



CONTRACT NO. GE/2015/24

HOLE NO. FB-ADH 1

SHEET

of

PROJECT Ground Investigation - New Territories East (Term Contract), Agreement No. CE 8/2015 (WS), First Stage of Desalination Plant at Tseung Kwan O - Investigation,

METHOD ROTARY									CO-ORDINATES E 846462.45					WORKS ORDER NO. GE/2015/24.3D		
MAC	HINE				S	D35					4440.			DATE 27.11.2017 to 21.12.2017		
FLUS	SHIN	G MED	NUIC			WA	TER		ORIEN	TATIC	N V	ERTICA	AL.	GROUND LEVEL +33.22 mPD		
Drilling Progress	ΨI	Water Level (m) Shift Start/ End		TCR%	SCR%	RQD%	Fracture Index	Tests	Samples	Reduced Level	S Depth (m)	Legend	Grade	Description Percussive drilling, assumed to be FILL.		
										+23.22						
1 1	ARGE DI	STURBED S				standard penetration test V in-situ vane shear test LOGGED S.L. Chiu		Olm	REMARKS 1. No inspection pit was excavated. 2. Constant head permeability tests were carried out at sections from 57.30m to 58.80m and 61.50m to 63.00m. 3. A groundwater sample was taken at 80.65m. 4. A piezometer was installed with tip at 60.00m.							
		AMPLE (78n	nm)			PER	KER TES	TY TEST	DATE		29	.12.201	7	3. A groundwater sample was taken at 80.65m. 4. A piezometer was installed with tip at 60.00m.		
	AZIER S	AMPLE R SAMPLE				BOF	REHOLE 1	ETER TEST ELEVIEWER	CHECH	KED		R. Chu				
▲ v	VATER S	AMPLE				77	ZOMETER WDPIPE 1		DATE		03	.01.201	8			



CONTRACT NO. GE/2015/24

HOLE NO. FB-ADH 1

2

SHEET

of

PROJECT Ground Investigation - New Territories East (Term Contract), Agreement No Design and Construction							No. CE	8/2015	(ws),				
METHOD		ROTA	VRY		CO-ORE	DINATE E 846		5		WORKS ORDER NO). GE/2	2015/24	J.3D
MACHINE	l regger	SD	35			N 814				DATE	27.11.2017	to	21.12.2017
FLUSHING MI	EDIUM	٧	VATER		ORIENT	ATION	1 VE	RTICA	L	GROUND LEVEL	+3:	3.22 m	PD
Mat Levi Casing Size Casing Size Casing Size Star		SCR%	RQD% Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade		Description		and the state of t
11	BEO SAMPLE			RETRATION TEST			2 2006		u ll	As sheet 1 of 9.			
LARGE DISTUI UT8 SAMPLE PISTON SAMP MAZIER SAMP SPT LINER SA WATER SAMP U100 SAMPLE	LE (70mm) LE MPLE LE			HEAR TEST TEST TER TEST LEVIEWER	DATE CHECK	KED		8.L. Chi 9.12.20 R. Chu 3.01.20	17				



CONTRACT NO. GE/2015/24

HOLE NO. FB-ADH 1

3

SHEET

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PRO	JEC	Groun Desig	nd Inve	estiga Cons	tion - truction	New 1	Territorie	s East (Term	Contract), Ag	greeme	nt No.	CE 8/201	5 (WS)), First Stage of Desalination Plant at Tseung Kwan O - II	nvestigation,	
MET	METHOD ROTARY									DINA	TES 46462	45		WORKS ORDER NO. GE/2015/24.3D		
MAC	HINE	Ē			9	D35					14440			DATE 27.11.2017 to 2	1.12.2017	
FLU:	SHIN	G MEI	DIUM			WA	TER		ORIEN'	TATIC	ON V	ERTIC	AL	GROUND LEVEL +33.22 mPD)	
Drilling Progress	Casing Size	Water Level (m) Shift Start/ End		TCR%	SCR%	RQD%	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description		
_21														As sheet 2 of 9.		
_22																
.23												1111				
24												111				
25												1111				
26												1111				
28	SW 28.00m	1		7/2		8			28.00	+5.22	28.00		X	Light grey (7.5YR 7/1) and pink (5YR 8/3	3), angular	
	PW		0	6					T2-120 28.59					Light grey (7.5YR 7/1) and pink (5YR 8/3 subangular, fine to coarse GRAVEL and cobble of rock fragments and with some and wood fragments. (FILL)	some concrete	
29			0	8					T2-120							
30									T2-120	+3.22	30.00	<u> </u>	8	REMARKS		
1 .	ARGE DIS		MPLE			V IN-SI	TU VANE SH KER TEST		LOGGE	ED		L. Chiu				
	PISTON SAMPLE (76mm) PERMEABILITY TEST MAZIER SAMPLE PRESSUREMETER TEST			DATE 29.12.2017				1								
SPILINER SAMPLE WATER SAMPLE WIGO SAMPLE STANDPIPE TIP				DATE 03.01.2018												



CONTRACT NO. GE/2015/24

HOLE NO. FB-ADH 1

SHEET

of

9

PROJECT Ground Investigation - New Territories East (Term Contract), Agreement No. CE 8/2015 (WS), First Stage of Desalination Plant at Tseung Kwan O - Investigation, Design and Construction WORKS ORDER NO. GE/2015/24.3D CO-ORDINATES METHOD ROTARY E 846462.45 21.12.2017 27.11.2017 to N 814440.08 DATE MACHINE **SD35** +33.22 mPD **GROUND LEVEL** ORIENTATION VERTICAL FLUSHING MEDIUM WATER Reduced Level Water Casing Size Level E Drilling Progress Samples (m) Shift Start/ Water Return% Fracture Description Legend RQD% Depth (Grade Tests End As sheet 3 of 9. 350 0 T2-120 From 30.50m to 33.90m: With much angular to subangular cobble of rock fragments. 31 0 T2-120 32 -32.38 33 38 T2-120 0 30.50 at 1800 30.20 at 0800 27.11.2017 45 T2-120 0 35 0 T2-120 36 6 37 0 T2-120 38 T2-120 0 38.70 39 0 T2-120 T2-120 0 REMARKS 1 STANDARD PENETRATION TEST I SMALL DISTURBED SAMPLE S.L. Chiu (/m LOGGED 1 LARGE DISTURBED SAMPLE V IN-SITU VANE SHEAR TEST U76 SAMPLE PACKER TEST 29.12.2017 DATE PISTON SAMPLE (76mm) PERMEABILITY TEST MAZIER SAMPLE PRESSUREMETER TEST R. Chu CHECKED SPT LINER SAMPLE BOREHOLE TELEVIEWER MATER SAMPLE A PIEZOMETER TIP 03.01.2018 DATE U100 SAMPLE STANDPIPE TIP



CONTRACT NO. GE/2015/24

HOLE NO. FB-ADH 1

SHEET

of

PROJECT Ground Investig. Design and Con-	ation - New Territories East (Term struction	Contract), Agreen	nent No. CE 8/2015 (WS), First Stage of Desalination Plant at Tseung Kwan O - Investigation,
METHOD	ROTARY	CO-ORDINA		WORKS ORDER NO. GE/2015/24.3D
MACHINE	SD35		846462.45 814440.08	DATE 27.11.2017 to 21.12.2017
FLUSHING MEDIUM	WATER	ORIENTATI	ON VERTICAL	GROUND LEVEL +33.22 mPD
Progress Casing Size Casing Size Mater Water Return% TCR%	SCR% RQD% Fracture Index Tests	Samples Reduced Level	Depth (m) Legend Grade	Description
28.11.2017 28.11.2017 28.11.2017 28.11.2017 28.10.00 30.20 61 0800 0 36		T2-120 -0.98 T2-120 T2-120 T2-120	- 40.20	As sheet 4 of 9. Light grey (7.5YR 7/1), angular to subangular, fine to coarse GRAVEL and COBBLE of rock fragments and with some concrete fragments. (FILL)
0 37		T2-120 T2-120 T2-120		*
26.11.2017 1800 30.20 45 1800 1800 1800 1800 1800 1800 1800 180		T2-120	3 44.80	Light grey (7.5YR 7/1) spotted pink and brown,
		T2-101		Light grey (7.5YR 7/1) spotted pink and brown, angular to subangular, slightly clayey silty sandy fine to coarse GRAVEL and some cobble of rock fragments and with some concrete and wood fragments. (FILL)
0 55		T2-101		
		T2-101		
11.12.2017 30.50 all 0800 0 49		T2-101		From 49.70m to 50.20m: With much angular to
\$ SMALL DISTURBED SAMPLE \$ LARGE DISTURBED SAMPLE DURS SAMPLE PISTON SAMPLE (78mm) MAZIER SAMPLE	\$ SMALL DISTURBED SAMPLE \$ LARGE DISTURBED SAMPLE \$ U78 SAMPLE \$ PACKER TEST \$ PERMEABILITY TEST \$ PERMEABILITY TEST		S.L. Chiu Um. 29.12.2017	REMARKS
MAZIER SAMPLE SPT LINER SAMPLE WATER SAMPLE WORTER SAMPLE WORD STAMPLE U100 SAMPLE STAMPLE STAMPLE STAMPLE STAMPLE STAMPLE STAMPLE		CHECKED	03.01.2018	



U100 SAMPLE

STANDPIPE TIP

DRILLHOLE RECORD

CONTRACT NO. GE/2015/24

FB-ADH 1 HOLE NO.

SHEET

of

9

PROJECT Ground Investigation - New Territories East (Term Contract), Agreement No. CE 8/2015 (WS), First Stage of Desalination Plant at Tseung Kwan O - Investigation, Design and Construction **METHOD** ROTARY CO-ORDINATES WORKS ORDER NO. GE/2015/24.3D E 846462.45 MACHINE **SD35** N 814440.08 DATE 27.11.2017 21.12.2017 to FLUSHING MEDIUM WATER ORIENTATION VERTICAL **GROUND LEVEL** +33.22 mPD Wate Reduced Leve Casing Size Leve Ξ Drilling Progress (m) Shift Water Return% Fracture Index Samples Legend RQD% Description TCR% SCR% Depth (Start End T2-101 subangular cobble of rock fragments. 0 T2-101 _51 51.64 52 0 T2-101 30.50 at 1800 30.20 at 0800 01.12.2017 -52.50 53 0 T2-101 From 53.40m to 53.68m: With much angular to subangular cobble of rock fragments. 54 0 T2-101 Soft to firm, dark greenish grey (5G 4/1) spotted white, slightly sandy clayey SILT with occasional shell fragments. (MARINE DEPOSIT) 55 0 56 1,1 1,1,1,1 N=4 30.60 at 1800 30.30 at 0800 02.12.201 04.12.201 57 \$7.65 57.90 Stiff, dark greyish brown (10YR 4/2) spotted light grey, slightly sandy clayey SILT with some wood fragments. (ESTUARINE DEPOSIT) 1,1 1,2,3,3 N=9 58 04.12.2017 05.12.2017 Dark grey (10YR 4/1) spotted light grey, angular to subangular, gravelly COBBLE and BOULDER of moderately decomposed tuff fragments. (COLLUVIUM) 0 T2-101 59 Extremely weak, pale brown (10YR 6/3) spotted light brown mottled brown, completely decomposed coarse ash TUFF. (Stiff, slightly sandy clayey SILT) 100 0 I SMALL DISTURBED SAMPLE REMARKS STANDARD PENETRATION TEST LARGE DISTURBED SAMPLE S.L. Chiu lh IN-SITU VANE SHEAR TEST LOGGED U78 SAMPLE PACKER TEST DATE 29.12.2017 PISTON SAMPLE (76mm PERMEABILITY TEST MAZIER SAMPLE PRESSUREMETER TEST CHECKED R. Chu SPT LINER SAMPLE BOREHOLE TELEVIEWER MATER SAMPLE PIEZOMETER TIP DATE

03.01.2018



CONTRACT NO. GE/2015/24

HOLE NO. FB-ADH 1.

7

SHEET

of

PRO	PROJECT Ground Investigation - New Territories East (Term Construction								n Contract), A	greeme	nt No.	CE 8/201	5 (WS	s), First Stage of Desalination Plant at Tseung Kwan O - Investigation,
MET	HOD)			RC	OTAR	Υ		CO-OF		TES 46462	45		WORKS ORDER NO. GE/2015/24.3D
MAC	HINI	E				SD35	5				14440			DATE 27.11.2017 to 21.12.2017
FLUS	SHIN	IG MEI	DIU	VI		WA	TER		ORIEN	TATIC	N V	/ERTIC	AL.	GROUND LEVEL +33.22 mPD
Drilling Progress	Casing Size	Water Level (m) Shift Start/ End		TCR%	SCR%	RQD%	Fracture	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
05.12.2017 06.12.2017		30.30 at 0800						7,7 9,11,13,15 N=48	11 50.20				V	As sheet 6 of 9.
61								₩	12 4 60.50		-			
			0	100				Ī	14 62.00					
		30.30						7,9 12,15,17,20 N=64	15 62.20 16 2.50					
06832017 07.12.2017		at 1800 30.26 at 0800	0	100				1	17 63.00					
_64 								7,10 12,16,18,22 N=58	18 64.00 64.10 19 64.20 20 64.50		-			
65			0	100					21, 85.00					
67.12.2017		30.40 at 1800 30.30 at 0800						6,11 14,16,20,25 N=75	22 22 66.00 66.10 23 66.20 24 66.50 25 777 67.00	-32.68		0 1 1	V	Extremely weak, light brown (7.5YR 6/4), completely decomposed coarse ash TUFF. (Slightly clayey silty fine to coarse SAND with occasional angular fine to coarse gravel of tuff fragments)
68			0	360				10,12 14,19,23,27 N=83	25 68.00 26 68.00 68.10 27 68.20	-				
_69			0	69	0	0	>20 NR >20	₩	72-101 	-35.49 -35.60	68.55	^^^\	III V	Moderately strong to strong, grey (10YR 5/1) streaked light brown, moderately decomposed coarse ash TUFF. (CORESTONE)
70			0	5	0	0	NR >20		T2-101 	-36.30		× × × × × × × × × × × × × × × × × × ×	V III	From 68.71m to 68.82m, 69.04m to 69.52m, 70.53m to 71.00m and 71.78m to 72.03m: No recovery, assumed to be completely decomposed TUFF.
T SMALL DISTURBED SAMPLE LARGE DISTURBED SAMPLE U78 SAMPLE D178 SAMPLE D178 SAMPLE PREMEABILITY TEST MAZIER SAMPLE SPILINER SAMPLE D7 B07 B07 B07 B07 B07 B07 B07				LOGGED DATE CHECKE DATE) _	S.L. 29.1:	. Chiu/ 2.2017 Chu / 1.2018	lm L	REMARKS					



CONTRACT NO. GE/2015/24

HOLE NO. FB-ADH 1

SHEET

8 of

PROJECT Ground Investigation - Ne Design and Construction	w Territories East (Term Contract)	ct), Agreement No. CE 8/2015 (WS),	First Stage of Desalination Plant at Tseung Kwan O - Investigation,
METHOD ROTA	ARY CO-	0-ORDINATES E 846462.45	WORKS ORDER NO. GE/2015/24.3D
MACHINE SD	35	N 814440.08	DATE 27.11.2017 to 21.12.2017
FLUSHING MEDIUM V	VATER ORII	RIENTATION VERTICAL	GROUND LEVEL +33.22 mPD
Progress Casing Size Return% TCR% SCR%	Fracture Index Tests Samples		Description
71 30.35 68.12.2017 1800	0 6.6 NR	-37.78 71.00	As sheet 7 of 9.
09.12.2017 30.50 - st - 0800	10.3 T2-101 NR 14.8	-38.81 72.03 V	
0 186	30 07.	73.15	Extremely weak, yellowish red (5YR 5/6) spotted brown and white, completely decomposed coarse ash TUFF. (Slightly clayey very silty fine to coarse SAND)
0 78 0	0 >20 T2-101	1 -40.54 - 73.76 VVV	Strong to very strong, dark grey mottled brown, moderately decomposed coarse ash TUFF. (CORESTONE)
09.12.2017 74.30m 1800 0 1805 4	0 >20 T2-101	1 F ₇₄₃₀ VVV "	From 73.76m to 73.90m: No recovery, assumed to be completely decomposed TUFF.
21.12.2017 30.00 sl 0800 50 1000 100 1	100 3.3 T2-101		Strong to very strong, dark grey spotted light grey, slightly decomposed coarse ash TUFF. Joints are medium to widely spaced, occasionally closely spaced, rough planar and rough undulating, iron and manganese oxide stained, dipping at 10° to
50 100 69	69 >20 T2-101	74.05 76.21 75.35 75.37	20°, 30° to 40° and 60° to 70°.
50 166 98	98 1.6 T2-101		
50 100 100	100 T2-101	n	
50 300 100	100 2.4 T2-101	-78.22	
50 50 100	100 T2-101	01 -48.78 89.00	DENAADIGO.
\$\pm\$ small disturbed sample \$\pm\$ LARGE DISTURBED SAMPLE \$\pm\$		OGGED S.L. Chiu Ch	REMARKS
U76 SAMPLE PISTON SAMPLE (76mm) MAZIER SAMPLE	PACKER TEST PERMEABILITY TEST PRESSUREMETER TEST		
SPT LINER SAMPLE WATER SAMPLE U100 SAMPLE	PIEZOMETER TIP	ATE 03.01.2018	



CONTRACT NO. GE/2015/24

HOLE NO. FB-ADH 1

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PRO	OJEC.	T Grou	ind Invign and	vestiga d Cons	ation - structi	New	Territ	ories E	ast (Terr	m Contract),	Agreem	ent No.	. CE 8/201	15 (WS	S), First Stage of Desalination	n Plant at Tseun	g Kwan C) - Investigat	ition,
MET	THOD)			RC	OTAR	Y			co-c	ORDINA F 8	ATES 84646			WORKS ORDER NO). GE	/2015/2	4.3D	
MAC	CHINE	E				SD35	5					814440			DATE	27.11.2017	to	21.12.20)17
FLU	SHIN	NG MEI	DIUN	1		WA	TER			ORIE			VERTIC	AL	GROUND LEVEL	+3	33.22 m	PD	
Drilling Progress	Casing Size	Water Level (m) Shift Start/ End	1	TCR%	SCR%	RQD%	Fracture	HIGGS	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade		Description			
21.12.2017	7	30.20 at 1800								T2-101	-47.43	- - - 8 - 80.65	/		As sheet 8 of 9.				
81															End of hole at 80.65	5 m.	The second of the second		
_82			v					,											
_83																			
_84																			
_85																			
_86																			
.87															•				
.88																			
.89																			
90								У				E 1							
I SMA	RGE DISTU	URBED SAMP URBED SAMP E IPLE (78mm)	MPLE		ľ	PACKER	J VANE S	NETRATION SHEAR TES		LOGGE	ΞD .		L. Chiu 12.2017	- 1	REMARKS		-		
	ZIER SAMP							TER TEST	i	CHECK	KED -		. Chu	El					
▲ WAT	TER SAMP	IPLE				PIEZOM	METER TI	TIP		DATE	_		01.2018						



CONTRACT NO. GE/2015/24

HOLE NO. FB-ADH 2

SHEET

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PROJECT Ground Investigation - New Territories East (Term Contract), Agreement No. Design and Construction						nt No. (CE 8/201	5 (WS)	, First Stage of Desalination	Plant at Tseung	Kwan C) - Investigation,			
RETHOD ROTARY							CO-OR		TES 46472	07		WORKS ORDER NO. GE/2015/24.3D			
ACHINE			5	SD08					14376			DATE	25.11.2017	to	21.12.2017
USHING ME	DIUM			WA	TER		ORIEN	TATIC	N N	ERTICA	AL.	GROUND LEVEL	+32	2.95 m	PD
Casing Size Cash (w) Frod Frod (w) Frod	Water Return%	TCR%	SCR%	RQD%	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade		Description		
2017 SW								+32.95				Percussive drilling,	assumed to b	e FILI	
SMALL DISTURBED LARGE DISTURBED U78 SAMPLE				V IN-S		SHEAR TEST	LOGGE	D	S.	L. Chiu	lh-	No inspection pit was excave Constant head permeability	ated. test was carried out	at section	from 60.15m to
PISTON SAMPLE (76	mm)			PER	MEABILIT	Y TEST	DATE		29.	12.2017	7	61.65m. 3. A groundwater sample was 4. A piezometer was installed	taken at 81.40m.		
MAZIER SAMPLE SPT LINER SAMPLE				BOF	REHOLE TE	TER TEST	CHECK	ED	F	R. Chu	U		2		
WATER SAMPLE				_	ZOMETER NDPIPE TI		DATE		03.	01.2018	3				



CONTRACT NO. GE/2015/24

HOLE NO. FB-ADH 2

SHEET

of

9

PROJECT Ground Investigation - New Territories East (Term Contract), Agreement No. CE 8/2015 (WS), First Stage of Desalination Plant at Tseung Kwan O - Investigation, Design and Construction

METHOD ROTARY	CO-ORDINATES	WORKS ORDER NO. GE/2015/24.3D		
MACHINE SD08	E 846472.97 N 814376.26	DATE 25.11.2017 to 21.12.2	:017	
FLUSHING MEDIUM WATER	ORIENTATION VERTI	CAL GROUND LEVEL +32.95 mPD		
Progress Casing Size Casing Size Nater Water Water TCR% SCR% SCR% RQD% Fracture Index Tests	Samples Reduced Level Depth (m) Legend	Description		
	LOGGED S.L. Chiu	REMARKS		
U78 SAMPLE	DATE 29.12.201 CHECKED R. Chu DATE 03.01.201			



CONTRACT NO. GE/2015/24

HOLE NO. FB-ADH 2

SHEET

of

PROJECT Ground Investigation Design and Construct	New Territories East (Term C	ntract), Agreement No. CE 8/2015 (WS), First Stage of Desalination Plant at Tseung Kwan O - Inves	stigation,
METHOD RO	DTARY	CO-ORDINATES WORKS ORDER NO. GE/2015/24.3D E 846472.97	
MACHINE	SD08		2.2017
FLUSHING MEDIUM	WATER	ORIENTATION VERTICAL GROUND LEVEL +32.95 mPD	
Drilling Progress Casing Size Casing Size Nutry Water Water TCR% TCR%	RQD% Fracture Index Tests	Samples Seduced Level Depth (m) Description	
		As sheet 2 of 9. As sheet 2 of 9. Wash boring, assumed to be FILL. Light grey (7.5YR 7/1) mottled black, angula subangular, COBBLE and occasional coars of rock fragments and with some concrete a asphalt fragments. (FILL)	ar to e gravel
30		+2.95 30.00	CONTRACTOR OF THE PROPERTY OF
SMALL DISTURBED SAMPLE LARGE DISTURBED SAMPLE U76 SAMPLE PISTON SAMPLE (76mm) MAZIER SAMPLE SPILINER SAMPLE WATER SAMPLE U100 SAMPLE	STANDARD PENETRATION TEST IN-SITU VANE SHEAR TEST PACKER TEST PERMEABILITY TEST PRESSUREMETER TEST BORGHOLE TELEVNEWER PIEZOMETER TIP STANDEPE TIP	LOGGED S.L. Chiu U. DATE 29.12.2017 CHECKED R. Chu U DATE 03.01.2018	



CONTRACT NO. GE/2015/24

HOLE NO. FB-ADH 2

SHEET

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DDO IECT Ground Investigati	ion - New Territories East (Terri	n Contract). Agreement No. CE 8/2015 (V	/S). First Stage of Desalination Plant at Tseung Kwan O - Investigation.
PROJECT Ground Investigate Design and Constr	ruction	The second state of the se	/S), First Stage of Desalination Plant at Tseung Kwan O - Investigation,
METHOD	ROTARY	CO-ORDINATES E 846472.97	WORKS ORDER NO. GE/2015/24.3D
MACHINE	SD08	N 814376.26	DATE 25.11.2017 to 21.12.2017
FLUSHING MEDIUM	WATER	ORIENTATION VERTICAL	GROUND LEVEL +32.95 mPD
	SCR% RQD% Fracture Index Tests	Samples Reduced Level Depth (m) Legend	Description
		T2-120	Light grey (7.5YR 7/1) mottled grey, angular to subangular, slightly clayey silty sandy fine to coarse GRAVEL and some cobble of rock fragments and
0 300 0 366 0 38 0 38		T2-120	GRAVEL and some cobble of rock fragments and with some concrete and refuse fragments. (FILL)
30.30 0 933 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		T2-120 	
0 889 0 889	STANDARD PENETRATION TEST V IN-SITU VANE SHEAR TEST PACKER TEST PERMEABILITY TEST	T2-120	REMARKS
FISTON SAMPLE (76mm) MAZIER SAMPLE ST LINER SAMPLE WATER SAMPLE U100 SAMPLE	PERMEABLITY TEST PRESSUREMETER TEST BOREHOLE TELEVIEWER PIEZOMETER TIP STANDPIPE TIP	DATE 29.12.2017 CHECKED R. Chu	



CONTRACT NO. GE/2015/24

HOLE NO. FB-ADH 2

SHEET

5 of

PROJECT Ground Investigation Design and Construct	- New Territories East (Term tion	Contract), Agreement No	o. CE 8/2015 (WS)	, First Stage of Desalination Plant at Tseung Kwan O - Investigation,
METHOD RO	OTARY	CO-ORDINATES	A service and a	WORKS ORDER NO. GE/2015/24.3D
MACHINE	SD08	N 8143	and the same	DATE 25.11.2017 to 21.12.2017
FLUSHING MEDIUM	WATER	ORIENTATION	VERTICAL	GROUND LEVEL +32.95 mPD
Drilling Progress Casing Size Casing Size Nation Water Water Water TCR% TCR%	RQD% Fracture Index Tests	Samples Reduced Level Depth (m)	Legend	Description
0 988 -41 0 988 -41 0 988 -42 0 988 -43 -43 -43 -44 -44 -44 -44 -45 -45 -46 -47 -48 -48 -48 -48 -49 -49 -49 -49 -49 -49 -49 -49 -49 -49		T2-120 T2-120 T2-120 T2-101 T2-101		Light grey (7.5YR 6/1) mottled grey and pinkish grey, angular to subangular, medium to coarse GRAVEL and occasional cobble of rock fragments and with some concrete and steel fragments. (FILL) From 44.80m to 45.48m, 49.47m to 50.31m and 54.00m to 54.30m: With some boulder (<300mm) of moderately decomposed tuff fragments.
\$\precedot \text{ SMALL DISTURBED SAMPLE}\$ LARGE DISTURBED SAMPLE DISTON SAMPLE (76mm) MAZIER SAMPLE SPI LINER SAMPLE WATER SAMPLE UND SAMPLE	STANDARD PENETRATION TEST INISTITU VANE SHEAR TEST PACKER TEST PERHABILITY TEST PRESSUREMETER TEST BOREHOLE TELEVIEWER PIEZOMETER TIP STANDIDET TIP	DATE :	S.L. Chiu Uh 29.12.2017 R. Chu U	KEMAKKS



CONTRACT NO. GE/2015/24

HOLE NO. FB-ADH 2

SHEET

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8 OI 9

PROJECT Ground Investig	ation - New Territories East (Terristruction	n Contract), Agreement No. CE 8/2015 (WS	s), First Stage of Desalination Plant at Tseung Kwan O - Investigation,		
METHOD	ROTARY	CO-ORDINATES	WORKS ORDER NO. GE/2015/24.3D		
MACHINE	SD08	E 846472.97 N 814376.26	DATE 25.11.2017 to 21.12.2017		
FLUSHING MEDIUM	WATER	ORIENTATION VERTICAL	GROUND LEVEL +32.95 mPD		
Drilling Progress Casing Size puggles Chapter Water Return% TCR%	SCR% RQD% Fracture Index Tests	Samples Reduced Level Depth (m) Legend Grade	Description		
05.12.2017		T2-101 	As sheet 5 of 9.		
		2 455.50 22.65 55.60 23.65 55.65 55.60 23.65 55.65 55.	Grey (10YR 5/1) mottled light brown and red, angular to subangular, slightly silty sandy fine to coarse GRAVEL of rock fragments and with occasional tile fragments. (FILL) Firm, light grey (7.5YR 1/4) streaked black, slightly silty CLAY. (ALLUVIUM)		
11122017 1800 12:12:2017 30:30 - 57 at 0800 - 57 0 800		T2-101 -24.20 -57.24 - 10.0	Dark grey (10YR 4/1) spotted light grey, BOULDER of slightly decomposed tuff fragments. (COLLUVIUM) Light grey (10YR 7/1) streaked light brown and dark		
0 18		T2-101 -25.15 58.10 -25.75	grey, angular to subangular, slightly clayey silty sandy fine to coarse GRAVEL and some cobble of rock fragments. (COLLUVIUM)		
0 95		50.10 -20.25 50.20 1 1 1 1	Extremely weak, pale olive (5Y 6/3) mottled yellowish red, completely decomposed, chloritised, coarse ash TUFF. (Very stiff, clayey sandy SILT)		
30.15 et 12.12.2017 1800 13.12.2017 20.12 et 60	5,11 14,78,23,38 N=03	7 59.30 8 59.60	Extremely weak, brown (7.5YR 5/3) spotted light brown and white, completely decomposed coarse ash TUFF. (Slightly clayey silty fine to coarse SAND)		
□ SMALL DISTURBED SAMPLE □ LARGE DISTURBED SAMPLE □ UTS SAMPLE □ PISTON SAMPLE (76mm) MAZIER SAMPLE □ SPT LINER SAMPLE ▲ WATER SAMPLE □ U100 SAMPLE	STANDARD PENETRATION TEST IN-SITU VANE SHEAR TEST PACKER TEST PERMEABILITY TEST PRESSUREMETER TEST BORCHOLE TELEVIEWER PIEZOMETER TIP STANDPIPE TIP	DATE 29.12.2017 CHECKED R. Chu DATE 03.01.2018	REMARKS		



CONTRACT NO. GE/2015/24

HOLE NO.

FB-ADH 2

SHEET

7

of

METHOD ROTARY MACHINE SD08		CO-OR	E 84	ES 6472	.97		WORKS ORDER NO. GE/2015/24.3D
MACHINE SD08				VVIL		,	
		N 814376.26					DATE 25.11.2017 to 21.12.2017
FLUSHING MEDIUM WATE	ORIENTATION VERTICAL		AL.	GROUND LEVEL +32.95 mPD			
Progress Casing Size Dail Bar	Index Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
0 3666	100bls/275mm	61.10 61.26 61.26 61.58				V	As sheet 6 of 9.
	100bls/265mm	62.10 63.10 63.20 63.27 63.57					
0 97		18 85.10 65.20	-31.15 -32.25	64.10		V	Extremely weak, brown (7.5YR 5/3) spotted light brown and white, completely decomposed coarse ash TUFF. (Slightly silty fine to coarse SAND)
0 8	N=96. 17,03/75mm	20 65.60 20 65.60 21 66.10 22 67.10 23 67.20 24 67.45				>	Extremely weak, brown (7.5YR 3/5) spotted light grey and white, completely decomposed coarse ash TUFF. (Slightly clayey very silty fine to coarse SAND) From 68.10m to 68.60m: No recovery, assumed to be completely decomposed TUFF.
T5.12.2017 at 1800	IR NI	68.10 T2-101 68.60		68.10 68.60 68.72		JV III	Weak to moderately weak, reddish brown (5YR 5/3) spotted light brown, highly decomposed coarse ash TUFF. (Angular, fine to coarse GRAVEL of highly
0 98 94 94	.1	T2-101	-37.05	70.00			decomposed tuff fragments) From 68.72m to 70.18m: Moderately strong to strong and moderately decomposed. (CORESTONE)
\$\delta \text{ \$MALL DISTURBED \$AMPLE} \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	LOGGE DATE CHECKI DATE	D _	S.I 29.	L. Chiu 12.2017 R. Chu 01.2018	0	REMARKS	



CONTRACT NO. GE/2015/24

HOLE NO. FB-ADH 2

SHEET

of

PROJECT Ground Investigation - New Territories East (Ter Design and Construction	m Contract), Agreement No. CE 8/2015 (WS	s), First Stage of Desalination Plant at Tseung Kwan O - Investigation,	
METHOD ROTARY	CO-ORDINATES E 846472.97	WORKS ORDER NO. GE/2015/24.3D	
MACHINE SD08	N 814376.26	DATE 25.11.2017 to 21.12.2017	
FLUSHING MEDIUM WATER	ORIENTATION VERTICAL	GROUND LEVEL +32.95 mPD	
Drilling Progress Casing Size Casing Size Nuter Water Return% TCR% SCR% RQD% Fracture Index Tests	Samples Reduced Level Depth (m) Legend Grade	Description	
NI	70.08 -37.23 - 70.18 VV III	From 70.40m to 71.16m, 74.07m to 74.94m and 75.05m to 75.60m: No recovery, assumed to completely decomposed TUFF.	
0 88 0 0 NR	T2-101 -38 21 - 71.16 IV	From 71.68m to 71.82m: Extremely weak and completely decomposed. (Slightly clayey silty fine to coarse SAND with occasional angular fine gravel of tuff fragments)	
16.12.2017 e81 1800 NI NI 800 NI NA 0800 NI 0800 0 0 100 69 64	71.53 -36.73 -71.68 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0	From 71.82m to 73.47m: Very strong and slightly decomposed. (CORESTONE)	
18.12.2017 19.12.2017 19.12.2017 10.000 10.000 10.000 10.000 10.000 10.000 10.000 10.000 10.000 10.000 10.0000 10.0000 10.00000 10.0000 10.0000 10.0000 10.0000 10.0000 10.0000 10.0000 10.00000 10.00000 10.00000 10.00000 10.0000 10.0000 10.00000 10.00000 10.00000 10.0000	T2-101		
NI NI	73.65 73.47 7.77 7.77 7.77 7.78 7.78 7.78 7.78 7		
0 38 0 0 NR HW 30.30 at 1800 NI	T2-101		
780.12.2017 30.10 all oscio O 2 31 31 NR	T2-101 42.65 75.60 11/ 1-27.75 75.70 0 0 11/ 1-27.75 75.70 0 0 11/ 1-27.75 75.70 0 0 11/ 1-27.75 75.70 0 0 11/ 1-27.75 75.70 0 0 11/ 1-27.75 75.70 0 0 11/ 1-27.75 75.70 0 0 0 11/ 1-27.75 75.70 0 0 0 11/ 1-27.75 75.75	Very strong, dark grey spotted light grey, slightly	
40 108 100 100	T2-101	decomposed coarse ash TUFF. Joints are widely spaced, occasionally closely and medium spaced, rough planar and rough undulating, iron oxide stained, occasionally kaolin and calcite coated, dipping at 40° to 50°, 65° to 75° and subvertically from 77.67m to 81.40m.	
40 100 100	T2-101		
40 198 96 96	78.83 78.95		
□ SMALL DISTURBED SAMPLE □ LARGE DISTURBED SAMPLE □ LARGE DISTURBED SAMPLE □ LARGE DISTURBED SAMPLE □ LARGE DISTURBED SAMPLE □ PISTON SAMPLE □ PISTON SAMPLE □ PERMEABILITY TEST □ PERSESURBEMETER TIEST □ SPT LINER SAMPLE □ BORCHOLE TELEVIEWER □ WATER SAMPLE □ DIZOMETER TIP □ U100 SAMPLE □ STANDPIPE TIP	LOGGED S.L. Chiu //L. DATE 29.12.2017 CHECKED R. Chu //L DATE 03.01.2018	REMARKS	



CONTRACT NO. GE/2015/24

HOLE NO. FB-ADH 2

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of

PROJE	ECT Grou	ınd Inv gn and	restiga I Cons	tion - truction	New 1	Territo	ries East (Term C	Contract), Ag	greeme	nt No.	CE 8/2015	(WS)), First Stage of Desalination Plant at Tseung Kwan O - Investigation,
METHOD ROTARY						CO-ORDINATES E 846472.97			97		WORKS ORDER NO. GE/2015/24.3D		
MACHINE SD08				N 814376.26					DATE 25.11.2017 to 21.12.2017				
FLUSHING MEDIUM WATER			ORIENTATION VERTICAL					GROUND LEVEL +32.95 mPD					
Progress	Wate Leve (m) Shift Start	/ater	TCR%	SCR%	RQD%	Fracture Index	Tests	Samples	Reduced Level	Depth (m)	Legend	Grade	Description
0.12.2017 1.12.2017	30.30 at 1800 30.05 at 0800					1.2		T2-101 80.29			/>>>> />>>> />>>>	IJ	As sheet 5 of 9.
81	30.30 at 1800	1	100	90	90			T2-101	-48.45	81.40			
82								·		-			End of hole at 81.40 m.
83								A .					
84							a						
85													
.86													
87										-			
.88													
_89													
00										-			
LARCE U76 S	LL DISTURBED GE DISTURBED SAMPLE ON SAMPLE (7: IER SAMPLE	SAMPLE	1		V IN-S	SITU VANE SKER TES RMEABILIT		LOGGE		29	.L. Chiu		REMARKS
SPT	LINER SAMPLE ER SAMPLE				BO		TELEVIEWER	CHECK	KED		R. Chu .01.2018		
Bill 11400	PAMP'C				A ne		no.	LUMIT		U.S	.u 1.ZU 11		I control of the cont

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DrilTech Ground Engineering Ltd.

BLK A & B, 9/F, HONG KONG SPINNERS IND. BLDG, PHASE VI.481-483 CASTLE PEAK RD, KLN, HONG KONG TEL: 2371 0008 FAX: 2744 1037 F-Mail: driltech@driltech.com.hk WEBSITE: driltech.com.hk



DRILTECH

DrilTech Ground Engineering Ltd.

BLK A & B, 9/F, HONG KONG SPINNERS IND. BLDG, PHASE VI,481-483 CASTLE PEAK RD, KLN, HONG KONG
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DrilTech Ground Engineering Ltd. BLK A & B, 9/F, HONG KONG SPINNERS IND. BLDG, PHASE VI,481-483 CASTLE PEAK RD, KLN, HONG KONG TEL: 2371 0008 FAX: 2744 1037 E-Mail: driltech@driltech.com.hk WEBSITE: driltech.com.hk DRILTECH E TOTAL CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT DRILTECH GROUND ENG. LTD. DRILTECH CEDD CONTRACT NO. : GE/2015/24 HOLE NO.: FB - ADH 2 **GROUND INVESTIGATION - NEW** 1 OF 13 TERRITORIES EAST (TERM CONTRACT) BOX NO.: WORKS ORDER NO. : GE/2015/24.3D DEPTH: 0.00 mTO 32.15 m JOB TITLE : Agreement No. CE 8/2015 (WS) First Stage of Desalination Plant DATE OF PHOTOGRAPH: 21/12/2017 at Tseung Kwan O - Investigation, **Design and Construction**







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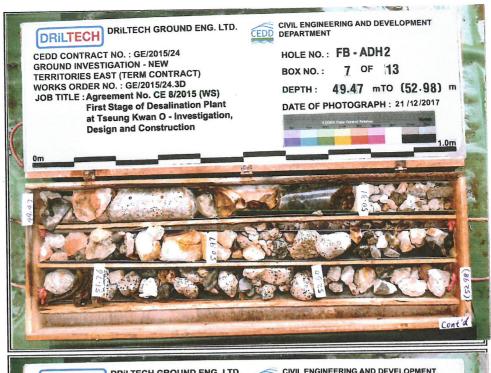
BLK A & B, 9/F, HONG KONG SPINNERS IND. BLDG, PHASE VI.481-483 CASTLE PEAK RD, KLN, HONG KONG
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