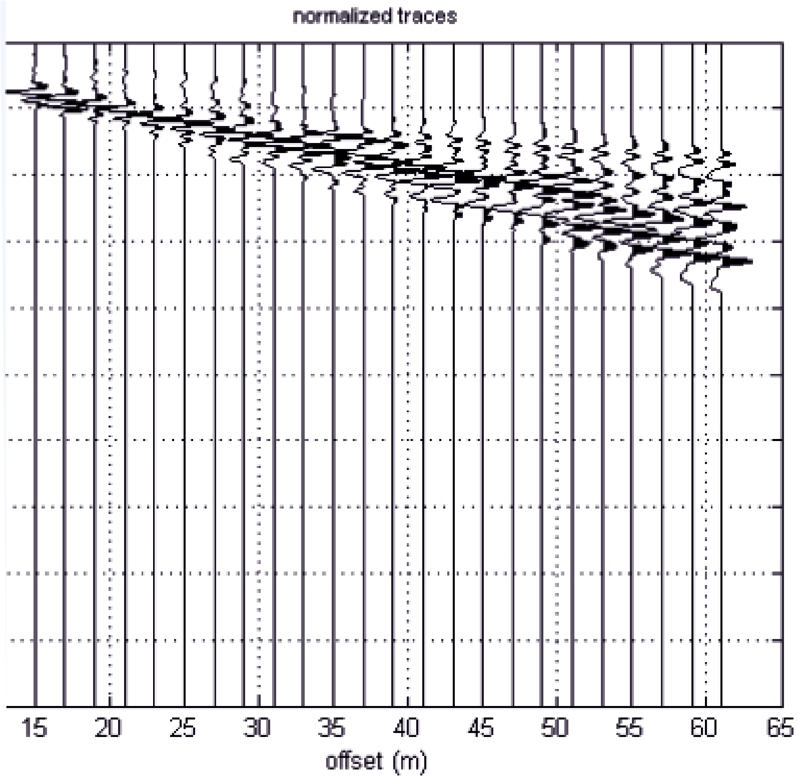
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

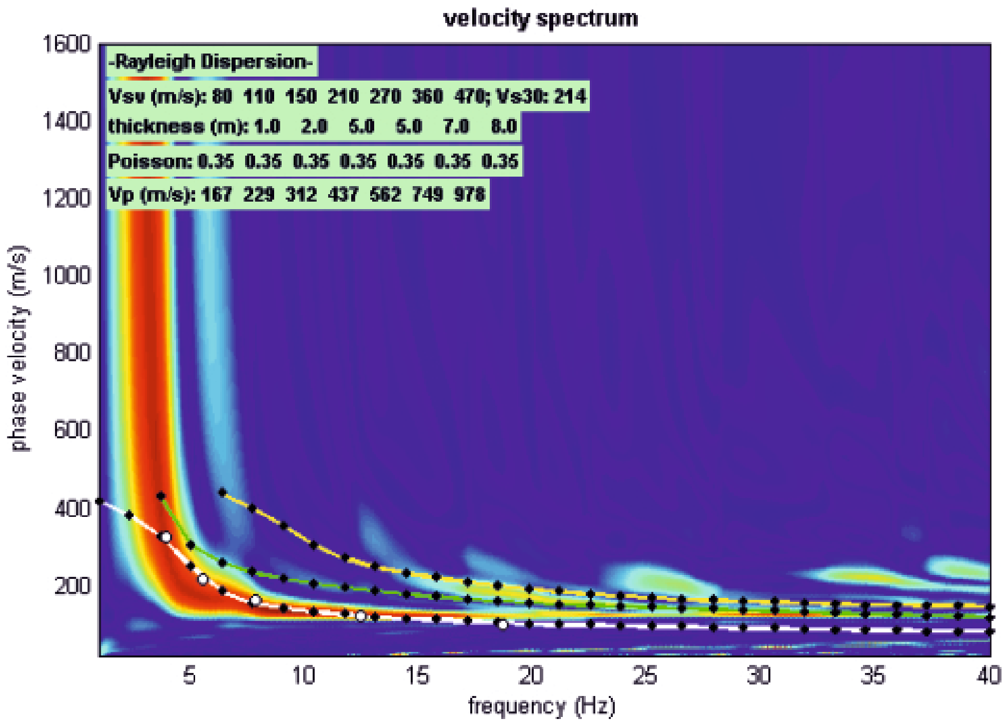
Cantiere: Medolla-Strada Provinciale
Operatori:D.ssa Linda Veratti, D.ssa Annalisa Cameroni
Lavoro: Studio terreno di fondazione
Elaborazione: D.ssa Sonia Gilioli
Responsabile: Dott. Geol. Pier Luigi Dallari

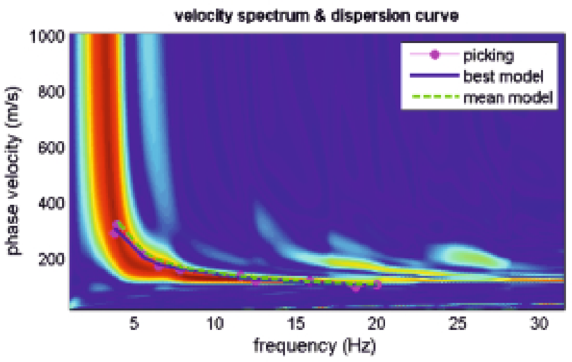
RIFERIMENTO
Rif. 130/14

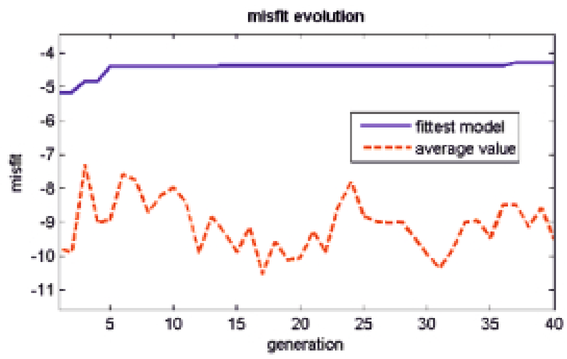
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



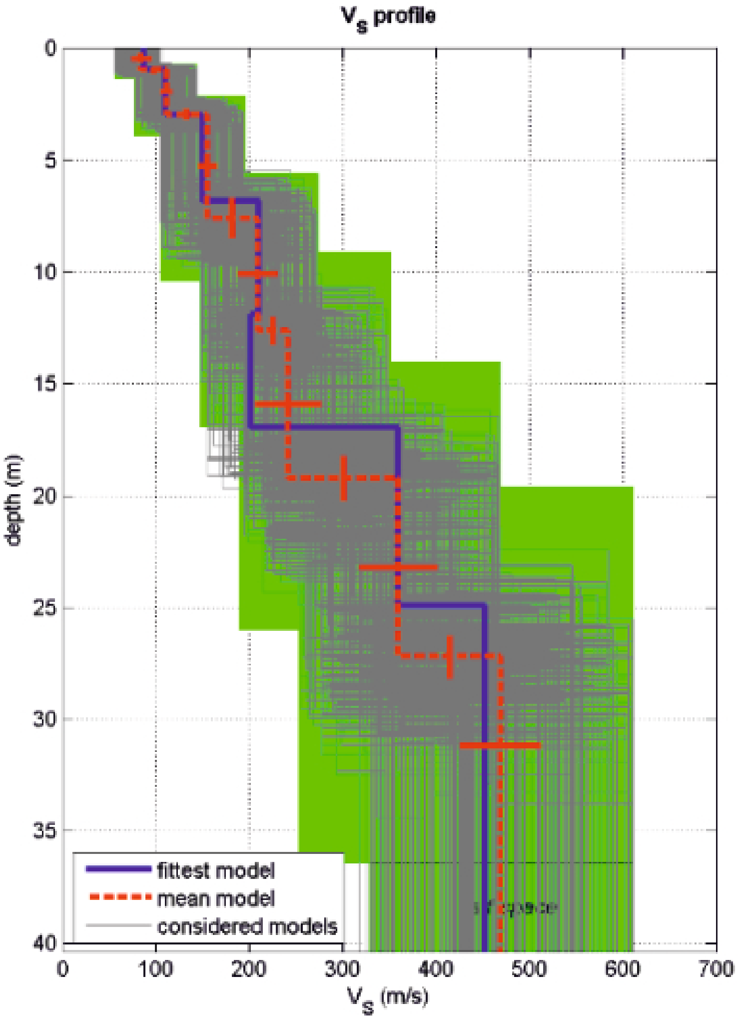
SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE







MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA

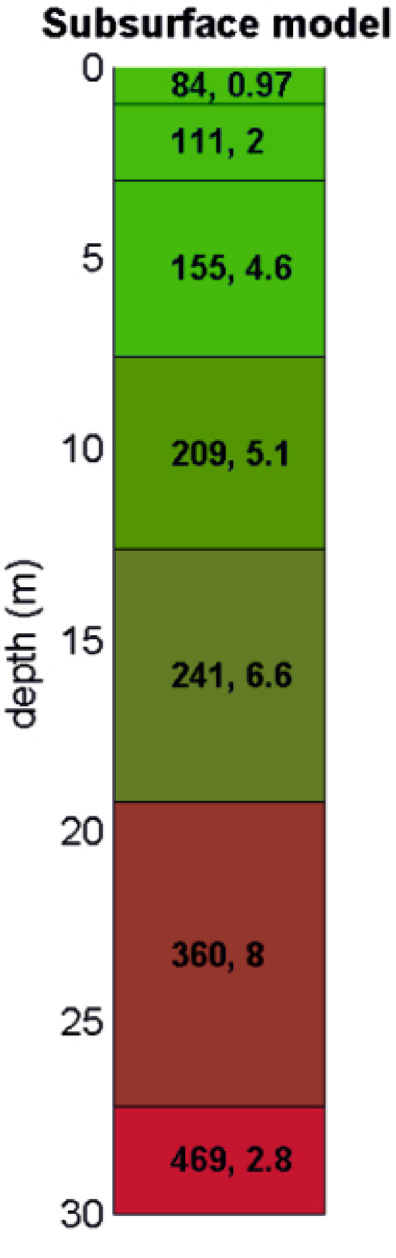


dataset: 636_1 5.dat

dispersion curve: pick.cdp

Vs30 (best model): 218 m/s

Vs30 (mean model): 216 m/s



BEST MODEL
Vs30 = 218 m/s

V_s	density	thickness
(m/s)	(gr/cm^3)	(m)

Tav. n. 5 “Indagini geognostiche”

Scala grafica

Legenda

●	prova penetrometrica statica
◂- - - - ▸	stendimento sismico Masw
★	indagine sismica passiva Hvsr

GEO GROUP s.r.l.
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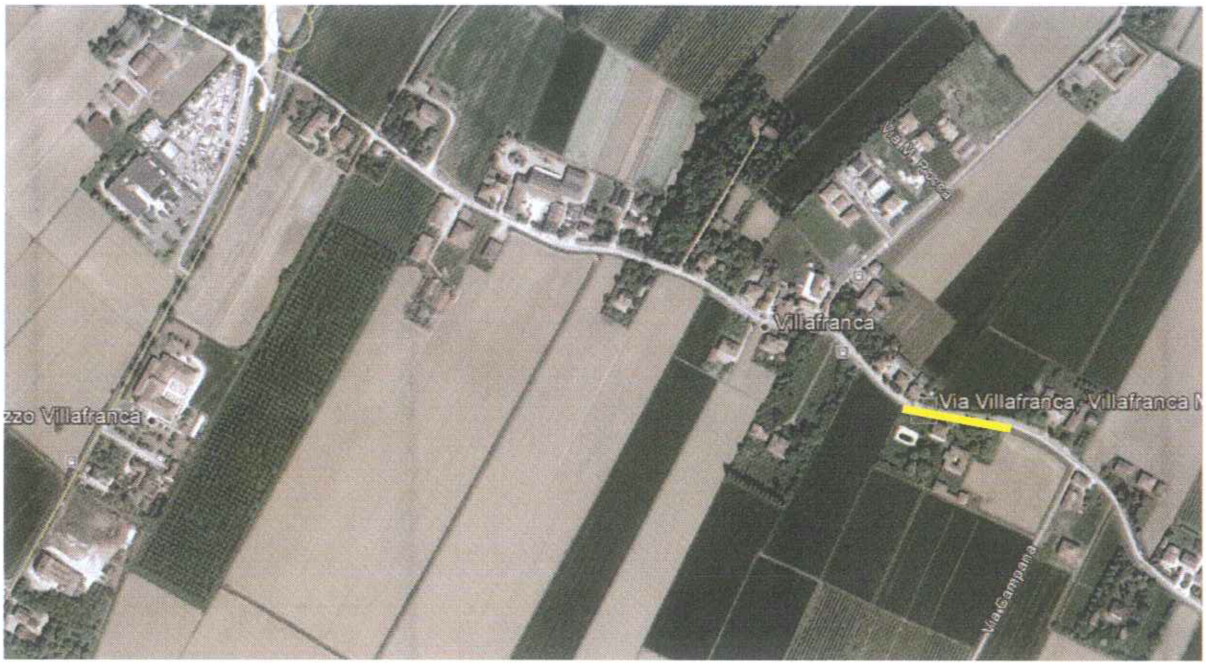
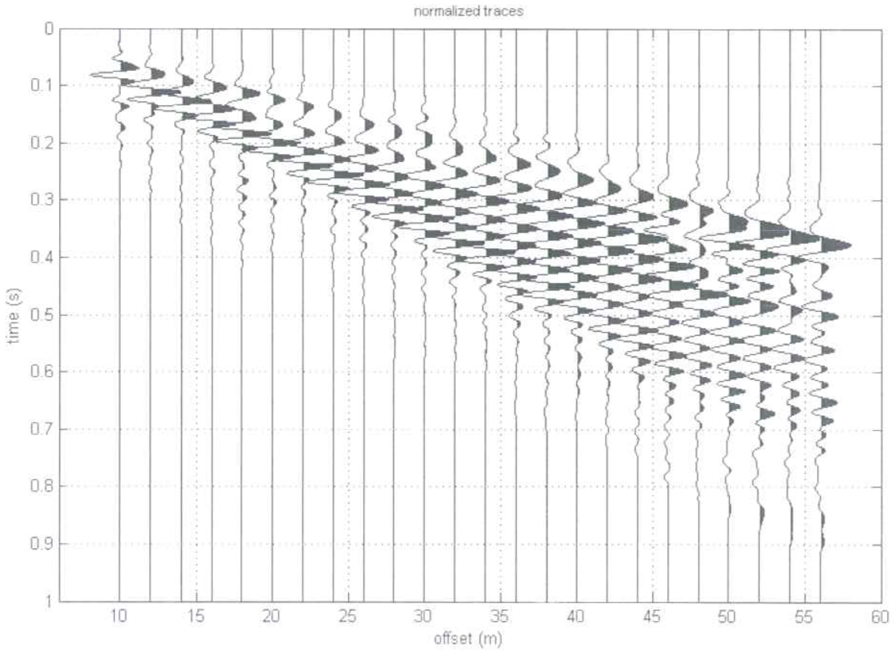
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

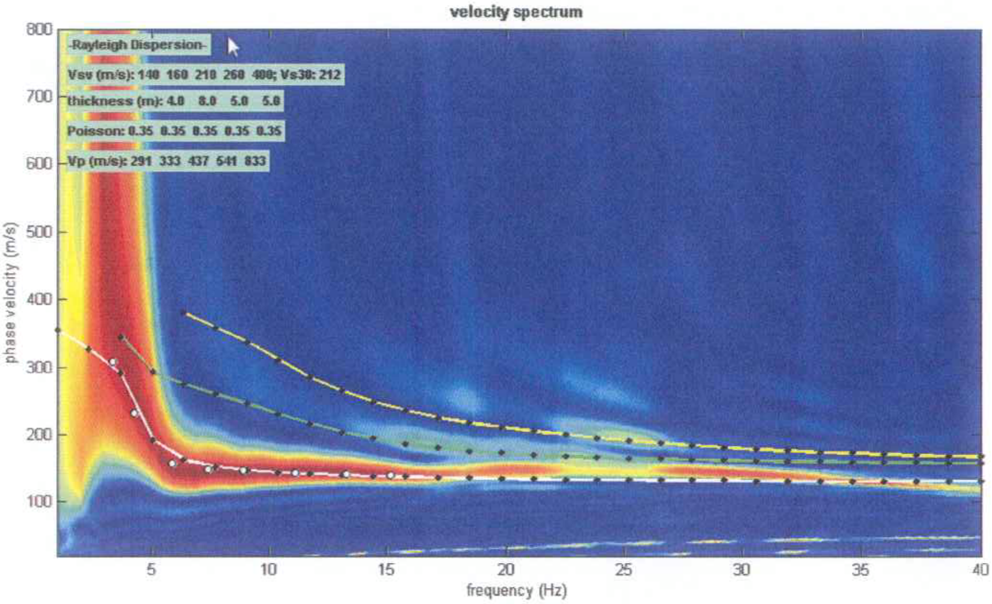
Cantiere:	Medolla (MO), Villafranca
Operatori:	Dott. Gabriele Ghirardini
Data:	04/03/13
Lavoro:	Studio del terreno di fondazione
Elaborazione:	Geol. Monica Mazzoli
Responsabile:	Dott. Geol. Pier Luigi Dallari

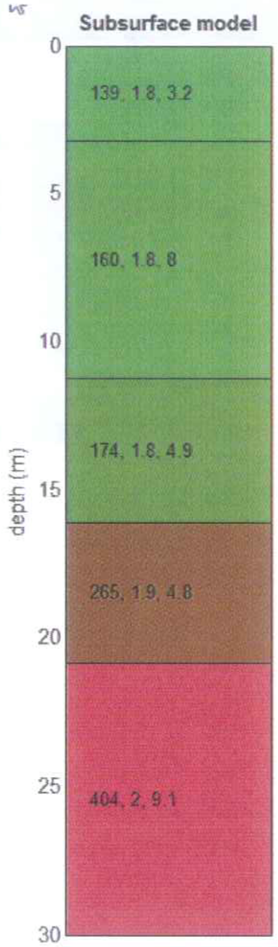
CERTIFICATO: 076_M_13

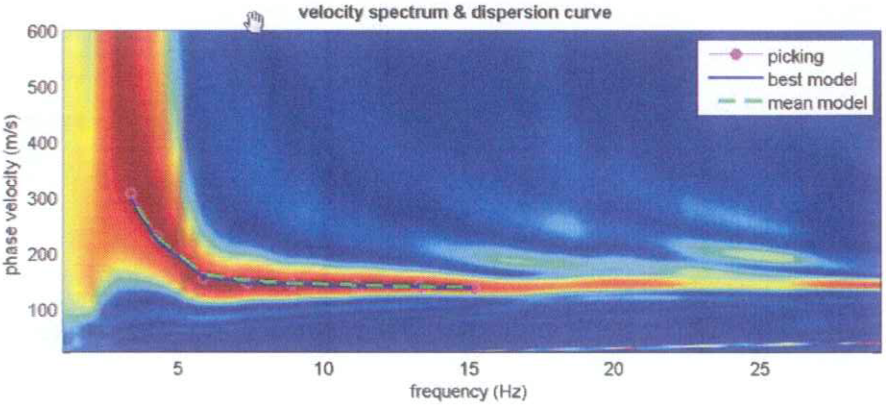


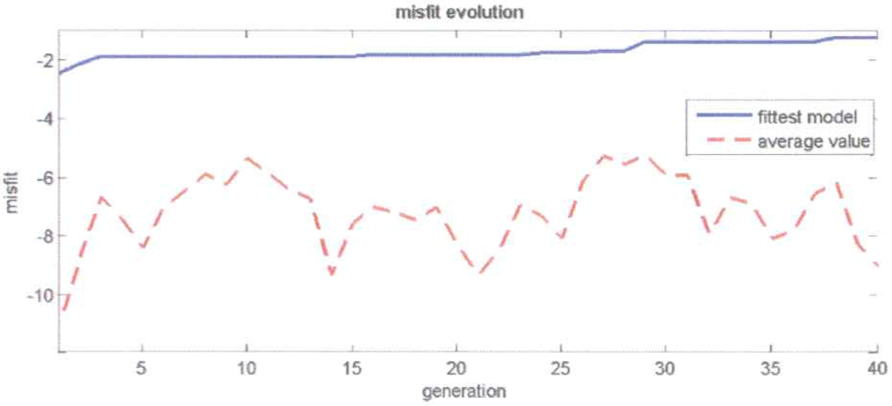
ELABORAZIONE







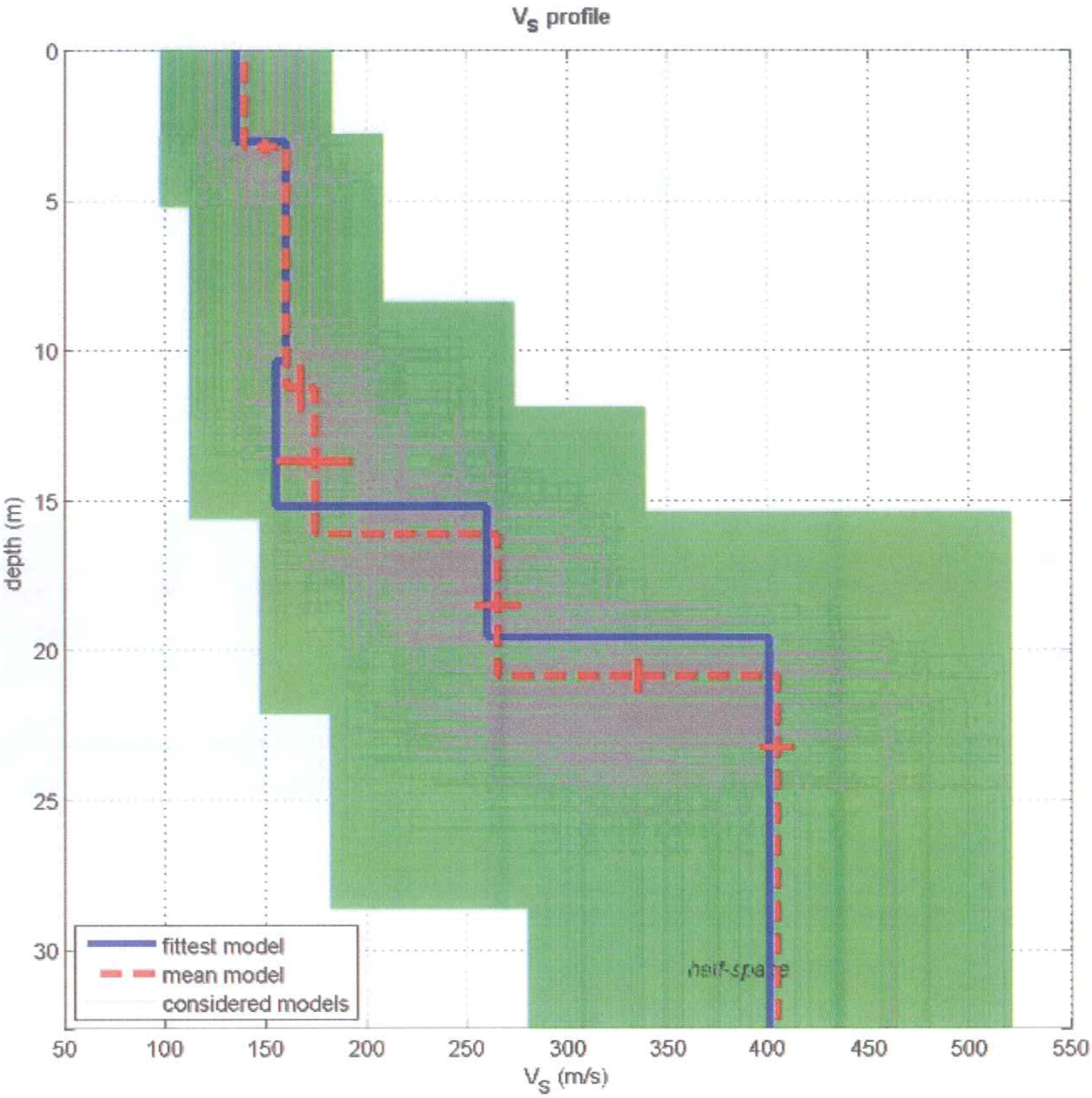




V_S (m/s)	density (gr/cm^3)	thickness (m)

[MODELLO FINALE]

V_{S30} = 211 m/s



dataset: 173.dat

dispersion curve: p1.cdp

Vs30 (best model): 211 m/s

Vs30 (mean model): 212 m/s

GEO GROUP s.r.l.
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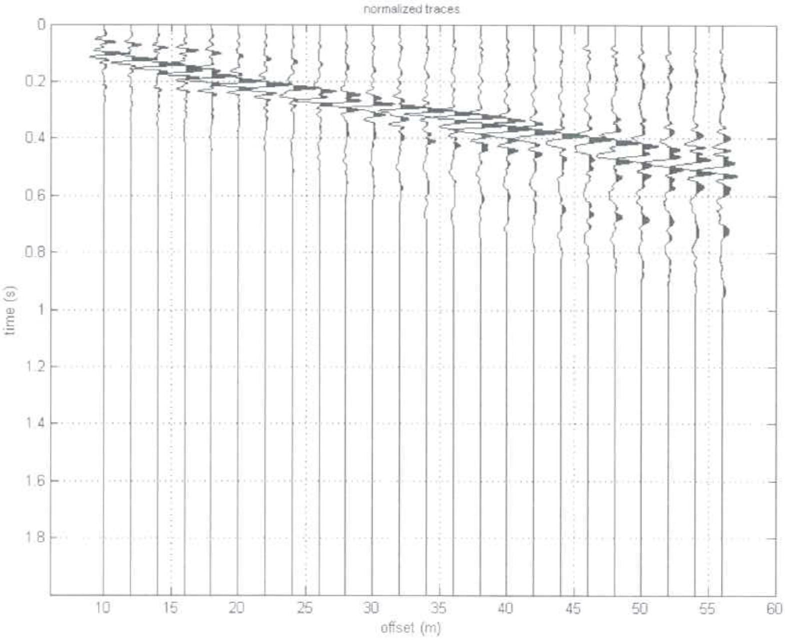
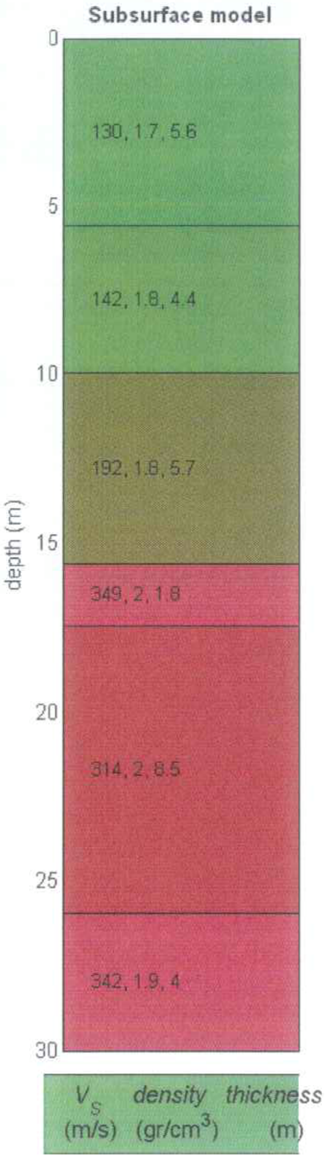
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

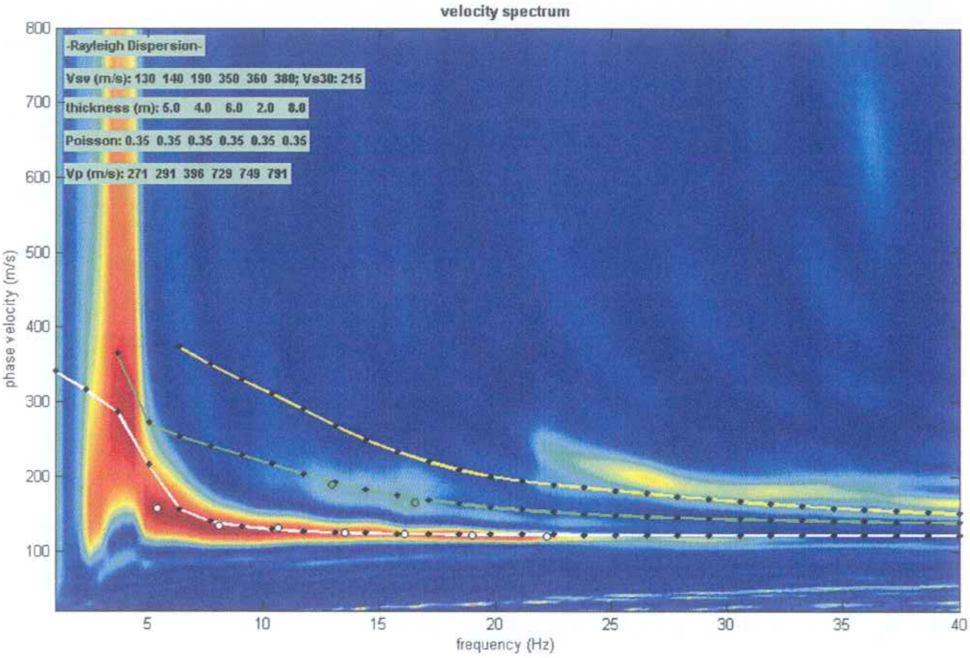
Cantiere:	Medolla (MO), Strada Statale S.S. n°12, civ. 133
Operatori:	Dott. Gabriele Ghirardini
Data:	12/03/13
Lavoro:	Studio del terreno di fondazione
Elaborazione:	Geol. Monica Mazzoli
Responsabile:	Dott. Geol. Pier Luigi Dallari

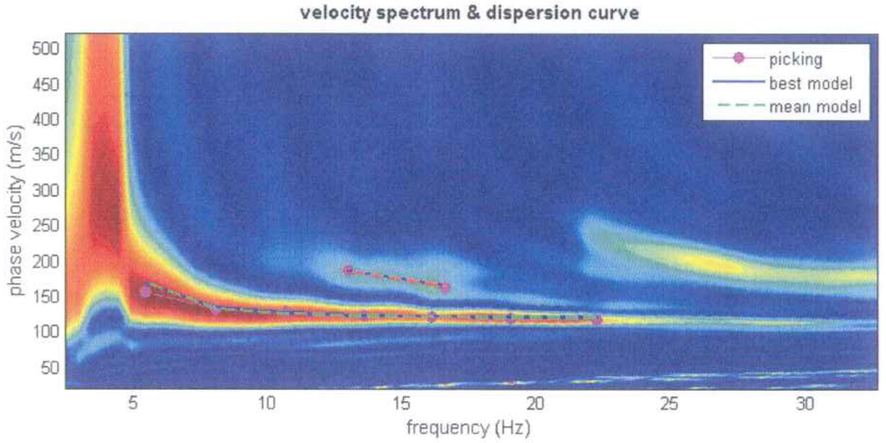
CERTIFICATO: 082_M_13

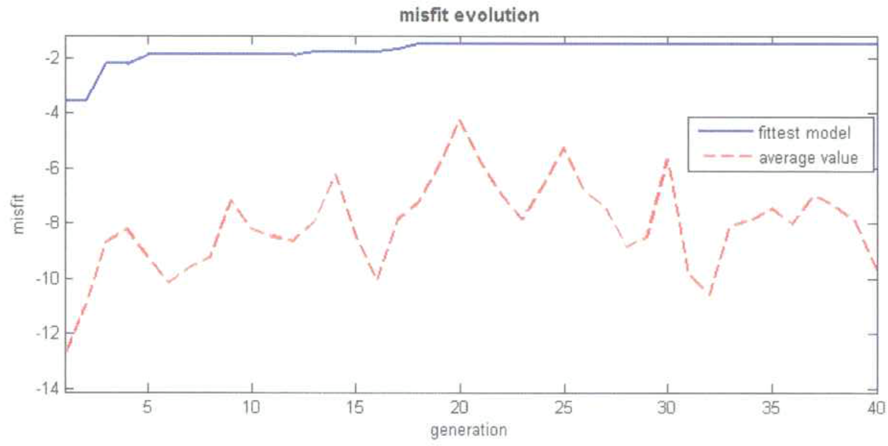
ELABORAZIONE




Subsurface model
depth (m)
0
5
10
15
20
25
30
130, 1.7, 5.6
142, 1.8, 4.4
192, 1.8, 5.7
349, 2, 1.8
314, 2, 8.5
342, 1.9, 4
V_S (m/s)
density (gr/cm^3)
thickness (m)

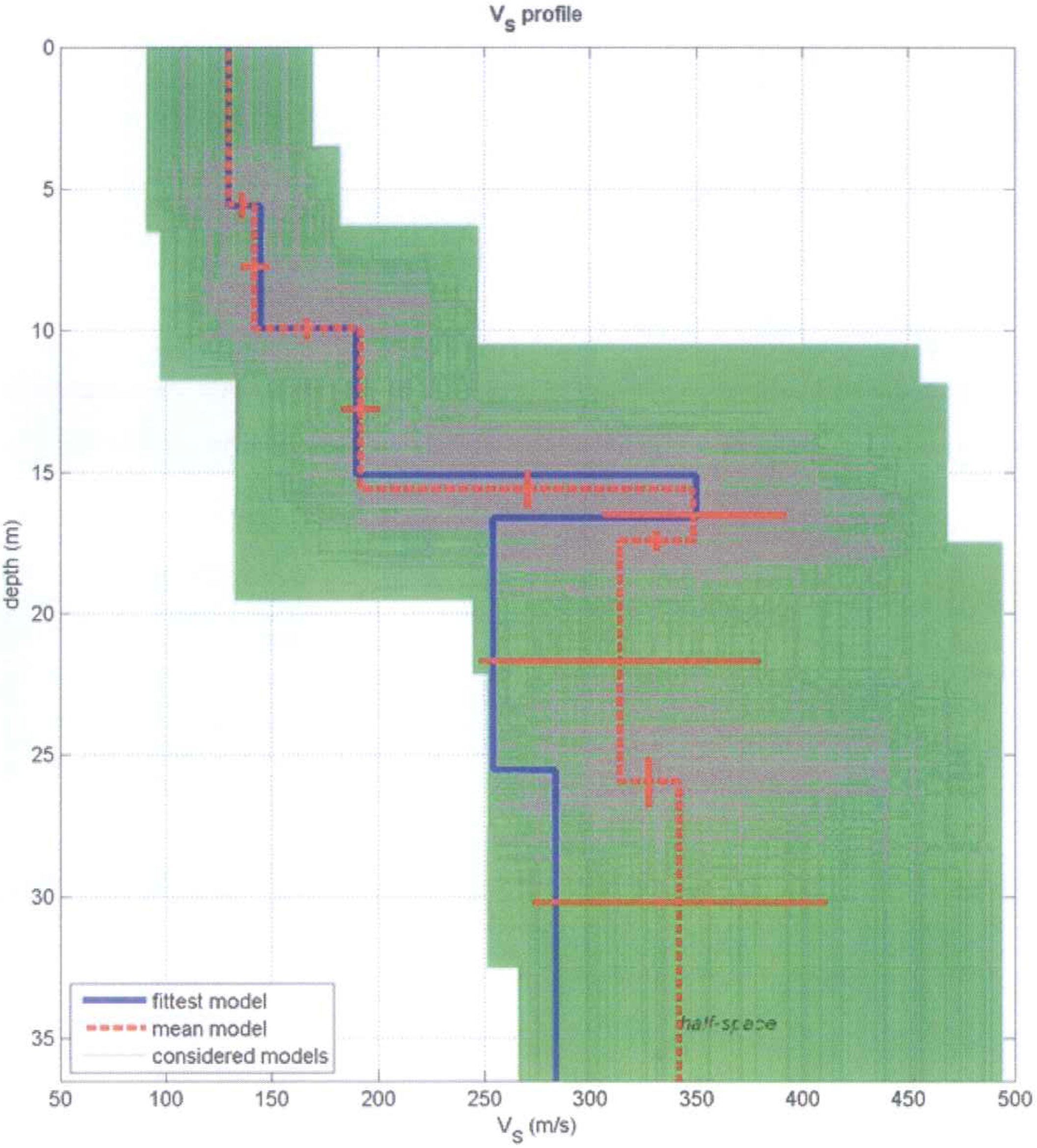

velocity spectrum
-Rayleigh Dispersion-
Vsv (m/s): 130 140 190 350 360 380; Vs30: 215
thickness (m): 5.0 4.0 6.0 2.0 8.0
Poisson: 0.35 0.35 0.35 0.35 0.35 0.35
Vp (m/s): 271 291 396 729 749 791
phase velocity (m/s)
800
700
600
500
400
300
200
100
5
10
15
20
25
30
35
40
frequency (Hz)


velocity spectrum & dispersion curve
picking
best model
mean model
phase velocity (m/s)
500
450
400
350
300
250
200
150
100
50
5
10
15
20
25
30
frequency (Hz)


misfit evolution
fittest model
average value
misfit
-2
-4
-6
-8
-10
-12
-14
5
10
15
20
25
30
35
40
generation

[MODELLO FINALE]

Vs_{30} = 193 m/s



dataset: 55.dat

dispersion curve: p1.cdp

Vs30 (best model): 193 m/s

Vs30 (mean model): 204 m/s

GEO GROUP s.r.l.

Indagini geognostiche, geofisiche e consulenze geologiche e geotecniche

182, via C. Costa 41100 Modena - Tel. 059/3967169 - Fax. 059/5332019- E-mail: geo.group@libero.it

Tav. n. 5 - “Ubicazione indagini geognostiche”

Scala grafica

N

⬚ Area di interesse

★ Indagine sismica passiva HVSR

↔ Indagine sismica a rifrazione MASW

● Prova penetrometrica statica CPT

GEO GROUP s.r.l.
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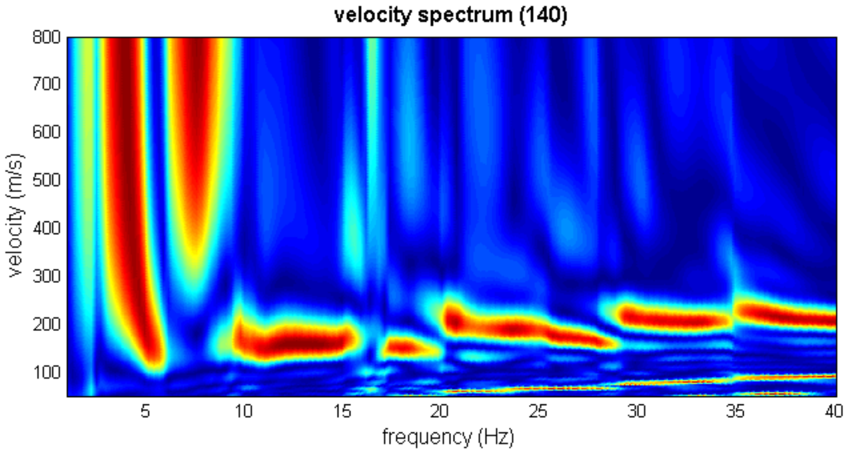
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

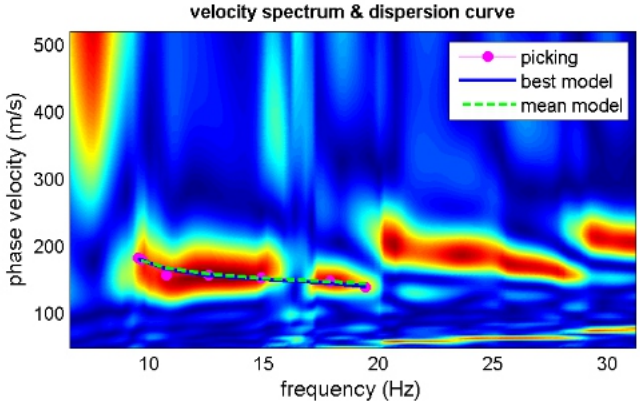
Cantiere: Medolla, Via Sparato
Operatori :Dott. Alessandro Uguzzoni e Dott.ssa Lisa Gasparini
Lavoro: Studio del terreno di fondazione
Data: 14/03/19
Responsabile: Dott. Geol. Pier Luigi Dallari

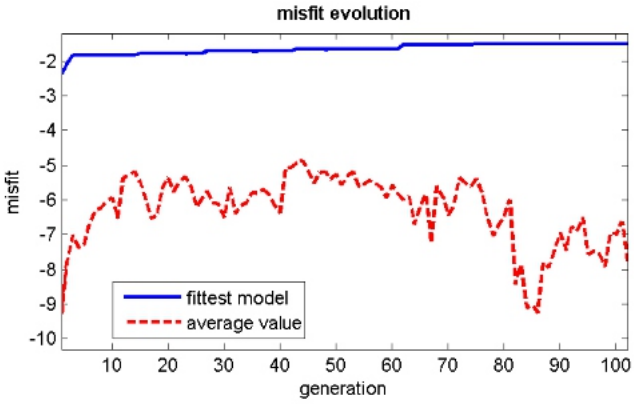
MASW_1
Rif. 163/19

UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO

SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE

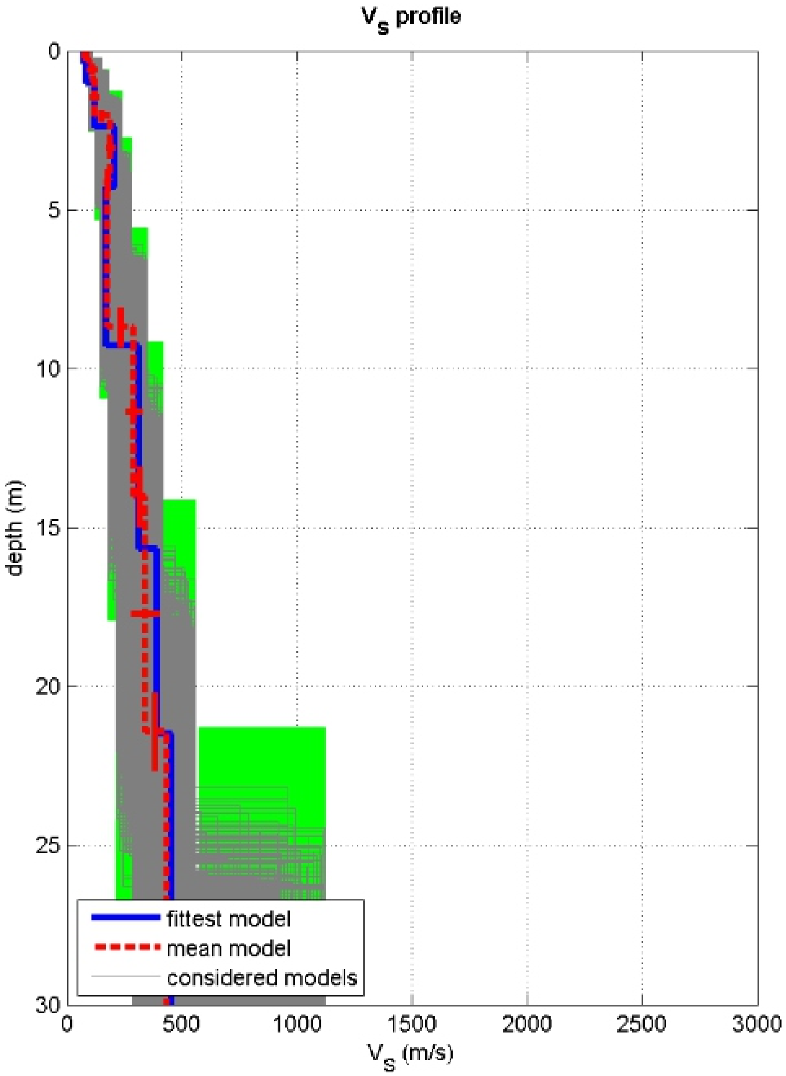

velocity spectrum (140)


velocity spectrum & dispersion curve


misfit evolution

www.winmasw.com

MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA



dataset: 140.dat

dispersion curve: pick.cdp

Vs30 (best model): 258 m/s

Vs30 (mean model): 259 m/s

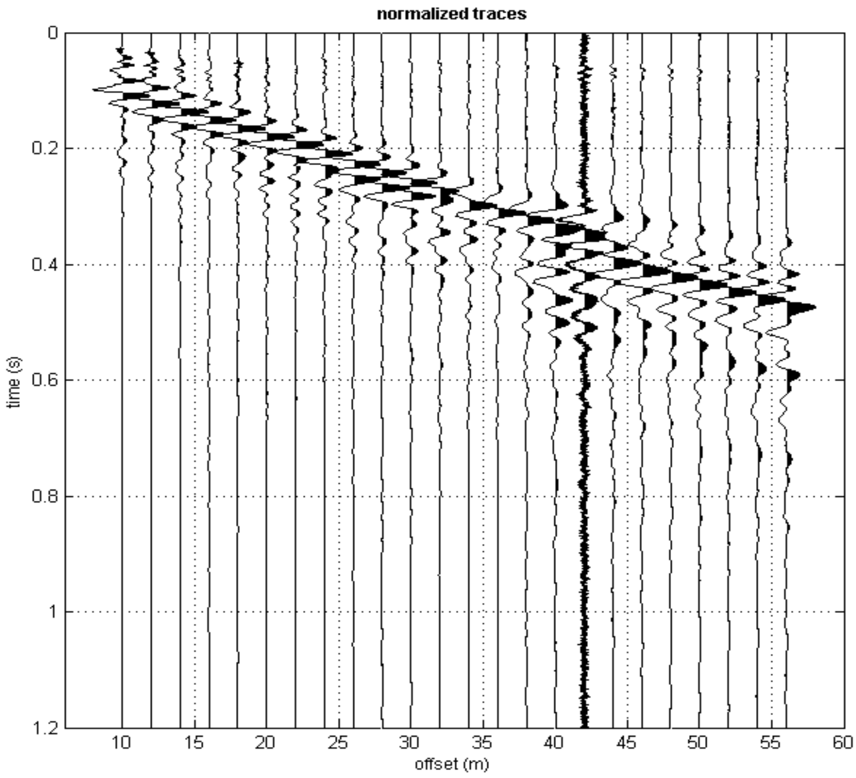
BEST MODEL
Vs30 = 258 m/s

GEO GROUP s.r.l.
Sede Legale: via C. Costa, 182 – 41124 Modena
Sede operativa: via per Modena, 12 – 41051 Castelnuovo Rangone (MO)
Tel. 059-39.67.169 - Fax . 059-53.32.019
p.IVA e C.F. 02981500362 – www.geogroupmodena.it - e-mail: info@geogroupmodena.it

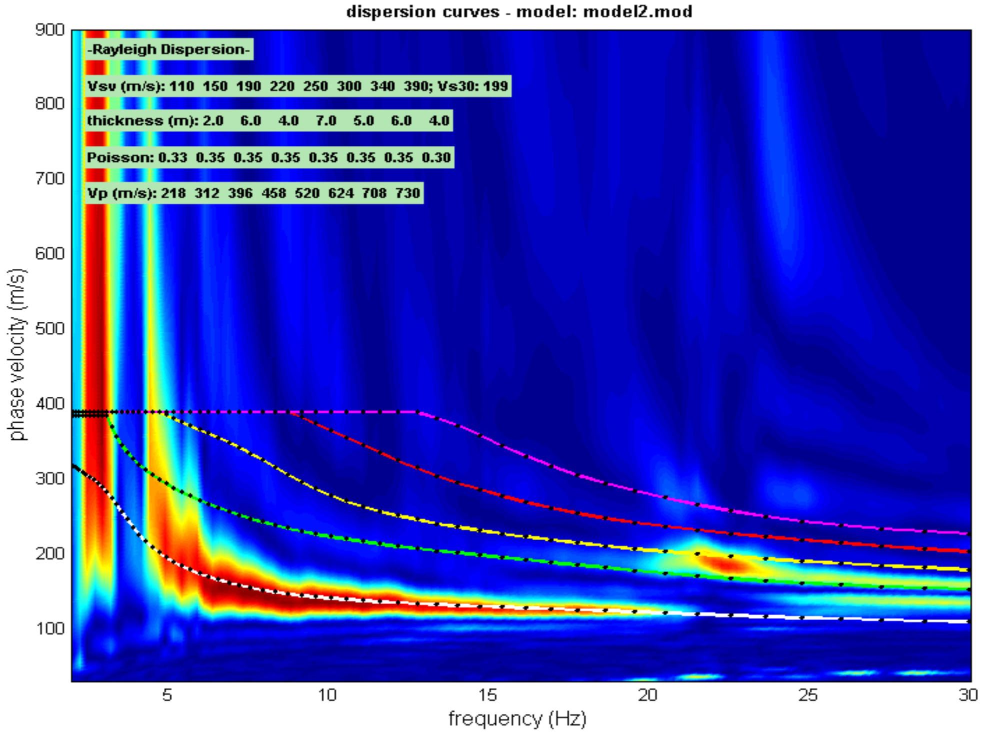
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

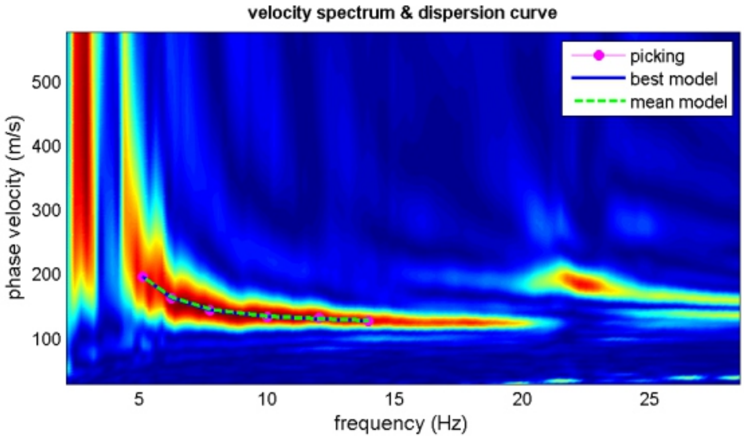
Cantiere: Medolla (MO), Via Statale
Operatore: Dott.ssa Erika Parmeggiani, Dott. Luca Pattuzzi
Data: 06/03/2015
Lavoro: Studio del terreno di fondazione
Elaborazione: Dott. ssa Erika Parmeggiani
Responsabile: Dott. Geol. Pier Luigi Dallari

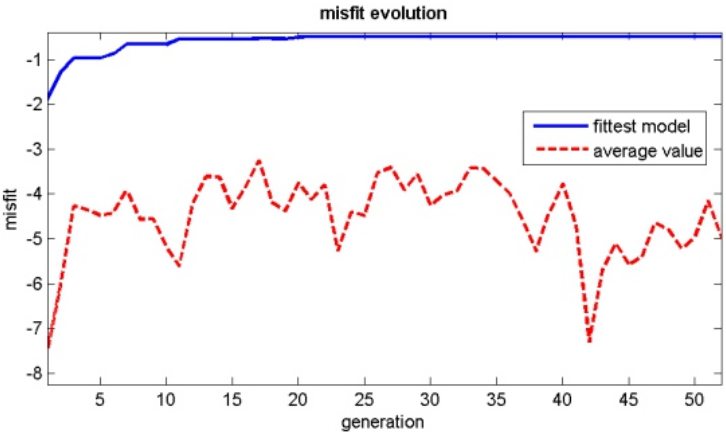
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



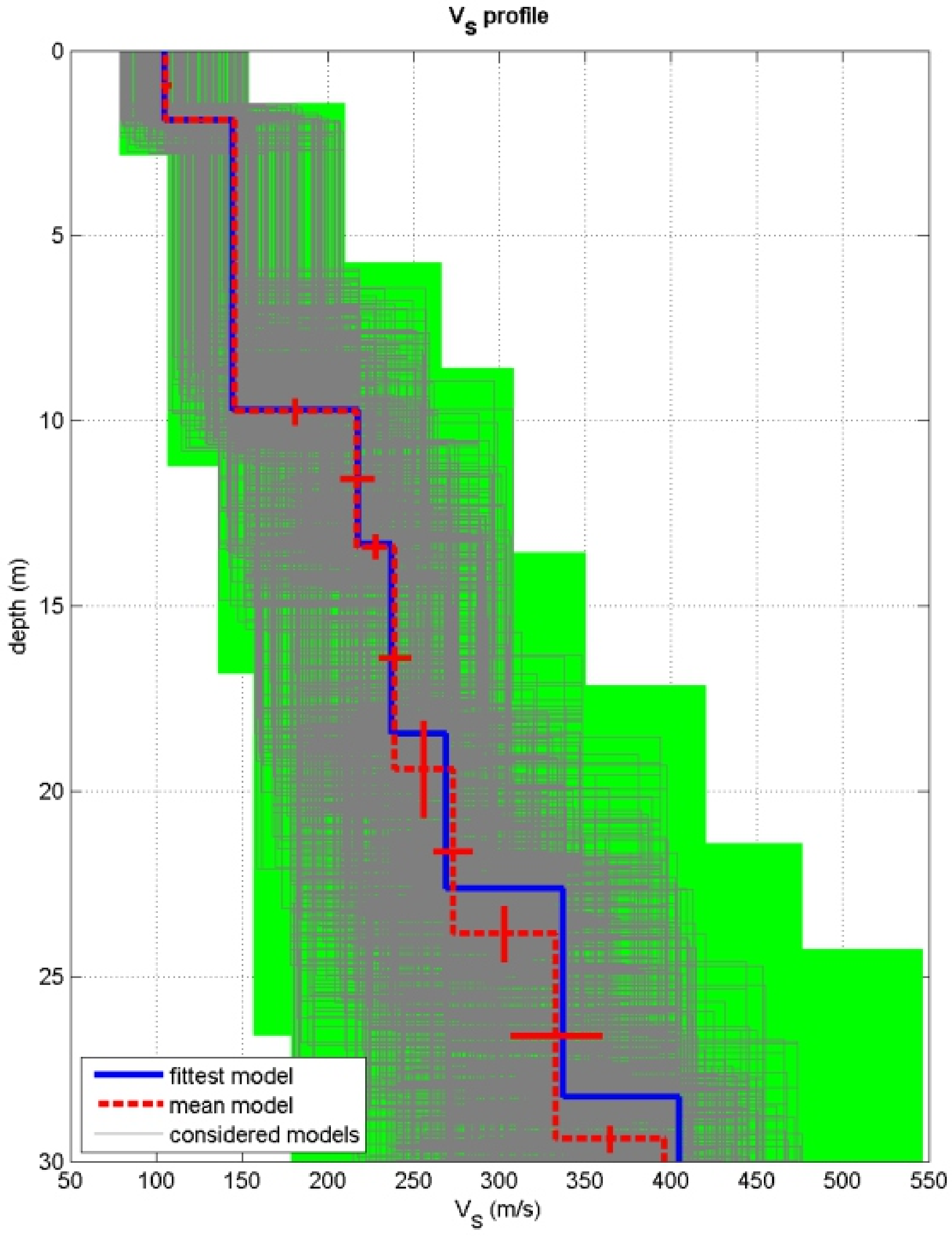
SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE







MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA



BEST MODEL

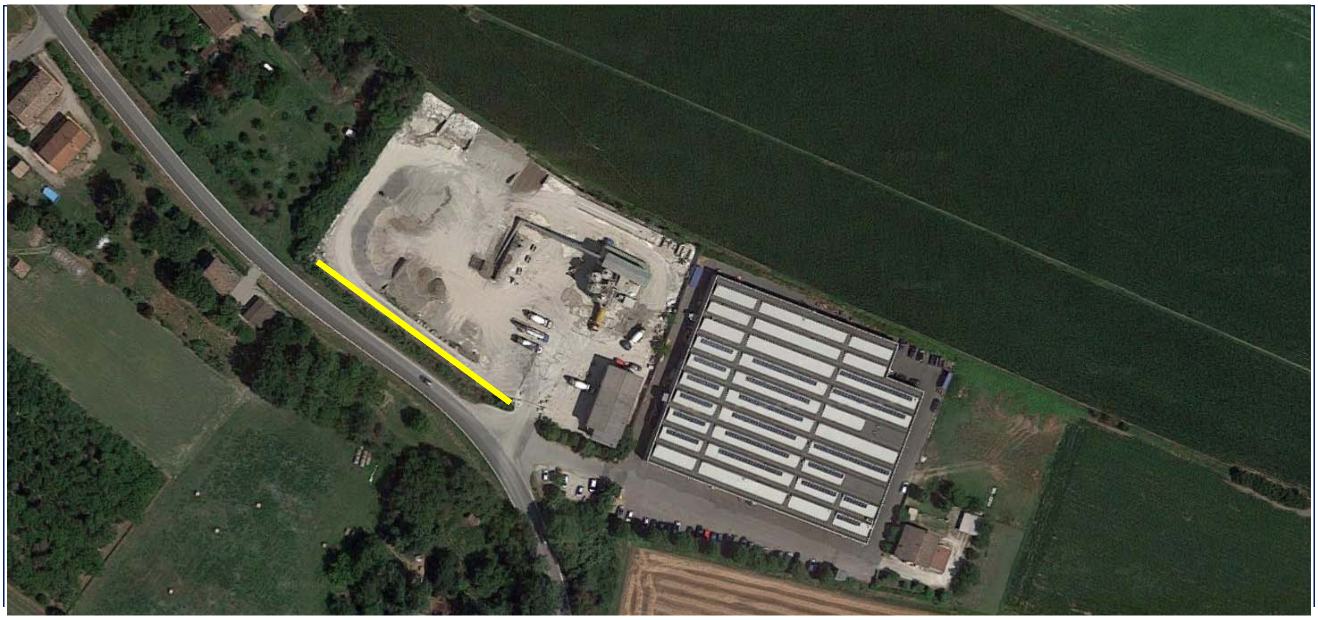
Vs30 = 205 m/s

GEO GROUP s.r.l.
Sede legale: Via C. Costa, 182 - 41123 MODENA
Sede operativa: via Per Modena, 12 – 41051 Castelnuovo Rangone (MO)
Tel. 059/3967169 Fax. 059/5332019
E-mail: info@geogroupmodena.it
P.IVA e C.F. 02981500362
www.geogroupmodena.it

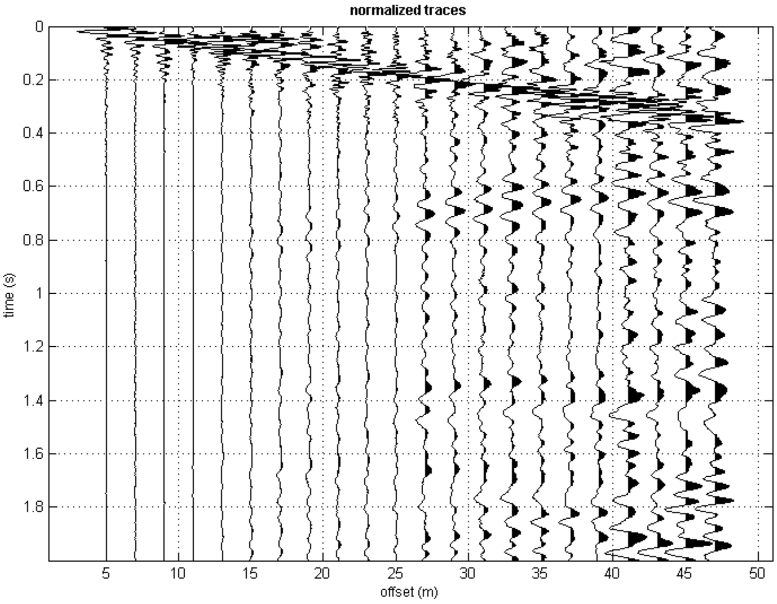
ANALISI SISMICA DI SITO SECONDO METODOLOGIA MASW

Cantiere: Strada Statale 12, n. 1, Medolla (MO)
Data: 28/03/2018
Lavoro: studio del terreno di fondazione
Responsabile: Dott. Geol. Pier Luigi Dallari

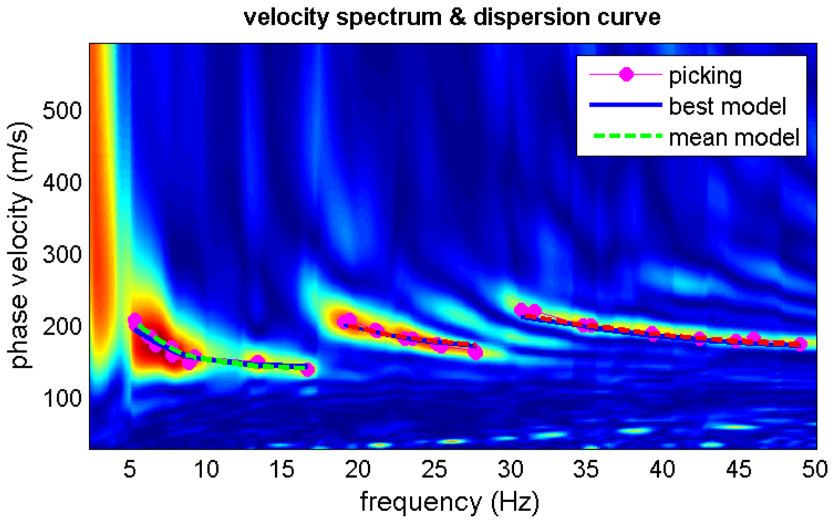
RIF. MASW 165/18

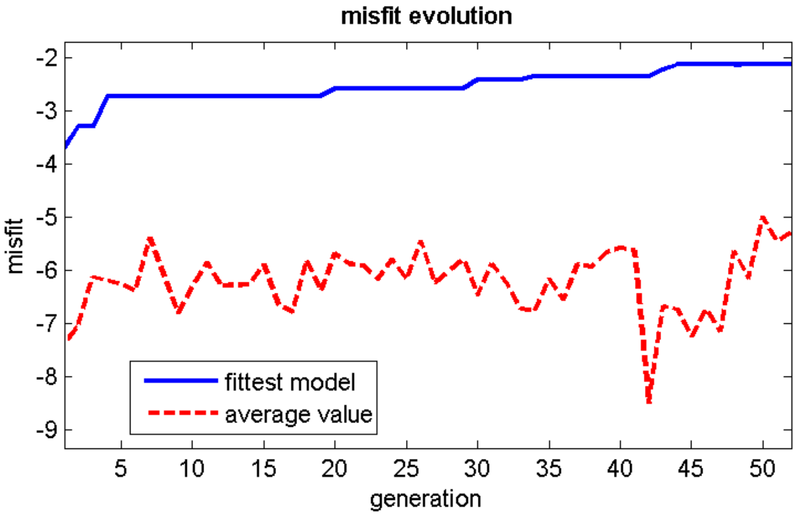


UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO

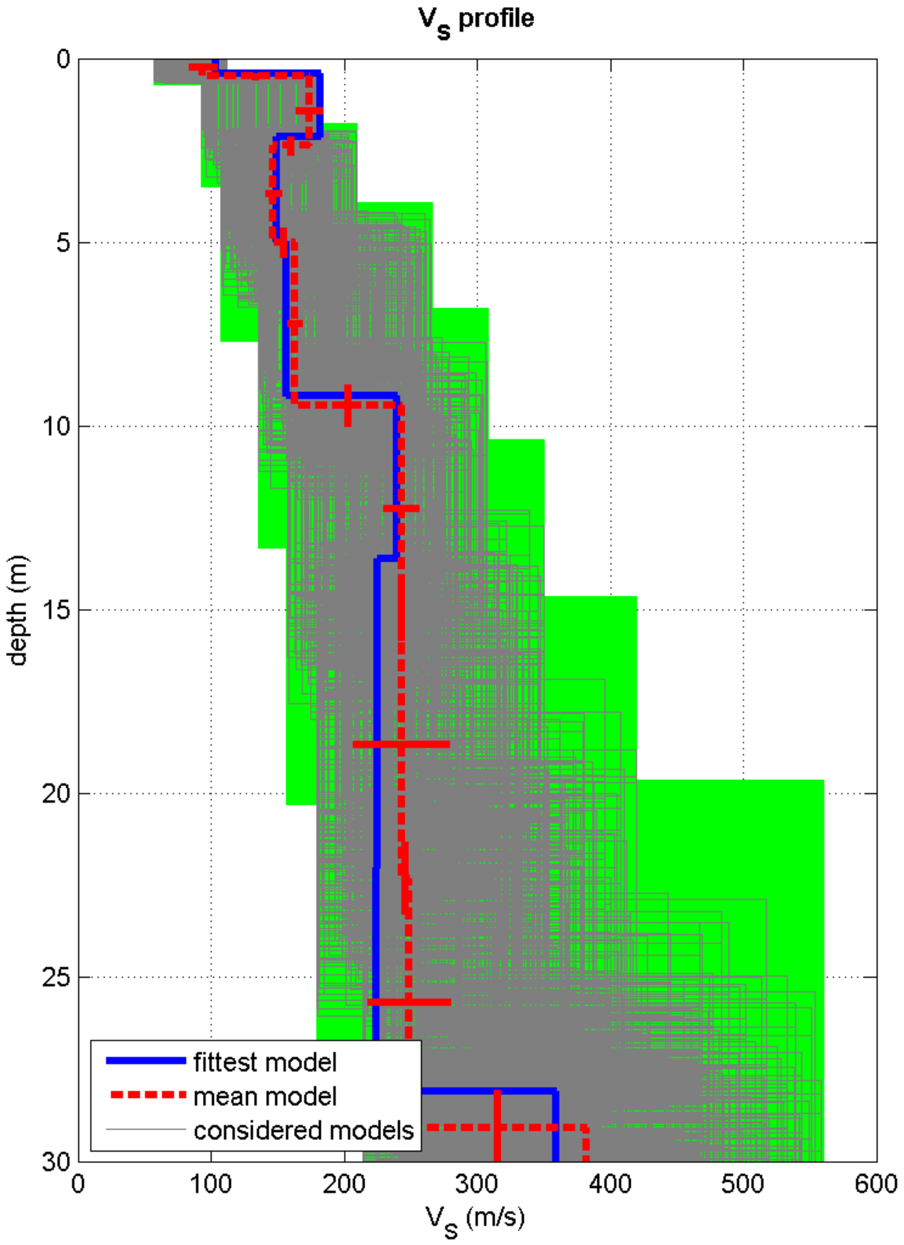


SPETTRO RELATIVO ALLE VELOCITÁ DI FASE REGISTRATE NEL DOMINIO DELLE FREQUENZE


velocity spectrum & dispersion curve


misfit evolution

MODELLO V_S30 DERIVATO DALL'INDAGINE MASW ESEGUITA



dataset: sommaFVS.mat

dispersion curve: picking.cdp

Vs30 (best model): 203 m/s

Vs30 (mean model): 209 m/s

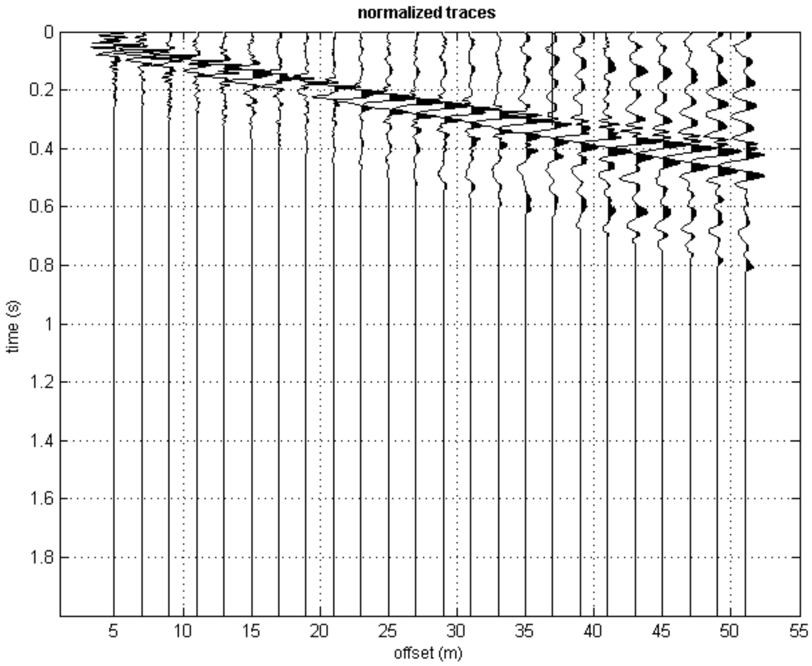
BEST MODEL
V_S30 = 203 m/s

GEO GROUP s.r.l.
Sede Legale: via C. Costa, 182 – 41124 Modena
Sede operativa: via per Modena, 12 – 41051 Castelnuovo Rangone (MO)
Tel. 059-39.67.169 - Fax . 059-53.32.019
p.IVA e C.F. 02981500362 – www.geogroupmodena.it - e-mail: info@geogroupmodena.it

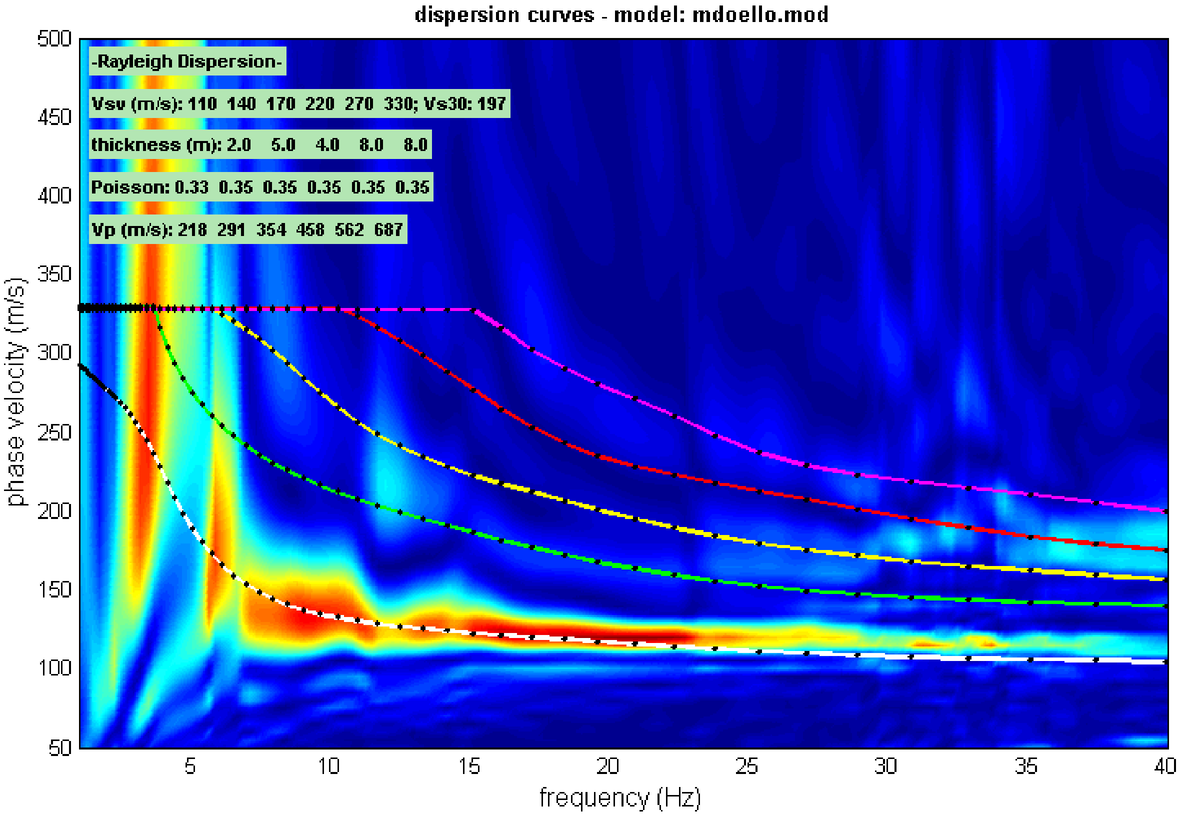
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

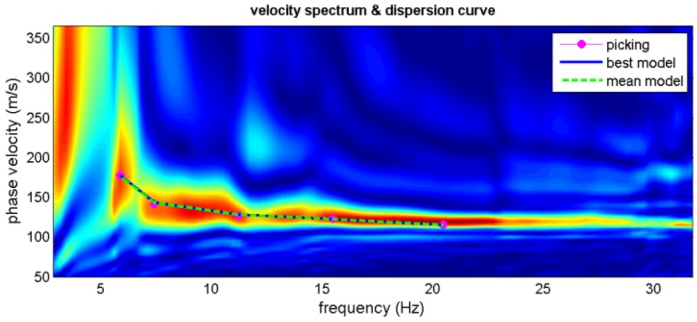
Cantiere:	Medolla (MO), Via Villafranca n.50-52-54
Operatore:	Dott.ssa Linda Veratti, Dott.ssa Domitilla Santi
Data:	05/04/2016
Lavoro:	Studio del terreno di fondazione
Elaborazione:	Dott. Luca Pattuzzi
Responsabile:	Dott. Geol. Pier Luigi Dallari

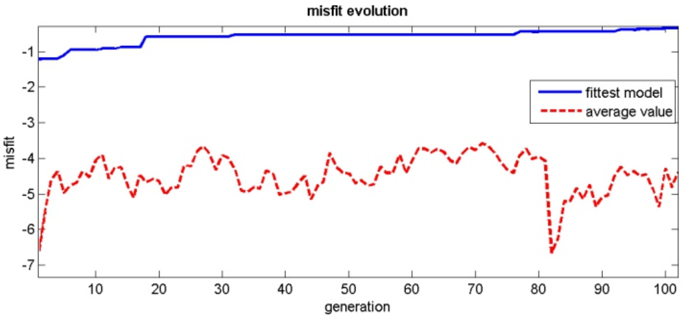
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



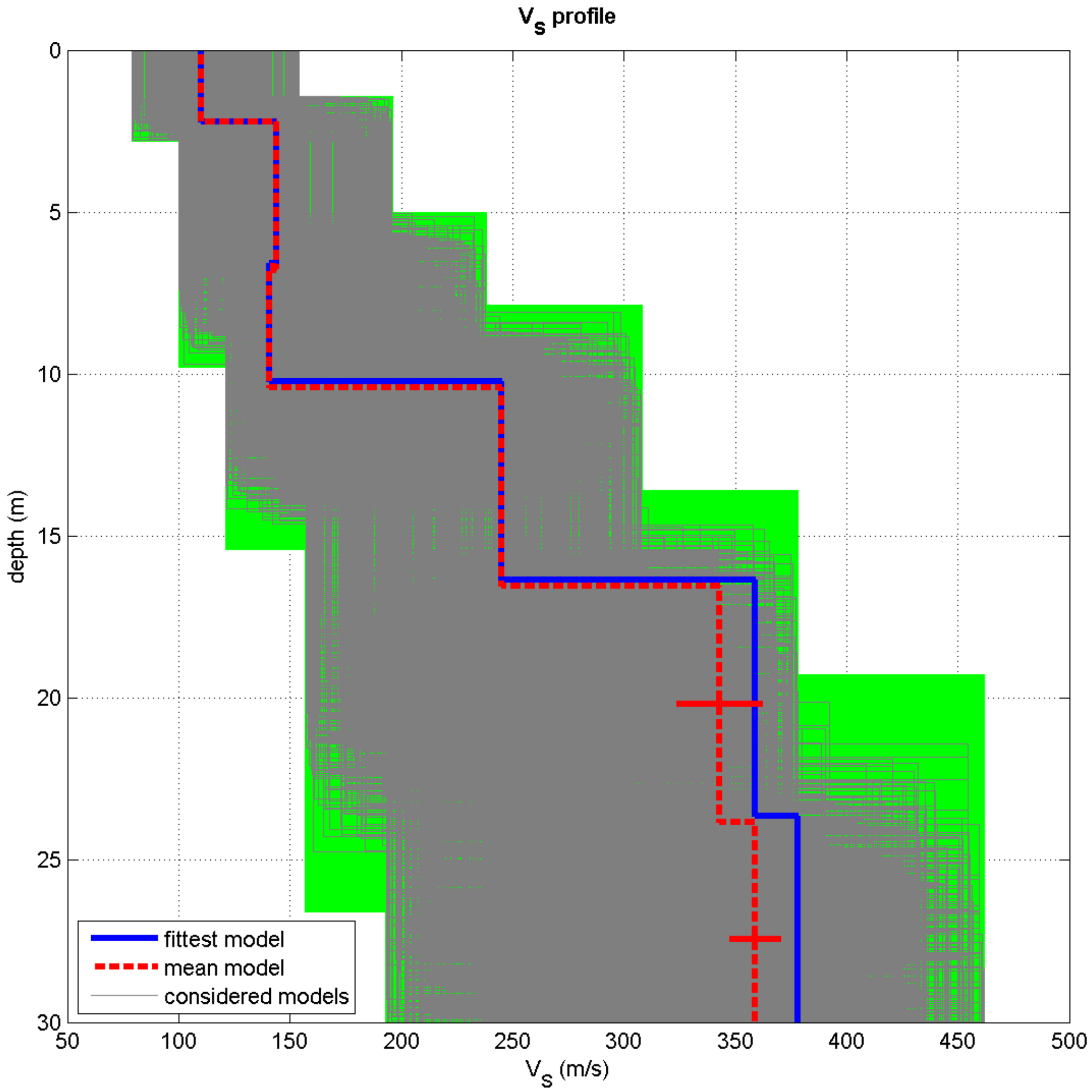
SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE


dispersion curves - model: mdoello.mod


velocity spectrum & dispersion curve


misfit evolution

MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA



dataset: 1083.dat

dispersion curve: pick.cdp

Vs30 (best model): 217 m/s

Vs30 (mean model): 213 m/s

half-space

BEST MODEL
Vs30 = 217 m/s

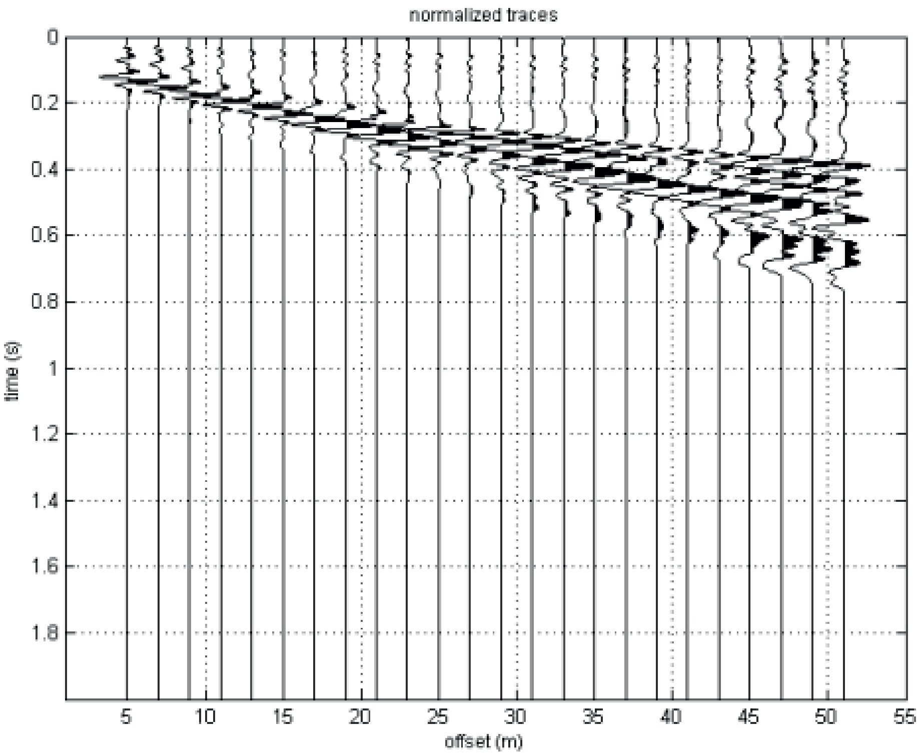
GEO GROUP s.r.l.
Sede Legale: via C. Costa, 182 – 41124 Modena
Sede operativa: via per Modena, 12 – 41051 Castelnuovo Rangone (MO)
Tel. 059-39.67.169 - Fax . 059-53.32.019
p.IVA e C.F. 02981500362 – www.geogroupmodena.it - e-mail: info@geogroupmodena.it

ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

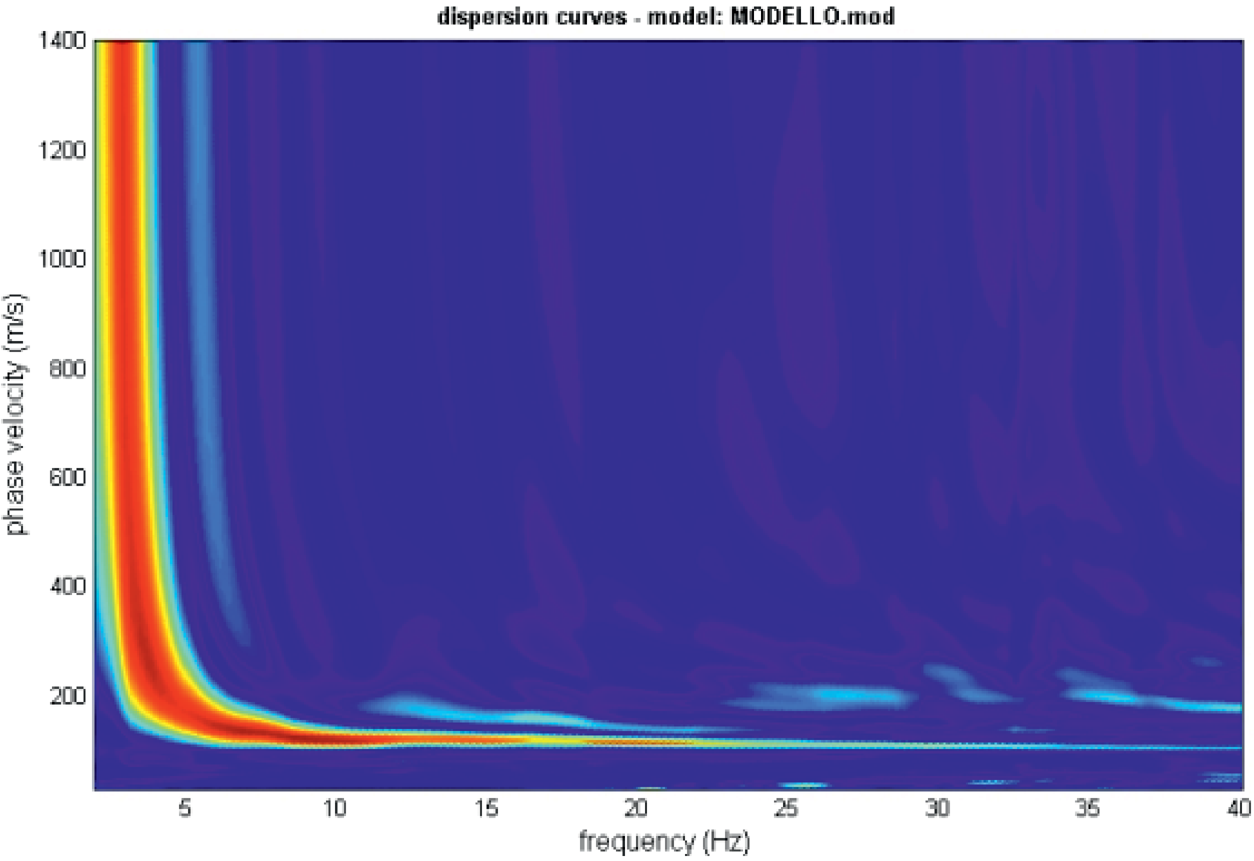
Cantiere: Medolla, via Bosco, n° 8
Operatori: Dott. Luca Pattuzzi
Data: 26/03/2015
Lavoro: Studio terreno di fondazione
Elaborazione: D.ssa Sonia Gilioli
Responsabile: Dott. Geol. Pier Luigi Dallari

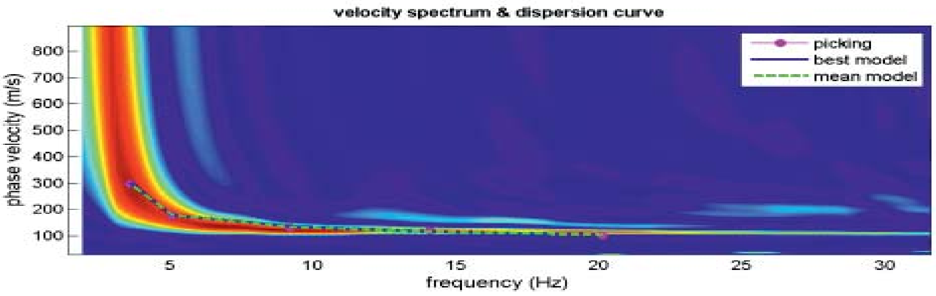
RIFERIMENTO
Rif. 201/15

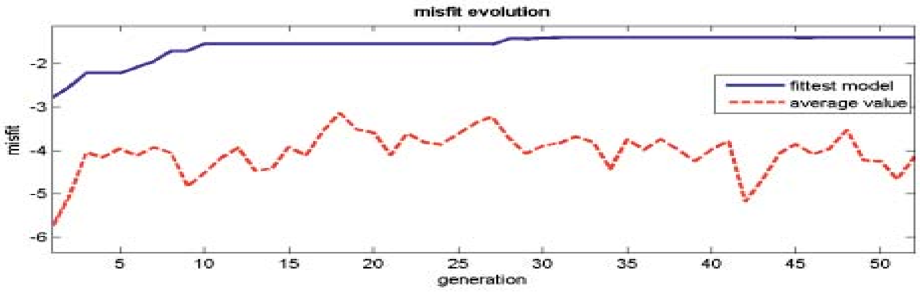
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE







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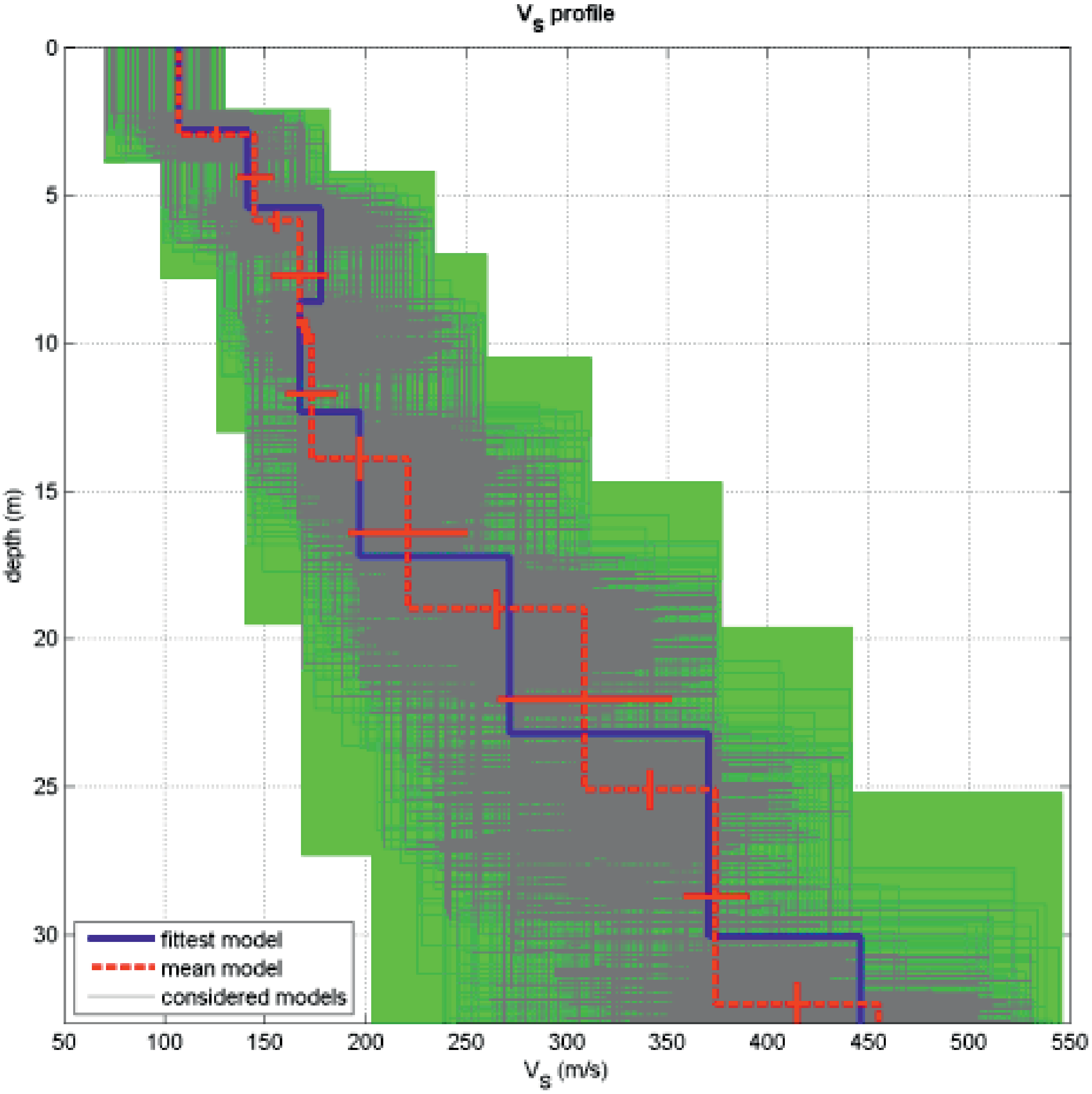
MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA



dataset: 514.dat

dispersion curve: pick.cdp

Vs30 (best model): 200 m/s

Vs30 (mean model): 199 m/s

BEST MODEL
Vs30 = 200 m/s

GEO GROUP s.r.l.
Indagini geognostiche, geofisiche e consulenze geologiche e geotecniche
182, via C. Costa 41100 Modena - Tel. 059/3967169 - Fax. 059/5332019- E-mail: geo.group@libero.it

Tav. n. 5 “Indagini geognostiche”

Scala grafica

Legenda

●	prova penetrometrica statica CPT
★	indagine sismica HVSR
↔	indagine sismica MASW

GEO GROUP S.R.L.
via Cesare Costa, 182 - 41100 Modena

PROVA PENETROMETRICA STATICA MECCANICA
LETTURE CAMPAGNA E VALORI TRASFORMATI

CPT	**1**
riferimento	**185-2013**
certificato n°	4311

Committente: **Studio tecnico**
Cantiere: **Studio terreno di fondazione**
Località: **Medolla, via Imperiale 26**

U.M.: **MPa**
Pagina: **1/4**
Elaborato:

Data esec.: 10/05/2013
Data certificato: 13/05/2013
Falda: -1.40 m da p.c.

H m	L1 -	L2 -	Lt -	qc MPa	fs kPa	F -	Rf %
0.20	0.00	0.00		0.00	73.00	0	
0.40	15.00	26.00		1.47	40.00	38	2.7
0.60	13.00	19.00		1.27	7.00	186	0.5
0.80	13.00	14.00		1.27	20.00	65	1.5
1.00	15.00	18.00		1.47	33.00	45	2.2
1.20	14.00	19.00		1.37	7.00	200	0.5
1.40	18.00	19.00		1.76	60.00	30	3.3
1.60	18.00	27.00		1.76	40.00	45	2.2
1.80	19.00	25.00		1.86	40.00	48	2.1
2.00	22.00	28.00		2.16	40.00	55	1.8
2.20	10.00	16.00		0.98	87.00	11	8.7
2.40	23.00	36.00		2.25	33.00	70	1.4
2.60	20.00	25.00		1.96	33.00	61	1.7
2.80	27.00	32.00		2.65	67.00	40	2.5
3.00	9.00	19.00		0.88	40.00	23	4.4
3.20	9.00	15.00		0.88	33.00	27	3.7
3.40	10.00	15.00		0.98	73.00	14	7.3
3.60	5.00	16.00		0.49	33.00	15	6.6
3.80	4.00	9.00		0.39	53.00	8	13.3
4.00	10.00	18.00		0.98	40.00	25	4.0
4.20	7.00	13.00		0.69	40.00	18	5.7
4.40	7.00	13.00		0.69	60.00	12	8.6
4.60	7.00	16.00		0.69	47.00	15	6.7
4.80	7.00	14.00		0.69	47.00	15	6.7
5.00	9.00	16.00		0.88	47.00	19	5.2
5.20	9.00	16.00		0.88	47.00	19	5.2
5.40	7.00	14.00		0.69	33.00	21	4.7
5.60	12.00	17.00		1.18	73.00	16	6.1
5.80	13.00	24.00		1.27	67.00	19	5.2
6.00	16.00	26.00		1.57	93.00	17	5.8
6.20	18.00	32.00		1.76	80.00	23	4.4
6.40	17.00	29.00		1.67	80.00	21	4.7
6.60	15.00	27.00		1.47	80.00	19	5.3
6.80	15.00	27.00		1.47	80.00	19	5.3
7.00	14.00	26.00		1.37	73.00	19	5.2
7.20	11.00	22.00		1.08	60.00	18	5.5
7.40	13.00	22.00		1.27	67.00	19	5.2
7.60	14.00	24.00		1.37	80.00	18	5.7
7.80	20.00	32.00		1.96	107.00	19	5.4
8.00	21.00	37.00		2.06	127.00	17	6.0
8.20	23.00	42.00		2.25	127.00	18	5.5
8.40	21.00	40.00		2.06	153.00	14	7.3
8.60	19.00	42.00		1.86	133.00	14	7.0
8.80	27.00	47.00		2.65	173.00	16	6.4
9.00	28.00	54.00		2.74	147.00	19	5.3
9.20	21.00	43.00		2.06	147.00	14	7.0
9.40	18.00	40.00		1.76	127.00	14	7.1
9.60	26.00	45.00		2.55	120.00	22	4.6
9.80	32.00	50.00		3.14	173.00	18	5.4
10.00	26.00	52.00		2.55	133.00	20	5.1
10.20	20.00	40.00		1.96	113.00	18	5.7
10.40	36.00	53.00		3.53	107.00	34	3.0
10.60	25.00	41.00		2.45	87.00	29	3.5
10.80	47.00	60.00		4.61	173.00	27	3.7
11.00	38.00	64.00		3.72	100.00	38	2.6
11.20	52.00	67.00		5.10	147.00	35	2.8
11.40	56.00	78.00		5.49	87.00	64	1.6
11.60	62.00	75.00		6.08	67.00	93	1.1
11.80	56.00	66.00		5.49	100.00	56	1.8
12.00	51.00	66.00		5.00	100.00	51	2.0
12.20	51.00	66.00		5.00	193.00	26	3.8
12.40	47.00	76.00		4.61	53.00	89	1.1
12.60	58.00	66.00		5.68	140.00	41	2.4
12.80	61.00	82.00		5.98	107.00	57	1.8
13.00	137.00	153.00		13.43	133.00	103	1.0
13.20	58.00	78.00		5.68	307.00	19	5.3
13.40	86.00	132.00		8.43	213.00	40	2.5
13.60	146.00	178.00		14.31	193.00	76	1.3
13.80	134.00	163.00		13.13	180.00	74	1.3
14.00	128.00	155.00		12.54	220.00	58	1.7
14.20	107.00	140.00		10.49	267.00	40	2.5
14.40	103.00	143.00		10.09	167.00	62	1.6
14.60	119.00	144.00		11.66	200.00	60	1.7
14.80	148.00	178.00		14.50	227.00	65	1.5
15.00	140.00	174.00		13.72	247.00	57	1.8
15.20	141.00	178.00		13.82	213.00	66	1.5
15.40	90.00	122.00		8.82	93.00	97	1.0
15.60	112.00	126.00		10.98	213.00	53	1.9
15.80	136.00	168.00		13.33	207.00	66	1.5
16.00	32.00	63.00		3.14	193.00	17	6.0
16.20	134.00	163.00		13.13	227.00	59	1.7
16.40	128.00	162.00		12.54	240.00	53	1.9
16.60	142.00	178.00		13.92	220.00	65	1.5
16.80	145.00	178.00		14.21	293.00	49	2.0
17.00	120.00	164.00		11.76	227.00	53	1.9
17.20	134.00	168.00		13.13	253.00	53	1.9
17.40	164.00	202.00		16.07	200.00	82	1.2
17.60	154.00	184.00		15.09	253.00	61	1.6
17.80	145.00	183.00		14.21	240.00	60	1.7
18.00	145.00	181.00		14.21	220.00	66	1.5
18.20	161.00	194.00		15.78	333.00	48	2.1
18.40	158.00	208.00		15.48	240.00	66	1.5
18.60	157.00	193.00		15.39	267.00	59	1.7
18.80	143.00	183.00		14.01	227.00	63	1.6
19.00	148.00	182.00		14.50	287.00	52	1.9
19.20	121.00	164.00		11.86	200.00	61	1.7
19.40	148.00	178.00		14.50	213.00	69	1.4
19.60	216.00	248.00		21.17	220.00	98	1.0
19.80	227.00	260.00		22.25	267.00	85	1.2
20.00	208.00	248.00		20.38			

H = profondità
L1 = prima lettura (punta)
L2 = seconda lettura (punta + laterale)
Lt = terza lettura (totale)
CT =10.00 costante di trasformazione

qc = resistenza di punta
fs = resistenza laterale calcolata 0.20 m sopra quota qc
F = rapporto Begemann (qc / fs)
Rf = rapporto Schmertmann (fs / qc)*100

GEO GROUP S.R.L.
via Cesare Costa, 182 - 41100 Modena

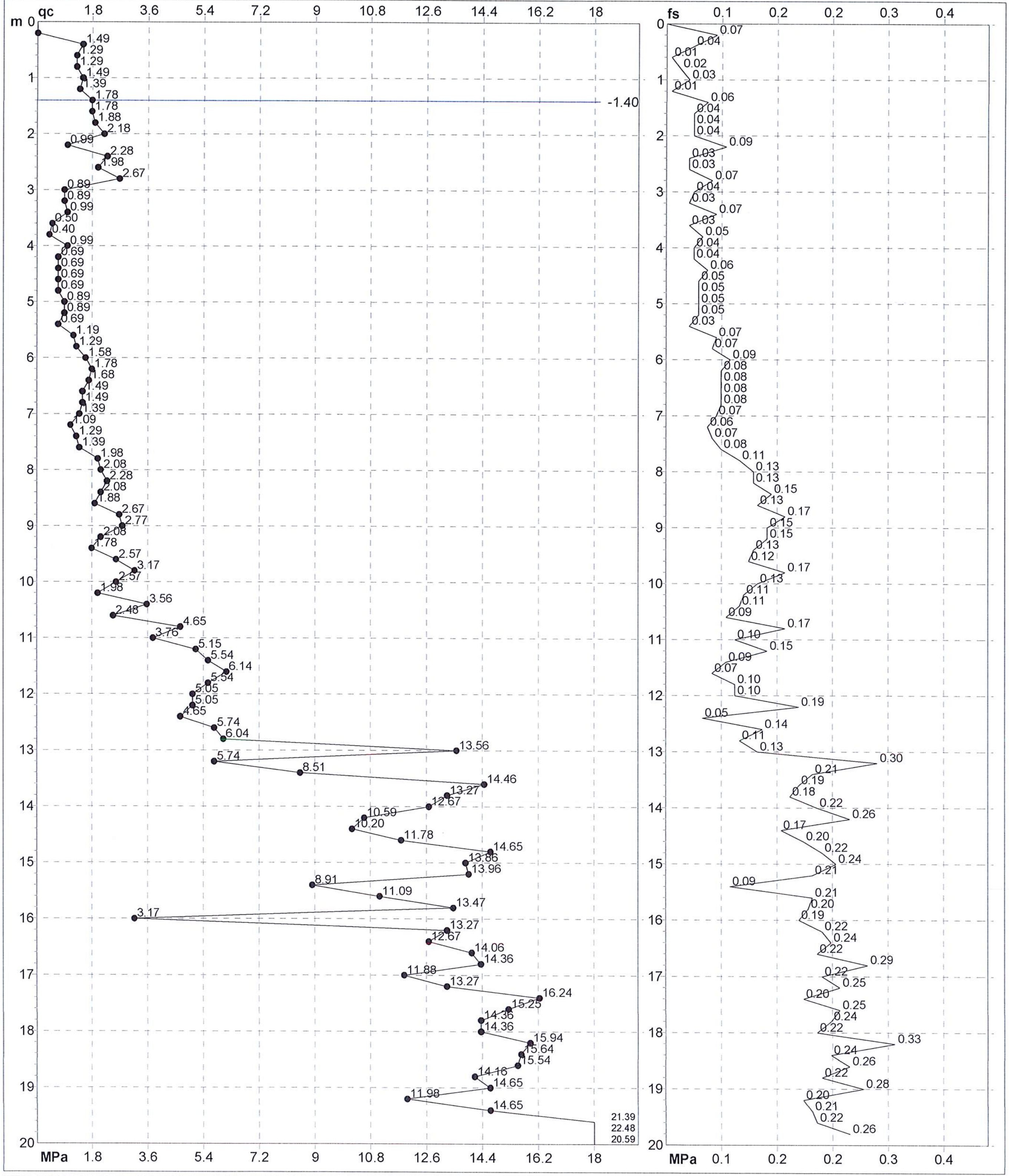
PROVA PENETROMETRICA STATICA MECCANICA
DIAGRAMMI DI RESISTENZA

CPT	**1**
riferimento	**185-2013**
certificato n°	4311

Committente: **Studio tecnico**
Cantiere: **Studio terreno di fondazione**
Località: **Medolla, via Imperiale 26**

U.M.: **MPa**
Scala: 1:100
Pagina: 2/4
Elaborato:

Data esec.: 10/05/2013
Data certificato: 13/05/2013
Quota inizio:
Falda: -1.40 m da p.c.



Penetrometro: TG63-200
Responsabile:
Assistente:

Preforo: m
Corr.astine: kN/ml
Corr.astine: kN/ml

GEO GROUP S.R.L.
via Cesare Costa, 182 - 41100 Modena

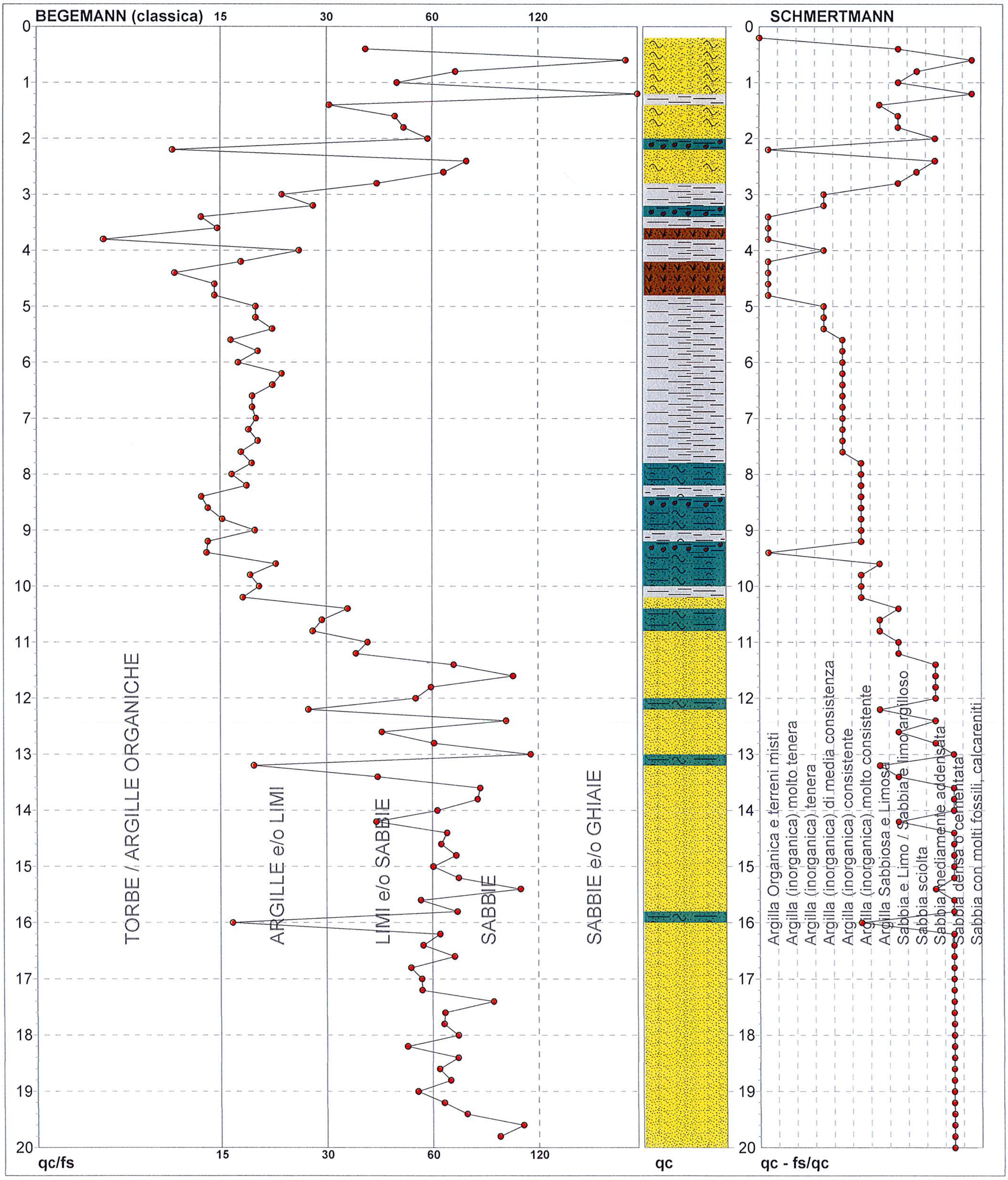
PROVA PENETROMETRICA STATICA MECCANICA
DIAGRAMMI LITOLOGIA

CPT	**1**
riferimento	**185-2013**
certificato n°	4311

Committente: **Studio tecnico**
Cantiere: **Studio terreno di fondazione**
Località: **Medolla, via Imperiale 26**

U.M.: **MPa**
Scala: 1:100
Pagina: 3/4
Elaborato:

Data esec.: 10/05/2013
Data certificato: 13/05/2013
Falda: -1.40 m da p.c.



Torbe / Argille org. :	11 punti,	11.11%
Argille e/o Limi :	34 punti,	34.34%
Limi e/o Sabbie :	27 punti,	27.27%
Sabbie:	25 punti,	25.25%
Sabbie e/o Ghiaie :	2 punti,	2.02%

Argilla Organica e terreni misti:	9 punti,	9.09%
Argilla (inorganica) media consist.:	6 punti,	6.06%
Argilla (inorganica) consistente:	11 punti,	11.11%
Argilla (inorganica) molto consist.:	12 punti,	12.12%

Argilla Sabbiosa e Limosa:	6 punti,	6.06%
Sabbia e Limo / Sabbia e limo arg.:	11 punti,	11.11%
Sabbia sciolta:	2 punti,	2.02%
Sabbia mediamente addensata:	9 punti,	9.09%
Sabbia densa o cementata:	30 punti,	30.30%
Sabbia con molti fossili, calcareniti:	2 punti,	2.02%

GEO GROUP S.R.L.
via Cesare Costa, 182 - 41100 Modena

PROVA PENETROMETRICA STATICA MECCANICA
PARAMETRI GEOTECNICI

CPT	1
riferimento	**185-2013**
certificato n°	4311

Committente:	**Studio tecnico**	U.M.:	**MPa**	Data esec.:	10/05/2013
Cantiere:	**Studio terreno di fondazione**	Pagina:	4/4	Data certificato:	13/05/2013
Località:	**Medolla, via Imperiale 26**	Elaborato:		Falda:	-1.40 m da p.c.

							NATURA COESIVA					NATURA GRANULARE										
Prof.	qc	qc/fs	zone	γ '	σ'vo	Vs	Cu	OCR	Eu50	Eu25	Mo	Dr	øSc	øCa	øKo	øDB	øDM	øMe	F.L.	E'50	E'25	Mo
m	U.M.			t/m³	kPa	m/s	kPa	%	U.M.	U.M.	U.M.	%	(°)	(°)	(°)	(°)	(°)	(°)		U.M.	U.M.	U.M.
0.20	--	--		1.85	3.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.40	1.47	37.50		1.89	7.3	154	65.3	96.5	11.1	16.7	4.9	70	44	36	33	31	40	27	--	2.5	3.7	4.4
0.60	1.27	185.71		1.88	11.0	145	59.3	51.4	10.1	15.1	4.6	55	42	33	30	29	38	26	--	2.1	3.2	3.8
0.80	1.27	65.00		1.88	14.7	145	59.3	35.8	10.1	15.1	4.6	48	42	32	29	27	36	26	--	2.1	3.2	3.8
1.00	1.47	45.45		1.89	18.4	154	65.3	30.6	11.1	16.7	4.9	48	42	32	29	27	36	27	--	2.5	3.7	4.4
1.20	1.37	200.00		1.89	22.1	150	62.4	22.9	10.6	15.9	4.7	41	41	30	27	26	34	26	--	2.3	3.4	4.1
1.40	1.76	30.00		0.91	23.9	164	73.5	25.6	12.5	18.7	5.5	47	42	31	28	26	35	27	--	2.9	4.4	5.3
1.60	1.76	45.00		0.91	25.7	164	73.5	23.3	12.5	18.7	5.5	46	42	31	28	26	35	27	--	2.9	4.4	5.3
1.80	1.86	47.50		0.92	27.5	168	76.0	22.4	12.9	19.4	5.7	46	42	31	28	26	35	27	--	3.1	4.7	5.6
2.00	2.16	55.00		0.86	29.2	177	--	--	--	--	--	50	42	31	28	26	35	28	--	3.6	5.4	6.5
2.20	0.98	11.49		0.90	30.9	132	49.0	11.2	8.3	12.5	3.9	--	--	--	--	--	--	--	--	--	--	--
2.40	2.25	69.70		0.86	32.6	180	--	--	--	--	--	48	42	31	28	26	35	28	--	3.8	5.6	6.8
2.60	1.96	60.61		0.93	34.4	171	78.4	17.6	13.3	20.0	5.9	42	41	30	27	25	34	27	--	3.3	4.9	5.9
2.80	2.65	40.30		0.87	36.1	192	--	--	--	--	--	51	42	31	28	26	35	28	--	4.4	6.6	7.9
3.00	0.88	22.50		0.88	37.9	127	44.1	7.6	9.2	13.8	3.7	--	--	--	--	--	--	--	--	--	--	--
3.20	0.88	27.27		0.88	39.6	127	44.1	7.2	9.8	14.8	3.7	--	--	--	--	--	--	--	--	--	--	--
3.40	0.98	13.70		0.90	41.4	132	49.0	7.8	10.0	15.0	3.9	--	--	--	--	--	--	--	--	--	--	--
3.60	0.49	15.15		0.80	42.9	101	24.5	3.1	11.9	17.8	2.5	--	--	--	--	--	--	--	--	--	--	--
3.80	0.39	7.55		0.46	43.8	93	19.6	2.3	2.3	3.4	0.6	--	--	--	--	--	--	--	--	--	--	--
4.00	0.98	25.00		0.90	45.6	132	49.0	6.9	11.5	17.3	3.9	--	--	--	--	--	--	--	--	--	--	--
4.20	0.69	17.50		0.84	47.2	115	34.3	4.2	13.2	19.8	3.2	--	--	--	--	--	--	--	--	--	--	--
4.40	0.69	11.67		0.46	48.1	115	34.3	4.1	2.4	3.6	1.0	--	--	--	--	--	--	--	--	--	--	--
4.60	0.69	14.89		0.46	49.0	115	34.3	4.0	2.4	3.6	1.0	--	--	--	--	--	--	--	--	--	--	--
4.80	0.69	14.89		0.46	49.9	115	34.3	3.9	2.5	3.7	1.0	--	--	--	--	--	--	--	--	--	--	--
5.00	0.88	19.15		0.88	51.7	127	44.1	5.2	14.2	21.3	3.7	--	--	--	--	--	--	--	--	--	--	--
5.20	0.88	19.15		0.88	53.4	127	44.1	4.9	14.8	22.1	3.7	--	--	--	--	--	--	--	--	--	--	--
5.40	0.69	21.21		0.84	55.0	115	34.3	3.5	15.5	23.3	3.2	--	--	--	--	--	--	--	--	--	--	--
5.60	1.18	16.44		0.92	56.8	141	56.0	6.2	14.9	22.4	4.4	--	--	--	--	--	--	--	--	--	--	--
5.80	1.27	19.40		0.93	58.7	145	59.3	6.4	15.2	22.9	4.6	--	--	--	--	--	--	--	--	--	--	--
6.00	1.57	17.20		0.96	60.5	157	68.2	7.3	15.0	22.5	5.1	--	--	--	--	--	--	--	--	--	--	--
6.20	1.76	22.50		0.98	62.5	164	73.5	7.7	15.2	22.7	5.5	--	--	--	--	--	--	--	--	--	--	--
6.40	1.67	21.25		0.97	64.4	161	70.9	7.1	16.1	24.1	5.3	--	--	--	--	--	--	--	--	--	--	--
6.60	1.47	18.75		0.95	66.2	154	65.3	6.2	17.4	26.1	4.9	--	--	--	--	--	--	--	--	--	--	--
6.80	1.47	18.75		0.95	68.1	154	65.3	6.0	18.1	27.1	4.9	--	--	--	--	--	--	--	--	--	--	--
7.00	1.37	19.18		0.94	69.9	150	62.4	5.4	19.0	28.5	4.7	--	--	--	--	--	--	--	--	--	--	--
7.20	1.08	18.33		0.91	71.7	137	52.6	4.3	20.0	30.0	4.2	--	--	--	--	--	--	--	--	--	--	--
7.40	1.27	19.40		0.93	73.5	145	59.3	4.8	20.4	30.6	4.6	--	--	--	--	--	--	--	--	--	--	--
7.60	1.37	17.50		0.94	75.4	150	62.4	5.0	20.8	31.2	4.7	--	--	--	--	--	--	--	--	--	--	--
7.80	1.96	18.69		0.93	77.2	171	78.4	6.4	20.0	30.0	5.9	23	40	26	23	21	29	27	--	3.3	4.9	5.9
8.00	2.06	16.54		0.93	79.0	174	80.7	6.4	20.4	30.6	6.2	24	40	26	23	21	29	27	--	3.4	5.1	6.2
8.20	2.25	18.11		0.94	80.9	180	85.1	6.7	20.6	30.9	6.8	26	40	26	23	22	30	28	--	3.8	5.6	6.8
8.40	2.06	13.73		0.93	82.7	174	80.7	6.1	21.8	32.7	6.2	23	40	26	23	21	29	27	--	3.4	5.1	6.2
8.60	1.86	14.29		0.99	84.6	168	76.0	5.5	22.9	34.4	5.7	--	--	--	--	--	--	--	--	--	--	--
8.80	2.65	15.61		0.95	86.5	192	92.8	6.9	21.9	32.8	7.9	30	40	27	24	22	30	28	--	4.4	6.6	7.9
9.00	2.74	19.05		0.96	88.3	194	94.6	6.8	22.4	33.5	8.2	31	40	27	24	22	30	28	--	4.6	6.9	8.2
9.20	2.06	14.29		0.93	90.2	174	80.7	5.5	24.5	36.7	6.2	20	40	25	22	21	29	27	--	3.4	5.1	6.2
9.40	1.76	14.17		0.98	92.1	164	73.5	4.7	25.6	38.4	5.5	--	--	--	--	--	--	--	--	--	--	--
9.60	2.55	21.67		0.95	94.0	189	91.0	6.0	24.8	37.2	7.6	27	40	26	23	22	30	28	--	4.2	6.4	7.6
9.80	3.14	18.50		0.97	95.9	204	104.5	7.0	24.1	36.1	9.4	33	41	27	24	23	31	29	--	5.2	7.8	9.4
10.00	2.55	19.55		0.95	97.7	189	91.0	5.7	26.2	39.3	7.6	26	40	26	23	21	29	28	--	4.2	6.4	7.6
10.20	1.96	17.70		0.93	99.5	171	78.4	4.7	27.7	41.5	5.9	16	39	25	21	20	28	27	--	3.3	4.9	5.9
10.40	3.53	33.64		0.89	101.3	214	--	--	--	--	--	36	41	27	24	23	31	30	--	5.9	8.8	10.6
10.60	2.45	28.74		0.94	103.1	186	89.1	5.2	28.2	42.4	7.4	23	40	26	22	21	29	28	--	4.1	6.1	7.4
10.80	4.61	27.17		1.01	105.1	236	153.5	10.1	26.1	39.2	13.8	44	42	29	25	24	32	31	--	7.7	11.5	13.8
11.00	3.72	38.00		0.90	106.8	218	--	--	--	--	--	37	41	27	24	23	31	30	--	6.2	9.3	11.2
11.20	5.10	35.37		0.92	108.7	245	--	--	--	--	--	47	42	29	26	24	33	31	--	8.5	12.7	15.3
11.40	5.49	64.37		0.93	110.5	252	--	--	--	--	--	49	42	29	26	24	33	31	--	9.1	13.7	16.5
11.60	6.08	92.54		0.94	112.3	262	--	--	--	--	--	52	42	30	27	25	34	32	--	10.1	15.2	18.2
11.80	5.49	56.00		0.93	114.1	252	--	--	--	--	--	48	42	29	26	24	33	31	--	9.1	13.7	16.5
12.00	5.00	51.00		0.92	115.9	243	--	--	--	--	--	45	42	28	25	24	32	31	--	8.3	12.5	15.0
12.20	5.00	26.42		1.01	117.9	243	166.6	9.7	28.5	42.8	15.0	44	42	28	25	24	32	31	--	8.3	12.5	15.0
12.40	4.61	88.68		0.91	119.7	236	--	--	--	--	--	41	41	28	25	23	32	31	--	7.7	11.5	13.8
12.60	5.68	41.43		0.93	121.5	256	--	--	--	--	--	48	42	29	26	24	33	31	--	9.5	14.2	17.1
12.80	5.98	57.01		0.94	123.3	260	--	--	--	--	--	49	42	29	26	24	33	32	--	10.0	14.9	17.9
13.00	13.43	103.01		1.06	125.4	353	--	--	--	--	--	77	44	33	30	28	37	35	--	22.4	33.6	40.3
13.20	5.68	18.89		1.02	127.4	256	189.5	10.3	32.2	48.3	17.1	47	42	29	26	24	32	31	--	9.5	14.2	17.1
13.40	8.43	40.38		0.98	129.3	297	--	--	--	--	--	60	43	31	28	26	35	33	--	14.0	21.1	25.3
13.60	14.31	75.65		1.07	131.4	362	--	--	--	--	--	78	44	33	30	28	37	36	--	23.8	35.8	42.9
13.80	13.13	74.44		1.05	133.5	350	--	--	--	--	--	75	44	33	30	28	37	35	--	21.9	32.8	39.4
14.00	12.54	58.18		1.04	135.5	344	--	--	--	--	--	73	44	32	29	27	37	35	--	20.9	31.4	37.6
14.20	10.49	40.07		1.01	137.5	322	--	--	--	--	--	66	43	31	28	27	35	34	--	17.5	26.2	31.5
14.40	10.09	61.68		1.00	139.4	317	--	--	--	--	--	64	43	31	28	26	35	34	--	16.8	25.2	30.3
14.60	11.66	59.50		1.03	141.5	335	--	--	--	--	--	69	44	32	29	27	36	35	--	19.4	29.2	35.0
14.80	14.50	65.20		1.07	143.6	364	--	--	--	--	--	76	44	33	30	28	37	36	--	24.2	36.3	43.5
15.00	13.72	56.68		1.06	145.6	356	--	--	--	--	--	74	44	32	29	28	37	36	--	22.9	34.3	41.2
15.20	13.82	66.20		1.06	147.7	357	--	--	--	--	--	74	44	32	29	28	37	36	--	23.0	34.5	41.5
15.40	8.82	96.77		0.98	149.6	302	--	--	--	--	--	58	43	30	27	25	34	33	--	14.7	22.1	26.5
15.60	10.98	52.58		1.02	151.6	328	--	--	--	--	--	65	43	31	28	26	35	34	--	18.3	27.4	32.9
15.80	13.33	65.70		1.05	153.7	352	--	--	--	--	--	72	44	32	29	27	36	35	--	22.2	33.3	40.0
16.00	3.14	16.58		0.97	155.6	204	104.5	3.8	43.8	65.7	9.4	22	40	25	21	20	28	29	--	5.2	7.8	9.4
16.20	13.13	59.03		1.05	157.7	350	--	--	--	--	--	70	44	32	29	27	36	35	--	21.9	32.8	39.4
16.40	12.54	53.33		1.04	159.7	344	--	--	--	--	--	69	43	31	28	27	36	35	--	20.9	31.4	37.6
16.60	13.92	64.55		1.06	161.8	358	--	--	--	--	--	72	44	32	29	27	36	36	--	23.2	34.8	41.7
16.80	14.21	49.49		1.07	163.9	361	--	--	--	--	--	72	44	32	29	27	36	36	--	23.7	35.5	42.6
17.00	11.76	52.86		1.03	165.9	336	--	--	--	--	--	65	43	31	28	26	35	35	--	19.6	29.4	35.3
17.20	13.13	52.96		1.05	168.0	350	--	--	--	--	--	69	44	31	28	27	36	35	--	21.9	32.8	39.4
17.40	16.07	82.00		1.10	170.1	378	--	--	--	--	--	76	44	32	29	28	37	37	--	26.8	40.2	48.2
17.60	15.09	60.87		1.08	172.2	369	--	--	--	--	--	73	44	32	29	27	36	36	--	25.2	37.7	45.3
17.80	14.21	60.42		1.07	174.3	361	--	--	--	--	--	71	44	32	29	27	36	36	--	23.7	35.5	42.6
18.00	14.21	65.91		1.07	176.4	361	--	--	--	--	--	70	44	32	29	27	36	36	--	23.7	35.5	42.6
18.20	15.78	48.35		1.09	178.6	376	--	--	--	--	--	74	44	32	29	27	36	36	--	26.3	39.4	47.3
18.40	15.48	65.83		1.09	180.7	373	--	--	--	--	--	73	44	32	29	27	36	36	--	25.8	38.7	46.5
18.60	15.39	58.80		1.09	182.8	372	--	--	--	--	--	72	44	32	29	27	36	36	--	25.6	38.5	46.2
18.80	14.01	63.00		1.06	184.9	359	--	--	--	--	--	69	44	31	28	27	35	36	--	23.4	35.0	42.0
19.00	14.50	51.57		1.07	187.0	364	--	--	--	--	--	70	44	31	28	27	36	36	--	24.2	36.3	43.5
19.20	11.86	60.50		1.03	189.0	337	--	--	--	--	--	63	43	30	27	26	34	35	--	19.8	29.6	35.6
19.40	14.50	69.48		1.07	191.1	364	--	--	--	--	--	69	44	31	28	27	35	36	--	24.2	36.3	43.5
19.60	21.17	98.18		1.15	193.4	420	--	--	--	--	--	82	45	33	30	28	37	38	--	35.3	52.9	63.5
19.80	22.25	85.02		1.15	195.6	428	--	--	--	--	--	83	45	33	30	28	38	39	--	37.1	55.6	66.7
20.00	20.38	--		1.15	197.9	414	--	--	--	--	--	80	44	33	30	28	37	38	--	34.0	51.0	61.2

GEO GROUP S.R.L.
via Cesare Costa, 182 - 41100 Modena

PROVA PENETROMETRICA STATICA MECCANICA
LETTURE CAMPAGNA E VALORI TRASFORMATI

CPT	**2**
riferimento	**185-2013**
certificato n°	4312

Committente: **Studio tecnico**
Cantiere: **Studio terreno di fondazione**
Località: **Medolla, via Imperiale 26**

U.M.: **MPa**
Pagina: 1/4
Elaborato:

Data esec.: 10/05/2013
Data certificato: 13/05/2013
Falda: -1.38 m da p.c.

H m	L1 -	L2 -	Lt -	qc MPa	fs kPa	F -	Rf %
0.20	0.00	0.00		0.00	127.00	0	
0.40	11.00	30.00		1.08	33.00	33	3.0
0.60	10.00	15.00		0.98	67.00	15	6.7
0.80	9.00	19.00		0.88	27.00	33	3.0
1.00	9.00	13.00		0.88	40.00	23	4.4
1.20	8.00	14.00		0.78	13.00	62	1.6
1.40	14.00	16.00		1.37	73.00	19	5.2
1.60	11.00	22.00		1.08	40.00	28	3.6
1.80	10.00	16.00		0.98	73.00	14	7.3
2.00	9.00	20.00		0.88	60.00	15	6.7
2.20	8.00	17.00		0.78	60.00	13	7.5
2.40	9.00	18.00		0.88	53.00	17	5.9
2.60	9.00	17.00		0.88	40.00	23	4.4
2.80	20.00	26.00		1.96	60.00	33	3.0
3.00	9.00	18.00		0.88	40.00	23	4.4
3.20	9.00	15.00		0.88	27.00	33	3.0
3.40	9.00	13.00		0.88	53.00	17	5.9
3.60	7.00	15.00		0.69	47.00	15	6.7
3.80	7.00	14.00		0.69	53.00	13	7.6
4.00	8.00	16.00		0.78	40.00	20	5.0
4.20	7.00	13.00		0.69	27.00	26	3.9
4.40	8.00	12.00		0.78	27.00	30	3.4
4.60	8.00	12.00		0.78	27.00	30	3.4
4.80	8.00	12.00		0.78	40.00	20	5.0
5.00	9.00	15.00		0.88	33.00	27	3.7
5.20	10.00	15.00		0.98	47.00	21	4.7
5.40	7.00	14.00		0.69	33.00	21	4.7
5.60	13.00	18.00		1.27	73.00	18	5.6
5.80	12.00	23.00		1.18	67.00	18	5.6
6.00	16.00	26.00		1.57	93.00	17	5.8
6.20	14.00	28.00		1.37	87.00	16	6.2
6.40	19.00	32.00		1.86	107.00	18	5.6
6.60	16.00	32.00		1.57	93.00	17	5.8
6.80	16.00	30.00		1.57	80.00	20	5.0
7.00	14.00	26.00		1.37	80.00	18	5.7
7.20	15.00	27.00		1.47	80.00	19	5.3
7.40	14.00	26.00		1.37	80.00	18	5.7
7.60	15.00	27.00		1.47	107.00	14	7.1
7.80	20.00	36.00		1.96	107.00	19	5.4
8.00	22.00	38.00		2.16	140.00	16	6.4
8.20	18.00	39.00		1.76	127.00	14	7.1
8.40	23.00	42.00		2.25	160.00	14	7.0
8.60	24.00	48.00		2.35	160.00	15	6.7
8.80	32.00	56.00		3.14	200.00	16	6.3
9.00	25.00	55.00		2.45	147.00	17	5.9
9.20	22.00	44.00		2.16	173.00	13	7.9
9.40	22.00	48.00		2.16	160.00	14	7.3
9.60	28.00	52.00		2.74	193.00	15	6.9
9.80	24.00	53.00		2.35	153.00	16	6.4
10.00	26.00	49.00		2.55	147.00	18	5.7
10.20	32.00	54.00		3.14	187.00	17	5.8
10.40	26.00	54.00		2.55	187.00	14	7.2
10.60	54.00	82.00		5.29	213.00	25	3.9
10.80	78.00	110.00		7.64	107.00	73	1.4
11.00	59.00	75.00		5.78	60.00	98	1.0
11.20	65.00	74.00		6.37	87.00	75	1.3
11.40	54.00	67.00		5.29			

H m	L1 -	L2 -	Lt -	qc MPa	fs kPa	F -	Rf %

H = profondità
L1 = prima lettura (punta)
L2 = seconda lettura (punta + laterale)
Lt = terza lettura (totale)
CT =10.00 costante di trasformazione

qc = resistenza di punta
fs = resistenza laterale calcolata 0.20 m sopra quota qc
F = rapporto Begemann (qc / fs)
Rf = rapporto Schmertmann (fs / qc)*100

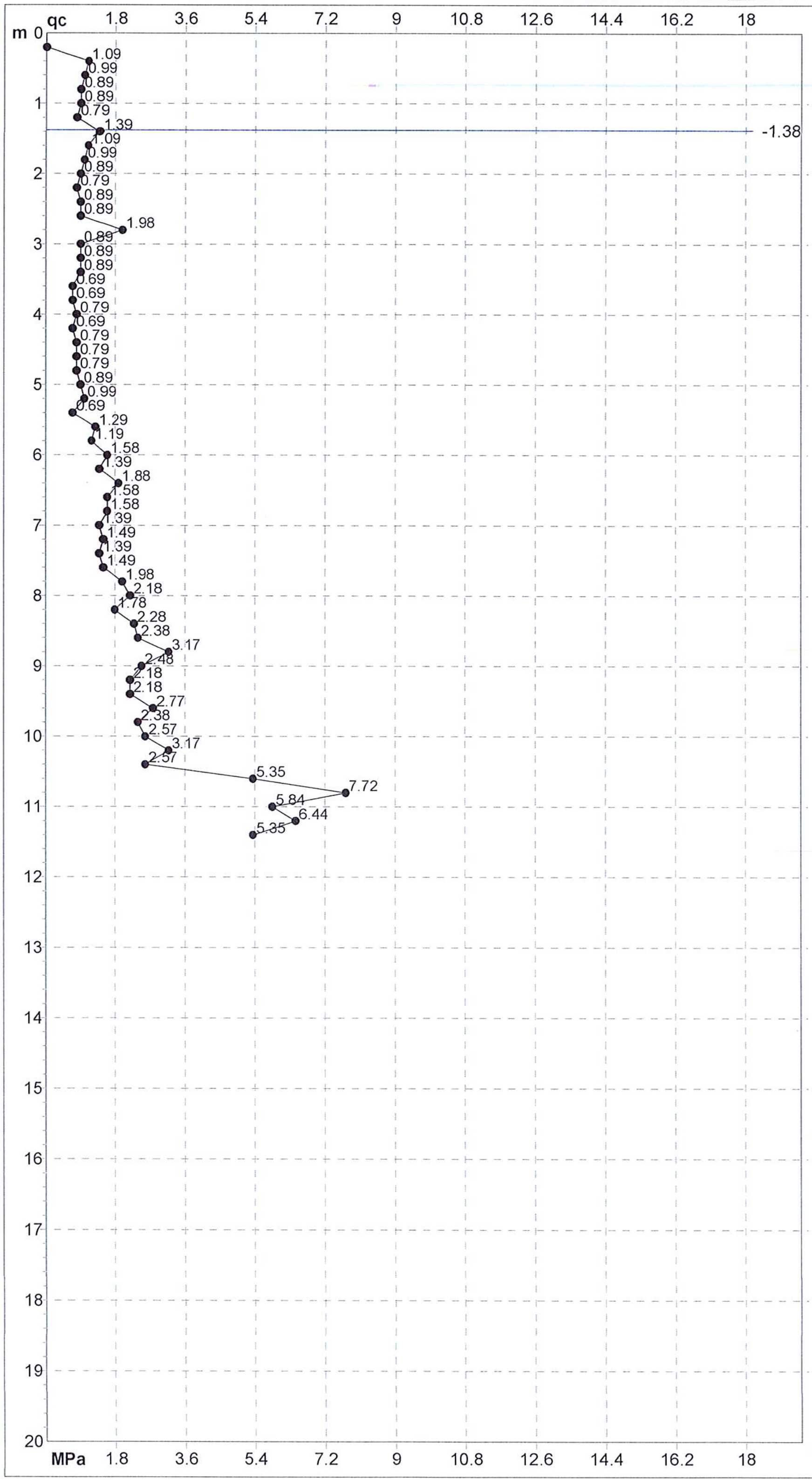
GEO GROUP S.R.L.
via Cesare Costa, 182 - 41100 Modena

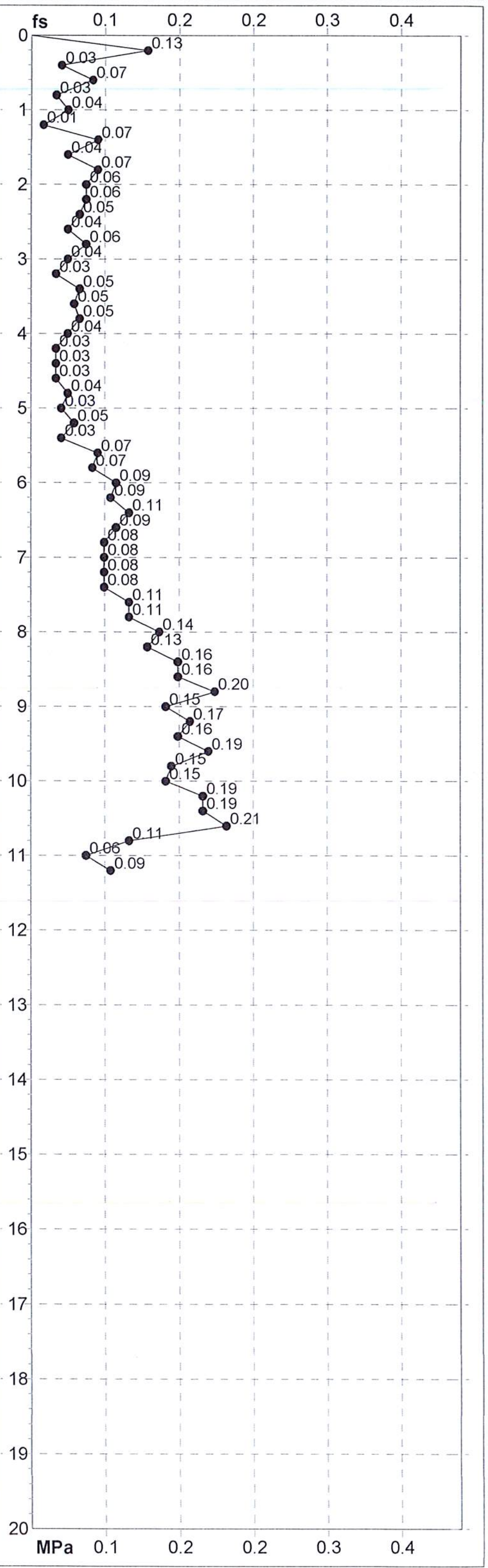
PROVA PENETROMETRICA STATICA MECCANICA
DIAGRAMMI DI RESISTENZA

CPT	**2**
riferimento	**185-2013**
certificato n°	4312

Committente:	**Studio tecnico**
Cantiere:	**Studio terreno di fondazione**
Località:	**Medolla, via Imperiale 26**

U.M.:	**MPa**	Data esec.:	10/05/2013
Scala:	1:100		
Pagina:	2/4	Data certificato: Quota inizio:	14/05/2013
Elaborato:		Falda: -1.38 m	da p.c.





		Penetrometro: TG63-200	Preforo: m
		Responsabile:	Corr.astine: kN/ml
		Assistente:	
			Corr.astine: kN/ml

GEO GROUP S.R.L.
via Cesare Costa, 182 - 41100 Modena

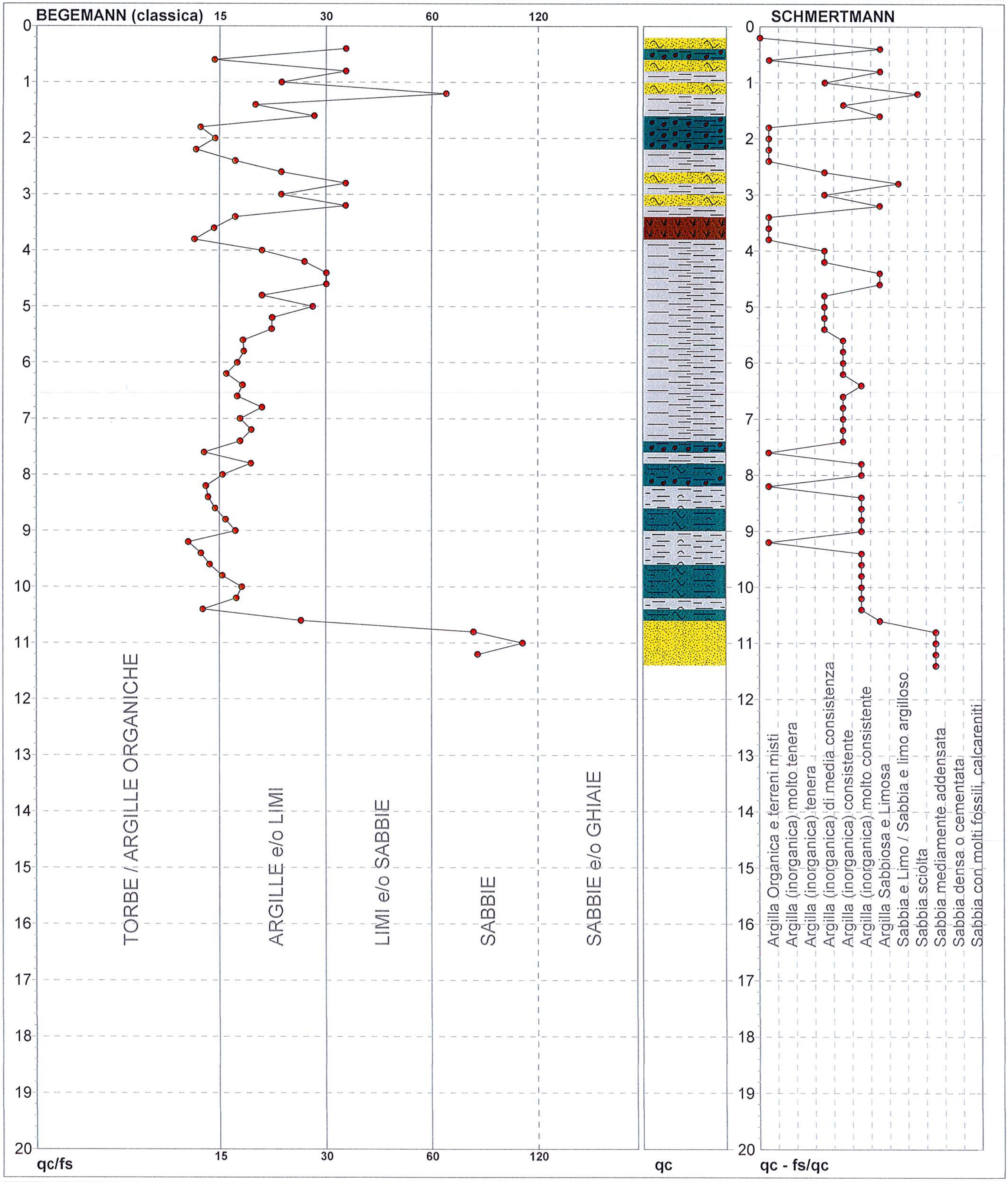
PROVA PENETROMETRICA STATICA MECCANICA
DIAGRAMMI LITOLOGIA

CPT	**2**
riferimento	**185-2013**
certificato n°	4312

Committente: **Studio tecnico**
Cantiere: **Studio terreno di fondazione**
Località: **Medolla, via Imperiale 26**

U.M.: **MPa**
Scala: 1:100
Pagina: 3/4
Elaborato:

Data esec.: 10/05/2013
Data certificato: 14/05/2013
Falda: -1.38 m da p.c.



Torbe / Argille org. :	15 punti,	15.15%	Argilla Organica e terreni misti:	11 punti,	11.11%	Argilla Sabbiosa e Limosa:	7 punti,	7.07%
Argille e/o Limi :	33 punti,	33.33%	Argilla (inorganica) media consist.:	9 punti,	9.09%	Sabbia e Limo / Sabbia e limo arg.:	1 punti,	1.01%
Limi e/o Sabbie :	4 punti,	4.04%	Argilla (inorganica) consistente:	10 punti,	10.10%	Sabbia sciolta:	1 punti,	1.01%
Sabbie:	4 punti,	4.04%	Argilla (inorganica) molto consist.:	13 punti,	13.13%	Sabbia mediamente addensata:	3 punti,	3.03%

GEO GROUP S.R.L.
via Cesare Costa, 182 - 41100 Modena

PROVA PENETROMETRICA STATICA MECCANICA
PARAMETRI GEOTECNICI

CPT		2
	riferimento	185-2013
	certificato n°	4312

Committente:	**Studio tecnico**	U.M.: **MPa**	Data esec.: 10/05/2013
Cantiere:	**Studio terreno di fondazione**	Pagina: 4/4	Data certificato: 13/05/2013
Località:	**Medolla, via Imperiale 26**	Elaborato:	Falda: -1.38 m da p.c.

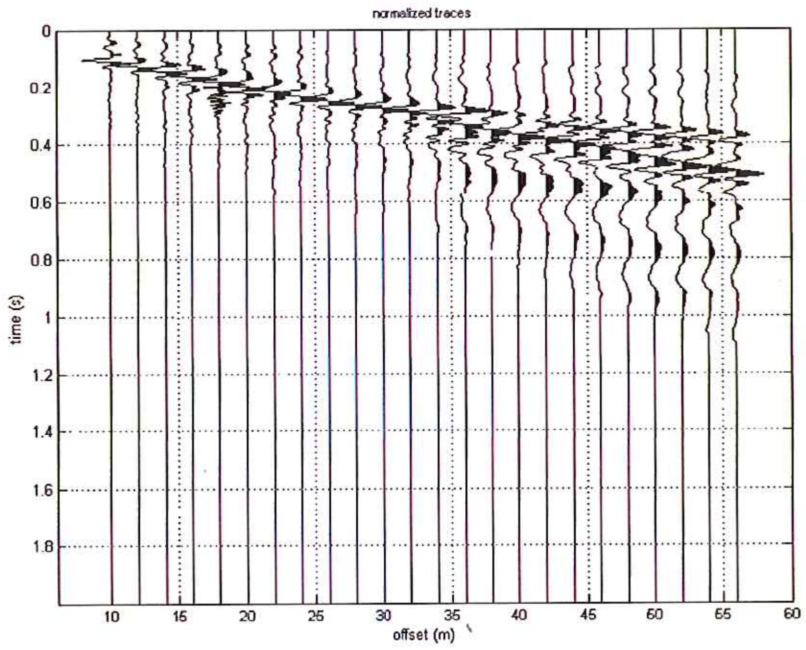
							NATURA COESIVA					NATURA GRANULARE										
Prof.	qc	qc/fs	zone	γ '	σ'vo	Vs	Cu	OCR	Eu50	Eu25	Mo	Dr	øSc	øCa	øKo	øDB	øDM	øMe	F.L.	E'50	E'25	Mo
m	U.M.			t/m³	kPa	m/s	kPa	%	U.M.	U.M.	U.M.	%	(°)	(°)	(°)	(°)	(°)	(°)		U.M.	U.M.	U.M.
0.20	--	--		1.85	3.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.40	1.08	33.33		1.87	7.3	137	52.6	74.2	8.9	13.4	4.2	60	43	35	32	30	39	26	--	1.8	2.7	3.2
0.60	0.98	14.93		1.90	11.0	132	49.0	40.6	8.3	12.5	3.9	--	--	--	--	--	--	--	--	--	--	--
0.80	0.88	33.33		1.85	14.6	127	44.1	24.9	7.5	11.2	3.7	36	41	30	27	25	34	26	--	1.5	2.2	2.6
1.00	0.88	22.50		1.88	18.3	127	44.1	18.8	7.5	11.2	3.7	--	--	--	--	--	--	--	--	--	--	--
1.20	0.78	61.54		1.84	21.9	121	39.2	13.0	6.7	10.0	3.4	22	40	28	24	23	31	26	--	1.3	2.0	2.4
1.40	1.37	19.18		0.94	23.8	150	62.4	21.0	10.6	15.9	4.7	--	--	--	--	--	--	--	--	--	--	--
1.60	1.08	27.50		0.91	25.6	137	52.6	15.5	8.9	13.4	4.2	--	--	--	--	--	--	--	--	--	--	--
1.80	0.98	13.70		0.90	27.3	132	49.0	13.0	8.3	12.5	3.9	--	--	--	--	--	--	--	--	--	--	--
2.00	0.88	15.00		0.88	29.0	127	44.1	10.6	7.5	11.2	3.7	--	--	--	--	--	--	--	--	--	--	--
2.20	0.78	13.33		0.86	30.7	121	39.2	8.5	7.3	10.9	3.4	--	--	--	--	--	--	--	--	--	--	--
2.40	0.88	16.98		0.88	32.5	127	44.1	9.2	7.7	11.6	3.7	--	--	--	--	--	--	--	--	--	--	--
2.60	0.88	22.50		0.88	34.2	127	44.1	8.6	8.1	12.2	3.7	--	--	--	--	--	--	--	--	--	--	--
2.80	1.96	33.33		0.93	36.0	171	78.4	16.6	13.3	20.0	5.9	41	41	30	27	25	34	27	--	3.3	4.9	5.9
3.00	0.88	22.50		0.88	37.7	127	44.1	7.6	9.2	13.8	3.7	--	--	--	--	--	--	--	--	--	--	--
3.20	0.88	33.33		0.85	39.4	127	44.1	7.2	9.8	14.6	3.7	11	39	25	22	21	29	26	--	1.5	2.2	2.6
3.40	0.88	16.98		0.88	41.1	127	44.1	6.9	10.4	15.6	3.7	--	--	--	--	--	--	--	--	--	--	--
3.60	0.69	14.89		0.46	42.0	115	34.3	4.9	2.2	3.2	1.0	--	--	--	--	--	--	--	--	--	--	--
3.80	0.69	13.21		0.46	42.9	115	34.3	4.7	2.2	3.3	1.0	--	--	--	--	--	--	--	--	--	--	--
4.00	0.78	20.00		0.86	44.6	121	39.2	5.3	12.2	18.2	3.4	--	--	--	--	--	--	--	--	--	--	--
4.20	0.69	25.93		0.84	46.2	115	34.3	4.3	12.9	19.4	3.2	--	--	--	--	--	--	--	--	--	--	--
4.40	0.78	29.63		0.86	47.9	121	39.2	4.9	13.3	19.9	3.4	--	--	--	--	--	--	--	--	--	--	--
4.60	0.78	29.63		0.86	49.6	121	39.2	4.7	13.8	20.7	3.4	--	--	--	--	--	--	--	--	--	--	--
4.80	0.78	20.00		0.86	51.3	121	39.2	4.5	14.3	21.5	3.4	--	--	--	--	--	--	--	--	--	--	--
5.00	0.88	27.27		0.88	53.0	127	44.1	5.0	14.6	22.0	3.7	--	--	--	--	--	--	--	--	--	--	--
5.20	0.98	21.28		0.90	54.8	132	49.0	5.5	14.9	22.3	3.9	--	--	--	--	--	--	--	--	--	--	--
5.40	0.69	21.21		0.84	56.4	115	34.3	3.4	15.8	23.8	3.2	--	--	--	--	--	--	--	--	--	--	--
5.60	1.27	17.81		0.93	58.3	145	59.3	6.4	15.1	22.6	4.6	--	--	--	--	--	--	--	--	--	--	--
5.80	1.18	17.91		0.92	60.1	141	56.0	5.8	16.1	24.1	4.4	--	--	--	--	--	--	--	--	--	--	--
6.00	1.57	17.20		0.96	61.9	157	68.2	7.1	15.5	23.2	5.1	--	--	--	--	--	--	--	--	--	--	--
6.20	1.37	16.09		0.94	63.8	150	62.4	6.1	16.8	25.2	4.7	--	--	--	--	--	--	--	--	--	--	--
6.40	1.86	17.76		0.99	65.7	168	76.0	7.5	16.1	24.1	5.7	--	--	--	--	--	--	--	--	--	--	--
6.60	1.57	17.20		0.96	67.6	157	68.2	6.3	17.6	26.4	5.1	--	--	--	--	--	--	--	--	--	--	--
6.80	1.57	20.00		0.96	69.5	157	68.2	6.1	18.3	27.4	5.1	--	--	--	--	--	--	--	--	--	--	--
7.00	1.37	17.50		0.94	71.3	150	62.4	5.3	19.5	29.2	4.7	--	--	--	--	--	--	--	--	--	--	--
7.20	1.47	18.75		0.95	73.2	154	65.3	5.4	19.9	29.8	4.9	--	--	--	--	--	--	--	--	--	--	--
7.40	1.37	17.50		0.94	75.0	150	62.4	5.0	20.7	31.1	4.7	--	--	--	--	--	--	--	--	--	--	--
7.60	1.47	14.02		0.95	76.9	154	65.3	5.1	21.1	31.7	4.9	--	--	--	--	--	--	--	--	--	--	--
7.80	1.96	18.69		0.93	78.7	171	78.4	6.2	20.6	30.8	5.9	22	40	26	23	21	29	27	--	3.3	4.9	5.9
8.00	2.16	15.71		0.93	80.5	177	82.9	6.5	20.7	31.1	6.5	25	40	26	23	22	30	28	--	3.6	5.4	6.5
8.20	1.76	14.17		0.98	82.5	164	73.5	5.4	22.4	33.6	5.5	--	--	--	--	--	--	--	--	--	--	--
8.40	2.25	14.38		0.94	84.3	180	85.1	6.3	21.9	32.9	6.8	25	40	26	23	22	30	28	--	3.8	5.6	6.8
8.60	2.35	15.00		0.94	86.1	183	87.1	6.4	22.4	33.5	7.1	26	40	26	23	22	30	28	--	3.9	5.9	7.1
8.80	3.14	16.00		0.97	88.0	204	104.5	7.8	21.3	32.0	9.4	35	41	28	24	23	31	29	--	5.2	7.8	9.4
9.00	2.45	17.01		0.94	89.9	186	89.1	6.2	23.5	35.3	7.4	26	40	26	23	22	30	28	--	4.1	6.1	7.4
9.20	2.16	12.72		0.93	91.7	177	82.9	5.5	24.8	37.2	6.5	22	40	25	22	21	29	28	--	3.6	5.4	6.5
9.40	2.16	13.75		0.93	93.6	177	82.9	5.4	25.5	38.2	6.5	21	40	25	22	21	29	28	--	3.6	5.4	6.5
9.60	2.74	14.51		0.96	95.4	194	94.6	6.2	25.0	37.5	8.2	29	40	26	23	22	30	28	--	4.6	6.9	8.2
9.80	2.35	15.69		0.94	97.3	183	87.1	5.5	26.4	39.6	7.1	23	40	26	22	21	29	28	--	3.9	5.9	7.1
10.00	2.55	17.69		0.95	99.1	189	91.0	5.6	26.7	40.0	7.6	25	40	26	23	21	29	28	--	4.2	6.4	7.6
10.20	3.14	17.11		0.97	101.0	204	104.5	6.6	26.0	39.0	9.4	32	41	27	24	22	30	29	--	5.2	7.8	9.4
10.40	2.55	13.90		0.95	102.9	189	91.0	5.4	28.0	42.0	7.6	25	40	26	22	21	29	28	--	4.2	6.4	7.6
10.60	5.29	25.35		1.01	104.9	249	176.4	12.0	30.0	45.0	15.9	49	42	29	26	25	33	31	--	8.8	13.2	15.9
10.80	7.64	72.90		0.96	106.8	286	--	--	--	--	--	61	43	31	28	26	35	33	--	12.7	19.1	22.9
11.00	5.78	98.33		0.93	108.6	257	--	--	--	--	--	51	42	30	26	25	33	32	--	9.6	14.5	17.3
11.20	6.37	74.71		0.94	110.4	267	--	--	--	--	--	54	42	30	27	25	34	32	--	10.6	15.9	19.1
11.40	5.29	--		0.92	112.2	249	--	--	--	--	--	47	42	29	26	24	33	31	--	8.8	13.2	15.9

ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

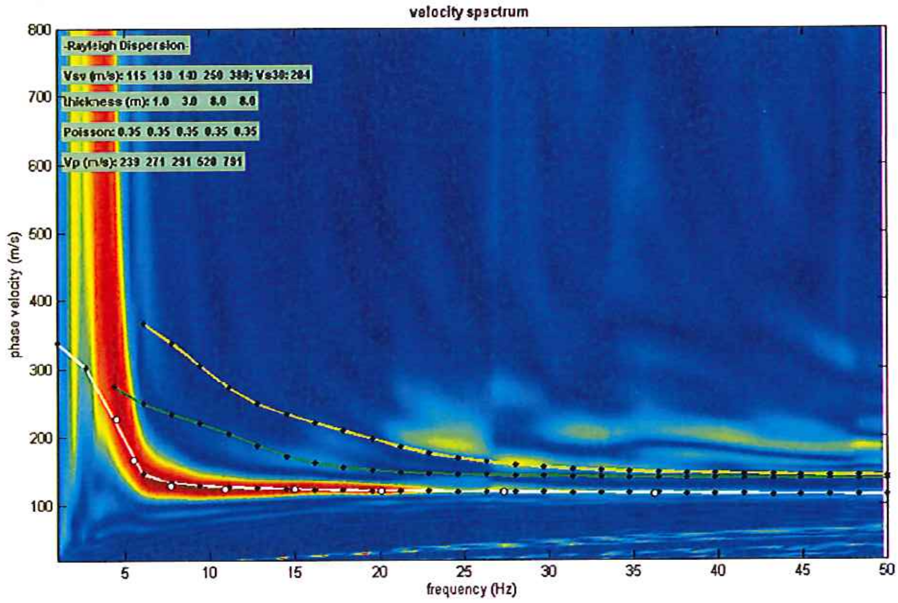
Cantiere:	Medolla (MO) – Strada Statale n. 71
Operatori:	Dott. Ssa Erika Parmeggiani
Data:	14/05/13
Lavoro:	Studio del terreno di fondazione
Elaborazione:	Dott. Ssa Geol. Monica Mazzoli
Responsabile:	Dott. Geol. Pier Luigi Dallari

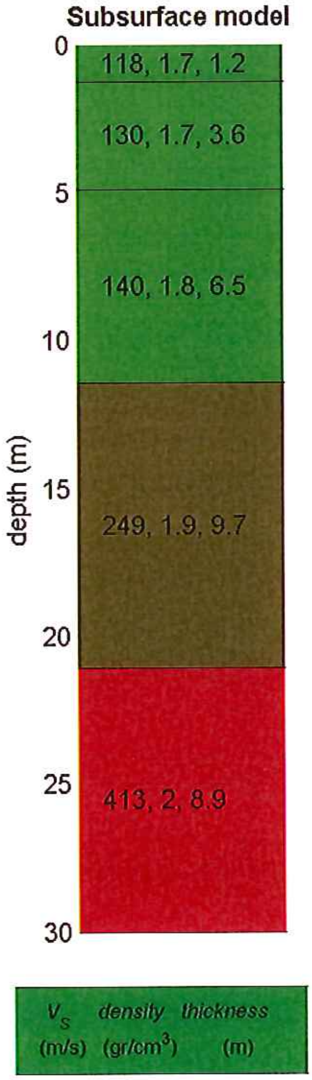
CERTIFICATO: 158_M_13

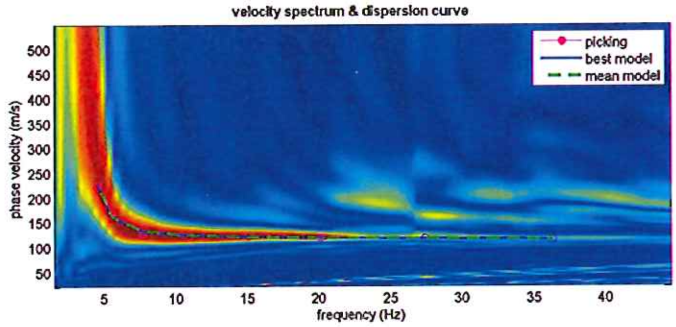
DATA INPUT

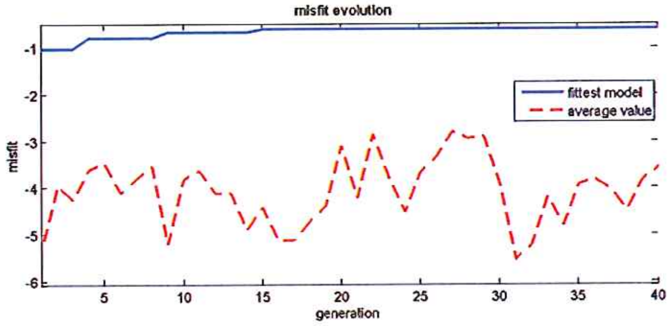


ELABORAZIONE



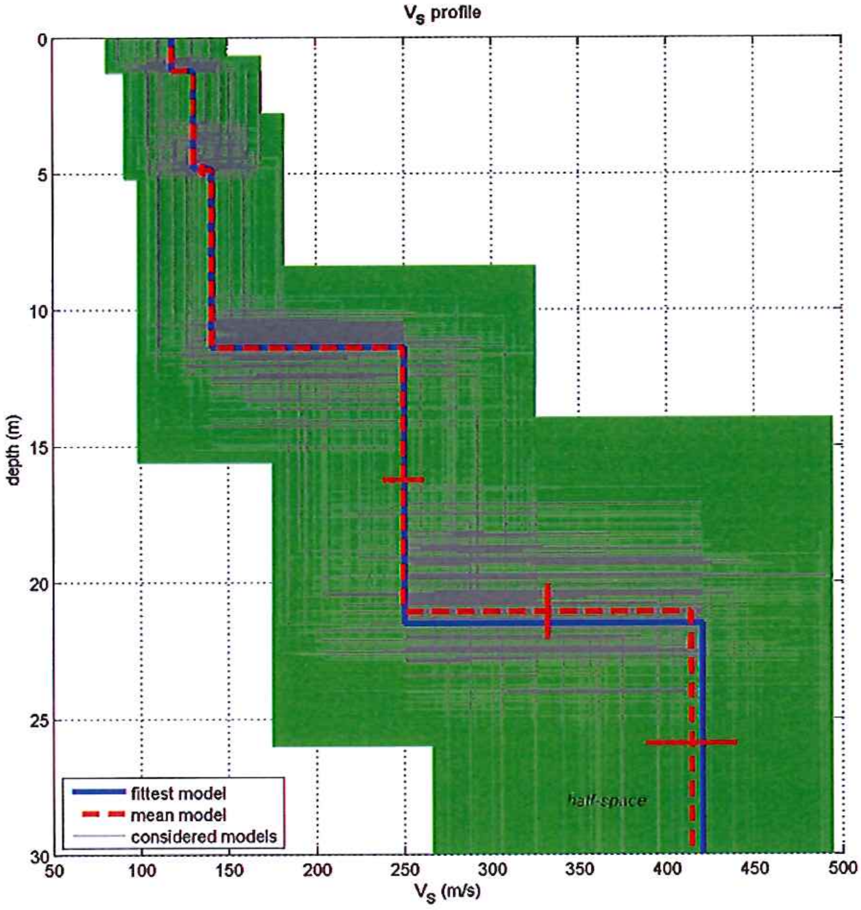






[MODELLO FINALE]

Vs_{30} = 206 m/s



dataset: 29.dat

dispersion curve: p1.cdp

Vs30 (best model): 206 m/s

Vs30 (mean model): 206 m/s

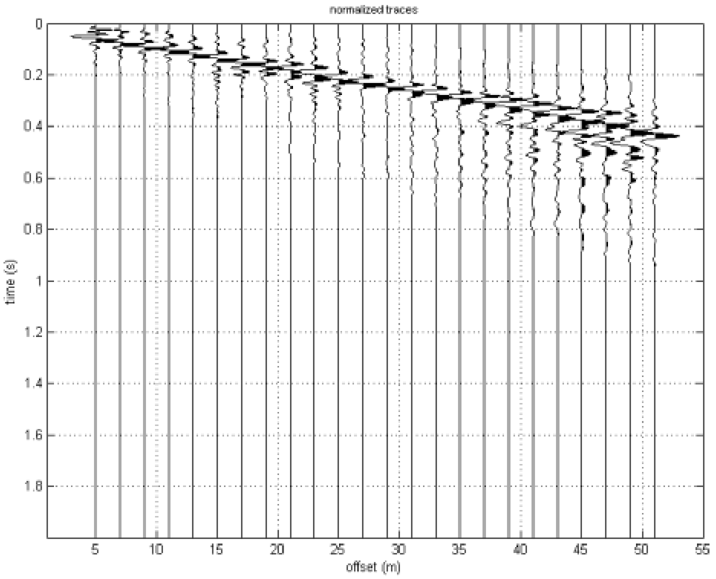
GEO GROUP s.r.l.
Sede Legale: via C. Costa, 182 – 41124 Modena
Sede operativa: via per Modena, 12 – 41051 Castelnuovo Rangone (MO)
Tel. 059-39.67.169 - Fax . 059-53.32.019
p.IVA e C.F. 02981500362 – www.geogroupmodena.it - e-mail: info@geogroupmodena.it

ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

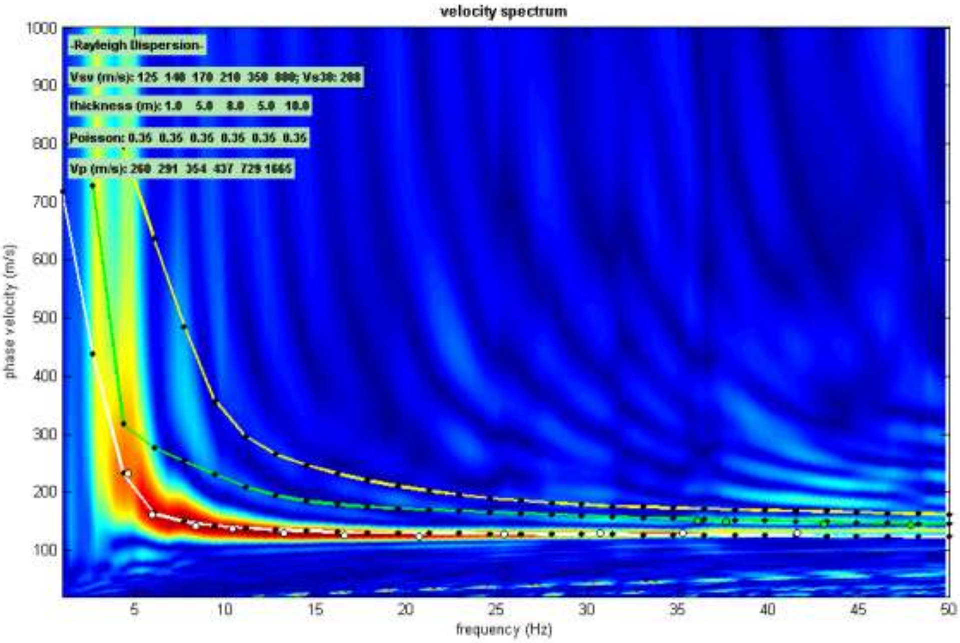
Cantiere:	Medolla (MO) – Piazza del Popolo, "Teatro Facchini"
Data:	14/05/13
Lavoro:	Studio del terreno di fondazione
Elaborazione:	Dott. Ssa Geol. Monica Mazzoli
Responsabile:	Dott. Geol. Pier Luigi Dallari

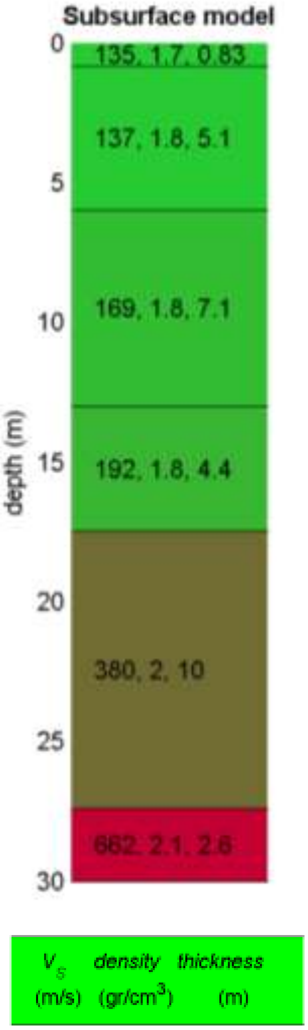
CERTIFICATO: 170_M_13

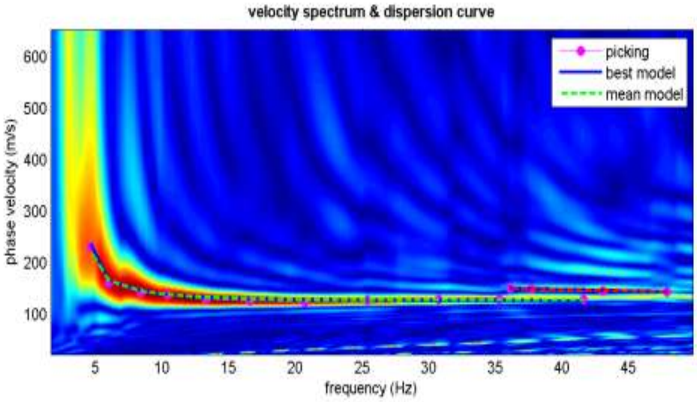
DATA INPUT

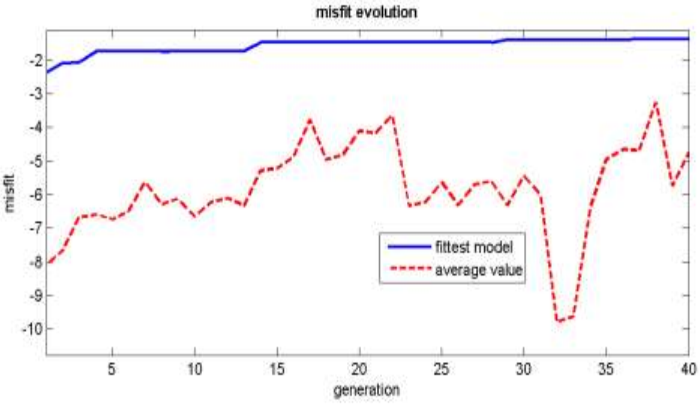


ELABORAZIONE



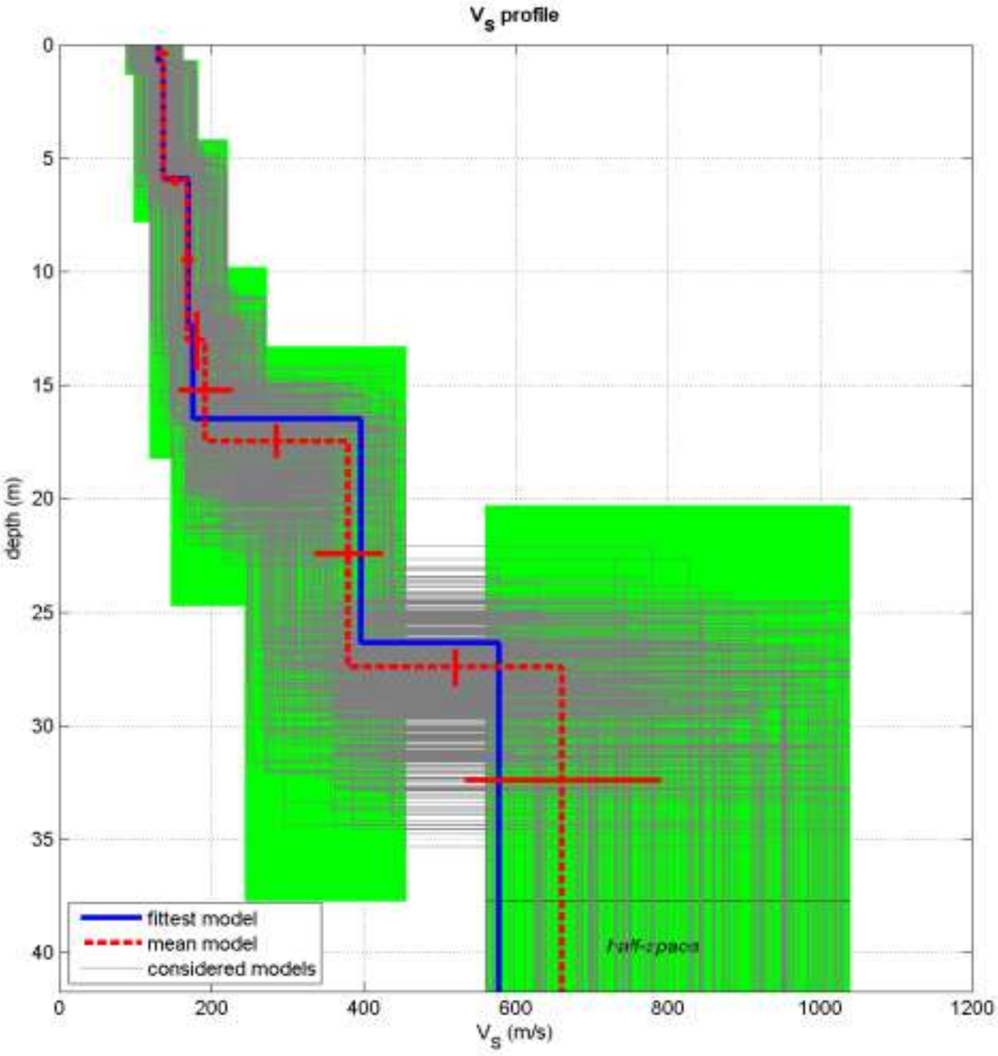






[MODELLO FINALE]

Vs$_{30}$ = 221 m/s



dataset: 15.dat

dispersion curve: p1.cdp

Vs30 (best model): 221 m/s

Vs30 (mean model): 216 m/s

ALLEGATO N° 3

Indagine sismica MASW

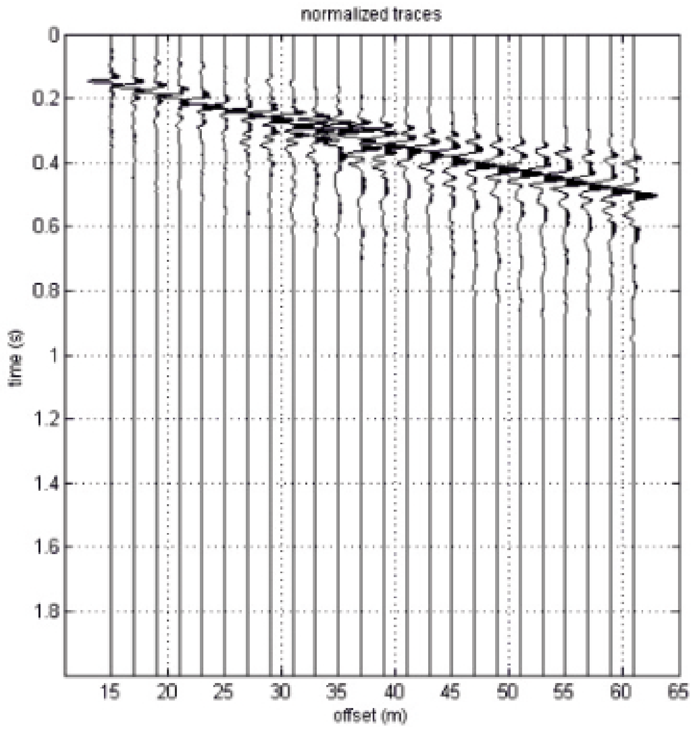
GEO GROUP s.r.l.
Sede Legale: via C. Costa, 182 – 41124 Modena
Sede operativa: via per Modena, 12 – 41051 Castelnuovo Rangone (MO)
Tel. 059-39.67.169 - Fax . 059-53.32.019
p.IVA e C.F. 02981500362 – www.geogroupmodena.it - e-mail: info@geogroupmodena.it

ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

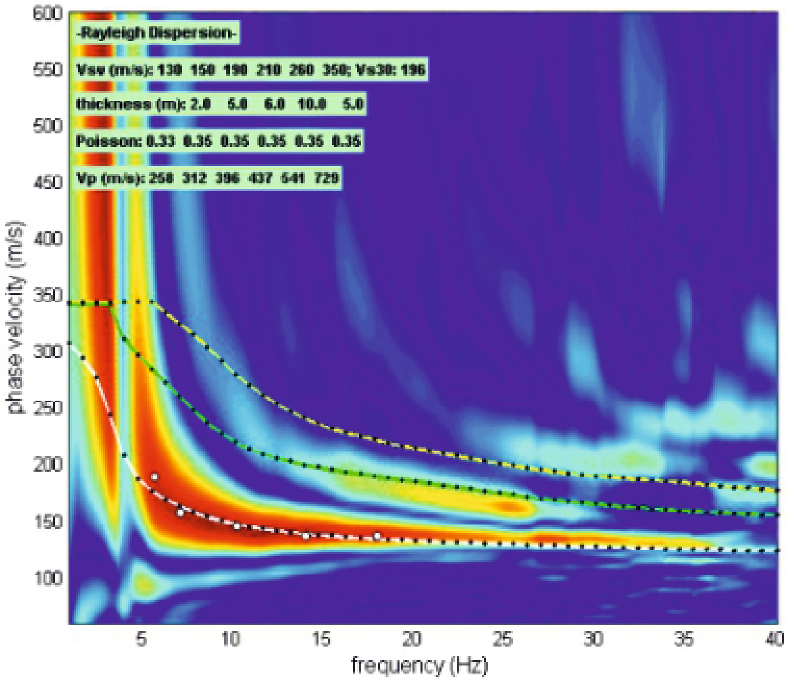
Cantiere: Medolla, Via San Matteo
Operatori :Dott.ssa Erika Parmeggiani e Dott.ssa Domitilla Santi
Lavoro: Studio del terreno di fondazione
Data: 03/04/2015
Elaborazione: Dott.ssa Linda Veratti
Responsabile: Dott. Geol. Pier Luigi Dallari

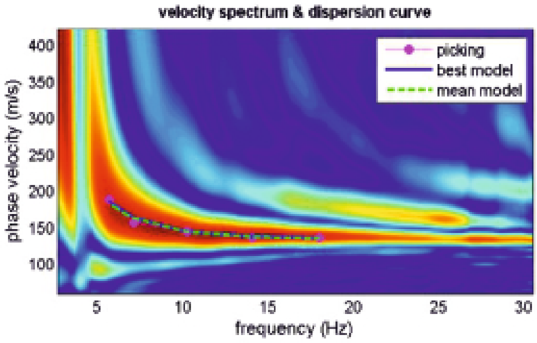
RIFERIMENTO
229/15

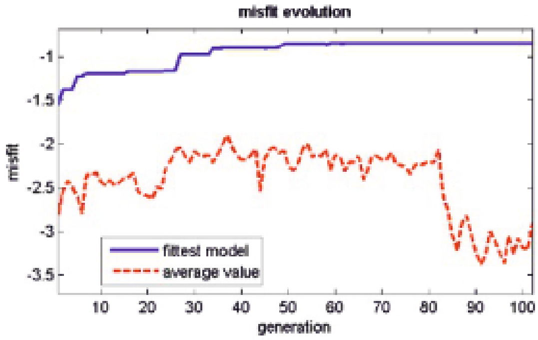
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



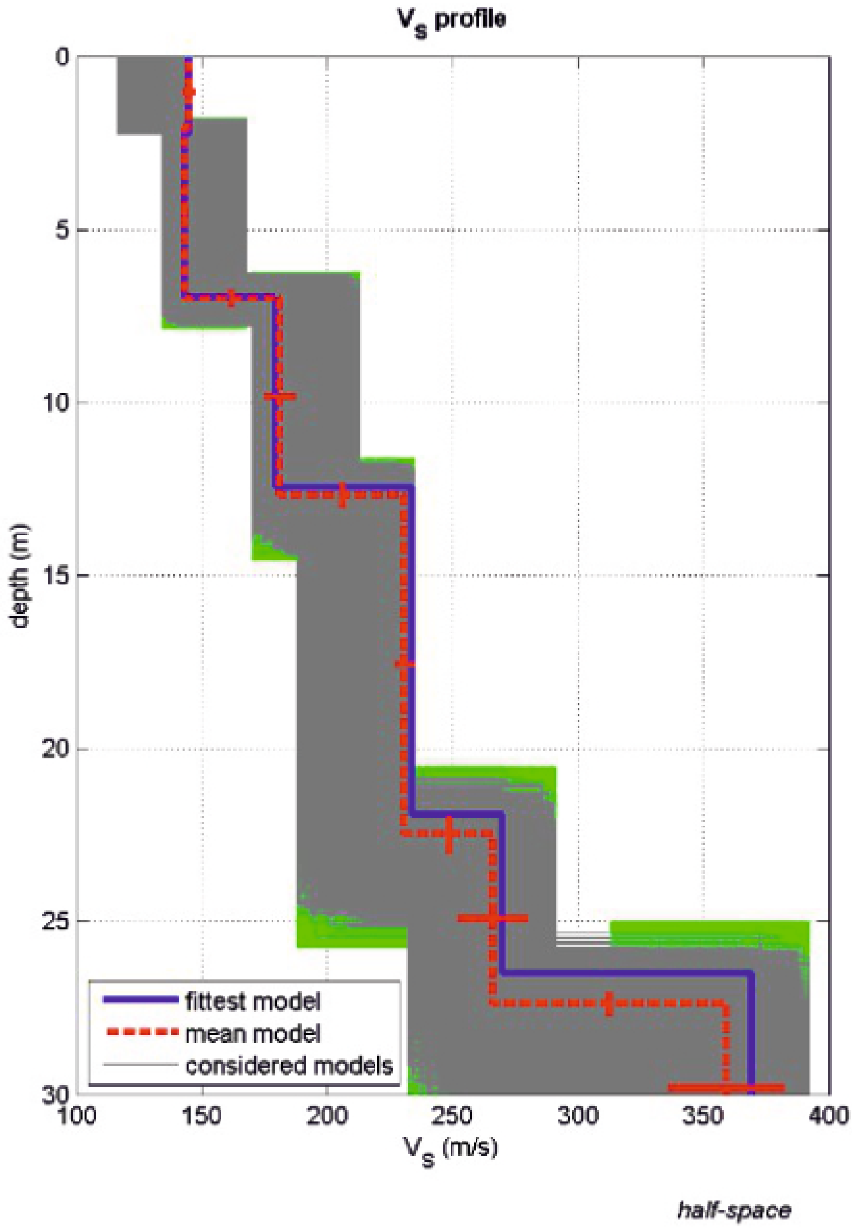
SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE







MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA



dataset: 706.dat

dispersion curve: picking.cdp

Vs30 (best model): 205 m/s

Vs30 (mean model): 202 m/s

BEST MODEL
Vs30 = 205 m/s

GEO GROUP s.r.l.
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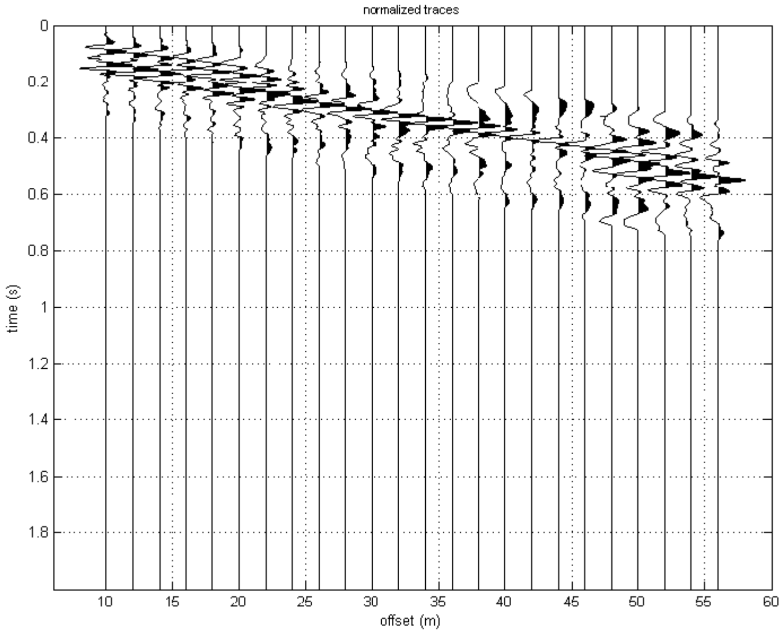
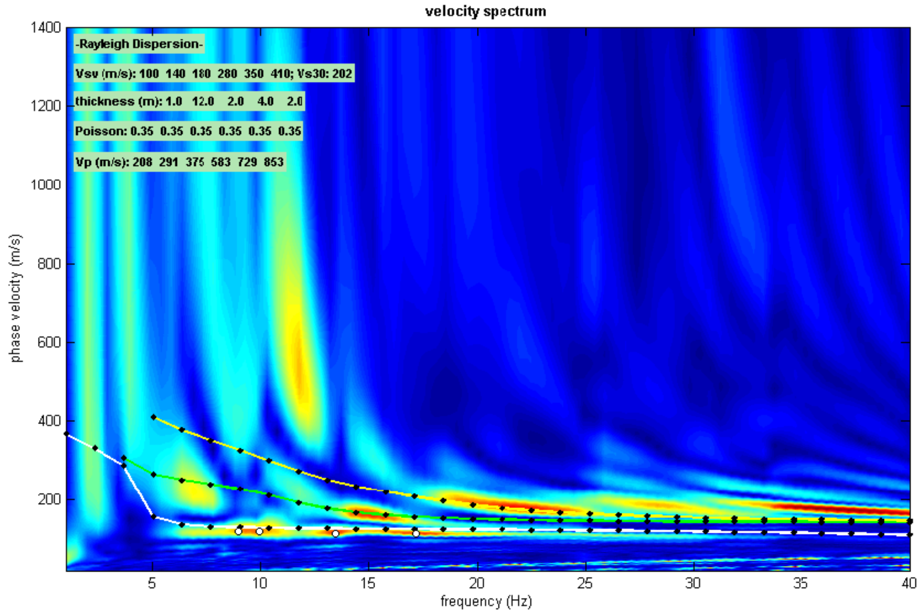
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

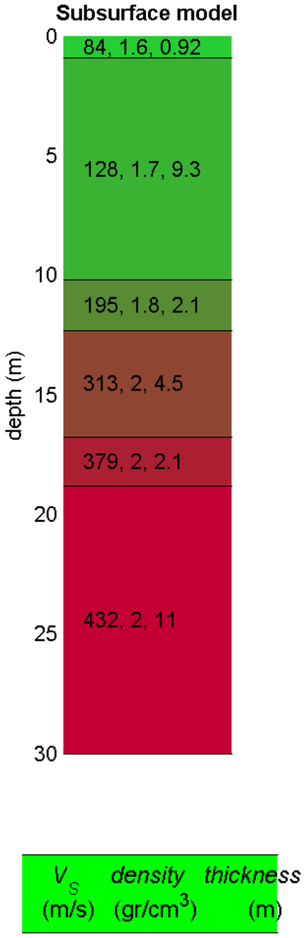
Cantiere:	SMedolla, MENU' S.p.A.
Operatori:	Dott. Ssa Erika Parmeggiani, Dott. Ssa Linda Veratti
Data:	16/04/13
Lavoro:	Realizzazione di un nuovo magazzino meccanizzato
Elaborazione:	Dott. Ssa Erika Parmeggiani
Responsabile:	Dott. Geol. Pier Luigi Dallari

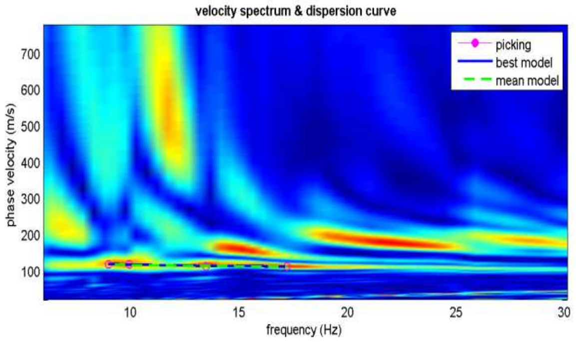
CERTIFICATO: 154_M_13

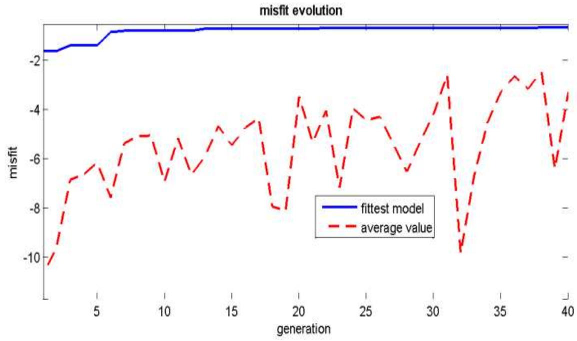
ELABORAZIONE




velocity spectrum
-Rayleigh Dispersion-
Vsv (m/s): 100 140 180 280 350 410; Vs30: 202
thickness (m): 1.0 12.0 2.0 4.0 2.0
Poisson: 0.35 0.35 0.35 0.35 0.35 0.35
Vp (m/s): 208 291 375 583 729 853
phase velocity (m/s)
1400
1200
1000
800
600
400
200
5
10
15
20
25
30
35
40
frequency (Hz)

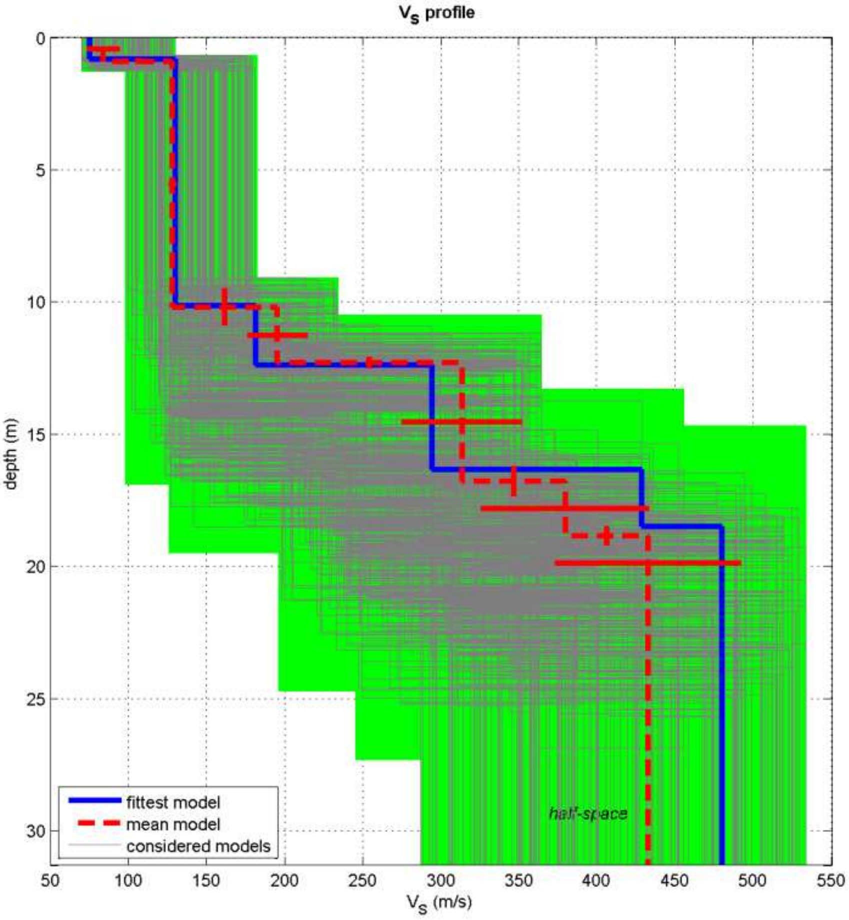

Subsurface model
0
5
10
15
20
25
30
depth (m)
84, 1.6, 0.92
128, 1.7, 9.3
195, 1.8, 2.1
313, 2, 4.5
379, 2, 2.1
432, 2, 11
V_S (m/s)
density (gr/cm^3)
thickness (m)


velocity spectrum & dispersion curve
picking
best model
mean model
phase velocity (m/s)
700
600
500
400
300
200
100
10
15
20
25
30
frequency (Hz)


misfit evolution
misfit
-2
-4
-6
-8
-10
fittest model
average value
5
10
15
20
25
30
35
40
generation

[MODELLO MIGLIORE]

Vs$_{30}$ = 218 m/s

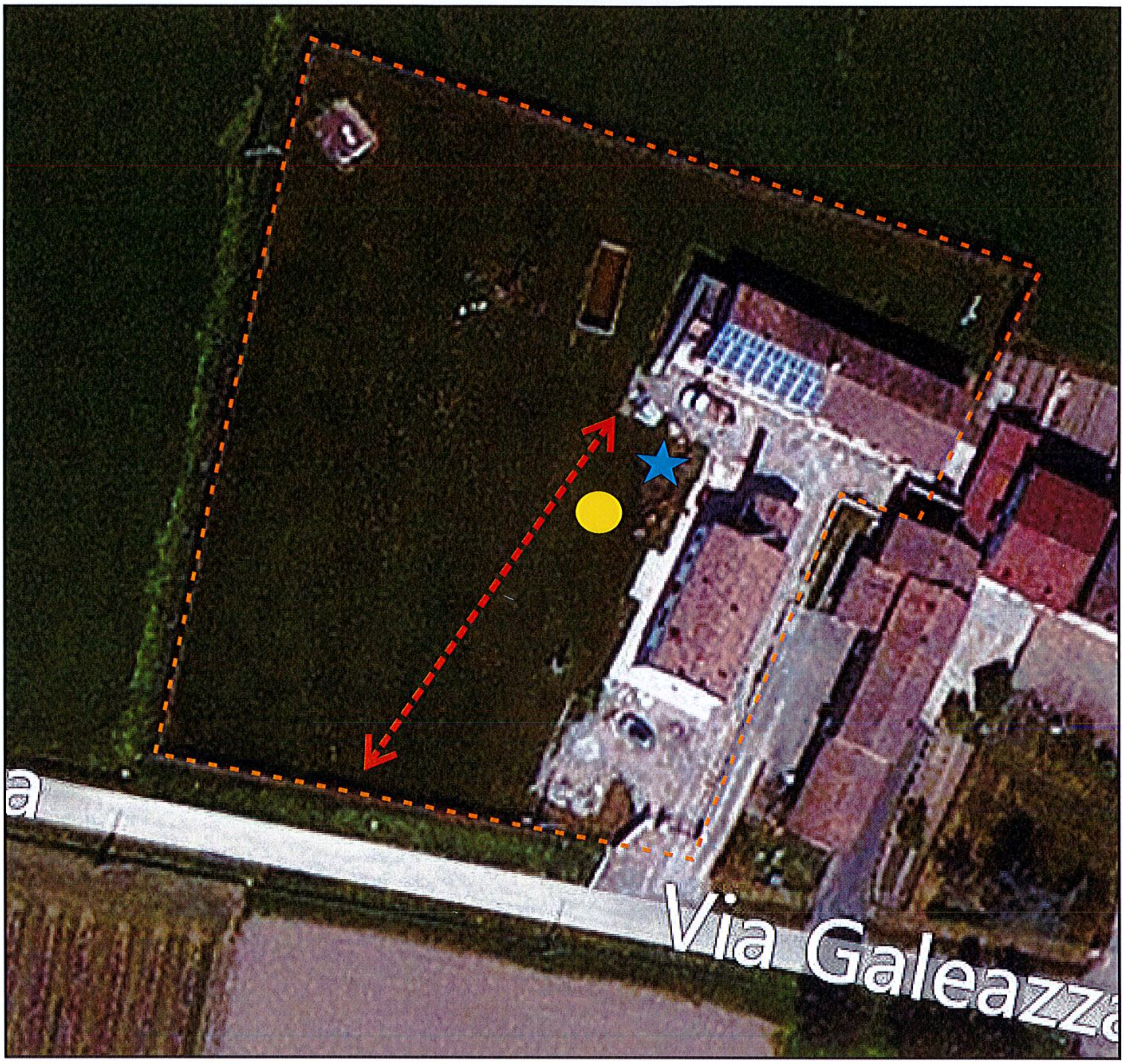


dataset: 215.dat

dispersion curve: Picking1.cdp

Vs30 (best model): 218 m/s

Vs30 (mean model): 215 m/s



Tav. n. 5 "Indagini geognostiche"

Scala grafica

Legenda

● prova penetrometrica statica CPT

★ indagine sismica HVSR

<-------> indagine sismica MASW

N

GEO GROUP s.r.l.
Sede Legale: via C. Costa, 182 – 41124 Modena
Sede operativa: via per Modena, 12 – 41051 Castelnuovo Rangone (MO)
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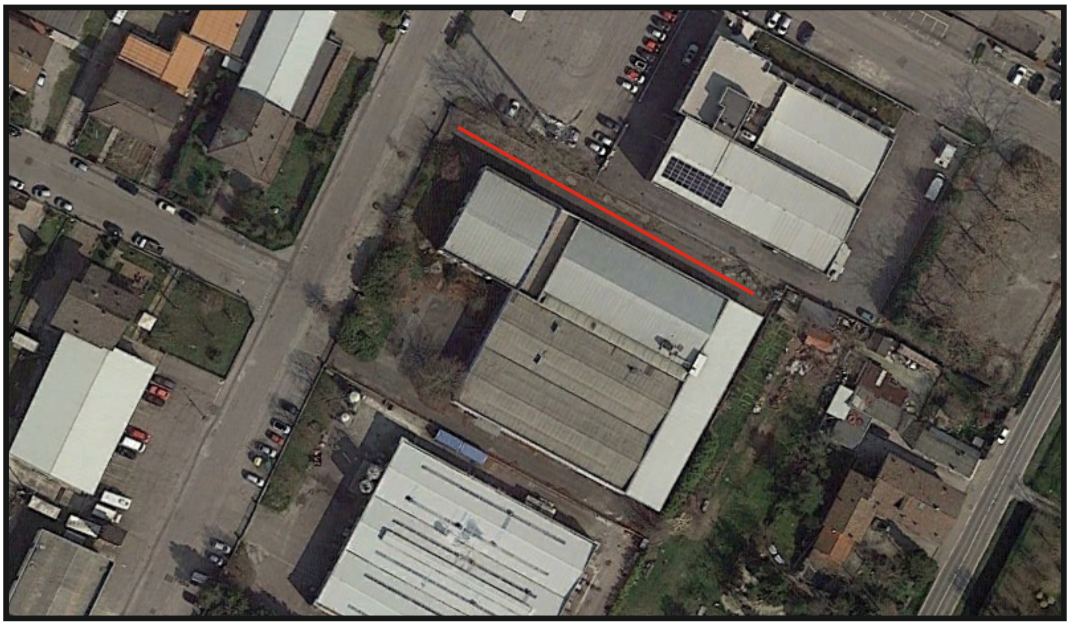
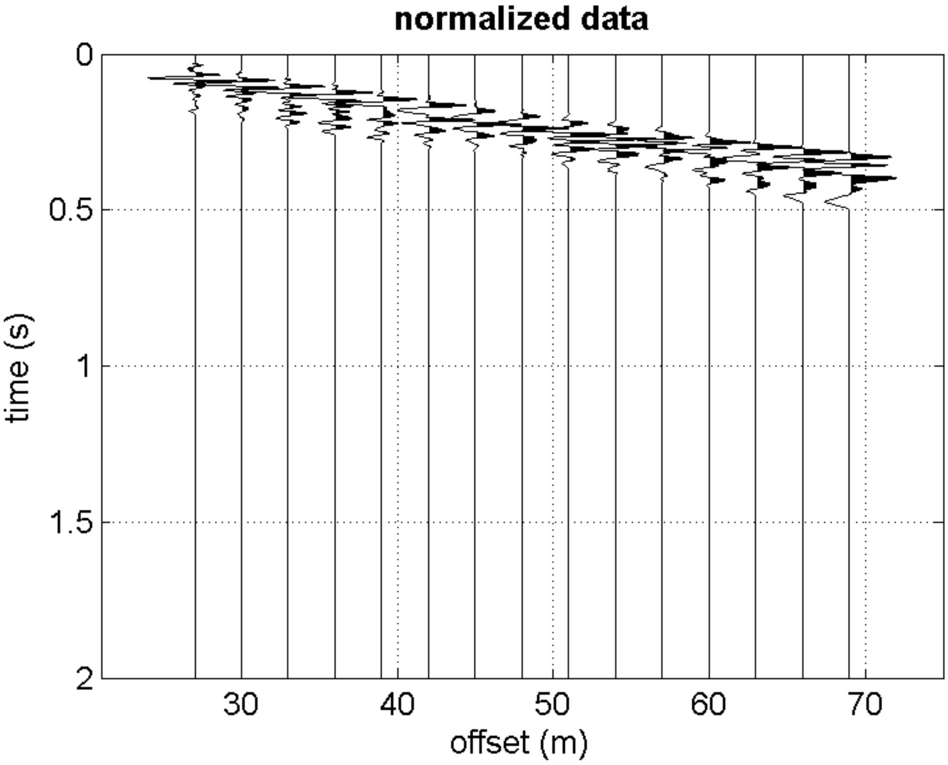
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

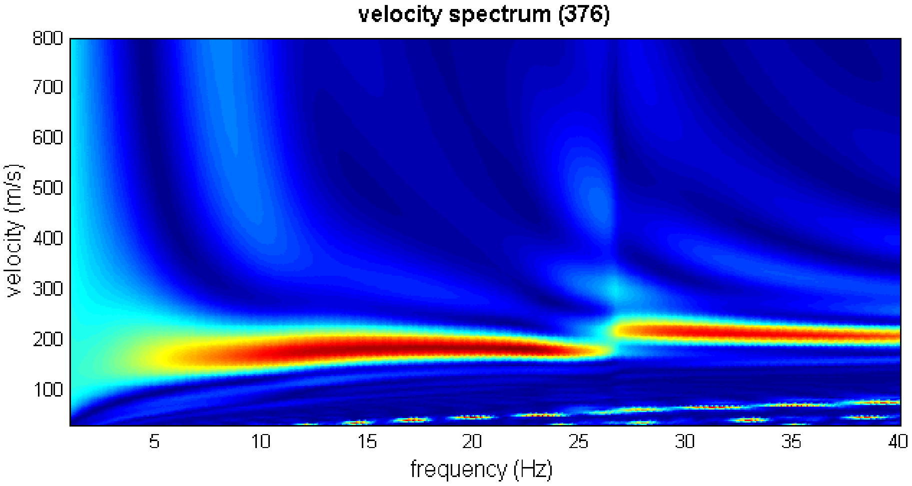
Cantiere: Medolla, Via degli Artigiani n.35
Lavoro: Studio del terreno di fondazione
Data: 17/04/2019
Responsabile: Dott. Geol. Pier Luigi Dallari

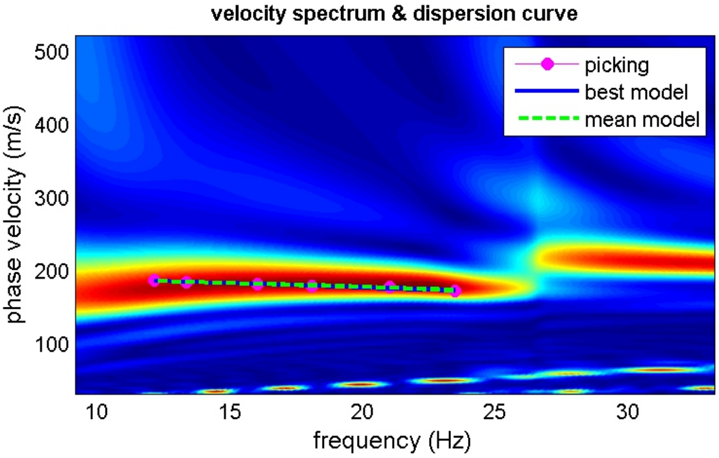


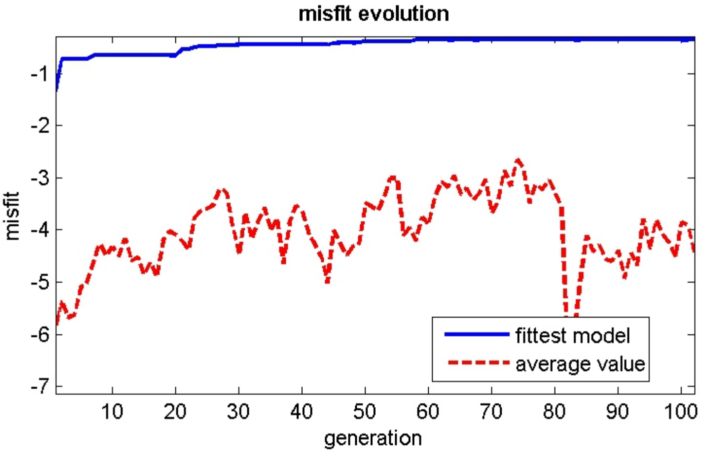
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



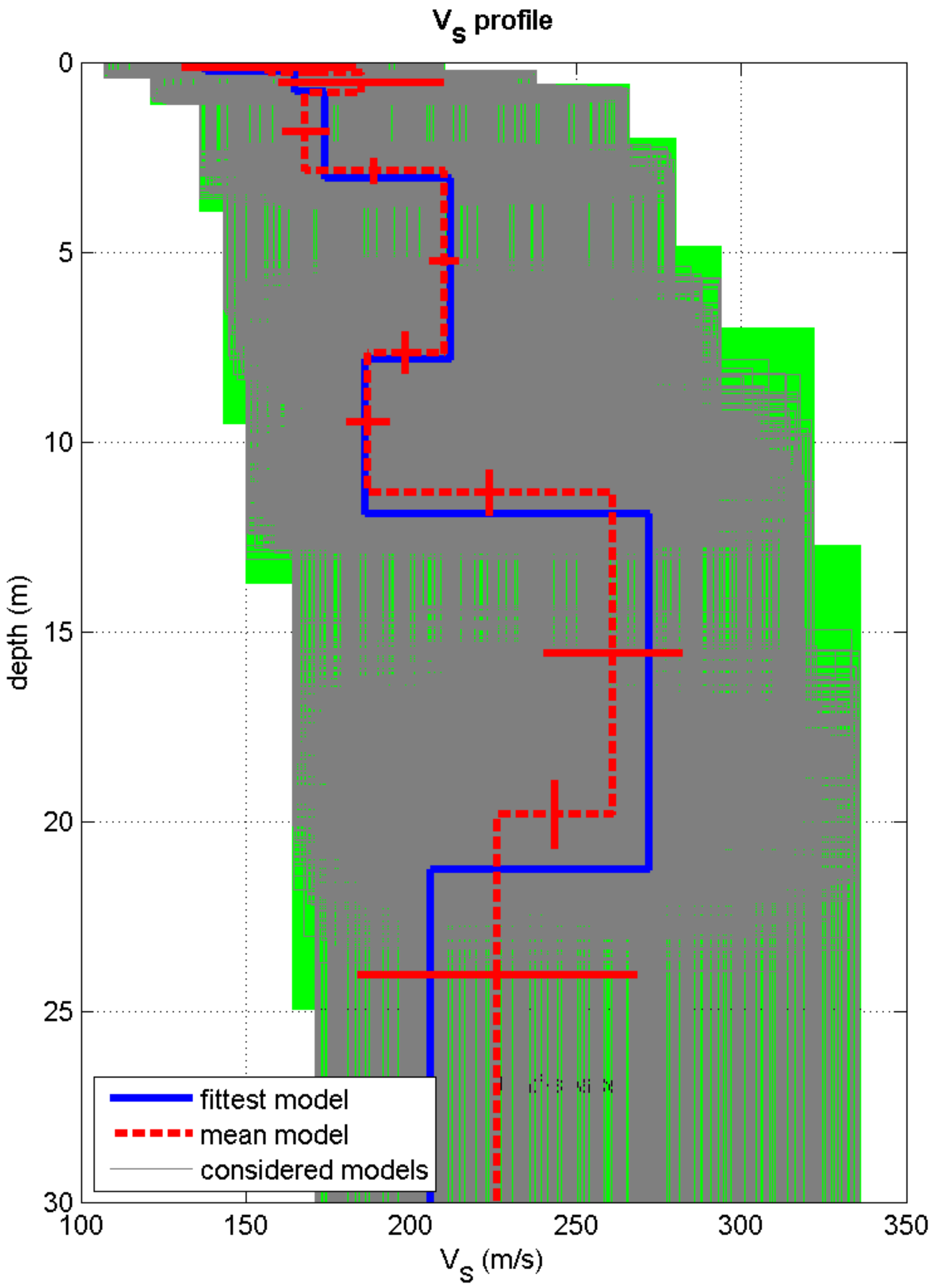
SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE







MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA



dataset: 376.dat

dispersion curve: pick.cdp

Vs30 (best model): 215 m/s

Vs30 (mean model): 219 m/s

BEST MODEL
Vs30 = 215 m/s

ALLEGATO N° 3

Indagine sismica MASW

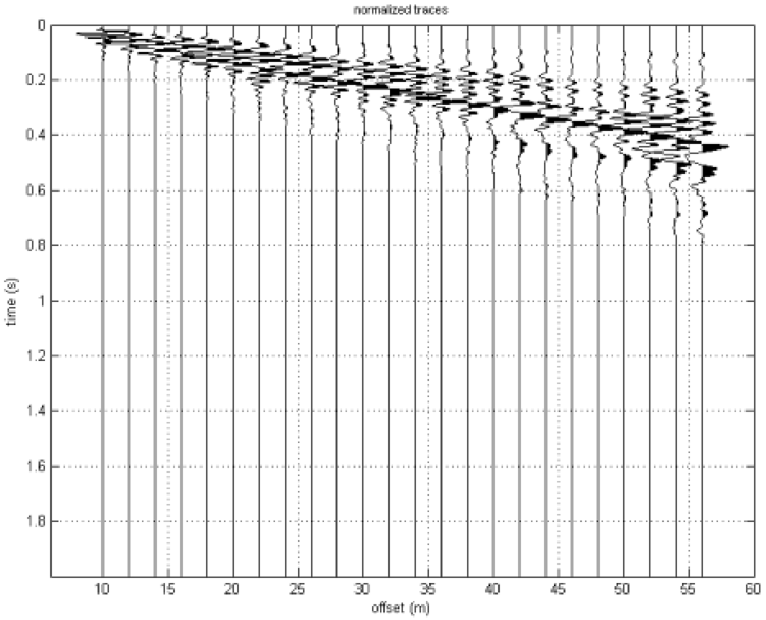
GEO GROUP s.r.l.
Sede Legale: via C. Costa, 182 – 41124 Modena
Sede operativa: via per Modena, 12 – 41051 Castelnuovo Rangone (MO)
Tel. 059-39.67.169 - Fax . 059-53.32.019
p.IVA e C.F. 02981500362 – www.geogroupmodena.it - e-mail: info@geogroupmodena.it

ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

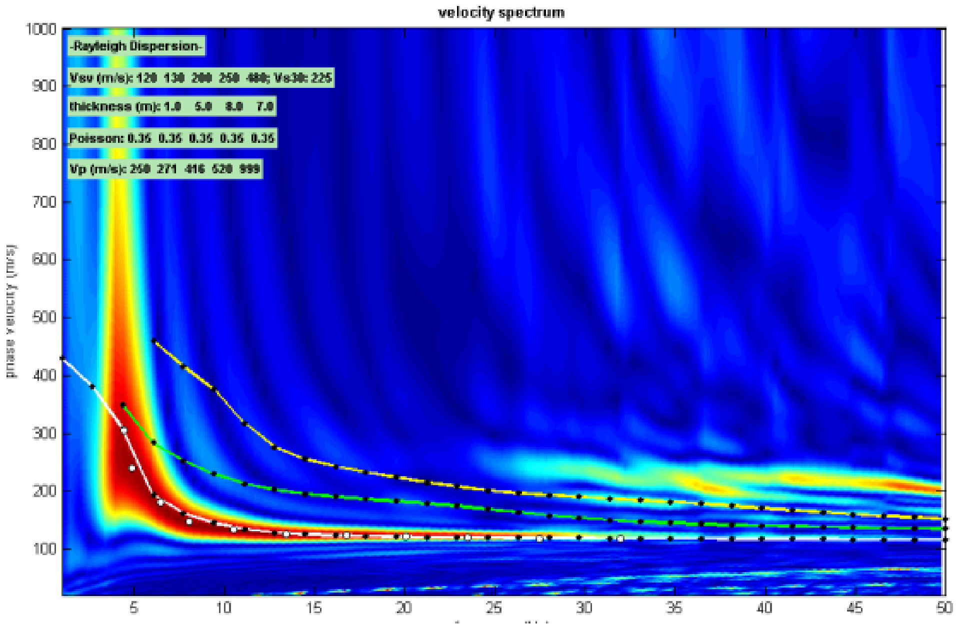
Cantiere: Medolla (MO) – Via Grande n. 22
Operatori: Dott. Gabriele Ghirardini e Dott. Geol. Emilio Guerzoni
Data: 15/05/13
Lavoro: Studio del terreno di fondazione
Elaborazione: Dott. Ssa Geo.. Monica Mazzoli
Responsabile: Dott. Geol. Pier Luigi Dallari

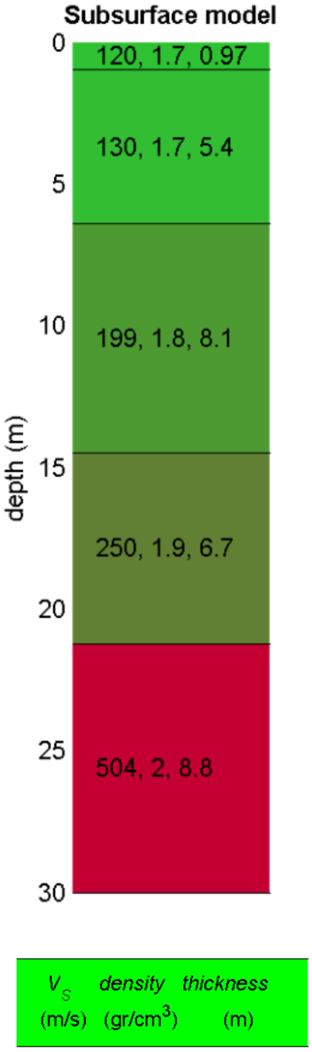
CERTIFICATO: 162_M_13

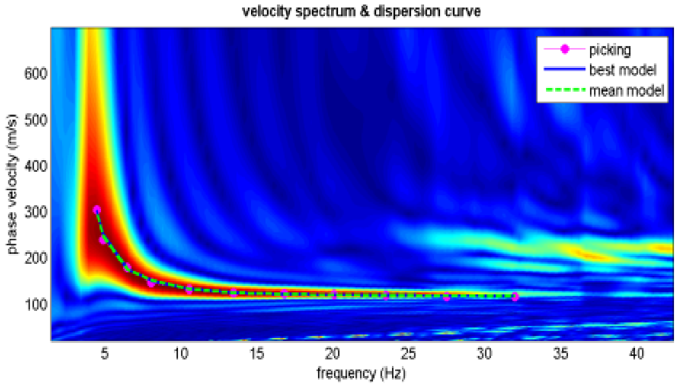
DATA INPUT

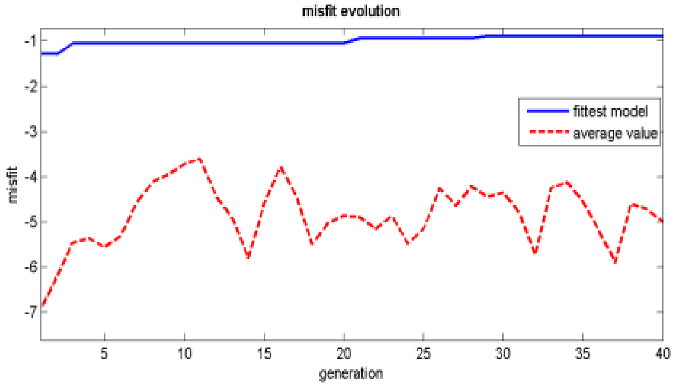


ELABORAZIONE



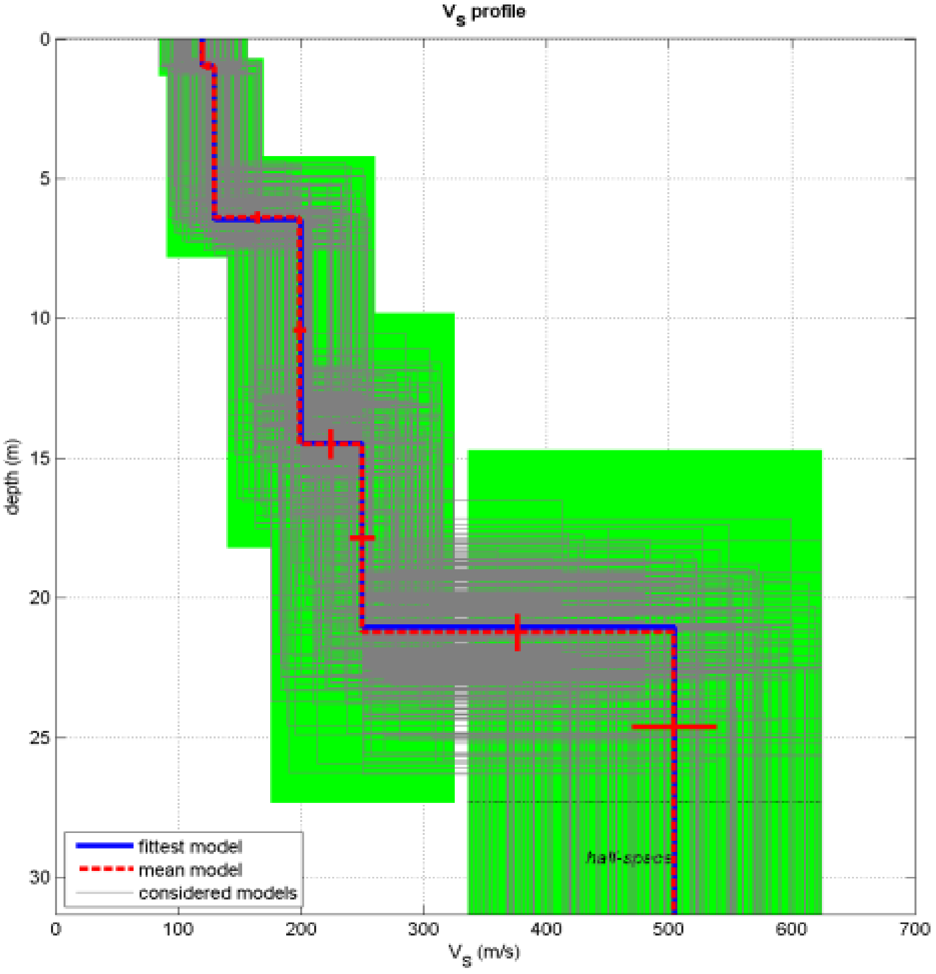






[MODELLO FINALE]

Vs_{30} = 223 m/s



dataset: 50.dat

dispersion curve: p1.cdp

Vs30 (best model): 223 m/s

Vs30 (mean model): 222 m/s

GEO GROUP s.r.l.
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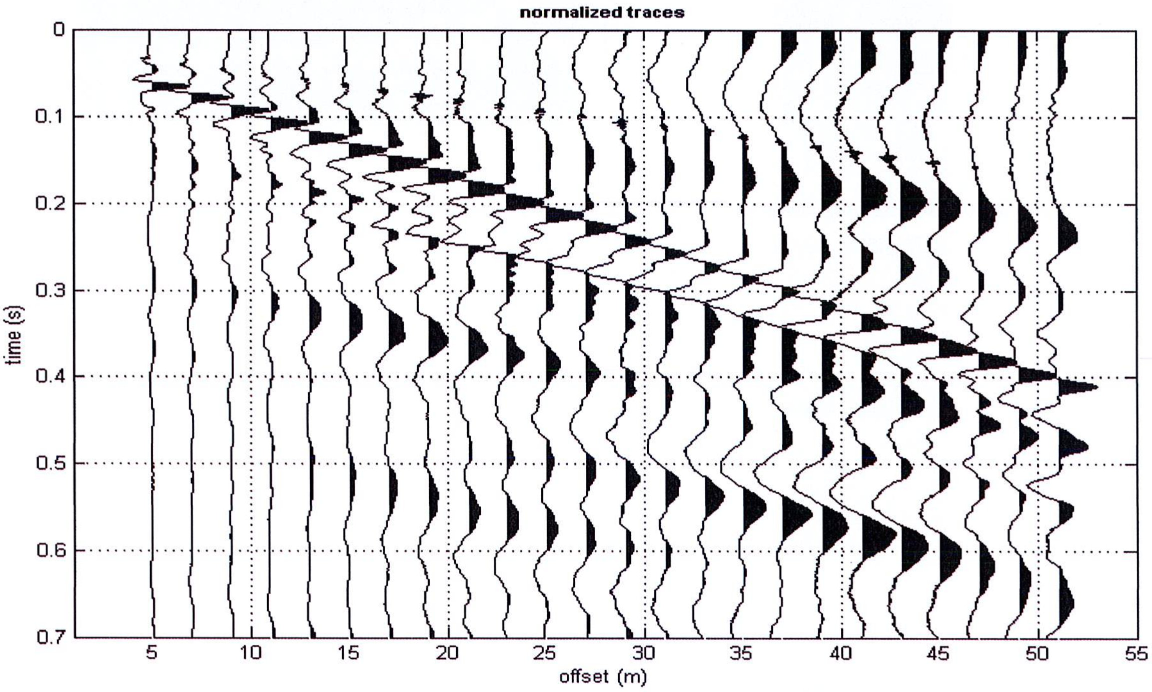
SISTEMA DI GESTIONE PER LA QUALITÀ CERTIFICATO = UNI EN ISO 9001:2008 = SINCERT DNV

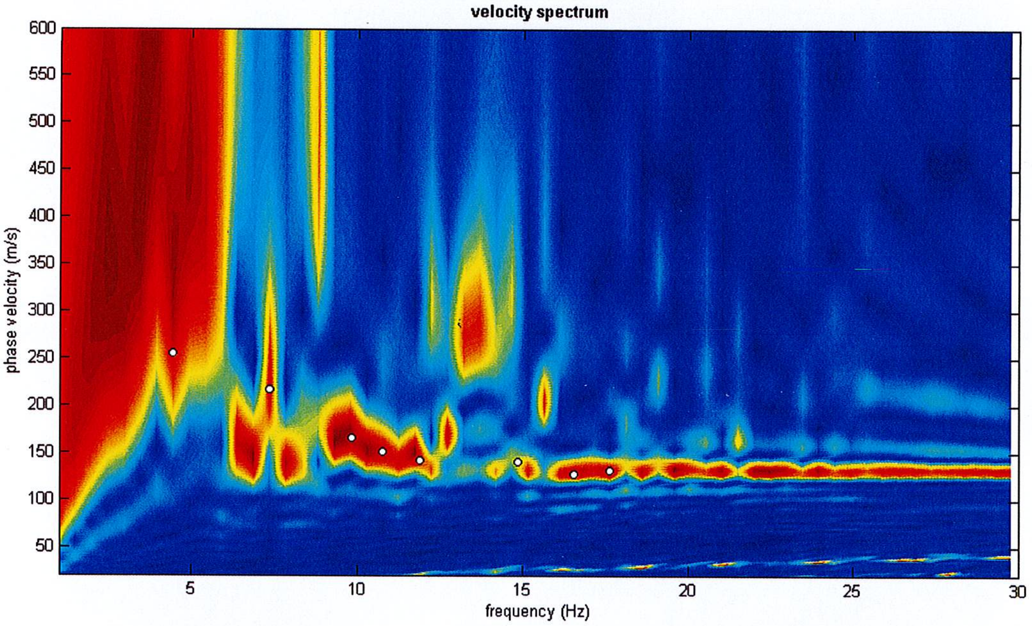
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

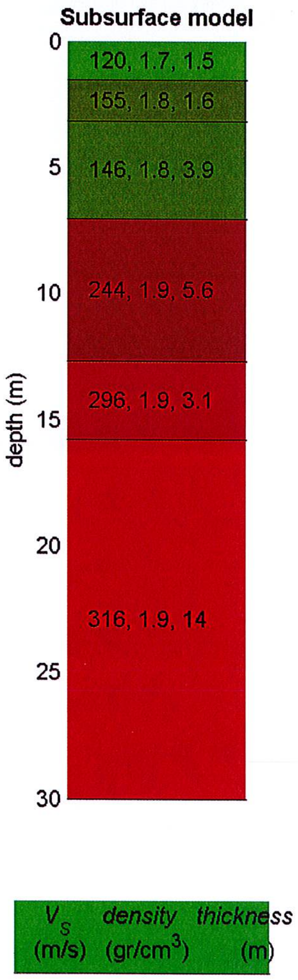
Cantiere:	Carpi, Federal Mogul, Via della Scienza
Operatori:	Dott. Ssa Linda Veratti
Data:	25/01/13
Lavoro:	Studio del terreno di fondazione
Elaborazione:	Dott. Ghirardini Gabriele
Responsabile:	Dott. Geol. Pier Luigi Dallari

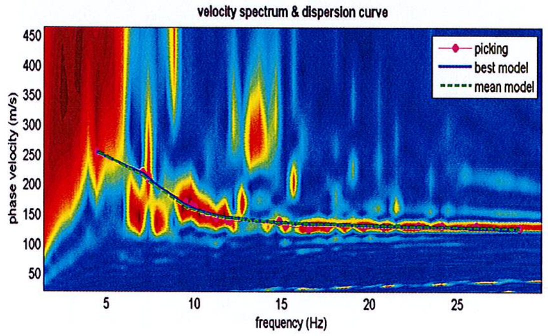
CERTIFICATO: 021_M_13

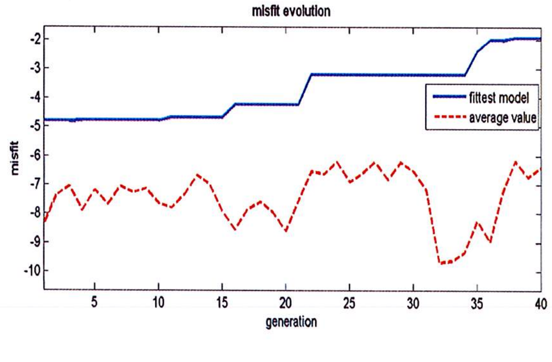


ELABORAZIONE



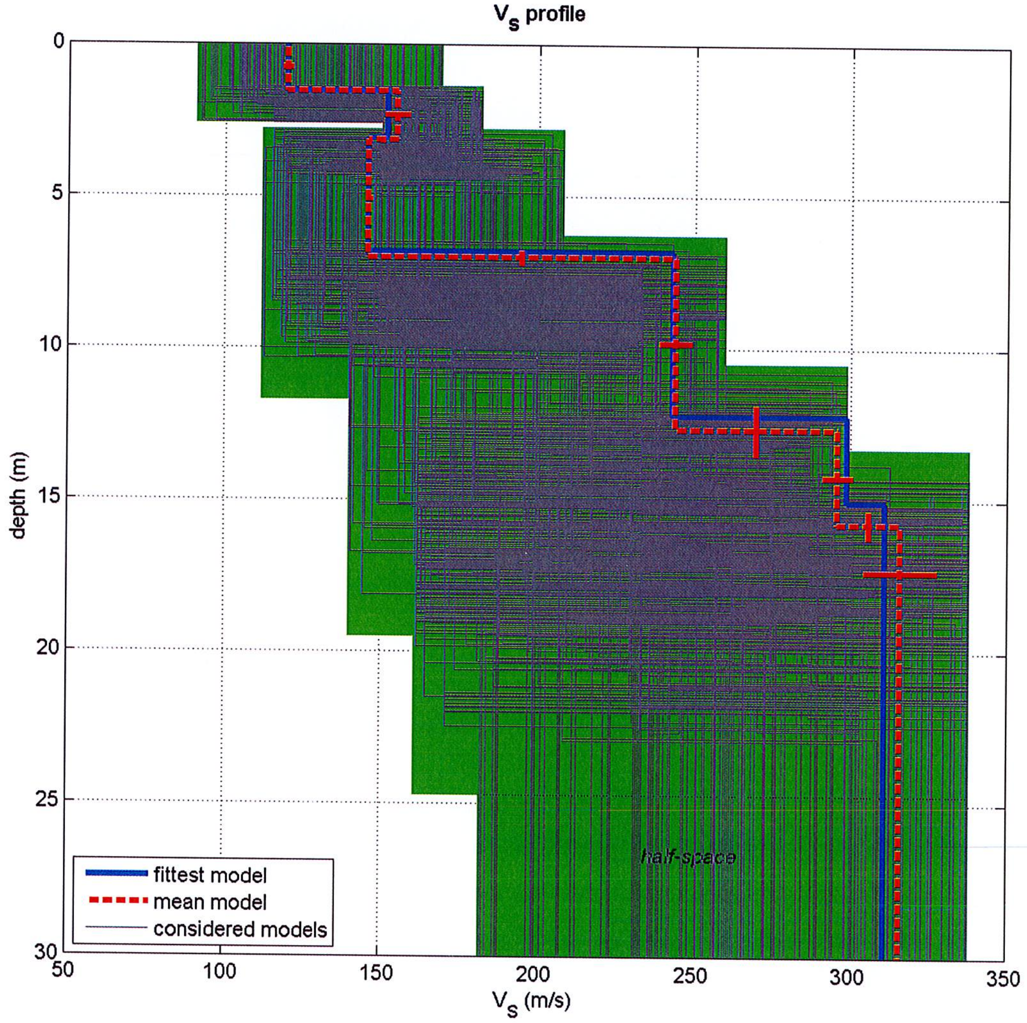






[MODELLO FINALE]

Vs$_{30}$ = 234 m/s



dataset: 135$_5$.dat

dispersion curve: pick.cdp

Vs30 (best model): 234 m/s

Vs30 (mean model): 234 m/s

ALLEGATO N° 3

Indagini sismiche

GEO GROUP s.r.l.
Sede legale: Via C. Costa, 182 - 41123 MODENA
Sede operativa: vi Per Modena, 15 – 41051 Castelnuovo Rangone (MO)
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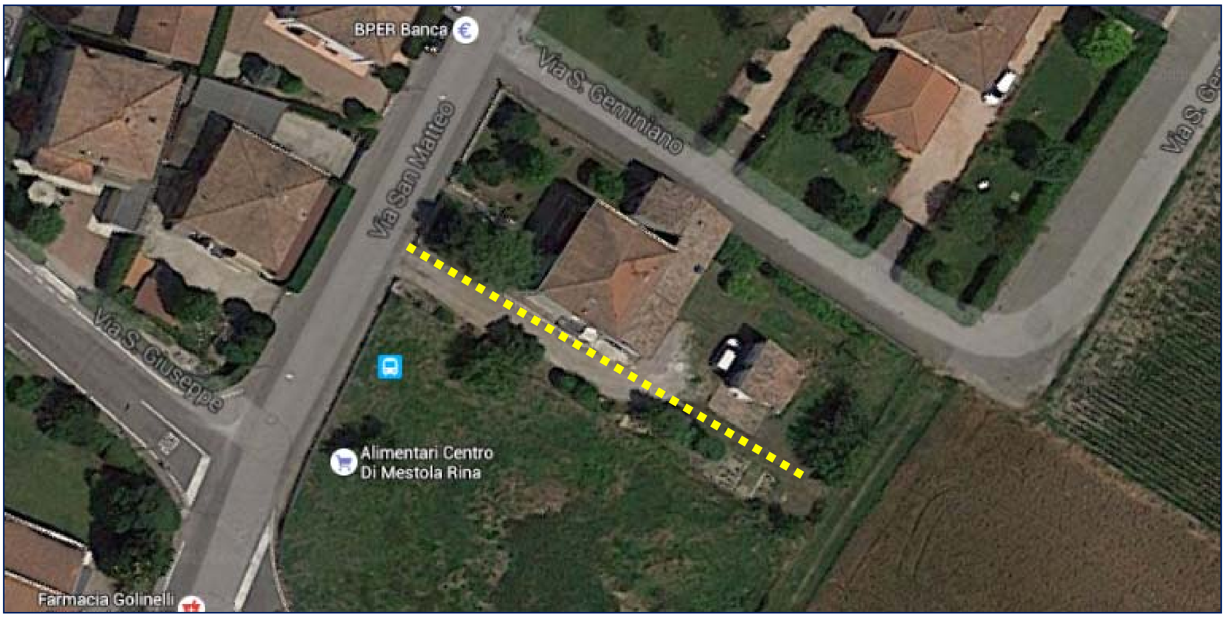
E-mail: geo.group@libero.it
P.IVA e C.F. 02981500362
www.geogroupmodena.it

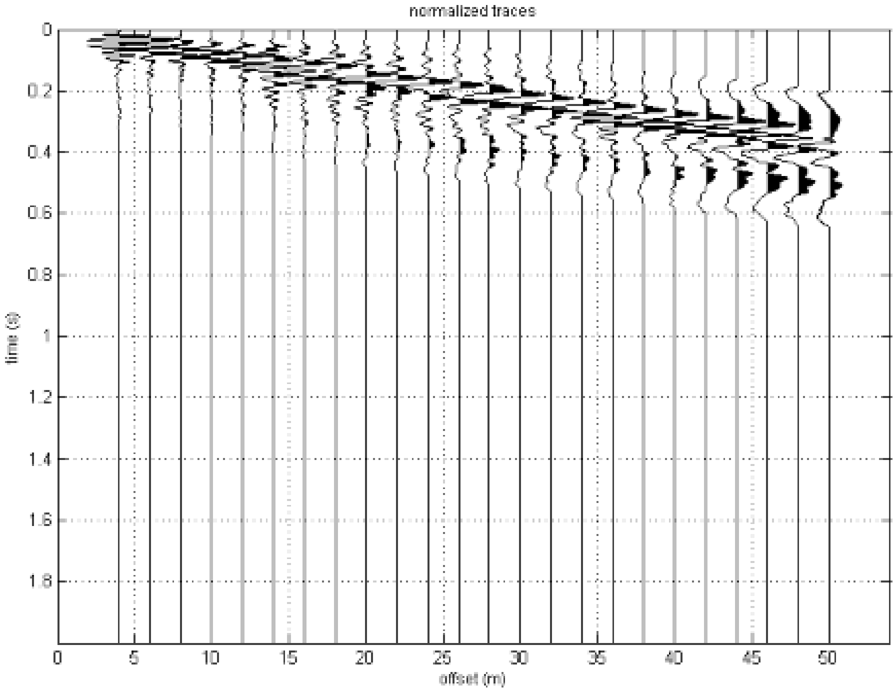
ANALISI SISMICA DI SITO SECONDO METODOLOGIA MASW

RIF. MASW 30/16

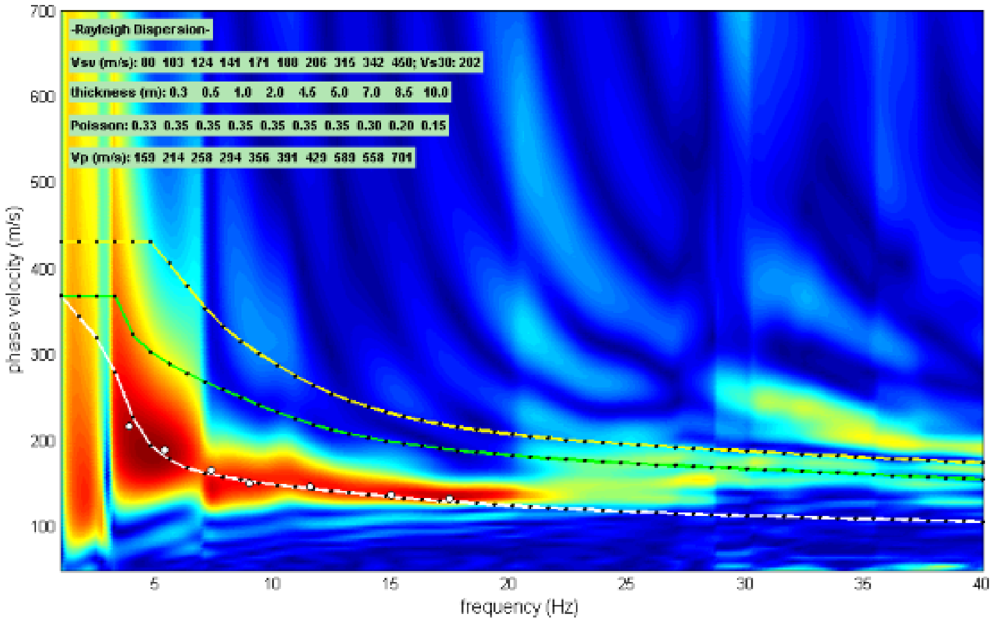
Cantiere: Via San Matteo, 49, Medolla (MO)
Data: 25/01/2016
Lavoro: Demolizione e ricostruzione
Operatori: Dott.ssa Linda Veratti, Dott.ssa Domitilla Santi
Elaborazione: Dott.ssa Linda Veratti
Responsabile: Dott. Geol. Pier Luigi Dallari

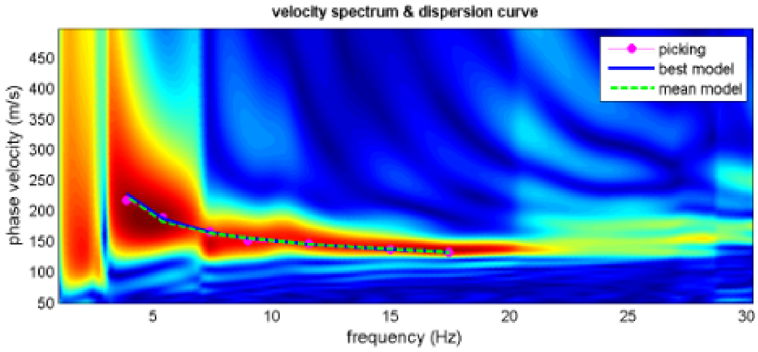


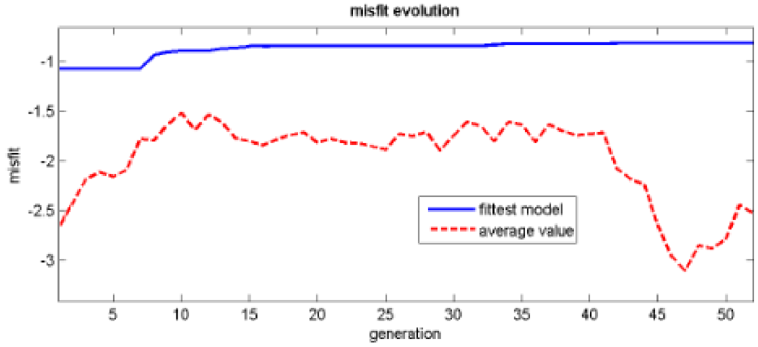
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



SPETTRO RELATIVO ALLE VELOCITÁ DI FASE REGISTRATE NEL DOMINIO DELLE FREQUENZE

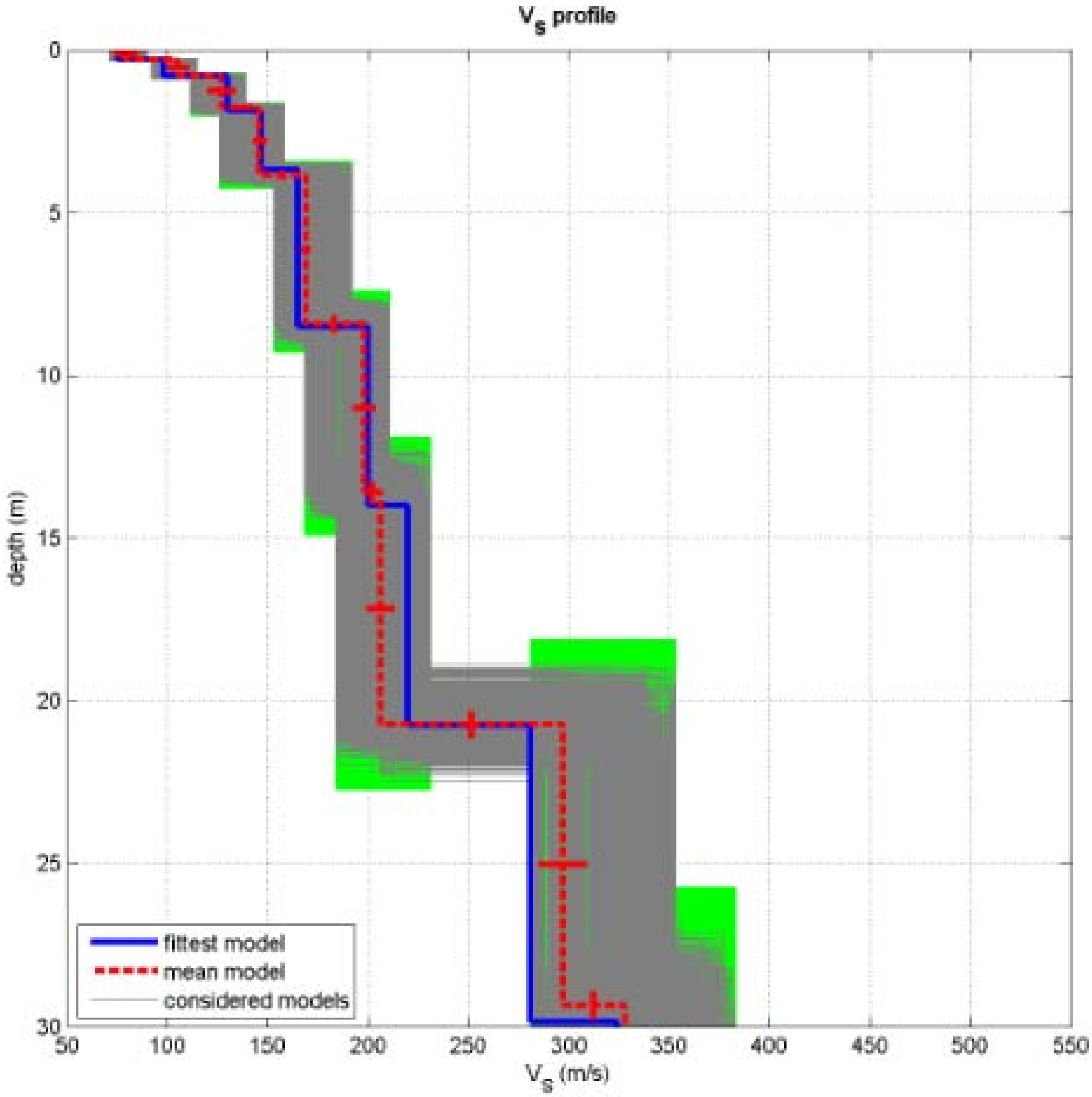






www.winmasw.com

MODELLO V_S30 DERIVATO DALL'INDAGINE MASW ESEGUITA



dataset: somma.segy

dispersion curve: pick.cdp

Vs30 (best model): 200 m/s

Vs30 (mean model): 201 m/s

BEST MODEL
V_S30 = 200 m/s

GEO GROUP s.r.l.
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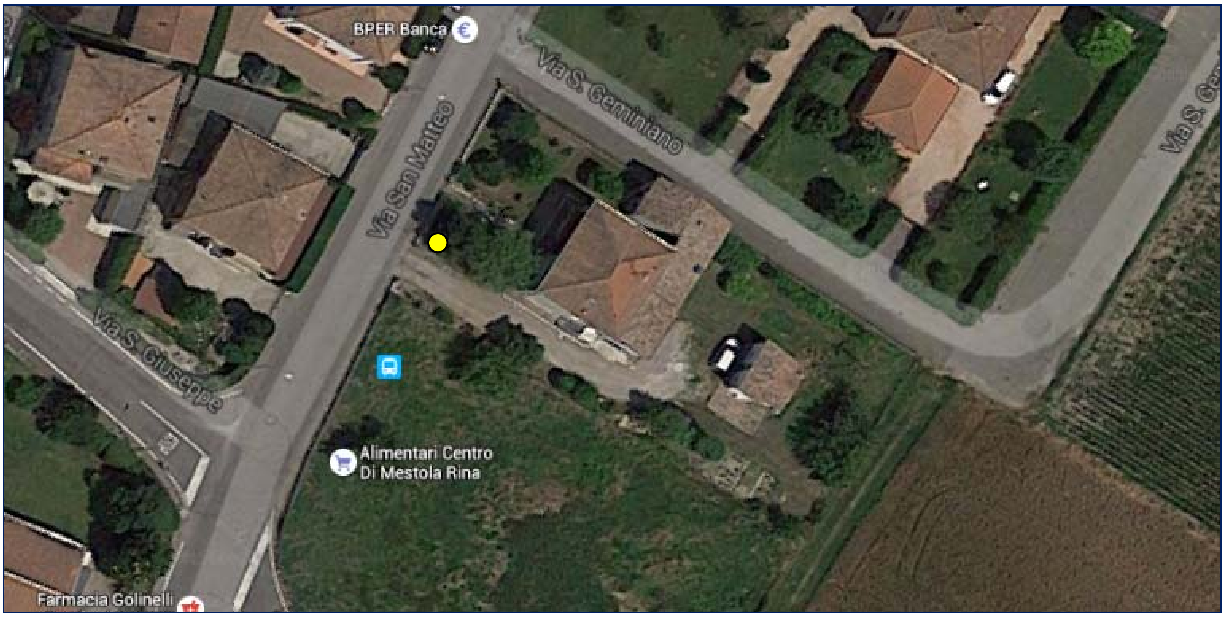
E-mail: geo.group@libero.it
P.IVA e C.F. 02981500362
www.geogroupmodena.it

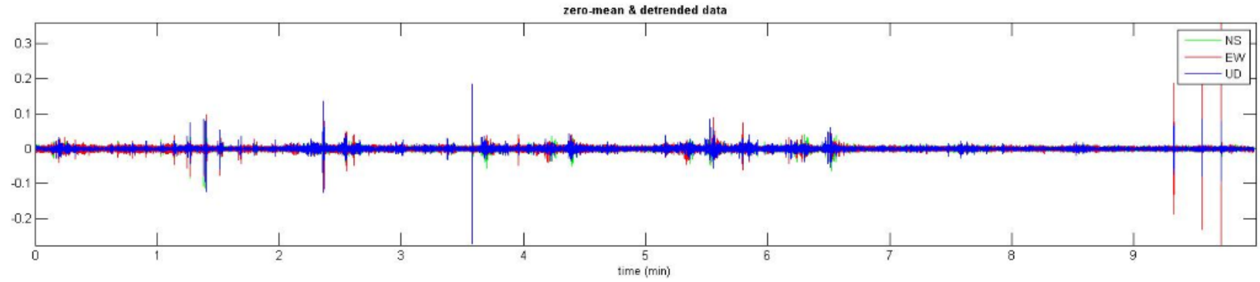
ANALISI SISMICA DI SITO SECONDO METODOLOGIA HVSR

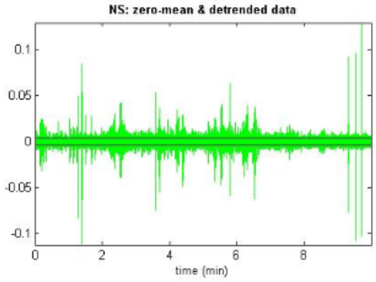
RIF. HVSR 1
30/16

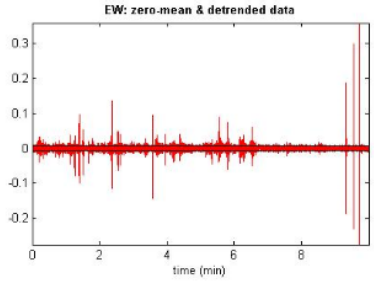
Cantiere: Via San Matteo, 49, Medolla (MO)
Data: 25/01/2016
Lavoro: Demolizione e ricostruzione
Operatori: Dott.ssa Linda Veratti, Dott.ssa Domitilla Santi
Elaborazione: Dott.ssa Linda Veratti
Responsabile: Dott. Geol. Pier Luigi Dallari

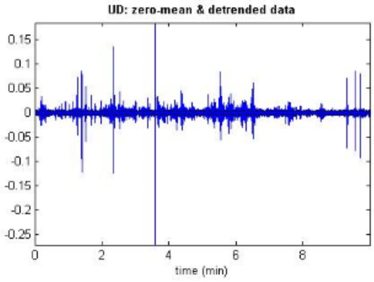


UBICAZIONE DELLA STAZIONE DI MISURA

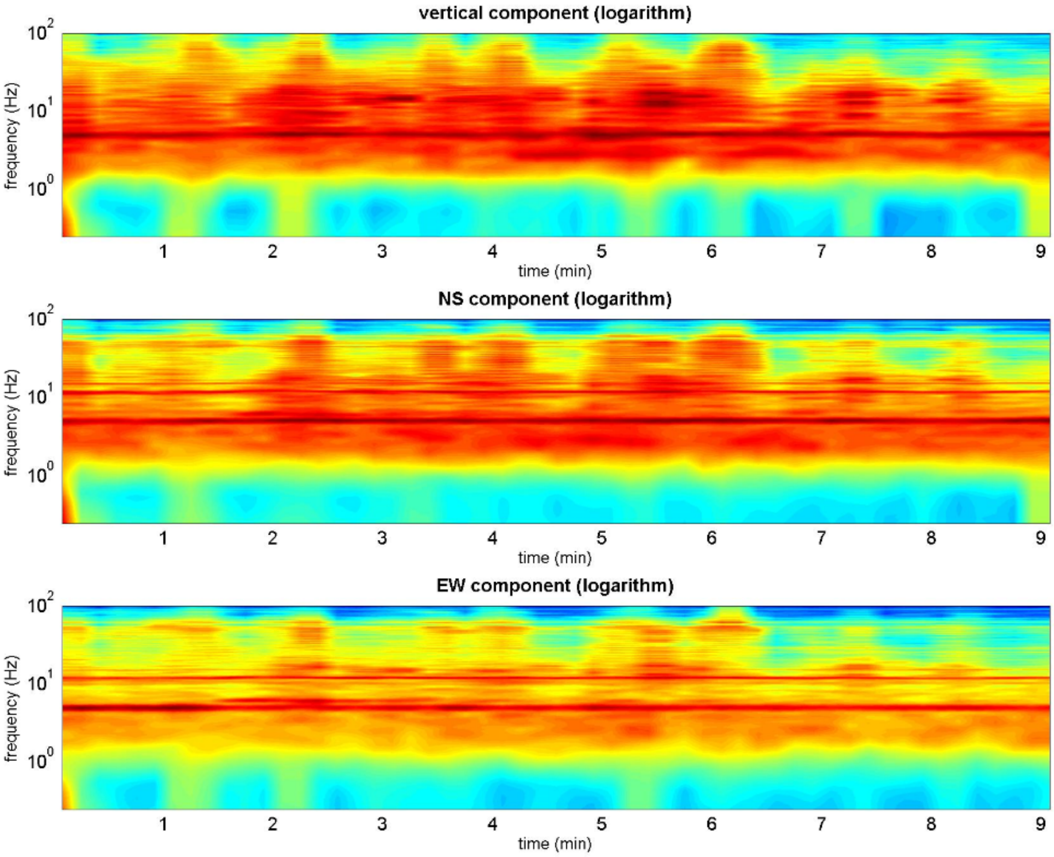




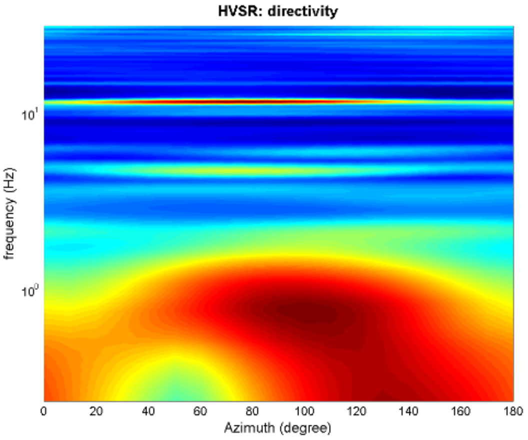


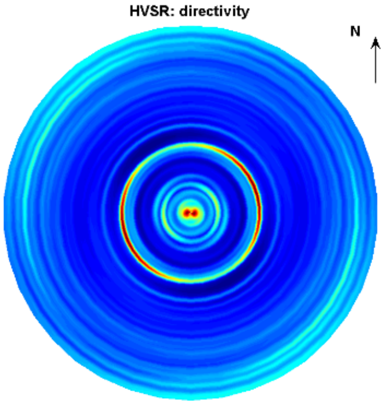


PERSISTENZA HVSR

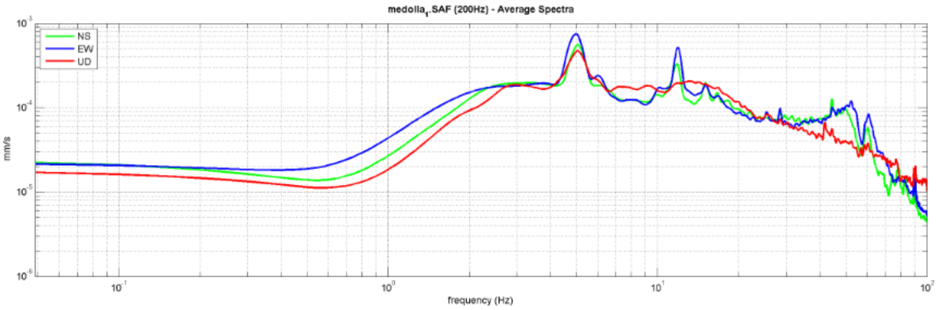


DIREZIONALITÁ HVSR

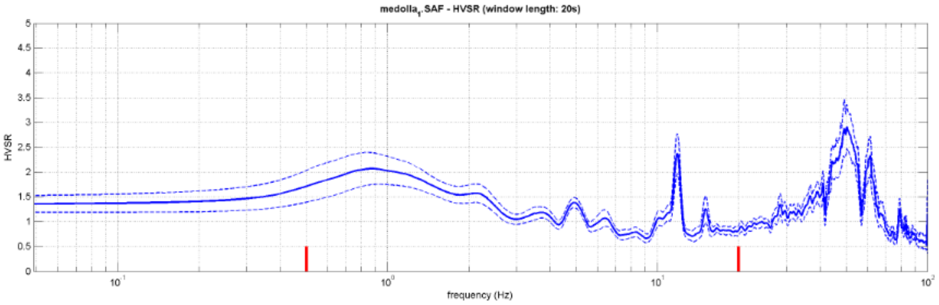




VELOCITÁ SPETTRALI

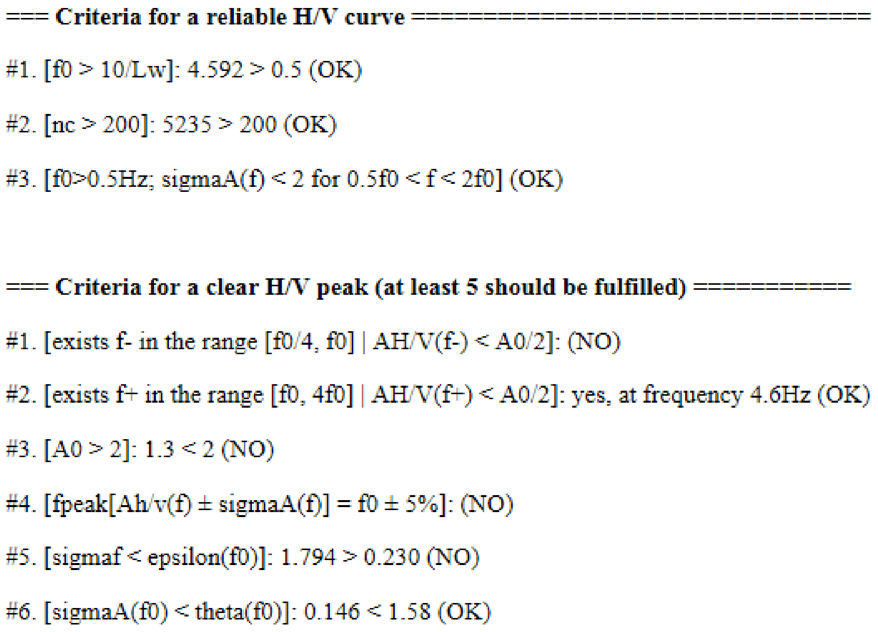


RAPPORTO HVSR DERIVATO DALL’ACQUISIZIONE ESEGUITA



FREQUENZA DERIVATA

nessun picco stratigrafico rilevato



=== **Criteria for a reliable H/V curve** ================================

#1. [f0 > 10/Lw]: 4.592 > 0.5 (OK)

#2. [nc > 200]: 5235 > 200 (OK)

#3. [f0>0.5Hz; sigmaA(f) < 2 for 0.5f0 < f < 2f0] (OK)

=== **Criteria for a clear H/V peak (at least 5 should be fulfilled)** ===========

#1. [exists f- in the range [f0/4, f0] | AH/V(f-) < A0/2]: (NO)

#2. [exists f+ in the range [f0, 4f0] | AH/V(f+) < A0/2]: yes, at frequency 4.6Hz (OK)

#3. [A0 > 2]: 1.3 < 2 (NO)

#4. [fpeak[Ah/v(f) ± sigmaA(f)] = f0 ± 5%]: (NO)

#5. [sigmaf < epsilon(f0)]: 1.794 > 0.230 (NO)

#6. [sigmaA(f0) < theta(f0)]: 0.146 < 1.58 (OK)

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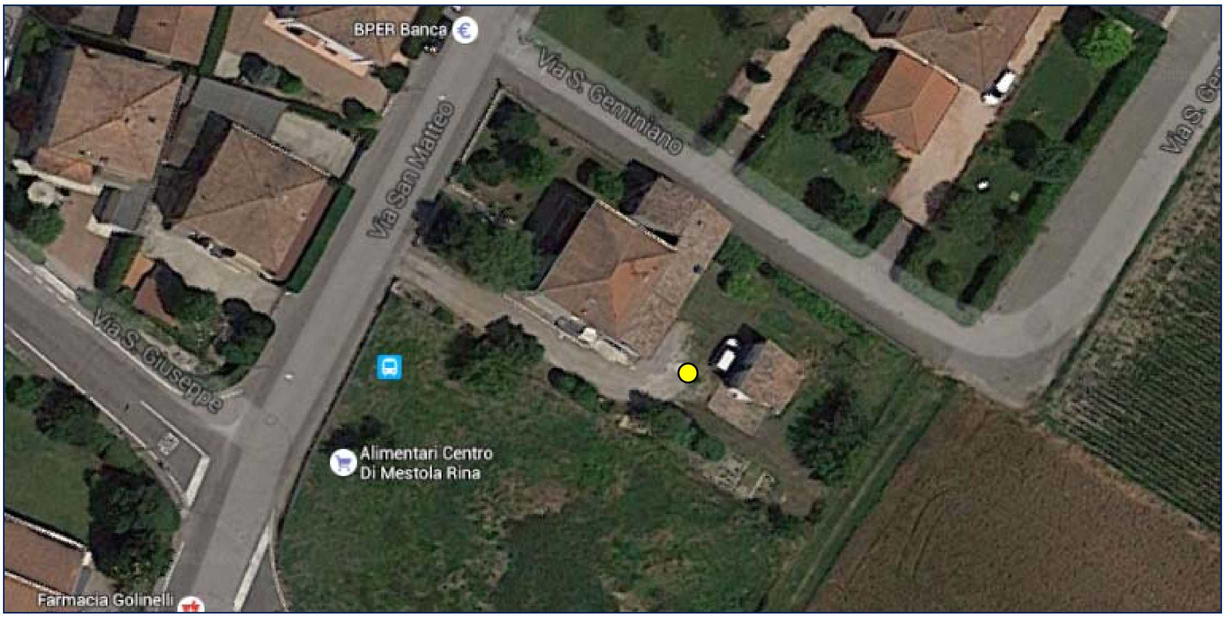
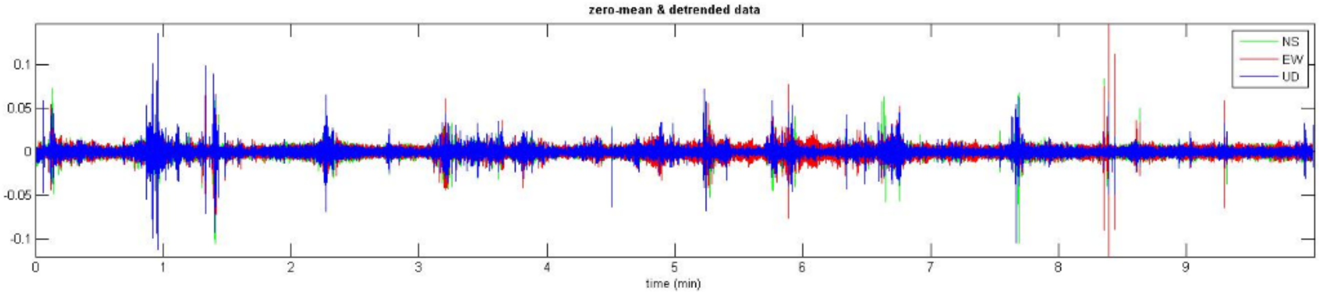
ANALISI SISMICA DI SITO SECONDO METODOLOGIA HVSR

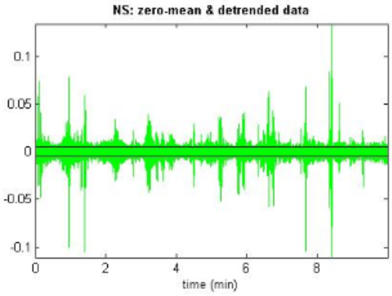
RIF. HVSR 2
30/16

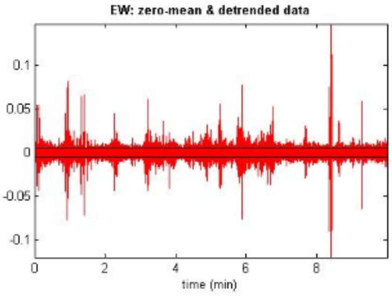
Cantiere: Via San Matteo, 49, Medolla (MO)
Data: 25/01/2016
Lavoro: Demolizione e ricostruzione
Operatori: Dott.ssa Linda Veratti, Dott.ssa Domitilla Santi
Elaborazione: Dott.ssa Linda Veratti
Responsabile: Dott. Geol. Pier Luigi Dallari

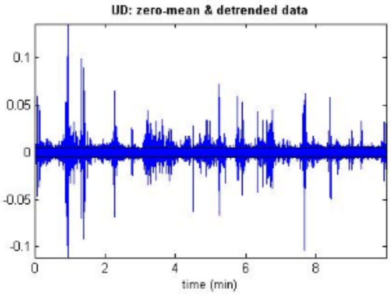


UBICAZIONE DELLA STAZIONE DI MISURA

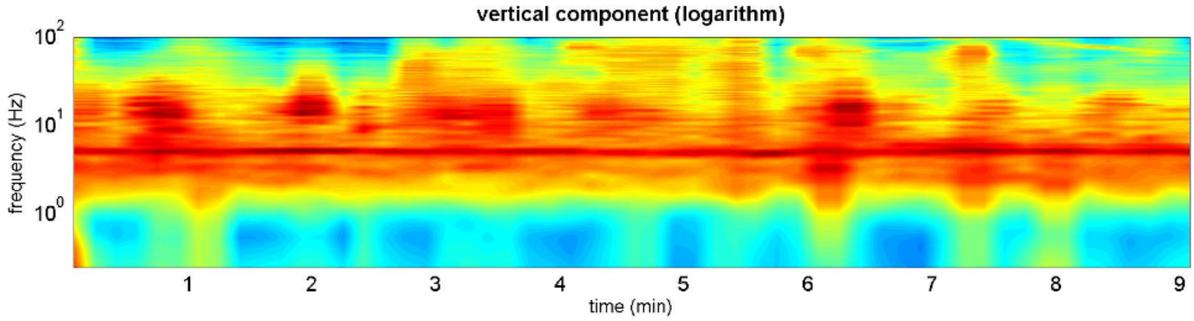


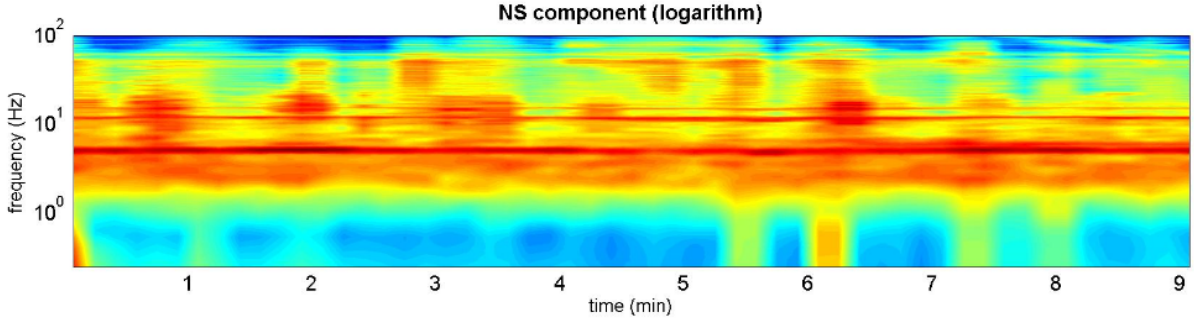


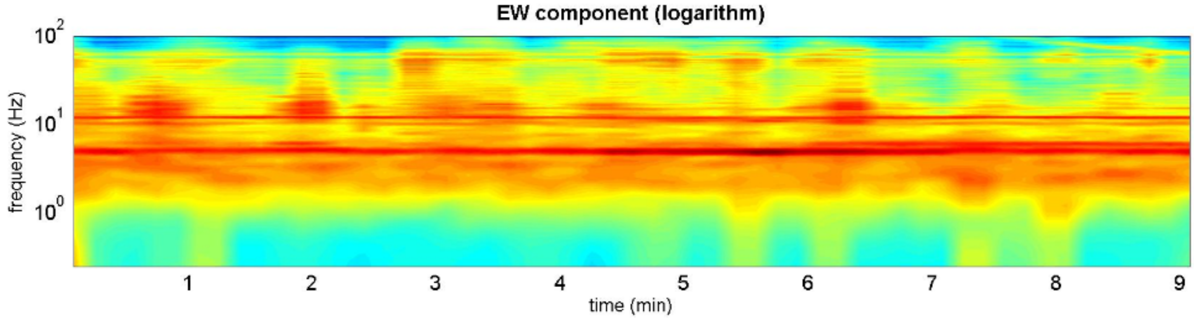




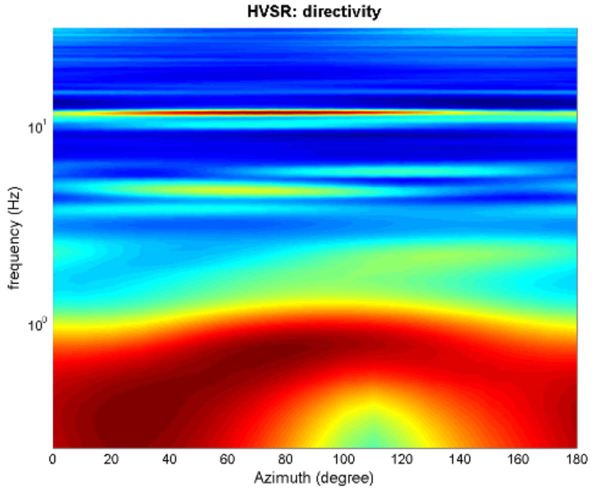
PERSISTENZA HVSR

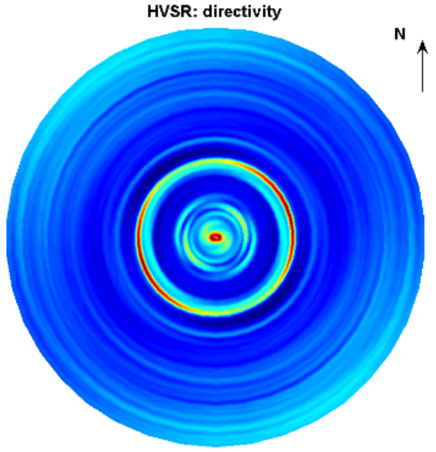




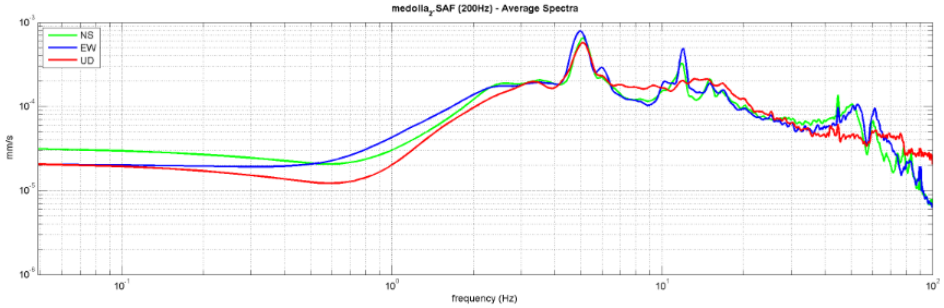


DIREZIONALITÁ HVSR

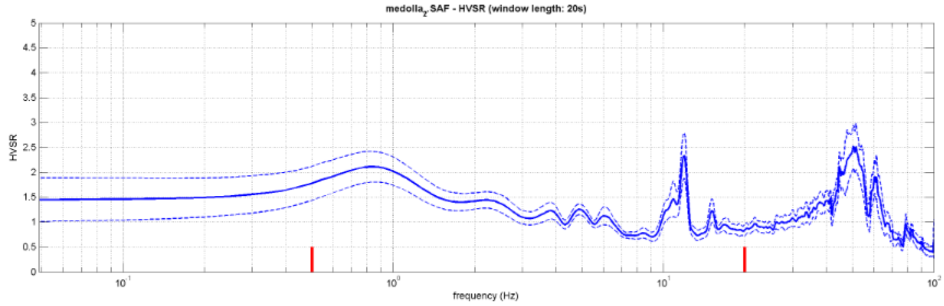




VELOCITÁ SPETTRALI



RAPPORTO HVSR DERIVATO DALL’ACQUISIZIONE ESEGUITA



FREQUENZA DERIVATA
nessun picco stratigrafico rilevato

=== Criteria for a reliable H/V curve ================================

#1. [f0 > 10/Lw]: 0.830 > 0.5 (OK)

#2. [nc > 200]: 930 > 200 (OK)

#3. [f0>0.5Hz; sigmaA(f) < 2 for 0.5f0 < f < 2f0] (OK)

=== Criteria for a clear H/V peak (at least 5 should be fulfilled) ===========

#1. [exists f- in the range [f0/4, f0] | AH/V(f-) < A0/2]: (NO)

#2. [exists f+ in the range [f0, 4f0] | AH/V(f+) < A0/2]: yes, at frequency 0.8Hz (OK)

#3. [A0 > 2]: 0.6 < 2 (NO)

#4. [fpeak[Ah/v(f) ± sigmaA(f)] = f0 ± 5%]: (NO)

#5. [sigmaf < epsilon(f0)]: 0.193 > 0.125 (NO)

#6. [sigmaA(f0) < theta(f0)]: 0.083 < 2 (OK)

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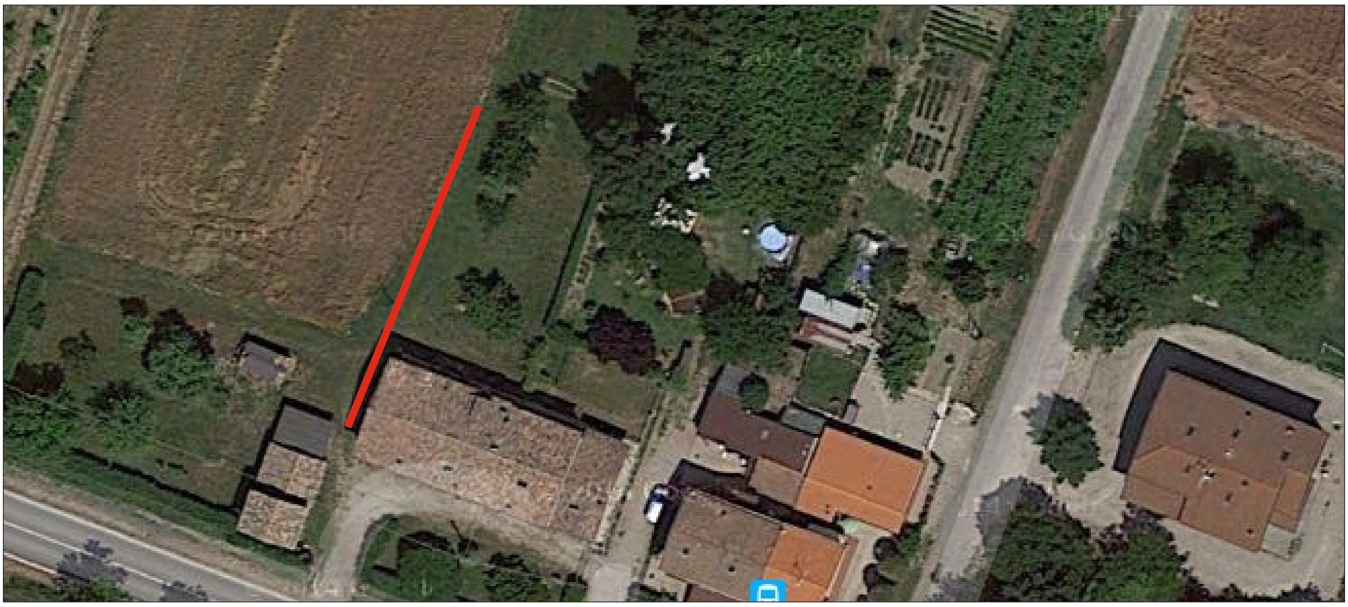
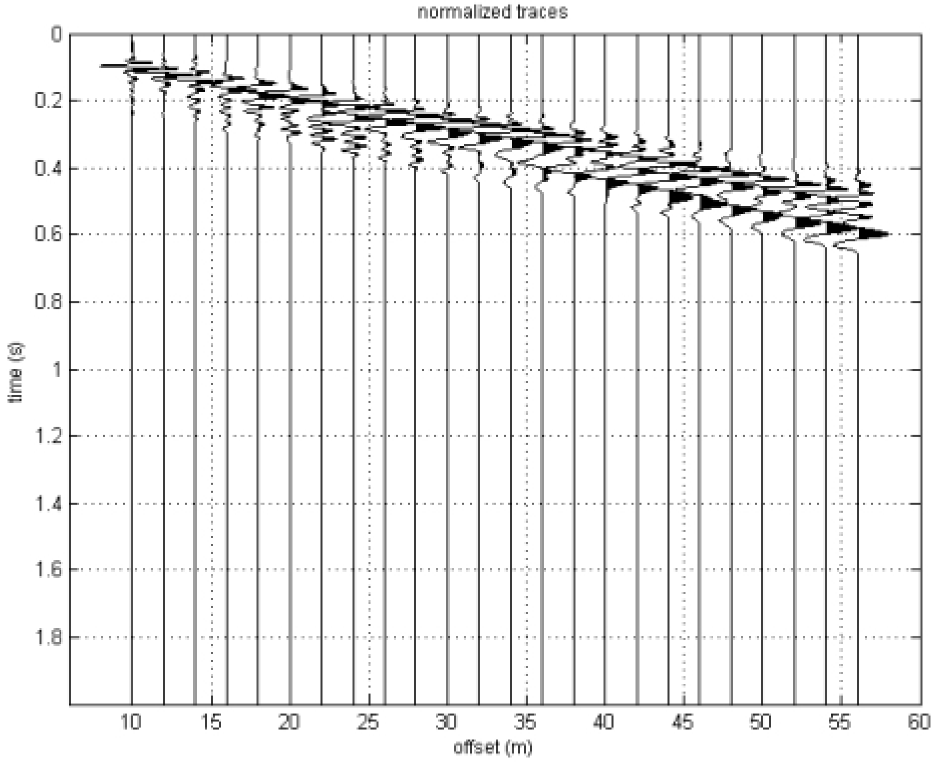
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

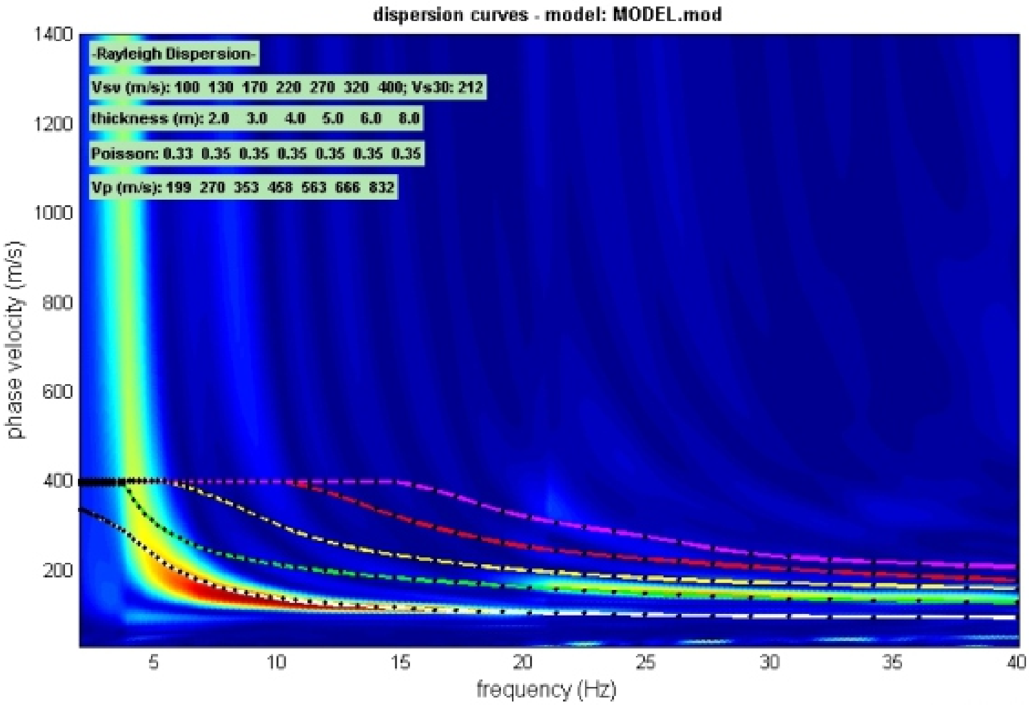
Cantiere:	**Medolla(MO), Via Provinciale, 113-115**
Operatore:	**D.ssa Linda Veratti, Dott.ssa Erika Parmeggiani**
Data:	**19/05/2015**
Lavoro:	**Studio del terreno di fondazione**
Elaborazione:	**Dott. ssa Sonia Gilioli**
Responsabile:	**Dott. Geol. Pier Luigi Dallari**

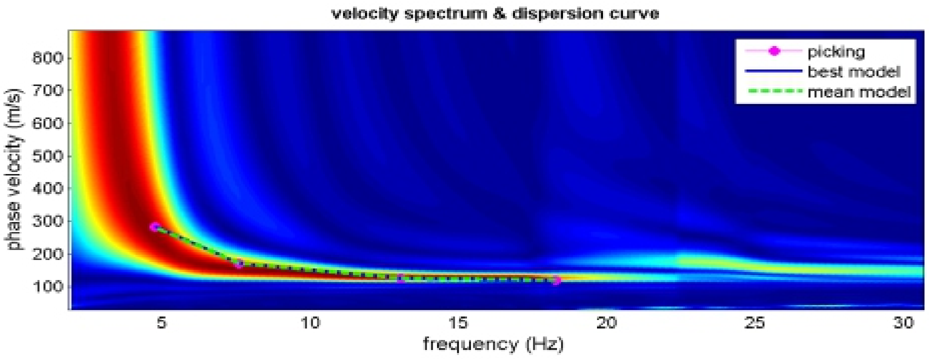


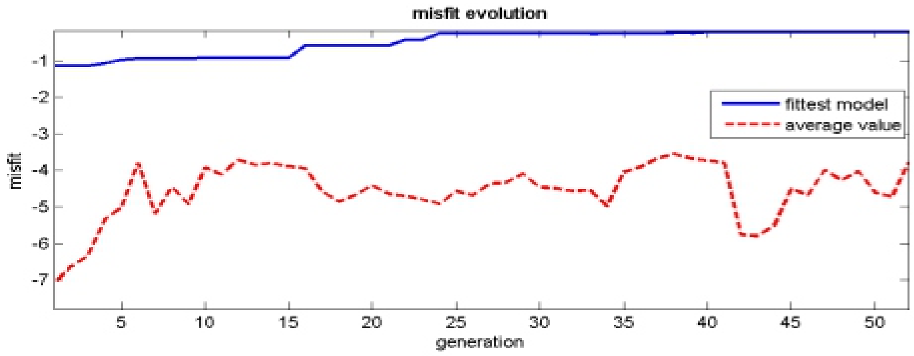
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



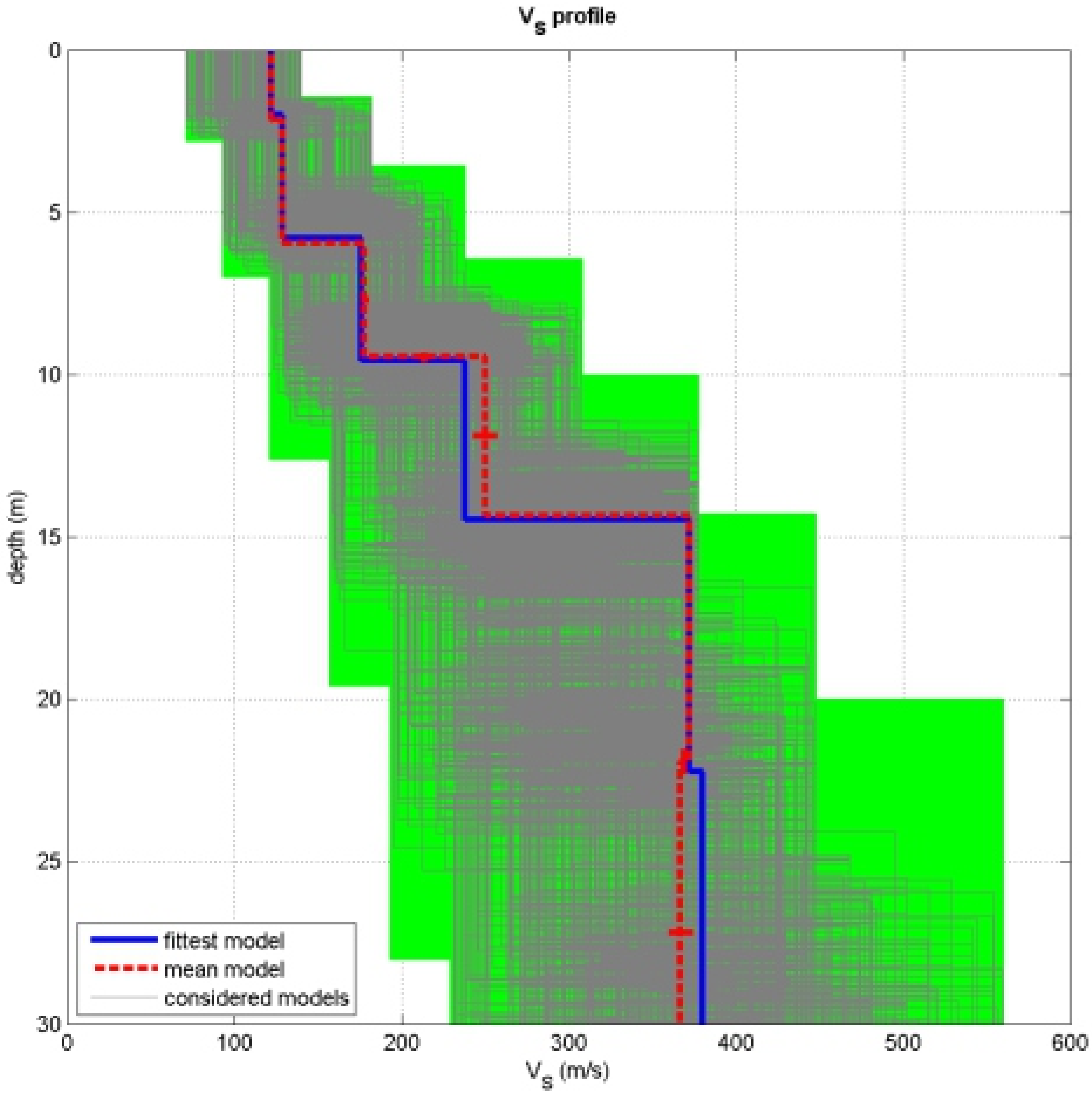
SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE







MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA



dataset: MASW.sgy

dispersion curve: pick.cdp

Vs30 (best model): 232 m/s

Vs30 (mean model): 233 m/s

half-space

BEST MODEL
Vs30 = 232 m/s

ALLEGATO N° 3

Indagine sismica MASW

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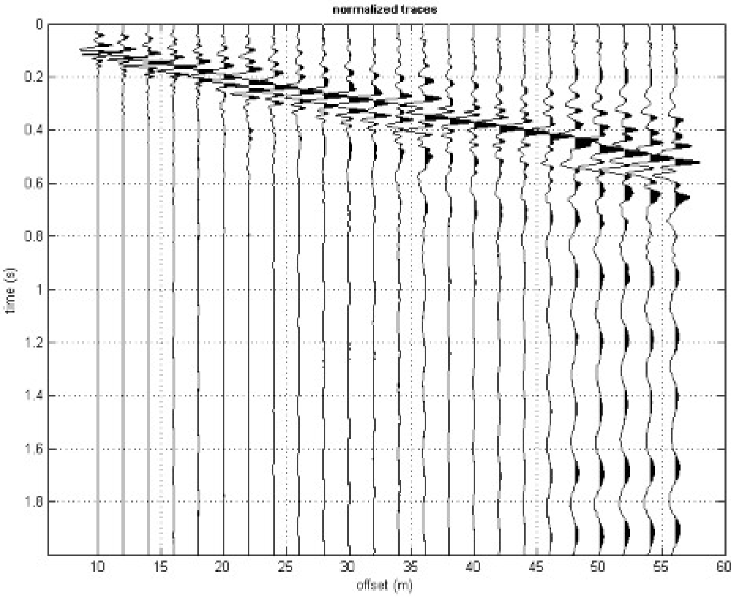
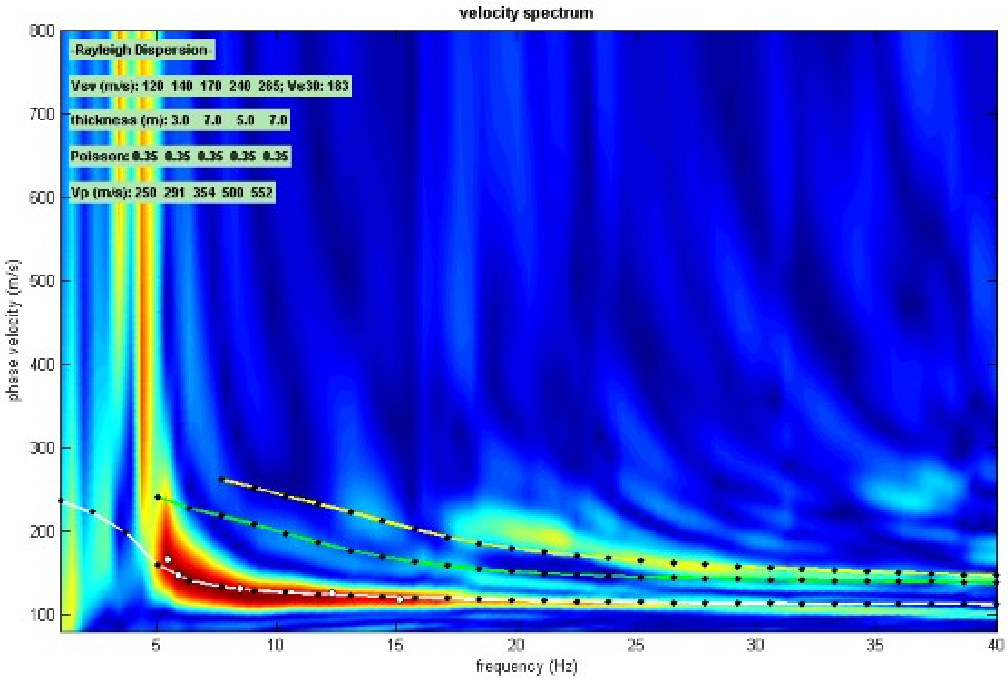
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

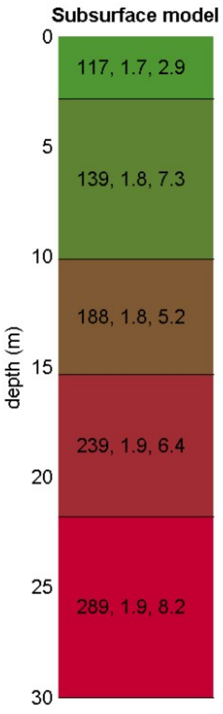
Cantiere: Medolla – Via Rocchina 1
Operatori: Dott. Ssa Linda Veratti
Data: 22/05/2013
Lavoro: Studio del terreno di fondazione
Elaborazione: Dott. Ssa Linda Veratti
Responsabile: Dott. Geol. Pier Luigi Dallari

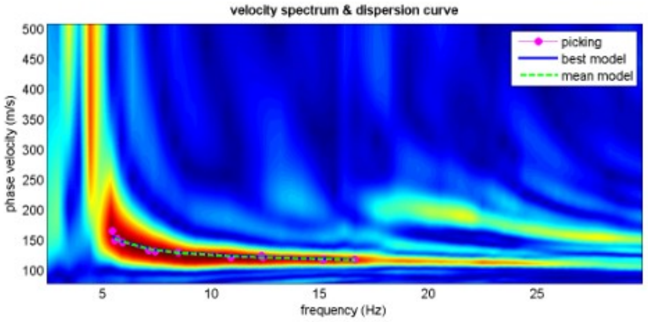
CERTIFICATO: 168_M_13

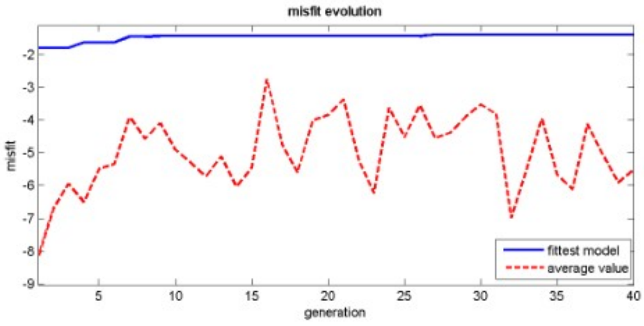


ELABORAZIONE





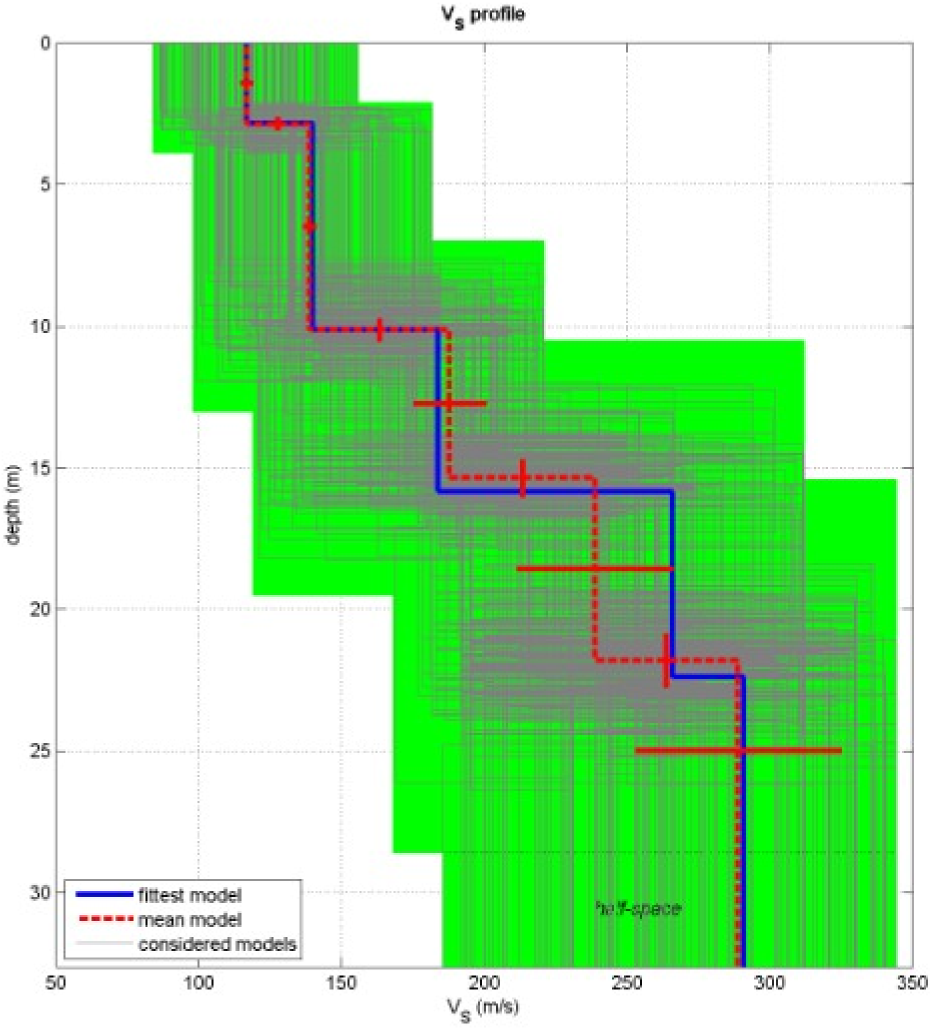




V_S (m/s)	density (gr/cm^3)	thickness (m)

[MODELLO FINALE]

Vs_{30} = 190 m/s



dataset: 58.dat

dispersion curve: PICK.cdp

Vs30 (best model): 190 m/s

Vs30 (mean model): 188 m/s

ALLEGATO N° 3

Indagini sismiche

GEO GROUP s.r.l.
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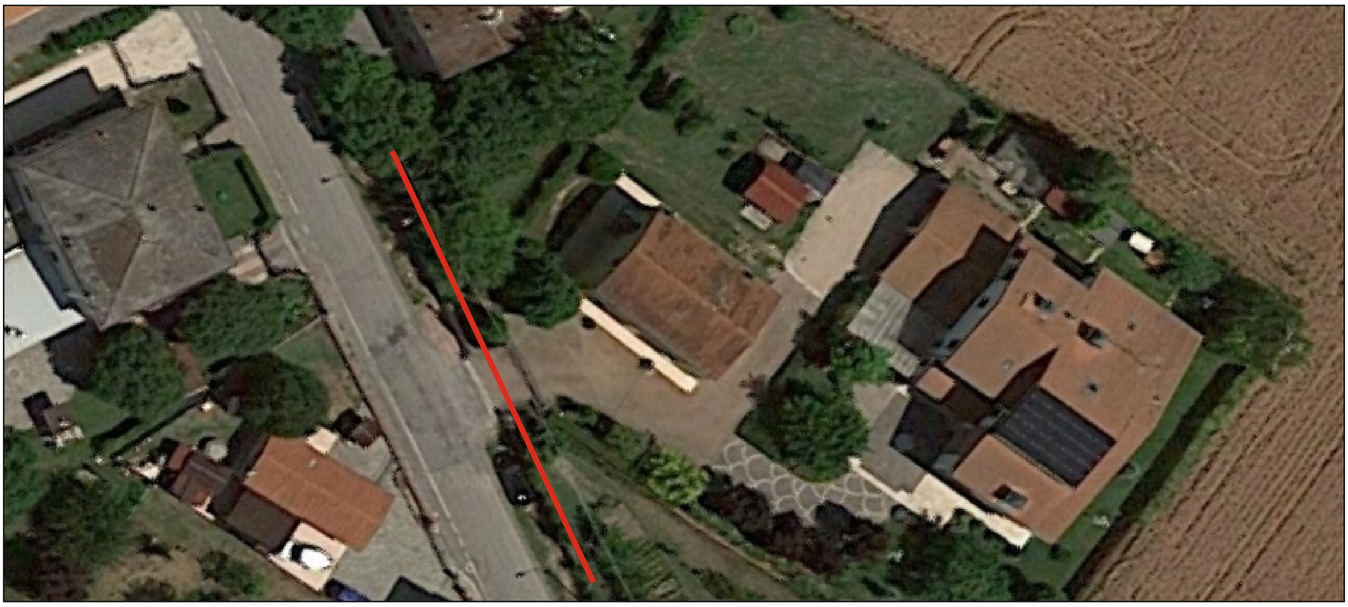
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

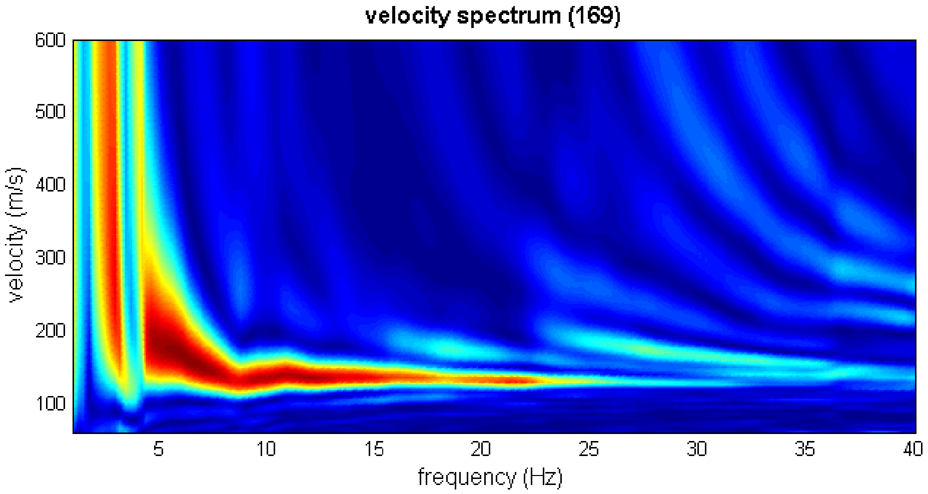
Cantiere: Medolla, Via Romana
Operatori :Dott. Emanuele Paganelli e Dott.ssa Lisa Gasparini
Lavoro: Studio del terreno di fondazione
Data: 20/06/18
Elaborazione: Dott.ssa Linda Veratti
Responsabile: Dott. Geol. Pier Luigi Dallari

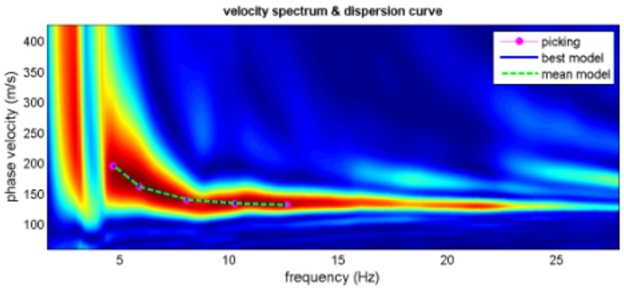
MASW
Rif. 341/18

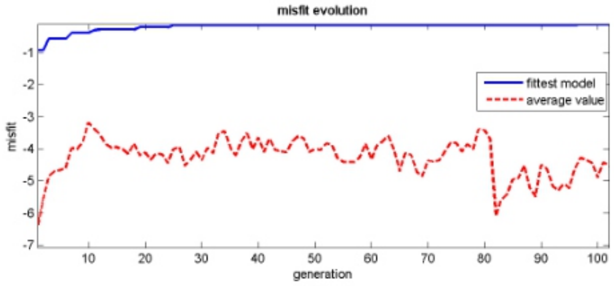


UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO

SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE

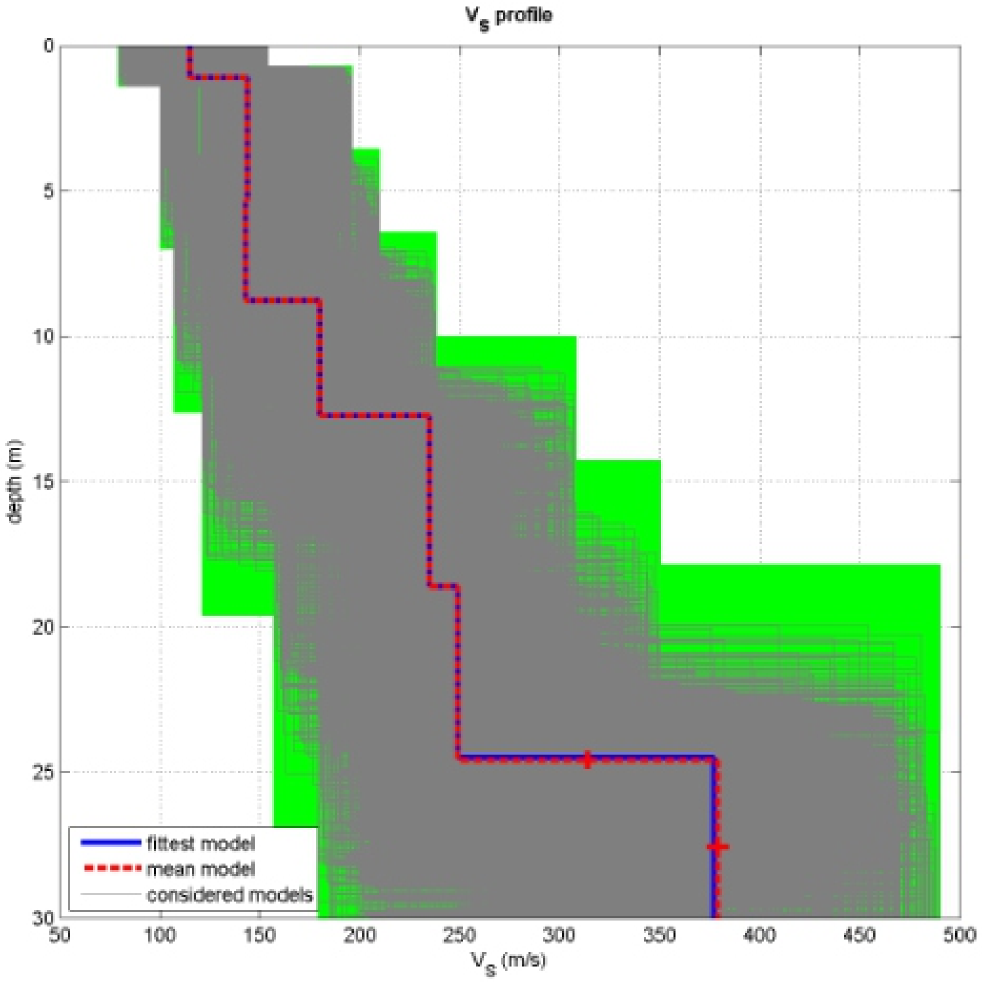






www.winmasw.com

MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA



dataset: 169.dat

dispersion curve: picking.cdp

Vs30 (best model): 202 m/s

Vs30 (mean model): 202 m/s

half-space

BEST MODEL
Vs30 = 202 m/s

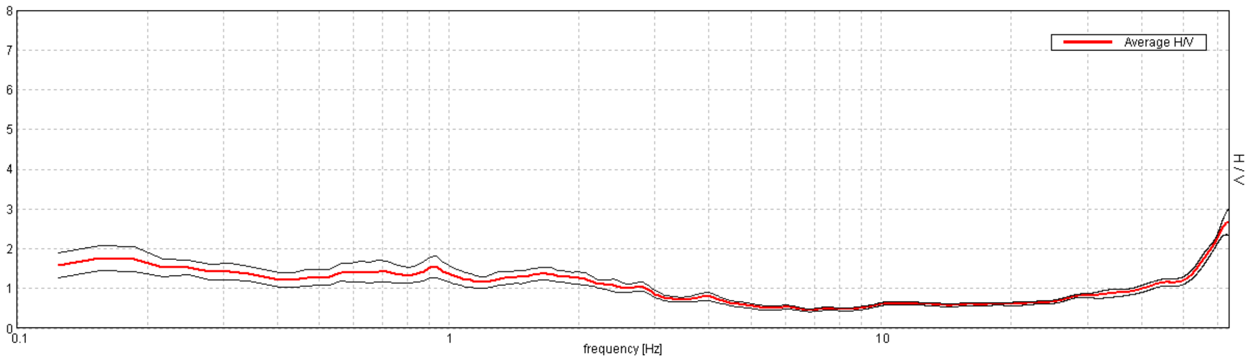
MEDOLLA, VIA ROMANA

Instrument: TE3-0303/01-17
Data format: 16 byte
Full scale [mV]: 51
Start recording: 20/06/18 13:08:32 End recording: 20/06/18 13:28:32
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS data not available

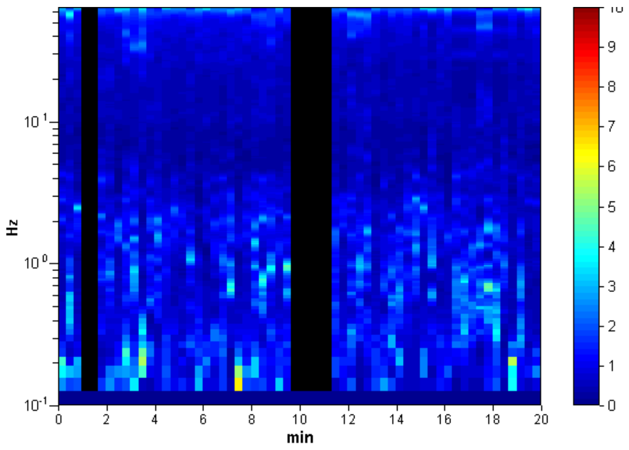
Trace length: 0h20'00". Analyzed 88% trace (manual window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

HORIZONTAL TO VERTICAL SPECTRAL RATIO

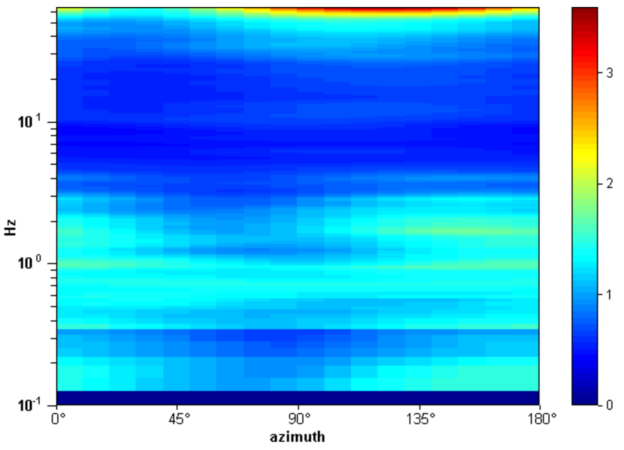
Max. H/V at 0.94 ± 0.66 Hz. (In the range 0.5 - 30.0 Hz).



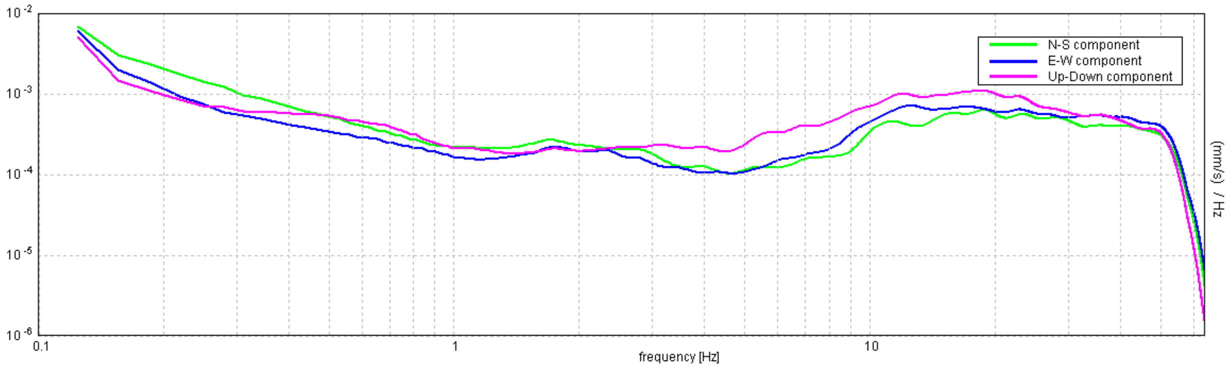
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the *Grilla* manual before interpreting the following tables**.]

Max. H/V at 0.94 ± 0.66 Hz (in the range 0.5 - 30.0 Hz).

Criteria for a reliable H/V curve [All 3 should be fulfilled]			
$f_0 > 10 / L_w$	0.94 > 0.50	OK	
$n_c(f_0) > 200$	993.8 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5Hz$ **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5Hz$**	Exceeded 0 out of 46 times	OK	
Criteria for a clear H/V peak [At least 5 out of 6 should be fulfilled]			
Exists f^- in $[f_0/4, f_0] \mid A_{H/V}(f^-) < A_0 / 2$			NO
Exists f^+ in $[f_0, 4f_0] \mid A_{H/V}(f^+) < A_0 / 2$	3.125 Hz	OK	
$A_0 > 2$	1.55 > 2		NO
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.6991| < 0.05		NO
$\sigma_f < \varepsilon(f_0)$	0.65541 < 0.14063		NO
$\sigma_A(f_0) < \theta(f_0)$	0.2802 < 2.0	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$					
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

ALLEGATO N° 3

Indagine sismica MASW

GEO GROUP s.r.l.
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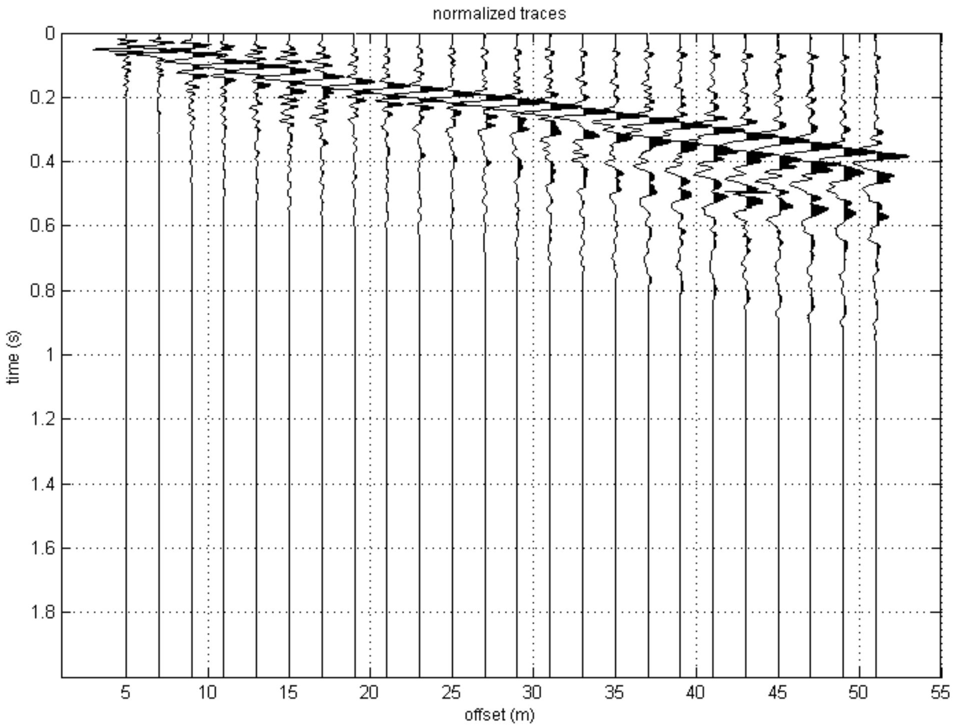
Sede operativa: via Per Modena, 12 – 41051 Castelnuovo Rangone (MO)
Tel. 059/3967169 Fax. 059/5332019
E-mail: geo.group@libero.it
P.IVA e C.F. 02981500362
www.geogroupmodena.it

ANALISI SISMICA DI SITO SECONDO METODOLOGIA MASW

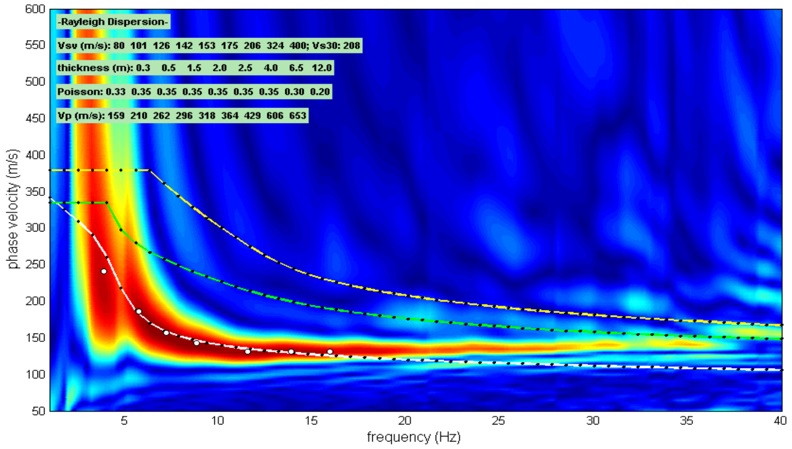
RIF. MASW 344/15

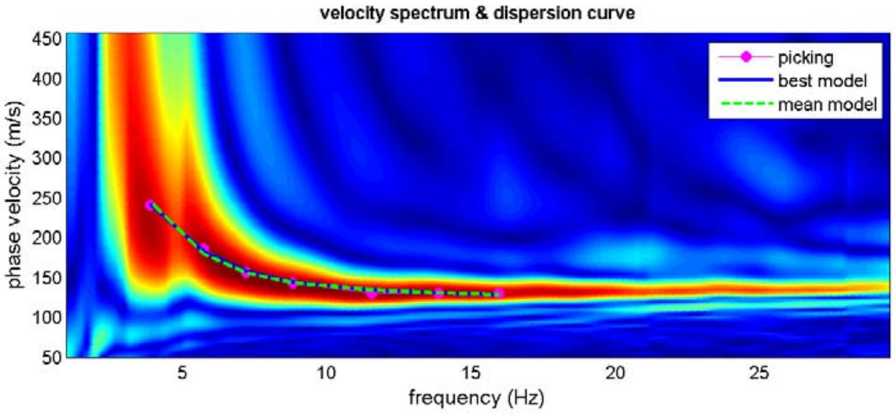
Cantiere: via Santa Liberata n. 16, Medolla (MO)
Data: 23/09/2015
Lavoro: studio del terreno di fondazione
Operatori: Dott.ssa Domitilla Santi, Dott.ssa Sonia Gilioli
Elaborazione: Dott.ssa Domitilla Santi
Responsabile: Dott. Geol. Pier Luigi Dallari

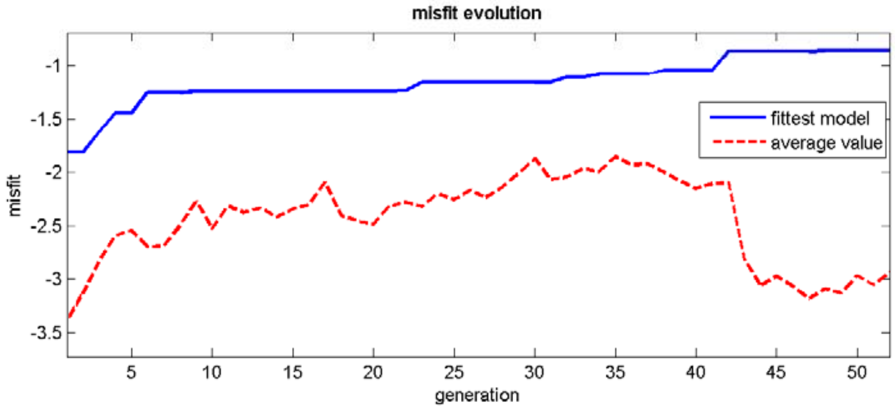
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



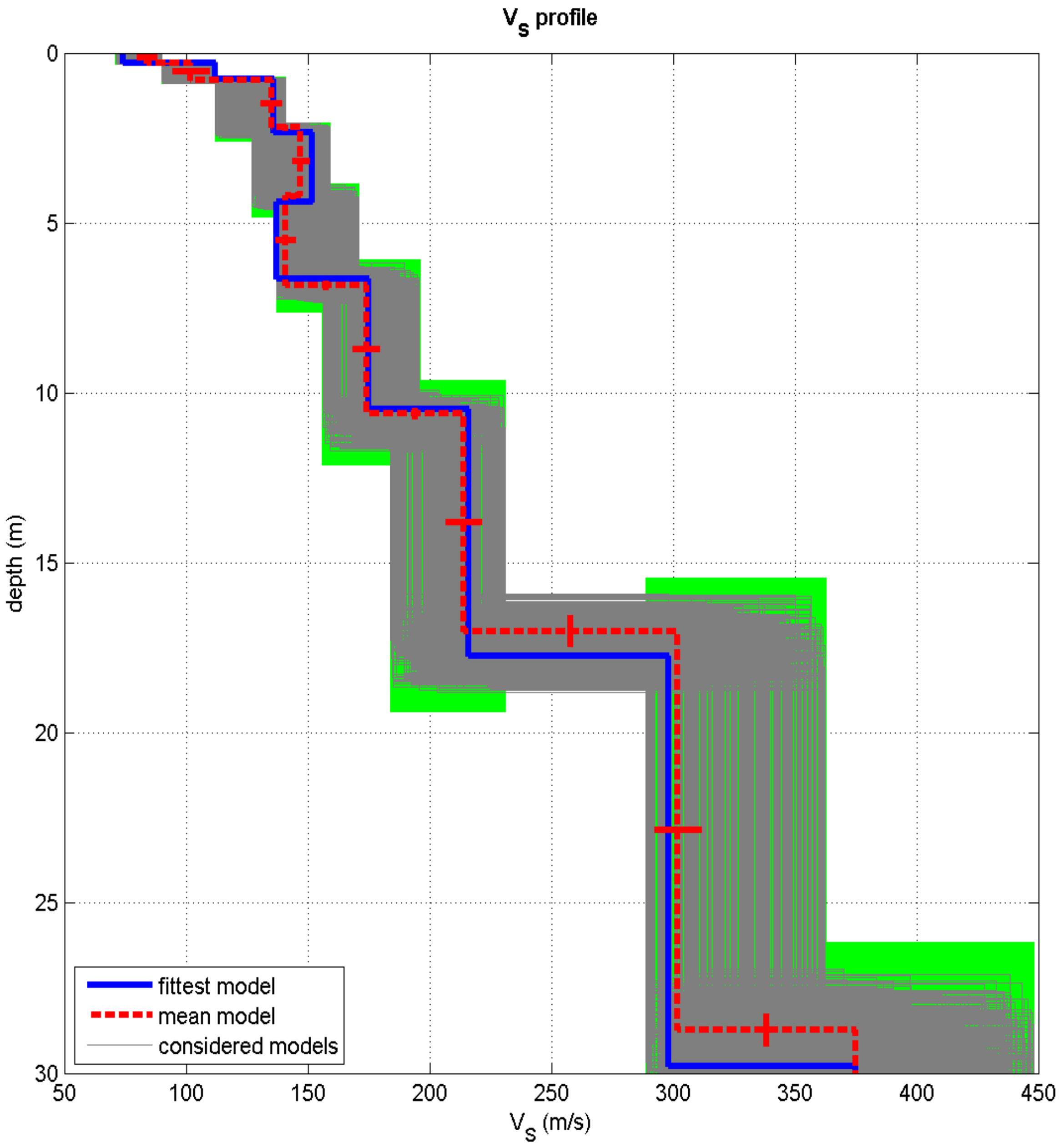
SPETTRO RELATIVO ALLE VELOCITÁ DI FASE REGISTRATE NEL DOMINIO DELLE FREQUENZE







SPETTRO RELATIVO ALLE VELOCITÁ DI FASE REGISTRATE NEL DOMINIO DELLE FREQUENZE



dataset: 21.dat

dispersion curve: PICK1.cdp

Vs30 (best model): 205 m/s

Vs30 (mean model): 207 m/s

BEST MODEL
V_S30 = 205 m/s

TAVOLE

GEO GROUP s.r.l.
Sede Legale: via C. Costa, 182 – 41123 Modena
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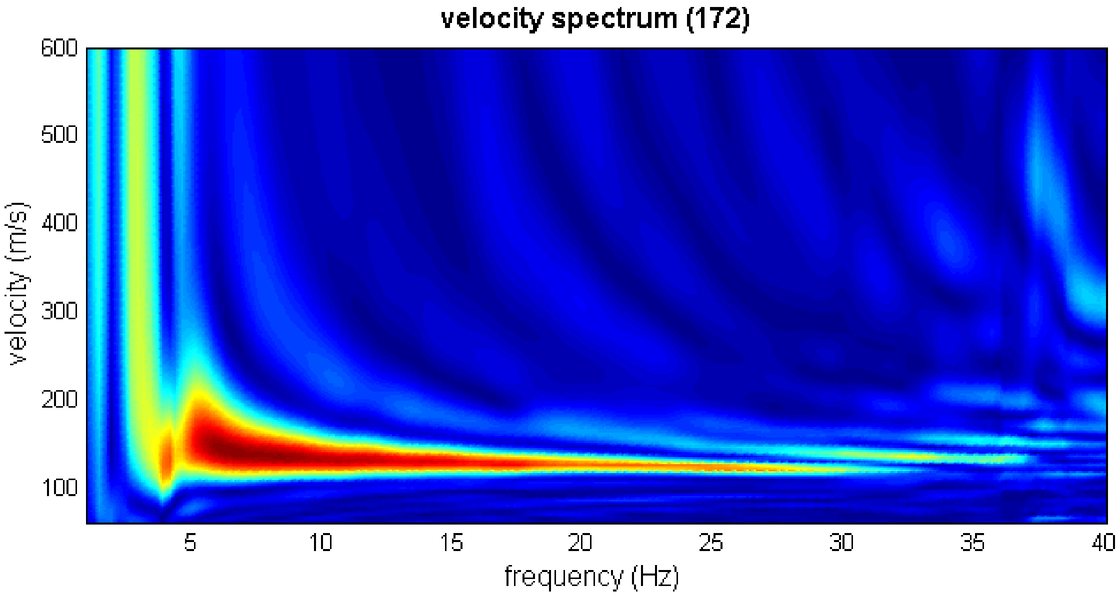
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

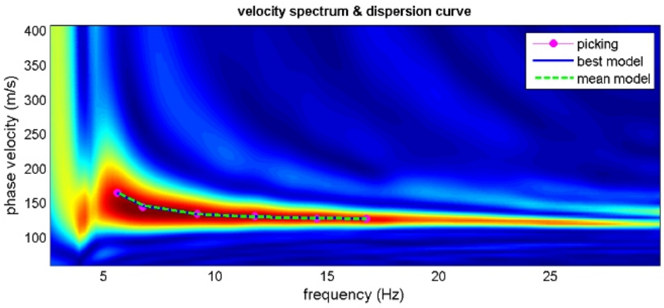
Cantiere: Medolla, Via San Matteo
Operatori :Dott. Emanuele Paganelli e Dott.ssa Lisa Gasparini
Lavoro: Studio del terreno di fondazione
Data: 20/06/18
Elaborazione: Dott.ssa Linda Veratti
Responsabile: Dott. Geol. Pier Luigi Dallari

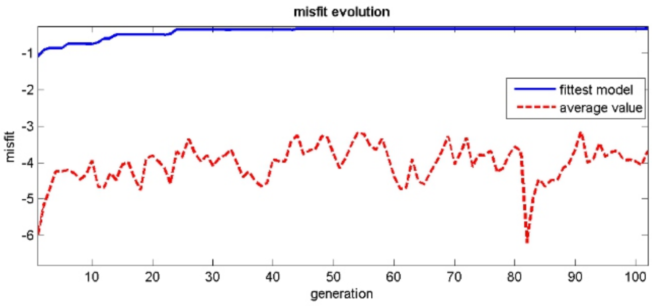
MASW
Rif. 345/18

UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO

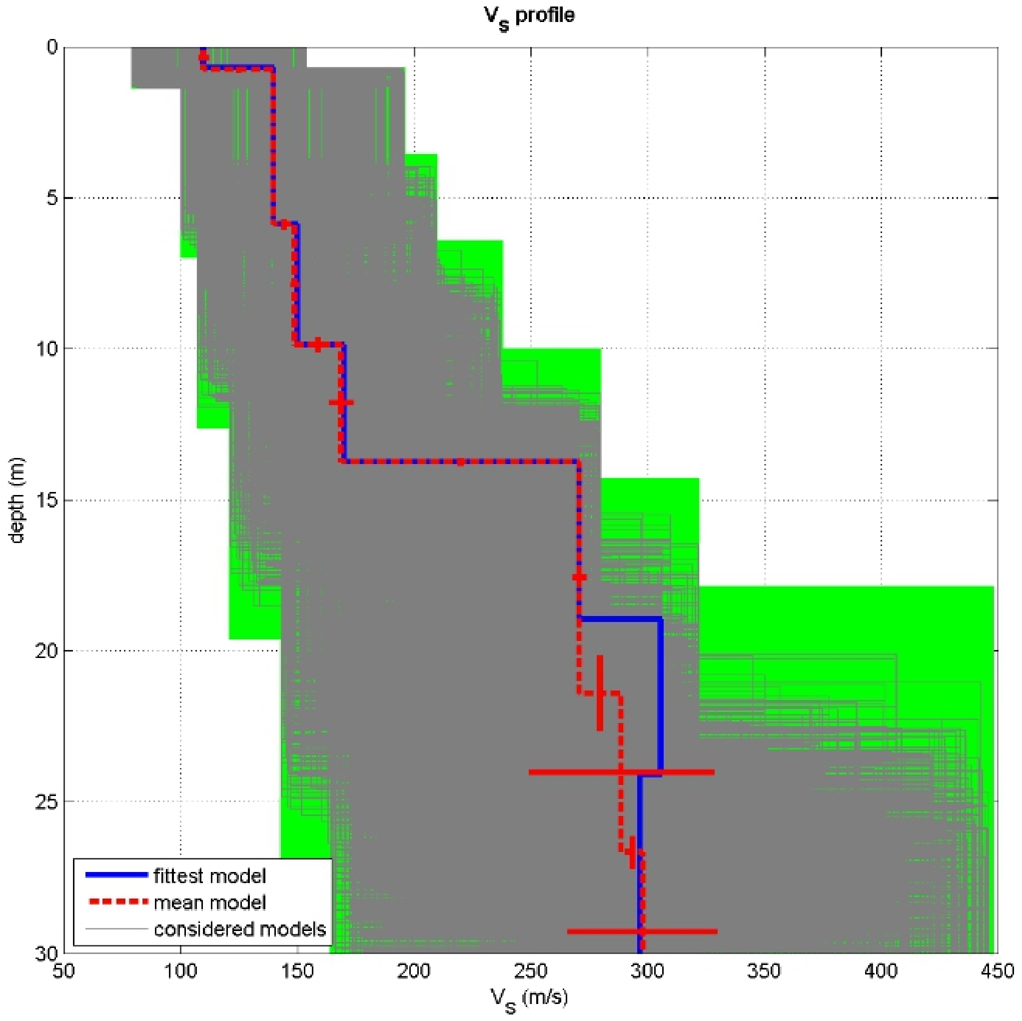
SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE







MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA



dataset: 172.dat

dispersion curve: pick.cdp

Vs30 (best model): 202 m/s

Vs30 (mean model): 199 m/s

half-space

BEST MODEL
Vs30 = 202 m/s

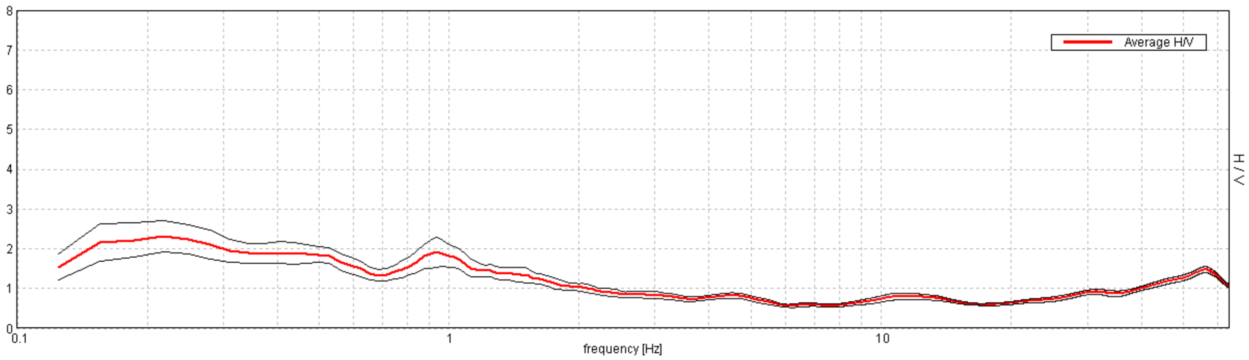
MEDOLLA, VIA SAN MATTEO

Instrument: TE3-0303/01-17
Data format: 16 byte
Full scale [mV]: 51
Start recording: 20/06/18 14:00:00 End recording: 20/06/18 14:20:00
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS data not available

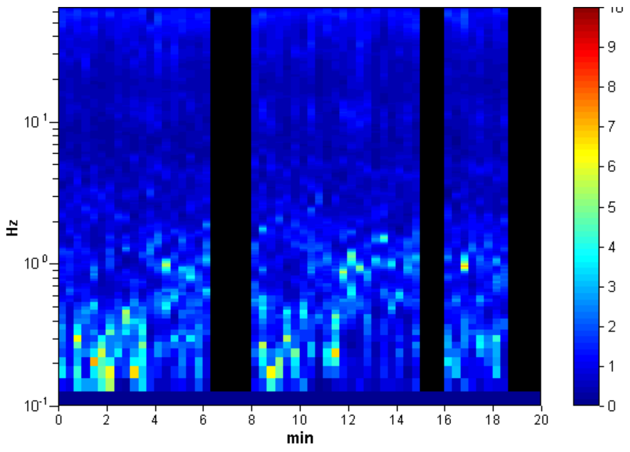
Trace length: 0h20'00". Analyzed 80% trace (manual window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

HORIZONTAL TO VERTICAL SPECTRAL RATIO

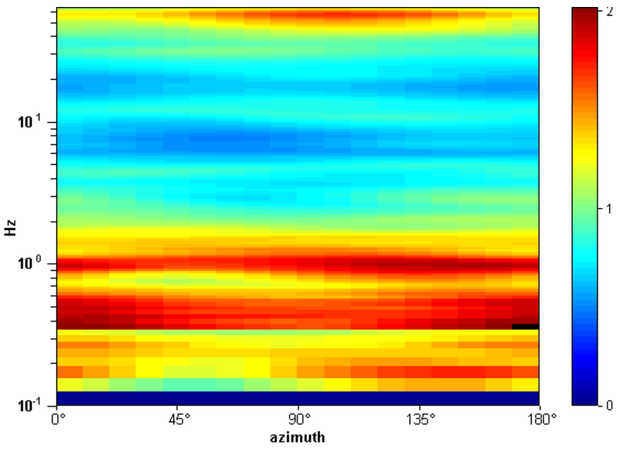
Max. H/V at 0.94 ± 0.4 Hz. (In the range 0.5 - 30.0 Hz).



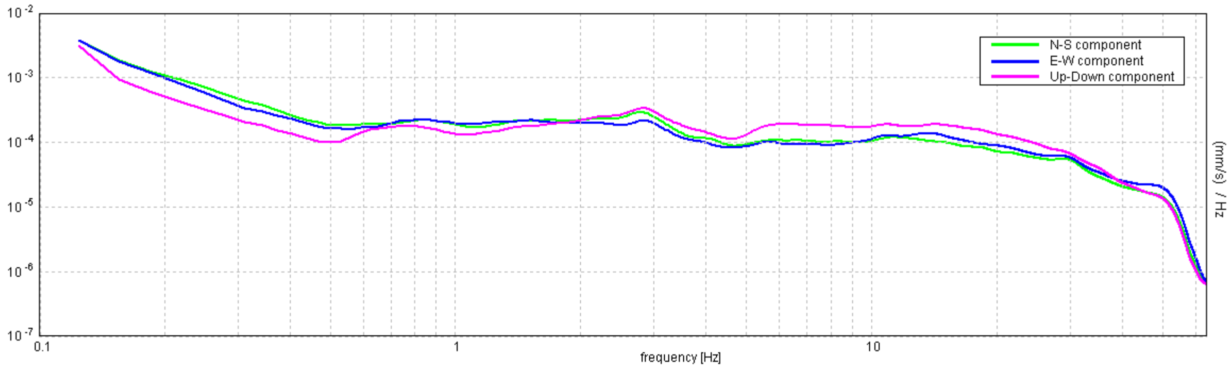
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables**.]

Max. H/V at 0.94 ± 0.4 Hz (in the range 0.5 - 30.0 Hz).

Criteria for a reliable H/V curve

[All 3 should be fulfilled]

$f_0 > 10 / L_w$	0.94 > 0.50	OK	
$n_c(f_0) > 200$	900.0 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5$Hz **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5$Hz**	Exceeded 0 out of 46 times	OK	

Criteria for a clear H/V peak

[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$			NO
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	2.188 Hz	OK	
$A_0 > 2$	1.92 > 2		NO
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.4223| < 0.05		NO
$\sigma_f < \varepsilon(f_0)$	0.3959 < 0.14063		NO
$\sigma_A(f_0) < \theta(f_0)$	0.3763 < 2.0	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$

Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

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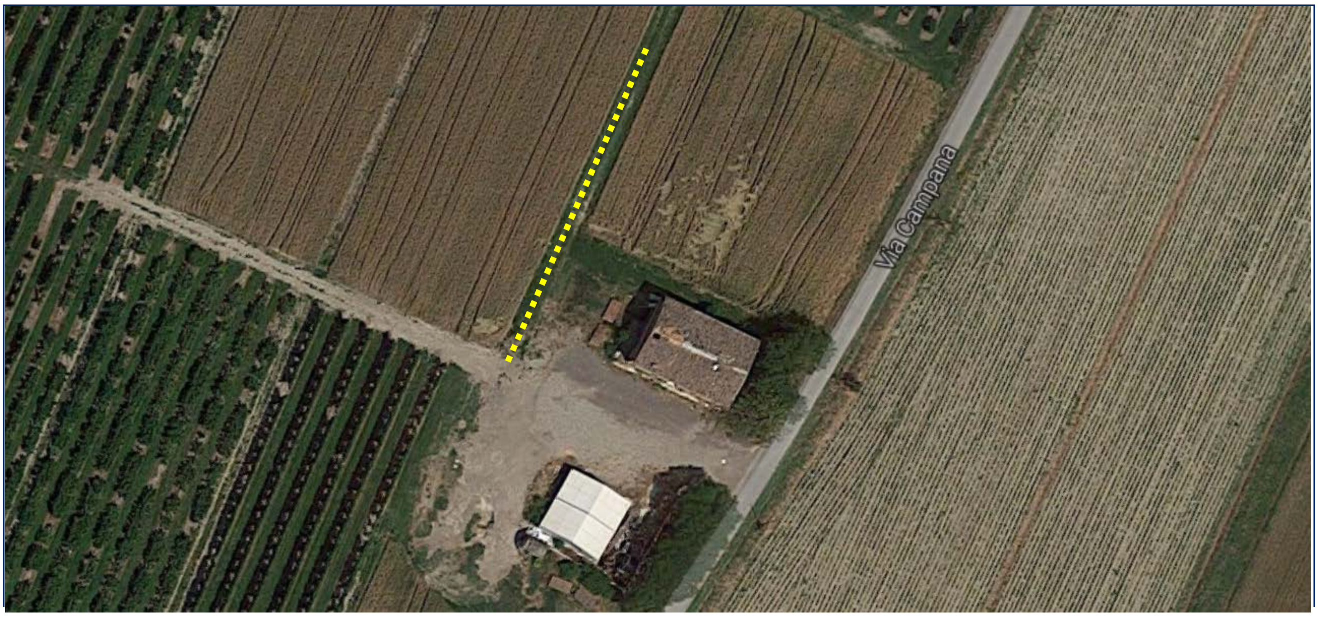
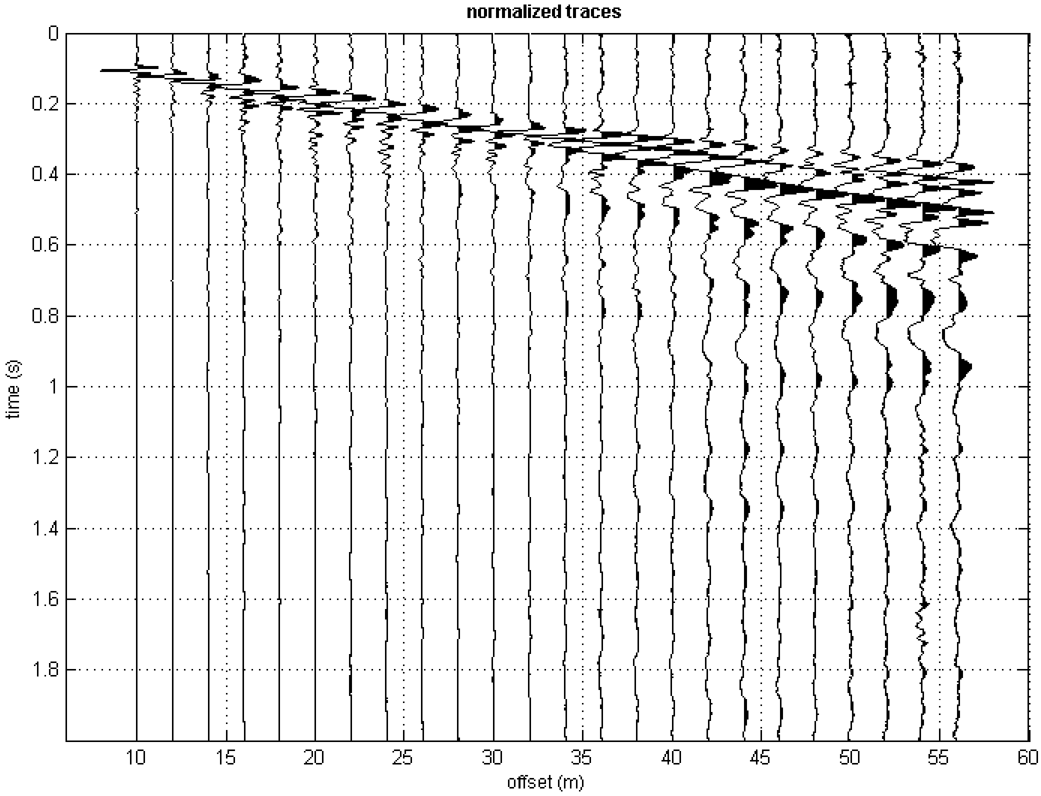
ANALISI SISMICA DI SITO SECONDO METODOLOGIA MASW

RIF. MASW 360/15

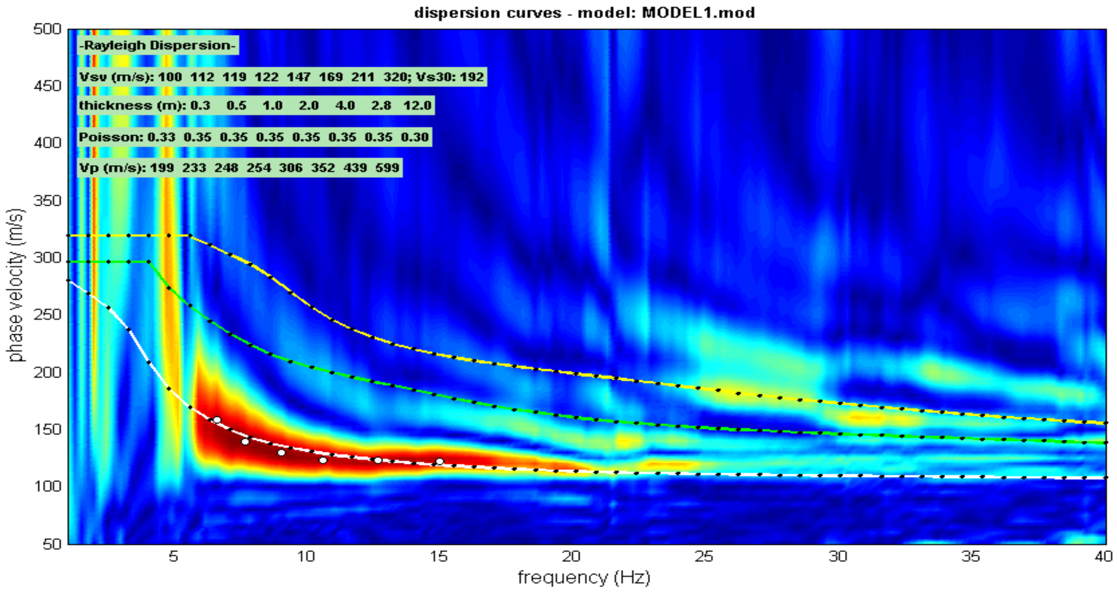
Cantiere: via Campana, Medolla (MO)
Data: 11/06/2015
Lavoro: demolizione e ricostruzione
Operatori: Dott.ssa Linda Veratti, Dott.ssa Nunzia Castronuovo
Elaborazione: Dott.ssa Domitilla Santi
Responsabile: Dott. Geol. Pier Luigi Dallari

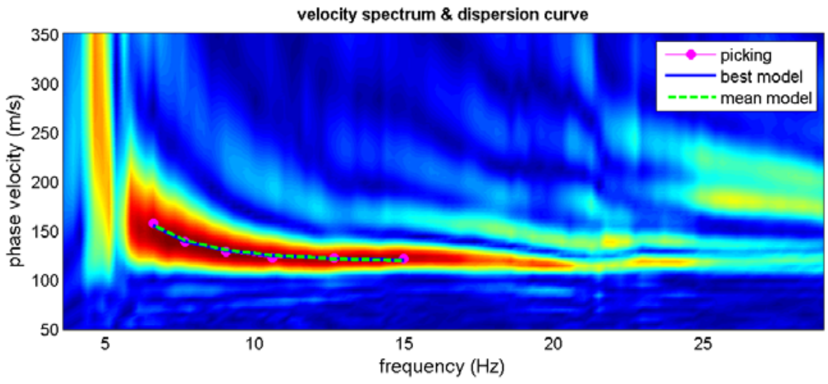


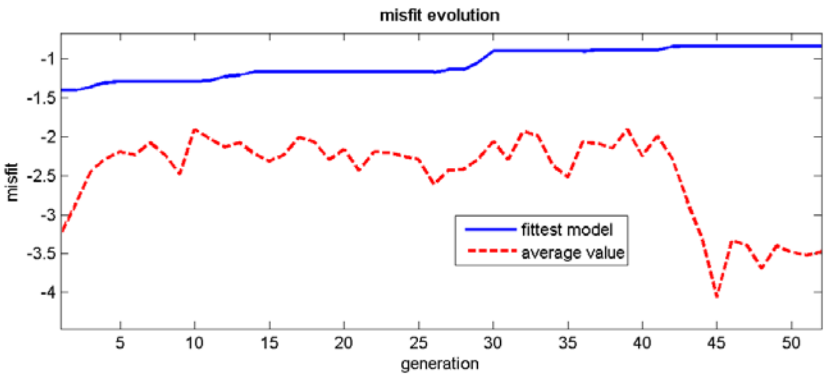
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



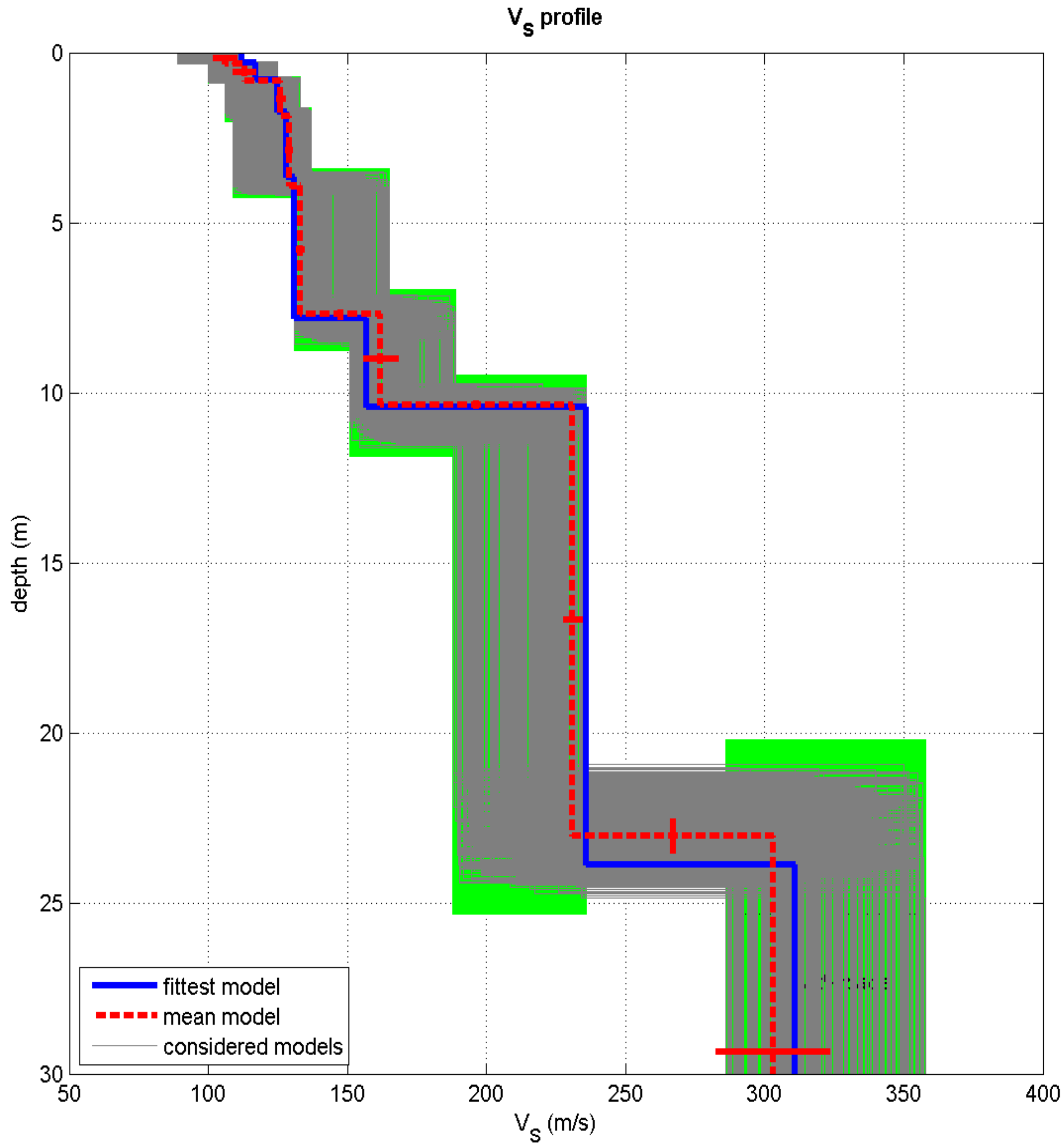
SPETTRO RELATIVO ALLE VELOCITÁ DI FASE REGISTRATE NEL DOMINIO DELLE FREQUENZE







MODELLO V_S30 DERIVATO DALL’INDAGINE MASW ESEGUITA



dataset: 228.dat

dispersion curve: PICK1.cdp

Vs30 (best model): 194 m/s

Vs30 (mean model): 194 m/s

BEST MODEL
V_S30 = 194 m/s

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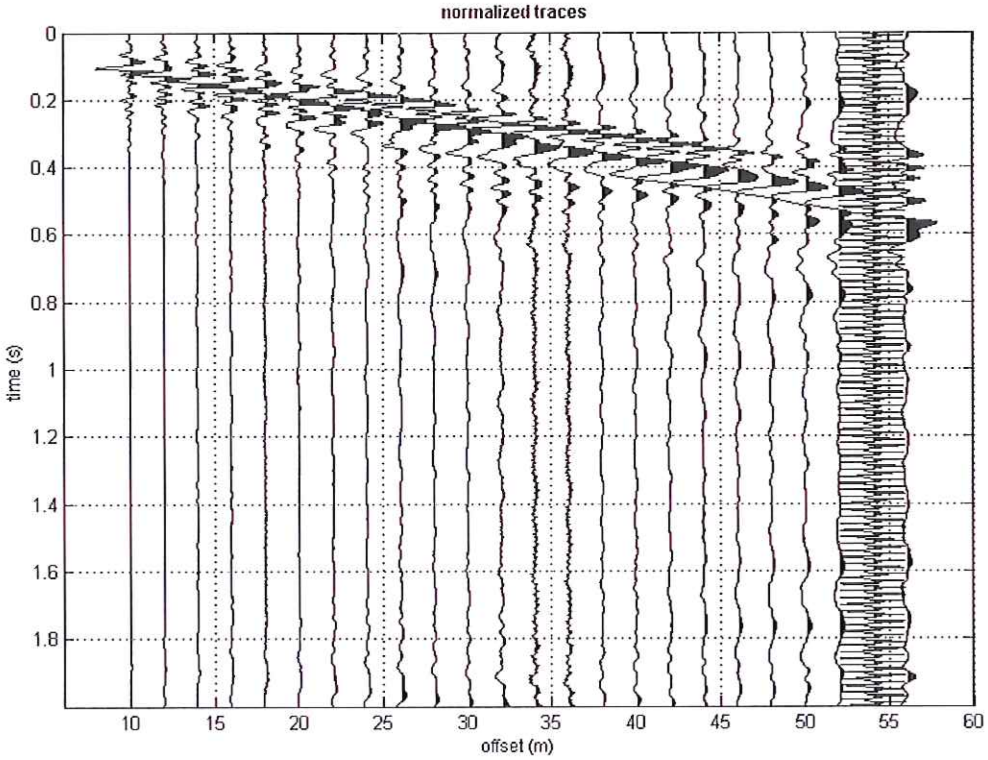
P.IVA e C.F. 02981500362
www.geogroupmodena.it

ANALISI SISMICA DI SITO SECONDO METODOLOGIA MASW

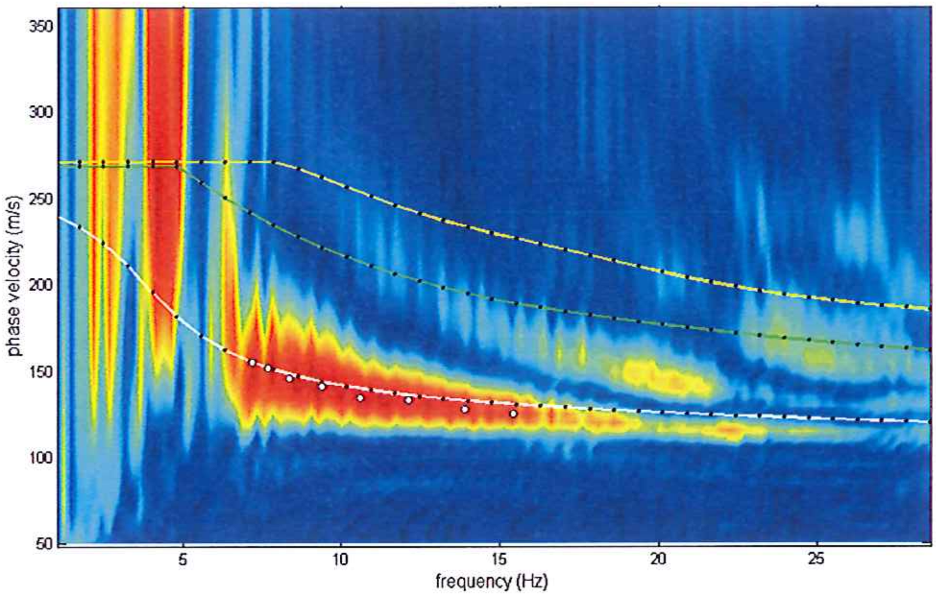
RIF. MASW 361/15

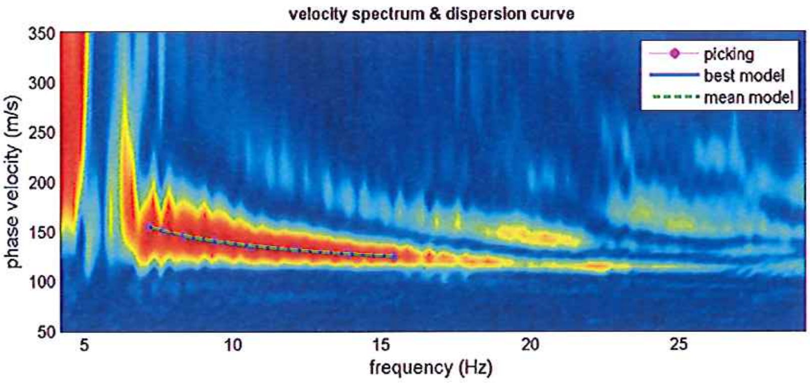
Cantiere: via Roncaglio, Medolla (MO)
Data: 11/06/2015
Lavoro: demolizione e ricostruzione
Operatori: Dott.ssa Linda Veratti, Dott.ssa Nunzia Castronuovo
Elaborazione: Dott.ssa Domitilla Santi
Responsabile: Dott. Geol. Pier Luigi Dallari

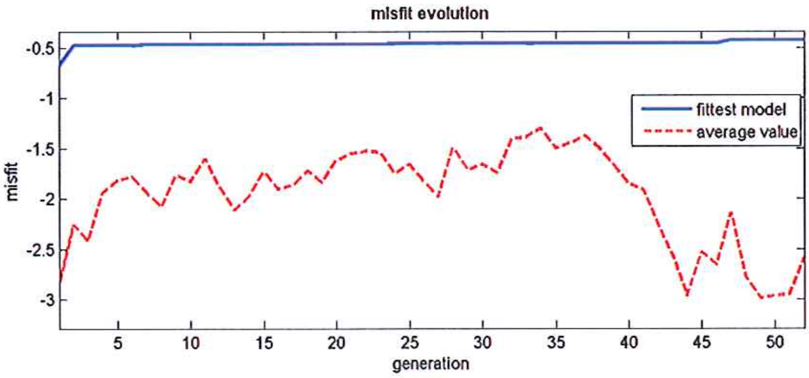
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



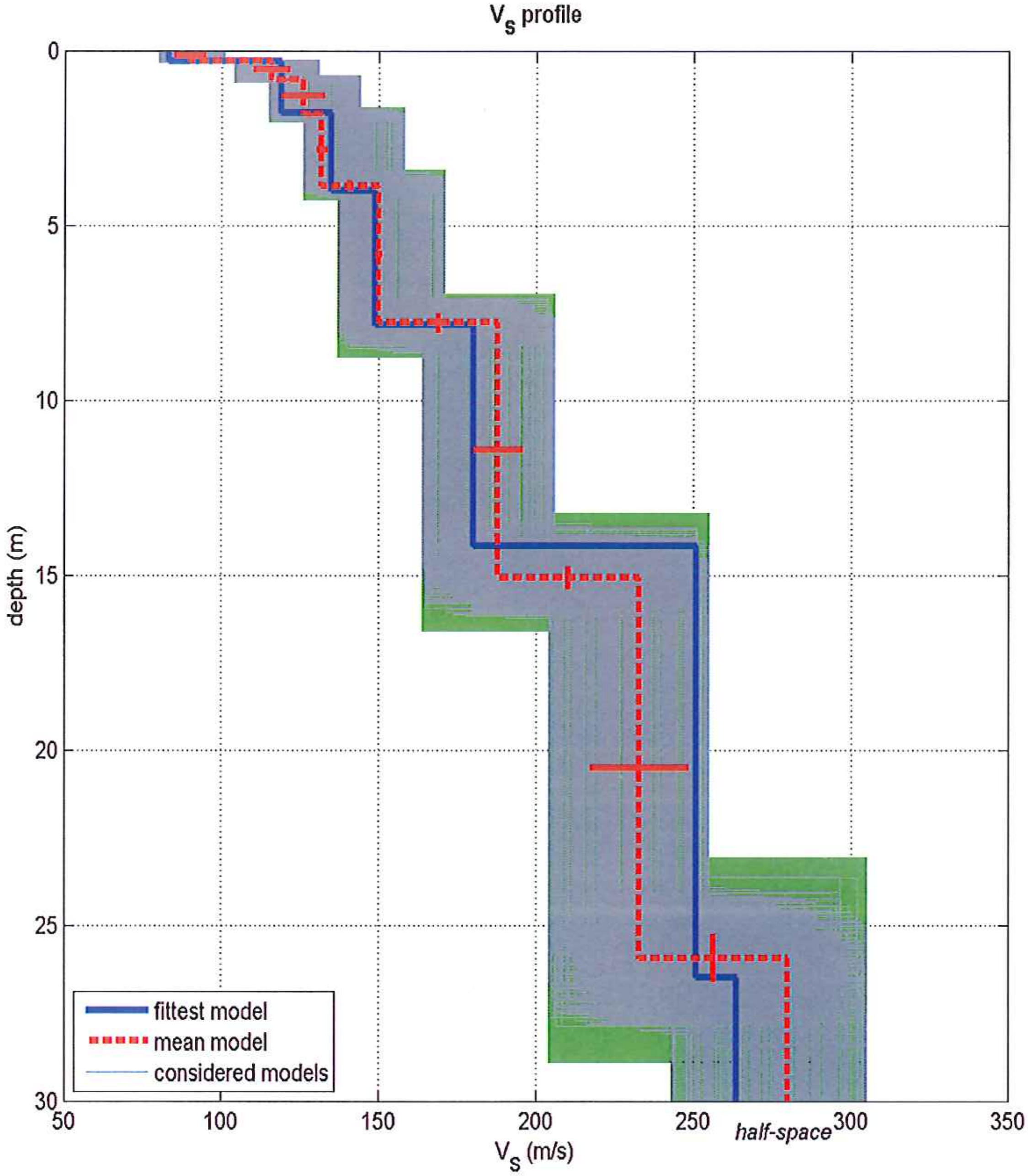
SPETTRO RELATIVO ALLE VELOCITÁ DI FASE REGISTRATE NEL DOMINIO DELLE FREQUENZE







MODELLO V_S30 DERIVATO DALL'INDAGINE MASW ESEGUITA



dataset: 225.dat

dispersion curve: PICK1.cdp

Vs30 (best model): 193 m/s

Vs30 (mean model): 191 m/s

BEST MODEL
V_S30 = 193 m/s

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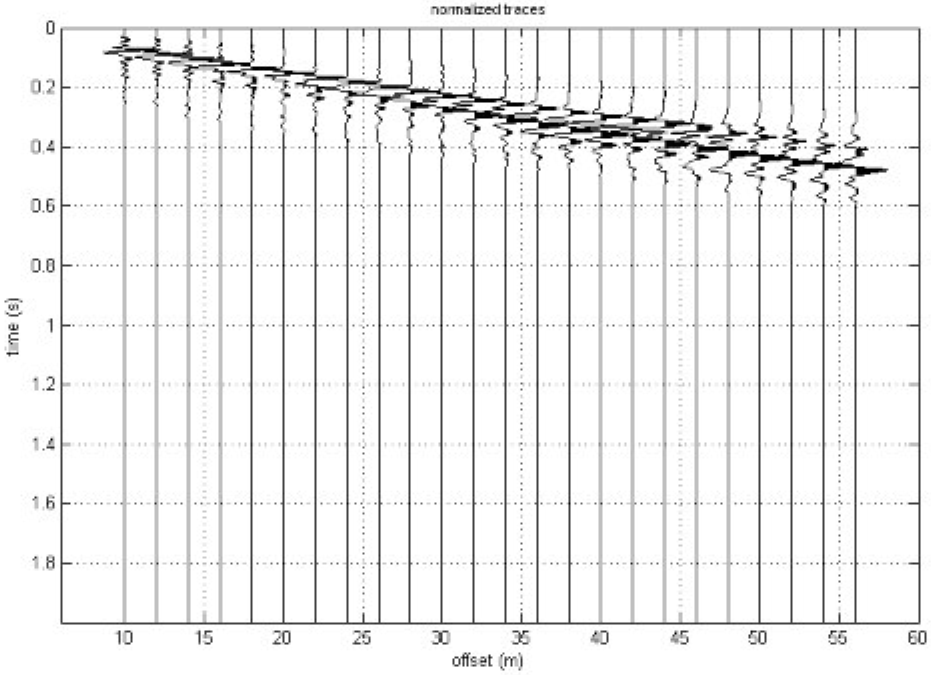
SISTEMA DI GESTIONE PER LA QUALITÀ CERTIFICATO
UNI EN ISO 9001:2008
SINCERT DNV

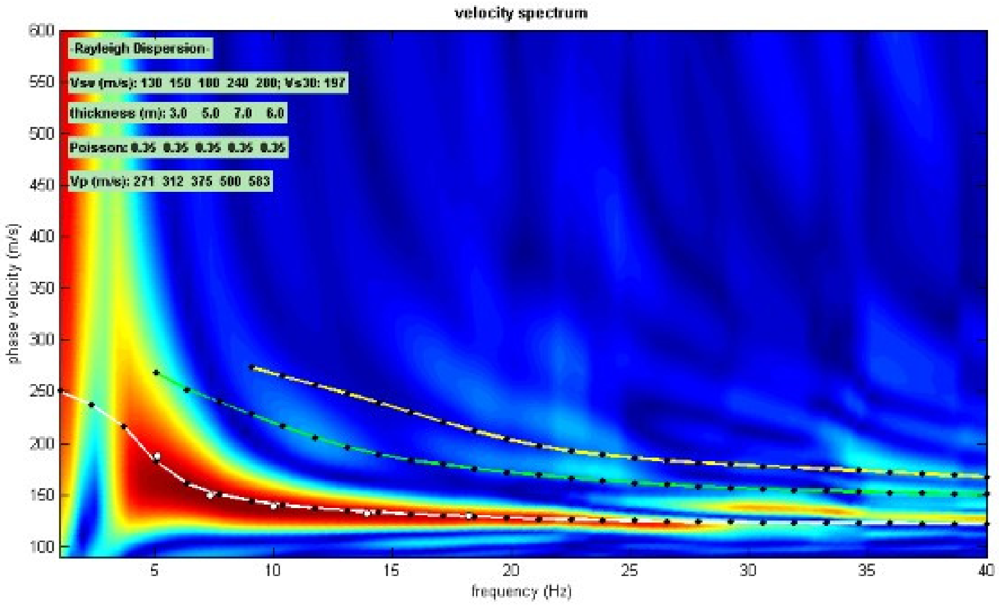
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

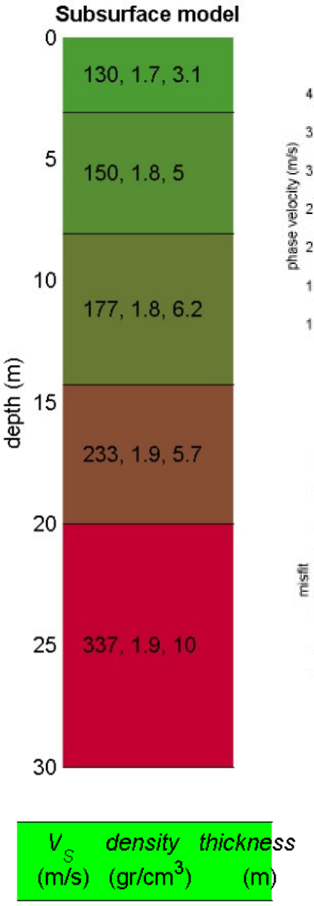
Cantiere: Medolla – Via Villafranca 14
Operatori: Dott. Ssa Erika Parmeggiani
Data: 06/06/13
Lavoro: Studio del terreno di fondazione
Elaborazione: Dott. Ssa Linda Veratti
Responsabile: Dott. Geol. Pier Luigi Dallari

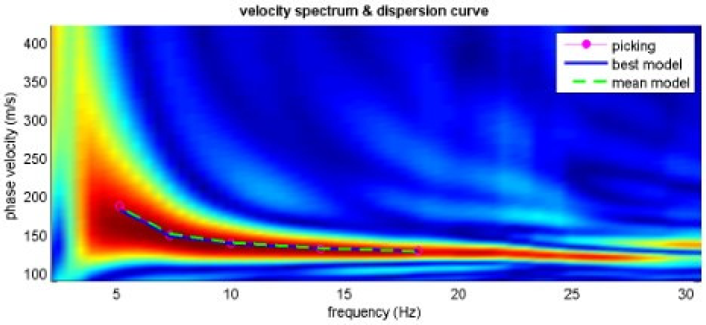
CERTIFICATO: 203_M_13

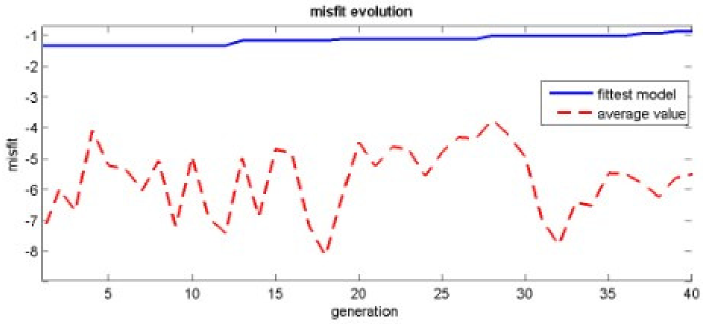


ELABORAZIONE



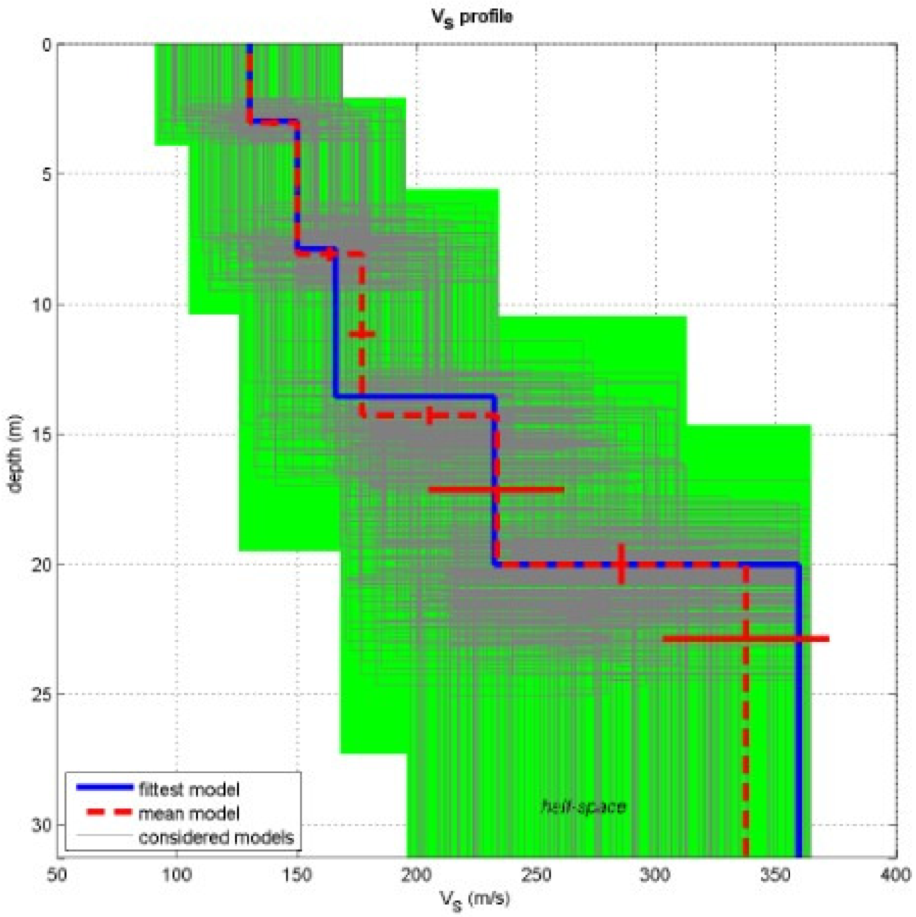






[MODELLO FINALE]

Vs_{30} = 206 m/s



dataset: 203.dat

dispersion curve: picking.cdp

Vs30 (best model): 206 m/s

Vs30 (mean model): 205 m/s

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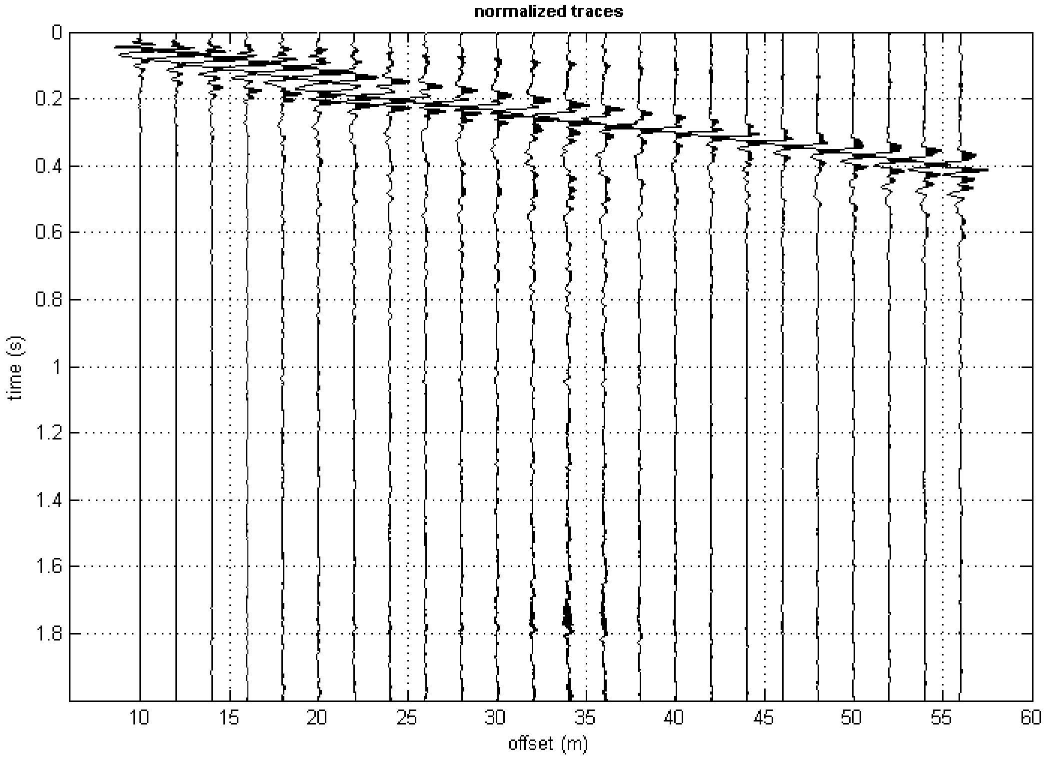
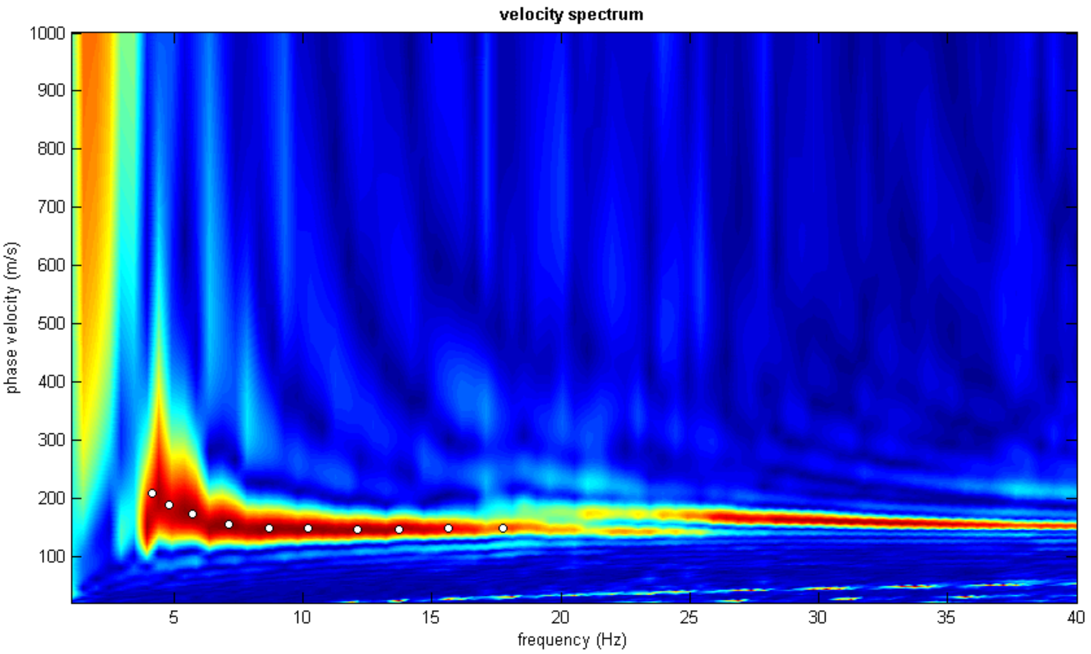
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

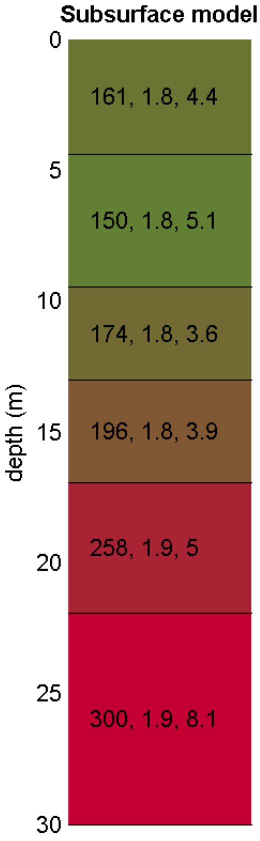
Cantiere: Medolla, Via Roncaglio
Operatori: Dott.ssa Geol. Tagliavini Alessandra, Dott.ssa Geol. Linda Veratti
Data: 12/06/2013
Lavoro: Studio del terreno di fondazione
Elaborazione: Dott. Ghirardini Gabriele
Responsabile: Dott. Geol. Pier Luigi Dallari

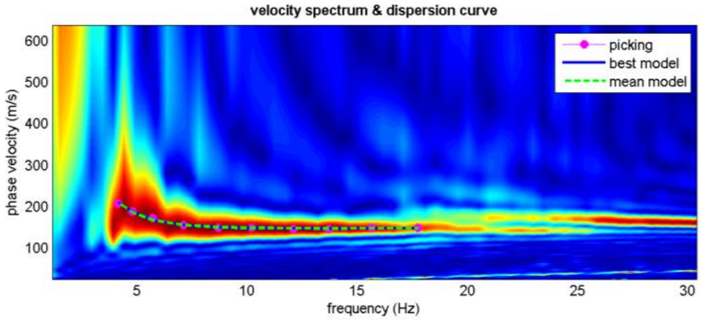
CERTIFICATO: 214_M_13

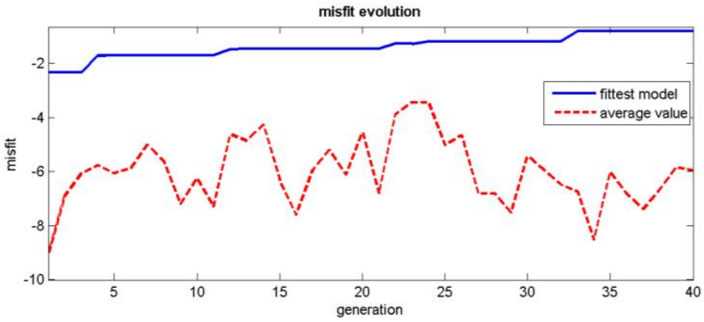


ELABORAZIONE


velocity spectrum


Subsurface model

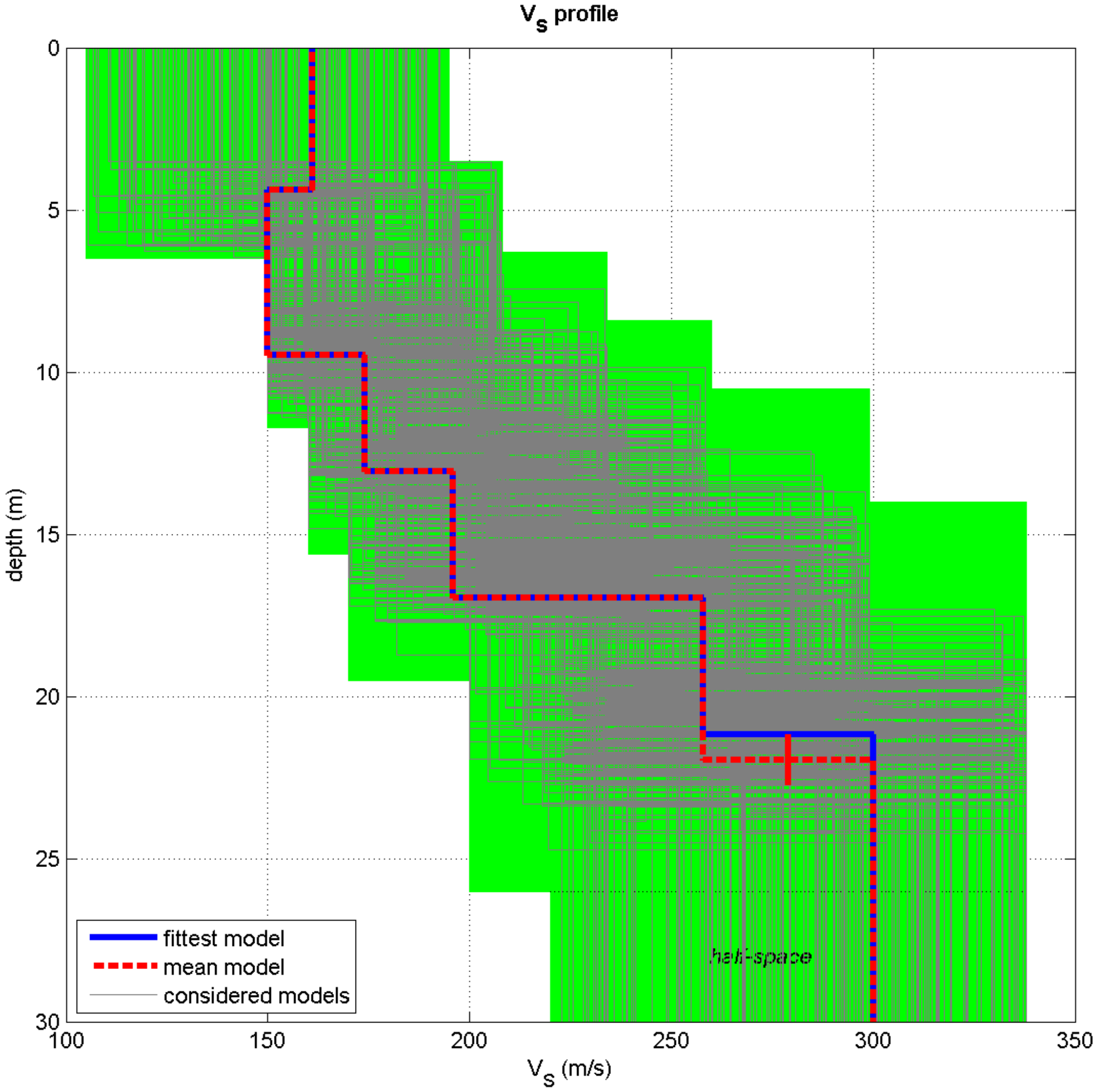

velocity spectrum & dispersion curve


misfit evolution

V_S	density	thickness
(m/s)	(gr/cm^3)	(m)

[MODELLO FINALE]

Vs30 = 204 m/s



dataset: 232.dat

dispersion curve: pick.cdp

Vs30 (best model): 204 m/s

Vs30 (mean model): 203 m/s

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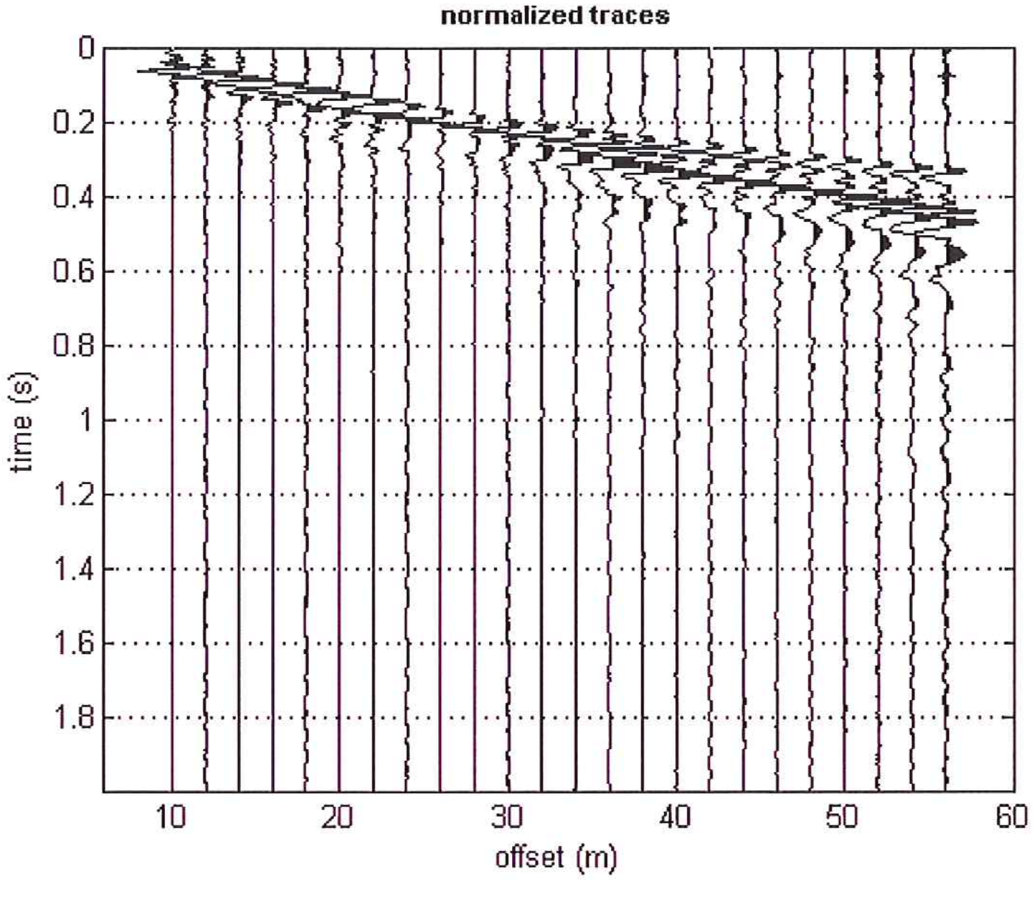
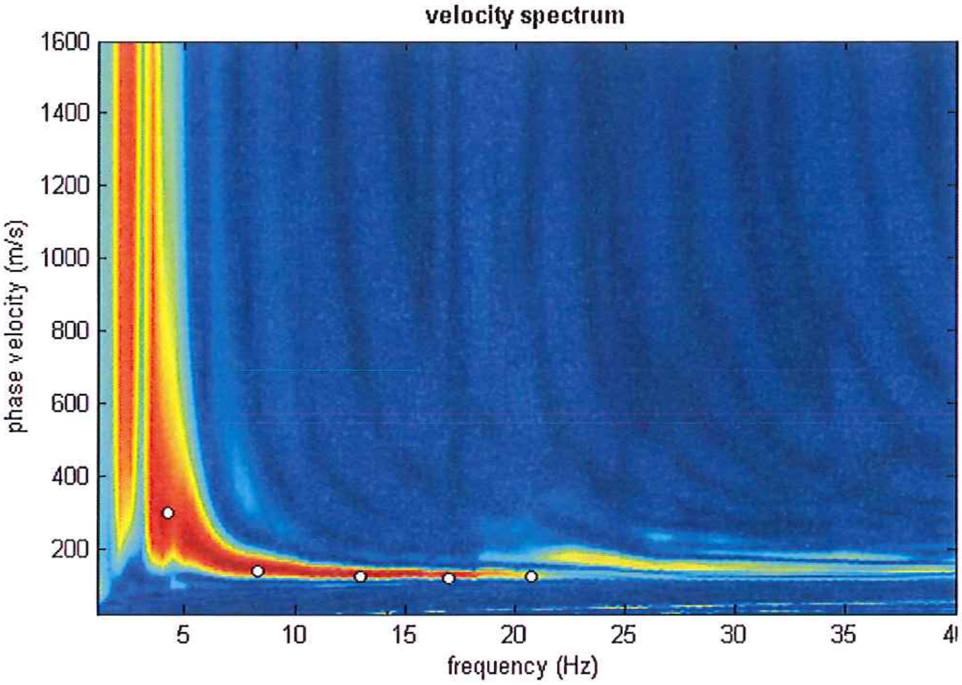
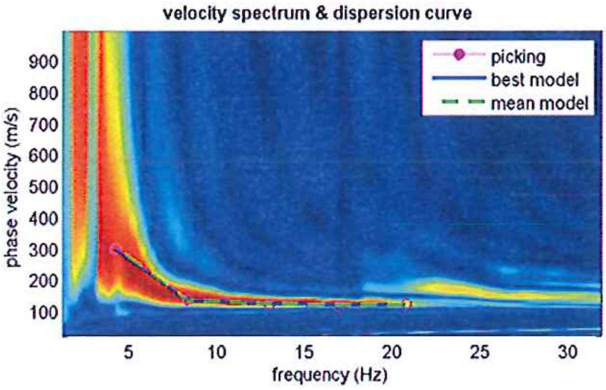
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

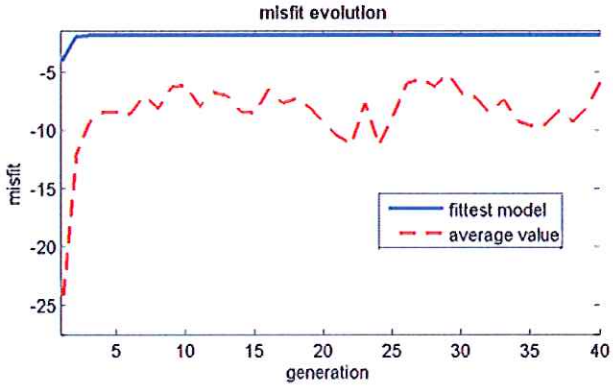
Cantiere: Medolla, via San Geminiano
Operatori: D.ssa Linda Veratti, D.ssa Sonia Gilioli
Data: 07/07/2014
Lavoro: Studio terreno di fondazione
Elaborazione: D.ssa Sonia Gilioli
Responsabile: Dott. Geol. Pier Luigi Dallari



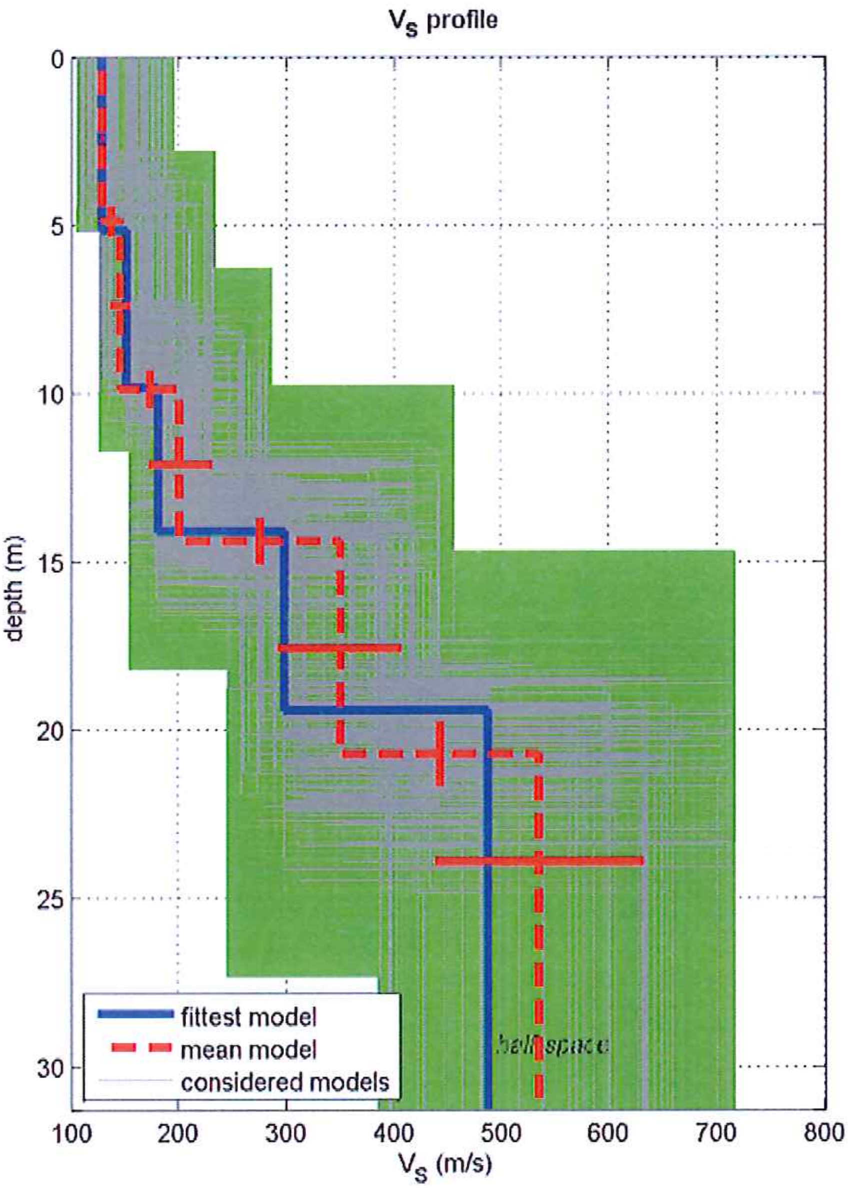
SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE

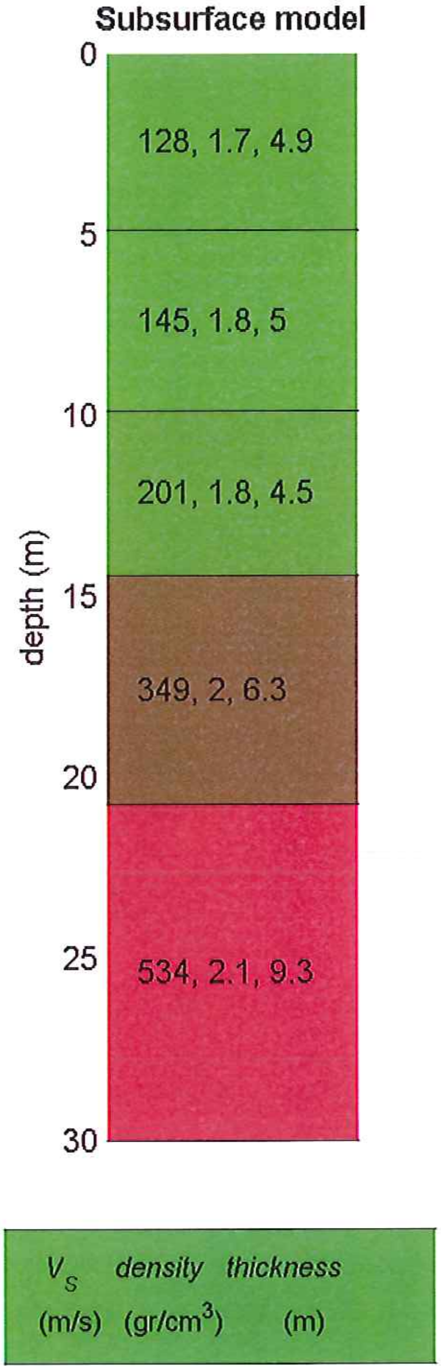






MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA





dataset: 741 $_1$0.dat

dispersion curve: pick1.cdp

Vs30 (best model): 223 m/s

Vs30 (mean model): 230 m/s

BEST MODEL
Vs30 = 223 m/s

ALLEGATO N° 3

Indagini sismiche

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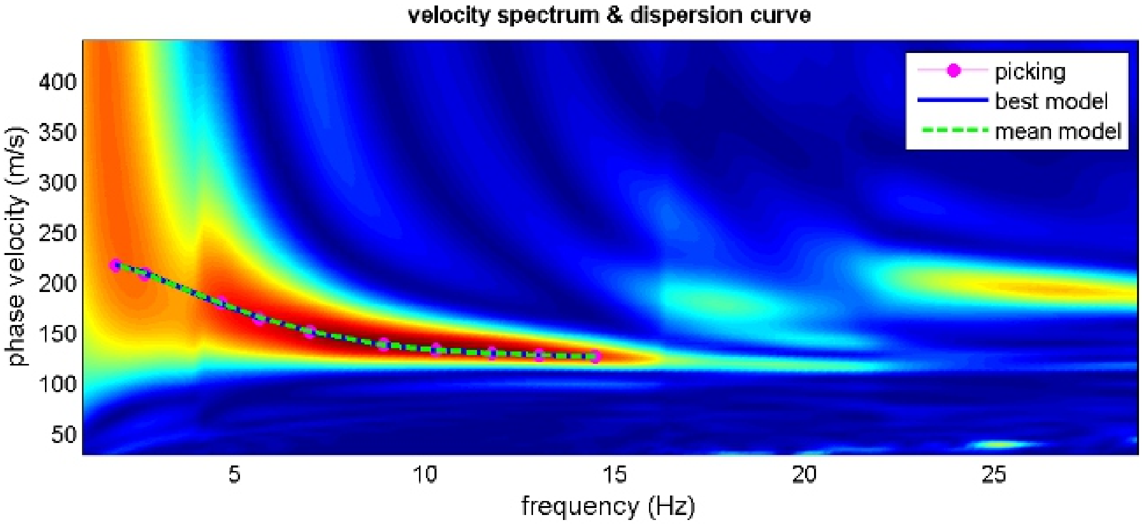
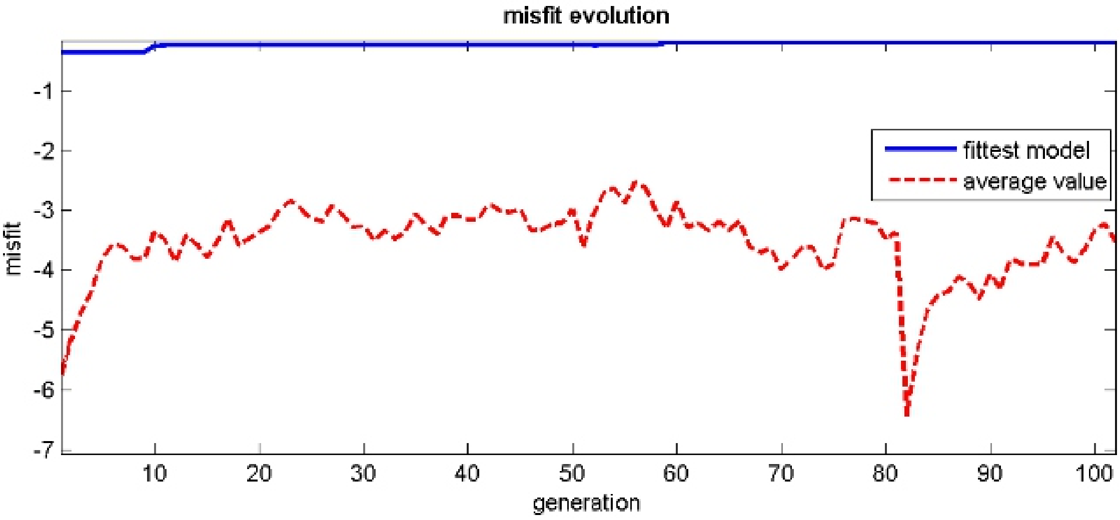
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

Cantiere: Medolla, località Villafranca, via Rocca
Lavoro: Studio del terreno di fondazione
Data: 04/07/2018
Responsabile: Dott. Geol. Pier Luigi Dallari

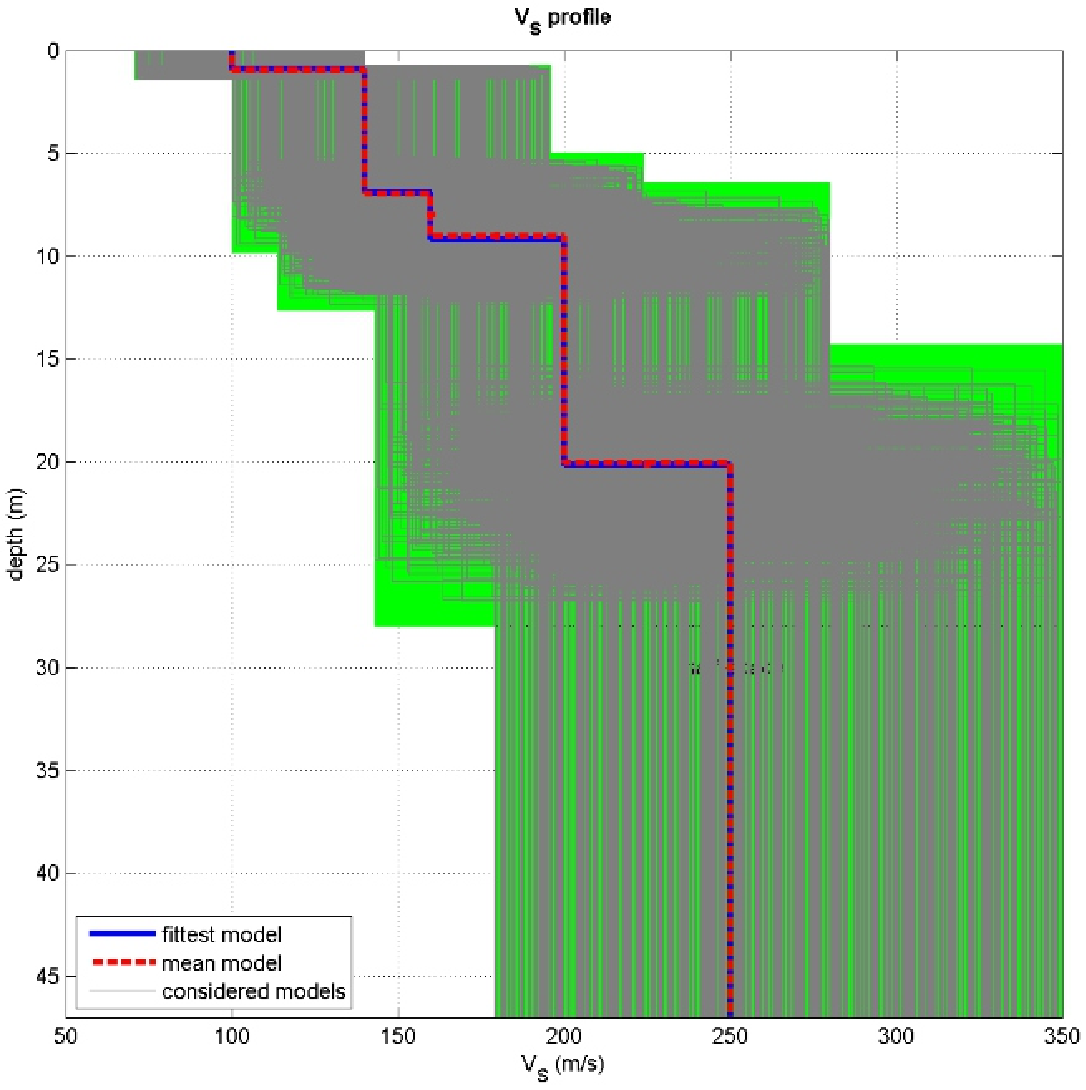
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO

SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE





MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA



dataset: 40.dat

dispersion curve: pick.cdp

Vs30 (best model): 187 m/s

Vs30 (mean model): 187 m/s

BEST MODEL
Vs30 = 187 m/s

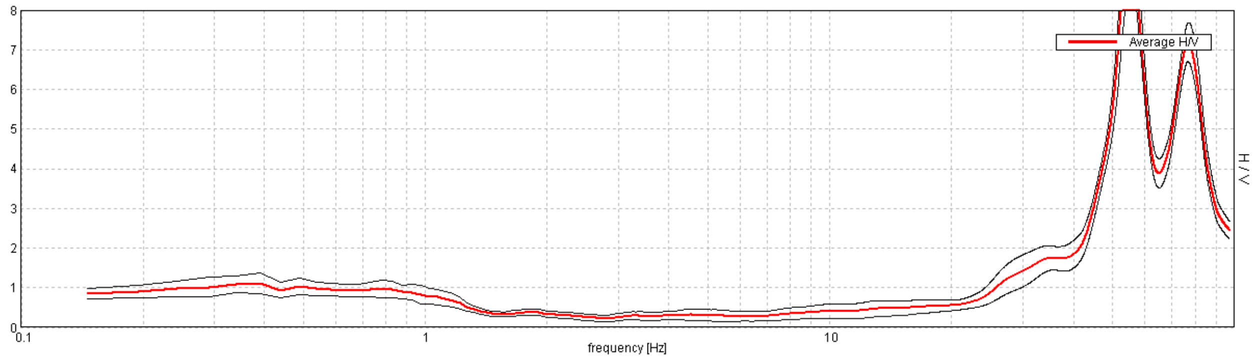
MEDOLLA VIA ROCCA, HV 1

Instrument: EXT- 24 bit USB
Data format: 16 byte
Full scale [mV]: n.a.
Start recording: 06/07/18 11:30:32 End recording: 06/07/18 11:50:32
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS data not available

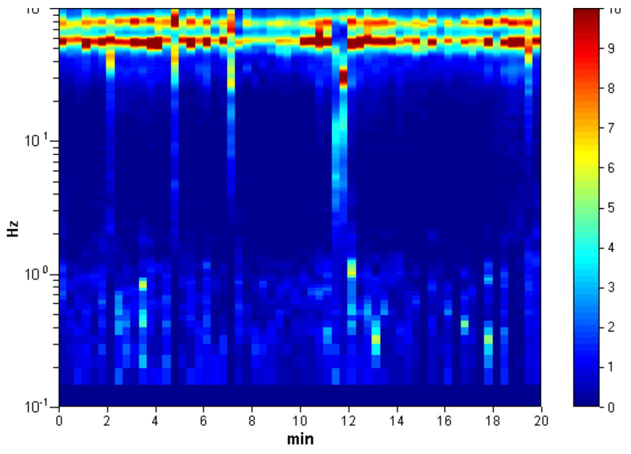
Trace length: 0h20'00". Analysis performed on the entire trace.
Sampling rate: 200 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

HORIZONTAL TO VERTICAL SPECTRAL RATIO

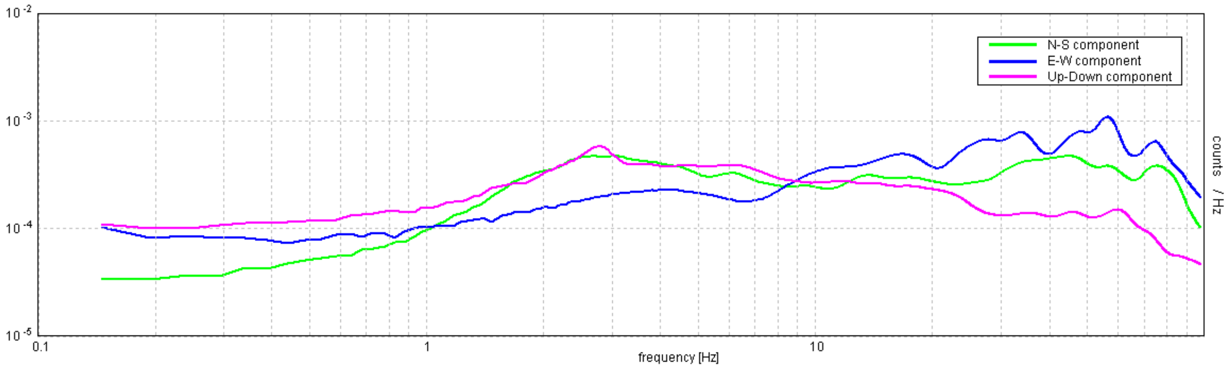
Max. H/V at 29.93 ± 16.96 Hz. (In the range 0.2 - 30.0 Hz).



H/V TIME HISTORY



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the** *Grilla* **manual before interpreting the following tables**.]

Max. H/V at 29.93 ± 16.96 Hz (in the range 0.2 - 30.0 Hz).

Criteria for a reliable H/V curve
[All 3 should be fulfilled]

$f_0 > 10 / L_w$	29.93 > 0.50	OK	
$n_c(f_0) > 200$	35918.0 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5$Hz **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5$Hz**	Exceeded 0 out of 920 times	OK	

Criteria for a clear H/V peak
[At least 5 out of 6 should be fulfilled]

Exists f^- in $[f_0/4, f_0] \mid A_{H/V}(f^-) < A_0 / 2$	23.438 Hz	OK	
Exists f^+ in $[f_0, 4f_0] \mid A_{H/V}(f^+) < A_0 / 2$			NO
$A_0 > 2$	1.42 > 2		NO
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.56677| < 0.05		NO
$\sigma_f < \varepsilon(f_0)$	16.96432 < 1.49658		NO
$\sigma_A(f_0) < \theta(f_0)$	0.4053 < 1.58	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$

Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	$0.25 f_0$	$0.2 f_0$	$0.15 f_0$	$0.10 f_0$	$0.05 f_0$
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

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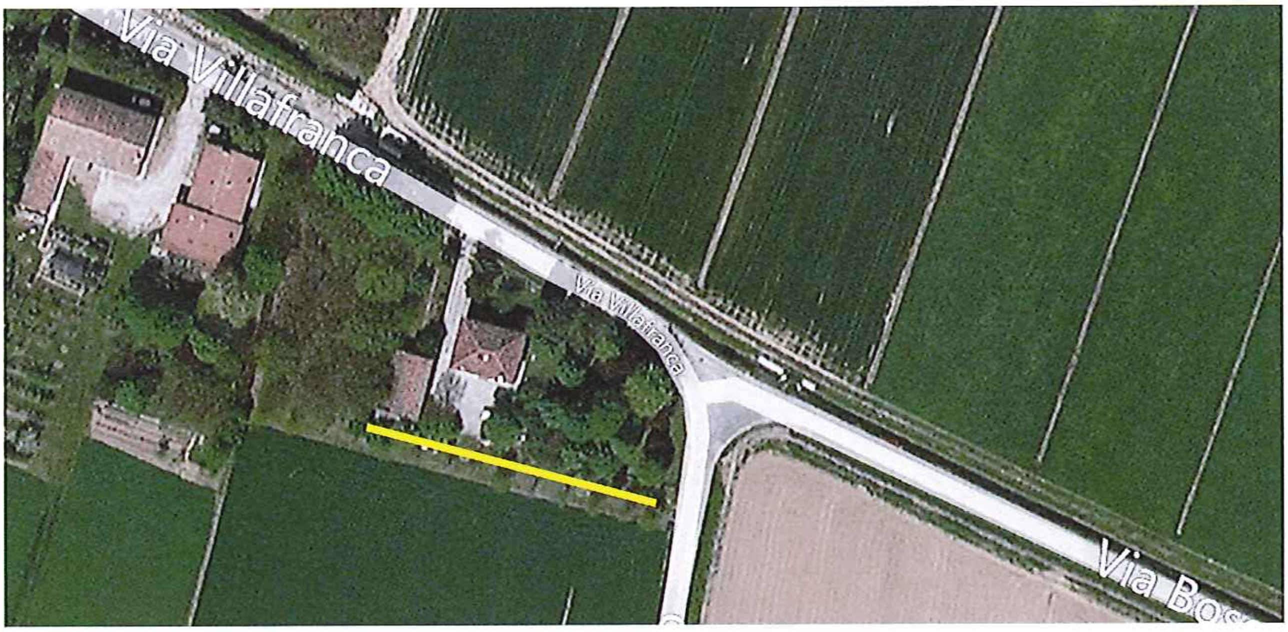
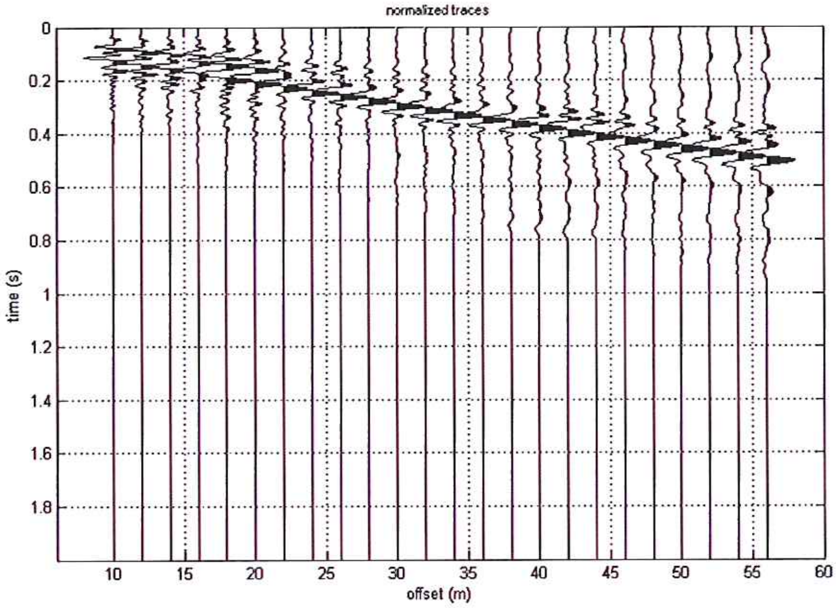
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

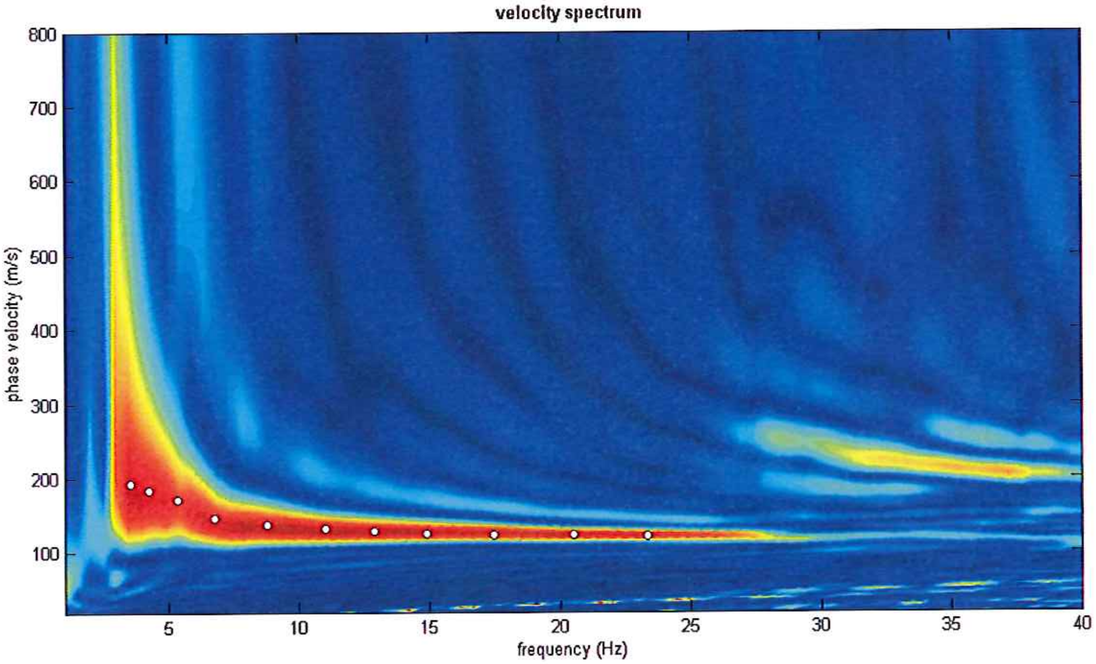
Cantiere:	Medolla – Via Villafranca
Operatori:	Dott. Ssa Erika Parmeggiani
Data:	24/06/2013
Lavoro:	Studio del terreno di fondazione
Elaborazione:	Dott. Ghirardini Gabriele
Responsabile:	Dott. Geol. Pier Luigi Dallari

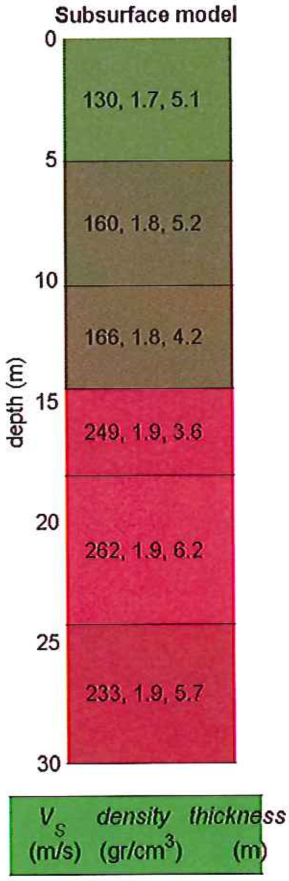
CERTIFICATO: 214_M_13

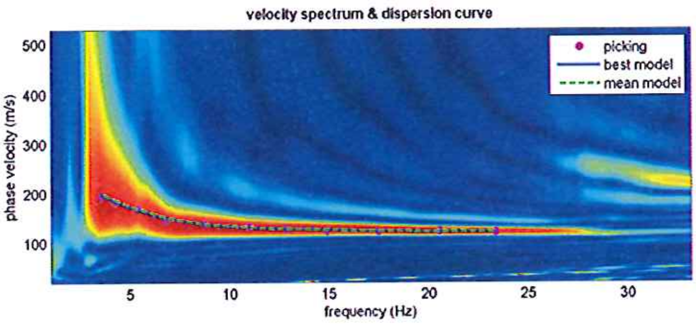


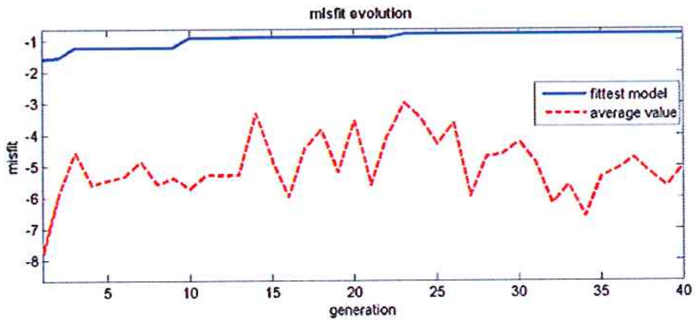


ELABORAZIONE



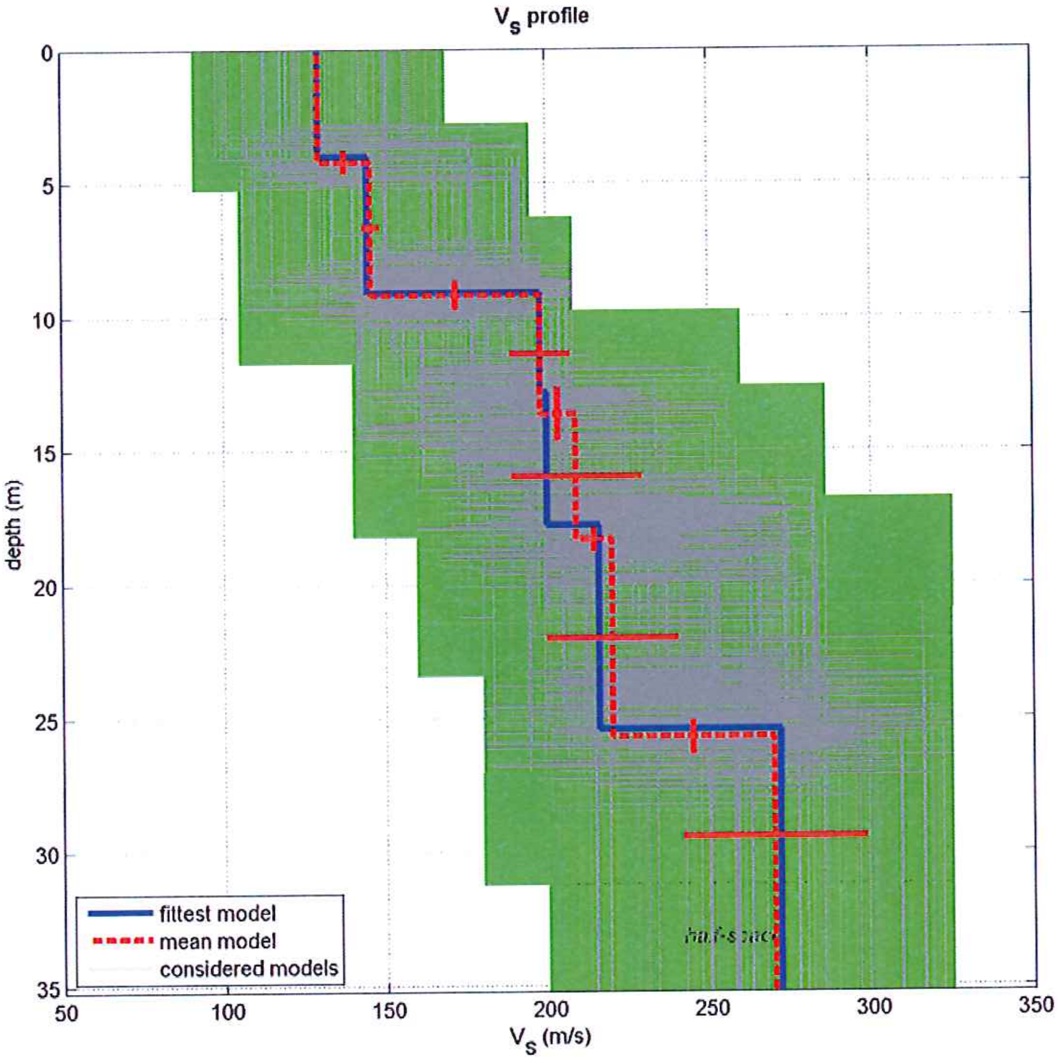






[MODELLO FINALE]

Vs_{30} = 185 m/s



dataset: $11_1 0$.dat

dispersion curve: PICK.cdp

Vs30 (best model): 185 m/s

Vs30 (mean model): 186 m/s

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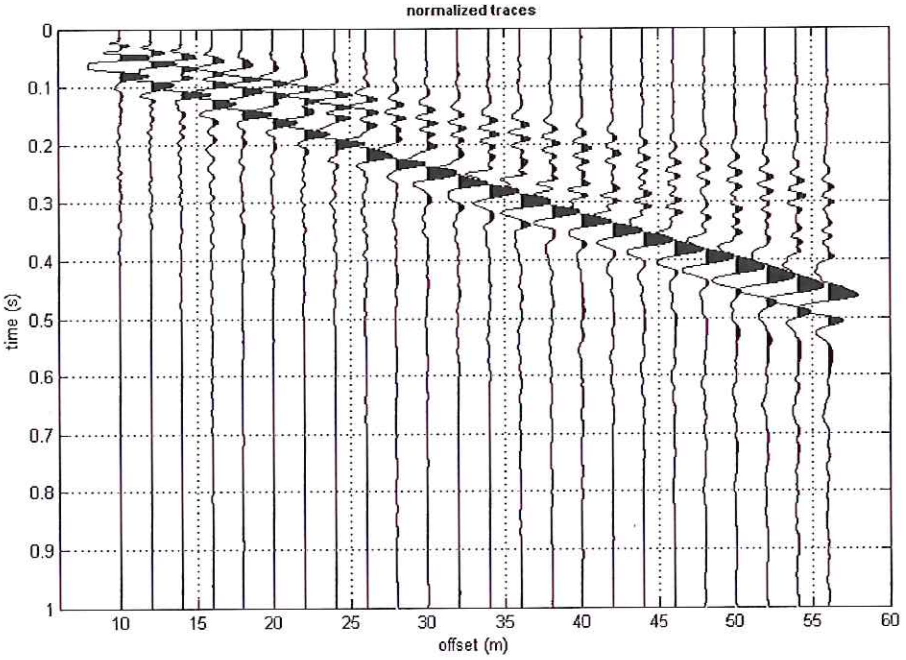
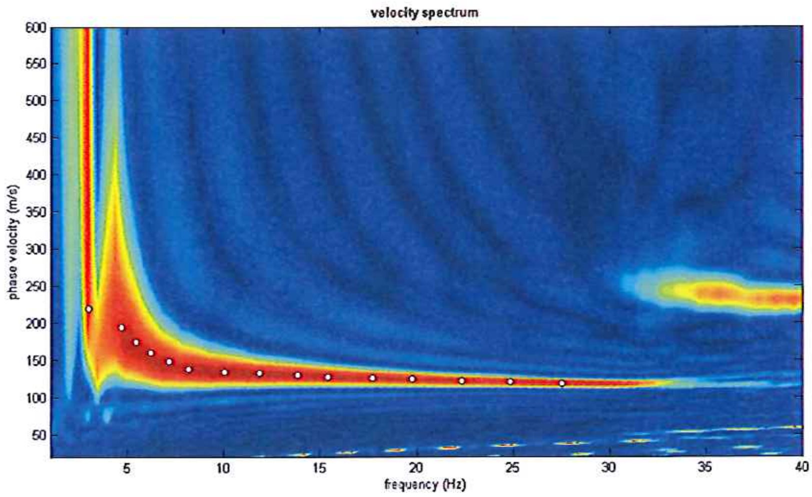
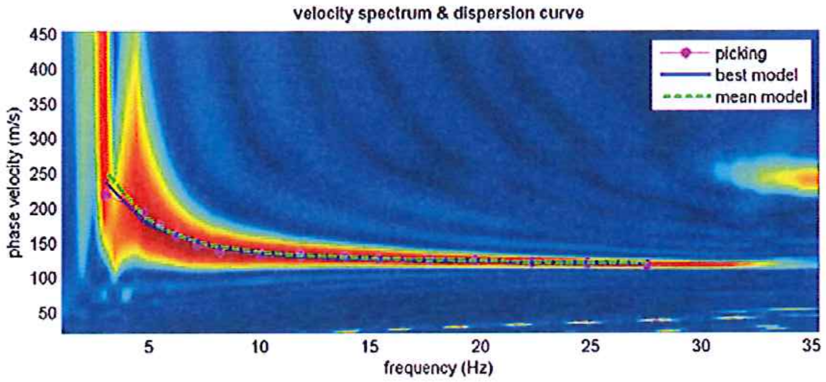
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

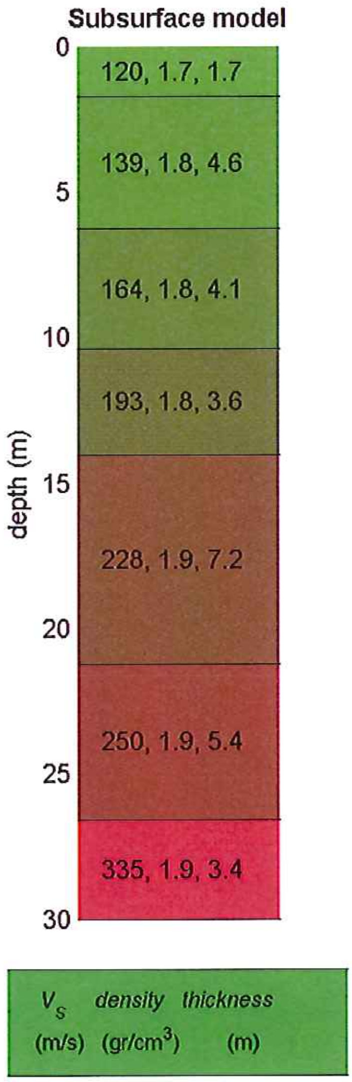
Cantiere:	Medolla – via Romana
Operatori:	Dott. ssa Linda Veratti
Data:	25/01/2014
Lavoro:	Studio del terreno di fondazione
Elaborazione:	Dott. Gabriele Ghirardini
Responsabile:	Dott. Geol. Pier Luigi Dallari

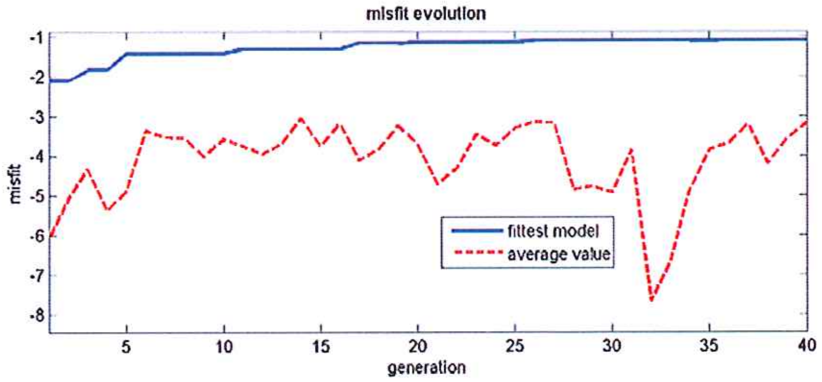
ELABORAZIONE



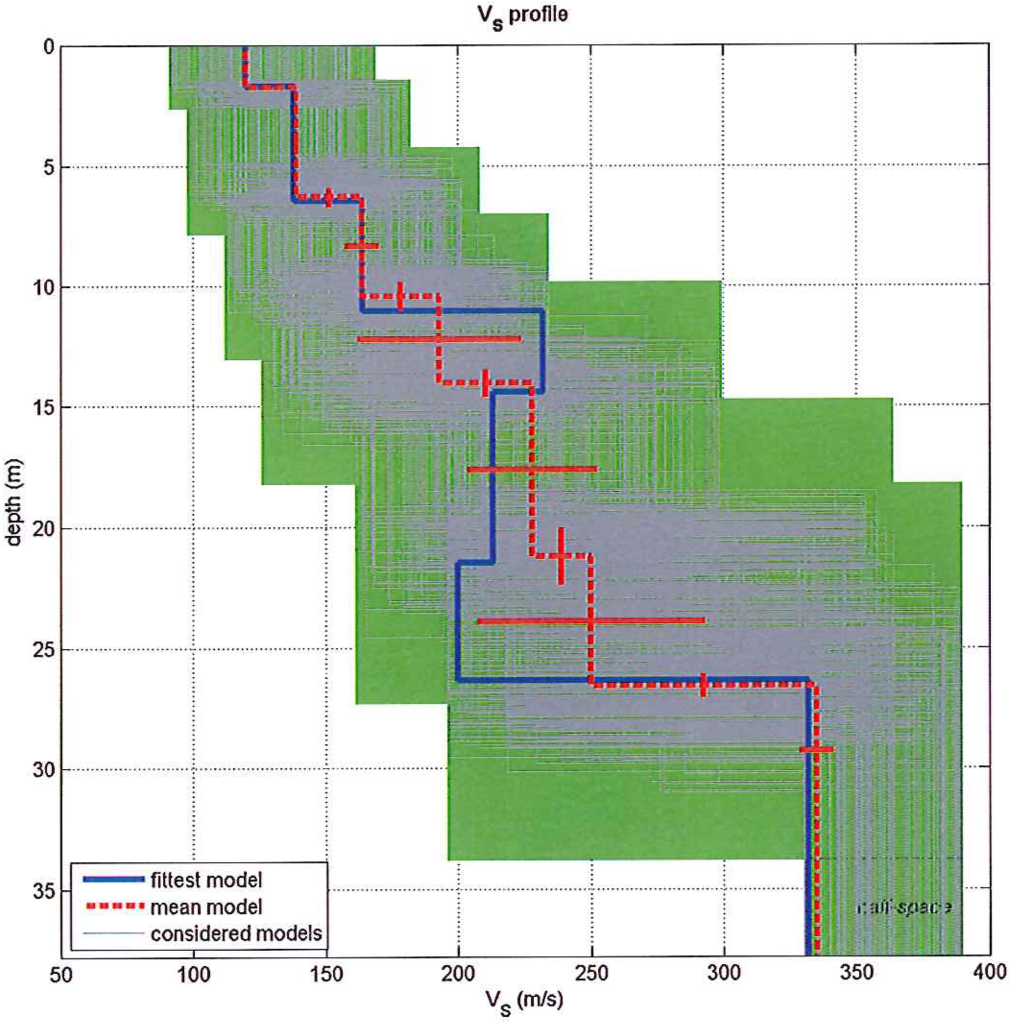

velocity spectrum
phase velocity (m/s)
600
550
500
450
400
350
300
250
200
150
100
50
frequency (Hz)
5
10
15
20
25
30
35
40


velocity spectrum & dispersion curve
picking
best model
mean model
phase velocity (m/s)
450
400
350
300
250
200
150
100
50
frequency (Hz)
5
10
15
20
25
30
35


Subsurface model
depth (m)
0
5
10
15
20
25
30
120, 1.7, 1.7
139, 1.8, 4.6
164, 1.8, 4.1
193, 1.8, 3.6
228, 1.9, 7.2
250, 1.9, 5.4
335, 1.9, 3.4
V_S density thickness
(m/s) (gr/cm^3) (m)


misfit evolution
misfit
-1
-2
-3
-4
-5
-6
-7
-8
fittest model
average value
generation
5
10
15
20
25
30
35
40

[MODELLO FINALE]
Vs_{30} = 188 m/s



dataset: 369.dat

dispersion curve: pick.cdp

Vs30 (best model): 188 m/s

Vs30 (mean model): 194 m/s

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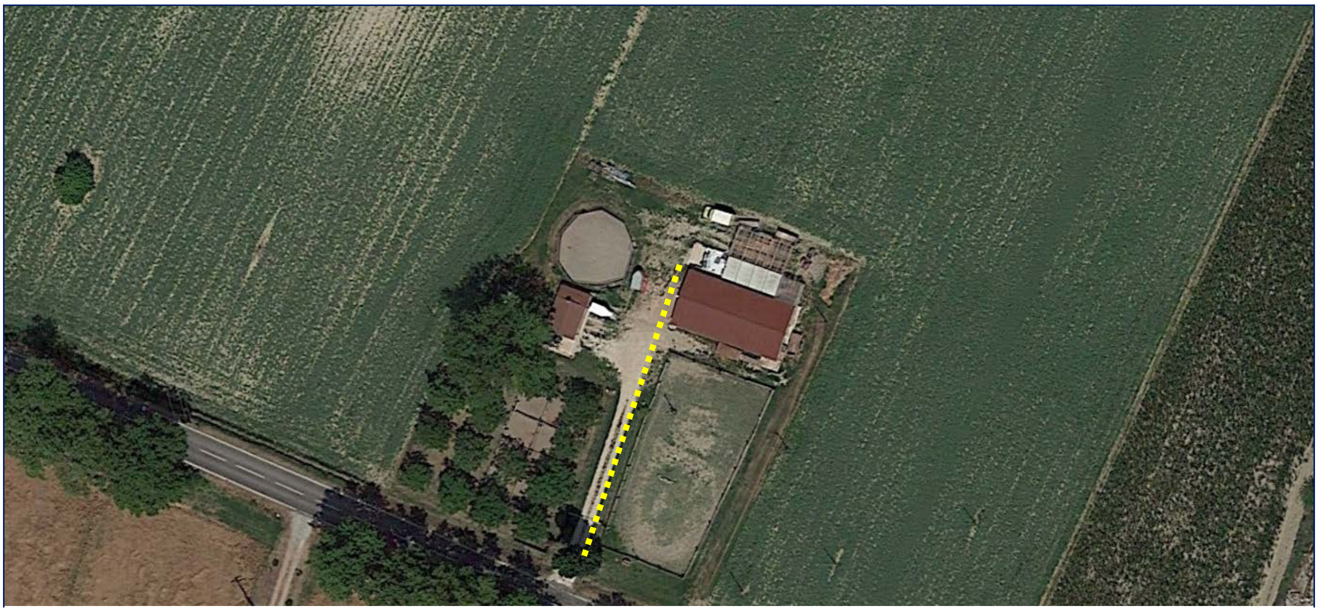
www.geogroupmodena.it

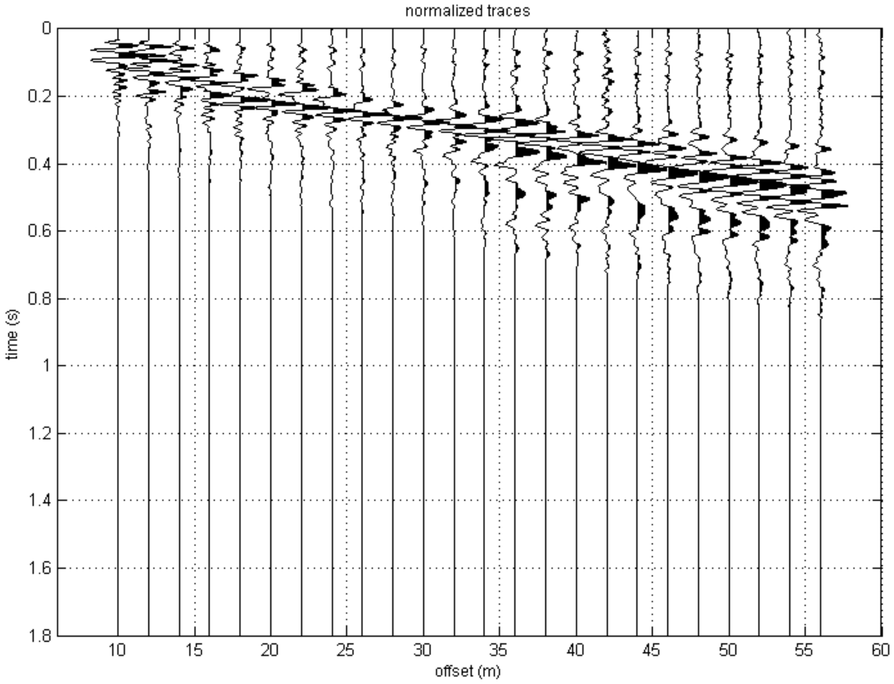
ANALISI SISMICA DI SITO SECONDO METODOLOGIA MASW

RIF. MASW 40/16

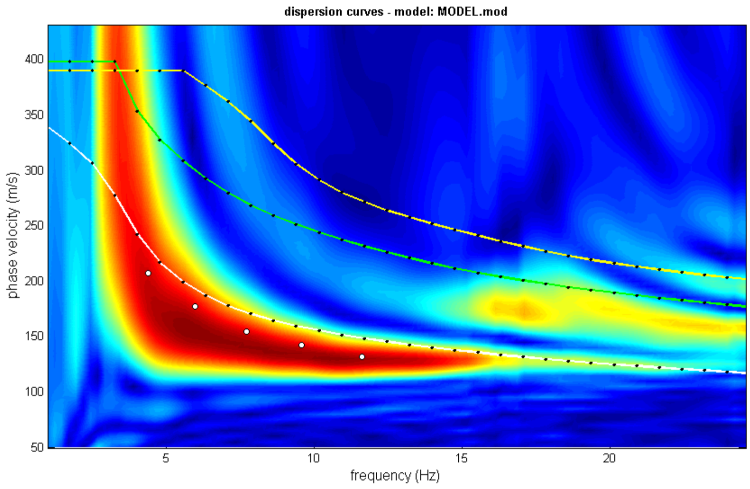
Cantiere: via Provinciale n. 99, Medolla (MO)
Data: 09/02/2016
Lavoro: studio del terreno di fondazione
Operatori: Dott.ssa Domitilla Santi, Dott. Salvatore Mucci
Elaborazione: Dott.ssa Domitilla Santi
Responsabile: Dott. Geol. Pier Luigi Dallari

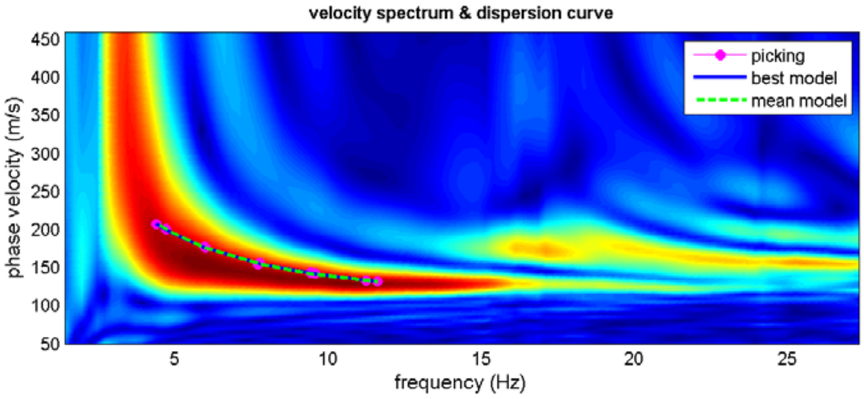


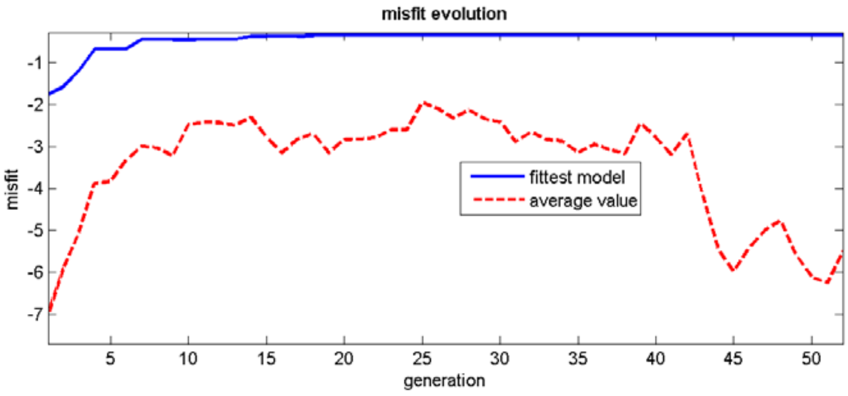
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



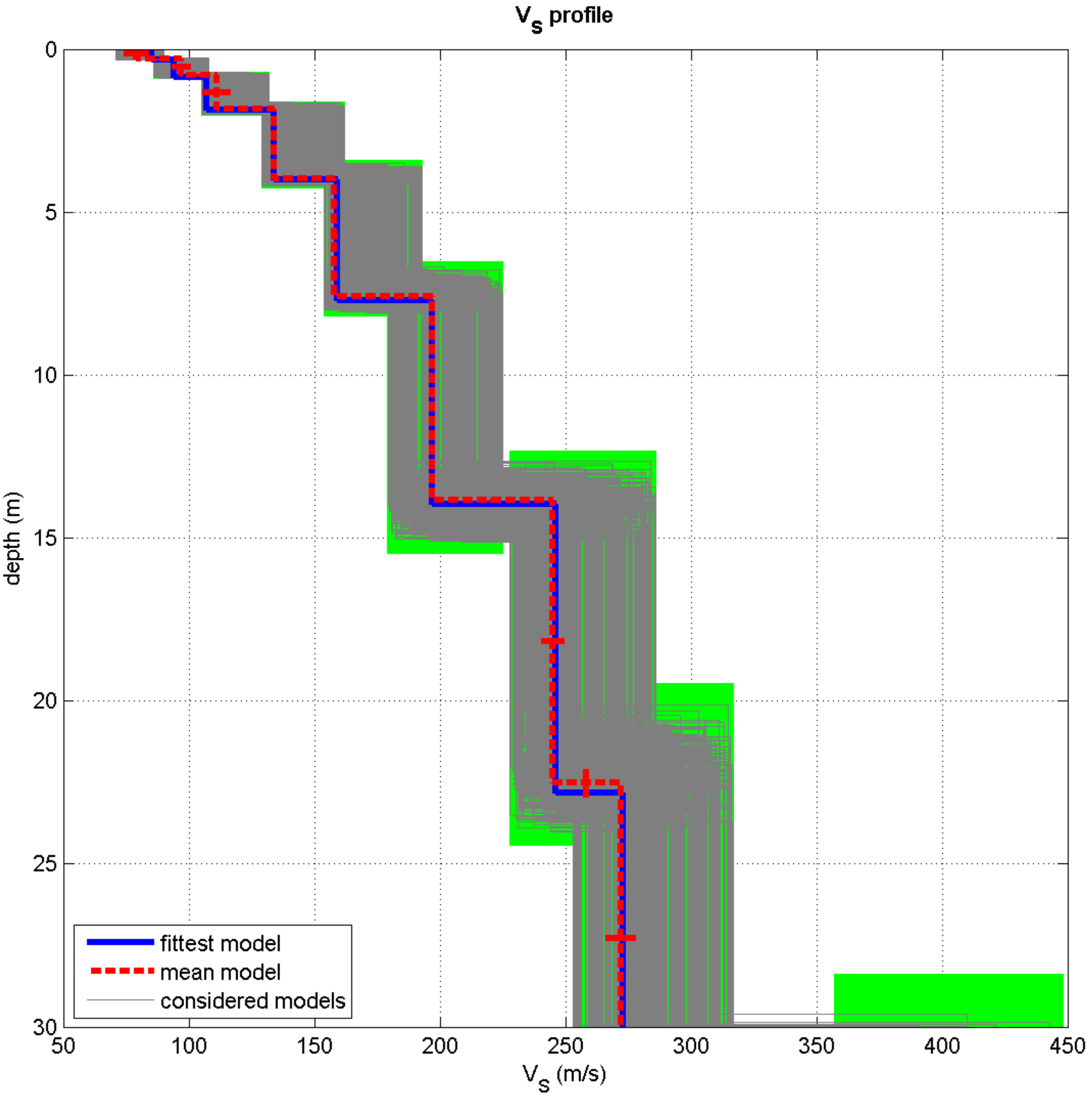
SPETTRO RELATIVO ALLE VELOCITÁ DI FASE REGISTRATE NEL DOMINIO DELLE FREQUENZE







MODELLO V_S30 DERIVATO DALL'INDAGINE MASW ESEGUITA



dataset: 666.dat

dispersion curve: PICK2.cdp

Vs30 (best model): 197 m/s

Vs30 (mean model): 198 m/s

BEST MODEL
V_S30 = 197 m/s

GEO GROUP s.r.l.
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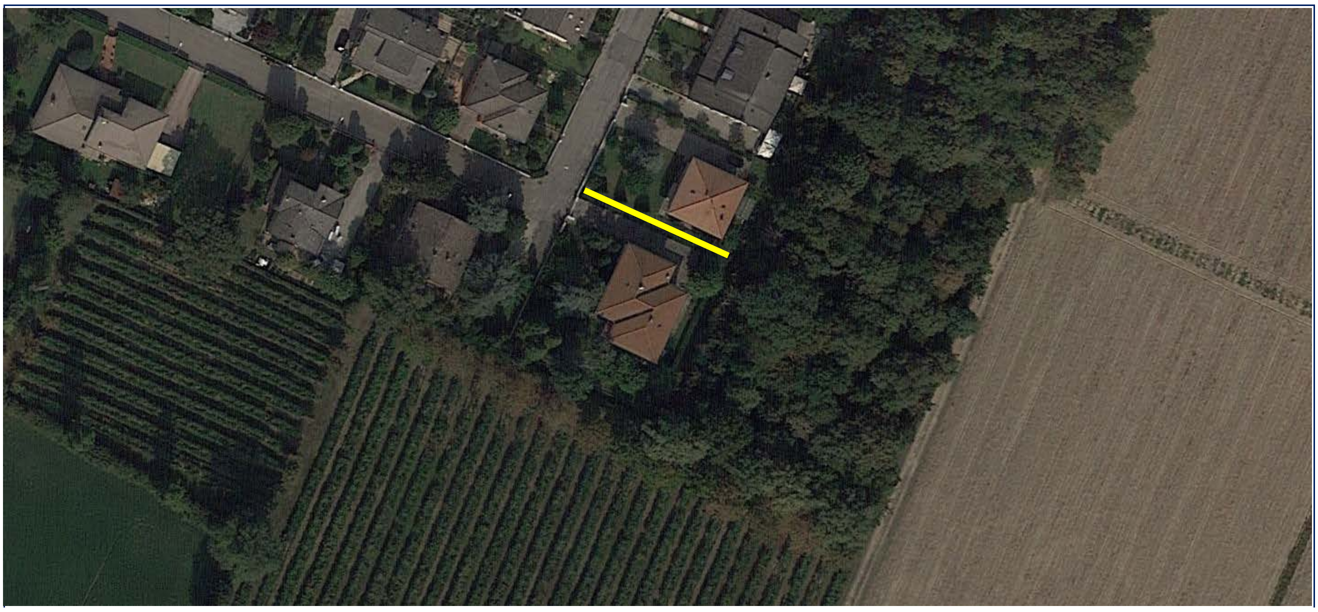
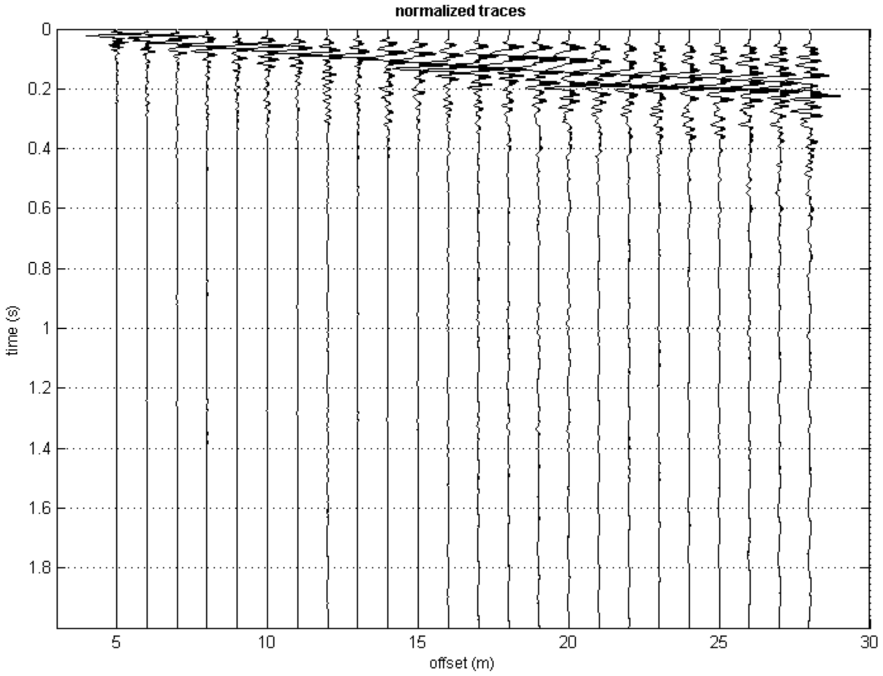
ANALISI SISMICA DI SITO SECONDO METODOLOGIA MASW

RIF. MASW 407/17

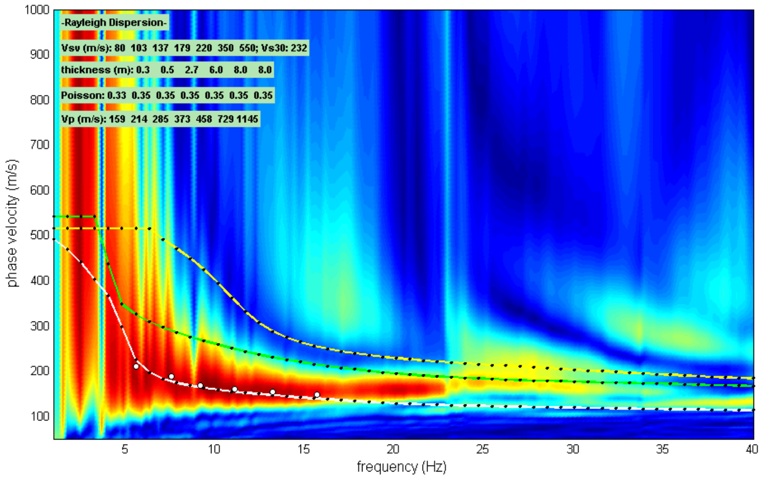
Cantiere: via Calanca n. 37, Medolla (MO)
Data: 11/07/2017
Lavoro: studio del terreno di fondazione
Operatori: Dott.ssa Sonia Gilioli
Elaborazione: Dott.ssa Domitilla Santi
Responsabile: Dott. Geol. Pier Luigi Dallari



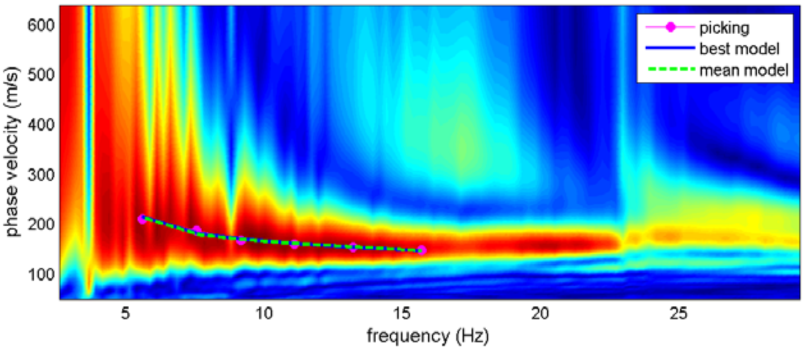
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



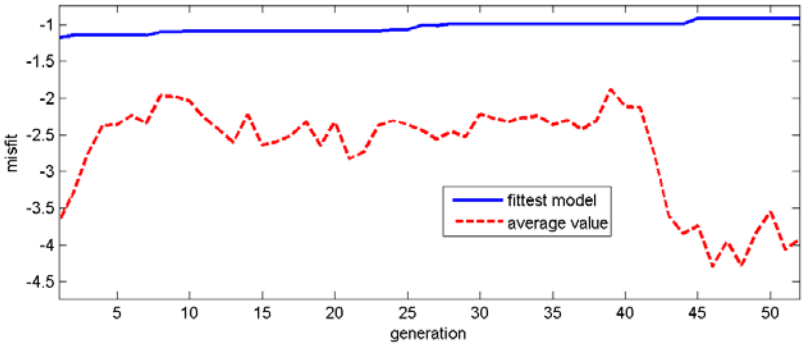
SPETTRO RELATIVO ALLE VELOCITÁ DI FASE REGISTRATE NEL DOMINIO DELLE FREQUENZE



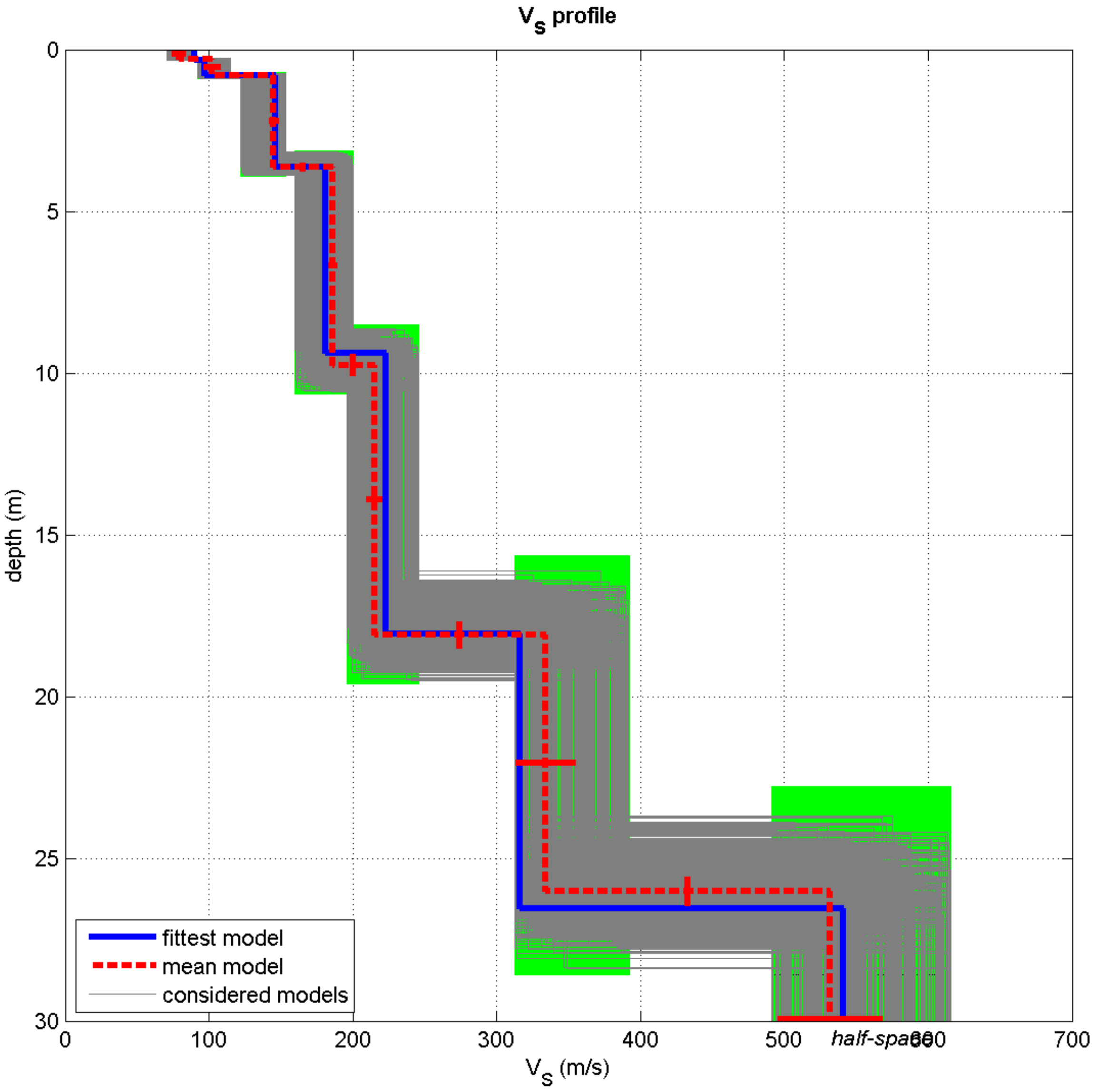
velocity spectrum & dispersion curve



misfit evolution



MODELLO V_S30 DERIVATO DALL'INDAGINE MASW ESEGUITA



dataset: 280.dat

dispersion curve: pick.cdp

Vs30 (best model): 228 m/s

Vs30 (mean model): 229 m/s

BEST MODEL
V_S30 = 228 m/s

GEO GROUP s.r.l.
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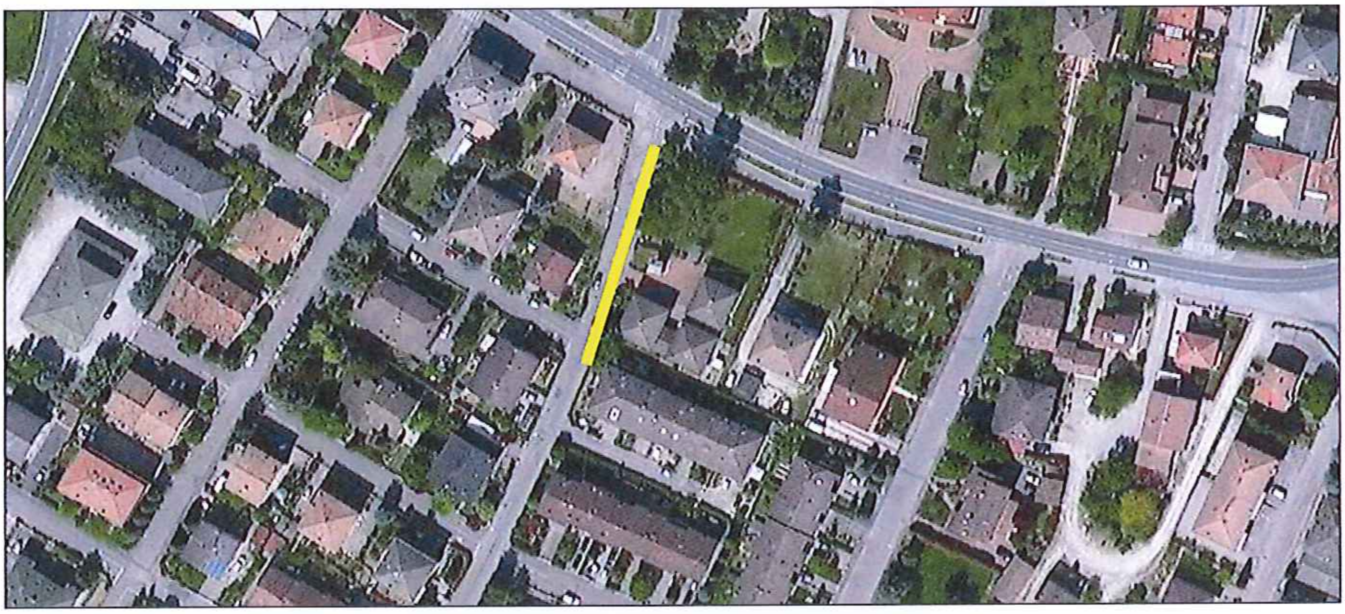
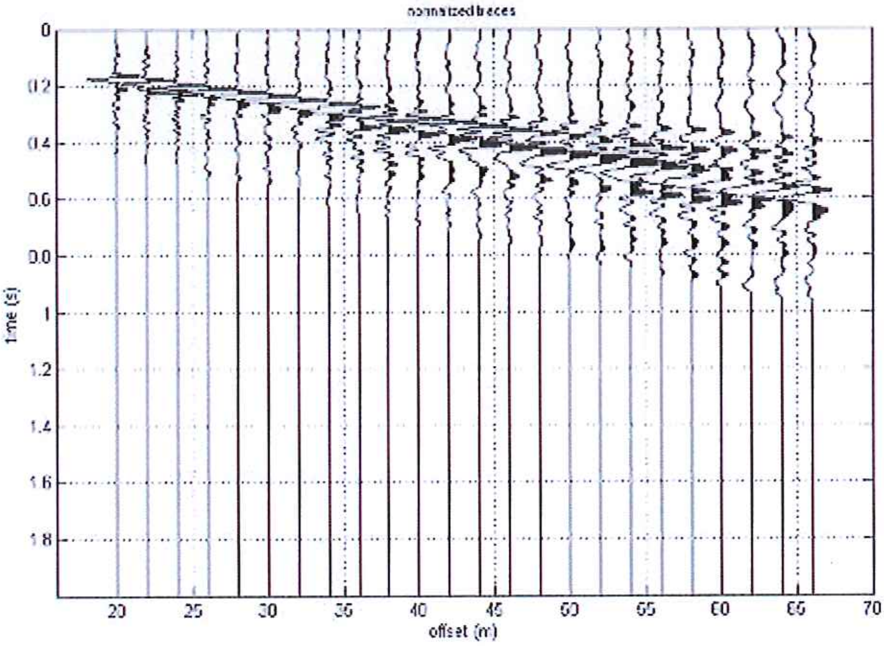
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

Cantiere: Medolla – Via Montale
Operatori: Dott. Ssa Linda Veratti
Data: 28/01/2014
Lavoro: Studio del terreno di fondazione
Elaborazione: Dott. Gabriele Ghirardini
Responsabile: Dott. Geol. Pier Luigi Dallari

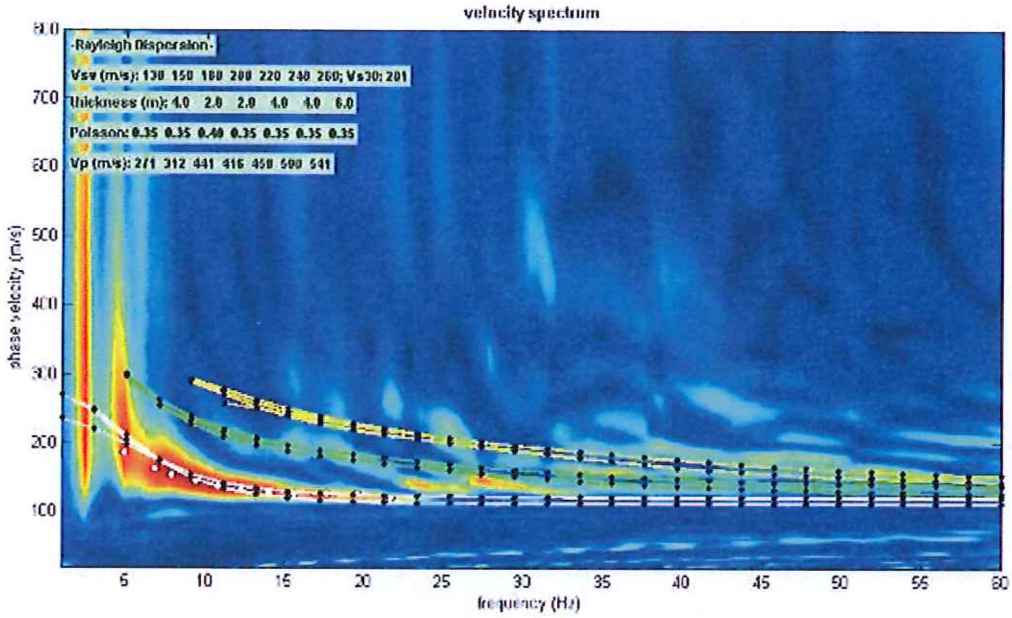
RIFERIMENTO
42/14

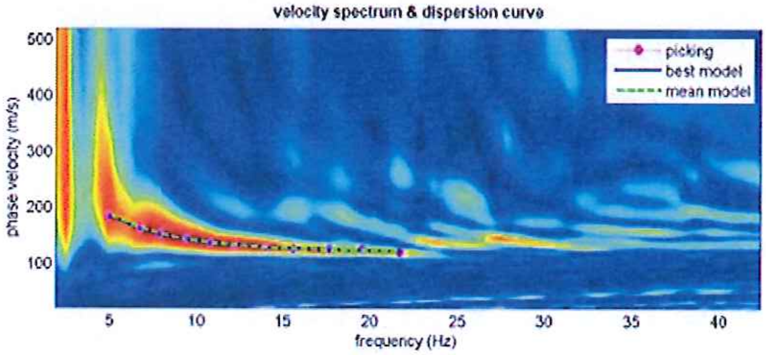


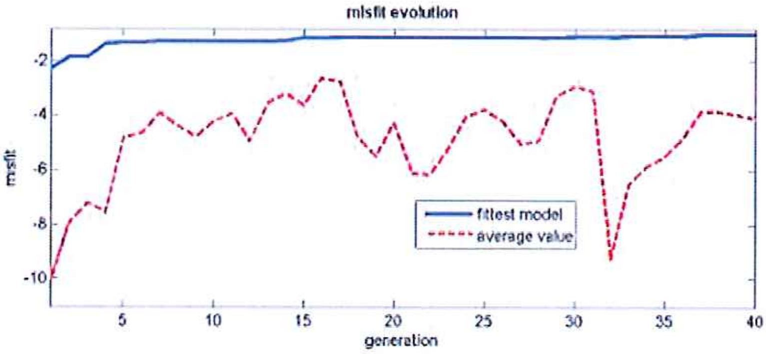
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



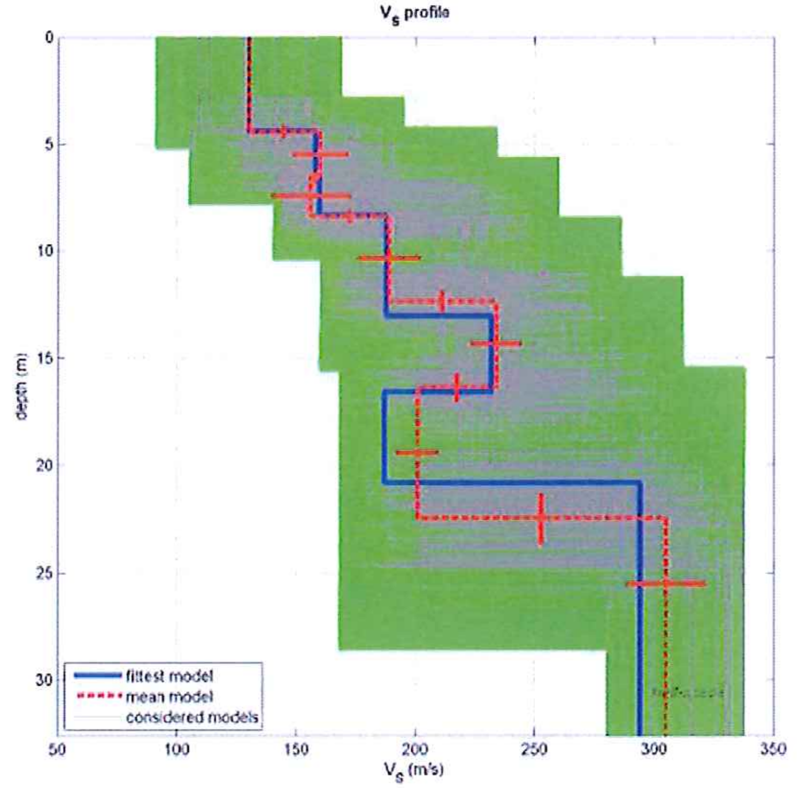
SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE







MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA

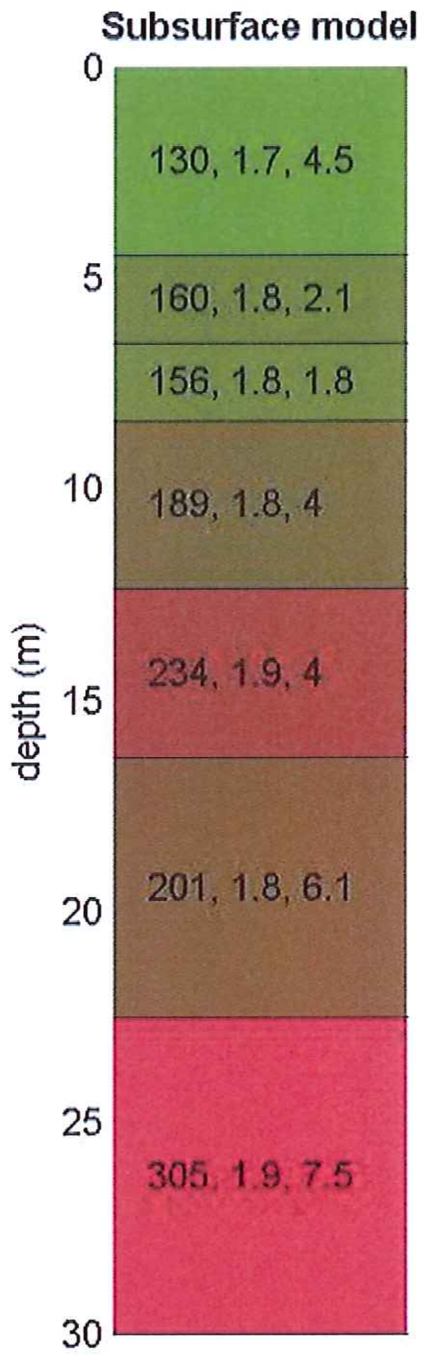


dataset: $382_2$0.dat

dispersion curve: PICK.cdp

Vs30 (best model): 196 m/s

Vs30 (mean model): 197 m/s



V_S density thickness
(m/s) (gr/cm^3) (m)

BEST MODEL
Vs30 = 196 m/s

GEO GROUP s.r.l.
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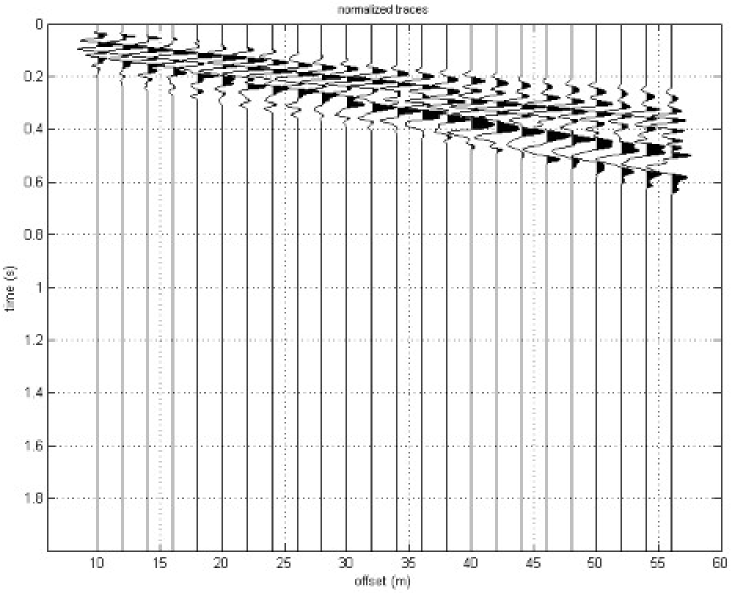
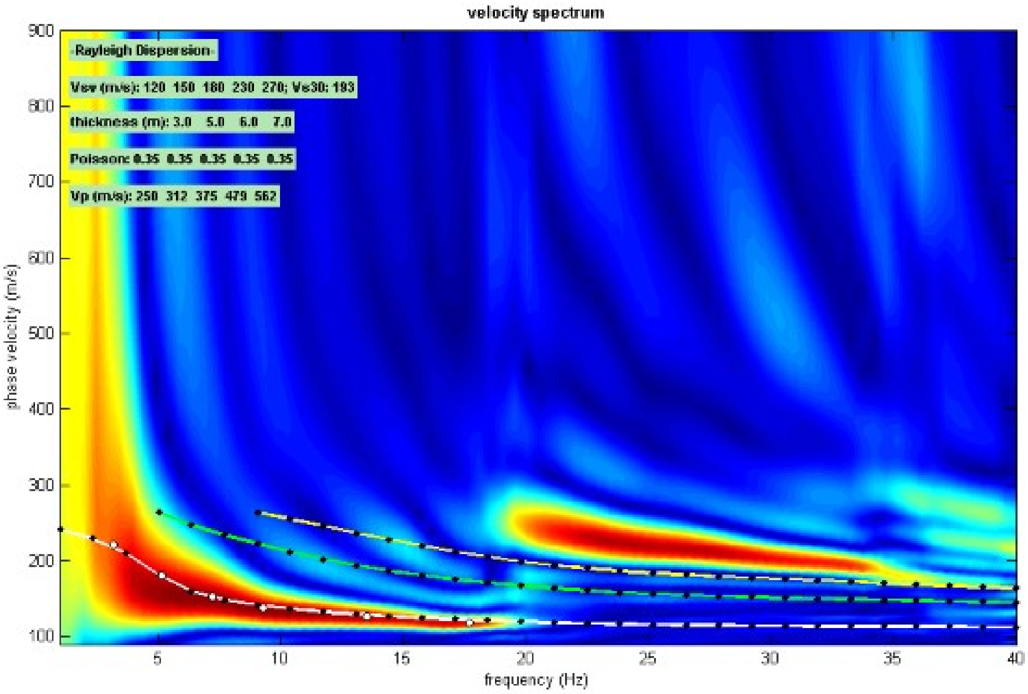
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

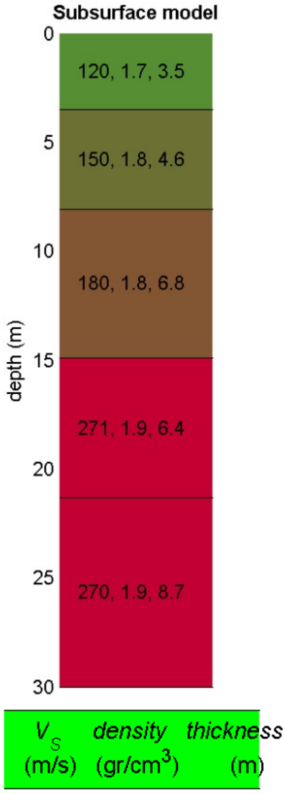
Cantiere:	Medolla – Via Santa Liberata
Operatori:	Dott. Ssa Linda Veratti
Data:	05/07/2013
Lavoro:	Studio del terreno di fondazione
Elaborazione:	Dott. Ssa Linda Veratti
Responsabile:	Dott. Geol. Pier Luigi Dallari

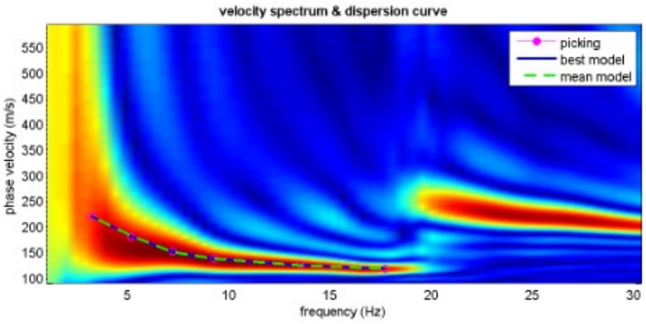
CERTIFICATO: 237_M_13

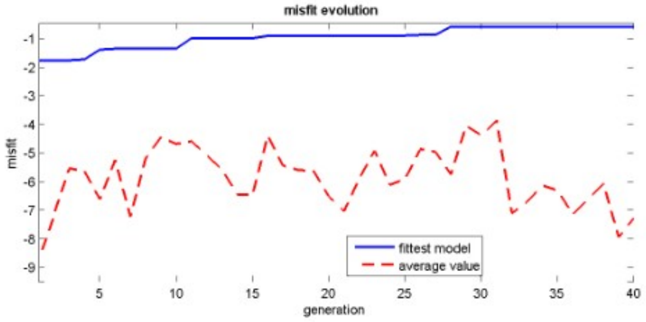


ELABORAZIONE



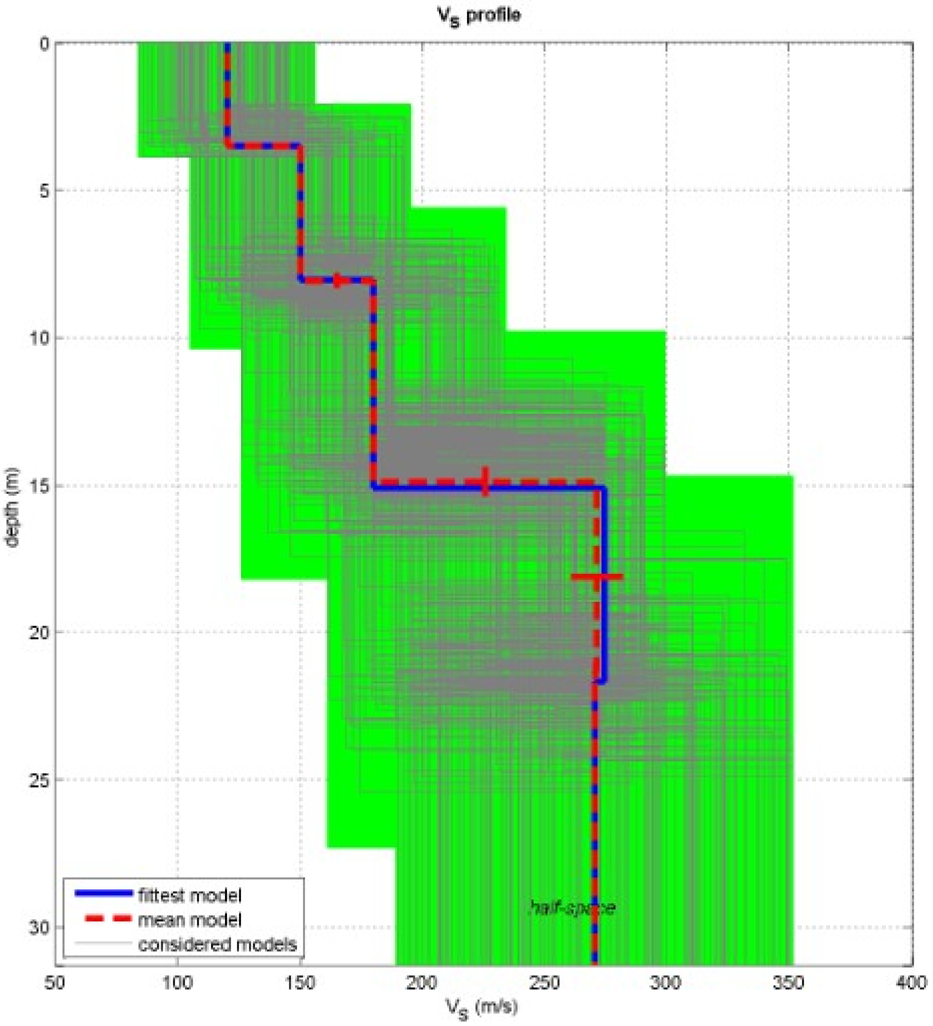






[MODELLO FINALE]

Vs_{30} = 195 m/s



dataset: 87.dat

dispersion curve: picking.cdp

Vs30 (best model): 195 m/s

Vs30 (mean model): 196 m/s

ALLEGATO N° 3

Indagini sismiche

GEO GROUP s.r.l.
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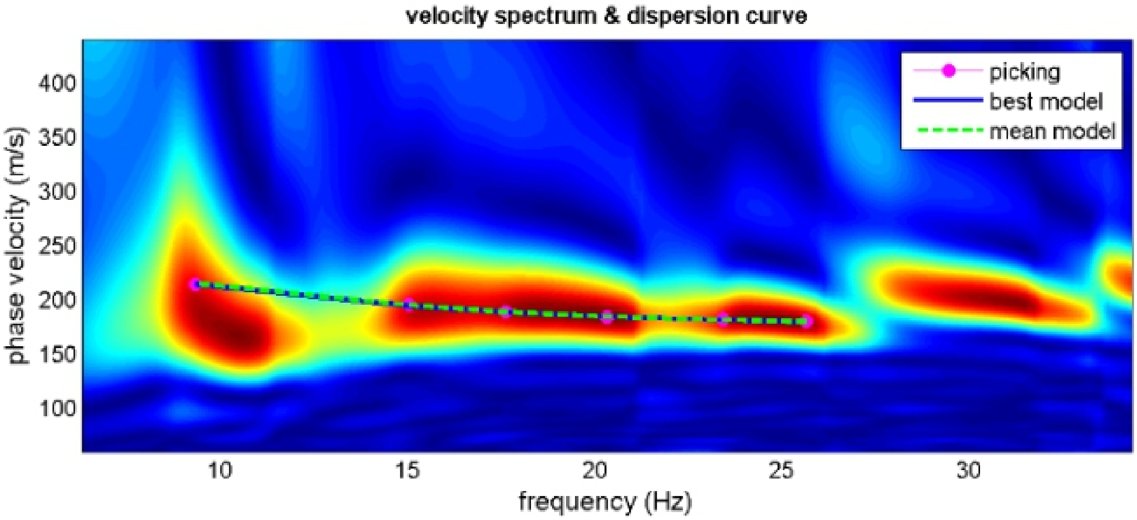
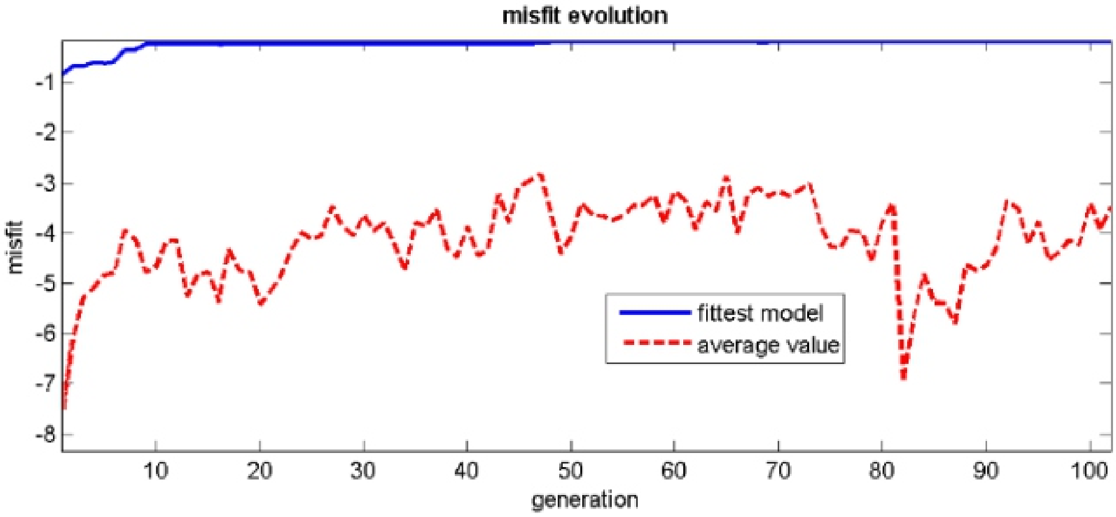
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

Cantiere: Medolla, Via degli Artigiani
Lavoro: Studio del terreno di fondazione
Data: 31/07/2018
Responsabile: Dott. Geol. Pier Luigi Dallari

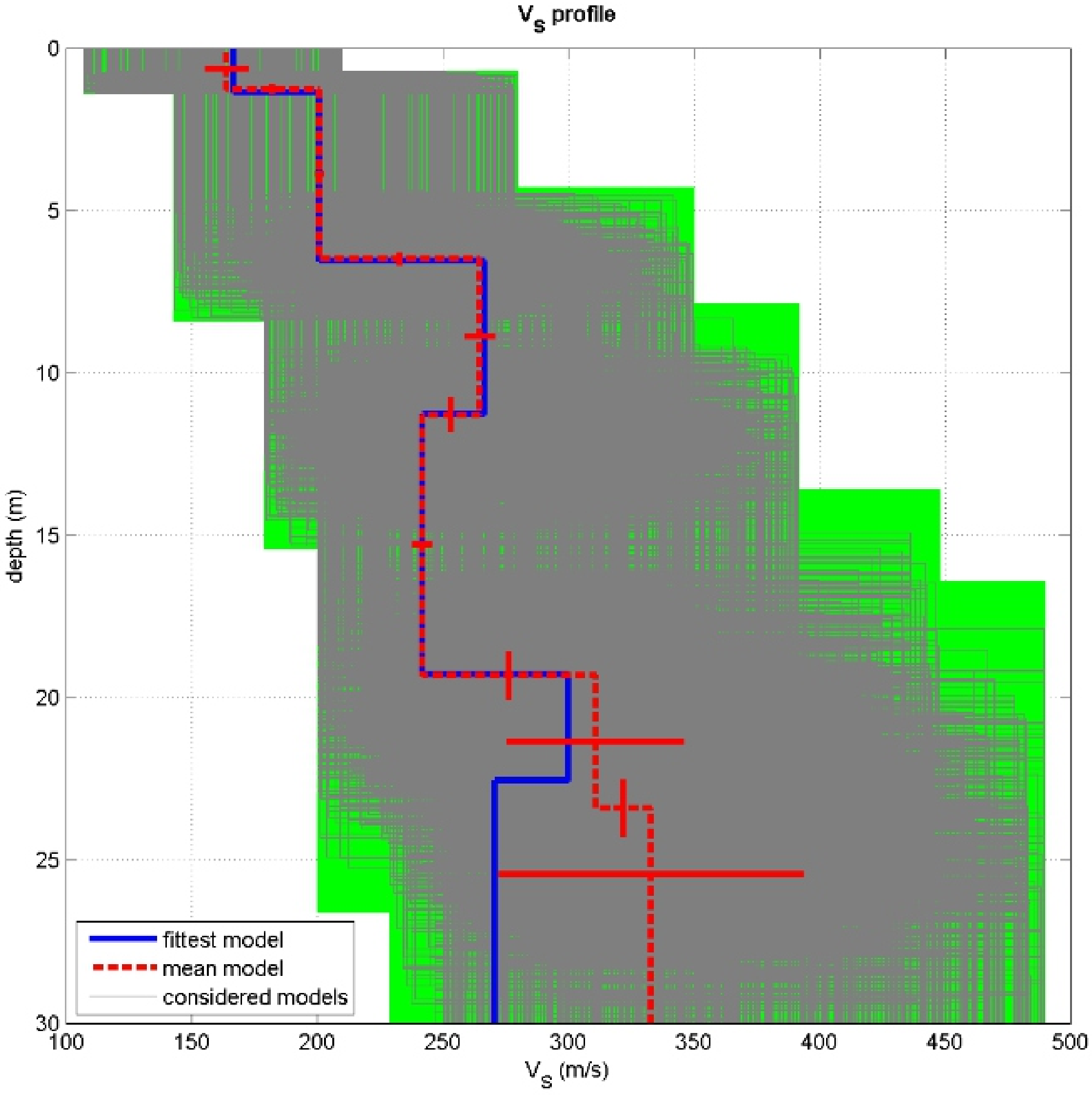
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO

SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE


velocity spectrum & dispersion curve


misfit evolution

MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA



half-space

dataset: 262.dat

dispersion curve: pick1.cdp

Vs30 (best model): 244 m/s

Vs30 (mean model): 254 m/s

BEST MODEL
Vs30 = 244 m/s

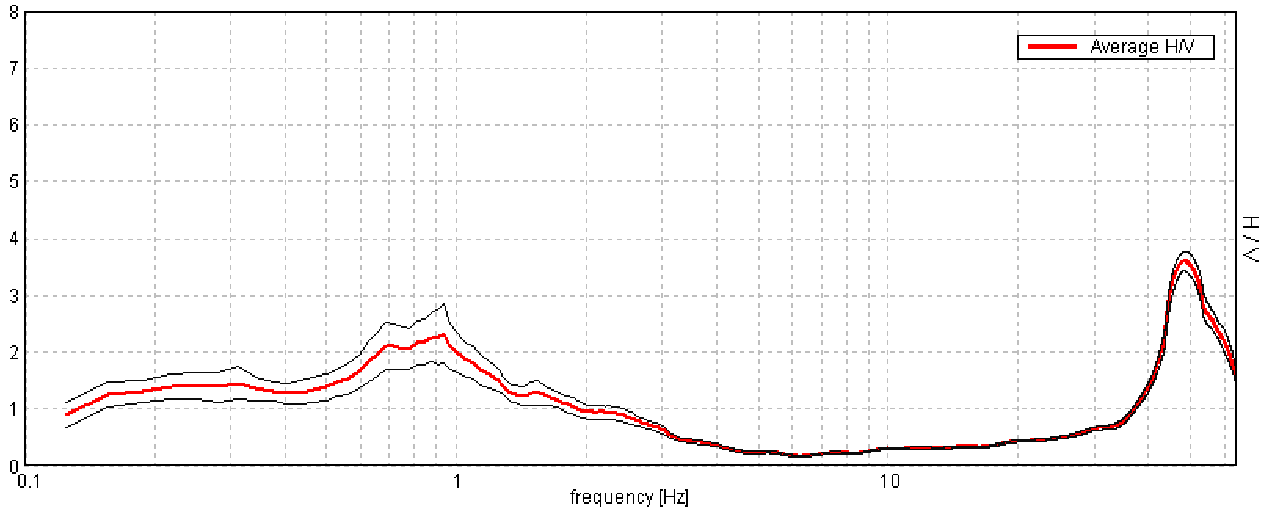
Medolla, Via degli artigiani

Instrument: TE3-0303/01-17
Data format: 16 byte
Full scale [mV]: 51
Start recording: 31/07/18 12:28:50 End recording: 31/07/18 12:48:50
Channel labels: NORTH SOUTH; EAST WEST ; UP DOWN
GPS data not available

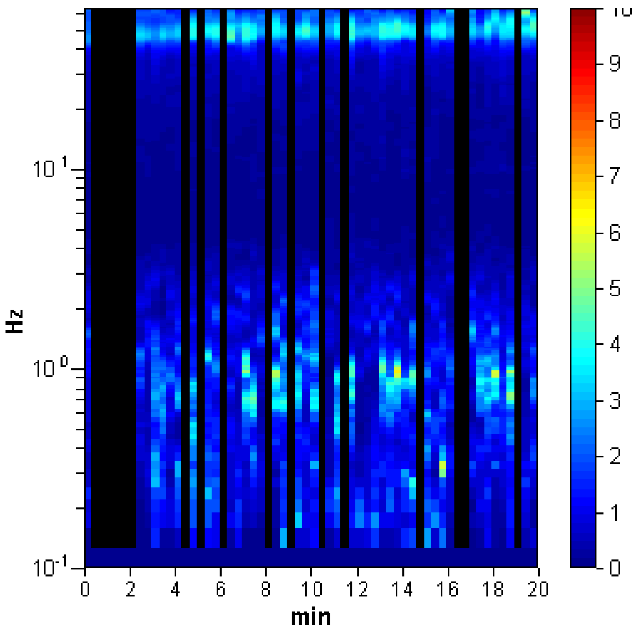
Trace length: 0h20'00". Analyzed 72% trace (manual window selection)
Sampling rate: 128 Hz
Window size: 20 s
Smoothing type: Triangular window
Smoothing: 10%

HORIZONTAL TO VERTICAL SPECTRAL RATIO

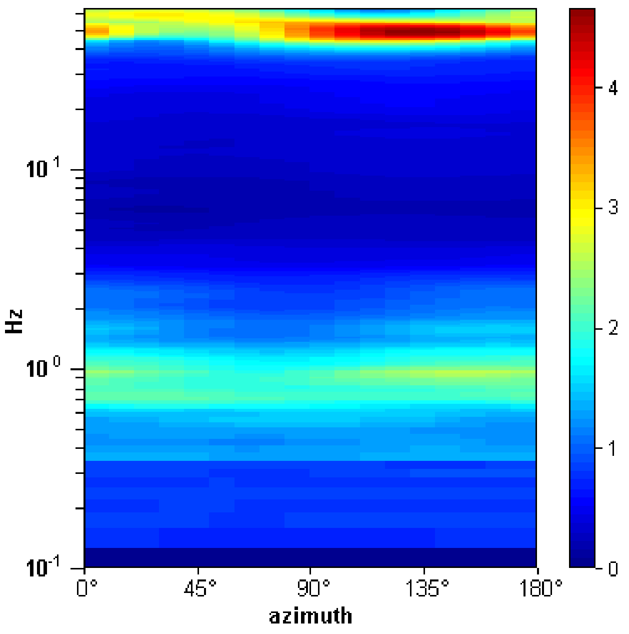
Max. H/V at 0.94 ± 0.18 Hz. (In the range 0.0 - 30.0 Hz).



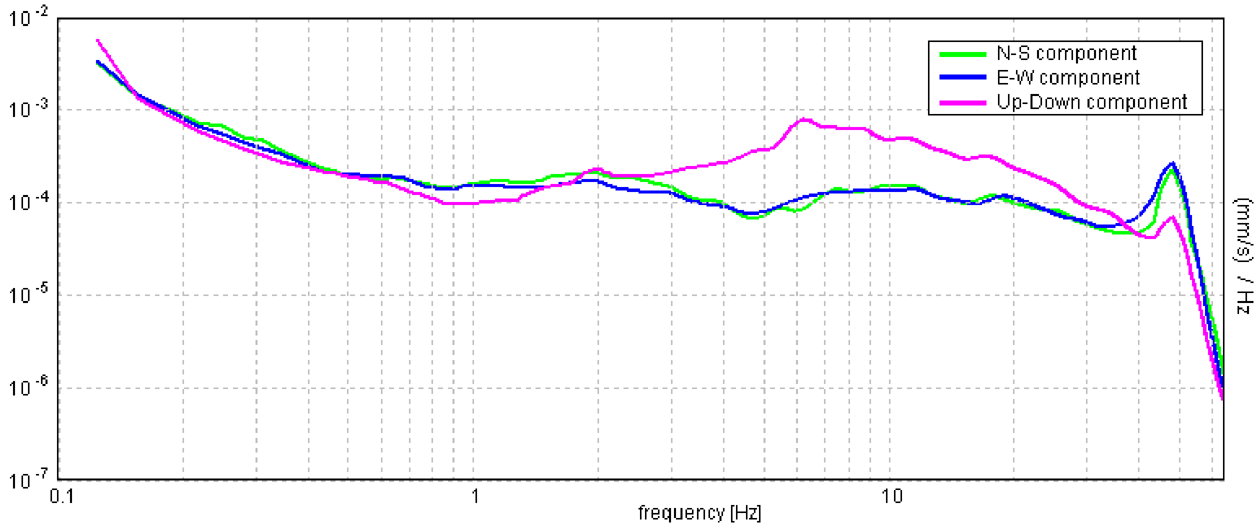
H/V TIME HISTORY



DIRECTIONAL H/V



SINGLE COMPONENT SPECTRA



[According to the SESAME, 2005 guidelines. **Please read carefully the *Grilla* manual before interpreting the following tables**.]

Max. H/V at 0.94 ± 0.18 Hz (in the range 0.0 - 30.0 Hz).

Criteria for a reliable H/V curve [All 3 should be fulfilled]			
$f_0 > 10 / L_w$	0.94 > 0.50	OK	
$n_c(f_0) > 200$	806.3 > 200	OK	
$\sigma_A(f) < 2$ for $0.5f_0 < f < 2f_0$ if $f_0 > 0.5$Hz **$\sigma_A(f) < 3$ for $0.5f_0 < f < 2f_0$ if $f_0 < 0.5$Hz**	Exceeded 0 out of 46 times	OK	
Criteria for a clear H/V peak [At least 5 out of 6 should be fulfilled]			
Exists f^- in $[f_0/4, f_0]$ | $A_{H/V}(f^-) < A_0 / 2$			NO
Exists f^+ in $[f_0, 4f_0]$ | $A_{H/V}(f^+) < A_0 / 2$	1.719 Hz	OK	
$A_0 > 2$	2.33 > 2	OK	
$f_{peak}[A_{H/V}(f) \pm \sigma_A(f)] = f_0 \pm 5\%$	|0.18972| < 0.05		NO
$\sigma_f < \varepsilon(f_0)$	0.17787 < 0.14063		NO
$\sigma_A(f_0) < \theta(f_0)$	0.5156 < 2.0	OK	

L_w	window length
n_w	number of windows used in the analysis
$n_c = L_w n_w f_0$	number of significant cycles
f	current frequency
f_0	H/V peak frequency
σ_f	standard deviation of H/V peak frequency
$\varepsilon(f_0)$	threshold value for the stability condition $\sigma_f < \varepsilon(f_0)$
A_0	H/V peak amplitude at frequency f_0
$A_{H/V}(f)$	H/V curve amplitude at frequency f
f^-	frequency between $f_0/4$ and f_0 for which $A_{H/V}(f^-) < A_0/2$
f^+	frequency between f_0 and $4f_0$ for which $A_{H/V}(f^+) < A_0/2$
$\sigma_A(f)$	standard deviation of $A_{H/V}(f)$, $\sigma_A(f)$ is the factor by which the mean $A_{H/V}(f)$ curve should be multiplied or divided
$\sigma_{logH/V}(f)$	standard deviation of log $A_{H/V}(f)$ curve
$\theta(f_0)$	threshold value for the stability condition $\sigma_A(f) < \theta(f_0)$

Threshold values for σ_f and $\sigma_A(f_0)$					
Freq. range [Hz]	< 0.2	0.2 – 0.5	0.5 – 1.0	1.0 – 2.0	> 2.0
$\varepsilon(f_0)$ [Hz]	0.25 f_0	0.2 f_0	0.15 f_0	0.10 f_0	0.05 f_0
$\theta(f_0)$ for $\sigma_A(f_0)$	3.0	2.5	2.0	1.78	1.58
log $\theta(f_0)$ for $\sigma_{logH/V}(f_0)$	0.48	0.40	0.30	0.25	0.20

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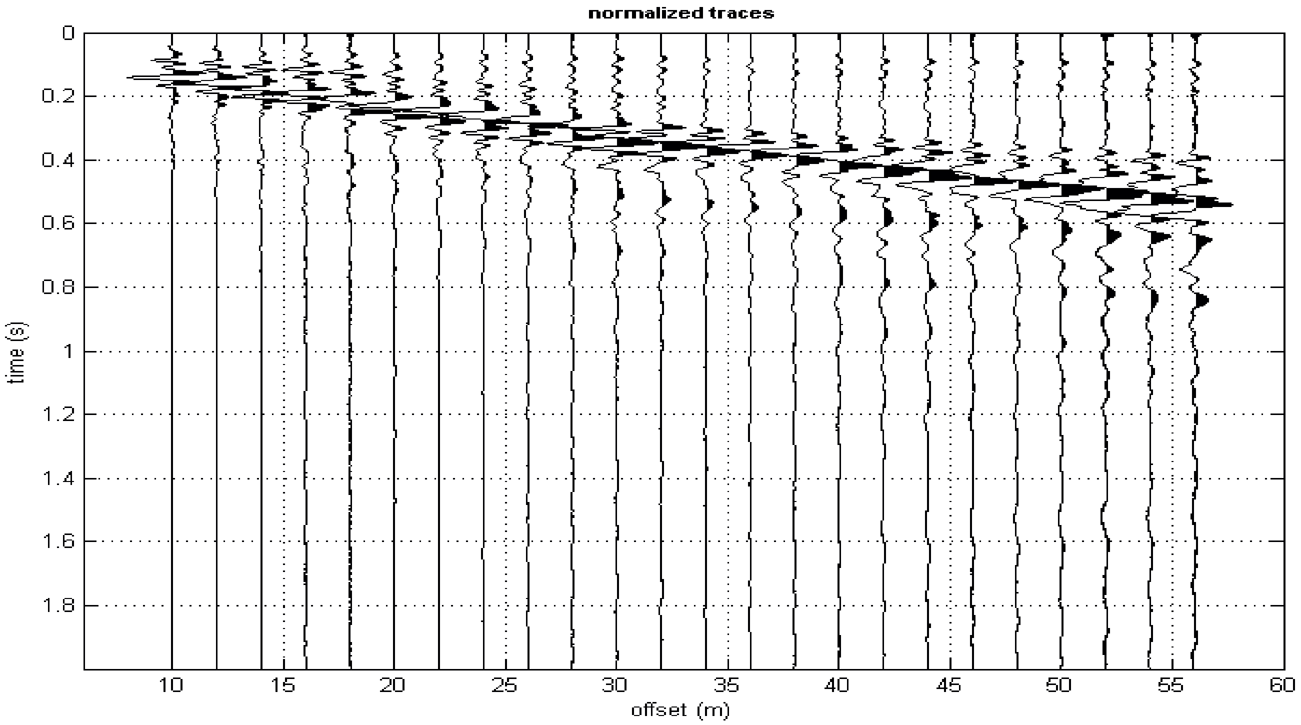
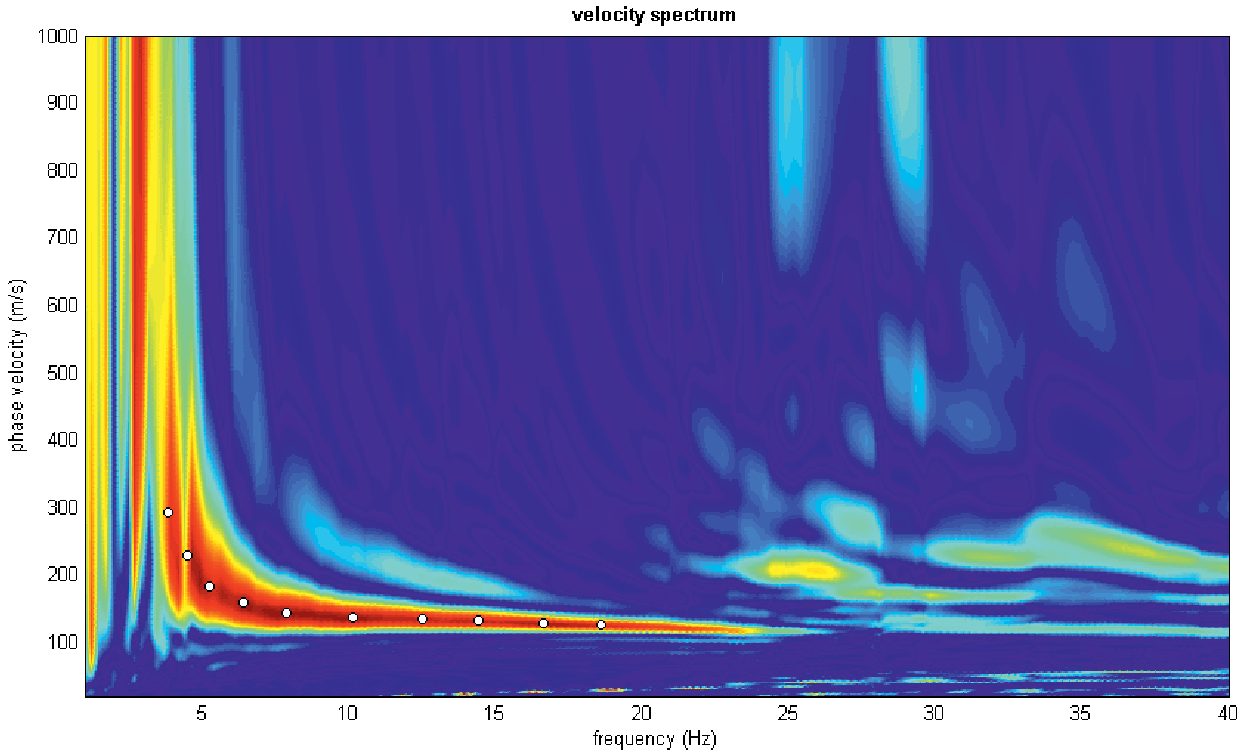
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

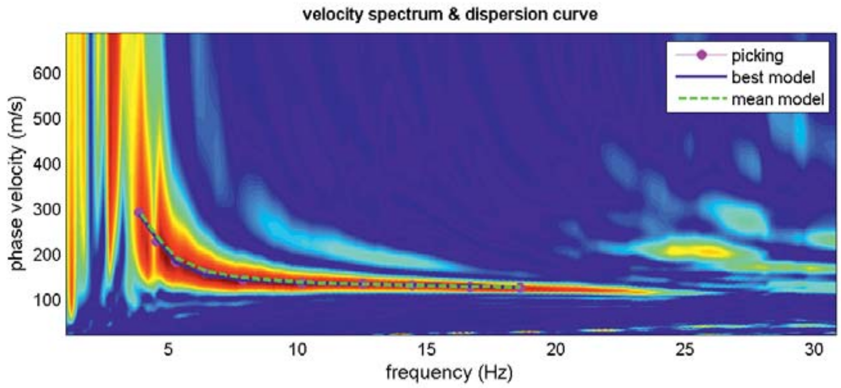
Cantiere:	Medolla, Vi a Montalbano
Operatori:	Dott. Ghirardini Gabriele
Data:	27/01/2013
Lavoro:	Studio del terreno di fondazione
Elaborazione:	Dott. Gabriele Ghirardini
Responsabile:	Dott. Geol. Pier Luigi Dallari

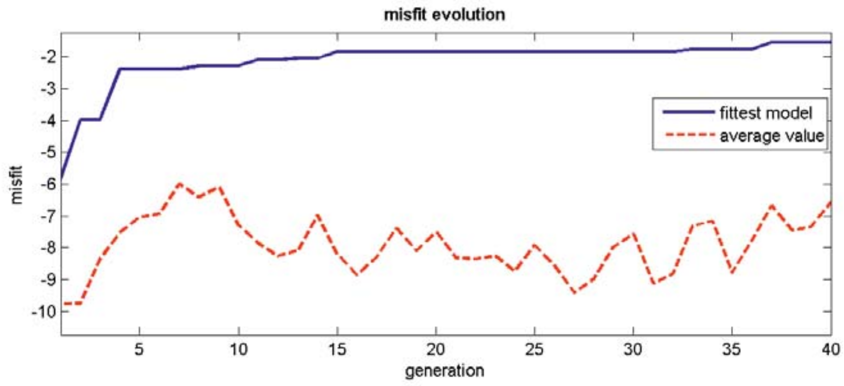
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



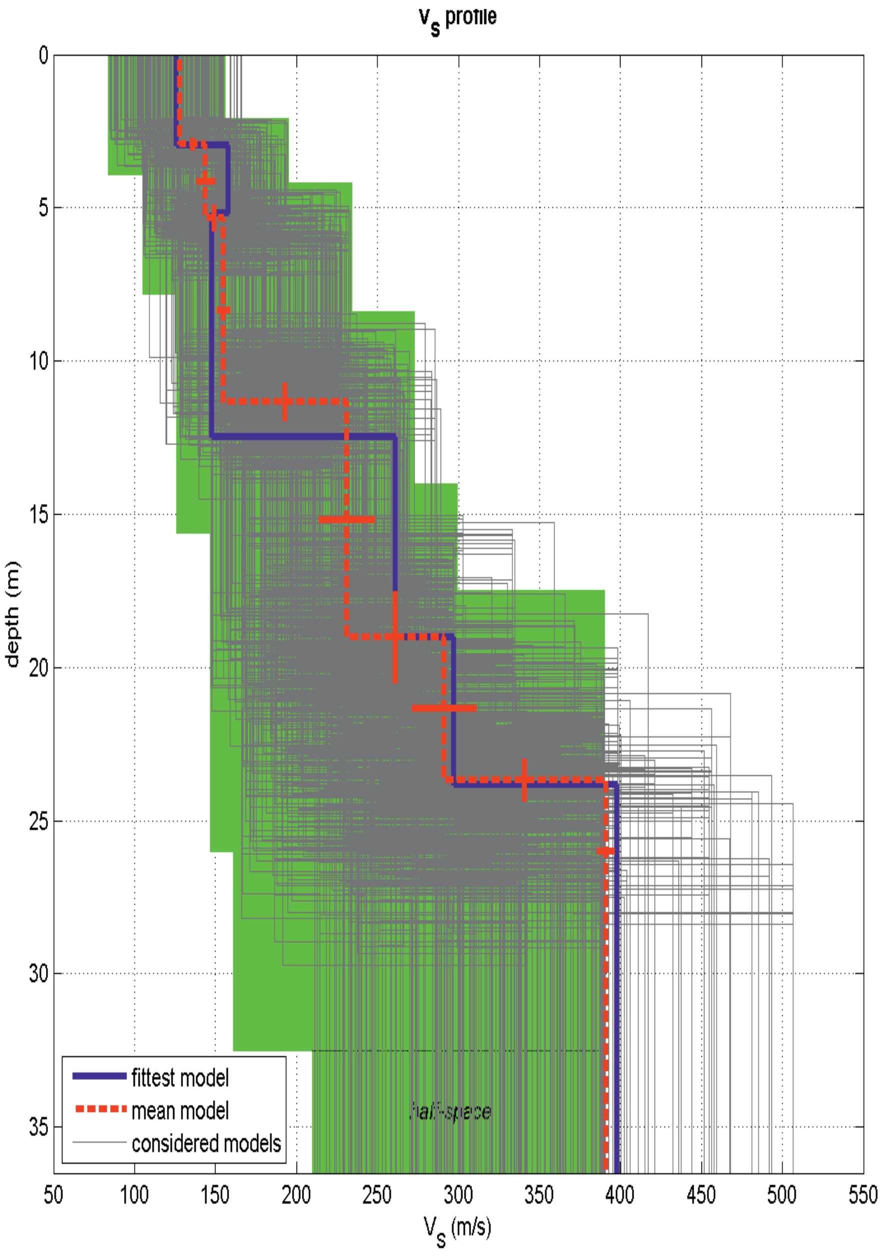
SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE

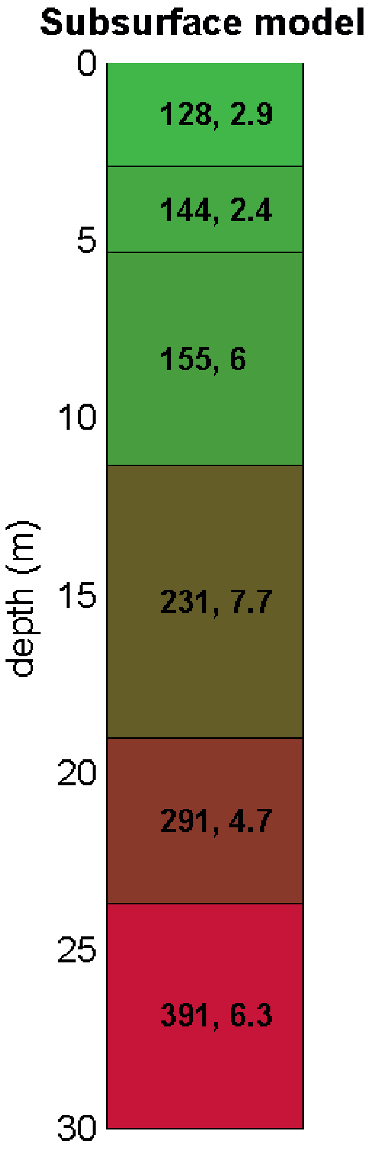






MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA





BEST MODEL
Vs30 = 209 m/s

V_S	density	thickness
(m/s)	(gr/cm^3)	(m)

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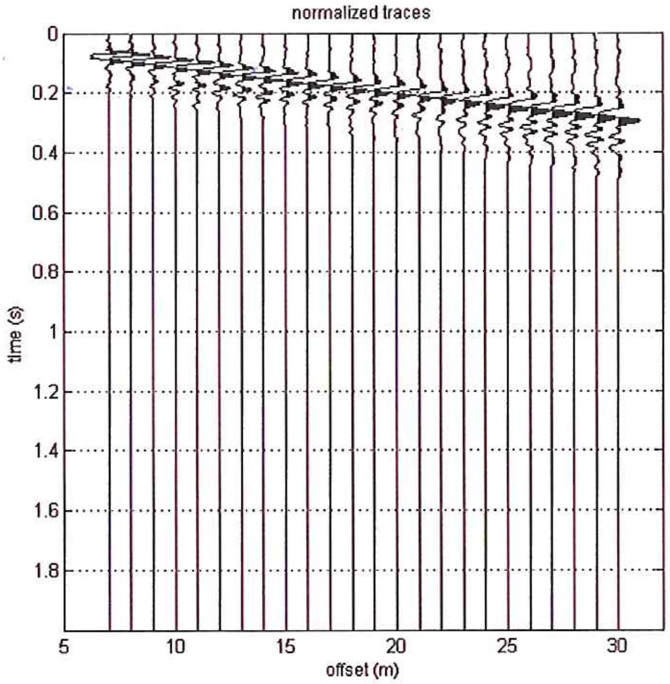
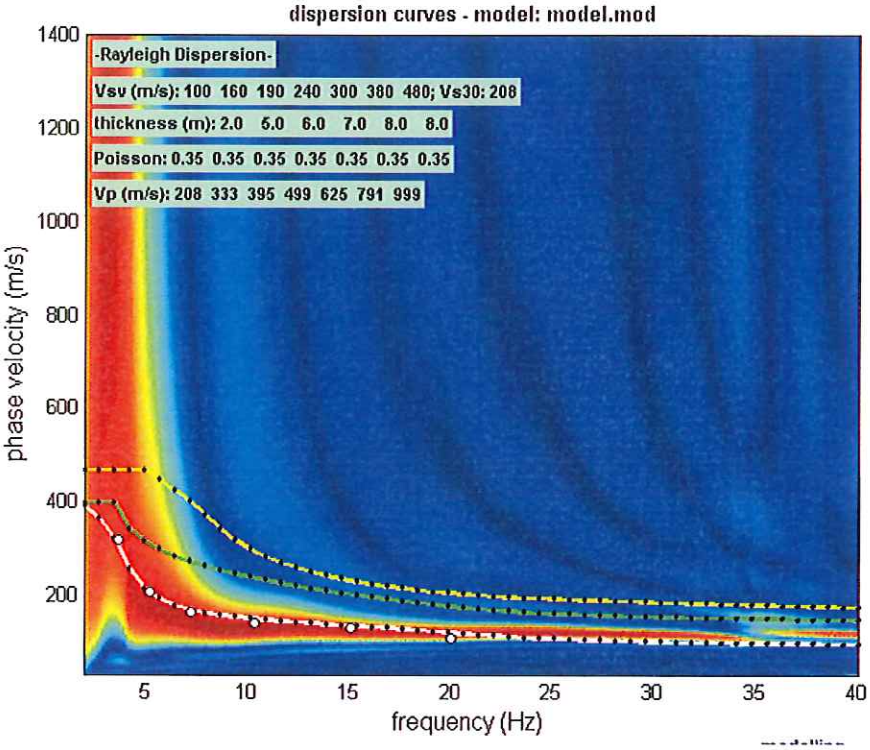
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

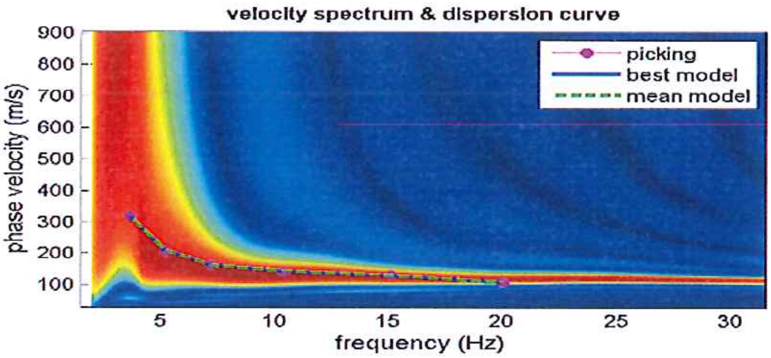
Cantiere:	Medolla via Villafranca, n. 2
Operatori:	Dott.ssa Cameroni, Casarini
Data:	29/08/2014
Lavoro:	Studio del terreno di fondazione
Elaborazione:	Dott.ssa Sonia Gilioli
Responsabile:	Dott. Dallari Pier Luigi

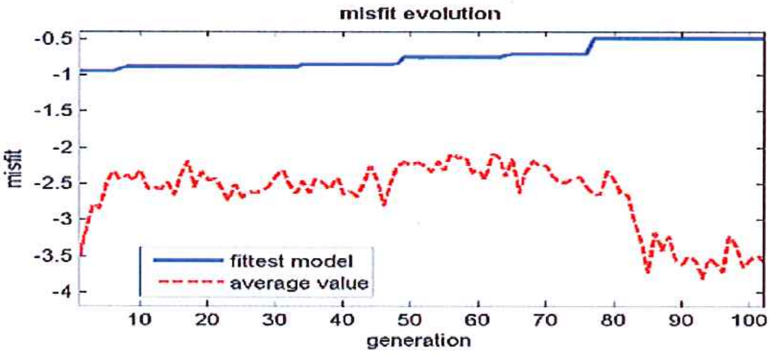
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



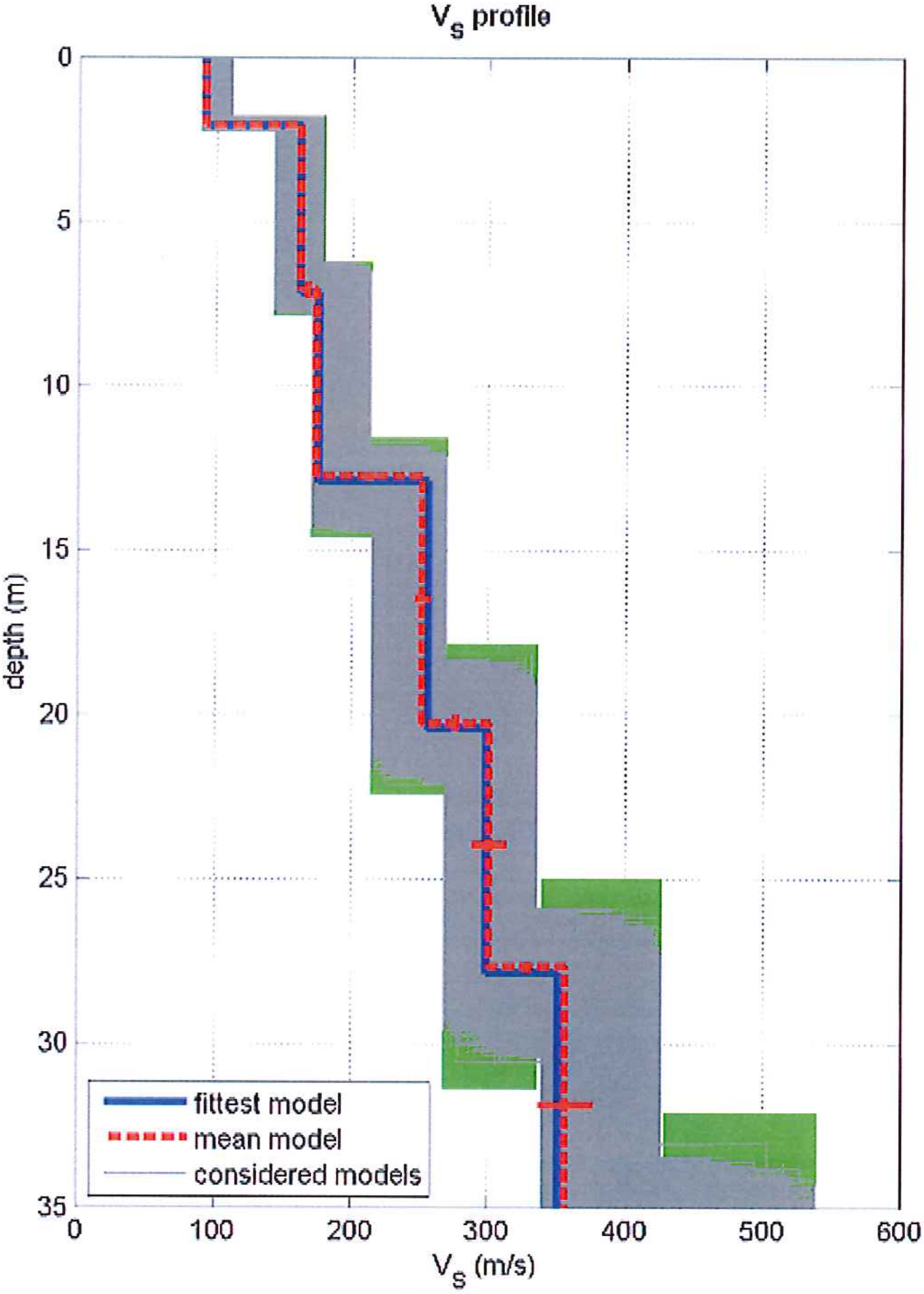
SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE







MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA



BEST MODEL
Vs30 = 205 m/s

half-space

dataset: 1_7.dat

dispersion curve: pick.cdp

Vs30 (best model): 205 m/s

Vs30 (mean model): 205 m/s

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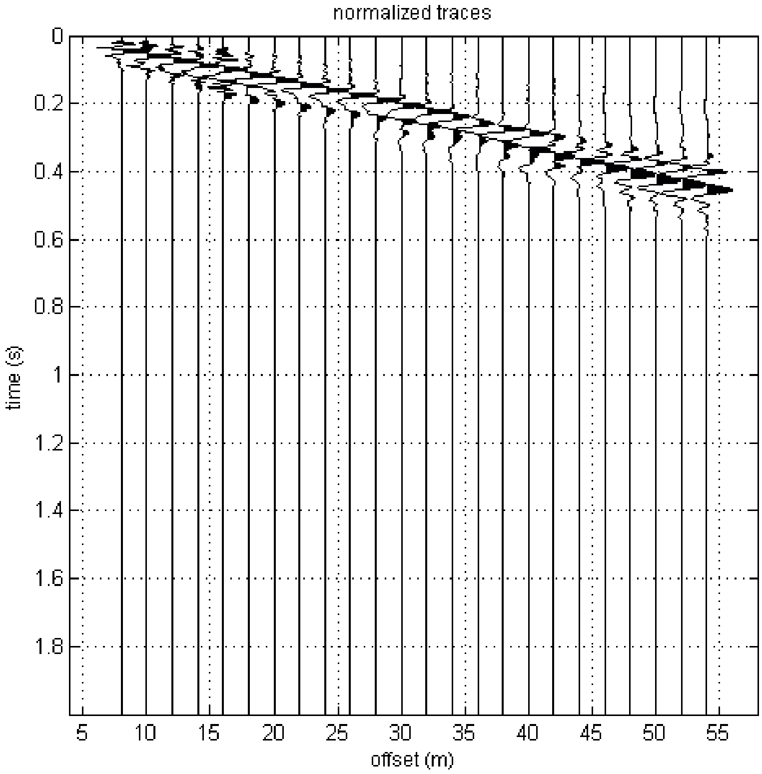
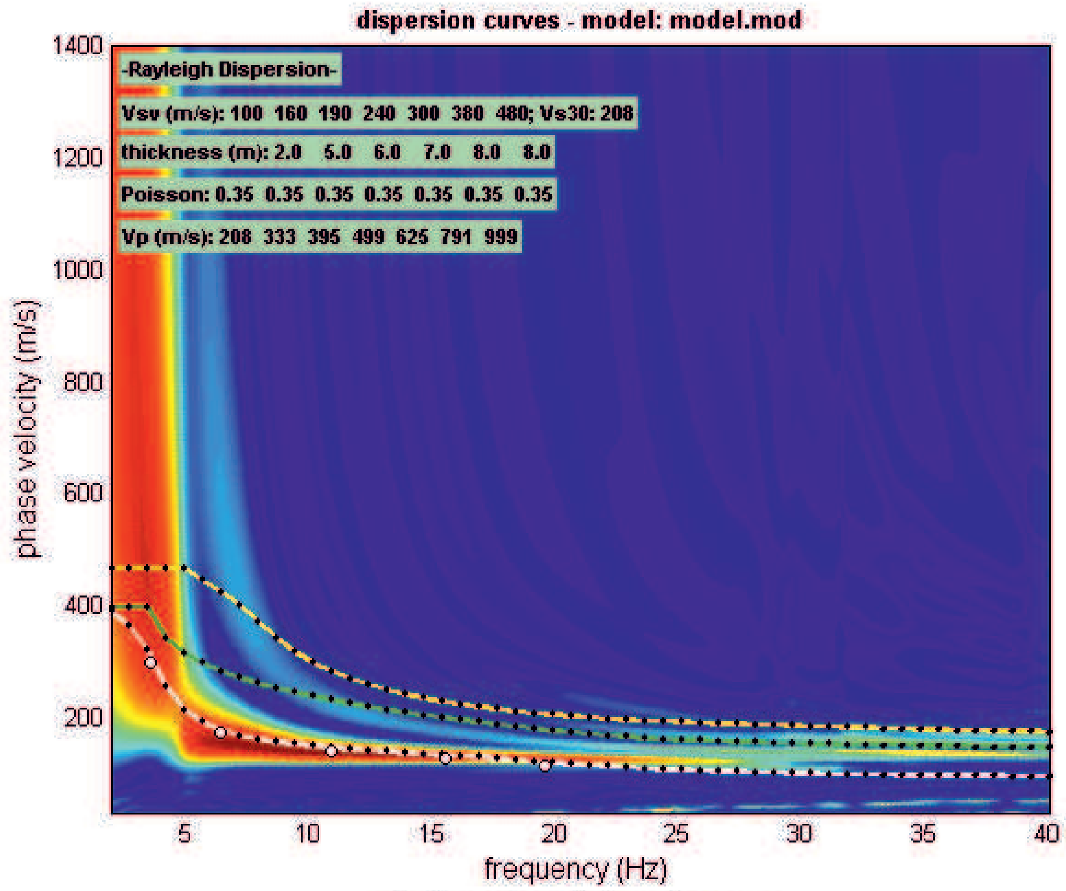
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

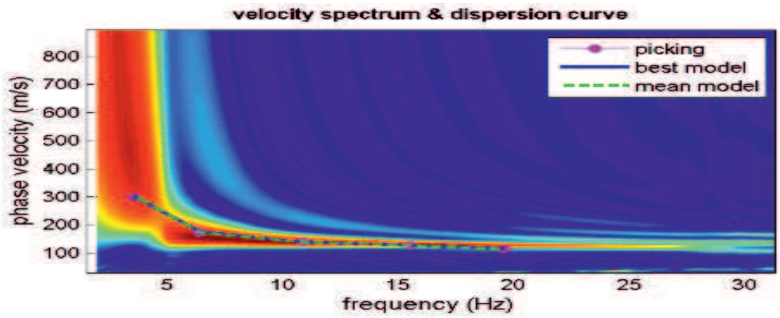
Cantiere:	Medolla via Bosco, n°45
Operatori:	Dott.ssa Cameroni, Dott. Casarini
Data:	29/08/2014
Lavoro:	Studio del terreno di fondazione
Elaborazione:	Dott.ssa Sonia Gilioli
Responsabile:	Dott. Dallari Pier Luigi

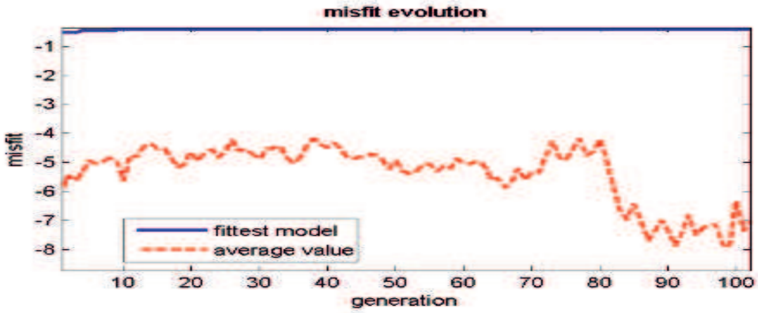
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



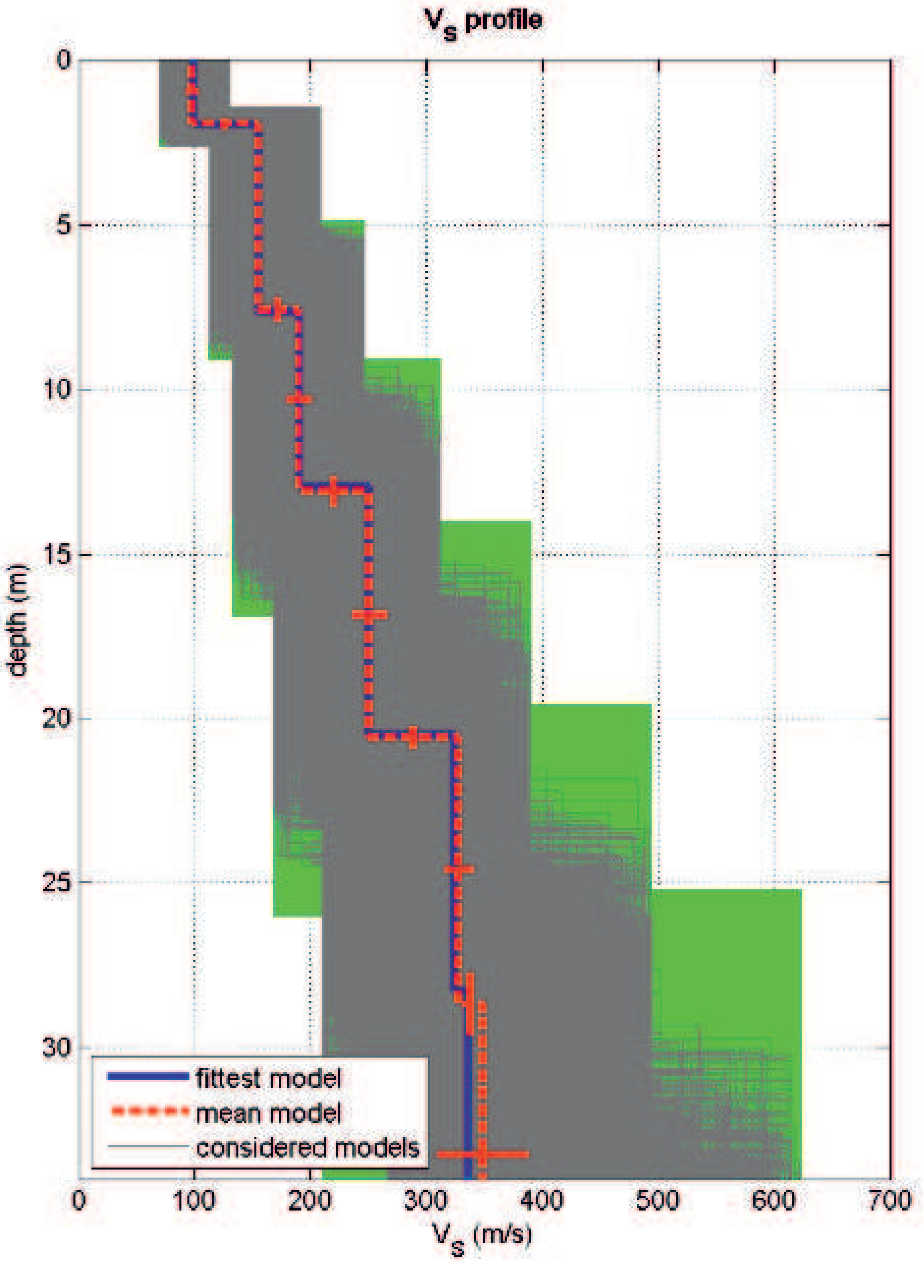
SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE


dispersion curves - model: model.mod


velocity spectrum & dispersion curve


misfit evolution

MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA



dataset: 7_8.dat

dispersion curve: pick.cdp

Vs30 (best model): 209 m/s

Vs30 (mean model): 209 m/s

BEST MODEL
Vs30 = 209 m/s

ALLEGATO N° 3

Indagine sismica MASW

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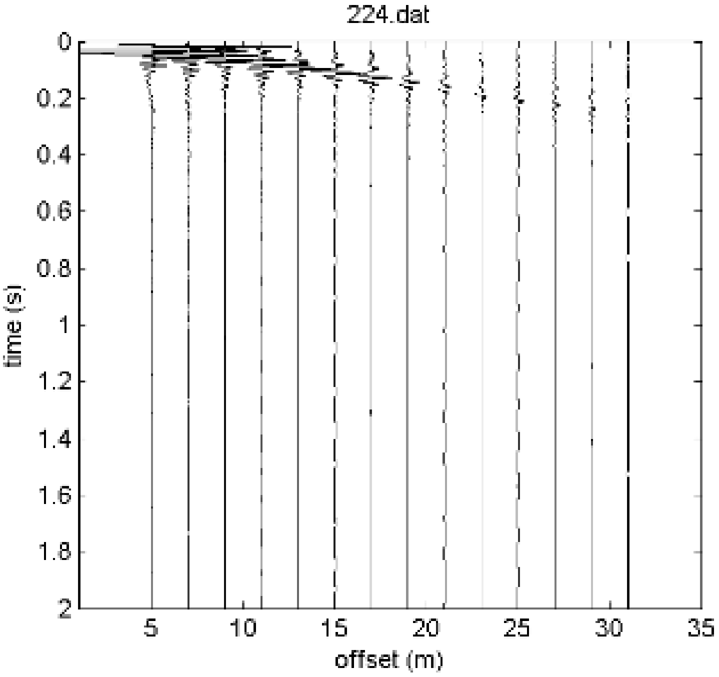
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

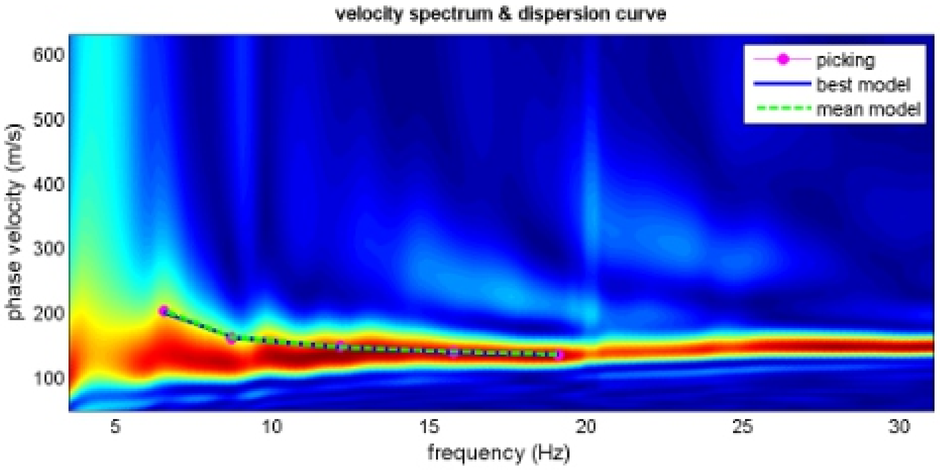
Cantiere: Medolla (MO),Via degli Artigiani – Angolo Via Montalbano
Data: 01/02/2018
Esecuzione: Dott. Alessandro Berti
Responsabile: Dott. Geol. Pier Luigi Dallari

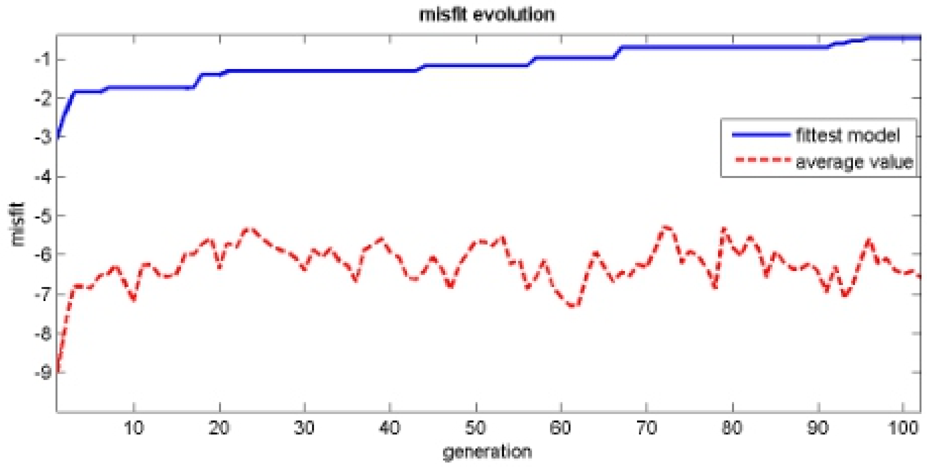
MASW
Rif. 49/18

UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



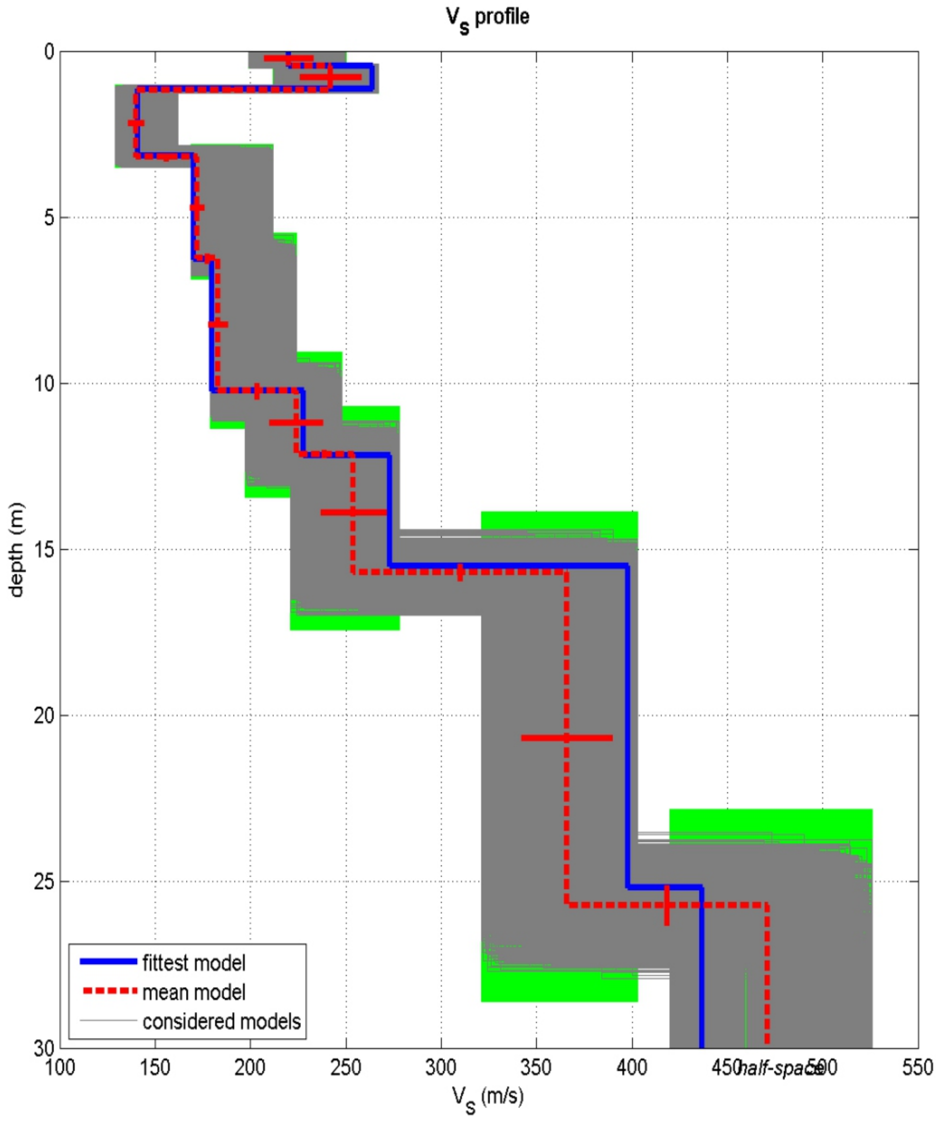
SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE





www.winmasw.com

MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA



dataset: somma masw.mat

dispersion curve: picking.cdp

Vs30 (best model): 263 m/s

Vs30 (mean model): 264 m/s

BEST MODEL
Vs30 = 263 m/s

ALLEGATO N° 3

Indagine sismica – tecnica MASW

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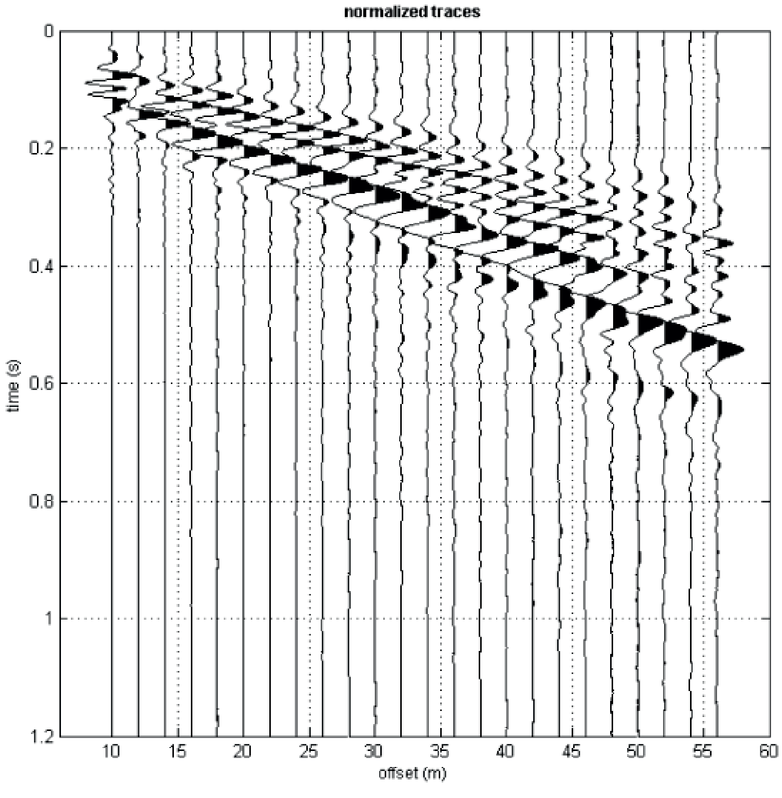
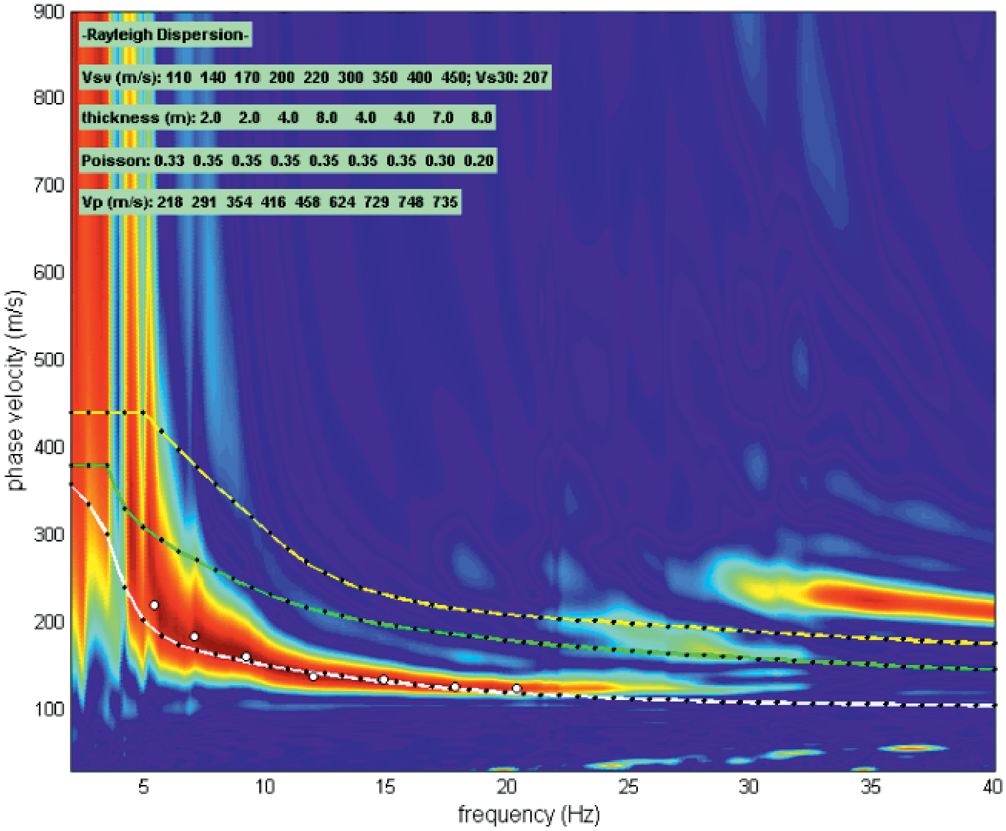
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

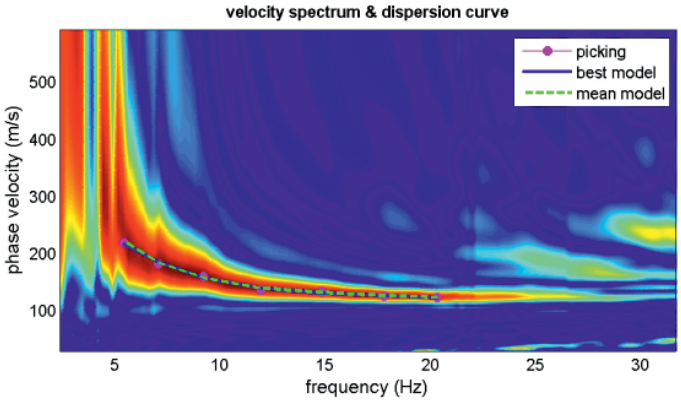
Cantiere:	Medolla (MO), Via Rubadello n. 35
Operatori:	Dott.ssa Sonia Gilioli e Dott.ssa Geol. Alessandra Tagliavini
Data:	29/09/2014
Lavoro:	Studio del terreno di fondazione
Elaborazione:	Dott.ssa Ing. Erika Parmeggiani
Responsabile:	Dott. Geol. Pier Luigi Dallari

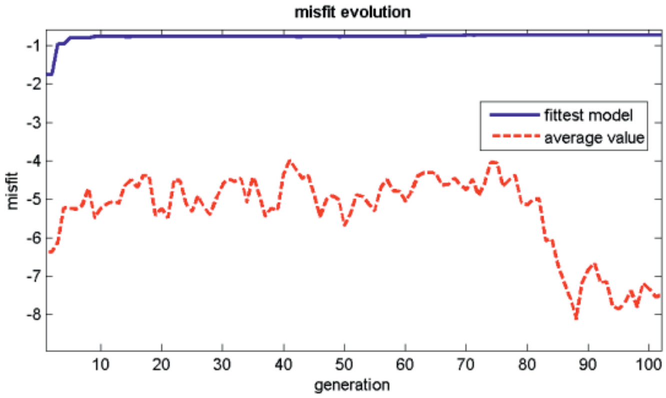
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



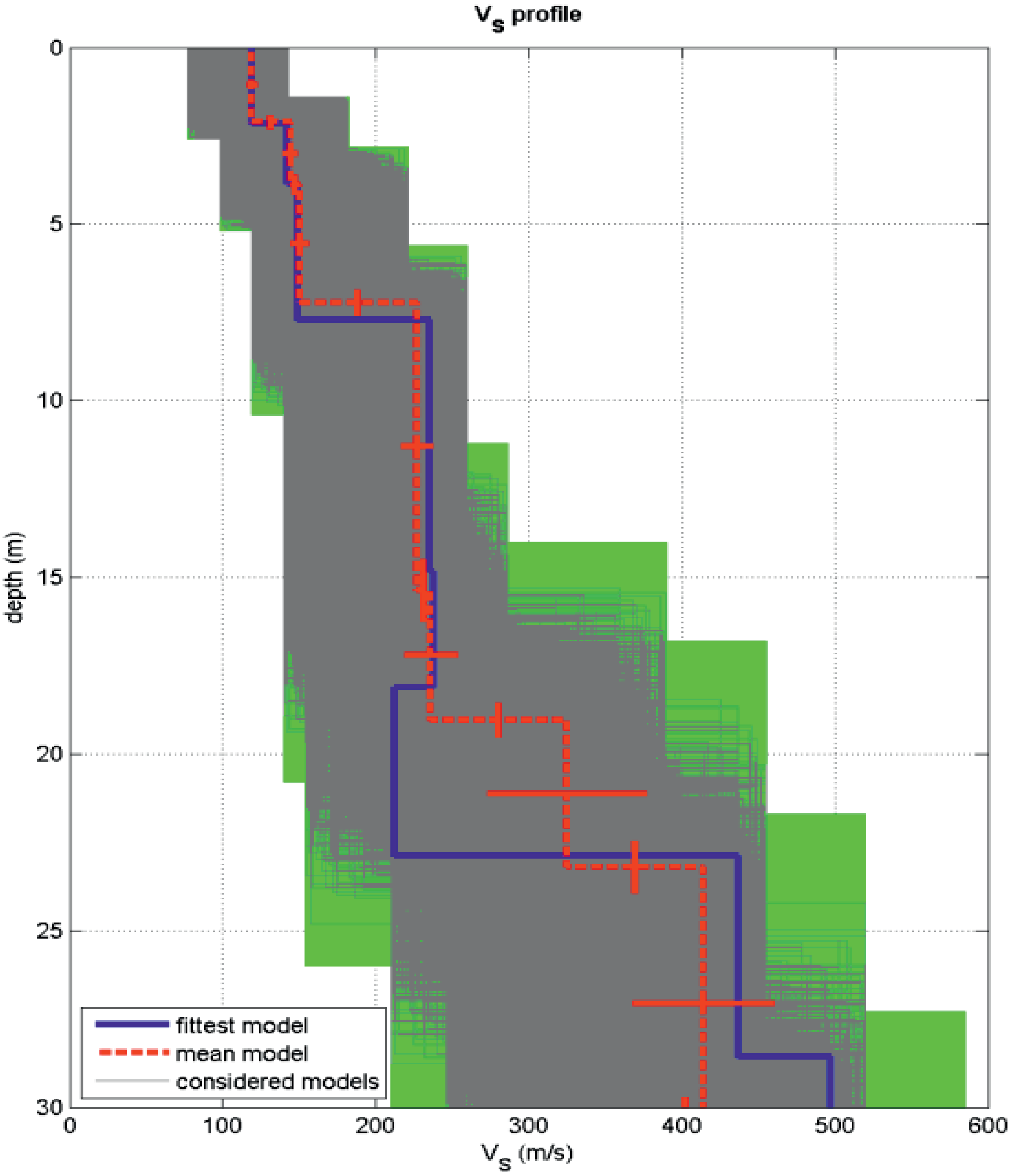
SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE







MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA



BEST MODEL

Vs30 = 217 m/s

GEO GROUP s.r.l.
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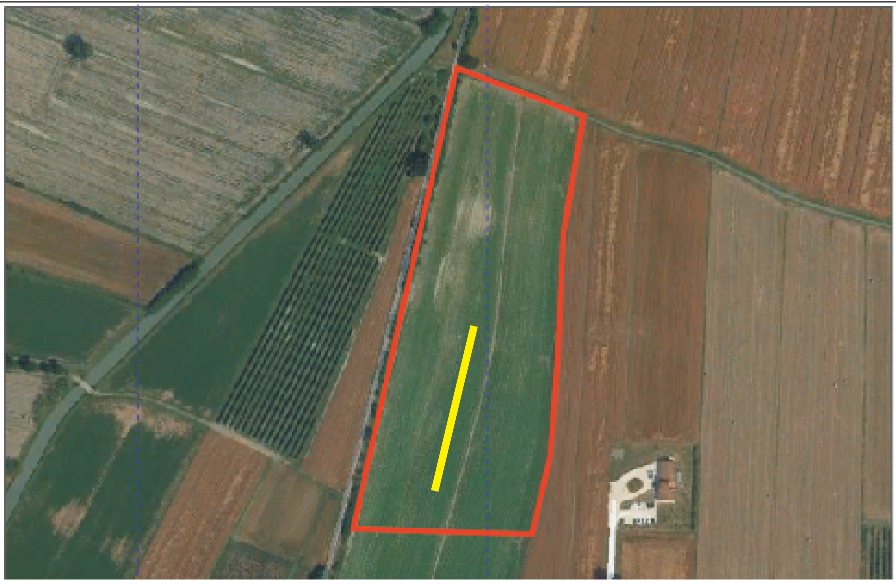
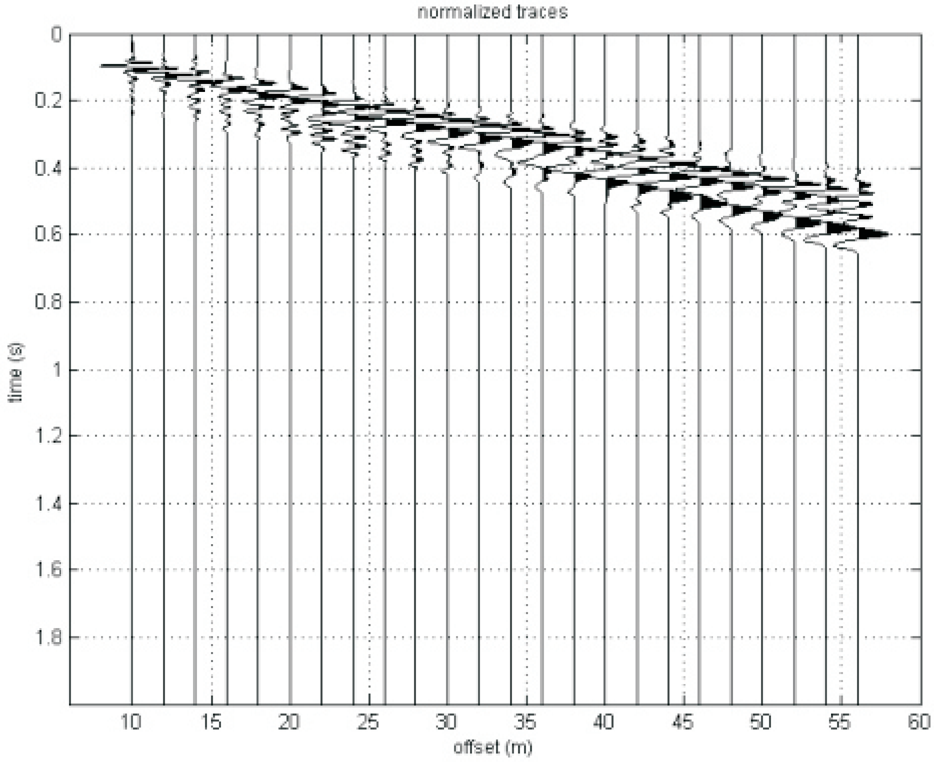
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

Cantiere: via Matteotti, Medolla (MO)
Data: 10/09/2015
Lavoro: nuovo fabbricato agricolo
Operatori: Dott.ssa Linda Veratti, Dott.ssa Nunzia Castronuovo
Elaborazione: Dott.ssa Domitilla Santi
Responsabile: Dott. Geol. Pier Luigi Dallari

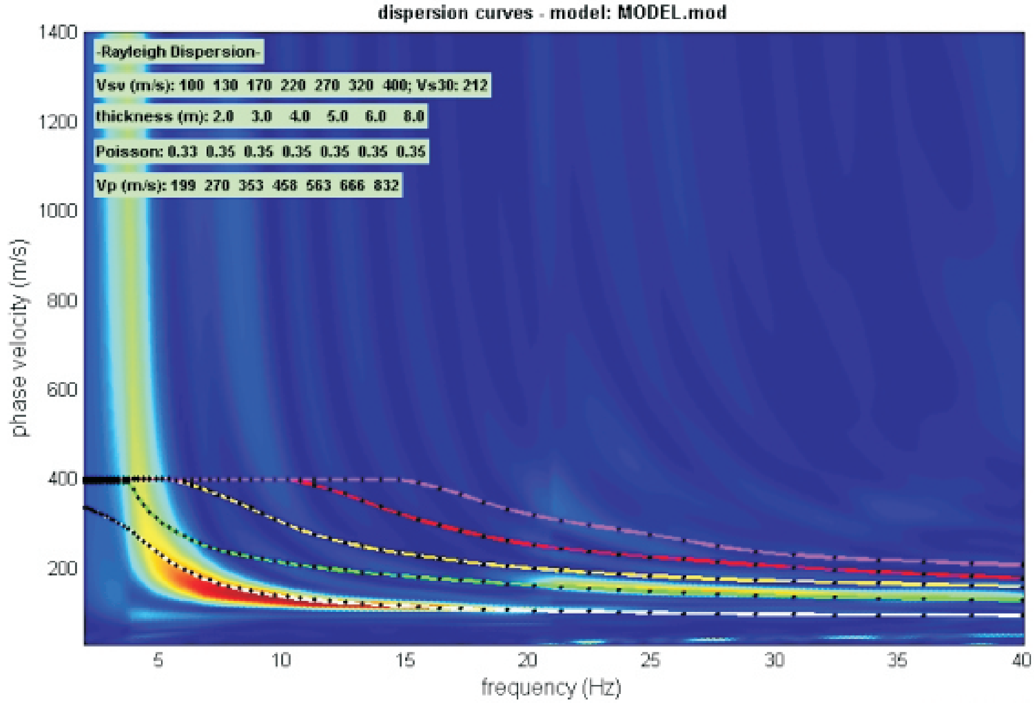
RIF. 519/15

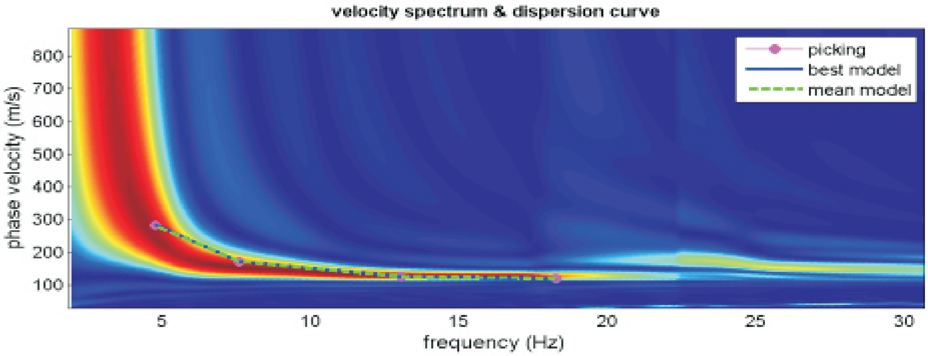


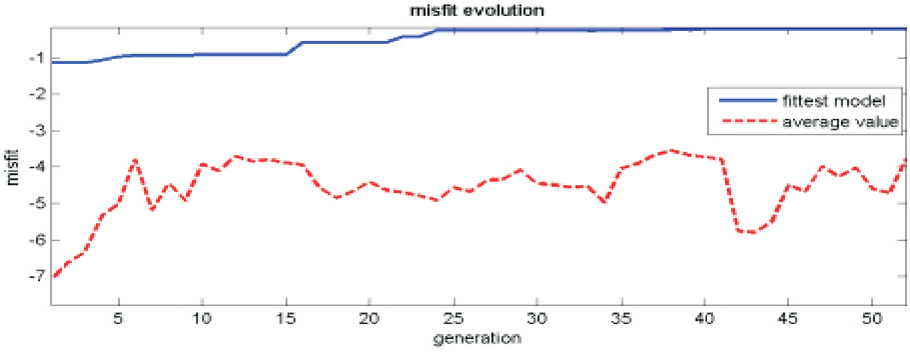
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



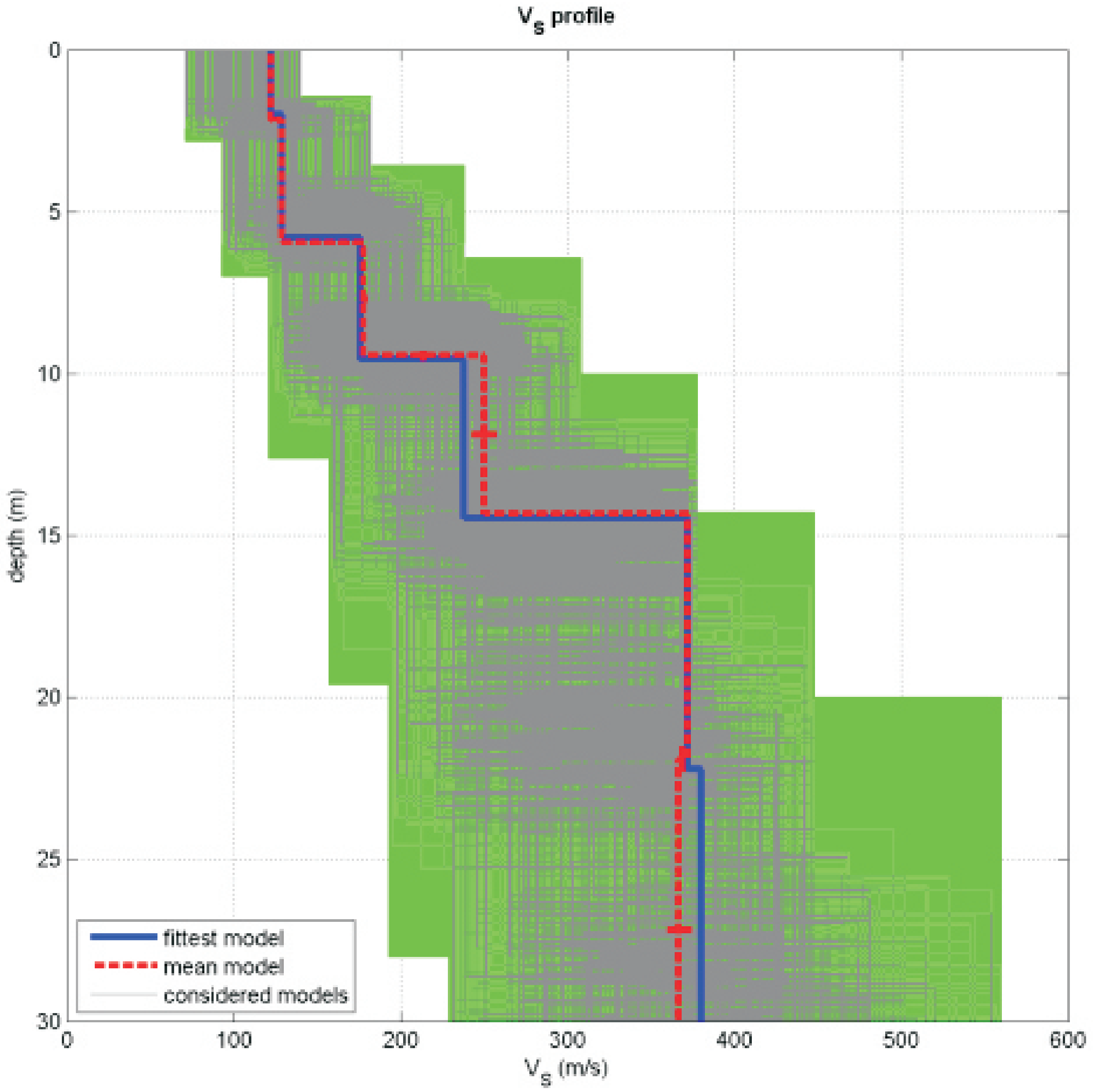
SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE







MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA



dataset: MASW.sgy

dispersion curve: pick.cdp

Vs30 (best model): 232 m/s

Vs30 (mean model): 233 m/s

half-space

BEST MODEL
Vs30 = 232 m/s

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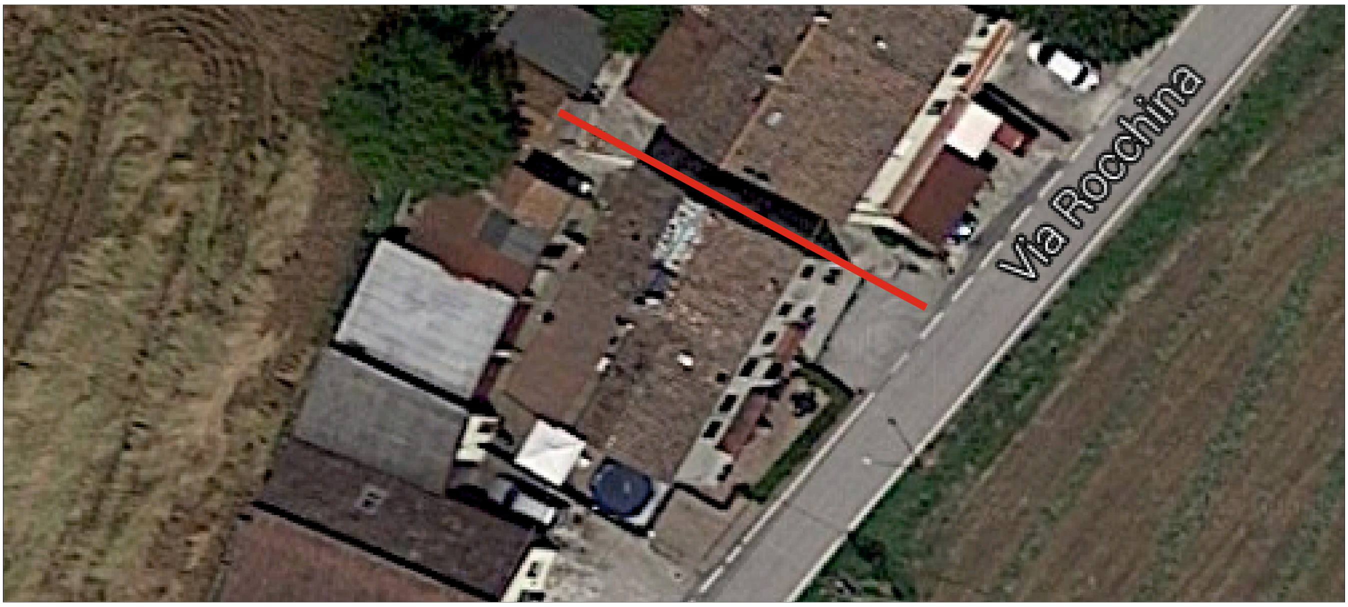
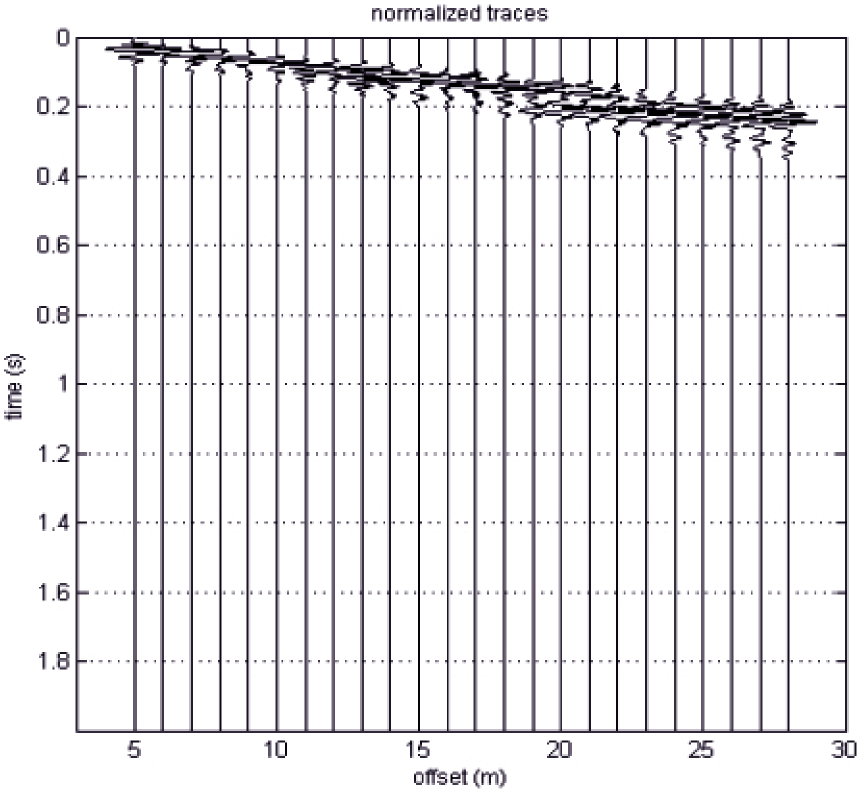
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

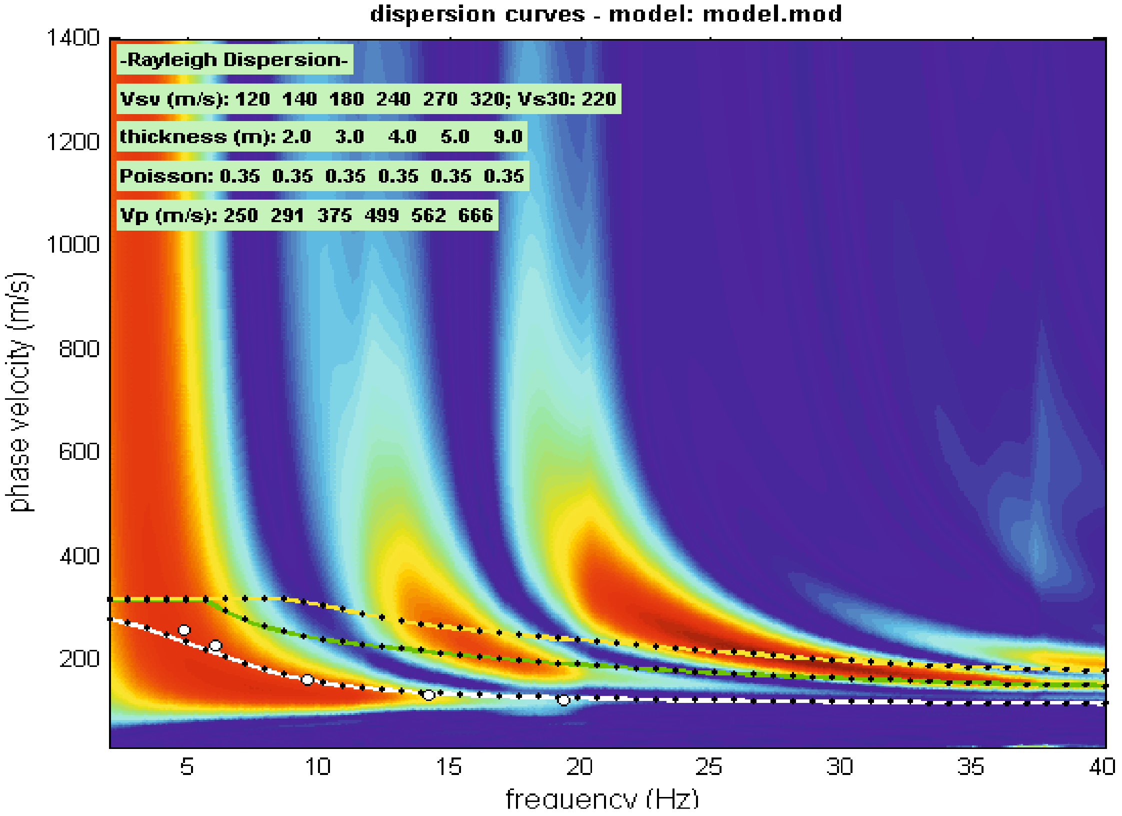
Cantiere:	Medolla(MO), Via Rocchimna
Operatore:	D.ssa Annalisa Borghi, Dott.ssa Sonia Gilioli
Data:	29/01/2015
Lavoro:	Studio del terreno di fondazione
Elaborazione:	Dott. ssa Sonia Gilioli
Responsabile:	Dott. Geol. Pier Luigi Dallari

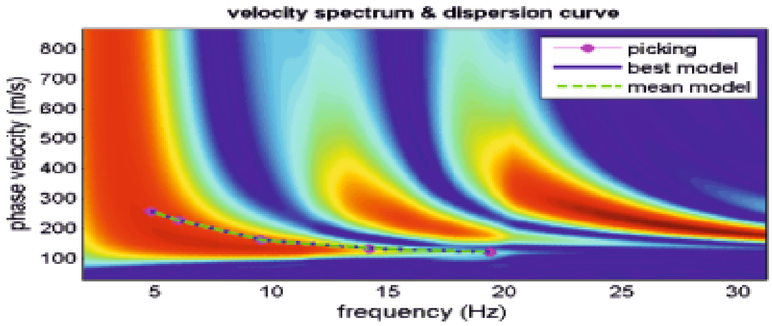


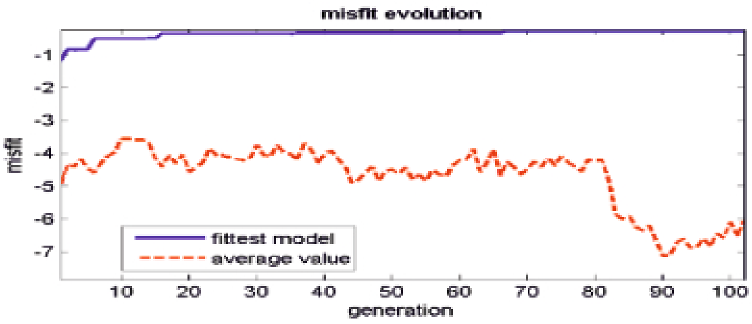
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE







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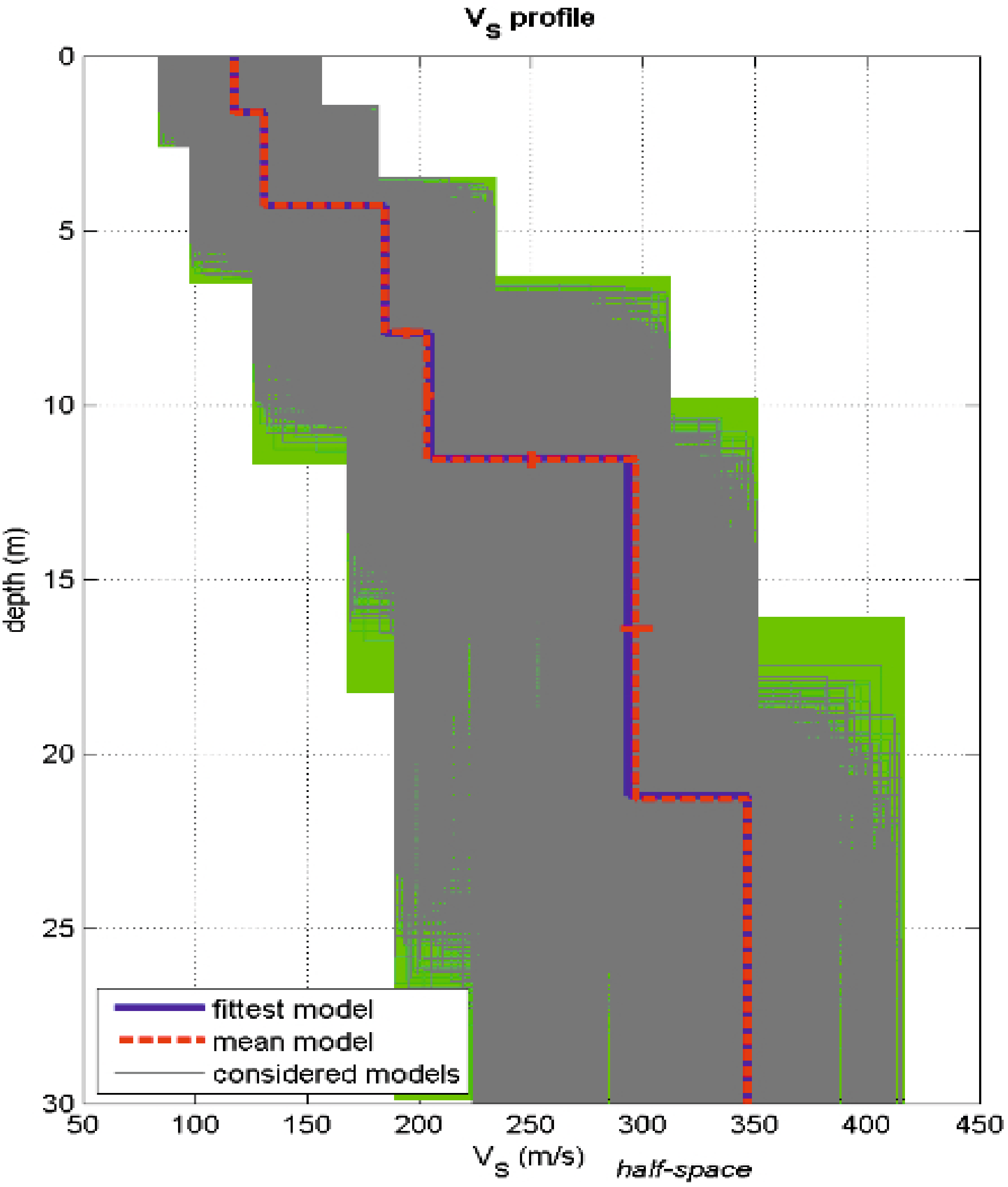
MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA



dataset: 1758.dat

dispersion curve: pick.cdp

Vs30 (best model): 232 m/s

Vs30 (mean model): 232 m/s

BEST MODEL
Vs30 = 232 m/s

ALLEGATO N° 3

Indagine sismica MASW

GEO GROUP s.r.l.
Sede Legale: via C. Costa, 182 – 41124 Modena
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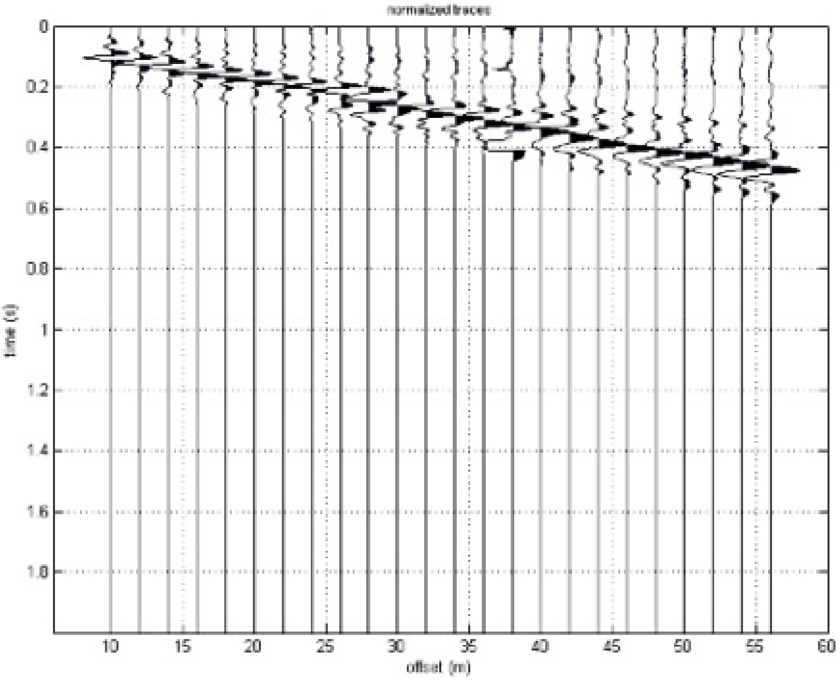
SISTEMA DI GESTIONE PER LA QUALITÀ CERTIFICATO
UNI EN ISO 9001:2008
SINCERT DNV

ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

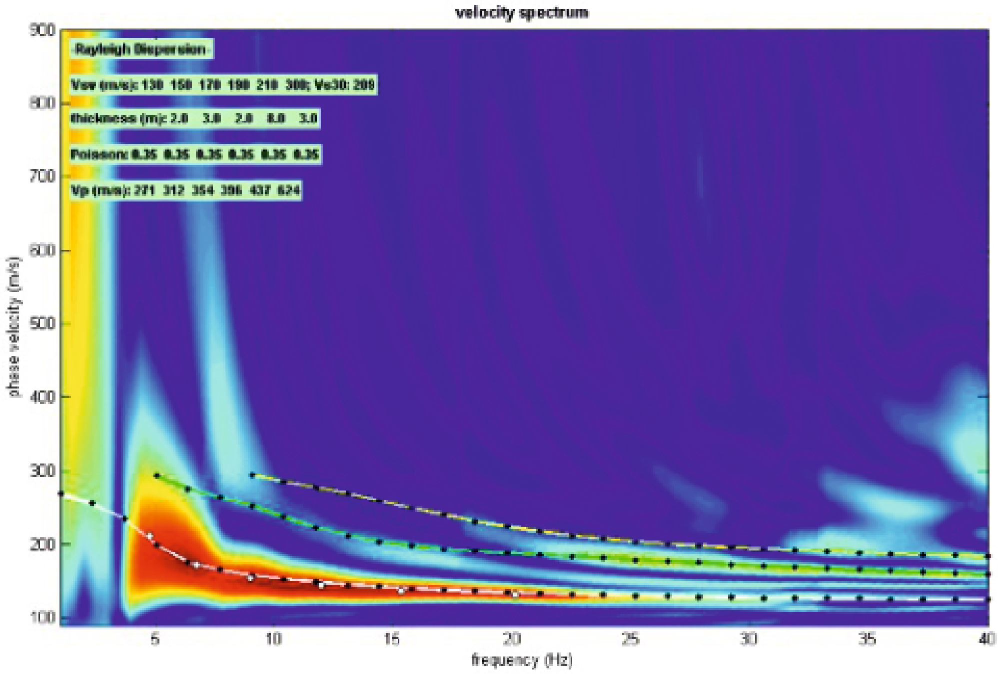
Cantiere: Medolla – Via Camurana 16
Operatori: Dott. Ssa Linda Veratti, Dott. Ssa Sonia Gilioli
Data: 12/09/2013
Lavoro: Studio del terreno di fondazione
Elaborazione: Dott. Ssa Linda Veratti
Responsabile: Dott. Geol. Pier Luigi Dallari

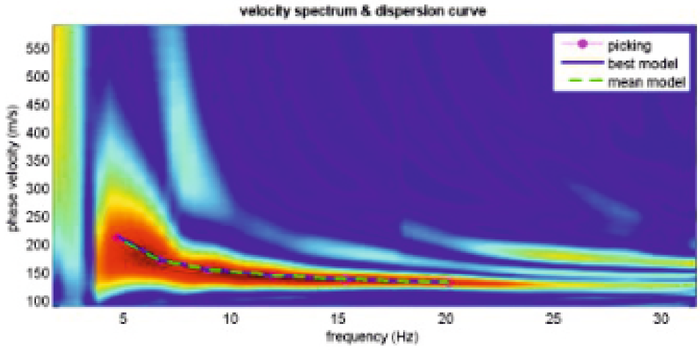
CERTIFICATO
304_M_13

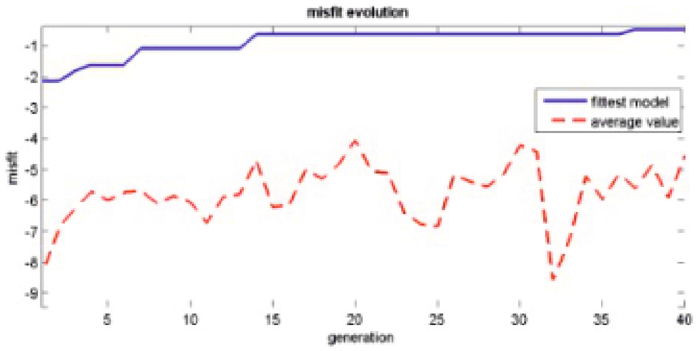
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



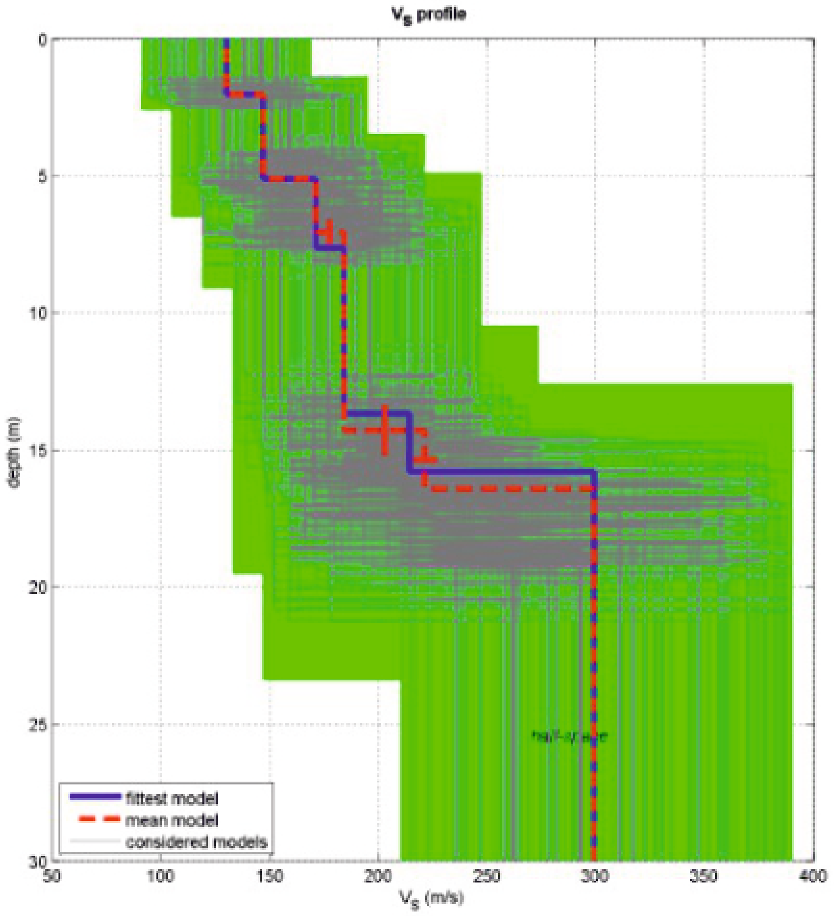
SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE







MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA

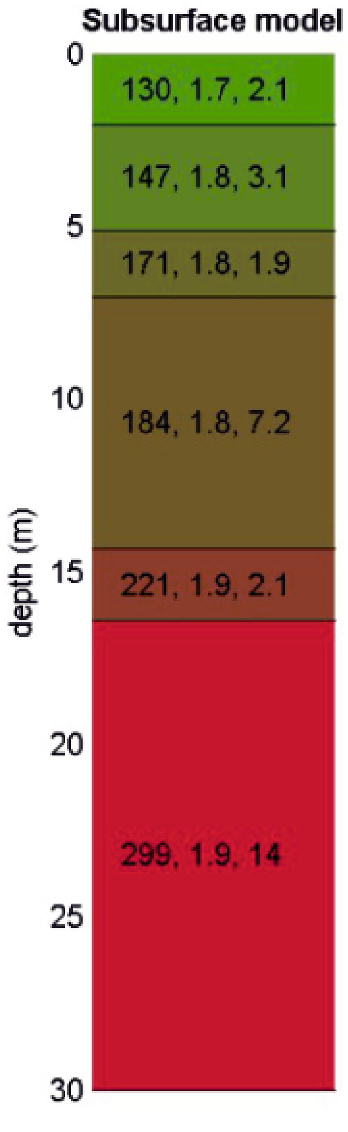


dataset: 324 $_1$0.dat

dispersion curve: picking.cdp

Vs30 (best model): 212 m/s

Vs30 (mean model): 211 m/s



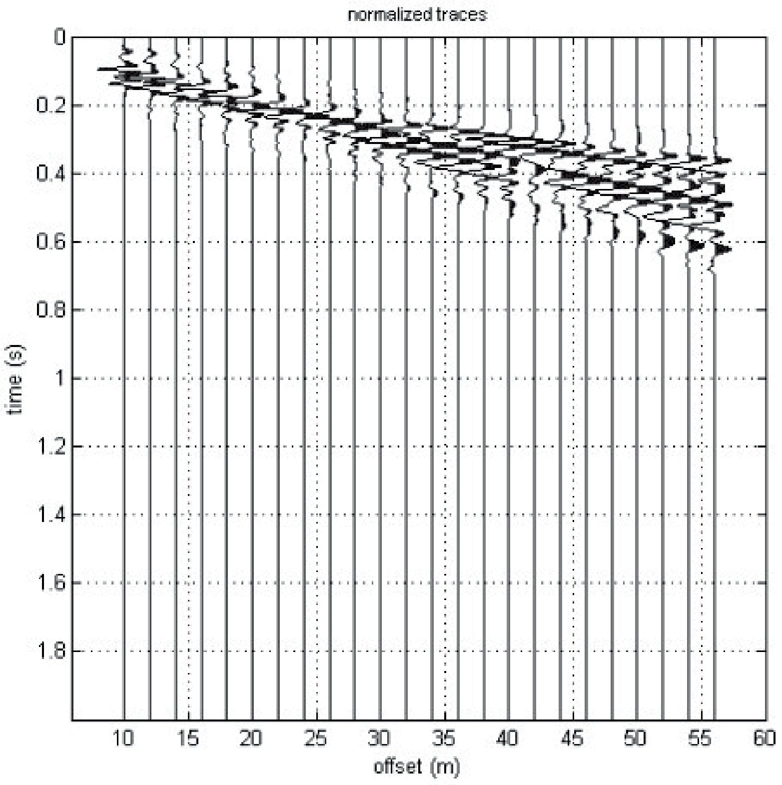
V_S	density	thickness
(m/s)	(gr/cm^3)	(m)

BEST MODEL
Vs30 = 212 m/s

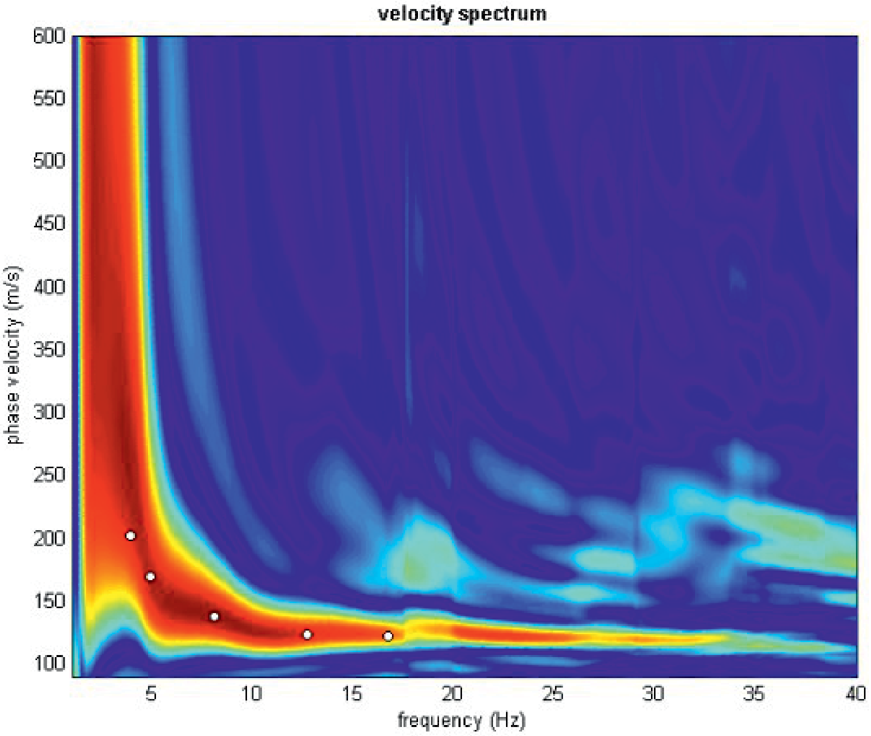
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

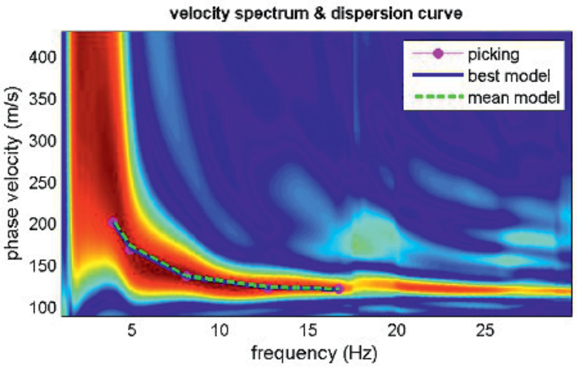
Cantiere: Medolla, via Camurana 61
Lavoro: Studio del terreno di fondazione
Responsabile: Dott. Geol. Pier Luigi Dallari

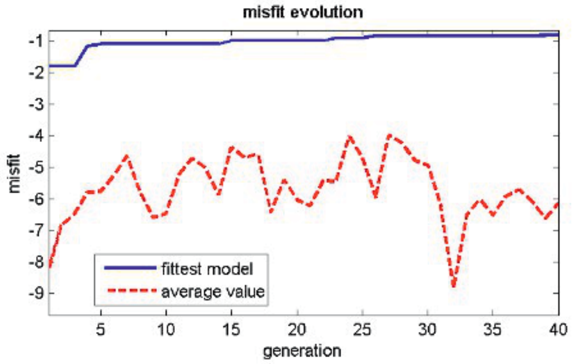
RIFERIMENTO
543/14



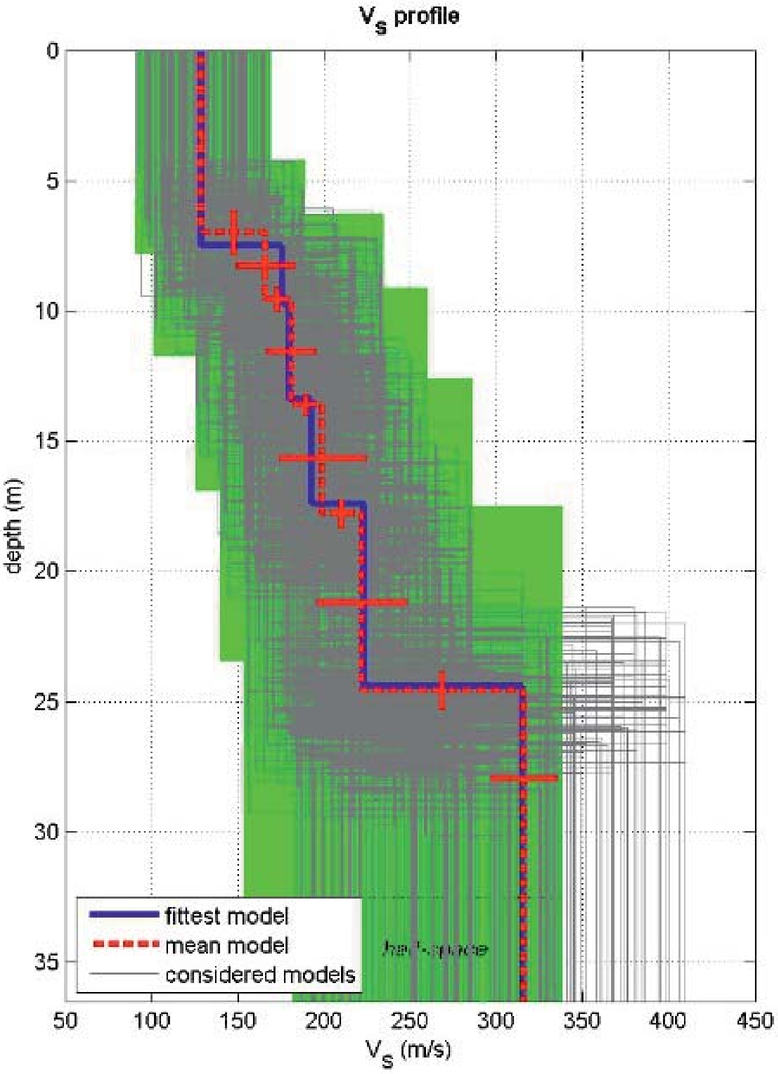
SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE

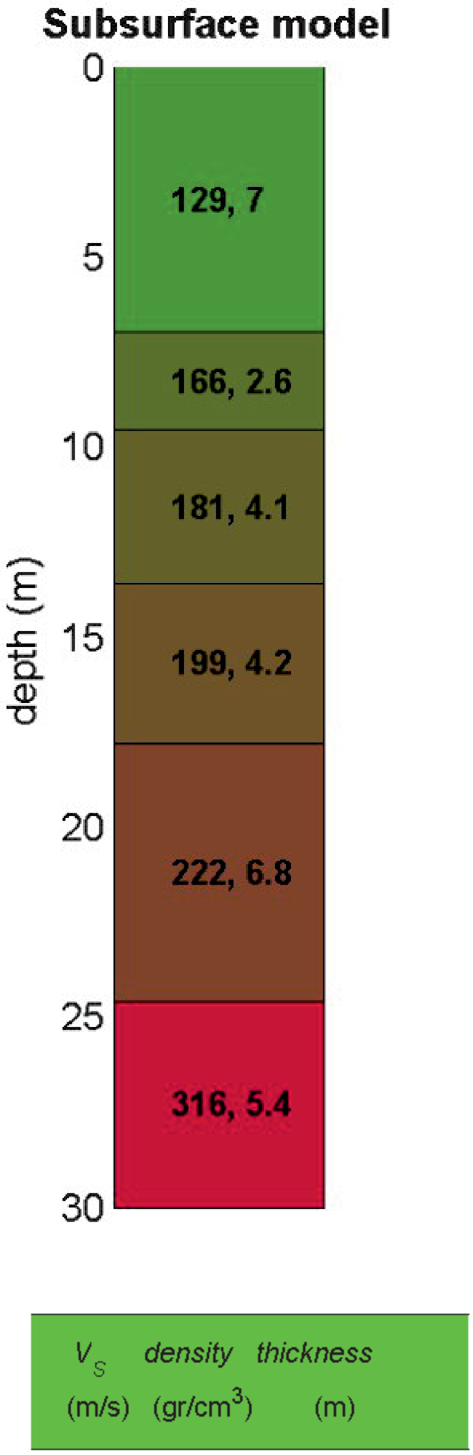






MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA





dataset: $708_1 0$.dat

dispersion curve: picking.cdp

Vs30 (best model): 186 m/s

Vs30 (mean model): 187 m/s

BEST MODEL
Vs30 = 186 m/s

ALLEGATO N° 3

Indagine sismica MASW

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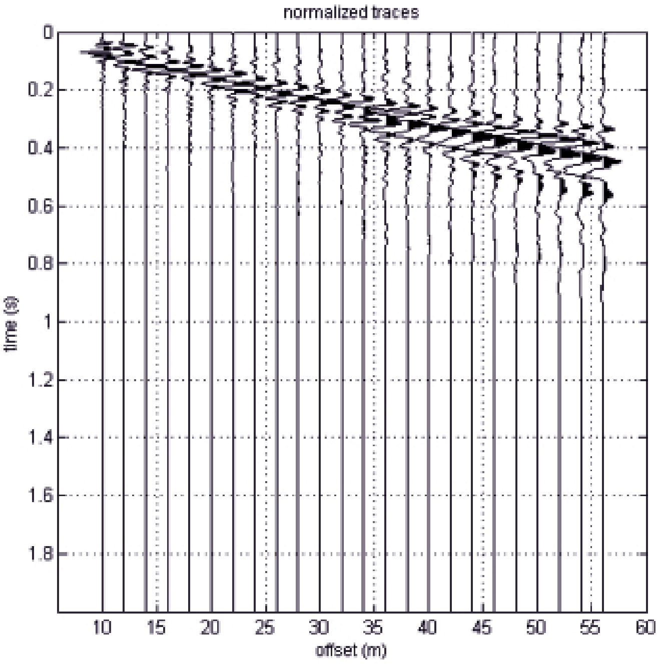
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

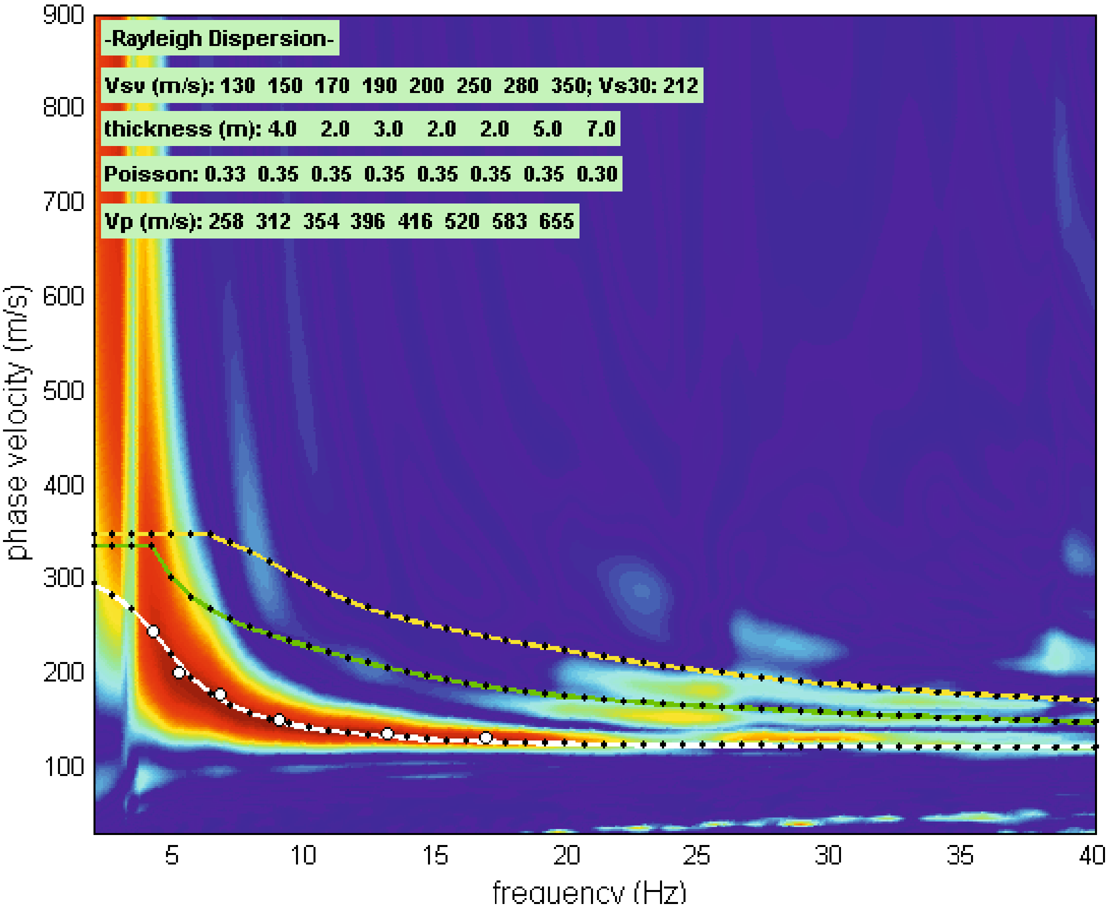
Cantiere: Medolla, Via Romana n°3
Operatori :Dott. Luca Pattuzzi, D.ssa Erika Parmeggiani
Lavoro: Studio del terreno di fondazione
Data: 27/10/2014
Elaborazione: Dott. Luca Pattuzzi
Responsabile: Dott. Geol. Pier Luigi Dallari

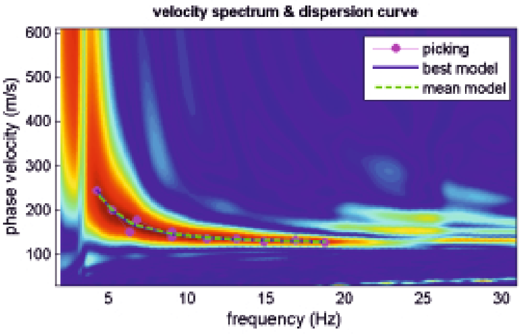
RIFERIMENTO
575/14

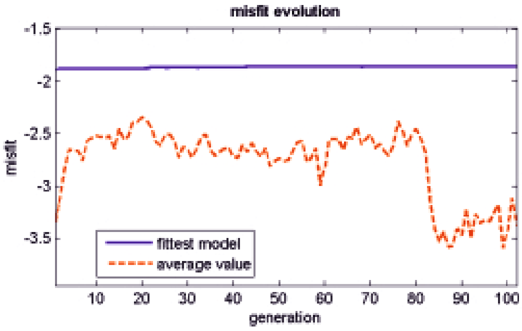
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



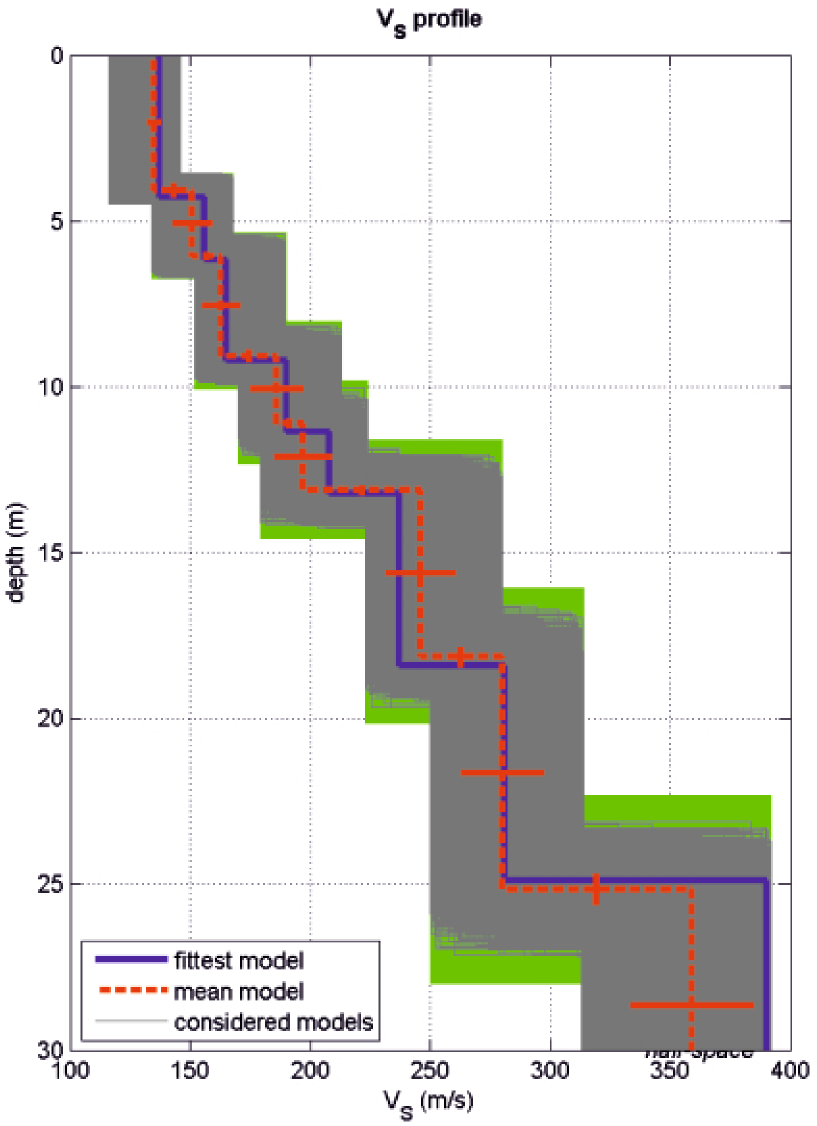
SPETTRO RELATIVO ALLE VELOCITA’ DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE







MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA



dataset: 4_1 0.dat

dispersion curve: pick.cdp

Vs30 (best model): 214 m/s

Vs30 (mean model): 211 m/s

BEST MODEL

Vs30 = 214 m/s

GEO GROUP s.r.l.
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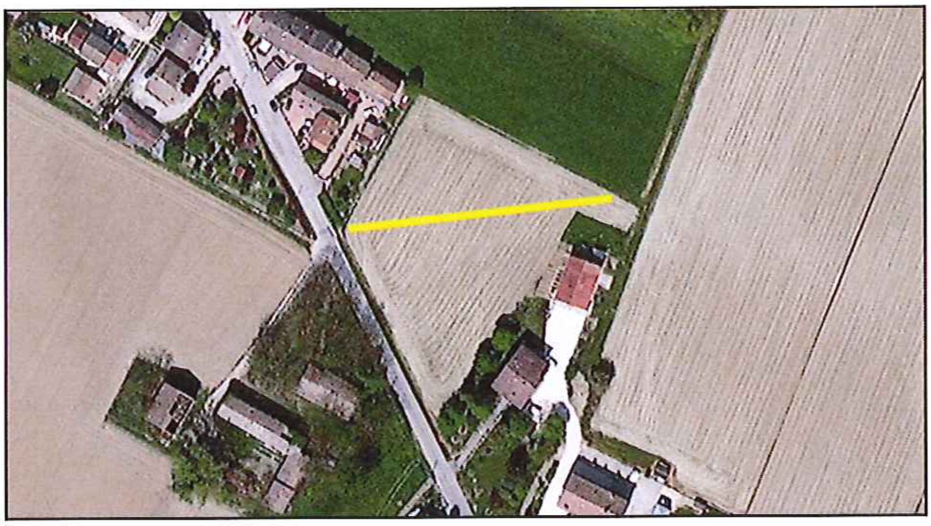
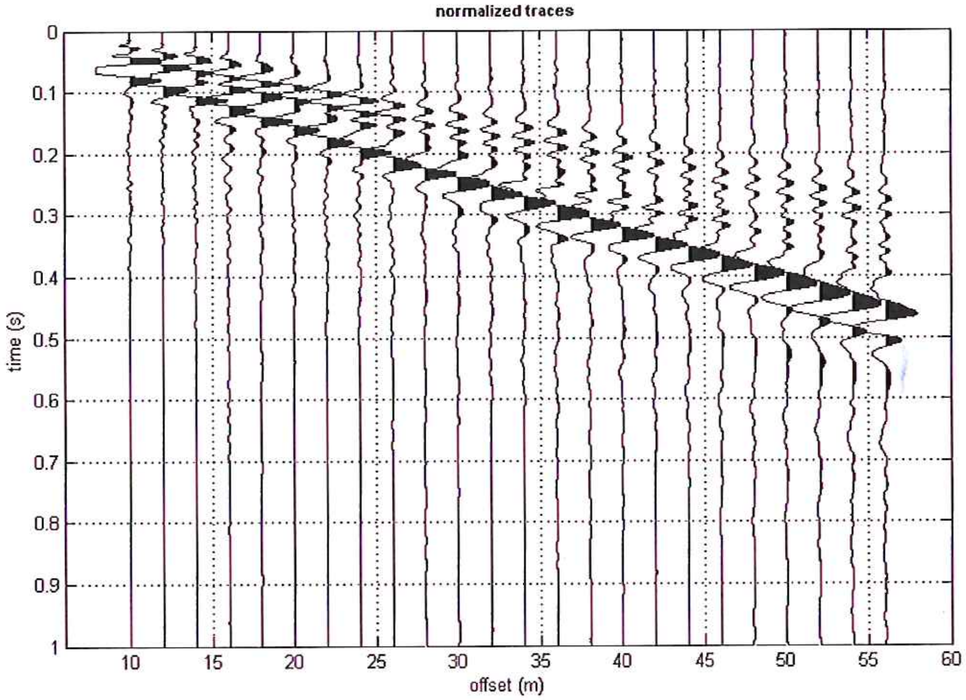
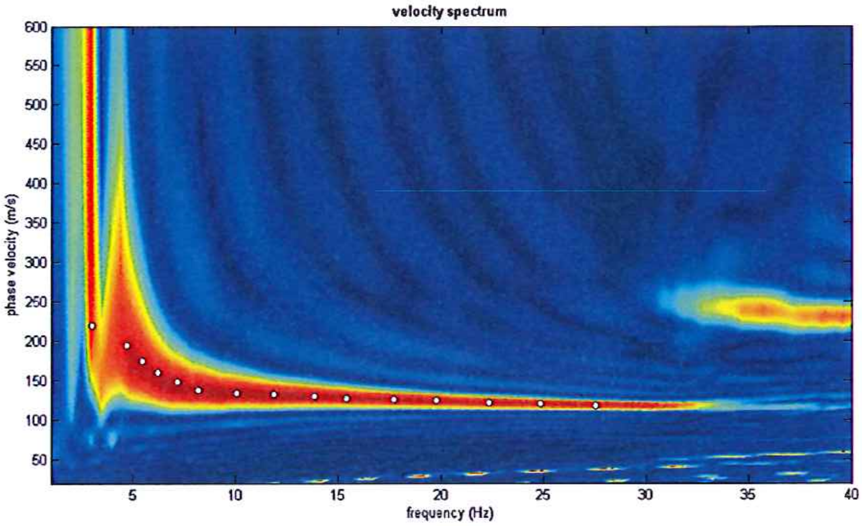
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

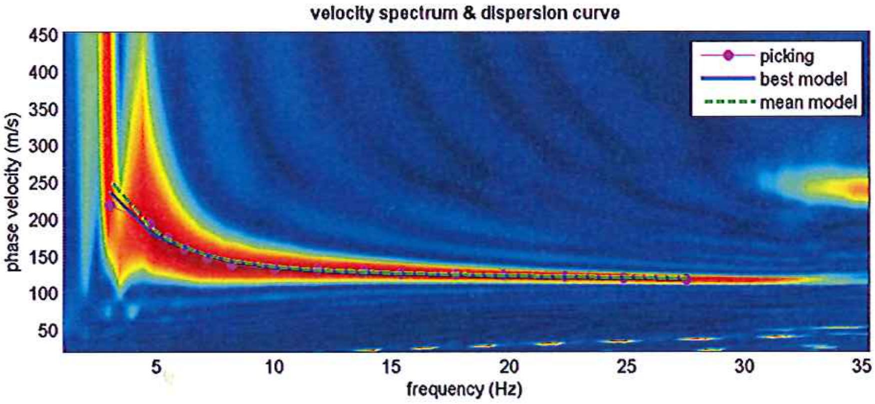
Cantiere:	Medolla – via Romana
Operatori:	Dott. ssa Linda Veratti, Dott.ssa Sonia Gilioli
Data:	19/09/2013
Lavoro:	Studio del terreno di fondazione
Elaborazione:	Dott. Gabriele Ghirardini
Responsabile:	Dott. Geol. Pier Luigi Dallari

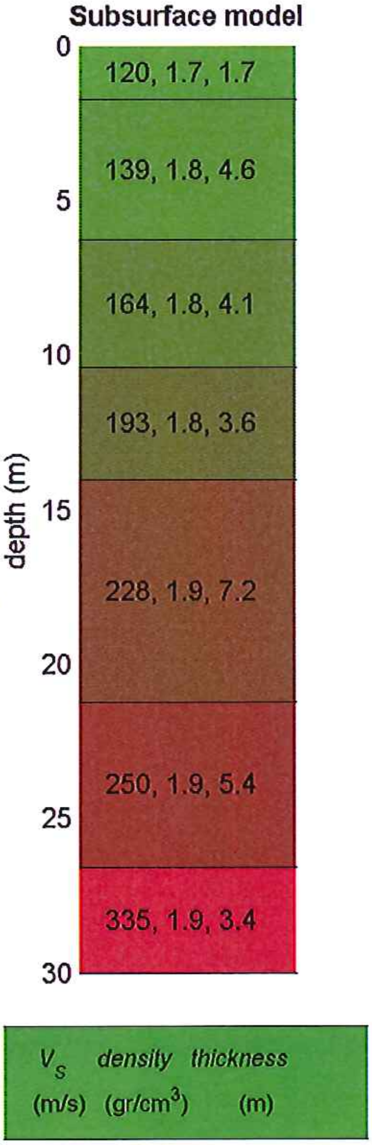


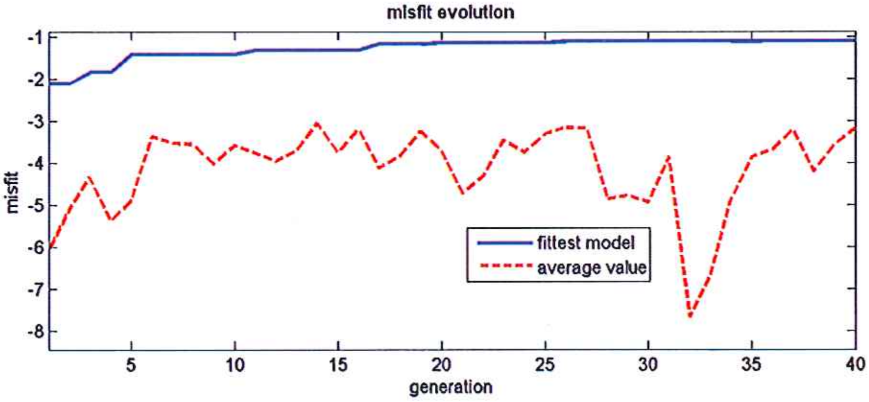
ELABORAZIONE




velocity spectrum
phase velocity (m/s)
600
550
500
450
400
350
300
250
200
150
100
50
frequency (Hz)
5
10
15
20
25
30
35
40

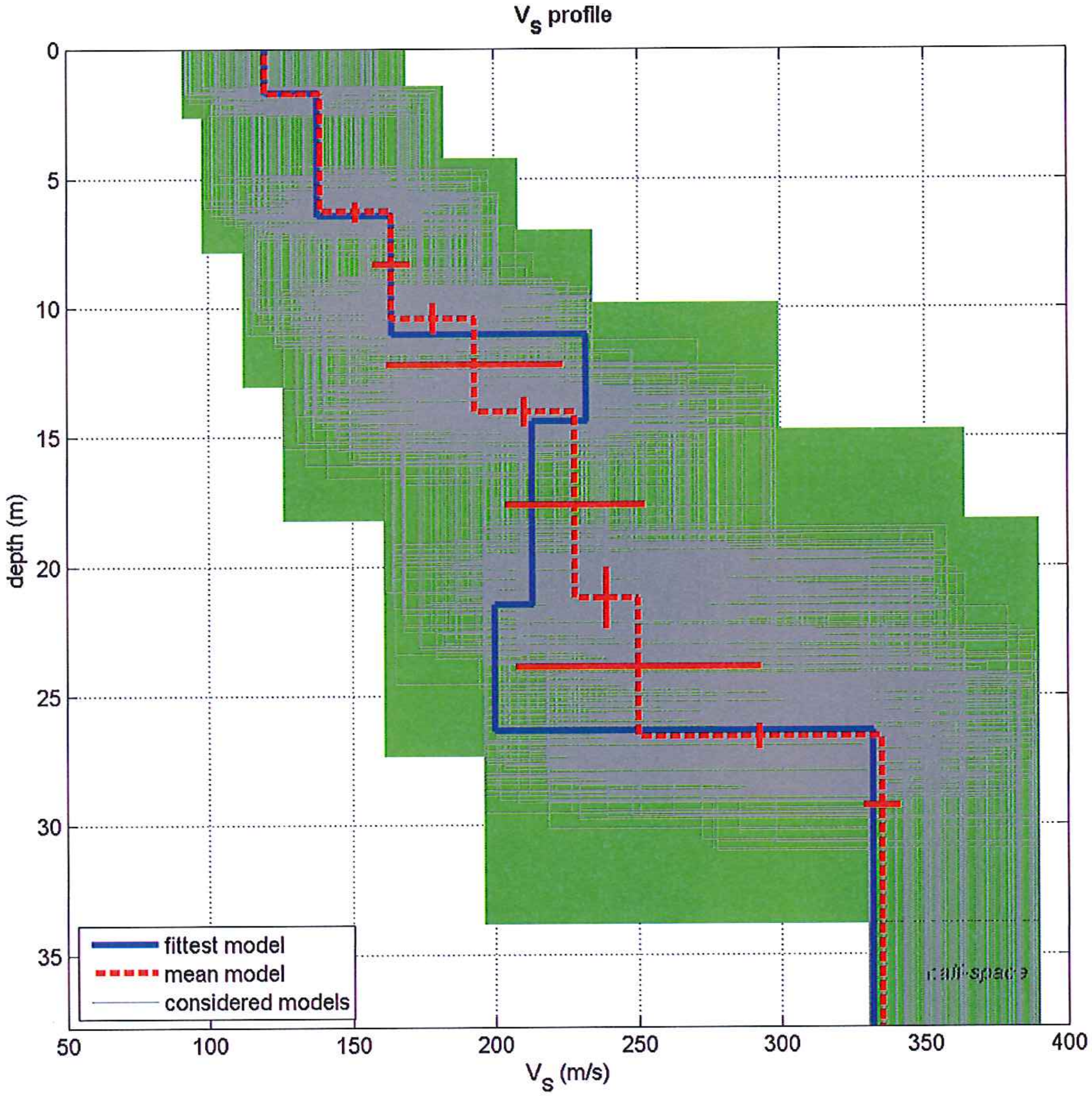

velocity spectrum & dispersion curve
picking
best model
mean model
phase velocity (m/s)
450
400
350
300
250
200
150
100
50
frequency (Hz)
5
10
15
20
25
30
35


Subsurface model
depth (m)
0
5
10
15
20
25
30
120, 1.7, 1.7
139, 1.8, 4.6
164, 1.8, 4.1
193, 1.8, 3.6
228, 1.9, 7.2
250, 1.9, 5.4
335, 1.9, 3.4
Vs density thickness
(m/s) (gr/cm3) (m)


misfit evolution
misfit
-1
-2
-3
-4
-5
-6
-7
-8
fittest model
average value
generation
5
10
15
20
25
30
35
40

[MODELLO FINALE]

Vs_{30} = 188 m/s



dataset: 369.dat

dispersion curve: pick.cdp

Vs30 (best model): 188 m/s

Vs30 (mean model): 194 m/s

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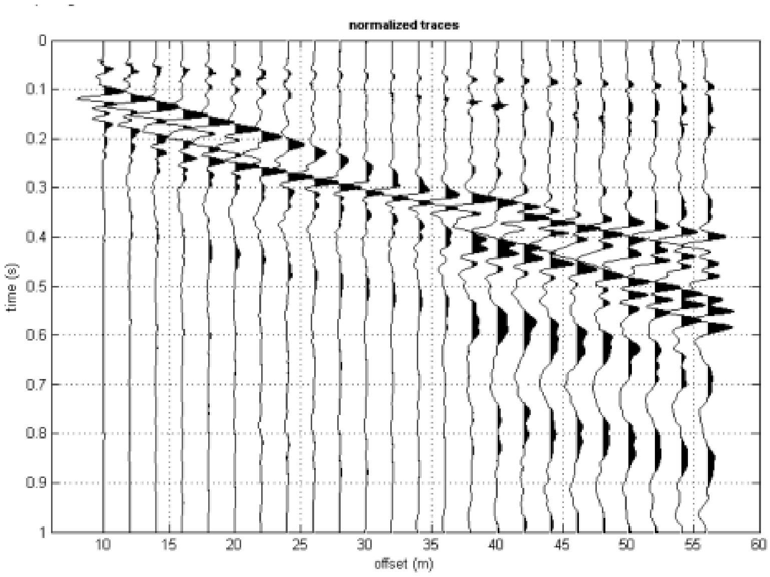
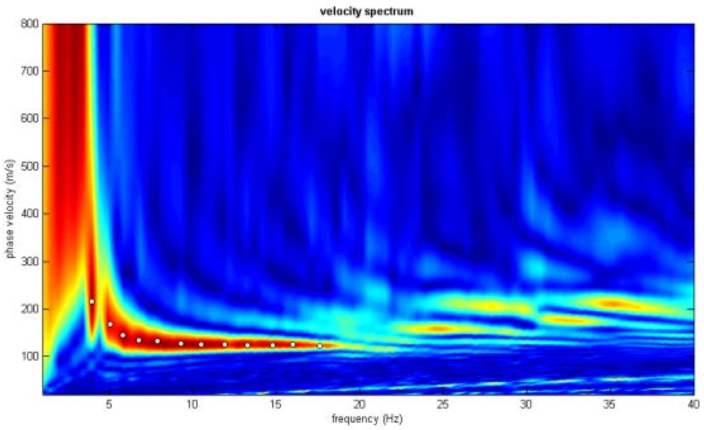
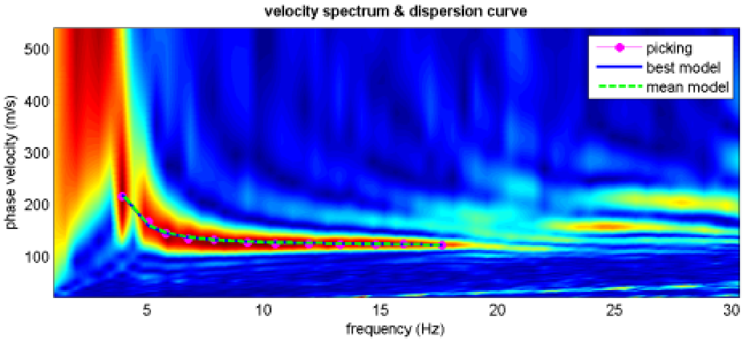
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

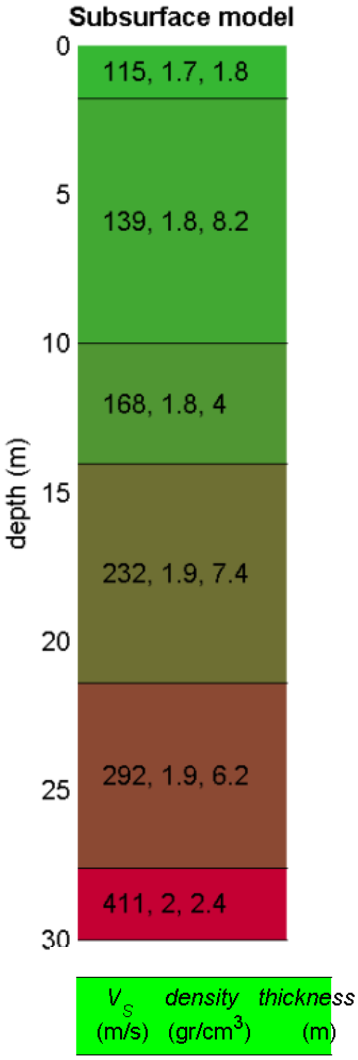
Cantiere:	Medolla – Via Provinciale Per Cavezzo, 2
Operatori:	Dott. Ssa Linda Veratti
Data:	19/09/2013
Lavoro:	Studio del terreno di fondazione
Elaborazione:	Dott. Gabriele Ghirardini
Responsabile:	Dott. Geol. Pier Luigi Dallari

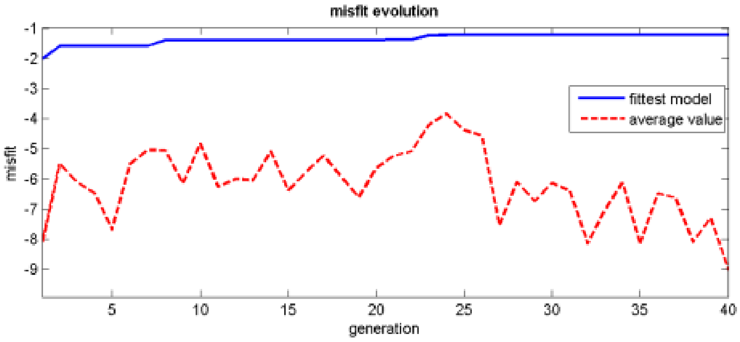
ELABORAZIONE











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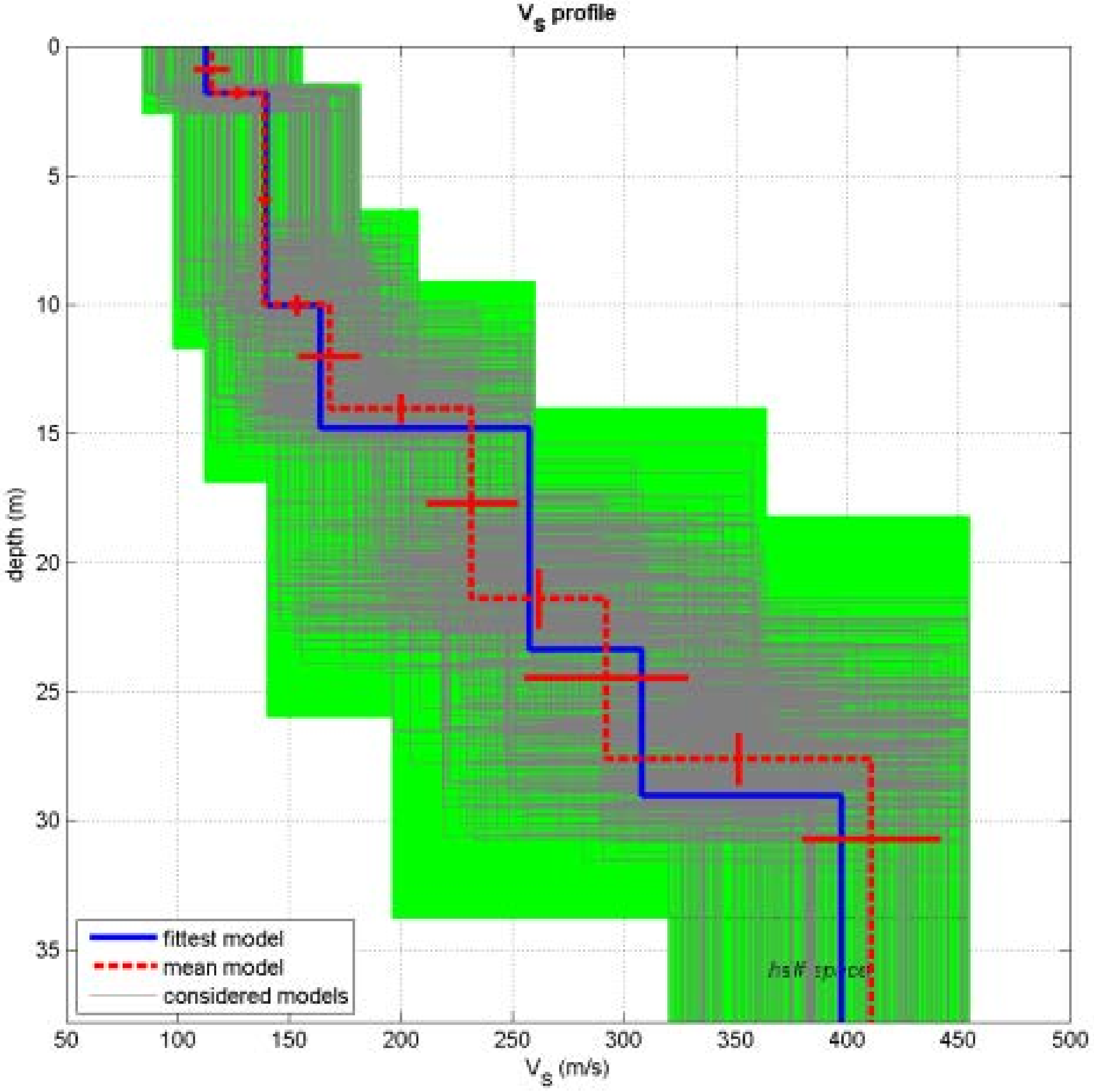
[MODELLO FINALE]

Vs$_{30}$ = 190 m/s



dataset: $343_{1}5$.dat

dispersion curve: pick.cdp

Vs30 (best model): 190 m/s

Vs30 (mean model): 191 m/s

GEO GROUP s.r.l.
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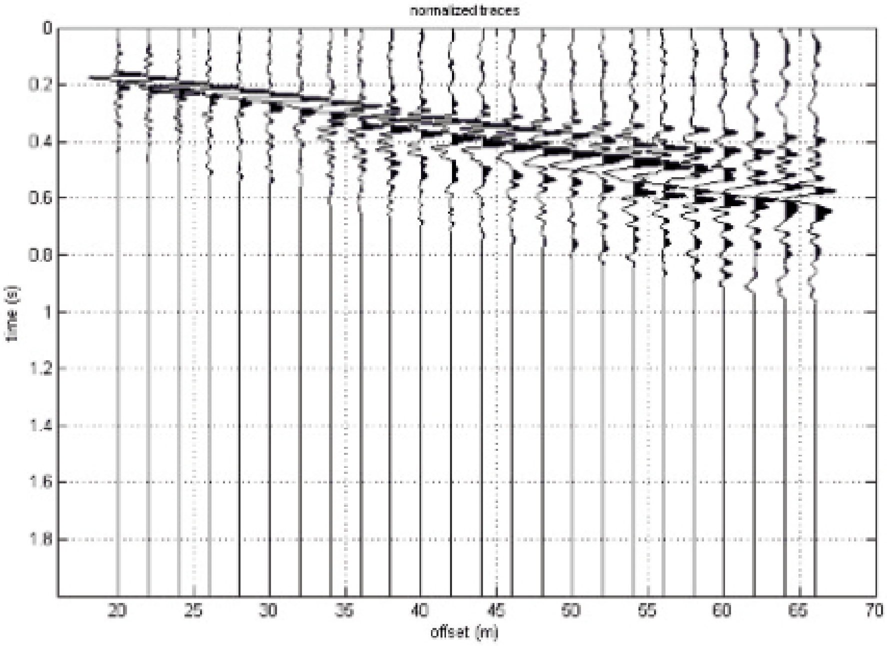
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

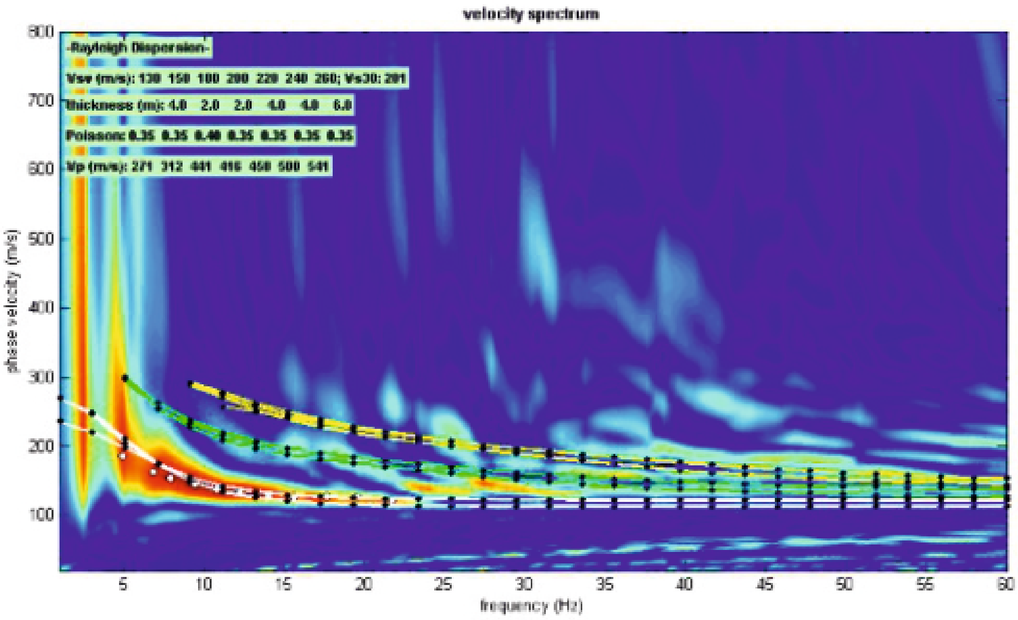
Cantiere:	Medolla – Via San Giuseppe
Operatori:	Dott. Ssa Erika Parmeggiani
Data:	25/09/2013
Lavoro:	Studio del terreno di fondazione
Elaborazione:	Dott. Gabriele Ghirardini
Responsabile:	Dott. Geol. Pier Luigi Dallari

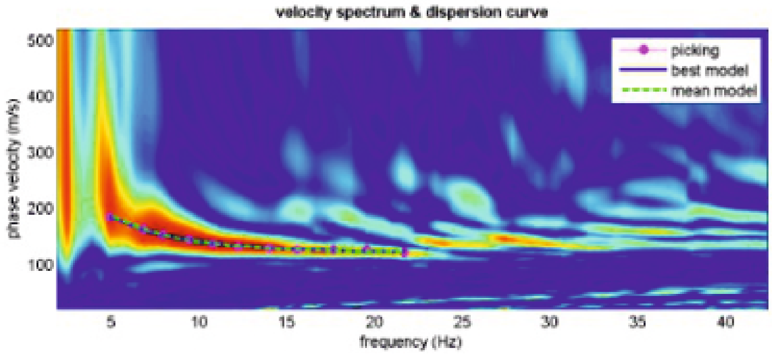
CERTIFICATO
314_M_13

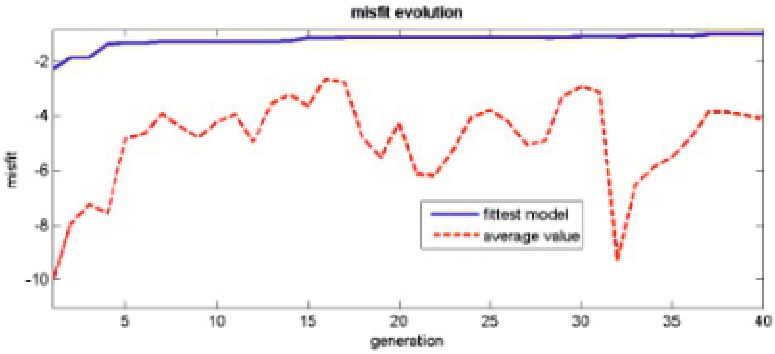
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



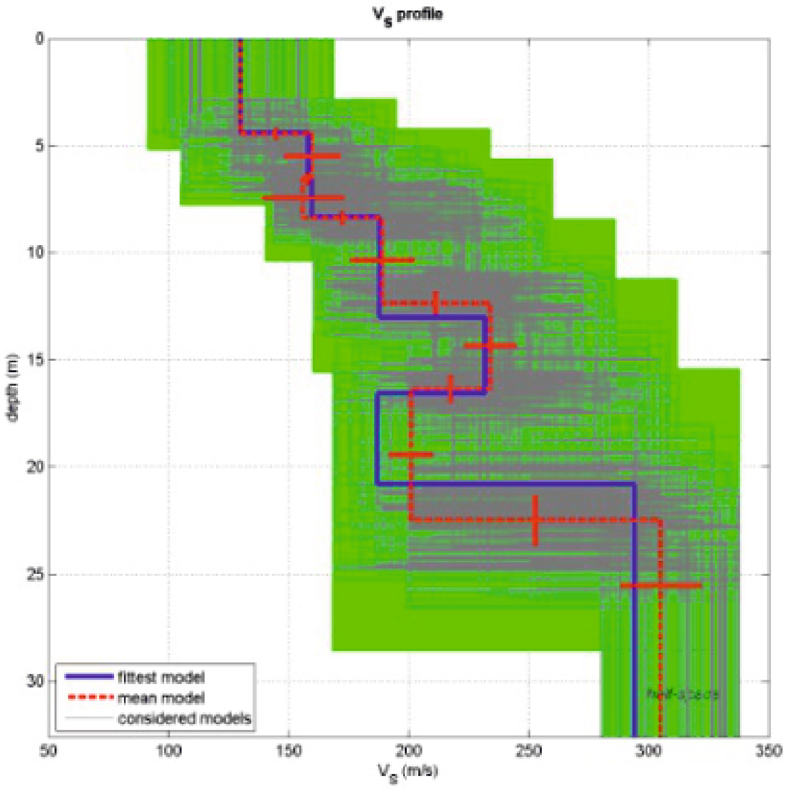
SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE







MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA

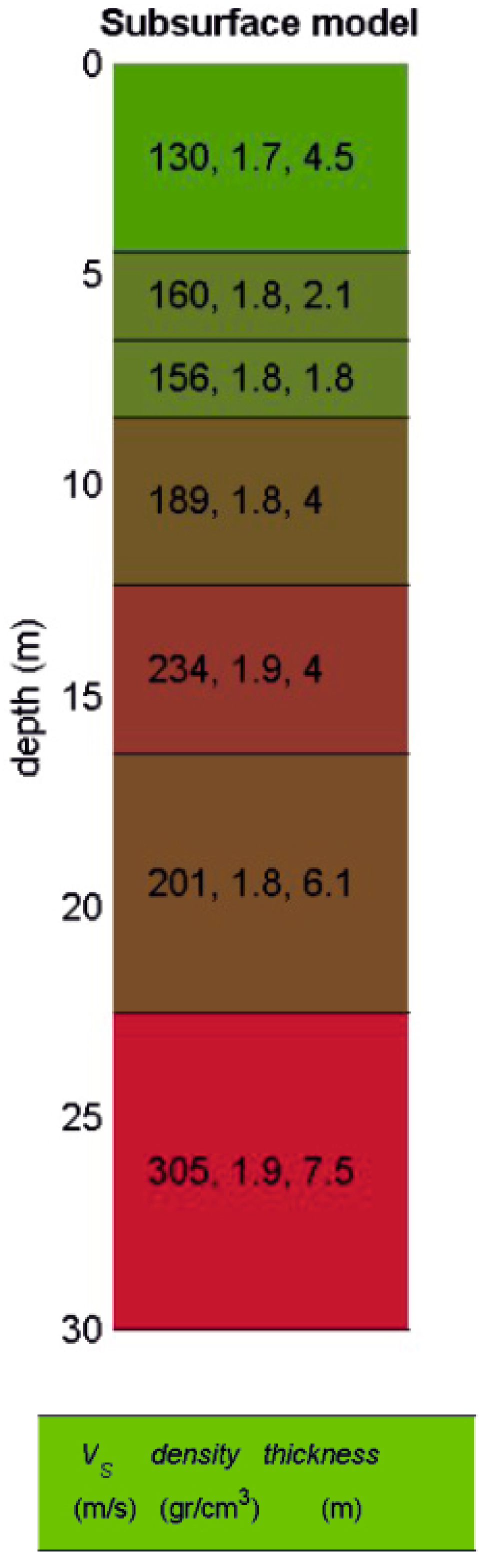


dataset: $382_2$0.dat

dispersion curve: PICK.cdp

Vs30 (best model): 196 m/s

Vs30 (mean model): 197 m/s



BEST MODEL

Vs30 = 196 m/s

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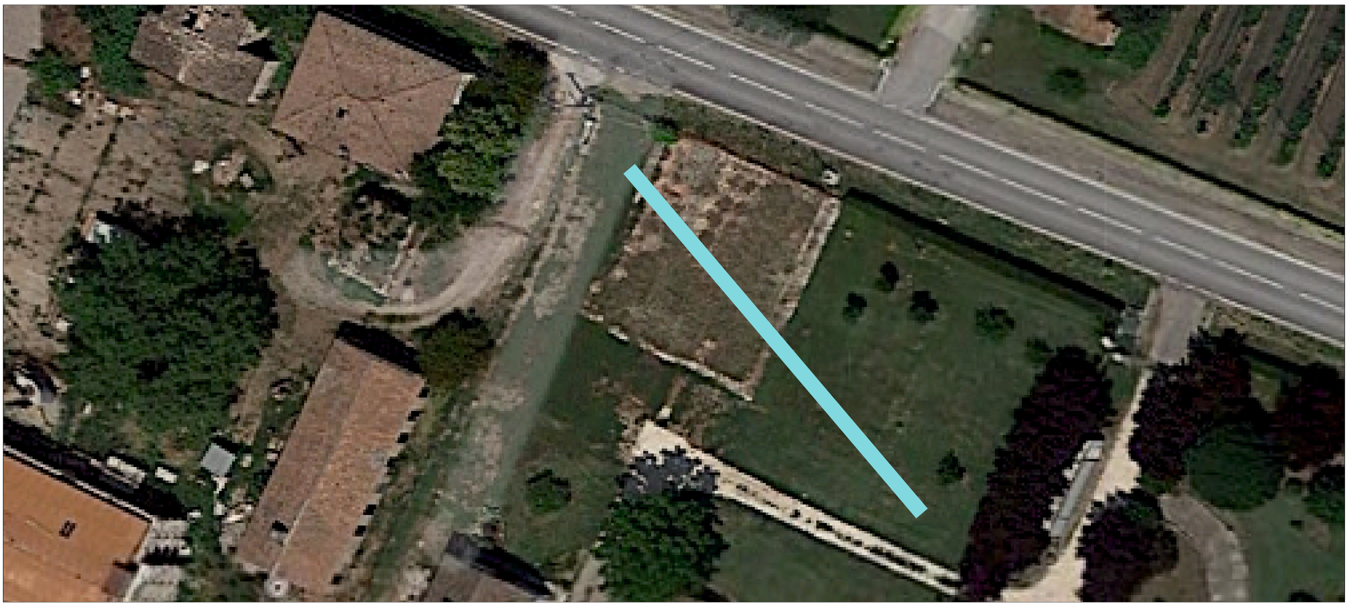
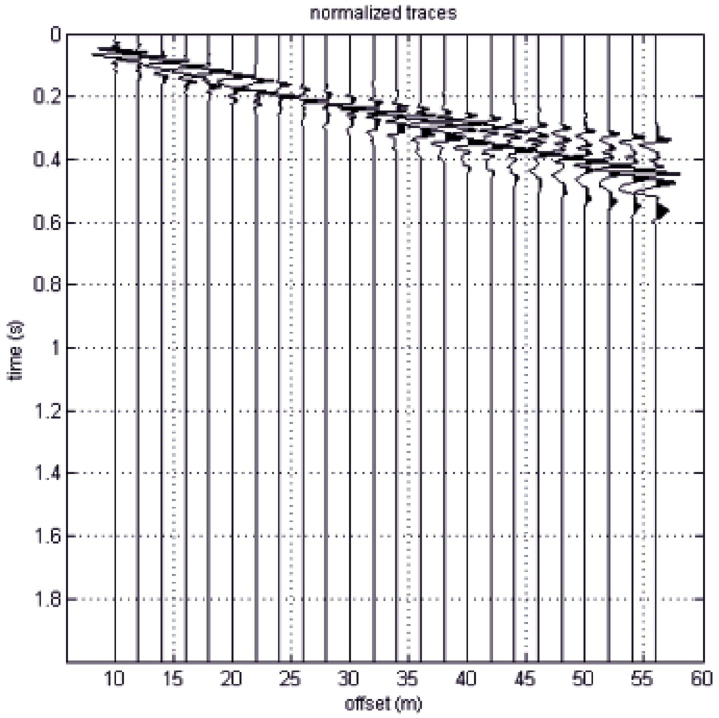
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

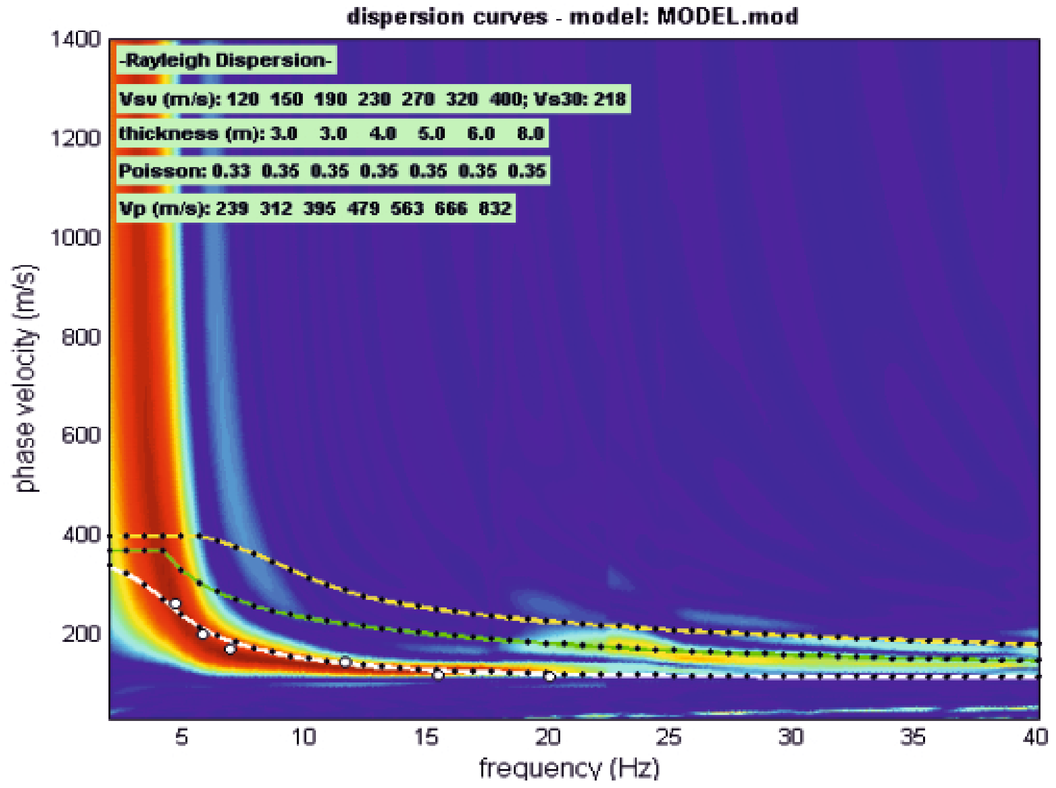
Cantiere: Medolla, via Provinciale
Operatori: Dott.ssa Geol. Alessandra Tagliavini, Dott.ssa Sonia Gilioli
Data: 12/11/2014
Lavoro: Studio terreno di fondazione
Elaborazione: Dott.ssa Sonia Gilioli
Responsabile: Dott. Geol. Pier Luigi Dallari

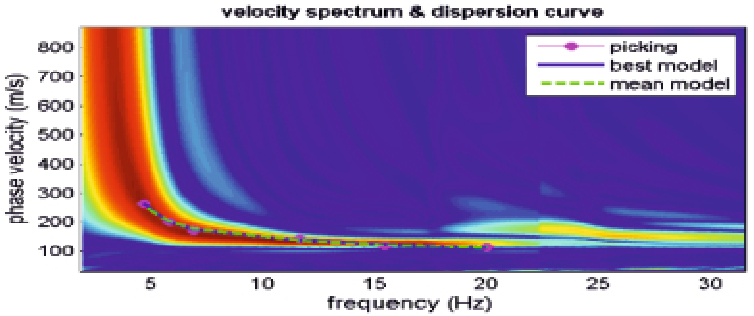


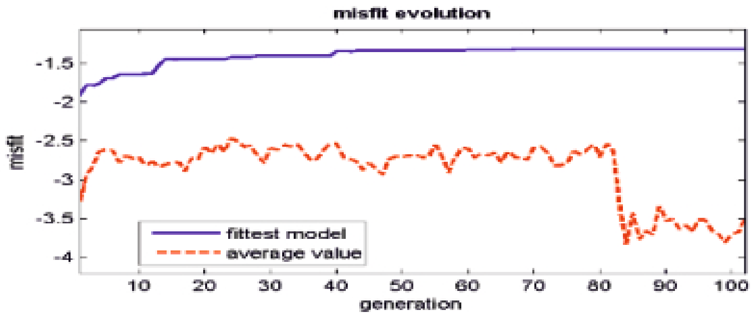
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



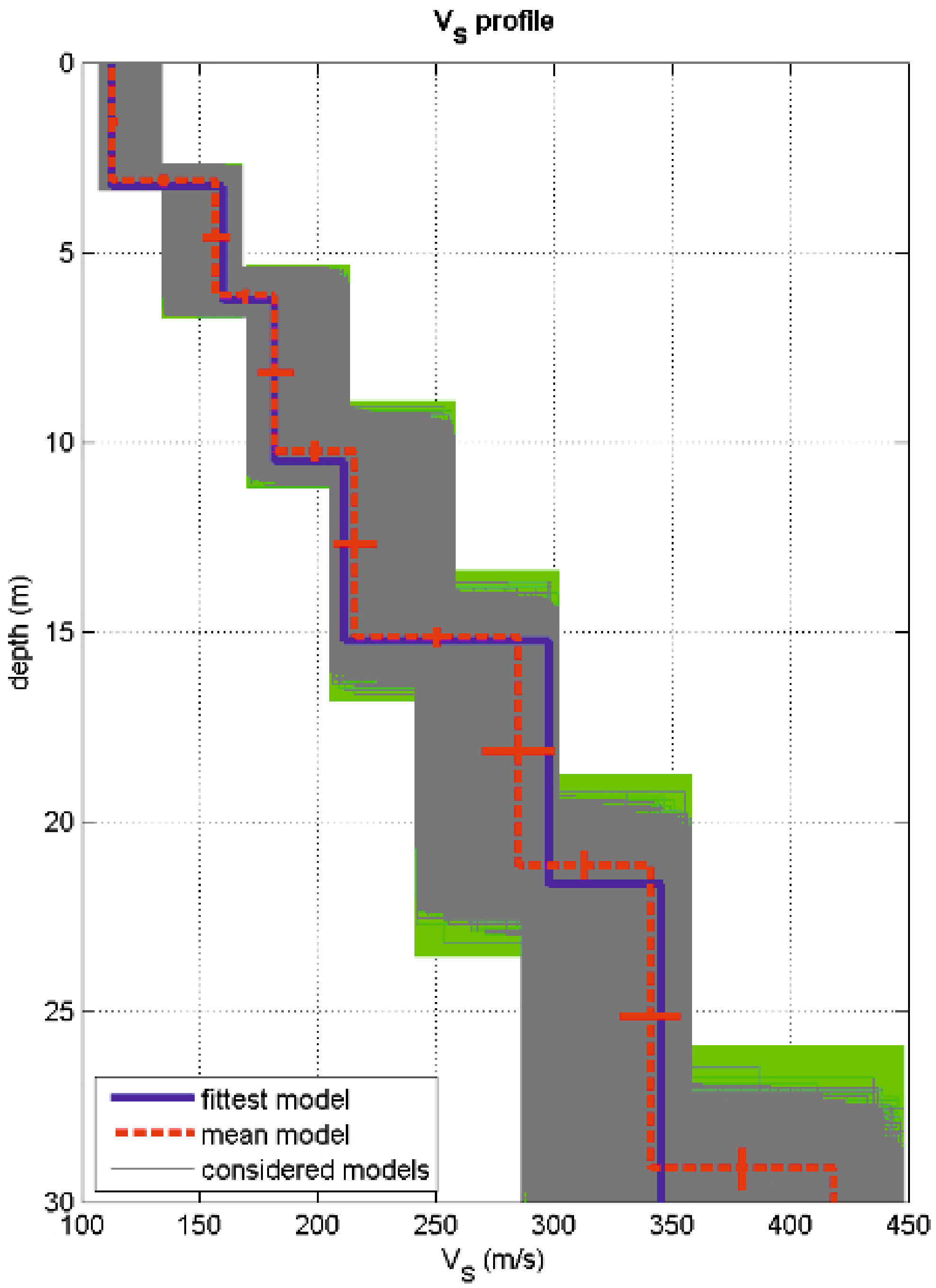
SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE







MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA



half-space

dataset: $740_1 0$.dat

dispersion curve: PICK.cdp

Vs30 (best model): 216 m/s

Vs30 (mean model): 216 m/s

BEST MODEL
Vs30 = 216 m/s

GEO GROUP s.r.l.
Sede legale: Via C. Costa, 182 - 41123 MODENA
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E-mail: info@geogroupmodena.it
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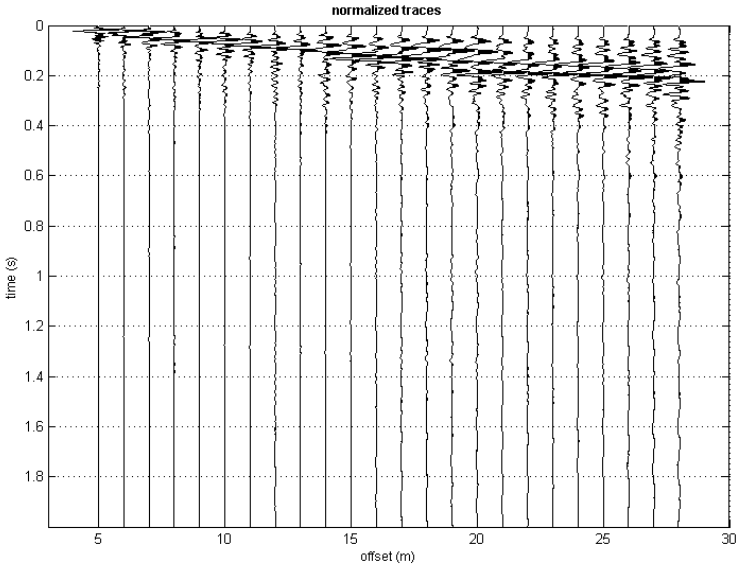
ANALISI SISMICA DI SITO SECONDO METODOLOGIA MASW

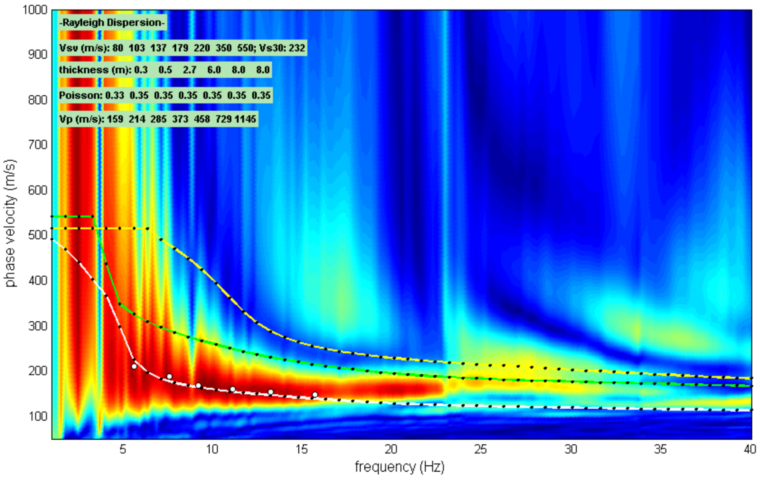
RIF. MASW 602/17

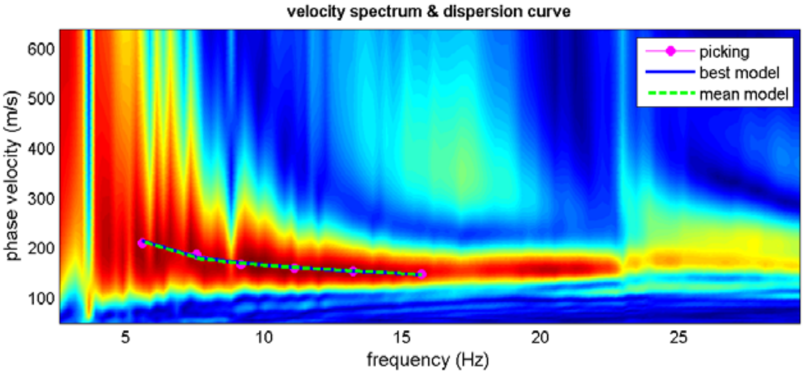
Cantiere: via Pontiroli, Medolla (MO)
Data: 04/10/2017
Lavoro: studio del terreno di fondazione
Operatori: Dott.ssa Domitilla Santi, Dott. Luca Pattuzzi
Elaborazione: Dott.ssa Domitilla Santi
Responsabile: Dott. Geol. Pier Luigi Dallari

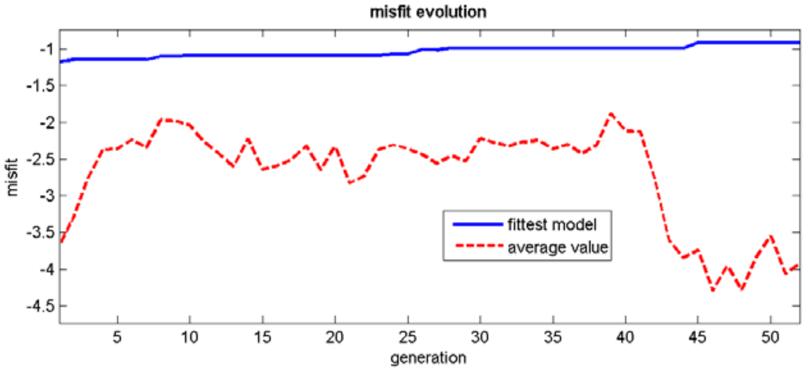
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



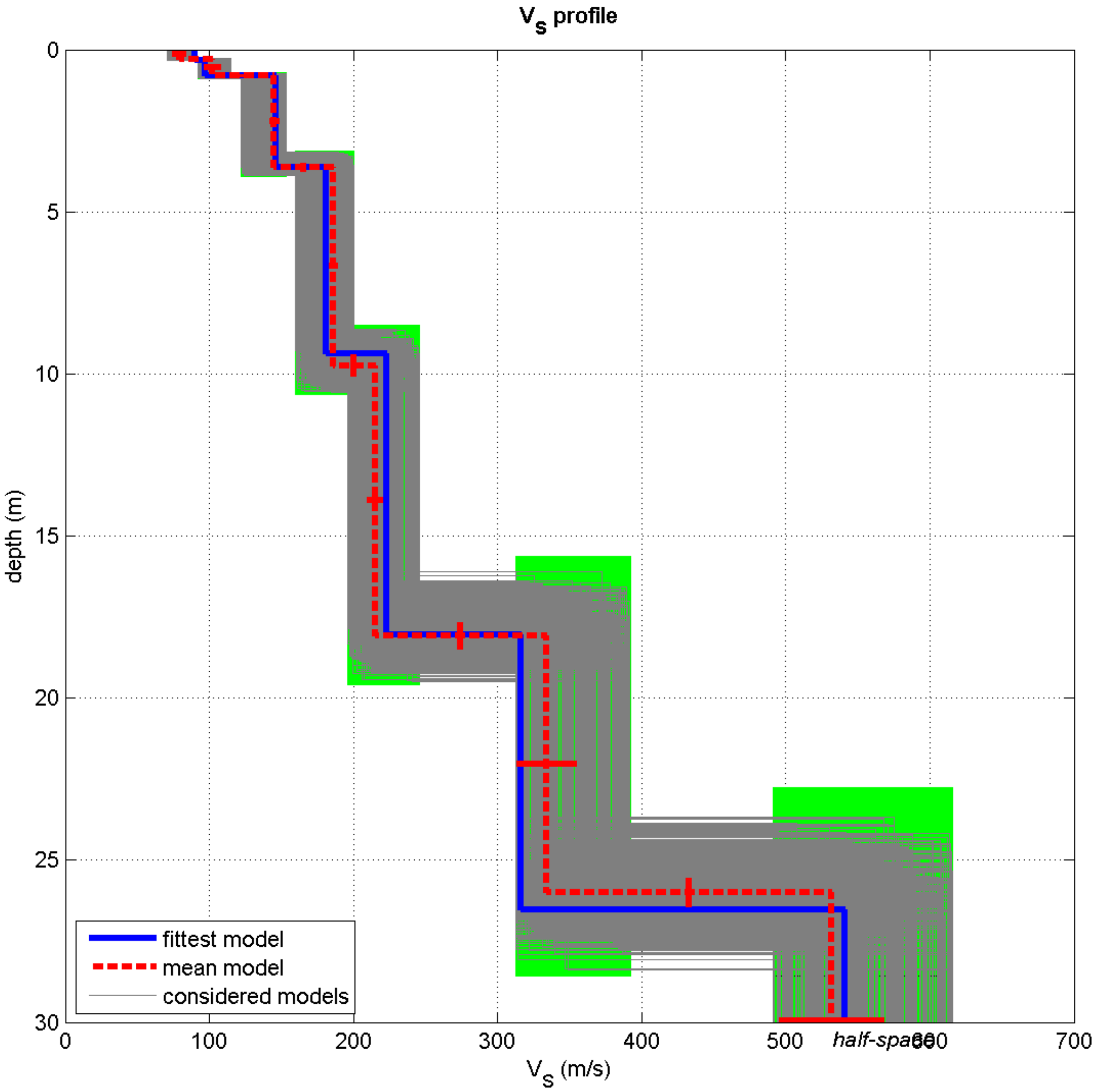
SPETTRO RELATIVO ALLE VELOCITÁ DI FASE REGISTRATE NEL DOMINIO DELLE FREQUENZE







MODELLO V_S30 DERIVATO DALL’INDAGINE MASW ESEGUITA



dataset: 280.dat

dispersion curve: pick.cdp

Vs30 (best model): 228 m/s

Vs30 (mean model): 229 m/s

BEST MODEL
V_S30 = 228 m/s

GEO GROUP s.r.l.
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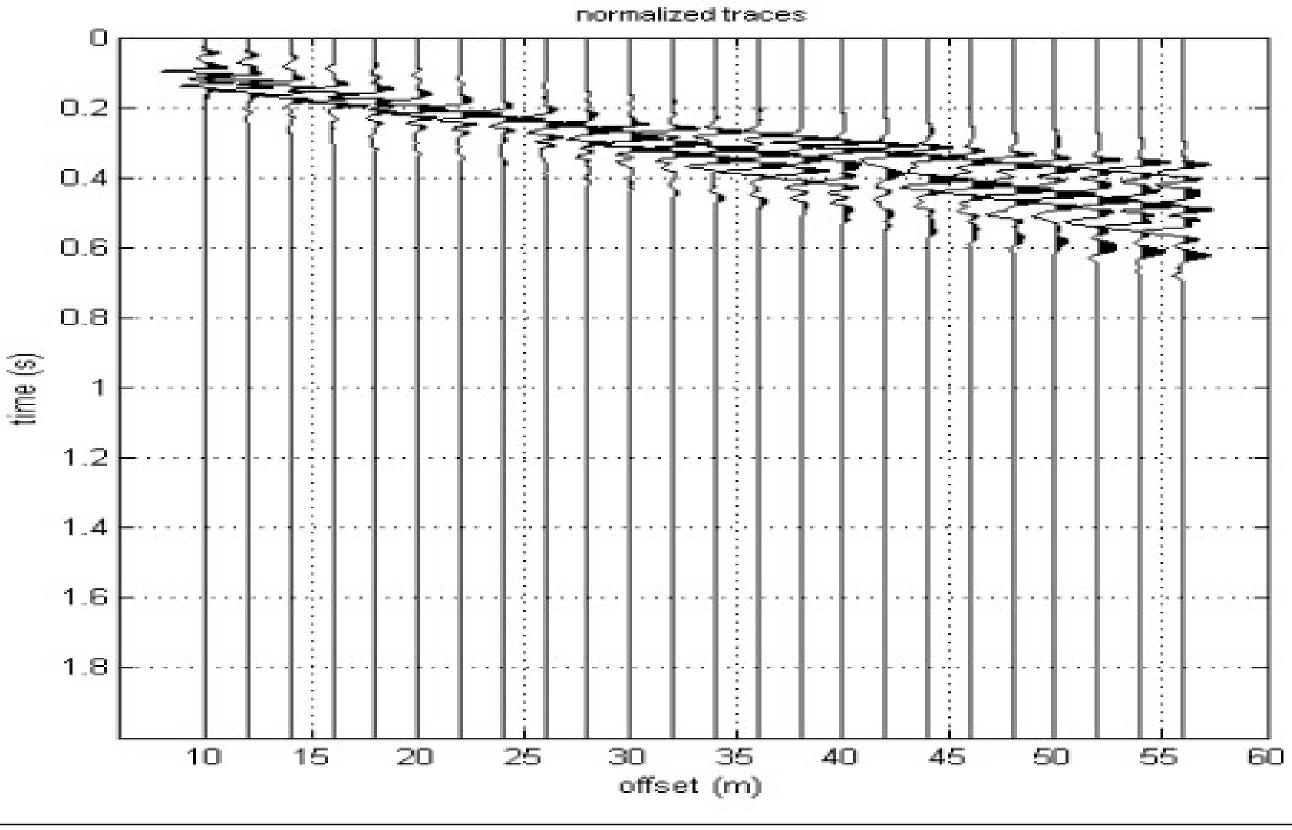
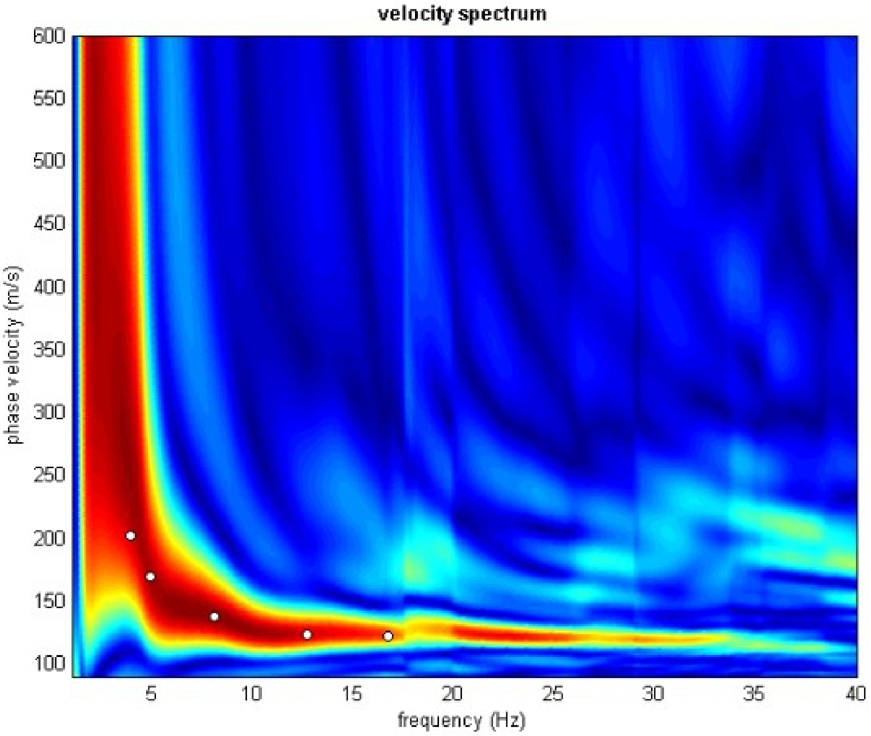
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

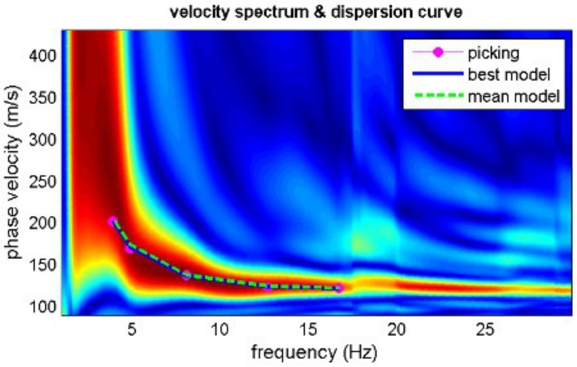
Cantiere: Medolla, via Bruino
Lavoro: Studio del terreno di fondazione
Responsabile: Dott. Geol. Pier Luigi Dallari

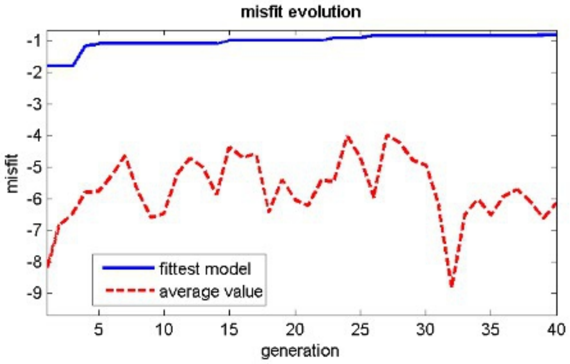
RIFERIMENTO
613/14



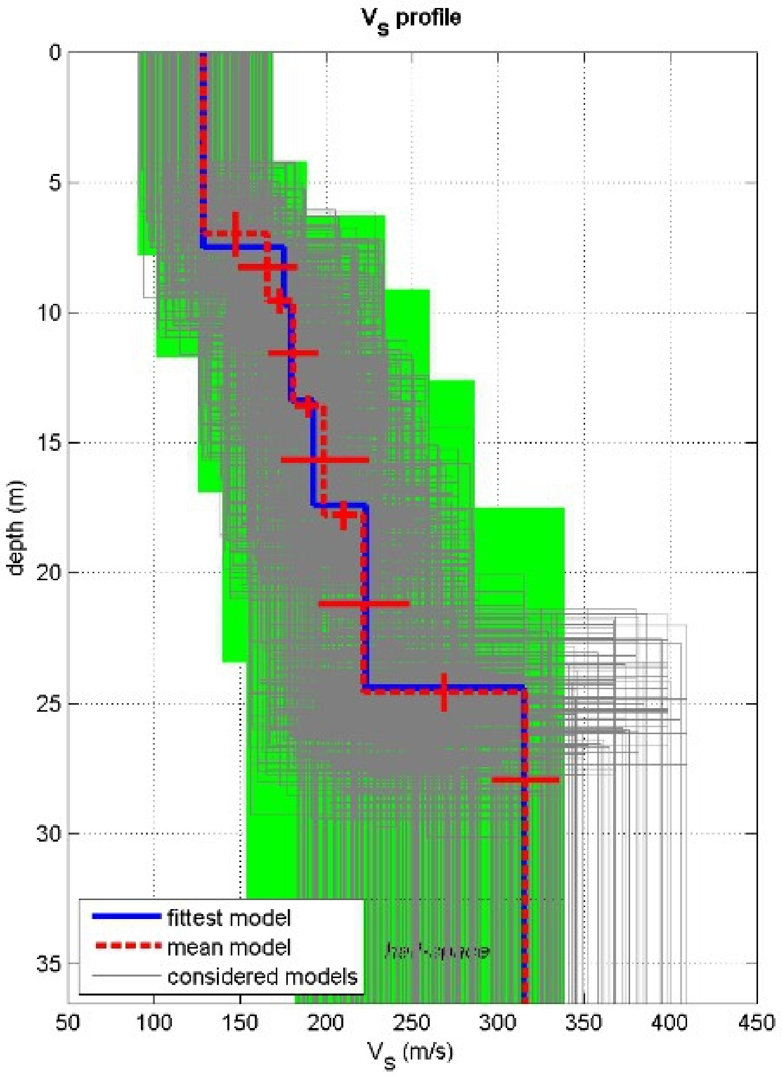
SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE







MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA

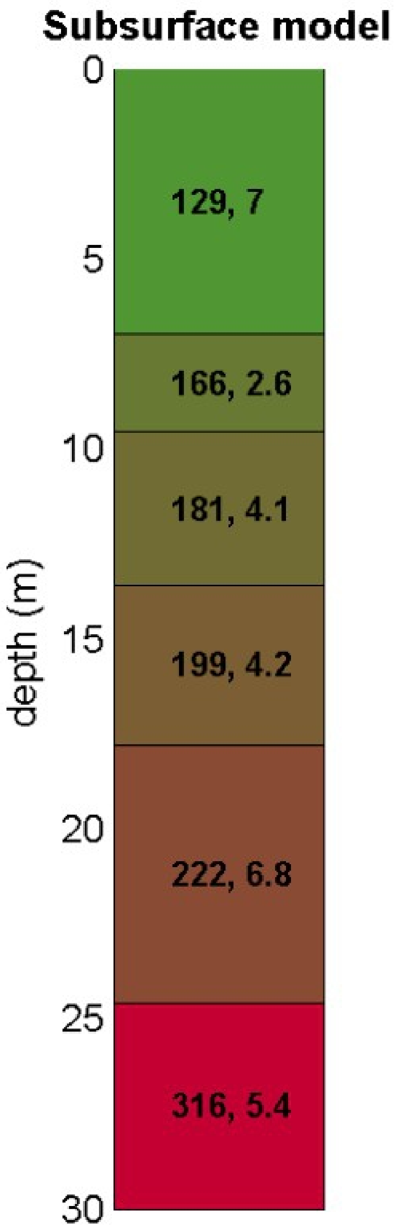


dataset: $708_1 0$.dat

dispersion curve: picking.cdp

Vs30 (best model): 186 m/s

Vs30 (mean model): 187 m/s



V_S *density* *thickness*
(m/s) (gr/cm^3) (m)

BEST MODEL
Vs30 = 186 m/s

GEO GROUP s.r.l.
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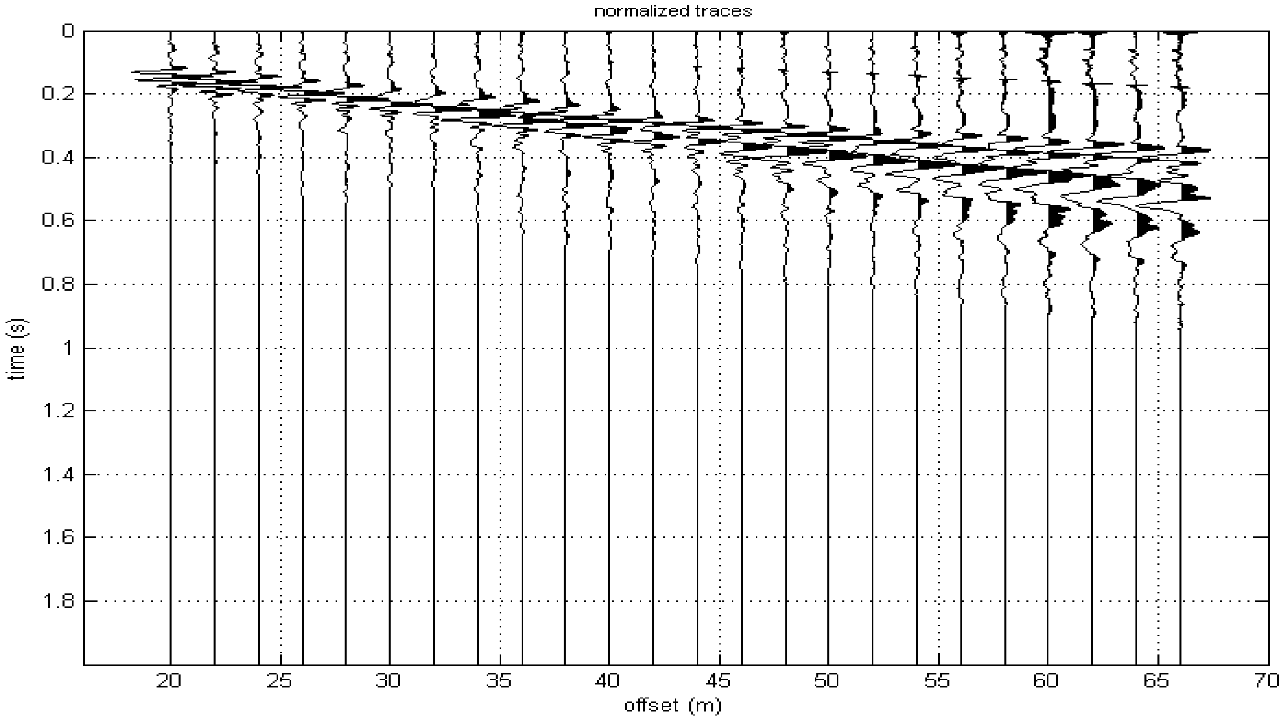
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

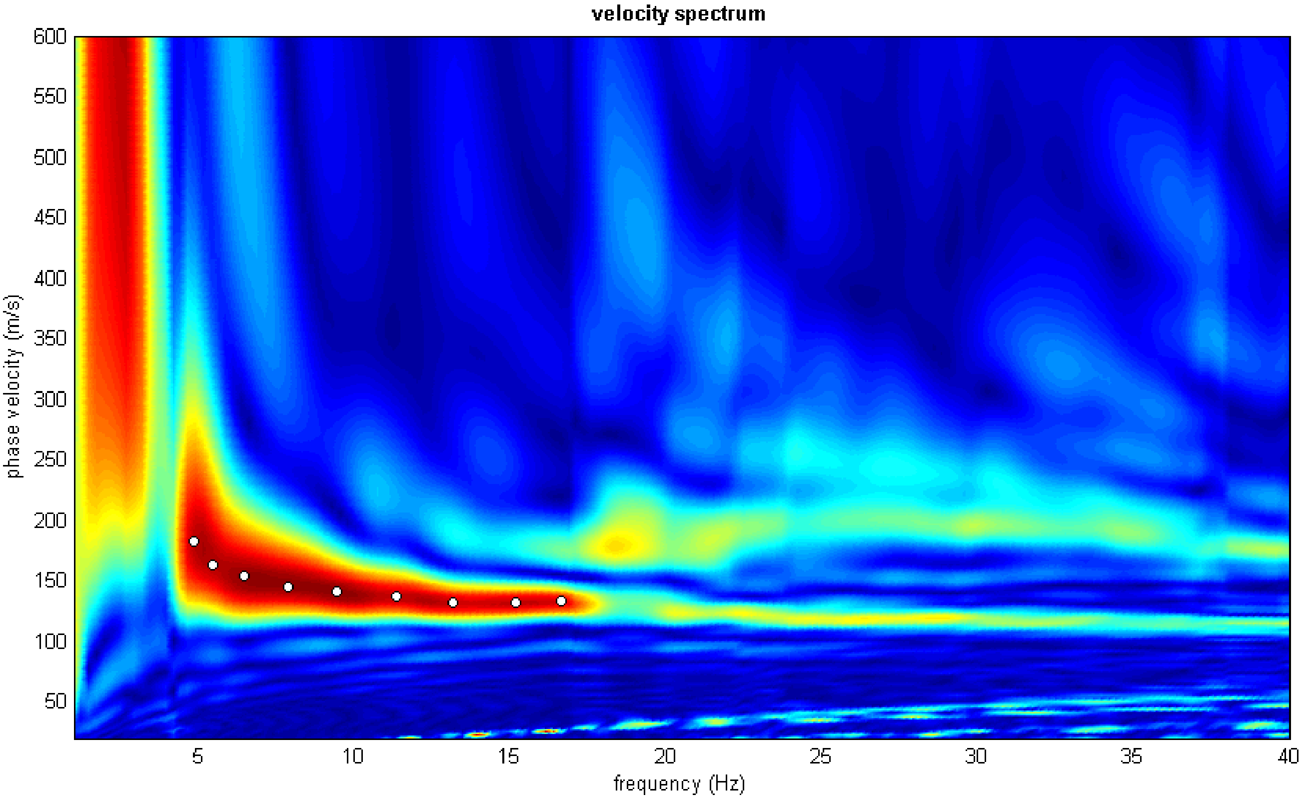
Cantiere:	Medolla, Via Roncaglio
Operatori:	Dott.ssa Linda Veratti, Dott. Luca Pattuzzi
Data:	14/11/2014
Lavoro:	Studio del terreno di fondazione
Elaborazione:	Dott. Luca Pattuzzi
Responsabile:	Dott. Geol. Pier Luigi Dallari

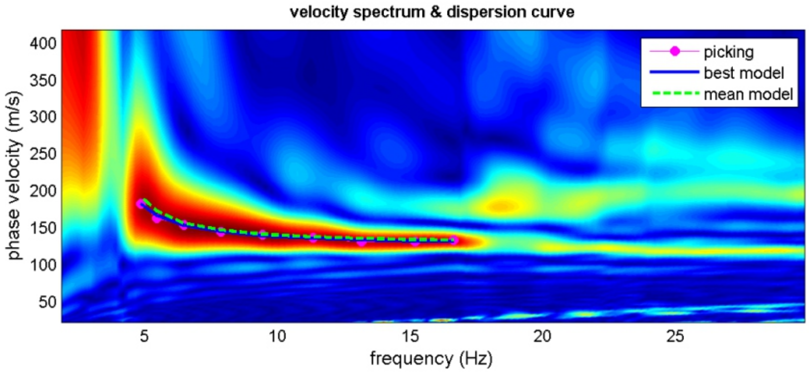
RIFERIMENTO
620/14

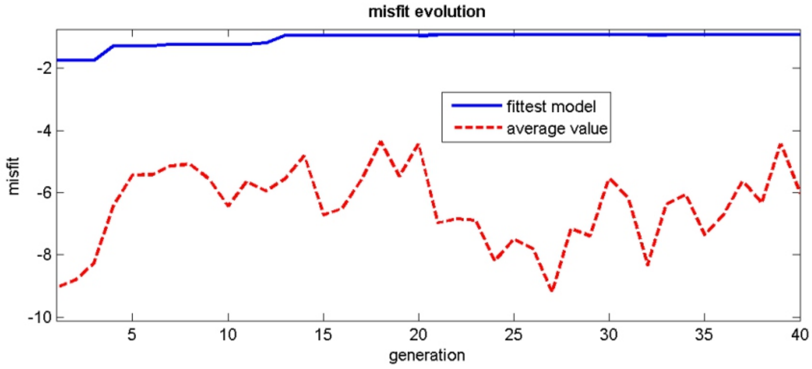
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



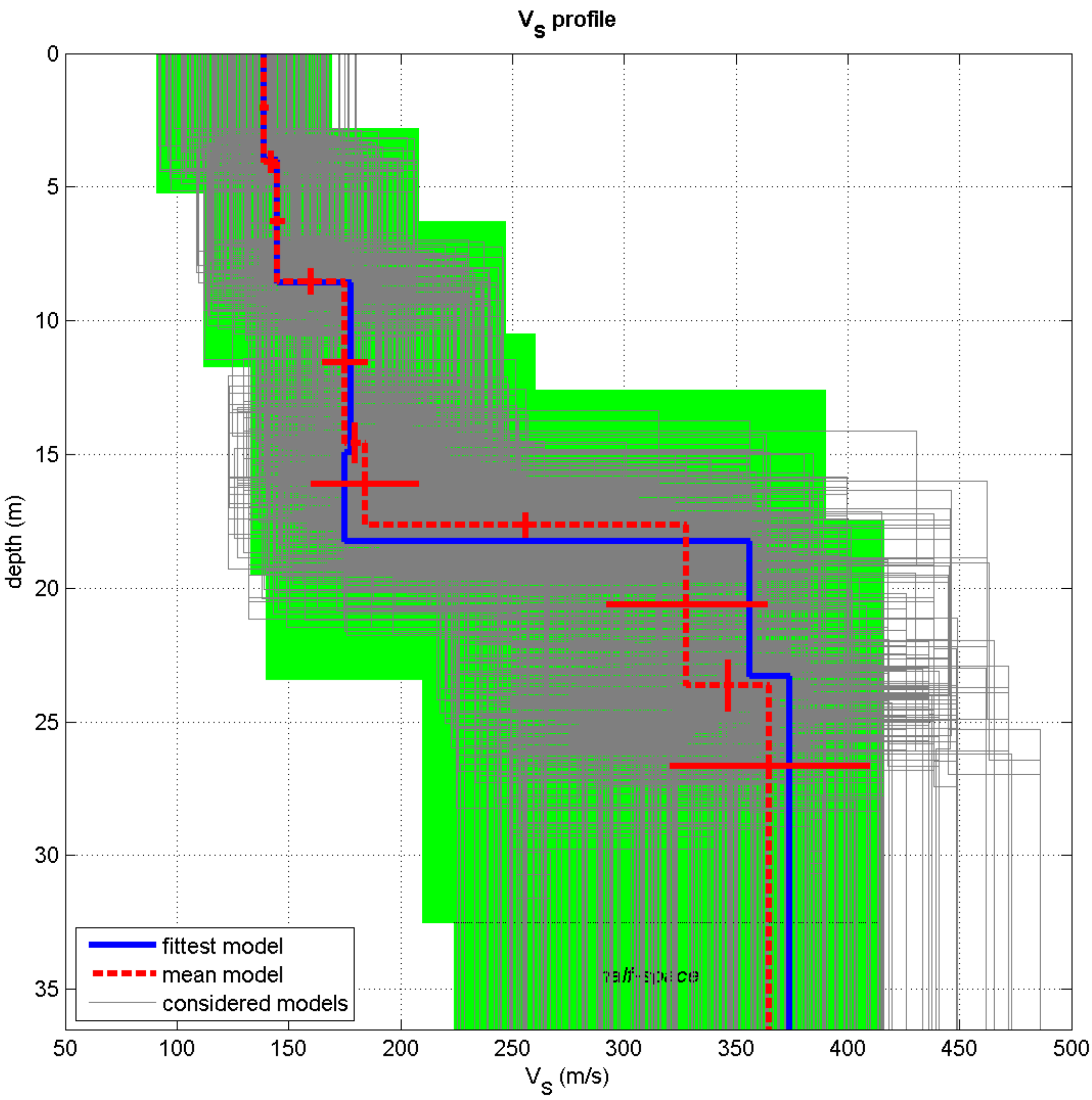
SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE







MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA



dataset: 333$_2$0 m.dat

dispersion curve: PICK.cdp

Vs30 (best model): 204 m/s

Vs30 (mean model): 204 m/s

BEST MODEL
Vs30 = 204 m/s

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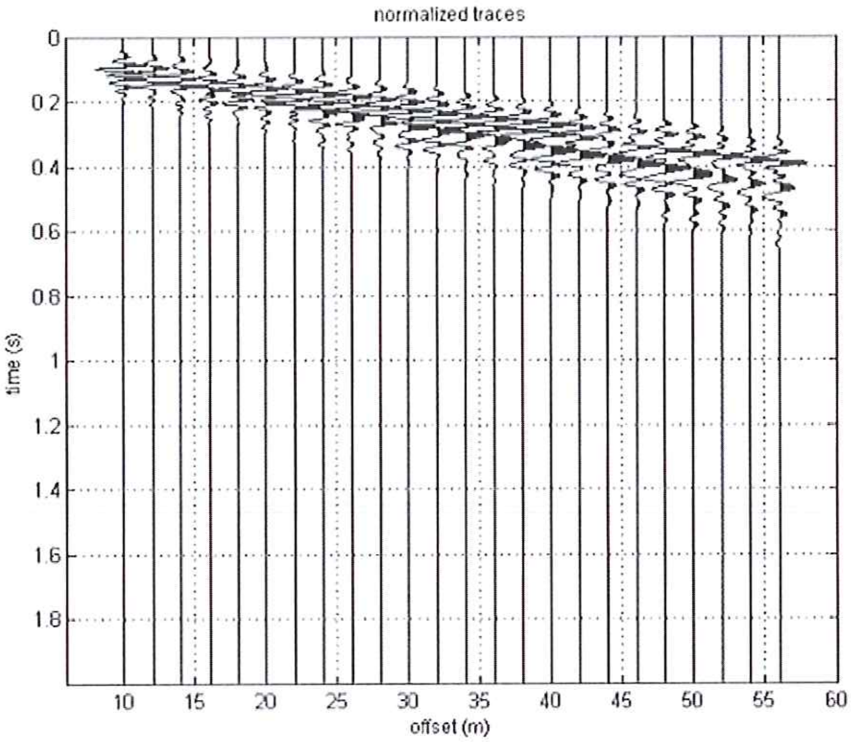
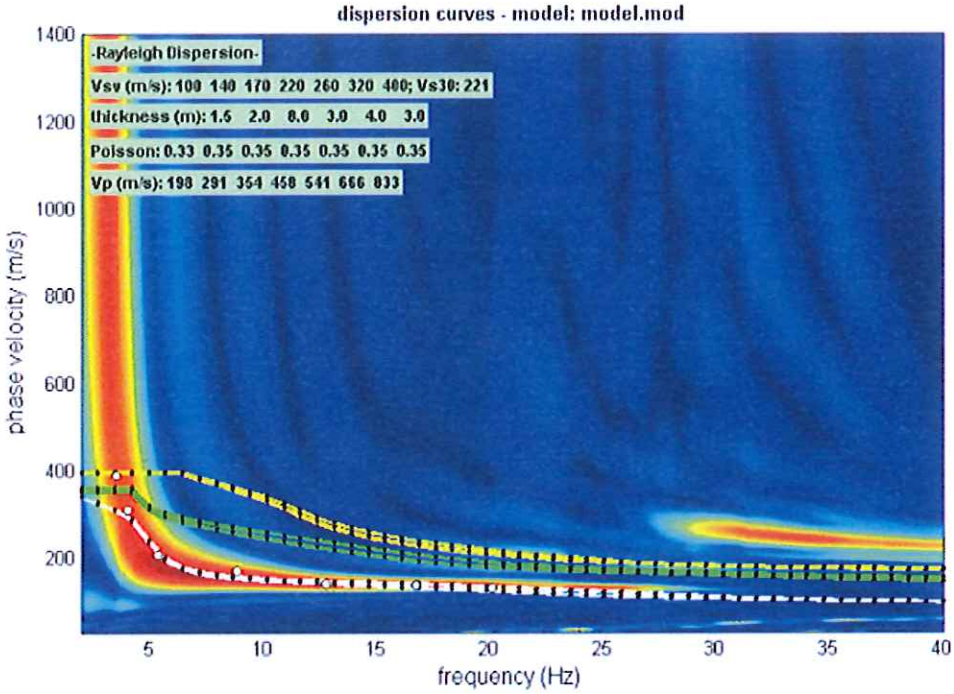
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

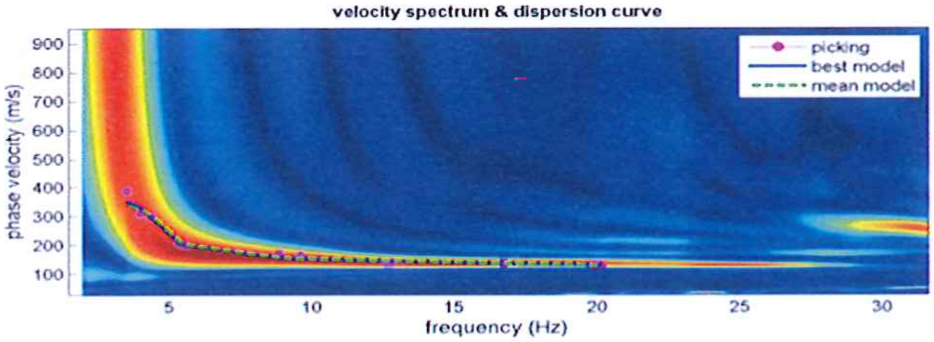
Cantiere: Medolla, via Sant'Antonio, n. 1
Operatori: Dott.ssa Annalisa Cameroni, Dott.ssa Sonia Gilioli
Data: 21/11/2014
Lavoro: Studio terreno di fondazione
Elaborazione: Dott.ssa Sonia Gilioli
Responsabile: Dott. Geol. Pier Luigi Dallari

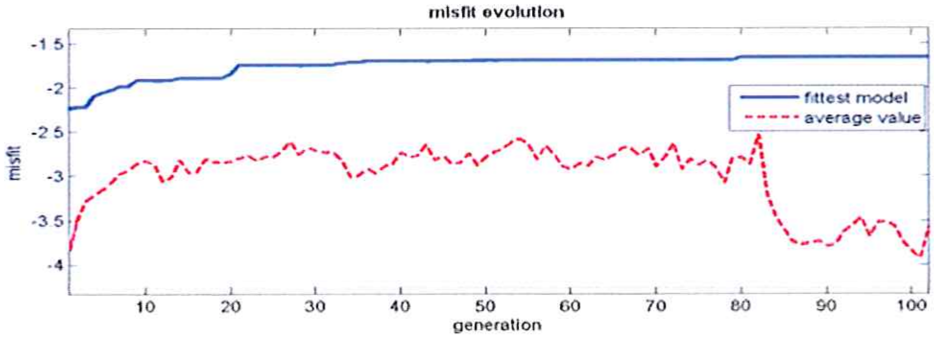
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE

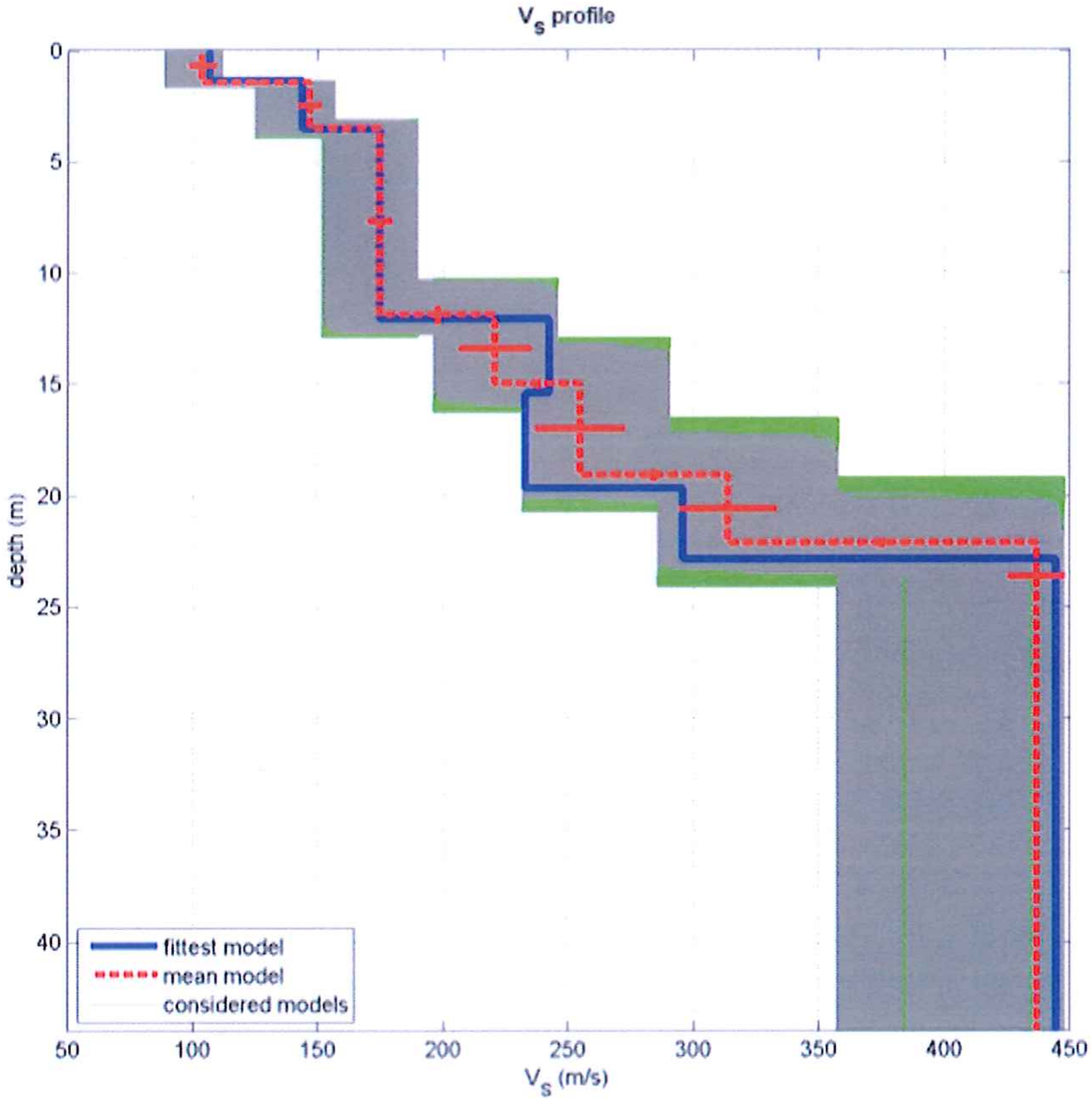

dispersion curves - model: model.mod


velocity spectrum & dispersion curve


misfit evolution

www.winmasw.com

MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA



dataset: 368-10.dat

dispersion curve: pick.cdp

Vs30 (best model): 221 m/s

Vs30 (mean model): 224 m/s

BEST MODEL
Vs30 = 221m/s

ALLEGATO N° 3

Indagine sismica MASW

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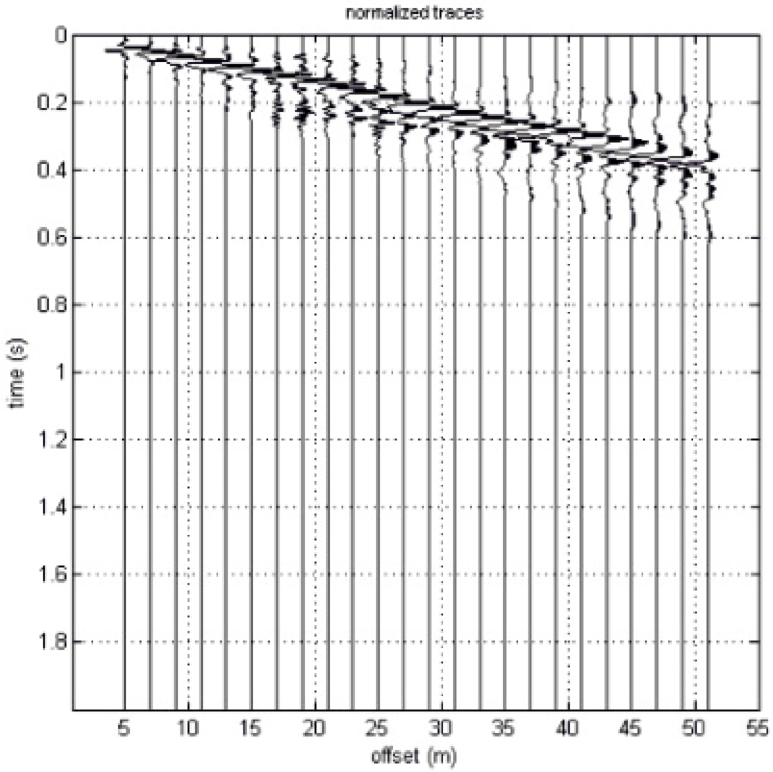
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

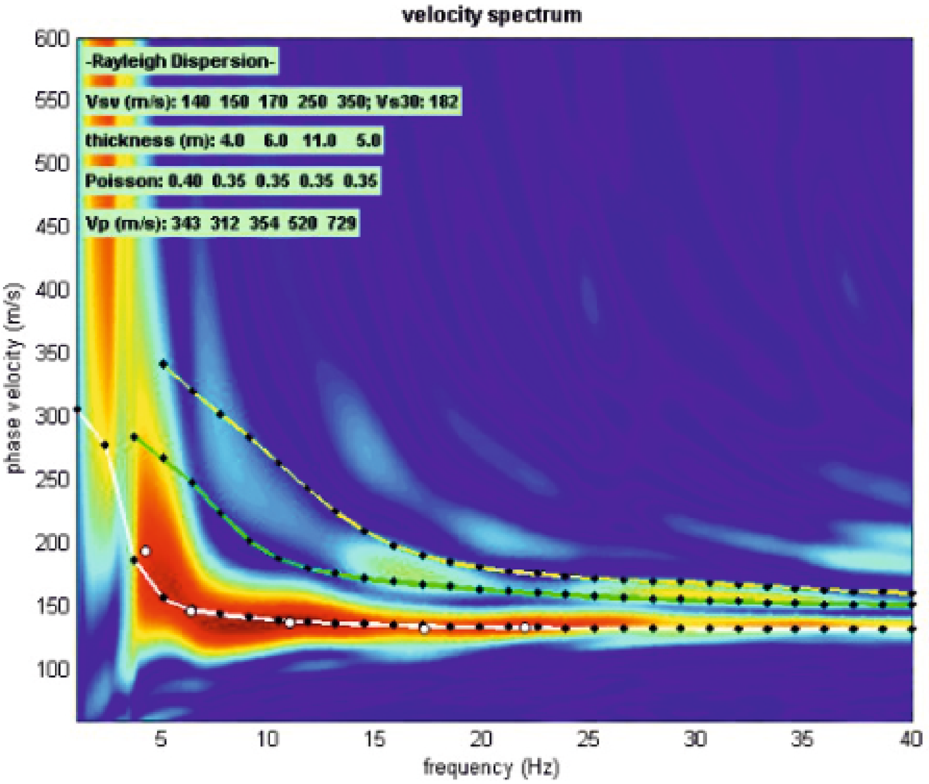
Cantiere: Medolla, Via dei Falegnami
Operatori :Dott.ssa Annalisa Cameroni e Dott.ssa Linda Veratti
Lavoro: Studio del terreno di fondazione
Data: 12/02/2014
Elaborazione: Dott.ssa Linda Veratti
Responsabile: Dott. Geol. Pier Luigi Dallari

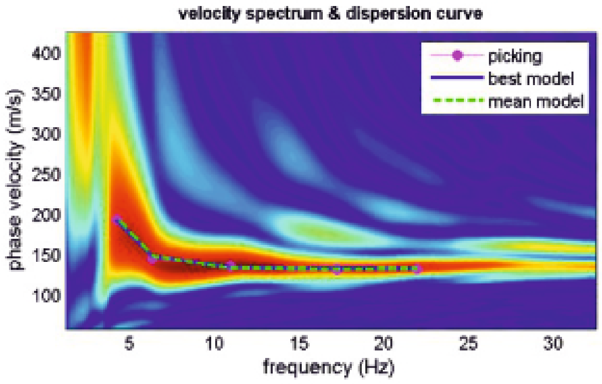
RIFERIMENTO
787/13

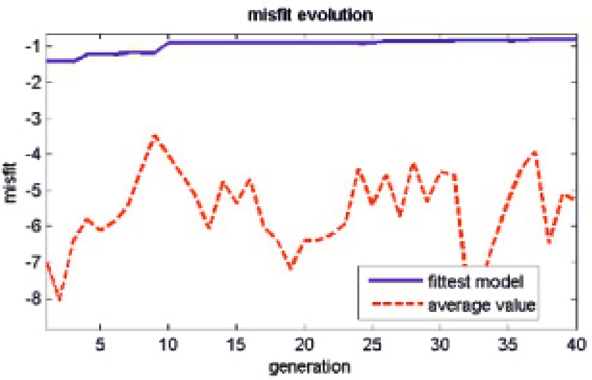
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



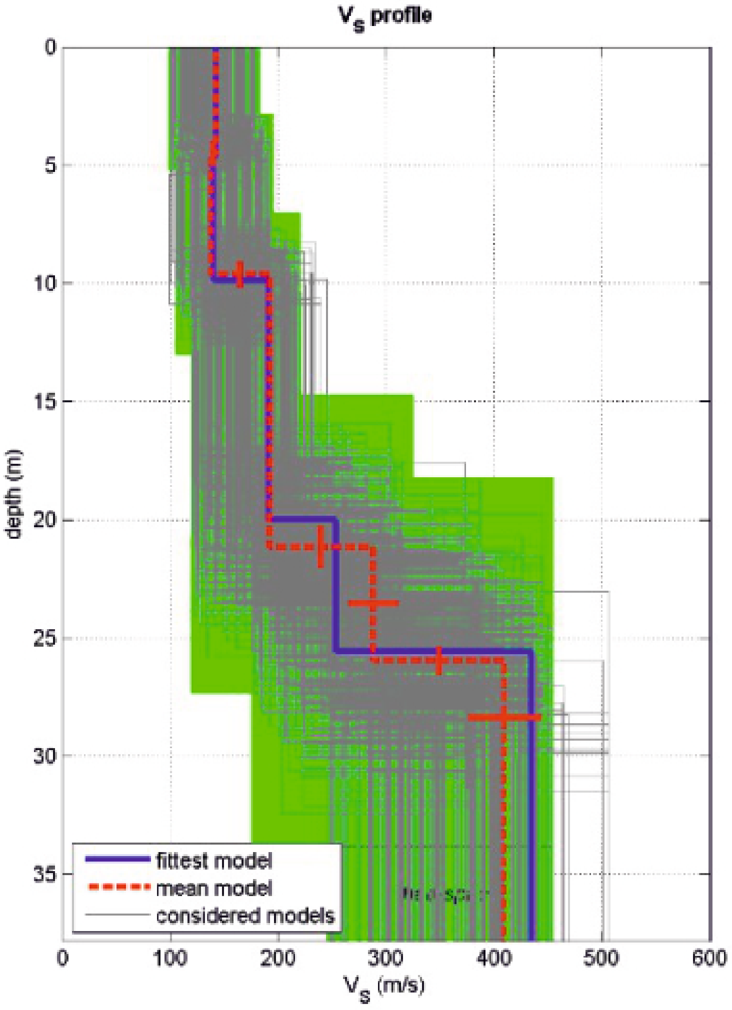
SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE







MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA

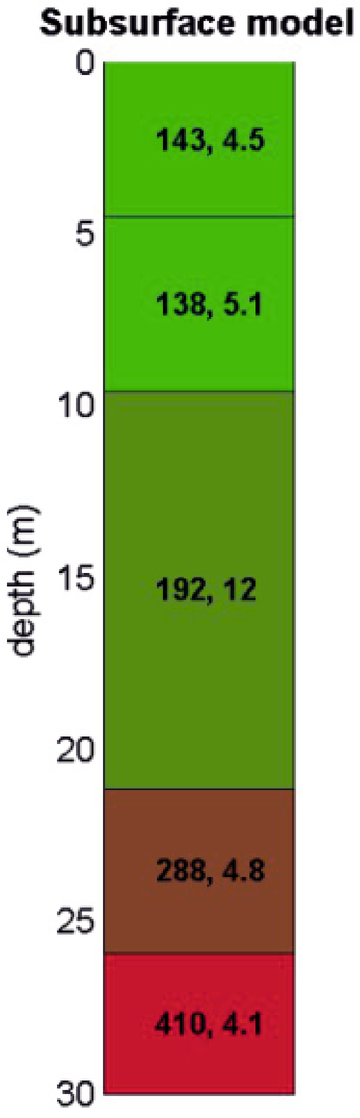


dataset: 471_5.dat

dispersion curve: PICKING.cdp

Vs30 (best model): 194 m/s

Vs30 (mean model): 193 m/s



V_S	density	thickness
(m/s)	(gr/cm^3)	(m)

BEST MODEL
Vs30 = 194 m/s

GEO GROUP s.r.l.
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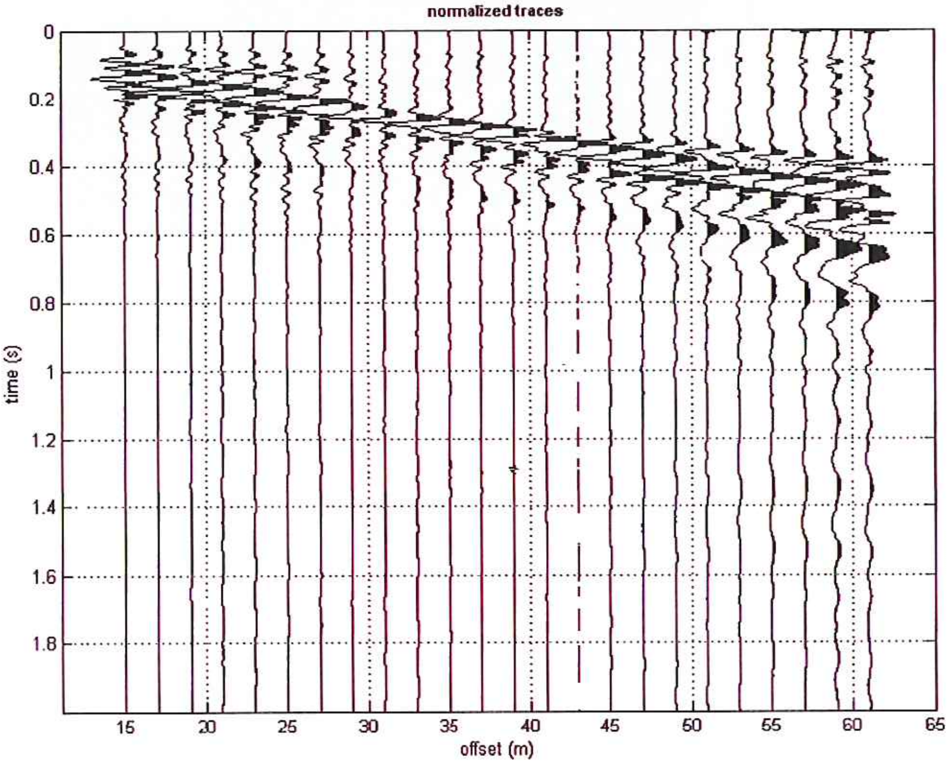
SISTEMA DI GESTIONE PER LA QUALITÀ CERTIFICATO = UNI EN ISO 9001:2008 = SINCERT DNV

ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

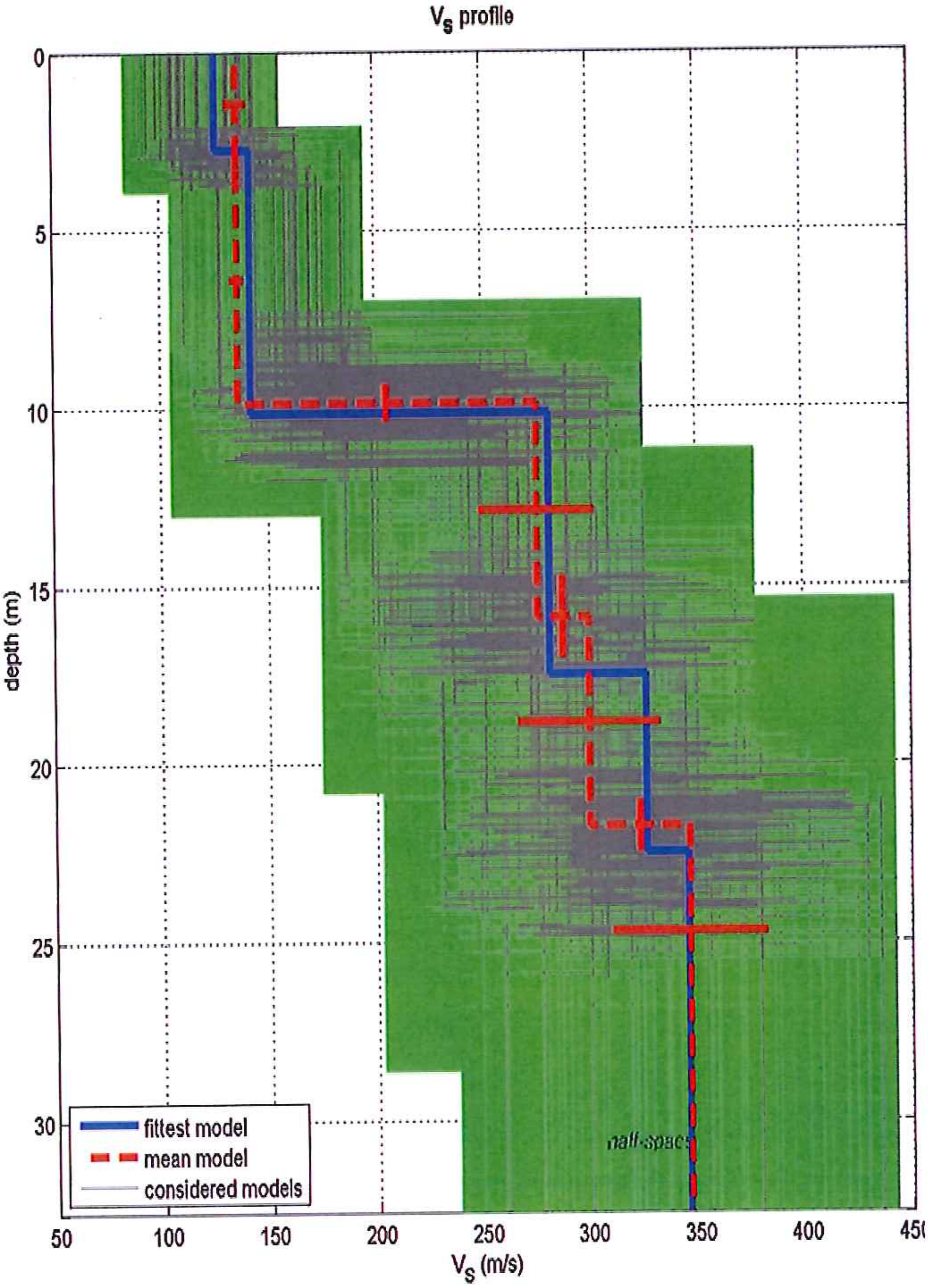
Cantiere:	Medolla (MO), Via Provinciale n. 69
Operatori:	Dott.ssa Erika Parmeggiani e Dott.ssa Linda Veratti
Data:	07/11/2013
Lavoro:	Studio del terreno di fondazione
Elaborazione:	Dott.ssa Erika Parmeggiani
Responsabile:	Dott. Geol. Pier Luigi Dallari

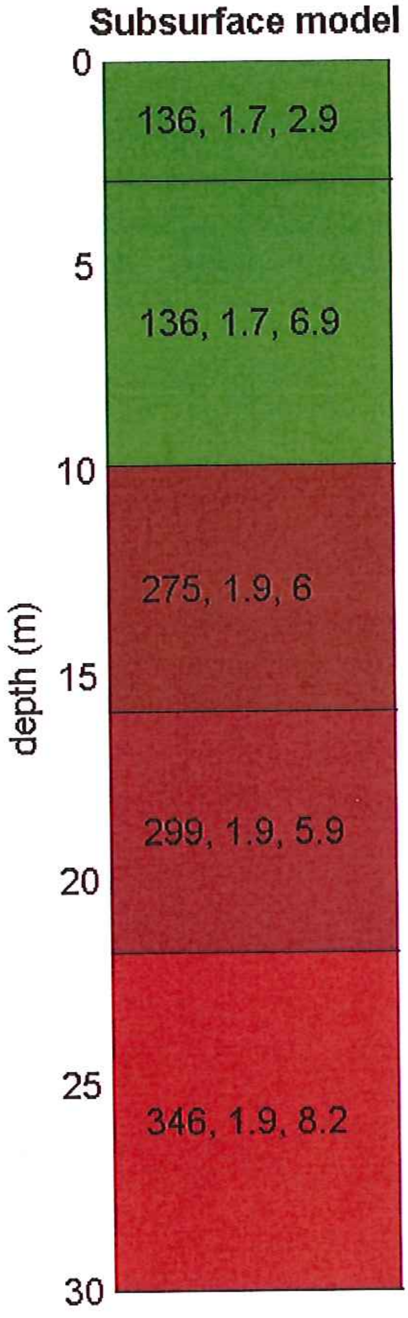
CERTIFICATO
356_M_13

UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA





BEST MODEL
Vs30 = 219 m/s

V_S density thickness
(m/s) (gr/cm^3) (m)

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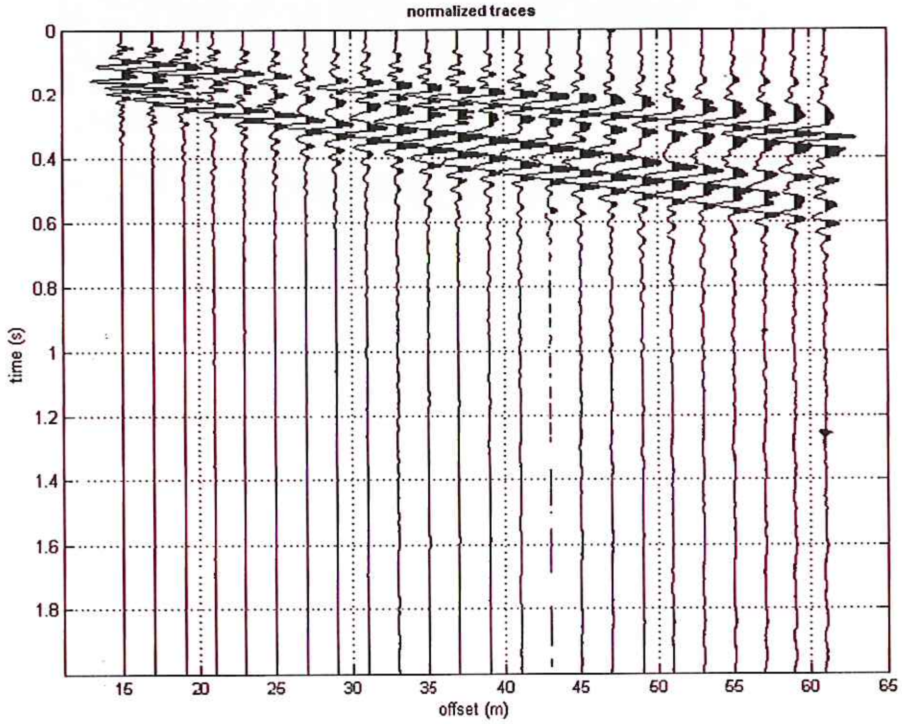
SISTEMA DI GESTIONE PER LA QUALITÀ CERTIFICATO
= UNI EN ISO 9001:2008 =
SINCERT DNV

ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

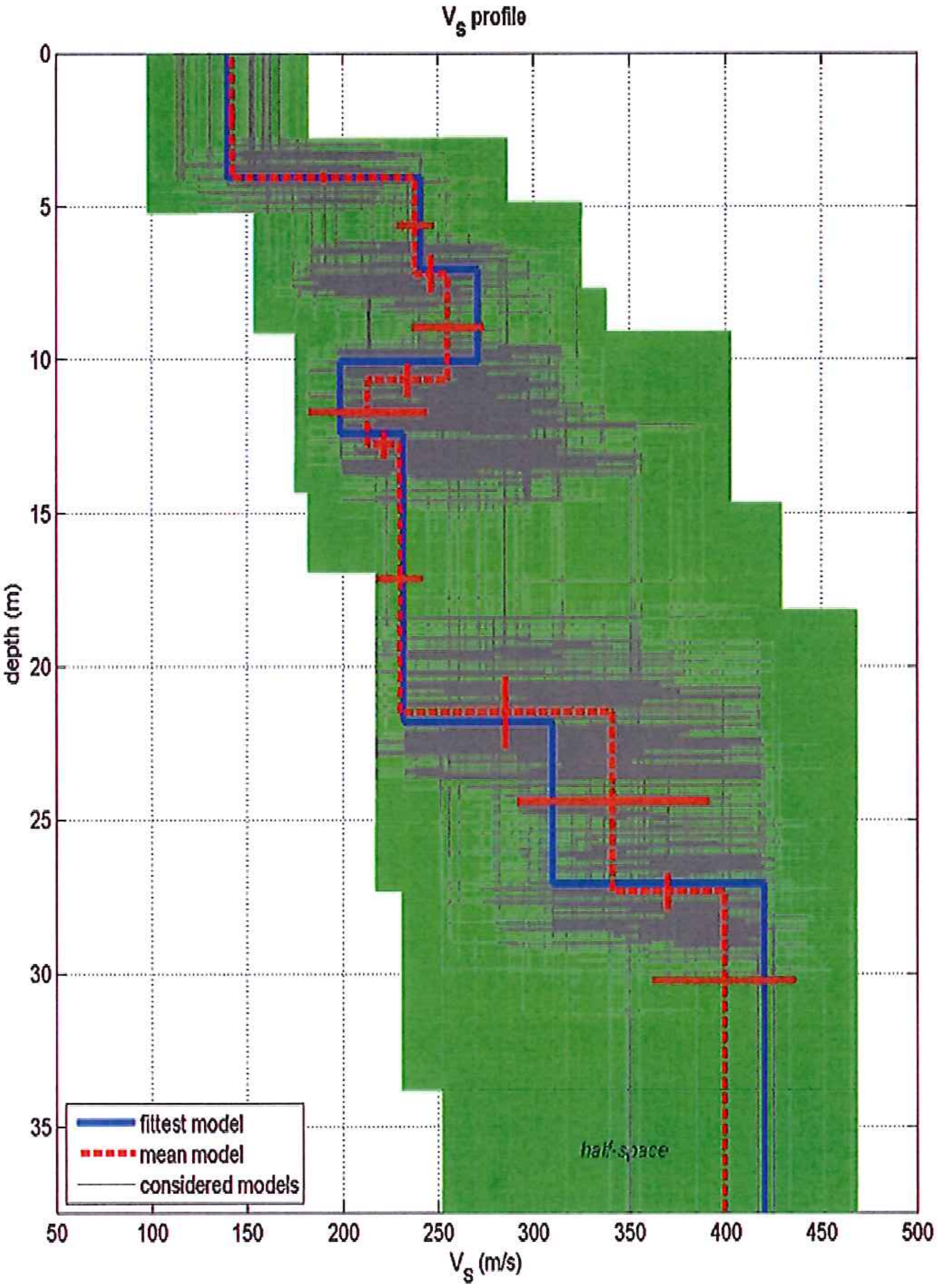
Cantiere: Medolla (MO), Via Messoretta n. 3
Operatori: Dott.ssa Erika Parmeggiani e Dott.ssa Linda Veratti
Data: 07/11/2013
Lavoro: Studio del terreno di fondazione
Elaborazione: Dott.ssa Erika Parmeggiani
Responsabile: Dott. Geol. Pier Luigi Dallari

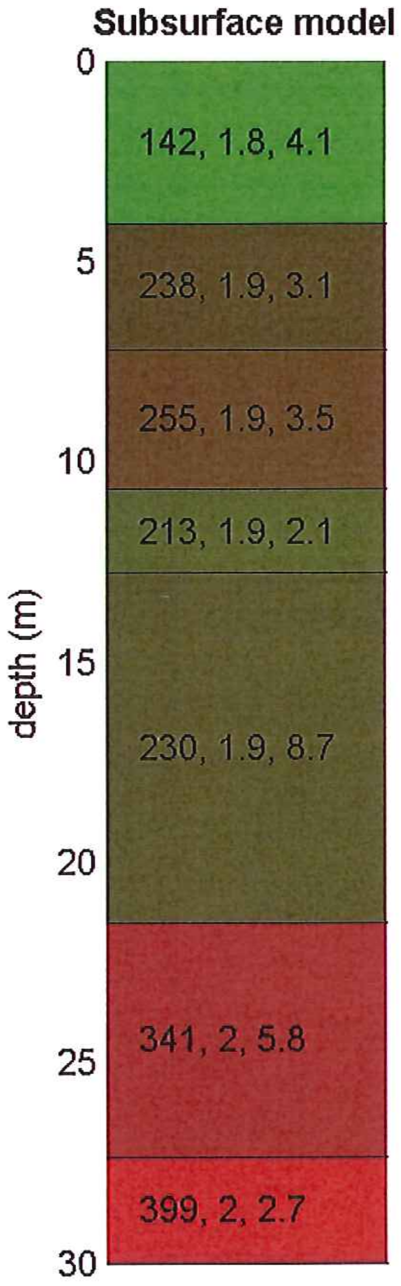
CERTIFICATO
357_M_13

UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA





BEST MODEL
Vs30 = 233 m/s

V_S density thickness
(m/s) (gr/cm^3) (m)

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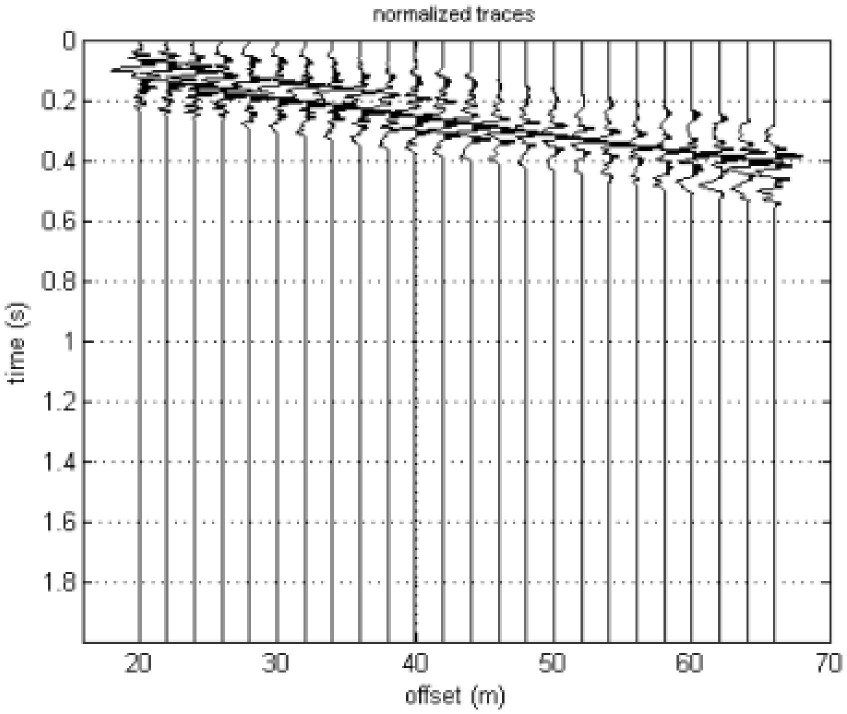
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

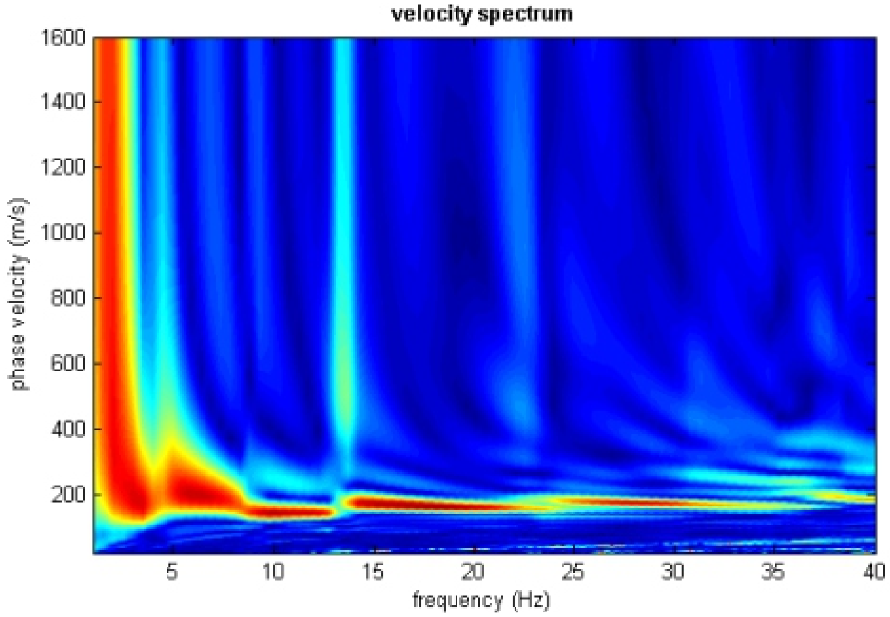
Cantiere: Medolla, via Caduti, n° 5
Operatori: D.ssa Sonia Gilioli
Data: 18/11/2013
Lavoro: Studio terreno di fondazione
Elaborazione: D.ssa Sonia Gilioli
Responsabile: Dott. Geol. Pier Luigi Dallari

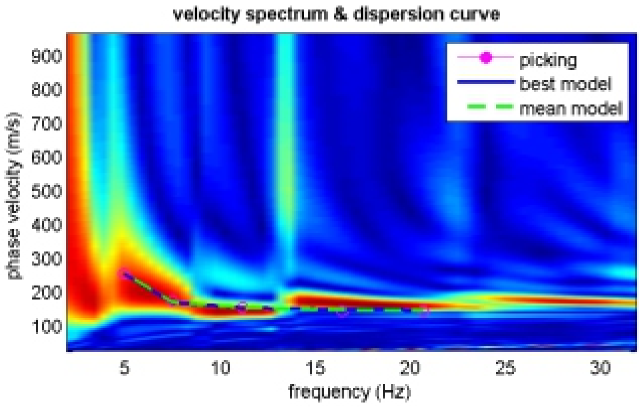
CERTIFICATO
366_M_13

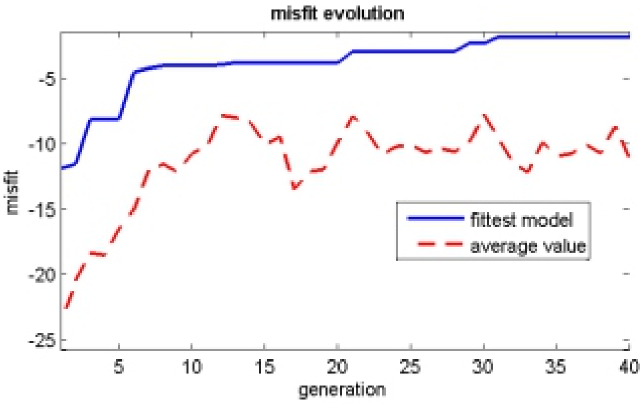
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



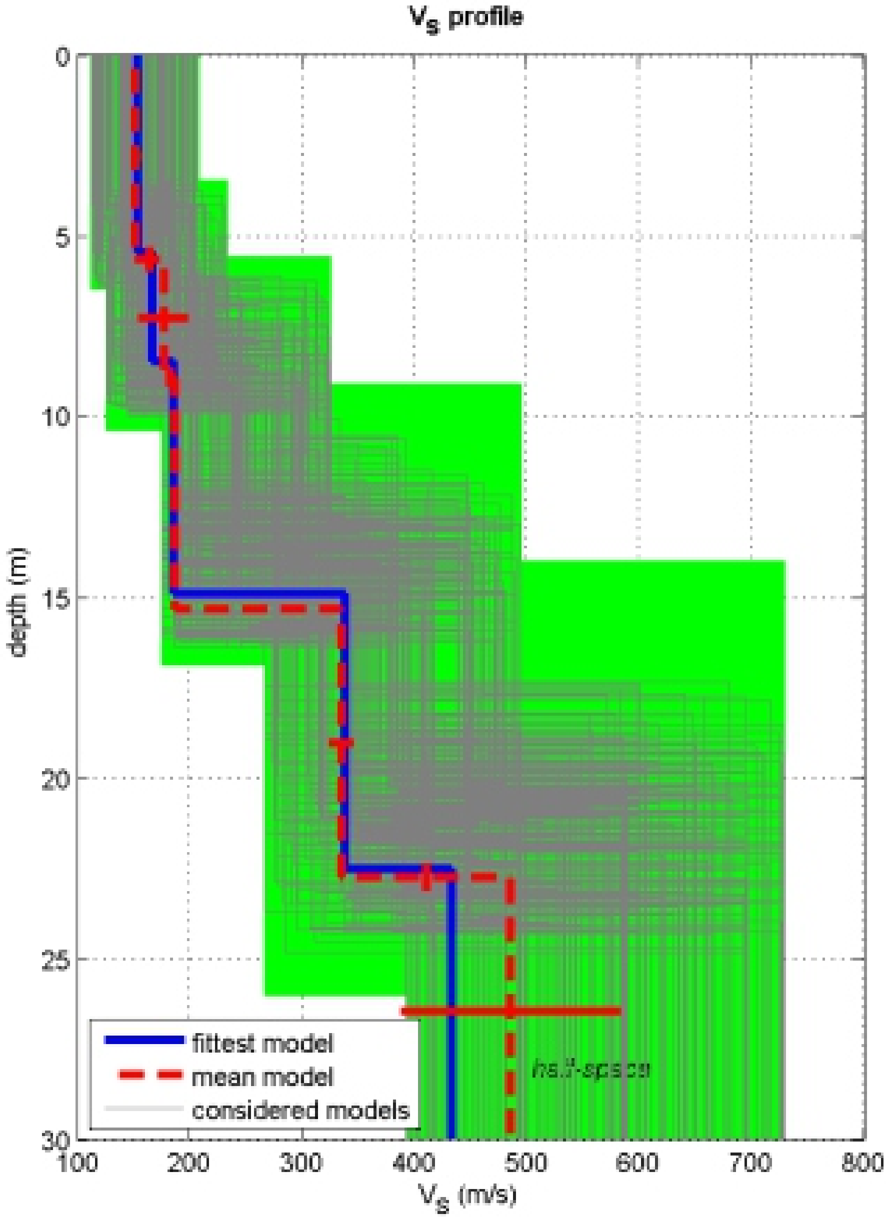
SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE

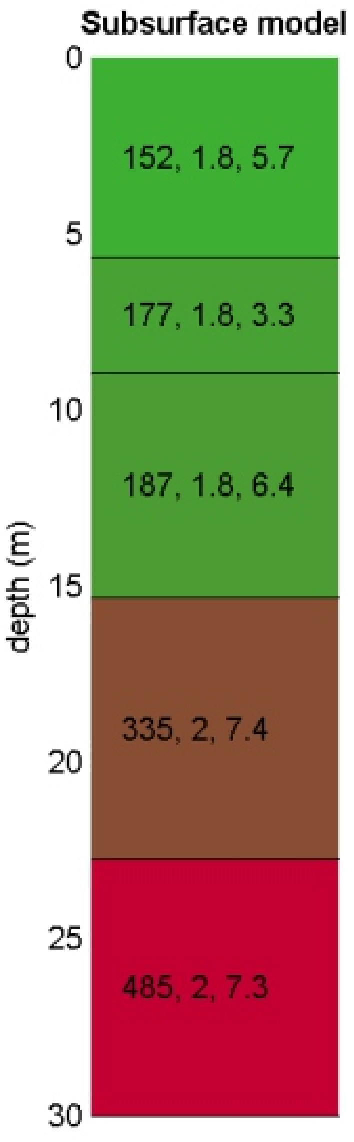






MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA





BEST MODEL
Vs30 = 234 m/s

V_S	*density*	*thickness*
(m/s)	(gr/cm^3)	(m)

ALLEGATO N° 3

Indagine sismica MASW

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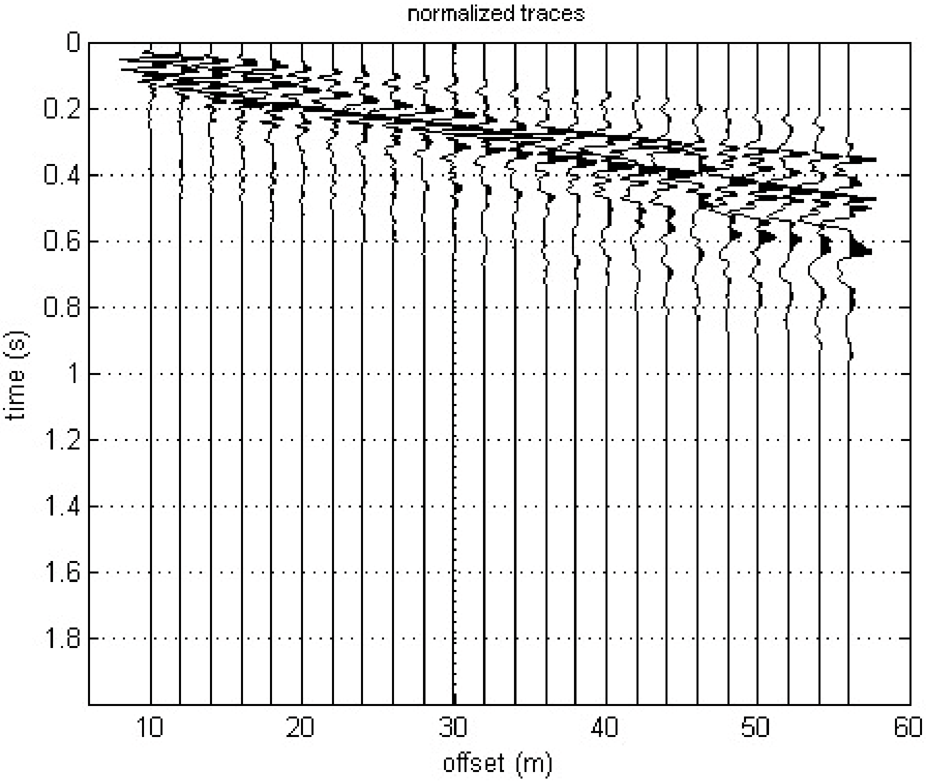
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

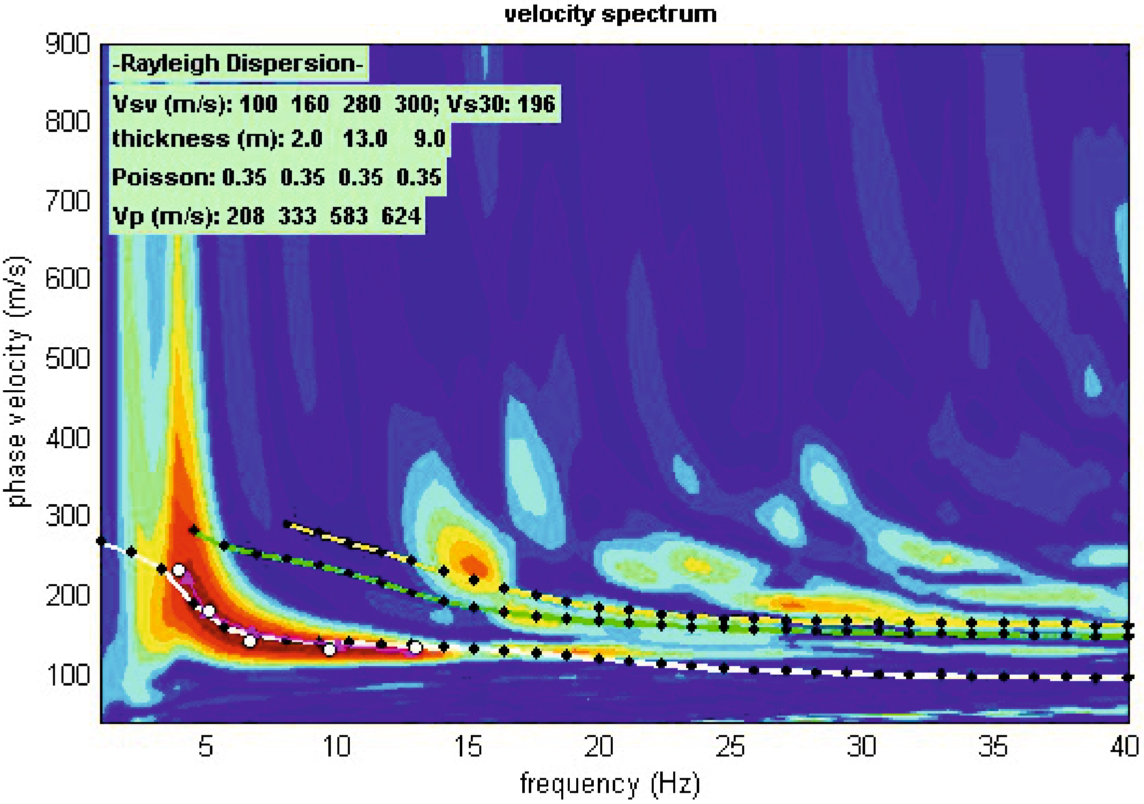
Cantiere:	Medolla, Via Provinciale 91/93
Operatori:	Dott.ssa Linda Veratti e Dott.ssa Sonia Gilioli
Data:	20/11/2013
Lavoro:	Studio del terreno di fondazione
Elaborazione:	Dott.ssa Linda Veratti
Responsabile:	Dott. Geol. Pier Luigi Dallari

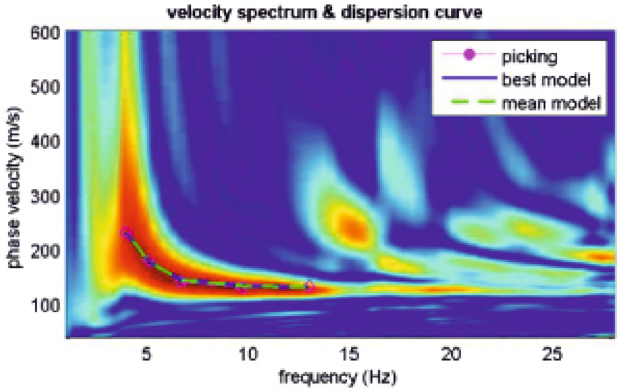
CERTIFICATO
380_M_13

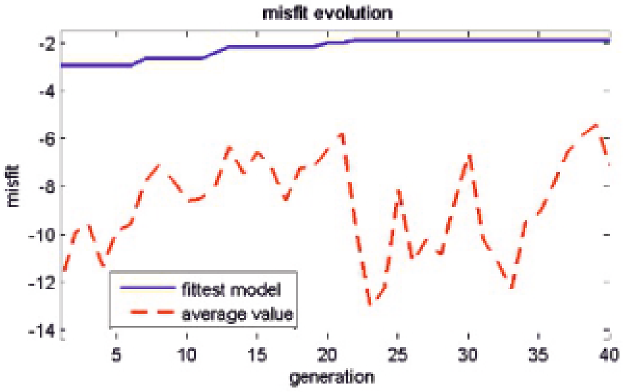
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



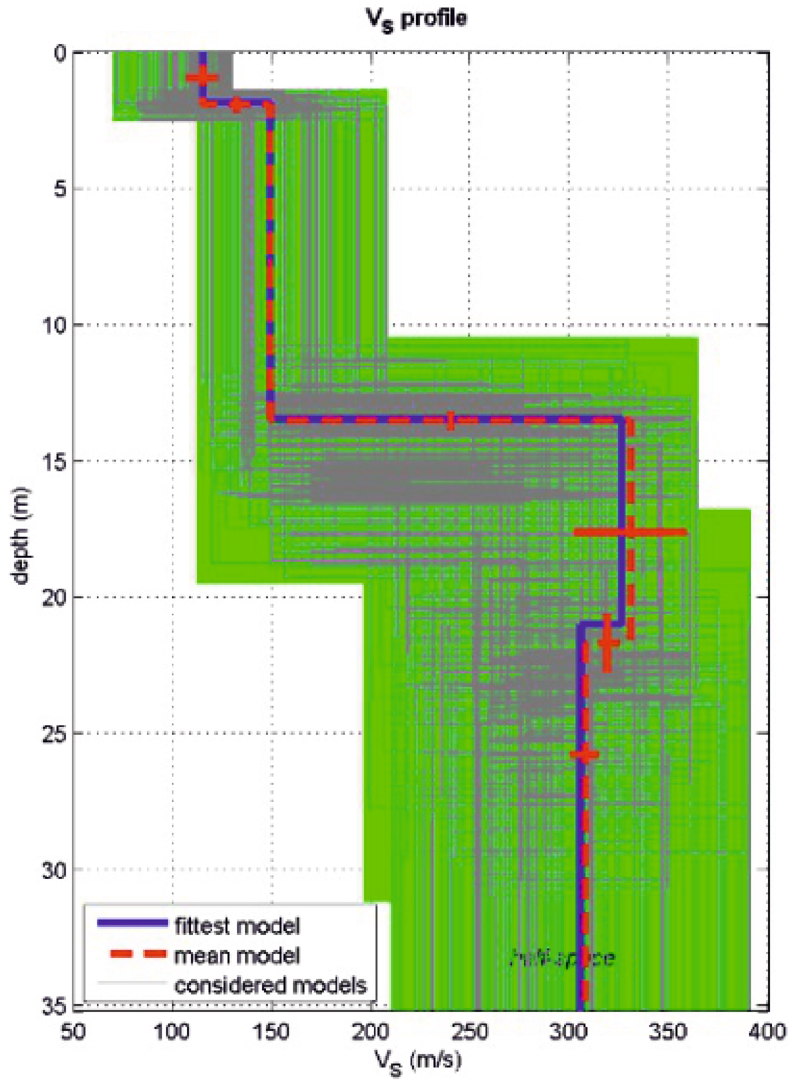
SPETTRO RELATIVO ALLE VELOCITA’ DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE

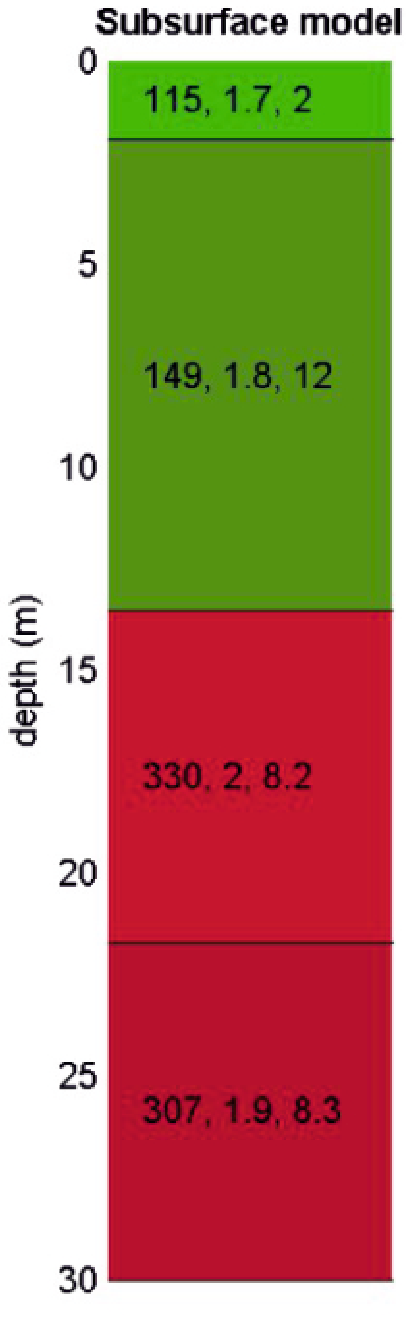






MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA





dataset: 724 ₁0.dat

dispersion curve: picking.cdp

Vs30 (best model): 204 m/s

Vs30 (mean model): 205 m/s

V_S	*density*	*thickness*
(m/s)	(gr/cm^3)	(m)

BEST MODEL
Vs30 = 204 m/s

ALLEGATO N° 3

Indagine sismica MASW

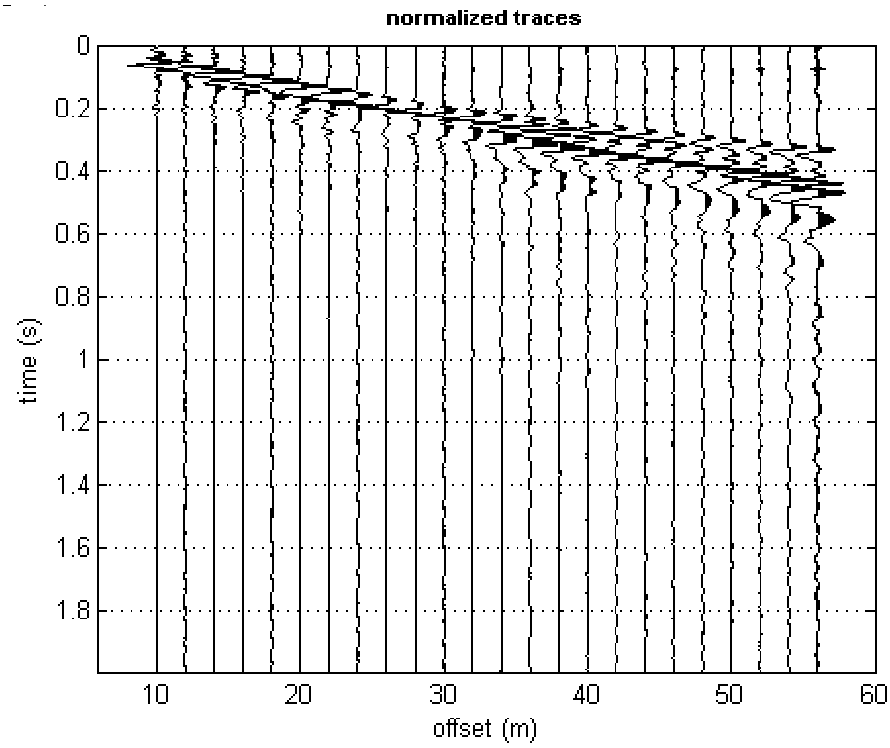
GEO GROUP s.r.l.
Sede Legale: via C. Costa, 182 – 41124 Modena
Sede operativa: via per Modena, 12 – 41051 Castelnuovo Rangone (MO)
Tel. 059-39.67.169 - Fax . 059-53.32.019
p.IVA e C.F. 02981500362 – www.geogroupmodena.it - e-mail: info@geogroupmodena.it

ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

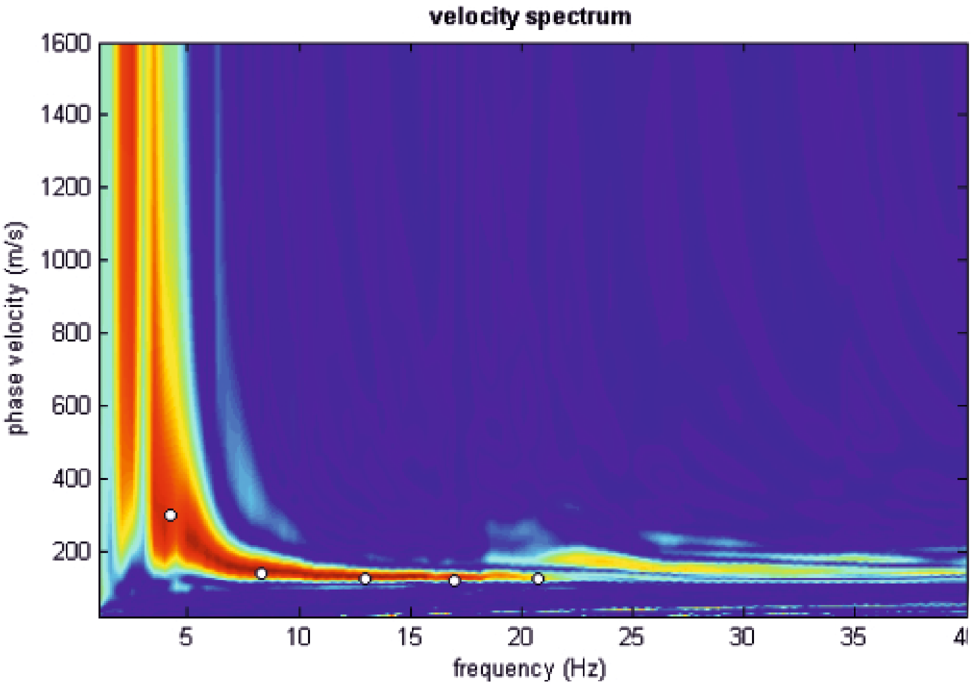
Cantiere: Medolla, via Rubadello, 27
Operatori: D.ssa Linda Veratti, D.ssa Sonia Gilioli
Data: 20/11/2013
Lavoro: Studio terreno di fondazione
Elaborazione: D.ssa Sonia Gilioli
Responsabile: Dott. Geol. Pier Luigi Dallari

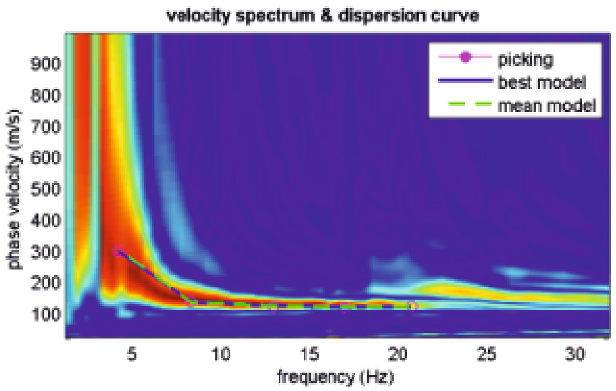
CERTIFICATO
385_M_13

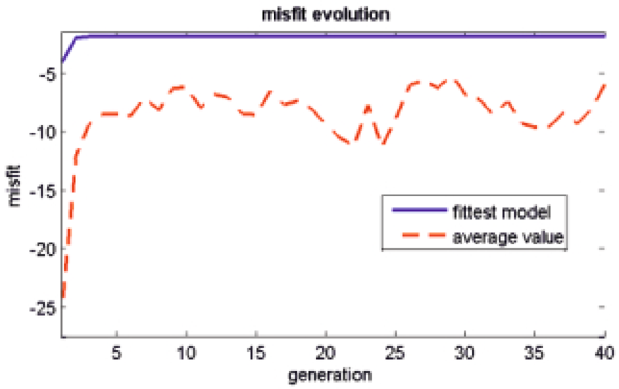
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE

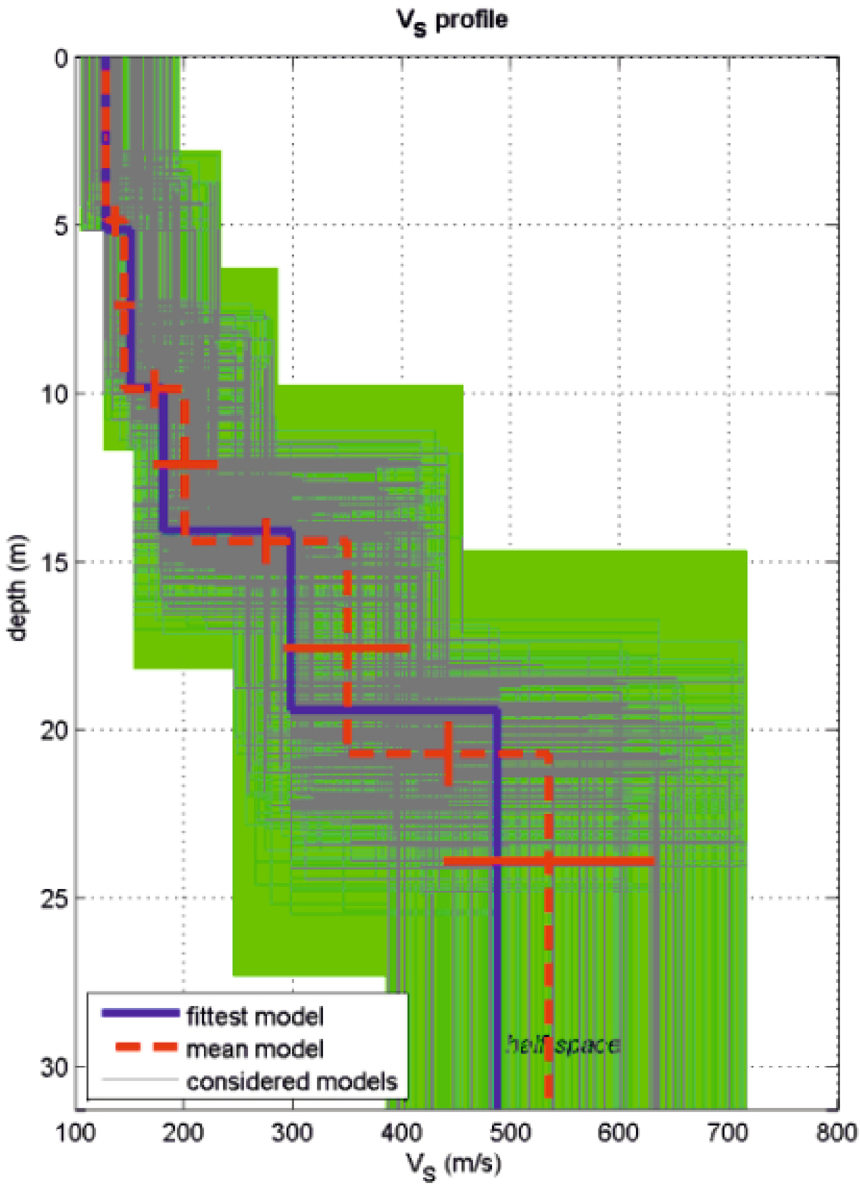


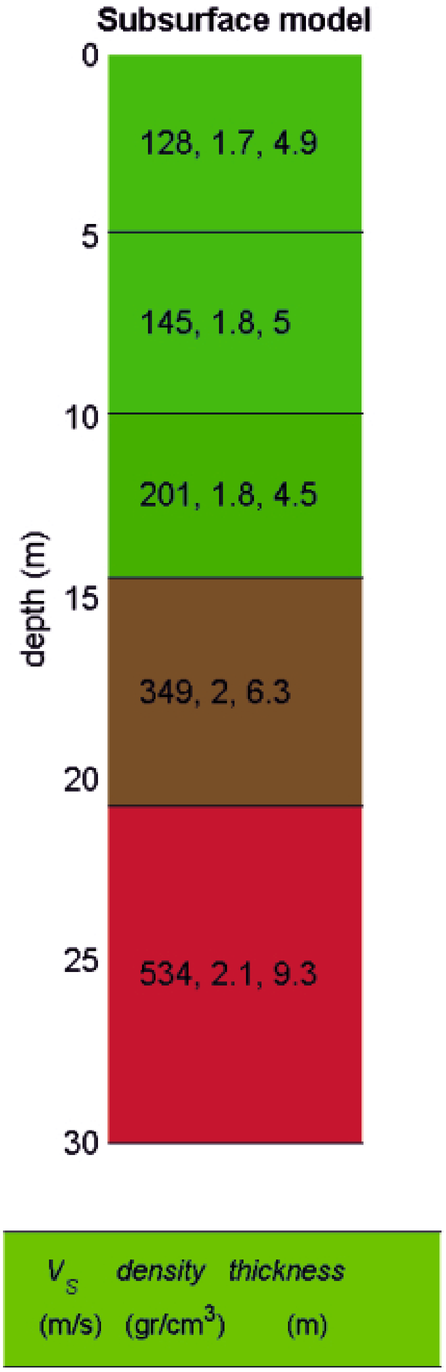




www.winmasw.com

MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA





dataset: 741 $_1$0.dat

dispersion curve: pick1.cdp

Vs30 (best model): 223 m/s

Vs30 (mean model): 230 m/s

BEST MODEL

Vs30 = 223 m/s

GEO GROUP s.r.l.
Sede Legale: via C. Costa, 182 – 41123 Modena
Sede operativa: via per Modena, 12 – 41051 Castelnuovo Rangone (MO)
Tel. 059-39.67.169 - Fax. 059-59.60.176
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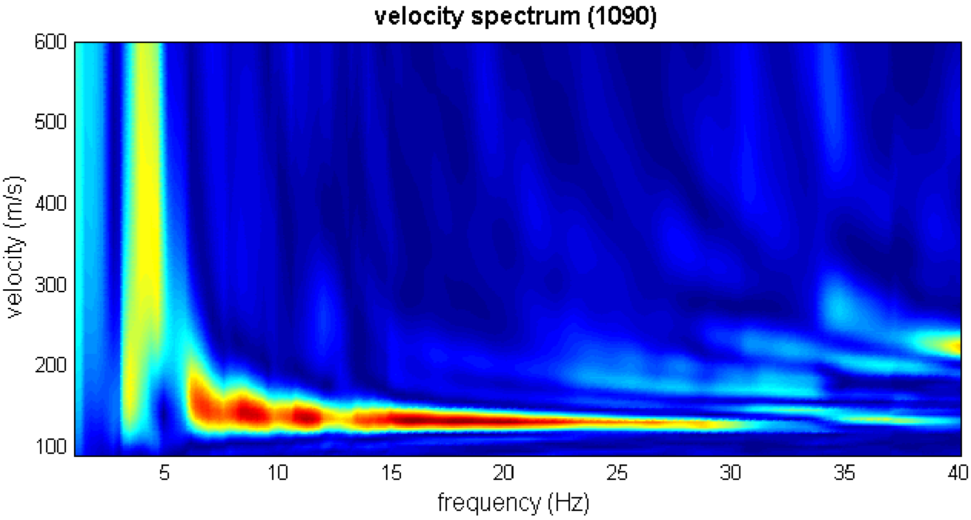
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

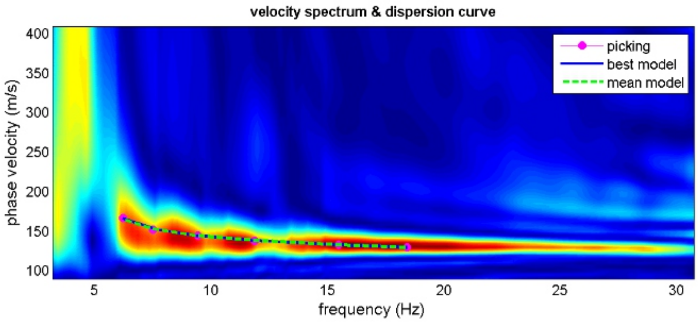
Cantiere: Medolla, SS12
Lavoro: Studio del terreno di fondazione
Responsabile: Dott. Geol. Pier Luigi Dallari

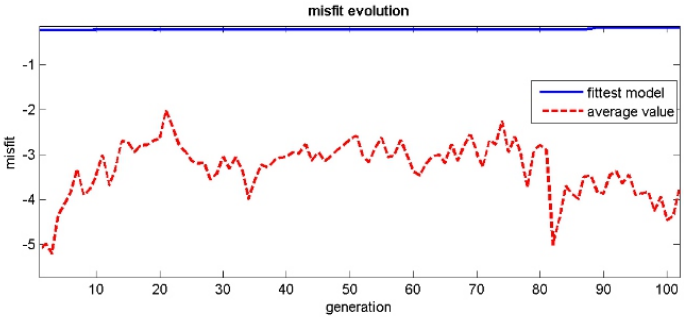
MASW
Rif. 739/19

UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO

SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE







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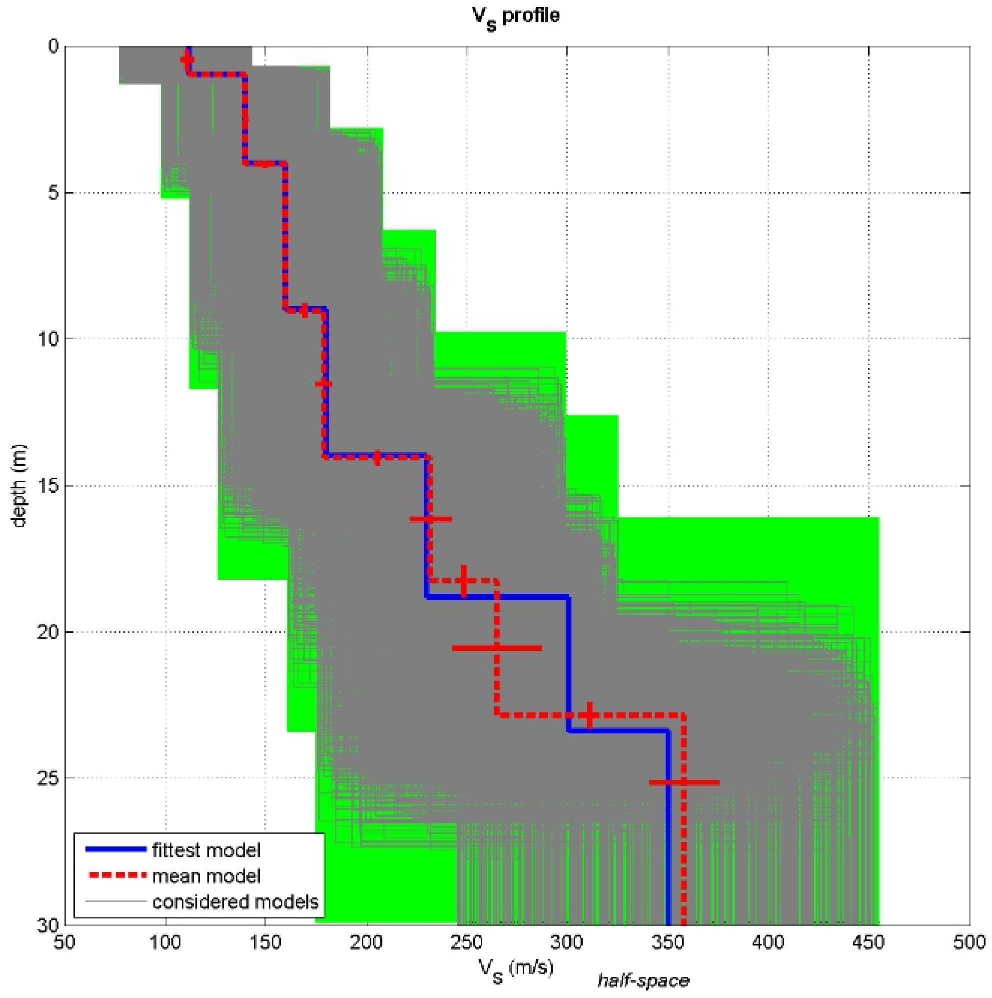
MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA



dataset: 1090.dat

dispersion curve: pick1.cdp

Vs30 (best model): 208 m/s

Vs30 (mean model): 206 m/s

BEST MODEL
Vs30 = 208 m/s

GEO GROUP s.r.l.
Indagini geognostiche e geofisiche – geologia applicata alle costruzioni – laboratorio geotecnico - idrogeologia – coltivazione cave– bonifiche – consolidamenti – geologia ambientale – consulenze geologiche e geotecniche

Indagine sismica MASW

GEO GROUP s.r.l.
Sede Legale: via C. Costa, 182 – 41124 Modena
Sede operativa: via per Modena, 12 – 41051 Castelnuovo Rangone (MO)
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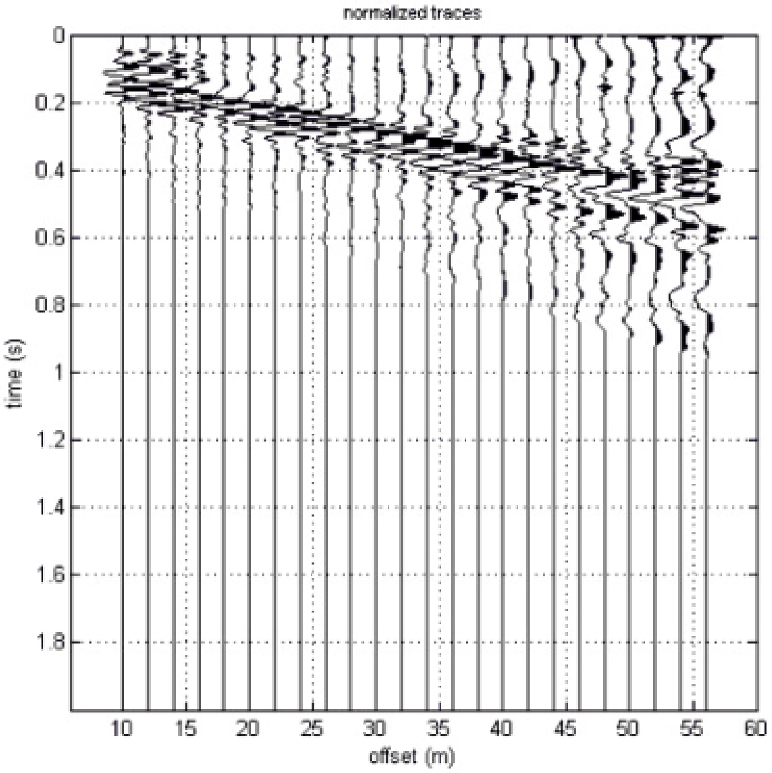
p.IVA e C.F. 02981500362 – www.geogroupmodena.it - e-mail: info@geogroupmodena.it

ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

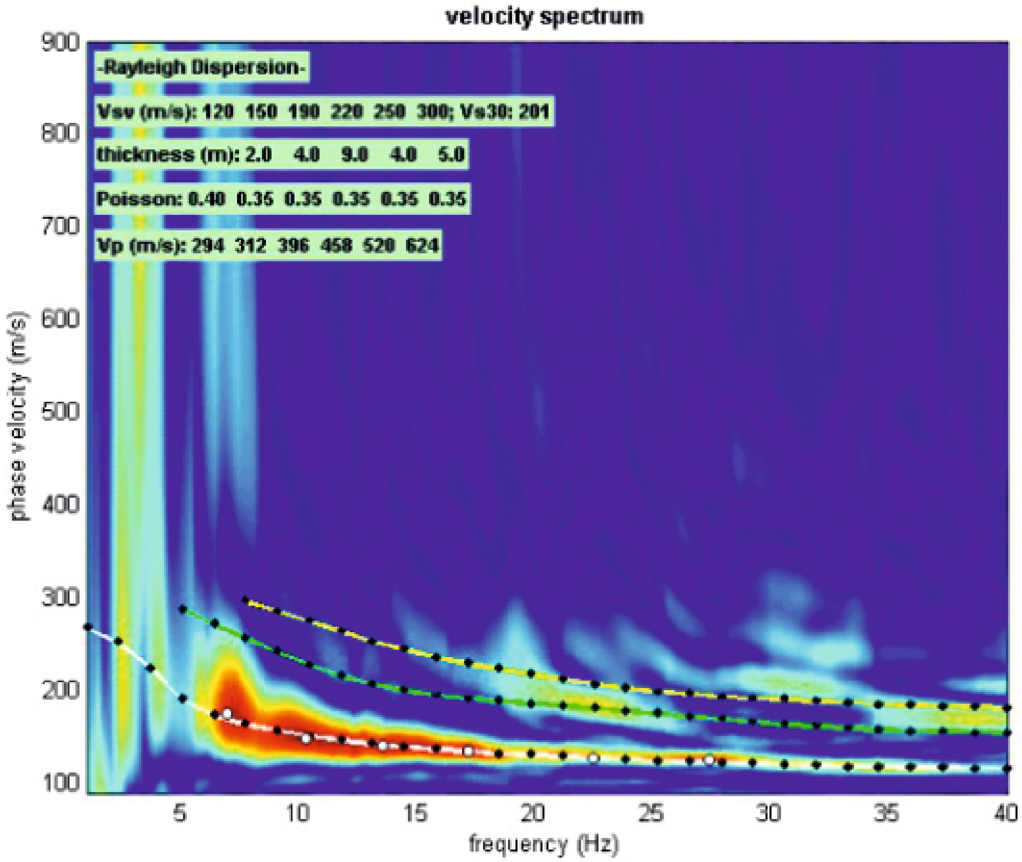
Cantiere: Medolla, Via Grande
Operatori :Dott. Gabriele Ghirardini
Lavoro: Realizzazione nuovo magazzino comunale
Elaborazione: D.ssa Linda Veratti
Responsabile: Dott. Geol. Pier Luigi Dallari

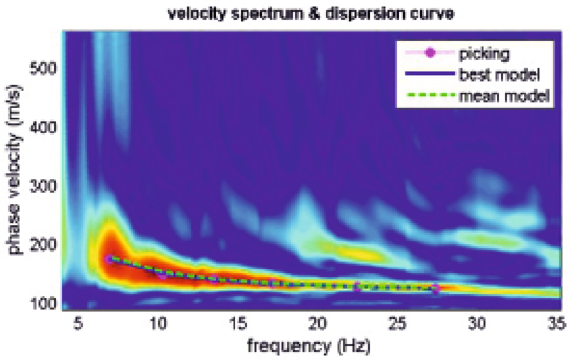
RIFERIMENTO
787/13

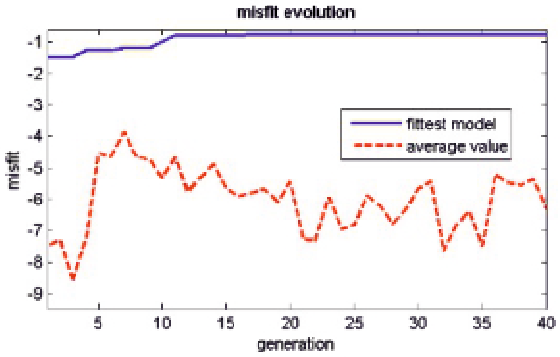
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



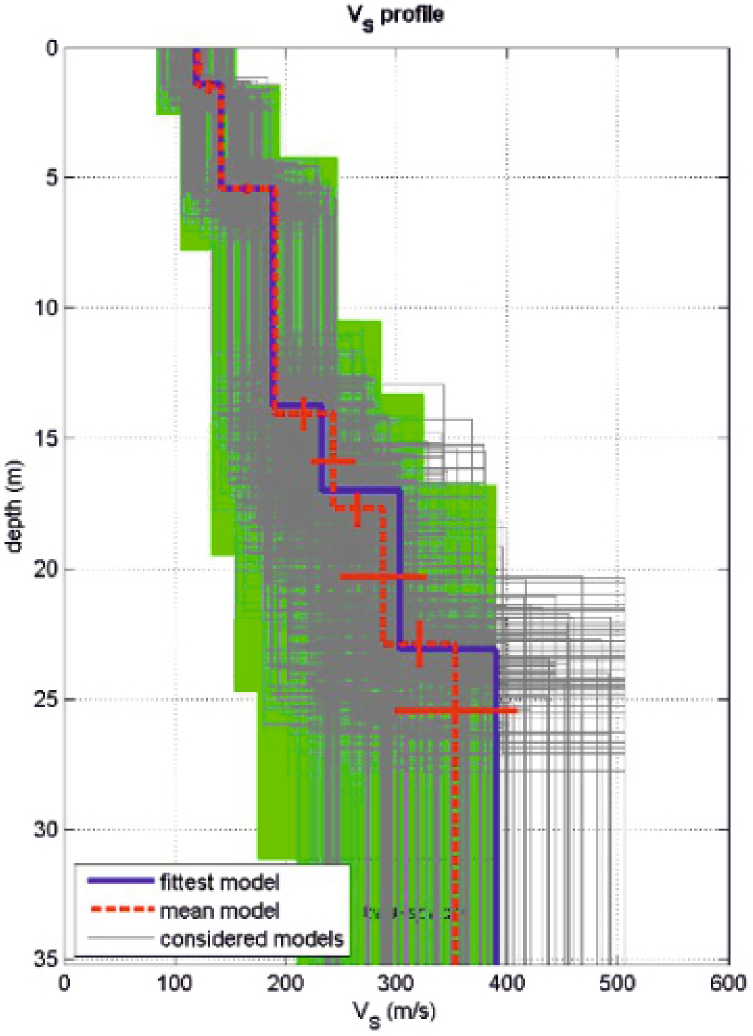
SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE

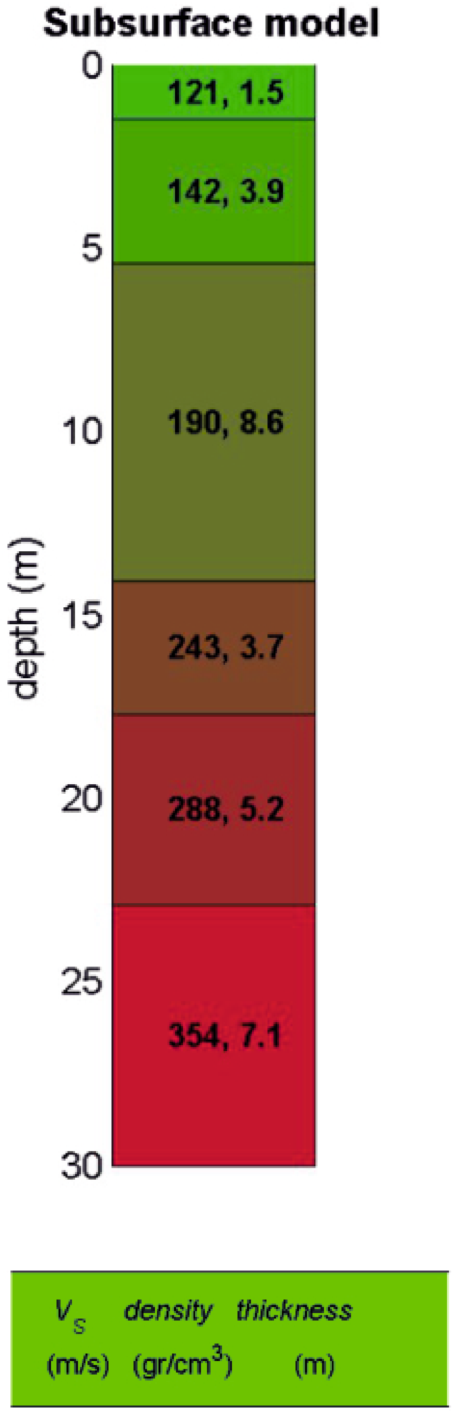






MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA





dataset: 420.dat

dispersion curve: picking.cdp

Vs30 (best model): 221 m/s

Vs30 (mean model): 216 m/s

BEST MODEL

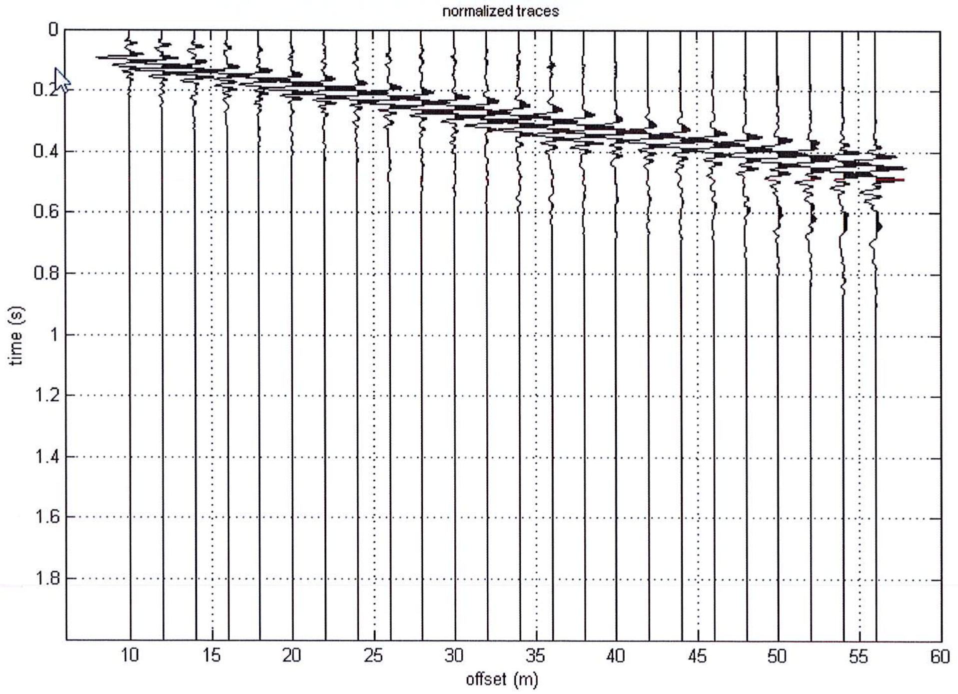
Vs30 = 221 m/s

GEO GROUP s.r.l.
Sede Legale: via C. Costa, 182 – 41124 Modena
Sede operativa: via per Modena, 12 – 41051 Castelnuovo Rangone (MO)
Tel. 059-39.67.169 - Fax . 059-53.32.019
p.IVA e C.F. 02981500362 – www.geogroupmodena.it - e-mail: info@geogroupmodena.it
SISTEMA DI GESTIONE PER LA QUALITÀ CERTIFICATO = UNI EN ISO 9001:2008 = SINCERT DNV

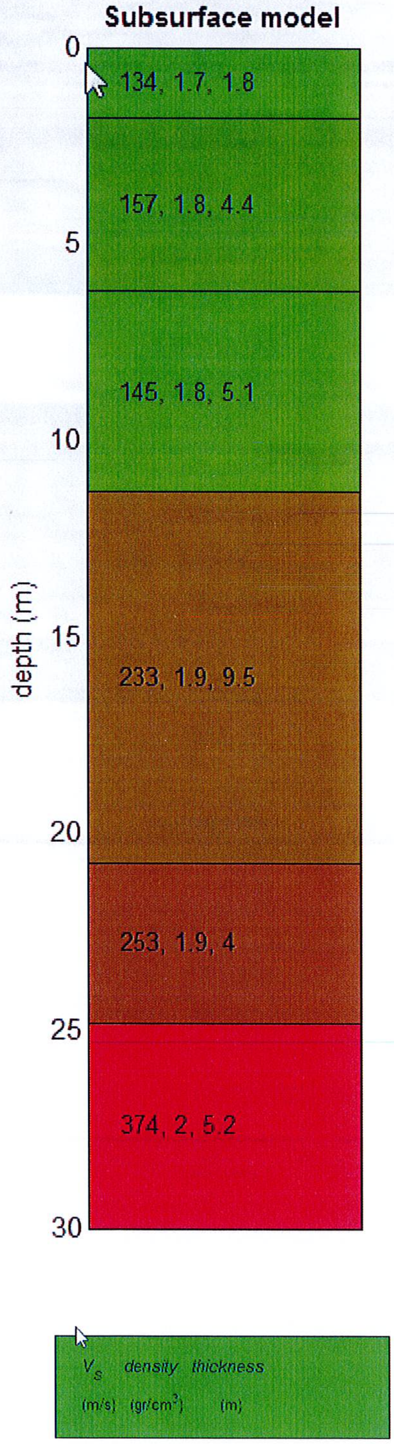
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

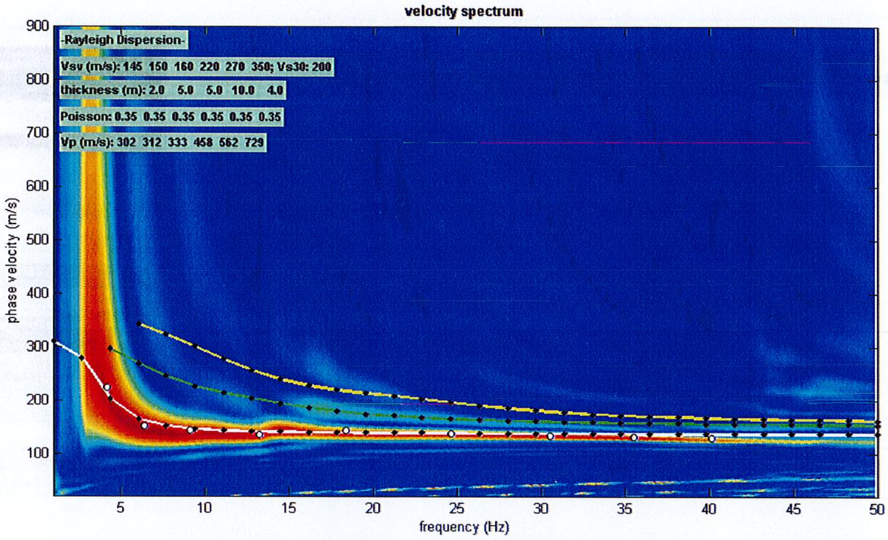
Cantiere:	Medolla (MO) - Villafranca – via Villafranca 83
Operatori:	Dott. ssa Erika Parmeggiani – Dott.ssa Linda Veratti
Data:	08/02/13
Lavoro:	Studio del terreno di fondazione
Elaborazione:	Geol. Monica Mazzoli
Responsabile:	Dott. Geol. Pier Luigi Dallari

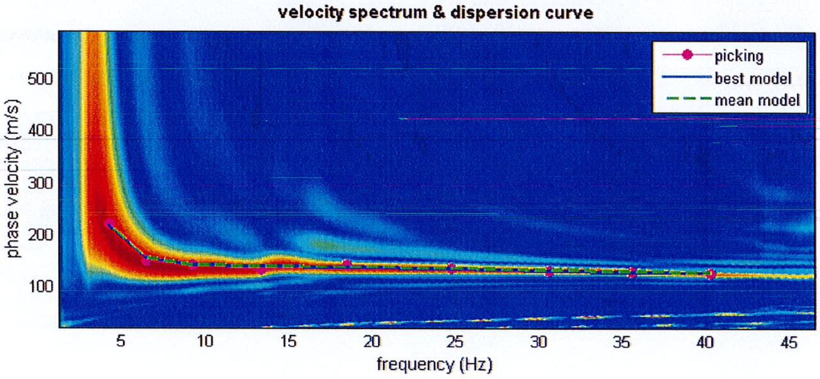
CERTIFICATO: 052_M_13

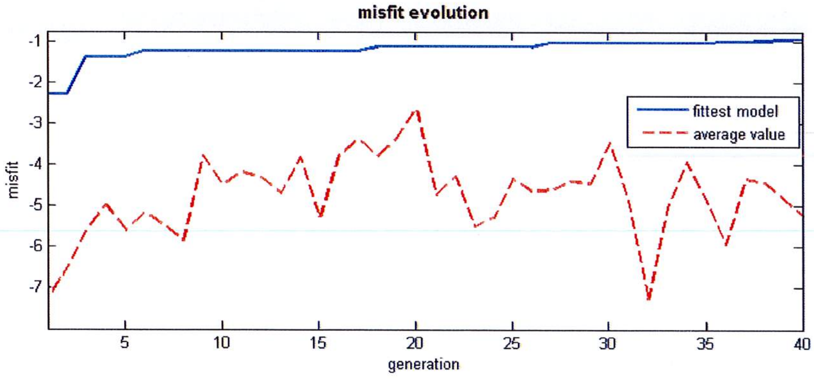


ELABORAZIONE



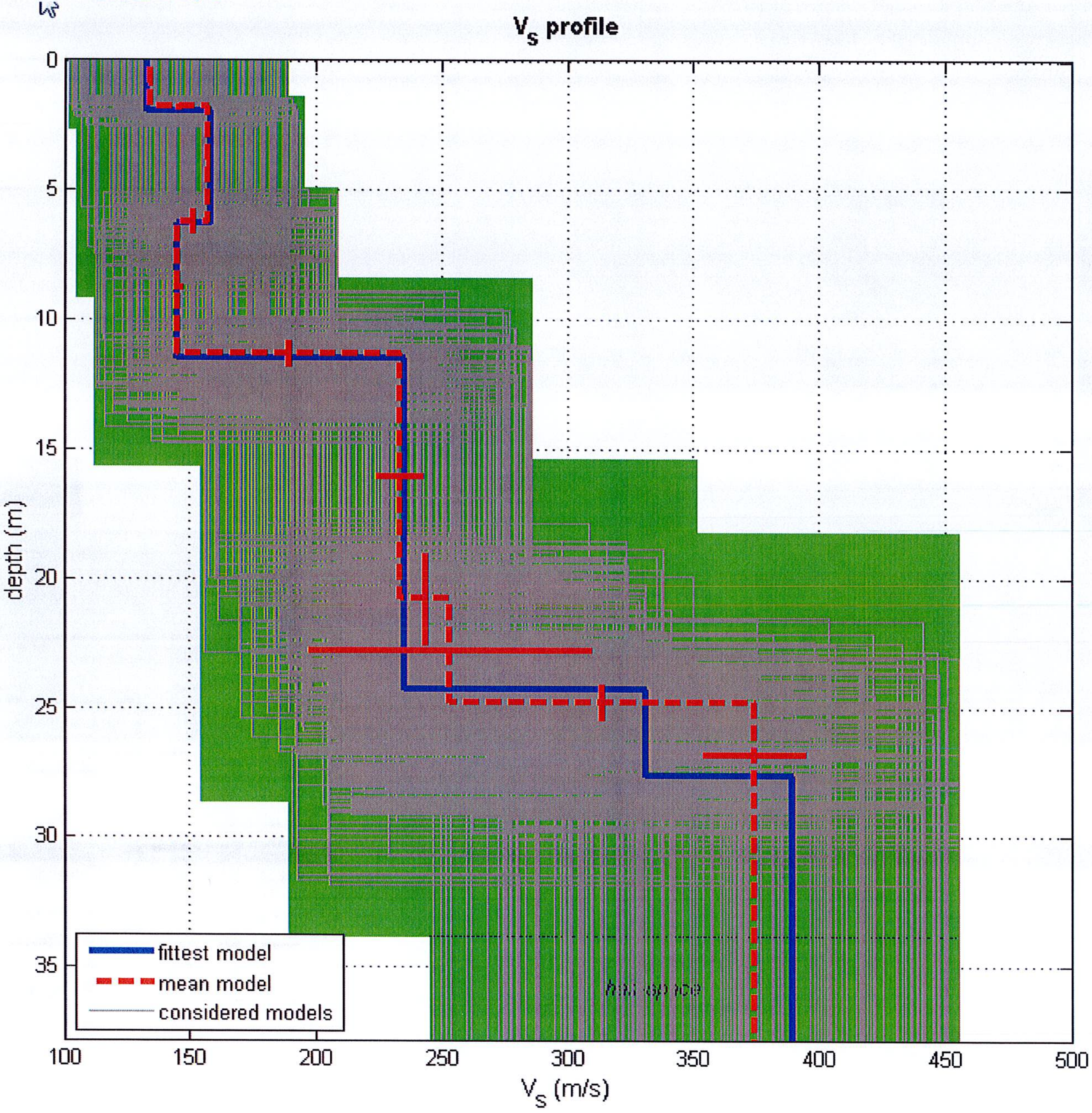






[MODELLO FINALE]

V_{s30} = 202 m/s



dataset: 250.dat

dispersion curve: p1.cdp

Vs30 (best model): 202 m/s

Vs30 (mean model): 204 m/s

GEO GROUP s.r.l.
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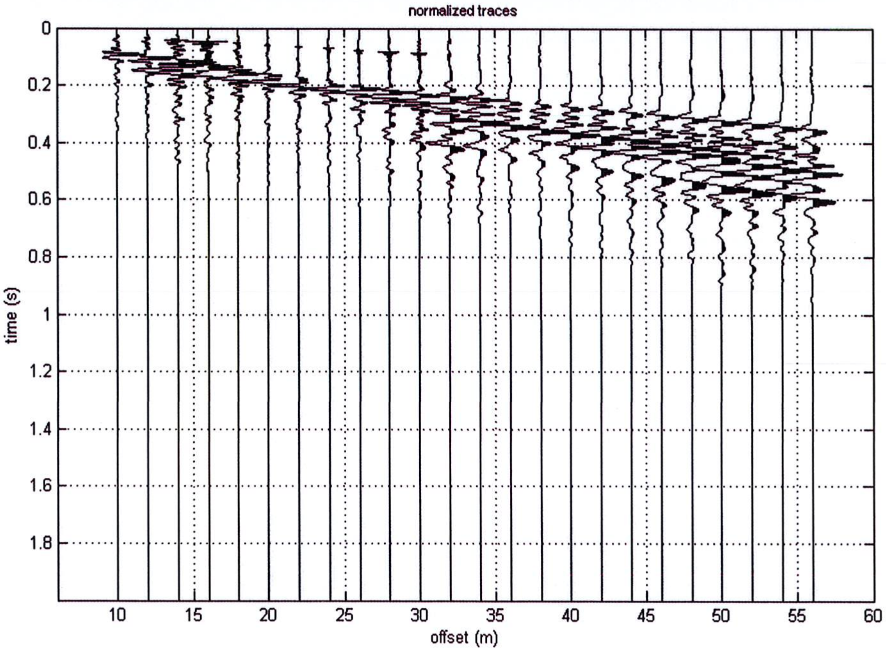
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

Cantiere:	Medolla (MO), Via Rubadello 23
Operatori:	Dott. ssa Erika Parmeggiani
Data:	15/02/13
Lavoro:	Studio del terreno di fondazione
Elaborazione:	Dott.ssa Mazzoli Monica
Responsabile:	Dott. Geol. Pier Luigi Dallari

CERTIFICATO: 069_M_13

ELABORAZIONE

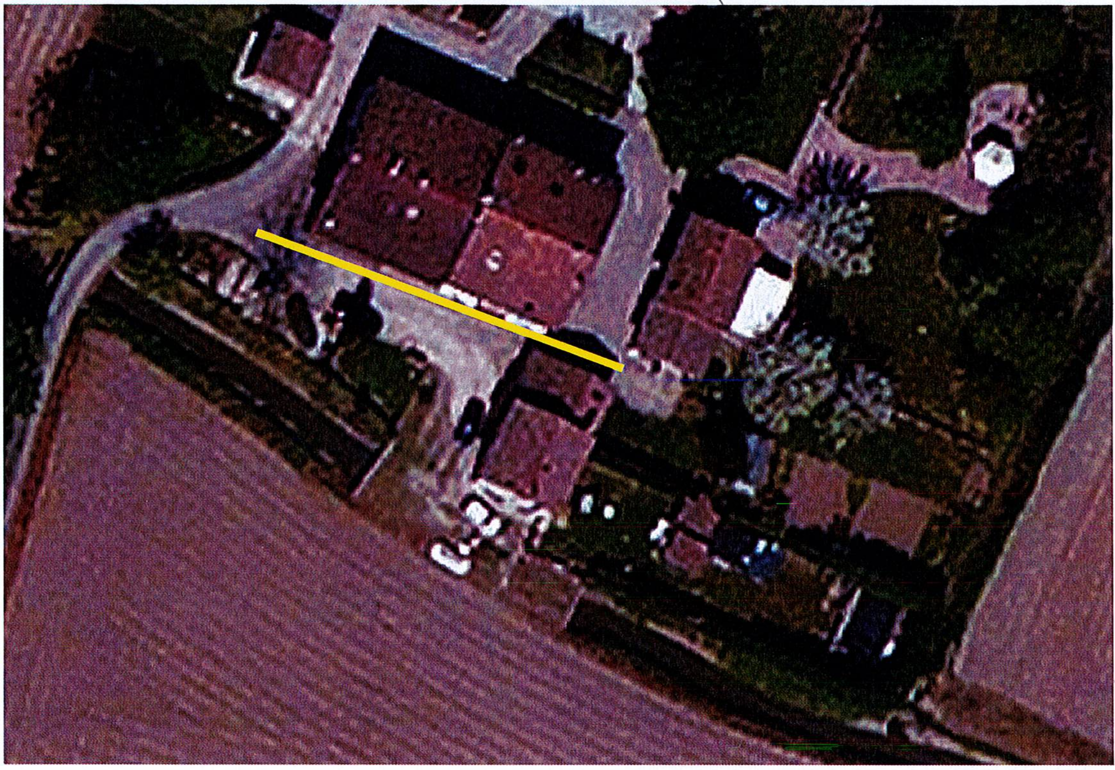


GEO GROUP s.r.l.
Sede Legale: via C. Costa, 182 – 41124 Modena
Sede operativa: via per Modena, 12 – 41051 Castelnuovo Rangone (MO)
Tel. 059-39.67.169 - Fax . 059-53.32.019
p.IVA e C.F. 02981500362 – www.geogroupmodena.it - e-mail: info@geogroupmodena.it
SISTEMA DI GESTIONE PER LA QUALITÀ CERTIFICATO = UNI EN ISO 9001:2008 =
SINCERT DNV

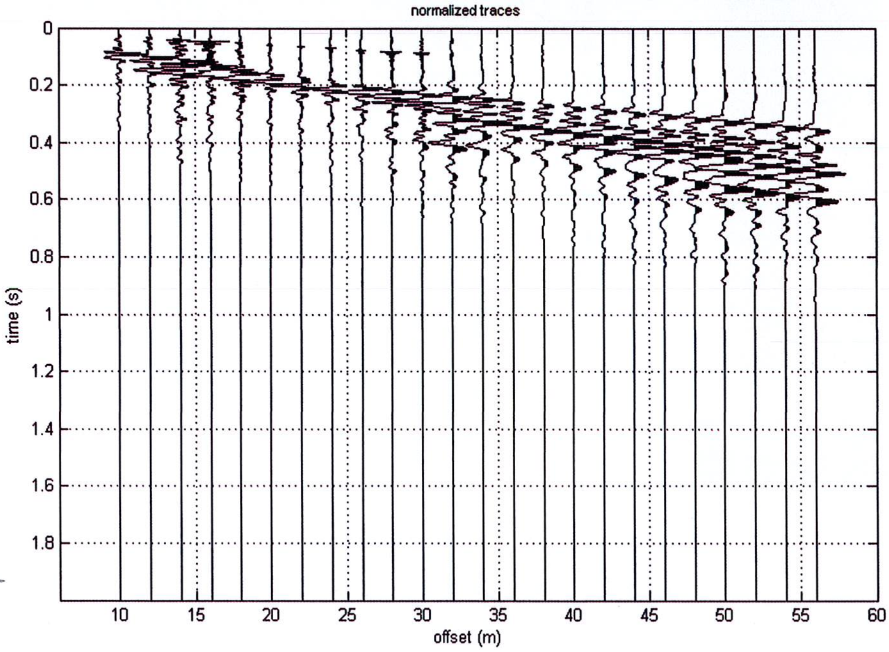
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

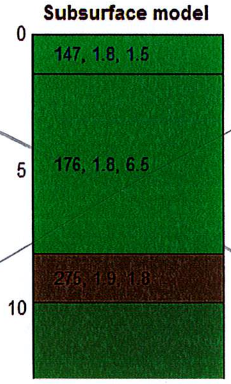
Cantiere: Medolla (MO), Via Rubadello 23
Operatori: Dott. ssa Erika Parmeggiani
Data: 15/02/13
Lavoro: Studio del terreno di fondazione
Elaborazione: Dott.ssa Mazzoli Monica
Responsabile: Dott. Geol. Pier Luigi Dallari

CERTIFICATO: 069_M_13



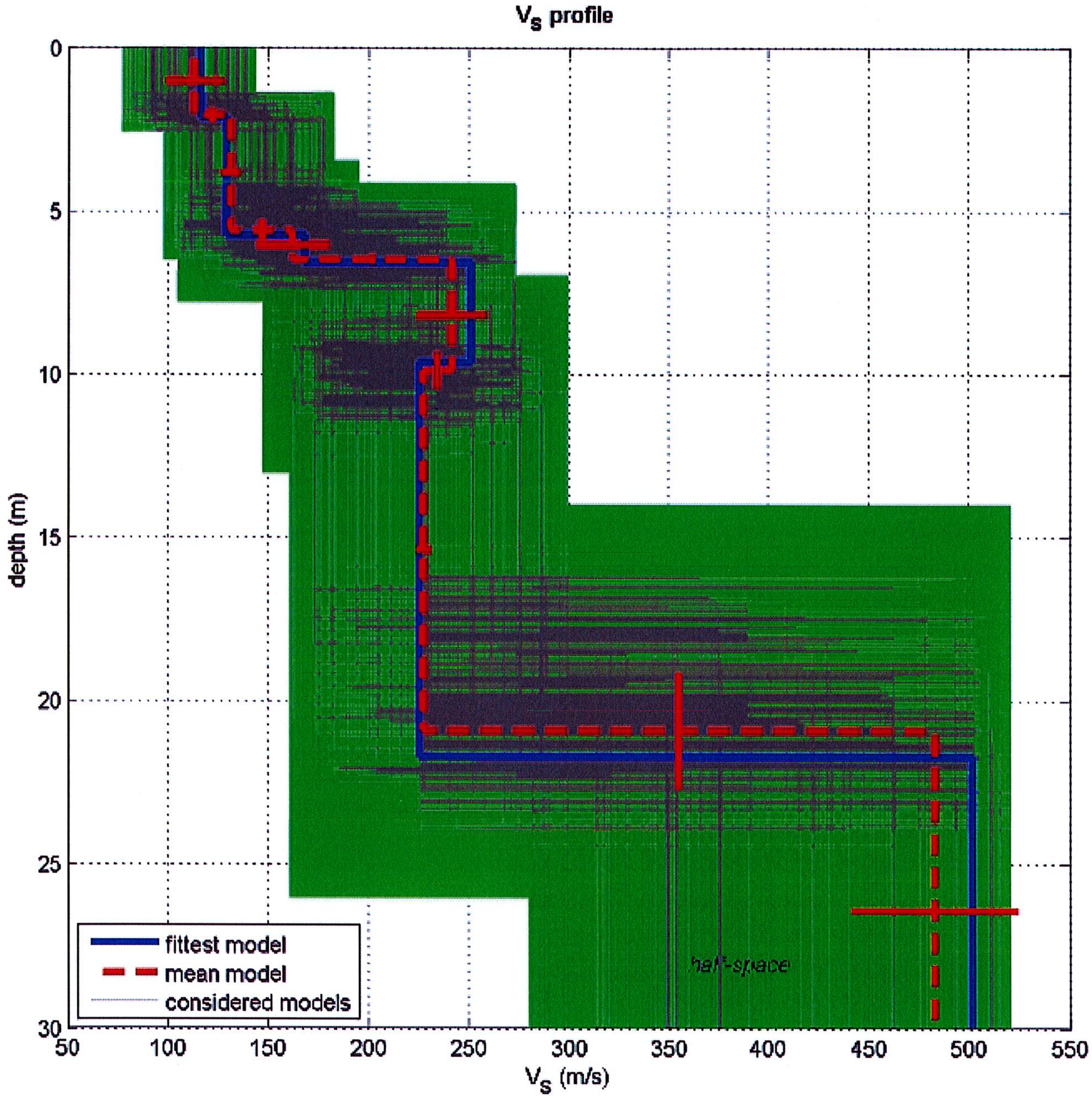
ELABORAZIONE





[MODELLO FINALE]

Vs_{30} = 224 m/s



dataset: 67.dat

dispersion curve: p1.cdp

Vs30 (best model): 224 m/s

Vs30 (mean model): 227 m/s

ALLEGATO N° 3

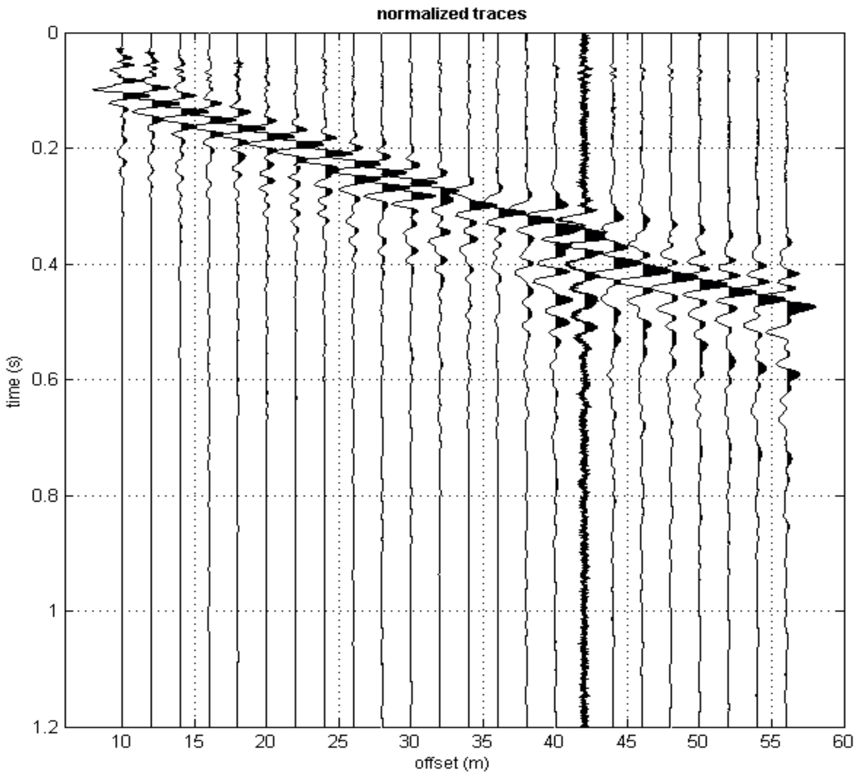
Indagine sismica – tecnica MASW

GEO GROUP s.r.l.
Sede Legale: via C. Costa, 182 – 41124 Modena
Sede operativa: via per Modena, 12 – 41051 Castelnuovo Rangone (MO)
Tel. 059-39.67.169 - Fax . 059-53.32.019
p.IVA e C.F. 02981500362 – www.geogroupmodena.it - e-mail: info@geogroupmodena.it

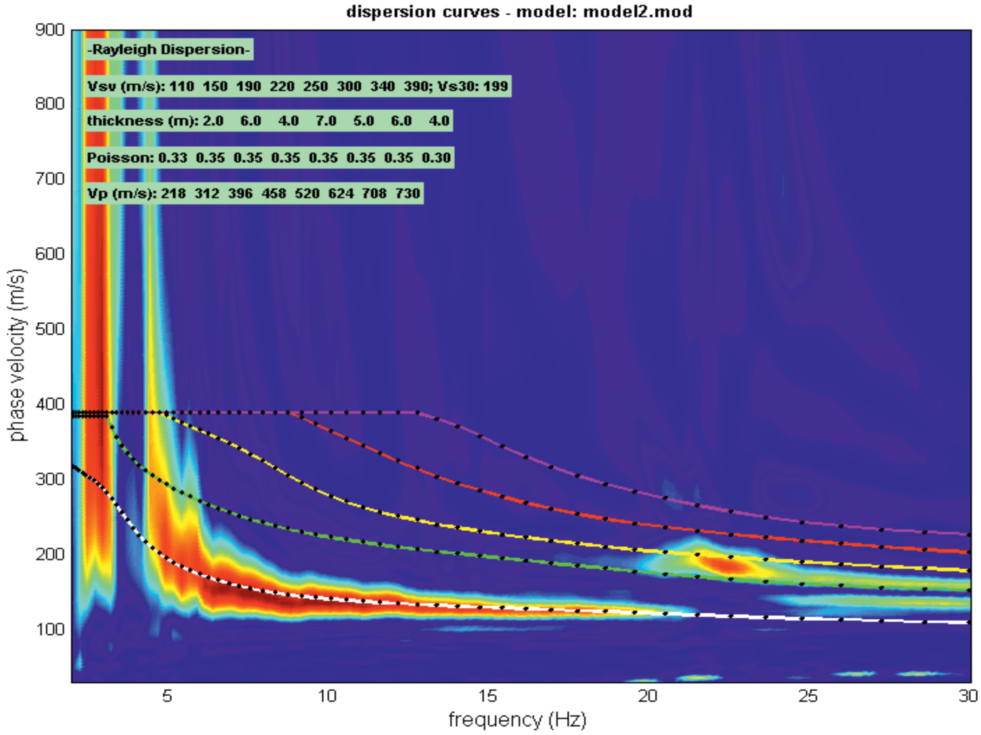
ANALISI SISMICA DI SITO SECONDO METODOLOGIA M.A.S.W.

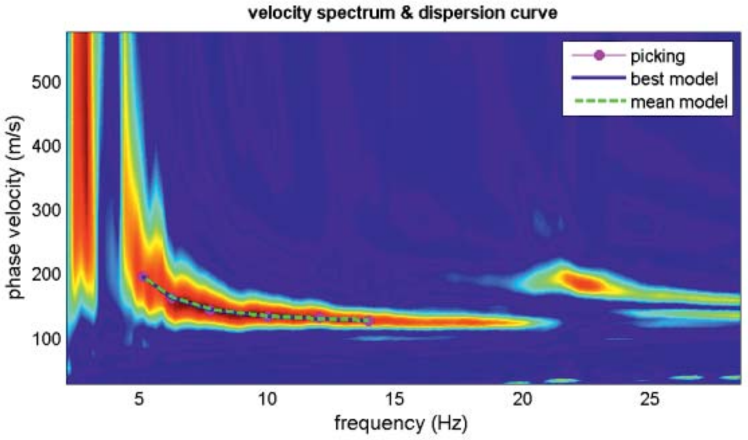
Cantiere:	Medolla (MO), Via Romana n. 65-67
Operatore:	Dott.ssa Erika Parmeggiani, Dott. Luca Pattuzzi
Data:	11/02/2015
Lavoro:	Studio del terreno di fondazione
Elaborazione:	Dott. ssa Erika Parmeggiani
Responsabile:	Dott. Geol. Pier Luigi Dallari

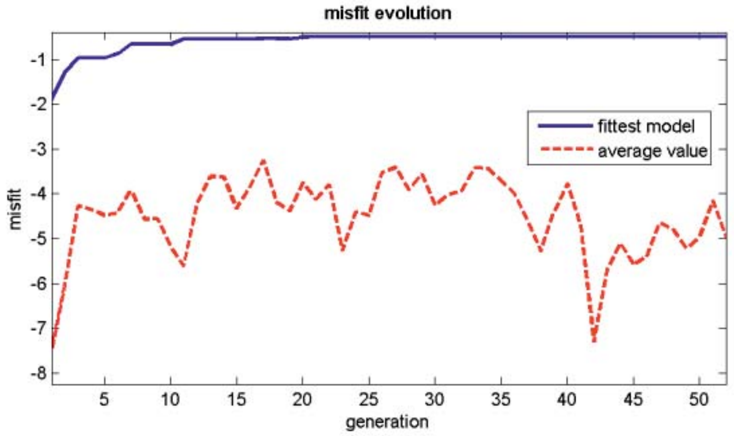
UBICAZIONE DELLO STENDIMENTO SISMICO IMPIEGATO



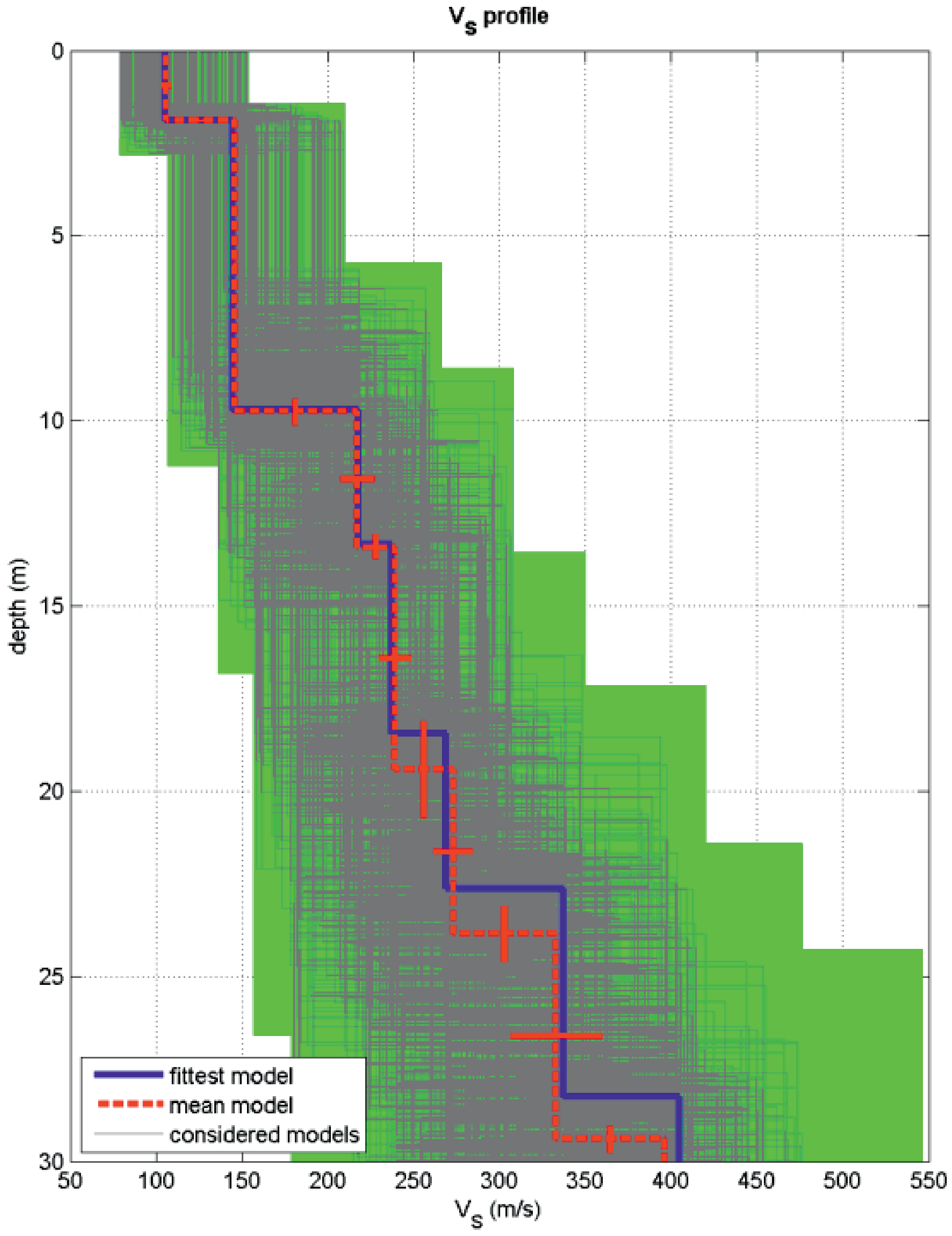
SPETTRO RELATIVO ALLE VELOCITA' DI FASE, REGISTRATE NEL DOMINIO DELLE FREQUENZE







MODELLO Vs30 DERIVATO DALL'INDAGINE MASW ESEGUITA



BEST MODEL

Vs30 = 205 m/s