Public Works Canada

Travaux Publics Canada

Western Region Région de l'Ouest

D003876

LIARD GEOTECH

1978

BORROW AND CENTRELINE

TESTHOLES

PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD HWY

TECH. PRONYCH	RIG B-61	DATE 78/03/06	km	B.P. No. 99	HOLE No. 1

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2		GRAVEL -			1					
4										
6					2	- 3 -	4	93		MOIST
8	GP									
10		SANDY			3					
12						- 3 -	40	57		MOIST
		FREE WATER LAST 1.2-1.5 m			4					
14										
16					5	- 2 -	34	64		MOIST
18		5.5 m								
20		BOTTOM OF HOLE - 5.5 m			6					
22										
24					7					
26										
28					8					
30					9					
32										
34					10					
36					11					
38										

○ = WATER CONTENT (% OF DRY WEIGHT)
△ = UNCONFINED STRENGTH kPa
50 100 150 200 250
PLASTIC LIMIT — LIQUID LIMIT
0% 20% 40% 60% 80% 100% 120%

CHAINAGE	OFFSET

REMARKS

PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 18/03/06	km	B.P. No. 99	HOLE No. 2

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
2, 4	ML	SILT - CLAYEY SANDY		FROZEN
6, 8		2.4m		
10, 12	SM	SAND - FEW PEBBLES SILTY		
14, 16		FREE WATER @ 4.6 m		
18		5.5m		
20, 22, 24, 26, 28, 30, 32, 34, 36, 38		BOTTOM OF HOLE - 5.5 m		

DEPTH (METRES)	Q = WATER CONTENT (% OF DRY WEIGHT) / Δ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250) / PLASTIC LIMIT — LIQUID LIMIT (w % 20% 40% 60% 80% 100% 120%)	GRAIN-SIZE ANALYSIS: CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
1						
2	NO SAMPLES TAKEN					
3						
4						
5						
6						
7						
8						
9						
10						
11						

CHAINAGE	OFFSET

REMARKS

PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD Hwy.

TECH. PRONYCH	RIG B-61	DATE 78/03/06	km C	B.P. No. 99	HOLE No. 3

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2	ML	SILT - CLAYEY .6m								
4	SM	SAND - SILTY FINE 1.4m			1					
6	GP	GRAVEL - SANDY			2	4	10	86		MOIST
8		2.6m								
10		REFUSAL @ 2.6m			3					
12										
14					4					
16										
18					5					
20					6					
22										
24					7					
26										
28					8					
30					9					
32										
34					10					
36					11					
38										

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa

50 100 150 200 250

PLASTIC LIMIT — LIQUID LIMIT

0% 20% 40% 60% 80% 100% 100+

CHAINAGE	OFFSET

REMARKS

PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD Hwy

TECH. PRONYCH	RIG B-61	DATE 78/03/06	km	B.P. No. 99	HOLE No. 4

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
2	ML	SILT - CLAYEY SANDY .9'		
4	SM	SAND - SILTY ~~Fine~~ 1.5m		
6		GRAVEL - SANDY		
8				
10	GW			
12				
14				
16				
18		CLAY SILTY SANDY 5.5m		
20		BOTTOM OF HOLE. 5.5m		
22				
24				
26				
28				
30				
32				
34				
36				
38				

GRAIN SIZE ANALYSIS				RELATIVE MOISTURE CONTENT
CLAY %	SILT %	SAND %	GRAVEL %	
4	46	50		Moist
1	9	90		Moist
2	28	70		Moist

CHAINAGE	OFFSET

REMARKS

PUBLIC WORKS CANADA — DRILL HOLE REPORT — Lizard Hwy.

TECH.	RIG	DATE		B.P. No.	HOLE No.
Paonych	B-61	78/03/06	km	99	5

CHAINAGE	OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2	ML	SILT - CLAYEY SANDY 7.5m								
4	SM	SAND - SILTY FINE 1.5m								
6	GW	GRAVEL - SANDY								
8					2					
10					3	3	41	56		MOIST
12										
14					4	3	36	61		MOIST
16		5.2m								
18	CL	CLAY - SILTY SANDY 5.5m			5					WET
20		BOTTOM OF HOLE - 5.5m								
22					6					
24					7					
26					8					
28										
30					9					
32					10					
34										
36					11					
38										

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa

50 100 150 200 250

PLASTIC LIMIT — LIQUID LIMIT

0% 20% 40% 60% 80% 100% 100+

PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH. Pronych	RIG B-61	DATE 78/03/06	km	B.P. No. 99	HOLE No. 6

CHAINAGE	OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2	ML	SILT - SANDY CLAYEY .75 m								
4	SM	SAND . SILTY FINE 1.5 m								
6		GRAVEL . SANDY								
10	GW									
12					3	3	39	58		MOIST
16		5.2 m								
18	CL	CLAY SILTY SANDY 5.5 m			5	44	22	34		MOIST
20		BOTTOM OF HOLE . 5.5 m								

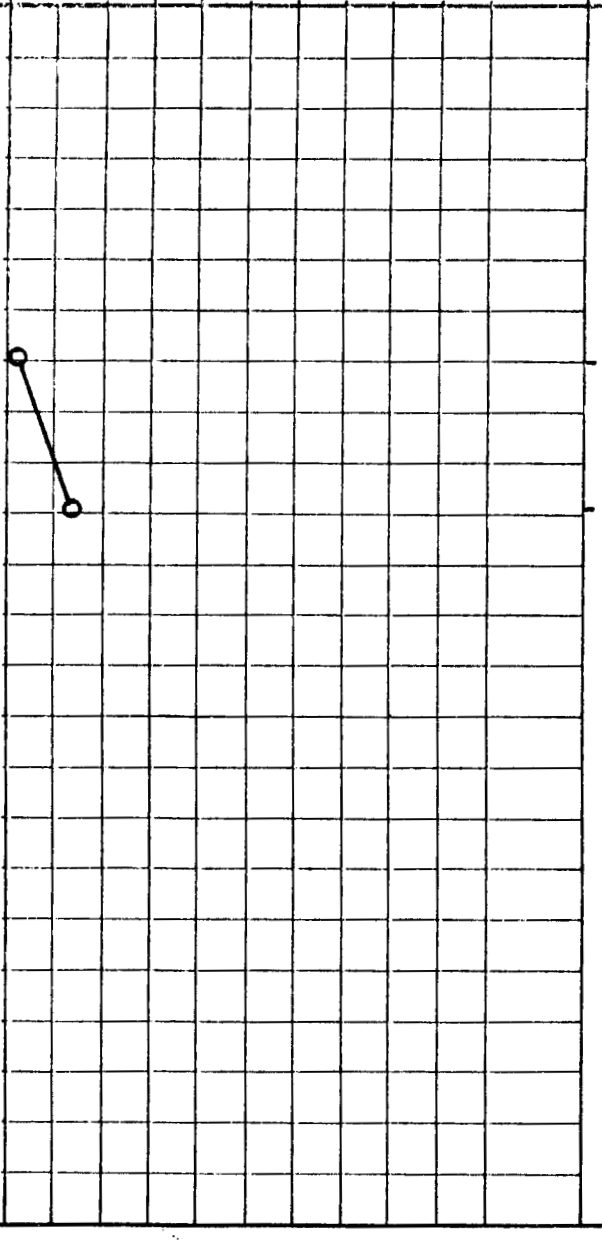
○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa

50 100 150 200 250

PLASTIC LIMIT — LIQUID LIMIT

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



PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/06	km	B.P. No. 99	HOLE No. 7

CHAINAGE	OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2		SILT - CLAYEY SANDY								
4	ML				1					
6										
8		2.4m			2					
		SAND - FEW PEBBLES								
10	SP	WET			3					
12		4.0m								
14		GRAVEL - SANDY			4					
16	GW	FREE WATER								
18		5.5m			5					
20		BOTTOM OF HOLE - 5.5m			6					
22										
24					7					
26										
28					8					
30					9					
32										
34					10					
36					11					
38										

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa

50 100 150 200 250

PLASTIC LIMIT — LIQUID LIMIT

20% 40% 60% 80% 100%

GRAIN-SIZE ANALYSIS

NO SAMPLES TAKEN

PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/06	km	B.P. No. 99	HOLE No. 8

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
2, 4	ML	SILT - CLAYEY SANDY DAMP		
		1.5m		
6, 8, 10, 12, 14	SP	SAND - FEW PEBBLES DAMP WET AFTER 4.0m FREE WATER		
		4.9m		
16, 18	CL	CLAY - SILTY SANDY WET		
		5.5m		
20		BOTTOM OF HOLE. 5.5m		

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

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

No SAMPLES TAKEN

GRAIN SIZE ANALYSIS				RELATIVE MOISTURE CONTENT
CLAY %	SILT %	SAND %	GRAVEL %	

CHAINAGE	OFFSET

REMARKS

PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/06	km	B.P. No. 99	HOLE No. 9

CHAINAGE	OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
		Pt .1m								
2		SAND - GRAVEL			1					
4	Sw	MIXTURE								
6	-				2	3	60	37		Moist
8	Gw									
10					3					
12						4	55	41		Moist
14					4					
16					5	2	51	47		Moist
18		5.5m								
20					6					
22										
24					7					
26					8					
28										
30					9					
32										
34					10					
36					11					
38										

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa

50 100 150 200 250

PLASTIC LIMIT — LIQUID LIMIT

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

PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/05	km 211	B.P. No. 100	HOLE No. 1

CHAINAGE	OFFSET

○ = WATER CONTENT (% OF DRY WEIGHT)
△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)
PLASTIC LIMIT ⊢——⊣ LIQUID LIMIT (20%, 40%, 60%, 80%, 100%)

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY-SILTY LOW PLASTIC + P_L				98	2	0		WET	FREE WATER
4					1					MOIST	.9m - 1.2m
6						92	7	1		MOIST	
8	CL	SILTY SANDY PEBBLES			2					WET	- ALL HOLES THIS PIT AREA ARE WELL ABOVE OPTIMUM TO A DEPTH OF 3-4 m
10					3						
12		@ P_L				62	30	8		MOIST	
14					4					MOIST	
16					5						
18											- NOT RECOMMENDED
20		GREY - 6.1m			6	65	30	5		MOIST	
22		BOTTOM OF HOLE - 6.1m									
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											

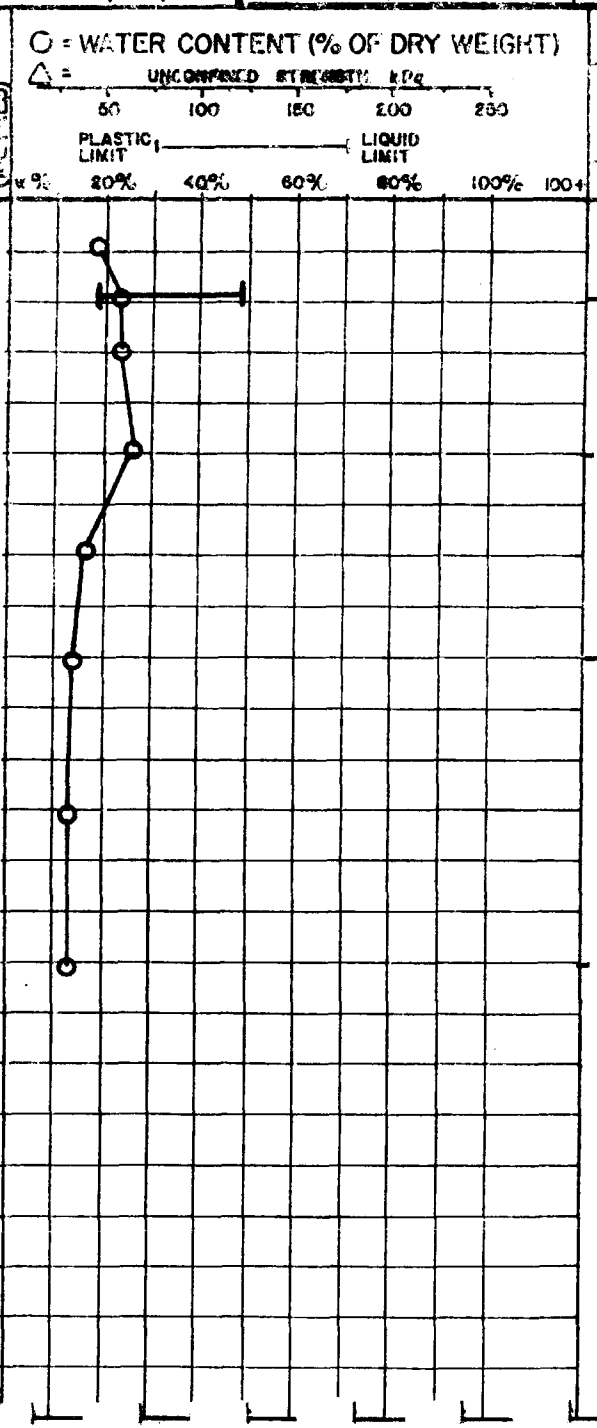
PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/06	km 211	B.P. No. 100	HOLE No. 2

CHAINAGE	OFFSET

REMARKS

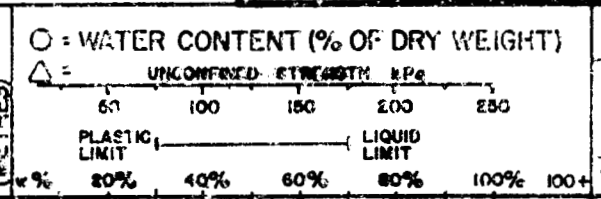
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2		CLAY - SILTY + PL MED. PLASTIC								DAMP
4					1	92	8	0		MOIST
6	CI	- PEBBLES								MOIST
8					2	95	4	1		MOIST
10		@ P_L			3					
12										MOIST
14					4	54	40	6		MOIST
16					5					
18										
20					6					MOIST
22										
24		7.6m			7	54	35	11		MOIST
26					8					
28		BOTTOM OF HOLE - 7.6m								
30					9					
32										
34					10					
36					11					
38										



PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/06	km 211	B.P. No. 100	HOLE No. 3

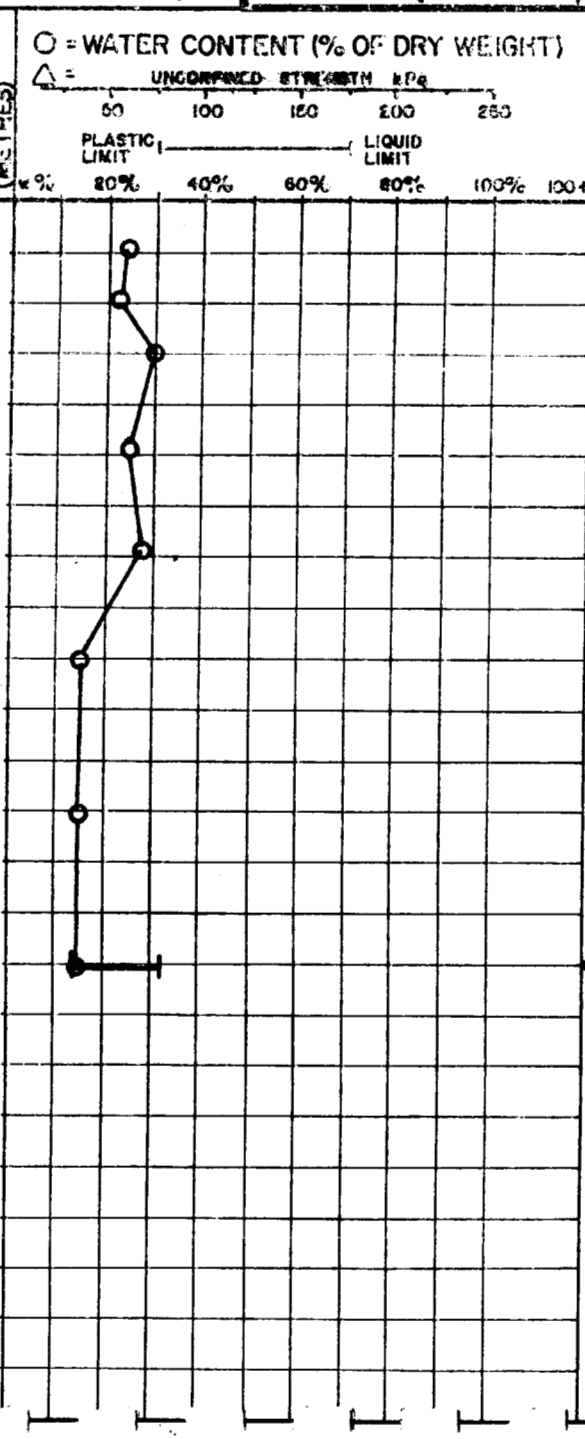
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2	CL	CLAY - SILTY LOW PLASTIC				94	6		0	DAMP			
4					1	97	3		0	MOIST			
6		- SILTY SANDY - PEBBLES								MOIST			
8	CI	MED. PLASTIC			2					WET			
10					3	69	30		1	MOIST			
12													
14					4					MOIST			
16					5								
18													
20					6	40	48		12	MOIST			
22					7								
24		7.6m								DAMP			
26		Bottom of Hole - 7.6 m			8								
28													
30					9								
32													
34					10								
36					11								
38													



PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. WEBBER | RIG B-50 | DATE 78/03/06 | km 211 | B.P. No. 100 | HOLE No. 4

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2, 4	CL, ML	SILT CLAYEY - CLAY SILTY			1	96	4	4	0	MOIST, DAMP
1.5m										
6, 8		CLAY SANDY SILTY PEBBLES + PL			2					MOIST, WET
10	OL, CI	LOW - MED PLASTIC			3	51	45	4		WET
12, 14, 16	CI	MED. PLASTIC @ PL			4, 5					WET
18, 20					6					DAMP
22, 24					7	63	31	6		DAMP
7.6m										
26, 28, 30, 32, 34, 36, 38		BOTTOM OF HOLE - 7.6 m			8, 9, 10, 11					



CHAINAGE	OFFSET

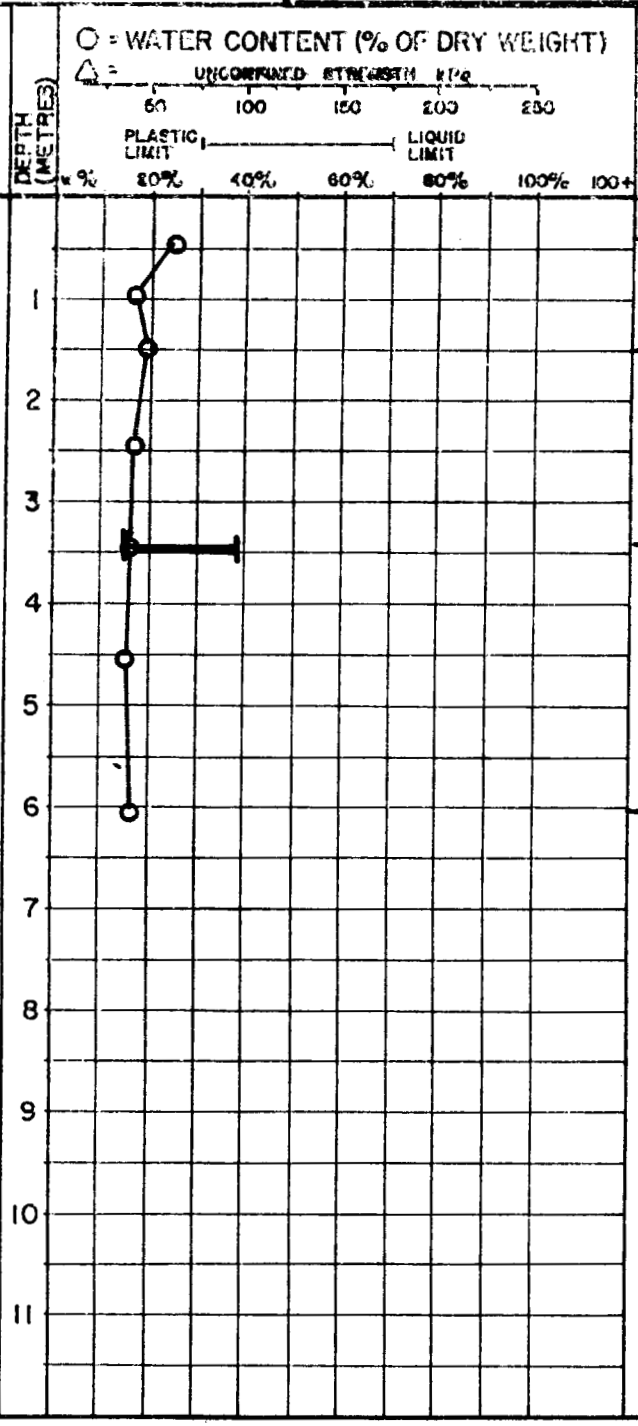
REMARKS

PUBLIC WORKS CANADA	DRILL HOLE REPORT	Alaska Hwy

TECH. WEBBER	RIG B-50	DATE 78/03/07	km 210	B.P. No. 101	HOLE No. 1

CHAINAGE	OFFSET

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
2	SM	SAND - SILTY		
		.9m		
4		CLAY - SILTY SANDY		
6		PEBBLES		
8		MED. PLASTIC		
		@ P_L		
10				
12				
14				
16		FREE WATER 4.6m - 7.6m		
18				
20		GREY -		
22				
24		7.6m		
26				
28		BOTTOM OF HOLE - 7.6m		
30				
32				
34				
36				
38				

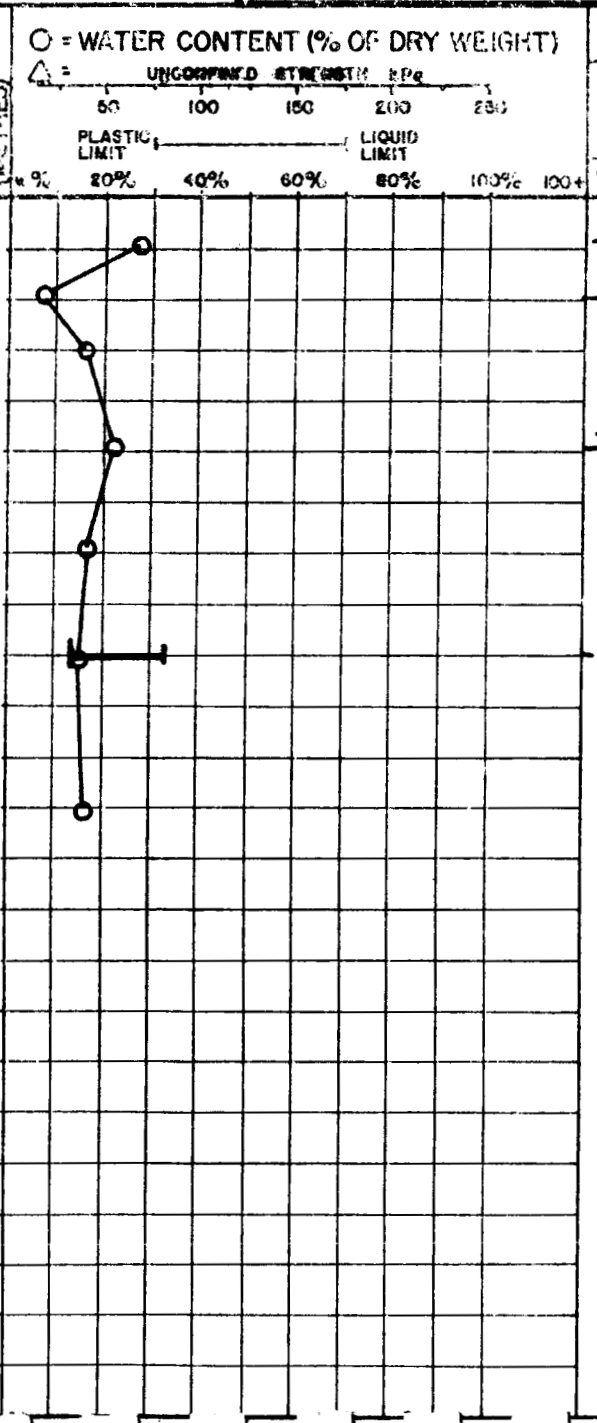


GRAIN-SIZE ANALYSIS				RELATIVE MOISTURE CONTENT	REMARKS
CLAY %	SILT %	SAND %	GRAVEL %		
40	60	0		SAT.	MOISTURE CONTENT PROBABLY 3-5% ABOVE OPTIMUM, HOWEVER BEST BET FOR BORROW IN AREA OF Km 209 TO 212. -SUGGEST AREA OF HOLES #1 AND #2
				MOIST	
74	25	1		MOIST	
				MOIST	
60	37	3		MOIST	
				MOIST	
55	36	9		~~MOIST~~ WET	

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD Hwy

TECH. WEBBER | RIG B-50 | DATE 78/03/07 | km 210 | B.P. No. 101 | HOLE No. 2

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY .6 m		FROZEN		96	4	0		MOIST	
4	SM	SAND - SILTY FINE MEDIUM 1.2 m			1	29	71	0		MOIST	
6		CLAY - SILTY SANDY - PEBBLES +PL								MOIST	
8					2	74	23	3		MOIST	
10		MED. PLASTIC			3						
12	CI									MOIST	
14		@ PL GREY - GRAVELLY			4	41	36	23		MOIST	FREE WATER FROM 4.9m - 6.1m
16					5						
18											
20		6.1 m			6					WET	
22		BOTTOM OF HOLE - 6.1 m									
24					7						
26											
28					8						
30					9						
32											
34					10						
36											
38					11						

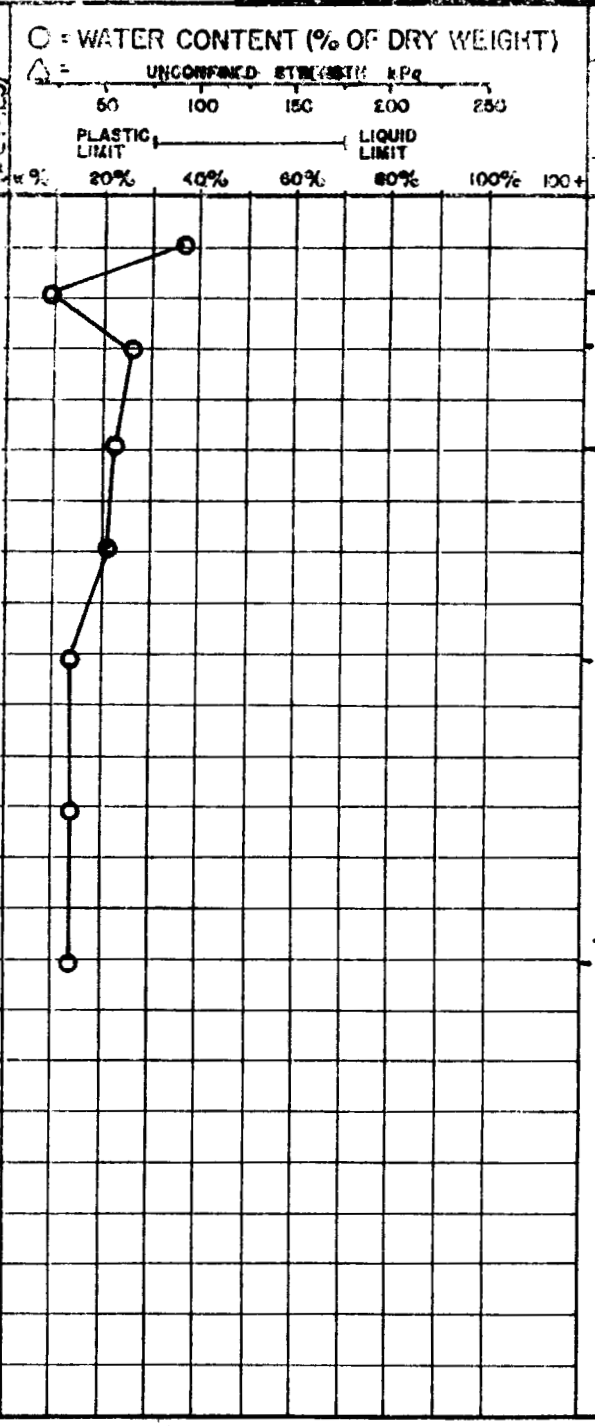


CHAINAGE	OFFSET

PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/07	km 210	B.P. No. 101	HOLE No. 3

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2	CL	CLAY - SILTY SANDY .6m								WET			
4	SM	SAND - SILTY 1.2m			1	46	54	0		MOIST			
6		SILT - SANDY 1.8m				88	12	0		WET			
8	CL	CLAY - SILTY SANDY - PEBBLES - LOW PLASTIC			2	62	35	3		WET			FREE WATER 1.5m - 2.7m
10					3					WET			
12													
14					4								
16	CI	GREY - MED. PLASTIC			5	63	28	9		MOIST			
18		COBBLES											
20					6					MOIST			
22													
24		7.6m			7	71	27	2		MOIST			
26		BOTTOM OF HOLE. 7.6m			8								
28													
30					9								
32													
34					10								
36					11								
38													



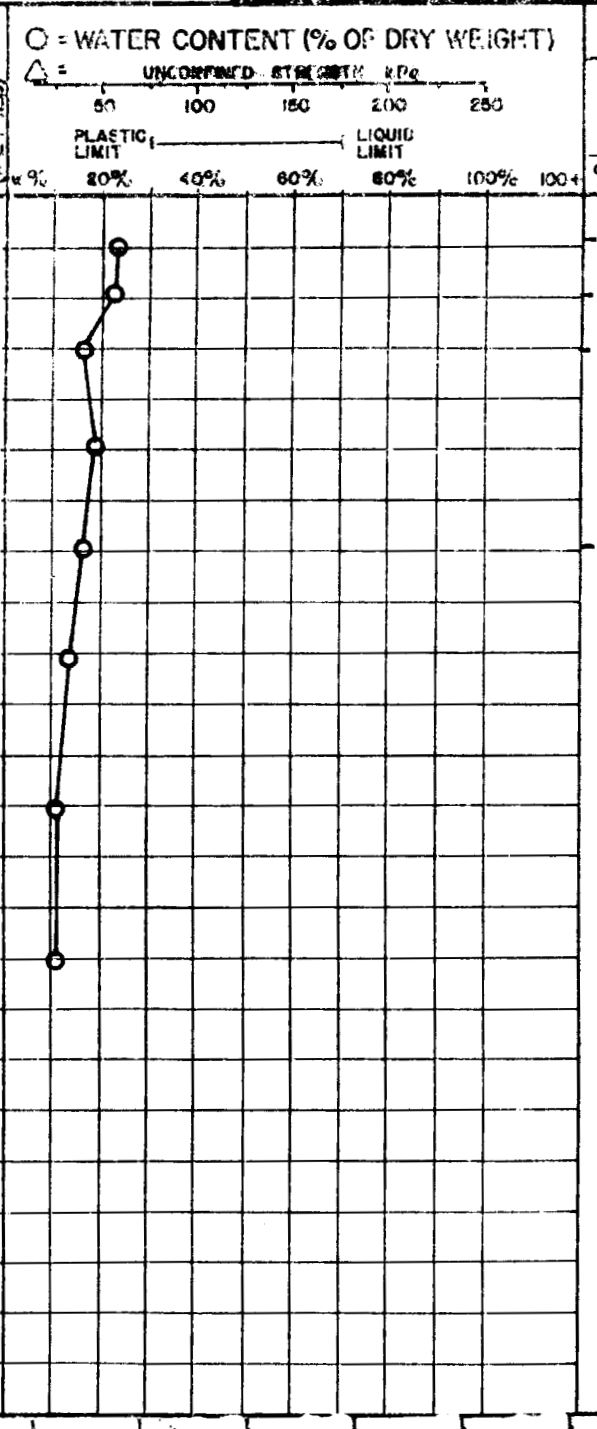
PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | Liard Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/07	km 210	B.P. No. 101	HOLE No. 4

CHAINAGE	OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2	ML	SILT -				97	1	3	0	MOIST
4		1.2 m			1	91	1	9	0	MOIST
6		CLAY - SILTY SANDY PEBBLES + PL			2	76	16	8		MOIST
8		LOW - MED. PLASTIC								MOIST
10	CL	@ PL			3					
12	CI	COBBLES				65	30	5		MOIST
14					4					MOIST
		GREY -								
16					5					
18										
20					6					DAMP
22										
24					7					DAMP
		7.6 m								
26		BOTTOM OF HOLE - 7.6 m			8					
28										
30					9					
32										
34					10					
36										
38					11					

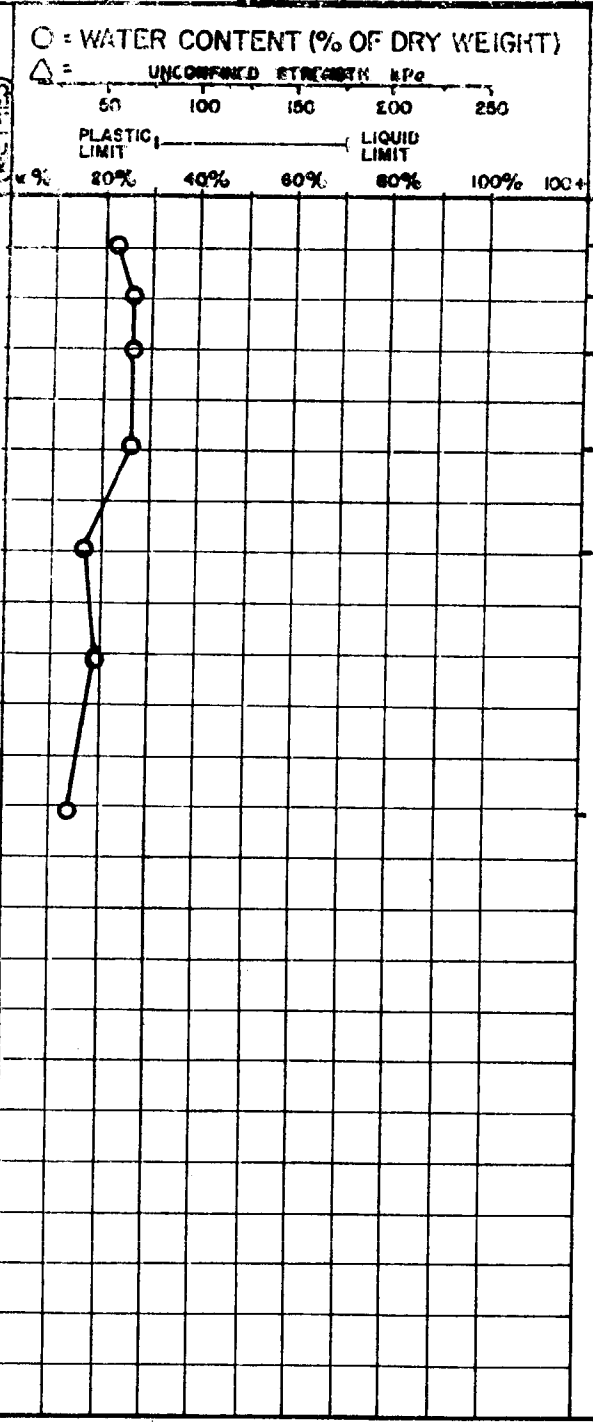


PUBLIC WORKS CANADA — DRILL HOLE REPORT — WIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/07	km 213	B.P. No. 102	HOLE No. 1

CHAINAGE	OFFSET

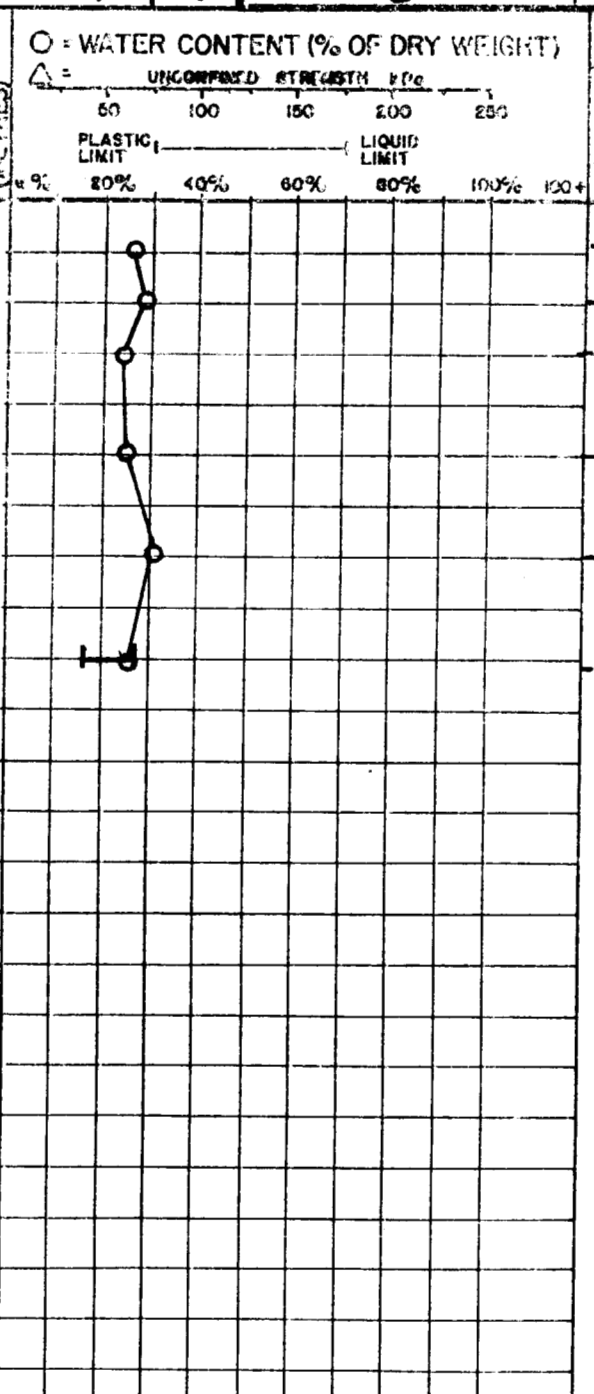
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		SILT.				97	3	0		MOIST	- WELL ABOVE OPTIMUM THROUGHOUT
4					1	96	4	0		MOIST	
6	ML	FREE WATER 2.1m - 2.7m				95	5	0		WET	
8					2	96	4	0		SAT	- NOT RECOMMENDED
10		3.1m			3						
12		CLAY - SILTY SANDY - GRAVELLY - LOW PLASTIC				68	20	12		H.I.B.	
14	CL				4						
16					5					MOIST	
18											
20		GREY COBBLES 6.1m			6	59	31	10		MOIST	
22		BOTTOM OF HOLE - 6.1m			7						
24											
26					8						
28											
30					9						
32											
34					10						
36											
38					11						



PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. WEBBER | RIG B-50 | DATE 78/03/07 | km 213 | B.P. No. 102 | HOLE No. 2

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
	ML	SILT - CLAYEY SANDY TO											
2	CL	CLAY - SILTY SANDY				87	13	0		WET			
4					1	94	6	0		WET			
		FREE WATER .9m - 2.7m				96	4	0		WET			
6					2								
8						88	12	0		WET			
10					3								
12						91	8	1		MOIST			
		4.0m			4								
14	CL	CLAY SILTY SANDY PEBBLES - FREE WATER 4.6m				65	25	10		WET			
16		BOTTOM OF HOLE - 4.6m			5								
18													
20					6								
22													
24					7								
26													
28					8								
30					9								
32													
34					10								
36					11								
38													



PUBLIC WORKS CANADA — DRILL HOLE REPORT

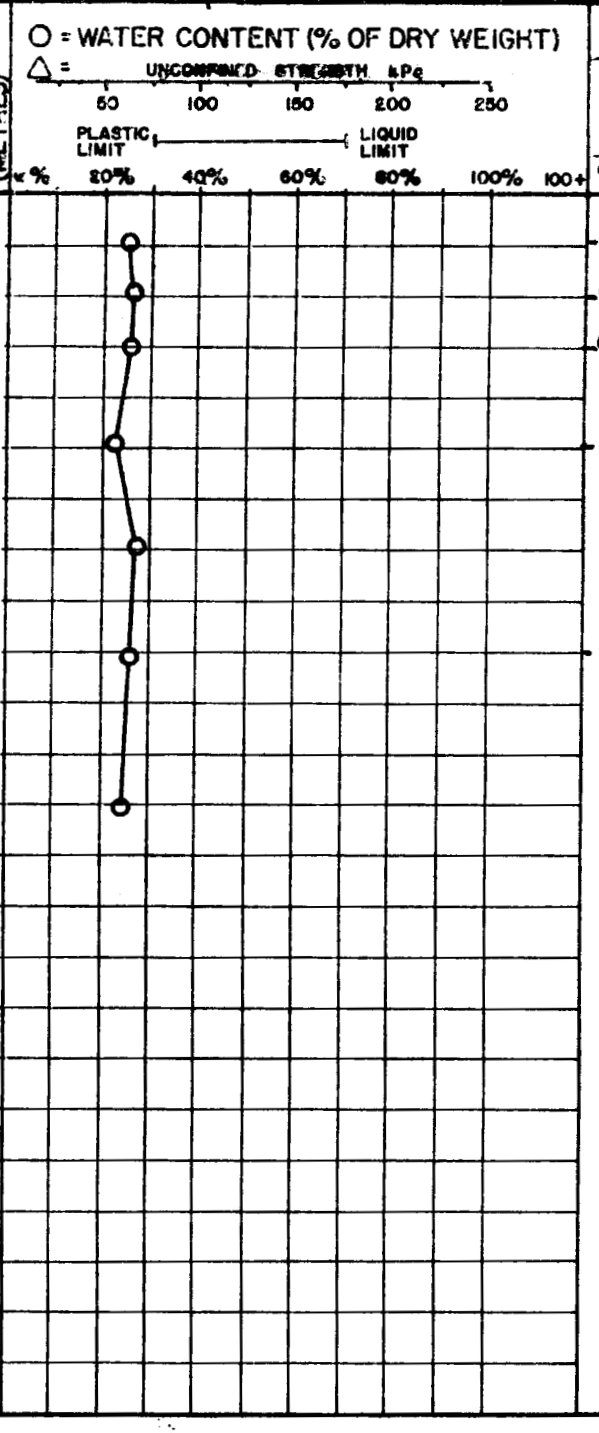
LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/07	km 213	B.P. No. 102	HOLE No. 3

CHAINAGE	OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2		SILT - CLAYEY				95	5	0		MOIST
4					1	96	4	0		WET
6	ML	FREE WATER 9m - 1.8m				92	8	0		WET
8		2.4m			2	87	12	1		MOIST
10		CLAY - SILTY SANDY			3					
12		PEBBLES								MOIST
14	CI	MED. PLASTIC			4	87	7	6		MOIST
16					5					
18										
20		GREY - 6.1m			6					MOIST
22		BOTTOM OF HOLE - 6.1m								
24					7					
26										
28					8					
30					9					
32										
34					10					
36										
38					11					



PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/07	km 213	B.P. No. 103	HOLE No. 1

CHAINAGE	OFFSET

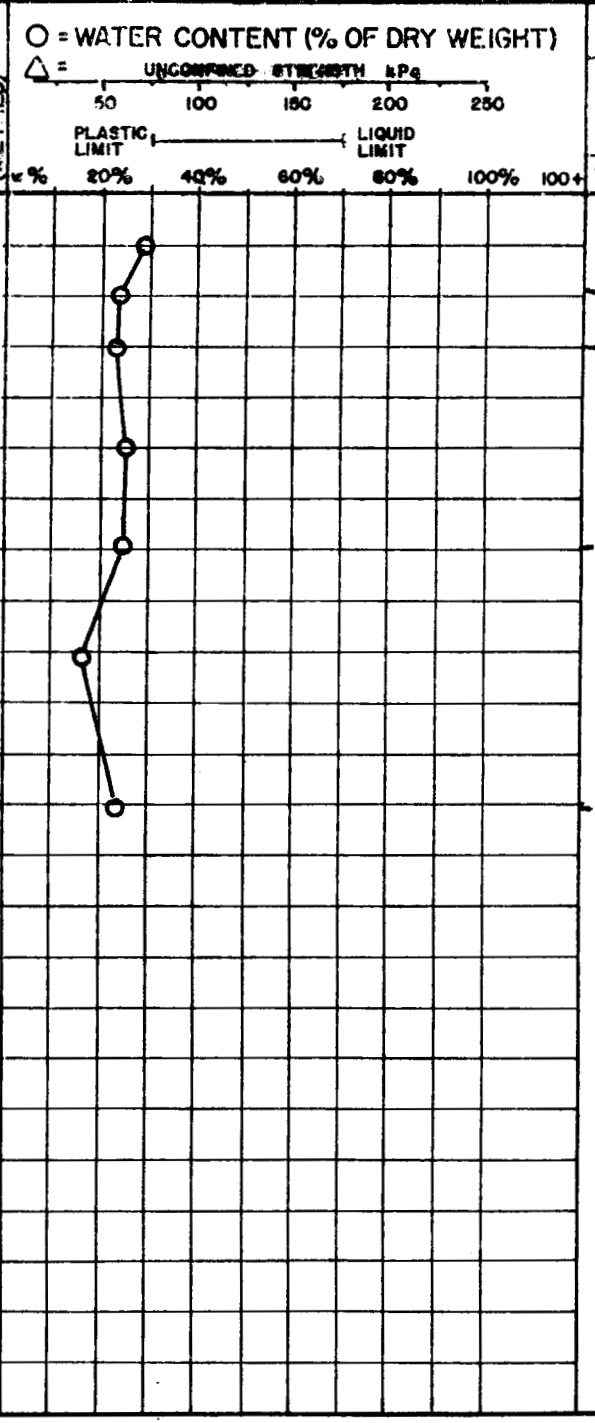
O = WATER CONTENT (% OF DRY WEIGHT)
△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)
PLASTIC LIMIT — LIQUID LIMIT (w % 20% 40% 60% 80% 100% 100+)

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY PEBBLES + PL				85	13	2		MOIST	· MOISTURE CONTENT WELL ABOVE OPTIMUM THIS AREA.
4		- SILTY			1					MOIST	
6		MED. PLASTIC								MOIST	
8	CI				2	97	3	0		MOIST	- NOT RECOMMENDED
10					3						
12										MOIST	
14					4						
16		GREY - SILTY SANDY PEBBLES LOW PLASTIC				75	23	2		MOIST	
18	CL				5						
20		6.1m			6					WET	
22		BOTTOM OF HOLE. 6.1m									
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											

PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/07	km 213	B.P. No. 103	HOLE No. 2

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2	CL	CLAY-SILTY .6m								WET			
4	ML	SILT-CLAYEY			1	98	2	0		MOIST			
6		2.1m				98	2	0		MOIST			
8		CLAY-SILTY +PL			2					WET			
10	CL	LOW PLASTIC			3								
12		GREY.				95	5	0		WET			
14					4					WET			
16					5								
18		PEBBLES								WET			
20		6.1m			6	88	9	3					
22		BOTTOM OF HOLE - 6.1m											
24					7								
26													
28					8								
30					9								
32													
34					10								
36					11								
38													

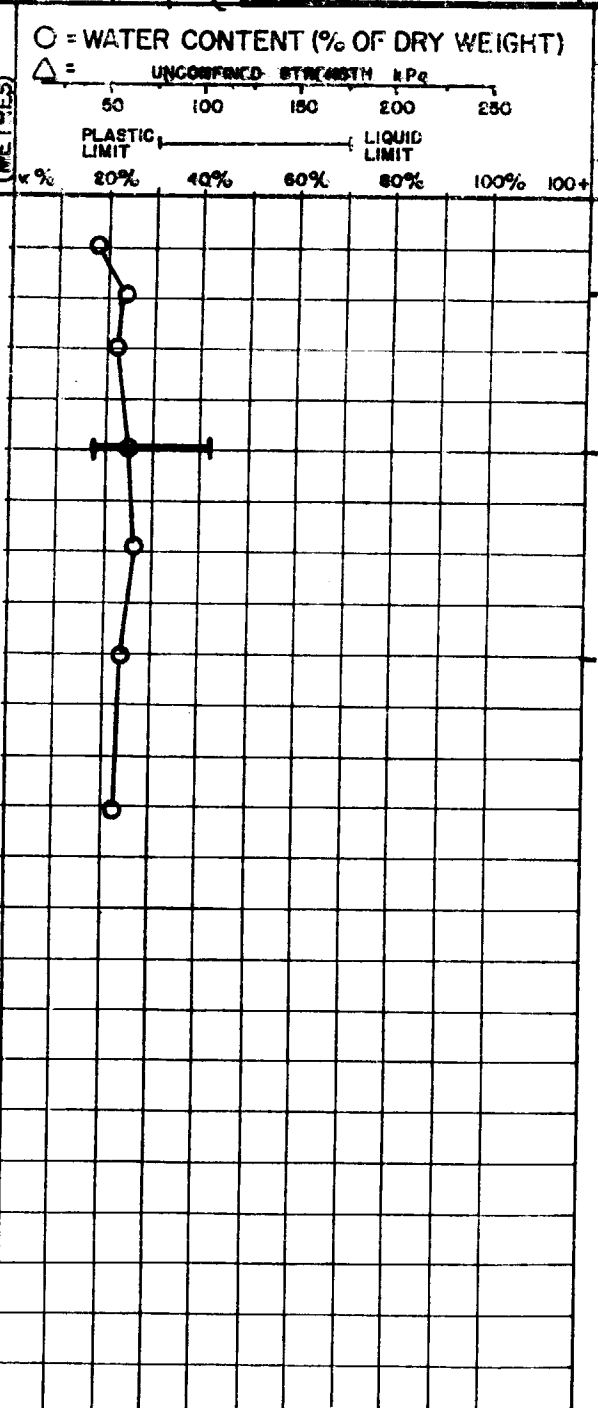


PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY

TECH. WEBBER	RIG B-50	DATE 78/03/07	km 213	B.P. No. 103	HOLE No. 3

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY								DAMP	
4		+ P_L			1	93	7		0	DAMP	
6		MED. PLASTIC								MOIST	
8	CI				2	91	9		0	MOIST	
10					3						
12										MOIST	
14		GREY.			4						
16						96	4		0	WET	
18					5						
20		6.1m			6					WET	
22		BOTTOM OF HOLE - 6.1m									
24					7						
26											
28					8						
30					9						
32											
34					10						
36											
38					11						

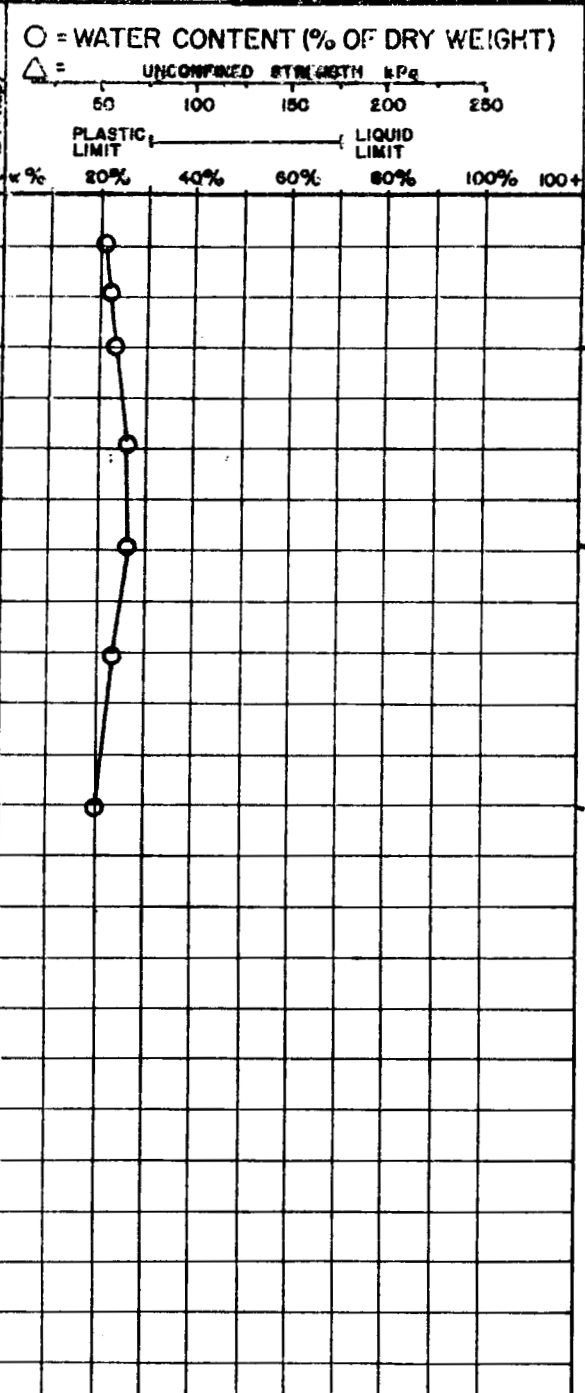


CHAINAGE | OFFSET

PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/07	km 213	B.P. No. 103	HOLE No. 4

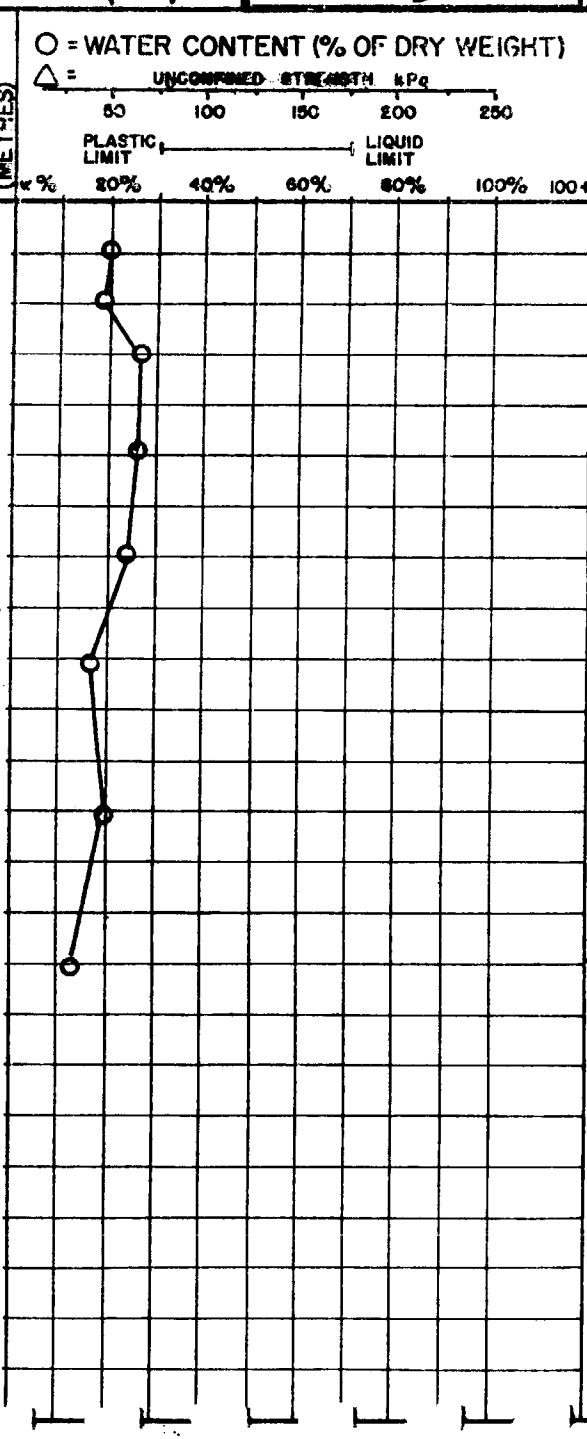
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2		CLAY - SILTY + P_L				98		2	0	DAMP			
4					1					DAMP			
6	CL	LOW-MED. PLASTIC				93		7	0	MOIST			
8	1				2					MOIST			
10	CI	- SANDY PEBBLES			3	82		14	4	WET			
12					4					WET			
14													
16					5								
18													
20		GREY. 6.1m			6	82		17	1	MOIST			
22		BOTTOM OF HOLE - 6.1m											
24					7								
26													
28					8								
30					9								
32													
34					10								
36													
38					11								



PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD Hwy.

TECH. WEBBER | RIG B-50 | DATE 78/03/07 | km 213 | B.P. No. 103 | HOLE No. 5

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2	CL - CI	CLAY - SILTY			1	81	16	3		DAMP H.I.B.			
4		- SILTY SANDY PEBBLES + PL											
6		- SILTY PEBBLES			2					MOIST			
8		LOW - MED. PLASTIC			2	88	8	4		WET			
10					3					WET			
12													
14		SILTY SANDY PEBBLES			4	72	26	2		MOIST			
16		4.9 m											
18	SM	SAND - SILTY PEBBLES			5								
20					6					MOIST-WET			
22		FREE WATER 7.0m - 7.6m											
24		7.6m			7	37	55	8		MOIST-WET			
26		BOTTOM OF HOLE - 7.6m			8								
28													
30					9								
32													
34					10								
36													
38					11								



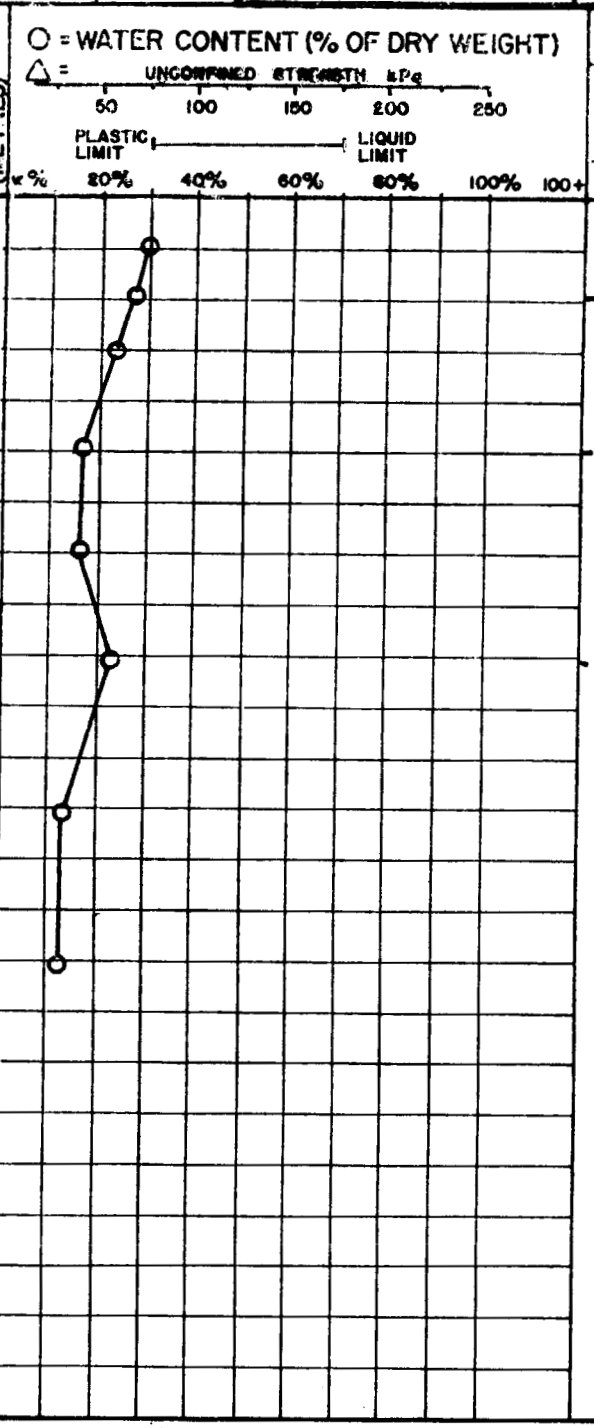
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/07	km 213	B.P. No. 103	HOLE No. 6

CHAINAGE	OFFSET

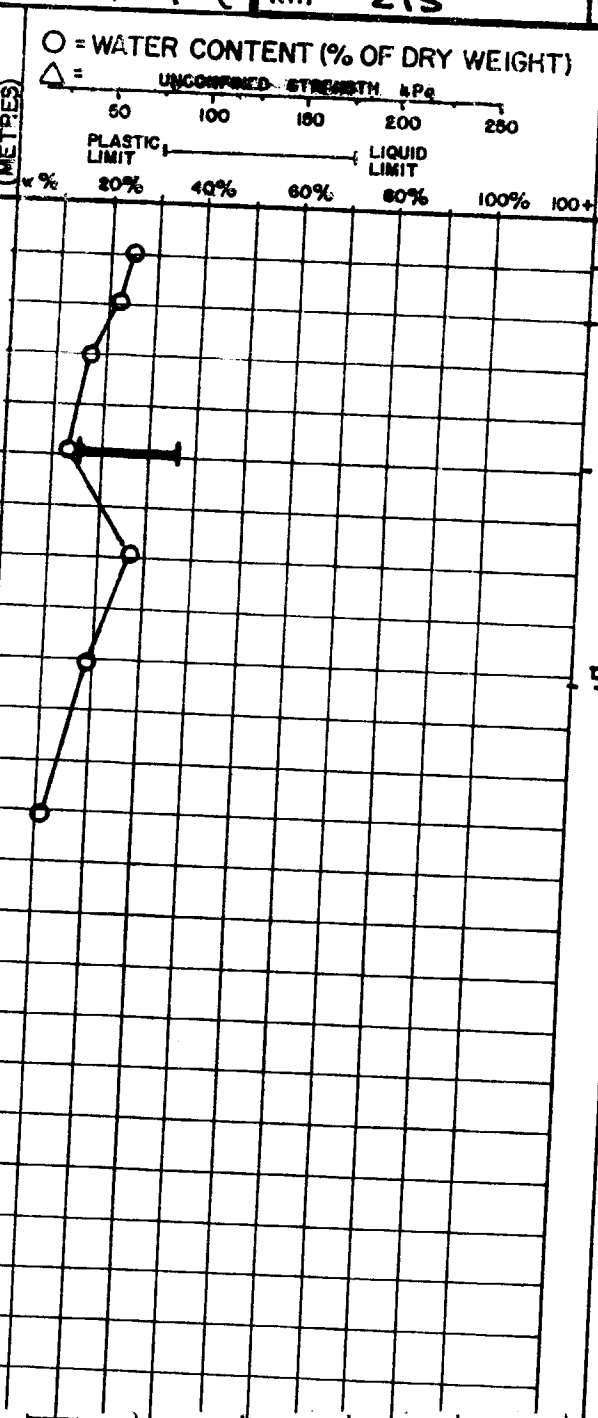
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY								WET	
		- LOW PLASTIC — .9m			1	96	4	0		WET	PERCH WATER 0-1.2 m
4	ML	SILT — 1.6m								MOIST	
6		CLAY -									
8		- SILTY SANDY PEBBLES			2	71	26	3		H.L.B.	
10	CU	LOW - MED. PLASTIC			3						
12	I									MOIST	
	CI				4						
14						86	12	2		MOIST	
16					5						
18		@ PL									
20		GREY.			6					DAMP	
22											
24					7						
		7.6m								DAMP	
26		BOTTOM OF HOLE - 7.6m			8						
28											
30					9						
32											
34					10						
36											
38					11						



PUBLIC WORKS CANADA — DRILL HOLE REPORT

TECH. WEBBER	RIG B-50	DATE 78/06/07	LIARD Hwy.
km 215	B.P. No. 104	HOLE No. 1	
CHAINAGE	OFFSET		

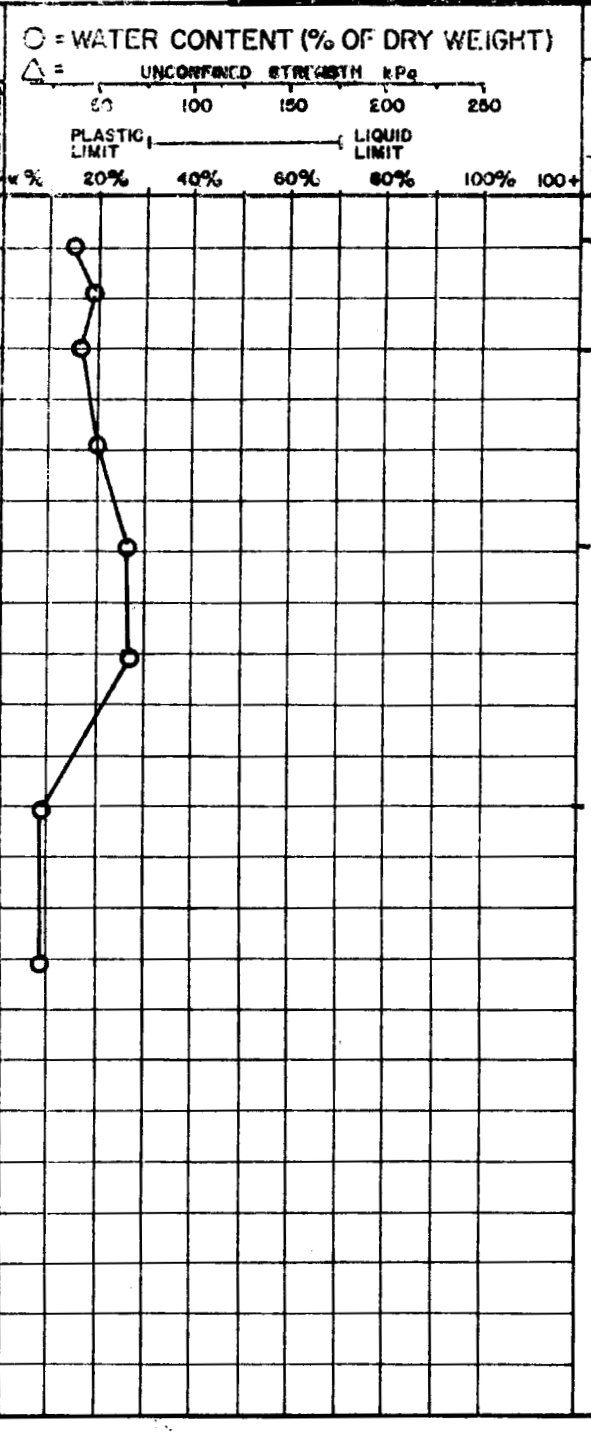
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
	ML	SILT-CLAYEY									
2		.6m									
4	CL	CLAY-SILTY SANDY PEBBLES				97	3	0		MOIST	-MOISTURE CONTENT GENERALLY ABOVE OPTIMUM THIS AREA, HOWEVER BEST BET FOR BORROW IN AREA OF KM. 213 TO 216.
6		GREY.			1	81	18	1		MOIST	
8	CI	MED. PLASTIC			2					WET	
10					3	62	32	6		MOIST	
12											
14					4					WET	
16					5	57	27	16		WET	-SUGGEST PIT BE DEVELOPED ADJACENT TO R.O.W. (HOLE #4) OR IN AREA OF HOLES #1 & #2.
18											
20		6.1m			6					DAMP	
22		BOTTOM OF HOLE - 6.1m									
24					7						
26											
28					8						
30											
32					9						
34					10						
36											
38					11						



PUBLIC WORKS JAN. JA	DRILL HOLE REC. DR.	LIARD HWY

TECH. WEBBER	RIG B-50	DATE 78/03/07	km 215	B.P. No. 104	HOLE No. 2

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2		CLAY - SILTY SANDY - PEBBLES			1	79	20	1		DAMP			
4		- SILTY + PL								DAMP			
6		MED. PLASTIC			2	97	3	0		DAMP			
8										DAMP			
10					3								
12	CI					93	7	0		MOIST			
14					4					WET			
16					5								
18		SILTY SANDY - PEBBLES - PL											
20					6	46	37	17		DAMP			
22					7								
24		7.6m								DAMP			
26		BOTTOM OF HOLE - 7.6m			8								
28													
30					9								
32													
34					10								
36													
38					11								

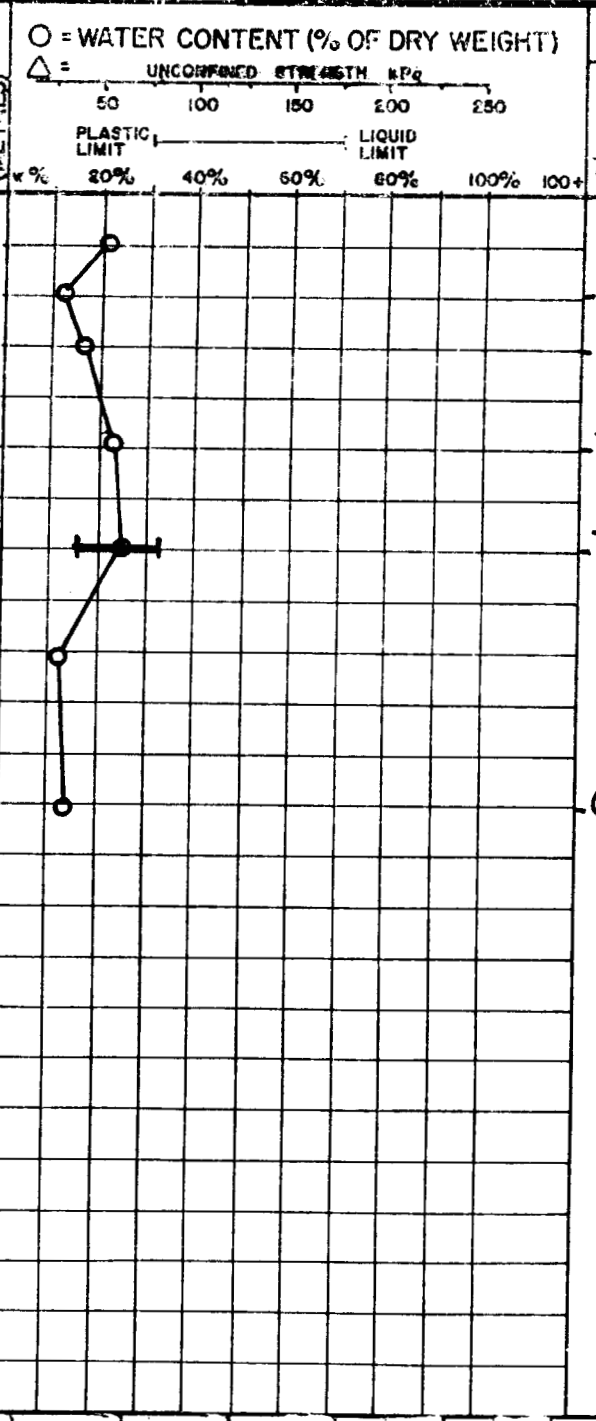


PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/07	km 215	B.P. No. 104	HOLE No. 3

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY-SILTY .6 m								DAMP	
4	SM	SAND-SILTY + P_L			1	41	59	0		MOIST	
6						51	49	0		MOIST	
8					2	32	68	0		SAT.	PERC. WATER 2.1 m - 2.7 m
10		3.1 m									
12	CI	CLAY - SILTY SANDY MED. PLASTIC			3	78	22	0		WET	
14		@ P_L			4						
16					5					DAMP	
18		GREY. - PEBBLES									
20		6.1 m			6	62	30	8		MOIST	
22		BOTTOM OF HOLE. 6.1 m									
24					7						
26											
28					8						
30					9						
32											
34					10						
36											
38					11						

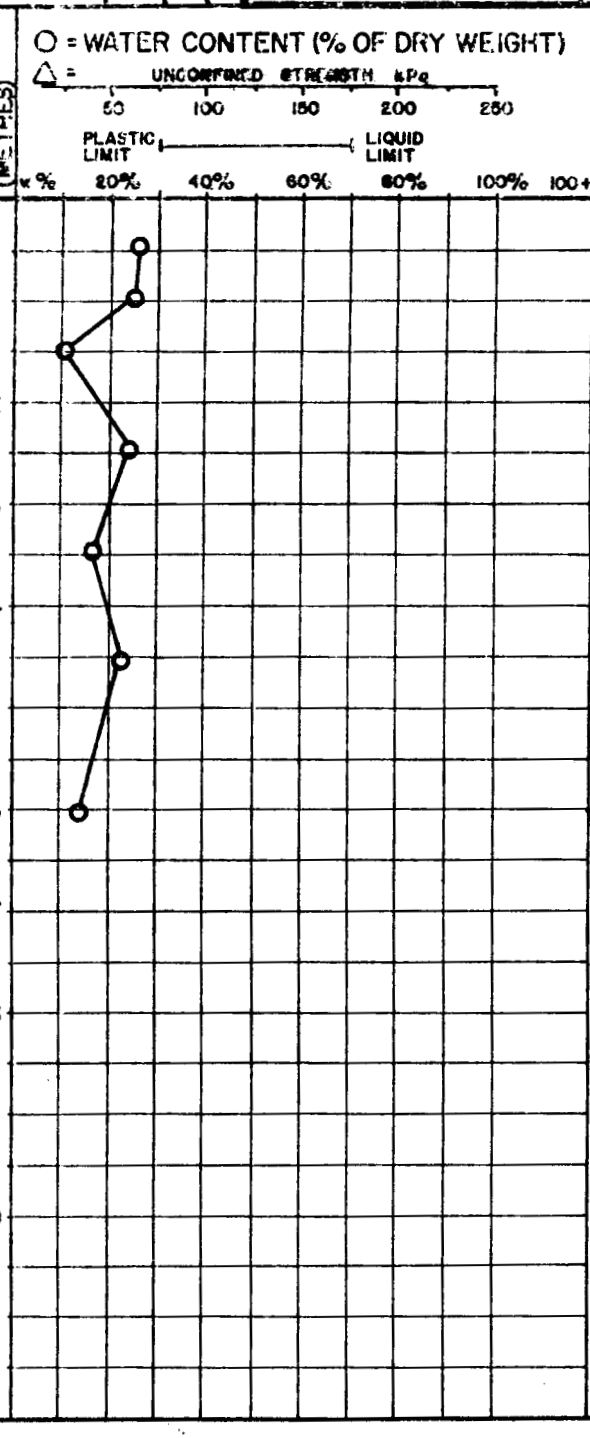


CHAINAGE | OFFSET

PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/07	km 215	B.P. No. 104	HOLE No. 4

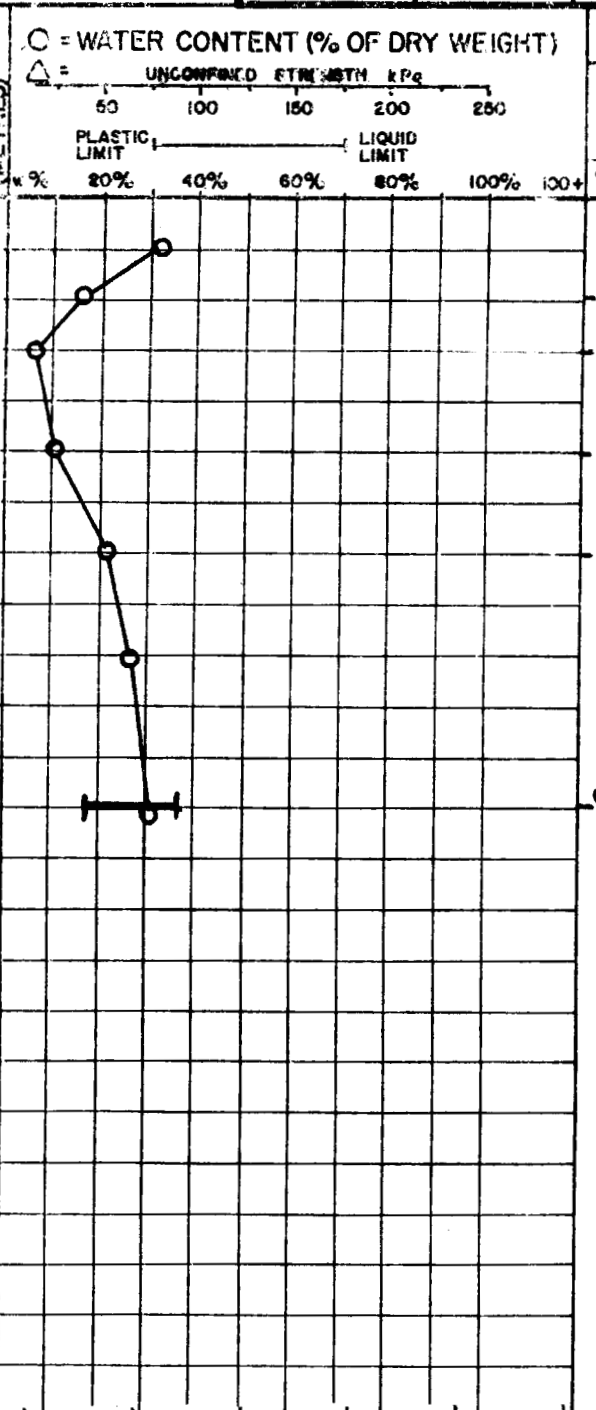
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2	ML	CLAY/SILTY - SILT CLAYEY				98	2	0		SAT.			
4	CL	1.2 m			1					MOIST			
6	SM	SAND - SILTY				30	70	0		MOIST			
		2.0m			2								
8		CLAY - SILTY/ SANDY GRAVELLY								MOIST			
10		MED. PLASTIC			3								
12						61	26	13		MOIST			
14	CI				4								
										MOIST			
16					5								
18		PEBBLES											
20		6.1m			6	73	24	3		DAMP			
22		BOTTOM OF HOLE - 6.1 m											
24					7								
26					8								
28													
30					9								
32													
34					10								
36					11								
38													



PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. WEBBER | RIG B-50 | DATE 78/03/09 | km 217 | B.P. No. 105 | HOLE No. 1

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY-SILTY .6m								SAT.	SUBSOIL THIS AREA WELL ABOVE OPTIMUM - NOT RECOMMENDED
4		SAND-SILTY			1	37	63	0		MOIST	
6						19	81	0		MOIST	
8	SM				2	37	63	0		MOIST	
10		3.1m			3	83	17	0		WET	
12		CLAY-SILTY SANDY +Pl			4						
14										WET	
16	CI	MED. PLASTIC			5						
18		-SILTY									
20		6.1m			6	99	1	0		WET	
22		BOTTOM OF HOLE - 6.1m									
24					7						
26					8						
28					9						
30											
32					10						
34											
36					11						
38											

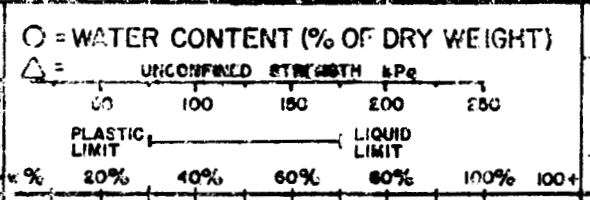


CHAINAGE | OFFSET

PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/09	km 217	B.P. No. 105	HOLE No. 2

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2	ML CL	SILT - CLAYEY - CLAY SILTY				93	7	0		WET			
		.6m											
4		SAND - SILTY			1	28	72	0		MOIST			
6	SM	FREE WATER 2.1m - 2.7m			2	18	82	0		MOIST			
8						31	69	0		WET			
10		3.1m			3								
12		CLAY - SILTY GREY - MED. PLASTIC			4					WET			
14	CI					92	8	0		WET			
16					5								
18													
20		6.1m			6					WET			
22		BOTTOM OF HOLE 6.1m			7								
24													
26					8								
28													
30					9								
32													
34					10								
36					11								
38													



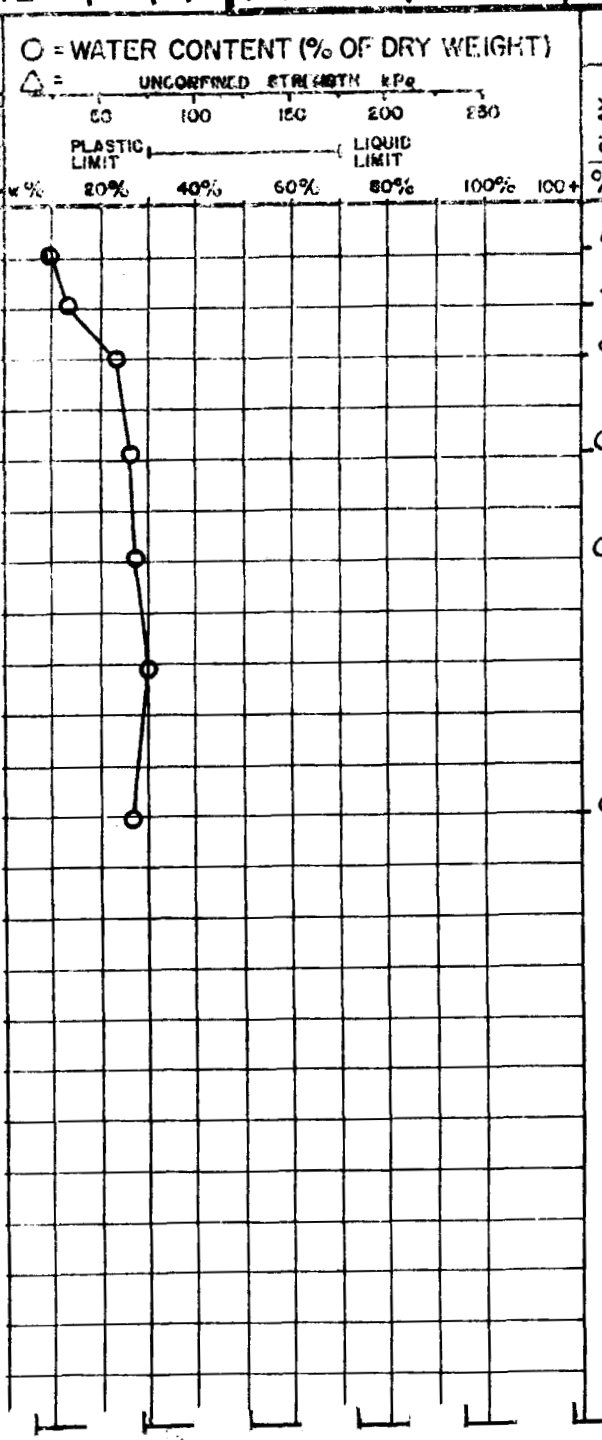
PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/09	km 217	B.P. No. 105	HOLE No. 3

CHAINAGE	OFFSET

REMARKS

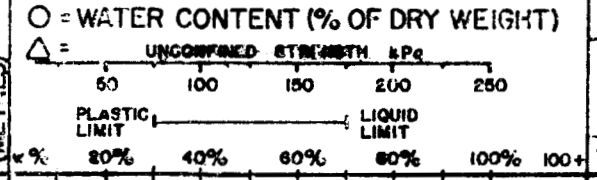
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
	ML	SILT - SAND MIX				55	45	0		MOIST
2	SM	SAND - SILTY			1	31	69	0		MOIST
4		1.2m								
		CLAY - SILTY PEBBLES				88	8	4		MOIST
6					2					
6		SILTY				98	2	0		WET
	CL	LOW - MED PLASTIC			3					
10						98	2	0		WET
12	CI	GREY -			4					
14										WET
16					5					
18										
20		6.1m			6	96	4	0		WET
		BOTTOM OF HOLE								
22					7					
24										
26					8					
28										
30					9					
32										
34					10					
36					11					
38										



PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD HY

TECH. WEBBER	RIG B-50	DATE 78/03/09	km LIARD ACCESS	B.P. No. 106	HOLE No. 1

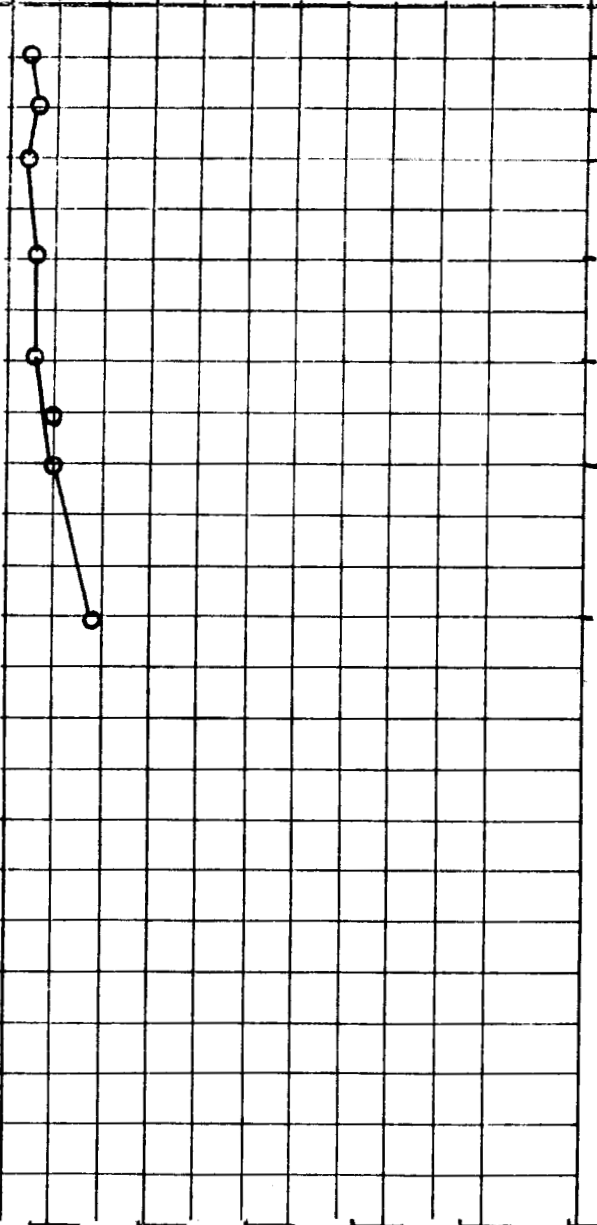
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2	ML	SILT - SANDY .6m			1	61	39	0		MOIST			O.K. FOR BORROW
4	SM	SANDY - SILT - FINE			2	15	85	0		MOIST			
6					3	20	80	0		MOIST			
8					4	19	81	0		MOIST			
10					5	18	82	0		MOIST			
12		4.0m			6								FREE WATER 4.0m-4.6m
14	ML	SILT - SAND 4.6m			7	65	35	0		SAT - WET			
16		BOTTOM OF HOLE - 4.6m			8								
18					9								
20					10								
22					11								
24													
26													
28													
30													
32													
34													
36													
38													



PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | HIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/09	km HIARD ACCESS	B.P. No. 106	HOLE No. 2

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38	SM, SP	SAND - SILTY FINE - MEDIUM FREE WATER 5.6m - 6.1m 6.1m BOTTOM OF HOLE - 6.1m		

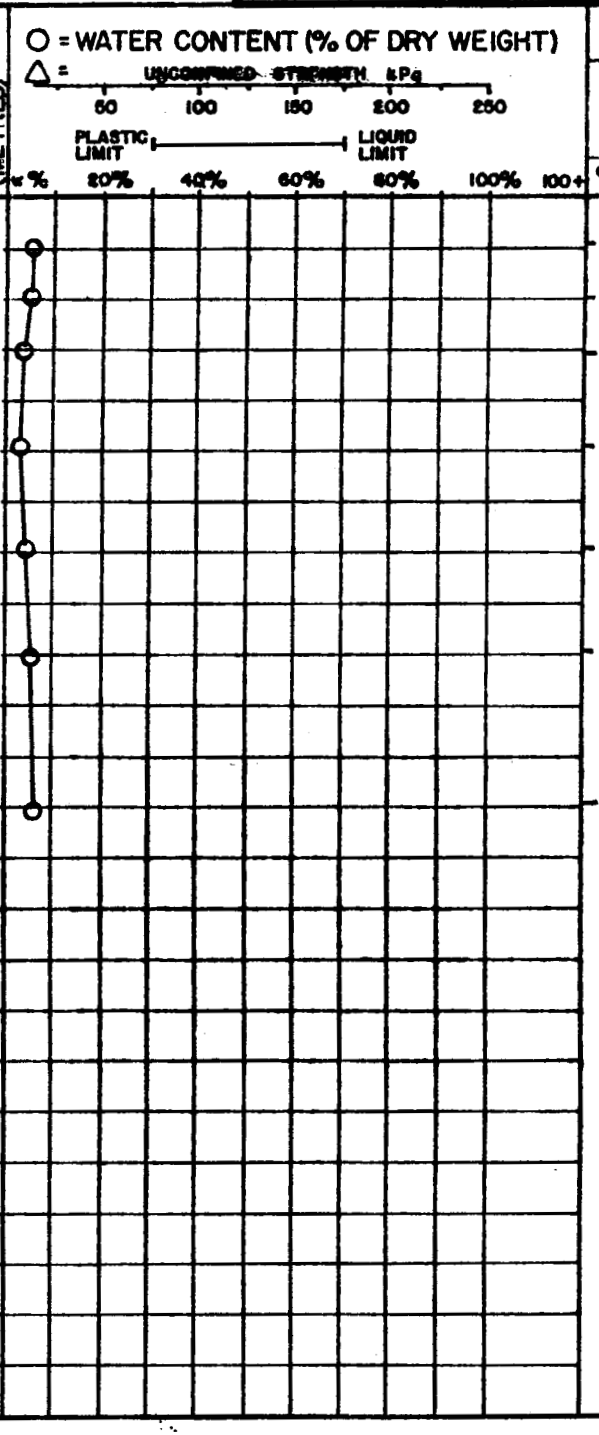


GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
12	88	0		DAMP-MOIST			
17	83	0		D-M			
14	86	0		D-M			
22	78	0		MOIST			
19	81	0		MOIST			
23	77	0		MOIST			
22	78	0		WET			

PUBLIC WORKS CANADA | DRILL HOLE REPORT | Liard Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/09	km Liard Access	B.P. No. 106	HOLE No. 3

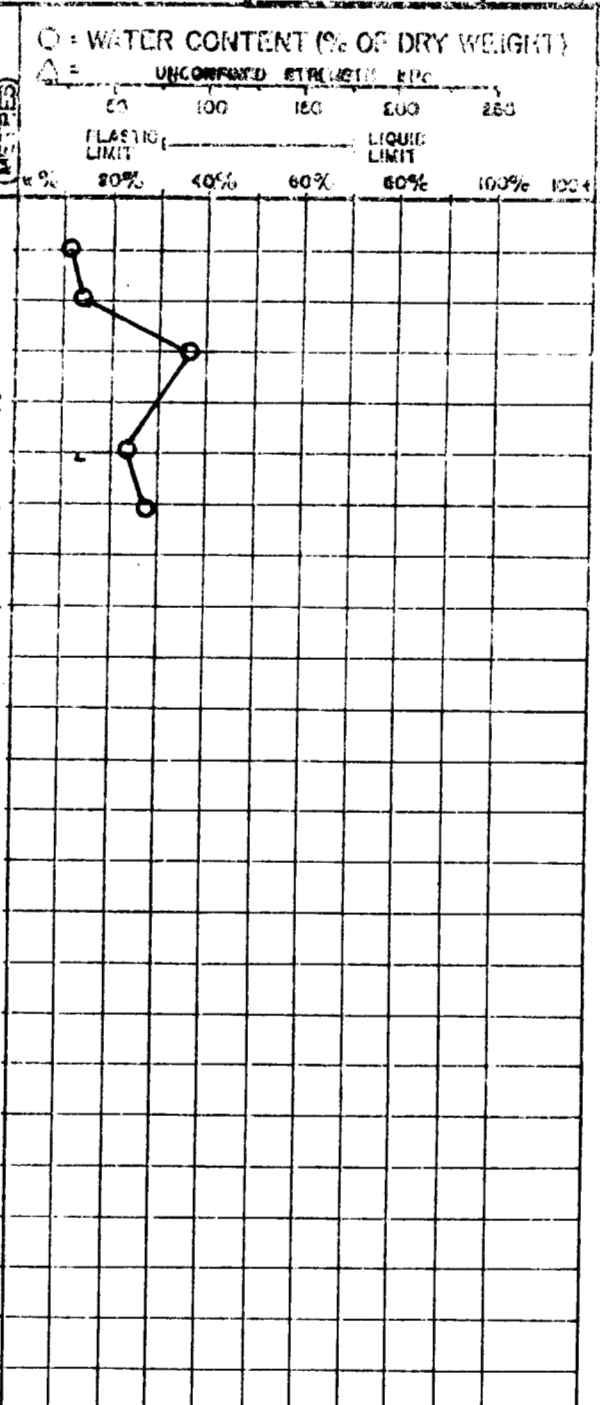
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2		SAND - SILTY FINE - MEDIUM				11	-	89	0	DAMP-MOIST			
4					1	14	-	84	0	D-M			
6	SM					14	-	84	0	DAMP			
8	SP				2	11	-	89	0	DAMP			
10					3	15	-	85	0	DAMP-MOIST			
12													
14					4	12	-	88	0	MOIST			
16					5								
18													
20		6.1m			6	15	-	85	0	MOIST			
22		BOTTOM OF HOLE - 6.1m											
24					7								
26													
28					8								
30					9								
32													
34					10								
36													
38					11								



PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY

TECH. PRONYCH | RIG B-61 | DATE 78/03/08 | km 212 to 217 | B.P. No. 107 | HOLE No. 1

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT	REMARKS
2	SC	SAND SILT MIX CLAYEY		FROZEN	MOIST	ALL HOLES BRIOT WELL ABOVE OPTIMUM. NOT RECOMMENDED.
4	ML				MOIST	
		1.5m				
6	CL	CLAY-SILTY			WET	
8	ML	SILT CLAYEY			MOIST-WET	
10	CL	3.1m			M-W	
12		BOTTOM OF HOLE - 3.1m				



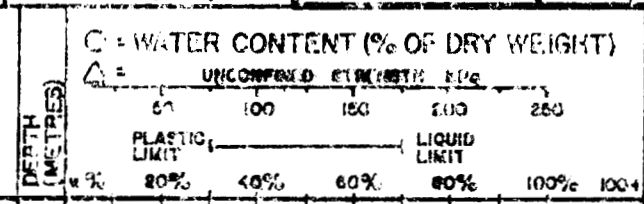
GRAIN SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %

CHAINAGE	OFFSET

PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 18/03/08	km 212 to 217	B.P. No. 107	HOLE No. 2

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2, 4	CL-CI	CLAY - SILTY LOW-MED. PLASTIC $+P_L$ 1.5m		FROZEN	1					WET SAT.			
6	ML	SILT - CLAYEY			2					MOIST-WET			
8		CLAYEY SANDY								M-W			
10	SM	SAND - SILTY 3.1m			3					MOIST			
12		BOTTOM OF HOLE - 3.1m											
14					4								
16					5								
18					6								
20					7								
22					8								
24					9								
26					10								
28					11								
30													
32													
34													
36													
38													



PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

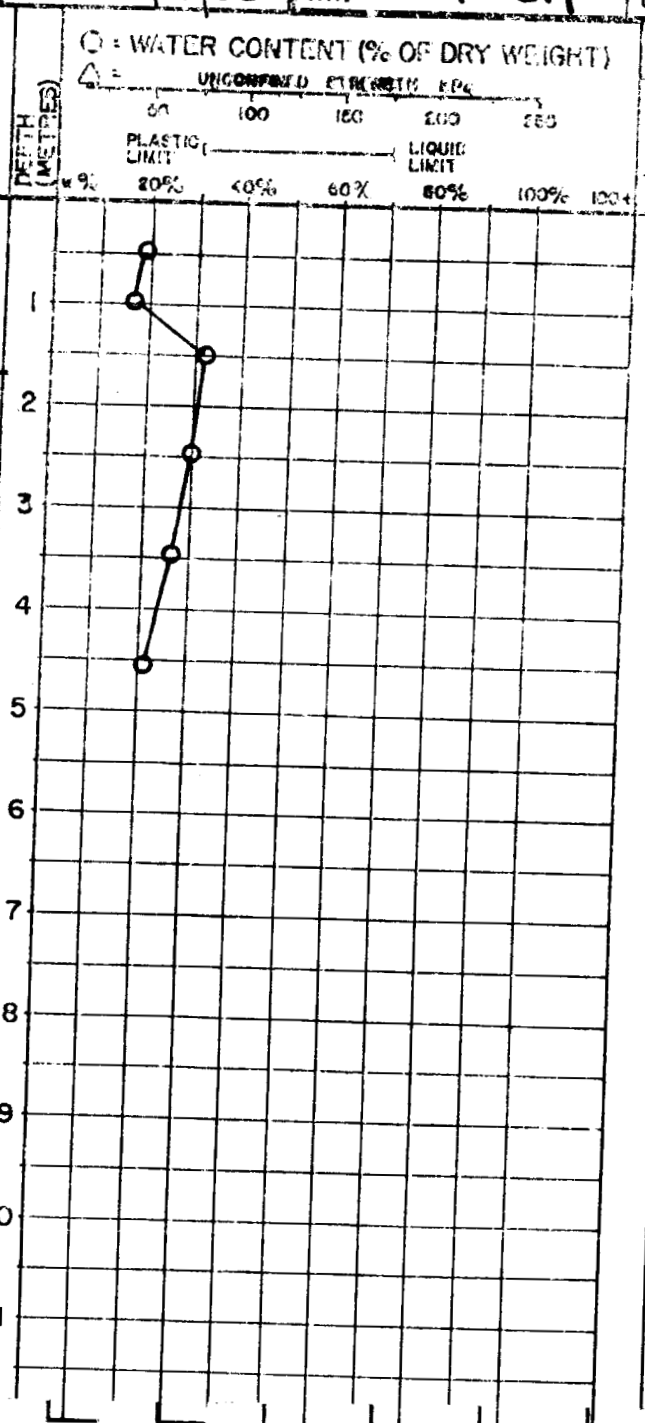
TECH. Pronych | RIG B-61 | DATE 78/03/08 | km 212 to 217 | B.P. No. 107 | HOLE No. 3

CHAINAGE	OFFSET

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT	REMARKS
0–2		SILT - CLAYEY		FROZEN	MOIST	
2–4	ML	CLAYEY SANDY			MOIST	
4–6					SAT. - FREE WATER	
6–10		SANDY			SAT. - FREE WATER	
10–14					SAT.	
14–16	CL	CLAY - SILTY SANDY PEBBLES 4.6 m			WET	
16–38		BOTTOM OF HOLE - 4.6 m				

GRAIN SIZE ANALYSIS

CLAY %	SILT %	SAND %	GRAVEL %



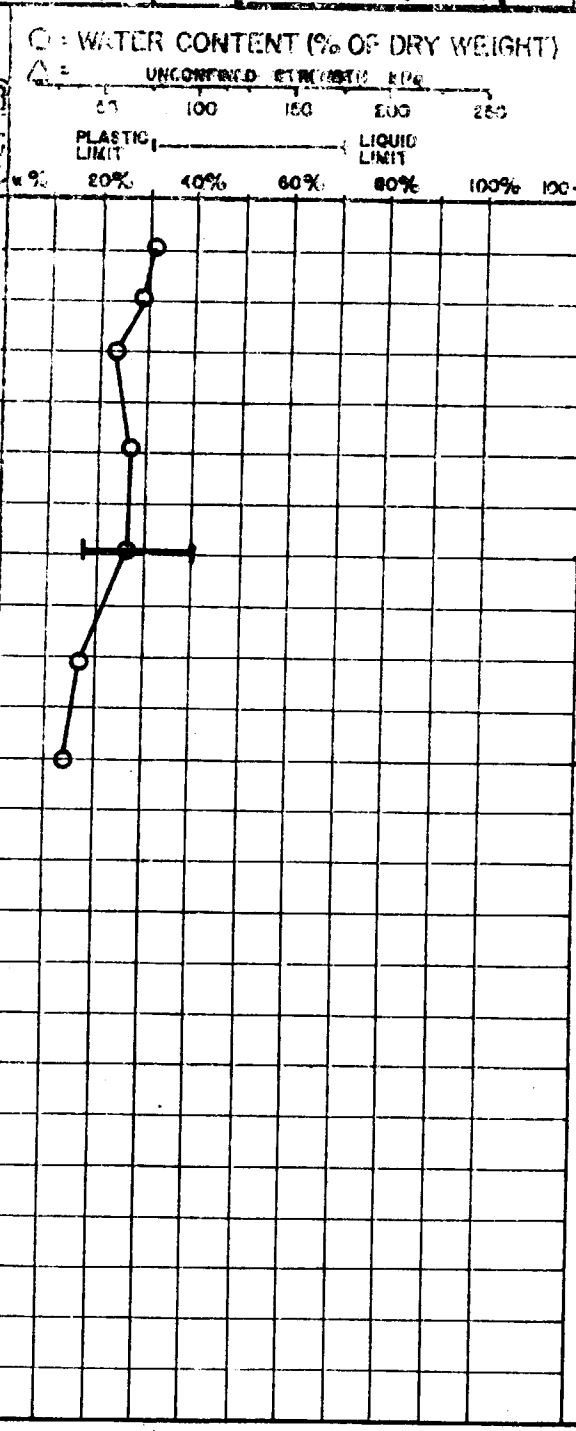
PUBLIC WORKS CANADA	DRILL HOLE REPORT	Alaska Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/08	km 212 TO 217	B.P. No. 107	HOLE No. 4

CHAINAGE	OFFSET

REMARKS

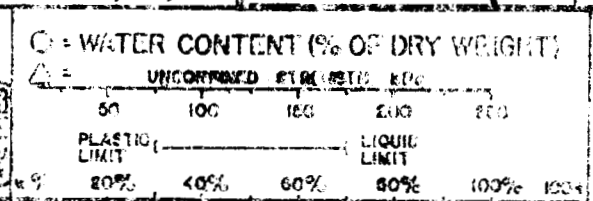
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2	ML	SILT - SANDY				98	2	0		WET-SAT
4		SILT -			1	96	4	0		WET
		1.5m								
6		CLAY - SILTY				93	7	0		MOIST
8					2					MOIST
10	CI	MED. PLASTIC			3					
12						87	13	0		MOIST
14					4					
16	CL	SILTY SANDY PEBBLES @ P_L			5					MOIST
18	CI	LOW - MED PLASTIC				67	29	4		MOIST
		5.5m								
20		BOTTOM OF HOLE - 5.5m			6					
22										
24					7					
26										
28					8					
30					9					
32										
34					10					
36										
38					11					



PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD Hwy.

TECH. PRONYCH | RIG B-61 | DATE 78/03/08 | km 212 TO 217 | B.P. No. 107 | HOLE No. 5

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		SILT - CLAYEY				99	1	0		FROM WATER	
4	ML	- SANDY			1	98	2	0		FROM WATER	SATURATED
6		1.8m				96	4	0		SAT.	1.2m - 1.8m
		CLAY - SILTY SANDY MED. PLASTIC			2	94	6	0		MOIST	
10	CI	GREY -			3					MOIST	
12											
14		- PEBBLES 4.6m			4	67	29	4		MOIST	
16		BOTTOM OF HOLE - 4.6m			5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36											
38					11						



CHAINAGE | OFFSET

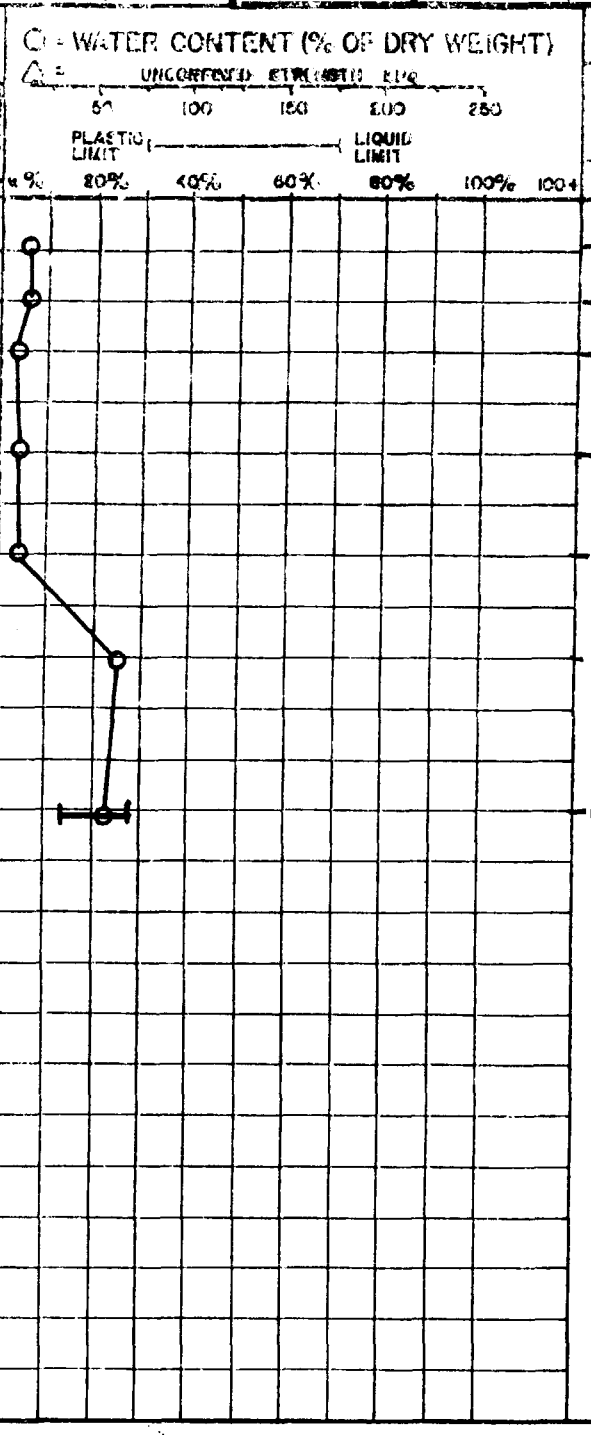
PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/11	km 217	B.P. No. 108	HOLE No. 1

CHAINAGE	OFFSET

REMARKS: BP 108 OK FOR BORROW TO DEPTH OF ABOUT 3.5 m.

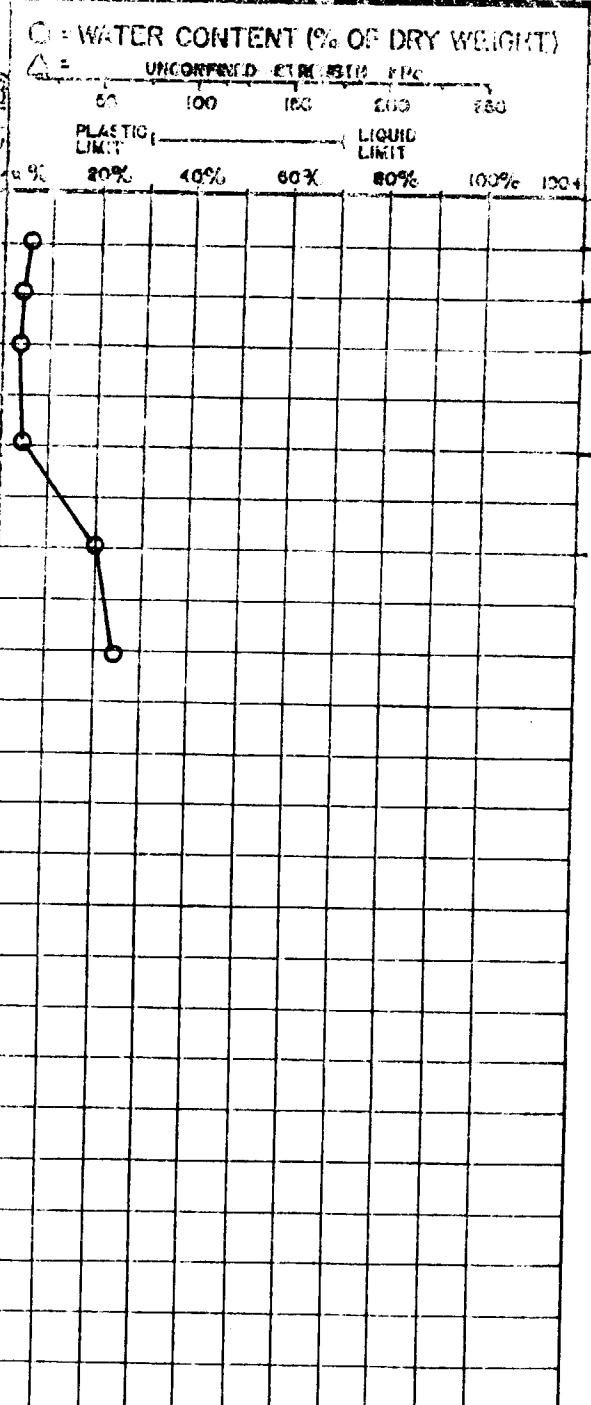
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2	SM	SAND. SILTY FINE-MEDIUM			1	14	86	0		MOIST
4						12	88	0		MOIST
6					2	11	89	0		DAMP
8						13	87	0		DAMP
10					3					DAMP-MOIST
12						12	88	0		
14		4.6 m FREE WATER 4.3m - 6.1m ?			4	87	13	0		WET
16	CL	CLAY SILTY SANDY LOW PLASTIC +PL			5					
18										
20		6.1m			6	63	37	0		WET
22		BOTTOM OF HOLE - 6.1m			7					
24										
26					8					
28										
30					9					
32										
34					10					
36					11					
38										



PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD Hwy.

TECH. WEBBER | RIG B-50 | DATE 78/03/01 | Km 217 | B.P. No. 108 | HOLE No. 2

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2	SM	SAND - SILTY - FINE - MEDIUM			1	12	88	0		MOIST			
4						8	92	0		MOIST			
6						10	90	0		DAMP			
8					2	11	89	0		DAMP			
10		3.1m											
12	CL	CLAY - SILTY SANDY - PEBBLES - LOW PLASTIC - SILTY			3	44	54	2		WET			FREE WATER 3.1m - 4.6m
14		4.6m			4					WET			
16		BOTTOM OF HOLE - 4.6m			5								
18					6								
20					7								
22					8								
24					9								
26					10								
28					11								
30													
32													
34													
36													
38													



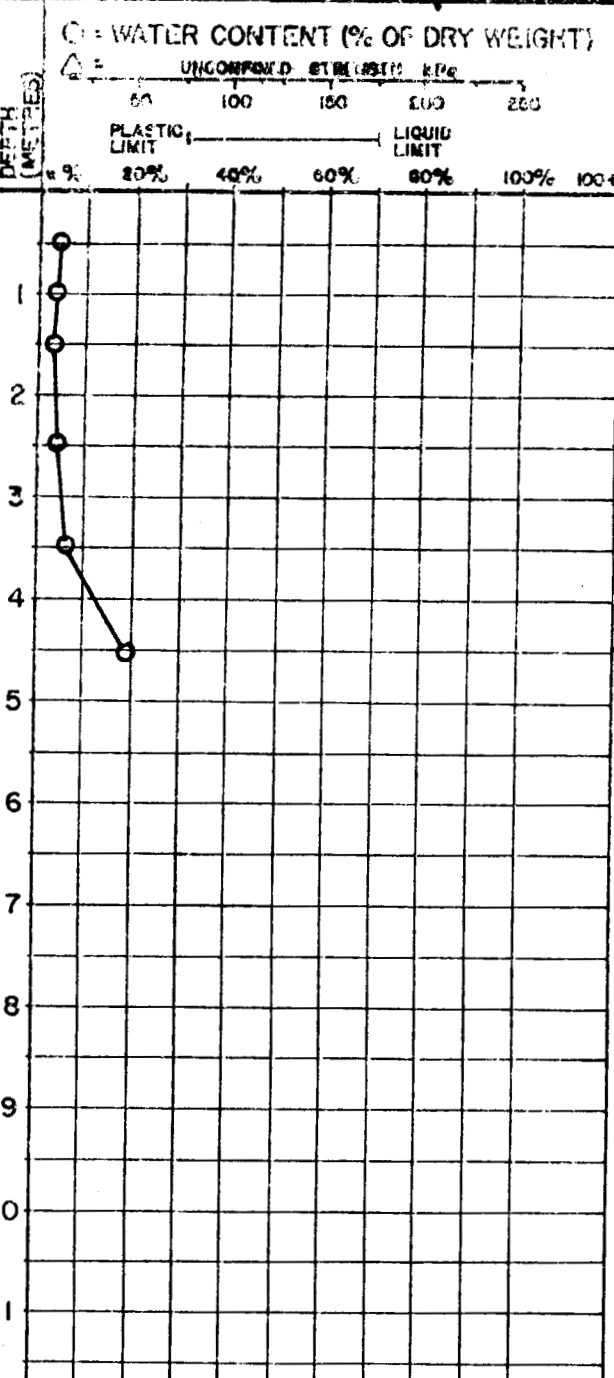
PUBLIC WORKS CANADA | DRILL HOLE REPORT | Liard Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/11	km 217	B.P. No. 108	HOLE No. 3

CHAINAGE	OFFSET

REMARKS

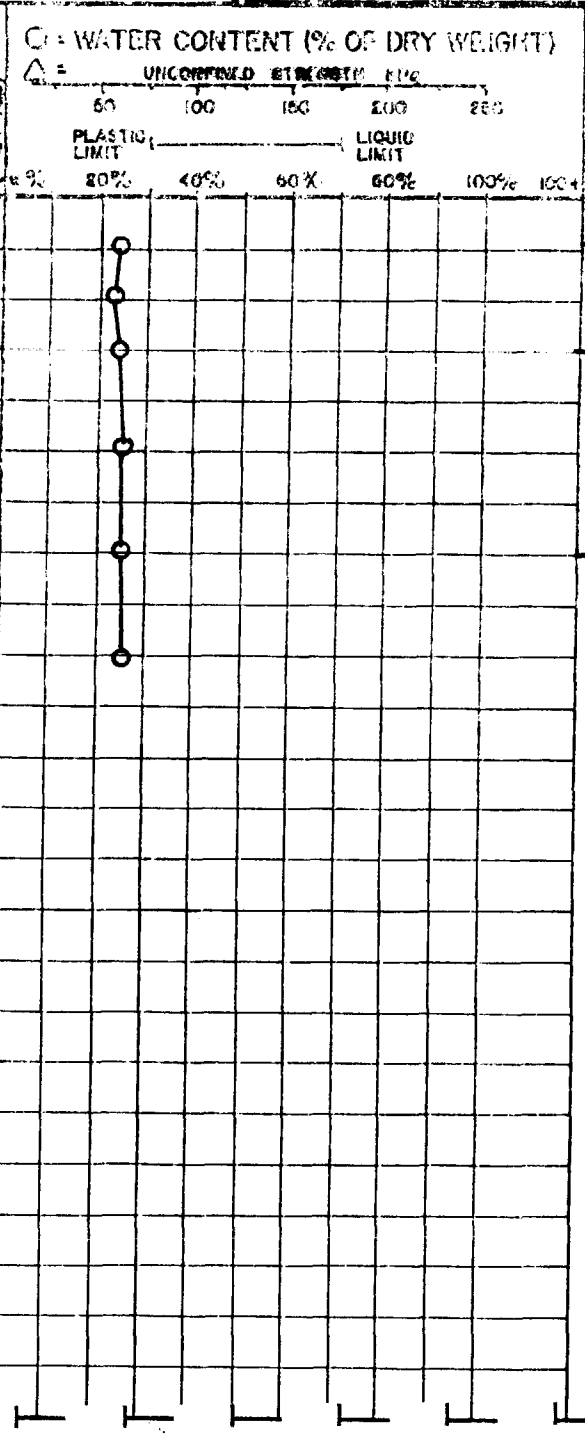
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2		SAND - SILTY				21	79	0		H.I.B
4		FINE - MEDIUM			1	12	88	0		DAMP
6						9	91	0		DAMP
8	SM				2	14	86	0		MOIST
10					3					
12		FREE WATER 4.0 - 4.6m				11	89	0		MOIST
14		4.6m			4	47	53	0		WET
16		BOTTOM OF HOLE - 4.6m			5					
18										
20					6					
22										
24					7					
26										
28					8					
30					9					
32										
34					10					
36										
38					11					



PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/11	km 218	B.P. No. 109	HOLE No. 1

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY				92	8	0		MOIST	BP 109 IS GOOD CONSTRUCTION MATERIAL (CLAY TILL) - BUT GENERALLY ABOVE OPTIMUM. -BORDERLINE AS BORROW SOURCE.
4					1					MOIST	
		- PEBBLES				93	4	3		MOIST	
6	CI	MED. PLASTIC			2						
8										MOIST	
10					3						
12		GREY - SILTY SANDY				89	11	0		MOIST	
14		- SILTY 4.6m			4					WET	
16		BOTTOM OF HOLE - 4.6 m			5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36											
38					11						

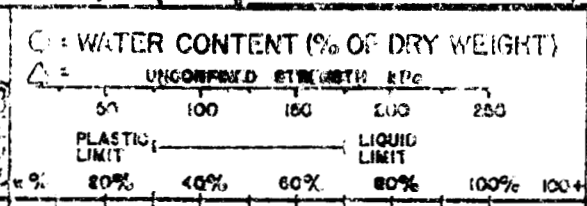


CHAINAGE	OFFSET

PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD HWY.

TECH. WEBBER | RIG B-50 | DATE 78/03/11 | km 218 | B.P. No. 109 | HOLE No. 2

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2	ML	SILT - CLAYEY .6m			1	96	4		0	WET			
4	CL	CLAY - SILTY SANDY 1.2 m				56	44		0	MOIST			
6	SC	SAND - SILTY CLAYEY 2.m				25	75		0	MOIST			
8		CLAY - SILTY SANDY + P_L PEBBLES - TILL			2	90	10		0	MOIST			
10													
12		@ P_L MED. PLASTIC			3					MOIST			
14	CI	GREY			4	65	30		5	MOIST			
16					5								
18													
20		6.1m			6					MOIST			
22		BOTTOM OF HOLE - 6.1m											
24					7								
26													
28					8								
30					9								
32													
34					10								
36					11								
38													



PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. WEBBER | RIG B-50 | DATE 78/03/11 | km 219 | B.P. No. 110 | HOLE No. 1

CHAINAGE	OFFSET

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY									BP110 O.K. FOR BORROW
4					1	76	24	0		MOIST	
		PEBBLES								MOIST	- GOOD CONSTRUCTION MATERIAL
6						68	31	1		MOIST	
8	CI	- TILL			2						- SLIGHTLY ABOVE OPTIMUM.
10		MED. PLASTIC								MOIST	
		GREY. @ & ABOVE P_L			3						- COBBLES AND OCCASIONAL BOULDERS
12						82	13	5		MOIST	
14					4						- STIFF OR DENSE.
16										MOIST	
18					5						
20		6.1m			6	56	40	2		MOIST	
22		BOTTOM OF HOLE. 6.1m									
24					7						
26											
28					8						
30					9						
32											
34					10						
36											
38					11						

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa

50 100 150 200 250

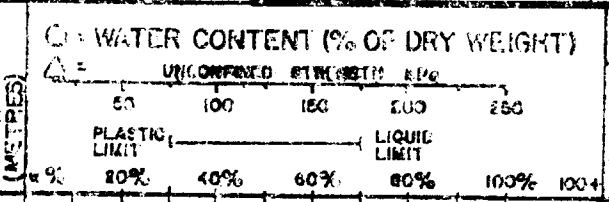
PLASTIC LIMIT ⊢——⊣ LIQUID LIMIT

10% 20% 40% 60% 80% 100% 100+

PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/11	km 219	B.P. No. 110	HOLE No. 2

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2		CLAY - SILTY SANDY								MOIST			
4		- PEBBLES @ P_L			1	78	21	1		MOIST			
6		- TILL								MOIST			
8	CI	MED. PLASTIC			2	76	21	3		MOIST			
10					3								
12										MOIST			
14					4								
16						70	26	4		MOIST			
18					5								
20		GREY - 6.1m			6					MOIST			
22		BOTTOM OF HOLE - 6.1m											
24					7								
26													
28					8								
30													
32					9								
34													
36					10								
38					11								

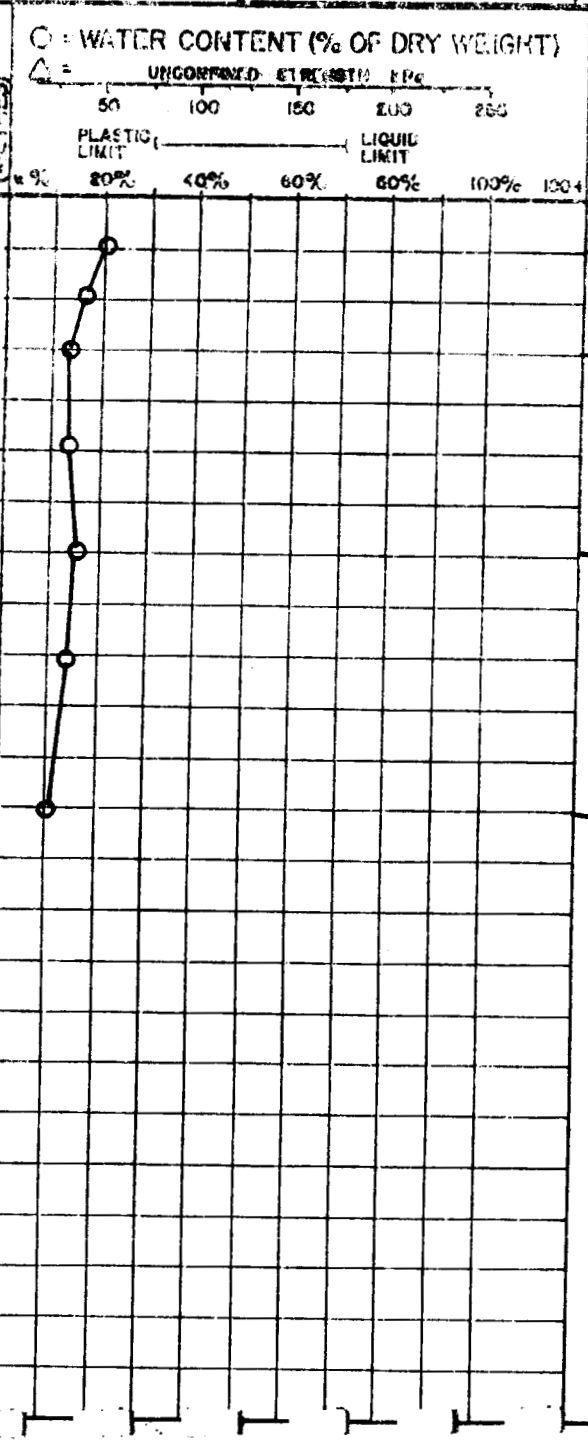


PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. WEBBER | RIG B-50 | DATE 78/03/11 | km 220 | B.P. No. 111 | HOLE No. 1

CHAINAGE	OFFSET

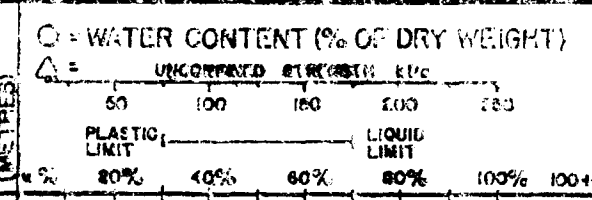
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY									BP 111 O.K.
		PEBBLES @ P_L									FOR BORROW
4					1					MOIST	
		-TILL				72-	27	1			- GOOD CONSTRUCTION
6						64-	28	8		MOIST	MATERIAL
		MED. PLASTIC			2						
8	CI									MOIST	- NEAR OPTIMUM.
10					3						- COBBLES AND
12						61-	35	4		MOIST	OCCASIONAL
					4						BOULDERS
14		GREY.									- STIFF OR DENSE.
16					5					MOIST	
18											
20		6.1m			6	54-	37	9		MOIST	
22		BOTTOM OF HOLE - 6.1m									
24					7						
26											
28					8						
30					9						
32											
34					10						
36											
38					11						



PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 18/03/11	km 220	B.P. No. 111	HOLE No. 2

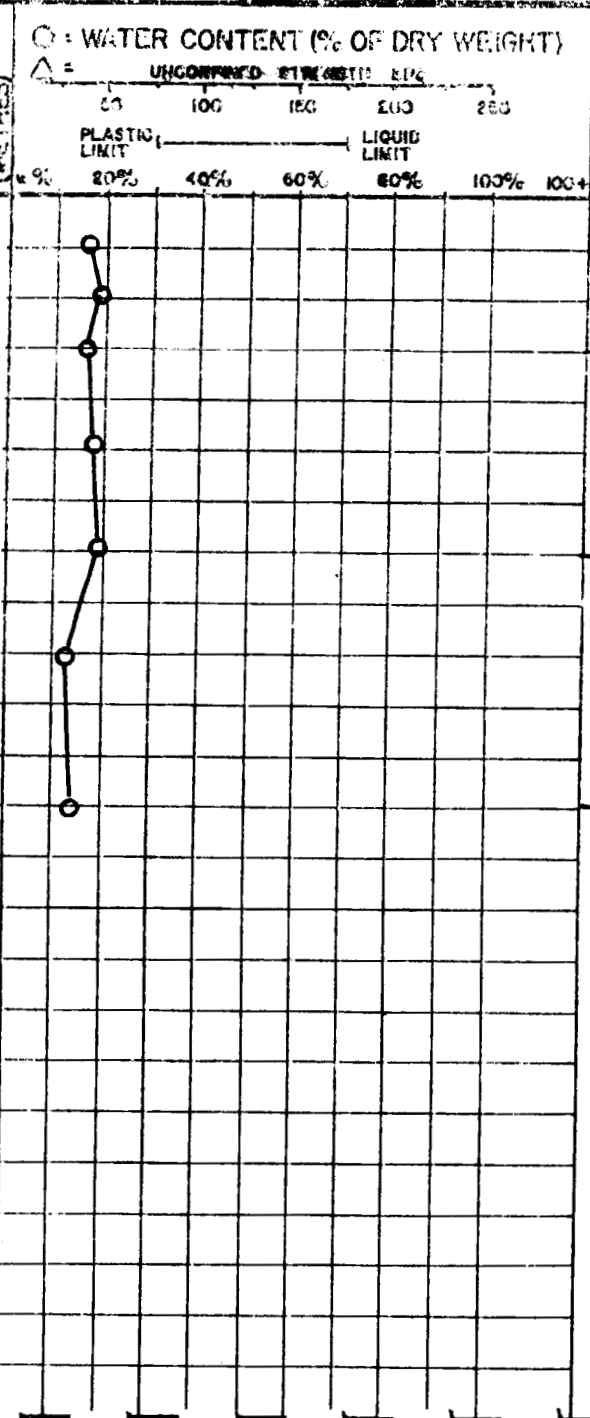
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2		CLAY - SILTY SANDY PEBBLES @ P_L OR $-P_L$ MED. PLASTIC								MOIST			
4					1	65	-	31	4	MOIST			
6					2					MOIST			
8	C1									MOIST			
10					3					MOIST			
12													
14					4	58	-	39	3	MOIST			
16					5								
18										MOIST			
20		GREY. 6.1m			6								
22		BOTTOM OF HOLE - 6.1m											
24					7								
26					8								
28													
30					9								
32													
34					10								
36					11								
38													



PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. WEBBER | RIG B-50 | DATE 78/03/11 | km 222 | B.P. No. 112 | HOLE No. 1

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	SILT - CLAYEY .6m									
4		CLAY - SILTY SANDY PEBBLES @ P_L MED. PLASTIC			1	96	4		0	MOIST	
6										WET	
8					2	80	19		1	DAMP-MOIST	
10										D-M	BP 112 O.K. FOR BORROW IN AREA OF HOLES #3 & #4 (Lt. of ℄)
12	CI				3	83	17		0	MOIST	
14					4					MOIST	
16		5.2m									
18	SM	SAND - SILT) PEBBLES NEAR WATER			5						
20		6.1m			6	14	82		4	WET	
22		BOTTOM OF HOLE - 6.1m									
24					7						
26					8						
28					9						
30											
32					10						
34											
36					11						
38											



CHAINAGE | OFFSET

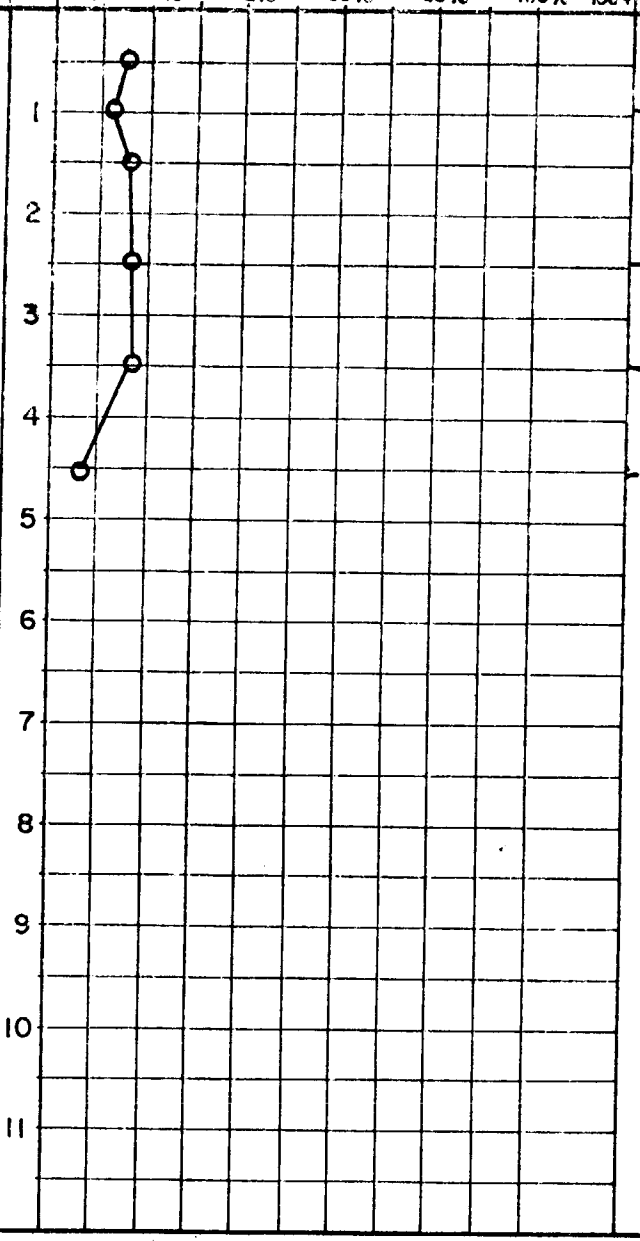
- GOOD CONSTRUCTION MTL. (SANDY-CLAY TILL)
- SLIGHTLY ABOVE OPTIMUM.
- COBBLES AND OCCASIONAL BOULDERS
- DENSE OR STIFF

PUBLIC WORKS CANADA | DRILL HOLE REPORT | MAP 14

TECH. WEBBER	RIG B-50	DATE 78/03/11	km 222	B.P. No. 112	HOLE No. 2

CHAINAGE	OFFSET

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
2, 4, 6, 8, 10	CL	CLAY - SILTY SANDY PEBBLES @ PL LOW PLASTIC		
10 – 16	SM	3.1 m SAND - SILTY - PEBBLES ~~LOW PLASTIC~~ 4.9 m		
18		REFUSAL @ 4.9 m		

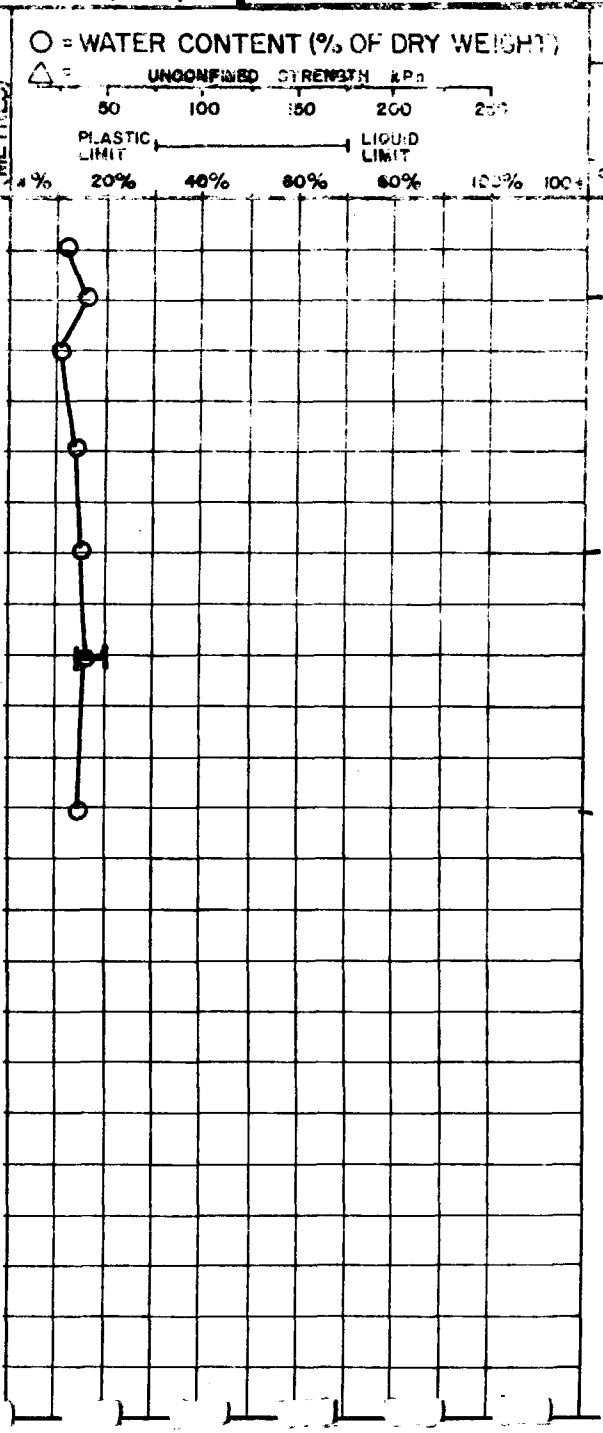


GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
				DAMP	
45	48	7		DAMP	
				MOIST	
67	32	1		WET	FREE WATER 3.1 m - 3.7 m
39	60	1		WET	
22	75	3		MOIST	

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD Hwy.

TECH. WEBBER | RIG B-50 | DATE 78/03/11 | km 222 | B.P. No. 112 | HOLE No. 3

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	DESCRIPTION
2	ML	SILT - SANDY		
		.6m		
4		CLAY - SILTY SANDY		
6	CL	PEBBLES - TILL		
		LOW PLASTIC		
8				
10				
12				
14	ML	SILT - CLAYEY SANDY		
		PEBBLES		
16				
18				
20		6.1m		
		BOTTOM OF HOLE - 6.1 m		
22				
24				
26				
28				
30				
32				
36				
38				

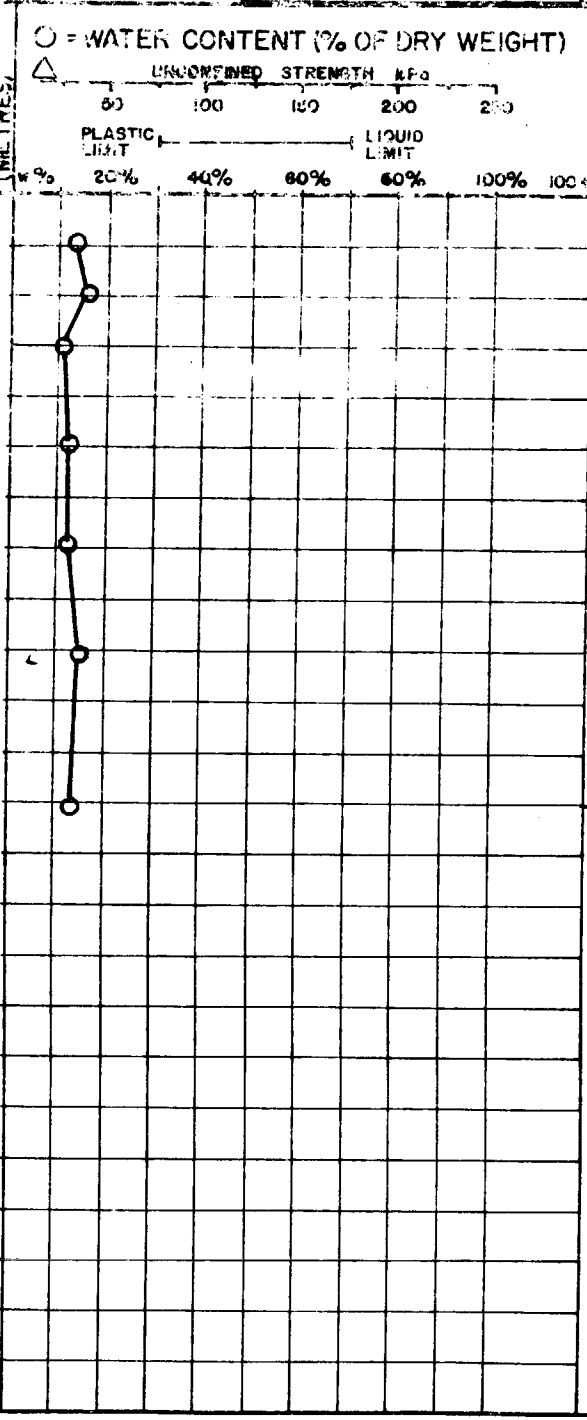


GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
				DAMP-MOIST	
60	35	5		MOIST-WET	
				MOIST	
				MOIST	
49	43	8		MOIST	
				MOIST-WET	
61	36	3		MOIST-WET	

PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD Hwy.

TECH. WEBBER | RIG B-50 | DATE 78/03/11 | km 222 | B.P. No. 112 | HOLE No. 4

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE / OFFSET / REMARKS
2	ML	SILT - SANDY .6m			1	68	30	2		DAMP	
		CLAY . SILTY SANDY								MOIST	
6		PEBBLES - TILL			2	49	36	15		MOIST	
8		LOW PLASTIC								MOIST	
10	CL	@ PL			3						
12					4	56	40	4		MOIST	
14										MOIST	
16					5						
18											
20		6.1m			6	72	27	1		MOIST	
22		BOTTOM OF HOLE - 6.1m									
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY

TECH. WEBBER | RIG B-50 | DATE 78/03/10 | km 219 | B.P. No. 113 | HOLE No. 1

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2–6	ML	SILT - SANDY			1–2						MUCH OF AREA DRILLED CONSISTS OF SILTY AND GRAVELLY SAND.
6–8		2.1 m									
8–10		BOULDERS									
10–12		3.4 m									
12–16	GM	GRAVEL - SANDY SILTY			3–4	31	23	46		MOIST	-PREFERRED GRAVEL IN VICINITY OF HOLES #11, #13, #14 & #15
16–20		6.1 m			5						-MORE DRILLING REQ'D TO EXPAND AREA.
20–26	SM	SAND - GRAVELLY SILTY			6–7						
26–28					7–8	10	71	19		DAMP	
28–30					8–9						
30–34					9–10	12	53	35		DAMP	
34–36		10.7 m			10–11	9	66	25		DAMP	
36–38		BOTTOM OF HOLE - 10.7 m									

○ = WATER CONTENT (% OF DRY WEIGHT)

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

PLASTIC LIMIT — LIQUID LIMIT

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

CHAINAGE | OFFSET

PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD HWY.

TECH. WEBBAR | RIG B-50 | DATE 78/03/10 | km 219 | B.P. No. 113 | HOLE No. 2

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2		SILT - SANDY			1								
4	ML												
6					2								
8		2.4m											
		BOULDERS			3								
10													
12		4.0m			4								
14		SAND-GRAVELLY SILTY											
16					5	29	41	30		MOIST			
18		GRAVEL - SANDY SILTY											
20		PEA - GRAVEL			6	15	35	50		MOIST			
22	GM												
24					7								
26					8	9	29	62		MOIST			
28													
30					9	10	36	54		MOIST			
32													
34					10								
		10.7m				9	39	52		MOIST			
36		BOTTOM OF HOLE - 10.7m			11								
38													

O - WATER CONTENT (% OF DRY WEIGHT)

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

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

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY

TECH. WEBBER | RIG B-50 | DATE 78/03/10 | km 219 | B.P. No. 113 | HOLE No. 3

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2		SILT - SANDY											
4													
6	ML				1								
8					2								
10		3.1 m			3								
12		SAND - GRAVELLY SILTY											
14		GRAVEL - SANDY SILTY			4								
16					5	24	54	22		MOIST			
18	GM												
20	GW				6	13	33	54		MOIST			
22					7								
24													
26					8	12	36	52		MOIST			
28													
30					9	11	32	57		MOIST			
32													
34		10.7m			10	8	29	63		MOIST			
36		BOTTOM OF HOLE - 10.7m			11								
38													

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa

50 100 150 200

PLASTIC LIMIT — LIQUID LIMIT

0% 20% 40% 60% 80% 100% 100+

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY

TECH. WEBBER	RIG B-50	DATE 78/03/10	km 219	B.P. No. 113	HOLE No. 4

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	O = WATER CONTENT (% OF DRY WEIGHT) / △ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250) / PLASTIC LIMIT — LIQUID LIMIT (w% 20% 40% 60% 80% 100% 100+)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE / REMARKS	OFFSET
2		SILT - SANDY											
4					1								
6	ML				2	NO SAMPLES TAKEN							
8													
10					3								
12													
14		BOULDERS			4								
16		4.9m			5								
18		BOTTOM OF HOLE - 4.9m											
20					6								
22													
24					7								
26													
28					8								
30					9								
32													
34					10								
36					11								
38													

PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD HWY.

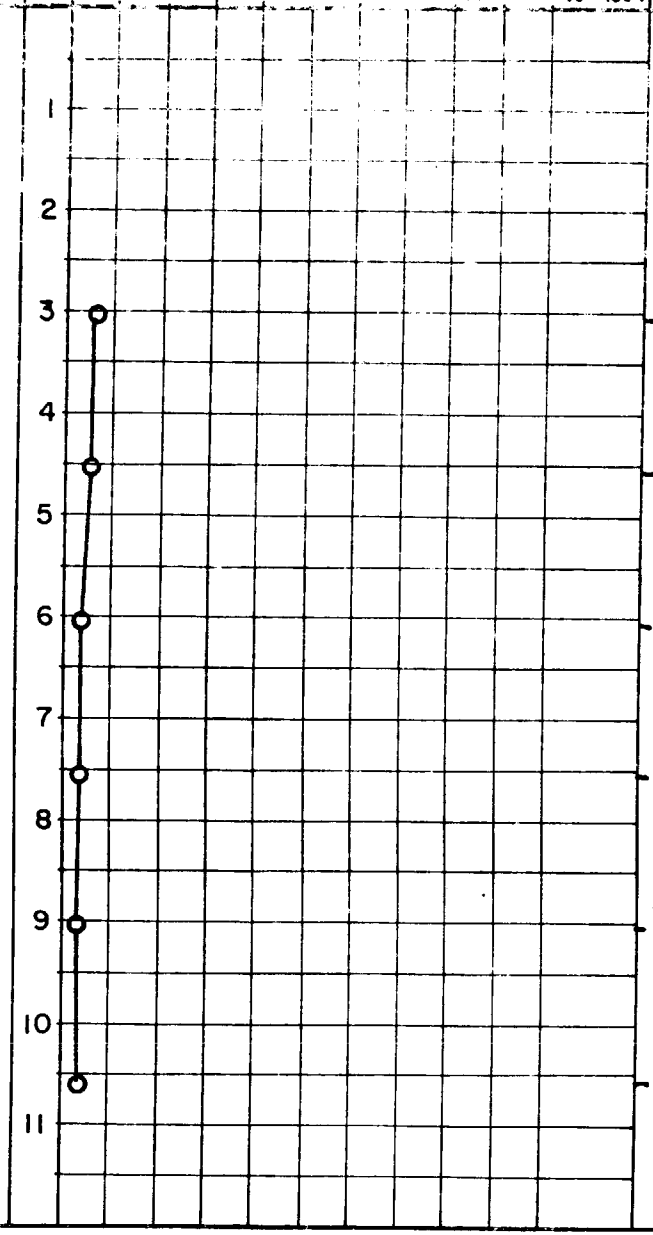
TECH. WEBBER	RIG B-50	DATE 18/03/10	km 219	B.P. No. 113	HOLE No. 5

DEPTH (FEET)	UNIFIED SOIL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	O = WATER CONTENT (% OF DRY WEIGHT) △ = UNCONFINED STRENGTH kPa (50, 100, 150, 200) PLASTIC LIMIT — LIQUID LIMIT (w% 20% 40% 60% 80% 100%)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2		SILT - SANDY			1									
6	ML				2									
8														
10					3									
12														
14					4									
16		4.9m					24	49	27		MOIST			
		SAND - SILTY GRAVELLY			5									
18														
20					6									
22														
24	SM				7		16	43	41		MOIST			
26					8									
28														
30					9		19	47	34		MOIST			
32														
34	GM	GRAVEL - SANDY SILTY			10		14	36	50		MOIST			
		10.7m												
36		BOTTOM OF HOLE - 10.7m			11									
38														

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. WEBBER | RIG B-50 | DATE 78/03/10 | km 219 | B.P. No. 13 | HOLE No. 6

DEPTH (FEET)	UNIFIED SOIL CLASS.	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
2		SILT - SANDY		
4	ML			
6		2.1m		
8		SAND - SILTY GRAVELLY		
10	SM			
12				
14				
16				
18				
20				
22				
24				
26		GRAVEL - SANDY		
28	GW			
30				
32				
34		10.7m		
36		Bottom of Hole - 10.7m		
38				



GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
25	44	31		DAMP	
24	59	17		DAMP	
11	71	18		DAMP	
13	50	37		DAMP	
7	37	56		DAMP	
5	40	55		DAMP	

CHAINAGE | OFFSET

PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/10	km 219	B.F. No. 113	HOLE No. 7

DEPTH (METRES)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	○ = WATER CONTENT (% OF DRY WEIGHT) △ = UNCONFINED STRENGTH kPa (50, 100, 150, 200) PLASTIC LIMIT — LIQUID LIMIT (w% 20% 40% 60% 80% 100%)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE / OFFSET / REMARKS
2		SILT-SANDY			1							
4												
6	ML				2							
8												
10					3							
12												
14					4							
16												
18		5.5 m			5							
20		SAND - SILTY GRAVELLY			6	○	15	74	11	Moist		
22	SM											
24		7.6m			7	○	13	69	18	Moist		
26		Bottom of Hole - 7.6m			8							
28												
30					9							
32												
34					10							
36												
38					11							

PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD Hwy.

TECH. WEBBER | RIG B-50 | DATE 78/03/10 | km 219 | B.P. No. 113 | HOLE No. 8

SOIL DESCRIPTION	UNIFIED SOIL SYMBOL	DEPTH (METRES)
Silt. Sandy		2, 4
Sand. Silty		6
	ML	8
		10
	SM	12, 14
		16, 18
6.1m		20
Bottom of Hole - 6.1m		22, 24, 26, 28, 30, 32, 34, 36, 38

WATER CONTENT (% OF DRY WEIGHT) — UNCONFINED STRENGTH 50 100 150 200 250 — PLASTIC LIMIT 20% 40% 60% 80% 100% 100+ — LIQUID LIMIT

No SAMPLES TAKEN

GRAIN-SIZE ANALYSIS				RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET
CLAY %	SILT %	SAND %	GRAVEL %		REMARKS	

PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/10	km 219	B.P. No. 113	HOLE No. 9

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

DEPTH (FEET)	UNIFIED SOIL CLASS.	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE / OFFSET / REMARKS
2		SILT - SANDY			1						
4											
6		SAND - SILTY			2						
8											
10	ML				3						
12	SM										
14					4						
16											
18					5						
20		6.1m			6						
22		BOTTOM OF HOLE - 6.1m			7						
24											
26					8						
28											
30					9						
32											
34					10						
36					11						
38											

NO SAMPLES TAKEN

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. WEBBER | RIG B-50 | DATE 78/03/10 | km 219 | B.P. No. 113 | HOLE No. 10

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	○ = WATER CONTENT (% OF DRY WEIGHT) △ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250) PLASTIC LIMIT — LIQUID LIMIT (w% 20% 40% 60% 80% 100% 100+)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2		SILT - SANDY			1									
4		SAND - SILTY												
6					2									
8	ML					NO SAMPLES TAKEN								
10	SM				3									
12														
14					4									
16														
18					5									
20		6.1 m			6									
22		BOTTOM OF HOLE - 6.1 m												
24					7									
26														
28					8									
30														
32					9									
34														
36					10									
38					11									

PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/10	km 219	B.P. No. 113	HOLE No. 11

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	○ = WATER CONTENT (% OF DRY WEIGHT) △ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250) PLASTIC LIMIT — LIQUID LIMIT (4%, 20%, 40%, 60%, 80%, 100%, 100+)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2		SILT - SANDY												
4	ML				1									
6														
8		2.4m			2									
		SAND - GRAVELLY SILTY												
10					3									
12	GM	GRAVELLY - SANDY SILTY												
14					4									
16	GW	SANDY ONLY			5		12	25	63	MOIST				
18														
20					6		10	23	67	MOIST				
22														
24					7		5	12	83	MOIST				
26					8									
28														
30					9		8	19	73	MOIST				
32														
34		10.7m			10		10	22	68	MOIST				
36		BOTTOM OF HOLE - 10.7m			11									
38														

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. WEBBER | RIG B-50 | DATE 78/03/10 | km 219 | B.P. No. 113 | HOLE No. 12

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
2		SILT - SANDY		
4	ML			
6				
8	SM	SAND - SILTY		
10				
12				
14				
16				
18				
20		6.4 m		
22		REFUSAL @ 6.4 m		
24				
26				
28				
30				
32				
34				
36				
38				

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

O = WATER CONTENT (% OF DRY WEIGHT)

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

PLASTIC LIMIT — LIQUID LIMIT

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

NO SAMPLES TAKEN

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

CHAINAGE	OFFSET

REMARKS

PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/10	km 219	B.P. No. 113	HOLE No. 13

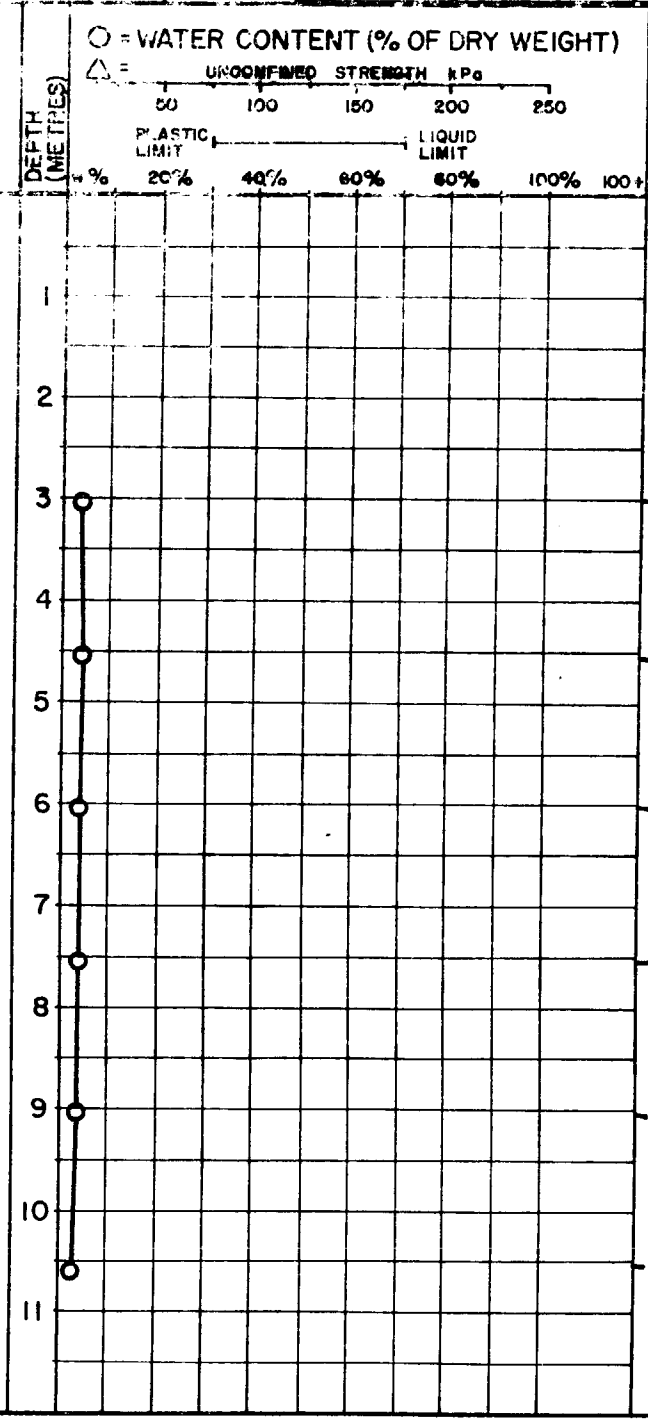
○ = WATER CONTENT (% OF DRY WEIGHT)
△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)
PLASTIC LIMIT — LIQUID LIMIT
w% 20% 40% 60% 80% 100% 100+

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE / OFFSET / REMARKS
2, 4, 6, 8, 10	ML	SILT - SANDY			1, 2, 3						
3.4m											
12	SM	SAND GRAVELLY SILTY			4						
14, 16	GM	GRAVEL - SANDY SILTY			4.5	26	44	30		MOIST	
18, 20, 22		GRAVEL COARSE			6	18	30	52		MOIST	
24, 26	GP				7, 7.5	9	7	84		MOIST	
28, 30					8, 9	5	3	92		MOIST	
32, 34		SILTY SANDY			10	14	10	76		MOIST	
10.7m											
36, 38		BOTTOM OF HOLE - 10.7m			11						

PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/10	km 219	B.P. No. 113	HOLE No. 14

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
2	ML SM	SILTY SAND - SANDY SILT		
8		2.4m		
8–10	SP	SAND - GRAVELLY		
12–14	SM	SILTY GRAVELLY		
22		7.0m		
24	GM	GRAVEL - SANDY SILTY		
26–28	GW	SANDY		
34		10.7m		
36–38		BOTTOM OF HOLE. 10.7m		



GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
9	56	35		MOIST
14	52	34		MOIST
10	48	42		MOIST
12	39	49		MOIST
9	28	63		MOIST
6	11	83		MOIST

CHAINAGE	OFFSET

REMARKS

PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78 03 10	km 219	B.P. No. 113	HOLE No. 15

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2		SILT SANDY			1								
4	ML												
6		2.1m			2								
8	SM	SAND - SILTY - GRAVEL											
	GM	MIX.											
10					3	15	40	45		MOIST			
12		GRAVEL - SANDY			4								
14													
16	GW				5	12	33	55		MOIST			
18													
20					6	8	17	75		MOIST			
22					7								
24													
26					8								
28													
30		9.1m			9								
32		BOTTOM OF HOLE - 9.1m											
34					10								
36													
38					11								

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa

50 100 150 200 250

PLASTIC LIMIT — LIQUID LIMIT

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

GRAIN-SIZE ANALYSIS

PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/10	km 219	B.P. No. 113	HOLE No. 16

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	○ = WATER CONTENT (% OF DRY WEIGHT) △ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250) PLASTIC LIMIT — LIQUID LIMIT (w% 20% 40% 60% 80% 100% 100+)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE / OFFSET / REMARKS
2		Silt - Sandy			1							
4												
6	ML				2							
8												
10					3							
12												
14					4							
16		4.9m			5							
18	SM	Sand - Gravelly Silty										
20					6	○	16	63	21		Moist	
22	GM	Gravel - Sandy Silty			7							
24		7.6m				○	10	40	50		Moist	
26		Bottom of Hole. 7.6m			8							
28												
30					9							
32												
34					10							
36					11							
38												

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. WEBBER | RIG B-50 | DATE 78/03/10 | km 219 | B.P. No. 113 | HOLE No. 17

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	O = WATER CONTENT (% OF DRY WEIGHT); △ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250); PLASTIC LIMIT — LIQUID LIMIT (1%, 20%, 40%, 60%, 80%, 100%, 100+)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2		SILT-SANDY												
4					1									
6														
8					2									
10		SAND. SILTY CLAYEY			3									
12						NO SAMPLES TAKEN								
14					4									
16					5									
18		PEBBLES COBBLES												
20					6									
22														
24		7.3m			7									
26		REFUSAL @ 7.3 m			8									
28														
30					9									
32														
34					10									
36														
38					11									

PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY

TECH. WEBBER	RIG B-50	DATE 78/03/10	km 224	B.P. No. 114	HOLE No. 1

CHAINAGE	OFFSET

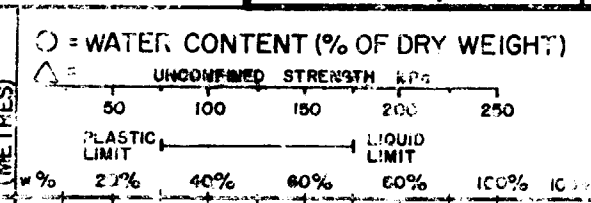
○ = WATER CONTENT (% OF DRY WEIGHT)
△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)
PLASTIC LIMIT — LIQUID LIMIT
w% 20% 40% 60% 80% 100% 100+

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY				62	35	3		DAMP	BP 114 OK FOR BORROW.
4		- PEBBLES			1					DAMP	
6		@ PL				65	28	7		DAMP	- GOOD CONSTRUCTION MATERIAL.
8	CI	MED. PLASTIC			2					DAMP	- NEAR OPTIMUM
10					3						- OCCASIONAL WET SEAM OR POCKET.
12						66	30	4		DAMP	
14					4						- COBBLES AND OCCASIONAL BOULDERS
16										DAMP	
18					5						- DENSE OR STIFF
20		6.1 m			6	72	26	2		DAMP	
		BOTTOM OF HOLE - 6.1 m									
22					7						
24											
26					8						
28											
30					9						
32											
34					10						
36					11						
38											

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/11	km 224	B.P. No. 114	HOLE No. 2

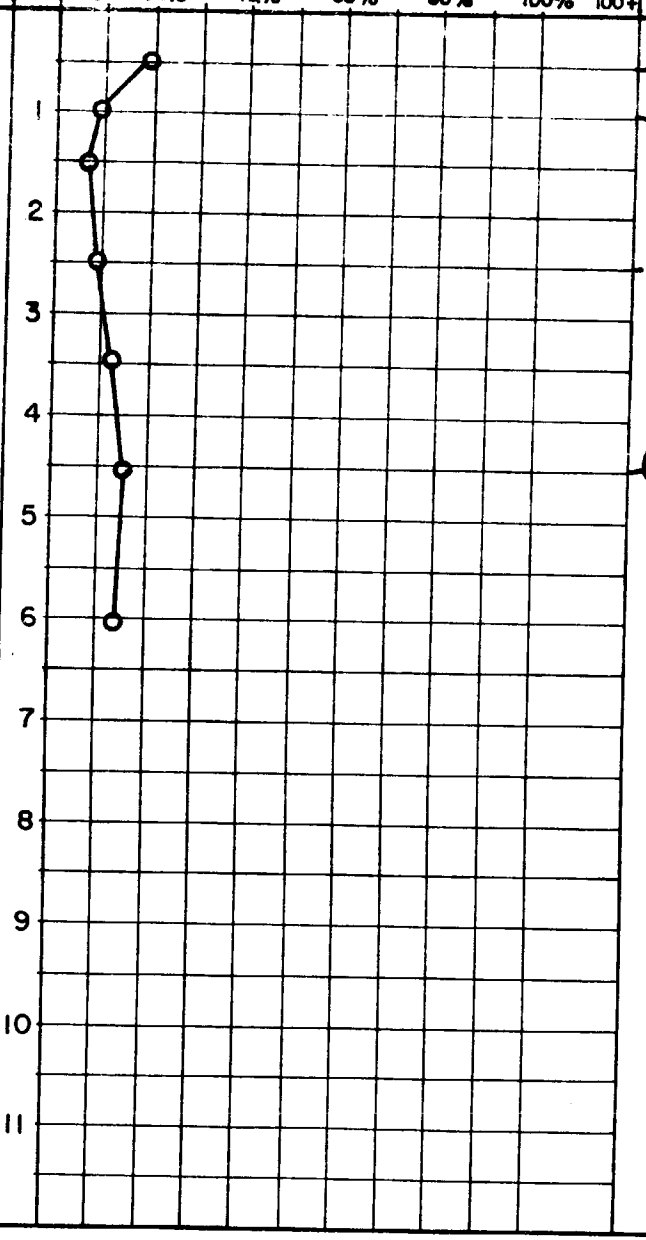
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2	SM	SAND. SILTY PEBBLES .6m	FROZEN			34	59	7		MOIST			
4		CLAY - SILTY SANDY	FROZEN		1	63	35	2		MOIST			
6		- PEBBLES								MOIST			
8		@ ¼ - P_L			2	40	49	11		MOIST			
10	CI	MED. PLASTIC			3								
12										MOIST			
14					4								
16		GREY				59	35	6		MOIST			
18					5								
20		6.1m			6					MOIST			
22		BOTTOM OF HOLE - 6.1m											
24					7								
26													
28					8								
30					9								
32													
34					10								
36													
38					11								



PUBLIC WORKS CANADA — DRILL HOLE REPORT

TECH. WEBBER	RIG B-50	DATE 78/03/11	km 224	B.P. No. 114	HOLE No. 3

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
2	SM	SAND - SILTY PEBBLES		
4		1.2M		
6		CLAY - SILTY SANDY PEBBLES - PL		
8	CL	LOW - MED. PLASTIC		
10				
12	CI	GREY. @ PL		
14		FREE WATER @ 5.2m		
16				
18				
20		6.1m		
22		BOTTOM OF HOLE - 6.1m		
24				
26				
28				
30				
32				
34				
36				
38				



GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
34	61	5		WET	
32	61	7		MOIST	
				MOIST	
39	55	6		MOIST	
				MOIST	
62	36	2		MOIST	
				MOIST	

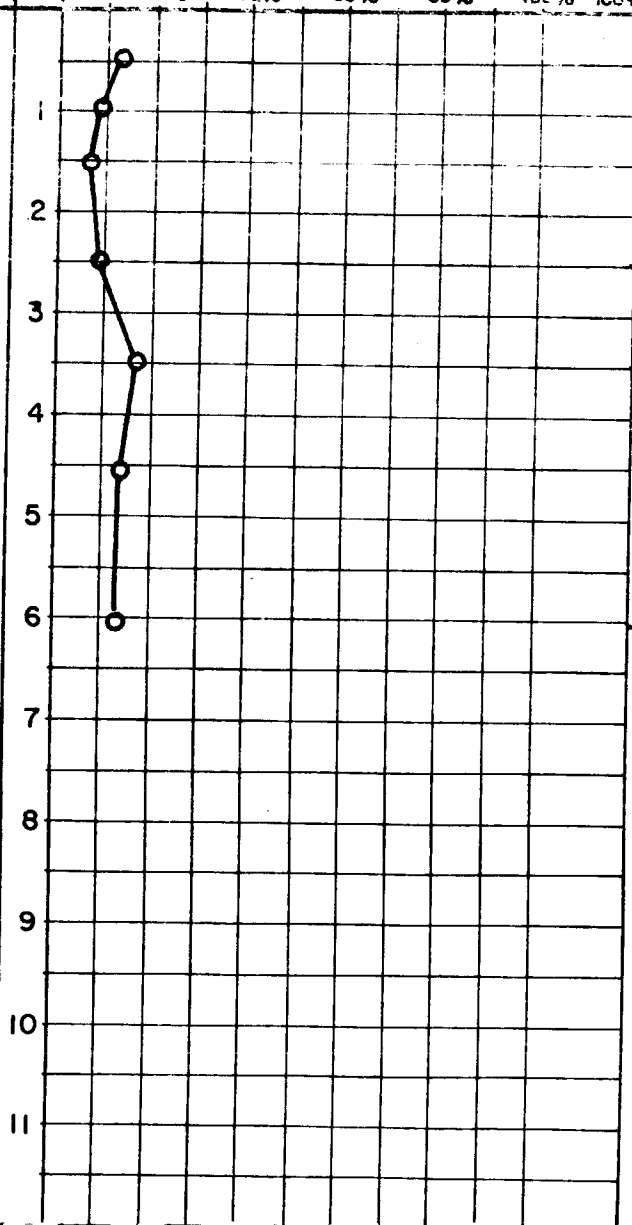
CHAINAGE	OFFSET

PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY

TECH. WEBBER	RIG B-50	DATE 78/03/11	km 224	B.P. No. 114	HOLE No. 4

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
2, 4	CL	CLAY - SILTY GRAVELLY SANDY LOW PLASTIC - P_L		
		1.2m		
6	SM	SAND - SILTY GRAVELLY PEBBLES		
8, 10	ML	SILT - SANDY		
		4.0m		
14, 16, 18	CL-CI	CLAY - SILTY SANDY PEBBLES LOW-MED. PLASTIC @ P_L		
		6.1m		
		BOTTOM OF HOLE - 6.1m		



GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
38	37	25		DAMP			
				MOIST			
28	57	15		MOIST			
34	58	8		MOIST			
53	46	1		WET			
				MOIST			
64	33	3		MOIST			

PUBLIC WORKS CANADA — DRILL HOLE REPORT

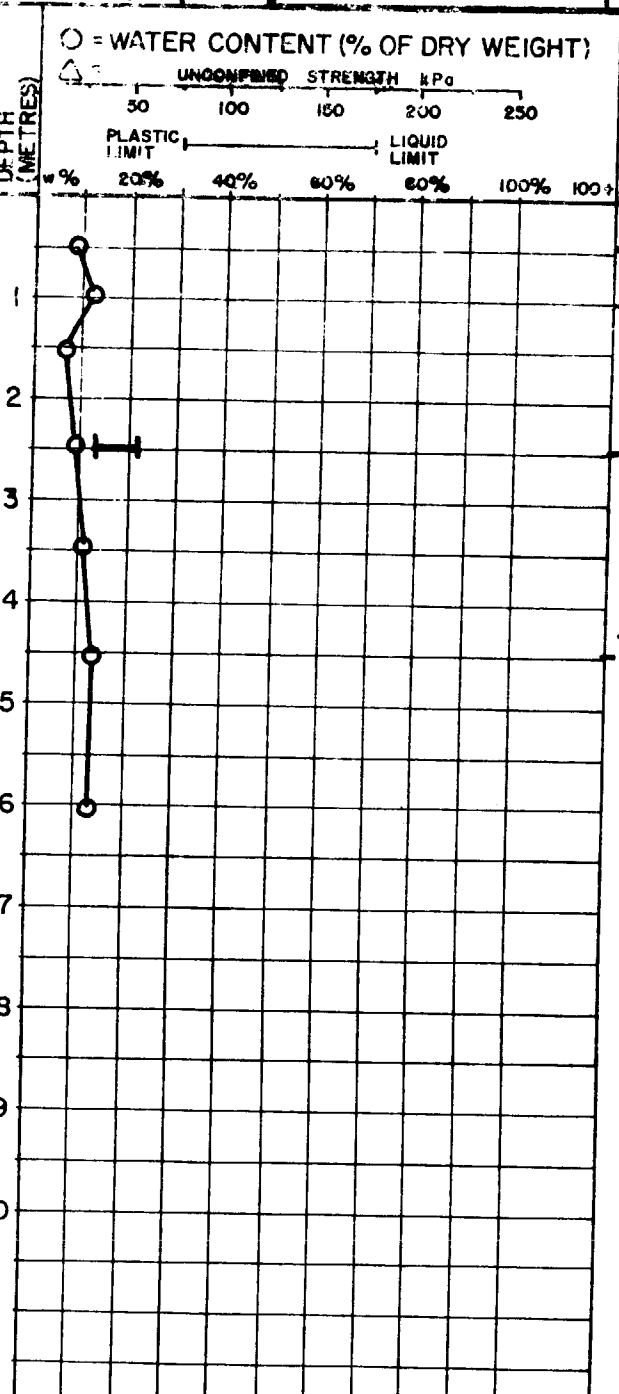
LIARD Hwy

TECH.	RIG	DATE	km	B.P. No.	HOLE No.
WEBBER	B-50	18/03/11	224	114	5

CHAINAGE	OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
		SAND-SILTY-PEBBLES .6m		
2	CL	CLAY-SILTY SANDY -PEBBLES > P_L		
4				
6				
8	SC	SAND-CLAYEY PEBBLES		
10				
12		CLAY-SILTY SANDY PEBBLES @ P_L		
14				
16	CL	LOW PLASTIC COBBLES		
18				
20		6.1m		
22		BOTTOM OF HOLE-6.1m		
24				
26				
28				
30				
32				
34				
36				
38				



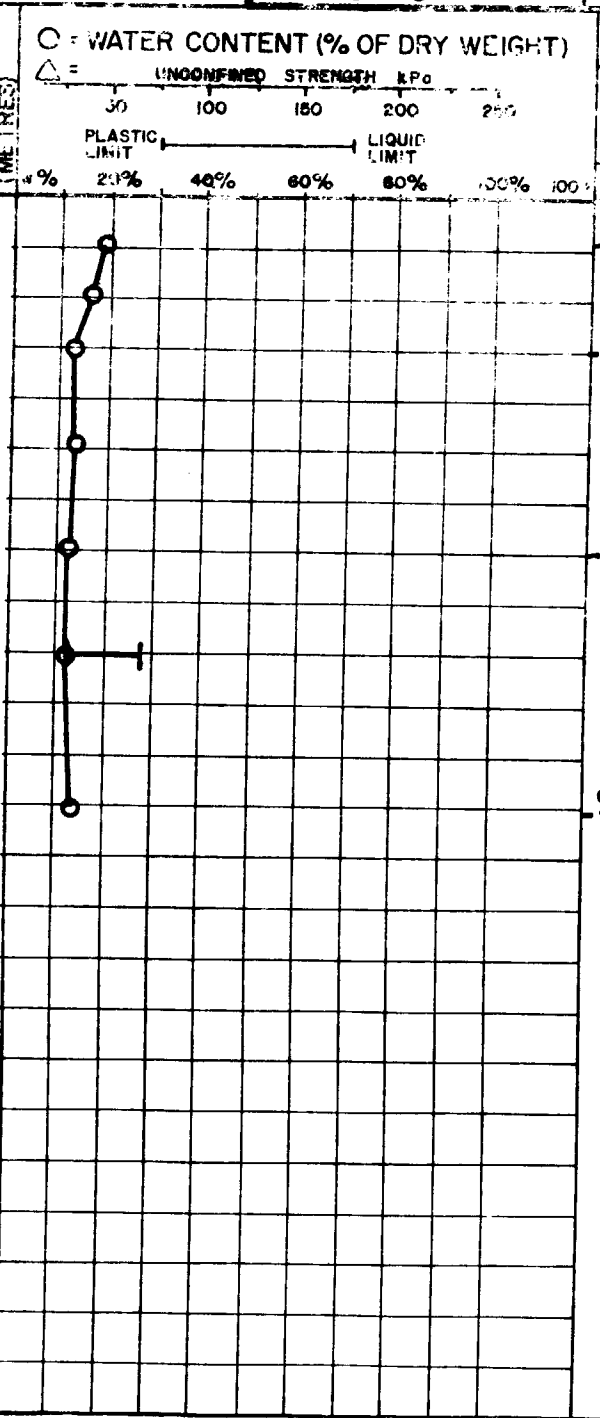
GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
41	54	5		DAMP
60	35	5		MOIST
				DAMP
37	54	9		DAMP
				DAMP
73	23	4		DAMP
				DAMP

PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/11	km 223	B.P. No. 115	HOLE No. 1

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY + P_L									BP 115 OK FOR BORROW.
4		PEBBLES			1					MOIST	
6		@ P_L				57	30	13		MOIST	- GOOD CONSTRUCTION MATERIAL
8	CL	LOW PLASTIC			2	55	39	6		MOIST	- SLIGHTLY ABOVE OPTIMUM.
10										MOIST	
12		GREY			3	53	43	4		MOIST	- WET @ SURFACE
14					4						- COBBLES AND OCCASIONAL BOULDERS
16										MOIST	
18					5						- DENSE OR STIFF
20		6.1 m			6	50	42	8		MOIST	
22		BOTTOM OF HOLE. 6.1 m									
24					7						
26											
28					8						
30											
32					9						
34											
36					10						
38					11						



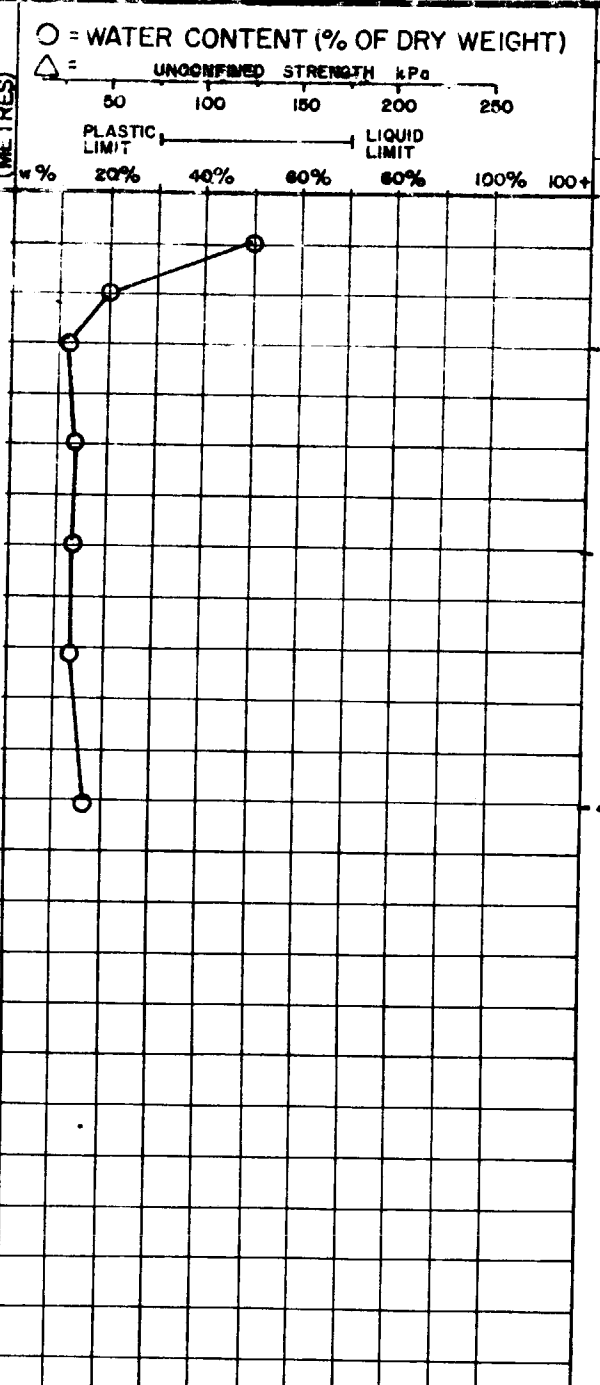
CHAINAGE | OFFSET

PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/11	km 223	B.P. No. 115	HOLE No. 2

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE / OFFSET / REMARKS
	OL	CLAY-SILTY ORGANIC									
2	CL	CLAY-SILTY								SAT.	
4		-SANDY PEBBLES			1					MOIST-WET	
6		@ P_L				50-	43	7		MOIST	
8					2						
10	CL									MOIST	
12					3	62-	35	3		MOIST	
14					4						
16										MOIST	
18	CL	HIGH SAND CONTENT +P_L			5						FREE WATER
20		6.1m			6	42-	51	7		SAT.	5.2m - 6.1m
22		BOTTOM OF HOLE - 6.1m									
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



PUBLIC WORKS CANADA — DRILL HOLE REPORT

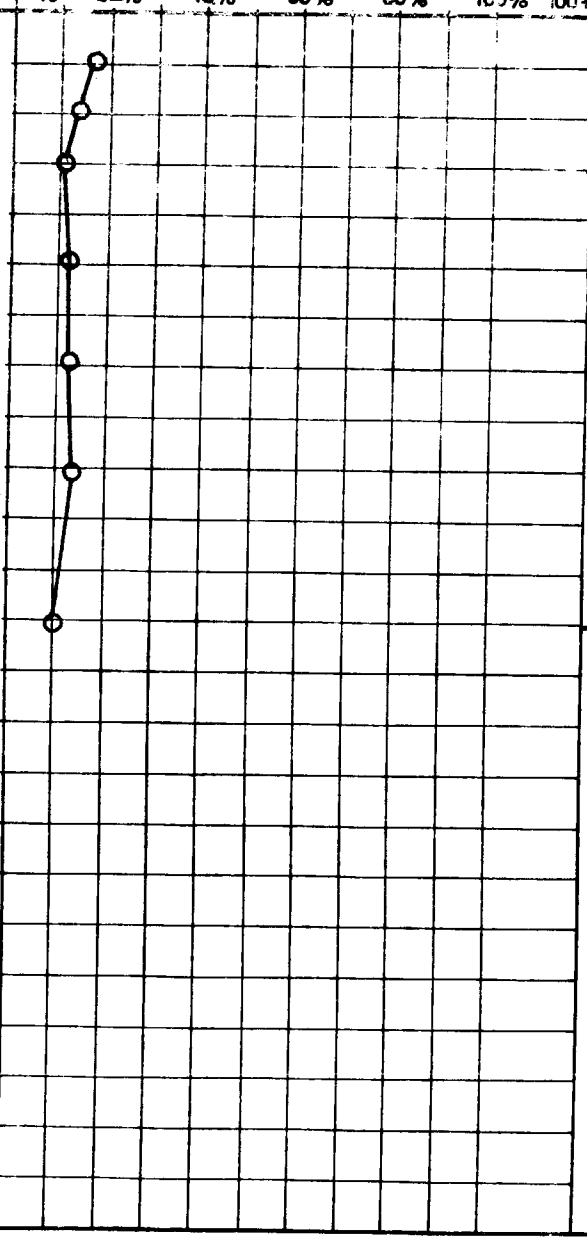
LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/11	km 221	B.P. No. 116	HOLE No. 1

O = WATER CONTENT (% OF DRY WEIGHT)

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

PLASTIC LIMIT — LIQUID LIMIT (0%, 20%, 40%, 60%, 80%, 100%, 100+)



DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY + PL									BP 116 OK FOR BORROW
4		- PEBBLES @ PL			1	56	40	4		MOIST	
6										MOIST	- GOOD CONSTRUCTION
8		- TILL			2	52	41	7		DAMP-MOIST	MATERIAL
10	CI	MED. PLASTIC			3					D-M	- AT OR SLIGHTLY ABOVE OPTIMUM
12					4	49	46	5		D-M	- COBBLES AND OCCASIONAL BOULDERS
14											
16		GREY.			5					DAMP	- DENSE OR STIFF
18											
20		6.1m			6	86	13	1		DAMP	
22		BOTTOM OF HOLE - 6.1m			7						
24											
26					8						
28											
30					9						
32											
34					10						
36											
38					11						

GRAIN-SIZE ANALYSIS

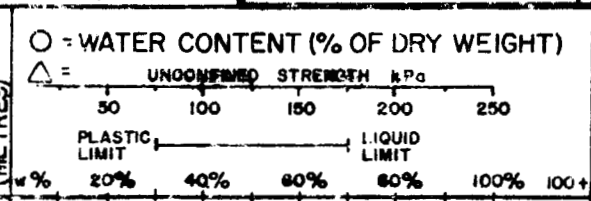
CHAINAGE

OFFSET

PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/11	km 221	B.P. No. 116	HOLE No. 2

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY PEBBLES LOW PLASTIC @ P_L								MOIST	
4		1.2 m			1					MOIST	
6	SC	SAND - SILTY CLAYEY PEBBLES			2	41	53	6		MOIST	
8		2.4 m				57	39	4		MOIST	
10		CLAY - SILTY SANDY - PEBBLES @ P_L			3						
12		- LOW PLASTIC								DAMP-MOIST	
14	CL	+P_L			4	79	20	1		MOIST-WET	
16					5						
18											
20		GREY 6.1 m			6					DAMP	
22		BOTTOM OF HOLE - 6.1 m									
24					7						
26					8						
28											
30					9						
32											
34					10						
36					11						
38											



CHAINAGE	OFFSET

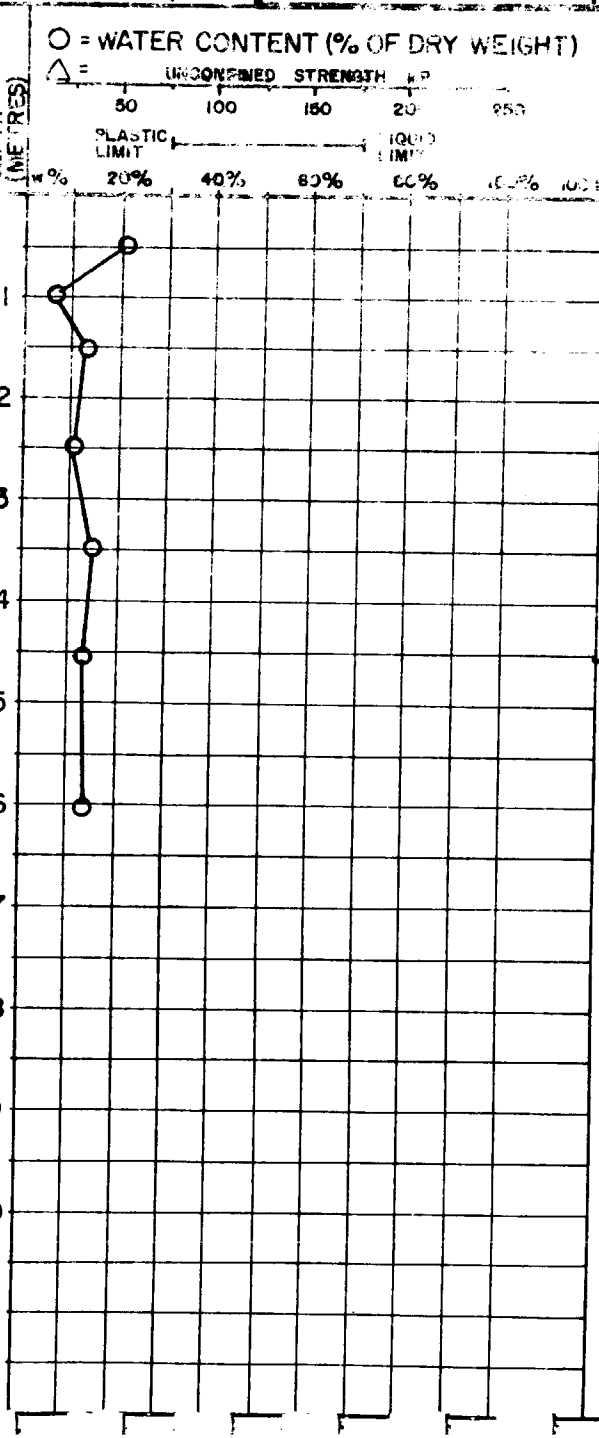
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/11	km 221	B.P. No. 116	HOLE No. 3

CHAINAGE	OFFSET

DEPTH FEET	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY GRAVELLY - PEBBLES TILL								MOIST-WET	
4	CL				1	39	33	28		MOIST	SHALE FRAGMENTS
6		@PL								MOIST	
8	SM	SAND - SILTY PEBBLES			2	42	54	4		DAMP-MOIST	
10					3						
12	CL	CLAY - SILTY SANDY - PEBBLES LOW PLASTIC @PL			4					MOIST-WET	
14											
16					5	51	44	5		MOIST	
18											
20		6.1m			6					MOIST-WET	
22		BOTTOM OF HOLE - 6.1m									
24					7						
26											
28					8						
30											
32					9						
34											
36					10						
38					11						



PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD Hwy

TECH. WEBBER	RIG B-50	DATE 78/03/11	km 225	B.P. No. 117	HOLE No. 1

CHAINAGE	OFFSET

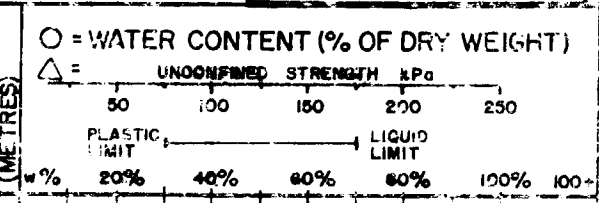
○ = WATER CONTENT (% OF DRY WEIGHT)
△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)
PLASTIC LIMIT — LIQUID LIMIT
w % 20% 40% 60% 80% 100% 100+

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY PEBBLES LOW PLASTIC @ ¢ - P_L			1					MOIST	BP17 OK FOR BORROW.
4										WET	
6					1.5	59	37	4		MOIST	- GOOD CONSTRUCTION MATERIAL
8	a				2					MOIST	- AT OR SLIGHTLY ABOVE OPTIMUM.
10					3						
12					3.5	59	35	6		MOIST-WET	- COBBLES AND OCCASIONAL BOULDERS
14					4						
16					4.5					MOIST	- DENSE OR STIFF
18					5						
20		GREY - 6.1m			6	63	31	6		MOIST	
22		BOTTOM OF HOLE - 6.1m			7						
24											
26					8						
28											
30					9						
32											
34					10						
36					11						
38											

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | HIARD HWY.

TECH. WEBBER | RIG B-50 | DATE 78/03/11 | km 225 | B.P. No. 117 | HOLE No. 2

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET
2		CLAY - SILTY SANDY								MOIST		
		- PEBBLES TILL			1	57	36		7	MOIST		
6		- LOW PLASTIC								MOIST		
8		@ P_L			2	64	30		6	MOIST		
10	CL				3					MOIST		
12												
14					4							
16						62	33		5	MOIST		
18					5							
20		GREY. 6.1m			6					MOIST		
22		BOTTOM OF HOLE. 6.1m										
24					7							
26												
28					8							
30					9							
32												
34					10							
36					11							
38												



GRAIN-SIZE ANALYSIS

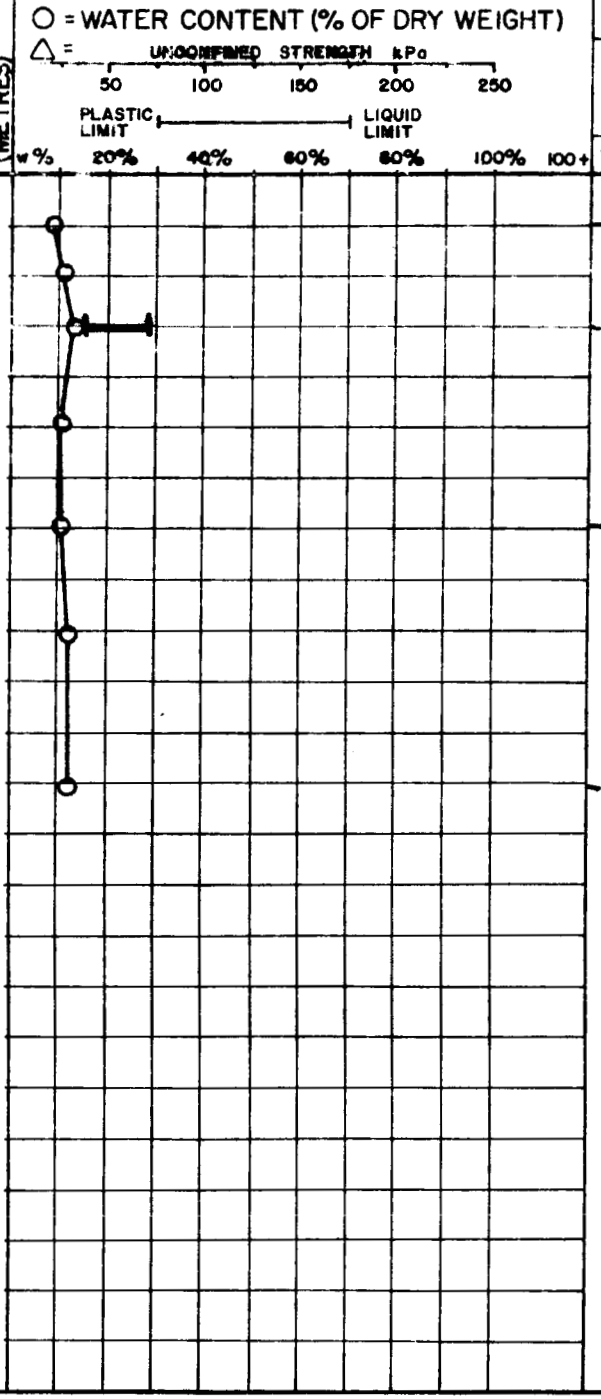
REMARKS

PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD Hwy

TECH. WEBBER	RIG B-50	DATE 78/03/11	km 227	B.P. No. 118	HOLE No. 1

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SANDY SILTY - PEBBLES - TILL				52	42	6		DAMP	
4					1					DAMP MOIST	
6		LOW PLASTIC				61	34	5		D-M	BP 118 OK FOR BORROW
8	CL				2					D-M	- RECOMMEND AREA OF HOLES #1 & #2
10					3						
12						48	44	8		MOIST	
14					4						- NEAR OPTIMUM
16		GREY.								MOIST	- GOOD CONSTRUCTION MATERIAL.
18											
20		6.1m			6	64	32	4		MOIST	- COBBLES AND OCCASIONAL BOULDERS THROUGHOUT
22		BOTTOM OF HOLE. 6.1m									
24					7						- DENSE OR STIFF
26											
28					8						
30					9						
32											
34					10						
36					11						
38											

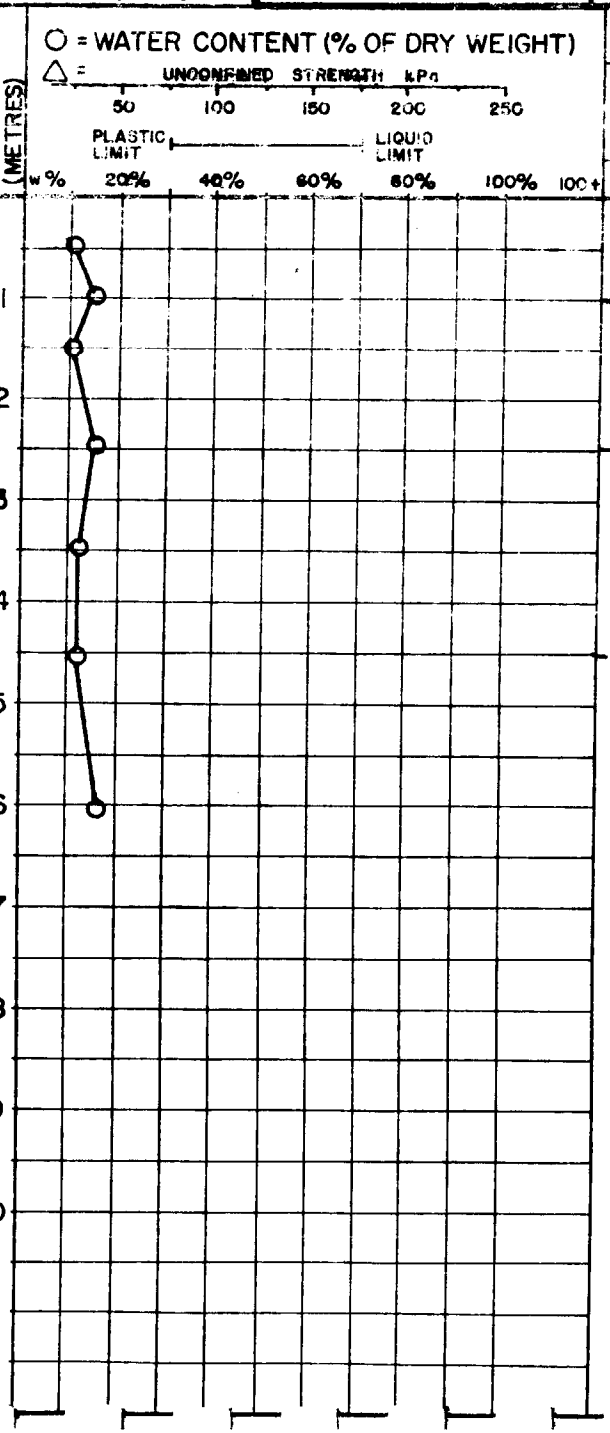


CHAINAGE | OFFSET

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. WEBBER | RIG B-50 | DATE 78/03/11 | km 227 | B.P. No. 118 | HOLE No. 2

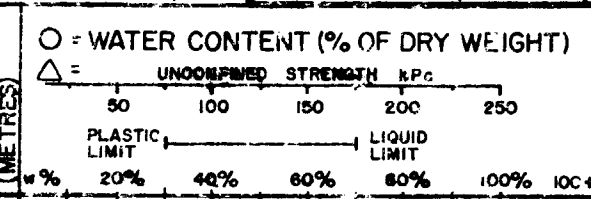
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2		CLAY - SILTY SANDY - PEBBLES - TILL @ PL LOW PLASTIC								DAMP			
4					1	49	40		11	MOIST-WET			
6										DAMP-MOIST			
8	CL				2	61	33		6	MOIST			
10					3								
12										MOIST			
14		GREY.			4	62	32		6	DAMP-MOIST			
16					5								
18													
20		6.1m			6					MOIST			
22		BOTTOM OF HOLE - 6.1m											
24					7								
26													
28					8								
30													
32					9								
34													
36					10								
38					11								



PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/11	km 227	B.P. No. 118	HOLE No. 3

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE / OFFSET / REMARKS
2	CI	CLAY - SILTY SANDY								DAMP	
4		- PEBBLES			1	50	42	8		MOIST	
6		- MED. PLASTIC								MOIST	
8		@ P_L			2	57	39	4		MOIST	
10	CL	- LOW PLASTIC			3						
12		+ P_L COBBLES								MOIST	
14					4						FREE WATER 4.0m - 4.9m
16						63	36	1		WET	
18					5						
20		GREY 6.1m			6					MOIST	
22		BOTTOM OF HOLE - 6.1m									
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											

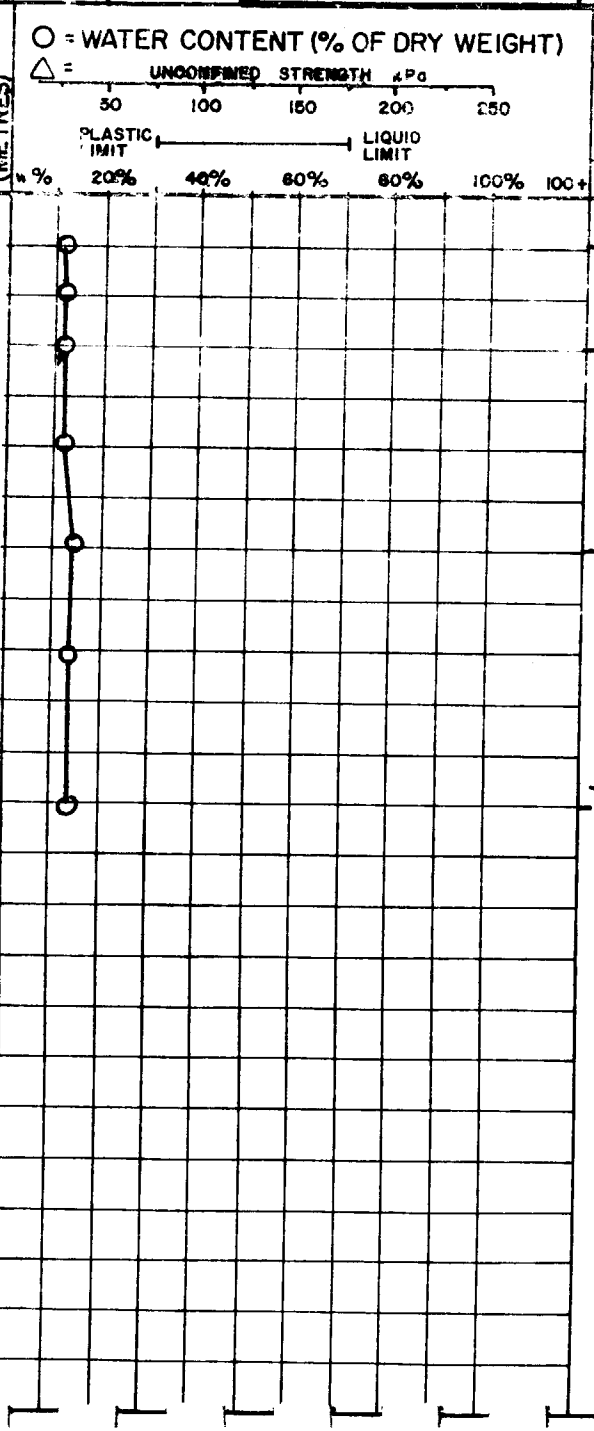


PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. WEBBER | RIG B-50 | DATE 78/03/11 | km 228 | B.P. No. 119 | HOLE No. 1

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE / OFFSET / REMARKS
2		CLAY - SILT - SAND MIX.									
4		CLAY - SILTY SANDY - PEBBLES - TILL			1	43	55	2		MOIST	BP 119 OK FOR BORROW
6		LOW - MED. PLASTIC								MOIST	
8	CL				2	62	34	4		MOIST	- GOOD CONSTRUCTION MATERIAL
10	CI				3					MOIST	- SLIGHTLY ABOVE OR AT OPTIMUM.
12						66	29	5		MOIST	- COBBLES AND OCCASIONAL BOULDERS THROUGHOUT
14					4						
16		COBBLES			5					MOIST	
18											- DENSE OR STIFF
20		6.1m			6	74	24	2		MOIST	
22		BOTTOM OF HOLE - 6.1m									
24					7						
26											
28					8						
30					9						
32											
34					10						
36											
38					11						

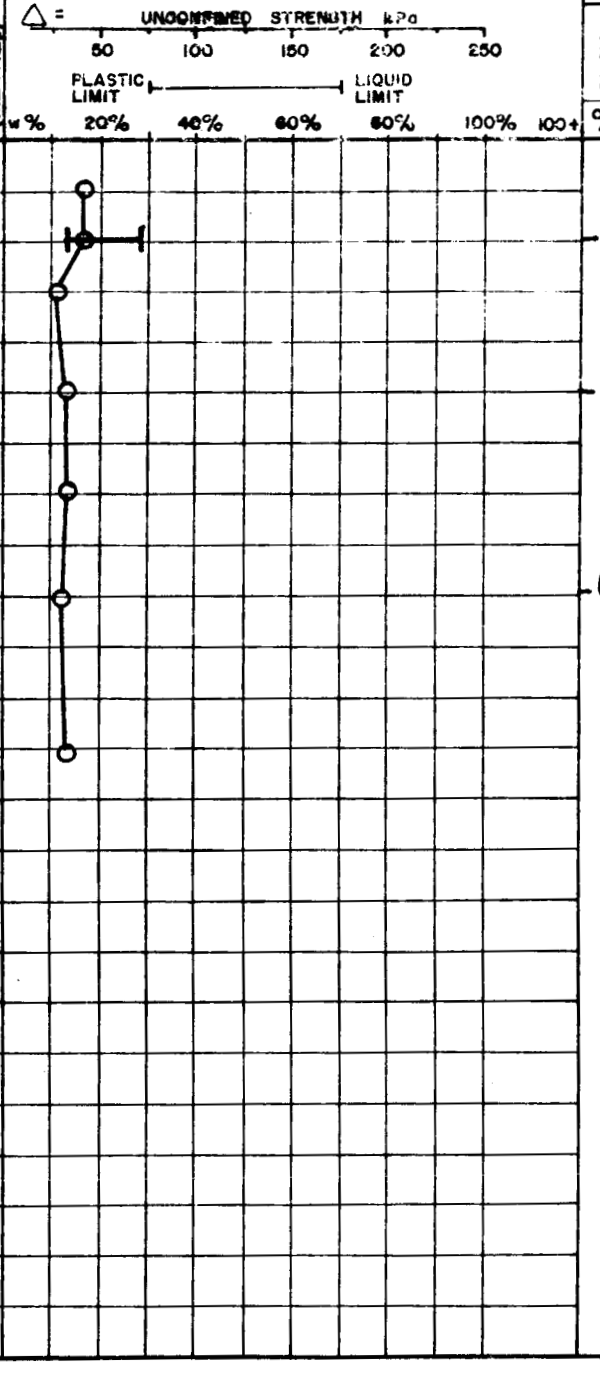


PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD Hwy

TECH. WEBBER	RIG B-50	DATE 78/03/11	km 228	B.P. No. 119	HOLE No. 2

O = WATER CONTENT (% OF DRY WEIGHT)
△ = UNCONFINED STRENGTH kPa



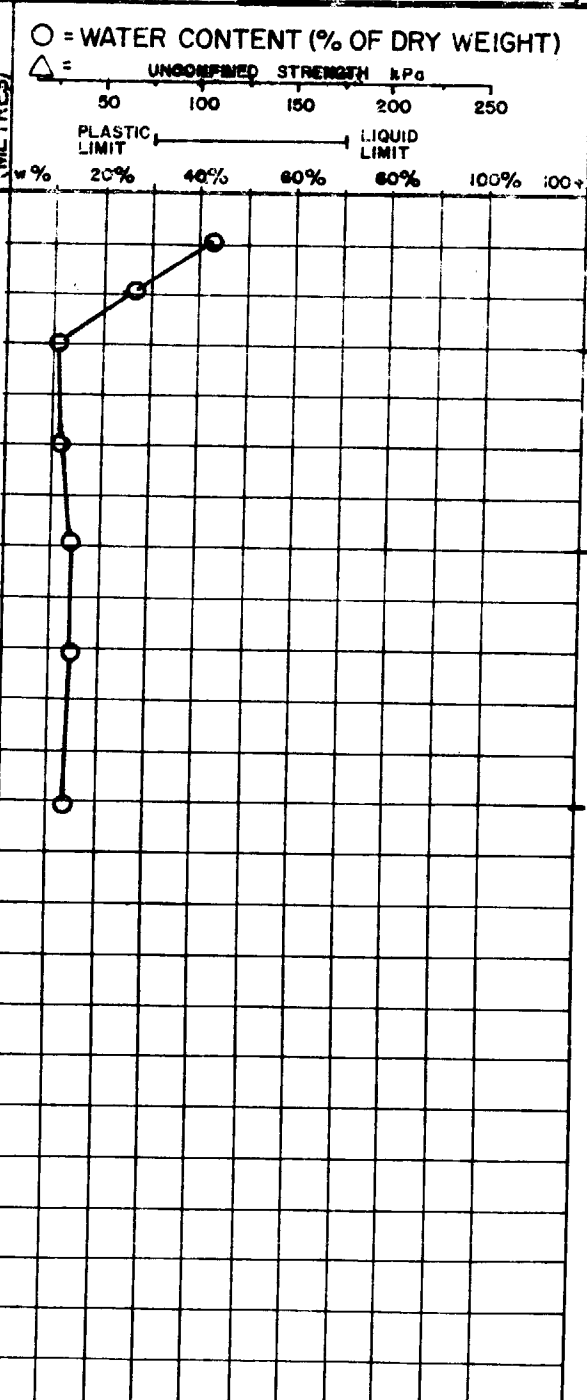
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE / OFFSET / REMARKS
2		CLAY - SILTY SANDY								MOIST-WET	
4		- PEBBLES			1	62	34		4	MOIST	
6		LOW PLASTIC								MOIST	
8	CL	@ P_L			2	62	34		4	MOIST	
10					3					MOIST	
12											
14		GREY -			4	61	33		6	MOIST	
16					5						
18											
20		6.1m			6					MOIST	
22		BOTTOM OF HOLE. 6.1m									
24					7						
26					8						
28											
30					9						
32											
34					10						
36					11						
38											

PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/11	km 228	B.P. No. 120	HOLE No. 1

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY MED. PLASTIC				99	1		0	WET	UPPER 1m OF BP120 WELL ABOVE OPTIMUM. - OTHERWISE O.K. FOR BORROW - GOOD CONSTRUCTION MATERIAL. - COBBLES AND OCCASIONAL BOULDERS THROUGHOUT - DENSE OR STIFF
4		CLAY - SILTY SANDY PEBBLES - TILL @ P_L			1					MOIST	
6						46	46	8		MOIST	
8					2					MOIST	
10	CL - CI	LOW - MED. PLASTIC COBBLES			3						
12					4	65	30	5		MOIST	
14											
16					5					MOIST	
18											
20		GREY 6.1m			6	69	29	2		MOIST	
22		BOTTOM OF HOLE - 6.1m									
24					7						
26											
28					8						
30											
32					9						
34					10						
36											
38					11						

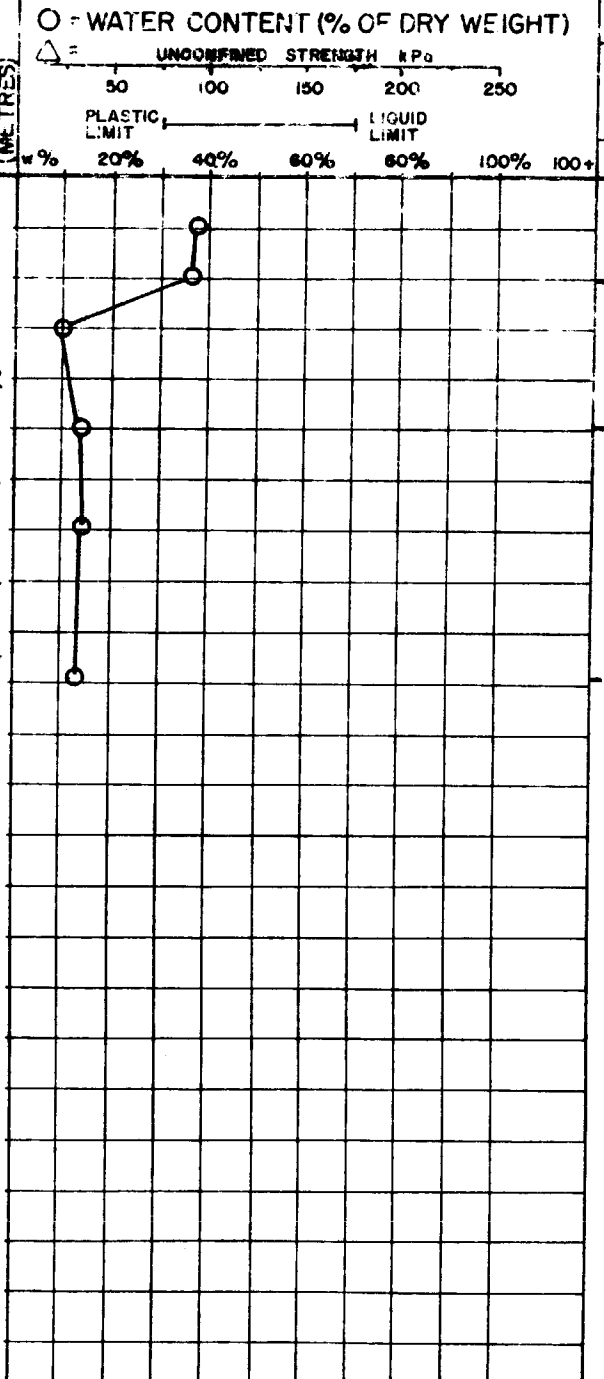


CHAINAGE | OFFSET

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD Hwy.

TECH. WEBBER | RIG B-50 | DATE 78/03/11 | km 228 | B.P. No. 120 | HOLE No. 2

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2		CLAY - SILTY								WET			
4					1	96	4		0	WET			
6		- SANDY PEBBLES								MOIST			
8	CL	LOW-MED. PLASTIC			2	55	38		7	MOIST			
10	CI				3								
12										MOIST			
14					4								
16		GREY - 4.9m			5	66	29		5	MOIST			
18		BOTTOM OF HOLE - 4.9m											
20		REFUSAL			6								
22													
24					7								
26													
28					8								
30					9								
32													
34					10								
36													
38					11								

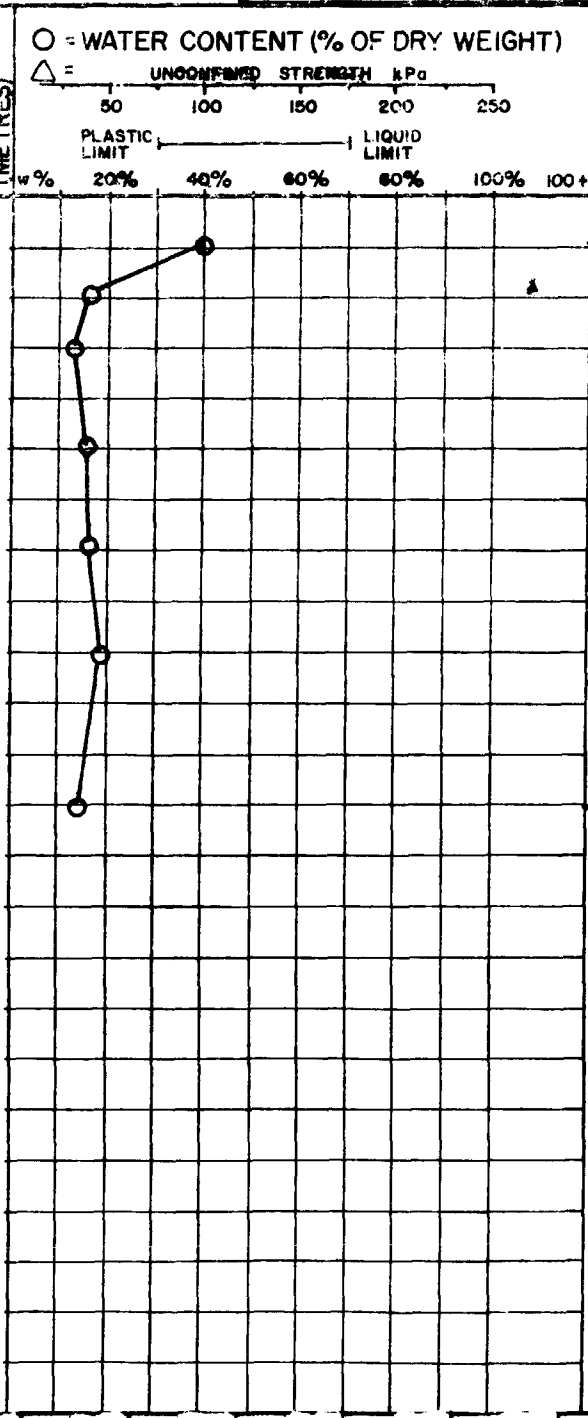


PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY

TECH. WEBBER	RIG B-50	DATE 78/03/11	km 228	B.P. No. 120	HOLE No. 3

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2		CLAY - SILTY SANDY				89	11	0		WET			
4					1					WET			
6		- PEBBLES								DAMP			
8					2	69	27	4		MOIST			
10		Q & + P_L			3								
12	CL	LOW PLASTIC								MOIST			
14					4								
16		GREY -			5					MOIST			
18													
20		6.1m			6	65	31	4		MOIST			
22		BOTTOM OF HOLE - 6.1m											
24					7								
26													
28					8								
30					9								
32													
34					10								
36													
38					11								

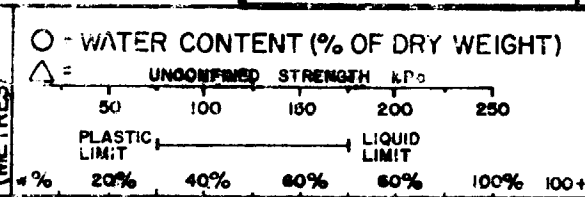


PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/11	km 228	B.P. No. 120	HOLE No. 4

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2	CL-CI	CLAY - SILTY SANDY PEBBLES @ PL LOW - MED. PLASTIC			1					MOIST			
4										MOIST			
6					2					MOIST			
8										MOIST			
10					3								
12		GREY -								MOIST			
14					4					MOIST			
16					5								
18													
20		6.1m			6					MOIST			
22		BOTTOM OF HOLE - 6.1m											
24					7								
26													
28					8								
30					9								
32													
34					10								
36					11								
38													



PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH.	RIG	DATE	km	B.P. No.	HOLE No.
WEBBER	B-50	78/03/11	230	121	1

CHAINAGE	OFFSET

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

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2, 4, 6, 8, 10, 12, 14	CL	CLAY - SILTY SANDY PEBBLES @ P_L LOW PLASTIC + P_L			1, 2, 3, 4	50	45	5		MOIST	
						57	39	4		MOIST	
										MOIST	
						62	30	8		MOIST	FREE WATER 4.0m - 4.6m
16		4.6m BOTTOM OF HOLE - 4.6m								WET	
18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38					5, 6, 7, 8, 9, 10, 11						

BP 121 OK FOR BORROW IN AREA OF HOLES #1 AND #2 TO A DEPTH OF ABOUT 4m

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. WEBBER | RIG B-50 | DATE 78/03/11 | km 230 | B.P. No. 121 | HOLE No. 2

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY PEBBLES MED. PLASTIC								DAMP	
4	CI				1	53	42	5		MOIST	
6										MOIST	
8		2.4 m			2	44	48	8		MOIST	
10	SC	SAND. SILTY CLAYEY			3						
12	CL	CLAY - SILTY SANDY @ PL								MOIST	
14	ML	SILT - SANDY 4.6 m			4	59	41	0		SAT.	FREE WATER 4.0m - 4.6m
16		BOTTOM OF HOLE. 4.6m			5						
18											
20					6						
22											
24					7						
26											
28					8						
30											
32					9						
34											
36					10						
38					11						

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa

50 100 150 200 250

PLASTIC LIMIT — LIQUID LIMIT

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

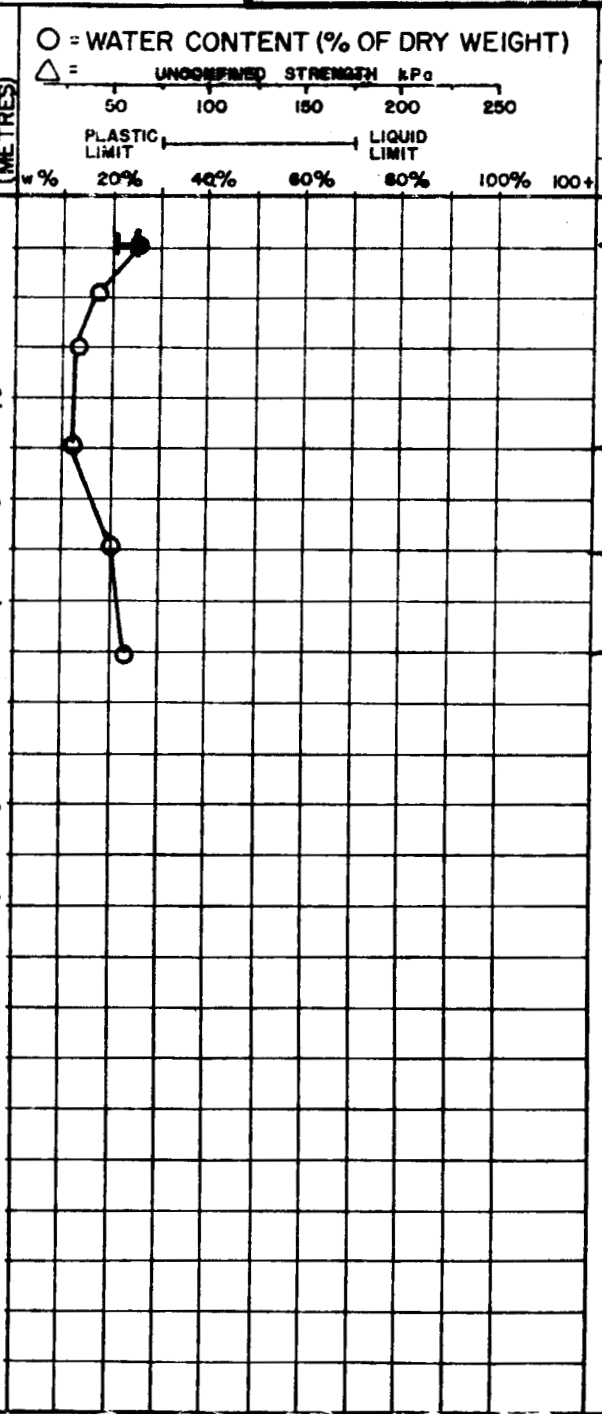
GRAIN-SIZE ANALYSIS

CHAINAGE | OFFSET

PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/11	km 230	B.P. No. 121	HOLE No. 3

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2	ML	SILT - CLAYEY - PEBBLES — .6m				89	9	2		WET			
4		CLAY - SILTY SANDY - PEBBLES - LOW PLASTIC			1					WET			
6	CL									MOIST			
8					2	55	40	5		MOIST			
10		3.1m											
12	ML	SAND - SILT MIX			3	55	44	1		WET-SAT			
14	SM	4.6m			4	56	44	0		WET-SAT.			
16		BOTTOM OF HOLE - 4.6m			5								
18													
20					6								
22													
24					7								
26													
28					8								
30					9								
32													
34					10								
36					11								
38													

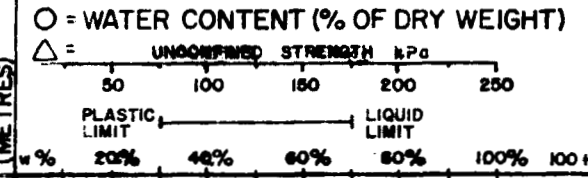


PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/11	km 232	B.P. No. 122	HOLE No. 1

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY PEBBLES MED. PLASTIC								HUMID	BP 122 OK FOR BORROW
4					1					HUMID	- GOOD CONSTRUCTION MATERIAL
6										HUMID	- NEAR OPTIMUM
8	Cl	@ P_L			2					HUMID	- COBBLES AND OCCASIONAL BOULDERS
10					3						
12										DAMP	- DENSE OR STIFF
14					4						POSSIBLE SOFT SHALE FROM 4.3 m
16		GREY - WITH SOFT SHALE FRAGMENTS			5					DAMP	
18											
20		6.1 m			6					DAMP	
22		BOTTOM OF HOLE - 6.1 m									
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											

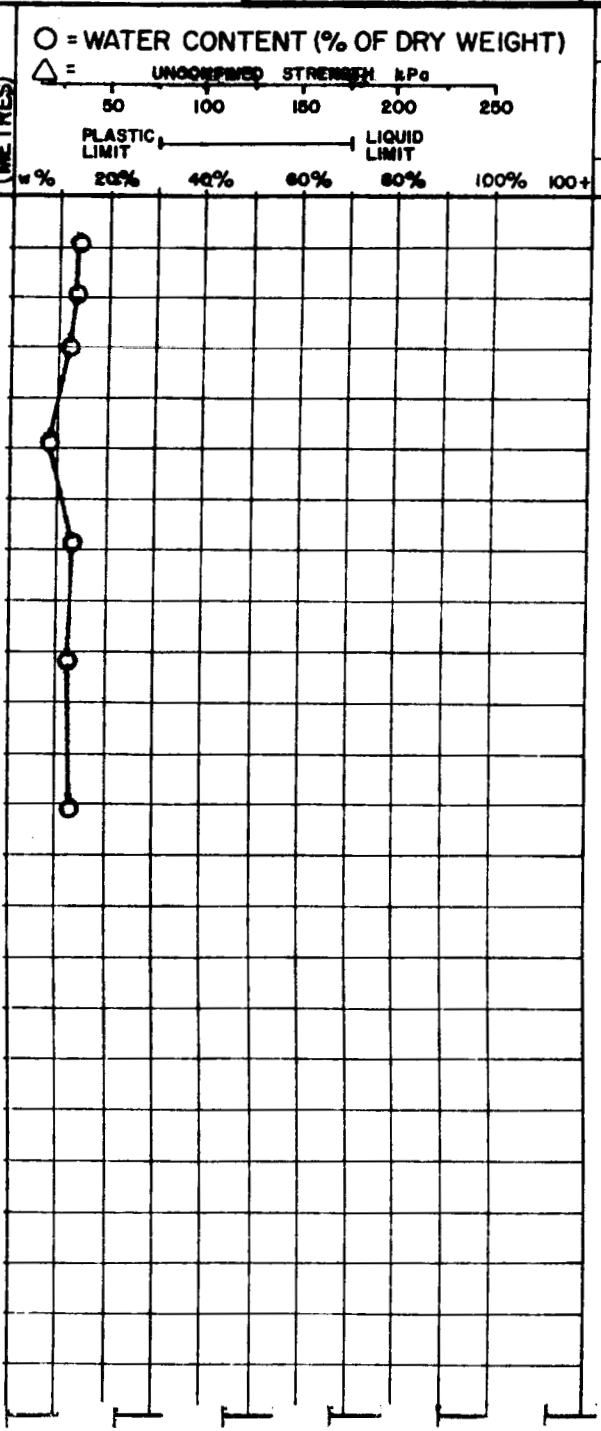


CHAINAGE	OFFSET

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | WARD HWY

TECH. WEBBER	RIG B-50	DATE 78/03/11	km 232	B.P. No. 122	HOLE No. 2

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE / OFFSET / REMARKS
2		CLAY - SILTY SANDY								MOIST	
4		PEBBLES			1					MOIST	
6		MED. PLASTIC								DAMP	
8	CI	@ PL			2					DAMP	
10					3						
12										MOIST	
14		COBBLES			4						
16		POSSIBLE SOFT SHALE FROM 5.2m			5					DAMP	
18		- SILTY									
20		6.1m			6					DAMP	
22		BOTTOM OF HOLE - 6.1m									
24					7						
26											
28					8						
30					9						
32											
34					10						
36											
38					11						

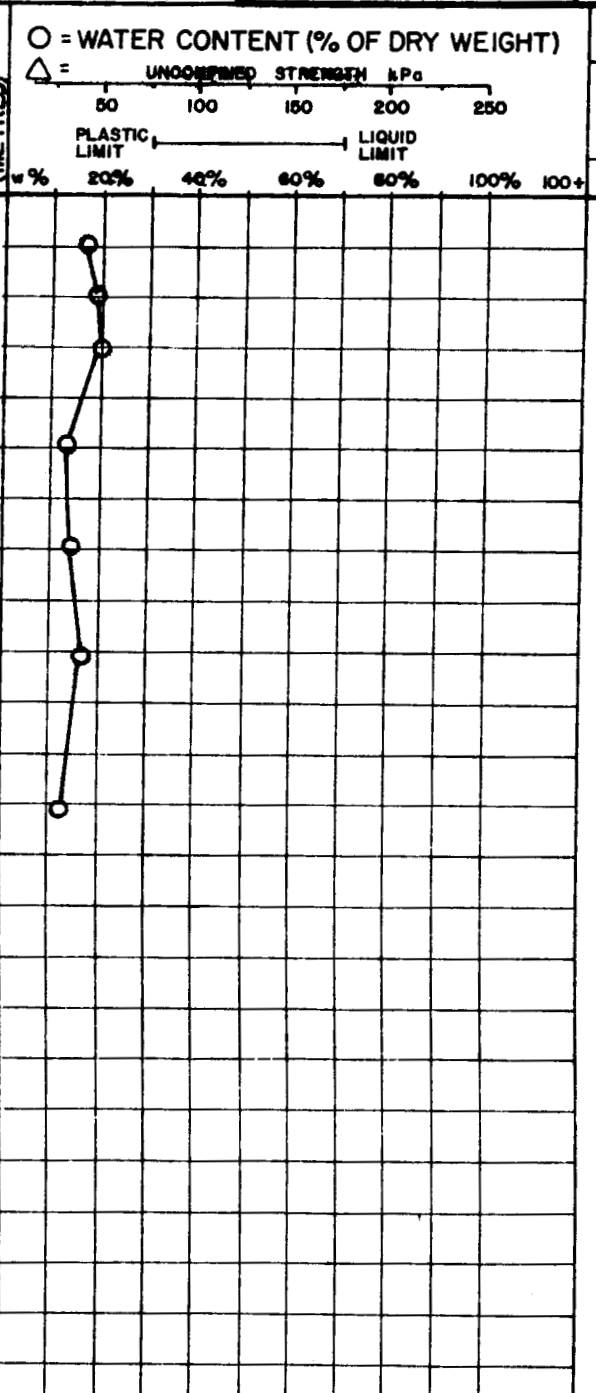


PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/11	km 232	B.P. No. 122	HOLE No. 3

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY								WET	
4		PEBBLES +PL			1					WET	
6		LOW PLASTIC								WET	
8					2					DAMP	
10		@ PL			3						
12	CI	MED. PLASTIC								DAMP	
14		COBBLES			4						
16		GREY - POSSIBLE SOFT SHALE FROM 5.2 m								DAMP	
18		- SILTY			5						
20		SHALE FRAGMENT 6.1m			6					DAMP	
22		BOTTOM OF HOLE - 6.1m									
24					7						
26					8						
28											
30					9						
32											
34					10						
36					11						
38											



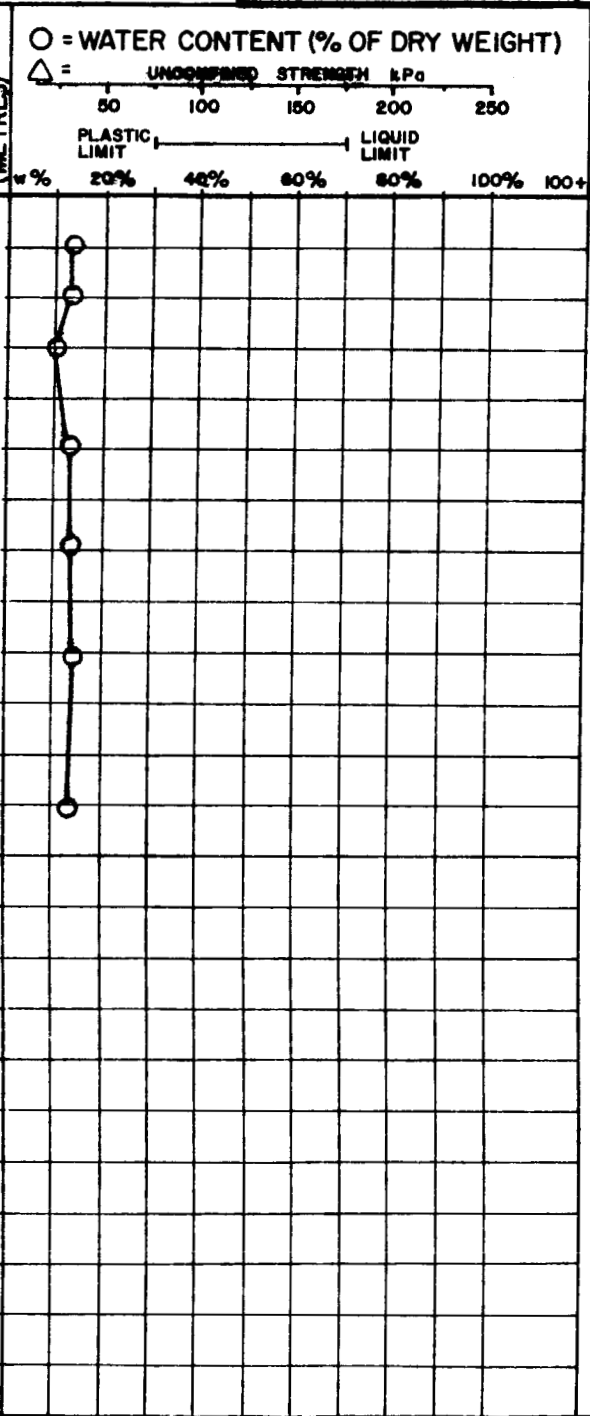
CHAINAGE | OFFSET

PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/11	km 233	B.P. No. 123	HOLE No. 1

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY				DAMP	BP 123 OK
4		- PEBBLES			1	DAMP	FOR BORROW
6		@ PL OR - PL				DAMP	- GOOD CONSTRUCTION MATERIAL
8		MED. PLASTIC			2	DAMP	- NEAR OPTIMUM.
10	CI				3	DAMP	- COBBLES AND OCCASIONAL BOULDERS THROUGHOUT
12							
14					4		
16		COBBLES			5	DAMP	- DENSE OR STIFF
18							
20		GREY 6.1m			6	DAMP	
22		BOTTOM OF HOLE - 6.1 m					
24					7		
26							
28					8		
30					9		
32							
34					10		
36					11		
38							



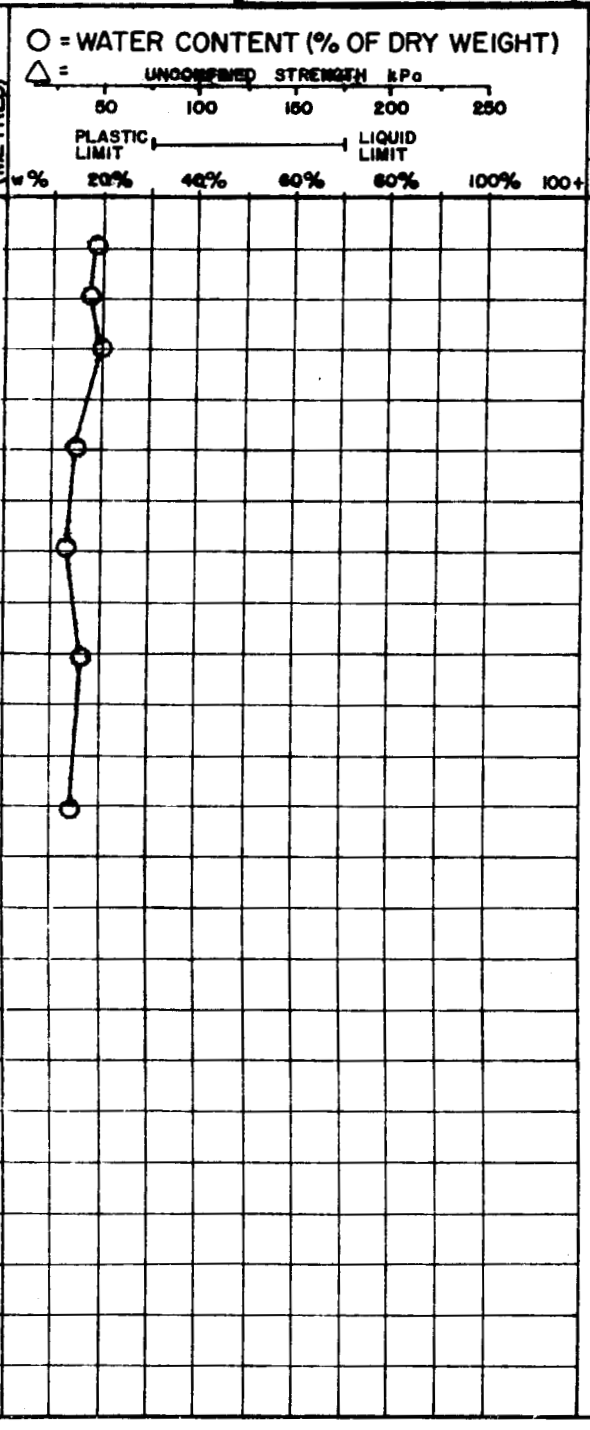
GRAIN-SIZE ANALYSIS				CHAINAGE	OFFSET
CLAY %	SILT %	SAND %	GRAVEL %		

PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/11	km 233	B.P. No. 123	HOLE No. 2

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY		FROZEN						MOIST	
		PEBBLES			1					MOIST	
4		LOW - MED. PLASTIC									
6	CL			FROZEN	2					WET	
8	CL									MOIST	
10					3						
12										MOIST	
14					4						
16		COBBLES			5					MOIST	
18											
20		6.1 m			6					MOIST	
22		BOTTOM OF HOLE - 6.1 m									
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



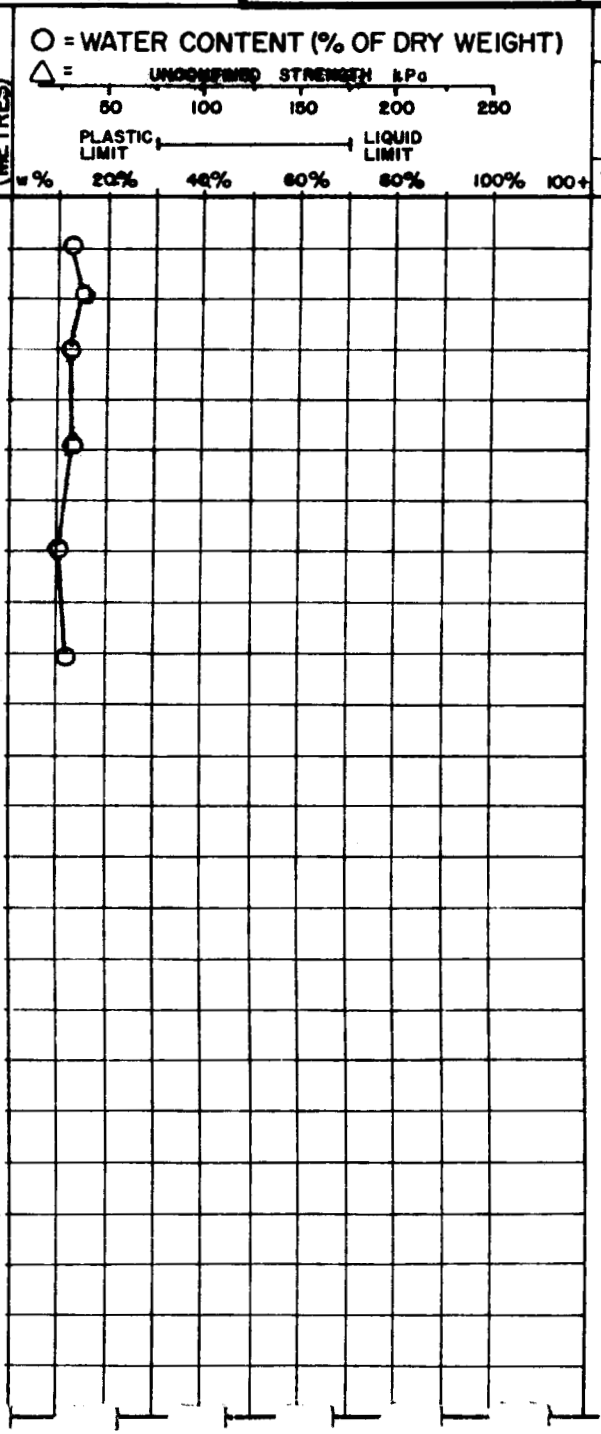
CHAINAGE	OFFSET

PUBLIC WORKS CANADA — DRILL HOLE REPORT

HIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/11	km 233	B.P. No. 123	HOLE No. 3

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2		CLAY - SILTY SANDY			MOIST			
4		- PEBBLES			MOIST			
6		@ PL			MOIST			
8	CI	MED. PLASTIC			MOIST			
10		COBBLES						
12					MOIST			
14					MOIST			
16		4.9m						
18		BOTTOM OF HOLE - 4.9 m						
20		REFUSAL						
22								
24								
26								
28								
30								
32								
34								
36								
38								



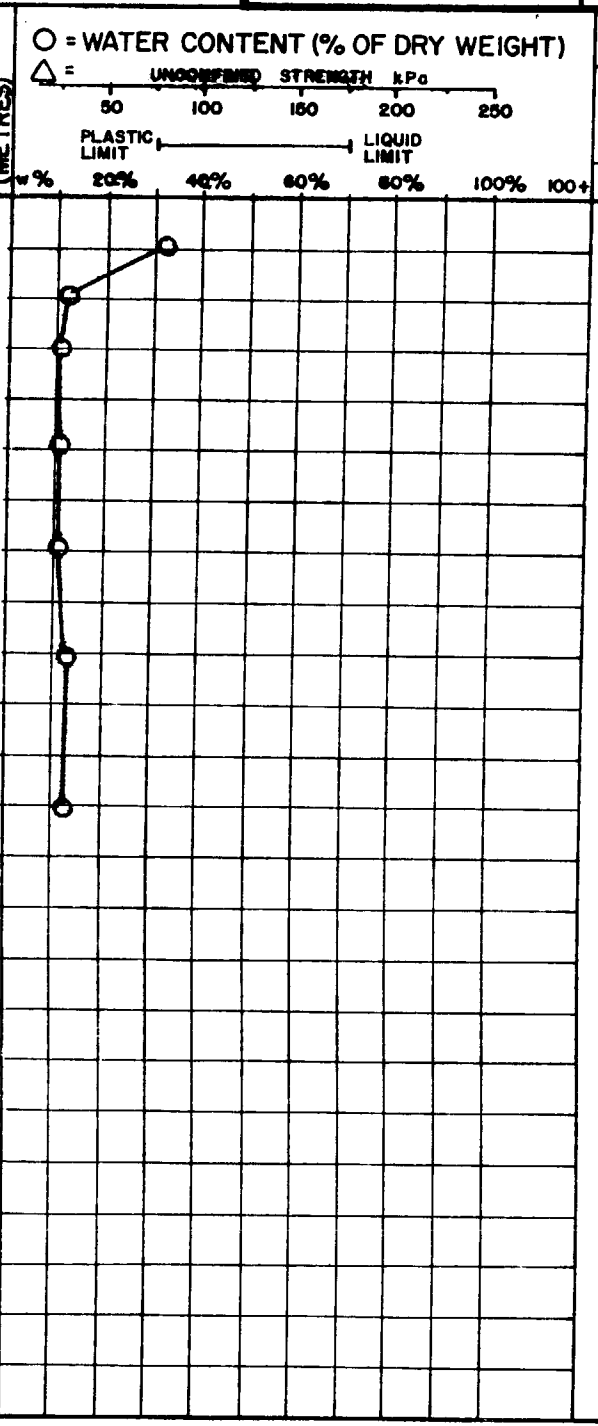
GRAIN-SIZE ANALYSIS			
CLAY %	SILT %	SAND %	GRAVEL %

PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/11	km 234	B.P. No. 124	HOLE No. 1

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY - PEBBLES								WET	BP124 OK
4		LOW - MED. PLASTIC			1					MOIST	FOR BORROW
6	CL	@ OR - P_L								MOIST	- GOOD CONSTRUCTION MATERIAL
8	CI				2					MOIST	- WET TO 0.5m
10					3						- OTHERWISE NEAR OPTIMUM.
12										MOIST	
14		GREY -			4						- COBBLES AND OCCASIONAL BOULDERS THROUGHOUT
16		COBBLES			5					MOIST	
18											
20		6.1m			6					MOIST	- DENSE OR STIFF
22		BOTTOM OF HOLE - 6.1m									
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



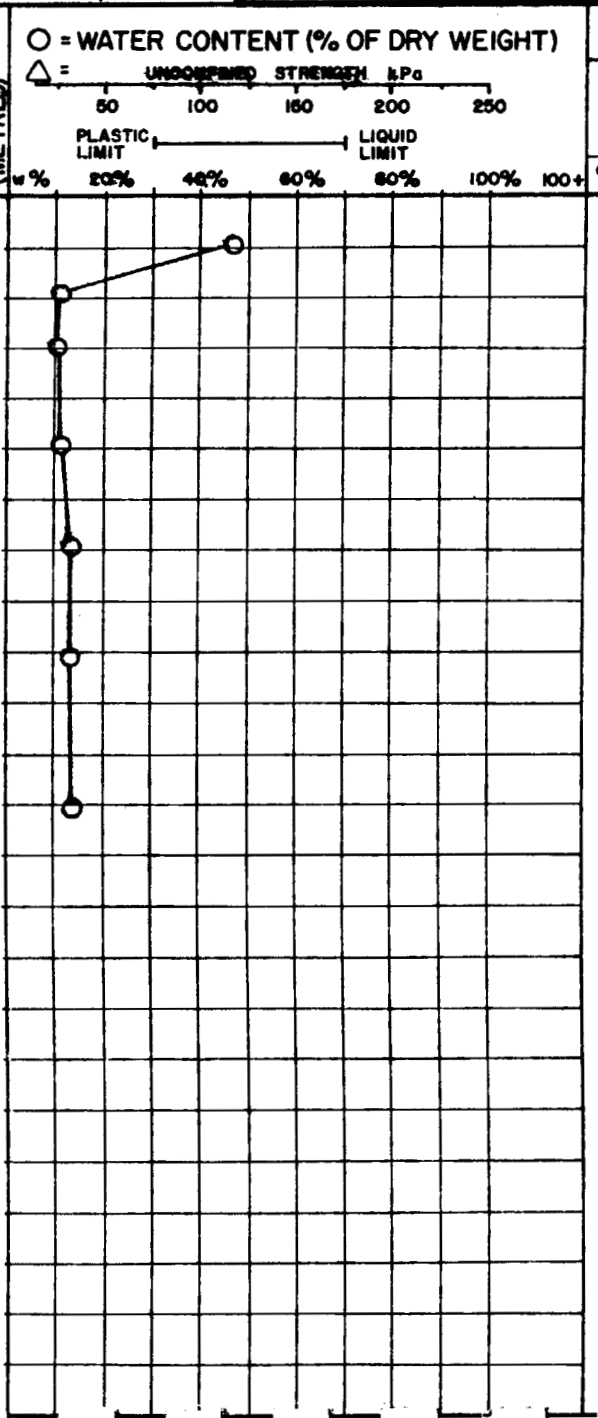
CHAINAGE	OFFSET

PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/11	km 234	B.P. No. 124	HOLE No. 2

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2		CLAY - SILTY								SAT.			
4		- SILTY SANDY PEBBLES			1					MOIST			
6		LOW-MED. PLASTIC								MOIST			
8	CL				2								
10	-				3					MOIST			
12	CI	COBBLES								MOIST			
14					4								
16					5					MOIST			
18													
20		GREY 6.1m			6					MOIST			
22		BOTTOM OF HOLE - 6.1 m											
24					7								
26													
28					8								
30													
32					9								
34													
36					10								
38													
					11								

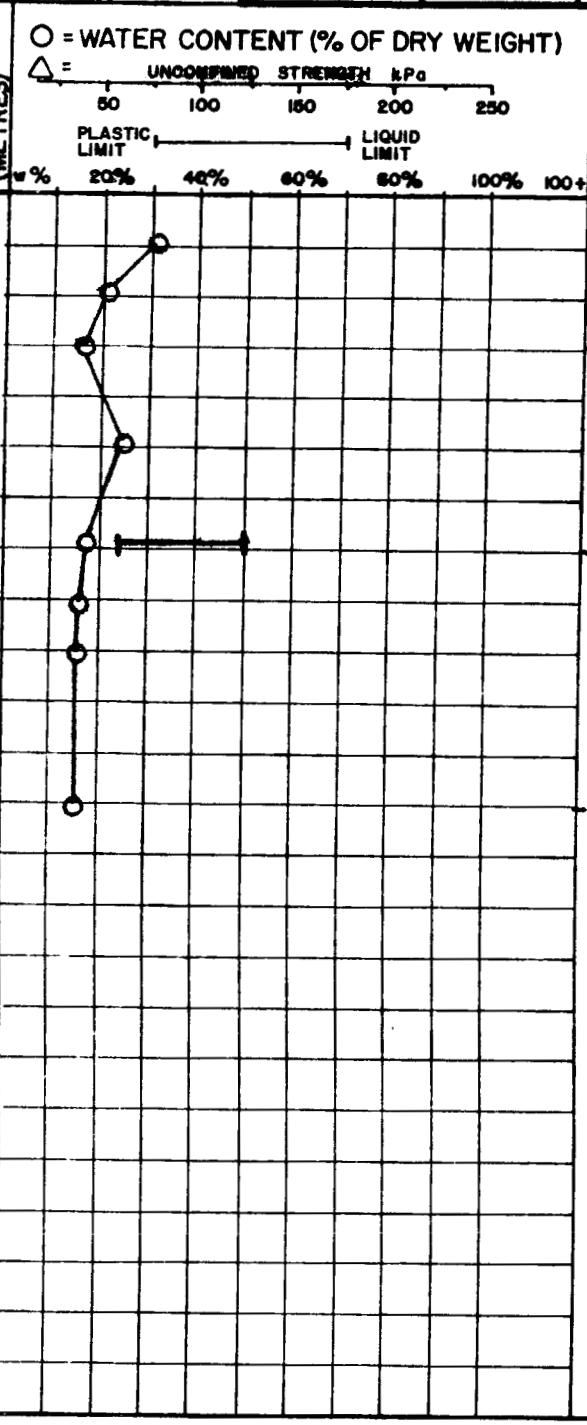


PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/13	km 237	B.P. No. 125	HOLE No. 1

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2		CLAY - SILTY				97	3	0		MOIST			BP 125 OK
4		GREY HIGH PLASTIC			1					DAMP			FOR BORROW
6						100	0	0		H.I.B			- HIGHLY PLASTIC
8	CH				2								CLAY BECOMING SOFT
10										DAMP			CLAY SHALE AT
					3								DEPTH
12		SOFT SHALE FRAGMENTS				99	1	0		DAMP			- NEAR OPTIMUM.
		OR CLAY-SHALE											
14					4								- [redacted] STIFF OR
16										DAMP			DENSE.
18					5								
20		6.1m			6	97	3	0		DAMP			
22		BOTTOM OF HOLE. 6.1m											
24					7								
26													
28					8								
30					9								
32													
34					10								
36					11								
38													

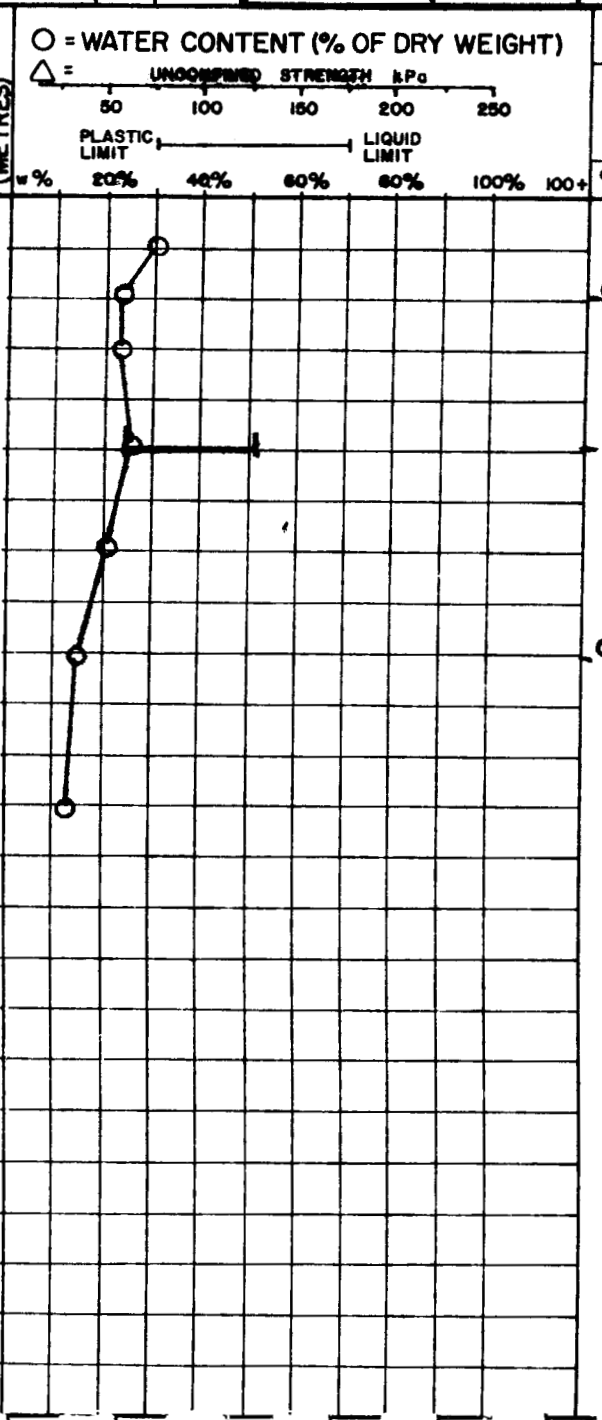


PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/13	km 237	B.P. No. 125	HOLE No. 2

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2		CLAY - SILTY								DAMP			
4		GREY - HIGH PLASTIC			1	99	1	0		DAMP			
6										DAMP			
8	CH				2	100	0	0		DAMP			
10					3								
12										DAMP			
14					4								
16		FEW SOFT SHALE FRAGS. OR CLAY-SHALE			5	98	2	0		DAMP			
18													
20		6.1m			6					DAMP			
22		BOTTOM OF HOLE - 6.1 m											
24					7								
26													
28					8								
30					9								
32													
34					10								
36													
38					11								

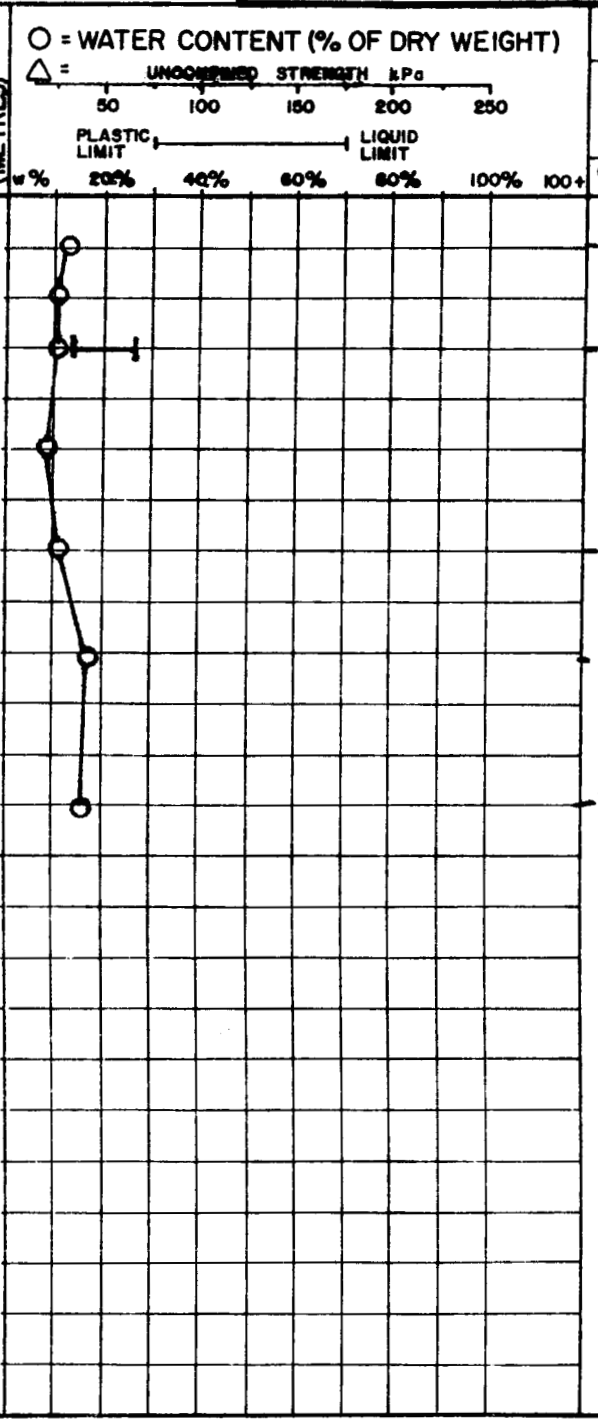


PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/13	km 238	B.P. No. 126	HOLE No. 1

CHAINAGE	OFFSET

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY SANDY PEBBLES LOW PLASTIC - P_L			1	52	36	12		DAMP	BP 126 OK FOR BORROW TO ABOUT 4 m.
4										DAMP	
6					2	49	44	7		MOIST	
8										MOIST	- GOOD CONSTRUCTION MATERIAL
10					3						
12		4.0 m				54	41	5		MOIST	- NEAR OPTIMUM TO 4 m.
14	SM	SAND - SILTY - PEBBLES			4						
16					5	52	48	0		WET	- WELL ABOVE OPTIMUM BELOW 4 m.
18	SC	- SILTY GRAVELY - PEBBLES									
20		6.1 m			6	51	47	2		WET-SAT.	- DENSE OR STIFF
22		BOTTOM OF HOLE: 6.1 m			7						
24											
26					8						
28											
30					9						
32											
34					10						
36					11						
38											

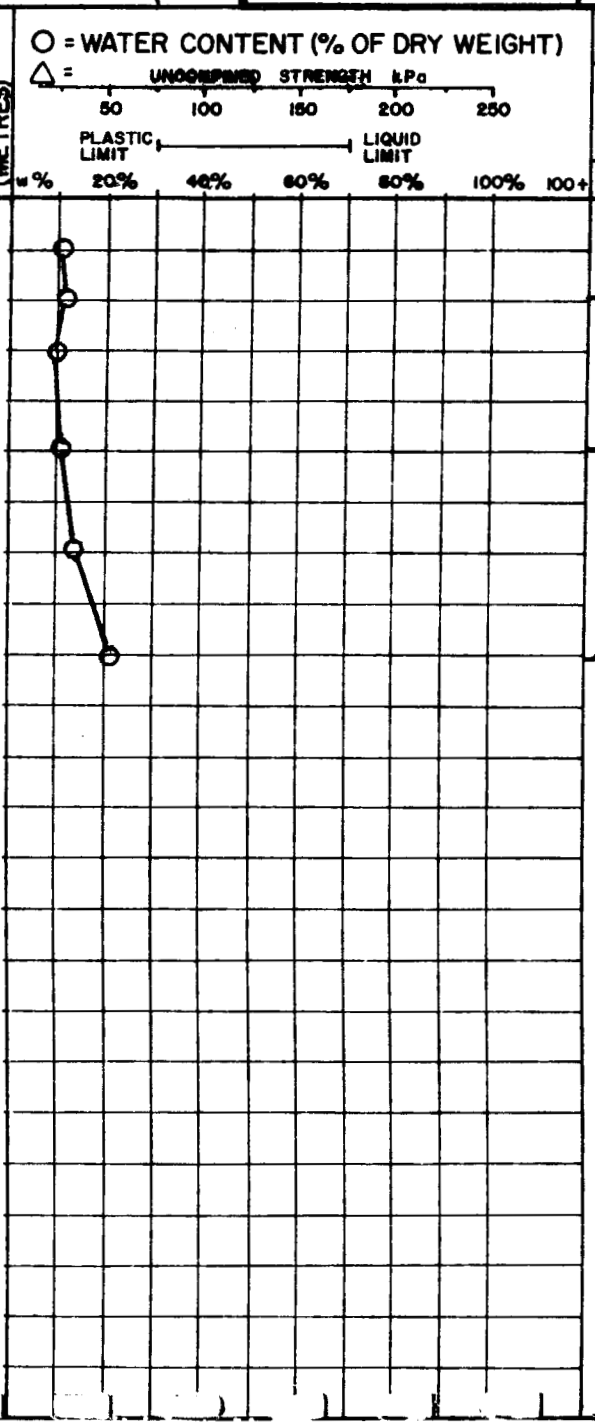


PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/13	km 238	B.P. No. 126	HOLE No. 2

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL SC	CLAY - SANDY - SAND CLAYEY - PEBBLES								DAMP	
4		CLAY - SILTY SANDY - PEBBLES			1	46	43	11		DAMP	
6		LOW PLASTIC								DAMP	
8	CL				2	50	44	6		DAMP	
10					3						
12		FREE WATER 4.0m - 4.6 m								DAMP	
14	ML	SILT - SANDY 4.6 m			4	66	33	1		WET-SAT.	
16		BOTTOM OF HOLE - 4.6 m			5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



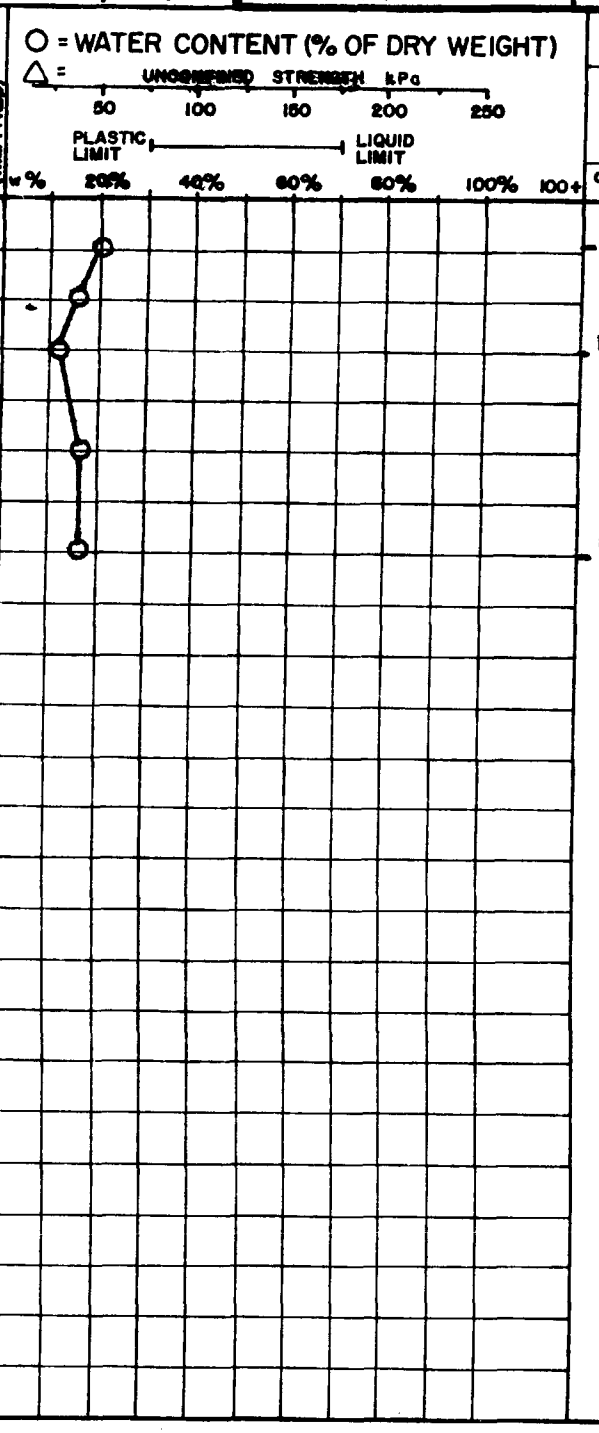
CHAINAGE	OFFSET

PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/13	km 241	B.P. No. 127	HOLE No. 1

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY - PEBBLES				64	30	6		MOIST	BP 127 OK FOR BORROW
4		LOW PLASTIC			1					MOIST	
6	CL	@ & ABOVE P_L				51	45	4		MOIST	- GOOD CONSTRUCTION MATERIAL
8					2					MOIST	- SLIGHTLY ABOVE OPTIMUM.
10					3						
12		3.7m				59	36	5		MOIST	- COBBLES AND OCCASIONAL BOULDERS
14		BOTTOM OF HOLE - 3.7m			4						
16		REFUSAL ON			5						- DENSE OR STIFF
18		BOULDERS									
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



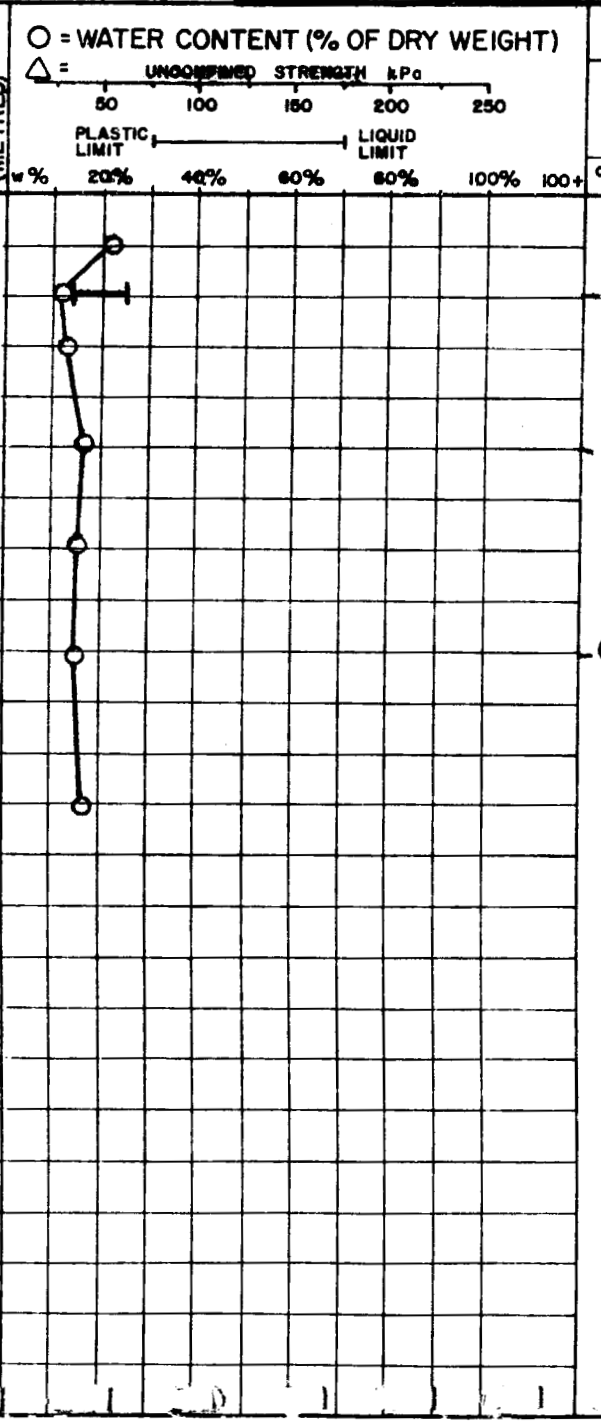
CHAINAGE	OFFSET

PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/13	km 241	B.P. No. 127	HOLE No. 2

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY SANDY - PEBBLES LOW PLASTIC @ PL								MOIST	
4					1	50	40	10		DAMP	
6										DAMP	
8					2	63	30	7		MOIST	
10					3						
12										MOIST	
14		COBBLES AND BOULDERS.			4	67	32	1		MOIST	
16					5						
18											
20		6.1 m			6					MOIST	
22		BOTTOM OF HOLE 6.1 m									
24					7						
26											
28					8						
30											
32					9						
34											
36					10						
38					11						



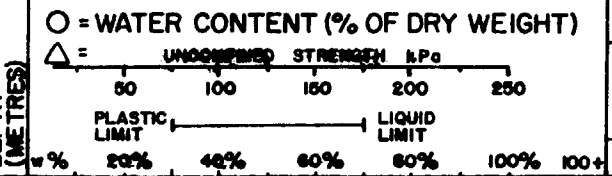
CHAINAGE	OFFSET

PUBLIC WORKS CANADA — DRILL HOLE REPORT

HIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/13	km 242	B.P. No. 128	HOLE No. 1

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY - PEBBLES			1	62	30	8		DAMP	BP 128 OK FOR BORROW
4										MOIST	
6		MED. PLASTIC			2	61	30	9		MOIST	- GOOD CONSTRUCTION MATERIAL
8	CI	@ P_L								MOIST	- SLIGHTLY ABOVE OPTIMUM.
10					3						
12						60	33	7		MOIST	- COBBLES AND OCCASIONAL BOULDERS THROUGHOUT
14					4						
16										MOIST	
		5.2 m			5						
18	SM	SAND - SILTY PEBBLES									- DENSE OR STIFF
20		6.1 m			6	44	55	1		MOIST	
22		BOTTOM OF HOLE - 6.1 m			7						
24											
26					8						
28											
30					9						
32											
34					10						
36					11						
38											



CHAINAGE | OFFSET

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | WIARD Hwy.

TECH. WEBBER | RIG B-50 | DATE 78/03/13 | km 242 | B.P. No. 128 | HOLE No. 2

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY - PEBBLES MED. PLASTIC @ P_L								DAMP	
4					1	59	36	5		DAMP	
6										DAMP	
8	CI				2	63	31	6		DAMP	
10					3						
12										DAMP	
14					4						
16						57	37	6		DAMP	
18					5						
20		GREY - 6.1m			6					DAMP	
22		BOTTOM OF HOLE - 6.1 m									
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa

50 100 150 200 250

PLASTIC LIMIT — LIQUID LIMIT

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

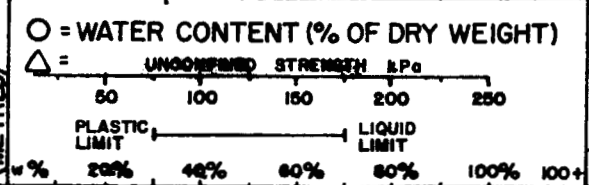
GRAIN-SIZE ANALYSIS

CHAINAGE | OFFSET

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/13	km 242	B.P. No. 128	HOLE No. 3

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2		CLAY - SILTY SANDY - PEBBLES				58	37	5		MOIST			
4					1					MOIST			
6		MED. PLASTIC				62	33	5		MOIST			
8	CI				2					MOIST			
10					3								
12		COBBLES				69	28	3		MOIST			
14					4					MOIST			
16					5								
18													
20		6.1m			6	61	33	6		MOIST			
22		BOTTOM OF HOLE. 6.1 m											
24					7								
26													
28					8								
30					9								
32													
34					10								
36					11								
38													



PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. WEBBAR | RIG B-50 | DATE 78/03/13 | km 245 | B.P. No. 129 | HOLE No. 1

CHAINAGE	OFFSET

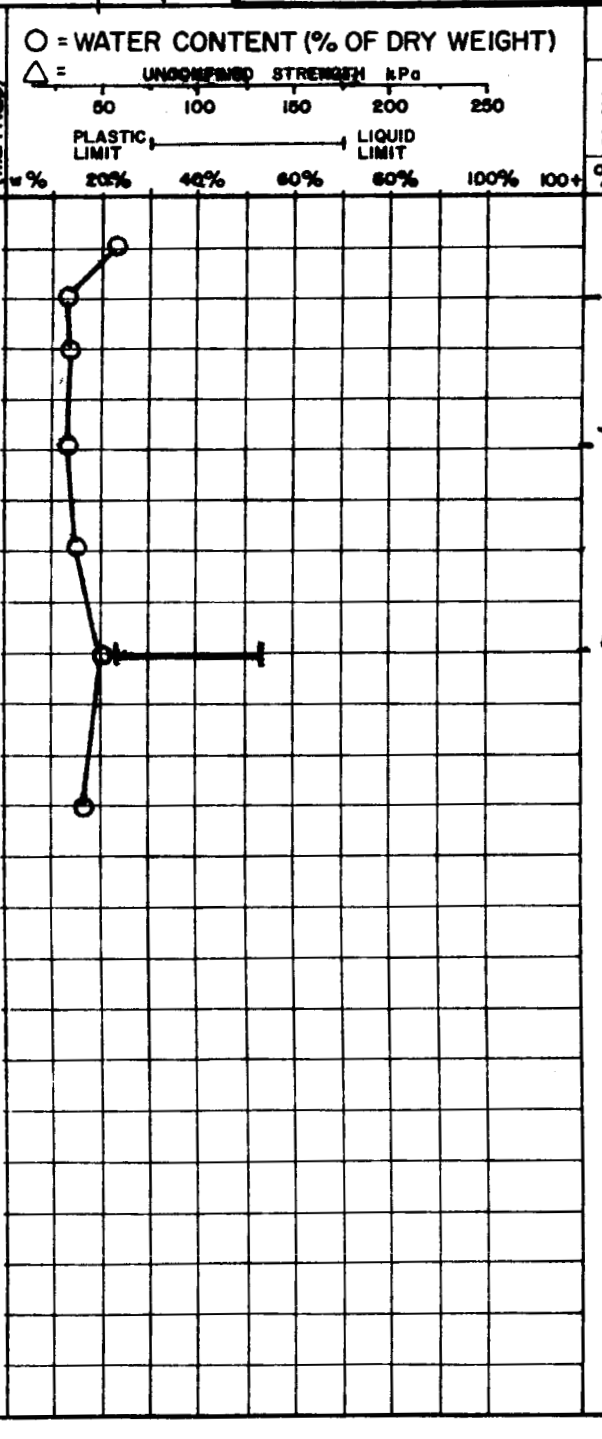
O = WATER CONTENT (% OF DRY WEIGHT)
△ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)
PLASTIC LIMIT — LIQUID LIMIT
w % 20% 40% 60% 80% 100% 100+

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY PEBBLES MED. PLASTIC				81	17	2		WET	BP 129 OK FOR BORROW
4					1					DAMP	
6						68	28	4		DAMP	- GOOD CONSTRUCTION MATERIAL
8	CI				2					DAMP	- NEAR OPTIMUM.
10					3						
12		GRAY - SILTY SANDY				87	13	0		DAMP	- COBBLES AND OCCASIONAL BOULDERS THROUGHOUT
14					4						
16										DAMP	
18					5						- DENSE OR STIFF
20		6.1m			6	75	25	0		DAMP	
22		BOTTOM OF HOLE - 6.1m									
24					7						
26											
28					8						
30					9						
32											
34					10						
36											
38					11						

PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/13	km 245	B.P. No. 129	HOLE No. 2

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2		CLAY-SILTY SANDY PEBBLES MED. PLASTIC			1	55	41	4		MOIST MOIST			
4	CI									MOIST			
6		@ PL COBBLES			2	74	25	1		DAMP			
8													
10					3					DAMP			
12		HIGH PLASTIC			4								
14	CH					84	16	0		DAMP			
16					5								
18													
20		6.1m			6					DAMP			
22		BOTTOM OF HOLE - 6.1m											
24					7								
26													
28					8								
30													
32					9								
34													
36					10								
38					11								



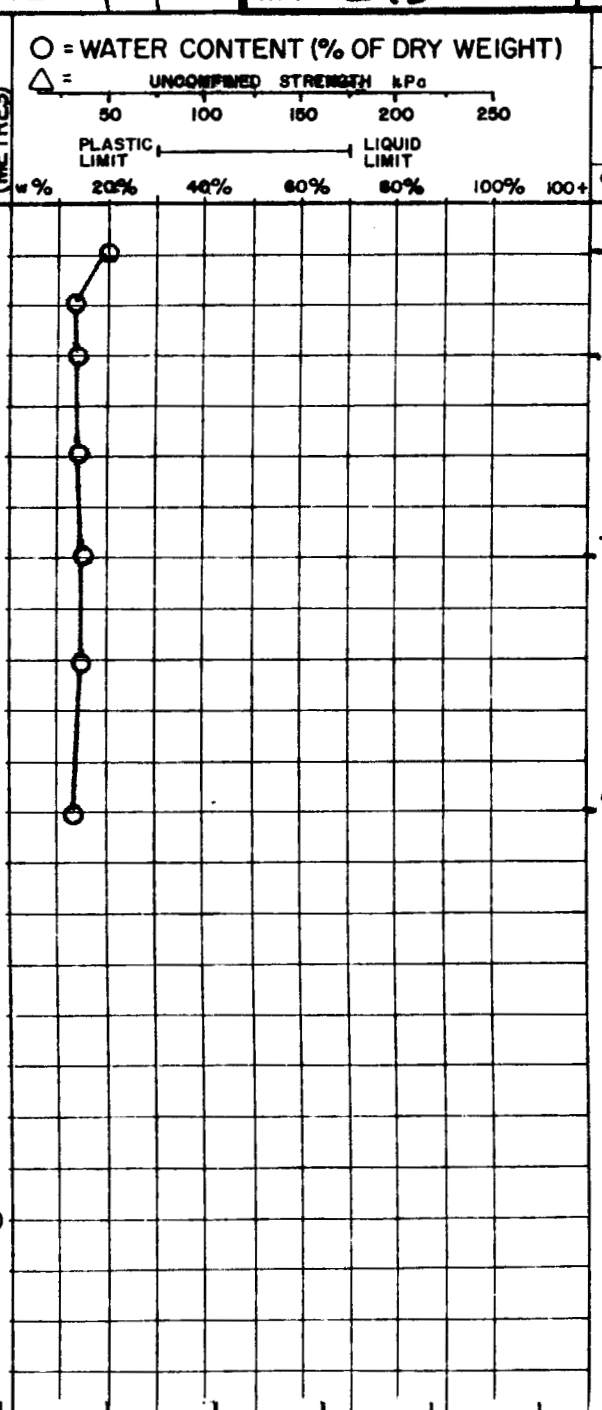
PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/13	km 245	B.P. No. 129	HOLE No. 3

CHAINAGE	OFFSET

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2		CLAY - SILTY SANDY				50	42	8		MOIST
4		PEBBLES			1					DAMP
6		MED. PLASTIC				67	24	9		DAMP
8	CI	@ P_L			2					DAMP
10					3					
12						73	26	1		DAMP
14	CI				4					DAMP
16					5					
18										
20		6.1m			6	93	7	0		DAMP
22		Bottom of Hole - 6.1m			7					
24										
26					8					
28										
30					9					
32										
34					10					
36					11					
38										



LIARD GEOTECH 1978

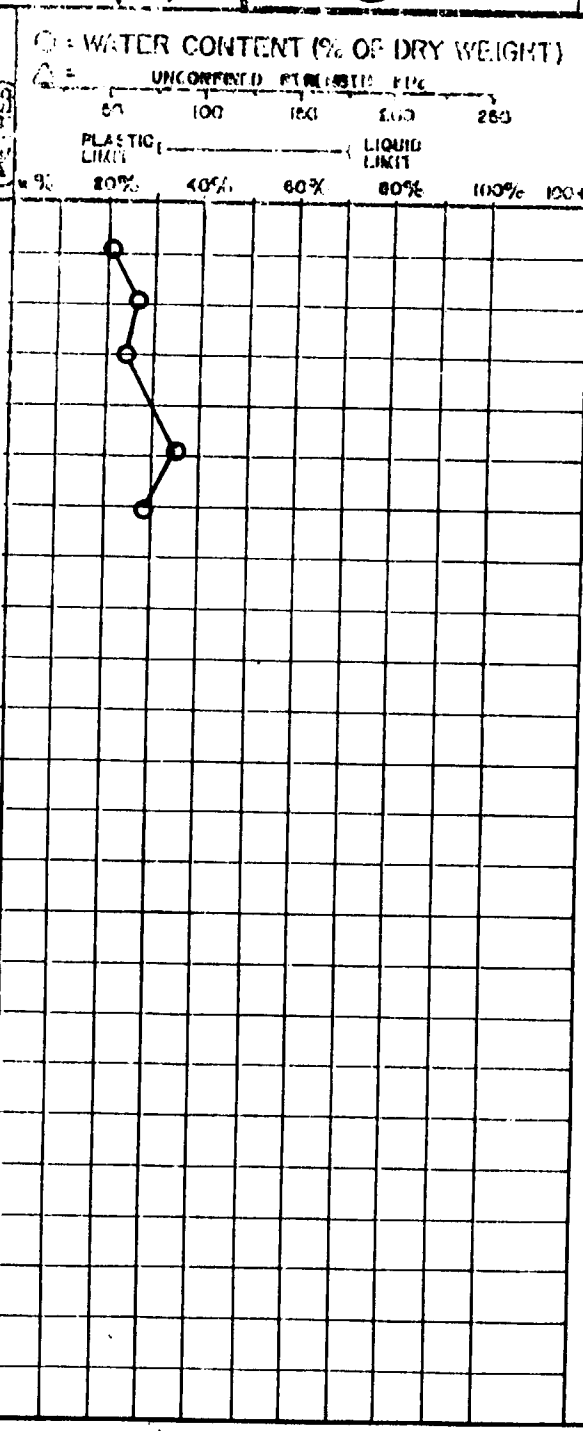
CENTRELINE

PUBLIC WORKS CANADA	DRILL HOLE REPORT	ACCESS ROAD @ LIARD

TECH. WEBBER	RIG B-50	DATE 78/03/78	km 0	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
0+100	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY-SILTY SANDY + PL LOW PLASTIC		FROZEN	1					WET	
4										MOIST	
6				ICE LENSES @ 2.4m	2					MOIST	
8										WET	
10		FEW PEBBLES 3.1m			3					WET	
12		BOTTOM OF HOLE - 3.1 m									
14					4						
16											
18					5						
20											
22					6						
24											
26					7						
28											
30					8						
32											
34					9						
36					10						
38					11						



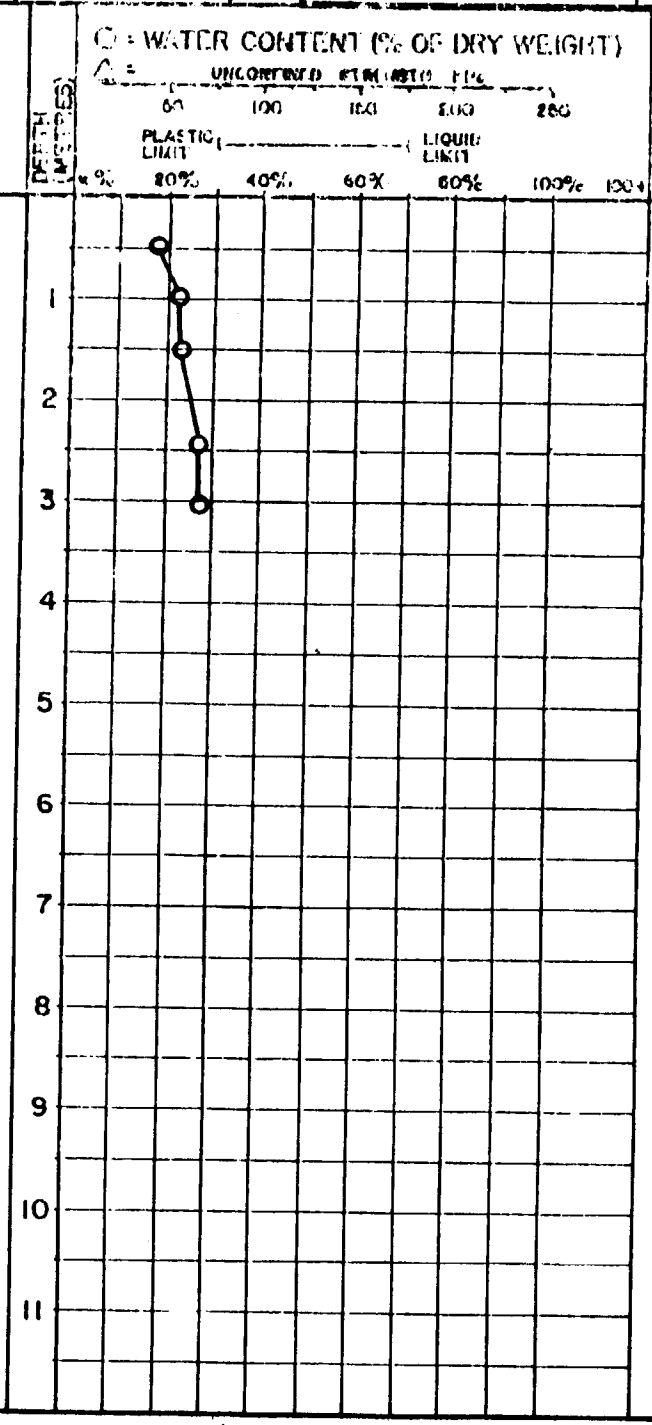
PUBLIC WORKS CANADA — DRILL HOLE REPORT

Access Road Ft. Liard

TECH. WEBBER	RIG B-50	DATE 78/03/08	km 0	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
0+405	4

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT	REMARKS
2	Sc	SAND - Silty Clayey .6m			Moist	
4		CLAY - Silty Sandy/ Low Plastic			Moist	
6	CL	- Silty +Pl			Moist	
8					Wet	
10		3.1m			Wet	
12		Bottom of Hole - 3.1m				



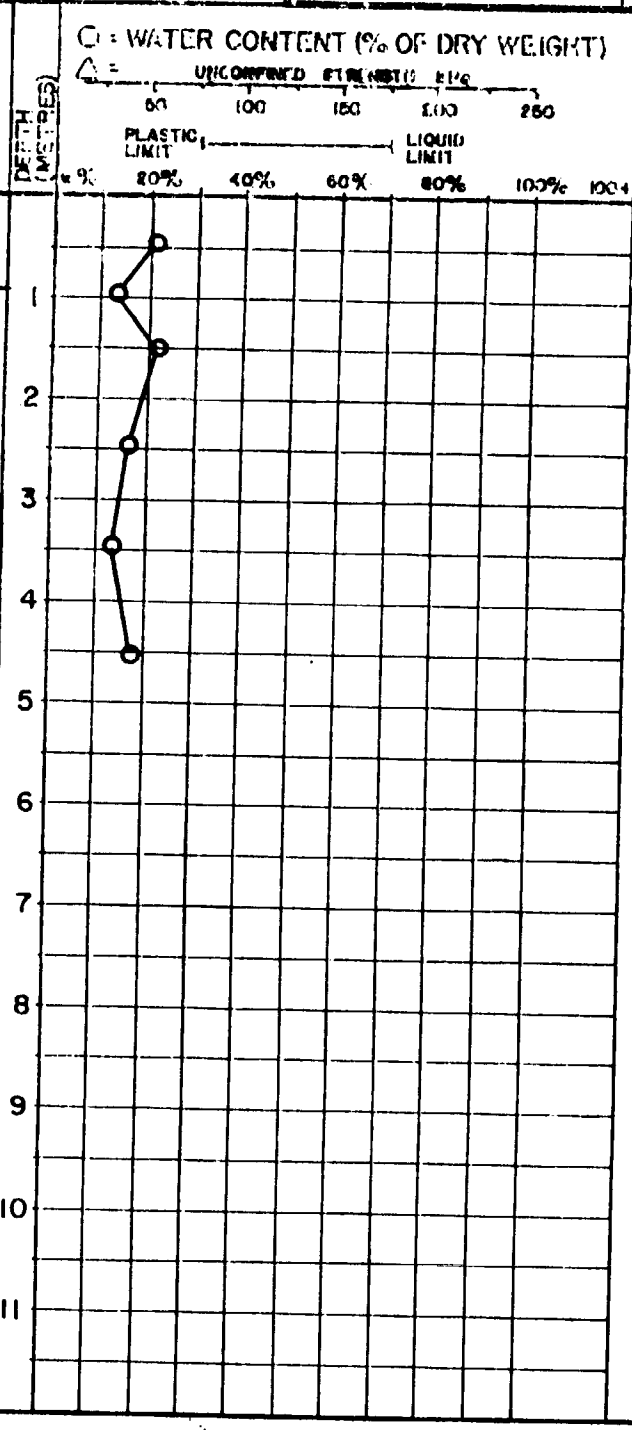
GRAIN SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %

I.P. JBLTD WORKS CANADA	DRILL HOLE REPORT	Access Road Ft. Liard

TECH. WEBBER	RIG B-50	DATE 78/03/08	Km 0	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
0+560	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
	CL	CLAY - SILTY .3m		Frozen						CUT SECTION
2	SC	SAND - SILTY CLAYEY							MOIST	
4		1.2m							MOIST	-SUBSOIL
6		CLAY - SILTY SANDY PEBBLES							MOIST	SLIGHTLY ABOVE
8	CL	LOW-MED. PLASTIC								OPTIMUM IN
10	CI								MOIST	PART - O.K.
12									MOIST	FOR CUT
14		4.6m								
16		BOTTOM OF HOLE . 4.6 m							MOIST	
18										
20										
22										
24										
26										
28										
30										
32										
34										
36										
38										

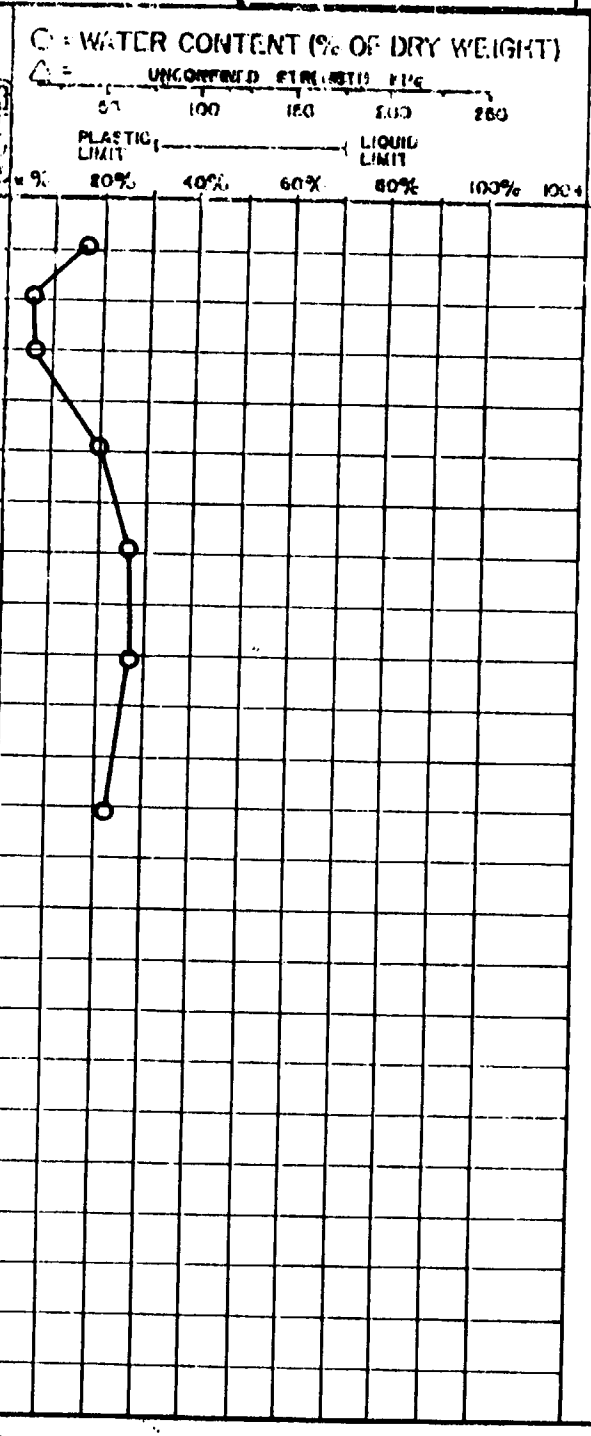


PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | Access Road Ft. Liard

TECH. WEBBER	RIG B-50	DATE 78/03/08	km 0	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
0+640	4c

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
	CL	CLAY - SILTY									
2		.6m								MOIST	O.K. FOR CUT
4	Sm	SAND - SILTY FINE - MEDIUM			1					MOIST	TO ABOUT 3m.
6		1.8m								MOIST	
6		CLAY - SILTY SANDY PEBBLES + PL LOW PLASTIC			2						
10										MOIST	
12	CL	FREE WATER 4.3m - 5.5m			3					WET	
14					4						
16										WET	
18					5						
20		GREY COBBLES 6.1m			6					WET	
22		BOTTOM OF HOLE - 6.1m									
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											

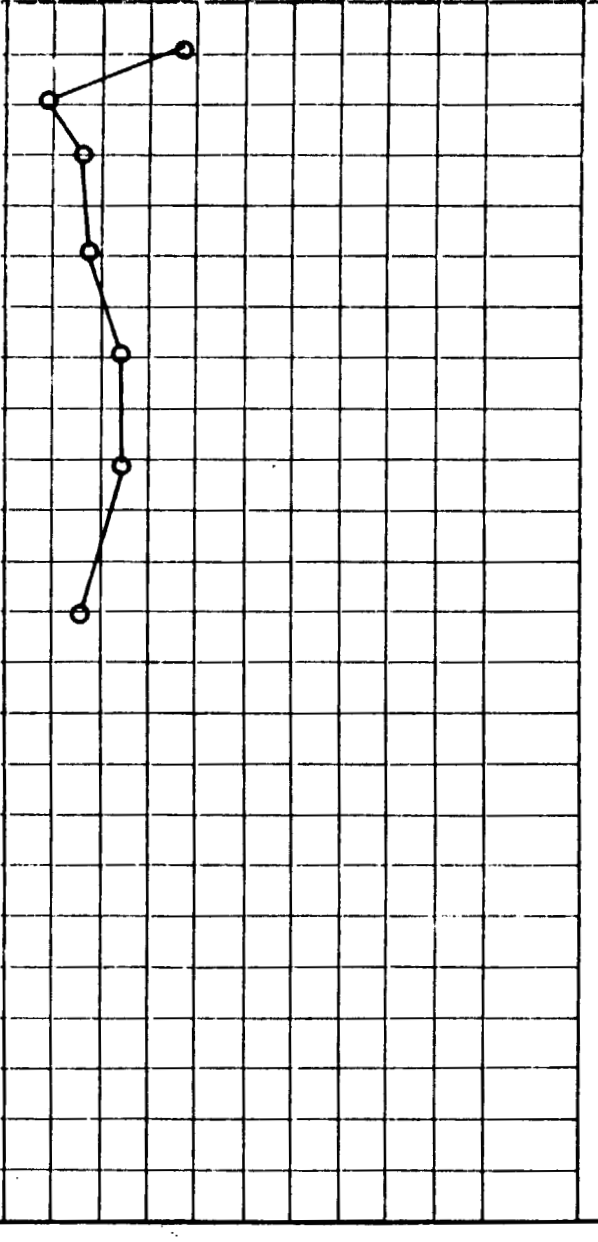


PUBLIC WORKS CANADA — DRILL HOLE REPORT — Access Road Ft. Liard

TECH. Webber	RIG B-50	DATE 78/03/08	km 0	B.P. No.	HOLE No. 5

CHAINAGE	OFFSET
0+710	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY SANDY .6m		FROZEN						SAT.	O.K. FOR CUT TO ABOUT 3m.
4	SM	SAND SILTY FINE. MEDIUM 1.5m			1					MOIST	
6	CL	CLAY - SILTY SANDY - PEBBLES - LOW PLASTIC			2					MOIST	
8										MOIST	
10					3						
12										WET	
14		GREY.			4						
16					5					WET	
18											
20		6.1m			6					MOIST	
22		BOTTOM OF HOLE. 6.1m									
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



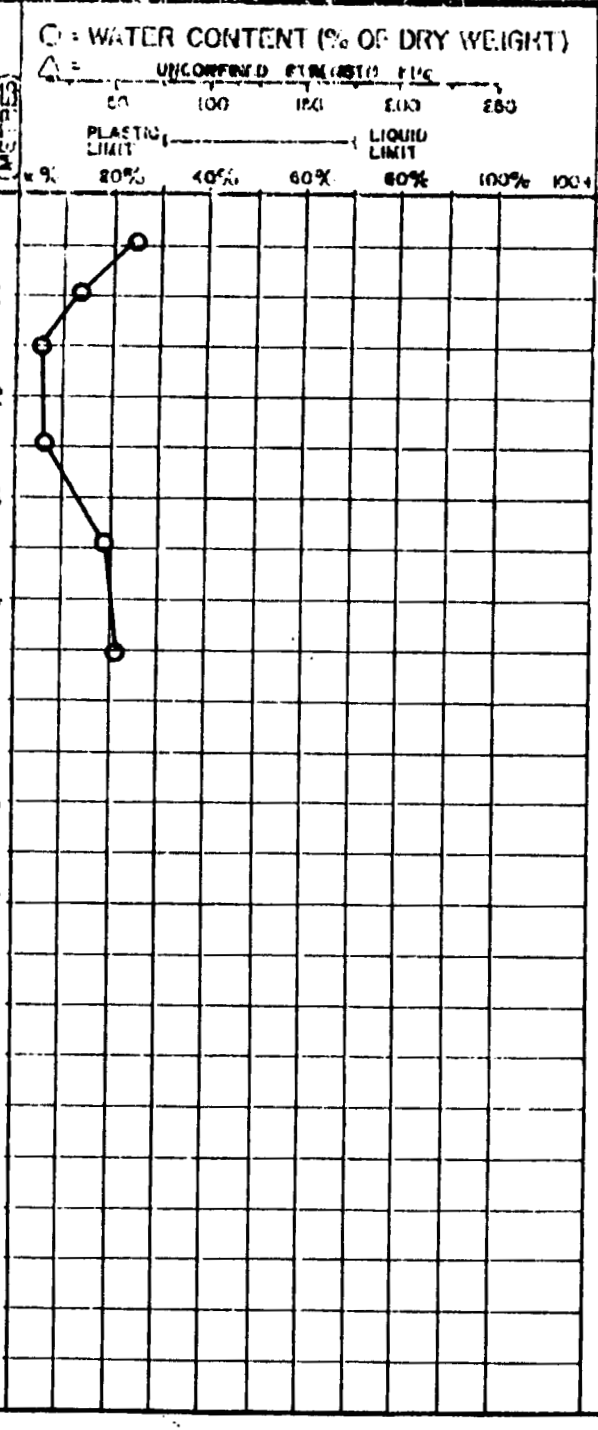
GRAIN-SIZE ANALYSIS

PUBLIC WORKS CANADA	DRILL HOLE REPORT	ACCESS ROAD Ft. LIARD

TECH. WEBBER	RIG B-50	DATE 78/03/08	km 0	B.P. No.	HOLE No. 6

CHAINAGE	OFFSET
0+845	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	SILT - SANDY		FROZEN	MOIST	O.K. FOR CUT TO ABOUT 2.5m.
		.9m				
4	SM	SAND - SILTY - FINE - MEDIUM			MOIST	
6					MOIST	
8		FREE WATER 2.7m - 4.6m			MOIST	
10						
12					WET	
14						
		4.6 m			SAT.	
16		BOTTOM OF HOLE. 4.6 m				
18						
20						
22						
24						
26						
28						
30						
32						
34						
36						
38						



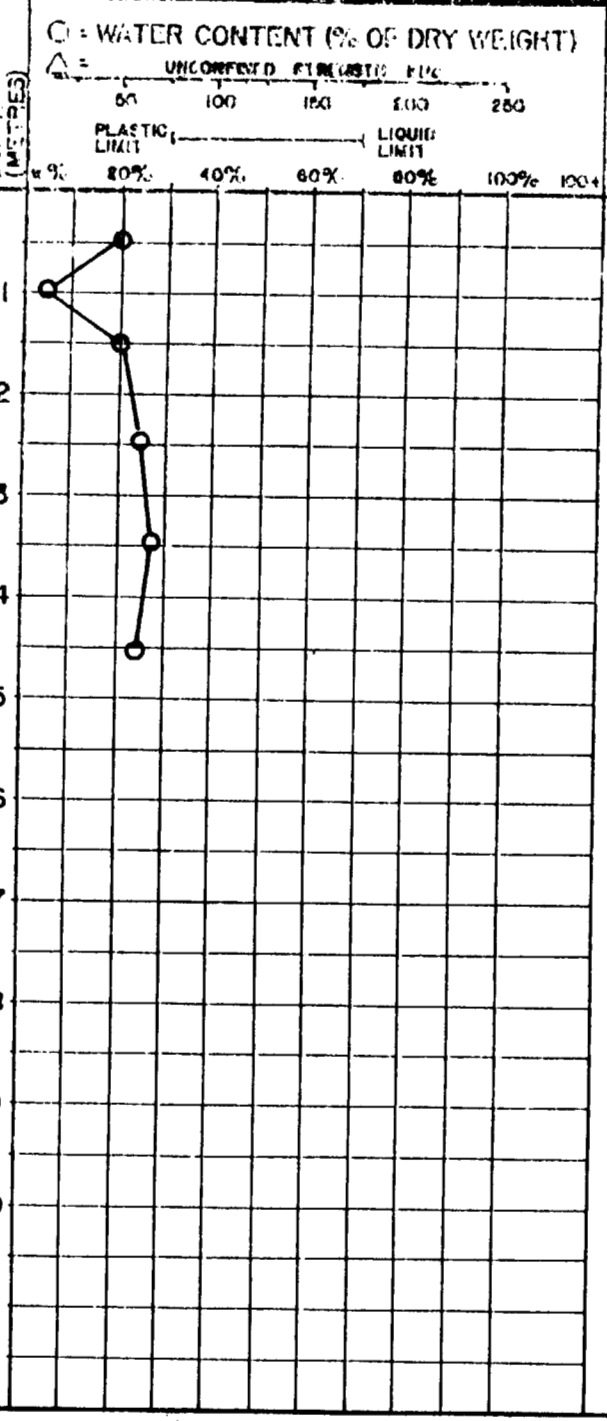
GRAIN SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %

PUBLIC WORKS CANADA — DRILL HOLE REPORT — ACCESS ROAD Ft. LIARD

TECH. WEBBER	RIG B-50	DATE 78/03/08	km 0	B.P. No.	HOLE No. 7

CHAINAGE	OFFSET
0+900	4

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT	REMARKS
	ML	SILT - CLAYEY SANDY		FROZEN		
2		.9m			DAMP	O.K. FOR CUT
4	SM	SAND - SILTY 1.2 m			DAMP	TO ABOUT 2.5m.
6		CLAY - SILTY SANDY - FEW PEBBLES + P_L			DAMP	
8		MED. PLASTIC			MOIST	
10	CI					
12					WET	
14		4.6m			MOIST	
16		BOTTOM OF HOLE - 4.6m				
18						
20						
22						
24						
26						
28						
30						
32						
34						
36						
38						



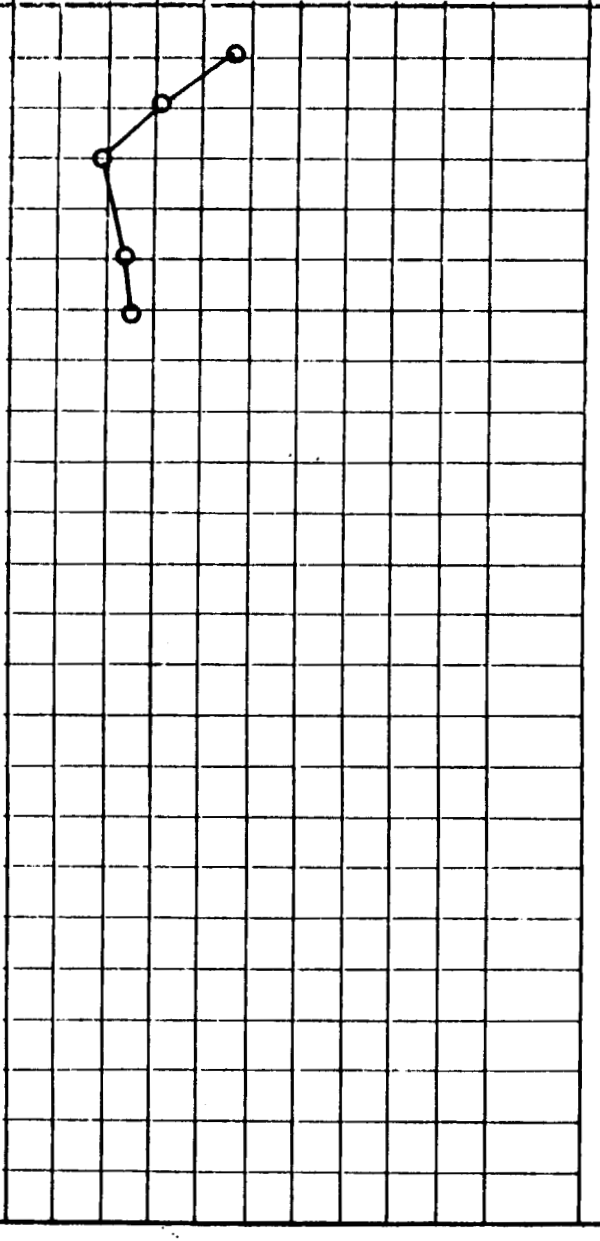
GRAIN SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %

PUBLIC WORKS CANADA	DRILL HOLE REPORT	ACCESS ROAD Ft. LIARD

TECH. WEBBER	RIG B-50	DATE 78/03/08	km 1	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
1+020	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
	CL	CLAY - SILTY SANDY		Frozen					Free WATER	
2	ML	SILT - SANDY							SAT.	
4										
	SM	SAND - SILTY							WET - SAT.	
6										Free WATER
8	SM ML	SILT SANDY - SAND SILTY							WET - SAT.	2.1 m - 3.1 m
10		3.1 m							SAT.	
12		Bottom of Hole - 3.1 m								
14										
16										
18										
20										
22										
24										
26										
28										
30										
32										
34										
36										
38										

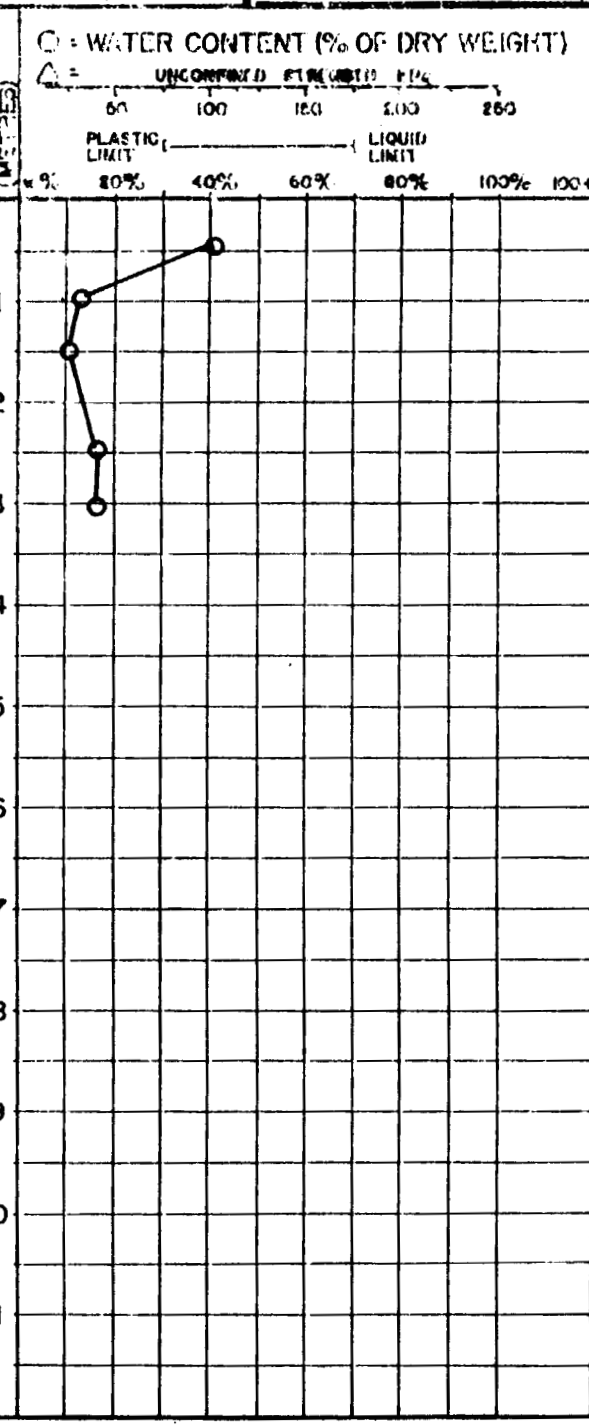


PUBLIC WORKS CANADA | DRILL HOLE REPORT | ACCESS ROAD Ft. LIARD

TECH. WEBBER	RIG B-50	DATE 78/03/08	Km 1	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
1+260	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	SILT - CLAYEY		Frozen					Free Water	
		.9m								
4		SAND - SILTY							Moist	
		Fine - Medium								
6	SM	Free Water - 1.8m - 3.1m							Moist	
8									Wet - Sat.	
10		3.1m							Wet	H.1.3a9.
12		Bottom of Hole - 3.1m								
14										
16										
18										
20										
22										
24										
26										
28										
30										
32										
34										
36										
38										

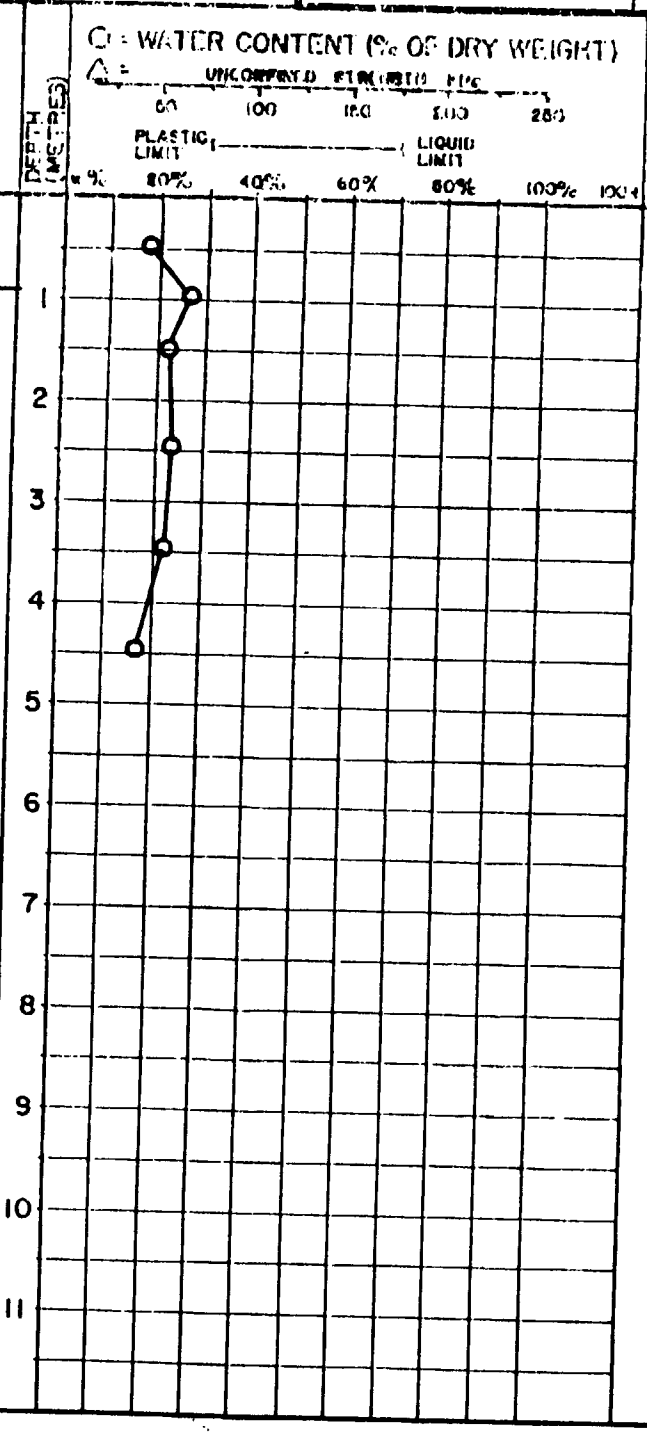


PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | ACCESS ROAD Ft. LIARD

TECH. WEBBER | RIG B-50 | DATE 78/03/08 | km 1 | B.P. No. | HOLE No. 3

CHAINAGE	OFFSET
1+460	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	SILT - CLAYEY SANDY		FROZEN					DAMP	
4		1.2 m							SAT.	
6		CLAY - SILTY SANDY PEBBLES + PL MED. PLASTIC							MOIST	
8	CI								MOIST	
10										
12									MOIST	
14		GRAY - 4.6 m							H.I.B.	
16		BOTTOM OF HOLE - 4.6 m								
18										
20										
22										
24										
26										
28										
30										
32										
34										
36										
38										

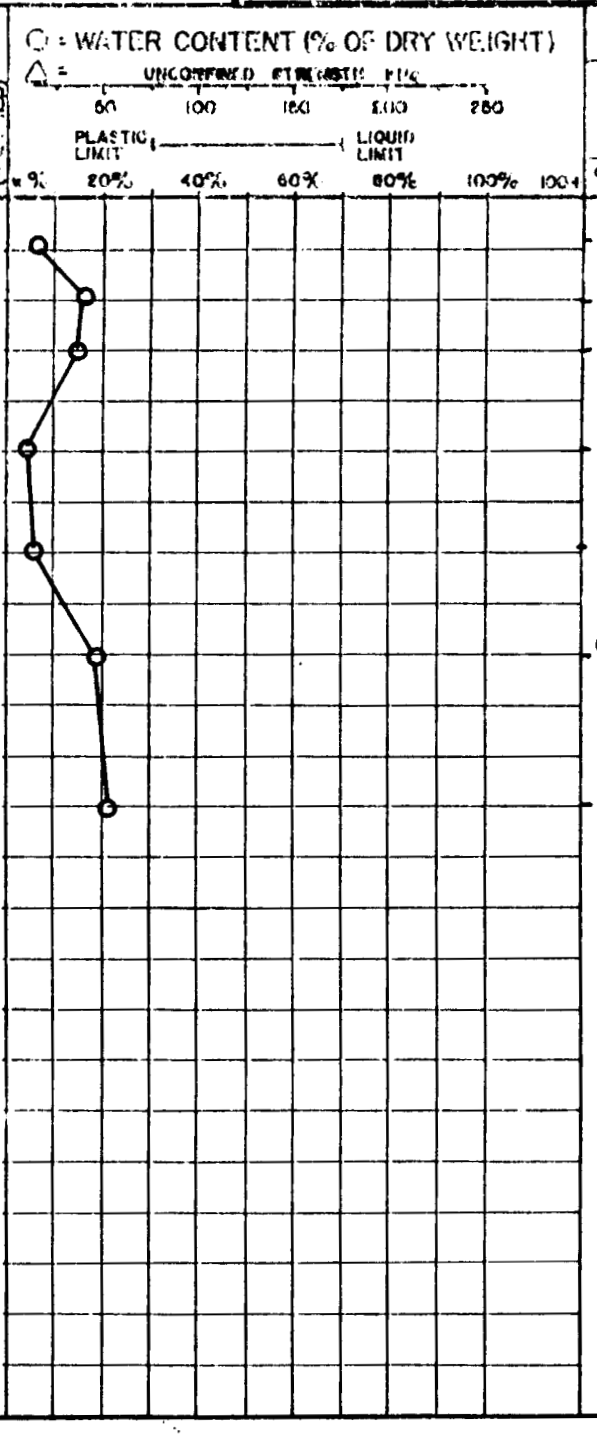


PUBLIC WORKS CANADA | DRILL HOLE REPORT | ACCESS ROAD Ft. LUSRD

TECH. WEBBER	RIG B-50	DATE 78/03/08	km 1	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
1+590	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		SAND - SILTY		FROZEN	25	75	0		MOIST	BEGINNING OF CUT SECTION - O.K. FOR CUT TO ABOUT 4 m.
4					30	70	0		WET	
6	SM				38	62	0		MOIST	
8					32	68	0		MOIST	
10					21	79	0		DAMP	
12										
14		4.6 m			91	9	0		H.I.B.	FREE WATER FROM 4.0 m - 4.9 m
16	ML	SILT.								
18		5.5 m								
20	CL	CLAY - SILTY SANDY LOW PLASTIC 6.1 m			72	27	1		WET	
22		BOTTOM OF HOLE. 6.1 m								
24										
26										
28										
30										
32										
34										
36										
38										

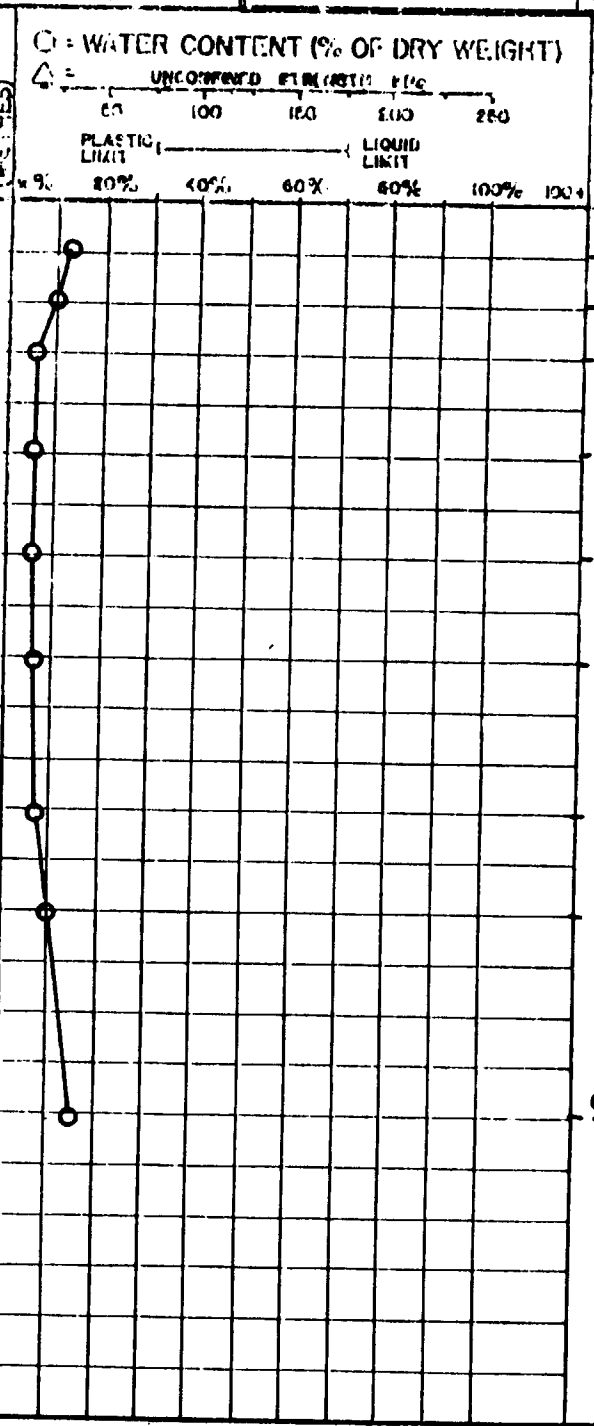


PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | ACCESS ROAD Ft. LIARD

TECH. WEBBER | RIG B-50 | DATE 78/03/08 | km 1 | B.P. No. | HOLE No. 5

CHAINAGE	OFFSET
1+660	6

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		SAND - SILTY - FINE - MEDIUM			1	35	65	0		MOIST	O.K. FOR CUT
4						29	71	0		MOIST	
6					2	19	81	0		DAMP	
8						17	83	0		DAMP	
10					3						
12	SM					15	85	0		DAMP	
14					4						
16						19	81	0		DAMP	
18					5						
20					6	17	83	0		DAMP	
22											
24					7	19	81	0		DAMP	
26											
28	ML				8						
30	SM	SAND - SILT MIX. 9.1 m			9	54	46	0		DAMP	
32		BOTTOM OF HOLE. 9.1m									
34					10						
36											
38					11						

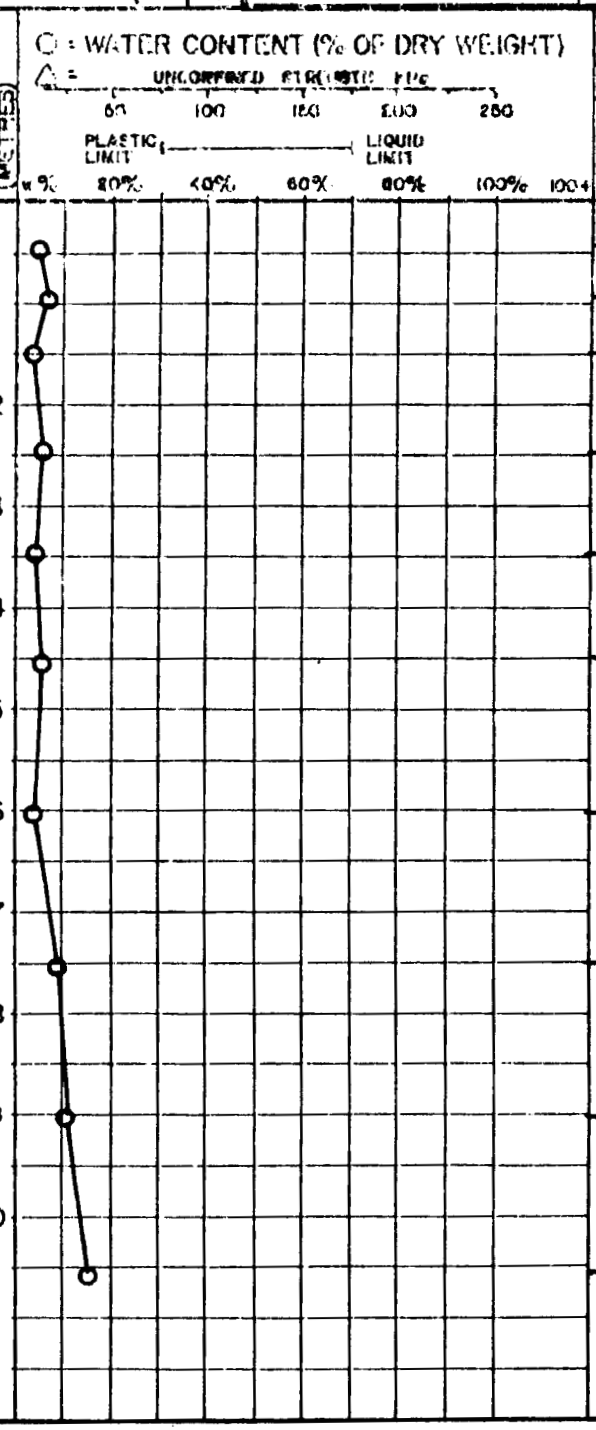


PUBLIC WORKS CANADA | DRILL HOLE REPORT | ACCESS ROAD Ft. LIARD

TECH. WEBBER	RIG B-50	DATE 78/03/08	km 1	B.P. No.	HOLE No. 6

CHAINAGE	OFFSET
1+710	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	SM	SAND - SILTY			1	27	73	0		DAMP	0.1% FOR CUT
4						33	67	0		DAMP	-DITCH EROSION
6						15	85	0		DAMP	COULD BE SEVERE
8					2	20	80	0		DAMP	
10					3	13	87	0		DAMP	
12											
14					4	15	85	0		DAMP	
16					5						
18											
20					6	29	71	0		DAMP	
22											
24					7						
26						43	56	1		DAMP	
28		8.5m			8						
30	CL	CLAY - SANDY SILTY PEBBLES LOW PLASTIC			9	46	52	2		MOIST	
32											
34		10.7m			10	54	45	1		MOIST	
36		Bottom of Hole. 10.7m			11						
38											

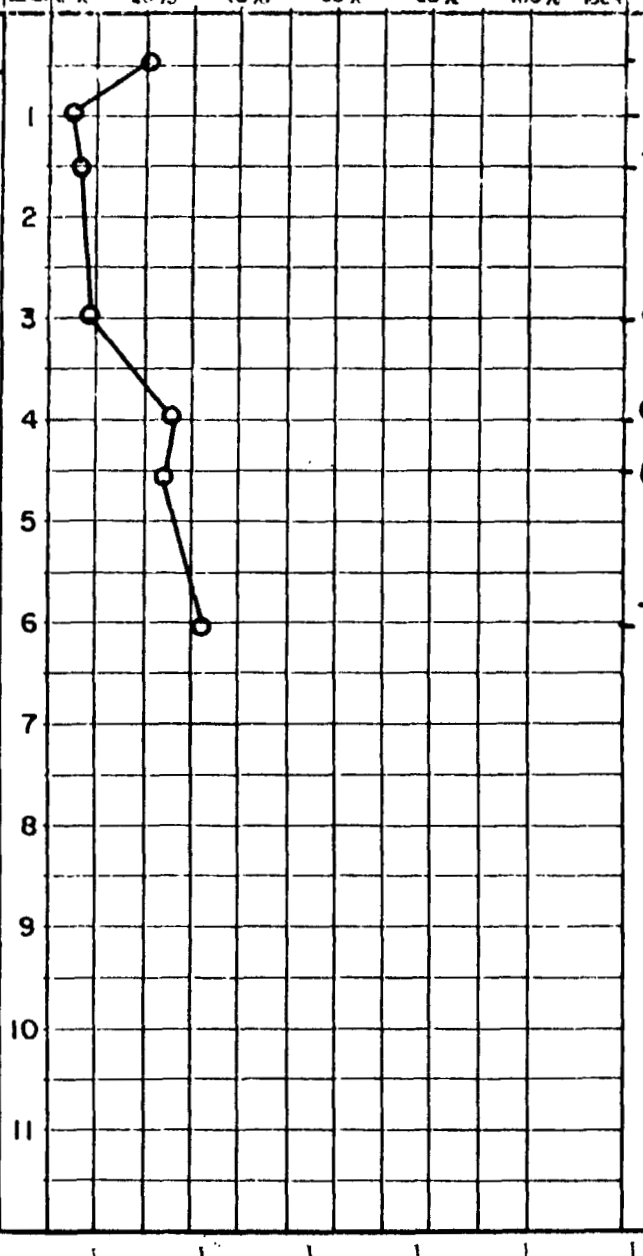


PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | Access Road Ft. Liard

TECH. WEBBER	RIG B-50	DATE 78/03/08	km 1	B.P. No.	HOLE No. 7

CHAINAGE	OFFSET
1+880	4

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
2	ML	SILT - SANDY		FROZEN
		.9 m		
4	SM	SAND - SILTY		
6				
10	SM - ML	SAND - SILT MIXTURE		
12				
14		4.6 m		
16	CL - CI	CLAY - SILTY SANDY + P_L		
18		LOW - MED. PLASTIC		
20		6.1 m		
		BOTTOM OF HOLE - 6.1 m		



GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
87	13	0		DAMP	O.K. FOR CUT
25	75	0		DAMP	TO ABOUT 3.5 m.
38	62	0		DAMP	
48	52	0		DAMP	
93	7	0		WET	
62	38	0		WET	
78	22	0		WET	

PUBLIC WORKS CANADA — DRILL HOLE REPORT — ACCESS ROAD FT. LIARD

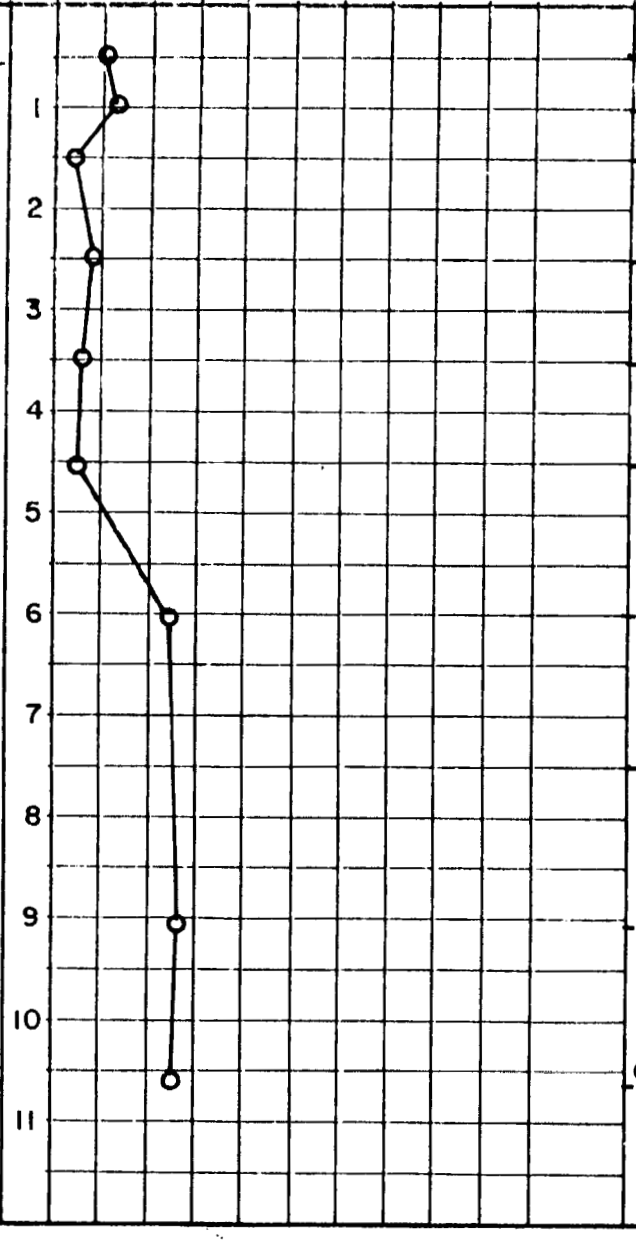
TECH. WEBBER	RIG B-50	DATE 78/03/08	km 2	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
2+020	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
2–18	SM	SAND - SILTY		FROZEN
18–34	CL / CI	CLAY - SILTY SANDY LOW PLASTIC; - SILTY MED PLASTIC		
34–38		BOTTOM OF HOLE - 10.7m		

5.5m

10.7m



GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
45	55	0		DAMP
41	59	0		DAMP
21	79	0		DAMP
35	65	0		DAMP
20	80	0		DAMP
13	87	0		DAMP
77	23	0		WET ~~DAMP~~
63	37	0		WET
94	6	0		WET
95	5	0		MOIST

REMARKS

DEEP CUT HERE WILL PROBABLY EXTEND INTO CLAY BELOW 5.5m.

- CLAY ABOVE OPTIMUM BUT SHOULD BE STABLE IN CUT
- MAY GET SEEPAGE AT SAND-CLAY INTERFACE.

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | ACCESS ROAD Ft. LIARD

TECH. WEBBER | RIG B-50 | DATE 78/03/08 | km 2 | B.P. No. | HOLE No. 2

CHAINAGE	OFFSET
2+080	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		SAND - SILTY		Frozen							- SEE HOLE # 2-1
4					1	98	2	0		DAMP	
6						45	55	0		DAMP	- NOTE SEEPAGE ABOVE CLAY STRATUM.
8					2	38	62	0		DAMP	
10	SM				3	24	76	0		DAMP	
12						28	72	0		DAMP	
14					4						
16						19	81	0		DAMP	
18		PREF. WATER 5.5m - 6.0m			5						
20					6	46	54	0		WET	
22		6.7m									
24		CLAY - SILTY SANDY			7						
26					8	78	22	0		WET	
28	CL	- SILTY									
30	CI	GREY - LOW-MED. PLASTIC			9	95	5	0		WET	
32											
34					10						
36		10.7m				94	6	0		WET	
38		BOTTOM OF HOLE - 10.7m			11						

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCORRECTED STRENGTH KPG

60 100 150 200 250

PLASTIC LIMIT ( ) LIQUID LIMIT

0% 20% 40% 60% 80% 100% 120%

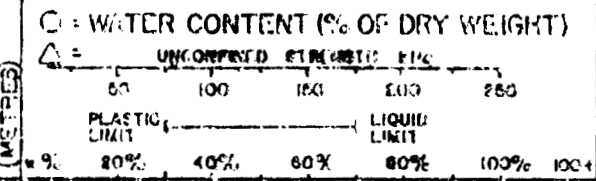
PUBLIC WORKS CANADA	DRILL HOLE REPORT	Access Road Ft. Liard

TECH. WEBBER	RIG B-50	DATE 78/03/08	km 2	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
2+180	℄

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2		SAND SILTY		Frozen						MOIST
4					1					DAMP
										DAMP
6	SM				2					
8		FREE WATER 2.1m - 4.6m								WET
10					3					
12										WET
14					4					
		4.6m								WET
16		BOTTOM OF HOLE - 4.6m			5					
18										
20					6					
22										
24					7					
26										
28					8					
30					9					
32										
34					10					
36					11					
38										



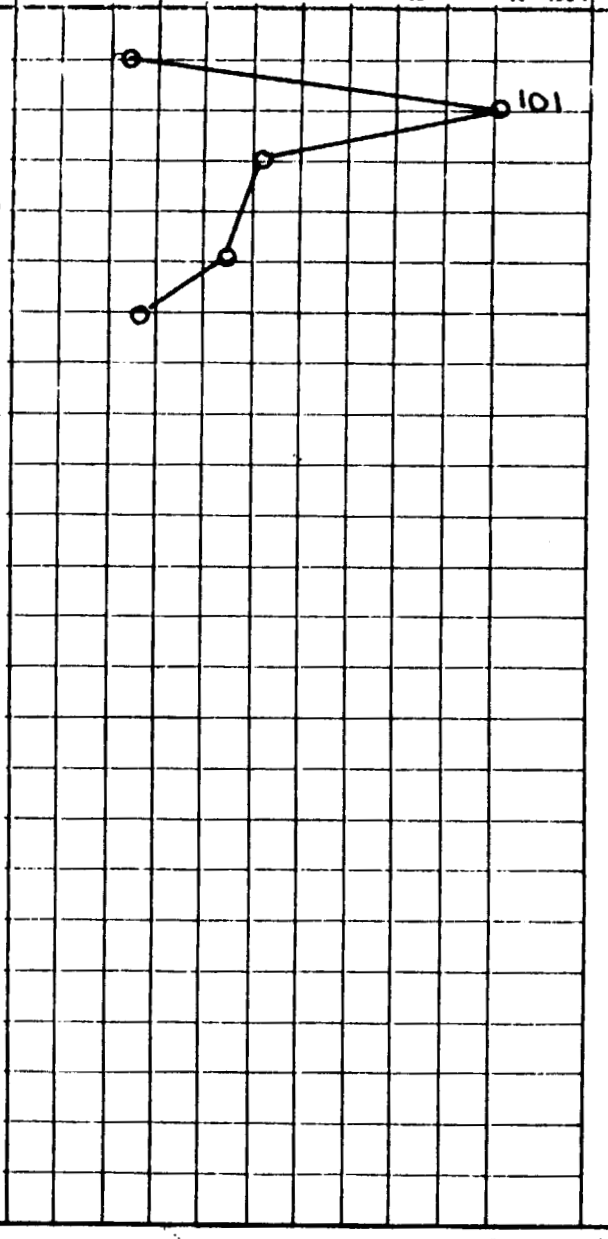
PUBLIC WORKS CANADA	DRILL HOLE REPORT	ACCESS ROAD FT. LIARD

TECH. PRONYCH	RIG B-61	DATE 78/03/08	km 2	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
2+400	℄

REMARKS: FREE WATER AFTER 2.4m

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2	Pt	PEAT & CLAY								SAT.
4	OH	1.2 m			1					SAT.
6	CL	CLAY SILTY - ORGANIC LOW PLASTIC +P			2					WET
8										WET
10		GRAVELLY 3.1 m			3					SAT.
12		BOTTOM OF HOLE - 3.1 m								



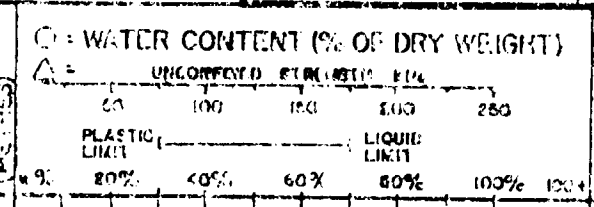
PUBLIC WORKS CANADA — DRILL HOLE REPORT

Access Road Ft. Liard

TECH. Pronych	RIG B-61	DATE 78/03/08	km 2	B.P. No.	HOLE No. 5

CHAINAGE	OFFSET
2+710	4

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY								WET-SAT.	
		LOW PLASTIC									
4	CL	SATURATED AFTER 1.8 m			1					SAT.	
6					2					SAT.	
6		- SILTY SANDY 2.6 m								SAT.	
10	SM	SAND - SILTY 3.1 m			3					MOIST	
		BOTTOM OF HOLE - 3.1 m									
12					4						
14											
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36											
38					11						

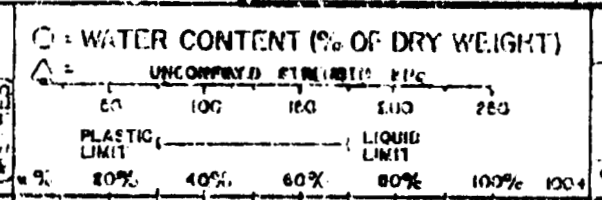


PUBLIC WORKS CANADA	DRILL HOLE REPORT	Access Road Ft. Liard

TECH. Pronych	RIG B-50	DATE 78/08/08	km 3	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
3+000	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	RELATIVE MOISTURE CONTENT
2		CLAY - SILTY				DAMP
4		MED. PLASTIC			1	MOIST
6	CI	SATURATED AFTER 2.1m				WET
8					2	
10		3.1m				WET
12					3	WET
14					4	
16					5	
18					6	
20					7	
22					8	
24					9	
26					10	
28					11	
30						
32						
34						
36						
38						



GRAIN SIZE ANALYSIS			
CLAY %	SILT %	SAND %	GRAVEL %

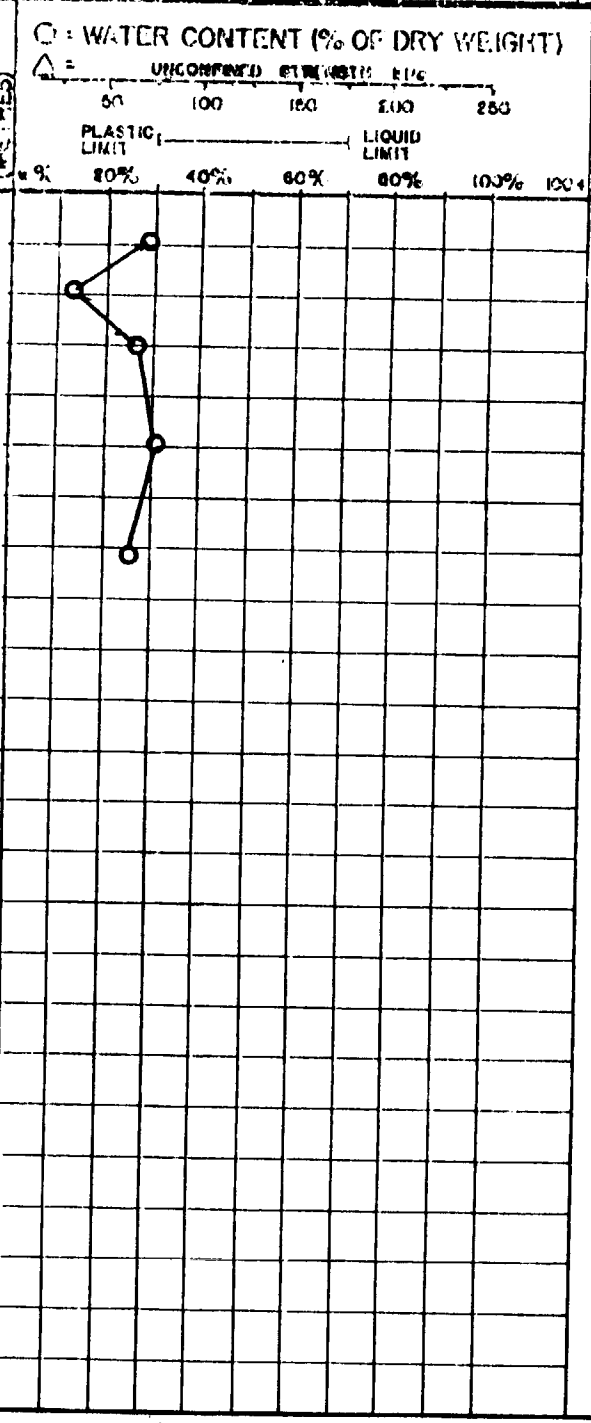
REMARKS

PUBLIC WORKS CANADA	DRILL HOLE REPORT	ACCESS ROAD FT. LIARD

TECH. PRONYCH	RIG B-50	DATE 78/03/08	km 3	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
3+400	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY SILTY SANDY								MOIST	
	SM	SAND - SILTY .75m									
4		1.05m CLAY - SILTY SANDY			1					DAMP	
6		LOW PLASTIC								WET	
8	CL				2						
10					3					SAT.	
12										SAT.	
		4.0m			4						
14		BOTTOM OF HOLE - 4.0m									
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36											
38					11						



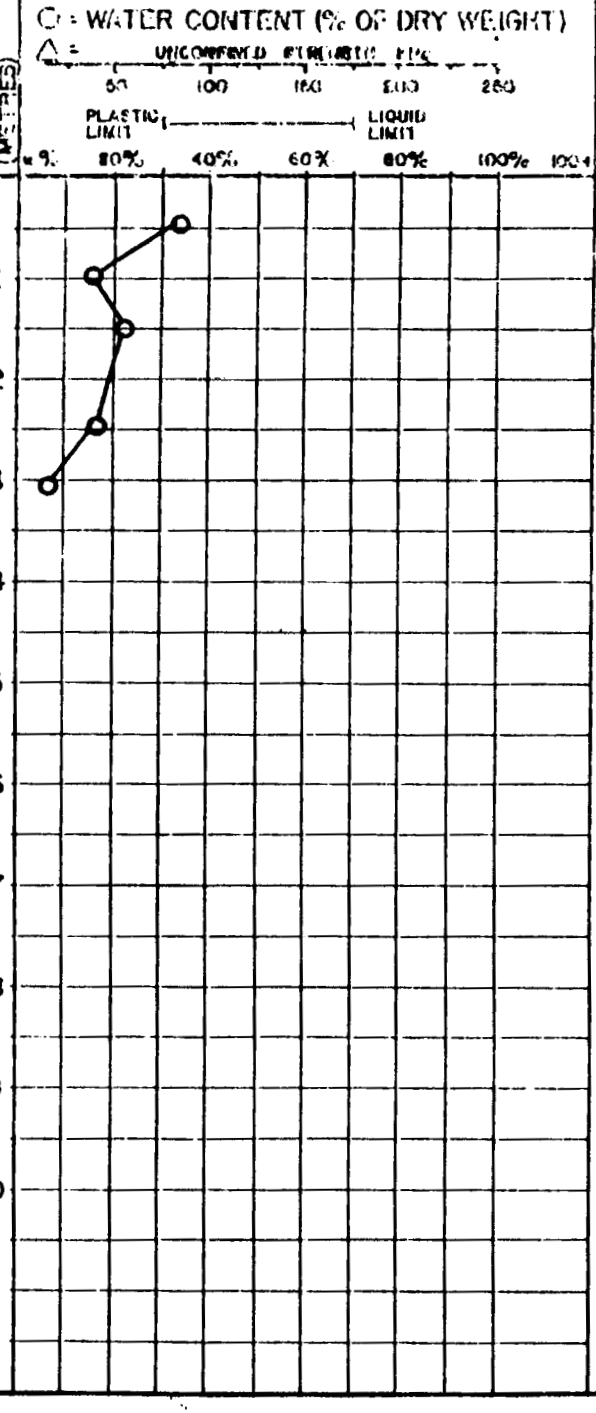
PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | ACCESS ROAD Ft. LIARD

TECH. PRONYCH	RIG B-61	DATE 78/03/08	km 3	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
3+700	℄

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2	CL	CLAY - SILTY SANDY LOW - MED. PLASTIC								SAT.
4	CI				1					DAMP
		1.5m								
6	ML	SILT - SANDY			2					Moist
8	SM	SAND - SILTY								Moist
		2.9m								
10	SM	SAND - SILTY GRAVELLY			3					Moist
		4.0m								
14		BOTTOM OF HOLE - 4.0 m			4					
16					5					
18										
20					6					
22										
24					7					
26					8					
28										
30					9					
32										
34					10					
36					11					
38										



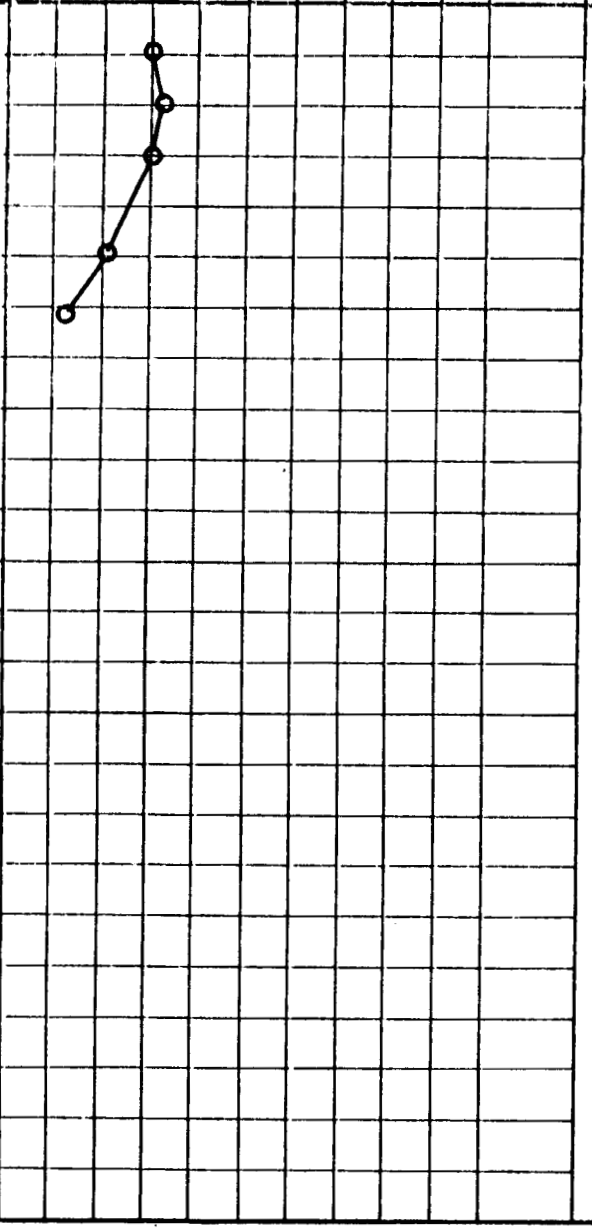
PUBLIC WORKS CANADA	DRILL HOLE REPORT	ACCESS ROAD FT. LIARD

TECH. PRONYCH	RIG B-61	DATE 78/03/08	Km 4	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
4+050	℄

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT
2–6	CI	CLAY - SILTY SANDY MED. PLASTIC			MOIST, WET, MOIST
6–8	ML	SILT - SANDY CLAYEY (2.4 m)			MOIST
8–12	SM	SAND - SILTY (2.7 m)			DAMP
12–14		4.0 m			
14		BOTTOM OF HOLE - 4.0 m			



GRAIN SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %

PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD Hwy.

TECH. PRONYCH	RIG B-61	DATE 78/03/05	km 206	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
206+148	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	SILT - CLAYEY								SAT.	
4		1.2 m			1					SAT.	
6	CL	CLAY - SILTY FEW PEBBLES + PL								WET	
8					2						
10	CL	- SILTY SANDY PEBBLES 3.1 m			3					WET	
12		BOTTOM OF HOLE - 3.1 m								MOIST	
14					4						
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											

O = WATER CONTENT (% OF DRY WEIGHT)

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

PLASTIC LIMIT — LIQUID LIMIT

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

PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/05	km 206	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
206+301.98	℄

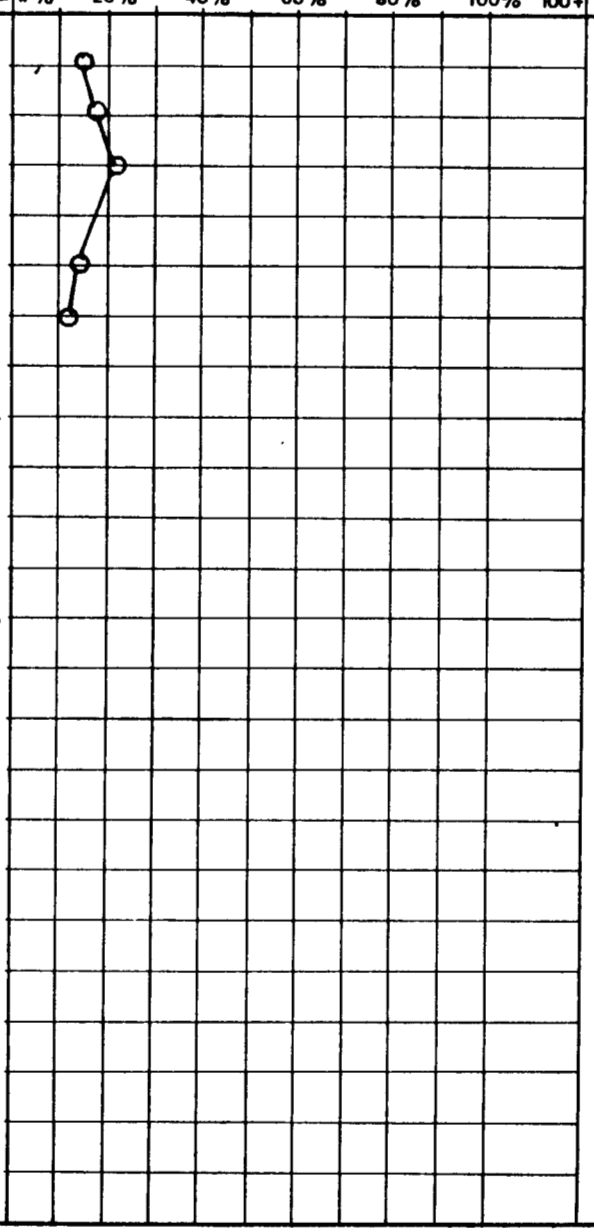
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	SILT - CLAYEY								MOIST	
4		SILT -			1					MOIST	
6										WET	
		2.1 m			2						
8	CL	CLAY - SILTY SANDY - PEBBLES & COBBLES @ PL								MOIST	
10		3.1 m			3					MOIST	
12		BOTTOM OF HOLE. 3.1 m									
14					4						
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											

O = WATER CONTENT (% OF DRY WEIGHT)

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

PLASTIC LIMIT — LIQUID LIMIT

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



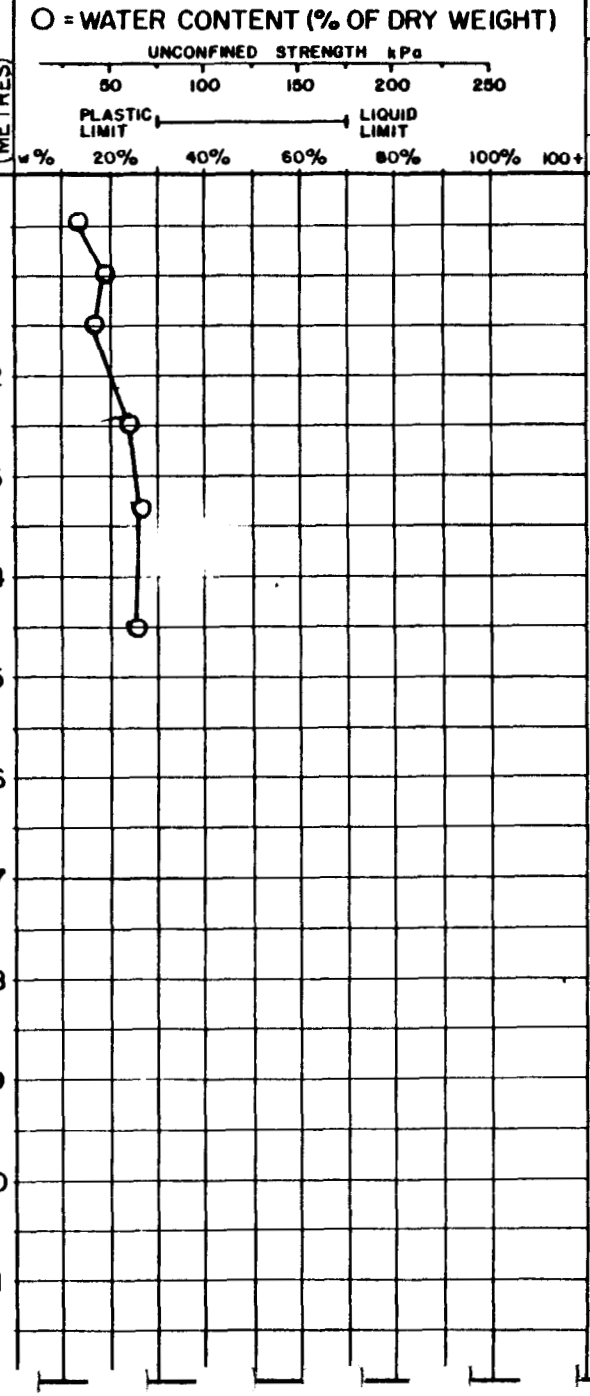
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/05	km 206	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
206+440	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		SILT - CLAYEY								MOIST	
4		SILT -			1					MOIST	
6	ML	- SANDY								MOIST	
8		- CLAYEY			2					WET	
10		3.1 m			3					WET	
12		CLAY - SILTY - LOW PLASTIC + PL									
14	CL	FREE WATER 21M - 4.6 m			4						
		4.6 m								WET-SAT.	
16		BOTTOM OF HOLE - 4.6 m			5						
18											
20					6						
22											
24					7						
26											
28					8						
30											
32					9						
34											
36					10						
38					11						



PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/05	km 206	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
206+595	℄

REMARKS: O.K. FOR CUT

O = WATER CONTENT (% OF DRY WEIGHT)

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

PLASTIC LIMIT — LIQUID LIMIT

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

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2		SILT - CLAYEY								WET
4		SILT - SANDY			1					MOIST
6										MOIST
8	ML	SILT - SAND MIX			2					MOIST
10					3					
12										MOIST
14		SILT - SANDY			4					MOIST
16					5					
18		5.5 m								
20	SM	SAND - SILTY 6.1 m			6					MOIST
22		BOTTOM OF HOLE - 6.1 m								
24					7					
26					8					
28										
30					9					
32										
34					10					
36					11					
38										

PUBLIC WORKS CANADA — DRILL HOLE REPORT

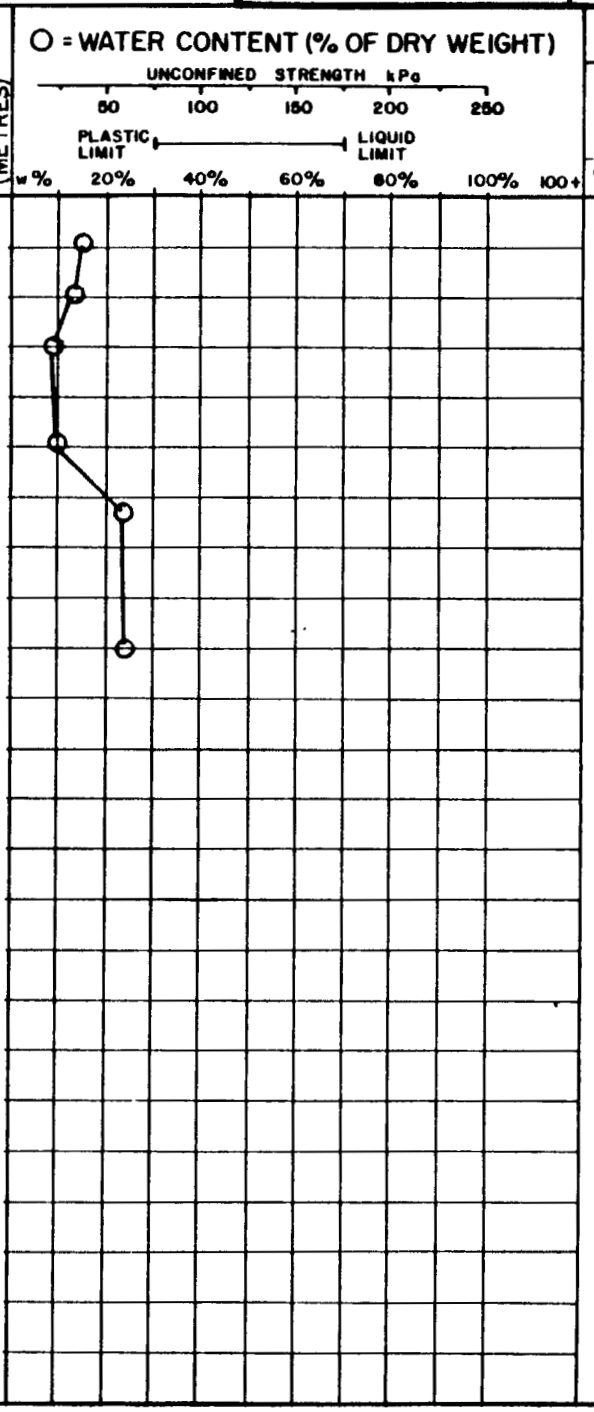
LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/05	km 206	B.P. No.	HOLE No. 5

CHAINAGE	OFFSET
206+660	℄

REMARKS: O.K. FOR CUT TO 3m

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT
2	ML	SILT - CLAYEY SANDY			MOIST
4					MOIST
6					MOIST
8					MOIST
10		3.1m			MOIST
12	CL CI	CLAY - SILTY LOW-MED PLASTIC			
		4.0m			
14	ML	SILT - CLAYEY - SANDY			WET
		4.6m			
16		BOTTOM OF HOLE - 4.6 m			
18					
20					
22					
24					
26					
28					
30					
32					
34					
36					
38					



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

PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/05	km 206	B.P. No.	HOLE No. 6

CHAINAGE	OFFSET
206+750	4

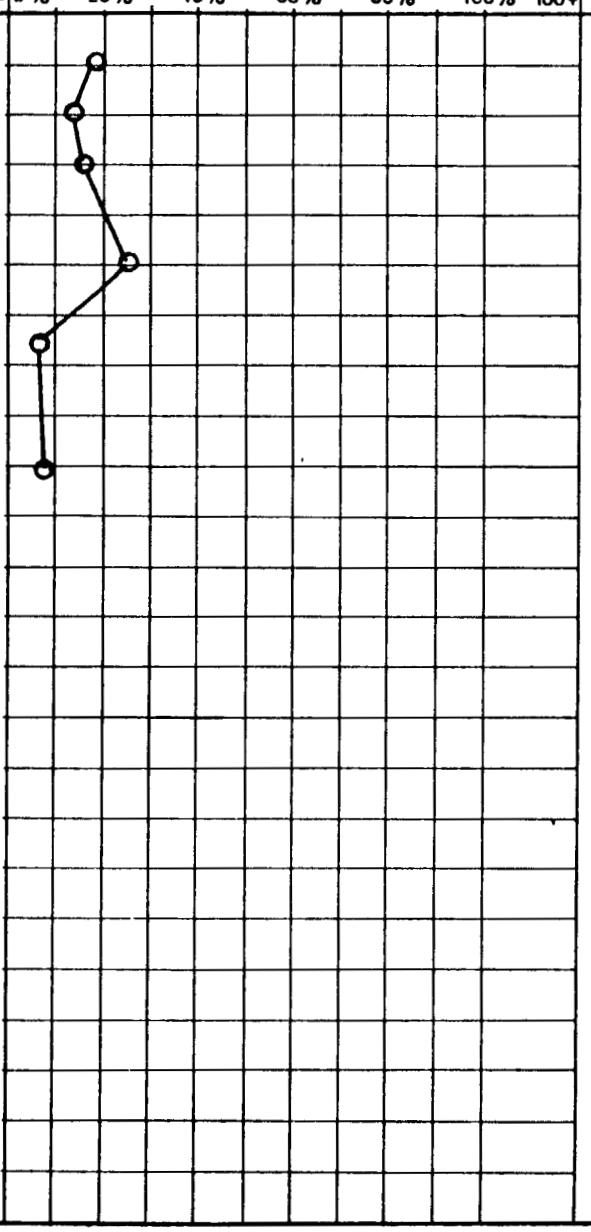
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		SILT - CLAYEY								MOIST	IN MAJOR CUT SECTION
		- SANDY								MOIST	
4	ML	- CLAYEY SANDY			1					MOIST	- SLIGHTLY ABOVE OPTIMUM TO 3m
6		2.1 m									
8	CL	CLAY - SILTY SANDY LOW PLASTIC			2					MOIST-WET	
		2.7 m									
10	SM	SAND - SILTY			3					MOIST	
12		- SILTY - CLAYEY									
14	SC	4.6 m			4					MOIST	
16		BOTTOM OF HOLE - 4.6 m			5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											

O = WATER CONTENT (% OF DRY WEIGHT)

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

PLASTIC LIMIT — LIQUID LIMIT

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



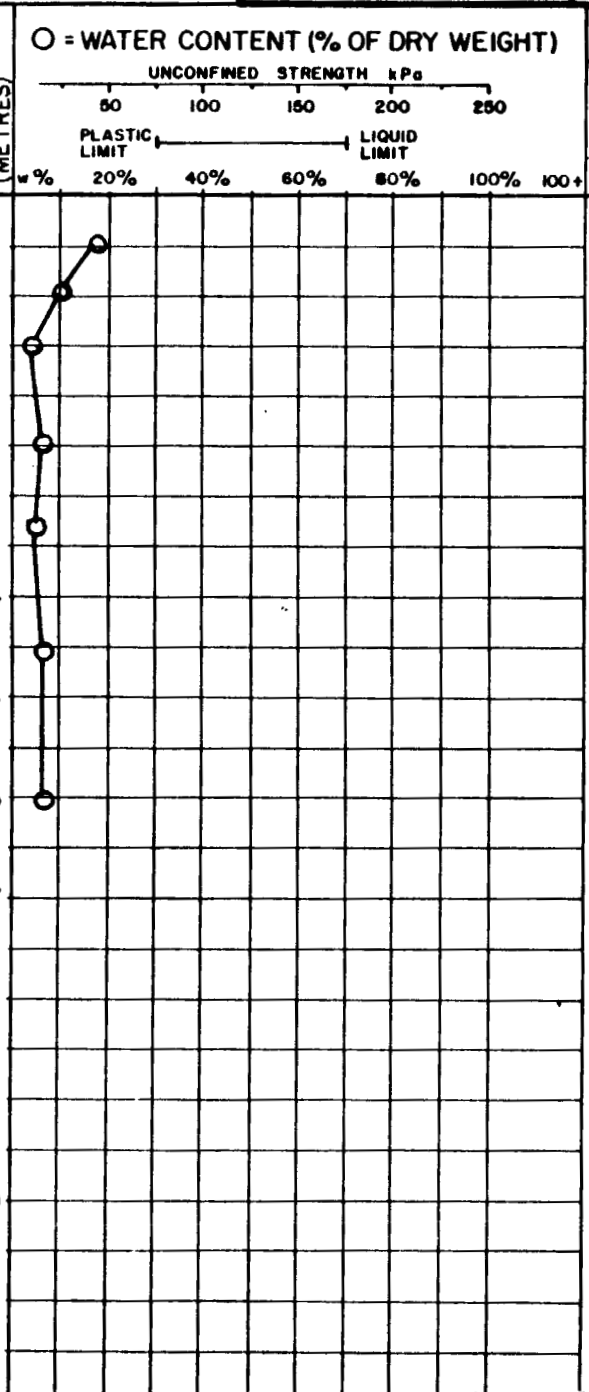
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/05	km 206	B.P. No.	HOLE No. 7

CHAINAGE	OFFSET
206+850	4

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	SILT - CLAYEY - CLAYEY SANDY			MOIST	IN MAJOR CUT SECTION. - O.K. FOR CUT AND BORROW - DITCH EROSION COULD BE SEVERE
4		1.2 m			MOIST	
6	SM	SAND - SILTY FEW PEBBLES			DAMP	
8		SILTY ONLY			MOIST	
10					MOIST	
12	SP	FINE				
14					MOIST	
16	SM	SILTY - FINE				
18						
20		6.1 m			MOIST	
22		BOTTOM OF HOLE - 6.1 m				
24						
26						
28						
30						
32						
34						
36						
38						



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

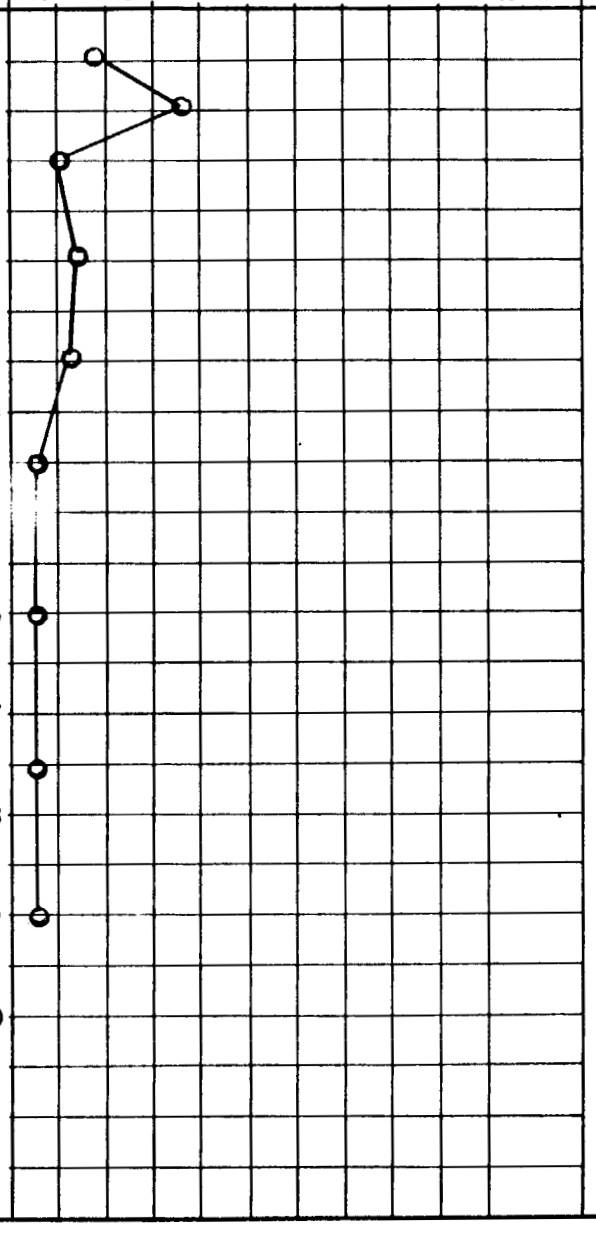
PUBLIC WORKS CANADA — DRILL HOLE REPORT

TECH. WEBBER	RIG B-50	DATE 78/03/05	km 206	B.P. No.	HOLE No. 8

CHAINAGE	OFFSET
206+920	℄

REMARKS: SEE HOLE #7

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT
2	ML	SILT - CLAYEY			MOIST
					FREE WATER
4	CL	CLAY - SILTY			MOIST
6	ML	SILT - CLAYEY SANDY			
8	CL	CLAY - SILTY SANDY			MOIST
		PARTS SAND - SILTY			
10					
12	SM	SAND - SILTY			MOIST
14		CLAY LUMPS			MOIST
16					
18					
20	SM	SAND - SILTY			MOIST
22					
24					MOIST
26					
28					MOIST
30		9.1 m			
32		BOTTOM OF HOLE. 9.1 m			
34					
36					
38					



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

PUBLIC WORKS CANADA — DRILL HOLE REPORT — Liard Hwy.

TECH. Webber	RIG B-50	DATE 78/03/05	km 207	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
207+000	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	Silt - Clayey			1	88	12	0		Moist	In major cut section.
4		- Sandy				78	22	0		Moist	- Erosion of ditches and slopes could be severe.
		1.5 m				22	78	0		Moist	
6	SM	Sand - Silty			2						
		2.1 m									
8		Sand - Fine				5	95	0		Moist	
10					3	5	95	0		Damp	
12	SP										
14					4	5	95	0		Damp	
16					5						
18											
20					6	8	92	0		Damp	
22	SM	- Silty									
24					7	12	88	0		Damp	
26					8						
28		Few Pebbles									
30					9	12	88	0		Damp	
32											
34					10						
36						9	91	0		Damp	
38					11						
			12.2 m			13	82	5		Damp	

O = WATER CONTENT (% OF DRY WEIGHT)

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

PLASTIC LIMIT — LIQUID LIMIT

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

Bottom of hole - 12.2 m

PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/05	km 207	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
207+090	℄

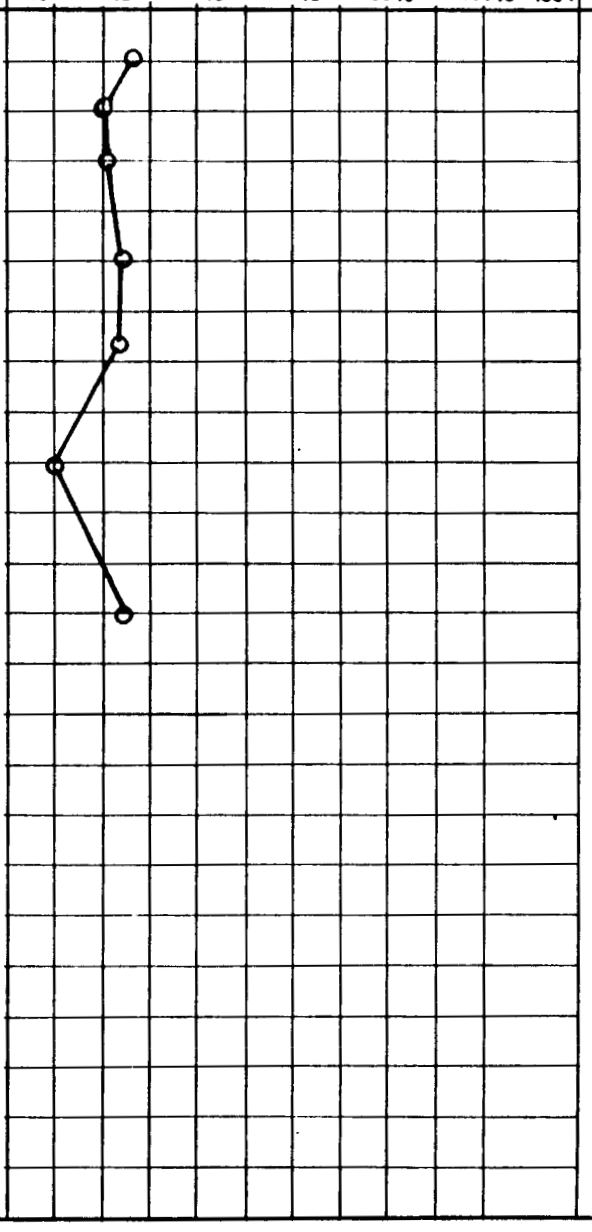
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY								MOIST-WET	
4	CL	LOW - MED. PLASTIC			1					MOIST	O.K. FOR CUT
6										MOIST	-SLIGHTLY ABOVE
8	CI				2					MOIST	OPTIMUM.
10					3					MOIST	
12											
14		4.3 m			4						
16	ML	SILT - SANDY			5					MOIST	
18											
20		CLAYEY SANDY 6.1 m			6					WET	
22		BOTTOM OF HOLE - 6.1 m									
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											

O = WATER CONTENT (% OF DRY WEIGHT)

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

PLASTIC LIMIT — LIQUID LIMIT

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



PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/05	km 207	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
207+130	℄

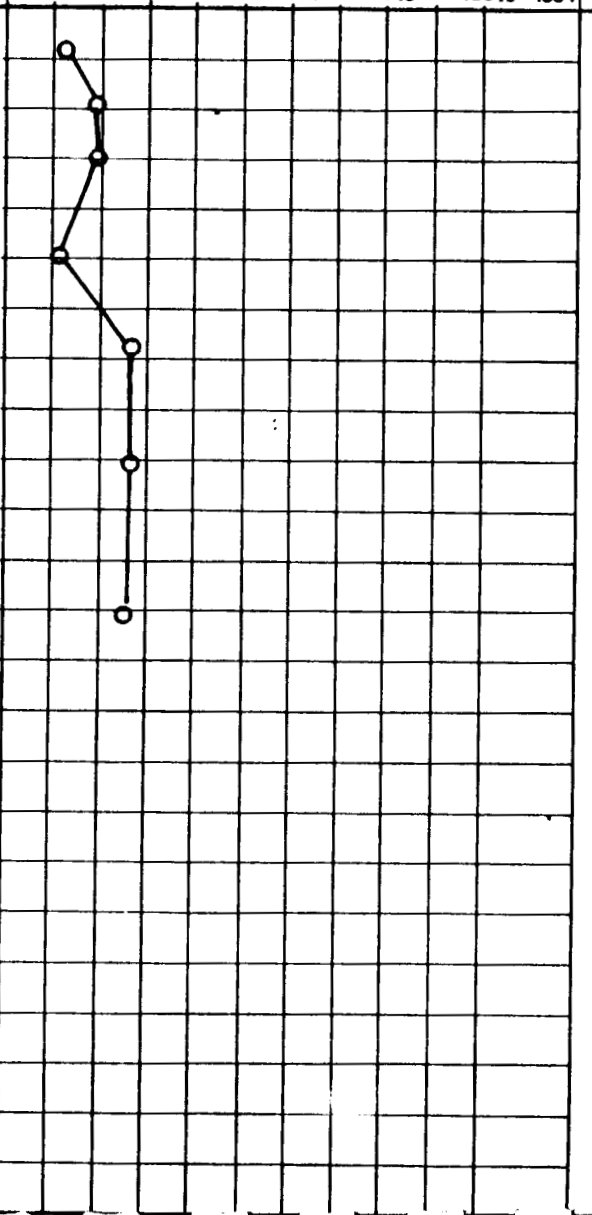
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	SILT -								MOIST	O.K. FOR CUT
4		1.2 m			1					MOIST	TO 2.5 m.
6	CL	CLAY - SILTY LOW PLASTIC + PL								MOIST	- SLIGHTLY ABOVE OPTIMUM
		2.1 m			2						
8	SM	SAND - SILTY CLAYEY								MOIST	
		2.7 m			3						
10		CLAY - SILTY									
12	CL	LOW PLASTIC								WET	
14					4						
16										WET	
18		SILTY SANDY			5						
20		6.1 m			6					WET-SAT.	
22		BOTTOM OF HOLE - 6.1 m									
24					7						
26											
28					8						
30											
32					9						
34											
36					10						
38					11						

O = WATER CONTENT (% OF DRY WEIGHT)

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

PLASTIC LIMIT — LIQUID LIMIT

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



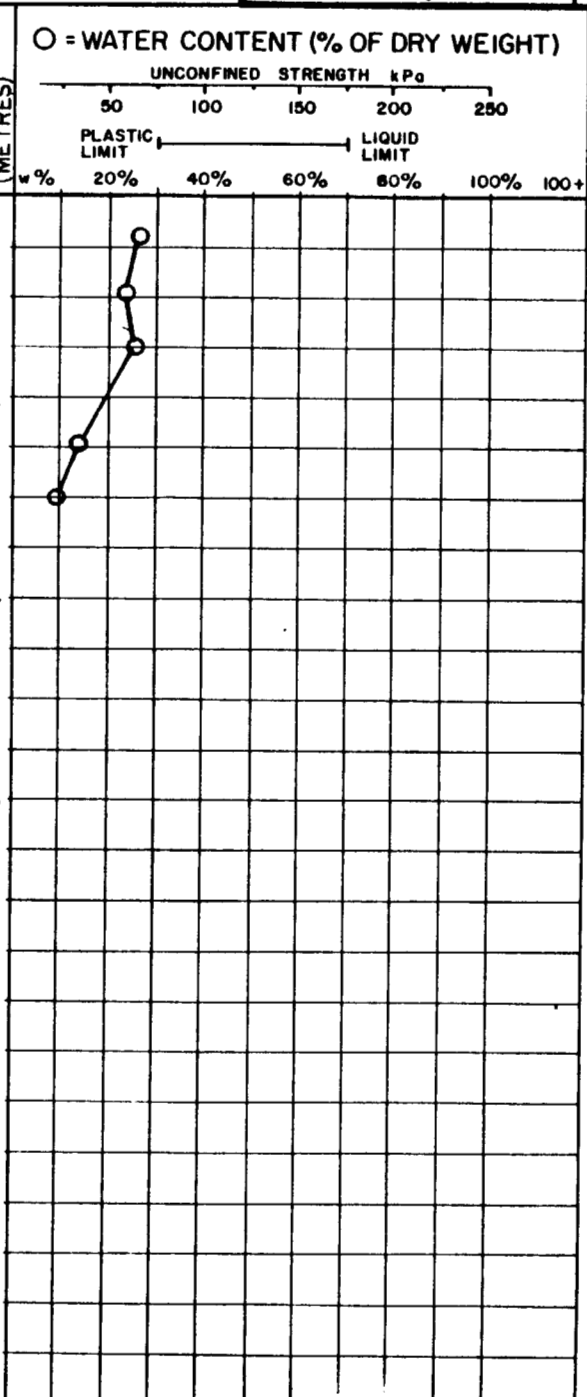
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/05	km 207	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
207+235	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
	OL	SILT - ORGANIC									
2	ML	CLAYEY								MOIST	
		1.2 m			1					MOIST	
4	CL	CLAY - SILTY LOW-MED PLASTIC									
6	CI	1.8 m								MOIST	
		SAND - CLAYEY SILTY - GRAVELLY			2						
8	SC									MOIST	
10		3.0 m			3					MOIST	
12		BOTTOM OF HOLE - 3.0 m									
14					4						
16					5						
18											
20					6						
22											
24					7						
26					8						
28											
30					9						
32											
34					10						
36					11						
38											



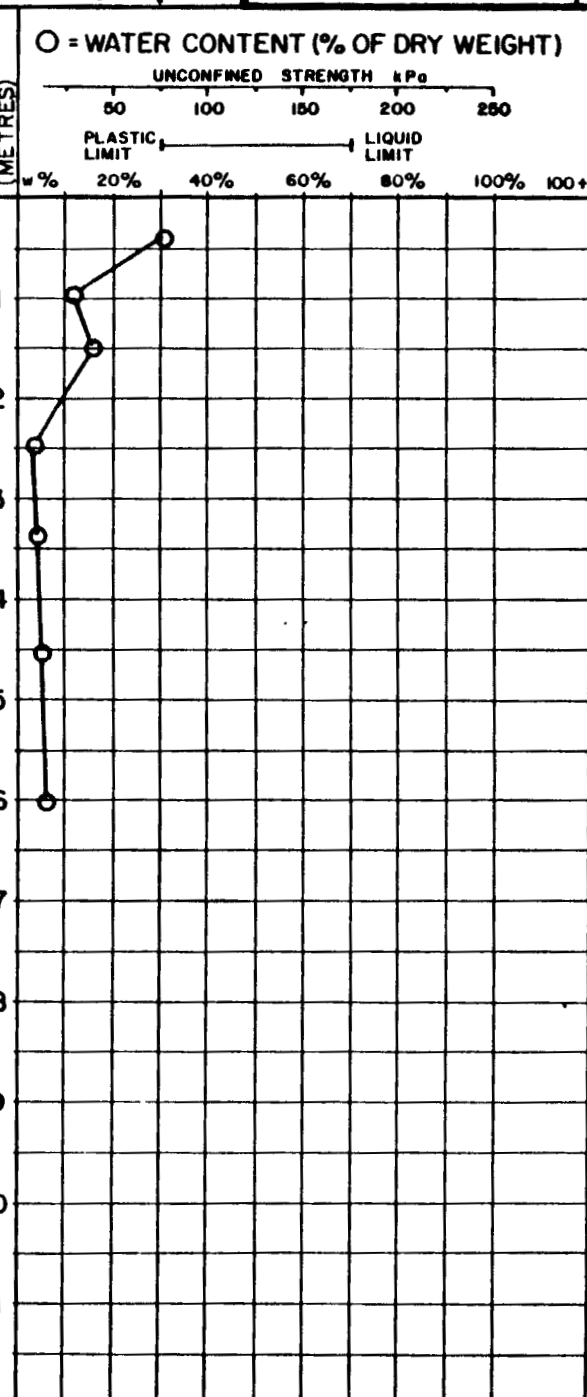
PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/05	km 207	B.P. No.	HOLE No. 5

CHAINAGE	OFFSET
207+500	℄

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT
2	ML	SILT - CLAYEY - ORGANIC			MOIST
4		- SANDY 1.2 m			MOIST
6	SC	SAND - SILTY CLAYEY			MOIST
8	SM	GRAVELLY SILTY			MOIST
10					MOIST
12					
14		4.3 m			WET
16		GRAVEL - SANDY			
18	GW				
20		6.1 m			WET
22		BOTTOM OF HOLE - 6.1 m			
24					
26					
28					
30					
32					
34					
36					
38					



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

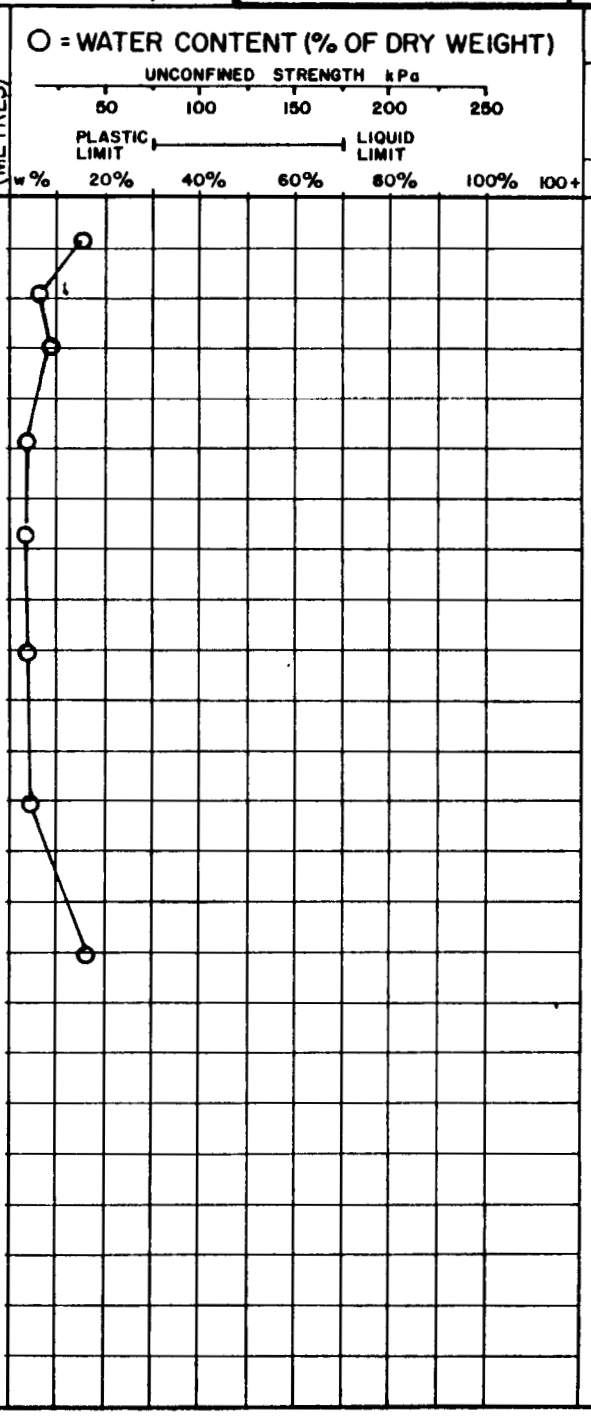
PUBLIC WORKS CANADA — DRILL HOLE REPORT

TECH. WEBBER	RIG B-50	DATE 78/08/06	km 207	B.P. No.	HOLE No. 5A

CHAINAGE	OFFSET
207+625	4

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT
2	ML	SILT			MOIST
		.9 m			
4	SM	SAND - SILTY			MOIST
		CLAY LUMPS			MOIST
6					
8	SC	SILTY CLAYEY			DAMP
10		3.4 m			DAMP
12	SM GW	SAND - GRAVEL MIX			
14					
16	GW	GRAVEL - SANDY			DAMP
18					
20					DAMP
22		7.0 m			
24	CL	CLAY - SILTY SANDY TILL PEBBLES			WET
		7.6 m			
26		BOTTOM OF HOLE - 7.6 m			
28					
30					
32					
34					
36					
38					

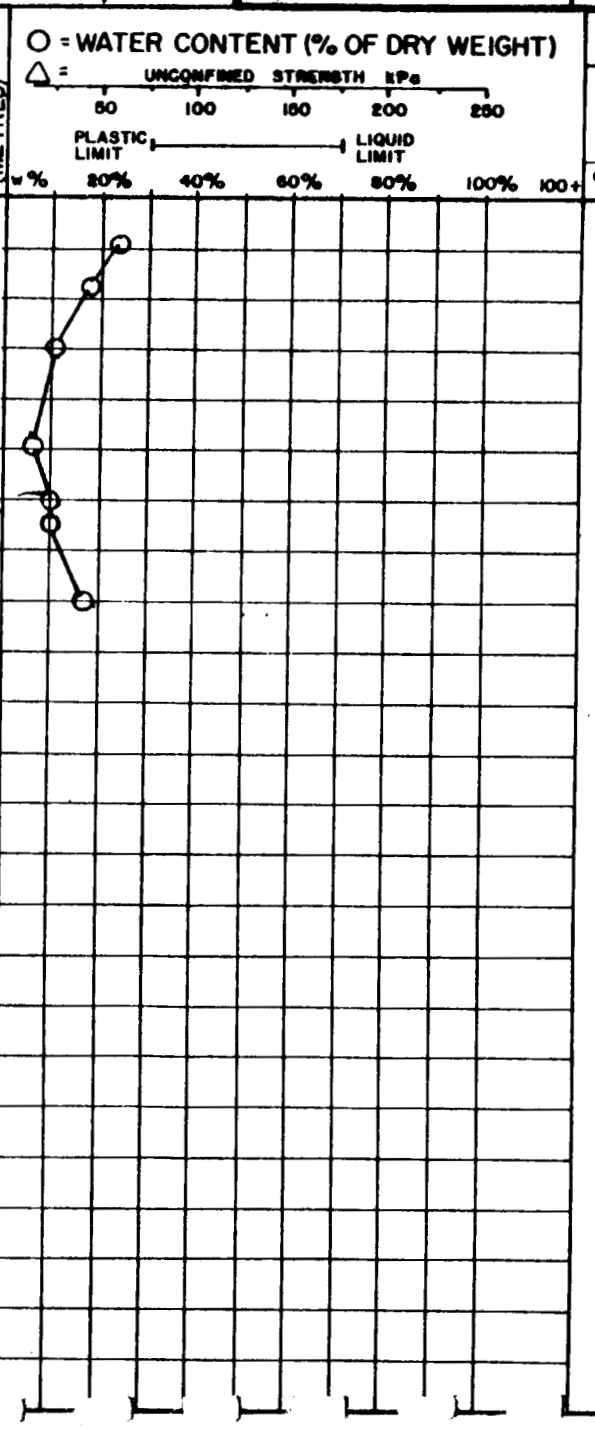


GRAIN-SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD Hwy.

TECH. WEBBER | RIG B-50 | DATE 78/03/05 | km 208 | B.P. No. | HOLE No. 1

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT
2	ML	SILT - CLAYEY			MOIST
		CLAYEY SANDY			MOIST
4		1.2 m			
6	SC	SAND - GRAVELLY SILTY CLAYEY			MOIST
8	SP	GRAVELLY			WET
10		3.1 m			WET
		GRAVEL - SANDY			WET
12	GC	GRAVEL - SAND - CLAY MIX TILL			
		4.0 m			
14	CL	CLAY - SILTY SANDY PEBBLES TILL			WET
		4.6 m			
16		BOTTOM OF HOLE - 4.6 m			
18					
20					
22					
24					
26					
28					
30					
32					
34					
36					
38					



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

CHAINAGE	OFFSET
208+100	±

REMARKS

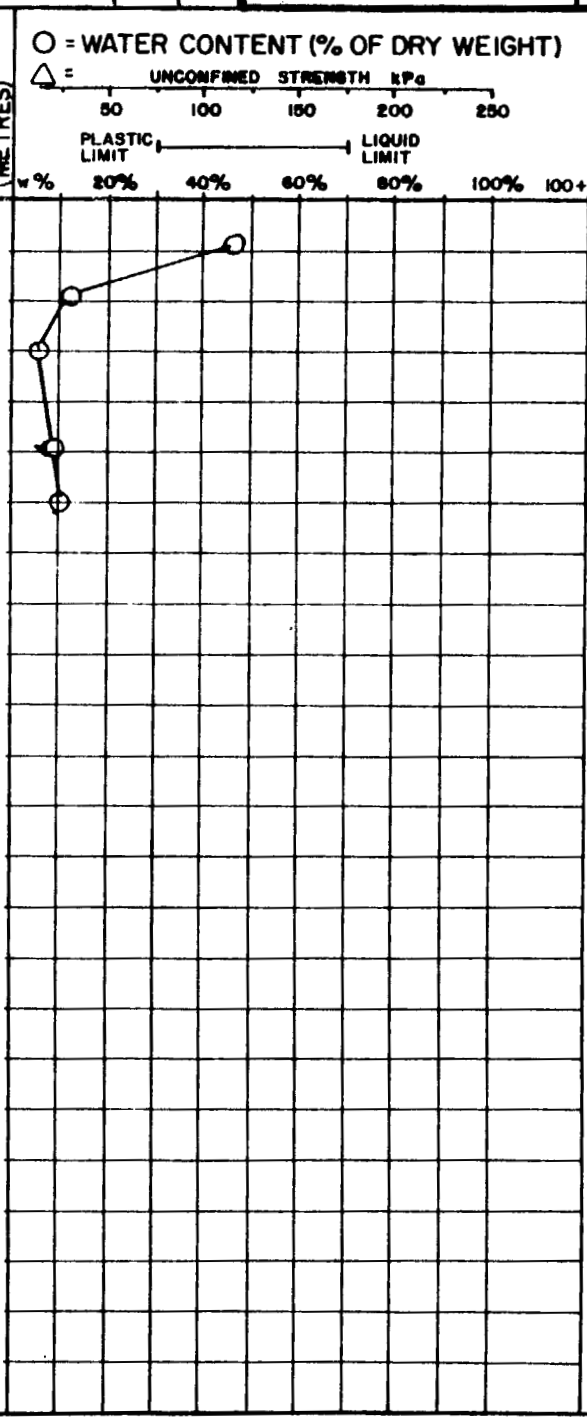
PUBLIC WORKS CANADA — DRILL HOLE REPORT

Liard Hwy.

TECH. Webber	RIG B-50	DATE 78/03/05	km 208	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
208+400	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	Silt - Organic Clayey .6			Wet	
4	SC	Sand - Clayey Silty Pebbles			Moist	H.I.B.
6	SM	Silty			Moist	
8		Gravelly			Wet	
10	GW	Gravel - Sandy 3.1 m			Wet	
12		Bottom of Hole - 3.1 m				



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

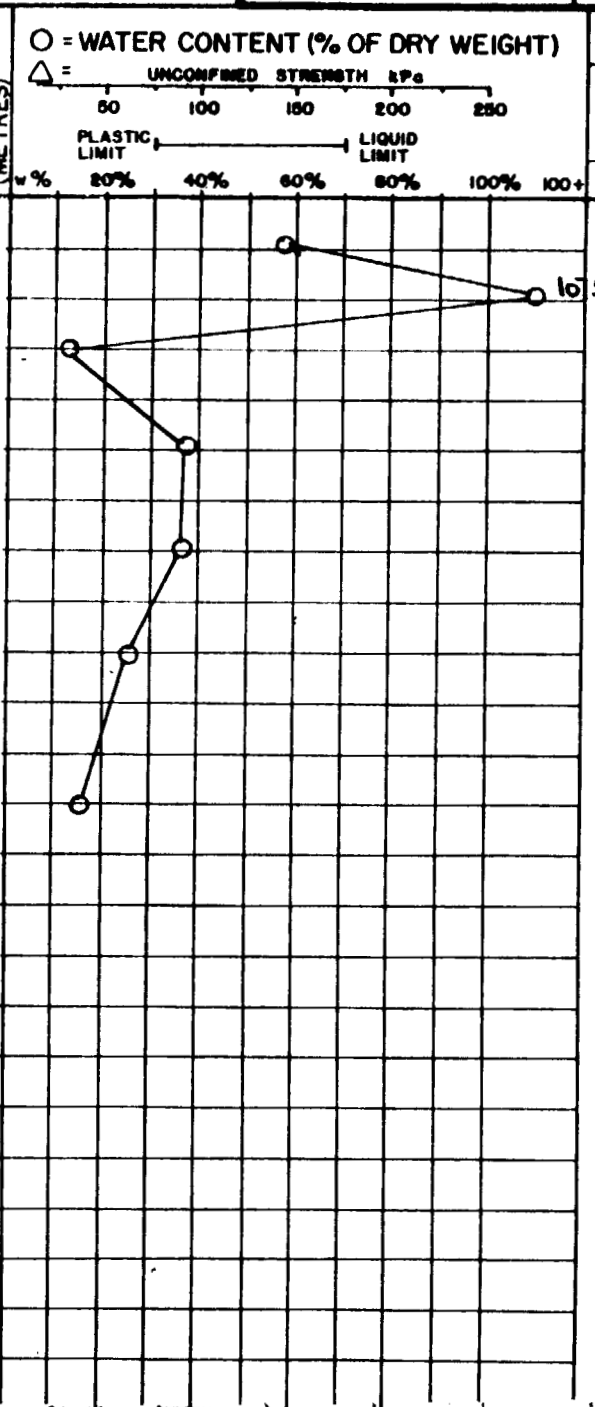
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY

TECH. WEBBER	RIG B-50	DATE 78/03/05	km 208	B.P. No.	HOLE No. 2A

CHAINAGE	OFFSET
208+695	18m [illegible]

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	SILT - CLAYEY .6 m								FREE WATER	
4	OH	CLAY - ORGANIC			1	5				SAT.	HOLE IN OLD.
6	PT	PEAT								SAT.	ABANDONED IN-FILLED CHANNEL.
8	OL	CLAY - ORGANIC			2					FREE WATER	- MAJOR (9-10m) FILL PROPOSED.
10	CL				3						- CAN EXPECT SIGNIFICANT SETTLEMENTS OF FILL IN BOTH SHORT AND LONG TERM.
12										FREE WATER	
14					4						
16		5.2 m								FREE WATER	
18	CL	CLAY - SILTY SANDY PEBBLES TILL LOW PLASTIC +PL			5						
20		6.1 m			6					MOIST	- SUGGEST 3:1 SIDESLOPES TO LESSEN POSSIBILITY OF SHEAR FAILURE.
22		BOTTOM OF HOLE. 6.1 m									
24					7						
26											
28					8						
30					9						
32											
34					10						
36											
38					11						



PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/06	km 208	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
208+915	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	SILT - CLAYEY .6'				93	7	0		MOIST	IN MAJOR CUT SECTION.
4		CLAY - SILTY SANDY SILTY			1	77	23	0		MOIST	
6						96	4	0		MOIST-WET	- MATERIAL WELL ABOVE OPTIMUM TO 5.6 m.
8	CL	LOW PLASTIC			2	96	4	0		WET	
10					3						
12						96	4	0		WET	
14		SANDY			4	73	27	0		WET	- SUGGEST LIMIT CUT TO 10 m.
16					5						
18		5.5m									
20		SAND - SILTY			6	30	69	1		MOIST	
22											
24					7	33	67	0			
26	SM	PEBBLES			8	30	69	1		MOIST	
28											
30					9	95	68	7		MOIST	
32											
34					10	90	10	0		WET	
36		10.7 m CLAY - SILTY SANDY LOW PLASTIC			11						
38	CL	+P.				56	44	0		WET	

O = WATER CONTENT (% OF DRY WEIGHT)

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

PLASTIC LIMIT — LIQUID LIMIT

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

BOTTOM OF HOLE - 12.2 m

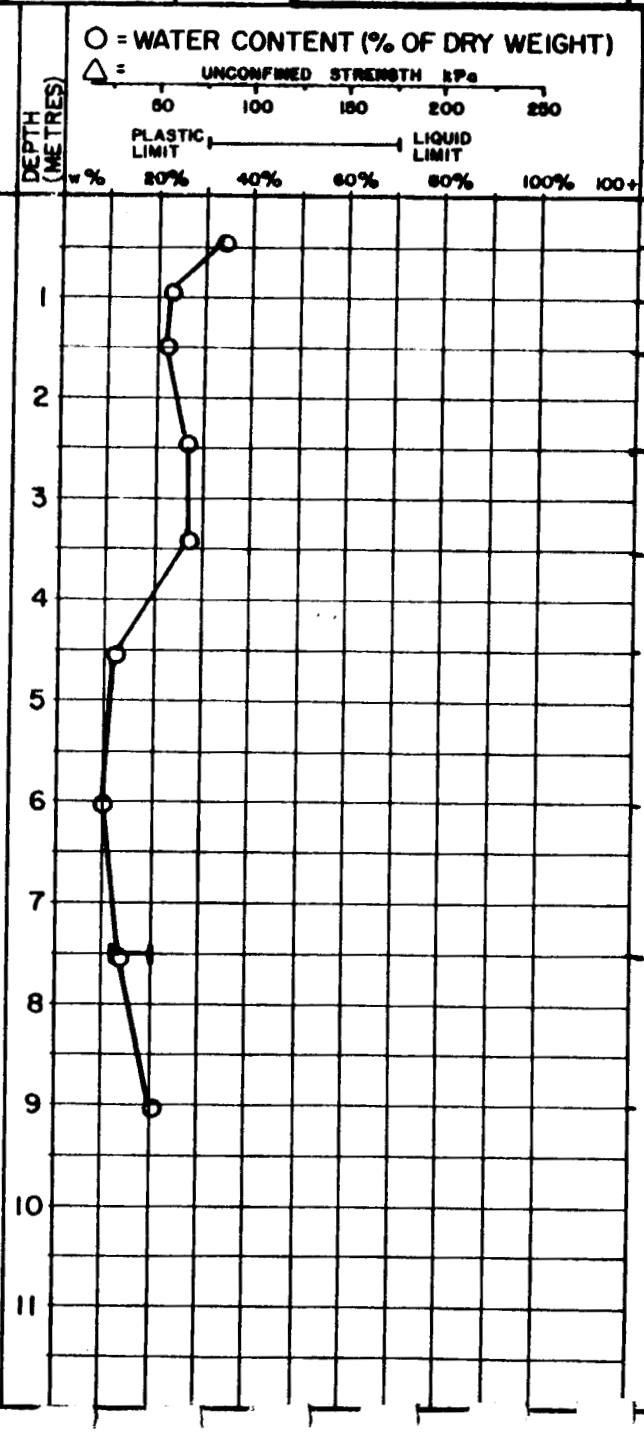
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD Hwy

TECH.	RIG	DATE	km	B.P. No.	HOLE No.
WEBBER	B-50	78/02/05	208		4

CHAINAGE	OFFSET
208 + 980	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
2	ML	SILT - CLAYEY .6 m		
4–12	CL	CLAY - SILTY LOW PLASTIC + P_L		
14		4 m		
16–22	SM	SAND - SILTY		
24–28	SC	- CLAYEY		
30	ML	SILT - CLAYEY SANDY 9.1 m		
32–38		BOTTOM OF HOLE - 9.1 m		



GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
94	6	0		SAT.
83	17	0		MOIST
93	7	0		MOIST
96	4	0		WET
96	4	0		WET
33	66	1		MOIST-WET
27	72	1		MOIST-WET
31	62	7		WET
55	45	0		WET

REMARKS

MAJOR CUT SECTION
- MATERIAL WELL ABOVE OPTIMUM TO 4 m.
- SLIGHTLY ABOVE OPTIMUM BELOW 4 m

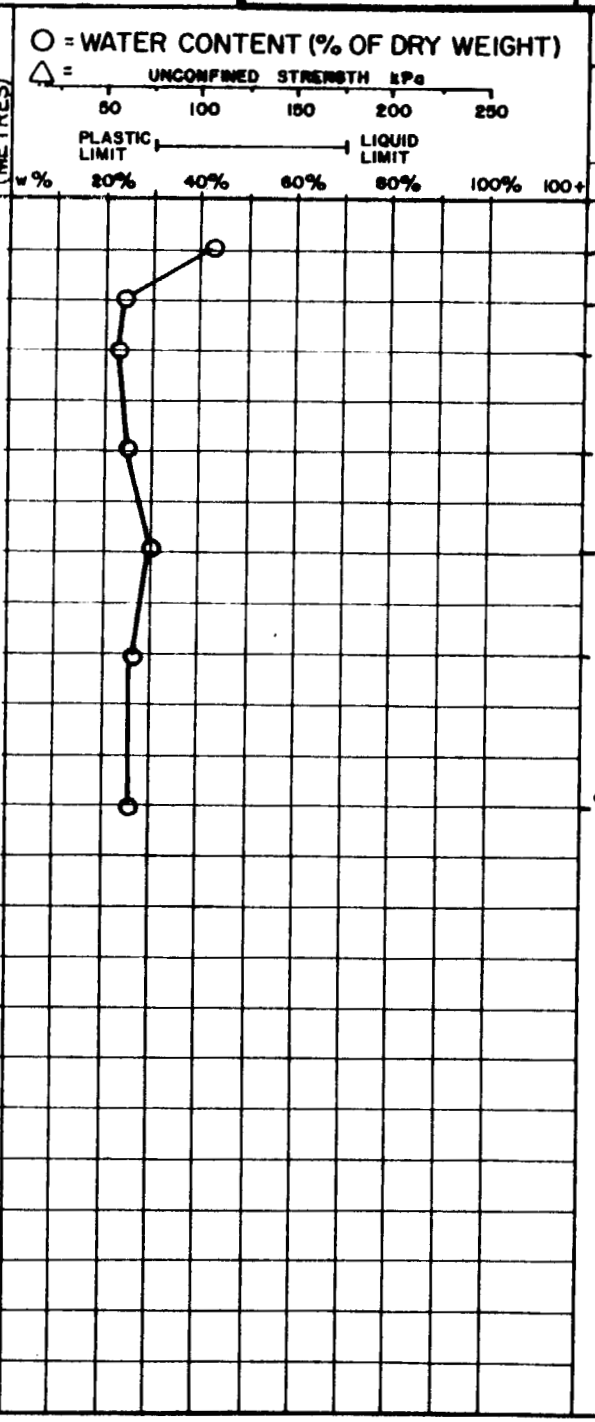
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD Hwy

TECH. WEBBER	RIG B-50	DATE 78/03/06	km 209	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
209+085	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)
2		SILT-CLAYEY			
4	ML	SILT-			1
6		FREE WATER TO 3.7m			
8		2.4m			
10		CLAY - SILTY SANDY			2
12		LOW PLASTIC			3
14	CL	tR			4
16					5
18		SILTY			
20		6.1m			6
22		BOTTOM OF HOLE- 6.1m			7
24					
26					8
28					
30					9
32					
34					10
36					11
38					



GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
95	5	0		FREE WATER
93	7	0		SAT.
89	11	0		SAT.
54	46	0		WET
74	26	0		WET
86	14	0		MOIST-WET
97	3	0		MOIST-WET

REMARKS

MAJOR CUT SECTION.
-MATERIAL WELL ABOVE OPTIMUM
-NOTE FREE WATER @ SURFACE.

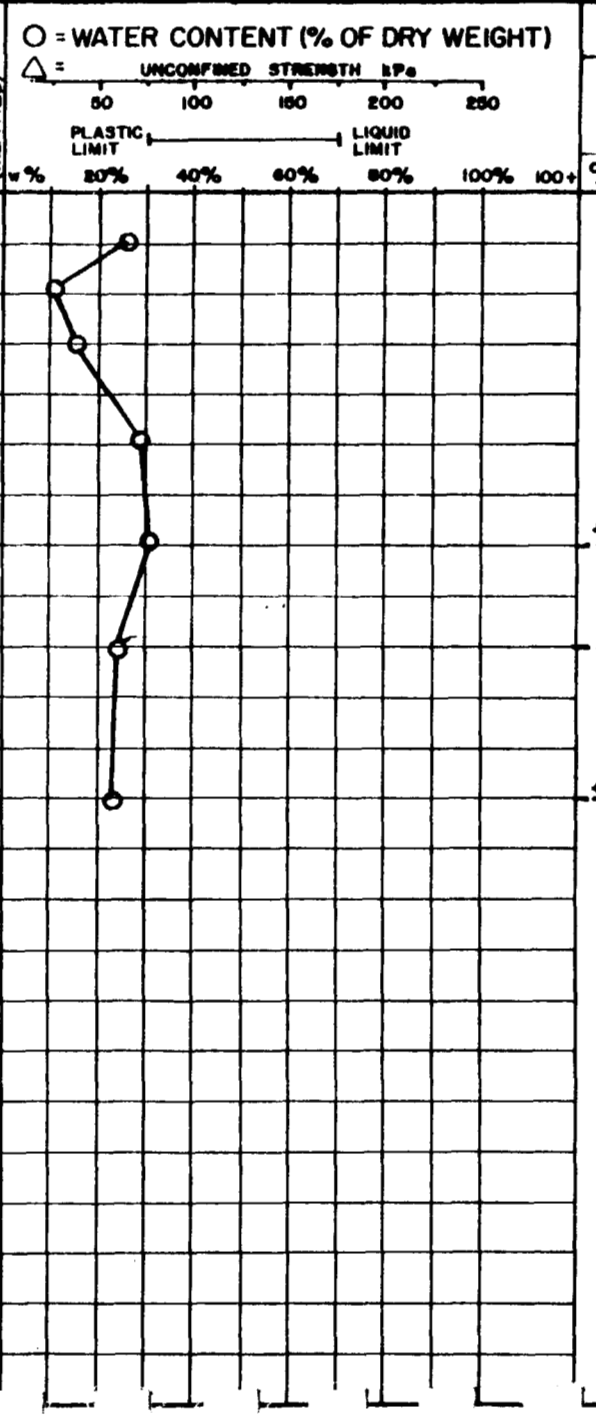
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/06	km 209	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
209+200	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	SILT - CLAYEY .6 m			MOIST	CONSIDER SHALLOW (1-1.5 m) CUT ONLY.
4	ML Sm	SILT - SAND MIX CLAYEY			MOIST	
6					MOIST	
8	CL	CLAY - SILTY SANDY + Pl			WET	
10	ML	SILT - CLAYEY				
12					FREE WATER	
14		FREE WATER 2.7m-6.1m 4.3 m				
16	SC Sm	SAND - CLAYEY SILTY			FREE WATER	
18						
20		6.1 m			FREE WATER	
22		BOTTOM OF HOLE - 6.1 m				
24						
26						
28						
30						
32						
34						
36						
38						



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

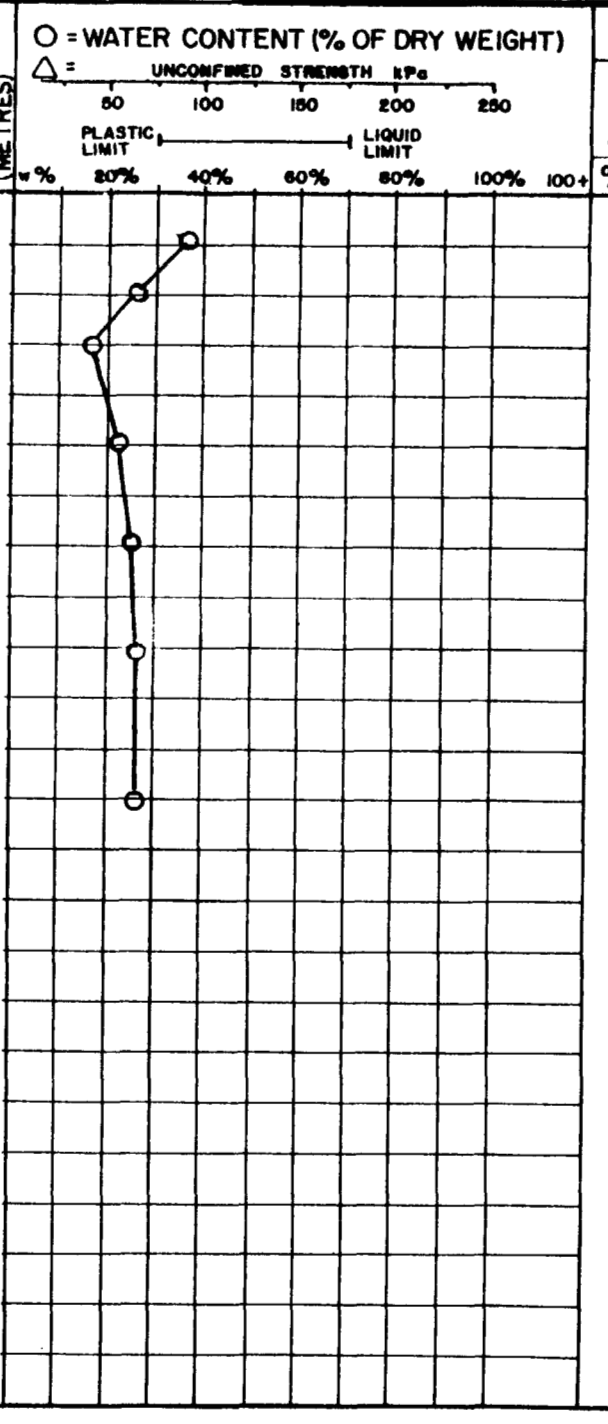
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/06	km 209	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
209+440	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT
2–4	ML	SILT - ORGANICS CLAYEY			SAT.
		1.5 m			MOIST
6	SM	SAND - SILTY			MOIST-WET
8–10	ML, SC	SAND - SILT MIX CLAYEY			FREE WATER
		3.1 m			
12–14	CL	CLAY - SILTY SANDY LOW PLASTIC + PL			WET
16–18		SILTY FREE WATER 2.1 m - 6.1 m			WET
20		SANDY SILTY 6.1 m			SAT.
22–38		BOTTOM OF HOLE - 6.1 m			



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

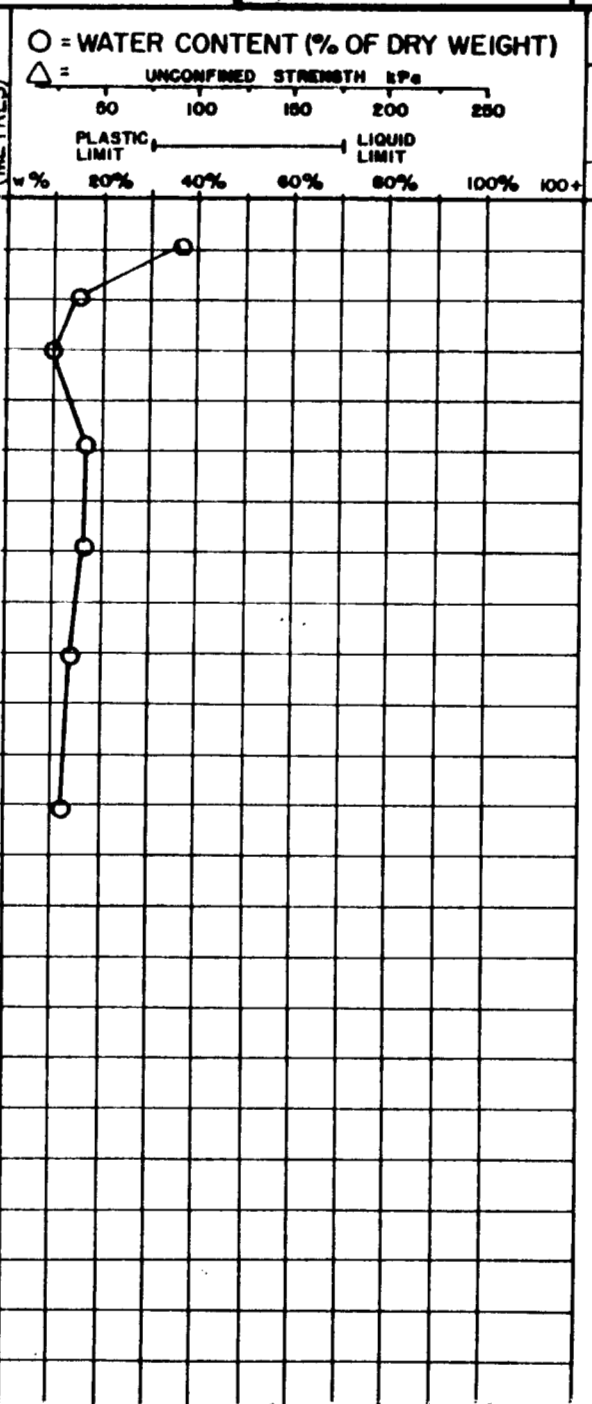
REMARKS

PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/06	km 209	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
209+695	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	SILT - CLAYEY								SAT.	
		CLAYEY SANDY			1					MOIST	
4		1.2 m									
		CLAY - SILTY SANDY								MOIST	
6		PEBBLES			2						
8		LOW PLASTIC								MOIST	
		+ PL			3						
10	CL									MOIST	
12					4						
14		@ PL								MOIST	
16					5						
18											
20		6.1 m			6					MOIST	
		BOTTOM OF HOLE - 6.1 m									
22					7						
24											
26					8						
28											
30					9						
32											
34					10						
36											
38					11						



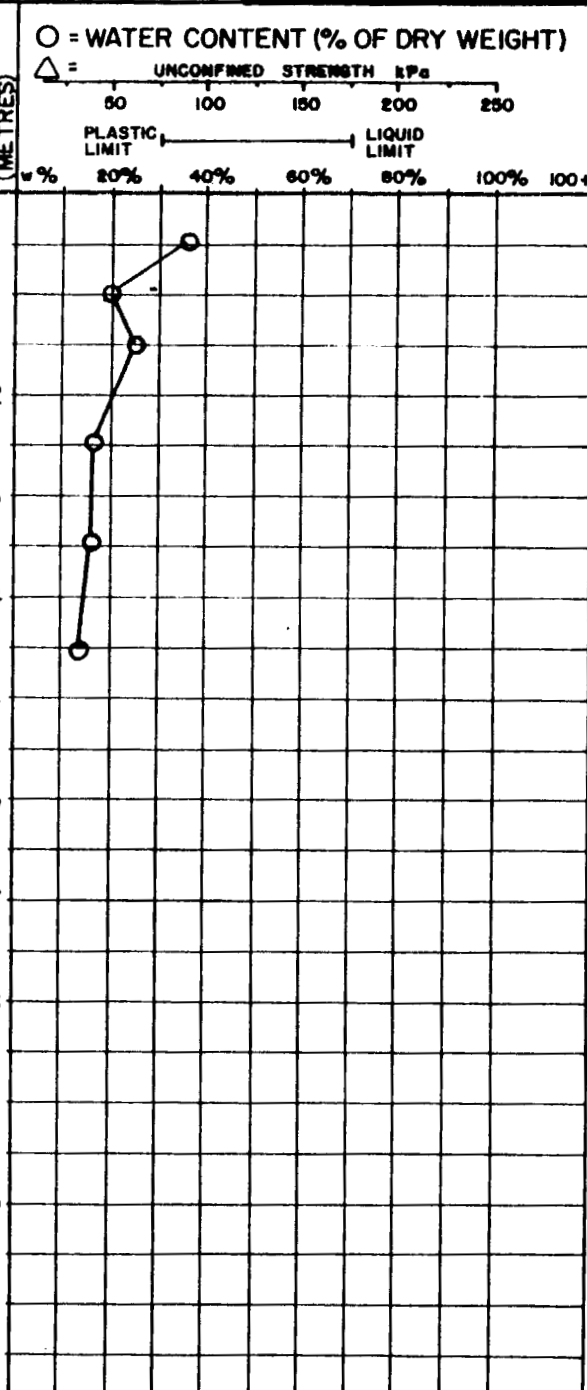
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/06	km 209	B.P. No.	HOLE No. 5

CHAINAGE	OFFSET
209+900	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		SILT-CLAYEY								FREEWATER	
4	ML	SANDY			1					MOIST	
6										SAT.	
		2.1 m			2						
8		CLAY - SILTY SANDY								MOIST-WET	
10		PEBBLES - TILL			3						
12	CL	+ PL								MOIST-WET	
14		LOW PLASTIC			4						
		4.6 m								MOIST-WET	
16		BOTTOM OF HOLE - 4.6 m			5						
18											
20					6						
22											
24					7						
26					8						
28											
30					9						
32											
34					10						
36					11						
38											



GRAIN-SIZE ANALYSIS

RELATIVE MOISTURE CONTENT

REMARKS

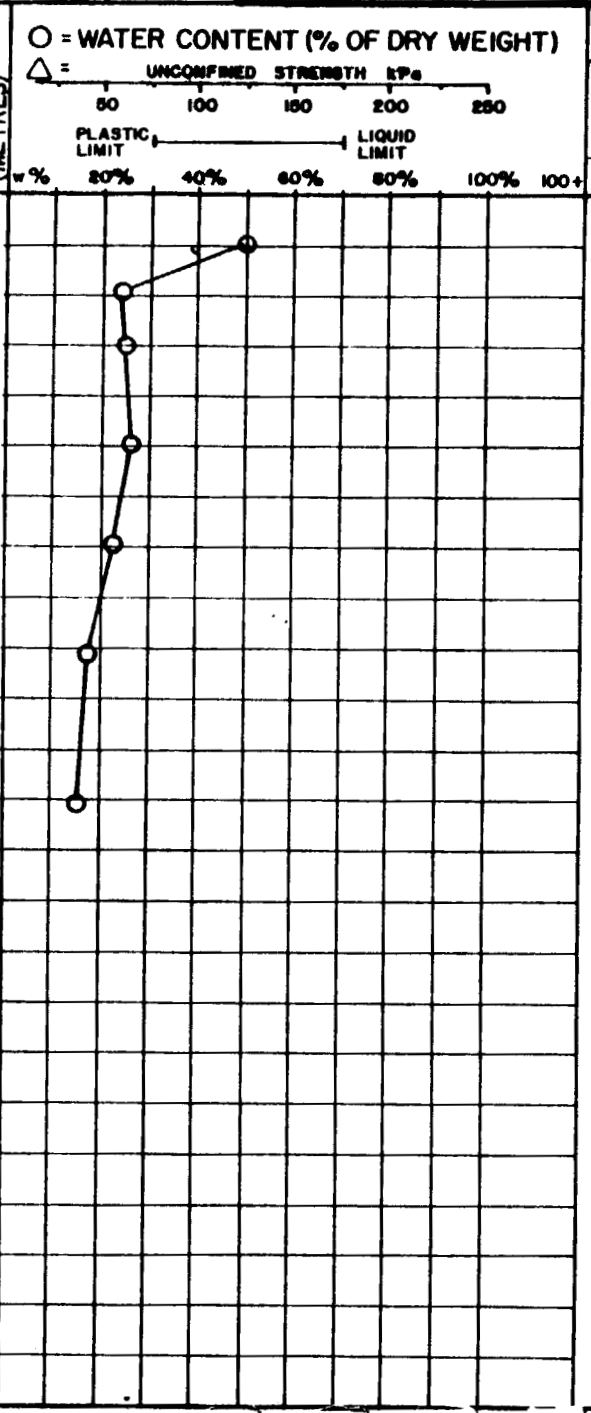
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/06	km 210	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
210+100	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
	CL	CLAY - SILTY ORGANICS									
2										SAT.	
4	ML	SILT.			1					WET	
6		- SANDY								WET-SAT.	
		FREE WATER 1.5m - 3.7m			2						
8	ML	- CLAYEY SANDY								SAT.	
10		3.1m			3						
12		CLAY - SILTY SANDY								WET	
		PEBBLES			4						
14	CL	LOW PLASTIC								WET	
16		+ PL TILL			5						
18											
20		6.1m			6					WET	
22		BOTTOM OF HOLE - 6.1m									
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



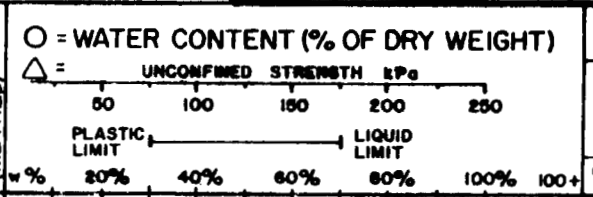
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/06	km 210	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
210+240	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	SILT-SANDY CLAYEY								WET	-NOT RECOMMENDED FOR CUT
4		SILT.			1					WET	
6	SM	SAND-SILT MIX 2.1 m			2					MOIST	
8		CLAY-SILTY SANDY +PL								WET	
10		LOW PLASTIC			3						
12	CL	PEBBLES								MOIST	
14		TILL 4.6 m			4					MOIST	
16		BOTTOM OF HOLE - 4.6 m			5						
18											
20					6						
22											
24					7						
26					8						
28											
30					9						
32											
34					10						
36					11						
38											



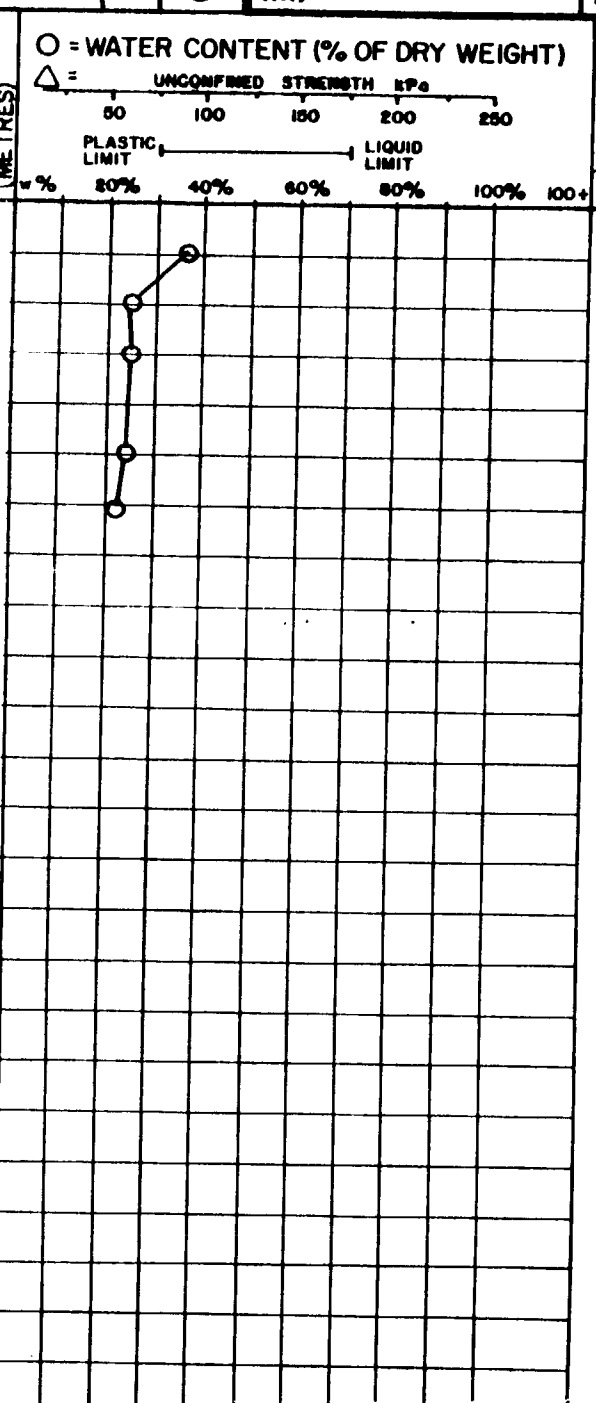
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 18/03/06	km 210	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
210+280	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	SILT-CLAYEY SANDY									
4		FREE WATER .9m - 2.4m			1					FREE WATER	
6										WET	
8	ML	SANDY			2					SAT.	
10	CL	CLAY-SILTY SANDY H.PLAS 2.7m 3.1m			3					WET	
12		BOTTOM OF HOLE - 3.1m								WET	
14					4						
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



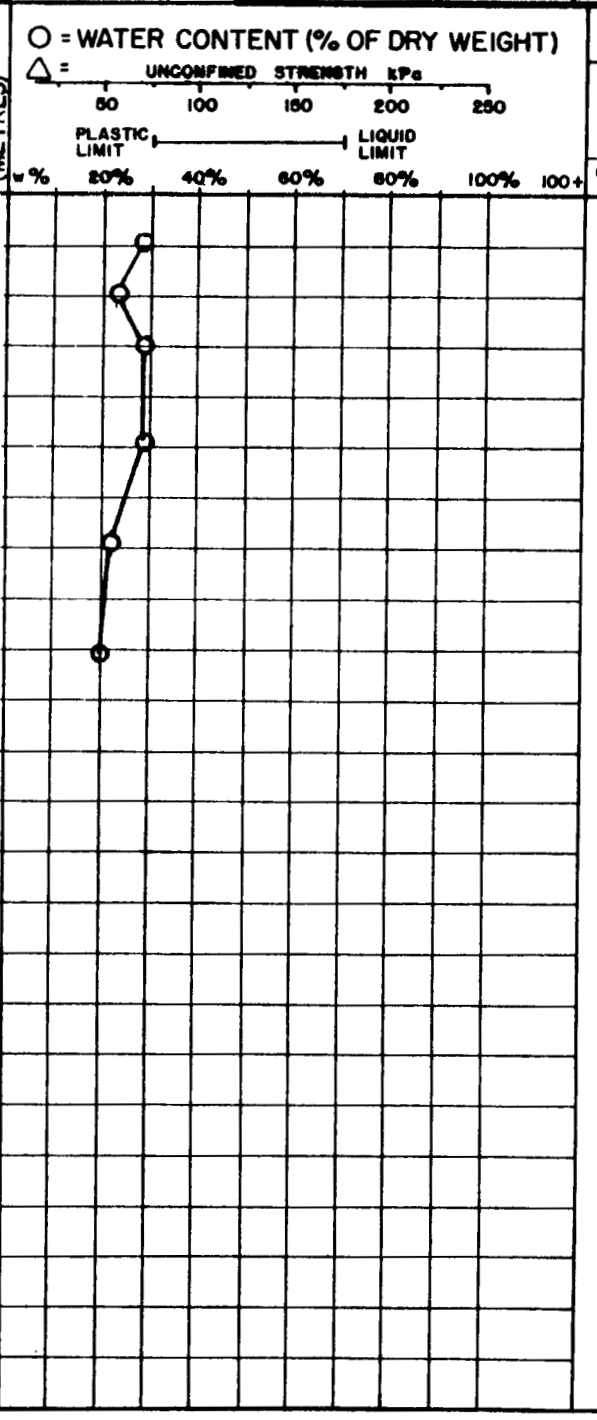
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/06	km 210	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
210+565	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2, 4, 6	ML	SILT - - SANDY - CLAYEY SANDY 2.1 m			1					WET-SAT WET SAT.	-NOT RECOMMENDED FOR CUT
8, 10, 12, 14	CL	CLAY - SANDY SILTY LOW PLASTIC FEW PLASTIC + P. 4.6 m			2, 3, 4					WET MOIST	
16		BOTTOM OF HOLE - 4.6 m			5					MOIST	
18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38					6, 7, 8, 9, 10, 11						



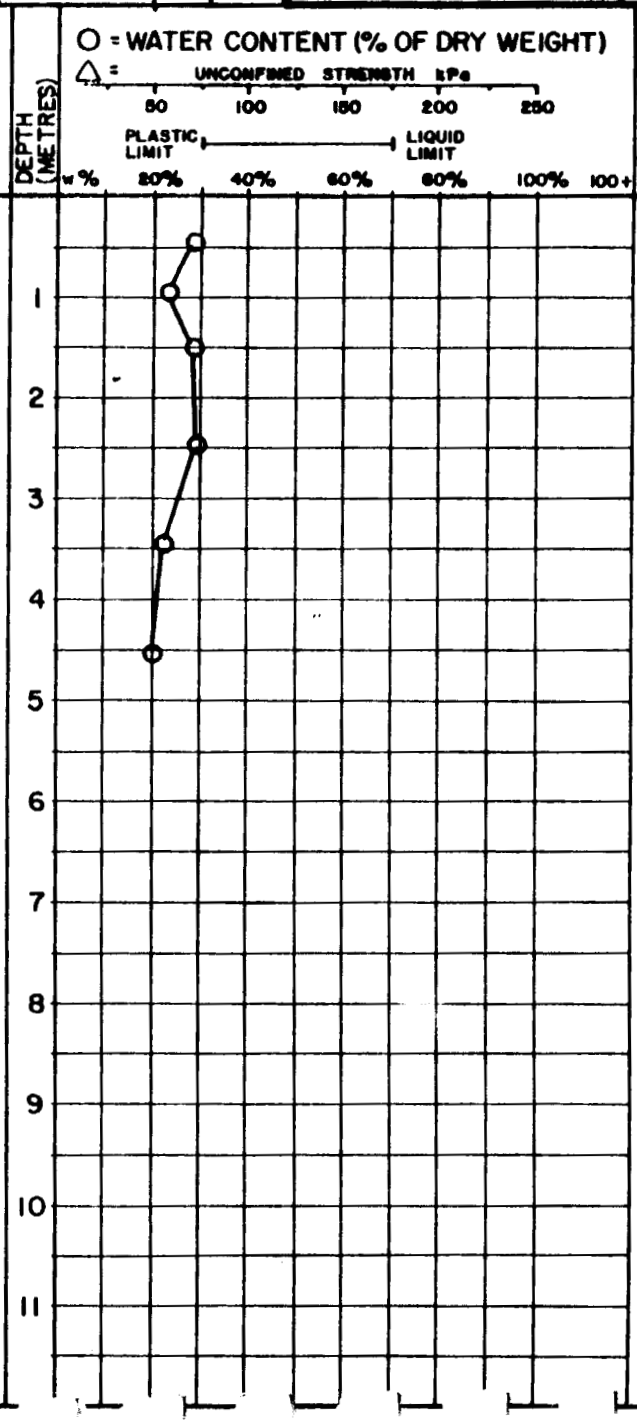
PUBLIC WORKS CANADA — DRILL HOLE REPORT

Liard Hwy.

TECH. Weber	RIG B-50	DATE 18/03/06	km 210	B.P. No.	HOLE No. 5

CHAINAGE	OFFSET
210+690	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT	REMARKS
	ML	Silt - Clayey			Wet - Sat.	
2	SM	Silt - Sand Mix			Wet	- Not recommended
4	ML	Pore Water .9m - 1.8m			Sat.	for cut.
6	ML	Silt - Clayey Sandy 2.1m				
8		Clay - Sandy Silty Low Plastic			Wet	
10	CL	+ P				
12					Wet	
14		4.6m			Wet	
16		Bottom of Hole - 4.6m				
18						
20						
22						
24						
26						
28						
30						
32						
34						
36						
38						



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

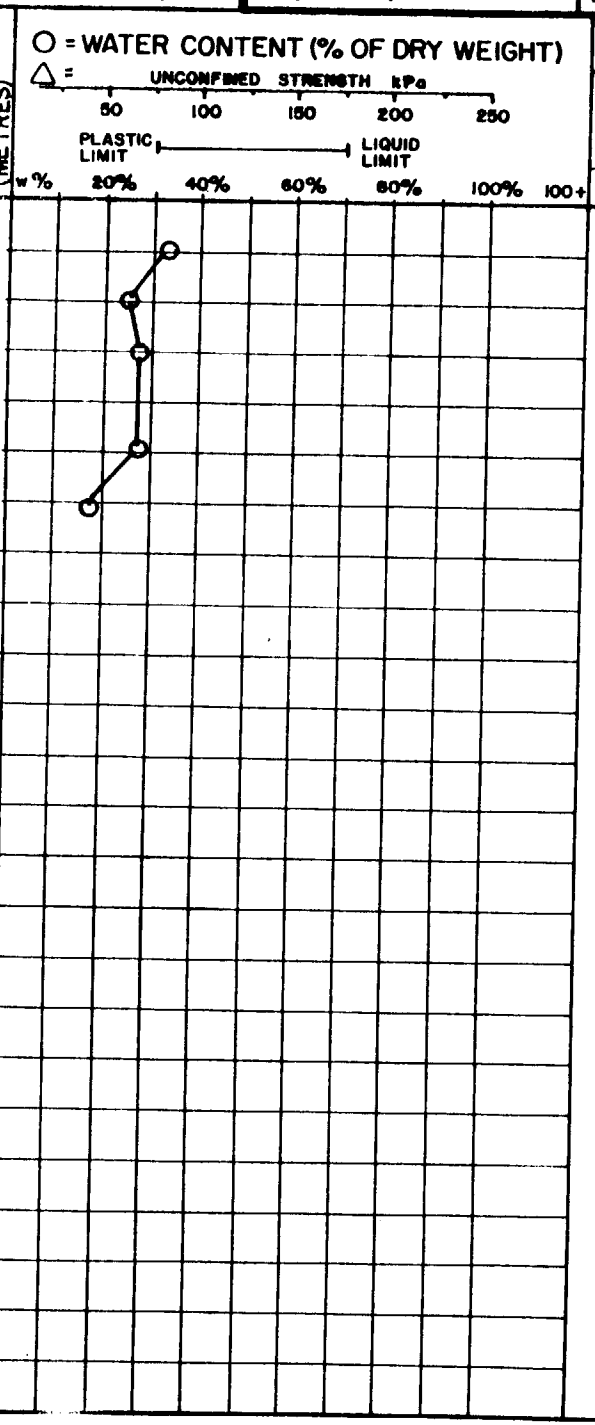
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/06	km 211	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
211+000	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		SILT - CLAYEY - ORGANICS								WET - SAT.	
4		- CLAYEY SANDY			1					MOIST - WET	
6	ML	FREE WATER 1.2m - 2.4m			2					SAT.	
8											
10		3.1m			3					SAT.	
12		BOTTOM OF HOLE - 3.1m								WET	
14					4						
16											
18					5						
20											
22					6						
24											
26					7						
28											
30					8						
32											
34					9						
36					10						
38					11						



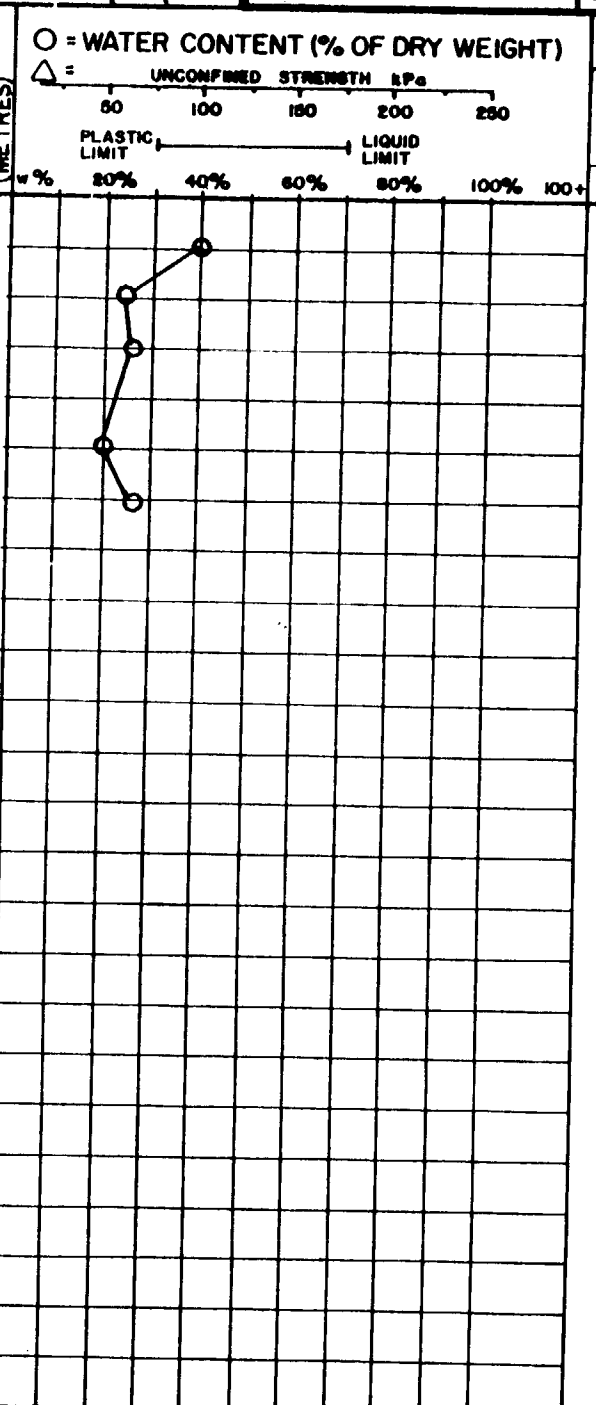
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/06	km 211	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
211 + 220	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	SILT - CLAYEY				
4		CLAYEY SANDY				
6		SANDY 1.5m - FREE WATER 1.8m			FREE WATER	
		2.1 m				
8	CL	CLAY - SILTY SANDY FEW PEBBLES LOW PLASTIC I_P			WET	
10		3.1 m			WET	
12		BOTTOM OF HOLE - 3.1 m			WET	
14						
16						
18						
20						
22						
24						
26						
28						
30						
32						
34						
36						
38						



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

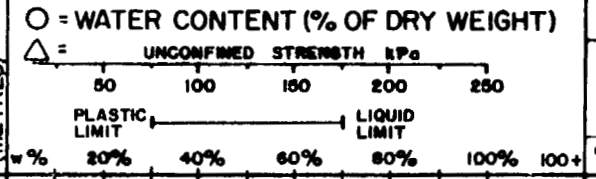
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD Hwy

TECH. PRONYCH	RIG B-61	DATE 78/03/05	km 211	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
211 + 620	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	SILT - CLAYEY ORGANIC TO .6m								MOIST	
4		- CLAYEY SATURATED AFTER 1.1m			1					WET	
6		1.8m								WET	
8	CL	CLAY - SILTY LOW PLASTIC + PL			2					WET	
10		3.1m			3					MOIST	
12		BOTTOM OF HOLE - 3.1 m									
14					4						
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30											
32					9						
34											
36					10						
38					11						

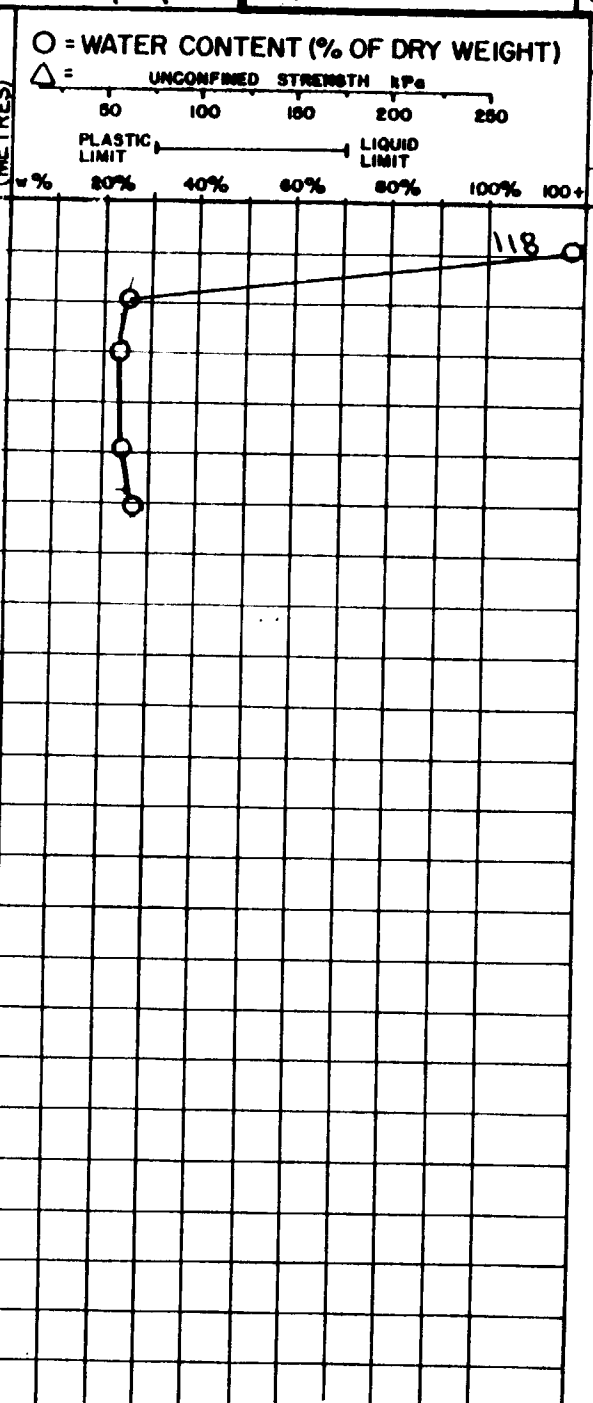


PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD Hwy.

TECH. Peanych | RIG B-61 | DATE 78/03/05 | km 211 | B.P. No. | HOLE No. 4

CHAINAGE	OFFSET
211+810	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT	REMARKS
	Pt	PEAT & CLAY				
2		.6m				
		SILT - CLAYEY			FREE WATER	
4					WET	
6	ML	SILT			MOIST	
8		CLAYEY			WET	
10	CL	CLAY - SILTY 3.1m			WET	
		BOTTOM OF HOLE - 3.1 m				



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

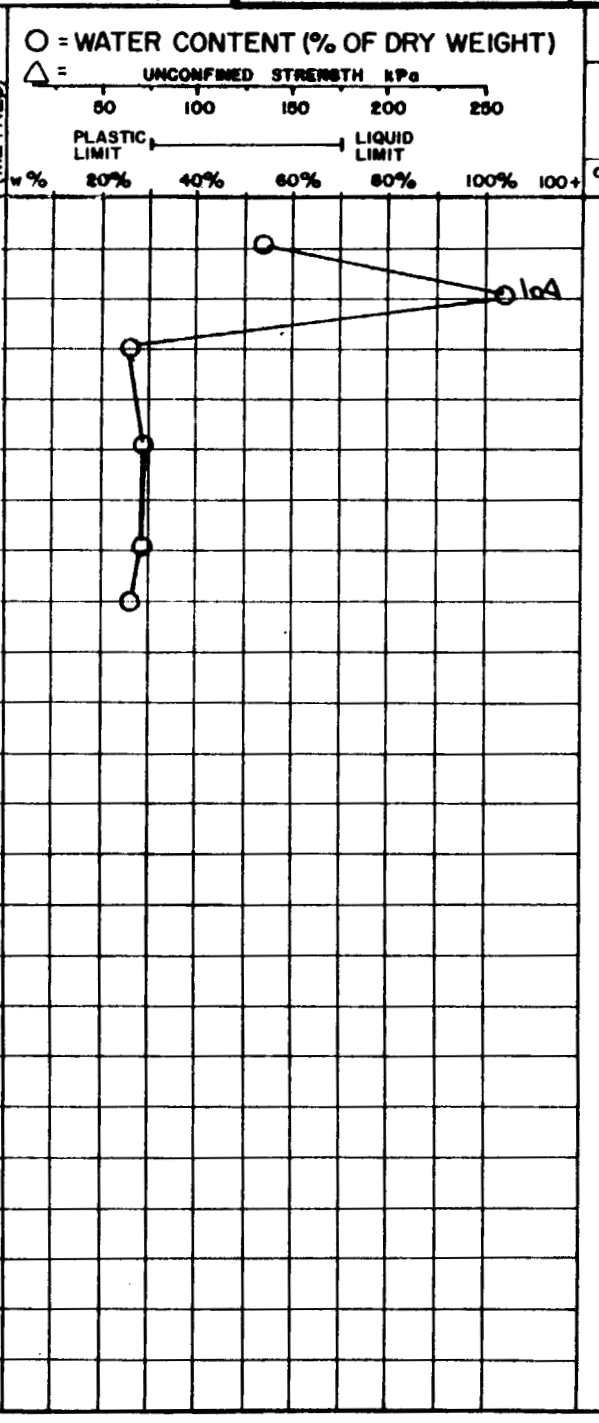
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/05	km 212	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
212+200	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	SILT - CLAYEY .6m								FREEWATER	
4	Pt	PEAT 1.2m			1					MOIST	
6	ML	SILT. CLAYEY								WET	
8					2					WET	
10					3						
12										WET	
		4m			4					WET	
14		BOTTOM OF HOLE - 4m									
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30											
32					9						
34											
36					10						
38					11						



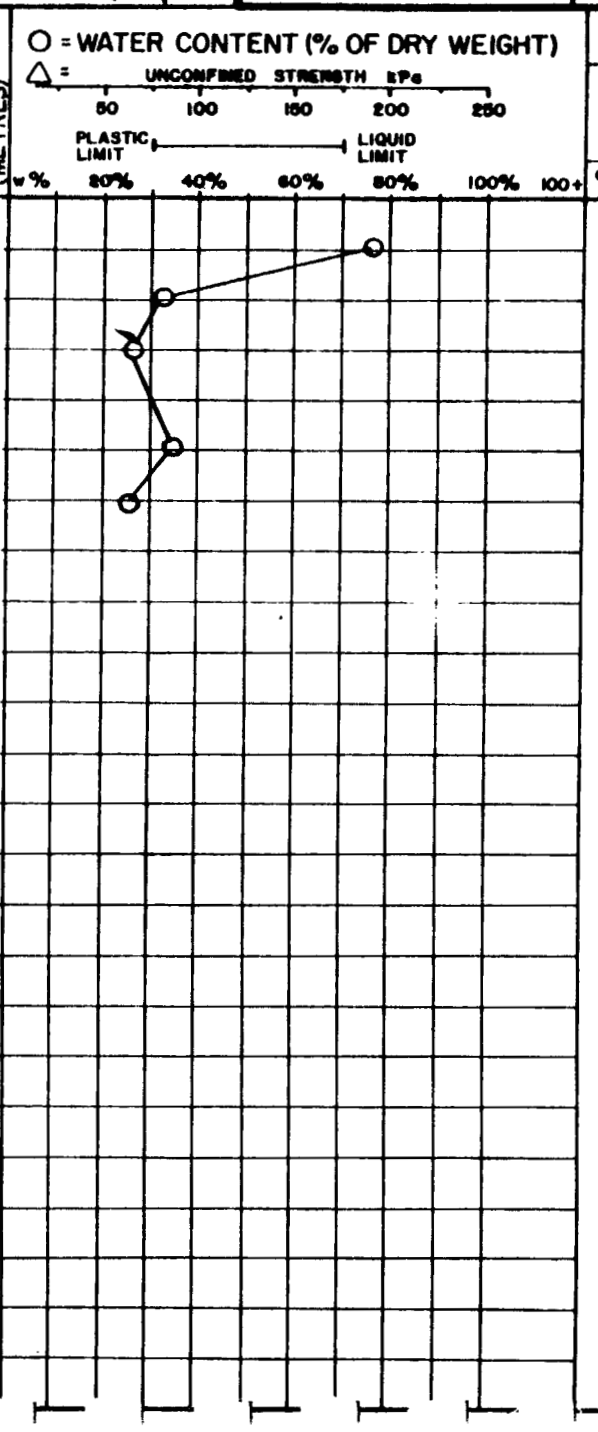
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/05	km 212	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
212+500	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
	Pt	PEAT & CLAY									
2		.6m								FREE WATER	
4		SILT - CLAYEY			1					WET	
6	ML	SILT								WET	
8		- CLAYEY			2					WET	
10		3.1m			3					WET	
		BOTTOM OF HOLE 3.1m									
12					4						
14											
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											

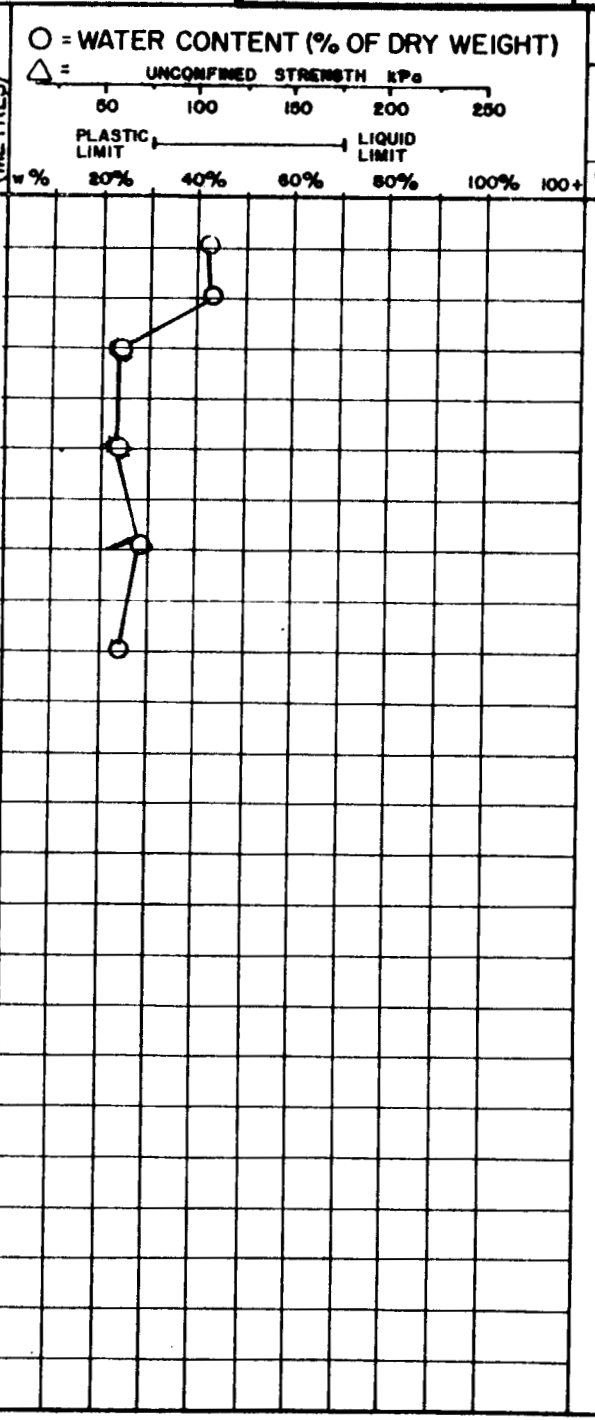


PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/05	km 212	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
212+675	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	SILT - CLAYEY								FREE WATER	
4					1					FREE WATER	
6		SANDY								WET	
		2.1m			2						
8		CLAY - SILTY								MOIST	
10		- MED. PLASTIC			3						
12	CI	+ PL								MOIST	
14					4						
		4.6m								MOIST-WET	
16		BOTTOM OF HOLE - 4.6m			5						
18											
20					6						
22											
24					7						
26											
28					8						
30											
32					9						
34											
36					10						
38					11						



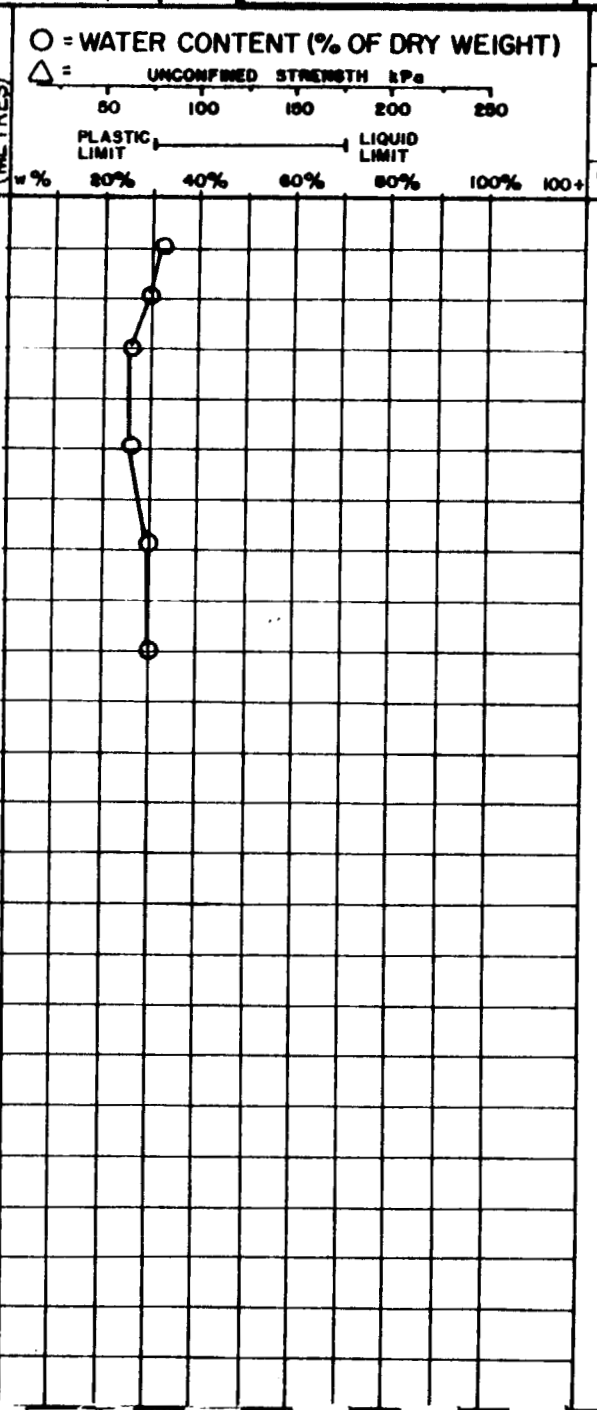
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD Hwy.

TECH. PRONYCH	RIG B-61	DATE 78/03/05	km 212	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
212+920	4

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		SILT - CLAYEY								SAT.	
4					1					SAT.	
6	ML									WET.	
8					2					SAT.	
10		3.1 m			3						
12	CL	CLAY - SILTY								MOIST-WET	
14	CI	LOW - MED PLASTIC			4					MOIST-WET	
		4.6 m									
16		BOTTOM OF HOLE - 4.6 m			5						
18											
20					6						
22											
24					7						
26					8						
28											
30					9						
32											
34					10						
36											
38					11						



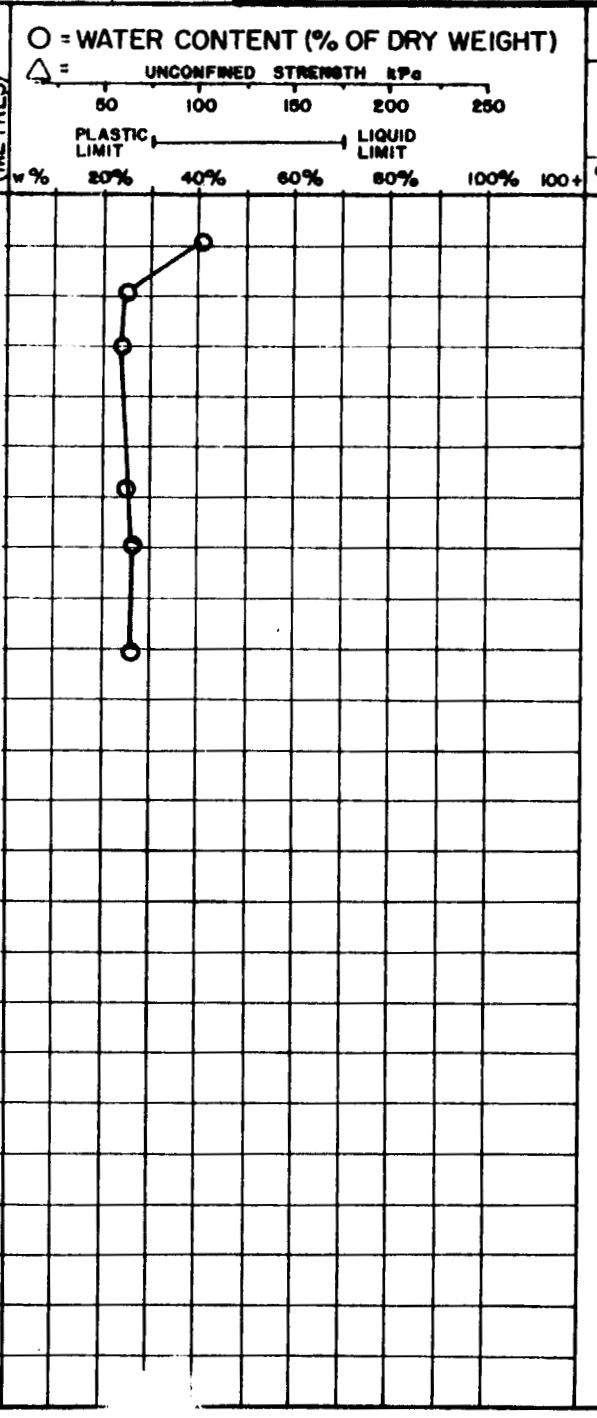
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH.	RIG	DATE	km	B.P. No.	HOLE No.
PRONY CH	B-61	78/03/05	213		1

CHAINAGE	OFFSET
213 + 32 m	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		SILT - CLAYEY								FREE WATER	
4					1					MOIST	
6	ML	SANDY			2					WET	
8		2.4 m									
10		CLAY - SILTY SANDY + PL			3					WET	
12	CL	- PEBBLES LOW PLASTIC			4					WET	
14		4.6 m								WET	
16		BOTTOM OF HOLE - 4.6 m			5						
18											
20					6						
22											
24					7						
26											
28					8						
30											
32					9						
34					10						
36					11						
38											



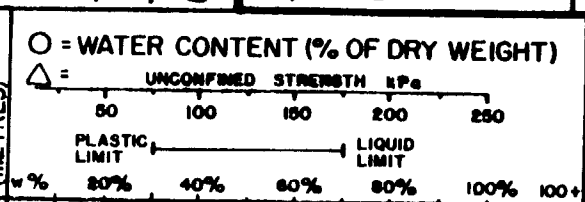
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH.	RIG	DATE	km	B.P. No.	HOLE No.
PRONYCH	B-61	78/03/05	213		2

CHAINAGE	OFFSET
213+680	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	RELATIVE MOISTURE CONTENT	REMARKS
2	CI	CLAY - SILTY - MED PLASTIC			1	SAT.	- SHALLOW CUT IN KNOB OK. WITH DITCHING
4						MOIST	
6		- SILTY SANDY			2	WET	
8	CL	LOW PLASTIC +Pl				MOIST	
10					3		
12						MOIST-WET	
14					4		
		4.6m					
16		Bottom of Hole - 4.6m			5	WET	
18							
20					6		
22							
24					7		
26							
28					8		
30							
32					9		
34							
36					10		
38					11		

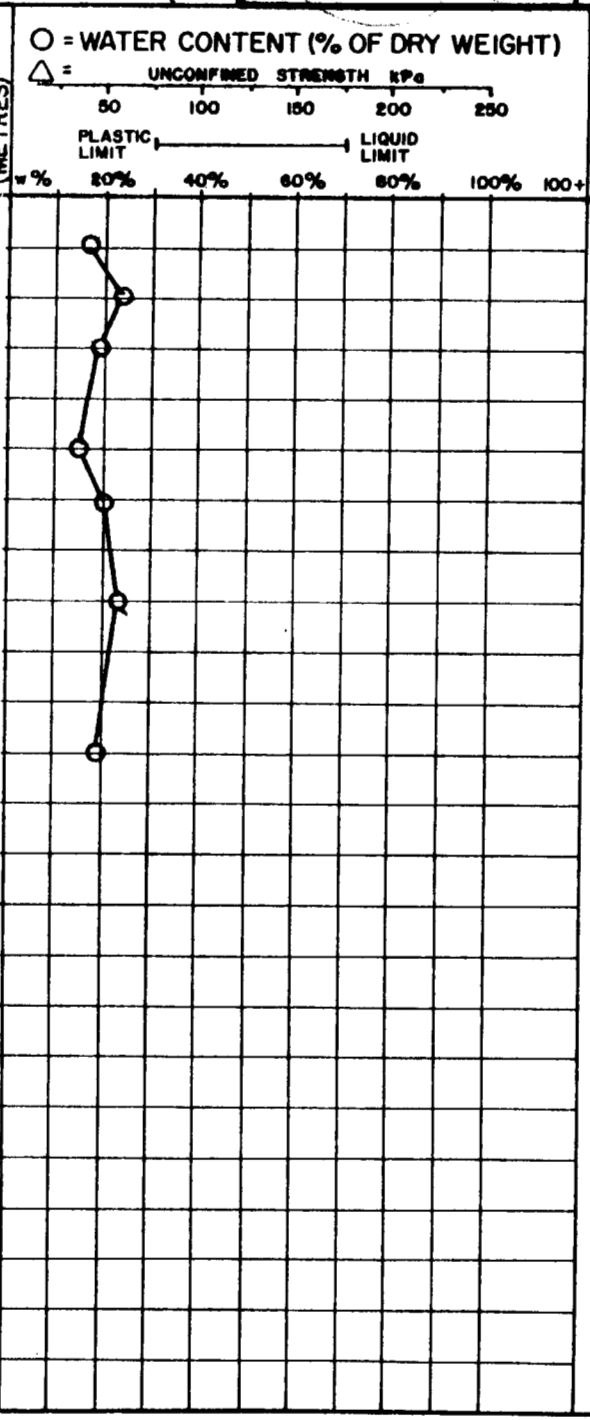


GRAIN-SIZE ANALYSIS			
CLAY %	SILT %	SAND %	GRAVEL %

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. PRONYCH | RIG B-61 | DATE 78/03/06 | km 241 | B.P. No. | HOLE No. 1

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
		SILT - CLAYEY								MOIST	213+980	℄	
2	ML	SILT -			1					WET			
4		1.2 m											
		CLAY - SILTY SANDY								MOIST			
6		- PEBBLES			2								
		- TILL											
8		+ P.								MOIST			
10	CL	LOW PLASTIC			3					MOIST			
12													
14					4					WET			
16													
					5								
18		4.5 m								WET			
20		BOTTOM OF HOLE - 4.5 m			6								
22													
24					7								
26													
28					8								
30					9								
32													
34					10								
36					11								
38													

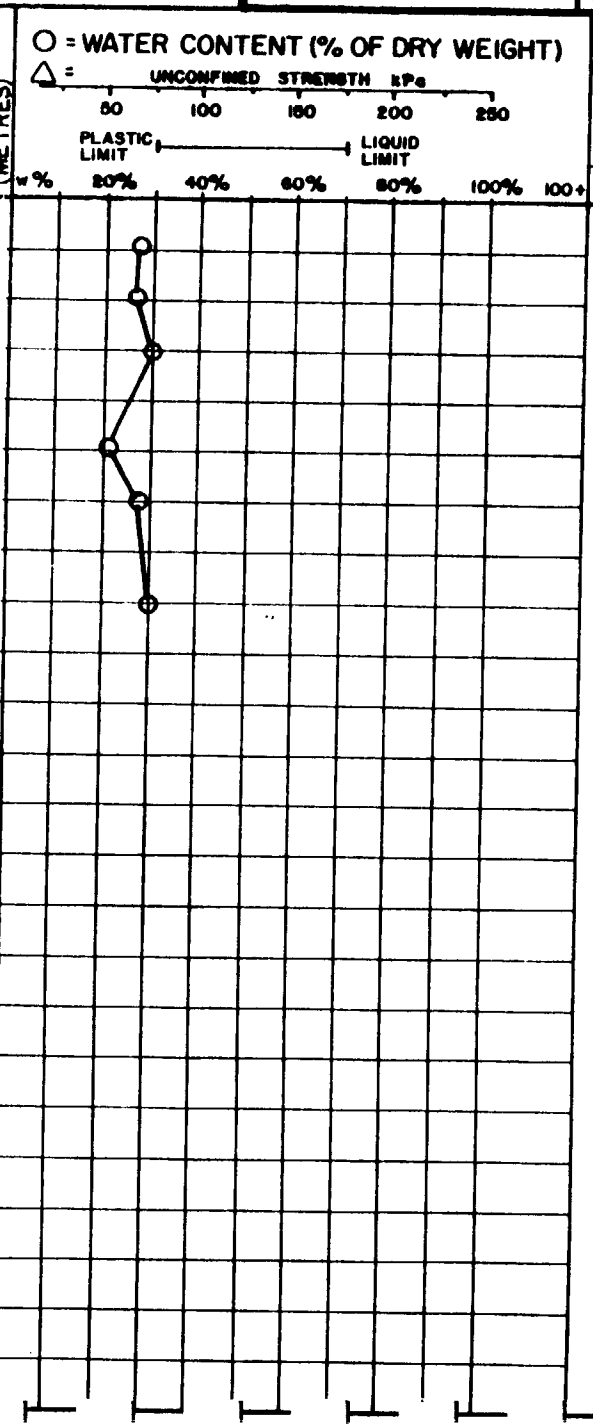


PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD Hwy.

TECH. PRONYCH	RIG B-61	DATE 78/03/05	km 214	B.P. No.	HOLE No. 1A

CHAINAGE	OFFSET
214+170	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
	ML	SILT									
2	CL	SILT CLAYEY - CLAY SILTY								POOR WATER	
4					1					WET	
6										WET-SAT	
8		CLAY-SILTY SANDY PEBBLES + PL			2					MOIST-WET	
10	CL	LOW PLASTIC			3					WET	
12		4.0 m									
14		BOTTOM OF HOLE - 4.0 m			4					WET	
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30											
32					9						
34											
36					10						
38					11						



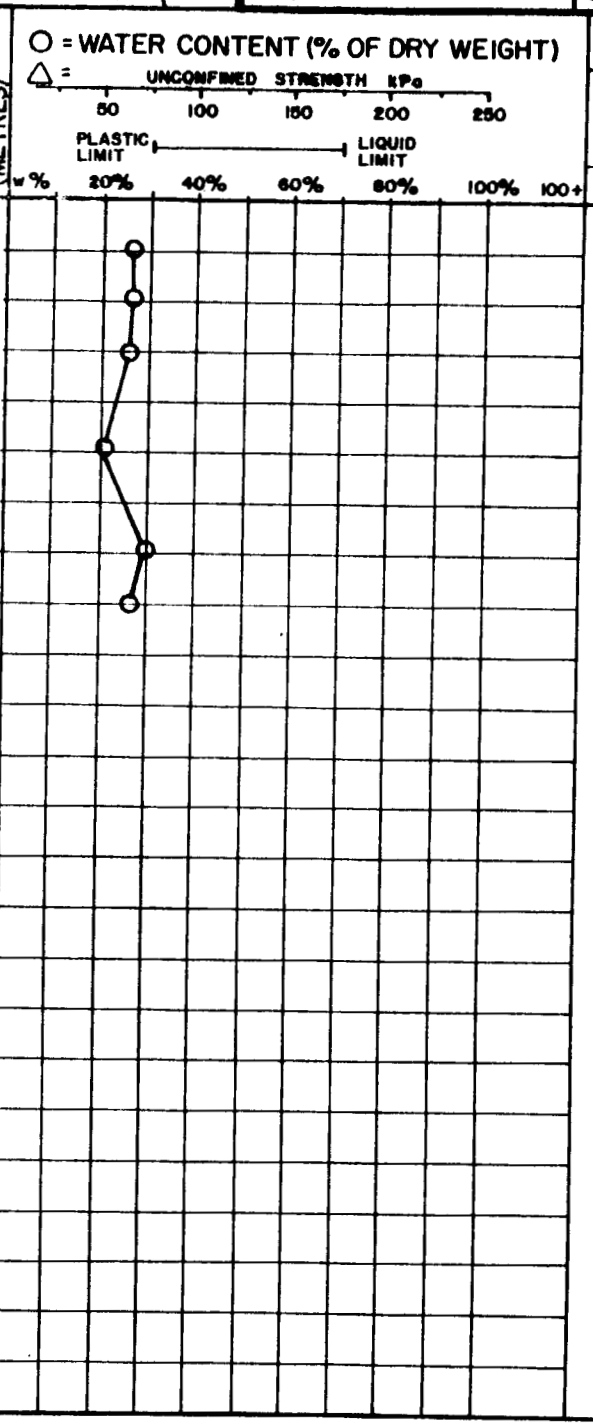
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH.	RIG	DATE	km	B.P. No.	HOLE No.
PRONYCH	B-61	78/03/05	214		2

CHAINAGE	OFFSET
214+320	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	SILT-CLAYEY								WET	
4		1.5 m			1					WET	
6		CLAY - SILTY SANDY								MOIST-WET	
8		PEBBLES			2						
10	CL	+PL								MOIST-WET	
		LOW PLASTIC			3						
12										MOIST-WET	
		4.0m			4						
14		BOTTOM OF HOLE - 4.0m								MOIST-WET	
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30											
32					9						
34											
36					10						
38					11						

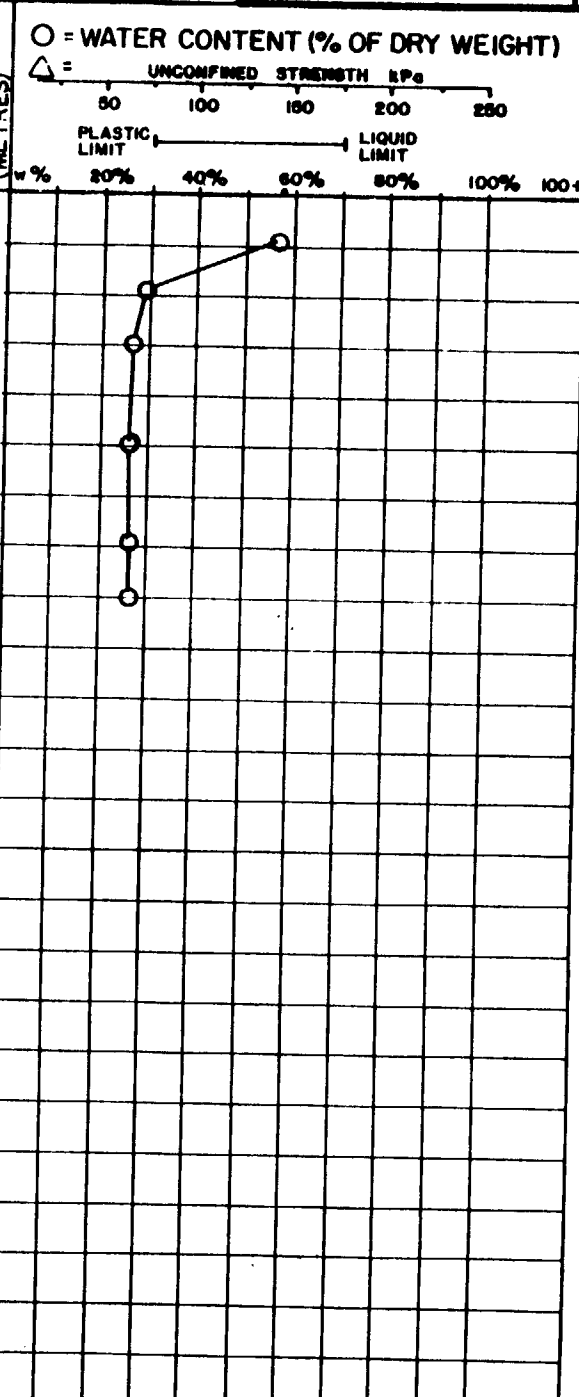


PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. PRONYCH | RIG B-61 | DATE 78/03/06 | km 214 | B.P. No. | HOLE No. 3

CHAINAGE	OFFSET
214 + 420	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		SILT - CLAYEY									
4	ML	SILT.			1					FREE WATER	
										SAT.	
6		· CLAYEY SANDY 1.8m								SAT.	
		CLAY - SILTY SANDY			2						
8		FEW PEBBLES									
10	CL - CI	LOW-MED. PLASTIC								WET	
		+ PL			3						
12		4.0m								WET	
14		BOTTOM OF HOLE. 4.0m			4					WET	
16											
18					5						
20											
22					6						
24											
26					7						
28											
30					8						
32											
34					9						
36											
38					10						
					11						



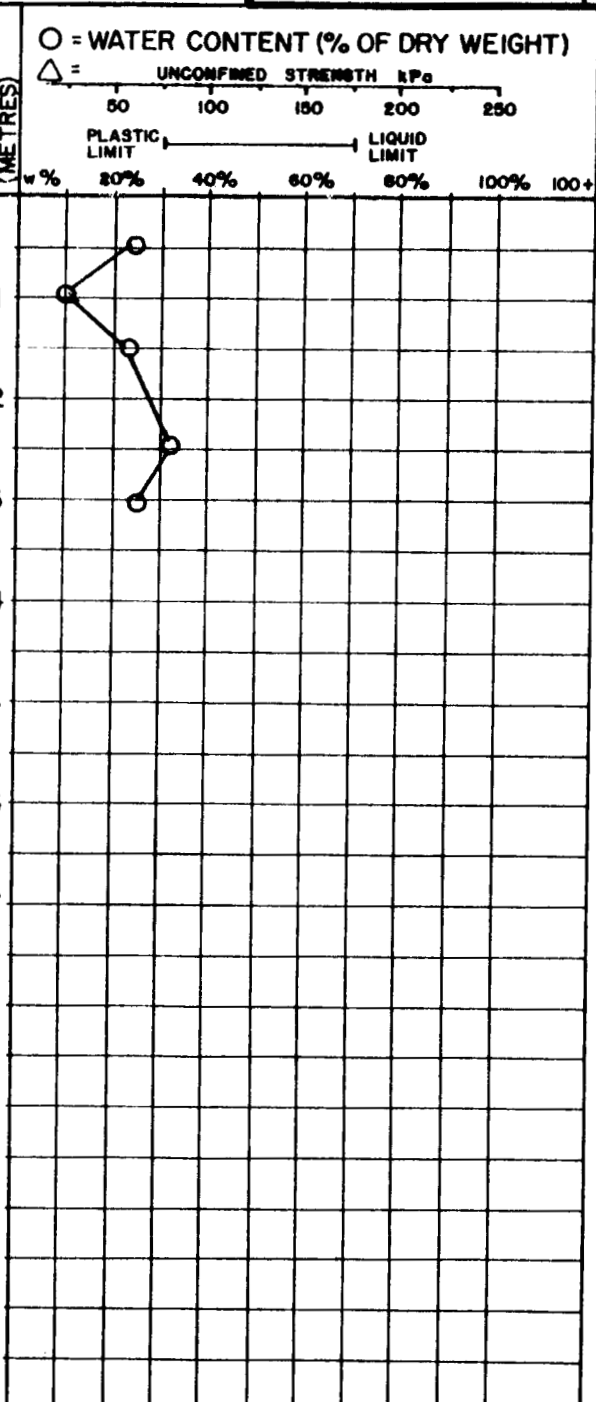
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/06	km 214	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
214 + 695	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
	Pt	PEAT .1m								
2		SILT - CLAYEY							SAT.	
4	ML	SILT							MOIST	
		- SANDY							SAT.	
6		1.8m								
		CLAY - SILTY								
8	CL	LOW PLASTIC							WET	
		+ Pt								
10		3.1m							WET	
		BOTTOM OF HOLE. 3.1m								
12										
14										
16										
18										
20										
22										
24										
26										
28										
30										
32										
34										
36										
38										



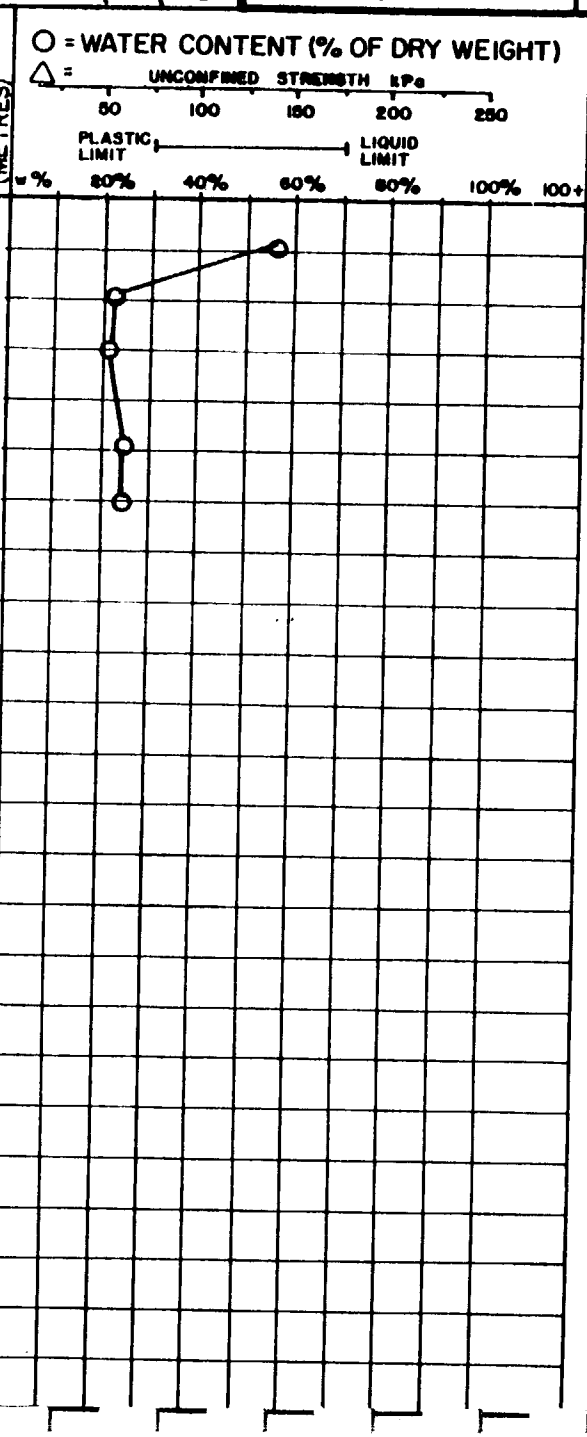
PUBLIC WORKS CANADA — DRILL HOLE REPORT

Liard Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/06	km 214	B.P. No.	HOLE No. 5

CHAINAGE	OFFSET
214+900	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	Cont - Clayey - Sandy			1					Poorly Wet.R	
4										Moist	
6		1.8 m								Moist-Wet	
8	CL	Clay - Silty Sandy Pebbles Low Plastic + Pl			2					Moist-Wet	
10		3.1 m			3					Moist-Wet	
12		Bottom of Hole - 3.1 m									
14					4						
16											
18					5						
20											
22					6						
24											
26					7						
28											
30					8						
32											
34					9						
36					10						
38					11						

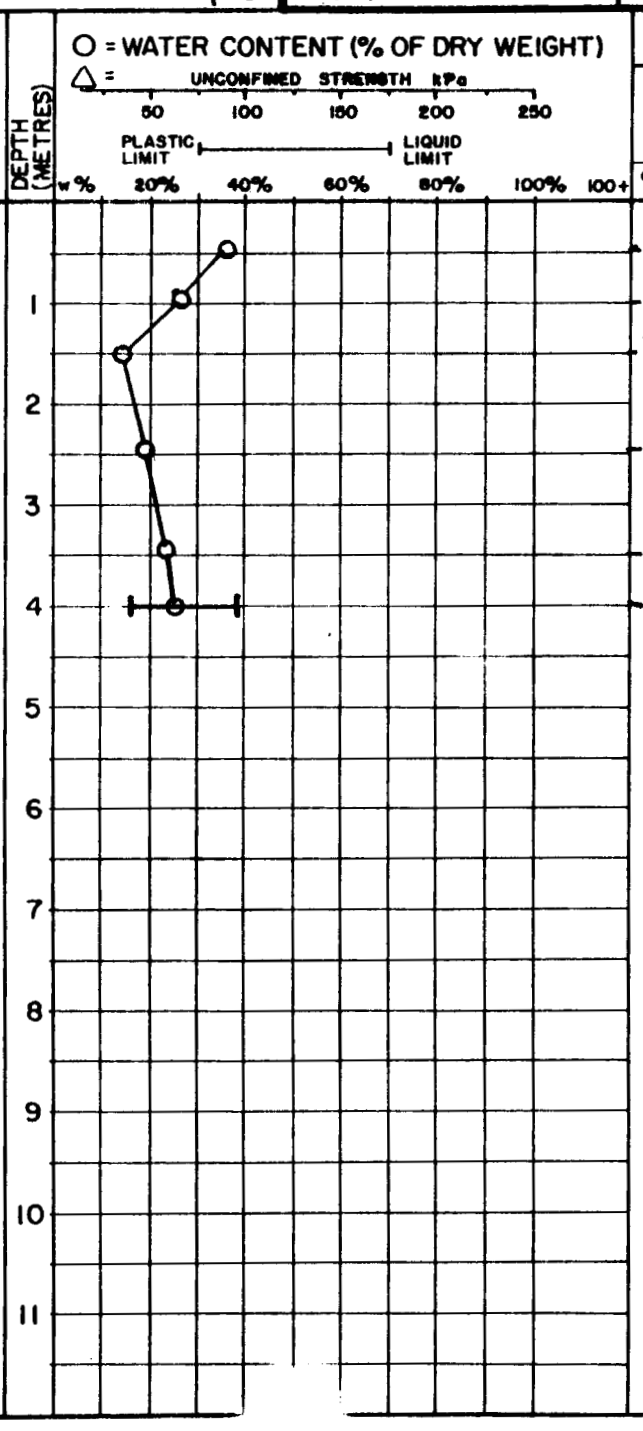


PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH.	RIG	DATE	km	B.P. No.	HOLE No.
PRONYCH	B-61	78/03/06	215		1

CHAINAGE	OFFSET
215+010	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
		SILT-CLAYEY		
2	ML	SILT		
4		1.2 m		
		SAND-SILTY		
6		FREE WATER AFTER 2.4 m		
8	SM			
10		3.4 m		
		CLAY-SILTY SANDY PEBBLES		
12	CL	4.0 m		
14		BOTTOM OF HOLE-4.0 m		
16				
18				
20				
22				
24				
26				
28				
30				
32				
34				
36				
38				



GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
99	-	1	0	SAT.	CUT SECTION - WELL ABOVE OPTIMUM
95	-	5	0	MOIST-WET	
37	-	63	0	MOIST	
23	-	77	0	WET	
44	-	56	0	FREE WATER	
77	-	22	1	WET	

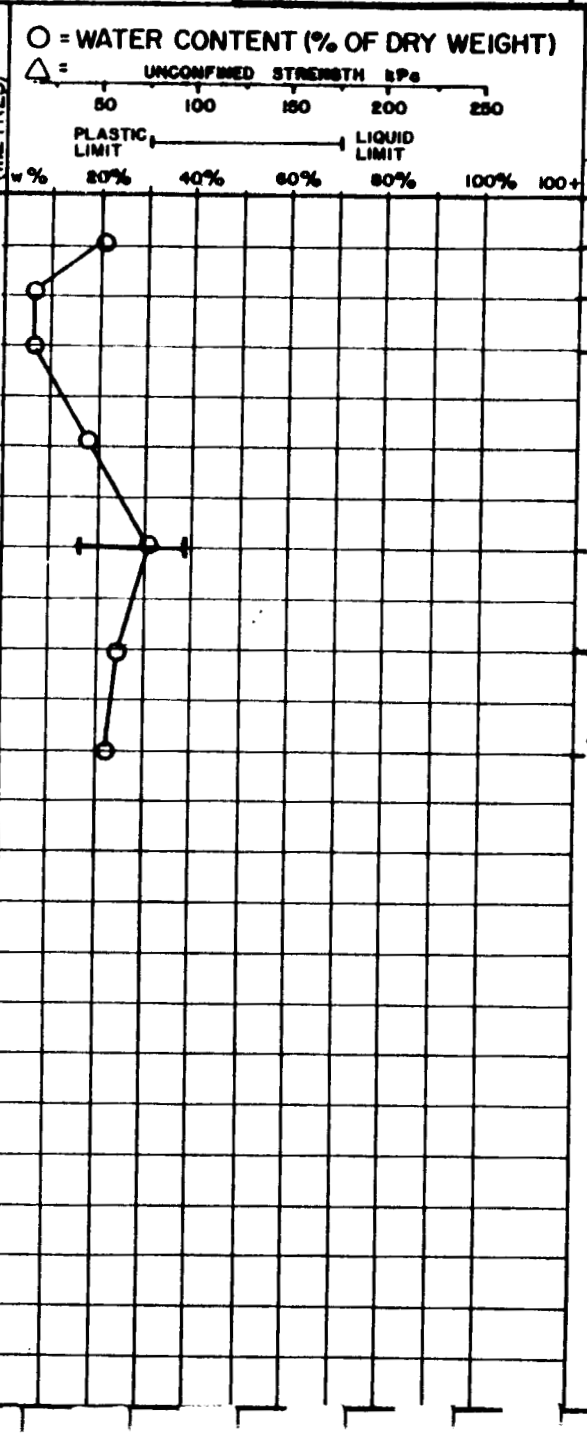
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/06	km 215	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
215+100	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	SILT - CLAYEY				89	-	11	0	MOIST	CUT SECTION
		.8m									
4		SAND - SILTY			1	24	-	76	0	MOIST	- ABOVE OPTIMUM
6	SM					27	-	73	0	MOIST	
8		2.4 m			2						
10		CLAY - SILTY								MOIST	
		LOW PLASTIC			3						
12	CL	+ P_L				91	-	9	0	MOIST-WET	
14		- SILTY SANDY			4						
16						76	-	22	2	MOIST	
					5						
18		5.5 m				77	-	22	1	MOIST	
20		BOTTOM OF HOLE - 5.5m			6						
22											
24					7						
26											
28					8						
30											
32					9						
34											
36					10						
38					11						



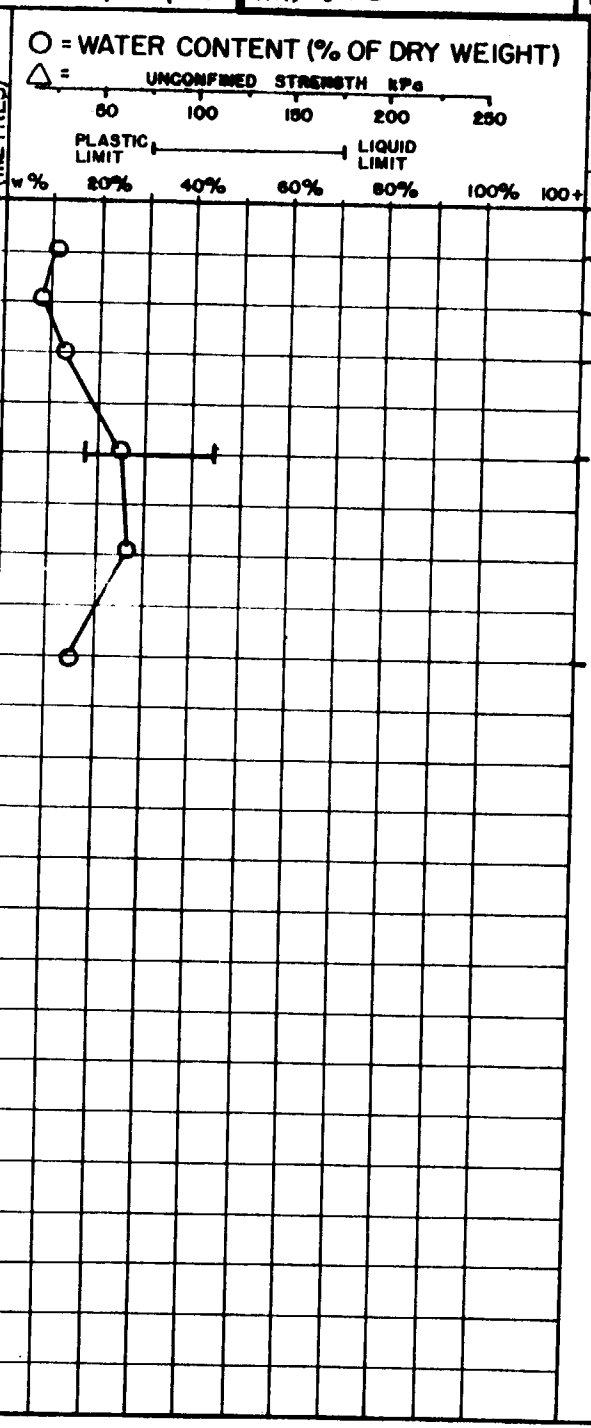
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD Hwy.

TECH. PRONYCH	RIG B-61	DATE 78/03/06	km 215	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
215+200	4

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	SM	SAND - SILTY				31	69	0		MOIST	CUT SECTION
4					1	17	83	0		MOIST	- ABOVE OPTIMUM
6		1.8 m				28	72	0		MOIST	BELOW 2 m.
8	CI	CLAY - SILTY SANDY MED. PLASTIC +P			2	64	34	2		MOIST	
10					3						
12										WET	
14		4.6 m			4						
16		BOTTOM OF HOLE. 4.6 m				68	29	3		MOIST	
18					5						
20											
22					6						
24											
26					7						
28											
30					8						
32											
34					9						
36					10						
38					11						



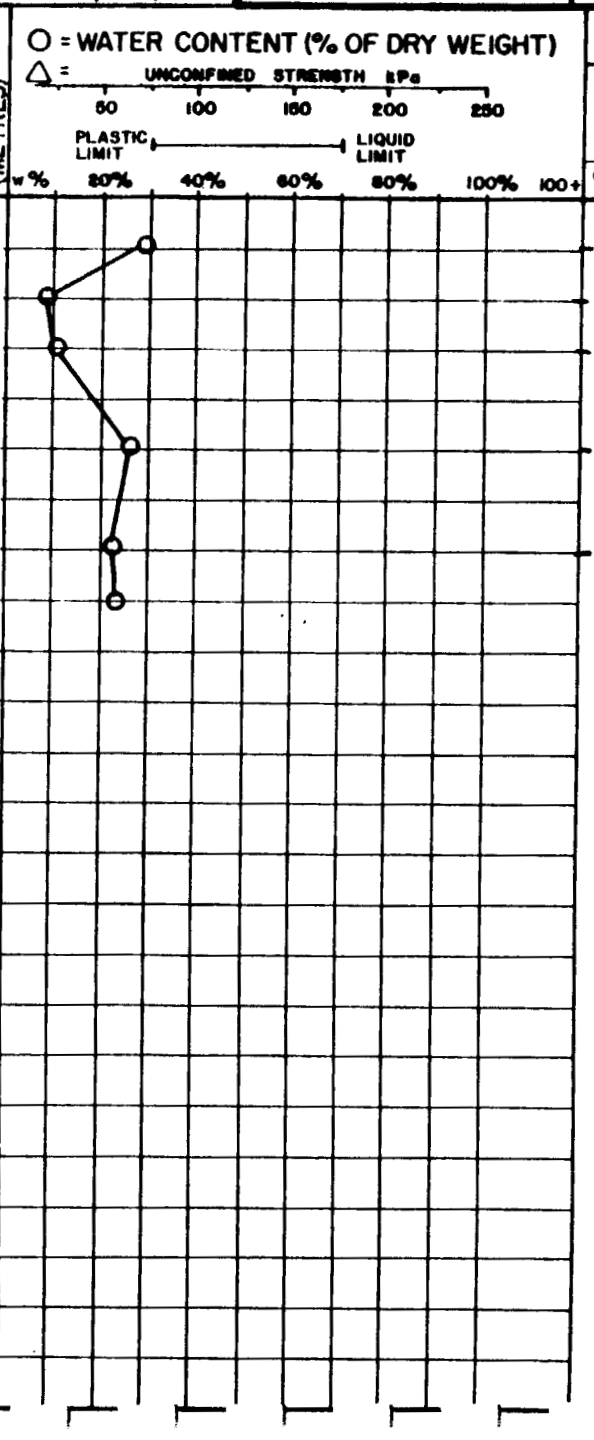
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD Hwy.

TECH.	RIG	DATE	km	B.P. No.	HOLE No.
PRONYCHI	B-65	78/03/06	215		4

CHAINAGE	OFFSET
215+335	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION
2	ML	SILT - CLAYEY SANDY		
		.6 m		
4	SM	SAND - SILTY		
6		2.1 m		
8	CL	CLAY - SILTY SANDY		
10		LOW PLASTIC		
12		+P$_L$		
		4 m		
14		BOTTOM OF HOLE - 4.0 m		
16				
18				
20				
22				
24				
26				
28				
30				
32				
34				
36				
38				



GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
81	19	0		WET	CUT SECTION
27	73	0		MOIST	- WELL ABOVE
18	82	0		MOIST	OPTIMUM BELOW
81	13	0		WET	2 m.
72	27	1		WET	
				MOIST-WET	

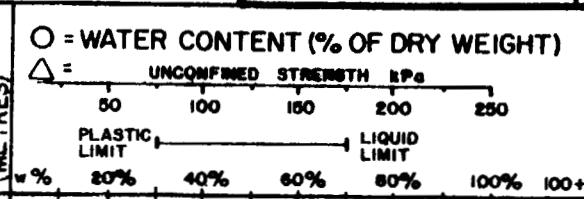
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY

TECH. PRONYCH	RIG B-61	DATE 78/03/06	km 215 - 5	B.P. No.	HOLE No. 5

CHAINAGE	OFFSET
215+500	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	SILT - .9m				94	- 6	0		FREE WATER	-SUBSOIL WELL ABOVE OPTIMUM
4	ML	SILT - SANDY 1.3m			1	87	- 13	0		MOIST-WET	
6	CI	CLAY - SILTY SANDY MED. PLASTIC			2	73	- 26	1		MOIST	
8						91	- 9	0		MOIST-WET	
10		3.1 m			3					MOIST-WET	
12		BOTTOM OF HOLE - 3.1 m									
14					4						
16					5						
18					6						
20					7						
22											
24					8						
26											
28					9						
30											
32					10						
34											
36					11						
38											



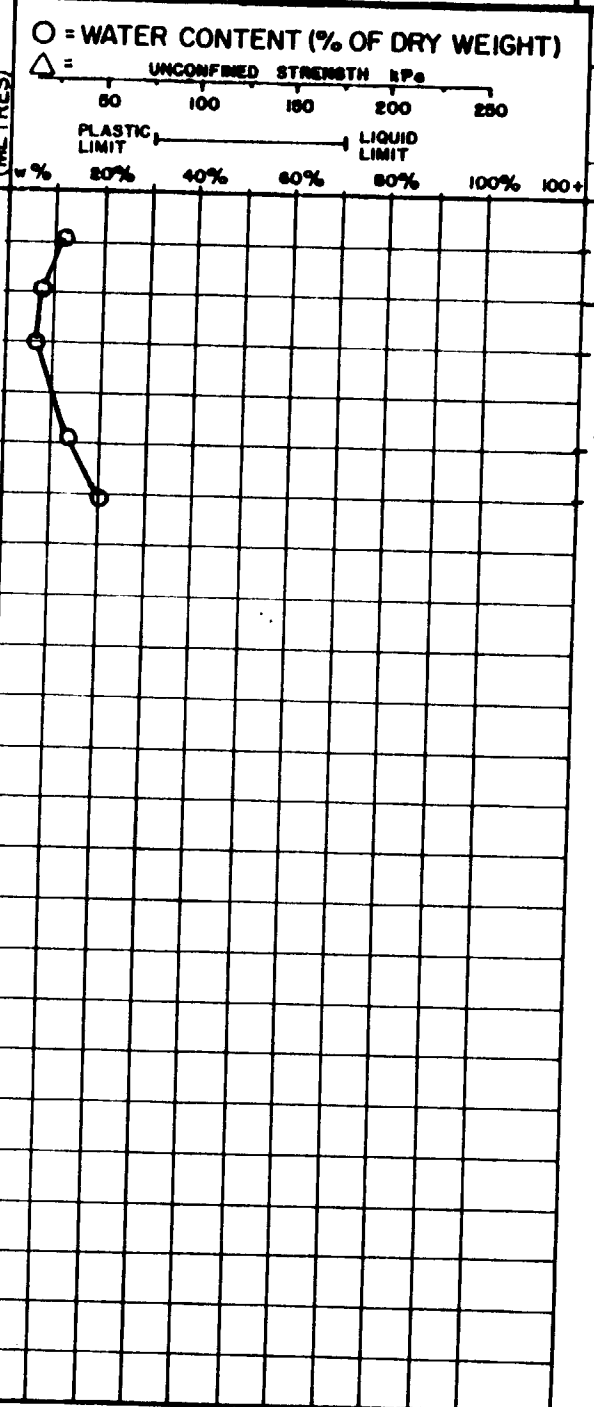
PUBLIC WORKS CANADA — DRILL HOLE REPORT

WIARD Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/06	km 215	B.P. No.	HOLE No. 6

CHAINAGE	OFFSET
215+570	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	Silt - Sandy									
		.9m									
4		Sand - Silty									
6	SM				1	5A-	46	0		Moist	- O.K. for shallow cut
8					2	18-	82	0		Moist	
10		3.1m			3	14-	86	0		Moist	
12		Bottom of Hole - 3.1m				26-	74	0		Moist-Wet	
14						13-	87	0		Wet-Sat.	
16											
18											
20											
22											
24											
26											
28											
30											
32											
34											
36											
38											



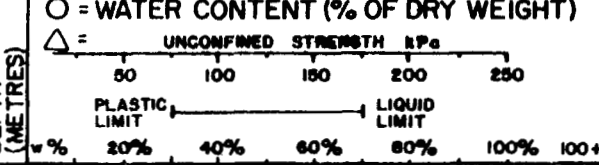
PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/06	km 215	B.P. No.	HOLE No. 7

CHAINAGE	OFFSET
215+880	℄

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	RELATIVE MOISTURE CONTENT
2	ML	SILT - CLAYEY CLAYEY SANDY			1	WET MOIST
4		1.2 m				
6	CL	CLAY - SILTY SANDY - FEW PEBBLES - LOW PLASTIC + PL SILTY			2	MOIST
8						WET
10		3.1 m			3	WET
12		BOTTOM OF HOLE 3.1 m				
14					4	
16					5	
18						
20					6	
22						
24					7	
26					8	
28						
30					9	
32						
34					10	
36					11	
38						



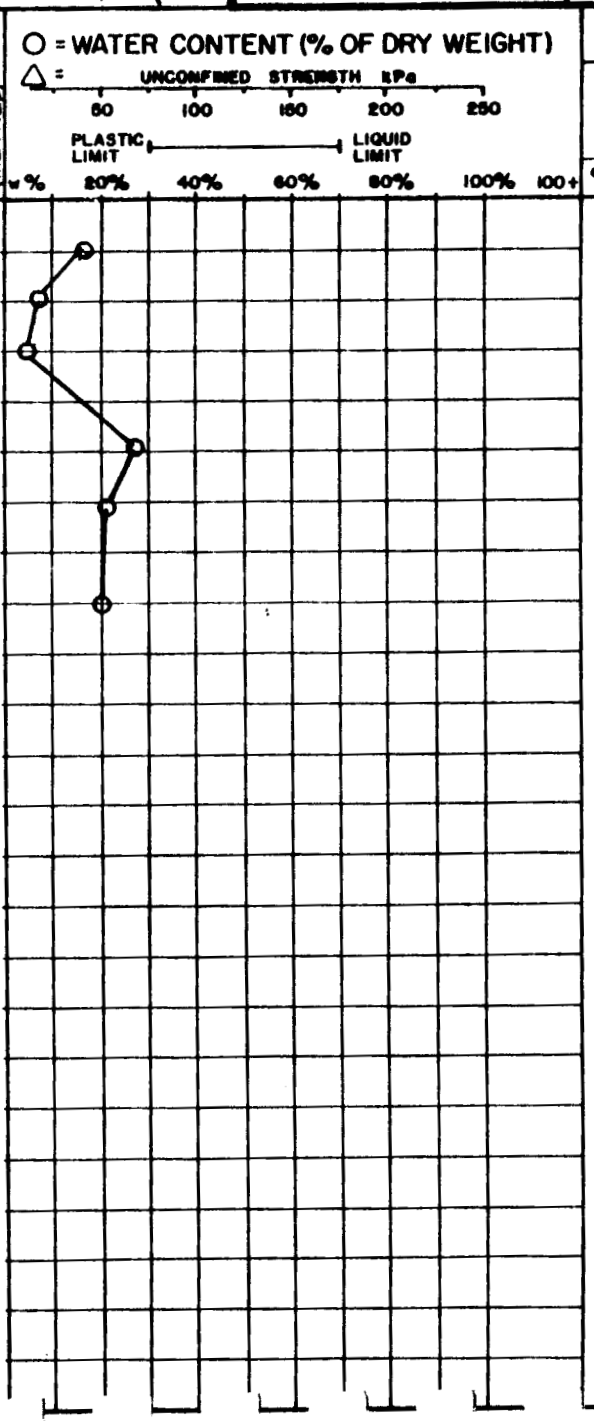
GRAIN-SIZE ANALYSIS			
CLAY %	SILT %	SAND %	GRAVEL %

PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD Hwy.

TECH. PRONYCH	RIG B-61	DATE 78/03/06	km 216	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
216+140	℄

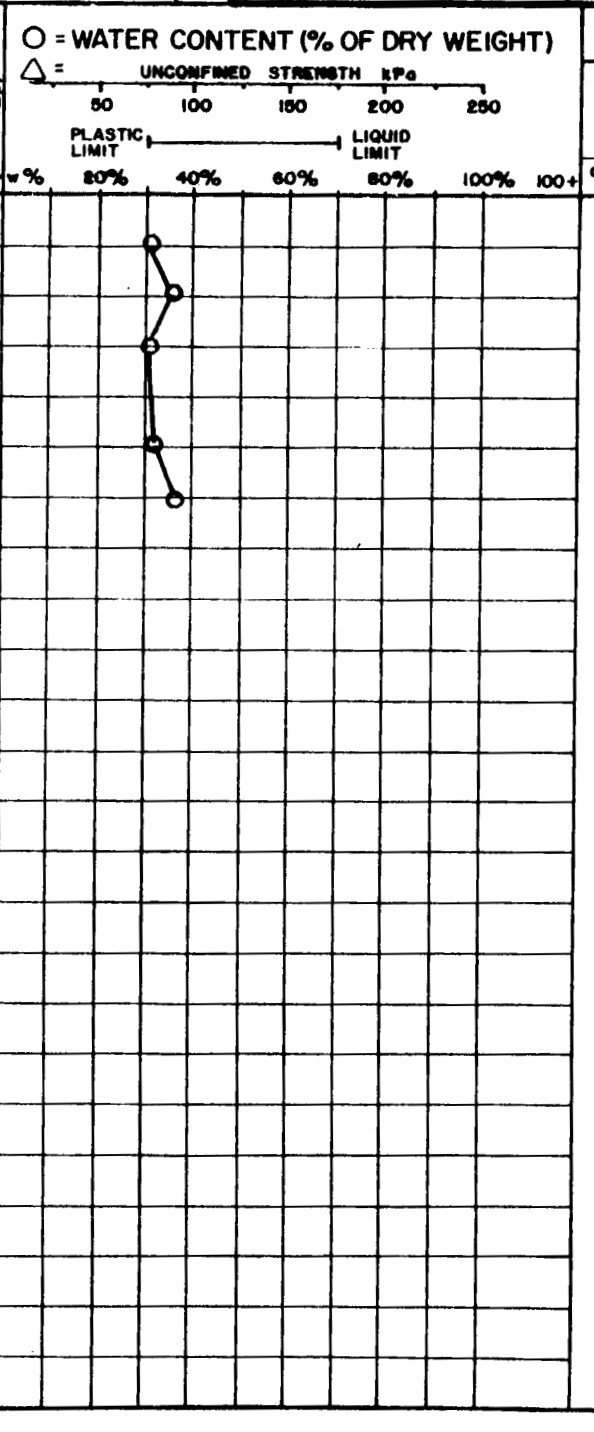
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	SILT - CLAYEY .8m								MOIST	
4	SM	SAND - SILTY			1					MOIST	
6		2.1 m			2						
8	CL	CLAY - SILTY SANDY LOW PLASTIC + P_L								MOIST	
10					3					WET	
12		FRW PEBBLES 4.0 m			4					WET	
14		BOTTOM OF HOLE - 4.0 m									
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30											
32					9						
34											
36					10						
38					11						



PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD Hwy.

TECH. WEBBER | RIG B-50 | DATE 78/03/06 | km 216 | B.P. No. | HOLE No. 2

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT
2	ML	SILT - CLAYEY .8m			FROM WATER
4	CL	CLAY - SILTY - ORGANICS			FROM WATER
6		LOW - MED. PLASTIC			WET
8	CI	FRIV PEBBLES			WET
10		3.1m			WET
12		BOTTOM OF HOLE - 3.1m			



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

CHAINAGE	OFFSET
216+480	℄

REMARKS

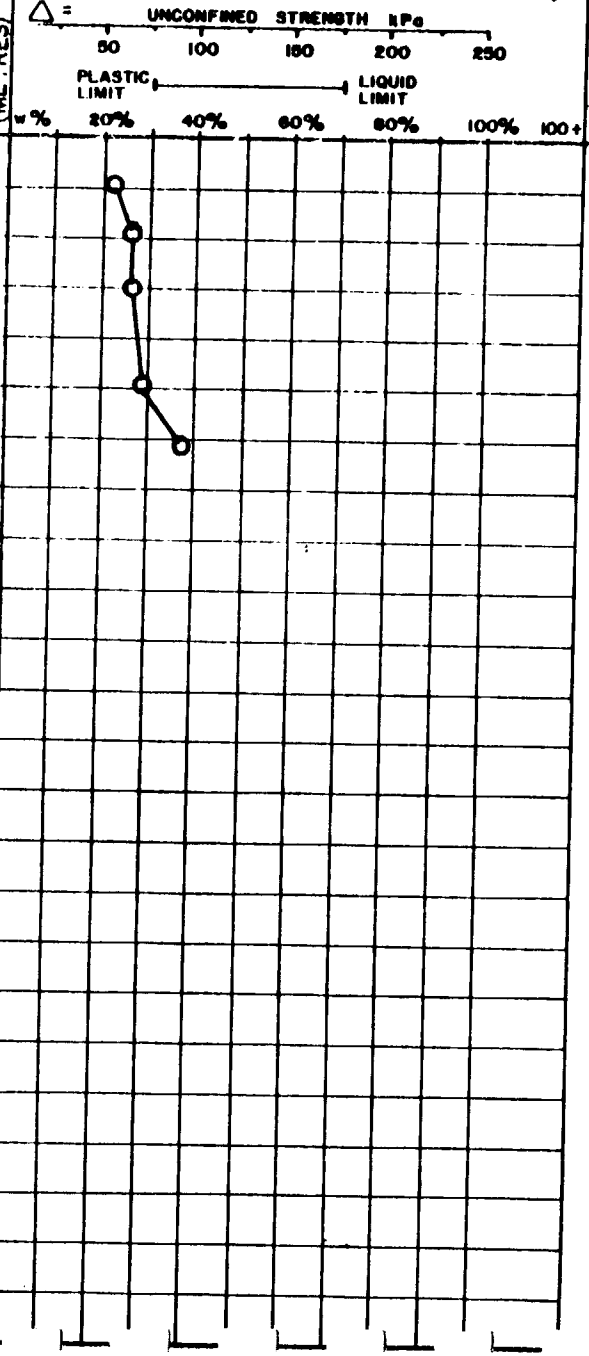
PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. PRONYCH | RIG B-61 | DATE 78/03/07 | km 216 | B.P. No. | HOLE No. 3

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	SILT - CLAYEY		FROZEN	MOIST	
4		1.1m			SAT	
6	CI	CLAY - SILTY MED. PLASTIC		ICE LENSES AFTER 2.4m	WET	
8						
10		3.1m			WET	
12		BOTTOM OF HOLE. 3.1m			WET	
14						
16						
18						
20						
22						
24						
26						
28						
30						
32						
34						
36						
38						

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa



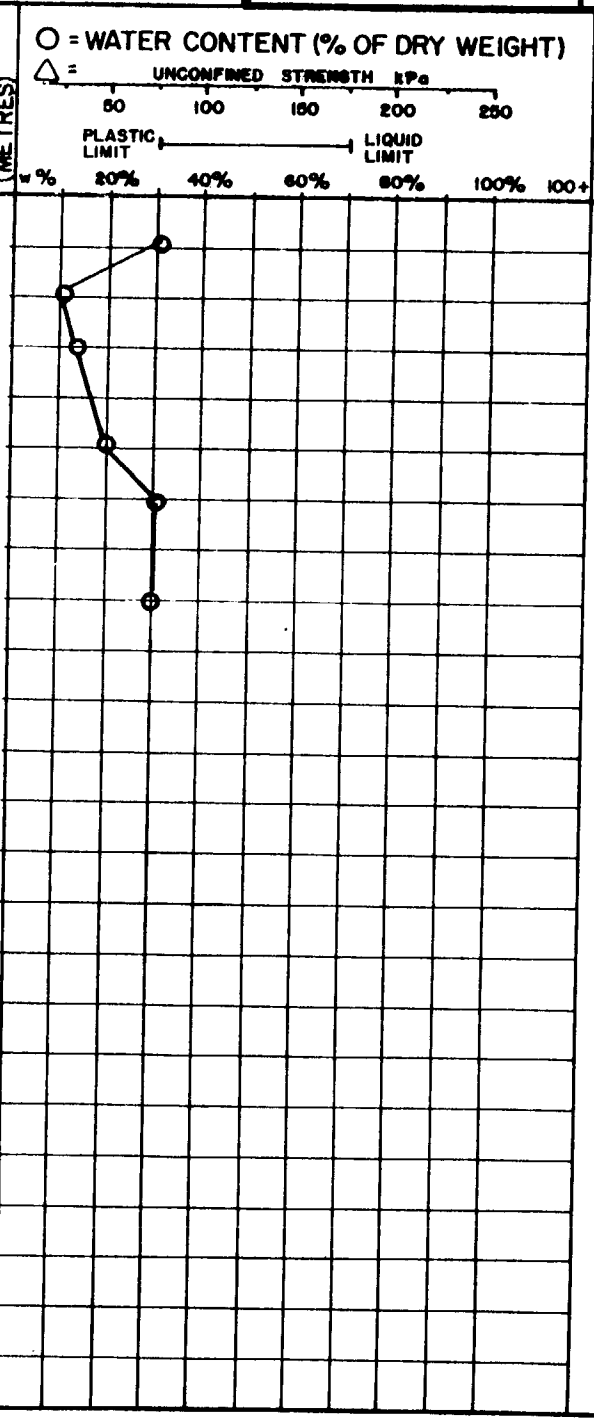
GRAIN-SIZE ANALYSIS			
CLAY %	SILT %	SAND %	GRAVEL %

CHAINAGE	OFFSET
216+700	℄

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. PRONYCH | RIG B-61 | DATE 78/03/06 | km 216 | B.P. No. | HOLE No. 4

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	ML CL	SILT-CLAYEY - CLAY-SILTY .6 m								VERY SAT.	
4		SAND - SILTY			1					MOIST	
6	SM	AFTER 2.1m SATURATED								WET	
8		SILTY CLAYEY 2.7 m			2						
10		CLAY-SILTY								SAT.	
12	CI	MED. PLASTIC + P_L 4.0 m			3					WET	
14		BOTTOM OF HOLE - 4.0 m			4					WET	
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30											
32					9						
34											
36					10						
38					11						



CHAINAGE	OFFSET
216+850 [redacted]	℄

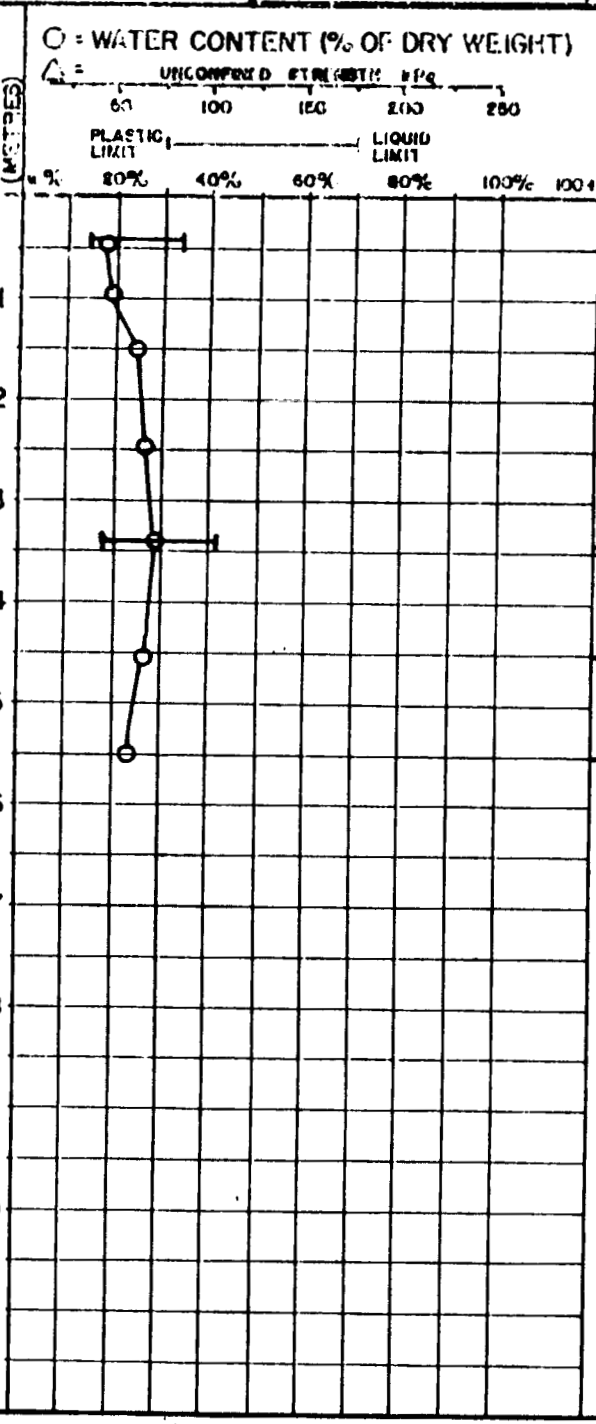
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/07	km 217	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
217+050	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY PEBBLES				58	38	4		MOIST	CUT SECTION PROPOSED
4		MED. PLASTIC			1	71	26	3		MOIST	-WELL ABOVE
6	CI	- SILTY				90	2	8		MOIST-WET	OPTIMUM
8					2	97	3	0		MOIST-WET	
10					3						
12						96	4	0		MOIST-WET	
14					4						
16						93	7	0		WET	
18		5.5m			5	93	7	0		MOIST-WET	
20		BOTTOM OF HOLE - 5.5m			6						
22											
24					7						
26											
28					8						
30											
32					9						
34					10						
36											
38					11						

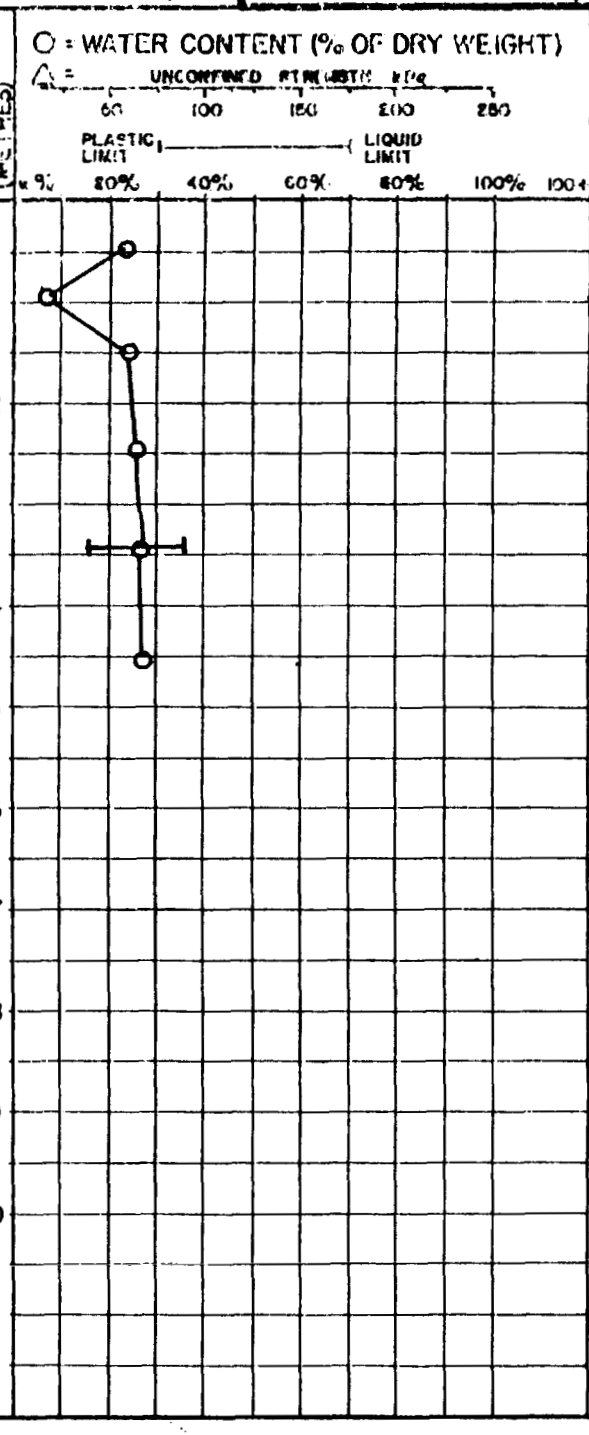


PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/07	km 217	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
217+100	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	SILT - CLAYEY .6 m			1	96	4	0		MOIST	CUT SECTION PROPOSED. - WELL ABOVE OPTIMUM.
4	SM	SAND - SILTY 1.2 m			2	22	78	0		MOIST	
6		CLAY - SILTY MED. PLASTIC +PL			3	74	19	7		MOIST	
8					4	90	10	0		WET	
10	CI				5	90	10	0		WET	
12					6	95	5	0		WET	
14		4.6 m			7						
16		BOTTOM OF HOLE - 4.6 m			8						
18					9						
20					10						
22					11						
24											
26											
28											
30											
32											
34											
36											
38											

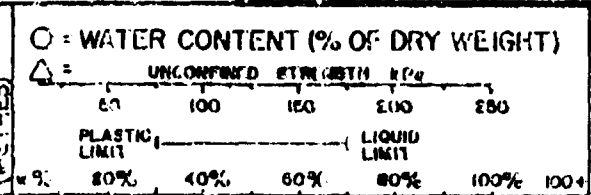


PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH.	RIG	DATE	km	B.P. No.	HOLE No.
PRONYCH	B-61	78/03/07	217		3

CHAINAGE	OFFSET
217+160	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
		SILT - CLAYEY									CUT SECTION PROPOSED - WELL ABOVE OPTIMUM
2	ML	SILT -			1	97	3	0		WET	
4						98	2	0		WET	
		SILT - SAND MIX 1.8 m				50	50	0		MOIST	
6		CLAY - SILTY			2						
8	CI	MED. PLASTIC				96	4	0		WET	
		SILTY SANDY 3.1 m			3	89	11	0		MOIST	
10											
12		BOTTOM OF HOLE - 3.1 m									
14					4						
16											
18					5						
20											
22					6						
24											
26					7						
28											
30					8						
32											
34					9						
36					10						
38					11						



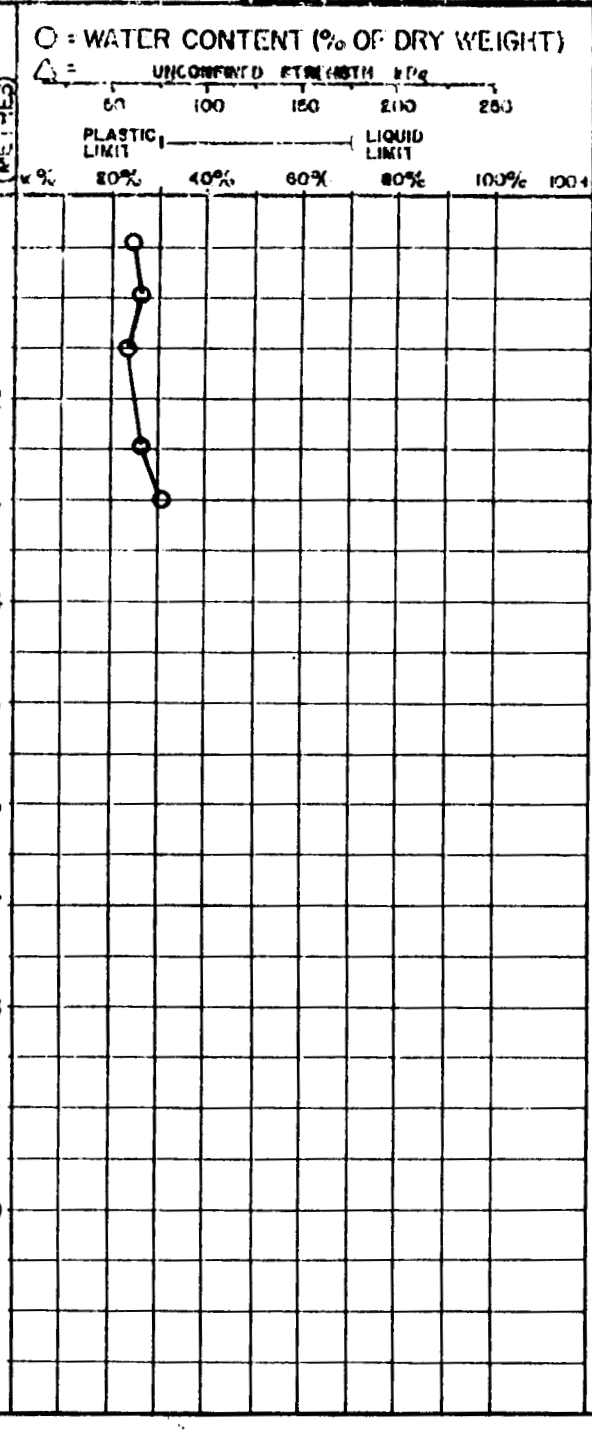
PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH. Pronych	RIG B-61	DATE 78/03/07	km 217	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
217+280	℄

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2		CLAY - SILTY				88	11	1		MOIST
4	CI	- SANDY			1					MOIST
		LOW - MED. PLASTIC				83	15	2		MOIST
6					2					
8	CL									MOIST-WET
10		3.1 m			3	99	1	0		WET
12		Bottom of Hole - 3.1 m								
14					4					
16					5					
18										
20					6					
22										
24					7					
26										
28					8					
30					9					
32										
34					10					
36					11					
38										



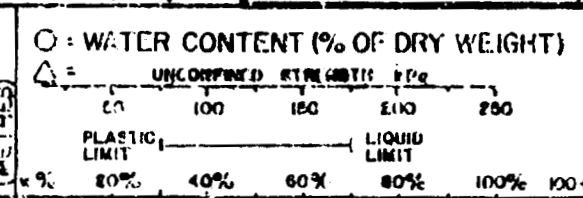
PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/07	km 217	B.P. No.	HOLE No. 5

CHAINAGE	OFFSET
217+410	℄

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2	ML	SILT-SANDY CLAYEY .7 m			1	59	41	0		MOIST
4		SAND-SILTY 1.3 m			1	35	65	0		MOIST
6		CLAY - SILTY SANDY PEBBLES			1	39	51	10		MOIST
8	CI	MED. PLASTIC			2					WET
10		WATER 2.4 m 3.1 m			3	83	17	0		WET
12		BOTTOM OF HOLE - 3.1 m								
14					4					
16					5					
18										
20					6					
22										
24					7					
26										
28					8					
30					9					
32										
34					10					
36					11					
38										

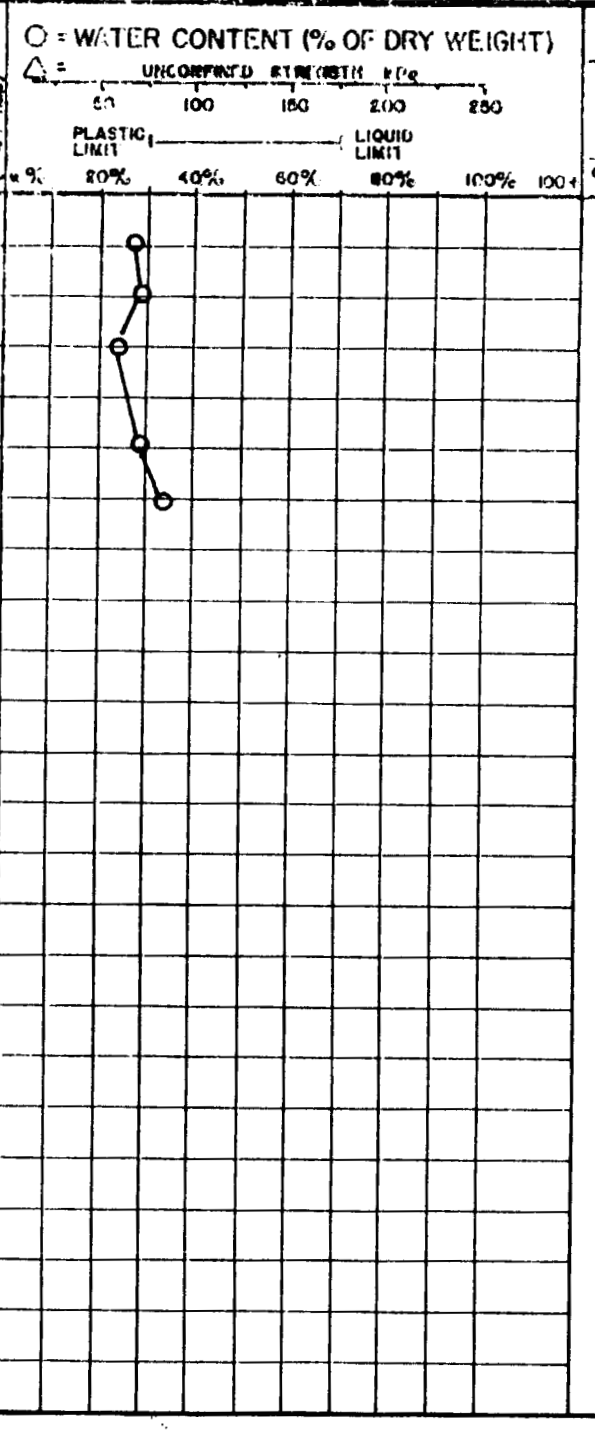


PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH. Pronych	RIG B-61	DATE 78/03/07	km 217	B.P. No.	HOLE No. 6

CHAINAGE	OFFSET
217+600	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
	Pt	Peat .1 m									
2	ML	Silt - Clayey 1.0 m								Sat.	
4	CL - CI	Clay - Silty Low - Med. Plastic			1					Sat.	
6										Wet	
8		- Silty Sandy + Pt 3.1 m			2					Moist-Wet	
10					3					Moist-Wet	
12		Bottom of Hole - 3.1 m			4						
14											
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



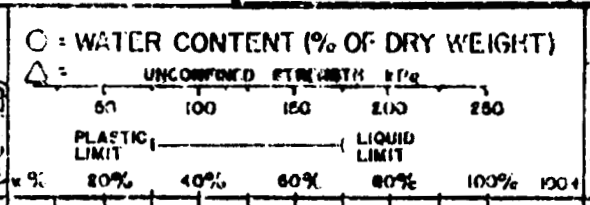
PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/07	km 217	B.P. No.	HOLE No. 7

CHAINAGE	OFFSET
217+880	4

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2	CI	CLAY - SILTY - SANDY - FEW PEBBLES + P_L MED. PLASTIC			1					MOIST
4										MOIST
6					2					MOIST
8										MOIST
10		3.1 m			3					MOIST
12		Bottom of Hole - 3.1 m								
14					4					
16					5					
18										
20					6					
22										
24					7					
26										
28					8					
30					9					
32										
34					10					
36					11					
38										

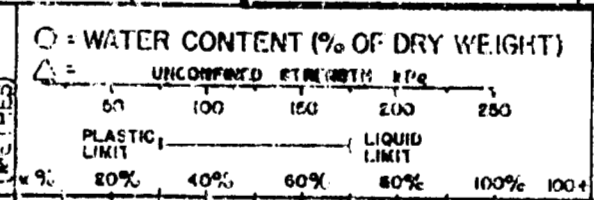


PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD Hwy

TECH. Pronych	RIG B-61	DATE 78/08/07	km 218	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
218+080	℄

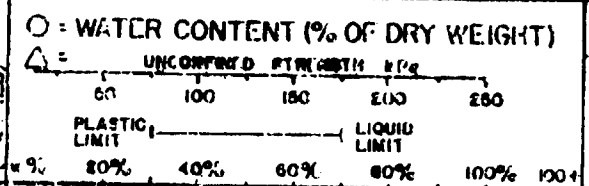
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
		Peat .05m									
2		CLAY - SILTY								MOIST	
4		- SANDY			1					MOIST-WET	
6	CL	- LOW PLASTIC + P_L								MOIST	
8					2						
10		3.1 m								MOIST	
12		Bottom of Hole - 3.1 m			3					MOIST-WET	
14					4						
16											
18					5						
20											
22					6						
24											
26					7						
28											
30					8						
32											
34					9						
36					10						
38					11						



PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD Hwy.

TECH. PRONYCH | RIG B-61 | DATE 78/03/07 | km 218 | B.P. No. | HOLE No. 2

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	RELATIVE MOISTURE CONTENT
2		CLAY - SILTY				
4		- SANDY		FROZEN	1	WET
		- PEBBLES		ICE		WET
6	CL	LOW PLASTIC		CRYSTALS	2	WET
8		+ PL		AFTER 2.4 m		
		GREY 3.1 m			3	WET
10						WET
12		BOTTOM OF HOLE - 3.1 m				
14					4	
16						
18					5	
20						
22					6	
24					7	
26						
28					8	
30					9	
32						
34					10	
36					11	
38						



GRAIN-SIZE ANALYSIS				CHAINAGE	OFFSET
CLAY %	SILT %	SAND %	GRAVEL %	218+200	℄

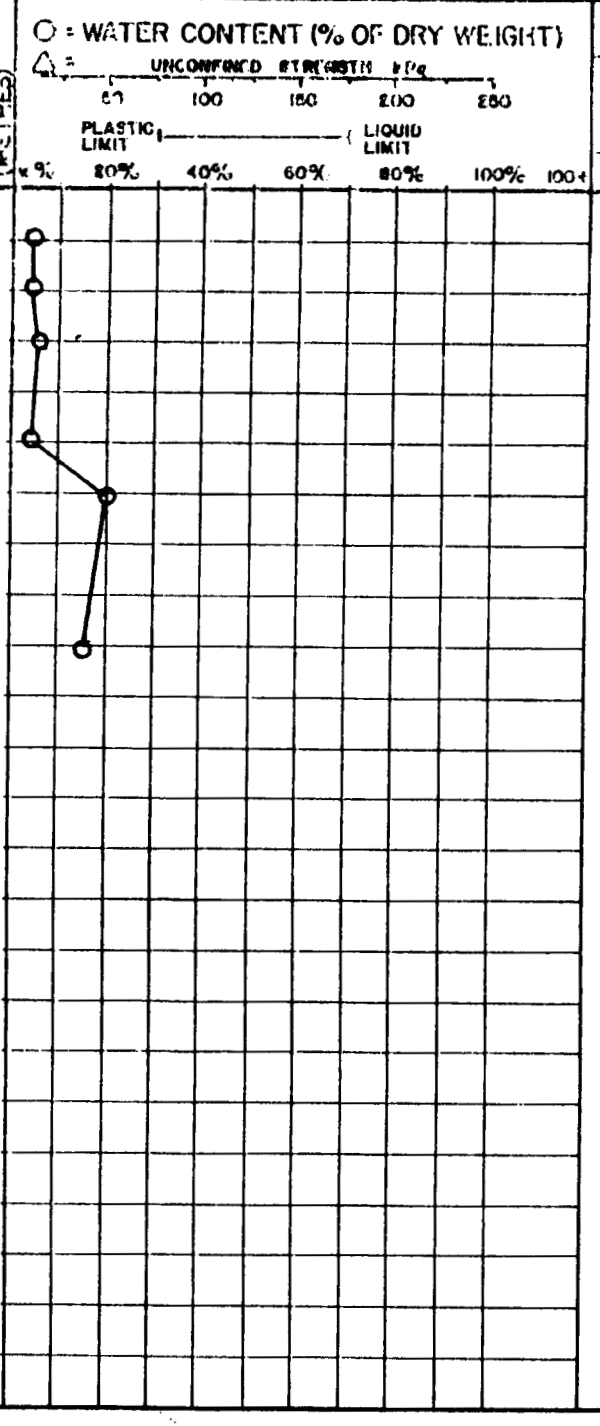
REMARKS

PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH. Pronych	RIG B-61	DATE 78/03/07	km 218	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
218+400	4L

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
		SAND - SILTY									
2										DAMP	ON SMALL RISE
4					1					DAMP	OK FOR CUT
6	SM									MOIST	
8					2					MOIST	
		2.7 m									
10		CLAY - SILTY			3					MOIST	
12		- SANDY									
	CL	- LOW PLASTIC									
14		+ PL			4						
		FEW PEBBLES 4.6m								MOIST	
16		BOTTOM OF HOLE - 4.6m			5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											

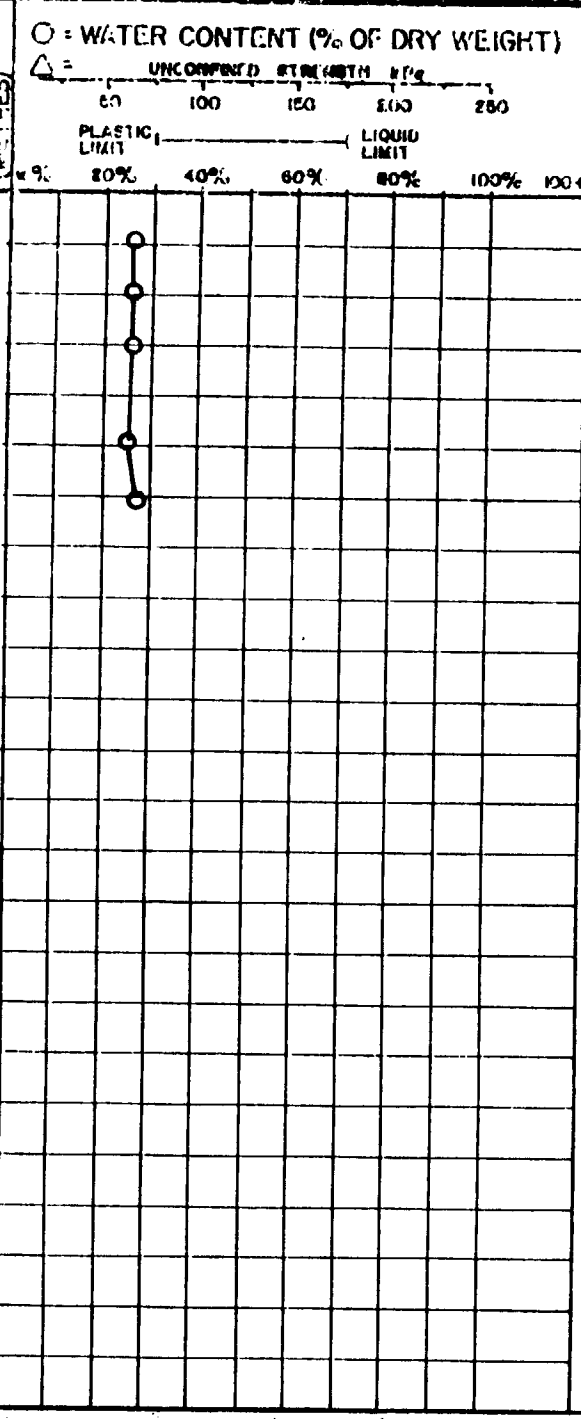


PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/07	km 218	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
218+720	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY		Frozen						Moist	
4	CI	MED. Plastic			1					Moist	
6		+ P_L								Moist	
8					2						
10		3.1 m								Moist	
12		Bottom of Hole - 3.1 m			3					Moist	
14					4						
16											
18					5						
20											
22					6						
24											
26					7						
28											
30					8						
32											
34					9						
36					10						
38					11						

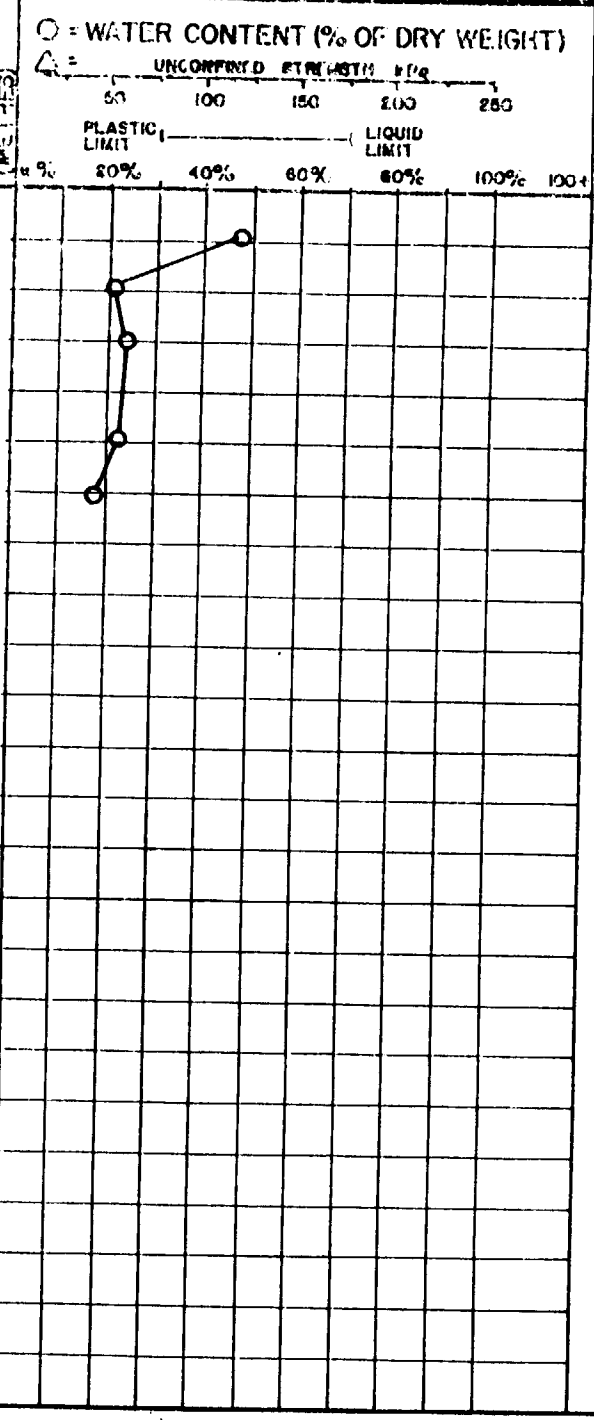


PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/07	km 219	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
218+980	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	SILT - CLAYEY - ORGANIC TO .2m SANDY								FREE WATER	
4		SILT 1.2 m			1					MOIST	
6		CLAY - SILTY SANDY								MOIST	
8	CL	LOW PLASTIC			2						
10		PEBBLES 3.1 m			3					MOIST-WET	
12		BOTTOM OF HOLE. 3.1m								MOIST	
14					4						
16											
18					5						
20											
22					6						
24											
26					7						
28											
30					8						
32											
34					9						
36											
38					10						
					11						

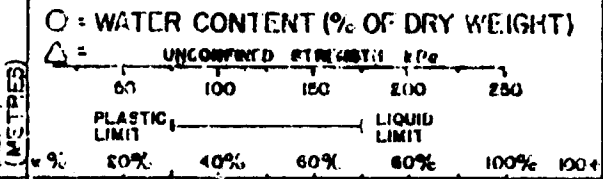


PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD Hwy.

TECH. PRONYCH	RIG B-61	DATE 78/03/07	km 219	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
219+160	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CI	CLAY - SILTY PEBBLES				90	8	2		MOIST	O.K. FOR CUT
4		- SILTY SANDY			1					MOIST	
6		- PEBBLES				75	23	2		MOIST	
		LOW - MED PLASTIC			2						
8										MOIST	
10					3						
12						52	43	5		MOIST	
14	CL	4.6 m			4					MOIST-WET	
16		BOTTOM OF HOLE - 4.6 m			5						
18											
20					6						
22											
24					7						
26											
28					8						
30											
32					9						
34											
36					10						
38					11						

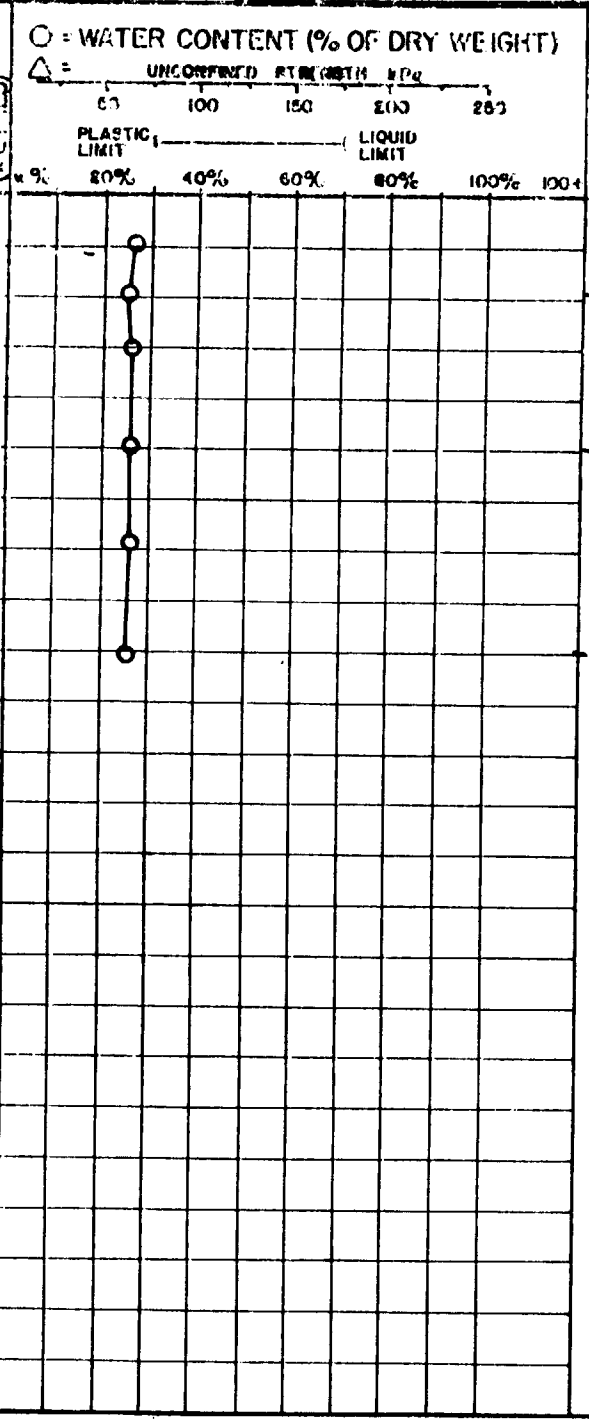


PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD HWY.

TECH. Pronych	RIG B-61	DATE 78/03/07	km 219	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
219+300	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
	SM	SAND - SILTY .2m									
2		CLAY - SILTY FEW PEBBLES								MOIST	SMALL RISE
4		- SANDY			1	88	10	2		MOIST	- ABOVE OPTIMUM
6		- SILTY								MOIST	BUT OK FOR CUT
8	CI	MEDIUM PLASTIC			2	96	4	0		MOIST	
10		+PL			3						
12										MOIST	
14		4.6m			4	95	5	0		MOIST	
16		BOTTOM OF HOLE - 4.6 m			5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36											
38					11						

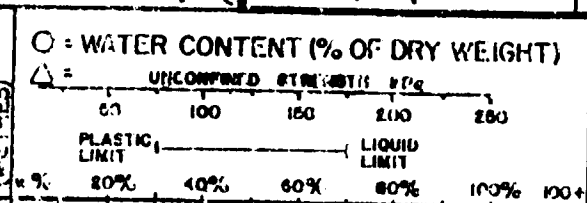


PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. Pronych | RIG B-61 | DATE 78/03/07 | km 219 | B.P. No. | HOLE No. 4

CHAINAGE	OFFSET
219+475	*

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY MED. PLASTIC								MOIST	
4	CI				1					H.I.B.	
6										MOIST	
8		-SILTY SANDY			2						
10		3.1 m			3					MOIST	
12		BOTTOM OF HOLE - 3.1 m								MOIST	
14					4						
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36											
38					11						

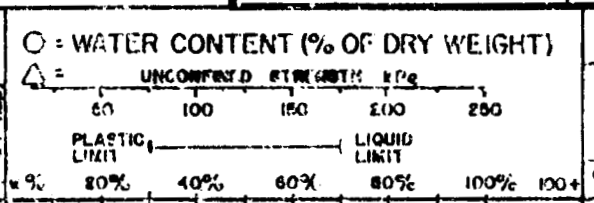


PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD Hwy.

TECH. Prony CH	RIG B-61	DATE 78/03/07	km 219	B.P. No.	HOLE No. 5

CHAINAGE	OFFSET
219+600	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY								WET-SAT	
4		LOW PLASTIC			1					WET	
6	CL	SILTY SANDY								MOIST	
8		@ PL			2					MOIST	
10		3.1 m			3					MOIST	
12		BOTTOM OF HOLE. 3.1 m									
14					4						
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											

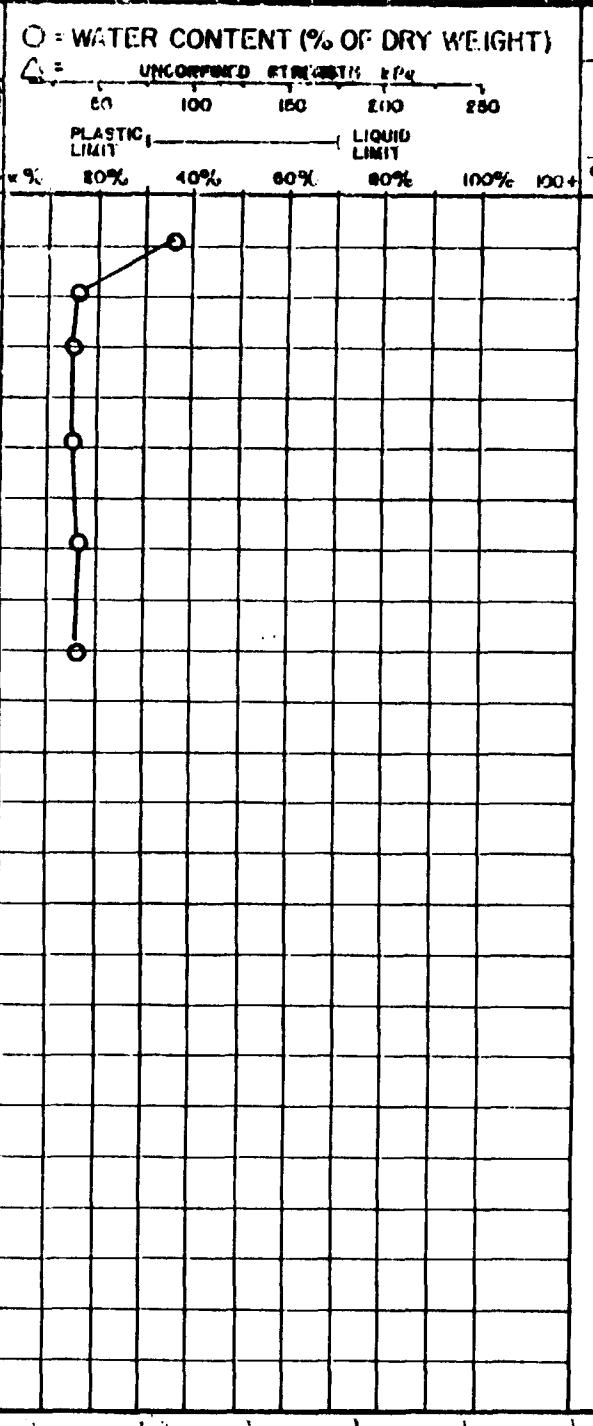


PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/07	km 219	B.P. No.	HOLE No. 6

CHAINAGE	OFFSET
219+740	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - Silty ORGANIC								WET	
4		- Silty Sandy			1					Moist	
6		- Pebbles								Moist	
8		Low Plastic			2					WET	
10		+ P			3					Moist	
12											
14		4.6 m			4					Moist	
16		Bottom of Hole - 4.6 m			5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											

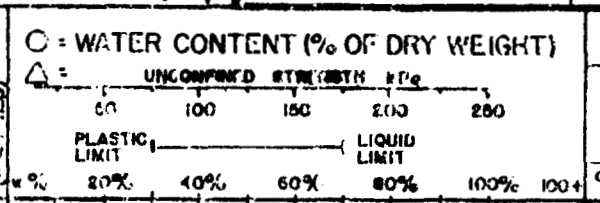


PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD Hwy.

TECH. Pronych	RIG B-61	DATE 78/02/09	km 220	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
219+935	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY SANDY PEBBLES LOW PLASTIC			1	66	31	1		MOIST	CUT PROPOSED - AT OR SLIGHTLY ABOVE OPTIMUM.
4						67	28	5		MOIST	
6						59	36	5		MOIST	
8					2	64	36	10		MOIST	
10					3						
12						72	26	2		MOIST	
14		4.6 m			4	71	26	3		MOIST	
16		BOTTOM OF HOLE. 4.6 m			5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



GRAIN-SIZE ANALYSIS

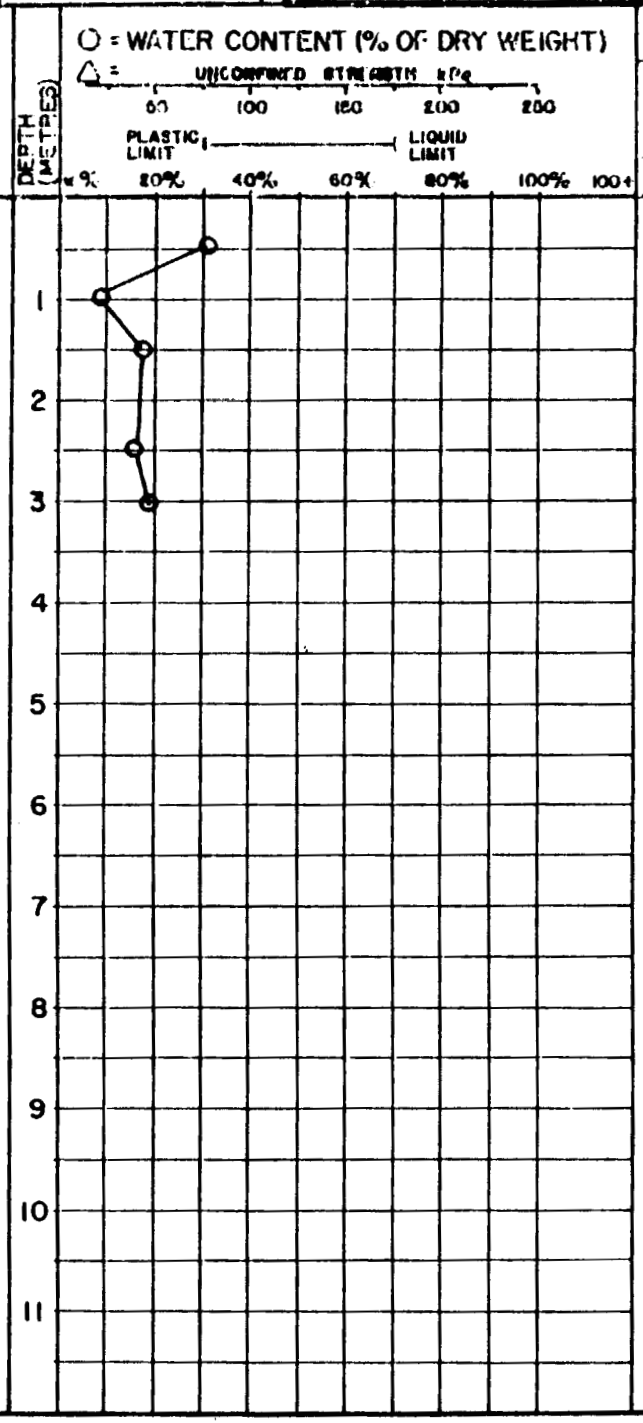
PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD HWY.

TECH. Pronych	RIG B-61	DATE 78/03/09	km 220	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
220+040	℄

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
	Pt	PEAT .15 m							
2	CL	CLAY - SILTY .6 m							SAT.
	Pt	PEAT .1 m							
4	SM	SAND - SILTY 1.2 m							MOIST
	CL	CLAY - SILTY SANDY - PEBBLES LOW PLASTIC +PL							WET
6									
8									MOIST
10		3.1 m							MOIST-WET
12		BOTTOM OF HOLE. 3.1 m							
14									
16									
18									
20									
22									
24									
26									
28									
30									
32									
34									
36									
38									

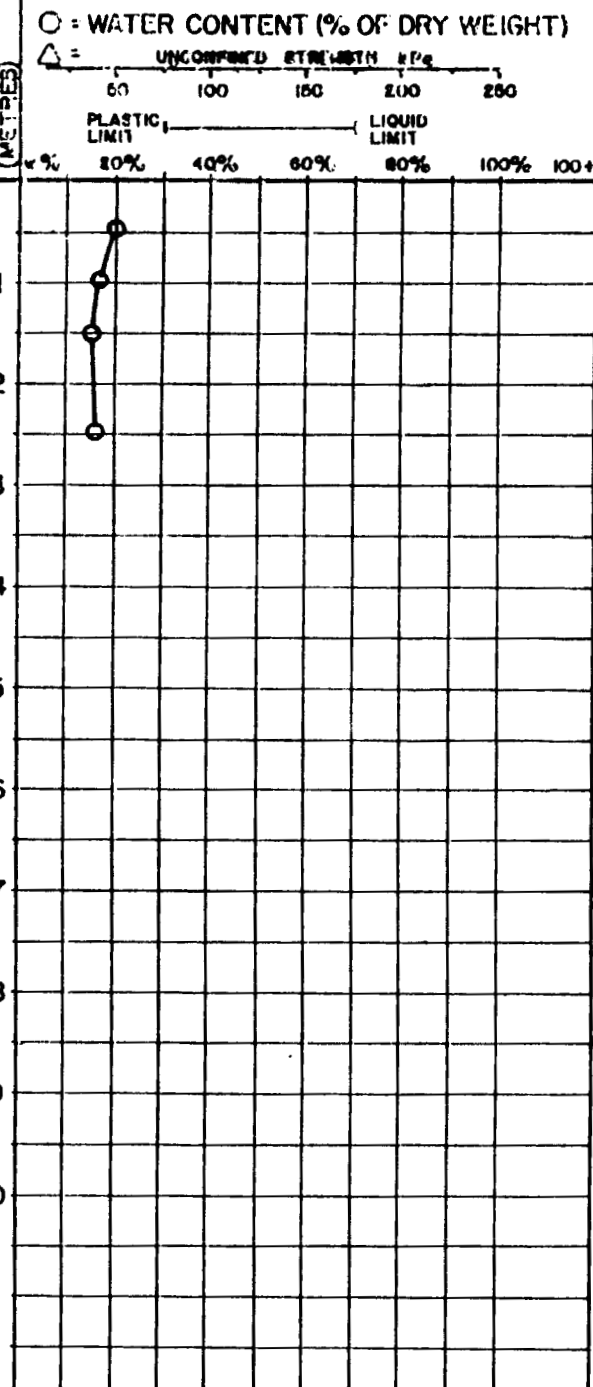


PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD HWY

TECH. PRONYCH	RIG B-61	DATE 78/03/09	km 220	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
220+260	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT
		Peat .06m			
2, 4, 6, 8	CL	CLAY - Silty Sandy - Pebbles - Low Plastic $\approx P_L$			Moist Moist Moist Moist-Wet
		2.9m			
10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38		Refusal @ 2.9 m			



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

REMARKS

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PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/09	km 220	B.P. No.	HOLE No. 4

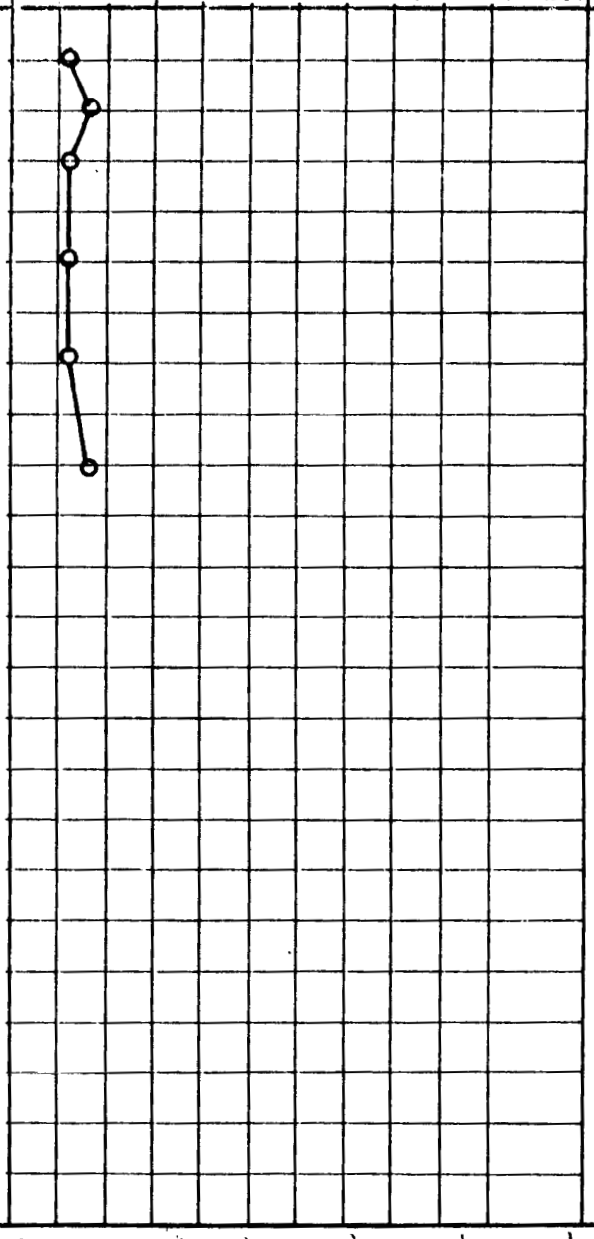
CHAINAGE	OFFSET
220+485	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT
2–6	CL	CLAY - SILTY SANDY - PEBBLES LOW PLASTIC +PL			MOIST; WET; MOIST-WET
6–8 (2.1 m)					
8–12	SC	SAND - SILTY CLAYEY PEBBLES			WET; WET
12–14 (3.7 m)	CL	CLAY - SILTY SANDY LOW PLASTIC +PL			MOIST
14 (4.6 m)		BOTTOM OF HOLE - 4.6 m			

○ = WATER CONTENT (% OF DRY WEIGHT)

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

PLASTIC LIMIT — LIQUID LIMIT



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

REMARKS

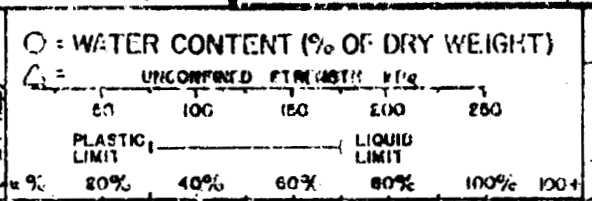
PUBLIC WORKS CANADA | DRILL HOLE REPORT | CIARD Hwy.

TECH. Dronych	RIG B-61	DATE 78/03/09	km 220	B.P. No.	HOLE No. 5

CHAINAGE	OFFSET
220+660	4

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	RELATIVE MOISTURE CONTENT
2	CL	CLAY - SILTY SANDY				MOIST-WET
4		- PEBBLES			1	MOIST-WET
		LOW PLASTIC				MOIST
6		BOULDERS OR COBBLES			2	
8		⌀ .9 m				WET
10					3	
12						WET
14		4.6 m			4	MOIST
16		BOTTOM OF HOLE - 4.6 m			5	
18						
20					6	
22						
24					7	
26						
28					8	
30						
32					9	
34						
36					10	
38					11	



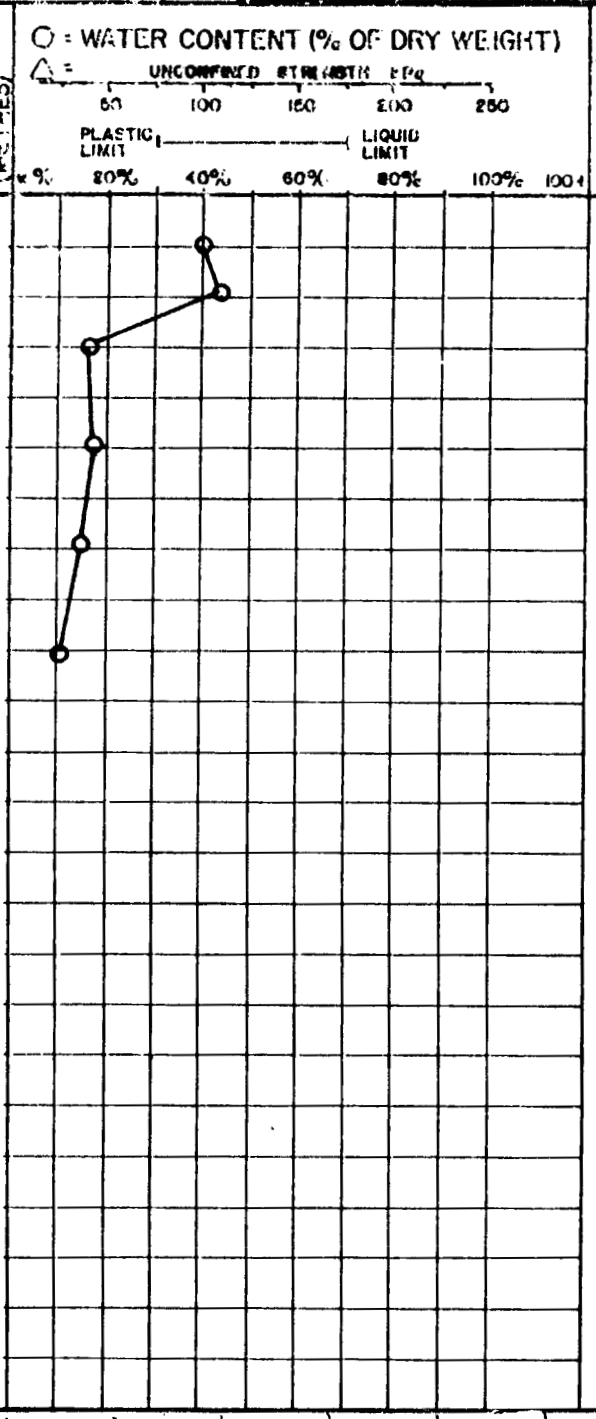
GRAIN-SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %

PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/09	km 220	B.P. No.	HOLE No. 6

CHAINAGE	OFFSET
220+740	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT
2	OL	CLAY - ORGANIC SILTY			WET
4	CL	1.2 m			WET
6	CL	CLAY - SILTY SANDY - PEBBLES LOW PLASTIC + PL			MOIST
8					MOIST-WET
10					
12					MOIST
14		4.6 m			MOIST
16		Bottom of Hole - 4.6 m			
18					
20					
22					
24					
26					
28					
30					
32					
34					
36					
38					



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

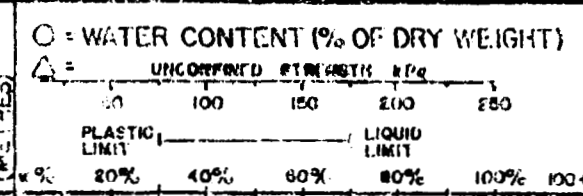
REMARKS

PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/09	km 221	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
220+920	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY								WET	
4		- SILTY SANDY			1					MOIST	
6	CL	- LOW PLASTIC								MOIST	
8		+PL			2						
10		3.1 m								MOIST	
12		BOTTOM OF HOLE - 3.1 m			3					MOIST	
14					4						
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36											
38					11						



GRAIN SIZE ANALYSIS

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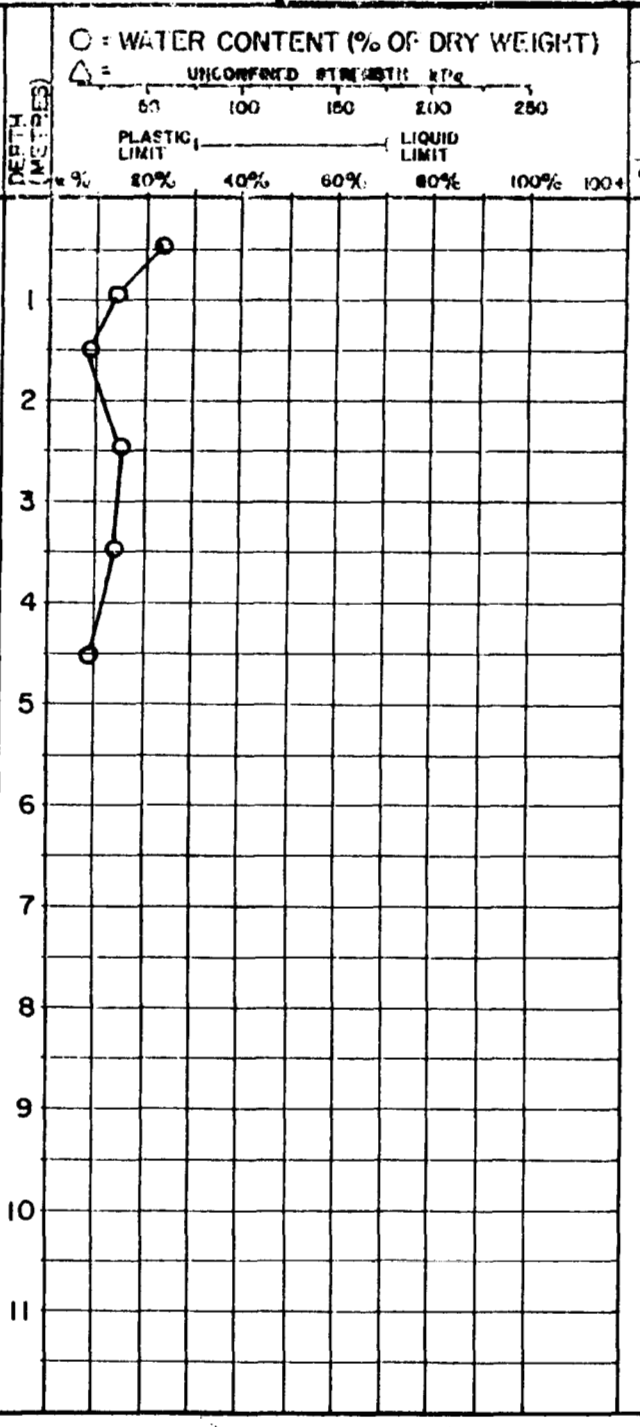
PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/09	km 221	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
221+100	℄

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT
2	CL	CLAY - SILTY SANDY			WET
4		- PEBBLES			MOIST
6		- LOW PLASTIC			MOIST
8		@ P_L			MOIST
10					
12					MOIST
14		4.6 m			MOIST
16		BOTTOM OF HOLE. 4.6 m			
18					
20					
22					
24					
26					
28					
30					
32					
34					
36					
38					



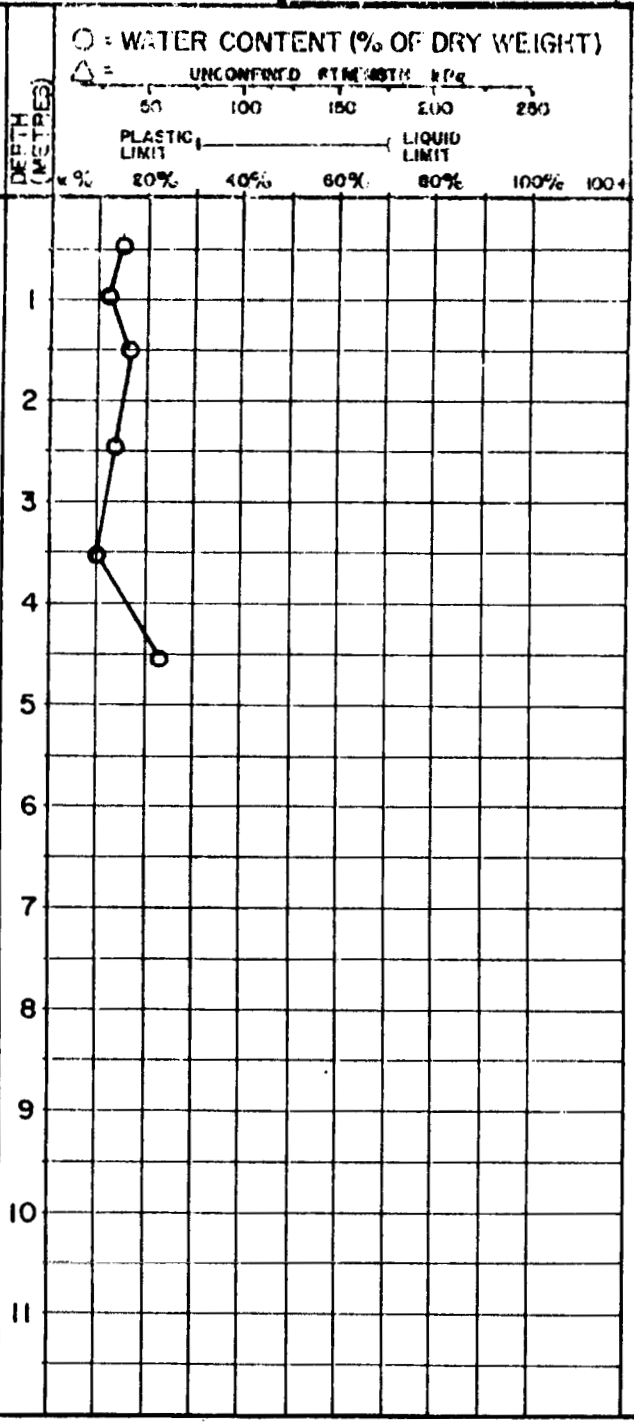
GRAIN SIZE ANALYSIS			
CLAY %	SILT %	SAND %	GRAVEL %

PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/09	km 221	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
221+185	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT
2	ML	Silt - Clayey Sandy .6 m			Moist
4		Clay - Silty Sandy			Moist
6		@ P_L & Above			Moist
8	CL	Low Plastic			Wet
10					
12					Moist
14		4.6m			Moist
16		Bottom of Hole - 4.6m			
18					
20					
22					
24					
26					
28					
30					
32					
34					
36					
38					



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

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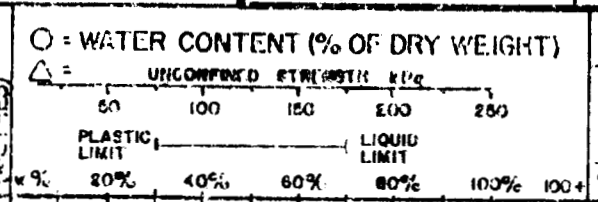
PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/09	km 221	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
221+375	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY-SILTY ORGANIC								MOIST	
4		-SILTY SANDY PEBBLES			1					WET	
6		LOW PLASTIC								WET	
8		+P_L			2						
10		3.1m								WET	
12		BOTTOM OF HOLE - 3.1m			3					MOIST-WET	
14					4						
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											

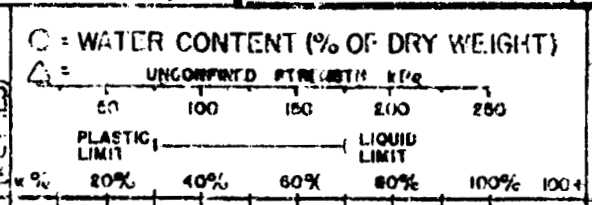


PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/09	km221	B.P. No.	HOLE No. 5

CHAINAGE	OFFSET
221+660	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
	ML	Silt-Clayey Sandy .6m								Moist	
2											
4		Clay-Silty Sandy + P_L			1					Moist	
6	CL	Low Plastic								Moist	
8		@ P_L			2					Moist	
10		3.1m			3					Moist	
12		Bottom of Hole - 3.1 m									
14					4						
16											
18					5						
20											
22					6						
24											
26					7						
28											
30					8						
32											
34					9						
36					10						
38					11						

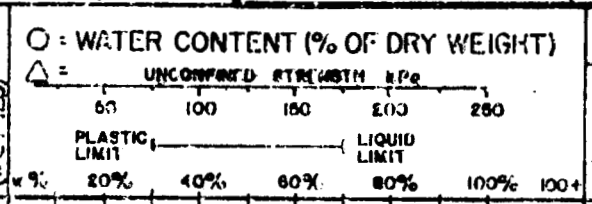


PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/09	km 222	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
221+930	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY - SILT SANDY + PL LOW PLASTIC 1.2 m			1					MOIST	ON SMALL RISE -OK FOR CUT
4	SC	SAND - CLAYEY SILTY - COARSE PEBBLES								MOIST	
6	SM				2					MOIST	
8										MOIST	
10	SC	CLAYEY 3.1 m			3					MOIST	
12		BOTTOM OF HOLE - 3.1 m									
14					4						
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



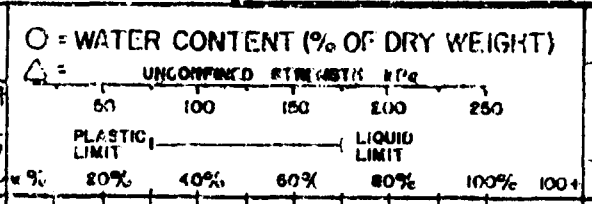
PUBLIC WORKS CANADA — DRILL HOLE REPORT

WIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/09	km 222	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
221+980	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY SANDY PEBBLES @ PL				40	52	8		MOIST	ON SMALL RISE
4		1.2 m			1	64	31	5		MOIST	-OK FOR CUT
6	SC	SAND - SILTY CLAYEY PEBBLES				29	69	2		MOIST	
8					2	23	74	3		MOIST	
10					3						
12	SP	- GRAVELLY SILTY				16	65	19		MOIST	
14					4						
16						27	58	15		MOIST	
18					5						
20		6.1 m			6	24	43	33		MOIST	
22		BOTTOM OF HOLE - 6.1 m									
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



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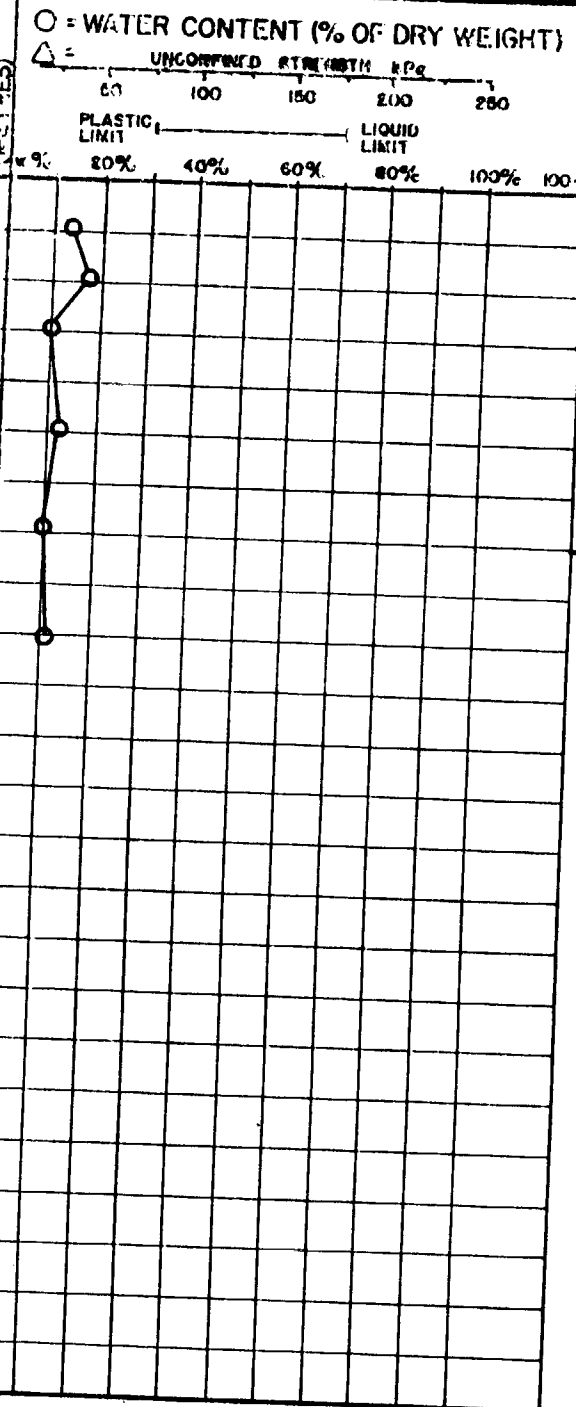
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. WEBBER | RIG B-50 | DATE 78/03/09 | km 222 | B.P. No. | HOLE No. 3

CHAINAGE	OFFSET
222 + 215	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2, 4, 6, 8, 10, 12, 14	CL	CLAY - SANDY SILTY PEBBLES + P_L @ 0.2 - P_L LOW PLASTIC			1, 2, 3, 4	45	50	5		MOIST	ON SMALL RISE
										WET	OK FOR CUT
						42	44	14		MOIST	
										MOIST	
						45	43	12		MOIST	
		4.6m									
16		BOTTOM OF HOLE. 4.6m								MOIST	
18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38					5, 6, 7, 8, 9, 10, 11						



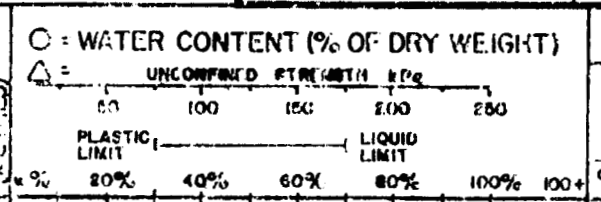
PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD HIGHWAY

TECH. Pronych	RIG B-61	DATE 78/03/09	km 222	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
222+350	℄

REMARKS: ON SMALL RISE - OK FOR CUT

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2		CLAY - SILTY SANDY								MOIST
4		PEBBLES			1	42	-	51	7	MOIST
6	CL	LOW PLASTIC								MOIST
8		@ PL			2	41	-	50	9	MOIST
10					3					
12										MOIST
14		4.6 m			4	57	-	38	5	MOIST
16		BOTTOM OF HOLE. 4.6 m			5					
18										
20					6					
22										
24					7					
26										
28					8					
30					9					
32										
34					10					
36										
38					11					



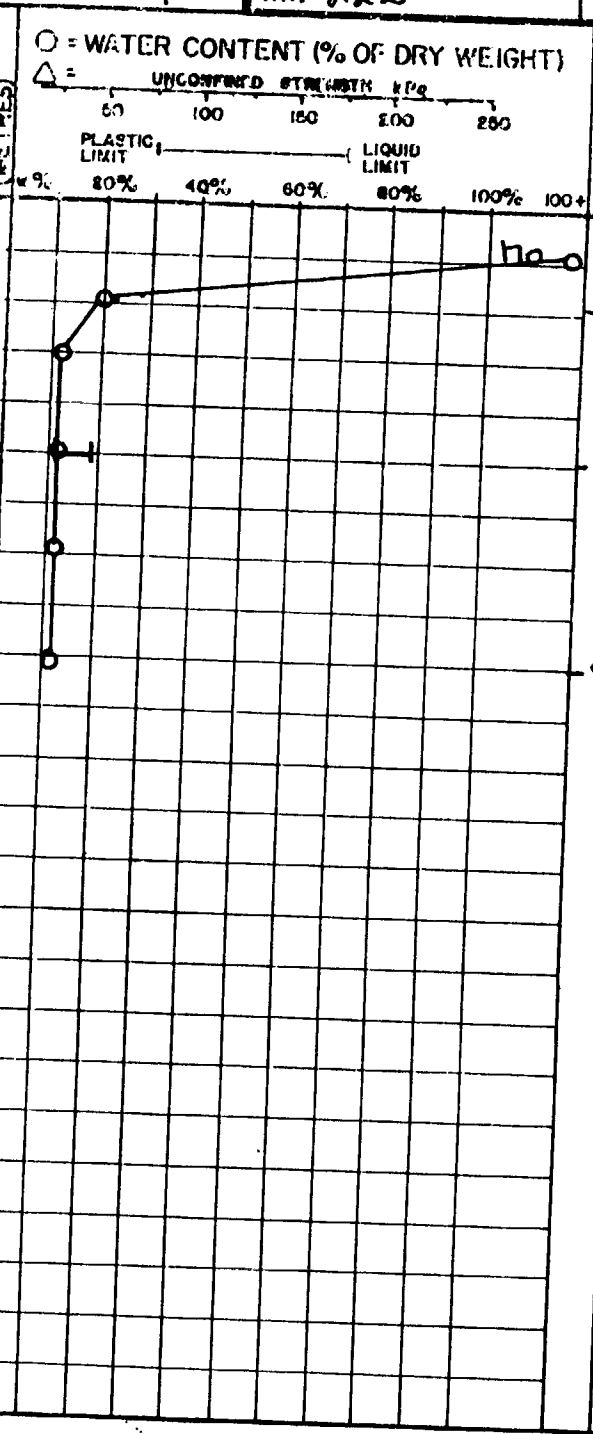
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/09	km 222	B.P. No.	HOLE No. 5

CHAINAGE	OFFSET
222+490	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	Pt	SILT-CLAY-SAND MIXTURE @ Pt								SAT.	CUT SECTION PROPOSED.
4	CL				1	56	42	2		WET	
6	Sc	LOW PLASTIC								WET	- ABOVE OPTIMUM BUT OK FOR CUT WITH DITCHING
8					2						
10		PEAT TO .75 m				39	53	8		WET	
12					3						
14		BOULDERS OR COBBLES @ 4m			4					MOIST-WET	
		4.6 m				47	44	9		MOIST-WET	
16		BOTTOM OF HOLE - 4.6 m			5						
18											
20					6						
22											
24					7						
26											
28					8						
30											
32					9						
34					10						
36											
38					11						



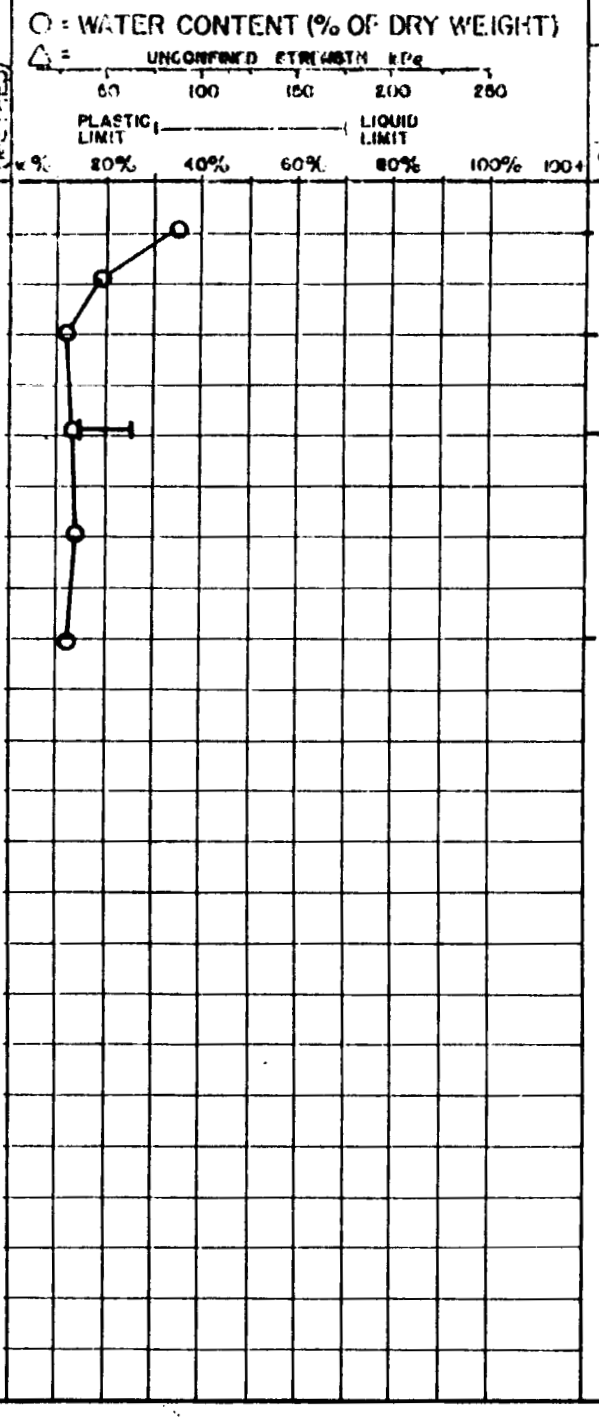
PUBLIC WORKS CANADA | DRILL HOLE REPORT | Liard Hwy.

TECH. Pronych	RIG B-61	DATE 78/08/09	km 222	B.P. No.	HOLE No. 6

CHAINAGE	OFFSET
222+560	℄

REMARKS: SEE HOLE 222-5

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
	Pt	PEAT .2 m								
2		CLAY - SILTY SANDY PEBBLES LOW PLASTIC + P_L				82	17	1		WET
4					1					WET
6	CL					48	44	8		WET
8		@ P_L			2	51	42	7		MOIST
10					3					
12										MOIST
14		GREY - GRAVELLY 4.6 m			4	53	36	11		MOIST
16		BOTTOM OF HOLE - 4.6 m			5					
18										
20					6					
22										
24					7					
26										
28					8					
30										
32					9					
34										
36					10					
38					11					



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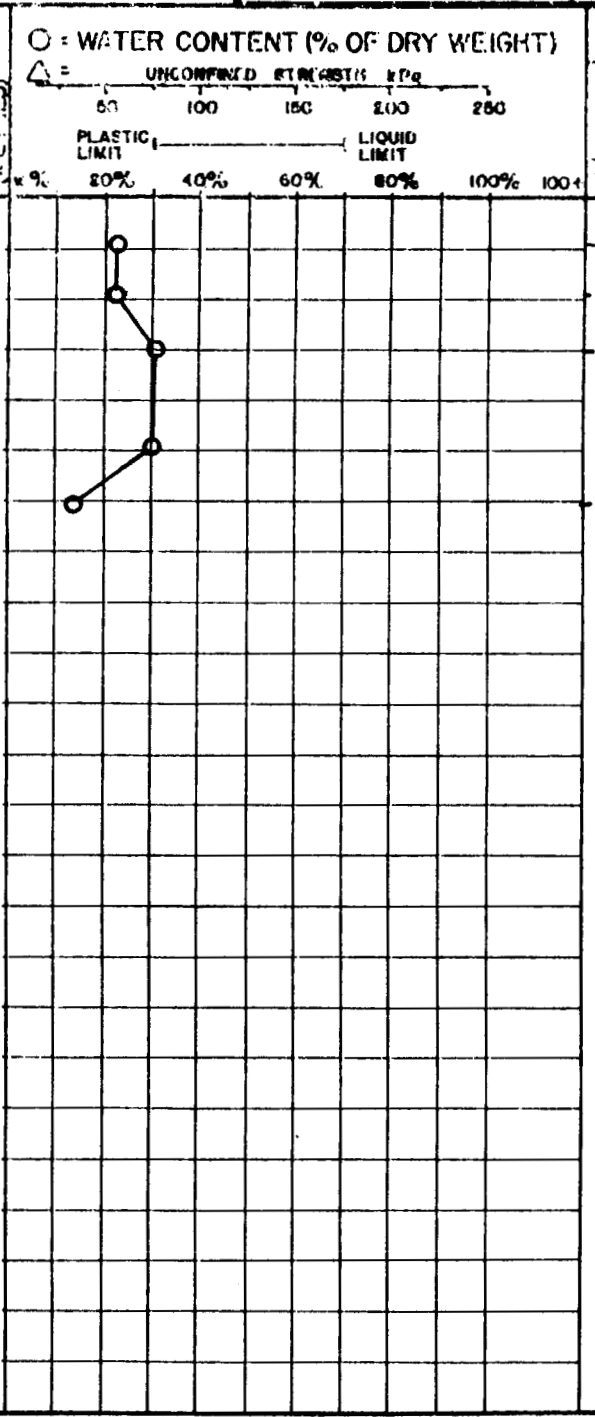
PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/09	km 222	B.P. No.	HOLE No. 7

CHAINAGE	OFFSET
222+660	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
	Pt	Peat .1m									
2	ML	Silt - Clayey Boulders or Cobbles @ .9m				91	-	9	0	Moist	
4		1.2 m			1	95	-	5	0	Wet	
6	CI	Clay - Silty Sandy + Pl Med. Plastic			2	85	-	15	0	Moist	
8										Moist	
10		Grey Pebbles @ Pl 3.1m			3	54	-	43	3	Moist	
12		Bottom of Hole - 3.1m									
14					4						
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											

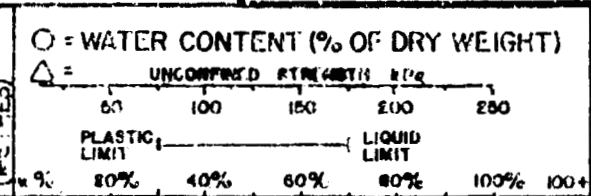


PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/09	km 223	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
223+100	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY PEBBLES LOW - MED. PLASTIC @ PL				59	37	4		MOIST-WET	
4	CL - CI				1					MOIST	
6						59	39	7		MOIST	
8					2					MOIST	
10		3.1 m			3	53	37	10		MOIST	
12		BOTTOM OF HOLE - 3.1 m									
14					4						
16					5						
18											
20					6						
22					7						
24											
26					8						
28											
30					9						
32											
34					10						
36					11						
38											

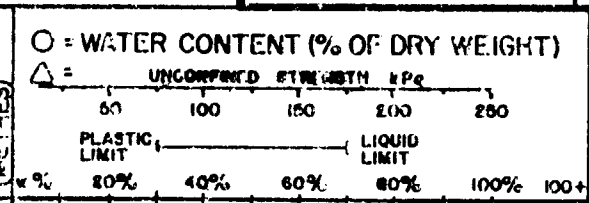


PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/09	km 223	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
223+220	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY								WET	PROPOSED CUT SECTION.
4		+PL LOW PLASTIC			1	62	35	3		WET	- WET AT SURFACE
6		- SILTY SANDY @ PL								MOIST-WET	BUT GOOD AT DEPTH.
8	CL	- PEBBLES TILL			2	51	42	7		MOIST	
10					3						
12		@ PL								MOIST	
14		4.6m			4	53	39	8		MOIST	
16		BOTTOM OF HOLE - 4.6 m			5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											

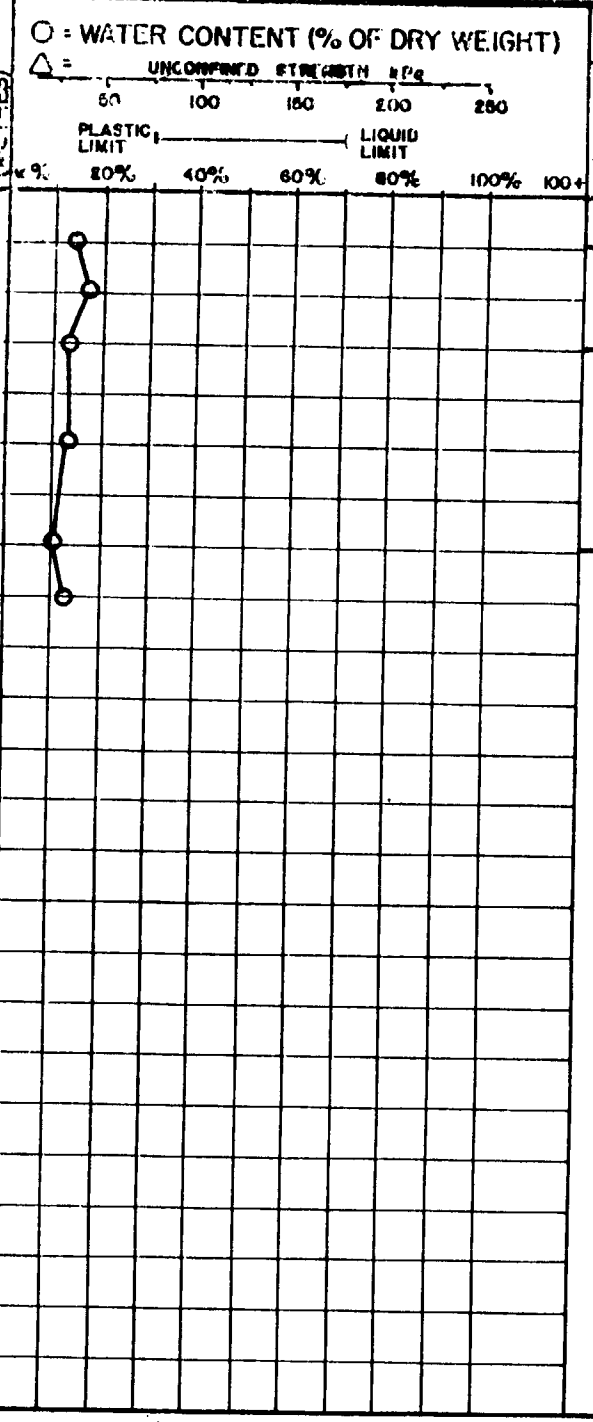


PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH. WEBBER	RIGB-50	DATE 78/03/09	km 223	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
223+320	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	SILT - CLAYEY SANDY PEBBLES .6m				66	32	2		MOIST	O.K. FOR CUT
4		CLAY - SILTY SANDY PEBBLES TILL			1					MOIST-WET	
6	CL	OR LOW PLASTIC				54	41	5		MOIST	
8					2					MOIST	
10		- GRAVELLY			3						
12		4.0m				33	49	18		MOIST	
14		BOTTOM OF HOLE - 4.0m			4					MOIST	
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36											
38					11						

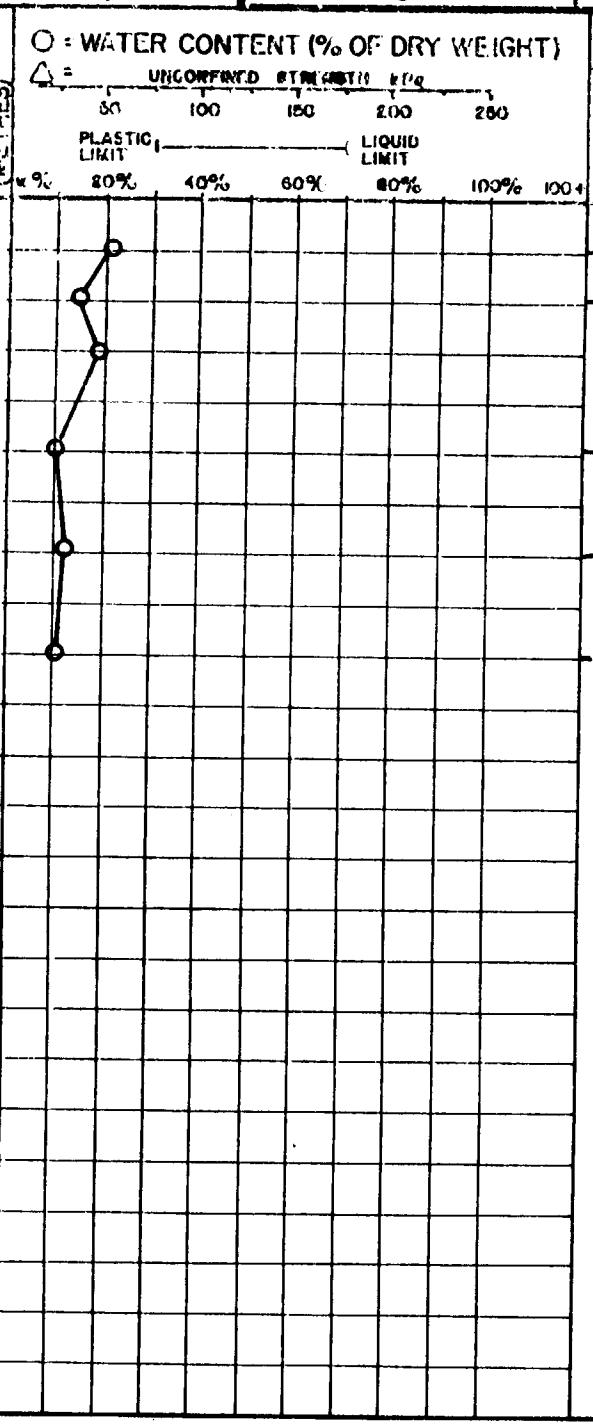


PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/02/09	km 223	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
223+450	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	SILT - CLAYEY .6 m				9	4	6	0	MOIST	O.K. FOR CULT
4	CL	CLAY - SILTY SANDY PEBBLES TILL +PL			1	57	37	6		MOIST	
6		2 m								MOIST	
8	SC	SAND - CLAYEY PEBBLES @ PL			2	40	53	7		MOIST	
10		GRAVELLY			3						
12		4.0 m				39	50	11		WET-SAT	
14	CL	CLAY - SILTY SANDY PEBBLES			4						
		4.6 m				47	47	6		MOIST	
16		BOTTOM OF HOLE - 4.6 m			5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36											
38					11						

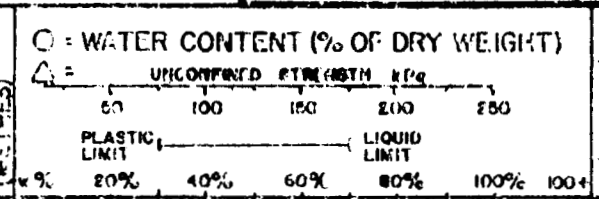


PUBLIC WORKS CANADA | DRILL HOLE RECORD | Alaska Hwy

TECH. WEBBER	RIG B-50	DATE 78/03/09	km 223	B.P. No.	HOLE No. 5

CHAINAGE	OFFSET
223+530	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
	ML	SILT - CLAYEY SANDY PEBBLES .6m				- 18 -	20	2			
2						~~30~~ -	~~68~~	~~2~~		MOIST	O.K. FOR CUT.
4		CLAY - SANDY SILTY PEBBLES TILL - PL			1	40 -	51	9		MOIST	
6										MOIST	
8	CL	GRAVEL - SAND - CLAY MIX			2	29 -	30	41		MOIST	
10					3						
12										MOIST	
14		PEBBLES CLAY - SILTY SANDY 4.6 m			4	47 -	44	9		MOIST	
16		BOTTOM OF HOLE - 4.6 m			5						
18											
20					6						
22											
24					7						
26					8						
28											
30					9						
32											
34					10						
36					11						
38											



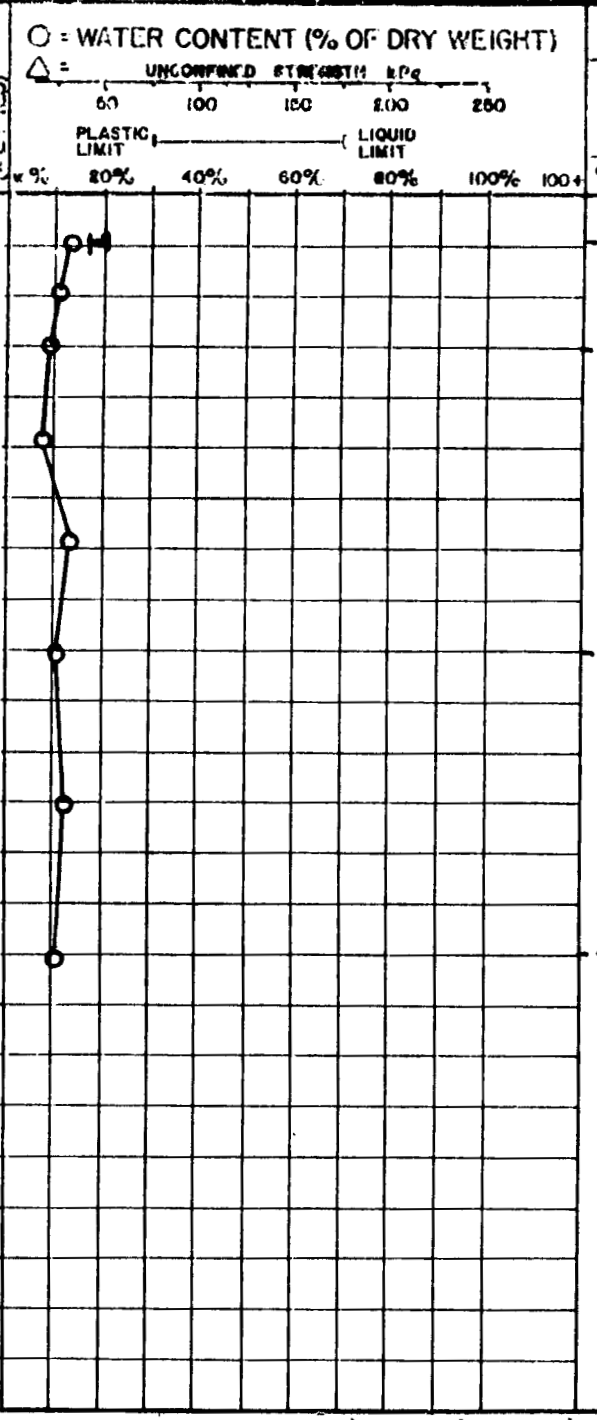
GRAIN SIZE ANALYSIS

PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/09	km 223	B.P. No.	HOLE No. 6

CHAINAGE	OFFSET
223+660	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	SILT-CLAYEY PEBBLES SANDY .6m				61	36	3		MOIST	O.K. FOR DEEP CUT.
4		CLAY - SANDY TILL SILTY PEBBLES @ P_L LOW PLASTIC			1					MOIST	
6						52	43	5		MOIST	
8					2					MOISTURE	
10					3						
12	CL									MOIST	
14					4	47	44	9		MOIST	
16					5						
18											
20		GREY			6					MOIST	
22											
24		7.6m			7	45	48	7		MOIST	
26		BOTTOM OF HOLE · 7.6m			8						
28											
30					9						
32											
34					10						
36											
38					11						

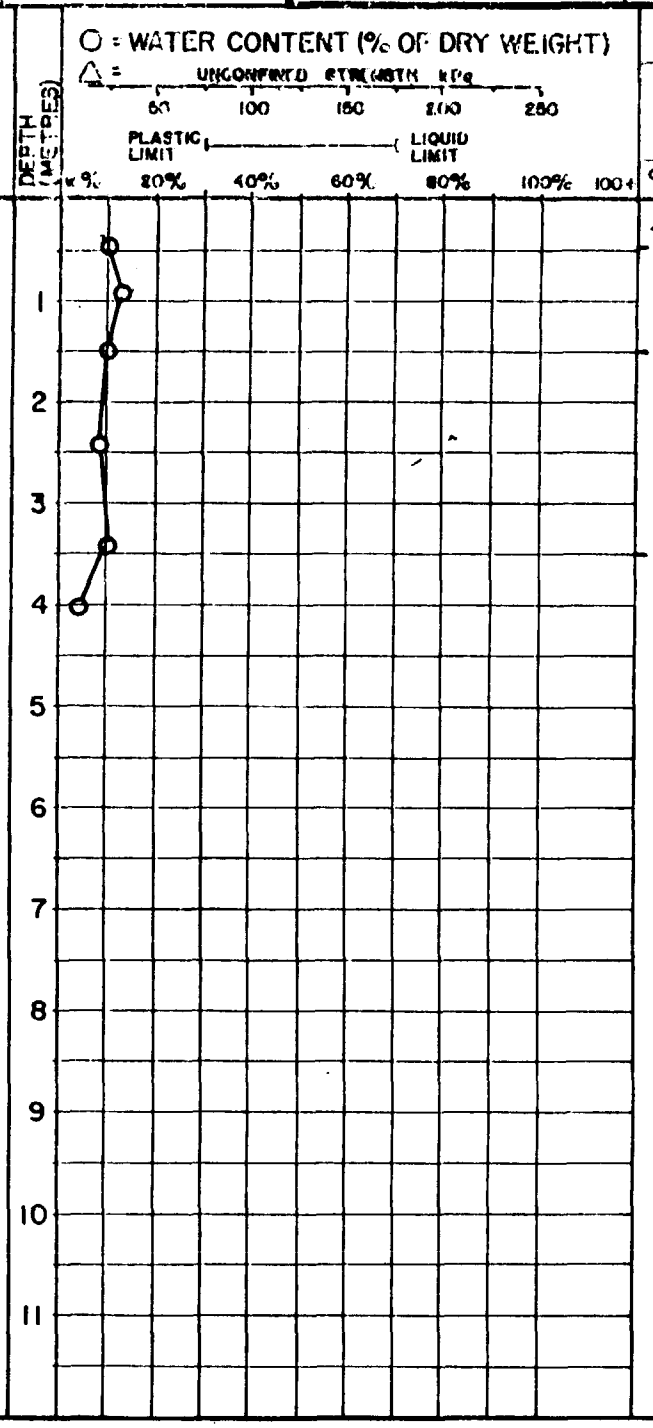


PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD Hwy.

TECH. PRONYCH	RIG B-61	DATE 78/03/09	km 224	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
224+000	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	GM	SILTY SAND - PEBBLES .6m			38	52	10		MOIST	O.K. FOR CULT.
4		CLAY - SILTY SANDY PEBBLES TILL							MOIST	
6	CL	LOW PLASTIC - PL			40	56	4		MOIST	
8									MOIST	
10		3.4 m								
12	SM	SAND - SILTY HARD DRILLING - PEBBLES 4.0 m			49	41	10		MOIST	HARD TO DRILL
14		BOTTOM OF HOLE - 4.0 m							DAMP	
16										
18										
20										
22										
24										
26										
28										
30										
32										
34										
36										
38										

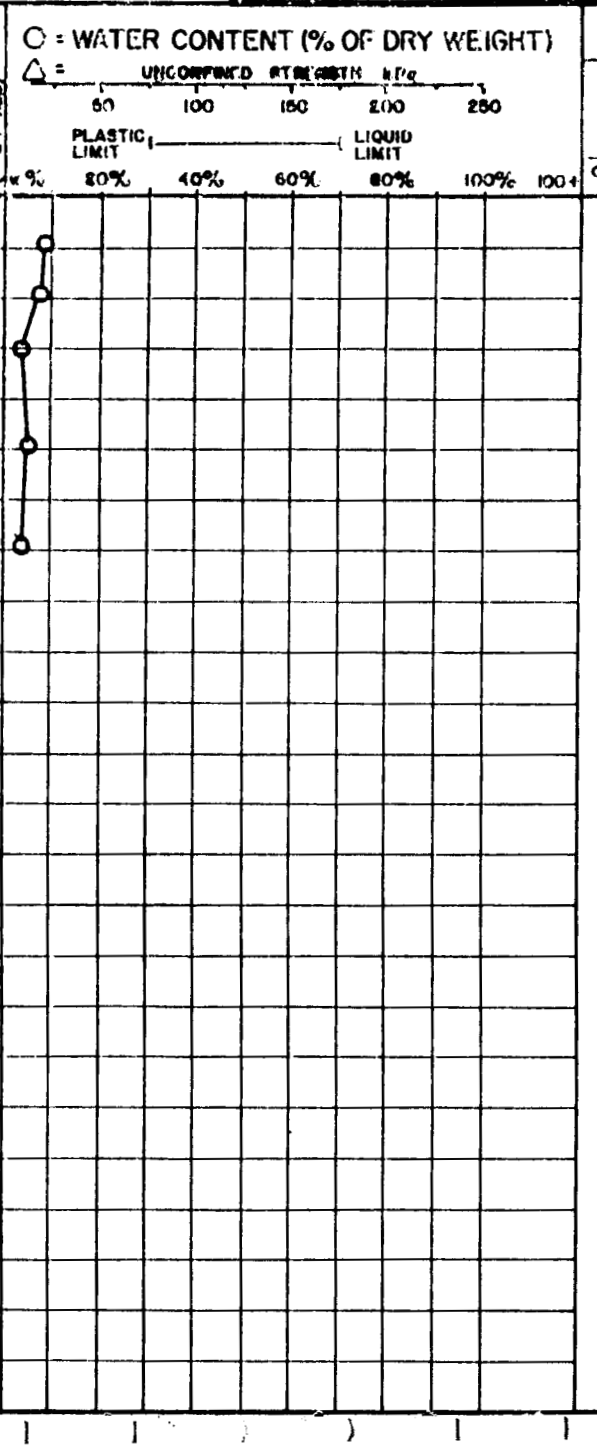


PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD Hwy.

TECH. W/REBBER	RIG B-50	DATE 78/03/09	km 224	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
224+320	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	SC	SAND - CLAYEY GRAVELLY								MOIST	O.K. FOR CUT
4					1					MOIST	
6	SW	- GRAVELLY MED. - COARSE								DAMP	
8		- SILTY - COARSE			2					MOIST	
10					3						
12	SP	FINE - COARSE 4.0 m								DAMP-MOIST	
14		BOTTOM OF HOLE - 4.0 m			4						
16		REFUSAL			5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36											
38					11						

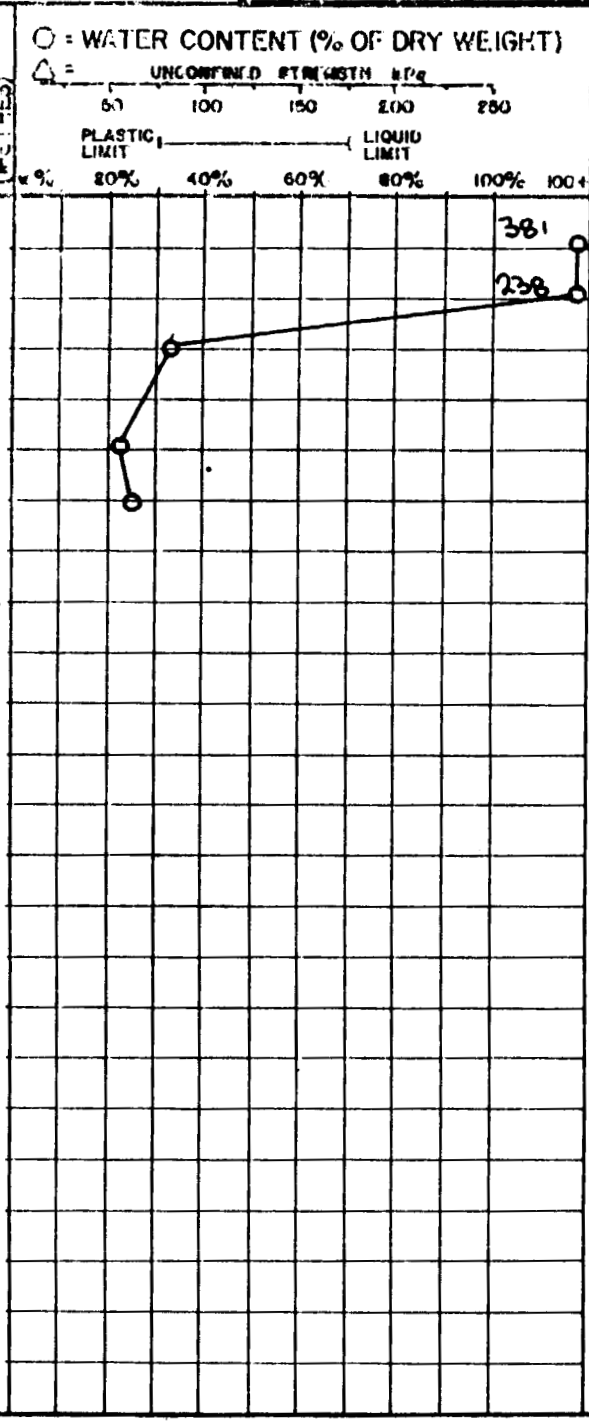


PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD Hwy.

TECH. Prowych	RIG B-61	DATE 78	km 224	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
224+500	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	RELATIVE MOISTURE CONTENT
2	Pt	PEAT				WET
4		PEAT & SILT 1.2 m			1	WET
6	CL	CLAY-SILTY ORGANICS				WET-SAT
8		LOW PLASTIC			2	
10		SILTY SANDY PEBBLES 3.1 m			3	WET SAT.
12		BOTTOM OF HOLE - 3.1m				
14					4	
16					5	
18						
20					6	
22						
24					7	
26						
28					8	
30					9	
32						
34					10	
36					11	
38						



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

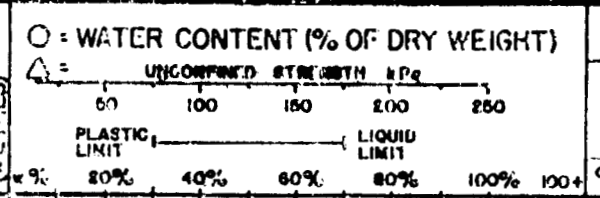
REMARKS

PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/09	km 224	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
224+620	℄

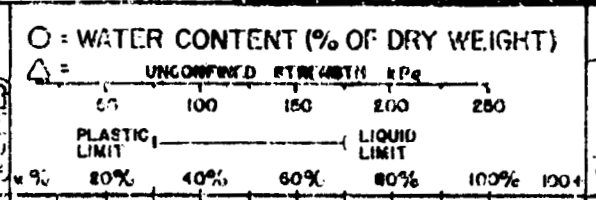
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY PEBBLES TILL				48	39	13		MOIST	O.K. FOR DEEP CUT
4	CI	@ P_L			1					MOIST	
6		MED - LOW PLASTIC				60	33	7		MOIST	
8	CL -				2					MOIST	
10	CI				3						
12						70	27	3		MOIST	
14					4						
16										MOIST	
18		5.8 m			5	70	27	3		MOIST	
20		REFUSAL @ 5.8 m			6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



PUBLIC WORKS CANADA | DRILL HOLE REPORT | HARD Hwy

TECH. Pronych	RIG B-61	DATE 78/03/09	km 225	B.P. No.	HOLE No. 1

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2, 4	CI	CLAY - SILTY SANDY - PEBBLES MED. PLASTIC			1	50	47	3		MOIST
										MOIST
4		1.1 m								
6		GRAVEL - SANDY			2	13	49	38		MOIST
		2.1 m								
8, 10, 12	SM	SAND - SILTY GRAVELLY			3	7	35	58		MOIST
						21	69	10		MOIST
		4.6 m			4	14	69	17		MOIST
14		BOTTOM OF HOLE - 4.6 m								
16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38					5, 6, 7, 8, 9, 10, 11					



CHAINAGE	OFFSET
224+900	℄

REMARKS: O.K FOR CUT.

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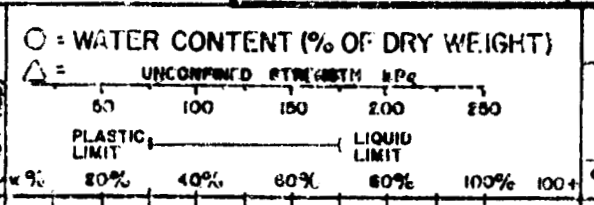
PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/09	km 225	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
225+260	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY PEBBLES LOW PLASTIC								MOIST	
		.9m									
4	SC	SAND - CLAYEY SILTY FINE - COARSE			1					MOIST	
6	SW									MOIST	
8		MED - COARSE - SOME CLAY			2					MOIST	
10		3.1m			3						
12		BOTTOM OF HOLE - 3.1 m			4						
14											
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



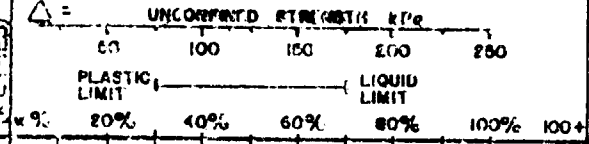
PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/09	km 225	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
225+480	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	SILT - CLAYEY SANDY .6 m								DAMP	
4	CL	CLAY - SILTY SANDY PEBBLES 1.2 m			1					MOIST	
6	SC	SAND - CLAYEY SILTY GRAVELLY			2					MOIST	
8		2.7 m								MOIST	
10		REFUSAL @ 2.7 m			3						
12					4						
14											
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36											
38					11						

○ = WATER CONTENT (% OF DRY WEIGHT)
△ = UNCONFINED STRENGTH kPa



GRAIN-SIZE ANALYSIS

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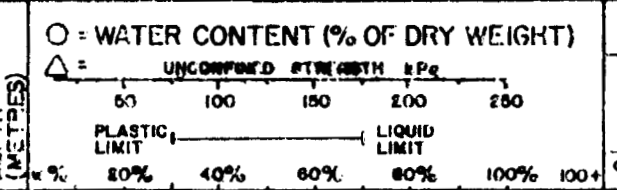
PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/09	km 225	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
225+580	℄

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2	CL	CLAY - SILTY SANDY PEBBLES + P_L			1					MOIST
4		@ P_L GRAVELLY								MOIST
6					2					MOIST
8	CL Sc	TO SAND-GRAVELLY CLAYEY 2.7m								MOIST
10		BOTTOM OF HOLE -2.7m			3					
12		REFUSAL								
14					4					
16					5					
18										
20					6					
22										
24					7					
26										
28					8					
30					9					
32										
34					10					
36					11					
38										

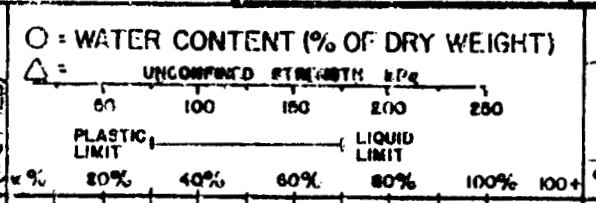


PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/09	km 225	B.P. No.	HOLE No. 5

CHAINAGE	OFFSET
225 + 680	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY SANDY PEBBLES								DAMP	OK. FOR CUT.
	CI	LOW - MED. PLASTIC 1.2 m			1					DAMP	
4	SC	SAND - GRAVELLY CLAYEY								MOIST	
6					2						
8	SP GP	GRAVEL - SAND MIX 2.7 m								MOIST	
10	CL	CLAY - SILTY SANDY GRAV. 3.1 m			3					MOIST	
12		BOTTOM OF HOLE - 3.1 m									
14					4						
16											
18					5						
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



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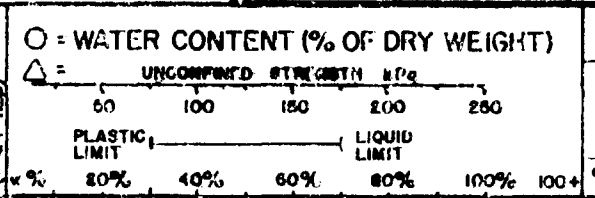
PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/09	km 225 -	B.P. No.	HOLE No. 6

CHAINAGE	OFFSET
225+820	℄

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2		CLAY - SILTY SANDY								DAMP TO MOIST
4	CL	- GRAVELLY			1					MOIST
6	CI	∂ or - P_L LOW - MED. PLASTIC 2.1 m			2					MOIST
8	SP	SAND - GRAVELLY 2.7								MOIST
10	GC	SAND-GRAVEL-CLAY MIX 3.1 m			3					MOIST
12		BOTTOM OF HOLE - 3.1 m								
14					4					
16					5					
18										
20					6					
22										
24					7					
26										
28					8					
30					9					
32										
34					10					
36					11					
38										

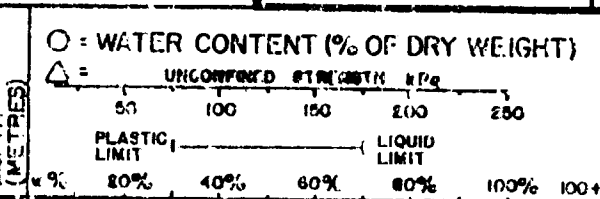


PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH.	RIG	DATE	km	B.P. No.	HOLE No.
WEBBER	B-50	78/03/09	226		1

CHAINAGE	OFFSET
226+130	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT	CLAY %	SILT %	SAND %	GRAVEL %	REMARKS
	ML	SILT - CLAYEY								
2		.6 m								
		CLAY - SILTY SANDY PEBBLES			MOIST					
4					MOIST					
	CL - CI	GRAVELLY TILL @ PL			MOIST					
6										
8		LOW - MED. PLASTIC								
					MOIST					
10		3.1 m			MOIST					
12		BOTTOM OF HOLE - 3.1 m								
14										
16										
18										
20										
22										
24										
26										
28										
30										
32										
34										
36										
38										



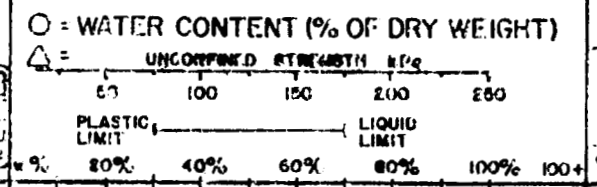
GRAIN-SIZE ANALYSIS

PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/09	km 226	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
226+300	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY SANDY PEBBLES - LOW PLASTIC - SILTY								MOIST	
4		1.2 m			1					WET	
6		GRAVEL - SAND CLAY MIXTURE LOW PLASTIC								MOIST-WET	
8	Gc				2					MOIST-WET	
10		3.1 m			3					MOIST-WET	
12		BOTTOM OF HOLE. 3.1 m									
14					4						
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



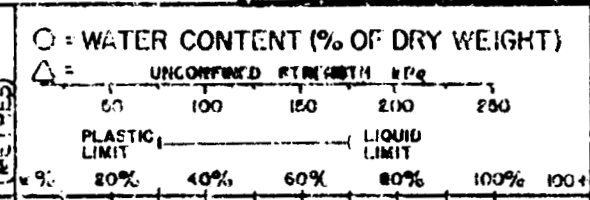
PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/09	km 226	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
226+860	℄

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2	CL	CLAY - SILTY SANDY - PEBBLES +PL Low Plastic								WET
4					1					WET
6										MOIST
8					2					MOIST
10		3.1 m			3					MOIST
12		BOTTOM OF HOLE - 3.1 m			4					
14										
16					5					
18										
20					6					
22										
24					7					
26										
28					8					
30					9					
32										
34					10					
36					11					
38										



PUBLIC WORKS CANADA

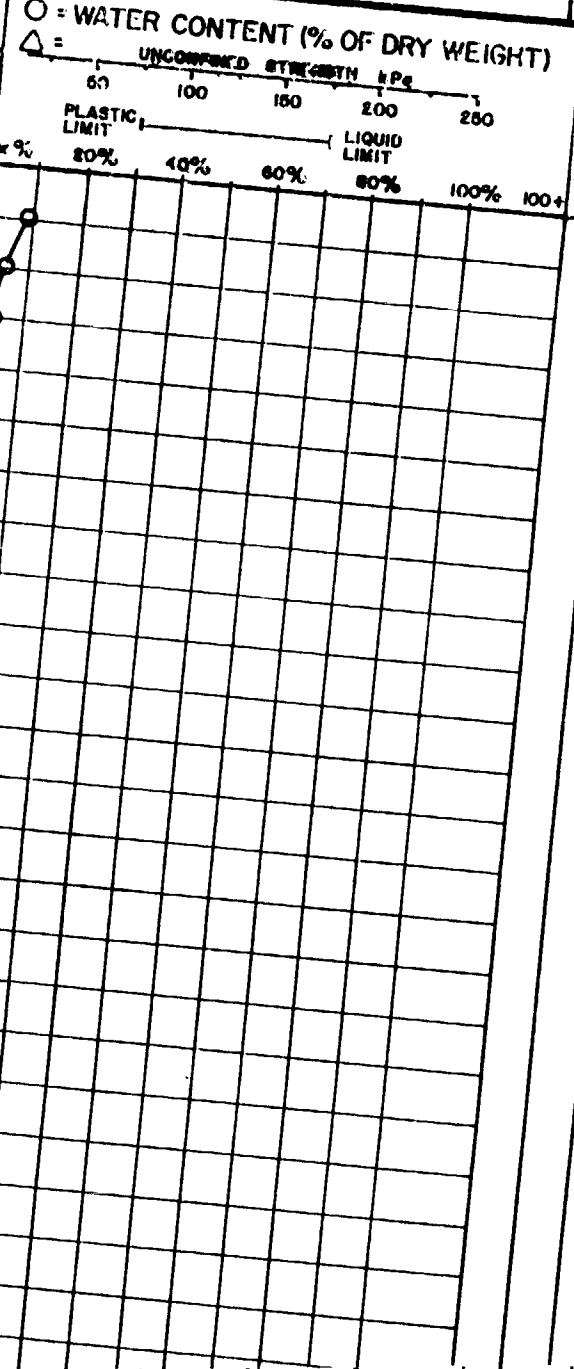
DRILL HOLE REPORT

TECH. WEBBER | RIG B-50 | DATE 78/03/09 | km 226 | LIARD HWY.

B.P. No. | HOLE No. 3

CHAINAGE	OFFS
226+565	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY SANDY - GRAVELLY - Pt								DAMP	
4	GC	GRAVEL - SANDY - CLAYEY .6 m								DAMP-MOIST	
6	GW	- SANDY 1.8 m								DAMP	
8		BOTTOM OF HOLE. 1.8 m									
10											
12											
14											
16											
18											
20											
22											
24											
26											
28											
30											
32											
34											
36											
38											

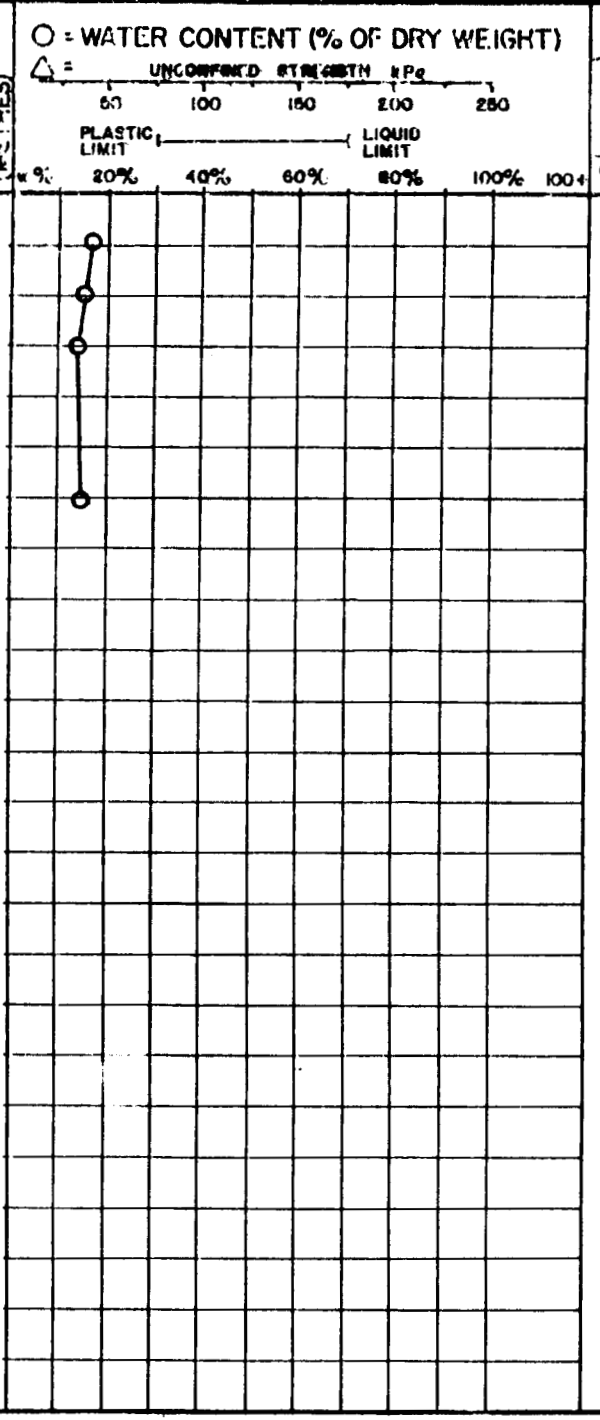


PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/09	km 227	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
227+280	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY / SANDY								MOIST	
4	CL	- LOW PLASTIC			1					MOIST - WET	
6		+ P_L								MOIST - WET	
8					2						
10		GREY PEBBLES 3.1 m			3					MOIST	
12		BOTTOM OF HOLE - 3.1 m									
14					4						
16					5						
18											
20					6						
22											
24					7						
26					8						
28											
30					9						
32											
34					10						
36					11						
38											



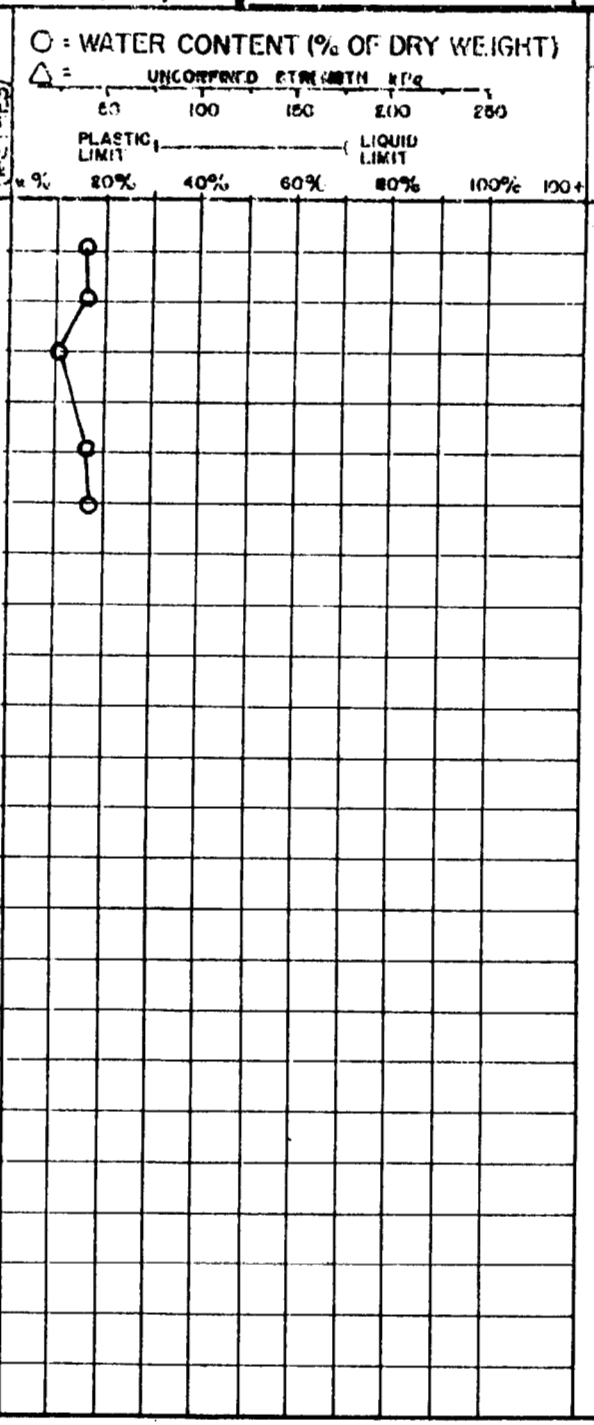
GRAIN-SIZE ANALYSIS

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. Pronych	RIG B-61	DATE 78/03/09	km 227	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
227+500	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY PEBBLES +PL								MOIST	
4	CL	LOW PLASTIC			1					M-III	
6										M-IV	
8					2					M-IV	
10		3.1 m			3					M-IV	
12		BOTTOM OF HOLE 3.1 m									
14					4						
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH.	RIG	DATE	km	B.P. No.	HOLE No.
PRONYCH	B-61	78/03/09	227		3

CHAINAGE	OFFSET
227+630	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	RELATIVE MOISTURE CONTENT
2	CL	CLAY - SILTY PEBBLES - LOW PLASTIC - SILTY SANDY			1	WET
4		1.2 m				WET
6	SC	SAND - CLAYEY GRAVELLY			2	M-W
8		2.6 m				M-W
10	CL	CLAY - SILTY SANDY PEBBLES @ 2			3	M-W
		3.1 m				
12		BOTTOM OF HOLE - 3.1 m			4	
14						
16					5	
18						
20					6	
22						
24					7	
26						
28					8	
30					9	
32						
34					10	
36					11	
38						

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa

50 100 150 200 250

PLASTIC LIMIT — LIQUID LIMIT

<10% 20% 40% 60% 80% 100% 100+

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

REMARKS

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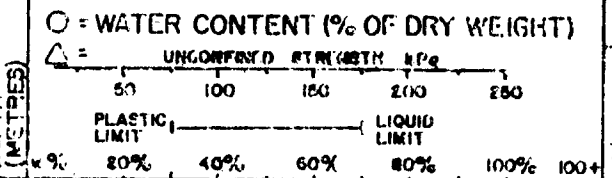
PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH.	RIG	DATE	km	B.P. No.	HOLE No.
PRONYCH	B-61	78/03/09	228		1

CHAINAGE	OFFSET
228+000	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	a	CLAY - SILTY SANDY PEBBLES TILL LOW PLASTIC				62	36	2		MOIST	O.K. FOR CUT
4					1					MOIST	
6						63	32	5		MOIST	
8					2					MOIST	
10		3.1 m			3	71	27	2		MOIST	
12		BOTTOM OF HOLE - 3.1 m									
14					4						
16											
18					5						
20											
22					6						
24											
26					7						
28											
30					8						
32											
34					9						
36											
38					10						
					11						

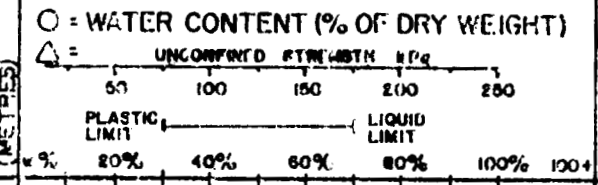


J. PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD HWY.

TECH. Pronych	RIG B-61	DATE 78/03/09	km 228	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
228+280	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY								MOIST-WET	
4	CL	- PEBBLES TILL			1					M-W	
6		- LOW PLASTIC								M-W	
8					2					M-W	
10		3.1m			3					M-W	
12		Bottom of Hole. 3.1m									
14					4						
16											
18					5						
20											
22					6						
24											
26					7						
28											
30					8						
32											
34					9						
36					10						
38					11						



PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/09	km 228	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
228+340	←

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

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	Q-Cl	CLAY - SILTY GRAVELLY - SILTY SANDY PEBBLES TILL @ P_L LOW-MOD. PLASTIC								WET	
4					1	39	-	39	22	MOIST	
6										MOIST	
8					2	57	-	36	7	MOIST	
10		3.1 m			3					MOIST	
12		BOTTOM OF HOLE - 3.1 m									
14					4						
16					5						
18											
20					6						
22											
24					7						
26					8						
28											
30					9						
32											
34					10						
36					11						
38											

PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD Hwy.

TECH. PRONYCH	RIG B-61	DATE 78/03/09	km 228	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
228+560	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	RELATIVE MOISTURE CONTENT	REMARKS
	Pt	PEAT .5m				MOIST-WET	SANDY CLAY TILL
2		CLAY - SILTY ORGANICS				WET	-SLIGHTLY ABOVE
4		- SILTY SANDY PEBBLES TILL			1	MOIST	OPTIMUM BUT
6		@ P_L					OK FOR CUT
8	CL	LOW PLASTIC			2	MOIST	
10		+ P_L			3	WET	
12					4		
14		4.6m					
16		BOTTOM OF HOLE - 4.6m			5		
18							
20					6		
22							
24					7		
26							
28					8		
30					9		
32							
34					10		
36					11		
38							

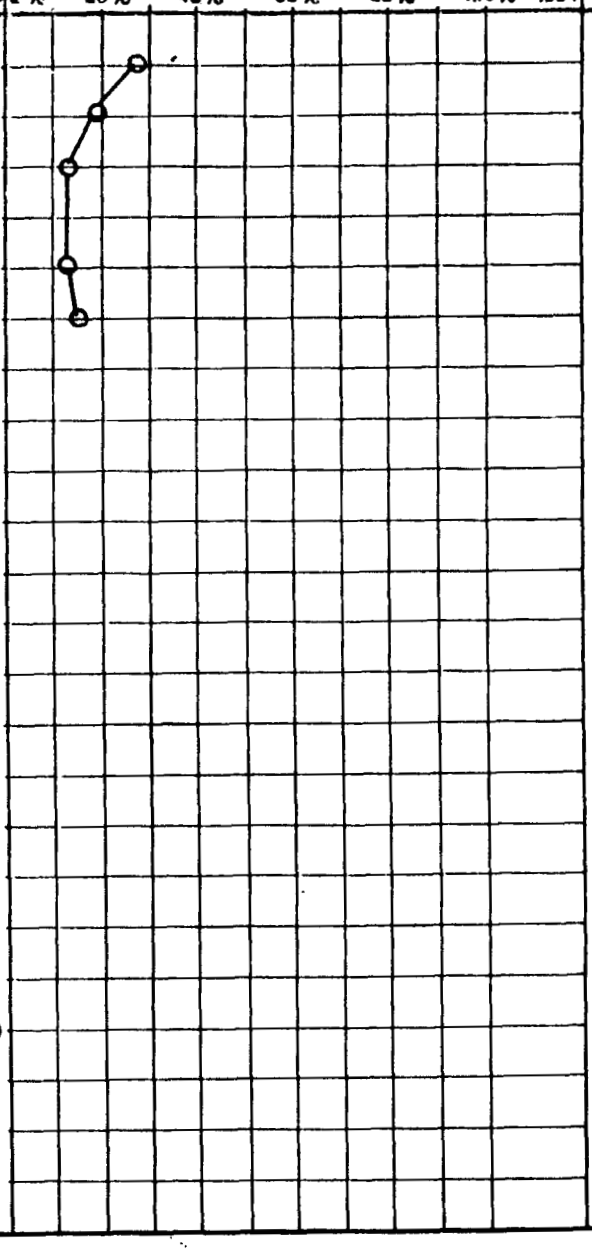
C = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa

50 100 150 200 250

PLASTIC LIMIT ⊢——⊣ LIQUID LIMIT

0% 20% 40% 60% 80% 100% 100+



GRAIN SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %

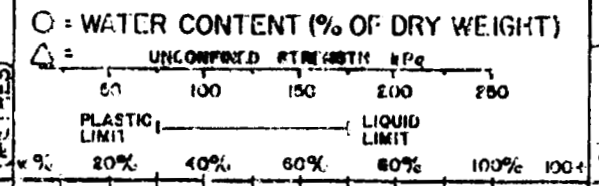
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/09	km 228	B.P. No.	HOLE No. 5

CHAINAGE	OFFSET
228+660	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY-SILTY									O.K. FOR CUT.
4		- SILTY SANDY			1					MOIST	
6	CL	- PEBBLES TILL				46	44	10		MOIST	
8	CI	LOW-MED. PLASTIC			2					MOIST	
10		@ P_L			3					MOIST	
12					4						
14		4.6 m				64	30	6		MOIST	
16		BOTTOM OF HOLE - 4.6 m			5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36											
38					11						

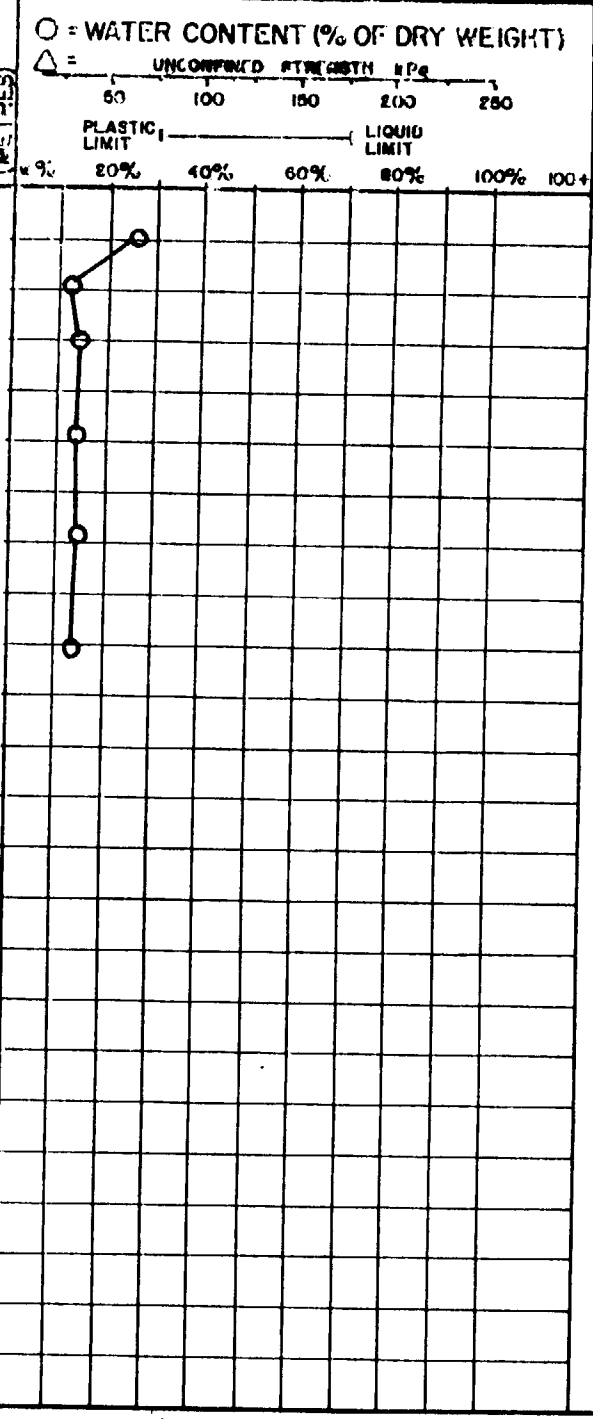


PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD HWY.

TECH. Pronych	RIG B-61	DATE 78/03/09	km 228	B.P. No.	HOLE No. 6

CHAINAGE	OFFSET
228+840	℄

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

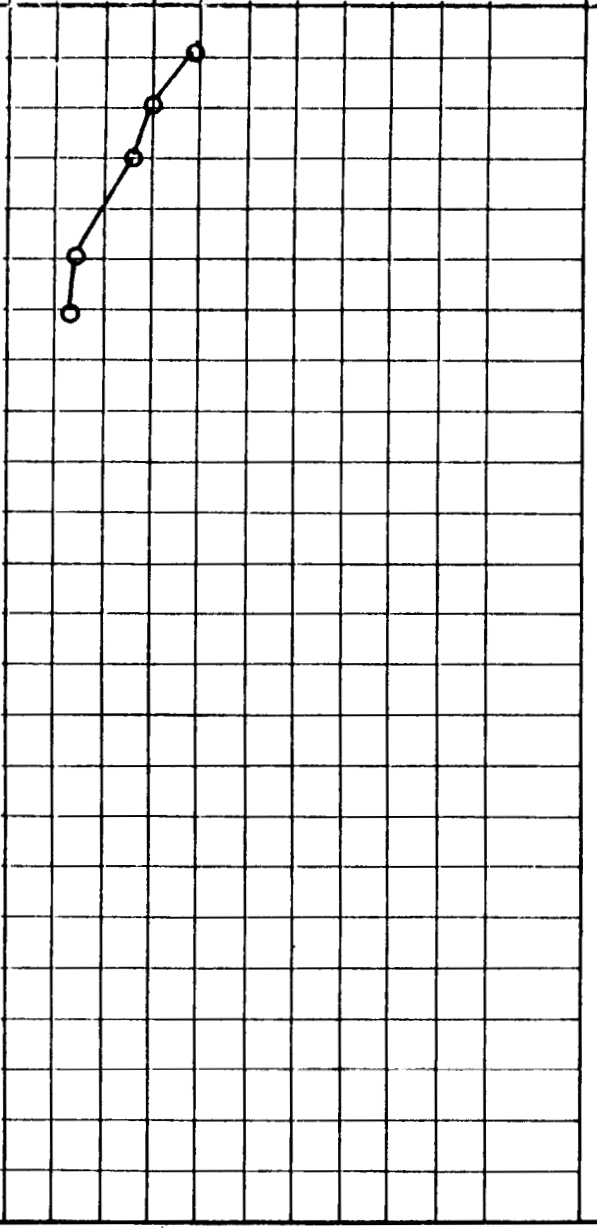


PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD HWY.

TECH. PRONY CH	RIG B-61	DATE 78/03/10	km 229	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
228+950	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY								WET	
4		PEBBLES			1					WET	
6	CL	LOW PLASTIC								MOIST	
8		SILTY SANDY PEBBLES TILL			2					MOIST	
10		3.1 m			3					MOIST	
12		BOTTOM OF HOLE - 3.1 m									
14					4						
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											

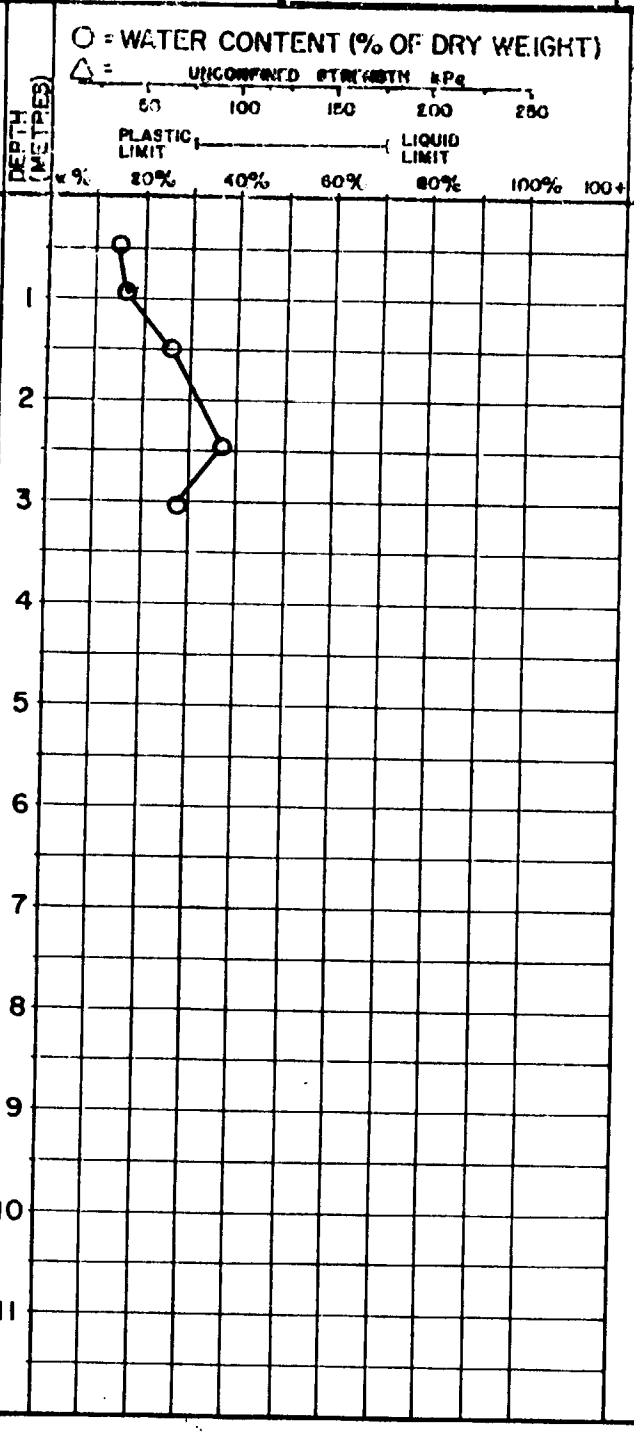


PUBLIC WORKS CANADA | DRILL HOLE REPORT | WARD Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/10	km 229	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
229+540	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
	Pt	PEAT .3 m								
2	CL	CLAY - SILTY SANDY ORGANICS							DAMP-MOIST	
4	ML	SILT - CLAYEY SANDY + P_L							DAMP-MOIST	
6									WET	
8	CL	CLAY - SILTY							WET	
10		3.1 m							WET	
12		BOTTOM OF HOLE - 3.1 m								
14										
16										
18										
20										
22										
24										
26										
28										
30										
32										
34										
36										
38										



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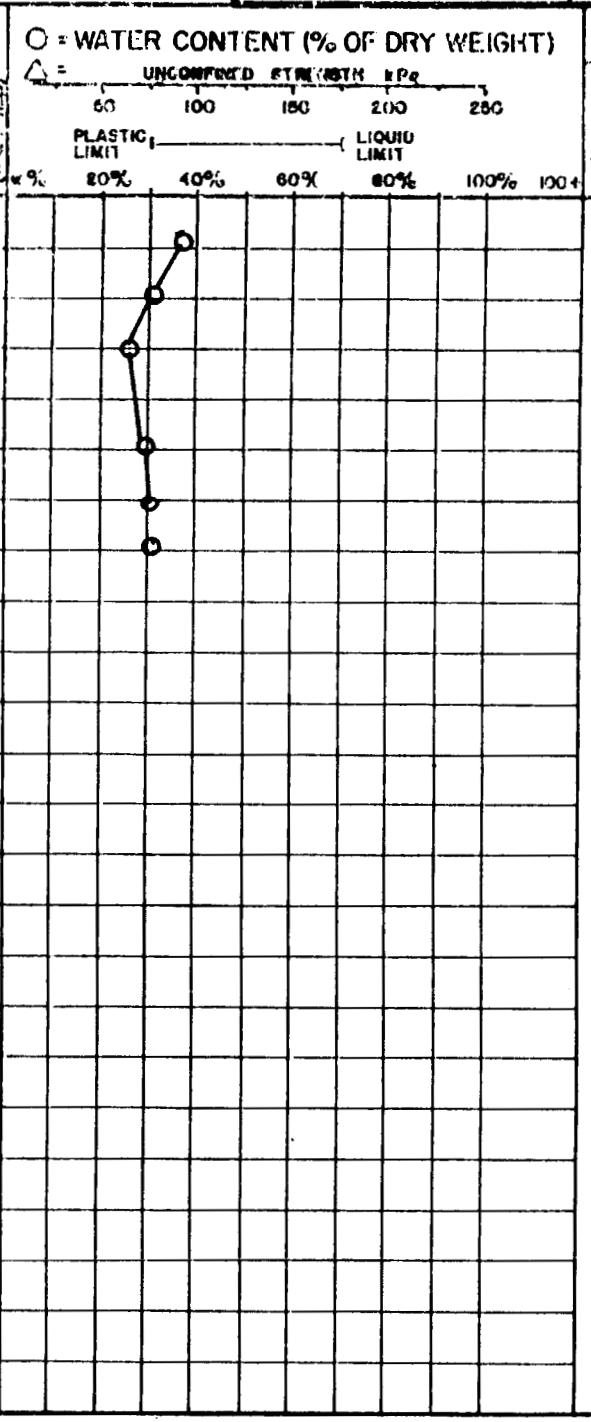
PUBLIC WORKS CANADA	DRILL HOLE REPORT	HARD Hwy.

TECH. PRONYCH	RIG B-61	DATE 78/03/10	km 229	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
229+770	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT
2		CLAY - SILTY			WET-SAT
		LOW PLASTIC			
4	CL	+ P_L WET AFTER .9m			WET
6					WET
8					WET
10		3.1 m			WET
12		BOTTOM OF HOLE - 3.1 m			
14					
16					
18					
20					
22					
24					
26					
28					
30					
32					
34					
36					
38					



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

REMARKS

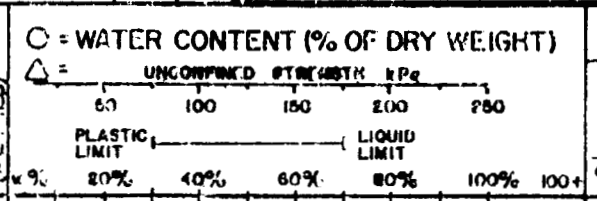
PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/10	km 230	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
229+950	℄

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2	CL	CLAY - SILTY SOME ORGANICS LOW PLASTIC WET AFTER .9 m			1					SAT.
4	ML CL	SILT - CLAYEY - CLAY SILTY								MOIST-WET WET-SAT.
6					2					
8	CL	CLAY - SILTY			2					WET
10		GREY 3.1 m			3					WET
12		BOTTOM OF HOLE - 3.1 m								
14					4					
16					5					
18										
20					6					
22										
24					7					
26										
28					8					
30					9					
32										
34					10					
36										
38					11					



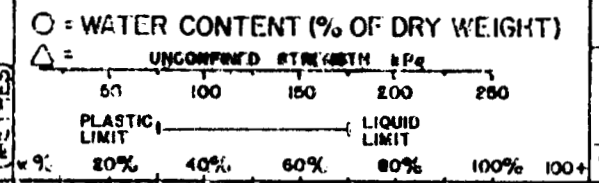
PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/10	km 230	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
230 + 340	

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
		CLAY-SILTY								WET-SAT
2										
4		WET			1					WET
		SANDY SILTY PEBBLES								WET
6		WATER BEARING SAND @ 2.3m			2					
8		2.4 m								WET
		SAND - SILTY CLAYEY PEBBLES			3					
10										
12	SC	SOME WATER IN HOLE AFTER 2.1m								WET
14					4					WET
		4.6m								
16		BOTTOM OF HOLE. 4.6m			5					
18										
20					6					
22										
24					7					
26										
28					8					
30					9					
32										
34					10					
36					11					
38										

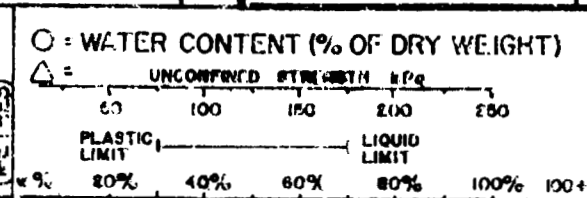


PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD HWY.

TECH. Pronych	RIG B-61	DATE 78/03/10	km 230	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
230+620	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY PEBBLES + PL OR @ PL								WET	
4	CL	GRAVELLY			1					WET	
6										MOIST	
8		PEBBLES LOW PLASTIC			2					MOIST-WET	
10		3.1 m			3					MOIST	
12		BOTTOM OF HOLE 3.1 m									
14					4						
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



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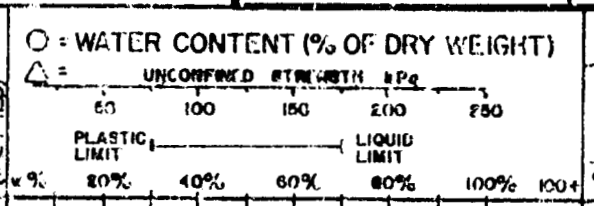
PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/10	km 230	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
230+780	℄

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2	CL	CLAY-SILTY SANDY PEBBLES +PL								WET-SAT
4					1					WET
		@PL								MOIST
6		TILL								
8		GRAVELLY			2					MOIST
10	CL	PEBBLES			3					MOIST
12		LOW PLASTIC								
14		4.6m			4					MOIST
16		BOTTOM OF HOLE - 4.6m			5					
18										
20					6					
22										
24					7					
26										
28					8					
30					9					
32										
34					10					
36					11					
38										



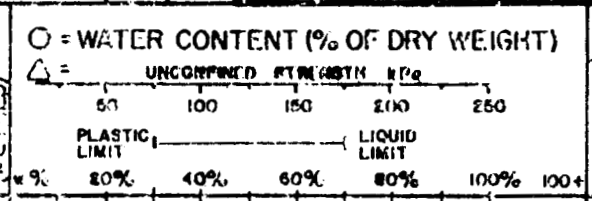
PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/10	km 231	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
230+980	℄

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2	Pt	PEAT								SAT.
4		1.4m								SAT
6		CLAY - SILTY SANDY PEBBLES LOW PLASTIC + PL								MOISTWET
8	CL									M-W
10		3.1m								MOIST
12		BOTTOM OF HOLE 3.1m								
14										
16										
18										
20										
22										
24										
26										
28										
30										
32										
34										
36										
38										



GRAIN SIZE ANALYSIS

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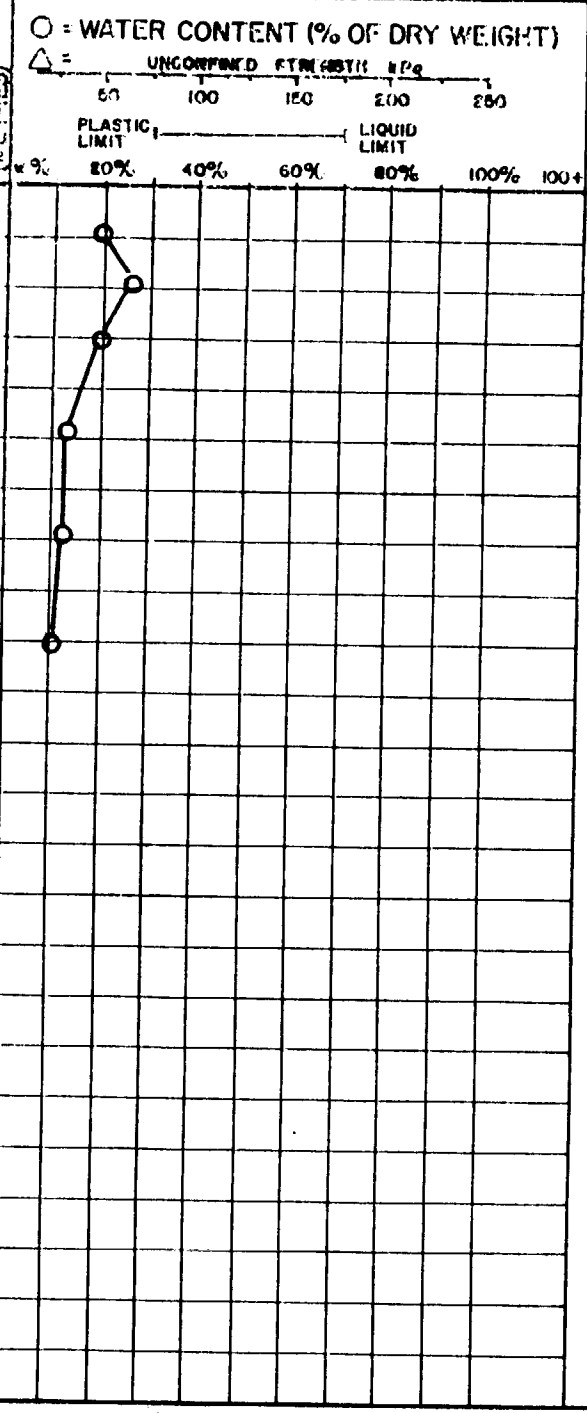
PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. Pronych	RIG B-61	DATE 78/03/10	km 231	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
231 + 300	℄

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



PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/10	km 231	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
231+520	℄

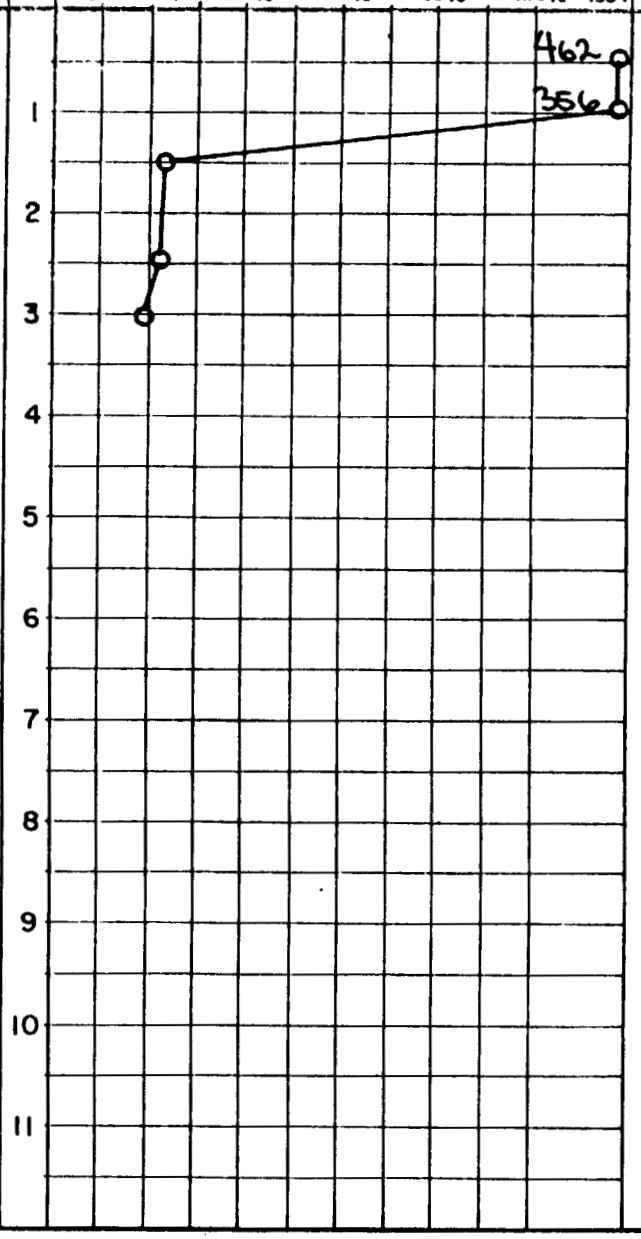
REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT
2	Pt	PEAT			SAT.
4		1.4 m			MOIST
6		CLAY - SILTY PEBBLES			WET
8	CL	LOW PLASTIC +Pt			WET
10		3.1 m			MOIST
12		BOTTOM OF HOLE 3.1 m			

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa

PLASTIC LIMIT — LIQUID LIMIT



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

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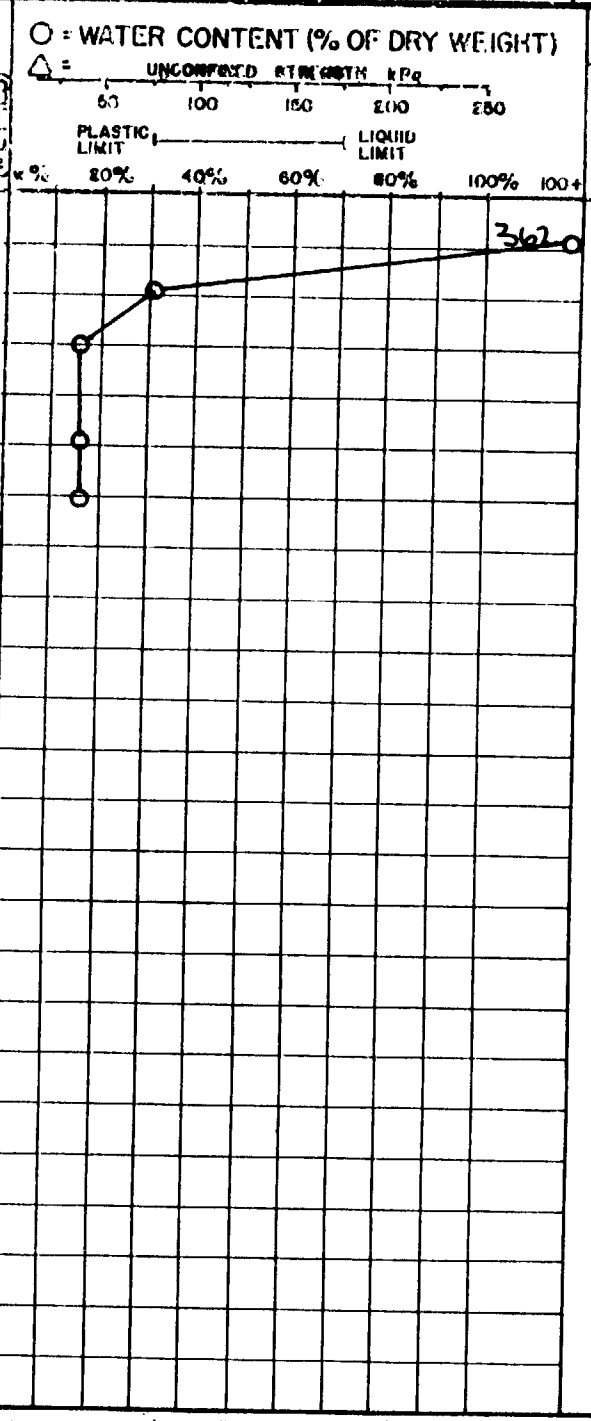
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY -

TECH. Prowsch	RIG B-61	DATE 78/03/10	km 231	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
231+700	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	RELATIVE MOISTURE CONTENT
2	Pt	PEAT .8m				WET
4		CLAY - SILTY ORGANIC			1	WET
6		- SILTY SANDY				MOIST
8	CL - CI	- PEBBLES TILL + PL OR ∂ PL			2	
10		LOW-MED. PLASTIC 3.1 m			3	MOIST / MOIST
12		BOTTOM OF HOLE .31m				
14					4	
16						
18					5	
20					6	
22						
24					7	
26						
28					8	
30					9	
32						
34					10	
36						
38					11	



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

REMARKS

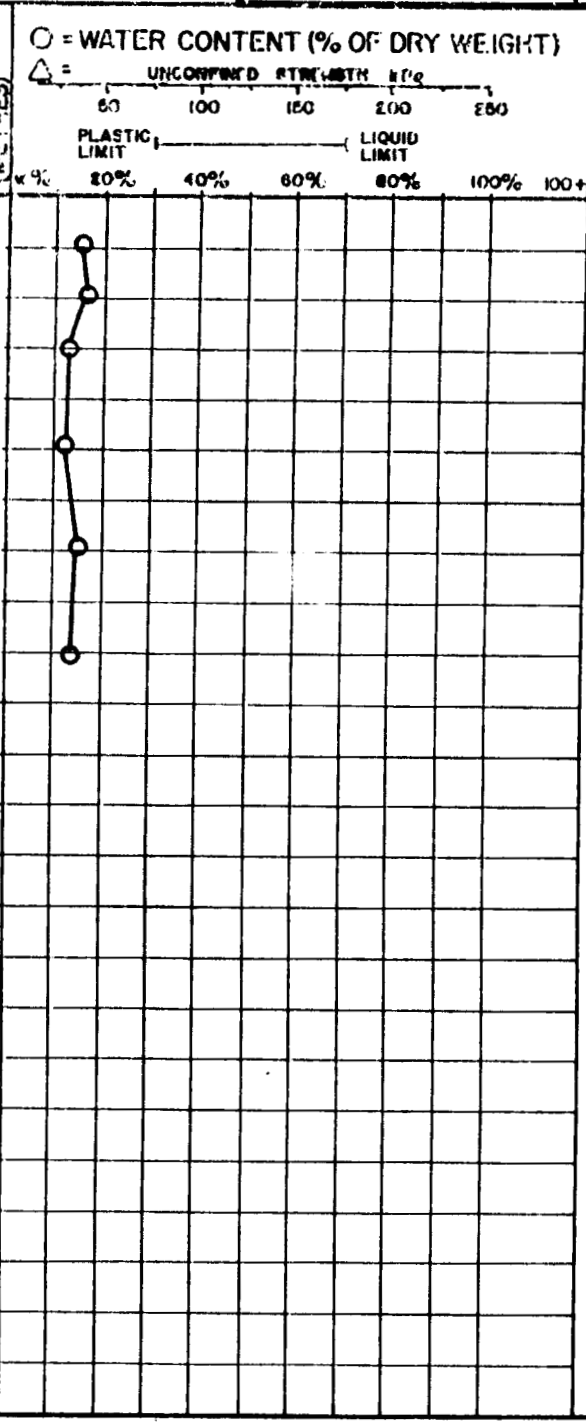
PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/10	km 231	B.P. No.	HOLE No. 5

CHAINAGE	OFFSET
231+840	℄

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2		CLAY - SILTY SANDY - PEBBLES TILL + P_L								MOIST
4					1					WET
6		@ P_L								WET
8	CL	LOW PLASTIC			2					MOIST
10					3					
12										MOIST
14		4.6m			4					
16		BOTTOM OF HOLE - 4.6 m								MOIST
18					5					
20					6					
22										
24					7					
26										
28					8					
30					9					
32										
34					10					
36					11					
38										



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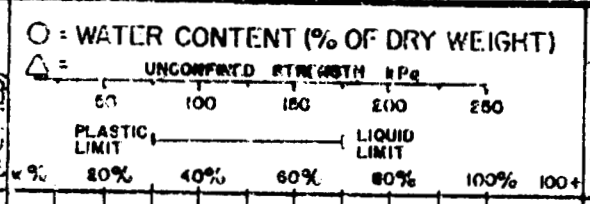
PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD Hwy

TECH. Pronych	RIG B-61	DATE 78/03/10	km 232	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
232+000	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	RELATIVE MOISTURE CONTENT
2		CLAY - SILTY SANDY PEBBLES TILL LOW PLASTIC @ Pb				WET
4					1	MOIST
6	CL					MOIST
8					2	MOIST
10					3	
12						MOIST
14		GREY 4.6m			4	MOIST
16		Bottom of Hole - 4.6m			5	
18						
20					6	
22						
24					7	
26						
28					8	
30					9	
32						
34					10	
36						
38					11	



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

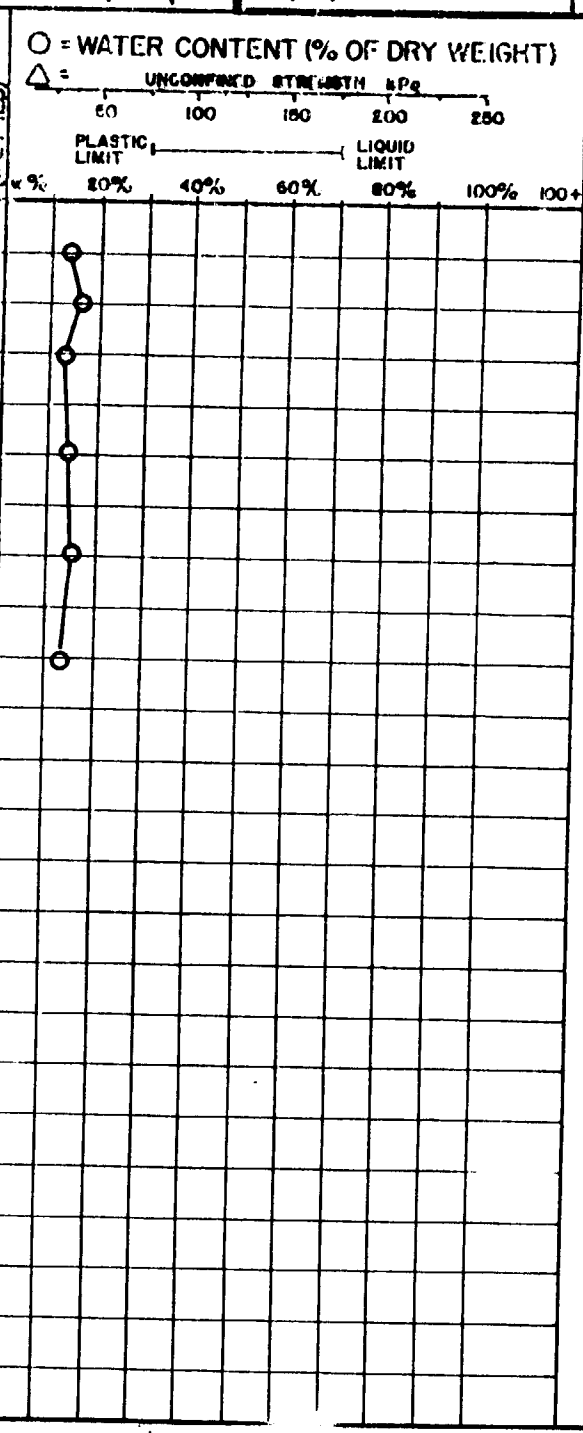
REMARKS

PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/10	km 232	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
232+080	℄

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



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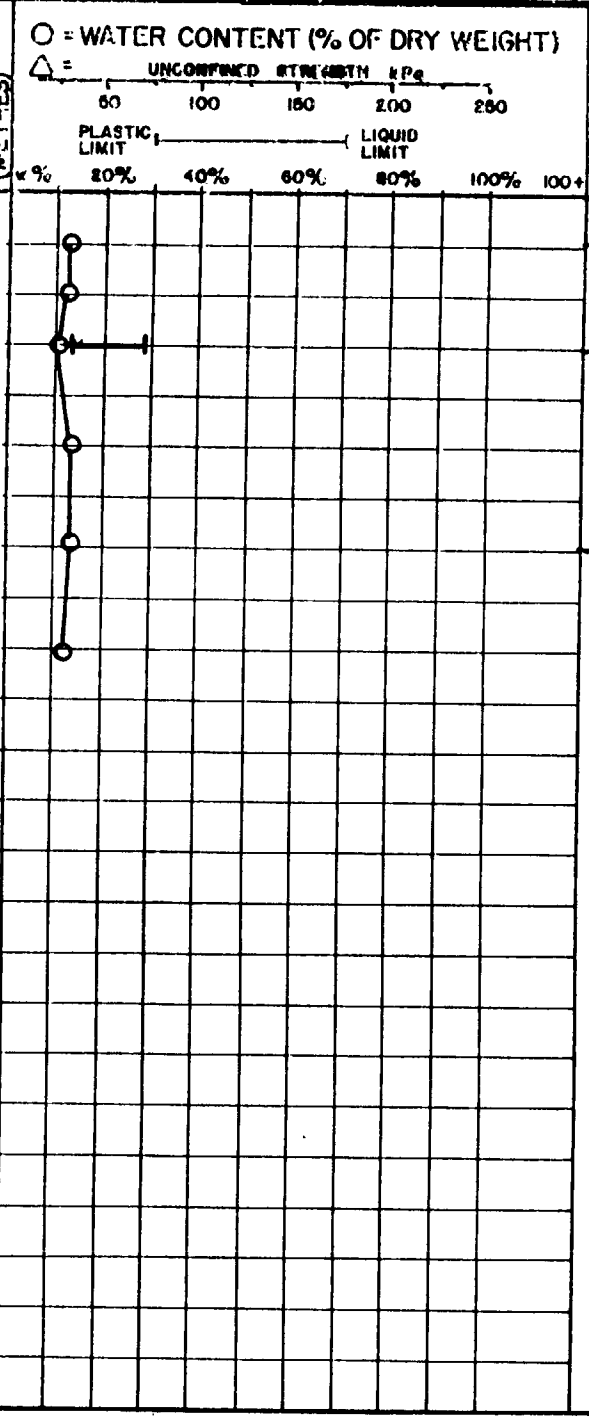
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD Hwy

TECH. Pronych	RIG B-61	DATE 78/03/10	km 232	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
232+380	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - Silty Sandy Pebbles Till Low Plastic @ P_L				46	47		7	Moist	
4					1					Moist	
6	CL					59	47		4	Moist	
8					2					Moist	
10					3						
12						68	28		4	Moist	
14		Gray 4.6m			4					Moist	
16		Bottom of Hole. 4.6m			5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



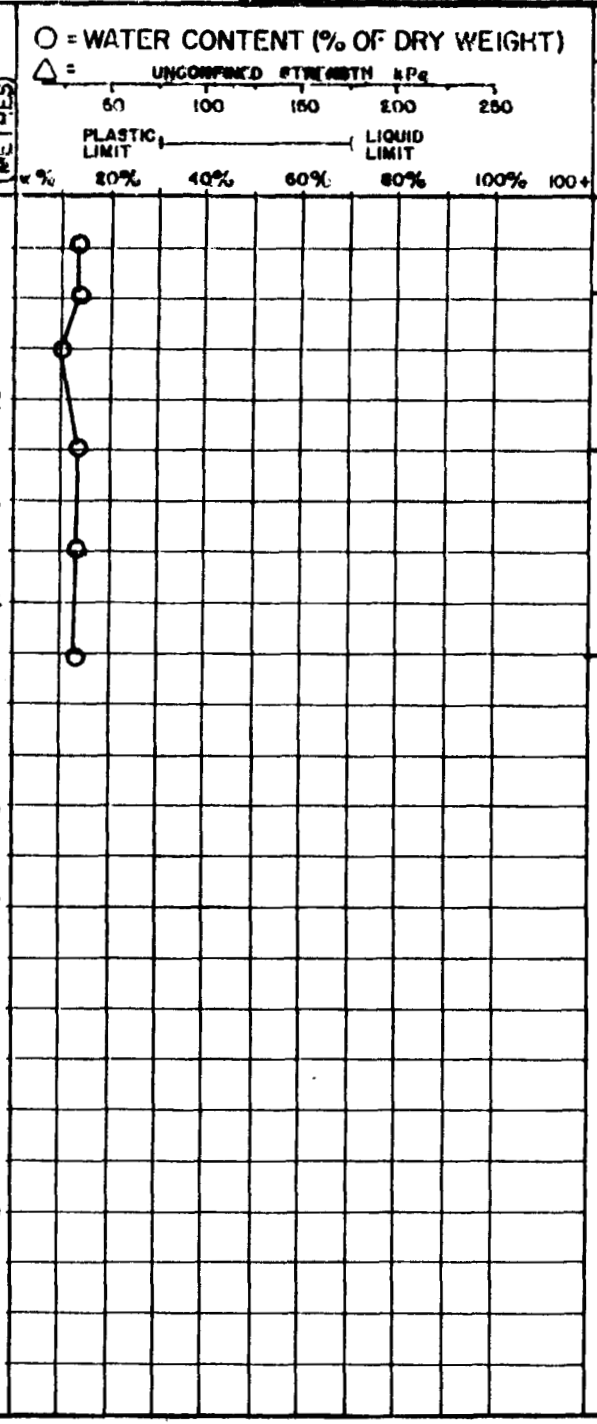
PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD HWY.

TECH. Pronych	RIG B-61	DATE 18/03/10	km 232	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
232+460	4

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2		CLAY. SILTY SANDY PEBBLES @ PL								MOIST-WET
4					1	52	44	4		MOIST
6		TILL								MOIST
8	CL-CI	LOW-MED. PLASTIC			2	69	29	2		MOIST
10					3					
12										MOIST
14		GREY 4.6 m			4	64	32	4		MOIST
16		BOTTOM OF HOLE. 4.6 m			5					
18										
20					6					
22										
24					7					
26					8					
28										
30					9					
32										
34					10					
36					11					
38										

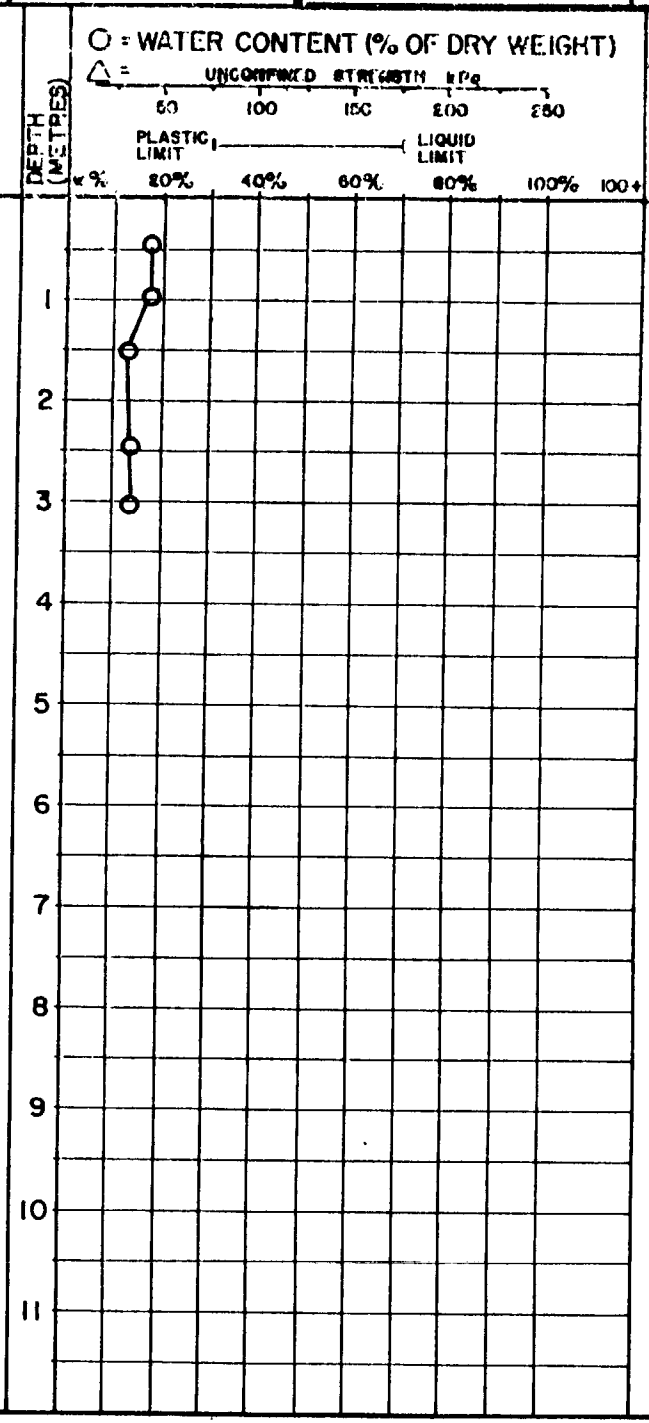


PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH.	RIG	DATE	km	B.P. No.	HOLE No.
PRONYCH	B-61	78/03/10	232		5

CHAINAGE	OFFSET
232+660	±

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT
2		CLAY - SILTY SANDY			WET
		PEBBLES			
4	CL	LOW PLASTIC +P_L			WET
		TILL @ P_L			
6					MOIST
8					MOIST
10		3.1 m			MOIST
12		BOTTOM OF HOLE - 3.1 m			
14					
16					
18					
20					
22					
24					
26					
28					
30					
32					
34					
36					
38					



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

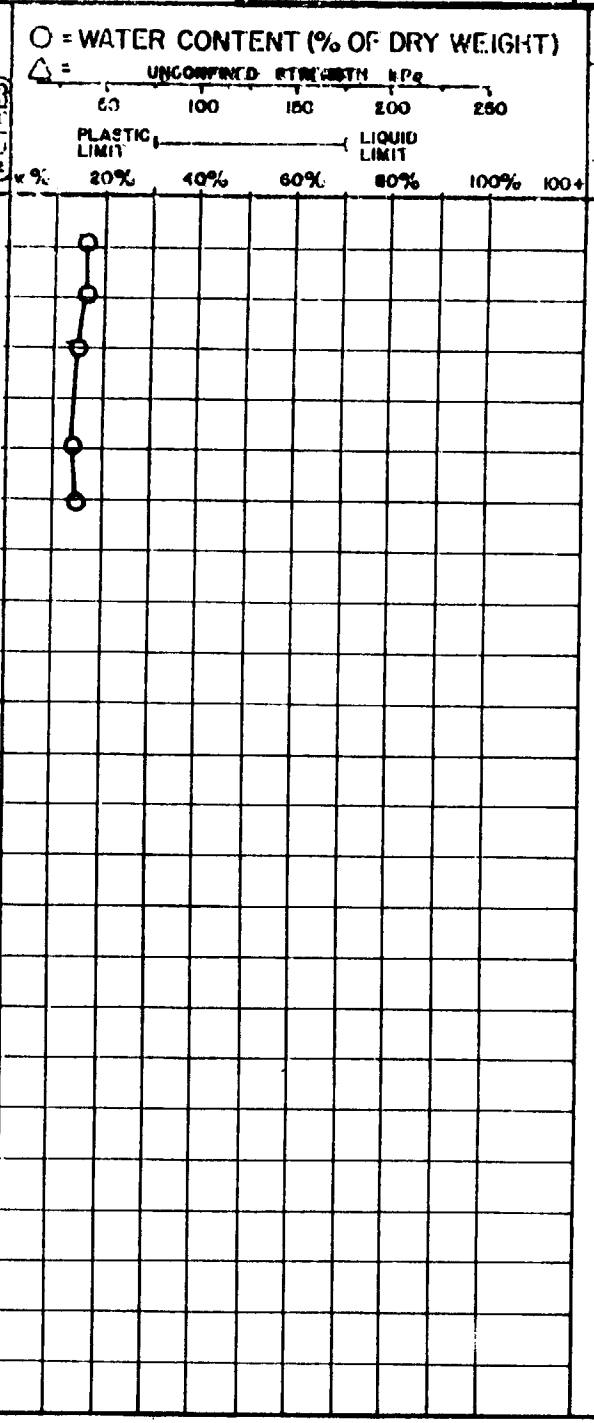
REMARKS

PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH. Pronych	RIG B-61	DATE 78/03/10	km 232	B.P. No.	HOLE No. 6

CHAINAGE	OFFSET
232+860	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY PEBBLES @ or ABOVE P_L								WET	
4		TILL			1					WET	
6	CL	LOW PLASTIC			2					MOIST	
8										MOIST	
10		3.1 m			3					MOIST	
12		BOTTOM OF HOLE . 3.1 m			4						
14											
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											

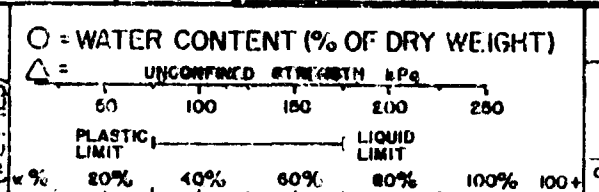


PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. Pronych	RIG B-61	DATE 78/03/11	km 233	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
233+155	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY SANDY +PL				55	36	9		WET	
4		LOW PLASTIC			1					WET	
6		PEBBLES - TILL				14	54	32		MOIST	?
8		@ PL			2	66	27	7		MOIST	
10					3						
12										MOIST	
14		GRAVELLY 4.6m			4	50	33	18		MOIST	
16		BOTTOM OF HOLE - 4.6m			5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



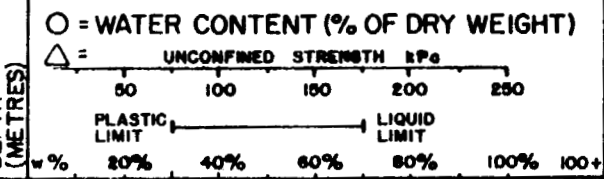
PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. Pronych	RIG B-61	DATE 78/03/11	km 233	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
233+300	℄

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	RELATIVE MOISTURE CONTENT
2		CLAY - SILTY SANDY - PEBBLES +PL				SAT.
4					1	WET-SAT
6	CL	@ PL				MOIST-WET
8		TILL LOW PLASTIC			2	MOIST
10		3.6m			3	MOIST
12		BOTTOM OF HOLE. 3.6m				
14					4	
16					5	
18						
20					6	
22						
24					7	
26					8	
28						
30					9	
32						
34					10	
36					11	
38						



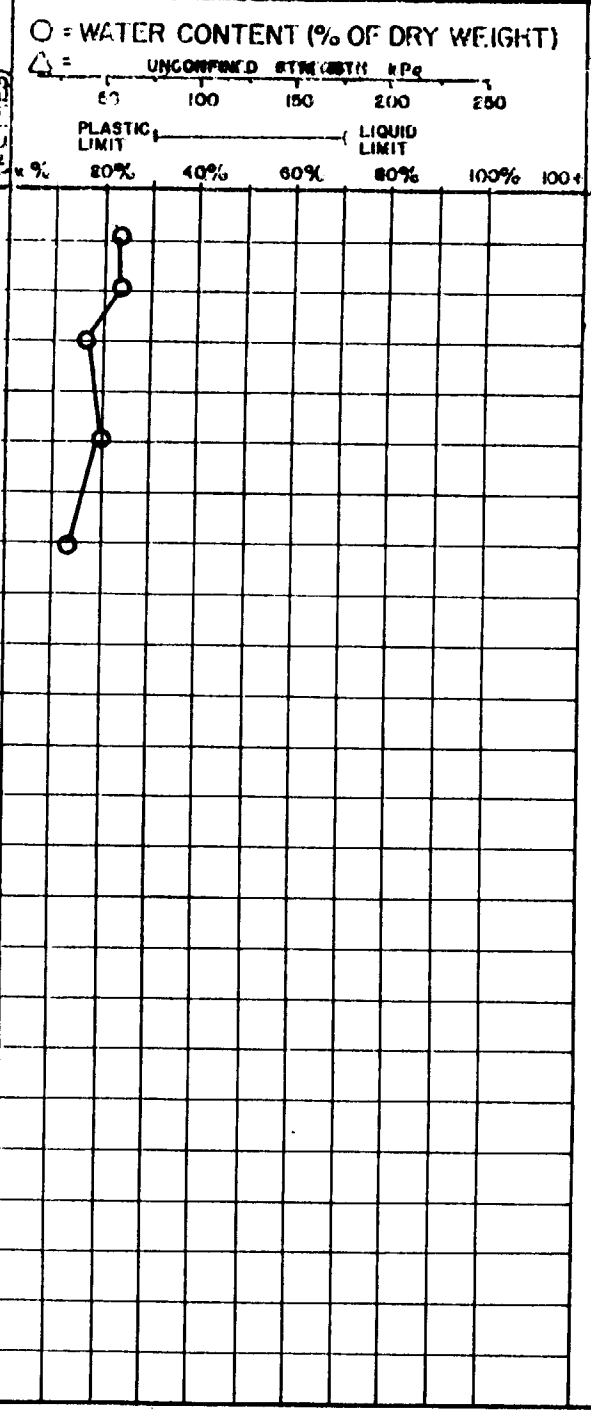
GRAIN-SIZE ANALYSIS			
CLAY %	SILT %	SAND %	GRAVEL %

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/11	km 233	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
233+560	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL ML	CLAY - SILTY - SILT - CLAYEY SANDY								WET	
4		1.1 m			1					WET	
4	Sc	SAND - CLAYEY - SILTY									
6	CL	CLAY - SANDY SILTY			2					MOIST	
8		GRAVELLY									
10	Sc	SAND - SILTY CLAYEY 3.1 m			3					WET	
12		BOTTOM of HOLE - 3.1 m			4					SAT.	
14		FREE WATER AFTER 2.6 m			5						
16					6						
18					7						
20					8						
22					9						
24					10						
26					11						
28											
30											
32											
34											
36											
38											



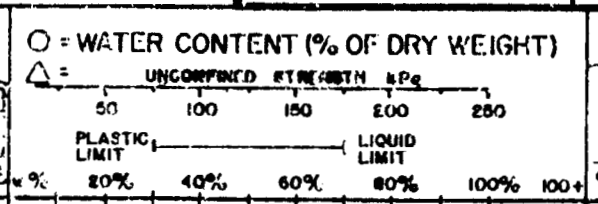
PUBLIC WORKS CANADA | DRILL HOLE REPORT | Liard Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/11	km 233	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
233+855	℄

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2		SAND-SILTY GRAVELLY								MOIST
		1.1 m								
4		CLAY - SILTY SANDY PEBBLES TILL @ PL			1					MOIST
6	CL - CI				2					DAMP-MOIST
8		LOW-MOD. PLASTIC								D-M
10		3.1 m			3					D-M
12		BOTTOM OF HOLE - 3.1 m								
14					4					
16					5					
18										
20					6					
22										
24					7					
26										
28					8					
30					9					
32										
34					10					
36					11					
38										



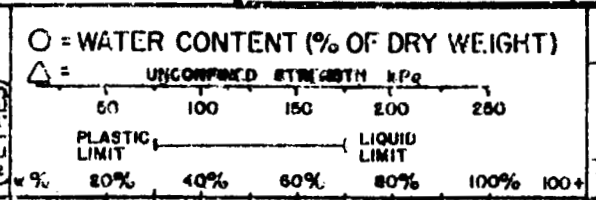
GRAIN-SIZE ANALYSIS

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | Liard Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/11	km 234	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
234+110	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY SANDY GRAVELLY TILL @ PL			1	53	36	11		MOIST	
4		LOW - MED. PLASTIC.								MOIST	
6					2	56	32	14		MOIST	
8	CI									MOIST	
10		3.1 m			3	62	30	8		MOIST	
12		Bottom of Hole - 3.1 m									
14					4						
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



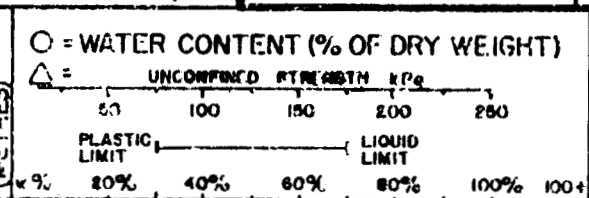
PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/11	km 234	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
234+280	*

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2	CL	CLAY - SILTY SANDY TILL PEBBLES + P_L			1					MOIST-WET
4		@ P_L OR BELOW								WET
6					2					MOIST
8	CI	LOW - MED. PLASTIC								MOIST
10		3.1 m			3					MOIST
12		BOTTOM OF HOLE - 3.1 m			4					
14										
16					5					
18										
20					6					
22										
24					7					
26										
28					8					
30					9					
32										
34					10					
36					11					
38										



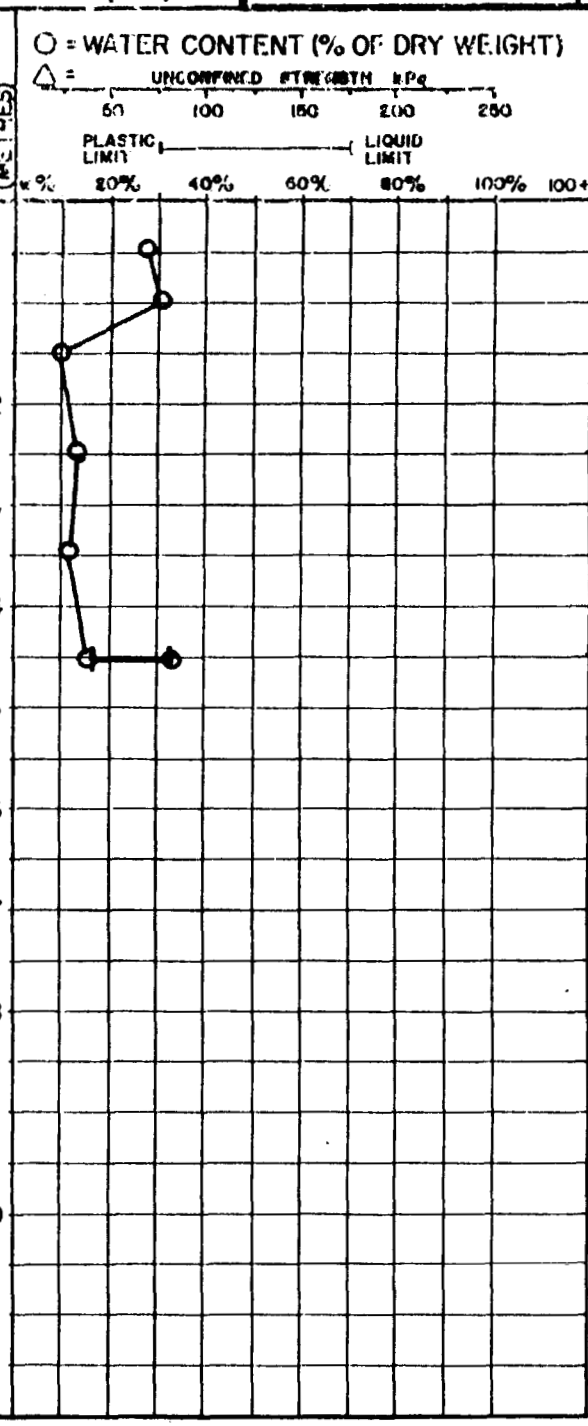
PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/11	km 234	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
234+490	℄

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2	CL	CLAY. SILTY +PL LOW PLASTIC								WET
4					1	83	17	0		WET
6		- SILTY SANDY PEBBLES · TILL @PL								MOIST
8	CI	MED. PLASTIC			2	60	38	2		MOIST
10					3					MOIST
12										
14		GREY 4.6m			4	68	30	2		MOIST
16		Bottom of Hole: 4.6m			5					
18										
20					6					
22										
24					7					
26										
28					8					
30					9					
32										
34					10					
36					11					
38										

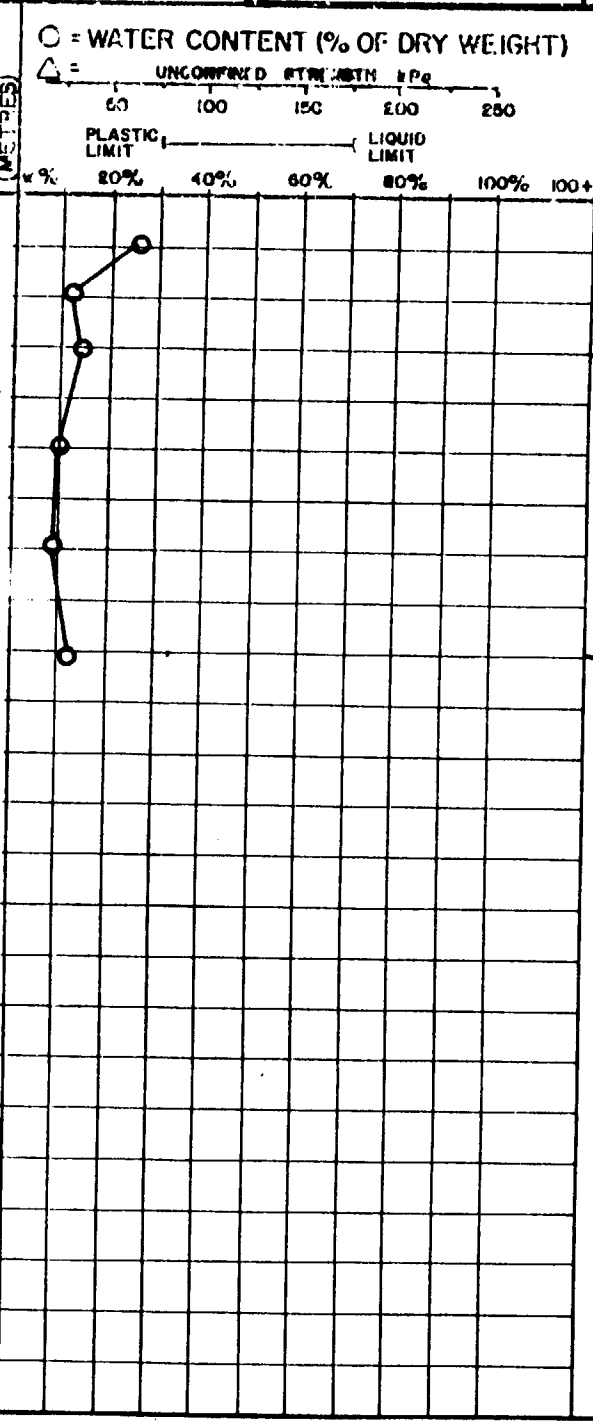


PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD Hwy.

TECH. PRONYCH	RIG B-61	DATE 78/03/11	km 234	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
234+570	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY SANDY PEBBLES - TILL @ P_L LOW PLASTICITY								WET	O.K. FOR CUT
4					1					MOIST	
6		1.8 m				59	36	5		MOIST	
8	Sc	SAND. SILTY CLAYEY GRAVELLY			2						
10					3					MOIST	
12		3.5 m								MOIST	
14	CL-CI	CLAY - SILTY SANDY PEBBLES @ P_L LOW - MED. PLASTIC			4	60	32	8		DAMP	
		4.6 m									
16		BOTTOM OF HOLE. 4.6 m			5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36											
38					11						



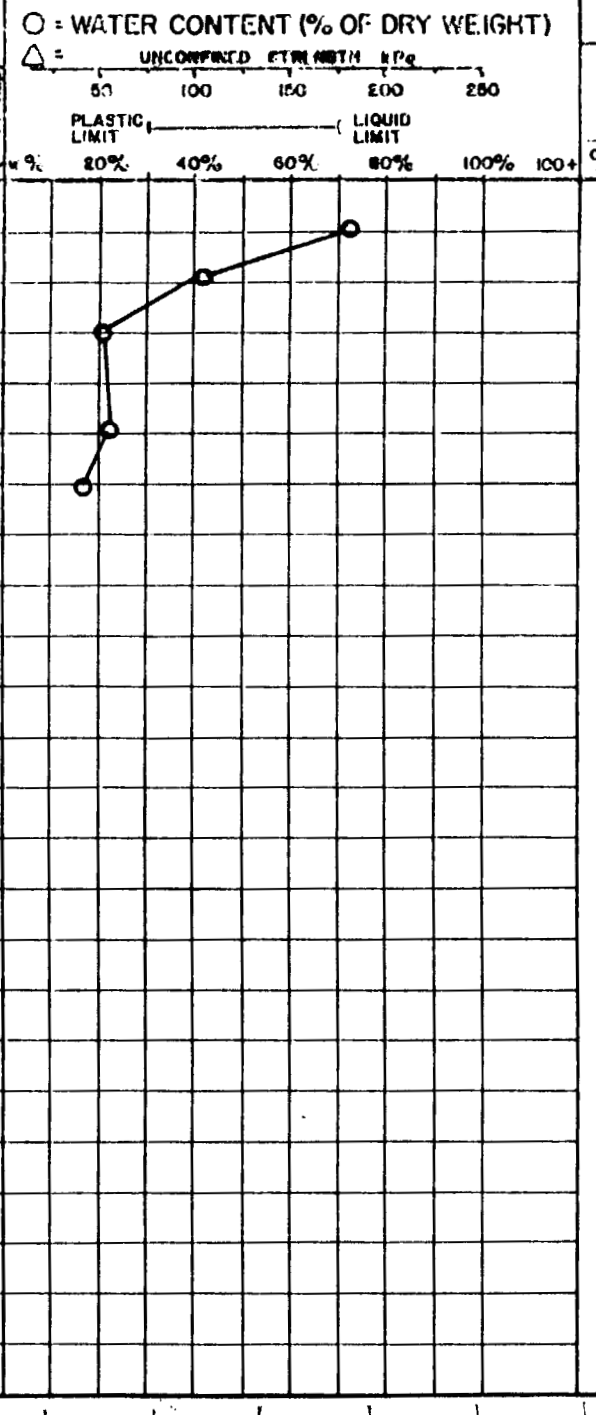
PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/11	km 234	B.P. No.	HOLE No. 5

CHAINAGE	OFFSET
234+880	℄

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
0	OL	CLAY - ORGANIC								Free Water	
2	CL									Some Water	
4		CLAY - SILTY SANDY PEBBLES + PL			1						
6	CL	LOW PLASTIC								WET	
8					2						2.7m - 2.85 m
10		3.1m								WET	WATER BEARING GRAVEL
12		BOTTOM OF HOLE - 3.1 m			3					WET	
14					4						
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30											
32					9						
34											
36					10						
38					11						

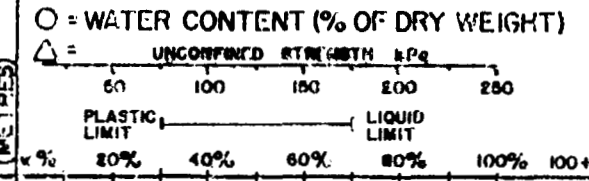


PUBLIC WORKS JAMAICA	DRILL HOLE REPORT	LIARD Hwy.

TECH. PRONYCH	RIG B-61	DATE 78/03/11	km 235	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
235 + 140	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY PEBBLES TILL				54	43	3		MOIST-WET	O.K FOR CUT
4		@ P_L			1					MOIST	
6		MED. PLASTIC								MOIST	
8	C1				2	68	36	6		MOIST	
10					3						
12										MOIST	
14		4.6 m			4	64	32	4		MOIST	
16		BOTTOM OF HOLE - 4.6 m			5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											

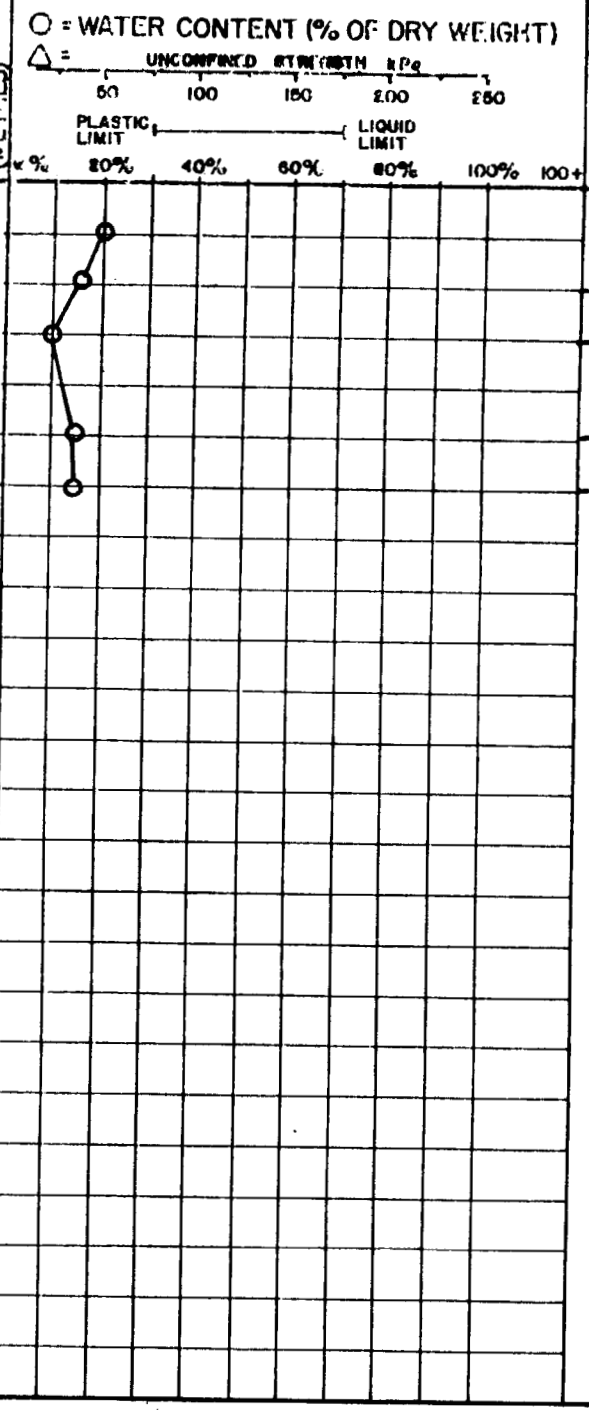


PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD HWY.

TECH. Pronych	RIG B-61	DATE 78/03/11	km 235	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
235+200	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY SANDY PEBBLES GRAVELLY @ .9 m								WET-SAT	O.K. FOR CULT
4		1.2 m			1	34 -	49		17	WET	
6	SC	SAND - GRAVELLY CLAYEY SILTY				26 -	58		16	MOIST	
8	CL	2.0 m CLAY - SILTY SANDY PEBBLES TILL			2						
10	CI	LOW - MED. PLASTIC 3.1 m				54 -	41		5	MOIST	
12		BOTTOM OF HOLE. 3.1 m			3					MOIST	
14					4						
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36											
38					11						

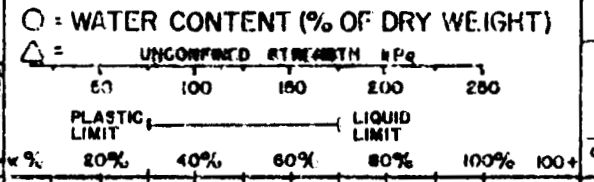


PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD HWY.

TECH. Pronych	RIG B-61	DATE 78/03/11	km 235	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
235+300	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT
2	Pt	PEAT .8 m			MOIST
4		CLAY - SILTY - SOME ORG.			MOIST-WET
6		- SILTY SANDY TILL - PEBBLES			MOIST
8	CL	+PL LOW PLASTIC			WET
10		3.1 m			WET
12		BOTTOM OF HOLE. 3.1m			
14					
16					
18					
20					
22					
24					
26					
28					
30					
32					
34					
36					
38					



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

REMARKS: BOULDERS ON SURFACE

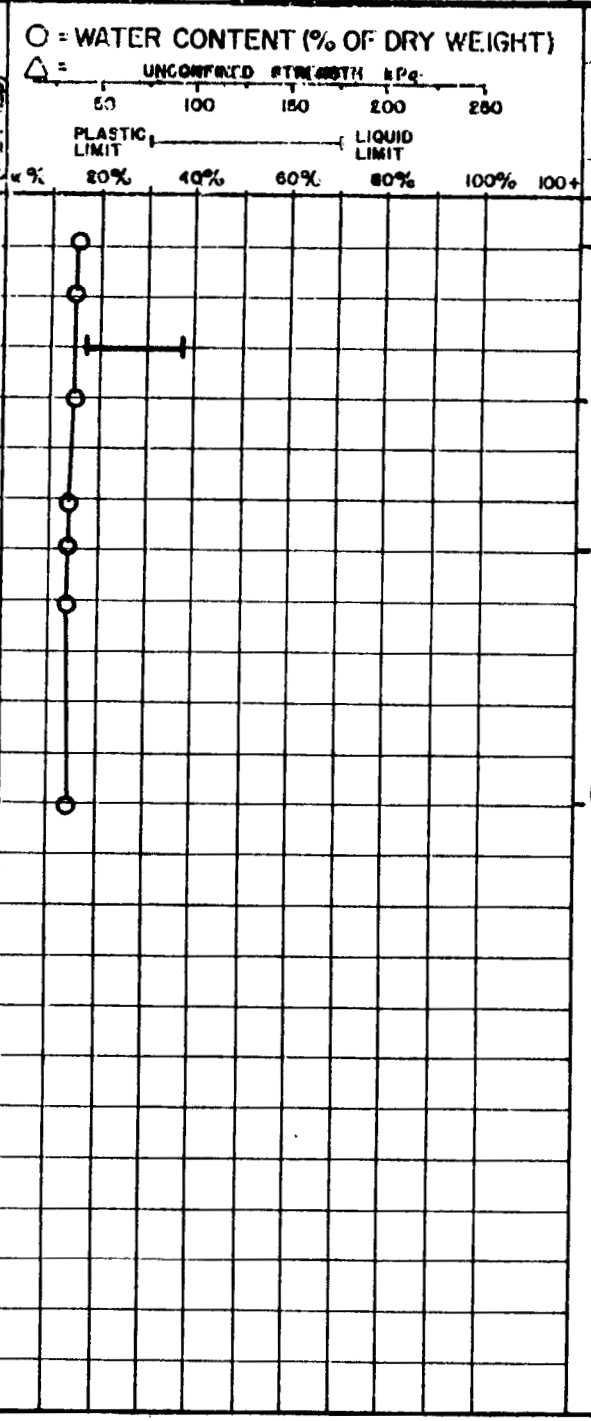
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. Pronych	RIG B-61	DATE 78/03/11	km 235	B.P. No.	HOLE No. 6

CHAINAGE	OFFSET
235+860	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SANDY SILTY PEBBLES - TILL MED. ROOTS				56	40	4		DAMP-MOIST	OK FOR DEEP CUT
4					1					D-M	
6											
8	Cl				2	69	22	9		D-M	
10					3					D-M	
12						57	34	9		D-M	
14					4					D-M	
16					5						
18											
20		GREY 6.1 m			6	65	26	9		D-M	
22		BOTTOM OF HOLE. 6.1 m									
24					7						
26											
28					8						
30					9						
32											
34					10						
36											
38					11						

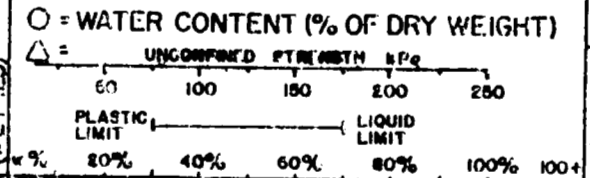


PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/11	km 236	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
235+980	6

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY PEBBLES TILL LOW PLASTIC +P_L								WET	
4					1					WET	
6	CL	⊙ P_L								MOIST	
8					2						
10		3.1 m			3					MOIST	
12		BOTTOM OF HOLE 3.1 m								MOIST	
14					4						
16											
18					5						
20											
22					6						
24											
26					7						
28											
30					8						
32											
34					9						
36					10						
38					11						



PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/11	km 236	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
236+210	℄

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	RELATIVE MOISTURE CONTENT
2	CL	CLAY - Silty Sandy Pebbles - + P_L - Till Low Plastic			1	WET
4						WET
6						WET
8		@ P_L			2	
10		Grey 3.1 m			3	MOIST
12		Bottom of Hole 3.1 m				MOIST
14					4	
16					5	
18						
20					6	
22						
24					7	
26						
28					8	
30					9	
32						
34					10	
36					11	
38						

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa

50 100 150 200 250

PLASTIC LIMIT — LIQUID LIMIT

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

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

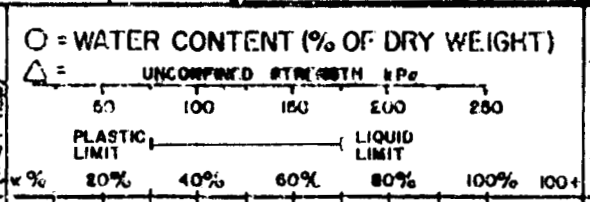
PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/11	km 236	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
236+400	℄

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2		CLAY. SILTY SANDY PEBBLES - TILL +PL								MOISTURE
4					1					M-W
6	CL	LOW PLASTIC								M-W
8		@PL			2					
10		GREY 3.1 m			3					M-W
12		BOTTOM OF HOLE. 3.1 m								M-W
14					4					
16					5					
18										
20					6					
22										
24					7					
26										
28					8					
30					9					
32										
34					10					
36					11					
38										



GRAIN-SIZE ANALYSIS

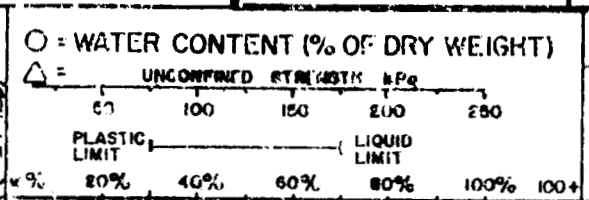
LR.

PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/11	km 236	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
236+655	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY . SILTY								WET	
4		. SILTY SANDY			1					WET	
6	CL	- PEBBLES TILL @ P_L			2					~~WET~~	H.I.B.
8		LOW PLASTIC								MOIST	
10		GREY 3.1m			3					MOIST	
12		BOTTOM OF HOLE - 3.1m									
14					4						
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



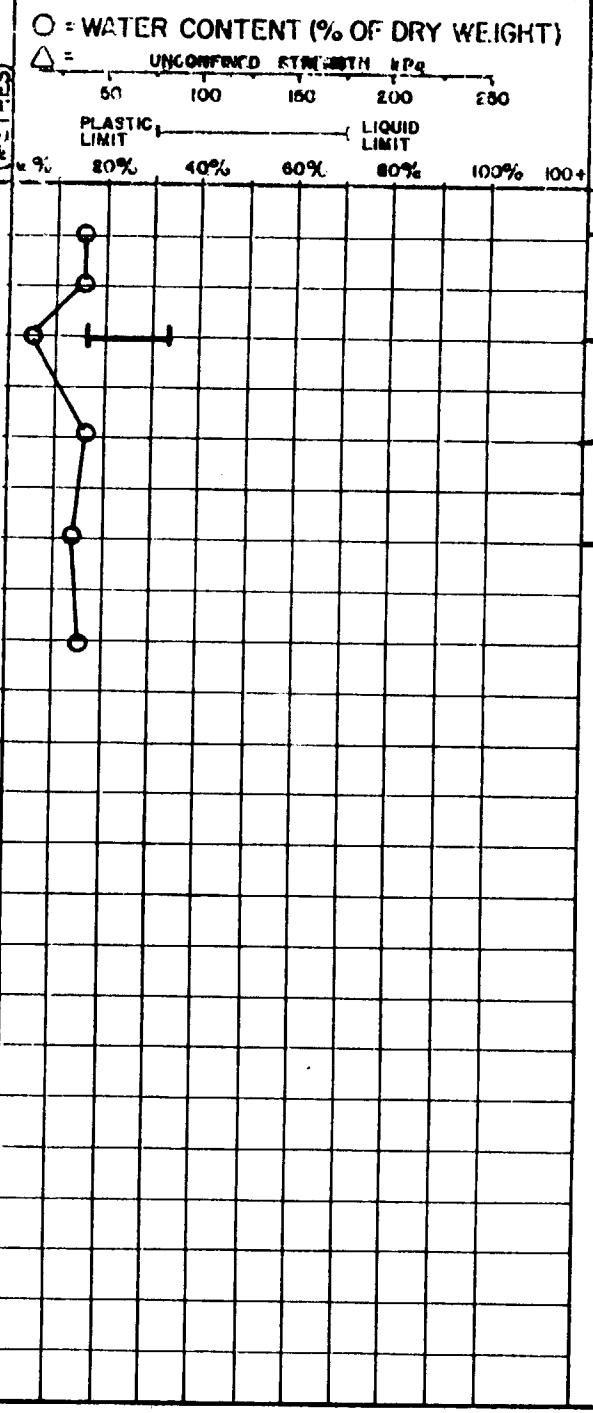
PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/11	km 236	B.P. No.	HOLE No. 5

CHAINAGE	OFFSET
236+800	℄

REMARKS: OK FOR CUT

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2	CL	CLAY - SANDY SILTY PEBBLES LOW PLASTIC TILL				56	43	1		MOIST-WET
4					1					MOIST-WET
6	CI	GRAVEL - CLAY MIX MED. PLASTIC				35	23	42		MOIST
8		CLAY - SILTY SANDY PEBBLES			2	69	28	3		MOIST
10					3					
12		GREY -				73	25	2		MOIST
14		4.6 m			4					MOIST
16		BOTTOM OF HOLE - 4.6 m			5					
18										
20					6					
22										
24					7					
26										
28					8					
30					9					
32										
34					10					
36					11					
38										

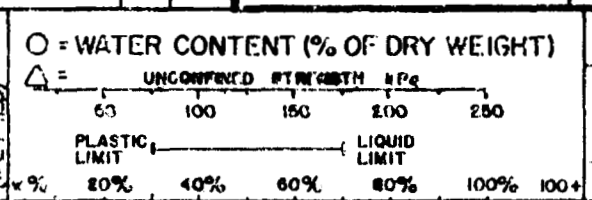


PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD Hwy.

TECH. Prony CH	RIG B-61	DATE 78/03/11	km 236	B.P. No.	HOLE No. 6

CHAINAGE	OFFSET
236+860	*

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY PEBBLES								WET	
4					1	48	40	12		WET	
6		- SILTY SANDY								WET	2.4m - 4.3 m SATURATED
8	CL	LOW PLASTIC			2	79	21	0		WET	
10	ML SM	. SAND . SILT MIX			3	55	45	0		MOIST	
12		GREY									IN DEEP CUT
14	CL	CLAY - SILTY SANDY			4	63	33	1		MOIST	- WET SAND-SILT LAYER FROM 2-3 m.
		4.6 m									
16		BOTTOM OF HOLE. 4.6 m			5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											

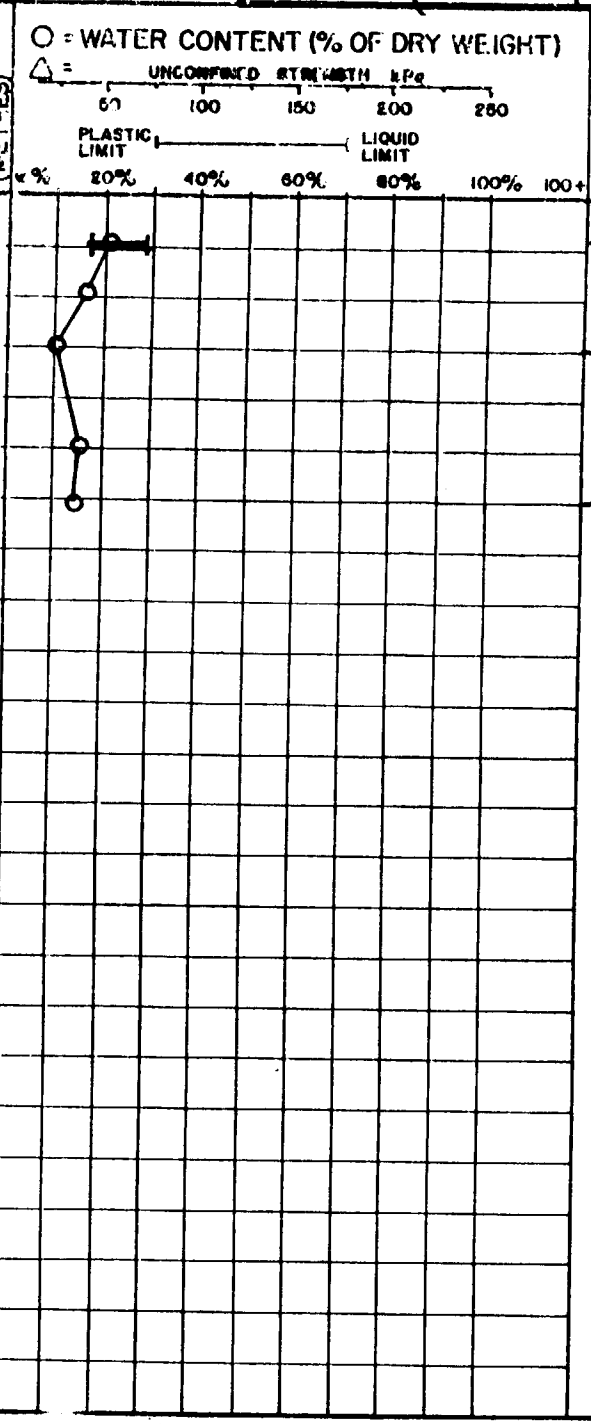


PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD HWY.

TECH. Pronych	RIG B-61	DATE 78/03/11	km 237	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
237+030	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY SANDY GRAVELLY LOW PLASTIC +P_L				44	38	18		WET	O.K. Toe cut
4		SILTY SANDY			1					WET	
6		@ P_L				95	5	0		MOIST	
8		- PEBBLES			2					MOIST	
10		3.1m			3	69	29	2		MOIST	
12		BOTTOM OF HOLE. 3.1m									
14					4						
16											
18					5						
20											
22					6						
24											
26					7						
28											
30					8						
32											
34					9						
36											
38					10						
					11						

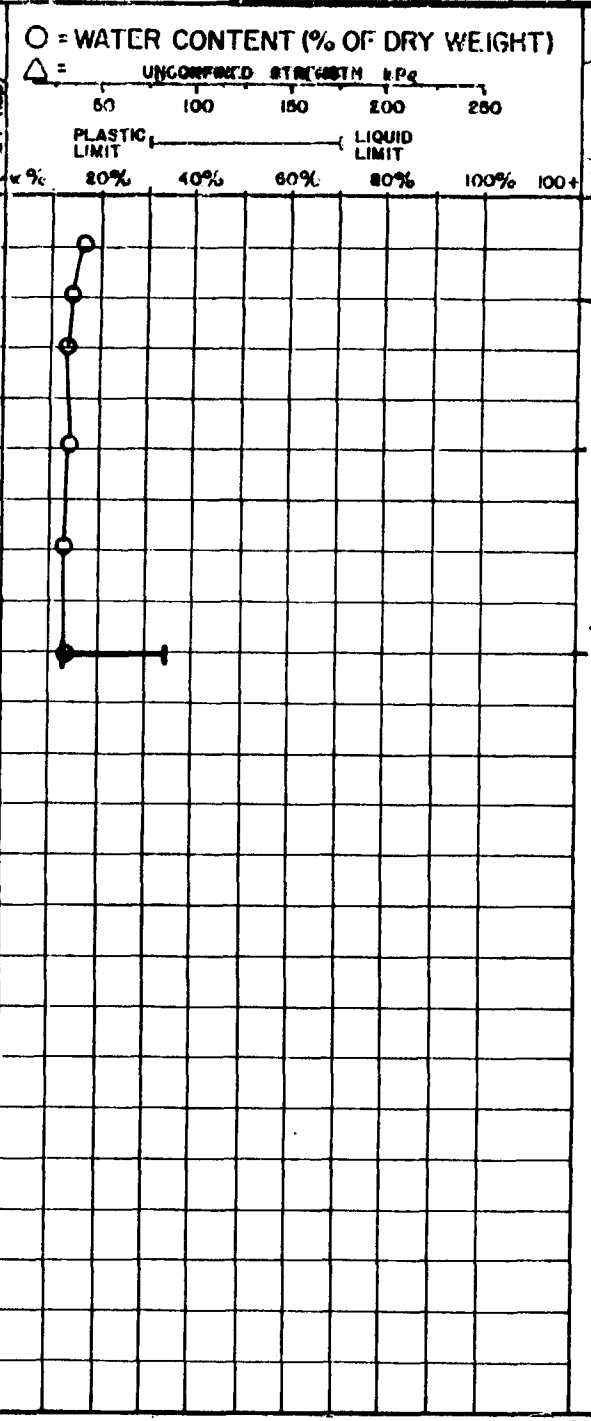


PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD Hwy.

TECH. DRONYCH	RIG B-61	DATE 78/03/12	km 237	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
237+100	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY-SILTY SANDY TILL								MOIST	O.K. FOR CUT
4		PEBBLES			1	71-	23	6		MOIST	
6		MED. PLASTIC								MOIST	
8	C1	BOULDERS @ 1.8 m			2	61-	32	7		MOIST	
10					3						
12										MOIST	
14		4.6 m			4	73-	25	2		MOIST	
16		BOTTOM OF HOLE - 4.6m			5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											

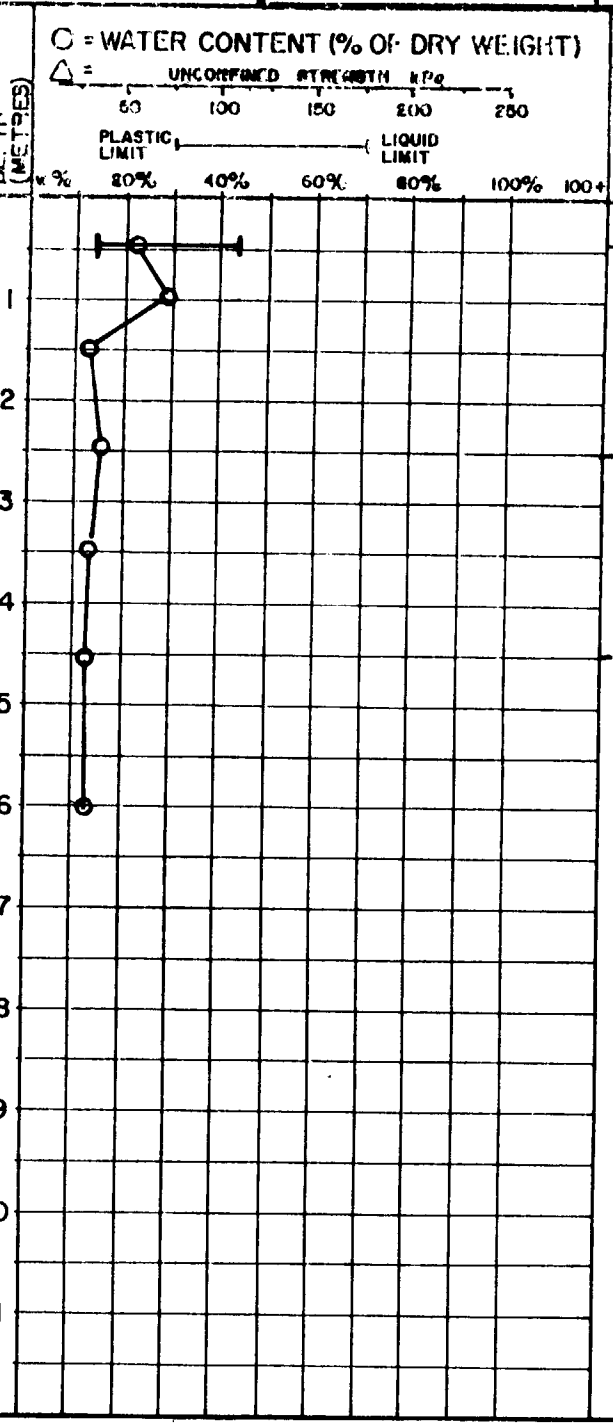


PUBLIC WORKS CANADA | DRILL HOLE REPORT | Liard Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/12	km 237	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
237+170	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY-SILTY SANDY PEBBLES + P. MED. PLASTIC			59	37		4	WET	OK FOR CUT
4									WET	
6	CI	TILL							MOIST	
8					71	23		6	MOIST	
10										
12									MOIST	
14		GRAY.			70	27		3	MOIST	
16										
18										
20		6.1m							MOIST	
22		BOTTOM OF HOLE - 6.1m								
24										
26										
28										
30										
32										
34										
36										
38										



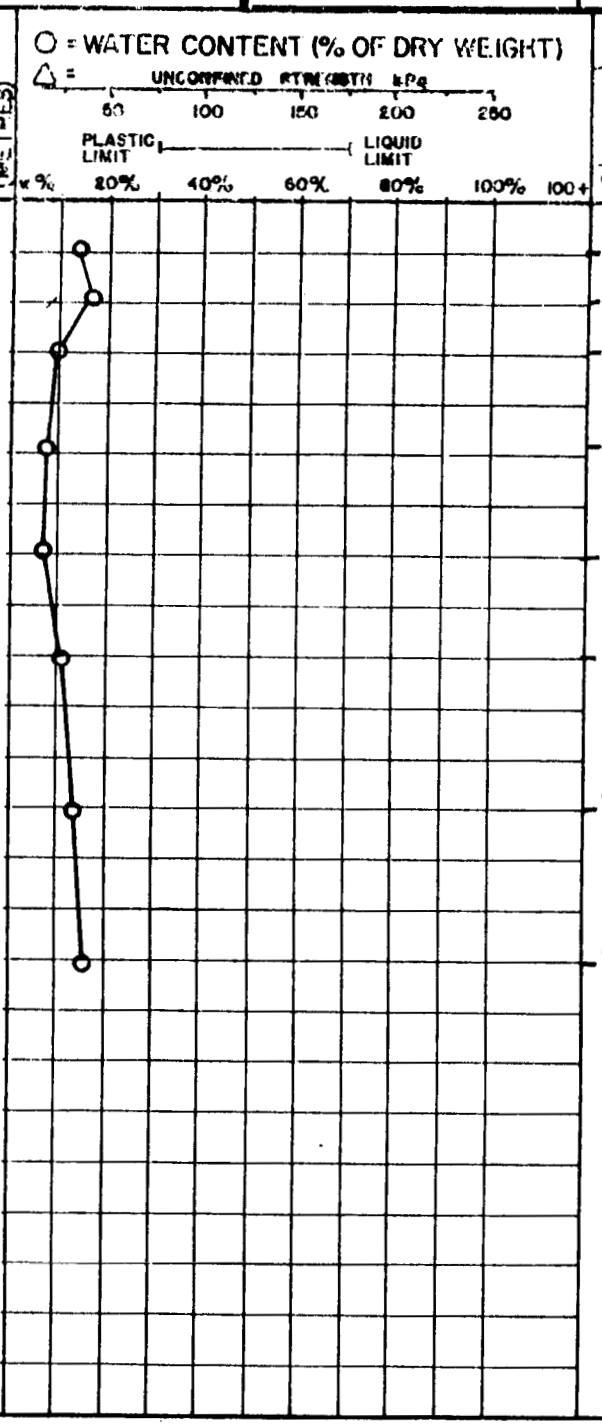
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/12	km 237	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
237+240	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY SANDY PEBBLES TILL								MOIST	O.K. FOR CUT
4	CI	LOW - MED. PLASTIC 1.2 m			1	66	31	3		MOIST	
6		SAND - SILTY PEBBLES			1.5	34	62	4		MOIST	
8	SM	SOME CLAY			2	26	71	3		MOIST	
10	SC				3	29	66	5		MOIST	
12					3.5						
14					4						
16					4.5	8	87	5		MOIST	
18					5						
20					6	28	70	2		WET	
22		PEBBLES			7						
24	CL	GREY SILTY SANDY CLAY 7.6 m			7.5	55	39	6		WET	
26		BOTTOM OF HOLE - 7.6 m			8						
28					9						
30					10						
32					11						
34											
36											
38											

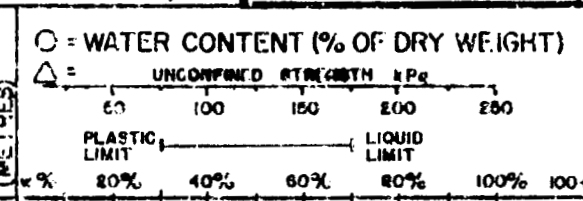


PUBLIC WORKS CANADA | DRILL HOLE REPORT | LAND HWY.

TECH. Pronych	RIG B-61	DATE 78/03/12	km 237	B.P. No.	HOLE No. 5

CHAINAGE	OFFSET
237+460	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	Pt	PEAT								SAT. FREE WATER	
4					1					SAT.	
6		1.8m								WET	-Suggest Sub-excavate to clay @ 1.8m
8	Cl	CLAY - Silty Med. Plastic			2					MOIST	
10		3.1m			3					MOIST	
12		Bottom of Hole - 3.1m									
14					4						
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30											
32					9						
34											
36					10						
38					11						



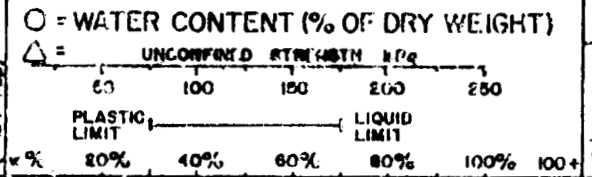
PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/12	km 237	B.P. No.	HOLE No. 6

CHAINAGE	OFFSET
237 + 640	±

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2		CLAY - SILTY								MOIST
4		GREY - MED. PLASTIC +P_L			1					MOIST
6										DAMP - MOIST
8	C1				2					MOIST
10					3					
12		@ P_L OR - P_L								DAMP
14		4.6m			4					
16		BOTTOM OF HOLE - 4.6m			5					DAMP
18										
20					6					
22										
24					7					
26										
28					8					
30					9					
32										
34					10					
36					11					
38										

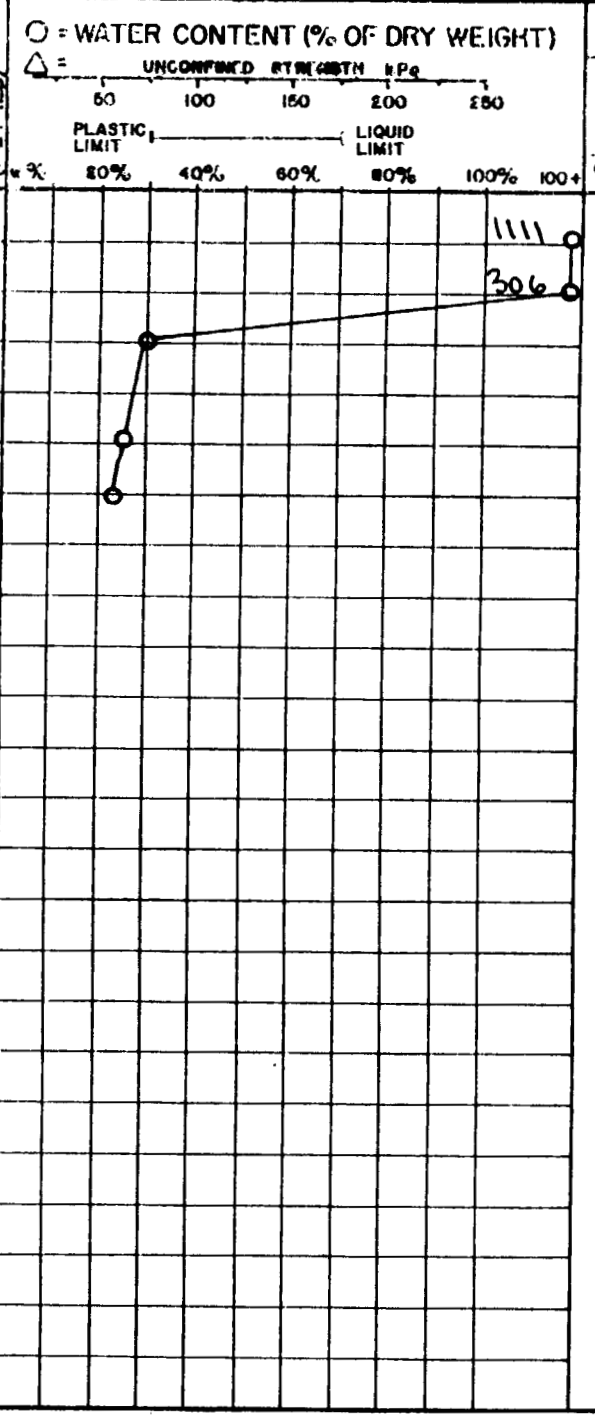


PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/12	km 237	B.P. No.	HOLE No. 7

CHAINAGE	OFFSET
237+190	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	Pt	PEAT								WET	SUGGEST
4		1.2m			1					MOIST	SUB-EXCAVATE PEAT
6		CLAY. SILTY GREY								MOIST	
8	CI	MED. PLASTIC			2						
10		3.1m			3					MOIST	
12		BOTTOM OF HOLE - 3.1m								MOIST	
14					4						
16					5						
18					6						
20					7						
22					8						
24					9						
26					10						
28					11						
30											
32											
34											
36											
38											



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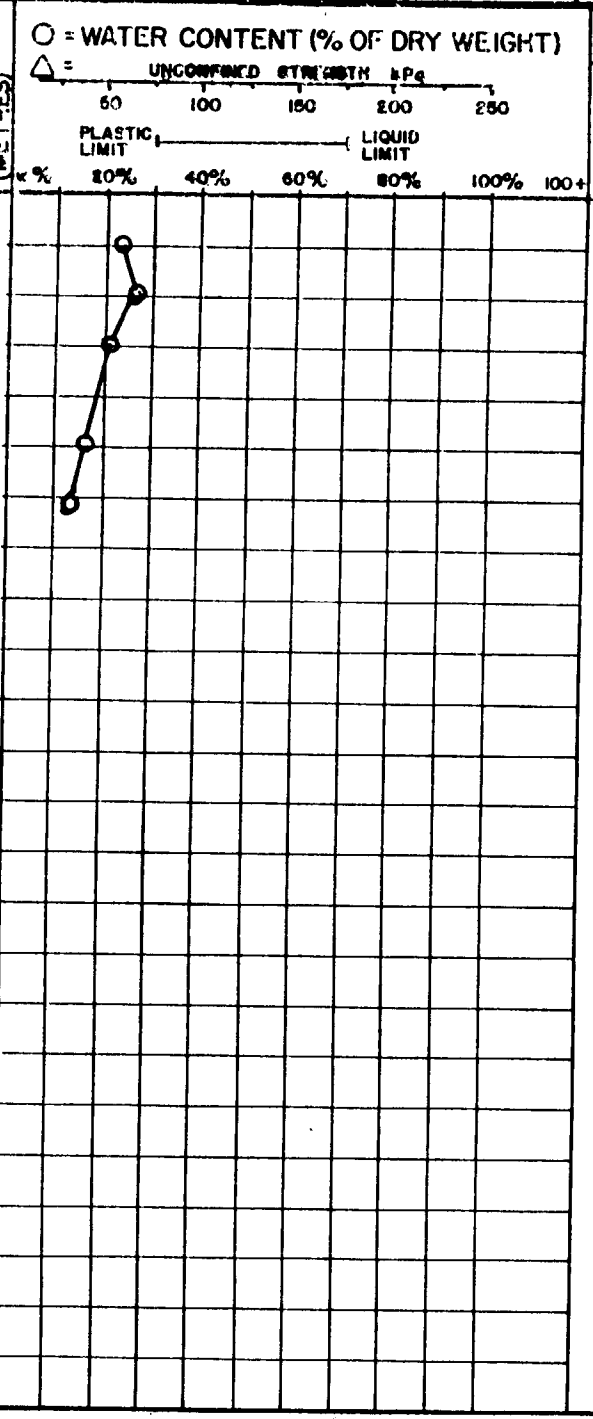
PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. Paonych | RIG B-61 | DATE 78/03/12 | km 238 | B.P. No. | HOLE No. 1

CHAINAGE	OFFSET
237+960 [redacted]	←

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY LOW PLASTIC							MOIST-WET	
4		1.2 m								
	ML	SILT - CLAYEY SANDY							WET	
6									MOIST	
	CL	CLAY - SILTY - SILT CLAYEY								
8										
	ML	SILT CLAYEY SANDY 3.1 m							MOIST	
10									MOIST	
12		BOTTOM OF HOLE - 3.1 m								
14										
16										
18										
20										
22										
24										
26										
28										
30										
32										
34										
36										
38										



PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/12	km 238	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
238+180 [redacted]	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	Sc	SAND - SILTY CLAYEY PEBBLES .8 m							MOIST	
4	CL	CLAY - SILTY SANDY PEBBLES +PL 1.5 m							WET	
6	SM	SAND - SILTY							WET	
8	Gc	GRAVELLY SILTY CLAYEY 2.7 m							WET MOIST	
10		BOTTOM OF HOLE 2.7m								
12		REFUSAL								
14		POSSIBLE BEDROCK OR								
16		LARGE BOULDER								
18										
20										
22										
24										
26										
28										
30										
32										
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36										
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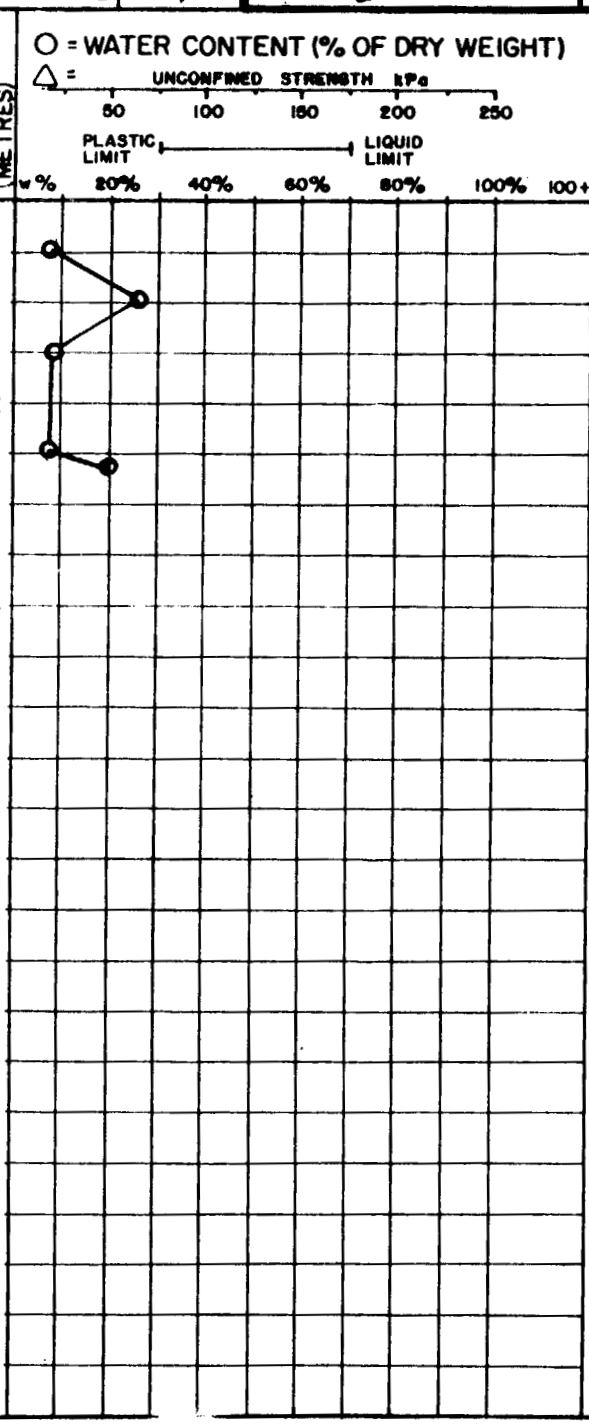

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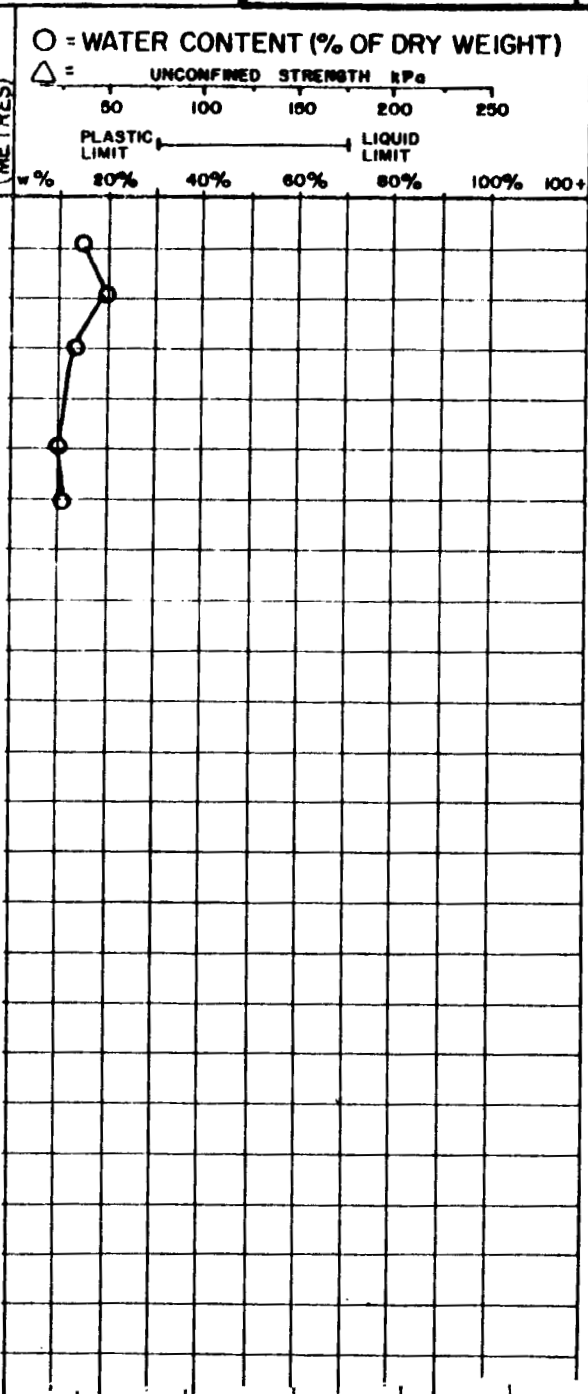
PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD Hwy.

TECH. PRONYCH	RIG B-61	DATE 78/03/12	km 238	B.P. No.	HOLE No. 3

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	RELATIVE MOISTURE CONTENT	CLAY %	SILT %	SAND %	GRAVEL %	CHAINAGE	OFFSET
2	CL	CLAY - SILTY SANDY PEBBLES			1	MOIST					238+450	℄
4		OPL				WET						
6		LOW PLASTIC			2	MOIST						
8		TILL				MOIST						
10					3	MOIST						
12		4.0m										
14		BOTTOM OF HOLE - 4.0m			4							
16					5							
18												
20					6							
22												
24					7							
26												
28					8							
30												
32					9							
34												
36					10							
38					11							



GRAIN-SIZE ANALYSIS

REMARKS

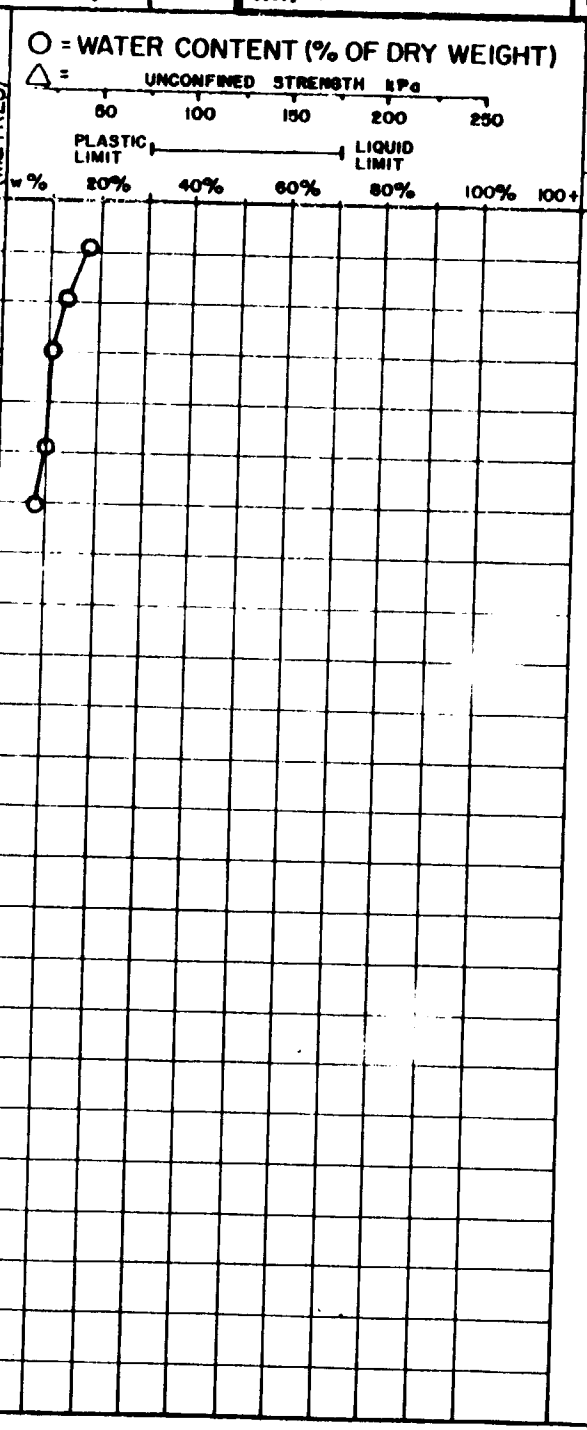
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH.	RIG	DATE	km	B.P. No.	HOLE No.
PRONYCH	B-61	78/03/12	238		4

CHAINAGE	OFFSET
238+600	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT	REMARKS
2–8	CL	CLAY-SILTY SANDY -PEBBLES -TILL +P_L @ P_L LOW PLASTIC			MOIST-WET; MOIST; MOIST	BOULDERS OR COBBLES @ 1.8 m
8–10	Sc	SAND-CLAYEY SILTY 2.6 m – 3.1 m			MOIST; MOIST	
10–12		BOTTOM OF HOLE. 3.1 m				



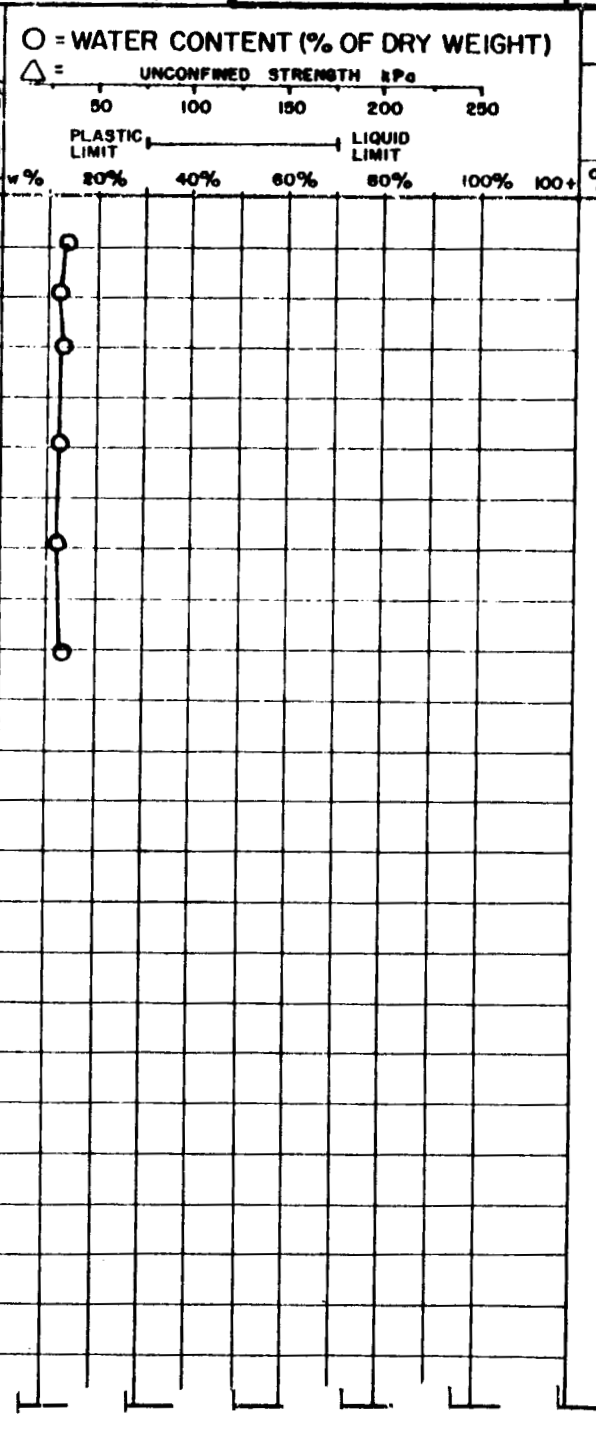
GRAIN-SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %

96

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD Hwy.

TECH. PRONYCH | RIG B-61 | DATE 78/03/12 | km 238 | B.P. No. | HOLE No. 5

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY. SILTY SANDY				MOIST	
4		PEBBLES			1	WET-MOIST	COBBLES @ .9m
6		TILL				WET	
		@ PL			2		
8	CL	LOW PLASTIC				MOIST-WET	
10					3		
12						M-W	
14		4.6m			4		
16		BOTTOM OF HOLE. 4.6m				M-W	
18					5		
20							
22					6		
24							
26					7		
28							
30					8		
32							
34					9		
36					10		
38					11		



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

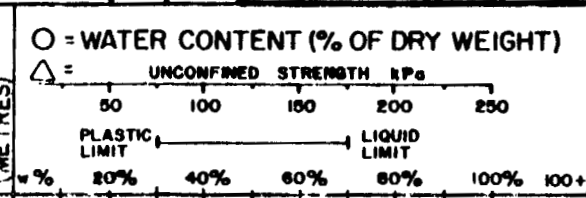
CHAINAGE	OFFSET
238+810	4

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. Pronych	RIG B-61	DATE 78/03/12	km 239	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
238+920	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY								MOIST	
4		- PEBBLES			1					MOIST-WET	
6		@ P_L - TILL								M-W	O.K. FOR CUT
8	CL	LOW PLASTIC			2					M-W	
10					3						
12										M-W	
14		4.6 m			4					M-W	
16		BOTTOM OF HOLE - 4.6 m			5						
18											
20					6						
22											
24					7						
26											
28					8						
30											
32					9						
34											
36					10						
38					11						



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PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. PRONYCH | RIG B-61 | DATE 78/03/12 | km 239 | B.P. No. | HOLE No. 2

CHAINAGE	OFFSET
239+070	℄

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

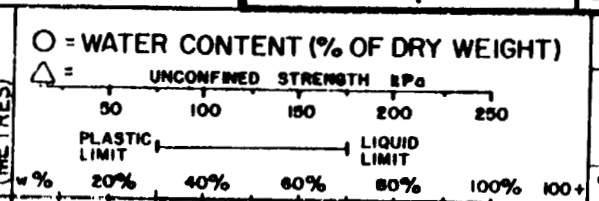
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY SANDY								MOIST-WET	
4		- PEBBLES			1					WET	O.K. FOR CUT
6		- LOW PLASTIC								MOIST	
8		BOULDERS OR COBBLES @ 1.0m			2					MOIST	
10					3						
12										MOIST-WET	
14					4						
16		4.6m								MOIST	
18		BOTTOM OF HOLE. 4.6m			5						
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH.	RIG	DATE	km	B.P. No.	HOLE No.
PRONYCH	B-61	78/03/12	239		4

CHAINAGE	OFFSET
239+360	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY SANDY PEBBLES				62	37	1		MOIST	O.K. FOR CUT
4		GRAVELLY			1					MOIST	
6		LOW PLASTIC				44	41	15		MOIST	
		2.1 m			2						
8	SM	SAND - SILTY				30	70	0		DAMP-MOIST	
10					3						
12						15	85	0		D-M	
		4.0 m			4	10	90	0		DAMP	
14		BOTTOM OF HOLE - 4.0 m									
16		REFUSAL			5						
18											
20					6						
22											
24					7						
26											
28					8						
30											
32					9						
34											
36					10						
38					11						

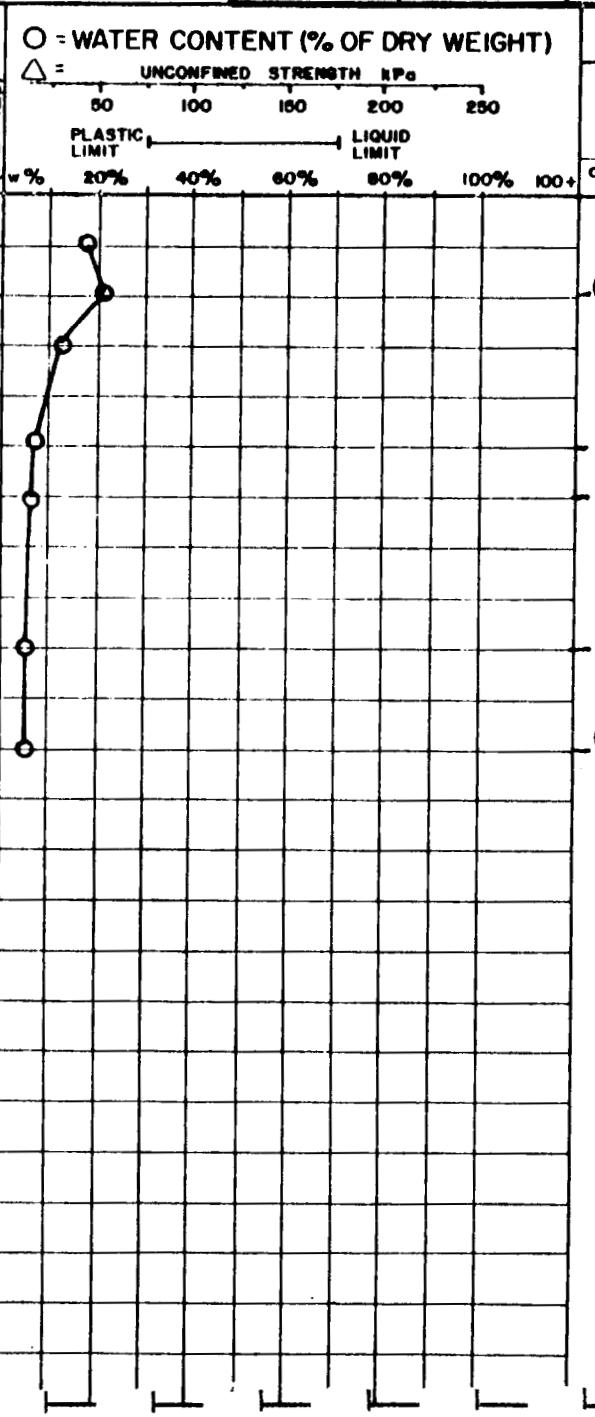


PUBLIC WORKS CANADA	DRILL HOLE REPORT	WIARD HWY.

TECH. Pronych	RIG B-61	DATE 78/03/12	km 239	B.P. No.	HOLE No. 5

CHAINAGE	OFFSET
239+460	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2, 4	CL	CLAY-SILTY SANDY - PEBBLES - TILL - LOW PLASTIC 1.5 m			1	62	33	5		MOISTURE MOIST DAMP-MOIST	O.K. FOR CUT
6, 8, 10, 12, 14	SM	SAND - SILTY FAIR PEBBLES HARD FROM 1.5 - 4.0 m			2, 3	16 19	83 80	1 1		DAMP DAMP-MOIST	
16, 18	SP	FINE 5.5 m			4, 5	13 9	87 90	0 1		D-M MOIST	
20, 22, 24, 26, 28, 30, 32, 34, 36, 38		BOTTOM OF HOLE - 5.5 m			6, 7, 8, 9, 10, 11						

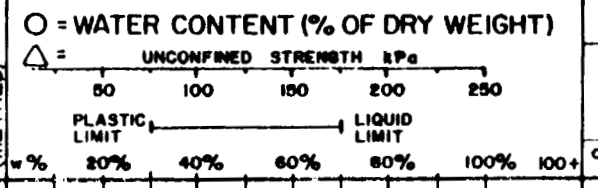


PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | HIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/12	km 239	B.P. No.	HOLE No. 6

CHAINAGE	OFFSET
239+560	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY-SILTY SANDY +P_L				73	26	1		WET	O.K. FOR CUT
4	CL	LOW-~~MED~~. PLASTIC			1					WET	
6	CL	-PEBBLES · TILL @P_L			1.5	52	42	6		MOIST	
8					2					MOIST	
10		3.4m			3						
12	SM	SAND-SILTY PEBBLES HARD AFTER 3.7m			3.5	46	51	3		MOIST	
14		4.6m			4	26	74	0		MOIST	
16		BOTTOM OF HOLE - 4.6m			5						
18											
20					6						
22											
24					7						
26					8						
28											
30					9						
32											
34					10						
36					11						
38											



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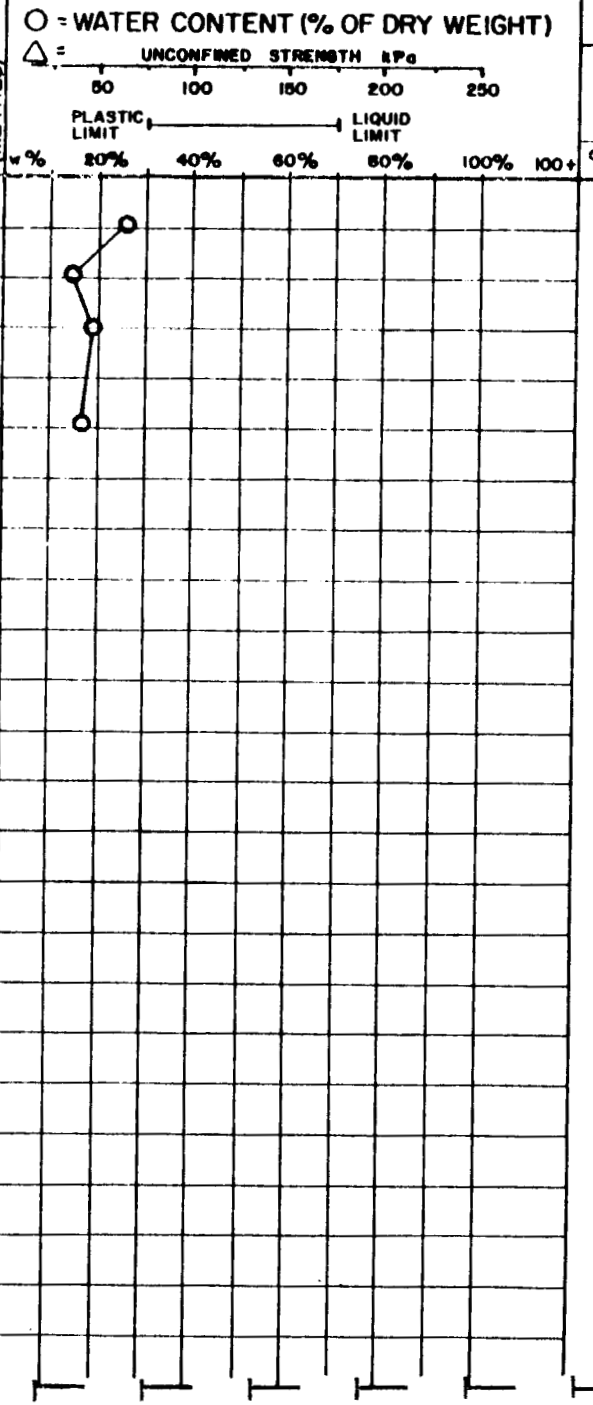
PUBLIC WORKS CANADA — DRILL HOLE REPORT

WARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/12	km 239	B.P. No.	HOLE No. 7

CHAINAGE	OFFSET
239+800	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY-SILTY SANDY-ORG. TILL			1					WET-SAT	
4	CL	LOW-MED. PLASTIC								MOIST	
6					2					MOIST-WET	
8		GREY- 2.4m								MOIST-WET	
10		BOTTOM OF HOLE- 2.4 m			3						
12					4						
14											
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30											
32					9						
34											
36					10						
38					11						

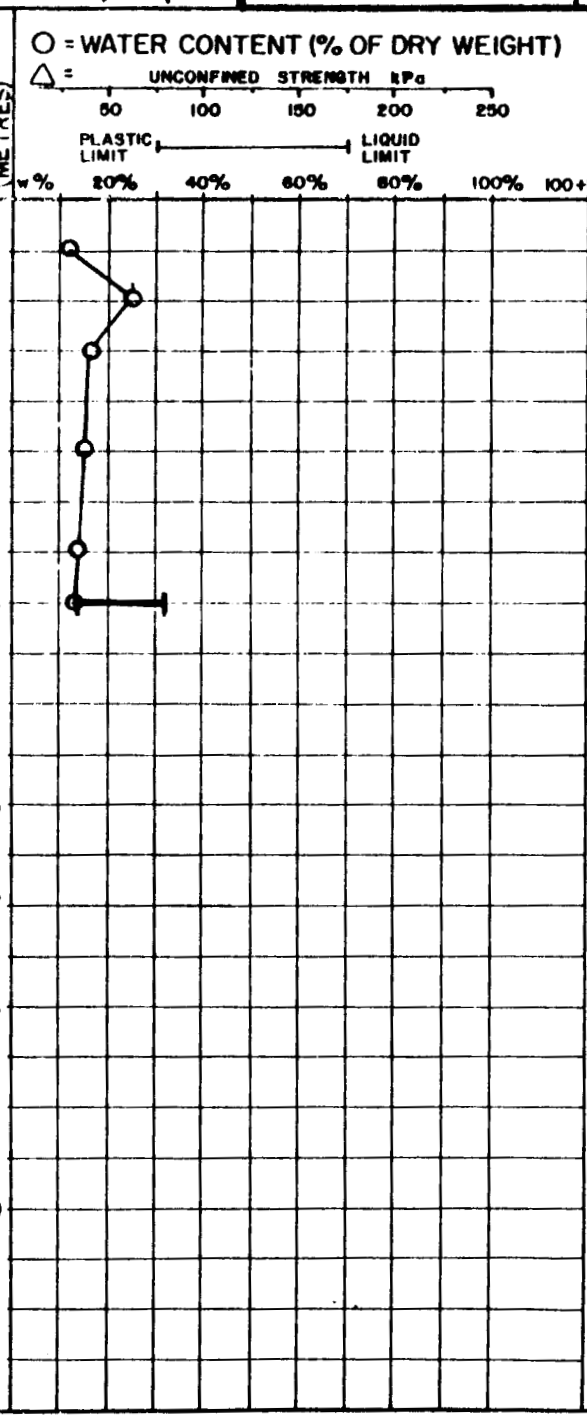


PUBLIC WORKS CANADA — DRILL HOLE REPORT — WARD HWY.

TECH.	RIG	DATE	km	B.P. No.	HOLE No.
PRONYCH	B-61	78/03/12	240		1

CHAINAGE	OFFSET
239+980	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
	SM	SAND - SILTY .2m									
2		CLAY - SILTY SANDY - PEBBLES +P. TILL				40	58	2		MOIST	O.K. FOR CUT
4					1					WET	
						58	34	8		MOIST-WET	
6	CL	LOW-MED. PLASTIC			2						
8										M-W	
	CI										
10					3						
										MOIST	
12		GREY 4.0m			4	58	37	5		MOIST	
14		BOTTOM OF HOLE. 4.0m									
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30											
32					9						
34											
36					10						
38					11						



GRAIN-SIZE ANALYSIS

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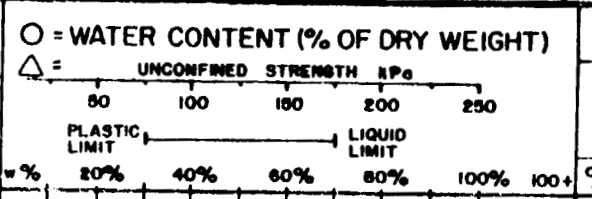
PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | WIARD HWY.

TECH. PRONYCH | RIG B-61 | DATE 78/03/12 | km 240 | B.P. No. | HOLE No. 2

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2, 4, 6, 8, 10, 12	CL	CLAY - SILTY SANDY - PEBBLES LOW PLASTIC TILL COBBLES @ 1.0m			1, 2, 3, 4	3	4 -	19	47	MOIST-WET, M-W, M-W, MOIST, MOIST, MOIST	240+045	↓	1 1½" ROCK OK FOR CUT
14		4.0m											
14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38		BOTTOM OF HOLE - 4.0m			5, 6, 7, 8, 9, 10, 11								



PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD Hwy.

TECH. Pronych | RIG B-61 | DATE 78/03/12 | km 240 | B.P. No. | HOLE No. 3

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY LOW - MED. PLASTIC			1					WET	
4		- SILTY SANDY PEBBLES								WET	
6	CI	- TILL			2					MOIST-WET	
8		2.4m								M-W	
10		BOTTOM OF HOLE - 2.4m			3						
12											
14					4						
16											
18					5						
20											
22					6						
24											
26					7						
28											
30					8						
32											
34					9						
36					10						
38					11						

O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa

50 100 150 200 250

PLASTIC LIMIT — LIQUID LIMIT

0% 20% 40% 60% 80% 100% 100+

CHAINAGE	OFFSET
240+160	℄

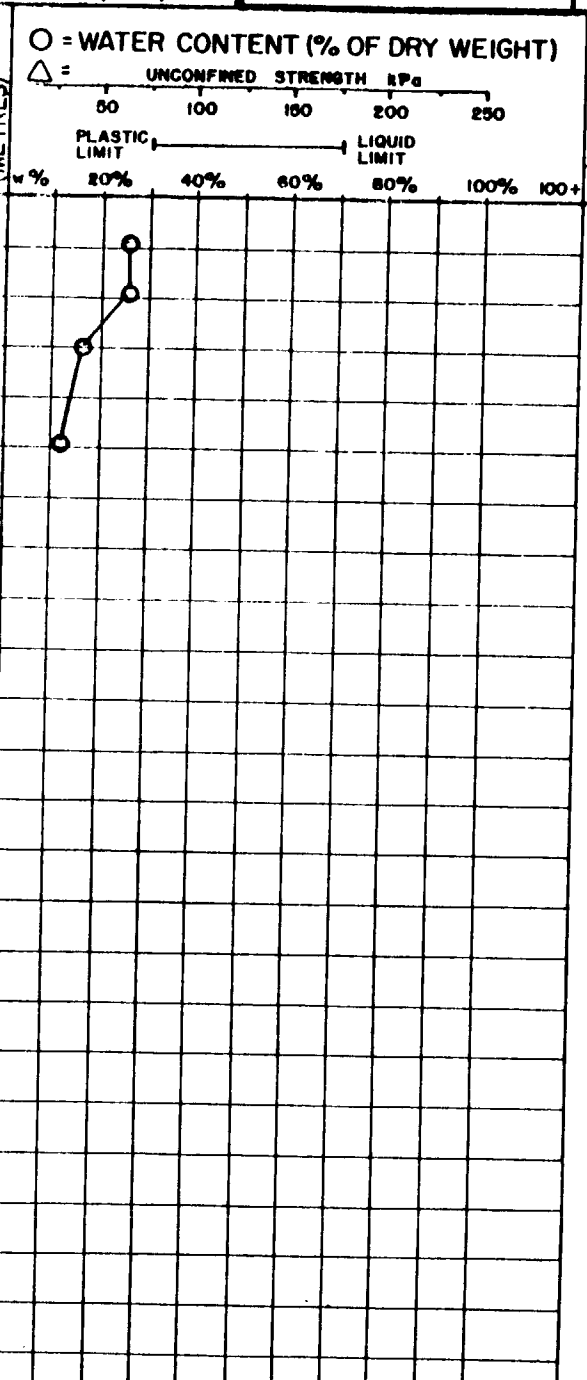
PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | WIARD Hwy.

TECH. PRONYCH | RIG B-61 | DATE 78/03/12 | km 240 | B.P. No. | HOLE No. 4

CHAINAGE	OFFSET
240+290	℄

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2		CLAY - SILTY SANDY +Pl - TILL								MOIST-WET
4	CL	LOW PLASTIC			1					WET
6					2					MOIST
8		@Pl 2.4m								MOIST
10		BOTTOM OF HOLE - 2.4m			3					
12					4					
14					5					
16					6					
18					7					
20					8					
22					9					
24					10					
26					11					
28										
30										
32										
34										
36										
38										



PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD Hwy.

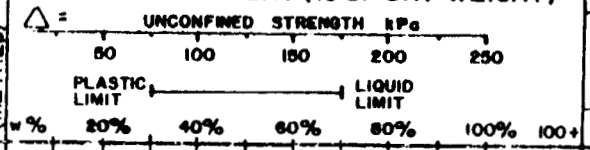
TECH. PRONYCH	RIG B-61	DATE 78/03/12	km 240	B.P. No.	HOLE No. 5

CHAINAGE	OFFSET
240+430	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CI	CLAY - SILTY SOME ORGANICS MED. PLASTIC								WET-SAT.	
4					1					WET-SAT.	
6	CL-CI	- SILTY SANDY PEBBLES TILL LOW-MED. PLASTIC 2.4 m			2					MOIST	
8										MOIST	
10		BOTTOM OF HOLE - m			3						
12											
14					4						
16											
18					5						
20											
22					6						
24											
26					7						
28											
30					8						
32											
34					9						
36					10						
38					11						

O = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa

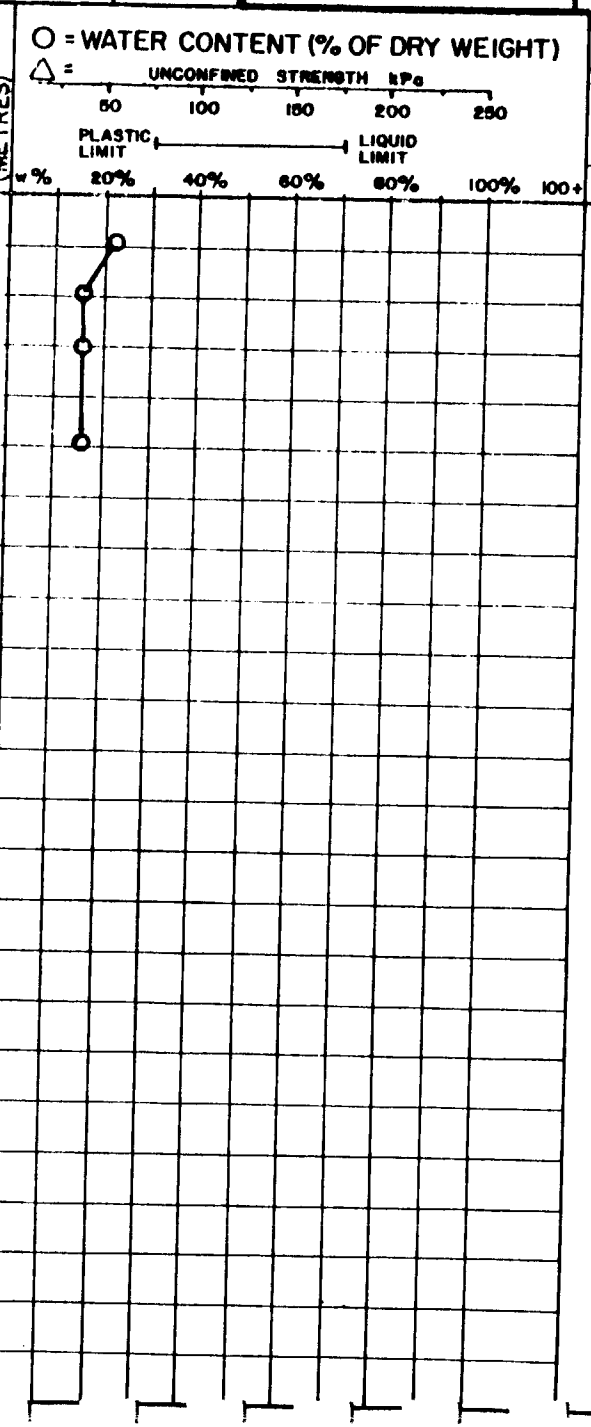


PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | Hiard Hwy.

TECH. Pronych | RIG B-61 | DATE 78/03/12 | km 240 | B.P. No. | HOLE No. 6

CHAINAGE	OFFSET
240+660	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY PEBBLES								WET-SAT.	
4	CL	TILL			1					WET	
6	CI	LOW-MED. PLASTIC			2					MOIST	
8		2.4m								MOIST	
10		Bottom of Hole - 2.4m			3						
12					4						
14											
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30											
32					9						
34											
36					10						
38					11						

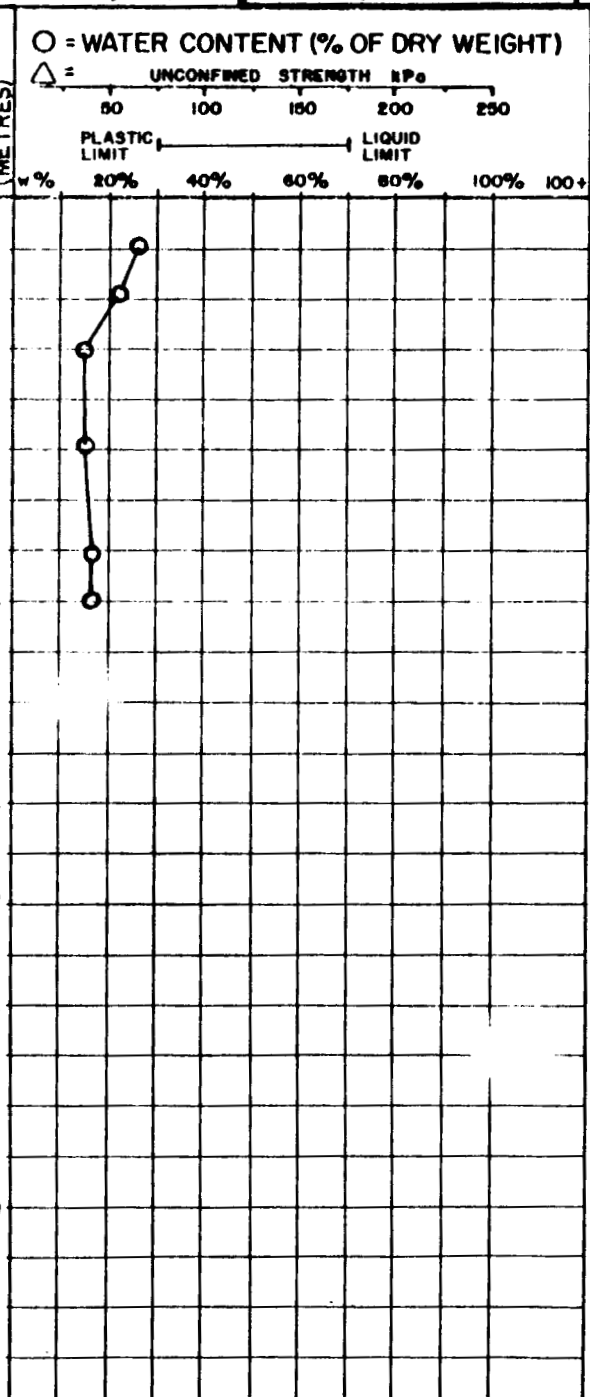


PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. Pronych	RIG B-61	DATE 78/03/12	km 240	B.P. No.	HOLE No. 7

CHAINAGE	OFFSET
240+830	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY-SILTY SANDY								WET	O.K. FOR CUT
4		- PEBBLES			1					MOIST-WET	
6		-TILL								M-W	
8	CL	LOW PLASTIC			2					M-W	
10					3						
12										WET	
		4.0m			4					MOIST-WET	
14		BOTTOM OF HOLE-4.0m									
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30											
32					9						
34											
36					10						
38					11						



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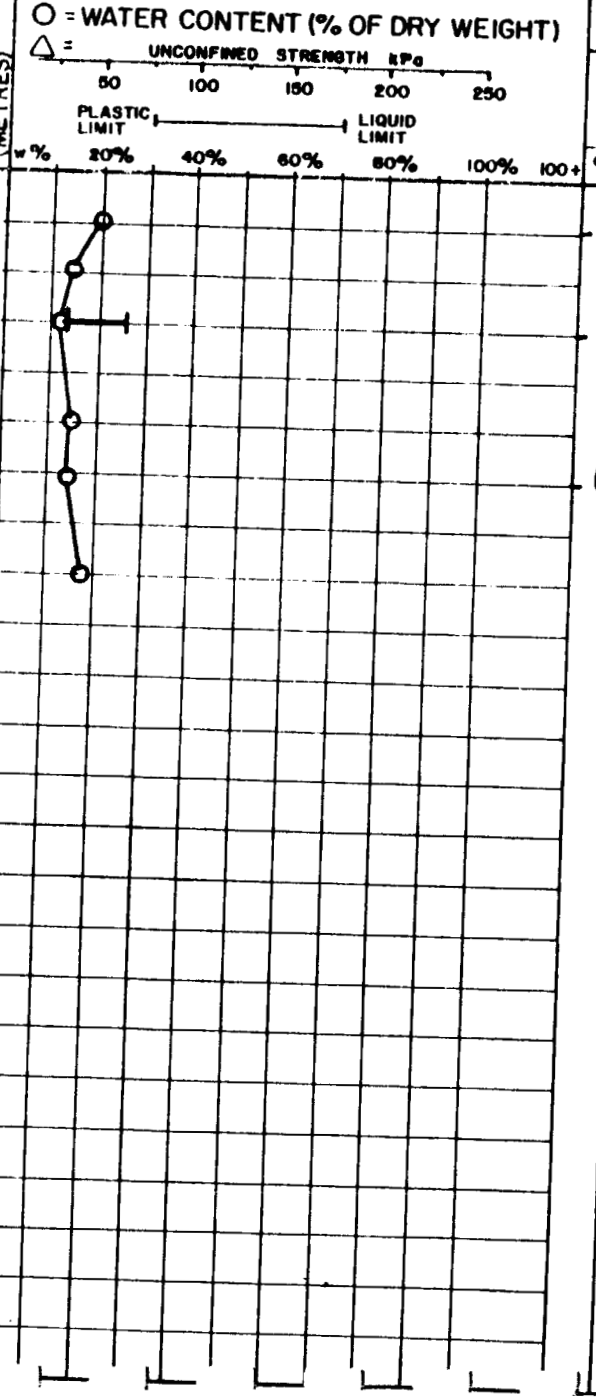
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. PRONYCH | RIG B-61 | DATE 78/03/12 | km 241 | B.P. No. | HOLE No. 1

CHAINAGE	OFFSET
240+910	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2, 4, 6, 8, 10, 12	CL	CLAY - SILTY SANDY - BROWNLY - PEBBLES - LOW PLASTIC			1, 2, 3	52	24	24		MOIST-WET MOIST	O.K. FOR CUT
						59	38	3		MOIST MOIST	
						63	33	4		MOIST MOIST	
14		4.0m			4						
16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38		BOTTOM OF HOLE. 4.0			5, 6, 7, 8, 9, 10, 11						



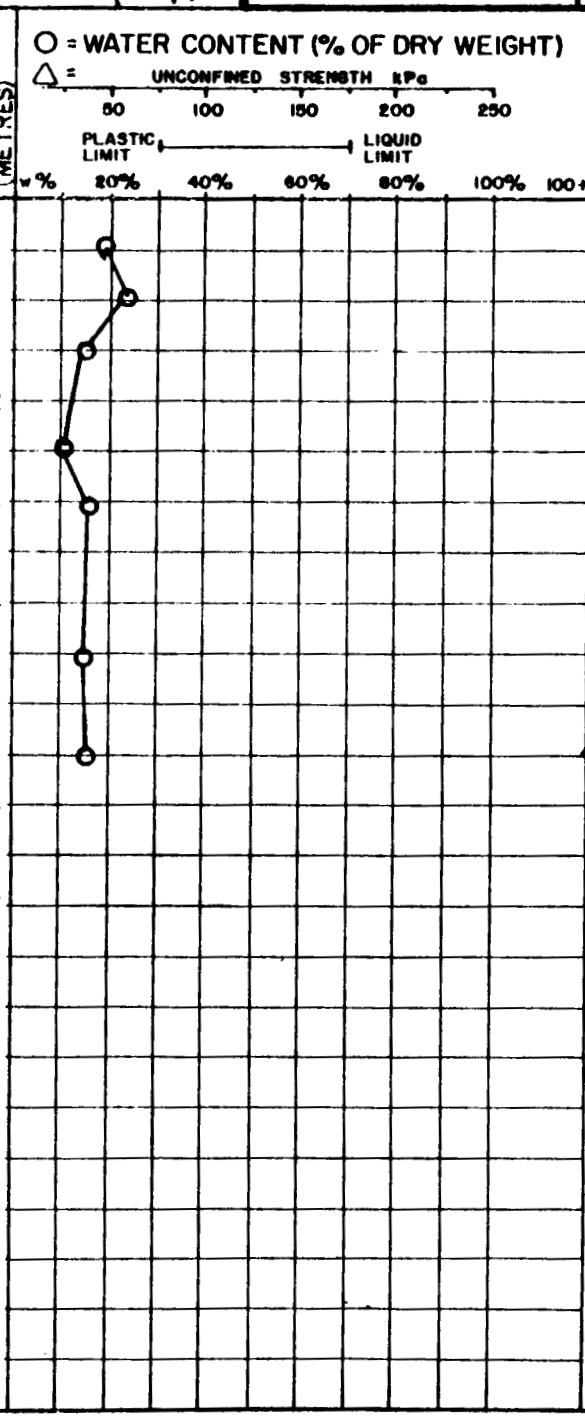
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD Hwy.

TECH. PRONYCH	RIG B-61	DATE 78/03/03	km 241	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
241+040	℄

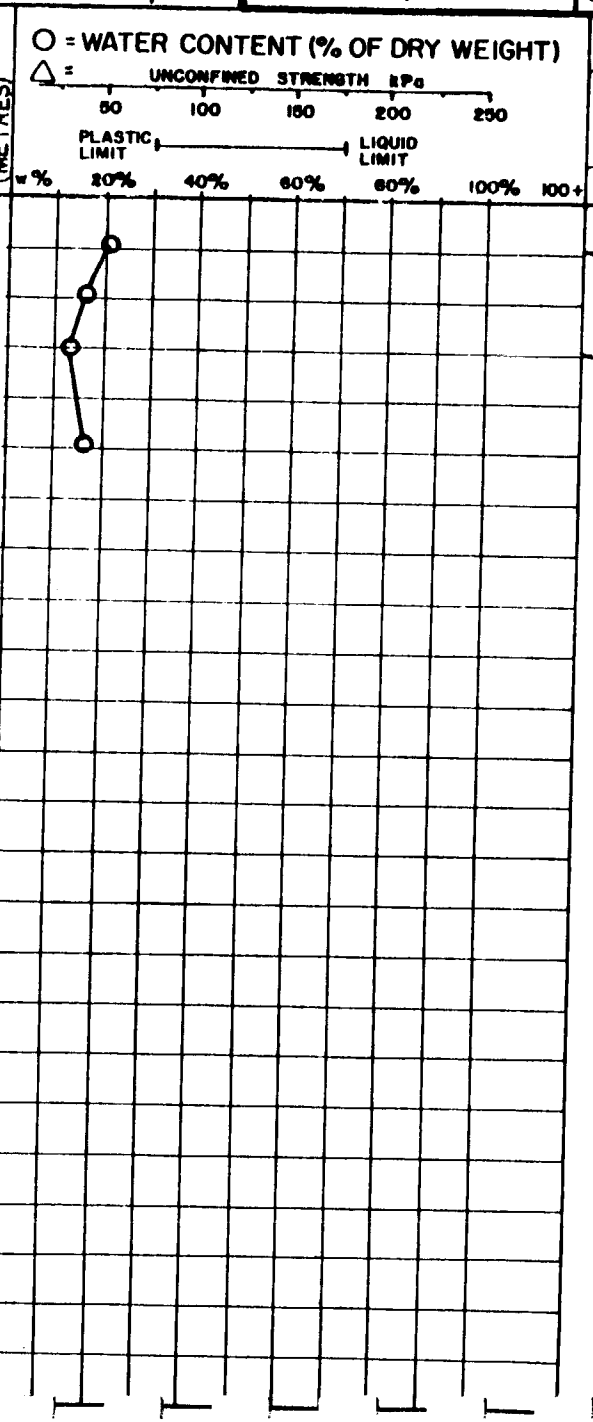
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY SANDY PEBBLES - TILL LOW PLASTIC								MOIST	O.K. FOR CUT
4					1	60	33	7		WET	
6										MOIST	
8					2					MOIST	
10					3					MOIST	
12											
14					4						
16					5					MOIST	
18		5.5m				67	30	3		MOIST	
20		BOTTOM OF HOLE - 5.5m			6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD Hwy.

TECH. Pronych | RIG B-61 | DATE 78/03/13 | km 241 | B.P. No. | HOLE No. 3

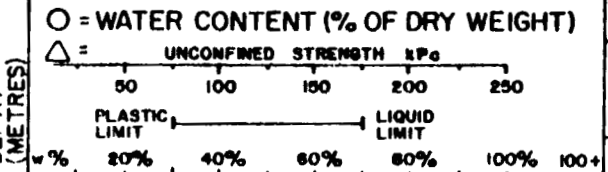
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	CHAINAGE	OFFSET	REMARKS
2		CLAY-SILTY/SANDY PEBBLES +P. LOW PLASTIC @P.			1	56	39	5		WET	241+150	℄	O.K. FOR CUT
4	CL									MOIST-WET			
6					2	55	37	8		MOIST			
8		2.4 m											
10		BOTTOM OF HOLE - 2.4 m			3					MOIST			
12					4								
14													
16					5								
18													
20					6								
22													
24					7								
26													
28					8								
30													
32					9								
34													
36					10								
38					11								



PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD Hwy.

TECH. PRONYCH | RIG B-61 | DATE 78/03/13 | km 241 | B.P. No. | HOLE No. 4

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	Sm	SAND-SILTY GRAVELLY .6m				36-	51	13		WET	O.K. FOR CUT
4		CLAY-SILTY SANDY . PEBBLES			1	57-	34	9		MOIST	
6	CL	LOW-MED. PLASTIC								MOIST	
8	-				2	64-	33	3		MOIST	
10	CI				3					MOIST	
12		4.0m			4	64-	31	5		MOIST	
14		BOTTOM OF HOLE - 4.0m									
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30											
32					9						
34											
36					10						
38					11						



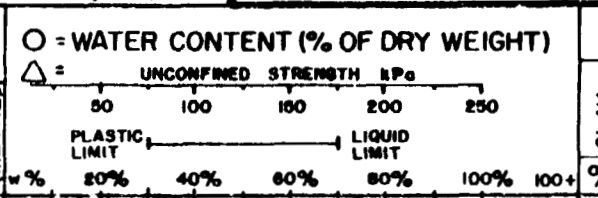
CHAINAGE: 241+350 | OFFSET: ℄

PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/13	km 241	B.P. No.	HOLE No. 5

CHAINAGE	OFFSET
241+455	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY-SILTY/SANDY GRAVELLY @ P. LOW PLASTIC								MOIST	O.K. FOR CUT
4	CL				1	55-	31	14		MOIST	
6										MOIST	
8		2.4 m			2	61-	27	12		MOIST	
10		BOTTOM OF HOLE - 2.4 m			3						
12					4						
14											
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30											
32					9						
34											
36					10						
38					11						

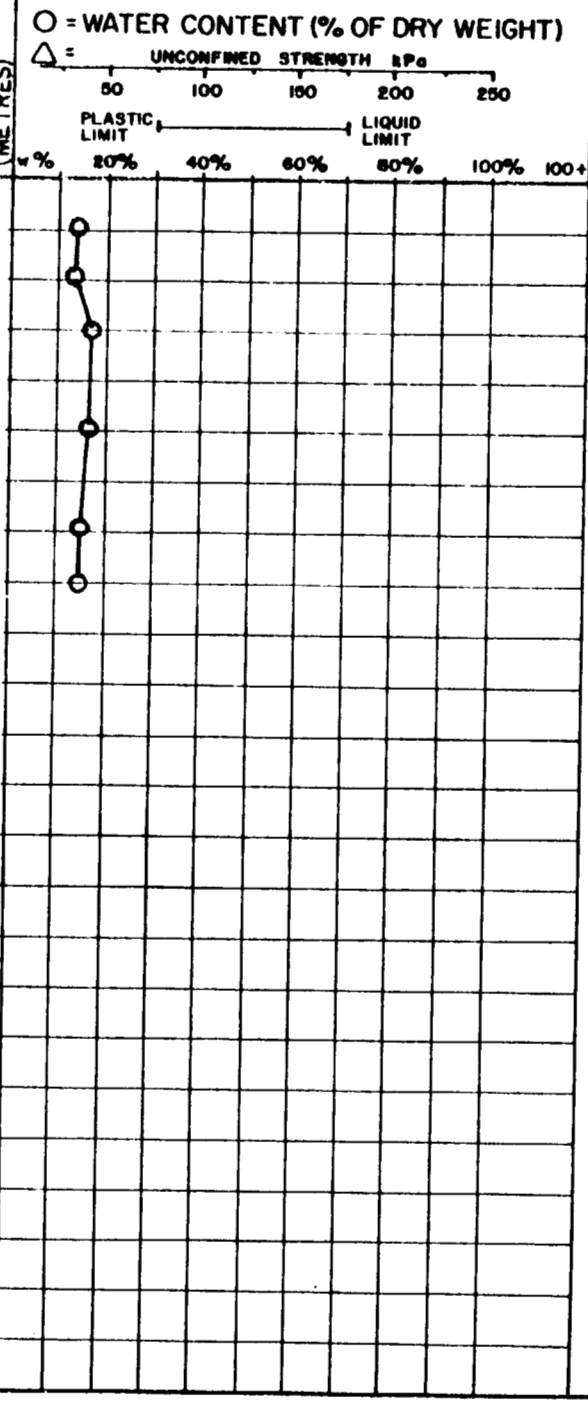


PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/13	km 241	B.P. No.	HOLE No. 6

CHAINAGE	OFFSET
241+627	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY								MOIST	O.K. FOR CUT
4		- PEBBLES			1					MOIST	
6		@ PL								MOIST	
8	C1	MED. PLASTIC			2						
10										MOIST	
12					3						
14		4.0m								MOIST	
16		BOTTOM OF HOLE - 4.0 m			4					MOIST	
18											
20					5						
22											
24					6						
26											
28					7						
30											
32					8						
34											
36					9						
38											
					10						
					11						

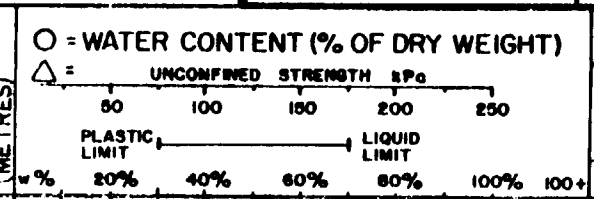


PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/13	km 241	B.P. No.	HOLE No. 7

CHAINAGE	OFFSET
241+850	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY-ORGANICS SILTY-PEBBLES								WET	
4	CL	LOW PLASTIC -SILTY ONLY			1					WET	
6										WET	
8		2.4m			2					WET	
10		BOTTOM OF HOLE- 2.4m			3						
12											
14					4						
16											
18					5						
20											
22					6						
24											
26					7						
28											
30					8						
32											
34					9						
36					10						
38					11						

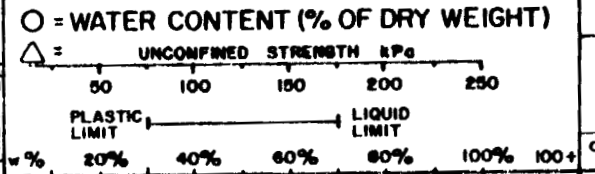


PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/13	km 242	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
241+930	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	ML CL	Silt Clayey - Clay Silty								Moist	
4		Clay - Silty Sandy Pebbles Low Plastic			1					Moist wet	
6	CL									M-W	
8		2.4m			2					M-W	
10		Bottom of Hole - 2.4m			3						
12					4						
14											
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30											
32					9						
34											
36					10						
38					11						

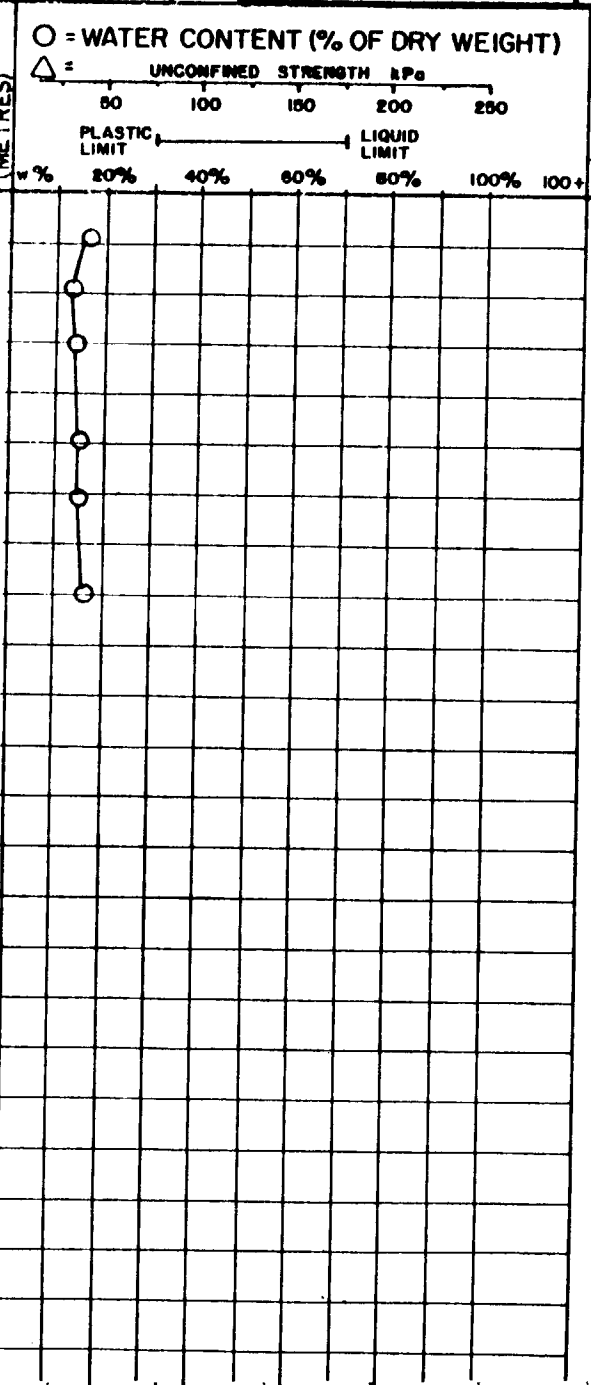


PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. Pronych | RIG B-61 | DATE 78/03/13 | km 242 | B.P. No. | HOLE No. 2

CHAINAGE	OFFSET
242+120	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY-SILTY SANDY - PEBBLES TILL								MOIST	
4		@ OR ABOVE PL			1					MOIST	
6		LOW PLASTIC								MOIST	
8					2					MOIST	
10					3					MOIST	
12		4.0m									
14		BOTTOM OF HOLE - 4.0 m			4					MOIST	
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30											
32					9						
34											
36					10						
38					11						



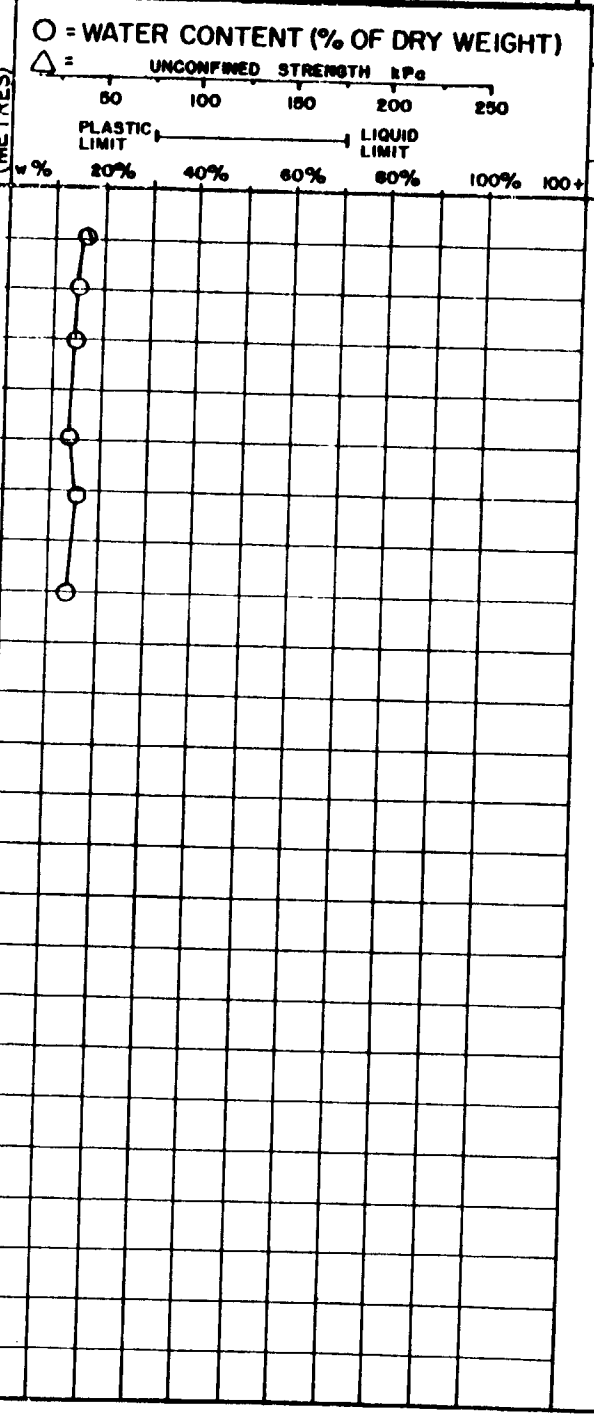
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD Hwy.

TECH.	RIG	DATE	km	B.P. No.	HOLE No.
PRONYCH	B-61	78/03/13	242		3

CHAINAGE	OFFSET
242+340	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY @ ωa + PL								MOIST	
4		LOW PLASTIC			1					MOIST	
6	a									MOIST-WET	
8					2						
10					3					MOIST	
12										MOIST	
14		4.0 m			4					MOIST	
16		BOTTOM OF HOLE - 4.0m									
18					5						
20											
22					6						
24											
26					7						
28											
30					8						
32											
34					9						
36					10						
38					11						



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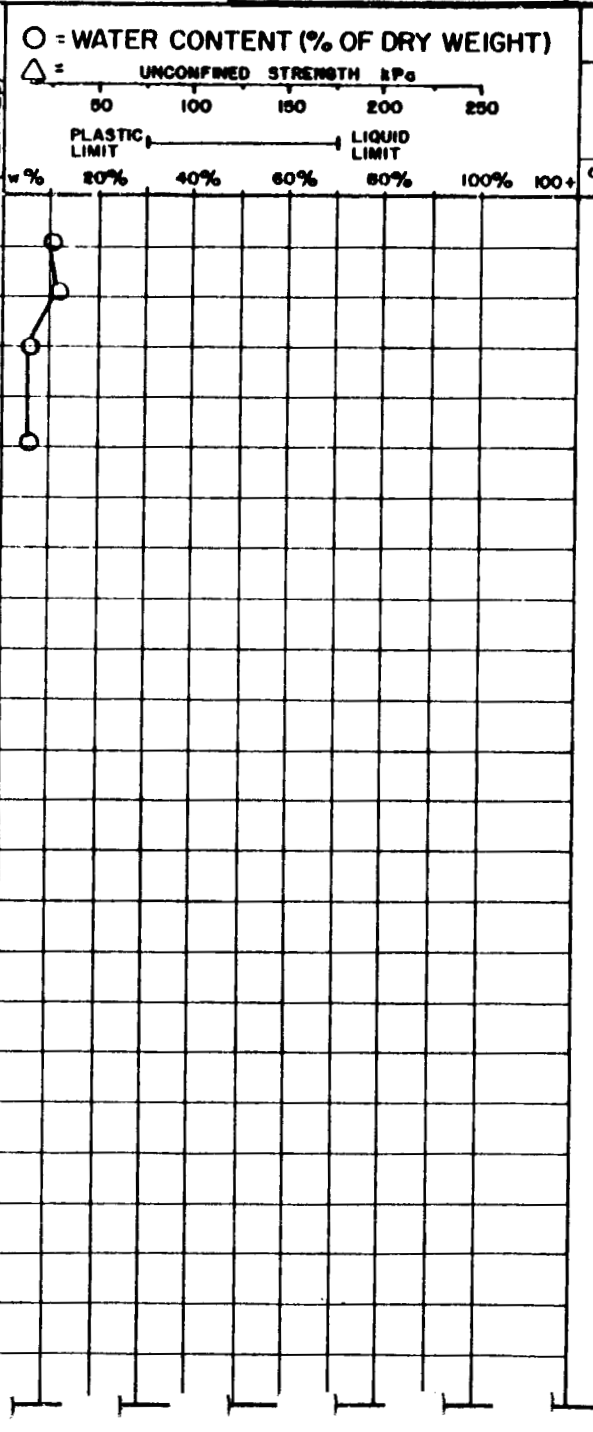
PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD Hwy.

TECH. PRONYCH	RIG B-61	DATE 78/03/13	km 242	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
242+720	←

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY SANDY PEBBLES - PL LOW PLASTIC				DAMP-MOIST	
4		1.2 m			1	D-M	O.K. FOR CUT
6	SM	SAND - SILTY - MEDIUM			2	D-M	
8		2.4 m				MOIST	
10		BOTTOM OF HOLE - 2.4 m			3		
12					4		
14							
16					5		
18							
20					6		
22							
24					7		
26							
28					8		
30							
32					9		
34							
36					10		
38					11		



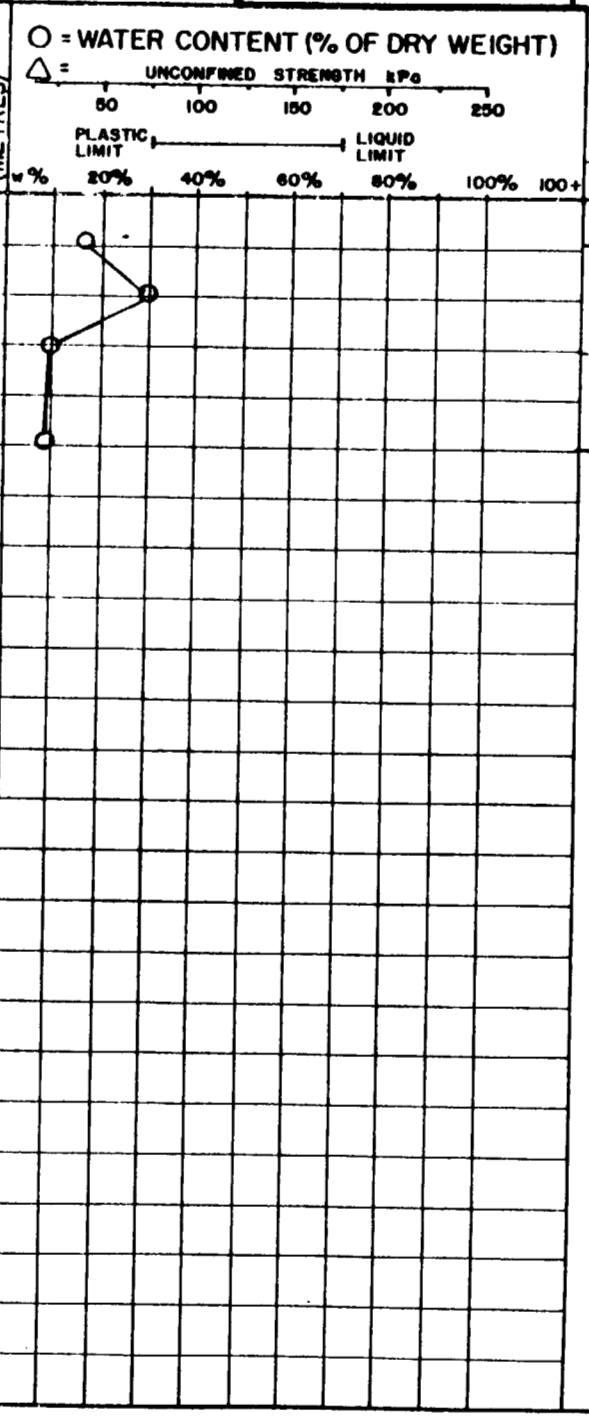
GRAIN-SIZE ANALYSIS			
CLAY %	SILT %	SAND %	GRAVEL %

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD Hwy.

TECH. PRONYCH | RIG B-61 | DATE 78/03/13 | km 242 | B.P. No. | HOLE No. 5

CHAINAGE	OFFSET
242+780	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
	PM	SILT - CLAYEY SANDY, .3 m									
2	CL	CLAY - SILTY PEBBLES LOW PLASTIC				62	36	2		MOIST	OK. FOR CUT
4		1.2 m			1					SAT.	
6	SC	SAND - SILTY CLAYEY GRAVELLY				33	47	20		MOIST	
8		2.4 m			2	35	54	11		MOIST	
10		BOTTOM OF HOLE - 2.4 m			3						
12					4						
14											
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



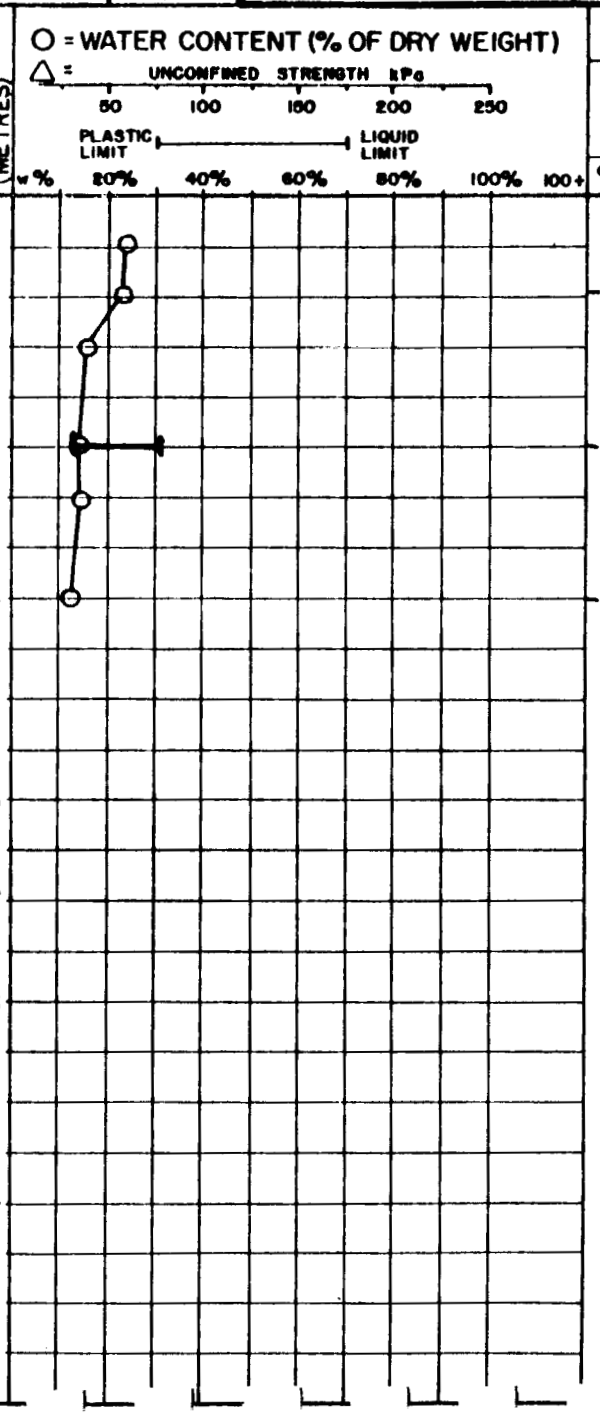
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD Hwy.

TECH. PRONYCH	RIG B-61	DATE 78/03/13	km 242	B.P. No.	HOLE No. 6

CHAINAGE	OFFSET
242+880	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY +PL			1	94	5	1		WET	O.K. FOR CUT
4										WET-SAT	
6	CI	- SILTY SANDY @ PL - GRAVELLY MED. PLASTIC			2					MOIST	
8						50	33	17		MOIST	
10					3					MOIST	
12		PEBBLES 4.0m			4	49	42	9		MOIST	
14		BOTTOM OF HOLE - 4.0m									
16					5						
18											
20					6						
22											
24					7						
26					8						
28											
30					9						
32											
34					10						
36					11						
38											



PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH.	RIG	DATE	km	B.P. No.	HOLE No.
PRONYCH	B-61	78/03/13	243		1

CHAINAGE	OFFSET
243+000	℄

O = WATER CONTENT (% OF DRY WEIGHT)
Δ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250)
PLASTIC LIMIT — LIQUID LIMIT
w % 20% 40% 60% 80% 100% 100+

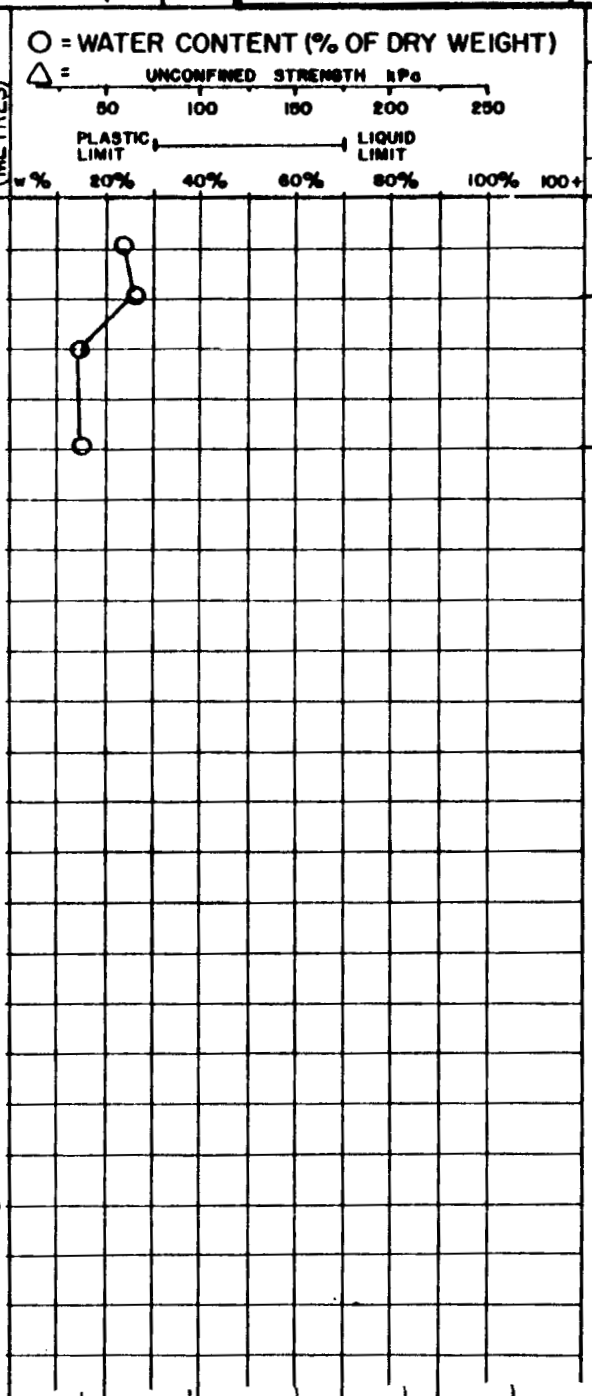
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2, 4, 6, 8, 10, 12	CI	CLAY-SILTY SANDY GRAVELLY MED. PLASTIC +PL @PL +PL			1, 2, 3	50	34	16		WET, MOIST, MOIST, MOIST, WET	O.K. FOR CUT
		2.4 m				51	46	3			
14		BOTTOM OF HOLE - 2.4 m			4					WET	
16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38					5, 6, 7, 8, 9, 10, 11						

PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/13	km 243	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
243+120	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY-SILTY SANDY +PL PEBBLES LOW PLASTIC - GRAVELLY							WET	
4	CL				46-	49		5	WET	
6									WET	
8		2.4m			54-	31		15	MOIST	
10		BOTTOM OF HOLE. 2.4m								
12										
14										
16										
18										
20										
22										
24										
26										
28										
30										
32										
34										
36										
38										

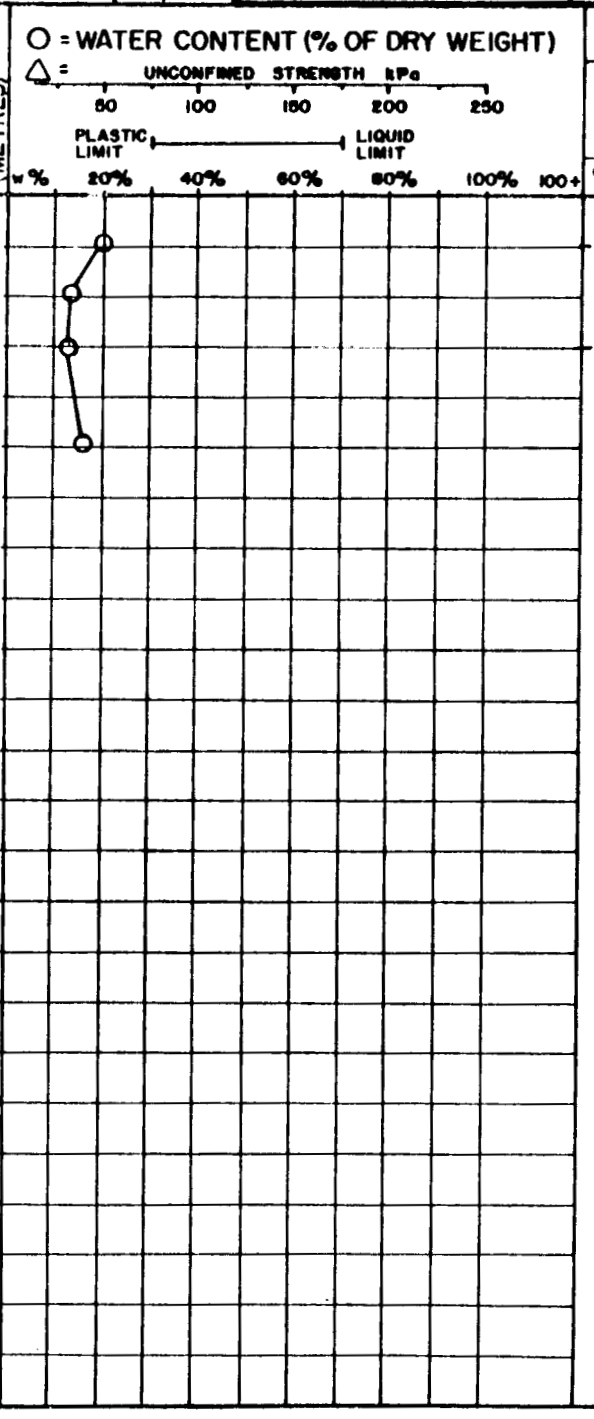


PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | Hiard Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/13	km 243	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
243+280	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY SANDY								Moist	
4		LOW - MED. PLASTIC			1					Moist	
6	CI	- PEBBLES				55	36	9		Moist	
8		2.4 m			2					Moist	
		BOTTOM OF HOLE - 2.4m									
10					3						
12					4						
14											
16					5						
18											
20					6						
22											
24					7						
26					8						
28											
30					9						
32											
34					10						
36					11						
38											

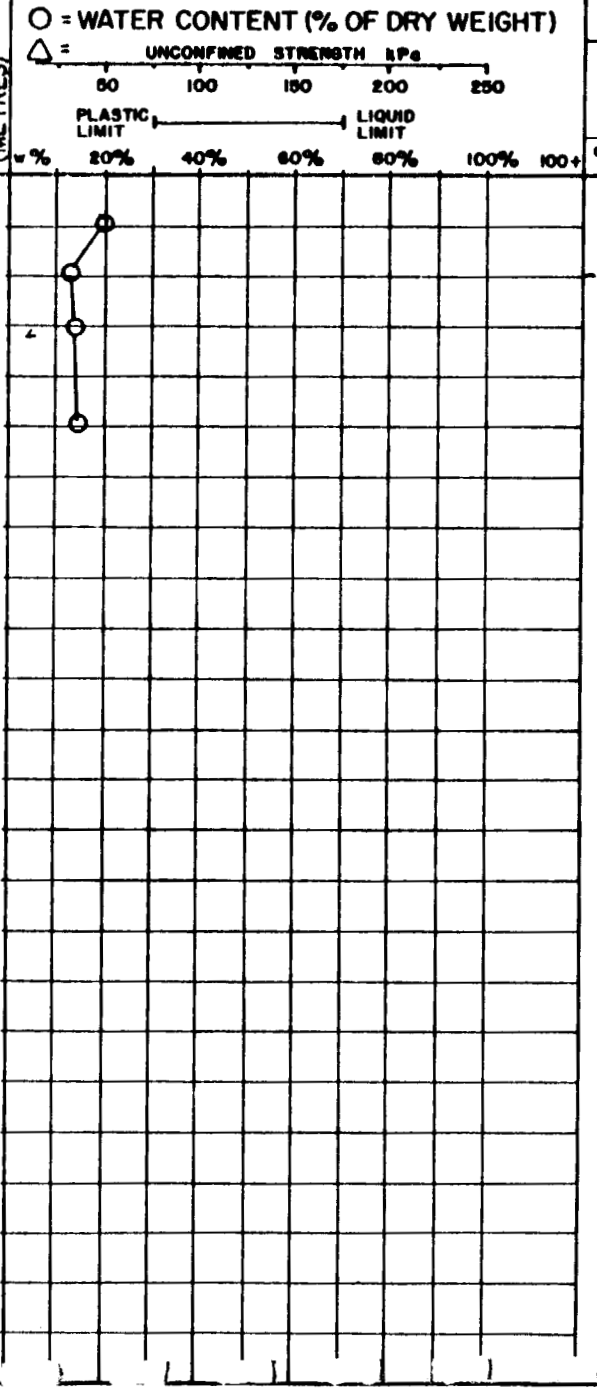


PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | HIGHWAY Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/13	km 243	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
243+480	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY-Silty Sandy + P_L Pebbles @ P_L								WET	O.K. FOR USE
4	CL	Low Plastic			1	57	37		6	MOIST	
6					2					MOIST	
8		2.4 m								WET	
10		Bottom of Hole - 2.4 m			3						
12					4						
14											
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36											
38					11						



PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/13	km 243	B.P. No.	HOLE No. 5

CHAINAGE	OFFSET
243+780	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2, 4, 6, 8, 10, 12	CI	CLAY - SILTY SANDY PEBBLES @ P_L MED. PLASTIC FEW COBBLES			1, 2, 3, 4	57	33	10		DAMP	O.K. FOR CULT
										DAMP	
						60	35	5		DAMP	
										DAMP	
										DAMP	
		4.0m				61	34	5		DAMP	
14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38		BOTTOM OF HOLE - 4.0m			5, 6, 7, 8, 9, 10, 11						

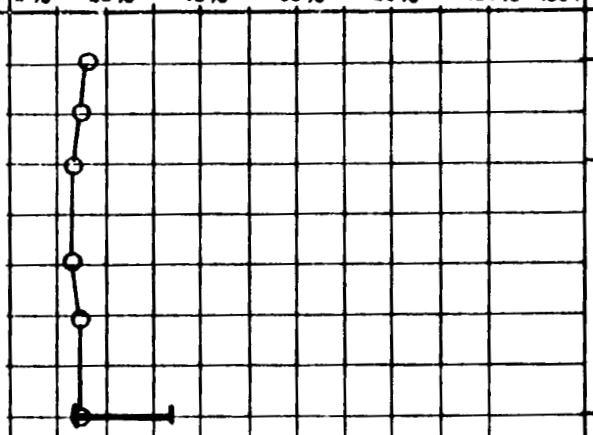
O = WATER CONTENT (% OF DRY WEIGHT)

Δ = UNCONFINED STRENGTH kPa

50 100 150 200 250

PLASTIC LIMIT — LIQUID LIMIT

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



GRAIN-SIZE ANALYSIS

RELATIVE MOISTURE CONTENT

REMARKS

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | LIARD Hwy.

TECH.	RIG	DATE	km	B.P. No.	HOLE No.
Pronych	B-61	78/03/13	244		1

CHAINAGE	OFFSET
244+010	℄

O = WATER CONTENT (% OF DRY WEIGHT)

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

PLASTIC LIMIT — LIQUID LIMIT

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

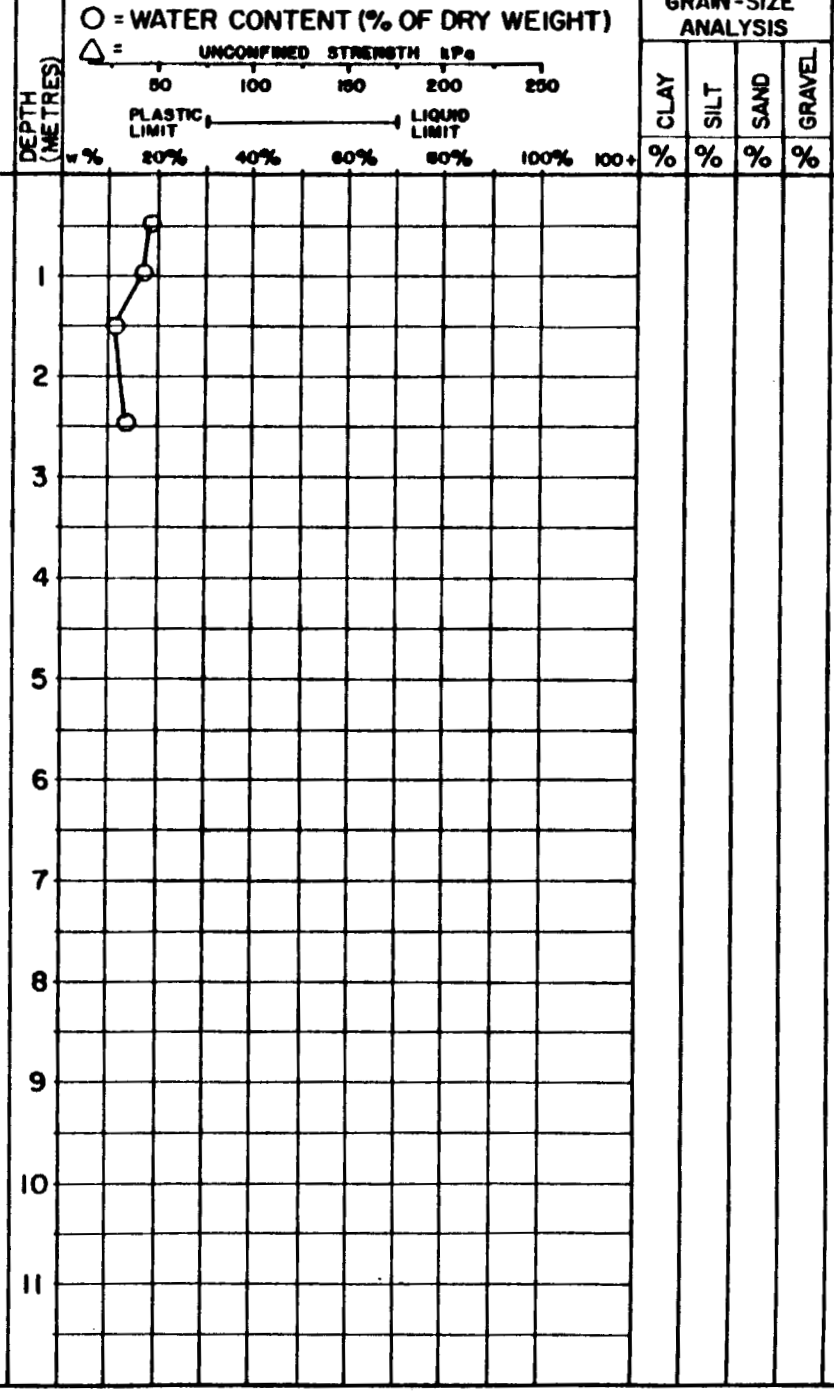
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38	CL	CLAY - SILTY SANDY - GRAVELLY - PEBBLES LOW PLASTIC			1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	42 - 38 20				WET SAT. MOIST	
		2.4m				50 - 46 4				WET	
		Bottom of Hole - 2.4m									

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | HIAID Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/13	km 244	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
244 +180	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT
2	CL	CLAY - SILTY SANDY - PEBBLES . LOW PLASTIC			WET
4					WET
6	CI	MED. PLASTIC			MOIST
8		2.4 m			MOIST
10		BOTTOM OF HOLE. 2.4 m			
12					
14					
16					
18					
20					
22					
24					
26					
28					
30					
32					
34					
36					
38					



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

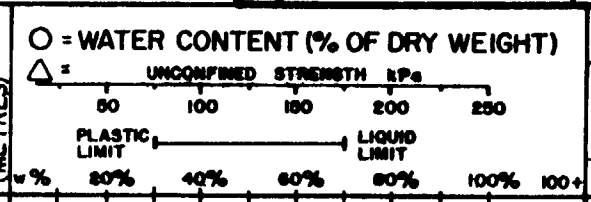
REMARKS

PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | WIARD HWY.

TECH. PRONYCHI	RIG B-61	DATE 78/03/13	km 244	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
244+350	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY SANDY + PL - PEBBLES @ PL LOW - MED. PLASTIC								SAT.	
4	CI				1					MOIST	
6										MOIST	
8		2.4 m			2					MOIST	
10		BOTTOM OF HOLE - 2.4 m			3						
12											
14					4						
16											
18					5						
20											
22					6						
24											
26					7						
28					8						
30											
32					9						
34											
36					10						
38					11						



PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | WIARD Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/13	km 244	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
244+730	℄

O = WATER CONTENT (% OF DRY WEIGHT)

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

PLASTIC LIMIT — LIQUID LIMIT

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

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY PEBBLES @ PL MED PLASTIC								MOIST	
4	CI				1					DAMP	
6										DAMP	
8		2.4 m			2					DAMP	
10		BOTTOM OF HOLE. 2.4 m			3						
12											
14					4						
16											
18					5						
20											
22					6						
24											
26					7						
28											
30					8						
32											
34					9						
36					10						
38					11						

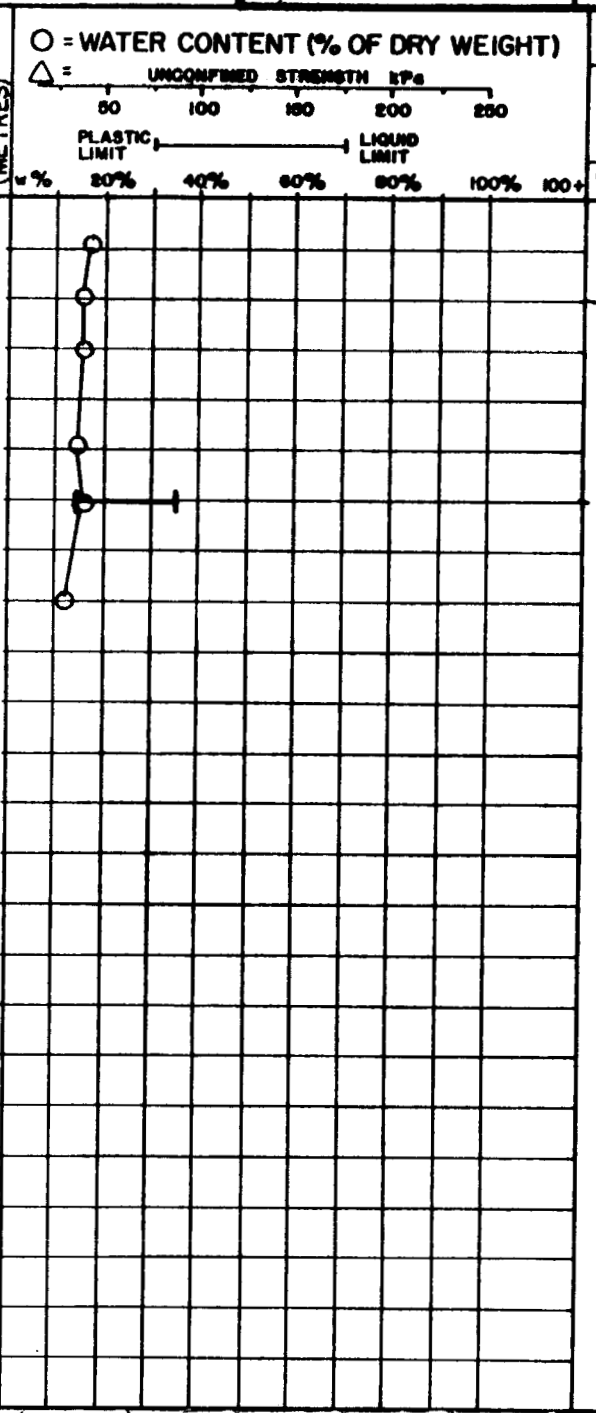
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD HWY.

TECH. Pronych	RIG B-61	DATE 78/03/13	km 244	B.P. No.	HOLE No. 5

CHAINAGE	OFFSET
244+900	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CI	CLAY - SILTY SANDY GRAVELLY @ or + P_L								WET	SLIGHTLY ABOVE OPTIMUM - O.K. FOR CUT
4					1	51	-	33	16	MOIST	
6		PEBBLES								DAMP	
8		MED. PLASTIC			2					DAMP	
10		GREY.			3	68	-	28	4	DAMP	
12		4.0 m									
14		BOTTOM OF HOLE. 4.0 m			4					DAMP	
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



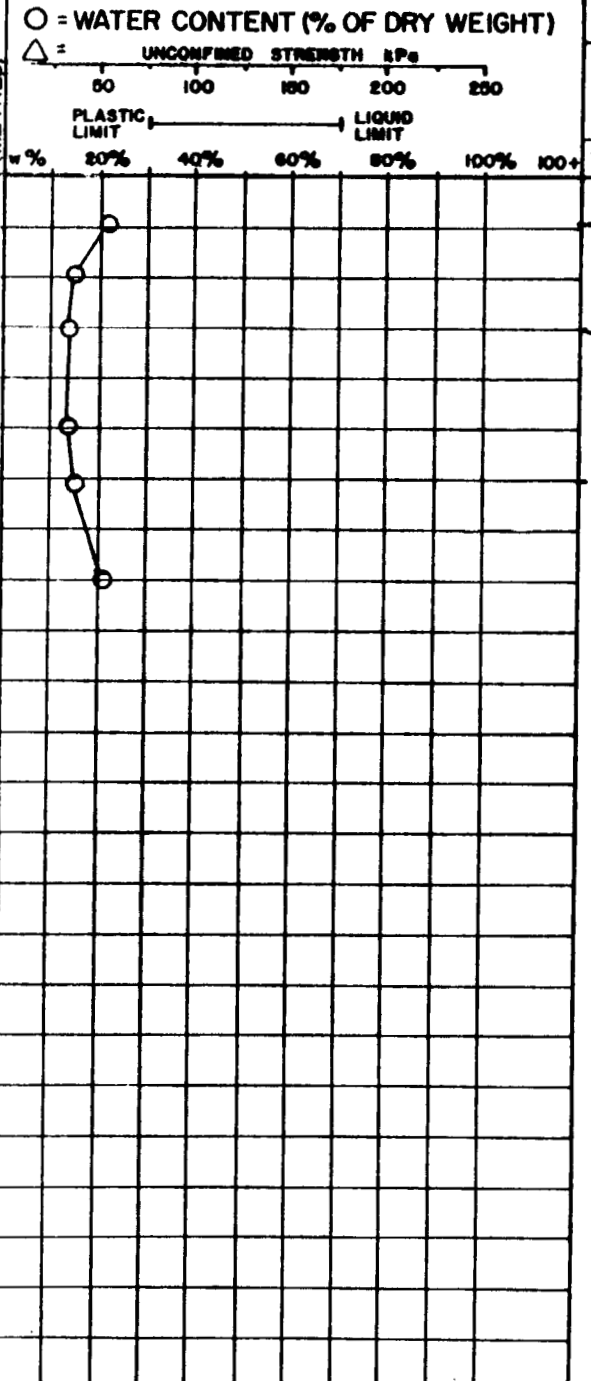
PUBLIC WORKS CANADA — DRILL HOLE REPORT

HIARD HWY.

TECH.	RIG	DATE	km	B.P. No.	HOLE No.
PRONYCH	B-61	78/03/13	245		1

CHAINAGE	OFFSET
244+960	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY. SILTY SANDY PEBBLES +PL				60	37	3		WET	SLIGHTLY ABOVE
4		LOW - MED. PLASTIC QPL			1					MOIST	OPTIMUM
6						52	38	10		DAMP	-O.K. FOR CUT
8	CL				2					DAMP	
10					3	71	28	1		DAMP	
12		GREY. +PL 4.0 m			4					DAMP	
14		BOTTOM OF HOLE - 4.0 m									
16					5						
18											
20					6						
22											
24					7						
26					8						
28											
30					9						
32											
34					10						
36					11						
38											



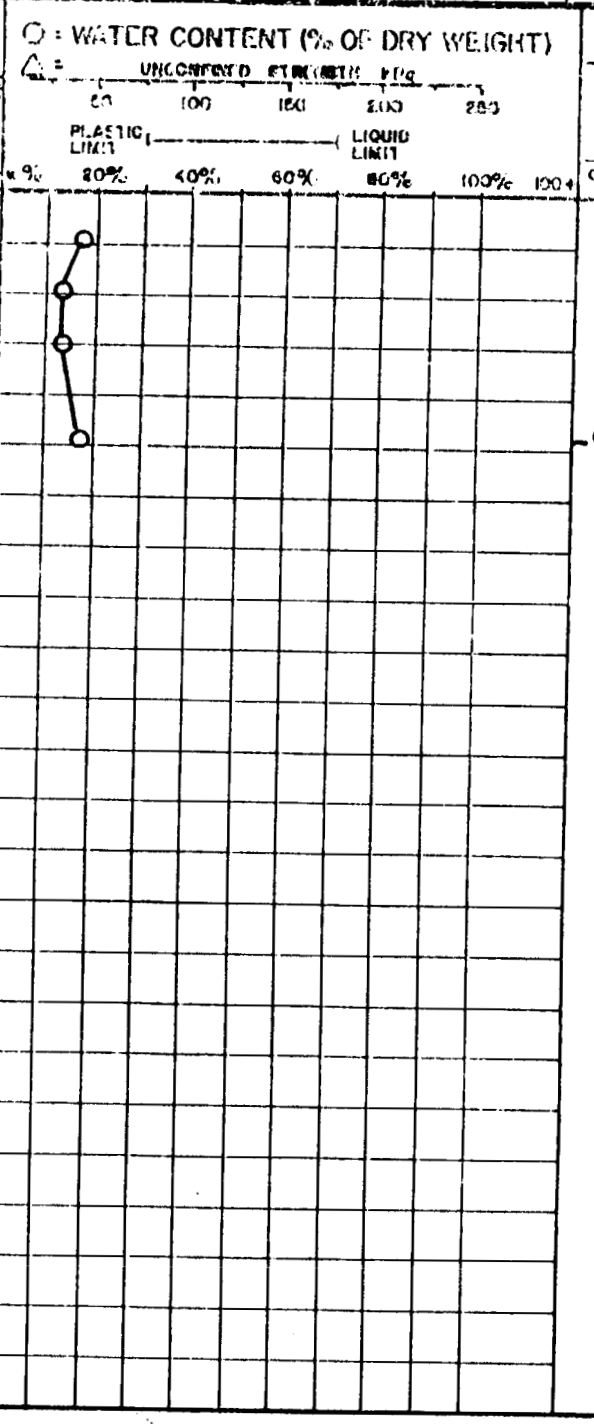
PUBLIC WORKS CANADA — DRILL HOLE REPORT

HIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/13	km 245	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
245+090	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY + P_L								MOIST	
4	CI	- PEBBLES @ P_L			1					MOIST	
		MED. PLASTIC									
6		+ P_L			2					MOIST	
8		2.4m				-6A-	25	11		MOIST	
		BOTTOM OF HOLE - 2.4 m									
10					3						
12											
14					4						
16											
18					5						
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36											
38					11						

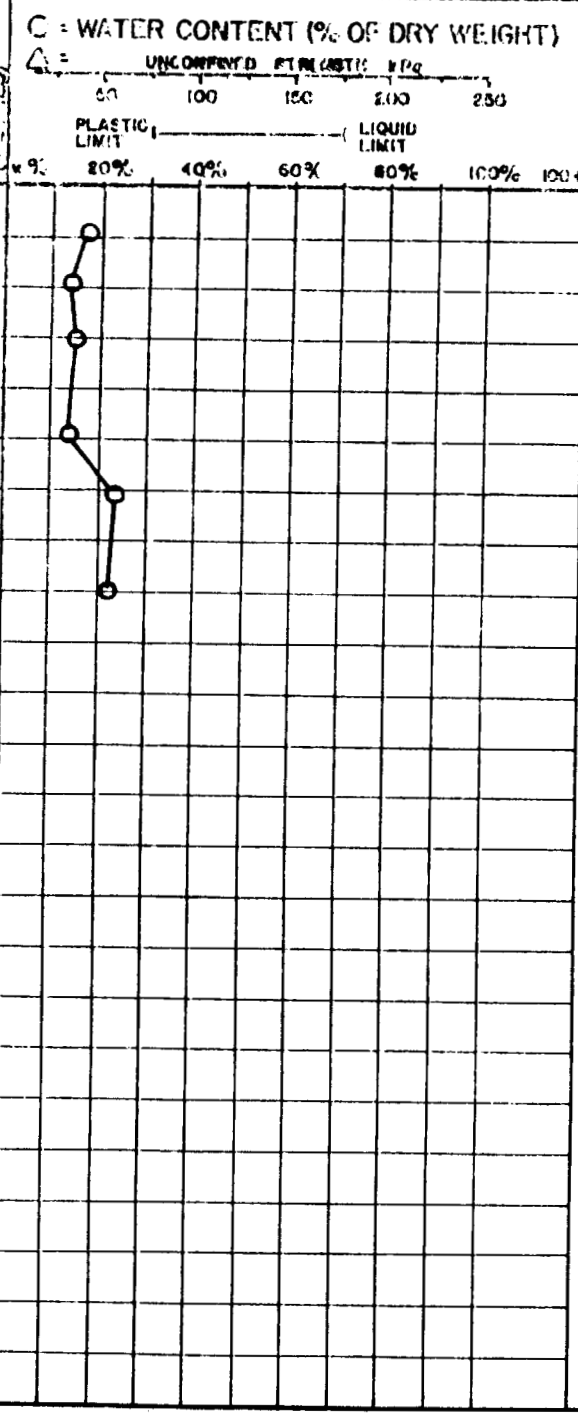


PUBLIC WORKS CANADA | DRILL HOLE REPORT | HIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/13	km 245	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
245+300	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY								WET	
4	CL	- PEBBLES @ P.			1	45	45	10		MOIST	
6		LOW - MED. PLASTIC								MOIST	
8	CI				2	60	36	4		DAMP	
10		+P.			3					MOIST	
12		4.0 m									
14		BOTTOM OF HOLE - 4.0 m			4					MOIST	
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36											
38					11						



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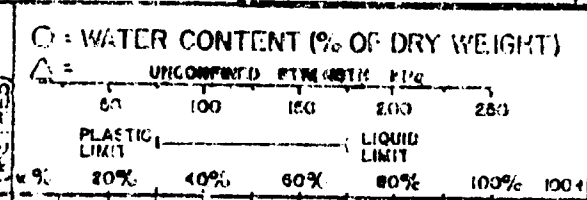
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD Hwy.

TECH. PRONYCH	RIG B-61	DATE 78/03/13	km 245	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
245+435	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY SANDY - PEBBLES @ PL								DAMP	O.K. FOR CUT
4	CI	LOW - MED. PLASTIC			1					MOIST	
6						50	43	7		MOIST	
8	CL	LOW PLASTIC			2					WET	
10					3	51	38	11		WET	
12		4.0 m									
14		BOTTOM OF HOLE . 4.0 m			4					WET	
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



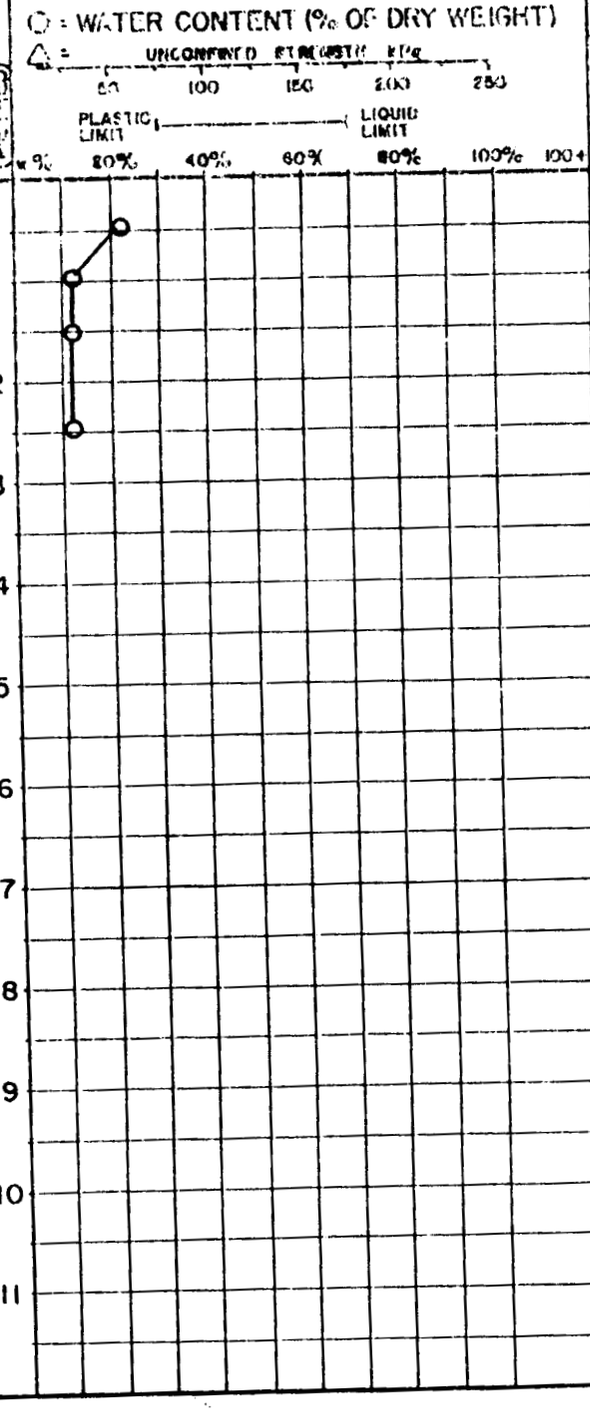
PUBLIC WORKS CANADA	DRILL HOLE REPORT	HIGHWAY

TECH. Pronych	RIG B-61	DATE 78/03/13	km 245	B.P. No.	HOLE No. 5

CHAINAGE	OFFSET
245+550	℄

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
0		CLAY - SILTY SANDY +PL								WET
2		- GRAVELLY @PL			1	43	38	19		MOIST
4	CL	LOW-MED. PLASTIC								
6	CI	- PEBBLES			2					MOIST
8		2.4 m								MOIST
10		BOTTOM OF HOLE. 2.4 m			3					
12					4					
14										
16					5					
18										
20					6					
22										
24					7					
26										
28					8					
30										
32					9					
34										
36					10					
38					11					



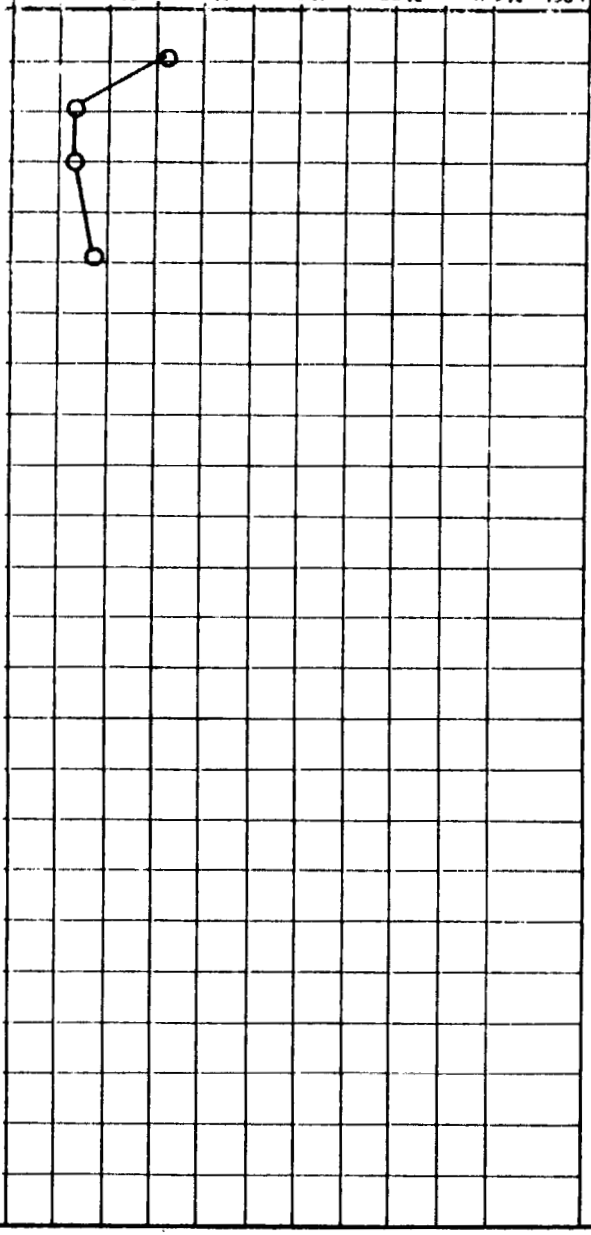
PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD Hwy.

TECH. Branch	RIG B-61	DATE 78/03/13	Km 245	B.P. No.	HOLE No. 6

CHAINAGE	OFFSET
245+740	℄

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT
	Pt	PEAT .2m			
2		CLAY & ORGANICS			WET
4		CLAY - SILTY SANDY PEBBLES @ ϕ + P_L			MOIST
6	CL	Low Plastic			WET
8		2.4m			MOIST
10		Bottom of Hole - 2.4m			
12					
14					
16					
18					
20					
22					
24					
26					
28					
30					
32					
34					
36					
38					



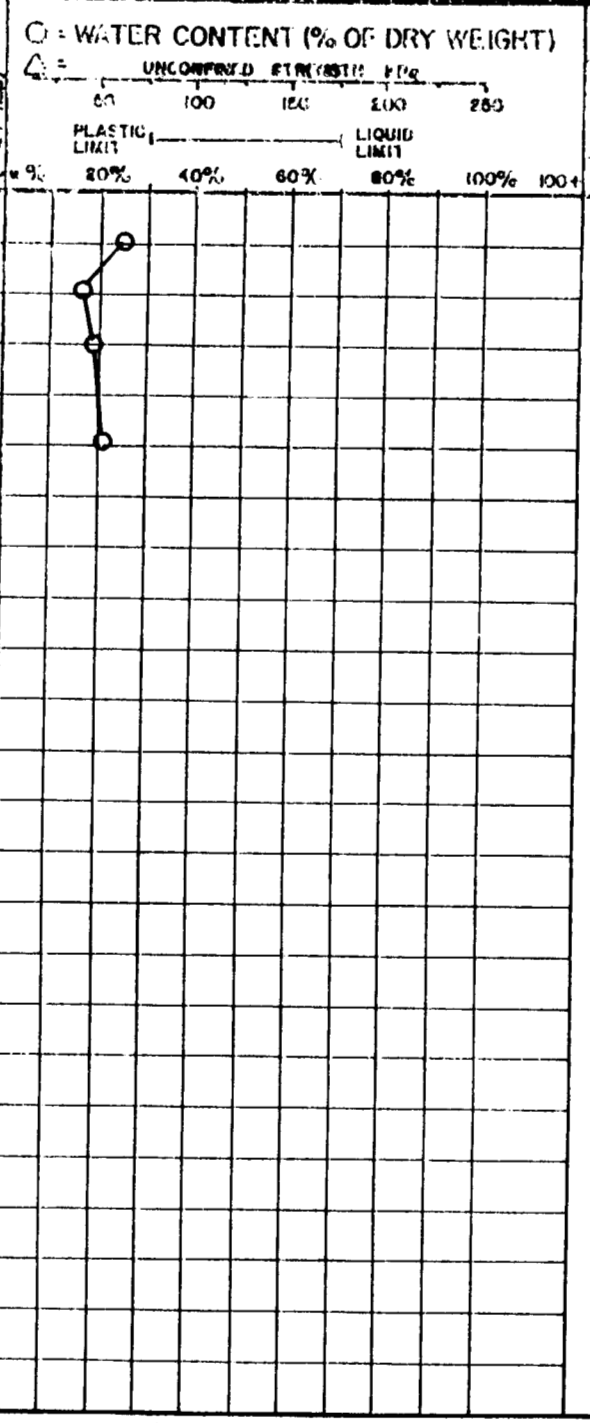
GRAIN-SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %

PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/13	km 246	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
246+020	±

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
	Pt	PEAT .3m									
2		CLAY - SILTY SANDY + PL - PEBBLES								SAT.	
4					1					MOIST	
6	CL	LOW PLASTIC			2					WET	SATURATED AFTER 1.8m
8		2.4 m								WET	
10		BOTTOM OF HOLE. 2.4m			3						
12											
14					4						
16											
18					5						
20											
22					6						
24											
26					7						
28											
30					8						
32											
34					9						
36											
38					10						
					11						



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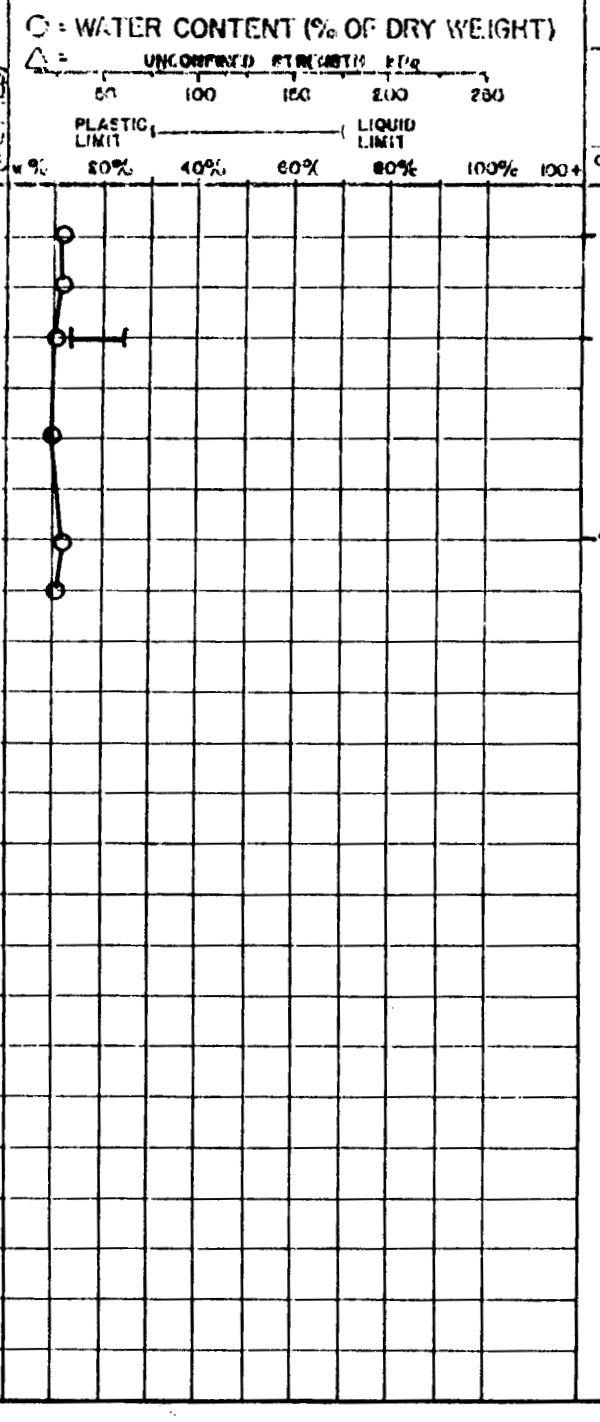
PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/13	km 246	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
246+215	E

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
	SM	SAND SILTY .15 m									
2		CLAY - SANDY SILTY PEBBLES @ R			1	47	46	7		DAMP	O.K. FOR CUT
4	CL	LOW - [redacted] PLASTIC								DAMP	
6	-				1.5	44	48	8		DAMP	
8	CL				2					DAMP	
10		- GRAVELLY			3						
12					3.5	41	47	12		MOIST	
		4.0 m			4					MOIST	
14		BOTTOM OF HOLE - 4.0 m									
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



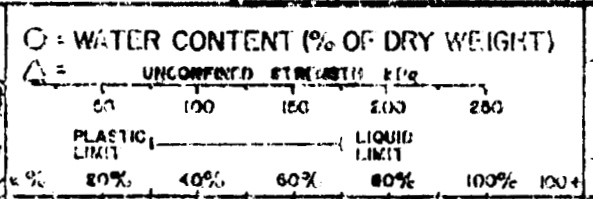
PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD HWY.

TECH. Pronych	RIG B-61	DATE 78/03/13	km 246	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
246+295	℄

REMARKS: O.K. FOR CUT

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2	CL	CLAY - SILTY SANDY GRAVELLY LOW PLASTIC @ P_L								WET
4					1	30	44	26		MOIST
6										DAMP
8					2	36	49	15		DAMP
10					3					MOIST
12		4.0 m								
14		BOTTOM OF HOLE - 4.0 m			4	37	51	12		MOIST
16					5					
18										
20					6					
22										
24					7					
26										
28					8					
30					9					
32										
34					10					
36					11					
38										



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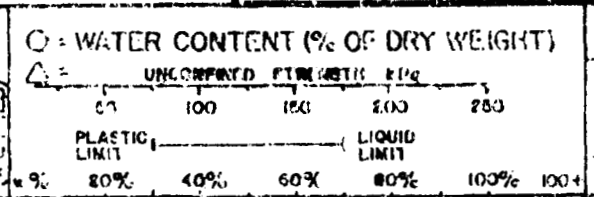
PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY

TECH. Pronych	RIG B-61	DATE 78/03/13	km 246	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
246+395	*

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	SM	SAND - SILTY GRAVELLY				19	48	33		MOIST	O.K. FOR CUT
		1.2 m @ P_L			1	19	57	24		MOIST	
4		CLAY - SILTY SANDY GRAVELLY LOW PLASTIC								MOIST	
6					2						
8						48	39	13		MOIST	
10	CL				3					MOIST	
12		4.0m									
14		BOTTOM OF HOLE - 4.0m			4						
16					5						
18											
20					6						
22											
24					7						
26					8						
28											
30					9						
32											
34					10						
36					11						
38											

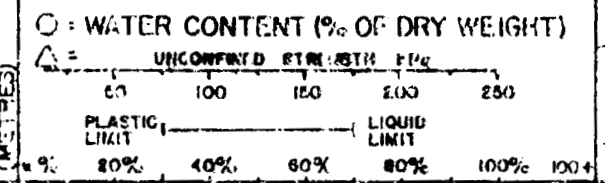


PUBLIC WORKS CANADA | DRILL HOLE REPORT | WARD Hwy.

TECH. PROVYCH	RIG B-61	DATE 78/03/15	km 246	B.P. No.	HOLE No. 5

CHAINAGE	OFFSET
246 + 460	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SANDY - GRAVELLY							MOIST	O.K. FOR CUT
		9m								
4		SAND - GRAVELLY SILTY			28	50	22		MOIST	
6	SM				29	44	27		MOIST	
8		2.4m								SATURATED SAND LENSE @ 2.7m
		CLAY - SANDY SILTY							MOIST	
10	CL	GRAY - PEBBLES QPL 3.1m			55	39	6		MOIST	
12		BOTTOM OF HOLE - 3.1m								
14										
16										
18										
20										
22										
24										
26										
28										
30										
32										
34										
36										
38										



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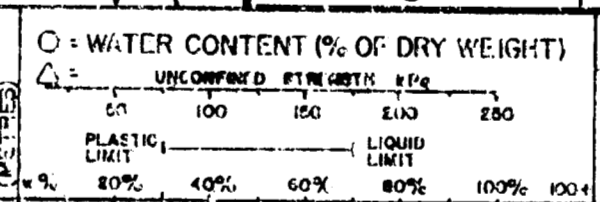
PUBLIC WORKS CANADA — DRILL HOLE REPORT — WIARD HWY.

TECH.	RIG	DATE	km	B.P. No.	HOLE No.
PRONYCH	B-61	78/03/15	246		6

CHAINAGE	OFFSET
246+515	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	SM	SAND - SILTY GRAVELLY			1	11	72	17		DAMP	O.K. FOR CUT
4					1	15	69	16		DAMP	
6					1	11	68	21		MOIST	
		2.1 m									
8	CL	CLAY - SILTY SANDY PEBBLES			2	45	51	4		MOIST	
		2.6 m									
10	SC	SAND - SILTY PEBBLES CLAYEY			3	29	65	6		MOIST	
12					4	38	53	9		MOIST	
14		4.6 m									
16		BOTTOM OF HOLE - 9.6 m			5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



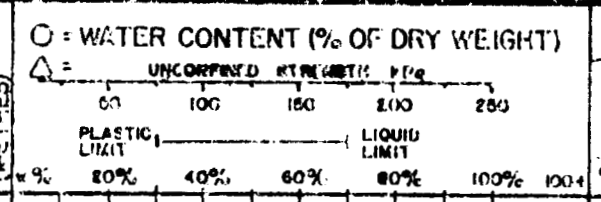
PUBLIC WORKS CANADA | DRILL HOLE REPORT | WARD Hwy

TECH. WEBBER	RIG B-50	DATE 78/03/13	km 246	B.P. No.	HOLE No. 7

CHAINAGE	OFFSET
246+880	4

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2	Pt	PEAT								FREE-WATER
4					1					FW
6		1.8 m								FW
	ML	SILT - ORGANIC CLAYEY			2					WET
8										
10	CL	CLAY - SILTY SANDY 3.1 m			3					MOIST-WET
12		BOTTOM OF HOLE - 3.1 m								
14					4					
16					5					
18										
20					6					
22										
24					7					
26										
28					8					
30					9					
32										
34					10					
36					11					
38										

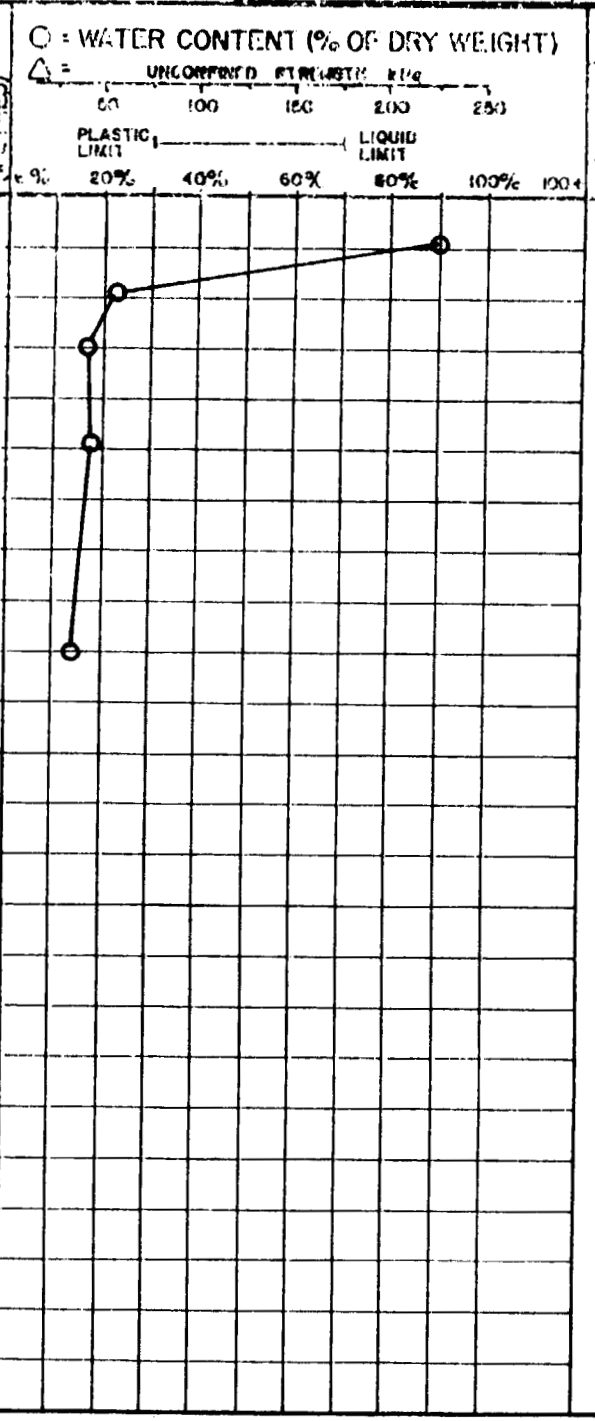


PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY

TECH. WEBBER	RIG B-50	DATE 78/03/13	km 247	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
247+020	℄

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

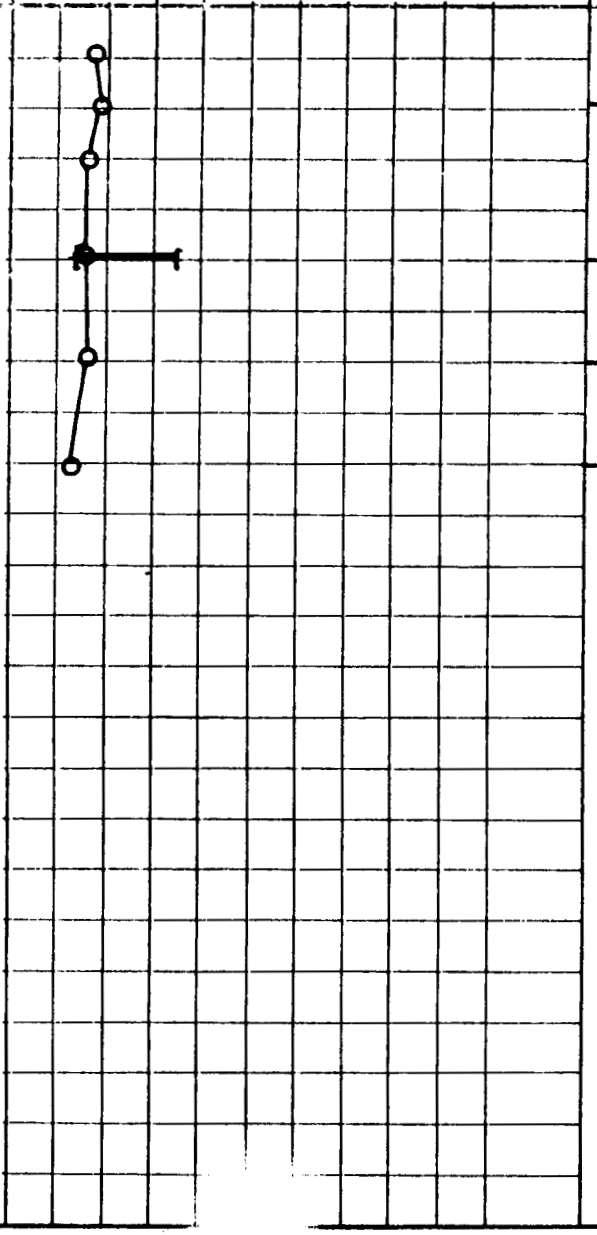


PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/13	km 247	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
247+220	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY PEBBLES MED. PLASTIC @ PL								MOIST	O.K. FOR CUT - SLIGHTLY ABOVE OPTIMUM
4					1	62	27	11		WET	
6										MOIST	
8	CI				2	66	29	5		MOIST	
10					3						
12						66	30	4		MOIST	
14		GREY 4.6m			4	61	34	5		MOIST	
16		BOTTOM OF HOLE - 4.6m			5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



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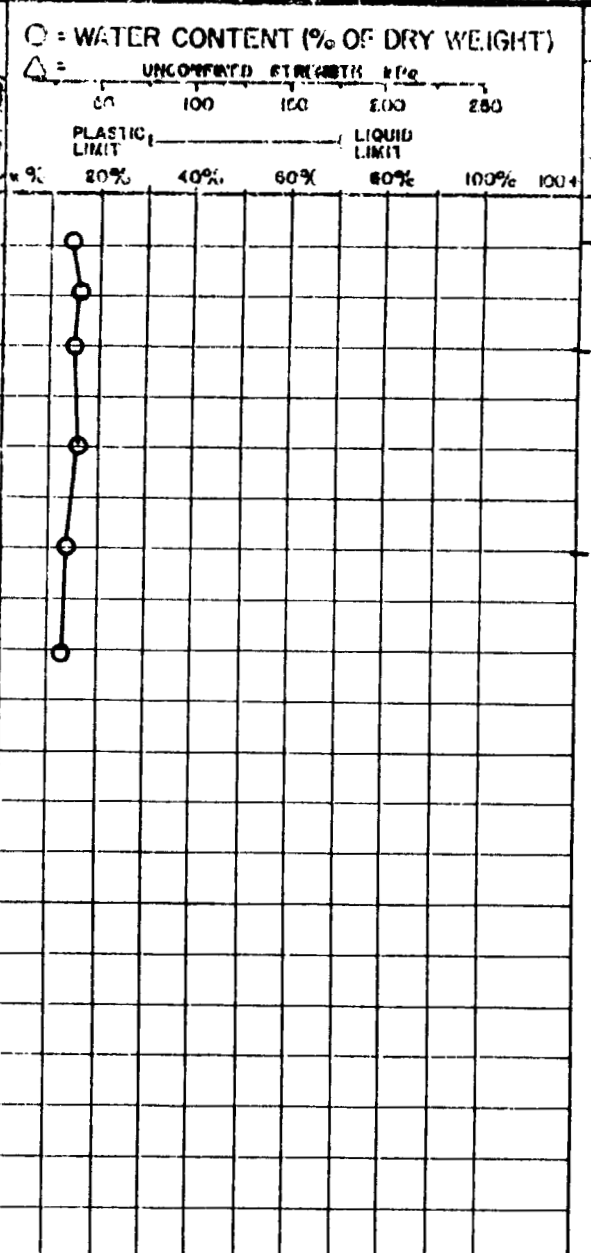
PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/13	km 247	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
247+280	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY PEBBLES @ PL				59	34	7		MOIST	O.K. FOR CUT
4					1					MOIST	
6	C1	MED. PLASTIC				63	30	7		MOIST	
8					2					MOIST	
10					3						
12		GRAY.				60	37	3		MOIST	
14		4.6 m			4					MOIST	
16		BOTTOM OF HOLE - 4.6 m			5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											

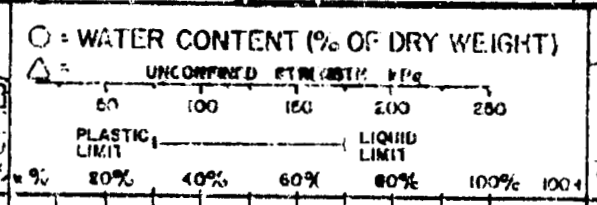


PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH. WEBBER	RIG B-50	DATE 78/03/13	km 247	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
247+440	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILT/ SANDY								WET	
4		PEBBLES @ PL			1					MOIST	
6	C1	MED. PLASTIC								MOIST	
8					2						
10		3.1m				63	31	6		MOIST	
12		BOTTOM OF HOLE - 3.1m			3					MOIST	
14					4						
16											
18					5						
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36											
38					11						



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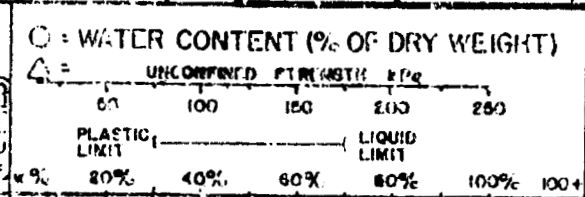
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/13	km 247	B.P. No.	HOLE No. 5

CHAINAGE	OFFSET
247+580	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY-SILTY SANDY + PL PEBBLES TILL				43	44	13		WET	
4					1					MOIST	
6		@ PL				68	25	7		MOIST	
8	CL	LOW PLASTIC			2					MOIST	
10		3.1 m			3	70	29	1		MOIST	
12		BOTTOM OF HOLE - 3.1 m									
14					4						
16											
18					5						
20											
22					6						
24											
26					7						
28											
30					8						
32											
34					9						
36					10						
38					11						

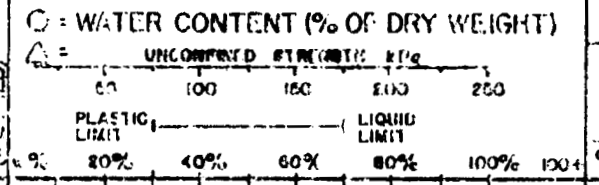


PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/13	km 247	B.P. No.	HOLE No. 6

CHAINAGE	OFFSET
247+750	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY @ P_L GRAVELLY LOW PLASTIC								MOIST	- O.K. FOR CUT
4					1	38	48	14		MOIST-WET	
6	CL									MOIST	
					2						
8										MOIST	
10					3						
12						47	46	7		WET	
14		4.6m			4					MOIST	
16		BOTTOM OF HOLE - 4.6m			5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



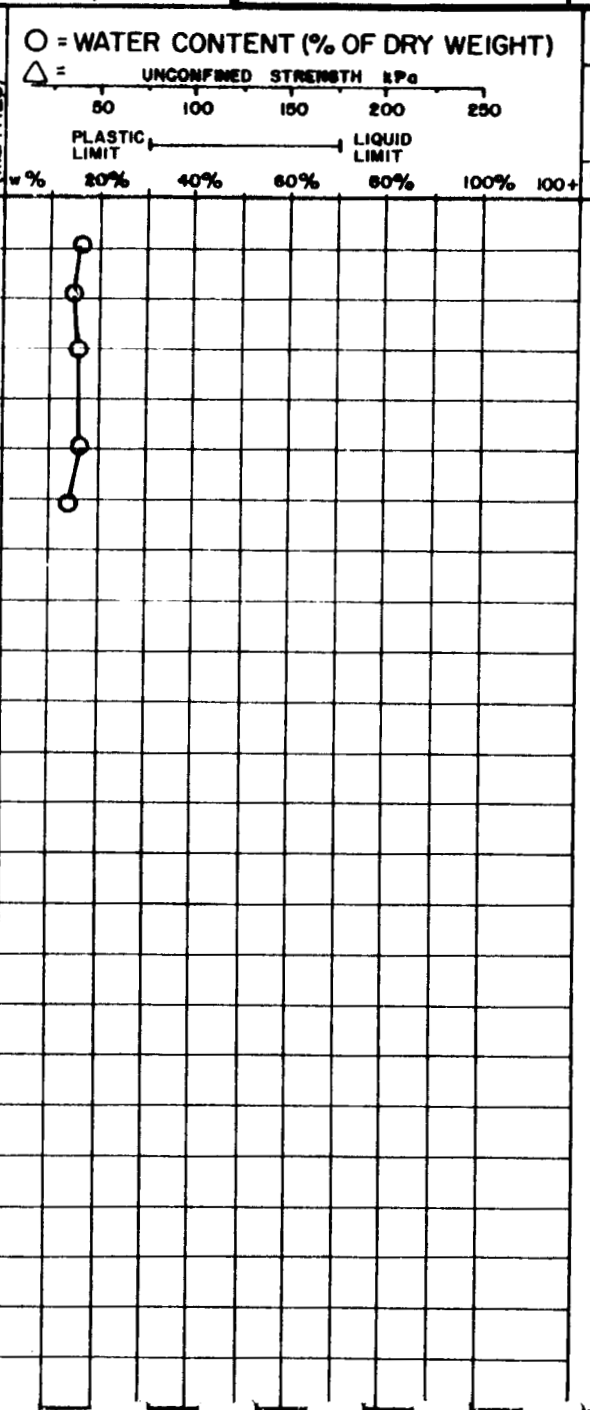
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/14	km 248	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
248+010	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY. SILTY SANDY PEBBLES. TILL LOW PLASTIC								WET	
4					1					MOIST	
6										MOIST	
8					2						
10		3.1 m								MOIST	
12		BOTTOM OF HOLE - 3.1 m			3					MOIST	
14					4						
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30											
32					9						
34											
36					10						
38					11						

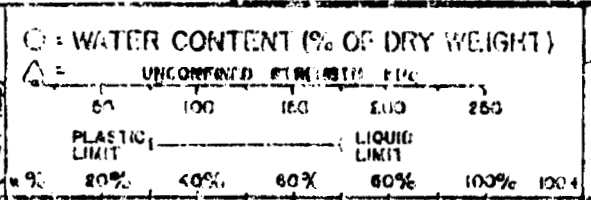


PUBLIC WORKS CANADA | DRILL HOLE REPORT | WARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/14	km 248	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
248+190	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY SANDY PEBBLES TILL @ ℄ - PL LOW PLASTIC								MOIST	
4					1					MOIST	
6	Sc	SAND - CLAYEY GRAVELLY			2					MOIST	
6	CL	CLAY - SILTY/SANDY PEBBLES LOW PLASTIC								MOIST-WET	
10					3					MOIST-WET	
12					4						
14		GRAY 4.6m								MOIST	
16		BOTTOM OF HOLE - 4.6m			5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36											
38					11						



GRAIN SIZE ANALYSIS

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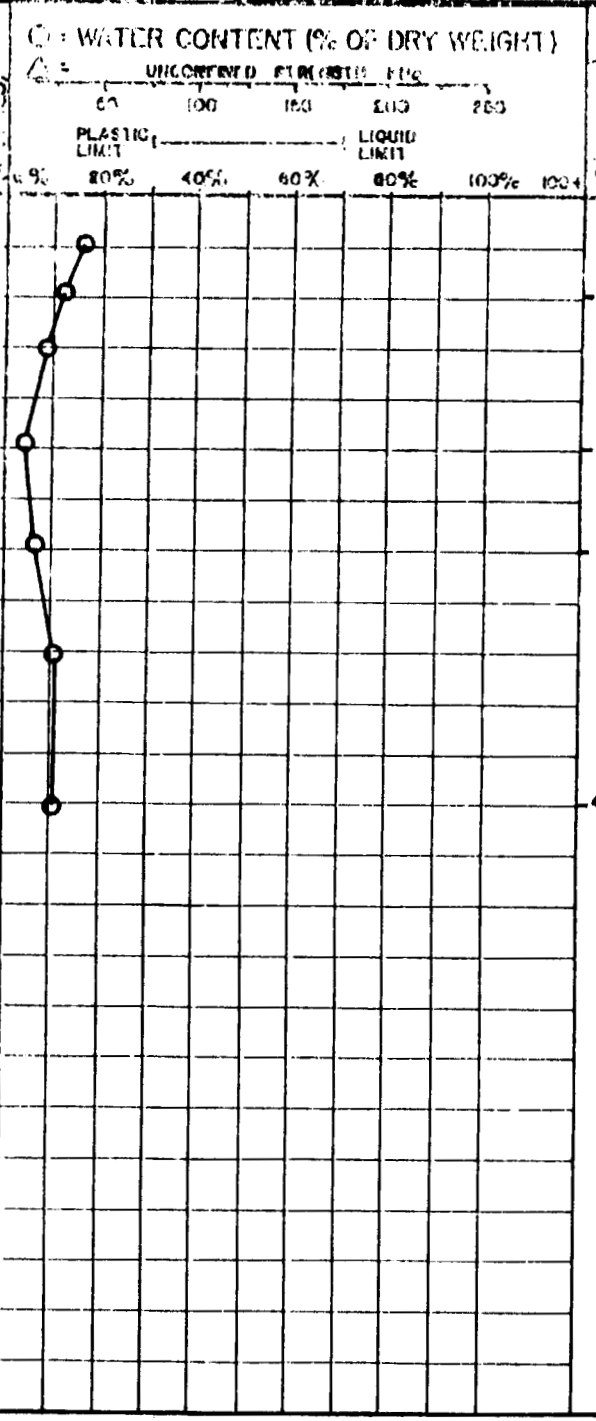
PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/14	km 248	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
248+400	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY SANDY - PEBBLES - GRAVELLY								MOIST	
4					1	54	44	2		MOIST	O.K. FOR CUT
6										MOIST	
		2.1			2						
8	SC	SAND - SILTY - PEBBLES CLAYEY				17	78	5		DAMP	
10	SP	SILTY FINE - MEDIUM			3	20	77	3		MOIST	
12		3.7m									
14	CL	CLAY - SANDY SILTY PEBBLES Q OR - PL			4						
16										MOIST	
18	CI	LOW - MED. PLASTIC			5						
20		GREY 6.1m			6	46	47	7		MOIST	
22		BOTTOM OF HOLE - 6.1 m									
24					7						
26											
28					8						
30					9						
32											
34					10						
36											
38					11						

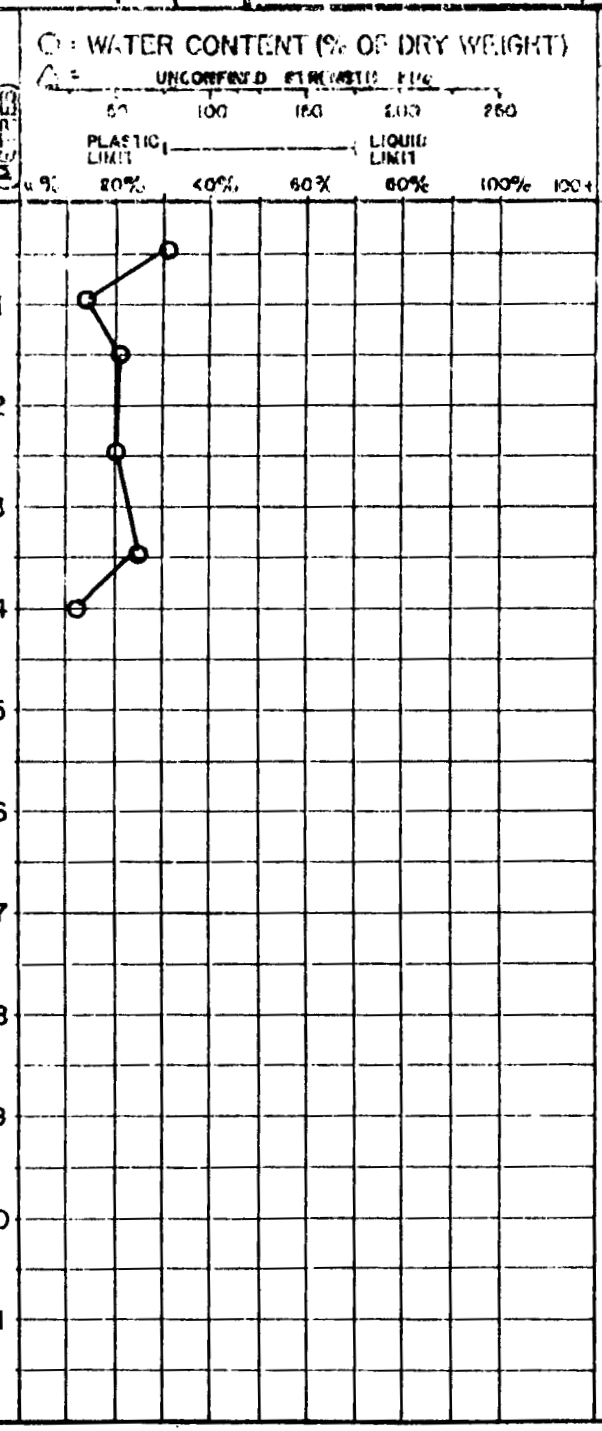


PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/14	km 248	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
248+620	4

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	RELATIVE MOISTURE CONTENT
2	CL	CLAY - SILTY SANDY LOW PLASTIC			WET
4		PEBBLES - TILL			MOIST
					MOIST
6	CL CI	CLAY - SILTY			MOIST
10					
12	CL	- SILTY SANDY PEBBLES 4.0 m			MOIST
					MOIST
14		BOTTOM OF HOLE - 4.0 m			
16					
18		LOG BOOK: 3.1 m END OF HOLE			
20					
22					
24					
26					
28					
30					
32					
34					
36					
38					



GRAIN SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %

REMARKS

PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD Hwy.

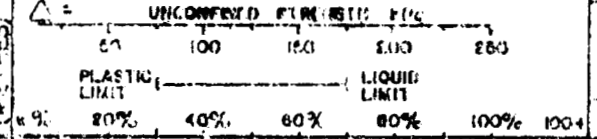
TECH. WEBBAR	RIG B-50	DATE 78/03/14	km 248	B.P. No.	HOLE No. 5

CHAINAGE	OFFSET
248+805	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY SANDY PEBBLES - P. .6m								DAMP MOIST	
4		SAND - SILTY CLAYEY PEBBLES			1	29	62	9		DAMP-MOIST	
6	Sc	- HARD				23	73	4			
					2					MOIST	
10		3.1m			3	32	64	4		MOIST	
12		BOTTOM OF HOLE. 3.1m									
14					4						
16		LOG BOOK : REFUSAL @ .9m			5						
18		HOLE REDRILLED									
20					6						
22		NOTES.									
24		LARGE BOULDERS AND ROCK SLABS ON SURFACE			7						
26		- [redacted] 1m + IN DIAMETER			8						
28											
30					9						
32											
34					10						
36					11						
38											

○ : WATER CONTENT (% OF DRY WEIGHT)

△ : UNCONFINED COMPRESSIVE STRENGTH (KPa)



PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD Hwy

TECH. WEBBER	RIG B-50	DATE 78-03-14	km 248	B.P. No.	HOLE No. 6

CHAINAGE	OFFSET
248+900	℄

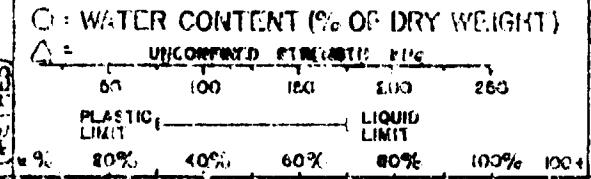
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	O = WATER CONTENT (% OF DRY WEIGHT) / △ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250) / PLASTIC LIMIT — LIQUID LIMIT (0%, 20%, 40%, 60%, 80%, 100%, 100+)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		SAND.										SAMPLES LOST.
4		HARD			1							
6		-POSSIBLY SANDSTONE			2							-RIDGE FROM STA 248+700
8												to 248+980 IS
10					3							VERY HARD
12		HARDNESS INCREASING										DRILLING. THERE
14		WITH DEPTH.			4							ARE NUMEROUS
16					5							LARGE BOULDERS
18		5.5m										ON THE SURFACE
20		REFUSAL @ 5.5m.			6							(1-2m. EXPOSED)
22					7							-CORE MAY BE
24												HARD SANDY TILL
26					8							OR SANDSTONE.
28												
30					9							
32					10							
34												
36					11							
38												

PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/14	km 249	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
248+950	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY SANDY PEBBLES .6m				67	28	5		MOIST	SEE HOLE #248-6
4		SAND - CLAYEY SILTY PEBBLES			1	28	70	2		MOIST	
6	SC					27	70	3		MOIST	
8					2	24	75	1		MOIST	
10					3	23	72	5		MOIST	
12		3.7m									
14		BOTTOM OF HOLE. 3.7m			4						
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36											
38					11						



J. JBL. W..IKS CANADA	DRILL HOLE REPORT	LIARD Hwy.

TECH. WEBBER	RIG B-50	DATE 78/03/19	km 249	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
249+210	℄

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
	CL	CLAY-SILTY SANDY GRAVELLY .6m				42	47	11		MOIST
2	SM	SAND-GRAVELLY SILTY			1	15	56	29		DAMP
4		1.8 m				19	65	16		DAMP
6		BOTTOM OF HOLE - 1.8 m			2					
8										
10		[redacted] Refusal to Auger advance			3					
12										
14		-Possibly Bedrock			4					
16										
18					5					
20										
22					6					
24										
26					7					
28										
30					8					
32										
34					9					
36										
38					10					
					11					

○ = WATER CONTENT (% OF DRY WEIGHT)
△ = UNCONFINED COMPRESSIVE STRENGTH (kPa)
50 100 150 200 250
PLASTIC LIMIT — LIQUID LIMIT
20% 40% 60% 80% 100%

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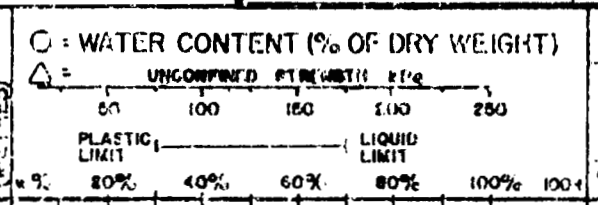
PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD HWY.

TECH. Pronych	RIG B-61	DATE 78/03/15	km 249	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
249 + 410	

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY. SILTY SANDY									
		· PEBBLES TILL									
4	CL	LOW PLASTIC			1					MOIST	POSSIBLE ROTTEN
		MED. PLASTIC								MOIST	BEDROCK AFTER
6	CI				2	61	28	11		MOIST	1.95 m
8	GC	GRAVEL - SAND MIX CLAYEY				66	32	2		MOIST	
		2.7 m				41	33	26		MOIST	
10					3						
12		BOTTOM OF HOLE - 2.7 m									
		REFUSAL									
14					4						
16		-POSSIBLY BEDROCK.			5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											

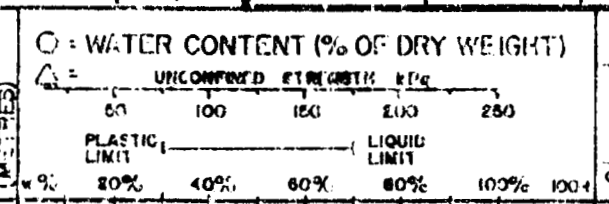


PUBLIC WORKS CANADA — DRILL HOLE REPORT — HARD Hwy.

TECH. Promych	RIG B-61	DATE 78/03/15	km 249	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
249+490	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY - PEBBLES @ P. MED. PLASTIC								MOIST-WET	
4					1	46	44	10		MOIST	
6	C1									MOIST	
8					2						HARD @ 2.9 m
10		3.2 m				60	34	6		MOIST	POSSIBLE BEDROCK
12		REFUSAL @ 3.2 m			3					MOIST	
14					4						
16					5						
18					6						
20					7						
22					8						
24					9						
26					10						
28					11						
30											
32											
34											
36											
38											

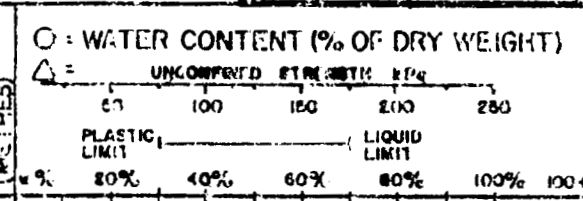


PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | HIARD HWY.

TECH. PRONYCH | RIG B-61 | DATE 78/03/15 | km 249 | B.P. No. | HOLE No. 5

CHAINAGE	OFFSET
249+543	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
2		CLAY - SILTY SANDY @ P.L								MOIST
4		- PEBBLES TILL			1	49	46	5		MOIST
		LOW - MED. PLASTIC								
6	CL	- GRAVELLY								MOIST
					2					
8	CI									MOIST
10		- PEBBLES			3	62	33	5		MOIST
12										
14		- GRAVELLY			4					MOIST
16		5.0m			5	29	49	22		MOIST
18		BOTTOM OF HOLE - 5.0m								
20		REFUSAL			6					
22		- POSSIBLY BEDROCK								
24					7					
26										
28					8					
30					9					
32										
34					10					
36					11					
38										



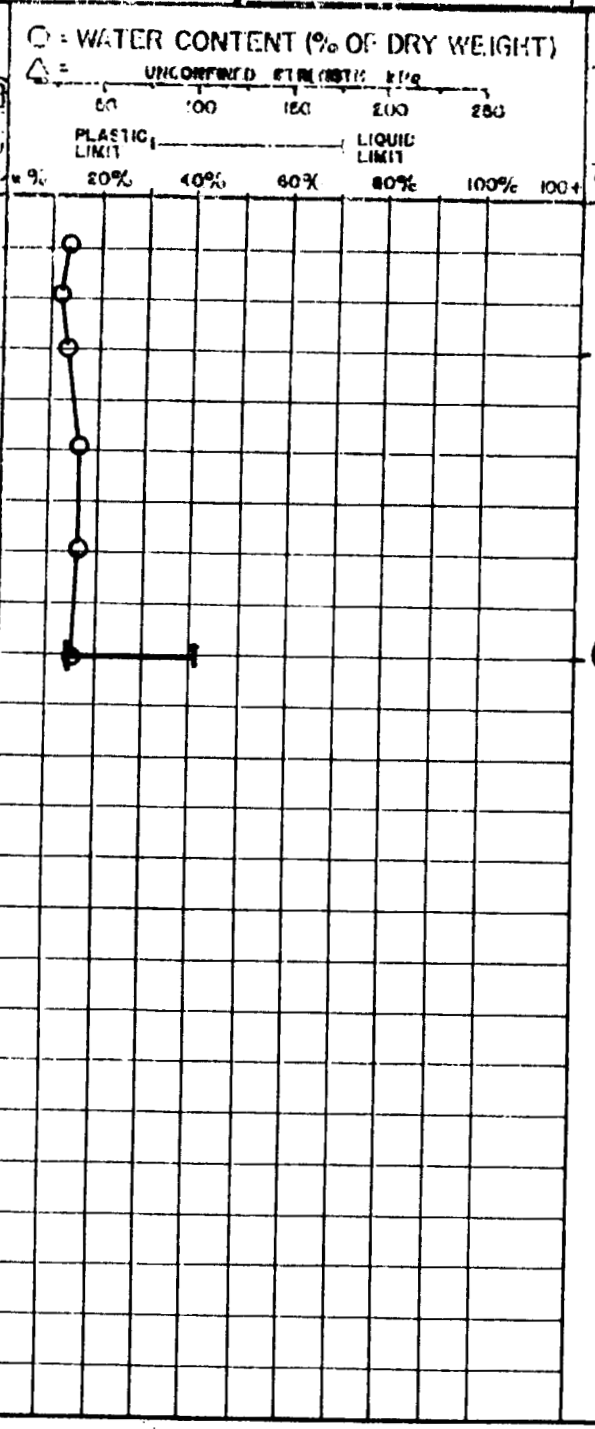
REMARKS: HARD AFTER 4.6 m

PUBLIC WORKS CANADA | DRILL HOLE REPORT | HIGHWAY Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/15	km 249	B.P. No.	HOLE No. 6

CHAINAGE	OFFSET
249+640	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
	ML	SILT - SANDY .25m									
2		CLAY - SILTY SANDY PEBBLES - TILL								MOIST	
4					1					MOIST	
6	CL - CI	LOW - MED PLASTIC @ PL				58	29	13		MOIST	
8					2					MOIST	
10					3						
12										MOIST	
14	CI	GREY - MED. PLASTIC			4						
16		4.9m				68	28	4		MOIST	HARD AFTER 4.7m
18		REFUSAL @ 4.9m			5						
20		-POSSIBLE BEDROCK.			6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



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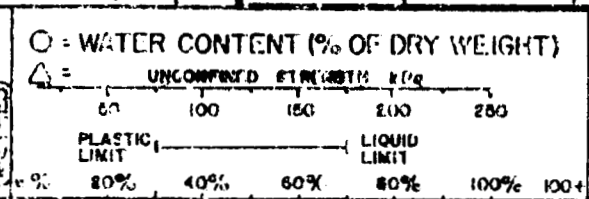
PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/15	km 249	B.P. No.	HOLE No. 7

CHAINAGE	OFFSET
249+770	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
	ML	SILT · SANDY .2m									
2		CLAY · SILTY SANDY @ P_L								MOIST	
4		PEBBLES · TILL			1					MOIST-WET	
6		LOW PLASTIC								M-W	
8	CL				2					M-W	
10					3						
12										M-W	
14					4					M-W	HARD AFTER 4.7m
16		5.0m									
18		BOTTOM OF HOLE. 5.0m			5						
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



JOB: PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/15	km 249	B.P. No.	HOLE No. 8

CHAINAGE	OFFSET
249+975	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	○ = WATER CONTENT (% OF DRY WEIGHT) △ = UNCONFINED STRENGTH kPa (50, 100, 150, 200, 250) PLASTIC LIMIT — LIQUID LIMIT (20%, 40%, 60%, 80%, 100%)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	SILT - SANDY .15m									MOIST	
	CL	CLAY - SILTY SANDY PEBBLES @ PL .9m			1						MOIST	
4		REFUSAL @ .9m										
6		- PROBABLY BOULDERS			2							
8												
10					3							
12												
14					4							
16												
18					5							
20												
22					6							
24												
26					7							
28												
30					8							
32												
34					9							
36					10							
38					11							

PUBLIC WORKS CANADA — DRILL HOLE REPORT

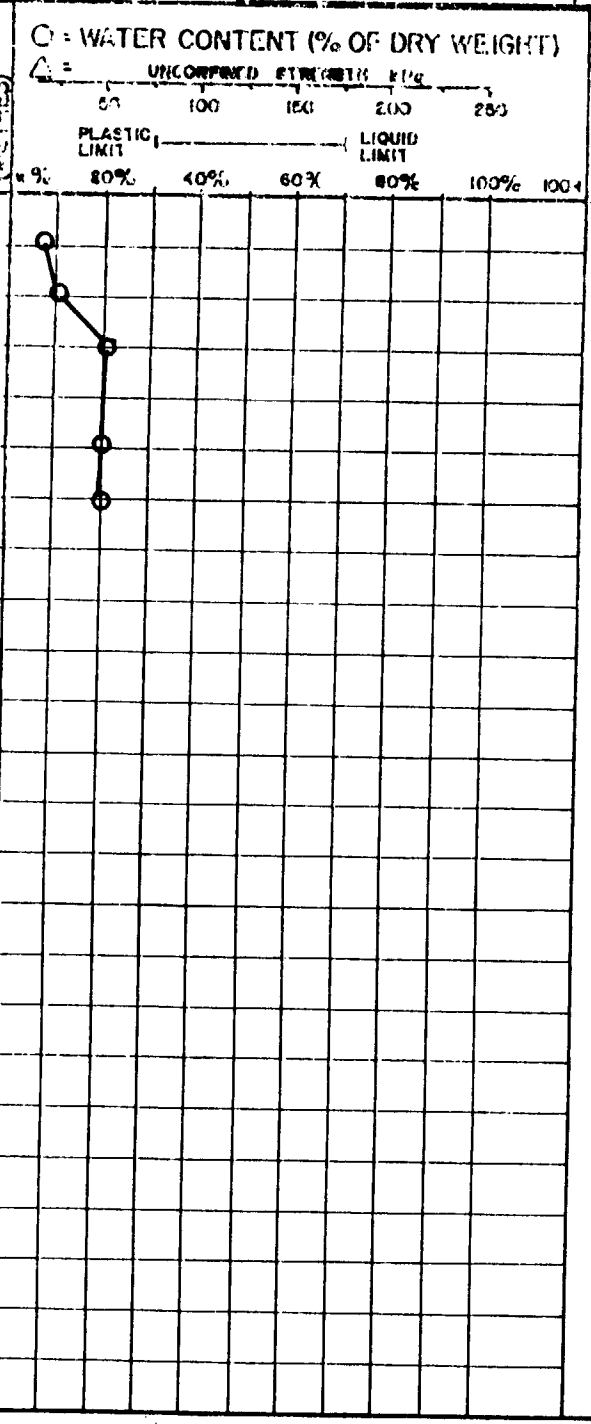
Liard Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/15	km 250	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
250+150	℄

REMARKS: Boulders on Surface

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - Silty Sandy - Gravelly - Till - Pebbles - P_L								Damp	
4	CL				1					Damp	
6		+ P_L								Moist-Damp	
8	CI	Low-Med. Plastic			2					M-D	
10		3.1 m			3					M-D	
12		Bottom of Hole - 3.1 m									
14					4						
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



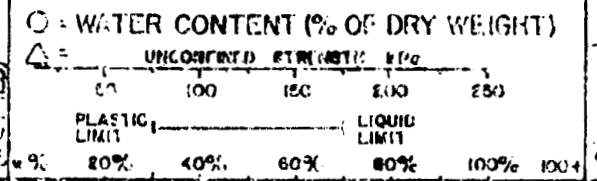
PUBLIC WORKS CANADA | DRILL HOLE REPORT | WARD Hwy.

TECH. PRONYCH	RIG B-61	DATE 78/03/15	km 250	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
250+265	℄

REMARKS: BOULDERS ON SURFACE

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT
	ML	SILT - SANDY .25m								
2		CLAY - SILTY SANDY @PL				71	27	2		MOIST
4		- PEBBLES - TILL			1					MOIST
6		MED. PLASTIC				74	25	1		MOIST
8	CI				2					MOIST
10		@PL OR - PL			3					
12		GRAY -				70	26	4		MOIST
14		4.6 m			4					MOIST
16		BOTTOM OF HOLE - 4.6 m			5					
18										
20					6					
22										
24					7					
26										
28					8					
30					9					
32										
34					10					
36					11					
38										



GRAIN SIZE ANALYSIS

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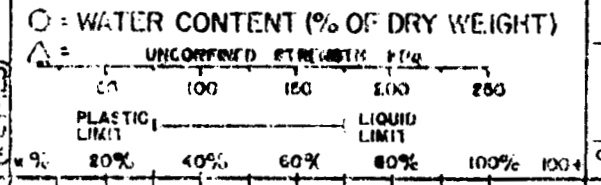
PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD HWY.

TECH. Pronych	RIG B-61	DATE 78/03/15	km 250	B.P. No.	HOLE No. 3

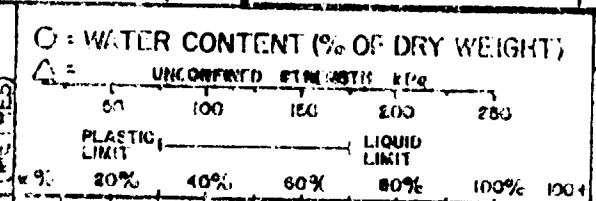
CHAINAGE	OFFSET
250+490	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY								MOIST	
4		PEBBLES - TILL			1	70	26	4		MOIST	
6		MED. PLASTIC								MOIST	
8		@PL			2	65	28	7		MOIST	
10	Cl				3						
12										MOIST	
14					4						
16										MOIST	
18					5						
20		6.1m			6	70	28	2		MOIST	
22		BOTTOM OF HOLE - 6.1m									
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD HWY.	
TECH. PRONYCH	RIG B-61	DATE 78/03/15	km 250
B.P. No.	HOLE No. 4	CHAINAGE 250+580	OFFSET ℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN-SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY PEBBLES - TILL				64	31	5		MOIST	
4		MED. PLASTIC @ PL			1					MOIST	
6	CI									MOIST	
8					2						
10		GRAY 3.1 m			3	67	28	5		MOIST	
12		BOTTOM OF HOLE - 3.1 m								MOIST	
14					4						
16											
18					5						
20											
22					6						
24											
26					7						
28											
30					8						
32											
34					9						
36					10						
38					11						



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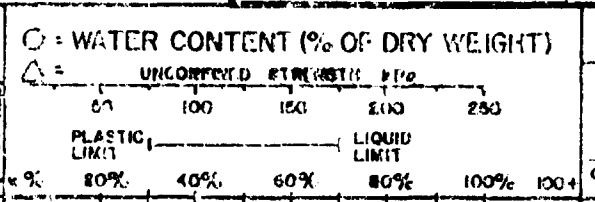
PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/15	km 250	B.P. No.	HOLE No. 5

CHAINAGE	OFFSET
[redacted]	
[redacted] 250+780	℄

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	RELATIVE MOISTURE CONTENT	CLAY %	SILT %	SAND %	GRAVEL %
		BOULDERS ON SURFACE								
2		CLAY - SILTY SANDY				MOIST				
4		- PEBBLES . TILL			1	MOIST				
		- LOW PLASTIC				MOIST	67	27	6	
6	CL	@ P_L			2					
8						MOIST				
10		3.1m			3	MOIST				
12		BOTTOM OF HOLE - 3.1m								
14					4					
16					5					
18										
20					6					
22										
24					7					
26										
28					8					
30					9					
32										
34					10					
36					11					
38										



GRAIN-SIZE ANALYSIS

PUBLIC WORKS CANADA	ALL HOLE RL. DR.	WARD Hwy.

TECH. PRONYCH	RIG B-61	DATE 78/03/15	km 251	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
251+80	4

REMARKS

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	RELATIVE MOISTURE CONTENT
2	CL	BOULDERS ON SURFACE CLAY - SILTY SANDY PEBBLES + Pn LOW PLASTIC				WET
4		1.2 m			1	WET
6		REFUSAL @ 1.2 m			2	
8		- PROBABLY BOULDERS				
10					3	
12						
14					4	
16						
18					5	
20						
22					6	
24						
26					7	
28						
30					8	
32						
34					9	
36						
38					10	
					11	

○ = WATER CONTENT (% OF DRY WEIGHT)

△ = UNCONFINED STRENGTH kPa

50 100 150 200 250

PLASTIC LIMIT — LIQUID LIMIT

20% 40% 60% 80% 100% 120%

GRAIN SIZE ANALYSIS	CLAY %	SILT %	SAND %	GRAVEL %

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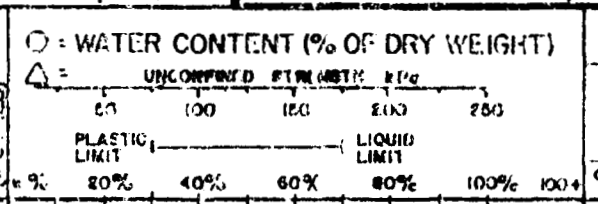
PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | Liard Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/15	km 251	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
251+300	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL	CLAY - SILTY SANDY - PEBBLES TILL - LOW PLASTIC @ PL								MOIST-WET	
4					1					M-W	- SLIGHTLY ABOVE OPTIMUM O.K. FOR CUT.
6										M-W	
8					2					MOIST	
10					3					MOIST	
12					4					MOIST	
14										MOIST	
16					5						
18											
20		6.1 m			6					MOIST	
22		BOTTOM OF HOLE. 6.1 m									
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											

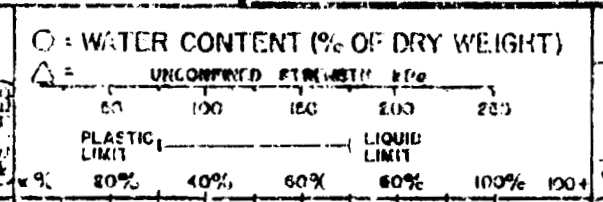


PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/15	km 251	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
251+350	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	ML	SILT - CLAYEY SANDY - PEBBLES				77	19	4		MOIST	- SLIGHTLY ABOVE OPTIMUM
4					1					WET	- O.K. FOR CUT.
6										MOIST	
8		COBBLES @ 3.2m			2	85	14	1		MOIST	
10					3						
12										MOIST	
14					4	54	43	3		WET	
16											
18		5.5m			5						
20		CLAY - SILTY SANDY - PEBBLES								MOIST	
22	CL	GREY - LOW - MED. PLASTIC			6						
24	CI				7	73	24	3		MOIST	
26											
28					8						
30		9.1m			9					MOIST	
32		BOTTOM OF HOLE - 9.1m									
34					10						
36					11						
38											



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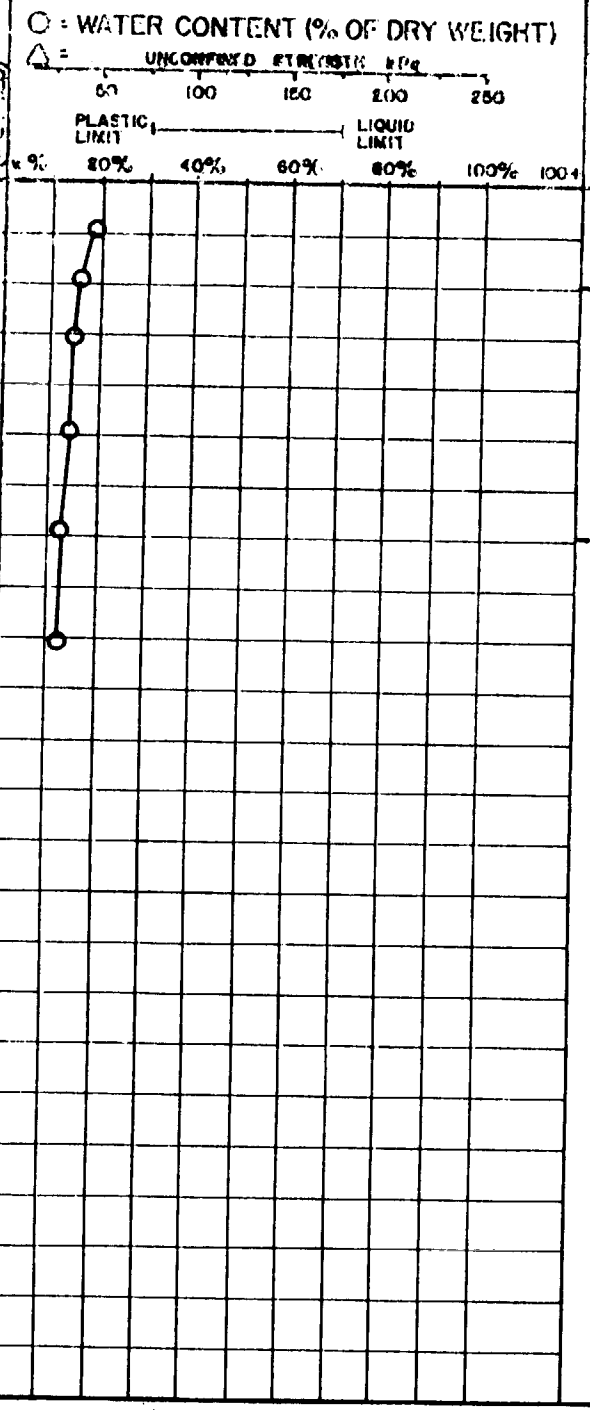
PUBLIC WORKS CANADA — DRILL HOLE REPORT

LIARD Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/15	km 251	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
251+670	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
	ML	SILT-SANDY-PEBBLES .2m									COBBLES ON SURFACE
2		CLAY-SILTY SANDY PEBBLES LOW PLASTIC								MOIST	
4					1	64	26	10		MOIST	
6	CL									MOIST	- O.K. FOR CUT
8					2					DAMP	
10					3						
12						61	35	4		DAMP	
14		4.6m			4						
16		BOTTOM OF HOLE. 4.6m								DAMP	
18					5						
20											
22					6						
24											
26					7						
28					8						
30											
32					9						
34											
36					10						
38					11						

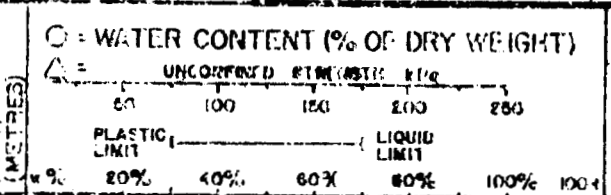


PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/15	km 251	B.P. No.	HOLE No. 5

CHAINAGE	OFFSET
251+760	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
	ML	SILT-SANDY .1 m									
2		CLAY-SILTY SANDY GRAVELLY ⊕PL								WET	O.K. FOR CUT
4					1					MOIST	
6		PEBBLES				58	27	15		MOIST	
8	CL	MED-LOW PLASTIC			2						
										MOIST	
10	CI	3.4 m			3						
12		BOTTOM OF HOLE .3.4m				63	32	5		MOIST	
14		REFUSAL			4						
16		PROBABLY ON BOULDERS.			5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											

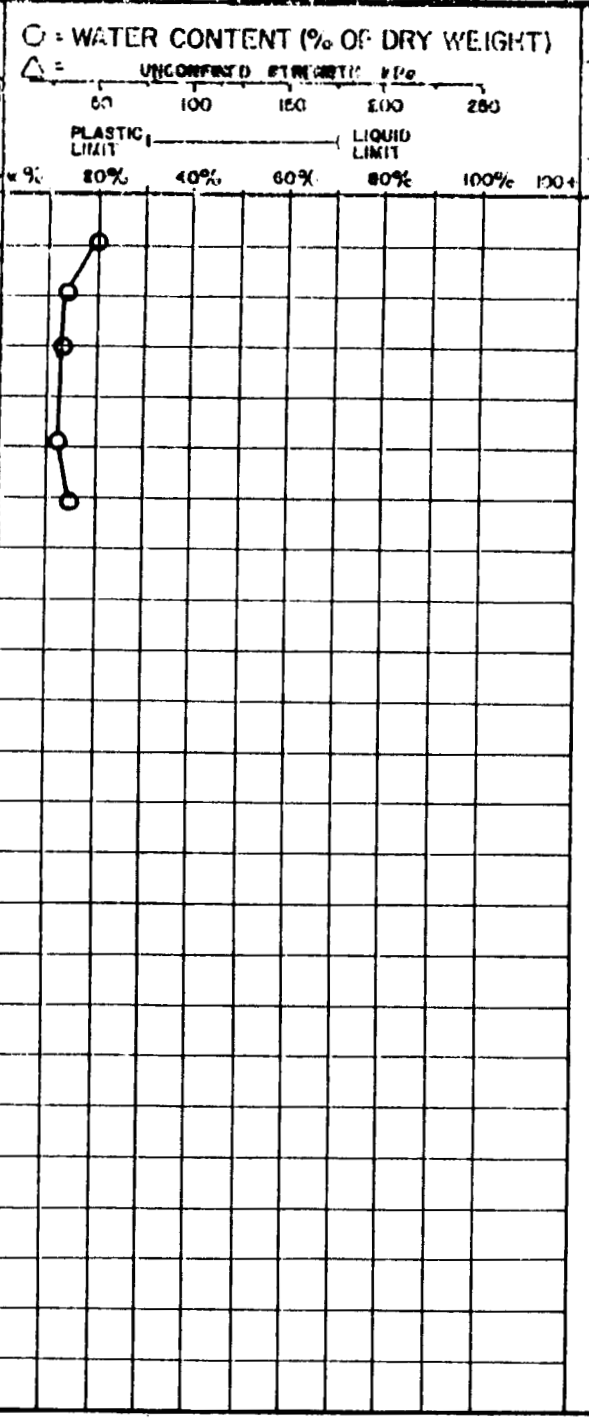


PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD HWY.

TECH. Pronych	RIG B-61	DATE 78/03/15	km 252	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
252+000	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY - SILTY SANDY +P_L									
		PEBBLES									
4		MED. PLASTIC			1					WET-SAT.	
	C1	@ P_L								DAMP	
6										DAMP	
					2						
8										MOIST	
10		3.1m			3					MOIST	
12		BOTTOM OF HOLE - 3.1m									
14					4						
16											
18					5						
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											

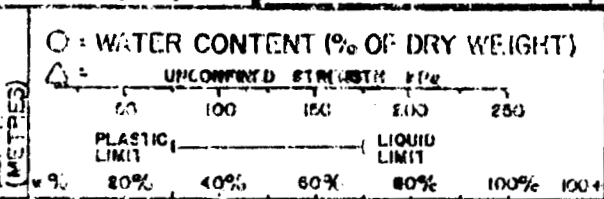


PUBLIC WORKS CANADA — DRILL HOLE REPORT — LIARD Hwy.

TECH. PRONYCH	RIG B-61	DATE 78/03/15	km 252	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
252+80	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
	SC	SAND-SILTY CLAYEY PEBBLES .6m								MOIST	-O.K. FOR CUT
2		CLAY - SANDY SILTY PEBBLES @ PL LOW PLASTIC			1					MOIST	
4										MOIST	
6	CL				2						
8										MOIST	
10		GREY - 3.1 m			3					DAMP	
12		BOTTOM OF HOLE - 3.1 m									
14					4						
16											
18					5						
20											
22					6						
24											
26					7						
28											
30					8						
32											
34					9						
36					10						
38					11						



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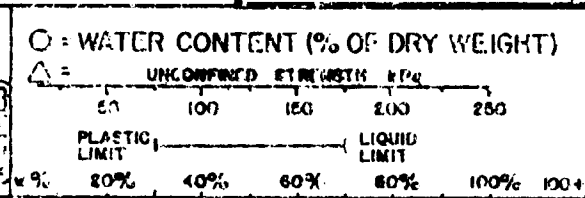
PUBLIC WORKS CANADA	DRILL HOLE REPORT	LIARD Hwy.

TECH. PRONYCH	RIG B-61	DATE 78/03/15	km 252	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
252+390	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
		PEAT .05m									
2	CL	CLAY - SILTY SANDY PEBBLES LOW PLASTIC								MOIST	OK FOR CUT
4					1					MOIST	
6		WATER BEARING LENSES OF SAND @ 2.3m								MOIST	
8					2					WET	
10		3.1m			3					MOIST	
12		BOTTOM OF HOLE. 3.1m									
14					4						
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											

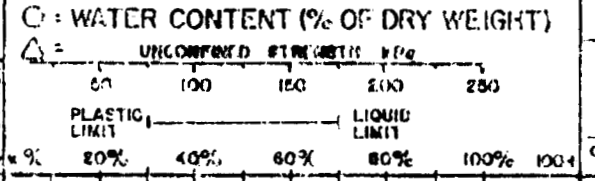


PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/15	km 252	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
252+600	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2		CLAY. SILTY SANDY PEBBLES @ OR + PL									O.K. FOR CUT
4	CL	LOW - MED. PLASTIC			1	64	29	7		MOIST	
6	-									DAMP	
8	CI				2	64	33	3		DAMP	
10		3.1m			3	63	29	8		MOIST	
12		BOTTOM OF HOLE. 3.1m								MOIST	
14					4						
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



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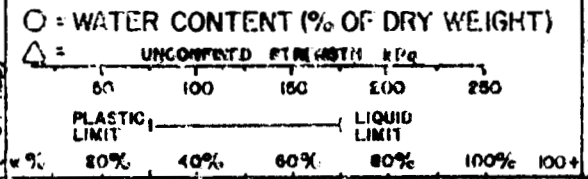
PUBLIC WORKS CANADA | **DRILL HOLE REPORT** | WIARD HWY.

TECH. PRONYCH	RIG B-61	DATE 78/03/15	km 252	B.P. No.	HOLE No. 5

CHAINAGE	OFFSET
252+720	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
2	CL - CI	CLAY - SILTY SANDY PEBBLES LOW - MED. PLASTIC			1	67	29	4		MOIST	O.K FOR CUT
4										MOIST	
6										MOIST	
8					2	68	29	3		MOIST	
10		3.1			3					MOIST	
12		BOTTOM OF HOLE - 3.1m									
14					4						
16					5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											

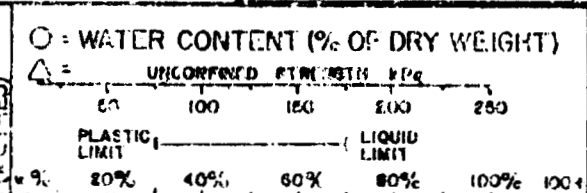


PUBLIC WORKS CANADA | DRILL HOLE REPORT | WARD Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/15	km 253	B.P. No.	HOLE No. 1

CHAINAGE	OFFSET
253+292	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
	ML	SILT - SANDY PEBBLES .2m									
2		CLAY - SILTY SANDY								MOIST	O.K. FOR CUT
4		· PEBBLES @ PL			1					MOIST	
6	CL	LOW PLASTIC								MOIST	
8					2						
10		3.1m			3					MOIST MOIST	
12		Bottom of Hole - 3.1m									
14					4						
16											
18					5						
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											



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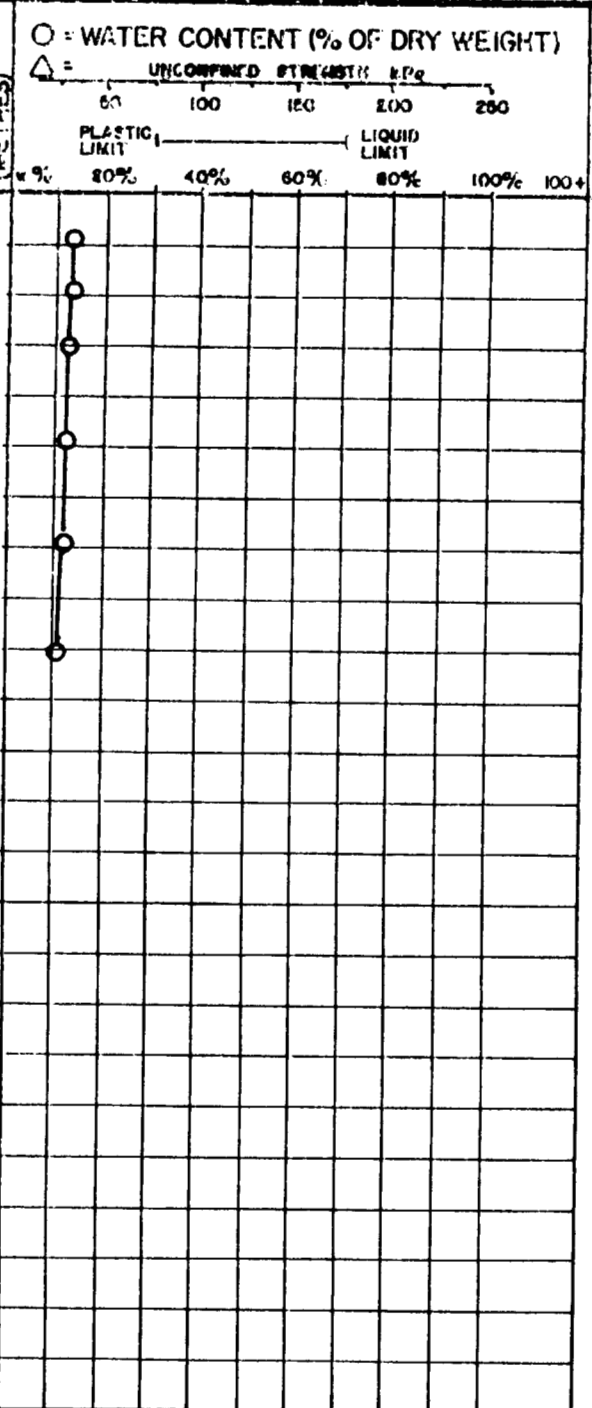
PUBLIC WORKS CANADA — DRILL HOLE REPORT

WARD Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/15	km 253	B.P. No.	HOLE No. 2

CHAINAGE	OFFSET
253+580	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
	ML	SILT-SANDY ·2m									
2		CLAY - SILTY SANDY @ PL - PEBBLES								MOIST	O.K. FOR CUT
4					1					MOIST	
6	CL	LOW - MED. PLASTIC								MOIST	
8	CI				2					MOIST	
10					3						
12										MOIST	
14		4.6m			4					MOIST	
16		BOTTOM OF HOLE - 4.6m			5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38											

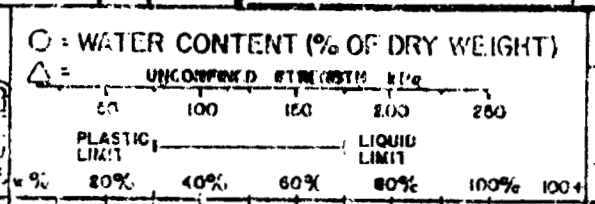


PUBLIC WORKS CANADA | DRILL HOLE REPORT | LIARD Hwy.

TECH. PRONYCH	RIG B-61	DATE 78/03/15	km 253	B.P. No.	HOLE No. 3

CHAINAGE	OFFSET
253+908 [redacted]	℄

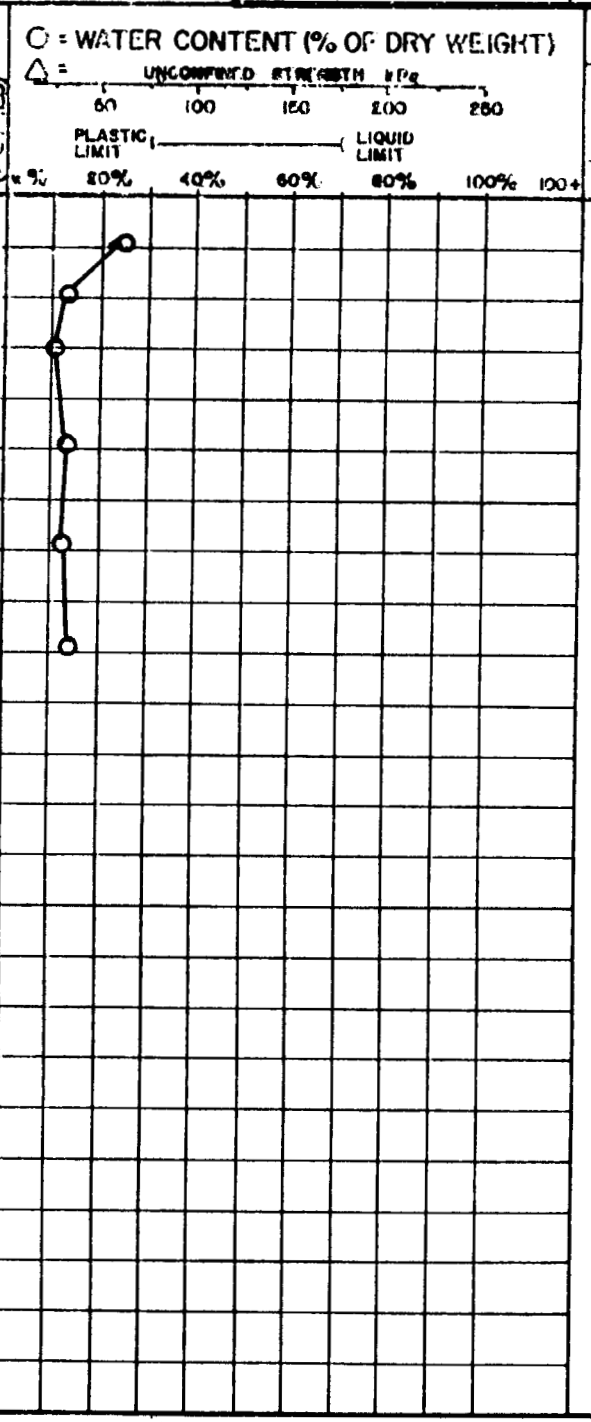
DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	GRAIN SIZE ANALYSIS CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
		COBBLES ON SURFACE									
	SM	SAND - SILTY .5m									
2		CLAY - SILTY SANDY @ PL								MOIST	
4		PEBBLES			1					MOIST	
6	CL	LOW - MED. PLASTIC								MOIST	
8	CI				2					MOIST	
10		3.1m			3					MOIST	
12		BOTTOM OF HOLE - 3.1m									
14					4						
16											
18					5						
20											
22					6						
24											
26					7						
28											
30					8						
32											
34					9						
36											
38					10						
					11						



PUBLIC WORKS CANADA — DRILL HOLE REPORT

Liard Hwy.

TECH. Pronych	RIG B-61	DATE 78/03/15	km 253	B.P. No.	HOLE No. 4

CHAINAGE	OFFSET
100 m From Bridge	℄

DEPTH (FEET)	UNIFIED SOIL SYMBOL	SOIL DESCRIPTION	PENETRATION RESISTANCE	ICE DESCRIPTION	DEPTH (METRES)	CLAY %	SILT %	SAND %	GRAVEL %	RELATIVE MOISTURE CONTENT	REMARKS
Sm	TL	SAND-SILT MIX .3m +PL									
2		CLAY-SILTY SANDY PEBBLES-TILL @PL								WET	
					1					MOIST	
6	CL - CI	LOW-MED. PLASTIC								MOIST	
					2						
										MOIST	
10					3						
12										MOIST	
					4						
14		4.6 m								MOIST	
16		Bottom of Hole - 4.6 m			5						
18											
20					6						
22											
24					7						
26											
28					8						
30					9						
32											
34					10						
36					11						
38