

Volume IV

BOREHOLE LOGS FOR THE BEAUFORT SEA

Dome Petroleum Ltd. 1981 - 1982

0306-34413

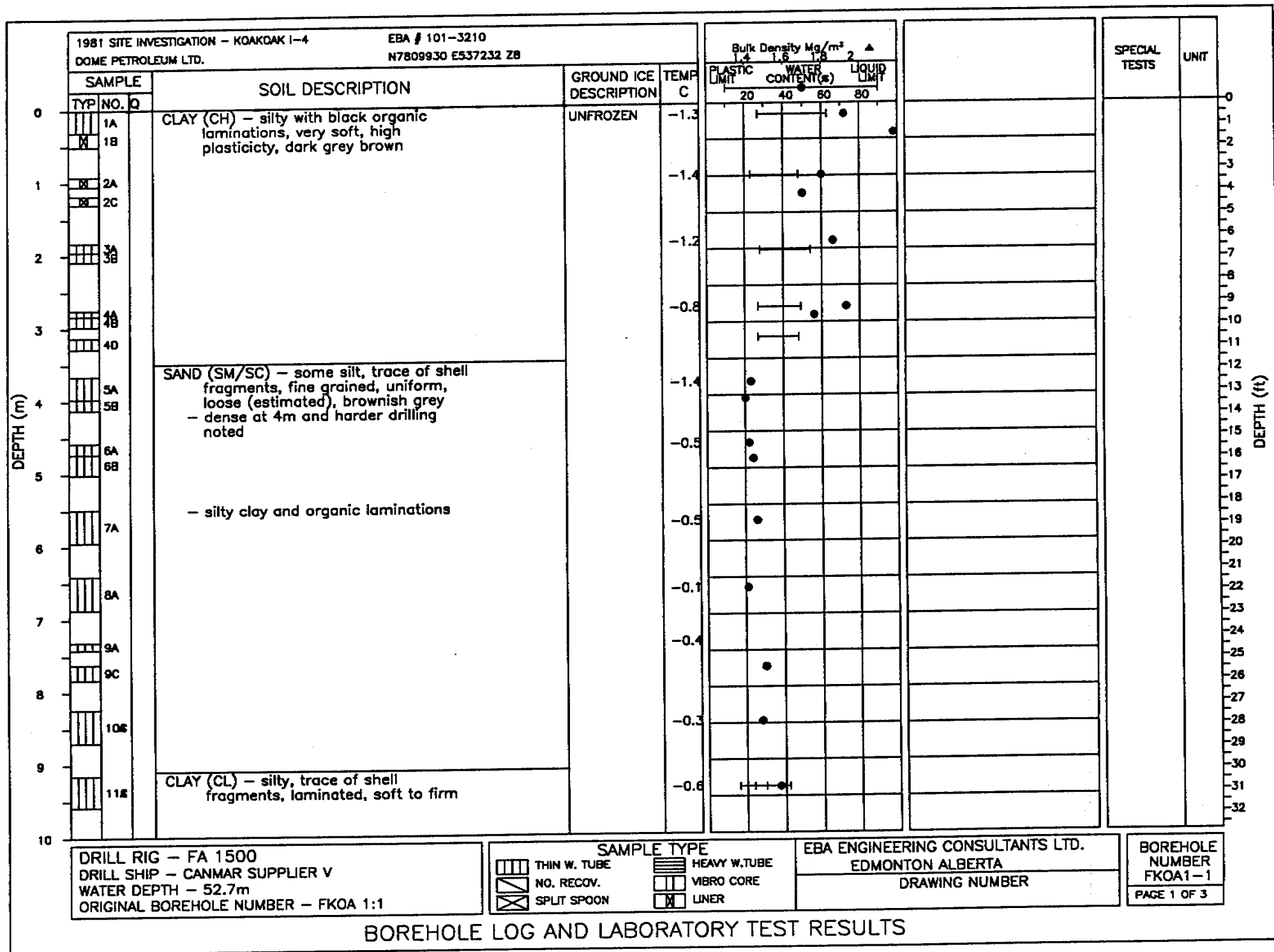
May, 1988

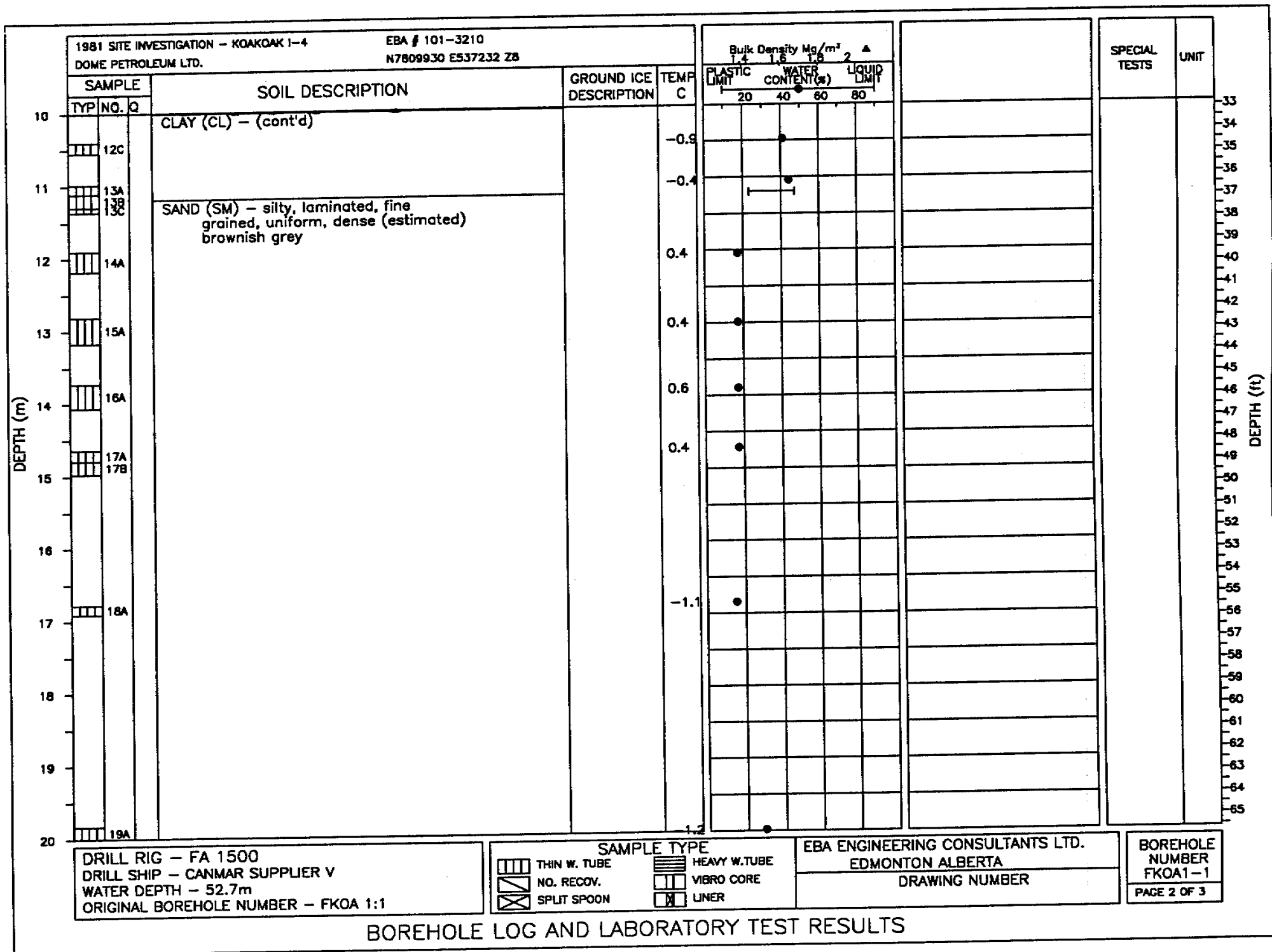


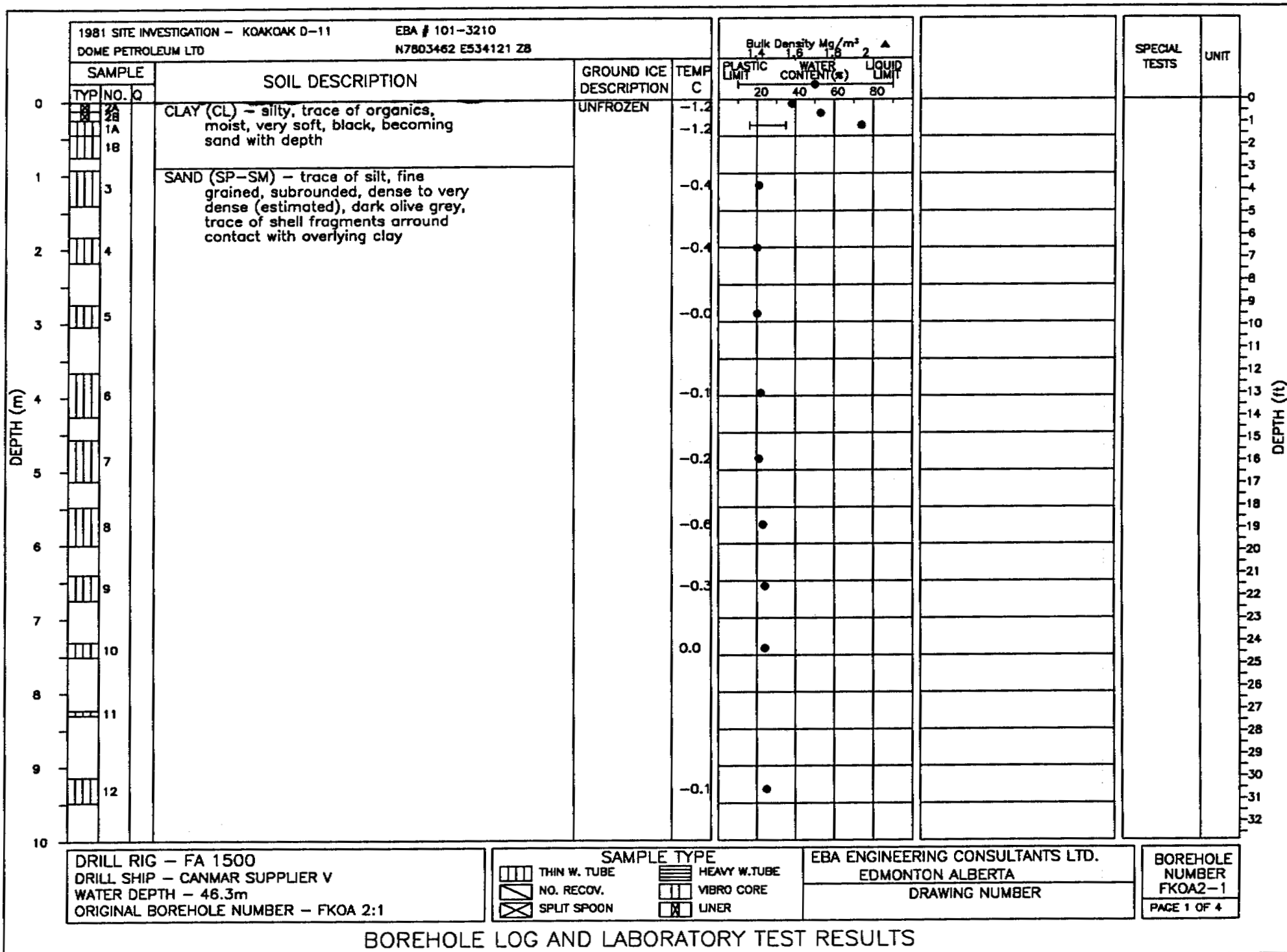
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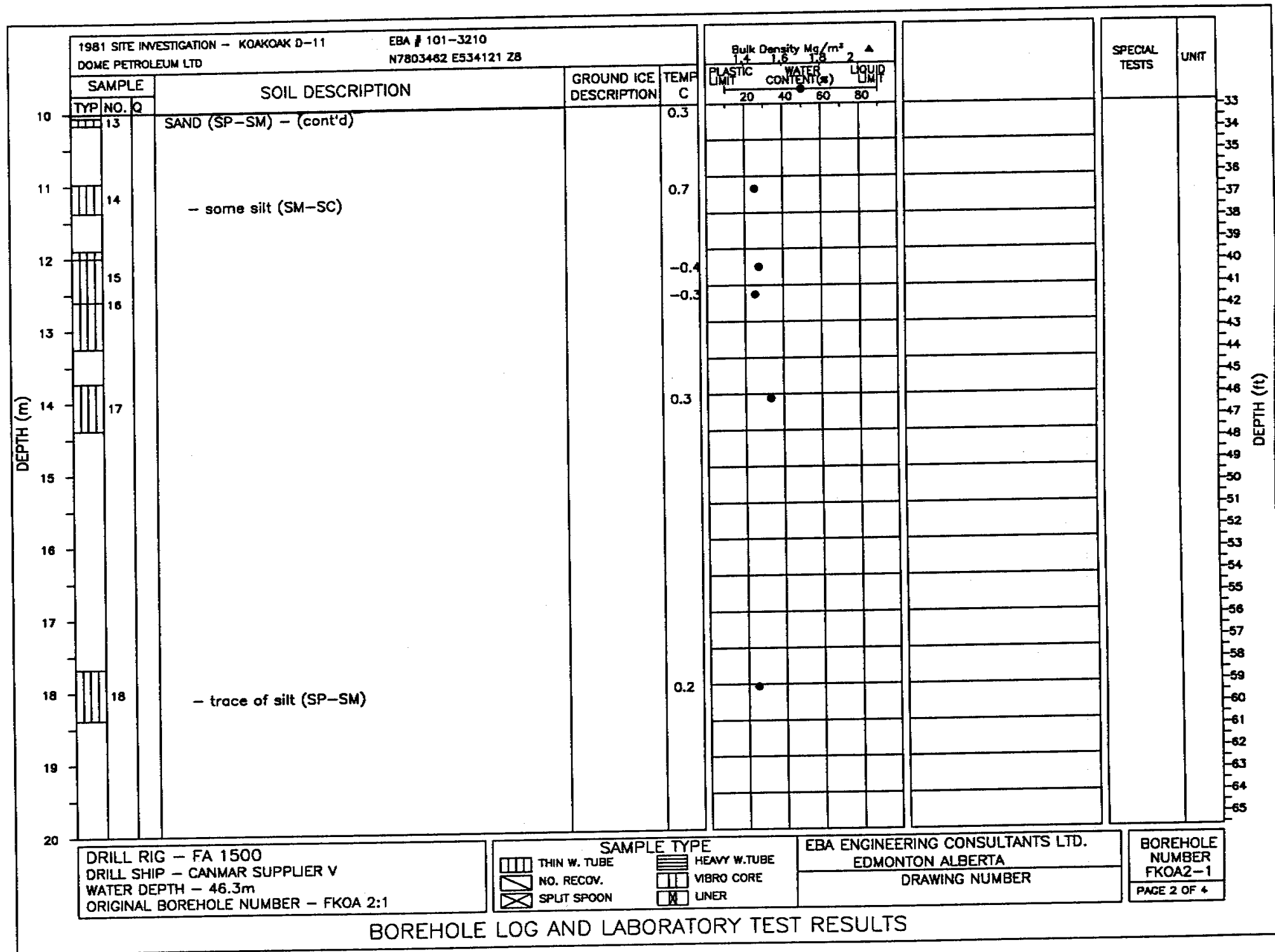
DOME PETROLEUM LTD. 1981 -1982

<u>APPENDIX</u>	<u>YEAR OF STUDY</u>	<u>CONSULTANT</u>	<u>CONSULTANT'S JOB NO.</u>
A	1981	EBA	101-3210 101-3210/3443 101-3430
B	1982	EBA	101-3605









1981 SITE INVESTIGATION - KOAKOAK D-11 DOME PETROLEUM LTD				EBA # 101-3210 N7803462 E534121 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO.	Q										
			SAND (SP-SM) - (cont'd)									66
												67
												68
												69
												70
												71
												72
												73
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												95
												96
												97
												98

DEPTH (m) 20 21 22 23 24 25 26 27 28 29 30

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 46.3m
 ORIGINAL BOREHOLE NUMBER - FKO2 2:1

SAMPLE TYPE

THIN W. TUBE

NO. RECOV.

SPLIT SPOON

HEAVY W. TUBE

VIBRO CORE

LINER

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER FKO2-1
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BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - KOAKOAK D-11 DOME PETROLEUM LTD				EBA # 101-3210 N7803482 E534121 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT					
TYP	NO. Q											
30	22	SAND (SP-SM) - (cont'd)	UNFROZEN									99
31												100
32												101
33	23	- thin bed of fine gravel overlying frozen fine sand END OF BOREHOLE at 33.2m	FROZEN, Nbn									102
34												103
35												104
36												105
37												106
38												107
39												108
40												109
												110
												111
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												124
												125
												126
												127
												128
												129
												130
												131

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 46.3m
 ORIGINAL BOREHOLE NUMBER - FKO A 2:1

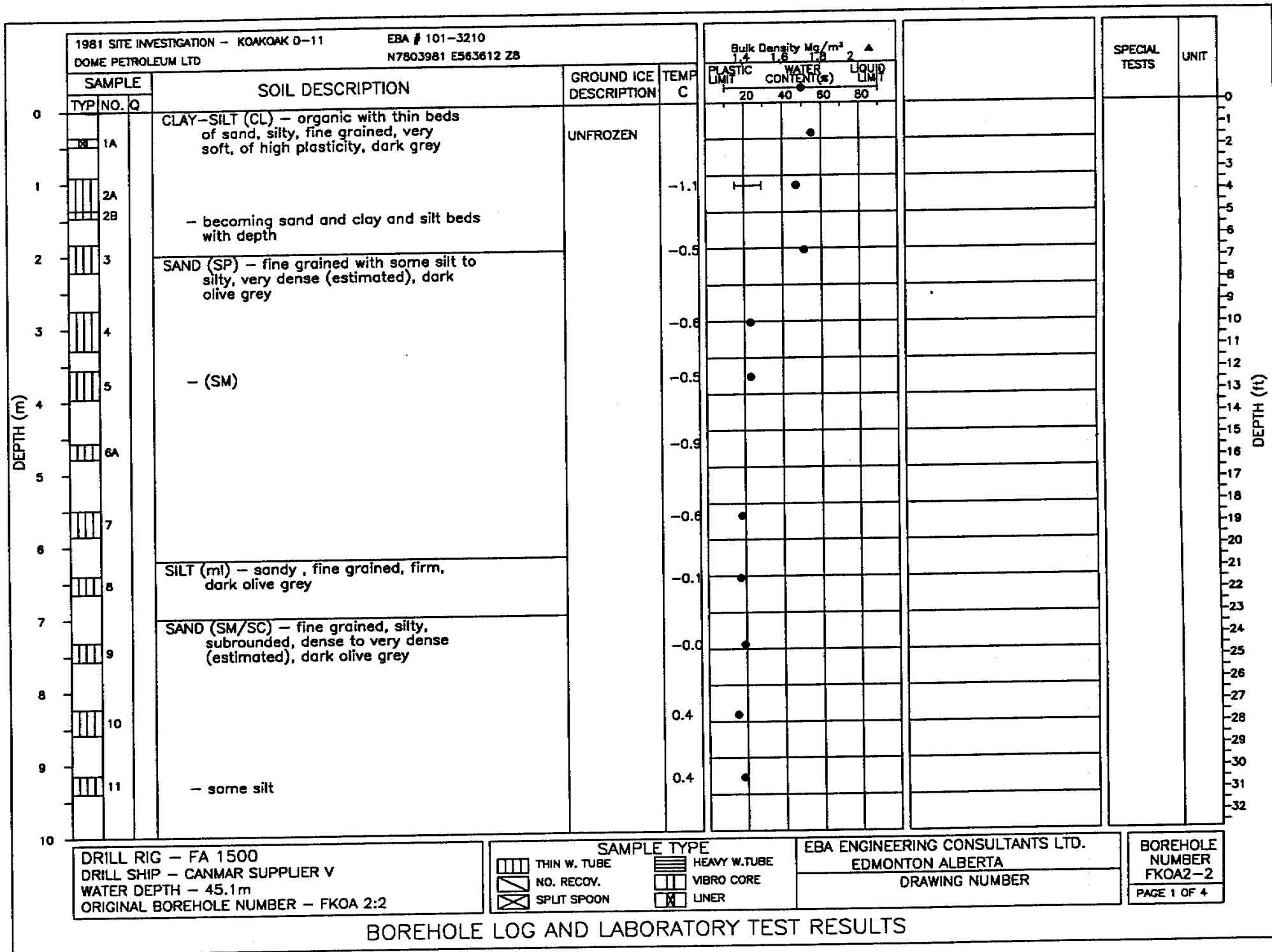
SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	LINER

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FKO A2-1
 PAGE 4 OF 4

BOREHOLE LOG AND LABORATORY TEST RESULTS



1981 SITE INVESTIGATION - KOAKOAK D-11 DOME PETROLEUM LTD				EBA # 101-3210 N7803981 E563612 Z8						SPECIAL TESTS		UNIT		
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	Bulk Density Mg/m ³ ▲								
TYP	NO.	Q				PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT						
10	12		SAND (sm-sp) - (cont'd) - becoming sand, fine grained with trace of silt (SP-SM)		0.5	•								33
11	13			0.5	•									34
12	14A 14B			-0.7	•									35
13	15			-0.6	•									36
14	16			-1.3	•									37
15	17			-0.6	•									38
16														39
17														40
18	18			-0.3	•									41
19														42
20														43
														44
														45
														46
														47
														48
														49
														50
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													54	
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													57	
													58	
													59	
													60	
													61	
													62	
													63	
													64	
													65	

DRILL RIG - FAILING 1500
DRILL SHIP - SUPPLIER V
WATER DEPTH - 45.1m

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	LINER

EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA
DRAWING NUMBER

BOREHOLE NUMBER
FKOA2-2
PAGE 2 OF 4

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - KOAKOAK D-11				EBA # 101-3210											
DOME PETROLEUM LTD				N7803981 E563612 Z8											
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	Bulk Density Mg/m ³ ▲				SPECIAL TESTS	UNIT	DEPTH (ft)			
TYP	NO.	Q				PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT							
			SAND (sm-sc) - becoming clean (SP)									56			
												57			
	19												58		
													59		
													60		
													61		
													62		
													63		
													64		
													65		
													66		
													67		
													68		
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													70		
													71		
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													73		
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													75		
	20											76			
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	21											88			
												89			
												90			
												91			
												92			
												93			
												94			
												95			
												96			
												97			
	22											98			

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 45.1m
 ORIGINAL BOREHOLE NUMBER - FKO2 2:2

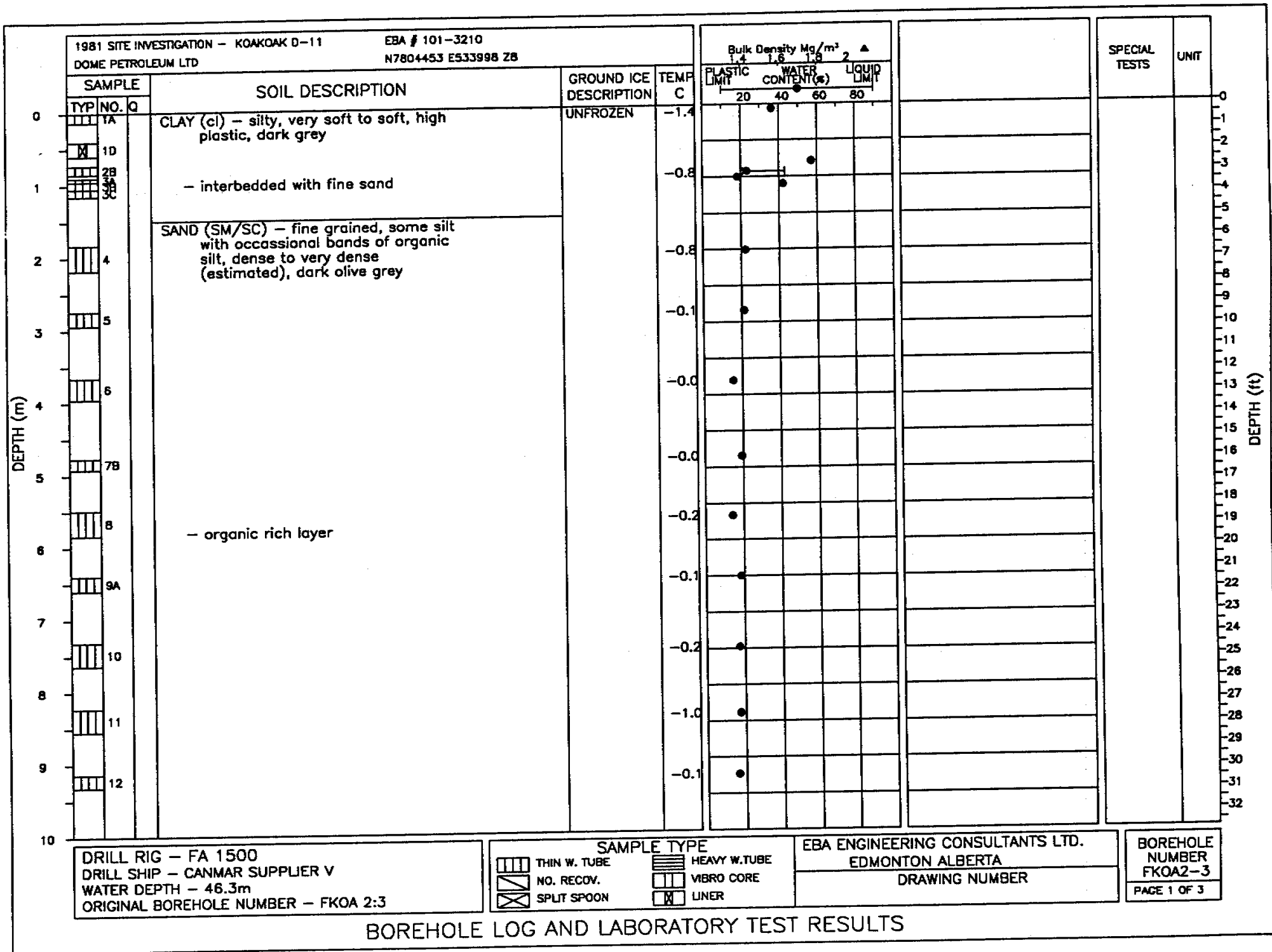
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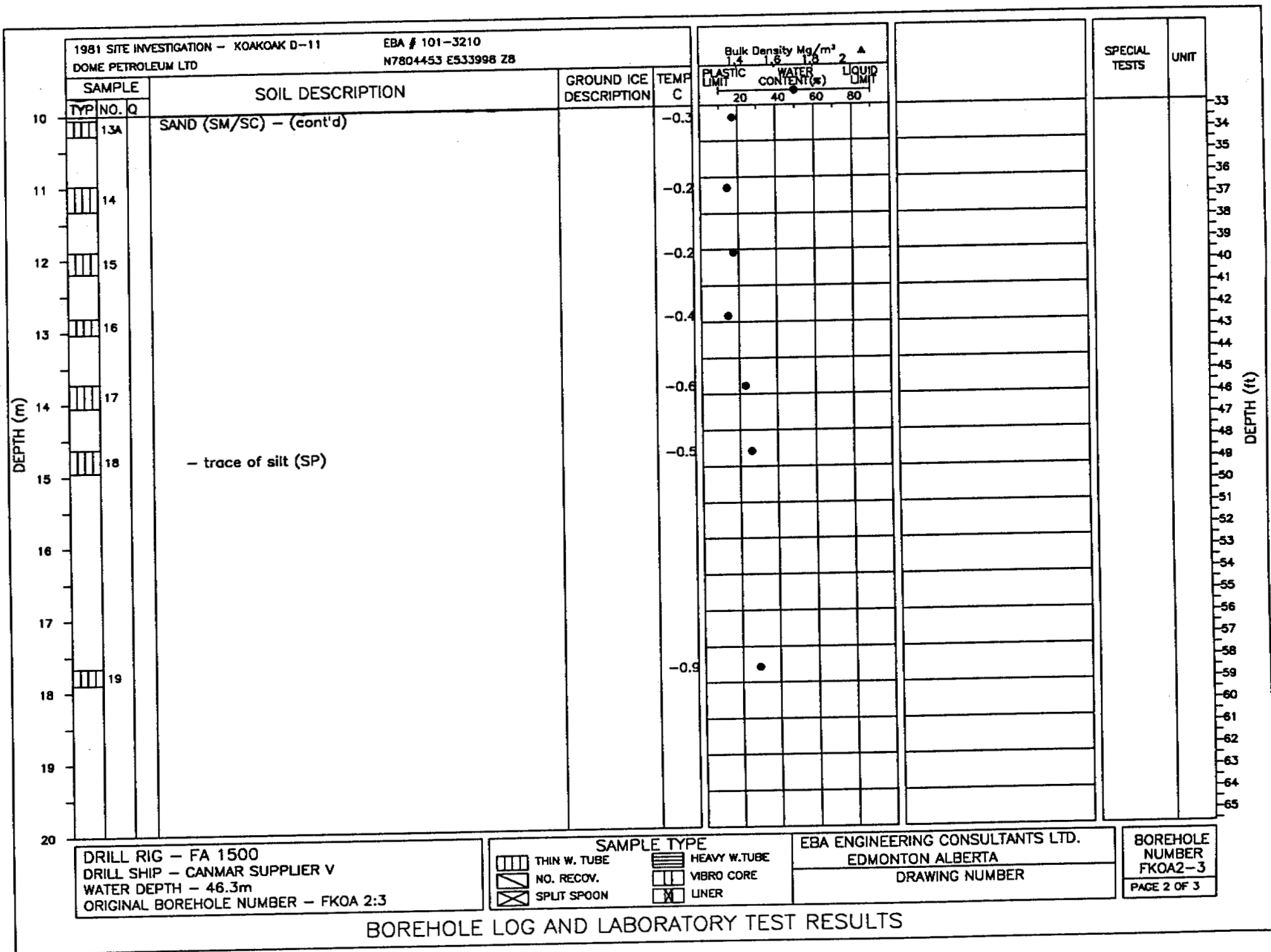
THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	LINER

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FKO2-2
 PAGE 3 OF 4

BOREHOLE LOG AND LABORATORY TEST RESULTS





1981 SITE INVESTIGATION - KOAKOAK D-11 DOME PETROLEUM LTD				EBA # 101-3210 N7804453 E533998 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2			SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT			
TYP	NO.	Q									
			SAND (SP) - (cont'd)								65
	20										67
											68
											69
											70
											71
											72
											73
											74
											75
											76
											77
											78
	21A			UNFROZEN							79
											80
											81
											82
											83
											84
											85
											86
											87
											88
											89
											90
											91
											92
											93
											94
											95
	23		END OF BOREHOLE at 29.1m	FROZEN, Nbn							96
											97
											98

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 46.3m
 ORIGINAL BOREHOLE NUMBER - FKO A 2:3

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	LINER

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FKO A2-3
 PAGE 3 OF 3

BOREHOLE LOG AND LABORATORY TEST RESULTS

EBA # 101-3210
N7803992 E533618 Z8

SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	WATER CONTENT (%)					
TYP	NO. Q				PLASTIC LIMIT	LIQUID LIMIT				
0	1	CLAY-SILT (CH) - with thin laminae of black sand throughout, very soft, of high plasticity, dark grey	UNFROZEN							0
		SAND (SP-SM) - trace silt, fine grained, subrounded with thin beds of fine grained sand with some silt, dense to very dense (estimated) dark olive grey								1
1	2			-0.6						2
										3
2	3			-0.6						4
										5
										6
3	4A	- silty, to some silt (SM/SC)		-0.4						7
										8
										9
4	5			-0.6						10
										11
										12
5	6			-0.6						13
										14
										15
6	7			-0.7						16
										17
										18
7	8A			-0.6						19
										20
										21
										22
8	9	- trace silt (SP-SM)		-1.0						23
										24
										25
9	10			-0.3						26
										27
										28
										29
										30
										31
										32
10	11			-0.7						

THIN W. TUBE
NO. RECOV.
SPLIT SPOON

	HEAVY W.TUBE
	VIBRO CORE
	GRAB

BOREHOLE
NUMBER
FKOA2-4

PAGE 1 OF 3

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - KOAKOAK D-11 DOME PETROLEUM LTD				EBA # 101-3210 N7803992 E533618 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT					
TYP	NO. Q											
10	12	SAND (SP-SM) - (cont'd)										33
												34
												35
11	13			-0.7								36
												37
												38
12	14			-0.7								39
												40
												41
13	15A			-1.0								42
												43
		- high organic content										44
14	16A			-1.1								45
												46
												47
	17	- (SP)										48
15												49
												50
												51
16												52
												53
												54
17												55
	18A			-0.3								56
	18C											57
18												58
												59
												60
												61
												62
19												63
												64
20												65

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 46.1m
 ORIGINAL BOREHOLE NUMBER - FKO2 2:4

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FKO2-4
 PAGE 2 OF 3

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - KOAKOAK D-11 DOME PETROLEUM LTD				EBA # 101-3210 N7803992 E533618 Z8		Bulk Density Mg/m^3 ▲ 1.4 1.6 1.8 2			SPECIAL TESTS	UNIT	DEPTH (ft)		
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	WATER CONTENT (%)								
TYP	NO.				Q			PLASTIC LIMIT	LIQUID LIMIT				
			SAND (SP) - (cont'd)								66		
													67
	19												68
													69
													70
													71
													72
													73
													74
													75
													76
													77
	20												78
													79
													80
													81
													82
													83
													84
													85
										86			
	21A									87			
										88			
										89			
										90			
										91			
										92			
										93			
										94			
										95			
										96			
										97			
	22B									98			

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 46.1m
 ORIGINAL BOREHOLE NUMBER - FKOA 2:4

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FKOA2-4
 PAGE 3 OF 3

NOTE: END OF BOREHOLE at 29.9m

UNFROZEN

-0.6

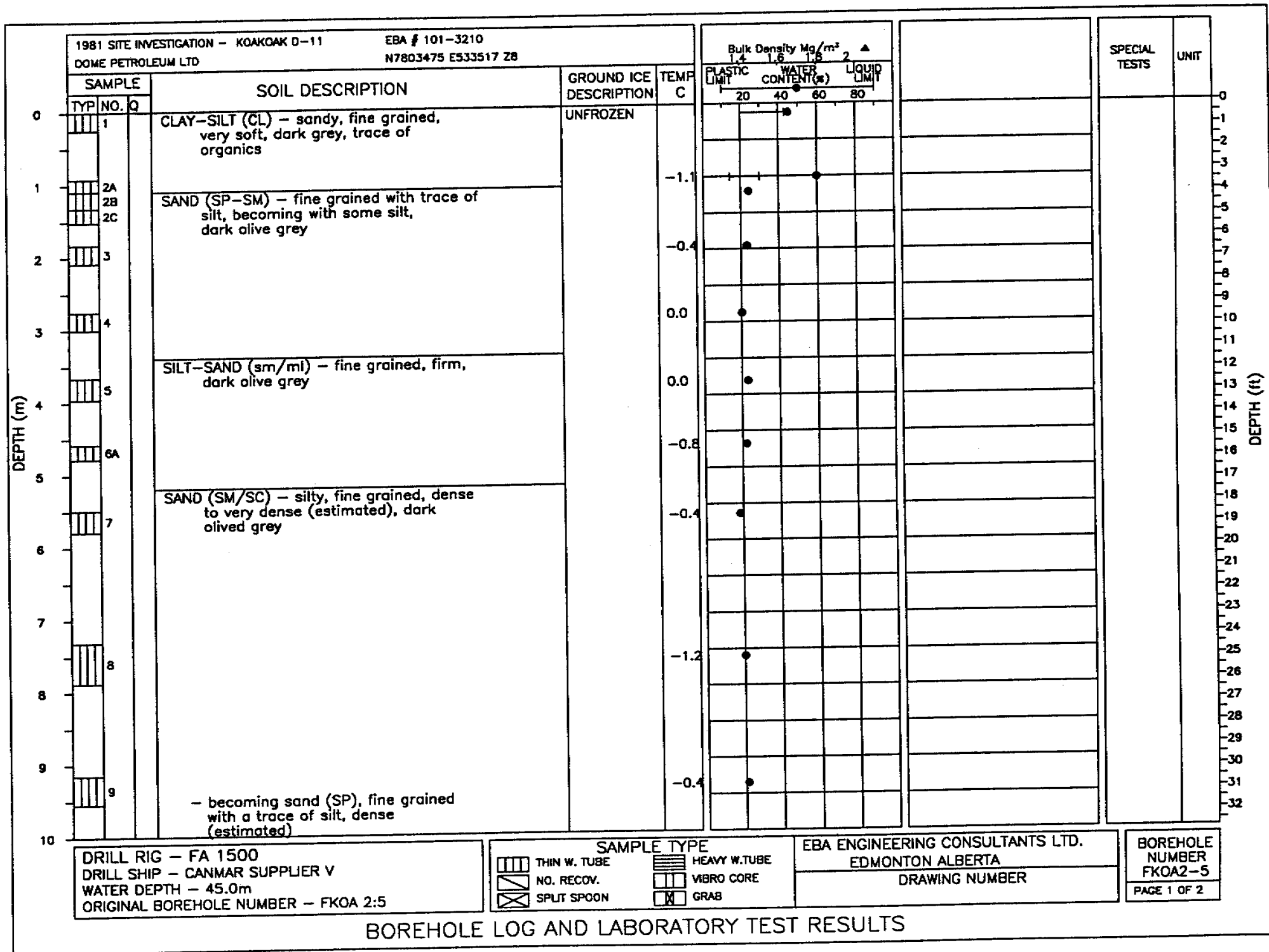
-0.5

-1.1

DEPTH (m)

DEPTH (ft)

BOREHOLE LOG AND LABORATORY TEST RESULTS



1981 SITE INVESTIGATION - KOAKOAK D-11 DOME PETROLEUM LTD				EBA # 101-3210 N7803475 E533517 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	WATER CONTENT (%)						
TYP	NO.	Q				PLASTIC LIMIT	LIQUID LIMIT					
			SAND (SP) - (cont'd)									33
	10											34
												35
	11											36
												37
												38
	11											39
												40
												41
	12											42
												43
												44
	12											45
												46
												47
												48
	13A											49
												50
												51
												52
												53
	14											54
												55
												56
			END OF BOREHOLE at 17.1m	UNFROZEN	0.5							57
												58
												59
												60
												61
												62
												63
												64
												65

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 45.0m
 ORIGINAL BOREHOLE NUMBER - FKO2 2:5

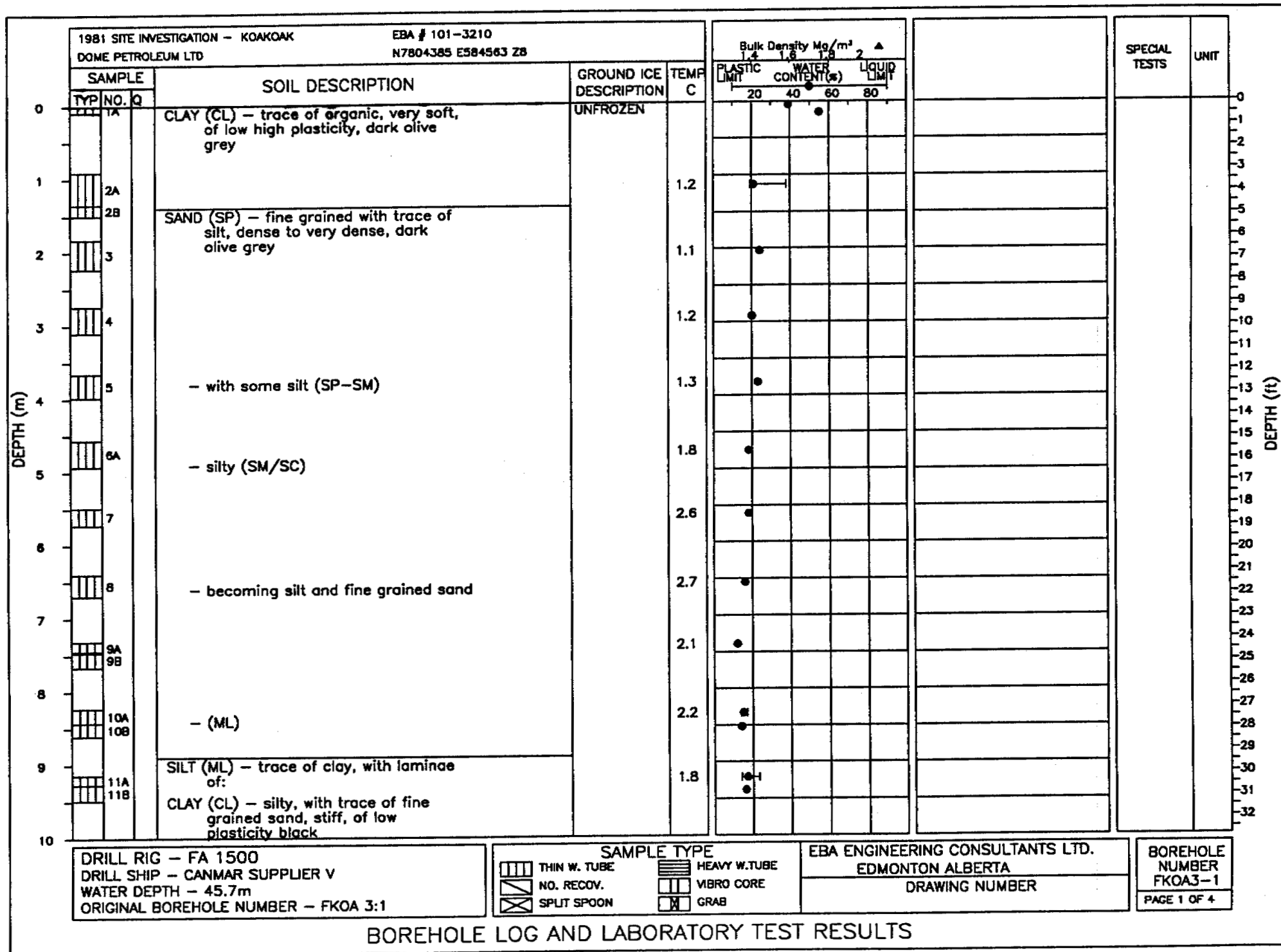
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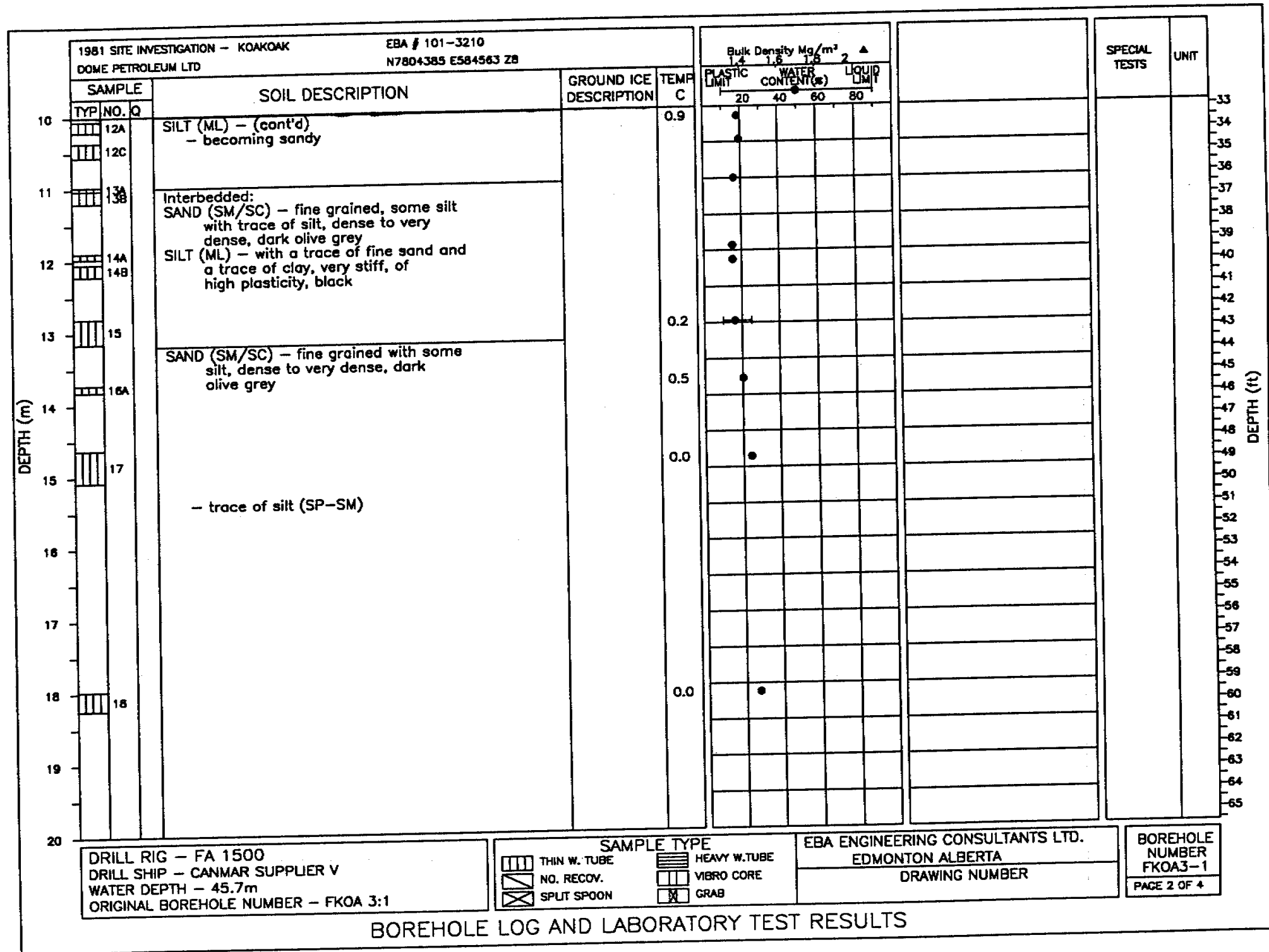
THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FKO2-5
 PAGE 2 OF 2

BOREHOLE LOG AND LABORATORY TEST RESULTS





1981 SITE INVESTIGATION - KOAKOAK DOME PETROLEUM LTD				EBA # 101-3210 N7804385 E584563 Z8						SPECIAL TESTS	UNIT
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	Bulk Density Mg/m ³ ▲					
DEPTH (m)	TYP	NO.				Q			PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT
20				SAND (SP-SM) - (cont'd)							
21		19			0.4						
22											
23											
24		20A		- becoming sand (SP)							
25											
26											
27		21			-0.1						
28											
29											
30											

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 45.7m
 ORIGINAL BOREHOLE NUMBER - FKO A 3:1

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FKO A3-1
 PAGE 3 OF 4

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - KOAKOAK DOME PETROLEUM LTD				EBA # 101-3210 N7804385 E584563 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2			SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT			
TYP	NO.	Q									
30	22A		SAND (SP) - (cont'd)		0.2						99
											100
											101
											102
											103
											104
											105
											106
											107
											108
31											109
											110
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40											192
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											195
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											197
											198
											199
											200
											201

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 45.7m
 ORIGINAL BOREHOLE NUMBER - FKO3-1

SAMPLE TYPE

THIN W. TUBE

NO. RECOV.

SPLIT SPOON

HEAVY W. TUBE

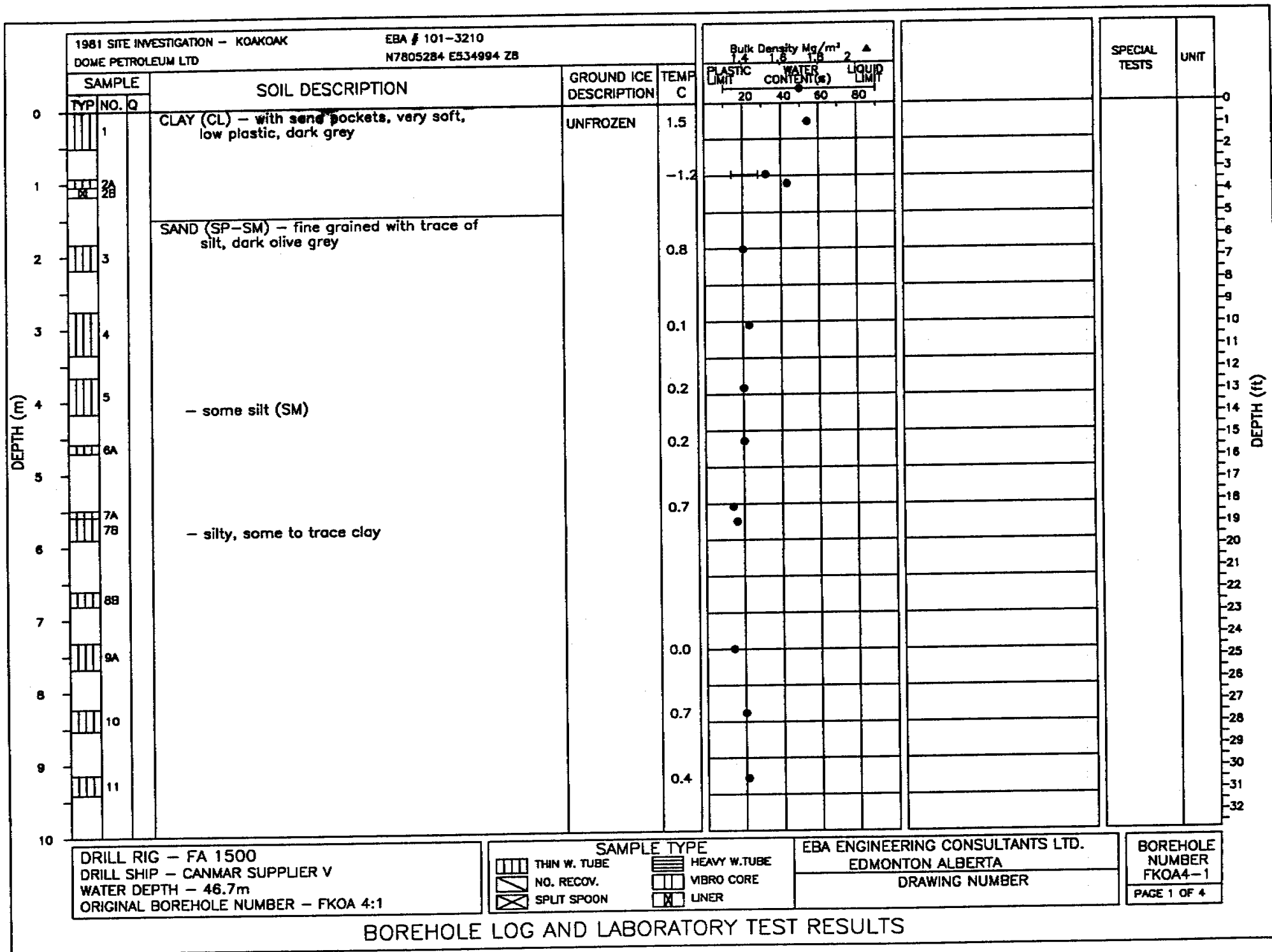
VIBRO CORE

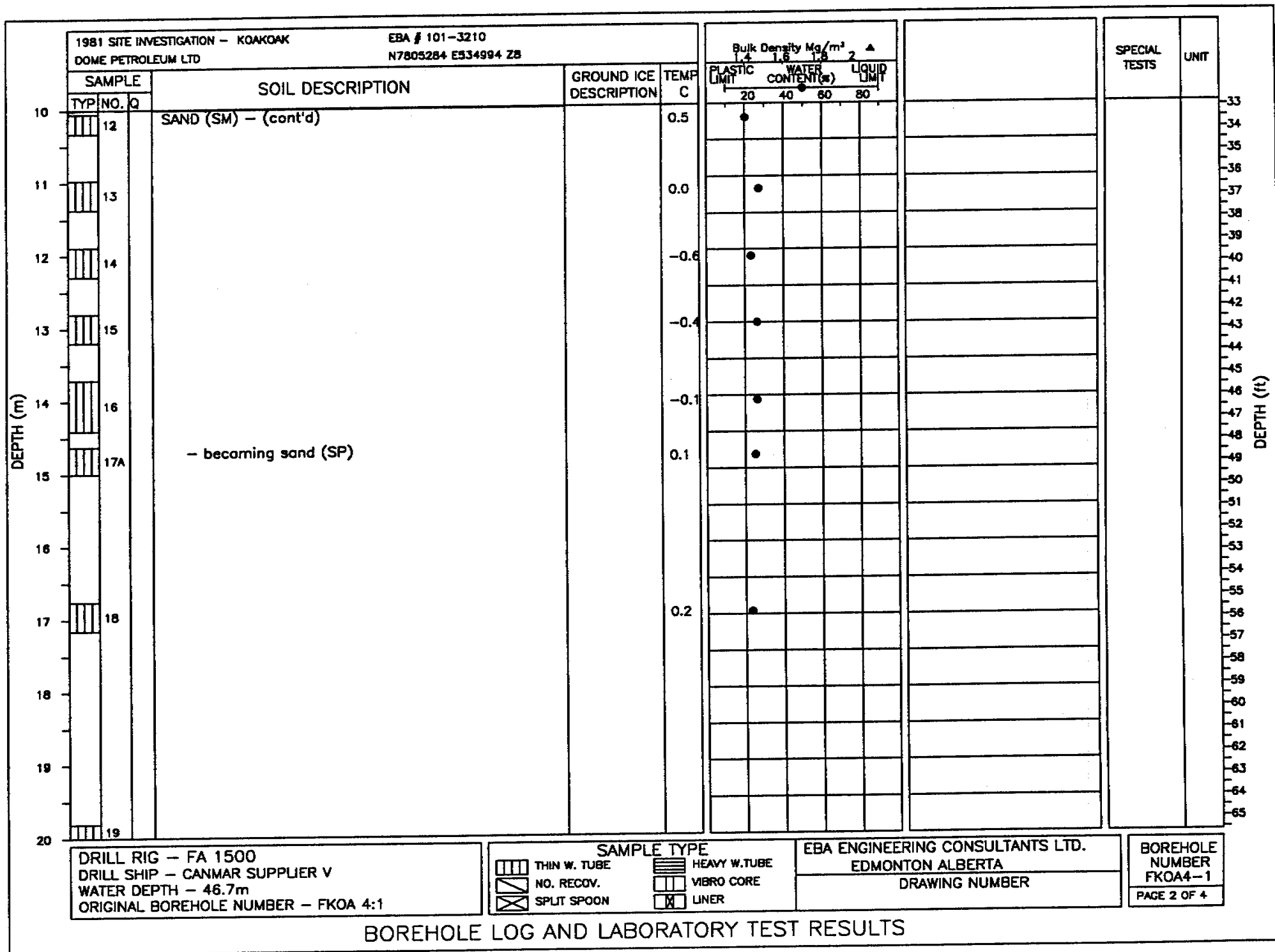
GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FKO3-1
 PAGE 4 OF 4

BOREHOLE LOG AND LABORATORY TEST RESULTS





1981 SITE INVESTIGATION - KOAKOAK DOME PETROLEUM LTD				EBA # 101-3210 N7805284 E534994 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT					
TYP	NO. Q											
20	19	SAND (SP) - (cont'd)		0.0								66
21												67
22												68
23	20				0.1							69
24												70
25												71
26	21A				0.1							72
27												73
28												74
29	22				0.1							75
30											76	
											77	
											78	
											79	
											80	
											81	
											82	
											83	
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											91	
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											93	
											94	
											95	
											96	
											97	
											98	

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 46.7m
 ORIGINAL BOREHOLE NUMBER - FKO4 4:1

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	LINER

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FKO4-1
 PAGE 3 OF 4

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION-KOAKOAK (BORROW)				EBA # 101-3210									
DOME PETROLEUM LTD				N7800294 E561391 Z8									
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	Bulk Density Mg/m ³ ▲				SPECIAL TESTS	UNIT	DEPTH (ft)	
TYP	NO.	Q				PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT					
0			SAND (SM) - some silt, fine grained, uniform, black, some organics, some cohesion - trace of clay to 0.7m, very dense (estimated)	UNFROZEN								0	
													1
													2
												3	
1			END OF BOREHOLE at 1.0m	UNFROZEN								4	
												5	
												6	
												7	
												8	
												9	
												10	
												11	
												12	
												13	
												14	
												15	
												16	
												17	
												18	
5													

DRILL RIG - VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 36.6m
 ORIGINAL BOREHOLE NUMBER - BKO5-1

SAMPLE TYPE

THIN W. TUBE

NO RECOVERY

SPLIT SPOON

HEAVY W. TUBE

CORE

GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BKO5-1

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION-KOAKOAK (BORROW)				EBA # 101-3210		Bulk Density Mg/m ³ ▲				SPECIAL TESTS	UNIT	
DOME PETROLEUM LTD				N7803839 E564159 Z8		PLASTIC LIMIT WATER CONTENT (%) LIQUID LIMIT						
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C								
TYP	NO. Q											
DEPTH (m)	0	1	SAND (SM) - some silt, black streaks and pockets, some cohesion, dense, brownish grey - with trace of clay below 0.14, very dense, black	UNFROZEN								0
	2	2		UNFROZEN								1
			END OF BOREHOLE at 0.6m									2
												3
												4
												5
												6
												7
												8
												9
												10
												11
												12
												13
												14
												15
											16	
5												

DRILL RIG - VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 35.0m
 ORIGINAL BOREHOLE NUMBER - BKO6 6:1

SAMPLE TYPE	
THIN W. TUBE	HEAVY W. TUBE
NO RECOVERY	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BKO6-1

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION-KOAKOAK (BORROW)				EBA # 101-3210									
DOME PETROLEUM LTD				N7804007 E563981 Z8									
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	Bulk Density Mg/m^3 ▲				SPECIAL TESTS	UNIT		
TYP	NO.	Q				PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT					
DEPTH (m)	0	1	SAND (SM/SC) - silty, fine grained, uniform, some clay	UNFROZEN									
	1	2	- clean (SP), clean, fine grained, uniform, grayish brown	UNFROZEN									
	2	3											
	3	4											
	4		END OF BOREHOLE at 2.4m										
	5												
	6												
	7												
	8												
	9												
	10												
	11												
	12												
	13												
	14												
	15												
16													

DRILL RIG - VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 38.0m
 ORIGINAL BOREHOLE NUMBER - BKO6 6:2

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOVERY	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BKO6-2

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION-KOAKOAK (BORROW)				EBA # 101-3210						SPECIAL TESTS	UNIT		
DOME PETROLEUM LTD				N7803716 E563768 Z8									
DEPTH (m)	SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	Bulk Density Mg/m ³ ▲						
	TYP	NO.	Q				PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
0		1		SAND (SM/SC) - some silt and clay, high plasticity, fine grained, dark olive grey, dense	UNFROZEN								
		2			UNFROZEN								
		3			UNFROZEN								
1				END OF BOREHOLE at 0.8m									
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													

DRILL RIG - VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 37.2m
 ORIGINAL BOREHOLE NUMBER - BKO6 6:3

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOVERY	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BKO6-3

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - SOUTH TARSUUT DOME PETROLEUM LTD					N7737500 E464409 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO.	Q										
0			GRAVEL-SAND (gp/sp) - medium grained, clean, some cobbles, (samples washed out of tube)	UNFROZEN								
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12			SILT (CL) - clayey, clay laminations, black									
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												
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47												
48												
49												
50												
51												
52												
53												
54												
55												
56												
57												
58												
59												
60												

1981 SITE INVESTIGATION - SOUTH TARSUUT DOME PETROLEUM LTD				EBA # 101-3210 N7737744 E464712 Z8		Bulk Density Mg/m^3 ▲ 1.4 1.6 1.8 2					SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	WATER CONTENT (%)								
TYP	NO. Q				PLASTIC LIMIT	20	40	60	80	LIQUID LIMIT			
0		SAND (SP) - fine grained, uniform	UNFROZEN										0
													1
													2
													3
													4
		- gravelly, trace of silt, particles up to 20mm diameter											5
													6
		SILT (CL) - trace of clay, some organics, laminated black	UNFROZEN										7
													8
													9
		END OF BOREHOLE at 2.6m											10
													11
													12
													13
													14
													15
													16

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 8.9m
 ORIGINAL BOREHOLE NUMBER - B-TAR:2

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOVERY	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTAR-2

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - SOUTH TARSUUT DOME PETROLEUM LTD				EBA # 101-3210 N7738004 E464007 ZB		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO. Q										
0		CLAY (ML) - silty, trace of sand and gravel, mottled soft	UNFROZEN								0
		SILT (ml) - clayey, trace of sand and gravel up to 20mm diameter									1
		END OF BOREHOLE at 0.9m									2
											3
											4
											5
											6
											7
											8
											9
											10
											11
											12
											13
											14
											15
											16

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 10.1m
 ORIGINAL BOREHOLE NUMBER - B-TAR:3

SAMPLE TYPE

☐ THIN W. TUBE	☐ HEAVY W. TUBE
☐ NO RECOVERY	☐ CORE
☐ SPLIT SPOON	☐ GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTAR-3

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - SOUTH TARSUUT DOME PETROLEUM LTD				EBA # 101-3210 N7737864 E464143 Z8		Bulk Density Mg/m^3 ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT					
TYP	NO. Q											
0		SAND (SP) - clean, trace of fine gravel, fine to medium grained	UNFROZEN									0
												1
												2
												3
1		- sandy gravel, sizes up to 40mm diameter	UNFROZEN									4
		SILT (ml) - mottled, trace of gravel, grey very stiff										5
		- No Recovery below 1.4m										6
		END OF BOREHOLE at 1.8m										7
2												8
												9
												10
												11
												12
												13
												14
												15
5												16

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 9.5m
 ORIGINAL BOREHOLE NUMBER - B-TAR:4

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOVERY	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTAR-4

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - SOUTH TARSUUT DOME PETROLEUM LTD				EBA # 101-3210 N7737999 E466009 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT					
TYP	NO. Q											
0		SAND (SM) - clean, fine to medium grained	UNFROZEN									
		GRAVEL-SAND (GP) - clean, sizes up to 50mm, some clean gravel lenses										
		SAND (SM) - very fine grained uniform, grey	UNFROZEN									
		END OF BOREHOLE at 1.2m										
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												

DRILL RIG - VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 8.7m
 ORIGINAL BOREHOLE NUMBER - B-TAR:5

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOVERY	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTAR-5

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - SOUTH TARSUUT DOME PETROLEUM LTD				EBA # 101-3210 N7737581 E465496 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT			
TYP	NO.	Q									
0			SAND (SP) - clean, fine to medium grained	UNFROZEN							
			GRAVEL (GP) - sandy, sizes up to 40mm diameter								
			- trace of silt lenses								
			SILT (ml) - some sand, grey	UNFROZEN							
			END OF BOREHOLE at 0.6m								
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											

DRILL RIG - VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 9.0m
 ORIGINAL BOREHOLE NUMBER - B-TAR:6

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOVERY	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTAR-6

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - SOUTH TARSUUT DOME PETROLEUM LTD				EBA # 101-3210 N7737647 E465997 Z8		Bulk Density Mg/m^3 ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)	
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT						
TYP	NO. Q												
DEPTH (m)	0		GRAVEL-SAND (GW-GM) - trace of silt, sizes up to 30mm diameter	UNFROZEN								0	
			SAND-SILT (SM) - trace of medium and coarse size sand grains	UNFROZEN								1	
			- some silt, very fine grained, uniform										2
													3
													4
													5
													6
													7
													8
													9
			SILT (ml) - mottled, occasional organic laminae										10
			END OF BOREHOLE at 2.7m										11
													12
													13
													14
													15
5												16	

DRILL RIG - VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 8.8m
 ORIGINAL BOREHOLE NUMBER - B-TAR:7

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOVERY	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTAR-7

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - SOUTH TARSUUT DOME PETROLEUM LTD				EBA # 101-3210 N7738006 E465503 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT			
TYP	NO.	Q									
0			SAND (SP) - trace of gravel and silt, fine to medium grained, sizes up to 25mm diameter	UNFROZEN							
1			SILT-ORGANICS (CL) - some gravel sizes up to 40mm diameter, stiff, some clay, some organic laminae, mottled, firm	UNFROZEN							
2			END OF BOREHOLE at 1.25m								
3											
4											
5											

DRILL RIG - VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 9.2m
 ORIGINAL BOREHOLE NUMBER - B-TAR:8

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOVERY	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTAR-8

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - SOUTH TARSUUT DOME PETROLEUM LTD				EBA # 101-3210 N7737262 E465498 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2.0					SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT						
TYP	NO. Q												
0		SAND (SP) - clean, fine to medium grained	UNFROZEN										0
		GRAVEL (GW) - sandy, sizes up to 40mm diameter									1		
		SAND (SP) - clean, fine to medium grained	UNFROZEN										2
		- and gravel, sizes up to 30mm diameter										3	
		SILT (CL) - and organics, laminated with fine sand										4	
1		END OF BOREHOLE at 1.2m										5	
2													6
3													7
4													8
5													9
													10
													11
													12
													13
													14
													15
													16

DRILL RIG - VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 9.2m
 ORIGINAL BOREHOLE NUMBER - B-TAR:9

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOVERY	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTAR-9

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - SOUTH TARSUUT DOME PETROLEUM LTD				EBA # 101-3210 N7738497 E465516 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO.	Q										
0			SAND (SP) - clean, very fine grained	UNFROZEN								0
			- 80mm layer of pea gravel - (SM) some silt, very fine grained	UNFROZEN								1
1			END OF BOREHOLE at 1.2m									2
												3
												4
												5
												6
												7
												8
												9
												10
												11
												12
												13
												14
												15
												16
												17
												18
5												

DRILL RIG - VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 8.4m
 ORIGINAL BOREHOLE NUMBER - B-TAR:10

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOVERY	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTAR-10

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - SOUTH TARSUUT DOME PETROLEUM LTD				EBA # 101-3210 N7738511 E465509 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO.	Q										
0			SAND (SP) - clean, fine to medium grained	UNFROZEN								0
				UNFROZEN								1
			- coarsed grained									2
1			END OF BOREHOLE at 1.1m									3
												4
												5
												6
												7
												8
												9
												10
												11
												12
												13
												14
												15
5												16

DRILL RIG - VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 9.2m
 ORIGINAL BOREHOLE NUMBER - B-TAR:11

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOVERY	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTAR-11

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - SOUTH TARSUUT DOME PETROLEUM LTD				EBA # 101-3210 N7737267 E464486 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)	
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT					
TYP	NO.	Q											
0			SAND (SP) - clean, medium grained	UNFROZEN								0	
													1
													2
													3
			- some fine gravel										4
			END OF BOREHOLE at 1.3m										5
													6
													7
													8
													9
													10
													11
													12
													13
													14
													15
5												16	

DRILL RIG - VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 8.2m
 ORIGINAL BOREHOLE NUMBER - B-TAR:12

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOVERY	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTAR-12

BOREHOLE LOG AND LABORATORY TEST RESULTS

EBA # 101-3210
N7737913 E463696 ZB

[illegible]

THIN W. TUBE
NO RECOVERY
SPLIT SPOON

HEAVY W.TUBE
CORE
GRAB

BOREHOLE
NUMBER
BTAR-13

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - SOUTH TARSUUT				EBA # 101-3210													
DOME PETROLEUM LTD				N7737683 E463736 Z8													
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	Bulk Density Mg/m ³ ▲						SPECIAL TESTS	UNIT	DEPTH (ft)			
TYP	NO.	Q				PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT									
						20	40	60	80								
			GRAVEL (GW) - sandy, clean, sizes up to 40mm diameter	UNFROZEN										0			
			SILT-CLAY (CL) - very fine sand laminae throughout low plastic, damp, stiff	UNFROZEN										1			
														2			
														3			
														4			
			END OF BOREHOLE at 1.1m											5			
														6			
														7			
														8			
														9			
														10			
														11			
														12			
														13			
														14			
														15			
														16			

DRILL RIG - VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 9.6m
 ORIGINAL BOREHOLE NUMBER - B-TAR:14

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOVERY	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTAR-14

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - SOUTH TARSUUT				EBA # 101-3210														
DOME PETROLEUM LTD				N7737706 E463274 Z8														
SAMPLE		SOIL DESCRIPTION		GROUND ICE DESCRIPTION		TEMP C		Bulk Density Mg/m ³ ▲						SPECIAL TESTS		UNIT		
TYP	NO. Q							PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT								
								20	40	60	80							
0		SAND-GRAVEL (SP-SM) - trace of silt, fine to medium grained		UNFROZEN														
		- (SP)																
		- (SP-SM)																
1		CLAY-SILT (CL) - damp medium to low plastic																
		END OF BOREHOLE at 1.2m																
2																		
3																		
4																		
5																		

DRILL RIG - VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 9.5m
 ORIGINAL BOREHOLE NUMBER - B-TAR:15

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOVERY	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTAR-15

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - SOUTH TARSUUT DOME PETROLEUM LTD				EBA # 101-3210 N7737593 E463387 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT(%)	LIQUID LIMIT				
TYP	NO.	Q										
0	X		SAND (SP) - clean	UNFROZEN								
			GRAVEL (GW) sandy, clean, sizes up to 25mm diameter									
			SAND (SP-SM) - trace of silt, fine grained, occasional silt laminae	UNFROZEN								
			END OF BOREHOLE at 0.95m									
1												
2												
3												
4												
5												

DRILL RIG - VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 8.8m
 ORIGINAL BOREHOLE NUMBER - B-TAR:16

SAMPLE TYPE

THIN W. TUBE

NO RECOVERY

SPLIT SPOON

HEAVY W. TUBE

CORE

GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTAR-16

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - SOUTH TARSUUT DOME PETROLEUM LTD				EBA # 101-3210 N7737485 E463490 Z8		Bulk Density Mg/m^3 ▲ 1.4 1.6 1.8 2					SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT					
TYP	NO.	Q											
0			SAND (SP) - clean, occasional pebbles, uniform	UNFROZEN									0
			GRAVEL (GP) - sandy, clean, sizes up to 50mm diameter										
			SAND (sp) - trace of gravel and silt, fine to medium grained, becoming finer grained and siltier with depth, clayey										
			SILT (CL) - clayey, mottled with organics, frequent sand partings and lenses										
			END OF BOREHOLE at 1.32m										
1				UNFROZEN									1
2				UNFROZEN									2
3				UNFROZEN									3
4				UNFROZEN									4
5				UNFROZEN									5

DRILL RIG - VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 9.2m
 ORIGINAL BOREHOLE NUMBER - B-TAR:17

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOVERY	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTAR-17

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - SOUTH TARSUUT DOME PETROLEUM LTD				EBA # 101-3210 N7737402 E463584 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT					
TYP	NO. Q											
0		SAND (SP) - clean	UNFROZEN									0
		GRAVEL (gw) - sandy, clean, up to 35mm diameter										1
		SAND (SP) - trace of silt, fine to medium grained										2
												3
1			UNFROZEN									4
												5
		SILT-SAND (ml-sm) - grading to clayey silt										6
												7
2		END OF BOREHOLE at 1.65m										8
												9
												10
												11
3												12
												13
												14
												15
4												16
												17
												18
												19
5												20
												21
												22
												23

DRILL RIG - VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 8.8m
 ORIGINAL BOREHOLE NUMBER - B-TAR:18

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOVERY	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 STAR-18

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - SOUTH TARSUUT DOME PETROLEUM LTD				EBA # 101-3210 N7737281 E463700 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)	
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT					
TYP	NO.	Q											
0			SAND (SP) - clean, fine grained, uniform	UNFROZEN								0	
													1
													2
													3
													4
													5
													6
													7
													8
													9
													10
													11
													12
													13
													14
													15
												16	
5			END OF BOREHOLE at 0.73m										

DRILL RIG - VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 8.5m
 ORIGINAL BOREHOLE NUMBER - B-TAR:19

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOVERY	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTAR-19

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - SOUTH TARSUUT DOME PETROLEUM LTD				EBA # 101-3210 N7738777 E464208 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT					
TYP	NO. Q											
0		SAND (SP) - clean, fine to medium grained	UNFROZEN									0
		GRAVEL-SAND (GP) - clean up to 30mm diameter										1
		SAND-GRAVEL (SP) - clean, gap graded, well rounded										2
												3
1			UNFROZEN									4
												5
		END OF BOREHOLE at 1.81m										6
2												7
												8
												9
3												10
												11
												12
4												13
												14
												15
5												16

DRILL RIG - VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 10.7m
 ORIGINAL BOREHOLE NUMBER - B-TAR:20

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOVERY	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTAR-20

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - SOUTH TARSUUT DOME PETROLEUM LTD				EBA # 101-3210 N7736903 E464110 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2.0				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO.	Q										
0			SAND (sp) - clean, fine to medium grained	UNFROZEN								0
												1
												2
												3
1			END OF BOREHOLE at 0.9m									4
												5
												6
												7
												8
												9
												10
												11
												12
												13
												14
												15
5												16

DRILL RIG - VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 8.2m
 ORIGINAL BOREHOLE NUMBER - B-TAR:21

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOVERY	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTAR-21

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - SOUTH TARSUUT DOME PETROLEUM LTD				EBA # 101-3210 N7736985 E463990 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT			
TYP	NO.	Q									
0			SAND (SP) - clean, fine to medium grained	UNFROZEN							0
			END OF BOREHOLE at 0.68m								1
											2
											3
											4
											5
											6
											7
											8
											9
											10
											11
											12
											13
											14
											15
											16
5											

DRILL RIG - VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 7.0m
 ORIGINAL BOREHOLE NUMBER - B-TAR:22

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOVERY	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTAR-22

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - SOUTH TARSUUT DOME PETROLEUM LTD				EBA # 101-3210 N7737225 E463790 Z8		Bulk Density Mg/m^3 ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)	
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT					
TYP	NO.	Q											
0			SAND (SP) - clean, fine to medium grained	UNFROZEN								0	
													1
													2
													3
													4
													5
													6
													7
													8
													9
													10
													11
													12
													13
													14
													15
												16	
5			GRAVEL-SAND (GP) - clean, sandier with depth, sizes up to 30mm diameter END OF BOREHOLE at 1.45m										

DRILL RIG - VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 8.8m
 ORIGINAL BOREHOLE NUMBER - B-TAR:23

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOVERY	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTAR-23

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - SOUTH TARSUUT DOME PETROLEUM LTD				EBA # 101-3210 N7737129 E463904 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2					SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT					
TYP	NO.	Q											
0			SAND (SP) - clean, medium to fine grained	UNFROZEN									0
			GRAVEL-SAND (GW) - clean, grading to coarse gravel, size up to 30mm diameter	UNFROZEN									1
													2
													3
													4
													5
													6
			END OF BOREHOLE at 1.75m										7
													8
													9
													10
													11
													12
													13
													14
													15
													16
5													

DRILL RIG - VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 8.5m
 ORIGINAL BOREHOLE NUMBER - B-TAR:24

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOVERY	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTAR-24

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION -- SOUTH TARSUUT DOME PETROLEUM LTD				EBA # 101-3210 N7737018 E464022 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO. Q										
0		SAND (SP) - clean, medium to fine grained	UNFROZEN								0
		GRAVEL (GW) - sandy, clean, well rounded, grading to coarse gravel at 0.7m	UNFROZEN								1
											2
											3
											4
											5
											6
		END OF BOREHOLE at 1.95m									7
											8
											9
											10
											11
											12
											13
											14
											15
											16

DRILL RIG - VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 8.5m
 ORIGINAL BOREHOLE NUMBER - B-TAR:25

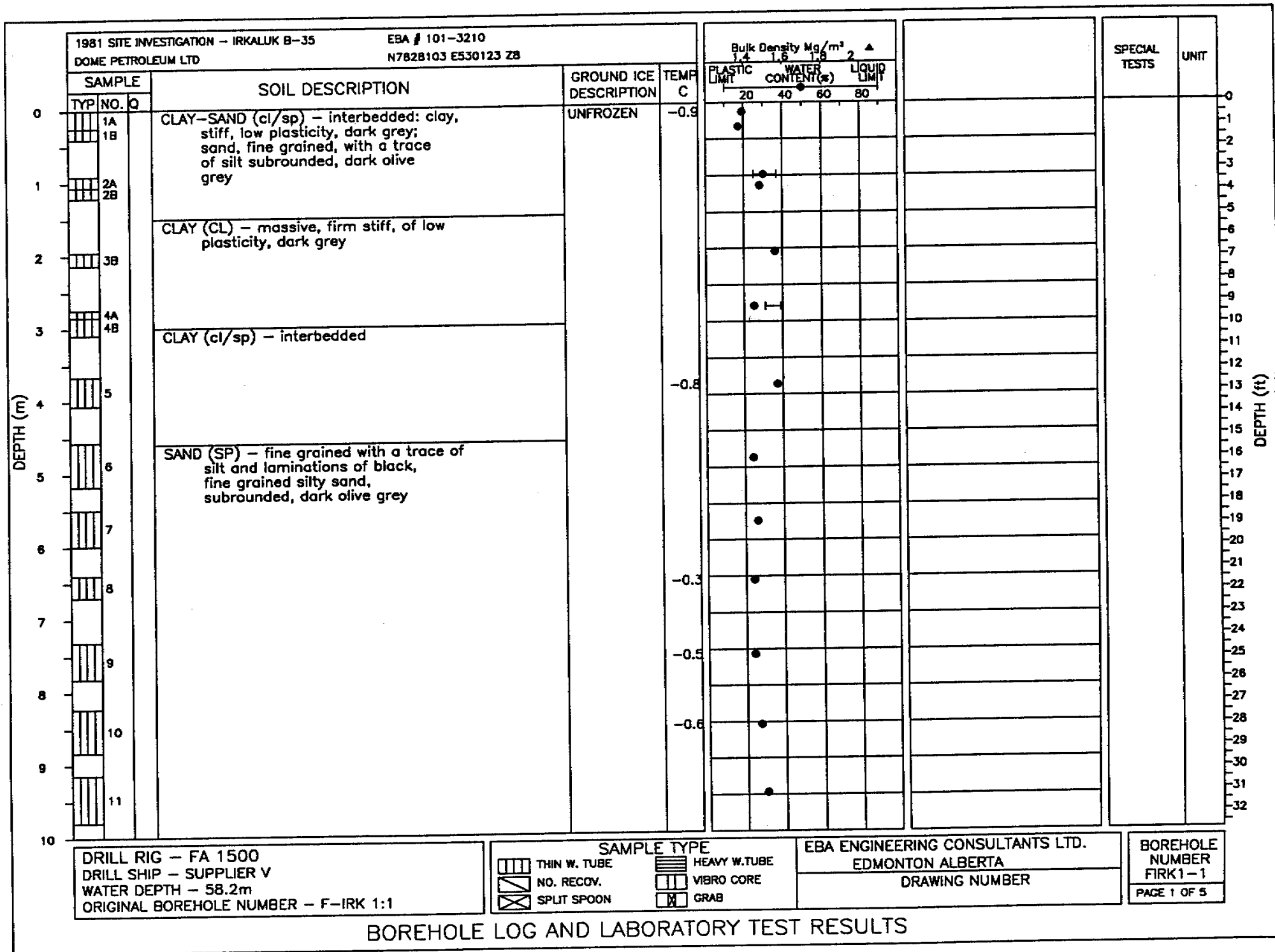
SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOVERY	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTAR-25

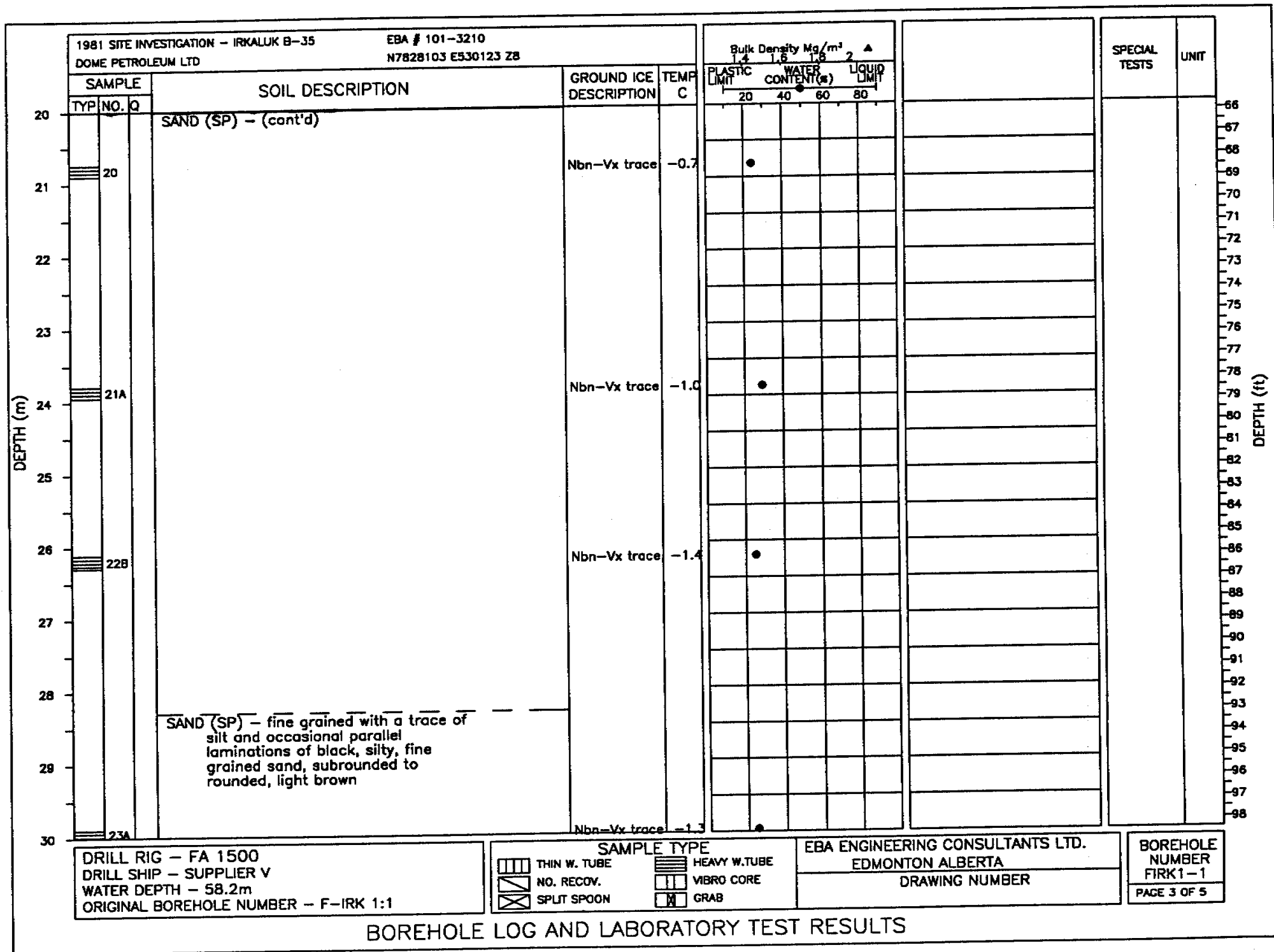
BOREHOLE LOG AND LABORATORY TEST RESULTS



1981 SITE INVESTIGATION - IRKALUK B-35 DOME PETROLEUM LTD				EBA # 101-3210 N7828103 E530123 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT					
NO.	Q											
10	12	SAND (SP) - (cont'd)										33
11	13											34
12	14											35
13	15											36
14	16											37
15	17											38
16	18											39
17												40
18												41
19												42
20												43
												44
												45
												46
												47
												48
												49
												50
		51										
		52										
		53										
		54										
		55										
		56										
		57										
		58										
		59										
		60										
		61										
		62										
		63										
		64										
		65										

DRILL RIG - FA 1500 DRILL SHIP - SUPPLIER V WATER DEPTH - 58.2m ORIGINAL BOREHOLE NUMBER - F-IRK 1:1		SAMPLE TYPE THIN W. TUBE NO. RECOV. SPLIT SPOON HEAVY W. TUBE VIBRO CORE GRAB		EBA ENGINEERING CONSULTANTS LTD. EDMONTON ALBERTA DRAWING NUMBER		BOREHOLE NUMBER FIRK1-1 PAGE 2 OF 5
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BOREHOLE LOG AND LABORATORY TEST RESULTS



1981 SITE INVESTIGATION - IRKALUK 8-35 DOME PETROLEUM LTD				EBA # 101-3210 N7828103 E530123 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO.	Q										
			SAND (SP) - (cont'd)									99
												100
												101
												102
												103
												104
												105
												106
												107
				Nbn-Vx trace	-1.4							108
												109
												110
												111
												112
												113
												114
												115
												116
												117
				Nbn-Vx trace	-1.1							118
												119
												120
												121
												122
												123
												124
												125
												126
												127
												128
				Nbn-Vx trace	-1.1							129
												130
												131

DRILL RIG - FA 1500
 DRILL SHIP - SUPPLIER V
 WATER DEPTH - 58.2m
 ORIGINAL BOREHOLE NUMBER - F-IRK 1:1

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FIRK1-1
 PAGE 4 OF 5

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - IRKALUK B-35 DOME PETROLEUM LTD				EBA # 101-3210 N7828103 E530123 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2			SPECIAL TESTS	UNIT
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT		
TYP	NO.	Q								
			SAND (SP) - (cont'd)							
			SAND (SP) - fine grained with a trace of silt and faint parallel thin laminae throughout, dark olive grey							
	27			Nbn-Vx trace	-1.4					
	28			FROZEN Nbn-Vx trace	-1.1					
			END OF BOREHOLE at 45.8m							

DRILL RIG - FA 1500
 DRILL SHIP - SUPPLIER V
 WATER DEPTH - 58.2m
 ORIGINAL BOREHOLE NUMBER - F-IRK 1:1

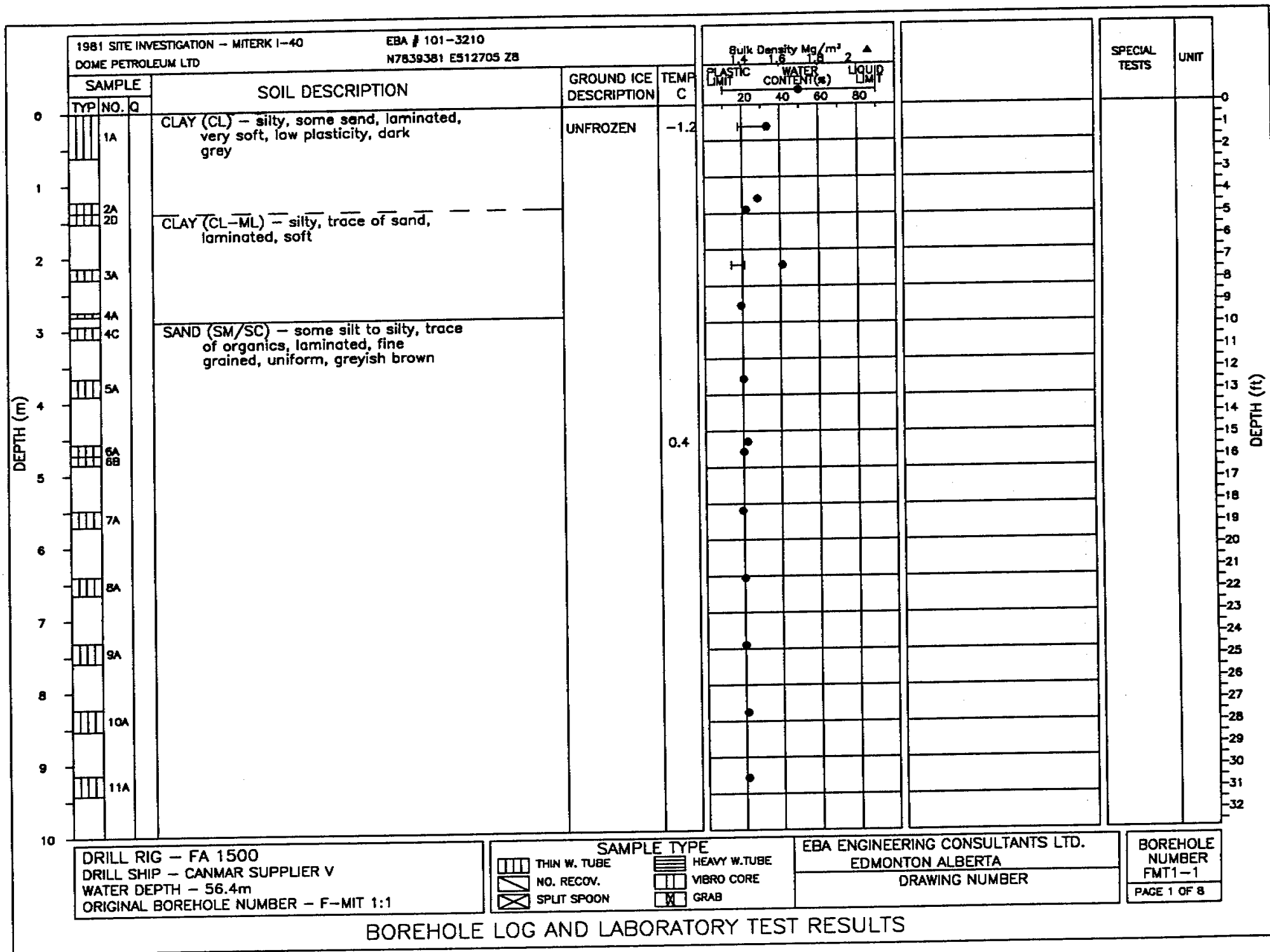
SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FIRK1-1
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BOREHOLE LOG AND LABORATORY TEST RESULTS



1981 SITE INVESTIGATION - MITERK 1-40 DOME PETROLEUM LTD				EBA # 101-3210 N7839381 E512705 Z8		Bulk Density Mg/m^3 ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT					
TYP	NO. Q											
10	12A	SAND (SM/SC) - (cont'd)		0.2								33
11	13A	- trace of silt (SP-SM), fine to medium grained, uniform, homogeneous										34
12	14A											35
13	15A											36
14	16A											37
15	17A											38
16	18A			0.2								39
17												40
18												41
19	19			-0.1								42
20												43
												44
												45
												46
												47
												48
												49
												50
												51
												52
												53
												54
												55
												56
												57
												58
												59
												60
												61
												62
												63
												64
												65

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 56.4m
 ORIGINAL BOREHOLE NUMBER - F-MIT 1:1

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FMT1-1
 PAGE 2 OF 8

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - MITERK 1-40 DOME PETROLEUM LTD				EBA # 101-3210 N7839381 ES12705 Z8		Bulk Density Mg/m^3 ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT WATER CONTENT (%) LIQUID LIMIT							
TYP	NO. Q							20	40	60	80	
		SAND (SP-SM) - (cont'd)										66
												67
												68
												69
												70
												71
												72
												73
				0.0								74
												75
												76
												77
												78
												79
												80
												81
												82
				0.4								83
												84
												85
												86
												87
												88
												89
												90
												91
												92
												93
			FROZEN Vs trace Vs trace									94
												95
												96
												97
												98

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 56.4m
 ORIGINAL BOREHOLE NUMBER - F-MIT 1:1

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FMT1-1
 PAGE 3 OF 8

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - MITERK 1-40 DOME PETROLEUM LTD				EBA # 101-3210 N7839381 E512705 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2			SPECIAL TESTS	UNIT	DEPTH (ft)		
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT WATER CONTENT (%) LIQUID LIMIT								
TYP	NO.				Q				20	40	60	80	
			SAND (SP-SM) - (cont'd)	UNFROZEN	0.3						99		
													100
													101
													102
													103
													104
													105
													106
													107
													108
													109
													110
													111
													112
													113
													114
													115
													116
													117
													118
										119			
										120			
										121			
										122			
										123			
										124			
										125			
										126			
										127			
										128			
										129			
										130			
										131			

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 56.4m
 ORIGINAL BOREHOLE NUMBER - F-MIT 1:1

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FMT1-1
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BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - MITERK I-40 DOME PETROLEUM LTD				EBA # 101-3210 N7839381 ES12705 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2			SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO. Q										20
		SAND (SP-SM) - (cont'd)									132
	26A			0.5							133
											134
											135
											136
											137
											138
											139
											140
											141
	27A			0.9							142
											143
											144
											145
											146
											147
											148
											149
											150
											151
											152
	28B		FROZEN Nbn-Vs trace	-1.4							153
											154
											155
											156
											157
											158
	29A		Nbn-Vs trace	-1.5							159
											160
											161
											162
	29B		Nbn-Vs trace								163
											164

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 56.4m
 ORIGINAL BOREHOLE NUMBER - F-MIT 1:1

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FMT1-1
 PAGE 5 OF 8

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - MITERK I-40 DOME PETROLEUM LTD				EBA # 101-3210 N7839381 E512705 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2.0			SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT			
TYPE	NO.	Q									
			SAND (SP-SM) - (cont'd)								165
											166
											167
											168
											169
											170
											171
											172
											173
											174
											175
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											194
											195
											196

DRILL RIG - FA 1500 DRILL SHIP - CANMAR SUPPLIER V WATER DEPTH - 56.4m ORIGINAL BOREHOLE NUMBER - F-MIT 1:1	SAMPLE TYPE THIN W. TUBE NO. RECOV. SPLIT SPOON HEAVY W. TUBE VIBRO CORE GRAB	EBA ENGINEERING CONSULTANTS LTD. EDMONTON ALBERTA DRAWING NUMBER	BOREHOLE NUMBER FMT1-1 PAGE 6 OF 8
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BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - MITERK I-40 DOME PETROLEUM LTD				EBA # 101-3210 N7839381 E512705 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2			SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT(%)	LIQUID LIMIT			
TYP	NO.	Q									
60			SAND (SP-SM) - (cont'd)								197
61											198
62		33A		Nbe trace	0.3						199
63											200
64		34C									201
65		34B		Nbe trace Nbe trace Nbe trace	0.3						202
66											203
67											204
68		35A		Nf-Nbn	-1.5						205
69											206
70											207
											208
											209
											210
											211
											212
											213
											214
											215
											216
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											221
											222
											223
											224
											225
											226
											227
											228
											229

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 56.4m
 ORIGINAL BOREHOLE NUMBER - F-MIT 1:1

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FMT1-1
 PAGE 7 OF 8

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - MITERK I-40 DOME PETROLEUM LTD				EBA # 101-3210 N7839381 E512705 Z8		Bulk Density Mg/m^3 ▲ 1.4 1.6 1.8 2.0			SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT			
TYP	NO.	Q									
			SAND (SP-SM) - (cont'd)								230
											231
											232
											233
				Nf-Nbn Nf-Nbn Nf-Nbn	-1.8						234
											235
											236
											237
											238
											239
											240
											241
											242
											243
											244
			END OF BOREHOLE at 74.3m	FROZEN Nf-Nbn							245
											246
											247
											248
											249
											250
											251
											252
											253
											254
											255
											256
											257
											258
											259
											260
											261
											262

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 56.4m
 ORIGINAL BOREHOLE NUMBER - F-MIT 1:1

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FMT1-1
 PAGE 8 OF 8

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - TARSUUT N-44 CANADIAN MARINE DRILLING LTD.				EBA # 101-3210/3443 N7753478 E458874 ZB		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT							
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT	DEPTH (m)										
TYP	NO. Q																	
0	1	CLAY AND SILT (CH) - fine organic lamina- tions, very soft, high plasticity, dark grey - soft - soft to firm	UNFROZEN		20	40	60	80			0							
	2											UNFROZEN						1
	3																	
	4	END OF BOREHOLE at 0.7m										3						
1											4							
											5							
											6							
											7							
2											8							
											9							
											10							
											11							
3											12							
											13							
											14							
											15							

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 21.7m
 ORIGINAL BOREHOLE NUMBER - F-TAR 1:1

SAMPLE TYPE

THIN W. TUBE

NO RECOV.

SPLIT SPOON

HEAVY W. TUBE

CORE

GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA

DRAWING NUMBER

BOREHOLE NUMBER
 FTAR1-1

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - TARSUUT N-44 CANADIAN MARINE DRILLING LTD.				EBA # 101-3210/3443 N7753473 E458838 Z8		Bulk Density Mg/m^3 ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (m)		
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT							
TYP	NO. Q													
0	1	CLAY AND SILT (CH) - traces of sand and organics, laminated, very soft, low plasticity, dark grey	UNFROZEN									0		
	2													1
	3													2
	4													3
	5													4
	6													5
		END OF BOREHOLE at 0.66m	UNFROZEN									6		
1												7		
2												8		
3												9		

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 21.3m
 ORIGINAL BOREHOLE NUMBER - F-TAR 1:2

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOV.	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FTAR1-2

BOREHOLE LOG AND LABORATORY TEST RESULTS

EBA # 101-3210/3443
N7754562 E452343 ZB

1981 SITE INVESTIGATION - TARSUUT N-44 CANADIAN MARINE DRILLING LTD.				EBA # 101-3210/3443 N7754562 E452343 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2			PLASTIC LIMIT 20 40 60 80			WATER CONTENT (%)			LIQUID LIMIT			SPECIAL TESTS		UNIT				
SAMPLE			SOIL DESCRIPTION			GROUND ICE DESCRIPTION		TEMP C																
TYP NO. Q																								
0			1			CLAY AND SILT (CH) - trace of organics, very soft, high plasticity, very dark grey			UNFROZEN															
2																								
3																								
4																								
			END OF BOREHOLE at 0.7m			UNFROZEN																		
1																								
2																								
3																								
4																								
5																								
6																								
7																								
8																								
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1981 SITE INVESTIGATION - TARSUT N-44 CANADIAN MARINE DRILLING LTD.				EBA # 101-3210/3443 N775811 E453392 Z8		Bulk Density Mg/m^3 ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO. Q										
0	1	CLAY (CH) - silty, moist, soft, high plastic, dark grey	UNFROZEN			40	60				
1	2					40	60				
2	3					40	60				
3	4					40	60				

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 20.7m
 ORIGINAL BOREHOLE NUMBER - F-TAR 1:5

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOV.	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FTAR1-5
 PAGE 1 OF 2

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - TARSUT N-44 CANADIAN MARINE DRILLING LTD.				EBA # 101-3210/3443 N775811 E453392 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT			
TYP	NO.	Q									
3			CLAY (CH) - (cont'd)								
	4										
			- damp, firm, (CL)								
	5										
4											
			- low plastic, (CL), damp, stiff, dark grey								
	6										
	7										
	8										
			NOTE: END OF BOREHOLE at 6.1m								
6											

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 20.7m
 ORIGINAL BOREHOLE NUMBER - F-TAR 1:5

UNFROZEN

SAMPLE TYPE

THIN W. TUBE

NO RECOV.

SPLIT SPOON

HEAVY W. TUBE

CORE

GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA

DRAWING NUMBER

BOREHOLE NUMBER
 FTAR1-5

PAGE 2 OF 2

BOREHOLE LOG AND LABORATORY TEST RESULTS

[illegible]

1981 SITE INVESTIGATION - TARSUUT N-44 CANADIAN MARINE DRILLING LTD.				EBA # 101-3210/3443 N7754890 E454193 ZB		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT			
TYP	NO.	Q									
0	1		SAND FILL (SP) - trace of silt, fine-grained, uniform	UNFROZEN							
	2		CLAY AND SILT (CH) - trace of organics, very soft, high plasticity, dark grey								
	3										
	4		- discrete zone of sand (SP), sampled at this level								
	5		- becoming stiffer	UNFROZEN							
1	END OF BOREHOLE at 0.9m										
2											
3											

DRILL RIG - FA 1500 DRILL SHIP - CANMAR SUPPLIER V WATER DEPTH - 22.2m ORIGINAL BOREHOLE NUMBER - F-TAR 1:7	SAMPLE TYPE THIN W. TUBE NO RECOV. SPLIT SPOON HEAVY W. TUBE CORE GRAB	EBA ENGINEERING CONSULTANTS LTD. EDMONTON ALBERTA DRAWING NUMBER	BOREHOLE NUMBER FTAR1-7
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BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 SITE INVESTIGATION - TARSUUT N-44
CANADIAN MARINE DRILLING LTD.

EBA # 101-3210/3443
N7754100 E454199 Z8

DEPTH (m)	SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	Bulk Density Mg/m ³ ▲				SPECIAL TESTS	UNIT	DEPTH (ft)
	TYP	NO.	Q				PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
0		1A		CLAY (CH) - trace of organics, moist, soft high plastic, dark grey	UNFROZEN								0
		1B											1
		2A											2
		2C											3
		2B											4
1													5
													6
													7
2		3A											8
		3B											9
		3C											10
													11
		4A											12
		4B											13
		4C											14
3													15

- very soft to soft and shear failure plane noted

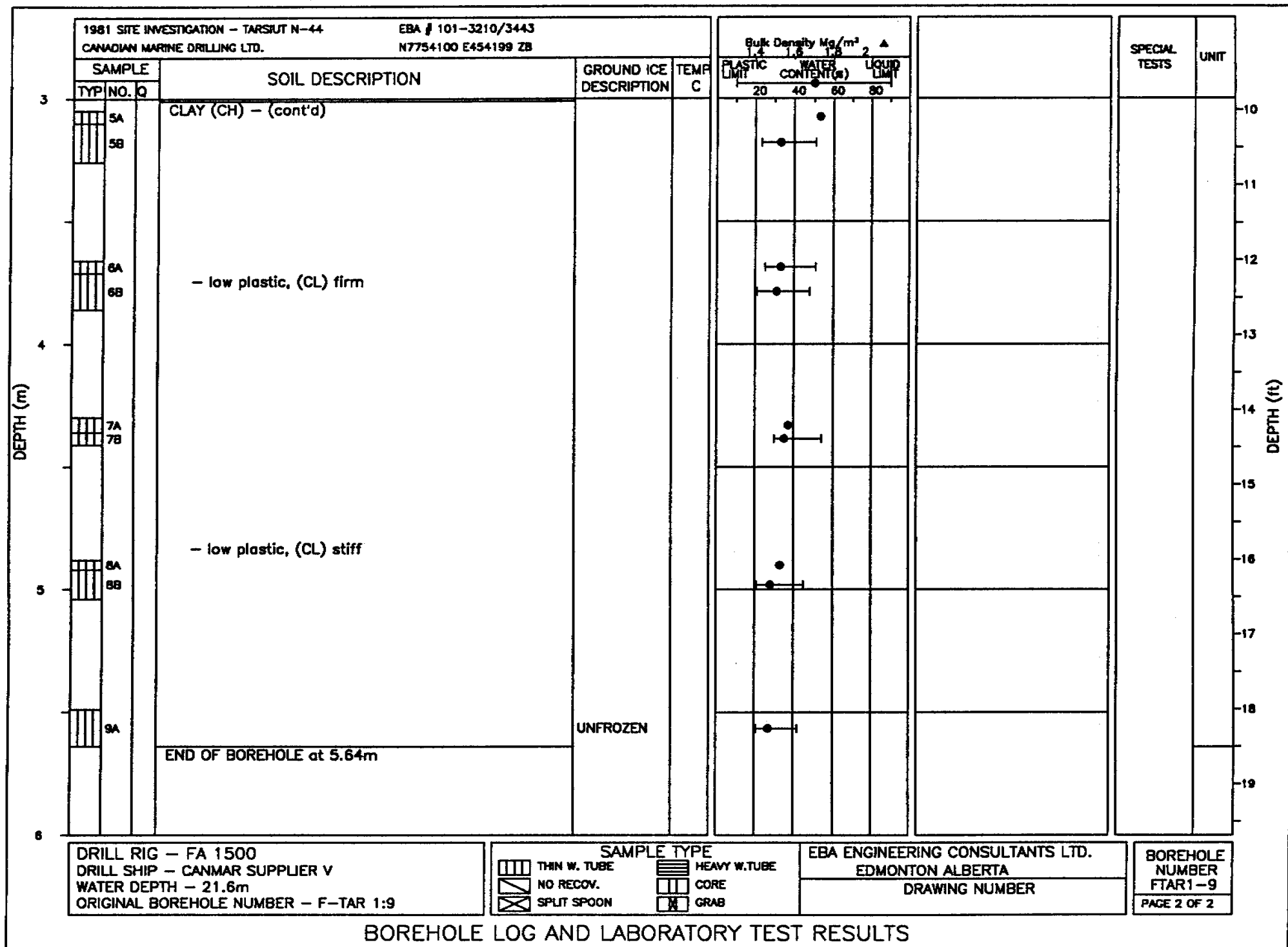
DRILL RIG - FA 1500
DRILL SHIP - CANMAR SUPPLIER V
WATER DEPTH - 21.6m
ORIGINAL BOREHOLE NUMBER - F-TAR 1:9

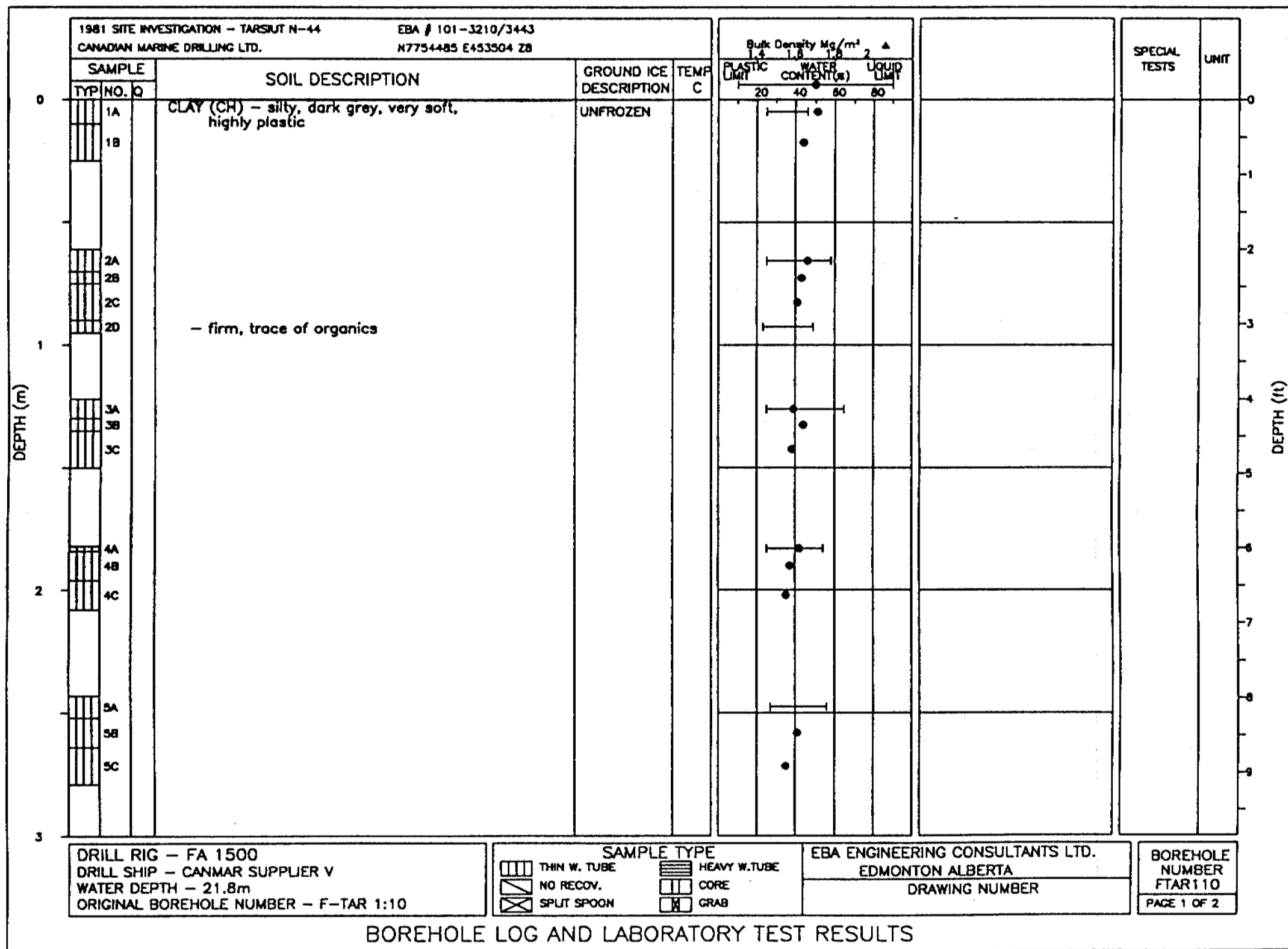
SAMPLE TYPE			
	THIN W. TUBE		HEAVY W. TUBE
	NO RECOV.		CORE
	SPLIT SPOON		GRAB

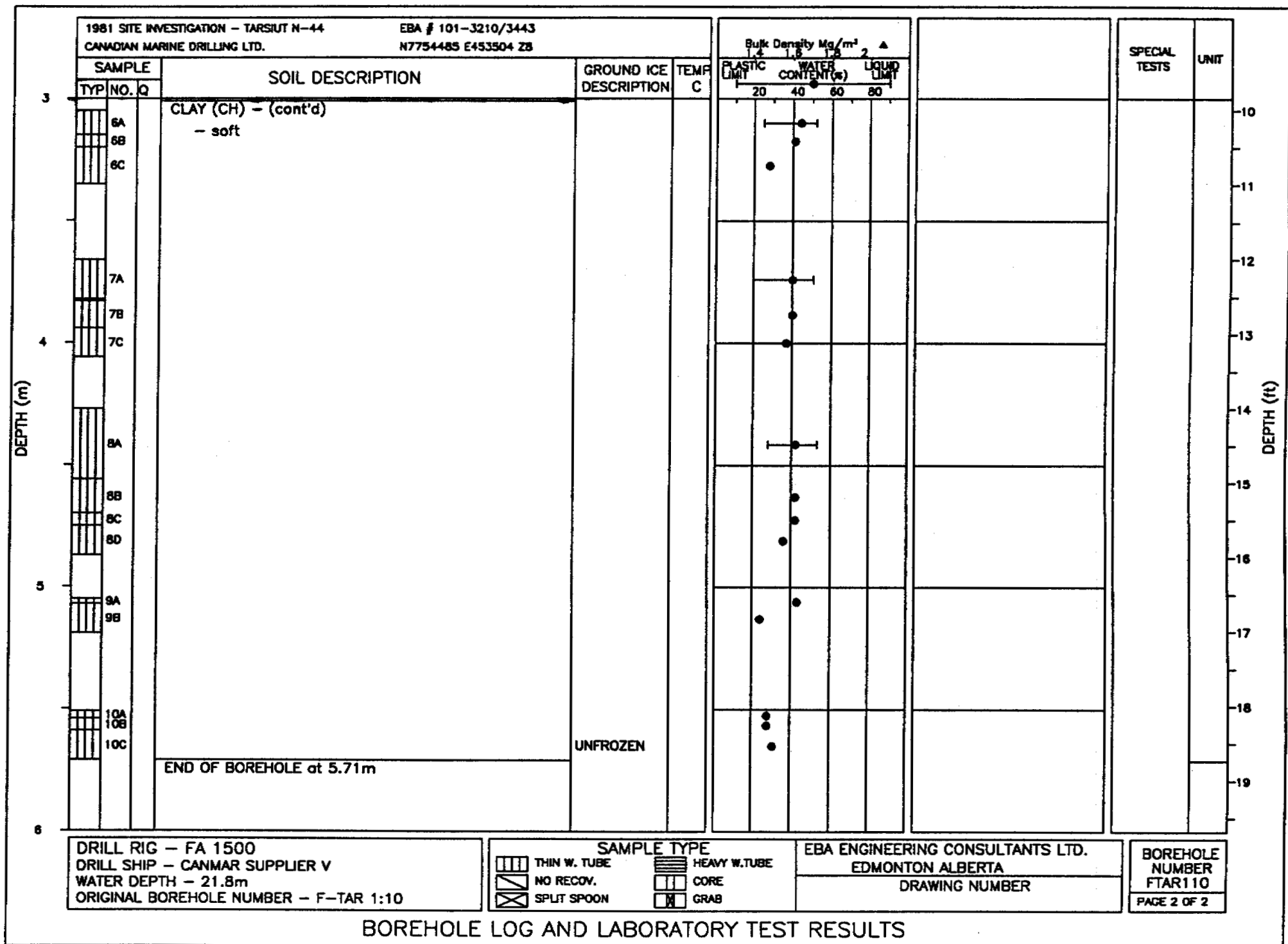
EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA
DRAWING NUMBER

BOREHOLE NUMBER
FTAR1-9
PAGE 1 OF 2

BOREHOLE LOG AND LABORATORY TEST RESULTS







1981 SITE INVESTIGATION - TARSUUT N-44 CANADIAN MARINE DRILLING LTD.				EBA # 101-3210/3443 N7754446 E454191 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT							
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT											
TYP	NO. Q																	
DEPTH (m)	0	18	CLAY AND SILT (ch) - trace of organics, soft, high plasticity, very dark grey - fine black lamination at 10mm intervals - silt lamination 10mm thick - pockets of silt and organics	UNFROZEN							DEPTH (ft)							
	10																	
	1A																	
	2A																	
	3																	
	4B																	
	4D																	
		END OF BOREHOLE at 0.7m	UNFROZEN															
1																		
2																		
3																		

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 23.8m
 ORIGINAL BOREHOLE NUMBER - F-TAR 1:18

SAMPLE TYPE

THIN W. TUBE

NO RECOV.

SPLIT SPOON

HEAVY W. TUBE

CORE

GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FTAR118

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 DEEP CORING PROGRAM, E.TARSIUT N-44					EBA # 101-3430									
DOME PETROLEUM LTD					N7754646 E454195 Z8									
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	Bulk Density Mg/m ³ ▲				SPECIAL TESTS	UNIT	DEPTH (ft)		
TYP	NO.	Q				PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT						
						20	40	60	80					
0			Unable to recover samples due to gravel slough from island fill									0		
1												1		
2												2		
3												3		
4												4		
5												5		
6												6		
7												7		
8												8		
9												9		
10												10		
11												11		
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												64		
												65		

DRILL RIG - CBIR 1
 DRILLED FROM TOP OF ISLAND FILL
 WATER DEPTH - 21.1m
 ORIGINAL BOREHOLE NUMBER - F-TD1:1

SAMPLE TYPE

☐ THIN W. TUBE

☐ NO RECOV.

☐ SPLIT SPOON

☐ HEAVY W. TUBE

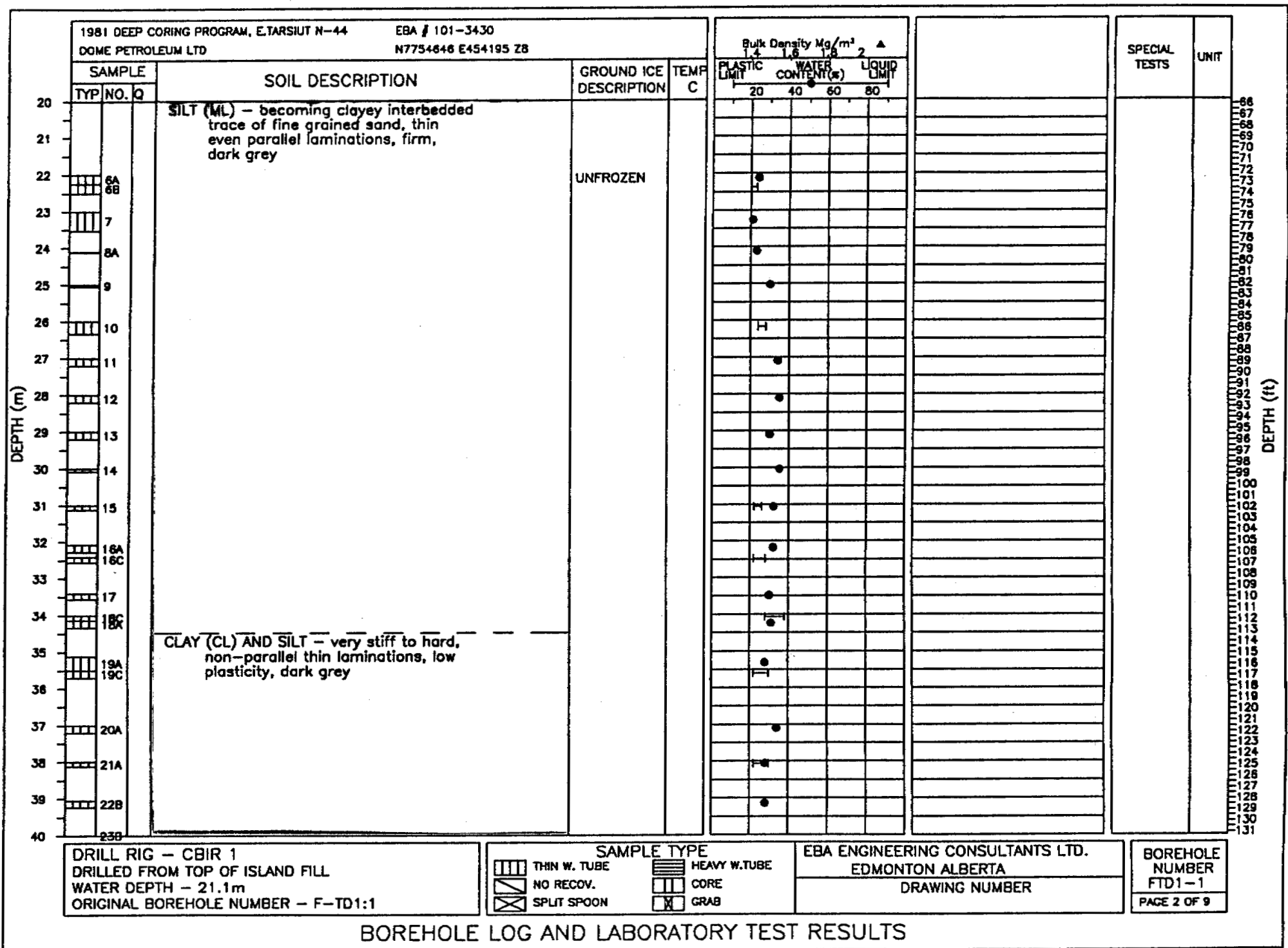
☐ CORE

☐ GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FTD1-1
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BOREHOLE LOG AND LABORATORY TEST RESULTS



1981 DEEP CORING PROGRAM, ETARSIUT N-44 DOME PETROLEUM LTD				EBA # 101-3430 N7754846 E454195 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2			SPECIAL TESTS	UNIT	
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO. Q										
40	23B	CLAY (CL) AND SILT - (cont'd) - becoming with some silt to silty	UNFROZEN							132	
41	24A										133
42	25										134
43	26A										135
44	26B										136
45	27A										137
46	28A										138
47	28B										139
48	29A										140
49	30A										141
50	31A	- becoming with trace to some silt, possibly organic, very stiff, dark olive grey								142	
51	32A										143
52	33A										144
53	34A										145
54	35A										146
55	36										147
56	37										148
57	38A										149
58											150
59											
60		- becoming hard, trace of fine sand								152	
										153	
										154	
										155	
										156	
										157	
										158	
										159	
										160	
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										195	
										196	

DRILL RIG - CBIR 1
 DRILLED FROM TOP OF ISLAND FILL
 WATER DEPTH - 21.1m
 ORIGINAL BOREHOLE NUMBER - F-TD1:1

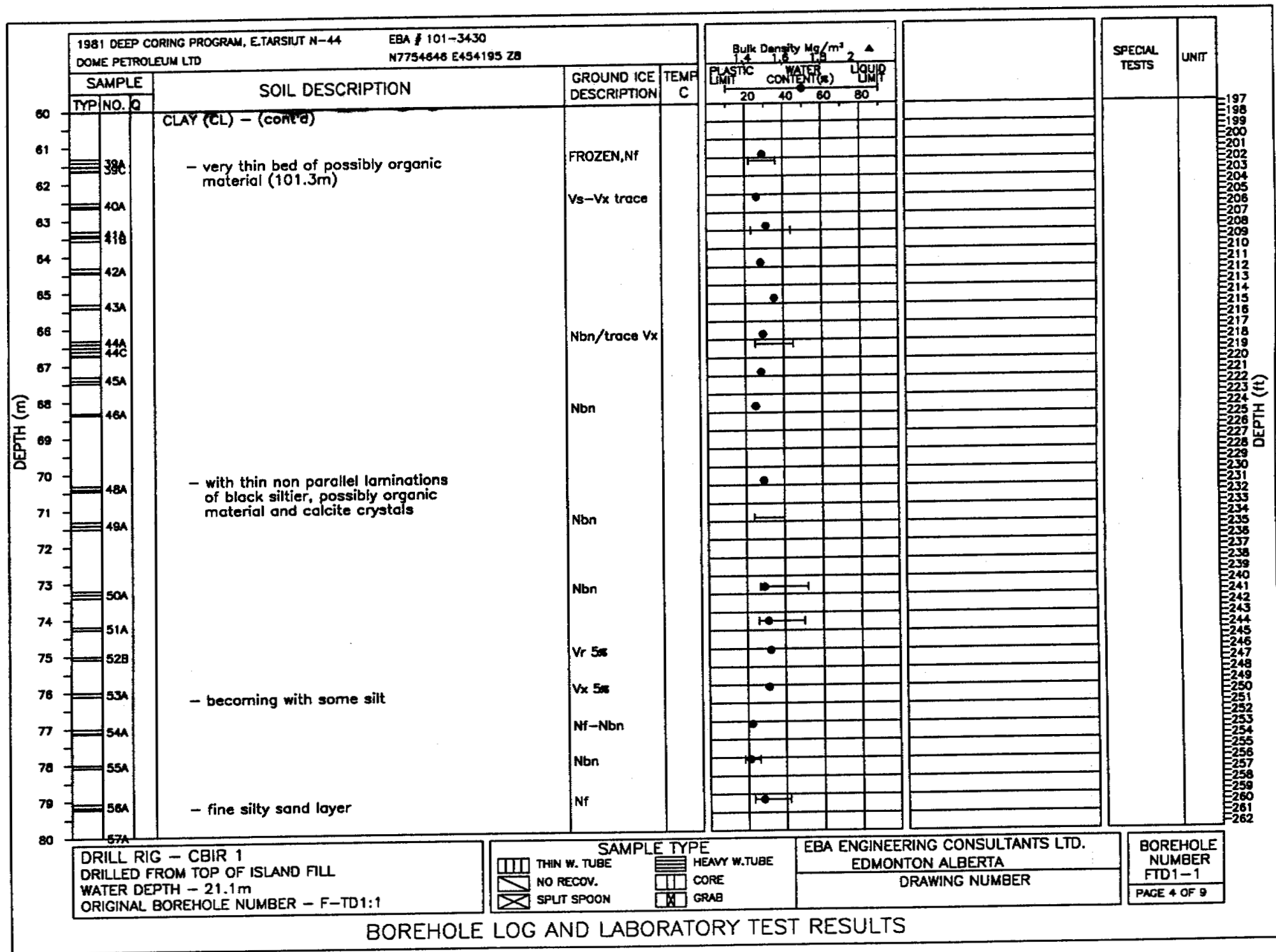
SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOV.	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FTD1-1
 PAGE 3 OF 9

BOREHOLE LOG AND LABORATORY TEST RESULTS



1981 DEEP CORING PROGRAM, E.TARSIUT N-44 DOME PETROLEUM LTD				EBA # 101-3430 N7754848 E454195 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2			PLASTIC LIMIT 20 40 60 80			WATER CONTENT(%) 20 40 60 80			LIQUID LIMIT 20 40 60 80			SPECIAL TESTS		UNIT	
SAMPLE		SOIL DESCRIPTION		GROUND ICE DESCRIPTION		TEMP C															
DEPTH (m)	TYP	NO.	Q																		
80		57A		CLAY (CL) - (cont'd)		Vx trace															
81		58A				Vx trace															
82		59A				Nf															
83		60A																			
84		61A				Vr 5%															
85		62A		- becoming slightly more plastic with slickensided fissures at 30 deg. to vertical		Vr trace															
86		63A				Vx trace															
87		64A																			
88		65A		SAND (SM) - silty, very fine grained, uniform, micaceous, trace of clay, dense (estimated), dark olive grey																	
89																					
90		67A				Nf-Nbn															
91		68																			
92		69				Nbn															
93		70A																			
94		71A		SILT (ml) - with some clay, firm to stiff, low plasticity		Nf-Nbn															
95		72A		CLAY (CL) - with some silt, very stiff, low plasticity, dark brown to black		Vx trace															
96																					
97		73A				Nbn, Vx trace															
98																					
99				- thin beds of thinly laminated silt																	
100		75		CLAY (CL) AND SILT																	

DRILL RIG - CBIR 1
 DRILLED FROM TOP OF ISLAND FILL
 WATER DEPTH - 21.1m
 ORIGINAL BOREHOLE NUMBER - F-TD1:1

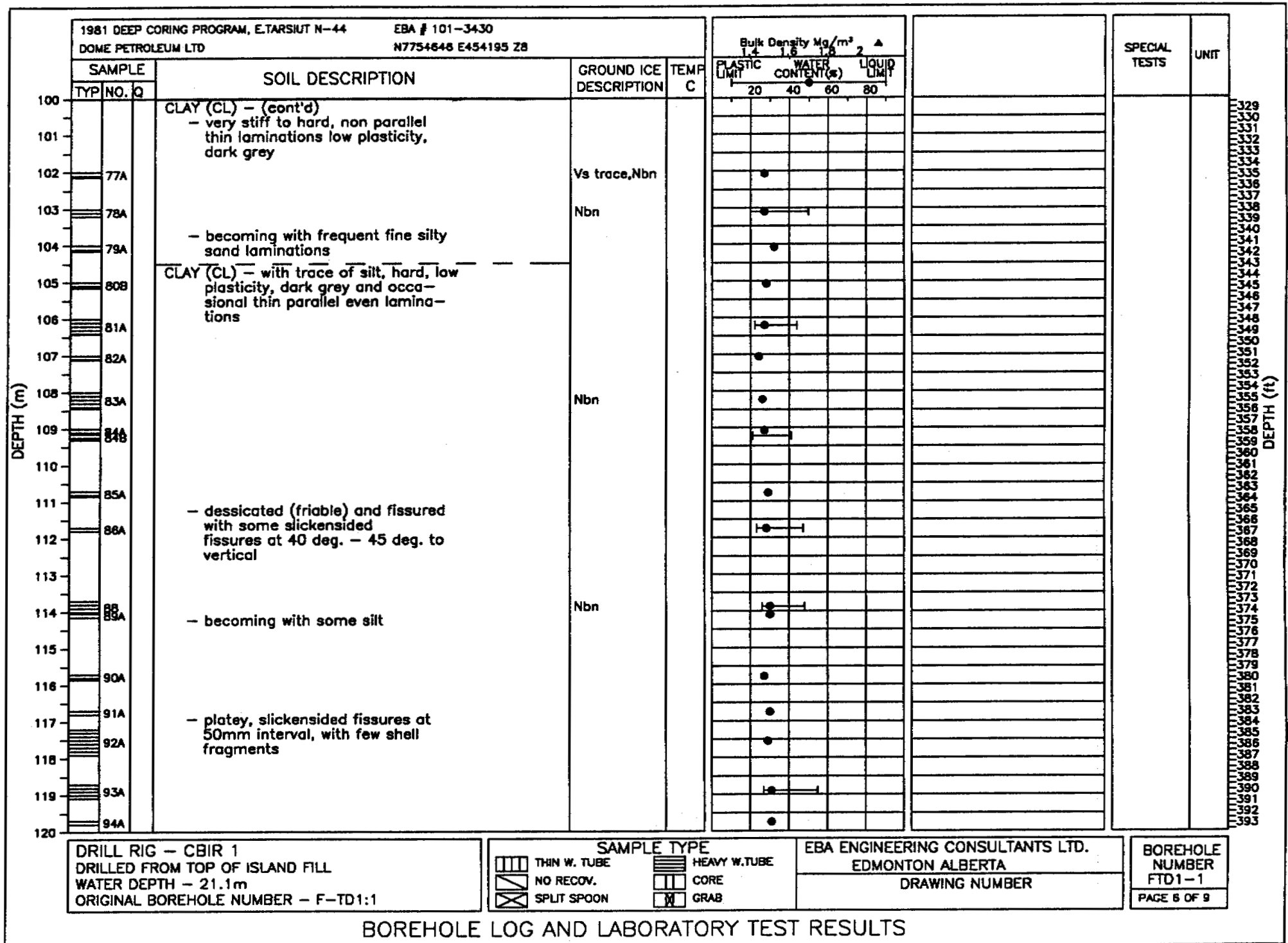
SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOV.	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FTD1-1
 PAGE 5 OF 9

BOREHOLE LOG AND LABORATORY TEST RESULTS



DEPTH (m)

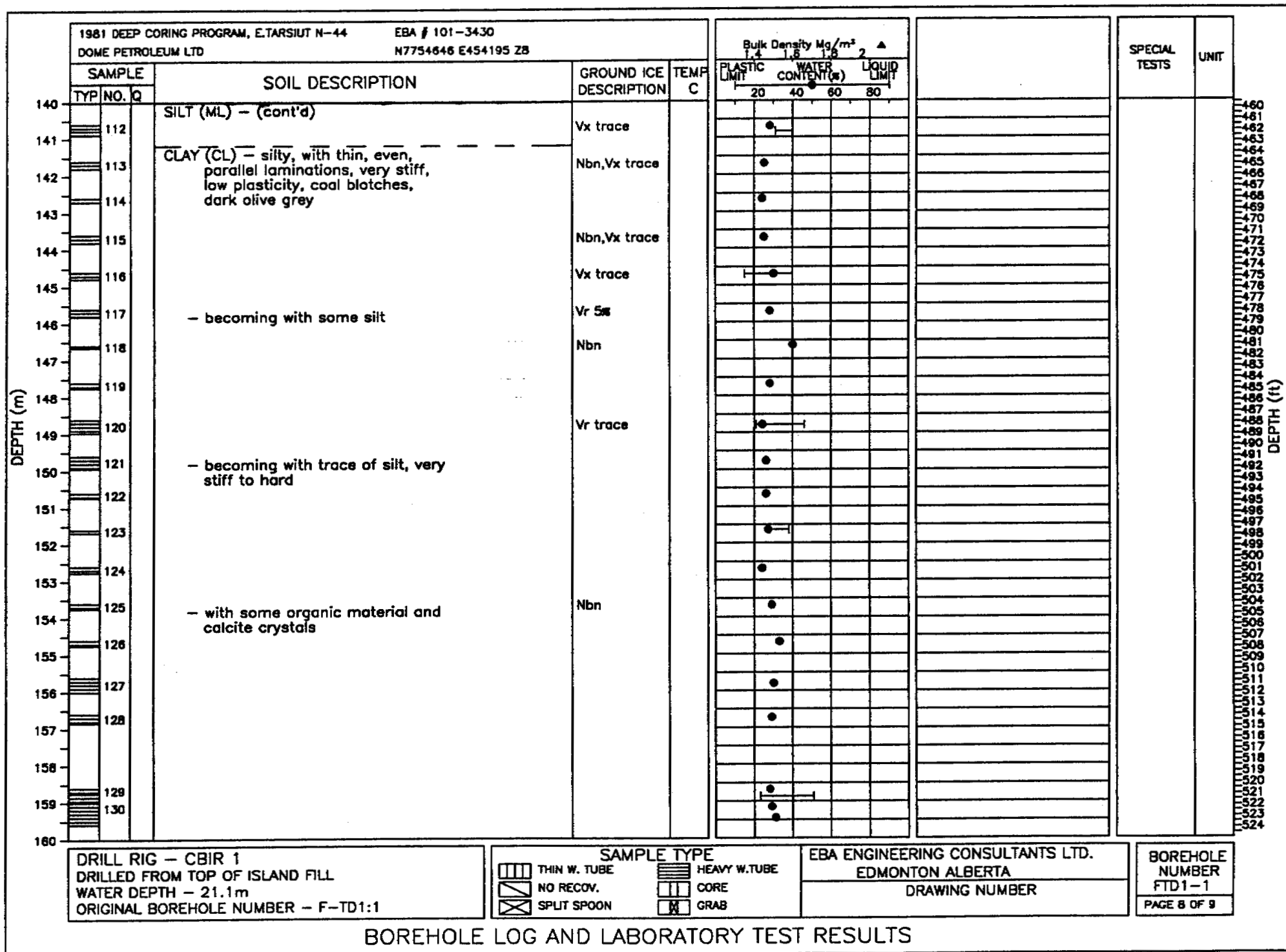
DEPTH (ft)

SAMPLE TYPE			
	THIN W. TUBE		HEAVY W. TUBE
	NO RECOV.		CORE
	SPLIT SPOON		GRAB

BOREHOLE
NUMBER
FTD1-1

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BOREHOLE LOG AND LABORATORY TEST RESULTS



1981 DEEP CORING PROGRAM, E.TARSIUT N-44				EBA # 101-3430											
DOME PETROLEUM LTD				N7754646 E454195 Z8											
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	Bulk Density Mg/m ³ ▲					SPECIAL TESTS	UNIT			
TYP	NO.	Q				PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT							
			CLAY (CL) - (cont'd)												
160															525
161															526
162				Nbn											527
163															528
164				Nbn											529
165															530
166															531
167				FROZEN											532
168															533
169															534
170															535
171															536
172				END OF BOREHOLE at 172m											537
173															538
174															539
175															540
176															541
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DRILL RIG - CBIR 1
 DRILLED FROM TOP OF ISLAND FILL
 WATER DEPTH - 21.1m
 ORIGINAL BOREHOLE NUMBER - F-TD1:1

SAMPLE TYPE

☐ THIN W. TUBE	☐ HEAVY W. TUBE
☐ NO RECOV.	☐ CORE
☐ SPLIT SPOON	☐ GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FTD1-1
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BOREHOLE LOG AND LABORATORY TEST RESULTS

EBA # 101-3430
N7754648 E454195 Z8

Bulk Density Mg/m³ ▲

PLASTIC LIMIT	WATER CONTENT (%)			LIQUID LIMIT
20	40	60	80	

SPECIAL TESTS

UNIT

DEPTH (m)

SAMPLE		
TYP	NO.	Q

SOIL DESCRIPTION

GROUND ICE DESCRIPTION	TEMP C
---------------------------	-----------

BOREHOLE F-TD1:1 Phase 1 LOG AND TEST
RESULTS LOCATED SEPARATELY

DRILL RIG - CBIR 1
DRILLED FROM TOP OF ISLAND FILL
WATER DEPTH - 21.1m
ORIGINAL BOREHOLE NUMBER - F-TD1:1A

SAMPLE TYPE

THIN W. TUBE
NO RECOV.
SPLIT SPOON

 HEAVY W.TUBE
 CORE
 GRAB

EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA
DRAWING NUMBER

BOREHOLE
NUMBER
FTD1-1A

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BOREHOLE LOG AND LABORATORY TEST RESULTS

DEPTH (m)

1981 DEEP CORING PROGRAM, ETARSIUT N-44 EBA # 101-3430
 DOME PETROLEUM LTD N7754846 E454195 ZB

SAMPLE
 TYP NO. Q

SOIL DESCRIPTION

GROUND ICE
 DESCRIPTION

TEMP
 C

Bulk Density Mg/m³ ▲
 1.4 1.6 1.8 2
 PLASTIC LIMIT WATER CONTENT (%) LIQUID LIMIT
 20 40 60 80

SPECIAL
 TESTS

UNIT

BOREHOLE F-TD1:1 Phase 1 LOG AND TEST
 RESULTS LOCATED SEPARATELY

END OF BOREHOLE F-TD1:1 - Phase 1 AT
 172.0m

BOREHOLE F-TD1:1 Phase 2
 CLAY - silty, dark grey

FROZEN

DRILL RIG - CBIR 1
 DRILLED FROM TOP OF ISLAND FILL
 WATER DEPTH - 21.1m
 ORIGINAL BOREHOLE NUMBER - F-TD1:1A

SAMPLE TYPE
 THIN W. TUBE
 NO RECOV.
 SPLIT SPOON
 HEAVY W. TUBE
 CORE
 GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE
 NUMBER
 FTD1-1A
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BOREHOLE LOG AND LABORATORY TEST RESULTS

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[illegible]

DRILL RIG - CBIR 1
DRILLED FROM TOP OF ISLAND FILL
WATER DEPTH - 21.1m
ORIGINAL BOREHOLE NUMBER - F-TD1:1A

SAMPLE TYPE	
	THIN W. TUBE
	NO RECOV.
	SPLIT SPOON
	HEAVY W. TUBE
	CORE
	GRAB

EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA
DRAWING NUMBER

BOREHOLE
NUMBER
FTD1-1A

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BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 DEEP CORING PROGRAM, E.TARSIUT N-44 DOME PETROLEUM LTD				EBA # 101-3430 N7754646 E454195 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2 PLASTIC LIMIT WATER CONTENT (%) LIQUID LIMIT 20 40 60 80			SPECIAL TESTS	UNIT
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C						
TYP	NO.				Q					
			CLAY - silty, dark grey							
	30		SILT - clayey with some fine grained sand	FROZEN						
	29		CLAY - with some silt and some fine grained sand partings							
	27		SILT - clayey with a trace of fine grained sand							
	26									

DEPTH (m)

DRILL RIG - CBIR 1
 DRILLED FROM TOP OF ISLAND FILL
 WATER DEPTH - 21.1m
 ORIGINAL BOREHOLE NUMBER - F-TD1:1A

SAMPLE TYPE

THIN W. TUBE

NO RECOV.

SPLIT SPOON

HEAVY W. TUBE

CORE

GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FTD1-1A
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BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 DEEP CORING PROGRAM, E.TARSIUT N-44 DOME PETROLEUM LTD				EBA # 101-3430 N7754645 E454195 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2			SPECIAL TESTS	UNIT
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT			
TYP	NO. Q									
DEPTH (m)	24	SILT - clayey	FROZEN							
	23	CLAY - silty								
	22									
	21	SILT - with a trace of fine grained sand	UNFROZEN							
	20	SILT - with a trace of fine grained sand interlaminated with silty clay								
	19	SAND - silty, fine grained, dark olive grey								
	18	CLAY - black, with a trace of silt and organics								
	17	SILT - black								
	16	CLAY - black, with a trace of silt, hard								

DRILL RIG - CBIR 1
DRILLED FROM TOP OF ISLAND FILL
WATER DEPTH - 21.1m
ORIGINAL BOREHOLE NUMBER - F-TD1:1A

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOV.	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA
DRAWING NUMBER

BOREHOLE NUMBER
FTD1-1A
PAGE 5 OF 7

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 DEEP CORING PROGRAM, ETARSIUT N-44 DOME PETROLEUM LTD				EBA # 101-3430 N7754848 E454195 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2 PLASTIC LIMIT WATER CONTENT (%) LIQUID LIMIT 20 40 60 80			SPECIAL TESTS	UNIT	
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C							
TYP	NO.				Q						
			CLAY - black, with a trace of silt, hard								
	12		CLAY - dark grey, with a trace of silt and black carbonaceous matter								
	11										
	9		SILT - black with a trace of fine grained sand, slightly organic, soft								
	8		SILT - black with light grey clay interlamination, hard								
	7		CLAY - dark grey with a trace of silt, hard								
	6		SAND - fine grained dark olive grey interlaminated with silt, black								

DEPTH (m)

DRILL RIG - CBIR 1
 DRILLED FROM TOP OF ISLAND FILL
 WATER DEPTH - 21.1m
 ORIGINAL BOREHOLE NUMBER - F-TD1:1A

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOV.	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FTD1-1A
 PAGE 6 OF 7

BOREHOLE LOG AND LABORATORY TEST RESULTS

1981 DEEP CORING PROGRAM, E.TARSIUT N-44

DOME PETROLEUM LTD

EBA # 101-3430

N7754646 E454195 Z8

SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	Bulk Density Mg/m³ ▲ 1.4 1.6 1.8 2 PLASTIC LIMIT WATER CONTENT(%) LIQUID LIMIT	SPECIAL TESTS	UNIT
TYP	NO.	Q						
DEPTH (m) 667.0 666.0 665.0 664.0 663.0 662.0 661.0 660.0 659.0 658.0 657.0 656.0 655.0 654.0 653.0 652.0 651.0 650.0 649.0 648.0 647.0 646.0 645.0 644.0 643.0 642.0 641.0 640.0 639.0 638.0 637.0 636.0 635.0 634.0 633.0 632.0 631.0 630.0 629.0 628.0 627.0 626.0 625.0 624.0 623.0 622.0 621.0 620.0 619.0 618.0 617.0 616.0 615.0 614.0 613.0 612.0 611.0 610.0 609.0 608.0 607.0 606.0 605.0 604.0 603.0 602.0 601.0 600.0 599.0 598.0 597.0 596.0 595.0 594.0 593.0 592.0 591.0 590.0 589.0 588.0 587.0 586.0 585.0 584.0 583.0 582.0 581.0 580.0 579.0 578.0 577.0 576.0 575.0 574.0 573.0 572.0 571.0 570.0 569.0 568.0 567.0 566.0 565.0 564.0 563.0 562.0 561.0 560.0 559.0 558.0 557.0 556.0 555.0 554.0 553.0 552.0 551.0 550.0 549.0 548.0 547.0 546.0 545.0 544.0 543.0 542.0 541.0 540.0 539.0 538.0 537.0 536.0 535.0 534.0 533.0 532.0 531.0 530.0 529.0 528.0 527.0 526.0 525.0 524.0 523.0 522.0 521.0 520.0 519.0 518.0 517.0 516.0 515.0 514.0 513.0 512.0 511.0 510.0 509.0 508.0 507.0 506.0 505.0 504.0 503.0 502.0 501.0 500.0 499.0 498.0 497.0 496.0 495.0 494.0 493.0 492.0 491.0 490.0 489.0 488.0 487.0 486.0 485.0 484.0 483.0 482.0 481.0 480.0 479.0 478.0 477.0 476.0 475.0 474.0 473.0 472.0 471.0 470.0 469.0 468.0 467.0 466.0 465.0 464.0 463.0 462.0 461.0 460.0 459.0 458.0 457.0 456.0 455.0 454.0 453.0 452.0 451.0 450.0 449.0 448.0 447.0 446.0 445.0 444.0 443.0 442.0 441.0 440.0 439.0 438.0 437.0 436.0 435.0 434.0 433.0 432.0 431.0 430.0 429.0 428.0 427.0 426.0 425.0 424.0 423.0 422.0 421.0 420.0 419.0 418.0 417.0 416.0 415.0 414.0 413.0 412.0 411.0 410.0 409.0 408.0 407.0 406.0 405.0 404.0 403.0 402.0 401.0 400.0 399.0 398.0 397.0 396.0 395.0 394.0 393.0 392.0 391.0 390.0 389.0 388.0 387.0 386.0 385.0 384.0 383.0 382.0 381.0 380.0 379.0 378.0 377.0 376.0 375.0 374.0 373.0 372.0 371.0 370.0 369.0 368.0 367.0 366.0 365.0 364.0 363.0 362.0 361.0 360.0 359.0 358.0 357.0 356.0 355.0 354.0 353.0 352.0 351.0 350.0 349.0 348.0 347.0 346.0 345.0 344.0 343.0 342.0 341.0 340.0 339.0 338.0 337.0 336.0 335.0 334.0 333.0 332.0 331.0 330.0 329.0 328.0 327.0 326.0 325.0 324.0 323.0 322.0 321.0 320.0 319.0 318.0 317.0 316.0 315.0 314.0 313.0 312.0 311.0 310.0 309.0 308.0 307.0 306.0 305.0 304.0 303.0 302.0 301.0 300.0 299.0 298.0 297.0 296.0 295.0 294.0 293.0 292.0 291.0 290.0 289.0 288.0 287.0 286.0 285.0 284.0 283.0 282.0 281.0 280.0 279.0 278.0 277.0 276.0 275.0 274.0 273.0 272.0 271.0 270.0 269.0 268.0 267.0 266.0 265.0 264.0 263.0 262.0 261.0 260.0 259.0 258.0 257.0 256.0 255.0 254.0 253.0 252.0 251.0 250.0 249.0 248.0 247.0 246.0 245.0 244.0 243.0 242.0 241.0 240.0 239.0 238.0 237.0 236.0 235.0 234.0 233.0 232.0 231.0 230.0 229.0 228.0 227.0 226.0 225.0 224.0 223.0 222.0 221.0 220.0 219.0 218.0 217.0 216.0 215.0 214.0 213.0 212.0 211.0 210.0 209.0 208.0 207.0 206.0 205.0 204.0 203.0 202.0 201.0 200.0 199.0 198.0 197.0 196.0 195.0 194.0 193.0 192.0 191.0 190.0 189.0 188.0 187.0 186.0 185.0 184.0 183.0 182.0 181.0 180.0 179.0 178.0 177.0 176.0 175.0 174.0 173.0 172.0 171.0 170.0 169.0 168.0 167.0 166.0 165.0 164.0 163.0 162.0 161.0 160.0 159.0 158.0 157.0 156.0 155.0 154.0 153.0 152.0 151.0 150.0 149.0 148.0 147.0 146.0 145.0 144.0 143.0 142.0 141.0 140.0 139.0 138.0 137.0 136.0 135.0 134.0 133.0 132.0 131.0 130.0 129.0 128.0 127.0 126.0 125.0 124.0 123.0 122.0 121.0 120.0 119.0 118.0 117.0 116.0 115.0 114.0 113.0 112.0 111.0 110.0 109.0 108.0 107.0 106.0 105.0 104.0 103.0 102.0 101.0 100.0 99.0 98.0 97.0 96.0 95.0 94.0 93.0 92.0 91.0 90.0 89.0 88.0 87.0 86.0 85.0 84.0 83.0 82.0 81.0 80.0 79.0 78.0 77.0 76.0 75.0 74.0 73.0 72.0 71.0 70.0 69.0 68.0 67.0 66.0 65.0 64.0 63.0 62.0 61.0 60.0 59.0 58.0 57.0 56.0 55.0 54.0 53.0 52.0 51.0 50.0 49.0 48.0 47.0 46.0 45.0 44.0 43.0 42.0 41.0 40.0 39.0 38.0 37.0 36.0 35.0 34.0 33.0 32.0 31.0 30.0 29.0 28.0 27.0 26.0 25.0 24.0 23.0 22.0 21.0 20.0 19.0 18.0 17.0 16.0 15.0 14.0 13.0 12.0 11.0 10.0 9.0 8.0 7.0 6.0 5.0 4.0 3.0 2.0 1.0 0.0								

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SAND – fine grained, interlaminated with silt

CLAY – silty, light grey and interbedded black clay, hard

SILT – black interlaminated with light grey silty clay with a trace of fine grained sand

CLAY – black, hard

SILT – dark grey, with a trace of fine grained sand and a trace of clay

UNFROZEN

END OF BOREHOLE AT 667.0m

THIN W. TUBE

NO RECOV.

SPLIT SPOON

HEAVY W. TUBE

CORE

GRAB

EBA ENGINEERING CONSULTANTS LTD.

EDMONTON ALBERTA

DRAWING NUMBER

BOREHOLE NUMBER

FTD1-1A

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BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA / 101-3605 N7815456 E562286 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT					
TYP	NO. Q											
0												0
	1	SAND (SP) - traces of silt and shell fragments, fine grained, uniform, grey brown	UNFROZEN									1
		- becoming yellowish brown below 0.3m										2
1		- one 5mm diameter pebble										3
	2											4
												5
2												6
	3											7
												8
3												9
	4		UNFROZEN									10
		END OF BOREHOLE at 3.6m										11
4												12
												13
5												14
												15
6												16
												17
7												18
												19
8												20
												21
9												22
												23
10												24
												25
												26
												27
												28
												29
												30
												31
												32

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 43.6m
 ORIGINAL BOREHOLE NUMBER - B-NER 1:1

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BNR1-1

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7816034 E562342 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2.0 PLASTIC LIMIT WATER CONTENT (%) LIQUID LIMIT 20 40 60 80				SPECIAL TESTS		UNIT		
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C									
TYP	NO.	Q												
0			CLAY (CL) - and sand, silty, trace of organics, very soft, low plasticity, dark grey	UNFROZEN										0
	5		SAND (SP) - traces of silt, and organics, fine grained, uniform, greyish brown											1
1														2
	8													3
2														4
	12													5
3	13		END OF BOREHOLE at 3.2m	UNFROZEN										6
														7
4														8
														9
5														10
														11
6														12
														13
7														14
														15
8														16
														17
9														18
														19
10														20
														21
														22
														23
														24
														25
														26
														27
														28
														29
														30
														31
														32

DRILL RIG - ROKLENG VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 43.6m
 ORIGINAL BOREHOLE NUMBER - B-NER 1:2

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BNR1-2

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7815811 E582043 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2			SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO. Q										
0	1	CLAY (CH) - silty and sandy, trace of organics, very soft, high plasticity, dark grey	UNFROZEN								0
	2										1
	3	CLAY (CL) - and sand, trace of organics, very soft, high plasticity, dark grey	UNFROZEN								2
1		SAND (SP) - trace of silt and organics, fine grained, uniform, grey brown									3
		END OF BOREHOLE at 0.8m									4
2											5
											6
											7
											8
											9
											10
											11
											12
											13
											14
											15
											16
											17
											18
											19
											20
											21
											22
											23
											24
											25
											26
											27
											28
											29
											30
											31
											32

DRILL RIG - ROKLENG VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 46.6m
 ORIGINAL BOREHOLE NUMBER - 8-NER 1:3

SAMPLE TYPE

THIN W. TUBE

NO. RECOV.

SPLIT SPOON

HEAVY W. TUBE

VIBRO CORE

GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BNR1-3

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7816470 E562315 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2			SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO. Q										
0	1	CLAY (CL) - and sand, trace of organics, very soft, low plasticity, dark grey	UNFROZEN								0
	2	- 300mm thick sand layer at 0.1m									1
	3										2
1	4	SAND (SP) - trace of silt, shell fragments and coal detritus, fine grained, uniform, loose (estimated), dark greyish brown									3
	5	- (SP-SM)									4
	6										5
2	7	- (SP) 25mm thick silt layer at 1.9 and 2.7m									6
	8										7
	9	- 25mm thick silt layer at 3.8m									8
3	10	- 25mm thick silt layer at 4.6m									9
	11										10
	12	- three 5mm thick silt layers at 5.6m									11
	13	- (SP-SM)									12
4	14										13
	15	- 10mm thick organic layer every 25mm at 7.9m									14
	16										15
	17										16
	18										17
5	19										18
	20										19
	21										20
	22										21
	23										22
	24										23
	25										24
	26										25
	27										26
	28										27
	29										28
	30										29
	31										30
	32										31
10	33										32

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 45.7m
 ORIGINAL BOREHOLE NUMBER - B-NER 1:5

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BNR1-5
 PAGE 1 OF 4

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7816470 E562315 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO.	Q										
10	20		SAND (SP-SM) - (cont'd) - (SP) trace of mica, 5mm thick silt layer									33
11	21											34
												35
												36
12	22		- (SP-SM)									37
												38
												39
13	23											40
												41
												42
14	24		- (SP) 3mm thick layer of coal detritus									43
												44
												45
	25											46
15												47
												48
												49
16												50
												51
												52
17												53
												54
												55
												56
18	26											57
												58
												59
19												60
												61
												62
												63
												64
20												65

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 45.7m
 ORIGINAL BOREHOLE NUMBER - B-NER 1:5

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA

DRAWING NUMBER

BOREHOLE NUMBER
 BNR1-5

PAGE 2 OF 4

BOREHOLE LOG AND LABORATORY TEST RESULTS

EBA # 101-3605
N7816470 E562315 Z8

DEPTH (m)

SAMPLE TYPE			
	THIN W. TUBE		HEAVY W. TUBE
	NO. RECOV.		VIBRO CORE
	SPLIT SPOON		GRAB

BOREHOLE
NUMBER
BNR1-5

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BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7816919 E560896 Z8		Bulk Density Mg/m^3 ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO. Q										
0	1A 1B	SAND (SC) - some clay, trace of silt and organics, fine grained, low plasticity, dark grey	UNFROZEN								0
1	2	SAND (SP) - trace of silt, fine grained, uniform, greyish brown									1
2	3	- traces of shell fragments and coal detritus, grey									2
3	4	- greyish brown									3
4	5										4
5	6	- (SP-SM) 10mm thick organic layer at 4.0m									5
6	7	- 5mm thick organic layer at 5.0m									6
7	8	- (SP) one 10mm diameter pebble at 5.6m									7
8	9	- 5mm thick silt layer at 6.5m									8
9	10										9
10	11										10

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 45.7m
 ORIGINAL BOREHOLE NUMBER - B-NER 2:1

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BNR2-1
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BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7816919 E560895 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT					
TYP	NO. Q											
10	12	SAND (SP) - (cont'd) - (SP-SM)										33
												34
												35
11	13	- (sp) two 10 - 25mm diameter pebble at 11.1m										36
												37
												38
12	14											39
												40
												41
13	15	- (SP) trace to some coal detritus										42
												43
												44
14	16											45
												46
												47
												48
15	17											49
												50
												51
												52
16												53
												54
												55
17												56
												57
												58
18	18	- trace of shell fragments, 5mm thick clay layer at 17.9m										59
												60
												61
												62
19												63
												64
20												65

DRILL RIG - FA 1500
DRILL SHIP - CANMAR SUPPLIER V
WATER DEPTH - 45.7m
ORIGINAL BOREHOLE NUMBER - B-NER 2:1

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA
DRAWING NUMBER

BOREHOLE NUMBER
BNR2-1
PAGE 2 OF 4

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK				EBA # 101-3605											
CANADIAN MARINE DRILLING LTD.				N7816919 E560896 Z8											
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	Bulk Density Mg/m ³ ▲				SPECIAL TESTS	UNIT	DEPTH (ft)			
TYP	NO.	Q				PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT							
						20	40	60	80						
			SAND (SP) - (cont'd)									66			
														67	
														68	
														69	
														70	
														71	
														72	
														73	
														74	
														75	
														76	
														77	
														78	
														79	
														80	
														81	
														82	
														83	
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														85	
											86				
											87				
											88				
											89				
											90				
											91				
											92				
											93				
											94				
											95				
											96				
											97				
											98				

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 45.7m
 ORIGINAL BOREHOLE NUMBER - B-NER 2:1

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BNR2-1
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BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7816919 E560896 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT					
TYP	NO. Q											
30		END OF BOREHOLE at 30.1m										99
												100
												101
												102
												103
												104
												105
												106
												107
												108
												109
												110
												111
												112
												113
												114
												115
												116
												117
												118
												119
												120
												121
												122
												123
												124
												125
												126
												127
												128
												129
												130
												131
40												

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 45.7m
 ORIGINAL BOREHOLE NUMBER - B-NER 2:1

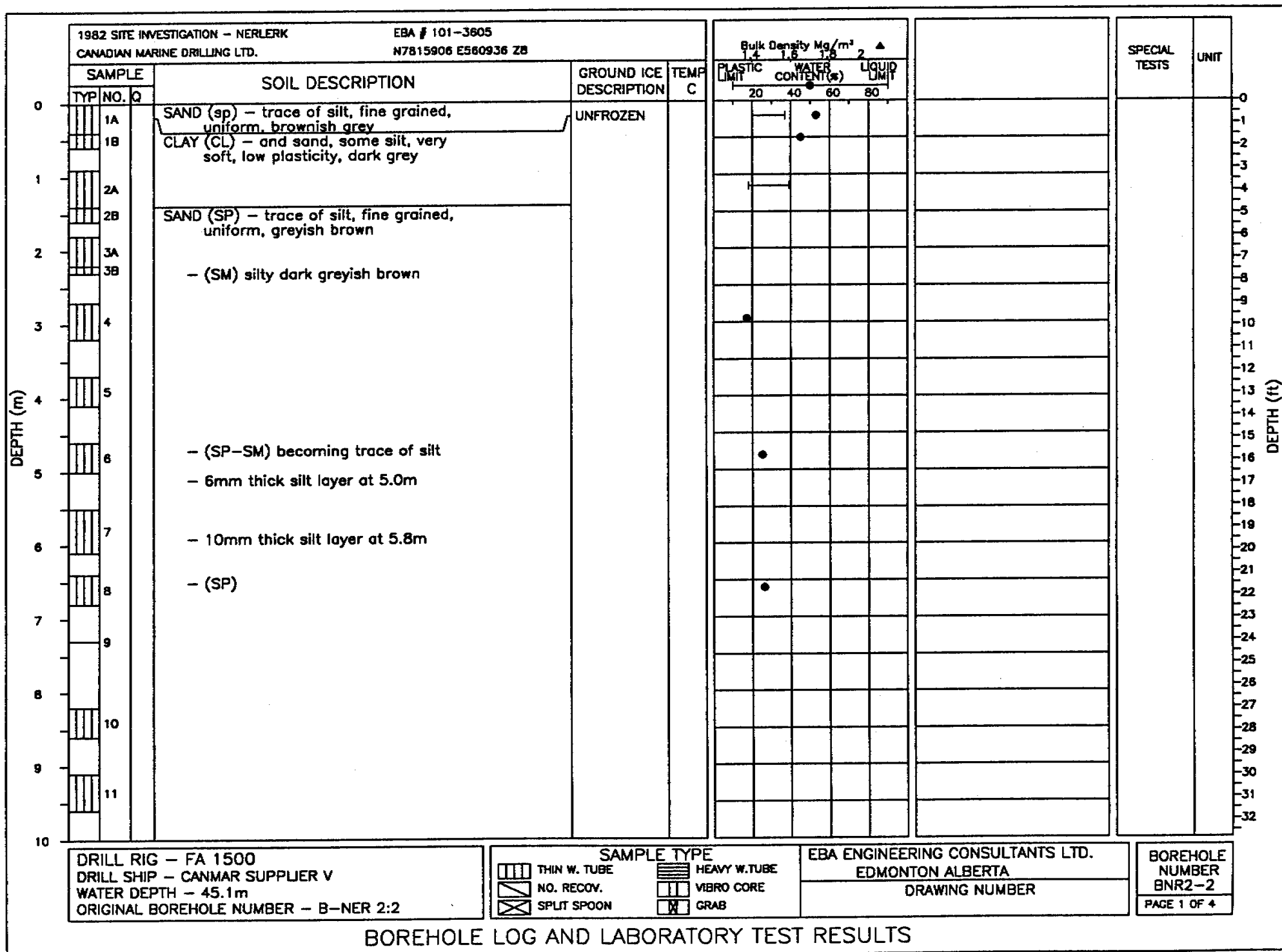
SAMPLE TYPE

☐ THIN W. TUBE	☐ HEAVY W. TUBE
☐ NO. RECOV.	☐ VIBRO CORE
☐ SPLIT SPOON	☐ GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BNR2-1
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BOREHOLE LOG AND LABORATORY TEST RESULTS



1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7815908 E560936 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT			
TYP	NO.	Q									
10	12		SAND (SP) - (cont'd)								
11	13		- trace of coal detritus at 13.7m								
12	14										
13	15										
14	16										
15	17										
16	18										
17											
18											
19											
20											

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 45.1m
 ORIGINAL BOREHOLE NUMBER - B-NER 2:2

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BNR2-2
 PAGE 2 OF 4

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7815906 E560936 Z8		Bulk Density Mg/m^3 ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT					
TYP	NO. Q											
		SAND (SP) - (cont'd)										66
												67
												68
												69
												70
												71
												72
												73
												74
												75
												76
												77
												78
												79
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												89
												90
												91
												92
												93
												94
												95
												96
												97
												98

DEPTH (m)

20

21

22

23

24

25

26

27

28

29

30

DEPTH (ft)

66

67

68

69

70

71

72

73

74

75

76

77

78

79

80

81

82

83

84

85

86

87

88

89

90

91

92

93

94

95

96

97

98

DRILL RIG - FA 1500
DRILL SHIP - CANMAR SUPPLIER V
WATER DEPTH - 45.1m
ORIGINAL BOREHOLE NUMBER - B-NER 2:2

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA

DRAWING NUMBER

BOREHOLE NUMBER
BNR2-2

PAGE 3 OF 4

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7815906 E580936 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2			SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT			
TYP	NO.	Q									
22			SAND (SP) - (cont'd)	UNFROZEN							99
			END OF BOREHOLE at 30.3m								100
											101
											102
											103
											104
											105
											106
											107
											108
											109
											110
											111
											112
											113
											114
											115
											116
											117
											118
											119
											120
											121
											122
											123
											124
											125
											126
											127
											128
											129
											130
											131

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 45.1m
 ORIGINAL BOREHOLE NUMBER - B-NER 2:2

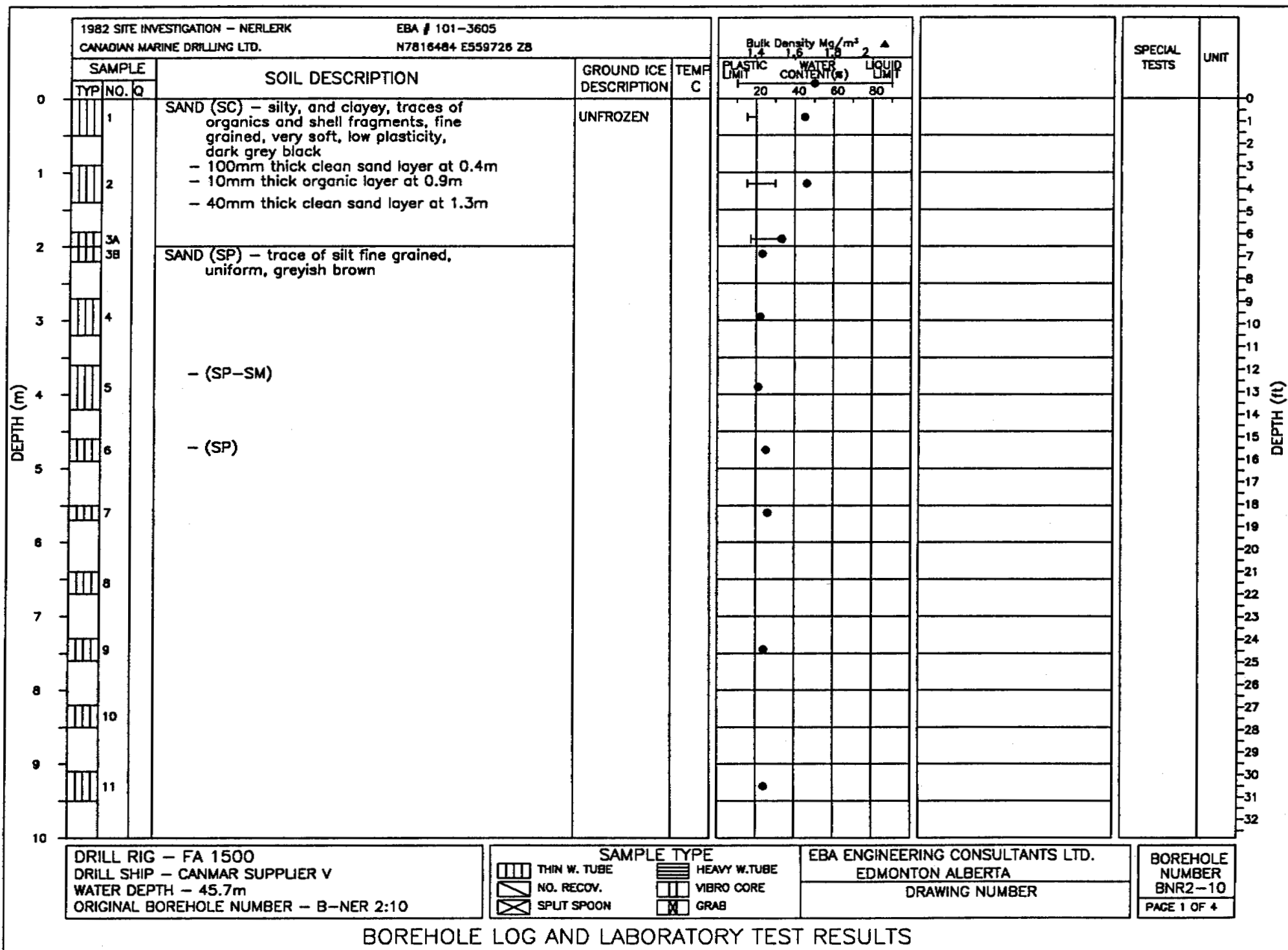
SAMPLE TYPE

☐ THIN W. TUBE	☐ HEAVY W. TUBE
☐ NO. RECOV.	☐ VIBRO CORE
☐ SPLIT SPOON	☐ GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BNR2-2
 PAGE 4 OF 4

BOREHOLE LOG AND LABORATORY TEST RESULTS



1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7816484 E559726 Z8		Bulk Density Mg/m ³ 1.4 1.6 1.8 2 ▲				SPECIAL TESTS	UNIT	DEPTH (m)	
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT					
TYP	NO.	Q											
10	12		SAND (SP) - (cont'd)									33	
													34
													35
11	13												36
													37
													38
													39
12	14												40
													41
													42
13	15												43
													44
													45
14	16												46
													47
15	17												48
													49
													50
												51	
16												52	
												53	
												54	
17												55	
												56	
												57	
												58	
18												59	
												60	
												61	
19	18											62	
												63	
												64	
20												65	

DRILL RIG - FA 1500
DRILL SHIP - CANMAR SUPPLIER V
WATER DEPTH - 45.7m

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA

DRAWING NUMBER

BOREHOLE NUMBER
BNR2-10

PAGE 2 OF 4

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7816484 E559726 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO.	Q										
			SAND (SP) - (cont'd)									66
						67						
						68						
						69						
						70						
						71						
						72						
						73						
						74						
						75						
						76						
						77						
						78						
						79						
						80						
						81						
						82						
						83						
						84						
						85						
			86									
			87									
			88									
			89									
			90									
			91									
			92									
			93									
			94									
			95									
			96									
			97									
			98									

DRILL RIG - FA 1500
DRILL SHIP - CANMAR SUPPLIER V
WATER DEPTH - 45.7m

SAMPLE TYPE

THIN W. TUBE
 NO. RECOV.
 SPLIT SPOON

HEAVY W. TUBE
 VIBRO CORE
 GRAB

EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA

DRAWING NUMBER

BOREHOLE NUMBER
BNR2-10

PAGE 3 OF 4

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7816484 E559726 Z8		Bulk Density Mg/m^3 ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (t)
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT WATER CONTENT (%) LIQUID LIMIT						
TYP	NO.	Q							20	40	60	80
			SAND (SP) - (cont'd)									99
												100
												101
	22			UNFROZEN								102
			END OF BOREHOLE at 31.1m									103
												104
												105
												106
												107
												108
												109
												110
												111
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												117
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												127
												128
												129
												130
												131

DRILL RIG - FA 1500
DRILL SHIP - CANMAR SUPPLIER V
WATER DEPTH - 45.7m

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA

DRAWING NUMBER

BOREHOLE NUMBER
BNR2-10

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BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK				EBA # 101-3605											
CANADIAN MARINE DRILLING LTD.				N7815299 E563257 Z8											
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	Bulk Density Mg/m ³ ▲						SPECIAL TESTS	UNIT	DEPTH (m)	
TYP	NO.	Q				PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT							
						1.4	1.6	1.8	2						
						20	40	60	80						
0	1		SAND (sm) - some silt, traces of clay and shell fragments, fine grained, dark grey brown	UNFROZEN										0	
	2		- (SP) trace silt below 0.3m, uniform											1	
														2	
1	3													3	
														4	
														5	
2	4													6	
														7	
			- (SP-SM) below 2.35m (estimated)											8	
														9	
3	5													10	
														11	
														12	
4	6			UNFROZEN										13	
			END OF BOREHOLE at 4.1m											14	
														15	
														16	
														17	
														18	
														19	
														20	
														21	
														22	
														23	
														24	
														25	
														26	
														27	
														28	
														29	
														30	
														31	
														32	

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 45.1m
 ORIGINAL BOREHOLE NUMBER - B-NER 3:1

SAMPLE TYPE

THIN W. TUBE

NO. RECOV.

SPLIT SPOON

HEAVY W. TUBE

VIBRO CORE

GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BNR3-1

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7815296 E563243 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC WATER LIQUID LIMIT CONTENT (%) LIMIT							
TYP	NO. Q							20	40	60	80	
0	18	CLAY (CL) - sandy with some silt, trace of organics, dark grey and black	UNFROZEN									0
	2	SAND (SP) - traces of silt, and shell fragments, fine grained, uniform, greyish brown										1
1	3			0.9								2
	4			2.7								3
2												4
												5
3	5	- becoming siltier and fine grained with depth		2.5								6
												7
4	6			1.6								8
												9
5	7	- (SP-SM)		2.0								10
												11
6	8			1.5								12
												13
7	9			1.7								14
												15
8	10			0.5								16
												17
9	11	- (SM)		1.9								18
												19
10	12	CLAY (cl) - sandy with silt laminations, stiff to very stiff, low plasticity, dark brownish grey		-0.7								20
	13											21
												22
												23
												24
												25
												26
												27
												28
												29
												30
												31
												32

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 45.1m
 ORIGINAL BOREHOLE NUMBER - B-NER 3:1B

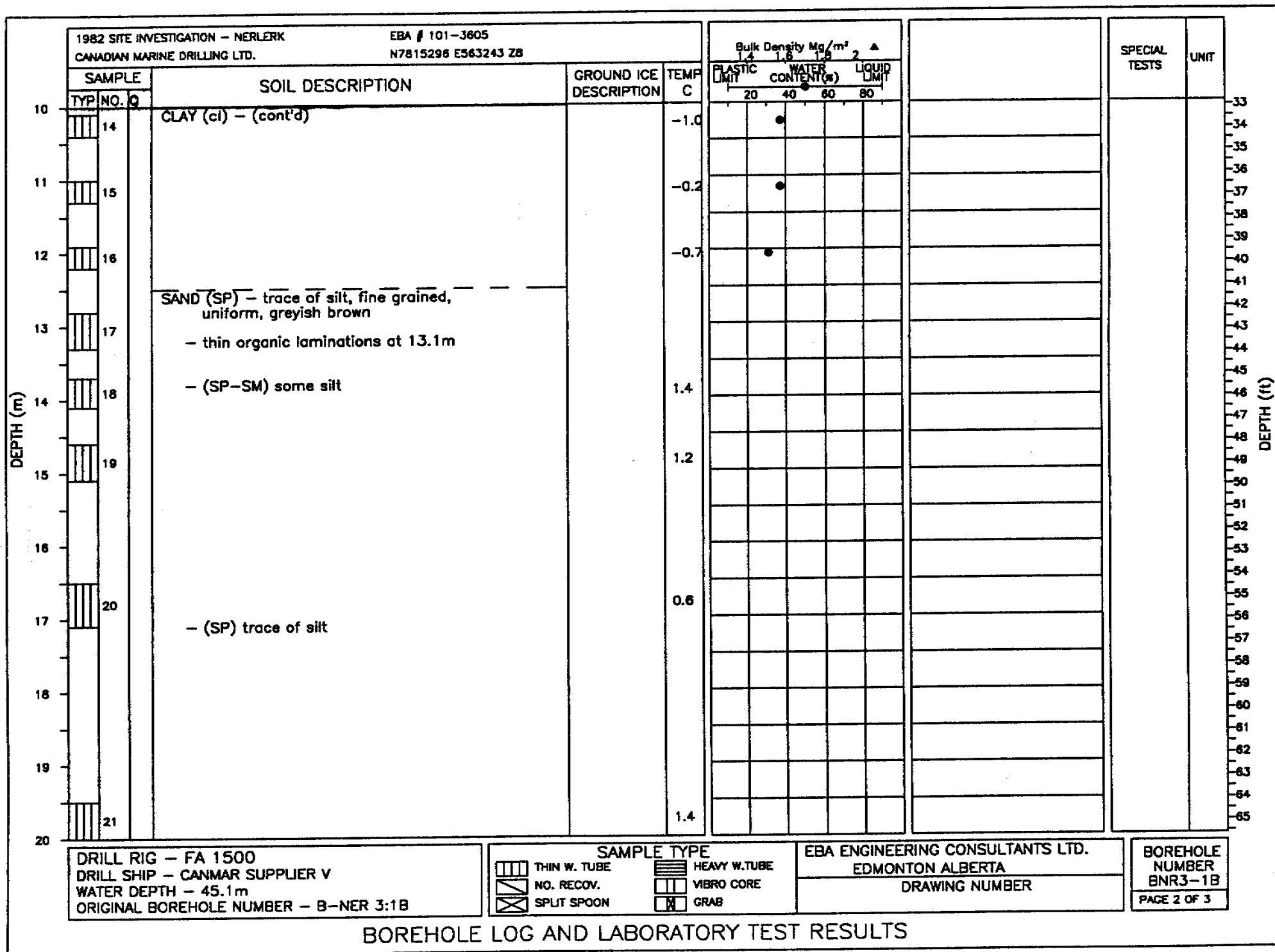
SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BNR3-1B
 PAGE 1 OF 3

BOREHOLE LOG AND LABORATORY TEST RESULTS



1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7815296 E563243 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)		
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT							
TYP	NO. Q													
	21	SAND (SP) - (cont'd)										86		
														87
														88
														89
														90
														91
														92
														93
														94
														95
														96
														97
	22	END OF BOREHOLE at 25.8m	UNFROZEN	1.4								86		
														87
														88
														89
														90
														91
														92
														93
														94
														95
														96
														97
	23											86		
												87		
												88		
												89		
												90		
												91		
												92		
												93		
												94		
												95		
												96		
												97		
												98		

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 45.1m
 ORIGINAL BOREHOLE NUMBER - B-NER 3:1B

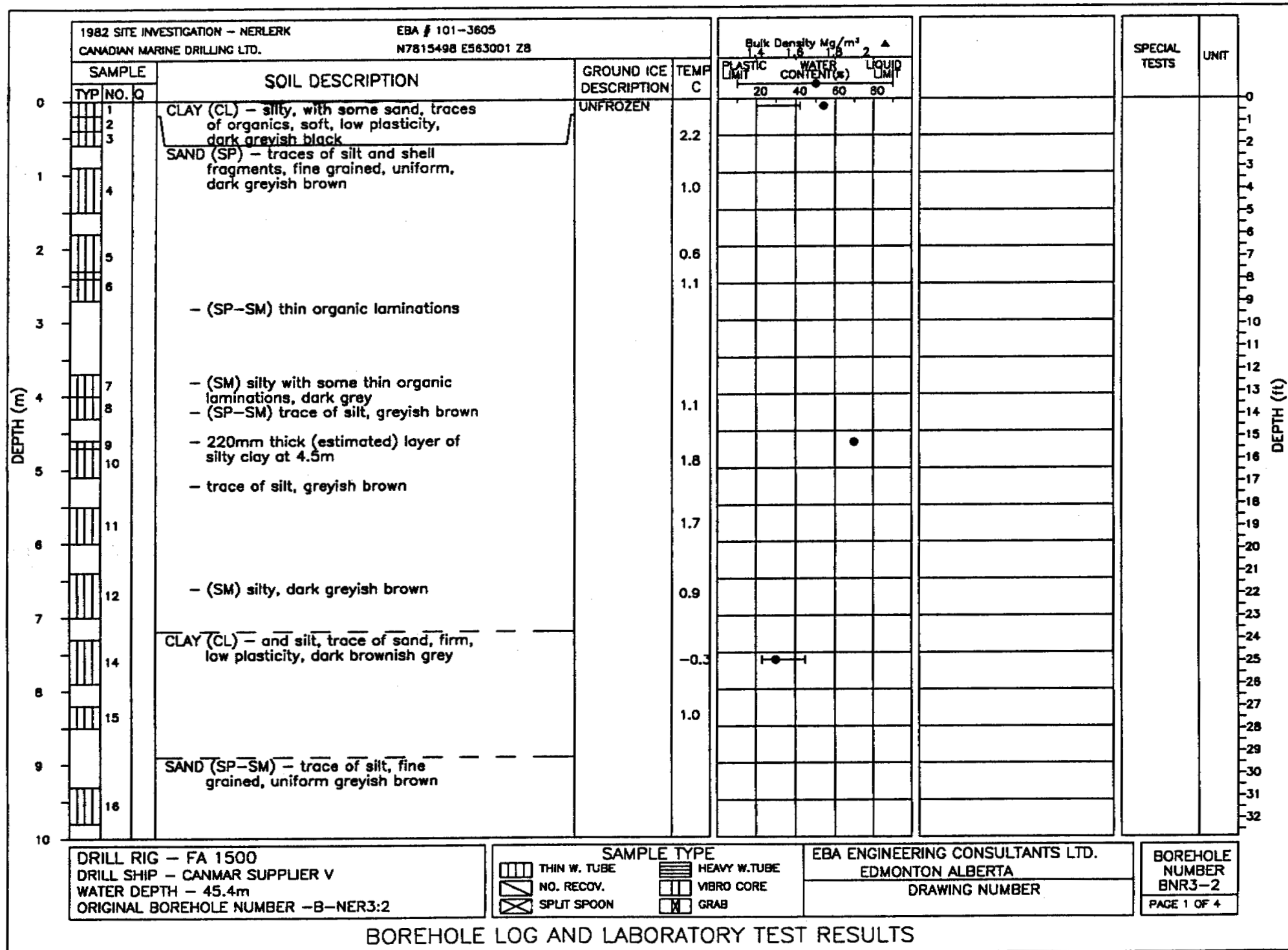
SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BNR3-1B
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BOREHOLE LOG AND LABORATORY TEST RESULTS



1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7815498 E563001 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO.	Q										
	17		SAND (SP-SM) - (cont'd)		0.7							33
												34
												35
	18											36
												37
												38
	19				0.8							39
												40
												41
	20				1.3							42
												43
												44
	21		- (SP)		0.4							45
												46
												47
	22				1.1							48
												49
												50
												51
	23				0.7							52
												53
												54
												55
												56
												57
												58
												59
												60
												61
	24				0.9							62
												63
												64
												65

DRILL RIG - FA 1500
DRILL SHIP - CANMAR SUPPLIER V
WATER DEPTH - 45.4m

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA

DRAWING NUMBER

BOREHOLE NUMBER
BNR3-2

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BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7815498 E563001 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT			
TYP	NO.	Q									
20			SAND (SP) - (cont'd)								
21											
22		25	- organic laminations - pebbles at 22.2m		2.7						
23											
24											
25		26	- organic laminations								
26											
27											
28		27			0.5						
29											
30											

DRILL RIG - FA 1500
DRILL SHIP - CANMAR SUPPLIER V
WATER DEPTH - 45.4m

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA

DRAWING NUMBER

BOREHOLE NUMBER
BNR3-2
PAGE 3 OF 4

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7815498 E563001 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO. Q										
30		SAND (SP) - (cont'd)									99
31	28		UNFROZEN	0.3							100
		END OF BOREHOLE at 31.5m									101
											102
											103
											104
											105
											106
											107
											108
											109
											110
											111
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											196
											197
											198
											199
											200

DRILL RIG - FA 1500
DRILL SHIP - CANMAR SUPPLIER V
WATER DEPTH - 45.4m

SAMPLE TYPE

THIN W. TUBE
 NO. RECOV.
 SPLIT SPOON

HEAVY W. TUBE
 VIBRO CORE
 GRAB

EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA

DRAWING NUMBER

BOREHOLE NUMBER
BNR3-2
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BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7815700 E562596 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2.0			SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO. Q										
DEPTH (m)	1	CLAY (CH) - silty with some sand, laminated, very soft to soft, high plasticity, dark grey	UNFROZEN	0.9							0
	2	SAND (SP) - traces of silt and organics, laminated, fine grained, uniform, greyish brown									1
	4			1.0							2
	5	- (SP-SM)		1.0							3
	6			1.4							4
	7	- (SP)		0.6							5
	8	- (SP-SM)		1.3							6
	9	- thin organic laminations with rootlets, black		0.7							7
	10	- (sm) some silt and organics with rootlets		0.8							8
	11	- 5mm thick clay layer at 6.6m		1.6							9
	12	- (SP-SM) trace of silt									10
	13										11
	14										12
	15	CLAY (CL) - and silt, very thin to thin laminations, very stiff, low plasticity, dark brownish grey		-0.4							13

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 45.1m
 ORIGINAL BOREHOLE NUMBER - B-NER 3:3

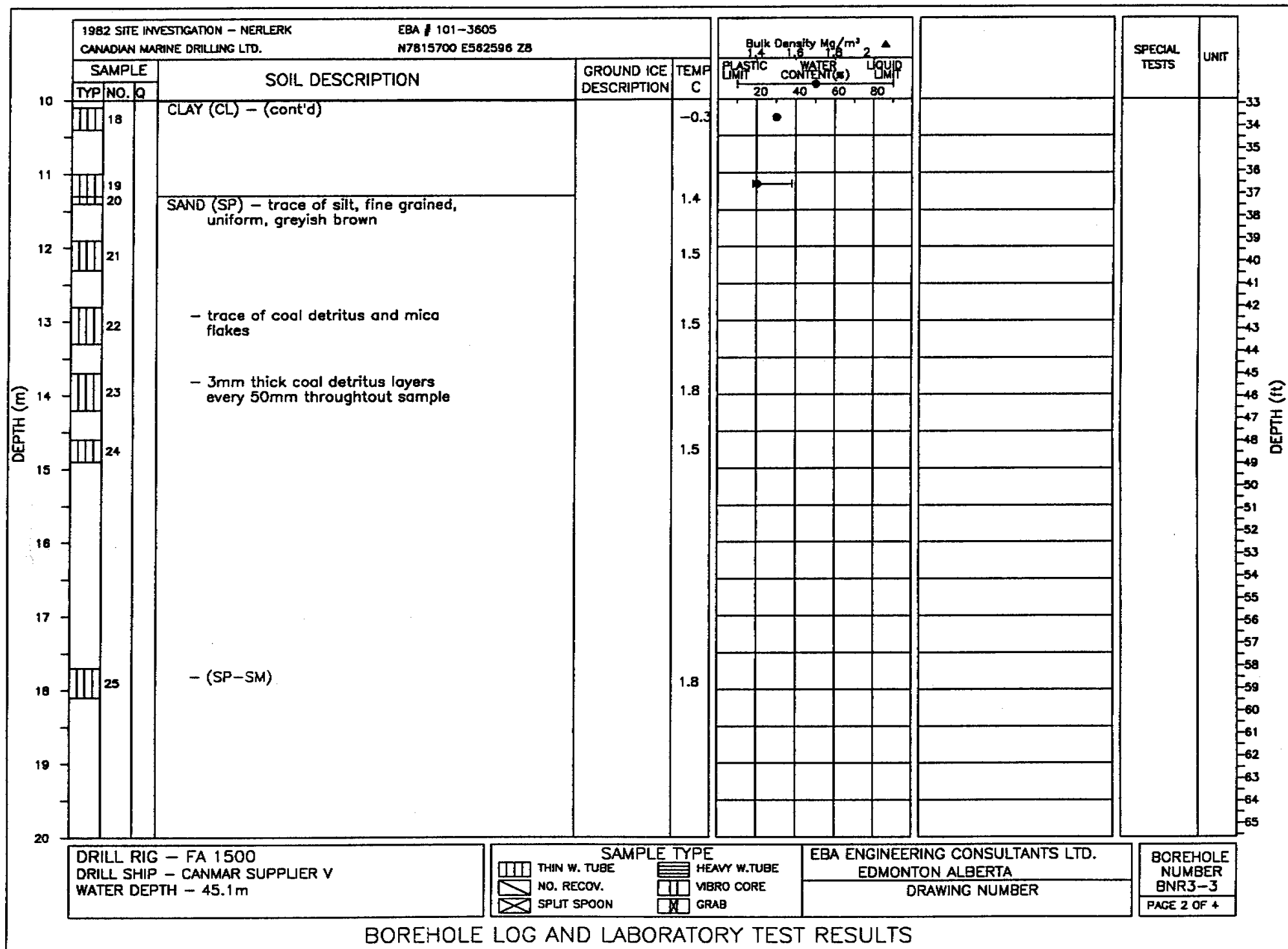
SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BNR3-3
 PAGE 1 OF 4

BOREHOLE LOG AND LABORATORY TEST RESULTS



1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7B15700 E562596 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO.	Q										
			SAND (SP-SM) - (cont'd)									66
												67
												68
												69
												70
												71
												72
												73
												74
												75
												76
												77
												78
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												89
												90
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												92
												93
												94
												95
												96
												97
												98

DRILL RIG - FA 1500
DRILL SHIP - CANMAR SUPPLIER V
WATER DEPTH - 45.1m

SAMPLE TYPE

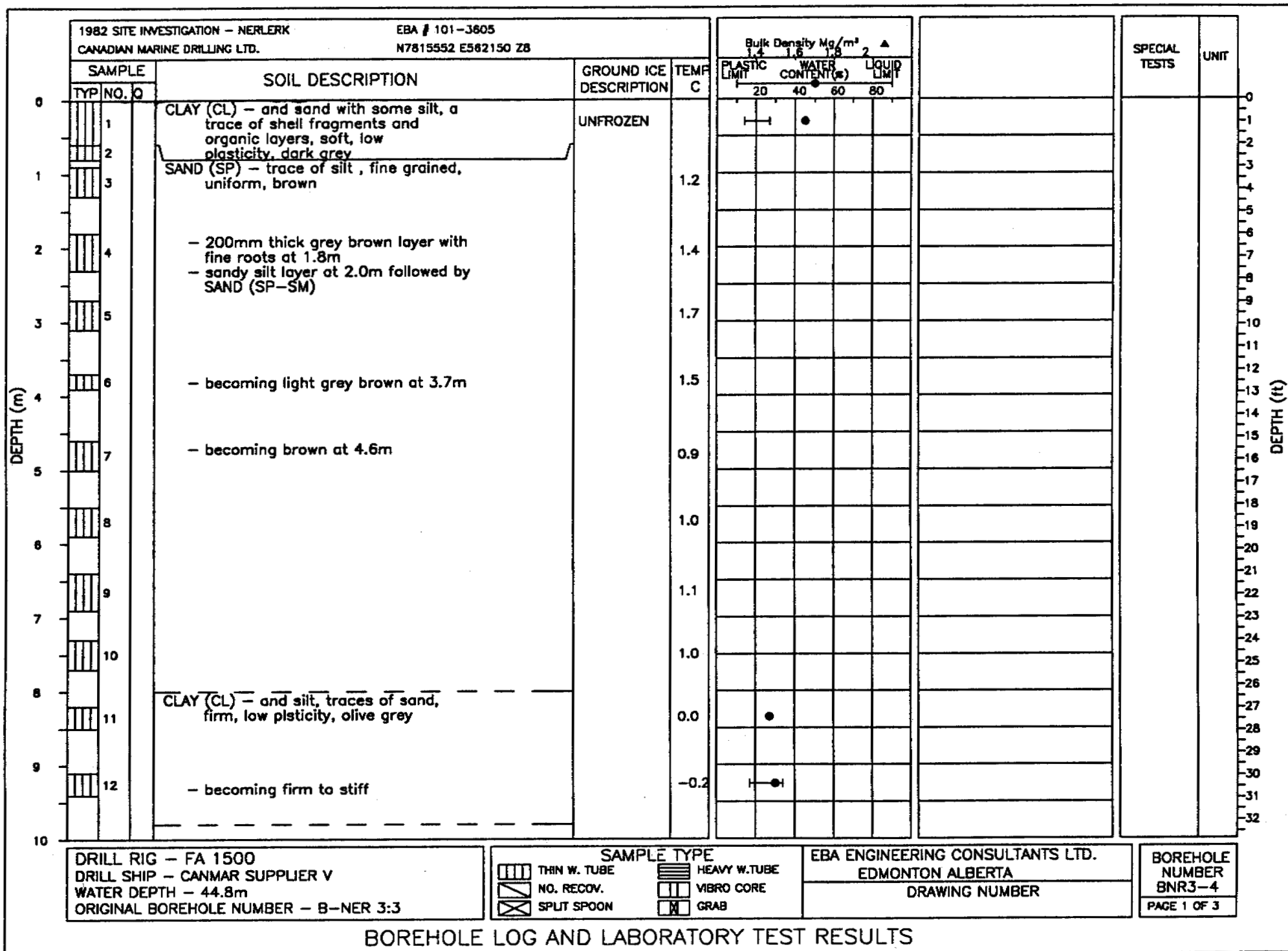
THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA

DRAWING NUMBER

BOREHOLE NUMBER
BNR3-3
PAGE 3 OF 4

BOREHOLE LOG AND LABORATORY TEST RESULTS



1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7815552 E562150 Z8		Bulk Density Mg/m ³ 1.4 1.6 1.8 2 ▲				SPECIAL TESTS	UNIT	DEPTH (ft)		
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT							
TYPE	NO. Q													
DEPTH (m)	13	SAND (SP) - (cont'd) - trace of silt, fine grained, uniform, brown - 350mm thick (estimated) clayey silt layer - 350mm thick (estimated) silty clay layer with numerous sand seams - (SM) becoming silty with organic bands at 13.6m (estimated) - (SP) wood fragments - traces of silt and organics		2.4								33		
			14	1.4									34	
			16	2.1										35
			17	0.3										36
			18	1.1										37
			19	1.4										38
			20											39
			21	0.1										40
			22	0.4										41
														42
														43
														44
														45
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												58		
												59		
												60		
												61		
												62		
												63		
												64		
												65		

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 44.8m
 ORIGINAL BOREHOLE NUMBER - B-NER 3:3

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BNR3-4
 PAGE 2 OF 3

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7815552 E562150 Z8		Bulk Density Mg/m ³ 1.4 1.6 1.8 2 ▲				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO.	Q										
20	22		SAND (SP - (cont'd)									66
												67
												68
												69
												70
												71
												72
												73
												74
												75
23	23		- (SP-SM)		-0.8							76
												77
												78
												79
												80
												81
												82
												83
												84
												85
26	24				0.0							86
												87
												88
												89
												90
												91
												92
												93
												94
												95
29	25		- (SP)	UNFROZEN	-0.3							96
			END OF BOREHOLE at 29.4m									97
30												98

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 44.8m
 ORIGINAL BOREHOLE NUMBER - B-NER 3:3

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BNR3-4
 PAGE 3 OF 3

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7814842 E561552 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2.0			PLASTIC LIMIT WATER CONTENT (%) LIQUID LIMIT			SPECIAL TESTS		UNIT				
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C														
TYP	NO. Q																	
DEPTH (m)	0	1	SAND (SC) - clayey, some silt, trace organics, fine grained, firm, low plasticity, dark grey	UNFROZEN	0.4											0		
	2	2	SAND (SP) - traces of silt and shell fragments, fine grained, uniform brown															1
	3	3																2
	4	4	SAND (sc) - clayey, some silt, fine grained, firm, low plasticity, dark grey															3
	5	5	SAND (SP) - traces of silt and shell fragments, fine grained, uniform, brown															4
	6	6	- (SM) some silt below 1.7m (estimated)															5
	7	7	- 2mm thick silt layer at 2.2m															6
	8	8	- (SP-SM) trace of silt below 2.7m															7
	9	9	- thinly bedded sand and silt below 3.4m (estimated)															8
	10	10	- 100mm thick silt and sand (CL) layer at 4.0m															9
	11	11	- (SP) trace of silt below 4.35m (estimated)															10
	12	12	SILT (ml) - some sand, trace of clay, dense, dark grey brown, 50mm thick organic rich bed at 5.6m															11
	13	13	SAND (SP) - trace of silt, fine grained, uniform brown															12
	14	14	- 150mm thick silty (SM) layer at 6.6m															13
	15	15																14
	16	16																15
17															16			
18															17			
19															18			
20															19			
21															20			
22															21			
23															22			
24															23			
25															24			
26															25			
27															26			
28															27			
29															28			
30															29			
31															30			
32															31			
33															32			

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 45.1m
 ORIGINAL BOREHOLE NUMBER - B-NER 3:5

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BNR3-5
 PAGE 1 OF 4

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA / 101-3605 N7814842 E561552 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT					
TYP	NO. Q											
10	17	SAND (SP) - (cont'd)		0.7								33
												34
11	18			1.3								35
												36
12	19			1.7								37
												38
13	20	- clay lens at 13m		1.0								39
												40
14	21			0.8								41
												42
15	22	- (SP-SM)		2.3								43
												44
16	23			1.7								45
												46
17												47
												48
18												49
												50
19	24			2.6								51
												52
												53
												54
												55
												56
												57
												58
												59
												60
												61
												62
												63
												64
20												65

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 45.1m
 ORIGINAL BOREHOLE NUMBER - B-NER 3:5

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BNR3-5
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BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7814842 E561552 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)		
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT							
TYP	NO. Q													
20		SAND (SP) - (cont'd)		1.9								66		
21														67
22	25													68
23														69
24														70
25														71
26														72
27														73
28	26													74
29														75
30		UNFROZEN		1.5								76		
31														77
32														78
33														79
34														80
35														81
36														82
37														83
38														84
39														85
40		FROZEN WELL BONDED		1.5								86		
41														87
42														88
43														89
44														90
45														91
46														92
47														93
48														94
49														95
50		- difficult drilling below 28m and repeated failure to recover sample at 30.8m may be indication of well bonded permafrost										96		
51														97
52														98
53														
54														
55														
56														
57														
58														
59														

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 45.1m
 ORIGINAL BOREHOLE NUMBER - B-NER 3:5

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BNR3-5
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BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK
CANADIAN MARINE DRILLING LTD.

EBA # 101-3605
N7814842 E561552 Z8

SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	Bulk Density Mg/m ³ ▲				SPECIAL TESTS	UNIT	DEPTH (ft)
TYP	NO. Q				PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
		SAND (SP) - (cont'd)									99
		- no recovery	FROZEN								100
		END OF BOREHOLE at 30.8m									101
											102
											103
											104
											105
											106
											107
											108
											109
											110
											111
											112
											113
											114
											115
											116
											117
											118
											119
											120
											121
											122
											123
											124
											125
											126
											127
											128
											129
											130
											131

DRILL RIG - FA 1500
DRILL SHIP - CANMAR SUPPLIER V
WATER DEPTH - 45.1m
ORIGINAL BOREHOLE NUMBER - B-NER 3:5

THIN W. TUBE

NO. RECOV.

SPLIT SPOON

HEAVY W. TUBE

VIBRO CORE

GRAB

EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA

DRAWING NUMBER

BOREHOLE NUMBER
BNR3-5

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BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK
CANADIAN MARINE DRILLING LTD.

EBA # 101-3605
N7815199 E561897 Z8

DEPTH (m)	SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	Bulk Density Mg/m ³ ▲			SPECIAL TESTS	UNIT	DEPTH (ft)
	TYP	NO. Q				PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT			
0		1	CLAY (cl) - silty, organic, rich bands, soft, low plasticity, dark grey	UNFROZEN	1.3						0
		2	- clayey sand below 0.2m								1
			SAND (SP) - trace of silt, fine grained, uniform brown								2
1		3	CLAY (CL) - silty, soft, low plasticity, dark grey								3
		4	SAND (SP-SM) - trace of silt, fine grained, uniform brown becoming grey brown below 2m								4
2		5									5
		6									6
		7	CLAY (CL-ML) - and silt, numerous fine grained sand partings, stiff, low plasticity								7
3		8									8
		9	SAND (SM) - some silt, fine grained, uniform brown								9
4			- trace of silt below 4.3m (estimated)								10
5		10	- silty below 4.9m								11
		11	- (SP) trace of silt below 5.3m (estimated)								12
6		12									13
7		13									14
8		14									15
9		15									16
10											17
											18
											19
											20
											21
											22
											23
											24
											25
											26
											27
											28
											29
											30
											31
											32

DRILL RIG - FA 1500
DRILL SHIP - CANMAR SUPPLIER V
WATER DEPTH - 44.5m
ORIGINAL BOREHOLE NUMBER - B-NER 3:6

SAMPLE TYPE
 THIN W. TUBE
 NO. RECOV.
 SPLIT SPOON
 HEAVY W. TUBE
 VIBRO CORE
 GRAB

EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA
DRAWING NUMBER

BOREHOLE NUMBER
BNR3-6
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BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7815199 E561897 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)	
DEPTH (m)	SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT					
	TYP	NO. Q											
10		16	SAND (SP) - (cont'd)		0.3							33	
													34
11		17				0.8							35
													36
12		18				0.5							37
													38
13		19				0.0							39
													40
14		20				1.3							41
													42
15		21				0.9							43
													44
16													45
													46
17		22				0.8							47
													48
18													49
													50
19													51
													52
20													53
													54
												55	
												56	
												57	
												58	
												59	
												60	
												61	
												62	
												63	
												64	
												65	

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 44.5m

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA

DRAWING NUMBER

BOREHOLE NUMBER
 BNR3-6

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BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7815199 E561897 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)		
DEPTH (m)	SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT						
	TYP	NO. Q												
20	THIN W. TUBE	23	SAND (SP) - (cont'd)		1.3							66		
21														67
22														68
23	THIN W. TUBE	24			0.7							69		
24														70
25														71
26	THIN W. TUBE	25			0.1							72		
27														73
28														74
29	THIN W. TUBE	26		UNFROZEN	1.1							75		
30														76
														77

DRILL RIG - FA 1500
DRILL SHIP - CANMAR SUPPLIER V
WATER DEPTH - 44.5m

SAMPLE TYPE

THIN W. TUBE

NO. RECOV.

SPLIT SPOON

HEAVY W. TUBE

VIBRO CORE

GRAB

EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA

DRAWING NUMBER

BOREHOLE NUMBER
BNR3-6

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BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7815199 E561897 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
DEPTH (m)	SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
	TYP	NO. Q										
30			SAND (SP) - (cont'd)									99
31		27	- No Recovery	FROZEN								100
32			END OF BOREHOLE at 31.5m									101
33												102
34												103
35												104
36												105
37												106
38												107
39												108
40												109
												110
												111
												112
												113
												114
												115
												116
												117
												118
												119
												120
												121
												122
												123
												124
												125
												126
												127
												128
												129
												130
												131

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 44.5m

SAMPLE TYPE

THIN W. TUBE
 NO. RECOV.
 SPLIT SPOON

HEAVY W. TUBE
 VIBRO CORE
 GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BNR3-6
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BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK				EBA # 101-3605									
CANADIAN MARINE DRILLING LTD.				N7814794 E561889 Z8									
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	Bulk Density Mg/m ³ ▲				SPECIAL TESTS	UNIT			
TYP	NO. Q				PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT						
DEPTH (m)	0	1	CLAY (CL) - silty, sandy, very soft, low plasticity, dark grey	UNFROZEN									
	1	2	SAND (SP) - traces of silt and shell fragments, fine grained, uniform, dark grey										
	2	3	- (SM) some silt below 0.6m	1.5									
	3	4	- (SP-SM) trace silt below 1.0m										
	4	5	- (SM) some silt to silty, trace of clay below 1.2m	1.3									
	5	6	- (SP-SM) trace of silt with fine roots below 1.7m (estimated), black										
	6	7	- (SP) trace of silt below 2.1m	1.8									
	7	8	- some silt with fine roots and organic rich beds below 2.45m										
	8	9	- (SP-SM) trace of silt, below 2.9m brown	1.5									
	9	10	- (SP) below 3.4m (estimated)										
	10	11		1.9									
	11	12	- (SP-SM) below 4.35m (estimated)										
	12	13		1.9									
	13	14	- (SP) below 6.15m (estimated)	2.0									
	14	15	CLAY (CL) - and silt, some sand, stiff, low plasticity, grey brown										
	15	16	- sand seam at 6.6m	0.3									
	16	17	SAND (SP) - trace of silt, fine grained uniform, brown										
17	18	- (SP-SM) below 7.5m	0.5										
18	19	- (SP) below 7.95m											
19	20		2.2										
20	21												
21	22		1.9										
22	23												
23	24												
24	25												
25	26												
26	27												
27	28												
28	29												
29	30												
30	31												
31	32												

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 45.4m
 ORIGINAL BOREHOLE NUMBER - B-NER 3:7

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BNR3-7
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BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7814794 E561889 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT					
TYP	NO. Q											
10	18	SAND (SP) - (cont'd)		2.3								33
												34
												35
11	19			2.8								36
												37
												38
12	20			1.7								39
												40
												41
13	21	- (SP-SM)		2.1								42
												43
												44
14	22	- (SP)		3.1								45
												46
												47
	23			2.8								48
15												49
												50
												51
												52
16												53
												54
												55
17												56
												57
												58
18	24			1.9								59
												60
												61
												62
19												63
												64
20												65

DRILL RIG - FA 1500
DRILL SHIP - CANMAR SUPPLIER V
WATER DEPTH - 45.4m

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA

DRAWING NUMBER

BOREHOLE NUMBER
BNR3-7

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BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7814794 E561889 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (t)		
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT						
TYP	NO.	Q												
			SAND (SP) - (cont'd)		3.0							66		
														67
	25													68
														69
														70
														71
														72
														73
														74
														75
													76	
													77	
													78	
	26					3.3							79	
														80
														81
														82
														83
													84	
													85	
												86		
												87		
												88		
	27				2.2							89		
													90	
													91	
													92	
													93	
													94	
													95	
													96	
													97	
													98	
	28													

DRILL RIG - FA 1500
DRILL SHIP - CANMAR SUPPLIER V
WATER DEPTH - 45.4m

SAMPLE TYPE

THIN W. TUBE
 NO. RECOV.
 SPLIT SPOON

HEAVY W. TUBE
 VIBRO CORE
 GRAB

EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA
DRAWING NUMBER

BOREHOLE NUMBER
BNR3-7
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BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7814794 E561889 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT(%)	LIQUID LIMIT					
TYP	NO. Q											
III	28	SAND (SP) - (cont'd) END OF BOREHOLE at 30.2m	UNFROZEN	3.4								99
												100
												101
												102
												103
												104
												105
												106
												107
												108
												109
												110
												111
												112
												113
												114
												115
												116
												117
												118
												119
												120
												121
												122
												123
												124
												125
												126
												127
												128
												129
												130
												131

DRILL RIG - FA 1500
DRILL SHIP - CANMAR SUPPLIER V
WATER DEPTH - 45.4m

SAMPLE TYPE

THIN W. TUBE

NO. RECOV.

SPLIT SPOON

HEAVY W. TUBE

VIBRO CORE

GRAB

EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA

DRAWING NUMBER

BOREHOLE NUMBER
BNR3-7

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BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7814987 E562037 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
DEPTH (m)	SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
	TYP	NO. Q										
0		1	CLAY (CL) - silty, soft, low plasticity, dark grey	UNFROZEN								0
		2	SAND (SP-SM) - traces of silt and shell fragments, fine grained, uniform, brown		1.4							1
1		3	- (SP) below 0.75m (estimated) - 5mm thick clay layer at 1.2m - (SP-SM) below 1.6m (estimated)		2.7							2
		4			2.2							3
2		5			3.0							4
		6A			2.7							5
3		6B			2.7							6
		7	- two 18mm thick layers with some silt and trace clay		1.4							7
4		8			2.7							8
		9	- (SM) silty		2.7							9
5		10	- (SP) some silt below 6.2m (estimated) - 40mm diameter - trace of silt		2.9							10
		11	- (SP-SM)									11
6		12										12
		13A										13
7		13B										14
			- (sp)									15
8												16
												17
9												18
												19
10												20
												21
												22
												23
												24
												25
												26
												27
												28
												29
												30
												31
												32

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 44.3m
 ORIGINAL BOREHOLE NUMBER - B-NER 3:8

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
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 BNR3-8
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BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7814987 E562037 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)	
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT						
TYPE	NO.												
DEPTH (m)	10	13	SAND (SP-SM) - (cont'd) - clay lenses with trace gravel to 10.77m - (SM) some silt - (SP-SM) trace silt - (SM) some silt - (SP) trace silt - (SM) silty, organic seam at 14.7m - (SP) trace silt		3.5							33	
	14											34	
	11	15			1.4								35
	12	16			0.9								36
	13	17			2.3								37
	14	18			3.0								38
	14	19			0.1								39
	15	20			0.9								40
	16	21											41
	17												42
	18												43
	19												44
	20												45
													46
													47
													48
													49
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											58		
											59		
											60		
											61		
											62		
											63		
											64		
											65		

DRILL RIG - FA 1500
DRILL SHIP - CANMAR SUPPLIER V
WATER DEPTH - 44.3m

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA
DRAWING NUMBER

BOREHOLE NUMBER
BNR3-8
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BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.			EBA # 101-3605 N7814987 E562037 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO. Q										
		SAND (SP) - (cont'd)									66
											67
											68
											69
											70
											71
											72
											73
		- organic lenses at 22.2m		2.7							74
											75
											76
											77
											78
											79
											80
											81
											82
											83
											84
				1.3							85
											86
											87
											88
											89
											90
											91
											92
											93
				1.0							94
											95
											96
											97
											98

DRILL RIG - FA 1500
DRILL SHIP - CANMAR SUPPLIER V
WATER DEPTH - 44.3m

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA
DRAWING NUMBER

BOREHOLE NUMBER
BNR3-8
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BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7815377 E561771 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2			SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT WATER CONTENT (%) LIQUID LIMIT						
TYP	NO. Q							20	40	60	80
DEPTH (m)	1	CLAY (CL) - and silt, some sand, soft, low plasticity, dark grey	UNFROZEN	1.6							0
	2	SAND (SP) - trace of silt, fine grained, uniform, brown									1
	3										2
	4										3
	5										4
	6	SILT (ml) - sandy, trace of clay, dense, brown									5
	7										6
	8	SAND (sp) - some silt, fine grained, uniform, brown									7
	9	- (SP-SM)									8
	10	CLAY (CL-ML) - and silt, 20mm beds of sand spaced 100mm apart; firm, dark grey									9
	11	SAND (SM) - some silt, fine grained, uniform, brown									10
	12	- 450mm thick (estimated) silt layer at 5.25m, trace of sand, dark grey									11
	13	- (SP) trace of silt below 5.7m									12
	14	- (SP-SM)									13
	15	- (SP)									14
	16										15
	17										16
	18										17
19									18		
20									19		
21									20		
22									21		
23									22		
24									23		
25									24		
26									25		
27									26		
28									27		
29									28		
30									29		
31									30		
32									31		
33									32		

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 45.4m
 ORIGINAL BOREHOLE NUMBER - B-NER 3:9

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BNR3-9
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BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3805 N7815377 E561771 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
DEPTH (m)	SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
	TYP	NO. Q										
10		19	SAND (SP) - (cont'd)		2.3							33
11		20	- (SP-SM)		1.0							34
12		21			2.3							35
13		22	- (SP)		2.7							36
14		24			2.3							37
15		25		UNFROZEN	3.8							38
16			END OF BOREHOLE at 15.1m									39
17												40
18												41
19												42
20												43
												44
												45
												46
												47
												48
												49
												50
												51
												52
												53
												54
												55
												56
												57
												58
												59
												60
												61
												62
												63
												64
												65

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 45.4m
 ORIGINAL BOREHOLE NUMBER - B-NER 3:9

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BNR3-9
 PAGE 2 OF 2

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7815397 E561992 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2			SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO. Q										
DEPTH (m)	0	1	CLAY (CL) - silty, and sandy, soft, low plasticity, dark grey	UNFROZEN	0.5						0
		2	SAND (SP-SM) - trace of silt, fine grained, uniform, brown								1
	1	3	CLAY (cl) - silty and sandy, soft, low plasticity, dark grey		1.1						2
		4	SAND (SP) - trace of silt, fine grained, uniform, brown								3
	2	5									4
		6									5
	3	7	CLAY (CL) - silty, some sand, hard, olive grey		2.2						6
		8									7
	4	9	SAND (SP) - trace of silt, fine grained, uniform, brown		4.3						8
		10									9
	5	11			4.0						10
		12									11
	6	13			3.9						12
		14									13
7	15			1.5						14	
	16									15	
8	17			0.6						16	
	18									17	
9	19	- (SP-SM)		0.9						18	
	20									19	
10	21	- (SP)		2.9						20	
	22									21	

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 44.8m
 ORIGINAL BOREHOLE NUMBER - B-NER 3:10

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BNR3-10
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BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7815397 E561992 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT					
TYP	NO. Q											
10	15	SAND (SP) - (cont'd)		2.6								33
												34
												35
11	16	- 10mm thick CLAY lens and one 13mm diameter pebble		2.5								36
												37
12	17			1.9								38
												39
13	18			1.7								40
												41
14	19	- (SP-SM)		1.3								42
												43
15	20			1.3								44
												45
		END OF BOREHOLE at 15.0m	UNFROZEN									46
												47
												48
												49
												50
												51
												52
												53
												54
												55
												56
												57
												58
												59
												60
												61
												62
												63
												64
												65

DRILL RIG - FA 1500
DRILL SHIP - CANMAR SUPPLIER V
WATER DEPTH - 44.8m

SAMPLE TYPE

THIN W. TUBE

NO. RECOV.

SPLIT SPOON

HEAVY W. TUBE

VIBRO CORE

GRAB

EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA

DRAWING NUMBER

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BNR3-10

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BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7815322 E562224 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT WATER CONTENT (%) LIQUID LIMIT							
TYP	NO. Q							20	40	60	80	
0	1	CLAY (CL) - silty, sandy, traces of shell fragments and organics, firm, low plasticity, dark grey - clayey sand layer at 0.5m	UNFROZEN									0
1	2											1
												2
												3
												4
												5
2	3	SAND (SP-SM) - trace of silt, fine grained, uniform, brown		2.1								6
												7
												8
												9
3	4A 4B 4C			2.0								10
												11
												12
4	5			2.5								13
												14
												15
5	7	- black organic lenses to 4.8m		1.6								16
												17
												18
6	8			2.6								19
												20
												21
												22
7	9			2.6								23
												24
												25
												26
8	11											27
												28
												29
9	12	SILT (ml) - occasional thin beds of silty fine grained sand, compact to dense, dark grey		1.6								30
												31
												32
10	13	CLAY (CL) - and silt, some sand, very stiff, grey brown										

DRILL RIG - FA 1500
DRILL SHIP - CANMAR SUPPLIER V
WATER DEPTH - 44.2m
ORIGINAL BOREHOLE NUMBER - B-NER 3:11

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA
DRAWING NUMBER

BOREHOLE NUMBER
BNR3-11
PAGE 1 OF 2

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7815322 E562224 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2			SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT			
TYP	NO.	Q									
10	13		SAND (SP) - trace of silt, fine grained, uniform, brown	UNFROZEN	2.0						33
11	15		END OF BOREHOLE at 11.5m		2.7						35
											36
											37
											38
											39
											40
											41
											42
											43
											44
											45
											46
											47
											48
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											52
											53
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											55
											56
											57
											58
											59
											60
											61
											62
											63
											64
											65

DRILL RIG - FA 1500
DRILL SHIP - CANMAR SUPPLIER V
WATER DEPTH - 44.2m

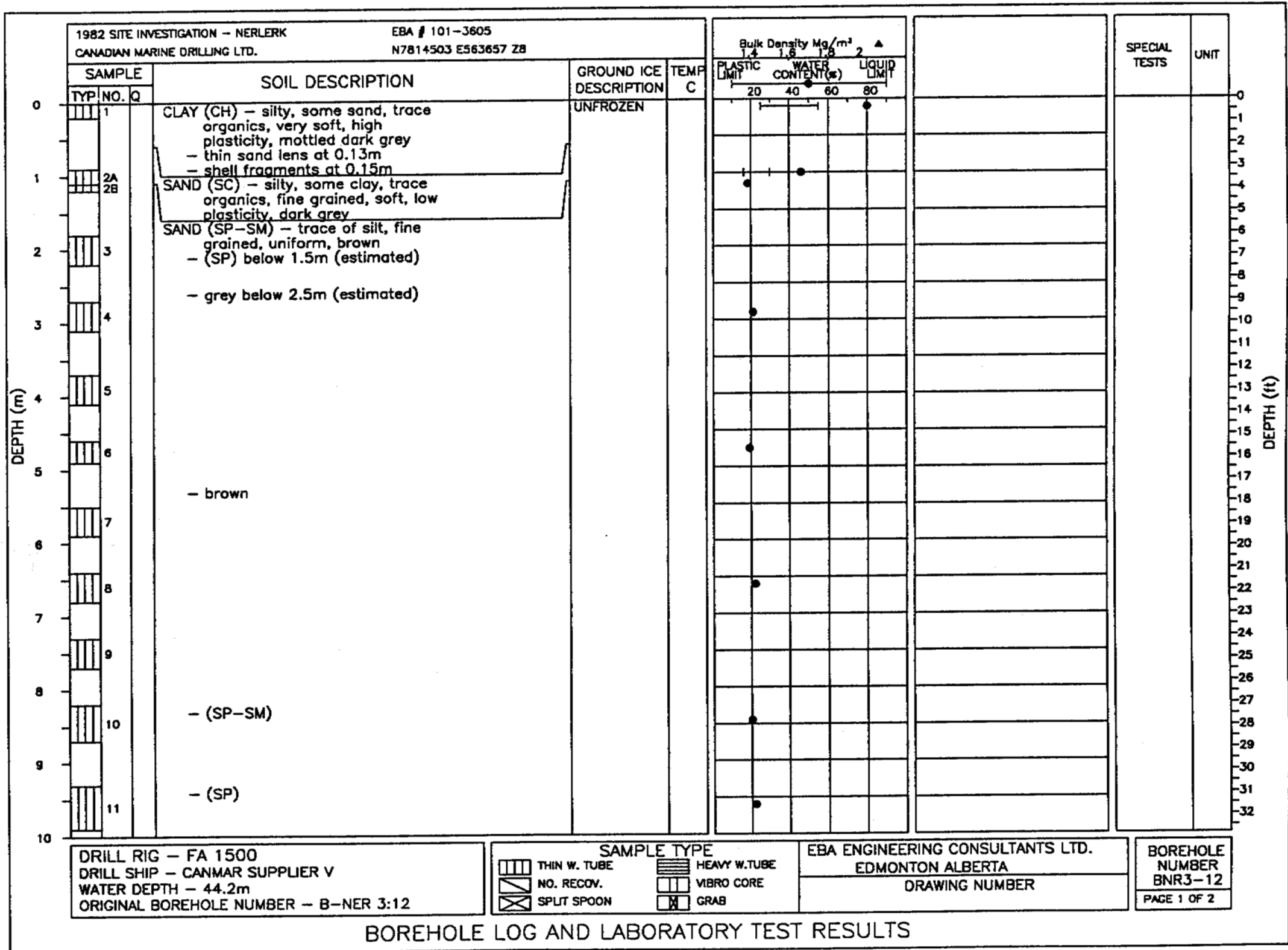
SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA
DRAWING NUMBER

BOREHOLE NUMBER
BNR3-11
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BOREHOLE LOG AND LABORATORY TEST RESULTS



1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7814503 E563657 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2			SPECIAL TESTS	UNIT	DEPTH (ft)		
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT						
TYP	NO. Q												
10	12	SAND (SP) - (cont'd)			20	40	60	80			33		
													34
11	13												35
													36
													37
12	14										38		
											39		
13	15										40		
											41		
											42		
		END OF BOREHOLE at 13.4m	UNFROZEN								43		
											44		
											45		
											46		
											47		
											48		
											49		
											50		
											51		
											52		
											53		
											54		
											55		
											56		
											57		
											58		
											59		
											60		
											61		
											62		
											63		
											64		
											65		

DRILL RIG - FA 1500
DRILL SHIP - CANMAR SUPPLIER V
WATER DEPTH - 44.2m

SAMPLE TYPE

THIN W. TUBE

NO. RECOV.

SPLIT SPOON

HEAVY W. TUBE

VIBRO CORE

GRAB

EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA

DRAWING NUMBER

BOREHOLE NUMBER
BNR3-12

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BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION TINGMARK BORROW CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7782696 E571171 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT					
TYP	NO. Q											
X	1	SAND (SP-SM) - fine grained with a trace to some silt, trace shell fragments, uniform, brownish grey 20mm, trace to some clay - (SP) at 0.5m - (SM) some silt to silty with trace to some clay, trace organics and shell fragments, dark grey to black at 0.7m - some silt, dark grey brown END OF BOREHOLE at 1.4m	UNFROZEN									0
	2											1
	3		UNFROZEN									
												3
												4
												5
												6
												7
												8
												9
												10
												11
												12
												13
												14
												15
												16
												17
												18
												19
												20
												21
												22
												23
												24
												25
												26
												27
												28
												29
												30
												31
												32

DRILL RIG - ROKLENG VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 22.2m
 ORIGINAL BOREHOLE NUMBER - B-TIN 1:1

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTN1-1

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION TINGMIARK BORROW CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7780126 E571019 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2			SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO. Q										
0	A	SAND (SC) - clayey and silty, low plasticity, very soft, dark grey	UNFROZEN								0
	B	SAND (SP) - fine grained with trace of silt, uniform, brown									1
		- trace organics appearing in pockets									2
1	C										3
											4
											5
2	D	- 20mm organic rich clay lens									6
											7
											8
3	E	- shell fragments									9
											10
4	F		UNFROZEN								11
		END OF BOREHOLE at 4.2m									12
											13
											14
											15
5											16
											17
											18
6											19
											20
											21
											22
7											23
											24
											25
8											26
											27
											28
9											29
											30
											31
10											32

DRILL RIG - ROKLENG VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 25.6m
 ORIGINAL BOREHOLE NUMBER - B-TING 1:4

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTN 1-4

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION TINGMARK BORROW				EBA # 101-3605													
CANADIAN MARINE DRILLING LTD.				N7779946 E572083 Z8													
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	Bulk Density Mg/m ³ ▲						SPECIAL TESTS	UNIT	DEPTH (m)	DEPTH (ft)		
TYP	NO.	Q				PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT									
	1A		SAND (SP) - fine grained with a trace of silt, uniform, grey brown	UNFROZEN										0	0		
	1B		SAND (SC) - fine grained with some clay and a trace of silt, soft, low plasticity, grey											1	1		
	1C													2	2		
	2A		SAND (SP) - fine grained with a trace of silt, uniform, grey brown											3	3		
														4	4		
														5	5		
			- brown											6	6		
														7	7		
	3A													8	8		
														9	9		
														10	10		
	4A			UNFROZEN										11	11		
														12	12		
			END OF BOREHOLE at 4.0m											13	13		
														14	14		
														15	15		
														16	16		
														17	17		
														18	18		
														19	19		
														20	20		
														21	21		
														22	22		
														23	23		
														24	24		
														25	25		
														26	26		
														27	27		
														28	28		
														29	29		
														30	30		
														31	31		
														32	32		

DRILL RIG - ROKLENG VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 24.7m
 ORIGINAL BOREHOLE NUMBER - B-TING 1:5

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTN1-5

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION TINGMARK BORROW CANADIAN MARINE DRILLING LTD.				EBA / 101-3605 N7780023 E572992 Z8		Bulk Density Mg/m^3 ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)		
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT WATER CONTENT (%) LIQUID LIMIT 20 40 60 80									
TYP	NO. Q													
0	1A	CLAY (cl) - silty with a trace of sand, very soft, low plasticity, grey brown										0		
	1B													1
1		SAND (SP) - fine grained with a trace of silt, uniform, brown										2		
	2A													3
	3A													4
	4A													5
2		END OF BOREHOLE at 4.0m	UNFROZEN									6		
														7
														8
														9
														10
														11
														12
														13
														14
														15
3												16		
												17		
												18		
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												28		
												29		
												30		
												31		
												32		
4														
5														
6														
7														
8														
9														
10														

DRILL RIG - ROKLENG VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 26.8m
 ORIGINAL BOREHOLE NUMBER - B-TING 1:6

SAMPLE TYPE

☐ THIN W. TUBE	☐ HEAVY W. TUBE
☐ NO. RECOV.	☐ VIBRO CORE
☐ SPLIT SPOON	☐ GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTN1-6

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION TINGMIARK BORROW CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7780047 E573982 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				PLASTIC LIMIT 20 40 60 80		WATER CONTENT (%)		LIQUID LIMIT		SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C													
DEPTH (m)	TYP	NO.				Q												
0		1A		SAND (SC) - some clay and silt, a trace of organics and shell fragments, very soft, low plasticity, dark grey	UNFROZEN													0
		1B		SAND (SP) - fine grained with a trace of silt, uniform, brown														1
1		2A																2
		3A																3
2		4A																4
3																		5
4				END OF BOREHOLE at 4.4m	UNFROZEN													6
5																		7
6																		8
7																		9
8																		10
9																		11
10																		12
																		13
																		14
																		15
																		16
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																		28
																		29
																		30
																		31
																		32

DRILL RIG - ROKLENG VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 26.5m
 ORIGINAL BOREHOLE NUMBER - B-TING 1:7

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTN1-7

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION TINGMIARK BORROW CANADIAN MARINE DRILLING LTD.				EBA / 101-3605 N7780038 E574966 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2.0 PLASTIC LIMIT WATER CONTENT (%) LIQUID LIMIT 20 40 60 80						SPECIAL TESTS		UNIT			
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C												
TYP	NO.	Q															
0	1A		SAND (SP) - fine grained with traces of silt, organics and shell fragments, dark grey	UNFROZEN												0	
1	2A		- 200mm thick layer of silty clay with some sand, low, plasticity, grey brown - medium to fine grained sand, brown - brown and grey	UNFROZEN												1	
	2B																2
	3A																3
2																4	
	4A															5	
3																6	
			END OF BOREHOLE at 3.4m													7	
4																8	
5																9	
6																10	
7																11	
8																12	
9																13	
10																14	
																15	
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																21	
																22	
																23	
																24	
																25	
																26	
																27	
																28	
																29	
																30	
																31	
																32	

DRILL RIG - ROKLENG VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 24.7m
 ORIGINAL BOREHOLE NUMBER - B-TING 1:8

SAMPLE TYPE

☐ THIN W. TUBE	☐ HEAVY W. TUBE
☐ NO. RECOV.	☐ VIBRO CORE
☐ SPLIT SPOON	☐ GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTN1-8

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION TINGMARK BORROW CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7780073 E578007 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO.	Q										
0	1A		CLAY (CL) - silty and sandy, soft, low plasticity, light grey brown	UNFROZEN								0
	1B		SAND (SP) - fine grained with a trace of silt and shell fragments, uniform, brown									1
	2A											2
	3A											3
	4A											4
												5
												6
												7
												8
												9
1				UNFROZEN								10
2												11
3												12
4												13
5												14
6												15
7												16
8												17
9												18
10												19
												20
												21
												22
												23
												24
												25
												26
												27
												28
												29
												30
												31
												32
			END OF BOREHOLE at 4.0m									

DRILL RIG - ROKLENG VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 26.8m
 ORIGINAL BOREHOLE NUMBER - B-TING 1:9

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTN1-9

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION TINGMARK BORROW				EBA # 101-3605									
CANADIAN MARINE DRILLING LTD.				N7786008 E562751 Z8									
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	Bulk Density Mg/m ³ ▲					SPECIAL TESTS	UNIT	
TYP	NO.	Q				PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT					
0	A		SAND (SP) - fine grained with a trace of silt, uniform, grey brown	UNFROZEN									
	B		- 150mm layer of sandy clay with organic rich pockets										
1	C												
	D												
2													
	E		- 50mm layer of clayey sand	UNFROZEN									
3													
4			END OF BOREHOLE at 4.0m										
5													
6													
7													
8													
9													
10													

DRILL RIG - ROKLENG VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 28.3m
 ORIGINAL BOREHOLE NUMBER - B-TING 1:10

SAMPLE TYPE

☐ THIN W. TUBE	☐ HEAVY W. TUBE
☐ NO. RECOV.	☐ VIBRO CORE
☐ SPLIT SPOON	☐ GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTN1-10

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION TINGMIARK BORROW CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7785002 E562759 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)									
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT													
TYP	NO.	Q																			
0	A		SAND (SP) - fine grained, uniform, grey brown - 200mm layer of clayey sand	UNFROZEN								0									
	B																			1	
	C																				2
																					3
																					4
1			- 20mm layer of sandy clay, olive grey	UNFROZEN								5									
	D																				6
																					7
	E																				8
																					9
2			END OF BOREHOLE at 4.0m	UNFROZEN								10									
	F																				11
																					12
																					13
																					14
3			END OF BOREHOLE at 4.0m	UNFROZEN								15									
																					16
																					17
																					18
																					19
4			END OF BOREHOLE at 4.0m	UNFROZEN								20									
																					21
																					22
																					23
																					24
5			END OF BOREHOLE at 4.0m	UNFROZEN								25									
																					26
																					27
																					28
																					29
6			END OF BOREHOLE at 4.0m	UNFROZEN								30									
																					31
																					32
7			END OF BOREHOLE at 4.0m	UNFROZEN																	
8			END OF BOREHOLE at 4.0m	UNFROZEN																	
9			END OF BOREHOLE at 4.0m	UNFROZEN																	
10			END OF BOREHOLE at 4.0m	UNFROZEN																	

DRILL RIG - ROKLENG VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 27.7m
 ORIGINAL BOREHOLE NUMBER - B-TING 1:11

SAMPLE TYPE

THIN W. TUBE

NO. RECOV.

SPLIT SPOON

HEAVY W. TUBE

VIBRO CORE

GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTN1-11

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION TINGMIARK BORROW CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7784002 E562768 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO.	Q										
0	A		SAND (SP) - fine grained with a trace of silt and shell fragments, uniform, grey brown	UNFROZEN								0
	B											
1	C		SAND (SC) - fine grained and clayey with some silt, low plasticity, olive grey	UNFROZEN								1
2	D		SAND (SP) - fine grained with a trace of silt, uniform, grey brown	UNFROZEN								2
3	E		- some clay partings	UNFROZEN								3
4			END OF BOREHOLE at 3.6m	UNFROZEN								4
												5
												6
												7
												8
												9
												10
												11
												12
												13
												14
												15
												16
												17
												18
												19
												20
												21
												22
												23
												24
												25
												26
												27
												28
												29
												30
												31
												32

DRILL RIG - ROKLENG VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 28.3m
 ORIGINAL BOREHOLE NUMBER - B-TING 1:12

SAMPLE TYPE

THIN W. TUBE

NO. RECOV.

SPLIT SPOON

HEAVY W. TUBE

VIBRO CORE

GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTN1-12

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION TINGMIARK BORROW CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7783009 E562768 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)		
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT							
TYP	NO. Q											20	40	60
0												0		
	1A	SAND (SP) - fine grained with a trace of silt, uniform, brown	UNFROZEN									1		
														2
	2A													3
														4
2			UNFROZEN									5		
	3A												6	
													7	
	4A												8	
3												9		
												10		
												11		
												12		
4		END OF BOREHOLE at 3.7m										13		
												14		
												15		
5												16		
												17		
												18		
6												19		
												20		
												21		
7												22		
												23		
												24		
8												25		
												26		
												27		
9												28		
												29		
												30		
												31		
10												32		

DRILL RIG - ROKLENG VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 30.8m
 ORIGINAL BOREHOLE NUMBER - B-TING 1:13

SAMPLE TYPE

☐ THIN W. TUBE

☐ NO. RECOV.

☐ SPLIT SPOON

☐ HEAVY W. TUBE

☐ VIBRO CORE

☐ GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTN1-13

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION TINGMIARK BORROW CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7782018 E562752 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2			SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO. Q										
0	1A	SAND (SC) - clayey with some silt, trace of organics, very soft, low plasticity, dark grey	UNFROZEN								0
	1B	SAND (SP-SM) - fine grained with a trace of silt, and shell fragments, uniform, brown									1
1	2A										2
	3A										3
2	4A	- (SP)									4
			UNFROZEN								5
3											6
											7
4											8
		END OF BOREHOLE at 4.3m									9
5											10
											11
6											12
											13
7											14
											15
8											16
											17
9											18
											19
10											20
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											24
											25
											26
											27
											28
											29
											30
											31
											32

DRILL RIG - ROKLENG VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 30.5m
 ORIGINAL BOREHOLE NUMBER - B-TING 1:14

SAMPLE TYPE

☐ THIN W. TUBE	☐ HEAVY W. TUBE
☐ NO. RECOV.	☐ VIBRO CORE
☐ SPLIT SPOON	☐ GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 BTN1-14

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD				EBA # 101-3605 N7815907 E560931 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2			SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO. Q										
0	1	CLAY FILL (CH) and silt, trace of sand and organics, very soft, high plasticity, dark grey	UNFROZEN								0
1	2										1
2	3A	SAND (SP) - trace of coarse-grained, fine grained, uniform									2
	3B	CLAY (CH) - and silt, some sand trace of organics and shell fragments, very soft, high plasticity, dark grey									3
3	4A										4
	4B										5
4	5	SAND (SP) - trace of silt, mica flakes and coal detritus, fine grained, uniform, greyish brown									6
5	6										7
6	7										8
7	8	- becoming coarser grained, 1mm lamination of coal detritus									9
8	9										10
9	10										11
10	11										12
11	12										13
12	13										14
13	14	- slight increase of coal detritus									15
14	15										16
15	16										17
	17										18
											19
											20
											21
											22
											23
											24
											25
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											41
											42
											43
											44
											45
											46
											47
											48
											49

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER AND ICE DEPTH - 45.1m
 ORIGINAL BOREHOLE NUMBER - F-NER2:3

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOVERY	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FNR2-3
 PAGE 1 OF 9

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD				EBA # 101-3605 N7815907 E560931 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2			SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO. Q										
15											50
16											51
17											52
18	18										53
19											54
20											55
21	19										56
22											57
23											58
24	20	- becoming finer grained									59
25											60
26											61
27	21	- (SP-SM) minor increase of silt and coarser grained									62
28											63
29											64
30	22										65
											66
											67
											68
											69
											70
											71
											72
											73
											74
											75
											76
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											94
											95
											96
											97
											98

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER AND ICE DEPTH - 45.1m
 ORIGINAL BOREHOLE NUMBER - F-NER2:3

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOVERY	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FNR2-3
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BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD				EBA # 101-3605 N7815907 E560931 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2			SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO. Q										
III	22	SAND (SP) - (cont'd)									99
											100
											101
											102
											103
	23		FROZEN, Nbn								104
											105
											106
											107
	24		Nbn								108
											109
											110
											111
											112
											113
											114
											115
											116
											117
	25										118
											119
											120
											121
											122
											123
											124
											125
											126
											127
	26		Nbn								128
											129
											130
											131
											132
											133
											134
											135
											136
											137
	27		Nbn								138
											139
											140
											141
											142
											143
											144
											145
											146
											147

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER AND ICE DEPTH - 45.1m
 ORIGINAL BOREHOLE NUMBER - F-NER2:3

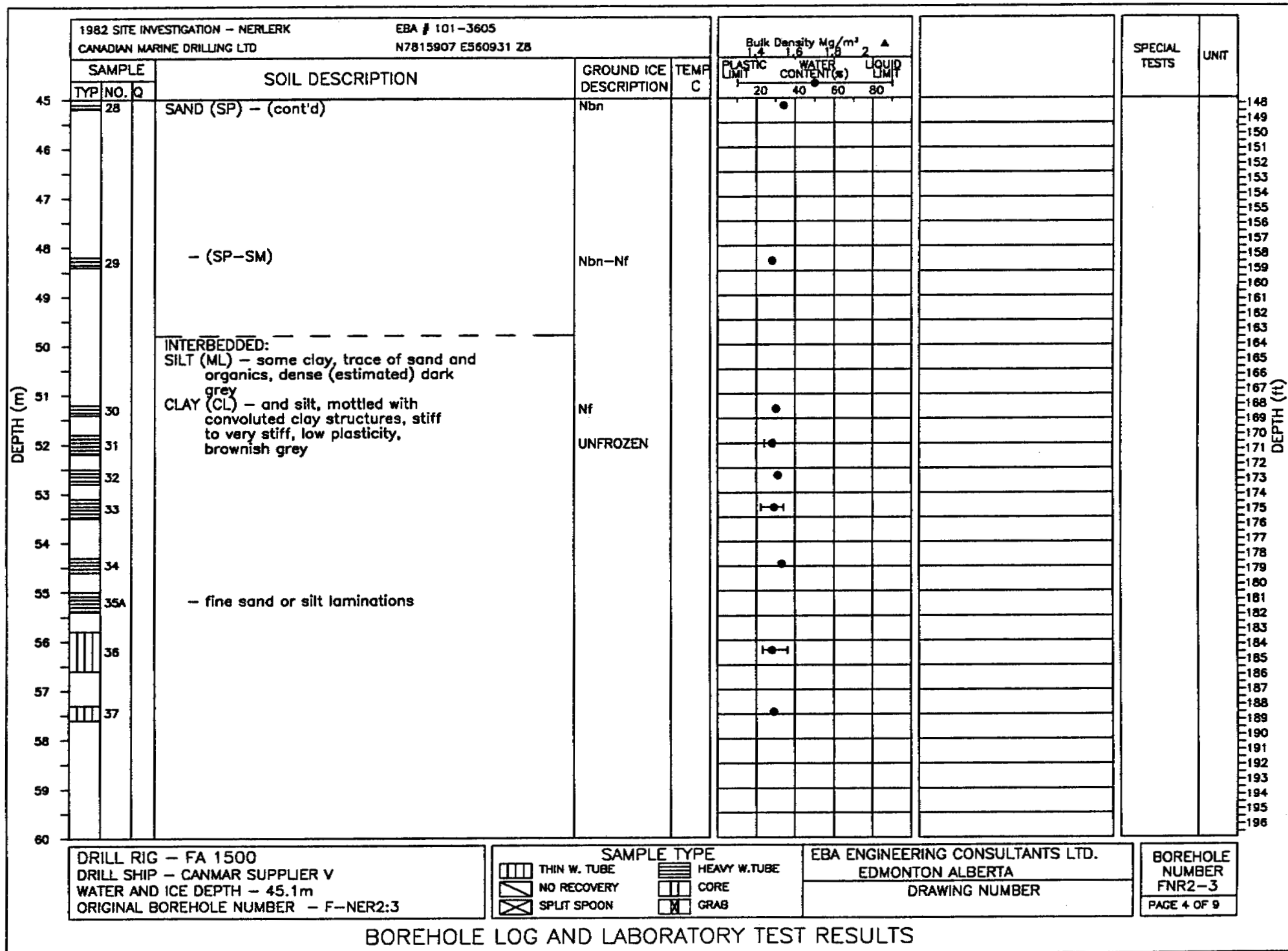
SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOVERY	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FNR2-3
 PAGE 3 OF 9

BOREHOLE LOG AND LABORATORY TEST RESULTS



1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD				EBA # 101-3605 N7815907 E560931 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2			SPECIAL TESTS	UNIT	DEPTH (m)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO. Q										
60	38A	CLAY (CL) - (cont'd)									197
61	38	- (CL-ML)									198
62											199
63											200
64	39										201
65											202
66											203
67	40	- (CL) - (ML) rich convoluted structures									204
68											205
69											206
70	41	- (CL), 50mm thick silt layer at 69.6m, 3mm thick organic laminae at 69.8m									207
71											208
72		CLAY (CL) - and silt, trace of organics, thin organic rich laminations, very stiff, low plasticity, olive grey									209
73	42										210
74											211
75											212
											213
											214
											215
											216
											217
											218
											219
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											224
											225
											226
											227
											228
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											237
											238
											239
											240
											241
											242
											243
											244
											245
											246

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER AND ICE DEPTH - 45.1m
 ORIGINAL BOREHOLE NUMBER - F-NER2:3

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOVERY	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FNR2-3
 PAGE 5 OF 9

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD				EBA # 101-3605 N7815907 E560931 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2.0			PLASTIC LIMIT WATER CONTENT (%) LIQUID LIMIT 20 40 60 80			SPECIAL TESTS	UNIT	DEPTH (m)	
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C											
TYP	NO.				Q										
			CLAY (CL) - (cont'd)												247
	43														248
															249
															250
															251
															252
															253
															254
															255
															256
															257
	44		- 1mm thick organic laminae at 78.7m												258
															259
															260
															261
															262
															263
															264
															265
															266
															267
	45														268
															269
															270
															271
															272
															273
															274
															275
															276
															277
	46A 46B		- (CL), slickensided surface at 45 deg. to horizontal												278
															279
															280
															281
															282
															283
															284
															285
															286
															287
	47A			FROZEN Vs 2mm thick ice lens											288
															289
															290
															291
															292
															293
															294
															295

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER AND ICE DEPTH - 45.1m
 ORIGINAL BOREHOLE NUMBER - F-NER2:3

SAMPLE TYPE

THIN W. TUBE	PISTON
NO RECOVERY	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FNR2-3
 PAGE 6 OF 9

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD				EBA # 101-3605 N7815907 E560931 Z8								
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	Bulk Density Mg/m ³ ▲			SPECIAL TESTS	UNIT	DEPTH (ft)		
TYP	NO. Q				PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT					
		CLAY (CL) - (cont'd)								296		
										297		
										298		
										299		
										300		
										301		
										302		
										303		
		CLAY (CH) - trace of shell fragments								304		
										305		
										306		
										307		
										308		
										309		
										310		
										311		
										312		
										313		
										314		
										315		
										316		
										317		
										318		
		- laminations or bedding planes at 5 deg.-10 deg. to horizontal resulting in hairline cracks every 30mm	Nbn-Nf Nbn-Nf							319		
										320		
										321		
										322		
										323		
										324		
										325		
										326		
										327		
										328		
		- (CH), strong odour of organics, trace of shell fragments	Nbn-Nf							329		
										330		
										331		
										332		
										333		
										334		
										335		
		SILT (ML) - transition from clay above								336		
										337		
										338		
										339		
										340		
										341		
										342		
										343		
										344		

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER AND ICE DEPTH - 45.1m
 ORIGINAL BOREHOLE NUMBER - F-NER2:3

SAMPLE TYPE

THIN W. TUBE	PISTON
NO RECOVERY	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FNR2-3
 PAGE 7 OF 9

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD				EBA # 101-3605 N7815907 E560931 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2.0			PLASTIC LIMIT 20 40 60 80			WATER CONTENT (%)			LIQUID LIMIT			SPECIAL TESTS		UNIT	
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C																
TYP	NO.	Q																			
105			SILT (ML) - (cont'd)																	345	
106			SAND (SM/SC) - transition from silt above	Nbn																346	
107			SAND (SP-SM) - trace of silt and coal detritus thin silt laminations, fine grained, uniform, greyish brown	Nbn																347	
108																				348	
109			- (SP), homogeneous, brown	Nbn																349	
110																				350	
111																				351	
112				Nbn																352	
113																				353	
114																				354	
115				Nbn																355	
116																				356	
117																				357	
118																				358	
119				Nbn																359	
120																				360	

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER AND ICE DEPTH - 45.1m
 ORIGINAL BOREHOLE NUMBER - F-NER2:3

SAMPLE TYPE

☐ THIN W. TUBE

☐ NO RECOVERY

☐ SPLIT SPOON

☐ PISTON

☐ CORE

☐ GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FNR2-3
 PAGE 8 OF 9

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK				EBA # 101-3605											
CANADIAN MARINE DRILLING LTD				N7815907 E580931 Z8											
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	Bulk Density Mg/m ³ ▲				SPECIAL TESTS	UNIT	DEPTH (m)			
TYP	NO.	Q				PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT							
			SAND (SP) - (cont'd)									394			
												395			
												396			
												397			
			- (SM/SC) grey coal detritus layer									398			
			3mm thick at 10 deg. to horizontal	FROZEN, Nbn								399			
			END OF BOREHOLE at 121.6m									400			
												401			
												402			
												403			
												404			
												405			
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												408			
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												441			
												442			

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER AND ICE DEPTH - 45.1m
 ORIGINAL BOREHOLE NUMBER - F-NER2:3

SAMPLE TYPE

THIN W. TUBE

NO RECOVERY

SPLIT SPOON

PISTON

CORE

GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FNR2-3
 PAGE 9 OF 9

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION NATIAK 0-44 CANADIAN MARINE DRILLING LTD				EBA # 101-3605 N7774573 E415596 ZB		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2.0			SPECIAL TESTS	UNIT
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT			
TYP	NO. Q									
0	1	CLAY (CH) - silty with trace of sand, homogeneous, very soft, (estimated), high plasticity, olive brown	UNFROZEN							
1	2									
2	3									
3	4	- and silt with trace shell fragments, firm, grey brown								
4	5									
5	6	- silty, laminated, dark grey and brown								
6	7	CLAY (CL) - and silt with trace black organics, very thinly laminated, stiff to very stiff, low plasticity, dark grey and brown								
7	8									
8	9									
9	10									
10	11									
11	12	CLAY (CL) - (cont'd)								
12	13									
13	14A									
14	15	- mottled grey and olive brown								
15	16									
	17	- stiff to very stiff, grey								

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 43.9m
 ORIGINAL BOREHOLE NUMBER - F-NAT 1:1

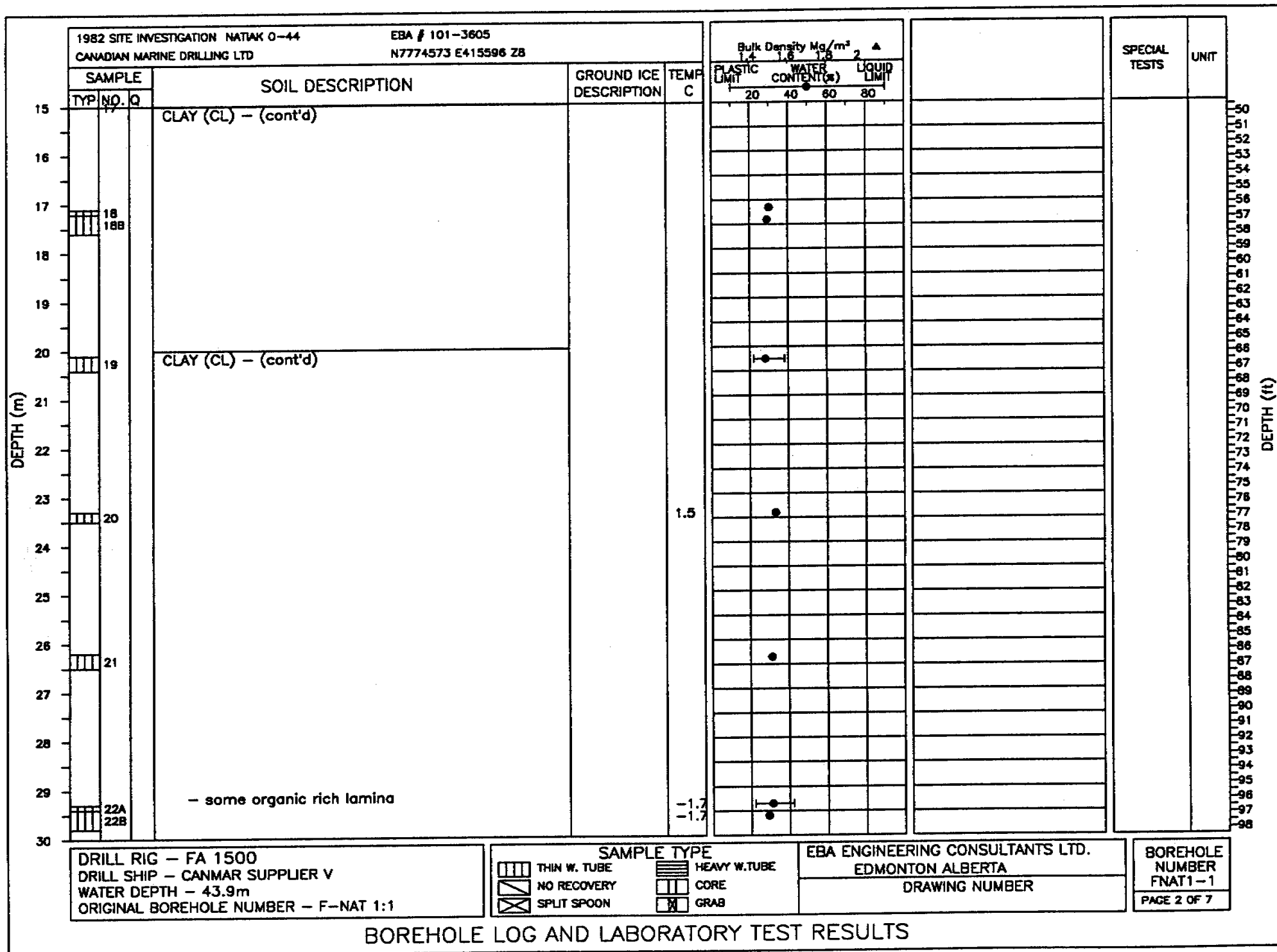
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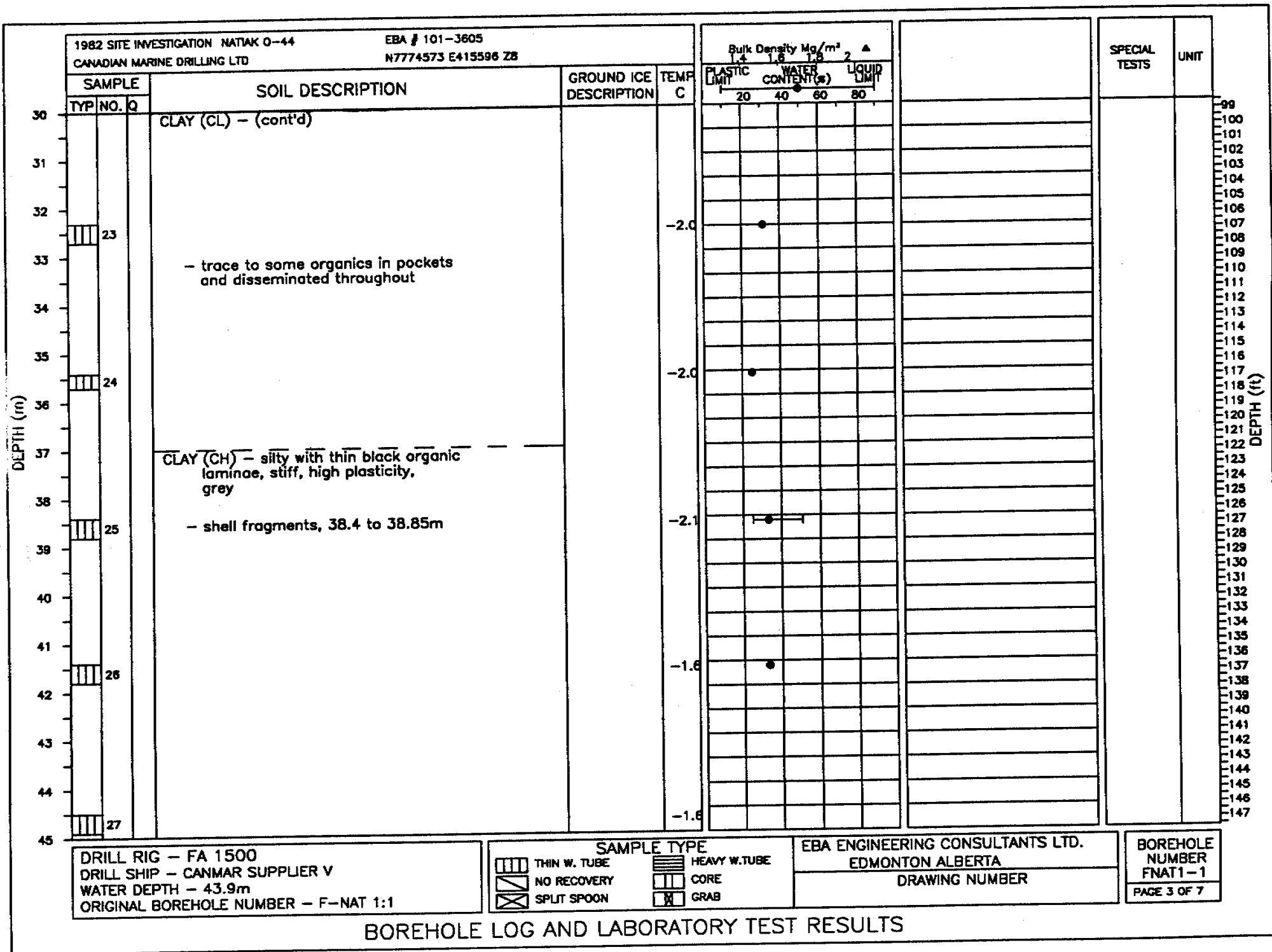
THIN W. TUBE	HEAVY W. TUBE
NO RECOVERY	CORE
SPLIT SPOON	GRAB

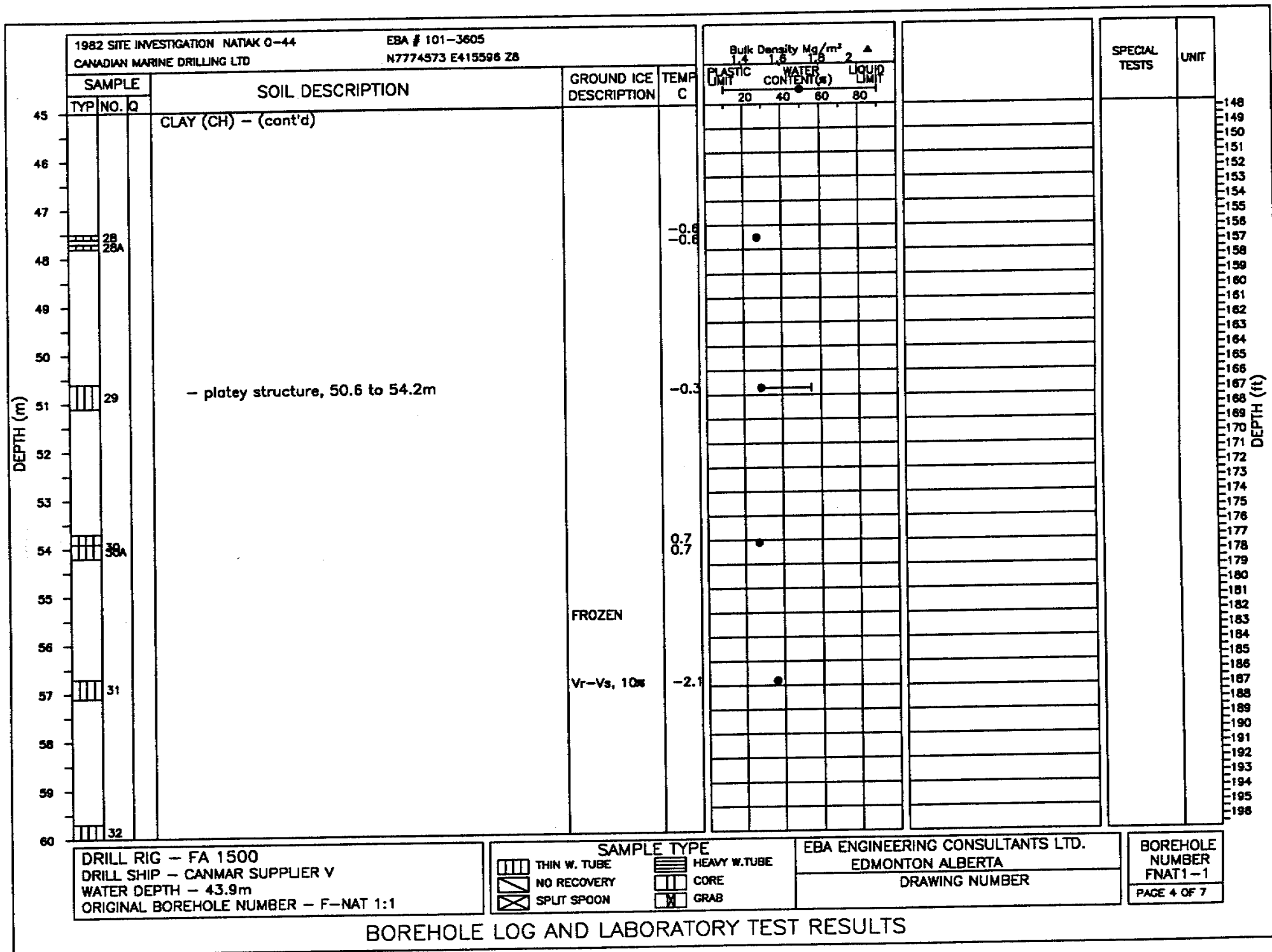
EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 FNAT1-1
 PAGE 1 OF 7

BOREHOLE LOG AND LABORATORY TEST RESULTS







1982 SITE INVESTIGATION NATIAK Q-44 CANADIAN MARINE DRILLING LTD				EBA # 101-3605 N7774573 E415596 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2			SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT WATER CONTENT (%) LIQUID LIMIT						
TYP	NO. Q							20	40	60	80
60	32	CLAY (CH) - (cont'd)	Vr-Vs, 5%	-2.4							197
61											198
62		CLAY (CL) - and silt with a trace of sand and disseminated organics, homogeneous with occasional thin organic laminations, low plasticity, dark grey and brown									199
63	33		Vr-Vs, trace	-1.0							200
64											201
65											202
66	34		Nf	-2.3							203
67											204
68											205
69	35		Nf	-2.4							206
70											207
71											208
72	36 36A 36B		Nf Nf Nf	-1.1 -1.1 -1.1							209
73											210
74											211
75	37										212
											213
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DRILL RIG - FA 1500
DRILL SHIP - CANMAR SUPPLIER V
WATER DEPTH - 43.9m
ORIGINAL BOREHOLE NUMBER - F-NAT 1:1

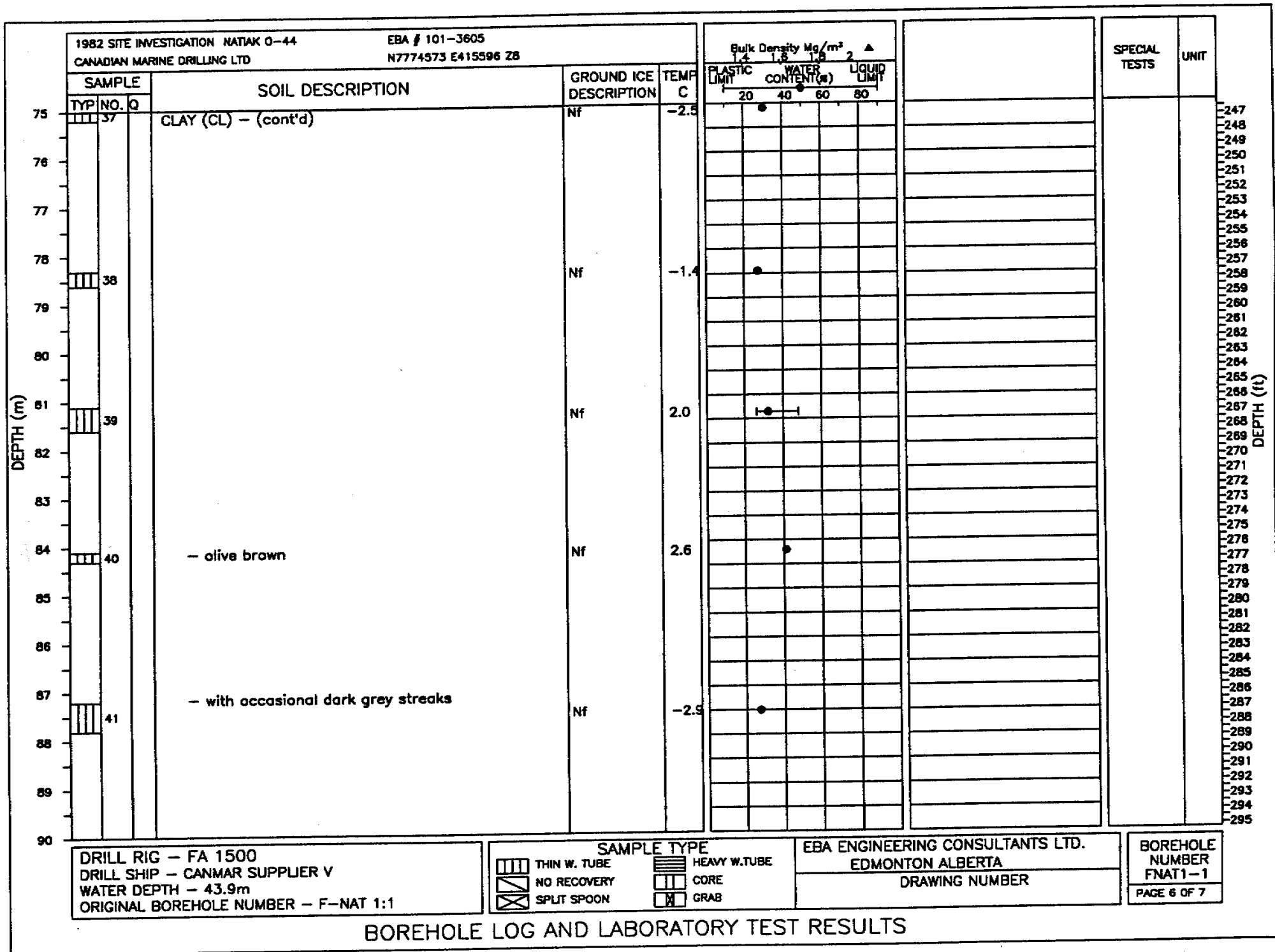
SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOVERY	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA
DRAWING NUMBER

BOREHOLE NUMBER
FNAT1-1
PAGE 5 OF 7

BOREHOLE LOG AND LABORATORY TEST RESULTS



1982 SITE INVESTIGATION NATAK 0-44 CANADIAN MARINE DRILLING LTD				EBA # 101-3605 N7774573 E415596 ZB		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2			SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT WATER CONTENT (%) LIQUID LIMIT						
TYP	NO. Q							20	40	60	80
90	42	CLAY (CL) - (cont'd) - shell fragments, 90.2 to 90.6m	Nf	-2.9							296
91											297
92											298
93											299
94	43	- dark grey END OF BOREHOLE at 93.7m	FROZEN, Nf	-2.4							300
95											301
96											302
97											303
98											304
99											305
100											306
101											307
102											308
103											309
104											310
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											344

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 43.9m
 ORIGINAL BOREHOLE NUMBER - F-NAT 1:1

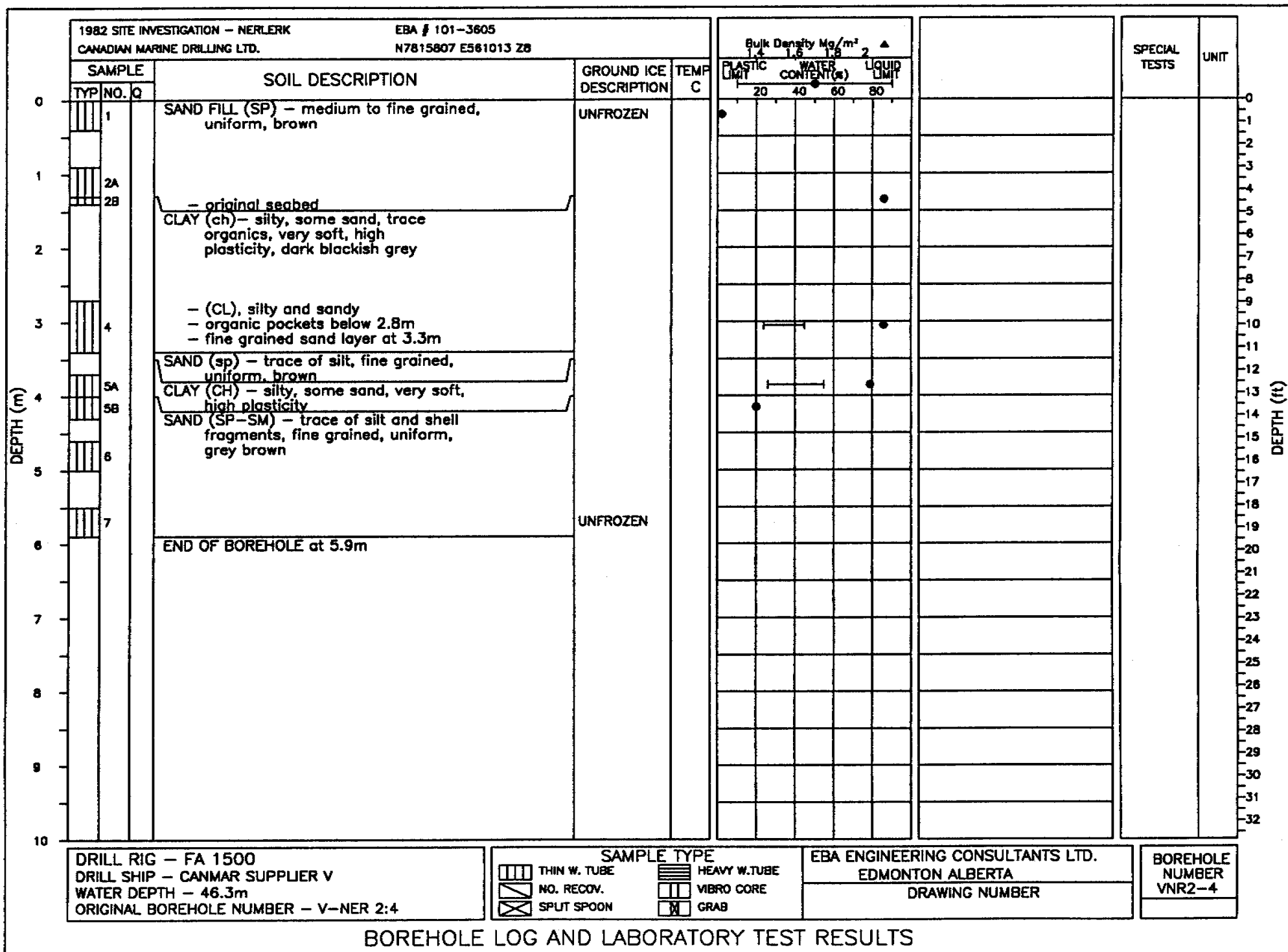
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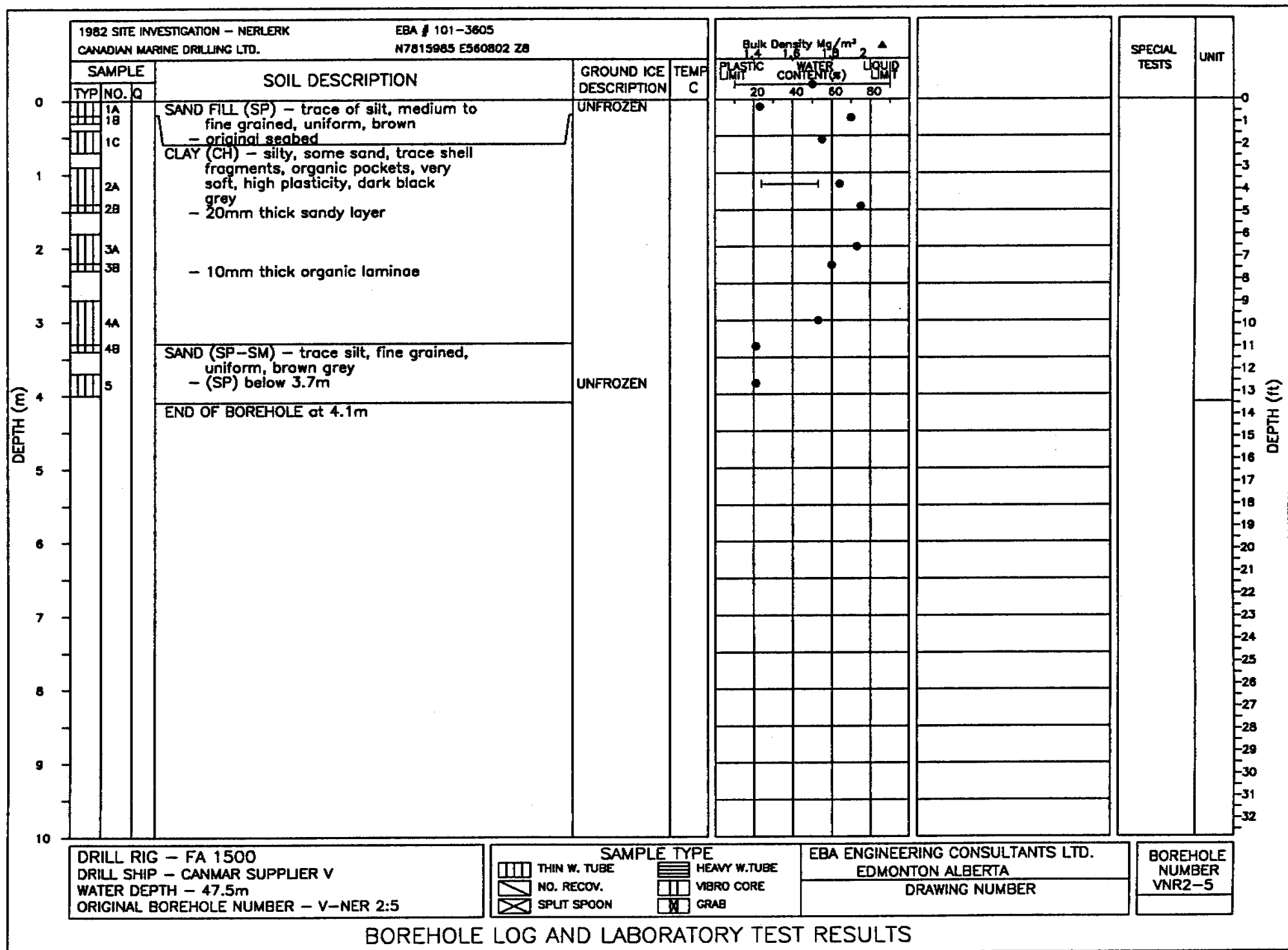
THIN W. TUBE	HEAVY W. TUBE
NO RECOVERY	CORE
SPLIT SPOON	GRAB

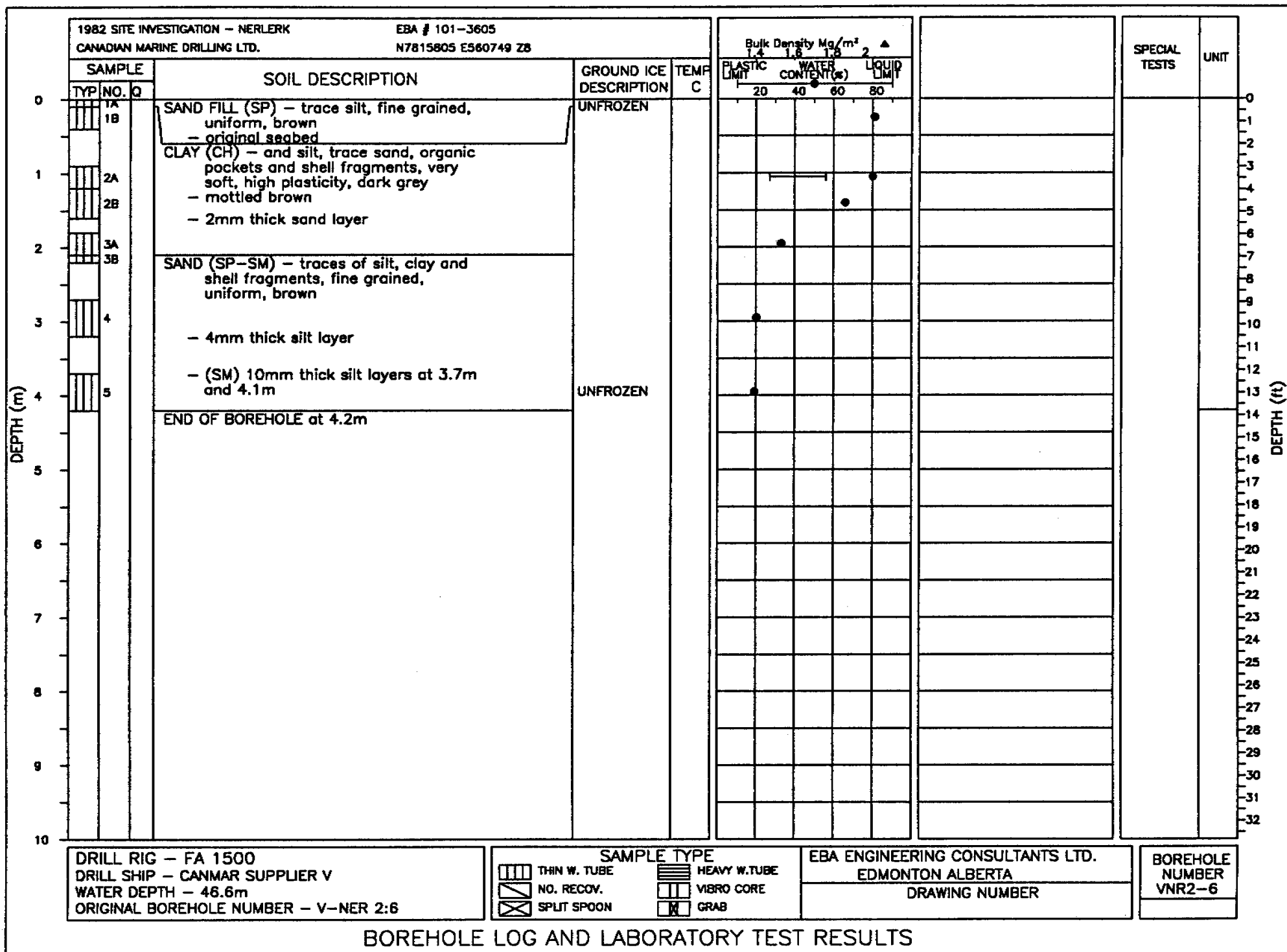
EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

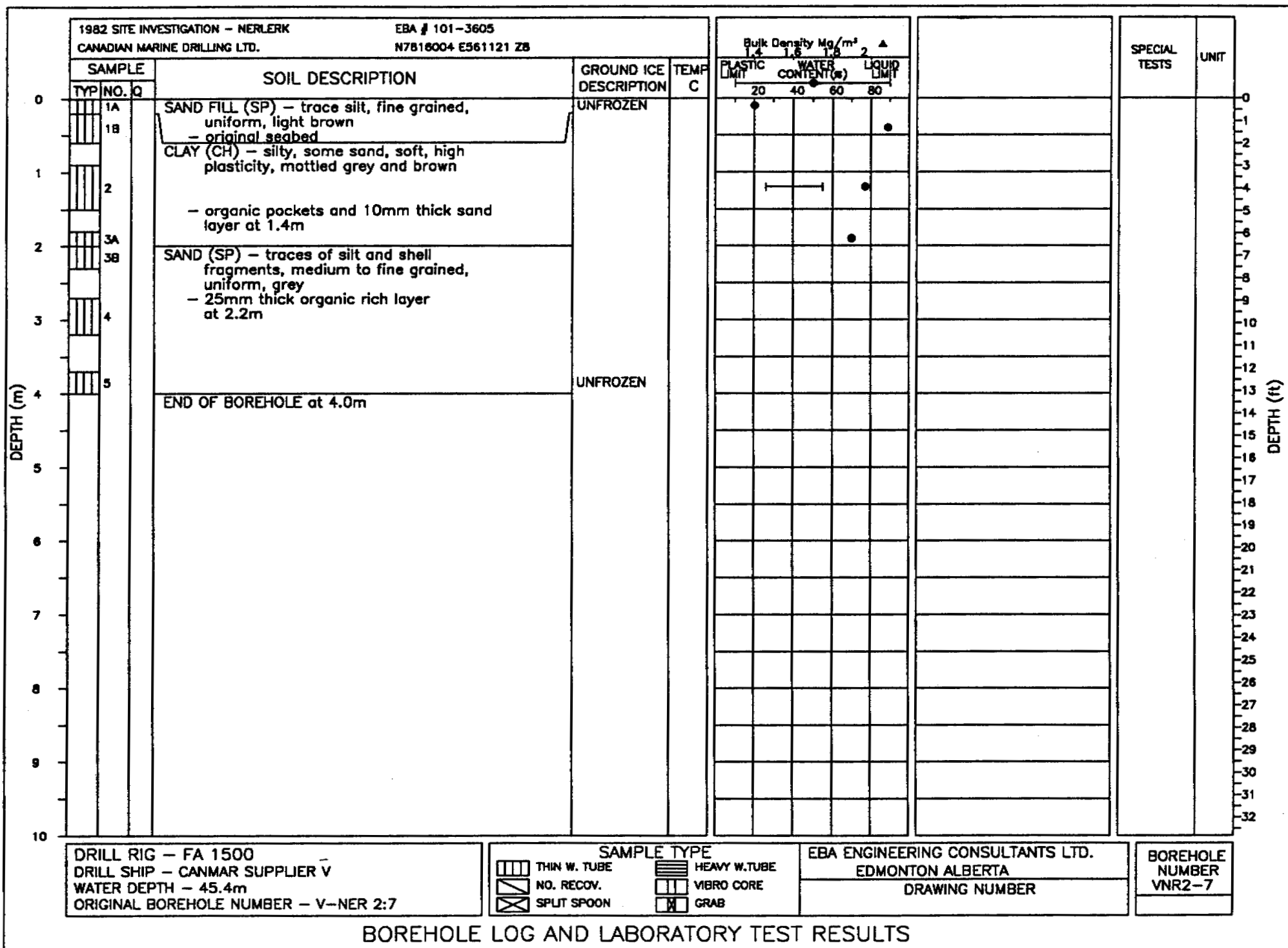
BOREHOLE NUMBER
 FNAT1-1
 PAGE 7 OF 7

BOREHOLE LOG AND LABORATORY TEST RESULTS









1982 SITE INVESTIGATION - NERLERK				EBA # 101-3605											
CANADIAN MARINE DRILLING LTD.				N7815866 E560947 ZB											
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	Bulk Density Mg/m ³ ▲						SPECIAL TESTS	UNIT		
TYP	NO.	Q				PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT							
0			SAND FILL (SP) trace silt, medium to fine grained, some coarse grained sand, poorly graded, brown												
1	2			UNFROZEN											
2	3		- 20mm diameter pebble and shell fragments												
3	4		CLAY (CH) - and silt, trace of sand, organic pockets, very soft, high plasticity, mottled grey and brown												
4	5B														
4	5C		SAND (sp) - trace to some silt, trace shell fragments, medium to fine grained, some coarse grained sand, uniform, grey brown												
5	6		- silt pockets in sample #6												
6	7		- 5mm thick silt layer with one 20mm diameter pebble	UNFROZEN											
6			END OF BOREHOLE at 5.9m												
7															
8															
9															
10															

DRILL RIG - FA 1500 DRILL SHIP - CANMAR SUPPLIER V WATER DEPTH - 44.8m ORIGINAL BOREHOLE NUMBER - V-NER 2:8	SAMPLE TYPE THIN W. TUBE NO. RECOV. SPLIT SPOON	HEAVY W. TUBE VIBRO CORE GRAB	EBA ENGINEERING CONSULTANTS LTD. EDMONTON ALBERTA DRAWING NUMBER	BOREHOLE NUMBER VNR2-8
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BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK
CANADIAN MARINE DRILLING LTD.

EBA # 101-3605
N7815867 E5600870 Z8

DEPTH (m)	SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	Bulk Density Mg/m ³ ▲				SPECIAL TESTS	UNIT	DEPTH (ft)
	TYP	NO. Q				PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
0	1		SAND FILL (SP) - trace silt, medium to fine grained, uniform, brown	UNFROZEN								0
1	2											1
2	3											2
3	4		- original seabed CLAY (CH) - silty, some sand, very soft, high plasticity, dark grey - organic pockets between 2.7 and 2.9m - becoming sandier with depth									3
4	5A											4
5	5B		SAND (SP) - trace of silt, fine grained, uniform brown									5
6	6A		CLAY (ch) - silty, trace sand, very soft, high plasticity, dark grey									6
7	6C		SAND (sp) - trace silt, fine grained, uniform, grey brown - (SP-SM) below 5.3m (estimated)	UNFROZEN								7
8	7		- 2mm thick silt layer at 5.8m END OF BOREHOLE at 5.8m									8
9												9
10												10

DRILL RIG - FA 1500
DRILL SHIP - CANMAR SUPPLIER V
WATER DEPTH - 45.1m
ORIGINAL BOREHOLE NUMBER - V-NER 2:9

SAMPLE TYPE
 THIN W. TUBE
 NO. RECOV.
 SPLIT SPOON
 HEAVY W. TUBE
 VIBRO CORE
 GRAB

EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA
DRAWING NUMBER

BOREHOLE NUMBER
VNR2-9

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK
CANADIAN MARINE DRILLING LTD.

EBA # 101-3605
N7815933 E561875 Z8

SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	Bulk Density Mg/m ³ ▲			SPECIAL TESTS	UNIT	DEPTH (m)
TYP	NO.	Q				PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT			
	1		CLAY (CL) - and sand, some silt, organic pockets, very soft, high plasticity, dark grey black	UNFROZEN			40				0
	2		SAND (SP) - trace silt, fine grained, uniform, grey brown								1
			- some organics at 0.6 and 0.8m, (SP-SM) below 1m								2
	3										3
			- 10mm thick organic layer								4
	4		- occasional silt pockets, trace shell fragments, organic laminations, at 2.1, 2.4, and 2.7m								5
			- (SP) below 3m								6
	5										7
			- (SP-SM) below 4m	UNFROZEN							8
	6		END OF BOREHOLE at 4.6m								9
											10
											11
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											13
											14
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											32

DRILL RIG - ROKLENG VIBROCORE
DRILL SHIP - CANMAR SUPPLIER V
WATER DEPTH - 42.6m
ORIGINAL BOREHOLE NUMBER - V-NER 2:11

SAMPLE TYPE
 THIN W. TUBE
 NO. RECOV.
 SPLIT SPOON
 HEAVY W. TUBE
 VIBRO CORE
 GRAB

EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA
DRAWING NUMBER

BOREHOLE NUMBER
VNR2-11

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7815947 E561789 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2			PLASTIC LIMIT 20 40 60 80			WATER CONTENT (%)			LIQUID LIMIT			SPECIAL TESTS		UNIT	
SAMPLE		SOIL DESCRIPTION		GROUND ICE DESCRIPTION		TEMP C															
TYP NO. Q																					
0	1		CLAY (ch) - silty, some sand, trace organics, very soft, high plasticity, dark grey	UNFROZEN																	
1	2		- (CL) and sand, some silt below 1.25m (estimated)																		
2	3		- trace shell fragments																		
3	4A																				
3	4B		SAND (SP-SM) - trace to some silt, trace shell fragments, fine grained, uniform, grey brown																		
4	5		- organic layer at 3.1m																		
5	6			UNFROZEN																	
6			END OF BOREHOLE at 5.1m																		
7																					
8																					
9																					
10																					

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 43.6m
 ORIGINAL BOREHOLE NUMBER - V-NER 2:12

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 VNR2-12

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7815890 E561654 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT					
TYP	NO. Q											
0	1A 1B	CLAY (ch) - silty, trace organics, soft, high plasticity, olive grey	UNFROZEN									0
		SAND (SM) - some silt, fine grained, uniform, dark grey										1
1	2	- thin clay layer										2
		- trace of silt grading to some silt, trace organics below 1.55m (estimated)										3
2	3	- (SM) some silt										4
		- trace of silt, below 2.55m (estimated)										5
3	4	END OF BOREHOLE at 3.0m	UNFROZEN									6
												7
												8
												9
												10
												11
												12
												13
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												30
												31
												32

DRILL RIG - FA 1500
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 45.1m
 ORIGINAL BOREHOLE NUMBER - V-NER 2:13

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 VNR2-13

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK				EBA # 101-3605									
CANADIAN MARINE DRILLING LTD.				N7815999 E561790 Z8									
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	Bulk Density Mg/m ³ ▲					SPECIAL TESTS	UNIT	
TYP	NO.	Q				PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT					
0	A1		CLAY (CH) - sandy, some silt, traces of organics, shells and sand partings, very soft, high plasticity, olive grey	UNFROZEN									
	A2												
1	B1		SAND (sm) - silty, traces of shell fragments and organics, fine grained, uniform, dark grey										
	B2		- (SP), traces of silt and organic fibres, brown grey at 1m										
2			- high organic content (estimated to be 25% by volume), grey at 1.6m										
			- brown grey										
	C												
3			- some silt, some organics, grey										
	D												
4													
	E			UNFROZEN									
5			END OF BOREHOLE at 5.0m										
6													
7													
8													
9													
10													

DRILL RIG - ROKLENG VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 45.1m
 ORIGINAL BOREHOLE NUMBER - V-NER 2:14

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA

DRAWING NUMBER

BOREHOLE NUMBER
 VNR2-14

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK				EBA # 101-3605		Bulk Density Mg/m ³ ▲				SPECIAL TESTS	UNIT	DEPTH (ft)
CANADIAN MARINE DRILLING LTD.				N7815999 E561886 Z8		PLASTIC LIMIT WATER CONTENT (%) LIQUID LIMIT 20 40 60 80						
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C								
TYP	NO. Q											
0	A	CLAY (ch) - silty, some sand pockets, numerous organic pockets, very soft, high plasticity, olive grey	UNFROZEN								0	
											1	
											2	
1	B	CLAY (cl) - silty, high organic content, soft, low plasticity, brown	UNFROZEN								3	
											4	
											5	
2		END OF BOREHOLE at 1.2m									6	
											7	
											8	
3											9	
											10	
											11	
4											12	
											13	
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5											15	
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8											24	
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											26	
9											27	
											28	
											29	
10											30	
											31	
											32	

DRILL RIG - ROKLENG VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 44.2m
 ORIGINAL BOREHOLE NUMBER - V-NER 2:15

SAMPLE TYPE

THIN W. TUBE
 NO. RECOV.
 SPLIT SPOON

HEAVY W. TUBE
 VIBRO CORE
 GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 VNR2-15

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK				EBA # 101-3605		CANADIAN MARINE DRILLING LTD.				N7816005 E561696 Z8											
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	Bulk Density Mg/m ³ ▲								SPECIAL TESTS	UNIT	DEPTH (m)	DEPTH (ft)				
TYP	NO.	Q				PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT													
	A		SAND (sp) - trace silt, fine grained, uniform, brown	UNFROZEN												0	0				
	B															1	1				
	C		CLAY (cl) - silty, sand pockets, trace organics, soft, low plasticity, dark grey													2	2				
	D															3	3				
			SAND (SP-SM) - trace silt, fine grained, uniform, brown													4	4				
			CLAY (cl) - sandy, some silt, trace organics, low plasticity, dark grey													5	5				
	E		SAND (SP-SM) - trace silt, fine grained, uniform, brown													6	6				
			- 50mm thick sandy clay layer at 0.9m													7	7				
																8	8				
																9	9				
	F		- silty, grey brown	UNFROZEN												10	10				
			END OF BOREHOLE at 3.2m													11	11				
																12	12				
																13	13				
																14	14				
																15	15				
																16	16				
																17	17				
																18	18				
																19	19				
																20	20				
																21	21				
																22	22				
																23	23				
																24	24				
																25	25				
																26	26				
																27	27				
																28	28				
																29	29				
																30	30				
																31	31				
																32	32				

DRILL RIG - ROKLENG VIBROCORE DRILL SHIP - CANMAR SUPPLIER V WATER DEPTH - 44.2m ORIGINAL BOREHOLE NUMBER - V-NER 2:16		SAMPLE TYPE THIN W. TUBE NO. RECOV. SPLIT SPOON HEAVY W. TUBE VIBRO CORE GRAB		EBA ENGINEERING CONSULTANTS LTD. EDMONTON ALBERTA DRAWING NUMBER		BOREHOLE NUMBER VNR2-16	
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BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK

CANADIAN MARINE DRILLING LTD.

EBA # 101-3605

N7815820 E561798 Z8

SAMPLE

TYP NO. Q

SOIL DESCRIPTION

CLAY (ch) - some silt, some sand, very soft, high plasticity, grey brown

SAND (SP-SM) - trace silt, fine grained, uniform, brown

- some silt to 2.2m

- silt lenses at 2.2m

- organic pockets to 3.2m

END OF BOREHOLE at 4.2m

GROUND ICE DESCRIPTION

UNFROZEN

UNFROZEN

TEMP C

Bulk Density Mg/m³ ▲

1.4 1.6 1.8 2

PLASTIC LIMIT

WATER CONTENT (%)

LIQUID LIMIT

20 40 60 80

SPECIAL TESTS

UNIT

DEPTH (m)

0

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

DEPTH (ft)

DRILL RIG - ROKLENG VIBROCORE

DRILL SHIP - CANMAR SUPPLIER V

WATER DEPTH - 44.2m

ORIGINAL BOREHOLE NUMBER - V-NER 2:17

SAMPLE TYPE

THIN W. TUBE

NO. RECOV.

SPLIT SPOON

HEAVY W. TUBE

VIBRO CORE

GRAB

EBA ENGINEERING CONSULTANTS LTD.

EDMONTON ALBERTA

DRAWING NUMBER

BOREHOLE NUMBER

VNR2-17

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7815812 E561886 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)	
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT WATER CONTENT (%) LIQUID LIMIT								
TYP	NO. Q							20	40	60	80		
0	1A	CLAY (CL) - and sand, some silt, very soft, low plasticity, dark grey and brown	UNFROZEN									0	
	1B												1
	2	SAND (SP) - trace of silt, fine grained, uniform, grey brown - brown below 0.6m										2	
													3
1	2											5	
2	3	- 20mm thick SILT lens										6	
												7	
3	4											8	
												9	
4	5		UNFROZEN									10	
		END OF BOREHOLE at 4.6m										11	
5												12	
												13	
6												14	
												15	
7												16	
												17	
8												18	
												19	
9												20	
												21	
10												22	
												23	
												24	
												25	
												26	
												27	
												28	
												29	
												30	
												31	
												32	

DRILL RIG - ROKLENG VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 44.8
 ORIGINAL BOREHOLE NUMBER - V-NER 2:13

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA

DRAWING NUMBER

BOREHOLE NUMBER
 VNR2-18

BOREHOLE LOG AND LABORATORY TEST RESULTS

EBA # 101-3605
N7B15808 E561973 ZB

DEPTH (ft)

BOREHOLE
NUMBER
VNR2-19

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK
CANADIAN MARINE DRILLING LTD.

EBA # 101-3605
N7815707 E581978 Z8

DEPTH (m)	SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	Bulk Density Mg/m ³ ▲				SPECIAL TESTS	UNIT	DEPTH (ft)
	TYP	NO. Q				PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
0	M	1	CLAY (ch) - and sand, some silt, very soft, high plasticity, dark grey and brown	UNFROZEN								0
1		2	SAND (SP) - trace silt, fine grained, uniform, brown									1
2		3										2
3		4										3
4		5	- (SP-SM)									4
5				UNFROZEN								5
6												6
7												7
8												8
9												9
10												10
			END OF BOREHOLE at 4.6m									11
												12
												13
												14
												15
												16
												17
												18
												19
												20
												21
												22
												23
												24
												25
												26
												27
												28
												29
												30
												31
												32

DRILL RIG - ROKLENG VIBROCORE
DRILL SHIP - CANMAR SUPPLIER V
WATER DEPTH - 45.1m
ORIGINAL BOREHOLE NUMBER - V-NER 2:20

SAMPLE TYPE
☐ THIN W. TUBE ☐ HEAVY W. TUBE
☐ NO. RECOV. ☐ VIBRO CORE
☐ SPLIT SPOON ☐ GRAB

EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA
DRAWING NUMBER

BOREHOLE NUMBER
VNR2-20

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK				EBA # 101-3605											
CANADIAN MARINE DRILLING LTD.				N7815712 E561875 Z8											
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	Bulk Density Mg/m ³ ▲					SPECIAL TESTS	UNIT	DEPTH (ft)		
TYP	NO.	Q				PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT							
0	A		SAND (SC) - clayey, some silt, fine grained, very soft, low plasticity, dark gray	UNFROZEN		1.4	1.6	1.8	2.0				0		
	B												1		
	C		SAND (SM) - trace of silt and shell fragments, fine grained, uniform, brown										2		
1	D		CLAY (CL) - and silt, sand partings, stiff, low plasticity, brown										3		
	E		SAND (SP-SM) - trace silt, fine grained, uniform, brown										4		
2	F												5		
				UNFROZEN									6		
3													7		
			- clayey below 3.55m										8		
4			END OF BOREHOLE at 3.6m										9		
													10		
5													11		
													12		
6													13		
													14		
7													15		
													16		
8													17		
													18		
9													19		
													20		
10													21		
													22		
													23		
													24		
													25		
													26		
													27		
													28		
													29		
													30		
													31		
													32		

DRILL RIG - ROKLENG VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 44.2m
 ORIGINAL BOREHOLE NUMBER - V-NER 2:21

SAMPLE TYPE

☐ THIN W. TUBE	☐ HEAVY W. TUBE
☐ NO. RECOV.	☐ CORE
☐ SPLIT SPOON	☐ GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 VNR2-21

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK				EBA # 101-3605											
CANADIAN MARINE DRILLING LTD.				N7814875 E561668 Z8											
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	Bulk Density Mg/m^3 ▲						SPECIAL TESTS	UNIT	DEPTH (m)	DEPTH (ft)
TYP	NO.	Q				PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT							
	1		CLAY (cl) - silty, sandy, soft, low plasticity, dark grey	UNFROZEN										0	
	2		SAND (SP) - trace silt, fine grained, uniform, brown											1	
	3													2	
	4													3	
	5													4	
	6													5	
	7		- dark grey sand lenses below 1.7m											6	
	8													7	
	9													8	
	10		- shell fragments below 2.7m											9	
	11													10	
	12		- (SP-SM) below 3.3m	UNFROZEN										11	
			END OF BOREHOLE at 3.7m											12	
														13	
														14	
														15	
														16	
														17	
														18	
														19	
														20	
														21	
														22	
														23	
														24	
														25	
														26	
														27	
														28	
														29	
														30	
														31	
														32	

DRILL RIG - ROKLENG VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 42.4m
 ORIGINAL BOREHOLE NUMBER - V-NER 2:22

SAMPLE TYPE

☐ THIN W. TUBE

☐ NO. RECOV.

☐ SPLIT SPOON

☐ HEAVY W. TUBE

☐ VIBRO CORE

☐ GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 VNR2-22

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7814877 E562562 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2.0 PLASTIC LIMIT WATER CONTENT (%) LIQUID LIMIT 20 40 60 80						SPECIAL TESTS		UNIT		
SAMPLE			SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C											
DEPTH (m)	TYP	NO. Q														
0		1	CLAY (CL) - and sand, some silt, very soft, low plasticity, dark grey	UNFROZEN												0
		2	SAND (SP) - trace silt, fine grained, uniform, grey brown													1
		3														2
		4														3
1		5														4
		6														5
		7														6
		8	- trace shell fragments	UNFROZEN												7
2			END OF BOREHOLE at 4.4m													8
																9
																10
																11
																12
																13
																14
																15
																16
																17
																18
																19
																20
																21
																22
																23
																24
																25
																26
																27
																28
																29
																30
																31
																32

DRILL RIG - ROKLENG VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 44.2m
 ORIGINAL BOREHOLE NUMBER - V-NER 2:23

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 VNR2-23

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7814973 E562592 ZB		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)	
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT						
TYP	NO. Q												
0		CLAY (cl) - silty, sandy, trace organics, soft, low plasticity, dark grey	UNFROZEN									0	
	1	SAND (SP) - trace silt, fine grained, uniform, medium grey											1
	2	- shell fragments below 1m											2
1													3
	3		UNFROZEN									4	
	4	- some clayey pockets and trace organics to 3.8m											5
2													6
													7
3												8	
												9	
4		END OF BOREHOLE at 3.8m										10	
												11	
												12	
												13	
												14	
												15	
												16	
												17	
												18	
												19	
												20	
												21	
												22	
												23	
												24	
												25	
												26	
												27	
												28	
												29	
												30	
												31	
												32	

DRILL RIG - ROKLENG VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 41.8m
 ORIGINAL BOREHOLE NUMBER - V-NER 2:24

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 VNR2-24

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7814691 E562747 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2.0			PLASTIC LIMIT 20 40 60 80			WATER CONTENT(%) 20 40 60 80			LIQUID LIMIT 20 40 60 80			SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C																
TYP	NO. Q																			
0	1	SAND (sp) - trace silt, fine grained, uniform, brown	UNFROZEN															0		
	2																	1		
	3	CLAY (cl) - silty and sandy, trace organics, soft, low plasticity, dark grey																2		
	4																	3		
1	5	SAND (sm) - silty, trace of clay, fine grained, grey brown																4		
	6																	5		
	7	SAND (SC) - clayey, some silt, trace organics, fine grained, soft, low plasticity, dark grey to grey																6		
	8	- 200mm thick silt-sand layer at 0.8m, trace clay, grey brown																7		
2	9	- 150mm thick silt-sand layer at 1.65m, trace clay, soft	UNFROZEN															8		
	10	- firm below 2.0m - stiff below 2.4m																9		
3		END OF BOREHOLE at 2.7m																10		
																		11		
																		12		
																		13		
4																		14		
																		15		
5																		16		
																		17		
																		18		
																		19		
6																		20		
																		21		
																		22		
																		23		
7																		24		
																		25		
																		26		
																		27		
																		28		
																		29		
																		30		
																		31		
																		32		

DRILL RIG - ROKLENG VIBROCORE
 DRILL SHIP - CANMAR SUPPLIER V
 WATER DEPTH - 43.3m
 ORIGINAL BOREHOLE NUMBER - V-NER 2:25

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	CORE
SPLIT SPOON	GRAB

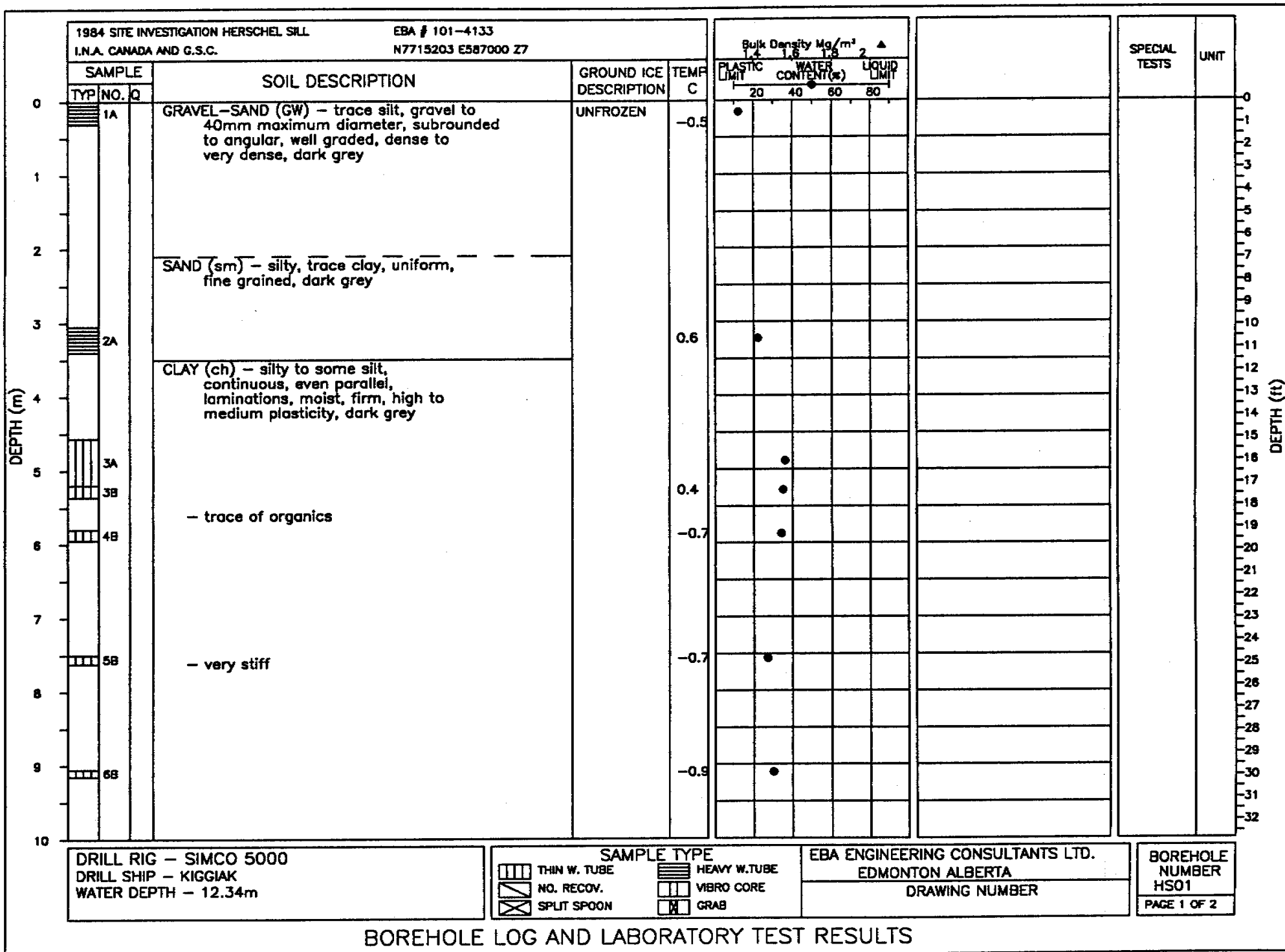
EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 VNR2-25

BOREHOLE LOG AND LABORATORY TEST RESULTS

1982 SITE INVESTIGATION - NERLERK CANADIAN MARINE DRILLING LTD.				EBA # 101-3605 N7B14802 E562400 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2			PLASTIC LIMIT 20 40 60 80			WATER CONTENT (%)			LIQUID LIMIT			SPECIAL TESTS		UNIT	
SAMPLE			SOIL DESCRIPTION		GROUND ICE DESCRIPTION		TEMP C														
TYP NO. Q																					
DEPTH (m)	0	1		SAND (sm) - silty, some organics, fine grained, light grey	UNFROZEN																
	2	2		CLAY (CH) - and silt, sandy, trace organics, stiff, high plasticity, dark grey																	
	3	3		SAND (SM) - some silt to silty, fine grained, uniform, dark grey																	
	4	4																			
	5	5		- 100mm thick organic rich layer																	
	6	6		- (SP-SM) trace of silt below 2.9m, medium grey	UNFROZEN																
	7			- sandy clay pockets at 3.5m																	
	8			END OF BOREHOLE at 3.6m																	
	9																				
	10																				
DRILL RIG - ROKLENG VIBROCORE DRILL SHIP - CANMAR SUPPLIER V WATER DEPTH - 42.7m ORIGINAL BOREHOLE NUMBER - V-NER 2:26				SAMPLE TYPE THIN W. TUBE NO. RECOV. SPLIT SPOON HEAVY W. TUBE VIBRO CORE GRAB				EBA ENGINEERING CONSULTANTS LTD. EDMONTON ALBERTA DRAWING NUMBER				BOREHOLE NUMBER VNR2-26									

BOREHOLE LOG AND LABORATORY TEST RESULTS



EBA # 101-4133
N7715203 E587000 Z7

DEPTH (m)

THIN W. TUBE
NO. RECOV.
SPLIT SPOON

	HEAVY W.TUBE
	VIBRO CORE
	GRAB

BOREHOLE
NUMBER
HS01

PAGE 2 OF 2

BOREHOLE LOG AND LABORATORY TEST RESULTS

1984 SITE INVESTIGATION HERSCHEL SILL I.N.A. CANADA AND G.S.C.				EBA # 101-4133 N7715255 E587095 Z7		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2				SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT WATER CONTENT(%) LIQUID LIMIT							
TYP	NO. Q				20	40	60	80				
DEPTH (m)	0	1A	GRAVEL-SAND (GP) - trace silt, subrounded, mainly coarse gravel to 50mm max. diameter, poorly graded, dark to olive grey	UNFROZEN								0
	1	2A	SAND (SM) - trace silt, uniform, fine to medium grained - becoming gravelly below 1.57m									1
	2	3A	CLAY (cl) - silty, interbedded, trace fine sand in silt beds, very thinly laminated, firm, medium plasticity, mottled olive grey and dark grey									2
	3											3
	4	4A										4
	5	4B										5
	6	5B										6
	7											7
	8											8
	9											9
10			END OF BOREHOLE at 5.73m	UNFROZEN	-0.7							10
												11
												12
												13
												14
												15
												16
												17
												18
												19
												20
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												26
												27
												28
												29
												30
												31
												32

DRILL RIG - SIMCO 5000
 DRILL SHIP - KIGGIAK
 WATER DEPTH - 12.5m

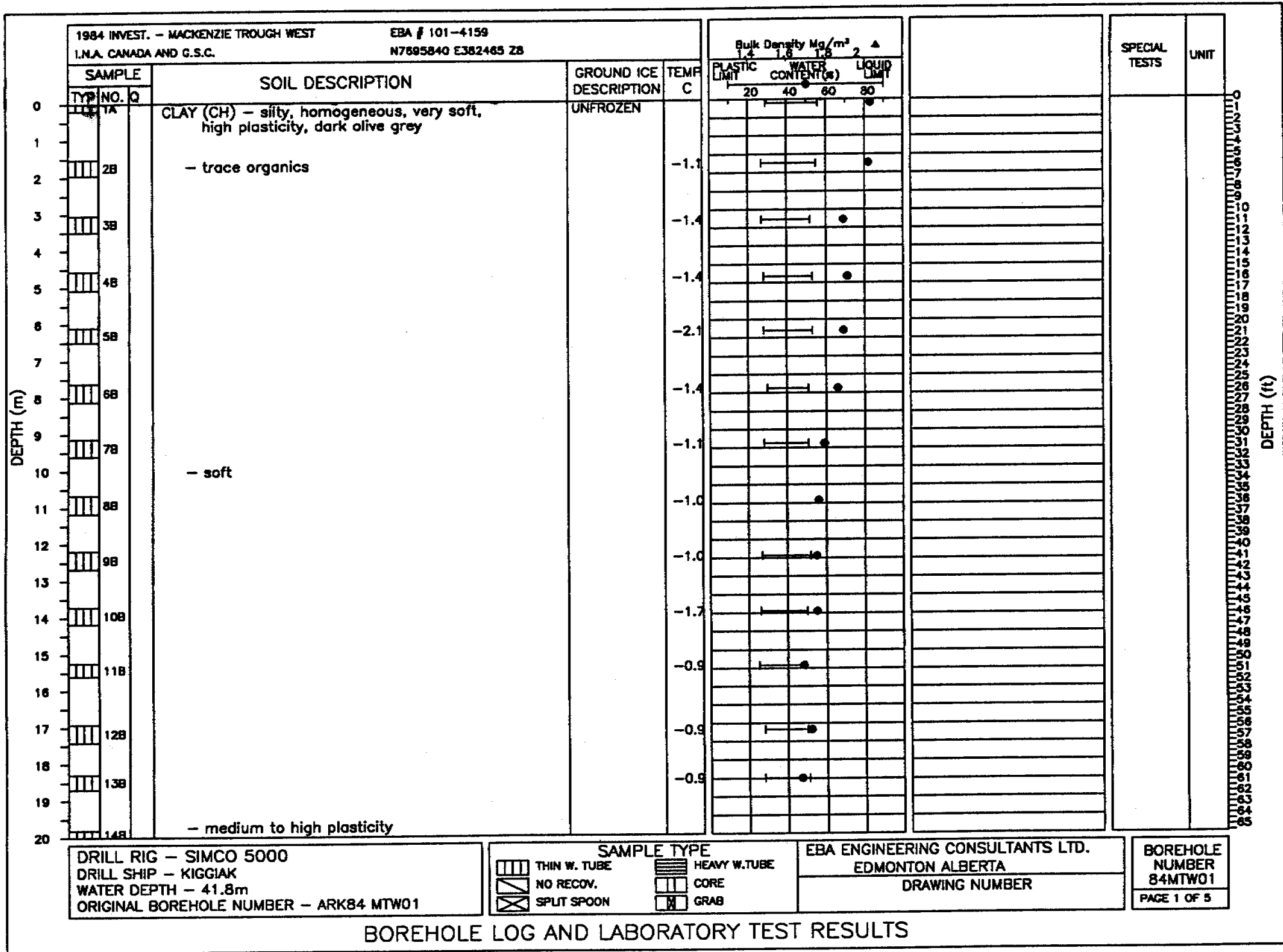
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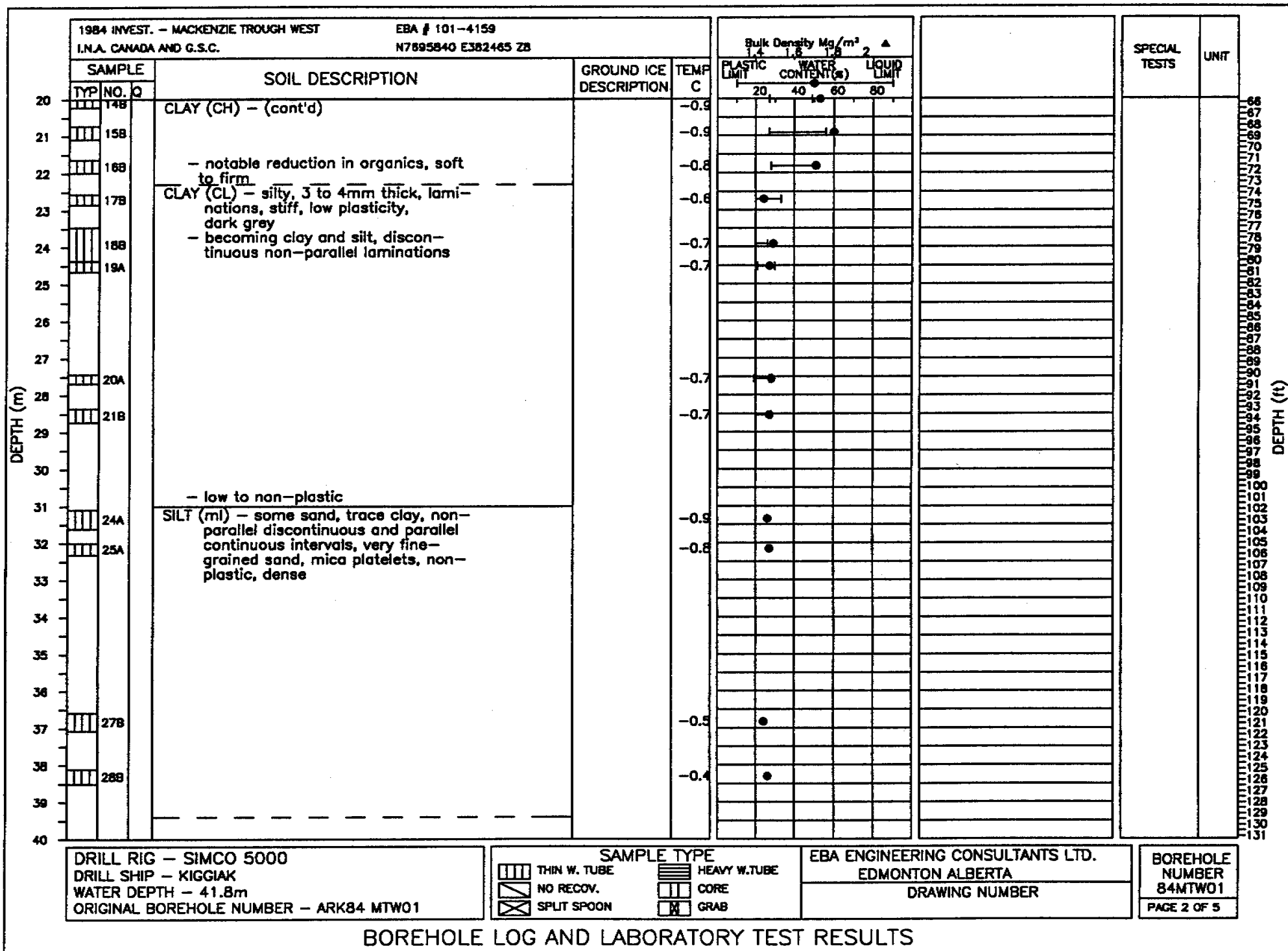
THIN W. TUBE	HEAVY W. TUBE
NO. RECOV.	VIBRO CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 HS02

BOREHOLE LOG AND LABORATORY TEST RESULTS





1984 INVEST. - MACKENZIE TROUGH WEST I.N.A. CANADA AND G.S.C.				EBA # 101-4159 N7695840 E382465 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2			SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO. Q										
40	298	SAND (sm) - silty, very fine-grained, mica platelets, non-parallel laminations very dense, dark grey		-0.1							132
41											133
42											134
43		SILT (ml) - some very fine-grained sand, trace fibrous organics mica platelets, dense, non-plastic, dark black									135
44	30A										136
45											137
46											138
47	31B	- homogeneous		-0.4							139
48											140
49											141
50	32B	- sandy, becoming less dense		-0.3							142
51											143
52											144
53		SAND (sm) - silty, very fine-grained, homogeneous, wet, highly dilatant									145
54	33A										146
55	34A	- becoming interbedded sand and silt									147
56	35A	- silt with some sand									148
57	36A	INTERBEDDED CLAY (cl) AND SILT (ml) - very thin laminations									149
58											150
59											151
60		SILT (ml) - some clay, mica platelets									152
											153
											154
											155
											156
											157
											158
											159
											160
											161
											162
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DRILL RIG - SIMCO 5000
 DRILL SHIP - KIGGIAK
 WATER DEPTH - 41.8m
 ORIGINAL BOREHOLE NUMBER - ARK84 MTW01

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOV.	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
 EDMONTON ALBERTA
 DRAWING NUMBER

BOREHOLE NUMBER
 84MTW01
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BOREHOLE LOG AND LABORATORY TEST RESULTS

1984 INVEST. - MACKENZIE TROUGH WEST I.N.A. CANADA AND G.S.C.				EBA # 101-4159 N7695840 E382465 Z8		Bulk Density Mg/m ³ ▲ 1.4 1.6 1.8 2			SPECIAL TESTS	UNIT	DEPTH (ft)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
TYP	NO. Q										
60		SILT (ml) - (cont'd)									197
61	37A										198
62	38A	- trace clay, trace fine-grained sand, dryer, non-plastic, dark grey									199
63											200
64											201
65											202
66											203
67	39A	- interbedded with clay									204
68											205
69											206
70											207
71	40A										208
72											209
73											210
74		CLAY (cl) - occasional very thin silt partings, very thinly laminated, firm to stiff, low plasticity									211
75											212
76	41A										213
77	42A	INTERBEDDED CLAY (cl) AND SILT (ml) - with very thin silt partings, stiff, olive grey, low plasticity									214
78											215
79											216
80											217
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DRILL RIG - SIMCO 5000
DRILL SHIP - KIGGIK
WATER DEPTH - 41.8m
ORIGINAL BOREHOLE NUMBER - ARK84 MTW01

SAMPLE TYPE

THIN W. TUBE	HEAVY W. TUBE
NO RECOV.	CORE
SPLIT SPOON	GRAB

EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA
DRAWING NUMBER

BOREHOLE NUMBER
84MTW01
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BOREHOLE LOG AND LABORATORY TEST RESULTS

1984 INVEST. - MACKENZIE TROUGH WEST I.N.A. CANADA AND G.S.C.				EBA # 101-4159 N7695840 E382465 Z8		Bulk Density Mg/m ³ ▲ PLASTIC LIMIT WATER CONTENT (%) LIQUID LIMIT 20 40 60 80			SPECIAL TESTS	UNIT	DEPTH (m)
SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C							
TYP	NO.										
		INTERBEDDED CLAY AND SILT - (cont'd)									283
	43A		UNFROZEN								284
		END OF BOREHOLE at 81.5m									285
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DRILL RIG - SIMCO 5000
 DRILL SHIP - KIGGIAK
 WATER DEPTH - 41.8m
 ORIGINAL BOREHOLE NUMBER - ARK84 MTW01

SAMPLE TYPE

☐ THIN W. TUBE

☐ NO RECOV.

☐ SPLIT SPOON

☐ HEAVY W. TUBE

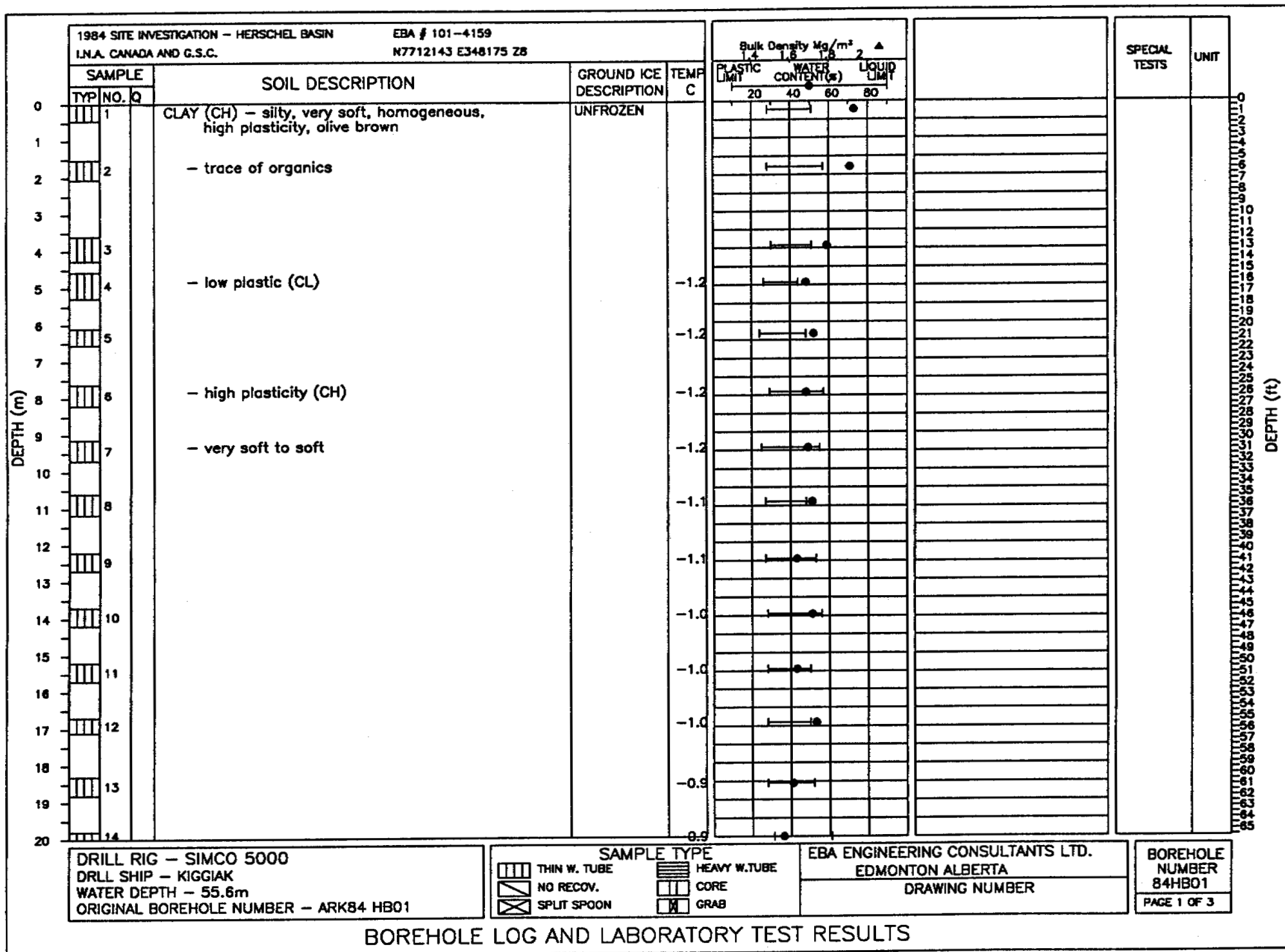
☐ CORE

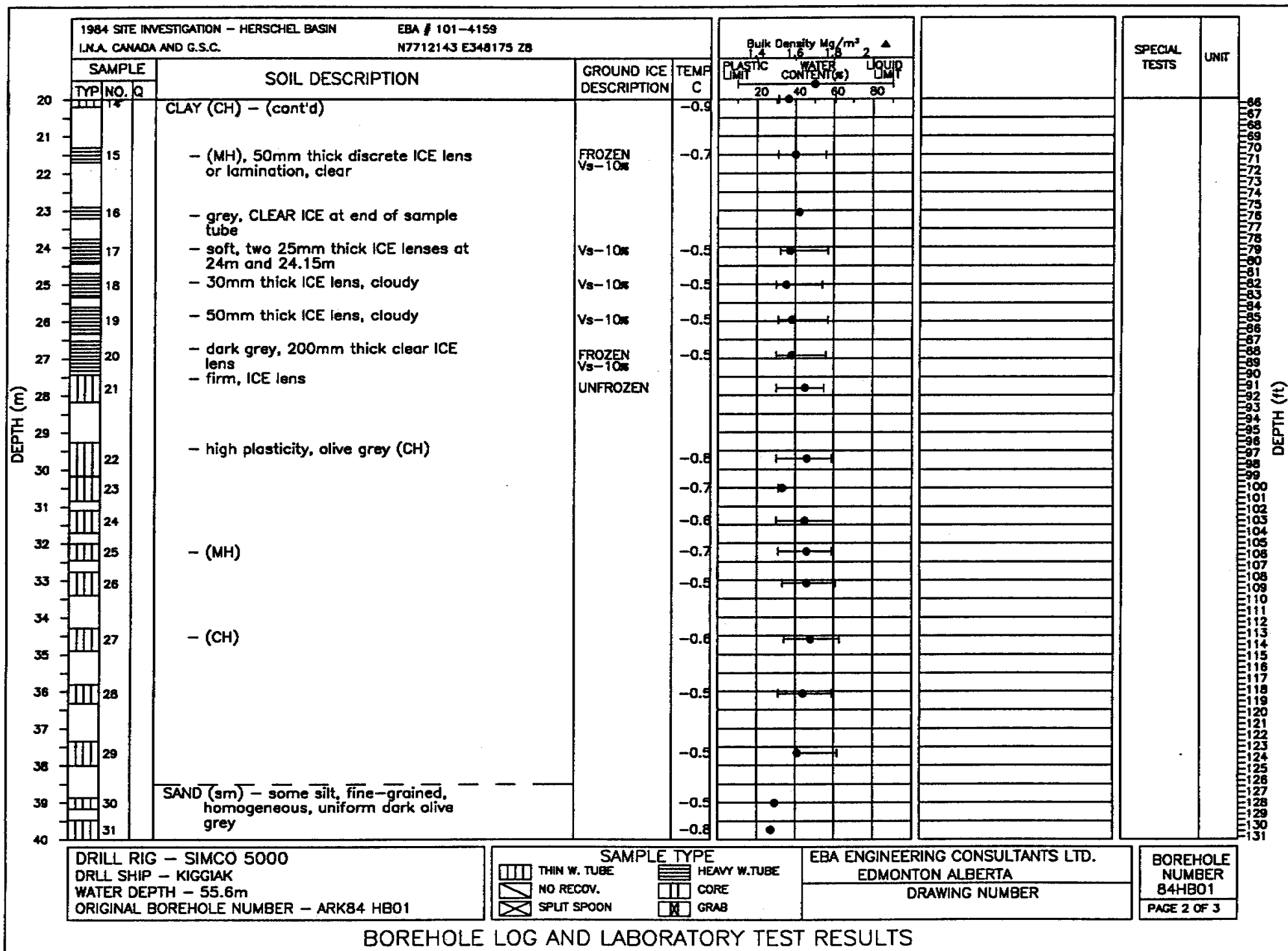
☐ GRAB

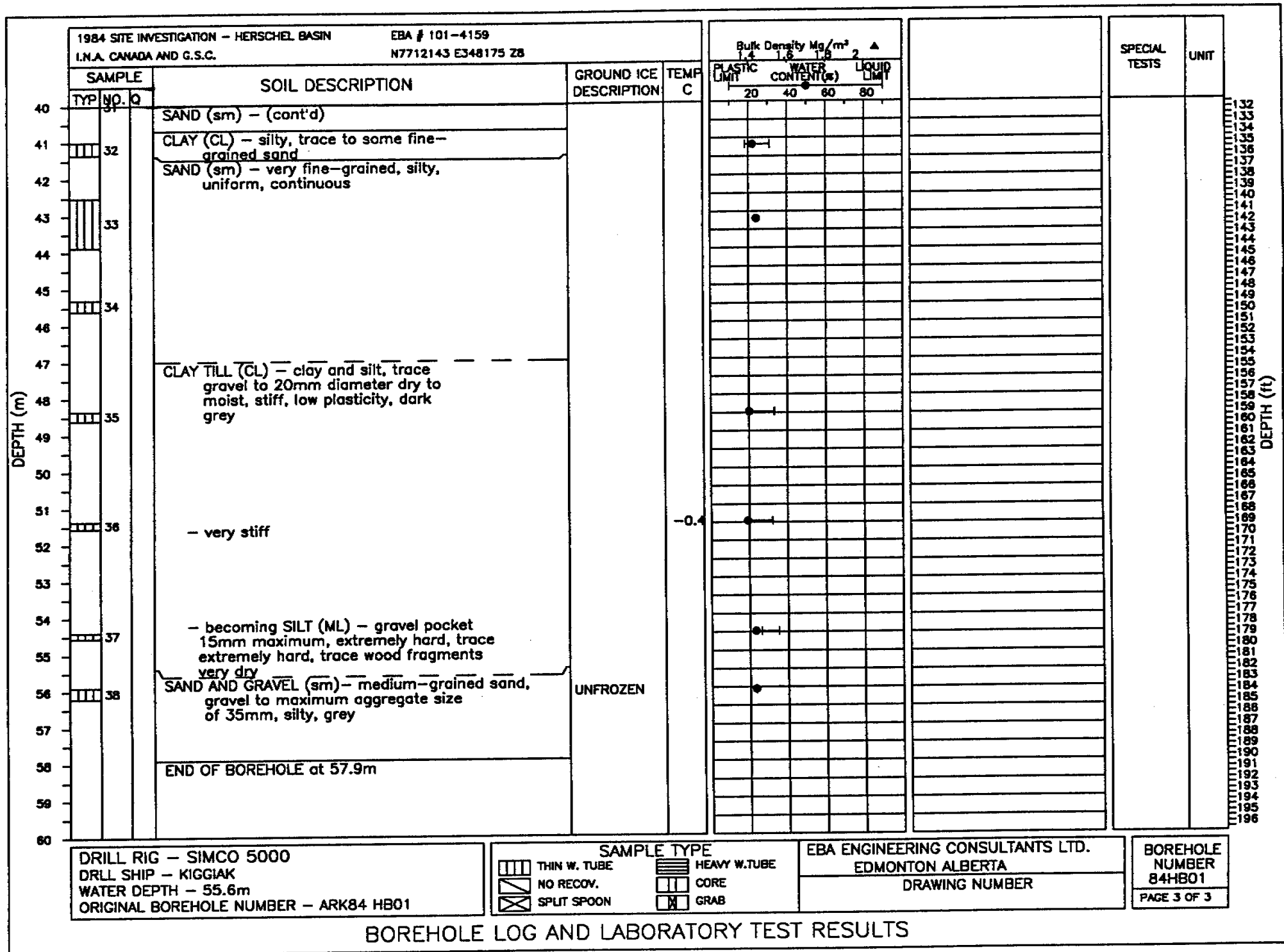
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 EDMONTON ALBERTA
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 84MTW01
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BOREHOLE LOG AND LABORATORY TEST RESULTS







1984 SITE INVESTIGATION - HERSCHEL BASIN
I.N.A. CANADA AND G.S.C.

EBA # 101-4159
N7711770 E350500 Z8

DEPTH (m)	SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	Bulk Density Mg/m ³			SPECIAL TESTS	UNIT	DEPTH (ft)
	TYP	NO. Q				PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT			
0		1	CLAY (CL/CH) - silty, trace organics, bioturbated homogeneous, very soft, intermediate to high plasticity, dark olive grey	UNFROZEN	1.0						0
1											1
2		2			-0.4						2
3		3	- soft, intermediate plasticity (CL), very dark grey		-1.0						3
4											4
5		4	- high plasticity (CH)		-0.8						5
6											6
7		5			-1.1						7
8		6			-0.1						8
9		7	- homogeneous, firm, 25mm thick ICE lens at 85 deg. to horizontal, ICE & SOIL, 80mm thick lens at end of sample, horizontal	FROZEN, Vs DISCRETE ICE LENSES Vs - 20% ICE & CLAY	-1.1						9
10											10
11		8			-1.1						11
12		9	- 100mm thick ICE interval with trace soil	60% ICE & 40% CLAY	-1.0						12
13											13
14		10	- becoming clay and silt	50% / 50% to 80% ICE & 20% CLAY	-1.1						14
15											15
16		11		70% ICE & 30% CLAY							16
17											17
18			- soil interval	Nbn	-0.9						18
19											19
20			- 50mm thick SOIL interval oriented 60 deg. to horizontal	SOIL interval	-0.9						20

DRILL RIG - SIMCO 5000
DRILL SHIP - KIGGIAK
WATER DEPTH - 28.0m
ORIGINAL BOREHOLE NUMBER - ARK84 HB02

SAMPLE TYPE
 THIN W. TUBE
 NO RECOV.
 SPLIT SPOON
 HEAVY W. TUBE
 CORE
 GRAB

EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA
DRAWING NUMBER

BOREHOLE NUMBER
84HB02
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BOREHOLE LOG AND LABORATORY TEST RESULTS

1984 SITE INVESTIGATION - HERSCHEL BASIN
I.N.A. CANADA AND G.S.C.

EBA # 101-4159
N7711770 E350500 ZB

DEPTH (m)	SAMPLE		SOIL DESCRIPTION	GROUND ICE DESCRIPTION	TEMP C	Bulk Density Mg/m ³ ▲				SPECIAL TESTS	UNIT	DEPTH (ft)
	TYP	NO. Q				PLASTIC LIMIT	WATER CONTENT (%)	LIQUID LIMIT				
20			CLAY (CH) - (cont'd)	FROZEN	-0.7							66
21			END OF BOREHOLE at 20.2m									67
22												68
23												69
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DRILL RIG - SIMCO 5000
DRILL SHIP - KIGGIAK
WATER DEPTH - 28.0m
ORIGINAL BOREHOLE NUMBER - ARK84 HB02

SAMPLE TYPE
☐ THIN W. TUBE ☐ HEAVY W. TUBE
☐ NO RECOV. ☐ CORE
☐ SPLIT SPOON ☐ GRAB

EBA ENGINEERING CONSULTANTS LTD.
EDMONTON ALBERTA
DRAWING NUMBER

BOREHOLE NUMBER
84HB02
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BOREHOLE LOG AND LABORATORY TEST RESULTS