Public Works Canada

Travaux Publics Canada

Western Region

Region de l'Ouest

APPENDIX A

APPENDIX B

APPENDIX C

REPORT

GEOTECHNICAL INVESTIGATION

Mile 970 to Mile 1059
Mackenzie Highway
Combined Data - 1976 to 1980
Volume II - Mile 995 to Mile 1020

Appendix A

Map

38
39
40

Appendix B

Appendix C

PUBLIC WORKS CANADA | DRILL HOLE REPORT | Inuvik - Tuk.

TECH. D. Pronych | RIG Air | DATE 80/03/19 | km | B.P. No. | HOLE No. 995-1

CHAINAGE	OFFSET
1369+00	

REMARKS

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
0	Pt	PEAT								
2	Cl	CLAY - SILTY SANDY PEBBLES .2m								
		.9m								
		ICE		ICR	1	77	21	2		H.B.
4		1.2m				78	16	6		H.B
		CLAY -		Vs						
6		SILTY SANDY			2					
8		PEBBLES				74	17	9		WET
10	Cl	MED. PLASTIC		Vc-Vr	3	78	16	6		WET
12										
14		4.6m			4	72	17	11		MOIST
16		BOTTOM OF HOLE - 4.6m			5					
18										
20					6					
22										
24					7					
26										
28					8					
30										
32					9					
34										
36					10					
38										
					11					

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk.

TECH. D. Pronych | RIG Air | DATE 80/02/19 | km | B.P. No. | HOLE No. 995-2

CHAINAGE: 1394+00 | OFFSET:

REMARKS:

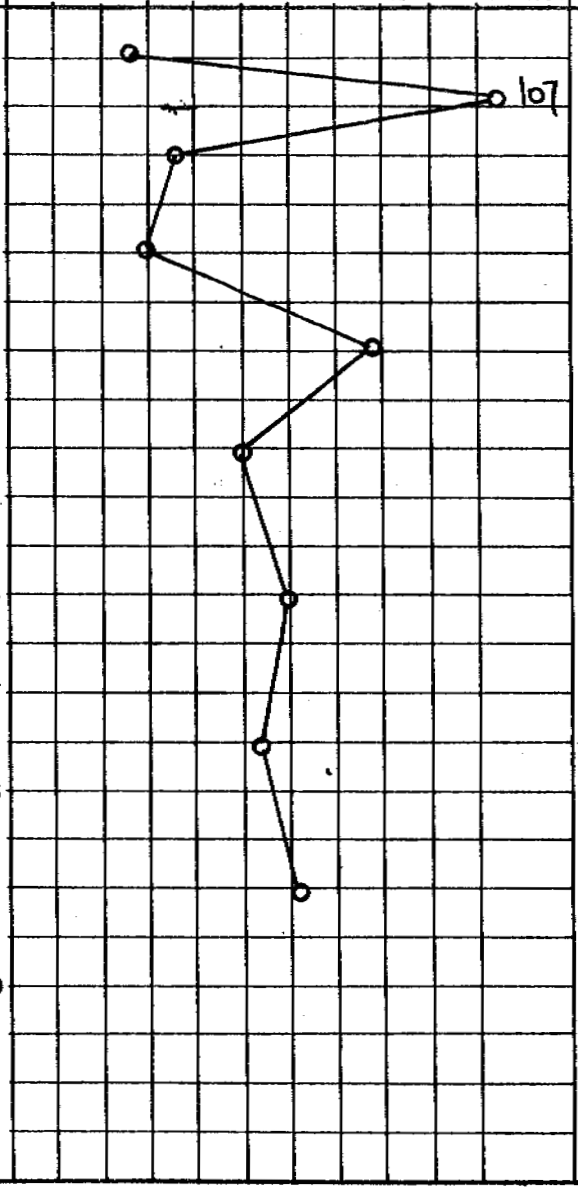
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
	Pt	PEAT — .3 m								
2		CLAY - SILTY PEBBLES & ICE		ICE & SOIL	1					MOIST-WET; FREE WATER; WET-SAT; WET
10	CL -	LOW - MED. PLASTIC			3					FREE WATER
12					4					
14	CI	ICE + CLAY - SILTY SANDY PEBBLES		ICE & SOIL	5					SAT.; FREE WATER
22					6					
24		CLAY - SILTY SANDY · PEBBLES			7					
26	CL · CI	LOW-MED. PLASTIC — 9.1 m		V_S	8					FREE WATER
30		BOTTOM OF HOLE - 9.1m			9					FREE WATER
32					10					
34										
36					11					
38										

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+



PUBLIC WORKS CANADA | DRILL HOLE REPORT | INUVIK - TUK.

TECH. D. PRONYCH | RIG AIR | DATE 80/03/19 | km | B.P. No. | HOLE No. 995-3

CHAINAGE 1409+50 | OFFSET

REMARKS

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
0	Pt	PEAT .2m		Vs						
2	Cl	CLAY - SILTY ICE		ICE	1	85	14	1		FREE WATER
4		CLAY - SILTY SANDY PEBBLES				72	25	3		SAT.
6						83	14	3		MOIST-WET
8	Cl	MED. PLASTIC		Vc - Vr	2	83	14	3		MOIST
10					3	77	16	7		MOIST
12					4	82	12	6		MOIST
14		4.6m								
16		BOTTOM OF HOLE - 4.6m			5					
18										
20					6					
22										
24					7					
26										
28					8					
30					9					
32										
34					10					
36										
38					11					

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk.

TECH. D. Pronych | RIG Air | DATE 80/03/19 | km | B.P. No. | HOLE No. 96-2

CHAINAGE: 1442+11 | OFFSET:

REMARKS:

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
0	Pt	PEAT — .2m		Vc/Vr						
2	CL	CLAY - SILTY				81	19	0		MOIST
4		ICE & SOIL		ICE & SOIL	1	70	28	2		FREE WATER
6		CLAY - SILTY - GRAVELLY SANDY TO				43	36	21		MOIST
8	CL - SC	SAND - CLAYEY			2	50	47	3		WET
10		PEBBLES — 3.4m		Vx	3					
12										
14		SAND - FINE - MEDIUM 4.6m			4	8	92	0		MOIST
16		BOTTOM OF HOLE - 4.6m			5					
18										
20					6					
22										
24					7					
26										
28					8					
30					9					
32										
34					10					
36										
38					11					

PUBLIC WORKS CANADA | DRILL HOLE REPORT | Inuvik - Tuk

TECH. D. Pronych | RIG Air | DATE 80/03/19 | km | B.P. No. | HOLE No. 996-3

CHAINAGE 455+00 | OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)
0	Pt	PEAT .3m		ICE & CLAY	0
2		ICE & CLAY			
4					1
6	CL	CLAY - SILTY Few Pebbles		Vs	2
8		Sandy			
10		CLAY - SILTY 3.4m			3
12	SM	SAND - SILTY		Vx	
14		4.6 m			4
16		Bottom of Hole - 4.6m			5
18					
20					6
22					
24					7
26					
28					8
30					9
32					
34					10
36					11
38					

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

GRAIN-SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %

RELATIVE MOISTURE CONTENT

- Freewater
- Freewater
- Freewater
- Wet
- Sat.
- Sat.

PUBLIC WORKS CANADA — DRILL HOLE REPORT — Inuvik-Tuk.

TECH. D. Pronych | RIG Air | DATE 80/03/19 | km | B.P. No. | HOLE No. 996-4

CHAINAGE 1466+72 | OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT
0	Pt	Peat — .2m			Wet
2		Ice + Soil		Ice + Soil	Moist/Water
4		Clay - Silty Sandy			Sat.
6	CL	Low - Med. Plastic		Vs	
8					Wet
10					
12	CL	Grey -		Vc-Vr	Moist
14					
16		No Return After 4.9m			Wet
18					
20				Vx	
22	CL	Clay - Silty — 7.00 m			
24		Bottom of Hole - 7.0m			
26					
28					
30					
32					
34					
36					
38					

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

DEPTH (METRES) 0 1 2 3 4 5 6 7 8 9 10 11

GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %

PUBLIC WORKS CANADA | DRILL HOLE REPORT | INUVIK - TUK.

TECH. D. PRONYCH | RIG AIR | DATE 80/03/19 | km | B.P. No. | HOLE No. 997-1

CHAINAGE 1482+00 | OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
0	Pt	PEAT .3m								
2–6		ICE & SOIL		SOIL & ICE	0–1	88	12	0		MOIST-WET
						88	12	0		MOIST
						77	11	2		WATER
8	GM	SAND - SILT MIX PEBBLES		VX	2					
10–12	CL	CLAY - SILTY SANDY MED. PLASTIC		VC-VR	3	56	39	5		MOIST
14	SC-CL	CLAY SANDY TO SAND CLAYEY 4.6m			4	70	30	0		WET
16		BOTTOM OF HOLE - 4.6m			5	72	28	0		MOIST
18–38					6–11					

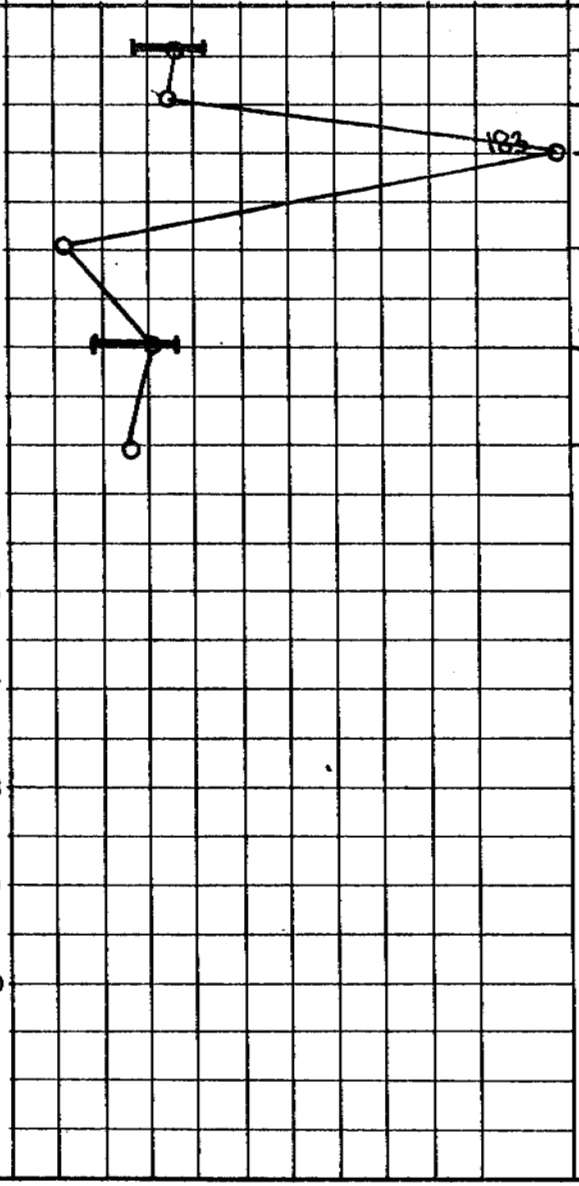
○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa

50 100 150 200 250

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+



PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | INUVIK - TUK

TECH. D. PRONYK | RIG AIR | DATE 80/03/19 | km | B.P. No. | HOLE No. 997-2

CHAINAGE: 1499+00 | OFFSET:

REMARKS:

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT ; LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
	Pt	PEAT — .3m								
2	Cl - Cl	CLAY - SILTY - PEBBLES - GRAVELLY		Vs	1	71	27	2		MOIST
4						75	25	0		DAMP
6		— 2.1m				41	22	37		SAT.
8	Sc	SAND - SILTY CLAYEY		Vc - Vs	2	47	52	1		WET
10	Sm	SAND - SILTY			3	41	59	0		MOIST
12		— 4.0m								
14	Cl	CLAY SANDY SILTY — 4.6m			4	44	56	0		MOIST
16		BOTTOM OF HOLE - 4.6m			5					
18										
20					6					
22										
24					7					
26										
28					8					
30										
32					9					
34					10					
36										
38					11					

PUBLIC WORKS CANADA | DRILL HOLE REPORT | Inuvik - Tuk

TECH. D. Pronych | RIG Air | DATE 80/03/19 | km | B.P. No. | HOLE No. 997-3

CHAINAGE 1522+00 | OFFSET

REMARKS

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
	Pt	PEAT — 3m								
2		ICE — .8m		ICE						
4	Pt	PEAT & ICE — 1.2m			1					
6	Sm	SAND SILT MIX GRAVELLY — 2.0m								
8		CLAY - SILTY SANDY PEBBLES MED. PLASTIC		Vc-Vr	2	86	14	0		FREE WATER
10	Cl					92	8	0		SAT.
12					3	40	46	14		SAT.
14		— 4.6m				76	23	1		WET
16		BOTTOM OF HOLE - 4.6m			4	80	18	2		WET
18						85	15	0		DAMP
20					5					
22										
24					6					
26										
28					7					
30										
32					8					
34										
36					9					
38										
					10					
					11					

PUBLIC WORKS CANADA — DRILL HOLE REPORT

INUVIK - TUK.

TECH. D. PRONYCH | RIG Air | DATE 80/03/19 | km | B.P. No. | HOLE No. 998-1

CHAINAGE: 1547+40 | OFFSET:

REMARKS:

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)
0	Pt	PEAT .3m		ICE & SOIL	0
2	OL-CL	ICE + SOIL ORGANICS			
4					1
6	CL-CI	CLAY - SILTY		V_S	2
8					
10					3
12					
14		4.6m			4
16		BOTTOM OF HOLE - 4.6m			5
18					
20		NO RETURN AFTER 4.0m			6
22					
24					7
26					
28					8
30					9
32					
34					10
36					11
38					

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

2170

GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %

RELATIVE MOISTURE CONTENT

FREE WATER

FREE WATER

WET

FREE WATER

FREE WATER

PUBLIC WORKS CANADA | DRILL HOLE REPORT | INUVIK - TUK

TECH. J. PROKYCH | RIG AIR | DATE 80/03/19 | km | B.P. No. | HOLE No. 998-2

CHAINAGE: 1553+50 | OFFSET:

REMARKS:

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
0	P_t	PEAT .3 m		ICE & PEAT
2		ICE & PEAT .9m		
4		ICE & SOIL		
6	CL	2.1m		
8		CLAY - SILTY		V_S
10		MED. PLASTIC		
12	C_1			
14		4.6m		
16		BOTTOM OF HOLE - 4.6m		

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

DEPTH (METRES): 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

104

103

GRAIN-SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %

RELATIVE MOISTURE CONTENT
Free H_2O
Free H_2O
Free H_2O
WET
SAT.
SAT

PUBLIC WORKS CANADA — DRILL HOLE REPORT

INUVIK - TUK.

TECH. D. ROMYCH | RIG AIR | DATE 80/03/19 | km | B.P. No. | HOLE No. 999-1

CHAINAGE | OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
	Pt	PEAT — .2m								
2		CLAY - SILTY								
4		- SANDY			1					
6		- PEBBLES								
8	CI	MED. PLASTIC		V_S	2					
10										
12					3					
14		4.6m			4					
16		BOTTOM OF HOLE. 4.6m			5					
18										
20					6					
22										
24					7					
26										
28					8					
30										
32					9					
34					10					
36										
38					11					

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

83	16	1		MOIST	
88	12	0		FREE H_2O	
86	13	1		WET	
86	13	1		WET	
89	11	0		WET	
85	11	4		WET	

PUBLIC WORKS CANADA — DRILL HOLE REPORT — INUVIK - TUK.

TECH. D. PRONYCH | RIG AIR | DATE 80/03/19 | km | B.P. No. | HOLE No. 999-2

CHAINAGE | OFFSET

REMARKS

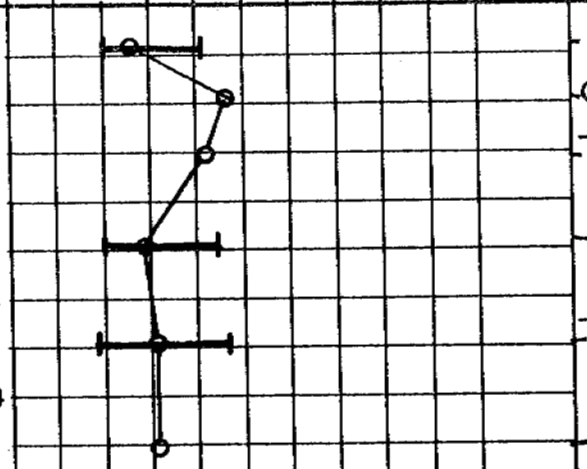
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
0	Pt	PEAT — .25m								
2	Cl	CLAY SILTY SANDY								
2		ICE & SOIL		ICE & SOIL	1	89	10	1		MOIST
4						92	8	0		FREEZING
4		CLAY - SILTY SANDY PEBBLES				76	16	8		SAT.
6					2					
8				Vc - Vx		80	16	4		WET
10	Cl	MED. PLASTIC		I	3					
12				Vs		75	18	7		WET
14		GRAVELLY 4.6 m			4	69	13	18		WET
16		BOTTOM OF HOLE - 4.6 m								
18					5					
20										
22					6					
24										
26					7					
28										
30					8					
32										
34					9					
36					10					
38										
					11					

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+



PUBLIC WORKS CANADA | DRILL HOLE REPORT | INUVIK - TUK

TECH. D. PRONYCH | RIG AIR | DATE 80/03/19 | km | B.P. No. | HOLE No. 999-3

CHAINAGE: 999-3 | OFFSET:

REMARKS:

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2	Pt	PEAT — 1.3m		ICE & ORGANICS	1					FREE H2O
4		ICE & ORGANICS								FREE H2O
6	CL	CLAY - SILTY LOW PLASTIC			2					FREE H2O
8	CI	MED. PLASTIC		Vs						WET
10					3					
12	CI									FREE H2O
14		4.6m			4					
16										FREE H2O
18		BOTTOM OF HOLE 4.6m			5					
20										
22					6					
24										
26					7					
28										
30					8					
32										
34					9					
36					10					
38										
					11					

PUBLIC WORKS CANADA | DRILL HOLE REPORT | INUVIK - TUK.

TECH. D. PRONYCH | RIG AIR | DATE 80/03/19 | km | B.P. No. | HOLE No. 999-4

CHAINAGE 1632+50 | OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
0	Pt	PEAT .1m	S	
2		ICE .9m		ICE
4		ICE & SOIL 2.1m	m	ICE & SOIL
8	CI	CLAY - SILTY PEBBLES MED. PLASTIC 4.6m		V S
16		BOTTOM OF HOLE - 4.6m		

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa

50 100 150 200 250

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

DEPTH (METRES) 0 1 2 3 4 5 6 7 8 9 10 11

112

GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %

RELATIVE MOISTURE CONTENT

MOIST

FREE H_2O

FREE H_2O

FREE H_2O

SAT.

FREE H_2O

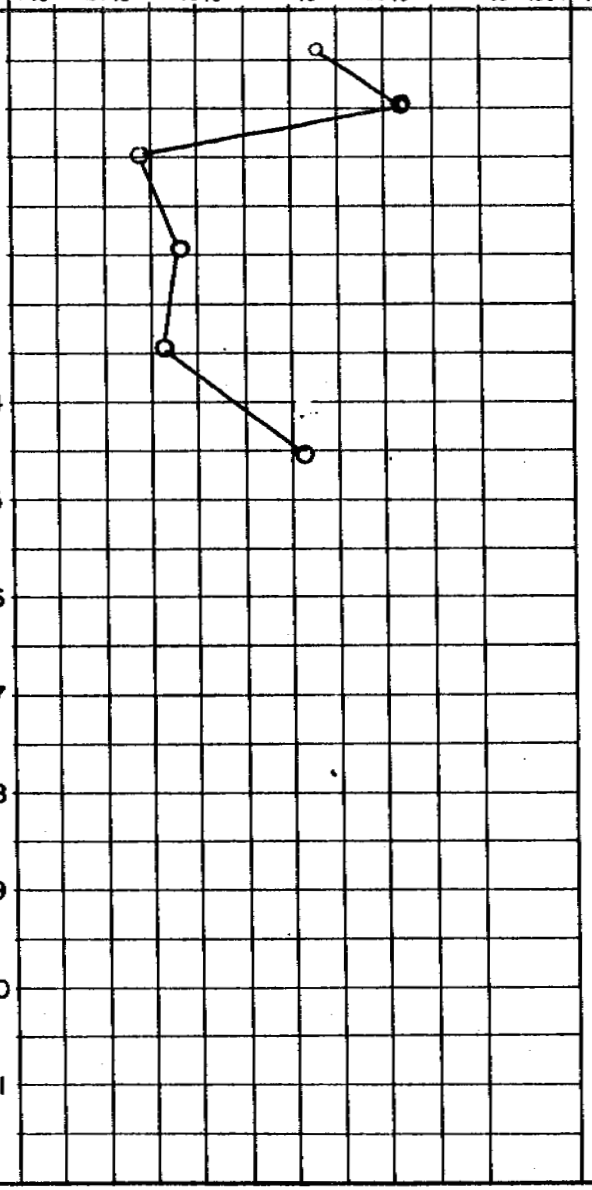
PUBLIC WORKS CANADA | DRILL HOLE REPORT | Inuvik - Tuk.

TECH. D. Pronych | RIG Air | DATE 80/03/19 | km | B.P. No. | HOLE No. 1000-1

CHAINAGE: 16+46 | OFFSET:

REMARKS:

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
0	Pt	Peat — 25m		Vs
2	Cl	Clay - Silty		
		Ice & Soil		Ice+Soil
4				
6		Clay - Silty Pebbles		
8	CL - Cl			Vs
10				
12				
14		4.6m		
16		Bottom of Hole - 4.6m		
18				
20				
22				
24				
26				
28				
30				
32				
34				
36				
38				



GRAIN-SIZE ANALYSIS			
CLAY	SILT	SAND	GRAVEL
%	%	%	%

DEPTH (METRES)	RELATIVE MOISTURE CONTENT
0	SAT.
1	Free H_2O
	SAT.
2	
	WET
3	
	WET
4	
	Free H_2O
5	
6	
7	
8	
9	
10	
11	

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk.

TECH. D. Pronych	RIG Air	DATE 80/03/20	km	B.P. No.	HOLE No. 1000-2

CHAINAGE	OFFSET
1663	

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT
0	PT	PEAT — 1.5m		Vc-Vr	MOIST
2	CI	CLAY - SILTY			FREE H_2O
4		ICE & SOIL		ICE & SOIL	WET
6		CLAY - SILTY			
8		FEW PEBBLES			WET
10	CL - CI			Vs	
12					WET-SOFT
14		4.6m			WET
16		BOTTOM OF HOLE - 4.6 m			

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

DEPTH (METRES): 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

w% 20% 40% 60% 80% 100% 100+

GRAIN-SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %

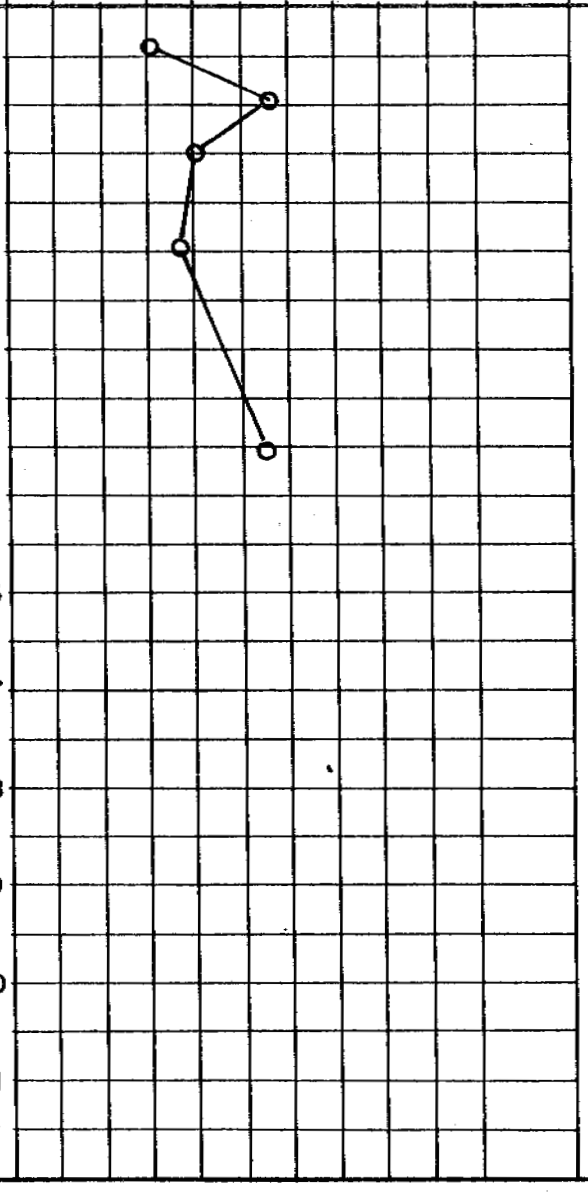
PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk

TECH. D. PRONYCH | RIG AIR | DATE 80/03/20 | km | B.P. No. | HOLE No. 1000 - 3

CHAINAGE: 1684 | OFFSET:

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
0	Pt	PEAT — 1.5m		
2	CL-CI	CLAY - SILTY		$V_c - V_r$
4		ICE & SOIL		ICE & SOIL
6				
8	CL	CLAY - SILTY		V_j
10				
12				
14	CI	- PEBBLES — 4.6m		
16		BOTTOM OF HOLE - 4.6m		
18				
20				
22				
24				
26				
28				
30				
32				
34				
36				
38				



GRAIN-SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %

RELATIVE MOISTURE CONTENT
MOIST
FREE WATER
WET
WET
SAT - FREE H_2O

REMARKS

PUBLIC WORKS CANADA | DRILL HOLE REPORT | Inuvik - Tuk.

TECH. D. Pronych | RIG Air | DATE 80/03/20 | km | B.P. No. | HOLE No. 1001 - 1

CHAINAGE 1707 | OFFSET

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
2	Pt.	PEAT .6m		Vs
4		ICE & SOIL		ICE & SOIL
6				
8	CL	CLAY - SILTY		Vs
10		POOR RETURNS MOSTLY ICE		Vs ICE
12				
14		4.6m		
16		BOTTOM OF HOLE - 4.6m		
18				
20				
22				
24				
26				
28				
30				
32				
34				
36				
38				

DEPTH (METRES)

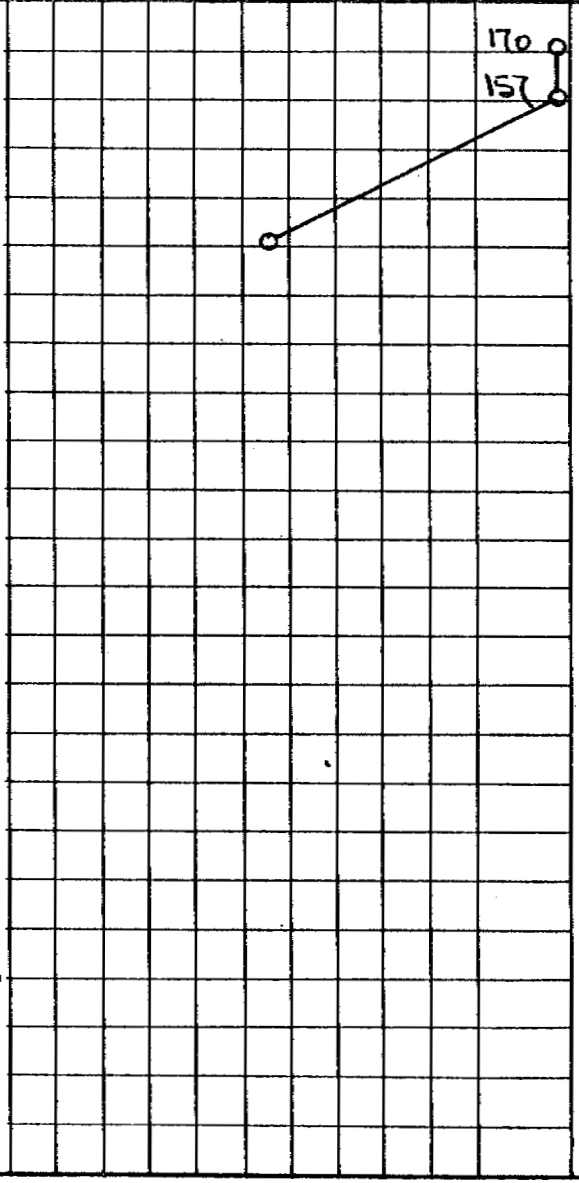
○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa

50 100 150 200 250

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+



GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %

RELATIVE MOISTURE CONTENT

FREE WATER

FREE WATER

REMARKS

PUBLIC WORKS CANADA — DRILL HOLE REPORT — INUVIK - TUK.

TECH. D. PRONYCH | RIG Air | DATE 80/08/20 | km | B.P. No. | HOLE No. 1001 - 2

CHAINAGE: 1727 | OFFSET:

REMARKS:

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)
0	Pt	PEAT — .15 m			
2	CL-OL	CLAY - SILTY ORGANIC — 2 m		Vs	
4		ICE & SOIL		ICE & SOIL	1
6					2
8		— 2.5 m			
	CL	CLAY - SILTY			
10		ICE		ICE	3
12					
14	CI	CLAY - SILTY — 4.6 m		Vs	4
16		BOTTOM OF HOLE - 4.6 m			5
18					
20					6
22					
24					7
26					
28					8
30					
32					9
34					10
36					11
38					

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa

50 100 150 200 250

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

350 215 130

GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %

RELATIVE MOISTURE CONTENT: WET — FREE H_2O — ✓ — ✓ — SAT.

PUBLIC WORKS CANADA | DRILL HOLE REPORT | Inuvik - Tuk.

TECH. D. Pronych | RIG Air | DATE 80/03/20 | km | B.P. No. | HOLE No. 1001-3

CHAINAGE	OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
0	Pt	Peat		
		.15m		
2	Pt	Peat		
4		Ice & Soil		Ice + Soil
6				
8		Clay - Silty Pebbles		
10	CL - CI			V_s
12				
14		4.6m		
16		Bottom of Hole - 4.6m		
18				
20				
22				
24				
26				
28				
30				
32				
34				
36				
38				

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

DEPTH (METRES): 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

117

GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %

RELATIVE MOISTURE CONTENT

Poss. H_2O

WET

SAT.

SAT.

PUBLIC WORKS CANADA | DRILL HOLE REPORT | INUVIK - TUK.

TECH. D. PRONYCH | RIG AIR | DATE 80|03|20 | km | B.P. No. | HOLE No. 1002-1

CHAINAGE 1762 | OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
2	Pt	PEAT — .5m		V_3
		CLAY & PEAT — .7m		
4		ICE & SOIL		ICE & SOIL
6		2.1m		
8	CL	CLAY-SILTY		$V_c - V_f$
10		3.1m		
12		ICE		ICE
14		4.6m		
16		BOTTOM OF HOLE - 4.6m		

DEPTH (METRES)

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa

50 100 150 200 250

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

229

144

GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %

RELATIVE MOISTURE CONTENT

Free Water

Free Water

Free Water

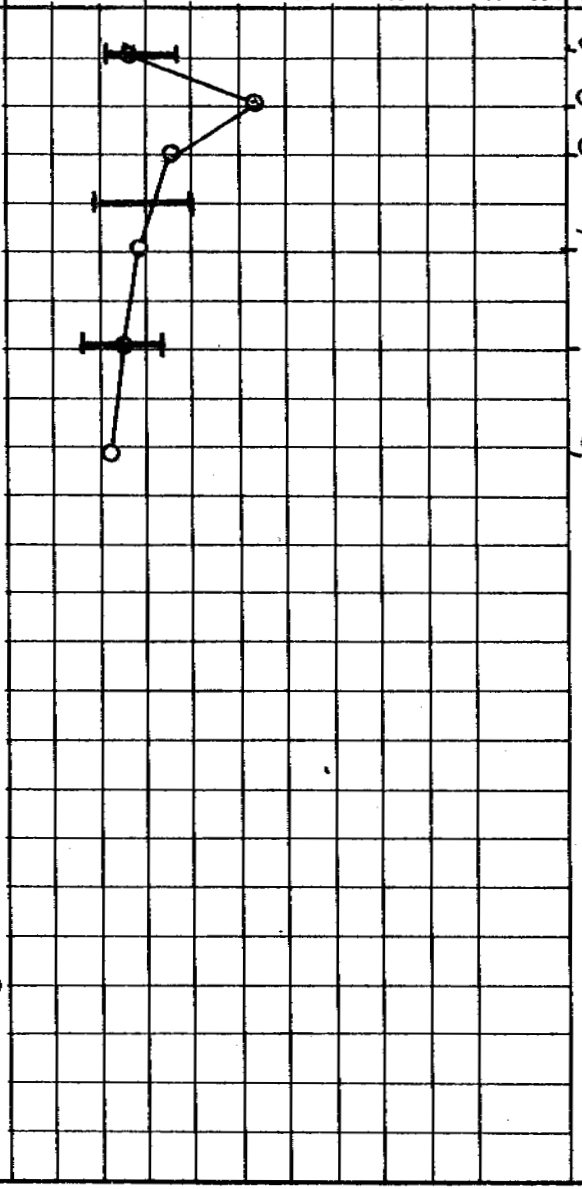
PUBLIC WORKS CANADA | DRILL HOLE REPORT | INUVIK - TUK.

TECH. D. PAONYCH | RIG AIR | DATE 80/03/20 | km | B.P. No. | HOLE No. 1002-2

CHAINAGE: 1777+50 | OFFSET:

REMARKS:

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
0	Pt	PEAT .3m							
2		ICE & SOIL		ICE + SOIL	95	5	0		MOIST
4					92	8	0		FREE H_2O
6		CLAY - SILTY - SANDY - PEBBLES			95	5	0		SAT.
8					79	17	4		WET
10	Cl			$V_c - V_x$					
12		MED. PLASTIC			86	13	1		MOIST
14		4.6m		V_x					
16		BOTTOM OF HOLE - 4.6m			92	8	0		MOIST
18									
20									
22									
24									
26									
28									
30									
32									
34									
36									
38									



PUBLIC WORKS CANADA — DRILL HOLE REPORT

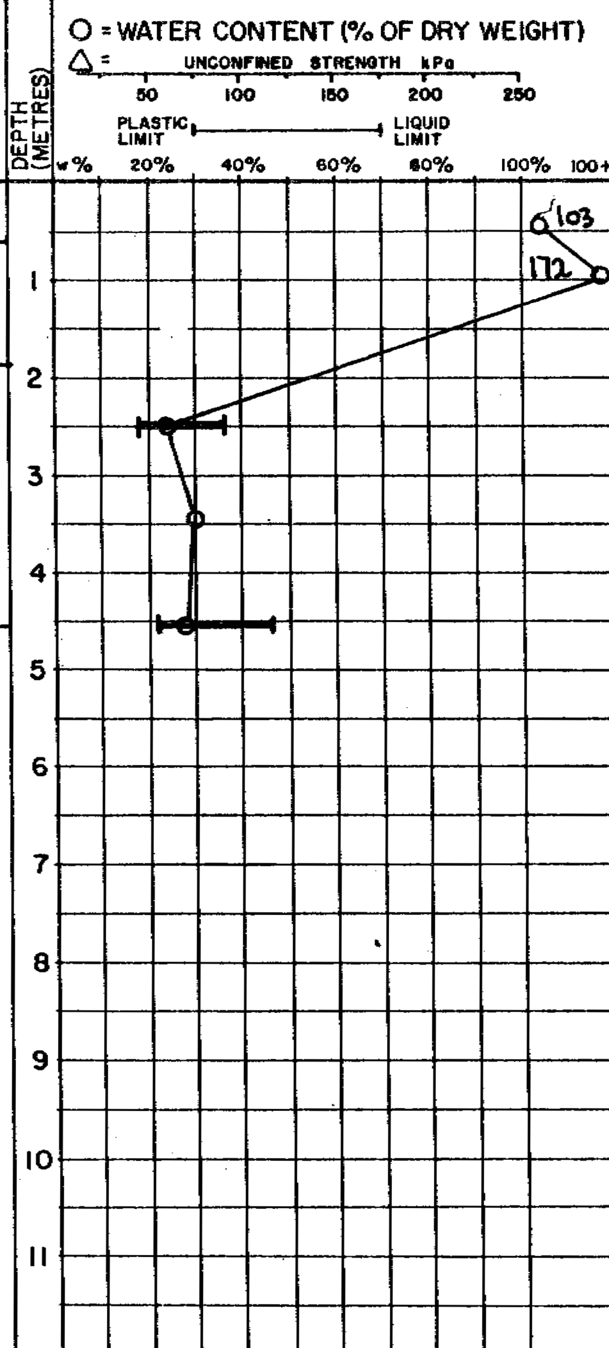
Inuvik - Tuk

TECH.	RIG	DATE	km	B.P. No.	HOLE No.
D. Pronych	Air	80/03/20			1003-1

CHAINAGE	OFFSET
1791+60	

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
0–2	Pt.	Peat .6m			91	-	9	0	Moist	
2–6		Ice 1.8m		Ice					Free H_2O	
6–15	CI	Clay - Silty - Sandy - Pebbles Med. Plastic 4.6 m		Vc - Vs	81	-	17	2	Moist	
					85	-	13	2	Wet	
					84	-	14	2	Moist	

Bottom of Hole - 4.6m



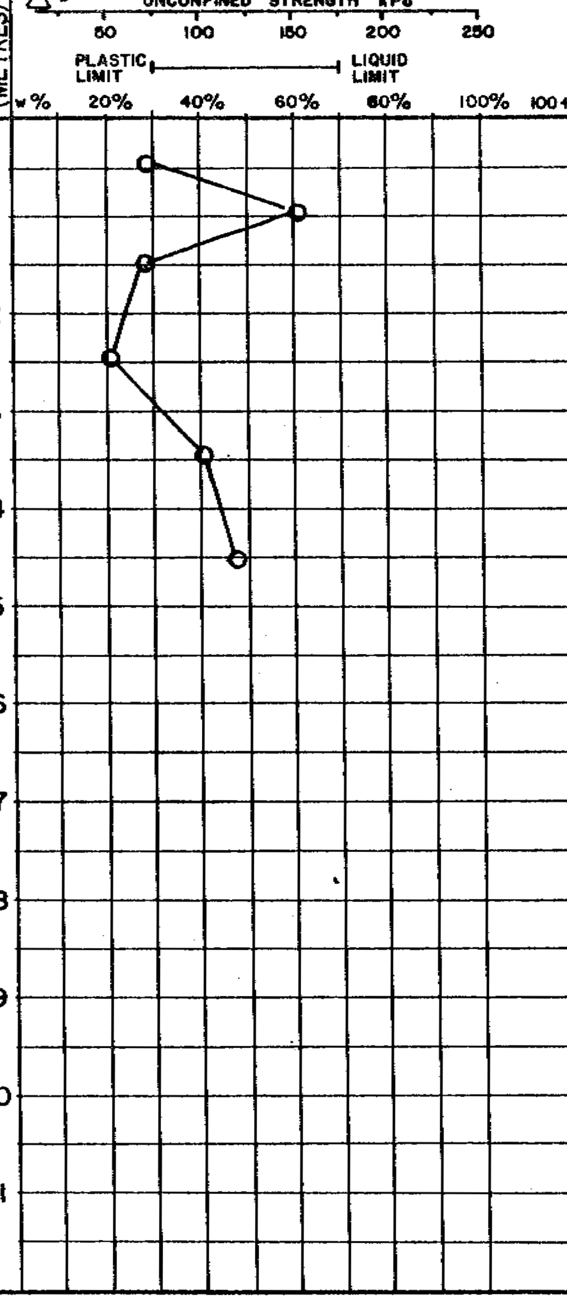
PUBLIC WORKS CANADA	DRILL HOLE REPORT	Inuvik - Tuk.

TECH. D. Pronych	RIG Air	DATE 80/03/20	km	B.P. No.	HOLE No. 1003-2

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	RELATIVE MOISTURE CONTENT
	Pt	Peat .3m				Moist
2		Clay - Silty		Vs		Sat.
4	CL	Low - Med. Plastic			1	Wet
6	-	Pebbles			2	
8	CI					Wet
10				Vs	3	
12						Sat.
14		4.6m			4	Sat.
16		Bottom of Hole - 4.6m			5	
18						
20					6	
22						
24					7	
26					8	
28						
30					9	
32						
34					10	
36					11	
38						

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa



GRAIN-SIZE ANALYSIS			
CLAY %	SILT %	SAND %	GRAVEL %

CHAINAGE	OFFSET
? 1806 - 1887	

REMARKS

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik-Tuk

TECH. D. Pronych	RIG Air	DATE 80/03/20	km	B.P. No.	HOLE No. 1003-3

CHAINAGE: 1824 + 00 | OFFSET:

REMARKS:

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
2	Pt	Peat		
4		Ice & Soil		Ice & Soil
6		Clay - Silty		Vc - Vr
8		Low Plastic		I
10	CL			Vs
12				
14		Pebbles 4.6m		
16		Botton of Hole - 4.6m		
18				
20				
22				
24				
26				
28				
30				
32				
34				
36				
38				

O = WATER CONTENT (% OF DRY WEIGHT)

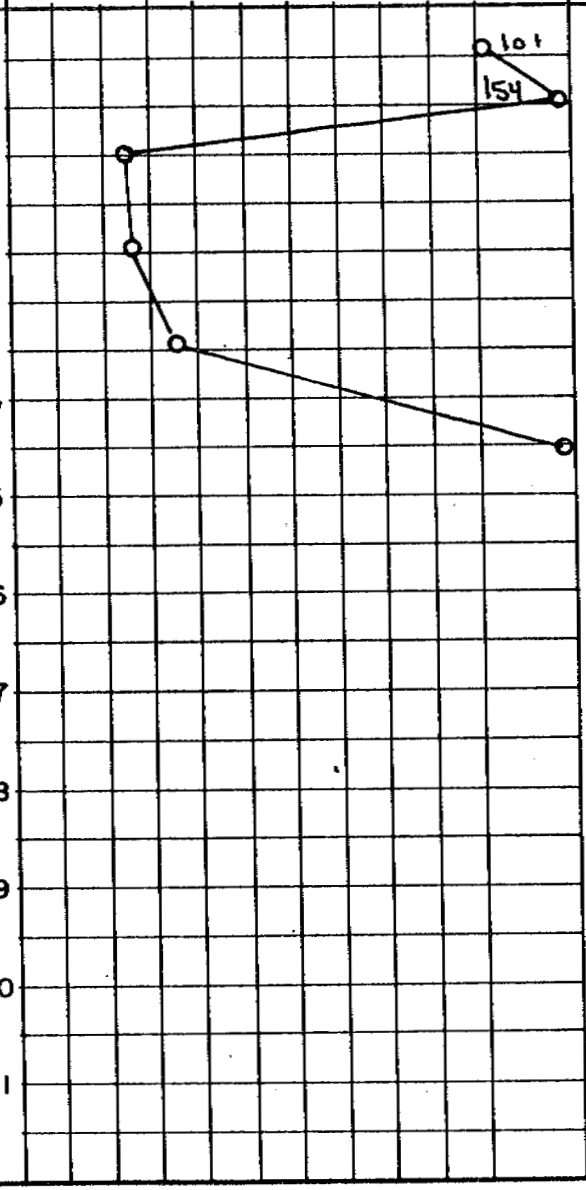
Δ = UNCONFINED STRENGTH kPa

50 100 150 200 250

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

DEPTH (METRES): 1 2 3 4 5 6 7 8 9 10 11



GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %

RELATIVE MOISTURE CONTENT

SAT.
Free Water
Wet
Wet
SAT.
Free Water

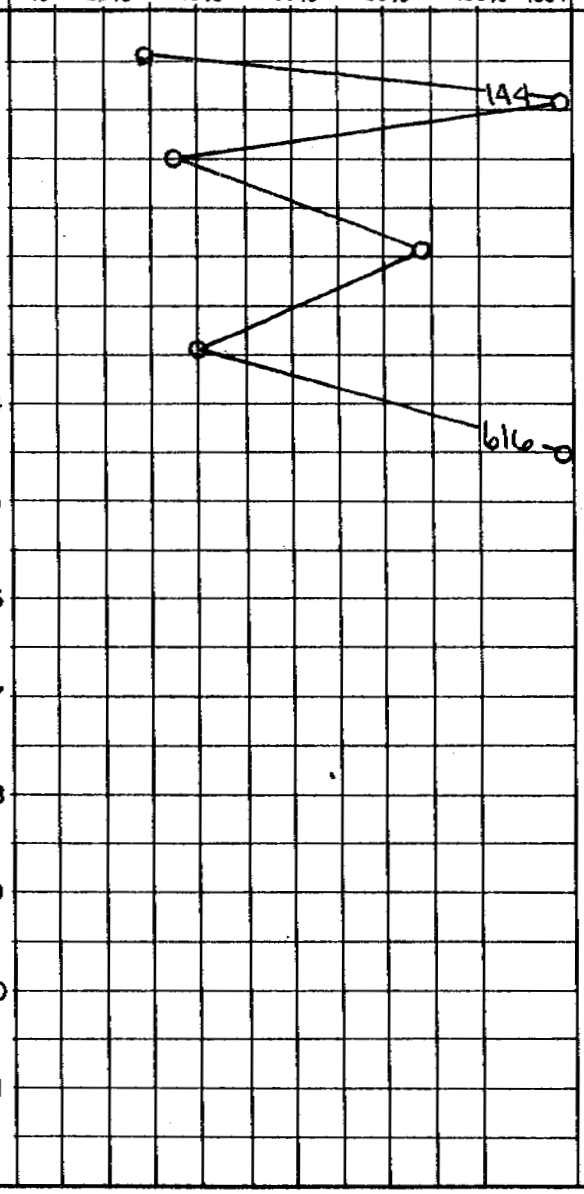
PUBLIC WORKS CANADA | DRILL HOLE REPORT | Inuvik - Tuk.

TECH. D. Pronych	RIG Air	DATE 80/03/20	km	B.P. No.	HOLE No. 1003-4

CHAINAGE	OFFSET
1838+50	

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT
0	Pt	PEAT .15m			
2	Cl	CLAY - SILTY .7m			Moist
4		Ice & Soil		Ice & Soil	Free H_2O
6					Wet
8	Cl	CLAY - SILTY 2.1m			Sat.
10		Ice & Soil		Ice & Soil	Sat.
12					
14		4.6m			Free H_2O
16		Bottom of Hole - 4.6m			
18					
20					
22					
24					
26					
28					
30					
32					
34					
36					
38					



GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %

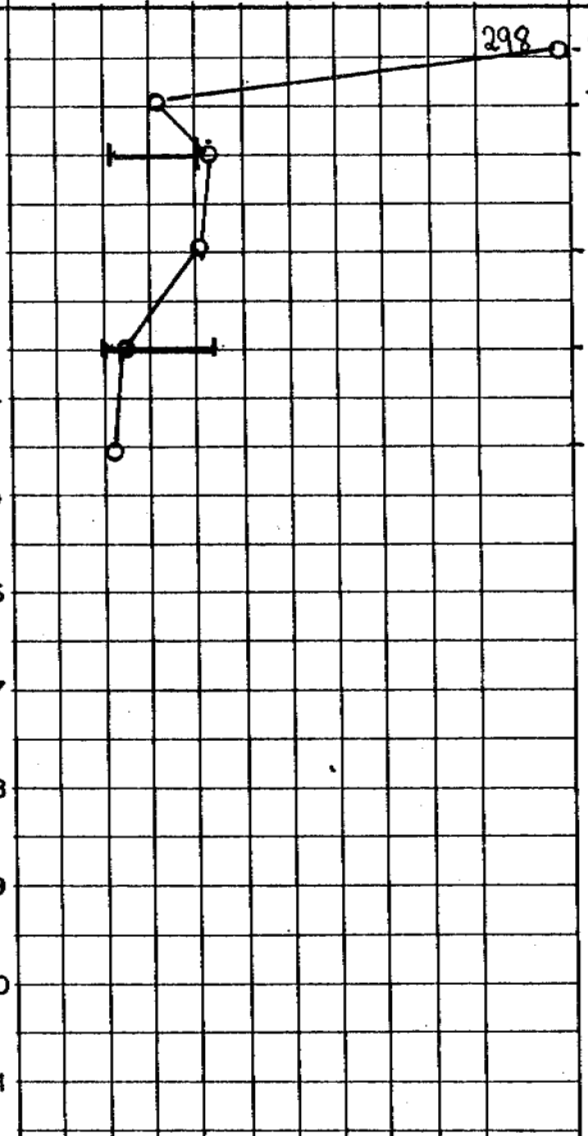
PUBLIC WORKS CANADA — DRILL HOLE REPORT — INUVIK - TUK.

TECH. D. ARONYSH | RIG AIR | DATE 80/03/20 | km | B.P. No. | HOLE No. 1004-1

CHAINAGE: 1856+00 | OFFSET:

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2	Pt	PEAT — .6m								
4		CLAY - SILTY SANDY PEBBLY MED. PLASTIC		V_S	1	89	11	0		FREE WATER
6						79	17	4		MOIST
8					2	84	15	1		SAT.
10	Cl					79	19	2		SAT.
12				V_C-V_r	3	81	16	3		WET
14		4.6m			4	83	15	2		MOIST
16		BOTTOM OF HOLE - 4.6 m			5					
18										
20					6					
22										
24					7					
26										
28					8					
30										
32					9					
34					10					
36										
38					11					



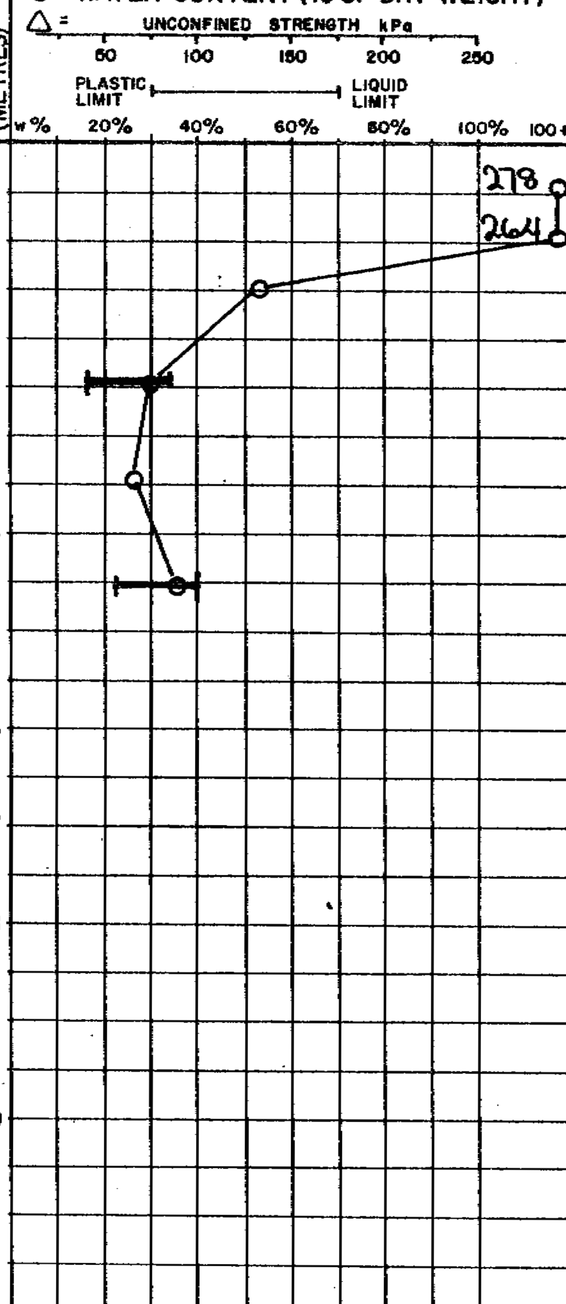
PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk.

TECH. D. Pronych	RIG Air	DATE 80/03/20	km	B.P. No.	HOLE No. 1004-2

CHAINAGE	OFFSET
1864+50	

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	WATER CONTENT (% OF DRY WEIGHT)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	Pt	Peat		Vs		278	99		1	0	Free H₂O	
4		1.2m			1	264	90		10	0	Free H_2O	
6		Clay - Silty, Sandy, Med. Plastic					83		17	0	Free H_2O	
8					2		85		15	0	Wet	
10	C1			Vc - Vr	3							
12							90		9	1	Wet	
14		4.6m			4		91		9	0	Moist	
16		Bottom of Hole - 4.6m			5							



DEPTH (FEET): 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38

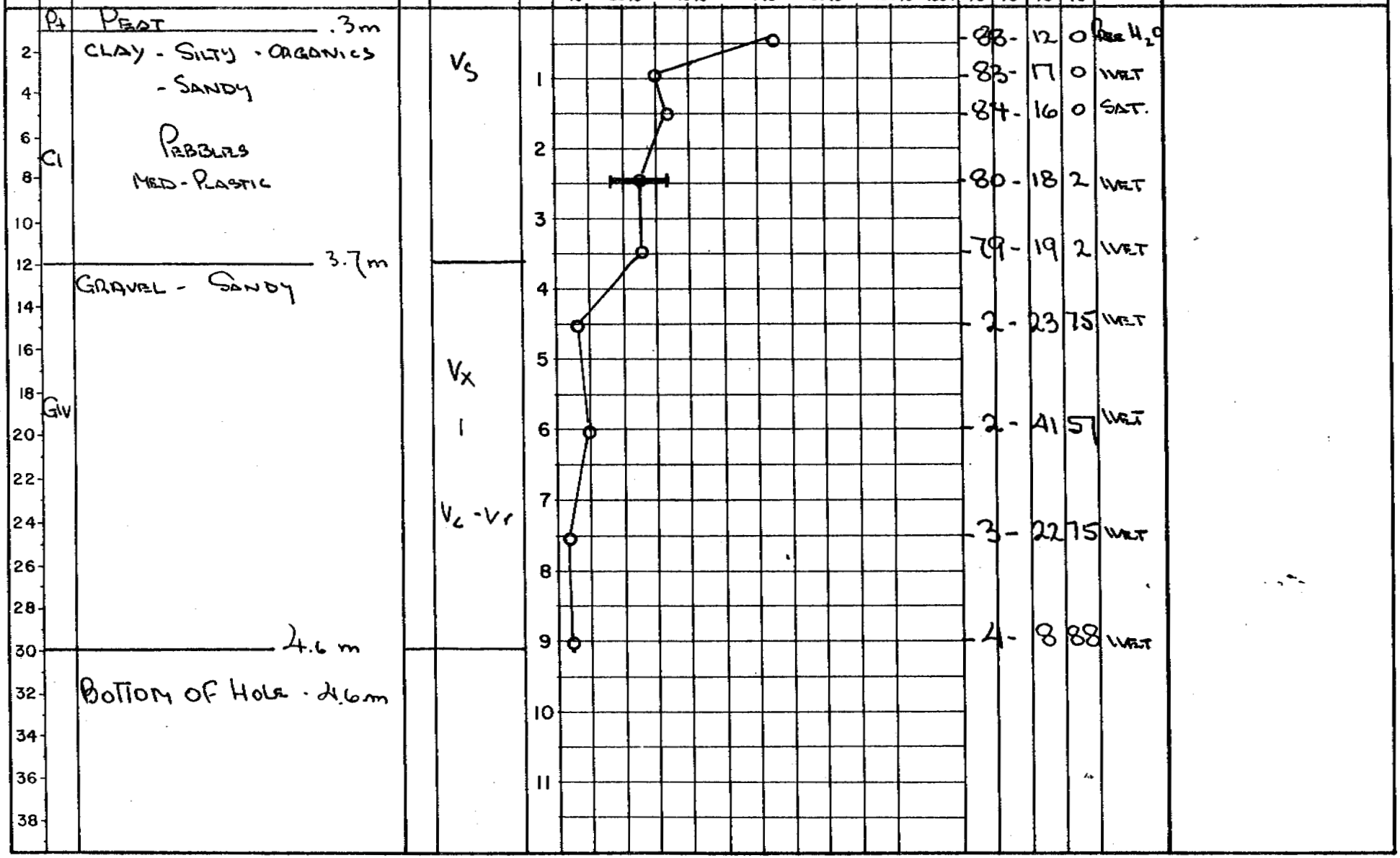
DEPTH (METRES): 6, 7, 8, 9, 10, 11

PUBLIC WORKS CANADA — DRILL HOLE REPORT — Inuvik - Tuk.

TECH. D. PRONYCH | RIG AIR | DATE 80/03/20 | km | B.P. No. | HOLE No. 1004-3

CHAINAGE | OFFSET

REMARKS



PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk.

TECH. D. PRONYCH | RIG Air | DATE 80/03/20 | km | B.P. No. | HOLE No. 1004-4

CHAINAGE: 1889 | OFFSET:

REMARKS:

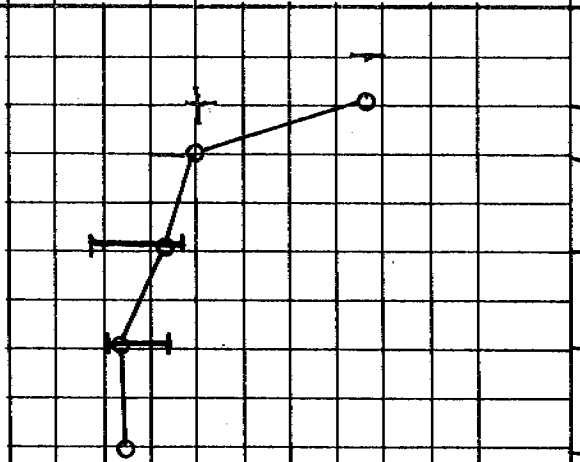
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
0	Pt	PEAT — .3m								
2		CLAY - SILTY		V_s	1	79	20	1		FREE H_2O
4		LOW PLASTIC				81	18	1		FREE H_2O
6					2					
8	CL - CI	MED. PLASTIC				81	18	1		SAT.
10					3					
12				V_c - V_r		78	17	5		WET
14		4.6 m			4					
16		BOTTOM OF HOLE - 4.6 m				80	18	2		WET
18					5					
20										
22					6					
24										
26					7					
28										
30					8					
32										
34					10					
36					11					
38										

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+



PUBLIC WORKS CANADA | DRILL HOLE REPORT | Inuvik - Tuk

TECH. D. Aronych | RIG Air | DATE 80/08/20 | km | B.P. No. | HOLE No. 1005-1

CHAINAGE: 1900 too | OFFSET:

REMARKS:

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

GRAIN-SIZE ANALYSIS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
	Pt	PEAT — .25m								
2	Cl	CLAY SILTY — .7m		Vx						DAMP
4		ICE & SOIL — 1.5m		ICE+SOIL	1					FREE H_2O
6	Cl-Cl									SAT.
	Cl	CLAY-SILTY		Vs	2					
8										SAT.
10		ICE		ICE	3					
12										
14		— 4.6m			4					
16		BOTTOM OF HOLE - 4.6m			5					
18										
20					6					
22										
24					7					
26										
28					8					
30										
32					9					
34										
36					10					
38					11					

36

PUBLIC WORKS CANADA | DRILL HOLE REPORT | Inuvik - Tuk.

TECH. D. Pronych | RIG Air | DATE 80/03/20 | km | B.P. No. | HOLE No. 1005-2

CHAINAGE: 1908+00 | OFFSET:

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)
2	Pt.	Peat .6m			
4		ICE & Soil		ICE & Soil	
6					
8	CL	CLAY - Silty			
10	I	Pebbles		$V_c - V_r$	
12	CI				
14		4.6m			
16					
18		Bottom of Hole - 4.6m			
20					
22					
24					
26					
28					
30					
32					
34					
36					
38					

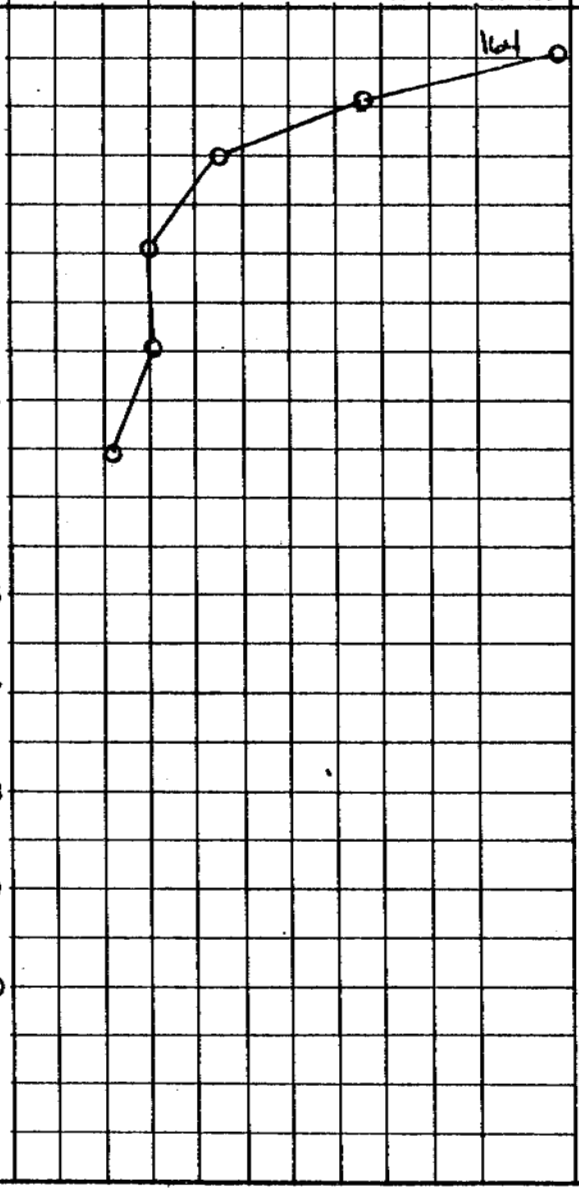
O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa

50 100 150 200 250

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+



GRAIN-SIZE ANALYSIS				RELATIVE MOISTURE CONTENT
CLAY %	SILT %	SAND %	GRAVEL %	
				Free H_2O
				SAT.
				WET
				MOIST

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk.

TECH. D. PRONYCH | RIG Air | DATE 80/03/21 | km | B.P. No. | HOLE No. 1005-3

CHAINAGE 1970+05 | OFFSET 30' LT

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	RELATIVE MOISTURE CONTENT
2–4	Pt	PEAT		Vs	1	WET
4–6	Pt	PEAT		Vs	1	WET
6	Pt	PEAT		Vs	1–2	WET
6–8	CL	CLAY SILTY		Vs	2	FREE H_2O
8–10	CL	CLAY SILTY		Vs	2–3	FREE H_2O
10–12	Gw	GRAVEL - SANDY		Vx	3	WET
12–14	Gw	GRAVEL - SANDY		Vx	3–4	WET
14	Gw	GRAVEL - SANDY		Vx	4	WET
16–38		BOTTOM OF HOLE - 4.6m			5–11	

2.1m

2.5m

4.6m

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

GRAIN-SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk.

TECH. D. Proniych | RIG Air | DATE 80/03/21 | km | B.P. No. | HOLE No. 1005 - A

CHAINAGE: 1925 + 50 | OFFSET:

REMARKS:

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)
0	Pt	PEAT ,1m		Vx	
2	Cl	CLAY - SILTY SANDY PEBBLES 1.2 m		Vs	1
4		GRAVEL - SANDY			
6					2
8	GW			Vx	
10					3
12					
14		ICE 4.6m		ICE	4
16					
18		BOTTOM OF HOLE - 4.6 m			5
20					
22					6
24					
26					7
28					
30					8
32					
34					9
36					10
38					11

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

GRAIN-SIZE ANALYSIS				RELATIVE MOISTURE CONTENT
CLAY %	SILT %	SAND %	GRAVEL %	
80	20	0		Moist
80	19	1		Free H_2O
5	42	53		Wet
5	54	41		Wet
3	29	68		Wet

PUBLIC WORKS CANADA | DRILL HOLE REPORT | Inuvik - Tuk

TECH. D. Pronych | RIG Air | DATE 80/03/21 | km | B.P. No. | HOLE No. 1005-S

CHAINAGE: 1942 + 00 | OFFSET:

REMARKS:

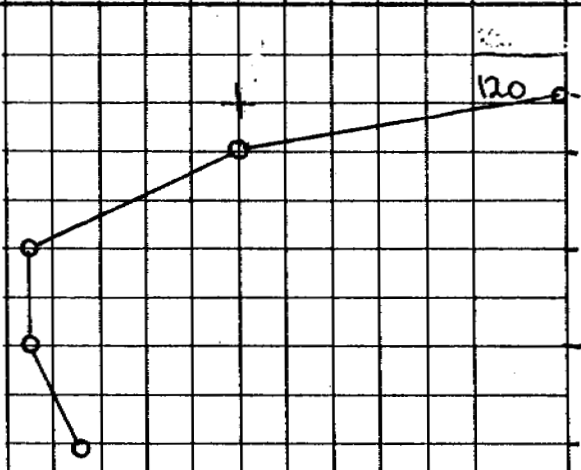
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
0	Pt	Peat — .15m								
2	CL	Clay Silty Sandy — 0.6m		ICE & Soil	0					
		Ice & Soil — 1.2m								
4	CI	Clay Silty Sandy Pebbles — 1.6m			1	80	19	1		Free H2O
6	Gw	Gravel Sandy								Sat.
8				Vx	2	82	16	2		
10	Sw	Sand - Gravelly				10	39	51		Wet
12					3					
14	Gw	Gravel Sandy — 4.6m		V-Vr		5	57	38		Wet
16		Bottom of Hole - 4.6m			4	5	36	59		Sat.
18					5					
20					6					
22					7					
24										
26					8					
28					9					
30					10					
32										
34					11					
36										
38										

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+



PUBLIC WORKS CANADA — DRILL HOLE REPORT

INUVIK - TUK.

TECH. D. PRONYCH | RIG AIR | DATE 80/03/21 | km | B.P. No. | HOLE No. 1006-1

CHAINAGE: 1956+00 | OFFSET:

REMARKS:

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
0	PT	PEAT — .3m		
2–6		ICE & SOIL		ICE & SOIL
8				
10			3.1 m	
10		ICE	3.7 m	ICE
12		GRAVEL	3.89 m	
14		ICE — 4.6m		ICE
16–38		BOTTOM OF HOLE - 4.6m		

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

DEPTH (METRES): 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
82	17	1		SAT.
				Free H2O

PUBLIC WORKS CANADA — DRILL HOLE REPORT

INUVIK-TUK

TECH. D. PRONYCH | RIG AIR | DATE 80/03/21 | km | B.P. No. | HOLE No. 1006-2

CHAINAGE: 1990+00 | OFFSET:

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2	Pt	PEAT - CLAY SILTY								FREE H_2O
4		1.2 m			1					WET
6	CL	CLAY - SILTY		V_S						FREE H_2O
8	-	LOW - MED. PLASTIC			2					WET
10	CI				3					
12					4					WET - SAT
14		4.6m								
16		BOTTOM OF HOLE - 4.6m			5					WET
18										
20					6					
22										
24					7					
26										
28					8					
30										
32					9					
34					10					
36										
38					11					

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa

50 100 150 200 250

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

200
460
114

PUBLIC WORKS CANADA — DRILL HOLE REPORT

INUVIK - TUK.

TECH. D. PRONYCH	RIG AIR	DATE 80/03/21	km	B.P. No.	HOLE No. 1007 - 1

CHAINAGE: 2014 100 | OFFSET:

REMARKS:

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
0	Pt	Peat .05 m		
2	CL	CLAY - SILTY .7m ORGANICS		V_c - V_f
4		ICE & ORGANICS		ICE & OL
6	CI	CLAY - SILTY - PEBBLES MED. PLASTIC		V_s
10		4.6m		
12		BOTTOM of HOLE 4.6m		

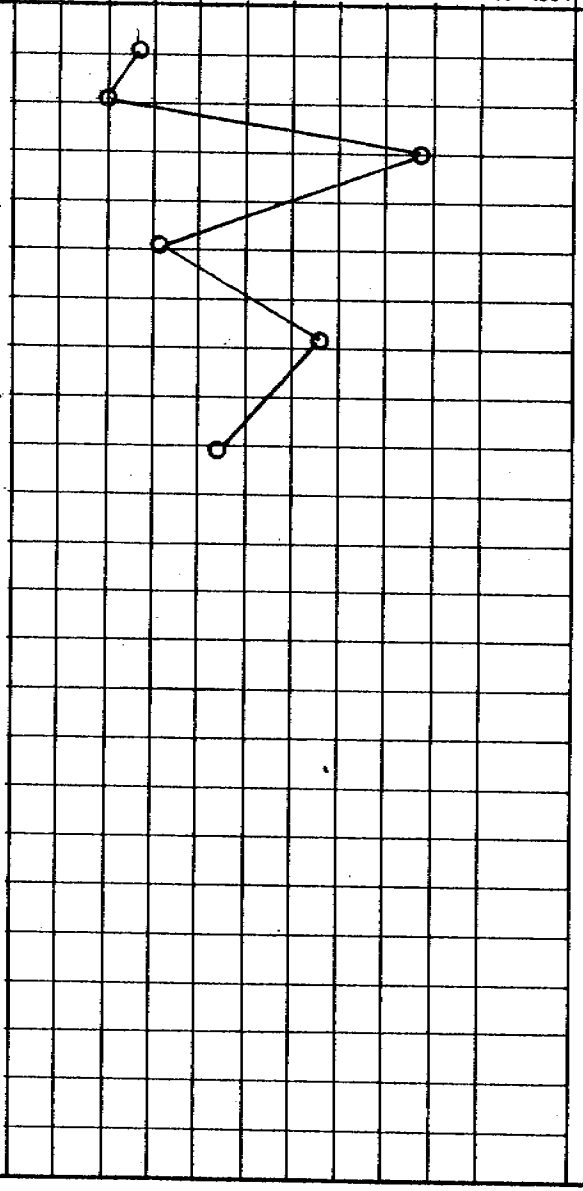
DEPTH (METRES)

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+



GRAIN-SIZE ANALYSIS				RELATIVE MOISTURE CONTENT
CLAY %	SILT %	SAND %	GRAVEL %	
				MOIST-WET
				WET
				FREE H_2O
				WET
				FREE H_2O
				FREE H_2O

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk.

TECH. D. PRONYCH | RIG Air | DATE 80/03/21 | km | B.P. No. | HOLE No. 1007-2

CHAINAGE 2042+00 | OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
2	Pt	PEAT — .6m		V_S
4–8		ICE & CLAY & ORGANICS		ICE + CL + OL
10				
12–14	CL - CI	CLAY - SILTY FEW PEBBLES — 4.6m		V I $V_C - V_r$
16–38		BOTTOM OF HOLE . 4.6m		

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

DEPTH (METRES) 1 2 3 4 5 6 7 8 9 10 11

GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %

RELATIVE MOISTURE CONTENT

WET — Free H_2O — Free H_2O — WET — Free H_2O — Moist

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk

TECH. D. Pronych | RIG Air | DATE 80/03/21 | km | B.P. No. | HOLE No. 1008-1

CHAINAGE 2057+00 | OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
0	Pt	PEAT .3m								
2		ICE & CLAY .9m		Icl + Cl		86	11	3		Moist
4	GW	GRAVEL - SANDY 1.2m		Vx	1	8	33	59		Wet
6		ICE & SOIL GRAVEL LAYERS		Icl - & Soil	2	78	18	4		Free H_2O
8										
10					3	37	32	31		Free H_2O
12	GM	GRAVEL - SANDY SILTY 3.1m		Vc-Vr & Vs	4	14	24	62		Wet
14		4.6m								
16		BOTTOM OF HOLE - 4.6m			5	7	37	56		Free H_2O
18										
20					6					
22										
24					7					
26										
28					8					
30										
32					9					
34					10					
36					11					
38										

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

PUBLIC WORKS CANADA | DRILL HOLE REPORT | Inuvik - Tuk. Hans Creek

TECH. D. Cook | RIG Air | DATE 80\03\30 | km | B.P. No. | HOLE No.

CHAINAGE | OFFSET

℄

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)
2		ICE .6		ICE	
4		GRAVEL - COBBLES			1
6		BOULDERS 1.8m			
8		BOTTOM OF HOLE - 1.8m			2
10					3
12					
14					4
16					
18					5
20					
22					6
24					
26					7
28					
30					8
32					
34					9
36					
38					10
					11

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa

50 100 150 200 250

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %

RELATIVE MOISTURE CONTENT

36

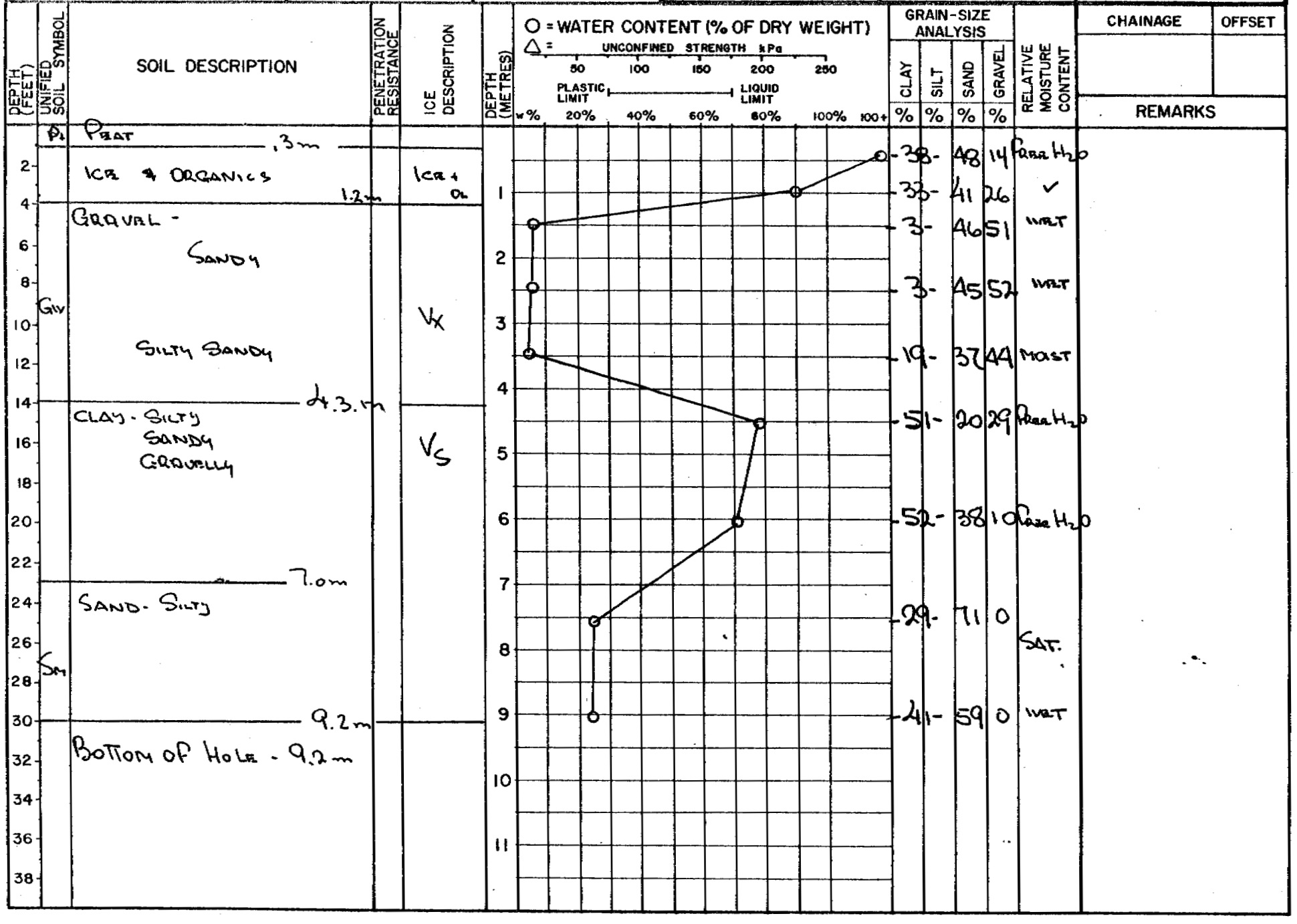
PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk. Top of Bank on South

TECH. D. Cook | RIG Air | DATE 80/04/01 | km | B.P. No. | HOLE No. 1008-1A

CHAINAGE | OFFSET

REMARKS



PUBLIC WORKS CANADA | DRILL HOLE REPORT | Inuvik - Tuk.

TECH. D. Pronych | RIG Air | DATE 80/03/21 | km | B.P. No. | HOLE No. 1009 - 1

CHAINAGE 2109 + 00 | OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)
0	Pt	Peat .3m			
2		Gravel - Sandy		Vx	
4					1
6		Sand Lenses			
8	Gw	@ 2.1 m 3.1m 4 m		Vc-Vr	2
10					
12				Vx	3
14		4.6m			4
16		Bottom of Hole - 4.6m			
18					5
20					6
22					
24					7
26					
28					8
30					9
32					
34					10
36					11
38					

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
4	-	36	60	Moist
1	-	27	72	Moist
3	-	19	78	Moist
9	-	43	48	Wet - Sat.
3	-	35	62	Wet
3	-	31	66	Wet

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk

TECH. D. Paonych | RIG Air | DATE 80/03/21 | km | B.P. No. | HOLE No. 1008-2

CHAINAGE 2106+00 | OFFSET

REMARKS

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
	Pt	PEAT .2m								
		GRAVEL								
2	CL	CLAY - SILTY SANDY .3m LOW PLASTIC		Vc - Vr		68	32	0		MOIST
4		1.2m			1	55	45	0		MOIST
6	SM	SAND - SILTY		Vs		43	57	0		FREE H_2O
8	GP	SAND - GRAVEL MIX			2	4	54	42		WET
		2.5m								
10		GRAVEL -			3					
12	GP	SANDY		Vx		4	42	54		MOIST
14					4					
		4.6m				3	28	69		SAT
16		BOTTOM OF HOLE - 4.6m			5					
18										
20					6					
22										
24					7					
26										
28					8					
30										
32					9					
34										
36					10					
38										
					11					

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk.

TECH. D. Pronych | RIG Air | DATE 80/03/21 | km | B.P. No. | HOLE No. 1009-2

CHAINAGE | OFFSET

REMARKS

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
	Pt	PEAT								
2	SP	SAND - FINE — 0.2 m		Vx						
4		1.2 m			1	1	98	1		Moist
6		ICE & SOIL		Ice & CL		6	94	0		Moist
		2.3 m			2	58	42	0		Free H_2O
8	SM	SAND - SILTY		Vs						
10		3.m				15	84	1		Free H_2O
12	GW	GRAVEL - SANDY		Vx	3	2	41	57		Wet
14		4.6 m			4	4	37	59		Wet
16		BOTTOM OF HOLE - 4.6m			5					
18										
20					6					
22										
24					7					
26										
28					8					
30										
32					9					
34										
36					10					
38										
					11					

PUBLIC WORKS CANADA — DRILL HOLE REPORT

INUVIK - TUK.

TECH. D. PRONYCH | RIG Air | DATE 80/03/21 | km | B.P. No. | HOLE No. 1009-3

CHAINAGE: 2125 + 00 | OFFSET:

REMARKS:

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
0	Pt	PEAT — .15 m		
2	CL	CLAY - SILTY — .7m		
4		ICE + SOIL — 1.7m		ICE & CL
6		CLAY - SILTY		
8	CL			
10	I			Vs
12	CL			
14		— 4.6m		
16		BOTTOM OF HOLE - 4.6m		
18				
20				
22				
24				
26				
28				
30				
32				
34				
36				
38				

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

DEPTH (METRES): 1 2 3 4 5 6 7 8 9 10 11

GRAIN-SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %

RELATIVE MOISTURE CONTENT
MOIST
WET
FREE H_2O
MOIST
SAT.
SAT.

PUBLIC WORKS CANADA — DRILL HOLE REPORT

INUVIK - TUK.

TECH. D. PRONYOH | RIG AIR | DATE 80/03/21 | km | B.P. No. | HOLE No. 1009-4

CHAINAGE: 2139+00 | OFFSET:

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)
2	Pt	PEAT		ICE & PEAT	
		.75 m			
4		CLAY - SILTY			1
6	CL - CI			VS	
8					2
10					3
12					
14		PEBBLES 4.6m			4
16		BOTTOM OF HOLE - 4.6m			5
18					
20					6
22					
24					7
26					
28					8
30					
32					9
34					10
36					11
38					

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa

50 100 150 200 250

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

158

GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %

RELATIVE MOISTURE CONTENT

FREE H2O

WET TO SAT.

FREE H2O

PUBLIC WORKS CANADA — DRILL HOLE REPORT

INUVIK - TUK.

TECH. D. PRONYCH | RIG AIR | DATE 80/03/22 | km | B.P. No. | HOLE No. 1010-1

CHAINAGE | OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)
0	Pt	PEAT			
2	Cl	CLAY - SILTY SANDY PEBBLES .15m MED. PLASTIC 1.2m		Vc-Vr	1
4	GM	GRAVEL - SAND - SILT MIX			
6	GP	GRAVEL - SANDY			2
8		2.7m			
10		ICE &		ICE & GP	3
12		SOME GRAVEL			4
14		4.6m			
16		BOTTOM OF HOLE - 4.6m			5
18					
20					6
22					
24					7
26					
28					8
30					
32					9
34					10
36					11
38					

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
78	16	6		DAMP
52	33	15		WET
21	42	37		SAT. - Free H_2O
6	41	53		WET

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk.

TECH. D. PRONYCH | RIG AIR | DATE 80 | 03 | 22 | km | B.P. No. | HOLE No. 1010-2

CHAINAGE: 2188 + 00 | OFFSET:

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
2	Pt	PEAT .1m		
4	CL	CLAY-SILTY MED. PLASTIC .7m		Vx
6		ICE + SOIL		ICE & CL
8	CL	CLAY-SILTY 1.2m		Vs
10		ICE & SOIL		ICE & CL
12				
14		4.6m		
16		BOTTOM OF HOLE 4.6m		

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

DEPTH (METRES): 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

363

107

GRAIN-SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %

RELATIVE MOISTURE CONTENT	REMARKS
DAMP	Perm H_2O
✓	
✓	
✓	
SAT.	

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk.

TECH. D. PRONYCH | RIG Air | DATE 80 03 22 | km | B.P. No. | HOLE No. 1010-3

CHAINAGE | OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
0	Pt	PEAT — .1m		
2	Cl	CLAY SILTY — .6m		
4		ICE & ORGANICS		ICE + OL
6		ICE & SOIL — 1.2m		ICE + CL
8	CL	CLAY - SILTY — 1.8m		VS
10		ICE & SOIL — 2.7m		ICE & CL
12		CLAY - SILTY Few Pebbles — 3.1m		VS
14	CL-Cl	— 4.6m		
16		BOTTOM OF HOLE. 4.6m		

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

DEPTH (METRES) 1 2 3 4 5 6 7 8 9 10 11

177

GRAIN-SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %

RELATIVE MOISTURE CONTENT: DAMP; Free H_2O ✓; WET; SAT.; SAT.

PUBLIC WORKS CANADA — DRILL HOLE REPORT

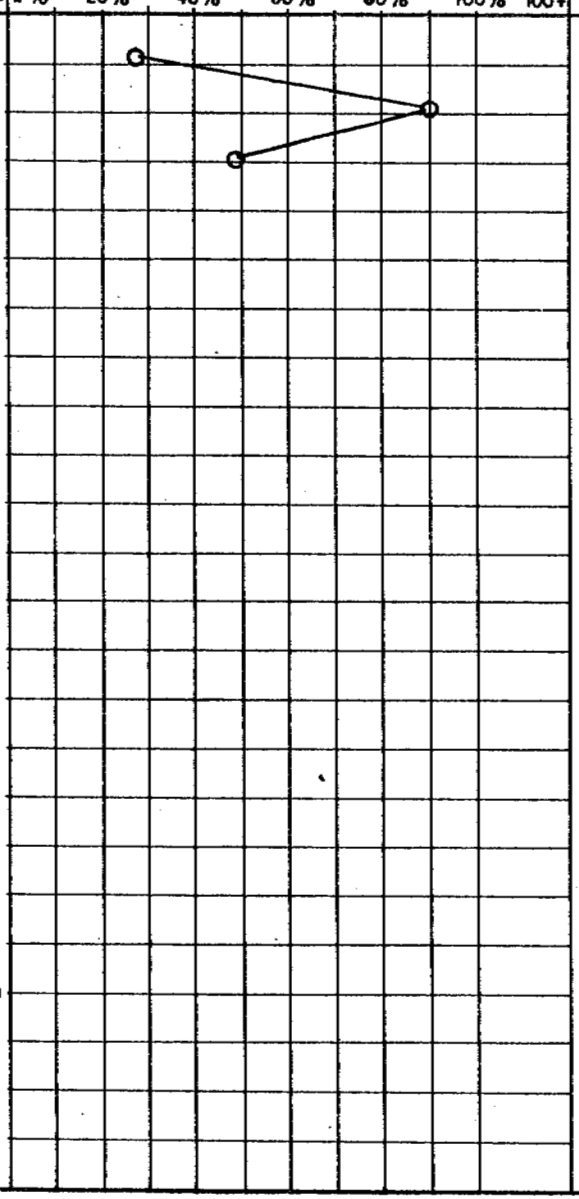
Inuvik - Tuk

TECH. D.COOK | RIG AIR | DATE 80/03/31 | km | B.P. No. | HOLE No. 1010-4

CHAINAGE | OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
0	Pt	Peat .3m		
2	CL	CLAY - SILTY LOW PLASTIC		V_S
4		1.5m		
6				
8		BOTTOM OF HOLE - 1.5m		
10		BOULDER		
12				
14				
16				
18				
20				
22				
24				
26				
28				
30				
32				
34				
36				
38				



GRAIN-SIZE ANALYSIS				RELATIVE MOISTURE CONTENT
CLAY %	SILT %	SAND %	GRAVEL %	
				Moist
				From Water
				From Water

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk.

TECH. D. Cook | RIG Air | DATE 80/03/31 | km | B.P. No. | HOLE No. 1010-5

CHAINAGE | OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
0	Pt	PEAT — .3m		
2–8	CL – CI	CLAY - SILTY FEW PEBBLES LOW - MED. PLASTIC		V_s
14		4.6m		
16		BOTTOM OF HOLE - 4.6 m		

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

DEPTH (METRES): 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %

RELATIVE MOISTURE CONTENT

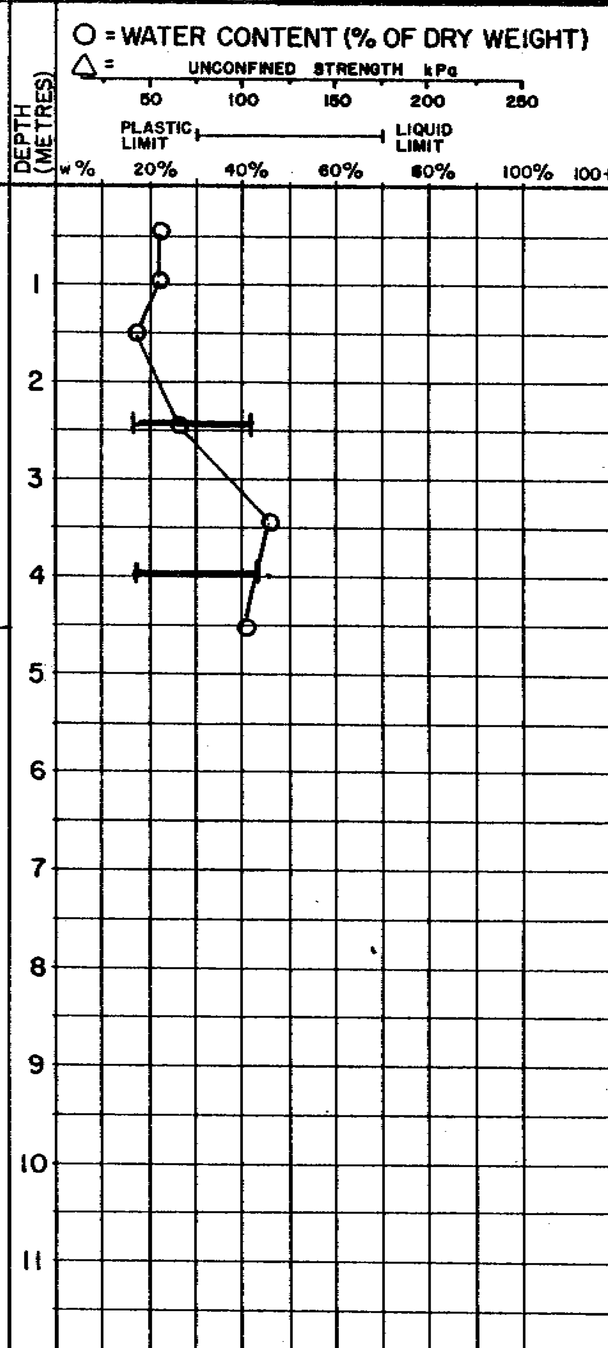
Free H_2O
SAT.
WET
SAT.
SAT.

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | Inuvik - Tuk

TECH. D. Pronych	RIG Air	DATE 80/03/22	km	B.P. No.	HOLE No. 1011-1

CHAINAGE	OFFSET
?	

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
	Pt	Peat .1m		
2		Clay - Silty, Pebbles		Vx
4	CL	Sandy		
6		Gravelly		
8	CI	Med. Plastic		Vc - Vr
10				
12				
14		4.6m		
16				
18		Bottom of Hole - 4.6 m		
20				
22				
24				
26				
28				
30				
32				
34				
36				
38				



GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
77-		21	2	Damp - Moist	
75-		23	2	Moist	
28-		46	26	Free H_2O	
56-		20	24	Wet	
65-		21	14	Sat.	
66-		21	13	Sat.	

PUBLIC WORKS CANADA — DRILL HOLE REPORT

INUVIK-TUK.

TECH. D. PROKYCH | RIG Air | DATE 80/03/22 | km | B.P. No. | HOLE No. 1011-2

CHAINAGE: 2252+00 | OFFSET:

REMARKS:

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	RELATIVE MOISTURE CONTENT
0		Peat .1m				
2	CL	CLAY - SILTY LOW PLASTIC				DAMP
4					1	SAT.
6	CI	MED. PLASTIC		Vs		SAT.
8					2	
10						WET
12					3	
14		4.6m				SAT.
16					4	WET
18		BOTTOM OF HOLE. 4.6m				
20					5	
22						
24					6	
26						
28					7	
30						
32					8	
34						
36					9	
38						
					10	
					11	

○ = WATER CONTENT (% OF DRY WEIGHT)

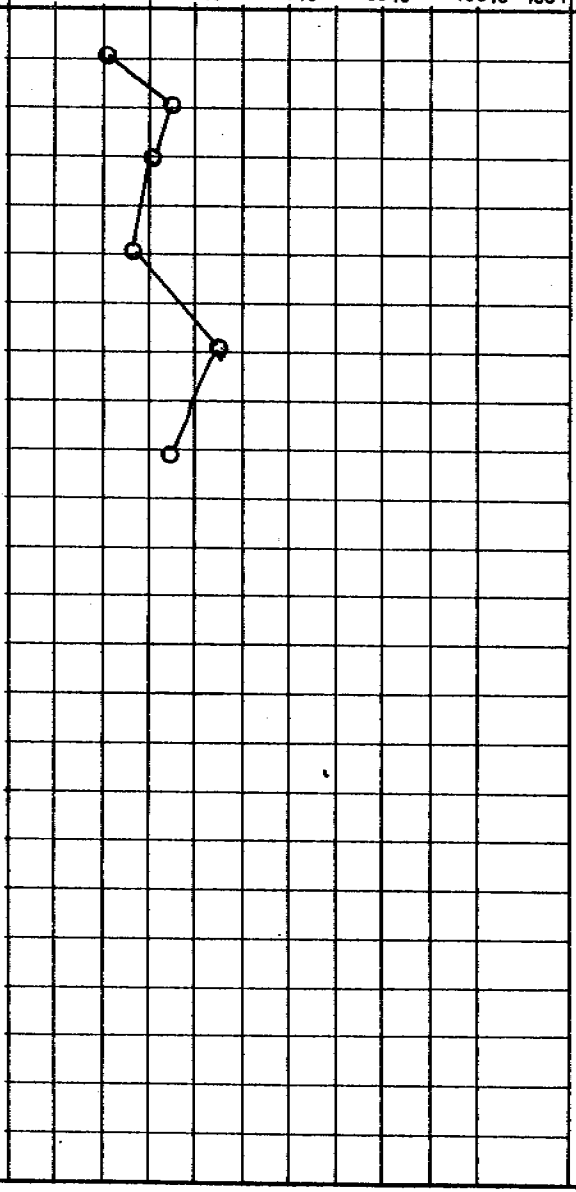
△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %



PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk.

TECH. D. Pronych | RIG Air | DATE 80/03/22 | km | B.P. No. | HOLE No. 10/2-1

CHAINAGE 2277+00 | OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
0	P_t	PEAT — .3m		
2		PEAT & ICE		P_t & ICE
4		.9m ICE & SOIL		ICE & CL
6				
8	CL - CI	CLAY - SILTY - PEBBLES		V_S
10				
12				
14	GP	GRAVEL — 4.6m		
16		BOTTOM OF HOLE - 4.6m		
18				
20				
22				
24				
26				
28				
30				
32				
34				
36				
38				

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

DEPTH (METRES): 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

246

127

GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %

RELATIVE MOISTURE CONTENT

WET

FREE H_2O

V

WET

SAT.

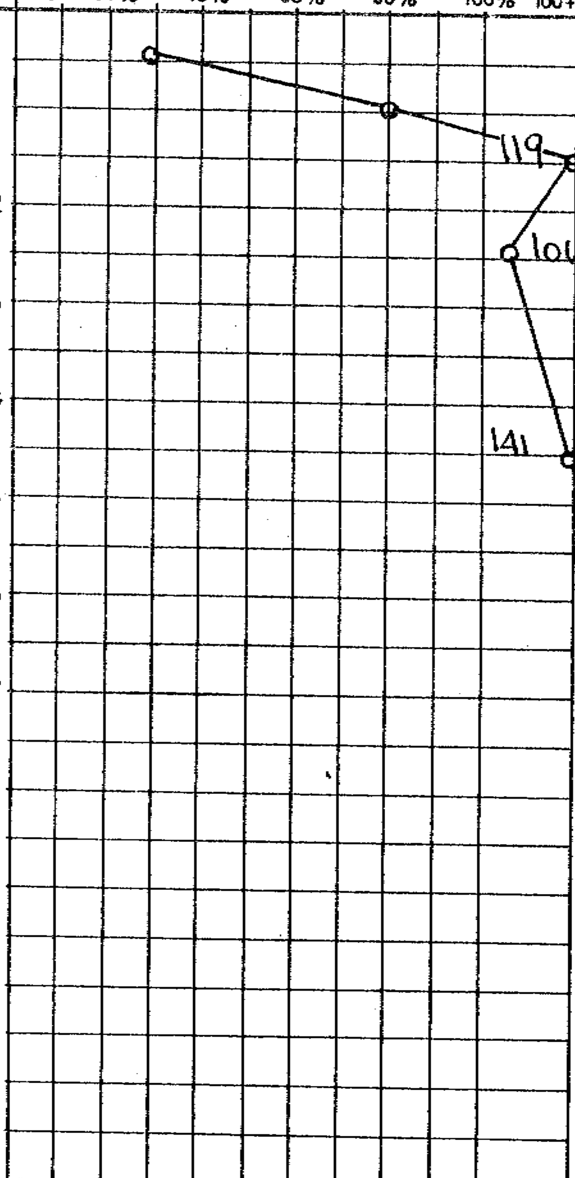
FREE H_2O

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk.

TECH. D. Pronych	RIG Air	DATE 80/03/22	km	B.P. No.	HOLE No. 1012-2

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	RELATIVE MOISTURE CONTENT	REMARKS
	Pt	Peat — .1m					
2–4	CL-CI	Clay - Silty — 1.8m		Vs	1	Damp / Sat. / Perm H₂O	
6–8		Ice & Soil — 2.7m		Ice + CL	2	✓	
10–12		Ice — 3.1m		Ice	3		
14	CL-CI	Clay - Silty — 4.6m		Vs	4	✓	
16–18		Bottom of Hole - 4.6m			5		



GRAIN-SIZE ANALYSIS: CLAY % | SILT % | SAND % | GRAVEL %

CHAINAGE | OFFSET

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk.

TECH. D. Pronych | RIG Air | DATE 80/03/22 | km | B.P. No. | HOLE No. 1012-3

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)
		Peat — .1m			
2	CL	CLAY - SILTY SANDY PEBBLES — 1.2m		Vx	1
4		GRAVEL - SANDY			
6	GP				2
8				Vx	
10					3
12		— 4.0			
14	SM	SAND - SILTY GRAVELLY — 4.6m			4
16		BOTTOM OF HOLE - 4.6m			5
18					
20					6
22					
24					7
26					
28					8
30					
32					9
34					10
36					11
38					

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
24	25	1		Moist
13	26	1		Moist-Wet
15	47	38		H.I.B
7	27	66		Sat.
4	30	66		Wet
34	56	10		Moist

CHAINAGE	OFFSET
1	

REMARKS

PUBLIC WORKS CANADA — DRILL HOLE REPORT

TECH. D. Cook. | RIG Air | DATE 80/03/31 | km | B. P. No. | INUVIK - TUK | HOLE No. 1012-A

CHAINAGE | OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
0	Pt	PEAT — .3m		
2–6	CL	CLAY - SILTY, PEBBLES, LOW PLASTIC		V_c - V_s
6–8		ICE		ICE
8–14	SP	SAND - PEBBLES		V_s
14–16	GM	GRAVEL - SILTY — 4.6m		
		BOTTOM OF HOLE - 4.6m		

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

DEPTH (METRES) 1 2 3 4 5 6 7 8 9 10 11

118

GRAIN-SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
					DAMP
					MOIST
					Free H_2O
					Free H_2O
					V

PUBLIC WORKS CANADA — DRILL HOLE REPORT

TECH. D. COOK | RIG AIR | DATE 80/03/31 | km | B.P. No. | INUVIK - TUK | HOLE No. 1012-5

CHAINAGE | OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
0	Pt	PEAT — .3m		
2–6	CL	CLAY - SILTY PEBBLES ORGANICS SILTY PEBBLES LOW PLASTIC — 2.1m		V_s
8	GM	GRAVEL - SILTY — 2.7m		$V_c - V_r$
10	CL-SC	SAND - GRAVELLY CLAYEY TILL — 3.4		
12	SP	SAND - GRAVELLY		V_s
14	GP	GRAVEL — 4.6m		
16–38		BOTTOM OF HOLE - 4.6m		

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

DEPTH (METRES): 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
				DAMP
				PORE H_2O
				WET.
				SAT.
				FREE H_2O
				FREE H_2O

PUBLIC WORKS CANADA — DRILL HOLE REPORT

INUVIK - TUK.

TECH. D. PRONYCH | RIG AIR | DATE 80/03/22 | km | B.P. No. | HOLE No. 10 13 - 1

CHAINAGE: 2305+00 | OFFSET:

REMARKS:

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

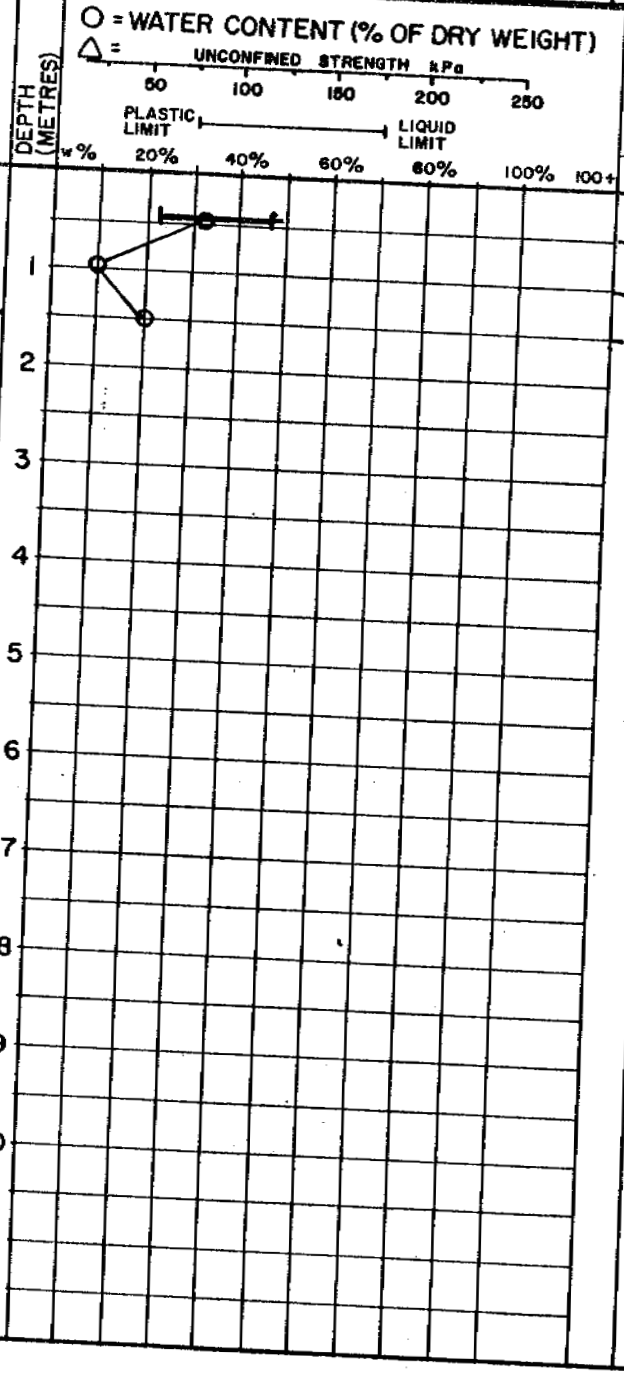
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
0	PT	PEAT .1m								
2	GC	GRAVEL - SAND MIX CLAYEY		Vc - Vr		22	43	35		WET
4	SM	SAND - GRAVELLY SILTY			1	12	61	27		WET
6	SP	SAND - FINE		Vs		9	90	1		FREE WATER
8		ICE		ICE	2					
10		FEW GRAVEL LENSES			3					
12					4					
14		4.6m								
16		BOTTOM OF HOLE - 4.6m			5					
18										
20					6					
22										
24					7					
26										
28					8					
30										
32					9					
34					10					
36										
38					11					

PUBLIC WORKS CANADA — DRILL HOLE REPORT

TECH. D. PRONYCH | RIG AIR | DATE 80/03/22 | km | Inuvik - Tuk. | B. P. No. | HOLE No. 1013-2

CHAINAGE: 2322+23.75 | OFFSET:

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
0	Pt	PEAT		
2	Cl	CLAY - SILTY SANDY MED. PLASTIC — .1m		
4	Gc	SAND - GRAVEL - CLAY MIX — .75m		Vc - Vs
6		ICE		
8				
10		FEW GRAVEL LENSES		ICE
12				
14		4.6m		
16		BOTTOM OF HOLE. 4.6m		
18				
20				
22				
24				
26				
28				
30				
32				
34				
36				
38				



GRAIN-SIZE ANALYSIS				RELATIVE MOISTURE CONTENT
CLAY %	SILT %	SAND %	GRAVEL %	
81	18	1		MOIST
19	48	33		WET
23	31	46		SAT.

REMARKS

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk.

TECH. D. Pronych | RIG Air | DATE 80/03/22 | km | B.P. No. | HOLE No. 1013-3

CHAINAGE: 2341+00 | OFFSET:

REMARKS:

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)
0	Pt	PEAT — 1m			
2–4	CL	CLAY - SILTY PEBBLES LOW - MED. PLASTIC		Vs	1
6–8	CL I CI				2
10–12					3
14		ICE — 4.6m		ICE	4
16–38		BOTTOM OF HOLE - 4.6m			5–11

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %

RELATIVE MOISTURE CONTENT

Moist

Free H_2O

Wet

Sat.

Wet

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk.

TECH. D. Pronych | RIG Air | DATE 80/03/22 | km | B.P. No. | HOLE No. 103-4

CHAINAGE: 2359+00 | OFFSET:

REMARKS:

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)
2	Pt	PEAT			
		.6m			
4	CL	CLAY - SILTY FEW PEBBLES LOW PLASTIC		Vs	1
6					
8					2
10					3
12					
14					4
		4.6m			
16		BOTTOM OF HOLE - 4.6m			5
18					
20					6
22					
24					7
26					
28					8
30					
32					9
34					
36					10
38					11

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

105

GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %

RELATIVE MOISTURE CONTENT

WET
FREE WATER
FREE WATER
SAT.
WET
SAT.

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk.

TECH. D. Pronych | RIG Air | DATE 80/03/22 | km | B.P. No. | HOLE No. 1014-1

CHAINAGE: 2406+00 | OFFSET:

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
0	Pt	Peat — .2m		
2–10		Peat & Ice		Ice & Pt.
10		3.4m		
12–14	CL	Clay - Silty		Vs
14		4.6m		
16		Bottom of Hole - 4.6m		

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

DEPTH (METRES): 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

O 231

O 354

GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %

RELATIVE MOISTURE CONTENT: Wet — Pore Water

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk. (Parson's Creek)

TECH. D. Peonych | RIG Air | DATE 80/03/22 | km | B.P. No. | HOLE No. 1015-1

CHAINAGE: 2462+00 | OFFSET:

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
	Pt	PEAT .3m		Vs
2	CL	CLAY - SILTY - ORGANICS .9m		
4		ICE & SOIL		Ice & CL
6		2.3m		
8	CL	CLAY - SILTY LOW PLASTIC ICE LENSES @ 3.1m 4.0m		Vs
10				
12				
14		4.6m		
16		BOTTOM OF HOLE - 4.6m		

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

DEPTH (METRES): 1 2 3 4 5 6 7 8 9 10 11

GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %

RELATIVE MOISTURE CONTENT

SAT.
FREE WATER
FREE WATER
SAT.
WET
SAT.

REMARKS

JBL... WORKS CANADA | DRILL HOLE REPORT | Inuvik - Tuk.

TECH. D. Pronych | RIG Air | DATE 80/03/23 | km | B.P. No. | HOLE No. 015-2

CHAINAGE: 2468+00 | OFFSET:

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
0	Pt	PEAT — .1m		
2	CL	CLAY - SILTY, LOW PLASTIC — 1.0m		Vs
4		ICE — 1.8m		ICE
6		CLAY - SILTY, LOW - MED. PLASTIC		
8	CL			Vs
10	-			
12	CI			
14		— 4.6m		$V_L - V_F$
16		BOTTOM OF HOLE - 4.6m		

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

DEPTH (METRES): 1 2 3 4 5 6 7 8 9 10 11

115

GRAIN-SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %

RELATIVE MOISTURE CONTENT	REMARKS
Moist	
SAT.	
Free Water	
SAT.	
WET	
Moist - WET	

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk

TECH. D. Pawlych | RIG A112 | DATE 80/03/23 | km | B.P. No. | HOLE No. 1016-1

CHAINAGE: 2497+75 | OFFSET:

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
2–4	Pt	Peat & Ice		Ice & Pt.
		1.5m		
6–14	CL	Clay - Silty Low Plastic		Vs
		Sandy 4.6m		
16–38		Bottom of Hole - 4.6m		

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

DEPTH (METRES): 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

247
314
222

GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %

RELATIVE MOISTURE CONTENT

Poss. Water

✓

✓

✓

✓

WET

PUBLIC WORKS CANADA — DRILL HOLE REPORT

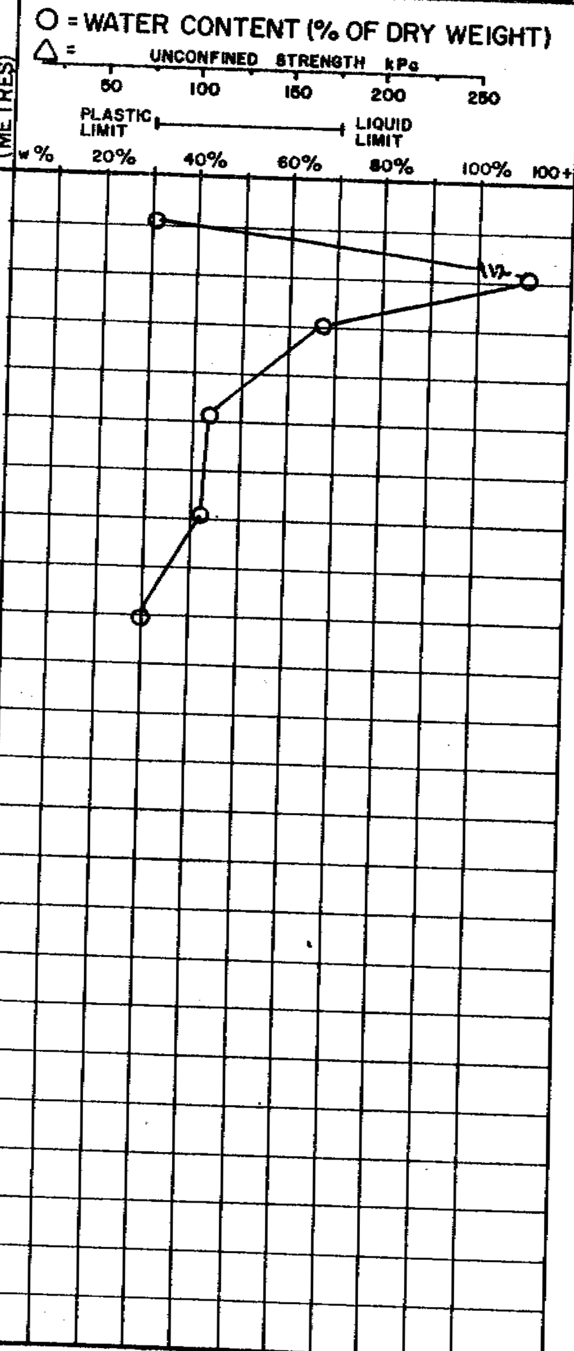
INUVIK - TUK.

TECH. D. PRONYCH | RIG AIR | DATE 80/03/23 | km | B.P. No. | HOLE No. 1016-2

CHAINAGE: 2516+00 | OFFSET:

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	RELATIVE MOISTURE CONTENT	REMARKS
0–7	Pt	ORGANICS & ICE		ICE & Pt.	0–2	MOIST; PARAIVATER; ✓	
7–15	CL	CLAY - SILTY LOW PLASTIC		Vs	2–4.6	SAT.; SAT - FREE WATER	
15		4.6m			4.6	WET	
		BOTTOM OF HOLE - 4.6m					

Grain-size analysis: CLAY % | SILT % | SAND % | GRAVEL %



PUBLIC WORKS CANADA — DRILL HOLE REPORT

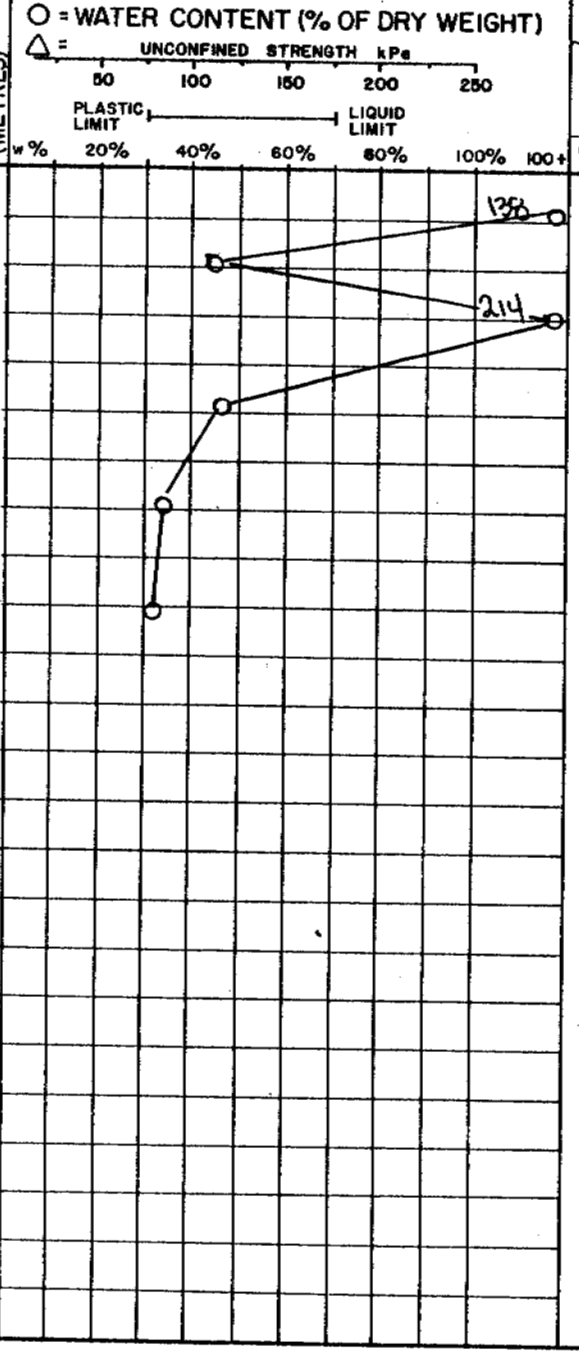
INUVIK - TUK

TECH. D. PAONYCH | RIG AIR | DATE 80/03/23 | km | B.P. No. | HOLE No. 1017 - 1

CHAINAGE: 2546+00 | OFFSET:

REMARKS:

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
2	Pt.	PEAT		Vs
		.75m		
4		ICE & SOIL		ICE & CL
6				
8		2.7m		
10	CL	CLAY - SILTY LOW PLASTIC		Vs
12				
14		4.6m		
16		BOTTOM OF HOLE. 4.6m		
18				
20				
22				
24				
26				
28				
30				
32				
34				
36				
38				



GRAIN-SIZE ANALYSIS				RELATIVE MOISTURE CONTENT
CLAY %	SILT %	SAND %	GRAVEL %	
				SAT.
				SAT.
				FREEZING FRINGE
				✓
				WET
				SAT.

PUBLIC WORKS CANADA — DRILL HOLE REPORT

INUVIK - TUK.

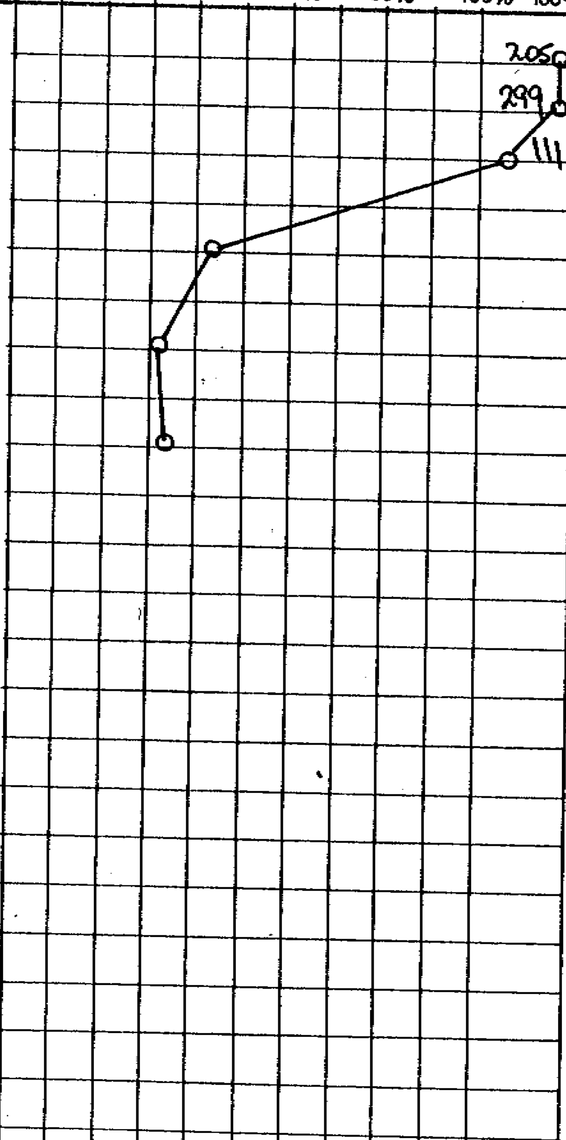
TECH.	RIG	DATE	km	B.P. No.	HOLE No.
D. PRONYSCH	AIR				107-2

CHAINAGE	OFFSET
2567+50	

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	RELATIVE MOISTURE CONTENT	REMARKS
2–4	Pt	PEAT & ICE 1.5m		ICE & Pt	0–1.5	Pool Water, ✓	
6–14	CL - CI	CLAY - SILTY LOW - MED. PLASTIC 4.6m		Vs	1.5–4.6	✓, WET, WET, MOIST	
16		BOTTOM OF HOLE - 4.6m					

○ = WATER CONTENT (% OF DRY WEIGHT)
△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)
PLASTIC LIMIT ├──┤ LIQUID LIMIT
w% 20% 40% 60% 80% 100% 100+

GRAIN-SIZE ANALYSIS: CLAY % | SILT % | SAND % | GRAVEL %



PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk

TECH. D. Paonych | RIG Air | DATE 80/03/23 | km | B.P. No. | HOLE No. 1018-1

CHAINAGE: 2599 + 00 | OFFSET:

REMARKS:

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)
0	Pt	Peat — .1m		Vx	
2	CL	CLAY - SILTY SANDY			
4	Gc	CLAY - GRAVEL - SAND MIXTURE		Vs	1
6					
8		2.4m			2
10	CL	CLAY - SANDY GRAVELLY		Vc - Vr	3
12	I				
14	Cl	SILTY			4
		4.6m			
16		BOTTOM OF HOLE - 4.6m			5
18					
20					6
22					
24					7
26					
28					8
30					
32					9
34					10
36					11
38					

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
37	49	14		MOIST
27	49	24		FREE WATER
28	45	27		V
26	55	19		WET
39	41	20		WET
69	25	6		SAT.

PUBLIC WORKS CANADA — DRILL HOLE REPORT

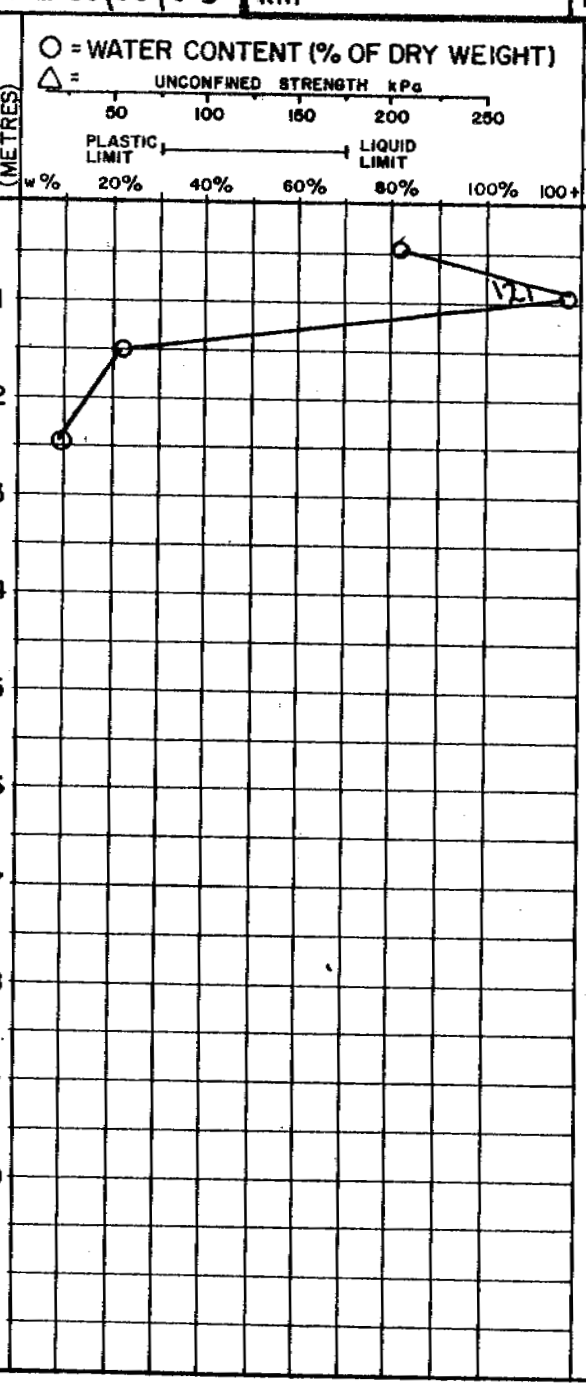
Inuvik - Tuk.

TECH. D. PRONYCH | RIG Air | DATE 80/03/23 | km | B.P. No. | HOLE No. 1018-2

CHAINAGE: 2606+00 | OFFSET:

REMARKS:

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
2	Pt	PEAT & ICE		ICE Pt
4	CL	CLAY - SILTY PEBBLES		VS
6				
8		GRAVELLY		Vc - Vf
10				
12		ICE		ICE
14		4.6m		
16		BOTTOM OF HOLE - 4.6m		
18				
20				
22				
24				
26				
28				
30				
32				
34				
36				
38				



GRAIN-SIZE ANALYSIS				RELATIVE MOISTURE CONTENT
CLAY %	SILT %	SAND %	GRAVEL %	
				WET
				PERCHED WATER
				∨
				WET

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk.

TECH. D. PRONIUCH | RIG 9 IR | DATE 80/03/23 | km | B.P. No. | HOLE No. 1018-3

CHAINAGE	OFFSET
2618 + 50	

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	RELATIVE MOISTURE CONTENT
2	PT.	PEAT .6m				SAT.
4		ICE & ORGANICS & CLAY		ICE - OL - CL	1	FREE WATER
6						SAT.
8					2	
10		SAND		SM		SAT.
12		ICE + SOME SOIL		ICE & OL	3	MOIST
14		4.6m			4	
16		BOTTOM OF HOLE. 4.6m			5	
18						
20					6	
22						
24					7	
26						
28					8	
30						
32					9	
34						
36					10	
38						
					11	

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

124

142

GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk

TECH. D. PRONYCH | RIG Air | DATE 80/03/23 | km | B.P. No. | HOLE No. 1018-4

CHAINAGE 2631 + 00 | OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)
0	Pt	PEAT .3m		Vs	0
2–14	Cl	CLAY - SILTY SANDY PEBBLES MED. PLASTIC GRAVELLY		Vc - Vr	1–4
14		4.6m		Vs	
16–38		BOTTOM OF HOLE - 4.6 m			5–11

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
61	34	5		SAT.
64	27	9		MOIST
61	34	5		WET
56	32	12		WET
36	24	40		SAT.
34	53	13		PLASTIC

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk.

TECH. D. Cook | RIG Air | DATE 80/05/31 | km | B.P. No. | HOLE No. 1018-5

CHAINAGE | OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)
0	Pt.	PEAT .3m			
2–4		SAND - SILTY		V_X	1
6–14	S_M			V_S	2–4
		4.6m			
16		BOTTOM OF HOLE. 4.6m			5
18–38					6–11

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

GRAIN-SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
	10	88	2		MOIST
	13	87	0		WET
	19	81	0		FREE H_2O
	44	56	0		✓
	19	81	0		✓
	16	84	0		✓

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk

TECH. D. Cook | RIG Air | DATE 80/03/31 | km | B.P. No. | HOLE No. 1018-6

CHAINAGE | OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)
0	Pt.	Peat .3m		Vx	
2	Cl	Clay - Silty Few Pebbles .9m			
4	CL	Sand - Silty Clayey Few Pebbles		Vs	1
6		Clay - Sandy Silty			
8	Sc	2.7m			
10		Ice		Ice & Sm	2
12		Trace of Soil			
14		4.6m			
16		Bottom of Hole - 4.6m			3
18					
20					4
22					
24					5
26					
28					6
30					
32					7
34					
36					8
38					

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

GRAIN-SIZE ANALYSIS				RELATIVE MOISTURE CONTENT
CLAY %	SILT %	SAND %	GRAVEL %	
85	15	0		DAMP
27	62	11		Free H_2O
36	62	2		V
14	86	0		V

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk.

TECH. D. PRONYCH | RIG AIR | DATE 80/03/23 | km | B.P. No. | HOLE No. 1019-1

CHAINAGE: 2642+00 | OFFSET: 100' LT.

REMARKS:

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % (20%, 40%, 60%, 80%, 100%, 100+)

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
0	Pt	PEAT — .1m								
2	Gc	GRAVEL - SAND MN CLAYEY — .9								
4		CLAY - SILTY			1	18	40	42		MOIST
6		- SANDY				69	19	12		SAT.
8		- PEBBLES		V_c-V_r	2	75	21	4		SAT.
10	Cl	MED. PLASTIC				62	35	3		WET
12					3	73	21	6		SAT.
14		— 4.6m			4	52	41	7		SAT.
16		BOTTOM OF HOLE - 4.6m			5					
18										
20					6					
22										
24					7					
26										
28					8					
30										
32					9					
34					10					
36										
38					11					

PUBLIC WORKS CANADA — DRILL HOLE REPORT

INUVIK - TUK

TECH. D. PROKYCH | RIG AIR | DATE 80/03/23 | km | B.P. No. | HOLE No. 1019-2

CHAINAGE 26+60 | OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)
2–6	Pt	PEAT & ICE		ICE + Pt	0–1
8–14	CL	CLAY - SILTY - SANDY - PEBBLES LOW PLASTIC		Vc-Vr	2–4
		4.6m			
16		Bottom of Hole - 4.6m			5
18–38					6–11

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa

50 100 150 200 250

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

270 399 100

GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %

RELATIVE MOISTURE CONTENT

FREE WATER

V

WET

WET

WET

MOIST

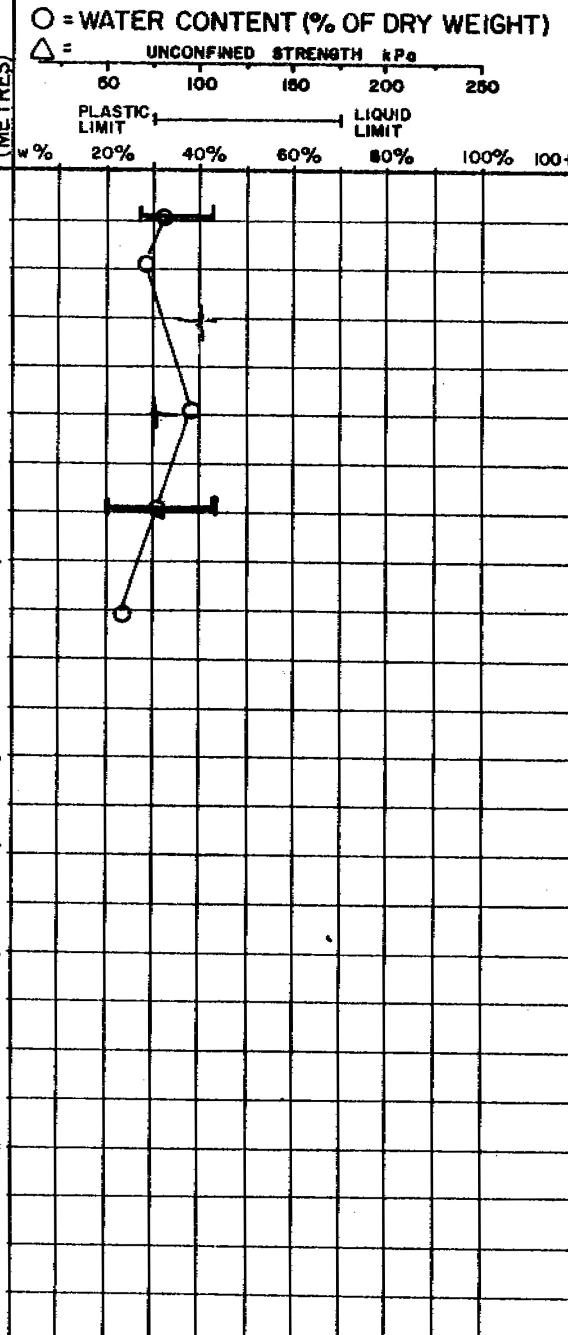
PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | INUVIK - TUK

TECH. D. PRONYCH | RIG AIR | DATE 80/03/23 | km | B.P. No. | HOLE No. 1019-3

CHAINAGE: 2684+00 | OFFSET: | REMARKS:

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
0–4	CL / CI	PEAT .1m; CLAY - SILTY - ORGANICS, MED. PLASTIC, 1.2m		Vc + Vr	0–1.2	94		6	0	MOIST
						98		2	0	DAMP
4–7		ICE, 2.1m		ICE	1.2–2.1					
7–15	CL / CI	CLAY - SILTY SANDY, LOW PLASTIC, PEBBLES, MED PLASTIC, 4.6m		Vc-Vr	2.1–4.6	79		20	1	WET
						90		10	0	WET
						67		24	9	WET

BOTTOM OF HOLE - 4.6m



PUBLIC WORKS CANADA — DRILL HOLE REPORT

INUVIK - TUK.

TECH. D. COOK | RIG Air | DATE 80/03/31 | km | B.P. No. | HOLE No. 1019-5

CHAINAGE | OFFSET

REMARKS

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
	Pt	Peat .3m								
2	Cl	CLAY - SILTY SANDY GRAVELLY		Vs	1	55	37	8		MOIST
4	GW	GRAVEL - SANDY				42	43	15		FREE H_2O
6		ICE		ICE		1	25	74		WET
8	GP	SAND - GRAVEL MIX			2					
10	SP	SAND - GRAVELLY		Vs	3	5	50	45		FREE H_2O
12						5	65	30		SAT.
14		4.6m			4					
16		BOTTOM OF HOLE - 4.6m			5	5	82	13		SAT.
18										
20					6					
22										
24					7					
26										
28					8					
30										
32					9					
34										
36					10					
38										
					11					

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk.

TECH. D. Cook | RIG Air | DATE 80/03/31 | km | B.P. No. | HOLE No. 1019-6

CHAINAGE | OFFSET

REMARKS

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
0	Pt	PEAT .3m								
2		CLAY SILTY SANDY PEBBLES .75m								
4	GW	GRAVEL - SANDY		Vx	1	7	30	3		DAMP
6						10	47	43		DAMP
8	SW	SAND-GRAVELLY 2.7m			2	11	47	42		SAT.
10						6	76	18		WET-SAT.
12		ICE		ICE	3					
14		4.6m								
16					4					
18		BOTTOM OF HOLE - 4.6m			5					
20					6					
22					7					
24										
26					8					
28										
30					9					
32										
34					10					
36										
38					11					

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk

TECH. D. COOK	RIG Air	DATE 80/03/31	km	B.P. No.	HOLE No. 1019-T

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)
2	Pt	PEAT — .3m			
4	CL	CLAY - SILTY - SANDY LOW PLASTIC		V_s	1
6		— 2.1m			
8	GW	GRAVEL - SANDY		$V_c - V_r$	2
10					3
12					4
14		— 4.6m			
16		BOTTOM OF HOLE - 4.6m			5
18					6
20					7
22					8
24					9
26					10
28					11
30					
32					
34					
36					
38					

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % (20%, 40%, 60%, 80%, 100%, 100+)

B2

GRAIN-SIZE ANALYSIS				RELATIVE MOISTURE CONTENT
CLAY %	SILT %	SAND %	GRAVEL %	
96	4	0		Poss H_2O
80	20	0		WET
84	16	0		Poss H_2O
5	32	63		WET
3	41	56		SAT.
2	60	38		SAT.

CHAINAGE	OFFSET

REMARKS

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk

TECH. D. Cook | RIG Air | DATE 80/08/31 | km | B.P. No. | HOLE No. 1019-8

CHAINAGE | OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
0	Pt	Peat — .3m		
2	SM	Sand - Gravelly Silty		Vx
4		— 1.2m		
6		Clay - Silt - Sand - Gravel		
8		Ice		Ice
10				
12		Ice & Soil		Ice + Soil
14		Ice — 4.6m		Ice
16		Bottom of Hole - 4.6m		

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

DEPTH (METRES): 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

GRAIN-SIZE ANALYSIS				RELATIVE MOISTURE CONTENT	
CLAY %	SILT %	SAND %	GRAVEL %		
8	71	21		WET	
12	66	22		Moist - Wet	
34	43	23		Damp - Moist	H.I.B
21	78	1		Free H_2O	

Appendix D

SEARCH AREAS #13, #14, #15 and #16

Landform and Location:	An eastern extension of the Caribou Hills that has been dissected by melt-water channels. Located some 25 miles north of Inuvik at Mile 996 - 97 of the Mackenzie Highway.
Material:	Poorly indurated sandstone which reduces to fine wet sand or silty sand upon thawing. Minor shale or clay shale.
Stripping:	Probably five to six feet in selected areas.
Volume:	Unlimited.
Conclusion:	Not recommended for development unless staged construction is proposed. The fine sandy material is wet or saturated upon thawing and would have little shear strength until drained. In addition it would be subject to severe wind erosion in an embankment on the open tundra unless enveloped in capping material. There is better borrow roughly three miles to the north (Area #18) where shale is available in quantity. This area would be a good source of roadside borrow if staged construction is proposed.

Topography

This search area is part of a broad ridge some 200' above the surrounding terrain that is an eastern extension of the Caribou Hills. The alignment crosses the ridge between roughly Mile 995 and Mile 1005. The high ground has been glaciated and meltwater has cut large spillways that dissect the uplands. There is a variable thickness of glacial till on the high ground which forms a flat to gently rolling morainic plain. The till commonly contains excess ice in the form of ice lenses, wedges and massive ice. In some cases where icy materials have been exposed and ice slumps (retrogressive - thaw flow slides) have developed, terraces have formed along the spillways or surface depressions have occurred. The spillways

have been partially filled with alluvium from tributary streams and colluvium from erosion of the bordering escarpments. The most common "bedrock" type in the area adjacent to the highway is unconsolidated or weakly consolidated sandstone. There are also interbedded clayey seams and some shale and siltstone strata. Continuity of beds is limited hence there are variations is bedding sequences from locality to locality. The degree of induation and consolidation also varies even within unique stratigraphic units. There is well indurated sandstone exposed along the creek in the bottom of the meltwater spillway west of Area #16 (see 1" = 1,000' photo), however this more highly consolidated strata was not encountered at a higher elevation. The amount of ground ice that is present within the sand depends in part on the porosity of the strata, which is inversely related to the degree of induration and consolidation. Thus the majority of the higher level strata, which were test drilled in Areas #13 to #16 and which are not well indurated, contain sufficient excess ice that the sandy material is wet or saturated upon thawing.

Materials and Quantities

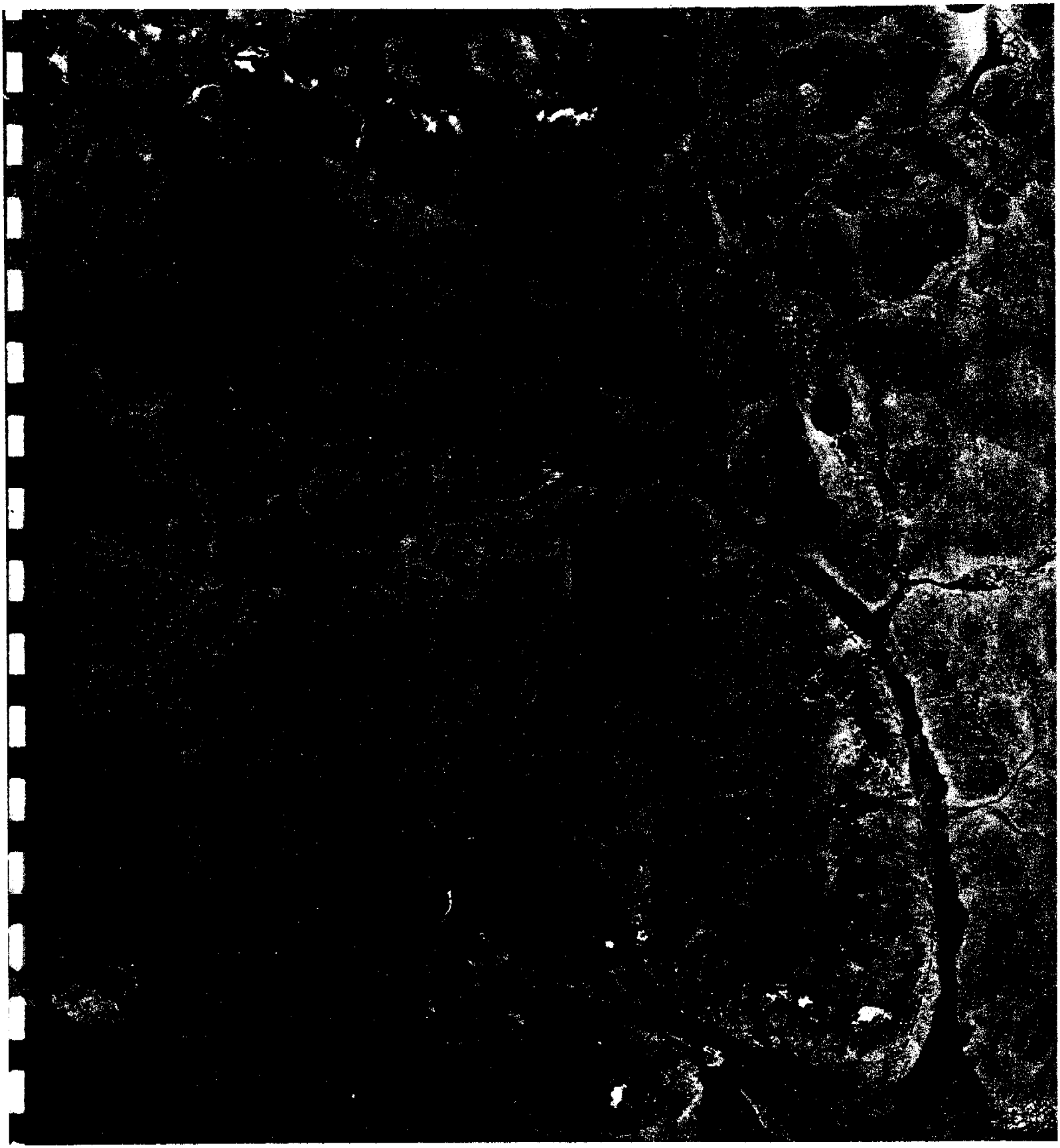
The majority of test holes were drilled along the edges of meltwater channels where overburden above the sandstone strata is minimal. All areas were permanently frozen and all contained excess ice, some with massive ice inclusions. Areas #13 and #16 are the better of the four areas drilled, however there is sufficient ice in even these areas that the fine grained sand and silty sand is wet or saturated upon thawing. The sandstone is very poorly indurated and is 'bedrock' only in geologic terms. The material upon thawing has no inherent strength or structure and reduces readily to fine sand or silty sand. Moisture contents generally range around 20%. Overburden material consisting of very ice-rich sandy silts or clays is usually not less than five feet to six feet in thickness.

Quantities of the sandy material are unlimited, however, this source should only be considered for development if staged construction is proposed. Subsoil moisture is relatively low near the alignment (centerline holes #995-2 and 3, #996-2 and #997-1, 2 and 3) and a roadside borrow pit could be developed. If the sand subsoil were placed in an embankment in a frozen state it would probably thaw and drain

without flowing, however, wind erosion may be a problem and it is anticipated the sand would have to be completely enveloped in shale capping.


STANL
AREA
9-5
REA 15
AREA 16


AREA 16
16-2
16-5
INDURATED
ONE EXPOSED
EDE ALONG CREEK



INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 28/3/70 | AIRPHOTO NO: | CHAINAGE | OFFSET
CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION | ELEV

TEST HOLE: MILE | B,C,S | NUMBER: AREA-13-1

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					Pt	PEAT — 4"		
2						CLAY-SILTY SANDY		
						ICE		ICE
4						SAND - SILTY		
6								
8					SM			
10								
12								V_L-V_r
14								
16								
18								
20								
22								
24								

○ = 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.)	REMARKS
86	14	0				MOIST
21	79	0				SAT.
18	82	0				WET
16	84	0				WET
19	81	0				WET
27	73	0				WET
33	67	0				MOIST
22	78	0				MOIST

BOTTOM OF HOLE - 30'

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

INUVIK - TUK.

DWN | FIELD ENG | DATE DRILLED 28/3/76 | AIRPHOTO NO: | CHAINAGE | OFFSET
CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION | ELEV

TEST HOLE — MILE | B,C,S | NUMBER: AREA-13-2

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					Pt	PEAT — 4"		
2–6						ICE & SOME SOIL		ICE
8–14					Cl	CLAY - SILTY SANDY MED. PLASTIC		
15'					SM	SAND - SILTY		Vs
					ML	SILT - SANDY		
20–24					ML	CLAYEY		Vc - Vr

CLAY - SILTY SANDY

BOTTOM OF HOLE - 30'

○ = 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.)	
84	15	1				SAT.
83	13	4				FREE WATER
90	10	0				SAT.
90	10	0				SAT.
53	47	0				FREE WATER
63	37	0				WET
57	43	0				MOIST
58	42	0				DAMP

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 12/4/76 | AIRPHOTO NO: | CHAINAGE | OFFSET
CKD | TECH PROVVCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV

TEST HOLE: MILE | B,C,S | NUMBER: AREA - 13 - 3

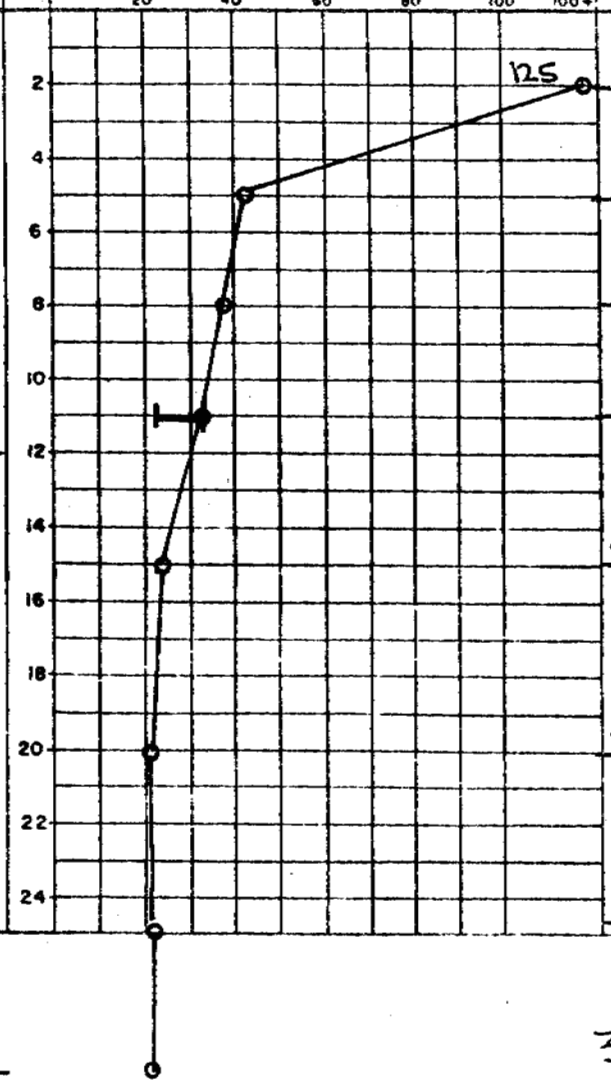
REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					Pt	PEAT 4"		
2					Pt	PEAT 2.5'		
4					CL	CLAY - SILTY SANDY PEBBLES LOW - MED. PLASTIC		V_S
6					CL			
8					CI			
10					CI			
12						12'		
14					SM	SAND - SILTY FINE		$V_C - V_Y$
16					SM			
18					SM			
20					SM			
22					SM			
24					SM			

BOTTOM OF HOLE - 30'

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

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



DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
2	90	10	0		WET		
4	60	37	3		FREE WATER		
8	75	25	0		FREE WATER		
10	48	58	0		WET		
14	32	68	0		MOIST		
20	23	77	0		MOIST		
24	41	59	0		MOIST		
	37	63	0		MOIST		

INUVIK - Tuk.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN	FIELD ENG	DATE DRILLED 12/4/76	AIRPHOTO NO:	CHAINAGE	OFFSET
CKD	TECH PROMICH	RIG A12	SURFACE DRAINAGE:	VEGETATION	ELEV

TEST HOLE

MILE	B,C,S	NUMBER
		AREA - 13-4

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					Pt	Pilot 4"		
2					CL - CI	CLAY - SILTY SANDY PEBBLES		Vs
4								
6								
8								
10						ICE		ICE
12								
14						15		
16						BOTTOM OF HOLE - 15'		
18								
20								
22								
24								

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

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

NO SAMPLES

DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
2							
4							
6							
8							
10							
12							
14							
16							
18							
20							
22							
24							

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 12/4/76 | AIRPHOTO NO: | CHAINAGE | OFFSET
CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV

TEST HOLE: MILE | B,C,S | NUMBER: AREA - 13-5

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					Pt	PEAT		
2					CL	CLAY - SILTY SANDY — 2"		
4						2.5' SAND - SILTY FINE		
6					SM			Vc - Vr
8								
10								
12								
14								
16								
18						18' CLAY - SILTY SANDY PEBBLES		Vs
20								
22					CI			
24						MED. PLASTIC		

O = WATER CONTENT (% OF DRY WEIGHT)
Δ = ICE CONTENT (% OF SAMPLE VOLUME)
PLASTIC LIMIT ⟷ LIQUID LIMIT
20 40 60 80 100 100+

GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
59	41	0		SAT.		
14	86	0		SAT.		
23	77	0		WET		
37	63	0		WET		
13	87	0		SAT.		
74	25	1		SAT.		
78	21	1		SAT.		

NEXT Page

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

TEST HOLE

MILE	B,C,S	NUMBER
		ARRA-13-5

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
30					CL	CLAY - SILTY SANDY MED. PLASTIC		Vx	94	6	0		DAMP		
32															
34									85	15	0		DAMP		
36															
38															
40									40	60	0		DAMP		
42															
44						45'									
46						BOTTOM OF HOLE - 45			69	31	0		MOIST		
48															
50															
52															
54															

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

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

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DOWN | FIELD ENG | DATE DRILLED 12/4/76 | AIRPHOTO NO: | CHAINAGE: | OFFSET
CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV

TEST HOLE: MILE | B,C,S | NUMBER: AR-A - 13-6

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
0					Pt	PEAT 2"									
2					CL	CLAY - SILTY - ORG TO 3' SANDY LOW PLASTIC		Vs	61	39	0		MOIST		
4									59	41	0		FREE WATER		
6															
8									69	31	0		FREE WATER		
10					SM	10' SILT - SAND MIXTURE			50	50	0		WET		
12															
14						SILT - SANDY									
16					ML	CLAY BALLS			66	34	0		MOIST		
18								Vx							
20									61	39	0		MOIST		
22															
24									63	37	0		MOIST		

○ = WATER CONTENT (% OF DRY WEIGHT)
△ = ICE CONTENT (% OF SAMPLE VOLUME)
PLASTIC LIMIT — LIQUID LIMIT
20 40 60 80 100 100+

BOTTOM OF HOLE - 30'

-62-38-0 MOIST

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

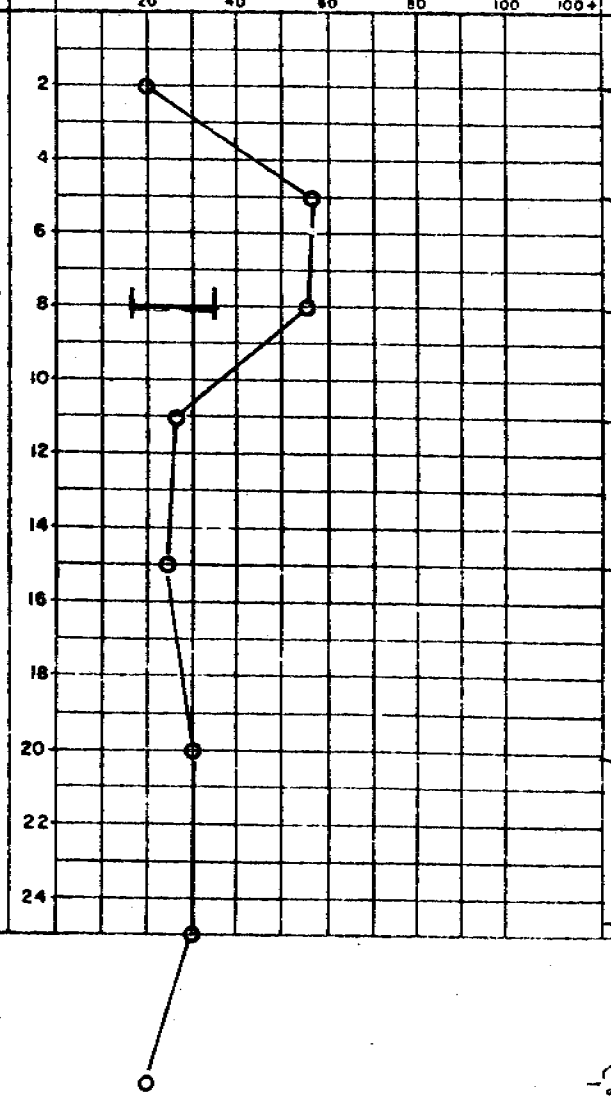
DWN | FIELD ENG | DATE DRILLED 12/4/76 | AIRPHOTO NO: | CHAINAGE | OFFSET
CKD | TECH PRONOVOST | RIG AIR | SURFACE DRAINAGE: | VEGETATION | ELEV

TEST HOLE: MILE | B,C,S | NUMBER: AREA - 13 - 7

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					Pt	PEAT 2"		
2						CLAY - SILTY - PEBBLES SANDY		VS
4								
6					Cl	MED. PLASTIC		
8								Vc - Vr
10								
12						13'		
14						SAND - SILTY FINE		
16								
18					SM			
20								
22								
24								

O = WATER CONTENT (% OF DRY WEIGHT)
Δ = ICE CONTENT (% OF SAMPLE VOLUME)

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



DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
2	76	20	4		WET		
4	79	21	0		FREE WATER		
6							
8	76	24	0		FREE WATER		
10	79	21	0		WET		
12							
14	14	85	1		WET		
16							
18							
20	18	82	0		SAT.		
22							
24	18	82	0		SAT.		

BOTTOM OF HOLE - 30'

-23-77-0 WET

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 12/4/76 | AIRPHOTO NO: | CHAINAGE | OFFSET
CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION | ELEV

TEST HOLE: MILE | B,C,S | NUMBER: AREA - 13 - 8

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
0					Pt	PEAT — 3"									
2					Sc	SAND - CLAYEY SILTY		Vs	41	59	0				FREE WATER
4															
6						— 5.5'			40	60	0				FREE WATER
8					CL CI	CLAY - SILTY SANDY			71	29	0				FREE WATER
10						— 9'									
12					Sc	SAND - SILTY CLAYEY			47	53	0				WET
14					SM	SILTY		Vc-Vr							
16									17	83	0				WET
18															
20									28	72	0				WET
22					SM										
24									38	62	0				WET

PLASTIC LIMIT — LIQUID LIMIT (20, 40, 60, 80, 100, 100+)

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

BOTTOM OF HOLE - 30'

-44-56-0 WET

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DRAWN | FIELD ENG | DATE DRILLED 12-4-76 | AIRPHOTO NO: | CHAINAGE | OFFSET
CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION | ELEV

TEST HOLE
MILE 8,C,S NUMBER
AREA 13-9

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					Pt	PEAT 8"		
2						ICE 3'		ICE
4						ICE + CLAY		ICE & C1
8					SM	SAND - SILTY FINE		Vc - Vr

O = WATER CONTENT (% OF DRY WEIGHT)
Δ = ICE CONTENT (% OF SAMPLE VOLUME)

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

DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
6	82	18	0		SAT.		
8	14	86	0		SAT.		
10	20	80	0		WET		
14	11	89	0		WET		
20	18	82	0		WET		
24	17	83	0		WET		

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

WN	FIELD ENG	DATE DRILLED	AIRPHOTO NO:	CHAINAGE	OFFSET
KD	TECH	RIG	SURFACE DRAINAGE	VEGETATION	ELEV

TEST HOLE

MILE	B,C,S	NUMBER
		AREA - B-9

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					SM	SAND - SILTY FINE		Vc-Vr
						45' BOTTOM OF HOLE -45'		

DEPTH (FEET)

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

PLASTIC LIMIT ⟷ LIQUID LIMIT

20 40 60 80 100 100+

30 32 34 36 38 40 42 44 46 48 50 52 54

GRAIN-SIZE ANALYSIS					
CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)
20	80	0		VWET	
21	79	0		VWET	
24	76	0		VWET	
48	52	0		SAT.	

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 12/4/76 | AIRPHOTO NO: | CHAINAGE | OFFSET
CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION | ELEV

TEST HOLE: MILE | B,C,S | NUMBER: AREA-13-10

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					Pt	PEAT — 8"		
2						ICE — 3'		ICE
6					Cl	CLAY - SILTY SANDY PEBBLES MED. PLASTIC		Vs
15						SANDY CLAY GRAVELLY — 17'		
20					Sm	SAND - SILTY		Vc - Vf
24								

O = WATER CONTENT (% OF DRY WEIGHT)
Δ = ICE CONTENT (% OF SAMPLE VOLUME)
PLASTIC LIMIT — LIQUID LIMIT
20 40 60 80 100 100+

GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
78	11	11		SAT.		
88	11	1		SAT.		
85	11	4		WET		
57	31	12		FREE WATER		
17	83	0		WET		
17	83	0		WET		
16	84	0		WET		

BOTTOM OF HOLE. 30'

INUVIK - TUK

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 28/5/76 | AIRPHOTO NO: | CHAINAGE: | OFFSET

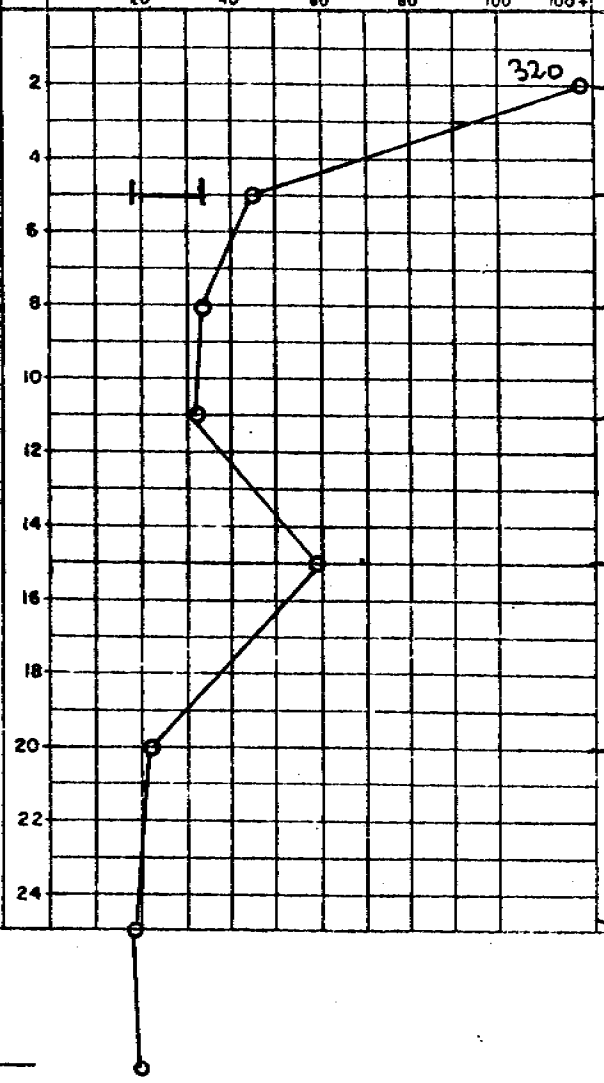
CKD | TECH PROVANCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV

TEST HOLE — MILE | B,C,S | NUMBER: AREA - 15 - 1

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					Pt	PEAT — 8"		
2–10					CL	CLAY - SANDY SILTY - SANDY MED PLASTIC		Vs
10–16					SM	SAND - SILTY — 10.5'		

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

PLASTIC LIMIT — LIQUID LIMIT



DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
2	37	62	1				FREE WATER
6	65	35	0				FREE WATER
8	75	18	7				WET
10	18	82	0				SAT.
16	16	84	0				WET
20	19	81	0				WET
24	18	82	0				WET

BOTTOM OF HOLE - 30'

-18-82-0 WET

INUVIK - TUK

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 2/3/76 | AIRPHOTO NO: | CHAINAGE | OFFSET
CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV

TEST HOLE: MILE | B,C,S | NUMBER: AREA - 15 - 2

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					Pt	PEAT 4"		
2					CL	CLAY - SILTY SANDY		
4						ICE		ICE
6					CL	CLAY - SILTY SANDY LOW PLASTIC		Vs
8						9'		
10						SAND - SILTY		
12								
14					SM			$V_c - V_r$
16								
18								
20								
22								
24								

O = WATER CONTENT (% OF DRY WEIGHT)
Δ = 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.)	REMARKS
67	33	0				MOIST
54	46	0				SAT.
76	24	0				SAT.
13	87	0				WET
13	87	0				WET
18	82	0				WET
20	80	0				WET
22	78	0				WET

BOTTOM OF HOLE - 30'

INUVIK - TUK

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 27/3/71 | AIRPHOTO NO: | CHAINAGE: | OFFSET:

CKD | TECH PRONYCH | RIG: AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV

TEST HOLE

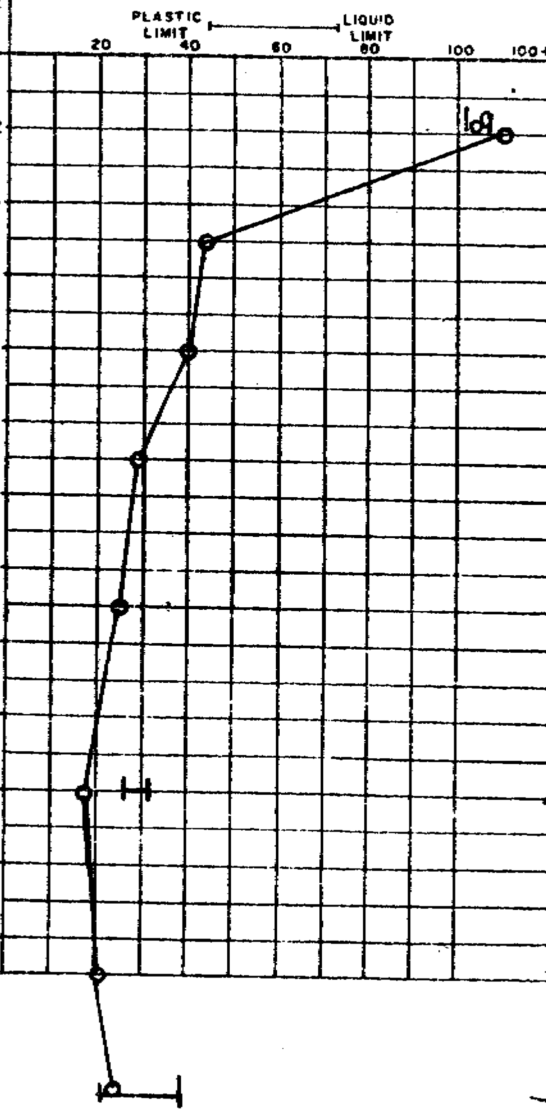
MILE | B,C,S | NUMBER

AREA- 15-3

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)
0 – 4"	Pt	PEAT ——— 4"							
4" – 2½'	Pt	PEAT ——— 2½'		VS		65	34	1	SAT.
2½' – 9'	CI	CLAY - SILTY SANDY MED. PLASTIC ——— 9'				83	17	0	SAT.
						85	15	0	SAT
9' – 17'	ML	SILT - CLAYEY SANDY ——— 17'		VC - VR		60	38	2	WET
						60	40	0	WET
17' – 20'		CLAY - SILTY SANDY SHALE FRAG'S. ——— 20'							
20' –		CLAY SILTY SHALE - SILTY SOFT				52	48	0	WET
						67	33	0	DAMP
				VX		73	27	0	DAMP

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



BOTTOM OF HOLE - 30'

INUVIK - TUK

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 27/3/74 | AIRPHOTO NO: | CHAINAGE | OFFSET
CKD | TECH RONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV

TEST HOLE: MILE | B,C,S | NUMBER: AREA - 16 - 1

REMARKS

○ = WATER CONTENT (% OF DRY WEIGHT)
△ = ICE CONTENT (% OF SAMPLE VOLUME)
PLASTIC LIMIT — LIQUID LIMIT
20 40 60 80 100 100+

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)
0					Pt	Peat								
4"						CLAY - SILTY SANDY MED. PLASTIC		V_S						
2					Cl				84	15	1		Moist	
4									84	16	0		Wet	
6						SHALE FRAG'S								
8'						SHALE - SOFT			92	8	0		Damp	
10									73	26	1		Damp	
12														
14														
15'									38	62	0		Moist	
16					SM	SAND - SILT MIXTURE								
18					ML			$V_C - V_r$						
20						SANDSTONE SOFT ?			52	48	0		Wet	
22														
24									56	44	0		Wet	

-48-52-0-WET

BOTTOM OF HOLE - 30'

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED APR/3/76 | AIRPHOTO NO: | CHAINAGE | OFFSET
CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION | ELEV

TEST HOLE: MILE | B,C,S | NUMBER
AREA - 16-2

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					Pt	PEAT ORGANIC 4"		
2						ICE & SOIL		
4								
6								
8						CLAY - SILTY		
10								$V_c - V_f$
12						SANDY		
14						HIGH PLASTIC		
16					CH			
18								
20					CL	LOW PLASTIC		
22								
24								

O = WATER CONTENT (% OF DRY WEIGHT)
Δ = ICE CONTENT (% OF SAMPLE VOLUME)

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

DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
2	68	32	0				FRESHWATER
4	90	10	0				FRESHWATER
8	87	11	2				WET
10	90	9	1				MOIST
14	86	11	3				SAT
20	80	20	0				MOIST
24	65	35	0				MOIST

161

SM SAND - SILTY

-42 58 0 WET

BOTTOM OF HOLE - 30'

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

INUVIK - TUK

DWN: FIELD ENG: DATE DRILLED 27/3/76 AIRPHOTO NO: CHAINAGE: OFFSET:
CKD: TECH PRONYCH RIG: AIR SURFACE DRAINAGE: VEGETATION: ELEV:

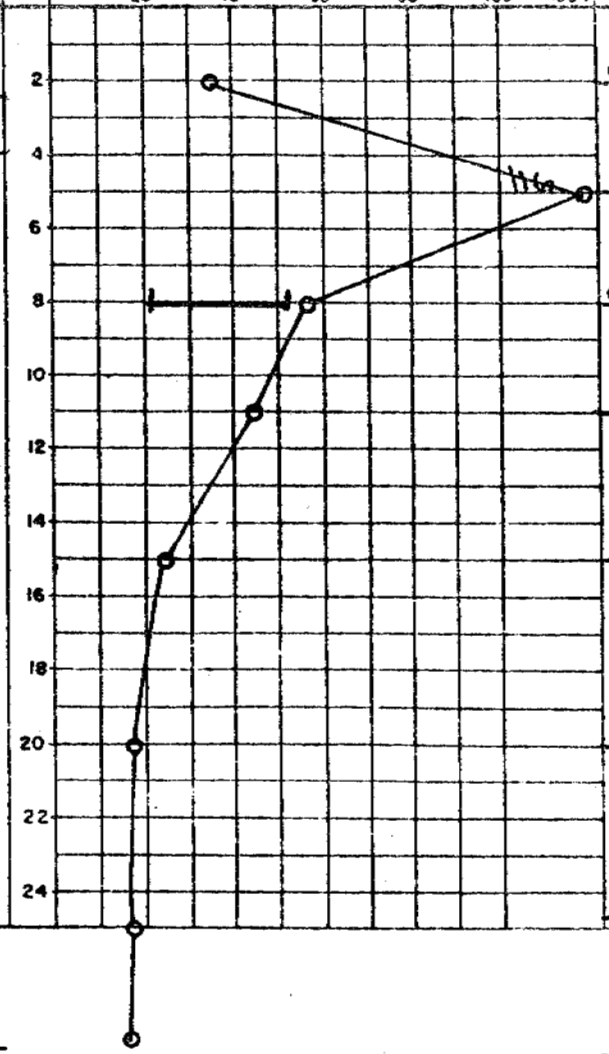
TEST HOLE — MILE: AREA-16 B,C,S: -3 NUMBER:

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					PT	PEAT 2"		
2					CL	CLAY - SILTY SANDY ORGANIC		
						ICE		ICE
4						CLAY - SILTY SANDY PEBBLES		
6								VS
8					CH	HIGH PLASTIC		
10								
12						12'		
14						SAND - SILTY		
16					SM			
18								
20								
22								
24								

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

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



DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
2	86	14	0		MOIST	
4	80	19	1		FREE WATER	
8	90	9	1		SAT.	
12	54	39	7		SAT.	
16	17	82	1		WET	
20	22	78	0		WET	
24	21	79	0		WET	
30	23	77	0		WET	

BOTTOM OF HOLE - 30'

INUVIK - TUK.

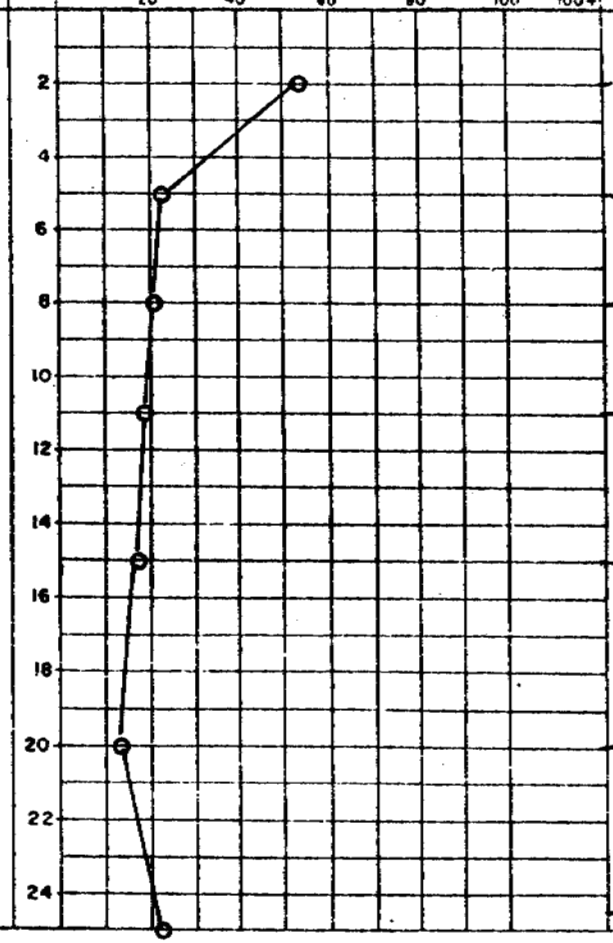
DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: FIELD ENG: | DATE DRILLED 27/3/76 | AIRPHOTO NO: | CHAINAGE | OFFSET
CKD: TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION | ELEV

TEST HOLE: MILE | B,C,S | NUMBER: AREA-16-9

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
2					Pt	PEAT 4"									
2						SAND - SILTY - FINE		Vs	26	71	3				FREE WATER
4									7	93	0		WET		
6															
8								V_c-V_f	7	93	0		WET		
10															
12									9	91	0		WET		
14															
16									10	90	0		WET		
18															
20									11	89	0		WET		
22						SILTY									
24									16	84	0		WET		



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

TEST HOLE

MILE	B,C,S	NUMBER

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
30						SAND-SILTY			14	84	0		WET	
32														
34									21	79	0		WET	
36														
38					SM			Vc-Vr						
40									18	82	0		WET	
42														
44														
46									21	79	0		WET	
48														
50									34	66	0		WET	
52														
54									43	57	0		Moist	
						55' CLAY SILTY SANDY ML WITH SOFT SHALE		Vx						
						BOTTOM OF HOLE - 60'			56	44	0		Moist	

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

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

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk. * 16-5

TECH. D. COOK | RIG AIR | DATE 80 | 08 | 04 | km | B.P. No. | HOLE No. [redacted]

CHAINAGE | OFFSET

REMARKS

* CHECK FOR SANDSTONE NEAR POWER LINE

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
0	Pt	PEAT — .3m		
2	Cl	CLAY-SILTY — .9m		VS
4	Pt	PEAT — 1.2m		
6		ICE & SOIL		ICE & CL
10		— 3.4m		
12	SP	SAND - GRAVELLY		
16		— 5.0m		
18		CLAY - SILTY SANDY PEBBLES MED. PLASTIC.		VS
22	Cl			
30		— 9.1m		
32		BOTTOM OF HOLE - 9.1m		

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

DEPTH (METRES): 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

GRAIN-SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
	94	6	0		WET
	88	12	0		SAT
	99	1	0		FREE WATER
	0	58	33		WET
	13	45	42		WET
	79	20	1		SAT.
	88	11	1		SAT.
	85	13	2		SAT.

SEARCH AREAS #17 and #18

Landform and Location:	An escarpment and benches along a glacial meltwater channel incised in a bedrock controlled ridge that is an extension of the Caribou Hills. Located some 28 miles north of Inuvik at Mile 1000 on the Mackenzie Highway.
Material:	Poorly indurated and consolidated shale, clay shale, siltstone and sandstone.
Stripping:	Variable from 0-5' on the tops of ridges to possibly 15'+ on the lower flanks of the ridges.
Volume:	Approximately 1,000,000 cu. yds. with some stripping.
Conclusion:	Good borrow source. Area #18A is the primary source. Area #18B can be developed as a secondary source if necessary. Area #18C is not recommended due to excess overburden.

Topography

This borrow area is part of the eastern extension of the Caribou Hills described previously. The areas test drilled here (#17 and #18) consist of the escarpments and benches adjacent to an ancient glacial meltwater channel which dissects the uplands. There is ice-rich glacial till on the surface of the uplands, however, along the exposed, south-facing, northern escarpment and upon benches on the north side of the spillway (Area #18), the icy overburden soils have been reduced largely by thermokarst activity. The sides and bottom of the spillway and the flanks of the benches on the north have variable thicknesses of colluvium and alluvium, all of which contain variable amounts of ground ice. These sediments increase in thickness toward the bottom of the spillway. On the southern side of the spillway (Area #17) there is an abundance of massive ice along the edge of the escarpment that is a complete contrast to the extensive thermokarst activity that has occurred on the exposed northern side.

There is a small creek flowing in the spillway at present which has incised the bottom and developed some small granular terraces.

Materials and Quantities

The bedrock here is slightly more indurated and consolidated than the sandstone in Areas #13 to #16, however, it also has very little inherent strength when thawed. It consists of interbedded shale, clay shale, siltstone and sandstone. There are three features that contain usable borrow: i.e., #18A - a portion of the spillway escarpment which is partially free of overburden; and two lower benches - #18B and #18C. These features are denoted on the 1" = 1,000' air photo included herein. Area #18A is the prime borrow source. It consists of a ridge with usable decomposed shale at the surface on the apex of the ridge, but with overburden soils on the flanks of the ridge. The material at depth is variable between soft shale and sandstone with moisture (ice) contents generally between 15 and 20%. Some of the sandy material tends to be wet on thawing, however, the shale is categorized as damp or moist in the thawed state, and with some mixing of the two materials in the grade, very little if any of the wetter material will have to wasted.

Maximum drilling depth here was 90 feet. This feature can be "day-lighted" to the east and south and stripping on the flanks will increase with depth of development. Cross-sections through the ridge are included on plates 1 and 2 on subsequent pages.

Area #18B is a ridge similar to #18A but lower. There is sand and gravel on the surface of this ridge in part which, although wet, should drain readily in an embankment. The core of the ridge is interbedded, soft shales, siltstone, and very weak sandstone which reverts to fine sand or silty sand when thawed. Maximum depth of drilling here was 90'. Cross-sections through this ridge are included on plate 3. Again stripping on the flanks will increase with the depth of development.

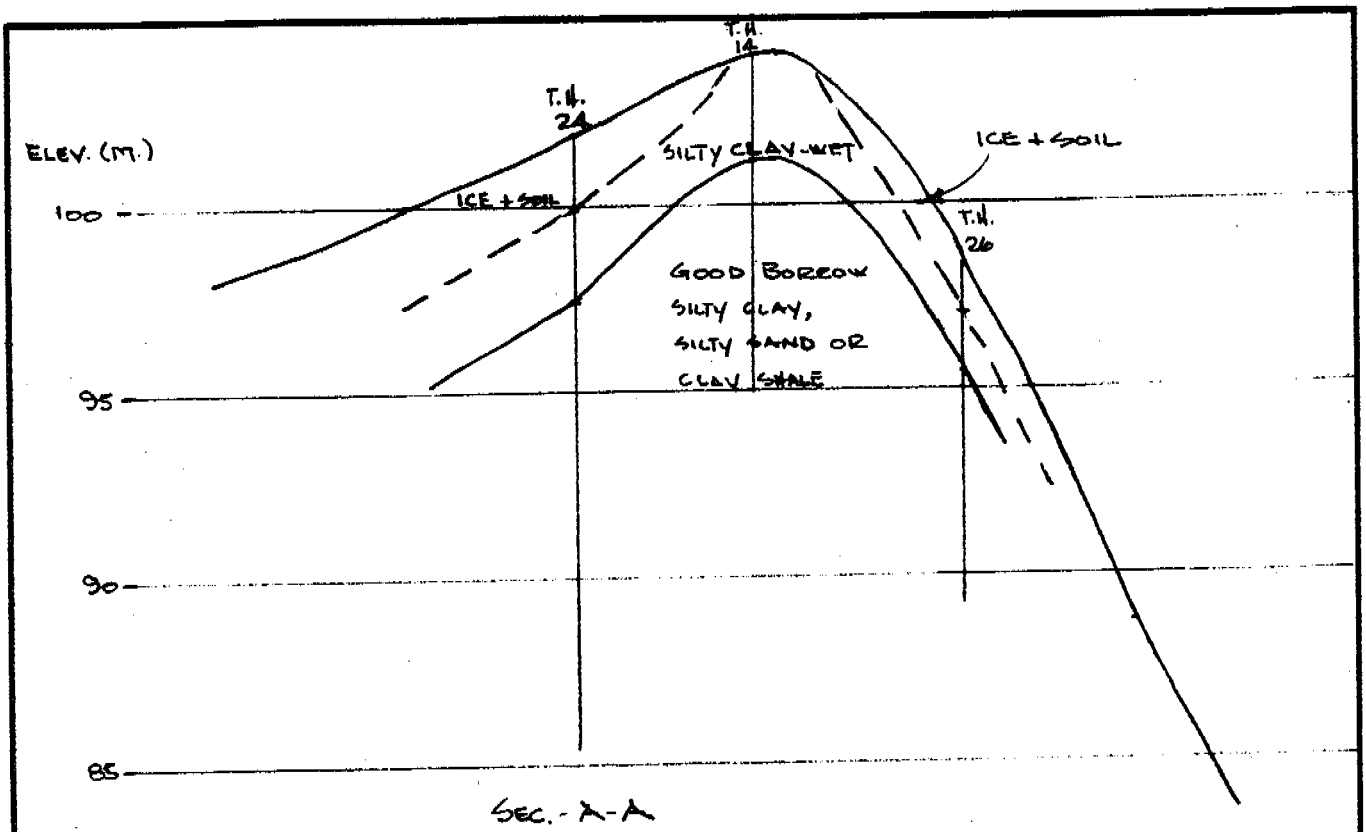
Area #18C is a low bench similar to #18B but wider and less sharply defined. The core of this ridge is similar soft shale, siltstone and weak sandstone, however, stripping is variable from eight to 15' and this feature is not recommended for development.

detined. The core of this ridge is similar soft shale, siltstone and

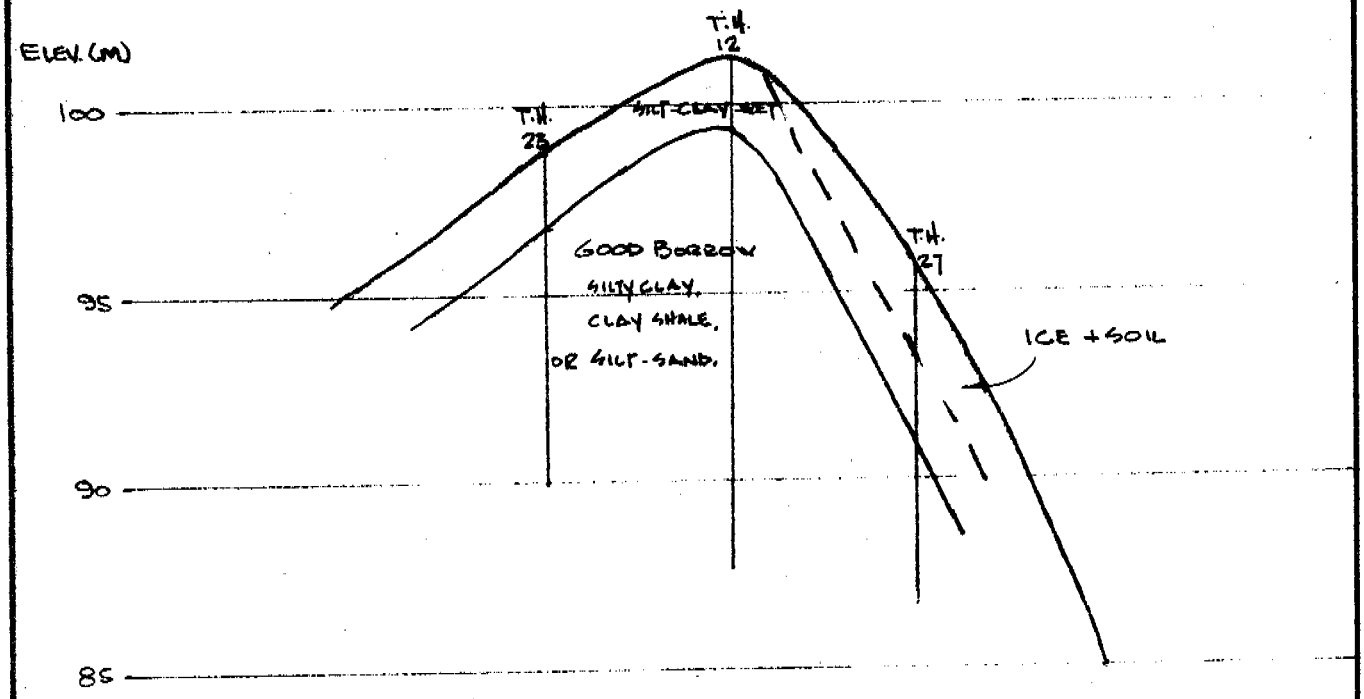
The edges of the escarpment to the east of Area #18C also consist of bedrock at depth, however, overburden is more extensive making development impractical.

SCALE 1:36,000
(APPROX 1"=3,000')

Map Jan 1981 (large map)



SEC. - A-A



SEC. B-B

VERT. SCALE 1 : 200

HORIZ. SCALE 1 : 2000

Public Works Canada / Travaux publics Canada

Drawing title: Titre du dessin: SECTIONS - AREA 18

scale: échelle: MILE 1000

date: revisions:

designed by: conçu par: date:

drawn by: dessiné par:

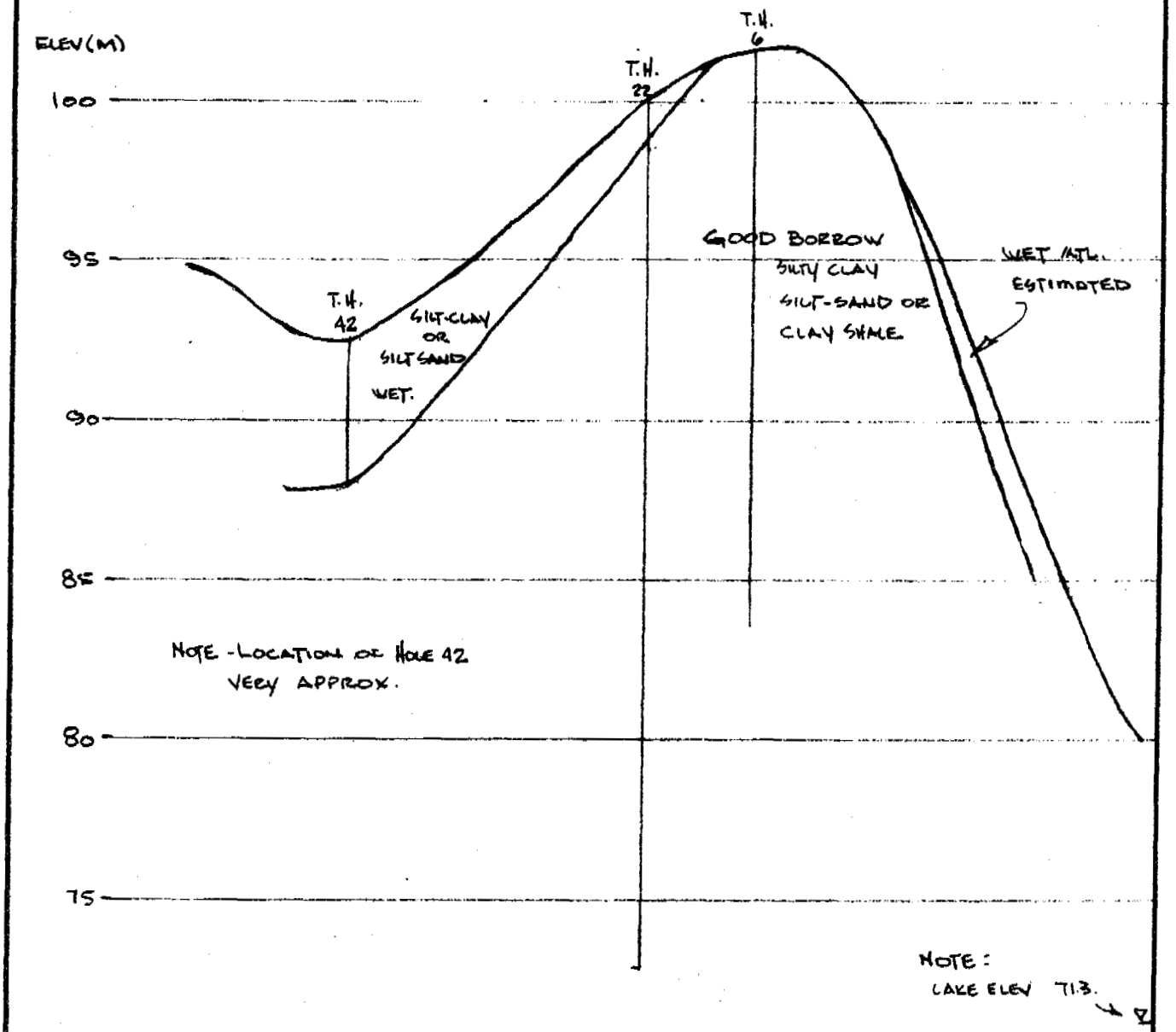
reviewed by: examiné par:

approved by: approuvé par:

project no.: no. du projet:

dwg. no. dessin no. 1

DPW 700A-2

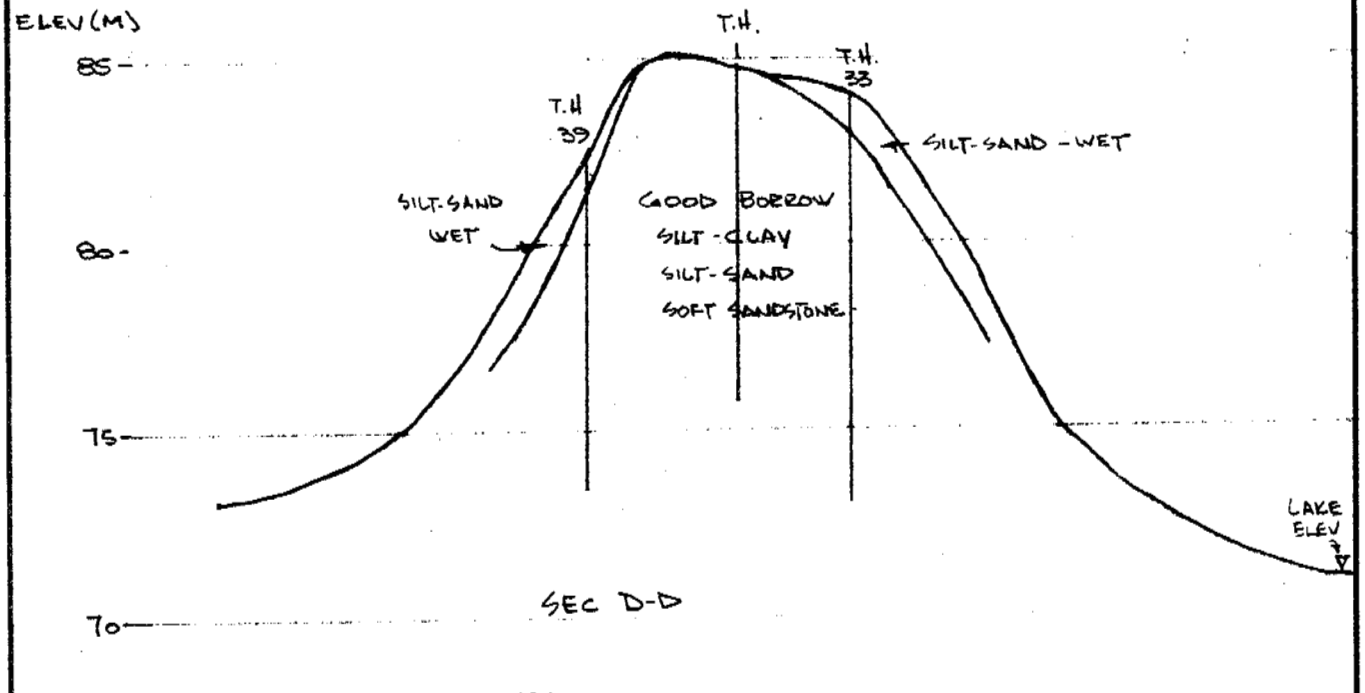


SECT C-C

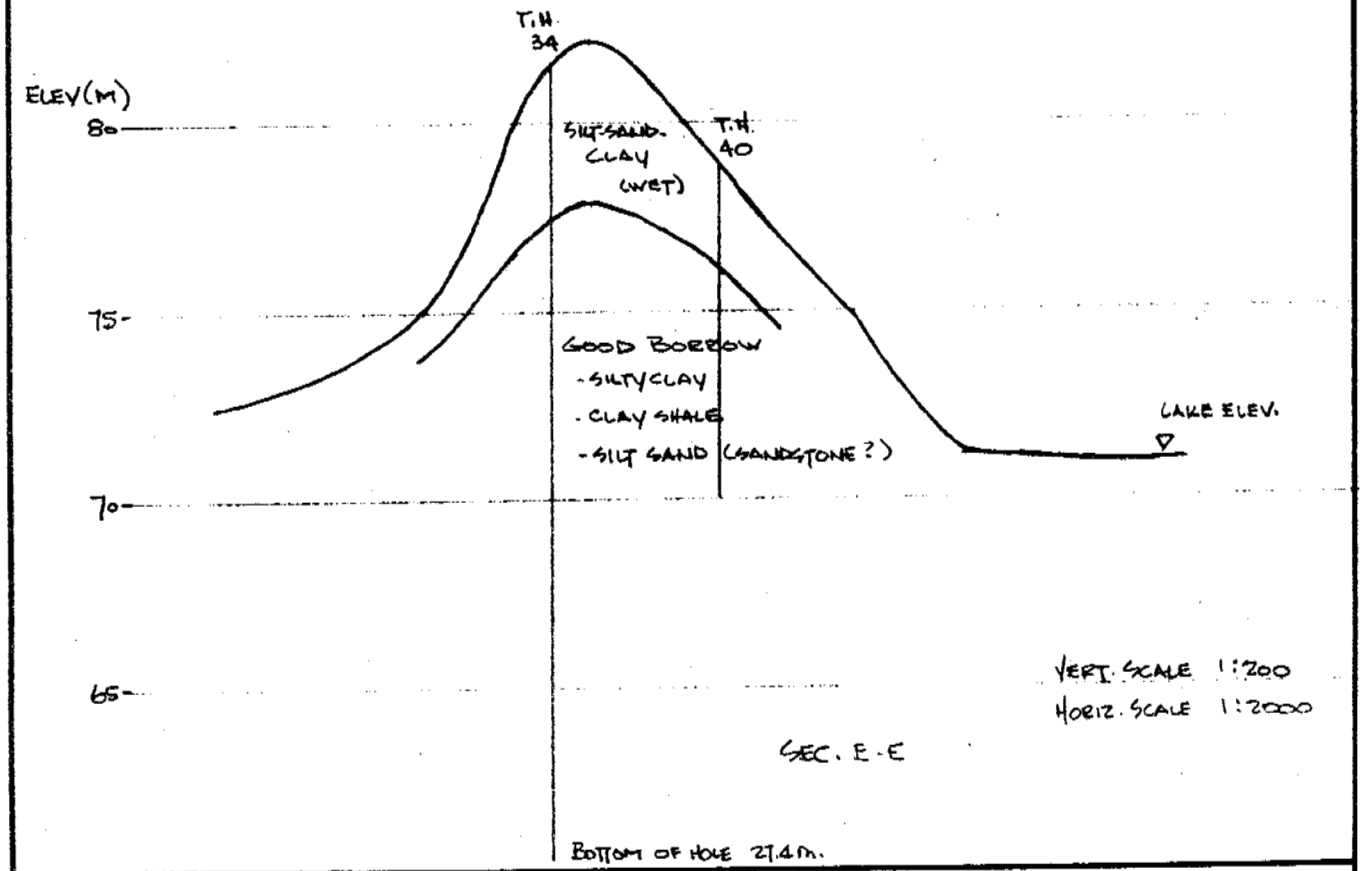
VERT. SCALE 1:200
HORIZ. SCALE 1:2000

Public Works Canada / Travaux publics Canada	Drawing title: Titre du dessin: SECTION - AREA 18	designed by: conçu par:	date:
	scale: échelle: MILE 1000.	drawn by: dessiné par:	
	date: revisions:	reviewed by: examiné par:	
		approved by: approuvé par:	
		project no.: no. du projet:	dwg. no. dessin no. 2.

DPW 700A-2



SEC D-D



VERT. SCALE 1:200
HORIZ. SCALE 1:2000

SEC. E-E

BOTTOM OF HOLE 27.4m.

Public Works Canada / Travaux publics Canada

Drawing title: Titre du dessin:
SECTIONS - AREA 18

scale: échelle: MILE 1000

date: revisions:

designed by: conçu par: date:

drawn by: dessiné par:

reviewed by: examiné par:

approved by: approuvé par:

project no.: no. du projet:

dwg. no. dessin no. 3

DPW 700A-2

INUVIK - Tuk.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DRAWN | FIELD ENG | DATE DRILLED 8/3/76 | AIRPHOTO NO: | CHAINAGE | OFFSET
CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV

TEST HOLE: MILE | B,C,S | NUMBER
AREA - 17 - 1

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					Pt	PEAT — 4"		
4					Cl	CLAY - SILTY SANDY PEBBLES MED. PLASTIC		
10						ICE & SOIL		
18					Cl	CLAY - SILTY SANDY PEBBLES MOSTLY WATER		V_s
26								

ICE ICE

BOTTOM OF HOLE - 30'

ICE ICE

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

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

DEPTH (FEET)	CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
2	83	15	2				SAT.
6	64	21	15				FREE WATER
8	59	37	4				FREE WATER
10½	67	33	0				WATER
20	64	33	3				FREE WATER
24	65	33	2				FREE WATER

INUVIK - TUK

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 28/3/74 | AIRPHOTO NO: | CHAINAGE | OFFSET

CKD | TECH BONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV

TEST HOLE — MILE | B,C,S | NUMBER: AREA - 17 - 2

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2					PT	PEAT — 2'		
4						ICE & SOME SOIL		
6								
8								
10								
12								
14								
16								
18								
20						ICE		ICE
22								
24								

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

PLASTIC LIMIT — LIQUID LIMIT: 20 | 40 | 60 | 80 | 100 | 100+

NO SAMPLE

DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
8						

30'

BOTTOM OF HOLE - 30'

INUVIK - TUK

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG. | DATE DRILLED 28/3/76 | AIRPHOTO NO: | CHAINAGE | OFFSET

CKD | TECH PROKYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV

TEST HOLE — MILE | B,C,S | NUMBER: AREA - 17-3

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					Pt	PEAT 4"		
2						CLAY - SILTY . SANDY . PEBBLE		Vs
4								
6						2'		
8								
10								
12								
14						ICE		ICE
16								
18								
20								
22								
24								

O = WATER CONTENT (% OF DRY WEIGHT)
Δ = ICE CONTENT (% OF SAMPLE VOLUME)

PLASTIC LIMIT ⟷ LIQUID LIMIT: 20 | 40 | 60 | 80 | 100 | 100+

No Samples

GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
CLAY %	SILT %	SAND %	GRAVEL %			

30'

BOTTOM OF HOLE - 30'

INUVIK - TUK

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 28/3/74 | AIRPHOTO NO: | CHAINAGE | OFFSET

CKD | TECH BRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION | ELEV

TEST HOLE — MILE | B,C,S | NUMBER: AREA - 11 - 4

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					PT	PEAT — 4"		
2						CLAY - SILTY		
						ICE		ICE
4						CLAY - SILTY SANDY PEBBLES		
6								
8								VS
10								
12								
14								
16								
18								
20								
22								
24								

DEPTH (FEET)

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

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

NO SAMPLE

GRAIN-SIZE ANALYSIS	CLAY	SILT	SAND	GRAVEL	WET DENSITY (PCF)	DRY DENSITY (PCF)
	%	%	%	%		

REMARKS

BOTTOM OF HOLE - 30'

INUVIK - TUK

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 78/3 | AIRPHOTO NO: | CHAINAGE: | OFFSET:
CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV:

TEST HOLE: MILE | B,C,S | NUMBER: AREA - 18-1

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					Pt	PEAT — 4"		
2						SAND - SILTY		
4						- FRIABLE SANDSTONE		
6								$V_C - V_r$
8								
10								
12								
14								
16								V_x
18								
20								
22								
24								

○ = WATER CONTENT (% OF DRY WEIGHT)
△ = ICE CONTENT (% OF SAMPLE VOLUME)
PLASTIC LIMIT — LIQUID LIMIT
20 40 60 80 100 100+

NO SAMPLES

GRAIN-SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)

REMARKS

BOTTOM OF HOLE - 30'

INUVIK - TUK

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

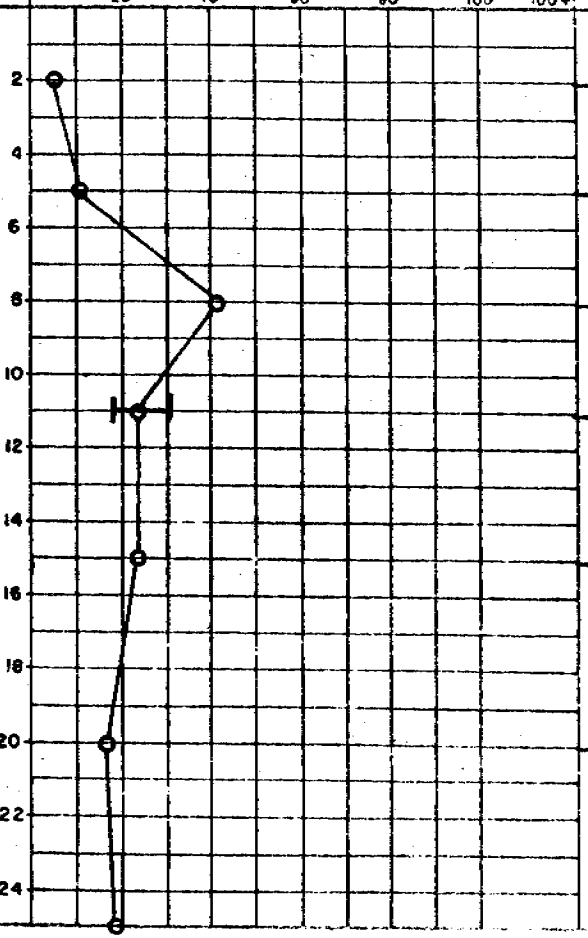
DWN | FIELD ENG | DATE DRILLED 28/3/76 | AIRPHOTO NO: | CHAINAGE | OFFSET
CKD | TECH RONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV

TEST HOLE: MILE | B,C,S | NUMBER: DRED - 19 - 7

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					Pt	PEAT — 2'		
2					GM	GRAVEL - SILTY SANDY		
7'								
8					SM	SAND - SILTY PEBBLES		Vc-Vr
10					CL	CLAY - SILTY		
12					SC	CLAYEY SAND		
16						POSSIBLE SANDSTONE		
20						SHALE - SOFT — 21'		Vx

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

PLASTIC LIMIT ⟷ LIQUID LIMIT



GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
10	37	53				MOIST
15	36	49				WET
36	59	5				SAT
55	45	0				WET
46	51	3				MOIST
57	43	0				DAMP
						HUMID

NEXT PAGE

NEXT PAGE

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

TEST HOLE

MILE	B,C,S	NUMBER
AREA - 18-7		

REMARKS

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

PLASTIC LIMIT ⟷ LIQUID LIMIT

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)
						SHALE - SOFT		VX					HUMID	
													HUMID	
													HUMID	
						CLAY - SAND - PEBBLES 44' 45'			43	47	10		DAMP	
						BOTTOM OF HOLE - 45'								

30 32 34 36 38 40 42 44 45 46 48 50 52 54

20 40 60 80 100 100+

INUVIK - TUK

DRILL HOLE REPORT

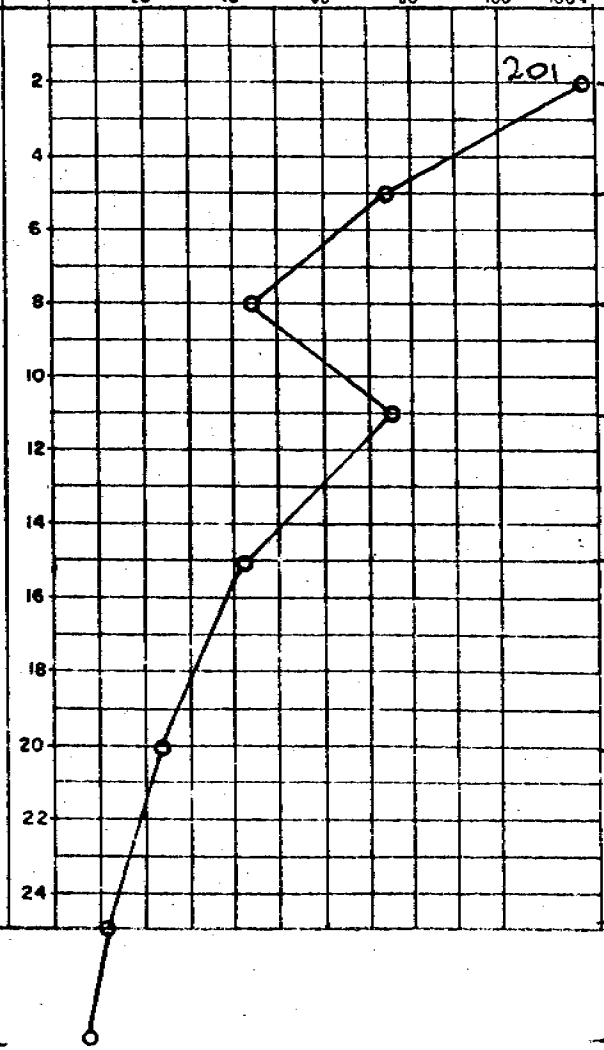
DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 28/3/74 | AIRPHOTO NO: | CHAINAGE | OFFSET
CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION | ELEV

TEST HOLE
MILE 8,C,5 NUMBER
AREA - 18-3

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					Pt	PEAT		
2						2.5'		
4						SAND-CLAYEY SILTY		Vs
6								
8					Sc			
10								
12								
14								
16								
18						SILTY - PEBBLES		
20								
22						GRAVELLY		
24					GW	GRAVEL - SANDY		

BOTTOM OF HOLE - 30'



GRAIN-SIZE ANALYSIS						REMARKS
CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)	
90	10	0				FREE WATER
43	57	0				FREE WATER
28	72	0				FREE WATER
38	62	0				FREE WATER
39	61	0				FREE WATER
9	89	2				SAT.
11	57	32				SAT.
5	40-55					SAT.

INUVIK - TUK

DRILL HOLE REPORT

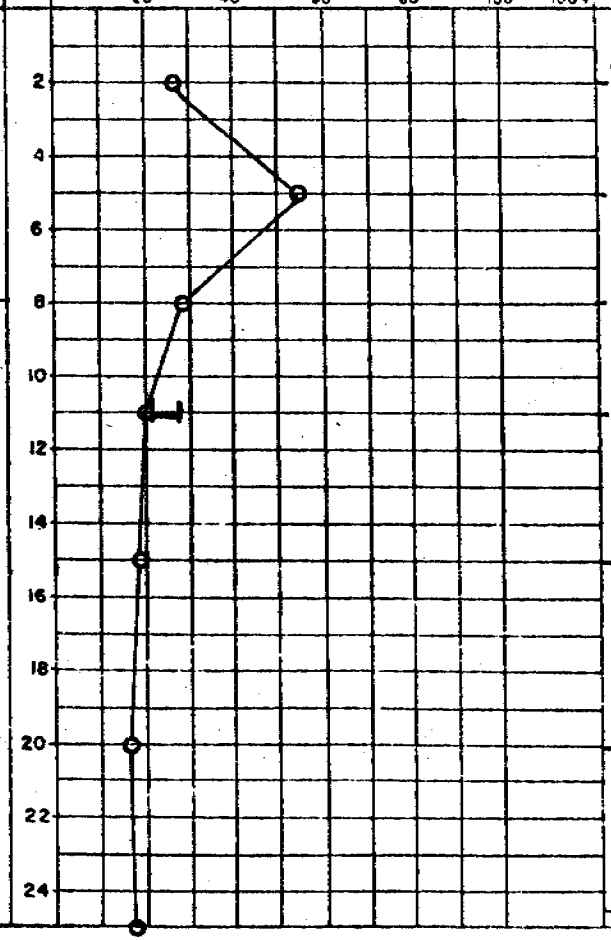
DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 28/3/76 | AIRPHOTO NO: | CHAINAGE | OFFSET
CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION | ELEV

TEST HOLE: MILE | B,C,S | NUMBER: AREA - 18 - 4

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					Pt	PEAT 2"		
					CL	CLAY - SANDY 2'		Vs
4						SAND - SILTY CLAYEY		
8					SC			Vx
16						SANDSTONE SOFT 16'		

O = WATER CONTENT (% OF DRY WEIGHT)
Δ = ICE CONTENT (% OF SAMPLE VOLUME)



GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
35	65	0				SAT.
48	52	0				FREEWATER
44	56	0				WET
47	53	0				MOIST
50	50	0				MOIST
22	78	0				DAMP
12	88	0				DAMP

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

OWN	FIELD ENG	DATE DRILLED	AIRPHOTO NO:	CHAINAGE	OFFSET
C'KD	TECH	RIG	SURFACE DRAINAGE:	VEGETATION	ELEV

TEST HOLE

MILE	B,C,S	NUMBER
848	- 18	- 9

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: CLAY % | SILT % | SAND % | GRAVEL % | 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+

SHALE - SOFT
& SANDSTONE

DAMP

30 32 34

DAMP

36 38 40

WET

42 44

45'

BOTTOM OF HOLE. 45'

45 46 48 50 52 54

WET

INUVIK - TUK

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 28/3/76 | AIRPHOTO NO: | CHAINAGE: | OFFSET

CKD | TECH Ronych | RIG AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV

TEST HOLE | MILE | B,C,S | NUMBER | AREA - 18+5

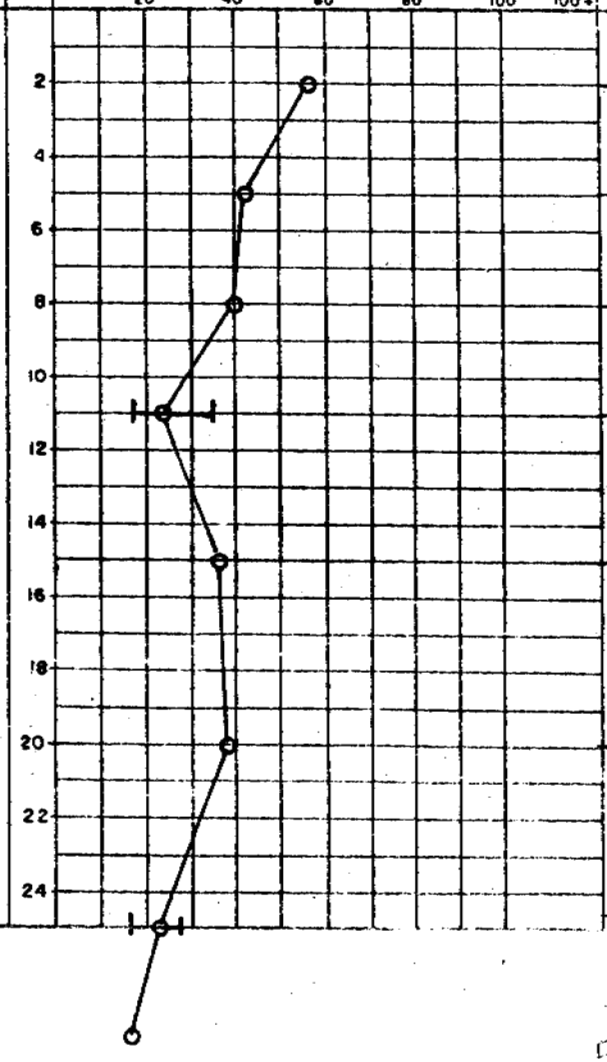
REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)
0					Pt	PEAT 4"								
2						CLAY - SILTY SANDY PEBBLES			79	20	1		FREE WATER	
4									77	22	1		FREE WATER	
6								Vs						
8					Cl	MED. PLASTIC			70	28	2		SAT.	
10									85	13	0		WET	
12														
14									62	34	4		SAT.	
16														
18														
20									84	16	0		SAT.	
22														
24					CL	LOW PLASTIC			55	44	1		MOIST	

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

PLASTIC LIMIT ⟷ LIQUID LIMIT

20 40 60 80 100 100+



Vx

BOTTOM OF HOLE - 30'

55 45 0 MOIST

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

INUVIK - TUK

DRAWN | FIELD ENG | DATE DRILLED 28/3/76 | AIRPHOTO NO: | CHAINAGE: | OFFSET
CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV

TEST HOLE: MILE | B,C,S | NUMBER: AREA - 18 - (

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
					PT	PEAT — 4"								
2						CLAY - SILTY SANDY			71	29	0		DAMP	
4					CL	LOW PLASTIC			67	33	0		WET	
6														
8									77	23	0		MOIST	
10					CI	MED. PLASTIC								
12						— 12'		Vx	84	16	0		MOIST	
14						SHALE - SOFT								
16						SANDSTONE			78	12	10		DAMP	
18														
20									72	28	0		DAMP	
22														
24									74	26	0		MOIST	

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

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

NEXT PAGE

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

TEST HOLE

MILE	B,C,S	NUMBER
		18-6

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
30						SHALE - SOFT SANDSTONE			59	41	0		DAMP	
34						34' AS ABOVE BUT MORE SAND SANDSTONE? LAYERS OF SHALE & SAND		Vx	48	52	0		MOIST	
36														
38														
40									59	41	0		DAMP	
42														
44									42	58	0		WET	
46														
48														
50									83	17	0		DAMP	
52														
54									86	14	0		DAMP	
56														
60						BOTTOM OF HOLE - 60'			61	39	0		WET	

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

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

INUVIK - TUK

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 23/3/76 | AIRPHOTO NO: | CHAINAGE | OFFSET
CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV

TEST HOLE: MILE | B,C,S | NUMBER: AREA - 18-7

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					Pt	PEAT — 2'		
2					CL	CLAY - SILTY SANDY PEBBLES		Vs
4					CI			
6						6'		
8						ICE		ICE
10								
12						12'		
14					CL	CLAY - SILTY SANDY PEBBLES		Vs
16					CI			
18						17' SAND - SILTY		
20					SM			Vc - Vf
22								
24								

○ = 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 (PCF)	DRY DENSITY (PCF)	REMARKS
79	19	2				WET
76	22	2				FREE WATER
78	21	1				FREE WATER
16	84	0				WET
19	81	0				WET

BOTTOM OF HOLE - 30'

-19-81-0 WET

INUVIK - TUK

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 28/3/76 | AIRPHOTO NO. | CHAINAGE | OFFSET
CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV

TEST HOLE: MILE ARRA | B,C,S 18 | NUMBER 8

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					Pt	PEAT		
2					CL	CLAY-SILTY SANDY 2"		
						ICE		ICE
4						CLAY - SILTY SANDY		
6					CL			
8					CI			Vs
10								
12						12'		
14					SM	SAND - SILTY		
15						15'		
						BOTTOM OF HOLE - 15'		

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

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

138

GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	
88	11	1				WET
86	14	3				FREE WATER
84	16	0				FREE WATER
14	86	0				WET

Inuvik - Tuk.

DRILL HOLE REPORT

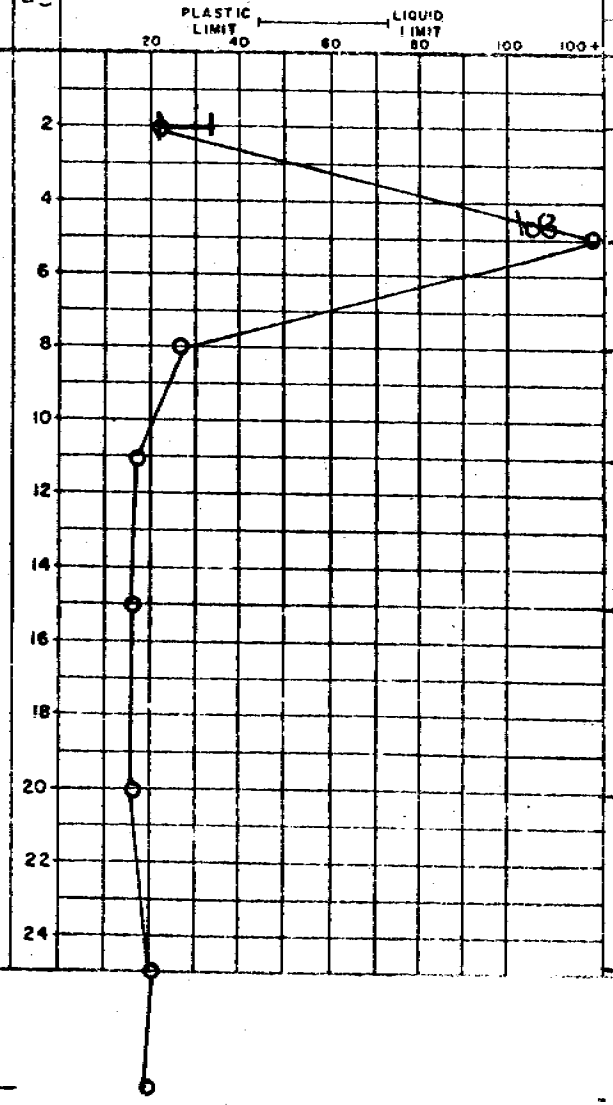
DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

OWN | FIELD ENG | DATE DRILLED 28/3/74 | AIRPHOTO NO: | CHAINAGE | OFFSET
CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION | ELEV

TEST HOLE — MILE | B,C,S | NUMBER
AREA - 18-9

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					PT	PEAT — 2'		
2					CL	CLAY - SILTY SANDY PEBBLES		Vx
4								Vs
6					CI	HARD PLASTIC		
8								
10								
12						— 12'		
14						SHALE - SOFT SAND LENSES SANDSTONE?		Vx
16								
18						— 18'		
20						SHALE - SOFT HARD CLAY? SAND		
22								
24								

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



DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
2	69	29	2				DAMP
6	72	27	1				FREE WATER
8	84	16	0				MOIST
12	71	27	2				DAMP
16	70	30	0				DAMP
20	52	48	0				DAMP
24	93	7	0				DAMP

SM
ML SAND - SILTY - SLI SANDY

-58- 39- 3 MOIST

BOTTOM OF HOLE - 30'

Inuvik - Tuk

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: FIELD ENG | DATE DRILLED 28/3/76 | AIRPHOTO NO: | CHAINAGE: | OFFSET:
CKD: TECH RONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION | ELEV

TEST HOLE: MILE | B,C,S | NUMBER: DREW - 18 - 10

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					Pt	PEAT 2"		
					CL	CLAY - SILTY SANDY PEBBLES MED. PLASTIC		
4								
6						SILTY - 1		
8					SL	LOW PLASTIC		
10								
12						SANDY		
14								
16								
18					CL			
20								
22							23	
24						ICE		ICE

○ = 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.)	REMARKS
78	17	5		SAT.		
69	30	1		FREE WATER		
95	5	0		SAT.		
94	6	0		SAT		
86	14	0		WET		
87	13	0		WET		

27

M

BOTTOM OF HOLE - 30'

90-10-0 FREE WATER

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DRAWN | FIELD ENG | DATE DRILLED 28/3/76 | AIRPHOTO NO. | CHAINAGE | OFFSET
CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE | VEGETATION | ELEV

TEST HOLE: MILE | B,C,S | NUMBER: AREA - 18 - 11

REMARKS

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

PLASTIC LIMIT ⟷ LIQUID LIMIT

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
0					Pt	Peat								
2"														
2					CI	CLAY - SILTY SANDY LOW & MED. PLASTIC		V_S	77	22	1		SAT.	
4														
6									62	38	0		SAT.	
8					CL			$V_C - V_r$	59	39	2		WET	
10									73	27	0		DAMP	
12														
14'								V_x						
14						SAND - SILT MIXTURE			46	54	0		DAMP	
16														
18					SM									
20					ML				60	40	0		DAMP	
22														
24									53	47	0		DAMP	

BOTTOM OF HOLE - 30'

49 - 51 - 0 DAMP

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

INUVIK - TUK

DWN	FIELD ENG	DATE DRILLED 11/4/76	AIRPHOTO NO:	CHAINAGE	OFFSET
CKD	TECH PRONYCH	RIG AIR	SURFACE DRAINAGE:	VEGETATION:	ELEV

TEST HOLE: MILE | B,C,S | NUMBER: AREA - 18 - 12

REMARKS

O = WATER CONTENT (% OF DRY WEIGHT)
Δ = ICE CONTENT (% OF SAMPLE VOLUME)

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

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)
0					PEAT	PEAT 1"								
					CL	CLAY - SILTY SANDY 3'			71	23	0		MOIST	
4					SM	SAND - SILTY 4'								
6					CL	CLAY - SILTY SANDY LOW PLASTIC			64	36	0		WET	
8									79	21	0		DAMP	
10									65	35	0		DAMP	
12						12'								
14						SHALE - SOFT SAND - SILTY SOFT SANDSTONE?		Vx	78	22	0		DAMP	
18														
20									69	29	2		DAMP	
22														
24									81	13	0		DAMP	
27						27 SAND - SILT MIX								

DRILL HOLE REPORT

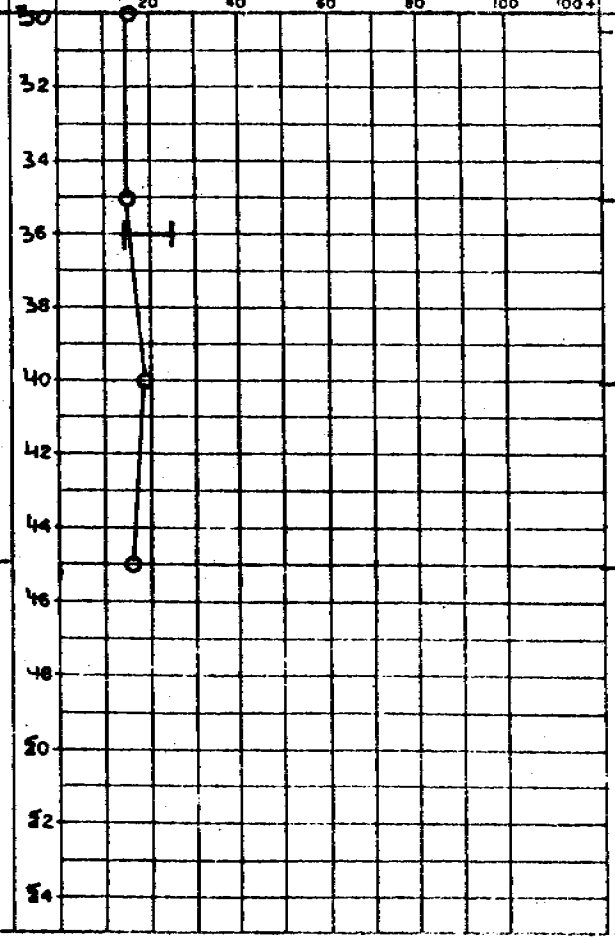
DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN	FIELD ENG	DATE DRILLED	AIRPHOTO NO:	CHAINAGE	OFFSET
CKD	TECH	RIG	SURFACE DRAINAGE:	VEGETATION:	ELEV

TEST HOLE

MILE	B,C,S	NUMBER
AREA 18		12

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
						SOFT SHALE & SILTY SAND		Vx	65	35	0		DAMP		
									65	35	0		DAMP		
									38	62	0		WET		
						45'			48	52	0		WET		
						BOTTOM OF HOLE - 45'									



INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

OWN	FIELD ENG	DATE DRILLED 11/4/76	AIRPHOTO NO:	CHAINAGE	OFFSET
CKD	TECH V. RONYCH	RIG AIR	SURFACE DRAINAGE:	VEGETATION	ELEV

TEST HOLE: MILE | B,C,S | NUMBER: ARFA - 18 - 13

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 CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)
					Pt	PEAT									
					Cl	CLAY-SILTY 1.5									
4						ICE & CLAY		ICE & CL-Cl	2						
8									6						
12									10						
14						15'			14						
18					SM.	SAND-SILTY			18						
						19'									
20					CL	CLAY-SANDY SILTY		Vc-Vr	20	54	46	0		WET	
22					Cl				22						
24									24	87	13	0		MOIST	

○ = WATER CONTENT (% OF DRY WEIGHT)
△ = ICE CONTENT (% OF SAMPLE VOLUME)
PLASTIC LIMIT — LIQUID LIMIT
20 40 60 80 100 100+

SHALE - SILTY SOFT 26'

-91-9-0 DAMP

BOTTOM OF HOLE - 30'

Inuvik - Tuk.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 11 4 76 | AIRPHOTO NO: | CHAINAGE | OFFSET
CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION | ELEV

TEST HOLE | MILE | B,C,S | NUMBER
AREA - 18-14

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					Pt	PEAT 2"		
						CLAY - SILTY SANDY		
					Cl	MED. PLASTIC		
						9'		
						CLAY - SILTY HARD SHALE ? SANDY		Vx
						SHALE FRAGMENTS		

○ = 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.)	REMARKS
83	17	0				MOIST
71	29	0				WET
80	20	0				WET
95	5	0				DAMP
73	27	0				MOIST
72	27	1				MOIST
88	12	0				DAMP

BOTTOM OF HOLE - 30'

-82-18-0 DAMP

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

INUVIK - TUK.

OWN	FIELD ENG	DATE DRILLED 11/4/76	AIRPHOTO NO:	CHAINAGE	OFFSET
CKD	TECH PRAYCH	RIG AIR	SURFACE DRAINAGE:	VEGETATION	ELEV

TEST HOLE: MILE — B,C,S — NUMBER: AREA - 18 - 15

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
0					Pt	PEAT — 2"									
2					CL	CLAY - SILTY SANDY		Vs	69	31	0				WET
4															
6						PEBBLES			89	11	0				FREE WATER
8						LOW - MED.			64	32	4				FREE WATER
10						PLASTIC									
12					CI				89	9	2				FREE WATER
14															
16									44	56	0				MOIST
18						17½' - 19'									
20						HARD LENSE OF			50	47	3				MOIST
22						SAND OR SILT									
24									52	48	0				MOIST

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

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

NEXT PAGE

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

TEST HOLE: MILE | B,C,S | NUMBER: AREA - 18 - 15

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
30					CL	CLAY - SANDY LOW PLASTIC			56	44	0		MOIST	
32														
34														
36					CI	MED PLASTIC			46	54	0		MOIST	
38														
40									43	57	0		MOIST	
42														
44						45'								
46						BOTTOM OF HOLE - 45'			56	44	0		MOIST	
48														
50														
52														
54														

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

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

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

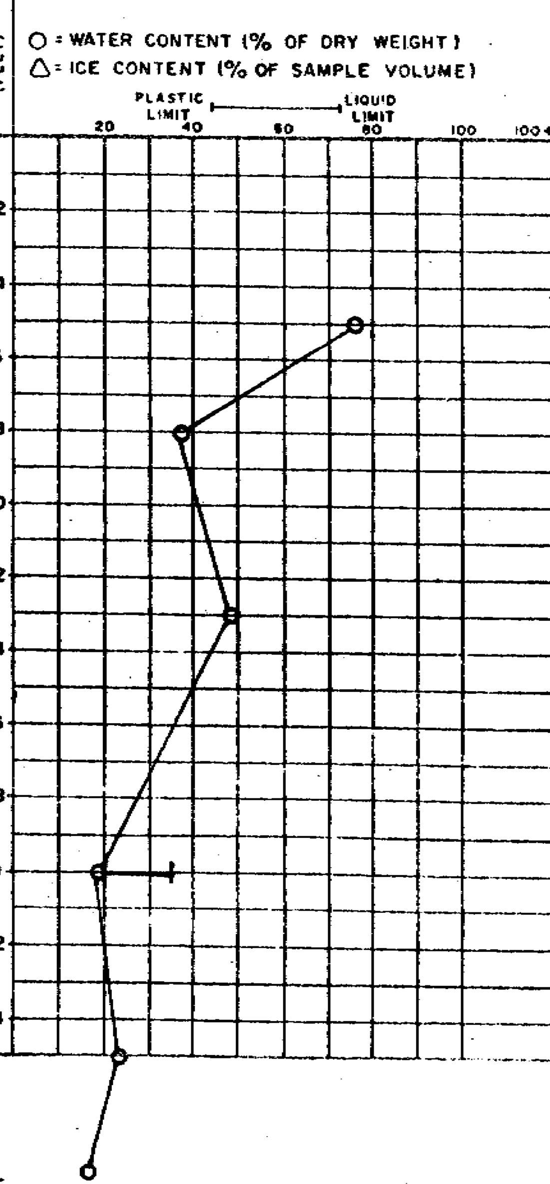
DWN	FIELD ENG	DATE DRILLED 11/4/76	AIRPHOTO NO:	CHAINAGE	OFFSET
CKD	TECH PRONYCH	RIG AIR	SURFACE DRAINAGE:	VEGETATION	ELEV

TEST HOLE

MILE	B,C,S	NUMBER
AREA - 18 - 16		

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	ICE DESCRIPTION	CLAY %	SILT %	SAND %	GRAVEL %	REMARKS
0	Pt	PEAT — 2"						
0–10	SM	SAND - SILTY	Vs					
~5				23		76	1	FREE WATER
~8				12		88	0	FREE WATER
10–15		ICE + SOIL	ICE & CL					
~13				92		8	0	FREE WATER
15–26	CI	CLAY - SILTY SANDY MED. PLASTIC	Vc - Vr					
20				64		36	0	MOIST
25				49		51	0	WET
26'		SAND - SILTY		39		61	0	MOIST

Column headings also printed: SAMPLE NUMBER, SAMPLE TYPE, % RECOVERY, PENETRATION RESISTANCE, LIMITS OF FROZEN GROUND, WET DENSITY (P.C.F.), DRY DENSITY (P.C.F.)



BOTTOM OF HOLE - 30'

SAND - SILTY

Inuvik - Tuk.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 11/4/76 | AIRPHOTO NO: | CHAINAGE | OFFSET
CKD | TECH Pronych | RIG AIR | SURFACE DRAINAGE: | VEGETATION | ELEV

TEST HOLE: MILE | B,C,S | NUMBER: AR&A - 18-17

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					Pt	PEAT 2"		
					SM	SAND - SILTY 3.0		Vs
						ICE 4.0		ICE
					ML SM	SAND - SILT MIX 7'		Vs
						8½'		
					SM	SAND - SILT 15'		Vs
						BOTTOM OF HOLE - 15'		

○ = WATER CONTENT (% OF DRY WEIGHT)
△ = ICE CONTENT (% OF SAMPLE VOLUME)
PLASTIC LIMIT → LIQUID LIMIT: 20 40 60 80 100 100+

NO SAMPLES

GRAIN-SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)

REMARKS

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DRAWN | FIELD ENG | DATE DRILLED 11/4/76 | AIRPHOTO NO: | CHAINAGE | OFFSET
CHKD | TECH PRONYCH | RIG: AIR | SURFACE DRAINAGE: | VEGETATION | ELEV

TEST HOLE
MILE | B,C,S | NUMBER
AREA-18-18

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					Pt	PEAT — 2'		
						ICE — 4'		ICE
						ICE & SAND		ICE & SM
					SM	SAND-SILTY SILT-SANDY — 15'		VS
						BOTTOM OF HOLE-15'		

O = WATER CONTENT (% OF DRY WEIGHT)
Δ = 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.)
18	82	0	CASE WATER		
81	19	0	CASE WATER		

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

NUVIK - TUT.

DWN | FIELD ENG | DATE DRILLED 11/4/76 | AIRPHOTO NO: | CHAINAGE: | OFFSET
CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV

TEST HOLE: MILE | B,C,S | NUMBER: AREA-18-19

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
0						GRAVEL-SAND MIX.		Vx	12	51	37		SAT.	
4					GM	SILTY			6	20	74		WET	
8						8½			19	41	40		WET	
10						SHALE - SOFT		Vc-Vr	86	14	0		SAT	
14								Vx	85	14	1		DAMP	
18									86	14	0		DAMP	
22									97	3	0		DAMP	

○ = WATER CONTENT (% OF DRY WEIGHT)
△ = ICE CONTENT (% OF SAMPLE VOLUME)
PLASTIC LIMIT — LIQUID LIMIT
20 40 60 80 100 100+

BOTTOM OF HOLE. 30'

93-6-1 DAMP

INUVIK – TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DRAWN | FIELD ENG | DATE DRILLED 11/4/76 | AIRPHOTO NO: | CHAINAGE | OFFSET
CHKD | TECH PRONYCH | RIG A112 | SURFACE DRAINAGE: | VEGETATION | ELEV

TEST HOLE: MILE | B,C,S | NUMBER: AREA-18-20

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					Pt	PEAT		
					CL	CLAY - SILTY SANDY 1" MED. PLASTIC		Vc–Vf
6'					SM	SAND - SILTY CLAYEY		
					CL	CLAY - SILTY SANDY		Vx
					ML	SILT - SANDY CLAYEY		
						SHALE - SOFT & SANDSTONE SOFT		

BOTTOM OF HOLE - 30'

O = WATER CONTENT (% OF DRY WEIGHT)
Δ = ICE CONTENT (% OF SAMPLE VOLUME)

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

DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
2	56	44	0		WET		
4	62	38	0		WET		
8	32	68	0		WET		
10	44	56	0		DAMP		
14	56	44	0		DAMP		
20	48	52	0		DAMP		
24	64	36	0		DAMP		

10-9-1 DAMP

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

Inuvik - Tuk -

DWN | FIELD ENG | DATE DRILLED 4/4/76 | AIRPHOTO NO | CHAINAGE | OFFSET
CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION | ELEV

TEST HOLE: MILE | B,C,S | NUMBER: 18-21

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					Pt	PEAT 1"		
4					CL ML	CLAY-SILTY SANDY SILT-SANDY CLAYEY PEBBLES		Vs
6						6'		
8					SM ML	SAND-SILT MIXTURE -POORLY CONSOLIDATED SANDSTONE ?		Vx

○ = 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 (PCF)	DRY DENSITY (PCF)	REMARKS
74	24	2				FREE WATER
77	23	0				FREE WATER
49	48	3				MOIST
47	51	2				MOIST
50	50	0				MOIST
57	43	0				MOIST
48	52	0				MOIST

BOTTOM OF HOLE - 30'

PUBLIC WORKS CANADA — DRILL HOLE REPORT

INUVIK - TUK.

TECH. D. COOK | RIG AIR | DATE 80/09/02 | km | B.P. No. 18 | HOLE No. 22

CHAINAGE | OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
	Pt	PEAT .5m								
2–4	CL	CLAY - SILTY SANDY LOW PLASTIC		Vs	1	82	18	0		WET
6						65	35	0		Free H2O
8		MED. PLASTIC			2	53	47	0		WET
10		SOFT CLAY-SHALE			3	74	26	0		MOIST
12										
14	ML	SAND - SILT MIX			4	82	18	0		DAMP-MOIST
16					5	57	42	1		MOIST
18		CLAY - SILTY								
20	CL	LOW PLASTIC		Vx	6	69	31	0		MOIST
22					7					
24										
26					8	66	34	0		MOIST
28	CI	MED. PLASTIC			9	75	25	0		DAMP-MOIST
30										
32		9.8m			10					
34		SAND - SILTY				28	72	0		MOIST
36	SM				11					
38						84	16	0		MOIST

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

PUBLIC WORKS CANADA — DRILL HOLE REPORT

TECH.	RIG	DATE	km	B.P. No. 18	HOLE No. 22

CHAINAGE	OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)
40		CLAY - SILTY			12
42		MED. PLASTIC			
44	CI				13
46					
48					14
50		N.P. 15.2			15
52		SAND - SILTY			
54					16
56	SM				
58					17
60		18.0m			18
62		CLAY - SILTY SAND APPROACHING SOFT SHALE		Vx	
64	CL	LOW PLASTIC			19
66					
68					20
70		MED. PLASTIC			
72					21
74					
76					22
78					
					23
					24

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa

50 100 150 200 250

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

GRAIN-SIZE ANALYSIS				RELATIVE MOISTURE CONTENT
CLAY %	SILT %	SAND %	GRAVEL %	
84	16	0		Moist
65	35	0		Moist
66	34	0		Moist
27	73	0		Moist
65	35	0		Moist
78	22	0		Moist
86	14	0		Moist
91	9	0		Moist

PUBLIC WORKS CANADA — DRILL HOLE REPORT

TECH.	RIG	DATE	km	B.P. No. 18	HOLE No. 22

CHAINAGE: | OFFSET:

REMARKS:

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)
80	CI	CLAY - SILTY SANDY		Vx	25
82					
84					
86					26
88	CL				
90		27.4 m			27
12		Bottom of Hole - 27.4 m			4
14					
16					5
18					
20					6
22					
24					7
26					
28					8
30					
32					9
34					
36					10
38					11

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa

50 100 150 200 250

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

GRAIN-SIZE ANALYSIS				RELATIVE MOISTURE CONTENT
CLAY %	SILT %	SAND %	GRAVEL %	
71	29	0		MOIST
70	30	0		MOIST
61	39	0		MOIST

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | INUVIK - TUK.

TECH. D. COOK | RIG AIR | DATE 80/04/02 | km | B.P. No. 18 | HOLE No. 23

CHAINAGE | OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)
0	Pt	PEAT			
2		.5m			
4	CL	CLAY - SILTY SANDY LOW PLASTIC		Vs	1
6					
8					2
10	CL	LOW PLASTIC			3
12					
14					4
16					
18	CL			Vx	5
20					6
22					
24					7
26	CL				8
28					
30		9.1m			9
32		BOTTOM OF HOLE - 9.1m			10
34					
36					11
38					

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
67	33	0		DAMP
72	28	0		Less H_2O
80	20	0		WET
61	39	0		MOIST
59	40	1		MOIST
67	33	0		MOIST
61	39	0		MOIST
75	24	1		MOIST
72	28	0		MOIST

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk.

TECH. D. COOK | RIG Air | DATE 80/04/02 | km | B.P. No. 18 | HOLE No. 24

CHAINAGE | OFFSET

REMARKS

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
	PT	PEAT .3m								
2–6		ICE TRACE OF SOIL 2.1m		ICE & CL	1					
8–14		SILTY - SANDY 4.6		VS VX	2–4	76	30	0		FREE H_2O
						73	27	0		WET
						72	28	0		MOIST
16–22	CI	CLAY - SILTY SANDY MED. PLASTIC APPROACHING SOFT SHALE			5–6	81	19	0		MOIST
24–30					7–9	73	27	0		MOIST
						91	9	0		MOIST
32–38	CI			VX	10–11	83	17	0		MOIST

Sup 2

PUBLIC WORKS CANADA — DRILL HOLE REPORT

TECH.	RIG	DATE	km	B.P. No. 18	HOLE No. 24

CHAINAGE	OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)
40					12
42		CLAY - Silty Sandy Soft Shale ?		Vx	
44					13
46					
48					14
50					15
52	SM	SAND - Silty N.P.			
54		16.7m			16
56		BOTTOM OF HOLE - 16.7 m			17
18					
20					18
22					7
24					
26					8
28					
30					9
32					
34					10
36					
38					11

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
83	17	0		Moist
39	61	0		Moist

PUBLIC WORKS CANADA — DRILL HOLE REPORT

INUVIK - TUK

TECH. D. COOK | RIG AIR | DATE 80/04/02 | km | B.P. No. 18 | HOLE No. 25

CHAINAGE | OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)
0	Pt	PEAT — .3m			
2–4		ICE SOME SOIL		ICE & CL	
6–8	Cl	CLAY - SILTY MED. PLASTIC			1–2
10		3.4m			
12–16	Cl	CLAY - SILTY VERY SOFT SHALE MED. PLASTIC CLAY-SHALE		VX	3–5
18–20					6
22		6.7m			
22–24	SP	SAND			7
24		7.6m			
26–30		CLAY - SILTY MED. PLASTIC CLAY-SHALE VERY SOFT			8–9
32–38					10–11

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
89	15	1		MOIST
86	13	1		POOR H_2O
82	18	0		✓
93	7	0		MOIST
91	9	0		DAMP
73	27	0		DAMP
76	24	0		MOIST
78	22	0		MOIST
91	9	0		MOIST
76	29	1		WET

PUBLIC WORKS CANADA — DRILL HOLE REPORT

TECH.	RIG	DATE	km	B.P. No. 18	HOLE No. 25

CHAINAGE | OFFSET

REMARKS

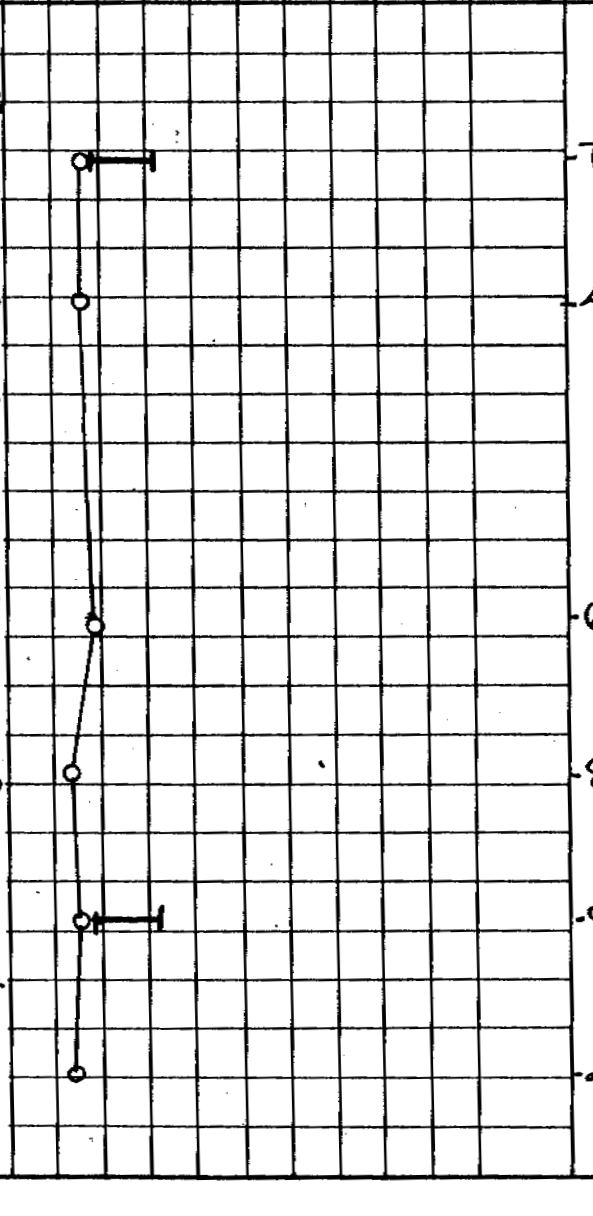
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
40										
42		CLAY-SILTY								
44	CI	CLAY-SHALE VERY SOFT			13					
46										
48		14.6m			14	75	25	0		Moist
50		SAND-SILTY			15	41	59	0		Moist
52	SM									
54					16					
56				Vx	17					
58										
60		18.3m TRACE OF PLASTICITY			18	64	36	0		Moist
62										
64		LAMINATED SAND AND CLAY-SHALE			19					
66										
68	CI	MED. PLASTIC			20	81	19	0		Moist
70										
72					21					
74										
76	SM	SAND-SILTY			22	88	12	0		Moist
78										
					23	45	55	0		Moist
					24					

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+



PUBLIC WORKS CANADA — DRILL HOLE REPORT

TECH. | RIG | DATE | km | B.P. No. 18 | HOLE No. 25

CHAINAGE | OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
80	SC	SAND-SILT MIX CLAYEY		
82				
84				
86		CLAY-SILTY SANDY CLAY SHALE SOFT LOW PLASTIC		Vx
88	CL			
90		27.4m		
		BOTTOM OF HOLE 27.4m		

DEPTH (METRES)

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
25	51	49	0		MOIST
26	78	22	0		MOIST
27	53	45	2		MOIST
28					
29					
6					
7					
8					
9					
10					
11					

14 16 18 20 22 24 26 28 30 32 34 36 38

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik-Tuk

TECH. D. Cook | RIG Air | DATE 80/04/02 | km | B.P. No. 18 | HOLE No. 26

CHAINAGE | OFFSET

REMARKS

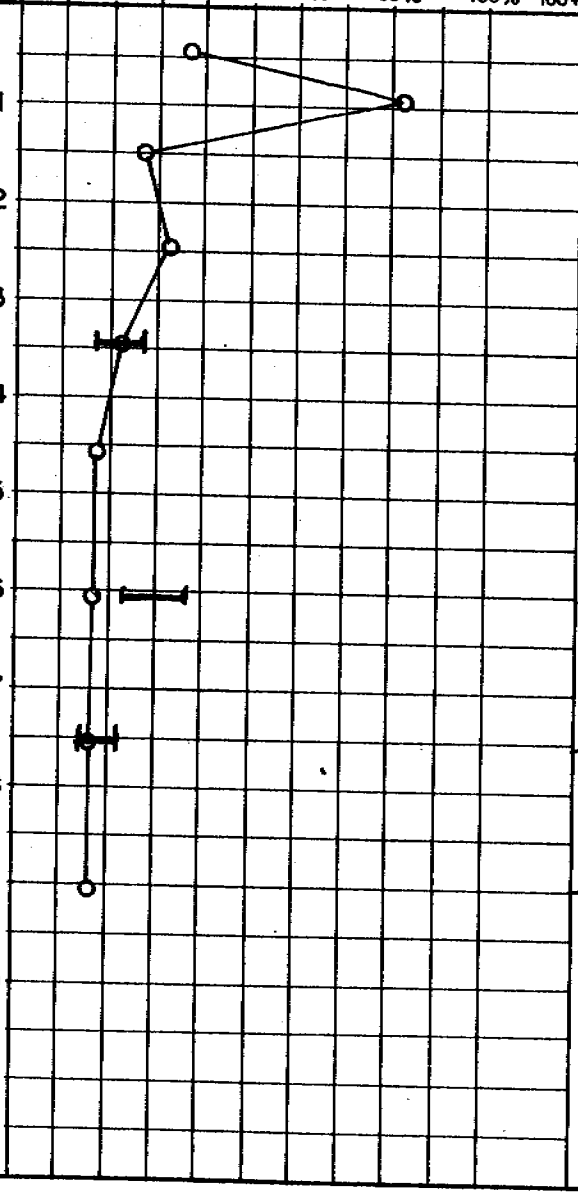
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
	Pt	Peat — 5m		Ice & Cl						
2–4		Ice & Soil — 1.5			1	71	27	2		Sat.
						69	31	0		Free H2O
6					2	60	40	0		Moist
8	Cl	Clay - Silty Sandy Low Plastic		Vc-Vr		49	51	0		Sat
10–12					3					
12						64	36	0		Moist
14					4					
16						62	38	0		Moist
18	Cl	Med. Plastic		Vx	5					
20						95	5	0		Moist
22	Cl	Low Plastic			6					
24		Sand Layers Clayey			7					
26						63	37	0		Moist
28					8					
30		9.1m			9	89	11	0		Moist
32		Bottom of Hole 9.1m			10					
34–38					11					

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+



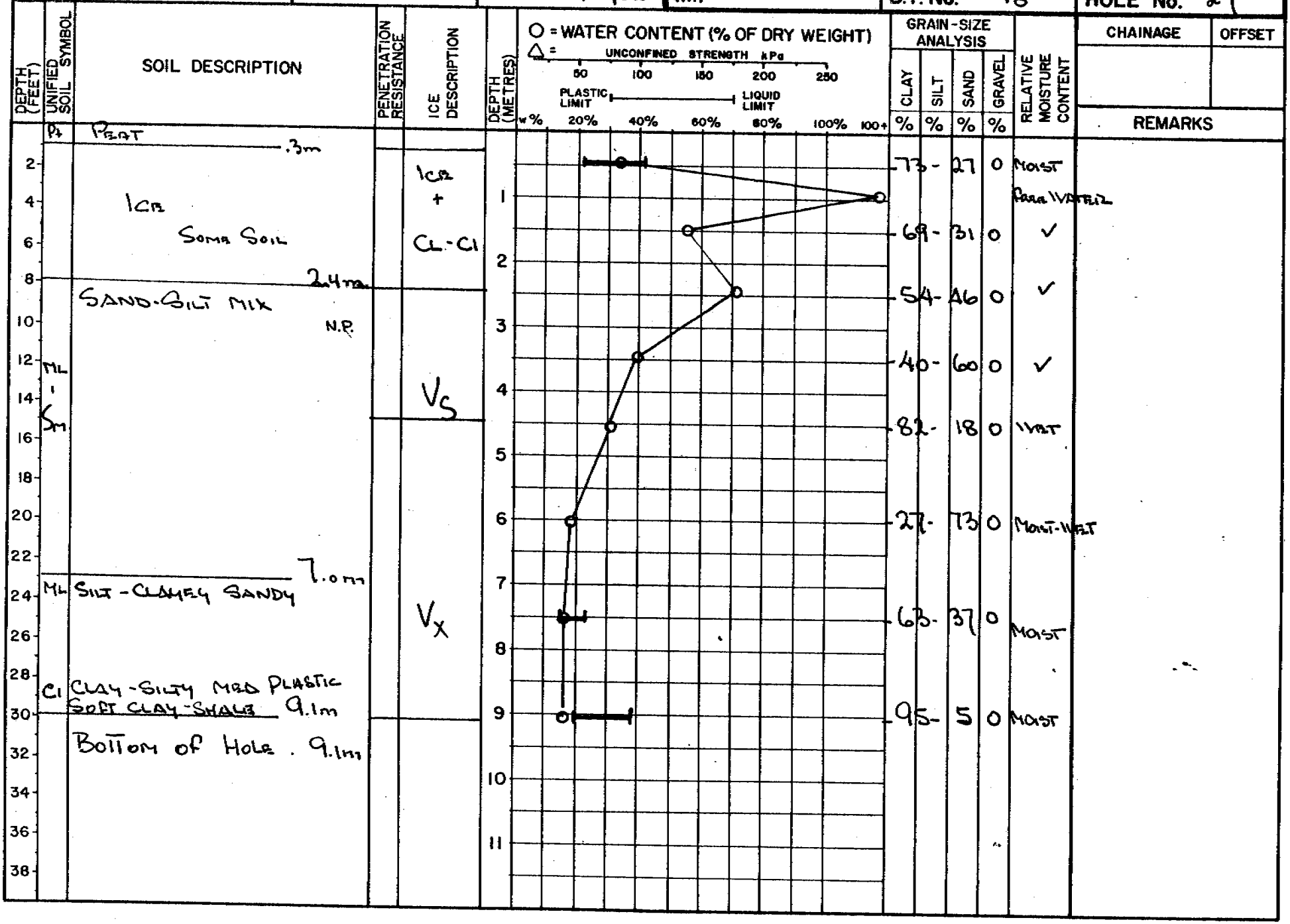
PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk

TECH. D. Cook | RIG Air | DATE 80/04/02 | km | B.P. No. 18 | HOLE No. 27

CHAINAGE | OFFSET

REMARKS



PUBLIC WORKS CANADA — DRILL HOLE REPORT

INUVIK - TUK

TECH. D. COOK | RIG AIR | DATE 80/04/02 | km | B.P. No. 18 | HOLE No. 28

CHAINAGE | OFFSET

REMARKS

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % (20%, 40%, 60%, 80%, 100%, 100+)

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2	Pt	PEAT — .5 m								
4	Cl	CLAY - SILTY SANDY FEW PEBBLES MED. PLASTIC — 2.1 m		Vs	1	86	12	2		MOIST
6						88	12	0		MOIST
8					2	83	15	2		POSS H2O
10		ICE		ICE						
12					3					
14		— 4.6 m			4					
16	Cl	CLAY - SILTY — 5.2 m			5	92	8	0		MOIST
18		CLAY - SILTY SANDY CLAY-SHALE ? MED. PLASTIC								
20					6	61	39	0		MOIST
22										
24	Cl			Ux	7	84	16	0		MOIST
26										
28					8					
30		— 9.1 m			9	68	32	0		MOIST
32		BOTTOM OF HOLE - 9.1 m								
34					10					
36										
38					11					

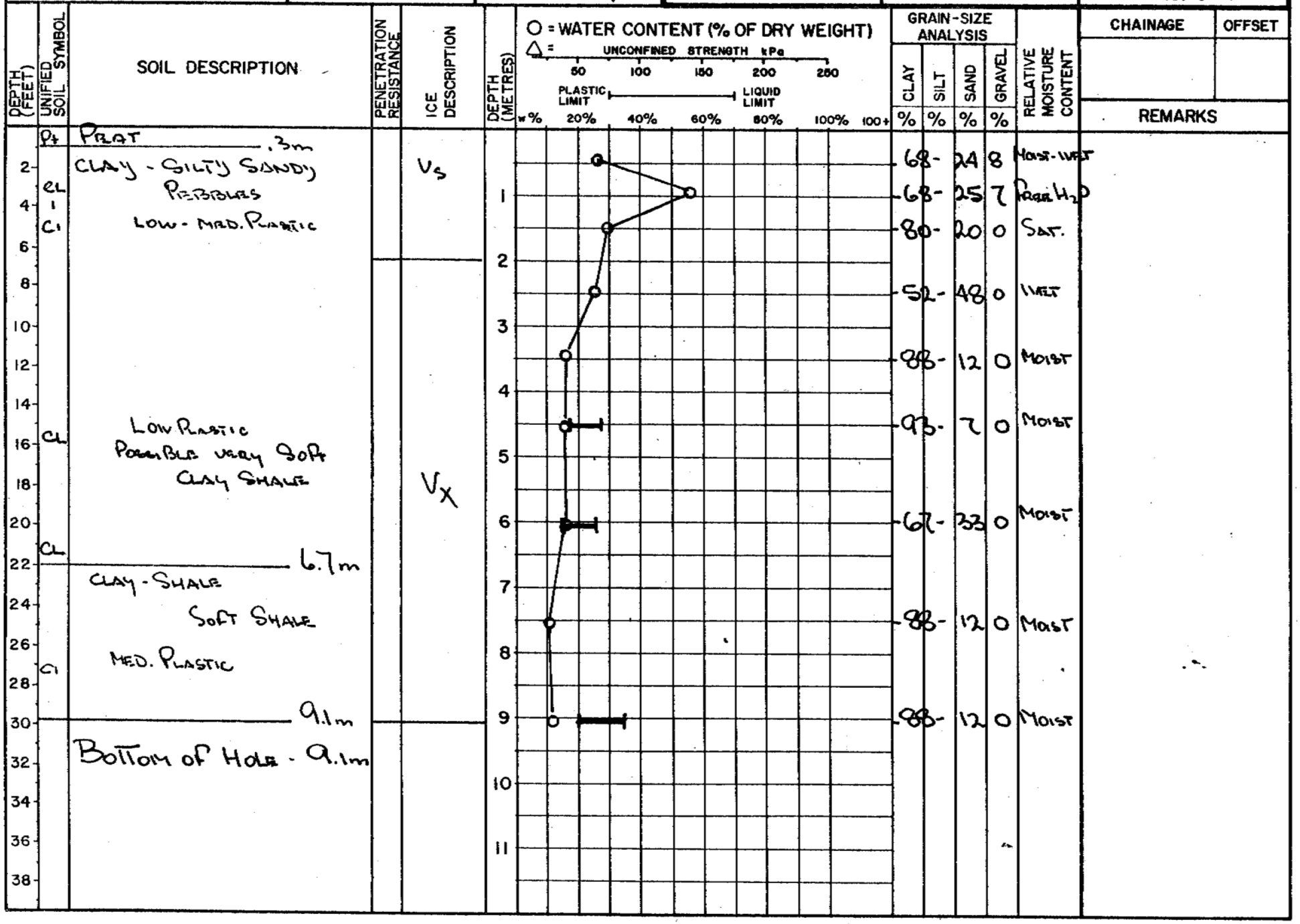
PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk.

TECH. D. COOK | RIG Air | DATE 80/04/02 | km | B.P. No. 18 | HOLE No. 29

CHAINAGE | OFFSET

REMARKS



PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk

TECH. D. COOK | RIG Air | DATE 86/04/02 | km | B.P. No. 18 | HOLE No. 30

CHAINAGE | OFFSET

REMARKS

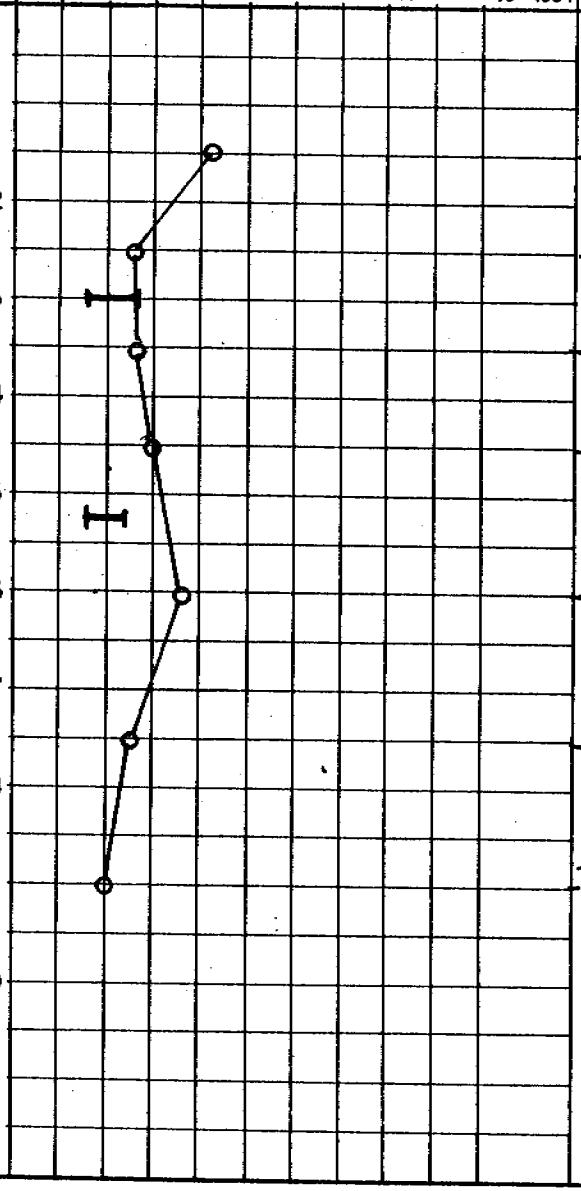
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)
0	Pt	PEAT			
		.3m		Ice & CL	
2		Ice - Trace of Soil			1
4					
6		Ice + Soil		Ice & CL	2
		2.1m			
8	CL	CLAY - Silty Sandy Few Pebbles Low Plastic No Pebbles			3
10					
12					4
14				Vs	
16					5
18	CL				
20					6
22					
24					7
26					
28		CLAY - Shale &		Vx	8
30		9.1m			9
32		Bottom of Hole 9.1m			
34					10
36					11
38					

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+



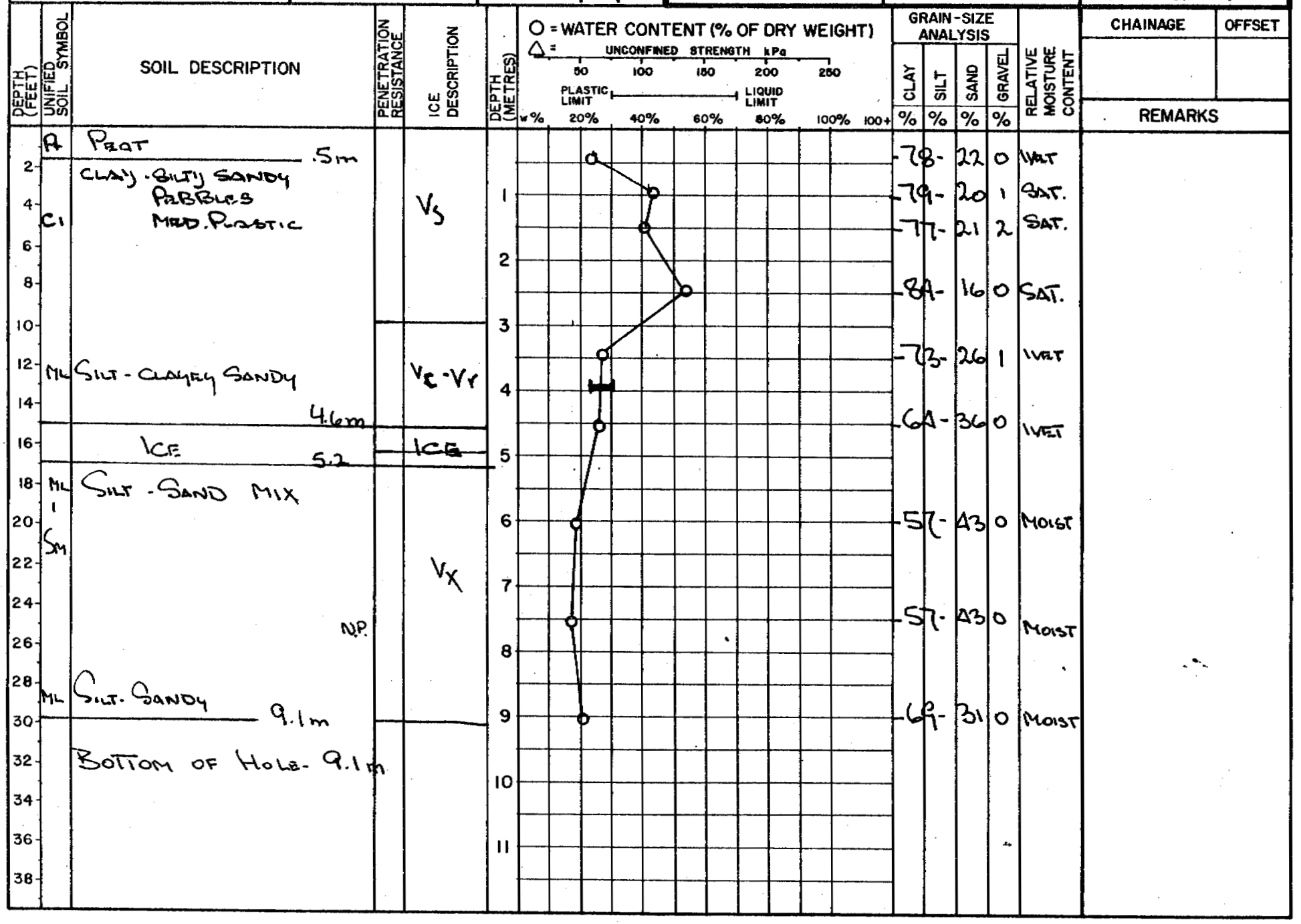
GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
60	35	5		Frozen H_2O
51	46	3		Sat.
76	24	0		Wet
86	14	0		Sat.
94	6	0		Frozen H_2O
65	35	0		Sat.
74	26	0		Moist

PUBLIC WORKS CANADA — DRILL HOLE REPORT — INUVIK-TUK.

TECH. D. COOK | RIG AIR | DATE 80/09/02 | km | B.P. No. 18 | HOLE No. 31

CHAINAGE | OFFSET

REMARKS



DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
0	Pt	PEAT							
2		.5m							
4	CL	CLAY - SILTY SANDY PEBBLES MED. PLASTIC		Vs	78	22	0		WET
6					79	20	1		SAT.
8					77	21	2		SAT.
10					84	16	0		SAT.
12	ML	SILT - CLAYEY SANDY		Vc - Vr	73	26	1		WET
14		4.6m			64	36	0		WET
16		ICE 5.2		ICE					
18	ML / SM	SILT - SAND MIX		Vx	57	43	0		MOIST
20									
22									
24					57	43	0		MOIST
26		N.P.							
28	ML	SILT. SANDY							
30		9.1m			69	31	0		MOIST
32		BOTTOM OF HOLE - 9.1m							
34									
36									
38									

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk

TECH. D. Cook | RIG Air | DATE 80/09/02 | km | B.P. No. 18 | HOLE No. 32

CHAINAGE | OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2	Pt	PEAT .5m			1	60	40	0		MOIST
4	ML	SILT - SANDY				60	40	0		FREE H2O
6	ML-CL	1.5m CLAY - SILTY - SILT - CLAYEY SANDY		VS	2	60	38	2		SAT.
8						63	37	0		DAMP
10		CLAY - SILTY SANDY MED. PLASTIC			3	75	25	0		DAMP
12				1						
14					4	79	20	1		WET
16	CL									
18					5					
20					6	76	24	0		WET
22				VC-VR						
24					7					
26					8	94	6	0		WET
28	CL									
30		9.1m			9	75	25	0		WET
32		BOTTOM OF HOLE - 9.1m			10					
34										
36					11					
38										

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

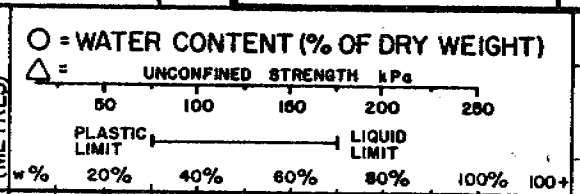
PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk.

TECH. D. Cook | RIG Air | DATE 80/09/02 | km | B.P. No. 18 | HOLE No. 33

CHAINAGE | OFFSET

REMARKS



DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
	PT	PEAT .3m								
2		CLAY - SILTY SANDY PEBBLES				63	36	1		WET
4					1	57	41	2		SAT.
6						47	50	3		WET
8		NO PEBBLES			2	53	47	0		MOIST
10		THIS MATERIAL HAS			3					
12		THE APPEARANCE				55	45	0		MOIST
14		OF A			4					
16		SAND - SILT MIX				53	47	0		DAMP
18					5					
20						55	45	0		MOIST
22					6					
24										
26					7	49	51	0		DAMP
28										
30					8					
32						59	41	0		DAMP
34					9					
36		11.0 m								
38		BOTTOM OF HOLE. 11.0 m VERY HARD SUBSTRATE			10					
					11	47	53	0		DAMP

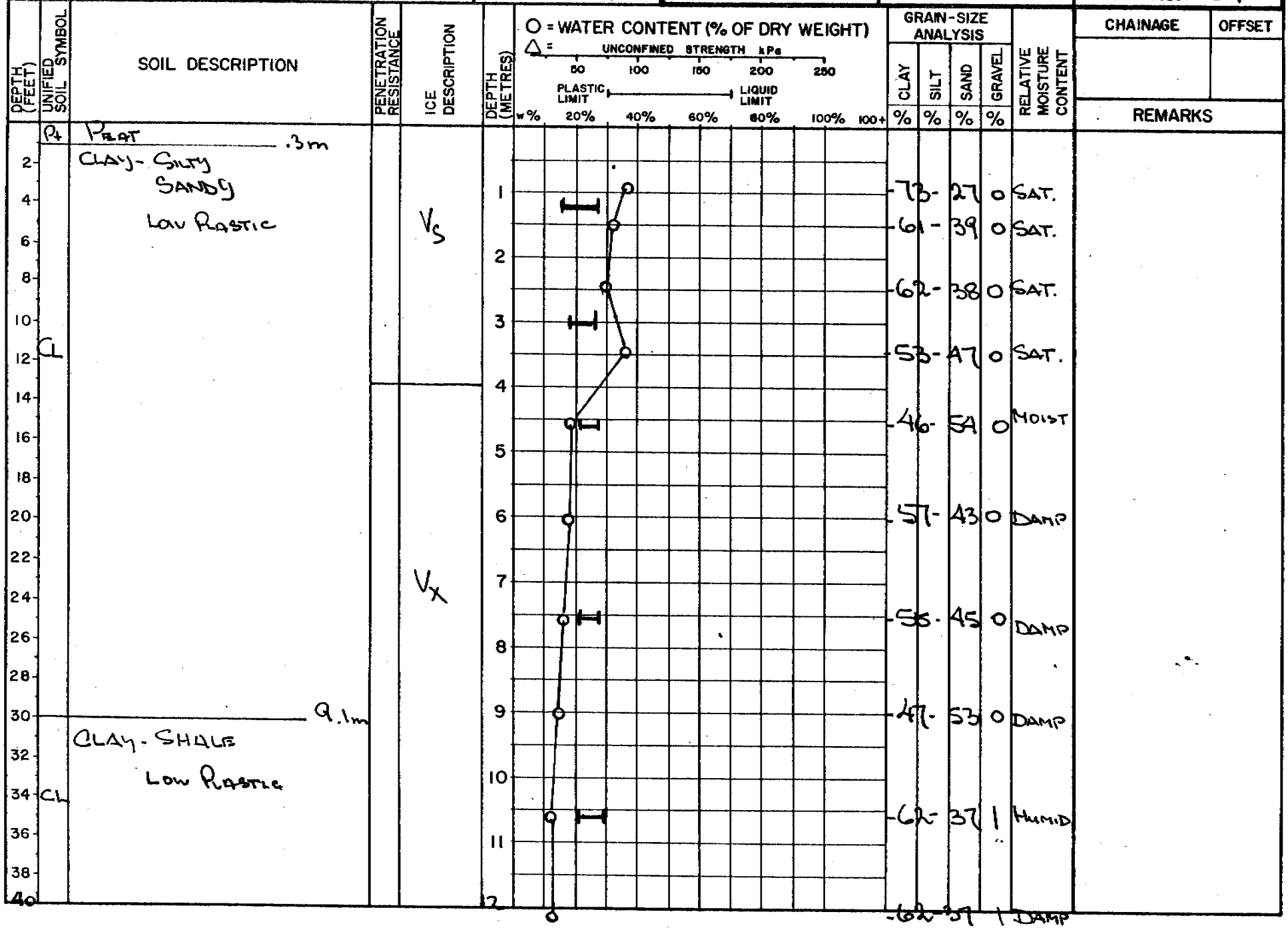
PUBLIC WORKS CANADA — DRILL HOLE REPORT

INUK - TUK.

TECH. D. COOK | RIG AIR | DATE 80/04/02 | km | B.P. No. 18 | HOLE No. 3A

CHAINAGE | OFFSET

REMARKS



PUBLIC WORKS CANADA — DRILL HOLE REPORT

INUVIK - TUK

TECH. | RIG | DATE | km | B.P. No. 18 | HOLE No. 34

CHAINAGE | OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)
40					12
42		CLAY - SHALE			
44		MED. PLASTIC			13
46	CI				
48					14
50		15.2m			15
52		SAND - SILTY			
54					16
56					17
58					
60					18
62					
64					19
66	SM			Vx	20
68					
70					21
72					
74					22
76					
78					23
					24

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
62	37	1		DAMP
94	6	0		DAMP
79	21	0		DAMP
23	75	2		MOIST
22	78	0		MOIST
25	75	0		MOIST
33	67	0		MOIST
31	69	0		MOIST

PUBLIC WORKS CANADA — DRILL HOLE REPORT

TECH.	RIG	DATE	km	B.P. No. 18	HOLE No. 34

CHAINAGE	OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)
80		SAND - SILTY			24
	SM			V_X	
85					26
					27
90		27.4 m			
		BOTTOM OF HOLE - 27.4 m			28
14					6
16					
18					28
20					
22					7
24					
26					8
28					
30					9
32					
34					10
36					
38					11

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

GRAIN-SIZE ANALYSIS				RELATIVE MOISTURE CONTENT
CLAY %	SILT %	SAND %	GRAVEL %	
32	68	0		WET
39	61	0		MOIST
44	56	0		MOIST

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk

TECH. D.Cook | RIG Air | DATE 80/04/02 | km | B.P. No. 18 | HOLE No. 35

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
0	Pt	Peat — .3m		
2	Sm	Sand - Silty		Vs
4		1.2m		
6	GP	Gravel - Sandy		
8		2.7m		
10				
12	SP	Sand		
14		4.6m		
16		Bottom of Hole. 4.6m		
18				
20				
22				
24				
26				
28				
30				
32				
34				
36				
38				

DEPTH (METRES): 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa: 50, 100, 150, 200, 250

PLASTIC LIMIT — LIQUID LIMIT

w %: 20%, 40%, 60%, 80%, 100%, 100+

No Samples Taken

GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT

CHAINAGE	OFFSET

REMARKS

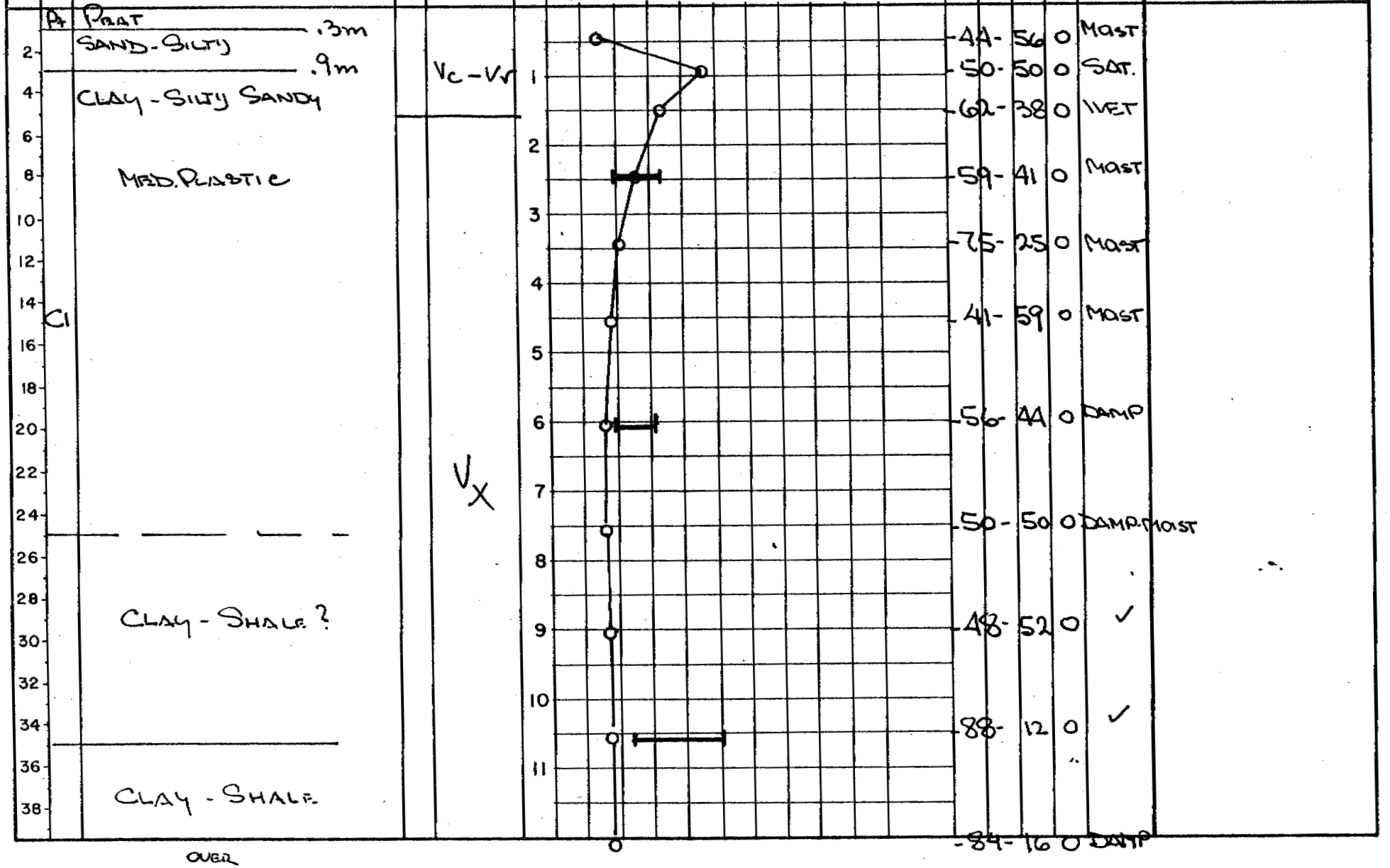
PUBLIC WORKS CANADA — DRILL HOLE REPORT

INUVIK - TUK.

TECH. D. COOK | RIG AIR | DATE 80/04/02 | km | B.P. No. 18 | HOLE No. 36

CHAINAGE | OFFSET

REMARKS



DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2	Pt	PEAT .3m							
		SAND-SILTY .9m		$V_C - V_X$					
4		CLAY - SILTY SANDY			44	56	0		MOIST
6					50	50	0		SAT.
		MED. PLASTIC			62	38	0		WET
8					59	41	0		MOIST
10					75	25	0		MOIST
12									
14	CL				41	59	0		MOIST
16									
18									
20					56	44	0		DAMP
22				V_X					
24					50	50	0		DAMP-MOIST
26									
28		CLAY - SHALE ?			48	52	0		✓
30									
32									
34					88	12	0		✓
36		CLAY - SHALE							
38					84	16	0		DAMP

OVER

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk.

TECH. D. Cook | RIG Air | DATE 80/04/02 | km | B.P. No. 18 | HOLE No. 36

CHAINAGE | OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)
42	CI	CLAY-SILTY SANDY MED. PLASTIC CLAY-SHALE		Vx	13
44					
45		13.7m			
46		BOTTOM OF HOLE - 13.7m			14
8					
10					3
12					
14					4
16					5
18					
20					6
22					
24					7
26					
28					8
30					
32					9
34					10
36					
38					11

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
84		16	0	Damp
92		8	0	Damp

PUBLIC WORKS CANADA — DRILL HOLE REPORT

INUVIK - TUK

TECH. D. COOK | RIG AIR | DATE 80/04/02 | km | B.P. No. 18 | HOLE No. 37

CHAINAGE | OFFSET

REMARKS

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
0	Pt	PEAT .5m								
2		SILT - SAND MIXTURE CLAYEY		VS	0					
4	ML				1	49	51	0		MOIST
6						41	59	0		SAT.
8				VX	2	52	48	0		SAT.
10		3.1				47	53	0		DAMP
12		ICE 3.7		ICE	3					
14		CLAY - SILTY SANDY			4					
16	CH	MED-HIGH PLASTIC				83	17	0		WET
18					5					
20					6	87	13	0		HUMID
22	CL	VERY LITTLE SAND		VX						
24					7					
26						94	6	0		HUMID
28					8					
30		9.1m								
32		BOTTOM OF HOLE - 9.1			9	91	9	0		HUMID
34					10					
36					11					
38										

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | Inuvik - Tuk

TECH. D. Cook | RIG Air | DATE 80/04/02 | km | B.P. No. 18 | HOLE No. 38

CHAINAGE | OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)
0	Pt	PEAT			
2		.5m			
4	Cl	CLAY - SILTY SANDY MED. PLASTIC			1
6		1.5m			
8	SC + ML	SAND - SILT MIXTURE CLAYEY			2
10					3
12					4
14		4.6m			
16		BOTTOM OF HOLE - 4.6m			5
18					
20					6
22					7
24					
26					8
28					
30					9
32					
34					10
36					11
38					

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

ATTERBERG DONE ON COMPOSITED OF 4 SAMPLES

GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
93	7	0		WET
71	29	0		SAT.
56	44	0		MOIST
54	46	0		MOIST
43	57	0		MOIST
39	61	0		MOIST

PUBLIC WORKS CANADA — DRILL HOLE REPORT

INUVIK-TUK

TECH. D. COOK | RIG AIR | DATE 80/04/04 | km | B.P. No. 18 | HOLE No. 39

CHAINAGE | OFFSET

REMARKS

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w % 20% 40% 60% 80% 100% 100+

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
	Pt	PEAT .3m								
2		SAND - SILT MIXTURE		Vc-Vs	1	67	27	6		DAMP
4						52	48	0		SAT.
6	SC					47	53	0		WET
8	I	CLAYEY			2	39	61	0		WET
10	ML	SOFT SANDSTONE?		Vx	3	46	54	0		DAMP
12										
14					4	60	40	0		DAMP
16										
18		HARD			5					
20					6	43	57	0		DAMP
22										
24					7					
26						55	45	0		DAMP
28					8					
30		9.1m			9	52	48	0		DAMP
32		BOTTOM OF HOLE 9.1m								
34					10					
36					11					
38										

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk

TECH. D. Cook | RIG Air | DATE 80/04/04 | km | B.P. No. 18 | HOLE No. 40

CHAINAGE | OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
0	Pt	PEAT .3m								
2–4		CLAY-SILTY SANDY		Vs	1	63	37	0		Moist
4–6		1.5m				53	47	0		Sat.
6–8		SAND-SILT MIX				55	45	0		Sat.
8–10	SC	CLAYEY			2	41	58	1		Sat.
10–12	ML									
12–14					3	41	59	0		Moist
14–16					4	53	47	0		Damp
16–18				Vx	5					
18–20										
20–22		6.4m			6	52	48	0		Damp
22–24		CLAY-SHALE			7					
24–26	CH					87	13	0		Damp
26–28					8					
28–30		9.1m			9	90	10	0		Humid
30–32		BOTTOM OF HOLE. 9.1m			10					
32–34										
34–36					11					
36–38										

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

PUBLIC WORKS CANADA — DRILL HOLE REPORT — Inuvik-Tuk

TECH. D. Cook | RIG Nia | DATE 80/09/09 | km | B.P. No. 18 | HOLE No. A1

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
0	Pt	PEAT — .3m		
2–4	SM – ML	SAND-SILT MIX N.P. — 1.5m		Vs
6–8		SAND - SOFT SAND-STONE		
8–10		CLAYEY		
10–14	Cl	CLAY-SANDY MED PLASTIC — 4.6m		Vx
16		BOTTOM OF HOLE - 4.6m		

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa: 50, 100, 150, 200, 250

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

DEPTH (METRES): 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
47	53	0		WET
49	51	0		MOIST
48	52	0		SAT.
65	35	0		DAMP
75	25	0		DAMP
50	48	2		DAMP

CHAINAGE | OFFSET

REMARKS

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk

TECH. D. Cook | RIG Air | DATE 80/09/04 | km | B.P. No. 18 | HOLE No. 42

CHAINAGE | OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)
0	Pt	PEAT			
		.3m			
2–4	ML-SC	SILT-SAND MIX CLAYEY			
		1.8m			
6–8	SM	SAND-SILTY		VS	
8–12	SM-ML	SILT-SAND MIX N.P.			
14	SM	SAND-SILTY			
		4.6m			
16–18		BOTTOM OF HOLE - 4.6m			

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa: 50, 100, 150, 200, 250

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

GRAIN-SIZE ANALYSIS				RELATIVE MOISTURE CONTENT
CLAY %	SILT %	SAND %	GRAVEL %	
55	41	4		DAMP
59	41	0		Pore H_2O
64	36	0		V
28	72	0		V
58	42	0		SAT.
41	59	0		WET

PUBLIC WORKS CANADA — DRILL HOLE REPORT

Inuvik - Tuk

TECH. D. COOK | RIG Air | DATE 80/09/09 | km | B.P. No. 18 | HOLE No. A3

CHAINAGE | OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)
0	Pt	PEAT — .3m			0
2–8	Cl	CLAY - SILTY SANDY MED. PLASTIC		V_S	0–2
		— 2.7m			
10–12	SM	SAND - SILTY			3
14–16		TO SAND - SILT MIX			4–5
18–20	ML	TO SILT - SANDY		V_X	6
22–24		TO SAND - SILTY CLAYEY			7
26–28	Sc	POSSIBLE SOFT SANDSTONE			8
		— 9.1m			
30–38		BOTTOM OF HOLE - 9.1m			9–11

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)

PLASTIC LIMIT — LIQUID LIMIT

w% 20% 40% 60% 80% 100% 100+

GRAIN-SIZE ANALYSIS				RELATIVE MOISTURE CONTENT
CLAY %	SILT %	SAND %	GRAVEL %	
65	34	1		Moist
92	8	0		Para H_2O
76	24	0		Sat.
90	10	0		Moist
32	68	0		Moist-Wet
59	41	0		✓
77	23	0		✓
50	50	0		✓
39	61	0		✓

SEARCH AREAS #19 and #19A

Landform and Location:	Glacio-fluvial complex on the southwest shore of Eskimo Lakes, 32 miles north of Inuvik - near Mile 1004 to 1006 Mackenzie Highway.
Material:	Sandy gravel.
Volume:	Unlimited but in many small mounds and hillcocks.
Stripping:	Variable from zero to six or eight feet. Most features contain massive clear ice at some depth.
Conclusion:	Development of Area #19A adjacent to the alignment at Mile 1006 could be considered. Pit development costs would be high because of five to eight feet of surface stripping plus massive ice layers at depth, however, pit would be strategically located and would have substantially reduced haul costs over alternate sources.

Topography

This source is part of a glacio-fluvial complex located along the south-west shore of Eskimo Lakes. The major deposit Area (#19) is along the lakeshore and is roughly two miles long and some 3,000 feet in width. This area is located one half to one mile from the highway right-of-way. A smaller deposit Area (#19A) is situated on, and adjacent to, the right-of-way near Mile 1006.

The ground surface throughout the complex is very irregular with many hillcocks, lakes and small gullies draining to Eskimo Lake from the smaller inland lakes. Some areas show a polygonal ground pattern.

Area #19 was test drilled previously by Ripley, Klohn and Leonoff, Consultants and four test holes from that investigation have been included herein.

Materials and Quantities

A - Area #19

This source is very erratic. Test hole #19-1 penetrated roughly 30 feet of sandy gravel with no massive ice inclusions, whereas hole #19-2, within 300 feet, encountered two massive ice layers totalling nine feet in thickness in 17 feet of drilling. Most test holes in this area encountered some clear ice with three holes, #19-6, #19-7 and #19-10, penetrating in excess of 20 feet of ice in a 30 foot hole. Many of the small hillocks contain gravel, however, as a general rule, it appears that where there are small exposed gravel faces on the surface, the deposit is shallow and underlain by ice.

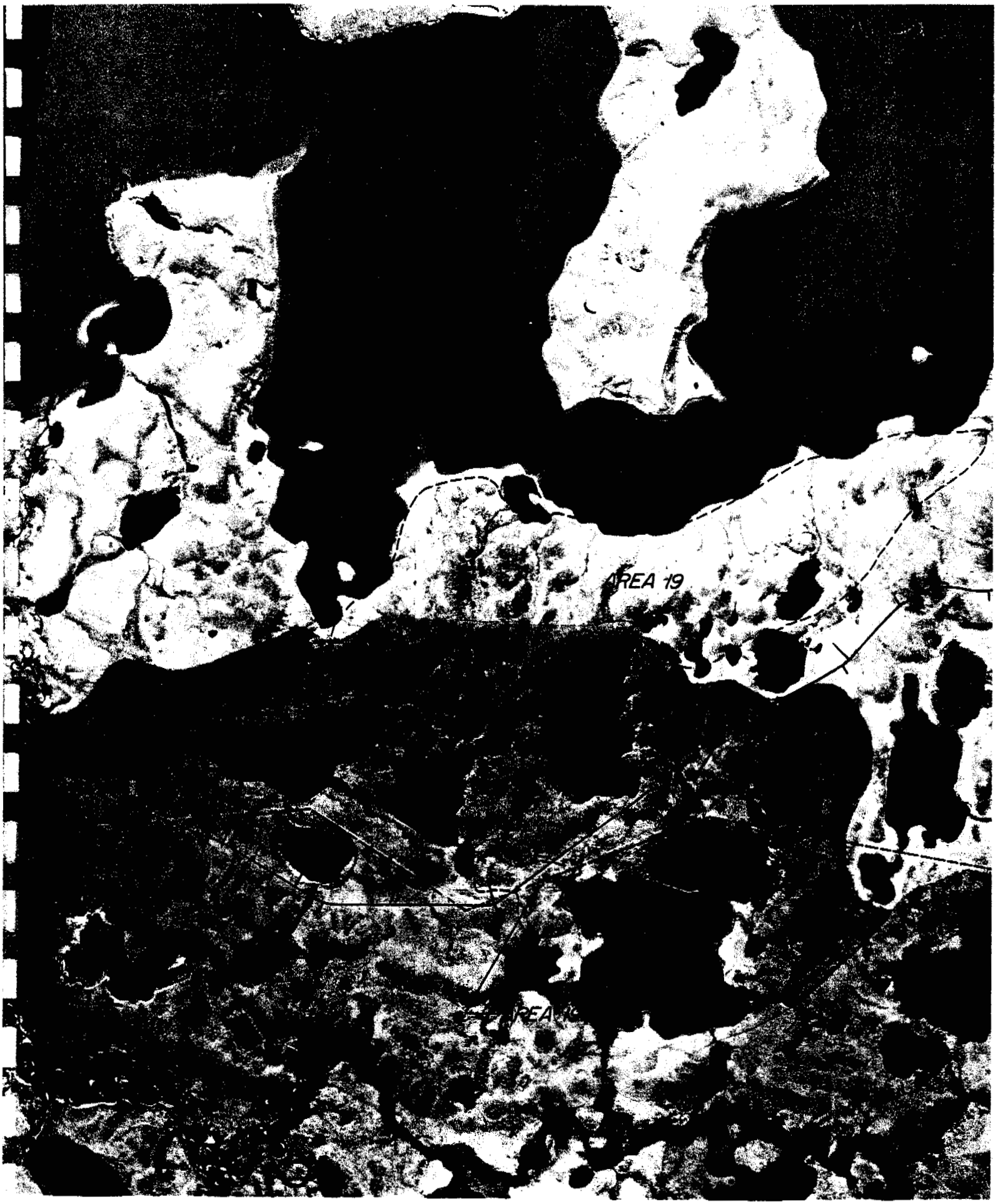
Where gravel does exist it is practically free of ice with thawed moisture contents near 5%.

The volume of recoverable material here is impossible to estimate accurately but it is probably in excess of 1,000,000 cu. yds. consisting of many small areas each with volumes in the order of 50,000 to 100,000 cu. yds. The drilling to date has been sufficient only to verify that there is usable material and, because of the variability in deposits, extensive drilling patterns will be required to select the most favorable features for development. It is expected that most features will contain some massive ice layers which will affect the method and extent of development. This area is probably not a viable source of embankment borrow because of the small volumes in any one feature and the pit development and haul costs. However there is good quality gravel here which may have use as surfacing material, and which could be developed by annual stripping and stockpiling of thawed material from the many small features.

B - Area #19A

This deposit straddles the alignment at Mile 1006 and like Area #19 is very erratic. There are clear ice lenses randomly throughout the sandy gravel, however this feature is considered to be viable embankment borrow source especially if staged construction is utilized. The portion of the feature west of the alignment (test holes #19-5 to #19-9) is recommended for development. Stripping here to the gravel will vary between probably

five to eight feet and some massive ice lenses will have to be removed within the deposit at depth. The gravel itself is at a relatively low moisture content (approximately 5%). It is estimated that at least 500,000 cu. yds. of material is available here, however, a detailed drilling pattern would be required to define the preferred pit area. Excavation of the frozen gravel will be difficult as the feature is on the edge of a relatively large lake which may impose some environmental restrictions on pit development, i.e., extraction by thawing and stripping may not be possible.


AREA 19

19-16
19-13
327-4
327-3
327-1 IS
1000' →
FROM 327
327-2
AREA
19-14
19-11
19-2
19-1
19-4
19-6
19-12
19-3
19-7
19-10
19-9


AREA 19
100
19A-1
19A-2
19A-8
19A-5

INUVIK - TUK

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 29/3/76 | AIRPHOTO NO: | CHAINAGE | OFFSET
CKD | TECH RONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV

TEST HOLE: MILE | B,C,S | NUMBER: AREA-19-1

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 CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)
					Pt	PEAT			2	7	17	6		WET	
	C1					CLAY - SILTY SANDY PEBBLES 2'			4	13	53	34		WET	
						GRAVEL - SANDY			6	6	51	43		WET	
					GW				8	10	38	52		WET	
									10	8	57	35		WET	
									12						
									14						
									16						
									18						
									20	7	36	57		WET	
									22						
									24	4	21	75		WET	

O = WATER CONTENT (% OF DRY WEIGHT)
Δ = ICE CONTENT (% OF SAMPLE VOLUME)
PLASTIC LIMIT — LIQUID LIMIT
20 40 60 80 100 100+

BOTTOM OF HOLE - 30'

--6- 25-68 WET

INUVIK - TUK

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 2/3/76 | AIRPHOTO NO: | CHAINAGE | OFFSET

CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE | VEGETATION | ELEV

TEST HOLE — MILE | B,C,S | NUMBER: AREA - 19-2

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					PT	PEAT 8"		
						CLAY - SILTY		
4						ICE		ICE
8					CL	CLAY - SILTY SANDY PEBBLES		Vs
12					CL			
14						ICE		ICE
20					GP	SAND - GRAVELLY		Vs
24						GRAVEL - SANDY 1" ICE LENSES		

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

PLASTIC LIMIT — LIQUID LIMIT: 20, 40, 60, 80, 100, 100+

DEPTH (FEET)	CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	
8	80	18	2				FREE WATER
12	82	18	0				FREE WATER
20	9	73	18				FREE WATER
24	5	22	53				FREE WATER

BOTTOM OF HOLE - 30'

FREE WATER

INUVIK - TUK

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

OWN | FIELD ENG | DATE DRILLED 29/3/16 | AIRPHOTO NO: | CHAINAGE | OFFSET
CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION | ELEV

TEST HOLE: MILE | B,C,S | NUMBER: AREA - 19-3

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					Pt	PEAT → 2"		
1					CL	CLAY - SILTY SANDY PEBBLES		Vs
4					Cl			
6						ICE		ICE
8								
10						GRAVEL - SANDY SILTY		
12								
14					GM			VcVr
16								
18								
20								
22								
24								

○ = 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 (PCF)	DRY DENSITY (PCF)	REMARKS
75	24	1				WET
81	18	1				FREE WATER
7	26	67				SAT.
13	25	62				SAT
4	26	70				SAT
10	39	51				SAT
9	26	65				FREE WATER

BOTTOM OF HOLE - 30'

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN	FIELD ENG	DATE DRILLED 29/3/76	AIRPHOTO NO:	CHAINAGE	OFFSET
CKD	TECH PRONYCH	RIG AIR	SURFACE DRAINAGE:	VEGETATION	ELEV

TEST HOLE
MILE | B,C,S | NUMBER
AREA - 19-4

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					Pt	PEAT 2"		
					CL	CLAY - SILTY SANDY PEBBLES 3'		
					GW	GRAVEL - SANDY		Vs
					GM	GRAVEL - SAND - SILT MIX		
						ICE		ICE
					GW	GRAVEL - SANDY		Vx
						ICE		ICE

○ = 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.)	REMARKS
78	21	1				FREEWATER
6	33	61				SAT.
42	31	27				SAT.
5	28	67				MOIST

BOTTOM OF HOLE. 30'

INUVIK - TUK

DRILL HOLE REPORT | **DEPARTMENT OF PUBLIC WORKS, CANADA**
MACKENZIE HIGHWAY

DWN	FIELD ENG	DATE DRILLED 29/3/76	AIRPHOTO NO:	CHAINAGE	OFFSET
CKD	TECH RONYCH	RIG AIR	SURFACE DRAINAGE:	VEGETATION:	ELEV

TEST HOLE — MILE | B,C,S | NUMBER: AREA - 19-5

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					Pt	PEAT — 2"		
2						ICE		ICE
4						CLAY - SILTY SANDY		
6						— 7'		
8						GRAVEL - SANDY		
10								
12					GW			
14								
16								
18								
20								
22								
24								

○ = 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.)
82	18	0			FREE WATER
5	15	80			SAT.
2	17	81			WET
3	23	74			SAT.
8	47	45			SAT.
5	18	77			WET

ICE — ICE

BOTTOM OF HOLE - 30'

ICE — ICE

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 19/3/76 | AIRPHOTO NO: | CHAINAGE | OFFSET | TEST HOLE
CKD | TECH RONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV | MILE | B,C,S | NUMBER
AREA-19-6

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.)	REMARKS
					Pt	PEAT 8"											
						ICE		ICE		NO SAMPLES							
2									2								
4									4								
6									6								
8									8								
10									10								
12									12								
14									14								
16									16								
18									18								
20									20								
22									22								
24									24								

Bottom of Hole - 30'

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 24/3/76 | AIRPHOTO NO: | CHAINAGE: | OFFSET | TEST HOLE
CKD | TECH PRONYCH | RIG: AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV | MILE | B,C,S | NUMBER
AREA - 19-7

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					P_t	PEAT — 2"		
					CL	CLAY - SILTY SANDY PEBBLES		V_S
						ICE		ICE
						FEW SOIL LENSES		
						GRAVEL SANDY — 26'		V_S
						BOTTOM OF HOLE - 30'		

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

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

NO SAMPLES

GRAIN-SIZE ANALYSIS				WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
CLAY %	SILT %	SAND %	GRAVEL %			

INUVIK - TUK

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 29/3/76 | AIRPHOTO NO: | CHAINAGE | OFFSET
CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION | ELEV

TEST HOLE: MILE | B,C,S | NUMBER: ADE-A - 19-8

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					Pt	PEAT — 2"		
2						ICE		ICE
4								
6					OL	CLAY - SILTY ORGANIC — 7'		
8					GM	GRAVEL - SILTY SANDY		
10					GW	SANDY		
12								
14								Vc-Vr
16								
18								
20								
22								
24								

O = WATER CONTENT (% OF DRY WEIGHT)
Δ = ICE CONTENT (% OF SAMPLE VOLUME)

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

GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
9	1	6	3			SAT.
26	31	43				FREE WATER
6	35	59				SAT.
8	31	61				SAT.
5	33	62				SAT.
3	31	66				SAT.

-4-39-57 SAT.

BOTTOM OF HOLE - 30'

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 29/3/76 | AIRPHOTO NO: | CHAINAGE: | OFFSET

CKD | TECH PRONYCH | RIG CAT | SURFACE DRAINAGE: | VEGETATION: | ELEV

TEST HOLE — MILE | B,C,S | NUMBER: AREA-19-9

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					Pt	PEAT 2"		Vs
					GC	CLAY - SAND - GRAVEL MIX		
4					GW	GRAVEL - SANDY		
6								Vc-Vr To Vs
18						ICE		ICE

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

PLASTIC LIMIT — LIQUID LIMIT

DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	
2	45	33	22				POREWATER
6	5	37	58				SAT.
8	8	32	60				WET
12	7	46	47				SAT.
15	4	21	75				SAT.

BOTTOM OF HOLE. 30'

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

INUVIK - TUK

DRAWN	FIELD ENG	DATE DRILLED 29/3/76	AIRPHOTO NO:	CHAINAGE	OFFSET
CKD	TECH PRONYCH	RIG AIR	SURFACE DRAINAGE:	VEGETATION	ELEV

TEST HOLE

MILE	B,C,S	NUMBER
		AREA - 19-10

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 CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
					Pt	Peat — 2"									
					GW	Gravel - Sandy									
						ICE		ICE							

O = WATER CONTENT (% OF DRY WEIGHT)
Δ = ICE CONTENT (% OF SAMPLE VOLUME)
PLASTIC LIMIT — LIQUID LIMIT
20 40 60 80 100 100+

NO SAMPLES

BOTTOM OF HOLE - 30'

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

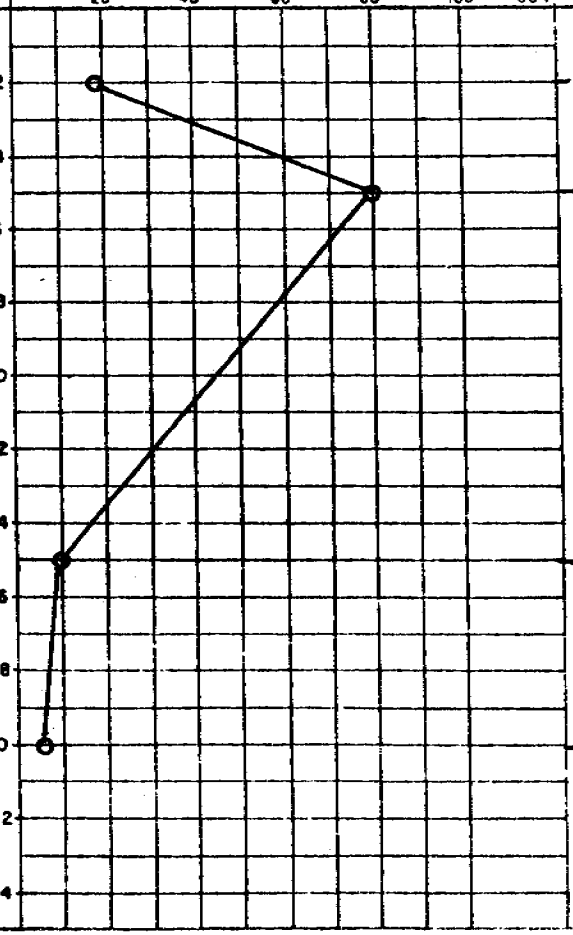
DWN | FIELD ENG. | DATE DRILLED 30/3/76 | AIRPHOTO NO: | CHAINAGE | OFFSET
CKD | TECH PRONYCH | RIG: AIR | SURFACE DRAINAGE: | VEGETATION | ELEV

TEST HOLE: MILE | B,C,S | NUMBER
AREA - 19 - 11

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					PT	PEAT — 2"		
					GM	GRAVEL - SANDY SILTY		V_s
8						ICE		ICE
14					GW	GRAVEL - SANDY		$V_c - V_x$
23						BOTTOM OF HOLE - 23'		

○ = 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 (PCF)	DRY DENSITY (PCF)	REMARKS
0 - 2	39	52					FREE WATER
5 - 6	29	56					FREE WATER
8 - 14	28	69					SAT.
18 - 20	57	35					SAT.

CAVING

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 30 8 76 | AIRPHOTO NO: | CHAINAGE | OFFSET

CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE | VEGETATION | ELEV

TEST HOLE | MILE | B,C,S | NUMBER | AREA - K9 - 12

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					Pt	PEAT 2"		
4						CLAY - SILTY SANDY PEBBLES		Vs
8						ICE 15'		ICE
18						GRAVEL - SANDY		
22						Rock Bit used after 15'		
24						Bottom of Hole - 23'		

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

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

NO SAMPLING

DEPTH (FEET)	CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
2						
4						
6						
8						
10						
12						
14						
16						
18						
20						
22						
24						

GRAIN-SIZE ANALYSIS

CAVING

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

INUVIK - TUK

DRAWN | FIELD ENG | DATE DRILLED 3/13/76 | AIRPHOTO NO: | CHAINAGE: | OFFSET
CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV

TEST HOLE
MILE | B,C,S | NUMBER
AREA - 19 - 13
REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					Pt	PEAT 2"		
					CL-SM	CLAY - SILTY SANDY PEBBLES 3'		V_S
4					SM	SAND - SILTY PEBBLES GRAVELLY		
8								$V_C - V_V$ TO V_X
14						ROCK BIT USED AFTER 15'		
25						BOTTOM OF HOLE - 25'		

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

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

DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
2	76	22	2				WET
4	41	57	2				FREE WATER
6	6	62	32				SAT.
10	4	18	81				SAT.
14	4	52	44				SAT.
20	5	54	41				SAT.
24	8	33	59				SAT

INUVIK - TUK

DRILL HOLE REPORT

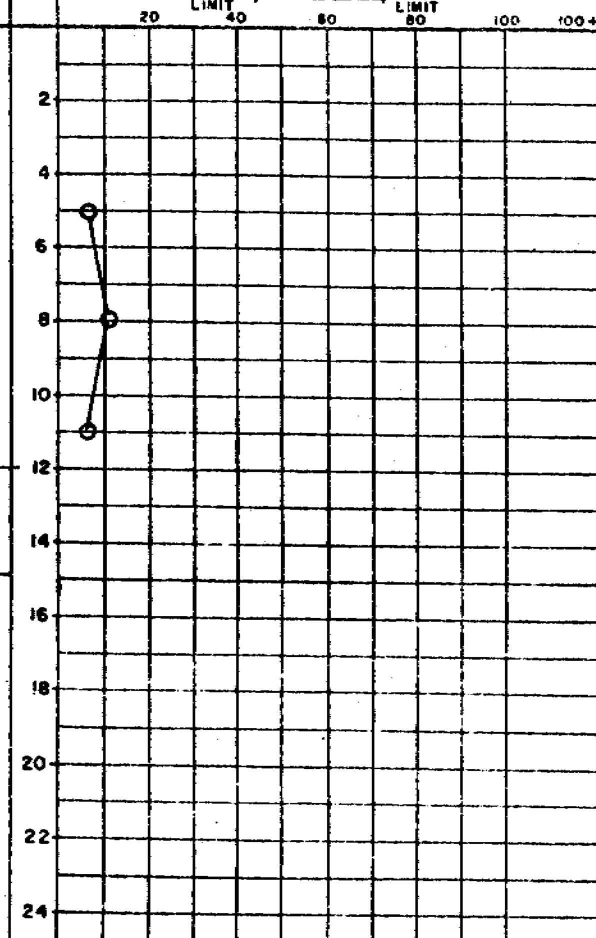
DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN	FIELD ENG	DATE DRILLED 30/3/76	AIRPHOTO NO:	CHAINAGE	OFFSET
CKD	TECH PRONYCH	RIG: AIR	SURFACE DRAINAGE:	VEGETATION	ELEV

TEST HOLE		
MILE	B,C,S	NUMBER
AREA - 19 - 14		

○ = WATER CONTENT (% OF DRY WEIGHT)
△ = ICE CONTENT (% OF SAMPLE VOLUME)
PLASTIC LIMIT ——— LIQUID LIMIT

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
0					Pt	PEAT — 2"									
2–4					SP	SAND - GRAVELLY									
5					GW	GRAVEL - SANDY		V_c - V_r	6	-	55	39	SAT.		
8									8	-	37	55	SAT.		
11									5	-	19	76	SAT.		
12–15						ICE — 15'		ICE							
15						BOTTOM OF HOLE - 15'									



DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

INUVIK - TUK.

DWN	FIELD ENG	DATE DRILLED 30/3/66	AIRPHOTO NO:	CHAINAGE	OFFSET
CKD	TECH TRONYCH	RIG AIR	SURFACE DRAINAGE:	VEGETATION	ELEV

TEST HOLE

MILE	B,C,S	NUMBER
AREA - 19 - 15		

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					Pt	PEAT — 2"		
						GRAVEL - SANDY		Vs
						5½'		
					SM	SILT - SANDY		
					ML	SAND - SILTY		
						9'		
						ICE		ICE
						15'		
						BOTTOM OF HOLE - 15'		

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

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

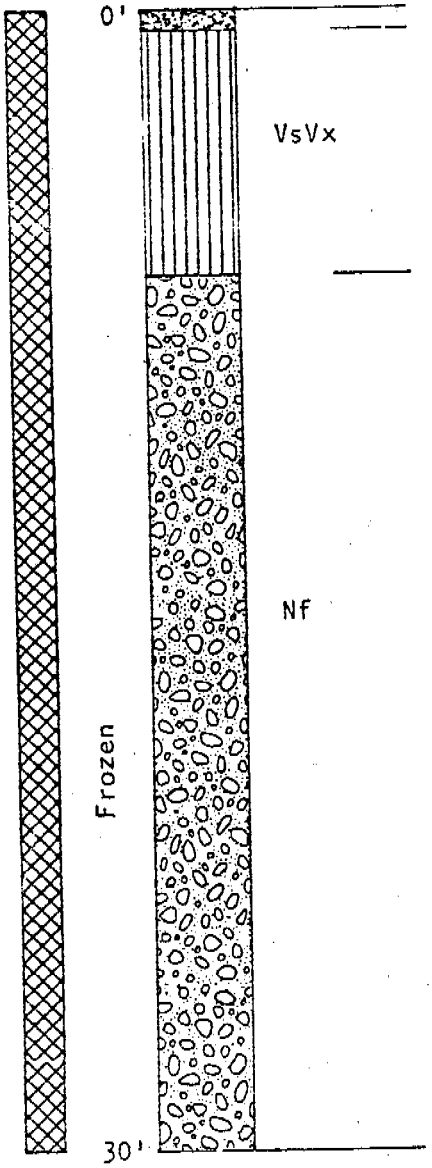
NO SAMPLES

GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
CLAY %	SILT %	SAND %	GRAVEL %		

TEST HOLE LOGS

SOURCE No. 327

327-1

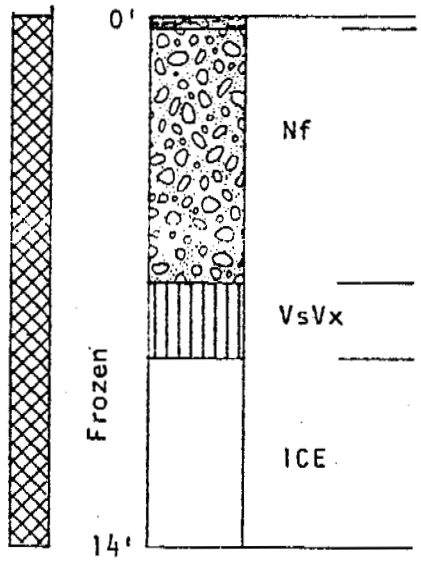


0'		(OL)	SILT - organics, roots, peat, etc.
.5'			
	VsVx	(ML)	SILT - some gravel, little sand, little clay, medium plastic, ice lenses and inclusions.
7.0'			
	Nf	(GP)	GRAVEL - some sand, trace silt, coarse graded, no visible ice.
30.0'			

TEST HOLE LOGS

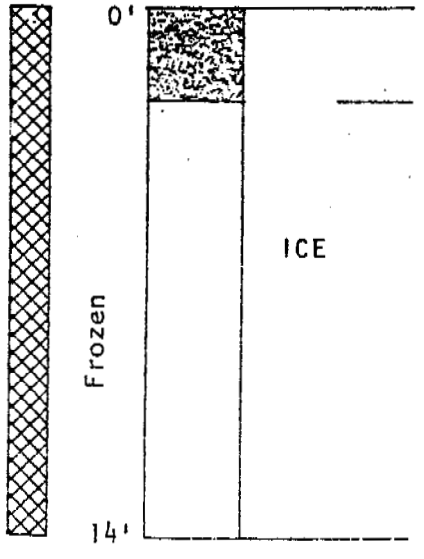
SOURCE No. 327

327-2



0'			
.25'	(OL)	SILT - organics, roots, peat, etc.	
	(GW-GM)	GRAVEL - some sand, trace silt, some cobbles, well graded, no visible ice.	
7.0'			
	(ML)	SILT - and ice lenses and inclusions.	
9.0'			
		ICE - clear.	
14.0'			

327-3

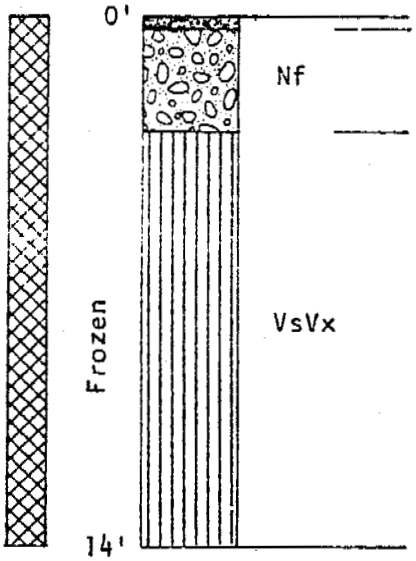


0'		
	(OL)	SILT - and organics, roots, peat, etc.
2.5'		
		ICE - and silt inclusions.
14.0'		

TEST HOLE LOGS

SOURCE No. 327

327-4



0'			
.25'	(OL)	SILT -	and organics, roots, peat, etc.
	(GW)	GRAVEL -	and sand, trace silt, well graded, dry and loose, no visible ice.
3.0'			
	(ML)	SILT and ICE	lenses and inclusions, low plastic.
14.0'			

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 19/4/76 | AIRPHOTO NO: | CHAINAGE: | OFFSET
CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV

TEST HOLE 19A-1

MILE	B,C,S	NUMBER
1005	19A-1	

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					Pt	PEAT 2"		
2					CL-CI	CLAY - SILTY SANDY PEBBLES 3'		
4						GRAVEL - SANDY		Vc-Vr
6								To
8					GW			Vs
10								
12								
14								
16								
18								
20								
22								
24								

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

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

DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	
2	6	7	29	4			DAMP
4	9		26	65			SAT.
6	13		28	59			SAT.
8	4		25	71			SAT. GRAVEL WATER
10							
12							
14	4		21	75			WET
16							
18							
20	6		42	52			SAT.
22							
24	4		34	62			WET

SAND - GRAVELLY

BOTTOM OF HOLE - 30'

-5-57-38 W&T

SAND - GRAVELLY

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 10/4/72 | AIRPHOTO NO: | CHAINAGE | OFFSET
CKD | TECH Pronych | RIG: AIR | SURFACE DRAINAGE: | VEGETATION | ELEV

TEST HOLE 19A-2

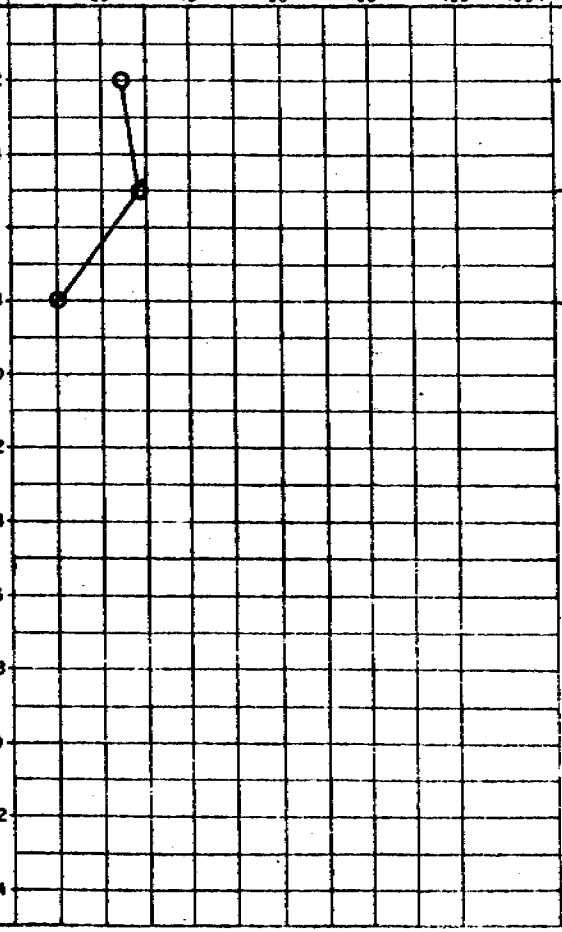
MILE	B,C,S	NUMBER
1005		19A-2

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					Pt	Peat — 2"		
					CL	CLAY - SILTY SANDY		Vc - Vr
4								
6						— 7'		
8					GC	GRAVEL - SANDY CLAYEY		
10						— 11'		
12						ICE		ICE
14						— 15½'		
16					GW	GRAVEL		Vs
18								
20						— 19'		
22						ICE		ICE
24						OCCASSIONAL GRAVEL LENSE		

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

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



DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
2	88	12	0		MOIST	
6	68	19	13		WET	
8	19	33	48		WET	

BOTTOM OF HOLE - 27'

BOTTOM OF HOLE - 27'

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG. | DATE DRILLED 10/4/76 | AIRPHOTO NO: | CHAINAGE: | OFFSET
CKD | TECH PRONYCH | RIG: AIR | SURFACE DRAINAGE: | VEGETATION | ELEV

TEST HOLE 19A-3

MILE	B,C,S	NUMBER
1005		19A-3

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					Pt	PEAT 2"		
2					CL-CI	CLAY - SILTY SANDY 3½'		Vc-Vr
4						GRAVEL - SANDY		To
6								
8					GW			Vs
10								
12								
14								
16								
18								
20								
22						ICE		ICE
24						SOME GRAVEL		

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

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

DEPTH (FEET)	CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	
2	73	26	1				SAT.
4	11	43	46				SAT
8	12	43	45				SAT.
10	5	29	67				SAT.
14	4	32	64				SAT
20	5	25	70				FREE WATER

GRAVEL - SANDY

0

BOTTOM OF HOLE - 30'

-13-49-38 SAT.

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 9/4/76 | AIRPHOTO NO: | CHAINAGE | OFFSET
CKD | TECH PRONYCH | RIG: AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV

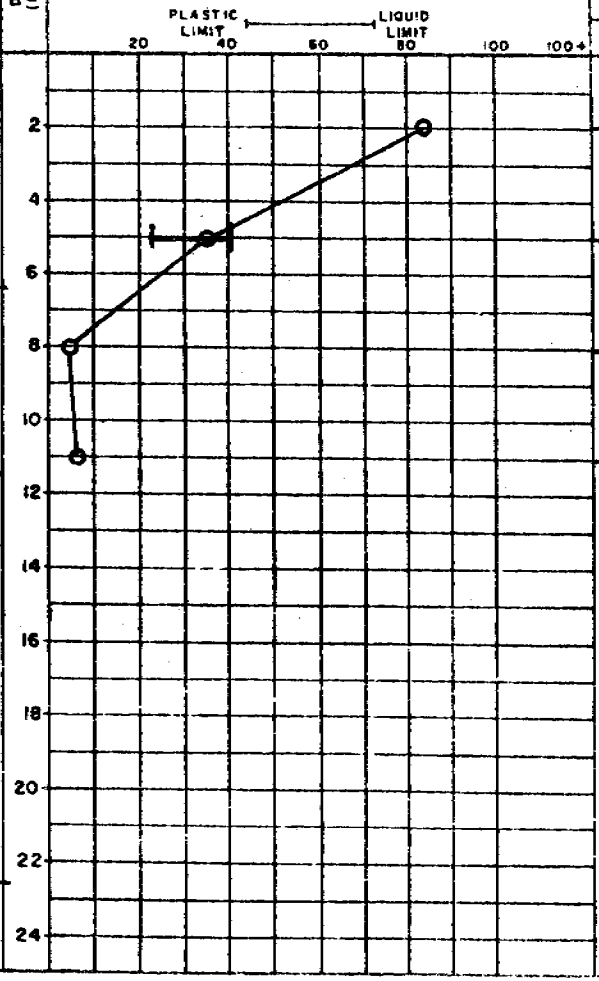
TEST HOLE 19A-4

MILE	B,C,S	NUMBER
1005		19A-4

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					Pt	PEAT 2"		
					CL	CLAY - GRAVELLY SILTY SANDY		VS
					CI	LOW-MED. PLASTIC 6½'		
					GM	GRAVEL - SANDY SILTY		Vx
						ICE		ICE
						GRAVELLY 22½		
						BOTTOM OF HOLE. 22½'		

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



GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)
58	19	23		SAT.	
74	20	6		SAT.	
10	37	53		WET	
19	43	38		WET	

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

INUVIK - TUK.

DWN | FIELD ENG | DATE DRILLED 10/4/76 | AIRPHOTO NO: | CHAINAGE: | OFFSET
CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION | ELEV

TEST HOLE 19A-5

MILE	B,C,S	NUMBER
1005	19A - 5	

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					PT	PEAT 2"		
					CL	CLAY - SILTY SANDY PEBBLES		
					CL	3'		
4					GW	GRAVEL - SANDY		Vx
						5½'		
6					SM	SAND-SILTY 7½'		
8						ICE 9'		ICE
10					GW	GRAVEL - SANDY		Vc-Vr
14								
18								
20								
22								
24								

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

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

DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
2	77	18	5			DAMP
4	8	37	55			WET
10	2	18	80			DAMP
14	14	47	39			SAT.
20	6	20	74			SAT.
24	3	20	77			SAT.

BOTTOM OF HOLE -26'

BOTTOM OF HOLE -26

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 10-4-76 | AIRPHOTO NO: | CHAINAGE | OFFSET
CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION | ELEV

TEST HOLE 19A-6

MILE	B,C,S	NUMBER
1005	19A	-6

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					PT	PEAT — 2"		
2					CL	CLAY - SILTY SANDY PEBBLES		
6						— 6½'		
8					GW	GRAVEL - SANDY		Vc-Vr
10								
12								
14						— 15'		
16						BOTTOM OF HOLE - 15'		

○ = 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 (PCF)	DRY DENSITY (PCF)
80	19	1		SAT.	
73	29	1		WET	
11	49	40		SAT.	
5	40	55		SAT.	
4	42	54		SAT.	

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

INUVIK - TUK.

DWN	FIELD ENG	DATE DRILLED 10/14/76	AIRPHOTO NO:	CHAINAGE	OFFSET
CKD	TECH PAWLYCH	RIG: AIR	SURFACE DRAINAGE:	VEGETATION	ELEV

TEST HOLE 19A-7

MILE	B,C,S	NUMBER
605	19A	-7

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 CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
					Pt	PEAT 2"									
					CL	CLAY - SILTY SANDY									
4					CI				2	82	18	0		DAMP	
6						6½'			4	77	23	0		SAT.	
8						GRAVEL - SANDY			8	8	39	53		SAT.	
10									10	5	42	53		SAT.	
12								Vc-Vr	12						
14									14						
					GW	ROCK BIT USED AFTER 15'			15	8	43	49		SAT.	
18									18						
20									20	3	45	52		SAT.	
22									22						
24									24	6	50	44		SAT.	

○ = WATER CONTENT (% OF DRY WEIGHT)
△ = ICE CONTENT (% OF SAMPLE VOLUME)
PLASTIC LIMIT — LIQUID LIMIT
20 40 60 80 100 100+

SM SAND - SILTY GRAVELLY

BOTTOM OF HOLE - 30'

-13-74-13 H.B.

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 10/4/76 | AIRPHOTO NO. | CHAINAGE | OFFSET
CKD | TECH PROVYCH | RIG A12 | SURFACE DRAINAGE: | VEGETATION | ELEV

TEST HOLE 19A-8
MILE 1005 | B,C,S | NUMBER 19A-8

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					Pt	PEAT — 2'		
					Cl	CLAY - SILTY SANDY — 3'		
					Gw	GRAVEL - SANDY		Vc-Vr
						11½'		
						ICE — 13'		ICE
					Gw	SANDY GRAVEL AS ABOVE		Vc-Vr
						ROCK BIT USED AFTER 15'		
						ICE — 17'		ICE
					Gw	SANDY GRAVEL AS ABOVE — 19'		Vc-Vr
						23'		
						ICE		ICE
						28'		
					Gw	SANDY GRAVEL AS ABOVE		

BOTTOM OF HOLE - 30'

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

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

DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
2	88	12	0				DAMP
6	6	48	46				SAT.
8	7	38	55				WET
12	5	37	58				SAT.
16	3	37	60				WET
20	3	39	58				SAT.

-2-20-78 SAT

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

OWN	FIELD ENG	DATE DRILLED 11/4/70	AIRPHOTO NO:	CHAINAGE:	OFFSET
CKD	TECH PRONYCH	RIG: N/R	SURFACE DRAINAGE:	VEGETATION:	ELEV

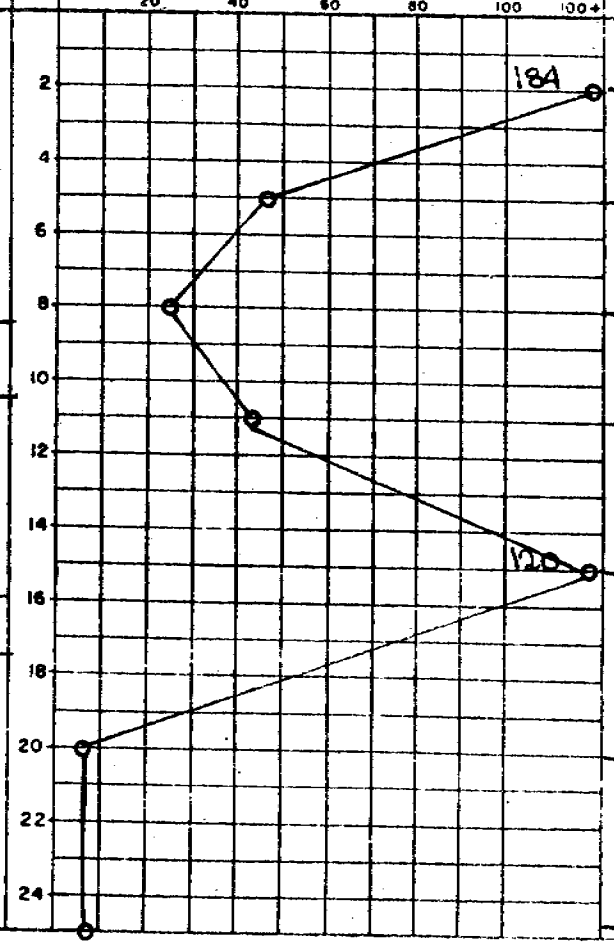
TEST HOLE 19A-9

MILE	B,C,S	NUMBER
1005	19A-9	

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					Pt	PEAT 2'		
2					CL	CLAY - SILTY SANDY		VS
4					CL			
6						7'		
8					GW	GRAVEL - SANDY 8.5'		
10						ICE 10.5'		ICE
12					SM	SAND - GRAVELLY SILTY		
14					GW	GRAVEL - SANDY		VS
16						ROXBIT USED ACTRAS 16'		
18						ICE 17.5'		ICE
20						GRAVEL - SANDY ICE MELTING AFTER		
22					GW	20' WATER IN HOLE		VC-VF
24								

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

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



DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
2	79	20	1				FREE WATER
4	81	19					FREE WATER
8	8	29	63				FREE WATER
11	16	82	1				FREE WATER
14	7	22	61				FREE WATER
20	3	24	73				SAT.
22	7	33	60				SAT.

NEXT PAGE

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

TEST HOLE 19A-9

MILE	B,C,S	NUMBER
1005	19A-9	

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2					GW	GRAVEL - SANDY		Vc - Vr
10					SM	SAND - GRAVELLY SILTY 42'		
12						BOTTOM OF HOLE - 42		

DEPTH (FEET) 30, 32, 34, 36, 38, 40, 42, 44, 16, 18, 20, 22, 24

○ = 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 (PCF)	DRY DENSITY (PCF)
5	29	66		WET	
7	17	76		WET	
12	68	20		M.C.	

REMARKS

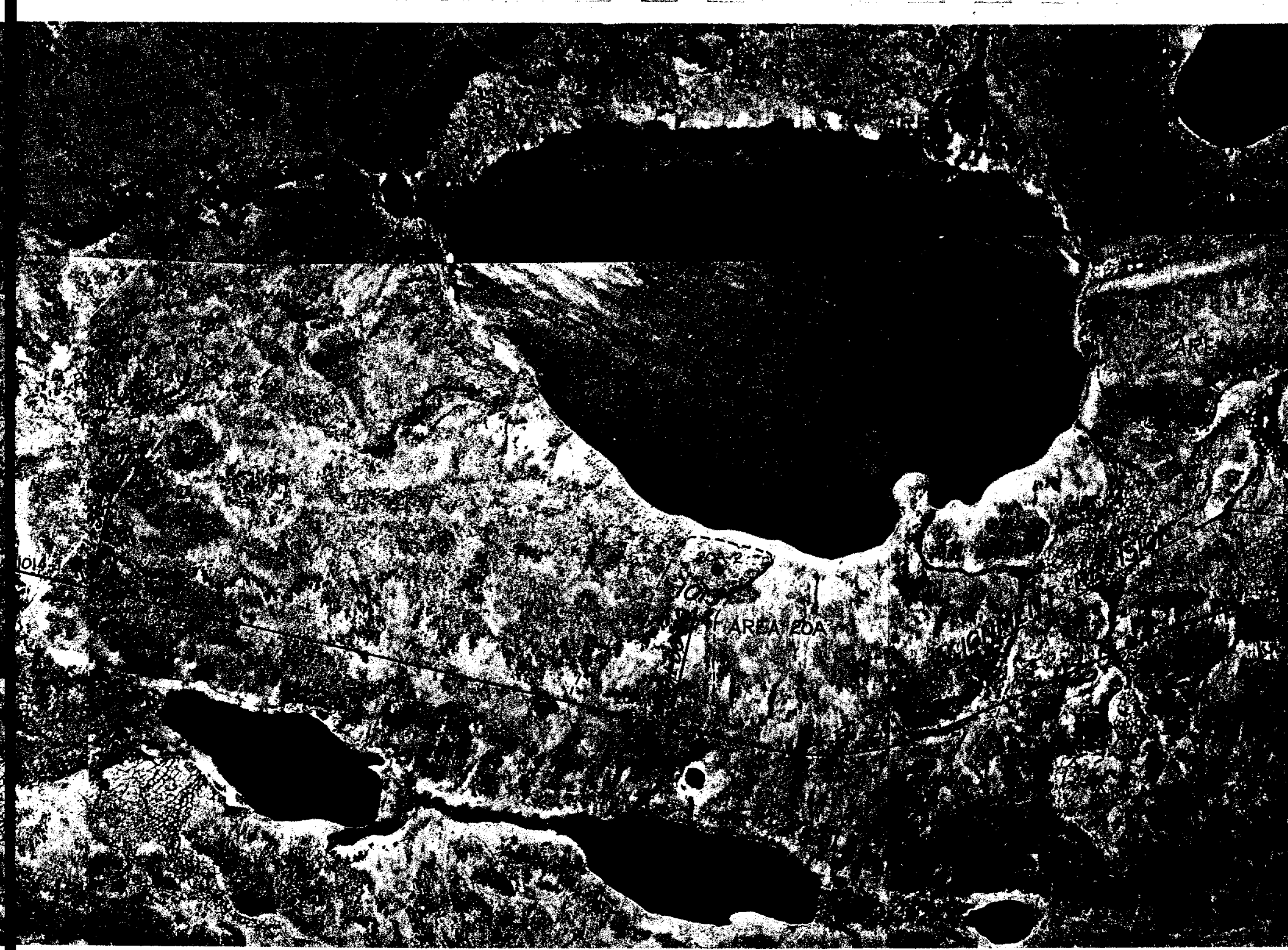
Hans Creek Gravel Source

This source is along Hans Creek near Mile 1009 of the Mackenzie Highway, and has been extensively test-drilled by Gulf Oil Canada Limited (Report entitled "granular Materials Inventory - Parsons Lake, N.W.T." - October 1974 by Klohn Leonoff Consultants Ltd.). Volumes of sandy gravel totalling in the order of at least 2,000,000 cu. yds. have been estimated here, much of which is immediately adjacent to the highway alignment. The above report is available within the Highways Library, Western Region. No further drilling was carried out at this source by Public Works.

SEARCH AREAS #20, #20A, #21, #22, #23E and #23F

Landform and Location:	Various small features near the alignment between Mile 1012 and Mile 1016, which show some surface evidence of glacio-fluvial deposits over either glacial till or lacustrine sediments.
Material:	Minor sand and gravel with much excess ice.
Volume:	Very limited.
Conclusion:	All areas are unsuitable for embankment borrow.


AREA
AREA 23E
AREA 20
PARSONS CREEK
POWER LINE
PARSONS


AREA 20A


98-

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 5/3/74 | AIRPHOTO NO: | CHAINAGE: | OFFSET
CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV

TEST HOLE: MILE | B,C,S | NUMBER: AREA - 20 - 1

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					Pt	PEAT — 2"		
					SM	SAND SILTY GRAVELLY		Vs
						11'		
						ICE 6" GRAVEL LENSE @ 12'		ICE
						16'		
					SM	SAND - SILTY PEBBLES		Vs

○ = WATER CONTENT (% OF DRY WEIGHT)
△ = ICE CONTENT (% OF SAMPLE VOLUME)
PLASTIC LIMIT — LIQUID LIMIT
20 40 60 80 100 100+

DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
2	26	49	25		WET		
4	20	43	37		FREE WATER		
8					SAT.		
20	42	52	6		SAT.		
24					FREE WATER		

Sc CLAYEY

-41-55-4 SAT.

BOTTOM OF HOLE - 30'

INUVIK - Tuk.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 31/3/76 | AIRPHOTO NO: | CHAINAGE: | OFFSET
CKD | TECH TRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV

TEST HOLE
MILE | B,C,S | NUMBER
AREA - 20-2

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					Pt	Peat 2"		
						Clay - Silty Sandy 2'		
2								
4						Ice		Ice
6						Some Sand		
8								
10					Sm	Sand - Silty Pebbles		
12						6" Gravel Lense @ 11'		Vs
14						15'		
16						Bottom of Hole		
18								
20								
22								
24								

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

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

No Samples

GRAIN-SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

INUVIK - TUK

DWN	FIELD ENG	DATE DRILLED 31/3/76	AIRPHOTO NO:	CHAINAGE:	OFFSET
CKD	TECH PRONYCH	RIG AIR	SURFACE DRAINAGE:	VEGETATION:	ELEV

TEST HOLE

MILE	B,C,S	NUMBER
AREA - 20-3		

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					Pt	PEAT — 2"		
						CLAY - SILTY SANDY PEBBLES — 3'		
4						GRAVEL - SANDY — 7'		
8						ICE SOME GRAVEL & SAND — 15'		ICE
						BOTTOM OF HOLE - 15'		

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

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

NO SAMPLES

GRAIN-SIZE ANALYSIS				WET DENSITY (PCF)	DRY DENSITY (PCF)
CLAY %	SILT %	SAND %	GRAVEL %		

INUVIK - TUK

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 3/3/76 | AIRPHOTO NO | CHAINAGE | OFFSET

CKD | TECH Pronych | RIG AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV

TEST HOLE

MILE | B,C,S | NUMBER

Area - 26 - 4

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					Pt	PEAT 2"		
						CLAY - SILTY 1'		
2					GW	GRAVEL - SANDY		
4						5'		
6						SAND - SILTY		
8						8'		
10						ICE		ICE
12						SOME SAND & GRAVEL		
14								
16								
18								
20								
22						22'		
24						ICE & GRAVEL LENSES		
						26'		

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

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

NO SAMPLES

GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
CLAY %	SILT %	SAND %	GRAVEL %		

REMARKS

BOTTOM OF HOLE - 26'

BOTTOM OF HOLE - 26'

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN	FIELD ENG	DATE DRILLED 10/4/16	AIRPHOTO NO:	CHAINAGE:	OFFSET
CKD	TECH PRONYCH	RIG: AIR	SURFACE DRAINAGE:	VEGETATION	ELEV

TEST HOLE 20A-1

MILE	B,C,S	NUMBER
1013	AREA	20A-1

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					Pt	PEAT 4"		
						CLAY - SILTY 3'		
4						ICE		ICE
						CLAY - SILTY 5' 4'		
6						GRAVEL - SANDY 6'		
8						ICE		ICE
10						10'		
12						ICE + SOIL		ICE & CL
14						15'		
						BOTTOM OF HOLE - 15'		
18								
20								
22								
24								

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

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

NO SAMPLES

DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
2						
4						
6						
8						
10						
12						
14						
16						
18						
20						
22						
24						

INUVIK - TUK

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN	FIELD ENG	DATE DRILLED 8 4 76	AIRPHOTO NO:	CHAINAGE	OFFSET
CKD	TECH PRONYCH	RIG: AIR	SURFACE DRAINAGE:	VEGETATION	ELEV

TEST HOLE 20A-2

MILE	B,C,S	NUMBER
1013	AREA	20A-2

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)
					Pt	PEAT .5'			
					CL	CLAY - GRAVELLY SILTY SANDY 3'		Vx	
					SM	SAND - SILTY GRAVELLY		Vs	
						ICE + SAND LENSES 15'		ICE + SM	
						BOTTOM OF HOLE 15'			

○ = 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 (PCF)	DRY DENSITY (PCF)
26	50	24		DAMP	
26	58	16		FREE WATER	

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN	FIELD ENG	DATE DRILLED 5/3/76	AIRPHOTO NO:	CHAINAGE	OFFSET
CKD	TECH PRONYCH	RIG: AIR	SURFACE DRAINAGE:	VEGETATION	ELEV

TEST HOLE

MILE	B,C,S	NUMBER
AREA - 21 - 1		

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					Pt	Peat — 2"		
						ICE — 1.5'		ICE
4						CLAY - SILTY SANDY		VS
14						— 14'		
						SAND - SILTY		VS

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

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

NO SAMPLES

GRAIN-SIZE ANALYSIS						
DEPTH (FEET)	CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)

ICE @ 28'

28'

BOTTOM OF HOLE - 28'

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

INUVIK - TUK.

DWN	FIELD ENG	DATE DRILLED 3/13/76	AIRPHOTO NO	CHAINAGE	OFFSET	TEST HOLE
CKD	TECH PRONYCH	RIG AIR	SURFACE DRAINAGE	VEGETATION	ELEV	MILE B,C,S NUMBER AREA-22-1

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					PT	PEAT 8"		
2						ICE		ICE
4						SOME CLAY		
6								
8								
10								
12								
14						CLAY - SILTY		VS
15						15		
						BOTTOM OF HOLE-15'		
16								
18								
20								
22								
24								

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

PLASTIC LIMIT ——— LIQUID LIMIT
20 40 60 80 100 00+

NO SAMPLES

DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
0							
2							
4							
6							
8							
10							
12							
14							
15							
16							
18							
20							
22							
24							

INUVIK - TUK

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN	FIELD ENG	DATE DRILLED 9/3/76	AIRPHOTO NO:	CHAINAGE	OFFSET
CKD	TECH PRONYCH	RIG AIR	SURFACE DRAINAGE	VEGETATION	ELEV

TEST HOLE

MILE	B,C,S	NUMBER
AREA - 22 - 2		

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					Pt	PEAT — 1½'		
2						ICE & CLAY		ICE & CL
4								
6								
8								
10						LAYERS OF ICE & CLAY LENSES		ICE & CL-Ci
12								
14						CLAY - SILTY SANDY — 15'		
16						BOTTOM OF HOLE - 15'		
18								
20								
22								
24								

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

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

NO SAMPLES

DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
2							
4							
6							
8							
10							
12							
14							
16							
18							
20							
22							
24							

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

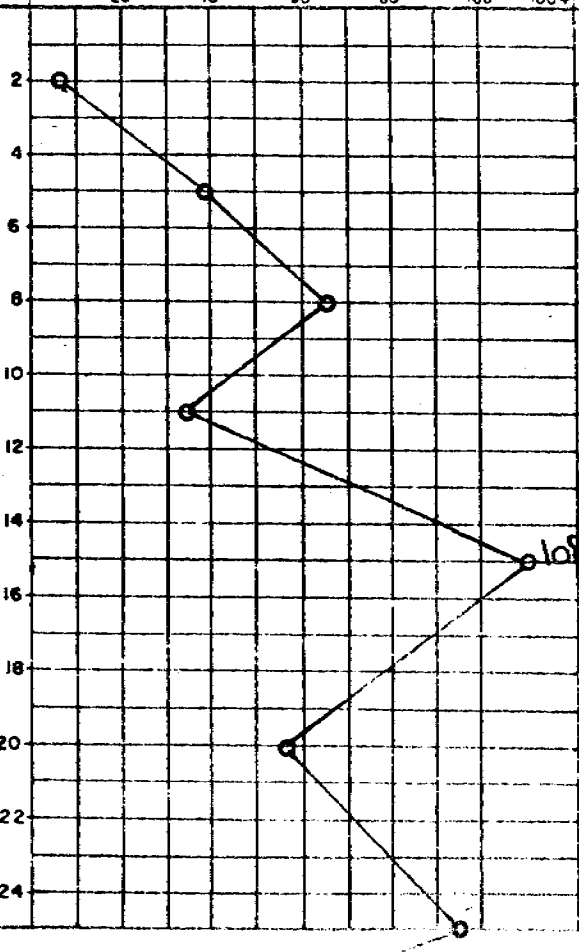
DWN	FIELD ENG	DATE DRILLED 9/4/76	AIRPHOTO NO:	CHAINAGE:	OFFSET
CKD	TECH PRONYCH	RIG AIR	SURFACE DRAINAGE:	VEGETATION:	ELEV

TEST HOLE: MILE | B,C,S | NUMBER: AR-A-23E-1

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					Pt	PEAT 4"		
					GM	GRAVEL - SILTY SANDY 3'		
						CLAY - SANDY SILTY PEBBLES		
					C			
					C1	VERY HIGH ICE CONTENT		Vs
						ICE		ICE

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

PLASTIC LIMIT — LIQUID LIMIT



DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
2	17	39	44				WET
4	56	40	4				FREE WATER
6	73	20	7				FREE WATER
8							
10	71	25	4				WET
12							
14	108	88	12	0			FREE WATER
16							
18							
20	77	21	2				FREE WATER
22							
24	52	41	7				FREE WATER

BOTTOM OF HOLE - 30'

35 26 39 FREE WATER

NUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

FIELD ENG | DATE DRILLED 9/4/71 | AIRPHOTO NO: | CHAINAGE | OFFSET
TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV

TEST HOLE | MILE | O,C,S | NUMBER
AREA - 23E - 2

REMARKS

SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)
				PT	PEAT 1"									
				GP	GRAVEL - SAND MIX									
				SM	SAND - SILTY PEBBLES 6'			2	5	45	50		Moist	
					GRAVEL - SANDY SILTY		V_C - Vr	4	17	81	8		SAT	
				GM	SAND LAYER 9'-11"			6	10	35	55		SAT.	
				GP	15½'			8	10	44	46		SAT	
					ICE		ICE	10	4	30	66		SAT.	
					OCCASSIONAL SAND LENSE		&	12						
							SM	14						
								16						
								18						
								20						
								22						
								24						

○ = WATER CONTENT (% OF DRY WEIGHT)
△ = ICE CONTENT (% OF SAMPLE VOLUME)
PLASTIC LIMIT — LIQUID LIMIT
20 40 60 80 100 100+

BOTTOM OF HOLE. 30'

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

FIELD ENG | DATE DRILLED 9/4/76 | AIRPHOTO NO: | CHAINAGE: | OFFSET:
TECH PRONYCH | RIG: AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV:

TEST HOLE: MILE | B,C,S | NUMBER: ADEA - 23E-3

SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
				Pt	PEAT — 5'		ICE + OH	2							
					ICE + ORGANICS — 4'			4							
				Gc	GRAVEL-CLAY-SAND MIX — 7'			6	33	37	30		SAT.		
				CL	SANDY SILTY CLAY PEBBLES LOW PLASTIC — 10'			8	54	39	7		SAT.		
				SM	SAND - SILTY — 17'			10	19	81	0		WET		
								12							
								14							
								16	16	84	0		WET		
					ICE + SAND LENSES — 22		ICE & SM	18							
								20							
								22							
				GM	GRAVEL - SANDY SILTY			24	11	44	45		SAT		

PLASTIC LIMIT 20 40 | LIQUID LIMIT 60 80 100 100+
○ = WATER CONTENT (% OF DRY WEIGHT)
△ = ICE CONTENT (% OF SAMPLE VOLUME)

GW

30'

34'

ICE & SAND

-4-26-76 SAT

BOTTOM OF HOLE - 42'

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

FIELD ENG | DATE DRILLED 10 4 | 15 | AIRPHOTO NO: | CHAINAGE: | OFFSET:
TECH PRONYCH | RIG: AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV:

TEST HOLE: MILE | B,C,S | NUMBER: AREA-23F-1

REMARKS

SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
				Pt	PEAT — 4"									
				Sc	SAND - SILTY CLAYEY SILTY — 8'			2	32	68	0		WET	
								4	34	66	0		SAT.	
							Vc - Vr	8	86	14	0		WET	
				Cl	CLAY - SILTY SANDY — 13'			10	56	44	0		WET	
					SAND - SILTY CLAYEY — 16'			12						
								14	44	56	0		SAT.	
					CLAY - SILTY SANDY PEBBLES			16						
				Cl	MED. PLASTIC			18						
								20	70	23	7		MOIST	
								22						
								24	70	25	5		MOIST	

O = WATER CONTENT (% OF DRY WEIGHT)
Δ = ICE CONTENT (% OF SAMPLE VOLUME)
PLASTIC LIMIT — LIQUID LIMIT
20 40 60 80 100 100+

BOTTOM OF HOLE - 30'

61-21-10 DAMP

Inuvik - Tuk.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

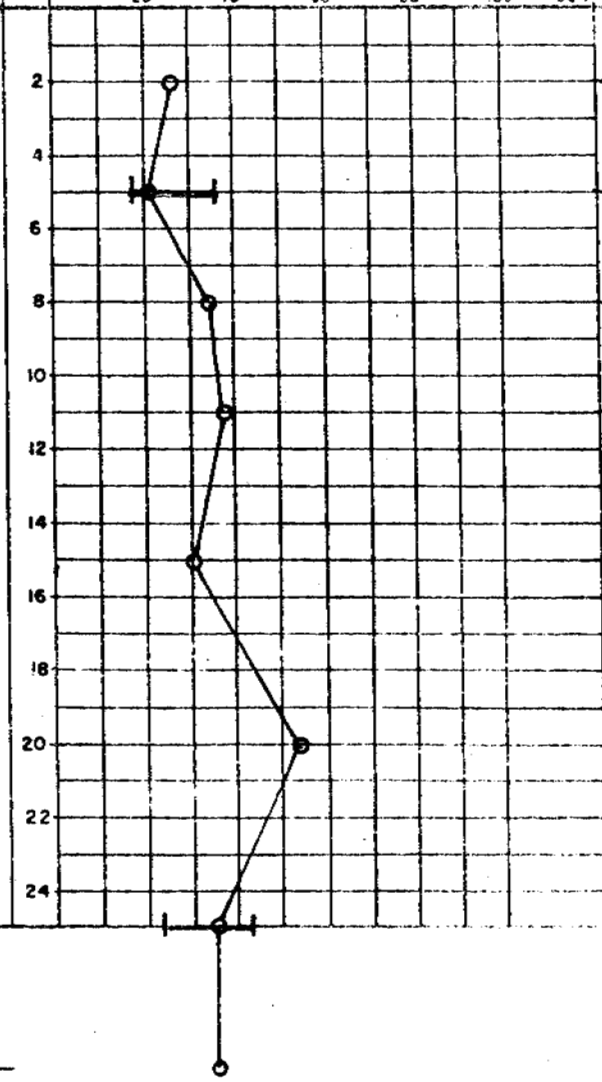
DWN | FIELD ENG | DATE DRILLED 19/4/76 | AIRPHOTO NO: | CHAINAGE | OFFSET
CKD | TECH PRONYCH | RIG 4IB | SURFACE DRAINAGE: | VEGETATION | ELEV

TEST HOLE: MILE 1014 | B,C,S | NUMBER 1

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					Pt	PEAT — 4"		
2						CLAY - SILTY SANDY PEBBLES		
4						GRAVELLY		
6								Vs
8								&
10						MED. PLASTIC.		
12					Cl			Vc-Vr
14						PEBBLES		
16								
18								
20								
22								
24								

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

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



DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
2	73	21	6		WET		
4	52	23	25		WET		
8	52	29	19		SAT.		
10	65	19	16		SAT.		
14	76	21	3		WET		
20	78	21	1		SAT.		
24	78	21	1		SAT.		
30	80	16	4		WET		

Bottom of Hole - 30'

PARSON CREEK SOUTH BANK

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

INUVIK - TUK.

DWN	FIELD ENG	DATE DRILLED 1-4-76	AIRPHOTO NO:	CHAINAGE:	OFFSET 4L
CKD	TECH PRONYCH	RIG AIR	SURFACE DRAINAGE:	VEGETATION	ELEV

TEST HOLE: MILE 101S; B,C,S; NUMBER 1

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					Pt	PEAT 2"		
					CL	CLAY - SILTY SANDY ORGANIC 3'		
						SAND - SILTY 5'		Vs
						CLAY - SILTY MED. PLASTIC		
					CI			Vc - Vr

O = WATER CONTENT (% OF DRY WEIGHT)
Δ = ICE CONTENT (% OF SAMPLE VOLUME)

PLASTIC LIMIT 40 — LIQUID LIMIT 80

DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
2	74	26	0				FREE WATER
4	18	82	0				FREE WATER
6	95	5	0				FREE WATER
8	97	3	0				FREE WATER
10							
12							
14	96	4	0				WET
16							
18							
20	89	11	0				MOIST
22							
24	98	2	0				WET

BOTTOM OF HOLE - 30'

SEARCH AREAS #23, #23A, #23B, #23C, #23D and #24B

Landform and Location:	A large number of kames on an outwash plain located roughly 26 miles south of Tuktoyaktuk and west of Mile 1025 on the Mackenzie Highway.
Material:	Sand and gravel-trace silt.
Volume:	Probably in excess of 500,000 cu. yds. but randomly located in small features.
Conclusion:	Not recommended for development due either to haul distances (three miles +) over very rough terrain to alignment, or extensive stripping (15 - 20 feet) of sources closer to the alignment.

Topography

This source is a kame field located in a glacio-fluvial outwash plain about four miles west of Eskimo Lakes and 26 miles south of Tuktoyaktuk. The kame field is very large - about four miles long and from 500 feet to two miles in width. Previous work was carried out in this field by Ripley Klohn Leonoff and borehole logs from that work are included herein. Features test-drilled extend from near the highway right-of-way to in excess of three miles away.

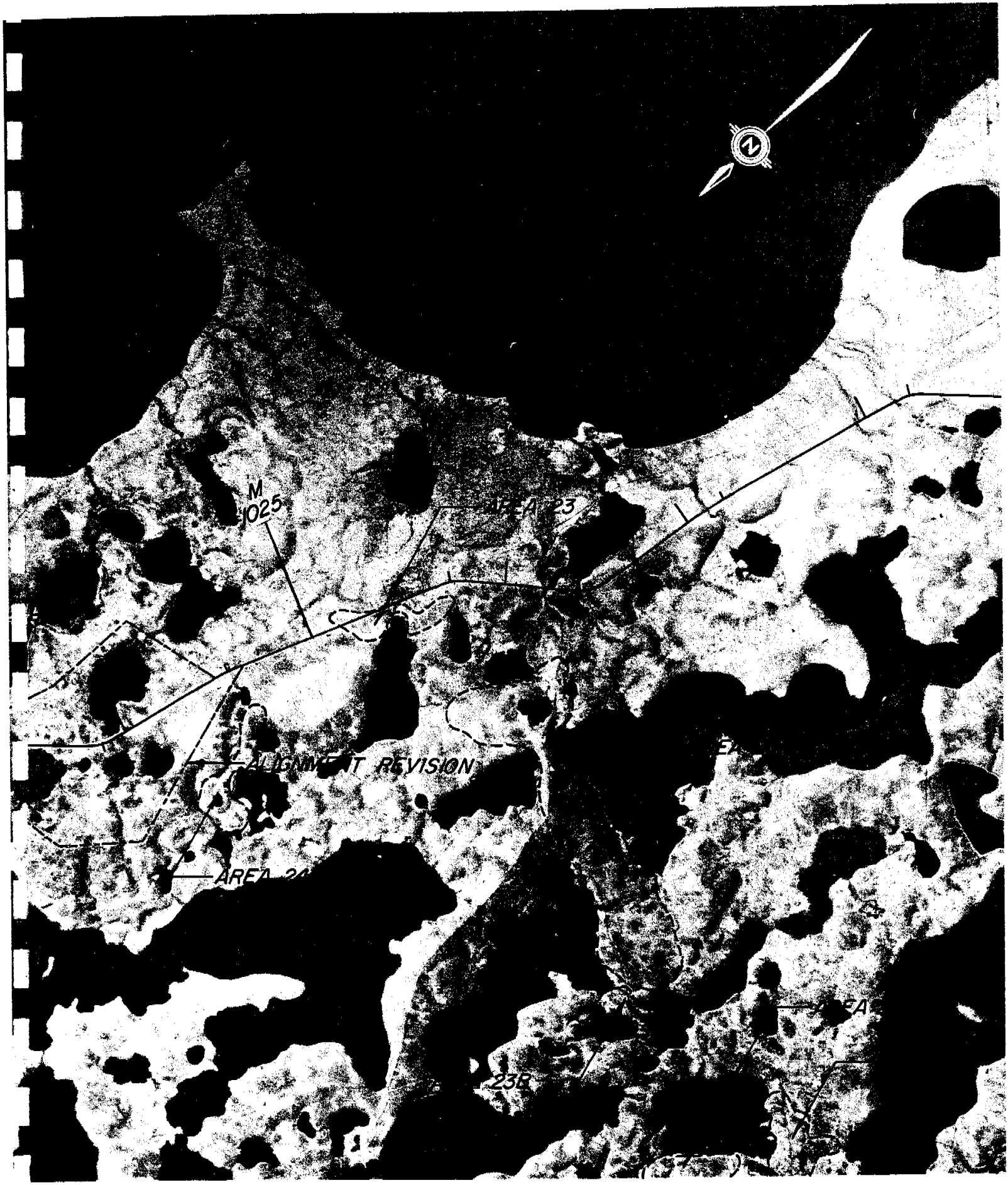
This source and the vicinity contain many ponds and hummocks; about 30 - 40% of the area is covered by water.

The numerous kames in this source rise from 20 to 100 feet above the surrounding plain, and at their bases measure from 200 to 1,000 feet across. The surrounding area shows the polygonal pattern characteristic of massive ground ice, and ice was encountered in many of the test holes.

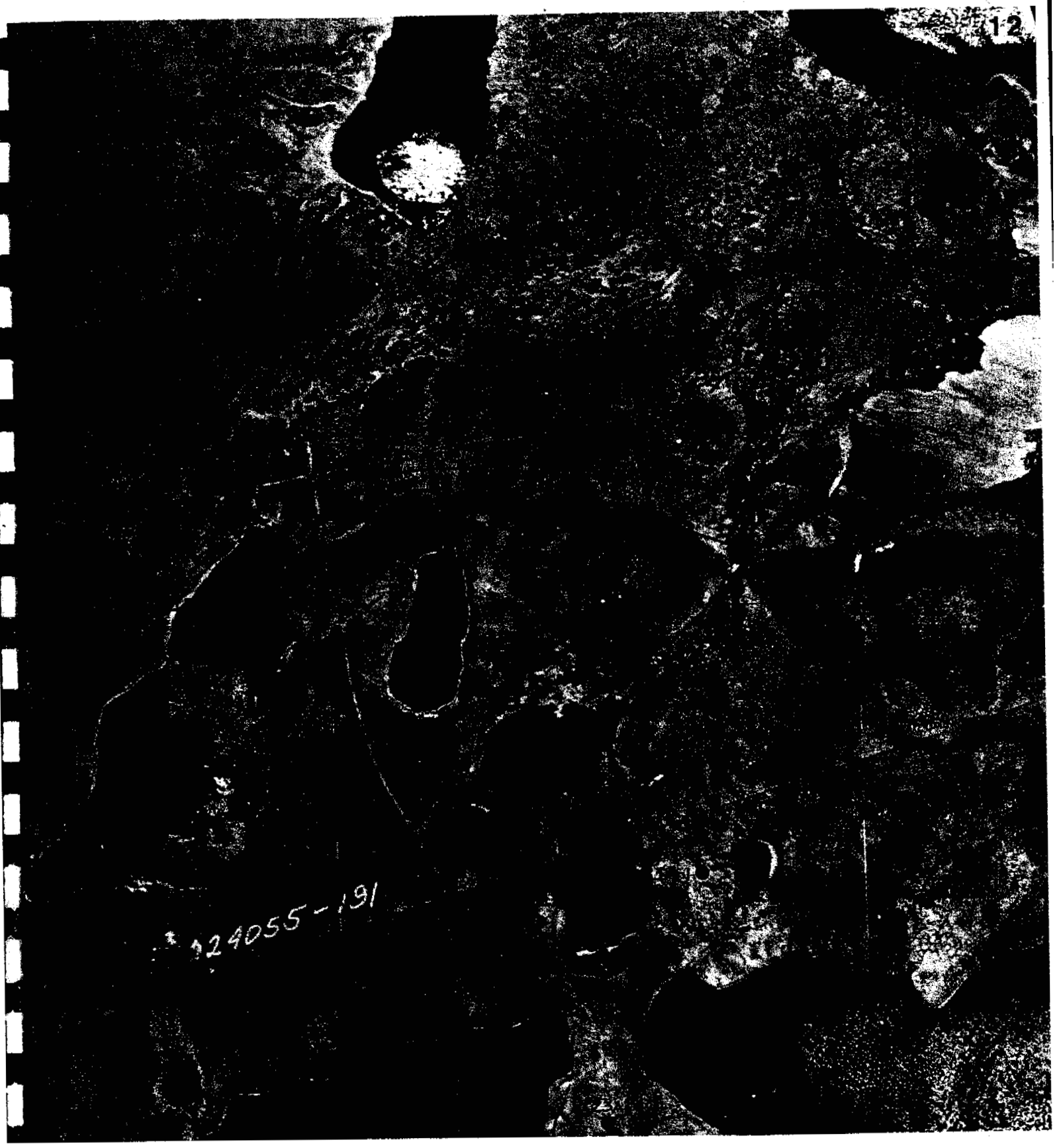
Materials and Quantities

The materials in the kames are variable from clean sands and gravels with little or no visible ice, to silts with minor sand and gravel and high ice contents. There are numerous gravel exposures throughout the

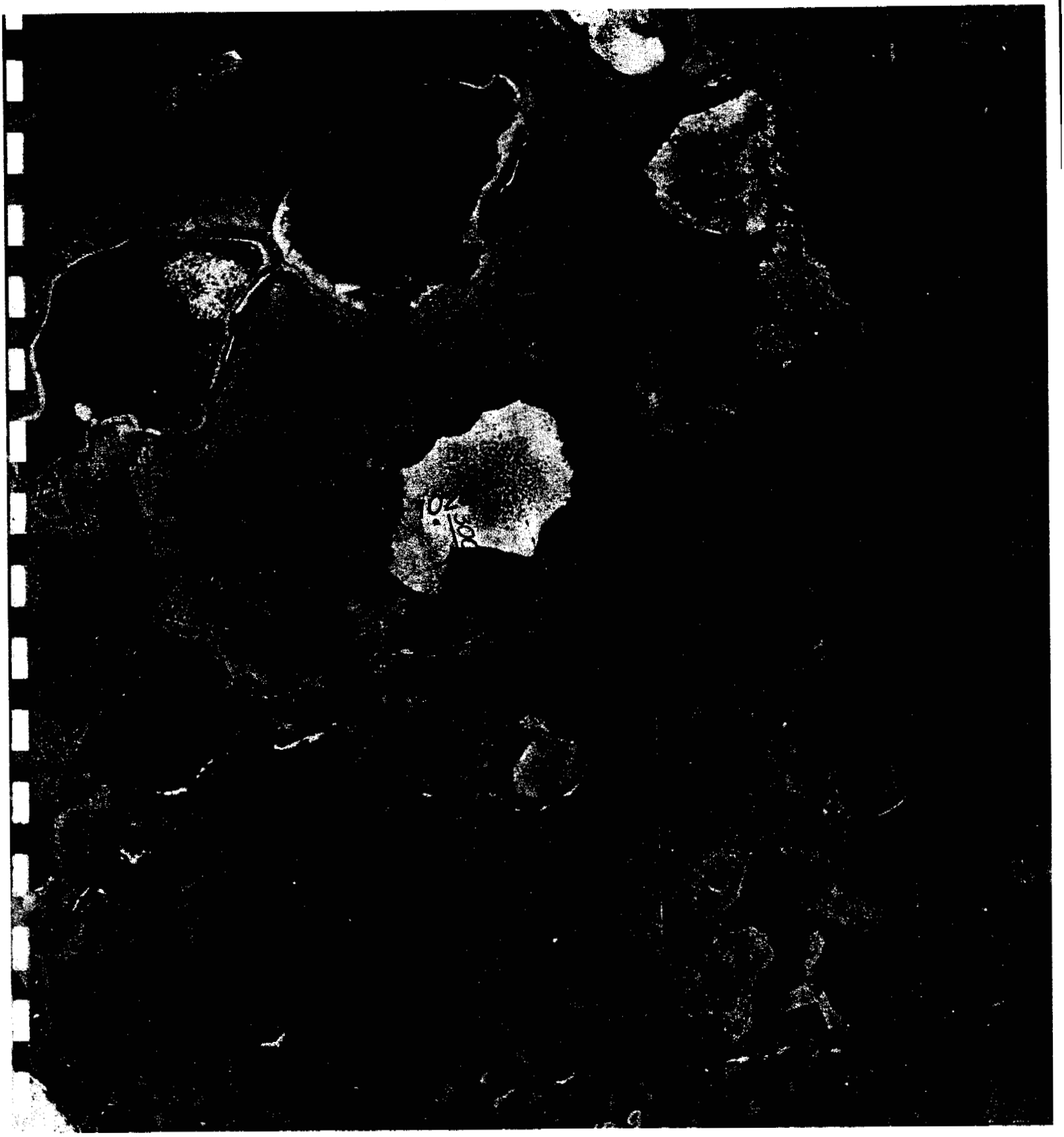
kame field, however, these gravel ridges invariably are narrow and shallow and underlain by massive ground ice. Very few features contain sufficient volume of usable material adequate for development as an embankment source. The larger granular features are located roughly three miles from the right-of-way in the vicinity of Areas #23B, #23C and #23D. There is probably in excess of 500,000 cu. yds. here, however, because of the very rough terrain and the distance from the present alignment, development of these features would not appear to be viable. Sufficient drilling has been carried out only to identify that there are significant quantities of good material in these granular kames and more detailed programmes will be required to define the preferred areas. A significant quantity of sandy gravel was encountered in Area #23 immediately adjacent to the right-of-way at Mile 1024.5, however, this granular material is under 15 to 20 feet of ice-rich silty clay overburden. Because of the extensive stripping this area is not considered suitable for development.


M
1025
AREA 23
ALIGNMENT REVISION
AREA 24
23B


24083-92
23A-3
23A-4
AREA 23A


12
124055-191


AREA 23A
AREA 23B
303-B
23B-1
23B-2
23D-1
23D-2
23D-3
AREA 23D
AREA 23C



Inuvik-Tuk.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 11/4/60 | AIRPHOTO NO: | CHAINAGE: | OFFSET
CKD | TECH PRONYCH | RIG: AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV

TEST HOLE: MILE | B,C,S | NUMBER: AREA-23-1

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					Pt	PEAT — 4"		
						ICE		ICE
4						CLAY - SILTY SANDY PEBBLES		Vs
10					CL	LOW - MED. PLASTIC		
					CI			
						— 19'		
20						GRAVEL - SANDY		
22					GW			Vs

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

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

DEPTH (FEET)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
4	05	50					FREE WATER
8	68	23	9				WET
12	63	32	5				FREE WATER
16	60	34	6				SAT.
20	7	46	47				FREE WATER
24	5	43	52				SAT.

BOTTOM OF HOLE - 30'

-5-31-61 SAT.

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 7/4/76 | AIRPHOTO NO: | CHAINAGE | OFFSET
CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV

TEST HOLE
MILE | B,C,S | NUMBER
ABFA -23-2

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					Pt	Peat 2"		
2						CLAY - SILTY SANDY 2'		
4						ICE & TILL		ICE & TILL
6								
8								
10						11'		
12						CLAY - SILTY SANDY PEBBLES 13'		
14						ICE		ICE
16								
18						19'		
20						GRAVEL - SANDY 20'		
22						BOTTOM OF HOLE. 20'		
24								

DEPTH (FEET)

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

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

NO SAMPLES

GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)

REMARKS

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

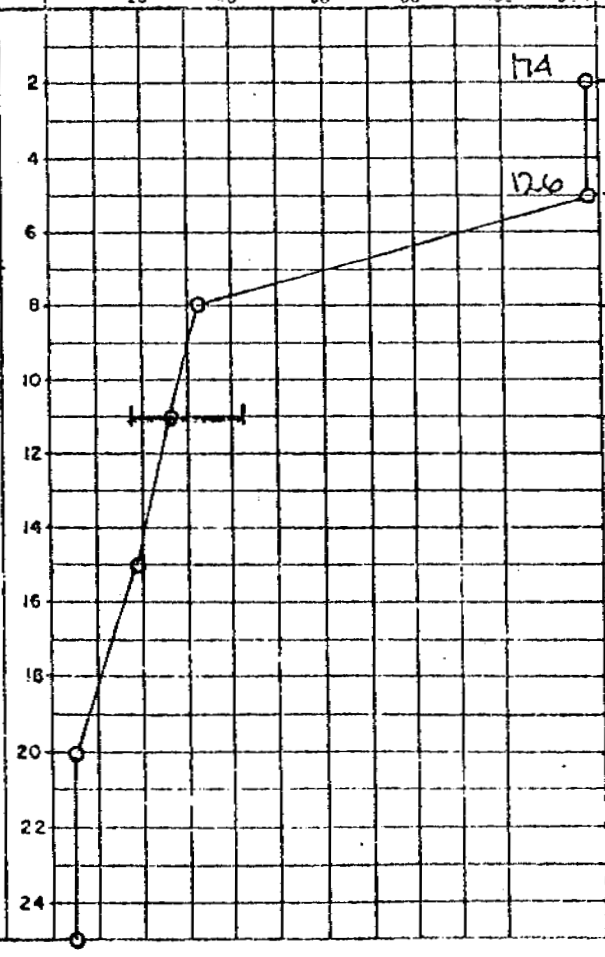
INUVIK - TUK.

FIELD ENG: | DATE DRILLED: 8/4/76 | AIRPHOTO NO: | CHAINAGE: | OFFSET:
TECH: RONYCH | RIG: AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV:

TEST HOLE: MILE | B,C,S | NUMBER: ABRA - 23-3

SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)
Pt PEAT — 4"		ICE	
ICE & SOIL		&	
		CL	
CLAY - SILTY SANDY PEBBLES MED. PLASTIC — CL		Vc-Vr	
15'4"			
GRAVEL - SANDY — GW			
24'			
SAND - SILTY - PEBBLES — SM			

O = WATER CONTENT (% OF DRY WEIGHT)
Δ = ICE CONTENT (% OF SAMPLE VOLUME)
PLASTIC LIMIT ⟷ LIQUID LIMIT (20, 40, 60, 80, 100, 100+)



GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
	96	4	0			FREE WATER
	98	2	0			FREE WATER
	95	5	0			WET
	76	23	1			WET
	61	31	8			WET
	8	31	61			WET
	18	72	10			WET

NEXT PAGE

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

WN	FIELD ENG	DATE DRILLED	AIRPHOTO NO:	CHAINAGE	OFFSET
KD	TECH	RIG	SURFACE DRAINAGE	VEGETATION	ELEV

TEST HOLE: MILE | B,C,S | NUMBER: AREA - 23-3

REMARKS

SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)
				GC	GRAVEL-SANDY CLAYEY			30						
								32						
								34						
					36'				19	33	48		VEG	
				SP	SAND-GRAVELLY		$V_C - V_r$	36	5	38	57		SAT	
								38						
								40	3	69	28		SAT	
				GW	GRAVEL-SANDY			42						
					45			44	7	27	66		SAT	
					BOTTOM OF HOLE - 45'			46						
								48						
								50						
								52						
								54						

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

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

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

Inuvik - Tuk.

FIELD ENG | DATE DRILLED 8/4/76 | AIRPHOTO NO: | CHAINAGE | OFFSET | TEST HOLE
TECH Kronych | RIG: AIR | SURFACE DRAINAGE: | VEGETATION | ELEV | MILE | D,C,S | NUMBER
AREA - 23-4

SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
Pt PEAT — 1'										
ICE + SOIL		ICE + SOIL								
CLAY - SILTY SANDY PEBBLES LOW PLASTIC GRAVELLY CL		Vc-Vr		81	15	4				WET
				74	21	5				MOIST
				56	31	13				WET
PEBBLES				51	45	4				WET
GRAVELLY				34	44	22				WET

O = WATER CONTENT (% OF DRY WEIGHT)
△ = ICE CONTENT (% OF SAMPLE VOLUME)
PLASTIC LIMIT — LIQUID LIMIT
20 40 60 80 100 100+
2 4 6 8 10 12 14 16 18 20 22 24

27'

Bottom of Hole - 27'

DRILL HOLE REPORT

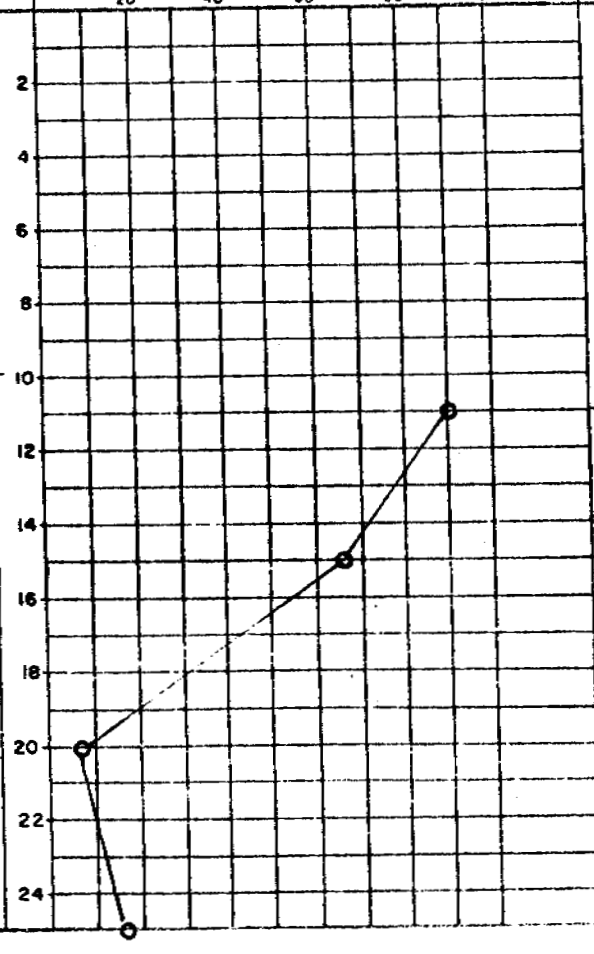
DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

INUVIK - TUK.

DWN | FIELD ENG | DATE DRILLED 9/4/76 | AIRPHOTO NO: | CHAINAGE | OFFSET | TEST HOLE
CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION | ELEV | MILE | B,C,S | NUMBER
AREA - 23A.1

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					Pt	PEAT 1'		
4						ICE		ICE
6						7'		
8						ICE & SILT 10		ICE + ML
10					OL	SAND - ORGANIC SILTY		VS
12					SM			
14						15'		
					ML	SILT - SANDY		
18						18'		
					SM	SAND - GRAVELLY SILTY		$V_C - V_I$
22								
24						24'		
					CL	CLAY - SILTY SANDY PEBBLES		

BOTTOM OF HOLE. 27'



GRAIN-SIZE ANALYSIS						REMARKS
CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)	
58	42	0				SAT.
88	12	0				WET
15	60	25				SAT.
63	32	5				MOIST

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

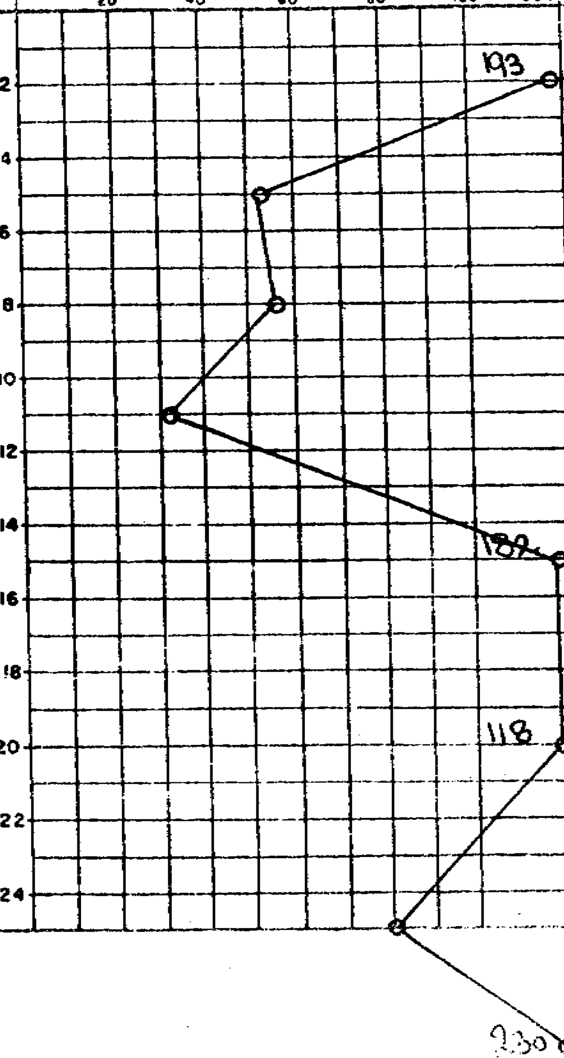
DWN	FIELD ENG	DATE DRILLED 4/4/74	AIRPHOTO NO:	CHAINAGE
CKD	TECH PRONYCH	RIG AIR	SURFACE DRAINAGE	VEGETATION
OFFSET	ELEV			

TEST HOLE		
MILE	B,C,S	NUMBER
AREA - 23A-2-		

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+

Depth (ft)	Unified soil symbol	Soil description	Ice description
0 – 4"	Pt	PEAT	
4" – 16	CL / Cl	ORGANIC CLAY; CLAY - SILTY SANDY PEBBLES	Vs
16 –	GC	GRAVEL - SANDY CLAYEY SILTY	



Depth (ft, approx.)	Water content (%)	CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
2	193	87-		13	0	FREE WATER		
5		79-		19	2	FREE WATER		
8		73-		19	8	FREE WATER		
11		77-		19	4	SAT.		
15	182	46-		48	6	FREE WATER		
20	118	14-		32	54	FREE WATER		
25		11-		26	63	FREE WATER		
30	230	24		36	40	FREE WATER		

BOTTOM OF HOLE - 30'

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

INUVIK - TUK.

DWN	FIELD ENG	DATE DRILLED 4/76	AIRPHOTO NO:	CHAINAGE	OFFSET	TEST HOLE
CKD	TECH TRONYCH	RIG AIR	SURFACE DRAINAGE:	VEGETATION	ELEV	MILE B,C,S NUMBER AREA-23A-3

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					Pt	PEAT 2"	1.5'	
2						ICE		ICE
4					CL	CLAY - SANDY	4'	Vs
6							7'	
8						ICE	10'	ICE
10					SM	SAND - GRAVELLY SILTY		Vc - Vv
12								
14							16	
16						ICE		ICE
18								
20								
22								
24								

ICE 27' ICE

BOTTOM OF HOLE -30'

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

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

GRAIN SIZE ANALYSIS						
DEPTH (FEET)	CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
11'	39	61	0			SAT.
	4	30	66			SAT.
	10	57	33			SAT.

REMARKS

Inuvik - Tuk

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 1/4/76 | AIRPHOTO NO: | CHAINAGE | OFFSET
CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV

TEST HOLE: MILE | B,C,S | NUMBER: AREA-23R4

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					Pt	PEAT 4"		
2–12						CLAY - SILTY SANDY PEBBLES		Vs
12						12'		
12–18						ICE 6" GRAVEL LENSE @ 15'		ICE

O = WATER CONTENT (% OF DRY WEIGHT)
Δ = ICE CONTENT (% OF SAMPLE VOLUME)
PLASTIC LIMIT — LIQUID LIMIT
20 40 60 80 100 100+

No Samples

GRAIN-SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)

REMARKS

Bottom of Hole - 30'

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

INUVIK - TUK.

DWN | FIELD ENG | DATE DRILLED 11/4/76 | AIRPHOTO NO: | CHAINAGE: | OFFSET | ELEV

CKD | TECH PRAYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION

TEST HOLE — MILE | B,C,S | NUMBER: AREA 2345

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
						PEAT 2"		
						1.5'		
						ICE 3'		ICE
4						SAND-GRAVELLY		
6						7'		
8						ICE		ICE
10								
12								
14						15'		
						BOTTOM OF HOLE. 15'		
18								
20								
22								
24								

DEPTH (FEET)

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

PLASTIC LIMIT — LIQUID LIMIT

20 40 60 80 100 100+

NO SAMPLES

GRAIN-SIZE ANALYSIS					
CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)

REMARKS

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

INUVIK - TUK.

DRAWN | FIELD ENG | DATE DRILLED 1/4/76 | AIRPHOTO NO: | CHAINAGE | OFFSET

CKD | TECH PROVOST | RIG AIR | SURFACE DRAINAGE: | VEGETATION | ELEV

TEST HOLE: MILE | B,C,S | NUMBER: AREA-23A-6

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
0					PT	PEAT — 4"									
4					CL	CLAY - SANDY GRAVELLY LOW PLASTIC		Vx	33	48	19			DAMP	
6						— 7'		Vs							
8						ICE		ICE							
14						— 15½'									
18					SP	SAND - GRAVELLY									
20					GP	GRAVEL - SANDY		Vc-Vr	8	6	31	61		SAT	
24									9	5	40	51		SAT	

O = WATER CONTENT (% OF DRY WEIGHT)
Δ = ICE CONTENT (% OF SAMPLE VOLUME)
PLASTIC LIMIT — LIQUID LIMIT
20 40 60 80 100 100+

1 43 50 SAT.

BOTTOM OF HOLE - 30'

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN | FIELD ENG | DATE DRILLED 9/4/76 | AIRPHOTO NO: | CHAINAGE: | OFFSET

CKD | TECH PRANYCH | RIG: AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV

TEST HOLE | MILE | B,C,S | NUMBER: AREA - 23A-8

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					Pt	PEAT		
						.5' ICE & ORGANIC		ICE + OH
4						ICE & CLAY 7'		ICE + CL
8					Sc	SAND-GRAVELLY SILTY CLAYEY		
12						12' CLAY - SILTY SANDY PEBBLES		
14					CL	LOW PLASTIC		$V_c - V_r$
18						17' SAND - SILTY		
22					Sm			

O = WATER CONTENT (% OF DRY WEIGHT)
Δ = ICE CONTENT (% OF SAMPLE VOLUME)

PLASTIC LIMIT ⟷ LIQUID LIMIT

20 40 60 80 100 100+

DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
2							
4	95	5	0				FREE WATER
6	66	30	4				FREE WATER
8							
10	24	56	18				WET
12							
14	87	11	2				WET
16							
18	16	84	0				SAT
20							
22							
24	18	82	0				WET

BOTTOM OF HOLE - 30'

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

INUVIK - TUK.

DRAWN | FIELD ENG | DATE DRILLED 9/4/76 | AIRPHOTO NO: | CHAINAGE: | OFFSET:
CHKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV:

TEST HOLE: MILE | B,C,S | NUMBER: ARSA-23B-1

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					P1	PEAT + GRAVEL 1.5'		
2						SAND - GRAVELLY		
4								
6								
8						8'		
10						ICE		ICE
12								
14						OCCASSIONAL		
16						SAND LENSE		
18								
20								
22								
24								

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

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

NO SAMPLES

DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
0							
2							
4							
6							
8							
10							
12							
14							
16							
18							
20							
22							
24							

BOTTOM OF HOLE - 30'

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

INUVIK - TUK.

DRAWN | FIELD ENG | DATE DRILLED 9/4/74 | AIRPHOTO NO: | CHAINAGE | OFFSET
CHKD | TECH PROKYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION | ELEV

TEST HOLE: MILE | B,C,S | NUMBER: AREA-23B-2

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 CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
2					GW	GRAVEL - SANDY		$V_C - V_r$	2	19	28	53		WET		
4									4	8	43	49		SAT.		
6								1	6							
8									8	4	22	74		WET		
10								V_X	10	3	17	80		WET		
12									12							
14									14							
16									16	7+	33	60		SAT.		
18									18							
20									20	4	19	77		—		
22									22							
24						LOST CIRCULATION AT 23'			24							

○ = WATER CONTENT (% OF DRY WEIGHT)
△ = ICE CONTENT (% OF SAMPLE VOLUME)
PLASTIC LIMIT — LIQUID LIMIT
20 40 60 80 100 100+

BOTTOM OF HOLE. 26'

BOTTOM OF HOLE. 26'

INUVIK - TUK.

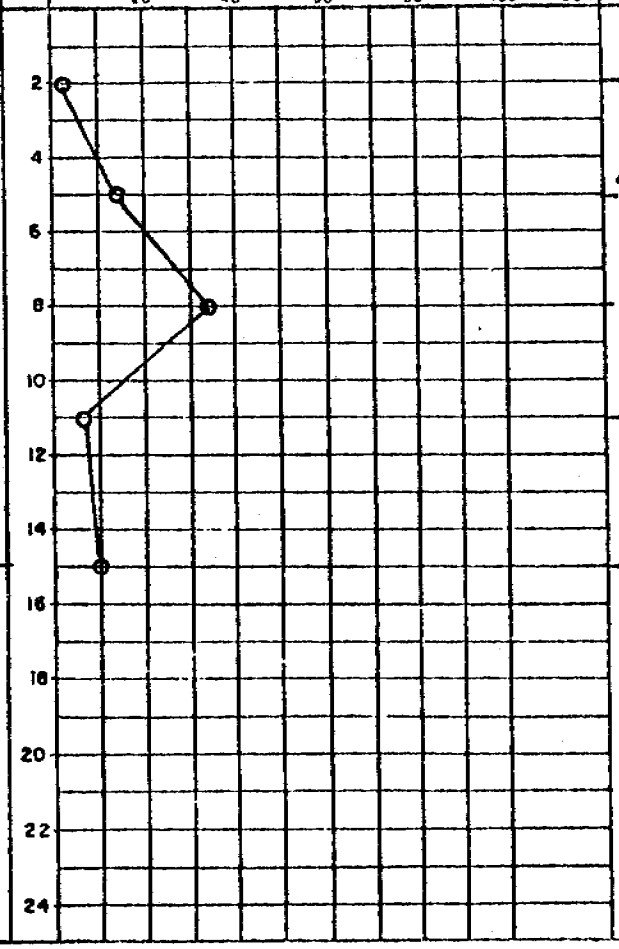
DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

FIELD ENG | DATE DRILLED 8/4/76 | AIRPHOTO NO: | CHAINAGE | OFFSET | TEST HOLE
TECH RONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION | ELEV | MILE | B,C,S | NUMBER
AREA - 23C-1

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)	REMARKS
0					Pt	PEAT 2"									
					GW	GRAVEL - SANDY									
3'									3	12	85				MOIST
					SM	SAND - SILTY GRAVELLY		Vs To							
						CLAYEY			22	56	22				SAT.
9'															
					GW	GRAVEL - SANDY		Vc - Vr	48	50	2				GROUNDWATER
					GM	SILTY			9	42	49				SAT.
15'															
						BOTTOM OF HOLE - 15'			16	47	37				SAT.

O = WATER CONTENT (% OF DRY WEIGHT)
Δ = ICE CONTENT (% OF SAMPLE VOLUME)



DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

Inuvik - Tuk.

AN	FIELD ENG	DATE DRILLED 9/4/76	AIRPHOTO NO:	CHAINAGE	OFFSET
KD	TECH PROWYCH	RIG: AIR	SURFACE DRAINAGE:	VEGETATION	ELEV

TEST HOLE

MILE	B,C,S	NUMBER
AREA - 23C-2		

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					Pt	Plant — 2"		
2					CL	CLAY - SILTY SANDY GRAVELLY Low Plastic		Vs
8						9'		
10					GW	GRAVEL - SANDY		$V_c - V_x$
15						15'		
						Bottom of Hole-15		

O = WATER CONTENT (% OF DRY WEIGHT)
Δ = ICE CONTENT (% OF SAMPLE VOLUME)

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

GRAIN-SIZE ANALYSIS					
CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)
56	31	13		FREE WATER	
53	37	10		SAT.	
50	35	15		WET	
5	38	57		WET	
				WET	

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

Nuvik-Tuk

DRAWN	FIELD ENG	DATE DRILLED 9/4/76	AIRPHOTO NO.	CHAINAGE	OFFSET
CKD	TECH Pronych	RIG AIR	SURFACE DRAINAGE	VEGETATION	ELEV

TEST HOLE

MILE	B,C,S	NUMBER
	AREA	231

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 (% 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 (PCF)	DRY DENSITY (PCF)
						GRAVEL-SANDY		V_C-Vr	2		9	33	58		SAT.	
									4		4	30	66		WET	
									6							
									8		2	27	71		WET	
									10		3	29	68		WET	
									12							
									14		5	22	63		SAT	
						15'										
						BOTTOM OF HOLE. 15			16							
									18							
									20							
									22							
									24							

INUVIK - Tuk.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

TOWN | FIELD ENG. | DATE DRILLED 9/4/76 | AIRPHOTO NO: | CHAINAGE | OFFSET
CKD | TECH PRONYCH | RIG Air | SURFACE DRAINAGE: | VEGETATION: | ELEV

TEST HOLE
MILE | B,C,S | NUMBER
AREA - 23D-2

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					Pt	PEAT — .5		
2						CLAY - Silty Sandy Pebbles		$V_c - V_r$
4								
6								
8								
10								
12								
14						— 15'		
16						BOTTOM OF HOLE-15'		
18								
20								
22								
24								

DEPTH (FEET)

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

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

NO SAMPLE

GRAIN-SIZE ANALYSIS				WET DENSITY (PCF)	DRY DENSITY (PCF)
CLAY	SILT	SAND	GRAVEL		
%	%	%	%		

REMARKS

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

Nuvik - Tuk.

FIELD ENG
TECH Pronych
DATE DRILLED 9/4/76
RIG: AIR
AIRPHOTO NO:
SURFACE DRAINAGE:
CHAINAGE
OFFSET
VEGETATION
ELEV

TEST HOLE
MILE | B,C,S | NUMBER
AREA- 230-3

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					Pt	PEAT 8"		
4					CL	CLAY - SILTY SANDY GRAVELLY Low PLASTIC		$V_C - V_r$
10						11		
12					SC	SAND - SILTY CLAYEY GRAVELLY		
18					SM	SILTY		V_S

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

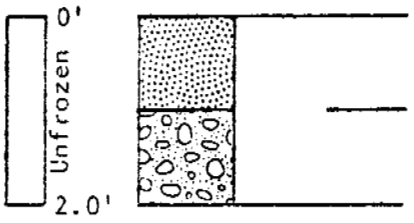
PLASTIC LIMIT — LIQUID LIMIT
20 40 60 80 100 100+

DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)	REMARKS
8	42	24	34				WET
10	50	31	19				WET
14	30	41	29				WET
20	10	90	0				SAT
24	14	86	0				SAT
	13	87	0				SAT.

Bottom of Hole - 30'

TEST PIT LOGS
SOURCE No. 305

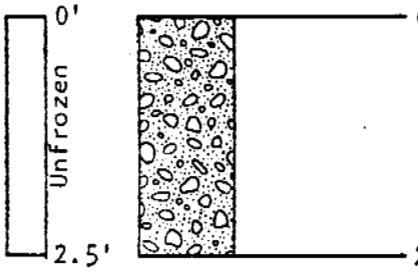
305-A



(SM) SAND - and silt, fine, uniform

(GP) GRAVEL - some sand

305-B

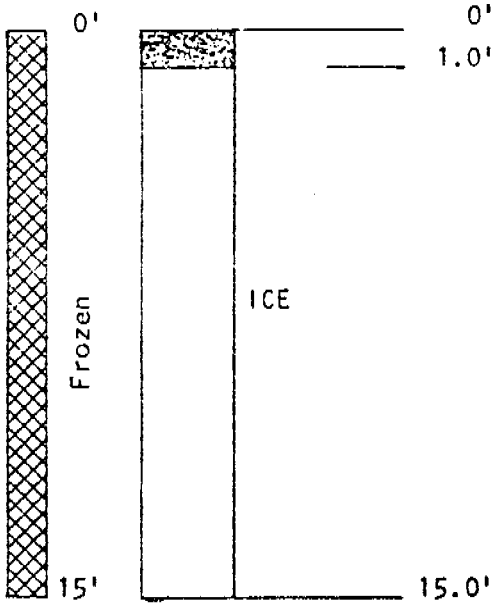


(GP) GRAVEL - and sand, rounded to subangular, clean

TEST HOLE LOGS

SOURCE No. 305

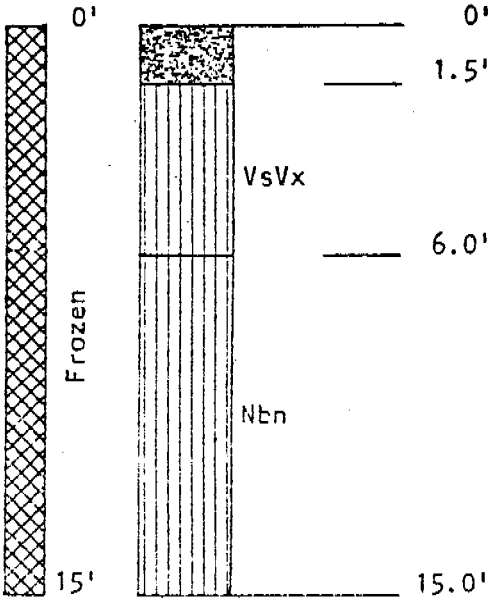
305-3



(OL) SILT - and organics, peat roots etc.

ICE - and silt lenses, trace gravel

305-4



(OL) SILT - and organics, peat roots etc.

(ML) SILT - trace gravel, some ice lenses and inclusions

(ML) SILT - trace gravel, trace sand, no visible ice

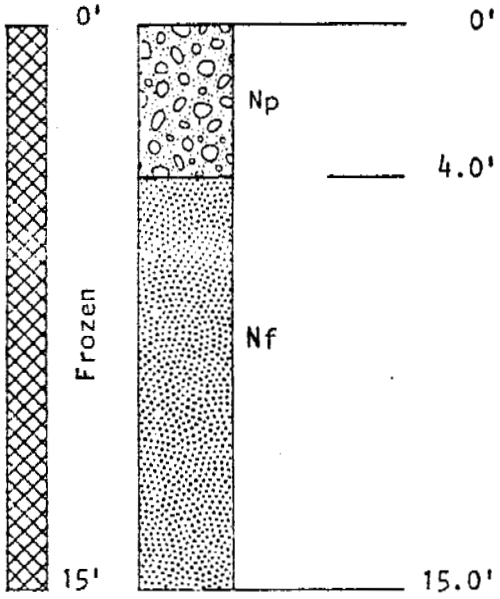
Moisture Content

Sample 1 depth 6.0'-8.0' 11.1%

TEST HOLE LOGS

SOURCE No. 305

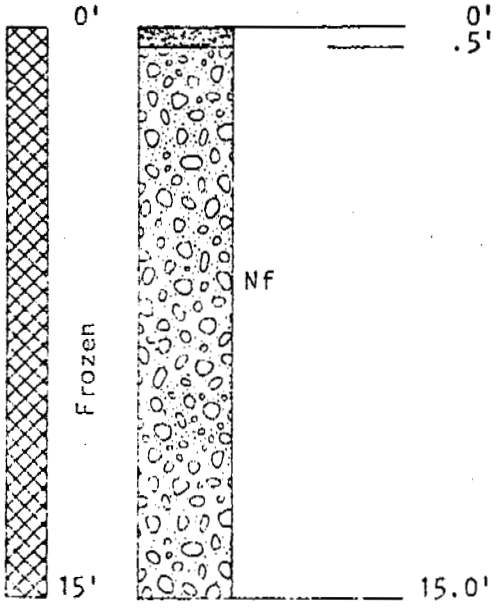
305-5



(GW) GRAVEL - and sand, trace silt, well graded, dry, no visible ice

(SW) SAND - some gravel, trace silt, well graded, dry no visible ice

305-6



(OL) SILT - and organic, roots, peat etc.

(GW) GRAVEL - and sand, trace silt, well graded, dry loose, no visible ice.

DRILL HOLE REPORT

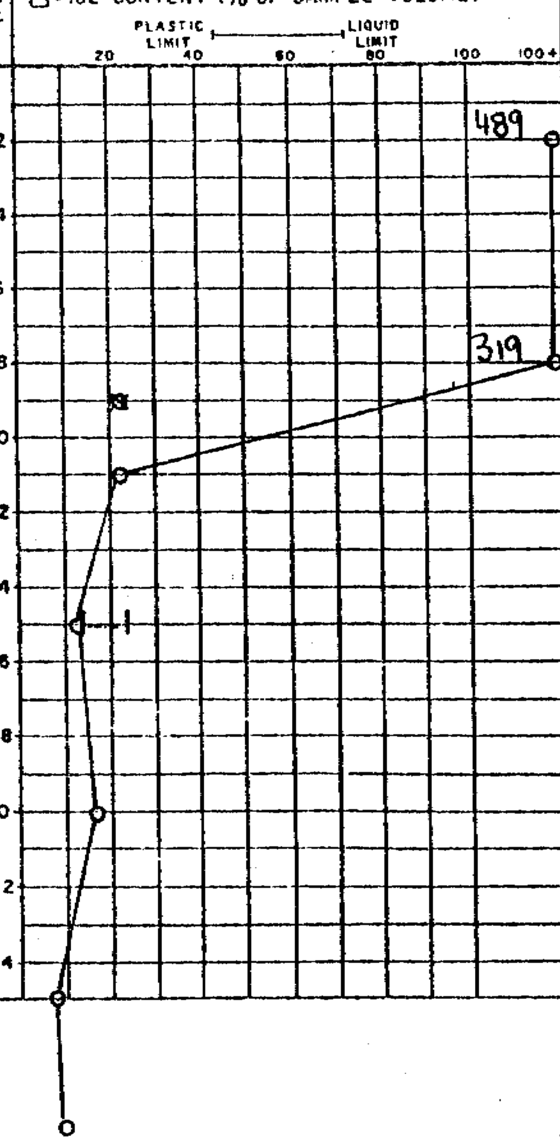
DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

INUVIK - TUK.

FIELD ENG	DATE DRILLED 8/4/76	AIRPHOTO NO:	CHAINAGE:	OFFSET:	TEST HOLE
TECH PRONYCH	RIG: AIR	SURFACE DRAINAGE:	VEGETATION:	ELEV	MILE / B,C,S / NUMBER: AREA-24B-1

UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	ICE DESCRIPTION	DEPTH (FEET)	CLAY %	SILT %	SAND %	GRAVEL %	REMARKS
Pt	PEAT — 8"							
	ICE & ORGANIC — 7'	ICE & OH	2	80	20	0		FREE WATER
Pt	PEAT — 10'		8					ORGANIC SAT.
CL	CLAY - SANDY, SILTY, PEBBLES, GRAVELLY, LOW PLASTIC	Vc - Vr	11	44	49	7		SAT.
			15	40	48	12		MOIST
			20	36	43	21		WET
GC	GRAVEL-SAND-CLAY MIX		25	17	42	41		WET
	SC SAND CLAYEY GRAVELLY		29	28	54	18		WET

BOTTOM OF HOLE - 30'



Column headings on form: SAMPLE NUMBER, SAMPLE TYPE, % RECOVERY, PENETRATION RESISTANCE, UNIFIED SOIL SYMBOL, SOIL DESCRIPTION, LIMITS OF FROZEN GROUND, ICE DESCRIPTION, DEPTH (FEET), GRAIN-SIZE ANALYSIS (CLAY %, SILT %, SAND %, GRAVEL %), WET DENSITY (P.C.F.), DRY DENSITY (P.C.F.), REMARKS

SC SAND CLAYEY GRAVELLY

INUVIK - TUK.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

FIELD ENG | DATE DRILLED 8/4/76 | AIRPHOTO NO: | CHAINAGE: | OFFSET
TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV

TEST HOLE: MILE | B,C,S | NUMBER: AREA - 24B-2

REMARKS

SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)
				PT	PEAT — 1.5'									
					ICE & SOIL — 4'		ICR	2						
					ICE & ORGANIC — 6'		ICR & OH	4						
				CL	CLAY - SILTY SANDY GRAVELLY MED. PLASTIC — 12'			6	39	34	27		SAT.	
								8						
								10	57	28	15		WET	
				GW	GRAVEL · SANDY — 16.5'		$V_c - V_r$	12						
								14	8	32	60		SAT.	
								16						
					SAND - SILTY PEBBLES			18						
				SM				20	45	51	4		WET	
								22						
								24	36	61	3		WET	

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

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

BOTTOM OF HOLE - 30'

-32 1d6-2 SAT

INUVIK - TUK

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

AN ENG | DATE DRILLED 8/4/76 | AIRPHOTO NO: | CHAINAGE | OFFSET

KO PRONYCH | RIG: AIR | SURFACE DRAINAGE: | VEGETATION | ELEV

TEST HOLE: MILE | B,C,S | NUMBER: AB-9-24B-3

SAMPLE NUMBER	SAMPLE TYPE	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION	DEPTH (FEET)
		PEAT 2"			
	SM	SAND - SILTY PEBBLES		Vc-Vr	
		ICE		ICE	
		GRAVEL & ICE 15'		ICE & GP	
		BOTTOM OF HOLE - 15'			

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

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

NO SAMPLES

GRAIN-SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (PCF)	DRY DENSITY (PCF)

REMARKS

INUVIK - TUK

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DOWN | FIELD ENG | DATE DRILLED 2/4/76 | AIRPHOTO NO: | CHAINAGE | OFFSET | TEST HOLE
CKD | TECH PRONYCH | RIG AIR | SURFACE DRAINAGE: | VEGETATION: | ELEV | MILE 1026 | B,C,S | NUMBER 1

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					Pt	Peat 4"		
2						CLAY SILTY / SANDY PEBBLES 3'		
4								ICE
6						ICE & SOIL		&
8								
10								SOIL
12						14'		
14						GRAVEL - SANDY		
16								Vs
18								
20						ICE		ICE
22								
24								

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

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

NO SAMPLES

GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
CLAY %	SILT %	SAND %	GRAVEL %		

REMARKS

28'
GRAVEL - SANDY 29'
BOTTOM OF HOLE - 29'

GRAVEL - SANDY