

EBA Engineering Consultants Ltd.

Civil, Geotechnical and Materials Engineers

ORIGINAL LOGS WITH STRENGTH DATA

ESSO Resources Canada Ltd.

(Continued)

0306-34413



D001352



ORIGINAL LOGS WITH STRENGTH DATA

ESSO Resources Canada Ltd.

(Continued)

0306-34413

May, 1988

1-1330

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION 7 725 935 mN x 559 896 mE	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ●						SPT RESISTANCE ▲								
				20			40			60								
				COMP. STRENGTH (TSF) ■														
				1	2	3												
2	ICE																	
4																		
6																		
8	WATER																	
10																		
12																		
14																		
16																		
18	CLAY		Not Frozen															
20	- grey																	
	- silty																	
22	- low to medium plastic																	
24																		
26																		
28																		
30																		



ICE THICKNESS (feet) 6.5

WATER DEPTH (feet) 17.5

FINAL DEPTH (feet) 121

DATE DRILLED 19/3/76

TECHNICIAN DY

REGION Kugmallit

HOLE No.

76-D49-1

PAGE 1 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ●			SPT RESISTANCE ▲		
				20 40 60			COMP. STRENGTH (TSF)		
				1	2	3	1	2	3
32	CLAY (cont'd) - grey - silty		Not Frozen						
34									
36									
38									
40									
42	- some silt bands								
44	-								
46	- medium plastic								
48									
50									
52	- trace of organics								
54									
56									
58									
60	SAND - brown - trace of silt - fine grained								



ICE THICKNESS (feet) 6.5

WATER DEPTH (feet) 17.5

FINAL DEPTH (feet) 121

DATE DRILLED 19/3/76

TECHNICIAN DY

REGION Kugmallit

HOLE No.

76-D49-1

PAGE 2 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ●					
				SPT RESISTANCE					
				20	40	60			
				COMP. STRENGTH (TSF) ■					
				1	2	3			
62	SAND (cont'd)		Not Frozen						
64									
66									
68									
70									
72									
74									
76									
78									
80									
82									
84	SILT-SAND - grey-brown - very fine grained								
86									
88									
90	- trace of organics - trace of grey clay layers								



ICE THICKNESS (feet) 6.5

WATER DEPTH (feet) 17.5

FINAL DEPTH (feet) 121

DATE DRILLED 19/3/76

TECHNICIAN DY

REGION Kugmallit

HOLE No.

76-D49-1

PAGE 3 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ● ▲					
				SPT RESISTANCE					
				20	40	60	COMP. STRENGTH (TSF) ■		
				1	2	3			
92	SILT-SAND (cont'd) - fine grained		Not Frozen						
94									
96									
98									
100									
102									
104									
106									
108									
110									
112									
114	- trace of organic clay								
116									
118									
120									
120	END OF HOLE @ 121 ft.								



ICE THICKNESS (feet)	6.5
WATER DEPTH (feet)	17.5
FINAL DEPTH (feet)	121

DATE DRILLED	19/3/76
TECHNICIAN	DY
REGION	Kugmallit

HOLE No.	76-D49-1
PAGE	4 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION 7 726 035 mN x 559 901 mE	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ●			SPT RESISTANCE ▲		
				20	40	60	20	40	60
				COMP. STRENGTH (TSF) ■			1	2	3
2	ICE								
4									
6									
8	WATER								
10									
12									
14									
16									
18	CLAY		Not Frozen						
20	- grey - silty								
22									
24	- thin laminations of silt - organic pockets								
26									
28									
30									



ICE THICKNESS (feet)	6.6
WATER DEPTH (feet)	17.5
FINAL DEPTH (feet)	89

DATE DRILLED	19/3/76
TECHNICIAN	DY
REGION	Kugmallit

HOLE No.	76-D49-2
PAGE	1 OF 3

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ●			SPT RESISTANCE ▲			COMP. STRENGTH (TSF) ■		
				20 40 60			1 2 3					
32	CLAY (cont'd)		Not Frozen									
34	- low to medium plastic	X										
36												
38												
40												
42	- trace of shells	X										
44												
46												
48												
50	- silty - low plastic											
52		X										
54												
56												
58	SAND											
60	- grey brown - fine grained - trace of silt - trace of organics and shells											



ICE THICKNESS (feet) 6.6

WATER DEPTH (feet) 17.5

FINAL DEPTH (feet) 89

DATE DRILLED 19/3/76

TECHNICIAN DY

REGION Kugmallit

HOLE No.

76-D49-2

PAGE 2 OF 3

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ● ▲					
				SPT RESISTANCE					
				20	40	60	COMP. STRENGTH (TSF) ■		
				1	2	3			
62	SAND (cont'd)		Not Frozen						
64	- fine to medium grained - slight trace of fine gravel								
66									
68									
70	- brown - some silt - very fine grained								
72									
74									
76									
78									
80									
82									
84									
86	- trace of organics								
88									
90	END OF HOLE @ 89								



ICE THICKNESS (feet)	6.6
WATER DEPTH (feet)	17.5
FINAL DEPTH (feet)	89

DATE DRILLED	19/3/76
TECHNICIAN	DY
REGION	Kugmallit

HOLE No.	76-D49-2
PAGE	3 OF 3

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION 7 725 881 mN x 559 980 mE	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ●			SPT RESISTANCE ▲		
				20 40 60			1 2 3		
				COMP. STRENGTH (TSF) ■					
2	ICE								
4									
6									
8	WATER								
10									
12									
14									
16									
18	CLAY		Not Frozen						
20	- grey - silty - low plastic								
22									
24									
26	- thick laminations of silt - trace of sand								
28									
30									



ICE THICKNESS (feet) 6.2

WATER DEPTH (feet) 17.7

FINAL DEPTH (feet) 121

DATE DRILLED 21/3/76

TECHNICIAN DY

REGION Kugmallit

HOLE No.

76-D49-3

PAGE 1 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)			SPT RESISTANCE	20	40	60	COMP. STRENGTH (TSF)	1	2	3	
32	CLAY (cont'd)		Not Frozen												
34	- low to medium plastic														
36															
38															
40															
42	- very silty - trace of organics.														
44															
46															
48	- clay-silt														
50	SAND														
52	- brown - fine grained - some silt - trace of organics														
54															
56	- trace of silt														
58															
60															

	ICE THICKNESS (feet)	6.2	DATE DRILLED	21/3/76	HOLE No.
	WATER DEPTH (feet)	17.7	TECHNICIAN	DY	76-D49-3
	FINAL DEPTH (feet)	121	REGION	Kugmallit	PAGE 2 OF 4

1045

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ●							▲
				SPT RESISTANCE							
				20	40	60	COMP. STRENGTH (TSF) ■				
				1	2	3					
	SAND (cont'd)		Not Frozen								
62											
64											
66											
68											
70	- very fine grained - trace of silt - trace of organics and rootlets										
72											
74											
76											
78											
80											
82	- some silt										
84											
86											
88											
90											



ICE THICKNESS (feet) 6.2

WATER DEPTH (feet) 17.7

FINAL DEPTH (feet) 121

DATE DRILLED 21/3/76

TECHNICIAN DY

REGION Kugmallit

HOLE No.

76-D49-3

PAGE 3 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ●					
				SPT RESISTANCE ▲					
				20	40	60	COMP. STRENGTH (TSF) ■		
				1	2	3			
92	SAND (cont'd) - some clay layers - grey brown		Not Frozen						
94									
96									
98									
100	SAND-SILT - medium grey - very fine grained		Not Frozen						
102									
104									
106									
108									
110									
112									
114									
116									
118									
120									
120	END OF HOLE @ 121								



ICE THICKNESS (feet) 6.2

WATER DEPTH (feet) 17.7

FINAL DEPTH (feet) 121

DATE DRILLED 20/3/76

TECHNICIAN DY

REGION Kugmallit

HOLE No.

76 D49-3

PAGE 4 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION 7 725 889 mN x 559 807 mE	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ●			SPT RESISTANCE ▲		
				20	40	60	20	40	60
				COMP. STRENGTH (TSF) ■			1	2	3
2	ICE								
4									
6	WATER								
8									
10									
12									
14									
16									
18	CLAY		Not Frozen						
20	- grey								
	- silty								
22	- low to medium plastic								
24									
26	- trace of organics								
28									
30									



ICE THICKNESS (feet) 5.6

WATER DEPTH (feet) 17.4

FINAL DEPTH (feet) 89

DATE DRILLED 21/3/76

TECHNICIAN DY

REGION Kugmallit

HOLE No.

76-D49-4

PAGE 1 OF 3

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ●			SPT RESISTANCE ▲			COMP. STRENGTH (TSF) ■		
				20	40	60				1	2	3
32	CLAY (cont'd) - grey - silty		Not Frozen									
34	- laminations of silt											
36												
38												
40												
42												
44												
46												
48												
50												
52												
54												
56												
58	SAND - grey - trace of silt											
60	- grey-brown - silty - fine grained											



ICE THICKNESS (feet) 5.6

WATER DEPTH (feet) 17.4

FINAL DEPTH (feet) 89

DATE DRILLED 21/3/76

TECHNICIAN DY

REGION Kugmallit

HOLE No.

76-D49-4

PAGE 2 OF 3

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ●					
				SPT RESISTANCE ▲			COMP. STRENGTH (TSF) ■		
				20	40	60	1	2	3
62	SAND (cont'd) - grey brown - fine grained - some silt - trace of organics		Not Frozen						
64									
66									
68									
70	- brown - very fine grained - trace to some silt		Not Frozen						
72									
74									
76									
78			Not Frozen						
80									
82									
84									
86	- grey brown - some silt to silty		Not Frozen						
88									
90	END OF HOLE @ 89								



ICE THICKNESS (feet) 5.6

WATER DEPTH (feet) 17.4

FINAL DEPTH (feet) 89

DATE DRILLED 21/3/76

TECHNICIAN DY

REGION Kugmallit

HOLE No.

76-D49-4

PAGE 3 OF 3

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION 7 727 120 mN x 558 995 mE	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ●					
				SPT RESISTANCE ▲					
				20	40	60	COMP. STRENGTH (TSF) ■		
				1	2	3			
2	ICE								
4									
6									
8	WATER								
10									
12									
14									
16									
18									
20	CLAY - grey - silty - low to medium plastic		Not Frozen						
22									
24									
26	- low plastic								
28									
30									



ICE THICKNESS (feet) 7.0

WATER DEPTH (feet) 18.3

FINAL DEPTH (feet) 121

DATE DRILLED 22/3/76

TECHNICIAN DY

REGION Kugmallit

HOLE No.

76-D49-5

PAGE 1 OF 4

1022

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ● ▲		
				SPT RESISTANCE		
				20	40	60
				COMP. STRENGTH (TSF) ■		
				1	2	3
32	CLAY (cont'd) - grey		Not Frozen			
34		X				
36						
38						
40						
42						
44						
46						
48						
50		X				
52	SILT - grey - some fine grained sand		Assumed Frozen			
54						
56						
58						
60						
	PEAT		FROZEN			



ICE THICKNESS (feet) 7.0

WATER DEPTH (feet) 18.3

FINAL DEPTH (feet) 121

DATE DRILLED 22/3/76

TECHNICIAN DY

REGION Kugmallit

HOLE No.

76-D49-5

PAGE 2 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ● ▲																
				SPT RESISTANCE																
				20 40 60																
				COMP. STRENGTH (TSF) ■																
				1 2 3																
62	PEAT - grey brown - trace of clay		Frozen Nbn																	
64																				
66	- fibrous	X																	114%	
68																				
70	SILT - light grey - sandy		Not Frozen																	
72																				
74	SAND - grey - trace of silt - fine grained																			
76																				
78																				
80	- fine to medium grained - some gravel - trace of silt																			
82																				
84																				
86																				
88																				
90																				



ICE THICKNESS (feet)	7.0
WATER DEPTH (feet)	18.3
FINAL DEPTH (feet)	121

DATE DRILLED	22/3/76
TECHNICIAN	DY
REGION	Kugmallit

HOLE No.	76-D49-5
PAGE	3 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ● ▲					
				SPT RESISTANCE					
				20	40	60	COMP. STRENGTH (TSF) ■		
				1	2	3			
92	SAND (cont'd) - grey - very fine grained		Not Frozen						
94									
96									
98									
100									
102									
104	SILT-SAND - brown - very fine grained								
106									
108									
110									
112									
114									
116									
118									
120	END OF HOLE @ 121 ft.								



ICE THICKNESS (feet) 7.0	DATE DRILLED 22/3/76	HOLE No.
WATER DEPTH (feet) 18.3	TECHNICIAN DY	76-D49-5
FINAL DEPTH (feet) 121	REGION Kugmallit	PAGE 4 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ●			SPT RESISTANCE ▲			COMP. STRENGTH (TSF) ■		
				20	40	60	20	40	60	2	3	
62	SAND (cont'd) - medium brown - silty	X										
64												
66												
68												
70												
72												
74												
76												
78		X										
80												
82	- some to trace silt											
	- trace to some fine gravel											
84	- fine to medium grained											
	- trace coarse grained											
	- clean											
86	- trace of organics											
88												
90												



ICE THICKNESS (feet) 5.4

WATER DEPTH (feet) 23.5

FINAL DEPTH (feet) 95

DATE DRILLED 2/4/76

TECHNICIAN JK

REGION Isserk

HOLE No.

76-2120

PAGE 3 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ●						▲
				SPT RESISTANCE						
				20	40	60				
				COMP. STRENGTH (TSF) ■						
				1	2	3				
	SAND (cont'd)									
92										
94										
96	END OF HOLE @ 95' Sand sloughing up inside casing									



ICE THICKNESS (feet)	5.4
WATER DEPTH (feet)	23.5
FINAL DEPTH (feet)	95

DATE DRILLED	2/4/76
TECHNICIAN	JK
REGION	Isserk

HOLE No.	76-2120
PAGE	4 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ●						SPT RESISTANCE ▲					
				20 40 60						COMP. STRENGTH (TSF) ☒					
				1 2 3											
	7 746 565 mN x 532 180 mE														
2	ICE														
4															
6															
8	WATER														
10															
12															
14															
16															
18															
20															
22															
24	CLAY - medium grey - very silty - low plastic		Not Frozen												
26	- laminations of silt and black organics	☒													
28															
30	SILT														



ICE THICKNESS (feet) 5.9

WATER DEPTH (feet) 22.6

FINAL DEPTH (feet) 121

DATE DRILLED 2/4/76

TECHNICIAN JK

REGION Isserk

HOLE No.

76-2120-4

PAGE 1 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ●			SPT RESISTANCE ▲			COMP. STRENGTH (TSF) □		
				20	40	60	20	40	60	1	2	3
32	SILT (cont'd) - medium brownish grey - clayey - low plastic		Not Frozen									
34												
36												
38												
40												
42												
44	SILT-CLAY - medium grey - low plastic - trace of organics											
46												
48	- trace of fine gravel - fine grained sand laminations											
50	SAND - medium brown grey - some silt - very fine, uniform	X										
52												
54												
56												
58	- silty											
60												



ICE THICKNESS (feet) 5.9

WATER DEPTH (feet) 22.0

FINAL DEPTH (feet) 121

DATE DRILLED 2/4/76

TECHNICIAN JK

REGION Isserk

HOLE No.

76-2120-4

PAGE 2 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ●						SPT RESISTANCE ▲
				SPT RESISTANCE						
				20	40	60	COMP. STRENGTH (TSF)			
				1	2	3	4	5	6	
62	SAND (cont'd)		Not Frozen							
64										
66										
68										
70	- medium grey									
72	- trace to some silt									
74	- fine grained									
76	- light to medium brown									
78	- very dense									
80	- trace of gravel									
82										
84										
86										
88										
90	- trace of organics									



ICE THICKNESS (feet) 5.9

WATER DEPTH (feet) 22.6

FINAL DEPTH (feet) 121

DATE DRILLED 2/4/76

TECHNICIAN JK

REGION Isserk

HOLE No.

76-2120-4

PAGE 3 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ● ▲					
				SPT RESISTANCE					
				20	40	60	COMP. STRENGTH (TSF) ■		
				1	2	3			
92	SAND (cont'd) - medium to light grey - fine to coarse grained - trace of silt and organics		NOT FROZEN						
94									
96									
98									
100									
102									
104									
106									
108									
110	- dark grey to black - silty - fine to very fine grained								
112	- organic odor								
114	- same to trace of silt								
116									
118									
120	END OF HOLE @ 121 Ft.								



ICE THICKNESS (feet) 5.9

WATER DEPTH (feet) 22.6

FINAL DEPTH (feet) 121

DATE DRILLED 2/4/76

TECHNICIAN JK

REGION Isserk

HOLE No.

76-2120-4

PAGE 4 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)					
				SPT RESISTANCE					
				20 40 60					
				COMP. STRENGTH (TSF)					
				1 2 3					
2	ICE								
4									
6									
8	WATER								
10									
12									
14									
16									
18									
20									
22									
24									
26									
28	CLAY		Not Frozen						
30	- grey - silty - medium plastic								

	ICE THICKNESS (feet) 6.3	DATE DRILLED 23/3/76	HOLE No. 76-L30-15 PAGE 1 OF 4
	WATER DEPTH (feet) 27.2	TECHNICIAN DY	
	FINAL DEPTH (feet) 121	REGION Arnak	

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)						SPT RESISTANCE	▲									
				20			40					60								
				COMP. STRENGTH (TSF)			2						3							
1	2	3	1	2	3	1	2	3	1	2	3									
32	CLAY (Cont'd.)		Not Frozen																	
34																				
36	- low plastic																			
38																				
40																				
42	- trace of organics - medium plastic																			
44																				
46																				
48																				
50																				
52																				
54																				
56																				
58																				
60																				



ICE THICKNESS (feet) 6.3

WATER DEPTH (feet) 27.2

FINAL DEPTH (feet) 121

DATE DRILLED 23/2/76

TECHNICIAN DY

REGION Arnak

HOLE No.

76-L30-15

PAGE 2 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ●						SPT RESISTANCE ▲											
				20						40											
				60						COMP. STRENGTH (TSF)											
				1						2						3					
62	CLAY (Cont'd.)		Not Frozen																		
	- some fine sand																				
64																					
66	- trace of organics - low plastic	⊗																			
68	SILT																				
	- dark grey																				
70	- some clay																				
	- trace of sand																				
72	- organic																				
	SAND																				
	- light brown																				
74	- fine grained																				
	- trace of silt																				
76																					
78																					
80																					
82	- medium brown																				
	- some silt																				
84	- fine grained																				
86																					
88																					
90																					



ICE THICKNESS (feet) 6.3

WATER DEPTH (feet) 27.2

FINAL DEPTH (feet) 121

DATE DRILLED 23/2/76

TECHNICIAN DY

REGION Arnak

HOLE No.

76-L30-15

PAGE 3 OF 4

IMPERIAL OIL LIMITED
BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)			SPT RESISTANCE	MOISTURE RESISTANCE		
				SPT RESISTANCE						
				20	40	60				
				COMP. STRENGTH (TSF)			1	2	3	
				1	2	3				
92	SAND (Cont'd.)		Not Frozen							
94										
96										
98										
100	SAND - SILT - brown - fine grained									
102										
104										
106										
108										
110										
112	SAND - medium brown - fine grained - trace to some silt									
114										
116										
118										
120	END OF HOLE @ 121 ft.									



ICE THICKNESS (feet) 6.3

WATER DEPTH (feet) 27.2

FINAL DEPTH (feet) 121

DATE DRILLED 23/2/76

TECHNICIAN DY

REGION	Arnak
--------	-------

HOLE No.

76-L30-15

PAGE 4 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 						SPT RESISTANCE 						20 40 60						COMP. STRENGTH (TSF) 						1 2 3					
	7 746 916 mN x 543 385 mE																																
2	ICE																																
4																																	
6																																	
8	WATER																																
10																																	
12																																	
14																																	
16																																	
18																																	
20																																	
22																																	
24																																	
26																																	
28																																	
30	CLAY - grey - silty - medium plastic		Not Frozen																														



ICE THICKNESS (feet) 6.4

WATER DEPTH (feet) 27.9

FINAL DEPTH (feet) 121

DATE DRILLED 25/3/76

TECHNICIAN DY

REGION Arnak

HOLE No.

76-L30-16

PAGE 1 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 					
				SPT RESISTANCE 					
				20	40	60	COMP. STRENGTH (TSF) 		
				1	2	3			
32	CLAY (Cont'd.) - soft - medium plastic		Not Frozen						
34									
36	- laminated - trace of organics								
38									
40									
42									
44									
46									
48									
50	- low to medium plastic - trace of organics								
52	SILT								
54	- grey - clayey - low plastic								
56									
58	- thinly interbedded with silty clay - medium plastic								
60									



ICE THICKNESS (feet) 6.4

WATER DEPTH (feet) 27.9

FINAL DEPTH (feet) 121

DATE DRILLED 25/3/76

TECHNICIAN DY

REGION Arnak

HOLE No.

76-L30-16

PAGE 2 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 						SPT RESISTANCE 					
				20			40			60					
				COMP. STRENGTH (TSF) 											
				1		2		3							
62	SILT (Cont'd.)		Not Frozen												
64															
66	- grey - clayey - sandy (fine grained) - organic layers														
68	SAND-SILT														
70	- grey - clayey - fine grained														
72															
74															
76	SAND														
78	- brown - fine grained - some silt														
80															
82															
84															
86															
88															
90															



ICE THICKNESS (feet) 6.4

WATER DEPTH (feet) 27.9

FINAL DEPTH (feet) 121

DATE DRILLED 25/3/76

TECHNICIAN DY

REGION Arnak

HOLE No.

76-L30-16

PAGE 3 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM - 1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 					
				SPT RESISTANCE 			COMP. STRENGTH (TSF) 		
				20	40	60	1	2	3
92	SAND (cont'd)		Not Frozen						
94	- trace of silt - trace of organics								
96									
98									
100									
102									
104									
106									
108									
110	- medium brown - fine to medium grained								
112	- trace of silt to clean - trace of organics								
114									
116									
118									
120	END OF HOLE @ 121 ft.								



ICE THICKNESS (feet) 6.4

WATER DEPTH (feet) 27.9

FINAL DEPTH (feet) 121

DATE DRILLED 25/3/76

TECHNICIAN DY

REGION Arnak

HOLE No.

76-L30-16

PAGE 4 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION 7 747 065 mN x 543 295 mE	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ●						SPT RESISTANCE ▲								
				20			40			60								
				COMP. STRENGTH (TSF) ■														
				1	2	3												
2	ICE																	
4																		
6																		
8	WATER																	
10																		
12																		
14																		
16																		
18																		
20																		
22																		
24																		
26																		
28	CLAY - dark grey - trace of fine sand		Not Frozen															
30																		



ICE THICKNESS (feet) 6.8

WATER DEPTH (feet) 27.4

FINAL DEPTH (feet) 113

DATE DRILLED 24/3/76

TECHNICIAN DY

REGION Arnak

HOLE No.

76-L30-17

PAGE 1 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)				SPT RESISTANCE	COMP. STRENGTH (TSF)		
				20		40				60	
				2		3					
32	CLAY (Cont'd.)		Not Frozen								
34	- grey	X									
	- low to medium plastic										
	- laminated with silty fine sand										
36											
38											
40											
42	- firm										
44	- soft	X									
	- laminated										
	- some organics										
46	- trace of shells										
48											
50		X									
52											
54											
56											
58	SILT	X									
	- grey										
	- clayey										
60	- trace sand pockets										
	- trace organics, low plastic										



ICE THICKNESS (feet) 6.8

WATER DEPTH (feet) 27.4

FINAL DEPTH (feet) 113

DATE DRILLED 24/3/76

TECHNICIAN DY

REGION Arnak

HOLE No.

76-L30-17

PAGE 2 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 						SPT RESISTANCE 						
				20			40			60						
				COMP. STRENGTH (TSF) 												
				1	2	3										
62	SILT (Cont'd.)		Not Frozen													
64	SAND-SILT - grey brown - very fine grained - some organics - dark grey - organic															
66																
68																
70				SAND - brown - some silt - fine grained												
72																
74																
76																
78																
80																
82	SAND - SILT - brown - very fine grained															
84																
86																
88																
90																



ICE THICKNESS (feet) 6.8

WATER DEPTH (feet) 27.4

FINAL DEPTH (feet) 113

DATE DRILLED 24/3/76

TECHNICIAN DY

REGION Arnak

HOLE No.

76-L30-17

PAGE 3 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ● ▲					
				SPT RESISTANCE					
				20	40	60	COMP. STRENGTH (TSF) ■		
				1	2	3			
92	SAND-SILT (Cont'd.)		Not Frozen						
94									
96									
98	SAND								
	- brown								
	- fine grained								
	- trace of silt								
100									
102									
104									
106									
108									
110									
112									
114	END OF HOLE @ 113 ft.								
116									
118									
120									



ICE THICKNESS (feet) 6.8

WATER DEPTH (feet) 27.4

FINAL DEPTH (feet) 113

DATE DRILLED 24/3/76

TECHNICIAN DY

REGION Arnak

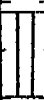
HOLE No.

76-L30-17

PAGE 4 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION 7 747 060 mN x 543 470 mE	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 						SPT RESISTANCE 20 40 60	COMP. STRENGTH (TSF) 
2	ICE										
4											
6											
8	WATER										
10											
12											
14											
16											
18											
20											
22											
24											
26											
28											
30	CLAY - grey - silty		Not Frozen								



ICE THICKNESS (feet) 6.4

WATER DEPTH (feet) 28.2

FINAL DEPTH (feet) 121

DATE DRILLED 24/3/76

TECHNICIAN DY

REGION Arnak

HOLE No.

76-L30-18

PAGE 1 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)					
				SPT RESISTANCE			COMP. STRENGTH (TSF)		
				20	40	60	1	2	3
32	CLAY (Cont'd.) - low to medium plastic		Not Frozen						
34									
36									
38									
40									
42	- grey - silty - low plastic								
44									
46									
48									
50	- medium plastic								
52									
54									
56									
58	- trace of fine brown sand								
60									



ICE THICKNESS (feet) 6.4

WATER DEPTH (feet) 28.2

FINAL DEPTH (feet) 121

DATE DRILLED 24/3/76

TECHNICIAN DY

REGION Arnak

HOLE No.

76-L30-18

PAGE 2 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 						SPT RESISTANCE 	
				20			40				60
				COMP. STRENGTH (TSF) 							
				1	2	3					
62	CLAY (Cont'd.)		Not Frozen								
64											
66	- grey - silty - sandy - low plastic										
68											
70	SAND										
	- dark grey - silty - brown										
72											
	- fine grained										
74											
76											
78	- some silt										
80											
82											
84											
86											
88											
90											



ICE THICKNESS (feet) 6.4

WATER DEPTH (feet) 28.2

FINAL DEPTH (feet) 121

DATE DRILLED 24/3/76

TECHNICIAN DY

REGION Arnak

HOLE No.

76-L30-18

PAGE 3 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 			SPT RESISTANCE 		
				20	40	60	COMP. STRENGTH (TSF) 		
				1	2	3	1	2	3
92	SAND (Cont'd.)		Not Frozen						
94									
96									
98									
100	- trace to some silt								
102									
104	- brown								
106	- medium to coarse grained								
108	- trace of gravel								
110	- trace of silt to clean								
112	- trace of organics								
114	- layers of fine silty sand								
116									
118									
120	END OF HOLE @ 121 ft.								



ICE THICKNESS (feet) 6.4

WATER DEPTH (feet) 28.2

FINAL DEPTH (feet) 121

DATE DRILLED 24/3/76

TECHNICIAN DY

REGION Arnak

HOLE No.

76-L30-18

PAGE 4 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION 7 746 860 mN x 543 000mE	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 						
				SPT RESISTANCE						
				20	40	60	COMP. STRENGTH (TSF) 			
				1	2	3				
2	ICE									
4										
6	WATER									
8										
10										
12										
14										
16										
18										
20										
22										
24										
26										
28	CLAY - medium grey - silty - low to medium plastic		Not Frozen							
30										



ICE THICKNESS (feet) 5.7

WATER DEPTH (feet) 26.5

FINAL DEPTH (feet) 105

DATE DRILLED 6/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-19

PAGE 1 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 							
				SPT RESISTANCE			COMP. STRENGTH (TSF)				
				20	40	60	1	2	3		
32	CLAY (Cont'd.)		Not Frozen								
34	- some thick laminations of medium grey sandy silt										
36											
38											
40	- medium to dark grey - thinly interbedded with silt-clay, low plastic										
42	- medium grey - medium plastic										
44											
46											
48											
50	- dark grey - silty										
52											
54											
56	SAND - medium brownish grey - some silt										
58	- trace of fine gravel - trace of silt - fine grained, uniform										
60											



ICE THICKNESS (feet) 5.7

WATER DEPTH (feet) 26.5

FINAL DEPTH (feet) 105

DATE DRILLED 6/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-19

PAGE 2 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)						SPT RESISTANCE											
				20						40						60					
				COMP. STRENGTH (TSF)																	
				1						2						3					
	SAND (Cont'd.)		Not Frozen																		
62	- very fine grained, uniform																				
64																					
66																					
68																					
70																					
72	- dark grey - some silt - organic																				
74	- medium grey - silty - fine to very fine grained																				
76																					
78	- some silt																				
80	- grey brown																				
82	- trace to some silt - uniform - trace of organics																				
84																					
86																					
88	- light brown																				
90																					



ICE THICKNESS (feet) 5.7

WATER DEPTH (feet) 26.5

FINAL DEPTH (feet) 105

DATE DRILLED 6/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-19

PAGE 3 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 			SPT RESISTANCE 		
				20	40	60	20	40	60
				COMP. STRENGTH (TSF) 			1	2	3
92	SAND (Cont'd.) - fine to medium grained - trace of silt		Not Frozen						
94									
96									
98									
100									
102	END OF HOLE @ 105 ft.								
104									
106									



ICE THICKNESS (feet) 5.7

WATER DEPTH (feet) 26.5

FINAL DEPTH (feet) 105

DATE DRILLED 6/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-19

PAGE 4 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 						SPT RESISTANCE 					
				20		40		60							
				COMP. STRENGTH (TSF) 											
				1		2		3							
2	ICE														
4															
6															
8	WATER														
10															
12															
14															
16															
18															
20															
22															
24															
26															
28															
30	CLAY - medium to dark grey - silty - low plastic		Not Frozen												



ICE THICKNESS (feet) 6.4

WATER DEPTH (feet) 28.0

FINAL DEPTH (feet) 89

DATE DRILLED 26/3/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-20

PAGE 1 OF 3

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 								
				SPT RESISTANCE 								
				20 40 60								
				COMP. STRENGTH (TSF) 								
				1 2 3								
32	CLAY (Cont'd.)		Not Frozen									
34	- medium plastic											
36												
38												
40												
42												
44												
46												
48												
50												
52	- very silty											
54												
56												
58												
60	SILT											



ICE THICKNESS (feet) 6.4

WATER DEPTH (feet) 28.0

FINAL DEPTH (feet) 89

DATE DRILLED 26/3/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-20

PAGE 2 OF 3

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ●						SPT RESISTANCE ▲								
				20			40			60								
				COMP. STRENGTH (TSF) ■														
				1	2	3												
62	SILT - dark grey - trace clay - non plastic		Not Frozen															
64																		
66	- clayey - low plastic																	
68																		
70																		
72	- medium grey - sandy																	
74																		
76	SAND-SILT - dark grey - organic																	
78	SAND - medium grey - fine grained - silty																	
80																		
82	- some silt - fine grained - trace of fine gravel																	
84																		
86	- trace of silt																	
88																		
90	END OF HOLE @ 89 ft.																	



ICE THICKNESS (feet)	6.4
WATER DEPTH (feet)	28.0
FINAL DEPTH (feet)	89

DATE DRILLED	26/3/76
TECHNICIAN	JK
REGION	Arnak

HOLE No.	76-L30-20
PAGE	3 OF 3

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 					
				SPT RESISTANCE 					
				20	40	60	COMP. STRENGTH (TSF) 		
	7 747 355 mN x 543 005 mE			1	2	3			
2	ICE								
4									
6	WATER								
8									
10									
12									
14									
16									
18									
20									
22									
24									
26									
28	CLAY		Not						
	- medium grey		Frozen						
	- silty								
	- medium to low plastic								
30									



ICE THICKNESS (feet) 5.5

WATER DEPTH (feet) 27.2

FINAL DEPTH (feet) 113

DATE DRILLED 6/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-21

PAGE 1 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)			①
				SPT RESISTANCE			▲
				20	40	60	
				COMP. STRENGTH (TSF)			■
				1	2	3	
32	CLAY (Cont'd.)		Not Frozen				
34	- medium to dark grey	X		▲	●		
36							
38							
40							
42	- thin laminations of grey brown silt and medium grey silty sand	X		▲	●		
44							
46	- trace of organics						
48							
50							
52	- dark grey						
54	- silty						
54	- medium to high plastic						
54	- trace of shells						
56	- low to medium plastic						
58							
60							



ICE THICKNESS (feet) 5.5

WATER DEPTH (feet) 27.5

FINAL DEPTH (feet) 113

DATE DRILLED 6/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-21

PAGE 2 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)						SPT RESISTANCE								
				20			40			60								
				COMP. STRENGTH (TSF)						1			2			3		
	CLAY (Cont'd.)		Not Frozen															
62	SAND-SILT																	
	- dark grey																	
	- fine grained																	
	- trace of gravel																	
64																		
	SAND																	
66	- medium greyish brown																	
	- silty																	
	- very fine grained																	
68	- uniform																	
70																		
72	- some silt																	
74																		
76																		
78																		
80																		
82																		
84																		
86																		
88																		
90																		



ICE THICKNESS (feet) 5.5

WATER DEPTH (feet) 27.5

FINAL DEPTH(feet) 113

DATE DRILLED 6/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-21

PAGE 3 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 						SPT RESISTANCE 	
				20			40				
				60			COMP. STRENGTH (TSF) 				
				1	2	3					
92	SAND (Cont'd.)		Not Frozen								
94											
96											
	- some silt to silty										
98											
100											
102											
	- fine grained, some medium - trace of silt										
104											
106											
108											
110											
112											
	- fine to medium grained - clean to trace of silt										
114	END OF HOLE @113 ft.										



ICE THICKNESS (feet) 5.5

WATER DEPTH (feet) 27.5

FINAL DEPTH (feet) 113

DATE DRILLED 6/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-21

PAGE 4 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION 7 747 280 mN x 543 705 mE	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 						
				SPT RESISTANCE			COMP. STRENGTH (TSF) 			
				20	40	60	1	2	3	
2	ICE									
4										
6	WATER									
8										
10										
12										
14										
16										
18										
20										
22										
24										
26										
28										
30	CLAY - grey - silty - firm		Not Frozen							



ICE THICKNESS (feet) 5.3

WATER DEPTH (feet) 27.5

FINAL DEPTH (feet) 121

DATE DRILLED 25/3/76

TECHNICIAN DY

REGION Arnak

HOLE No.

76-L30-24

PAGE 1 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)			SPT RESISTANCE	▲	COMP. STRENGTH (TSF)	■
				20	40	60				
				1	2	3				
32	CLAY (Cont'd.) - medium plastic		Not Frozen							
34	SILT - grey - clayey - low to medium plasticity	X								
36										
38										
40	- thick interbeds of silty clay - medium plastic									
42										
44										
46										
48	- some organic layers - pockets of fine sand									
50		X								
52										
54										
56										
58										
60	CLAY									



ICE THICKNESS (feet) 5.3

WATER DEPTH (feet) 27.5

FINAL DEPTH (feet) 121

DATE DRILLED 25/3/76

TECHNICIAN DY

REGION Arnak

HOLE No.

76-L30-24

PAGE 2 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)			SPT RESISTANCE	20	40	60	COMP. STRENGTH (TSF)	1	2	3	
62	CLAY - grey		Not Frozen												
64															
66															
68															
70															
72															
74	SILT - grey brown - sandy														
76	SAND - light brown - fine grained - silty														
78															
80	- trace to some silt														
82	- thin laminations of grey sandy silty clay														
84															
86															
88															
90	- siltier														



ICE THICKNESS (feet) 5.3

WATER DEPTH (feet) 27.5

FINAL DEPTH (feet) 121

DATE DRILLED 25/3/76

TECHNICIAN DY

REGION Arnak

HOLE No.

76-L30-24

PAGE 3 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 						SPT RESISTANCE 					
				20			40			60					
				COMP. STRENGTH (TSF) 											
				1	2	3									
92	SAND (Cont'd.)		Not Frozen												
94															
96															
98															
100															
102	SAND-SILT														
104	- light brown - very fine grained														
106	SAND														
108	- medium brown - fine to medium grained - trace of organics - trace of silt														
110															
112															
114	- fine to medium grained - some coarse sand and fine gravel														
116															
118															
120	END OF HOLE @ 121 ft.														



ICE THICKNESS (feet) 5.3

WATER DEPTH (feet) 27.5

FINAL DEPTH (feet) 121

DATE DRILLED 25/3/76

TECHNICIAN DY

REGION Arnak

HOLE No.

76-L30-24

PAGE 4 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM - 1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 						SPT RESISTANCE 					
				20			40			60					
				COMP. STRENGTH (TSF) 											
	7 746 640 mN x 542 720 mE			1	2	3									
2	ICE														
4															
6															
8	WATER														
10															
12															
14															
16															
18															
20															
22															
24															
26															
28	CLAY - medium grey - silty - medium plastic		Not Frozen												
30															



ICE THICKNESS (feet) 6.0

WATER DEPTH (feet) 26.5

FINAL DEPTH (feet) 105

DATE DRILLED 7/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-26

PAGE 1 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)			SPT RESISTANCE			COMP. STRENGTH (TSF)
				20	40	60	1	2	3	
32	CLAY (Cont'd.)		Not Frozen							
34	- thinly laminated with medium brownish grey sandy silt	X								
36	- trace of organics									
38										
40										
42										
44										
46	- medium to dark grey - trace of fine gravel									
48										
50										
52										
54	SAND									
56	- medium grey - some silt - fine grained									
58	- trace of silt									
60										



ICE THICKNESS (feet) 6.0

WATER DEPTH (feet) 26.5

FINAL DEPTH (feet) 105

DATE DRILLED 7/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-26

PAGE 2 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)						SPT RESISTANCE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
				20						40						60																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
				1						2						3																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
	SAND (Cont'd)		Not Frozen																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								



ICE THICKNESS (feet) 6.0
 WATER DEPTH (feet) 26.5
 FINAL DEPTH (feet) 105

DATE DRILLED 7/4/76
 TECHNICIAN JK
 REGION Arnak

HOLE No.
 76-L30-26
 PAGE 3 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ☐						SPT RESISTANCE ☐					
				20 40 60						COMP. STRENGTH (TSF) ☐					
				1 2 3											
92	SAND (Cont'd.) - medium brown - fine to medium grained - trace of silt to clean		Not Frozen												
94															
96															
98															
100															
102															
104															
106															
106	END OF HOLE @ 105 ft.														
108															
110															
112															
114															
116															
118															
120															



ICE THICKNESS (feet)	6.0
WATER DEPTH (feet)	26.5
FINAL DEPTH (feet)	105

DATE DRILLED	7/4/76
TECHNICIAN	JK
REGION	Arnak

HOLE No.	76-L30-26
PAGE	4 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)					
				SPT RESISTANCE					
				20	40	60	COMP. STRENGTH (TSF)		
	7 746 995 mN x 543 655 mE			1	2	3			
2	ICE								
4									
6	WATER								
8									
10									
12									
14									
16									
18									
20									
22									
24									
26									
28	CLAY		Not						
	- medium grey		Frozen						
	- silty								
	- low plastic								
30									



ICE THICKNESS (feet) 5.5

WATER DEPTH (feet) 27.0

FINAL DEPTH (feet) 52.0

DATE DRILLED 12/4/76

TECHNICIAN JAK

REGION Arnak

HOLE No.

76-L30-31

PAGE 1 OF 2

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 											
				SPT RESISTANCE 											
				COMP. STRENGTH (TSF) 											
				20			40			60					
				1			2			3					
32	CLAY (Cont'd.) - 1' layer of medium brownish grey sand, some silt, some shells		Not Frozen												
34	- thin laminations of silt														
36	- thin laminations of black organics														
38															
40															
42															
44	- medium plastic														
46															
48															
50															
52	- thick laminations of silt														
54	END OF HOLE @ 52 ft. Hole terminated because foundation holes cancelled														
56															
58															
60															



ICE THICKNESS (feet) 5.5

WATER DEPTH (feet) 27.0

FINAL DEPTH (feet) 52.0

DATE DRILLED 12/4/76

TECHNICIAN JAK

REGION Arnak

HOLE No.

76-L30-31

PAGE 2 OF 2

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)										▲						
				SPT RESISTANCE																
				20 40 60																
				COMP. STRENGTH (TSF)										☒						
				1 2 3																
2	ICE																			
4																				
6																				
8	WATER																			
10																				
12																				
14																				
16																				
18																				
20																				
22																				
24																				
26																				
28	CLAY		Not																	
30	- grey - silty - some shells		Frozen																	



ICE THICKNESS (feet) 6.9
 WATER DEPTH (feet) 27.3
 FINAL DEPTH (feet) 121

DATE DRILLED 11/4/76
 TECHNICIAN R.C.
 REGION Arnak

HOLE No.
 76-L30-32
 PAGE 1 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)			SPT RESISTANCE	
				20	40	60		
				COMP. STRENGTH (TSF)				
				1	2	3		
32	CLAY (Cont'd.) - medium plastic		Not Frozen					
34	- thick laminations of sandy silt - trace of organics							
36								
38								
40								
42								
44								
46								
48								
50	- thin laminations of brown sand							
52								
54								
56								
58								
60								



ICE THICKNESS (feet) 6.9

WATER DEPTH (feet) 27.3

FINAL DEPTH (feet) 121

DATE DRILLED 11/4/76

TECHNICIAN R.C.

REGION Arnak

HOLE No.

76-L30-32

PAGE 2 OF 4

93.4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)						SPT RESISTANCE
				20 40 60						
				COMP. STRENGTH (TSF)						
				1	2	3				
62	CLAY (Cont'd.)		Not Frozen							
64										
66	SAND									
68	- grey-black - silty - fine grained - trace of gravel									
70										
72	SAND									
74	- medium brown - trace to some silt - fine grained									
76										
78										
80	- trace of silt									
82										
84										
86										
88										
90										



ICE THICKNESS (feet) 6.9

WATER DEPTH (feet) 27.3

FINAL DEPTH (feet) 121

DATE DRILLED 11/4/76

TECHNICIAN RC.

REGION Arnak

HOLE No.

76-L30-32

PAGE 3 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ●						▲
				SPT RESISTANCE						
				20	40	60	COMP. STRENGTH (TSF)			
				1	2	3				■
92	SAND (Cont'd)		Not Frozen							
94										
96										
98	- trace of silt									
100										
102	- grey brown - medium to fine grained									
104										
106										
108										
110										
112	- medium brown - trace of silt to clean									
114										
116										
118										
120	- clean END OF HOLE @ 121 ft.									



ICE THICKNESS (feet)	6.9
WATER DEPTH (feet)	27.3
FINAL DEPTH (feet)	121

DATE DRILLED	11/4/76
TECHNICIAN	RC
REGION	Arnak

HOLE No.	76-L30-32
PAGE	4 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 						SPT RESISTANCE 
				COMP. STRENGTH (TSF) 						
	7 746 805 mN x 542 795 mE			1	2	3				
2	ICE									
4										
6										
8	WATER									
10										
12										
14										
16										
18										
20										
22										
24										
26										
28	CLAY		Not Frozen							
30	- medium grey - silty - low to medium plastic - some thin laminations of silty sand and silt									



ICE THICKNESS (feet) 6.5

WATER DEPTH (feet) 26.3

FINAL DEPTH (feet) 121

DATE DRILLED 13/4/76

TECHNICIAN JAK

REGION Arnak

HOLE No.

76-L30-35

PAGE 1 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)						SPT RESISTANCE	20	40	60	COMP. STRENGTH (TSF)	1	2	3
	CLAY (Cont'd.)		Not Frozen														
32																	
	- low plastic																
34	- trace of organics																
36																	
38																	
40																	
42																	
	- thin layer of black organic silty clay																
44																	
46	- dark grey																
	- medium plastic																
	- trace of organics																
48																	
50																	
52																	
54	SAND																
	- medium grey																
56	- fine some medium grained																
	- trace of silt																
	- trace of fine gravel in top 1'																
58	- finer with depth																
60																	



ICE THICKNESS (feet) 6.5

WATER DEPTH (feet) 26.3

FINAL DEPTH (feet) 121

DATE DRILLED 13/4/76

TECHNICIAN JAK

REGION Arnak

HOLE No.

76-L30-35

PAGE 2 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)						SPT RESISTANCE											
				20						40						60					
				COMP. STRENGTH (TSF)																	
				1						2						3					
62	SAND (Cont'd.) - some silt - thin layer of dark grey sandy silt, some organics		Not Frozen																		
64																					
66																					
68	- fine to medium grained - trace to some silt - trace of 1" gravel																				
70																					
72																					
74	- fine grained - trace of silt - trace of organics																				
76																					
78																					
80																					
82	- medium grey - silty - very fine grained																				
84																					
86																					
88																					
90																					



ICE THICKNESS (feet) 6.5
WATER DEPTH (feet) 26.3
FINAL DEPTH (feet) 121

DATE DRILLED 13/4/76
TECHNICIAN JAK
REGION Arnak

HOLE No.
76-L30-35
PAGE 3 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ☐			SPT RESISTANCE ☐		
				20	40	60	1	2	3
	SAND (Cont'd)		Not Frozen						
92									
94	- medium grey								
	- trace to some silt								
	- fine to very fine								
96									
98									
100									
102	- very fine grained								
	- trace to some organics (wood chips)								
104									
106	- medium brown								
	- trace of silt								
	- fine grained								
108									
110									
112									
114	- fine to medium grained								
	- trace of organics								
116									
118									
120	END OF HOLE @ 121 ft.								



ICE THICKNESS (feet) 6.5

WATER DEPTH (feet) 26.3

FINAL DEPTH (feet) 121

DATE DRILLED 13/4/76

TECHNICIAN JAK

REGION Arnak

HOLE No.

76-L30-35

PAGE 4 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 					
				SPT RESISTANCE 					
				20	40	60	COMP. STRENGTH (TSF) 		
	7 746 580 mN x 542 360 mE						1	2	3
2	ICE								
4	ICE								
6	WATER								
8									
10									
12									
14									
16									
18									
20									
22									
24									
26	CLAY		Not						
28	- medium grey		Frozen						
	- medium plastic								
	- silty								
30									



ICE THICKNESS (feet) 5.2

WATER DEPTH (feet) 25.7

FINAL DEPTH (feet) 121

DATE DRILLED 5/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-PIA

PAGE 1 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 						
				SPT RESISTANCE						
				20	40	60	COMP. STRENGTH (TSF) 			
					2	3				
32	CLAY (Cont'd.)		Not Frozen							
34	- thick laminations of brown- ish grey silt									
36										
38										
40										
42	- medium to dark grey					 				
44										
46										
48										
50										
52	SAND									
	- medium brown									
	- some silt									
54	- fine to medium grained									
56										
	- less silt									
58										
60										



ICE THICKNESS (feet) 5.2

WATER DEPTH (feet) 25.7

FINAL DEPTH (feet) 121

DATE DRILLED 5/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-PIA

PAGE 2 OF 4

IMPERIAL OIL LIMITED
BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)						
				SPT RESISTANCE						
				20	40	60	COMP. STRENGTH (TSF)			
				1	2	3				
62	SAND (Cont'd.)		Not Frozen							
64	- very fine grained									
66	- some silt to silty									
68										
70										
72										
74										
76										
78										
80										
82										
84										
86										
88	- silty									
90										



ICE THICKNESS (feet) 5.2

WATER DEPTH (feet) 25.7

FINAL DEPTH (feet) 121

DATE DRILLED 5/1/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-PIA

PAGE 3 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)												SPT RESISTANCE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
				20												40			60																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
				COMP. STRENGTH (TSF)												1			2			3																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
92	SAND (Cont'd.) - medium brown - silty to some silt - trace of organics		Not Frozen																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						



ICE THICKNESS (feet) 5.2

WATER DEPTH (feet) 25.7

FINAL DEPTH (feet) 121

DATE DRILLED 5/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-PIA

PAGE 4 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 						SPT RESISTANCE 		
				20			40			60		
				COMP. STRENGTH (TSF) 						1		
	7 746 405 mN x 542 520 mE											
2	ICE											
4												
6												
8	WATER											
10												
12												
14												
16												
18												
20												
22												
24												
26												
28	CLAY - medium grey - silty - medium plastic		Not Frozen									
30												



ICE THICKNESS (feet) 6.3

WATER DEPTH (feet) 26.2

FINAL DEPTH (feet) 121

DATE DRILLED 5/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-PIB

PAGE 1 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)			SPT RESISTANCE	20	40	60	COMP. STRENGTH (TSF)	1	2	3	
32	CLAY (Cont'd.)		Not Frozen												
34	- some thick laminations of medium brownish grey silt	X													
36	- dark grey														
38	- silty														
40	- medium plastic														
42	- trace of organics														
44															
46															
48															
50	SAND	X													
52	- medium grey brown														
54	- fine grained														
56	- some silt and gravel														
58	- some thin interbeds of silt clay														
60	CLAY														
62	- dark grey to black														
64	- silty														
66	- medium plastic														
68	- organic														
70															
72															
74															
76															
78															
80															
82															
84															
86															
88															
90															
92															
94															
96															
98															
100															
102															
104															
106															
108															
110															
112															
114															
116															
118															
120															
122															
124															
126															
128															
130															
132															
134															
136															
138															
140															
142															
144															
146															
148															
150															
152															
154															
156															
158															
160															
162															
164															
166															
168															
170															
172															
174															
176															
178															
180															
182															
184															
186															
188															
190															
192															
194															
196															
198															
200															



ICE THICKNESS (feet) 6.3

WATER DEPTH (feet) 26.2

FINAL DEPTH (feet) 121

DATE DRILLED 5/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-PIB

PAGE 2 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)			SPT RESISTANCE			COMP. STRENGTH (TSF)		
							20	40	60			
							1	2	3			
62	SAND (Cont'd.)		Not Frozen									
	- some silt											
64												
66												
68												
70												
72												
74												
	- trace to some silt											
	- fine to very fine grained											
76												
78												
80												
	- fine to medium sand											
	- trace of silt											
82												
84												
86												
88												
	- some silt											
	- fine to very fine grained											
90												



ICE THICKNESS (feet) 6.3

WATER DEPTH (feet) 26.2

FINAL DEPTH (feet) 121

DATE DRILLED 5/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-PIB

PAGE 3 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)						SPT RESISTANCE
				COMP. STRENGTH (TSF)						
92	SAND (Cont'd.) - fine grained - trace of silt - trace of organics and wood		Not Frozen							
94										
96										
98										
100										
102										
104										
106										
108										
110										
112	- clean to trace of silt - slight trace of gravel									
114										
116										
118										
120	- fine to medium grained END OF HOLE @ 121 ft.									



ICE THICKNESS (feet) 6.3
 WATER DEPTH (feet) 26.2
 FINAL DEPTH (feet) 121

DATE DRILLED 5/4/76
 TECHNICIAN JK
 REGION Arnak

HOLE No.
 76-L30-PIB
 PAGE 4 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION 7 746 180 mN x 542 720 mE	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)						
				SPT RESISTANCE						
				20	40	60	COMP. STRENGTH (TSF)			
				1	2	3				
2	ICE									
4										
6	WATER									
8										
10										
12										
14										
16										
18										
20										
22										
24										
26	CLAY		Not							
	- medium grey		Frozen							
28	- silty									
	- medium plastic									
30										



ICE THICKNESS (feet) 5.7

WATER DEPTH (feet) 25.5

FINAL DEPTH (feet) 121

DATE DRILLED 4/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-PIC

PAGE 1 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 						SPT RESISTANCE 
				20 40 60						
				COMP. STRENGTH (TSF) 						
				1 2 3						
32	CLAY (cont'd)		Not Frozen							
34	- some thin interbeds of silt-clay									
36										
38	- medium to dark grey									
40										
42	- medium plastic - trace of thin silt laminations									
44										
46	- dark grey - trace of organics									
48										
50	SILT									
52	SAND - medium brown - trace to some silt - fine to medium grained									
54										
56	- trace of silt to clean - trace of fine gravel									
58										
60										



ICE THICKNESS (feet) 5.7

WATER DEPTH (feet) 25.5

FINAL DEPTH (feet) 121

DATE DRILLED 4/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-PIC

PAGE 2 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 					
				SPT RESISTANCE 					
				20	40	60	COMP. STRENGTH (TSF) 		
							2	3	
62	SAND (Cont'd.) - medium brown to medium grey - some silt to silty - very fine grained		Not Frozen						
64									
66	- medium grey - silty - very fine grained								
68									
70									
72	- medium brownish grey								
74									
76									
78									
80									
82	- very fine grained, uniform								
84									
86									
88									
90									



ICE THICKNESS (feet) 5.7

WATER DEPTH (feet) 25.5

FINAL DEPTH (feet) 121

DATE DRILLED 4/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-PIC

PAGE 3 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 						SPT RESISTANCE ▲
				20			40			
				60			COMP. STRENGTH (TSF) 			
				1	2	3	1	2	3	
92	SAND (Cont'd.)		Not Frozen							
94										
96										
98	- medium brown - fine grained - some silt									
100	- trace of silt to clean - fine to medium grained									
102										
104										
106										
108										
110										
112										
114										
116										
118										
120	END OF HOLE @ 121 ft.									



ICE THICKNESS (feet) 5.7

WATER DEPTH (feet) 25.5

FINAL DEPTH (feet) 121

DATE DRILLED 4/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-PIC

PAGE 4 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 						SPT RESISTANCE 						
				20		40		60								
				COMP. STRENGTH (TSF) 						1		2		3		
7	746 105 mN x 542 180 mE															
2	ICE															
4																
6																
8	WATER															
10																
12																
14																
16																
18																
20																
22																
24																
26	CLAY		Not Frozen													
	- medium to dark grey															
	- silty															
28	- medium plastic															
30																



ICE THICKNESS (feet) 6.4

WATER DEPTH (feet) 25.2

FINAL DEPTH (feet) 97

DATE DRILLED 6/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-PI-G

PAGE 1 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)						
				SPT RESISTANCE						
				20	40	60	COMP. STRENGTH (TSF)			
				1	2	3				
32	CLAY (Cont'd.)		Not Frozen							
34	- some thin silt laminations									
36										
38										
40										
42	- low to medium plastic									
44										
46										
48										
50	SAND									
52	- medium greyish brown - silty - fine grained, uniform - trace of gravel									
54										
56	- some silt to silty									
58										
60	- silty									



ICE THICKNESS (feet)	6.4
WATER DEPTH (feet)	25.2
FINAL DEPTH (feet)	97

DATE DRILLED	6/4/76
TECHNICIAN	JK
REGION	Arnak

HOLE No.	76-L30-PI-G
PAGE	2 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 						SPT RESISTANCE 
				20			40			
				60			COMP. STRENGTH (TSF) 			
				1	2	3	1	2	3	
62	SAND (Cont'd.)		Not Frozen							
64										
66										
68										
70	- medium grey - silty									
72										
74	- medium brown - fine to medium grained									
76	- some silt									
78										
80	- trace of silt									
82										
84										
86										
88										
90										



ICE THICKNESS (feet)	6.2
WATER DEPTH (feet)	25.2
FINAL DEPTH (feet)	97

DATE DRILLED	6/4/76
TECHNICIAN	JK
REGION	Arnak

HOLE No.	76-L30-P1-G
PAGE	3 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM - 1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 						SPT RESISTANCE 	
				20			40				60
				COMP. STRENGTH (TSF) 							
				1	2	3					
92	SAND (Cont'd.)		Not Frozen								
94											
96											
98	END OF HOLE @ 97 ft.										



ICE THICKNESS (feet) 6.2

WATER DEPTH (feet) 25.2

FINAL DEPTH (feet) 97

DATE DRILLED 6/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-P1-G

PAGE 4 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION 7 745 805 mN x 541 845 mE	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 						SPT RESISTANCE 		
				20			40			60		
				COMP. STRENGTH (TSF) 								
				1	2	3						
2	ICE											
4												
6												
8	WATER											
10												
12												
14												
16												
18												
20												
22												
24	CLAY		Not									
	- medium to light grey		Frozen									
	- silty											
26	- soft											
	- medium plastic											
28												
30												



ICE THICKNESS (feet) 6.2

WATER DEPTH (feet) 23.7

FINAL DEPTH (feet) 105

DATE DRILLED 6/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-PI-Z

PAGE 1 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 						SPT RESISTANCE 					
				20						40					
				60						COMP. STRENGTH (TSF) 					
				1		2		3							
32	CLAY (Cont'd.)		Not Frozen												
	- some thin silt laminations														
34															
36															
38															
40	- trace of shells														
42															
44															
46	SAND-SILT														
	- medium grey														
48	- very fine grained														
	- trace of gravel														
	- thin interbeds of silt clay														
50															
52	SAND														
	- medium grey-brown														
	- some silt														
54	- fine grained														
56															
	- medium brown														
	- fine grained														
58															
60															



ICE THICKNESS (feet) 6.2

WATER DEPTH (feet) 23.7

FINAL DEPTH (feet) 105.

DATE DRILLED 6/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-PI-Z

PAGE 2 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)						SPT RESISTANCE	▲
				20 40 60							
				COMP. STRENGTH (TSF)							
2 3											
62	SAND (Cont'd.)		Not Frozen								
64											
66	- silty										
68											
70											
72											
74											
76											
78	- trace of silt - fine uniform - trace of fine gravel										
80											
82	- some thin silt-clay lamina- tions										
84											
86											
88											
90											



ICE THICKNESS (feet) 6.2

WATER DEPTH (feet) 23.7

FINAL DEPTH (feet) 105

DATE DRILLED 6/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-PI-Z

PAGE 3 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)						SPT RESISTANCE											
				20						40						60					
				1						2						3					
92	SAND (Cont'd.) - fine grained, uniform - trace of silt to clean		Not Frozen																		
94																					
96																					
98																					
100																					
102	END OF HOLE @ 105 ft.																				
104																					
106																					
108																					
110																					
112																					
114																					
116																					
118																					
120																					



ICE THICKNESS (feet) 6.2

WATER DEPTH (feet) 23.7

FINAL DEPTH (feet) 105

DATE DRILLED 6/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-PI-Z

PAGE 4 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 						SPT RESISTANCE 					
				20			40			60					
				COMP. STRENGTH (TSF) 											
				1	2	3									
	ICE														
2															
4															
6															
	WATER														
8															
10															
12															
14															
16															
18															
20															
22															
24															
26															
28															
30	CLAY - medium grey		Not Frozen												



ICE THICKNESS (feet) 6.2
 WATER DEPTH (feet) 29.0
 FINAL DEPTH (feet) 121

DATE DRILLED 4/4/76
 TECHNICIAN JK
 REGION Arnak

HOLE No.
 76-L30-P2A
 PAGE 1 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)						SPT RESISTANCE	20	40	60	COMP. STRENGTH (TSF)	1	2	3
32	CLAY (Cont'd.) - medium grey - silty - medium plastic		Not Frozen														
34	- trace of thin silt laminations	X															
36																	
38																	
40	- medium to dark grey - silty - medium plastic																
42	- some interbedded silt-clay - trace to some organics	X															
44																	
46																	
48																	
50		X															
52																	
54																	
56																	
58		X															
60																	



ICE THICKNESS (feet) 6.0

WATER DEPTH (feet) 29.0

FINAL DEPTH (feet) 121

DATE DRILLED 4/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-P2A

PAGE 2 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 			SPT RESISTANCE 		
				20	40	60	20	40	60
				COMP. STRENGTH (TSF) 			1	2	3
62	CLAY (Cont'd.)		Not Frozen						
64									
66									
68									
70	SAND-SILT - dark grey - very fine uniform sand								
72									
74	SAND - medium grey - silty - fine grained, uniform								
76									
78									
80									
82	- some silt								
84									
86									
88									
90									



ICE THICKNESS (feet) 6.0

WATER DEPTH (feet) 29.0

FINAL DEPTH (feet) 121

DATE DRILLED 4/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-P2A

PAGE 3 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM - 1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)						SPT RESISTANCE					
				20			40			60					
				COMP. STRENGTH (TSF)											
				1		2		3							
92	SAND (Cont'd.)		Not Frozen												
94	- medium brown														
	- medium to fine grained														
	- trace of silt														
96															
98															
100															
102															
104															
106	- fine grained														
	- trace of organics														
108															
110															
112															
	- fine to medium grained														
114															
116															
118															
120	END OF HOLE @ 121 ft.														



ICE THICKNESS (feet) 6.0

WATER DEPTH (feet) 29.0

FINAL DEPTH (feet) 121

DATE DRILLED 4/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-P2A

PAGE 4 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION 7 746 745 mN x 543 880 mE	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 						SPT RESISTANCE 					
				20		40		60							
				COMP. STRENGTH (TSF) 											
	ICE														
2															
4															
6															
	WATER														
8															
10															
12															
14															
16															
18															
20															
22															
24															
26															
28															
	CLAY		Not Frozen												
30															



ICE THICKNESS (feet) 5.9

WATER DEPTH (feet) 28.5

FINAL DEPTH (feet) 121

DATE DRILLED 3/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-P2B

PAGE 1 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)			SPT RESISTANCE	20	40	60	COMP. STRENGTH (TSF)	1	2	3	
32	CLAY (Cont'd.) - medium grey - silty - medium plastic	X	Not Frozen												
34															
36	- thinly bedded with silt - low plastic	X													
38															
40	- thinly bedded with silt-clay - low plastic - stiff														
42															
44	- medium plastic - trace of thick silt lamina- tions	X													
46	- medium dark grey														
48															
50	- low to medium plastic - trace of thin silt lamina- tions	X													
52															
54															
56															
58															
60		X													



ICE THICKNESS (feet) 5.9

WATER DEPTH (feet) 28.5

FINAL DEPTH (feet) 121

DATE DRILLED 3/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-P2B

PAGE 2 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 			SPT RESISTANCE 			COMP. STRENGTH (TSF) 		
				20	40	60				1	2	3
	CLAY (Cont'd.)		Not Frozen									
62	SILT-CLAY - medium brownish grey - trace of very fine sand											
64												
66	CLAY - dark grey - silty - medium to high plastic											
68												
70	SILT-SAND - medium dark grey - very fine, uniform											
72												
74	SAND - medium grey - trace to some silt - very fine grained											
76												
78												
80												
82												
84												
86												
88	- trace of silt - organic - pieces of wood											
90												



ICE THICKNESS (feet) 5.9

WATER DEPTH (feet) 28.5

FINAL DEPTH (feet) 121

DATE DRILLED 3/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-P2B

PAGE 3 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)						SPT RESISTANCE	
				20 40 60							
				COMP. STRENGTH (TSF)							
				1 2 3							
92	SAND (Cont'd.)		Not Frozen								
94											
96											
98											
100											
102											
104	- some silt to silty										
106											
108											
110											
112	- more organics (wood)										
114	- trace of organics										
116											
118	- silty										
120	END OF HOLE @ 121 ft.										



ICE THICKNESS (feet) 5.7

WATER DEPTH (feet) 28.5

FINAL DEPTH (feet) 121

DATE DRILLED 3/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-P2B

PAGE 4 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 					
				SPT RESISTANCE 			COMP. STRENGTH (TSF) 		
				20	40	60	1	2	3
7 746 600 mN x 543 880 mE									
ICE									
2									
4									
6	WATER								
8									
10									
12									
14									
16									
18									
20									
22									
24									
26									
28	CLAY		Not Frozen						
30	- medium grey - silty								



ICE THICKNESS (feet) 5.6

WATER DEPTH (feet) 28.0

FINAL DEPTH (feet) 121

DATE DRILLED 4/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-P2C

PAGE 1 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 						SPT RESISTANCE 
				COMP. STRENGTH (TSF) 						
				20	40	60				
				1	2	3				
32	CLAY (Cont'd.) - low plastic		Not Frozen							
34	- some thin silt laminations									
36										
38										
40	- thinly interbedded with silt-clay									
42										
44										
46										
48										
50	- medium to dark grey - low plastic									
52	- some thin interbeds of silt									
54										
56										
58	- some shells									
60										



ICE THICKNESS (feet) 5.6

WATER DEPTH (feet) 28.0

FINAL DEPTH (feet) 121

DATE DRILLED 4/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-P2C

PAGE 2 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 					
				SPT RESISTANCE 					
				20	40	60			
				COMP. STRENGTH (TSF) 					
				1	2	3			
62	CLAY (Cont'd.)		Not Frozen						
64									
66	- dark grey								
	- silty								
	- medium plastic								
68									
70									
72	- some sand								
74									
76	SAND-SILT								
	- black								
	- fine grained, uniform								
	- organic odour								
78									
80	SILT-SAND								
	- medium grey								
	- very fine, uniform								
82									
84	SAND								
	- medium grey								
	- very fine grained, uniform								
	- silty								
86									
88									
90									



ICE THICKNESS (feet) 5.6

WATER DEPTH (feet) 28.0

FINAL DEPTH (feet) 121

DATE DRILLED 4/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-P2C

PAGE 3 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)												SPT RESISTANCE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
				20												40			60																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
				COMP. STRENGTH (TSF)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
				1												2			3																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
92	SAND (Cont!d.)		Not Frozen																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								



ICE THICKNESS (feet) 5.6

WATER DEPTH (feet) 28.0

FINAL DEPTH (feet) 121

DATE DRILLED 4/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-P2C

PAGE 4 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 					
				SPT RESISTANCE 					
				20	40	60			
				COMP. STRENGTH (TSF) 					
				1	2	3			
2	ICE								
4									
6	WATER								
8									
10									
12									
14									
16									
18									
20									
22									
24									
26									
28	CLAY		Not						
	- medium grey		Frozen						
	- silty								
30	- medium plastic								



ICE THICKNESS (feet) 5.3

WATER DEPTH (feet) 27.5

FINAL DEPTH (feet) 121

DATE DRILLED 4/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-P2D

PAGE 1 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 						SPT RESISTANCE 					
				20		40		60							
				COMP. STRENGTH (TSF) 											
				1		2		3							
32	CLAY (Cont'd.)		Not Frozen												
34	- some thin laminations of silt and black organics														
36															
38															
40															
42	- medium to dark grey														
44															
46															
48															
50	- low plastic														
52															
54															
56															
58	- thinly interbedded with silt-clay														
60															



ICE THICKNESS (feet) 5.3

WATER DEPTH (feet) 27.5

FINAL DEPTH (feet) 121

DATE DRILLED 4/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-P2D

PAGE 2 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)						SPT RESISTANCE						
				20 40 60						20 40 60						
				COMP. STRENGTH (TSF)												
				1 2 3												
62	CLAY (Cont'd.)		Not Frozen													
64																
66																
68																
70																
72	SAND - dark grey to black - silty - fine to medium grained - organic odour															
74	SAND - medium grey - some silt - fine grained, uniform															
76																
78	SILT - dark grey - sandy, dense															
80																
82	SAND - medium grey - very silty - fine grained, uniform															
84																
86																
88																
90																



ICE THICKNESS (feet) 5.3

WATER DEPTH (feet) 27.5

FINAL DEPTH (feet) 121

DATE DRILLED 4/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-P2D

PAGE 3 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)					
				SPT RESISTANCE			COMP. STRENGTH (TSF)		
				20	40	60	1	2	3
92	SAND (Cont'd.) - very fine grained, uniform		Not Frozen						
94	- silty								
96									
98									
100									
102									
104									
106	- medium grey - silty - very fine grained, uniform								
108									
110									
112									
114	- medium grey brown - some silt								
116									
118									
120	- trace of gravel - END OF HOLE @ 121 ft.								



ICE THICKNESS (feet) 5.3

WATER DEPTH (feet) 27.5

FINAL DEPTH (feet) 121

DATE DRILLED 4/4/76

TECHNICIAN JK

REGION Arnak

HOLE No.

76-L30-P2D

PAGE 4 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION 7 755 705mN x 525 580 mE	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ●						▲
				SPT RESISTANCE						
				20	40	60	COMP. STRENGTH (TSF)			
				1	2	3				■
2	ICE									
4										
6										
8	WATER									
10										
12										
14										
16										
18										
20										
22										
24										
26										
28										
30										



ICE THICKNESS (feet) 5.9

WATER DEPTH (feet) 39.4

FINAL DEPTH (feet) 117

DATE DRILLED 30/3/76

TECHNICIAN JK

REGION Isserk

HOLE No.

76-B15-16

PAGE 1 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)					
				SPT RESISTANCE			COMP. STRENGTH (TSF)		
				20	40	60	1	2	3
32	WATER (cont'd)								
34									
36									
38									
40	CLAY - medium grey - silty - medium to high plastic - stiff - low plastic - trace of black organics - siltier with depth - medium brownish grey - silty - medium plastic - low plastic - some thin laminations of silt-sand		Not Frozen						
42									
44									
46									
48									
50									
52									
54									
56									
58									
60									



ICE THICKNESS (feet) 5.9

WATER DEPTH (feet) 39.4

FINAL DEPTH (feet) 117

DATE DRILLED 30/2/76

TECHNICIAN JK

REGION Isserk

HOLE No.

76-B15-16

PAGE 2 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ●						SPT RESISTANCE ▲						
				20		40		60								
				COMP. STRENGTH (TSF) ■												
				1	2	3				1	2	3				
62	CLAY (cont'd) - thick laminations of silt-clay		Not Frozen													
64																
66																
68	- medium grey - silty - medium plastic															
70																
72																
74	- medium to high plastic															
76	SILT-CLAY - medium grey - some fine sand - very slight trace of gravel															
78																
80	SILT - medium grey - sandy - some clay - laminated with silty clay															
82																
84																
86	SAND-SILT - very fine, uniform - interbedded with silty clay		Assumed Frozen													
88																
90																



ICE THICKNESS (feet) 5.9

WATER DEPTH (feet) 39.4

FINAL DEPTH (feet) 117

DATE DRILLED 30/2/76

TECHNICIAN JK

REGION Isserk

HOLE No.

76-B15-16

PAGE 3 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)						①
				SPT RESISTANCE						▲
				20	40	60	COMP. STRENGTH (TSF)			☐
				1	2	3				
92	SAND-SILT (cont'd) - medium brown - very fine uniform		Assumed Frozen							
94	SAND - medium brown - fine grained	X								
96	- silty									
98										
100	- some silt									
102										
104										
106										
108	- silty									
110										
112										
114										
116										
118	END OF HOLE @ 117									
120										



ICE THICKNESS (feet) 5.9

WATER DEPTH (feet) 39.4

FINAL DEPTH (feet) 117

DATE DRILLED 30/2/76

TECHNICIAN JK

REGION Isserk

HOLE No.

76-B15-16

PAGE 4 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ● ▲					
				SPT RESISTANCE			COMP. STRENGTH (TSF) ☐		
				20	40	60	1	2	3
	7 755 545 mN x 526 340 mE								
	ICE								
2									
4									
6	WATER								
8									
10									
12									
14									
16									
18									
20									
22									
24									
26									
28									
30									



ICE THICKNESS (feet) 5.6

WATER DEPTH (feet) 37.9

FINAL DEPTH (feet) 121

DATE DRILLED 29/3/76

TECHNICIAN JK

REGION Isserk

HOLE No.

76-B15-17

PAGE 1 OF 5

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM - 1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)			SPT RESISTANCE		
				20	40	60			
				COMP. STRENGTH (TSF)					
				1	2	3			
32	WATER (cont'd)								
34									
36									
38									
40	CLAY - medium grey - very silty - low plastic - thin silt laminations - medium plastic		Not Frozen						
42									
44									
46									
48									
50									
52									
54									
56									
58									
60									



ICE THICKNESS (feet) 5.6

WATER DEPTH (feet) 37.9

FINAL DEPTH (feet) 121

DATE DRILLED 29/3/76

TECHNICIAN JK

REGION Isserk

HOLE No.

76-B15-17

PAGE 2 OF 5

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 						SPT RESISTANCE 
				SPT RESISTANCE						
				20	40	60				
				COMP. STRENGTH (TSF) 						
				1	2	3				
62	CLAY (cont'd)		Not Frozen							
64										
66										
68										
70										
72										
74										
76										
78										
80										
82										
84										
86										
88										
90										

- dark grey

- silty

- organic (pieces of wood)

- medium to high plastic

- dark grey
- silty
- organic (pieces of wood)
- medium to high plastic



ICE THICKNESS (feet) 5.6

WATER DEPTH (feet) 37.9

FINAL DEPTH (feet) 121

DATE DRILLED 29/3/76

TECHNICIAN JK

REGION Isserk

HOLE No.

76-B15-17

PAGE 3 OF 5

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ● ▲					
				SPT RESISTANCE			COMP. STRENGTH (TSF)		
				20	40	60	1	2	3
92	CLAY (cont'd)		Not Frozen						
94	SILT		Frozen						
	- medium grey brown		Nbe						
	- sandy (fine grained uniform)								
96	- trace to some gravel								
98	SAND		Nbe						
	- medium to dark grey brown		Nbn						
	- fine, uniform, silty								
100	- medium brown								
	- very fine								
102	- interbedded with medium grey brown silt-clay								
104									
	- some very fine sand								
106									
108									
110									
112									
114	- trace of fine gravel								
116									
118									
120	CLAY- silty								
	SAND								



ICE THICKNESS (feet) 5.6

WATER DEPTH (feet) 37.9

FINAL DEPTH (feet) 121

DATE DRILLED 29/3/76

TECHNICIAN JK

REGION Isserk

HOLE No.

76-B15-17

PAGE 4 OF 5

[illegible]

FINAL DEPTH (feet) 121

REGION	Isserk
--------	--------

PAGE 5 OF 5

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)												SPT RESISTANCE	▲																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
				20												40												60												COMP. STRENGTH (TSF)												■																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
				1												2												3																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
2	ICE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	



ICE THICKNESS (feet) 5.7

WATER DEPTH (feet) 36.0

FINAL DEPTH (feet) 81

DATE DRILLED 9/4/76

TECHNICIAN JK

REGION Isserk

HOLE No.

76-B15-20

PAGE 1 OF 3

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 					
				SPT RESISTANCE 					
				20	40	60	COMP. STRENGTH (TSF) 		
				1	2	3			
32	WATER (cont'd)								
34									
36									
38	CLAY - medium grey - silty - medium plastic		Not Frozen						
40									
42									
44	- thin interbeds of clay-silt - trace of organics - low plastic								
46									
48									
50									
52									
54									
56									
58									
60									



ICE THICKNESS (feet) 5.7

WATER DEPTH (feet) 36.0

FINAL DEPTH (feet) 81

DATE DRILLED 9/4/76

TECHNICIAN JAK

REGION Isserk

HOLE No.

76-B15-20

PAGE 2 OF 3

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)					SPT RESISTANCE								
				20			40		60		COMP. STRENGTH (TSF)	1	2	3			
62	CLAY (cont'd)		Not Frozen														
64	- medium to dark grey																
66	- medium plastic																
68																	
70																	
72	SILT-SAND																
74	- medium grey		Frozen														
76	SAND		Nbe														
78	- medium grey																
80	- some silt to trace of silt																
82	- fine grained																
84			Nbe														
86	- trace of silt																
88	END OF HOLE @ 81'																
90	(rig break down short hole)																



ICE THICKNESS (feet) 5.7

WATER DEPTH (feet) 36.0

FINAL DEPTH (feet) 81

DATE DRILLED 9/4/76

TECHNICIAN JAK

REGION Isserk

HOLE No.

76-B15-20

PAGE 3 OF 3

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 					
				SPT RESISTANCE 					
				20	40	60	COMP. STRENGTH (TSF) 		
	7 754 795 mN x 526 725 mE			1	2	3			
2	ICE								
4									
6									
8	WATER								
10									
12									
14									
16									
18									
20									
22									
24									
26									
28									
30									



ICE THICKNESS (feet) 5.9

WATER DEPTH (feet) 36.4

FINAL DEPTH (feet) 97

DATE DRILLED 9/4/76

TECHNICIAN JAK

REGION Isserk

HOLE No.

76-B15-21

PAGE 1 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 					
				SPT RESISTANCE 					
				COMP. STRENGTH (TSF) 					
				20	40	60			
				1	2	3			
32	WATER (cont'd)								
34									
36									
38	CLAY		Not Frozen						
40	- medium grey								
	- silty								
	- low to medium plastic								
	- trace of shells and organics								
42									
44									
46									
48	- medium plastic								
	- trace of fine gravel @ 45'								
50									
52									
54									
56									
58									
60									



ICE THICKNESS (feet) 5.9

WATER DEPTH (feet) 36.4

FINAL DEPTH (feet) 97

DATE DRILLED 9/4/76

TECHNICIAN JAK

REGION Isserk

HOLE No.

76-B15-21

PAGE 2 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)						SPT RESISTANCE											
				20						40						60					
				1						2						3					
62	CLAY (cont'd)		Not Frozen																		
64																					
66																					
68																					
70	SAND-SILT - medium grey - fine grained		Frozen Nbe																		
72																					
74	SAND - medium brownish grey - some silt																				
76	- gravelly from 77' - 79' 2" maximum																				
78																					
80	SAND-SILT - dark grey - clayey		Nbe																		
82																					
84																					
86																					
88	SAND - medium brown - silty - fine grained		Nbe-Nbn																		
90																					



ICE THICKNESS (feet)	5.9
WATER DEPTH (feet)	36.4
FINAL DEPTH (feet)	97

DATE DRILLED	9/4/76
TECHNICIAN	JAK
REGION	Isserk

HOLE No.	76-B15-21
PAGE	3 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)						SPT RESISTANCE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
				20						40						60																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
				COMP. STRENGTH (TSF)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
				1						2						3																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
92	SAND (cont'd)		Frozen Nbn																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									



ICE THICKNESS (feet) 5.9

WATER DEPTH (feet) 36.4

FINAL DEPTH (feet) 97

DATE DRILLED 9/4/76

TECHNICIAN JAK

REGION Isserk

HOLE No.

76-B15-21

PAGE 4 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION 7 754 645 mN x 526 575 mE	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 											
				SPT RESISTANCE 											
				COMP. STRENGTH (TSF) 											
				20			40			60					
				1			2			3					
2	ICE														
4															
6	WATER														
8															
10															
12															
14															
16															
18															
20															
22															
24															
26															
28															
30															



ICE THICKNESS (feet) 5.0

WATER DEPTH (feet) 35.9

FINAL DEPTH (feet) 113

DATE DRILLED 8/4/76

TECHNICIAN JK

REGION Isserk

HOLE No.

76-B15-22

PAGE 1 OF 4

IMPERIAL OIL LIMITED
BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)			SPT RESISTANCE		
				20	40	60	COMP. STRENGTH (TSF)		
						1	2	3	
32	WATER (cont'd)								
34									
36									
38	CLAY		Not Frozen						
40	- light to medium grey - silty - soft - medium plastic								
42	- trace of organics								
44	- medium grey - some thin laminations of silty sand - low plastic - hard								
46									
48									
50	- medium to dark grey - very silty								
52	- some thick laminations of medium grey silt								
54									
56	- dark grey - trace of shells - trace of fine sand								
58									
60									



ICE THICKNESS (feet) 5.0

WATER DEPTH (feet) 35.9

FINAL DEPTH (feet) 113

DATE DRILLED 8/4/76

TECHNICIAN JK

REGION	Isserk
--------	--------

HOLE No.

76-B15-22

PAGE 2 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)			SPT RESISTANCE	20	40	60	COMP. STRENGTH (TSF)	1	2	3
	CLAY (cont'd)		Not Frozen											
62	SAND													
	- dark grey to black													
	- fine grained, uniform													
64	- some silt													
66	- trace of silt	X												
	- trace of fine gravel													
68														
70	SILT													
	- medium to dark grey													
	- trace of sand													
72	- non plastic													
	SAND-SILT													
	- medium grey													
74	- very fine grained													
76	SAND													
	- medium grey													
	- gravelly (3/8" - 1")													
78	- some silt		Frozen											
	- gap graded													
	- fine grained, uniform													
80	- some thin silt interbeds													
	SAND-SILT													
	- dark grey to black													
82	- fine grained uniform	X												
	- thick laminations of													
	dark grey to black clay-silt													
84														
86														
88														
90														



ICE THICKNESS (feet) 5.0

WATER DEPTH (feet) 35.9

FINAL DEPTH (feet) 113

DATE DRILLED 8/4/76

TECHNICIAN JK

REGION Isserk

HOLE No.

76-B15-22

PAGE 3 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 						SPT RESISTANCE 					
				20			40			60					
				COMP. STRENGTH (TSF) 											
				1	2	3	4	5	6	7	8	9	10	11	12
92	SAND-SILT (cont'd)		Frozen												
94	SAND - medium to dark grey brown - trace of silt - fine grained, uniform		Nbe												
96															
98	CLAY - medium grey - silty		Clay is still plastic												
100	- trace of organics - some thick sand laminations		Sand - Nbe												
102															
104															
106	SAND-SILT - medium brown - fine grained, uniform		Nbe												
108															
110															
112															
114	END OF HOLE @ 113'														
116															
118															
120															

Clay
Sand



ICE THICKNESS (feet) 5.0

WATER DEPTH (feet) 35.9

FINAL DEPTH (feet) 113

DATE DRILLED 8/4/76

TECHNICIAN JK

REGION Isserk

HOLE No.

76-B15-22

PAGE 4 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ● ▲						
				SPT RESISTANCE						
				20 40 60						
				COMP. STRENGTH (TSF) ■						
				1 2 3						
	ICE									
2										
4										
6	WATER									
8										
10										
12										
14										
16										
18										
20										
22										
24										
26										
28										
30										



ICE THICKNESS (feet)	5.2
WATER DEPTH (feet)	43.6
FINAL DEPTH (feet)	90.5

DATE DRILLED	28/3/76
TECHNICIAN	JK
REGION	Isserk

HOLE No.	76-70-6
PAGE	1 OF 3

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 			SPT RESISTANCE 		
				20	40	60	COMP. STRENGTH (TSF) 		
				1	2	3	1	2	3
32	WATER (cont'd)								
34									
36									
38									
40									
42									
44									
46			Not Frozen						
48									
50									
52									
54									
56									
58									
60									



ICE THICKNESS (feet) 5.2

WATER DEPTH (feet) 43.6

FINAL DEPTH (feet) 90.5

DATE DRILLED 28/3/76

TECHNICIAN JK

REGION Isserk

HOLE No.

76-70-6

PAGE 2 OF 3

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 			SPT RESISTANCE 		
				20	40	60	20	40	60
				COMP. STRENGTH (TSF) 			1	2	3
62	CLAY-SILT (cont'd)		Not Frozen						
64	SAND-SILT								
	- medium grey								
	- fine, uniform								
66									
68									
70									
72	SILT		Frozen						
	- medium to dark grey		Nbn						
	- trace of clay								
	- non plastic								
	- trace of coarse sand								
74									
76	SAND-SILT								
	- medium grey brown		Nbe-Nbn						
78									
80									
82									
84									
86									
88	- thickly laminated								
90	END OF HOLE @ 90.5								



ICE THICKNESS (feet)	5.2
WATER DEPTH (feet)	43.6
FINAL DEPTH (feet)	90.5

DATE DRILLED	28/3/76
TECHNICIAN	JK
REGION	Isserk

HOLE No.	76-70-6
PAGE 3 OF 3	

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)						SPT RESISTANCE				
				20			40			60				
				COMP. STRENGTH (TSF)										
				1	2	3								
	ICE													
2														
4														
6														
	WATER													
8														
10														
12														
14														
16														
18														
20														
22														
24														
26														
28														
30														



ICE THICKNESS (feet) 6.2

WATER DEPTH (feet) 42.8

FINAL DEPTH (feet) 108

DATE DRILLED 27/3/76

TECHNICIAN JK

REGION Isserk

HOLE No.

76-53-6

PAGE 1 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ●						▲	□
				SPT RESISTANCE							
				20	40	60	COMP. STRENGTH (TSF)				
				1	2	3					
32	WATER (cont'd)										
34											
36											
38											
40											
42											
44	CLAY - medium grey - silty - low plastic		Not Frozen								
46											
48											
50		✕									
52		- thin laminations of grey brown silty sand									
54											
56		▬▬									
58											
60	SILT										



ICE THICKNESS (feet)	6.2
WATER DEPTH (feet)	42.8
FINAL DEPTH (feet)	108

DATE DRILLED	27/3/76
TECHNICIAN	JK
REGION	Isserk

HOLE No.	76-53-6
PAGE	2 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)			SPT RESISTANCE	20	40	60	COMP. STRENGTH (TSF)	1	2	3
62	SILT (cont'd) - medium grey - some sand to sandy		Not Frozen											
64														
66	SAND-SILT - medium to dark grey - very fine sand with thin laminations of organic black silt	X												
68														
70	CLAY- medium to dark grey - silty - low plastic		Frozen Nbn											
72	SILT - medium grey - sandy, trace of clay													
74														
76	SAND-SILT - very fine													
78	CLAY - medium to dark grey - silty - low plastic - trace of fine gravel		Vx - trace											
80														
82														
84	SAND-SILT - medium brown - very fine grained - bedded with dark grey silt-clay													
86			Nbe-Nbn Vs 30% 3" lense											
88														
90	- thickly laminated with medium brown sand	X												



ICE THICKNESS (feet) 6.2

WATER DEPTH (feet) 42.8

FINAL DEPTH (feet) 108

DATE DRILLED 27/3/76

TECHNICIAN JK

REGION Isserk

HOLE No.

76-53-6

PAGE 3 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM - 1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)			SPT RESISTANCE			COMP. STRENGTH (TSF)		
				20	40	60	1	2	3	1	2	3
92	SAND-SILT (cont'd)		Frozen Vs 50%									
94												
96	CLAY-SILT - medium grey - low plastic		Nbn									
98												
100												
102	SAND - medium brown - fine, uniform - some silt to silty		Nbn									
104												
106												
108	- silty											
110	END OF HOLE @ 108'											
112												
114												
116												
118												
120												



ICE THICKNESS (feet) 6.2

WATER DEPTH (feet) 42.8

FINAL DEPTH (feet) 108

DATE DRILLED 27/3/76

TECHNICIAN JK

REGION Isserk

HOLE No.

76-53-6

PAGE 4 OF 4

IMPERIAL OIL LIMITED

BEAUFORT. SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 						
				SPT RESISTANCE						
				20	40	60	COMP. STRENGTH (TSF) 			
	7 754 485 mN x 522 770 mE			1	2	3				
	ICE									
2										
4										
6	WATER									
8										
10										
12										
14										
16										
18										
20										
22										
24										
26										
28										
30										



ICE THICKNESS (feet) 5.6

WATER DEPTH (feet) 35.7

FINAL DEPTH (feet) 121

DATE DRILLED 1/4/76

TECHNICIAN JK

REGION Isserk

HOLE No.

76-H20-1

PAGE 1 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 						
				SPT RESISTANCE						
				20	40	60				
				COMP. STRENGTH (TSF) 						
				1	2	3				
32	WATER (cont'd)									
34										
36	CLAY		Not Frozen							
38	- medium grey									
	- very silty									
	- low plastic									
	- trace of organics									
40	- some medium grey brown silt laminations									
42										
44	SILT									
	- medium grey brown									
	- thinly bedded with dark grey organic silt-clay									
46	- non plastic									
48										
50	- some clay									
52	CLAY-SILT									
	- medium grey									
	- thinly interbedded with low plastic silty clay									
54										
56	SILT- medium grey									
	- sandy									
58	- trace to some fine to medium gravel									
	SAND- medium grey									
60	- silty, very fine									



ICE THICKNESS (feet) 5.6

WATER DEPTH (feet) 35.7

FINAL DEPTH (feet) 121

DATE DRILLED 1/4/76

TECHNICIAN JK

REGION Isserk

HOLE No.

76-H20-1

PAGE 2 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)			SPT RESISTANCE	20	40	60	COMP. STRENGTH (TSF)	1	2	3
62	CLAY- dark grey to black - silty - organic, trace of roots & shells		Not Frozen											
64	SILT- medium grey brown - sandy (very fine) - some clay													
66		X												
68	SAND-SILT - medium grey - very fine, uniform - loose - thin interbeds of dark grey to black, clayey, sandy silt													
70														
72	CLAY-SILT - dark grey - sandy - low plastic													
74		X												
76														
78														
80														
82														
84	- thinly interbedded with medium grey sandy silt													
86														
88	- low plastic - sandy - massive, stiff													
90														



ICE THICKNESS (feet) 5.6

WATER DEPTH (feet) 35.7

FINAL DEPTH (feet) 121

DATE DRILLED 1/4/76

TECHNICIAN JK

REGION Isserk

HOLE No.

76-H20-1

PAGE 3 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)			SPT RESISTANCE	▲
				20	40	60		
				COMP. STRENGTH (TSF)			■	
				1	2	3		
	CLAY-SILT (cont'd)		Not Frozen					
92	- trace of sand							
	- low to medium plastic							
94								
	- low plastic							
96								
98	SAND		Frozen					
	- medium grey brown		Nbe					
	- silty							
100	- very fine, uniform							
102			Appears to					
			have frozen					
104			and unfrozen					
			zones					
106								
108								
110								
112								
114								
116								
118								
120	END OF HOLE @ 121 Ft.		Nbe					



ICE THICKNESS (feet)	5.6
WATER DEPTH (feet)	35.7
FINAL DEPTH (feet)	121

DATE DRILLED	1/4/76
TECHNICIAN	JK
REGION	Isserk

HOLE No.	76-H20-1
PAGE	4 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 						COMP. STRENGTH (TSF) 
				SPT RESISTANCE						
				20	40	60	1	2	3	
7	753 450 mN x 525 150 mE									
2	ICE									
4										
6										
6	WATER									
8										
10										
12										
14										
16										
18										
20										
22										
24										
26										
28										
30										



ICE THICKNESS (feet) 5.9

WATER DEPTH (feet) 34.6

FINAL DEPTH (feet) 121

DATE DRILLED 31/3/76

TECHNICIAN JK

REGION Isserk

HOLE No.

76-H25-1

PAGE 1 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ● ▲		
				SPT RESISTANCE		
				20	40	60
				COMP. STRENGTH (TSF) ■		
				1	2	3
32	WATER (cont'd)					
34						
36	CLAY		Not Frozen			
	- medium grey					
	- silty					
	- medium plastic					
38						
	- thin laminations of medium brown silt					
40	- trace of organics					
42						
44						
46	CLAY-SILT					
	- medium grey					
	- low plastic					
48	- trace of organics					
50	CLAY					
	- medium brownish grey					
	- silty					
	- low plastic					
52	- a few thick clay-silt laminations					
54	- trace of very fine sand					
56						
58	SAND					
	- medium grey					
	- trace to some silt					
	- trace of fine gravel					
60	- fine grained					



ICE THICKNESS (feet) 5.9

WATER DEPTH (feet) 34.6

FINAL DEPTH (feet) 121

DATE DRILLED 31/3/76

TECHNICIAN JK

REGION Isserk

HOLE No.

76-H25-1

PAGE 2 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%)			SPT RESISTANCE	20	40	60	COMP. STRENGTH (TSF)	1	2	3
62	SAND (cont'd)		Not Frozen											
64	CLAY - medium grey - very silty - trace to some fine sand - low plastic													
66	SILT - medium grey brown - trace to some fine sand - some clay													
68														
70														
72														
74	- interbedded with thick, dark grey, organic sand, silt layers													
76														
78														
80	SAND - medium brown - some silt - fine grained													
82														
84														
86														
88														
90														



ICE THICKNESS (feet) 5.9

WATER DEPTH (feet) 34.6

FINAL DEPTH (feet) 121

DATE DRILLED 31/3/76

TECHNICIAN JK

REGION Isserk

HOLE No.

76-H25-1

PAGE 3 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 					
				SPT RESISTANCE 					
				20	40	60			
				COMP. STRENGTH (TSF) 					
				1	2	3			
	SAND (cont'd)		Not Frozen						
92	- very fine grained								
94									
96									
98									
100									
102									
104									
106									
108									
110									
112									
114									
116									
118									
120	END OF HOLE @ 121 Feet								



ICE THICKNESS (feet) 5.9

WATER DEPTH (feet) 34.6

FINAL DEPTH (feet) 121

DATE DRILLED 31/3/76

TECHNICIAN JK

REGION Isserk

HOLE No.

76-H25-1

PAGE 4 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) 					
				SPT RESISTANCE 					
				20	40	60			
	7 746 650 mN x 532 715 mE			COMP. STRENGTH (TSF) 					
				1	2	3			
2	ICE								
4									
6	WATER								
8									
10									
12									
14									
16									
18									
20									
22									
24	CLAY- medium grey		Not Frozen						
26	- silty								
28	- low to medium plastic								
30	SILT- medium grey brown								
	- low plastic								
	- clayey								
	- some thin laminations of								
	silty clay & organics								



ICE THICKNESS (feet) 5.4

WATER DEPTH (feet) 23.5

FINAL DEPTH (feet) 95

DATE DRILLED 2/4/76

TECHNICIAN JK

REGION Isserk

HOLE No.

76-2120

PAGE 1 OF 4

IMPERIAL OIL LIMITED

BEAUFORT SEA DRILLING PROGRAM-1976

DEPTH (feet)	SOIL DESCRIPTION	SAMPLE	GROUND ICE CONDITION	MOISTURE CONTENT (%) ●				SPT RESISTANCE ▲			
				20 40 60				2 3			
				COMP. STRENGTH (TSF) ■							
32	SILT (cont'd)	X	Not Frozen								
34											
36											
38	- clayey - thin interbeds of clay-silt										
40		X									
42											
44	SILT-CLAY - medium grey - low plastic										
46											
48	SILT - medium brownish grey - some clay - non plastic - some thick clay-silt laminations	X									
50											
52											
54		X									
56	SAND-SILT - medium brown - very fine, uniform sand - trace to some, fine to coarse gravel										
58											
60	SAND										



ICE THICKNESS (feet) 5.4

WATER DEPTH (feet) 23.5

FINAL DEPTH (feet) 95

DATE DRILLED 2/4/76

TECHNICIAN JK

REGION Isserk

HOLE No.

76-2120

PAGE 2 OF 4

2721

ESSO

PROJECT: ESSO ARCTIC OFFSHORE - Winter 1980		HOLE NO.: 80-3		PROJECT NO.: 101-2721	
LOCATION: ALERK 7754094m N. X 582402m E.		SURFACE ELEVATION: Sealevel			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☒ CORE ☐ OTHER ☒ VIBRO		DRILL: MIDWEST SONIC			

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE	DEPTH (ft.)	WATER CONTENT-%		COMPRESSION STRENGTH	
					PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Torvane	Unconfined
0	WATER							
2								
4								
6								
8								
10								
12	CLAY (CL) - low plastic, moist, firm, dark grey - some sand layers and organic-rich strata	CL	G					
14	SAND (SP-SM) - fine grained, uniform, trace of silt and gravel up to 10mm	SP-SM	G					
16			G					
18	- a few thin silt layers	SP-SM	G					
20	- dense, clean	SP	G					
22	- difficult drilling indicating dense material		G					
24	- some silty zones	SM	G					
25.3	END OF HOLE at 25.3m							

	THICKNESS OF ICE: (m)	-	WET UNIT $\frac{KN}{m^3}$	16	18	20	22	10	20	30	40
	THICKNESS OF ICE AND WATER: (m)	11.3	WEIGHT-O P.C.F.	100	110	120	130	140	150	Dynamic Cone:	Nc - ☐
			COMPLETION DEPTH: (m)	25.3	DATE DRILLED:	20 March 1980					
		LOGGED BY:	PMR	DRAWING NO.:	1/1						

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO ARCTIC OFFSHORE - Winter 1980		HOLE NO.: 80-8		PROJECT NO.: 101-2721	
LOCATION: ALERK		SURFACE ELEVATION: Sealevel			
7754095m N. X 582934m E.		DRILL: MIDWEST SONIC			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☒ NO RECOVERY ☒ CORE ☐ OTHER					

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE	DEPTH (ft.)	WATER CONTENT-% ●		COMPRESSIVE STRENGTH								
					PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Torvane								
							Unconfined	Pocket Penetrometer							
					20	40	60	80	TSF .1	.2	.3	.4	.5		
					kPa		10	20	30	40					
2	WATER														
4															
6															
8															
10															
12	CLAY - dark grey, silty clay, low plastic N=0 - sand layers and shells	CL	☒												
14	SAND - uniform, grey, fine grained N=32		☒												
16	- fine, silty, shell fragment N=31	SM	☒												
18															
20															
22	- clean, uniform, fine, light to medium brown N=30 (No Recovery)	SP	☒												
24															
		SM-SP													

	THICKNESS OF ICE: (m)	-	WET UNIT $\frac{KN}{m^3}$	16	18	20	22	10	20	30	40
	THICKNESS OF ICE AND WATER: (m)	11.3	WEIGHT-O P.C.F.	100	110	120	130	140	150	Dynamic Cone:	Nc - ☐
		20.1	COMPLETION DEPTH: (m)	31.4	DATE DRILLED: 22 March 1980				Standard Penetration: N - ☒		
			LOGGED BY:	PMR	DRAWING NO.:				1/2		

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.



THICKNESS OF ICE AND WATER: (m) 11.3

Dynamic Cone: Nc - ☐
Standard Penetration: N - ☒

DATE
DRILLED: 22 March 1980

DRAWING NO.: 2/2

This log is a compilation of subsurface conditions and soil or rock classification obtained from the well as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO ARCTIC OFFSHORE - WINTER 1980		HOLE NO.: 80-13		PROJECT NO.: 101-2721	
LOCATION: ALERK 7753938mN. X 582930mE.		SURFACE ELEVATION: SEALEVEL			
DRILL: MIDWEST SONIC					
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☐ CORE ☐ OTHER					

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE	DEPTH (ft.)	WATER CONTENT-% ●				COMPRESSION STRENGTH			
					PLASTIC LIMIT (W _p)		LIQUID LIMIT (W _L)		Torvane		Unconfined	
									Pocket Penetrometer		TSF, 1	
								kPa				
2	WATER											
4												
6												
8												
10												
12	CLAY - silty, low plastic, trace of organics	CL										
14	SAND - uniform, light grey, fine-grained (N=27;no recovery)	SM-SP										
16	- uniform, fine, trace of silt, light brown (N=41;no recovery)											
18												
20	(N=34;no recovery)											
22	- as above											
24	(N=42;no recovery)	SP-SM										
	- uniform sand, trace of silt											

THICKNESS OF ICE: (m) -----

THICKNESS OF ICE AND WATER: (m) 11.6

2A.1

WET UNIT	16	18	20	22	10	20	30	40
	KN/m ³							
WEIGHT-O P.C.F.	100	110	120	130	140	150		
COMPLETION					DATE			
DEPTH: (m)	35.4				DRILLED: 25 March 1980			
LOGGED BY:	J.P.B.				DRAWING NO.: 1/2			

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO ARCTIC OFFSHORE - WINTER 1980		HOLE NO.: 80-13		PROJECT NO.: 101-2721								
LOCATION: ALERK 7753938mN x 582930mE.		SURFACE ELEVATION: SEALEVEL										
DRILL: MIDWEST SONIC												
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☐ CORE ☐ OTHER												
DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (m.)	WATER CONTENT-%		COMPRESSIVE STRENGTH						
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Torvane Unconfined Pocket Penetrometer TSF .1 .2 .3 .4 .5 kPa 10 20 30 40						
26	SAND - light grey, uniform, trace of silt - 0.3m layer of silt - clean, uniform, fine-grained - clean to trace of silt - no recovery	SP-SH	G									
			G									
28			G									
			ML									
			SP									
30			G									
32			G									
34		SP-SH	G									
36	END OF HOLE at 35.4m											
38												
40												
42												
44												
46												
48												
 THICKNESS OF ICE: (m) ----- THICKNESS OF ICE AND WATER: (m) 11.6		WET UNIT $\frac{kN}{m^3}$		16	18	20	22	10	20	30	40	
		WEIGHT-O P.C.F.		100	110	120	130	140	150	Dynamic Cone: Nc - ☐		
		COMPLETION DEPTH: (m)		35.4		DATE DRILLED: 25/26 March 1980						
		LOGGED BY:		J.P.B.		DRAWING NO.: 2/2						

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

3097

PROJECT: ESSO 1981 WINTER CORING PROGRAM		HOLE NO.: 81-4		PROJECT NO.: 101-3097	
LOCATION: WEST ATKINSON (Foundation Hole)		SURFACE ELEVATION: Sea Level			
UTM 7743436N 612772E		DRILL: Sonic			
SAMPLE TYPE: ☒ THIN WALLED TUBE		☒ SPLIT SPOON		☒ GRAB	
		☐ NO RECOVERY		☒ CORE	
				☐ OTHER	

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-%		COMPRESSIVE STRENGTH	
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲	Pocket Penetrometer..... Δ
				20 40 60 80		TSF 1 2 3 4 5	kPa 100 200 300 400
0	ICE						
2	WATER						
4							
6	NOTE: No ice or ice bonded sediments encountered						
8	CLAY - trace of silt, medium plastic, very soft, wet to moist, dark grey	cl					
10	- trace of black organics, very soft, dark grey						
12	No Recovery From Tube						
14	SPLIT SPOON - SAND, trace of silt, medium grained, damp, dark to medium brown	sp					
16	-medium grained, trace of coarse grained, clean, medium to dark brown						
18	-silty, some clay & organic streaks, fine grained, laminated, moist to wet						
20	NO RECOVERY						
22							
24	SILT - clayey to some clay, trace of gravel, laminated, low plastic, moist, dark grey	ml					

	THICKNESS OF ICE: (m) 1.5	WET UNIT $\frac{kN}{m^3}$ 16 18 20 22	Dynamic Cone: Nc - ☐
	THICKNESS OF ICE AND WATER: (m) 6.4	WEIGHT-O P.C.F. 100 110 120 130 140 150	Standard Penetration: N - ☒
COMPLETION DEPTH: (m) 51.8		DATE DRILLED: 23 March, 1981	
LOGGED BY: GL		DRAWING NO.: A-4a	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO - 1981 WINTER CORING PROGRAM		HOLE NO.: 81-4		PROJECT NO.: 101-3097	
LOCATION: WEST ATKINSON (Foundation Hole)		SURFACE ELEVATION: Sea Level			
UTM 7743436N 612772E		DRILL: Sonic			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☒ CORE ☐ OTHER					

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●	COMPRESSION STRENGTH
				PLASTIC LIMIT (W _p) LIQUID LIMIT (W _L) 20 40 60 80	Unconfined..... ▲ Pocket Penetrometer..... Δ TSF 1 2 3 4 5 kPa 100 200 300 400
19.6	26 SILT - clayey to some clay, trace of gravel, laminated, low plastic, moist, dark grey		60		
21.6	28 NO RECOVERY EVEN WITH CATCHER		70		
23.6	30 SAND - medium to fine grained, from A rods	sp	80		
25.6	32 SAND - medium to fine grained from A rods		90		
27.6	34 NO RECOVERY		100		
29.6	36 NO RECOVERY		110		
31.6	38 NO RECOVERY		120		
33.6	40 NO RECOVERY		130		
35.6	42 NO RECOVERY				
37.6	44 CLAY - silty to & SILT, trace of black organics & wood fragments, laminated, low to medium plastic, damp to moist, dark grey	cI			
39.6	46 SAND				
41.6					

	THICKNESS OF ICE: (m) 1.5	WET UNIT $\frac{kN}{m^3}$ 16 18 20 22	Dynamic Cone: Nc - ☐
	THICKNESS OF ICE AND WATER: (m) 6.4	WEIGHT-O P.C.F. 100 110 120 130 140 150	Standard Penetration: N - ☒
COMPLETION DEPTH: (m) 51.8		DATE DRILLED: 24 March, 1981	
LOGGED BY: GL		DRAWING NO.: A-4b	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM		HOLE NO.: 81-1		PROJECT NO.: 101-3097		
LOCATION: ITIYOK		SURFACE ELEVATION: Sea Level				
UTM 7760141N 534353E		DRILL: Sonic				
SAMPLE TYPE: ☒ THIN WALLED TUBE		☒ SPLIT SPOON		☐ GRAB		
		☐ NO RECOVERY		☐ CORE		
				☐ OTHER		
DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲ Pocket Penetrometer..... Δ TSF 1 2 3 4 5 kPa 100 200 300 400
0	ICE					
2	WATER					
4						
6						
8						
10						
12						
14	NOTE: No ice or ice bonded sediments encountered					
16	CLAY - silty, trace of shells & fine grained sand stringers, laminated, medium plastic, damp, dark grey	CL	0			
17.7	- trace of interlaminated organics	CL	10			
18.7	- increasing medium/fine grained sand lenses	CL	10			
20.7	- increasing silt	CL	20			
22.7	SAND - fine grained, occasional clay chunks	SP-SM	20			
23.7	- poorly graded	SP-SM	20			
24.7	- trace of silt, homogeneous, damp, dense, medium dark brown	SP-SM	30			
25.7	- some silt (silty clay lenses to 100 mm)	SP-SM	30			
26.7	- organic pockets & streaks	SP-SM	30			
27.7	- angular rock fragment to 30 mm	SP-SM	30			
		THICKNESS OF ICE: (m) 1.5		WET UNIT $\frac{kN}{m^3}$ 16 18 20 22		UNDRAINED SHEAR STRENGTH kilo Pascals
THICKNESS OF ICE AND WATER: (m) 14.3		COMPLETION DEPTH: (m) 45.1		DATE DRILLED: 12 April, 1981		
		LOGGED BY: GL		DRAWING NO.: B-2a		

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM		HOLE NO.: 81-1		PROJECT NO.: 101-3097	
LOCATION: ITIYOK UTM 7760141N 534353E		SURFACE ELEVATION: Sea Level			
DRILL: Sonic					
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☒ NO RECOVERY ☐ CORE ☐ OTHER					

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH						
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲	Pocket Penetrometer..... Δ	TSF ¹	2	3	4	5
				20	40	60	80	kPa	100	200	300	400
11.7	SAND (cont) - trace of clay, moist, compact, dark brown	SP-SM	36									
13.7			38									
15.7			40									
17.7			42									
19.7	- silty, trace of clay	SM-SC	44									
21.7			46									
23.7			48									
25.7			50									
27.7	- becoming cleaner & coarser grained	SP	52									
29.7			54									
31.7			56									
33.7			58									
35.7	- trace of silt, dense to very dense, damp	SP	60									
37.7			62									
39.7			64									
41.7			66									
43.7	- medium light brown	SP-SM	68									
45.7			70									
47.7			72									
49.7			74									
51.7	- uniform	SP-SM	76									
53.7			78									
55.7			80									
57.7			82									
59.7	CLAY - some silt, medium plastic, moist, dark grey	CL	84									
61.7	SAND - trace of silt, fine grained, uniform, compact, clean, medium to light brown	SP	86									
63.7			88									
65.7			90									
67.7			92									
69.7	- trace of silt, fine grained, trace of medium grained, occasional organic wisps, damp, dense	SP	94									
71.7			96									
73.7			98									
75.7			100									
77.7	- predominantly fine grained, trace of medium grained, uniform, dense, light brown	SP	102									
79.7			104									
81.7			106									
83.7			108									
85.7	END OF HOLE 45.1 m below sea level		110									
87.7			112									
89.7			114									
91.7			116									
93.7			118									
95.7			120									
97.7			122									
99.7			124									
101.7			126									
103.7			128									
105.7			130									
107.7			132									
109.7			134									
111.7			136									
113.7			138									
115.7			140									
117.7			142									
119.7			144									
121.7			146									
123.7			148									
125.7			150									

	THICKNESS OF ICE: (m) 1.5	WET UNIT $\frac{KN}{m^3}$ 16 18 20 22	UNDRAINED SHEAR STRENGTH kilo Pascals
	THICKNESS OF ICE AND WATER: (m) 14.3	WEIGHT-O P.C.F. 100 110 120 130 140 150	Mini-vane Res. Mini-vane + ◇
		COMPLETION DEPTH: (m) 45.1	DATE DRILLED: 12 April, 1981
		LOGGED BY: GL	DRAWING NO.: B-2b

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM		HOLE NO.: 81-2		PROJECT NO.: 101-3097	
LOCATION: ITIYOK UTM 7759766N 536595E		SURFACE ELEVATION: Sea Level			
DRILL: Sonic					
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☒ NO RECOVERY ☒ CORE ☐ OTHER					

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH	
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲	Pocket Penetrometer..... Δ
				20 40 60 80		TSF 1 2 3 4 5	kPa 100 200 300 400
0 - 1.1	ICE						
1.1 - 14.3	WATER						
14.3 - 16.0	CLAY - silty, trace of sand & shells, medium plastic, laminated, damp to moist, soft to very soft, dark grey	CL	0 - 10				
16.0 - 20.0	- increasing organics & interbedded medium grained sand lenses	CL	10 - 20				
20.0 - 22.0	- sand lenses	CL	20 - 30				
22.0 - 24.3	- organic streaks & pockets, medium plastic, damp, firm	CL	30 - 40				



THICKNESS OF ICE: (m) 1.1

THICKNESS OF ICE AND WATER: (m) 14.3

WET UNIT $\frac{kN}{m^3}$	16 18 20 22
WEIGHT-O P.C.F.	100 110 120 130 140 150
COMPLETION DEPTH: (m)	42.1
LOGGED BY:	GL
DATE DRILLED:	14 April, 1981
DRAWING NO.:	B-3a

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM		HOLE NO.: 81-2		PROJECT NO.: 101-3097								
LOCATION: ITIYOK		SURFACE ELEVATION: Sea Level										
UTM 7759766N 536595E		DRILL: Sonic										
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☒ NO RECOVERY ☒ CORE ☐ OTHER												
DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH						
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲ Pocket Penetrometer..... Δ TSF 1 2 3 4 5 kPa 100 200 300 400						
26	CLAY (cont) & SILT, trace of sand	CL	40	40	60							
28	& ORGANICS silty, trace of shells, spongy, soft, damp, black - trace of sand		40	40	60							
28	GRAVEL - rounded particles		40	40	60							
30	SAND - trace of silt & organics, fine to medium grained, damp, compact, black	SP	50	40	60							
32	- Lost Core											
34	- medium to fine grained, with occasional clay lenses, homogeneous, compact	SP	60	40	60							
36	- silty, trace of clay, fine grained		70	40	60							
38	- laminated with silty clay lenses (medium plastic), damp	SM SC	80	40	60							
40	- medium to dark brown		80	40	60							
42	- trace of silt, homogeneous, increase in density, damp, medium dark brown	SP SM	90	40	60							
42.1	END OF HOLE 42.1 m'below sea level											
44												
46												
48												
THICKNESS OF ICE: (m) 1.1 THICKNESS OF ICE AND WATER: (m) 14.3		WET UNIT $\frac{KN}{m^3}$		16	18	20	22	Dynamic Cone: Nc - ☐				
		WEIGHT-O P.C.F.		100	110	120	130	140	150	Standard Penetration: N - ☒		
		COMPLETION DEPTH: (m)		42.1						DATE DRILLED: 14 April, 1981		
LOGGED BY: GL								DRAWING NO.: B-3b				

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM		HOLE NO.: 81-3		PROJECT NO.: 101-3097	
LOCATION: ITIYOK UTM 7758671N 533823E		SURFACE ELEVATION: Sea Level			
DRILL: Sonic					
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☒ NO RECOVERY ☒ CORE ☐ OTHER					

DEPTH (m)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (m)	WATER CONTENT %		COMPRESSIVE STRENGTH				
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲ Pocket Penetrometer..... Δ TSF 1 2 3 4 5				
						kPa 100 200 300 400				
0.9	ICE									
2.9	WATER									
14.9	CLAY - silty, trace of shells & fine grained sand, laminated, medium plastic, damp, dark grey	CL	0							
16.9	- medium grained sand lenses		10							
18.9	- trace of sand wisps		20							
20.9	SAND - some silt, trace of clay, fine grained, dense, damp, dark grey	SM-SC	30							
22.9	- silty, trace of clay, fine grained, homogeneous, uniform, dark greyish brown									
24.9	- dense, moist									
	- medium grained clean sand lens (100 mm)									

	THICKNESS OF ICE: (m) 1.2	WET UNIT $\frac{kN}{m^3}$ 16 18 20 22	Dynamic Cone: Nc - ☐
	THICKNESS OF ICE AND WATER: (m) 13.1	WEIGHT-O P.C.F. 100 110 120 130 140 150	Standard Penetration: N - ☒
	COMPLETION DEPTH: (m) 45.1	DATE DRILLED: 14 April, 1981	
LOGGED BY: GL		DRAWING NO. B-4a	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM		HOLE NO.: 81-5		PROJECT NO.: 101-3097	
LOCATION: ITIYOK UTM 7761497M 535366E		SURFACE ELEVATION: Sea Level			
DRILL: Sonic					
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☐ CORE ☐ OTHER					

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-%		COMPRESSIVE STRENGTH	
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲	Pocket Penetrometer..... Δ
				20 40 60 80		TSF 1 2 3 4 5	kPa 100 200 300 400
0.0	ICE						
2.0	WATER						
16.0	CLAY - some silt to silty, trace of shells & organic streaks, laminated, medium plastic, damp	CL					
20.0	- white shells						
22.0	- irregular sand lenses & organic wisps						
24.0	SAND - silty, trace of clay lenses, fine grained, homogeneous, uniform, dense to very dense, medium dark greyish brown	SM					



THICKNESS OF ICE: (m) 1.2

THICKNESS OF ICE AND WATER: (m) 15.2

WET UNIT $\frac{kN}{m^3}$	16 18 20 22
WEIGHT-O P.C.F.	100 110 120 130 140 150
COMPLETION DEPTH: (m)	45.2
LOGGED BY:	GL

DATE DRILLED:	13 April, 1981
DRAWING NO.:	B-5a

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM		HOLE NO.: 81-5		PROJECT NO.: 101-3097	
LOCATION: ITIYOK UTH 7761497N 535366E		SURFACE ELEVATION: Sea Level			
SAMPLE TYPE: ☒ THIN WALLED TUBE		☒ SPLIT SPOON		☐ GRAB	
		☐ NO RECOVERY		☐ CORE	
				☐ OTHER	

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-%		COMPRESSIVE STRENGTH					
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲	Pocket Penetrometer..... Δ	TSF 1 2 3 4 5	kPa 100 200 300 400		
10.8	SAND (cont) - some silt, fine grained	SM	30								
32											
34											
36											
38											
40											
42											
44											
46											
48											
14.8	- some silt, trace of organics, predominantly fine grained, trace of medium grained, damp, very dense, dark brown - moist	SM	40								
42											
44											
46											
48											
50											
52											
54											
56											
58											
18.8	- silty, trace of clay, fine grained	SM-SC	60								
62											
64											
66											
68											
70											
72											
74											
76											
78											
22.8	- silty, fine grained, lens to 70 mm - fine grained, occasional organic & silt lenses, medium brown	SP	80								
82											
84											
86											
88											
90											
92											
94											
96											
98											
26.8	END OF HOLE 45.2 m below sea level		100								

	THICKNESS OF ICE: (m) 1.2	WET UNIT $\frac{KN}{m^3}$ 16 18 20 22	10 20 30 40
	THICKNESS OF ICE AND WATER: (m) 15.2	WET UNIT P.C.F. 100 110 120 130 140 150	Dynamic Cone: Nc - ☐
	COMPLETION DEPTH: (m) 45.2	DATE DRILLED: 13 April, 1981	Standard Penetration: N - ☒
	LOGGED BY: GL	DRAWING NO.: B-5b	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM		HOLE NO.: 81-6		PROJECT NO.: 101-3097	
LOCATION: ITIYOK (ISLAND CENTRE) UTM 7760142N 535365E		SURFACE ELEVATION: Sea Level			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☐ GRAB ☐ NO RECOVERY ☐ CORE ☐ OTHER		DRILL: Sonic			

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH				
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲ Pocket Penetrometer..... Δ TSF 1 2 3 4 5 kPa 100 200 300 400				
0 - 1.7	ICE									
1.7 - 5.7	WATER									
5.7 - 14.3	CLAY - some silt to silty, trace of white shells, finely laminated, medium plastic, wet becoming damp, medium to dark grey	CL	0 - 10							
14.3 - 22.7	SAND - trace of silt, fine grained, poorly graded, homogeneous, medium dark brown - damp, compact - dense to very dense, medium brown, organic wisps - trace of shells & clay lenses - black organics & rootlets	SP-SM	10 - 30							
22.7 - 24.3	CLAY - silty, sandy, some fibrous organics, moist	CL-ML	30 - 35							



THICKNESS OF ICE: (m) 0.8

THICKNESS OF ICE AND WATER: (m) 14.3

WET UNIT $\frac{kN}{m^3}$	16 18 20 22	UNDRAINED SHEAR STRENGTH Kilo Pascals Mini-vane Res. Mini-vane
WEIGHT-O P.C.F.	100 110 120 130 140 150	
COMPLETION DEPTH: (m)	45.1	DATE DRILLED: 11 April, 1981
LOGGED BY: GL		DRAWING NO.: B-6a

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM		HOLE NO.: 81-6		PROJECT NO.: 101-3097	
LOCATION: ITIYOK - (ISLAND CENTRE)		SURFACE ELEVATION: Sea Level			
UTM 7760142N 535365E		DRILL: Sonic			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☐ GRAB ☐ NO RECOVERY ☐ CORE ☐ OTHER					
DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : PLASTIC LIMIT (W _p) LIQUID LIMIT (W _L)	COMPRESSIVE STRENGTH Unconfined..... ▲ Pocket Penetrometer..... Δ TSF 1 2 3 4 5 kPa 100 200 300 400
11.7	SAND (cont) CLAY - silty, sandy, some fibrous organics, trace of shells, moist, soft, dark grey black				
26	- very soft, moist	CL-ML	40		
28	- trace of fine grained sand, medium plastic				
30					
32	ORGANICS - clayey, trace of wood chips & rootlets, moist to damp, black	OL-CL	60		
34	& CLAY some medium grained sand lenses, trace of shells, finely laminated				
36	SILT (till-like) - sandy, clayey, some rock fragments to 3 mm, angular, to 20 mm subround, damp, medium brown	ML	70		
38	SAND - silty (to 37.2 m) fine grained, homogeneous, damp, medium to light brown				
40	- dense	SP-SM	80		
42	- uniform				
44	- trace of silt				
46	- trace of silt, becoming finer grained, dense to very dense, damp, medium to dark brown				
48	END OF HOLE 45.1 m below sea level				
THICKNESS OF ICE: (m) 0.8 THICKNESS OF ICE AND WATER: (m) 14.3				WET UNIT $\frac{kN}{m^3}$ 16 18 20 22 WEIGHT-O P.C.F. 100 110 120 130 140 150 UNDRAINED SHEAR STRENGTH kilo Pascals Mini-vane Res. Mini-vane +	
COMPLETION DEPTH: (m) 45.1				DATE DRILLED: 11 April, 1981	
LOGGED BY: GL				DRAWING NO.: B-6b	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM				HOLE NO.: 81-7		PROJECT NO.: 101-3097	
LOCATION: ITIYOK UTM 7759561N 533796E				SURFACE ELEVATION: Sea Level			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☒ CORE ☐ OTHER				DRILL: Sonic			

DEPTH (m.)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH					
					PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	TSF 1 2 3 4 5					
					20	40	60	80	100	200	300	400
0.3	ICE											
2	WATER											
4												
6												
8												
10												
12												
14	Lost Drill Strings	UNFROZEN		0								
16												
18	CLAY - silty, some sand, trace of shell fragments, finely laminated, medium plastic, damp, dark grey		CL	10								
20	SAND - trace of silt, fine grained, homogeneous, damp, dense, medium brown - silty clay stringers, trace of shell - very dense		SP-SM	20								
22				30								
24	- dense											

	THICKNESS OF ICE: (m) 1.5	WET UNIT $\frac{kN}{m^3}$ 16 18 20 22	10 20 30 40
	THICKNESS OF ICE AND WATER: (m) 13.7	WEIGHT-O P.C.F. 100 110 120 130 140 150	Dynamic Cone: Nc - ☐
	COMPLETION DEPTH: (m) 41.1	DATE DRILLED: 15 April, 1981	Standard Penetration: N - ☒
LOGGED BY: GL		DRAWING NO.: B-7a	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM		HOLE NO.: 81-7		PROJECT NO.: 101-3097	
LOCATION: ITIYOK UTM 7759561N 533796E		SURFACE ELEVATION: Sea Level			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☐ CORE ☐ OTHER		DRILL: Sonic			

DEPTH (m.)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-%		COMPRESSIVE STRENGTH	
					PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲	Pocket Penetrometer..... Δ
					20	40	60	80
12.3	SAND (cont) - trace of silt - silty pockets, dark to medium grey - predominantly fine grained, trace of medium grained partings, very dense, moist, medium brown - some silt - Lost Drill Strings	UNFROZEN	SP	36				
26				40				
28								
16.3	SAND - trace of silt & clay, fine grained, dense to very dense, dark greyish brown - fine grained, loose, dark greyish brown (drilling indicates loose to 36.6 m.) - some silt - trace of silt pockets, fine grained, loose to compact, damp, dark greyish brown		SM	50				
30								
32								
34								
20.3				60				
36								
38								
24.3				70				
40								
26.3		ICE & SAND sand bonded Nbe		80				
42								
28.3	END OF HOLE 41.1 m below sea level			90				
44				100				
46								
48								

	THICKNESS OF ICE: (m) 1.5	WET UNIT $\frac{KN}{m^3}$ 16 18 20 22	10 20 30 40
	THICKNESS OF ICE AND WATER: (m) 13.7	WEIGHT-O P.C.F. 100 110 120 130 140 150	Dynamic Cone: Nc - □
	COMPLETION DEPTH: (m) 41.1	DATE DRILLED: 15 April, 1981	Standard Penetration: N - ■
LOGGED BY: GL		DRAWING NO.: B-7b	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM		HOLE NO.: 81-8		PROJECT NO.: 101-3097				
LOCATION: ITIYOK UTM 7759578N 534641E		SURFACE ELEVATION: Sea Level						
DRILL: Sonic								
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☒ CORE ☐ OTHER								
DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH		
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)			
				20	40	60	80	Unconfined..... ▲ Pocket Penetrometer..... Δ TSF 1 2 3 4 5 kPa 100 200 300 400
2	ICE (including shear ice)							
4	WATER							
6								
8								
10								
11								
14	NOTE: No ice or ice bonded sediments encountered							
16	CLAY - silty, trace of shells & organics, finely laminated, medium plastic, damp, dark grey	CL						
18	- medium grained sand lens, damp	CL						
20	- siltier	CL						
22	& ORGANICS, silty to some silt, interlaminated, dark grey/black	CL						
24	SAND - silty, some clay & organic lenses, fine grained, compact to dense, damp	SM SC						
				WET UNIT $\frac{kN}{m^3}$ 16 18 20 22 WEIGHT-O P.C.F. 100 110 120 130 140 150		Dynamic Cone: Nc - ☐ Standard Penetration: N - ☒		
				COMPLETION DEPTH (m) 42.1		DATE DRILLED: 16 April, 1981		
				LOGGED BY: GL		DRAWING NO.: B-8a		

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM		HOLE NO.: 81-8		PROJECT NO.: 101-3097	
LOCATION: ITIYOK UTM 7759578N 534641E		SURFACE ELEVATION: Sea Level			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☐ CORE ☐ OTHER		DRILL: Sonic			

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-%		COMPRESSIVE STRENGTH	
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲	Pocket Penetrometer..... ▲
				20 40 60 80		TSF 1 2 3 4 5	kPa 100 200 300 400
11.7	SAND (cont) - fine grained, trace of medium grained, occasional silt lenses, homogeneous, dense to very dense, damp, medium greyish brown - fine grained, some medium grained, moist	SM-SC	40				
26							
28							
30							
15.7							
32	SILT - some clay, trace of fine grained sand & organics, finely laminated, moist, dark grey	ML	60				
19.7	SAND - trace of silt, fine grained, trace of medium grained, clean, damp, compact, medium brown - compact to dense - trace of silt	SP	70				
34							
36							
23.7							
38							
25.7	- trace of silt, fine grained, homogeneous, uniform, dense, damp, medium to light brown - silty, trace of organic wisps, fine grained	SP-SM	80				
40							
22.7							
42	END OF HOLE 42.1 m below sea level	SM	90				
44			100				
46							
48							

	THICKNESS OF ICE: (m) 2.7	WET UNIT $\frac{kN}{m^3}$ 16 18 20 22	10 20 30 40
	THICKNESS OF ICE AND WATER: (m) 14.3	WEIGHT-O P.C.F. 100 110 120 130 140 150	Dynamic Cone: Nc ☐
	COMPLETION DEPTH: (m) 42.1	DATE DRILLED: 16 April, 1981	Standard Penetration: N ☒
LOGGED BY: GL		DRAWING NO.: B-8b	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO: 1981 WINTER CORING PROGRAM		HOLE NO.: 81-4		PROJECT NO.: 101-3097	
LOCATION: ISSUNGNAK SOUTH UTM 7763203N 524553E		SURFACE ELEVATION: Sea Level			
DRILL: Sonic					
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☒ NO RECOVERY ☒ CORE ☐ OTHER					

DEPTH (m.)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE	DEPTH (ft.)	WATER CONTENT %		COMPRESSIVE STRENGTH					
						PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	TSF 1 2 3 4 5					
						20	40	60	80	100	200	300	400
0	ICE												
2	WATER												
4													
6													
8													
10													
12													
14	NOTE: ice encountered at 40.2 m												
16	SILT - some clay, trace of sand, low plastic, hard dark grey	UNFROZEN	ML	G	0								
18	SAND - trace of silt, gravel and shells, fine grained, damp, very dense, medium brown			G									
20	- trace of organics			G									
22	- uniform			G									
24	- finer grained, dark brown			G									
26	- trace of silt			G									
28	- fine grained, some clay pockets and organics, moist			G									
30	CLAY - silty, trace of fine grained sand and organics		CL	G	30								



THICKNESS OF ICE: (m) 1.4

THICKNESS OF ICE AND WATER: (m) 15.5

WET UNIT $\frac{kN}{m^3}$	16	18	20	22		
WEIGHT-O P.C.F.	100	110	120	130	140	150
COMPLETION DEPTH: (m)	42.1					
LOGGED BY:	GL					
DATE DRILLED:	21 April, 1981					
DRAWING NO.:	C-2a					

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO: 1981 WINTER CORING PROGRAM				HOLE NO.: 81-5		PROJECT NO.: 101-3097	
LOCATION: ISSUNGNAK SOUTH UTM 7763194N 523918E				SURFACE ELEVATION: Sea Level			
DRILL: Sonic							
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☒ NO RECOVERY ☒ CORE ☐ OTHER							

DEPTH (m.)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (in.)	WATER CONTENT-%		COMPRESSIVE STRENGTH				
					PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲ Pocket Penetrometer..... Δ TSF 1 2 3 4 5 kPa 100 200 300 400				
0	ICE										
2	WATER										
4											
6											
8											
10											
12											
14	NOTE: Ice bonded sediments encountered at 25.9 m										
16	SAND - some silt, predominantly fine grained, damp, compact, dark greenish grey - trace of rounded pebbles - some silt (lenses)	UNFROZEN	SM	0							
18				10							
20	CLAY - silty and organic with occasional sand lenses, damp - medium plastic, dark grey			20							
22	- very dense sand lenses and pockets		CL	30							
24	- laminations with organics										



THICKNESS OF ICE: (m) 0.9

THICKNESS OF ICE AND WATER: (m) 15.2

WET UNIT $\frac{kN}{m^3}$	16	18	20	22
WEIGHT-O P.C.F.	100	110	120	130
COMPLETION DEPTH: (m)	39.0			
LOGGED BY:	GL			
DATE DRILLED:	21 April, 1981			
DRAWING NO.:	C-3a			

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.



DRAWING NO.: C-3b

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and locations indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO: 1981 WINTER CORING PROGRAM		HOLE NO.: 81-6		PROJECT NO.: 101-3097	
LOCATION: ISSUNGIK SOUTH UTM 7763315H 523270E		SURFACE ELEVATION: Sea Level			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☐ CORE ☐ OTHER		DRILL: Sonic			

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE	DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSION STRENGTH	
					PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲	Pocket Penetrometer..... Δ
					20	40	60	80
0	ICE							
2	WATER							
4								
6								
8								
10								
12								
14	NOTE: No ice or ice bonded sediments encountered							
16	CLAY - silty, medium plastic, moist, very soft, dark grey							
18	- silty, fine grained sand lens to 800 mm							
20	- soft, dark grey							
22								
24	SILT & CLAY - occasional fine grained sand inclusions, medium plastic, damp, firm, dark grey to black							



THICKNESS OF ICE: (m) 1.5

THICKNESS OF ICE AND WATER: (m) 15.2

WET UNIT	KN	16	18	20	22
WEIGHT-O P.C.F.		100	110	120	130
COMPLETION DEPTH:(m)		36.0			
LOGGED BY:		JC			

DATE DRILLED:	8 May, 1981			
DRAWING NO.:	C-4a			

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO: 1981 WINTER CORING PROGRAM		HOLE NO.: 81-6		PROJECT NO.: 101-3097	
LOCATION: ISSUIGHAK SOUTH		SURFACE ELEVATION: Sea Level			
UTM 7763315N 523270E		DRILL: Sonic			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☐ CORE ☐ OTHER					

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH	
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲	Pocket Penetrometer..... Δ
				20	40	60	80
26	SILT & CLAY - occasional sand inclusions - 300 mm organic layer	CL	30				
28	SILT - Some clay, trace of fine grained sand, low to medium plastic, moist, dark grey to black	ML	40				
30	SAND - trace of silt, fine grained, uniform, moist, medium brown - silty, some clay		50				
34	- silty, trace of clay	SM	60				
36	- some silt, trace of clay	SC	70				
36	END OF HOLE 36.0 m below ice level						
38	NOTE: Two drill rods lost down the hole						
40							
42							
44							
46							
48							

	THICKNESS OF ICE: (m) 1.5	WET UNIT $\frac{kN}{m^3}$ 16 18 20 22 WEIGHT-O P.C.F. 100 110 120 130 140 150	10 20 30 40 Dynamic Cone: Nc - ☐ Standard Penetration: N - ☒
	THICKNESS OF ICE AND WATER: (m) 15.2	COMPLETION DEPTH: (m) 36.0	DATE DRILLED: 8 May, 1981
		LOGGED BY: JC	DRAWING NO.: C-4b

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO: 1981 WINTER CORING PROGRAM		HOLE NO.: 81-7		PROJECT NO.: 101-3097							
LOCATION: ISSUNGNAK SOUTH UTM 7763903N 522228E		SURFACE ELEVATION: Sea Level									
DRILL: Sonic											
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☐ CORE ☐ OTHER											
DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (m.)	WATER CONTENT-%		COMPRESSIVE STRENGTH					
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲ Pocket Penetrometer..... Δ TSF 1 2 3 4 5 kPa 100 200 300 400					
0 - 1.8	ICE										
1.8 - 7.8	WATER										
7.8 - 16.2	CLAY - silty, medium plastic, moist, firm, occasional clast to 35 mm dark grey, trace of black mottling	CL									
16.2 - 24.0	SAND - some clay silt, fine grained uniform, moist, medium to dark grey green	SM-SC									
 THICKNESS OF ICE: (m) 1.2 THICKNESS OF ICE AND WATER: (m) 16.2				WET UNIT $\frac{kN}{m^3}$ 16 18 20 22 WEIGHT-O P.C.F. 100 110 120 130 140 150		Dynamic Cone: Nc ☐ Standard Penetration: N ☒					
COMPLETION DEPTH: (m) 26.8				DATE DRILLED: 10 May, 1981							
LOGGED BY: JC				DRAWING NO.: C-5a							

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM		HOLE NO.: 81-1		PROJECT NO.: 101-3097	
LOCATION: HAYAK UTM 7756186N 560851E		SURFACE ELEVATION: Sea Level			
DRILL: Sonic					
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☒ CORE ☐ OTHER					

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-%		COMPRESSIVE STRENGTH	
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲	Pocket Penetrometer..... Δ
				20	40	60	80
0	ICE (compact)						
2	ICE (shear)						
4							
6							
8	WATER						
10							
12							
14							
16							
18	NOTE: No ice or ice bonded sediments encountered						
20	CLAY - silty, trace of organic streaks, faintly laminated, high plastic, moist, dark grey						
22	- damp	CH					
24	- uniform, firm						



THICKNESS OF ICE: (m) 6.1

THICKNESS OF ICE AND WATER: (m) 18.3

WET UNIT $\frac{kN}{m^3}$	16	18	20	22
WEIGHT-O P.C.F.	100	110	120	130
COMPLETION DEPTH: (m)	43.9			
LOGGED BY: GL				

DATE DRILLED:	8 April, 1981
DRAWING NO.: D-2a	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM		HOLE NO.: 81-1		PROJECT NO.: 101-3097	
LOCATION: HAYAK UTM 7756186N 560851E		SURFACE ELEVATION: Sea Level			
DRILL: Sonic					
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☒ NO RECOVERY ☒ CORE ☐ OTHER					

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-%		COMPRESSIVE STRENGTH	
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲ Pocket Penetrometer..... Δ TSF 1 2 3 4 5 kPa 100 200 300 400	
26	CLAY (cont) - medium plastic - medium plastic, smell of organics, dark grey black - some organics (nonfibrous), trace of white shells - organic pockets & streaks, damp to moist	CH	20	40	60		
28			30	50			
30			40	60			
32			50	80			
34			60	100			
36			70	120			
38			80	140			
40			90	160			
42			100	180			
44			110	200			
46	SAND - Fine grained, trace of medium grained, homogeneous, compact, medium grey becoming brown. - some silt, damp to dry, dense - medium & fine grained lenses to 10 mm, trace of silt, damp, medium brown	SM	70	16	18		
48			80	20	22		
END OF HOLE 43.9 m below sea level							

 THICKNESS OF ICE: (m) 6.1 THICKNESS OF ICE AND WATER: (m) 18.3	WET UNIT $\frac{KN}{m^3}$ 16 18 20 22 WEIGHT-O P.C.F. 100 110 120 130 140 150		UNDRAINED SHEAR STRENGTH kilo Pascals Mini-vane Res. Mini-vane + ◇
	COMPLETION DEPTH: (m) 43.9 LOGGED BY: GL		DATE DRILLED: 8 April, 1981 DRAWING NO.: D-2b

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM			HOLE NO.: 81-2		PROJECT NO.: 101-3097	
LOCATION: NAYAK UTM 7753935N 556004E			SURFACE ELEVATION: Sea Level			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☐ CORE ☐ OTHER			DRILL: Sonic			

DEPTH (m.)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-%		COMPRESSIVE STRENGTH				
					PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲ Pocket Penetrometer..... ▲ TSF 1 2 3 4 5 kPa 100 200 300 400				
0	ICE										
2	WATER										
4											
6											
8											
10											
12											
14	NOTE: Sediments unbonded even when ice present										
16	CLAY - silty, traces of shells, organic pockets & streaks, laminated, medium plastic, damp, dark brownish grey	UNFROZEN		0							
18			CL	10							
20				20							
22				30							
24	- silty										

	THICKNESS OF ICE: (m) 1.7	WET UNIT $\frac{KN}{m^3}$ 16 18 20 22	Dynamic Cone: Nc - ☐ Standard Penetration: N - ☒
	THICKNESS OF ICE AND WATER: (m) 15.5	WEIGHT-O P.C.F. 100 110 120 130 140 150	
COMPLETION DEPTH: (m) 45.1		DATE DRILLED: 7 April, 1981	
LOGGED BY: GL		DRAWING NO.: D-3a	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM		HOLE NO.: 81-2		PROJECT NO.: 101-3097	
LOCATION: NAYAK		SURFACE ELEVATION: Sea Level			
UTM 7753935N 556004E		DRILL: Sonic			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☐ CORE ☐ OTHER					

DEPTH (m.)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-%		COMPRESSIVE STRENGTH						
					PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	TSF ¹						
					20	40	60	80	100	200	300	400	
26	CLAY (cont) -medium plastic, moist, soft to firm, dark brownish grey	UNFROZEN	CL	30									
28													
30													
32													
34	SAND - trace of silt & clay, fine grained homogeneous, damp, medium brownish grey - trace of shells - trace of silt, damp, grey		SP. SM	36									
38													
40													
42													
44	- trace of silt pockets, dark greyish brown - silty, trace of clay & organics, fine grained, damp to moist, compact to dense, dark greyish brown - moist to wet - trace of shells - becoming medium grained with silt stringers, homogeneous - organics & wood fragments - some silt, fine grained, trace of medium grained, moist to damp, medium dark brown		SM SC	46									
48													
46	END OF HOLE 45.1 m below ice level			100									

	THICKNESS OF ICE: (m) 1.7	WET UNIT $\frac{kN}{m^3}$ 16 18 20 22	Dynamic Cone: No - ☐
	THICKNESS OF ICE AND WATER: (m) 15.5	WEIGHT-O P.C.F. 100 110 120 130 140 150	Standard Penetration: N - ☒
	COMPLETION DEPTH: (m) 45.1	DATE DRILLED: 7 April, 1981	
LOGGED BY: GL		DRAWING NO.: D-3b	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM				HOLE NO.: 81-3		PROJECT NO.: 101-3097	
LOCATION: NAYAK UTM 7756081N 563690E				SURFACE ELEVATION: Sea Level			
DRILL: Sonic							
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☐ CORE ☐ OTHER							
DEPTH (m.)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH
					PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	
					20	40	Unconfined..... ▲ Pocket Penetrometer..... Δ TSF 1 2 3 4 5 kPa 100 200 300 400
2	ICE						
4	WATER						
6							
8							
10							
12							
14							
16							
18	NOTE: Sediments unbonded even when ice present						
20	CLAY - silty, trace of black organic pockets, uniform, medium plastic, moist, very soft, dark brownish grey	UNFROZEN		0			
22			CL	10			
24	- increasing organics			30			
				WET UNIT $\frac{kN}{m^3}$ 16 18 20 22 WEIGHT-O P.C.F. 100 110 120 130 140 150		10 20 30 40 Dynamic Cone: No ☐ Standard Penetration: N ☒	
THICKNESS OF ICE: (m) 1.2 THICKNESS OF ICE AND WATER: (m) 18.6				COMPLETION DEPTH: (m) 45.1		DATE DRILLED: 4 April, 1981	
				LOGGED BY: GL		DRAWING NO.: D-4a	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM				HOLE NO.: 81-3		PROJECT NO.: 101-3097	
LOCATION: NAYAK UTM 7756081N 563690E				SURFACE ELEVATION: Sea Level			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☐ CORE ☐ OTHER				DRILL: Sonic			

DEPTH (m.)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT %		COMPRESSIVE STRENGTH						
					PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined	Pocket Penetrometer	TSF	2	3	4	5
					20	40	60	80	kPa	100	200	300	400
7.4	CLAY (cont)	UNFROZEN		30									
26	- soft to firm		CL	30									
28				40									
11.4	- high plastic, soft to firm			50									
30				60									
32				70									
15.4	- occasional fine laminations, light grey		CH	80									
34				90									
36				100									
19.4	- increase in organics	INFERRED ICE <15% V _r + V _s		110									
38		UNFROZEN		120									
40	- silty, trace of fine grained sand - lens of sand, trace of organics		PT	130									
23.4	ORGANICS - damp to dry, H ₂ S smell, medium to light brown SAND - trace of clay & silt, fine grained, trace of medium grained, homogeneous, damp, compact to dense, light grey - predominantly fine grained, medium brown		SM SC	140									
25.4				150									
22.4	- fine grained		SP SM	160									
46	END OF HOLE 45.1 m below ice level												

	THICKNESS OF ICE: (m) 1.2	WET UNIT $\frac{KN}{m^3}$ 16 18 20 22	Dynamic Cone: Nc ☐
	THICKNESS OF ICE AND WATER: (m) 18.6	WEIGHT-O P.C.F. 100 110 120 130 140 150	Standard Penetration: N ☒
	COMPLETION DEPTH: (m) 45.1	DATE DRILLED: 4 April, 1981	
LOGGED BY: GL		DRAWING NO.: D-4b	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM			HOLE NO.: 81-7		PROJECT NO.: 101-3097	
LOCATION: NAYAK UTM 7753970N 561003E			SURFACE ELEVATION: Sea Level			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☐ CORE ☐ OTHER			DRILL: Sonic			

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-%		COMPRESSIVE STRENGTH	
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲	Pocket Penetrometer..... Δ
				20 40 60 80		TSF 1 2 3 4 5	kPa 100 200 300 400
0 - 1.2	ICE						
1.2 - 16.8	WATER						
16.8 - 18.2	CLAY - silty, trace of shells, organic streaks and pockets, high plastic, moist, dark greenish grey	CH	0				
18.2 - 24.2	- siltier, faintly laminated, medium to high plastic (bivalve shell to 7 mm)	CH	10				
24.2 - 26.2			20				



THICKNESS OF ICE: (m) 1.2

THICKNESS OF ICE AND WATER: (m) 16.8

WET UNIT $\frac{kN}{m^3}$	16 18 20 22	UNDRAINED SHEAR STRENGTH kilo Pascals	
WEIGHT-O P.C.F.	100 110 120 130 140 150	Mini-vane Res. Mini-vane	+
COMPLETION DEPTH:(m)	42.1	DATE DRILLED:	8 April, 1981
LOGGED BY:	GL	DRAWING NO.:	D-5a

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM		HOLE NO.: 81-7		PROJECT NO.: 101-3097	
LOCATION: HAYAK UTM 7753970 561003E		SURFACE ELEVATION: Sea Level			
DRILL: Sonic					
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☒ NO RECOVERY ☒ CORE ☐ OTHER					

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH							
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲ Pocket Penetrometer..... Δ							
				20	40	60	80	TSF 1	2	3	4	5	
								kPa	100	200	300	400	
26	CLAY (cont)	CH	30										
28	- interlaminated organics to 3 mm, black		40										
30			50										
32	- trace of hard black organics (coal)		60										
34	- shells to 5 mm, trace of nonfibrous organic streaks	SP	70										
36	SAND - trace of silt, fine grained, trace of medium grained, damp to moist, compact, dark grey		80										
38	- homogeneous, medium greyish brown												
40	- uniform, dense to very dense, damp, light brown												
42	- organic streaks to 3 mm	SP-SM											
42	- silty												
END OF HOLE 42.1 m below ice level													
44													
46													
48													

	THICKNESS OF ICE: (m) 1.2	WET UNIT $\frac{KN}{m^3}$ 16 18 20 22	UNDRAINED SHEAR STRENGTH kilo Pascals
	THICKNESS OF ICE AND WATER: (m) 16.8	WEIGHT-O P.C.F. 100 110 120 130 140 150	Mini-vane Res. Mini-vane
	COMPLETION DEPTH:(m) 42.1	DATE DRILLED: 8 April, 1981	
	LOGGED BY: GL	DRAWING NO.: D-5b	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM		HOLE NO.: 81-4		PROJECT NO.: 101-3097	
LOCATION: AOK UTM 7761749N 561729E		SURFACE ELEVATION: Sea Level			
DRILL: Sonic					
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☒ CORE ☐ OTHER					

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-%		COMPRESSIVE STRENGTH				
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲ Pocket Penetrometer..... Δ				
						TSF ¹ 2 3 4 5 kPa 100 200 300 400				
2.2	CLAY (cont)									
26	- stiffer		8							
28	- uniform	CL	10							
30			20							
32	- trace of whole shells, finely laminated, high plastic		30							
34			35							
36		CH	40							
38			45							
40	- some fine grained sand		50							
42	SAND - fine grained, medium grey		55							
44	- trace of silt & medium grained sand, compact to dense, medium brown		60							
46	- damp	SP	65							
48	- occasional silty laminations & organics, grey	SM	70							
22.2	- black organic lens to 7 mm									
END OF HOLE 45.1 m below ice level										

	THICKNESS OF ICE: (m) 1.0	WET UNIT $\frac{kN}{m^3}$ 16 18 20 22	10 20 30 40
	THICKNESS OF ICE AND WATER: (m) 23.8	WEIGHT-O P.C.F. 100 110 120 130 140 150	Dynamic Cone: Nc - ☐
		COMPLETION DEPTH: (m) 45.1	DATE DRILLED: 9 April, 1981
		LOGGED BY: GL	DRAWING NO.: E-2b

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM				HOLE NO.: 81-5		PROJECT NO.: 101-3097							
LOCATION: AOK UTM 7762536N 560103E				SURFACE ELEVATION: Sea Level									
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☒ NO RECOVERY ☐ CORE ☐ OTHER													
DEPTH (m.)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-%				COMPRESSIVE STRENGTH				
					PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)							
					20	40	60	80					
									Unconfined..... ▲ Pocket Penetrometer..... Δ TSF 1 2 3 4 5 kPa 100 200 300 400				
2													
4													
6													
8													
10													
12													
14													
16													
18													
20													
22													
24													
	CLAY - silty, faintly laminated, high plastic	UNFROZEN	CH	0									

THICKNESS OF ICE: (m) 1.1

THICKNESS OF ICE AND WATER: (m) 24.4

WET UNIT $\frac{kN}{m^3}$	16	18	20	22	10	20	30	40	
WEIGHT-O P.C.F.	100	110	120	130	140	150	Dynamic Cone: Nc - ☐ Standard Penetration: N - ☒		
COMPLETION DEPTH: (m)	45.1				DATE DRILLED: 9 April, 1981				
LOGGED BY: GL					DRAWING NO.: E-3a				

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM				HOLE NO.: 81-5		PROJECT NO.: 101-3097	
LOCATION: AOK UTM 7762536N 560103E				SURFACE ELEVATION: Sea Level			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☒ NO RECOVERY ☒ CORE ☐ OTHER				DRILL: Sonic			

DEPTH (m.)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH	
					PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲	Pocket Penetrometer..... △
					20	40	60	80
0	CLAY (cont)	UNFROZEN		0				
1.6	- bivalve shell to 30 mm			10				
3.6	- trace of organic pockets & streaks, damp			20				
	- white shells to 10 mm			30				
	- very soft			40				
7.6			CH	50				
	- medium to high plastic, firm			60				
11.6				70				
	- medium to high plastic, soft			80				
15.6				90				
	SAND - trace of silt, fine grained, trace of medium grained, damp, dense, medium grey becoming brown		SP-SM	100				
	- homogeneous, uniform, damp, dense to very dense, medium brown			110				
19.6				120				
		semi-bonded Non		130				
21.6	END OF HOLE 45.1m below ice level			140				
48				150				

	THICKNESS OF ICE: (m) 1.1	WET UNIT $\frac{KN}{m^3}$ 16 18 20 22	Dynamic Cone: Nc - ☐
	THICKNESS OF ICE AND WATER: (m) 24.4	WEIGHT-O P.C.F. 100 110 120 130 140 150	Standard Penetration: N - ☒
	COMPLETION DEPTH: (m) 45.1	DATE DRILLED: 9 April, 1981	
	LOGGED BY: GL	DRAWING NO.: E-3b	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

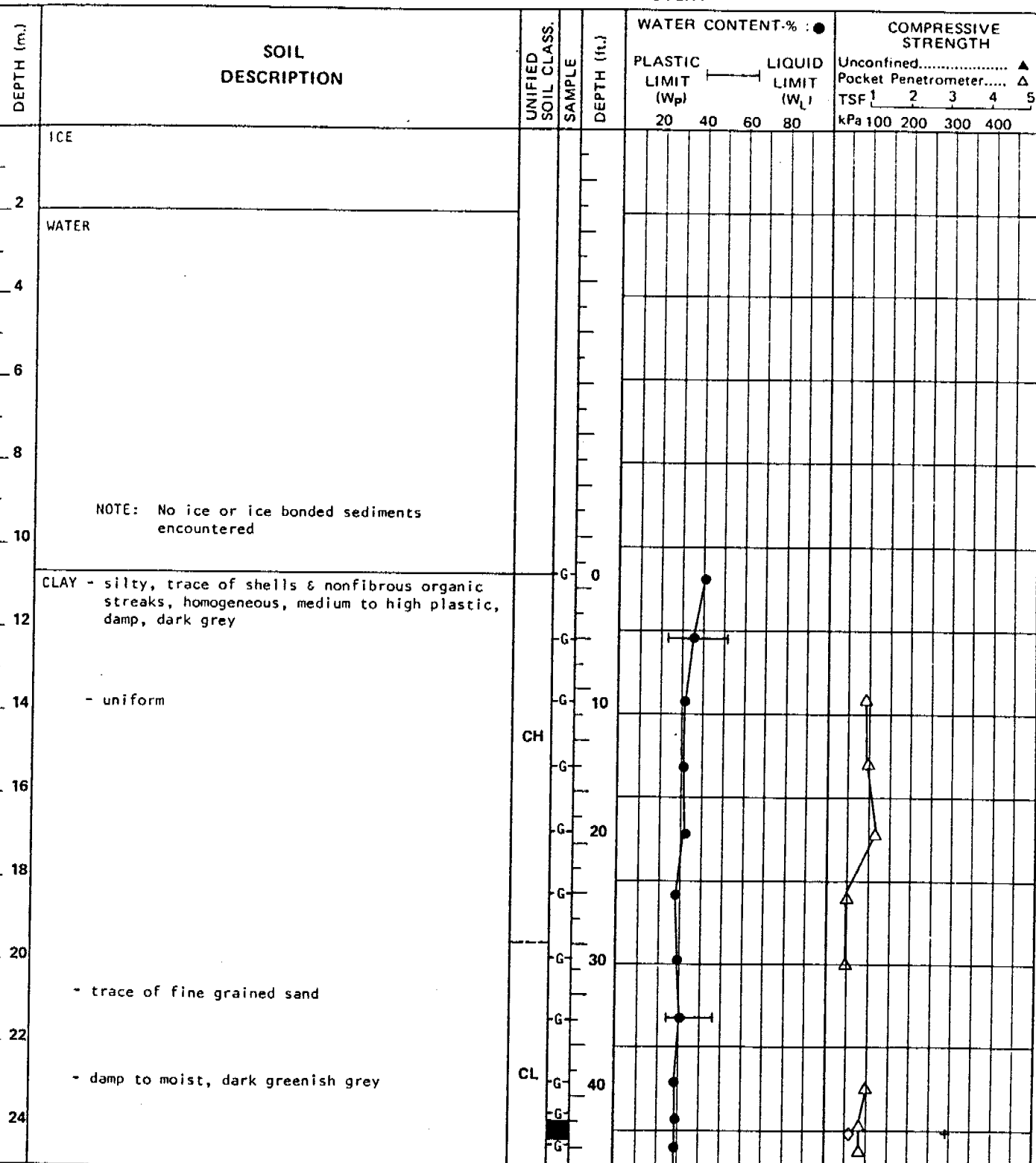
PROJECT: ESSO 1981 WINTER CORING PROGRAM		HOLE NO.: 81-1		PROJECT NO.: 101-3097	
LOCATION: IGALAK		SURFACE ELEVATION: Sea Level			
UTM 7737854N 491622E		DRILL: Sonic			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☐ CORE ☐ OTHER					
DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-%	COMPRESSIVE STRENGTH
				PLASTIC LIMIT (W _p) LIQUID LIMIT (W _L) 20 40 60 80	Unconfined..... ▲ Pocket Penetrometer..... Δ TSF 1 2 3 4 5 kPa 100 200 300 400
0	ICE				
2	WATER				
4					
6					
8	NOTE: No ice or ice bonded sediments encountered				
10	CLAY - silty, trace of shells to 3 mm, trace of organic streaks, medium plastic, sometimes laminated, damp, medium to dark grey	CL	0		
12			10		
14			20		
16	- trace of fine grained interlaminated sand		30		
18			40		
20	- uniform		50		
22					
24					
THICKNESS OF ICE: (m) 1.5 THICKNESS OF ICE AND WATER: (m) 8.2		WET UNIT $\frac{kN}{m^3}$ 16 18 20 22 WEIGHT-O P.C.F. 100 110 120 130 140 150		Dynamic Cone: Nc - ☐ Standard Penetration: N - ☒	
COMPLETION DEPTH: (m) 39.0		DATE DRILLED: 23 April, 1981			
LOGGED BY: GL		DRAWING NO.: F-2a			

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM		HOLE NO.: 81-1		PROJECT NO.: 101-3097	
LOCATION: I GALAK		SURFACE ELEVATION: Sea Level			
UTM 7737854N 491622E		DRILL: Sonic			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☒ CORE ☐ OTHER					

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH				
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲ Pocket Penetrometer..... Δ				
						TSF 1 2 3 4 5 kPa 100 200 300 400				
17.8	CLAY (cont)	CL	58	35	75					
26	- as before		60	35	75					
28	SAND - trace of silt and clay, fine grained, trace of medium grained, occasional clay lenses to 5 mm, damp to moist, dense, medium greenish grey		62	35	75					
21.8	& SILT, trace of clay and organics, moist to wet	SP. SM	65	35	75					
30			67	35	75					
32	SILT & CLAY - trace of shells, fine grained sand & organics, damp, dark grey/black.		69	35	75					
25.8	- Interlaminated, fine grained black sand	ML	71	35	75					
34	- SAND lens to 900 mm, fine grained, damp, medium greenish grey		73	35	75					
36	- SILT & CLAY - some organics, medium to low plastic, damp, dark greenish grey		75	35	75					
38			77	35	75					
40	END OF HOLE 39.0 m below sea level		79	35	75					
24.8			81	35	75					
21.8			83	35	75					
			85	35	75					
			87	35	75					
			89	35	75					
			91	35	75					
			93	35	75					
			95	35	75					
			97	35	75					
			99	35	75					
			101	35	75					
			103	35	75					
			105	35	75					
			107	35	75					
			109	35	75					
			111	35	75					
			113	35	75					
			115	35	75					
			117	35	75					
			119	35	75					
			121	35	75					
			123	35	75					
			125	35	75					
			127	35	75					
			129	35	75					
			131	35	75					
			133	35	75					
			135	35	75					
			137	35	75					
			139	35	75					
			141	35	75					
			143	35	75					
			145	35	75					
			147	35	75					
			149	35	75					
			151	35	75					
			153	35	75					
			155	35	75					
			157	35	75					
			159	35	75					
			161	35	75					
			163	35	75					
			165	35	75					
			167	35	75					
			169	35	75					
			171	35	75					
			173	35	75					
			175	35	75					
			177	35	75					
			179	35	75					
			181	35	75					
			183	35	75					
			185	35	75					
			187	35	75					
			189	35	75					
			191	35	75					
			193	35	75					
			195	35	75					
			197	35	75					
			199	35	75					
			201	35	75					
			203	35	75					
			205	35	75					
			207	35	75					
			209	35	75					
			211	35	75					
			213	35	75					
			215	35	75					
			217	35	75					
			219	35	75					
			221	35	75					
			223	35	75					
			225	35	75					
			227	35	75					
			229	35	75					
			231	35	75					
			233	35	75					
			235	35	75					
			237	35	75					
			239	35	75					
			241	35	75					
			243	35	75					
			245	35	75					
			247	35	75					
			249	35	75					
			251	35	75					
			253	35	75					
			255	35	75					
			257	35	75					
			259	35	75					
			261	35	75					
			263	35	75					
			265	35	75					
			267	35	75					
			269	35	75					
			271	35	75					
			273	35	75					
			275	35	75					
			277	35	75					
			279	35	75					
			281	35	75					
			283	35	75					
			285	35	75					
			287	35	75					
			289	35	75					
			291	35	75					
			293	35	75					
			295	35	75					
			297	35	75					
			299	35	75					
			301	35	75					
			303	35	75					
			305	35	75					
			307	35	75					
			309	35	75					
			311	35	75					
			313	35	75					
			315	35	75					
			317	35	75					
			319	35	75					
			321	35	75					
			323	35	75					
			325	35	75					
			327	35	75					
			329	35	75					
			331	35	75					
			333	35	75					
			335	35	75					
			337	35	75					
			339	35	75					
			341	35	75					
			343	35	75					
			345	35	75					
			347	35	75					
			349	35	75					
			351	35	75					
			353	35	75					
			355	35	75					
			357	35	75					
			359	35	75					
			361	35	75					
			363	35	75					
			365	35	75					
			367	35	75					
			369	35	75					
			371	35	75					
			373	35	75					
			375	35	75					
			377	35	75					
			379	35	75					
			381	35	75					
			383	35	75					
			385	35	75					
			387	35	75					
			389	35	75					
			391	35	75					
			393	35	75					
			395	35	75					
			397	35	75					
			399	35	75					
			40							

PROJECT: ESSO 1981 WINTER CORING PROGRAM		HOLE NO.: 81-2	PROJECT NO.: 101-3097
LOCATION: 1GALAK UTM 7742502N 489378E		SURFACE ELEVATION: Sea Level	
DRILL: Sonic			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☒ NO RECOVERY ☒ CORE ☐ OTHER			



THICKNESS OF ICE: (m) 2.0
THICKNESS OF ICE AND WATER: (m) 10.7

WET UNIT $\frac{kN}{m^3}$	16	18	20	22
WEIGHT-O P.C.F.	100	110	120	130
COMPLETION DEPTH (m)	32.9		DATE DRILLED: 24 April, 1981	
LOGGED BY: GL			DRAWING NO. F-3a	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM		HOLE NO.: 81-3		PROJECT NO.: 101-3097		
LOCATION: OMAT UTM 7736812N 481076E		SURFACE ELEVATION: Sea Level				
DRILL: Sonic						
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☒ CORE ☐ OTHER						
DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE	DEPTH (ft.)	WATER CONTENT-% : ●	COMPRESSIVE STRENGTH
					PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)
0	ICE					
2	WATER					
4						
6						
8	NOTE: No ice or ice bonded sediments encountered					
0.9	CLAY - silty, finely laminated, medium plastic, moist becoming damp, dark grey	G		0		
	- dark to medium grey	G				
2.9	- some organics, slightly spongy, homogeneous, medium plastic, damp dark grey black	G		10		
		G				
6.9		G		20		
		G				
10.9	± ORGANICS, occasional fine grained sand parting, pitted texture, damp, soft to firm	G		30		
		G				
14.9	- subrounded GRAVEL lens	G		40		
		G				
	- trace of sand, trace of organics, laminated with fine grained sand partings, damp to moist, firm, dark grey black	G		50		
		G				
 THICKNESS OF ICE: (m) 1.4 THICKNESS OF ICE AND WATER: (m) 9.1		WET UNIT $\frac{kN}{m^3}$		16 18 20 22		
		WEIGHT-O P.C.F.		100 110 120 130 140 150		
		COMPLETION DEPTH:(m)		45.1		
		LOGGED BY: GL		DRAWING NO.: G-2a		
		DATE DRILLED: 15 April, 1981		Dynamic Cone: Nc - ☐ Standard Penetration: N - ☒		

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM		HOLE NO.: 81-3		PROJECT NO.: 101-3097	
LOCATION: OMAT UTM 7736812N 481076E		SURFACE ELEVATION: Sea Level			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☒ NO RECOVERY ☒ CORE ☐ OTHER		DRILL: Sonic			

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-%		COMPRESSION STRENGTH	
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲	Pocket Penetrometer..... Δ
				20 40 60 80		TSF 1 2 3 4 5	kPa 100 200 300 400
16.9	CLAY - silty, low plastic	CL	50	20	60		
26	- as before		55	20	60		
28			60	20	60		
30	- sandy, trace of white shells, homogeneous, damp, firm, dark grey black		65	20	60		
20.9	SAND - some to trace of gravel, rounded to 30 mm, fine grained, homogeneous, compact to dense, moist, medium brownish grey	SW	70	20	60		
24.9	SILT - some clay, trace of fine grained sand and organic pockets, damp, dark grey	ML	75	20	60		
34	- low plastic, moist		80	20	60		
	- clayey laminations, damp		85	20	60		
36	- sandy pockets, moist		90	20	60		
	- pitted texture, damp		95	20	60		
28.9	- some clay, trace of sand, homogeneous, moist to wet, very soft to soft		100	20	60		
40	- trace of black organic streaks		105	20	60		
	- trace of clay pockets		110	20	60		
32.9	- sandy & clayey lenses, trace of organic streaks pitted texture, moist to damp, dark grey		115	20	60		
34.9	- some clay, trace of sand		120	20	60		
36.9	END OF HOLE 45.1 m below sea level						
48	N.B. Natural gas escapes on withdrawal of drill string						

	THICKNESS OF ICE: (m) 1.4	WET UNIT $\frac{KN}{m^3}$ 16 18 20 22	Dynamic Cone: Nc - ☐
	THICKNESS OF ICE AND WATER: (m) 9.1	WEIGHT-O P.C.F. 100 110 120 130 140 150	Standard Penetration: N - ☒
	COMPLETION DEPTH: (m) 45.1	DATE DRILLED: 18 April, 1981	
LOGGED BY: GL		DRAWING NO.: G-2b	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM		HOLE NO.: 81-4		PROJECT NO.: 101-3097	
LOCATION: OMAT		SURFACE ELEVATION: Sea Level			
UTM 7737632N 482330E		DRILL: Sonic			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☒ NO RECOVERY ☒ CORE ☐ OTHER					

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH				
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲				
						Pocket Penetrometer..... Δ				
						TSF 1	2	3	4	5
						kPa	100	200	300	400
2	ICE (Solid)									
4	ICE (Shear)									
6	WATER									
8	Note: No ice or ice bonded sediments encountered									
0.9	CLAY - silty, trace of shells & organic pockets, finely laminated, medium plastic, moist becoming damp, dark grey									
4.9	- trace of white shells, homogeneous	CL								
8.9	- increase in organics, earthy smell, pitted texture, medium plastic, damp, dark grey black									
12.9	- siltier									
	- fine grained sand lens									
	- some organics, trace of fine grained sand, dark grey black									

	THICKNESS OF ICE: (m) 6.1	WET UNIT $\frac{KN}{m^3}$ 16 18 20 22	Dynamic Cone: Nc - ☐
	THICKNESS OF ICE AND WATER: (m) 9.1	WEIGHT-O P.C.F. 100 110 120 130 140 150	Standard Penetration: N - ☐
	COMPLETION DEPTH: (m) 45.1	DATE DRILLED: 19 April, 1981	
	LOGGED BY: GL	DRAWING NO: G-3a	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING		HOLE NO.: 81-4		PROJECT NO.: 101-3097	
LOCATION: OMAT		SURFACE ELEVATION: Sea Level			
UTM 7737632N 482330E		DRILL: Sonic			
SAMPLE TYPE: ☒ THIN WALLED TUBE		☒ SPLIT SPOON		☒ GRAB	
		☒ NO RECOVERY		☒ CORE	
				☐ OTHER	

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH	
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲	Pocket Penetrometer..... △
				20	40	60	80
16.9	CLAY - silty, some sand, laminated, pitted texture in places, damp, dark grey	CL	50	16	18		
26			55	16	18		
28	- some organics, medium plastic, dark grey to black		60	16	18		
30	- SILT lens, clayey, some sand		65	16	18		
20.9	SILT & SAND - trace of clay, fine grained, homogeneous, compact, damp, dark grey	ML	70	16	18		
32	- trace of clay		75	16	18		
34	- clayey, trace of organics		80	16	18		
36	- silty, some organics, homogeneous, loose to compact, wet		85	16	18		
38	- some black organics		90	16	18		
40	- trace of clay		95	16	18		
42	- wet		100	16	18		
44	- increase in clay		105	16	18		
46	SILT - trace of sand, clay (lenses), shell fragments & organics, laminated, low to non plastic, damp, dark grey to black		110	16	18		
48	- clayey		115	16	18		
36.9	END OF HOLE 45.1 m below ice level		120	16	18		
48	N.B. Shallow gas escapes on withdrawal of drill string						

	THICKNESS OF ICE: (m) 6.1	WET UNIT $\frac{kN}{m^3}$ 16 18 20 22	10 20 30 40
	THICKNESS OF ICE AND WATER: (m) 9.1	WEIGHT-O P.C.F. 100 110 120 130 140 150	Dynamic Cone: Nc - ☐
COMPLETION DEPTH: (m) 45.1		DATE DRILLED: 19 April, 1981	
LOGGED BY: GL		DRAWING NO.: G-3b	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM		HOLE NO.: 81-5		PROJECT NO.: 101-3097	
LOCATION: OMAT UTM 7738012N 480195E		SURFACE ELEVATION: Sea Level			
DRILL: Sonic					
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☒ NO RECOVERY ☒ CORE ☐ OTHER					

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH	
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲	Pocket Penetrometer..... Δ
				20 40 60 80		TSF 1 2 3 4 5	kPa 100 200 300 400
	SILT (cont) - as before		G 50				
15.6	26 SILT & SAND - trace of clay, fine grained, homogeneous, compact, moist, dark grey		G 50				
	- occasional silt & clay pockets		G 60				
19.6	30		G 60				
	32 SILT - some clay, trace of fine grained sand, finely laminated, moist, dark grey	ML	G 70				
23.6	34 SILT & SAND - trace of clay, fine grained, uniform, homogeneous, moist, dark grey		G 80				
	-occasional clay & organic pockets		G 90				
27.6	38 SILT - sandy, trace of clay, homogeneous, moist, dark grey		G 90				
29.6	40 - increase in clay pockets - trace of sand & mica flakes		G 100				
31.6	42		G 100				
	END OF HOLE 42.1 m below ice level						
44	N.B. Shallow gas on withdrawal of drill string		110				
46							
48							

	THICKNESS OF ICE: (m) 1.8	WET UNIT $\frac{kN}{m^3}$ 16 18 20 22	10 20 30 40
	THICKNESS OF ICE AND WATER: (m) 10.4	WEIGHT-O P.C.F. 100 110 120 130 140 150	Dynamic Cone: Nc - ☐
	COMPLETION DEPTH: (m) 42.1	DATE DRILLED: 19 April, 1981	Standard Penetration: N - ☒
LOGGED BY: GL		DRAWING NO.: G-4b	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM		HOLE NO.: 81-1		PROJECT NO.: 101-3097	
LOCATION: ISSIGAK UTM 7743456N 462107E		SURFACE ELEVATION: Sea Level			
DRILL: Sonic					
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☐ CORE ☐ OTHER					

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH	
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲	Pocket Penetrometer..... Δ
				20 40 60 80		TSF 1 2 3 4 5	kPa 100 200 300 400
0	ICE						
2	WATER						
4							
6							
8							
10							
12							
14	NOTE: No ice or ice bonded sediments encountered						
16	SILT & CLAY - trace to some organics, beginning very soft, dark grey	G	0				
18	CLAY - (till-like) silty, trace of rock fragments, (coarse sand size) damp, hard, dark grey	G	10				
20	- faintly laminated	G	20				
22	- elongated pebbles	G	30				
24		G					

	THICKNESS OF ICE: (m) 1.5	WET UNIT $\frac{KN}{m^3}$ 16 18 20 22	10 20 30 40
	THICKNESS OF ICE AND WATER: (m) 14.0	WEIGHT-O P.C.F. 100 110 120 130 140 150	Dynamic Cone: Ne ☐
	COMPLETION DEPTH: (m) 26.2	DATE DRILLED: 29 March, 1981	Standard Penetration: N ☒
	LOGGED BY: GL	DRAWING NO.: H-2a	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM		HOLE NO.: 81-1		PROJECT NO.: 101-3097	
LOCATION: ISSIGAK UTM 7743456N 462107E		SURFACE ELEVATION: Sea Level			
		DRILL: Sonic			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☐ GRAB ☒ NO RECOVERY ☐ CORE ☐ OTHER					

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH				
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲	Pocket Penetrometer..... Δ	TSF 1 2 3 4 5	kPa 100 200 300 400	
	CLAY (till-like) (cont.)	CL								
	CLAY - silty, trace to some shells, finely laminated high plastic, dark grey	CH								
26			40							
28	END OF HOLE 26.2 m below sea level (hole cored to 29.9 m below sea level but lost drill string on withdrawal)									
30										
32										
34										
36										
38										
40										
42										
44										
46										
48										

	THICKNESS OF ICE: (m) 1.5	WET UNIT $\frac{kN}{m^3}$ 16 18 20 22	10 20 30 40
	THICKNESS OF ICE AND WATER: (m) 14.0	WEIGHT-O P.C.F. 100 110 120 130 140 150	Dynamic Cone: Nc - ☐
	COMPLETION DEPTH:(m) 26.2	DATE DRILLED: 29 March, 1981	Standard Penetration: N - ☒
	LOGGED BY: GL	DRAWING NO.: H-2b	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM			HOLE NO.: 81-3		PROJECT NO.: 101-3097	
LOCATION: ISSIGAK			SURFACE ELEVATION: Sea Level			
UTM 7741373N 462321E			DRILL: Sonic			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☒ CORE ☐ OTHER						

DEPTH (m.)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH	
					PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲	Pocket Penetrometer..... Δ
					20	40	60	80
0	ICE							
2	WATER							
4								
6								
8								
10								
12	NOTE: Sediments not bonded even when ice present							
14	CLAY - silty to & SILT, trace of organics, shell fragments, occasional medium grained sand particles, finely laminated, medium plastic, damp, dark grey	UNFROZEN		0				
16				10				
18				20				
20				30				
22	- & SILT damp to moist	trace Vs						
24	- some organics	ice lenses to 25 mm ice chunks to 20 mm Vs+Vr 10-15%						
	SILT & ORGANICS, clayey, some sand, damp, dark grey to black	UNFROZEN	OL					
	SILT - clayey, trace to some fine grained sand, trace of shell fragments, finely laminated, low plastic, dark grey	Vs 10%	ML					



THICKNESS OF ICE: (m) 1.2

THICKNESS OF ICE AND WATER: (m) 13.4

WET UNIT $\frac{kN}{m^3}$	16	18	20	22
WEIGHT-O P.C.F.	100	110	120	130
COMPLETION DEPTH (m)	39.0			
LOGGED BY:	GL			

DATE DRILLED:	28 March, 1981
DRAWING NO.	H-3a

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM				HOLE NO.: 81-3		PROJECT NO.: 101-3097	
LOCATION: ISSIGAK				SURFACE ELEVATION: Sea Level			
UTM 7741373N 462321E				DRILL: Sonic			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☐ CORE ☐ OTHER							

DEPTH (m.)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-%		COMPRESSIVE STRENGTH				
					PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲	Pocket Penetrometer..... Δ	TSF 1 2 3 4 5	kPa 100 200 300 400	
12.6	SILT (cont) (hard drilling 23.8-25.3 m) -trace of pebbles to 5 mm -faintly laminated -trace of mica flakes -low to medium plastic, damp -clayey, trace of black organic streaks & mica flakes -finely laminated, low plastic, damp, dark grey	Vs 10%	ML	38	16						
14.5		40		18							
18.6		50		20							
22.6		60		22							
24.6		70		24							
26.6		80		26							
		82		28							
		84		30							
		86		32							
		88		34							
40	END OF HOLE 39.0 m below sea level										

	THICKNESS OF ICE: (m) 1.2	WET UNIT $\frac{kN}{m^3}$ 16 18 20 22	10 20 30 40
	THICKNESS OF ICE AND WATER: (m) 13.4	WEIGHT-O P.C.F. 100 110 120 130 140 150	Dynamic Cone: Nc ☐
	COMPLETION DEPTH: (m) 39.0	DATE DRILLED: 28 March, 1981	Standard Penetration: N ☒
	LOGGED BY: GL	DRAWING NO.: H-3b	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM				HOLE NO.: 81-4		PROJECT NO.: 101-3097	
LOCATION: ISSIGAK UTM 7741306N 459621E				SURFACE ELEVATION: Sea Level			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☒ NO RECOVERY ☐ CORE ☐ OTHER				DRILL: Sonic			

DEPTH (m.)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-%		COMPRESSIVE STRENGTH						
					PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲ Pocket Penetrometer..... Δ						
							TSF ¹	2	3	4	5		
					20	40	60	80	kPa	100	200	300	400
0	ICE												
2	WATER												
4													
6													
8													
10													
12	NOTE: sediments not bonded even when ice present												
14	CLAY - silty to some silt, laminated, medium plastic, moist, firm, dark grey	UNFROZEN		0									
16	- siltier, trace of black organic streaks - ORGANICS (17.1 to 17.4 m)		CL	10									
18	- trace to some organics, damp - irregular laminations	Vs < 5% lenses to 10 mm Ice lens to 25 mm											
20	- trace of shells, medium to high plastic - medium to dark grey	Ice + Clay 70:30 Ice + Clay 70:30		20									
22		UNFROZEN	CH										
24	- increase in organics & rootlets	Inferred ice lenses < 5% Vs		30									



THICKNESS OF ICE: (m) 1.5

THICKNESS OF ICE AND WATER: (m) 13.7

WET UNIT $\frac{kN}{m^3}$	16	18	20	22
WEIGHT-O P.C.F.	100	110	120	130
COMPLETION DEPTH: (m)	39.0			
LOGGED BY:	GL			
DATE DRILLED:	2 April, 1981			
DRAWING NO.:	H-4a			

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM		HOLE NO.: 81-4		PROJECT NO.: 101-3097	
LOCATION: ISSIGAK UTM 7741806N 459621E		SURFACE ELEVATION: Sea Level			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☒ CORE ☐ OTHER		DRILL: Sonic			

DEPTH (m.)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH	
					PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲	Pocket Penetrometer..... ▲
					20	40	60	80
12.0	CLAY (cont) - silty, medium to high plastic - some organics, laminated, damp hard - trace of shells - organic, laminated with rootlets, trace of shells, earthy smell, black - trace of sand, high plastic, stiff dark grey - occasional rock fragment to 20 mm - less clay SILT - some clay, trace of fine grained sand and organics, damp to dry, occasional angular rock fragments to 25 mm, oily smell, dark grey to black	Ice Lenses to 20 mm	G	40				
26		Vr 40%	G					
20		Ice Lenses & Chunks <5%	G					
16.3		Vr <10% Occasional ice lenses <2%	G					
30		Vr + Vs 10-15%	G					
32		Vr + Vs < 10%	G					
20.3		Inferred ice traces of Vs to terminal depth	G					
34			G					
36			G					
24.3			G					
40	END OF HOLE 39.0 m below sea level							
26.3	N.B. shallow gas on withdrawal of drill string							
42								
44								
46								
48								

	THICKNESS OF ICE: (m) 1.5	WET UNIT $\frac{kN}{m^3}$ 16 18 20 22	UNDRAINED SHEAR STRENGTH kilo Pascals
	THICKNESS OF ICE AND WATER: (m) 13.7	WEIGHT-O P.C.F. 100 110 120 130 140 150	Mini-vane Res. Mini-vane
	COMPLETION DEPTH: (m) 39.0	DATE DRILLED: 2 April, 1981	
LOGGED BY: GL		DRAWING NO.: H-4b	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM				HOLE NO.: 81-1		PROJECT NO.: 101-3097	
LOCATION: KADLUK UTM 7745135N 457181E				SURFACE ELEVATION: Sea Level			
				DRILL: Sonic			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☒ NO RECOVERY ☒ CORE ☐ OTHER							
DEPTH (m.)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH
					PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲ Pocket Penetrometer..... Δ TSF ¹ 2 3 4 5 kPa 100 200 300 400
2	ICE						
4	WATER						
6							
8							
10							
12							
14							
16	CLAY - silty, trace of organics, laminated, medium plastic	UNFROZEN					
18	- becoming harder		CH				
20	SILT & CLAY - trace of organic streaks, irregular laminations, medium to low plastic, damp to dry, dark grey	Vs < 10% ice lenses to 15 mm UNBONDED Vr & Vs < 3% UNBONDED	ML CL				
22							
24	- trace of shells, medium plastic						
 THICKNESS OF ICE: (m) 1.2 THICKNESS OF ICE AND WATER: (m) 15.8					WET UNIT $\frac{kN}{m^3}$ 16 18 20 22 WEIGHT-O P.C.F. 100 110 120 130 140 150		Dynamic Cone: Nc - ☐ Standard Penetration: N - ☒
					COMPLETION DEPTH: (m) 45.1 LOGGED BY: GL		DATE DRILLED: 31 March, 1981 DRAWING NO.: 1-2a

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM				HOLE NO.: 81-1		PROJECT NO.: 101-3097	
LOCATION: KADLUK UTM 7745135N 457181E				SURFACE ELEVATION: Sea Level			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☐ CORE ☐ OTHER							
DEPTH (m.)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-%		COMPRESSIVE STRENGTH
					PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	
					20	40	Unconfined..... ▲ Pocket Penetrometer..... Δ TSF 1 2 3 4 5 kPa 100 200 300 400
10.2	- increasing fine grained sand, less clay	Vr+Vs<3%	ML-CL	30			
26		UNBONDED		0			
28	<i>Silt</i> - sandy to some fine grained sand, trace of clay, trace of mica flakes, homogeneous, damp to moist, dark grey	No visible ice, sediments semi-bonded in places to 31.7 m		40			
14.2				50			
30	- trace of sand, low plastic		CL				
32							
18.2	Lost core as vibration required to withdraw drill string suspected inter-bedded sandy SILT & clayey SILT			60			
38							
22.2							
40							
26.2							
42							
28.2							
44							
30.2	END OF HOLE 45.1 m below ice level						
46							
48							
 THICKNESS OF ICE: (m) 1.2 THICKNESS OF ICE AND WATER: (m) 15.8				WET UNIT $\frac{kN}{m^3}$ 16 18 20 22 WEIGHT-O P.C.F. 100 110 120 130 140 150		Dynamic Cone: Nc - ☐ Standard Penetration: N - ☒	
				COMPLETION DEPTH: (m) 45.1		DATE DRILLED: 31 March, 1981	
				LOGGED BY: GL		DRAWING NO.: I-2b	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM				HOLE NO.: 81-2		PROJECT NO.: 101-3097	
LOCATION: KADLUK UTM 7743532N 454892E				SURFACE ELEVATION: Sea Level			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☐ CORE ☐ OTHER							

DEPTH (m.)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-%		COMPRESSIVE STRENGTH	
					PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲	Pocket Penetrometer..... Δ
					20 40 60 80		TSF 1 2 3 4 5	kPa 100 200 300 400
0 - 1.4	ICE							
1.4 - 14.6	WATER							
14.6 - 24	CLAY - silty, medium plastic, moist to wet, dark grey - black organic streaks - becoming harder, high plastic - trace of shells, laminated - trace of slickensides - damp - less clay	UNFROZEN	CH					
24 - 25.8	SILT - some clay & mica flakes, laminated, non plastic, dark grey	Vs < 5% occasional lenses	ML					

1.4

A 3.4

u/c

B

9.4

C

0

10

20

30

WET UNIT $\frac{KN}{m^3}$ 16 18 20 22

WEIGHT-O P.C.F. 100 110 120 130 140 150

COMPLETION DEPTH (m) 39.1

LOGGED BY: GL

10 20 30 40

Dynamic Cone: Nc - ☐

Standard Penetration: N - ☒

DATE DRILLED: 30 March, 1981

DRAWING NO.: 1-3a



THICKNESS OF ICE: (m) 1.2

THICKNESS OF ICE AND WATER: (m) 14.6

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM			HOLE NO.: 81-2		PROJECT NO.: 101-3097		
LOCATION: KADLUK UTM 7743532N 454892E			SURFACE ELEVATION: Sea Level				
DRILL: Sonic							
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☐ CORE ☐ OTHER							
DEPTH (m.)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH
					PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	
					20	40	Unconfined..... ▲ Pocket Penetrometer..... Δ TSF 1 2 3 4 5 kPa 100 200 300 400
11.4	SILT (cont) - some clay, trace of sand	Vs<5% occasional lenses	ML				
26		bonded sediments Nbn					
28	CLAY - silty, trace of shells, laminated, medium plastic, dark grey	UNFROZEN	CL				
30							
32	SILT - (interbedded clayey silt & sandy silt) trace of shells, fine grained sand, occasional black organic streaks. - sandy, trace of clay	sediments semi-bonded to terminal depth Vs<2%					
34	- (driller reports alternating hard & soft formations during drilling) - interlaminated SILTS, medium and dark grey		ML				
36							
38	- some clay, trace of sand						
40	END OF HOLE 39.1 m below ice level						
42							
44							
46							
48							
THICKNESS OF ICE: (m) 1.2 THICKNESS OF ICE AND WATER: (m) 14.6					WET UNIT $\frac{KN}{m^3}$ 16 18 20 22 WEIGHT-O P.C.F. 100 110 120 130 140 150		10 20 30 40 Dynamic Cone: Nc - ☐ Standard Penetration: N - ☒
					COMPLETION DEPTH: (m) 39.1 LOGGED BY: GL		DATE DRILLED: 30 March, 1981 DRAWING NO.: I-3b

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM				HOLE NO.: 81-4		PROJECT NO.: 101-3097	
LOCATION: KADLUK UTM 7742670N 456658E				SURFACE ELEVATION: Sea Level			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☒ NO RECOVERY ☒ CORE ☐ OTHER				DRILL: Sonic			

DEPTH (m.)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSION STRENGTH	
					PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲	Pocket Penetrometer..... Δ
					20 40 60 80	20 40 60 80	TSF 1 2 3 4 5	kPa 100 200 300 400
2	ICE							
2	WATER							
16	CLAY - some silt to silty, trace of shells, high plastic, moist to wet, dark grey - siltier, organic pockets & streaks, laminated, medium plastic, damp	trace Vx UNBONDED						
18		traces of Vr + Vs	CL					
20		Vs ice lenses to 10 mm						
22	- siltier, trace of fine grained sand	UNFROZEN						
24	SILT - sandy, trace of clay, homogeneous, uniform, low to non plastic, damp to moist, dark grey		ML					



THICKNESS OF ICE: (m) 1.5

THICKNESS OF ICE AND WATER: (m) 14.3

WET UNIT $\frac{kN}{m^3}$	16 18 20 22	UNDRAINED SHEAR STRENGTH kilo Pascals	10 20 30 40
WEIGHT-O P.C.F.	100 110 120 130 140 150	Mini-vane Res. Mini-vane	+
COMPLETION DEPTH:(m)	42.1	DATE DRILLED:	1 April, 1981
LOGGED BY: GL		DRAWING NO.:	I-4a

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM		HOLE NO.: 81-4		PROJECT NO.: 101-3097		
LOCATION: KADLUK		SURFACE ELEVATION: Sea Level				
UTM 7742670N 456658E		DRILL: Sonic				
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☐ CORE ☐ OTHER						
DEPTH (m.)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ● PLASTIC LIMIT (W _p) LIQUID LIMIT (W _L)	COMPRESSIVE STRENGTH Unconfined..... ▲ Pocket Penetrometer..... Δ TSF 1 2 3 4 5 kPa 100 200 300 400
26	SILT (cont.) - clayey	UNFROZEN		40		
28	- interbedded sandy SILTS & clayey SILTS, traces of mica flakes, turbidity current structures, damp when not frozen, dark grey	semi-bonded				
30	- some clay, trace of sand	UNFROZEN				
32			ML			
34	- some sand, traces of clay, homogeneous, uniform, damp to moist, dark grey	semi-bonded in places to terminal depth				
36	- trace of fine laminations & black organics					
38	- some sand, trace of clay					
40	- uniform	occasional ice lenses to 3 mm				
42	- clayey laminations					
42	- trace of sand & clay, homogeneous, dense, dark grey	semi-bonded				
44	END OF HOLE 42.1 m below ice level					
44	NB: Natural gas escaping on withdrawal of drill string					
46						
48						
 THICKNESS OF ICE: (m) 1.5 THICKNESS OF ICE AND WATER: (m) 14.3		WET UNIT $\frac{kN}{m^3}$ 16 18 20 22 WEIGHT-O P.C.F. 100 110 120 130 140 150		UNDRAINED SHEAR STRENGTH kilo Pascals Mini-vane Res. Mini-vane		
COMPLETION DEPTH: (m) 42.1		DATE DRILLED: 1 April, 1981				
LOGGED BY: GL		DRAWING NO.: 1-4b				

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM		HOLE NO.: 81-2		PROJECT NO.: 101-3097		
LOCATION: MINUK UTM 7734576N 443747E		SURFACE ELEVATION: Sea Level				
DRILL: Sonic						
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☒ NO RECOVERY ☒ CORE ☐ OTHER						
DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE	DEPTH (ft.)	WATER CONTENT-% : ●	COMPRESSIVE STRENGTH
					PLASTIC LIMIT (W _p) 20 40 60 80	LIQUID LIMIT (W _L) 80
2	ICE					
4	WATER					
6						
8						
10						
12						
14	NOTE: No ice or ice bonded sediments encountered					
16	CLAY & SILT - trace of organics & shells to 7 mm, homogeneous, high plastic, moist to damp, medium greenish grey					
18	- laminated, damp	CH				
20		G				
22		G				
24	- pitted texture, medium plastic	CL				
THICKNESS OF ICE: (m) 1.5 THICKNESS OF ICE AND WATER: (m) 14.9		WET UNIT $\frac{kN}{m^3}$ 16 18 20 22 WEIGHT-O P.C.F. 100 110 120 130 140 150		Dynamic Cone: Nc - □ Standard Penetration: N - ■		
		COMPLETION DEPTH: (m) 36.0 LOGGED BY: GL		DATE DRILLED: 25 April, 1981 DRAWING NO.: J-2a		

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM		HOLE NO.: 81-2		PROJECT NO.: 101-3037	
LOCATION: MINUK UTM 7734576N 443747E		SURFACE ELEVATION: Sea Level			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☒ CORE ☐ OTHER					
DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ● PLASTIC LIMIT (W _p) LIQUID LIMIT (W _L) 20 40 60 80	COMPRESSIVE STRENGTH Unconfined..... ▲ Pocket Penetrometer..... △ TSF 1 2 3 4 5 kPa 100 200 300 400
26	CLAY & SILT - trace of organics & shells, pitted texture, medium plastic, damp, dark grey, black - uniform - trace of wood fragments - trace of sand - trace of black organic pockets to 5 mm & wood chips	CL	30	●	▲
28			●	▲	
30			●	▲	
32			●	▲	
34			●	▲	
36			●	▲	
38			●	▲	
40			●	▲	
42			●	▲	
44			●	▲	
END OF HOLE 36.0 m below sea level			70	●	▲
46					
48					

THICKNESS OF ICE: (m) 1.5

THICKNESS OF ICE AND WATER: (m) 14.9

WET UNIT $\frac{kN}{m^3}$ 16 18 20 22 WEIGHT-O P.C.F. 100 110 120 130 140 150	10 20 30 40 Dynamic Cone: Ne - ☐ Standard Penetration: N - ☒
COMPLETION DEPTH: (m) 36.0	DATE DRILLED: 25 April, 1981
LOGGED BY: GL	DRAWING NO.: J-2b

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM			HOLE NO.: 81-3		PROJECT NO.: 101-3097	
LOCATION: MINUK UTM 7733597N 443684E			SURFACE ELEVATION: Sea Level			
DRILL: Sonic						
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☒ NO RECOVERY ☒ CORE ☐ OTHER						

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE	DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH						
					PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲						
							Pocket Penetrometer..... Δ						
							TSF 1 2 3 4 5						
					20	40	60	80	kPa	100	200	300	400
2	ICE												
4	WATER												
6													
8													
10													
12													
14	NOTE: No ice or ice bonded sediments encountered												
16	CLAY & SILT - trace of shells & organics, laminated, medium to high plastic, damp to moist, medium greenish grey			0									
18		CL		10									
20		CL		20									
22	- pitted texture, trace of horizontal laminations/wisps, medium plastic	CL		30									
24		CL											

	THICKNESS OF ICE: (m) 2.0	WET UNIT $\frac{kN}{m^3}$ 16 18 20 22	Dynamic Cone: Nc - ☐
	THICKNESS OF ICE AND WATER: (m) 15.5	WEIGHT-O P.C.F. 100 110 120 130 140 150	Standard Penetration: N - ☒
	COMPLETION DEPTH: (m) 39.0	DATE DRILLED: 25 April, 1981	
LOGGED BY: GL		DRAWING NO.: J-3a	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: ESSO 1981 WINTER CORING PROGRAM		HOLE NO.: 81-3		PROJECT NO.: 101-3097	
LOCATION: MINUK UTM 7733597N 443684E		SURFACE ELEVATION: Sea Level			
DRILL: Sonic					
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☐ GRAB ☐ NO RECOVERY ☐ CORE ☐ OTHER					

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ● PLASTIC LIMIT (W _p) LIQUID LIMIT (W _L)	COMPRESSION STRENGTH Unconfined..... ▲ Pocket Penetrometer..... Δ TSF 1 2 3 4 5 kPa 100 200 300 400
	CLAY & SILT (cont)				
26	- medium plastic, dark grey		30		
28	- some organics, pitted texture		40		
30	- nonfibrous organics		50		
34	- dark grey, black		60		
38	- trace of gravel particles		70		
40	END OF HOLE 39.0 m below sea level (part refusal: difficult drilling)		80		
42					
44					
46					
48					

	THICKNESS OF ICE: (m) 2.0	WET UNIT $\frac{KN}{m^3}$ 16 18 20 22	10 20 30 40
	THICKNESS OF ICE AND WATER: (m) 15.5	WEIGHT-O P.C.F. 100 110 120 130 140 150	Dynamic Cone: Nc: ☐
		COMPLETION DEPTH: (m) 39.0	DATE DRILLED: 25 April, 1981
	LOGGED BY: GL	DRAWING NO.: J-3b	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

3251

PROJECT: 1981 SUMMER CORING PROGRAM		HOLE NO.: 81-9		PROJECT NO.: 101-3251	
LOCATION: ITIYOK UTM N 7759890 E 534823		SURFACE ELEVATION: Sea Level			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☐ CORE ☐ OTHER		DRILL: Sonic			

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH				
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲ Pocket Penetrometer..... Δ TSF 1 2 3 4 5 kPa 100 200 300 400				
0	WATER		0							
14	CLAY silty, trace of shells medium plastic, damp, mottled dark to medium grey	CL	0							
16			10							
18	-trace of sand pockets to 25 mm		20							
20			30							
22	-interbedded SAND lenses									
24	SILT & SAND, trace of clay fine grained, damp, medium gray	ML								

	THICKNESS OF ICE: (m)	—	WET UNIT $\frac{kN}{m^3}$	16	18	20	22	20	40	60	80
	THICKNESS OF ICE AND WATER: (m)	14.0	WEIGHT-O P.C.F.	100	110	120	130	140	150	STANDARD PENETRATION: N- ☒	
COMPLETION DEPTH:		38.1m	DATE DRILLED:		16 July 1981						
LOGGED BY:		J.G.C.	DRAWING NO.:								

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: 1981 SUMMER CORING PROGRAM			HOLE NO.: 81-9		PROJECT NO.: 101-3251	
LOCATION: ITIYOK UTM N 7759890 E 543823			SURFACE ELEVATION: Sea Level			
DRILL: Sonic						
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☒ NO RECOVERY ☒ CORE ☐ OTHER						

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH	
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲	Pocket Penetrometer..... Δ
				20	40	60	80
26	SILT & SAND trace of clay, mottled black	ML	40				
28	SAND silty, trace of clay, fine grained, medium, brown -fine grained, damp occasional black organics pebbles to 25 mm (subangular)	SM	50				
30	CLAY silty, some fine grained sand, high plastic, damp, dark grey	CH	60				
32	SAND some silt, fine grained damp, medium brown -occasional clay chunks	SP	70				
34	-trace of silt, moist	SM	80				
36							
38	End of hole 38.1 m below sea level						
40							

	THICKNESS OF ICE: (m) —	WET UNIT $\frac{KN}{m^3}$ 16 18 20 22	20 40 60 80
	THICKNESS OF ICE AND WATER: (m) 14.0	WEIGHT-O P.C.F. 100 110 120 130 140 150	STANDARD PENETRATION: N- ■
	COMPLETION DEPTH: 38.1m	DATE DRILLED: 16 July 1981	
	LOGGED BY: J.G.C.	DRAWING NO.:	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: 1981 SUMMER CORING PROGRAM			HOLE NO.: 81-10		PROJECT NO.: 101-3251	
LOCATION: ITIYOK UTM N 7759987 E 535002			SURFACE ELEVATION: Sea Level			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☐ CORE ☐ OTHER			DRILL: Sonic			

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH	
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲	Pocket Penetrometer..... Δ
				20 40 60 80		TSF 1 2 3 4 5	kPa 100 200 300 400
2							
4							
6							
8							
10							
12							
14							
14	WATER		0				
16	CLAY silty, medium plastic, moist to wet, medium greenish grey	CL	0				
16	SILT & CLAY - trace of sand, organics and shell-fragments, thin sand wisps dark grey	CL	0				
18	-black organic pockets medium plastic; finely laminated	CL	10				
20	-traces of bivalve shells	CL	20				
22	-decreasing plasticity	CL	30				
24		CL	30				

	THICKNESS OF ICE: (m) _____	WET UNIT $\frac{kN}{m^3}$ 16 18 20 22	STANDARD PENETRATION: N- ☒
	THICKNESS OF ICE AND WATER: (m) 14.6	WEIGHT-O P.C.F. 100 110 120 130 140 150	
	COMPLETION DEPTH: 42.3 m	DATE DRILLED: 19 July 1981	
	LOGGED BY: G.L.	DRAWING NO.:	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: 1981 SUMMER CORING PROGRAM		HOLE NO.: 81-10		PROJECT NO.: 101-3251	
LOCATION: ITIYOK UTM N 7759987 E 535002		SURFACE ELEVATION: Sea Level			
DRILL: Sonic					
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☒ CORE ☐ OTHER					

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH	
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲	Pocket Penetrometer..... Δ
				20	40	60	80
26	CLAY & SILT (cont'd)	CL	G				
28	SAND silty, trace clay, fine grained, trace medium grained, faintly laminated, damp, med-light grey with black organic pockets	SM	G				
30	-clayey SILT lens to 900 mm	ML	G				
32	-SAND fine grained, occasional silt stringers, compact to dense, damp, medium light greyish brown	SM	G				
34	-trace of interbedded medium grained sand wisps, visible grains subangular to sub-rounded.	SM	G				
36	-some silt, damp	SP	G				
38		G	G				
40	-trace of silt	G	G				
42	-silty	SM	G				
44	End of hole 42.3 m below sea level						

	THICKNESS OF ICE: (m) -	WET UNIT $\frac{KN}{m^3}$ 16 18 20 22	STANDARD PENETRATION: N- ●
	THICKNESS OF ICE AND WATER: (m) 14.6	WEIGHT-O P.C.F. 100 110 120 130 140 150	DATE DRILLED: 19 July 1981
		COMPLETION DEPTH: 42.3 m	DRAWING NO.:
		LOGGED BY: G.L.	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: 1981 SUMMER CORING PROGRAM		HOLE NO.: 81-11		PROJECT NO.: 101-3251	
LOCATION: ITIYOK UTM N 7759352 E 535012		SURFACE ELEVATION: Sea Level			
DRILL: Sonic					
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☐ CORE ☐ OTHER					

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH						
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲						
						Pocket Penetrometer..... Δ						
				20	40	60	80	TSF 1	2	3	4	5
								kPa	100	200	300	400
2												
4												
6												
8												
10												
12												
14	WATER											
14	CLAY - silty, trace pebbles, medium plastic, moist, dark grey - some sand	CL	0									
16		CL										
18	- organic pockets	CL										
20	- trace of sand	CL										
22	SAND - silty, trace of clay, fine grained, dark brownish grey	SM										
24	- trace of clay, compact, moist	SM										

	THICKNESS OF ICE: (m) —	WET UNIT $\frac{KN}{m^3}$ 16 18 20 22	STANDARD PENETRATION: N- ☒
	THICKNESS OF ICE AND WATER: (m) 13.7	WEIGHT-O P.C.F. 100 110 120 130 140 150	
	COMPLETION DEPTH: 27.4m	DATE DRILLED: 21 July 1981	
	LOGGED BY: JGC/GL	DRAWING NO.:	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: 1981 SUMMER CORING PROGRAM		HOLE NO.: 81-11		PROJECT NO.: 101-3251	
LOCATION: ITIYOK UTM N 7759352 E 535012		SURFACE ELEVATION: Sea Level			
DRILL: Sonic					
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☒ NO RECOVERY ☒ CORE ☐ OTHER					
DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE	DEPTH (ft.)	WATER CONTENT-% : ● PLASTIC LIMIT (W _p) — LIQUID LIMIT (W _L) 20 40 60 80 TSF 1 2 3 4 5 kPa 100 200 300 400
26	SAND (continued) 6 SILT, trace of rounded gravel to 40 mm	SM		30	
28	- some silt, trace of medium grained sand, subangular grains	SP		40	
28	End of hole 27.4 m below sea level 13.7			50	
30					
32					
34					
36					
38					
40					
42					
44					
46					
48					

	THICKNESS OF ICE: (m) —	WET UNIT $\frac{kN}{m^3}$ 16 18 20 22	20 40 60 80
	THICKNESS OF ICE AND WATER: (m) 13.7	WEIGHT-O P.C.F. 100 110 120 130 140 150	STANDARD PENETRATION: N. ■
	COMPLETION DEPTH: 27.4 m	DATE DRILLED: 21 July 1981	
	LOGGED BY: JGC/GL	DRAWING NO.:	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: 1981 SUMMER CORING PROGRAM		HOLE NO.: 81-12		PROJECT NO.: 101-3251	
LOCATION: ITIYOK UTM N 7759208 E 534735		SURFACE ELEVATION: Sea Level			
DRILL: Sonic					
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☐ CORE ☐ OTHER					

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE	DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH				
					PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲ Pocket Penetrometer..... Δ TSF 1 2 3 4 5 kPa 100 200 300 400				
2											
4											
6											
8											
10											
12											
14	WATER										
14	CLAY - silty, trace of sand, shells & organics, medium plastic, faintly laminated, moist to damp, medium - dark grey	CL	G	0							
16		G									
18	& SILT, trace of organics, low plastic, dark grey	G									
20	SAND - some silt, fine grained, trace of shells, damp, medium grey	SM	G	20							
22		G									
24	- silty, trace of clay	G									

	THICKNESS OF ICE: (m) —	WET UNIT $\frac{KN}{m^3}$ 16 18 20 22	WEIGHT-O P.C.F. 100 110 120 130 140 150	STANDARD PENETRATION: N- ☒
	THICKNESS OF ICE AND WATER: (m) 13.7	COMPLETION DEPTH: 45.7m	DATE DRILLED: 24 July 1981	
	LOGGED BY: GL/JGC	DRAWING NO.:		

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: 1981 SUMMER CORING PROGRAM		HOLE NO.: 81-12		PROJECT NO.: 101-3251	
LOCATION: ITIYOK UTM N 7759208 E 534735		SURFACE ELEVATION: Sea Level			
DRILL: Sonic					
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☒ CORE ☐ OTHER					

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH		
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲	Pocket Penetrometer..... Δ	
				20 40 60 80		TSF 1 2 3 4 5	kPa 100 200 300 400	
26	SAND - silty, fine grained, medium greyish brown	SM	40	●				
	- silty, trace of clay		G	40	●			
28	- trace to some silt		G	50	●			
30	SILT - sandy, trace of clay, non plastic, moist, dark grey	ML	G					
32	SAND - silty, trace of clay, fine grained, non plastic, wet, dark grey	SM	G					
	SILT - clayey, trace of fine grained sand, dark grey	ML	G					
34	SAND - some silt, trace of clay, fine grained, uniform, moist, medium brownish grey	SM	G					
36			G	70	●			
38	LOST CORE		G					
40								
42								
44								
46	End of hole 45.7 m below sea level							
48								

	THICKNESS OF ICE: (m) —	WET UNIT $\frac{kN}{m^3}$ 16 18 20 22	STANDARD PENETRATION: N- ■
	THICKNESS OF ICE AND WATER: (m) 13.7	WEIGHT-O P.C.F. 100 110 120 130 140 150	COMPLETION DEPTH: 45.7m
		LOGGED BY: GL/JGC	DATE DRILLED: 24 July 1981
		DRAWING NO.:	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: 1981 SUMMER CORING PROGRAM		HOLE NO.: 81-13		PROJECT NO.: 101-3251	
LOCATION: ITIYOK UTM N 7759357 E 534443		SURFACE ELEVATION: Sea Level			
DRILL: Sonic					
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☒ CORE ☐ OTHER					

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE	DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH								
					PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲								
							Pocket Penetrometer..... Δ								
					20	40	60	80	TSF 1 2 3 4 5 kPa 100 200 300 400						
14	WATER														
15	CLAY - silty, trace of shells & organics, medium plastic, wet at top 1 m, becoming moist to damp, medium dark grey	CL		0											
18	SILT & CLAY - trace shells & mica flakes, laminated, high plastic, dark grey - trace fine grained sand & organics & ORGANICS, damp	MH		10											
20	- gastropod & bivalve shells	OH		20											
22	SAND - silty, some clay, fine grained, homogeneous, moist to wet, medium greenish grey	SM		30											
24	- trace of subrounded pebbles to 40 mm - silty trace of clay, moist, compact														

	THICKNESS OF ICE: (m) —	WET UNIT $\frac{kN}{m^3}$ 16 18 20 22	STANDARD PENETRATION: N- ☒
	THICKNESS OF ICE AND WATER: (m) 14.3	WEIGHT-O P.C.F. 100 110 120 130 140 150	DATE
	COMPLETION DEPTH: 42.7 m	LOGGED BY: G.L.	DRILLED: 25 July 1981
		DRAWING NO.:	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: 1981 SUMMER CORING PROGRAM		HOLE NO.: 81-13		PROJECT NO.: 101-3251	
LOCATION: ITIYOK UTM N 7759357 E 534443		SURFACE ELEVATION: Sea Level			
DRILL: Sonic					
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☐ CORE ☐ OTHER					

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH	
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲	Pocket Penetrometer..... Δ
				20 40 60 80		TSF 1 2 3 4 5	kPa 100 200 300 400
	SAND (continued)						
		SM					
26			40				
	- & SILT, trace of clay	ML					
28							
	- trace of silt, fine grained, medium/light grey	SP					
30			50				
	- & SILT, trace clay						
32		SM					
	- trace of silt (stringers) compact, damp, dark grey		60				
34							
	- clean, fine grained, uniform, damp						
36			70				
	- trace of silt	SP					
38							
	- trace of silt, fine grained, medium brownish grey		80				
40		SP					
42		SM	90				
	End of hole 42.7 m below sea level						
44			100				
46							
48							

	THICKNESS OF ICE: (m) —	WET UNIT $\frac{kN}{m^3}$ 16 18 20 22	20 40 60 80
	THICKNESS OF ICE AND WATER: (m) 14.3	WEIGHT-O P.C.F. 100 110 120 130 140 150	STANDARD PENETRATION: N- ■
		COMPLETION DEPTH: 42.7m	DATE DRILLED: 25 July 1981
		LOGGED BY: GL	DRAWING NO.:

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: 1981 SUMMER CORING PROGRAM			HOLE NO.: 81-16		PROJECT NO.: 101-3251	
LOCATION: ITIYOK UTM N 7759700 E 534413			SURFACE ELEVATION: Sea Level			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☒ NO RECOVERY ☐ CORE ☐ OTHER			DRILL: Sonic			

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (m.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH				
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲ Pocket Penetrometer..... Δ				
						TSF 1 2 3 4 5 kPa 100 200 300 400				
2										
4										
6										
8										
10										
12										
14	WATER									
14	CLAY - silty, trace of sand, medium plastic, damp to moist, dark grey	CL	0							
16		CL	1							
18	- sandy, silty, medium plastic, dark grey	CL	2							
20	- ORGANIC SILT roots & rootlets, trace clay, medium dark grey brown	OL	3							
22	SAND - silty, trace pebbles to 35 mm, trace of clay, fine grained, damp	SM	4							
24	- & SILT occasional pebbles to 25 mm	ML	5							

	THICKNESS OF ICE: (m) —	WET UNIT $\frac{kN}{m^3}$ 16 18 20 22		STANDARD PENETRATION: N- ☒
	THICKNESS OF ICE AND WATER: (m) 14.0	WEIGHT-O P.C.F. 100 110 120 130 140 150		DATE DRILLED: 25 July 1981
	COMPLETION DEPTH: 45.7m	LOGGED BY: GL/JGC		DRAWING NO.:

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: 1981 SUMMER CORING PROGRAM		HOLE NO.: 81-16		PROJECT NO.: 101-3251	
LOCATION: ITIYOK UTM N 7759700 E 534413		SURFACE ELEVATION: Sea Level			
DRILL: Sonic					
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☒ CORE ☐ OTHER					

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-%		COMPRESSIVE STRENGTH	
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲	Pocket Penetrometer..... ▲
				20	40	60	80
26	SAND & SILT - trace of clay, occasional subrounded pebble to 25 mm	G	40				
28							
30		G	50				
32							
34		G	60				
36							
38		G	70				
40							
42		G	80				
44							
46	G	90					
48							
	SAND - some silt to silty, fine grained, moist, uniform, dark grey	G	100				
	- silty						
	- & SILT, trace of clay, medium to dark greyish brown	G	110				
	- trace of silt, fine grained, uniform, damp, medium greyish brown						
	SILT - clayey, trace of fine grained sand, uniform, moist, medium greyish brown	G	120				
	SAND & SILT - trace to some clay, fine grained, uniform, moist, medium greyish brown						
	- some silt	G	130				
	- trace of silt, medium grained						
	End of hole 45.7 m below sea level	G	140				
		G	150				

	THICKNESS OF ICE: (m) —	WET UNIT $\frac{KN}{m^3}$ 16 18 20 22	STANDARD PENETRATION: N- ■
	THICKNESS OF ICE AND WATER: (m) 14.0	WEIGHT-O P.C.F. 100 110 120 130 140 150	
		COMPLETION DEPTH: 45.7m	DATE DRILLED: 25 July 1981
		LOGGED BY: GL/JGC	DRAWING NO.:

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: 1981 SUMMER CORING PROGRAM		HOLE NO.: 81-19		PROJECT NO.: 101-3251	
LOCATION: ITIYOK UTM N 7759879 E 534164		SURFACE ELEVATION: Sea Level			
DRILL: Sonic					
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☐ CORE ☐ OTHER					

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT %		COMPRESSIVE STRENGTH	
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined	Pocket Penetrometer
				20 40 60 80		TSF 1 2 3 4 5	kPa 100 200 300 400
2							
4							
6							
8							
10							
12							
14	WATER						
16	CLAY - silty, trace of sand & shells, medium plastic, damp-moist, dark grey	CL	0				
18	SAND - trace to some silt, occasional clay inclusion, medium greyish brown		10				
20	- trace of silt, fine grained, occasional silt inclusions to 10 mm	SP	20				
22		SM	30				
24	- silty, fine grained	SM					

	THICKNESS OF ICE: (m) —	WET UNIT $\frac{KN}{m^3}$ 16 18 20 22	STANDARD PENETRATION: N- ☒
	THICKNESS OF ICE AND WATER: (m) 14.0	WEIGHT-O P.C.F. 100 110 120 130 140 150	
	COMPLETION DEPTH: 39.6m	DATE DRILLED: 26 July 1981	
LOGGED BY: JGC		DRAWING NO.:	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the time.

PROJECT: 1981 SUMMER CORING PROGRAM		HOLE NO.: 81-19		PROJECT NO.: 101-3251	
LOCATION: ITIYOK UTM 7759879 E 534164		SURFACE ELEVATION: Sea Level			
DRILL: Sonic					
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☒ CORE ☐ OTHER					

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH	
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲	Pocket Penetrometer..... Δ
				20	40	60	80
26	SAND - silty, fine grained, uniform, dark greyish brown - some silt - clay lens to 200 mm - some silt, fine grained, uniform, medium brown - trace of silt - some silt, fine grained, moist, uniform, dark greyish brown	SM	40	16	18	20	22
28		SP	50	16	18	20	22
30		SM	60	16	18	20	22
32		SM	70	16	18	20	22
34		SP	80	16	18	20	22
36		SM	90	16	18	20	22
38		SP	100	16	18	20	22
40		SM	110	16	18	20	22
42		SP	120	16	18	20	22
44		SM	130	16	18	20	22

	THICKNESS OF ICE: (m) —	WET UNIT $\frac{kN}{m^3}$ 16 18 20 22	STANDARD PENETRATION: N- ■
	THICKNESS OF ICE AND WATER: (m) 14.0	COMPLETION DEPTH: 39.6m	DATE DRILLED: 25 July 1981
	LOGGED BY: JGC	DRAWING NO.:	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: 1981 SUMMER CORING PROGRAM		HOLE NO.: 81-20		PROJECT NO.: 101-3251	
LOCATION: ITIYOK UTM N 7759409 E 534711		SURFACE ELEVATION: Sea Level			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☒ CORE ☐ OTHER		DRILL: Sonic			

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH				
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	TSF 1 2 3 4 5				
				20 40 60 80		kPa 100 200 300 400				
2										
4										
6										
8										
10										
12										
14	WATER									
14	CLAY silty, moist, medium plastic, dark grey	CL	0							
16		CL	10							
18	- silt lens	CL	20							
20	CLAY (till-like) silty, sandy with pebbles, flow structure, damp, hard, dark grey	CL	30							
22		ML	40							
24	SAND trace of silt and clay, fine grained, uniform, compact to loose, medium grey	SM	50							



THICKNESS OF ICE: (m) -

THICKNESS OF ICE AND WATER: (m) 14.0

WET UNIT $\frac{kN}{m^3}$	16 18 20 22	STANDARD PENETRATION: N- ☒
WEIGHT-O P.C.F.	100 110 120 130 140 150	
COMPLETION DEPTH:	45.7m	DATE DRILLED: 26 July 1981
LOGGED BY:	G.L.	DRAWING NO.:

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: 1981 SUMMER CORING PROGRAM			HOLE NO.: 81-8		PROJECT NO.: 101-3251	
LOCATION: ISSUNGNAK SOUTH UTM N 7763596 E 522298			SURFACE ELEVATION: Sea Level			
DRILL: Sonic						
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☒ NO RECOVERY ☒ CORE ☐ OTHER						

DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-%		COMPRESSIVE STRENGTH	
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲	Pocket Penetrometer..... Δ
				20 40 60 80		TSF 1 2 3 4 5	kPa 100 200 300 400
0	WATER CLAY silty, trace of shells, med/high plastic moist (CH) -	CH	0				
18	2.5 SAND some silt, trace of shells, medium grained, (SM) medium greyish brown	SM	10				
20	5.6 CLAY silty, medium plastic, damp, dark grey (CL) -	CL	20				
22	7.1 ORGANIC SILT, some clay, trace of fine grained sand & rootlets, moist, black (OL)	OL	25				
24	8.7 SILT (ML) - clayey to some clay, trace of pebbles & rootlets	ML	30				

	THICKNESS OF ICE: (m) —	WET UNIT $\frac{kN}{m^3}$ 16 18 20 22	STANDARD PENETRATION: N- ☒
	THICKNESS OF ICE AND WATER: (m) 14.9	WEIGHT-O P.C.F. 100 110 120 130 140 150	
	COMPLETION DEPTH: 39.6m	DATE DRILLED: 26 July 1981	
	LOGGED BY: J.G.C.	DRAWING NO.:	

This log is a summary of the data obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted.

PROJECT: 1981 SUMMER CORING PROGRAM		HOLE NO.: 81-8		PROJECT NO.: 101-3251		
LOCATION: ISSINGNAK SOUTH UTM N 7763596 E 522298		SURFACE ELEVATION: Sea Level				
DRILL: Sonic						
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☒ NO RECOVERY ☒ CORE ☐ OTHER						
DEPTH (m.)	SOIL DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH
				PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	
				20 40 60 80		Unconfined..... ▲ Pocket Penetrometer..... Δ TSF 1 2 3 4 5 kPa 100 200 300 400
26	(cont'd) SILT trace of clay & sand, very wet, non plastic	ML	30	20	80	
28	(10.8) SILT & SAND trace to some clay, trace of organics moist, black		40	20	80	
30			50	20	80	
32	(16.3) SAND silty, some clay, fine grained damp, medium brown		60	20	80	
34	(5m)	SM	70	20	80	
36			80	20	80	
38	(21.8) SILT sandy, wet, medium brown (ML) -CLAY lens -clayey, trace of fine grained sand, low plastic, dense, dark greyish brown	ML	90	20	80	
40	End of hole 39.6 m below sea level ▲ BORE AT 24.7 m					
42						

	THICKNESS OF ICE: (m) —	WET UNIT $\frac{KN}{m^3}$ 16 18 20 22	20 40 60 80
	THICKNESS OF ICE AND WATER: (m) 14.9	WEIGHT-O P.C.F. 100 110 120 130 140 150	STANDARD PENETRATION: N- ■
	COMPLETION DEPTH: 39.6m	DATE DRILLED: 26 July 1981	
LOGGED BY: J.G.C.		DRAWING NO.:	

This log is a compilation of subsurface conditions and soil properties as determined from the borehole. Soil samples were taken according to the procedures outlined in the project manual.

Soil samples were taken from the borehole. Soil samples were taken from the borehole. Soil samples were taken from the borehole.

PROJECT: 1981 SUMMER CORING PROGRAM			HOLE NO.: 81-9		PROJECT NO.: 101-3251	
LOCATION: ISSUNGNAK SOUTH UTM N 7763917 E 521812			SURFACE ELEVATION: Sea Level			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☒ CORE ☐ OTHER			DRILL: Sonic			

DEPTH (m.)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH		
					PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲	Pocket Penetrometer..... ▲	
					20	40	60	80	
26	SAND ^(sm) silty, trace of clay, homogeneous compact, damp, dark greenish grey		SM	30					
	-clay lenses								
	-moist								
28	(SP-sm) -some silt, some clay			40					
30	-silty, fine grained, moist, compact, medium greenish brown		SP						
32	-some silt		SM	50					
34	-silty, fine grained								
36	-CLAY lens to 100 mm								
	-medium fine grained, homogeneous, dense, med. brown								
38	SAND & SILT ^(sm) fine grained with clay lenses to 40 mm dense, moist, dark greenish grey		SM	70					
40	Lost Core			80					
42	Drilling performance indicates permafrost at 41.1 m	UNFROZEN FROZEN							
44				90					
46	End of hole 45.7 m below sea level END OF BOREHOLE AT 29.5 m			100					

	THICKNESS OF ICE: (m) —	WET UNIT $\frac{KN}{m^3}$ 16 18 20 22	20 40 60 80
	THICKNESS OF ICE AND WATER: (m) 16.2	WEIGHT-O P.C.F. 100 110 120 130 140 150	STANDARD PENETRATION: N. ■
	COMPLETION DEPTH: 45.7m	DATE DRILLED: 27 July 1981	
LOGGED BY: G. L.		DRAWING NO.:	

This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: 1981 SUMMER CORING PROGRAM				HOLE NO.: 81-98		PROJECT NO.: 101-3251	
LOCATION: ISSUNGNAK SOUTH UTM N 7763912 E 521837				SURFACE ELEVATION: Sea Level			
DRILL: Sonic							
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☐ NO RECOVERY ☐ CORE ☐ OTHER							

DEPTH (m.)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-%		COMPRESSIVE STRENGTH	
					PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲	
							Pocket Penetrometer..... Δ	
					20	40	60	80
					TSF 1 2 3 4 5			
					kPa 100 200 300 400			
2								
4								
6								
8								
10								
12								
14								
16	WATER			0				
16	CLAY & SILT, traces of sand organics & shells, medium plastic, moist, becoming damp dark grey	UNFROZEN	CL	0				
18								
18	-trace to some sand, laminated, low plastic, damp							
18	-organic lens							
20	SAND trace of silt, fine grained, moist, dark greenish grey		SP	10				
22								
22	-trace of smoothed pebbles to 50 mm (shale pieces)							
22	-silty, clay lenses, fine grained damp dark greenish grey							
24			SM	20				



THICKNESS OF ICE: (m) —

THICKNESS OF ICE AND WATER: (m) 15.9

WET UNIT $\frac{KN}{m^3}$	16	18	20	22
WEIGHT-O P.C.F.	100	110	120	130
COMPLETION DEPTH:	45.7m			
LOGGED BY:	G.L.			
DATE DRILLED:	27 July 1981			
DRAWING NO.				

PROJECT: 1981 SUMMER CORING PROGRAM			HOLE NO.: 81-98		PROJECT NO.: 101-3251		
LOCATION: ISSUNGNAK SOUTH UTM N 7763912 E 521837			SURFACE ELEVATION: Sea Level				
			DRILL: Sonic				
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☒ NO RECOVERY ☒ CORE ☐ OTHER							
DEPTH (m.)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE DEPTH (ft.)	WATER CONTENT-%		COMPRESSION STRENGTH
					PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	
					20	40	Unconfined..... ▲ Pocket Penetrometer..... Δ TSF 1 2 3 4 5 kPa 100 200 300 400
26	SAND some silt, trace of clay, dark greenish grey			30			
	- clay lenses						
28	- some clay			40			
	SILT & CLAY lenses, v. stiff						
30	SILT & SAND occasional clay lenses, dense, damp, dark grey			50			
	SAND silty, fine grained, homogeneous, moist, medium greenish grey		SP				
32				60			
	- coarser		SM				
34	- med/fine grained, some silt stringers, loose to compact, medium greyish brown			70			
36	- silty, fine grained, damp to moist, homogeneous, uniform, medium greenish brown			80			
38				90			
40	- trace of silt						
42							
44	LOST CORE BACKFREEZING OF RODS DUE TO PERMAFROST CAUSED LOSS	UNFROZEN FROZEN					
46	End of hole 45.7 m below sea level			100			
48							
 THICKNESS OF ICE: (m) - THICKNESS OF ICE AND WATER: (m) 15.9			WET UNIT $\frac{kN}{m^3}$ 16 18 20 22 WEIGHT-O P.C.F. 100 110 120 130 140 150		STANDARD PENETRATION: N- 		
			COMPLETION DEPTH: 45.7 m		DATE DRILLED: 27 July 1981		
			LOGGED BY: G.L.		DRAWING NO.:		

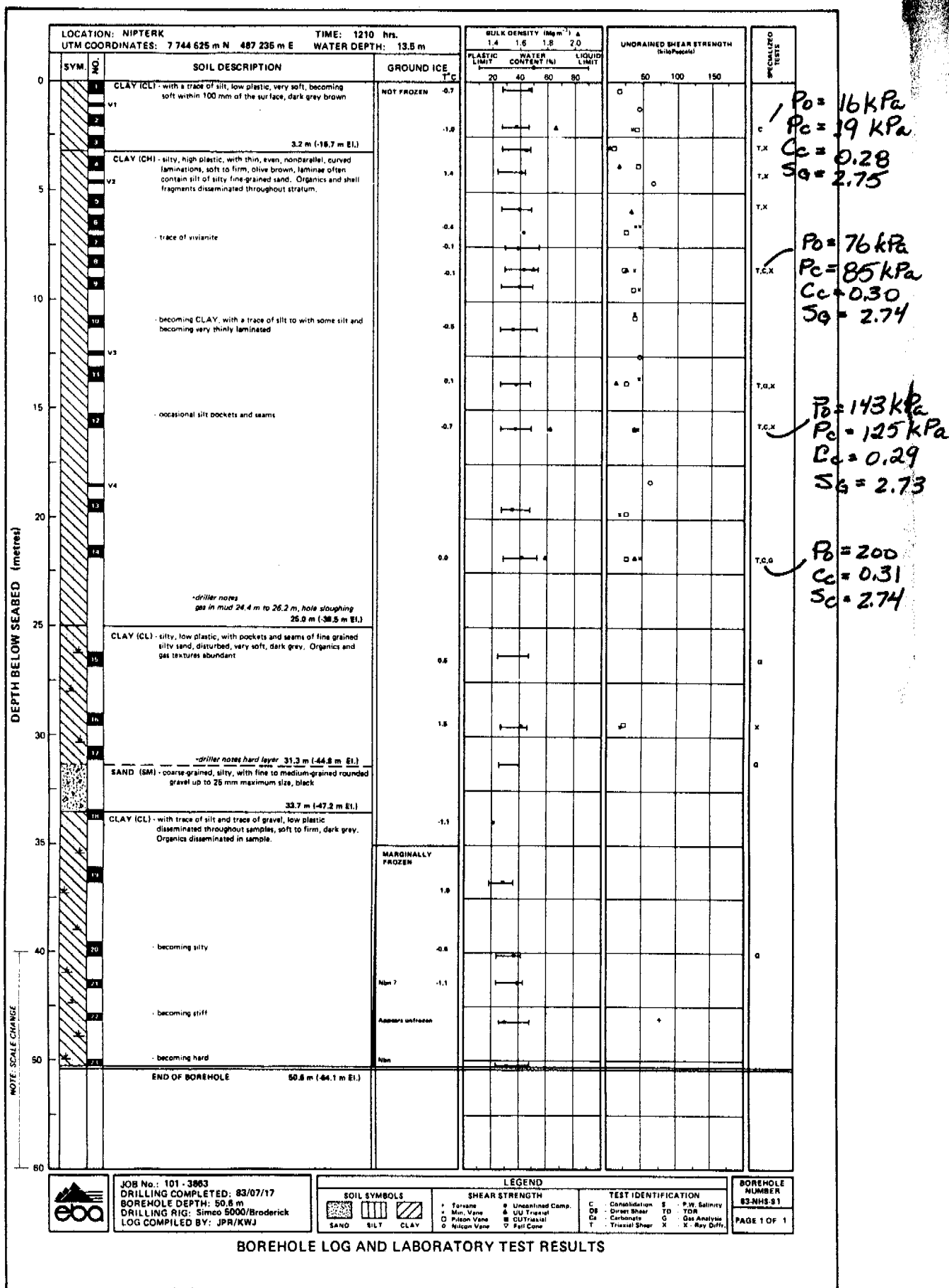
This log is a compilation of subsurface conditions and soil or rock classification obtained from the field as well as from laboratory testing of samples from the borehole. Soil zones have been interpreted according to commonly accepted practice. The change from one zone to another, as indicated on the log, may be transitional and approximate in nature. Groundwater conditions refer only to those observed at the times and places indicated and they may vary with time, geologic conditions, and construction activity.

PROJECT: 1981 SUMMER CORING PROGRAM			HOLE NO.: 81-10		PROJECT NO.: 101-3251	
LOCATION: ISSUNGNAX SOUTH UTM N 7763594 E 521807			SURFACE ELEVATION: Sea Level			
DRILL:			DGD 2000			
SAMPLE TYPE: ☒ THIN WALLED TUBE ☒ SPLIT SPOON ☒ GRAB ☒ NO RECOVERY ☒ CORE ☐ OTHER						

DEPTH (m)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	UNIFIED SOIL CLASS.	SAMPLE	DEPTH (ft.)	WATER CONTENT-% : ●		COMPRESSIVE STRENGTH					
						PLASTIC LIMIT (W _p)	LIQUID LIMIT (W _L)	Unconfined..... ▲ Pocket Penetrometer..... Δ TSF 1 2 3 4 5 kPa 100 200 300 400					
2													
4													
6													
8													
10													
12													
14													
16	WATER												
18	CLAY - trace of silt, medium plastic, grey	UNFROZEN	CL		0								
20	- some silt				10								
22	SAND - some silt & clay, fine-grained, uniform, greyish brown		SP		20								
24	- trace of silt, moist, grey, brown												
	- uniform, compact		SM										

	THICKNESS OF ICE: (m)	-
	THICKNESS OF ICE AND WATER: (m)	16.5
	WET UNIT $\frac{kN}{m^3}$ 16 18 20 22 WEIGHT-O P.C.F. 100 110 120 130 140 150	
	STANDARD PENETRATION: N- ☒	
COMPLETION DEPTH: 36.9m		DATE DRILLED: 6 August 1981
LOGGED BY: HARDY & ASSOC.		DRAWING NO.:

This log is a compilation of measurements and soil or rock data from the core log.



LOCATION: NIPTERK		TIME: 04:15 hrs.	
UTM COORDINATES: 7 744 600 m N 487 270 m E		WATER DEPTH: 12.2 m	
SYM.	Z	SOIL DESCRIPTION	GROUND ICE T °C
0	1	CLAY (CL) - with a trace of silt and a trace of shell fragments, homogenous, low plastic, soft to very soft, becoming stiff dark gray - thin, curved, parallel, even silty laminations (25 mm)	NOT FROZEN 0.6 0.9
1	V1		
2	2		
3	V2		
4	3		
5	V3		
6	4		
7	V4		
8	5		
5		END OF BOREHOLE	4.9 m (-17.1 m El.)
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

BULK DENSITY (Mg m ⁻³) ▲		
1.4	1.6	1.8 2.0
PLASTIC LIMIT	WATER CONTENT (%)	
20	40	60 80
LIQUID LIMIT		
UNDRAINED SHEAR STRENGTH (kiloPascals)		
50	100	150

SPECIALIZED TESTS



JOB No.: 101 - 3863
 DRILLING COMPLETED: 83/09/18
 BOREHOLE DEPTH: 4.9 m
 DRILLING RIG: S5000/M.V. Broderick
 LOG COMPILED BY: JPR/MAV

SOIL SYMBOLS		
SAND	SILT	CLAY

LEGEND	
SHEAR STRENGTH	
+ Torvane	● Unconfined Compr.
x Min. Vane	▲ UU Triaxial
□ Pilon Vane	■ CU Triaxial
▽ Nilcon Vane	

TEST IDENTIFICATION	
C - Consolidation	T - Triaxial Shear
TS - Thaw Strain	S - P.W. Salinity
DS - Direct Shear	X - X-Ray Diff.

BOREHOLE NUMBER 83-NHS-S02
PAGE 1 OF 1

BOREHOLE LOG AND LABORATORY TEST RESULTS

DEPTH BELOW SEABED (metres)

LOCATION: ISSIGAK

UTM COORDINATES: 7 733 980 m N ; 460 150 m E

WATER DEPTH: 10.4 m

SYM.	No.	SOIL DESCRIPTION	GROUND ICE	BULK DENSITY (Mg m ⁻³) 1.4 1.6 1.8 2.0 PLASTIC LIMIT WATER CONTENT (%) LIQUID LIMIT 20 FROZEN 40 60 80	UNDRAINED SHEAR STRENGTH (kiloPascals) 50 100 150	SPECIALIZED TESTS
0	1	SAND (SP) - gravelly, trace silt, sand coarse- to fine- grained, gravel fine grained to 25 mm, subrounded, smooth, loose (estimated) dark grey 0.6 m (-11.0 m El.)	NOT FROZEN			
1	2	CLAY (CL) - with a trace of silt, trace organics, with occasional very thin beds of fine-grained sand and silt, soft to firm, dark grey				
2	3	- becoming thinly laminated with curved parallel continuous laminae and trace of gravel				
3	4	- 15 mm silt lens with trace of fine-grained sand and trace of gravel at 3.8 m				
4	5	- 15 mm organic lens at 5.2 m				
5	6					
6	7					
7	8					
8		NOTE: Driller notes harder drilling conditions 8.5 m				
9			FROZEN			
10		- some silt, trace sand, trace gravel	Vr 10% clear, freshwater ice lenses			
11		END OF BOREHOLE 10.1 m (-20.5 m El.)				
12						
13						
14						
15						

3883



JOB No.: 101 - 3883
DRILLING COMPLETED: 83 - 07 - 21
BOREHOLE DEPTH: 10.1 m
DRILLING RIG: Simco 5000/MV Broderick
LOG COMPILED BY: MAV/KWJ/JPR

SOIL SYMBOLS



LEGEND

SHEAR STRENGTH

+ Torvane
x Min. Vane
□ Pilcon Vane
● Unconfined Compr.
▲ UU Triaxial
■ CU Triaxial

TEST IDENTIFICATION

C - Consolidation
TS - Thaw Strain
DS - Direct Shear
T - Triaxial Shear
S - P.W. Satinity
X - X-Ray Diff.

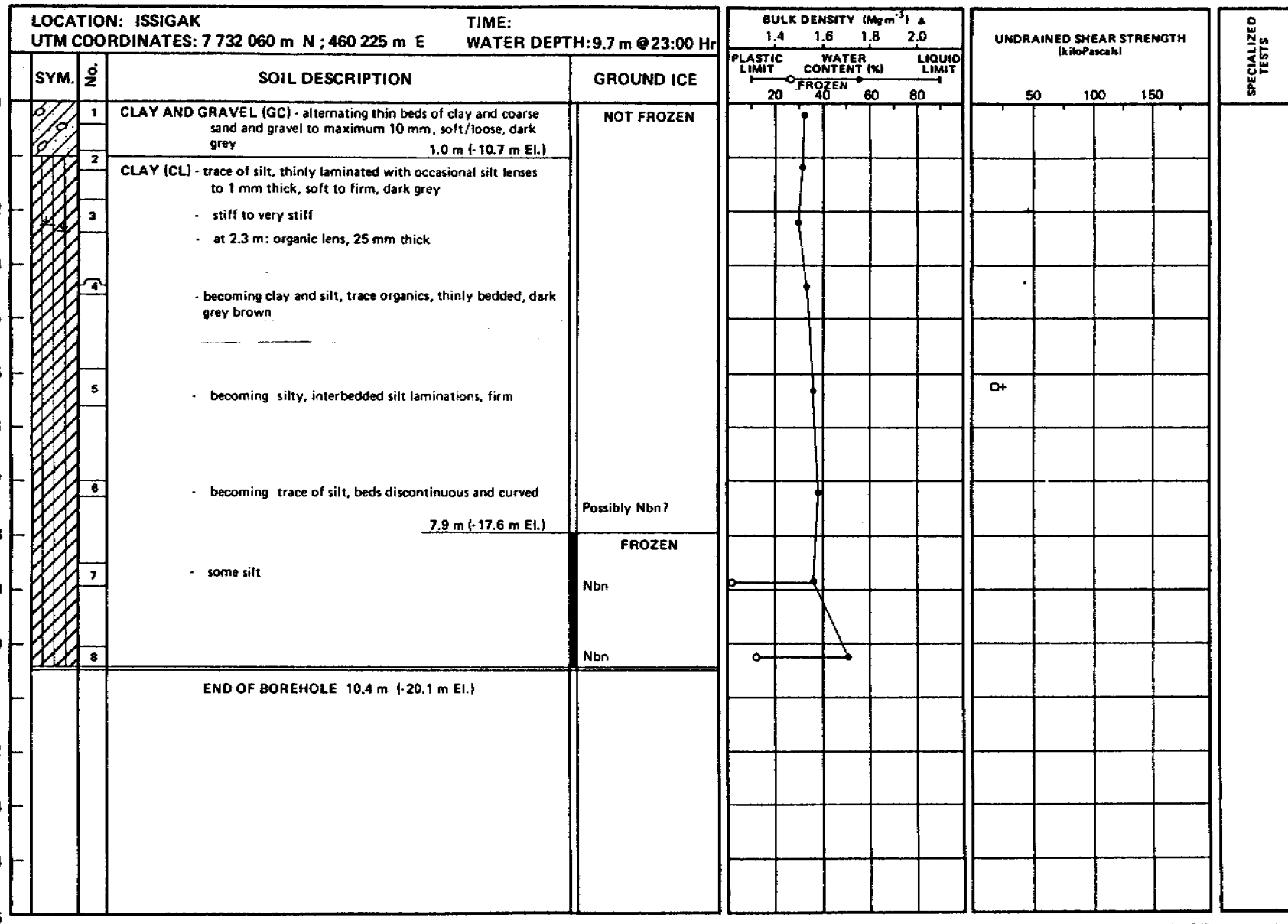
BOREHOLE NUMBER
83 - IBS - S16

PAGE 1 OF 1

BOREHOLE LOG AND LABORATORY TEST RESULTS



DEPTH BELOW SEABED (metres)



JOB No.: 101 - 3883
 DRILLING COMPLETED: 83 - 07 - 21
 BOREHOLE DEPTH: 10.4 m
 DRILLING RIG: Simco 5000/MV Broderick
 LOG COMPILED BY: KWJ/JPR

SOIL SYMBOLS		SHEAR STRENGTH		TEST IDENTIFICATION	
 SAND	 SILT	 CLAY	+ Torvane x Min. Vane □ Picon Vane	● Unconfined Compr. ▲ UU Triaxial ■ CU Triaxial	C - Consolidation TS - Thaw Strain DS - Direct Shear
				T - Triaxial Shear S - P.W. Salinity X - X-Ray Diffr.	

BOREHOLE
NUMBER
83 - 1BS - S23

PAGE 1 OF 1

BOREHOLE LOG AND LABORATORY TEST RESULTS

DEPTH BELOW SEABED (metres)

LOCATION: ISSIGAK UTM COORDINATES: 7 732 200 m N ; 460 180 m E WATER DEPTH: 9.6 m @ 01:30 Hr					BULK DENSITY ($Mg\ m^{-3}$) ▲ 1.4 1.6 1.8 2.0			UNDRAINED SHEAR STRENGTH (kiloPascals)			SPECIALIZED TESTS				
SYM.	No.	SOIL DESCRIPTION			GROUND ICE										
1	1	GRAVEL AND CLAY (GC) - some sand and silt, soft, loose, dark grey, at 0.3 m SAND lens, 50 mm thick, some silt, trace gravel - gravel content decreasing with depth			NOT FROZEN										
		0.4 m (-10.0 m El.)													
	2	CLAY (CL) - some silt, very thin laminae, wavy, parallel, stiff; dark grey													
2															
3															
4															
5															
6															
7															
8	3	- blocky structure			Ice lens 10 mm thick Vr 5%										
9		END OF BOREHOLE 8.02 m (-17.62 m El.)													
10															
11															
12															
13															
14															
15															

JOB No.: 101 - 3883
 DRILLING COMPLETED: 83 - 07 - 22
 BOREHOLE DEPTH: 8.02 m
 DRILLING RIG: Simco 5000/MV Broderick
 LOG COMPILED BY: MAV

SOIL SYMBOLS

SAND
 SILT
 CLAY

LEGEND

SHEAR STRENGTH

+ Torvane ● Unconfined Compr.
 x Min. Vane ▲ UU Triaxial
 □ Pilon Vane ■ CU Triaxial

TEST IDENTIFICATION

C - Consolidation T - Triaxial Shear
 TS - Thaw Strain S - P.W. Satinity
 DS - Direct Shear X - X-Ray Diffr.

**BOREHOLE
NUMBER**
 83 - IBS - S25

PAGE 1 OF 1

DEPTH BELOW SEABED (metres)

DRILLING COMPLETED: 83/09/28
BOREHOLE DEPTH: 12.2 m
DRILLING RIG: S5000/M.V. Broderick
LOG COMPILED BY: JPR

 SAND  SILT  CLAY

† Torvane	● Unconfined Compr
x Min. Vane	▲ UU Triaxial
□ Pitcon Vane	■ CU Triaxial

C - Consolidation	T - Triaxial Shear
TS - Thaw Strain	S - P.W. Satinity
DS - Direct Shear	X - X-Ray Difr.

PAGE 1 OF 1

DEPTH BELOW SEABED (metres)

LOCATION: ARNAK K-06			WATER DEPTH: 7.4m																				
UTM COORDINATES: 547 442 mE			7 739 535 mN			(TIME MEASURED 09:50hrs.)																	
SYMBOL			SAMPLE			SOIL DESCRIPTION			GROUND ICE DESCRIPTION			BULK DENSITY			UNDRAINED SHEAR STRENGTH (kPa)			SOIL UNIT			LABORATORY TESTS		
												PLASTIC LIMIT WATER CONTENT (%) 20 40 60 80			LIQUID LIMIT 20 40 60 80								
1.0			1			CLAY (CL) -silty, trace of shell fragments, thinly laminated, firm, wet to saturated, low plasticity, dark grey. 1.3m (-8.7m El.)			NOT FROZEN 1.03														
			2			SAND and SILT (SM) -uniform, fine-grained, dark brown.																	
			3			SAND (SP-SM) -trace of silt, medium to fine-grained, uniform, compact (est.), saturated, olive grey.																	
			4			(SP) -trace of silt, trace of gravel, trace of organics, medium to fine-grained, olive grey. 3.5m (-10.9m El.)			1.19														
5.0						SILT (ML) -some sand to sandy, organic odour, wet to saturated, soft to very soft, dark grey.																	
			5			-nonplastic			0.44														
			6			-nonplastic			0.08														
			7			-dark grey becoming olive grey, nonplastic																	
			8			-medium plasticity (CL) 9.3m (-16.7m El.)																	
10.0			9			SAND (SP) -trace of silt, uniform, fine-grained, saturated, dark brown.			1.28														
			10						1.32														
15.0			11			-(SM) trace of silt, uniform, fine-grained, saturated, grey-brown.																	
						END OF BOREHOLE 15.6m (-23.0m El.)																	

PROJECT NUMBER 101C-4271 DRILLING COMPLETED 85/07/24 TERMINATION DEPTH 15.6m DRILLING RIG SIMCO 5000/Bradwick LOG COMPILED BY MAV/BAB/NRM	SOIL SYMBOLS		SAMPLE TYPE		SHEAR STRENGTH		TEST IDENTIFICATION		BOREHOLE NUMBER AR85S05 PAGE 1 OF 1
	Gravel Sand	Silt Clay	Thin Wall Tube Split Spoon Liner	Core Disturbed No Recovery	Torsion Mini Vane Picon Vane In Situ Vane	UU Triaxial Fall Cone	Consolidation Thaw Strain Direct Shear Direct Simple Shear	Triaxial Shear P.W. Salinity Gas Analysis	

4271

LOCATION: ARNAK K-06			WATER DEPTH: 7.1m		BULK DENSITY		UNDRAINED SHEAR STRENGTH (kPa)				SOIL UNIT	LABORATORY TESTS		
UTM COORDINATES: 547 390mE 7 739 560mN			(TIME MEASURED 14:30 hrs.)		PLASTIC LIMIT LIQUID LIMIT									
			SOIL DESCRIPTION		GROUND ICE DESCRIPTION (°C)		WATER CONTENT (%)							
					NOT FROZEN		20 40 60 80		20 40 60 80					
20.0														
13			-trace of silt, fine-grained, saturated, compact (est.), dark brown. (10YR 3/3)		0.94		●							
25.0														
14					0.73		●						IVa	
15							●							
					29.3m (-36.4m El.)									
30.0			NOTE: driller encountering difficult drilling (SP) trace of silt, saturated, dark brown, poor recovery.		Nbn some Nbe in sand		●							
32.0m (-39.1m El.)														
INTERBEDDED LAYERS OBSERVED BY DRILLER:														
-SAND (SM) some silt, fine-grained, gray brown.														
-CLAY (CL) silty, some gravel (2cm), low plasticity, some organics, dark grey.							● ●							
34.4m (-41.5m El.)					34.4m (-41.5m El.)									
35.0			SAND -interpreted from drillers notes.		NOT FROZEN								IVb	
36.6m (-43.7m El.)														
18			CLAY (CL) -silty, medium plasticity, dark grey.		-0.55		●							
			END OF BOREHOLE 37.1m (-44.2m El.)											

GSD

D₅₀ = 325µm

D₁₀ = 210µm

%FINES = 1

PROJECT NUMBER 101C-4271
 DRILLING COMPLETED 85/07/23
 TERMINATION DEPTH 37.1
 DRILLING RIG SIMCO 5000/Broderick
 LOG COMPILED BY MAV/BAB/NRM

SOIL SYMBOLS

Gravel Sand Silt Clay

SAMPLE TYPE

Thin Wall Tube Split Spoon Liner Core Disturbed No Recovery

SHEAR STRENGTH

+ Torvane x Mini Vane Δ Picon Vane ◇ In Situ Vane

▲ UU Triaxial ∇ Fall Cone

TEST IDENTIFICATION

C Consolidation TS Thaw Strain DS Direct Shear DSS Direct Simple Shear

T Triaxial Shear S P.W. Salinity G Gas Analysis

BOREHOLE NUMBER
AR85S01

PAGE 2 OF 2

