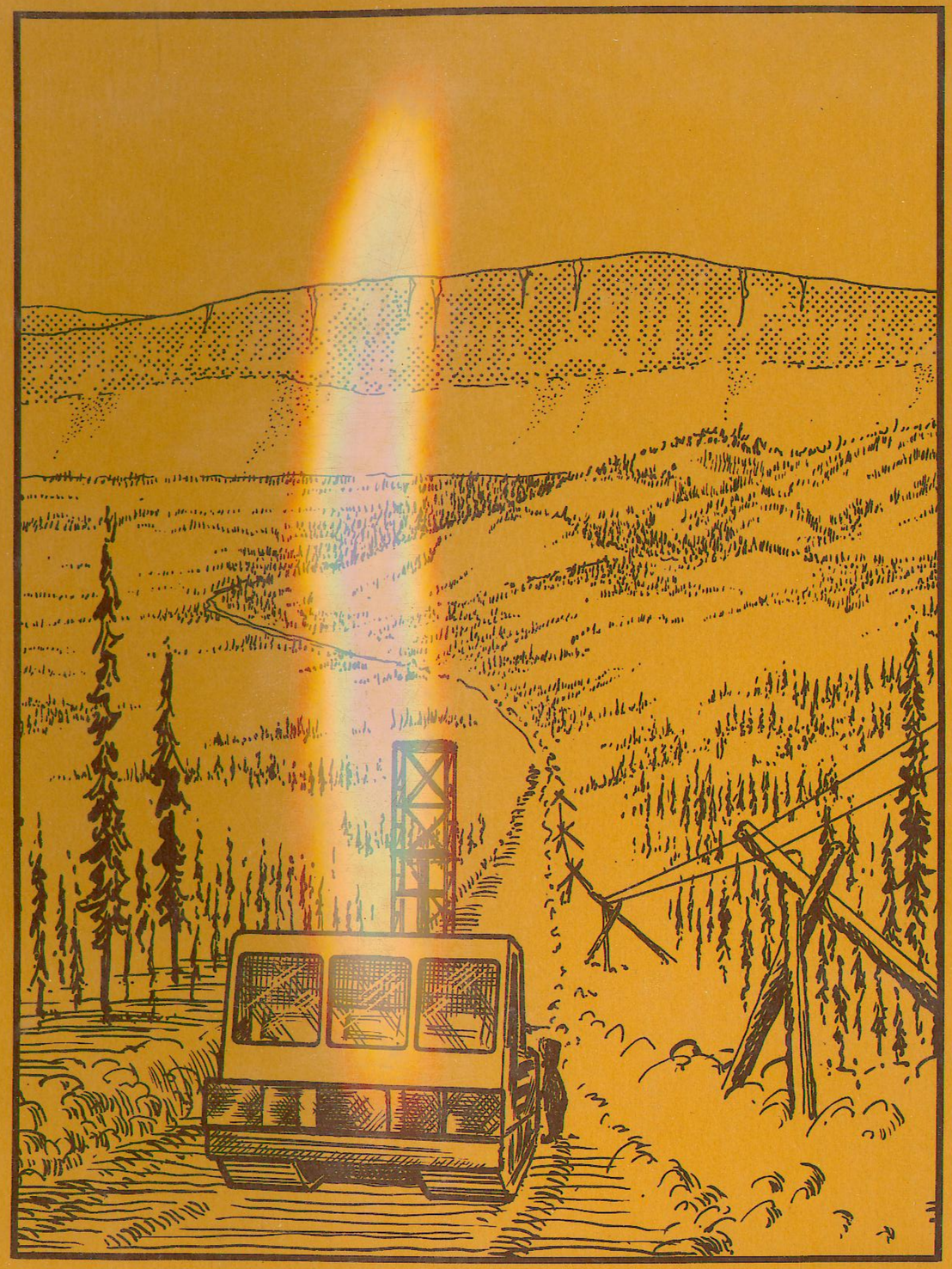


MACKENZIE HIGHWAY
GEOTECHNICAL EVALUATION

VOLUME XI

CENTER LINE AND

SPECIAL BOREHOLE LOGS

SECTION IV

MILE 668 To MILE 649

D001827

eba Engineering Consultants Ltd.

ISSUE #3



THE ASSOCIATION OF
PROFESSIONAL ENGINEERS
OF ALBERTA
PERMIT NUMBER
P245
ELMER W. BROOKER
& ASSOCIATES LTD.

VOLUME XI

CENTER LINE AND

SPECIAL BOREHOLE LOGS

SECTION IV

MILE 668 To MILE 649

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

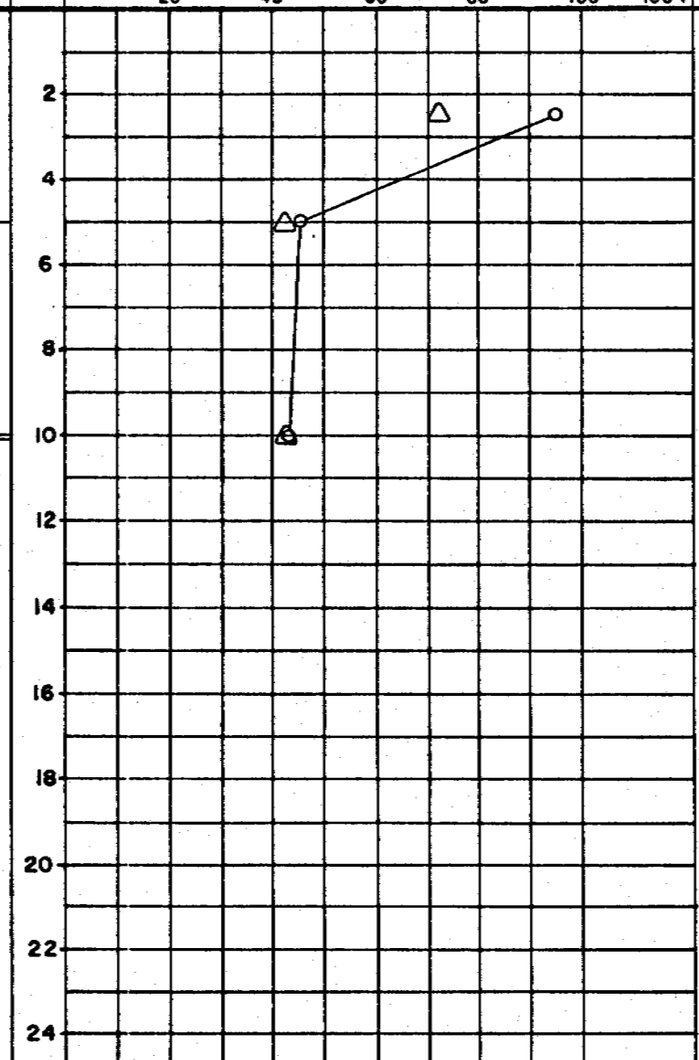
DWN: ALB | FIELD ENG: NRM | DATE DRILLED 12/2/73 | AIRPHOTO NO: A22763-45 | CHAINAGE: 2949 + 90 | OFFSET

CKD: GRG | TECH: HC | RIG: Texoma | SURFACE DRAINAGE: Fair - South | VEGETATION: Bl. Spruce 10-15' Sparse | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
668	C	1

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					PT	PEAT - Med. Brown, Organic	F	V 70 - 75%
2	1				OL	SILT - Organic		
4	2				CI	CLAY - Silty, Med. Brown, Med. Plastic, Dark Brown @ 5' - Grey		V 40 - 45%
6								
8								
10	3					END OF HOLE @ 10'		
12								
14								
16								
18								
20								
22								
24								



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

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

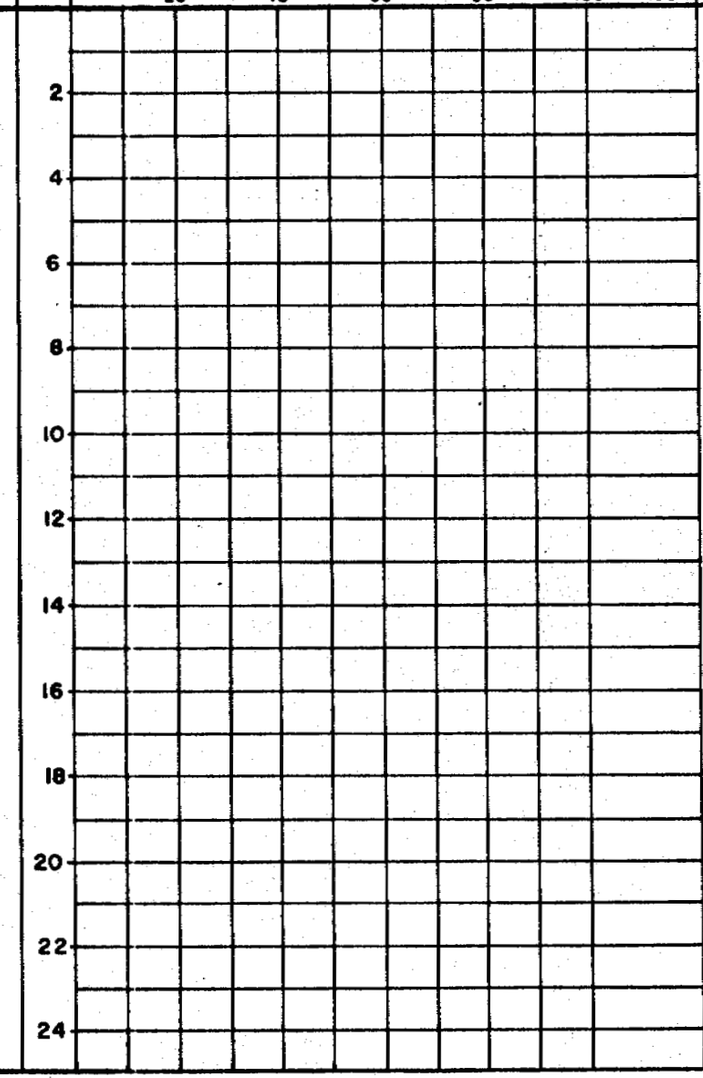
DWN:	FIELD ENG:	DATE DRILLED:	AIRPHOTO NO:	CHAINAGE:	OFFSET
CKD	TECH	RIG:	SURFACE DRAINAGE:	VEGETATION:	ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
668	C	2

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2						No Hole Drilled		
4								
6								
8								
10								
12								
14								
16								
18								
20								
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 14/2/73 | AIRPHOTO NO: A22860 - 118 | CHAINAGE: 2956 + 20 | OFFSET

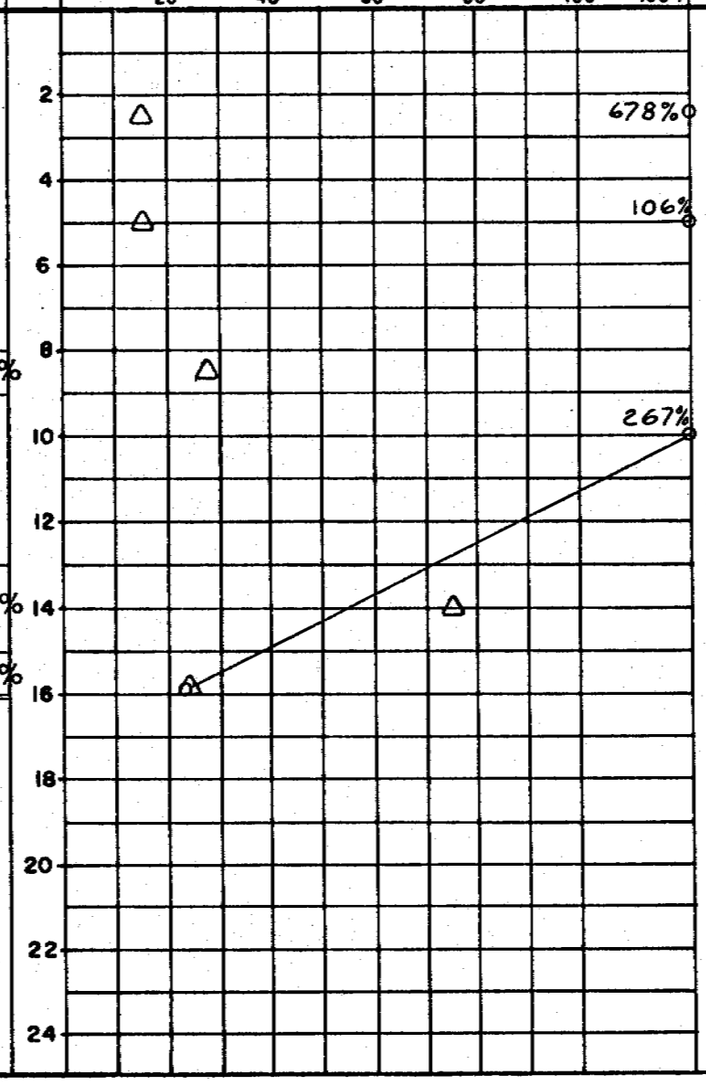
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor to N.E. | VEGETATION: Light Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
668	C	3

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				PT	PEAT - Reddish Brown - Fibrous	F	V.. 10 - 20%
4	2							
6								
8					OL	Organic Silt - Black - Fibrous		V:- 25-30%
10	3							NB.
12								
14								V:- 70-80%
16	4				CH	CLAY - Grey, High Plasticity		V:- 20-30%
						END OF HOLE 16'		



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

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 14/2/73 | AIRPHOTO NO: A22860 - 118 | CHAINAGE: 2962 + 80 | OFFSET

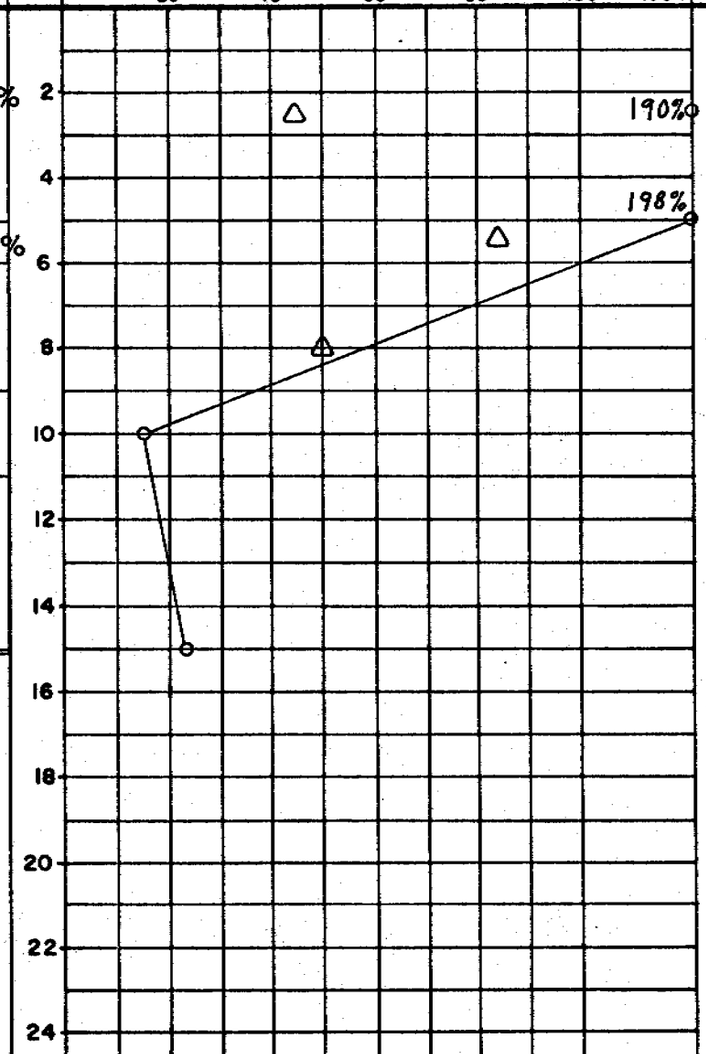
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Good to N.E. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
668	C	4

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				PT	PEAT - Black - Fibrous	F	V- 40-50%
4	2							V- 80-90%
6					OL	ORGANIC SILT - Dark Brown		V- 50%
8								
10	3				ML to SM	SILT- Med. Brown (TILL)- Some Clay - Low Plasticity		NB
12							U	Unfrozen
14	4					- Sandy - Very Sandy		
16						END OF HOLE 15'		
18								
20								
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

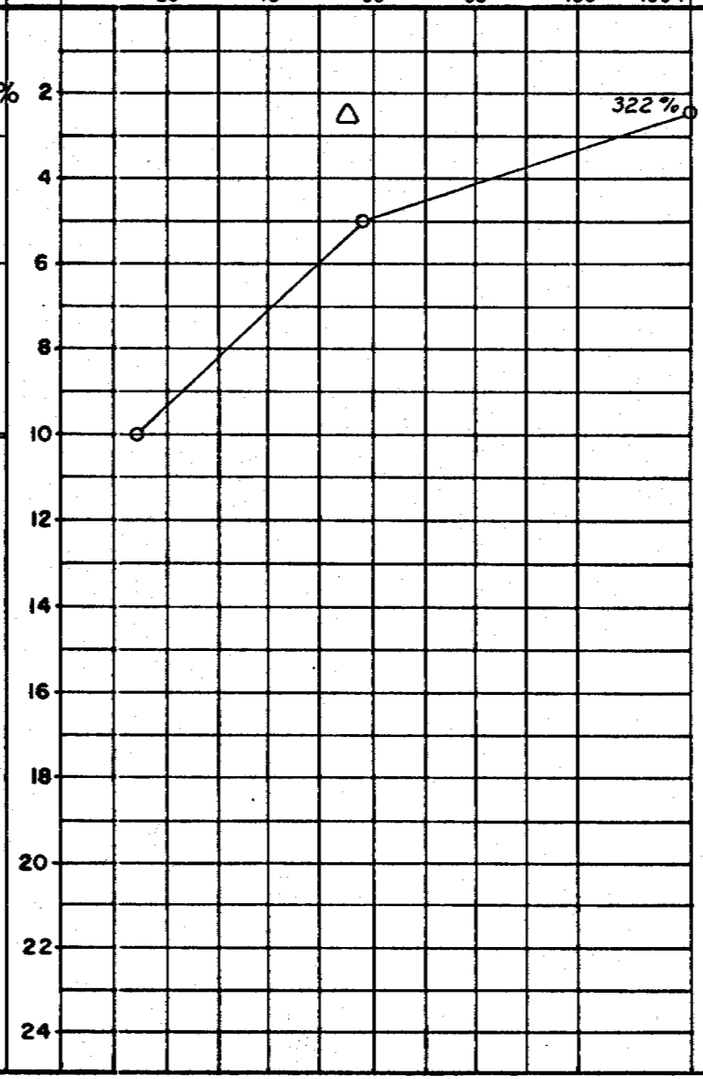
DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 14/2/73 | AIRPHOTO NO: A22860 - 118 | CHAINAGE: 2970 + 50 | OFFSET

CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Good to N.E. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
668	C	5

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				PT	PEAT - Dark Brown - Fibrous	F	V- 50-60%
4	2				ML	SILT- Med. Brown, (TILL) Sandy, Low Plasticity, Organic, Trace of clay & grave		NB
6								
8						- Med. Brown, Sandy, Low Plasticity, Clayey	U	Unfrozen
10	3							
12						END OF HOLE 10'		
14								
16								
18								
20								
22								
24								



DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
2						
4	7	66	25	2		
6						
8						
10						
12						
14						
16						
18						
20						
22						
24						

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 14/2/73 | AIRPHOTO NO: A22860 - 118 | CHAINAGE: 2977 + 40 | OFFSET

CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Good to N.E. | VEGETATION: Very Sparse Bl. Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
668	C	6

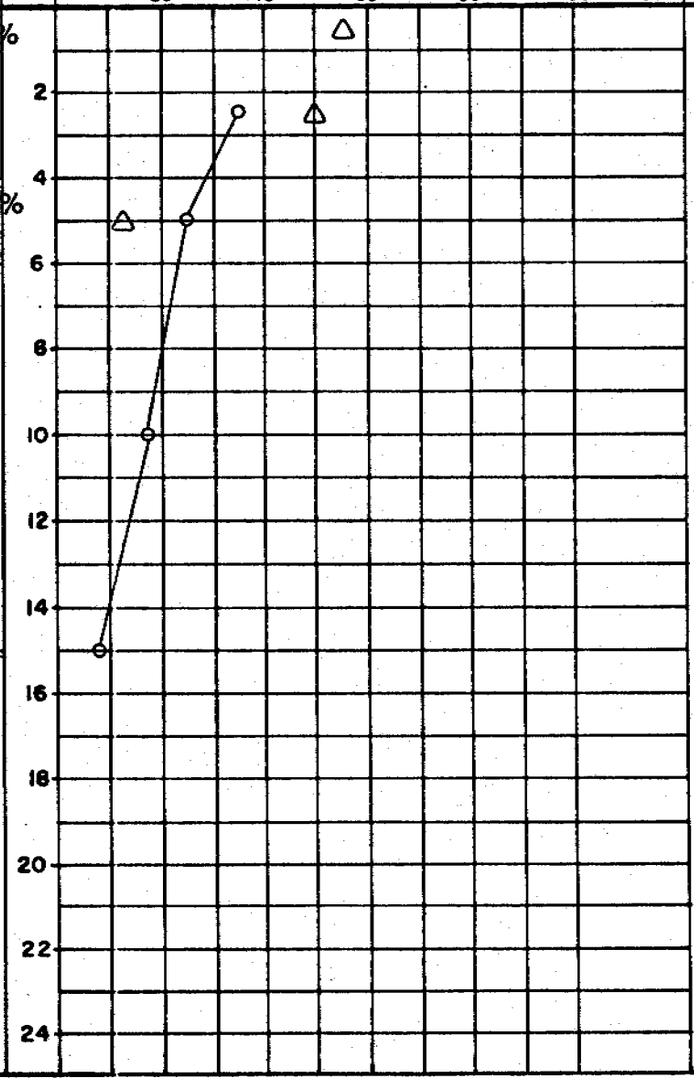
REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					PT	PEAT - Fibrous		V - 50-60%
2	1				CL	CLAY - Med. Brown SILT - Traces of Sand (TILL) & Gravel - Low Plasticity	F	V - 50%
4								V - 10-15%
6	2							NB
8								
10	3				ML	SILT - Light Brown - Clayey - Med. Plasticity		
12					SH (CL)	SHALE - Grey - Clayey		
14	4							
16						END 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+



DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
0						
2						
4						
6						
8						
10						
12						
14						
16						
18						
20						
22						
24						

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 14/2/73 | AIRPHOTO NO: A22860 - 118 | CHAINAGE: 2984 + 80 | OFFSET

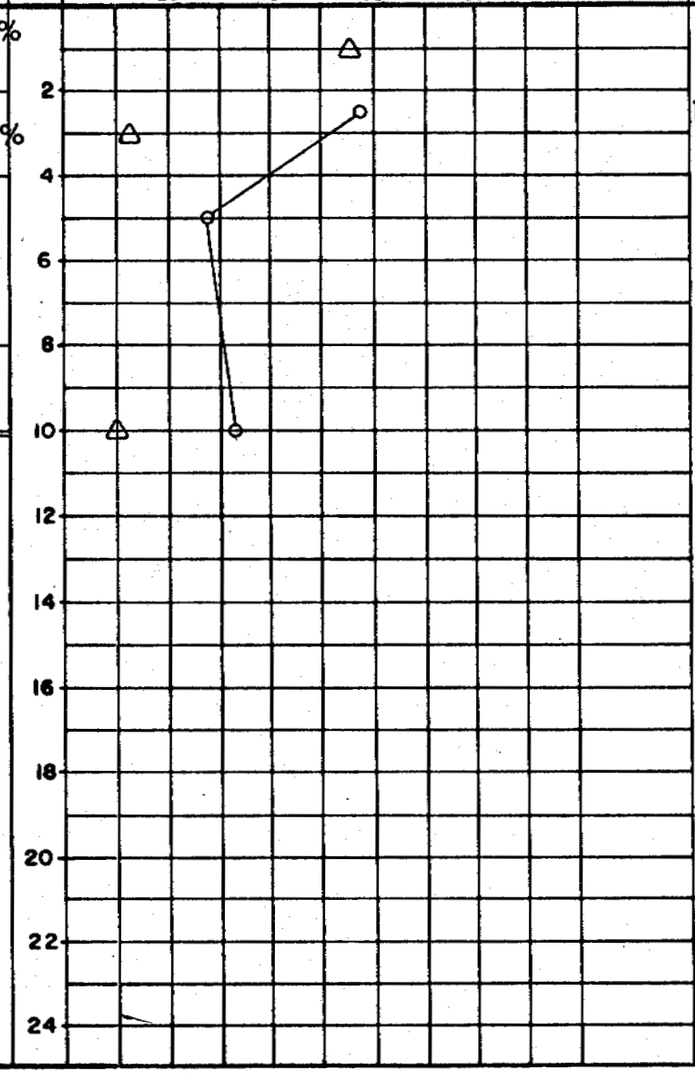
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Good to North | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
668	C	7

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					OL	Organic Silt		V- 50-60%
2	1				ML	SILT - Med. Brown (TILL) - Clayey, Sandy - Low Plasticity - Pieces of Limestone and Gravel	F	V- 10-15%
4	2							NB
6								
8					ML	SILT - Med. to Light Brown, Clayey, Low Plasticity		V- 10%
10	3					END OF HOLE 10'		
12								
14								
16								
18								
20								
22								
24								



GRAIN-SIZE ANALYSIS	CLAY	SILT	SAND	GRAVEL	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
	%	%	%	%		
1	19	56	25	-		
2						
3						

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 14/2/73 | AIRPHOTO NO: A22860 - 118 | CHAINAGE: 2991 + 40 | OFFSET

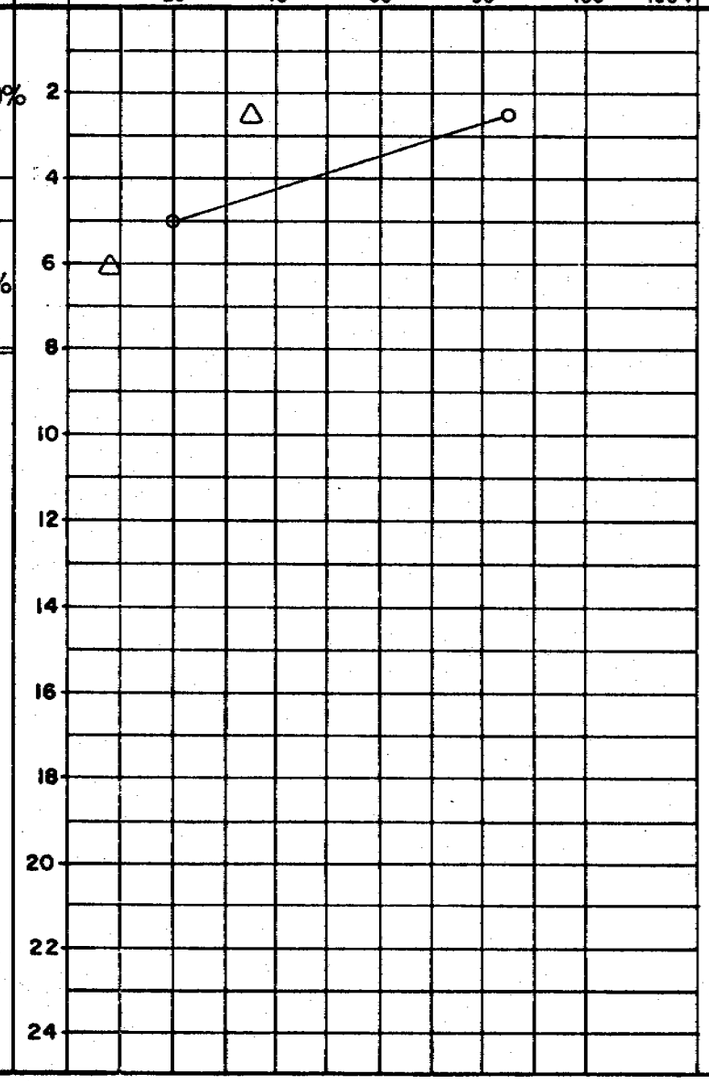
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Good to North | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
667	C	1

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				PT	PEAT - Dark Brown - Fibrous - Silty	F	V- 30-40%
4	2				OH	Organic Clay		NB
6					CL	CLAY - Med. Brown, Silty, Low Plasticity		V- 5-10%
8					ML	SILT - Med. Brown (TILL) - Low Plasticity		
10						LIMESTONE - Greyish		
12						END OF HOLE 8'		
14								
16								
18								
20								
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 14/2/73 | AIRPHOTO NO: A22860 - 118 | CHAINAGE: 2995 + 30 | OFFSET

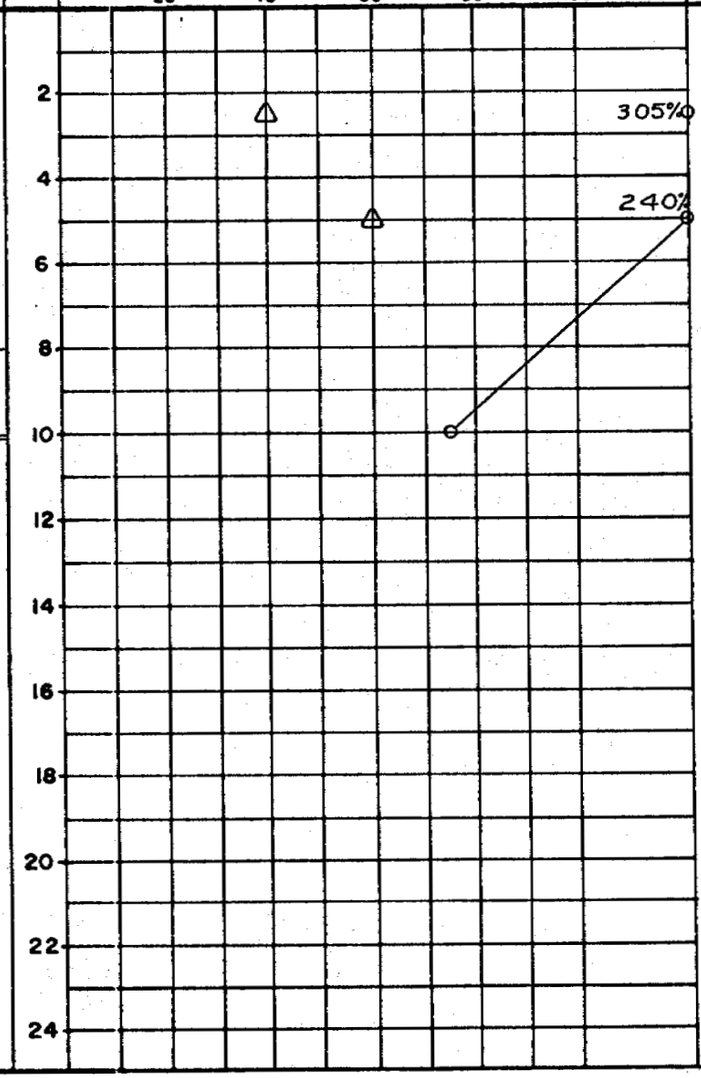
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Fair to West | VEGETATION: Sparse Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
667	C	2

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				PT to OL	PEAT - Dark Brown - Fibrous - Silty	F	V- 40% V~ 60%
4	2							
6								
8					OL to CL	ORGANIC SILT - Med. to Dk. Brown		NBN
10	3					CLAY - Greyish Brown - Low Plasticity		
12						END OF HOLE 10'		
14								
16								
18								
20								
22								
24								



GRAIN-SIZE ANALYSIS

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						

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

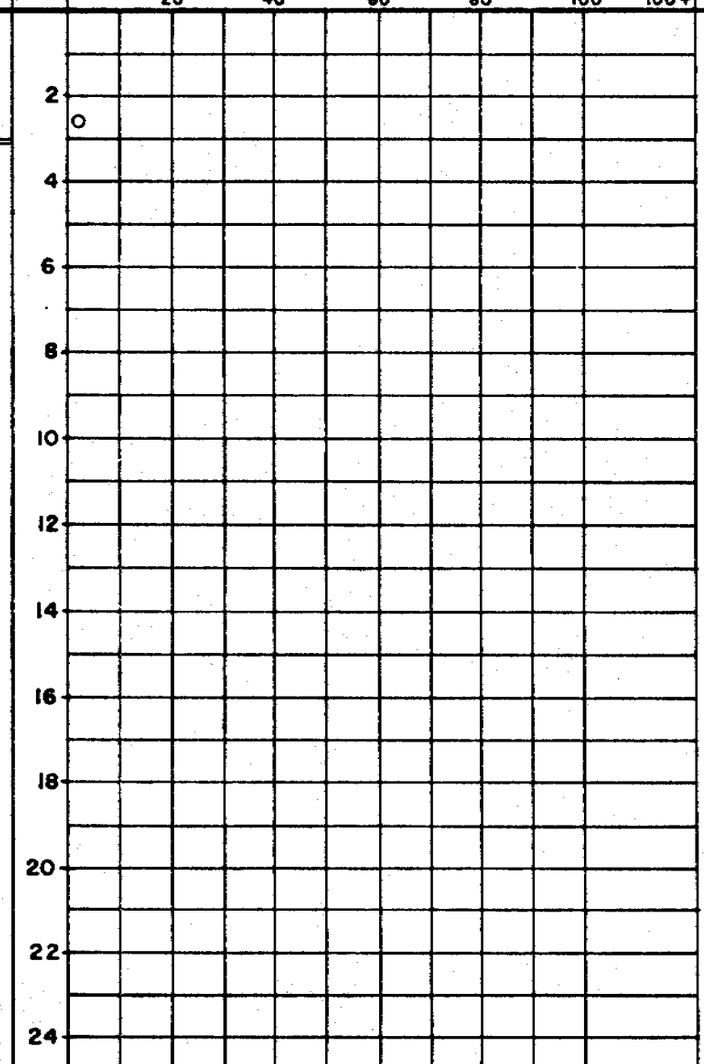
DWN: ALB | FIELD ENG: NRM | DATE DRILLED 14/2/73 | AIRPHOTO NO: A22860 - 118 | CHAINAGE: 2999 + 98 | OFFSET

CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Good to N & S | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
667	C	3

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				GM	GRAVEL - Med., Brown - Angular - Some sand - Trace of silt & clay	F	NF
4						LIMESTONE - BEDROCK END OF HOLE 3'		
6								
8								
10								
12								
14								
16								
18								
20								
22								
24								



GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
CLAY %	SILT %	SAND %	GRAVEL %		
(13)	19	68			

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

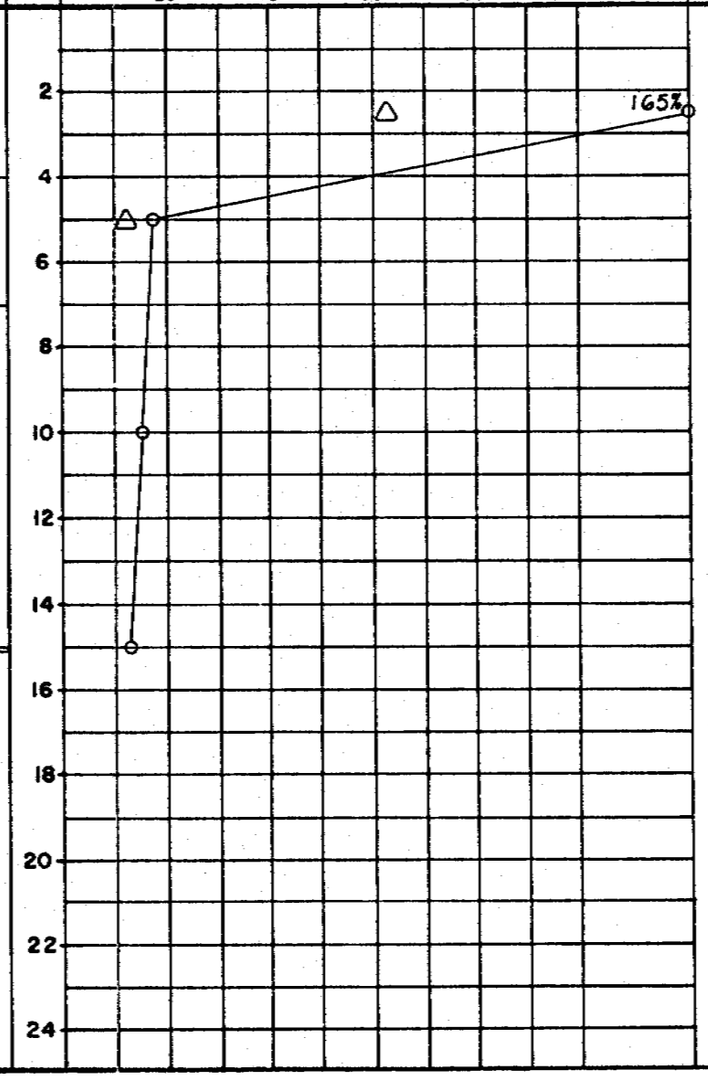
DWN: ALB | FIELD ENG: NRM | DATE DRILLED 13/2/73 | AIRPHOTO NO: A22860 - 117 | CHAINAGE: 3005 + 10 | OFFSET

CKD: GTG | TECH: HC | RIG: Texoma | SURFACE DRAINAGE: Good - South | VEGETATION: Black Spruce 15-20' Dense | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
667	C	4

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				PT	PEAT - Med. Brown - Organic - Silty		V 60 - 65%
4								
6	2				ML	SILT - Med. Brown (TILL) - Sandy - Gravelly - Low Plasticity	F	V 5 - 10%
8								
10	3							NB
12								
14	4					BEDROCK		
16						END OF HOLE 12'		
18								
20								
22								
24								



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

REMARKS

Intersection of Highway Right-Away & Winter Road

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 2/13/73 | AIRPHOTO NO: A22860 - 117 | CHAINAGE: 3012 + 50 | OFFSET

CKD: GRG | TECH: HC | RIG: Texoma | SURFACE DRAINAGE: Good - South | VEGETATION: Bl. Spruce 20-40 | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
667	C	5

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				CI	CLAY - Med. Brown - Med Plasticity - Silty		V. 40 - 45%
4								
6	2						F	V 10 - 15%
8								
10	3							
12						END OF HOLE 10'		
14								
16								
18								
20								
22								
24								

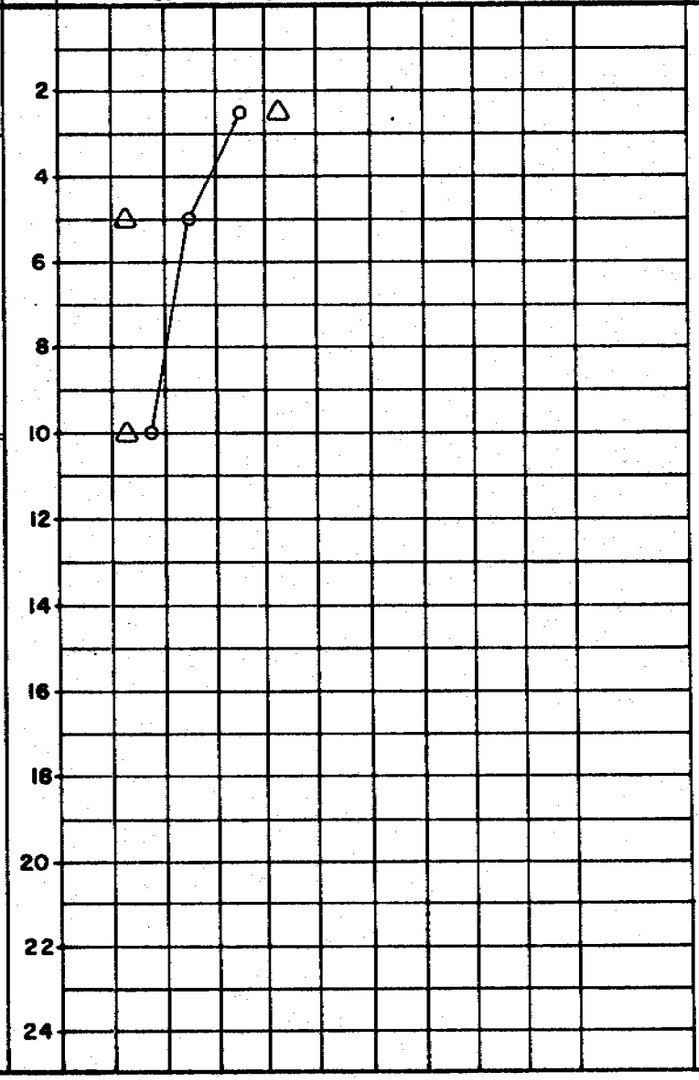
Sparse to Dense

○ = 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						
4						
6						
8						
10						
12						
14						
16						
18						
20						
22						
24						

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 13/2/73 | AIRPHOTO NO: A22860 - 117 | CHAINAGE: 3019 + 95 | OFFSET

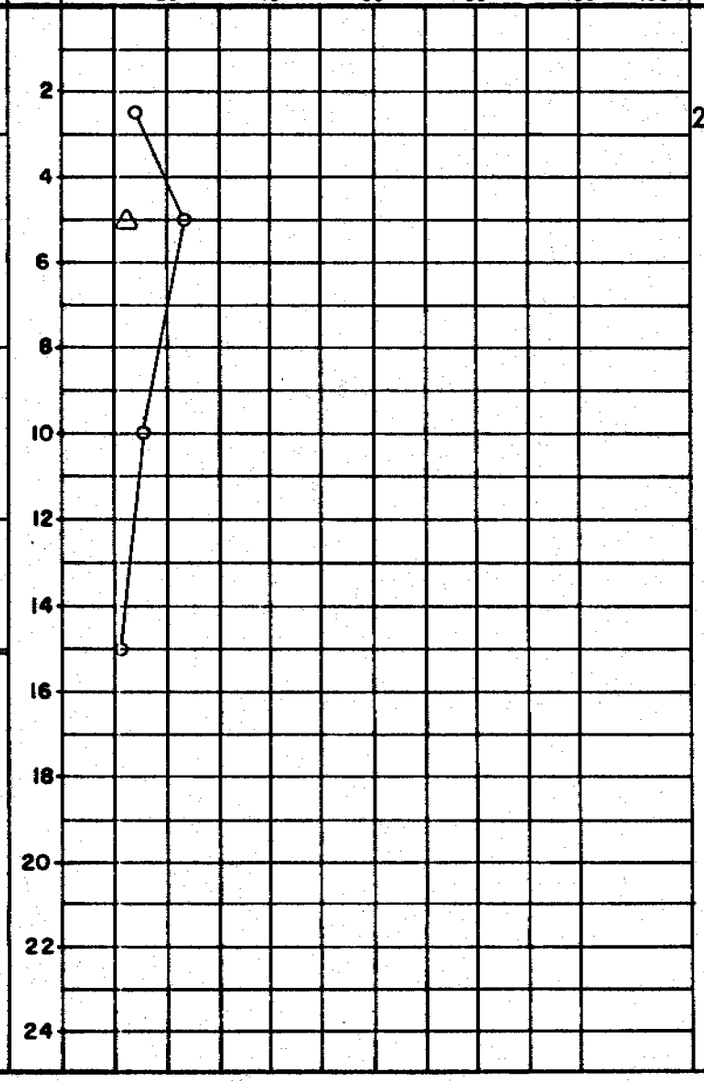
CKD: GRG | TECH: HC | RIG: Texoma | SURFACE DRAINAGE: V. Good - South | VEGETATION: Black Spruce, Birch 10-30' | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
667	C	6

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				CI	CLAY - Med. Brown SILT - Med. Plasticity (TILL) - Very Dry to 3' - Sandy - Trace of Gravel	F	NB
4	2							V 10 - 15%
6								
8								
10	3							NB
12								
14	4					- Grey	F to U	NB to Unfrozen
16						END OF HOLE 15'		
18								
20								
22								
24								



DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
2	20	42	34	4		

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB GRG | FIELD ENG: NRM | DATE DRILLED 13/2/73 | AIRPHOTO NO: A22860 - 117 | CHAINAGE: 3026 + 68 | OFFSET

CKD | TECH: HC | RIG: Texoma | SURFACE DRAINAGE: V. Good - South | VEGETATION: Black Spruce, Willow | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
667	C	7

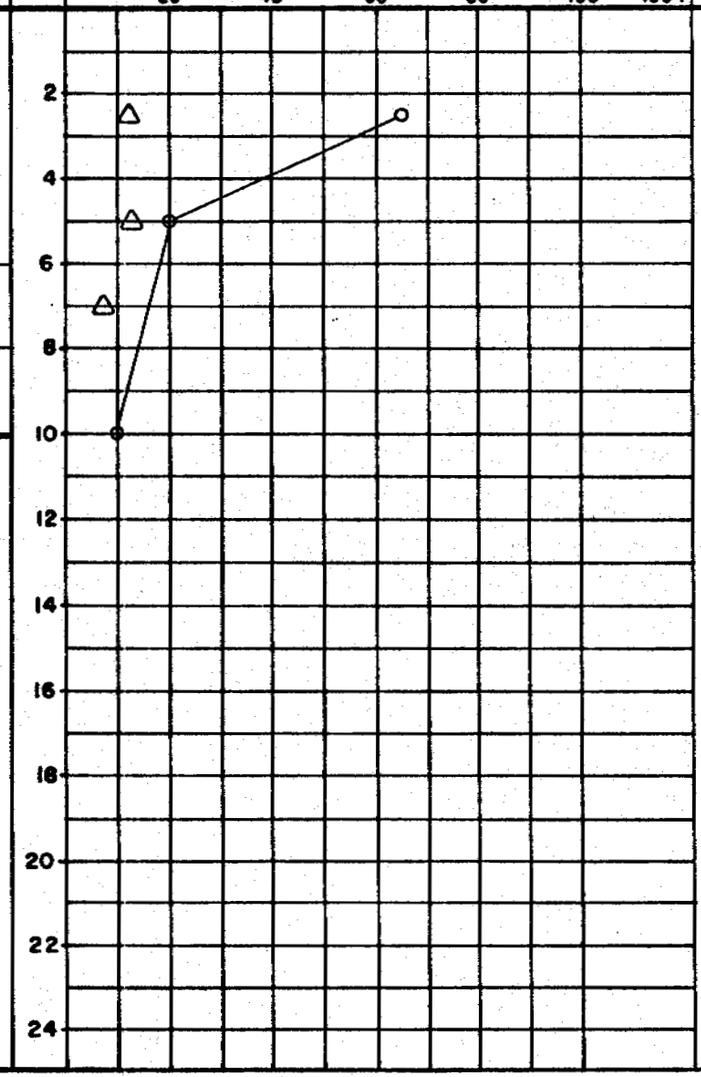
REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					PT	PEAT - Med. Brown, Organic		
2	1				SM	SAND - Silty - Grey Brown - Wet		V: 10 - 15%
4	2				CL	CLAY - Silty, Grey (TILL) - Low Plasticity	F	V: 5 - 10%
6								
8								NB!
10	3					- Grey		
10						END OF HOLE 10'		
12								
14								
16								
18								
20								
22								
24								

5 - 30', Sparse

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

PLASTIC LIMIT — LIQUID LIMIT



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						

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 13/2/73 | AIRPHOTO NO: A22860 - 116 | CHAINAGE: 3033 + 73 | OFFSET

CKD: GRG | TECH: HC | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce, Tamarack | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
666	C	1

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					PT	PEAT - Med. Brown, Organic	F	
2	1				CL	CLAY - Silty (TILL) - Med. Brown - Low Plasticity		NB'
4	2							V 5 - 10%
6								
8						- Grey - Shale Fragments		NB'
10	3				SH (CL)	SHALE - Grey, Dry, Hard, Silty, Low Plasticity		N/A
12								
14	4							
16						END OF HOLE 15'		
18								
20								
22								
24								

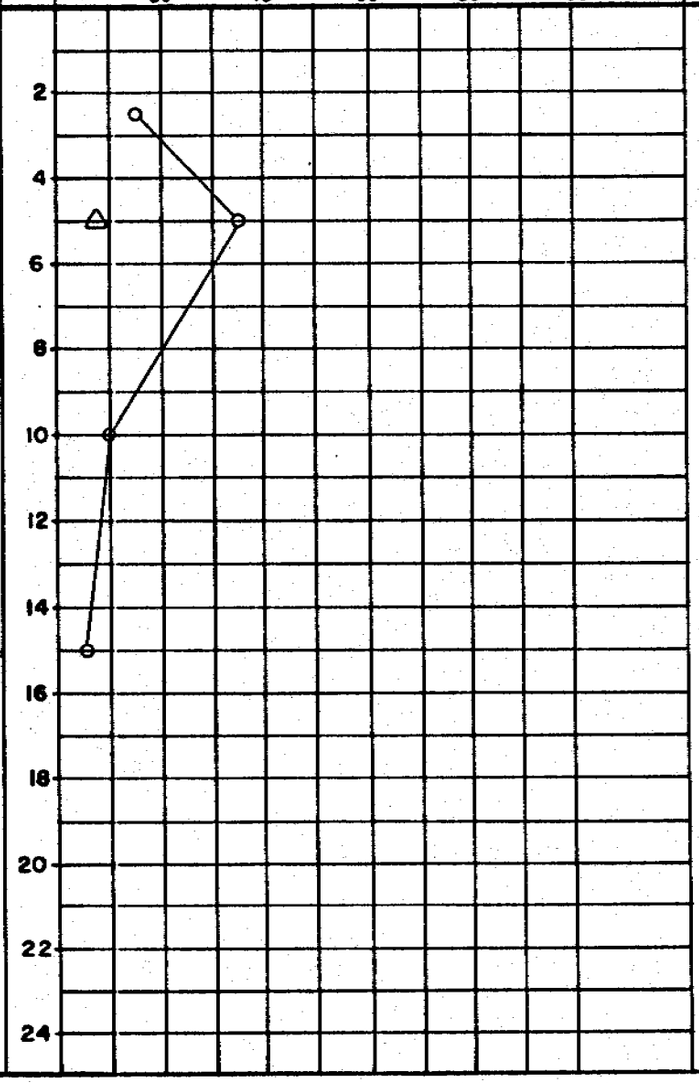
10 - 15', Sparse

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = ICE CONTENT (% OF SAMPLE VOLUME)

PLASTIC LIMIT — LIQUID LIMIT

20 40 60 80 100 100+



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 13/2/73 | AIRPHOTO NO: A22860 - 116 | CHAINAGE: 304 + 90 | OFFSET

CKD: GRG | TECH: HC | RIG: Texoma | SURFACE DRAINAGE: Fair - South | VEGETATION: Black Spruce 10 - 12 ' | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
666	C	2

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				PT	PEAT - Med. Brown - Organic		
4	2				SM	SAND - Med. Brown, Silty	F	V 30 - 35%
6								Unf to NB
8								V 1/8" Lenses 15 - 20%
10	3				CI	CLAY - Grey, Silty, Med. Plasticity	U	Unfrozen
12						END OF HOLE 11'		
14								
16								
18								
20								
22								
24								

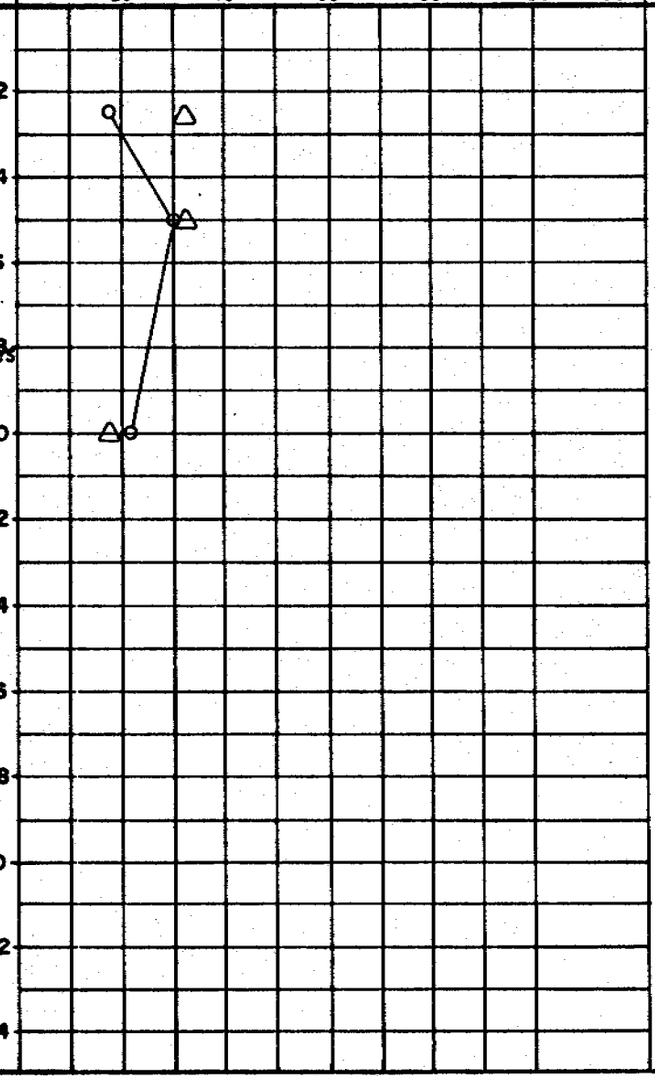
Sparse

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = ICE CONTENT (% OF SAMPLE VOLUME)

PLASTIC LIMIT — LIQUID LIMIT

20 40 60 80 100 100+



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 14/2/73 | AIRPHOTO NO: A22860 - 116 | CHAINAGE: 3048 + 92 | OFFSET

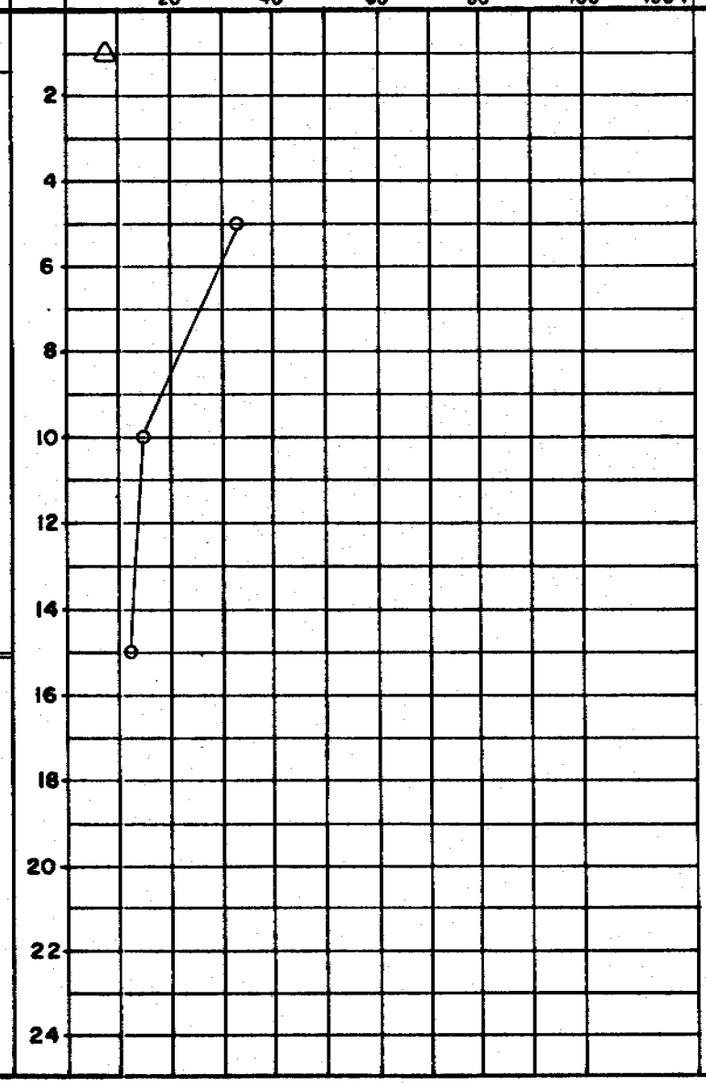
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor to South | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
666	C	3

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				PT	PEAT - Black - Fibrous		V 5 - 10%
4	2				ML	SILT - Med. Brown - Clayey - Low Plasticity		
6							F	
8					ML	SILT - Med. Brown (TILL) - Sandy - Low Plasticity		NB
10	3							
12					TO SH (CL)	- Grey - Clayey - Low Plasticity - Some Shale		
14	4							
16						END OF HOLE 15'		
18								
20								
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

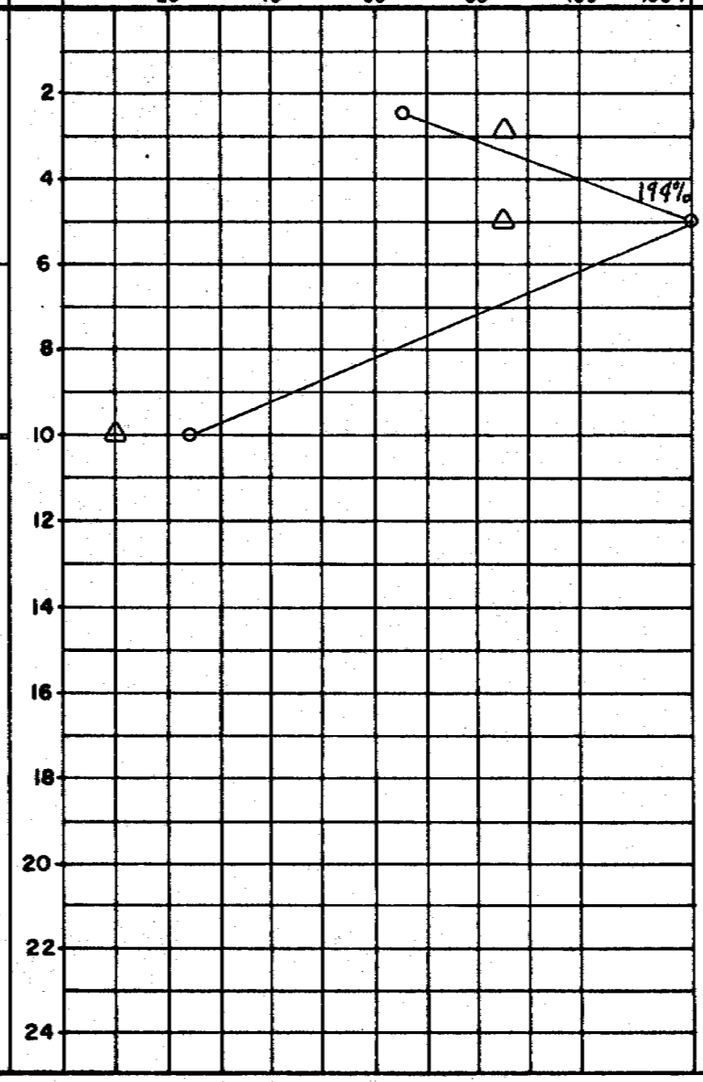
DWN: ALB | FIELD ENG: NRM | DATE DRILLED 14/2/73 | AIRPHOTO NO: A22860 - 116 | CHAINAGE: 3057 + 40 | OFFSET

CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor to S | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
666	C	4

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				PT	PEAT - Black - Fibrous	F	V 80 - 90%
4	2				OL to ML	SILT (TILL) - Organic - Sandy - Some clay - Trace of gravel		
6					CI	CLAY - Grey - Med Plasticity - Silty		V - 10%
8								
10	3					END OF HOLE 10'		
12								
14								
16								
18								
20								
22								
24								



GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
CLAY %	SILT %	SAND %	GRAVEL %		
12	63	24	1		

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 14/2/73 | AIRPHOTO NO: A22860 - 116 | CHAINAGE: 3065 + 30 | OFFSET

CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor to S. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

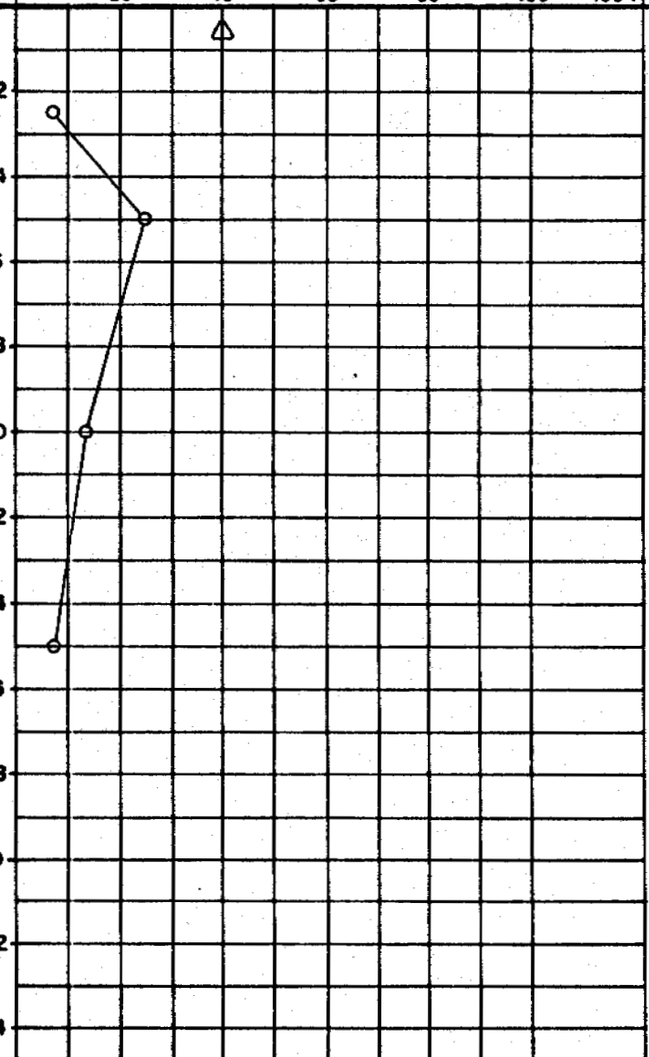
MILE	B,C,S	NUMBER
666	C	5

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					PT	PEAT	F	V- 40%
2	1				ML	SILT - Med. Brown (TILL) - Sandy - Low Plasticity - Some clay		
4	2							
6						- Clayey - Low Plasticity		NB
8								
10	3					- Some Shale		
12					SM	SAND - Grey, Fine (TILL) - Silty - Non-Plastic	U	Unfrozen
14	4							
16					·	END OF HOLE 15'		
18								
20								
22								
24								

○ = 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						
4						
6						
8						
10						
12						
14						
16						
18						
20						
22						
24						

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DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

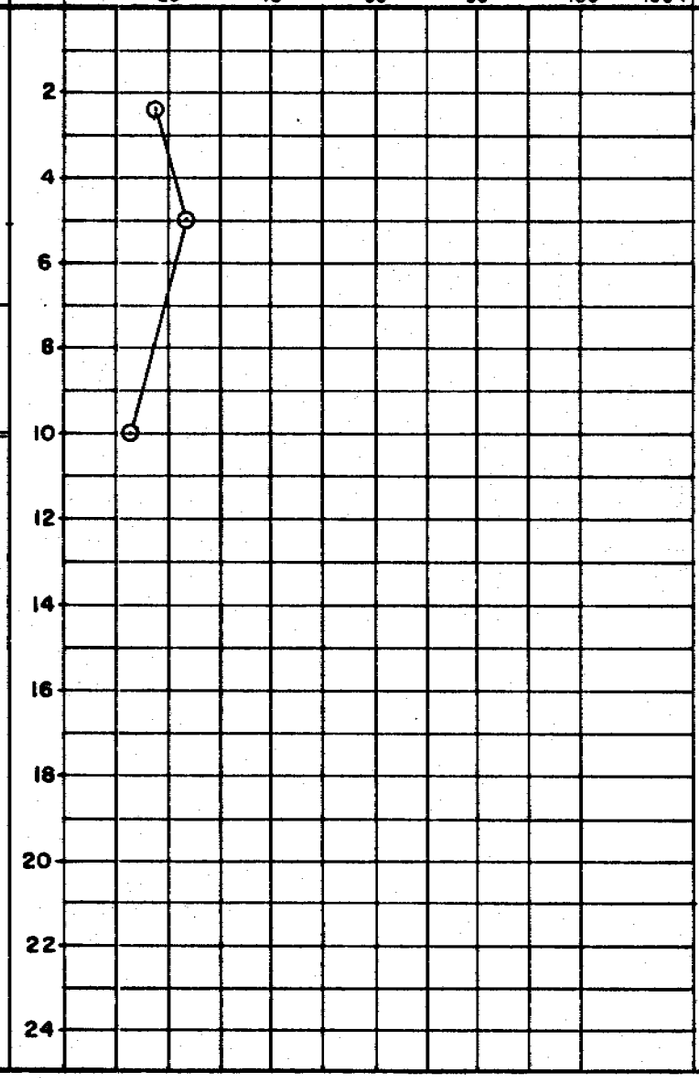
DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 14/2/73 | AIRPHOTO NO: A22860-116 | CHAINAGE: 3072 + 40 | OFFSET

CKD: GRG | TECH: JK | RIG: Yrcoms | SURFACE DRAINAGE: Poor to S. | VEGETATION: Black Spruce | ELEV

TEST HOLE

MILE	B,C,S	NUMBER
666	C	6

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				CL	CLAY - Silty - Med. to Light Brown - Low Plasticity	F	NB
4	2							
6					CL	CLAY - Med. Brown SILT - Some Gravel and (TILL) Sand, Low Plasticity		
8						CLAY - Grey, Silty - Low Plasticity - Shale	U	Unfrozen
10	3							
12						END OF HOLE 10'		
14								
16								
18								
20								
22								
24								



GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
24	44	15	17		

REMARKS

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DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 14/2/73 | AIRPHOTO NO: A22860 - 116 | CHAINAGE: 3079 + 80 | OFFSET

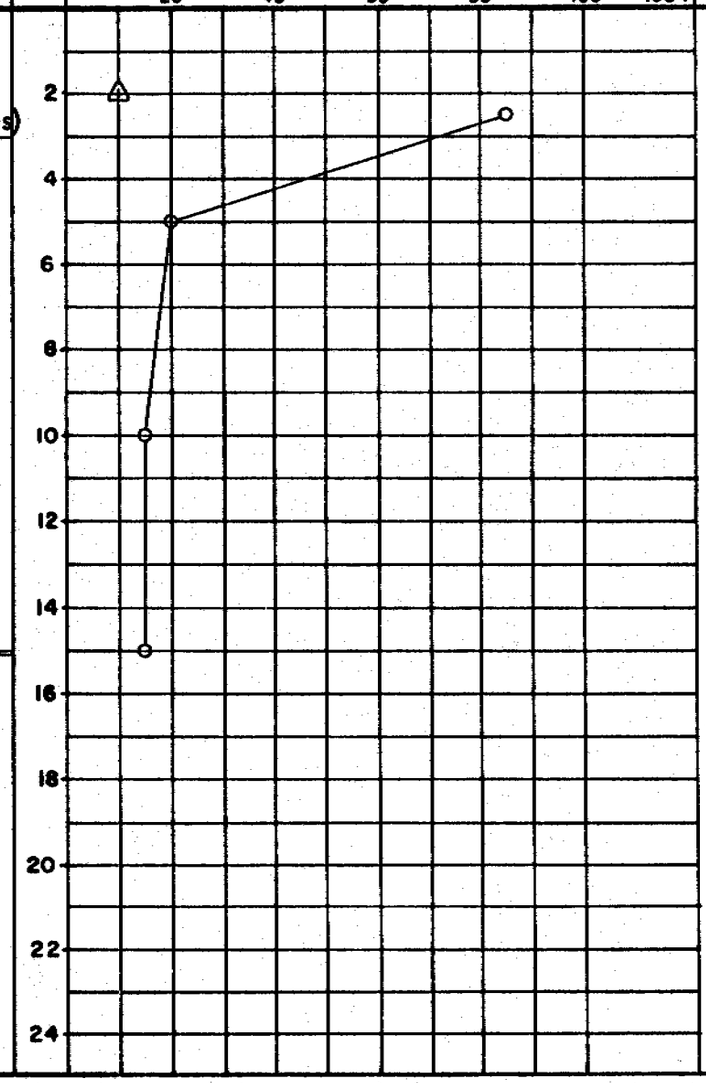
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor to S. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
666	C	7

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				OL	SILT - Light Brown - Low Plasticity - Organic		V 10 (1/8" Lenses)
4	2				ML	SILT (TILL) - Med. Brown - Sandy - Low Plasticity - Some clay		NB
8	3				CL	CLAY - Silty, Grey - Low Plasticity - Fragments of Limestone - Low Plasticity		
14	4							
16						END OF HOLE 15'		



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

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DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 14/2/73 | AIRPHOTO NO: A22860 - 116 | CHAINAGE: 3088 + 25 | OFFSET

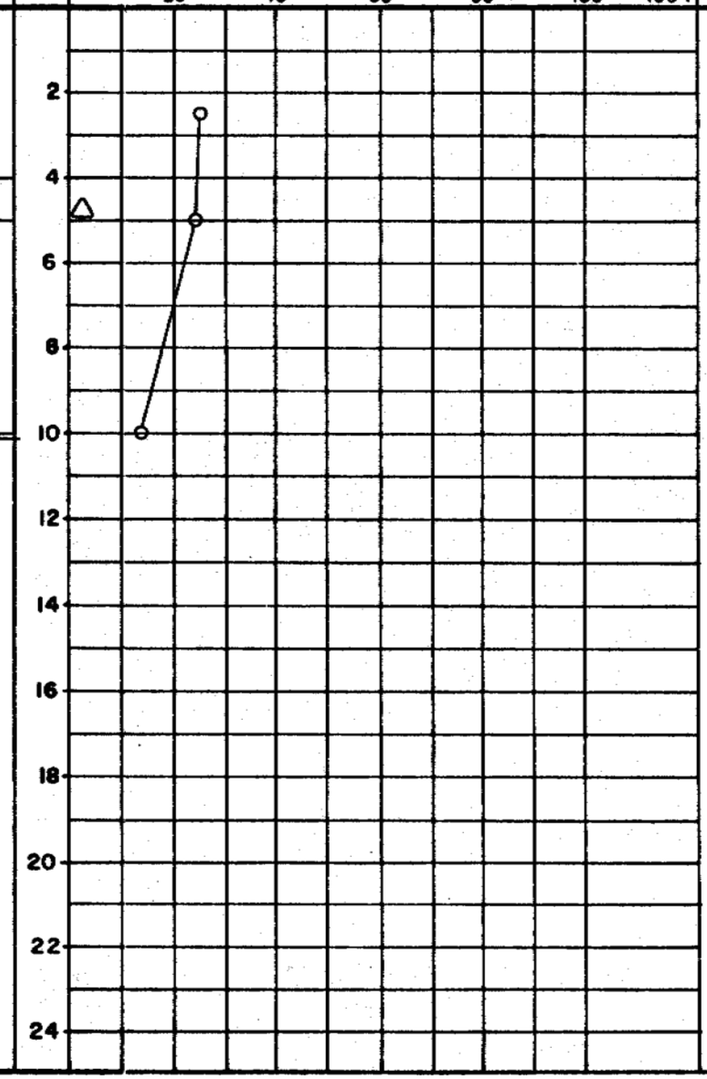
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor to S. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
665	C	1

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0								
2	1				OL to ML	SILT - Light Brown - Low Plasticity - Some Organics	F	NB
4	2				ML	SILT - Med. Brown (TILL) - Med. Plasticity - Traces of Sand		V- 0 - 5%
6								
8						- Reddish Oxides		NB
10	3				SM	SAND - Grey, silty, some gravel, trace of Clay, Shale (TILL)		
12						END OF HOLE 10'		
14								
16								
18								
20								
22								
24								



GRAIN-SIZE ANALYSIS	CLAY	SILT	SAND	GRAVEL	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
	%	%	%	%		
	7	25	53	15		

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DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 14/2/73 | AIRPHOTO NO: A22860 - 116 | CHAINAGE: 3096 + 10 | OFFSET

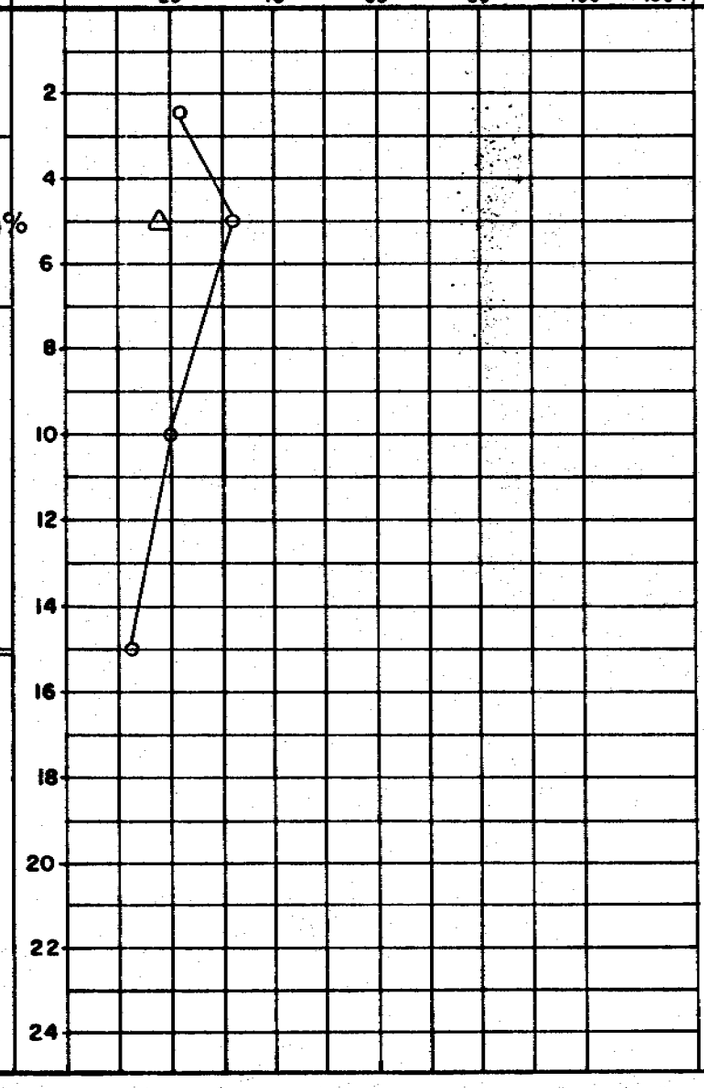
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor to S. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
665	C	2

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				ML	SILT - Light To Med. Brown - Clayey - Low Plasticity	F	NB
4	2				ML	SILT - Med. Brown (TILL) - Low Plasticity		V 15-20%
8								
10	3					- Sandy		NB
12								
14	4				CL	CLAY - Grey, Some Shale, SILT - Low Plasticity - Traces of Sand		
16						END OF HOLE 15'		
18								
20								
22								
24								



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

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DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 14/2/73 | AIRPHOTO NO: A22860 - 115 | CHAINAGE: 3104 + 50 | OFFSET

CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Fair to S. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

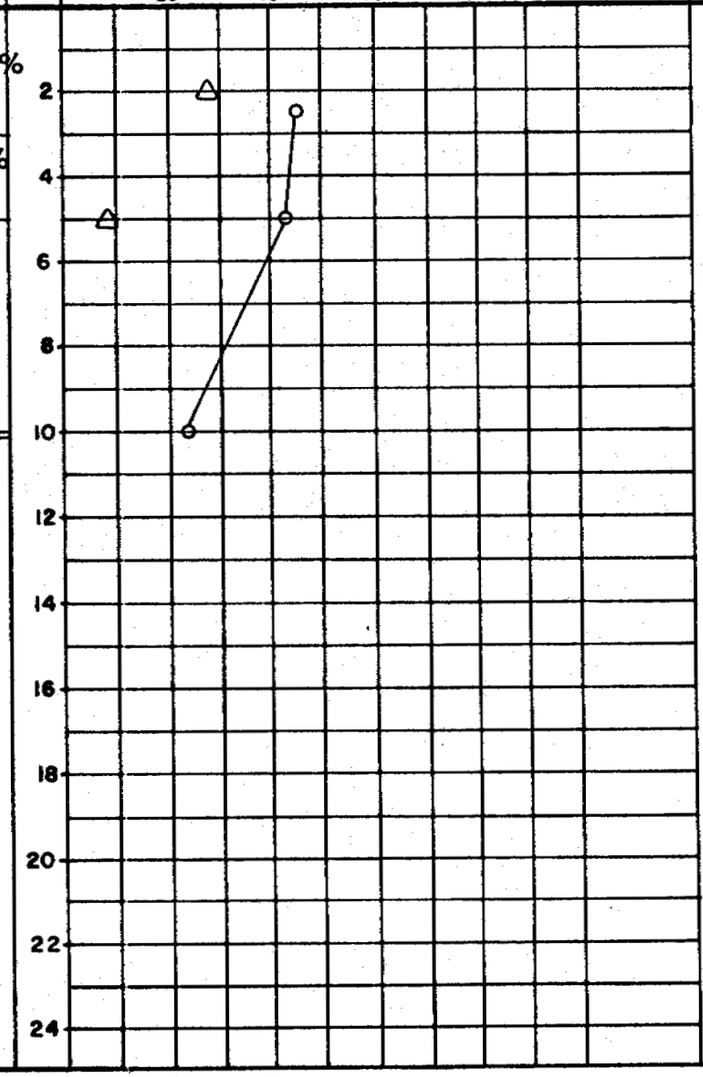
MILE	B,C,S	NUMBER
665	C	3

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				ML to CL	SILT - Light Brown CLAY - Low Plasticity	F	V 25-30%
4	2				ML	SILT - Med. Brown (TILL) - Low Plasticity - Traces of Sand		V 5-10%
6								
8						- Sandy		NB
10	3							
						END OF HOLE 10'		

O = 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						
4						
6						
8						
10						
12						
14						
16						
18						
20						
22						
24						

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 14/2/73 | AIRPHOTO NO: A22860 - 115 | CHAINAGE: 3113 + 20 | OFFSET

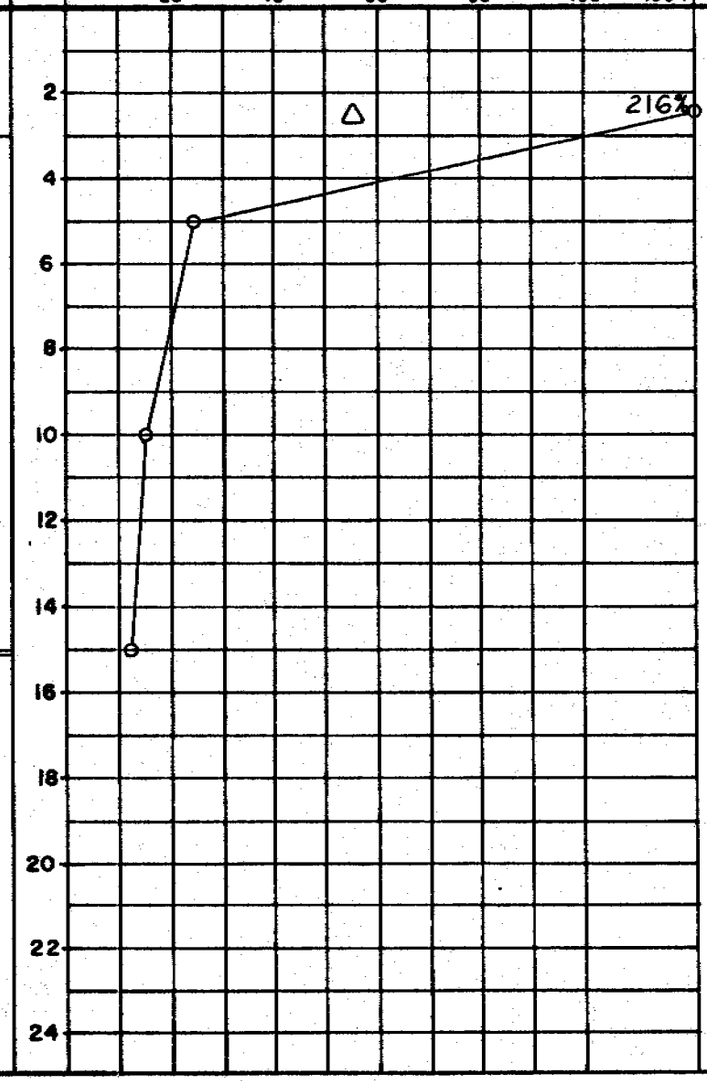
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor to S. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
665	C	4

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				PT	PEAT - Black - Fibrous - Silty	F	V 50 - 60%
4	2				ML	SILT - Med. Brown - Low Plasticity - Sandy		NB
10	3				CL	CLAY SILT - Low Plasticity (TILL) - Brown - Some Limestone Fragments		
14	4							
16						END OF HOLE 15'		



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 14/2/73 | AIRPHOTO NO: A22860 - 115 | CHAINAGE: 3122 + 15 | OFFSET

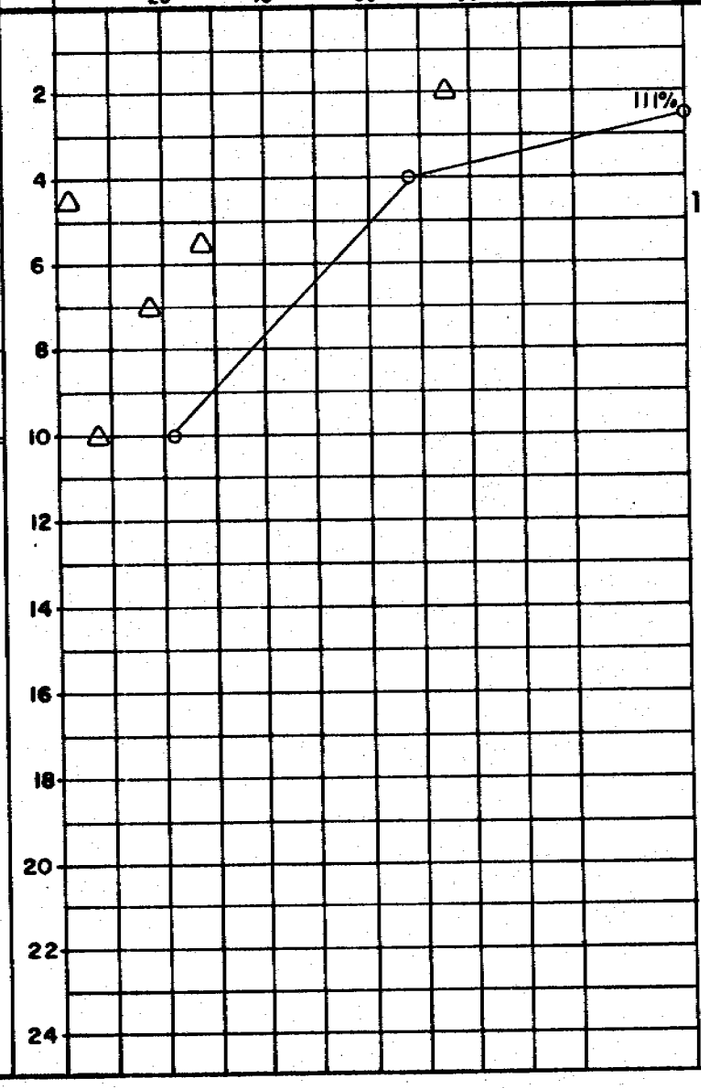
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor to S. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
665	C	5

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				OL	SILT - Dark Brown - Highly Organic	F	V 70 - 80%
4						- Med. Brown		V 0 - 5%
6	2				ML	- Low Plasticity - Sandy - Some clay		V 25 - 30%
8						- Low Plasticity - Med. Brown		V 15 - 20%
10	3				CL	CLAY - Grey, Low Plastic		V 5 - 10%
12						END OF HOLE 10'		
14								
16								
18								
20								
22								
24								



GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
CLAY %	SILT %	SAND %	GRAVEL %		
13	66	21	-		

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 14/2/73 | AIRPHOTO NO: A22860 - 115 | CHAINAGE: 3131 + 05 | OFFSET

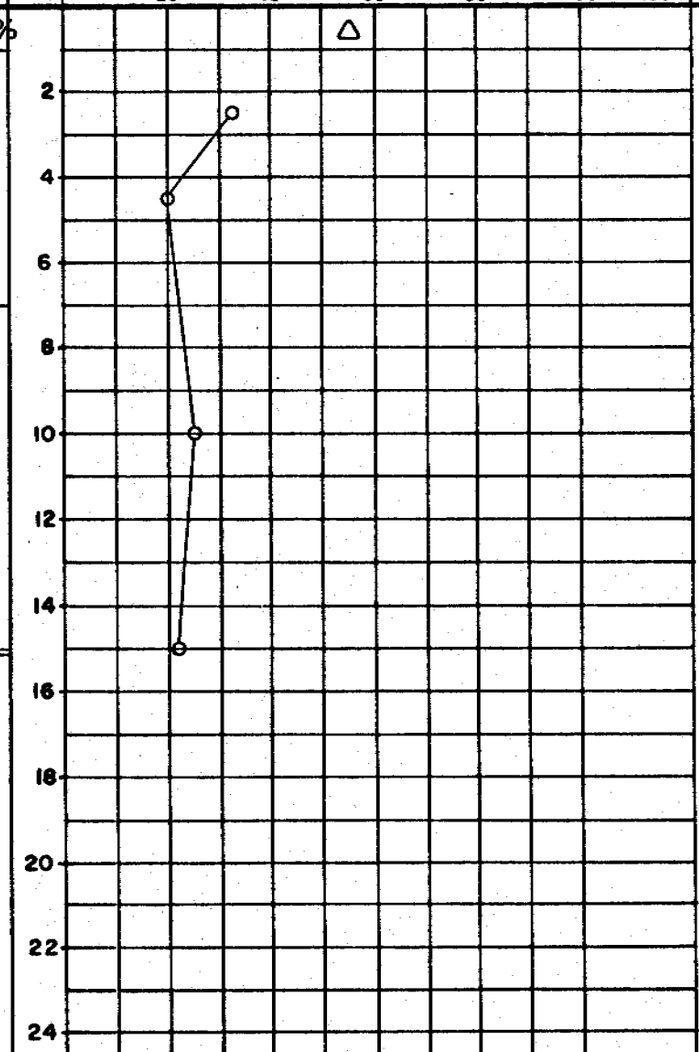
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor to S. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
665	C	6

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					PT	PEAT - Dark Brown	F	V= 50 - 60%
2	1				SM	SAND - Med. Brown - Wet - Silty	U	Unfrozen
4	2							
6								
8					CL	CLAY - Grey, Silty - Low Plasticity	F	
10	3							NB
12								
14	4					- Some Shale		
16						END OF HOLE 15'		
18								
20								
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

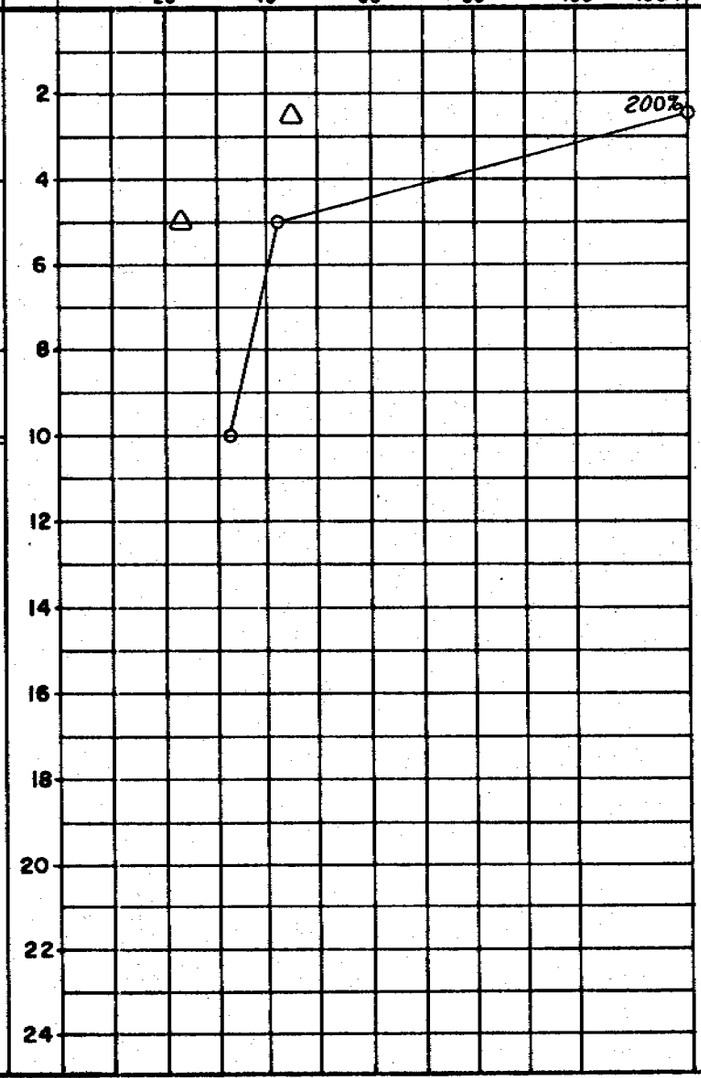
DWN: ALB	FIELD ENG: NRM	DATE DRILLED: 14/2/73	AIRPHOTO NO: A22774 - 65	CHAINAGE: 3142 + 36	OFFSET
CKD: GRG	TECH: JK	RIG: Texoma	SURFACE DRAINAGE: Poor to S.	VEGETATION: Black Spruce	ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
665	C	7

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				PT	PEAT - Black - Fibrous - Some Silt	F	V: 40 - 50%
4								
6	2				ML	SILT - Light Brown - Low Plasticity - Clayey		V 20 - 25%
8								
10	3				CL	CLAY - Grey, Silty - Low Plasticity, Pebbles		NB
12						END OF HOLE 10'		
14								
16								
18								
20								
22								
24								



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

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DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 15/2/73 | AIRPHOTO NO: A22774 - 63 | CHAINAGE: 3148 + 75 | OFFSET

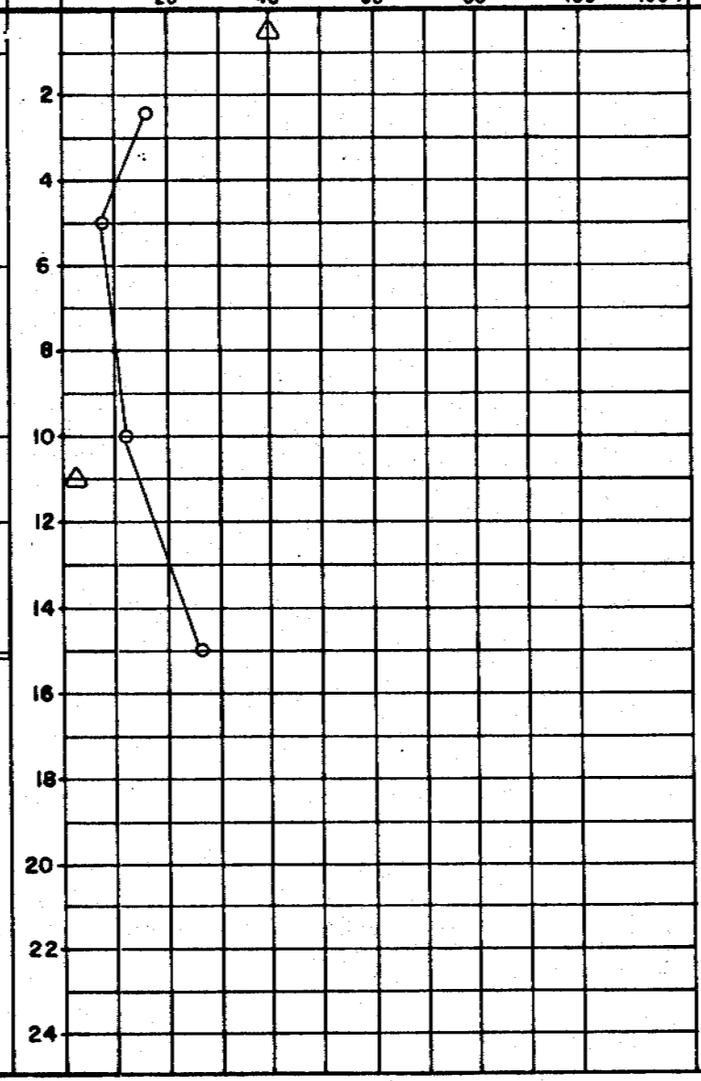
CKD GRG | TECH JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
665	C	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	F	V= 40%
2	1				SC	SAND - Med. Brown, Clayey, some silt - Low Plasticity - Sandy		NF
4	2							
6					CL	CLAY - Grey - Low Plasticity - Silty		NB
8								
10	3							V= 0-5%
12								NB
14	4							
16						END OF HOLE 15'		
18								
20								
22								
24								



GRAIN-SIZE ANALYSIS

DEPTH (FEET)	CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
0 - 15	28	14	58	-		

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DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 15/2/73 | AIRPHOTO NO: A22774 - 63 | CHAINAGE: 3155 + 00 | OFFSET

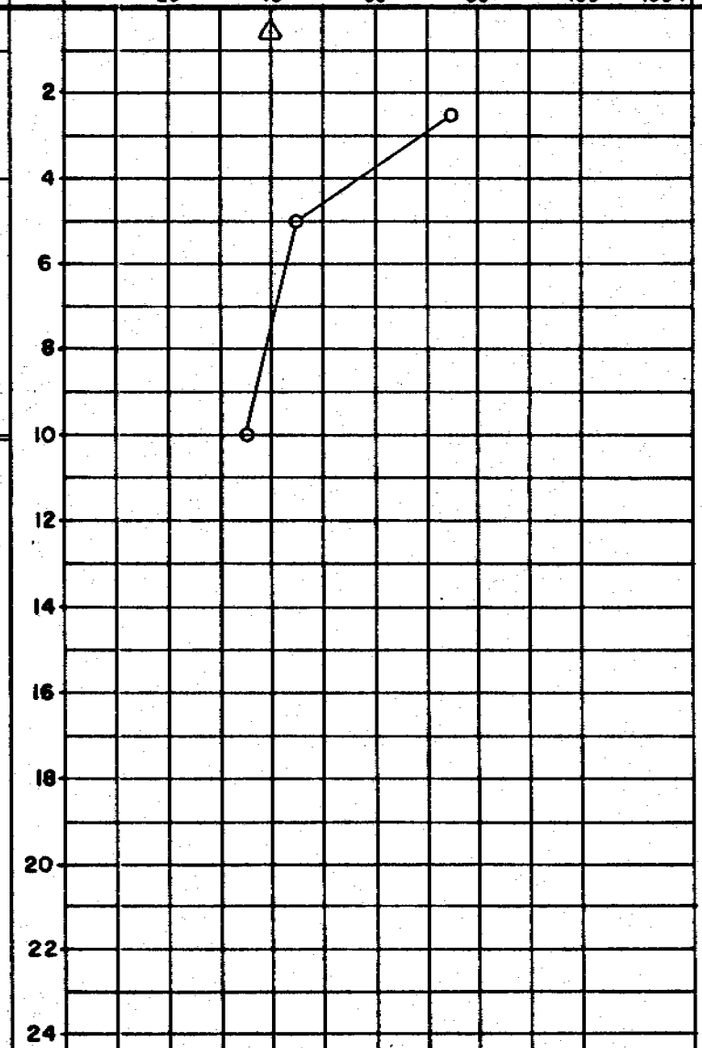
CKD GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Fair to N. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
664	C	1

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					PT	PEAT - Black		V ≈ 40%
2	1				OL to CL	CLAY - Dk. Brown - Low Plasticity - Organic - Med. Brown - Low Plasticity - Traces of Sand	U	NB
4								
6	2							Unfrozen
8					ML	SILT (TILL) - Dark Brown, Low Plasticity, Sandy		
10	3					END OF HOLE 10'		
12								
14								
16								
18								
20								
22								
24								



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

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DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 15/2/73 | AIRPHOTO NO: A22774 - 63 | CHAINAGE: N/A | OFFSET

CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Good to S. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

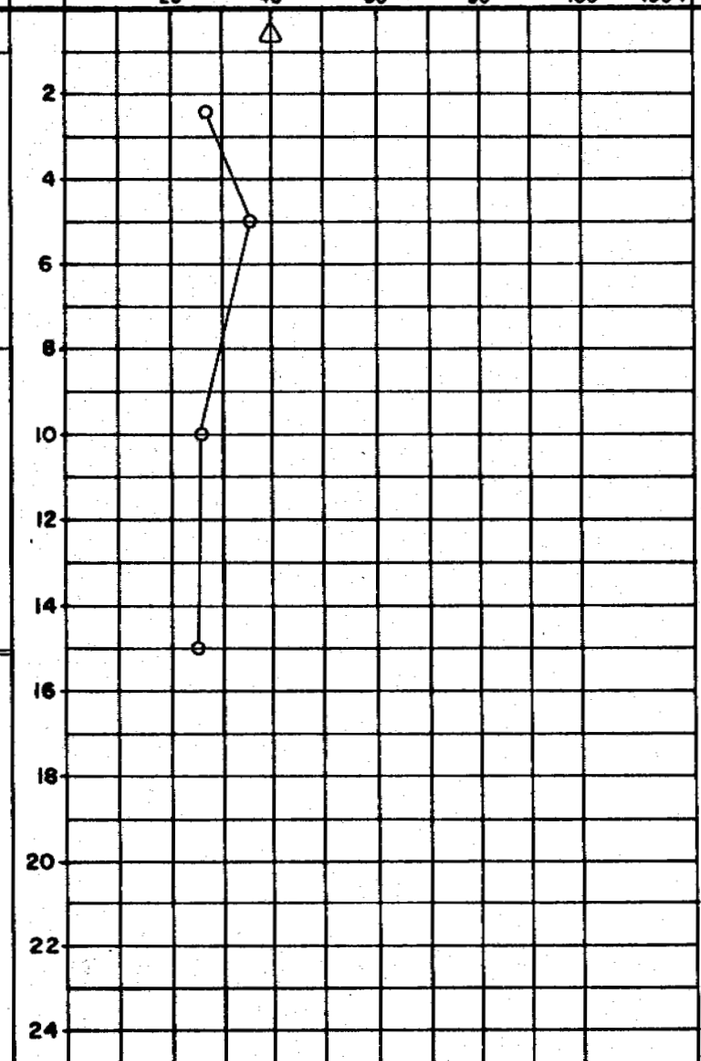
MILE	B,C,S	NUMBER
664	C	2

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					PT	PEAT - Black	F	V- 40%
2	1				ML	SILT - Med. Brown - Moist - Sandy - Trace of Clay - No Plasticity	U	Unfrozen
4	2							
6								
8								
10	3						F	NB
12								
14	4				ML	SILT - Grey, Low Plastic, - Sandy, Pebbles		
16						END OF HOLE		
18								
20								
22								
24								

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

PLASTIC LIMIT — LIQUID LIMIT



DEPTH (FEET)	CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
2 - 14	8	72	20	-		

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 15/2/73 | AIRPHOTO NO: A22774 - 63 | CHAINAGE: 3168 + 20 | OFFSET

CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Fair to S. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
664	C	3

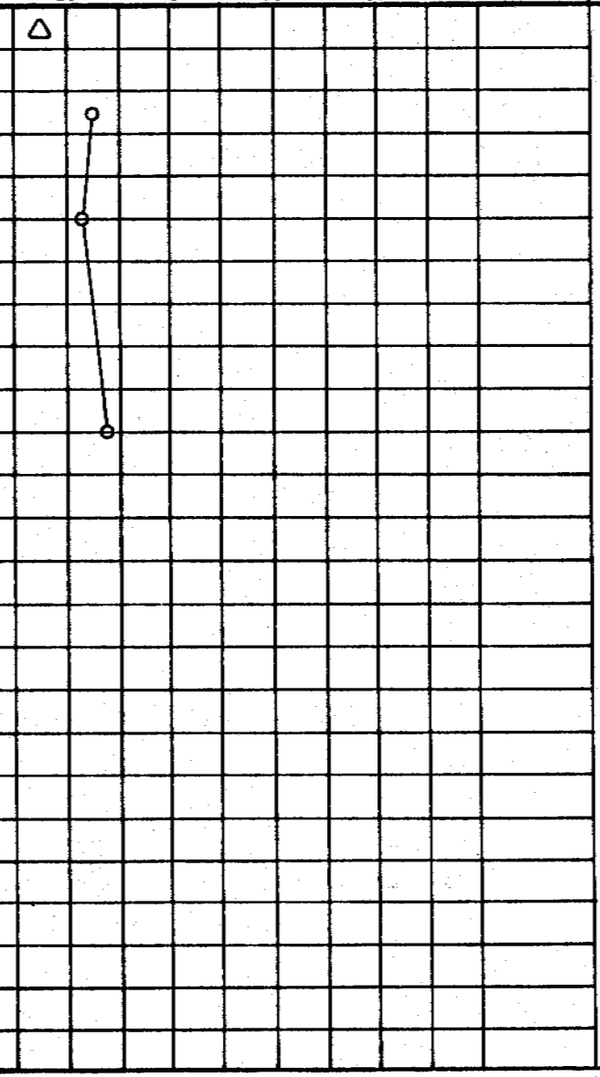
REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					PT	PEAT		V - 15%
2	1				ML	SILT - Med. Brown - Low Plasticity - Sandy	F	NB
4	2						U	Unfrozen
8	3						F	NB
10						END OF HOLE 10'		

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

PLASTIC LIMIT — LIQUID LIMIT

20 40 60 80 100 100+



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

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DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 15/2/73 | AIRPHOTO NO: A22774 - 62 | CHAINAGE: 3175 + 50 | OFFSET

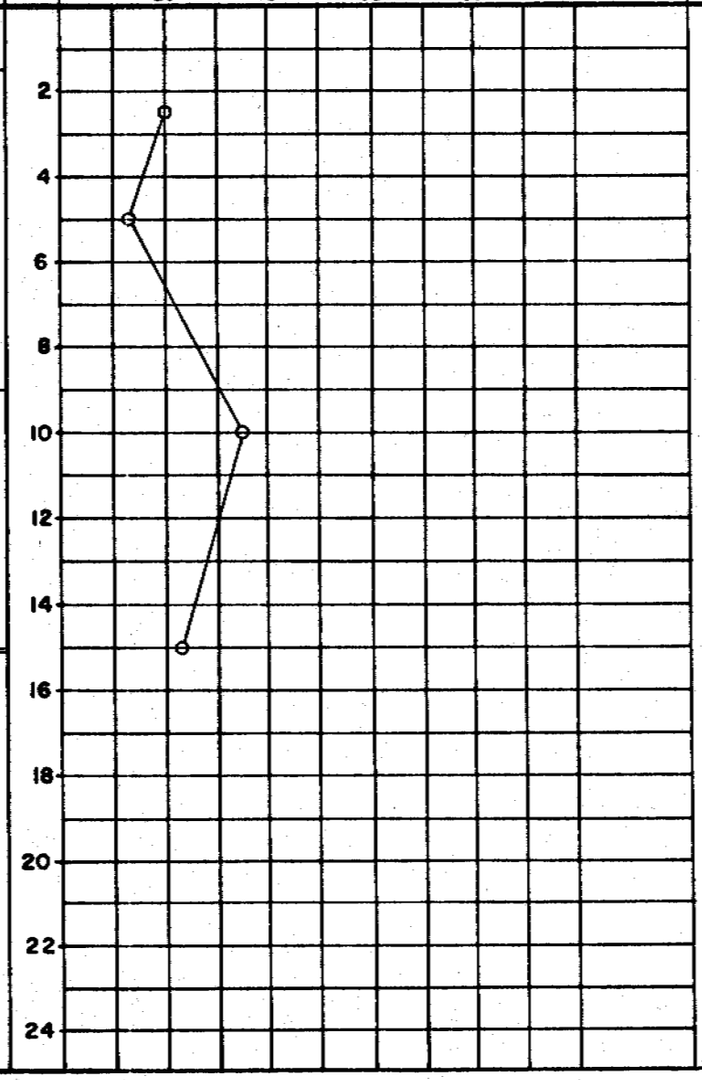
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Fair to S. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
664	C	4

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				ML to SM	SILT - Med. Brown - Sandy - Low Plasticity - Clayey Near Top	F	NB
4								
6	2					- Moist	U	Unfrozen
8								
10	3						F	NB
12								
14	4							
16						END OF HOLE 15'		
18								
20								
22								
24								



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

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DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 15/2/73 | AIRPHOTO NO: A22774 - 62 | CHAINAGE: 3183 + 40 | OFFSET

CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor to S. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
664	C	5

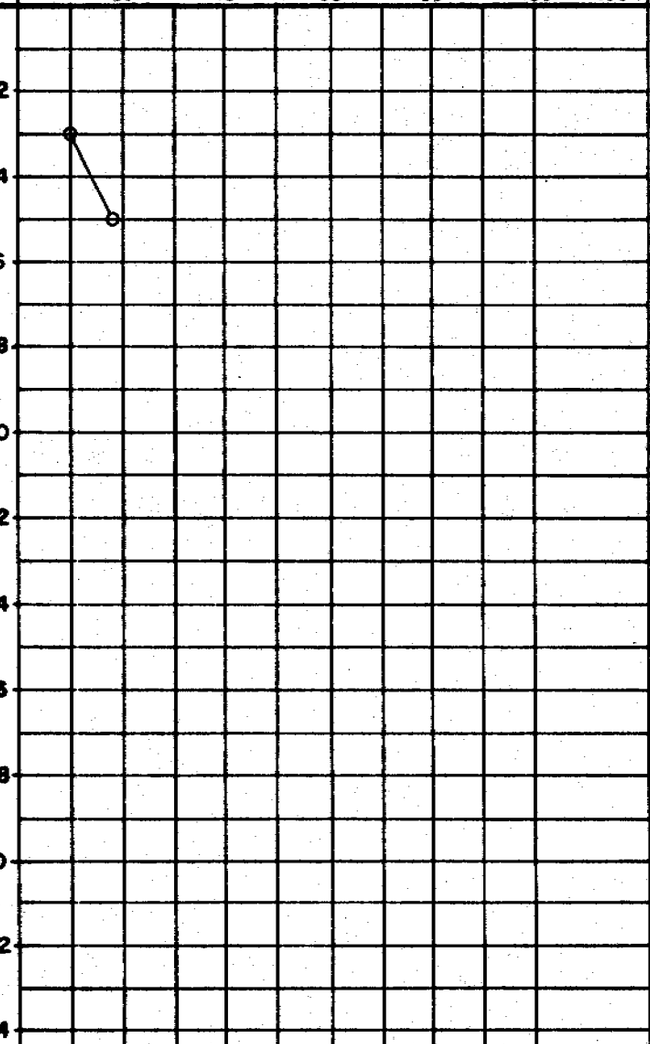
REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SM	SAND - Med. Brown - Medium - Silty - Trace of Gravel	F	NF
							U	Unfrozen
4	2						F	
6								
8						- Pebbles		NB
10	3							
						END OF HOLE 10'		
12								
14								
16								
18								
20								
22								
24								

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 (P.C.F.)	DRY DENSITY (P.C.F.)
2	(30)		68	2		

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DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 15/2/73 | AIRPHOTO NO: A22774 - 62 | CHAINAGE: 3191 + 40 | OFFSET

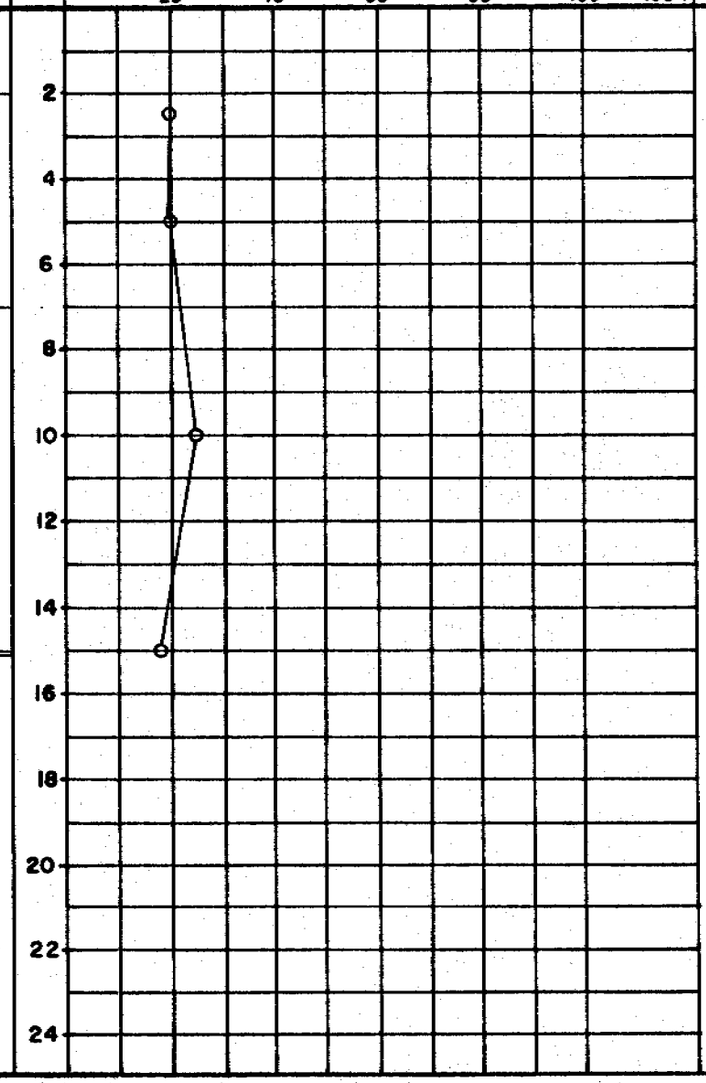
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor to S. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
664	C	6

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				ML	SILT - Med. Brown - Low Plasticity - Traces of Fine Sand	F	NB
4	2					- Moist	U	Unfrozen
8					SM	SAND - Med. Brown - Fine - Silty	F	NB
10	3							
12					ML	SILT - Grey, Sandy		
14	4				SM	SAND - Coarse, Grey, Pebbles		
16						END OF HOLE 15'		
18								
20								
22								
24								



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

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DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 15/2/73 | AIRPHOTO NO: A22774 - 62 | CHAINAGE: 3199 + 05 | OFFSET

CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor to N. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
664	C	7

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SM	SAND - Med. Brown - Fine - Silty		NB
4								
6	2						F	
8					ML	SILT - Grey, Sandy, Low Plasticity		
10	3				SM	SAND - Coarse, Greyish, Loose		
						END OF HOLE 10'		

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

PLASTIC LIMIT — LIQUID LIMIT

20 40 60 80 100 100+

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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 15/2/73 | AIRPHOTO NO: A22774 - 61 | CHAINAGE: 3214 + 85 | OFFSET

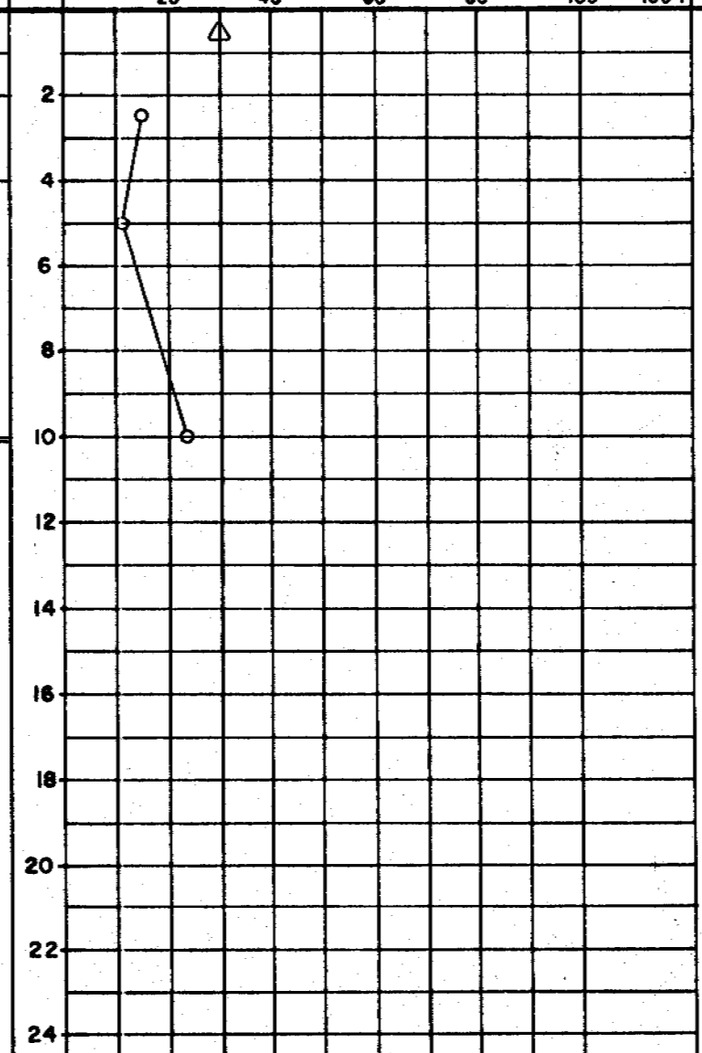
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Fair to S. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
663	C	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 - Black	F	V ~ 30%
2	1					SILT - Med. Brown - Sandy - Low Plasticity		NB
4	2						U.	Unfrozen
6					SM	SAND - Med. Brown - Silty - Dense	F	NB.
8								
10	3					END OF HOLE 10'		
12								
14								
16								
18								
20								
22								
24								



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

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DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 15/2/73 | AIRPHOTO NO: A22774 - 61 | CHAINAGE: N/A | OFFSET

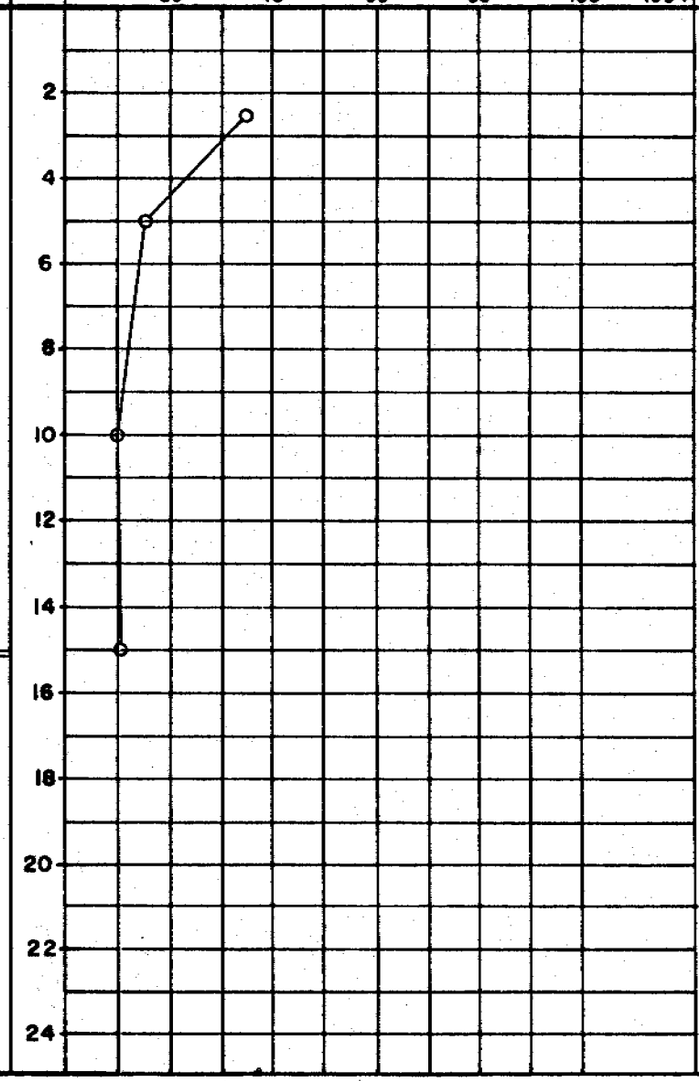
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Fair to S. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
663	C	3

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0–4	1				OL to ML	SILT - Dark Brown - Low Plastic - Organic	F	
4–14	2, 3, 4				GW	GRAVEL - Med. Brown - Some sand - Dense - Trace of fines		NB.
16						END OF HOLE 15'		



GRAIN-SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
	(10)		14	76		

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DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 15/2/73 | AIRPHOTO NO: A22774-61 | CHAINAGE: N/A | OFFSET

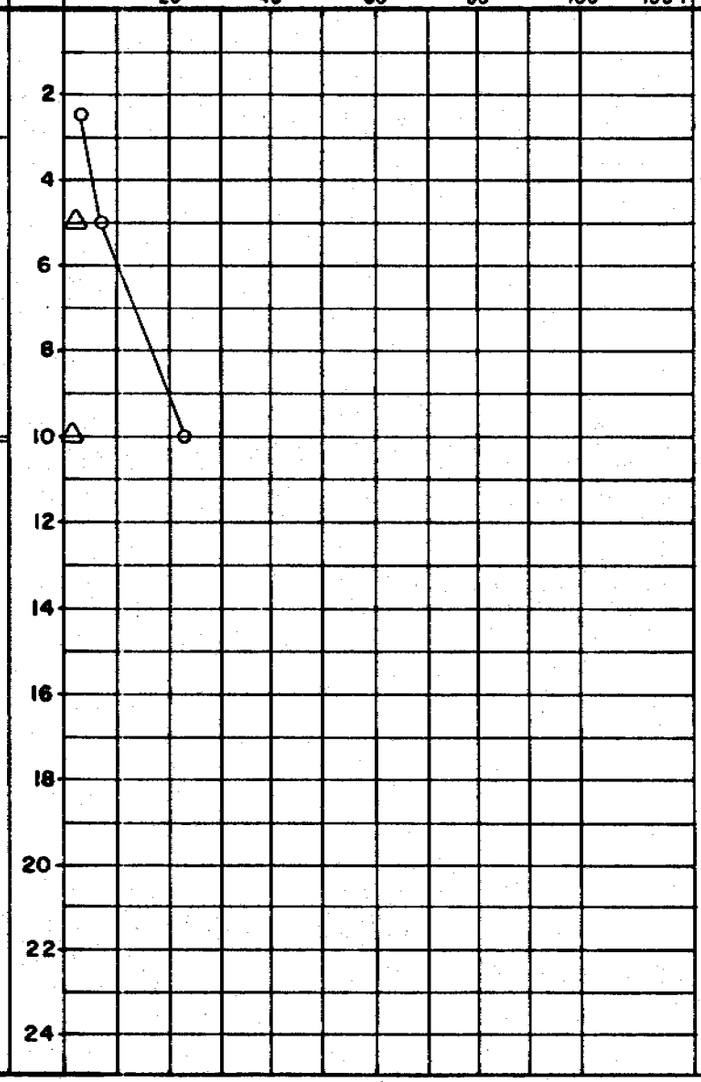
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor to South | VEGETATION: Black Spruce 20' | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
663	C	4

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				OL to ML	SILT - Med. Brown - Low Plasticity - Organic	F	NB
4	2				SM	SAND - Med. Brown - Silty - Dense - Gravelly		V 0 - 5%
6								
8								
10	3					END OF HOLE 10'		
12								
14								
16								
18								
20								
22								
24								



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

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DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 5/2/73 | AIRPHOTO NO: A22774 - 61 | CHAINAGE: 3207 + 15 | OFFSET

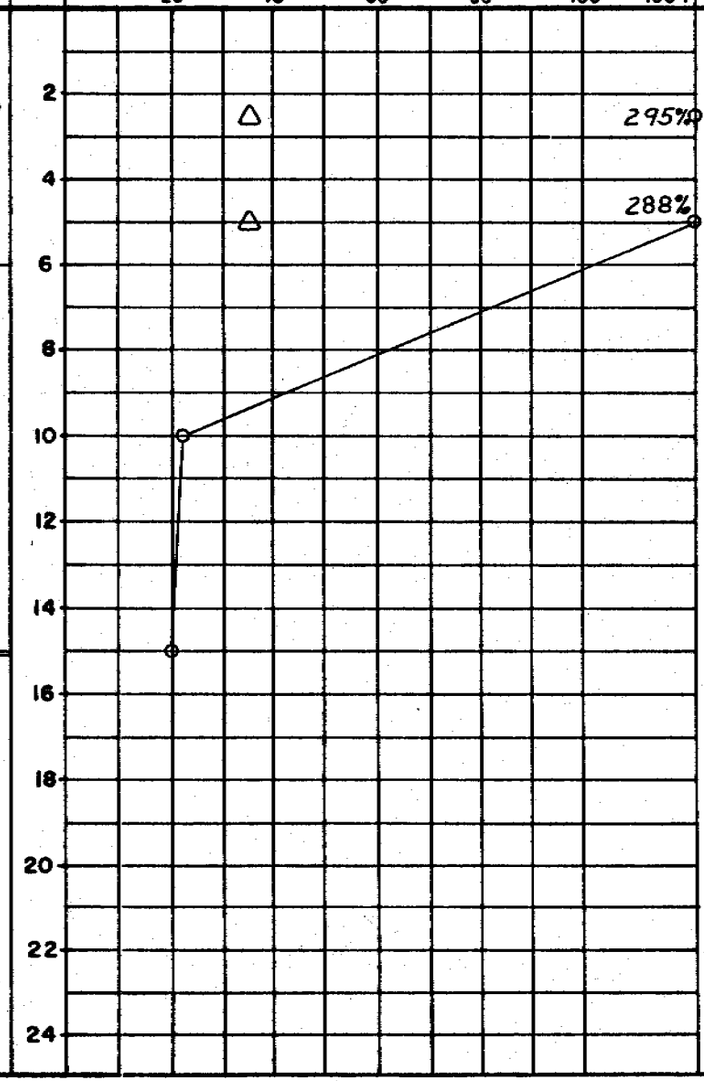
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor to N. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
663	C	1

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				PT	PEAT - Black - Fibrous	F	V 30 - 40%
4	2				ML	SILT - Sandy - Some Clay - Low Plasticity		
6					SP to SM	SAND - Med. Brown - Coarse - Some Gravel		NB
10	3					- Grey - Coarse - Some Silt - Pebbles		
14	4							
16						END OF HOLE 15'		
18								
20								
22								
24								



DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
2	16	62	22	-		

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DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 15/2/73 | AIRPHOTO NO: A22774 - 61 | CHAINAGE: 3214 + 85 | OFFSET

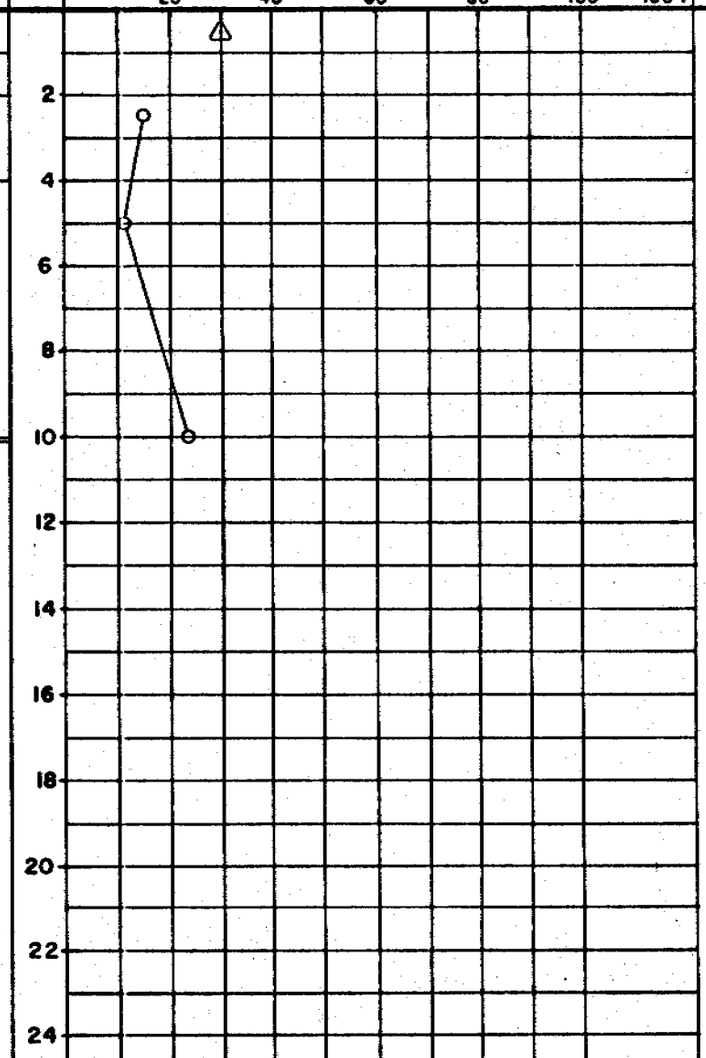
CKD GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Fair to S. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
663	C	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 - Black	F	V - 30%
2	1					SILT - Med. Brown - Sandy - Low Plasticity		NB
4							U.	Unfrozen
6	2							
8					SM	SAND - Med. Brown - Silty - Dense	F	NB.
10	3					END OF HOLE 10'		
12								
14								
16								
18								
20								
22								
24								



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

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DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 15/2/73 | AIRPHOTO NO: A22774-61 | CHAINAGE 3238 + 25 | OFFSET

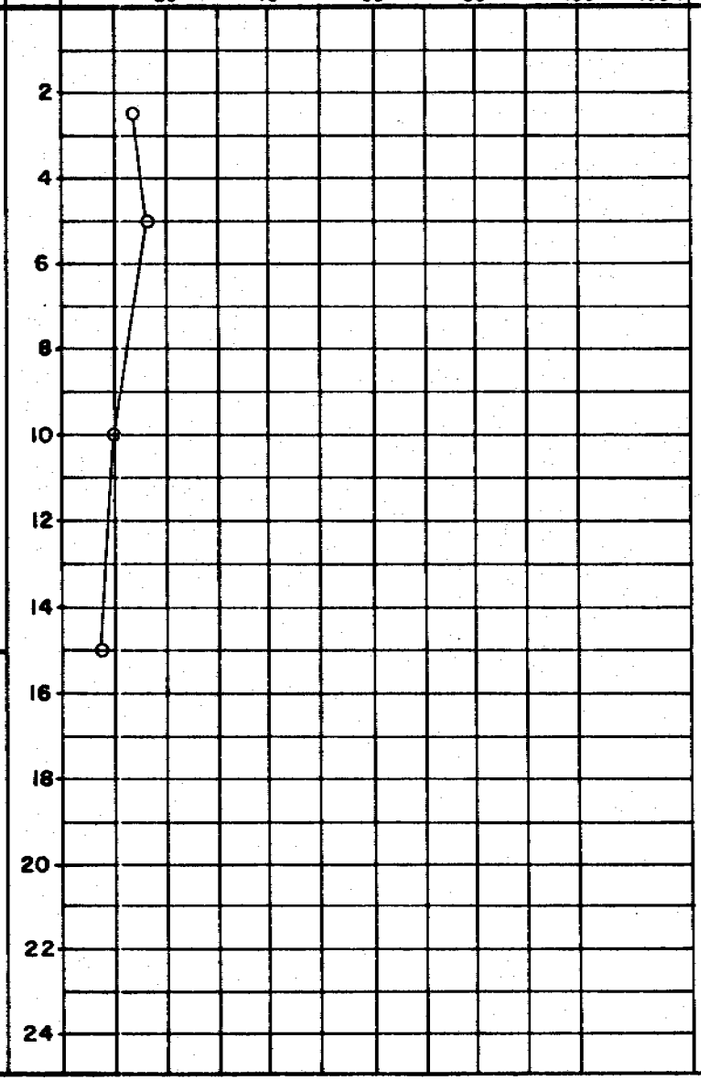
CKD GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
663	C	5

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				ML	SILT - Med. Brown - Low Plasticity - Sandy	F	
4	2							
6					SM to SP	SAND - Med. Brown - Medium, Silty - Grey Coarse, - Dense, - Pebbles, - Some Silt		NB
8								
10	3							
12								
14	4							
16						END OF HOLE 15'		
18								
20								
22								
24								



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

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DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 15/2/73 | AIRPHOTO NO: A22774 - 60 | CHAINAGE: 3246 + 20 | OFFSET

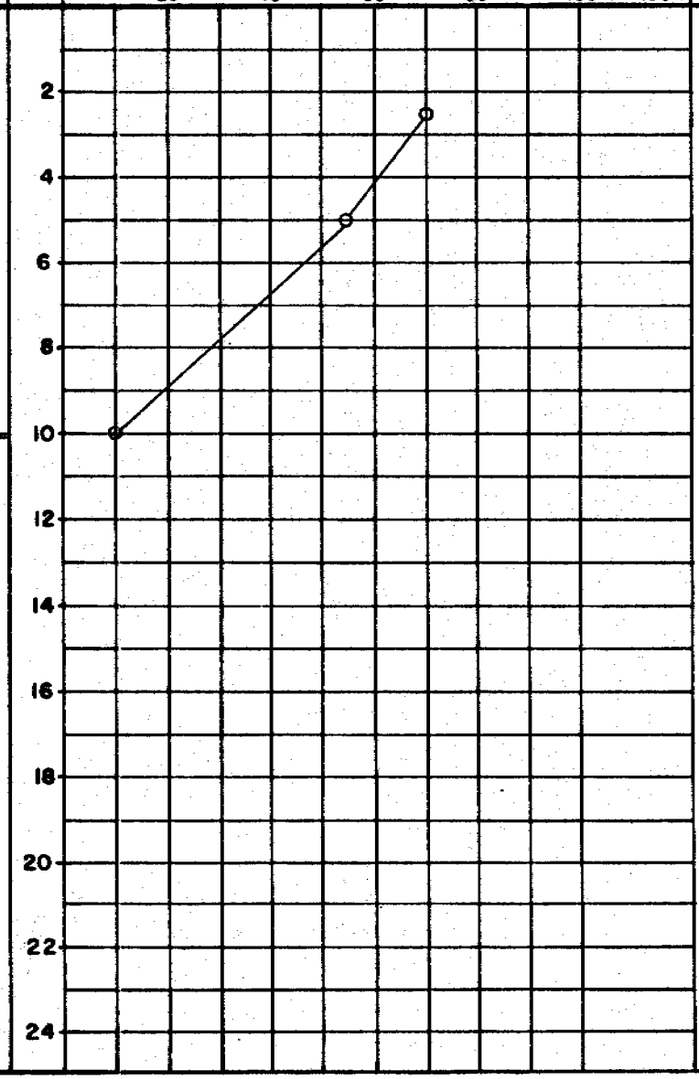
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
663	C	6

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				OH to ML	SILT - Dark Brown - Med Plasticity - Organics	F	
6	2				ML	SILT - Med. Brown - Low Plasticity - Sandy		NB
8					SP	SAND - Greyish Brown - Dense, Gravelly		
10	3					END OF HOLE 10'		



○ = 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.)

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

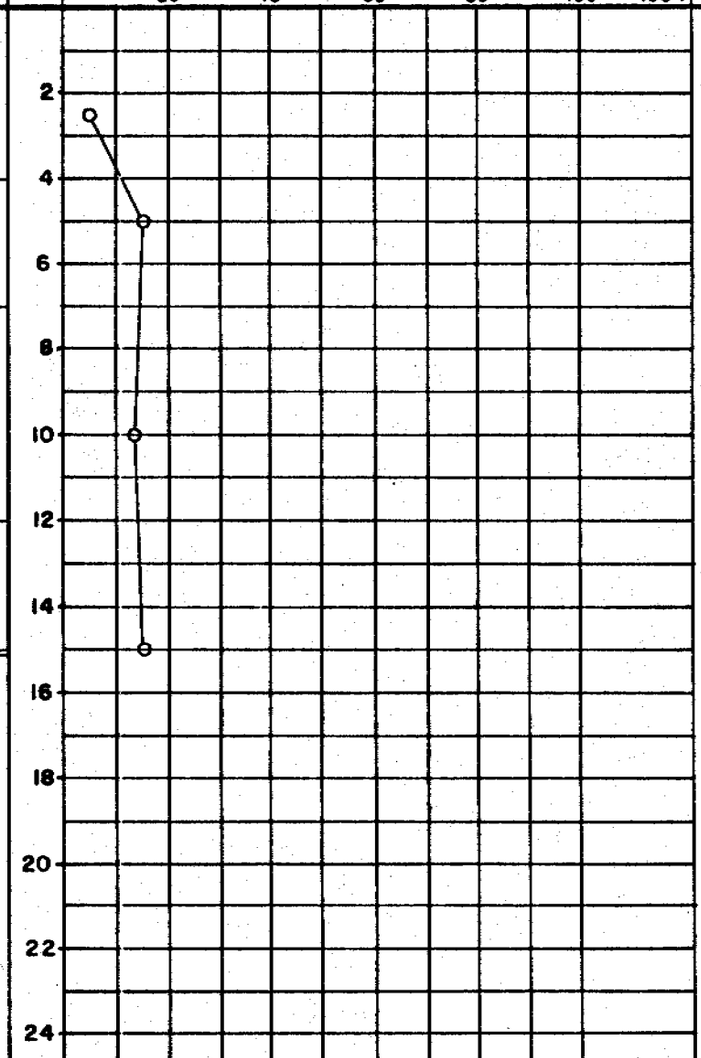
DWN: ALB	FIELD ENG: NRM	DATE DRILLED: 15/2/73	AIRPHOTO NO: A22774 - 60	CHAINAGE: 3254 + 20	OFFSET
CKD GRG	TECH: JK	RIG: Texoma	SURFACE DRAINAGE: Fair to N.	VEGETATION: Black Spruce	ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
663	C	7

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				ML	SILT - Med. Brown - Low Plasticity - Sandy, Pebbles		NF
4	2				SP to SM-SC	SAND - Med. Brown - Coarse - Dense	F	NB
8							U	
10	3					- Silty, Clayey - Gravelly		Unfrozen
12					ML	SILT - Grey - Med. Plasticity - Sandy (fine)	F	NB
14	4							
16						END OF HOLE 15'		
18								
20								
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 15/2/73 | AIRPHOTO NO: A22774 - 59 | CHAINAGE: 3262 + 15 | OFFSET

CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Fair to N | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
662	C	1

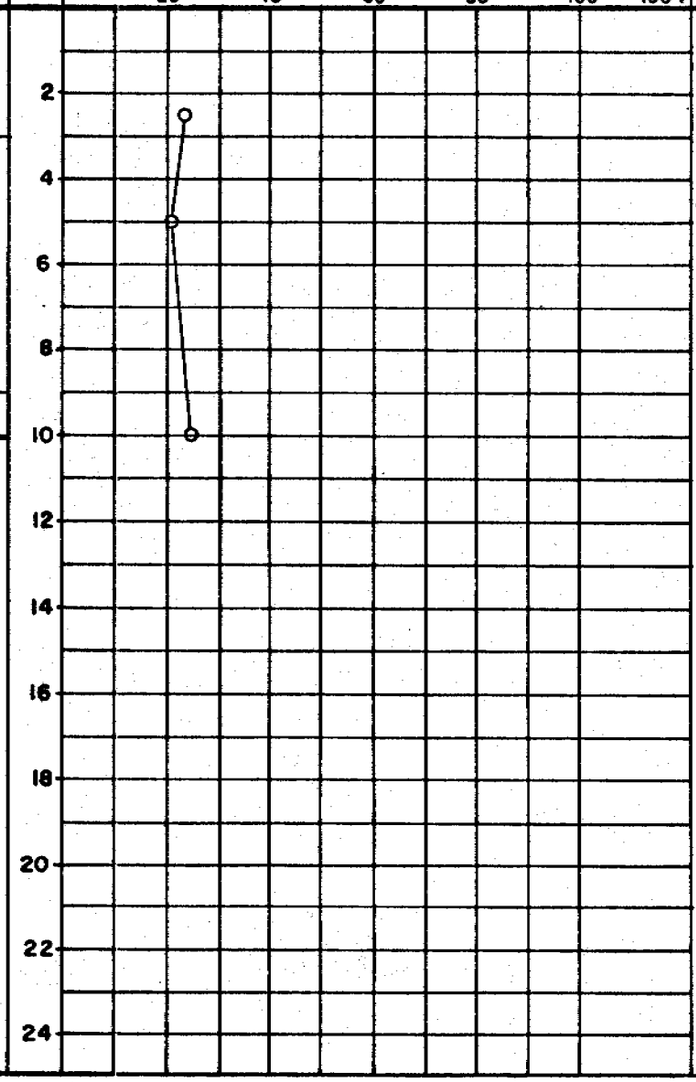
REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				ML	SILT - Med. Brown - Low Plasticity	F	NF
4	2				SM	SAND - Med. Brown - Dense - Fine, Silty - Moist - Trace of Clay	U	Unfrozen
10	3				ML	SILT - Grey, Sandy, Low Plasticity	F	NF
						END OF HOLE 10'		

○ = 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.)
	10	38	52			

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 15/2/73 | AIRPHOTO NO: A22774-59 | CHAINAGE: 3270 + 60 | OFFSET

CKD GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor to W. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
662	C	2

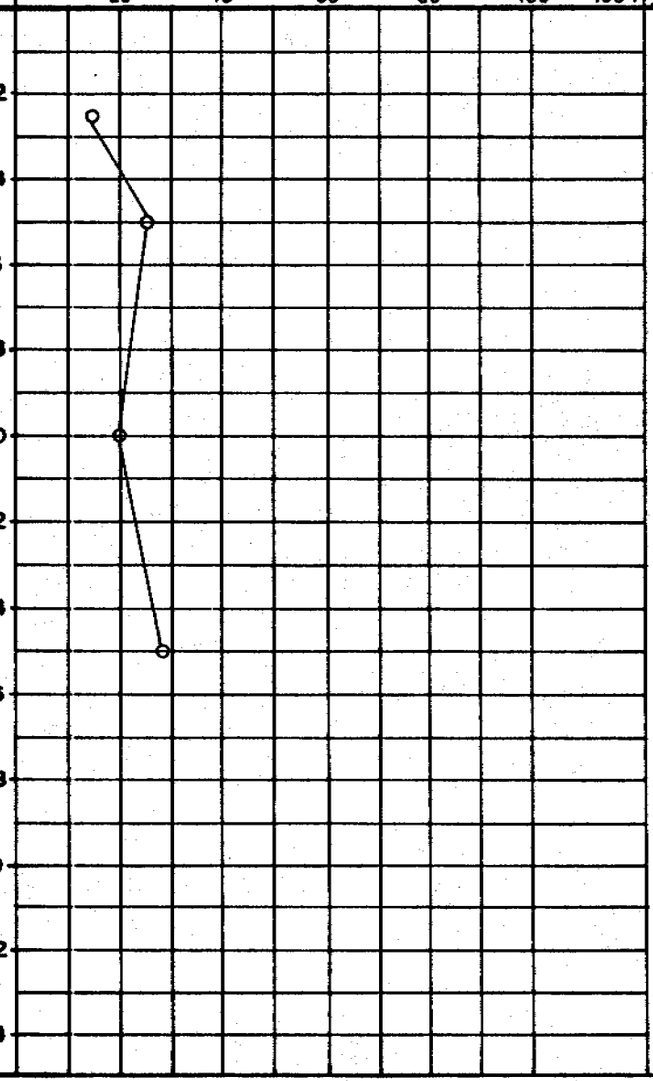
REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				OL to ML	SILT - Med. Brown - Low Plasticity - Organics		
4	2				SM	SAND - Greyish Brown - Dense - Silty - Medium to Fine	F	NF to NB
10	3							
14	4							
16						END OF HOLE 15'		

○ = 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						
4						
6						
8						
10						
12						
14						
16						
18						
20						
22						
24						

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

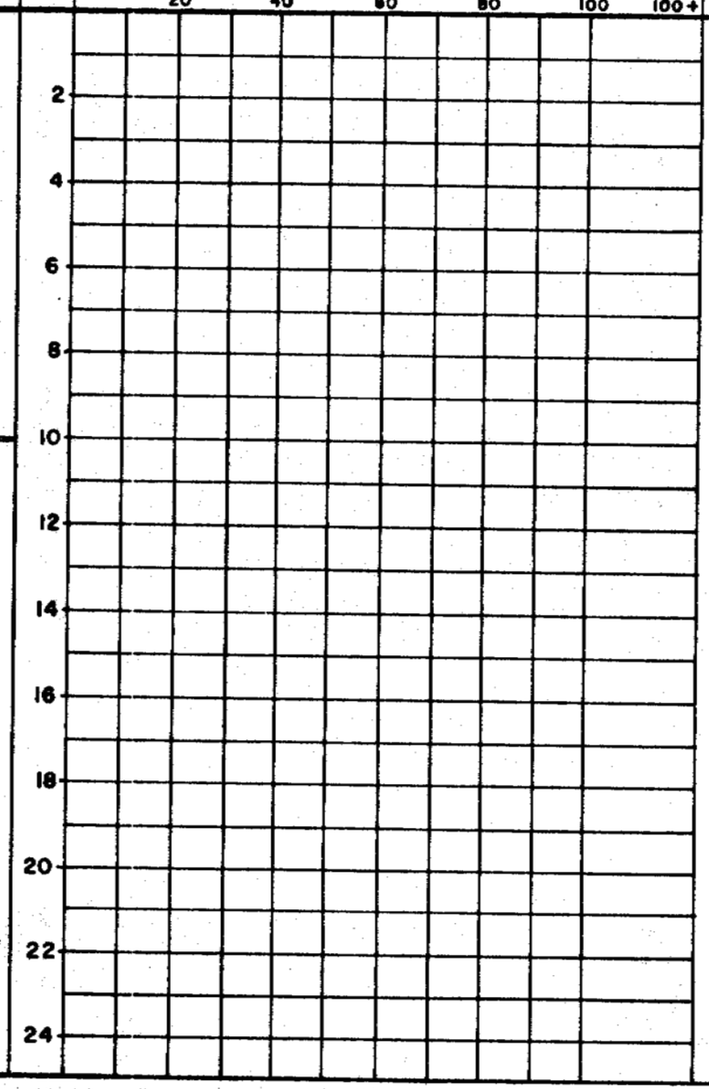
DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 15/2/73 | AIRPHOTO NO: A22774 - 59 | CHAINAGE: 3277 + 25 | OFFSET

CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Fair to SW | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
662	C	3

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				ML	SILT - Med. Brown - Low Plasticity		NF
4	2				GP	GRAVEL - Med. Brown - Subround, Loose - Sandy	F	
8	3				SP to SM	SAND - Greyish Brown - Coarse, Loose, Silty		
10						END OF HOLE 10'		
12								
14								
16								
18								
20								
22								
24								



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

REMARKS

Samples lost in Field

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 15/2/73 | AIRPHOTO NO: A22774 - 59 | CHAINAGE: 3285 + 20 | OFFSET

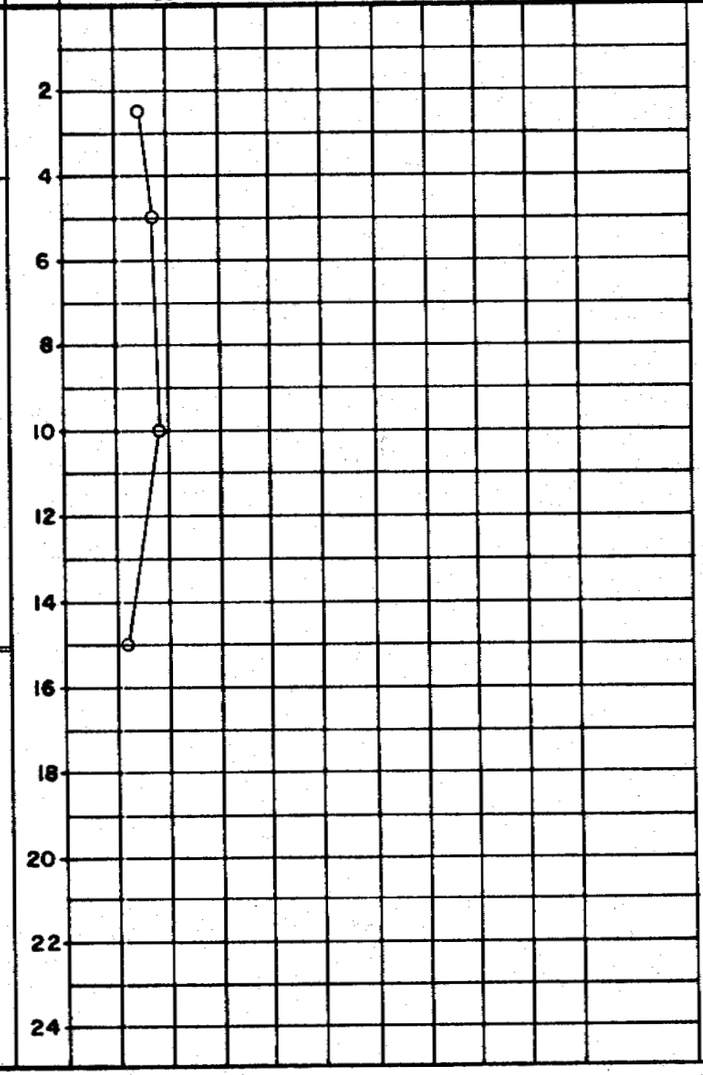
CKD GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor to S. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
662	C	4

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				ML	SILT - Med. Brown - Low Plasticity	F	NF
4	2					- Fine, Sandy - Med. Brown - Pebbles		
6								
8								
10	3							NB
12					ML	SILT - Grey - Med. Plasticity - Trace of Med. Sand		
14	4							
16						END OF HOLE 15'		
18								
20								
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 17/2/73 | AIRPHOTO NO: A22774 - 59 | CHAINAGE: 3292 + 50 | OFFSET

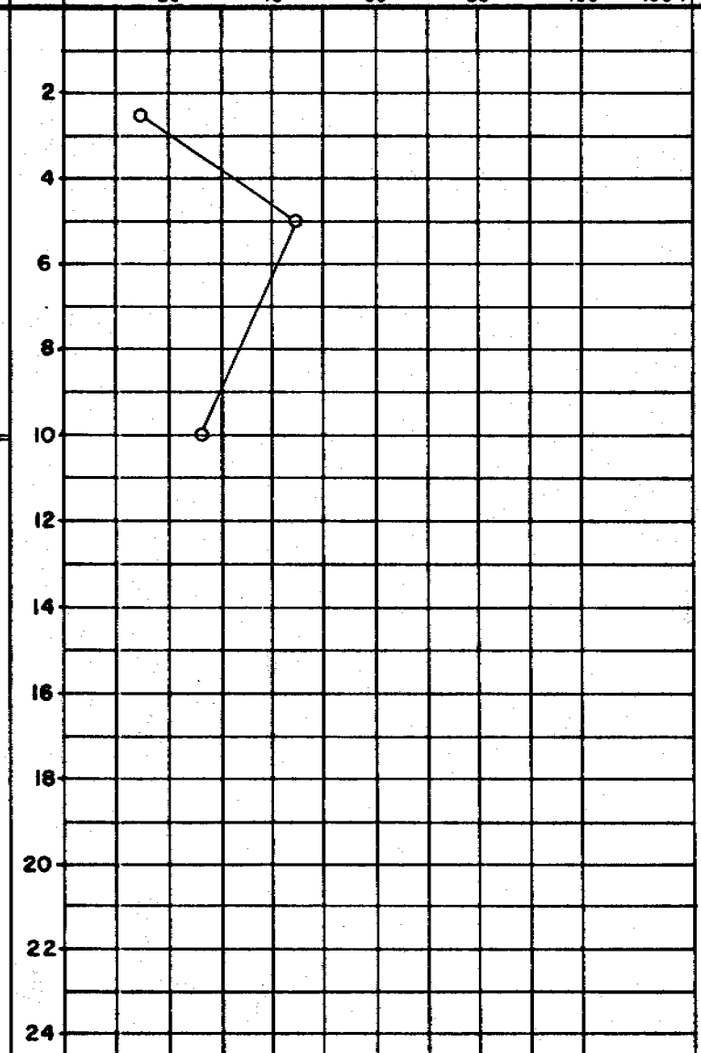
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
662	C	5

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				CL-ML	SILT (TILL) - Clayey - Med. to Dk. Brown - Low Plasticity - Sandy	F	
4								
6	2				SP to SM	SAND - Med. Brown - Gravelly, Some Silt - Cobbles		NB
8								
10	3				CL	CLAY - Silty, Med. Brown, Low Plasticity, Sandy		
12						END OF HOLE 10'		
14								
16								
18								
20								
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 17/2/73 | AIRPHOTO NO: A22774 - 59 | CHAINAGE: 3300 + 80 (EST.) | OFFSET

CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
662	C	6

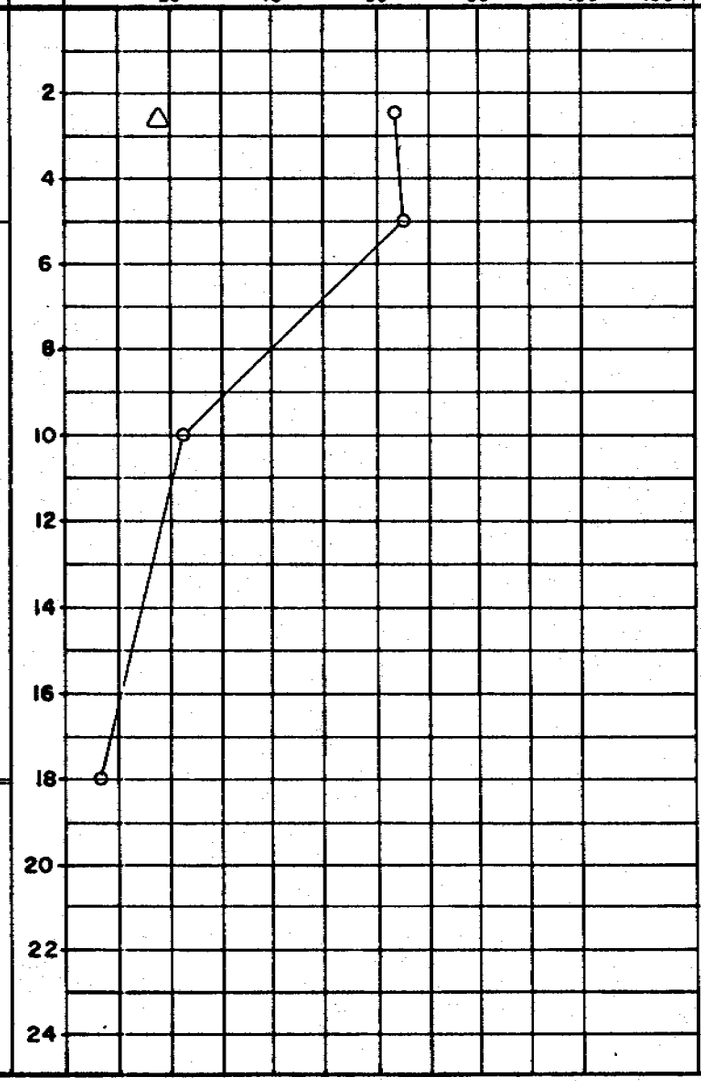
REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0–2					PT to OL	PEAT – Black – Silty, organic	F	V 15-20%
2	1							
4								
2–6	2				SM	SAND – Med. Brown (TILL) – Silty, Clayey – Low Plasticity		NB
6–8								
8–10					ML	SILT – Med. Brown (TILL) – Sand – Low Plasticity		
10	3							
12								
14								
16								
18	4							
18						END 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+



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 17/2/73 | AIRPHOTO NO: A22774 - 59 | CHAINAGE: 3310 + 00 (EST.) | OFFSET

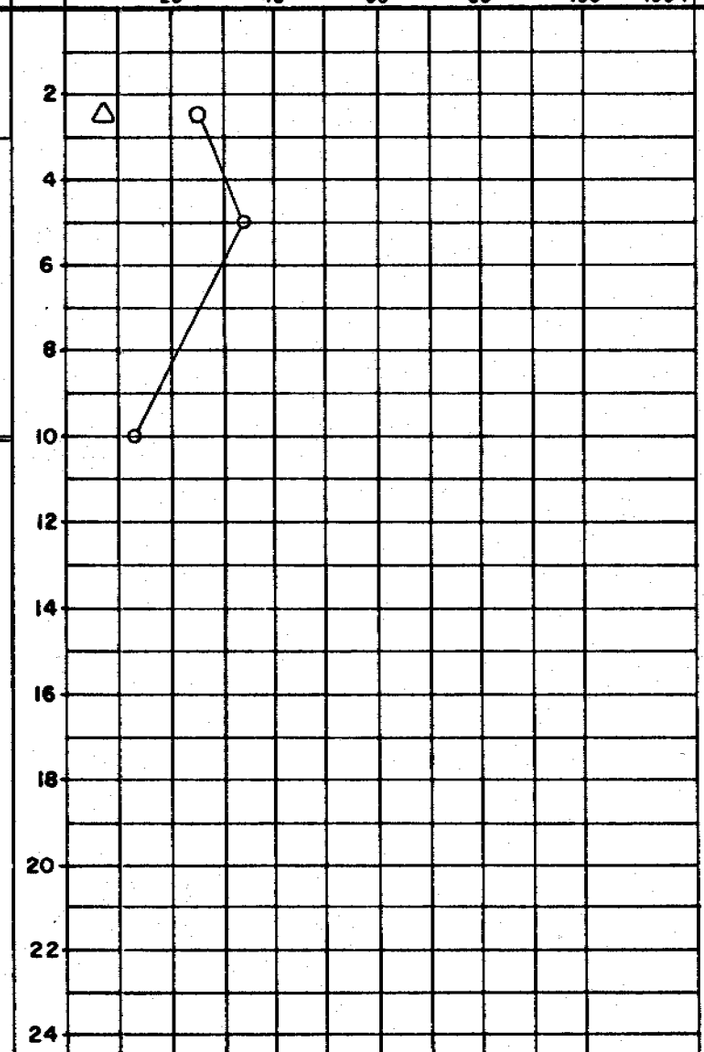
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
662	C	7

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				PT	PEAT - Black - Silty	F	V 5-10%
4	2				SM	SAND - Med. Brown (TILL) - Gravelly - Silty		
6								
8				_	CL	CLAY - Silty, Med. Brown (TILL) - Low Plasticity - Trace of Sand and Gravel.		NB
10	3							
12						END OF HOLE 10'		
14								
16								
18								
20								
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 17/2/78 | AIRPHOTO NO: A22774 - 59 | CHAINAGE: 3318 + 40 | OFFSET

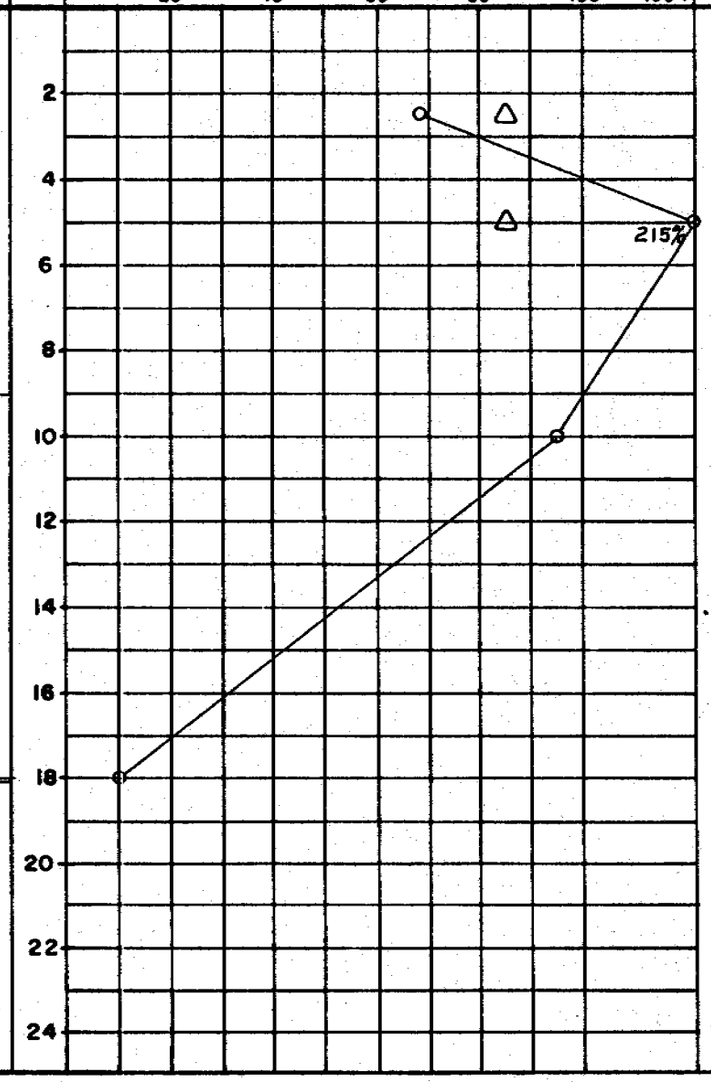
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
662	C	8

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				PT	PEAT to ORGANIC SILT - Black - Fibrous - Silty - Non Plastic	F	V 80-90%
4	2							
6								
8								
10	3				ML	SILT - Greyish Brown - Low Plasticity - Clayey - Pebbles		NB
12								
14								
16					ML	SILT (TILL) - Grey - Clayey - Low Plasticity - Traces of Shale - Coarse Sand		
18	4							
20						END OF HOLE 18'		
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 17/2/73 | AIRPHOTO NO: A22774 - 58 | CHAINAGE: 3324 + 30 | OFFSET

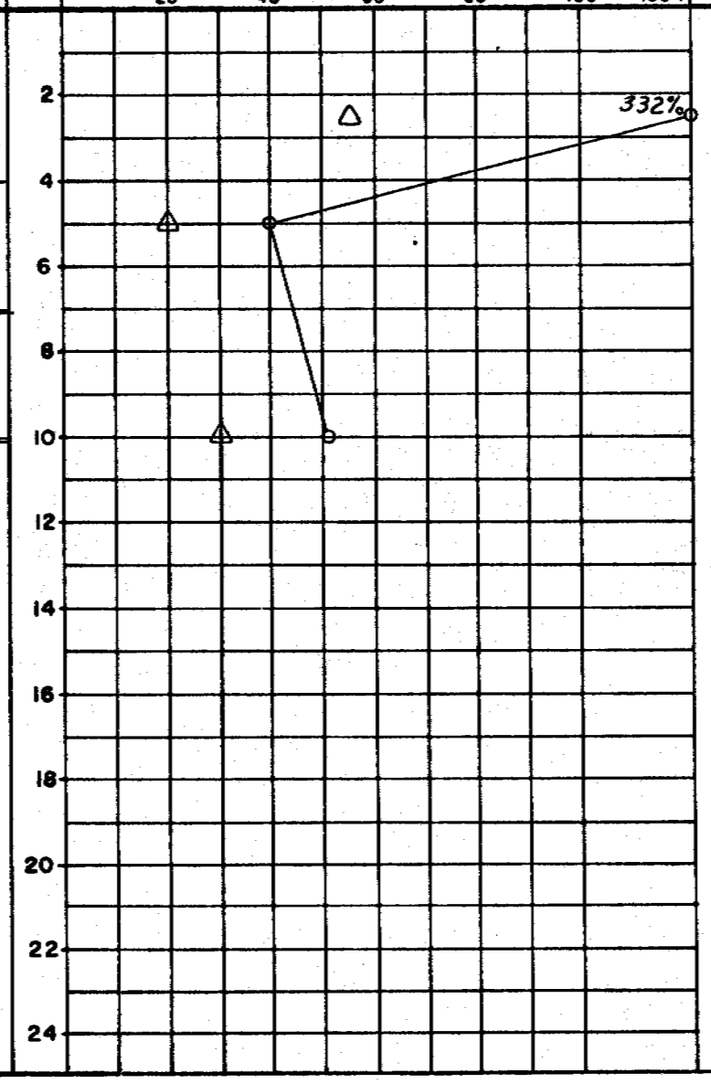
CKD GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
661	C	1

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				PT	PEAT - Black - Fibrous	F	V 50 - 60%
4	2				CL	CLAY - Greyish Brown - Low Plasticity - Silty		V 20%
8								V 30%
10	3					END OF HOLE 10'		
12								
14								
16								
18								
20								
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 17/2/73 | AIRPHOTO NO: A22774 - 58 | CHAINAGE: 3332 + 70 | OFFSET

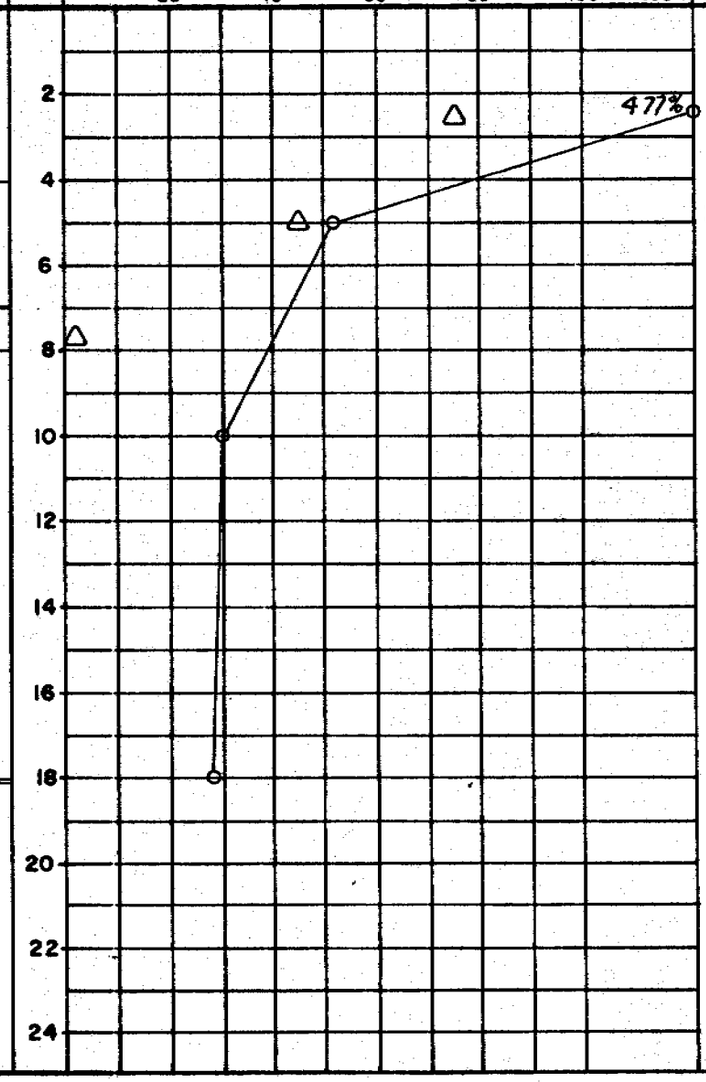
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
661	C	2

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				PT	PEAT - Fibrous - Black	F	V. 70-80%
4	2				CL	CLAY - Greyish Brown - Low Plasticity - Silty - Trace of Sand		V. 40-50%
6								V. 0-5%
8								
10	3					- Dark Brown - Med Plasticity - Some Silt		NB
12								
14								
16								
18	4					END OF HOLE 18'		
20								
22								
24								



GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
33	59	8	-		

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 17/2/73 | AIRPHOTO NO: A22774 - 58 | CHAINAGE: 3340 + 25 | OFFSET

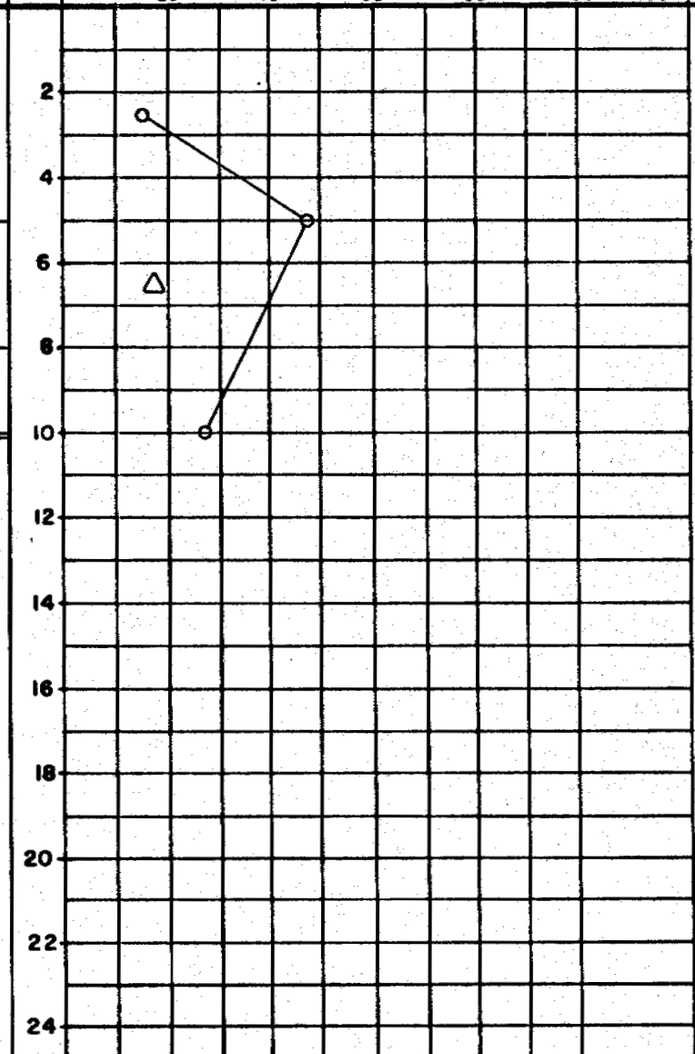
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
661	C	3

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				ML	SILT - Med. Brown (Till) - Low Plasticity - Clayey	F	NB
6	2				CL	CLAY - Med. Brown - Low Plasticity - Some Silt		V 15-20%
10	3							NB
						END OF HOLE 10'		



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

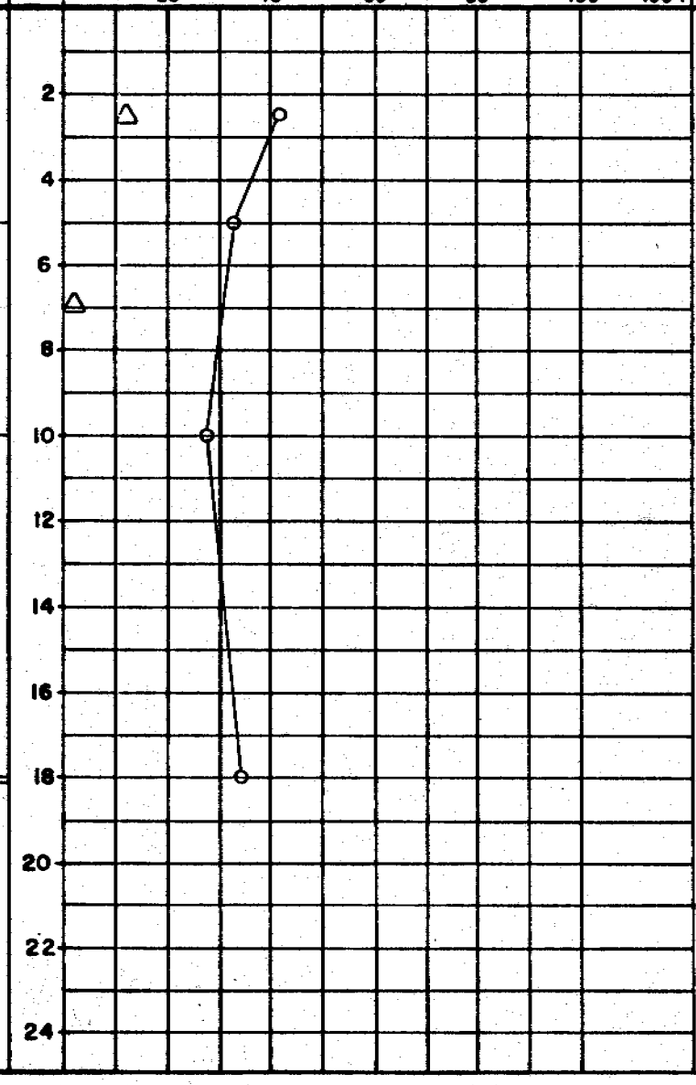
DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 17/2/73 | AIRPHOTO NO: A22774 - 58 | CHAINAGE: 3342 + 40 | OFFSET:

CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
661	C	4

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				PT	PEAT - Dark Brown - Silty	F	V 10-15%
4					ML	SILT - Med. Brown - Low Plasticity - Clayey		
6	2				CL	CLAY - Dark Brown - Low Plastic - Silty		V 0-5%
8								
10	3							
12								NB
14								
16						- Dark Grey - Silty		
18	4					END OF HOLE 18'		
20								
22								
24								



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

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 17/2/78 | AIRPHOTO NO: A22774 - 58 | CHAINAGE: 3355 + 10 | OFFSET

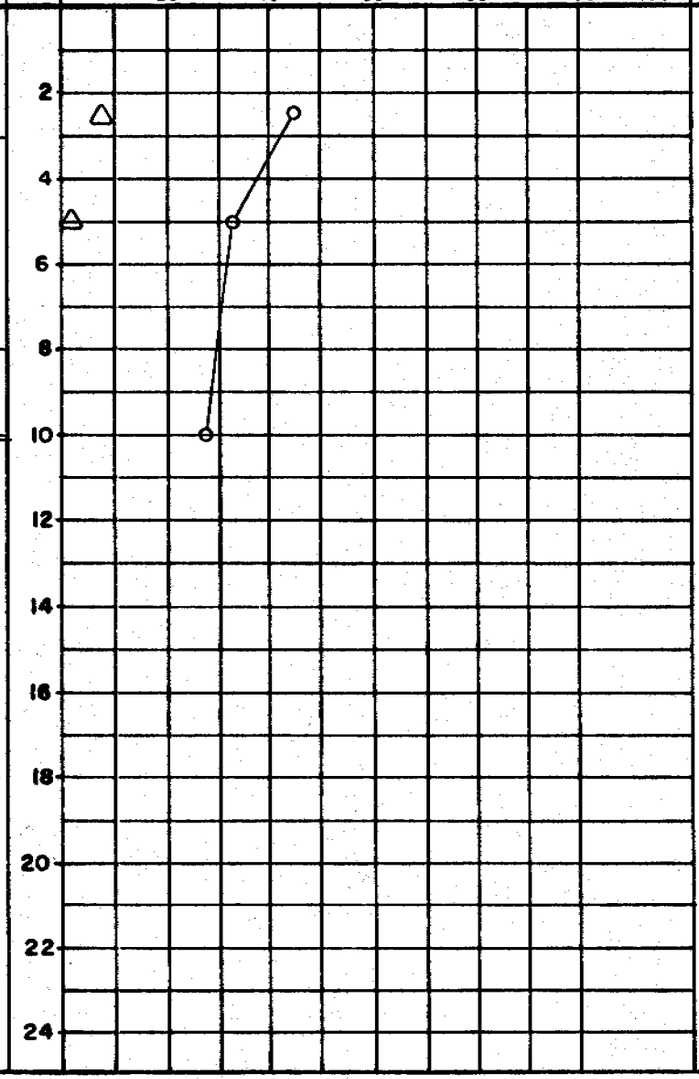
CKD | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
66	C	5

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				ML	SILT - Med. Brown - Sandy - Low Plasticity - Organic		V 5-10%
4	2				ML	SILT (TILL) - Med. Brown - Sandy - Clayey	F	V 0-5%
8	3				CL	CLAY - Dark Brown - Low Plasticity - Silty		NB
10						END OF HOLE 10'		



DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
2						
4						
8						
10						

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 17/2/73 | AIRPHOTO NO: A22774 - 58 | CHAINAGE: 3360 + 94 | OFFSET

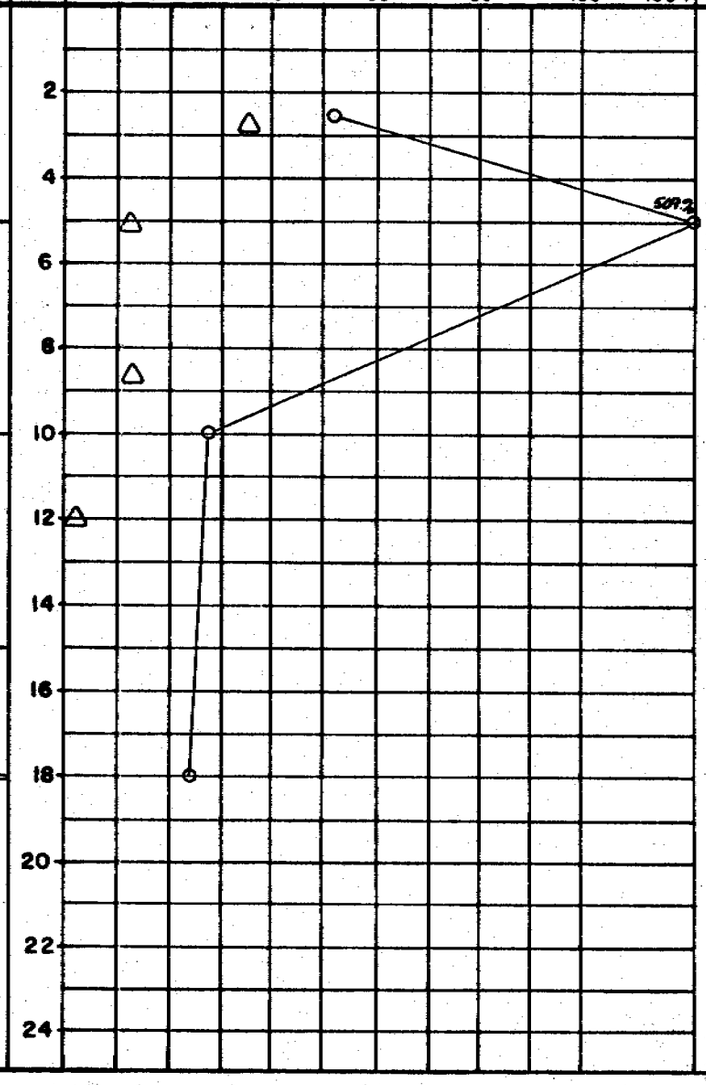
C: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
661	C	6

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				ML	SILT- Med. Brown - Low Plasticity	F	V 40-50%
4	2					- Some Sand		
6								
8								V 10-15%
10	3					- Clayey - Low Plasticity		
12								V 0-5%
14						- Sandy - Low Plasticity - Grey - Clayey - Low Plasticity		
16								
18	4							NB
						END OF HOLE 18'		
20								
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

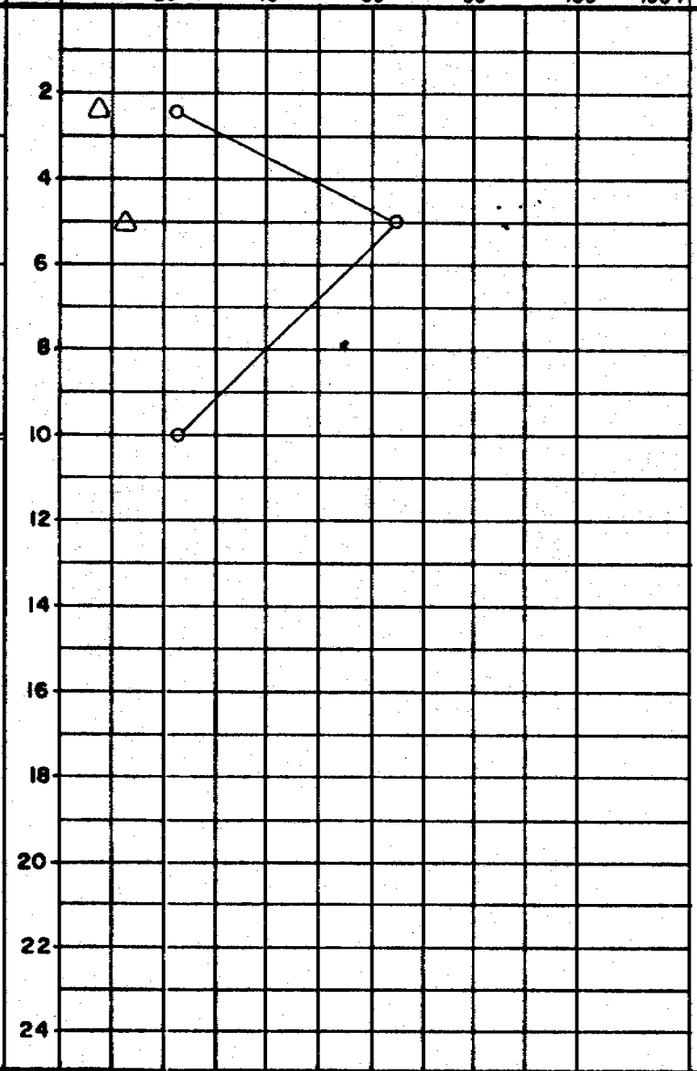
DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 17/2/73 | AIRPHOTO NO: A22774 - 58 | CHAINAGE: 3366 + 63 | OFFSET

CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
661	C	7

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				CL	CLAY - Med. Brown - Low Plasticity - Silty		V 0-5%
4	2					- Sandy	F	V 10-15%
8	3					- Greyish - Low Plasticity		NB
10						END OF HOLE 10'		



GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
CLAY %	SILT %	SAND %	GRAVEL %		
32	46	16	2		

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 7/2/73 | AIRPHOTO NO: A22774 - 58 | CHAINAGE: 3374 + 20 | OFFSET

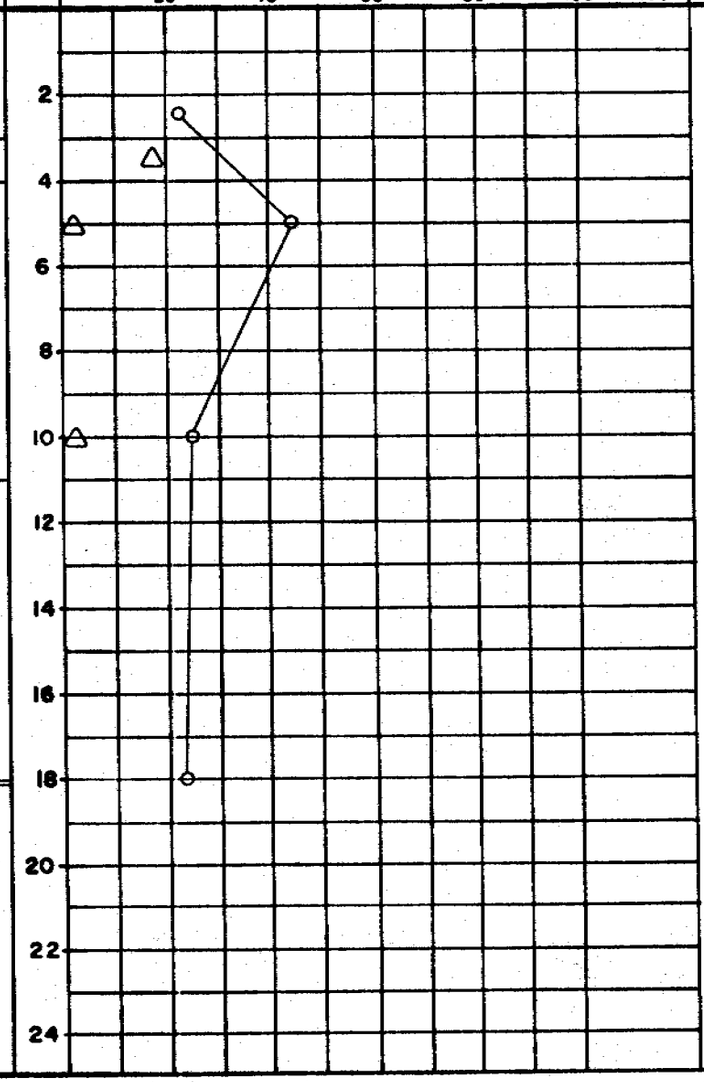
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
660	C	1

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				CL to CI	CLAY - Silty - Med. Brown - Low Plasticity - Trace of Coarse Sand	F	NB'
4								V-15-20
6	2					- Med. Plasticity		V - 0-5%
8								
10	3					- Grey		
12								NB
14								
16								
18	4					END OF HOLE 18'		
20								
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

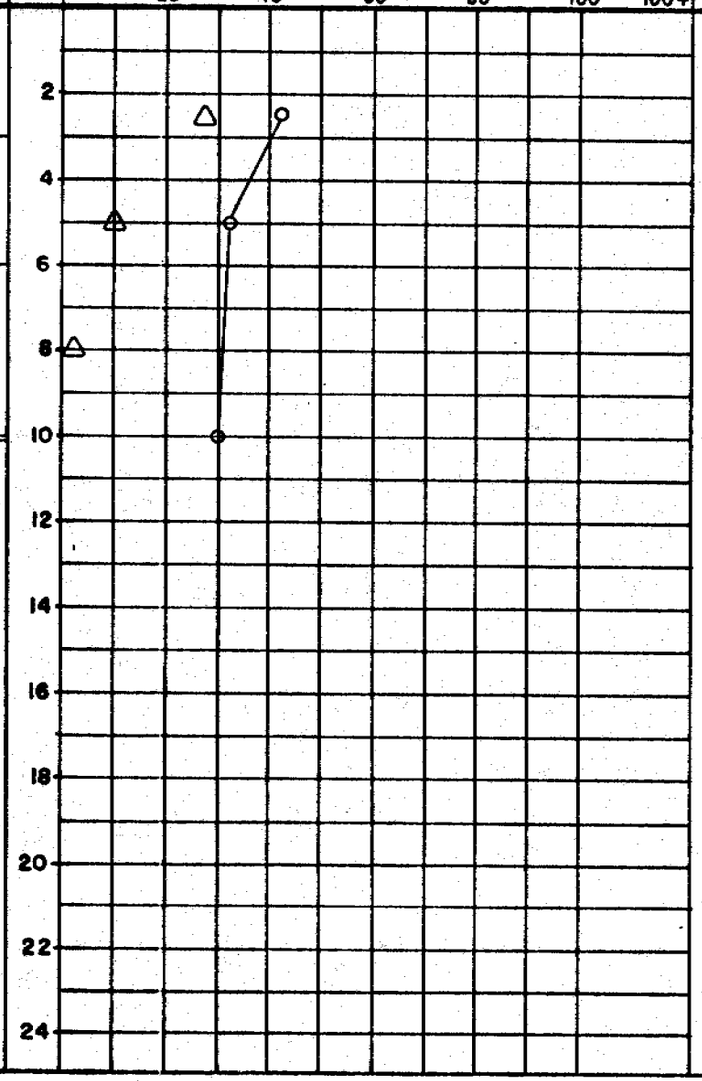
DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 17/2/73 | AIRPHOTO NO: A22774 - 57 | CHAINAGE: 3381 + 80 | OFFSET

CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
660	C	2

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				ML	SILT - Med. Brown - Low Plasticity	F	V 25-30%
4	2					- Sandy		V 5-10%
6						- Clayey - Low Plasticity		V 0-5%
8								
10	3					END OF HOLE 10'		
12								
14								
16								
18								
20								
22								
24								



GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 17/2/73 | AIRPHOTO NO: A22774 - 58 | CHAINAGE: 3389 + 40 | OFFSET

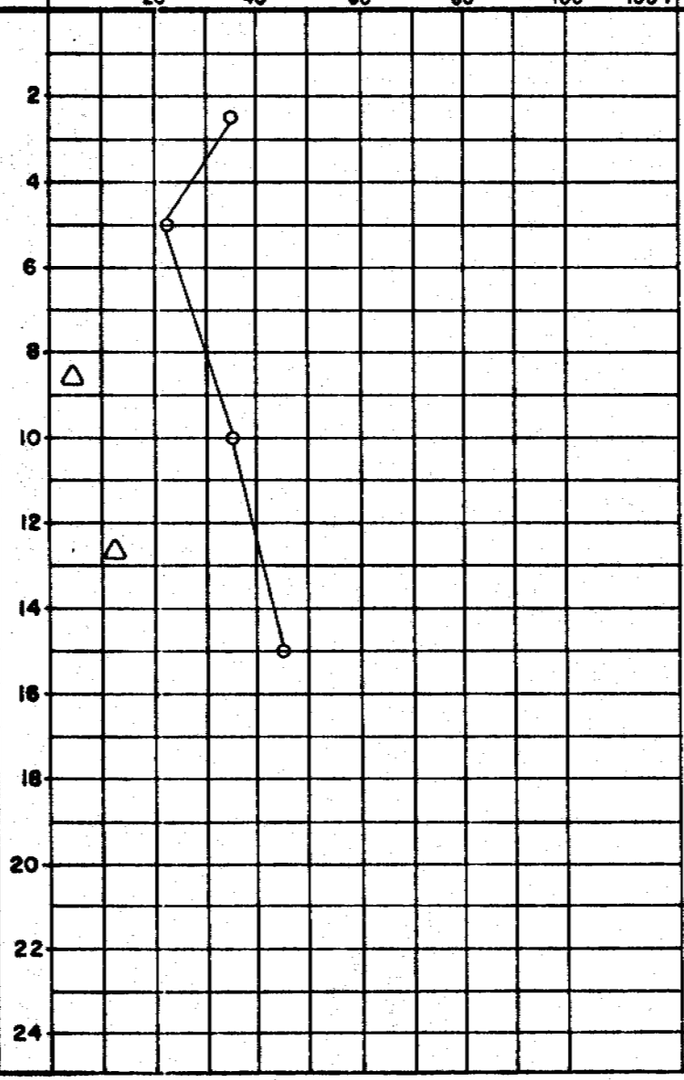
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
660	C	3

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SP to SM	SAND - Fine - Med. Brown - Some Silt - Dense	F	NB
4	2							
6								
8					CL to CI	CLAY - Med. to Dark Brown - Silty - Low Plasticity - Grey - Med Plasticity		V:-O-10%
10	3							V 10-15%
12								
14	4							
16						END OF HOLE 15'		
18								
20								
22								
24								



GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 18/2/73 | AIRPHOTO NO: A22774 - 55 | CHAINAGE: 3398 + 02 | OFFSET

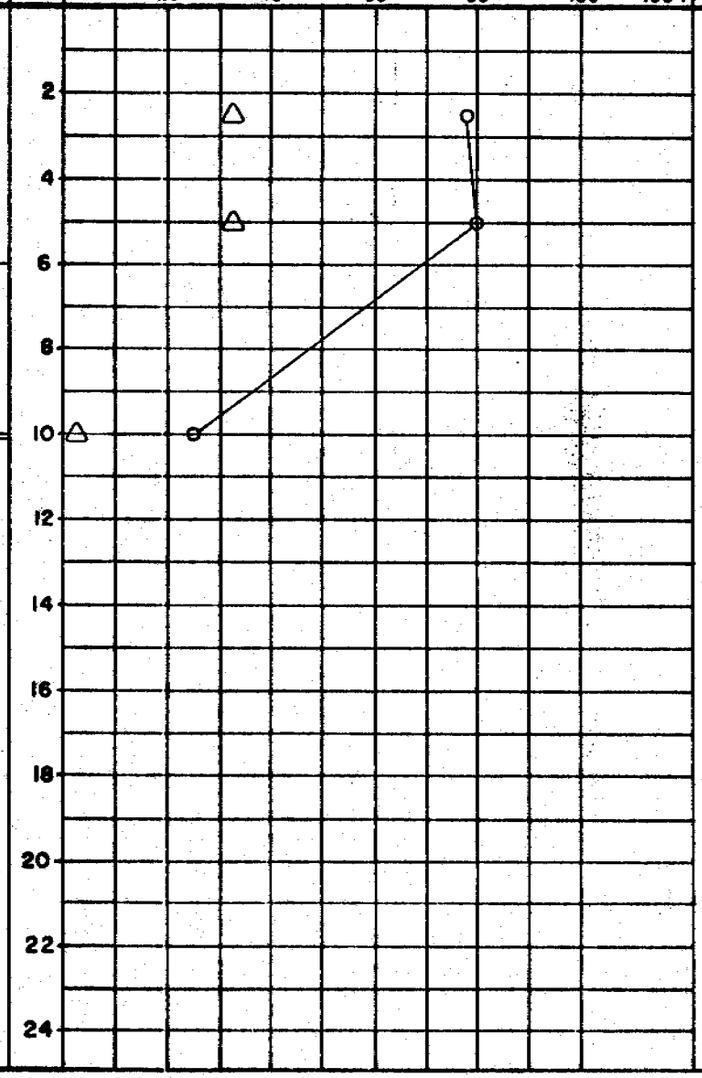
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
660	C	4

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				OL	CLAY - Med. Brown SILT - Low Plasticity - Some Organics Near Top		V 30-35%
4					ML	- Clayey - Some sand		
6	2						F	
8						- Sandy		V 0-5%
10	3					END OF HOLE 10'		
12								
14								
16								
18								
20								
22								
24								



GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
22	64	14	-		

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DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 18/2/73 | AIRPHOTO NO: A22774-55 | CHAINAGE: 3405 + 60 | OFFSET

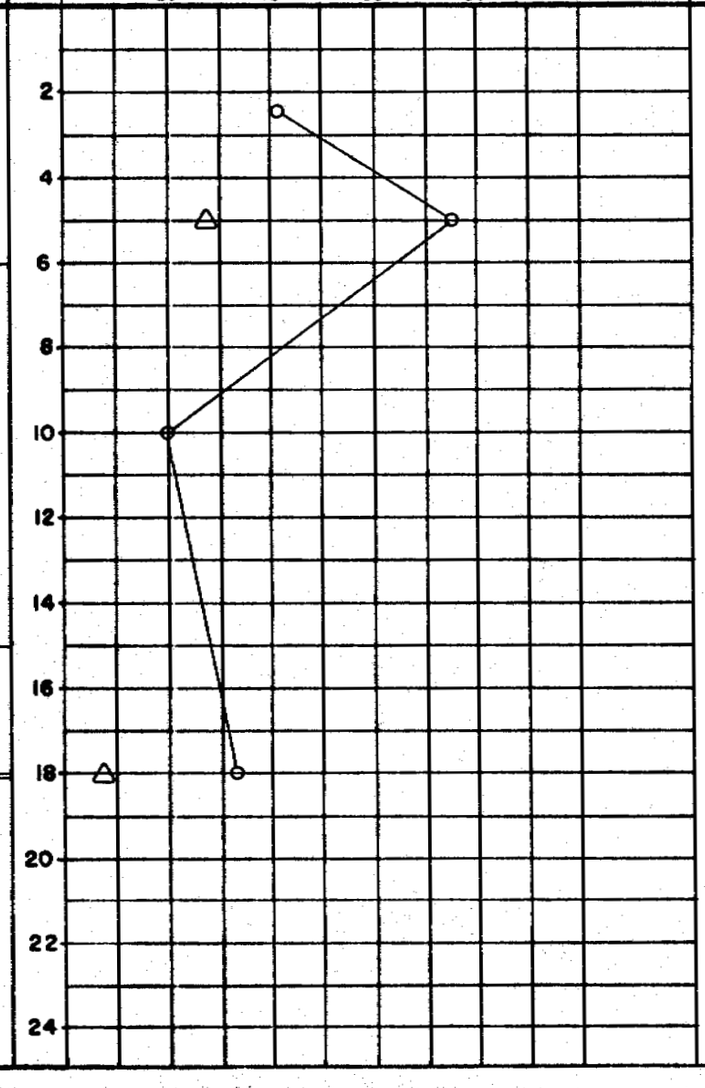
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
660	C	5

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				OL	SILT - Organic Near Top - Med. Brown - Low Plasticity - Clayey	F	V 25-30%
4					ML			
6	2							
8								
10	3				SM	SAND - Greyish Brown - Silty - Dense		NB
12								
14								
16					CL	CLAY - Grey - Silty - Low Plasticity		V 5-10%
18	4					END OF HOLE 18'		
20								
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 18/2/73 | AIRPHOTO NO: A22774 - 55 | CHAINAGE: 3413 + 50 | OFFSET

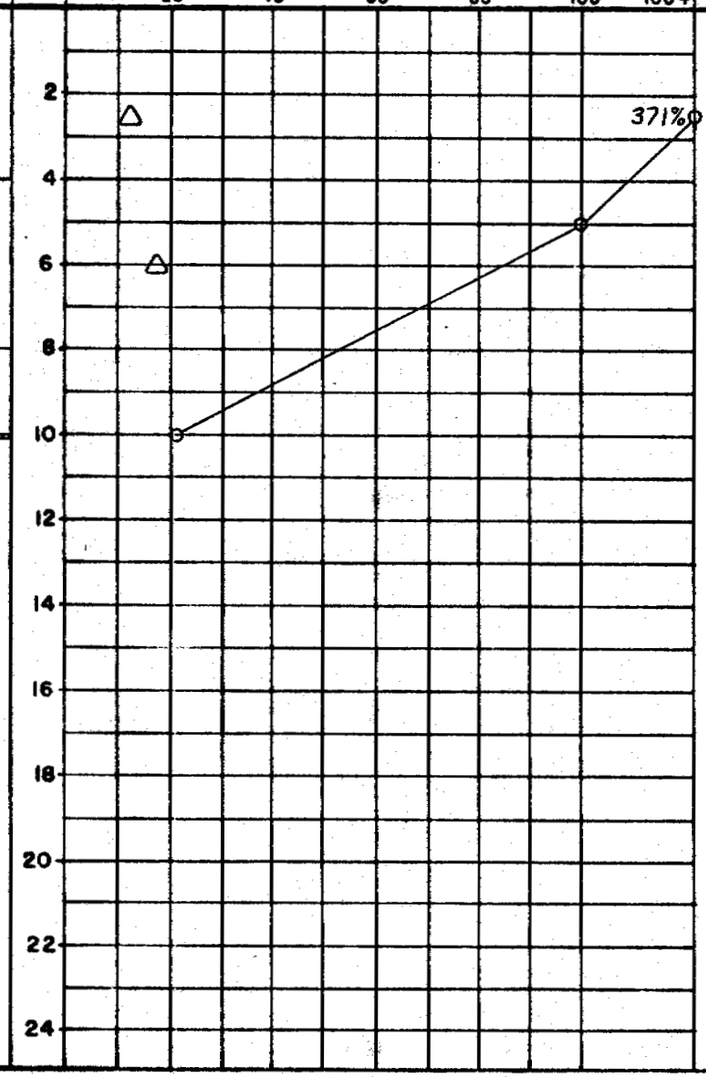
CKD GRG | TECH JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
660	C	6

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				PT to OL	PEAT - Black - Fibrous - Organic Silt	F	V 10 - 15%
4								
6	2				CL	CLAY - Dk. Brown - Silty - Med. Plasticity		V 15-20%
8								
10	3				SM	SAND - Med. Brown, Fine - Dense - Silty		NB
12						END OF HOLE 10'		
14								
16								
18								
20								
22								
24								



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						

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DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 18/2/73 | AIRPHOTO NO: A22774 - 55 | CHAINAGE: 3421 + 10 | OFFSET

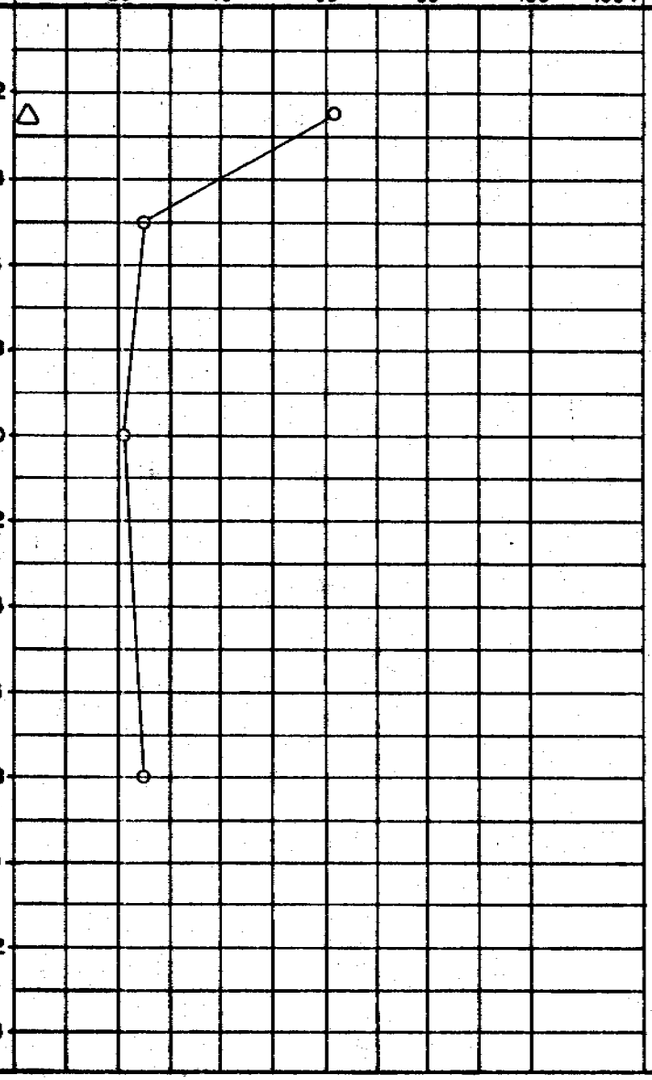
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
660	C	7

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				ML	SILT - Med. Brown - Low Plasticity		V 0-5%
4								
6	2				SM to SP	SAND - Med. Brown - Dense - Silty - Uniform, Medium - Trace of Clay	F	NB
8								
10	3					- Clean		
12								
14								
16								
18	4					- Trace of Coal		
20						END OF HOLE 18'		
22								
24								



GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
CLAY %	SILT %	SAND %	GRAVEL %		
5	31	64	-		

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DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 18/2/73 | AIRPHOTO NO: A22774 - 54 | CHAINAGE: 3432 + 10 | OFFSET

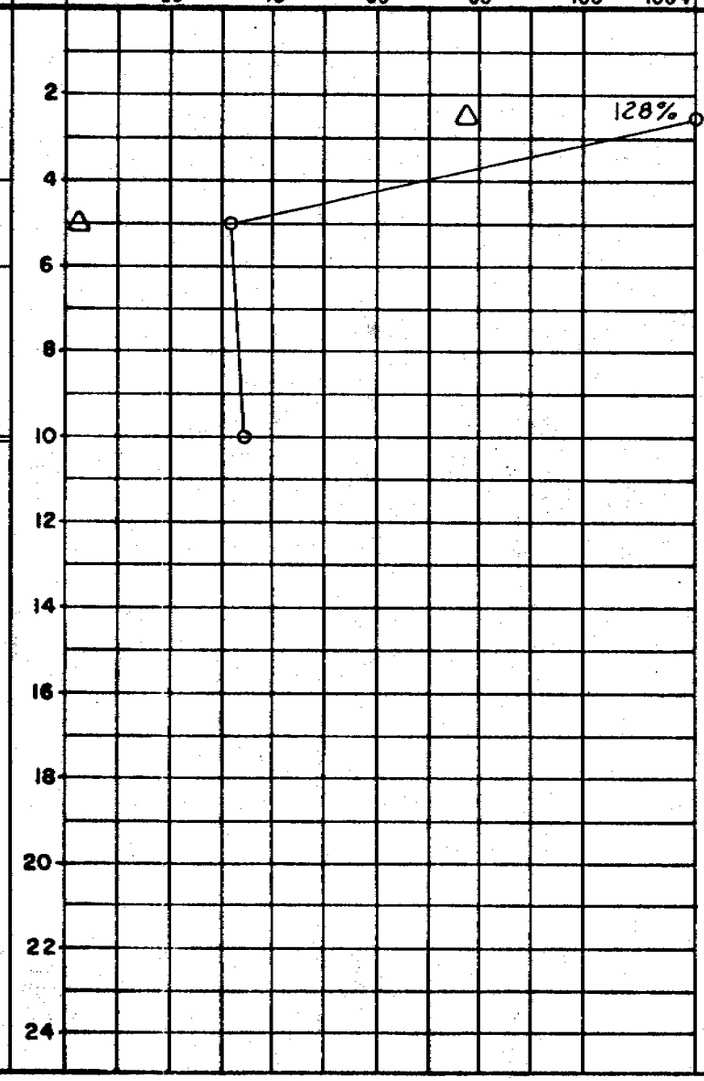
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
659	C	1

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				PT to OL	PEAT - Black - Fibrous - Silty	F	V 75-80%
4	2				ML	SILT - Med. Brown - Sandy - Low Plasticity		V 0-5%
8					SM	SAND - Med. Brown - Fine, Dense, Silty		NB
10	3					END OF HOLE 10'		



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

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

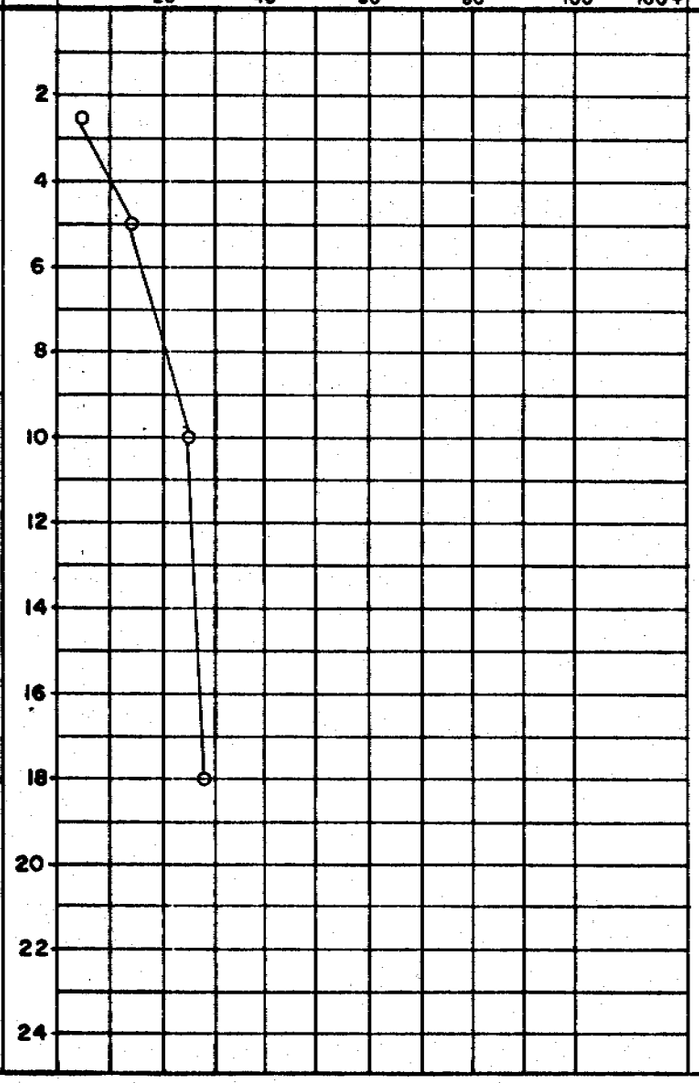
DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB	FIELD ENG: NRM	DATE DRILLED: 18/2/73	AIRPHOTO NO: A22774 - 54	CHAINAGE: 3410 + 25	OFFSET
CKD: GRG	TECH: JK	RIG: Texoma	SURFACE DRAINAGE: Fair to S.	VEGETATION: Black Spruce & Birch	ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
659	C	2

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SW	SAND - Med. Brown - Gravelly - Loose - Some silt and Clay - Well Graded	F	NF
4	2							
6								
8								
10	3				CI	CLAY - Grey - Med Plasticity - Wet	U.	Unfrozen
12								
14								
16								
18	4					END OF HOLE 18'		
20								
22								
24								



GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
CLAY %	SILT %	SAND %	GRAVEL %		
(11)		56	33		

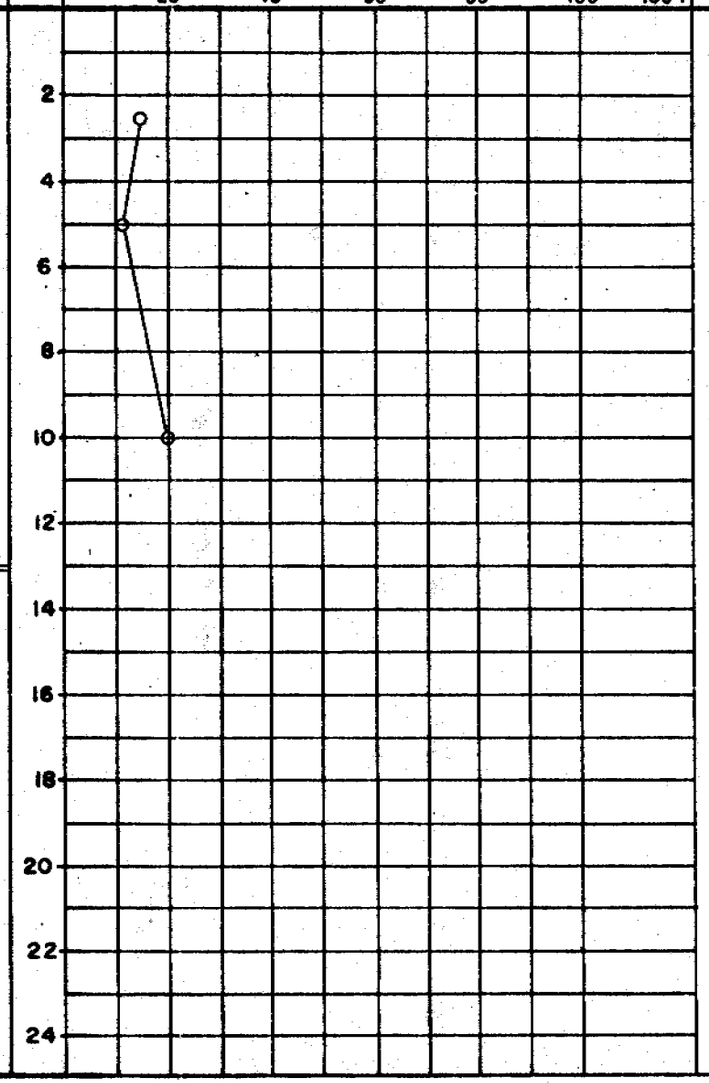
REMARKS

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB	FIELD ENG: NRM	DATE DRILLED 18/2/73	AIRPHOTO NO: A22774 - 54	CHAINAGE: 3442 + 20	OFFSET	TEST HOLE
CKD GRG	TECH: JK	RIG: Texoma	SURFACE DRAINAGE: Good to N.	VEGETATION: Black Spruce & Birch	ELEV:	MILE 659 / B,C,S C / NUMBER 3

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SP	SAND - Gravelly - Med. Brown - Dense - Poorly Graded - Trace of Silt and Clay	F	NB
4	2							
6								
8								
10	3				CI	CLAY - Grey, Silty - Med Plasticity		
12								
14						END OF HOLE 13'		
16								
18								
20								
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 18/2/73 | AIRPHOTO NO: A22774 - 54 | CHAINAGE: 3456 + 80 | OFFSET

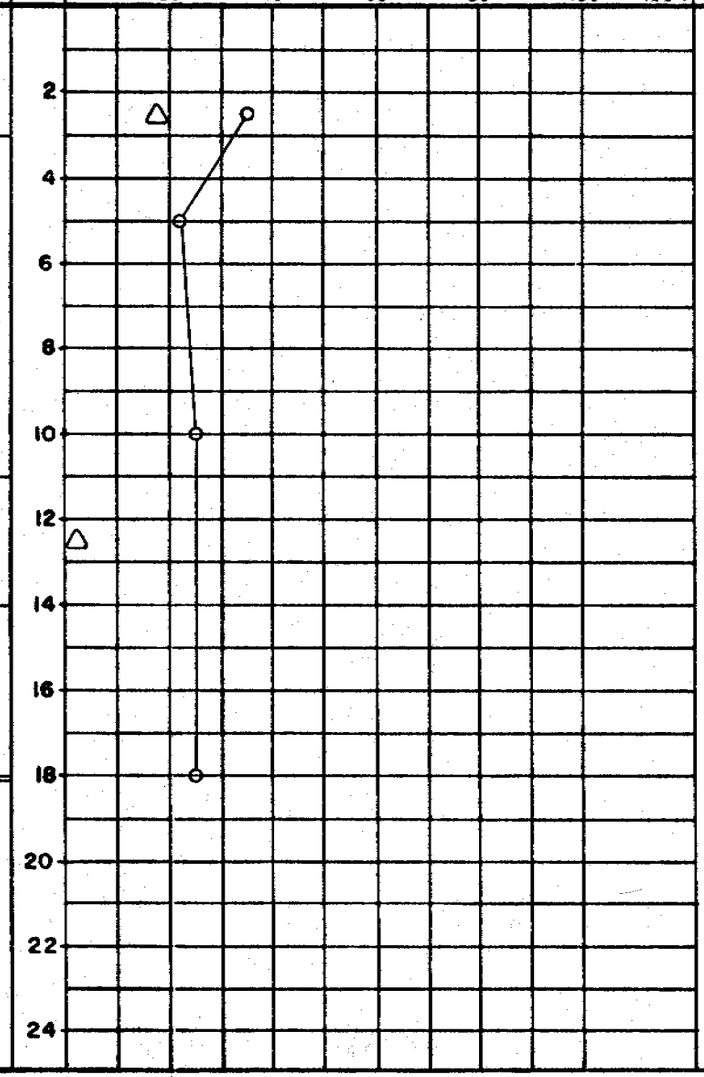
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
659	C	4

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				OL to ML	SILT - Med. Brown - Organic - Low Plasticity		V 15-20%
4	2				SP	SAND - Med. Brown - Trace of Silt - Medium - Some gravel	F	NB
8								
10	3				CI	CLAY - Grey - Silty - Med Plasticity		V 0-5%
12								
14								
16								NB
18	4							
						END OF HOLE 10'		
20								
22								
24								



GRAIN-SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
	(9)		78	12		

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

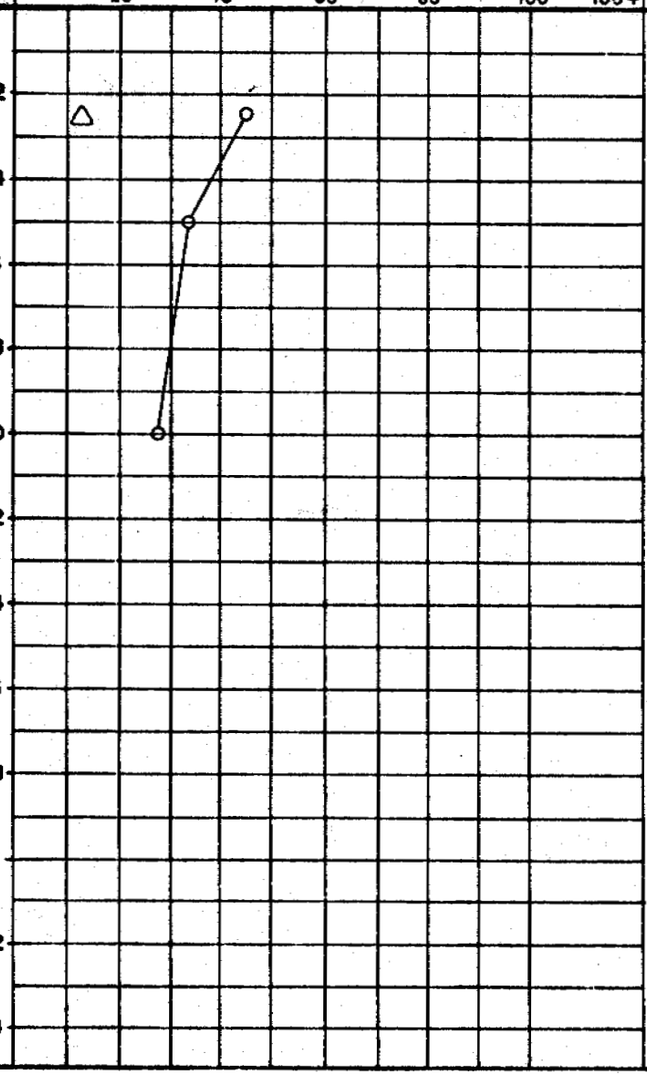
DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 18/2/73 | AIRPHOTO NO: A22774-59 | CHAINAGE: 3464 + 70 | OFFSET

CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Fair to S | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE		
MILE	B,C,S	NUMBER
659	C	5

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				PT	PEAT - Black - Silty, Clayey		V 10-15%
4								
6	2				CL CI	CLAY - Med. Brown - Silty - Low Plasticity	F	NB
8						- Grey - Med Plasticity		
10	3					END OF HOLE 10'		
12								
14								
16								
18								
20								
22								
24								



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

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DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 18/2/73 | AIRPHOTO NO: A22774 - 54 | CHAINAGE: 3472 + 60 | OFFSET:

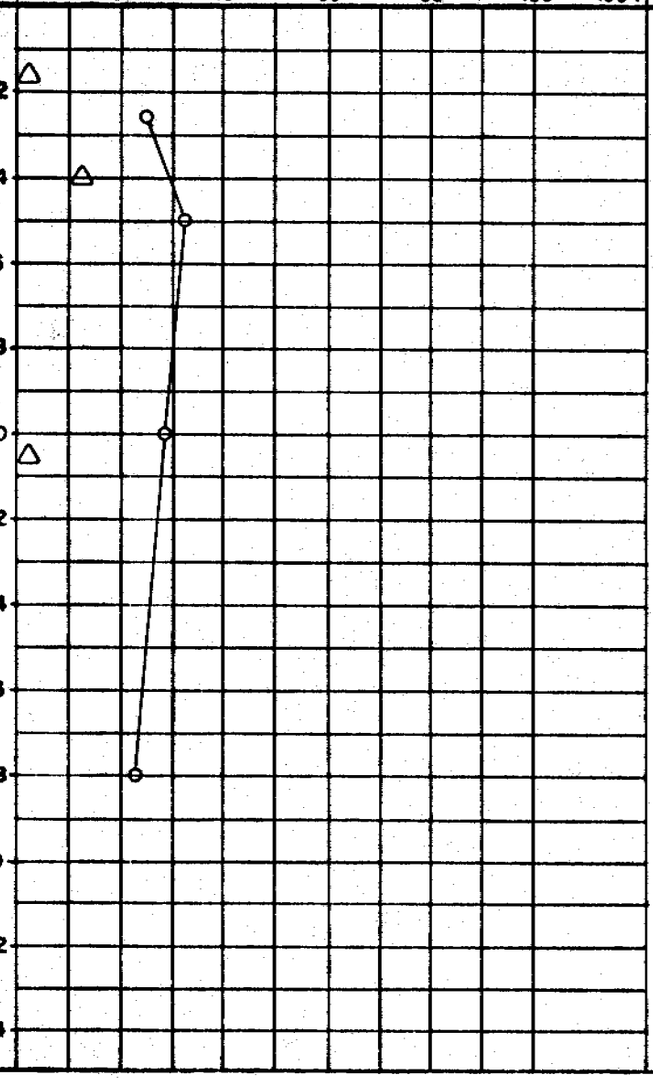
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Fair to S. | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
659	C	6

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				ML	SILT - Clayey - Med. Brown - Sandy - Non Plasticity	F	V 0-5%
4								V 10-15%
6	2				CI	CLAY - Med. to Dark Brown - Med Plasticity - Silty		
8								
10	3					- Grey - Some Silt		V 0 - 5%
12								
14								
16								
18	4					END OF HOLE 18'		
20								
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 18/2/73 | AIRPHOTO NO: A22774 - 54 | CHAINAGE: 3480 + 40 | OFFSET

CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
659	C	7

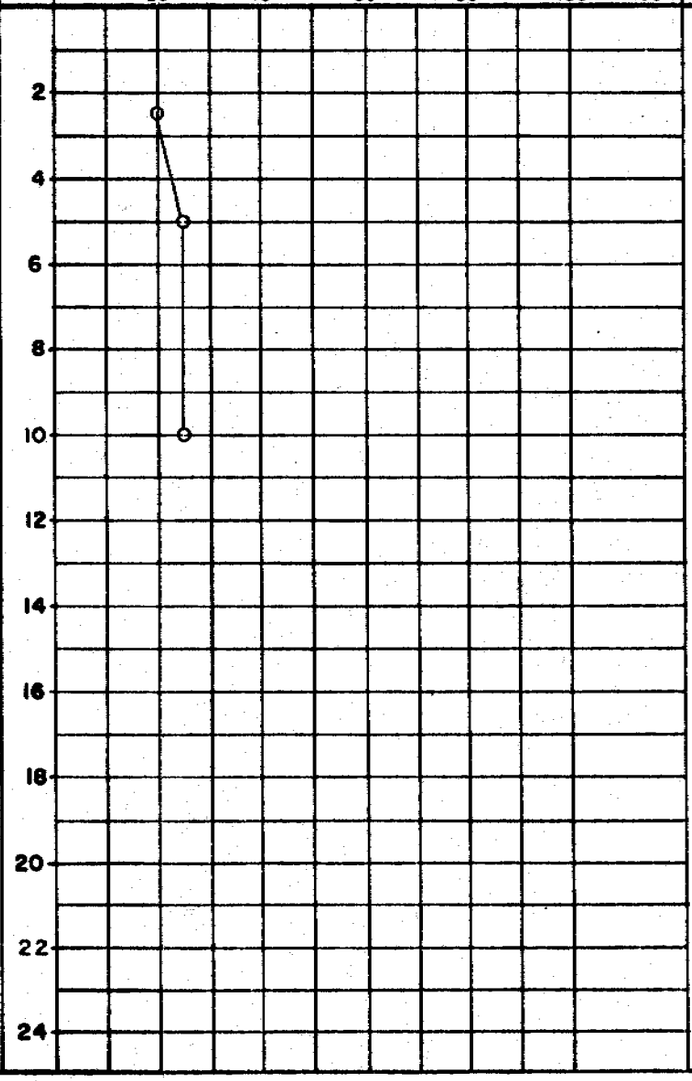
REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				ML	SILT - Clayey - Med. Brown - Low Plasticity - Some Sand	F	V-. 0-5%
4	2					- Moist to Wet	U	Unfrozen
8	3				CI	CLAY - Grey - Med Plasticity		
10						END OF HOLE 10'		

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

PLASTIC LIMIT — LIQUID LIMIT

20 40 60 80 100 100+



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

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 18/2/73 | AIRPHOTO NO: A22774 - 52 | CHAINAGE: 3489 + 10 | OFFSET

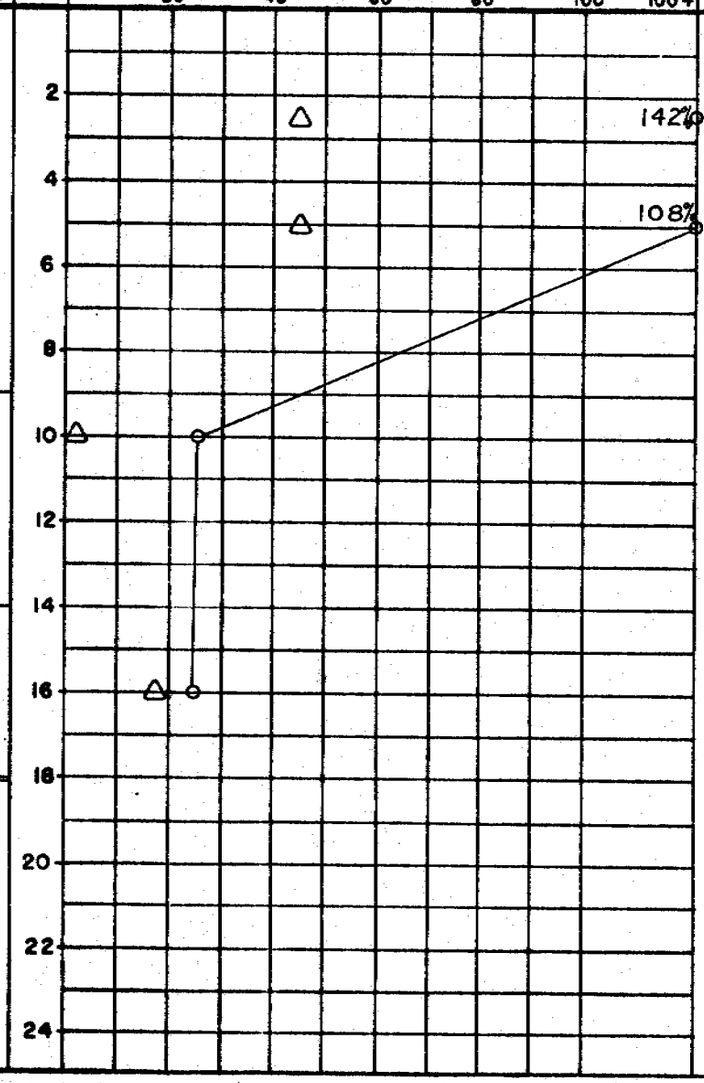
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Fair to NW | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
658	C	1

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				OL	ORGANIC SILT - Dark Brown		
4	2					- Some Med Sand - Some clay		V 40-50%
8								
10	3				ML	SILT - Med. Brown - Sandy - Low Plasticity		
12					CI	CLAY - Grey - Med Plasticity - Some Silt		V 0-5%
14								
16								V 15-20%
18	4					END OF HOLE 18'		
20								
22								
24								



GRAIN-SIZE ANALYSIS	CLAY	SILT	SAND	GRAVEL	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
	%	%	%	%		
	14	75	11	-		

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

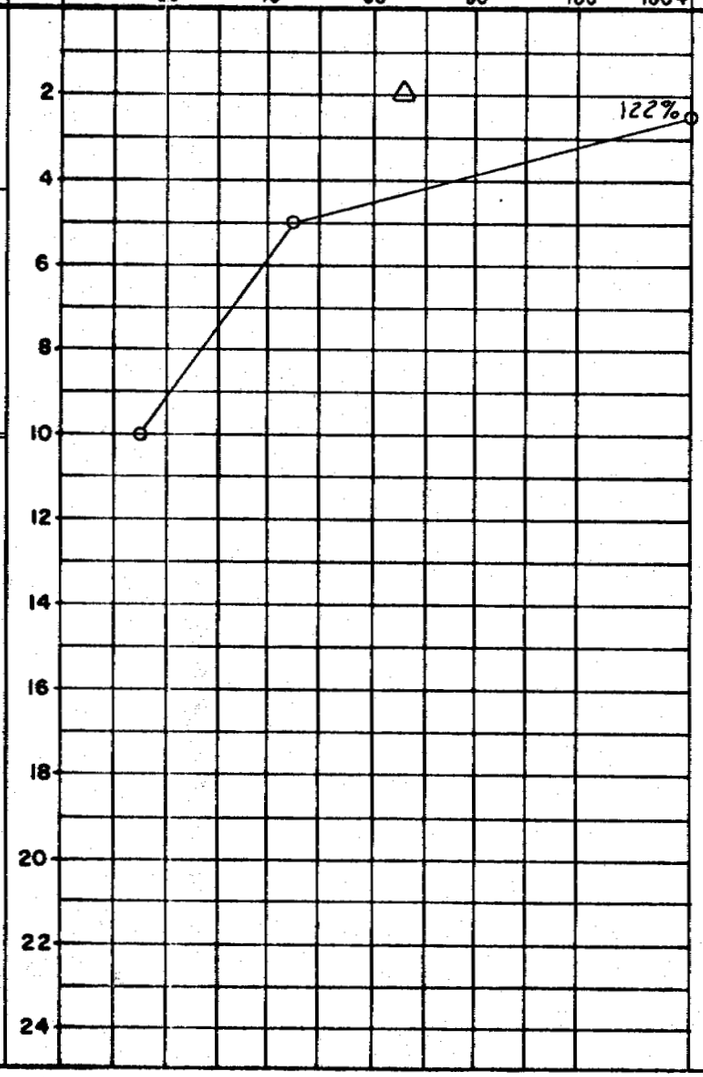
DWN: ALB | FIELD ENG: NRM | DATE DRILLED 18/2/73 | AIRPHOTO NO: A22774 - 52 | CHAINAGE: 3497 + 10 (est.) | OFFSET

CKD GRG | TECH JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
658	C	2

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				PT	PEAT - Black - Silty		V 60-70%
4								
6	2				ML	SILT - Med. Brown - Sandy - Pebbles - Low Plasticity	F	NB
8								
10	3				SP	SAND - Med. Brown - Gravelly, Dense		
12						END OF HOLE 10'		
14								
16								
18								
20								
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 18/2/73 | AIRPHOTO NO: A22774 - 52 | CHAINAGE: 3507 + 20 | OFFSET

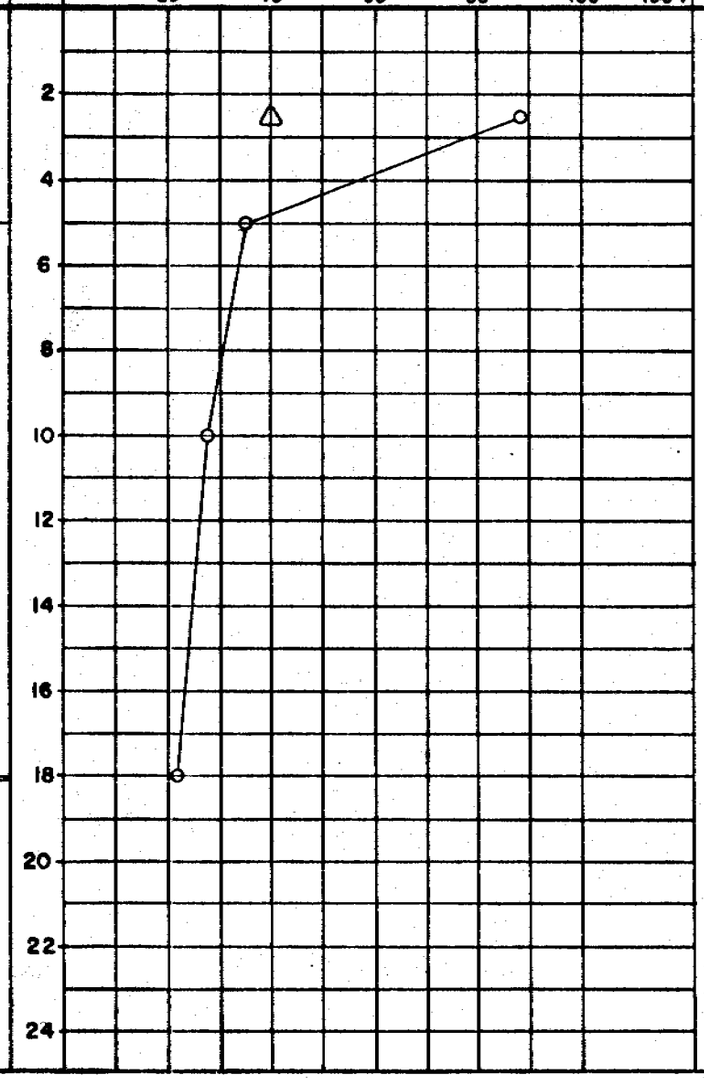
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
658	C	3

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				OH to CH	CLAY - Organic, Silty - Black - Fibrous	F	V- 40%
6	2				ML	SILT - Clayey - Med. Brown - Sandy - Low Plasticity		
10	3					- Clayey,		
12					SM	SAND - Med. to Dark Brown - Silty		NB
18	4					END OF HOLE 18'		



DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
2						
6						
10						
12						
18						

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 18/2/73 | AIRPHOTO NO: A22774 - 52 | CHAINAGE: 3514 + 74 | OFFSET

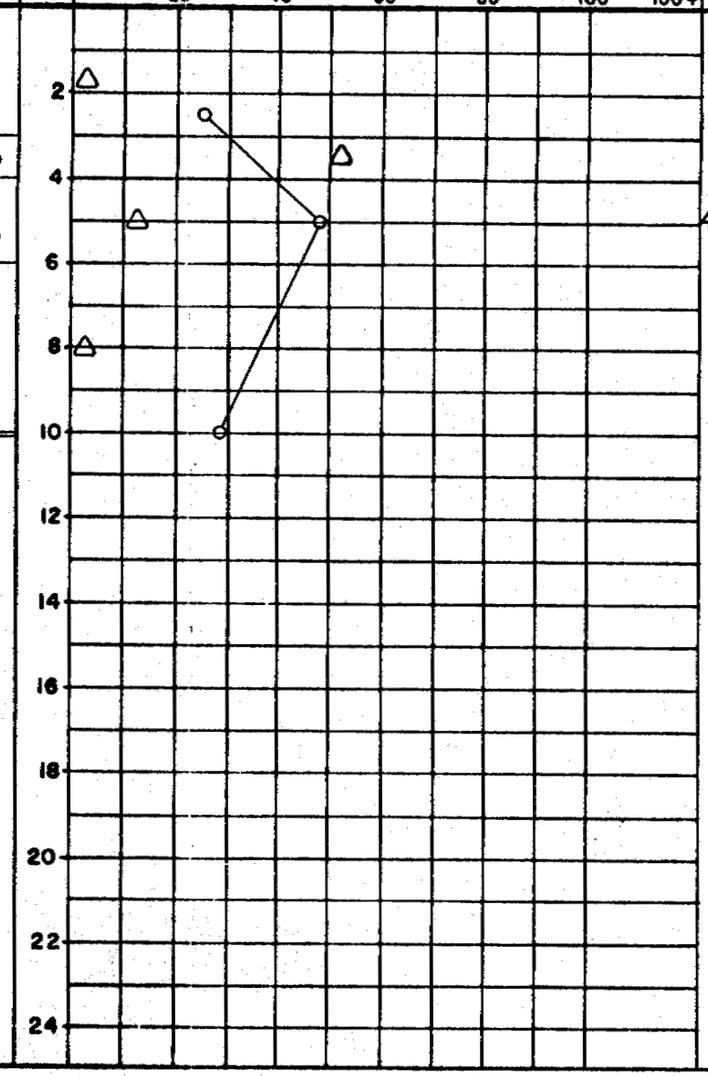
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Fair to S. | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
658	C	4

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				CI	CLAY - Med. Brown - Silty - Med. Plasticity - Some Organics	F	V 0-5% V- 40-50% V- 10-15%
4								
6	2					- Dark Brown - Silty		
8								V- 0-5%
10	3							
12						END OF HOLE 10'		
14								
16								
18								
20								
22								
24								



GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
45	55	-	-		

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DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 18/2/73 | AIRPHOTO NO: A22774 - 52 | CHAINAGE: 3521 + 60 | OFFSET

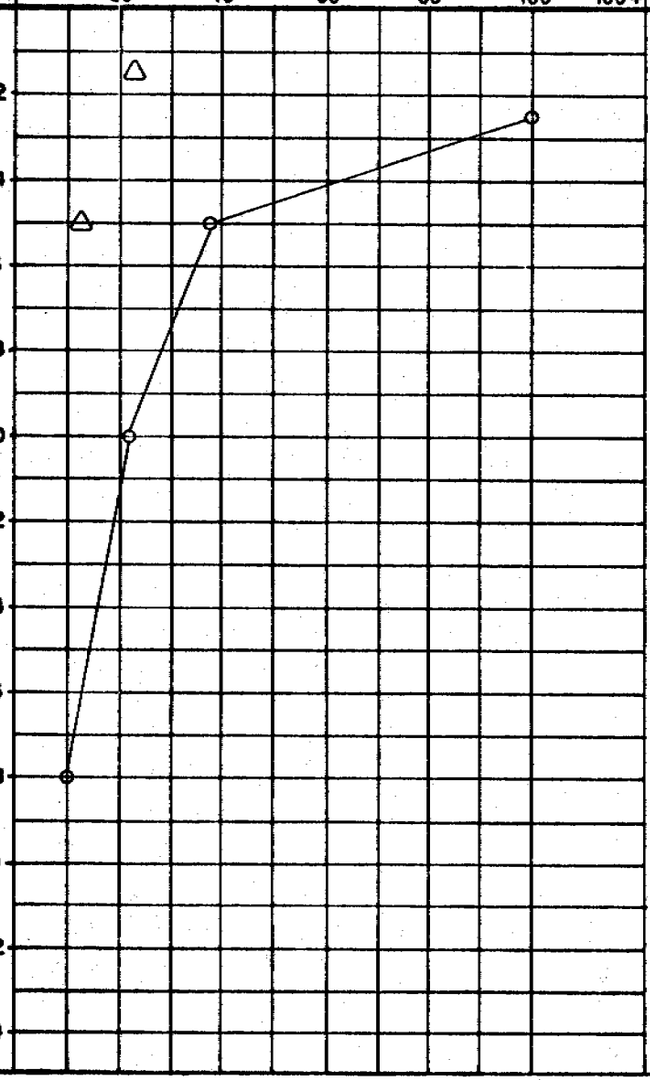
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Fair to SW | VEGETATION: Black Spruce & Birch | ELEV

TEST HOLE

MILE	B,C,S	NUMBER
658	C	5

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				ML	SILT - Med. Brown - Low Plasticity - Clayey - Trace of Organics		V 20-25%
4								
6	2							V 10-15%
8					GP	GRAVEL - Med. Brown, Sandy, - Dense, Poorly Graded	F	
10	3				CI	CLAY (TILL) - Med. Brown, Sandy, Silty, Med. Plasticity		NB
12					ML	SILT - Med. Brown, Clayey, Some Sand, Low Plasticity		
14					GM to GC	GRAVEL - Med. Brown (Greyish) - Silty, Clayey - Poorly Graded		
16								
18	4							
						END OF HOLE 18'		
20								
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

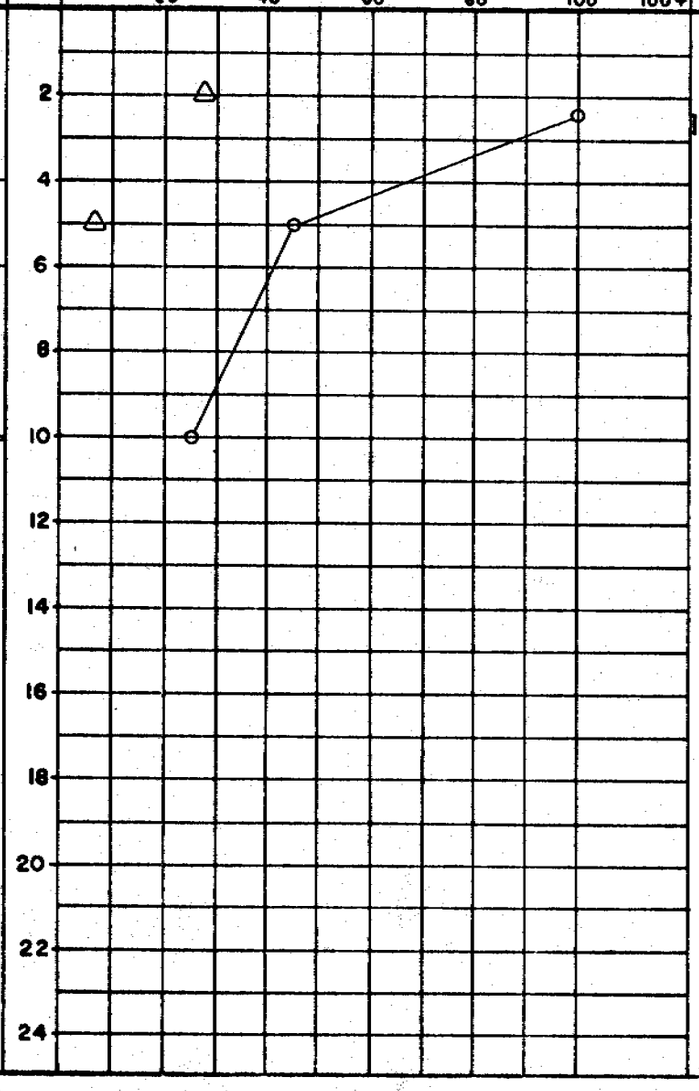
DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 18/2/73 | AIRPHOTO NO: A22774 - 52 | CHAINAGE: 3530 + 20 | OFFSET:
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Fair to S.W. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
658	C	6

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				ML	SILT - Med. Brown - Low Plasticity - Sandy - Some Clay	F	V 25-30%
4	2							V 5-10%
6						- Clayey - Low Plasticity		NB
8	3							
10						END OF HOLE 10'		
12								
14								
16								
18								
20								
22								
24								



GRAIN-SIZE ANALYSIS

DEPTH (FEET)	CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
2	12	51	37	-		

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 19/2/73 | AIRPHOTO NO: A22763 - 81 | CHAINAGE: 3538 + 20 | OFFSET

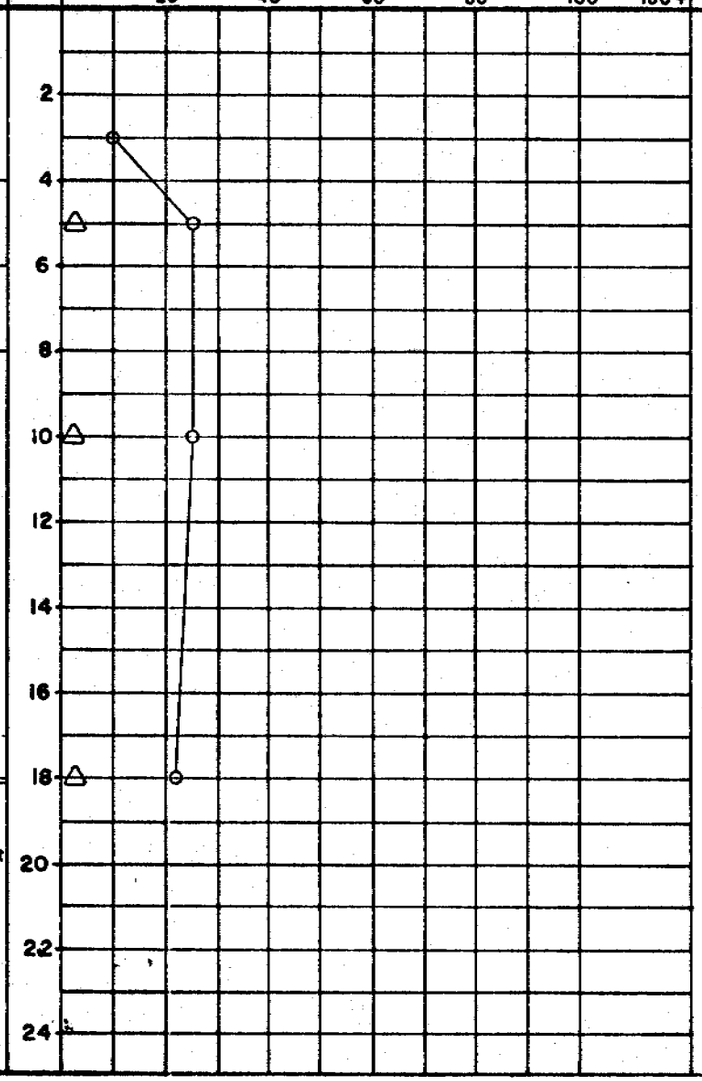
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Fair to S. | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
657	C	1

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				ML	SILT - Med. Brown - Low Plasticity	F	NB
4	2				GM to GW	GRAVEL - Med. Brown - Sandy - Loose - Some Clay - Silty		V 0-5%
6					CL	CLAY (Till) - Dark Brown - Silty - Low Plasticity		NB
8								
10	3				CI	CLAY - Grey - Med Plasticity - Silty		V- 0-5%
12								
14								
16								
18	4					END OF HOLE 18'		
20								
22								
24								



GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
CLAY %	SILT %	SAND %	GRAVEL %		
	(23)	35	42		

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 9/2/73 | AIRPHOTO NO: A22763 - 81 | CHAINAGE: 3545 + 20 | OFFSET

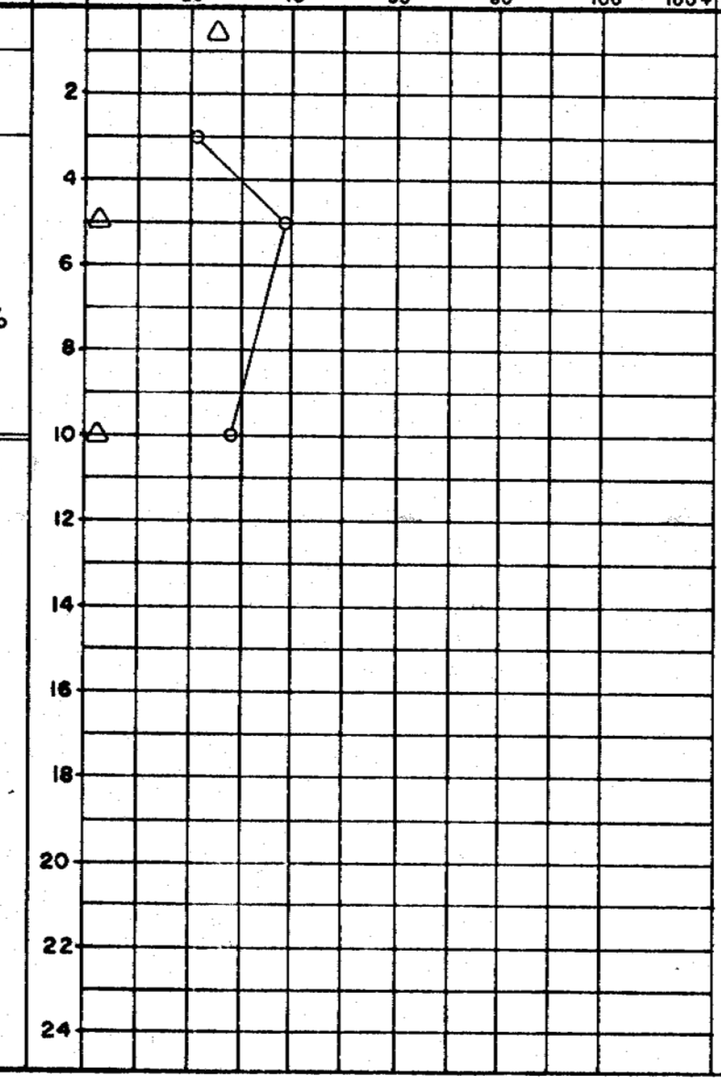
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Fair to S. | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
657	C	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 - Black		V- 25%
2	1				ML	SILT - Med. Brown - Low Plasticity		NB
4	2				CL	CLAY - Med. Brown (TILL) - Silty - Some Gravel - Low Plasticity	F	V- 0-5%
6						- Some Silt - Reddish Oxides		
8								
10	3					END OF HOLE 10'		
12								
14								
16								
18								
20								
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 19/2/73 | AIRPHOTO NO: A22763 - 81 | CHAINAGE: 3352 + 20 (EST.) | OFFSET

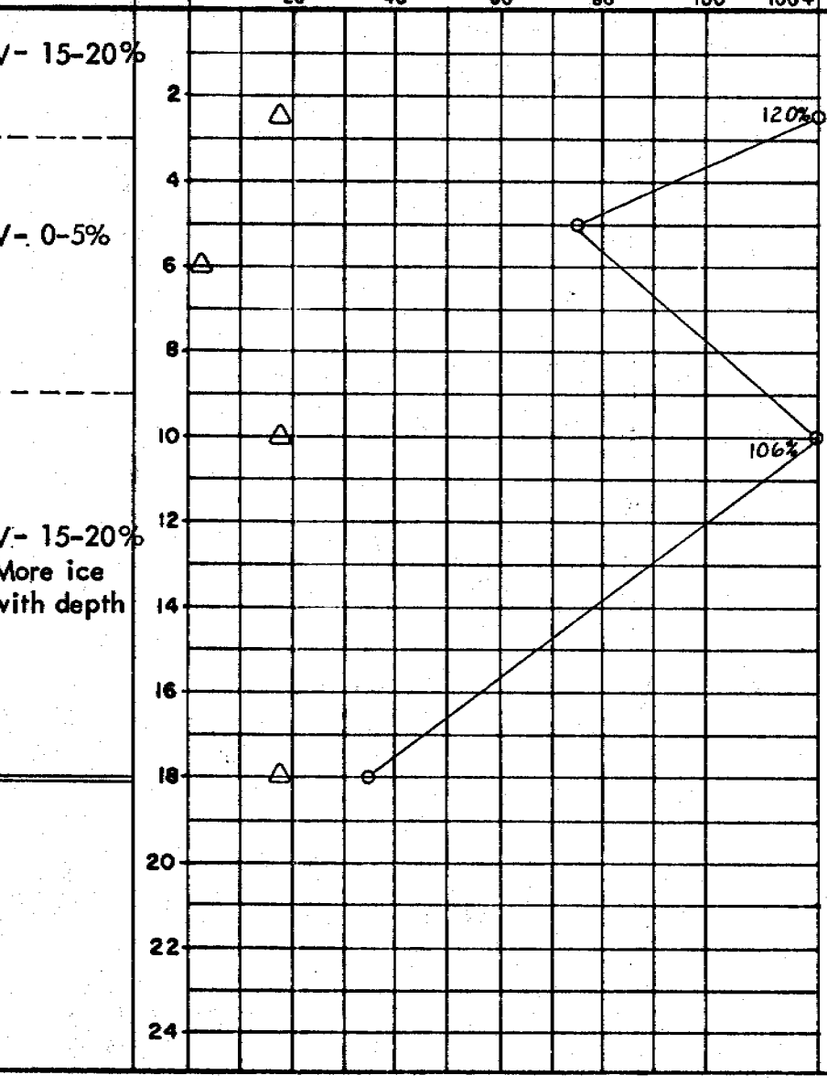
CKD GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
657	C	3

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				OL to ML	ORGANIC SILT - Dark Brown - Clayey		V- 15-20%
4	2				CH	CLAY - Dark Brown - High Plasticity - Sandy 9'		V- 0-5%
10	3				CI	- Med. Plasticity		V- 15-20% More ice with depth
16	4					- Grey, Med. Plastic		
18						END OF HOLE 18'		

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



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

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

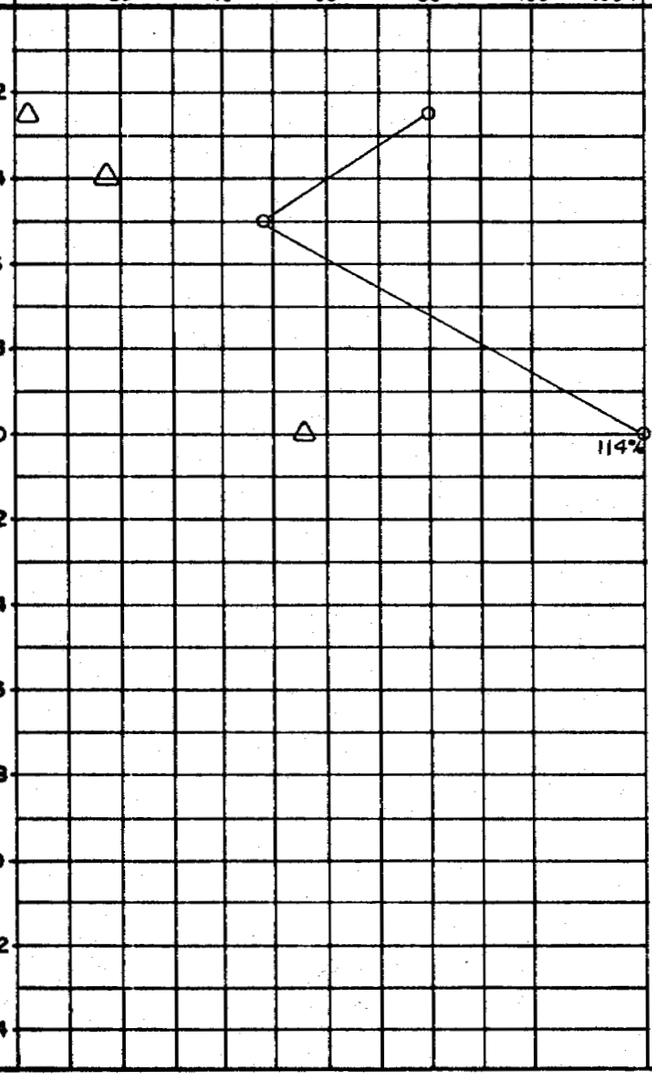
DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 9/2/73 | AIRPHOTO NO: A22763 - 81 | CHAINAGE: 3558 + 20 (EST.) | OFFSET:
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Fair to S. | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
657	C	4

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				OL	ORGANIC SILT - Dark Brown - Clayey		V- 0-5%
4	2				CL	CLAY - Dark Brown - Med. Plasticity - Trace of Med. Sand	F	V- 15-20% to V- 50-60%
6								
8								
10	3					END OF HOLE 10'		
12								
14								
16								
18								
20								
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							
4							
6							
8							
10							
12							
14							
16							
18							
20							
22							
24							

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 20/2/73 | AIRPHOTO NO: A22776 - 81 | CHAINAGE: 3570 + 30 | OFFSET

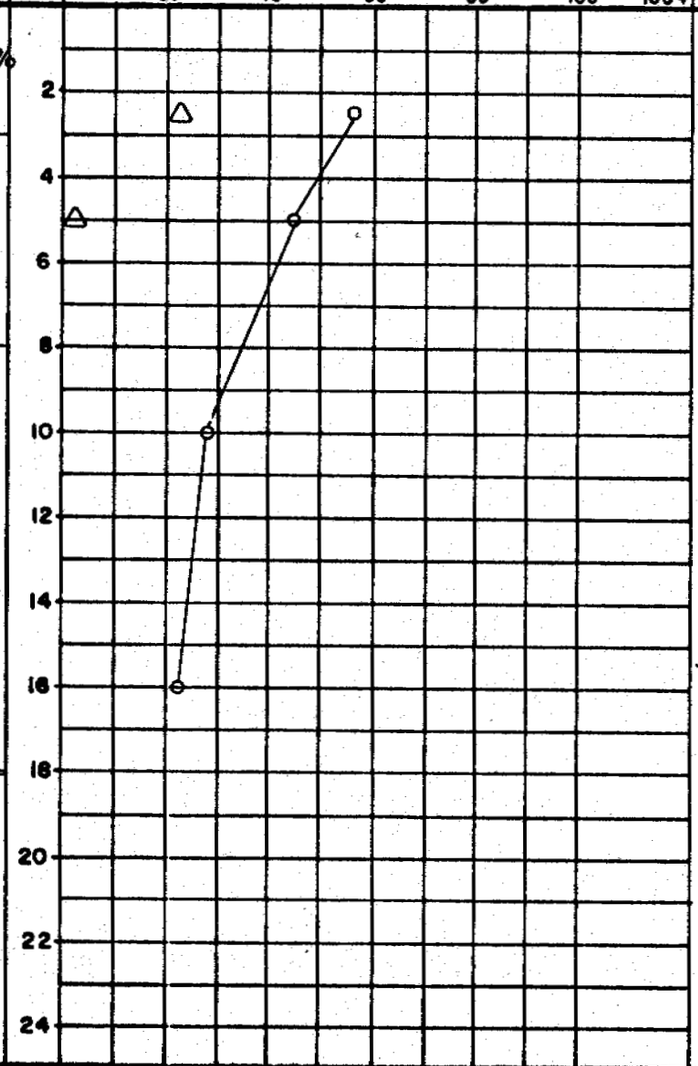
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Good to N. | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
657	C	5

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				OL	ORGANIC SILT - Med. Brown		V - 20-25%
4	2				CL to CI	CLAY - Med. to Dk. Brown SILT - Low to Med Plasticity - Trace of Fine Sand		V - 0-5%
10	3						F	NB
14					CL	- Grey		
16								
18	4					- Low Plasticity		
						END OF HOLE 18'		
20								
22								
24								



GRAIN-SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
	29	65	6	-		

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 20/2/73 | AIRPHOTO NO: A22763 - 81 | CHAINAGE: 3577 + 15 | OFFSET

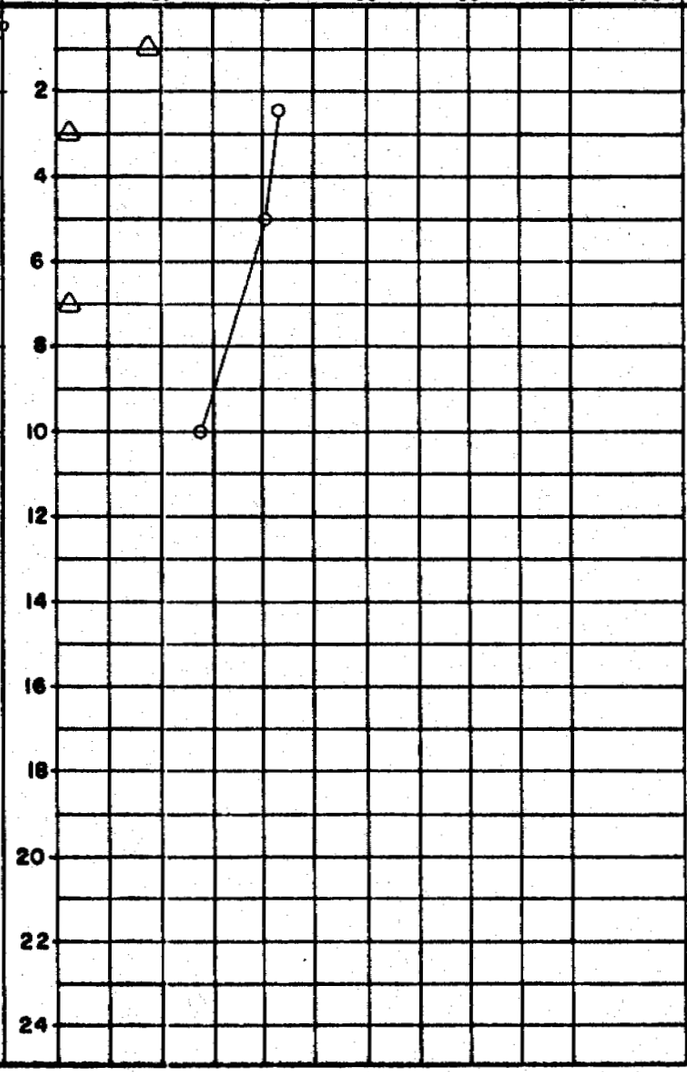
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Fair | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
657	C	6

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					ML	PEAT - Black		V - 15-20%
2	1				CL to CI	CLAY - Dark Brown SILT - Low to Med Plasticity		V - 0-5%
4								
4	2					- Some Fine Sand Lenses	F	NB
6						- Some Organics		V 0-5%
8								
8					ML	SILT - Grey, Low Plasticity		NB
10	3					- Siltstone		
10						END OF HOLE 10'		
12								
14								
16								
18								
20								
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

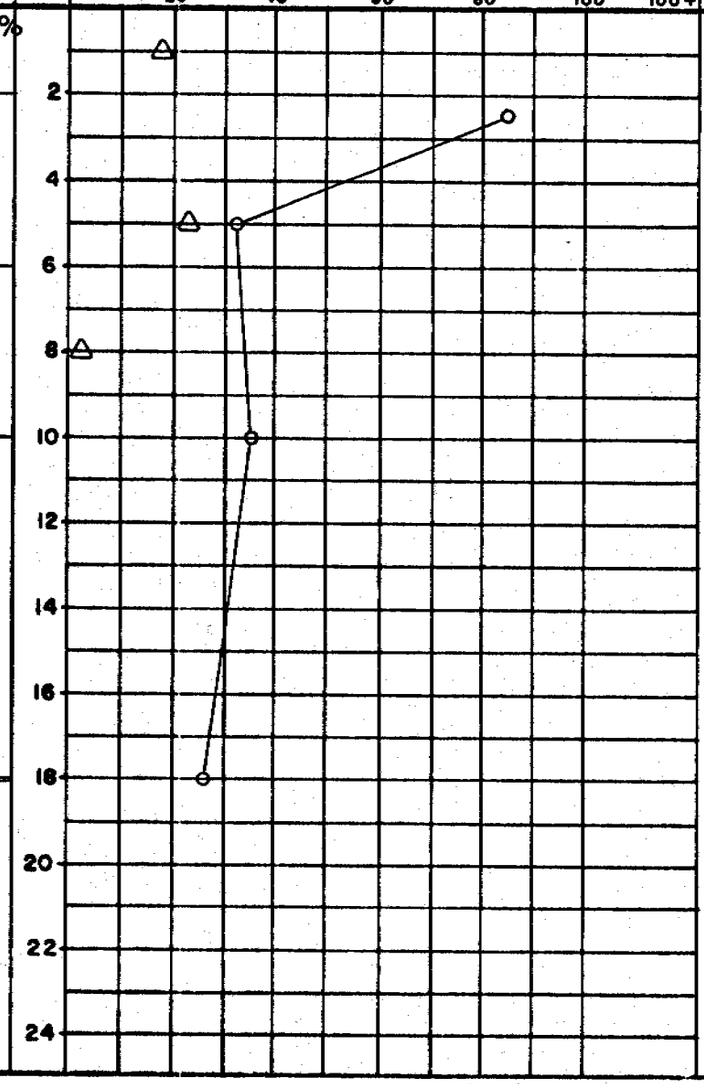
DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 20/2/73 | AIRPHOTO NO: A22774 - 61 | CHAINAGE: 3584 + 10 | OFFSET:

CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Fair to N. | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
657	C	7

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					PT	PEAT - Black		V- 15-20%
2	1				ML	SILT - Med. Brown - Clayey - Trace of Sand - Organics		V 20-25%
4								
6	2							V- 0-5%
8					CL to CI	CLAY - Dark Brown - Low to Med Plasticity - Silty	F	
10	3							
12								
14					ML	SILT - Grey - Clayey - Low Plasticity - Siltstone		NB
16								
18	4							
						END OF HOLE 18'		
20								
22								
24								



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

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 20/2/73 | AIRPHOTO NO: A22774 - 61 | CHAINAGE: 3591 + 20 | OFFSET

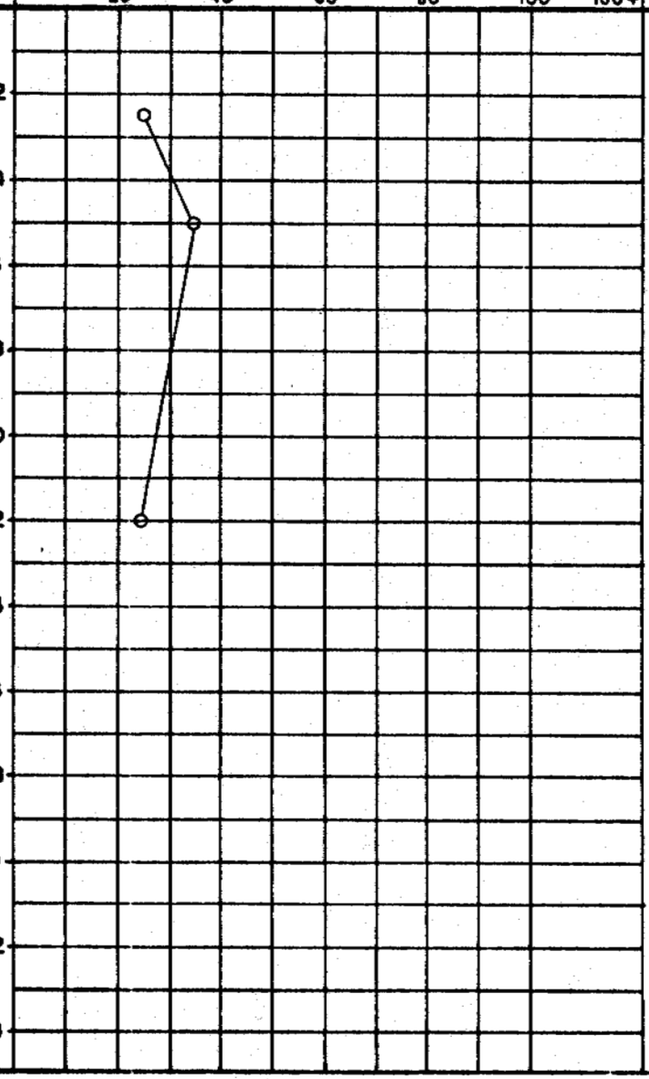
CKD GRG | TECH JK | RIG: Texoma | SURFACE DRAINAGE: Fair to N. | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
657	C	8

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				ML	SILT - Med. Brown - Low Plasticity - Clayey - Trace of Fine Sand	F	NB
4	2							
6								
8								
10								
12	3							
						END OF HOLE 12'		
14								
16								
18								
20								
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB	FIELD ENG: NRM	DATE DRILLED: 20/2/73	AIRPHOTO NO: A22763 - 79	CHAINAGE: 3598 + 10	OFFSET
CKD: GRG	TECH: JK	RIG: Texoma	SURFACE DRAINAGE: Fair to S.	VEGETATION: Black Spruce & Birch	ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
656	C	1

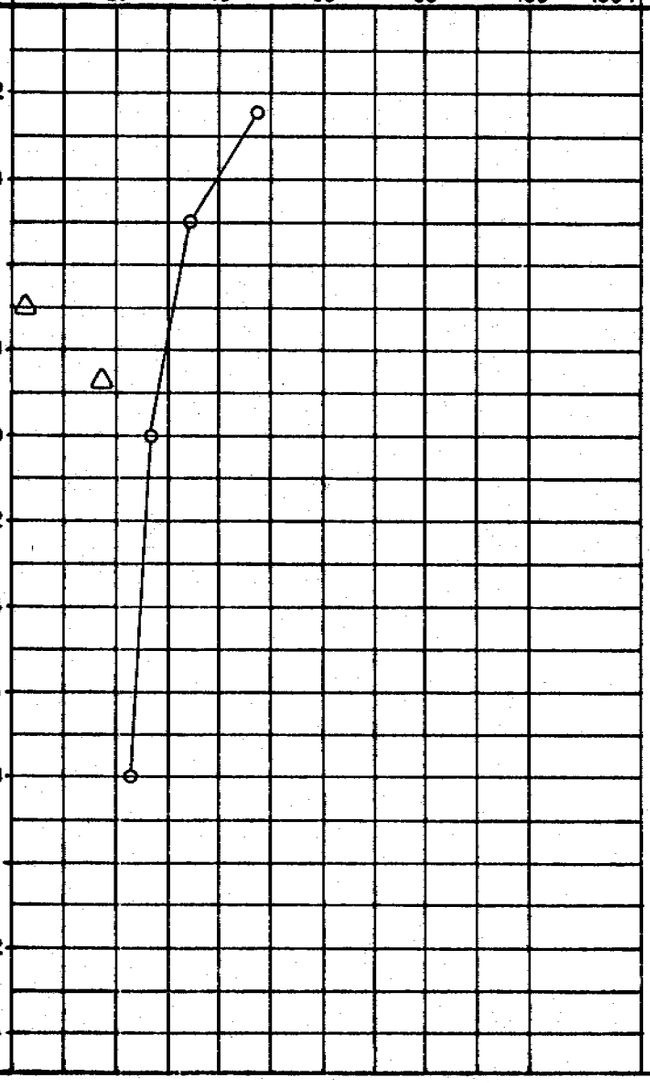
REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0–2								
2–4	1				SM	SAND - Med. Brown - Dense - Silty		NB
4–6	2				ML	SILT - Med. Brown - Sandy - Low Plasticity - Clayey	F	V- 0–5%
6–8								V- 15–20%
8–10	3					- Grey - Sand Lenses		
10–12								NB
12–14								
14–16								
16–18	4							
18						END 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+



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						

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

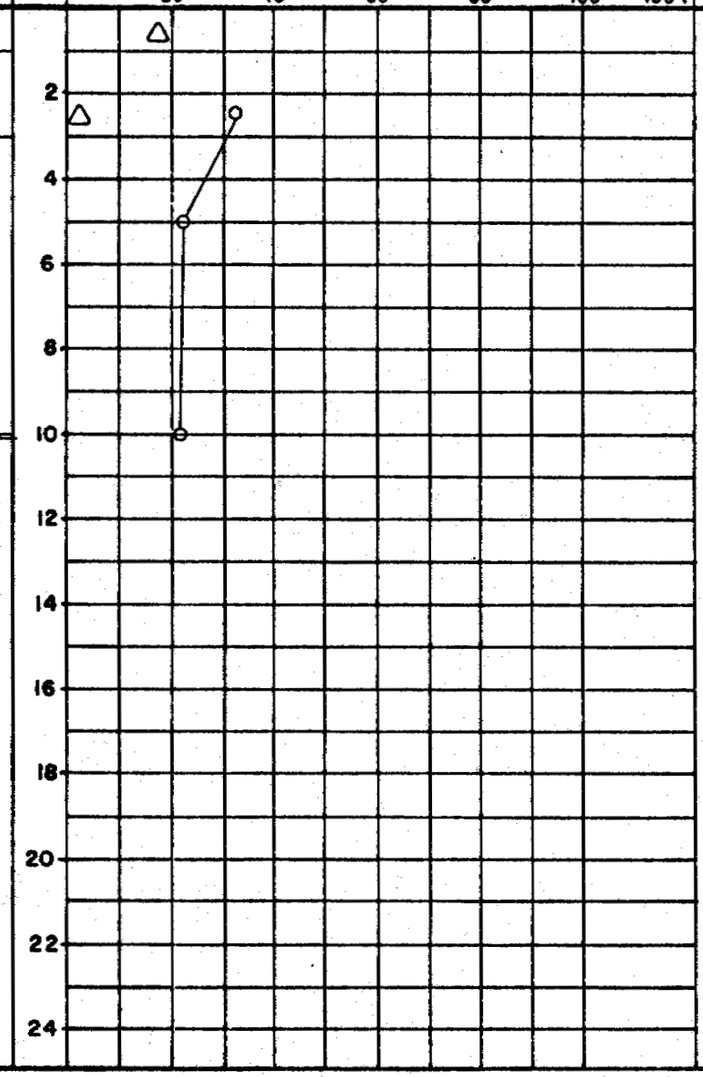
DWN: ALB | FIELD ENG: NRM | DATE DRILLED 20/2/73 | AIRPHOTO NO: A22763 - 79 | CHAINAGE: 3605 + 25 | OFFSET

CKD: GRG. | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Fair to S. | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
656	C	2

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				PT	PEAT - Black	F	V - 15-20%
					SM	SAND - Med. Brown - Silty, Dense		V - 0-5%
4	2				ML	SILT - Clayey - Dk. Brown - Low Plasticity - Trace of Fine Sand - Grey	U	Unfrozen
6								
8								
10	3					END OF HOLE 10'		
12								
14								
16								
18								
20								
22								
24								



GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 20/2/73 | AIRPHOTO NO: A22763 - 79 | CHAINAGE: 3612 + 50 | OFFSET

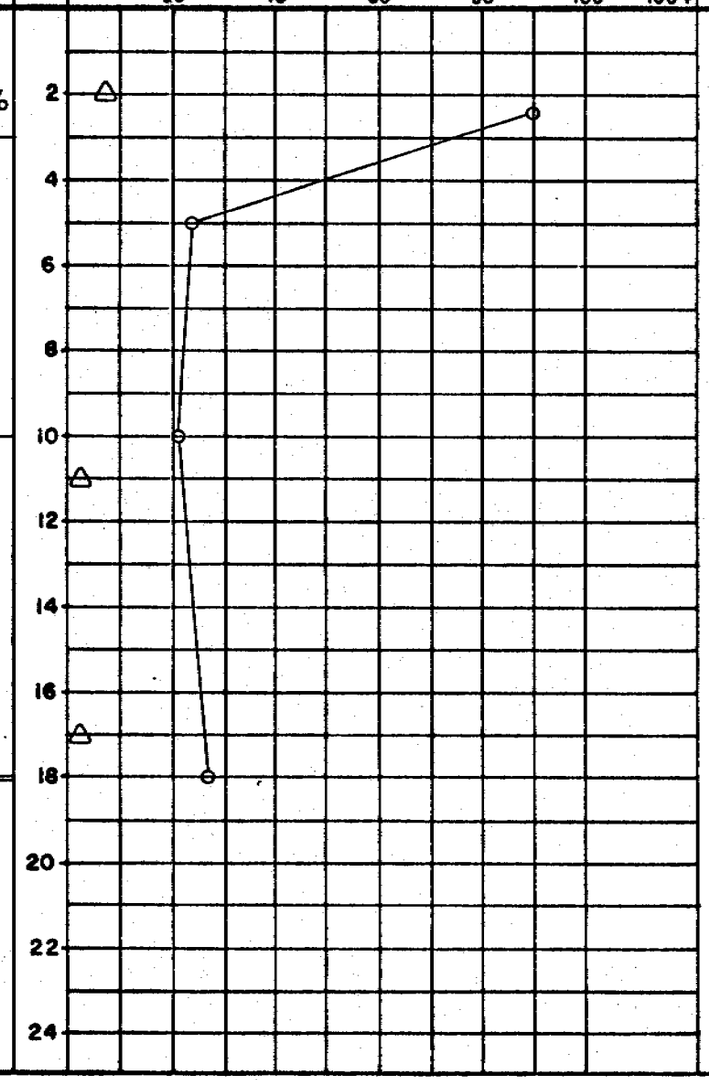
CKD GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Fair to S. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
656	C	3

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				OL to ML	SILT - Black - Organic - With Fine Sand		V = 5-10%
4	2				SM	SAND - Med. Brown - Fine - Dense - Silty		
6						- Greyish	F	NB
8								
10	3				ML	SILT - Grey - Clayey - Low Plasticity		V - 0-5%
12								
14								
16								
18	4					END OF HOLE 18'		
20								
22								
24								



GRAIN-SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
	(20)		80	-		

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 20/2/73 | AIRPHOTO NO: A22763 - 79 | CHAINAGE: 3620 + 50 | OFFSET

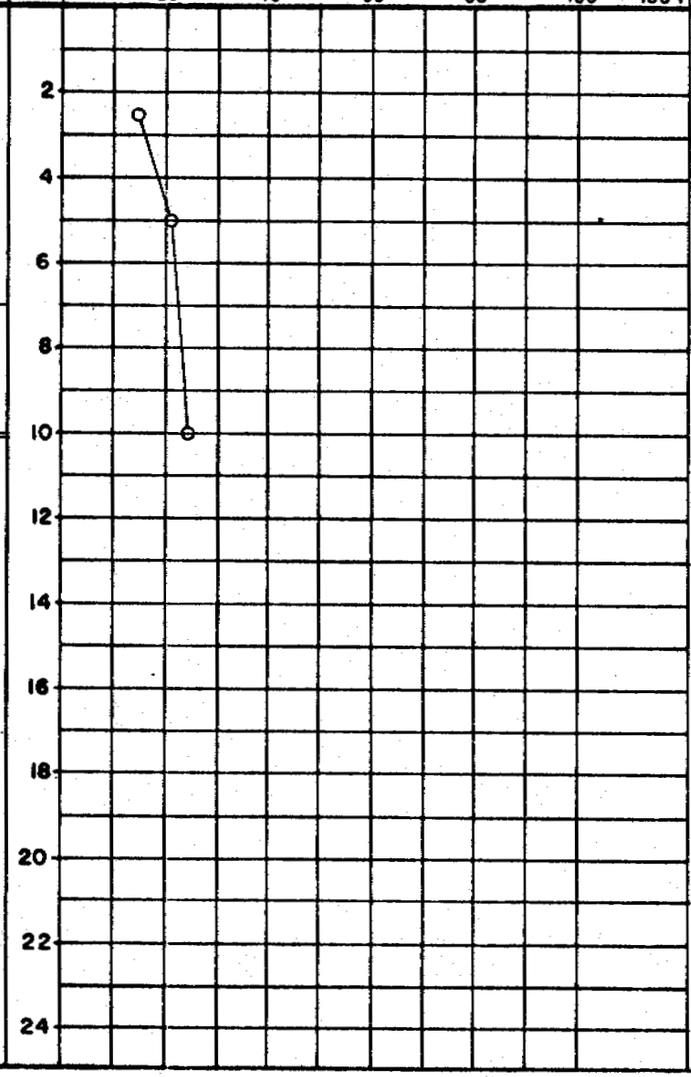
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Good to S. | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
656	C	4

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SP	SAND - Med. Reddish Brown - Fine - Dense - Some Silt	F	NF to NB
4								
6	2							
8					ML	SILT - Grey - Clayey - Med. Plasticity - With Sand Lenses		NB
10	3							
12						END OF HOLE 10'		
14								
16								
18								
20								
22								
24								



DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
2						
4						
6						
8						
10						

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

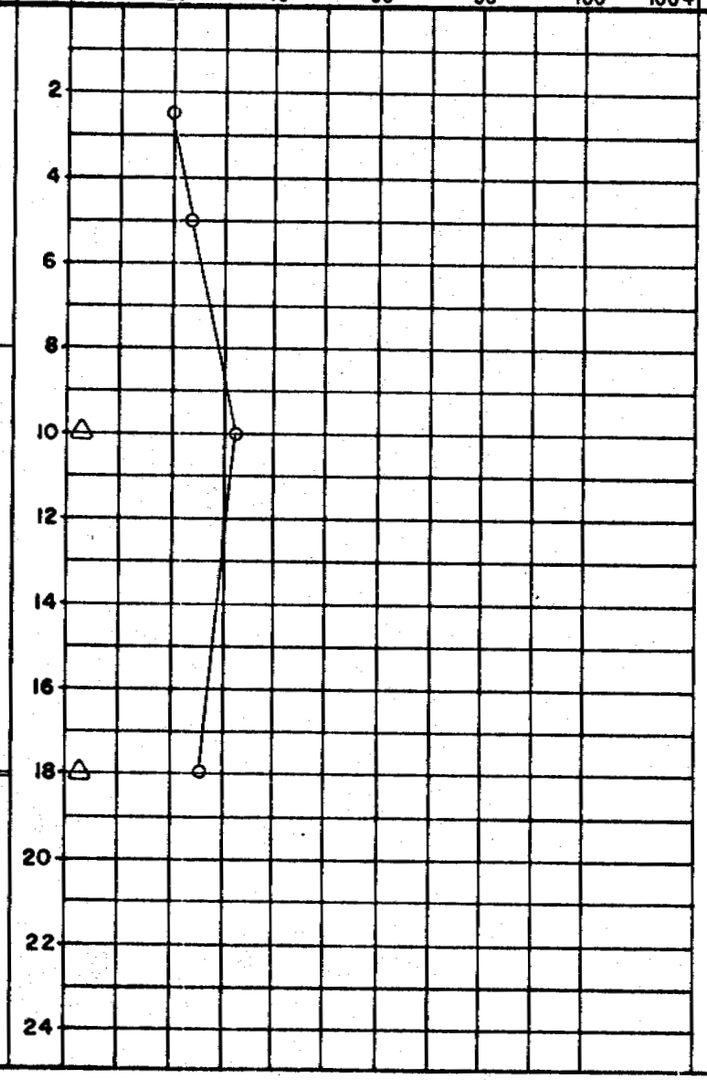
DWN: ALB | FIELD ENG: NRM | DATE DRILLED 20/2/73 | AIRPHOTO NO: A22763 - 79 | CHAINAGE: 3624 + 00 (EST.) | OFFSET

CKD GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Fair to N. | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
656	C	5

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SP to SM	SAND - Med. Brown - Fine - Dense - Some Silt		NF to NB
4	2					- Reddish Brown		
6						- Med. Brown - Silty		
8								
10	3				ML	SILT - Grey - Clayey - Low Plasticity	F	V = 0-5%
12								
14								
16								
18	4							
						END OF HOLE 18'		
20								
22								
24								



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

REMARKS

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB	FIELD ENG: NRM	DATE DRILLED 20/2/73	AIRPHOTO NO: A22763 - 79	CHAINAGE: 3628 + 30	OFFSET
CKD GRG	TECH: JK	RIG: Texoma	SURFACE DRAINAGE: Fair to E.	VEGETATION: Black Spruce	ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
656	C	6

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				OL to ML	SILT - Black - Organic - Some Fine Sand		V 20-25%
4	2				SP	SAND - Med. Brown - Fine - Dense - Trace of Silt to Some Silt	F	NF to NB
8						- Trace of Clay		
10	3							
						END OF HOLE 10'		

○ = 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.)
	(3)		97			

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

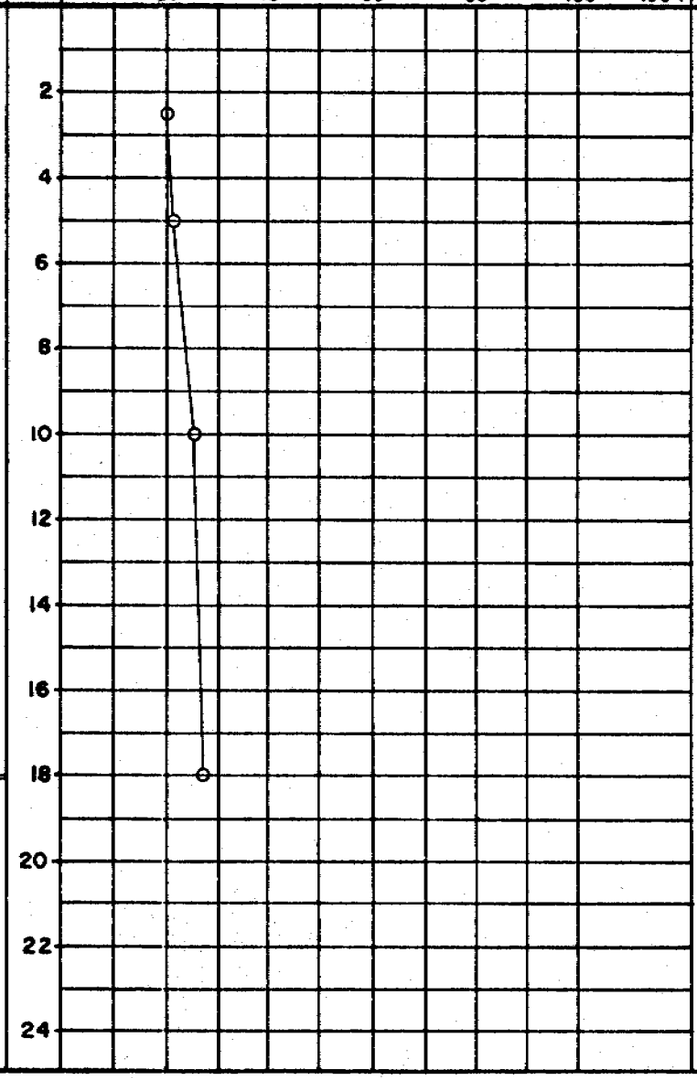
DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 20/2/7 | AIRPHOTO NO: A22763 - 79 | CHAINAGE: 3636 + 30 | OFFSET

CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
656	C	7

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SP	SAND - Med. Brown - Dense, Fine - Trace of Silt		NF to NB
4	2							
6								
8						- Greyish Brown - Silty		
10	3				SM		F	
12								
14								
16								
18	4							
20						END OF HOLE 18'		
22								
24								



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

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

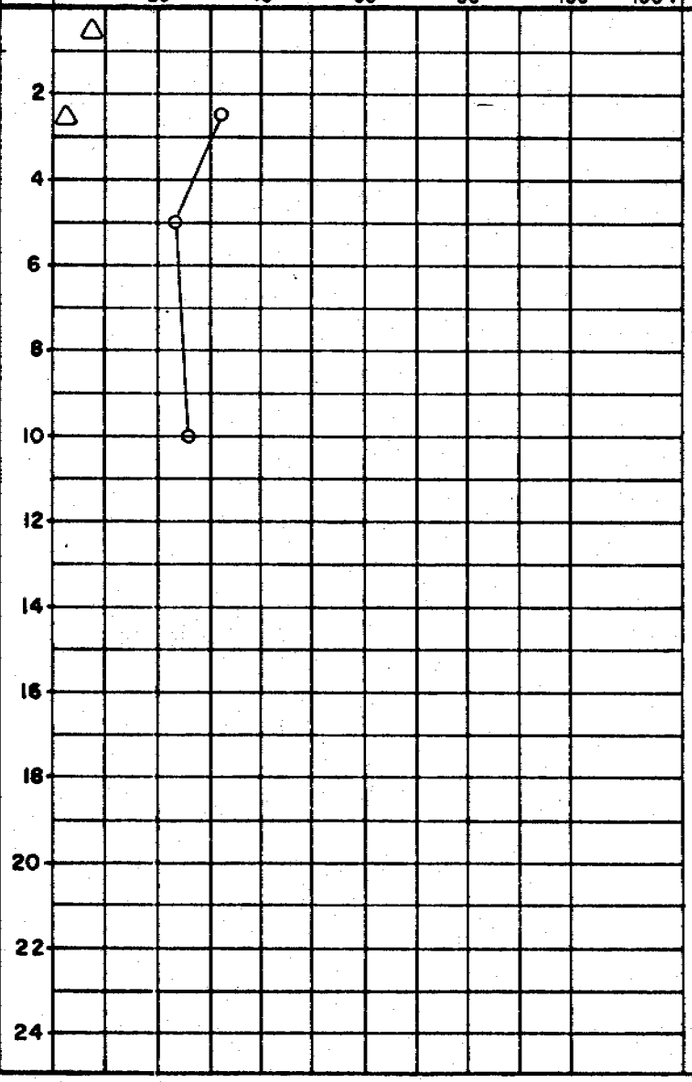
DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 20/2/73 | AIRPHOTO NO: A22763 - 79 | CHAINAGE: 3651 + 60 | OFFSET:

CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
656	C	8

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					PT	PEAT - Black		V 5-10%
2	1				SM	SAND - Med. Brown - Fine, Dense - Silty - Trace of Clay - Greyish - Trace of Silt	F	V 0 - 5% NB to NF
4	2							
6								
8					SP			
10	3					END OF HOLE 10'		
12								
14								
16								
18								
20								
22								
24								



GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
7	26	67	-		
(10)		90			

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

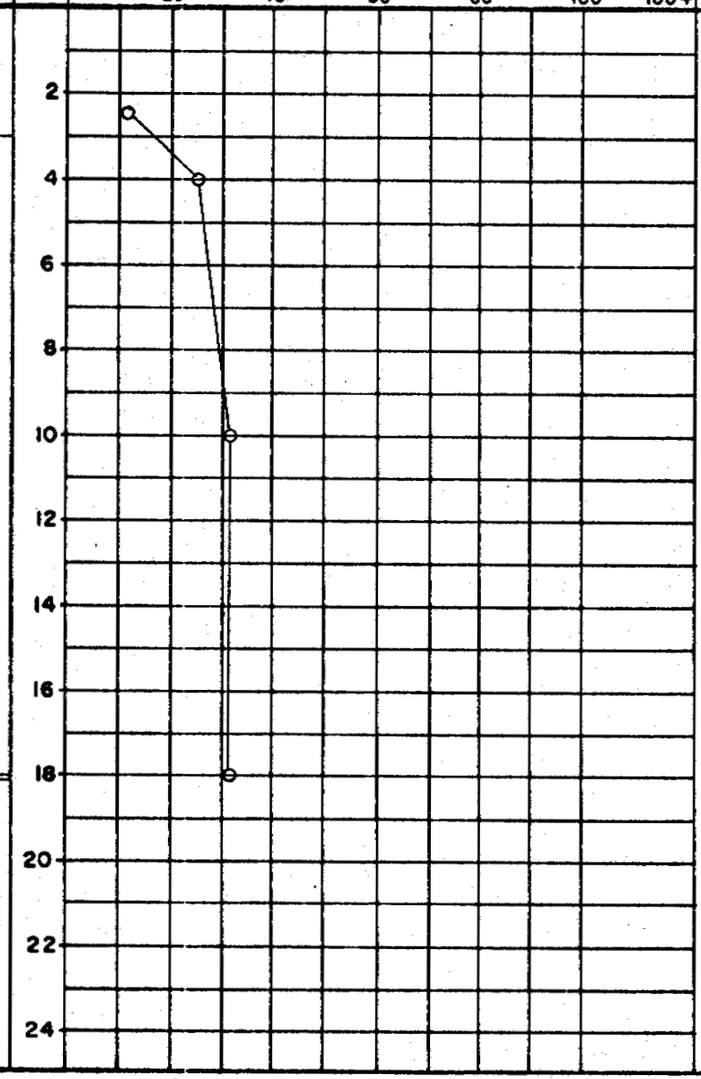
DWN: ALB | FIELD ENG: NRM | DATE DRILLED 19/2/73 | AIRPHOTO NO: A22763 - 79 | CHAINAGE: 3666 + 60 | OFFSET

CKD GRG | TECH JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
655	C	1

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SM	SAND - Med. Brown - Dense, Fine - Silty	F	NF to NB
4	2							
6								
8								NB
10	3							
12								
14								
16								
18	4					END OF HOLE 18'		
20								
22								
24								



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

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

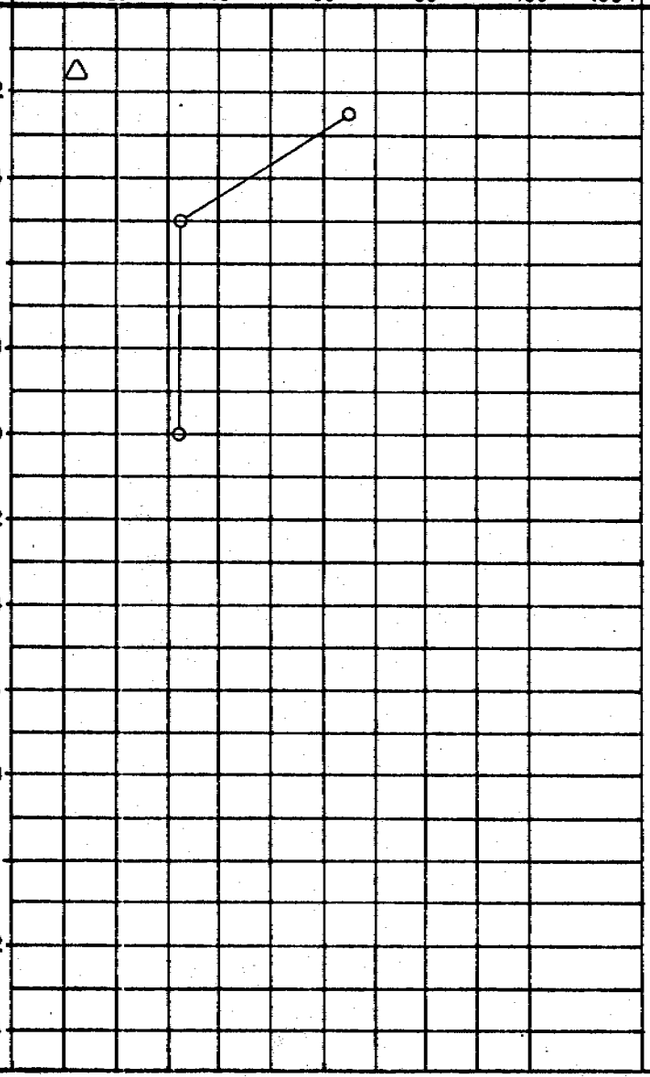
DWN: ALB | FIELD ENG: NRM | DATE DRILLED 19/2/73 | AIRPHOTO NO: A22763 - 79 | CHAINAGE: 3673 + 80 | OFFSET

CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
655	C	2

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				PT to OL	PEAT - Black - Organic Silt		V 10 - 15%
4	2				SM	SAND - Med. Brown - Silty - Dense, Fine	F	NB
6								
8								
10	3					END OF HOLE 10'		
12								
14								
16								
18								
20								
22								
24								



GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
CLAY	SILT	SAND	GRAVEL		
%	%	%	%		
	(25)	75	-		

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 9/2/73 | AIRPHOTO NO: A22763 - 79 | CHAINAGE: 3682 + 10 | OFFSET

CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce | ELEV:

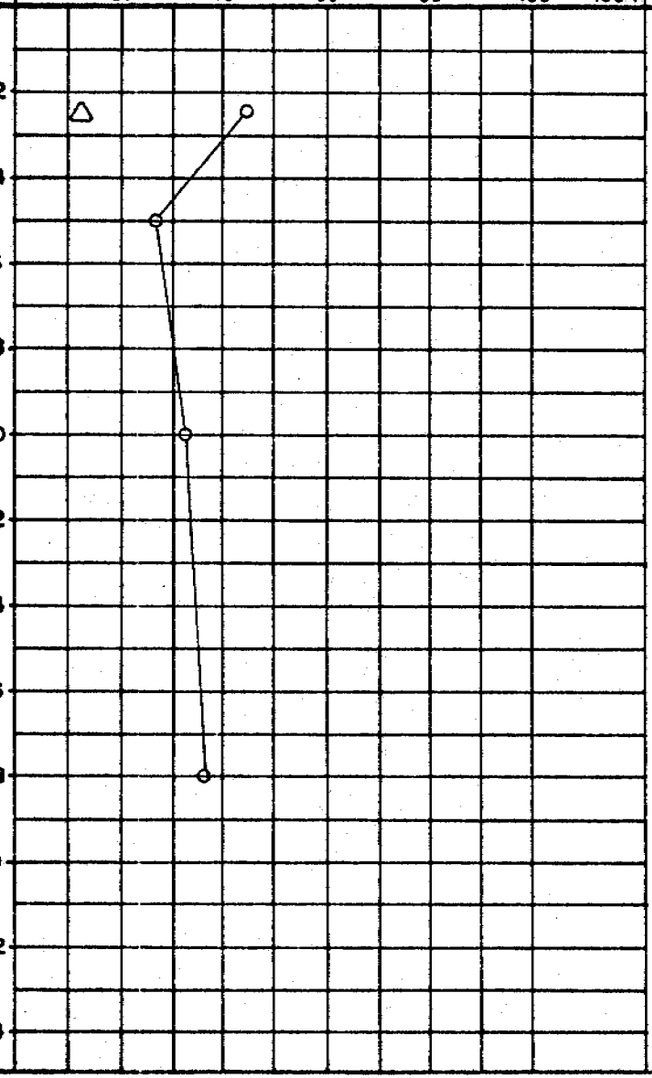
TEST HOLE

MILE	B,C,S	NUMBER
655	C	3

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				PT	PEAT - Black - Silty		V - 10-15%
4	2				SM	SAND - Med. Brown - Dense, Fine - Silty		
8							F	NF to NB
10	3					- Greyish		
18	4					END OF HOLE 18'		

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

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



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

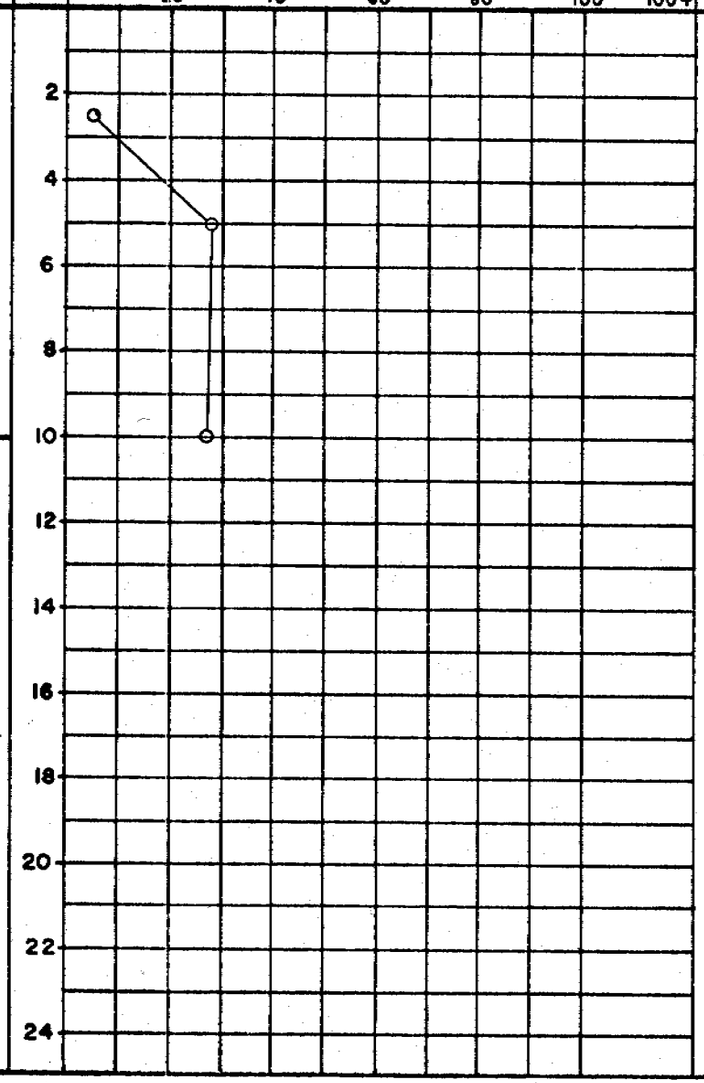
DWN: ALB | FIELD ENG: NRM | DATE DRILLED 19/2/78 | AIRPHOTO NO: A22763 - 79 | CHAINAGE: 3688 + 10 | OFFSET

CKD GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Fair to S. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
655	C	4

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SP	SAND - Med. Brown - Fine, some silt - Dense		NF to NB
4	2				SM	- Silty	F	
6								
8								
10	3					END OF HOLE 10'		
12								
14								
16								
18								
20								
22								
24								



GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
CLAY %	SILT %	SAND %	GRAVEL %		
(15)		85			

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 19/2/73 | AIRPHOTO NO: A22763 - 79 | CHAINAGE: 3694 + 80 | OFFSET

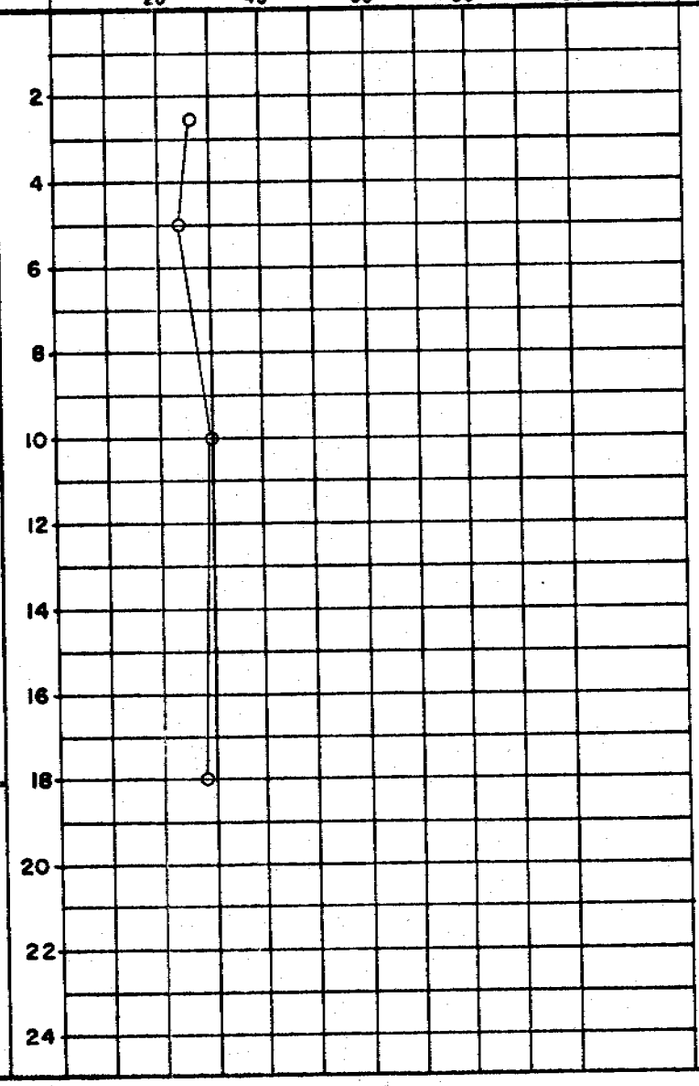
CKD GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Fair to N. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
655	C	5

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SM	SAND - Med. Brown - Fine - Dense - Silty	F	NF to NB
4								
6	2							
8								
10	3							
12						- Grey		
14								
16								
18	4					END OF HOLE 18'		
20								
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

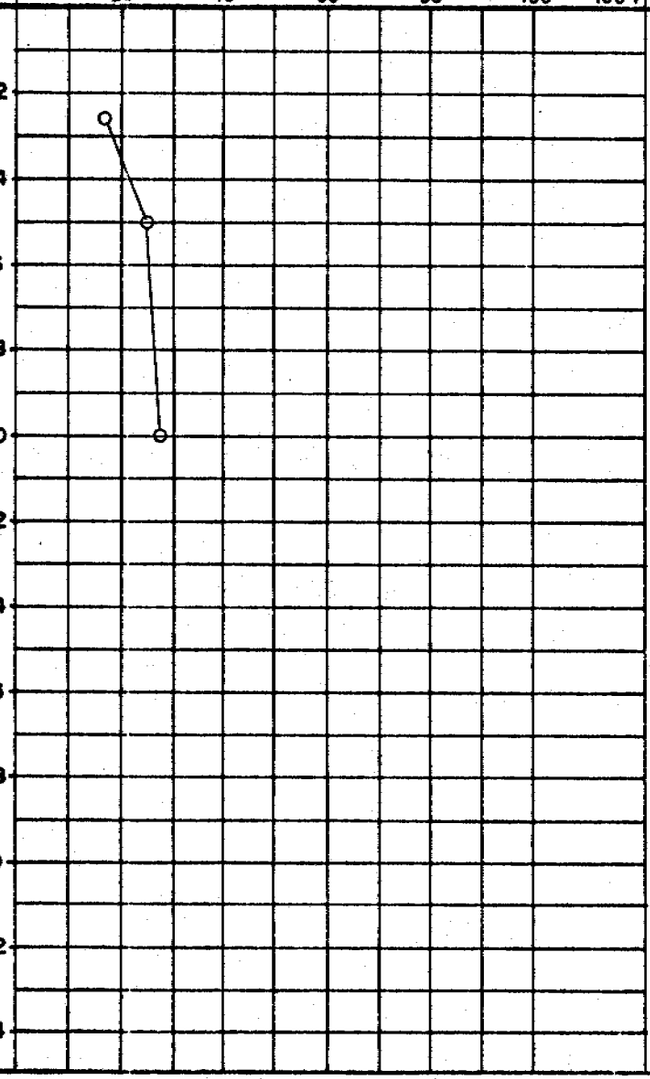
DWN: ALB | FIELD ENG: NRM | DATE DRILLED 19/2/73 | AIRPHOTO NO: A22763 - 79 | CHAINAGE: 3702 + 10 | OFFSET

CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
655	C	6

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SP	SAND - Med. Brown - Fine - Dense - Some Silt		
4								
6	2						F	NB
8					SM	- Grey - Silty		
10	3							
12						END OF HOLE 10'		
14								
16								
18								
20								
22								
24								



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

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 19/2/73 | AIRPHOTO NO: A22763 - 79 | CHAINAGE: 3708 + 40 | OFFSET

CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Fair to S. | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
655	C	7

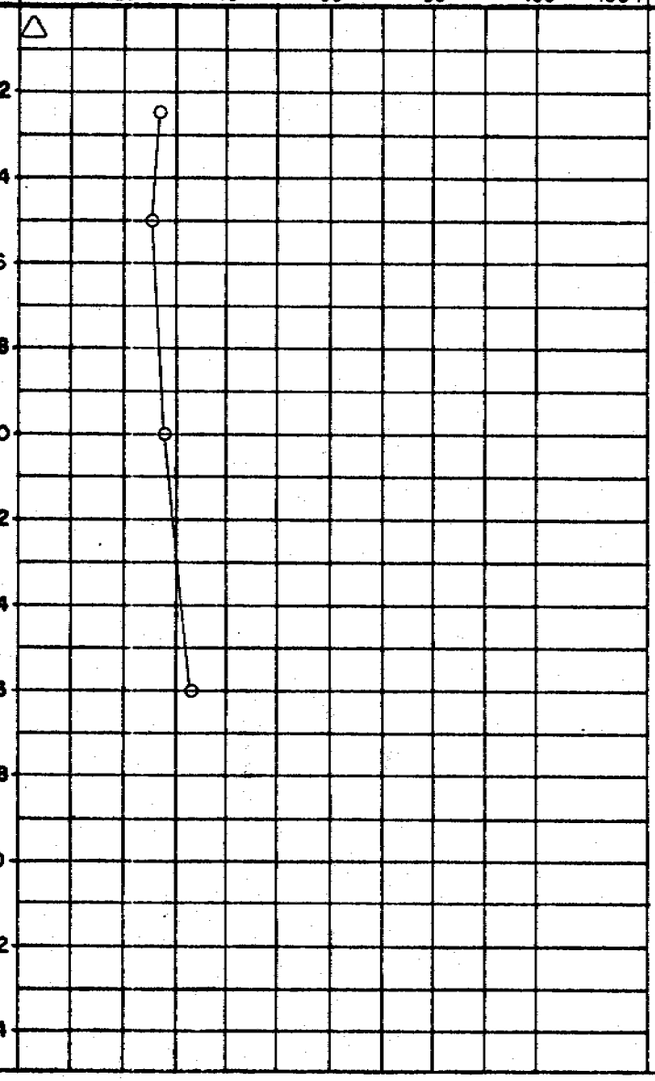
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					PT	PEAT - Black	F	V 0-5%
2	1				SP	SAND - Med. Brown - Fine - Dense - Some Silt		NF to NB
4								
6	2							
8								
10	3				SM	- Silty		
12								
14								
16						- Grey		
18	4					END OF HOLE 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+



GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 19/2/78 | AIRPHOTO NO: A22763 - 79 | CHAINAGE: 3716 + 00 | OFFSET

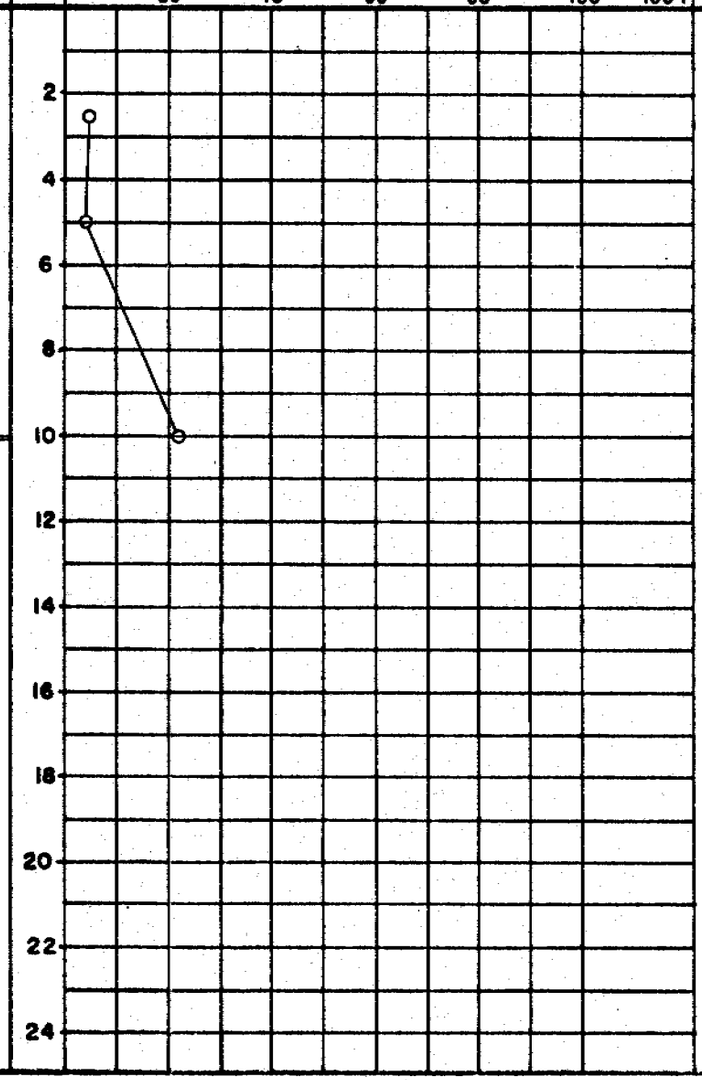
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Top of Hill | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
654	C	1

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SP	SAND - Med. Brown - Fine - Loose - Trace of Silt	F	NB
4								
6	2							
8					SM	- Silty		
10	3					END OF HOLE 10'		
12								
14								
16								
18								
20								
22								
24								



GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
	(8)	92			

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 19/2/73 | AIRPHOTO NO: A22763 - 79 | CHAINAGE: 3724 + 50 | OFFSET

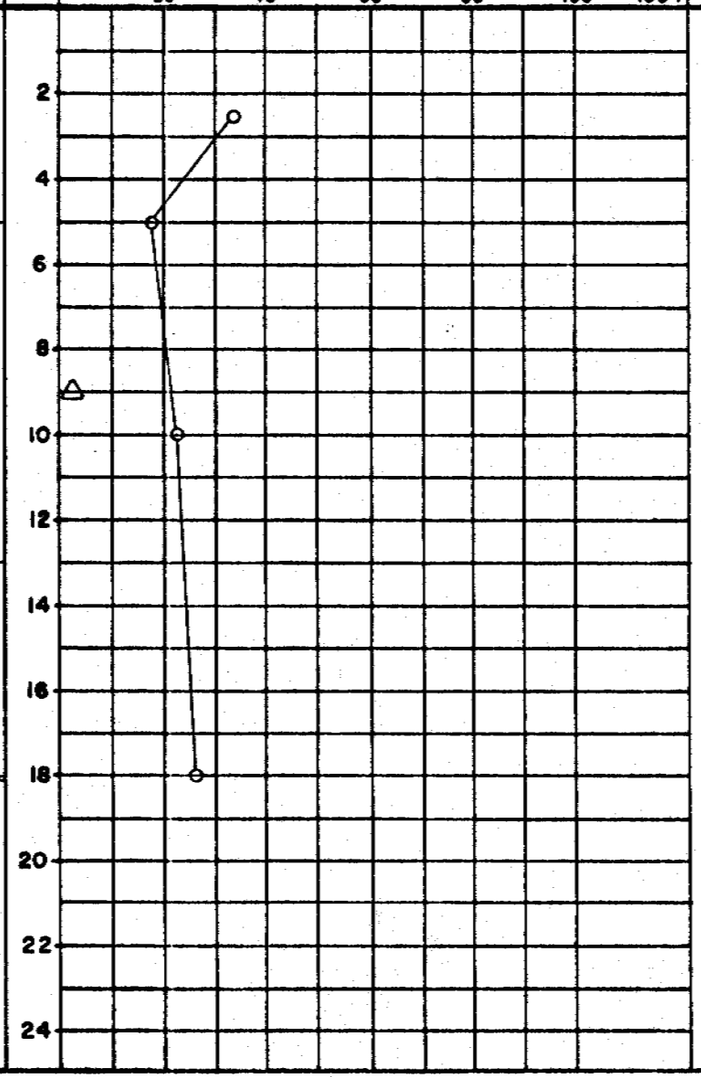
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
654	C	2

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SM	SAND - Med. Brown - Silty - Dense - Trace of Organics		NB
4	2					- Coarse		
6					CL	CLAY - Dk. Brown - Low Plasticity - Pebbles - Silty	F	V 0 - 5%
8								
10	3							
12								
14								
16						- Grey		V 5 - 10%
18	4					END OF HOLE 18'		
20								
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 19/2/73 | AIRPHOTO NO: A22763 - 78 | CHAINAGE: 3731 + 30 | OFFSET

CKD GRG | TECH: DY | RIG: Mayhew | SURFACE DRAINAGE: Well Drained | VEGETATION: Black Spruce | ELEV:

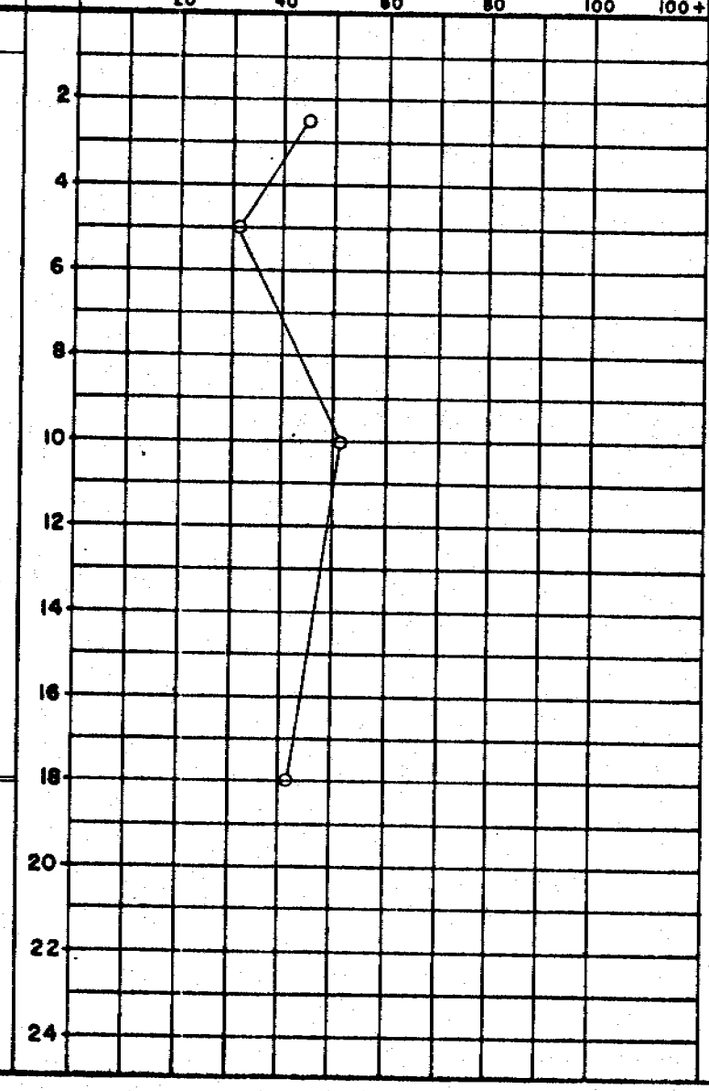
TEST HOLE		
MILE	B,C,S	NUMBER
654	C	3

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				OL to ML	SILT - Dk. Brown - Sandy - Organic	F	NB
4	2				SM	SAND - Dk. Brown - Some Silt - Med. to Fine Sand - Trace of Gravel - Wet	U	Unfrozen
10	3							
18	4							
						END OF HOLE 18'		

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

PLASTIC LIMIT — LIQUID LIMIT



GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
CLAY %	SILT %	SAND %	GRAVEL %		
(18)		89	3		

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

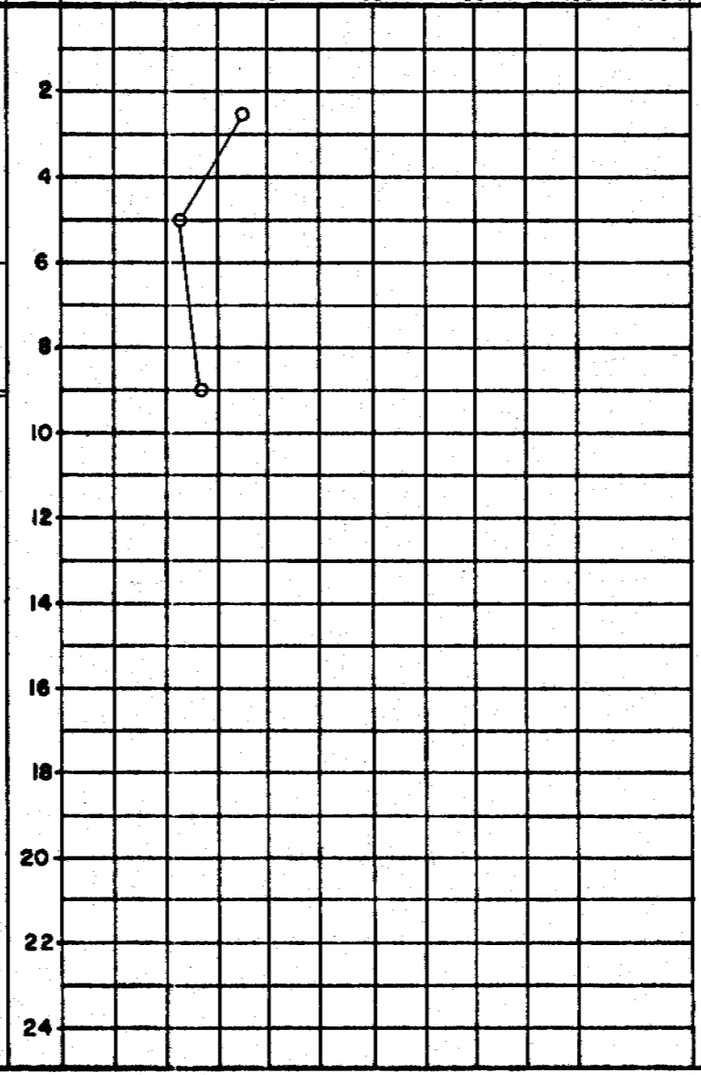
DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 19/2/73 | AIRPHOTO NO: A22763 - 78 | CHAINAGE: 3738 + 30 | OFFSET

CKD: GRG | TECH: DY | RIG: Mayhew | SURFACE DRAINAGE: Well Drained | VEGETATION: Black Spruce, Tamarack | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
654	C	4

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					PT	PEAT - Dk. Brown, Fibrous		
2	1				SM	SAND - Lt. Brown - Silty - Fine - Trace of Clay	F	NB
4								
6	2				CL	CLAY - Dk. Brown - Silty - Low Plasticity	U	Unfrozen
8	3							
10						END OF HOLE 9'		
12								
14								
16								
18								
20								
22								
24								



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

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

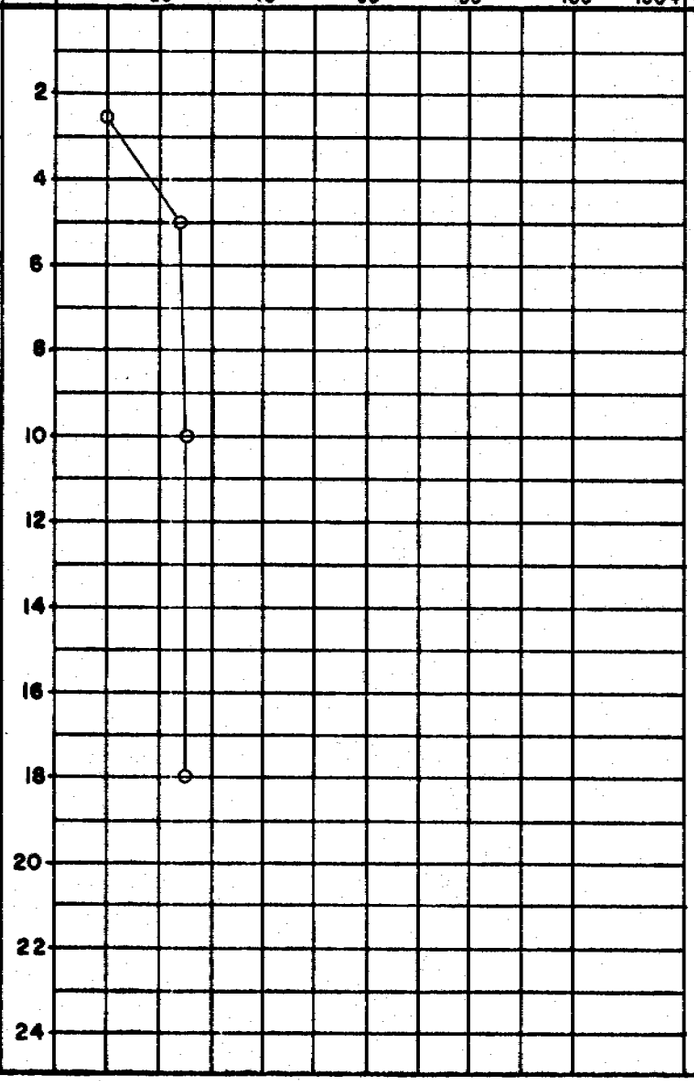
DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB	FIELD ENG: NRM	DATE DRILLED 19/2/73	AIRPHOTO NO: A22763 - 78	CHAINAGE: 3746 + 05	OFFSET
CKD: GRG	TECH: DY	RIG: Mayhew	SURFACE DRAINAGE: Well Drained	VEGETATION: Black Spruce	ELEV:

TEST HOLE		
MILE	B,C,S	NUMBER
654	C	5

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SM	SAND - Lt. Brown - Silty - Fine		NF
4	2				SM	- Med. Brown - Silty - Fine	F	NB
10	3				CL	CLAY - Grey, Silty - Low Plasticity - Trace of Fine Sand		
18	4				CL		U	Unfrozen
						END OF HOLE 18'		



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB	FIELD ENG: NRM	DATE DRILLED 19/2/78	AIRPHOTO NO: A22763 - 78	CHAINAGE: 3755 + 65	OFFSET	TEST HOLE
CKD: GRG	TECH: DY	RIG: Mayhew	SURFACE DRAINAGE: Well Drained	VEGETATION: Black Spruce, Birch	ELEV:	MILE: 654 / B,C,S: C / NUMBER: 6

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SP to SM	SAND - Lt. Brown - Fine, trace of silt - Med. Brown - Silty	F	NF NB
4	2							
6						CLAY - Grey, Silty - Low Plasticity		V 25 - 30%
8								
10	3				CL			NB
12								
14								
16								
18	4							
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				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
CLAY %	SILT %	SAND %	GRAVEL %		
(8)		92			

REMARKS

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

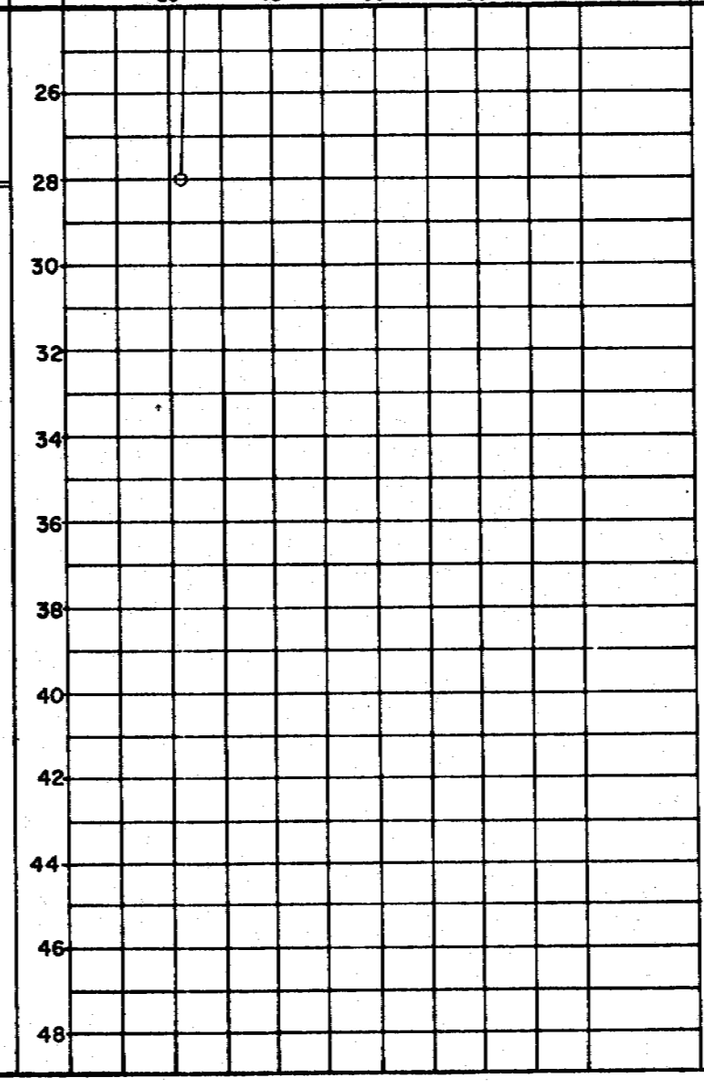
DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB	FIELD ENG: NRM	DATE DRILLED: 19/2/73	AIRPHOTO NO: A22763 - 78	CHAINAGE: 3755 + 65	OFFSET
CKD: GRG	TECH: DY	RIG: Mayhew	SURFACE DRAINAGE: Well Drained	VEGETATION: Black Spruce, Birch	ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
654	C	6

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
26					CL	CLAY - Grey - Silty - Low Plasticity	F	NB
28	5					END OF HOLE 28'		
30								
32								
34								
36								
38								
40								
42								
44								
46								
48								



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 19/2/73 | AIRPHOTO NO: A22763 - 78 | CHAINAGE: 3766 + 60 | OFFSET

CKD: GRG | TECH: DY | RIG: Mayhew | SURFACE DRAINAGE: Well Drained | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
654	C	7

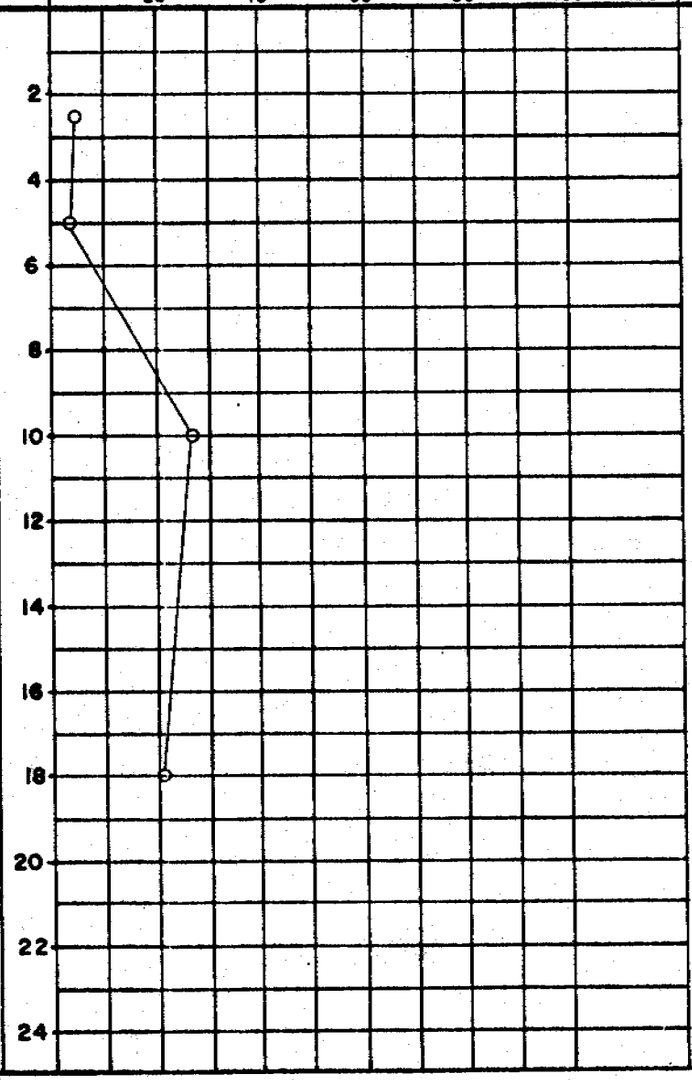
REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SP	SAND - Lt. Brown (fine) - Some Silt	F	NF
4	2					- Med. Brown - Some Silt		
6								
8								
10	3					- Grey Brown - Fine		
12								
14								
16								
18	4					END 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+



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

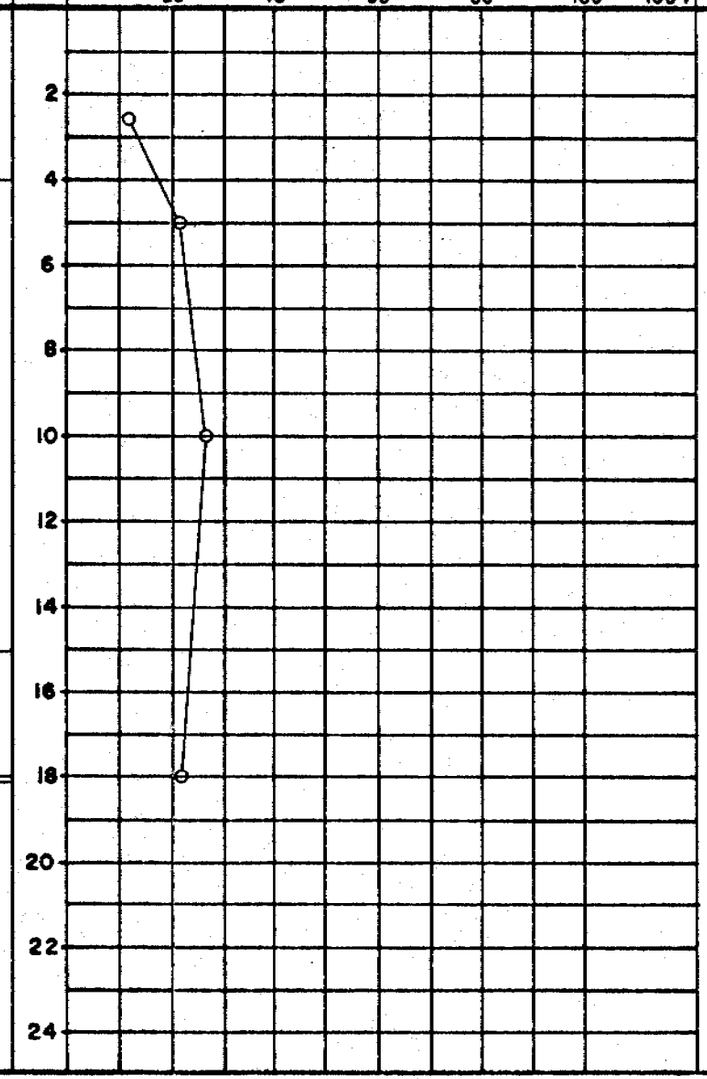
DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 19/2/73 | AIRPHOTO NO: A22763 - 77 | CHAINAGE: 3776 + 50 | OFFSET

CKD: GRG | TECH: DY | RIG: Mayhew | SURFACE DRAINAGE: Well Drained | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
653	C	1

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SM	SAND - Med. Brown - Silty	F	NF
4								
6	2							NB
8								
10	3							
12								
14								
16					ML	SILT - Grey, Clayey - Low Plasticity - Trace of Fine Sand	U	Unfrozen
18	4							
20						END OF HOLE 18'		
22								
24								



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

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 19/2/73 | AIRPHOTO NO: A22763 - 77 | CHAINAGE: 3785 + 80 | OFFSET

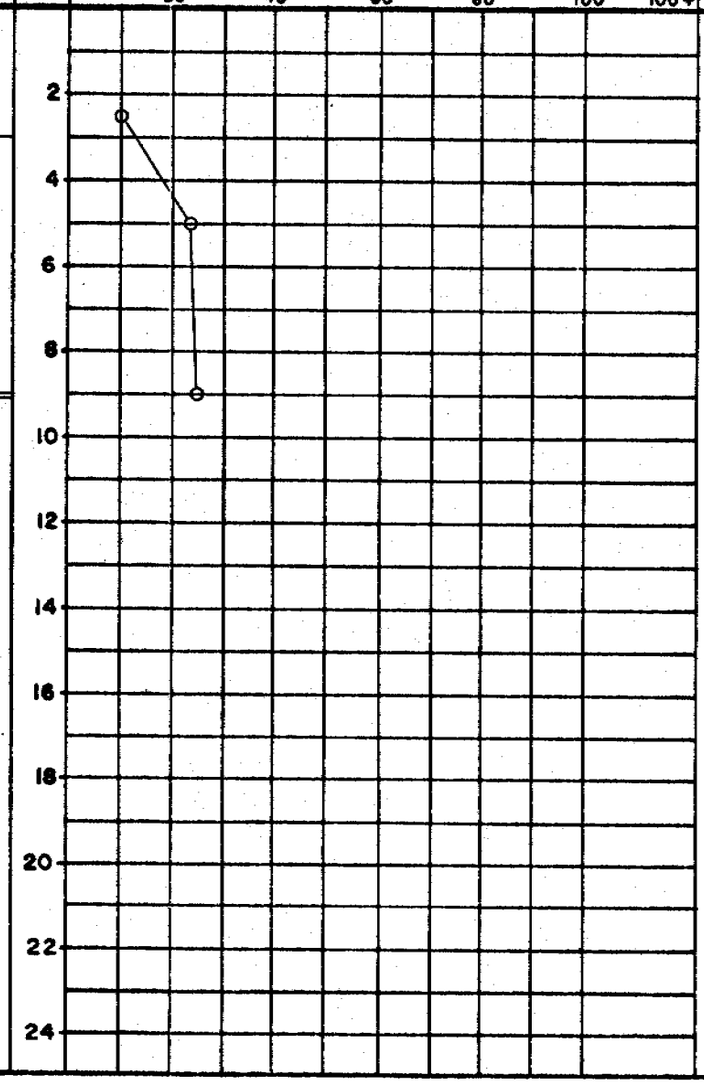
CKD: GRG | TECH: DY | RIG: Mayhew | SURFACE DRAINAGE: Well Drained | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
653	C	2

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SP	SAND - Reddish Brown - Some Silt		NF
4							F	NB
6	2				SM	- Med. Brown - Some silt - Non-Plastic - Trace of Clay		
8	3							
10						END OF HOLE 9'		
12								
14								
16								
18								
20								
22								
24								



GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
3	14	83	-		

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

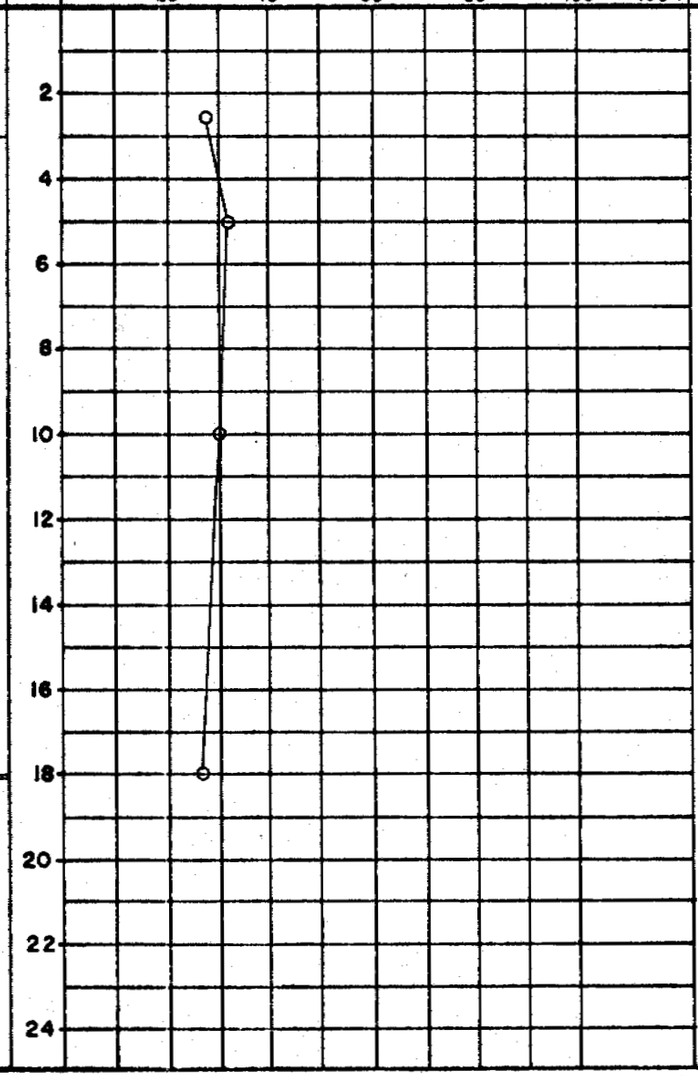
DWN: ALB | FIELD ENG: NRM | DATE DRILLED 19/2/73 | AIRPHOTO NO: A22763 - 77 | CHAINAGE: 3795 + 10 | OFFSET

CKD: GRG | TECH: DY | RIG: Mayhew | SURFACE DRAINAGE: Well Drained | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
653	C	3

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0								
2	1				SM	SAND - Lt. Brown - Silty - Fine		NF
4								
6	2				ML	SILT - Med. Brown - Sandy - Some Clay	F	NB
8								
10	3							
12								
14								
16								
18	4							
						END OF HOLE 18'		
20								
22								
24								



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

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 19/2/73 | AIRPHOTO NO: A22763 - 76 | CHAINAGE: 3805 + 10 | OFFSET

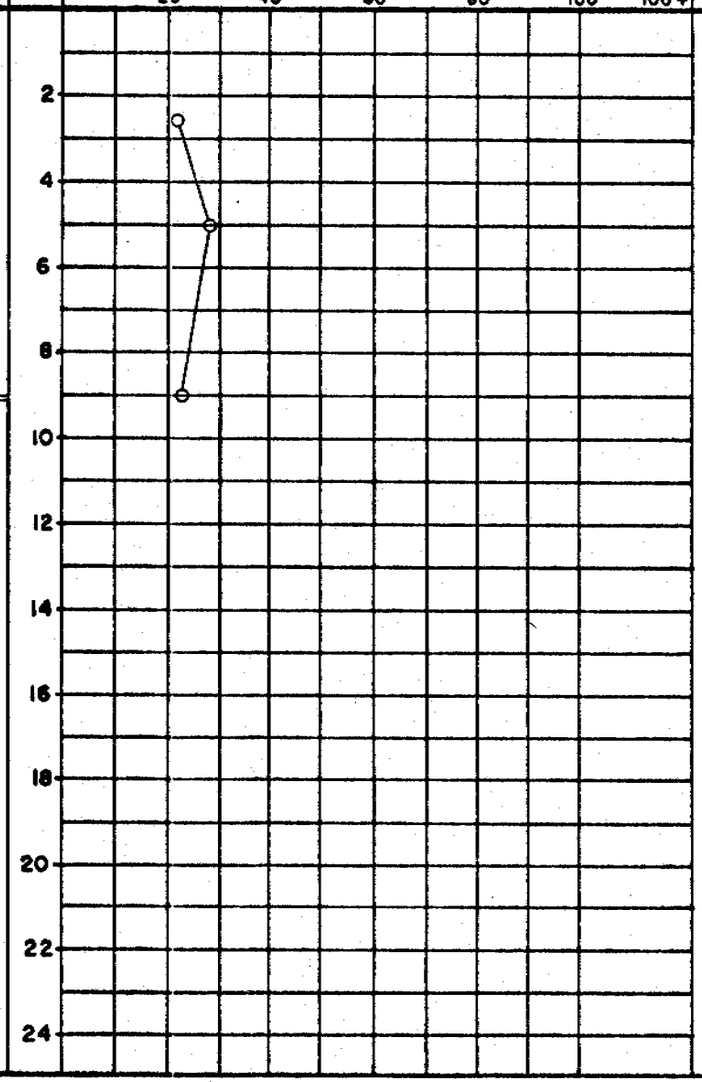
CKD: GRG | TECH: DY | RIG: Mayhew | SURFACE DRAINAGE: Well Drained | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
653	C	4

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SP	SAND - Med. Brown - Some Silt and Clay - Fine	F	NB
4	2							
6								
8	3							
10						END OF HOLE 9'		
12								
14								
16								
18								
20								
22								
24								



GRAIN-SIZE ANALYSIS

DEPTH (FEET)	CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
2	(13)		87	-		

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

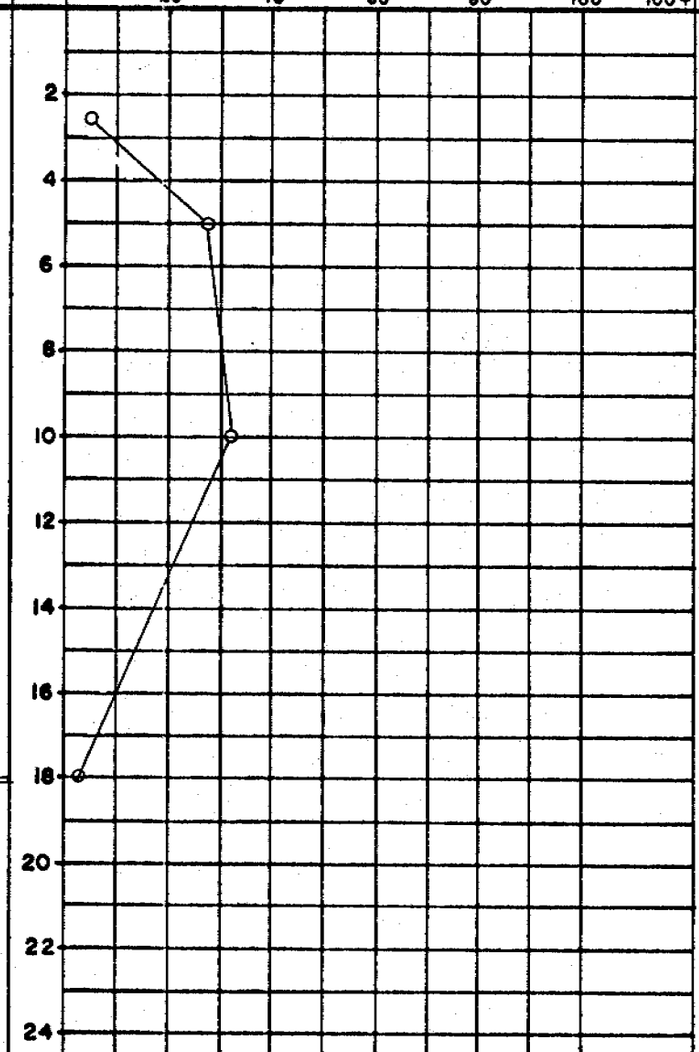
DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 21/2/73 | AIRPHOTO NO: A22763 - 77 | CHAINAGE: 3811 + 50 | OFFSET:
CKD: GRG | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Fair to | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
653	C	5

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SP	SAND - Reddish Brown - Fine - Dense - Some Silt		
4	2					- Greyish Brown - Silty		NF to NB
6								
8					SM		F	
10	3							
12								
14								
16					GW	GRAVEL - Med. Brown Sandy, Well Graded		
18	4					END OF HOLE 18'		
20								
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 21/2/73 | AIRPHOTO NO: A22763 - 77 | CHAINAGE: 3818 +45 | OFFSET

CKD: NRM | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Fair to N | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
653	C	6

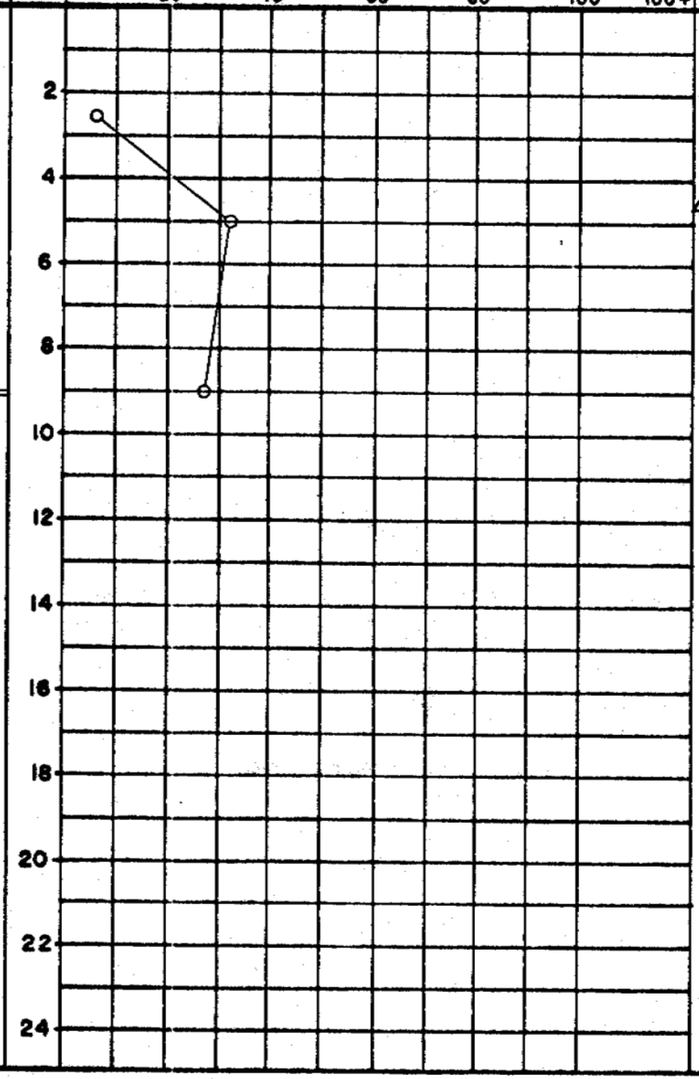
REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SP	SAND - Reddish Brown - Fine - Dense - Some Silt	F	NF to NB
4	2				ML	SILT - Greyish Brown - Sandy - Trace of Clay		
6								
8	3							
10						END OF HOLE 9'		
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+



GRAIN-SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
	4	63	33	-		

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

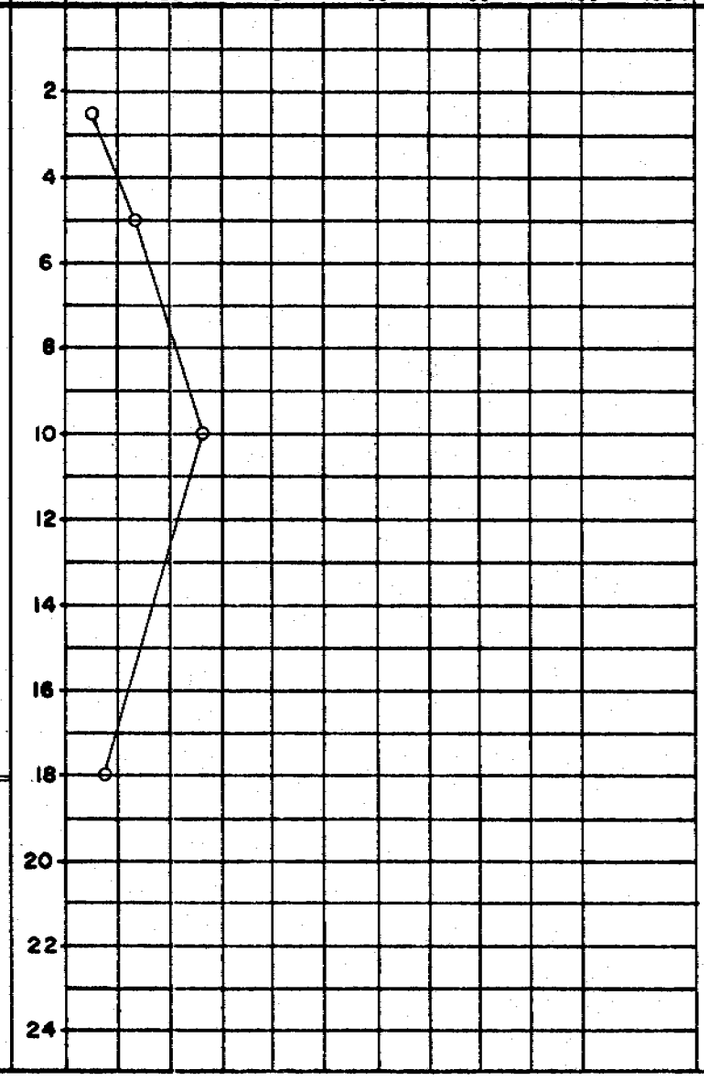
DWN: ALB | FIELD ENG: NRM | DATE DRILLED 21/2/73 | AIRPHOTO NO: A22763 - 77 | CHAINAGE: 3824 + 50 | OFFSET

CKD: GRG | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Fair to S. | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
653	C	7

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SP	SAND - Reddish Brown - Fine to Med. - Dense - Clean		
4								
6	2					- Greyish - Silty		NF to NB
8					SM		F	
10	3							
12								
14					GP	GRAVEL - Med. Brown - Sandy - Dense - Poorly Graded		
16								
18	4					END OF HOLE 18'		
20								
22								
24								



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

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 21/2/73 | AIRPHOTO NO: A22763 - 77 | CHAINAGE: 3832 + 80 | OFFSET

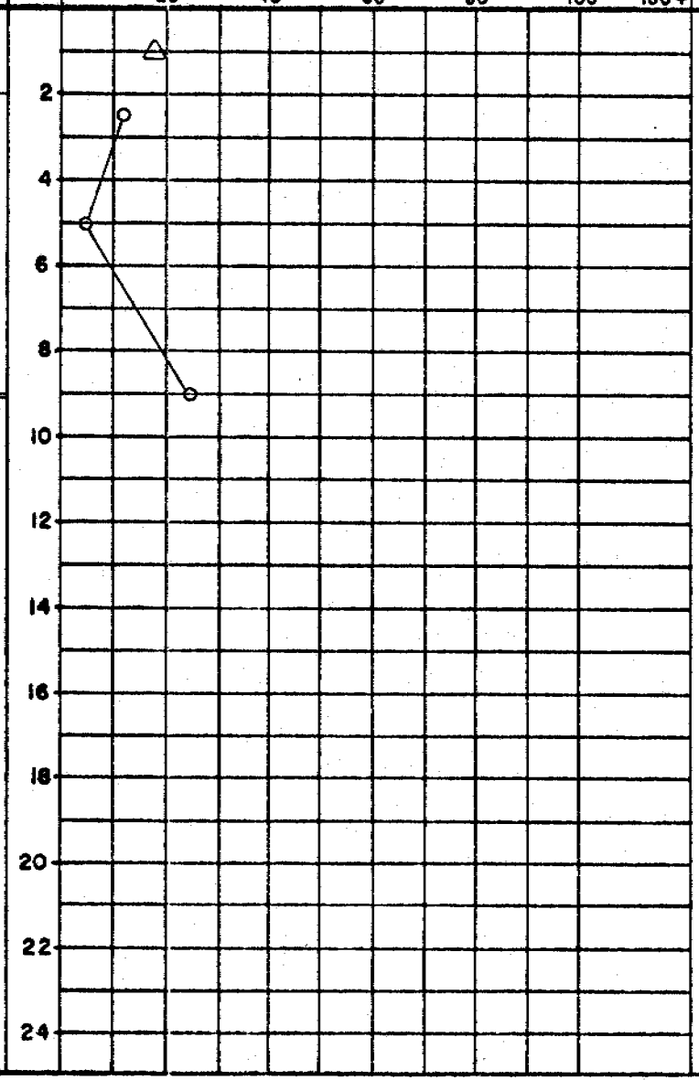
CKD: GRG | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
652	C	1

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					PT	PEAT - Black - Fibrous		V 15 - 20%
2	1				SP	SAND - Reddish Brown - Clean - Dense - Greyish	F	NF to NB
4								
6	2							
8					SM	- Silty		
10	3					END OF HOLE 9'		
12								
14								
16								
18								
20								
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

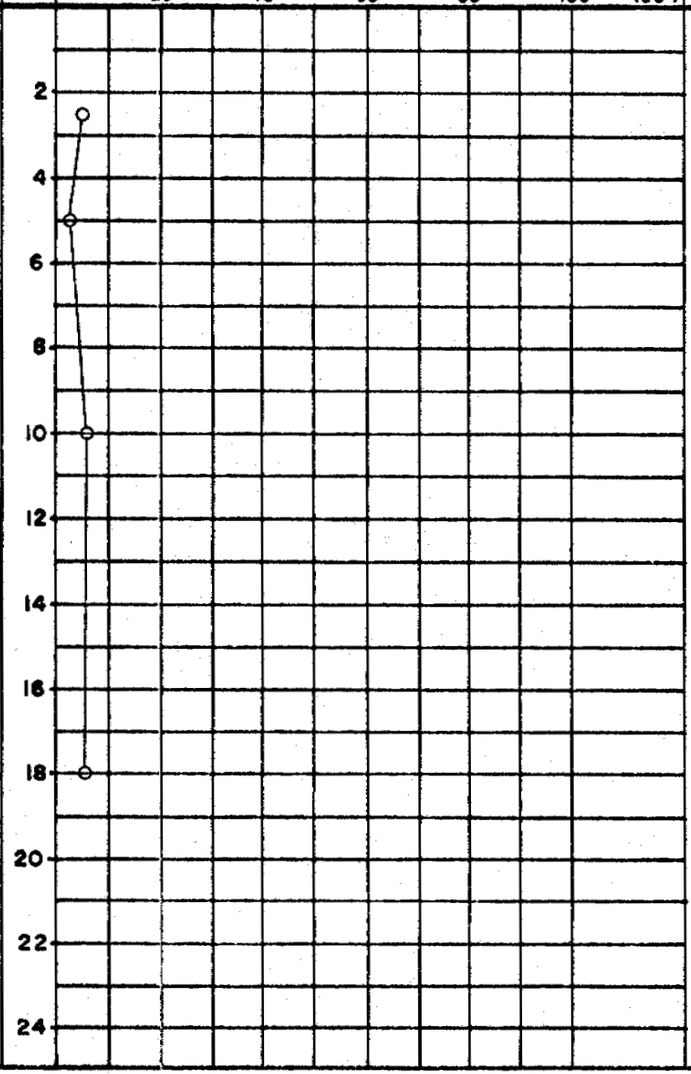
DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 21/2/73 | AIRPHOTO NO: A22763 - 76 | CHAINAGE: 3838 + 60 | OFFSET

CKD: GRG | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
652	C	2

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SW	SAND - Reddish Brown - Coarse - Well Graded		
4								
6	2				SM	- Greyish - Fine - Silty		NF to NB
8						- Clean - Uniform	F	
10	3				SP			
12								
14								
16								
18	4							
						END OF HOLE 18'		
20								
22								
24								



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

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 21/2/73 | AIRPHOTO NO: A22763 - 76 | CHAINAGE: 2842 + 80 | OFFSET

CKD: GRG | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
652	C	3

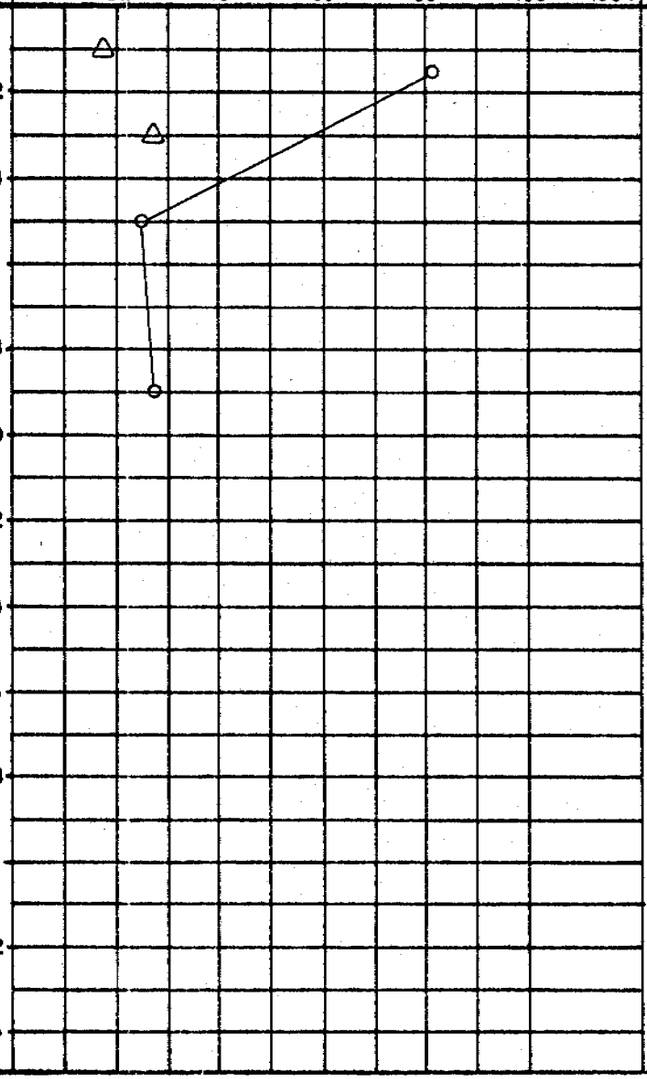
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				PT	PEAT - Black - Fibrous		V 15 - 20%
4					ML	SILT - Med. Brown - Low Plasticity		V 25-30%
6	2				SP	SAND - Greyish Brown - Med. to Fine - Trace of silt	F	NB
8	3							
10						END OF HOLE 9'		
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+



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

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 19/2/73 | AIRPHOTO NO: 423003-29 | CHAINAGE: 3848 + 80 (EST.) | OFFSET

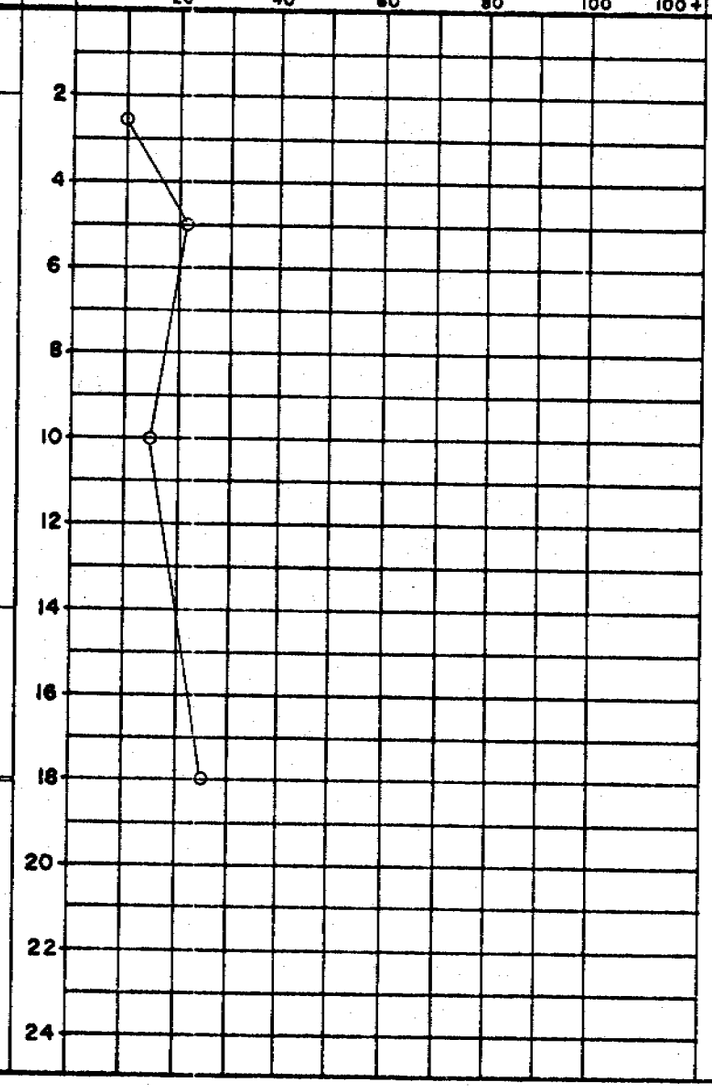
CKD: GRG | TECH: DY | RIG: Mayhew | SURFACE DRAINAGE: Well Drained | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
652	C	4

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SM	SAND - Lt. Brown - Silty - Medium Brown - Silty - Some Gravel	F	NF
4	2							NB
6								
8								
10	3				ML	SILT - Med. Brown - Some Clay - Sandy		
12								
14					SP	SAND - Med. Brown - Med. Grained	U	Unfrozen
16								
18	4					END OF HOLE 18'		
20								
22								
24								



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						

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

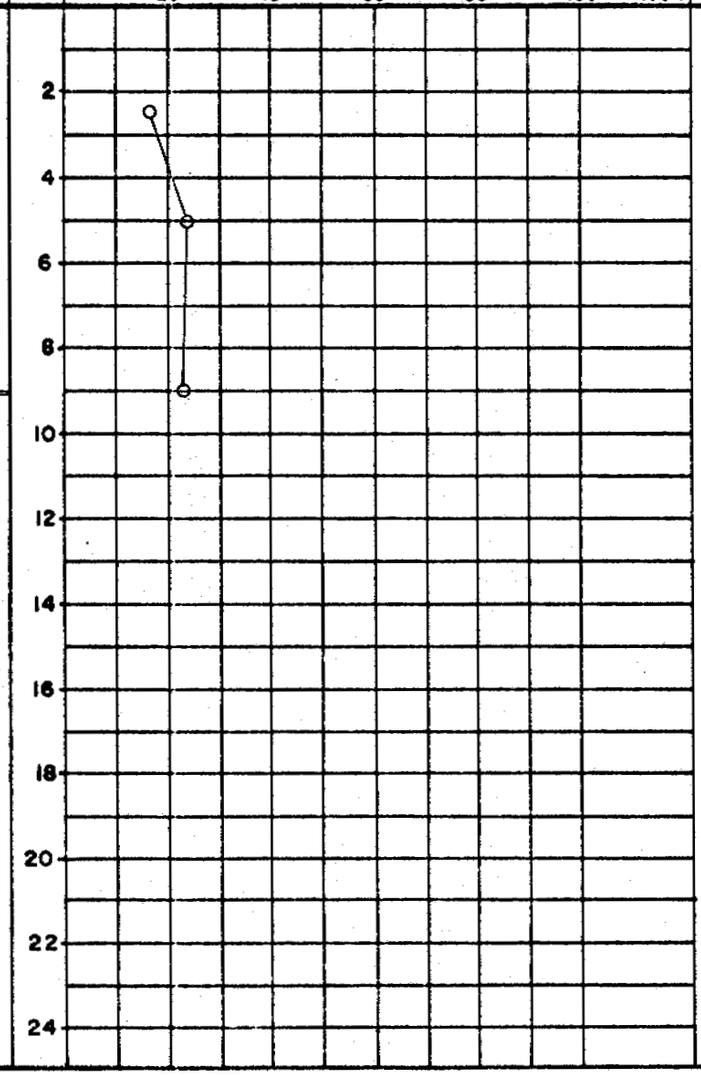
DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 19/2/73 | AIRPHOTO NO: A23003-29 | CHAINAGE: 3854 + 90 | OFFSET

CKD: GRG | TECH: DY | RIG: Mayhew | SURFACE DRAINAGE: Well Drained | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
652	C	5

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SM	SAND - Med. Brown - Silty - Medium Grained	F	NB
4	2							
6								
8	3							
10						END OF HOLE 9'		
12								
14								
16								
18								
20								
22								
24								



GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 19/2/73 | AIRPHOTO NO: A23003-30 | CHAINAGE: 3860 + 80 | OFFSET

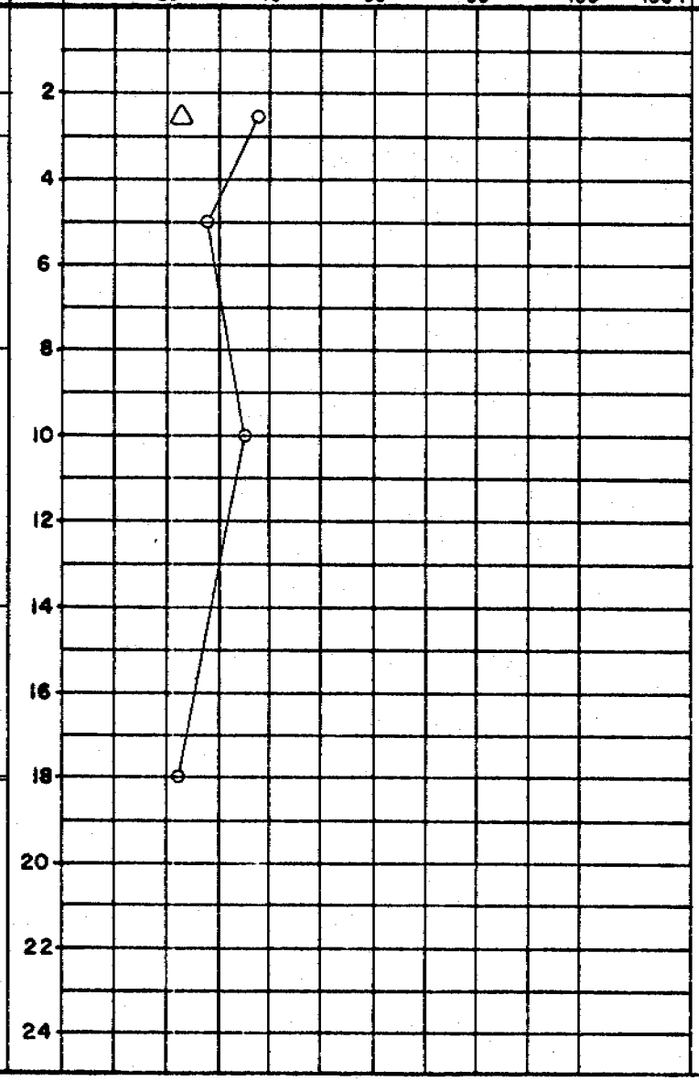
CKD: GRG | TECH: DY | RIG: Mayhew | SURFACE DRAINAGE: Well Drained | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
652	C	6

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2						PEAT - Dark Brown - Fibrous		NB
	1				SM	SAND - Med. Brown - Silty - Trace of Clay - Low Plasticity		V- 20-25%
4								NB
	2							
6								
8					ML	SILT - Med. Brown - Clayey - Low Plasticity	F	
10	3							V 1 - 5%
12								
14					ML	- Grey - Some Clay - Low Plasticity		NB
16								
18	4							
						END OF HOLE 18'		
20								
22								
24								



GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
7	45	48	0		

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

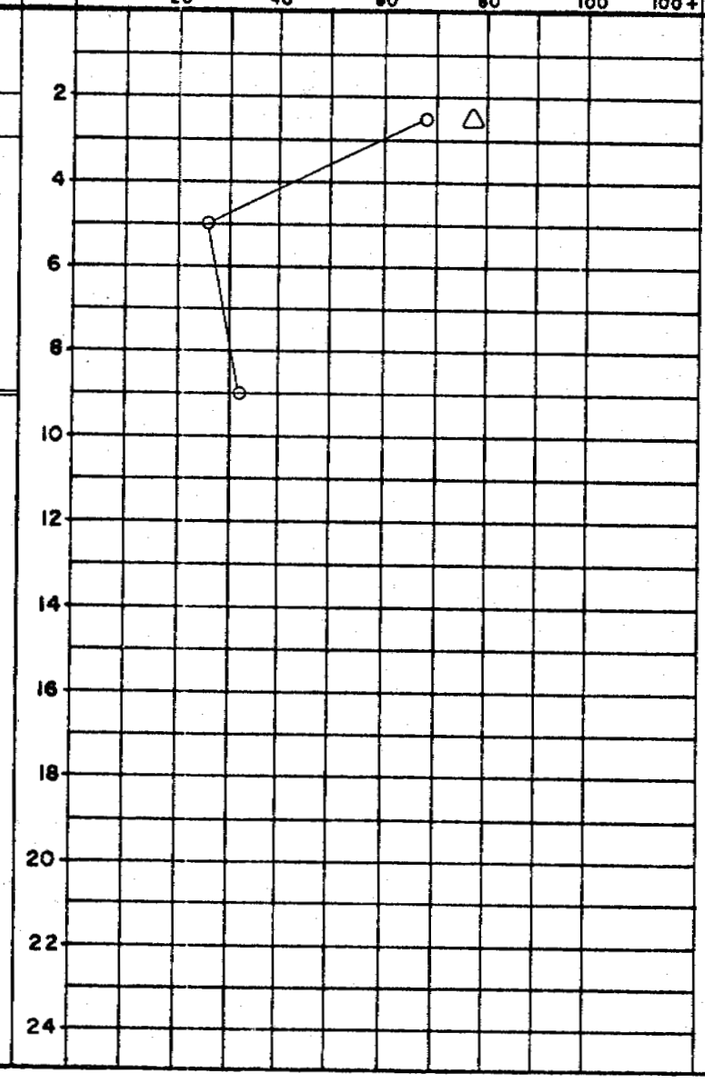
DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 19/2/73 | AIRPHOTO NO: A23003-30 | CHAINAGE: 3868 + 10 | OFFSET

CKD: GRG | TECH: DY | RIG: Mayhew | SURFACE DRAINAGE: Well Drained | VEGETATION: Black Spruce | ELEV:

TEST HOLE		
MILE	B,C,S	NUMBER
652	C	7

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					PT	PEAT - Dark Brown - Fibrous		NB
2	1				ML	SILT - Med. Brown - Some Clay - Low Plasticity - Trace of Gravel & Sand	F	V - 75-80%
4	2							NB
6								
8	3							
10						END OF HOLE 9'		
12								
14								
16								
18								
20								
22								
24								



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

REMARKS

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 19/2/73 | AIRPHOTO NO: A23003-30 | CHAINAGE: 3875 + 80 | OFFSET

CKD GRG | TECH DY | RIG: Mayhew | SURFACE DRAINAGE: Well Drained | VEGETATION: Black Spruce | ELEV:

TEST HOLE

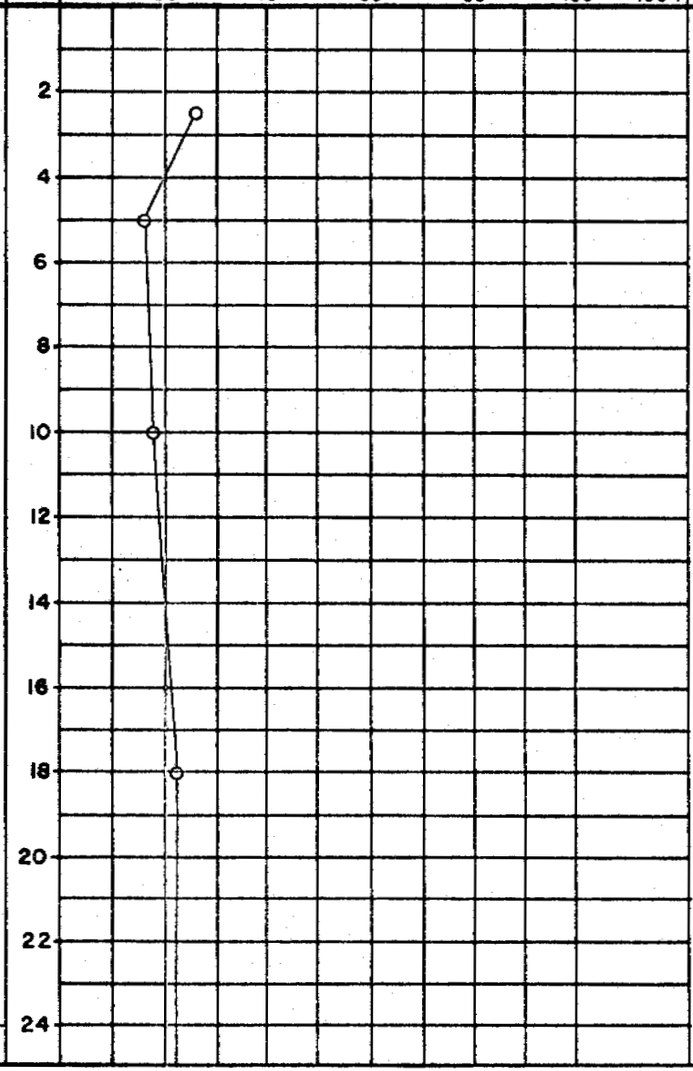
MILE	B,C,S	NUMBER
652	C	8

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SM	SAND - Med. Brown - Silty		
4	2				SP	- Med. Brown - Gravelly - Coarse		
6							F	NB
8					ML	SILT - Med. Brown - Sandy		
10	3				to	- Clayey		
12					SM			
14								
16								
18	4					- Very Sandy		
20								
22					ML	SILT - Grey, Clayey - Low Plasticity		
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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB	FIELD ENG: NRM	DATE DRILLED 19/2/73	AIRPHOTO NO: A23003-30	CHAINAGE: 3875 + 80	OFFSET
CKD GRG	TECH DY	RIG Mayhew	SURFACE DRAINAGE: Well Drained	VEGETATION: Black Spruce	ELEV.

TEST HOLE

MILE	B,C,S	NUMBER
652	C	8

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
26					ML	SILT - Grey - Clayey - Low Plasticity	F	NB
28	5					END OF HOLE 28'		
30								
32								
34								
36								
38								
40								
42								
44								
46								
48								

○ = 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.)
26						
28						
30						
32						
34						
36						
38						
40						
42						
44						
46						
48						

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 21/2/73 | AIRPHOTO NO: A23003 - 30 | CHAINAGE: 3890 + 80 | OFFSET

CKD: GRG | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Good to N. | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
652	C	9

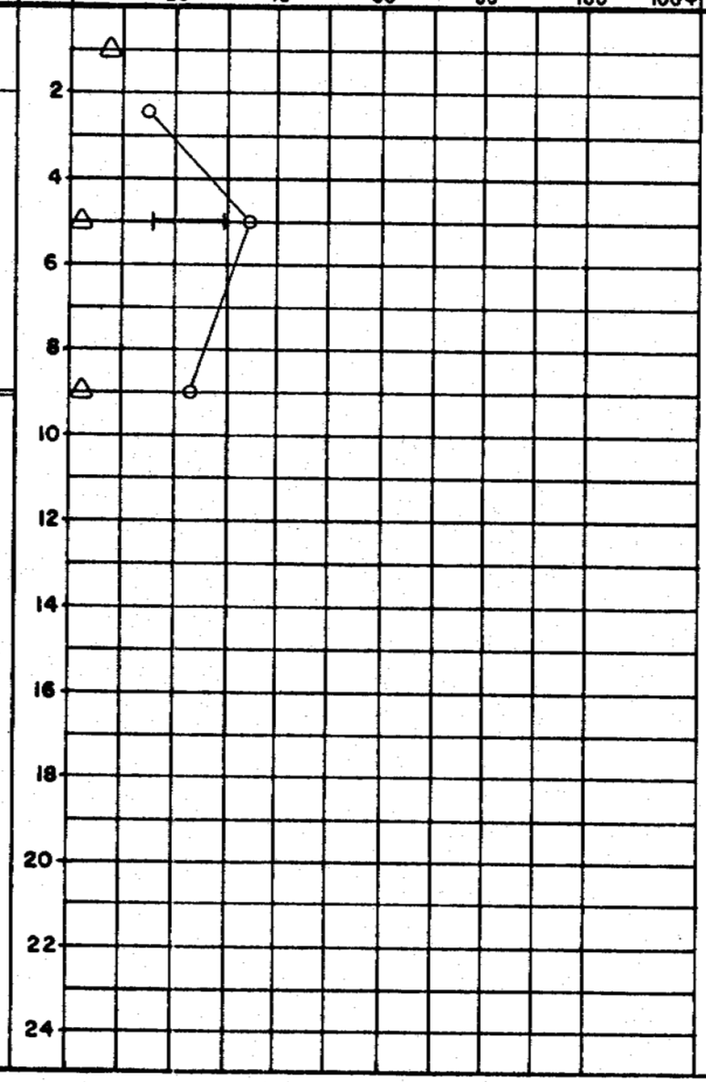
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2					PT	PEAT - Black, Fibrous		V 5-10%
4	1				CL	CLAY-SILT - Med. Brown - Sandy - Pebbly Near 2' - Low Plasticity	F	V: 0 - 5%
6	2							
8	3							
10						END OF HOLE 9'		
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+



GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
23	53	23	1		

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

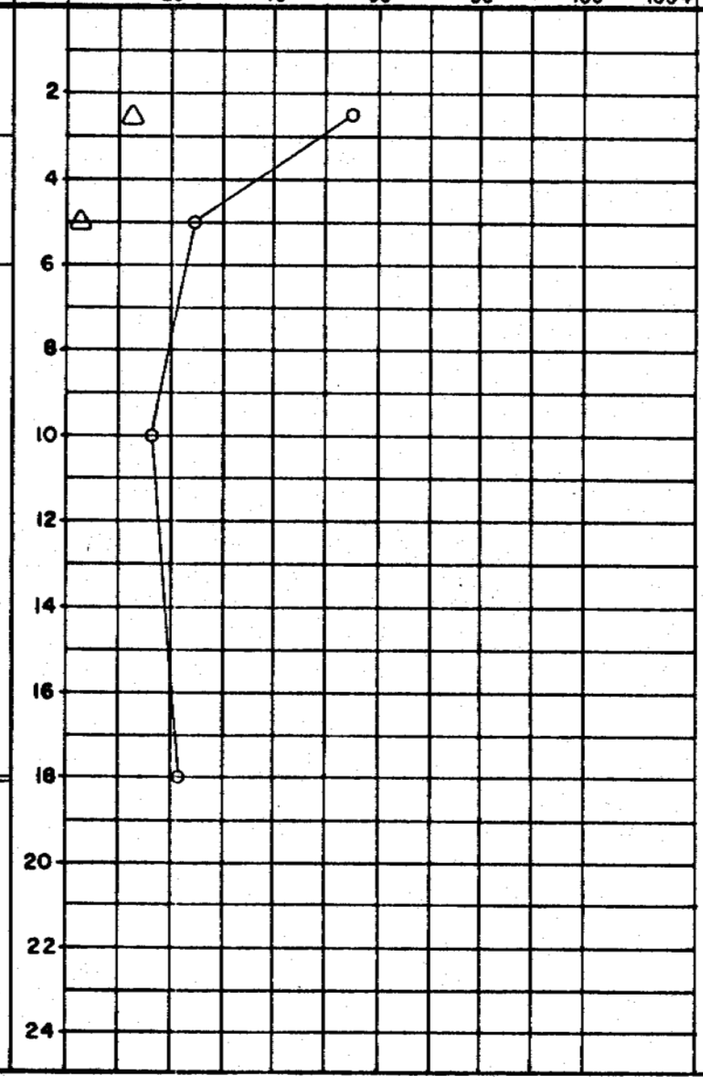
DWN: ALB | FIELD ENG: NRM | DATE DRILLED 21/2/73 | AIRPHOTO NO: A23003-30 | CHAINAGE: 3900 + 90 | OFFSET

CKD: GRG | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Fair to N. | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
651	C	1

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				OL	ORGANIC SILT - Med. Brown - Some Peat		V 10-15%
4	2				ML	SILT - Clayey - Med Brown - Sandy - Low Plasticity		V 0 - 5%
6					SM	SAND - Med. Brown - Fine - Dense - Silty	F	
8								
10	3				ML	SILT - Clayey - Med. Brown - Low Plasticity - Pebbles @ 10'		NB
12								
14								
16						- Grey		
18	4							
						END OF HOLE 18'		
20								
22								
24								



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

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 21/2/73 | AIRPHOTO NO: A23003-30 | CHAINAGE: 3907 + 80 | OFFSET

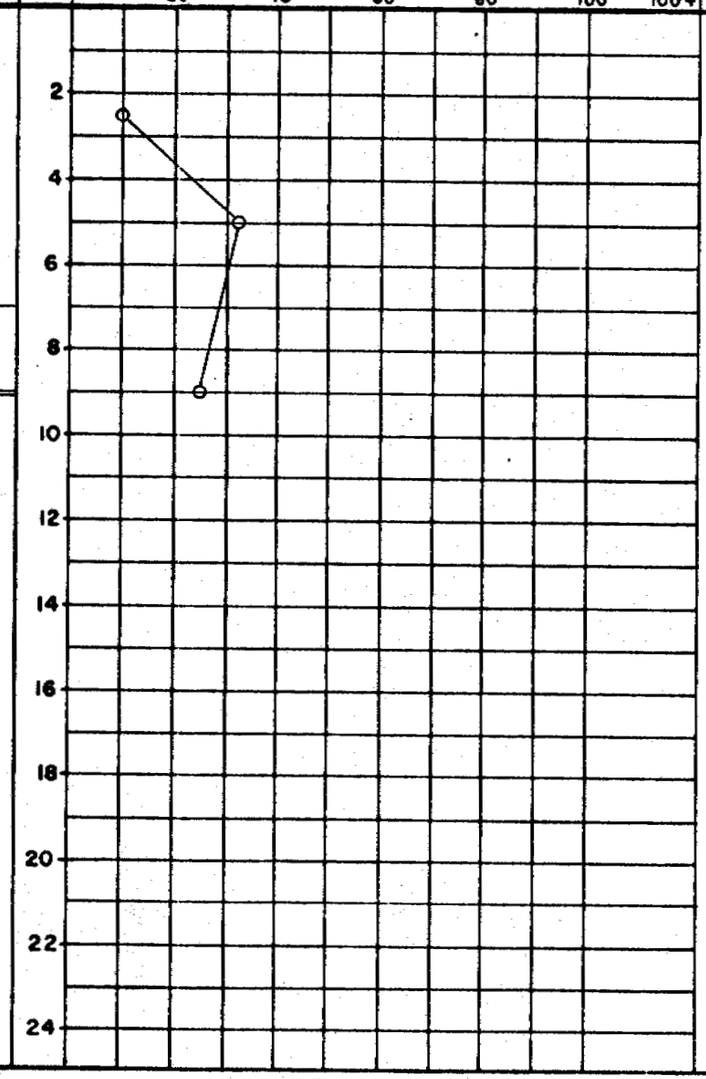
CKD: GRG | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Good to NW | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
651	C	2

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SM	SAND - Silty - Med. Brown - Fine - Dense	F	NF to NB
4	2							
6								
8	3				ML	SILT - Clayey, Med. Brown, Some Sand, Low Plasticity		NB
10						END OF HOLE 9'		
12								
14								
16								
18								
20								
22								
24								



GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

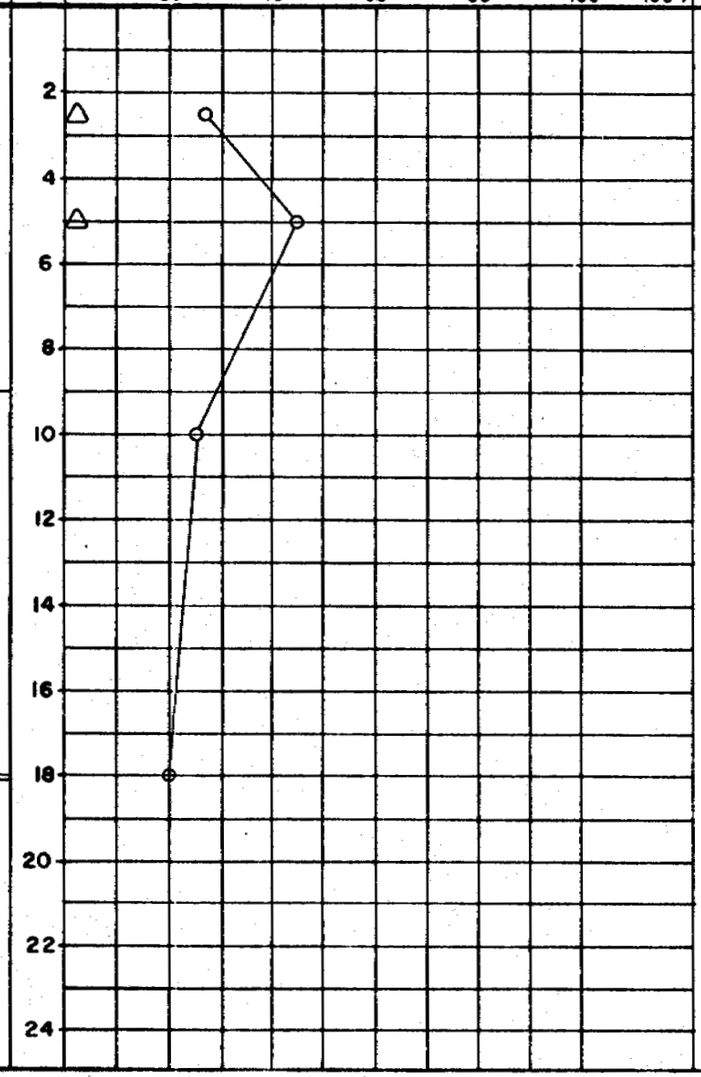
DWN: ALB | FIELD ENG: NRM | DATE DRILLED 21/2/73 | AIRPHOTO NO: A23003-30 | CHAINAGE: 3914 + 30 | OFFSET

CKD: NRM | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Fair to N | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
651	C	3

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				ML	SILT - Med. Brown (TILL) - Pebbles - Sandy SILT - Low Plasticity		
4	2				CL	CLAY - Brown (TILL) - Non Plastic - Sandy - Trace of Gravel		V- 0-5%
8						- Some Sand		
10	3						F	NB
14								
16					ML	SILT - Grey - Some Clay - Low Plasticity		
18	4					END OF HOLE 18'		
20								
22								
24								



GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
22	46	24	8		

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 21/2/73 | AIRPHOTO NO: A23003-31 | CHAINAGE: 3920 + 80 | OFFSET

CKD GRG | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Fair to S. | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

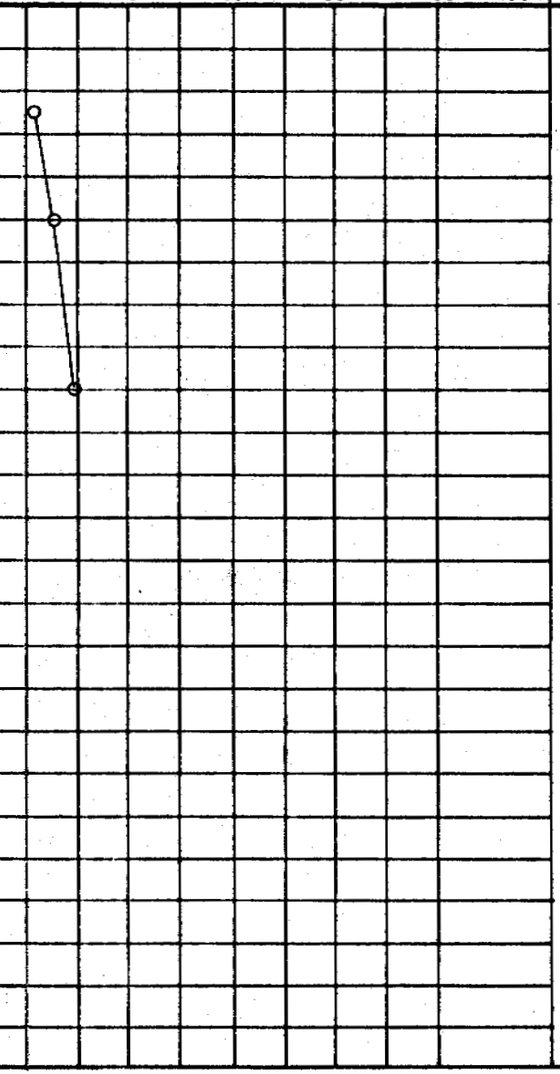
MILE	B,C,S	NUMBER
651	C	4

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SP	SAND - Med. Brown - Fine - Dense - Some Silt	F	NF to NB
4	2							
6								
8	3				ML	SILT - Med. Brown, Low Plastic, Some Sand		NB
10						END OF HOLE 9'		
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.)	REMARKS
2							
4							
6							
8							
10							
12							
14							
16							
18							
20							
22							
24							

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

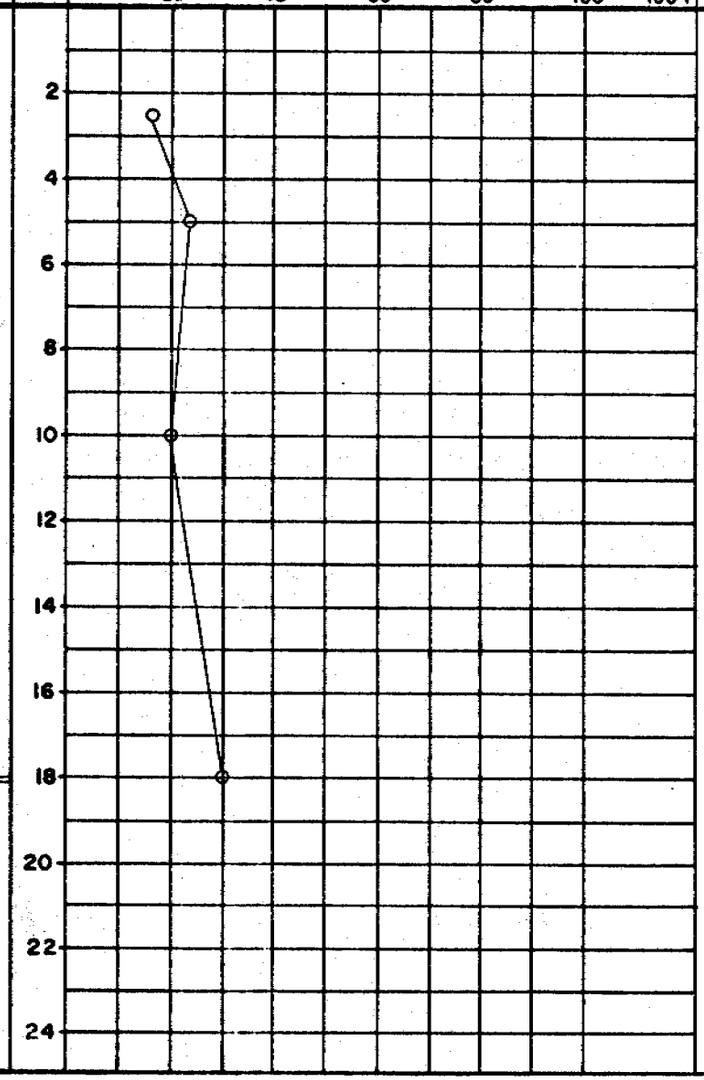
DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 21/2/73 | AIRPHOTO NO: A23003-31 | CHAINAGE: 3927 + 50 | OFFSET

CKD: GRG. | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Good to S. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
651	C	5

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SM	SAND - Med. Brown - Silty - Low Plasticity - Coarse Silt to Fine Sand - Some Gravel - Trace of Clay	F	NB
4	2							
6								
8								
10	3					- Med. Brown - Fine - Dense - Silty		
12								
14								
16								
18	4					SILT - Grey, Low Plasticity		
20						END OF HOLE 18'		
22								
24								



GRAIN-SIZE ANALYSIS	CLAY	SILT	SAND	GRAVEL	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
	%	%	%	%		
	7	28	53	12		

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

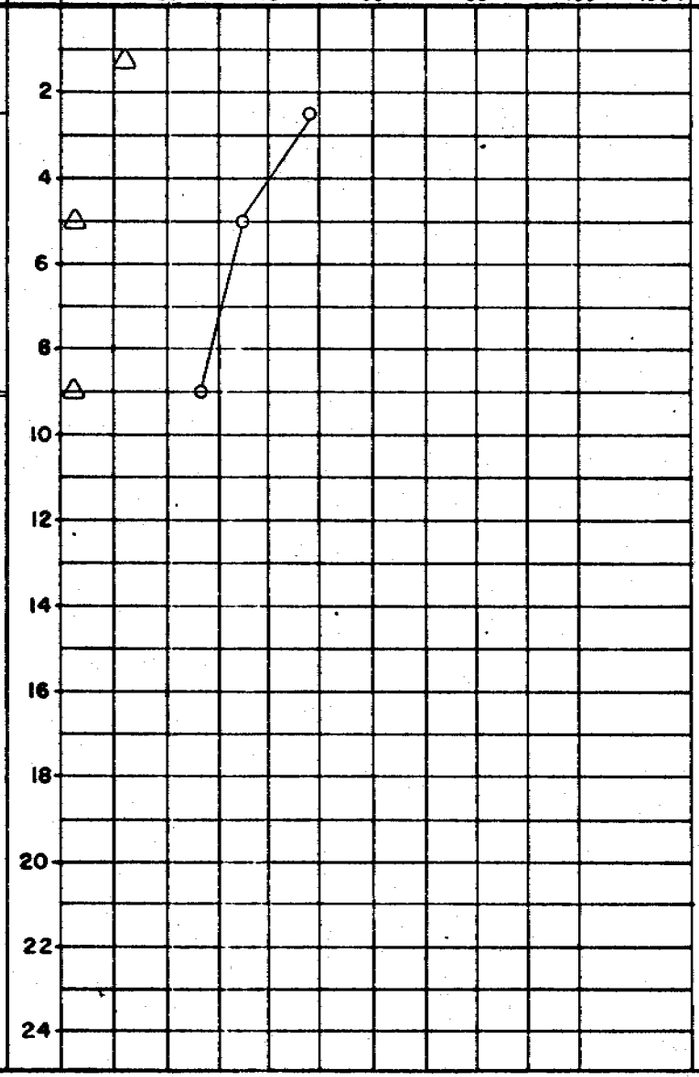
DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 21/2/73 | AIRPHOTO NO: A23003-31 | CHAINAGE: 3933 + 80 | OFFSET

CKD: GRG | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Fair to S. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
651	C	6

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				PT	PEAT - Black, Fibrous		V- 10-15%
4	2				CL	CLAY - Grey, SILT Low Plasticity	F	V- 0-5%
8	3							
10						END OF HOLE 9'		



GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 21/2/73 | AIRPHOTO NO: A23003-31 | CHAINAGE: 3940 + 50 | OFFSET

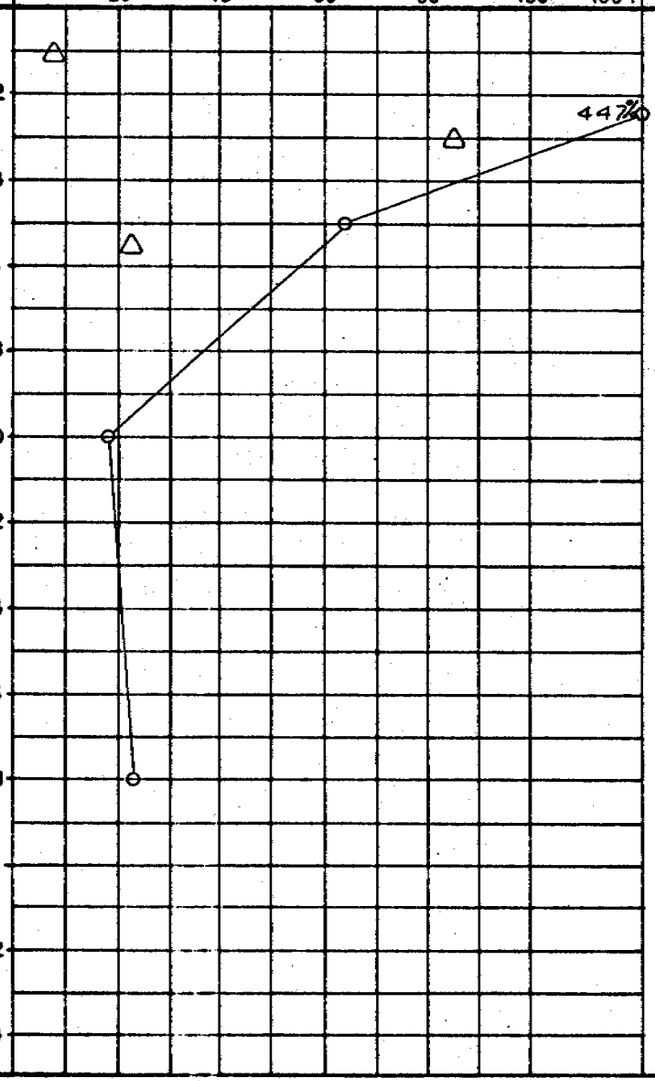
CKD: GRG | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Fair to N. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
651	C	7

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				PT to OL	PEAT - Black Fibrous - Silty		V~ 5-10%
								V~ 80-90%
4	2					- Some Sand		V ~ 20-25%
6								
8					ML	SILT - Med. Brown - Clayey, Sandy - Non Plastic	F	NB
10	3							
12								
14								
16					CI	CLAY - Grey - Med. Plasticity - Some Silt		
18	4							
						END OF HOLE 18'		
20								
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

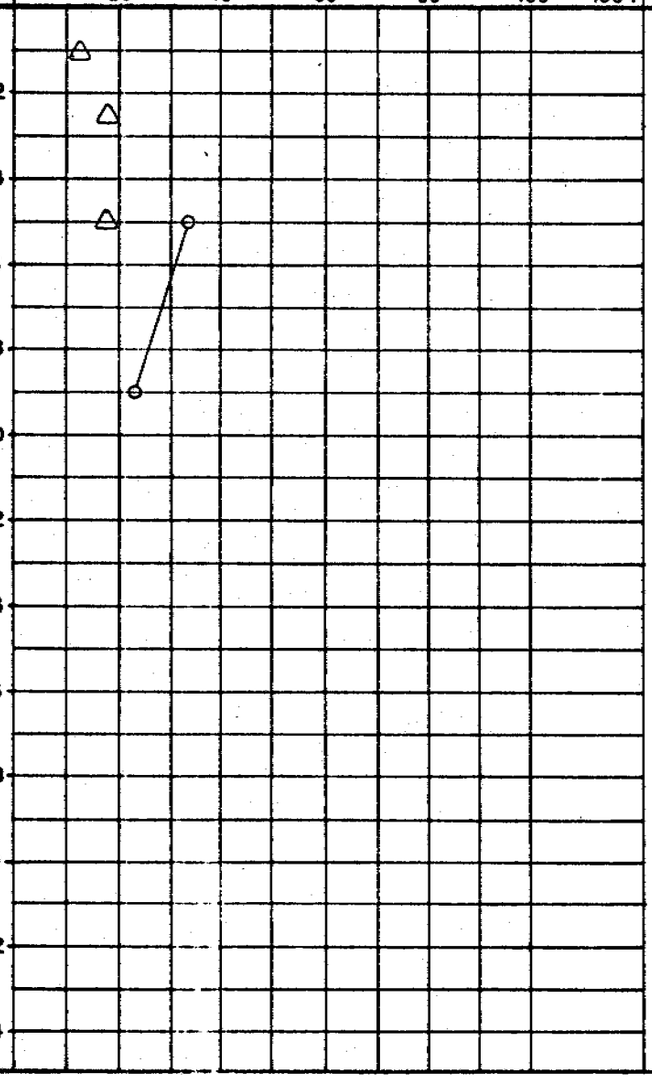
DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 21/2/73 | AIRPHOTO NO: A23003-31 | CHAINAGE: 3946 + 80 | OFFSET

CKD GRG | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Good to N | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
651	C	8

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					PT	PEAT - Black, Fibrous		V - 10-15%
2	1				CL	CLAY - Med. Brown, SILT Low Plasticity	F	V - 15-20%
4	2							
6								
8	3							NB
10						END OF HOLE 9'		
12								
14								
16								
18								
20								
22								
24								



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

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 21/2/73 | AIRPHOTO NO: A23003-32 | CHAINAGE: 3951 + 80 (EST.) | OFFSET

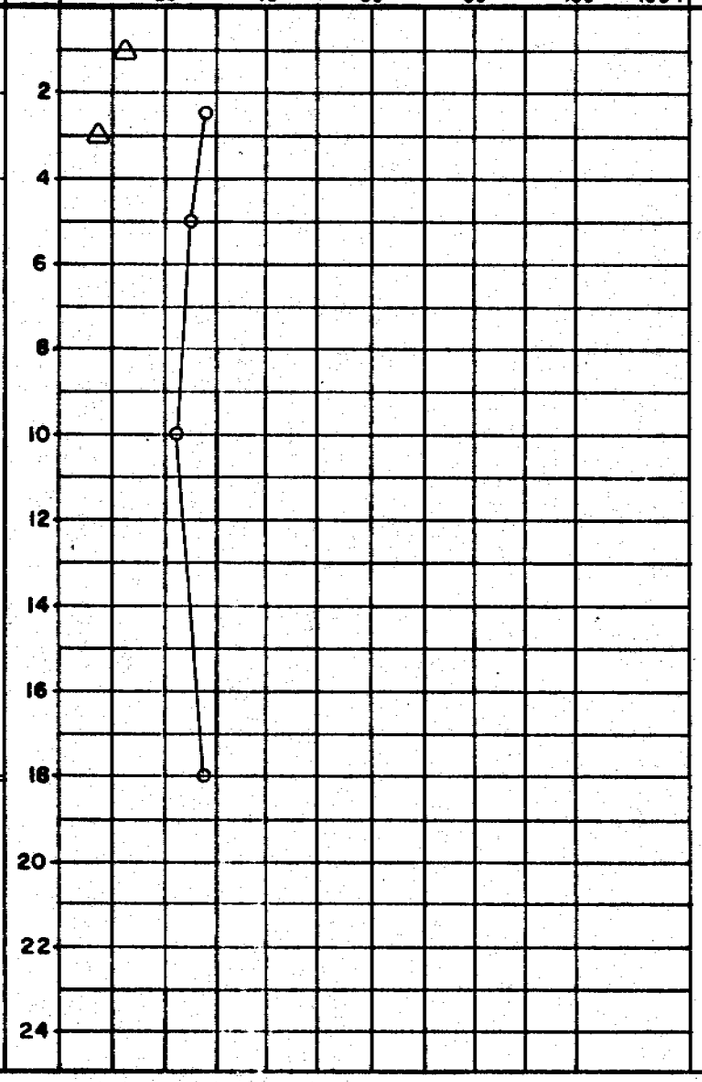
CKD: GRG | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
650	C	1

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					PT	PEAT - Black, Fibrous	F	V ÷ 10-15%
2	1				ML	SILT - Med. Brown - Clayey - Low Plasticity - Trace of Fine Sand		V - 5-10%
4	2							
6								
8					SM	SAND - Med. Brown - Dense, Fine - Silty		
10	3				ML	SILT - Grey - Clayey - Low Plasticity		NB
12								
14								
16								
18	4					END OF HOLE 18'		
20								
22								
24								



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

E.W. BROOKER & ASSOCIATES. LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

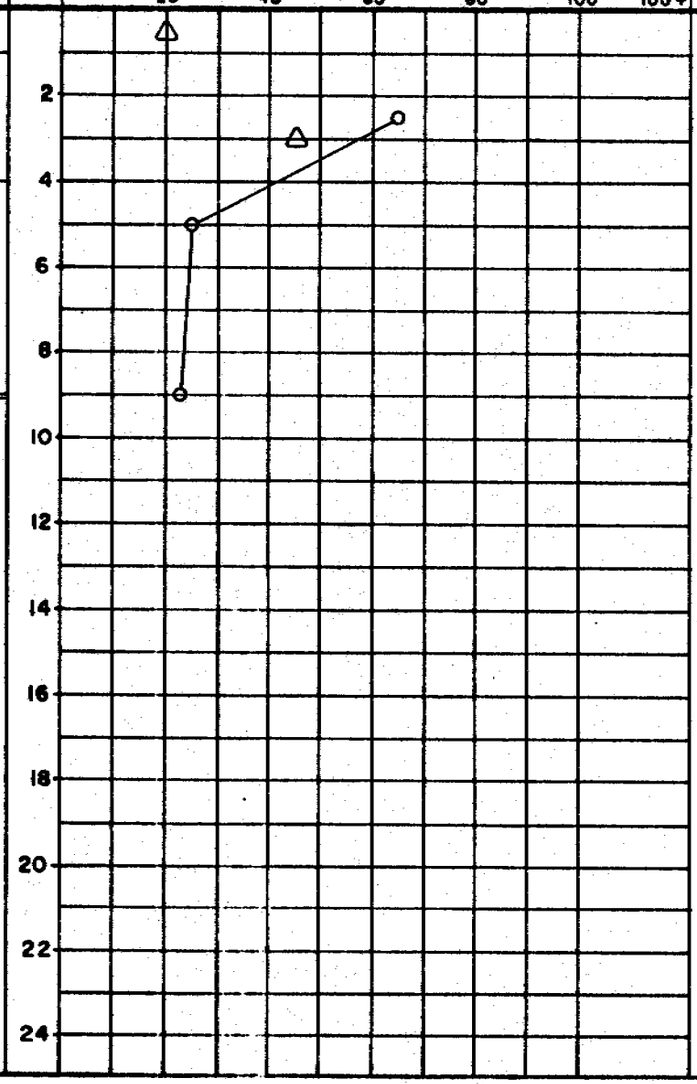
DWN: ALB | FIELD ENG: NRM | DATE DRILLED 21/2/73 | AIRPHOTO NO: A23003-32 | CHAINAGE: 3958 + 60 | OFFSET

CKD: GRG | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
650	C	2

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					PT	PEAT - Black, Fibrous	F	V= 15-20%
2	1				CL	CLAY - Med. Brown SILT - Low Plasticity - Some sand		V= 40-50%
4	2							NB
6					SM	SAND - Med. Brown - Fine to Med. - Dense - Silty		
8	3							
10						END OF HOLE 9'		
12								
14								
16								
18								
20								
22								
24								



GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
23	63	14	-		

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

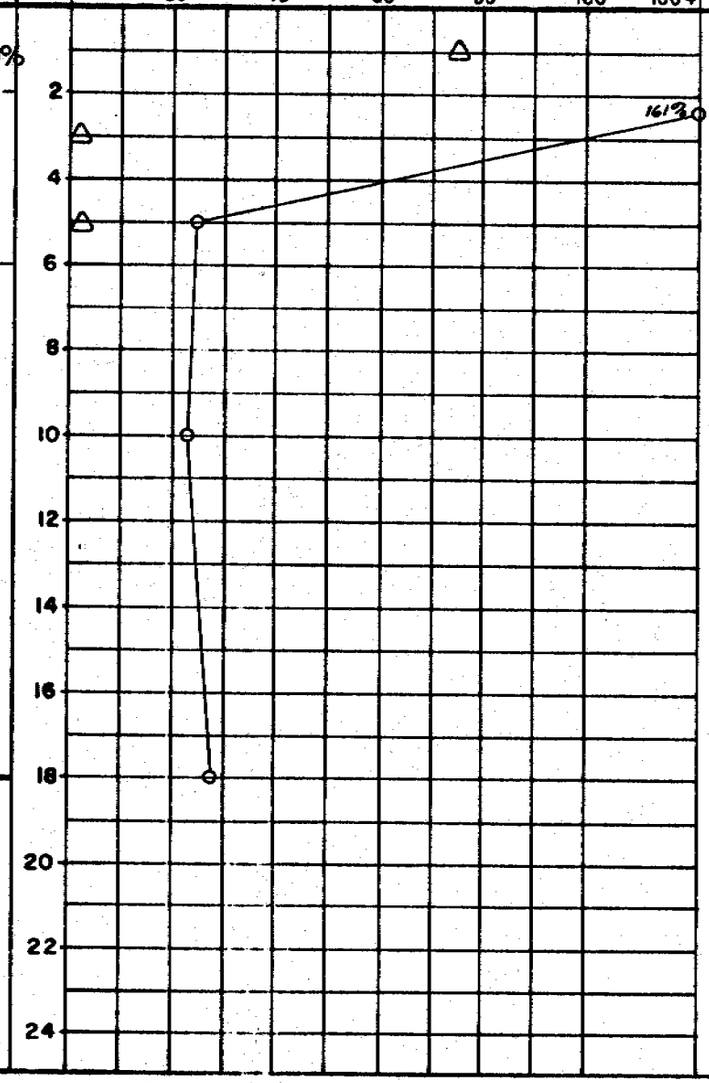
DWN: ALB | FIELD ENG: NRM | DATE DRILLED 21/2/73 | AIRPHOTO NO: A23003-32 | CHAINAGE: 3965 + 80 | OFFSET

CKD GRG | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Fair to S.W. | VEGETATION: Black Spruce | ELEV:

TEST HOLE		
MILE	B,C,S	NUMBER
650	C	3

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2					PT	PEAT - Black, Fibrous - Silty		V:- 70-80%
2	1				CL	CLAY - Med. Brown - Silty - Low Plasticity		V:- 0-5%
4	2							
6								
8					SM	SAND - Med. Brown - Fine - Dense - Silty	F	NB
10	3							
12								
14								
16								
18	4				ML	SILT - Grey, Some Clay, Low Plasticity		
						END OF HOLE 18'		
20								
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 21/2/73 | AIRPHOTO NO: A23003-32 | CHAINAGE: 3972 + 80 | OFFSET:

CKD: GRG | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
650	C	4

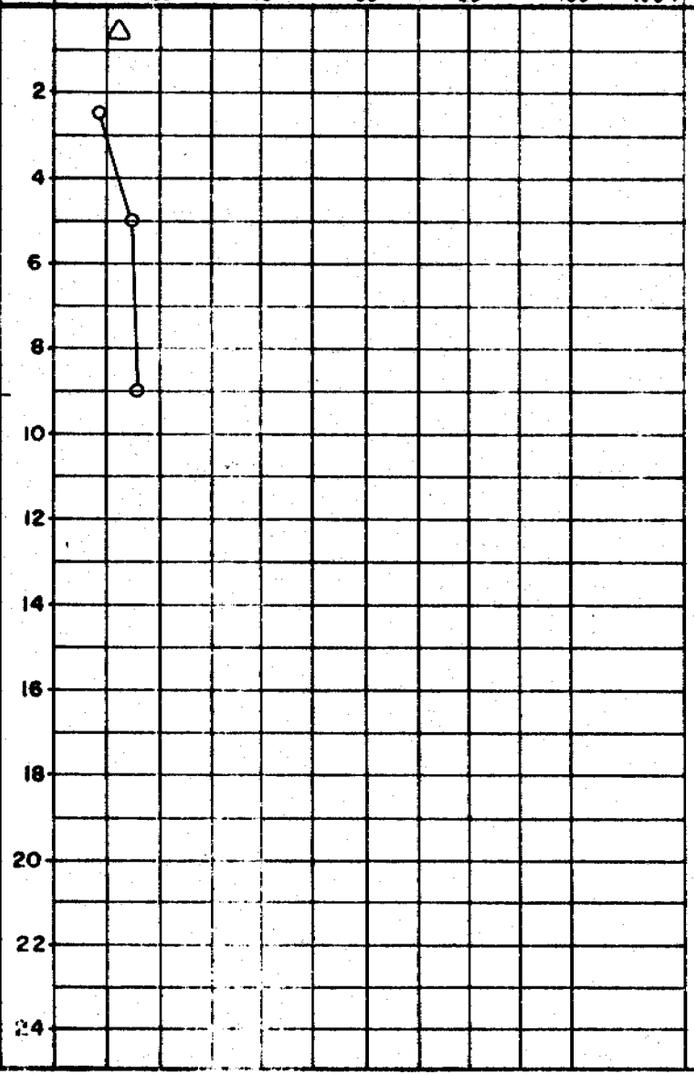
REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					PT	PEAT - Black, Fibrous		V 10-15%
2	1				SM	SAND - Med. Brown - Silty - Dense - Fine	F	NF to NB
6	2				SW	SAND - Med. Brown - Dense - Well Graded - Gravelly - Trace of Silt		
8	3							
10						END OF HOLE 9'		

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

PLASTIC LIMIT — LIQUID LIMIT

20 40 60 80 100 100+



GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
CLAY %	SILT %	SAND %	GRAVEL %		
(4)		64	32		

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

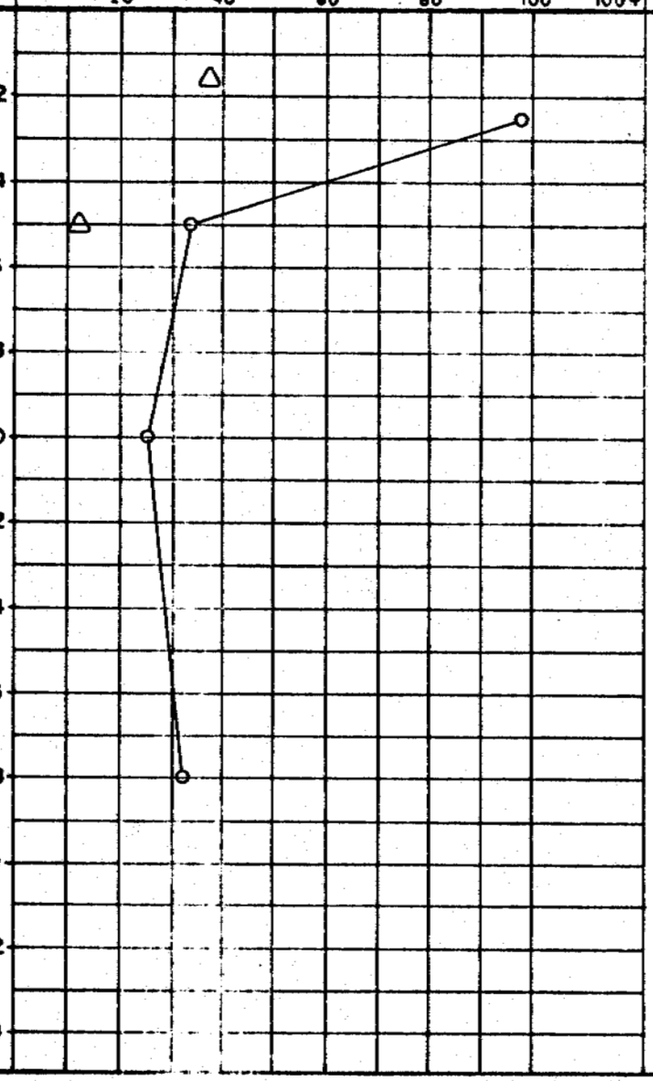
DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB	FIELD ENG: NRM	DATE DRILLED: 21/2/73	AIRPHOTO NO: A23003 - 32	CHAINAGE: 3979 + 20	OFFSET
CKD: GRG	TECH: JK	RIG: Mayhew	SURFACE DRAINAGE: Good to S.	VEGETATION: Black Spruce	ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
650	C	5

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0–2	1				PT	PEAT - Black - Silty	F	V. 35–40%
2–4								
4–6	2					CLAY - Med. Brown SILT - Some sand - Low Plasticity		V. 10–15%
6–8								
8–10					CL			
10–12	3							NB
12–14								
14–16								
16–18	4							
18–20						END OF HOLE 18'		
20–22								
22–24								



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

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 21/2/73 | AIRPHOTO NO: A23003 - 32 | CHAINAGE: 3785 + 90 | OFFSET

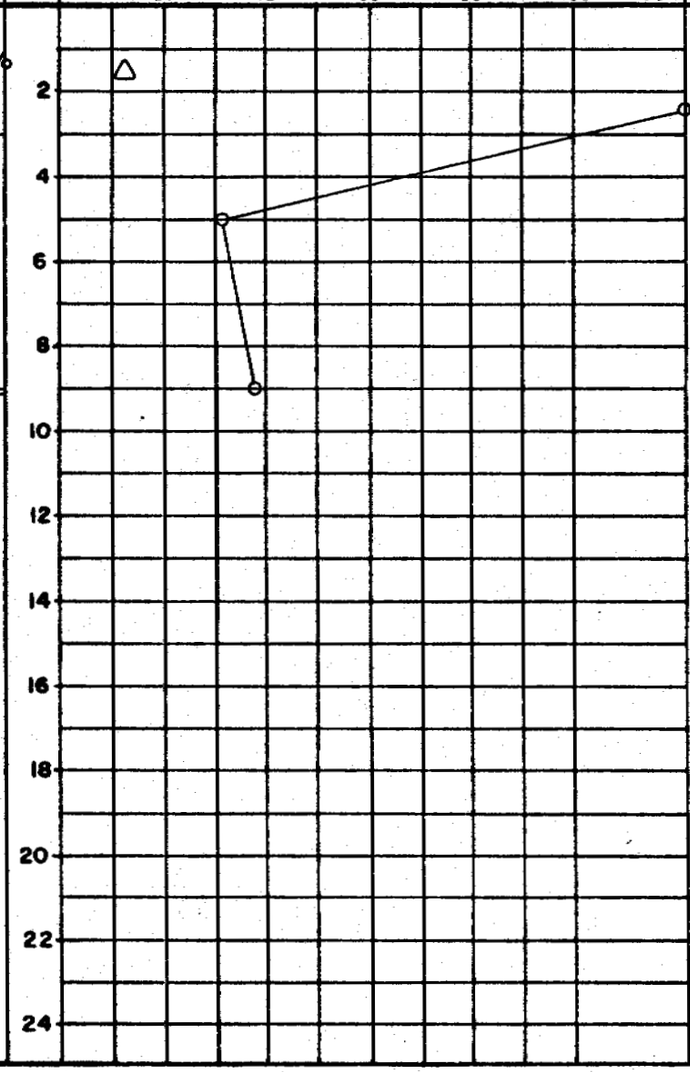
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Good to S. | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
650	C	6

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				PT	PEAT - Black - Fibrous - Silty		V - 10-15%
4	2				SM	SAND - Med. Brown - Dense - Silty - Fine to Coarse	F	NF to NB
8	3							
10						END OF HOLE 9'		



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

MVPL19

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 21/2/73 | AIRPHOTO NO: A23003 - 32 | CHAINAGE: 3992 + 40 | OFFSET

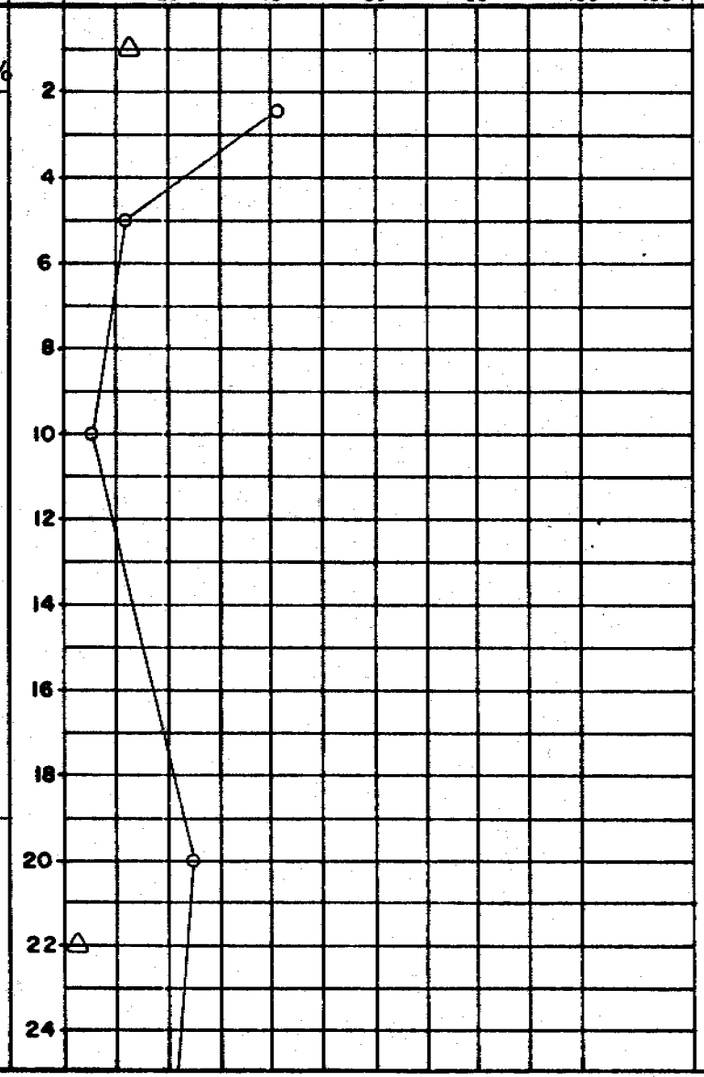
CKD: GRG | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Good to S. | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE MVPL19

MILE	B,C,S	NUMBER
650	C	7

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				PT	PEAT - Black - Sandy - Fibrous		V- 10-15%
4	2				SM	SAND - Med. Greyish Brown - Silty, Fine		
6								
8								
10	3				GW	GRAVEL - Med. Brown - Sandy - Well Graded - Dense	F	NB
12								
14	4							
16					ML CL	SILT - Grey, some clay - Trace of sand - Low Plasticity		
18								
20	5							V- 0-5%
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 21/2/73 | AIRPHOTO NO: A23003 - 32 | CHAINAGE: 3992 + 40 | OFFSET
CKD: GRG | TECH: JK | RIG: Texoma | SURFACE DRAINAGE: Good to S. | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE MVPL19

MILE	B,C,S	NUMBER
650	C	7

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
26	6				ML CL	SILT - Same	F to U	NB to Unfrozen
30	7							
36						END OF HOLE 36'		

O = WATER CONTENT (% OF DRY WEIGHT)
△ = ICE CONTENT (% OF SAMPLE VOLUME)
PLASTIC LIMIT — LIQUID LIMIT
20 40 60 80 100 100+
DEPTH (FEET): 26 28 30 32 34 36 38 40 42 44 46 48

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

REMARKS

North Bank of Oscar Creek

Hole terminated @ 36' drill bit mudded up.

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

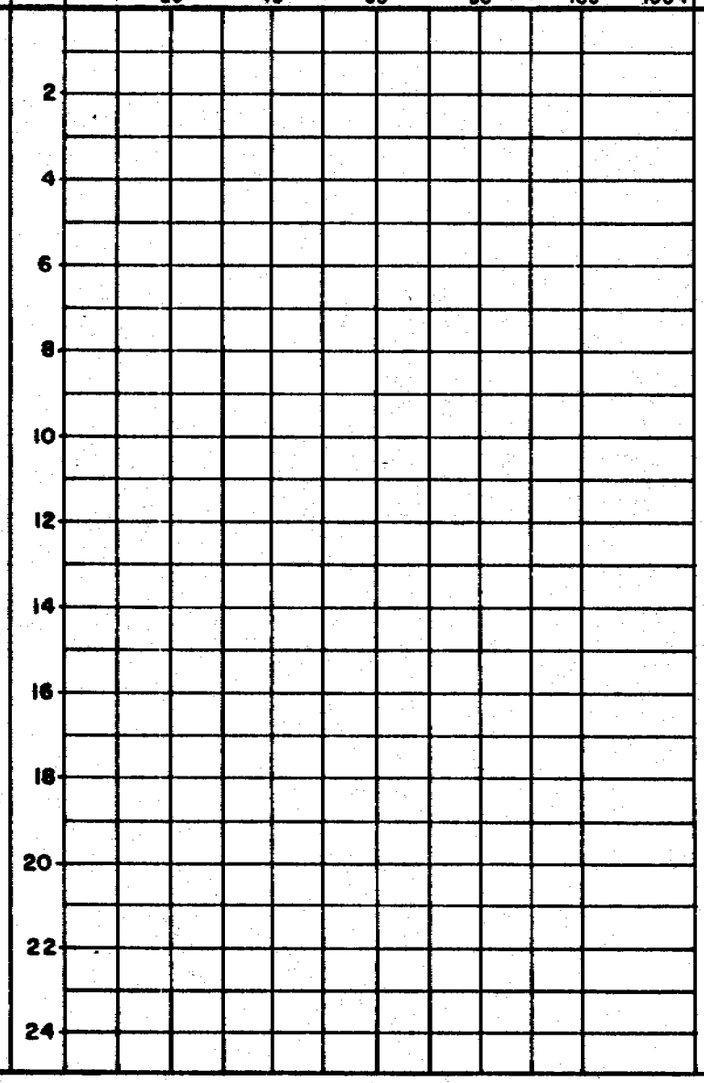
DWN:	FIELD ENG:	DATE DRILLED:	AIRPHOTO NO:	CHAINAGE:	OFFSET
CKD:	TECH:	RIG:	SURFACE DRAINAGE:	VEGETATION:	ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
649	C	1

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2						Not Drilled		
4								
6								
8								
10								
12								
14								
16								
18								
20								
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

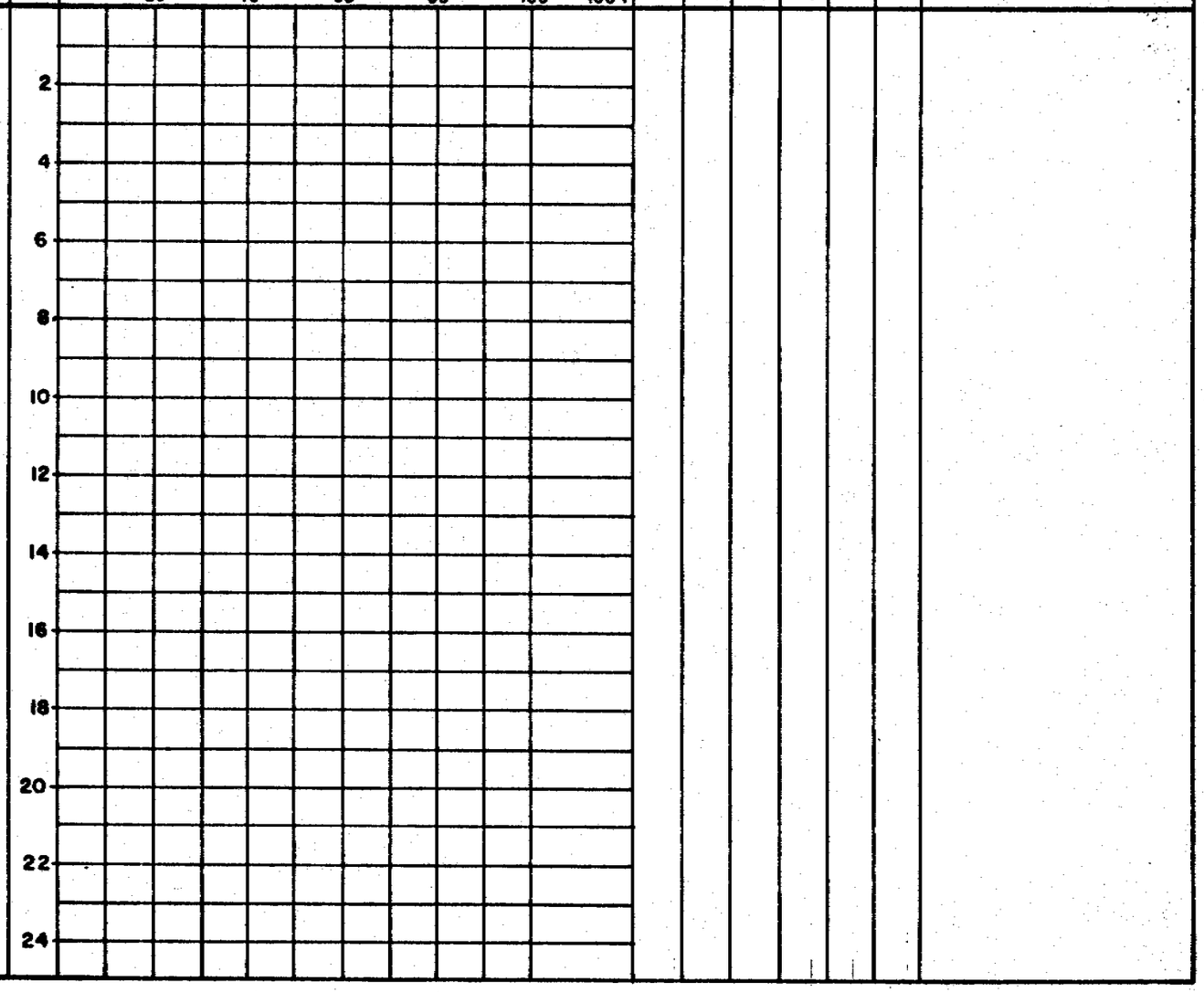
DWN:	FIELD ENG:	DATE DRILLED:	AIRPHOTO NO:	CHAINAGE:	OFFSET
CKD:	TECH:	RIG:	SURFACE DRAINAGE:	VEGETATION:	ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
649	C	2

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2						Not Drilled		
4								
6								
8								
10								
12								
14								
16								
18								
20								
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

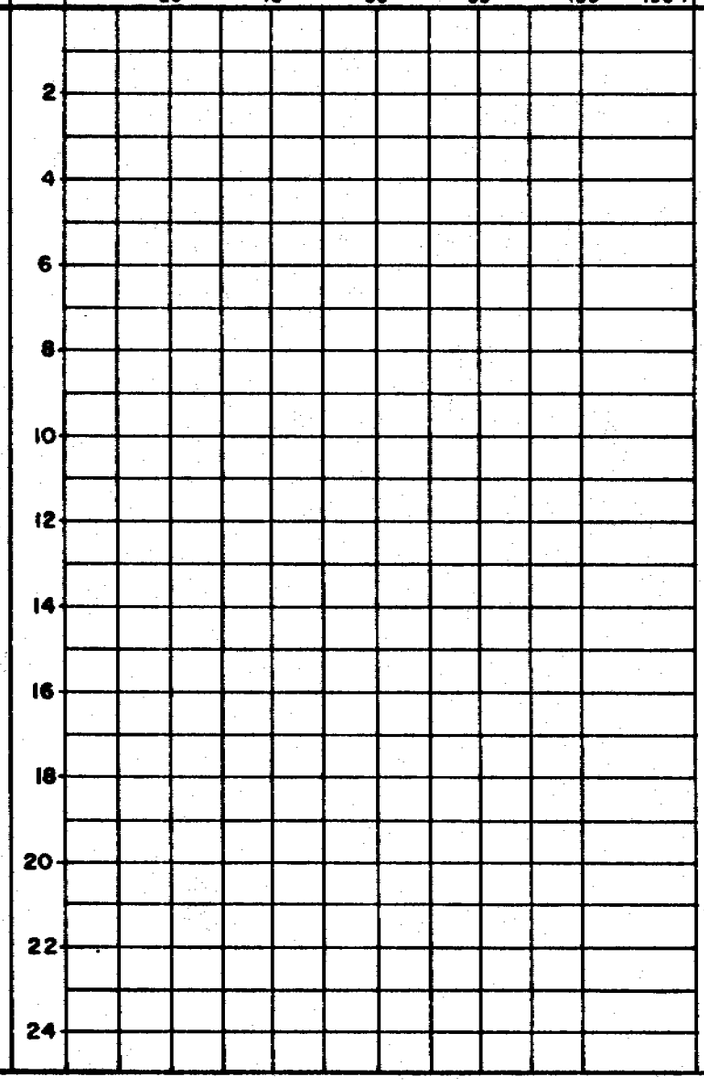
DWN:	FIELD ENG:	DATE DRILLED:	AIRPHOTO NO:	CHAINAGE:	OFFSET
CKD	TECH	RIG:	SURFACE DRAINAGE:	VEGETATION:	ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
649	C	3

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2						Not Drilled		
4								
6								
8								
10								
12								
14								
16								
18								
20								
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD.

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
649	C	4

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.)
2						Not Drilled			2						
4									4						
6									6						
8									8						
10									10						
12									12						
14									14						
16									16						
18									18						
20									20						
22									22						
24									24						

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

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

E.W. BROOKER & ASSOCIATES LTD.

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
649	C	5

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2						Not Drilled		
4								
6								
8								
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+

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

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

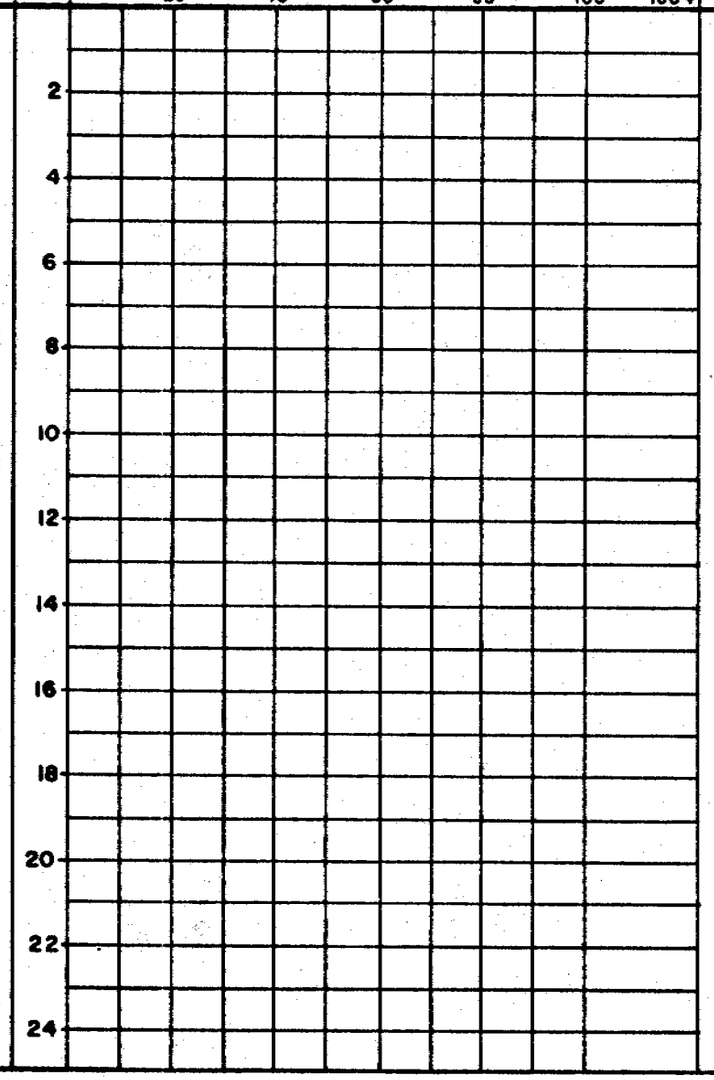
DWN:	FIELD ENG:	DATE DRILLED:	AIRPHOTO NO:	CHAINAGE:	OFFSET
CKD	TECH:	RIG:	SURFACE DRAINAGE:	VEGETATION:	ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
649	C	6

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2						Not Drilled		
4								
6								
8								
10								
12								
14								
16								
18								
20								
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 4/3/73 | AIRPHOTO NO: A23003 - 33 | CHAINAGE: 4004 + 00 | OFFSET

CKD: GRG | TECH: TJ | RIG: Mayhew | SURFACE DRAINAGE: Good to Creek | VEGETATION: Dense Spruce 30 - 35' | ELEV:

TEST HOLE

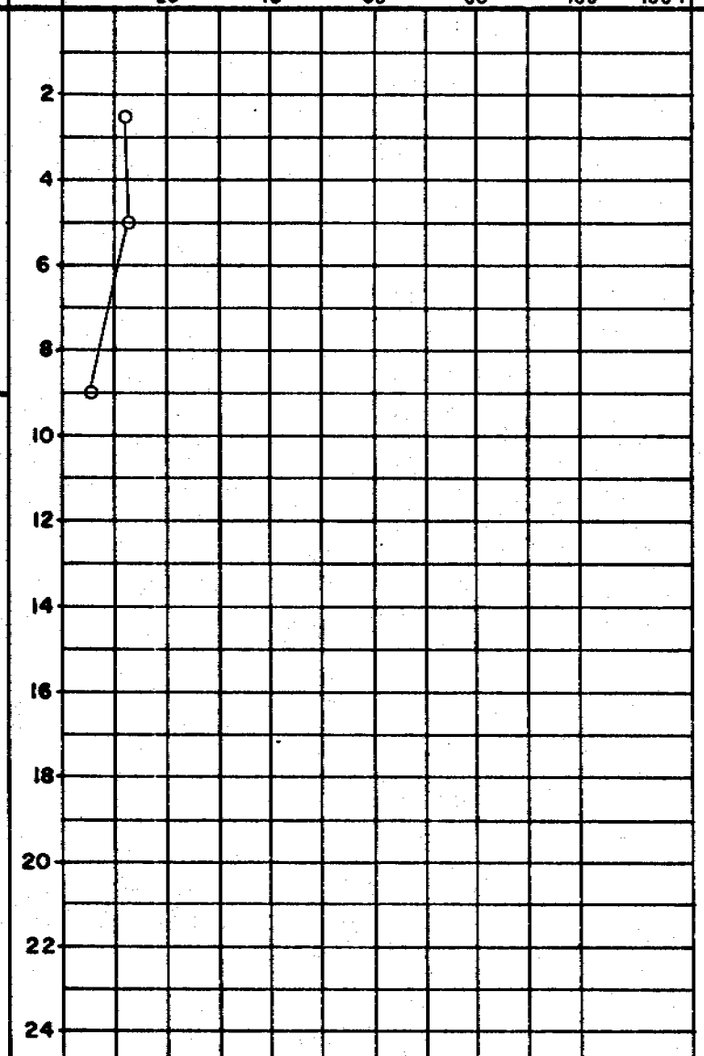
MILE	B,C,S	NUMBER
649	C	7

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SW	SAND - Lt. Brown - Some silt - Some Gravel & Cobble	F	NB
6	2				GP	GRAVEL - Lt. Brown - Dense - Med. - Fine		
8	3							
10						END OF HOLE 9'		

○ = 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.)
	%	%	%	%		
	(17)	66	17			

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 24/2/73 | AIRPHOTO NO: A22774 - 64 | CHAINAGE: 3153 + 00 | OFFSET

CKD: GRG | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Creek Bed | VEGETATION: Black Spruce | ELEV:

TEST HOLE

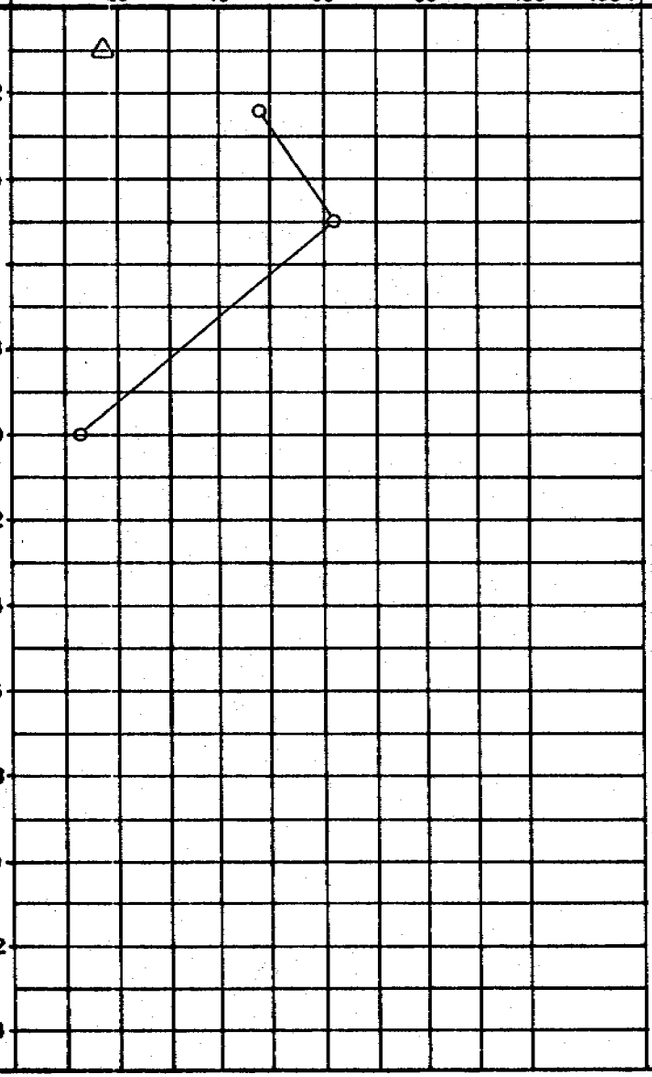
MILE	B,C,S	NUMBER
664	S	1

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2					PT	PEAT - Black - Silty, Clayey	F	V- 15-20%
4	1							
6	2				CL	CLAY - Dk. Brown to Black - Silty - Low to Med. Plastic - Organics Near Top	U	Unfrozen
8								
10	3					- Silty Sand, Some Gravel		
12						END OF HOLE 10'		
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				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
CLAY %	SILT %	SAND %	GRAVEL %		

REMARKS

Stopped hole at 10' because of sloughing

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

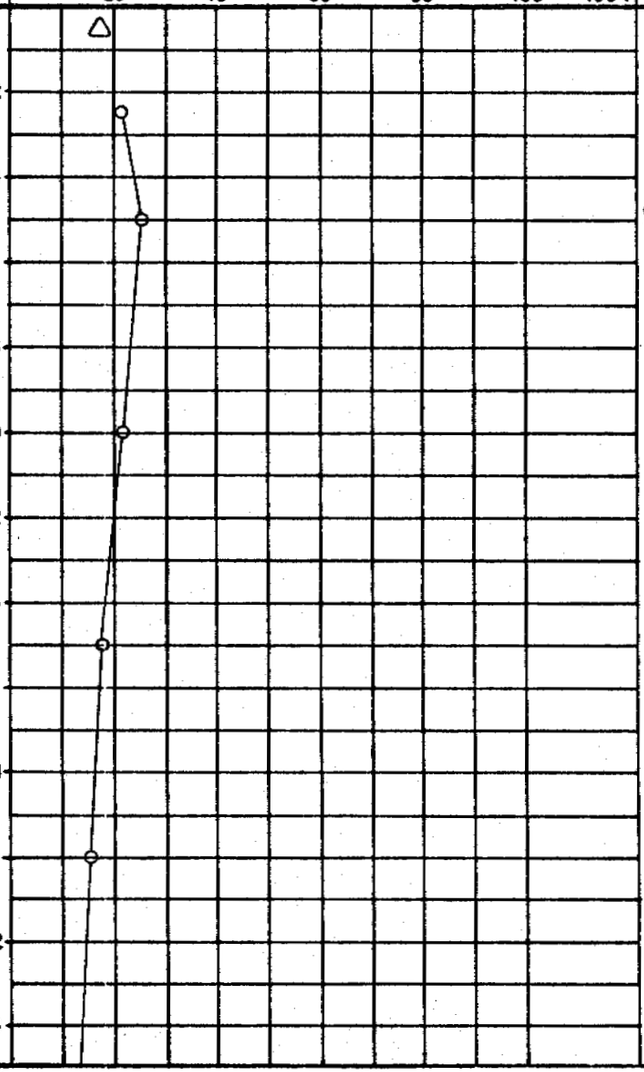
DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB	FIELD ENG: NRM	DATE DRILLED 24/2/73	AIRPHOTO NO: A22774 - 62	CHAINAGE: 3182 + 75	OFFSET
CKD G.R.G.	TECH: JK	RIG: Mayhew	SURFACE DRAINAGE: Fair to N.	VEGETATION: Black Spruce	ELEV:

TEST HOLE MVPL15

MILE	B,C,S	NUMBER
664	S	2

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
					PT	PEAT - Black Fibrous		V = 15-20%
2	1				SM	SAND - Med. Brown - Silty - Dense - Uniform - Trace of clay and gravel		NF to NB
4	2							
6								
8					SP	- Clean - Med. to Coarse - Grey	F	
10	3							
12								
14	4							NF
16								
18								
20	5				CL	CLAY (TILL) - Grey - Silty - Low Plasticity - Some Coarse Sand		
22								
24								



GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
9	36	53	2		

REMARKS

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

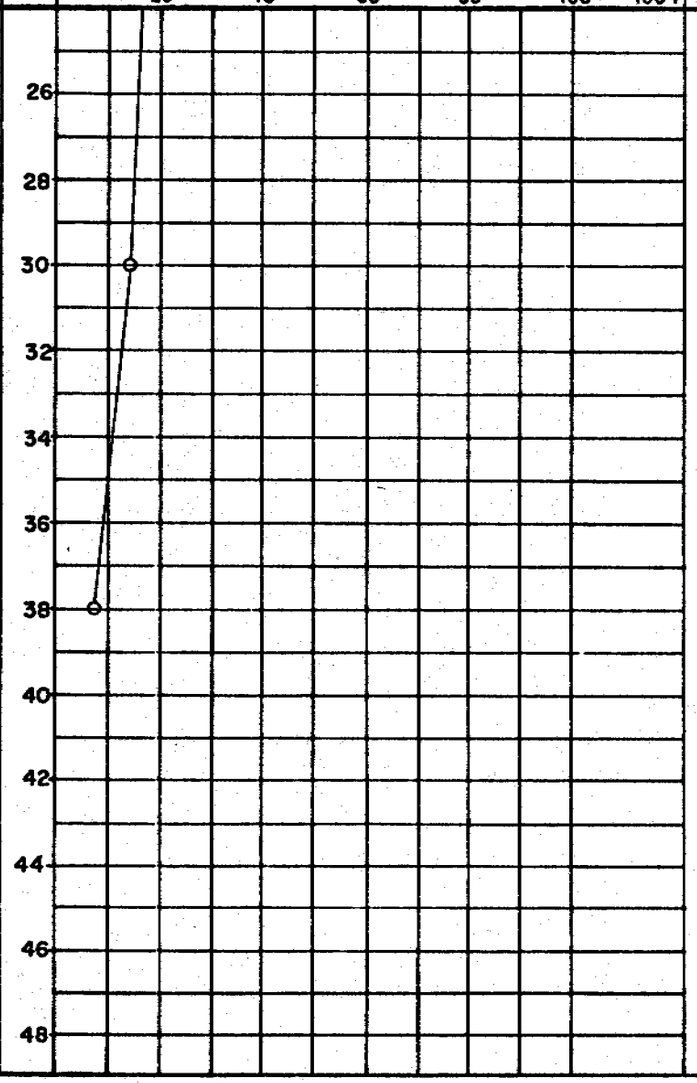
DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB	FIELD ENG: NRM	DATE DRILLED 24/2/73	AIRPHOTO NO: A22774 - 62	CHAINAGE: 3182 + 75	OFFSET
CKD: GRG	TECH: JK	RIG: Mayhew	SURFACE DRAINAGE: Fair to N.	VEGETATION: Black Spruce	ELEV:

TEST HOLE MVPL15

MILE	B,C,S	NUMBER
664	S	2

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
26					CL	CLAY (TILL) - Same		
28						SILT - Grey - Low Plasticity - Some Clay - Some Shale to Shaley	F	NF
30	6				ML to SH (ML)			
32								
34								
36								
38	7					END OF HOLE 38'		
40								
42								
44								
46								
48								



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

REMARKS

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

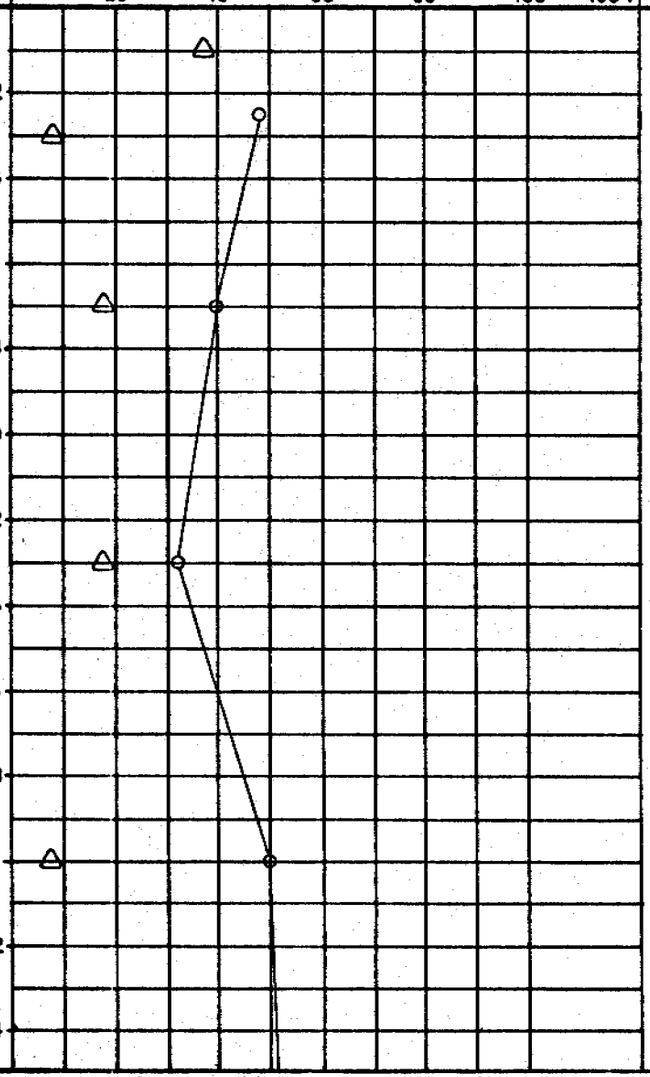
DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 24/2/73 | AIRPHOTO NO: A22774 - 56 | CHAINAGE: 3403 + 10 | OFFSET
CKD: GRG | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Good to N. | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
660	S	1

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					OL	ORGANIC SILT - Med. Brown		V 35 - 40%
2	1				ML	SILT - Med. Brown - Clayey - Low Plasticity - Trace of Organics Near Top - Some Sand		V 5 - 10%
4	2							
6								
8								
10	3				CL to ML	CLAY - Silty - Mottled Silt With Clay, Low Plasticity		V 15 - 20%
12								
14	4				CL	- Med. Brown - Silty - Greyish		
16								
18								
20	5				CL to CI	- Low to Med. Plasticity		V 5-10%
22								
24								



GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
CLAY %	SILT %	SAND %	GRAVEL %		
18	67	15	-		

REMARKS

Open Water on Creek

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 24/2/73 | AIRPHOTO NO: A22774 - 56 | CHAINAGE: 3403 + 10 | OFFSET

CKD: GRG | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Good to N. | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
660	S	1

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
26	6				CL to CI	CLAY - Grey, Low to Med. Plasticity	F	V 0-5%
28	7					END OF HOLE 18'		

O = 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.)

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

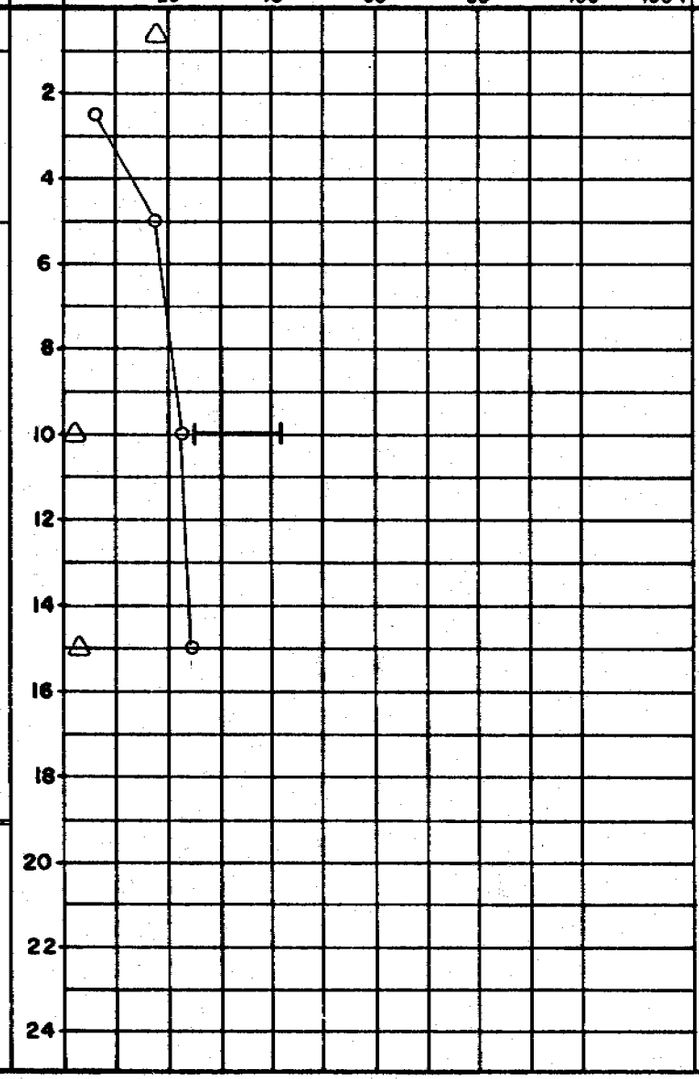
DWN: ALB | FIELD ENG: NRM | DATE DRILLED 24/2/73 | AIRPHOTO NO: A22774 - 55 | CHAINAGE: 3446 + 10 | OFFSET

CKD: LAB | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Good to S. | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE MVPL16

MILE	B,C,S	NUMBER
659	S	1

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				PT	PEAT-Reddish Brown, Fibrous	F	V.- 15-20%
					GW	GRAVEL - Sandy, Med. Brown Loose, Well Graded		NF
4					ML to CL	SILT (TILL) - Med. Brown, Sandy, Low Plasticity		
	2							
6					CI	CLAY - Grey - Some Silt - Med. Plasticity		
8								
10	3							V - 0-5%
12								
14								
	4					- A Few isolated Pebbles		
16								
18								
20						END OF HOLE 19'		
22								
24								



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

REMARKS

North Bank Elliot

Loose Gravel sloughing. Soil would not blow out of hole.

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

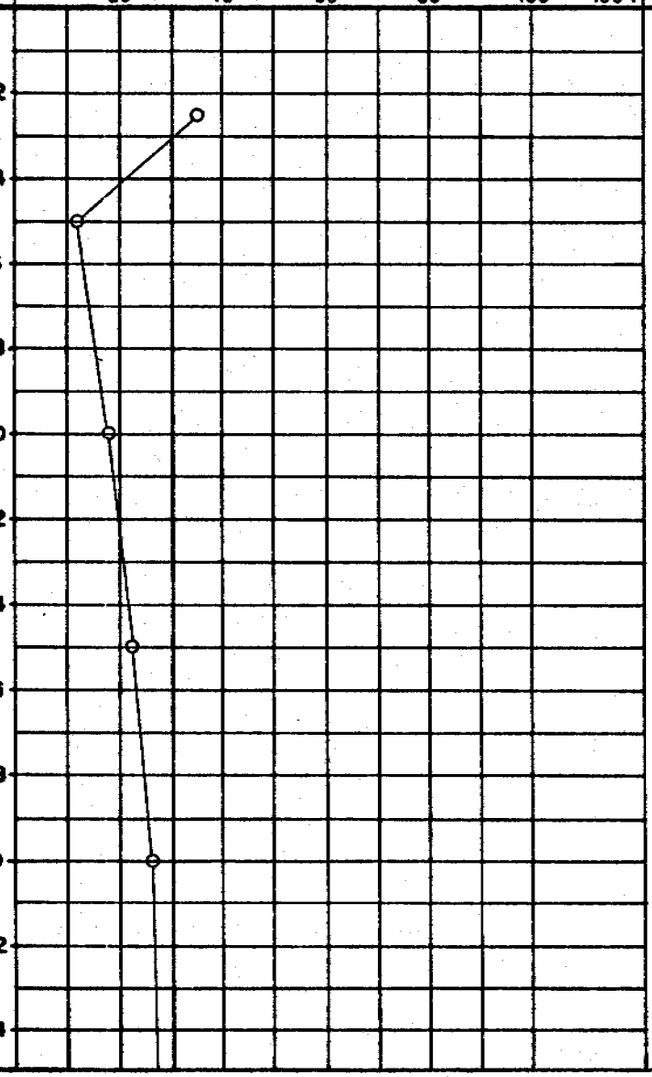
DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 24/2/73 | AIRPHOTO NO: A22774 - 55 | CHAINAGE: 3449 + 25 | OFFSET

CKD: LAB | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Good to N. | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
659	S	2

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SP	GRAVEL - Med. Brown - Sandy - Poorly Graded - Dense - Trace of Silt and Clay		
4	2							
6								
8					SM	SAND - Med, brown gravelly & silty - Trace of Clay		NF to NB
10	3							
12					CI	CLAY - Grey - Some Silt - Med. Plasticity	F	
14	4					- A Few Isolated Pebbles		
16								
18								
20	5							VX 0-5%
22								
24								



GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
CLAY %	SILT %	SAND %	GRAVEL %		
8	20	55	17		

REMARKS

South bank Elliot

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

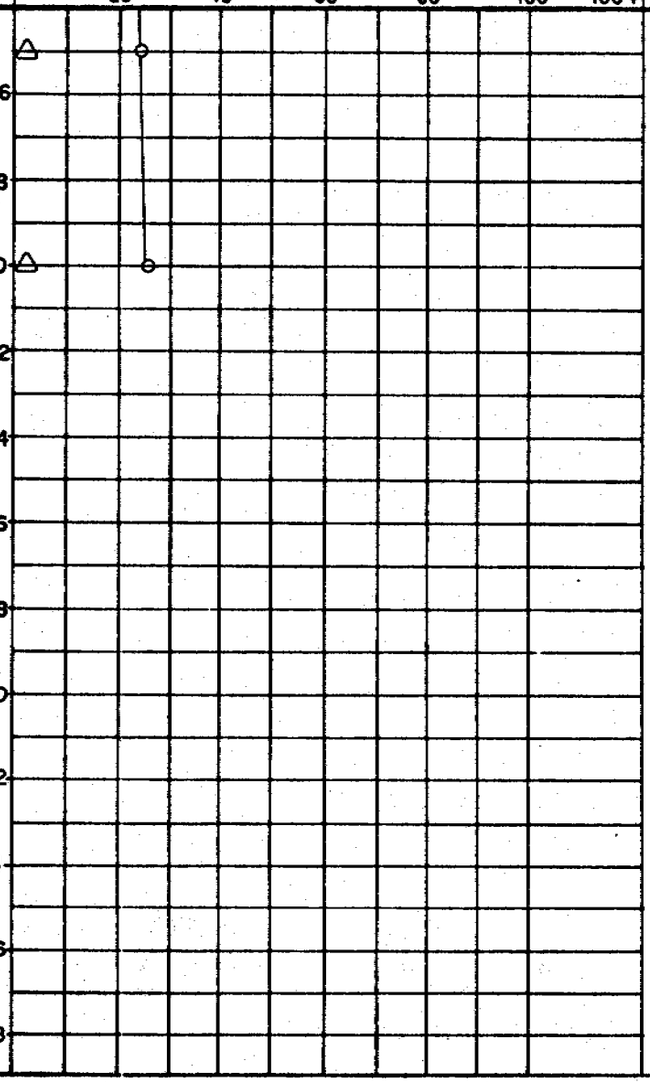
DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB	FIELD ENG: NRM	DATE DRILLED: 24/2/73	AIRPHOTO NO: A22774 - 55	CHAINAGE: 3449 + 25	OFFSET
CKD: LAB	TECH: JK	RIG: Mayhew	SURFACE DRAINAGE: Good to N.	VEGETATION: Black Spruce & Birch	ELEV

TEST HOLE

MILE	B,C,S	NUMBER
659	S	2

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
26								
28					CI	CLAY - Same	F	V-0-5%
30	6							
30						END OF HOLE 30'		
32								
34								
36								
38								
40								
42								
44								
46								
48								



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

REMARKS

Sloughing in hole. Could not drill past 30'

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

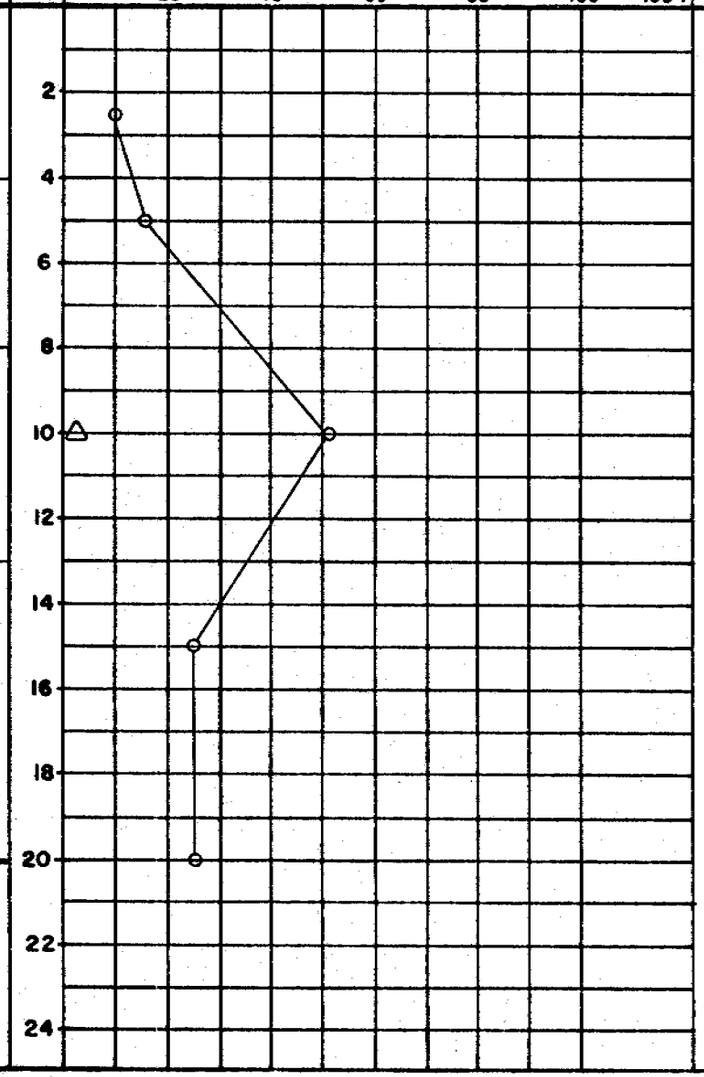
DWN: ALB | FIELD ENG: NRM | DATE DRILLED 25/2/73 | AIRPHOTO NO: A22774 - 55 | CHAINAGE: 3442 + 50 | OFFSET

CKD LAB | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Good to S. | VEGETATION: Birch & Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
659	S	3

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				GW	GRAVEL- Med. Brown - Sandy - Loose - Well Graded		NF
4								
6	2				SW to SM	SAND - Med. Brown - Silty - Gravelly, trace of silt - Dense	F	NB
8								
10	3					- Med. Brown - Some Clay - Silty - Low Plasticity		V 0-5%
12								
14	4				CI	CLAY - Grey - Silty - Med. Plasticity	U	Unfrozen
16								
18								
20	5					END OF HOLE 20'		
22								
24								



DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
10	-	3	70	27		

REMARKS

Loose Sand & Gravel Sloughing Elliot.

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 3/2/73 | AIRPHOTO NO: A22774 - 56 | CHAINAGE: 3452 + 65 (EST.) | OFFSET

CKD: LAB | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Good to N | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

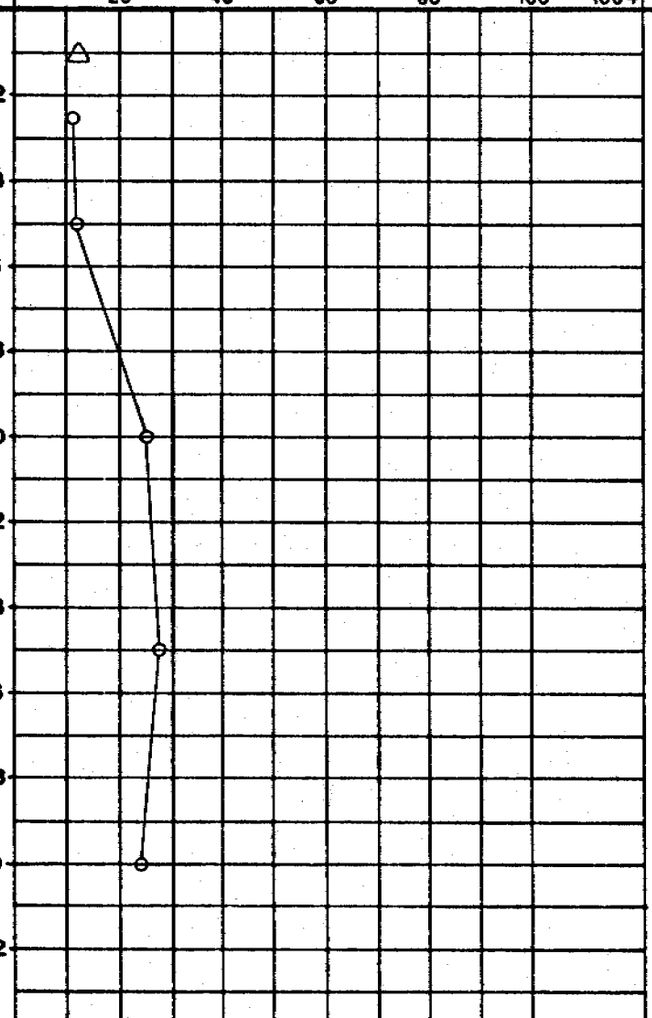
MILE	B,C,S	NUMBER
659	S	4

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					PT	PEAT - Reddish Brown - Fibrous		V 10-15%
2	1				GW	GRAVEL - Reddish Brown - Sandy, some silt - Loose - Well Graded		NF
4								
6	2							
8					SM to SP	SAND - Med. Brown - Med. Grained - Loose, Silty - Poorly Graded	F	
10	3							
12					CI	CLAY - Grey - Silty - Med. Plasticity - Trace of Fine Sand		NB
14	4							
16								
18								
20	5					END OF HOLE 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				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
CLAY %	SILT %	SAND %	GRAVEL %		
-	12	36	52		

REMARKS

Elliot Creek

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

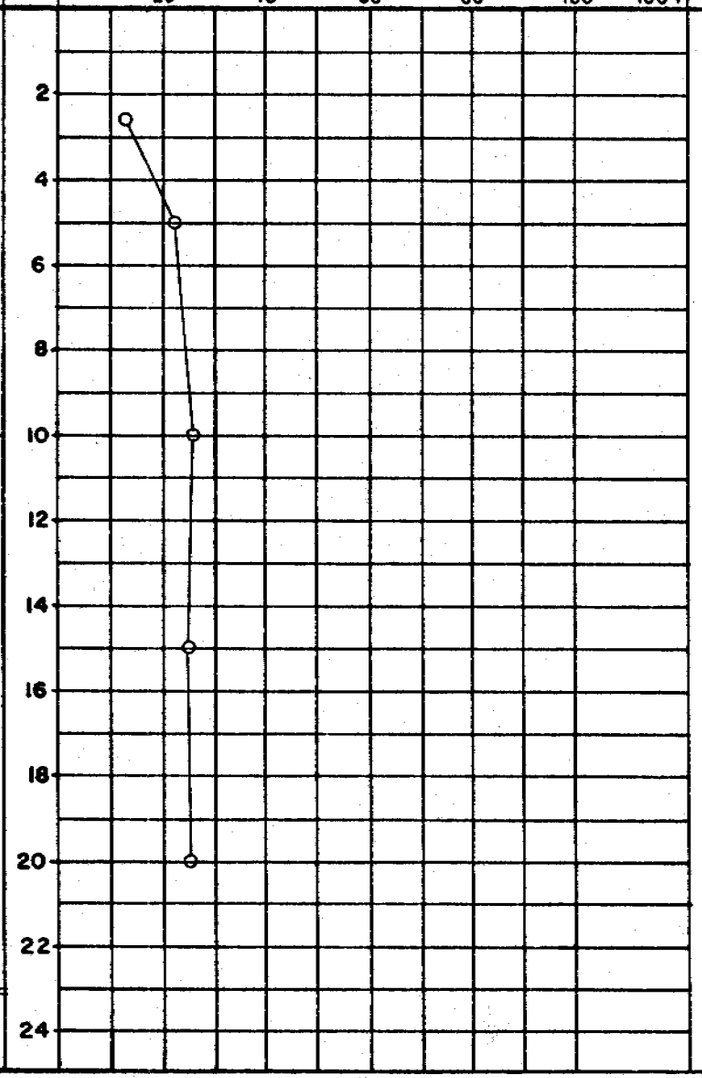
DWN: ALB | FIELD ENG: NRM | DATE DRILLED 3/2/73 | AIRPHOTO NO: A22774 - 56 | CHAINAGE: 3455 + 90 (EST.) | OFFSET

CKD: LAB | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Fair to N | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
659	S	5

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SM	SAND - Med. Brown - Med. Grained - Silty - Dense - Gravelly from 2 - 5' - Fine		NF to NB
4	2							
6								
8								
10	3				CI	CLAY - Grey - Silty - Med. Plasticity - With Some Fine Sand	F	NB
12								
14	4							
16								
18								
20	5							
22								
24						END OF HOLE 23'		



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

REMARKS

Elliot Creek

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 3/2/73 | AIRPHOTO NO: A22774 - 56 | CHAINAGE: 3451 + 60 (EST.) | OFFSET

CKD: LAB | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Good to N. | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
659	S	6

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					PT	PEAT - Reddish Brown - Fibrous	F	V - 10-15%
2	1				GP	GRAVEL - Med. Brown - Sandy - Loose - Poorly Graded		NF
4								
6	2							
8					SM	SAND - Med. Brown - Silty - Some Gravel - Fine to Med.		
10	3							
12					CI	CLAY - Grey SILT - Med. Plasticity		NB
14	4							
16								
18								
20	5							
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.)
	%	%	%	%		
	-	23	68	9		

REMARKS

Elliot Creek

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 3/2/73 | AIRPHOTO NO: A22774 - 56 | CHAINAGE: 3451 + 60 (EST.) | OFFSET

CKD: LAB | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Good to N. | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
659	S	6

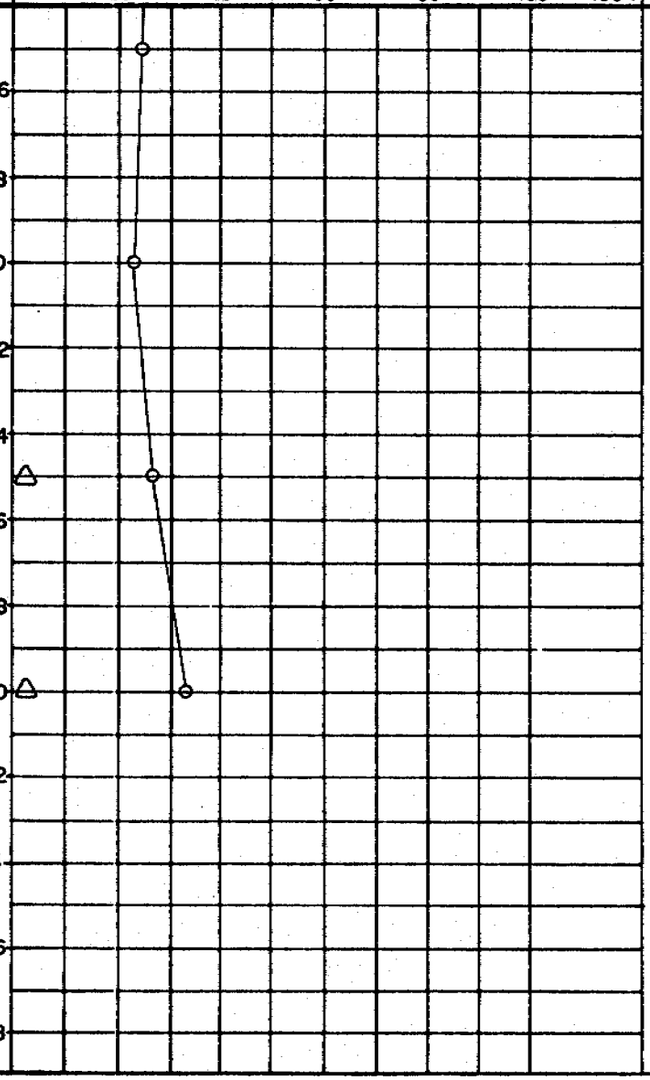
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
26	7					CLAY SILT - Same		NB
28								
30	8				CI		F	
32								
34								
36	9							V - 0-5%
38								
40	10							
42								
44						END OF HOLE 43'		
46								
48								

DEPTH (FEET)

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

PLASTIC LIMIT — LIQUID LIMIT

20 40 60 80 100 100+



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

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

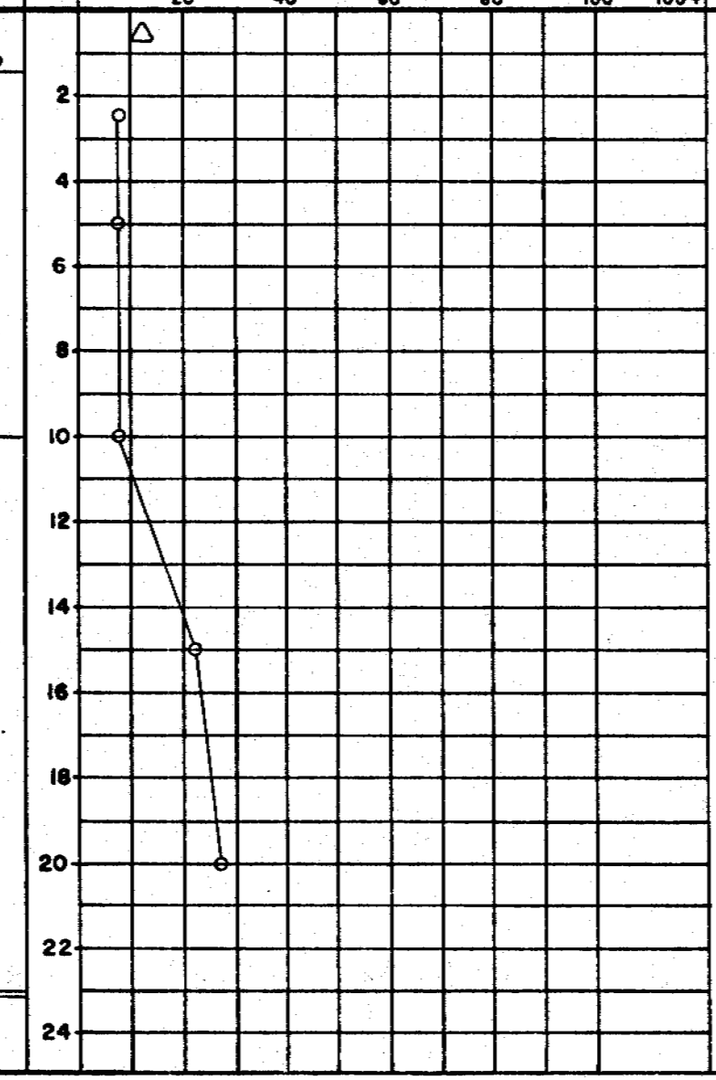
DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 3/2/73 | AIRPHOTO NO: A22774 - 56 | CHAINAGE: 3450 + 55 (EST.) | OFFSET
CKD: LAB | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Good to N | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
659	S	7

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					PT	PEAT - Reddish Brown - Fibrous		V.- 10-15%
2	1				GP to SP	GRAVEL- Med. Brown SAND - Loose - Poorly Graded		NF
4								
6	2							
8								
10	3				SP	SAND - Med. Brown - Fine, Uniform - Dense	F	
12					CI	CLAY - Grey - Silty - Med. Plasticity		NB
14	4							
16								
18								
20	5							
22								
24						END OF HOLE 23'		



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

REMARKS

Elliot Creek

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 3/2/73 | AIRPHOTO NO: A22774 - 56 | CHAINAGE: 3447 + 55 (EST.) | OFFSET

CKD: LAB | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Good to S | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
659	S	8

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				GP	GRAVEL - Med. Brown - Loose - Med. to Coarse Sand - Poorly Graded	F	NF
4								
6					CL	CLAY - grey, silty, med. plastic		NB
8								
10								
12								
14						END OF HOLE 5' (Loose gravel sloughing into hole)		
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+

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

REMARKS

Elliot Creek

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 3/7/73 | AIRPHOTO NO: A22774 - 56 | CHAINAGE: 3447 + 10 (EST.) | OFFSET

CKD: LAB | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Good to S | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
659	S	9

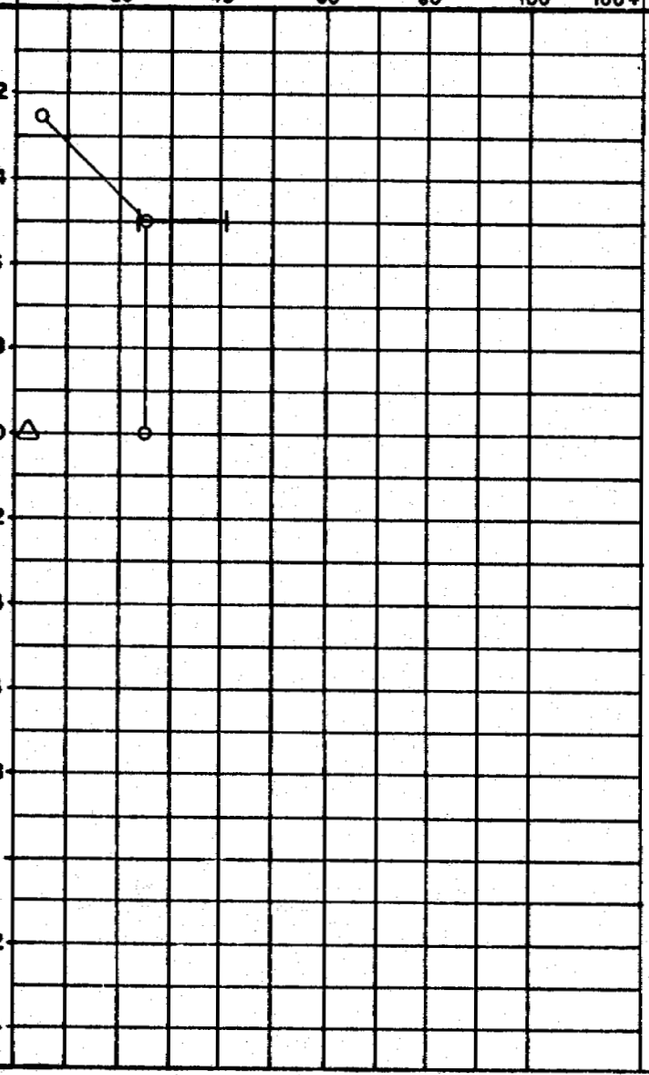
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				GP	GRAVEL- Med. Brown - Loose - Sandy - Poorly Graded		NF
4	2				CI	CLAY - Grey, Silty - Med. Plasticity	F	NB
10	3							V 0 - 5%
14						END OF HOLE 13'		

DEPTH (FEET)

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

PLASTIC LIMIT — LIQUID LIMIT

20 40 60 80 100 100+



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

REMARKS

Elliot Creek

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 3/2/73 | AIRPHOTO NO: A22774 - 56 | CHAINAGE: 3444 + 95 (EST.) | OFFSET

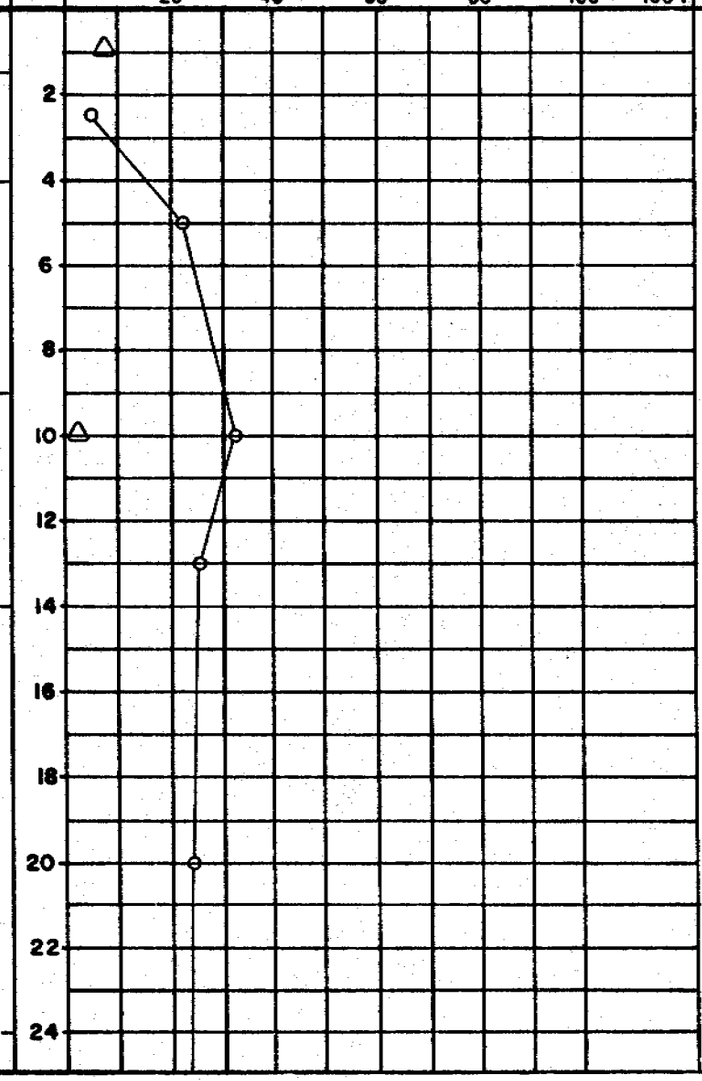
CKD: LAB | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Good to S | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
659	S	10

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					PT	PEAT - Reddish Brown - Silty, Fibrous		V 5 - 10%
2	1				SD to SM	SAND - Med. Brown - Loose - Gravelly - Poorly Graded		NF
4	2					- Med. Brown - Silty - Fine - Dense - Uniform		NB
8								
10	3				CI	CLAY - Grey - Silty - Med. Plasticity	F	V 0 - 5%
12								
14	4							NB
16								
18								
20	5							
22								
24								



DEPTH (FEET)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
0						
2						
4						
6						
8						
10						
12						
14						
16						
18						
20						
22						
24						

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB	FIELD ENG: NRM	DATE DRILLED: 3/2/73	AIRPHOTO NO: A22774 - 56	CHAINAGE: 3444 + 95 (EST.)	OFFSET	TEST HOLE
CKD: LAB	TECH: JK	RIG: Mayhew	SURFACE DRAINAGE: Good to S	VEGETATION: Black Spruce & Birch	ELEV:	MILE: 659 / B,C,S: S / NUMBER: 10

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
26	6				CI	CLAY - Same	F	NB
28						END OF HOLE 28'		

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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 5/2/73 | AIRPHOTO NO: A22774 - 56 | CHAINAGE: 3443 + 65 (EST.) | OFFSET

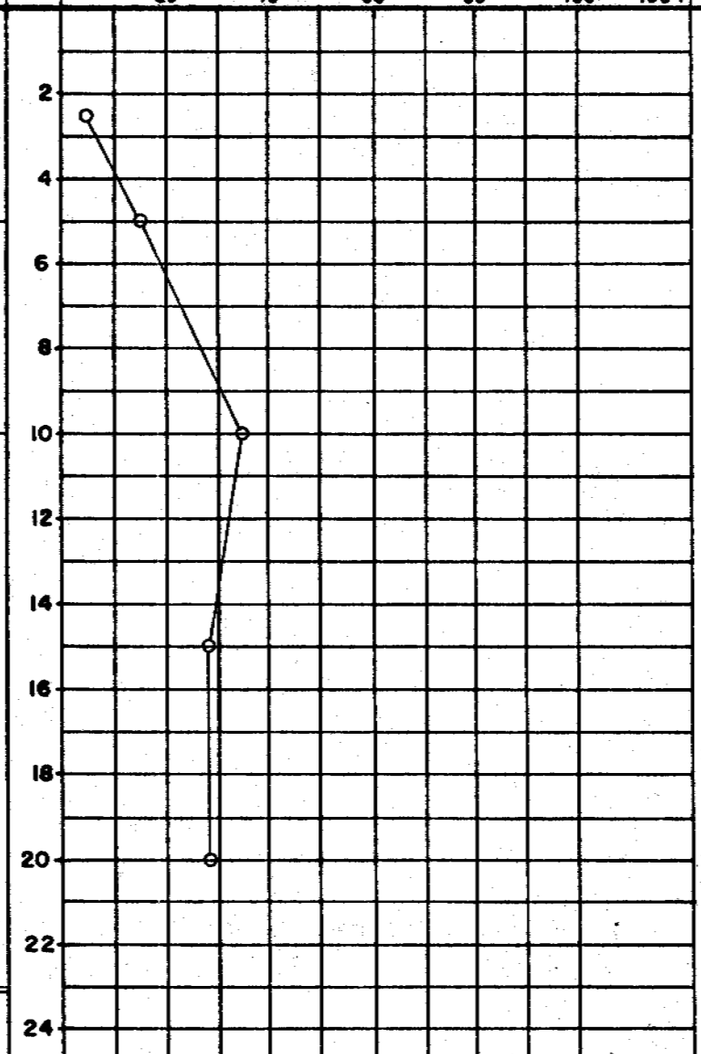
CKD: LAB | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Good to S. | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
659	S	11

REMARKS: Elliot Creek

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SP to SM	SAND - Med. Brown - Gravelly - Loose - Poorly Graded	F	NF
4								
6	2					- Med. Brown - Medium - Silty - Dense - Some Gravel		NF to NB
8								
10	3				CL to CI	CLAY - Grey - Silty - Low - Med. Plasticity		NB
12								
14	4							
16								
18								
20	5					- Trace of Fine Sand		
22								
24						END OF HOLE 23'		



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 3/2/73 | AIRPHOTO NO: A22774 - 53 | CHAINAGE: 3616 + 77 | OFFSET

CKD: GRG | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Creek Bed | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
658	S	1A

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
						ICE		ICE
2	1				CI	CLAY - Med. Brown - Some Silt - Med. Plasticity - Free Water	U.	Unfrozen
4								
6						END OF HOLE 5'		
8								
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+

210%

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

REMARKS

Creek Bed Water @ 2'

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

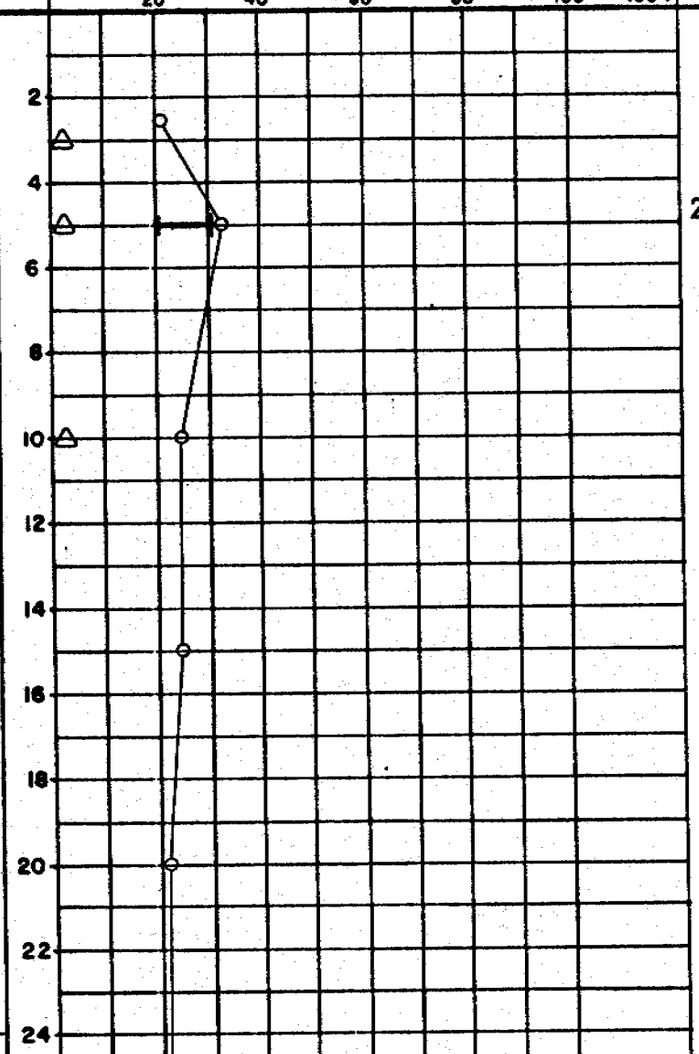
DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB	FIELD ENG: NRM	DATE DRILLED 24/2/73	AIRPHOTO NO: A22774 - 53	CHAINAGE: 3517 + 20	OFFSET
CKD: GRG.	TECH: JK	RIG: Mayhew	SURFACE DRAINAGE: Good to N.	VEGETATION: Black Spruce & Birch	ELEV:

TEST HOLE		
MILE	B,C,S	NUMBER
658	S	1

REMARKS: South Bank of Small Stream

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				ML	SILT - Med. Brown - Trace of Fine Sand - Clayey	F	V- 0-5%
4	2							
6								
8								
10	3					- Grey		
12								
14	4							NB
16								
18								
20	5					- Clayey, Low Plasticity		
22								
24								



GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
CLAY %	SILT %	SAND %	GRAVEL %		
24	74	2	-		

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB	FIELD ENG: NRM	DATE DRILLED: 24/2/73	AIRPHOTO NO: A22774 - 53	CHAINAGE: 3517 + 20	OFFSET
CKD: GRG.	TECH: JK	RIG: Mayhew	SURFACE DRAINAGE: Good to N.	VEGETATION: Black Spruce & Birch	ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
658	S	1

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
26					ML	SILT	F	NB
28	6					- Sandy With Clay		
						END OF HOLE 28'		
30								
32								
34								
36								
38								
40								
42								
44								
46								
48								

DEPTH (FEET)

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

PLASTIC LIMIT — LIQUID LIMIT

20 40 60 80 100 100+

26 28 30 32 34 36 38 40 42 44 46 48

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

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

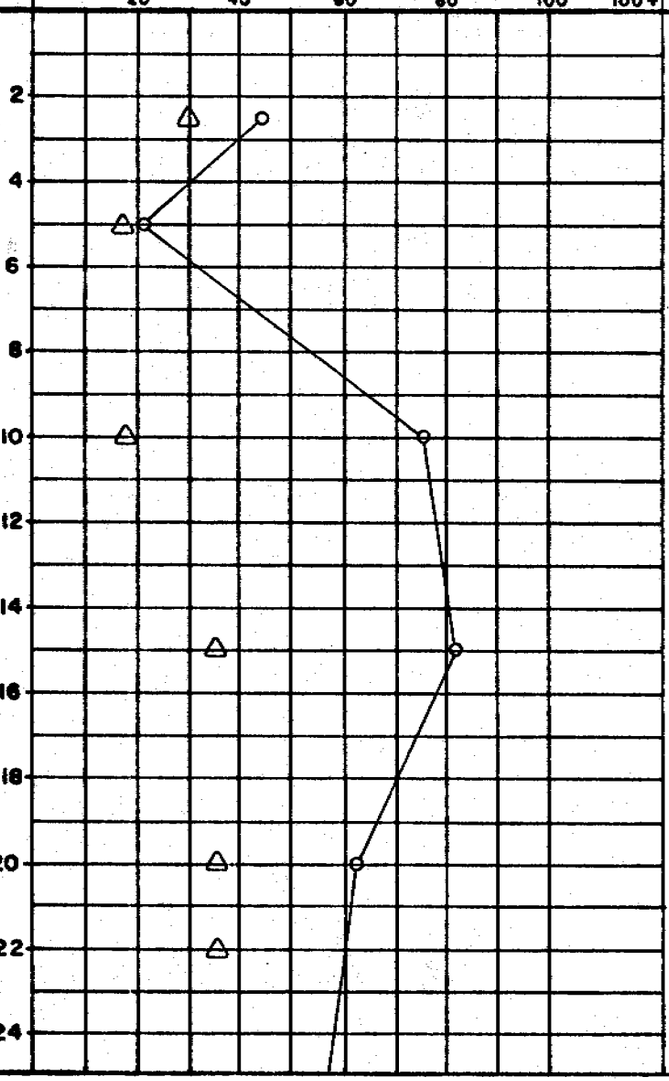
DWN: ALB | FIELD ENG: NRM | DATE DRILLED 25/2/73 | AIRPHOTO NO: A22774 - 53 | CHAINAGE: 3557 + 20 (EST.) | OFFSET

CKD GRG | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Fair to S | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
657	S	1

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				OL	ORGANIC SILT - Clayey		V 25 - 30
4	2				CL	CLAY - Med. Greyish Brown SILT - Low Plasticity (TILL) - Trace of Sand	F	V 15 - 20
10	3							
12								
14	4				CL to CI	CLAY - Grey SILT - Low to Med. Plasticity		
16								
18								
20	5							V 30 - 40%
22								
24								



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

REMARKS

50' North of North Bank

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

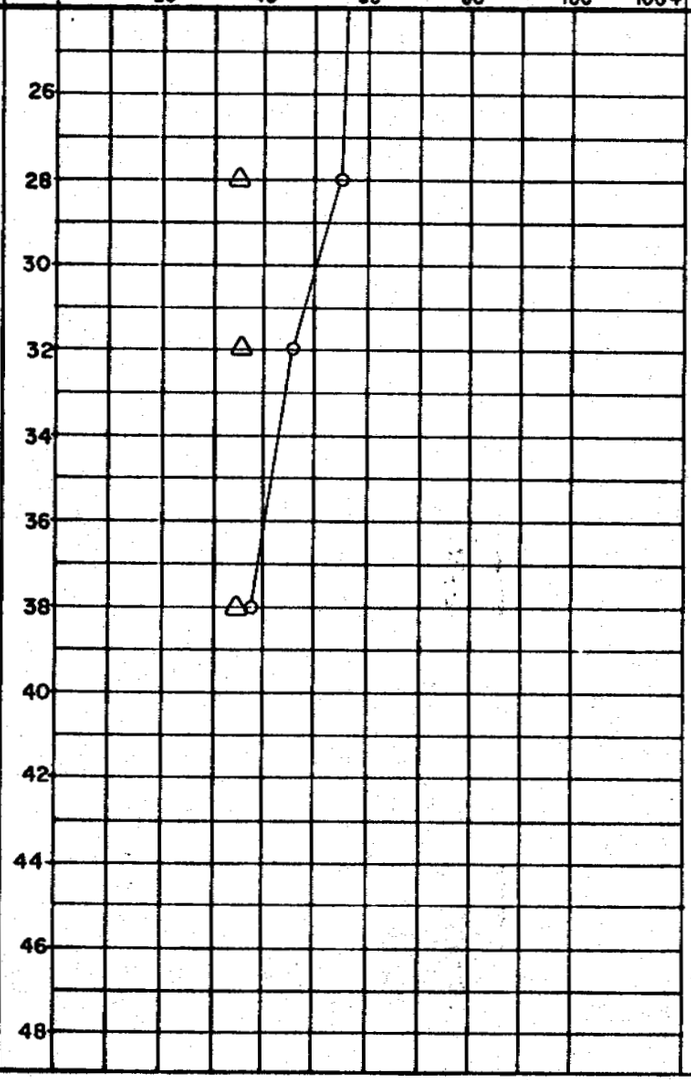
DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 25/2/73 | AIRPHOTO NO: A22774 - 53 | CHAINAGE: 3557 + 20 (EST.) | OFFSET

CKD: GRG | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Fair to S | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE		
MILE	B,C,S	NUMBER
657	S	1

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
26					CL to CI	CLAY SILT - same	F	V 30 - 40%
28	6							
30								
32	7							
34								
36								
38	8							
38						END OF HOLE 38'		
40								
42								
44								
46								
48								



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

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB	FIELD ENG: NRM	DATE DRILLED 25/2/78	AIRPHOTO NO: A22774 - 53	CHAINAGE: 3562 + 00	OFFSET
CKD GRG	TECH: JK	RIG: Mayhew	SURFACE DRAINAGE: Good to N.	VEGETATION: Black Spruce & Birch	ELEV:

TEST HOLE MVPL17

MILE	B,C,S	NUMBER
657	S	2

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				CL to CI	CLAY - Grey, Some Med. SILT Sand - Low to Med. Plasticity	F	V 35 - 40%
4	2							
6								
8								
10	3					- Black		
12								
14	4							
16								
18					CI	CLAY - Silty, Grey, Med. Plasticity		V 50 - 60%
20	5							V 15 - 20%
22								
24								

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

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

GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
CLAY %	SILT %	SAND %	GRAVEL %		
23	62	15	-		

REMARKS

South Bank

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

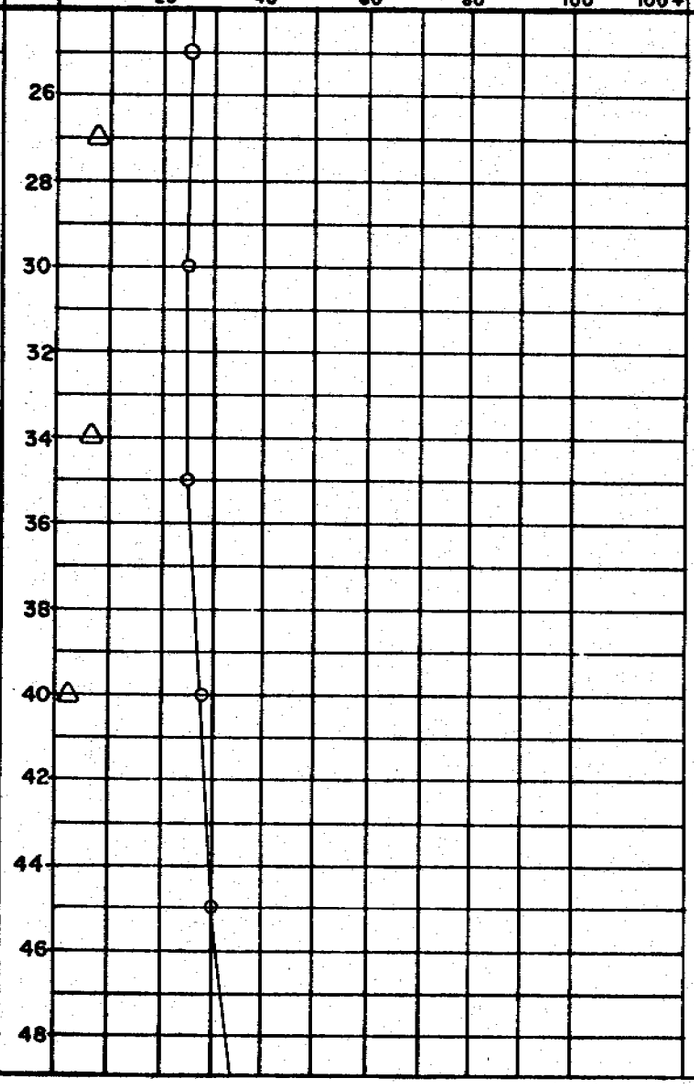
DWN: ALB | FIELD ENG: NRM | DATE DRILLED 25/2/73 | AIRPHOTO NO: A22774 - 53 | CHAINAGE: 3562 + 00 | OFFSET

CKD: GRG | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Good to N. | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE MVPL17

MILE	B,C,S	NUMBER
657	S	2

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
26	6				CL to CI	CLAY - same	F	V 15 - 20 V- 5-10% V- 0-5%
28								
30	7							
32								
34	8							
36								
38								
40	9							
42								
44								
46								
48								



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

REMARKS

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 25/2/73 | AIRPHOTO NO: A22774 - 53 | CHAINAGE: 3562 + 00 | OFFSET

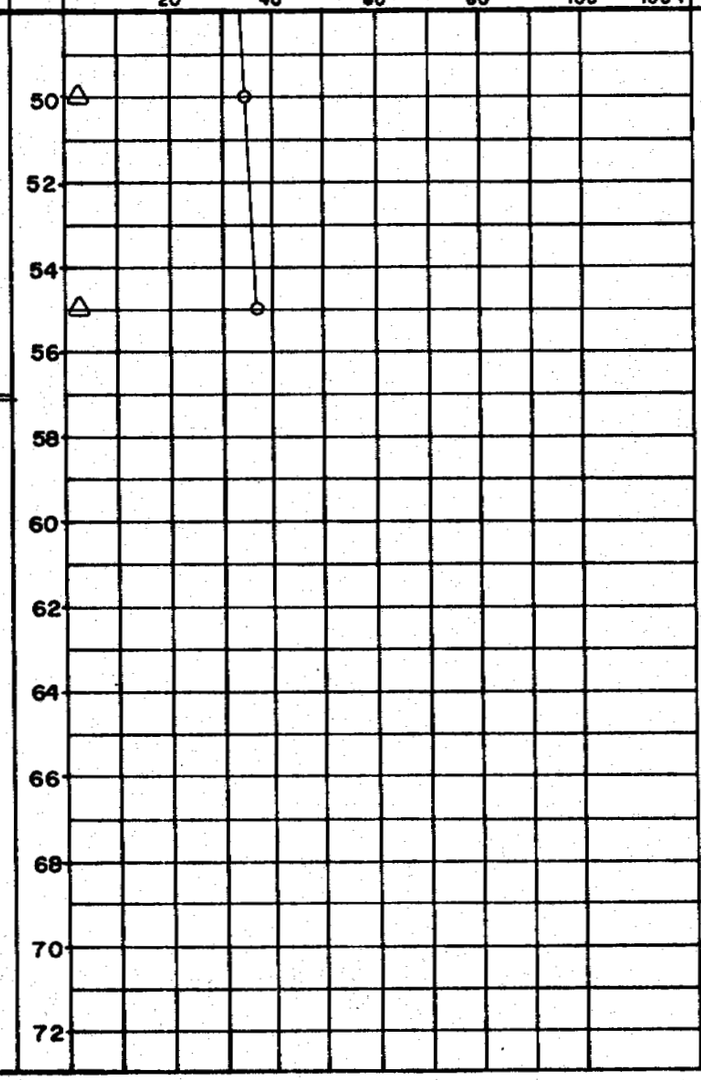
CKD: GRG | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Good to N. | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
657	S	2

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
50	11				CL to CI	CLAY - same	F	V-0-5%
52								
54	12							
56								
58						END OF HOLE 57'		
60								
62								
64								
66								
68								
70								
72								



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

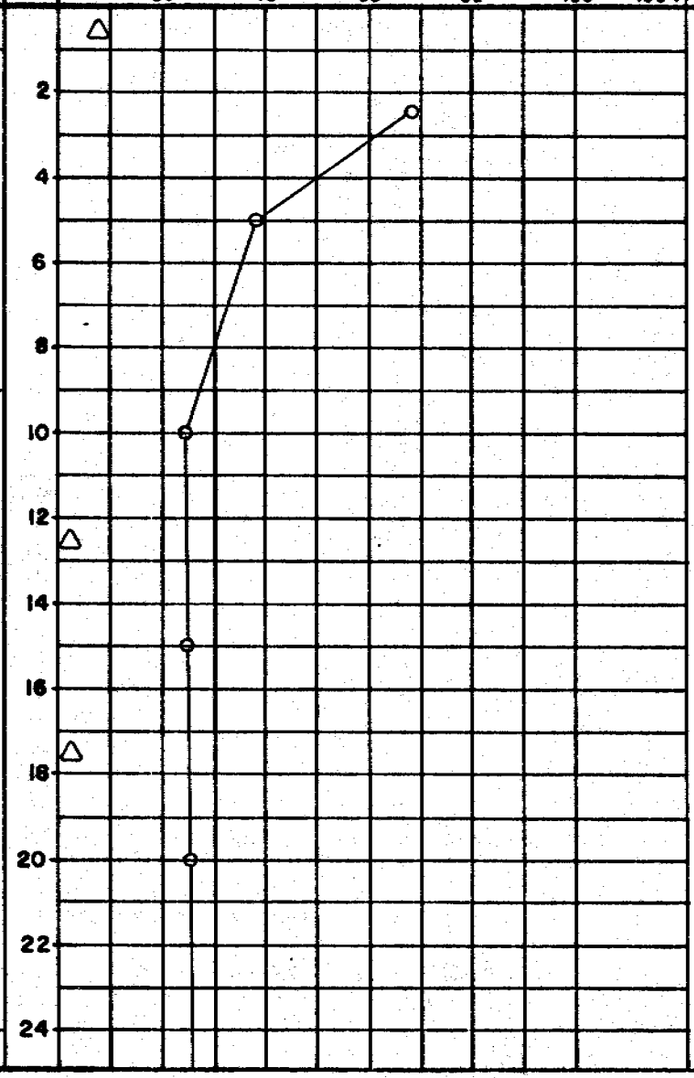
DWN: ALB	FIELD ENG: NRM	DATE DRILLED 25/2/73	AIRPHOTO NO: A22763 - 82	CHAINAGE: 3621 + 30	OFFSET
CKD: GRG	TECH: JK	RIG: Mayhew	SURFACE DRAINAGE: Good to S.	VEGETATION: Black Spruce & Birch	ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
656	S	1

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
0					PT	PEAT - Black, Fibrous	F	V- 5-10%
2	1				SM	SAND - Med. Brown - Fine - Uniform - Dense - Silty		NF to NB
4								
6	2							
8								
10	3				ML	SILT - Grey - Clayey - Some Sand - Low Plasticity		V. 0 - 5%
12								
14	4							
16								
18								
20	5							
22								
24								



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

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB	FIELD ENG: NRM	DATE DRILLED 25/2/73	AIRPHOTO NO: A22763	CHAINAGE: 3621 + 30	OFFSET
CKD: GRG	TECH: JK	RIG: Mayhew	SURFACE DRAINAGE: Good to S	VEGETATION: Black Spruce & Birch	ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
656	S	1

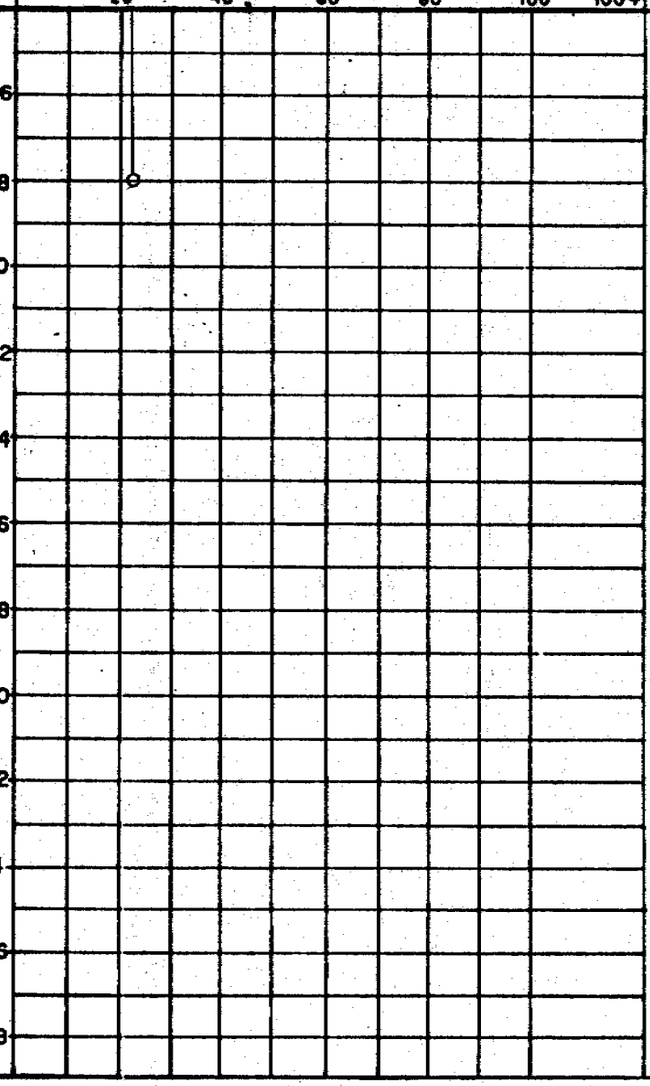
DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
26					ML	Silt	F	V
						– same		0–5%
28	6					END OF HOLE 28'		
30								
32								
34								
36								
38								
40								
42								
44								
46								
48								

DEPTH (FEET)

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

PLASTIC LIMIT — LIQUID LIMIT

20 40 60 80 100 100+



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

REMARKS

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

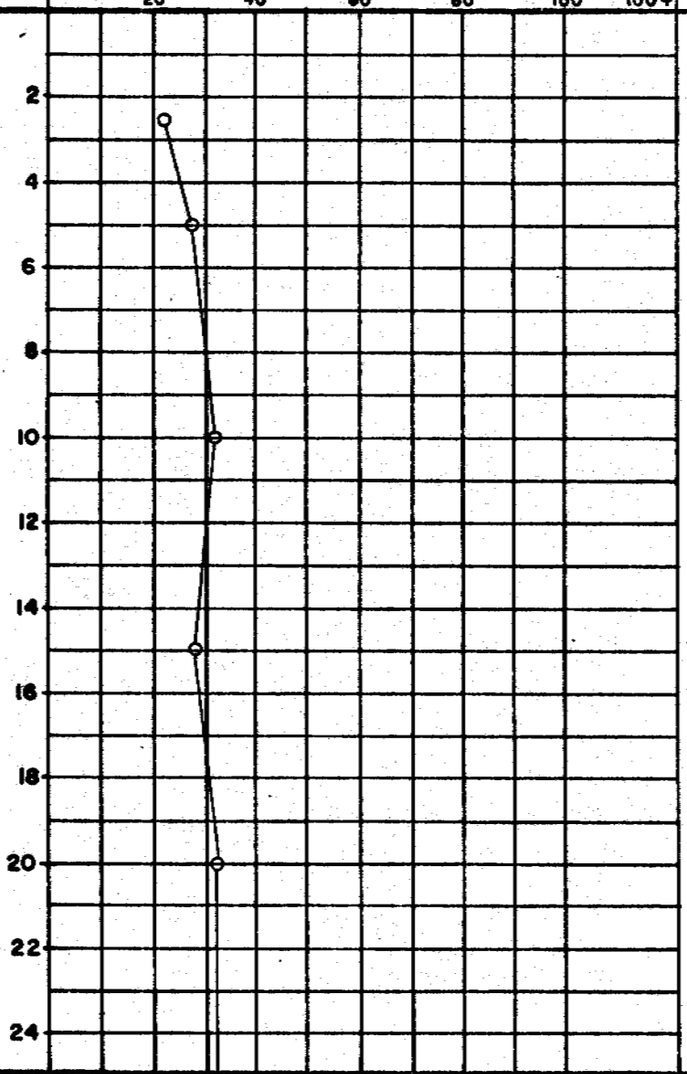
DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 25/2/7 | AIRPHOTO NO: A22763 - 80 | CHAINAGE: 3702 + 15 | OFFSET

CKD: GRG | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce | ELEV:

TEST HOLE MVPL18

MILE	B,C,S	NUMBER
655	S	1

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SP	SAND - Med. Brown - Fine - Some Silt - Uniform - Dense - Greyish Brown		
4	2							
6								
8						- Silty		
10	3				SM		F	NF to NB
12								
14	4							
16								
18								
20	5					- Grey Brown		
22								
24								



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

REMARKS

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

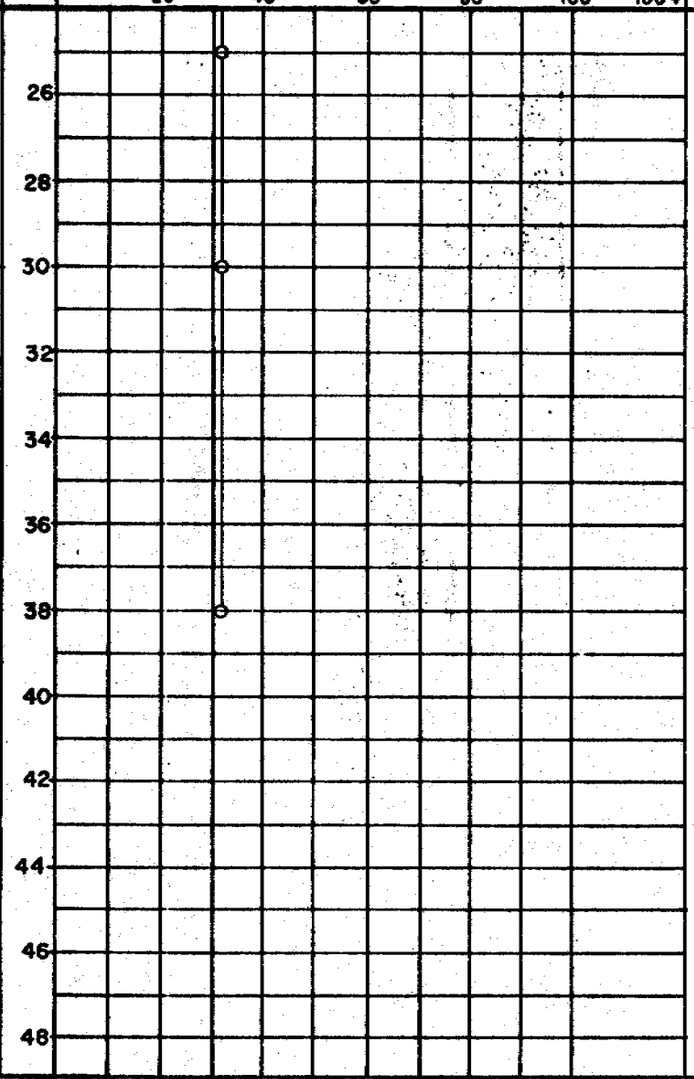
DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB	FIELD ENG: NRM	DATE DRILLED: 25/2/73	AIRPHOTO NO: A22763 - 80	CHAINAGE: 3702 + 15	OFFSET
CKD: GRG	TECH: JK	RIG: Mayhew	SURFACE DRAINAGE: Poor	VEGETATION: Black Spruce	ELEV:

TEST HOLE MVPL18

MILE	B,C,S	NUMBER
655	S	1

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
26	6				SM	SAND - same	F	NF to NB
30	7				ML	SILT - Med. Brown - Sandy - Some Clay - Low Plasticity		NB
38	8					END OF HOLE 38'		



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

REMARKS

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

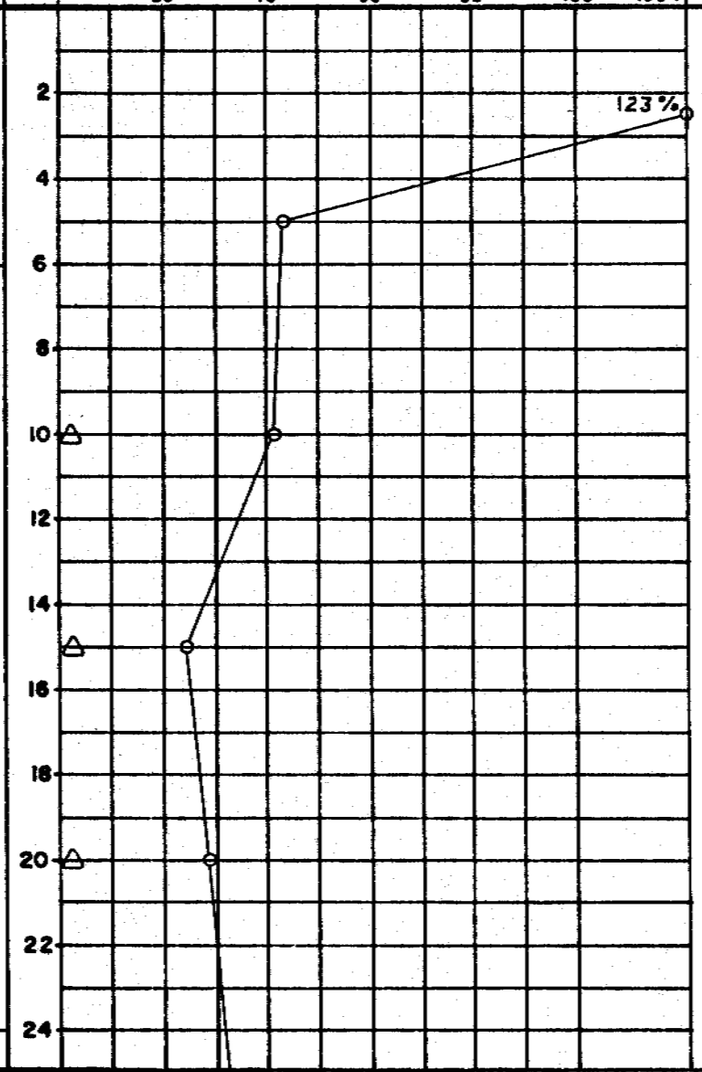
DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB	FIELD ENG: NRM	DATE DRILLED 8/3/73	AIRPHOTO NO: A22774 - 44	CHAINAGE: 3883 + 00 (est.)	OFFSET
CKD GRG	TECH: TJ	RIG: Mayhew	SURFACE DRAINAGE: Good to S.	VEGETATION: Thick Spruce 25 - 30'	ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
651	S	1

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				OL to ML	SILT - Grey-Brown - Non-Plastic - Some Organic		NB
6	2				CL to CI	CLAY - Grey-Brown - Silty - Low - Med. Plastic	F	V 0 - 5%
10	3							
14	4							
20	5							
24								



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

REMARKS

Bottom of Ravine

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB	FIELD ENG: NRM	DATE DRILLED: 8/3/73	AIRPHOTO NO: A22774 - 44	CHAINAGE: 3883 + 00 (EST.)	OFFSET:	TEST HOLE: MILE 651 / B,C,S S / NUMBER 1
CKD: GRG	TECH: TJ	RIG: Mayhew	SURFACE DRAINAGE: Good to S.	VEGETATION: Thick Spruce 25 - 30'	ELEV:	

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
26	6				CL to CI	CLAY - Same	F	V 0-5%
28	7					END OF HOLE 28'		

○ = WATER CONTENT (% OF DRY WEIGHT)
△ = ICE CONTENT (% OF SAMPLE VOLUME)
PLASTIC LIMIT — LIQUID LIMIT
20 40 60 80 100 100+
26 28 30 32 34 36 38 40 42 44 46 48

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

REMARKS

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

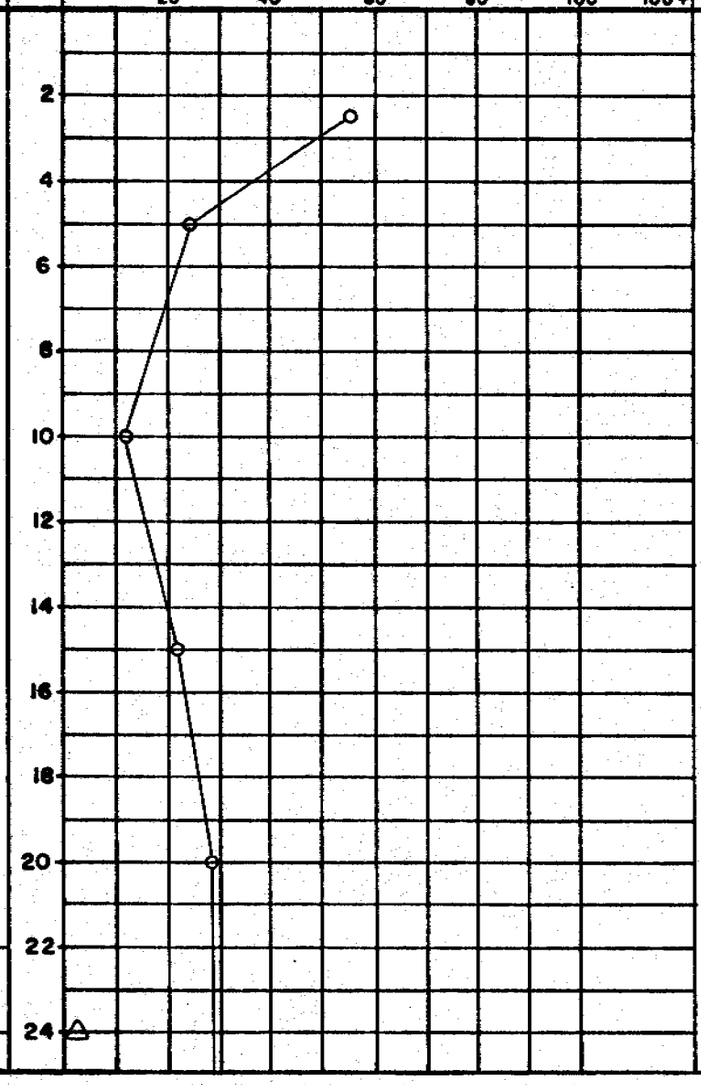
DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB	FIELD ENG: NRM	DATE DRILLED: 3/2/73	AIRPHOTO NO: A23003 - 32	CHAINAGE: 3989 + 40 (EST.)	OFFSET
CKD: LAB	TECH: JK	RIG: Mayhew	SURFACE DRAINAGE: Fair to S.	VEGETATION: Black Spruce & Birch	ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
650	S	2

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SP	SAND - Med. Brown - Medium - Dense - Uniform - With Fine Gravel	F	NB
4	2							
6					GW	GRAVEL - Med. Brown - Sandy, trace of silt - Dense - Well Graded		
8								
10	3							
12								
14	4				ML to SM	SILT - Grey - Sandy (fine) - Dense -		
16								
18								
20	5							
22					MW	- Grey, Some Clay, Low Plasticity,		V 0 - 5%
24						Sandy		



GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
-	4	26	70		

REMARKS

Oscar Creek

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

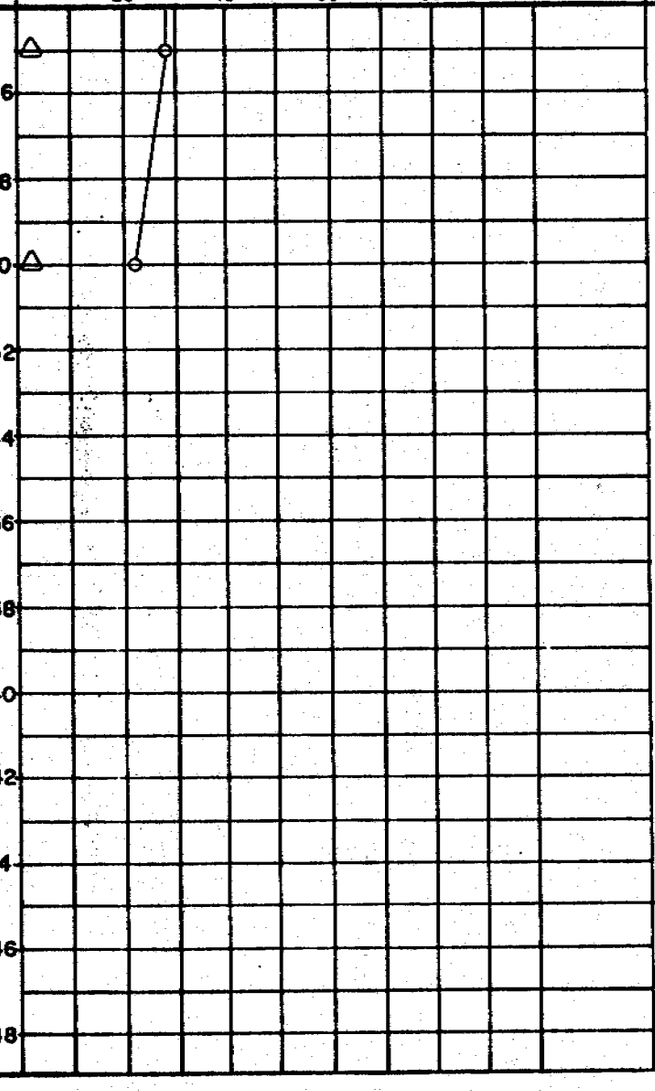
DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 3/2/73 | AIRPHOTO NO: A23003 - 32 | CHAINAGE: | OFFSET:
CKD: LAB | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Fair to N. | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
650	S	2

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
26	6				CL to CI	SILT - Clayey - Low to Med. Plasticity	F	V 0 - 5%
28								
30	7							
32								
34						END OF HOLE 34'		
36								
38								
40								
42								
44								
46								
48								



GRAIN-SIZE ANALYSIS

DEPTH (FEET)	CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
26						
28						
30						
32						
34						
36						
38						
40						
42						
44						
46						
48						

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 3/2/73 | AIRPHOTO NO: A23003 - 32 | CHAINAGE: 3990 + 40 (EST.) | OFFSET

CKD: LAB | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Fair to S. | VEGETATION: Black Spruce, & Birch | ELEV:

TEST HOLE

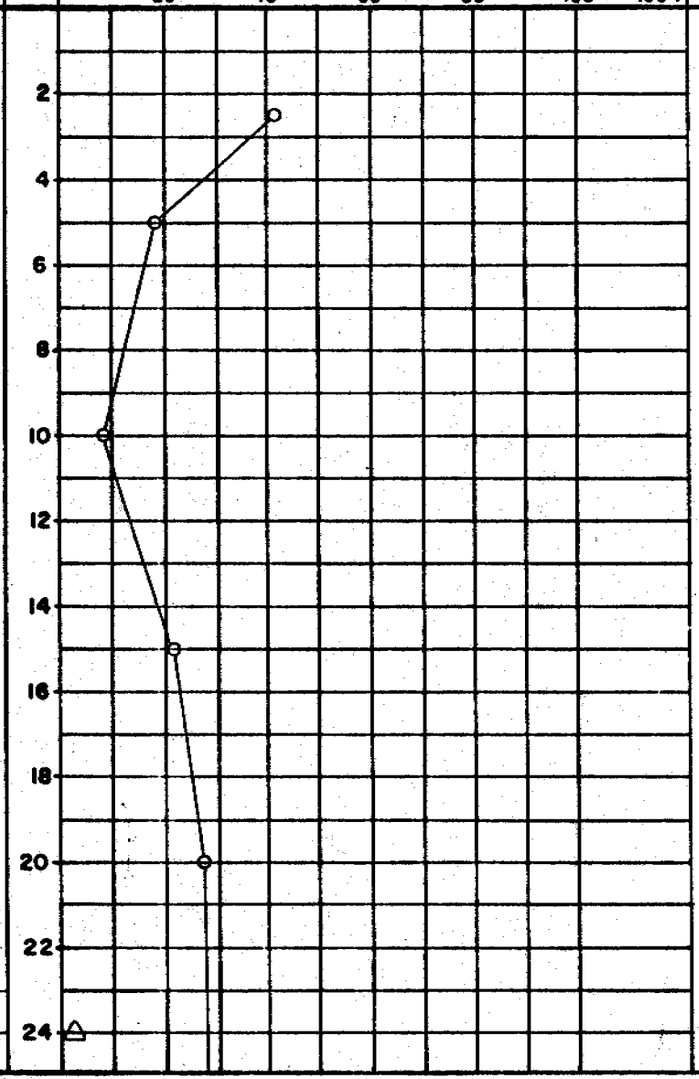
MILE	B,C,S	NUMBER
650	S	3

REMARKS: Oscar Creek

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2	1				SP	SAND - Med. Brown - Silty - Dense, Medium - Uniform		
4	2				GP	GRAVEL - Med. Brown - Sandy - Dense - Poorly Graded		NB
10	3							
14	4				ML	SILT - Grey - Sandy (Fine). - Dense - Some gravel, some clay @ 15'	F	
20	5							
24					CU	- Grey - Clayey - Low Plasticity		V-0-5%

○ = 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.)
	12	49	30	9		

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 3/2/73 | AIRPHOTO NO: A23003 - 32 | CHAINAGE: 3990 + 40 (EST.) | OFFSET

CKD: LAB | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Fair to S | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
650	S	3

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
26	6				CW	SILT - same	F	V 0 - 5%
30	7					END OF HOLE 30'		

DEPTH (FEET)

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

PLASTIC LIMIT — LIQUID LIMIT

20 40 60 80 100 100+

26 28 30 32 34 36 38 40 42 44 46 48

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

REMARKS

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

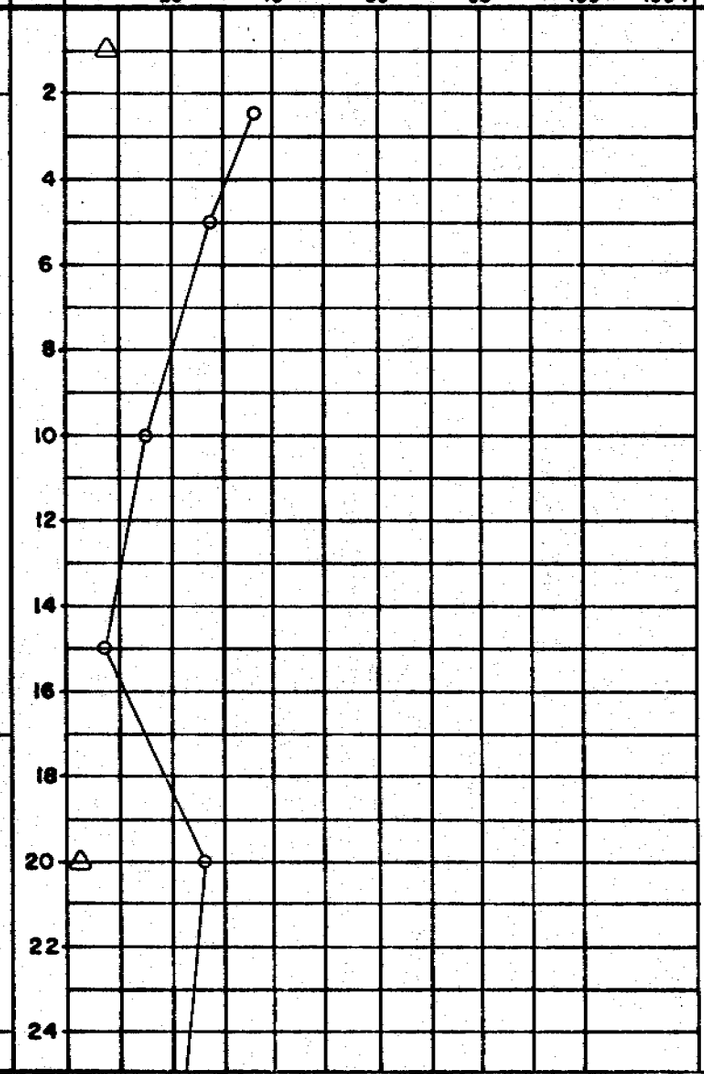
DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB	FIELD ENG: NRM	DATE DRILLED: 3/2/73	AIRPHOTO NO: A23003 - 32	CHAINAGE: 3991 + 30	OFFSET
CKD: LAB	TECH: JK	RIG: Mayhew	SURFACE DRAINAGE: Fair to S.	VEGETATION: Black Spruce & Birch	ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
650	S	4

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2					PT	PEAT - Black - Fibrous		V 5 - 10%
4	1				SM	SAND - Med. Brown - Medium - Dense -		
6	2					- Silty		
8								NB
10	3				GP	GRAVEL - Med. Brown - Sandy - Dense - Poorly Graded	F	
12								
14	4					- Grey		
16								
18					ML to CW	SILT - Grey - Clayey - Low Plasticity - Trace of Fine Sand		V 0 - 5%
20	5							
22								
24								



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

REMARKS

Oscar Creek

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED 3/2/73 | AIRPHOTO NO: A23003 - 32 | CHAINAGE: 3991 + 30 (EST.) | OFFSET
CKD: LAB | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Good to N. | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
650	S	4

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
26	6				ML to CW	SILT - same		
28								
30	7						F	V 0 - 5%
32								
34								
36	8							
38						END OF HOLE 38'		
40								
42								
44								
46								
48								

DEPTH (FEET)

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

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

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

REMARKS

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 3/2/73 | AIRPHOTO NO: A23003 - 32 | CHAINAGE: 3994 + 30 (EST.) | OFFSET
CKD: LAB | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Good to N | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
650	S	5

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2					SP	SAND - Med. Brown - Dense, Fine - Uniform		
4	1				GP	GRAVEL - Med. Brown - Dense - Sandy - Poorly Graded		NB
6	2							
8								
10	3				SP	SAND - Med. Brown - Coarse - Dense - Some Gravel	F	
12								
14	4				CL to ML	SILT - Grey - Some Clay, trace of sand - Low Plasticity		V 0 - 5%
16								
18								
20	5							
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				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
CLAY %	SILT %	SAND %	GRAVEL %		
16	79	5	-		

REMARKS

Oscar Creek

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

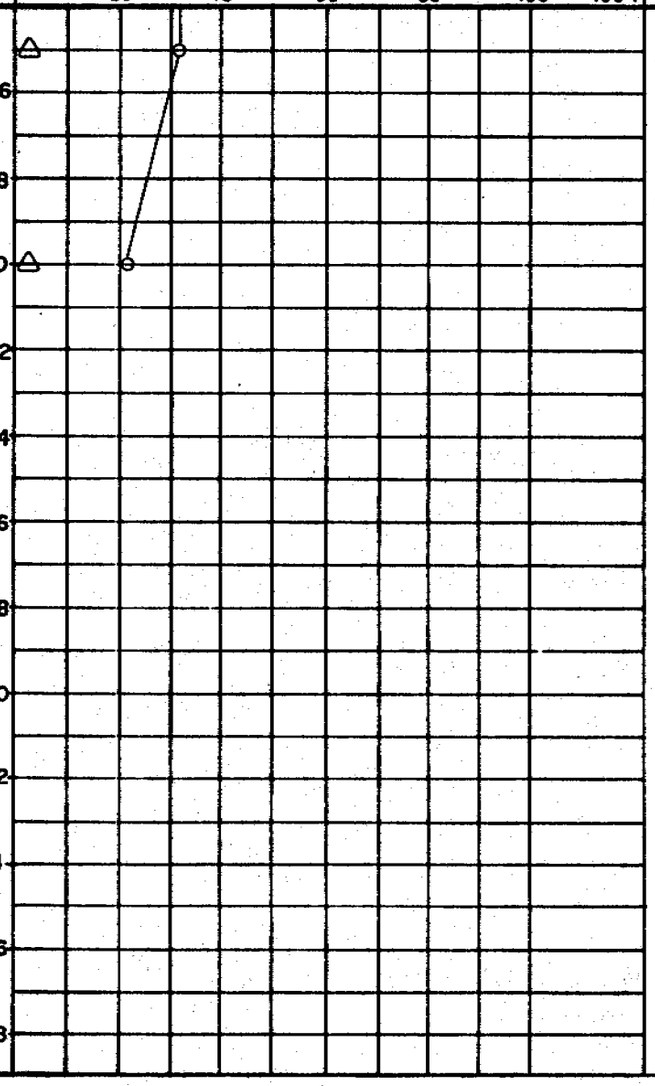
DWN: ALB	FIELD ENG NRM	DATE DRILLED 3/2/73	AIRPHOTO NO: A23003 - 32	CHAINAGE: 6994 + 30 (EST.)	OFFSET
CKD LAB	TECH JK	RIG Mayhew	SURFACE DRAINAGE: Good to N.	VEGETATION: Black Spruce & Birch	ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
650	S	5

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
26	6				ML to CW	SILT - same	F	V. 0 - 5%
28								
30	7							
32						END OF HOLE 32'		
34								
36								
38								
40								
42								
44								
46								
48								



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 3/2/73 | AIRPHOTO NO: A23003 - 32 | CHAINAGE: 3996 + 60 (EST.) | OFFSET

CKD: LAB | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Fair to N. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

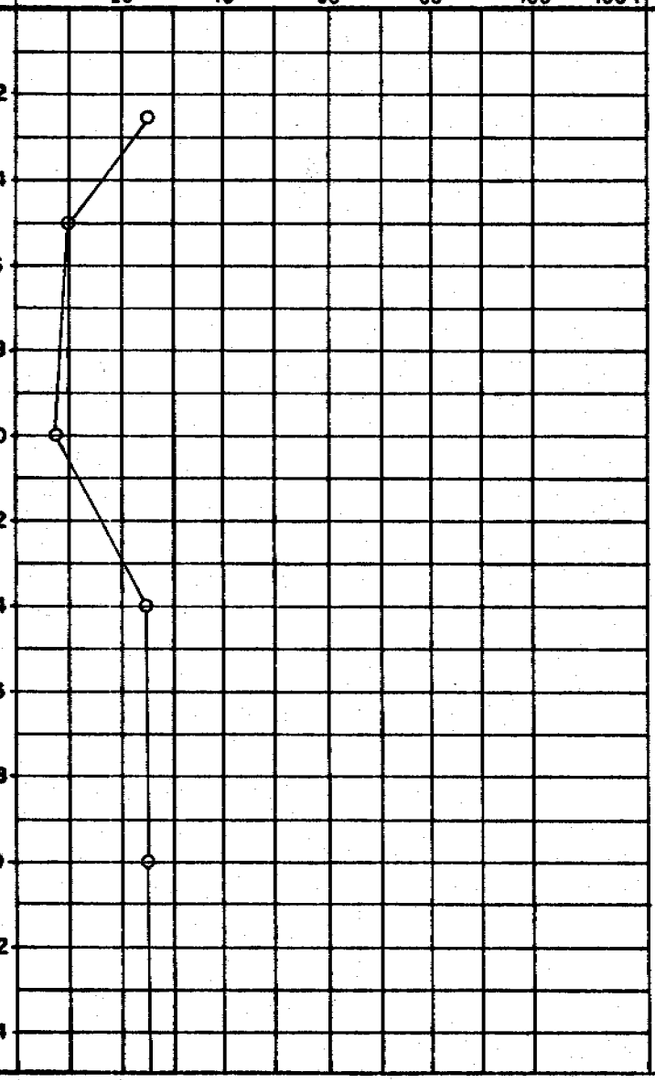
MILE	B,C,S	NUMBER
650	S	6

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2					SM	SAND - Med. Brown - Fine, Dense - Silty		NB
4	1				SP to GP	SAND - Med. Brown, GRAVEL - Coarse sand, - Dense - Poorly Graded		NF to NB
6	2							
8								
10	3							
12								
14					ML to CW	SILT - Grey - Some Clay - Low Plasticity	F	NB
16	4							
18								
20	5							
22								
24								

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

PLASTIC LIMIT — LIQUID LIMIT

20 40 60 80 100 100+



DEPTH (FEET)
2
4
6
8
10
12
14
16
18
20
22
24

GRAIN-SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)

REMARKS

Oscar Creek

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

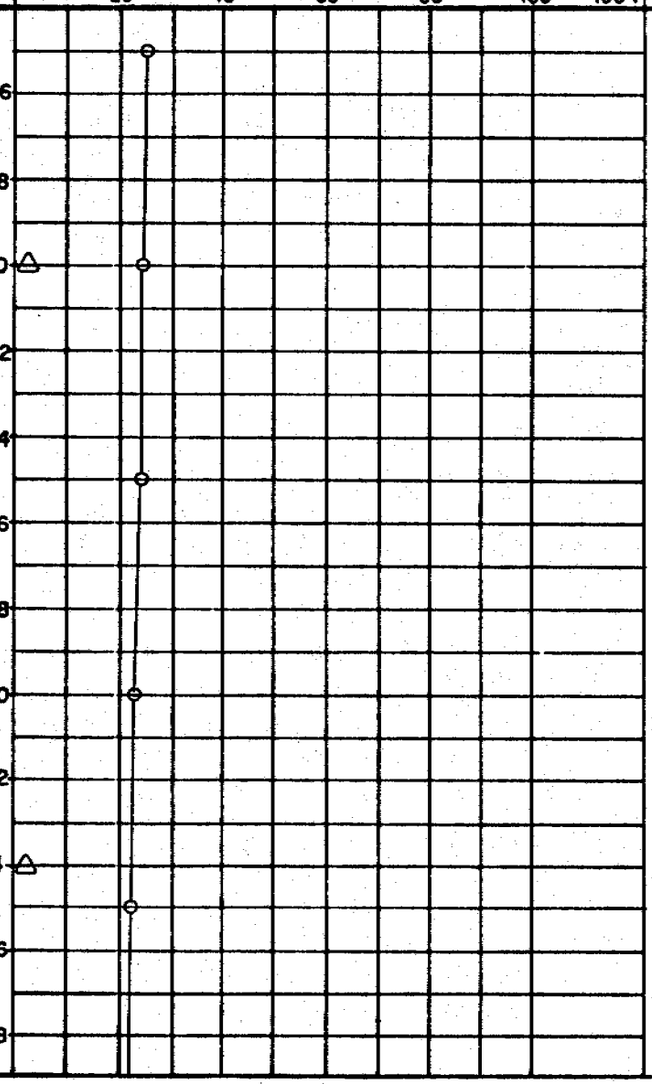
DWN: ALB	FIELD ENG: NRM	DATE DRILLED: 3/2/73	AIRPHOTO NO: A23003 - 32	CHAINAGE: 3996 + 60 (EST.)	OFFSET
CKD: LAB	TECH: JK	RIG: Mayhew	SURFACE DRAINAGE: Fair to N	VEGETATION: Black Spruce & Birch	ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
650	S	6

REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
26	6				ML to CW	SILT - same	F	NB V 0 - 5% NB NB V-0-5%
28								
30	7							
32								
34								
36	8							
38								
40	9							
42								
44	10							
46								
48								



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

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 3/2/73 | AIRPHOTO NO: A23003 - 32 | CHAINAGE: 3996 + 60 (EST.) | OFFSET
CKD: LAB | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Fair to N | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
650	S	6

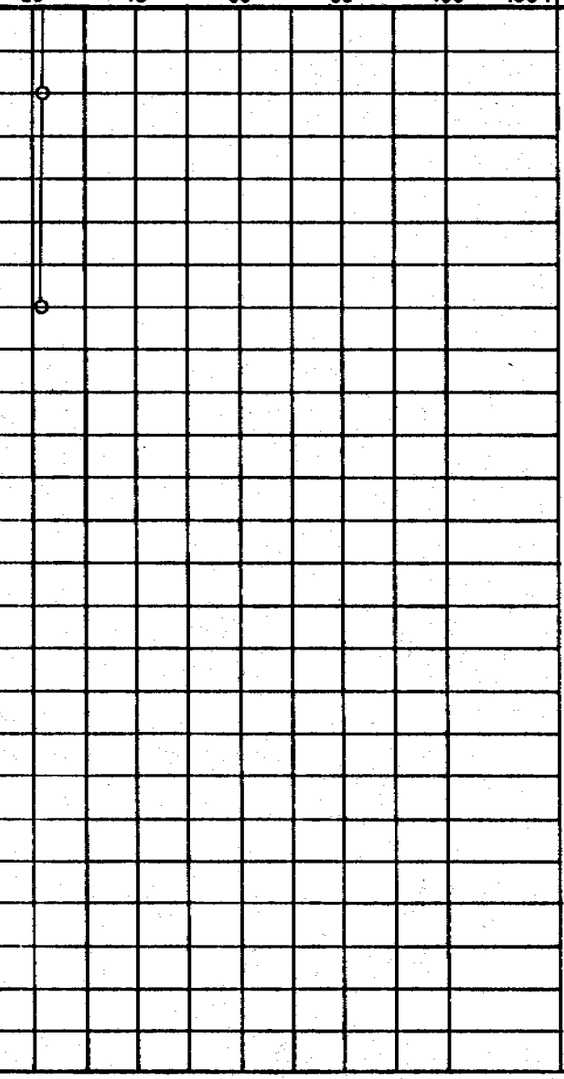
REMARKS

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
50	11				ML CW	SILT – same	F	NB
52								
54	12							
56								
58						END OF HOLE 58'		
60								
62								
64								
66								
68								
70								
72								

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

PLASTIC LIMIT ⟷ LIQUID LIMIT

20 40 60 80 100 100+



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

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

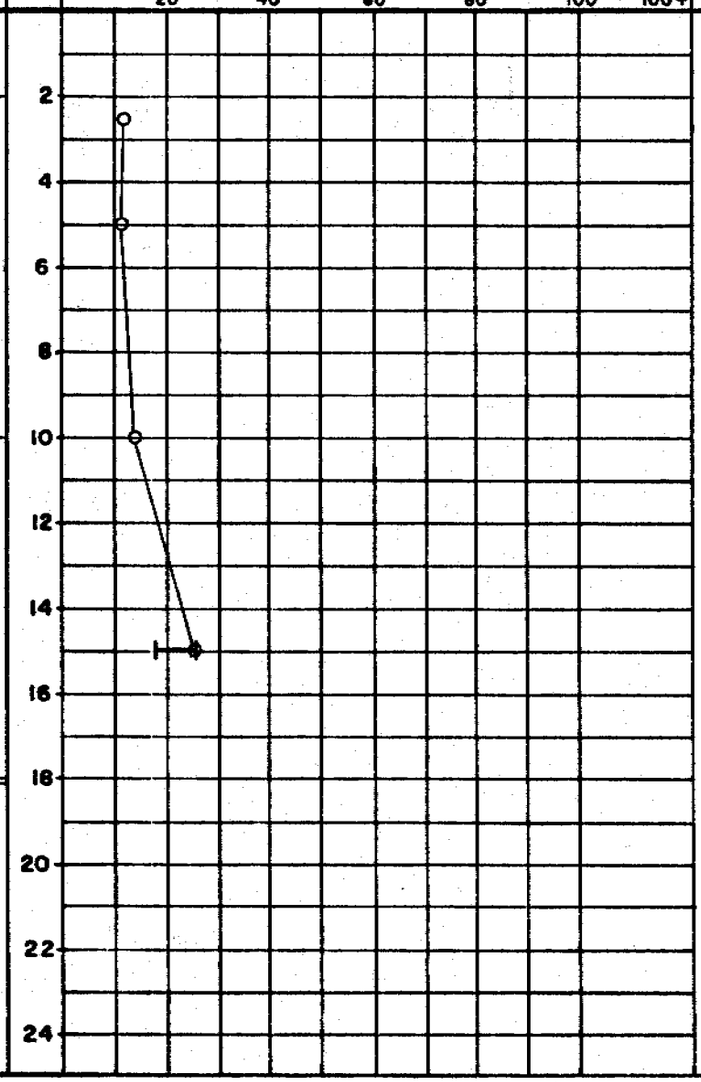
DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 3/2/73 | AIRPHOTO NO: A23003-32 | CHAINAGE: 3996 + 60 (EST.) | OFFSET: 160 EAST

CKD: LAB | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Poor | VEGETATION: Black Spruce & Birch | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
650	S	7

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2					SM	SAND - Med. Brown - Fine, Silty - Dense		NB
2	1							
4					GP	GRAVEL - Med. Brown - Sandy - Dense - Poorly Graded		NF to NB.
6	2							
8								
10	3						F	
12					ML	SILT - Grey - Some Clay - Low Plasticity		NB
14								
16	4							
18						END OF HOLE 18'		
20								
22								
24								



GRAIN-SIZE ANALYSIS					
CLAY %	SILT %	SAND %	GRAVEL %	WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
11	82	7	-	-	

REMARKS

Oscar Creek

E.W. BROOKER & ASSOCIATES LTD.

DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 3/2/73 | AIRPHOTO NO: A23003 - 32 | CHAINAGE: 3996 + 60 (EST) | OFFSET: 110' WEST

CKD: LAB | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Fair to W. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

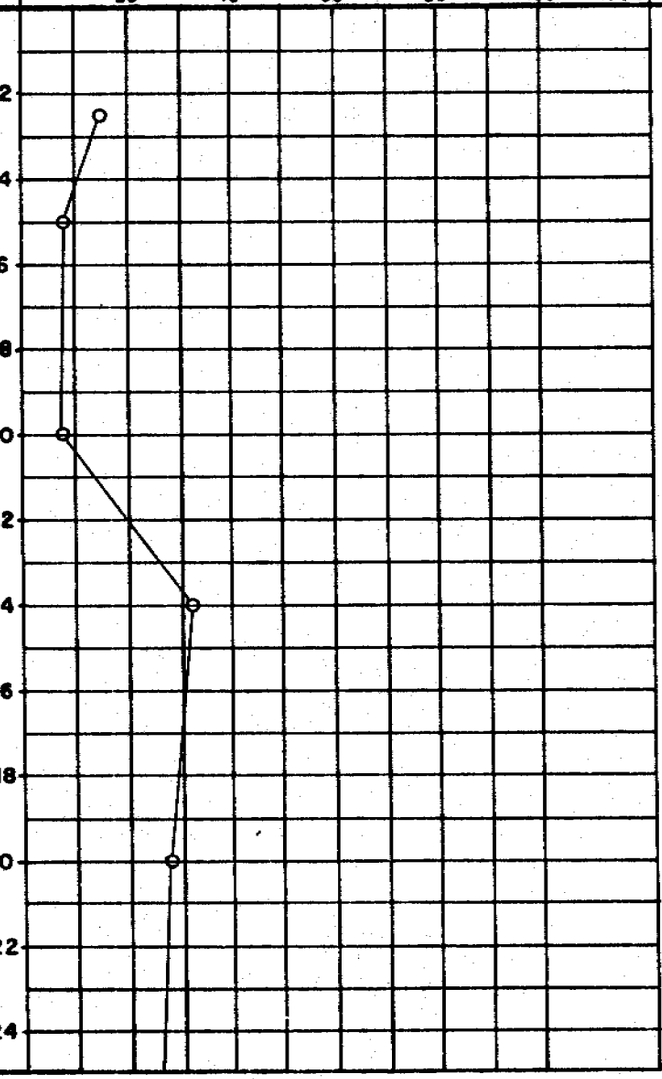
MILE	B,C,S	NUMBER
650	S	8

DEPTH (FEET)	SAMPLE NUMBER	SAMPLE TYPE	% RECOVERY	PENETRATION RESISTANCE	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	LIMITS OF FROZEN GROUND	ICE DESCRIPTION
2					SM	SAND - Med. Brown - Fine Silty - Dense		NB
4	1				GW	GRAVEL - Med. Brown - Sandy, trace of silt - Dense - Well Graded	F	NF to NB
6	2							
8								
10	3							
12								
14	4				ML to CW	SILT - Grey - Some Clay - Low Plasticity		NB
16								
18								
20	5							
22								
24							F	

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

PLASTIC LIMIT ⟷ LIQUID LIMIT

20 40 60 80 100 100+



GRAIN-SIZE ANALYSIS				WET DENSITY (P.C.F.)	DRY DENSITY (P.C.F.)
CLAY %	SILT %	SAND %	GRAVEL %		
-	2	24	74		

REMARKS

Oscar Creek

E.W. BROOKER & ASSOCIATES LTD. — DRILL HOLE REPORT

DEPARTMENT OF PUBLIC WORKS, CANADA
MACKENZIE HIGHWAY

DWN: ALB | FIELD ENG: NRM | DATE DRILLED: 3/2/73 | AIRPHOTO NO: A23003 - 32 | CHAINAGE: 3996 + 60 (EST.) | OFFSET: 110' WEST
CKD: LAB | TECH: JK | RIG: Mayhew | SURFACE DRAINAGE: Fair to W. | VEGETATION: Black Spruce | ELEV:

TEST HOLE

MILE	B,C,S	NUMBER
650	S	8

REMARKS: Oscar Creek

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.)
26					ML to CL	SILT - Same	F	V 0-5%	26						
28	6					END OF HOLE 28'			28						
30									30						
32									32						
34									34						
36									36						
38									38						
40									40						
42									42						
44									44						
46									46						
48									48						

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

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

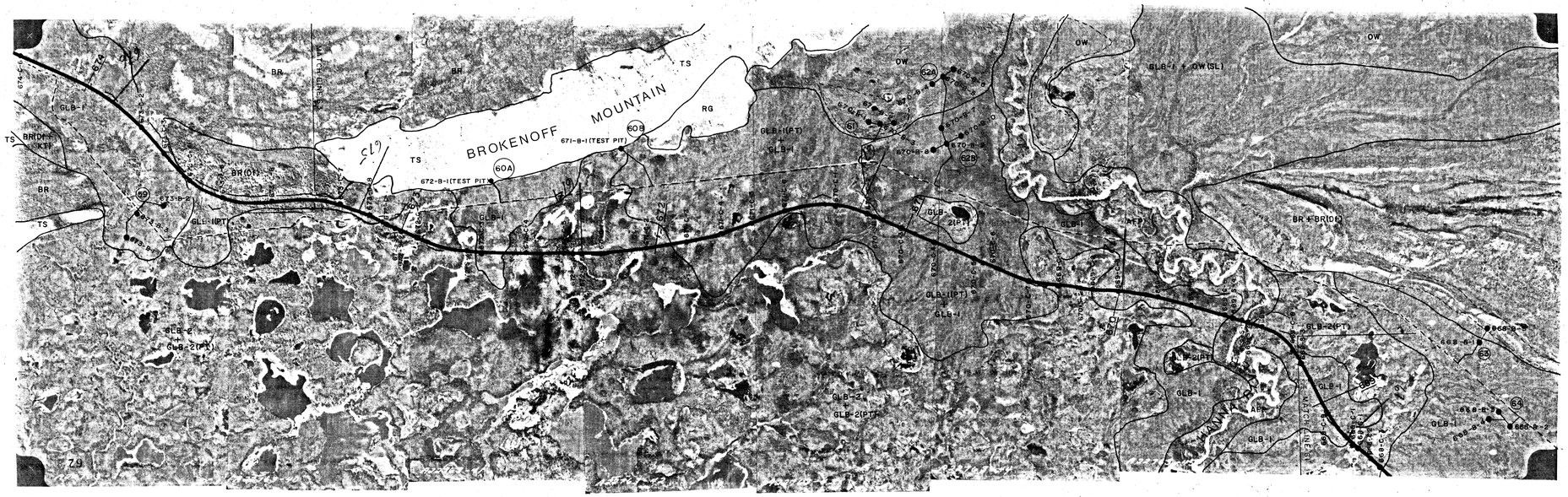
Center-Line Terrain Evaluation - Summary Sheet

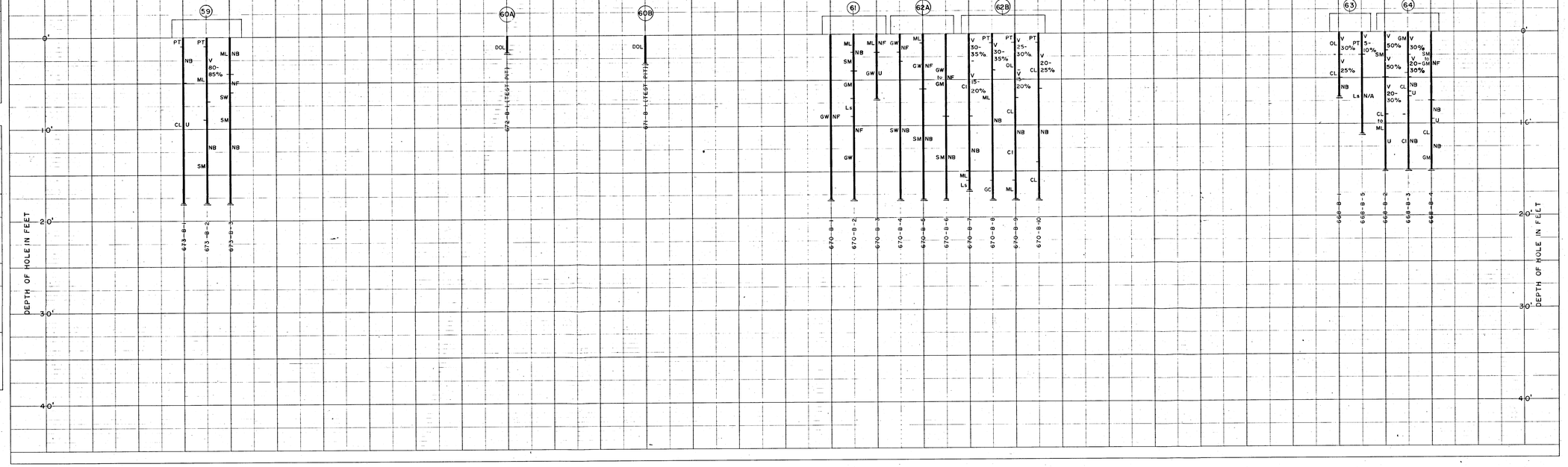
MOSAIC NO. 62

MILE 676 TO MILE 671

TERRAIN DESCRIPTION	TOPOGRAPHY	VEGETATION	SURFACE DRAINAGE	SURFICIAL SOIL	SUBSTRATA	GROUND ICE CONDITION		
						0 - 5'	5 - 10'	>10'
676-C-6 GLB-1(PT) Glacial Lake Basin With Local Peat Covered Areas	Flat	Sparse Black Spruce 15-25' High	Poor	1-3' of Peat	Lacustrine Clay Generally. Near Mountain Sand to Silt	V -V 50-75%	U/F to V 50%	U/F to NB
GLB-2 + GLB-2(PT Poorly Drained Glacial Lake Basin With Peat Covered Areas	Flat to Gentle Slope Towards Creek and Away From Mountain	Dense Black Spruce 20-30'	Fair to Good	Up to 4' of Peat or Organic Soil	Lacustrine Clay to 18+'	75-90% Ice or Peat + Organic Soil	V 25-75%	V 30-35%
GLB-1 Glacial Lake Basin	Flat	Sparse Black Spruce 10-15'	Poor	Organic Clay	Lacustrine Clay	V 20-35%	V 10-15%	N/A
GLB-1 + GLB-2(PT) Glacial Lake Basin With Poorly Drained + Local Peat Covered Areas	Flat With Thaw Lakes	Black Spruce and Some Birch 25-40'	Poor to Fair	--	Lacustrine Clay & Some Silt Organic Near Surface	From 3' of Ice to V 20%	V 20-75% Generally 20-25%	V 10-25%
GLB-1(PT) + GLB-1 Generally Peat Covered Glacial Lake Basin	Flat	Sparse Black Spruce Generally 10-15' High	Poor	Peat and Organic Soil to a Depth of	Lacustrine Clay	V 45-90% Generally About 65%	V 30-50%	NB to V 30%
GLB-2 + GLB-2(PT) Poorly Drained and Locally Peat Glacial Lake Basin	Flat	Sparse Black Spruce 10-15' High	Poor to Fair	0-6' + of Peat and Organic Silt	Lacustrine Clay	ICE to V 15%	V 15-65%	NB to V 20-25%
GLB-1	Flat	Sparse Black Spruce 10-15' High	Poor Except Near the Hanna River	0-3' of Organic Silt Generally Absent	Lacustrine Clay	Generally V 70-100%	V 20-70%	NB to V 40%
HANNA RIVER	See detail in	River Crossing	Report					
GLB-1 Glacial Lake Basin	Flat	Sparse Black Spruce 10-15' High and Some Tamarack	Fair Except Near the Hanna River	Generally Absent to 0.5' of Peat	Lacustrine Clay	V 80-100%	V 30-65%	V 35% to NB as High as V 65%
671-C-1								

DRAWING No.	SHEET No.	TOTAL SHEETS
	62	





REVISED 20/2/73

TERRAIN LEGEND

Symbol	Terrain Type	Physiographic Features	Materials Description
AFD	Alluvial Fan Deposit	Cone shaped, gently sloping stream outlet	Poorly sorted silt, sand gravel, wire cobbles and boulders
AFP	Active Flood Plain	Exposed bars in stream or river channel	Sand and gravel in high energy streams to silt and sand in low energy streams
AMP	Alluvial Meander Plain (Mackenzie River Meander Plain)	Flat plain often with sand dunes on it	Sands and silty sands stratified or channel deposits
AMP-2	Alluvial Meander Plain (excluding the Mackenzie River Plain)	Flood plains filling bottom of the stream or river valley	Fine silt, sand or gravel as channel deposits
BR	Bedrock	Outcrop to continuous ridge	Exposed rock to rock with generally less than 5 feet of cover
DL	Deltaic Sand Plain	At the mouth of a river or creek	Silt toostratum over stratified silty sand and silt with some clay and pebbles
E	Esker	Narrow sharp ridge	Sand and/or gravel with some silt inclusions
FFP	Fossil Flood Plain	Flat plain may be dissected to rolling topography	Silty topstratum over sand and/or gravel of a flood plain of an inactive stream
GLB-1	Glacial Lake Basin (Better drained type)	Lowland occasionally swampy areas	Igerrich to to medium plastic silty clay, occasionally with a trace of sand
GLB-2	Glacial Lake Basin (thermokarst type)	Lowlands usually swampy with thaw lakes	Usually peat covered glacio-lacustrine silty clay
GM	Ground Moraine (undifferentiated)	Flat to broad gentle slopes	Silt till to clay till usually some sand and gravel
HM	Hummocky Moraine	Large hummocks and short ridges with kettles	Mostly till with some sand and/or silt. Peat overlies silty clays in kettle depression
HT	High Terraces	Tabular bodies along the sides of and above present or abandoned river channels	Silt covered stratified sand and/or gravel of fluvial or outwash origin
K	Kames	Conical hill to short ridge	Complexly stratified sand and/or gravel with minor till or boulders
KT	Kame Terrace	Poorly expressed terraces	Dirty poorly sorted sand and/or gravel to till
LB	Lacustrine Basin	Postglacial ponded deposits in larger lowlying areas	Organic and inorganic clay, silt and fine sand
OW	Outwash Plains or Deltas	Tabular bodies	Sand and/or gravel
PKM	Ridge-and-Knoll Moraine	Drumlinized till plain. Rolling large linear features	Molded basal till low plastic silty-clay till
SD	Sand Dunes	Elongate Ridges to Barchans	Fine to medium sand
TS	Talus Slopes	Steep Slopes	Mainly coarse gravel cobbles and boulders

Surficial Features

AS	Abandoned Strandlines
DR	Drumlinoid forms including flutings and glacial grooves with linear ridges
IWP	Ice Wedge Polygons, usually in ice-rich silt
RG	Rock and Talus glaciers along the Norman Range. Mixed ice and silt to boulders.
RS	Rock Slide to rock avalanche scars on the Norman Range
SK	Sinkholes in soluble bedrock

Topstratum Phases (Associated with Terrain Types)

DF	Thin (0 - 10 feet) of drift over bedrock surface
PT	Mixed bog and fen peats in post glacial ponded depression
SL	Slopewash or solifluction features. Topstratum of ice-rich poorly sorted silty clay and silty sand to gravel
WM	Wave modified, mainly a thin sandy to gravelly washed layer over till

Complexes are shown as combinations of two terrain types with or without phases that pertain to the parent type.

Terrain Symbols are modified from Canadian Gas Arctic Study Limited Terrain Study for this area.

Legend For "Mackenzie Highway, Mosaic"

	Mackenzie Highway
	Borrow Areas
	Access Road to borrow area on pre-existing cutlines
	Cleared access to borrow areas
(18)	Borrow area number
689-C-4	Borehole number
721	Mileage
RKW	Terrain Outlines

Borrow Profile Legend

G	Gravel	W	Well Graded		Broken Section
S	Sand	P	Poorly Graded		End of Hole
M	Silt	L	Low Plasticity	NS	Not to Scale
C	Clay	I	Intermediate Plasticity	U	Unfrozen
Ls	Limestone	H	High Plasticity	N/A	Not Available
Sh	Shale	PT	Peat	NB)	Standard Ice
Dol	Dolomite	(T)	Till	NF)	Description
Bl	Boulder	(CL)	Low Plasticity Clayey Shale	V)	Symbols
O	Organic Soil	(18)	Borrow Area Number		

TOPOGR. NOTES
BORROW AREAS
STRUCTURES NOTED

MOSAIC
FLIGHT No.
PHOTO No.
ORIGINAL SCALE
FLOWN IN CONJUNCTION WITH LINE LOCATING FLIGHT

K.P. PROFILE
SOILS
DESIGN GRADELINE
STRATIGRAPHIC SECTIONS
STRUCTURES NOTED

Center-Line Terrain Evaluation - Summary Sheet

MOSAIC NO. 61

MILE 669 TO MILE 663

TERRAIN DESCRIPTION	TOPOGRAPHY	VEGETATION	SURFACE DRAINAGE	SURFICIAL SOIL	SUBSTRATA	GROUND CONDITION 0-5'	ICE CONDITION 5-10'	ICE CONDITION >10'
668-C-1								
GLB-2(PT) Peat Covered Poorly Drained Glacial Lake Basin	Lowlying Area	Thin Black Spruce	Very Poorly Drained	6-8 Feet of Peat Over Organic Silt to 9-15' Depth	Unfrozen Silt Till	V 10-50%	NB to V 50%	NB to V 80%
GLB-1(PT) Better Drained Peat Covered	Gentle Slope to North-east	Black Spruce	Well Drained	Peat to 3 Feet	Lacustrine Silt Over Silt Till	NB to Vx 60%	U/F	unknown
GM Ground Moraine	Moderate to Steep Slope to North-east	Sparse Black Spruce	Good	1-2 Feet Peat or Organic Material	Silt Till and Clay Till Over Weathered Shale	V 10-60%	NB to V 10%	NB
BR+BR(Bf) Exposed and Near Surface Bedrock	Upland Ridge of Bedrock	Black Spruce Very Sparse on outcrop	Locally Very Good to Very Poor	Peat from 4-8' in Depression	Organic Silt to Silt Till Over Shallow Bedrock	V 40-60	NB to 20%	NB to N/A for Bedrock
GM(SL)(WM) Slopewash and Wave Modified Ground Moraine	Sloping to South	Black Spruce and Birch	Good to Very Good	None	Clay and Clay Till	V 10-40%	V 10-15%	V 10% to NB
FFP(SL) Slopewash Modified Fossil Flood Plain	Gentle Cross-Slopes	Black Spruce	Poor to South and West	Locally 1-3 Feet of Peat and Organic Soil	Fluvial Sand, Silt and Clay	NB to U/F In Peaty or Organic Soils V 50-50% up to V 80%	V 10% to NB	U/F to NB
PT Peat	Flat	Black Spruce	Creek Bed	1-2 Feet of Peat	Organic Clay	Vx 10-40% to NB	U/F	U/t
FFP(SL) Slopewash Modified Fossil Flood Plain	Gentle Cross-Slopes	Black Spruce	Poor to Fair to	1-2' of Peat Locally	Silt and Sand More Sand to the South	NB to U/F	NB to U/F	NB to U/F
662-C-2								

DRAWING No.	SHEET No.	TOTAL SHEETS
	6 1	

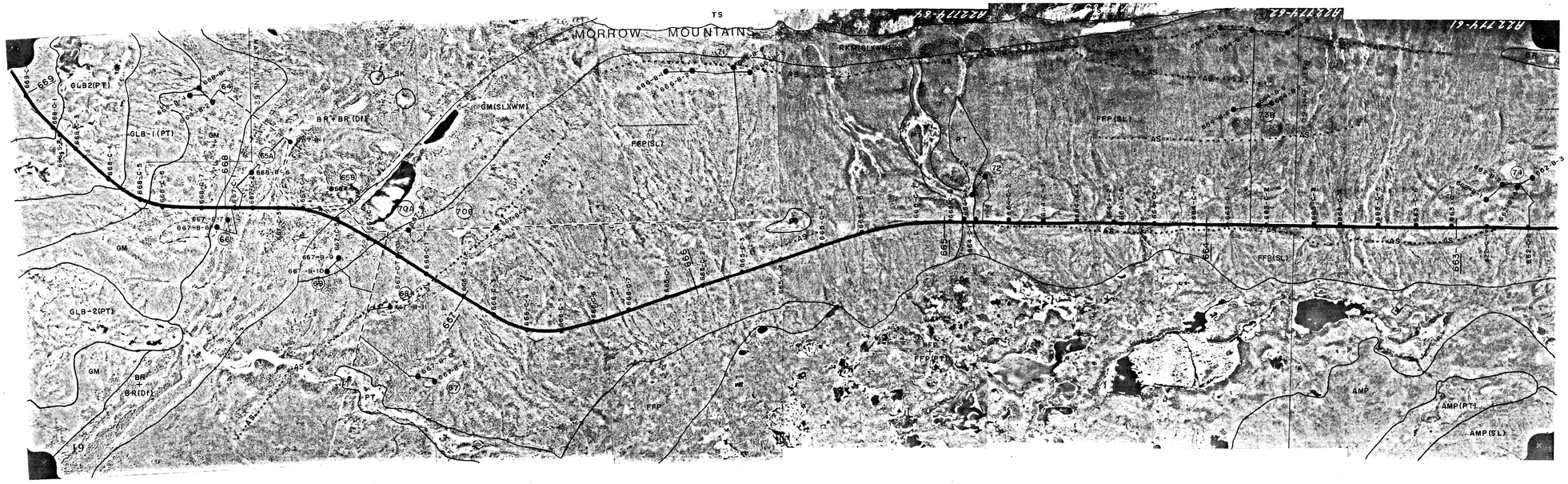
PLAN
ALIGNMENT
TOPOGR. NOTES
DRAINAGE AREAS
STRUCTURES NOTED

MOSAIC
FLIGHT No.
PHOTO. No.
DESIGNS SCALE
FLOWN
INTERPRETATION
MAP BASED ON AERIAL

PROFILE
PROFILE
SOILS
DESIGN GRADELINE
DRAINAGE
STRUCTURES NOTED

DATE | BY

SURVEYED | DATE | PLOTTED | DATE | CHECKED | DATE


MORROW MOUNTAINS
TS
A22774-61
A22774-62
A22774-63
A22774-64
GLB2(PT)
GLB-1(PT)
GLB-2(PT)
GM
GM(SL)(WM)
BR + BR (DI)
BR + 8R(DI)
FEE(SL)
FFP(SL)
FFP(PT)
FFP
RT
AS
RK(SL)(WM)
AMP
AMP(PT)
AMP(SL)
PT
SK
668-C-1
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668-C-2361
668-C

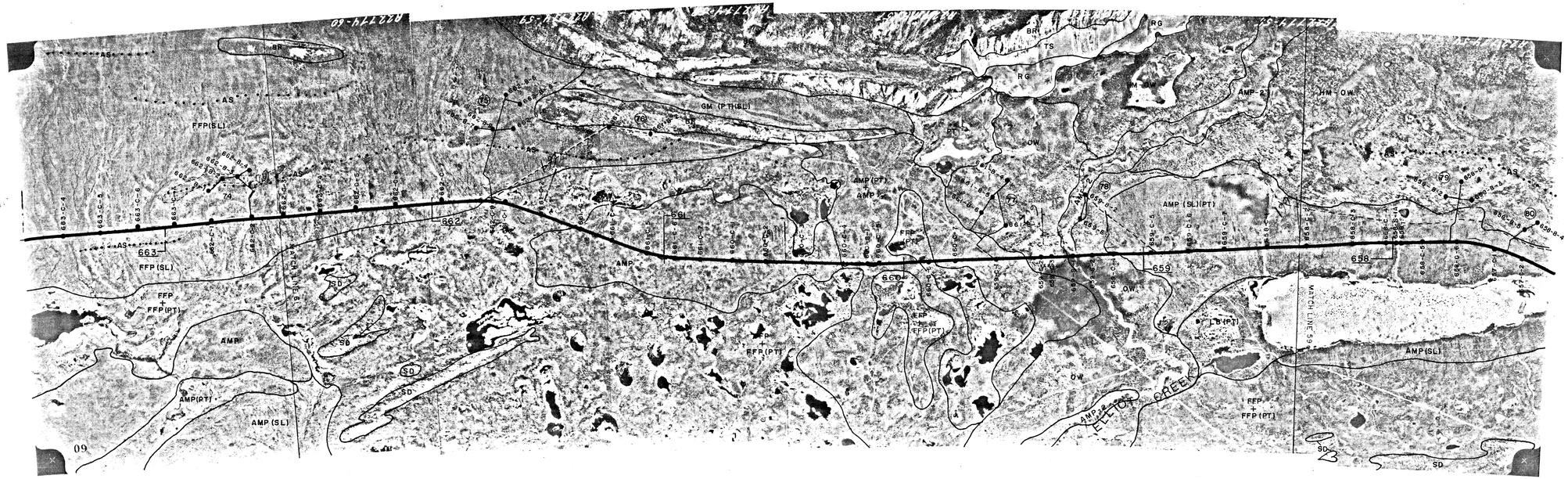
Center-Line Terrain Evaluation - Summary Sheet

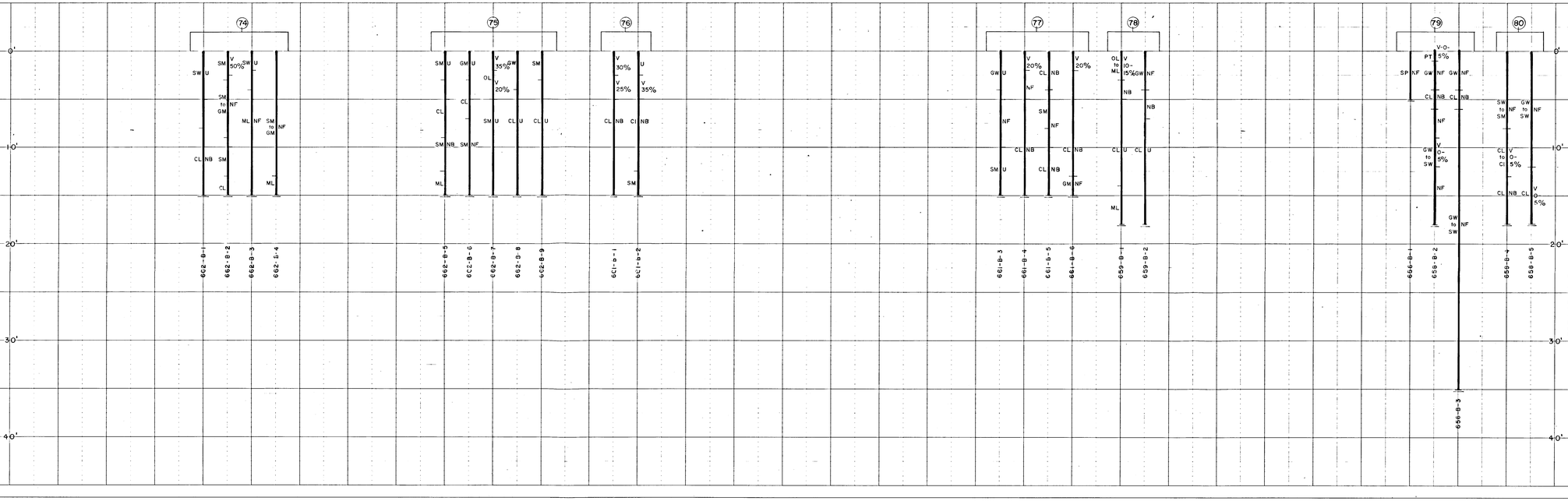
MOSAIC NO. 60

MILE 663 TO MILE 658

TERRAIN DESCRIPTION	TOPOGRAPHY	VEGETATION	SURFACE DRAINAGE	SURFICIAL SOIL	SUBSTRATA	GROUND ICE CONDITION		
						0 - 5'	5- 10'	>10'
662-C-2 FFP(SL) Slopewash Modified Fossil Flood Plain	Gentle Cross Slopes to West	Black Spruce	Poor	Locally up to 5' of Peat	Silt Sand and Clay	NF to NB Peat Areas V20%	NF to NB	NF to NB
FFP+FFP(PT) Locally Peat Covered Flood Plain	Flat	Black Spruce	Poor	4-9' of Peat and Organic Silt	Silt and Clay	V 40-90% High Ice in Organic Soil	V 20-90% Content	NBN
AMP Old Meander Plain of Mackenzie River	Flat	Black Spruce & Birch	Poor	None	Silt Clay Sand	V 25-30 to NB Locally to 50%	NB to V10%	NB to V5%
FFP(PT) Peat Covered Flood Plain	Flat	Black Spruce & Birch	Poor	Peat to 4 Feet	Clay and Sand	V 10-20%	NB to V 20%	Unknown
AMP+AMP(PT) Locally Peat Covered Meander Plain	Gentle Slope	Black Spruce	Poor	Locally 4 Feet of Peat	Silt and Sand	V 80% in Peat NB + V 5%	NB to V 5%	NB
OW Outwash Plain Elliot Creek Crossing	Sloping to the Creek	Black Spruce & Birch	Good to Creek Poor Away From Creek	Sand and Gravel to 8-10 Feet	Clay Below 10'	NF to NB	NF to NB	NF to NB
AMP(SL)(PT) Slopewash Modified Peat Covered Alluvial Meander Plain	Very Gently Sloping to West	Black Spruce & Birch	Fair to Poor to West	Generally None Locally up to 9 Feet of Organic Silt	Clay and Silt With Some Gravel and Sand Beds	V 40% to NBN Average as High as 70% in Peat	NB to V 5%	NB to V 5%
657-C-1								

DRAWING No.	SHEET No.	TOTAL SHEETS





REVISED 1/3/73
REVISED 16/4/73

TERRAIN LEGEND

Symbol	Terrain Type	Physiographic Features	Materials Description
AFD	Alluvial Fan Deposit	Open cones, gently sloping stream outlets	Loosely variable silty sand gravel, some boulders and boulders
AFP	Active Flood Plain	Exposed bars in stream or river channel	Sand and gravel in high energy streams to silt and sand in low energy streams
AMP	Alluvial Meander Plain (equivalent to River Meander Plain)	Flat plain often with some channels	Sand, silt, clay, sands, gravel in channel deposits
AMP-2	Alluvial Meander Plain (equivalent to the Mackenzie River Plain)	Flood plain, resulting during of the stream or river valley	Fine silts, sand or gravel as channel deposits
BR	Bedrock	Outcrop in continuous mantle	Fine grained rock more, often generally less than 5 feet of cover
DL	Deltaic Sand Plain	At the mouth of a river or creek	Silt, stratified over stratified silty sand and silt, with some clay and pockets
E	Esker	Narrow sharp ridge	Coarse gravel with few silt inclusions
FFP	Fossil Flood Plain	Flat plain, may be dissected by outwash topography	Silty, stratified over sand and gravel of a flood plain of an inactive stream
GLB-1	Glacial Lake Basin (better drained type)	Uplands usually rolling, marshy areas	Stratified silt, clay, occasionally fine sand
GLB-2	Glacial Lake Basin (Fitzgerald type)	Uplands usually marshy with shallow lakes	Usually peat covered glacio-lacustrine silty clay
GM	Ground Moraine (undifferentiated)	Flat to broad gentle slopes	Silt to fine clay till usually some sand and gravel
HM	Hummocky Moraine	Large mounds and knoll ridges with kettles	Mostly till with some sand and/or silts. Peat overlies silts, clays in kettle depression
HT	High Terraces	Tabular bodies along the sides of an above present or abandoned river channels	Silty overlain stratified sand and/or gravel of fluvial or outwash origin
K	Kames	Conical hill to short ridge	Commonly stratified sand and/or gravel with minor silt - boulders
KT	Kame Terrace	Poorly expressed terraces	Dirty poorly sorted sand and/or gravel to till
LB	Lacustrine Basin	Pretglacial terrain deposits in larger flooding areas	Organic and inorganic clay, silt and fine sand
OW	Outwash Plains or Deltas	Tabular bodies	Sand and/or gravel
RM	Ridge-and-Knoll Moraine	Drumlinized till plain, rolling large linear features	Medium sand till low plastic silty clay till
SD	Sand Dunes	Elongate Ridges to Barchans	Fine to medium sand
TS	Talus Slopes	Steep Slopes	Mainly coarse gravel cobbles and boulders

Surficial Features

AS	Abandoned Strandlines
DR	Drumlinoid form including flutings and glacial grooves with linear ridges
IWP	Ice Wedge Polygons, usually in ice-rich silt
RG	Rock and Talus glaciers along the Norman Range. Mixed ice and silt to boulders.
RS	Rock Slide to rock avalanche scars on the Norman Range
SK	Sinkholes in soluble bedrock

Topstratum Phases (Associated with Terrain Types)

DF	Thin (0 - 10 feet) of drift over bedrock surface
PT	Mixed bog and fen peats in post glacial ponded depression
SL	Slopewash or solifluction features. Topstratum of ice-rich poorly sorted silty clay and silty sand to gravel
WM	Wave modified, mainly a thin sandy to gravelly washed layer over till

Complexes are shown as combinations of two terrain types with or without phases that pertain to the parent type.

Terrain Symbols are modified from Canadian Gas Arctic Study Limited Terrain Study for this area.

Legend for Mackenzie Highway Mosaic

- Mackenzie Highway
- Borrow Areas
- Access Road to borrow area on prexisting outlines
- Cleared access to borrow areas
- (18) Borrow area number
- 689-C-4 Borehole number
- 721 Mileage
- RM Terrain Outlines

Borrow Profile Legend

G	Gravel	W	well Graded		Broken Section
S	Sand	P	Poorly Graded		End of Hole
M	Silt	L	Low Plasticity	NS	Not to Scale
C	Clay	I	Intermediate Plasticity	U	Unfrozen
LS	Limestone	H	High Plasticity	N/A	Not Available
SH	Shale	PT	Peat	STD	Standard Ice
DOL	Dolomite	(T)	Till	DES	Description
BL	Boulder	(CL)	Low Plasticity Clayey Shale	SYM	Symbols
O	Organic Soil	(18)	Borrow Area Number		

MOSAIC
FLIGHT No.
PHOTO No.
ORIGINAL SCALE
FLOWN
INTERPRETATION
LINE LOCATED IN FIELD
BY
DATE

PROFILE
PROFILE
SOILS
DESIGN GRADELINE
DRAINAGE
STRUCTURES NOTED
SURVEYED
DATE
PLOTTED
DATE
CHECKED
DATE

ALIGNMENT
PROFILE NOTES
DRAINAGE
BORROW AREAS
STRUCTURES NOTED

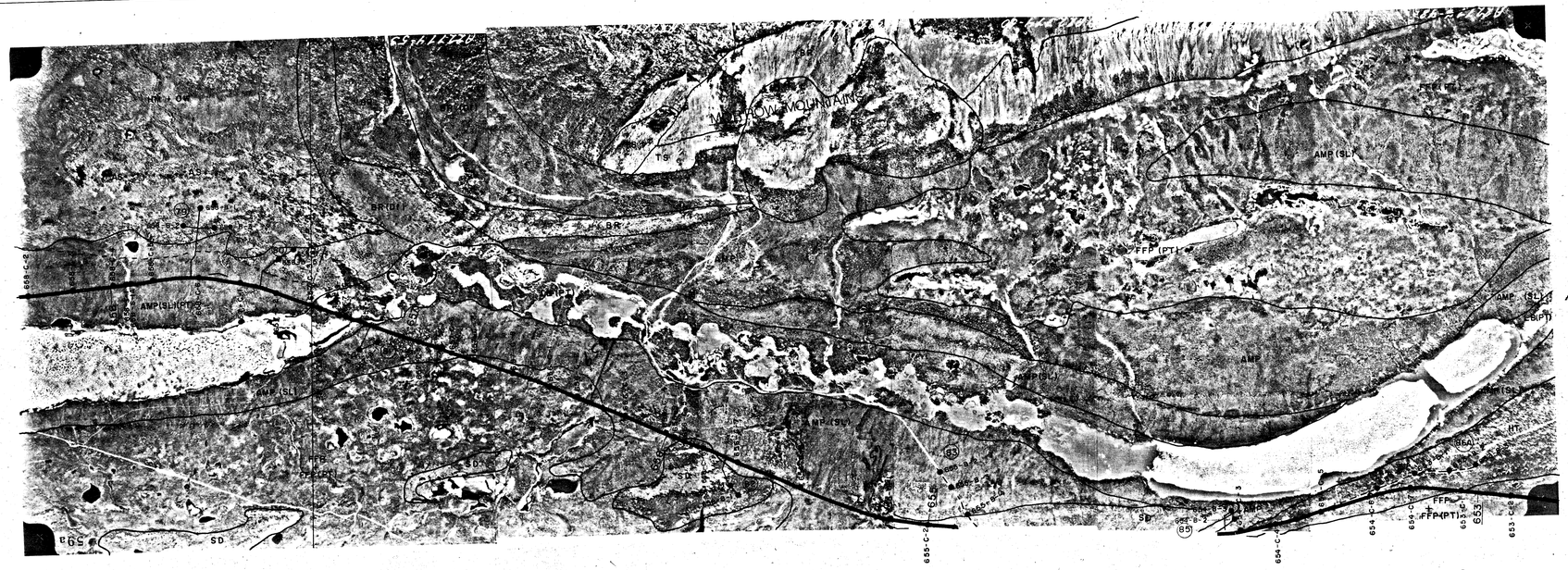
Center-Line Terrain Evaluation - Summary Sheet

MOSAIC NO. 59a

MILE 658 TO MILE 657

TERRAIN DESCRIPTION	TOPOGRAPHY	VEGETATION	SURFACE DRAINAGE	SURFICIAL SOIL	SUBSTRATA	GROUND ICE CONDITION		
						0 - 5'	5 - 10'	>10'
657-C-1								
AMP(SL)(PT) Slopewash Modified Peat Covered Meander Plain	Gently Sloping to West	Black Spruce and Birch	Fair	Locally Peat and Organic Silt to 4 Feet	Clay With Some Gravel	NB to V 15%	NB to V 15%	NB to V 15%
LB (PT) Lacustrine Basin	Sloping to Creek	Black Spruce & Birch	Fair to Good to Creek	Organic Silt to 3 Feet	Lacustrine Clay & Silt	V25-40	V 15-40	V 30-40
AMP (SL) Slopewash Modified Alluvial Meander Plain	Sloping to Creek	Black Spruce & Birch	Fair to Good	Peat and Organic Silt to 3 Feet	Silt and Clay	V 15-25%	V 5-20%	V 5% to NB
FFP+FFP(PT) Locally Peat Covered Flood Plain Sediments	Flat	Black Spruce & Birch	Poor	Locally 2 Feet of Peat	Silt and Clay	NB to V25%	NB to V5% to U/F	NB
AMP(SL) Alluvial Meander Plain With Slope-wash Features	Sloping Gently to East	Black Spruce Some Birch	Fair to Poor	Locally up to 3 Feet of Organic Silt and Some Peat	Silt and Sand	V25% to NB High-est in Organic Soil	NB to NF	NB to NF
655-C-1								

DRAWING No.	SHEET No.	TOTAL SHEETS
	17	


MACKENZIE MOUNTAINS
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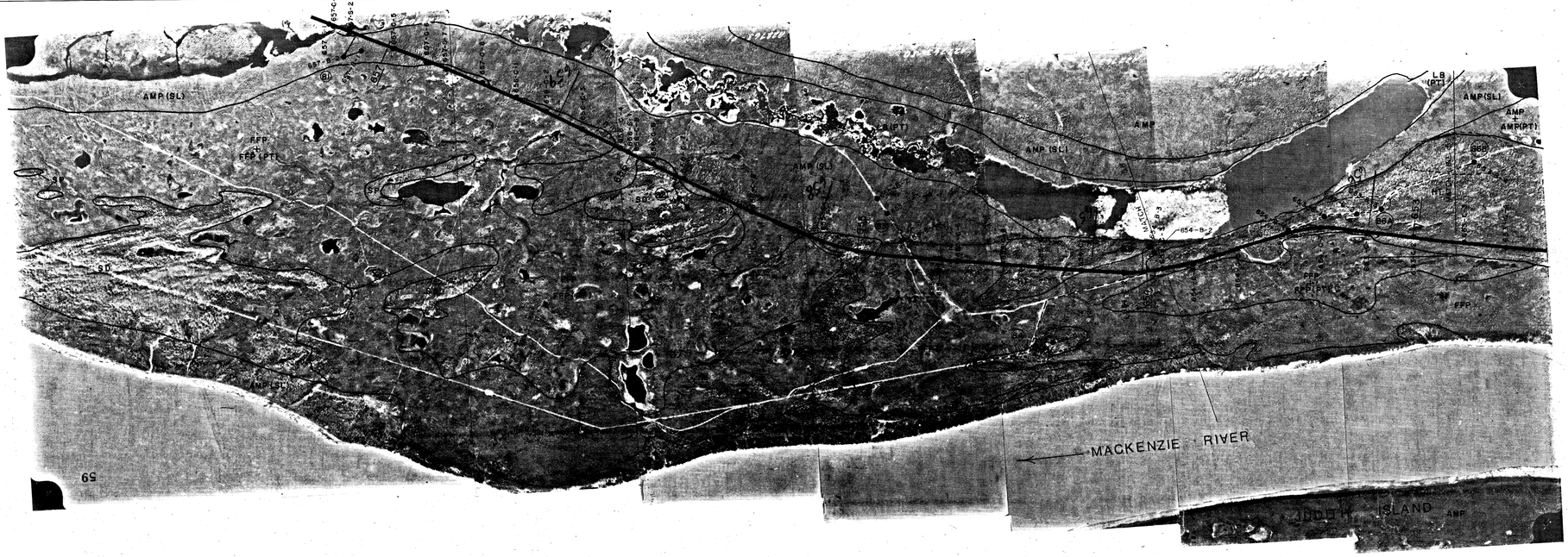
Center-Line Terrain Evaluation - Summary Sheet

MOSAIC NO. 59

MILE 657 TO MILE 653

TERRAIN DESCRIPTION	TOPOGRAPHY	VEGETATION	SURFACE DRAINAGE	SURFICIAL SOIL	SUBSTRATA	GROUND ICE CONDITION		
						0 - 5'	5 - 10'	>10'
655-C-1								
SD Sand Dune	Low Hill	Thick Black Spruce	Good	None	Sand	NF to NB	NB	NB
FFP Flood Plain	Flat	Black Spruce	Fair	None	Sand	NF to NB	NF to NB	NF to NB
HT River Terrace	Flat	Black Spruce	Fair to	1 Foot of	Sand	NF to NB	NF to NB	NF to NB
FFP Flood Plain	Flat	Black Spruce and Birch	Poor	Alluvial Sand to 5 Feet	Clay	NB	V 0-5%	V 5-10%
HT River Terrace	Flat to Gentle Slope to Lake	Black Spruce and Birch Some Tamarack	Good	None	Alluvial Sand Over Fluvial Silt and Clay	NF to NB	NF to NB to V 30% in Clay	NB to U/F
653-C-1								

DRAWING No.	SHEET No.	TOTAL SHEETS
	59	



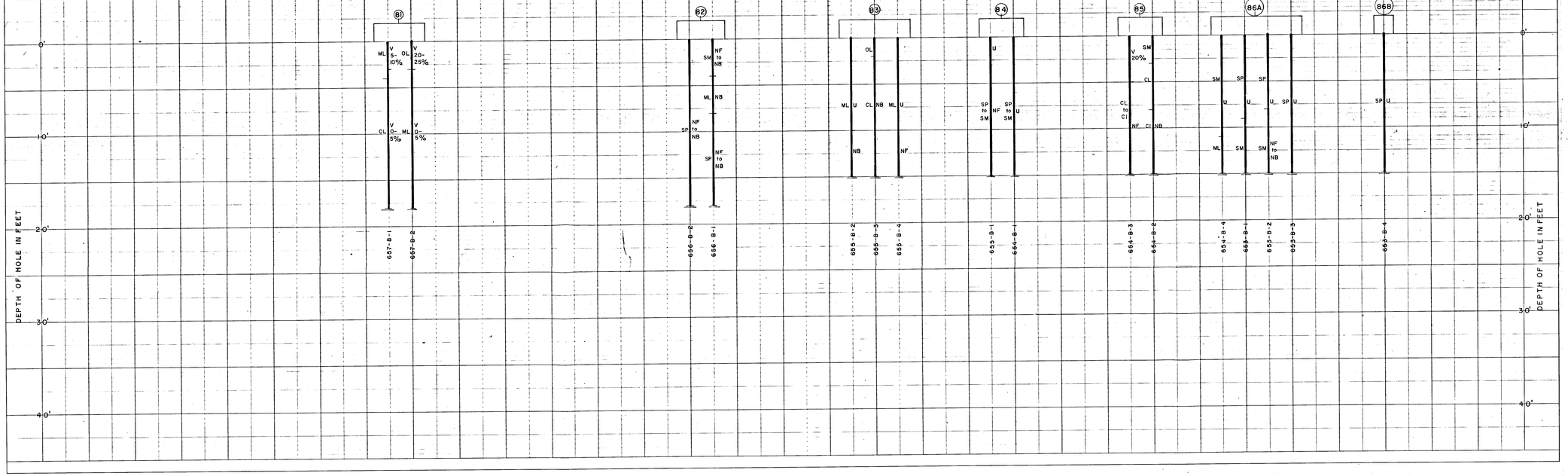
PLAN
- ALIGNMENT
- TOPOGR. NOTES
- DRAINAGE
- BORROW AREAS
- STRUCTURES NOTED

MOSAIC
- FLIGHT No.
- PHOTO No.
- ORIGINAL SCALE
- FLOWN
- INTERPRETATION
- INCORPORATED IN FIELD

PROFILE
- X-PROFILE
- SOIL
- DESIGN GRADELINE
- DRAINAGE
- STRUCTURES NOTED

DATE | BY

DATE | SURVEYED | DATE | PLOTTED | DATE | CHECKED | DATE



REVISED 20/2/73
REVISED 16/4/73

TERRAIN LEGEND

Symbol	Terrain Type	Physiographic Features	Materials Description
AFD	Alluvial Fan Deposit	Cone shaped, gently sloping stream outlet	Poorly sorted silt, sand gravel, wide cobbles and boulders
AFP	Active Flood Plain	Exposed bars in stream or river channel	Sand and gravel in high energy streams to silt and sand in low energy streams
AMP	Alluvial Meander Plain (Mackenzie River Meander Plain)	Flat plain often with sand dunes on it	Sands and silty sands stratified or channel deposits
AMP-2	Alluvial Meander Plain (excluding the Mackenzie River Plain)	Flood plains filling bottom of the stream or river valley	Fine silt, sand or gravel as channel deposits
BR	Bedrock	Outcrop to continuous ridge	Exposed rock to rock with generally less than 5 feet of cover
DL	Deltaic Sand Plain	At the mouth of a river or creek	Silt toostratum over stratified silty sand and silt with some clay and pebbles
E	Esker	Narrow sharp ridge	Sand and/or gravel with some silt inclusions
FFP	Fossil Flood Plain	Flat plain may be dissected to rolling topography	Silty toostratum over sand and/or gravel of a flood plain of an inactive stream
GLB-1	Glacial Lake Basin (Better drained type)	Lowland occasionally swampy areas	Ice-rich to to medium plastic silty clay, occasionally with a trace of sand
GLB-2	Glacial Lake Basin (thermokarst type)	Lowlands usually swampy with than lakes	Usually peat covered glacio-lacustrine silty clay
GM	Ground Moraine (undifferentiated)	Flat to broad gentle slopes	Silt till to clay till usually some sand and gravel
HM	Hummocky Moraine	Large hummocks and short ridges with kettles	Mostly till with some sand and/or silt. Peat overlies silty clays in kettle depression
HT	High Terraces	Tabular bodies along the sides of and above present or abandoned river channels	Silt covered stratified sand and/or gravel of fluvial or outwash origin
K	Kames	Conical hill to short ridge	Comletely stratified sand and/or gravel with minor till or boulders
KT	Kame Terrace	Poorly expressed terraces	Dirty poorly sorted sand and/or gravel to till
LB	Lacustrine Basin	Postglacial ponded deposits in larger lowlying areas	Organic and inorganic clay, silt and fine sand
OW	Outwash Plains or Deltas	Tabular bodies	Sand and/or gravel
RKM	Ridge-and-Knoll Moraine	Drumlinized till plain, rolling large linear features	Molded basal till low plastic silty-clay till
SD	Sand Dunes	Elongate Ridges to Barchans	Fine to medium sand
TS	Talus Slopes	Steep Slopes	Mainly coarse gravel cobbles and boulders

Surficial Features

• • • AS	Abandoned Strandlines
DR	Drumlinoid forms including flutings and glacial grooves with linear ridges
IWP	Ice Wedge Polygons, usually in ice-rich silt
RG	Rock and Talus glaciers along the Norman Range. Mixed ice and silt to boulders.
RS	Rock Slide to rock avalanche scars on the Norman Range
SK	Sinkholes in soluble bedrock

Topstratum Phases (Associated with Terrain Types)

DF	Thin (0 - 10 feet) of drift over bedrock surface
PT	Mixed bog and fen peats in post glacial ponded depression
SL	Slopewash or solifluction features. Toostratum of ice-rich poorly sorted silty clay and silty sand to gravel
WM	Wave modified, mainly a thin sandy to gravelly washed layer over till

Complexes are shown as combinations of two terrain types with or without phases that pertain to the parent type.

Terrain Symbols are modified from Canadian Gas Arctic Study Limited Terrain Study for this area.

Legend For Mackenzie Highway Mosaic

- Mackenzie Highway
- Borrow Areas
- Access Road to borrow area on pre-existing cutlines
- Cleared access to borrow areas
- (18) Borrow area number
- 689-C-4 Borehole number
- 721 Mileage
- Terrain Outlines

Borrow Profile Legend

G	Gravel	W	Well Graded		Broken Section
S	Sand	P	Poorly Graded		End of Hole
M	Silt	L	Low Plasticity	NS	Not to Scale
C	Clay	I	Intermediate Plasticity	U	Unfrozen
Ls	Limestone	H	High Plasticity	N/A	Not Available
Sh	Shale	PT	Peat	NB	Standard Ice
Dol	Dolomite	(T)	Till	NF	Description
Bl	Boulder	(CL)	Low Plasticity Clayey Shale	V)	Symbols
O	Organic Soil	(18)	Borrow Area Number		

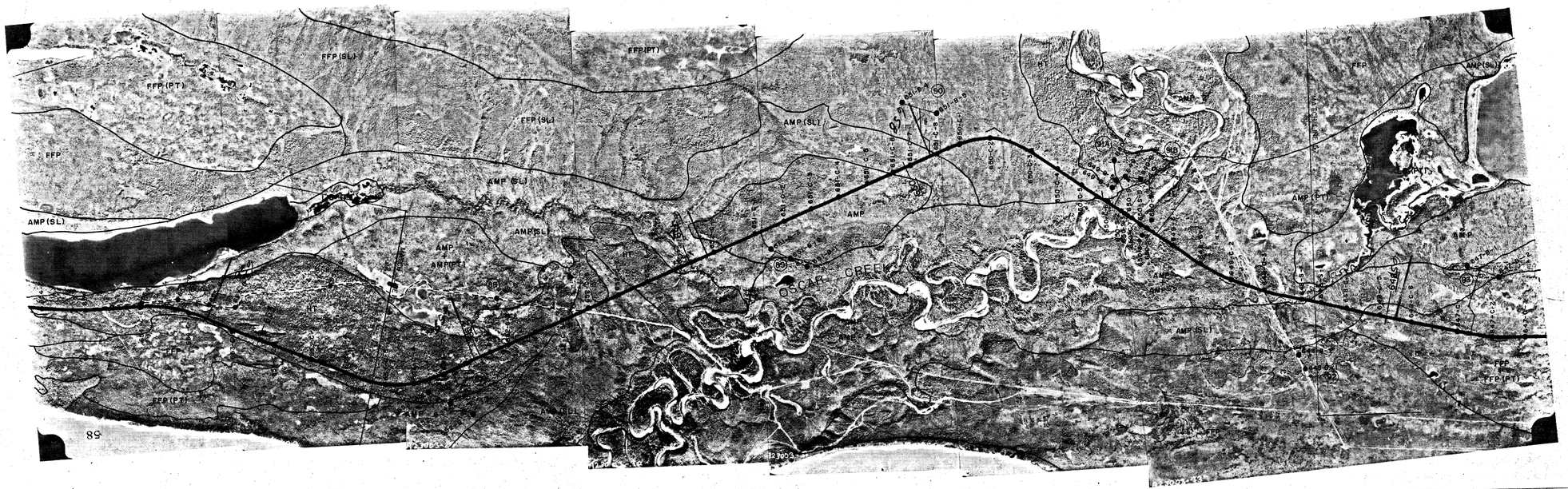
Center-Line Terrain Evaluation - Summary Sheet

MOSAIC NO. 58

MILE 653 TO MILE 648

TERRAIN DESCRIPTION	TOPOGRAPHY	VEGETATION	SURFACE DRAINAGE	SURFICIAL SOIL	SUBSTRATA	GROUND ICE CONDITION		
						0-5'	5-10'	>10
653-C-1								
HT River Terrace	Flat to Hummocky	Thick and Tall Black Spruce and Birch	Fair to Good	None	Sand With Some Silt	NB to NF	NB to NF	NB to NF
AMP(SL) Alluvial Meander Plain With Slope-Wash	Gently Sloping to Southwest	Black Spruce	Good	2 Feet of Peat	Silt Locally Overlain by Sand	NB to V 25%	NB	NB
HT River Terrace	Gently Sloping	Black Spruce	Good	6 Feet of Sand	Fluvial Silt	NB	NB	NB
AMP(SL) Alluvial Meander Plain	Ravine	Thick Spruce 25-30'	Creek at Bottom	Peat to 2 Feet	Clay and Silt	V 5%	V 5%	V 5%
AMP Alluvial Meander Plain	Gently Sloping Towards Oscar Creek	Black Spruce and Birch	Good to Fair	Locally Peat and Organic Soil to 2 Feet	Alluvial Sand Silt and Clay	NB to V 15%	NB to V 5%	NB to V 5%
AMP(SL) Slopewash Modified Alluvial Meander Plain	Valley	Black Spruce	Fair to Small Creek in	Peat to 7' at Creek	Silt and Clay	V 5 to 90% in Peat	V 25 to NB	NB
FFP(SL) Flood Plain With Slope-wash	Flat to Very Gently Sloping	Black Spruce	Poor to Fair	2 to 3 Feet of Peat	Alluvial Sand Silt and Clay	V 10-20% up to 90% in Peat	V 20% to NB	NB to NF
AMP+AMP-2 Oscar Creek Meander Plain	Lowland to River Plain	Dense Black Spruce	Good to Poor	Locally Peat to 2'	Sand and Gravel Over Clay	NB	NB	NB
AMP(SL) Slopewash Modified Alluvial Meander Plain	Sloping to Oscar Creek	Thin Spruce 10-15'	Very Good	2' of Peat	Silt and Clay	V 30-50%	V 5-10%	unknown
648-C-5								

DRAWING No.	SHEET No.	TOTAL SHEETS
	59	



TERRAIN LEGEND

Symbol	Terrain Type	Physiographic Features	Materials Description
AFD	Alluvial Fan Deposit	Cone shaped, gently sloping stream outlet	Poorly sorted silt, sand gravel, some cobbles and boulders
AFP	Active Flood Plain	Exposed bars in stream or river channel	Sand and gravel in high energy streams to silt and sand in low energy streams
AMP	Alluvial Meander Plain (Mackenzie River Meander Plain)	Flat plain often with sand dunes on it	Sands and silty sands stratified or channel deposits
AMP-2	Alluvial Meander Plain (excluding the Mackenzie River Plain)	Flood plains filling bottom of the stream or river valley	Fine silt, sand or gravel as channel deposits
BR	Bedrock	Outcrop to continuous ridge	Exposed rock to rock with generally less than 5 feet of cover
DL	Deltaic Sand Plain	At the mouth of a river or creek	Silty toostratum over stratified silty sand and silt with some clay and pebbles
E	Esker	Narrow sharp ridge	Sand and/or gravel with some silt inclusions
FFP	Fossil Flood Plain	Flat plain may be dissected to rolling topography	Silty toostratum over sand and/or gravel of a flood plain of an inactive stream
GLB-1	Glacial Lake Basin (Better drained type)	Lowland occasionally swampy areas	Ice-rich to to medium plastic silty clay, occasionally with a trace of sand
GLB-2	Glacial Lake Basin (thermokarst type)	Lowlands usually swampy with thaw lakes	Usually peat covered glacio-lacustrine silty clay
GM	Ground Moraine (undifferentiated)	Flat to broad gentle slopes	Silt till to clay till usually some sand and gravel
HM	Hummocky Moraine	Large hummocks and short ridges with kettles	Mostly till with some sand and/or silt. Peat overlies silty clays in kettle depression
HT	High Terraces	Tabular bodies along the sides of and above present or abandoned river channels	Silt covered stratified sand and/or gravel of fluvial or outwash origin
K	Kames	Conical hill to short ridge	Complexly stratified sand and/or gravel with minor till or boulders
KT	Kame Terrace	Poorly expressed terraces	Dirty poorly sorted sand and/or gravel to till
LB	Lacustrine Basin	Postglacial ponded deposits in larger lowlying areas	Organic and inorganic clay, silt and fine sand
OW	Out-wash Plains or Deltas	Tabular bodies	Sand and/or gravel
RKM	Ridge-and-Knoll Moraine	Drumlinized till plain, rolling large linear features	Molded basal till low plastic silty/clay till
SD	Sand Dunes	Elongate Ridges to Barchans	Fine to medium sand
TS	Talus Slopes	Steep Slopes	Mainly coarse gravel cobbles and boulders

Surficial Features

AS	Abandoned Strandlines
DR	Drumlinoid forms including flutings and glacial grooves with linear ridges
IWP	Ice Wedge Polygons, usually in ice-rrich silt
RG	Rock and Talus glaciers along the Norman Range. Mixed ice and silt to boulders.
RS	Rock Slide to rock avalanche scars on the Norman Range
SK	Sinkholes in soluble bedrock

Topsstratum Phases (Associated with Terrain Types)

DF	Thin (0 - 10 feet) of drift over bedrock surface
PT	Mixed bog and fen peats in post glacial ponded depression
SL	Slopewash or solifluction features. Topstratum of ice-rrich poorly sorted silty clay and silty sand to gravel
WM	Wave modified, mainly a thin sandy to gravelly washed layer over till

Complexes are shown as combinations of two terrain types with or without phases that pertain to the parent type.

Terrain Symbols are modified from Canadian Gas Arctic Study Limited Terrain Study for this area.

Legend For Mackenzie Highway Mosaic

- Mackenzie Highway
- Borrow Areas
- Access Road to borrow area on pre-existing cutlines
- Cleared access to borrow areas
- (18) Borrow area number
- 689-C-4 Borehole number
- 721 Mileage
- RKM Terrain Outlines

Borrow Profile Legend

G	Gravel	W	Well Graded		Broken Section
S	Sand	P	Poorly Graded		End of Hole
M	Silt	L	Low Plasticity	NS	Not to Scale
C	Clay	I	Intermediate Plasticity	U	Unfrozen
Ls	Limestone	H	High Plasticity	N/A	Not Available
Sh	Shale	PT	Peat	NBI	Standard Ice
Dol	Dolomite	(T)	Till	NFI	Description
Bl	Boulder	(CL)	Low Plasticity Clayey Shale	VI	Symbols
O	Organic Soil	(18)	Borrow Area Number		

PLAN
ALIGNMENT
TUNNEL NOTES
ACCESS ROADS
BORROW AREAS
STRUCTURES NOTED

PROFILE
℄ PROFILE
SOILS
GROUND GRADELINE
DRAINAGE
STRUCTURES NOTED

MOSAIC
FLOWN
FLIGHT No.
PHOTO No.
PROGRESS SCALE
INTERPRETATION
MAP ADDED IN FIELD

SURVEYED | DATE | PLOTTED | DATE | CHECKED | DATE | BY | DATE

REVISED 20/2/73