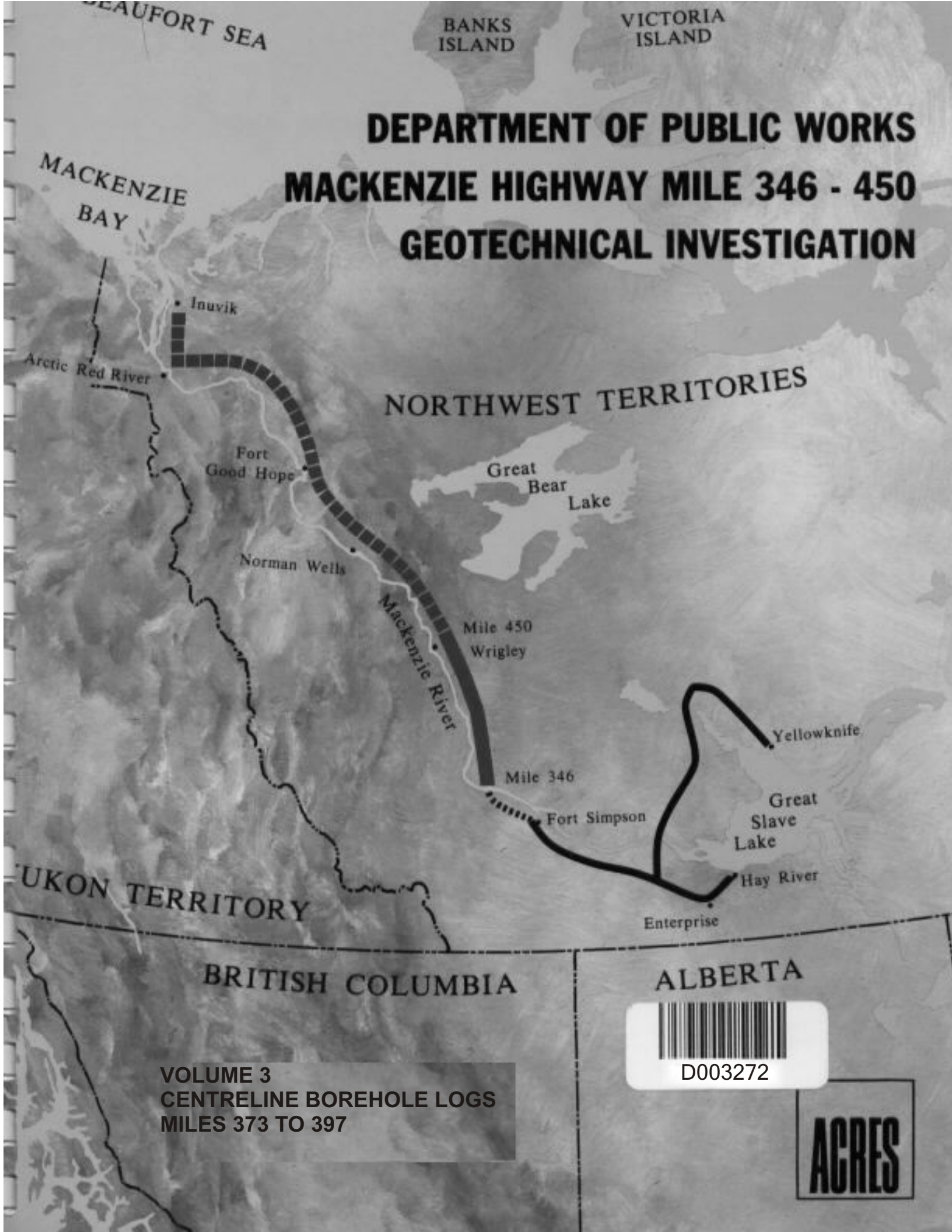


DEAUFORT SEA

BANKS
ISLAND

VICTORIA
ISLAND

DEPARTMENT OF PUBLIC WORKS MACKENZIE HIGHWAY MILE 346 - 450 GEOTECHNICAL INVESTIGATION



VOLUME 3
CENTRELINE BOREHOLE LOGS
MILES 373 TO 397



D003272

ACRES

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA						DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY								
DWN:		FIELD ENG:		DATE DRILLED 28/2/		AIRPHOTO NO: A22777-175		CHAINAGE 1412 + 00		OFFSET		TEST HOLE				
CKD		TECH W. R.		RIG 1		SURFACE DRAINAGE FAIR		VEGETATION AE		ELEV 288		MILE B,C,S NUMBER				
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
2	1				ML	SANDY SILT WITH A TRACE OF CLAY	F	N _{bn}	2							
3									3							
4							UF		4							
6	2				ML				6							
8									8							
10									10							
12	3				ML				12							
14									14							
15						END OF HOLE AT 15'			15							
16									16							
18									18							
20									20							
22									22							
24									24							

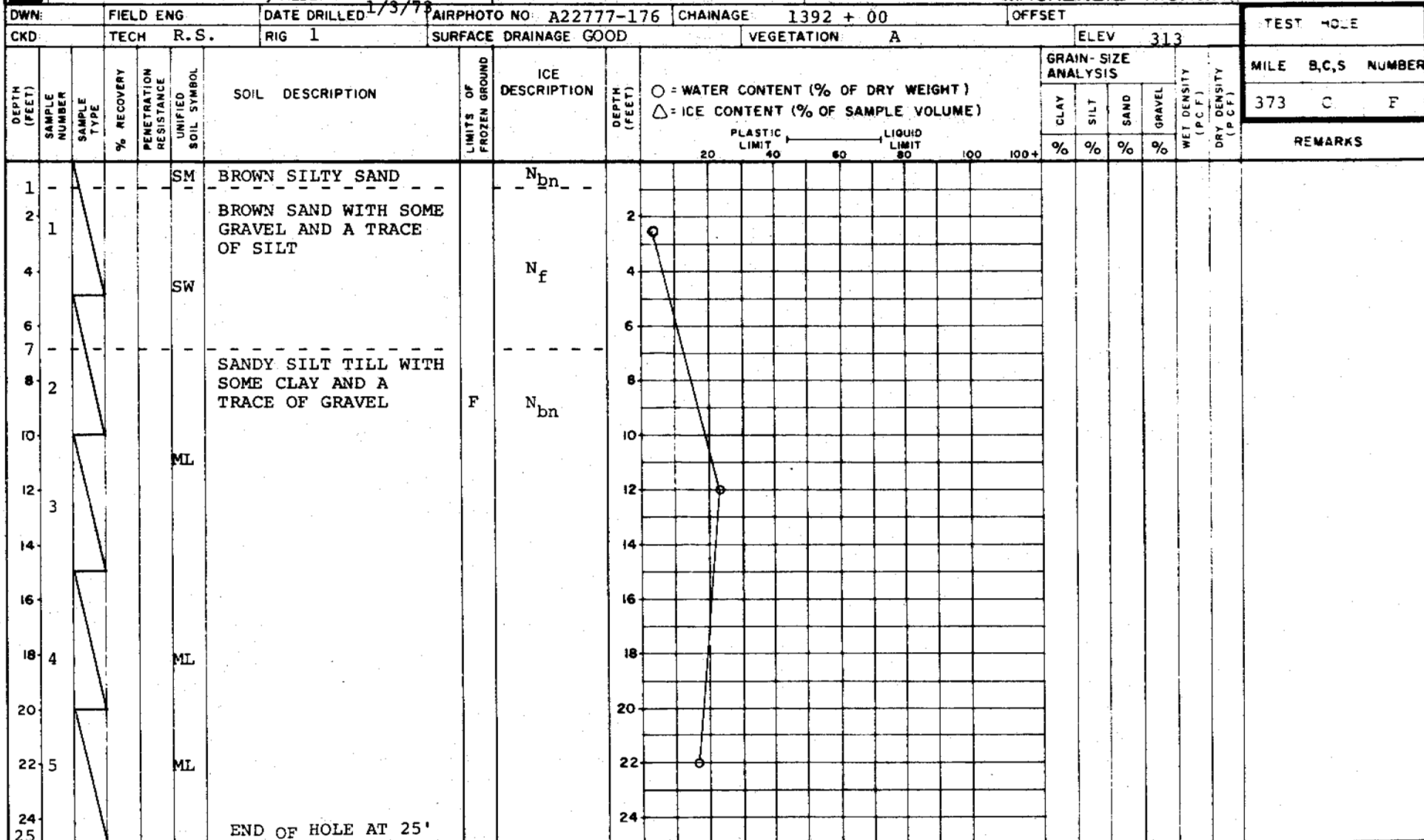
NON PLASTIC
AT 10 FT.

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT										DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN:		FIELD ENG		DATE DRILLED 1/3/78		AIRPHOTO NO: A22777-175		CHAINAGE: 1402 + 00		OFFSET:		ELEV 304		TEST HOLE															
CKD		TECH R.S.		RIG 1		SURFACE DRAINAGE GOOD		VEGETATION A																					
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS		WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	MILE	B,C,S	NUMBER													
										CLAY %	SILT %						SAND %	GRAVEL %											
2	1				SP	SAND WITH SOME SILT AND TRACES OF CLAY AND GRAVEL			2	4	15	79	2																
4									4																				
5									5																				
6						SILT WITH SOME CLAY AND SAND			6																				
8									8																				
10	2				ML	BROWN GREY	F	N _{bn}	10	12	72	15	1																
12									12																				
14									14																				
15									15																				
16									16																				
17	3				SW	SAND WITH SOME GRAVEL AND SILT AND A TRACE OF CLAY			17	3	26	63	8																
18									18																				
20									20																				
21									21																				
22	4				SM	SILTY SAND WITH TRACES OF CLAY AND GRAVEL		N _f	22	7	41	48	4																
24									24																				
25						END OF HOLE AT 25'																							

NON PLASTIC
AT 15'

[illegible]

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY



ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY								
DWN:		FIELD ENG:		DATE DRILLED 1/3/73		AERPHOTO NO: A22777-176		CHAINAGE 1384 + 00		OFFSET		TEST HOLE				
CKD		TECH R.S.		RIG 1		SURFACE DRAINAGE GOOD		VEGETATION B		ELEV 313						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
2	1				ML	SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL			2							
4									4							
5									5							
6									6							
8	2				ML		F	N _{bn}	8							
10						BROWN GREY			10							
12	3				ML			N _f	12							
14									14							
15						END OF HOLE AT 15'			15							
16									16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA						DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY							
DWN:		FIELD ENG.		DATE DRILLED 1/3/79		AIRPHOTO NO. A22777-176		CHAINAGE 1377 + 50		OFFSET							
CKD		TECH R.S.		RIG I		SURFACE DRAINAGE GOOD				VEGETATION A		ELEV 337				TEST HOLE	
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATOR RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	MILE B.C.S NUMBER	
									○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)								
									PLASTIC LIMIT LIQUID LIMIT								
									20 40 60 80 100 100+								
									CLAY SILT SAND GRAVEL								
									% % % %								
																REMARKS	
1	-	-	-	-	SM	BROWN SILTY SAND - - -		N _{bn}	2								
2	1				SW	BROWN GRAVELLY SAND WITH A TRACE OF SILT			4								
4									6								
5							F	N _f	8								
6									10								
8	2				SW				12								
10									14								
12	3				SW				16								
14									18								
15						END OF HOLE AT 15'			20								
16									22								
18									24								
20																	
22																	
24																	

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT										DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN:		FIELD ENG.		DATE DRILLED 2/3/77		AERIAL PHOTO NO. A22777-174		CHAINAGE 1466 + 40		OFFSET		TEST HOLE																	
CKD		TECH R.G.		RIG 2		SURFACE DRAINAGE FAIR		VEGETATION B		ELEV 288		MILE 374		S,C,S C		NUMBER E													
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS													
										CLAY %	SILT %	SAND %	GRAVEL %																
2	1				ML	BROWN SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL			2																				
4									4																				
6									6																				
8	2				ML		F	N _{bn}	8																				
10									10																				
12	3				ML				12																				
14									14																				
15						END OF HOLE AT 15'			16																				
16									18																				
18									20																				
20									22																				
22									24																				
24																													

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY								
DWN:		FIELD ENG		DATE DRILLED 2/3/78		AERPHOTO NO A22777-174		CHAINAGE 1456 + 10		OFFSET		TEST HOLE				
CKD		TECH R.G.		RIG 2		SURFACE DRAINAGE FAIR		VEGETATION B		ELEV 291						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)						
										PLASTIC LIMIT LIQUID LIMIT 20 40 60 80 100 100+						
2	1				Pt	PEAT		V _x	2							
4					ML	SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL			4							
5									5							
6	2						F	N _{bn}	6							
8					ML				8							
10						BROWN GREY			10							
12	3				ML				12							
14									14							
15						END OF HOLE AT 15'			15							
16									16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY										
DWN:		FIELD ENG:		DATE DRILLED 28/2/		AIRPHOTO NO: A22777-174		CHAINAGE 1452 + 00		OFFSET		TEST HOLE				
CKD:		TECH W. R.		RIG 1		SURFACE DRAINAGE GOOD		VEGETATION AB		ELEV 294		MILE 374 B.C.S C NUMBER G				
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
2	1				ML	GREY AND BROWN SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL			2							
4									4							
5									5							
6						GREY AND BROWN SILTY SAND WITH SOME GRAVEL	F	N _{bn}	6							
8	2				SM				8							
10									10							
12	3				SM				12							
14									14							
15						END OF HOLE AT 15'			15							
16									16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY											
DWN:		FIELD ENG:	DATE DRILLED 28/2/73	AIRPHOTO NO: A22777-175	CHAINAGE 1447 + 00	OFFSET		TEST HOLE									
CKD		TECH: W. R.	RIG I	SURFACE DRAINAGE GOOD		VEGETATION: ABD		ELEV 304									
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	MILE B,C,S NUMBER	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %				
2	1				SW	BROWN AND GREY SAND WITH SOME GRAVEL AND A TRACE OF SILT	F	N _f	2								HOLE CAVING IN BADLY AND HAD NO CASING AVAIL- ABLE TO KEEP IT OPEN
4									4								
5									5								
6						END OF HOLE AT 5'			6								
8									8								
10									10								
12									12								
14									14								
16									16								
18									18								
20									20								
22									22								
24									24								

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY								
DWN:		FIELD ENG		DATE DRILLED		AIRPHOTO NO:		CHAINAGE		OFFSET		TEST HOLE				
CKD:		TECH		RIG		SURFACE DRAINAGE		VEGETATION		ELEV		MILE B,C,S NUMBER				
		W. R.		1		GOOD		ABD		299		374 C J				
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY	SILT	SAND	GRAVEL			
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)						
										PLASTIC LIMIT 20 40 60 80 100 100+ LIQUID LIMIT 80 100 100+						
2	1				SW	BROWN SAND WITH SOME GRAVEL AND A TRACE OF SILT	F	N _f	2							HOLE CAVING IN BADLY
4									4							
5									6							
6	2								6	0	3	76	21			
7									6	0	3	95	2			
8						END OF HOLE AT 7'			8							
10									10							
12									12							
14									14							
16									16							
18									18							
20									20							
22									22							
24									24							

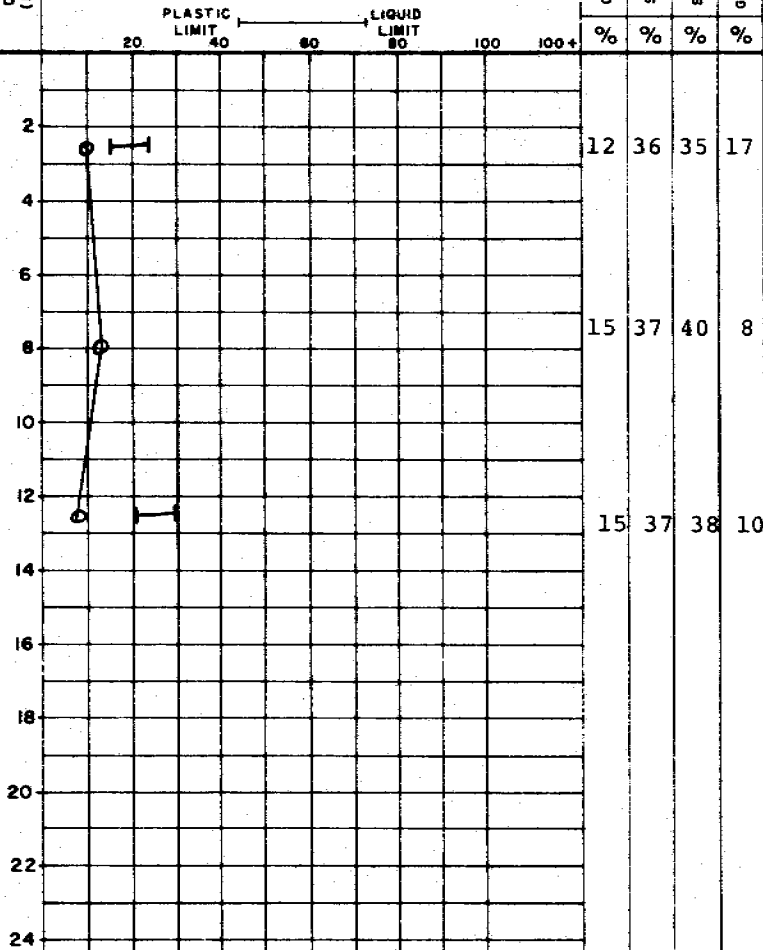
ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY								
OWN: CKD		FIELD ENG: TECH W. R.		DATE DRILLED: 28/2/73		AIRPHOTO NO: A22777-175		CHAINAGE: 1431 + 00		OFFSET		TEST HOLE				
				RIG: 1		SURFACE DRAINAGE: FAIR		VEGETATION: ABE		ELEV: 293						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
2	1				SM	GREY SILTY SAND	F	V _x	2							
3																
4																
6						SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL	UF		6							
8	2				ML				8							
10									10							
11						BROWN GREY			11							
12	3								12							
14									14							
15						END OF HOLE AT 15'			15							
16									16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY								
DWN:		FIELD ENG		DATE DRILLED 28/2/73		AIRPHOTO NO: A22777-175		CHAINAGE 1428 + 00		OFFSET		TEST HOLE				
CKD		TECH W.R.		RIG 1		SURFACE DRAINAGE GOOD		VEGETATION AB		ELEV 295						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
2	1				ML	SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL			2							
4									4							
5									5							
6									6							
8									8							
10									10							
12						BROWN GREY			12							
14	2				ML				14							
15						END OF HOLE AT 15'			15							
16									16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY								
DWN:		FIELD ENG:		DATE DRILLED: 28/2/73		AIRPHOTO NO: A22777-175		CHAINAGE: 1422 + 40		OFFSET:		TEST HOLE				
CKD:		TECH: W.R.		RIG: 1		SURFACE DRAINAGE: FAIR		VEGETATION: ABD		ELEV: 289						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY	SILT	SAND	GRAVEL			
									○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)						MILE B,C,S NUMBER 374 C M	
									PLASTIC LIMIT 40 LIQUID LIMIT 80 20 40 60 80 100 100+							
2						Pt BLACK PEAT		V _x	2							
4									4							
5									5							
6	1					ML GREY SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL	F	N _{bn}	6							
8									8							
10									10							
12									12							
14	2					ML			14							
15						END OF HOLE AT 15'			15							
16									16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY								
DWN:		FIELD ENG.		DATE DRILLED 28/2/73		AIRPHOTO NO: A22771-41		CHAINAGE 1537+50		OFFSET		TEST HOLE				
CKD		TECH R.S.		RIG 1		SURFACE DRAINAGE GOOD		VEGETATION B		ELEV 294						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
2					Pt	PEAT		V _x	2							
4	1				ML	BROWN SILT AND SAND WITH SOME CLAY AND GRAVEL			4							
6									6							
8	2				ML			N _{bn}	8							
10									10							
12	3				ML				12							
14									14							
16						END OF HOLE AT 15'			16							
18									18							
20									20							
22									22							
24									24							

○ = WATER CONTENT (% OF DRY WEIGHT)
△ = ICE CONTENT (% OF SAMPLE VOLUME)



ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY			
DWN:		FIELD ENG:		DATE DRILLED		AIRPHOTO NO:		CHAINAGE		OFFSET	
CKD		TECH		RIG		SURFACE DRAINAGE		VEGETATION		ELEV	
		R.S.		1		GOOD		B		299	
										TEST HOLE	
										MILE B,C,S NUMBER	
										375 C 5	
										REMARKS	

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
										CLAY %	SILT %	SAND %	GRAVEL %		
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)					
										PLASTIC LIMIT 40 60 80 100 100+ LIQUID LIMIT 80 100 100+					
2	1				Pt	PEAT		V _x	2						
4					ML	SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL			4						
6						LIGHT BROWN DARK BROWN	F	N _{bn}	6						
8									8						
10	2				ML				10						
12						BROWN GREY			12						
14									14						
16	3				ML				16						
18									18						
20						END OF HOLE AT 20'			20						
22									22						
24									24						

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA						DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY						
DWN:		FIELD ENG.		DATE DRILLED 28/2/13		AIRPHOTO NO: A22771-41		CHAINAGE: 1512+00		OFFSET		TEST HOLE				
CKD		TECH W.R.		RIG 1		SURFACE DRAINAGE FAIR		VEGETATION A B E		ELEV 293						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
					SM	BROWN SILTY SAND										
2	1				ML	GREY SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL			2	27	51	19	3			
4					ML											
6					ML		F	N _{bn}								
8																
10																
12	2				ML				12	15	41	37	7			
14																
16						END OF HOLE AT 15'			16							
18									18							
20									20							
22									22							
24									24							

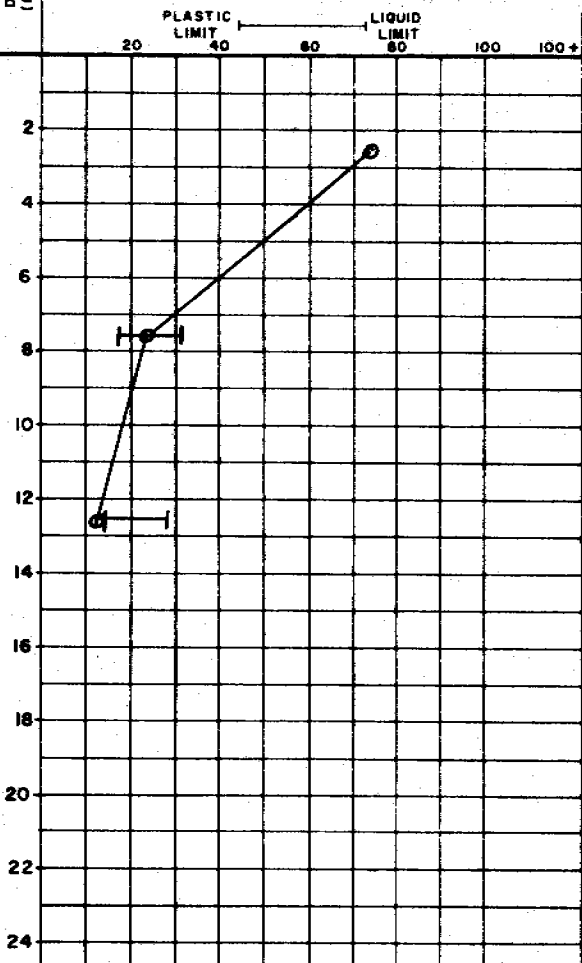
ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT										DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN:		FIELD ENG:		DATE DRILLED 28/2/83		AIR PHOTO NO: A22771-41		CHAINAGE: 1504+00		OFFSET		TEST HOLE																	
CKD		TECH: W.R.		RIG: I		SURFACE DRAINAGE: GOOD		VEGETATION: A B E		ELEV: 300		MILE: 375		B,C,S: C		NUMBER: E													
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS													
										CLAY %	SILT %	SAND %	GRAVEL %																
2	1				ML	SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL BROWN GREY	F	N _{bn}	2																				
4									4																				
6	2				ML				6																				
8									8																				
10									10																				
12	3				ML				12																				
14									14																				
16									16																				
18	4				ML				18																				
20						END OF HOLE AT 20'			20																				
22									22																				
24									24																				

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY										
DWN:		FIELD ENG.	DATE DRILLED	AIRPHOTO NO:	CHAINAGE	OFFSET		TEST HOLE								
CKD	TECH	W.R.	RIG	SURFACE DRAINAGE	GOOD	VEGETATION	A B E	ELEV	299							
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY	SILT	SAND	GRAVEL			
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)						
										PLASTIC LIMIT 20 40 60 80 100 100+						
2	1				ML	SILT AND SAND TILL WITH SOME GRAVEL AND CLAY			2							
4									4							
6									6							
8									8							
10						--BROWN-- GREY	F	N _{bn}	10							
12	2				ML				12							
14									14							
16									16							
18	3				ML				18							
20						END OF HOLE AT 20'			20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY								
DWN:		FIELD ENG:		DATE DRILLED: 28/2/73		AIR PHOTO NO: A22771-41		CHAINAGE: 1476+00		OFFSET:		TEST HOLE				
CKD:		TECH: M.H.R.		RIG: 2		SURFACE DRAINAGE: POOR		VEGETATION:		ELEV: 287		MILE: 375 B,C,S: C NUMBER: H				
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
2					Pt	PEAT		V _x	2							
4	1				ML	BROWN SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL			4	18	48	30	4			
6									6							
8	2				ML		F	N _{bn}	8	15	44	32	9			
10									10							
12									12	20	43	33	4			
14	3				ML				14							
16						END OF HOLE AT 15'			16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY										
DWN:		FIELD ENG.	DATE DRILLED 28/2/73	AIRPHOTO NO: A22771-43	CHAINAGE 41 + 00 (Approx)	OFFSET		ELEV 495								
CKD	TECH	R.G.	RIG 2	SURFACE DRAINAGE FAIR		VEGETATION A		ELEV 495								
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
2					Pt	PEAT		V _x	2							
4	1				ML	DARK BROWN SILT AND SAND TILL WITH SOME CLAY AND TRACES OF GRAVEL AND COBBLES			4							
6									6							
8	2				ML		F	N _{bn}	8							
10									10							
12	3				ML				12							
14									14							
15						HOLE ENDS AT 15'			15							
16									16							
18									18							
20									20							
22									22							
24									24							

○ = WATER CONTENT (% OF DRY WEIGHT)
△ = ICE CONTENT (% OF SAMPLE VOLUME)



CLAY	SILT	SAND	GRAVEL	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
19	47	31	3		
16	37	43	4		

TEST HOLE
MILE B.C.S. NUMBER
376 C 3

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY								
DWN:		FIELD ENG		DATE DRILLED 28/2/74		AIR PHOTO NO: A22771-43		CHAINAGE: 36 + 80		OFFSET		TEST HOLE				
CKD		TECH R.G.		RIG 2		SURFACE DRAINAGE GOOD		VEGETATION A		ELEV 497		MILE B,C,S NUMBER				
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY	SILT	SAND	GRAVEL			
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)						
										PLASTIC LIMIT 20 40 60 80 100 100+ LIQUID LIMIT 80 100 100+						
2	1				ML	DARK BROWN SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL			2							
4									4							
5									5							
6									6							
8	2				ML				8							
10							F	N _{bn}	10							
12	3				ML				12							
14							UF		14							
16									16							
18	4				ML				18							
20						END OF HOLE AT 20'			20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY			
DWN:		FIELD ENG:		DATE DRILLED 28/2		PHOTO NO: A22771-43		CHAINAGE: 33 + 95		OFFSET:		TEST HOLE			
CKD:		TECH: R.G.		RIG: 2		SURFACE DRAINAGE: GOOD		VEGETATION: A		ELEV: 499					
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS		WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS	
										CLAY %	SILT %				SAND %
2	1				ML	SILT AND SAND TILL WITH SOME CLAY AND A TRACE OF GRAVEL AND OF COBBLES			2						
4									4						
5									5						
6									6						
8	2				ML				8	20	42	34	4		
10									10						
12	3				SM	BROWN GREY			12	7	30	47	16		
14									14						
15									15						
16									16						
18	4				ML				18	20	39	34	7		
20						END OF HOLE AT 20'			20						
22									22						
24									24						

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY								
DWN:		FIELD ENG:		DATE DRILLED 28/2/71		AIR PHOTO NO: A22771-43		CHAINAGE: 31 + 10		OFFSET		TEST HOLE				
CKD		TECH: R. G.		RIG 2		SURFACE DRAINAGE: FAIR		VEGETATION: A		ELEV 498		MILE B,C,S NUMBER				
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
2	1				Pt	PEAT		V _x	2							
4					ML				4							
5									6							
6	2					CLAYEY SILT AND SAND TILL WITH A TRACE OF GRAVEL			8	27	41	26	6			
8					ML		F	N _{bn}	10							
10									12							
12	3				ML	BROWN GREY			14	25	39	35	1			
14									16							
15						END OF HOLE AT 15'			18							
16									20							
18									22							
20									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY										
DWN:		FIELD ENG:	DATE DRILLED: 28/2/73	AIRPHOTO NO: A22771-43	CHAINAGE: 22 + 00	OFFSET:		TEST HOLE								
CKD:		TECH: R.G.	RIG: 2	SURFACE DRAINAGE: FAIR		VEGETATION: A		ELEV: 500								
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY	SILT	SAND	GRAVEL			
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)						
										PLASTIC LIMIT LIQUID LIMIT 20 40 60 80 100 100+						
1					Pt	PEAT		V _x								
2	1				ML	SILT AND SAND TILL WITH SOME CLAY AND TRACES OF GRAVEL AND COBBLES			2							
4									4							
5									5							
6									6							
8	2				ML		F	N _{bn}	8							
10									10							
12	3				ML				12							
14									14							
15						END OF HOLE AT 15'			15							
16									16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY								
DWN:		FIELD ENG:		DATE DRILLED 28/2/81		AIR PHOTO NO: A22771-43		CHAINAGE 15 + 10		OFFSET:		TEST HOLE				
CKD:		TECH R. G.		RIG 2		SURFACE DRAINAGE FAIR		VEGETATION B		ELEV 502		MILE B,C,S NUMBER				
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
2	1				ML	SILT AND SAND TILL WITH SOME CLAY AND TRACES OF GRAVEL AND COBBLES			2							
4									4							
5									5							
6	2				ML		F	N _{bn}	6							
8									8							
10									10							
12	3				ML	BROWN GREY			12							
14									14							
15						END OF HOLE AT 15'			15							
16									16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY					
DWN:		FIELD ENG:		DATE DRILLED: 28/2/73		AIRPHOTO NO: A22771-43		CHAINAGE: 1548 + 00		OFFSET:		TEST HOLE	
CKD:		TECH R.S.		RIG 1		SURFACE DRAINAGE: GOOD		VEGETATION: B		ELEV 293			

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME) PLASTIC LIMIT LIQUID LIMIT 20 40 60 80 100 100+																
2	1				Pt	PEAT		V _x	2							
4					SM	SAND AND SILT TILL WITH TRACES OF CLAY, GRAVEL AND COBBLES			4							
6							F	N _{bn}	6							
8	2				SM				8							
10									10							
12	3				ML	BROWN GREY			12							
14									14							
15						END OF HOLE AT 15'			15							
16									16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT										DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN:		FIELD ENG		DATE DRILLED 28/2/		AIRPHOTO NO: A-22771-44		CHAINAGE 90 + 00		OFFSET		TEST HOLE																	
CKDB.P.S.		TECH R.S.		RIG 1		SURFACE DRAINAGE GOOD		VEGETATION A		ELEV 495		MILE B,C,S NUMBER																	
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS													
										CLAY %	SILT %	SAND %	GRAVEL %																
						4" of PEAT																							
2	1				SM	BROWN SILTY SAND TILL WITH SOME CLAY AND GRAVEL			2																				
4									4																				
5									5																				
6									6																				
8	2				SM				8																				
10									10																				
12	3				SM				12																				
14									14																				
16						END OF HOLE AT 15'			16																				
18									18																				
20									20																				
22									22																				
24									24																				

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY								
DWN:		FIELD ENG:		DATE DRILLED:		AIRPHOTO NO:		CHAINAGE:		OFFSET:		TEST HOLE				
CKD:		TECH:		RIG:		SURFACE DRAINAGE:		VEGETATION:		ELEV:		MILE B,C,S NUMBER				
		R.S.		1		FAIR		B		500		377 C B				
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY	SILT	SAND	GRAVEL			
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)						
										PLASTIC LIMIT LIQUID LIMIT 20 40 60 80 100 100+						
2	1				SM	SILT AND SAND TILL WITH A TRACE OF GRAVEL AND CLAY			2							
4									4							
5									5							
6							F	N _{bn}	6							
8	2				SM				8							
10									10							
12					SM	- BROWN GREY - -			12							
14									14							
15						END OF HOLE AT 15'			15							
16									16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY										
DWN:		FIELD ENG:		DATE DRILLED: 28/2/73		AIRPHOTO NO: A22771-44		CHAINAGE: 80 + 00		OFFSET:		TEST HOLE				
CKD:		TECH: S. R.		RIG:		SURFACE DRAINAGE: GOOD		VEGETATION: B		ELEV 493						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
2	1				Pt	PEAT AND SILTY SAND		V _x	2							
3																
4						SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL			4							
5																
6																
8	2				ML		F	N _{bn}	8							
10																
12	3				ML	BROWN GREY			12							
14									14							
15						END OF HOLE AT 15'			15							
16									16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA						DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY						
DWN:		FIELD ENG:		DATE DRILLED 28/2/11		AIR PHOTO NO: A22771-44		CHAINAGE 75 + 00		OFFSET		TEST HOLE				
CKD:		TECH R.S.		RIG 1		SURFACE DRAINAGE GOOD		VEGETATION A		ELEV 502						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
									O = WATER CONTENT (% OF DRY WEIGHT) Δ = ICE CONTENT (% OF SAMPLE VOLUME)							
									PLASTIC LIMIT LIQUID LIMIT							
									20 40 60 80 100 100+							
2	1				SM	BROWN SAND WITH SOME GRAVEL AND SILT AND A TRACE OF CLAY			2							
4									4							
5									5							
6									6							
8	2				SM		F	N _{bn}	8							
10									10							
11	-				- - - - -				11							
12					ML	GREY SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL			12							
14									14							
15	3								15							
16						END OF HOLE AT 15'			16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY										
OWN:		FIELD ENG:		DATE DRILLED: 28/2/73		AIRPHOTO NO: A22771-44		CHAINAGE: 62 + 00		OFFSET:		TEST HOLE				
CKD:		TECH: R.S.		RIG: 1		SURFACE DRAINAGE: GOOD		VEGETATION: A		ELEV: 499						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)						
										PLASTIC LIMIT 20 40 60 80 100 100+ LIQUID LIMIT 80 100 100+						
2	1				Pt	PEATY SOIL		V _x	2							
4									4							
5									5							
6									6							
8	2				ML	SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL	F	N _{bn}	8							
10									10							
12	3				ML	BROWN GREY			12							
14									14							
15						END OF HOLE AT 15'			15							
16									16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA						DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY							
DWN:		FIELD ENG:		DATE DRILLED:		AIR PHOTO NO:		CHAINAGE:		OFFSET:		TEST HOLE					
CKD:		TECH R.G.		RIG 2		SURFACE DRAINAGE FAIR		VEGETATION: A		ELEV 499							
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS	
										CLAY	SILT	SAND	GRAVEL				
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)							
										PLASTIC LIMIT LIQUID LIMIT							
										20 40 60 80 100 100+							
2					Pt	PEAT		V _x	2								
4	1				ML	DARK BROWN SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL AND COBBLES		N _{bn}	4								
6							F		6								
8	2				ML				8								
10									10								
12	3				ML				12								
14									14								
15						END OF HOLE AT 15'			15								
16									16								
18									18								
20									20								
22									22								
24									24								

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY										
OWN:		FIELD ENG:		DATE DRILLED 28/2/77		AIR PHOTO NO: A22771-44		CHAINAGE 46 + 00		OFFSET		TEST HOLE				
CKD		TECH R.G.		RIG 2		SURFACE DRAINAGE FAIR		VEGETATION: A		ELEV 497		MILE B,C,S NUMBER				
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
										CLAY	SILT	SAND	GRAVEL			
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)						
										20	40	60	80	100	100+	
										PLASTIC LIMIT				LIQUID LIMIT		
2	1				Pt	PEAT		V _x	2							
4					ML	DARK BROWN SANDY SILT WITH SOME CLAY AND A TRACE OF GRAVEL			4							
6									6							
8	2				ML		F	N _{bn}	8							
10									10							
12	3				ML				12							
14									14							
15						END OF HOLE AT 15'			15							
16									16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY										
OWN: CKD		FIELD ENG: TECH W.R.		DATE DRILLED: 2/1/2/		AIRPHOTO NO: A22782-150		CHAINAGE: 147 + 00		OFFSET:		TEST HOLE				
				RIG: 1		SURFACE DRAINAGE: GOOD		VEGETATION: ABD		ELEV: 506						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
2	1				CL	CLAY AND SILT TILL WITH A TRACE OF SAND			2							
4									4							
5									5							
6						BROWN GREY	F	N _{bn}	6							
8	2				CL				8	52	45	3	0			
10									10							
11									11							
12	3				ML	SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL			12	22	48	22	8			
14									14							
15						END OF HOLE AT 15'			15							
16									16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY								
DWN:		FIELD ENG:		DATE DRILLED: 27/2/77		AIRPHOTO NO: A22782-150		CHAINAGE: 142 + 00		OFFSET:		TEST HOLE				
CKD:		TECH: W.R.		RIG: 1		SURFACE DRAINAGE: FAIR		VEGETATION: ABE		ELEV: 504-						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
2	1				ML	SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL			2							
4									4							
5									5							
6									6							
8	2				ML			N _{bn}	8							
10									10							
11						BROWN GREY			11							
12									12							
14	3				ML				14							
15						END OF HOLE AT 15'			15							
16									16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA						DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY							
DWN:		FIELD ENG.		DATE DRILLED: 2/7/20		AIRPHOTO NO: A22782-150		CHAINAGE: 140 + 00		OFFSET		TEST HOLE					
CKD:		TECH: W.R.		RIG: 1		SURFACE DRAINAGE: GOOD		VEGETATION: ABE		ELEV: 497							
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS	
										CLAY %	SILT %	SAND %	GRAVEL %				
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)							
										PLASTIC LIMIT ——— LIQUID LIMIT 20 40 60 80 100 100+							
2	1				ML	SILT AND SAND TILL SOME CLAY AND GRAVEL		V _x	2								
4									4								
5									5								
6									6								
8	2				ML		F	N _{bx}	8								
10									10								
12	3				ML				12								
14									14								
15						END OF HOLE AT 15'			15								
16									16								
18									18								
20									20								
22									22								
24									24								

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT										DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN:		FIELD ENG		DATE DRILLED 21/2/03		AERPHOTO NO: A22782-150		CHAINAGE 131 + 00		OFFSET		TEST HOLE																	
CKD		TECH W.R.		RIG 1		SURFACE DRAINAGE GOOD		VEGETATION: ABE		ELEV 506		MILE 378 B,C,S C NUMBER D																	
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS													
										CLAY %	SILT %	SAND %	GRAVEL %																
2	1				ML	SILT AND SAND TILL WITH SOME CLAY AND A TRACE OF GRAVEL			2																				
4									4																				
5									5																				
6	2				ML			N _{bn}	6																				
8									8																				
10						BROWN GREY			10																				
12	3				ML				12																				
14									14																				
15						END OF HOLE AT 15'			15																				
16									16																				
18									18																				
20									20																				
22									22																				
24									24																				

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY										
DWN:		FIELD ENG.		DATE DRILLED 27/2/73		AIRPHOTO NO: A22782-150		CHAINAGE 125 + 00		OFFSET		TEST HOLE				
CKD		TECH: W. R.		RIG: 1		SURFACE DRAINAGE: GOOD		VEGETATION: ABD		ELEV 504						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)						
										PLASTIC LIMIT ——— LIQUID LIMIT 20 40 60 80 100 100+						
2	1				ML	SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL			2							
4						- BROWN - - GREY -			4							
6									6							
8	2				ML		F	N _{bn}	8							
10									10							
12									12							
14									14							
15									15							
16						END OF HOLE AT 15'			16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY								
DWN:		FIELD ENG		DATE DRILLED 28/2/79		AIR PHOTO NO: A22782-149		CHAINAGE: 106 + 00		OFFSET		TEST HOLE				
CKD		TECH R.S.		RIG 1		SURFACE DRAINAGE GOOD		VEGETATION: A		ELEV 506		MILE B,C,S NUMBER				
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
2					Pt	PEAT		V x	2							
4					ML	SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL			4							
5									5							
6	2				ML		F		6							
8									8							
10									10							
12	3				ML	BROWN GREY			12							
14									14							
15						END OF HOLE AT 15'			15							
16									16							
18									18							
20									20							
22									22							
24									24							

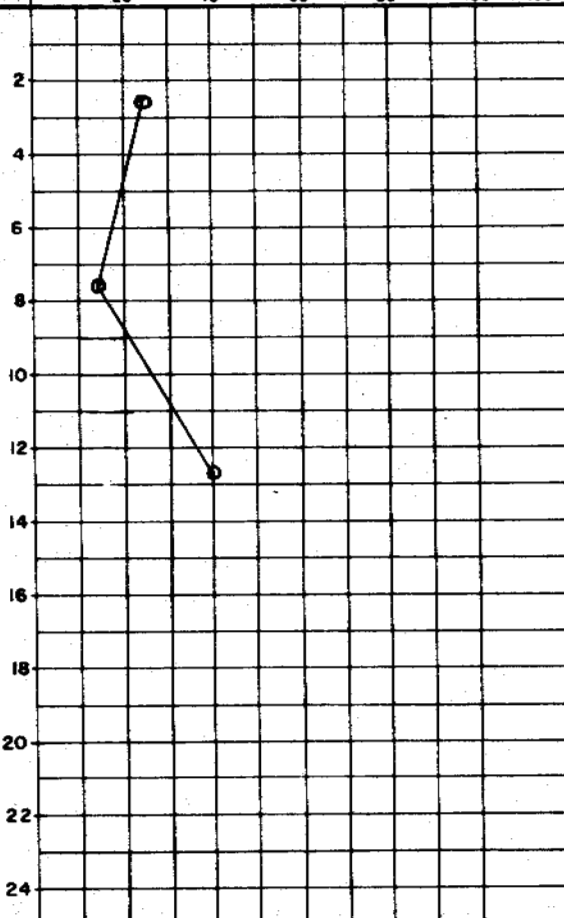
ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY								
OWN:		FIELD ENG.		DATE DRILLED		AIRPHOTO NO:		CHAINAGE		OFFSET:		TEST HOLE				
CKD:		TECH		RIG		SURFACE DRAINAGE		VEGETATION		ELEV		MILE B,C,S NUMBER				
		R.S.		1		GOOD		B		493		378 C H				
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)						
										PLASTIC LIMIT LIQUID LIMIT 20 40 60 80 100 100+						
2	1				Pt	PEAT		V _x	2							
4					ML	SANDY SILT TILL WITH A TRACE OF CLAY AND OF GRAVEL			4							
6									6							
8	2				ML		F	N _{bn}	8							
10									10							
11						BROWN GREY			11							
12	3				ML				12							
14									14							
16									16							
18	4				ML				18							
20						END OF HOLE AT 20'			20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN:		FIELD ENG		DATE DRILLED 27/2/73		AIRPHOTO NO: A22782-151		CHAINAGE 199 + 00		OFFSET		TEST HOLE									
CKD		TECH R.S.		RIG 1		SURFACE DRAINAGE GOOD		VEGETATION: A		ELEV 520		MILE 379		B,C,S C		NUMBER A					
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS		WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS							
										CLAY %	SILT %				SAND %	GRAVEL %					
						PEAT															
2	1				ML	SAND AND SILT TILL WITH SOME CLAY AND GRAVEL			2												
4									4												
5									5												
6									6												
8	2				ML	CLAYEY SILT AND SAND TILL WITH SOME GRAVEL	F	N _{bn}	8												
10						BROWN GREY			10												
12	3				ML				12												
14									14												
15						END OF HOLE AT 15'			15												
16									16												
18									18												
20									20												
22									22												
24									24												

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY										
DWN:		FIELD ENG	DATE DRILLED: 27/2/73	AIRPHOTO NO: A22782-151	CHAINAGE: 189 + 00	OFFSET:		TEST HOLE								
CKD	TECH	R.S.	RIG 1	SURFACE DRAINAGE: GOOD		VEGETATION: A		ELEV 525								
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
2	1				Pt	PEAT		V _x	2							
4						SILT AND SAND TILL WITH SOME CLAY AND A TRACE OF GRAVEL			4							
5									5							
6									6							
8	2				ML		F	N _{bn}	8							
10						BROWN GREY			10							
12	3				ML				12							
14									14							
15						END OF HOLE AT 15'			15							
16									16							
18									18							
20									20							
22									22							
24									24							

○ = WATER CONTENT (% OF DRY WEIGHT)
△ = ICE CONTENT (% OF SAMPLE VOLUME)

PLASTIC LIMIT 20 40 60 80 100 100+
LIQUID LIMIT



ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN:		FIELD ENG		DATE DRILLED 27/2		AIRPHOTO NO: A22782-51		CHAINAGE 174 + 00		OFFSET		TEST HOLE			
CKD		TECH R.S.		RIG 1		SURFACE DRAINAGE GOOD		VEGETATION: A		ELEV: 539'					
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS		WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS	
										CLAY %	SILT %				SAND %
2	1				Pt	PEAT		V _x	2						
4									4						
5									5						
6									6						
8	2				ML	SILT AND SAND TILL WITH SOME CLAY AND GRAVEL.	F	N _{bn}	8						
10									10						
11					ML				11						
12	3					BROWN GREY			12						
14									14						
15									15						
16						END OF HOLE AT 15'			16						
18									18						
20									20						
22									22						
24									24						

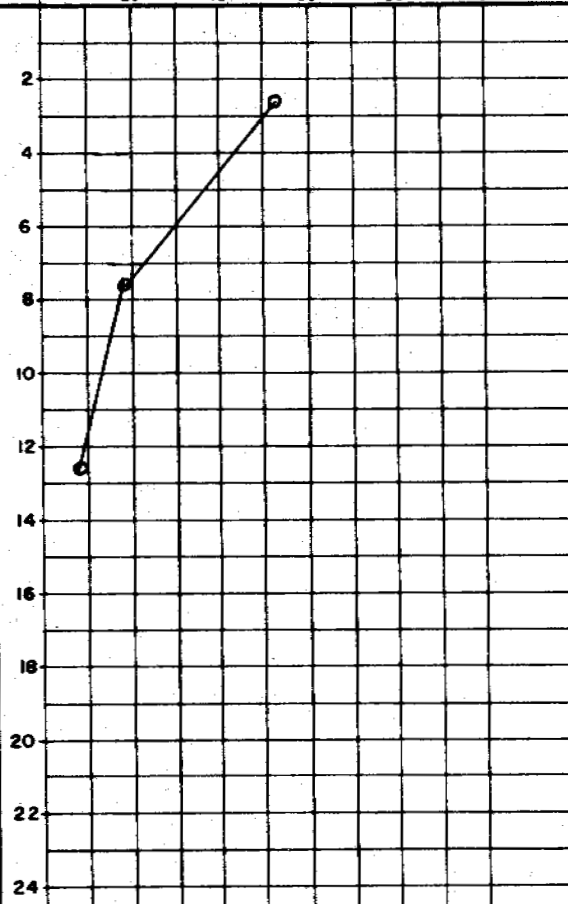
ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY										
DWN:		FIELD ENG:	DATE DRILLED: 27/6/73	AIRPHOTO NO: A22782-151	CHAINAGE: 169 + 00	OFFSET:		TEST HOLE								
CKD:		TECH: R.S.	RIG: 1	SURFACE DRAINAGE: GOOD		VEGETATION:		ELEV: 539								
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
2	1				ML	CLAYEY SILTY TILL WITH SOME SAND AND A TRACE OF GRAVEL			2	22	47	22	6			
4									4							
5									5							
6									6							
8	2				ML	BROWN GREY	F	N _{bn}	8	19	42	33	6			
10									10							
12	3				ML				12	17	36	35	12			
14									14							
15						END OF HOLE AT 15'			15							
16									16							
18									18							
20									20							
22									22							
24									24							

[illegible]

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY								
DWN:		FIELD ENG		DATE DRILLED 27/2/73		AIRPHOTO NO: A22782-152		CHAINAGE: 249+50		OFFSET		TEST HOLE				
CKD		TECH R.S.		RIG 1		SURFACE DRAINAGE GOOD		VEGETATION: A		ELEV 482						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
2					Pt	PEAT		V _x	2							
4	1				ML	DARK BROWN CLAYEY SILT TILL WITH SOME SAND AND A TRACE OF GRAVEL		N _{bn}	4							
6									6							
8	2								8							
10									10							
12	3				ML				12							
14									14							
16						END OF HOLE AT 15'			16							
18									18							
20									20							
22									22							
24									24							

○ = WATER CONTENT (% OF DRY WEIGHT)
△ = ICE CONTENT (% OF SAMPLE VOLUME)

PLASTIC LIMIT 20 40 60 80 100 100+
LIQUID LIMIT



ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY					
DWN:		FIELD ENG		DATE DRILLED: 27/2/73		AIRPHOTO NO: A22782-152		CHAINAGE: 240+00		OFFSET		TEST HOLE	
CKD		TECH W.R.		RIG: 1		SURFACE DRAINAGE: FAIR		VEGETATION: A B D E		ELEV: 483			

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS		
										CLAY %	SILT %	SAND %	GRAVEL %					
					Pt	PEAT												
2	1				ML	SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL	F	V _x	2									
4																		
6	2				ML						6							
8																		
								N _{bn}										
10							UF		10									
12	3				ML				12									
14																		
16																		
						BROWN GREY												
18	4				ML				18									
20						END OF HOLE AT 20'			20									
22									22									
24									24									

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY										
DWN		FIELD ENG.		DATE DRILLED: 27/2/73		AIRPHOTO NO: A22782-152		CHAINAGE: 230+00		OFFSET		TEST HOLE				
CKD		TECH: R.S.		RIG: 1		SURFACE DRAINAGE: GOD		VEGETATION: A		ELEV: 486		MILE: 380 B,C,S: C NUMBER: G				
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
										CLAY	SILT	SAND	GRAVEL			
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)						
										PLASTIC LIMIT LIQUID LIMIT 20 40 60 80 100 100+						
2					Pt	PEAT		V _x	2							
4					ML	CLAYEY SILT TILL WITH SOME SAND AND A TRACE OF GRAVEL		N _{bn}	4							
6									6							
8	2				CL				8							
10									10							
12	3				ML	BROWN GREY			12							
14									14							
16						END OF HOLE AT 15'			16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY								
DWN		FIELD ENG		DATE DRILLED 2/2/11		AIRPHOTO NO: A22782-152		CHAINAGE: 223+00		OFFSET:		TEST HOLE				
CKD		TECH: R.S.		RIG: 1		SURFACE DRAINAGE: GOOD		VEGETATION: A		ELEV: 491						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)						
										PLASTIC LIMIT 20 40 60 80 100 100+ LIQUID LIMIT 80 100 100+						
2	1				Pt	PEAT		V _x	2							
4					SM	SILTY SAND WITH SOME GRAVEL AND COBBLES			4							
6									6							
8	2				ML	CLAYEY SILT TILL WITH SOME SAND AND A TRACE OF GRAVEL	F	N _{bn}	8							
10									10							
12					ML				12							
14	3								14							
16						END OF HOLE AT 15'			16							
18									18							
20									20							
22									22							
24									24							

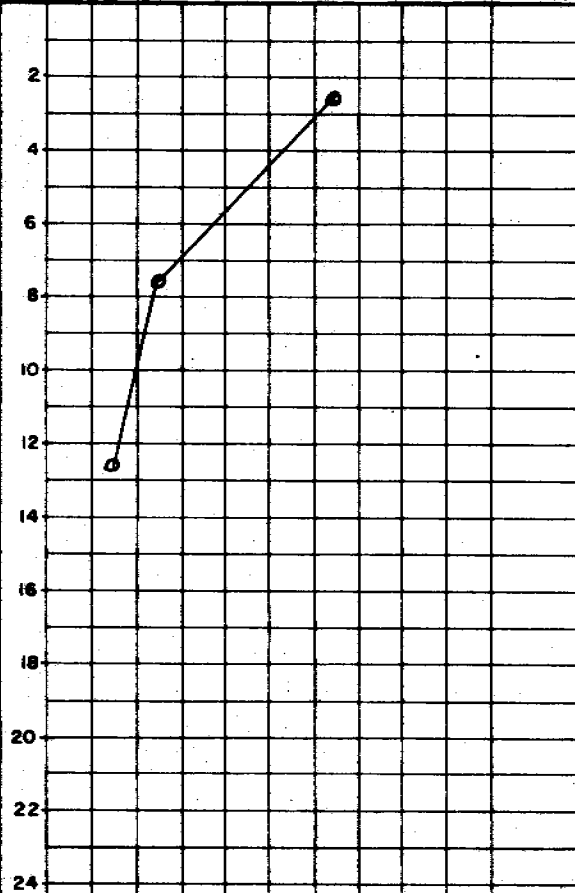
ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY								
DWN:		FIELD ENG:		DATE DRILLED: 27/2/13		AIRPHOTO NO: A22782-152		CHAINAGE: 203+00		OFFSET:		TEST HOLE				
CKD:		TECH: R.S.		RIG: 1		SURFACE DRAINAGE: GOOD		VEGETATION: A		ELEV: 518						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNITED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)						
										PLASTIC LIMIT ——— LIQUID LIMIT 20 40 60 80 100 100+						
2	1				SM	BROWN SILTY SAND			2							
4									4							
6									6							
8	2				ML	CLAYEY SILT TILL WITH SOME SAND AND A TRACE OF GRAVEL	F	N _{bn}	8							
10						BROWN GREY			10							
12	3				ML				12							
14									14							
16									16							
18	4				ML				18							
20						END OF HOLE AT 20'			20							
22									22							
24									24							

[illegible]

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA 27/2/73										DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
OWN:		FIELD ENG.		DATE DRILLED		AIRPHOTO NO: A22771-51		CHAINAGE: 292+00		OFFSET:		TEST HOLE									
CKD		TECH. R.G.		RIG No. 2		SURFACE DRAINAGE POOR		VEGETATION: A		ELEV 523											
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS					
										CLAY %	SILT %	SAND %	GRAVEL %								
2					Pt	PEAT		Vx	2												
4	1				ML	Brown Sandy Silt Till With Some Clay And A Trace Of Gravel			4												
6										6											
8	2				ML		F	N _{bn}	8												
10									10												
12									12												
14	3				ML				14												
16						End Of Hole At 15'			16												
18									18												
20									20												
22									22												
24									24												

○ = WATER CONTENT (% OF DRY WEIGHT)
 △ = ICE CONTENT (% OF SAMPLE VOLUME)

PLASTIC LIMIT 20 40 60 80 100 100+
 LIQUID LIMIT 80 100 100+



ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA 27/2/73				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY														
DWN:		FIELD ENG:		DATE DRILLED:		AIRPHOTO NO: A22771-51		CHAINAGE: 280+00		OFFSET:		TEST HOLE								
CKD:		TECH: R.G.		RIG: No. 2		SURFACE DRAINAGE: FAIR		VEGETATION: A		ELEV: 501										
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	MILE	B,C,S	NUMBER		
										CLAY %	SILT %	SAND %	GRAVEL %							
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)										
										PLASTIC LIMIT LIQUID LIMIT 20 40 60 80 100 100+										
2					Pt	PEAT		Vx	2											
4	1				ML	BROWN SANDY SILT TILL WITH SOME CLAY AND TRACES OF GRAVEL AND COBBLES	F	N _{bn}	4											
5																				
6																				
8	2				ML							8								
10									10											
12									12											
14	3				ML				14											
16									16											
18									18											
20						END OF HOLE AT 15'			20											
22									22											
24									24											
REMARKS																				

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA 27/2/73				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY								
DWN:		FIELD ENG		DATE DRILLED:		AIRPHOTO NO: A22771-50		CHAINAGE: 275+00		OFFSET		TEST HOLE				
CKD:		TECH R.G.		RIG: NO. 2		SURFACE DRAINAGE: FAIR		VEGETATION: A		ELEV. 492						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
2	1				Pt	PEAT		Vx	2							
4					ML	SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL			4							
6									6							
8	2				ML		F	N _{bn}	8							
10									10							
12									12							
14	3				ML	BROWN GREY			14							
16									16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA 27/2/73										DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN:		FIELD ENG:		DATE DRILLED		AIRPHOTO NO: A22771-50		CHAINAGE: 270+00		OFFSET:		TEST HOLE									
CKD:		TECH R.G.		RIG NO. 2		SURFACE DRAINAGE FAIR		VEGETATION A		ELEV 490		MILE		B,C,S		NUMBER					
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS					
										CLAY	SILT	SAND	GRAVEL								
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)											
										20	40	60	80	100	100+						
2	1				Pt	PEAT		Vx	2												
4					ML	SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL			4												
6									6												
8	2				ML		F	N _{bn}	8												
10									10												
12									12												
14	3				ML	BROWN GREY			14												
16									16												
18									18												
20						END OF HOLE AT 15'			20												
22									22												
24									24												

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY								
DWN:		FIELD ENG:		DATE DRILLED: 26/2/73		AIRPHOTO NO: A22771-52		CHAINAGE: 361 + 00		OFFSET:		TEST HOLE				
CKD:		TECH: M.H.R.		RIG: 2		SURFACE DRAINAGE: POOR		VEGETATION: B		ELEV: 511						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
2					Pt	PEAT		V _x	2							
4	1				ML	SAND AND SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL			4							
5																
6							F	N _{bn}	6							
8	2				ML				8							
10									10							
12	3				ML	BROWN GREY			12							
14							UF		14							
15						END OF HOLE AT 15'			15							
16									16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY										
DWN:		FIELD ENG:		DATE DRILLED 26/2/71		AIRPHOTO NO: A22771-52		CHAINAGE 358 + 00		OFFSET		TEST HOLE				
CKD:		TECH: M.H.R.		RIG: 2		SURFACE DRAINAGE POOR		VEGETATION: B		ELEV 509		MILE 382 B,C,S C NUMBER B				
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
2					Pt	PEAT		V _x	2							
4	1				ML	SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL	F	N _{bn}	4							
6									6							
8	2				ML				8							
10									10							
12									12							
14	3				ML	BROWN GREY			14							
15						END OF HOLE AT 15'			15							
16									16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY										
DWN:		FIELD ENG	DATE DRILLED 26/2/74	AIR PHOTO NO: A22771-52	CHAINAGE: 343 + 00	OFFSET		TEST HOLE								
CKD:		TECH: M.H.R.	RIG: 2	SURFACE DRAINAGE: POOR		VEGETATION: B		ELEV: 510								
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
2					Pt	PEAT		V _x	2							
4	1				ML	SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL	F	N _{bn}	4							
5									5							
6									6							
8	2				ML				8							
10									10							
12	3				ML	BROWN GREY			12							
14									14							
15						END OF HOLE AT 15'			15							
16									16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA					DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
OWN:		FIELD ENG:		DATE DRILLED: 26/2/		AIRPHOTO NO: A22771-52		CHAINAGE: 336 + 00		OFFSET:		TEST HOLE				
CKD:		TECH: M.H.R.		RIG: 2		SURFACE DRAINAGE: POOR		VEGETATION: B		ELEV: 517		MILE B,C,S NUMBER				
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
2	1				ML	CLAY, SILT, AND SAND TILL WITH SOME GRAVEL	F	N _{bn}	2	26	28	29	17			
4									4							
5									5							
6						- BROWN - GREY - - -			6							
8	2				ML				8	31	33	28	8			
10									10							
12	3				ML				12	15	47	30	8			
14									14							
15						END OF HOLE AT 15'			15							
16									16							
18									18							
20									20							
22									22							
24									24							

[illegible]

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA 26/2/73				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY											
DWN:		FIELD ENG:	DATE DRILLED:	AIRPHOTO NO:	CHAINAGE:	OFFSET:		TEST HOLE									
CKD:		TECH M.H.R.	RIG No. 2	SURFACE DRAINAGE: POOR		VEGETATION: B		ELEV: 507									
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS	
										CLAY %	SILT %	SAND %	GRAVEL %				
○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)										PLASTIC LIMIT LIQUID LIMIT 20 40 60 80 100 100+							
2	1				Pt	PEAT		Vx	2								
4					SM		F	N _{bn}	4	18	26	33	23				
6						SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL, SILTIER WITH DEPTH -- BROWN GREY			6								
8	2				ML				8	18	44	31	7				
10									10								
12									12								
14	3				ML				14	23	50	24	3				
15									15								
16						END OF HOLE AT 15'			16								
18									18								
20									20								
22									22								
24									24								

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA 26/2/73				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY										
DWN:		FIELD ENG:	DATE DRILLED:	AIRPHOTO NO: A22771-53	CHAINAGE: 404+20	OFFSET:		TEST HOLE								
CKD:		TECH: M.H.R.	RIG No. 2	SURFACE DRAINAGE: POOR		VEGETATION: B		ELEV 506								
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
2					Pt	PEAT		Vx	2							
4	1				ML	SANDY SILT TILL WITH SOME CLAY AND TRACES OF GRAVEL AND COBBLES	F	N _{bn}	4							
6									6							
8	2				ML	BROWN GREY			8							
9									9							
10									10							
12	3				ML				12							
14									14							
15									15							
16						END OF HOLE AT 15'			16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA 26/2/73						DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY							
DWN:		FIELD ENG		DATE DRILLED		AIRPHOTO NO: A22771-54		CHAINAGE: 397+50		OFFSET		TEST HOLE					
CKD		TECH: M.H.R.		RIG No. 2		SURFACE DRAINAGE: POOR		VEGETATION: B		ELEV: 508							
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS	
										CLAY	SILT	SAND	GRAVEL				
										%	%	%	%				
2					Pt	PEAT		Vx	2								
4	1				ML	SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL			4								
5									5								
6									6								
8	2				ML		F	N _{bn}	8								
10						BROWN GREY			10								
12									12								
14	3				ML				14								
15									15								
16									16								
18									18								
20						END OF HOLE AT 15'			20								
22									22								
24									24								

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA 26/2/73				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY										
DWN:		FIELD ENG:		DATE DRILLED:		AIRPHOTO NO: A22771-54		CHAINAGE: 387+00		OFFSET:		TEST HOLE						
CKD:		TECH M.H.R.		RIG No. 2		SURFACE DRAINAGE POOR		VEGETATION: B		ELEV. 511								
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNITED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS		
										CLAY %	SILT %	SAND %	GRAVEL %					
2					Pt	PEAT		Vx	2									
4	1				ML	SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL	F	N _{bn}	4									
5																		
6																		
8	2				ML				8									
10									10									
12	3				ML	BROWN GREY			12									
14									14									
15									15									
16						END OF HOLE AT 15'			16									
18									18									
20									20									
22									22									
24									24									

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA 25/2/73				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY				
DWN:		FIELD ENG.		DATE DRILLED:		AIRPHOTO NO: A22771-55		CHAINAGE: 442+00		OFFSET		
CKD:		TECH: V.S.		RIG No. 1		SURFACE DRAINAGE: FAIR		VEGETATION: BG		ELEV 492		
TEST HOLE												
										MILE	B,C,S	NUMBER
										384	C	A
REMARKS												

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	
										CLAY %	SILT %	SAND %	GRAVEL %			
2	1				Pt	PEAT			2							
3																
4					ML	GREY SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL	F	Vx	4							
6																
8	2				ML				8							
10																
12							UF		12							
14	3				ML		F	N _{bn}	14							
16						END OF HOLE AT 15'			16							
18									18							
20									20							
22									22							
24									24							

○ = WATER CONTENT (% OF DRY WEIGHT)
 △ = ICE CONTENT (% OF SAMPLE VOLUME)

PLASTIC LIMIT 20 40 60 80 100 100+ LIQUID LIMIT 80

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA 25/2/73				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY					
DWN:		FIELD ENG:		DATE DRILLED:		AIRPHOTO NO: A22771-55		CHAINAGE: 448+00		OFFSET:		TEST HOLE	
CKD:		TECH: V.S.		RIG: No. 1		SURFACE DRAINAGE: FAIR		VEGETATION: BG		ELEV: 490			

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)						
										PLASTIC LIMIT LIQUID LIMIT 20 40 60 80 100 100+						
2	1				Pt	PEAT		Vx	2							
4					SM	SILTY SAND WITH SOME GRAVEL			4							
6							F	N _{bn}	6							
8	2				ML	GREY SANDY SILT TILL WITH A TRACE OF CLAY AND GRAVEL			8							
10									10							
12									12							
14	3				ML				14							
16						END OF HOLE AT 15'			16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA 25/2/73				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY			
DWN:		FIELD ENG	DATE DRILLED	AIRPHOTO NO	CHAINAGE	OFFSET		TEST HOLE	
CKD:		TECH V.S.	RIG No. 1	SURFACE DRAINAGE	VEGETATION	ELEV			
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)
○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)									
PLASTIC LIMIT LIQUID LIMIT 20 40 60 80 100 100+									
GRAIN-SIZE ANALYSIS CLAY SILT SAND GRAVEL WET DENSITY (P.C.F.) DRY DENSITY (P.C.F.)									
MILE B.C.S NUMBER 384 C C									
REMARKS									
2	I				Pt	PEAT			2
4	1				SM	SILTY SAND WITH SOME GRAVEL AND A FEW COBBLES			4
6	2				ML	GREY SANDY SILT TILL WITH TRACES OF CLAY AND GRAVEL	F	N _{bn}	6
8									8
9									9
10					ML				10
12	3								12
14									14
16									16
18									18
20									20
22									22
24									24
END OF HOLE AT 15'									

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA 26/2/73				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY					
DWN:		FIELD ENG		DATE DRILLED		AIRPHOTO NO: A22771-55		CHAINAGE: 433+00		OFFSET		TEST HOLE	
CKD:		TECH M.H.R.		RIG No. 2		SURFACE DRAINAGE: POOR		VEGETATION: B		ELEV 498			

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY	SILT	SAND	GRAVEL			
										%	%	%	%			
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)						
										PLASTIC LIMIT LIQUID LIMIT 20 40 60 80 100 100+						
2	1				Pt	PEAT		Vx	2							
4					ML	SANDY SILT TILL WITH TRACES OF CLAY GRAVEL AND COBBLES			4							
6									6							
8	2				ML	BROWN GREY	F	N _{bn}	8							
10									10							
12	3				ML				12							
14									14							
16									16							
18									18							
20									20							
22						END OF HOLE AT 15'			22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY											
DWN:		FIELD ENG:		DATE DRILLED:		AIRPHOTO NO: A22771-55		CHAINAGE: 429+50		OFFSET:		TEST HOLE					
CKD:		TECH: M.G.R.		RIG No. 2		SURFACE DRAINAGE POOR		VEGETATION: B		ELEV. 501							
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS	
										CLAY	SILT	SAND	GRAVEL				
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)						MILE: 384 B,C,S: C NUMBER: F	
										PLASTIC LIMIT LIQUID LIMIT 20 40 60 80 100 100+							
2					Pt	BROWN SILTY SAND AND PEAT		Vx	2								
3	1								3								
4									4								
6						SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL	F	N _{bn}	6								
8	2				ML				8								
10									10								
12	3				ML				12								
14									14								
15									15								
16						END OF HOLE AT 15'			16								
18									18								
20									20								
22									22								
24									24								

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY										
DWN:		FIELD ENG:		DATE DRILLED: 26/2/73		AIRPHOTO NO: A22771-56		CHAINAGE: 468+00		OFFSET:		TEST HOLE				
CKD:		TECH: J.M.		RIG: 1		SURFACE DRAINAGE: FAIR		VEGETATION: B		ELEV: 491						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
						PEAT				○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)						
										PLASTIC LIMIT LIQUID LIMIT 20 40 60 80 100 100+						
2	1				MI	SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL	F	N _{bn}	2							
4									4							
6									6							
8	2				MI				8							
10						BROWN GREY			10							
12									12							
14	3				MI				14							
16						END OF HOLE AT 15'			16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY								
DWN:		FIELD ENG		DATE DRILLED 26/2/73		AIRPHOTO NO: A2271-57		CHAINAGE 479+00		OFFSET		TEST HOLE				
CKD		TECH J.M.		RIG 1		SURFACE DRAINAGE FAIR		VEGETATION B		ELEV 494						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
						Pe PEAT										
2									2							
4	1				ML	SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL	F	N _{DN}	4	22	39	31	8			
6									6							
8	2				ML				8	23	44	30	3			
10						--- BROWN --- GREY			10							
12									12							
14	3				ML		UF		14	15	42	33	10			
16									16							
18	4				ML				18	20	44	29	7			
20						END OF HOLE AT 20'			20							
22									22							
24									24							

○ = WATER CONTENT (% OF DRY WEIGHT)
△ = ICE CONTENT (% OF SAMPLE VOLUME)

PLASTIC LIMIT 20 40 60 80 100 100+
LIQUID LIMIT

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY					
OWN:		FIELD ENG:		DATE DRILLED: 26/2/73		AIRPHOTO NO: A22771-57		CHAINAGE: 483+00		OFFSET:	
CKD:		TECH: J.M.		RIG: 1		SURFACE DRAINAGE: GOOD		VEGETATION: A B		ELEV: 501	
DEPTH (FEET)		SAMPLE NUMBER		SAMPLE TYPE		% RECOVERY		PENETRATION RESISTANCE		UNIFIED SOIL SYMBOL	
SOIL DESCRIPTION		LIMITS OF FROZEN GROUND		ICE DESCRIPTION		DEPTH (FEET)		GRAIN-SIZE ANALYSIS		TEST HOLE	
										MILE B,C,S NUMBER	
										385 C E	
										REMARKS	
2		1									
4											
6		2									
8											
10		3									
12											
14											
16											
18											
20											
22											
24											

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY										
DWN:		FIELD ENG.		DATE DRILLED 26/2/73		AIRPHOTO NO: A22771-57		CHAINAGE 485+00		OFFSET:		TEST HOLE				
CKD:		TECH J.M.		RIG 1		SURFACE DRAINAGE GOOD		VEGETATION A B		ELEV 501						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
						PEAT		V _x								
2	1				MI	SANDY SILT WITH SOME CLAY AND A TRACE OF GRAVEL			2							
4									4							
6									6							
8	2				MI		F	N _{bn}	8							
10						BROWN GREY			10							
12									12							
14	3				MI				14							
16						END OF HOLE AT 15'			16							
18									18							
20									20							
22									22							
24									24							

[illegible]

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY										
DWN:		FIELD ENG	DATE DRILLED 2/2/78	AIRPHOTO NO. A22771-58	CHAINAGE 505 + 00 (Approx)	OFFSET		TEST HOLE								
CKD		TECH W.R.	RIG 1	SURFACE DRAINAGE POOR	VEGETATION: AD	ELEV: 507										
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY	SILT	SAND	GRAVEL			
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)						
										PLASTIC LIMIT LIQUID LIMIT 20 40 60 80 100 100+						
					Pt	PEAT										
2	1				ML	SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL AND COBBLES			2							
4									4							
6									6							
8	2				ML				8							
9									9							
10						BROWN GREY		N _{bn}	10							
12	3				ML				12							
14									14							
15						END OF HOLE AT 15'			15							
16									16							
18									18							
20									20							
22									22							
24									24							

DWN:		FIELD ENG	DATE DRILLED	AIRPHOTO NO:	CHAINAGE	526 + 00	OFFSET	MACKENZIE HIGHWAY			TEST HOLE					
CKD:	TECH:	W. R.	RIG	1	SURFACE DRAINAGE	GOOD	VEGETATION	ABD	ELEV	498	MILE	B,C,S	NUMBER			
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
									○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)							
									PLASTIC LIMIT LIQUID LIMIT 20 40 60 80 100 100+							
									CLAY	SILT	SAND	GRAVEL	%	%	%	%
2	1				ML	SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL			2							
4									4							
5									5							
6									6							
8	2				ML		F	N _{bn}	8							
9									9							
10						BROWN GREY			10							
12	3				ML				12							
14									14							
15						END OF HOLE AT 15'			15							
16									16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
OWN:		FIELD ENG:		DATE DRILLED: 2/2/73		AERIAL PHOTO NO: A22771-58		CHAINAGE: 548 + 00		OFFSET:		TEST HOLE			
CKD:		TECH: W.R.		RIG: 1		SURFACE DRAINAGE: FAIR		VEGETATION: ABD		ELEV: 476					
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS		WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS	
										CLAY %	SILT %				SAND %
2					Pt	PEAT		V _x	2						
4	1				ML	SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL		N _{bn}	4						
6							F		6						
8	2				ML				8						
10									10						
12	3				ML	BROWN GREY			12						
14									14						
15						END OF HOLE AT 15'			15						
16									16						
18									18						
20									20						
22									22						
24									24						

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY												
DWN:		FIELD ENG:		DATE DRILLED: 2/2/78		AIRPHOTO NO: A22771-58		CHAINAGE: 552 + 50		OFFSET:		TEST HOLE						
CKD:		TECH: W. R.		RIG: 1		SURFACE DRAINAGE: FAIR		VEGETATION: ABD		ELEV: 474								
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS		
										CLAY %	SILT %	SAND %	GRAVEL %					
2	1				ML	SANDY SILT TILL WITH A TRACE OF CLAY GRAVEL AND COBBLES	F	N _{bn}	2									
4									4									
5									5									
6									6									
8	2				ML				8									
10									10									
11						BROWN GREY			11									
12	3				ML				12									
14									14									
15						END OF HOLE AT 15'			15									
16									16									
18									18									
20									20									
22									22									
24									24									

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY										
DWN:		FIELD ENG:		DATE DRILLED: 2/2/78		AIR PHOTO NO: A22771-58		CHAINAGE: 561 + 00		OFFSET:						
CKD:		TECH: W.R.		RIG: 1		SURFACE DRAINAGE: FAIR		VEGETATION: BD		ELEV: 471						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS		WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	TEST HOLE		
										CLAY %	SILT %			SAND %	GRAVEL %	MILE
														386	C	H
														REMARKS		
2					Pt	PEAT		V _x	2							
4	1				ML	BROWN SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL	F	N _{bn}	4							
5									5							
6									6							
8	2				ML				8							
10									10							
12									12							
14	3				ML				14							
15									15							
16						END OF HOLE AT 15'			16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA 2/2/73				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY												
OWN:		FIELD ENG:		DATE DRILLED		AIRPHOTO NO: A22771-60		CHAINAGE: 580+50		OFFSET:		TEST HOLE						
CKD:		TECH: W.R.		RIG: No. 1		SURFACE DRAINAGE: GOOD		VEGETATION: ABD		ELEV: 466								
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS		
										CLAY %	SILT %	SAND %	GRAVEL %					
2	1				ML	SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL AND COBBLES -- BROWN GREY --	F	N _{bn}	2									
4									4									
6									6									
8	2				ML				8									
10									10									
12									12									
14	3				ML				14									
16						END OF HOLE AT 15'			16									
18									18									
20									20									
22									22									
24									24									

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA 2/2/73				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY											
DWN:		FIELD ENG:		DATE DRILLED:		AIRPHOTO NO: A22771-60		CHAINAGE: 589+00		OFFSET:		TEST HOLE					
CKD:		TECH: W.R.		RIG: No. 1		SURFACE DRAINAGE: FAIR		VEGETATION: ABD		ELEV: 464							
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS	
										CLAY %	SILT %	SAND %	GRAVEL %				
2	1				ML	SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL AND COBBLES			2								
4										4							
6	2				ML					6							
8						<u>BROWN</u> GREY	F	N _{bn}	8								
10									10								
12					ML				12								
14	3								14								
16						END OF HOLE AT 15'			16								
18									18								
20									20								
22									22								
24									24								

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA 1/2/73				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY								
DWN:		FIELD ENG		DATE DRILLED		AIRPHOTO NO. A22771-62		CHAINAGE 604+50		OFFSET		TEST HOLE				
CKD		TECH R.S.		RIG No. 1		SURFACE DRAINAGE GOOD		VEGETATION A		ELEV 458						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
					Pt	PEAT		Vx								
2					ML	SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL			2							
4																
5																
6																
8	2				ML				8							
10																
11						BROWN GREY										
12	3				ML				12							
14																
16						END OF HOLE AT 15'			16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA 1/2/73				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY										
DWN:		FIELD ENG	DATE DRILLED	AIRPHOTO NO: A22771-60	CHAINAGE 612+50	OFFSET		TEST HOLE								
CKD		TECH R.S.	RIG No. 1	SURFACE DRAINAGE GOOD	VEGETATION: A	ELEV 458		MILE	B,C,S							
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)						
										PLASTIC LIMIT LIQUID LIMIT 20 40 60 80 100 100+						
2	1				Pt	PEAT			2							
4					ML	SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL			4							
6					ML				6							
8	2								8							
10						BROWN GREY	F	N _{bn}	10							
12	3				ML				12							
14									14							
15									15							
16						END OF HOLE AT 15'			16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT										DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN:		FIELD ENG:		DATE DRILLED: 1/2/78		AIRPHOTO NO: A22771-60		CHAINAGE: 630 + 75		OFFSET:		ELEV: 454		TEST HOLE															
CKD:		TECH: R.S.		RIG: 1		SURFACE DRAINAGE: GOOD		VEGETATION: A																					
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS		WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS															
										CLAY %	SILT %				SAND %	GRAVEL %													
						3 IN. OF PEAT																							
2	1				SM	BROWN SILTY SAND			2		6	47	46	1	NON PLASTIC														
4									4																				
5									5																				
6	2					BROWN SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL		N _{bn}	6						NON PLASTIC														
8					ML				8		5	38	57	0															
10									10																				
12	3				ML				12																				
14									14																				
15						END OF HOLE AT 15'			15																				
16									16																				
18									18																				
20									20																				
22									22																				
24									24																				

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY						
DWN:		FIELD ENG:		DATE DRILLED 1/2/77		AIRPHOTO NO: A22771-62		CHAINAGE: 652 + 75		OFFSET:		TEST HOLE		
CKD:		TECH: R.S.		RIG: 1		SURFACE DRAINAGE: FAIR		VEGETATION: A		ELEV: 441		MILE: 388 B.C.S: C NUMBER: D		
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS		WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %			
2	1				Pt	PEAT		V _x	2					
4					ML	SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL AND COBBLES			4					
5									5					
6							F	N _{bn}	6					
8					ML				8					
10						BROWN GREY			10					
12	2				ML				12					
14									14					
15						END OF HOLE AT 15'			15					
16									16					
18									18					
20									20					
22									22					
24									24					

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY								
DWN:		FIELD ENG		DATE DRILLED 1/27/73		AERPHOTO NO: A22771-62		CHAINAGE: 654 + 50		OFFSET:		TEST HOLE				
CKD		TECH: R.S.		RIG: 1		SURFACE DRAINAGE: GOOD		VEGETATION: A		ELEV: 440						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY	SILT	SAND	GRAVEL			
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)						
										PLASTIC LIMIT LIQUID LIMIT 20 40 60 80 100 100+						
1						3 IN. OF PEAT										
2	1				ML	SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL			2							
4									4							
5									5							
6									6							
8									8							
9						BROWN GREY		N _{bn}	9							
10									10							
12	2				ML				12							
14									14							
15						END OF HOLE AT 15'			15							
16									16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY								
OWN:		FIELD ENG:		DATE DRILLED: 1/27/11		AERIAL PHOTO NO: A22771-62		CHAINAGE: 657 + 50		OFFSET:		TEST HOLE		
CKD:		TECH: R. S.		RIG: 1		SURFACE DRAINAGE: GOOD		VEGETATION: A		ELEV: 440				
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS		WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %			
						PEAT								
					SM	BROWN SILTY SAND								
2	1				ML	SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL			2					
4									4					
6							F	N _{bn}	6					
8	2				ML	BROWN			8					
9						GREY			9					
10									10					
12	3				ML				12					
14									14					
15									15					
16						END OF HOLE AT 15'			16					
18									18					
20									20					
22									22					
24									24					

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY					
DWN:		FIELD ENG		DATE DRILLED: 1/27/71		AIRPHOTO NO: A22771-62		CHAINAGE: 669 + 00		OFFSET	
CKD:		TECH: R.S.		RIG 1		SURFACE DRAINAGE: GOOD		VEGETATION: A		ELEV 452	
DEPTH (FEET)		SAMPLE NUMBER		SAMPLE TYPE		% RECOVERY		PENETRATION RESISTANCE		UNITED SOIL SYMBOL	
SOIL DESCRIPTION		LIMITS OF FROZEN GROUND		ICE DESCRIPTION		DEPTH (FEET)		GRAIN-SIZE ANALYSIS		TEST HOLE	
										MILE B,C,S NUMBER	
										388 C G	
										REMARKS	
Pt		SM		PEAT							
2		-1		BROWN SILTY SAND							
4				SANDY SILT TILL WITH							
5				SOME CLAY AND A							
6				TRACE OF GRAVEL							
8											
10				BROWN GREY							
12		2		ML							
14											
15											
16				END OF HOLE AT 15'							
18											
20											
22											
24											

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY					
DWN:		FIELD ENG:		DATE DRILLED: 1/2/71		AIRPHOTO NO: A22771-62		CHAINAGE: 669 + 00		OFFSET:	
CKD:		TECH: R.S.		RIG 1		SURFACE DRAINAGE: GOOD		VEGETATION: A		ELEV 452	
DEPTH (FEET)		SAMPLE NUMBER		SAMPLE TYPE		% RECOVERY		PENETRATION RESISTANCE		UNIFIED SOIL SYMBOL	
SOIL DESCRIPTION		LIMITS OF FROZEN GROUND		ICE DESCRIPTION		DEPTH (FEET)		O = WATER CONTENT (% OF DRY WEIGHT) Δ = ICE CONTENT (% OF SAMPLE VOLUME)		GRAIN-SIZE ANALYSIS	
								PLASTIC LIMIT 40 60 80 100 100+		LIQUID LIMIT 80 100 100+	
								CLAY %		SILT %	
								SAND %		GRAVEL %	
								WET DENSITY (P.C.F.)		DRY DENSITY (P.C.F.)	
								MILE 388		B,C,S C	
								NUMBER G		REMARKS	
2		-1		-		-		-		-	
4											
5											
6											
8											
10											
12		2									
14											
15											
16											
18											
20											
22											
24											

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA						DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY										
DWN:		FIELD ENG.		DATE DRILLED: 1/2/73		AIRPHOTO NO: A22771-62		CHAINAGE: 681+00		OFFSET:		TEST HOLE								
CKD:		TECH W.R.		RIG 1		SURFACE DRAINAGE: PAIR		VEGETATION: A		ELEV: 446										
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS				
										CLAY %	SILT %	SAND %	GRAVEL %							
									○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)											
									PLASTIC LIMIT ——— LIQUID LIMIT 20 40 60 80 100 100+											
2	1				CL	SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL	F	N_{bn}	2					35	34	29	2			
8	2				ML				8							21	25	43	11	
12	3				ML				12											
16						END OF HOLE AT 15'			16											
18									18											
20									20											
22									22											
24									24											

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY										
DWN:		FIELD ENG:		DATE DRILLED 1/2/73		AERPHOTO NO: A22771-63		CHAINAGE: 690+00		OFFSET		TEST HOLE				
CKD:		TECH: W.R.		RIG: 1		SURFACE DRAINAGE: FAIR		VEGETATION: A B		ELEV: 458						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY	SILT	SAND	GRAVEL			
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)						
										PLASTIC LIMIT LIQUID LIMIT 20 40 60 80 100 100+						
2	1				Pt	PEAT		V _x	2							
4					SM	SAND AND SILT TILL WITH A TRACE OF CLAY GRAVEL AND COBBLES			4							
6									6							
8	2				SM	BROWN - GREY		N _{bn}	8							
10									10							
12									12							
14	3				SM				14							
16						END OF HOLE AT 15'			16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY										
DWN:		FIELD ENG		DATE DRILLED 1/2/73		AIRPHOTO NO: A22771-64		CHAINAGE: 728+50		OFFSET:		TEST HOLE				
CKD		TECH		W.R.		RIG 1		SURFACE DRAINAGE: GOOD		VEGETATION: A B		ELEV 476				
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
										CLAY	SILT	SAND	GRAVEL			
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)						
										PLASTIC LIMIT ——— LIQUID LIMIT 20 40 60 80 100 100+						
2	1				Pt	PEAT		V _x	2							
4									4							
6						BROWN SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL		N _{bn}	6							
8	2				ML				8							
10									10							
12	3				ML				12							
14									14							
16						END OF HOLE AT 15'			16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY					
DWN:		FIELD ENG.		DATE DRILLED: 12/2/73		AIRPHOTO NO: A22771-64		CHAINAGE 743 + 50		OFFSET		TEST HOLE	
CKD:		TECH: W. R.		RIG: 1		SURFACE DRAINAGE: GOOD		VEGETATION: ABD		ELEV: 474			

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
2	1				SM	BROWN FINE SILTY SAND			2							
3									3							
4					ML	BROWN SILTY AND SANDY TILL WITH SOME CLAY AND A TRACE OF GRAVEL	F	N _{bn}	4							
5									5							
6	2				ML				6							
8									8							
10							UF		10							
12	3				ML				12							
14									14							
15						END OF HOLE AT 15'			15							
16									16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY												
DWN:		FIELD ENG		DATE DRILLED 1/2/73		AIRPHOTO NO: A22771-65		CHAINAGE: 754 + 00		OFFSET		TEST HOLE								
CKD:		TECH: W.R.		RIG: 1		SURFACE DRAINAGE: GOOD		VEGETATION: AB		ELEV: 461										
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME) PLASTIC LIMIT LIQUID LIMIT 20 40 60 80 100 100+				GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
														CLAY %	SILT %	SAND %	GRAVEL %			
2	1				ML	SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL			2											
4									4											
5									5											
6									6											
8	2				ML		F	N _{bn}	8											
10						BROWN GREY			10											
11									11											
12	3				ML		UF		12											
14									14											
15						END OF HOLE AT 15'			15											
16									16											
18									18											
20									20											
22									22											
24									24											

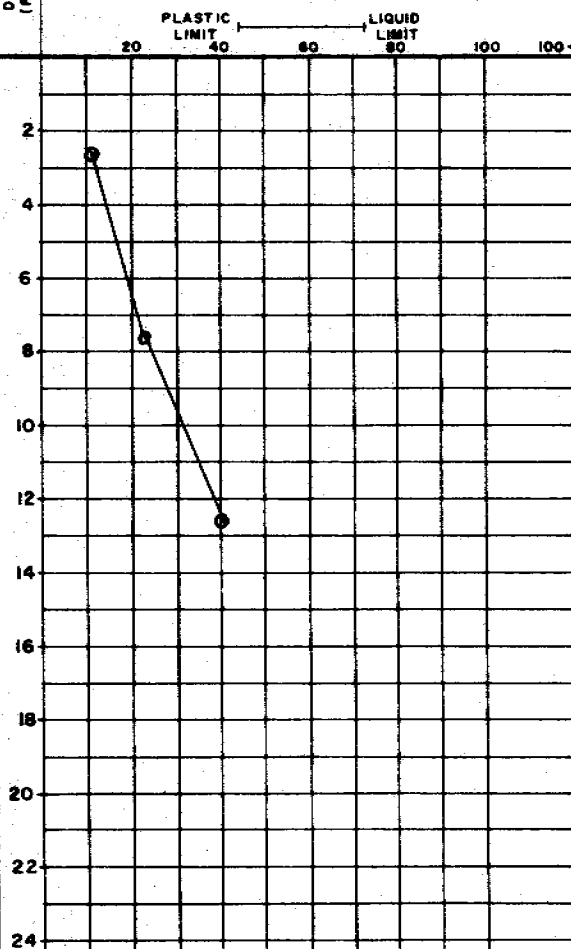
ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN:		FIELD ENG:		DATE DRILLED: 1/2/73		AIRPHOTO NO: A22771-65		CHAINAGE: 762 + 50				OFFSET:					
CKD:		TECH: W.R.		RIG: 1		SURFACE DRAINAGE: FAIR				VEGETATION: AB				ELEV: 454			
														TEST HOLE			
														MILE: 390 B,C,S: C NUMBER: D			
														REMARKS			

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	
										CLAY %	SILT %	SAND %	GRAVEL %			
2	1				ML	BROWN SANDY SILT TILL WITH SOME CLAY AND A TRACE OF GRAVEL	F	N _{bn}	2							
4	2															
5																
6																
8	3				ML		UF		8							
10																
12	4				ML				12							
14																
15						END OF HOLE AT 15'			15							
16									16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT										DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN:		FIELD ENG:		DATE DRILLED 12/23		AIRPHOTO NO A22771-65		CHAINAGE 787 + 50		OFFSET		TEST HOLE																	
CKD		TECH W.R.		RIG 1		SURFACE DRAINAGE GOOD		VEGETATION ABD		ELEV 462																			
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS													
										CLAY %	SILT %	SAND %	GRAVEL %																
2	1				SM	BROWN SILTY SAND TILL WITH SOME CLAY AND A TRACE OF GRAVEL			2																				
4									4																				
5									5																				
6									6																				
8	2				SM		F	N _{bn}	8																				
10									10																				
12	3								12																				
14									14																				
15						END OF HOLE AT 15'			15																				
16									16																				
18									18																				
20									20																				
22									22																				
24									24																				

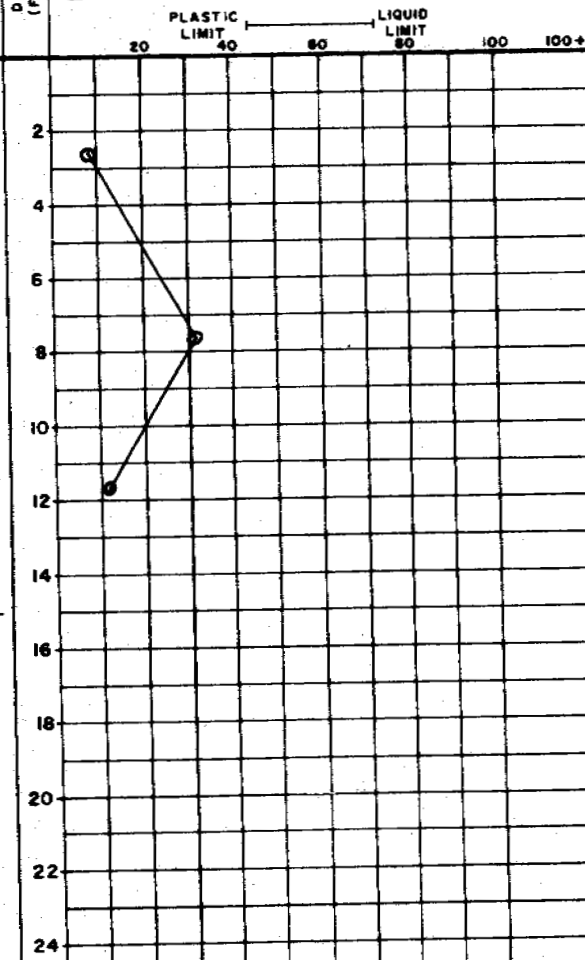
ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY								
OWN:		FIELD ENG:		DATE DRILLED 1/2/73		AIRPHOTO NO: A22771-66		CHAINAGE 800 + 50		OFFSET:		TEST HOLE				
CKD:		TECH W.R.		RIG 1		SURFACE DRAINAGE GOOD		VEGETATION ABD		ELEV 442						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
2	1				SM	Brown fine silty sand	F	Nbn	2							
4									4							
5									5							
6									6							
8	2				SM		UF		8							
10									10							
12	3				SM				12							
14									14							
15						End of hole at 15'			15							
16									16							
18									18							
20									20							
22									22							
24									24							

○ = WATER CONTENT (% OF DRY WEIGHT)
△ = ICE CONTENT (% OF SAMPLE VOLUME)



ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT										DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN:		FIELD ENG:		DATE DRILLED 31/1/73		AIR PHOTO NO: A22771-65		CHAINAGE: 804 + 00		OFFSET:		TEST HOLE																	
CKD:		TECH R.S.		RIG 1		SURFACE DRAINAGE GOOD		VEGETATION A		ELEV 433		MILE B,C,S NUMBER																	
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS													
										CLAY %	SILT %	SAND %	GRAVEL %																
0.3						PEAT																							
2	1				SC	Silt and sand with some clay and a trace of gravel																							
4																													
5																													
6	2				SC																								
8																													
9						Brown Grey																							
10																													
12																													
14																													
15						End of Hole at 15'																							
16																													
18																													
20																													
22																													
24																													

○ = WATER CONTENT (% OF DRY WEIGHT)
 △ = ICE CONTENT (% OF SAMPLE VOLUME)



ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT										DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN:		FIELD ENG		DATE DRILLED: 31/1/73		AIRPHOTO NO: A22771-65		CHAINAGE: 833 + 00		OFFSET:		TEST HOLE																	
CKD:		TECH: R.S.		RIG: 1		SURFACE DRAINAGE: GOOD		VEGETATION: A		ELEV: 417		MILE: 391		B,C,S: C		NUMBER: C													
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS													
										CLAY %	SILT %	SAND %	GRAVEL %																
2	1				SP	Brown sand		Nf	2																				
4									4																				
5									5																				
6	2	P	50%	121	SW	Silty sand with some gravel	F	Vx	6																				
7									7																				
8	3				SW			Nf	8																				
10									10																				
12	4								12																				
14	4				SW	Sand with some gravel and a trace of silt			14																				
15									15																				
16	5	P		26	SW				16																				
17									17																				
18						End of Hole at 17'			18																				
20									20																				
22									22																				
24									24																				

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY								
DWN:		FIELD ENG		DATE DRILLED 31/7/73		AIRPHOTO NO: A22771-66		CHAINAGE: 838 + 00		OFFSET		TEST HOLE				
CKD:		TECH: W.R.		RIG: 1		SURFACE DRAINAGE: GOOD		VEGETATION: AB		ELEV 407		MILE: 391 B,C,S: C NUMBER: D				
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME) PLASTIC LIMIT 40 LIQUID LIMIT 80																
2	1				SM	Fine brown sand with some silt	F	Nbn	2							
4									4							
6	2						UF		6							
8									8							
10	3				SM		F	N _f	10							
12	4								12							
14					SM				14							
15						End of hole at 15'			15							
16									16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY						
DWN:		FIELD ENG:		DATE DRILLED 31/1/73		AIRPHOTO NO: A22771-66		CHAINAGE: 816 + 50		OFFSET:		TEST HOLE		
CKD:		TECH: W.R.		RIG: 1		SURFACE DRAINAGE: GOOD		VEGETATION: AB		ELEV: 425				
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS		WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %			
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)				
										PLASTIC LIMIT LIQUID LIMIT 20 40 60 80 100 100+				
2	1				SM	Fine brown silty sand with a trace of clay			2					
4									4					
5									5					
6					SM		F	Nbn	6					
8	2								8					
10									10					
12					SM				12					
14									14					
15									15					
16						End of hole at 15'			16					
18									18					
20									20					
22									22					
24									24					

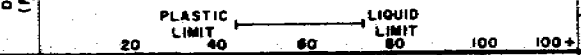
ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA						DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY							
DWN:		FIELD ENG		DATE DRILLED 03/1/73		AIRPHOTO NO: A22771-67		CHAINAGE: 843 + 00				OFFSET:			
CKD		TECH W.R.		RIG 1		SURFACE DRAINAGE GOOD		VEGETATION ABD				ELEV 391			
												TEST HOLE			
												MILE B,C,S NUMBER			
												392 C A			
												REMARKS			
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
										CLAY	SILT	SAND	GRAVEL		
										%	%	%	%		
2	1				SM	Fine silty sand with some clay			2						
4									4						
5									5						
6	2				SM		F	Nbn	6						
8									8						
10									10						
12	3				SM				12						
14									14						
15						End of hole at 15'			15						
16									16						
18									18						
20									20						
22									22						
24									24						

[illegible]

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY										
DWN:		FIELD ENG:		DATE DRILLED 31/1/73		AIRPHOTO NO: A22771-67		CHAINAGE: 860 + 00		OFFSET:		TEST HOLE				
CKD:		TECH: W.R.		RIG: 1		SURFACE DRAINAGE: PAIR		VEGETATION: ABD		ELEV: 395		MILE B,C,S NUMBER				
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)						
										PLASTIC LIMIT 20 40 60 80 100 100+ LIQUID LIMIT 80 100 100+						
2					SM	Fine brown silty sand with a trace of clay			2							
4									4							
5	1								5							
6									6							
8					SM		F	Nbn	8							
10	2								10							
12					SM				12							
14									14							
15	3					End of hole at 15'			15							
16									16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN:		FIELD ENG:		DATE DRILLED: 28/1/73		AIRPHOTO NO: A22771-67		CHAINAGE: 878 + 90		OFFSET:		TEST HOLE									
CKD:		TECH: R.G.		RIG: 1		SURFACE DRAINAGE: GOOD		VEGETATION: A		ELEV: 380											
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS					
										CLAY %	SILT %	SAND %	GRAVEL %								
2	1				SM	Brown fine sand with some silt			2	5	34	60	1								
4									4												
5									6												
6									8	1	25	73	1								
8	2				SM				10												
10									12												
12	3				SM				14												
14									16												
15						End of hole at 15'			18												
16									20												
18									22												
20									24												
22																					
24																					

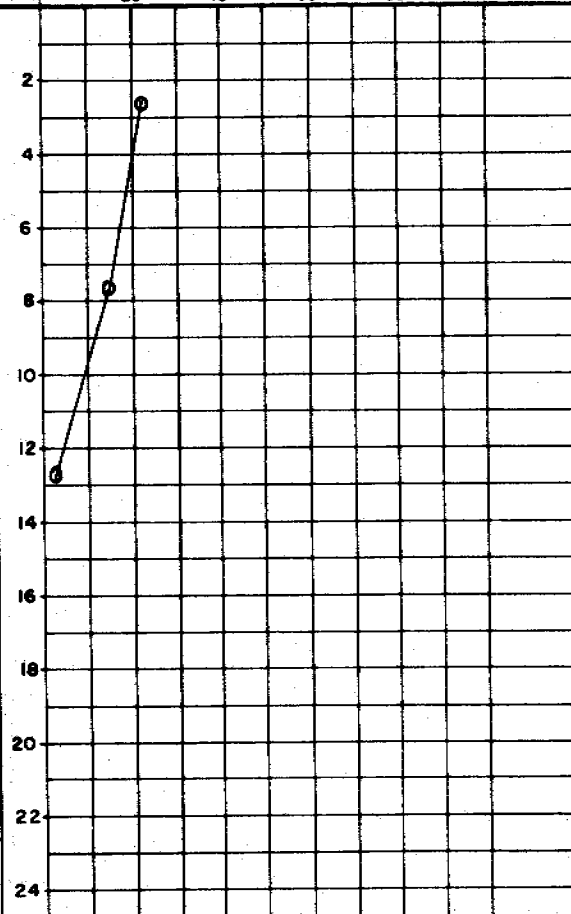
○ = WATER CONTENT (% OF DRY WEIGHT)
 △ = ICE CONTENT (% OF SAMPLE VOLUME)



ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY													
DWN:		FIELD ENG:		DATE DRILLED 29/1/73		AIRPHOTO NO: A22771-68		CHAINAGE: 889 + 85		OFFSET		TEST HOLE							
CKD:		TECH R.G.		RIG 1		SURFACE DRAINAGE GOOD		VEGETATION A		ELEV 386		MILE B,C,S NUMBER							
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS			
										CLAY %	SILT %	SAND %	GRAVEL %						
2	1				SM	FINE BROWN SAND	F	Nbn	2										
4											4								
5	1										5								
6											6								
8					SM						8								
10									10										
12					SM				12										
14									14										
15						END OF HOLE AT 15'			15										
16									16										
18									18										
20									20										
22									22										
24									24										

○ = WATER CONTENT (% OF DRY WEIGHT)
 △ = ICE CONTENT (% OF SAMPLE VOLUME)

PLASTIC LIMIT 40 60 80 100 100+
 LIQUID LIMIT 80



ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY										
DWN:		FIELD ENG		DATE DRILLED 29/7/73		AIRPHOTO NO: A22771-68		CHAINAGE 910 + 50		OFFSET		TEST HOLE						
CKD:		TECH R. G.		RIG 1		SURFACE DRAINAGE: GOOD		VEGETATION: A		ELEV 392								
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS		
										CLAY %	SILT %	SAND %	GRAVEL %					
2	1				SM	FINE BROWN SAND WITH A TRACE OF GRAVEL	F	Nf	2									
4											4							
5											5							
6											6							
8	2				SM				8									
10									10									
12	3				SM				12									
14									14									
15						END OF HOLE AT 15'			15									
16									16									
18									18									
20									20									
22									22									
24									24									

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY								
DWN:		FIELD ENG:		DATE DRILLED 4/2/73		AIRPHOTO NO: A22771-69		CHAINAGE: 944 + 00		OFFSET:		TEST HOLE				
CKD:		TECH R.G.		RIG: 2		SURFACE DRAINAGE: GOOD		VEGETATION: A		ELEV 393						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)						
										PLASTIC LIMIT LIQUID LIMIT 20 40 60 80 100 100+						
2						BROWN SILTY SAND			2							
4									4							
5	1	T			SM				5							
6									6							
8									8							
10									10							
12	2	T			SM		F	Nbn	12	1	26	73	0			
14									14							
15									15							
16	3	T			SM				16	2	26	72	0			
18	4	T			SM				18							
20									20							
22	4	T							22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY								
DWN:		FIELD ENG:		DATE DRILLED 4/2/73		AIRPHOTO NO: A22771-69		CHAINAGE: 944 + 00		OFFSET:		TEST HOLE				
CKD:		TECH: R.G.		RIG: 2		SURFACE DRAINAGE: GOOD		VEGETATION: A		ELEV: 393						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
25	5	T			SP	POORLY GRADED FINE GRAINED SAND			25	0	3	97	0			
30	6	T			SP		F	Nf	30	0	2	98	0			
35	7	T			SP				35	0	4	96	0			
40	8	T			SM	SILTY SAND			40	2	28	70	0			
						END OF HOLE AT 41.5'			41.5							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA						DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY										
DWN:		FIELD ENG:		DATE DRILLED 4/2/73		AIRPHOTO NO: A22771-69		CHAINAGE: 947 + 22		OFFSET:		TEST HOLE						
CKD:		TECH: V.S.		RIG: 2		SURFACE DRAINAGE: GOOD		VEGETATION: AF		ELEV: 390								
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS		
										CLAY %	SILT %	SAND %	GRAVEL %					
2						FINE DRY BROWN SAND WITH A TRACE OF SILT		NF	2									
4									4									
6	1	P		25	SP				6									
8									8									
10	2	P		26	SP				10									
12									12									
14									14									
16	3	P		27	SP				16									
18									18									
20	4	P		28	SP				20									
22									22									
24									24									

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT										DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN:		FIELD ENG:		DATE DRILLED 4/2/73		AIRPHOTO NO: A22771-69		CHAINAGE: 944 + 00		OFFSET:		TEST HOLE																	
CKD:		TECH: R.G.		RIG: 2		SURFACE DRAINAGE: GOOD		VEGETATION: A		ELEV: 393																			
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS													
										CLAY %	SILT %	SAND %	GRAVEL %																
2						BROWN SILTY SAND			2																				
4									4																				
5	1	T			SM				5																				
6									6																				
8									8																				
10							F	Nbn	10																				
12	2	T			SM				12																				
14									14																				
15									15																				
16	3	T			SM				16																				
18	4	T			SM				18																				
20									20																				
22									22																				
24	4	T							24																				

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN:		FIELD ENG:		DATE DRILLED 4/2/73		AIRPHOTO NO: A22771-69		CHAINAGE: 944 + 00		OFFSET:		ELEV: 393		TEST HOLE							
CKD:		TECH: R.G.		RIG: 2		SURFACE DRAINAGE: GOOD		VEGETATION: A													
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS					
										CLAY	SILT	SAND	GRAVEL								
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)						MILE 393 B,C,S S NUMBER C					
										PLASTIC LIMIT LIQUID LIMIT 20 40 60 80 100 100+											
25	5	T			SP	POORLY GRADED FINE GRAINED SAND			2	0	3	97	0								
30	6	T			SP		F	Nf	6	0	2	98	0								
35	7	T			SP				10	0	4	96	0								
40						SILTY SAND			14												
41.5	8	T			SM				16	2	28	70	0								
END OF HOLE AT 41.5'																					

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA						DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY								
DWN:		FIELD ENG		DATE DRILLED 4/2/73		AIRPHOTO NO: A22771-69		CHAINAGE: 947 + 22		OFFSET		TEST HOLE				
CKD		TECH V.S.		RIG 2		SURFACE DRAINAGE GOOD		VEGETATION AF		ELEV 390		MILE B,C,S NUMBER				
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME) 20 40 60 80 100 100+ PLASTIC LIMIT LIQUID LIMIT																
2						FINE DRY BROWN SAND WITH A TRACE OF SILT			2							
4									4							
6	1	P		25	SP			Nf	6							
8									8							
10	2	P		26	SP		F		10							
12									12							
14									14							
16	3	P		27	SP				16							
18									18							
20	4	P		28	SP				20							
22									22							
24									24							

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ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY										
DWN:		FIELD ENG:		DATE DRILLED: 4/2/73		AIRPHOTO NO: A22771-69		CHAINAGE: 947+22		OFFSET:		TEST HOLE				
CKD:		TECH: V.S.		RIG: 2		SURFACE DRAINAGE: GOOD		VEGETATION: A F		ELEV: 390						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY	SILT	SAND	GRAVEL			
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)						
										PLASTIC LIMIT LIQUID LIMIT 20 40 60 80 100 100+						
50	10				SP			N _F	2							
52									4							
55	11			88	SP				6							
60	12	P		86	SP				10							
65									12							
70	13	P		86	SP				14							
75									16							
80									18							
85									20							
90									22							
95									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT										DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN:		FIELD ENG:		DATE DRILLED 3/2/73		AIRPHOTO NO: A22771-70		CHAINAGE 944 ± 00		OFFSET 800' EAST		TEST HOLE																	
CKD:		TECH: R.G.		RIG: No. 2		SURFACE DRAINAGE: GOOD		VEGETATION: AB		ELEV 293		MILE B,C,S NUMBER																	
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS													
										CLAY %	SILT %	SAND %	GRAVEL %																
2						FINE DRY BROWN SAND WITH A TRACE OF SILT		N _f	2							TOP OF HILL ON CNT LINE 800' EAST OF HOLE 393-S-C													
4									4																				
6	1	T			SP				6		0	6	94	0															
8						SANDY SILT WITH A TRACE OF CLAY	F		8																				
10	2	T			ML				10		3	58	39	0															
12									12																				
14								N _{bn}	14																				
16	3	T			ML				16		5	69	26	0															
18									18																				
20	4	T			SP	SAND WITH A TRACE OF SILT			20		0	5	95	0															
22								N _f	22																				
24									24																				

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ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY												
DWN:		FIELD ENG:		DATE DRILLED: 3/2/73		AIRPHOTO NO: A22771-70		CHAINAGE: 944 + 00		OFFSET: 800' EAST		TEST HOLE								
CKD:		TECH: R.G.		RIG: No. 21		SURFACE DRAINAGE: GOOD		VEGETATION: AB		ELEV:		MILE B.C.S. NUMBER								
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS				
										CLAY %	SILT %	SAND %	GRAVEL %							
15		T			SM				2	○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME) PLASTIC LIMIT 40 LIQUID LIMIT 80				3	20	77	0			
2							F	N _F	2											
4									4											
16					109SM				6											
6						END OF HOLE AT 80'			6											
8									8											
10									10											
12									12											
14									14											
16									16											
18									18											
20									20											
22									22											
24									24											

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA		DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY											
DWN:		FIELD ENG	DATE DRILLED 25/2/73	AIRPHOTO NO: A22771-69	CHAINAGE 944 ± 00	OFFSET 500 ft. E.	TEST HOLE								
CKD:		TECH M.H.R.	RIG 2	SURFACE DRAINAGE GOOD	VEGETATION A	ELEV	MILE	B,C,S	NUMBER						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS		
										CLAY	SILT	SAND	GRAVEL		
										%	%	%	%		
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)					
										PLASTIC LIMIT 40 LIQUID LIMIT 80					
2							F	N _{bn}	2					HOLE LOCATED APPROX. 500 FT. E. OF HOLE 393-S-C	
4									4						
5	1	P	0	45/6"	SP	FINE BROWN SAND WITH SOME SILT	UF		5						
6									6						
8									8						
10	2	P	0	39/6"	SP				10						
12									12						
14									14						
15	3	P	6	18/20"	SP				15	3	34	63	0		
16									16						
18									18						
20	4	P	0	22/20"	SP				20						
22									22						
24									24						

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA					DRILL HOLE REPORT					DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY						
DWN:		FIELD ENG:		DATE DRILLED 25/2/73		AIRPHOTO NO: A22771-69		CHAINAGE: 944 + 00		OFFSET: 500 Ft. E.		TEST HOLE				
CKD:		TECH: M.H.R.		RIG: 2		SURFACE DRAINAGE: GOOD		VEGETATION: A		ELEV:		MILE B,C,S NUMBER				
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
25	5	P	60	34	SP											
2									2							
4									4							
30	6	P	20	23	SP				6							
6				6"					6							
8									8							
35	7	P	35	37	SP				10							
12									12							
14									14							
40									16							
16									18							
18									20							
45									22							
20									24							
22																
24																
50																

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT										DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN:			FIELD ENG:			DATE DRILLED 26/2/73			AIRPHOTO NO: A22771-69			CHAINAGE: 944 + 00			OFFSET: 500 Ft. E.			TEST HOLE											
CKD:			TECH: R.G.			RIG: 2			SURFACE DRAINAGE: GOOD			VEGETATION: A			ELEV:														
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS													
										CLAY %	SILT %	SAND %	GRAVEL %																
80	13	T			SP					○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)																			
2						END OF HOLE AT 81.5'			2																				
4									4																				
6									6																				
8									8																				
10									10																				
12									12																				
14									14																				
16									16																				
18									18																				
20									20																				
22									22																				
24									24																				

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT										DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN:		FIELD ENG:		DATE DRILLED: 30/1/73		AERPHOTO NO: A22771-71		CHAINAGE: 979+25		OFFSET:		TEST HOLE																	
CKD:		TECH: W.R.		RIG: 1		SURFACE DRAINAGE: GOOD		VEGETATION: D. B.		ELEV: 271		MILE: 394		B,C,S: C		NUMBER: B													
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS													
										CLAY %	SILT %	SAND %	GRAVEL %																
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)																			
										PLASTIC LIMIT LIQUID LIMIT 20 40 60 80 100 100+																			
2						FINE SILTY SAND WITH A TRACE OF CLAY			2																				
4						---BROWN--- GREY			4																				
6	1	P		50	SM			N _{bn}	6	6	27	67	0																
8								F	8																				
10	2	P	90	38	ML	SILTY WITH SOME CLAY AND A TRACE OF SAND			10	16	76	8	0																
12									12																				
14	3	P	10	38	SP				14																				
16						SAND WITH A TRACE OF SILT AND GRAVEL			16																				
18								V _x	18																				
20	4	P		126	SP				20	0	8	91	1																
22									22																				
24									24																				

[illegible]

[illegible]

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT					DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY				
DWN:		FIELD ENG:		DATE DRILLED: 5/2/73		AIRPHOTO NO: A22771-71		CHAINAGE: 981 + 31		OFFSET:		TEST HOLE							
CKD:		TECH: M.H.R.		RIG: 2		SURFACE DRAINAGE: ON RIVER		VEGETATION: RIVER (NIL)		ELEV: 258									
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS			
										CLAY %	SILT %	SAND %	GRAVEL %						
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)									
										20	40	60	80	100	100+				
2						GRAVELLY SAND	F	N _{bn}	2										
4	1	.							4					0	3	65	32		
6									6										
8									8										
10	2	P		20	GP		UF		10					0	8	64	28		
12									12										
14	3	P		59	GP				14										
16									16										
18									18										
20						DARK GREY SANDY SILT WITH A TRACE OF CLAY			20										
22	4	P		31	ML				22										
24									24										

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT										DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN:			FIELD ENG:			DATE DRILLED: 5/2/73			AERPHOTO NO: A2271-71			CHAINAGE: 981 + 31			OFFSET:			TEST HOLE											
CKD:			TECH: R.G.			RIG: 2			SURFACE DRAINAGE: ON RIVER			VEGETATION: RIVER			ELEV: 258														
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS					WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS												
										CLAY %	SILT %	SAND %	GRAVEL %																
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)																			
										PLASTIC LIMIT LIQUID LIMIT 20 40 60 80 100 100+																			
25	5	P	70	41	ML				2																				
2									4																				
30	6	P		49	ML				6																				
8									8																				
35	7	P		33	ML		UF		10																				
10									12																				
12									14																				
14									16																				
40	8	P		32	ML				18																				
16									20																				
18									22																				
45	9	P		46	ML				24																				
20																													
22																													
24																													
50																													

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT										DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN:		FIELD ENG		DATE DRILLED 5/2/78		AIRPHOTO NO: A22771-71		CHAINAGE: 981 + 31		OFFSET		TEST HOLE																	
CKD		TECH R.G.		RIG 2		SURFACE DRAINAGE: ON RIVER		VEGETATION: RIVER		ELEV 258		MILE		B,C,S		NUMBER													
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS													
										CLAY %	SILT %	SAND %	GRAVEL %																
	10	P		41						○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)																			
2						END OF HOLE AT 51-5'			2																				
4									4																				
6									6																				
8									8																				
10									10																				
12									12																				
14									14																				
16									16																				
18									18																				
20									20																				
22									22																				
24									24																				

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA					DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN:		FIELD ENG:		DATE DRILLED 7/2/73		AIRPHOTO NO: A 22771-71		CHAINAGE: 984 + 05		OFFSET: 27' E		TEST HOLE				
CKD B.P.S		TECH: R.G.		RIG: No. 2		SURFACE DRAINAGE: ON RIVER		VEGETATION: Nil		ELEV: 256.5		MILE B,C,S NUMBER				
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
						ICE AND WATER										
2									2							
3																
4									4							
6						RIVER BOTTOM			6							
8									8							
10									10							
12									12							
14									14							
16									16							
18									18							
20	1	P	90	23	ML	DARK GREY SILT WITH A TRACE OF CLAY AND OF SAND			20							
22							UF		22		6	84	10	0		
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY										
DWN:		FIELD ENG		DATE DRILLED 7/2/74		AIR PHOTO NO: A22771-71		CHAINAGE 984 + 05		OFFSET 27'E		TEST HOLE				
CKD B.P.S.		TECH R.G.		RIG #2		SURFACE DRAINAGE ON RIVER		VEGETATION NIL		ELEV. 256.5						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)						
										PLASTIC LIMIT ——— LIQUID LIMIT 20 40 60 80 100 100+						
2									2							
4									4							
6									6							
8									8							
10	2	P		22	ML		UF		10			4	90	6	0	
12									12							
14									14							
16									16							
18									18							
20									20			5	79	16	0	
22	3	P		35	ML				22							
24									24							

[illegible]

[illegible]

[illegible]

[illegible]

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY								
OWN:		FIELD ENG:		DATE DRILLED: 7/3		AIRPHOTO NO: A22771-73		CHAINAGE: 988 + 25		OFFSET:		TEST HOLE		
CKD:		TECH: M.H.R.		RIG: 2		SURFACE DRAINAGE: GOOD		VEGETATION: A G		ELEV: 284				
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS		WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %			
2	14				CL	GREY, CLAYEY, SANDY SILT, MINOR GRAVEL			2					
4									4					
80									80	20	45	31	4	
6									6					
8									8					
85	15				CL				85					
12									12					
14									14					
90									90					
16									16					
18									18					
95					CL				95					
22									22					
24									24					

[illegible]

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA		DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY												
OWN: FIELD ENG		DATE DRILLED 30/1/73		AIRPHOTO NO: A22771-71		CHAINAGE 969+65		OFFSET		TEST HOLE						
CKD TECH W.R.		RIG 1		SURFACE DRAINAGE LOW & FLAT		VEGETATION A B C E		ELEV 293		MILE B,C,S NUMBER						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
25	5	P						N _F	2	1	7	74	18			
29								V _x	4	40	59	1	0			
30	6	P	90	61	CL	GREY CLAYEY SILT										
6						END OF HOLE AT 30'			6							
8									8							
10									10							
12									12							
14									14							
16									16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN:		FIELD ENG:		DATE DRILLED		AIR PHOTO NO:		CHAINAGE		OFFSET		TEST HOLE									
CKD:		TECH: W.R.		RIG: 1		SURFACE DRAINAGE: GOOD		VEGETATION: A B D		ELEV: 293		MILE		B,C,S		NUMBER					
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS		WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS							
										CLAY %	SILT %				SAND %	GRAVEL %					
						SILTY SAND															
2						BROWN SAND WITH SOME SILT AND A TRACE OF CLAY															
4																					
6	1	P	80	49	SM		F	N _{bn}	6	2	10	88	0								
8									8												
10	2	P	90	70	SM				10	3	14	83	0								
12									12												
14									14												
16	3	P		136	SW	SAND WITH SOME GRAVEL AND A TRACE OF SILT			16	0	6	78	16								
18									18												
20	4	P		151	SW			N _f	20	0	6	87	7								
22									22												
24									24												

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY				
DWN:		FIELD ENG		DATE DRILLED: 28/1/73		AERIAL PHOTO NO: A22771-71		CHAINAGE: 958+80		OFFSET		TEST HOLE				
CKD:		TECH V.S.		RIG: 1		SURFACE DRAINAGE: GOOD		VEGETATION: A C D		ELEV: 279						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
2						BROWN SILT WITH SOME CLAY AND A TRACE OF FINE SAND		V	2							
4									4							
6	1	P	90	17	ML				6		21	70	9	0		
8	2				ML	SILT AND SAND WITH SOME CLAY	F	N _f	8		10	40	50	0		
10	3	P	80	69					10							
12	4					GRAVELLY SAND WITH SOME SILT AND A TRACE OF CLAY			12		4	12	61	23		
14					SW				14							
16									16							
18									18							
20	5	P		100	5"	SILTY SAND WITH SOME CLAY AND A TRACE OF FINE GRAVEL		V _x	20		10	32	55	3		
22					SM				22							
24	6					END OF HOLE AT 25'		N _f	24							

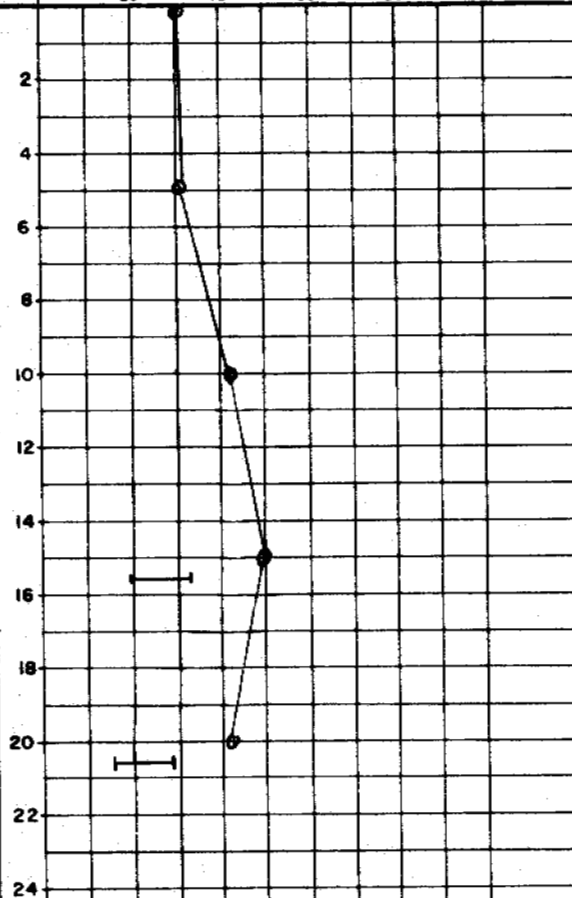
ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY			
DWN:		FIELD ENG:	DATE DRILLED:	AIRPHOTO NO:	CHAINAGE:	OFFSET:		TEST HOLE	
CKD:		TECH:	R.G.:	RIG:	SURFACE DRAINAGE:	GOOD	VEGETATION:	A	ELEV: 295
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)
○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)									
PLASTIC LIMIT 40 LIQUID LIMIT 80 100 100+									
GRAIN-SIZE ANALYSIS CLAY SILT SAND GRAVEL % % % %									
WET DENSITY (P.C.F.) DRY DENSITY (P.C.F.)									
MILE B,C,S NUMBER 394 C I									
REMARKS									
2	6				CL	CLAYEY SILT WITH SOME GRAVEL			2
4									4
30									6
6									8
7									10
8									12
35									14
10									16
8									18
12									20
14									22
40	9	P		130	CL				24
16									
18	10								
45									
20									
22	11				CL				
24									
END OF HOLE AT 50'									

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN:		FIELD ENG		DATE DRILLED: 29/1/73		AIRPHOTO NO: A22771-69		CHAINAGE: 949+60		OFFSET:		TEST HOLE									
CKD:		TECH: V.S.		RIG: 1		SURFACE DRAINAGE: GOOD		VEGETATION: A C D		ELEV: 303											
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNITED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS		WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS							
										CLAY %	SILT %				SAND %	GRAVEL %					
○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME) PLASTIC LIMIT 40 LIQUID LIMIT 60 20 40 60 80 100 100+																					
2						GREY SILTY SAND			2												
4									4												
6	1	P		150	SM				6												
8									8												
10	2	P		122	SM		F	N _f	10												
12									12												
14									14												
16	3	△		80	SM				16												
18									18												
20	4	P		110	SM				20												
22									22												
24									24												
										1	7	92	0								

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT										DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN:		FIELD ENG:		DATE DRILLED: 29/1/72		AIRPHOTO NO: A22771-69		CHAINAGE: 949+60		OFFSET:		TEST HOLE																	
CKD:		TECH: V.S.		RIG: 1		SURFACE DRAINAGE: GOOD		VEGETATION: A C D		ELEV: 303																			
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS		WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS															
										CLAY %	SILT %				SAND %	GRAVEL %													
25	5	P		140		GREY SAND WITH SOME SILT AND A TRACE OF CLAY		N _f	2																				
30	6	P		100	SM				6	4	23	73	0																
35	7				SM		F	V	10																				
40	8	P		50	ML	GREY SILTY WITH SOME CLAY AND A TRACE OF SAND		V _s	16	30	67	3	0																
46'	9	P		10	ML			V	20	18	81	1	0																
22	END OF HOLE AT 46'																												
24																													

○ = WATER CONTENT (% OF DRY WEIGHT)
 △ = ICE CONTENT (% OF SAMPLE VOLUME)

PLASTIC LIMIT ——— LIQUID LIMIT



ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA						DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY							
DWN:		FIELD ENG		DATE DRILLED: 31/1/71		AIRPHOTO NO: A22771-71		CHAINAGE: 994+50		OFFSET:		TEST HOLE					
CKD:		TECH V.S.		RIG: 2		SURFACE DRAINAGE: GOOD		VEGETATION: A G		ELEV: 288							
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS		WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS			
										CLAY %	SILT %						
2						GREY CLAYEY SILT WITH A TRACE OF SAND			2								
4									4								
6	1	P	100	120	ML		F		6								
8								V _r	8								
10	2	P	90	136	ML				10								
12									12								
14						GREY SILTY SAND		N _f	14								
16	3		200	SC					16								
18						END OF HOLE AT 16'-5"			18								
20									20								
22									22								
24									24								

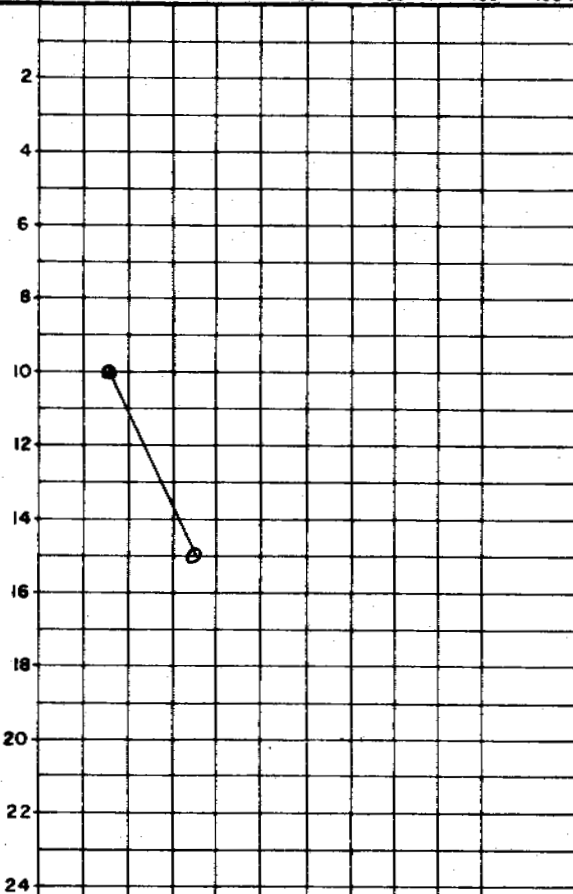
ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT										DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN:		FIELD ENG		DATE DRILLED		AIRPHOTO NO		CHAINAGE		OFFSET		TEST HOLE																	
CKD		TECH		RIG		SURFACE DRAINAGE		VEGETATION		ELEV																			
		V.S.		2		GOOD		A G		313																			
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS													
										CLAY	SILT	SAND	GRAVEL																
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)						MILE 395 B,C,S C NUMBER A													
										PLASTIC LIMIT 20 40 60 80 100 100+ LIQUID LIMIT 60 100 100+																			
2					SM	BROWN FINE SILTY SAND			2																				
4						BROWN SAND WITH SOME SILT, TRACE OF CLAY	F	N _{bn}	4																				
6	1	P	10	27	SM				6							NON PLASTIC													
8						GREY SANDY SILT			8																				
10						BROWN FINE SAND WITH SOME SILT	F		10							NON PLASTIC													
12	2	P	0	48	SM				12																				
14	3		0	32	SM				14																				
16						END OF HOLE AT 15'			16																				
18									18																				
20									20																				
22									22																				
24									24																				

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT										DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DOWN:		FIELD ENG		DATE DRILLED 31/1/71		AIRPHOTO NO: A22771-73		CHAINAGE: 41+50		OFFSET:		TEST HOLE																	
CKD		TECH V.S.		RIG 2		SURFACE DRAINAGE GOOD		VEGETATION: A F G		ELEV 310		MILE B,C,S NUMBER																	
DEPTH (FEET)		SAMPLE NUMBER		SAMPLE TYPE		% RECOVERY		PENETRATION RESISTANCE		UNIFIED SOIL SYMBOL		SOIL DESCRIPTION		LIMITS OF FROZEN GROUND		ICE DESCRIPTION		DEPTH (FEET)		GRAIN-SIZE ANALYSIS		WET DENSITY (P.C.F.)		DRY DENSITY (P.C.F.)		REMARKS			
																				CLAY		SILT		SAND		GRAVEL			
																				%		%		%		%			
2												SM		BROWN SILTY SAND		N _{bn}		2										WATER TABLE AT 16' APPROX	
4														BROWN SAND FINE TO MEDIUM GRAINED		F		4											
6		1		Z		29		SM										6											
8																		8											
10		2		P		40		31		SM								10											
12																		12											
14														BROWN COARSE SAND WITH FINE GRAVEL		UF		14											
16		3		P		37		SW										16											
18																		18											
20																		20											
22																		22											
24																		24											

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT										DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN:		FIELD ENG		DATE DRILLED		AIRPHOTO NO:		CHAINAGE		OFFSET		TEST HOLE		MILE		B,C,S		NUMBER											
CKD		TECH		V.S.		RIG		2		SURFACE DRAINAGE		GOOD		VEGETATION:		B F G		ELEV		309									
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS													
										CLAY %	SILT %	SAND %	GRAVEL %																
2					SM	BROWN SILTY SAND			2																				
4									4																				
6	1	P		150 MI		BROWN CLAYEY SILT WITH A TRACE OF SAND			6																				
8									8																				
10	2	P		72 MI			F	V _s	10																				
12									12																				
14	3	P		130 MI					14																				
16						END OF HOLE AT 15'			16																				
18									18																				
20									20																				
22									22																				
24									24																				

○ = WATER CONTENT (% OF DRY WEIGHT)
△ = ICE CONTENT (% OF SAMPLE VOLUME)

PLASTIC LIMIT 20 40 60 80 100 100+
LIQUID LIMIT 80 100 100+



[illegible]

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA						DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY											
DWN:		FIELD ENG.		DATE DRILLED 4/2/73		AIRPHOTO NO: A22771-73		CHAINAGE: 73 + 00		OFFSET:											
CKD:		TECH R.S.		RIG 1		SURFACE DRAINAGE GOOD		VEGETATION: A		ELEV 470		TEST HOLE									
												MILE		B,C,S		NUMBER					
												396		S		E					
REMARKS																					
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	PLASTIC LIMIT ——— LIQUID LIMIT				GRAIN-SIZE ANALYSIS							
										20	40	60	80	100	100+	%	%	%	%	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
2	1				SW	BROWN GRAVELLY SAND WITH SOME SILT	F	N _{bn}	2												
4									4												
5									5												
6	2	P		115	ML	SILTY AND CLAYEY TILL WITH SAND AND A TRACE OF GRAVEL	UF		6												
8									8												
10						BEDROCK (SHALE)			10												
12						END OF HOLE AT 12'			12												
14									14												
16									16												
18									18												
20									20												
22									22												
24									24												

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY										
DWN:		FIELD ENG:		DATE DRILLED: 1/2/83		AIRPHOTO NO: A22771-73		CHAINAGE: 83 + 19		OFFSET:		TEST HOLE				
CKD:		TECH V.S.		RIG: 2		SURFACE DRAINAGE: GOOD		VEGETATION: ADF		ELEV: 543						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY %	SILT %	SAND %	GRAVEL %			
										○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)						
										PLASTIC LIMIT 20 40 60 80 100 100+ LIQUID LIMIT 40 60 80 100 100+						
1					SP	VERY FINE SAND WITH SOME GRAVEL		N _{bn}	2							
2																
4									4							
5	2				125GW	BROWN SAND AND FINE GRAVEL	F	N _f	5							
6									6							
8									8							
10	3				140GW				10							
12									12							
14									14							
15	4				200GW				15							
16									16							
18									18							
20	5				190GW				20							
22									22							
24						END OF HOLE AT 25'			24							

[illegible]

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT										DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN:		FIELD ENG:		DATE DRILLED: 4/2		AIRPHOTO NO: A22771-73		CHAINAGE: 77 + 10		OFFSET:		TEST HOLE																	
CKD:		TECH:		RIG: 1		SURFACE DRAINAGE: GOOD		VEGETATION: A		ELEV: 589		MILE: 396		B,C,S: S		NUMBER: I													
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS													
										CLAY %	SILT %	SAND %	GRAVEL %																
1	1				S	FINE SILTY SAND		N _{bn}	2																				
2						SAND WITH SOME SILT AND A TRACE OF GRAVEL AND CLAY		N _f	4																				
3									6																				
4	2								8																				
5									10																				
6									12																				
7									14																				
8									16																				
9									18																				
10									20																				
11									22																				
12									24																				
13	3	T	75%	98ML		SILTY TILL, SANDY WITH SOME CLAY AND GRAVEL		N _{bn}	2	2	15	75	8																
14									4																				
15									6																				
16									8																				
17									10																				
18									12																				
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HOLE KEPT CAVING
IN, HAD TO CASE
TO 10 FT.

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT				DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY							
DWN:		FIELD ENG:		DATE DRILLED: 4/2		AIRPHOTO NO: A22771-73		CHAINAGE: 77 + 10		OFFSET:					
CKD:		TECH: R.S.		RIG: 1		SURFACE DRAINAGE: GOOD		VEGETATION: A		ELEV: 589					
TEST HOLE															
MILE: 396 B,C,S: S NUMBER: I															
REMARKS:															
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	WATER CONTENT (%)	ICE CONTENT (%)	GRAIN-SIZE ANALYSIS	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	
												CLAY	SILT	SAND	GRAVEL
												%	%	%	%
2	5	T		49	ML	SILT AND SAND TILL WITH SOME CLAY AND GRAVEL			2						
4									4						
30	5				ML				6						
32	6								8			20	30	32	18
35									10						
39	7				ML				12			17	33	40	10
39						END OF HOLE AT 39'			14						
16									16						
18									18						
20									20						
22									22						
24									24						

[illegible]

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN:		FIELD ENG.		DATE DRILLED: 8/2/73		AIRPHOTO NO:		CHAINAGE: 59+50		OFFSET: 300' WEST		TEST HOLE									
CKD:		TECH: M.H.R.		RIG: 2		SURFACE DRAINAGE: GOOD		VEGETATION: A		ELEV: 329		MILE: 396		B.C.S: S		NUMBER: R					
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS					
										CLAY %	SILT %	SAND %	GRAVEL %								
2						BROWN SILTY SAND WITH SOME GRAVEL AND A TRACE OF CLAY			2												
4	1	P		42	SP				4												
6									6												
8							F	N _{bn}	8												
10	2	P		37	ML				10												
11									11												
12						GREY SILT WITH SOME CLAY			12												
14									14												
16	3	P		23	ML		UF		16												
18									18												
20	4	P		9	ML				20												
22									22												
24						END OF HOLE AT 25'			24												
25									25												

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN:		FIELD ENG:		DATE DRILLED: 1/2/13		AIRPHOTO NO: A22771-75		CHAINAGE: 111 + 00		OFFSET:		ELEV: 556		TEST HOLE							
CKD:		TECH: R.G.		RIG: 2		SURFACE DRAINAGE: Fair		VEGETATION: AB													
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS		WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS							
										CLAY %	SILT %										
2									2												
4									4												
5	1	P	0	19	SC	BROWN SILTY TILL, SANDY WITH SOME GRAVEL AND A TRACE OF CLAY AND COBBLES	F	N _{bn}	5												
6									6												
8									8												
10	2	P	10	19	ML				10												
12									12												
14	3				ML				14												
15									15												
16						End of hole at 15'			16												
18									18												
20									20												
22									22												
24									24												

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN:		FIELD ENG:		DATE DRILLED 1/2/73		AIRPHOTO NO: A22771-75		CHAINAGE 121 + 00		OFFSET:		TEST HOLE									
CKD:		TECH: R.G.		RIG 2		SURFACE DRAINAGE Good		VEGETATION AB		ELEV: 579											
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	○ = WATER CONTENT (% OF DRY WEIGHT) △ = ICE CONTENT (% OF SAMPLE VOLUME)		GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	MILE	B,C,S	NUMBER	
										PLASTIC LIMIT	LIQUID LIMIT	CLAY %	SILT %	SAND %	GRAVEL %						REMARKS
2									2												
4									4												
5									5												
6	1	P	20	44	SC	BROWN SILTY AND SANDY TILL WITH SOME GRAVEL AND A TRACE OF CLAY AND OF COBBLES	F	N _{bn}	6	○											
8									8												
10	2	△			SC			N _f	10	○											
12						End hole at 12'			12												
14									14												
16									16												
18									18												
20									20												
22									22												
24									24												

HOLE ABANDONED
AFTER 12 FT.
BECAUSE OF
CONTINUOUS
CAVE IN.

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA				DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY										
DWN:		FIELD ENG	DATE DRILLED	AIRPHOTO NO	CHAINAGE	OFFSET		TEST HOLE								
CKD:		TECH	RIG	SURFACE DRAINAGE	VEGETATION	ELEV		MILE	B,C,S							
		R.G.	2	Good	ABD	569		397	C							
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
										CLAY	SILT	SAND	GRAVEL			
										PLASTIC LIMIT	LIQUID LIMIT					
										20	40	60	80	100	100+	
										%	%	%	%			
2									2							
4									4							
5	1	N			ML	BROWN SILTY TILL, SANDY WITH SOME GRAVEL, TRACE OF CLAY AND OF COBBLES.		N _{bn}	5							
6									6							
8									8							
10	2	N			ML				10							
12									12							
14									14							
15									15							
16						End of hole at 15'			16							
18									18							
20									20							
22									22							
24									24							

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY						
DWN:		FIELD ENG:		DATE DRILLED 1/2/73		AIRPHOTO NO: A22771-75		CHAINAGE: 140 + 50 (Approx.)		OFFSET		TEST HOLE						
CKD		TECH R.G.		RIG 2		SURFACE DRAINAGE: Fair		VEGETATION A		ELEV: 590		MILE B,C,S NUMBER						
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS		
										CLAY %	SILT %	SAND %	GRAVEL %					
2						DARK BROWN SILT AND SAND TILL WITH SOME GRAVEL AND CLAY. THE SILT TO SAND RATIO DECREASES WITH DEPTH	F	N _{bn}	2									
4									4									
5	1	P	90	39	ML				5									
6									6									
8									8									
10	2	P	100	74	ML				10									
12									12									
14	3	P		80	ML				14									
15									15									
16									16									
18									18									
20									20									
22									22									
24									24									
									End of hole at 15'									

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT		DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN		FIELD ENG		DATE DRILLED 1/2/73		AIRPHOTO NO: A22771-75		CHAINAGE: 152 + 50		OFFSET:		TEST HOLE									
CKD		TECH R.G.		RIG 2		SURFACE DRAINAGE: Good		VEGETATION: A		ELEV: 671											
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS					
										CLAY %	SILT %	SAND %	GRAVEL %								
2					SM	BROWN SILTY SAND TILL WITH SOME GRAVEL AND CLAY			2												
4									4												
5									5												
6	1	P	50	73				N _{bn}	6	12	31	44	13								
8									8												
10	2	P	0	68	SP	BROWN SAND WITH SOME GRAVEL	F	N _f	10												
12									12												
14	3				SP				14												
15									15												
16						End of hole at 15'			16												
18									18												
20									20												
22									22												
24									24												

ACRES CONSULTING SERVICES LIMITED CALGARY, ALBERTA										DRILL HOLE REPORT										DEPARTMENT OF PUBLIC WORKS, CANADA MACKENZIE HIGHWAY									
DWN:		FIELD ENG		DATE DRILLED 1/2/73		AIRPHOTO NO: A22771-75		CHAINAGE: 158 + 00		OFFSET		ELEV. 692		TEST HOLE															
CKD		TECH R.G.		RIG 2		SURFACE DRAINAGE: Fair		VEGETATION A						MILE B,C,S NUMBER															
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS				WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS													
										CLAY %	SILT %	SAND %	GRAVEL %																
2						BROWN SAND TILL WITH SOME SILT AND GRAVEL AND A TRACE OF CLAY			2																				
4										4																			
5	1	P		45	CL					5																			
6									6																				
8									8																				
10	2	P		73	SC				10																				
12									12																				
14	3	P		75	SC				14																				
15									15																				
16						End of hole at 15'			16																				
18									18																				
20									20																				
22									22																				
24									24																				

○ = WATER CONTENT (% OF DRY WEIGHT)
 △ = ICE CONTENT (% OF SAMPLE VOLUME)

