GEOTECHNICAL INVESTIGATIONS

Highway Construction
Km 1674.0 to 1684.4
Alaska Highway #1
Yukon 2002-2003
Volume 2 of 2

Yukon
Community and Transportation Services
Transportation Engineering Branch

Geotechnical Services

BOX 2703, WHITEHORSE, YUKON
PHONE 867-667-8820 FAX 867-393-6447

ORIGINAL - Do Not Remove From File

Highway Construction
Km 1674.0 to 1684.4
Alaska Highway #1
Yukon 2002-2003
Volume 2 of 2

This Data Package prepared for project viewing:

December, 2001

Transportation Engineering Branch
Geotechnical Services
461 Range Road
Whitehorse, Yukon

CONTENTS

Volume 1 of 2

INTRODUCTION

Investigation notes, classification methods and legends.

2000 & 2001 CENTRELINE TESTING ALASKA HIGHWAY

Subsurface Exploration and Testing Report Sheets are provided.
The reports for the Right-of-Way holes are arranged according to project location, starting at Km 1673+875 and increasing to Km 1684+450.

Laboratory Testing Result Sheets are provided.
The reports for the centreline holes are arranged according to testhole number, starting at 563-1743 and increasing to 594-979.

2000 & 2001	TEST HOLES 1743 to 1747	shown with prefix 563-
	TEST HOLES 1748 to 1751	shown with prefix 564-
	TEST HOLES 888 to 912	shown with prefix 586-
	TEST HOLES 913 to 925	shown with prefix 587-
	TEST HOLES 926 to 948	shown with prefix 588-
	TEST HOLES 949 to 973	shown with prefix 593-
	TEST HOLES 974 to 979	shown with prefix 594-

NOTE: 2000 & 2001 Centreline Test Hole locations on the Subsurface Exploration and Testing Report Sheets are approximate. Actual Test Hole locations, compiled by GPS survey, are indicated on project plans.

CONTENTS (continued)

Volume 2 of 2

1978 CENTRELINE TESTING ALASKA HIGHWAY

A Test Hole Location Reference Table and Subsurface Exploration & Testing Report Sheets are provided.
The reports for the centreline holes are arranged according to project location, starting at Km 1673+993 and increasing to Km 1684+415.

1978	TEST HOLES 169 to 301	shown with no prefix

IMPORTANT NOTE: Due to alignment revisions subsequent to the 1978 centreline testing the test hole locations indicated on the 1978 Subsurface Exploration and Testing Report sheets are invalid. Utilize the Test Hole Location Reference Table provided in order to determine the test hole locations relevant to the current alignment.

QUARRY SOURCE Km 1674 RHS ALASKA HIGHWAY

Location Plans and Subsurface Exploration and Testing Report Sheets are provided.

Air Rotary Drill Testing

2000	TEST HOLES 866 to 869, 873 to 883	shown with prefix 576-

GRANULAR SOURCE Km 1691.3 RHS ALASKA HIGHWAY (Silver Creek)

A production history, location plan, photographs, and subsurface exploration and testing report sheets are provided.

Backhoe Testing

1991	TEST PITS 05	shown with prefix 152-
1992	TEST PITS 18 & 19	shown with prefix EBA-
2001	TEST PITS 1521, 1522, 1530, 1537 to 1543	shown with prefix 583-
2001	TEST PITS 1544, 1551, & 1552	shown with prefix 584

Auger Testing

2001	TEST HOLES 1509 & 1510	shown with prefix 581-
2001	TEST HOLES 1518	shown with prefix 582-

1978 CENTRELINE TESTING
1673+993 to 1684+415
ALASKA HIGHWAY

TEST HOLE LOCATION REFERENCE TABLE

Km 1674.0 to 1684.4

TEST HOLE #	DRILL LOG LOCATION		CURRENT LOCATION	
	STATION	OFFSET	STATION	OFFSET
169	1674+022	C.L.	1673+993	0.5 m Rt
170	1674+091	C.L.	1674+062	0.5 m Rt
171	1674+160	C.L.	1674+131	0.5 m Rt
172	1674+230	C.L.	1674+201	0.5 m Rt
173	1674+320	C.L.	1674+291	0.5 m Rt
174	1674+395	C.L.	1674+366	0.6 m Rt
175	1674+466	C.L.	1674+437	0.6 m Rt
176	1674+565	C.L.	1674+536	0.6 m Rt
177	1674+645	C.L.	1674+616	0.6 m Rt
178	1674+730	C.L.	1674+701	0.6 m Rt
179	1674+803	C.L.	1674+774	0.6 m Rt
180	1674+878	C.L.	1674+849	0.7 m Rt
181	1674+950	C.L.	1674+921	0.7 m Rt
182	1675+028	C.L.	1674+999	0.7 m Rt
183	1675+115	C.L.	1675+086	0.7 m Rt
184	1675+189	C.L.	1675+160	0.7 m Rt
185	1675+209	C.L.	1675+180	0.7 m Rt
186	1675+335	C.L.	1675+306	0.7 m Rt
187	1675+408	C.L.	1675+379	0.7 m Rt
188	1675+475	C.L.	1675+446	0.8 m Rt
189	1675+550	C.L.	1675+521	0.7 m Rt
190	1675+620	C.L.	1675+591	0.5 m Rt
191	1675+690	C.L.	1675+661	0.4 m Rt
192	1675+770	C.L.	1675+741	0.2 m Rt
193	1675+890	C.L.	1675+861	C.L.
194	1675+963	C.L.	1675+934	0.1 m Lt
195	1676+172	C.L.	1676+143	0.1 m Lt
196	1676+192	C.L.	1676+163	0.1 m Lt
197	1676+268	C.L.	1676+239	C.L.
198	1676+342	C.L.	1676+313	C.L.
199	1676+412	C.L.	1676+383	C.L.
200	1676+487	C.L.	1676+458	C.L.
201	1676+580	C.L.	1676+551	C.L.
202	1676+648	C.L.	1676+619	C.L.
203	1676+730	C.L.	1676+701	C.L.
204	1676+804	C.L.	1676+775	C.L.
205	1676+880	C.L.	1676+851	C.L.
206	1676+950	C.L.	1676+921	0.1 m Rt

TEST HOLE #	DRILL LOG LOCATION		CURRENT LOCATION	
	STATION	OFFSET	STATION	OFFSET
207	1677+020	C.L.	1676+991	0.1 m Rt
208	1677+085	C.L.	1677+056	0.1 m Rt
209	1677+164	C.L.	1677+135	0.1 m Rt
210	1677+268	C.L.	1677+239	0.1 m Rt
211	1677+349	C.L.	1677+320	0.1 m Rt
212	1677+428	C.L.	1677+399	0.1 m Rt
213	1677+505	C.L.	1677+476	0.1 m Rt
214	1677+584	C.L.	1677+555	0.2 m Rt
215	1677+662	C.L.	1677+633	0.2 m Rt
216	1677+732	C.L.	1677+703	0.2 m Rt
217	1677+896	C.L.	1677+867	0.2 m Rt
218	1677+972	C.L.	1677+943	0.2 m Rt
219	1678+058	C.L.	1678+029	0.2 m Rt
220	1678+137	C.L.	1678+108	0.2 m Rt
221	1678+212	C.L.	1678+183	0.3 m Rt
222	1678+290	C.L.	1678+261	0.3 m Rt
223	1678+368	C.L.	1678+339	0.3 m Rt
224	1678+456	C.L.	1678+427	0.2 m Rt
225	1678+538	C.L.	1678+509	0.9 m Lt
226	1678+616	C.L.	1678+587	1.7 m Lt
227	1678+695	C.L.	1678+665	2.4 m Lt
228	1678+775	C.L.	1678+745	2.9 m Lt
229	1678+857	C.L.	1678+827	3.2 m Lt
230	1678+937	C.L.	1678+907	3.2 m Lt
231	1679+018	C.L.	1678+988	3.0 m Lt
232	1679+094	C.L.	1679+064	2.8 m Lt
233	1679+175	C.L.	1679+145	2.6 m Lt
234	1679+254	C.L.	1679+224	2.3 m Lt
235	1679+332	C.L.	1679+302	2.1 m Lt
236	1679+405	C.L.	1679+375	1.9 m Lt
237	1679+487	C.L.	1679+457	1.6 m Lt
238	1679+576	C.L.	1679+546	1.4 m Lt
239	1679+640	C.L.	1679+610	1.2 m Lt
240	1679+720	C.L.	1679+690	0.9 m Lt
241	1679+797	C.L.	1679+767	0.7 m Lt
242	1679+870	C.L.	1679+840	0.5 m Lt
243	1679+930	C.L.	1679+900	0.3 m Lt
244	1680+010	C.L.	1679+980	C.L.
245	1680+080	C.L.	1680+050	0.2 m Rt
246	1680+160	C.L.	1680+130	0.4 m Rt
247	1680+230	C.L.	1680+200	1.0 m Rt

TEST HOLE #	DRILL LOG LOCATION		CURRENT LOCATION	
	STATION	OFFSET	STATION	OFFSET
248	1680+369	C.L.	1680+278	1.6 m Rt
249	1680+432	C.L.	1680+341	2.2 m Rt
250	1680+507	C.L.	1680+416	2.8 m Rt
251	1680+588	C.L.	1680+497	2.7 m Rt
252	1680+667	C.L.	1680+576	2.4 m Rt
253	1680+740	C.L.	1680+649	2.0 m Rt
254	1680+822	C.L.	1680+731	1.6 m Rt
255	1680+900	C.L.	1680+809	0.9 m Rt
256	1680+975	C.L.	1680+884	0.4 m Lt
257	1680+999	C.L.	1680+908	0.8 m Lt
258	1681+138	C.L.	1681+047	3.2 m Rt
259	1681+217	C.L.	1681+126	4.1 m Lt
260	1681+298	C.L.	1681+207	3.8 m Lt
261	1681+388	C.L.	1681+297	3.4 m Lt
262	1681+455	C.L.	1681+364	3.1 m Lt
263	1681+530	C.L.	1681+439	2.8 m Lt
264	1681+610	C.L.	1681+519	2.4 m Lt
265	1681+690	C.L.	1681+599	2.1 m Lt
266	1681+767	C.L.	1681+676	3.3 m Lt
267	1681+844	C.L.	1681+752	6.3 m Lt
268	1681+920	C.L.	1681+828	17.0 m Lt
269	1682+000	C.L.	1681+908	29.4 m Lt
270	1682+080	C.L.	1681+988	40.6 m Lt
271	1682+152	C.L.	1682+062	47.7 m Lt
272	1682+240	C.L.	1682+152	52.4 m Lt
273	1682+300	C.L.	1682+214	53.0 m Lt
274	1682+400	C.L.	1682+316	49.6 m Lt
275	1682+448	C.L.	1682+364	47.2 m Lt
276	1682+518	C.L.	1682+434	43.7 m Lt
277	1682+589	C.L.	1682+505	40.1 m Lt
278	1682+672	C.L.	1682+588	36.0 m Lt
279	1682+770	C.L.	1682+686	31.0 m Lt
280	1682+838	C.L.	1682+754	27.6 m Lt
281	1682+908	C.L.	1682+824	24.1 m Lt
282	1682+990	C.L.	1682+906	19.9 m Lt
283	1683+045	C.L.	1682+961	17.4 m Lt
284	1683+118	C.L.	1683+033	15.9 m Lt
285	1683+187	C.L.	1683+102	17.3 m Lt
286	1683+245	C.L.	1683+160	20.5 m Lt
287	1683+328	C.L.	1683+245	26.0 m Lt
288	1683+403	C.L.	1683+321	29.3 m Lt

TEST HOLE #	DRILL LOG LOCATION		CURRENT LOCATION	
	STATION	OFFSET	STATION	OFFSET
289	1683+470	C.L.	1683+389	30.4 m Lt
290	1683+535	C.L.	1683+457	31.0 m Lt
291	1683+630	C.L.	1683+554	29.1 m Lt
292	1683+710	C.L.	1683+636	25.3 m Lt
293	1683+795	C.L.	1683+722	19.3 m Lt
294	1683+865	C.L.	1683+793	12.8 m Lt
295	1683+939	C.L.	1683+867	7.7 m Lt
296	1684+010	C.L.	1683+938	5.7 m Lt
297	1684+088	C.L.	1684+016	5.6 m Lt
298	1684+172	C.L.	1684+100	5.7 m Lt
299	1684+252	C.L.	1684+181	6.7 m Lt
300	1684+368	C.L.	1684+296	5.9 m Lt
301	1684+487	C.L.	1684+415	6.1 m Lt

Public Works Canada

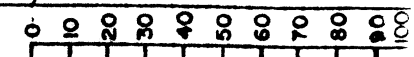
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

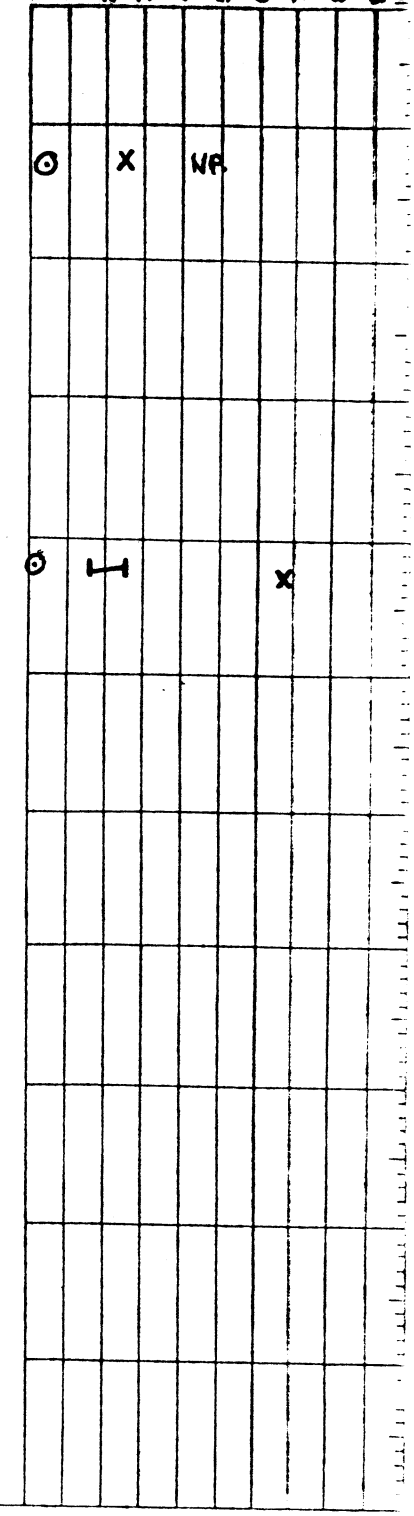
SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 169
HOLE LOCATION	1674+022	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78·10·26	DRILL UNIT	TECHNICIAN T.M.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300mm
1			A/P	1	1988	GM	39	36		
2										
3										
4			A/P	2	1973	CL	4	28	28	
5	END HOLE									
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT





Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 470

HOLE LOCATION 1674+091 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78·10·26 | DRILL UNIT | TECHNICIAN T.M

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300mm
0			A/P	1	1976	CL-ML				
4.6	END HOLE		A/P	2	2008	ML	4	23	33	

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90 100

⊙ H

⊕ NP. X

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

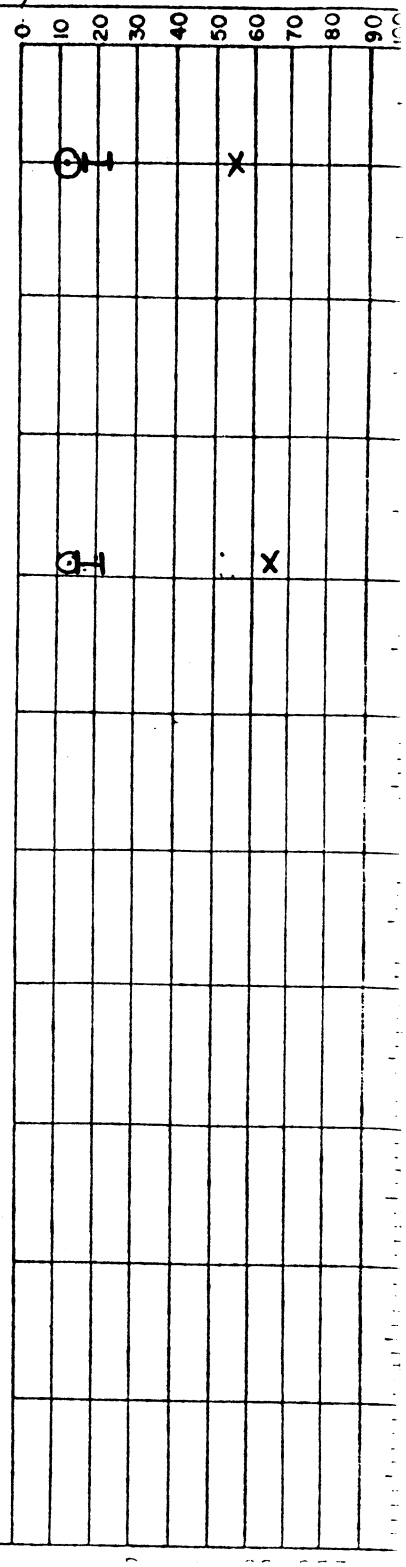
PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 171

HOLE LOCATION 1674+160 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78·10·26 | DRILL UNIT | TECHNICIAN T.M.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1			A/P	1	2033	CL-ML	12	34	18	
2										
3										
4			A/P	2	1986	CL-ML	11	24		
5	END HOLE									
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

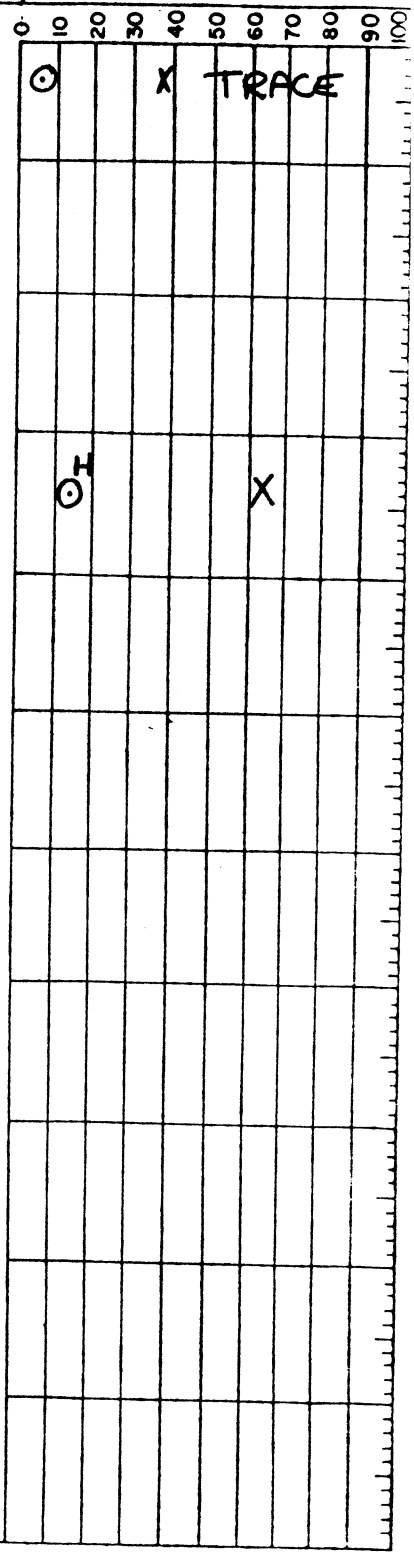
SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 172
HOLE LOCATION	1674+230	ELEV.	DEPTH TO G.W.L.
DATE DRILLED		DRILL UNIT	TECHNICIAN T. M.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
0		A	P	1	1982	SM	18	44		
3		A	P	2	1990	ML	10	28	20	
4.6	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

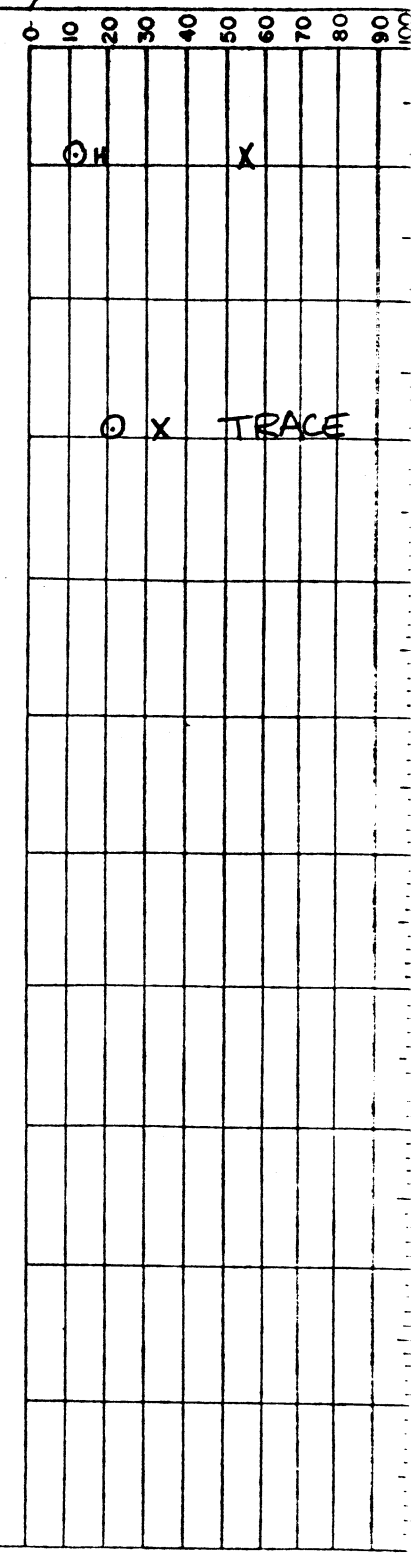
PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 173

HOLE LOCATION 1674+320 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78-10-27 | DRILL UNIT | TECHNICIAN TM.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300mm
1										
2			A|P	1	1987	ML	9	36		
3										
4	END HOLE		A|P	2	1993	SM	2	64	6	
5										
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9			HOLE No. 174
HOLE LOCATION 1674 + 395		ELEV.	DEPTH TO G.W.L.
DATE DRILLED 78.10.27	DRILL UNIT		TECHNICIAN T.M

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
0			A/P	1	2025	SM	10	44	16	
3	END HOLE									

0 – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

⊙ X TRACE

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 — HOLE No. 175

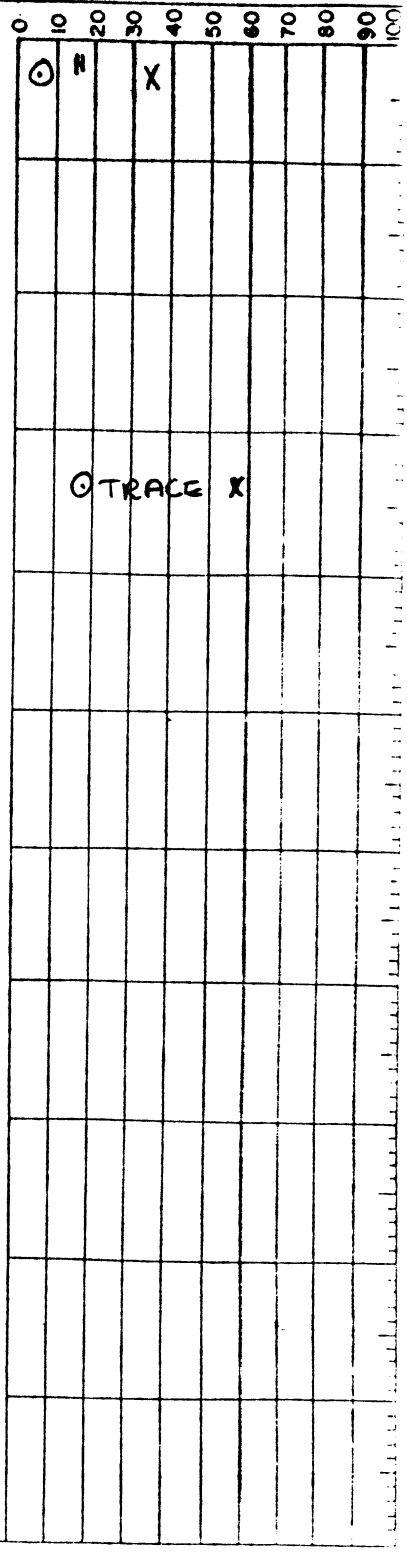
HOLE LOCATION 1674+466 — ELEV. — DEPTH TO G.W.L.

DATE DRILLED 78.10.27 — DRILL UNIT — TECHNICIAN T.M

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
0			A	P	1	1991	SM	17	48	-
3			A	P	2	1981	ML	11	31	14
4.5	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

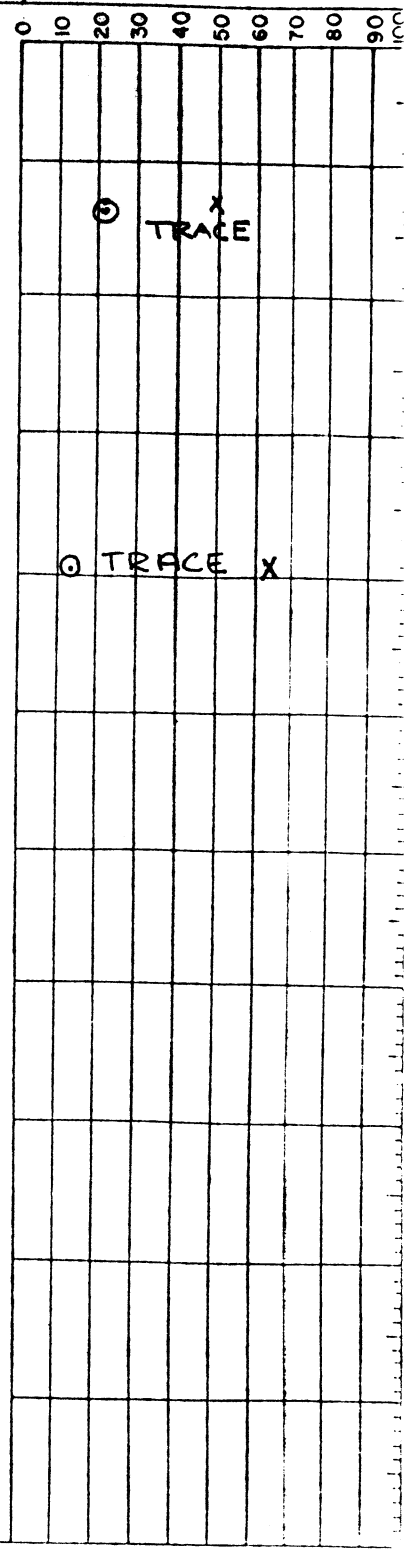
SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 176
HOLE LOCATION	1674+565	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78.10.27	DRILL UNIT	TECHNICIAN T.M.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300mm
1			A/P	1	1992	SM	8.4	42.1	11.9	
2										
3										
4			A/P	2	2691	ML	8	29	9	
5	END HOLE									
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90 100



Public Works Canada

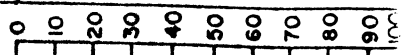
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 177
HOLE LOCATION	1674 + 645	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78-10-30	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1			A/P	1	2330	CL	17	25	-	
2										
3			A/P	2	2340	CL	3	12		
4			A/P	3	2293	CL	5	19	37	
5	END HOLE									
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT



Public Works Canada

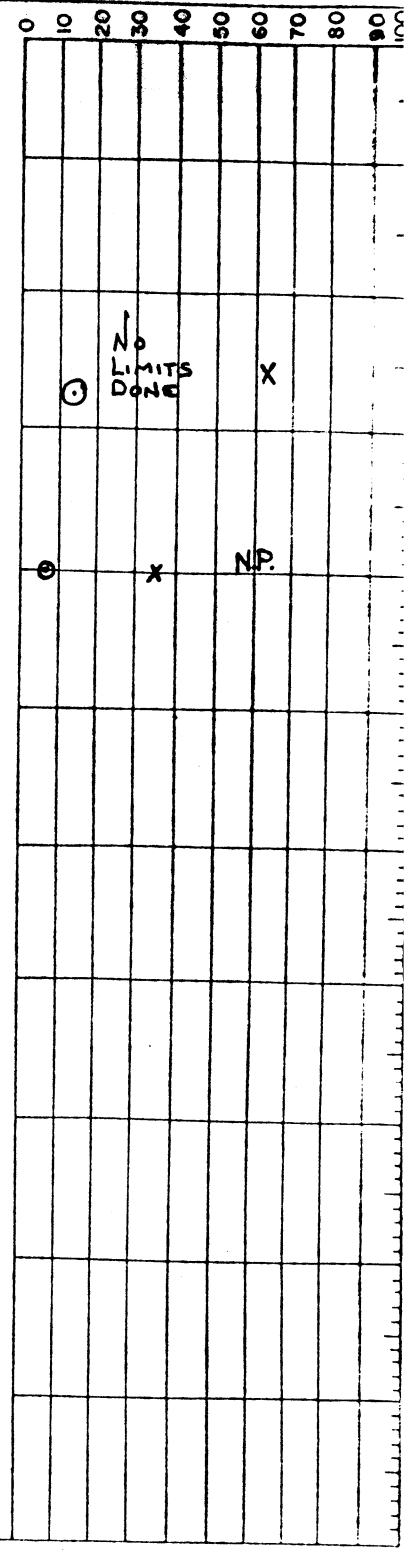
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 178
HOLE LOCATION	1674+730	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78-10-30	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
3			A/P	1	2688	CL	3	35	12	
4			A/P	2	2517	SM	28	37	13	
5	END HOLE									

0 - % MOISTURE CONTENT
x - % < .074mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

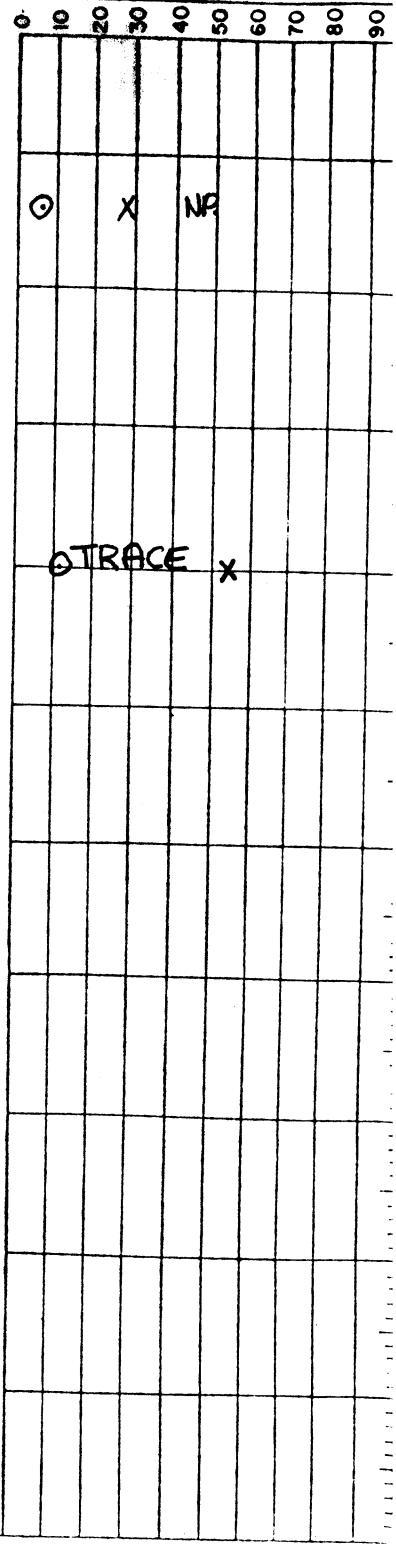
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION: SHAKWAK SEGMENT 9 — HOLE No. 179
HOLE LOCATION: 1674 + 803 — ELEV. — DEPTH TO G.W.L.
DATE DRILLED: 78-10-30 — DRILL UNIT — TECHNICIAN: S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
			A/P	1	2074	SM	3	68		
			A/P	2	2321	ML	15	30	12	
	END HOLE									

0 - % MOISTURE CONTENT
x - % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 180

HOLE LOCATION 1674 + 878 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78-10-30 | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300mm
			A/P	1	2694	M.L.	1	15	21	
			A/P	2	2530	S.M.	10	72		
	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90 100

1 2 3 4 5 6 7 8 9 10

NP.

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 181
HOLE LOCATION	1674 + 950	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78-10-30	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
			A/P	1	2610	CL	4	26	26	
			A/P	2	2550	SM	16	69		
	END HOLE									

SAMPLE DATA

O – % MOISTURE CONTENT
X – % < .074mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90 100

1 2 3 4 5 6 7 8 9 10

N.P

Public Works Canada

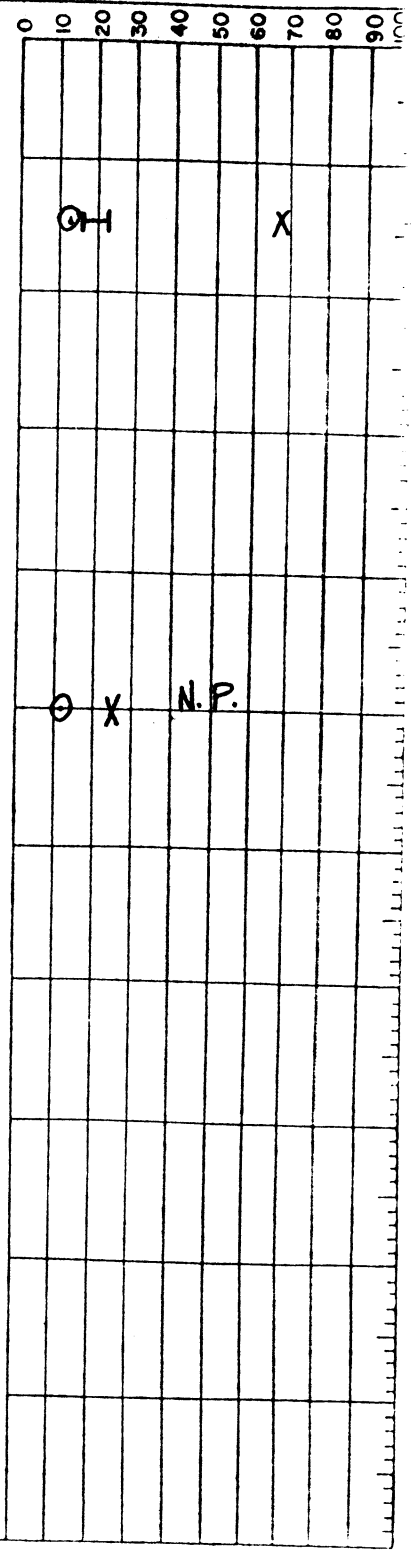
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9	HOLE No.	182
HOLE LOCATION	1675 + 028	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78-10-30	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1			A/P	1	2558	CL ML	4	27	10	
2										
3										
4										
5			A/P	2	2692	SM	23	51	5	
6	END HOLE									
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 183
HOLE LOCATION 1675 + 115 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78-10-30 | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1										
2			A/P	1	2179	SM	25	26		
3										
4			A/P	2	2077	SM	22	48	8	
5	END HOLE									
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

⊙ TRACE X

⊙ X TRACE

Public Works Canada

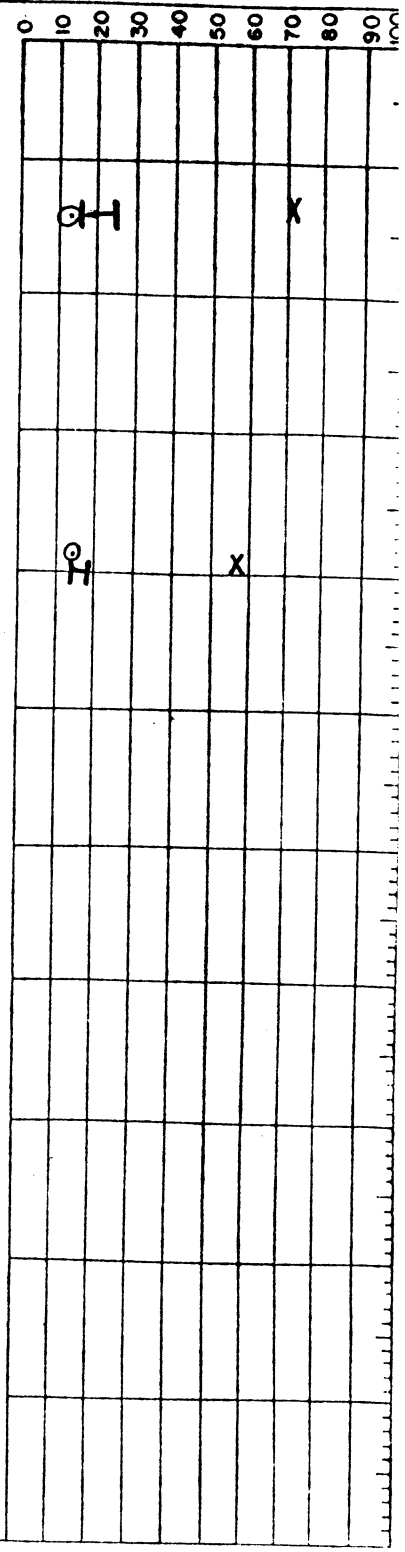
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 184
HOLE LOCATION	1675 + 189	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78-10-30	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1										
2			A/P	1	2320	CL-ML	7	22		
3										
4			A/P	2	2341	CL-ML	12	31	20	
5	END HOLE									
6										
7										
8										
9										
10										

0 – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

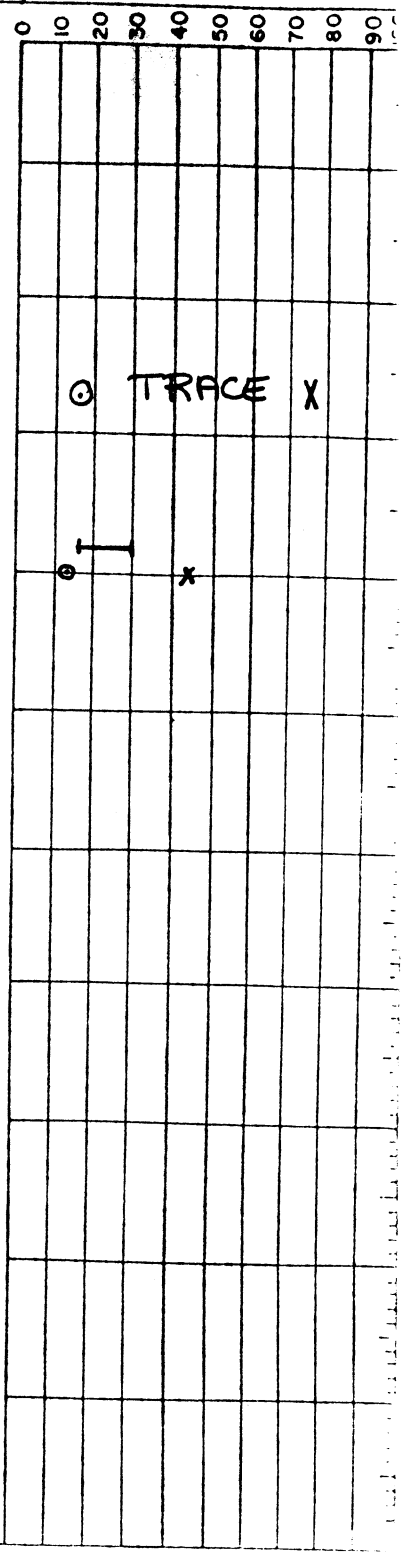
PROJECT/SECTION: SHAKWAK SEGMENT 9 — HOLE No.: 185
HOLE LOCATION: 1675+189 — ELEV. — DEPTH TO G.W.L.
DATE DRILLED: 78-10-30 — DRILL UNIT — TECHNICIAN: S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
			A/P	1	2314	ML	0	24		
			A/P	2	2693	S.M	18	38	14	
	END HOLE									

SAMPLE DATA

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90



Public Works Canada

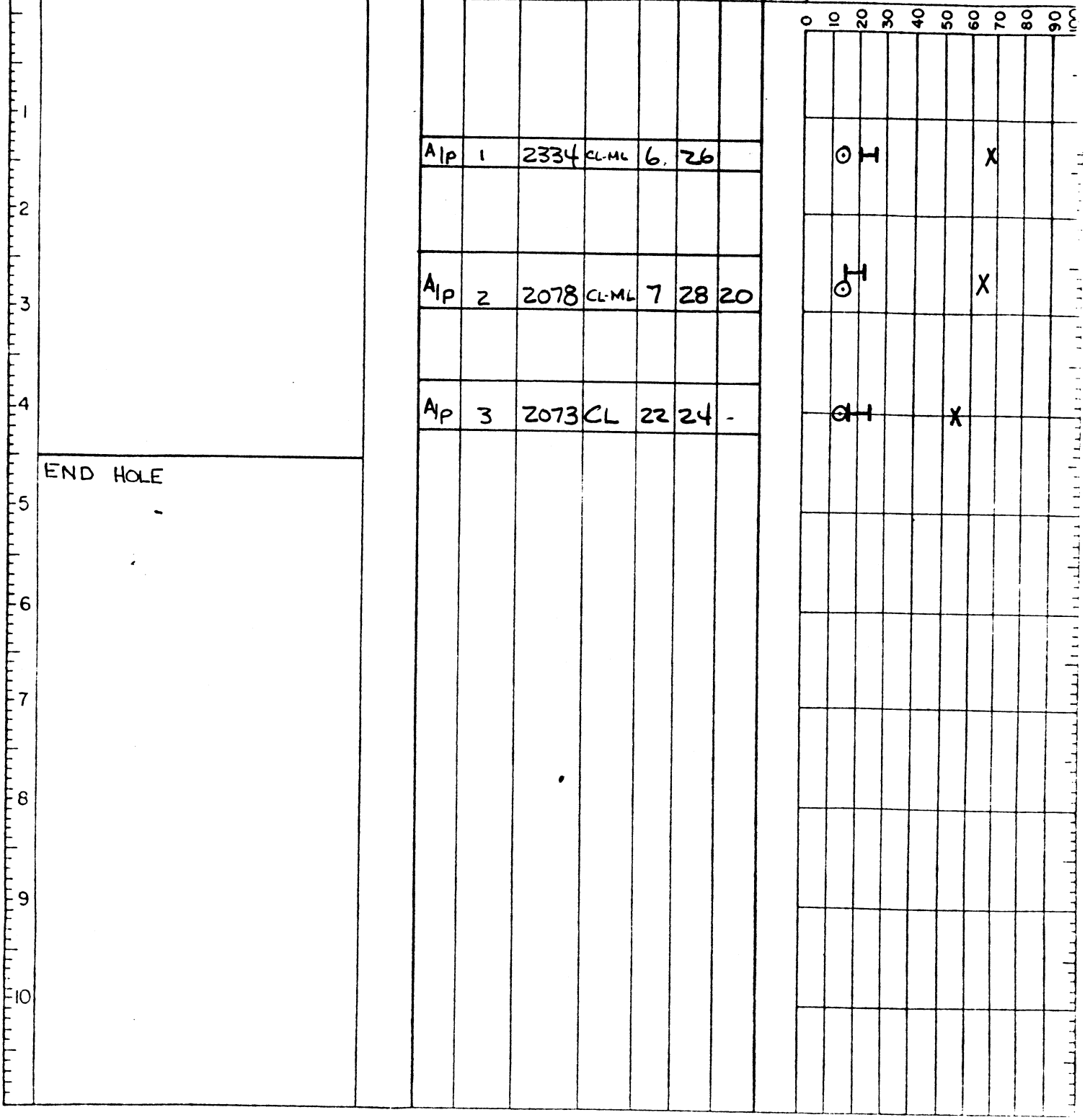
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 186
HOLE LOCATION	1675 + 209	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78-10-30	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300mm
			A	1	2334	CL-ML	6	26		
			A	2	2078	CL-ML	7	28	20	
			A	3	2073	CL	22	24	-	
	END HOLE									

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

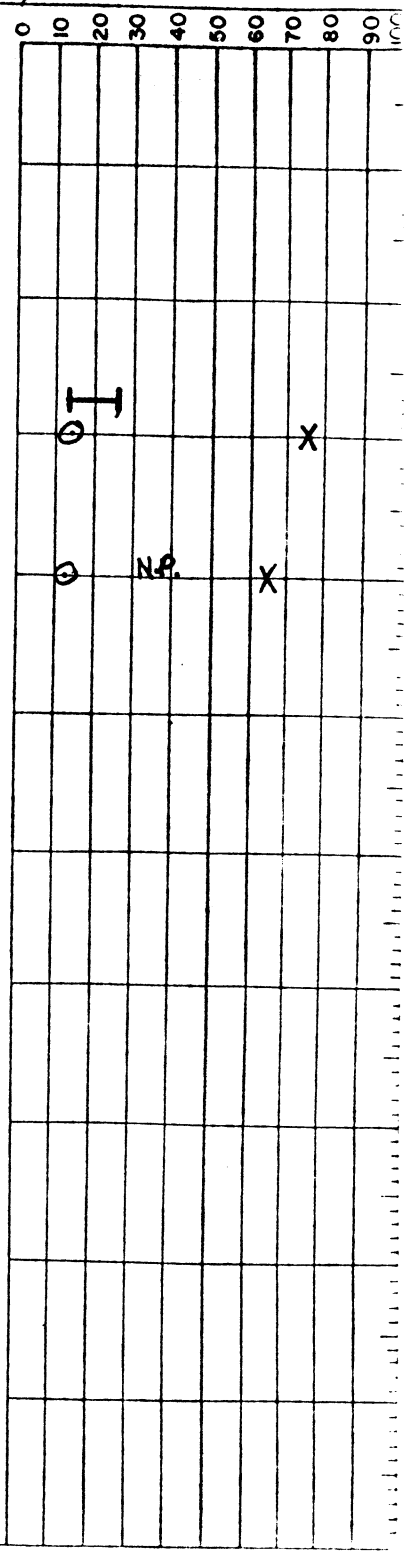
PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 187

HOLE LOCATION 1675+408 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78-10-30 | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3		A/P	1	2322	CL	3	21	-		
4		A/P	2	2338	ML	8	27	23		
5	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 188
HOLE LOCATION 1675+475 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78.10.30 | DRILL UNIT | TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3			A/P	1	2572	CL	24	18		
4			A/P	2	2592	SC	25	32		
4.6	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90 100

1 2 3 4 5 6 7 8 9 10

Public Works Canada

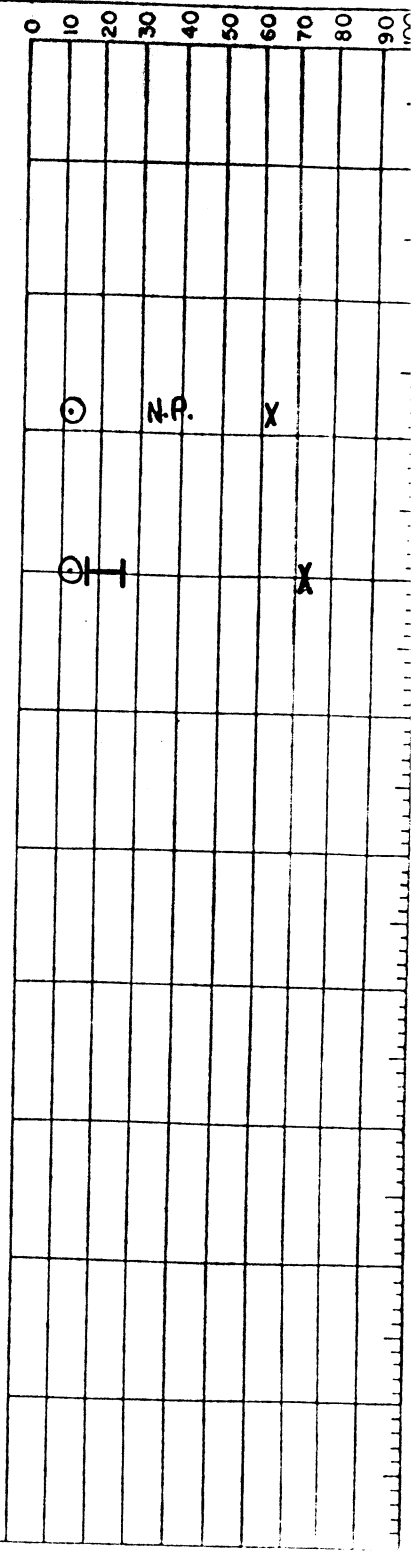
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 189
HOLE LOCATION 1675+550 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78.10.30 | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
3			A/P	1	2346	ML	14	23		
4			A/P	2	2600	CL	6	22	31	
5	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

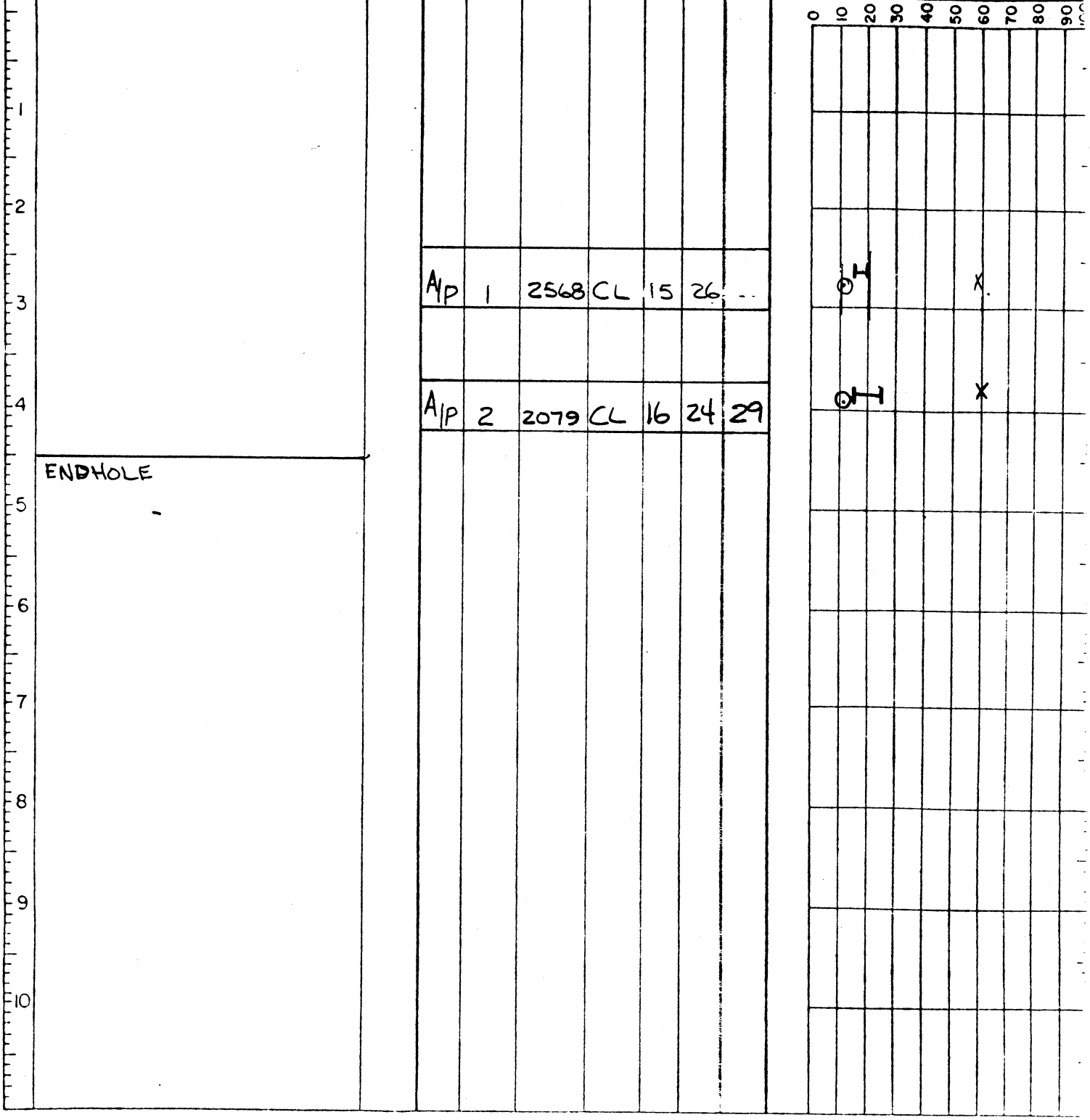
PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 190

HOLE LOCATION 1675 t 620 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78·10·30 | DRILL UNIT | TECHNICIAN SC.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
			A/P	1	2568	CL	15	26	..	
			A/P	2	2079	CL	16	24	29	
	ENDHOLE									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

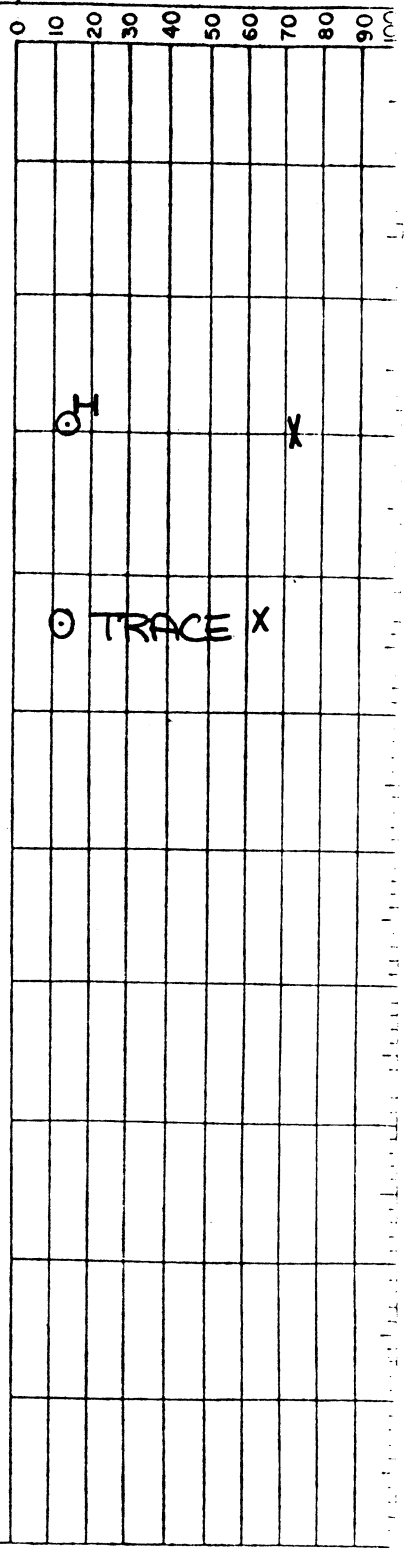
SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 191
HOLE LOCATION	1675+690	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78·10·30	DRILL UNIT	TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3		A	P	1	2587	CL-ML	6[2]	23[3]	25[2]	
4		A	P	2	2575	ML	8	29	–	
	END HOLE									

O – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 — HOLE No. 192

HOLE LOCATION 1675+770 — ELEV. — DEPTH TO G.W.L.

DATE DRILLED 78.10.30 — DRILL UNIT — TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3			A/P	1	2689	ML	11	34	11	
4			A/P	2	2080	CL-ML	7	40	16	
4.6	END HOLE									

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

3: O N.P. X
4: O TRACE X

Public Works Canada

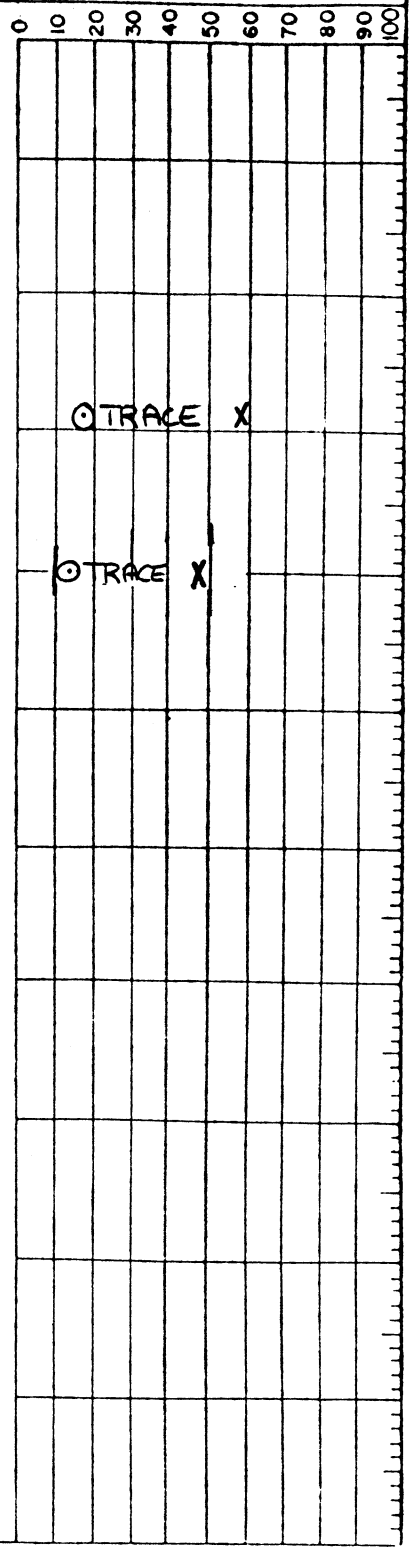
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 193
HOLE LOCATION	1675+890	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78.10.30	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3			A/P	1	2577	ML	5	36	-	
4			A/P	2	2337	SM	17	34	13	
5	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT



Public Works Canada

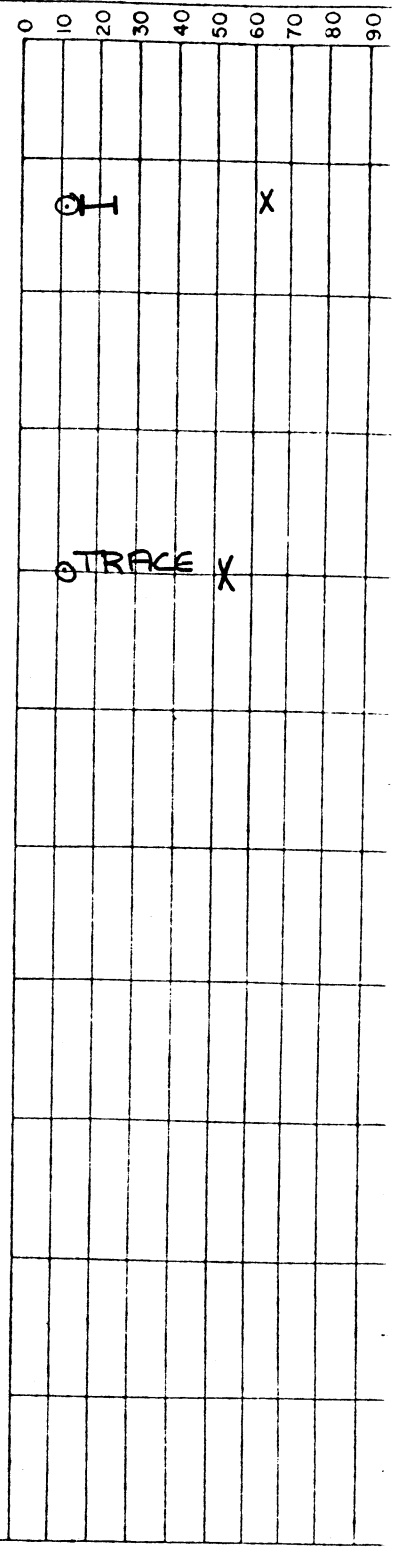
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 194
HOLE LOCATION	1675+963	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78.10.31	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1			A/P	1	2333	CL	12	24		
2										
3										
4			A/P	2	2309	ML	13	36	15	
5	END HOLE									
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 195
HOLE LOCATION 1676+172 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78.10.31 | DRILL UNIT | TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
3		A/P	1	2076	CLML	8	31			
4		A/P	2	2557	SC	13	41	9		
5	END HOLE									

0 – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

TRACE

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

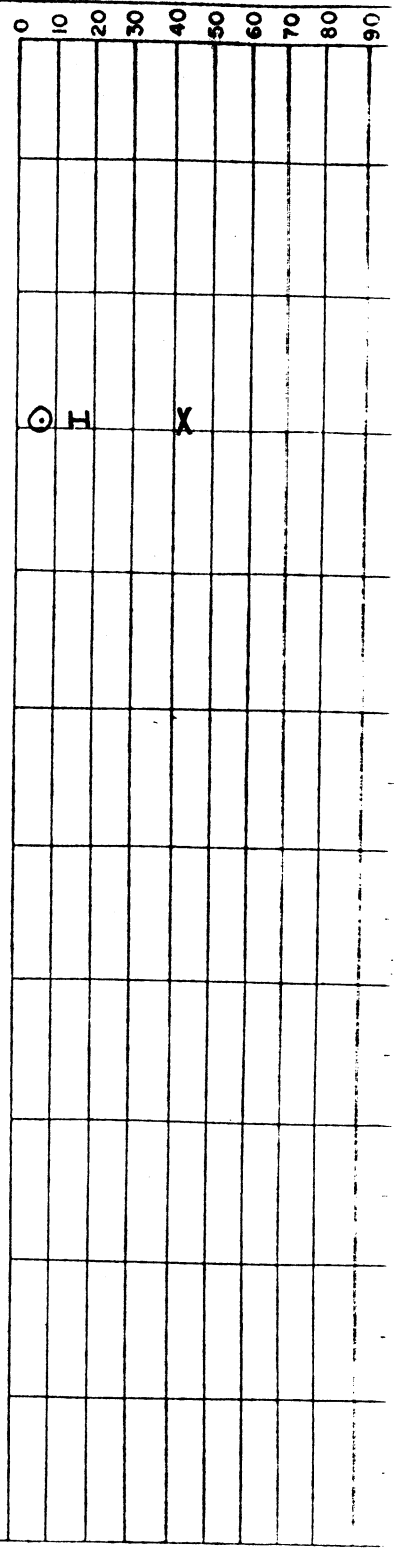
PROJECT/SECTION SHAKWAK SEGMENT 9 — HOLE No. 196

HOLE LOCATION 1676+192 — ELEV. — DEPTH TO G.W.L.

DATE DRILLED 78.10.31 — DRILL UNIT — TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
3			A/P	1	2503	SM	24	35	11	
5	END HOLE									

0 – % MOISTURE CONTENT
X – % < .074mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

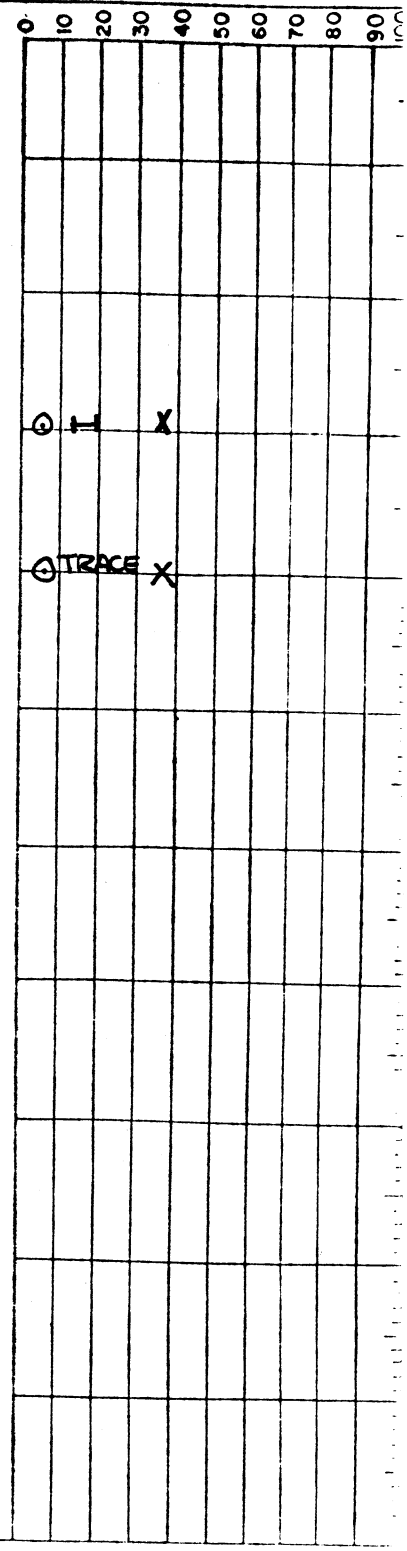
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 197
HOLE LOCATION 1676+268 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78.10.31 | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3			A/P	1	2603	SC-SM	28	34		
4			A/P	2	2323	SM	24	38	11	
5	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 198
HOLE LOCATION	1676+342	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78.10.31	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	SAMPLE DATA: FIELD No.	SAMPLE DATA: LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300mm
3	REFUSAL									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

1 2 3 4 5 6 7 8 9 10

Public Works Canada

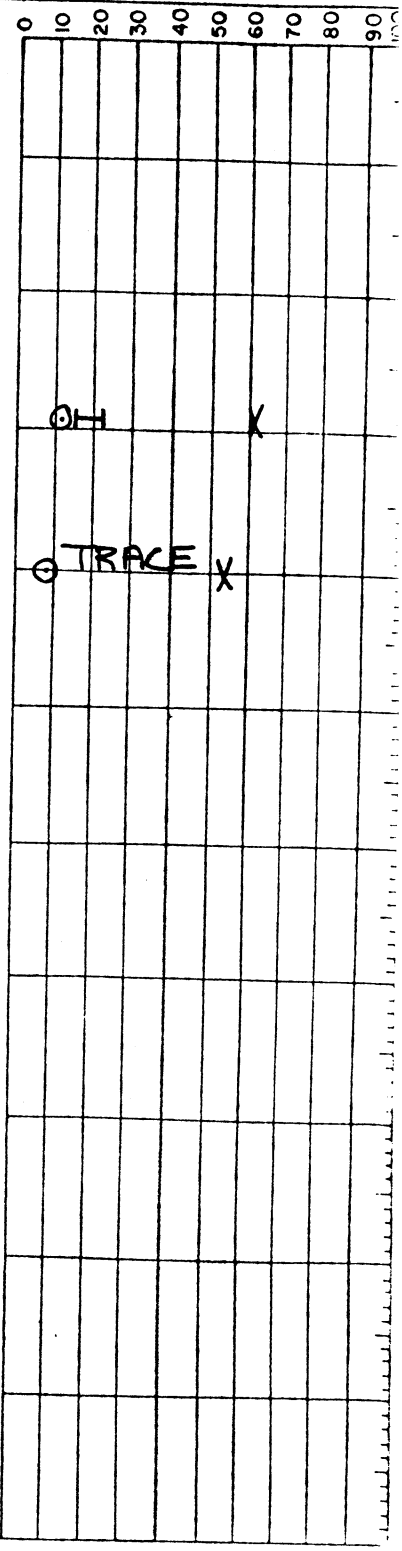
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9		HOLE No. 199
HOLE LOCATION 1676 + 412	ELEV.	DEPTH TO G.W.L.
DATE DRILLED 78-10-31	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD PENETRATION BLOWS/300 mm
			A/P	1	2339	CL	11	29	21	
			A/P	2	2313	ML	18	28		
	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

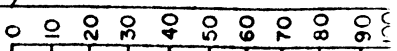
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

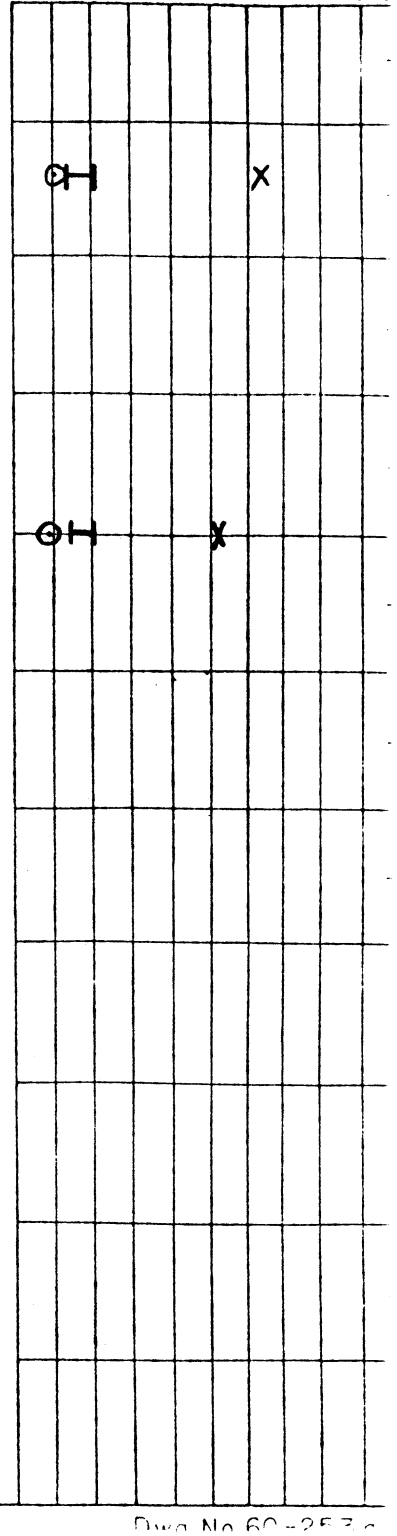
SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 200
HOLE LOCATION	1676 + 487	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78·10·31	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1			A/P	1	2316	CL-ML	11	26		
2										
3										
4			A/P	2	2318	CL-ML	20	27	21	
5	END HOLE									
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊣ PLASTIC LIMIT





Dwg No 60-253-c

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 201

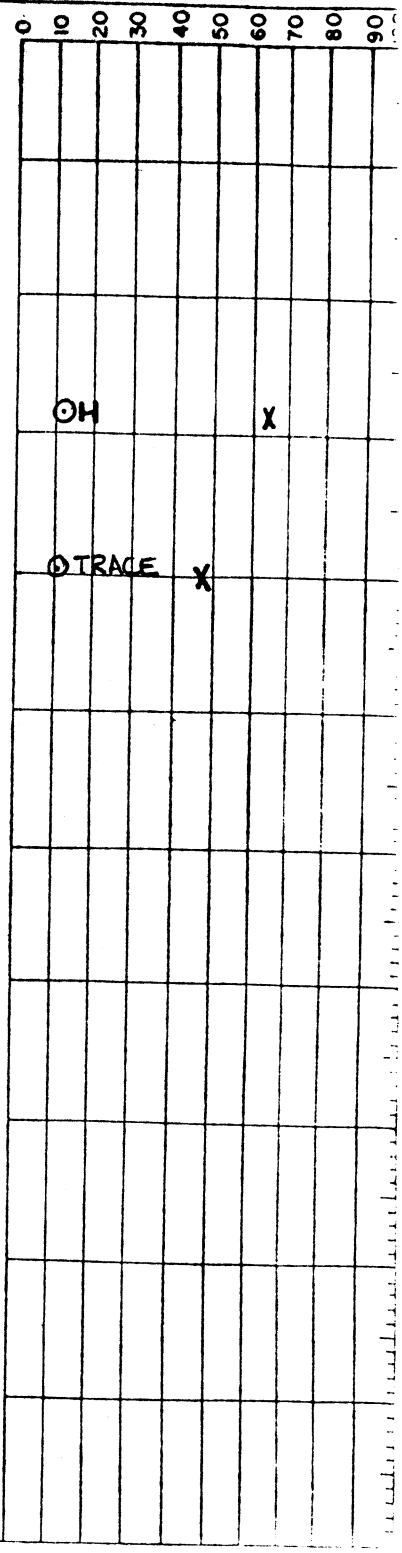
HOLE LOCATION 1676+580 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78·10·31 | DRILL UNIT | TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3		A	P	1	2315	ML	6	29		
4		A	P	2	2326	SM	19	33	16	
5	END HOLE									

0 – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 202
HOLE LOCATION	1676+ .648	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78.10.31	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
		A/P	1	2496	SM	35	51			
		A/P	2	2554	SM	18	43	10		

0 – % MOISTURE CONTENT
x – % < .074mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90 100

⊙ x N.P.

⊙ TRACE x

1 2 3 4 5 6 7 8 9 10

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 203
HOLE LOCATION 1676+730 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78·10·31 | DRILL UNIT | TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3	REFUSAL	A|P	1		2605	SM	38	41		

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

⊙ X N.P.

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

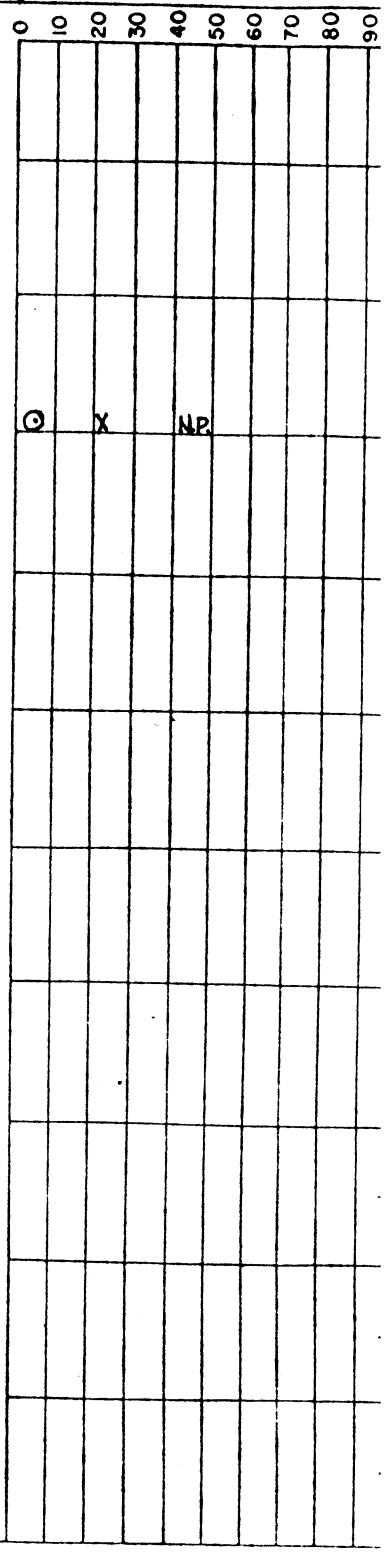
PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 204

HOLE LOCATION 1676+804 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78·10·31 | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
3	REFUSAL		A/P	1	2532	GM	49	29	1	

0 – % MOISTURE CONTENT
x – % < .074mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 205
HOLE LOCATION	1676+ 880	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78·10·31	DRILL UNIT	TECHNICIAN SC.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
1										
2										
3			A	P 1	2515	ML	22	24	3	
4	REFUSAL									
5										
6										
7										
8										
9										
10										

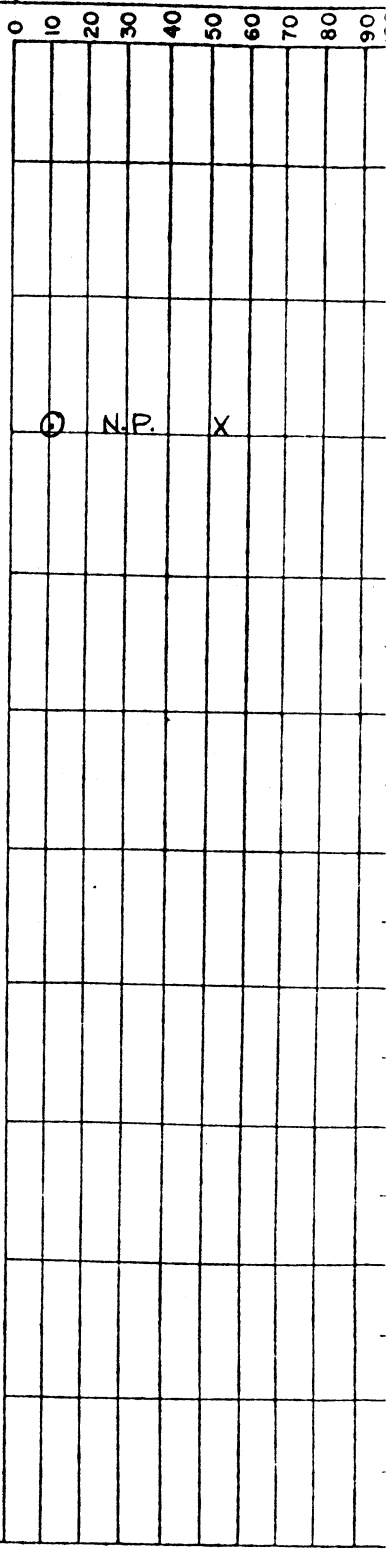
SAMPLE DATA

O – % MOISTURE CONTENT

x – % < .074mm

LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90



Dwg. No. 60-253a

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 — HOLE No. 206

HOLE LOCATION 1676+950 — ELEV. — DEPTH TO G.W.L.

DATE DRILLED — DRILL UNIT — TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
3			A/P	1	2588	CL	17	19		
4			A/P	2	2613	CL-ML	13	26	30	
4.6	END. HOLE									

O – % MOISTURE CONTENT
X – % < .074mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

1 2 3 4 5 6 7 8 9 10

Public Works Canada

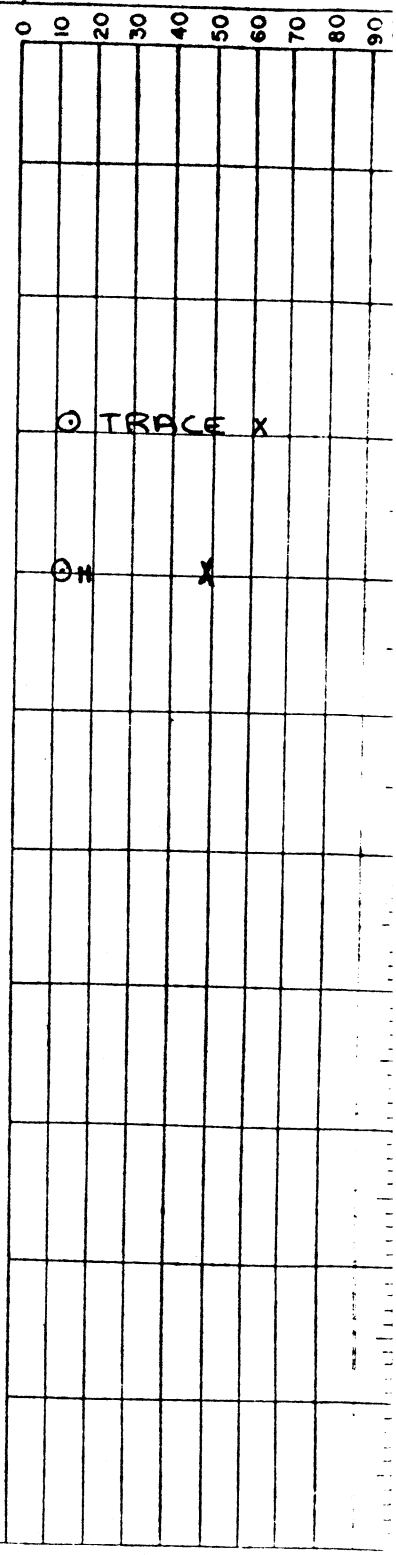
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 207
HOLE LOCATION 1677+020 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78·10·31 | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300mm
3			A/P	1	2552	ML	6	33		
4			A/P	2	2531	SM	20	30	16	
5	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

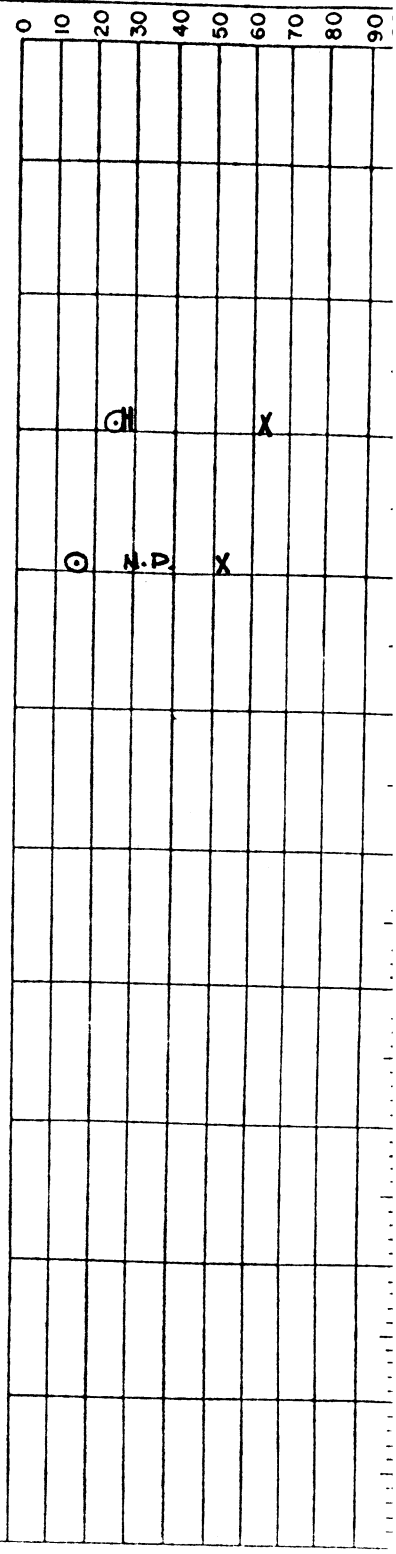
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 208
HOLE LOCATION 1677+085 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78.10.31 | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3			A/P	1	2609	ML	8	30	18	
4			A/P	2	2564	ML	15	34	-	
5	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

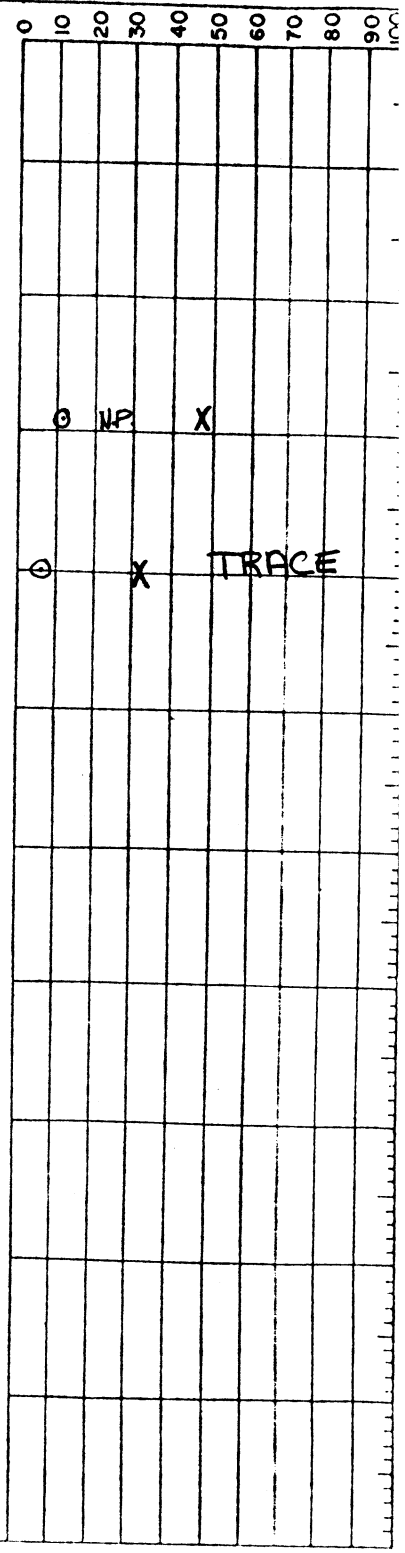
PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 209
HOLE LOCATION	1677+164	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78·10·31	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
		A/P	1	2347	SM	15	36			
		A/P	2	2362	GM	51	18	11		
	END HOLE									

SAMPLE DATA

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90 100



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 — HOLE No. 210

HOLE LOCATION 1677 + 269 — ELEV. — DEPTH TO G.W.L.

DATE DRILLED 78.10.31 — DRILL UNIT — TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
3		A/P	1	2359	GM	55	18			
4		A/P	2	2566	ML	10	35	16		
5	END HOLE									

SAMPLE DATA

O – % MOISTURE CONTENT
X – % < .074mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

3: O X TRACE
4: O N.P. X

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9		HOLE No. 211
HOLE LOCATION 1677+349	ELEV.	DEPTH TO G.W.L.
DATE DRILLED 78.10.31	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3	REFUSAL		A/P	1	2349	GM	67	21		

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

⊙ X N·P

Public Works Canada

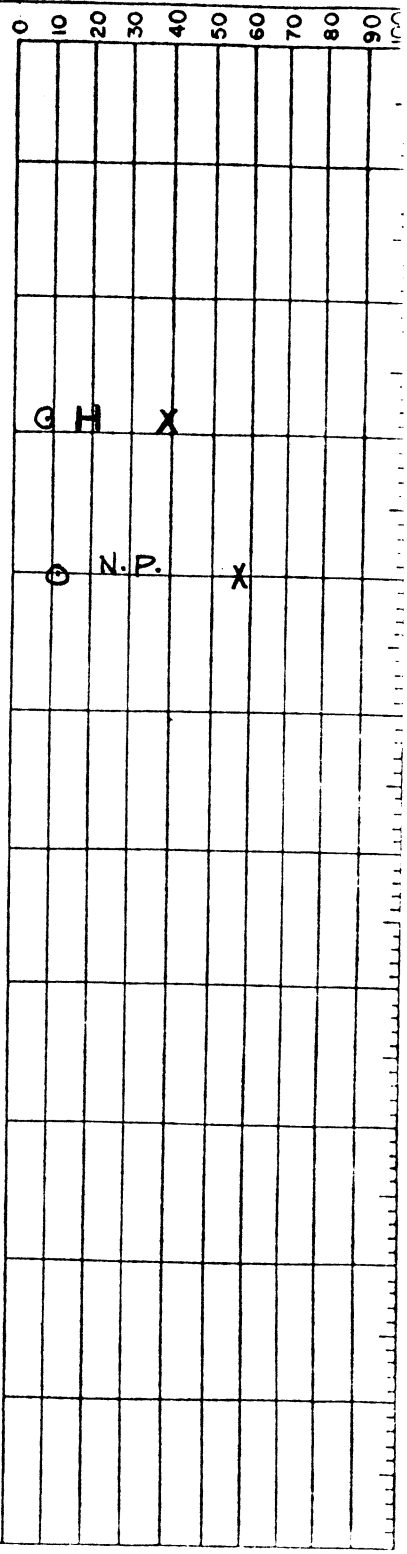
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 212
HOLE LOCATION 1677+428 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78.11.01 | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3			A/P	1	2520	GM	30	30	18	
4			A/P	2	2317	ML	18	24		
4.5	END HOLE									

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT



Public Works Canada

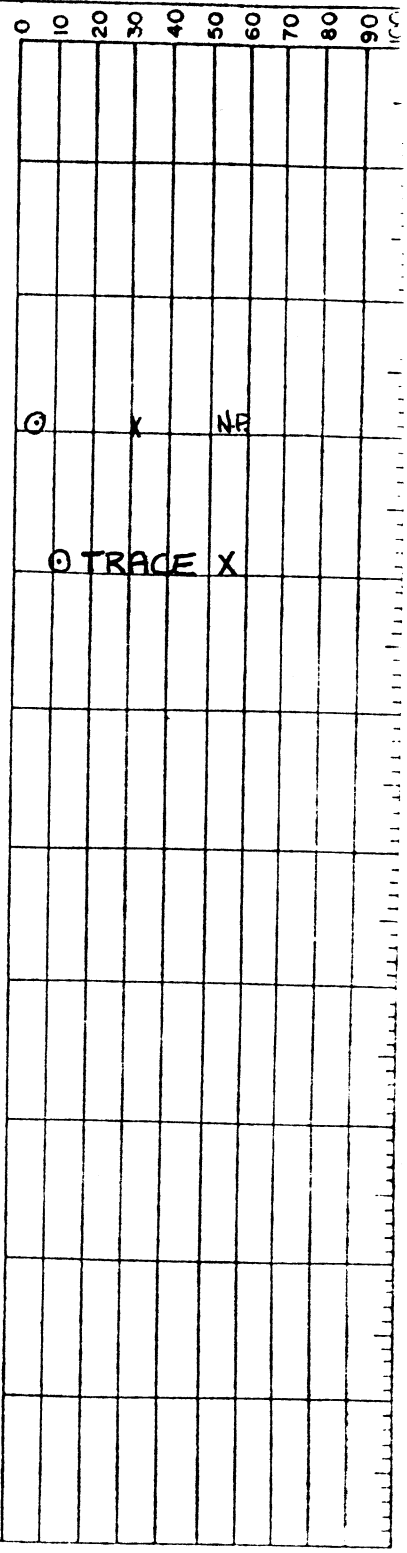
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 213
HOLE LOCATION	1677+505	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78·11·01	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3			A/P	1	2324	SM	30	39		
4			A/P	2	2357	ML	9	36	15	
4.6	END HOLE									

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

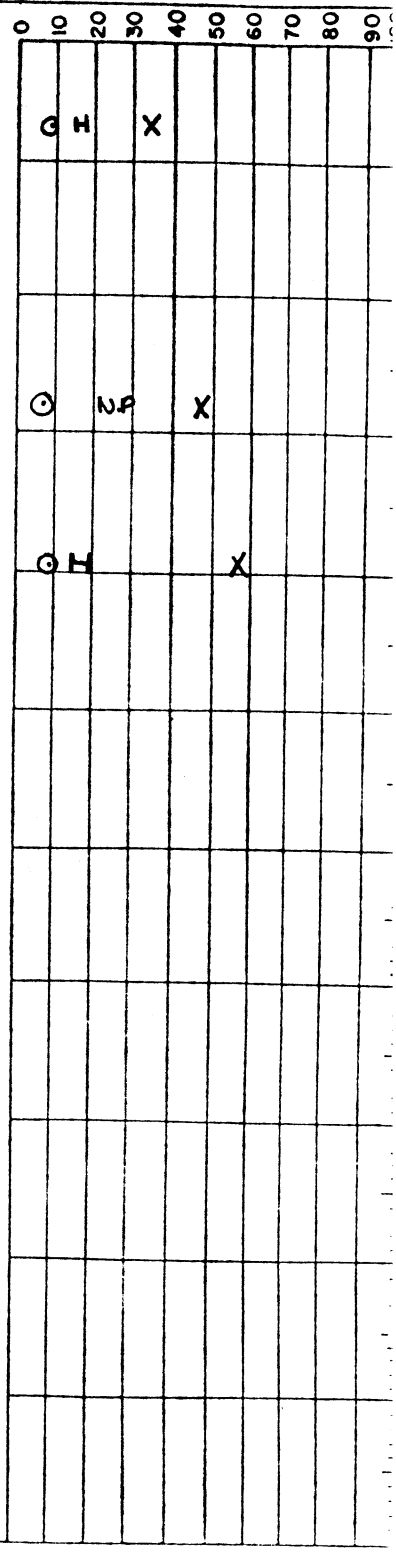
SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 214
HOLE LOCATION	1677 + 584	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78-11-01	DRILL UNIT	TECHNICIAN S.C

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300mm
1		A|P	1		2516	SM	19	47		
2										
3		A|P	2		2542	SM	21.6	30[5]	15.4	
4		A|P	3		2501	ML	9.3	33.3	22.2	
5	END HOLE									
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 215
HOLE LOCATION	1677 + 662	ELEV.	DEPTH TO G.W.L.
DATE DRILLED		DRILL UNIT	TECHNICIAN

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3	REFUSAL		A/P	1	2356	SM	31	27	14	

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

⊙ N.P. X

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 216

HOLE LOCATION 1677 + 732 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED | DRILL UNIT | TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3			A/P	1	2351	GM	30	26	14	
4	REFUSAL									

0 – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

O TRACE X

Public Works Canada

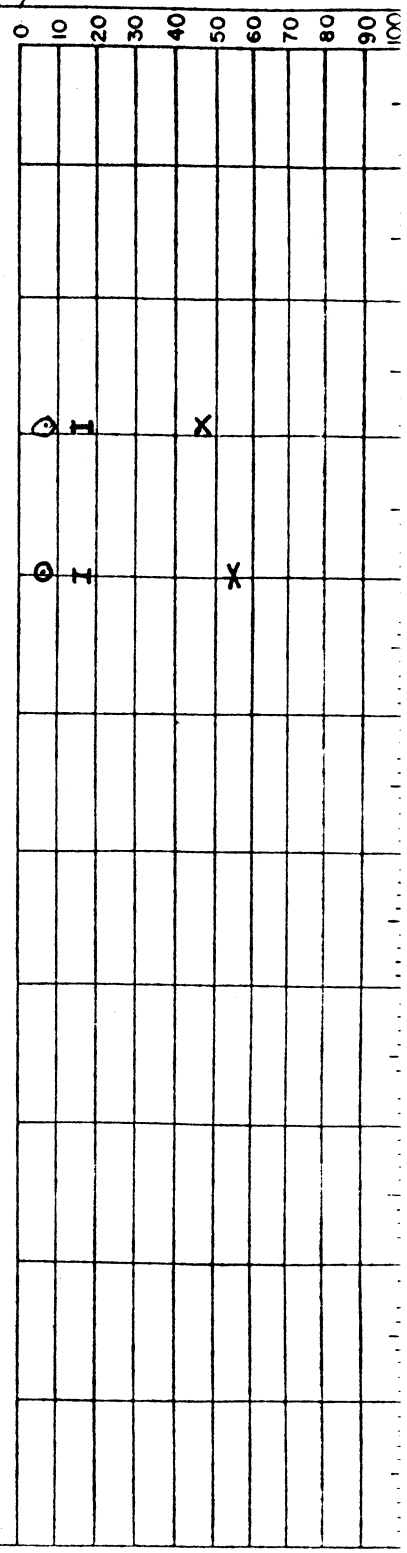
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9		HOLE No. 217
HOLE LOCATION 1677+896	ELEV.	DEPTH TO G.W.L.
DATE DRILLED 78-11-01	DRILL UNIT	TECHNICIAN SC.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3		A/P	1	2611	SM	21	30			
4		A/P	2	2551	ML	11.6	32.9	22.3		
4.6	END HOLE									

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊣ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 — HOLE No. 218

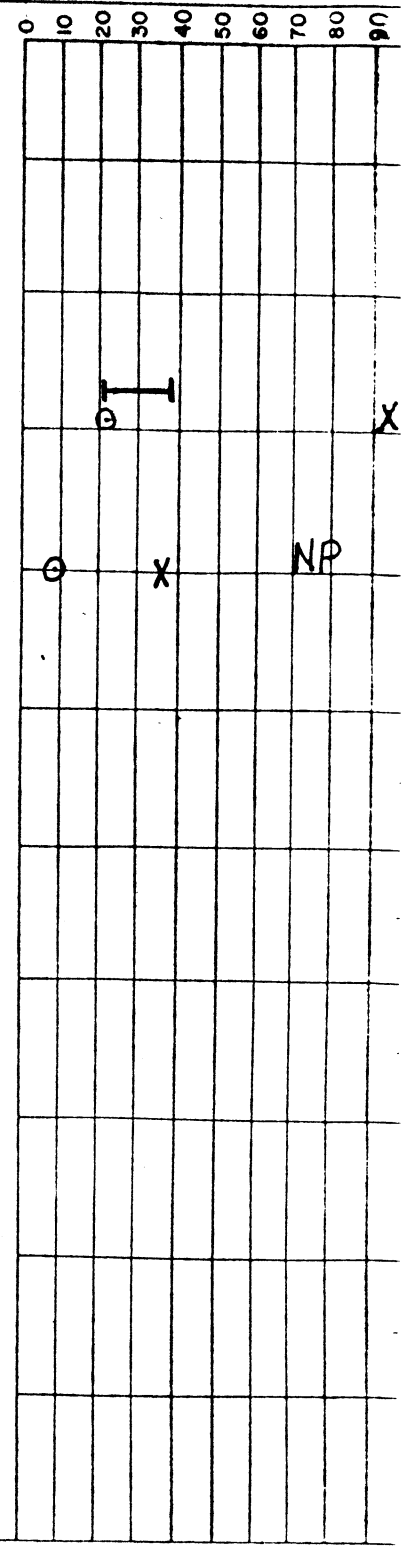
HOLE LOCATION 1677+972 — ELEV. — DEPTH TO G.W.L.

DATE DRILLED 78·11·01 — DRILL UNIT — TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3			A	P	1	2511	CL	2	5	
4			A	P	2	2596	GM	39.5	23.7	5.4
5	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

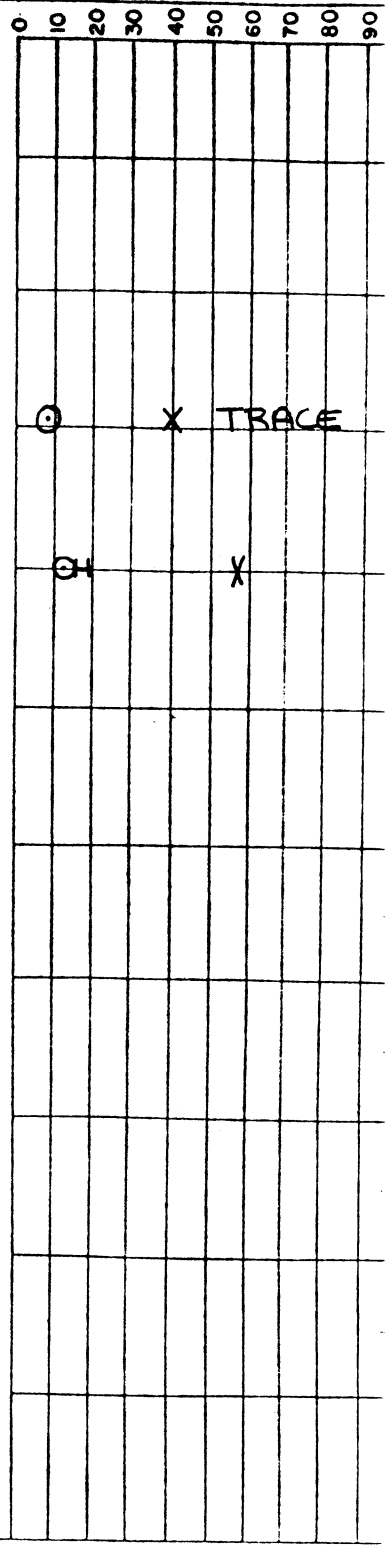
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 219
HOLE LOCATION 1678+058 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78.11.01 | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3			A/P	1	2563	GM	34	26		
4			A/P	2	2492	cl-ML	7.8	33.6	24.2	
4.5	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 220
HOLE LOCATION 1678+137 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78.11.01 | DRILL UNIT | TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300mm
3		A/P	1	2513	ML	15.7	31.9	21.6		
4		A/P	2	2570	CL	14	28			

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

NP.

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 221

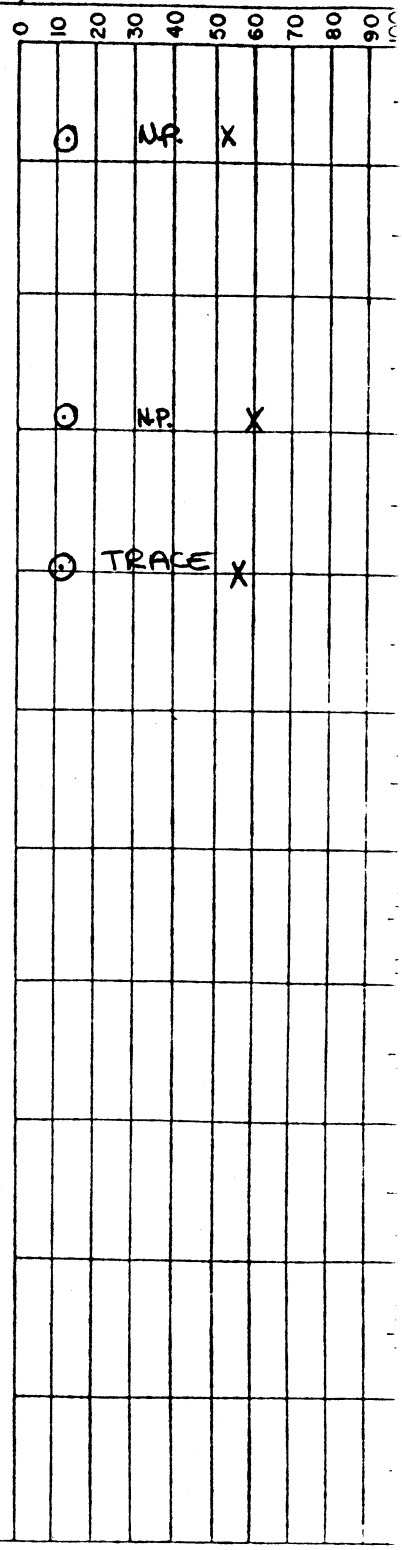
HOLE LOCATION 1678+212 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78-11-01 | DRILL UNIT | TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1			A/P	1	2555	ML	8	41	9	
2										
3			A/P	2	2479	ML	11	29	24	
4			A/P	3	2186	ML	13	30		
5	END HOLE									
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 — HOLE No. 222

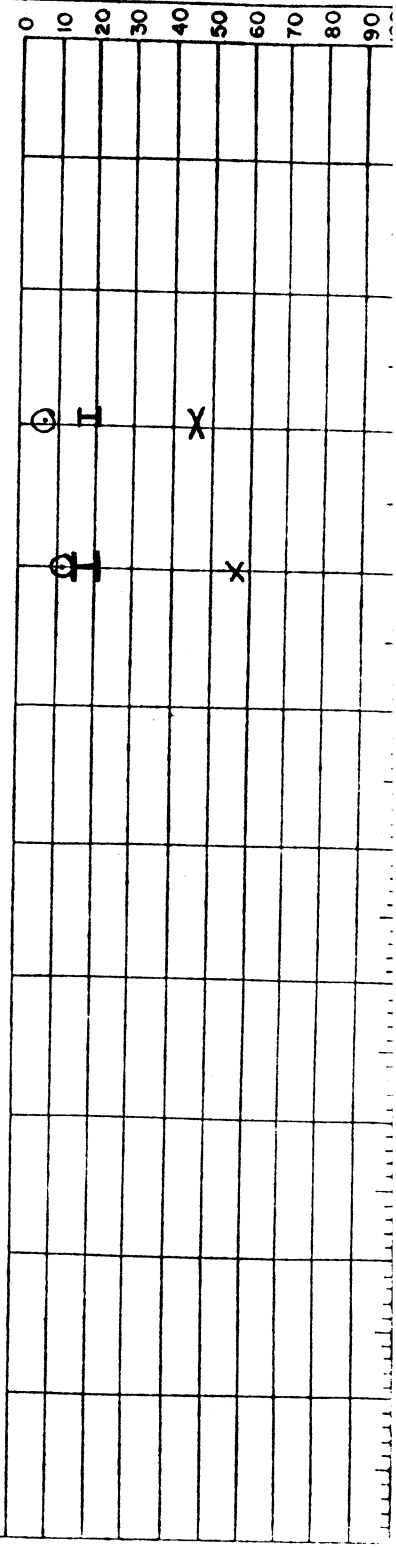
HOLE LOCATION 1678+290 — ELEV. — DEPTH TO G.W.L.

DATE DRILLED — DRILL UNIT — TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3			A/P	1	2529	GM	27.8	25.9	17.6	
4			A/P	2	2491	CL-ML	12	31		
4.6	END HOLE									

0 – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 223

HOLE LOCATION 1678+368 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78.11.01 | DRILL UNIT | TECHNICIAN S.C.

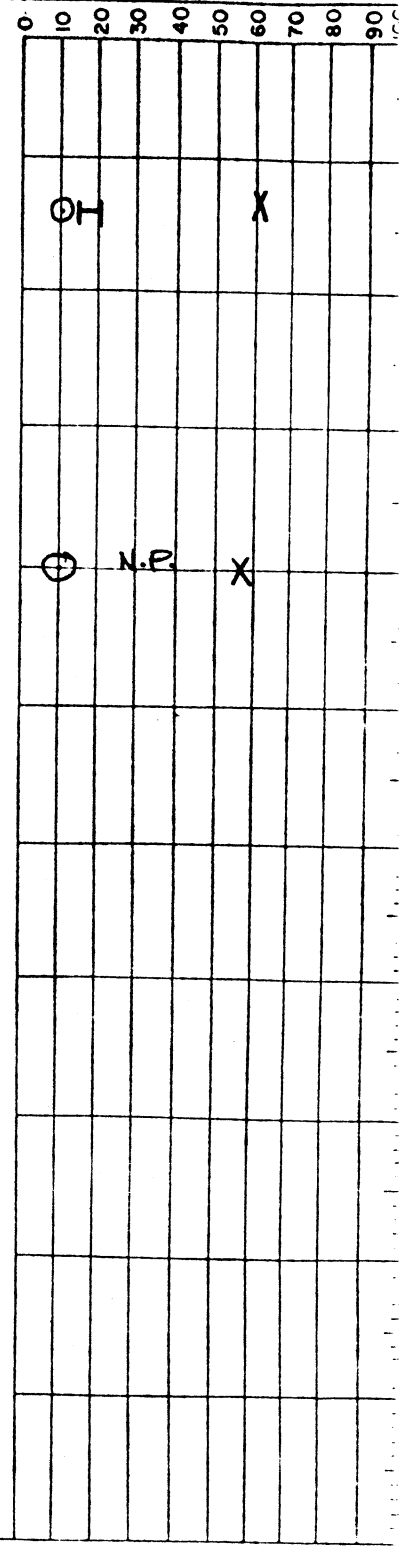
SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1										
2			A	P	1	2488	CL-ML	8	31	24
3										
4			A	P	2	2332	ML	10	32	22
5	END HOLE									
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT

X – % < .074 mm

LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 — HOLE No. 224

HOLE LOCATION 1678+456 — ELEV. — DEPTH TO G.W.L.

DATE DRILLED 78.11.01 — DRILL UNIT — TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300mm
3		A/P	1		2571	SM	31	43.8		
4	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

3: ⊙ x NP

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 — HOLE No. 225

HOLE LOCATION 1678 + 538 — ELEV. — DEPTH TO G.W.L.

DATE DRILLED 78. 11. 01 — DRILL UNIT — TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3			A/P	1	2489	GC-GM	30.9	25.3	17.3	
4			A/P	2	2690	ML	17	31		
4.6	END HOLE									

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

3: O ⊢ X
4: O N.P. X

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 226
HOLE LOCATION	1678+616	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78·11·01	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3			A/P	1	2559	GM	26	25	7	
4			A/P	2	2601	CL-ML	15	31	19	
4.6	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

1 2 3 4 5 6 7 8 9 10

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

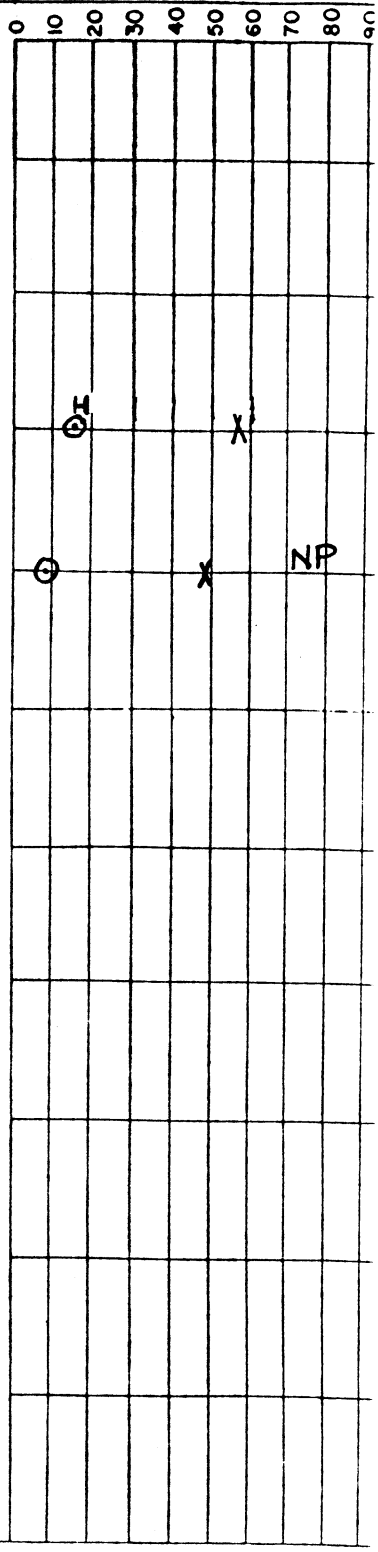
SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 — HOLE No. 227
HOLE LOCATION 1678+695 — ELEV. — DEPTH TO G.W.L.
DATE DRILLED 78.11.01 — DRILL UNIT — TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3		A/P	1	2485	ML	11.2	30.6		16.8	
4		A/P	2	2487	GM	27.3	23.4		19.4	
5	END HOLE									

0 – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

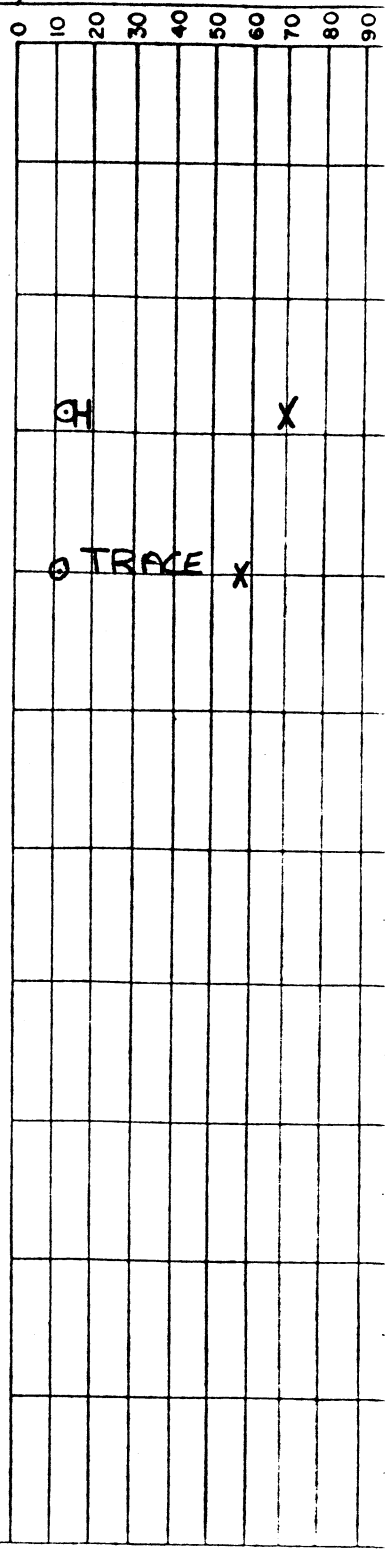
SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION: SHAKWAK SEGMENT 9 — HOLE No. 228
HOLE LOCATION: 1678+775 — ELEV. — DEPTH TO G.W.L.
DATE DRILLED: 78.11.01 — DRILL UNIT — TECHNICIAN: S.C.

SAMPLE DATA

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3			A/P	1	2615	ML	4	26		
4			A/P	2	2567	ML	12	30	19	
4.6	END HOLE									

0 – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

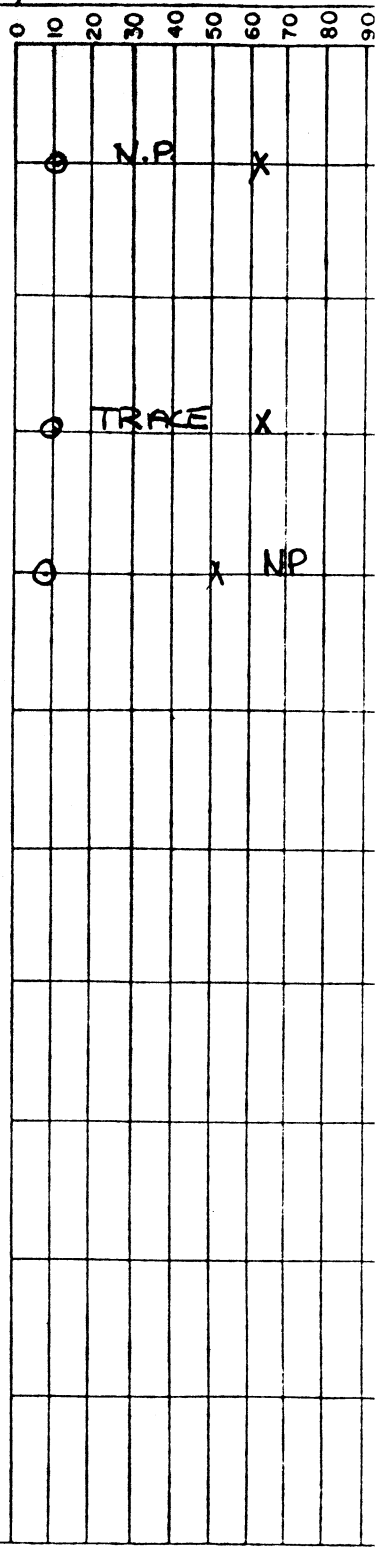
SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 229
HOLE LOCATION	1678+857	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78.11.01	DRILL UNIT	TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1		A/P	1		2553	ML	8	31	3	
2										
3		A/P	2		2184	ML	8	28		
4		A/P	3		2481	ML	18.3	30.9	18.3	
5	END HOLE									
6										
7										
8										
9										
10										

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 230
HOLE LOCATION 1678+937 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78.11.01 | DRILL UNIT | TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3			A/P	1	2075	ML	7	57		
4			A/P	2	2533	ML	9.7	36.8	19.2	
4.6	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

3: ⊙ x TRACE
4: ⊖ x NP.

Public Works Canada

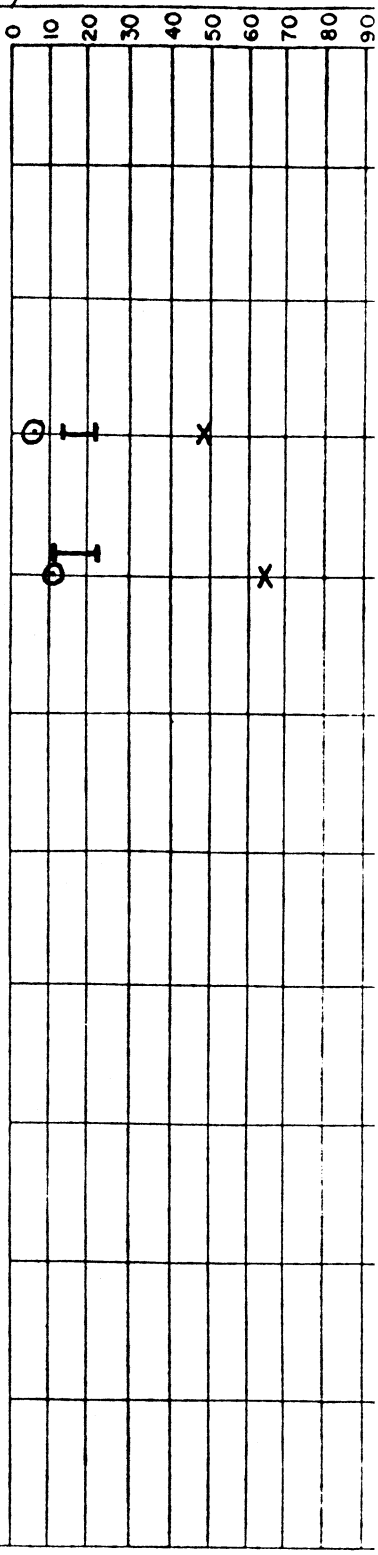
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 231
HOLE LOCATION	1679+018	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78.11.01	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3			A|P	1	2348	GC.	26	24		
4			A|P	2	2181	CL	4	31	26	
5	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

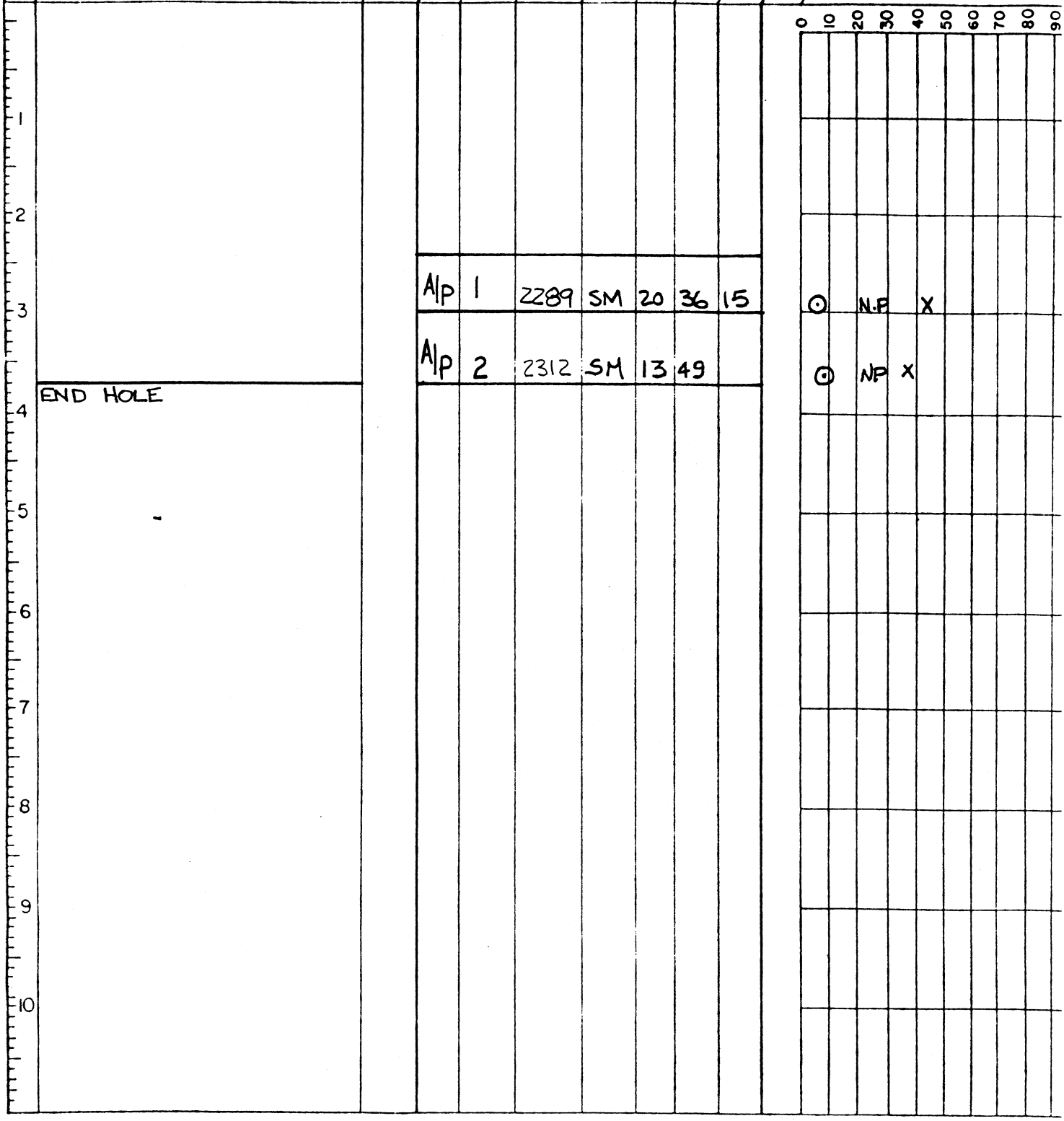
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 232
HOLE LOCATION	1679+094	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78.11.01	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
			A/P	1	2289	SM	20	36	15	
			A/P	2	2312	SM	13	49		
	END HOLE									

0 – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊣ PLASTIC LIMIT



Public Works Canada

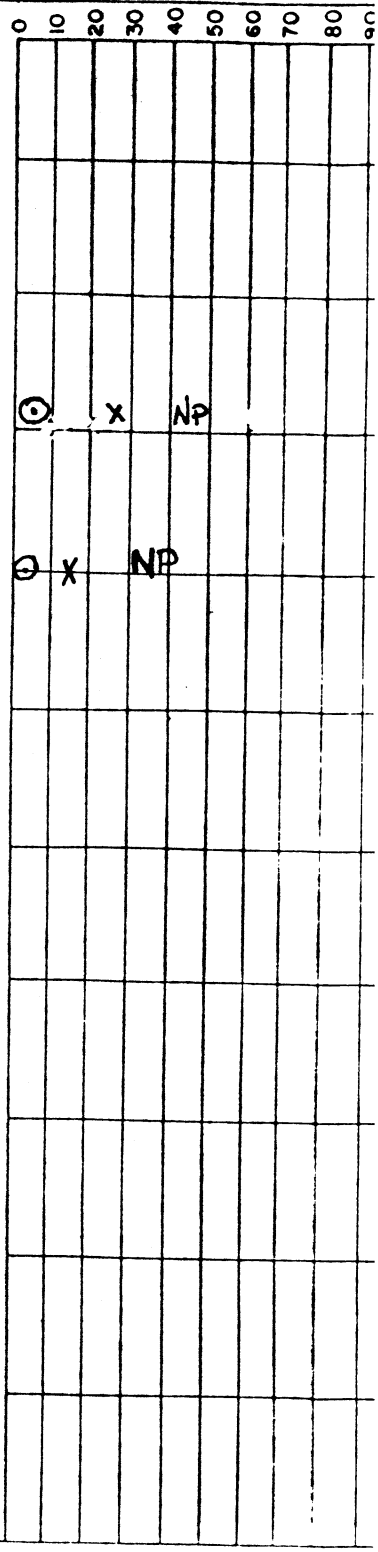
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 233
HOLE LOCATION	679 + 175	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78 · 11 · 01	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3			A/P	1	2582	GM	42.1	30.3		
4			A/P	2	2500	GM	45.0	39.2		
4.6	END HOLE									

0 – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 234

HOLE LOCATION 1679+254 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED | DRILL UNIT | TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3		A	P	1	2187	SM	20.9	32.9	·	
4	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

① X TRACE

Public Works Canada

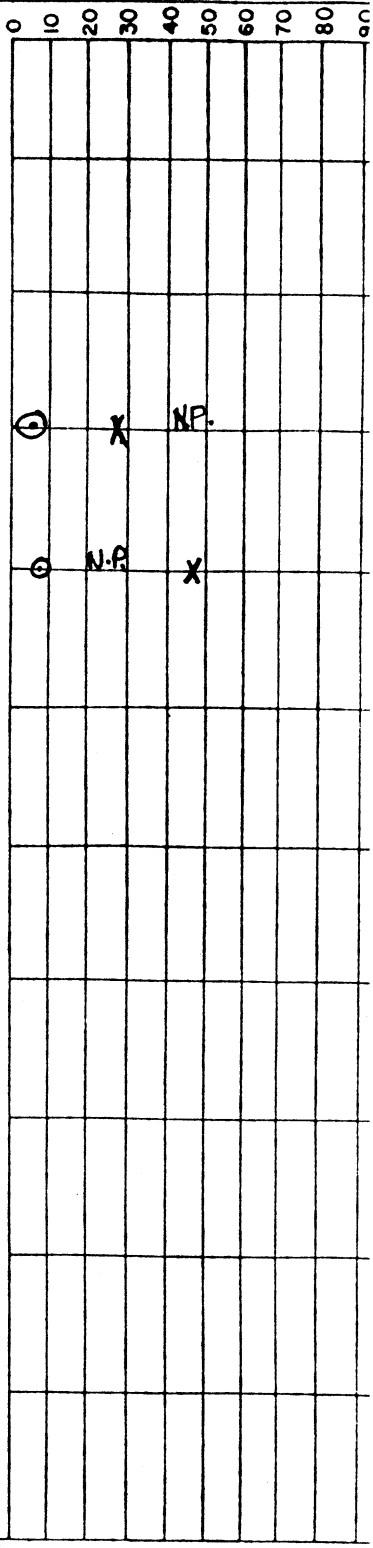
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9		HOLE No. 235
HOLE LOCATION 1679+332	ELEV.	DEPTH TO G.W.L.
DATE DRILLED 78.11.02	DRILL UNIT	TECHNICIAN SC.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3			A/P	1	2512	GM	53.7	17.6	10.9	
4			A/P	2	2177	SM	16	37		
5	END HOLE									

0 – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

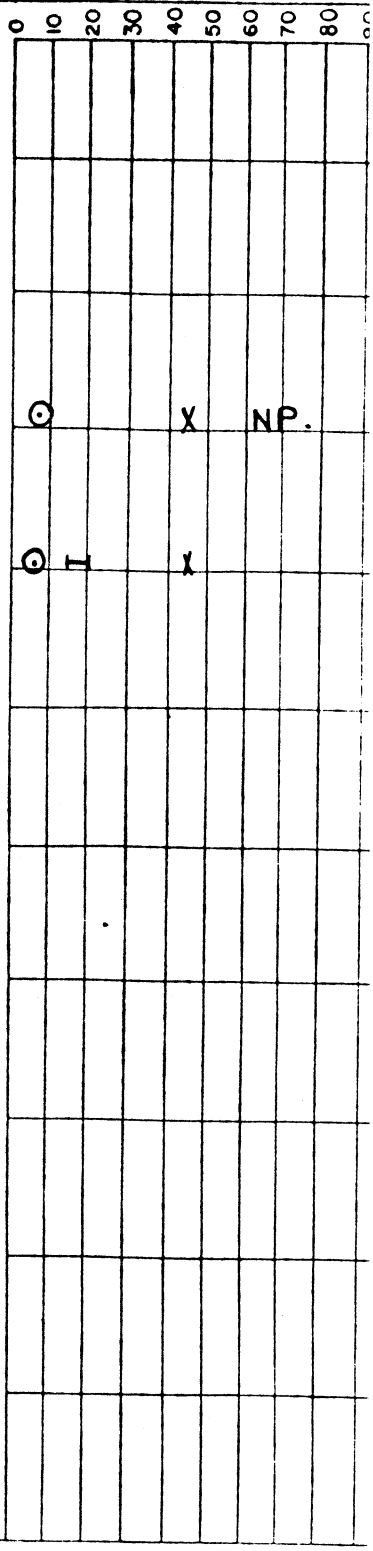
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 236
HOLE LOCATION	1679+405	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78.11.02	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3			A/P	1	2490	SM	24.4	29.6	15.6	
4			A/P	2	2056	SM	20.6	32.2	5.0	
4.6	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

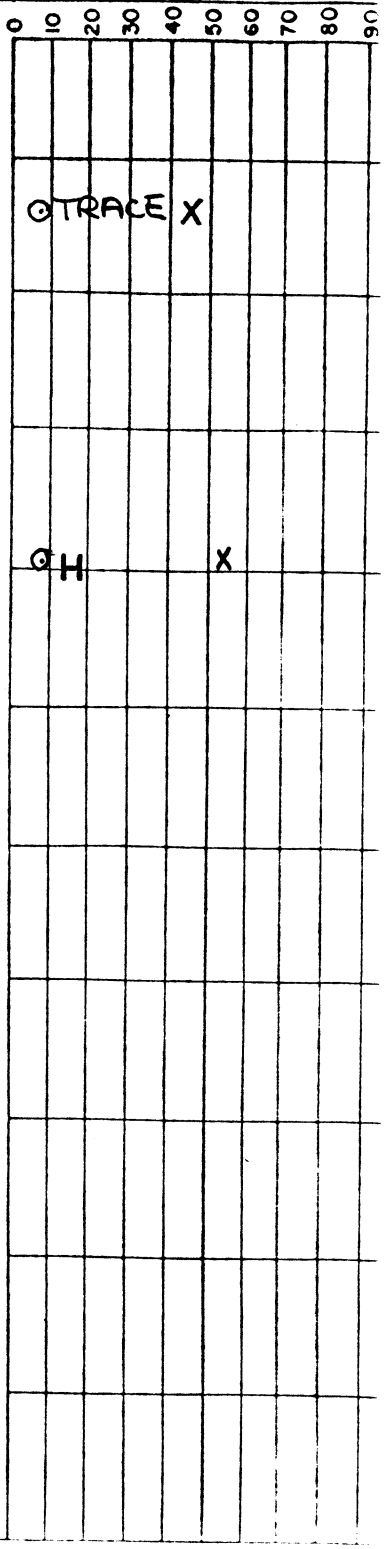
SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9		HOLE No. 237
HOLE LOCATION 1679+487	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	DRILL UNIT	TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
1			A/P	1	2336	SM	24	31	13	
2										
3										
4			A/P	2	2180	CL-ML	12	34	.	
5	END HOLE									
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

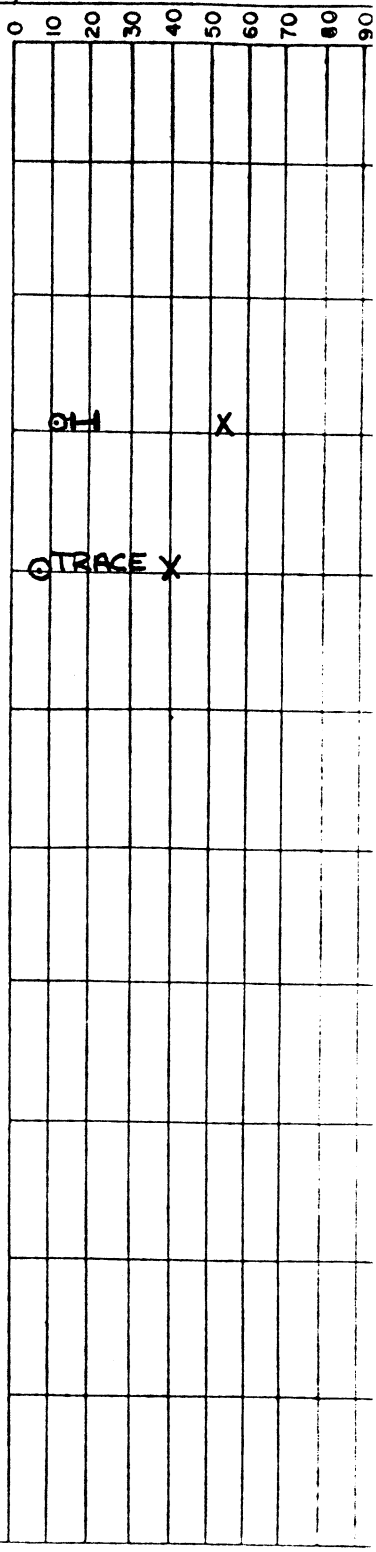
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 238
HOLE LOCATION	1679 + 576	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78·11·02	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300mm
3			A/P	1	2345	CL-ML	15	31		
4			A/P	2	2353	SC	29	31	13	
5	END HOLE									

0 – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 239
HOLE LOCATION 1679+640 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78.11.02 | DRILL UNIT | TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
		A/P	1	2565	SM	17	33	13	⊙ TRACE	X
		A/P	2	2578	CL/ML	17	31	11	⊙ TRACE	X
	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

1 2 3 4 5 6 7 8 9 10

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 240
HOLE LOCATION 1679+720 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78.11.02 | DRILL UNIT | TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3		A/P	1		2519	ML	20.1	28.9	18.6	
4		A/P	2		2541	SM	19.2	33.1	17.3	
5	END HOLE									

0 – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80

⊙ X N.P.
⊙ X N.P.

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 — HOLE No. 241

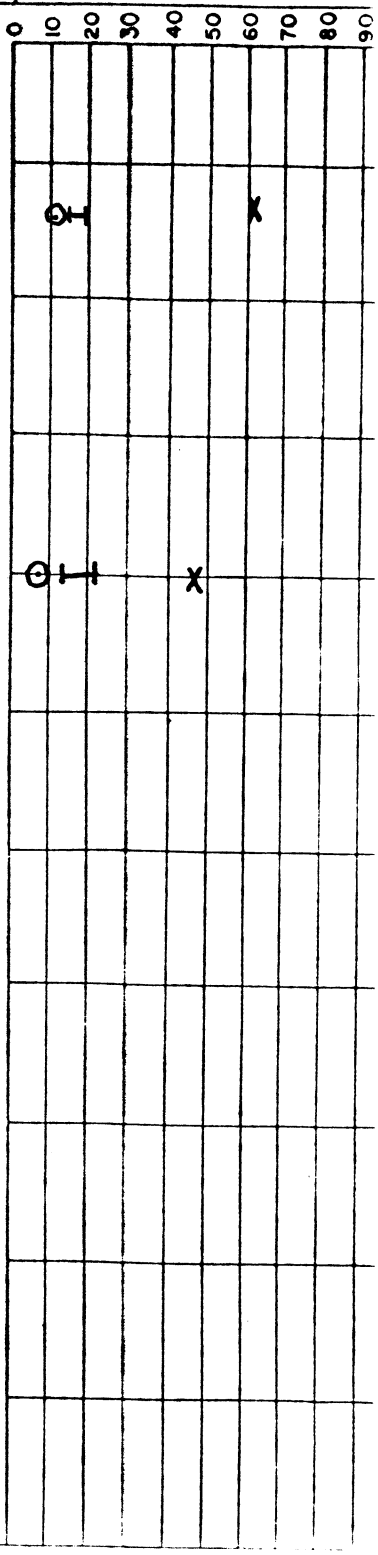
HOLE LOCATION 1679+797 — ELEV. — DEPTH TO G.W.L.

DATE DRILLED — DRILL UNIT — TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
1										
2		A/P	1	2475	ML	15.8	24.5	21.5		
3										
4		A/P	2	2594	SC	20	32			
5	END HOLE									
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 242
HOLE LOCATION 1679 + 870 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78.11.02 | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300mm
			A/P	1	2523	CL-ML	9.7	27.7	16.4	
			A/P	2	2518	CL	11.8	32.7	11.5	
	END HOLE									

0 - % MOISTURE CONTENT
x - % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

1 2 3 4 5 6 7 8 9 10

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

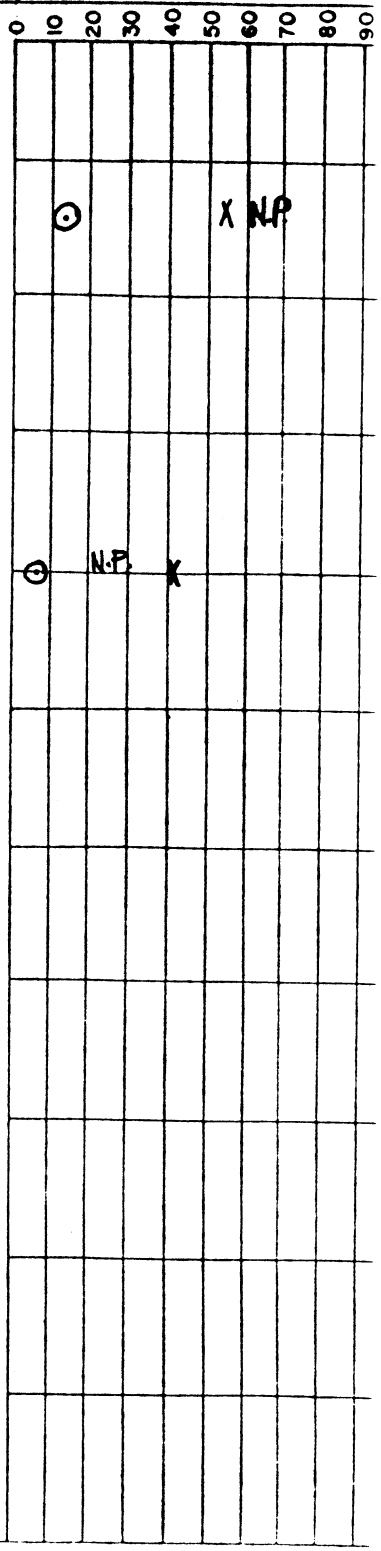
SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 243
HOLE LOCATION 1679+930 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78·11·02 | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
1			A/P	1	2502	ML	18.6	27.1	13.7	
2										
3										
4			A/P	2	2310	SM	28	32	-	
5	END HOLE									
6										
7										
8										
9										
10										

SAMPLE DATA

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 244

HOLE LOCATION 1680+010 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78.11.02 | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm	0 – % MOISTURE CONTENT; X – % < .074 mm; LIQUID LIMIT ⊢ PLASTIC LIMIT
1											0 10 20 30 40 50 60 70 80
2			A/P	1	2599	SC	16	36	17		⊙ TRACE X
3			A/P	2	2327	ML	16	31	19		⊙ NP X
4											
5	END HOLE										
6											
7											
8											
9											
10											

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 245

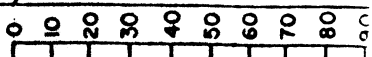
HOLE LOCATION 1680+080 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78.11.08 | DRILL UNIT | TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1			A/P	1	2505	SM	17	36	3	
2										
3			A/P	2	2072	ML	4	30		
4										
4.6	END HOLE									
5										
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT



O X NP

O TRACE X

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 246

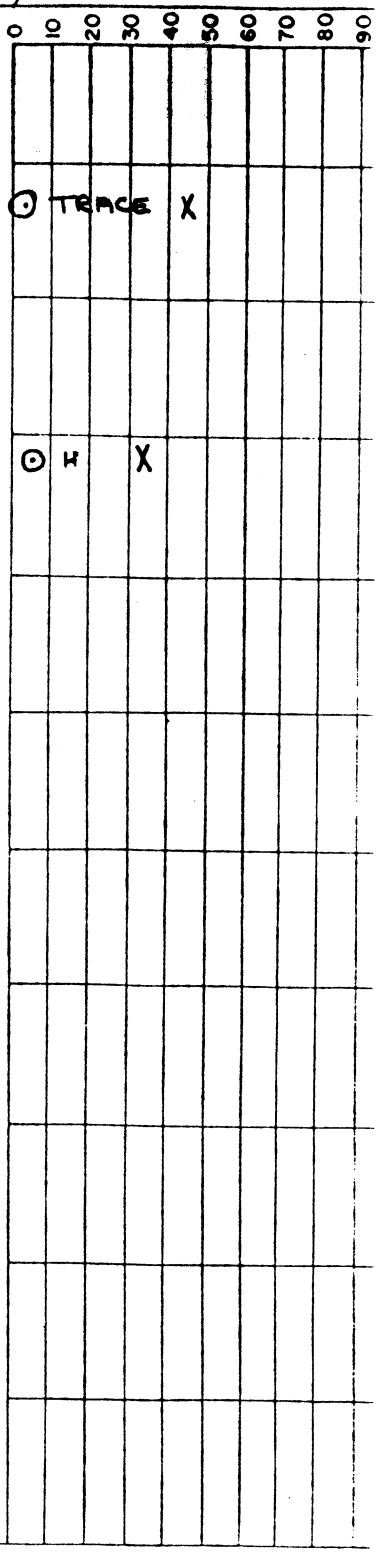
HOLE LOCATION 1690+160 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78.11.02 | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
1		A/P	1	2311		SM	16	38		
2										
3		A/P	2	2591		GM	35.1	30.8	11.6	
4										
	END HOLE									
5										
6										
7										
8										
9										
10										

SAMPLE DATA

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9		HOLE No. 247
HOLE LOCATION 1680+230	ELEV.	DEPTH TO G.W.L.
DATE DRILLED 78·11·02	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1			A/P	1	2598	SM	16	37		
2										
3			A/P	2	2342	SM	15	37	16	
4										
5	END HOLE									
6										
7										
8										
9										
10										

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

⊙ TRACE x

⊙ TRACE x

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 248
HOLE LOCATION 1680+ 369 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78.11.02 | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
			A/P	1	2178	SC	23	32		15
			A/P	2	2343	GM	31	30		

0 – % MOISTURE CONTENT
x – % < .074mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80

1 2 3 4 5 6 7 8 9 10

⊙ H x
⊙ TRACE x

Public Works Canada

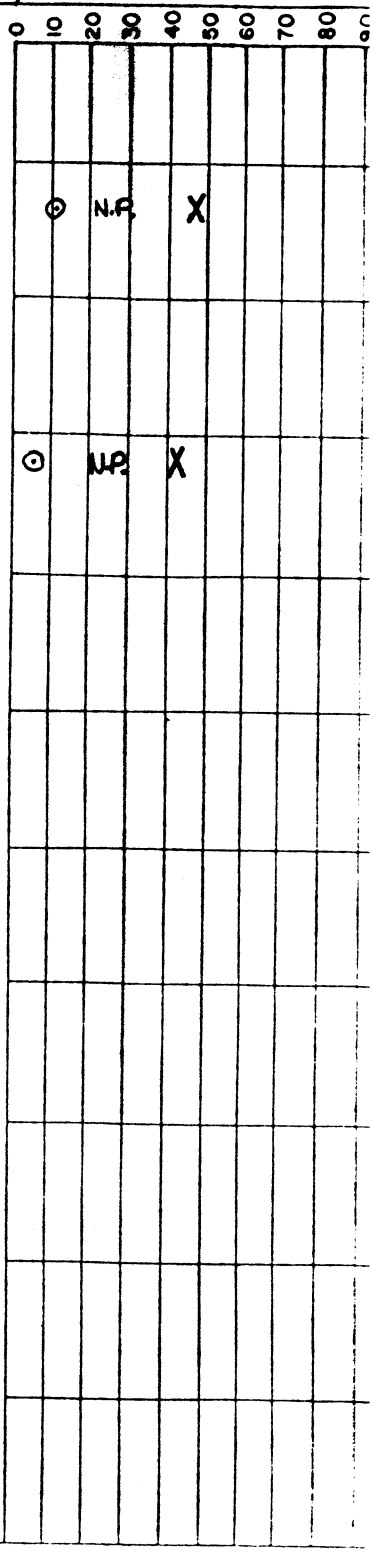
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 249
HOLE LOCATION 1680+432 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78.11.02 | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1			A/P	1	2183	SM	14	38	-	
2										
3			A/P	2	2607	SM	25	33	15	
4										
5	END HOLE									
6										
7										
8										
9										
10										

0 – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 250
HOLE LOCATION 1680 + 507 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78·11·02 | DRILL UNIT | TECHNICIAN SC.

SAMPLE DATA

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
0										
1		A/P	1		2595	ML	13	35		
2		A/P	2		2586	SM	30	30	15	
3										
4		A/P	3		2562	GC	48	22		
5	END HOLE									
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

1 ⊙ N.P. X
2 ⊙ N.P. X
4 ⊙ H X

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

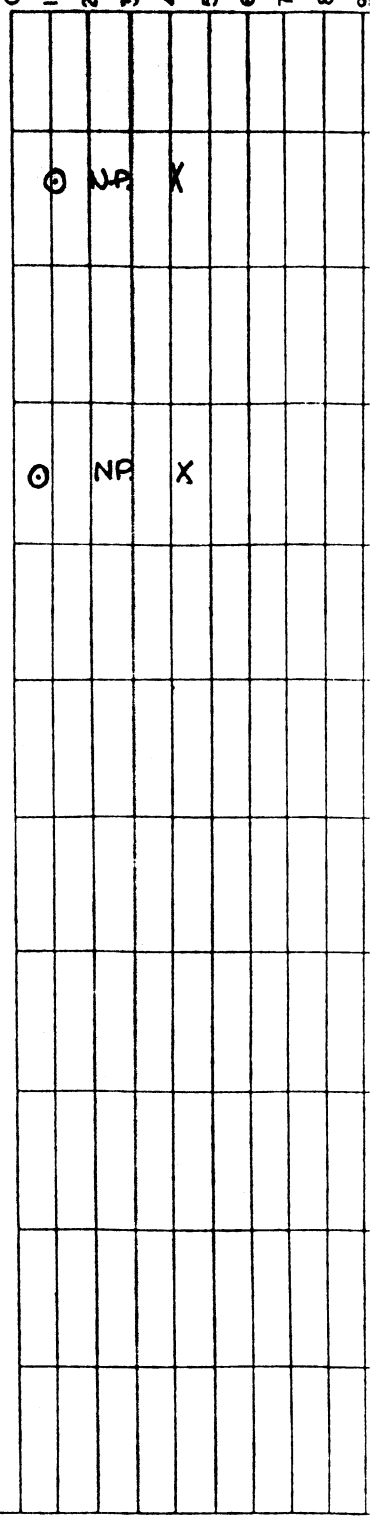
PROJECT/SECTION SHAKWAK SEGMENT 9 — HOLE No. 261

HOLE LOCATION — ELEV. — DEPTH TO G.W.L.

DATE DRILLED 78.11.02 — DRILL UNIT — TECHNICIAN S.C.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
1										
2			A	1P	1	2560	GM	31	28	14
3										
4			A	1P	2	2185	SM	25	33	
5	END HOLE									
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Dwg No. 60-253

Public Works Canada

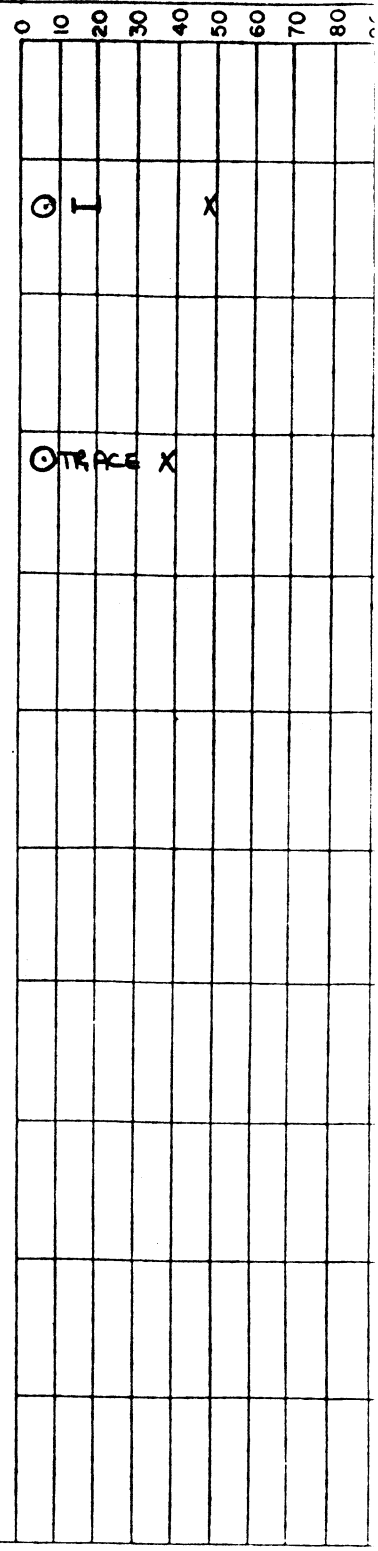
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 252
HOLE LOCATION 1680+667 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78.11.02 | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1			A/P	1	2576	SC	20	30		
2										
3			A/P	2	2335	GC	33	27	14	
4										
5	END HOLE									
6										
7										
8										
9										
10										

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 253

HOLE LOCATION 1680+740 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78.11.02 | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
1										
2		A/P	1	2182	OL	12	30			
3										
4		A/P	2	2507	ML	14.6	33.8	16.7		
5	END HOLE									
6										
7										
8										
9										
10										

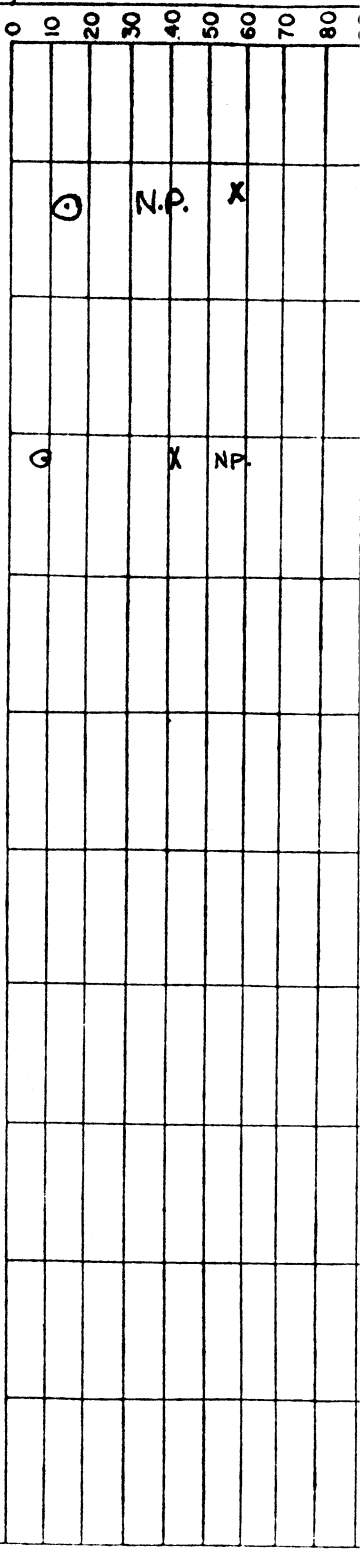
SAMPLE DATA

O – % MOISTURE CONTENT

X – % < .074 mm

LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

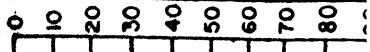
SUBSURFACE EXPLORATION AND TESTING REPORT

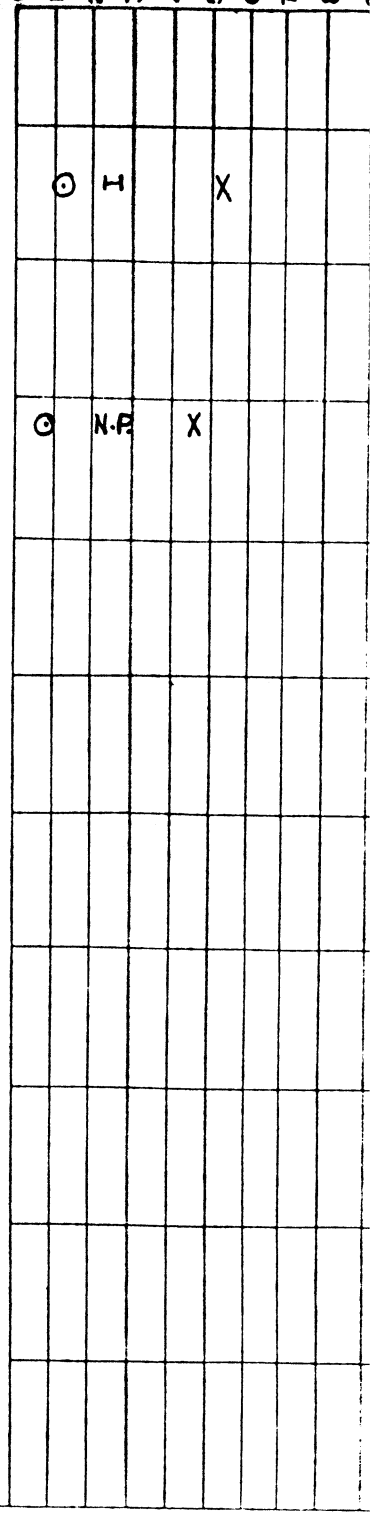
PROJECT/SECTION SHAKWAK SEGMENT 9		HOLE No. 254
HOLE LOCATION 1680+822	ELEV.	DEPTH TO G.W.L.
DATE DRILLED 79.11.03	DRILL UNIT	TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1										
2		Alp	1		2526	ML	13	35	14.2	
3		Alp	2		2579	SM	19	34		
4										
5	END HOLE									
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT





Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

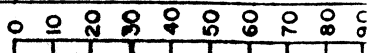
SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 255
HOLE LOCATION	1680+900	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78.11.03	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1										
2			A	1P	1	2547	SM	23	36	
3										
4			A	1P	2	2589	ML	12	32	13
5	END HOLE									
6										
7										
8										
9										
10										

SAMPLE DATA

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



⊙ TRACE x

⊙ TRACE x

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 — HOLE No. 256

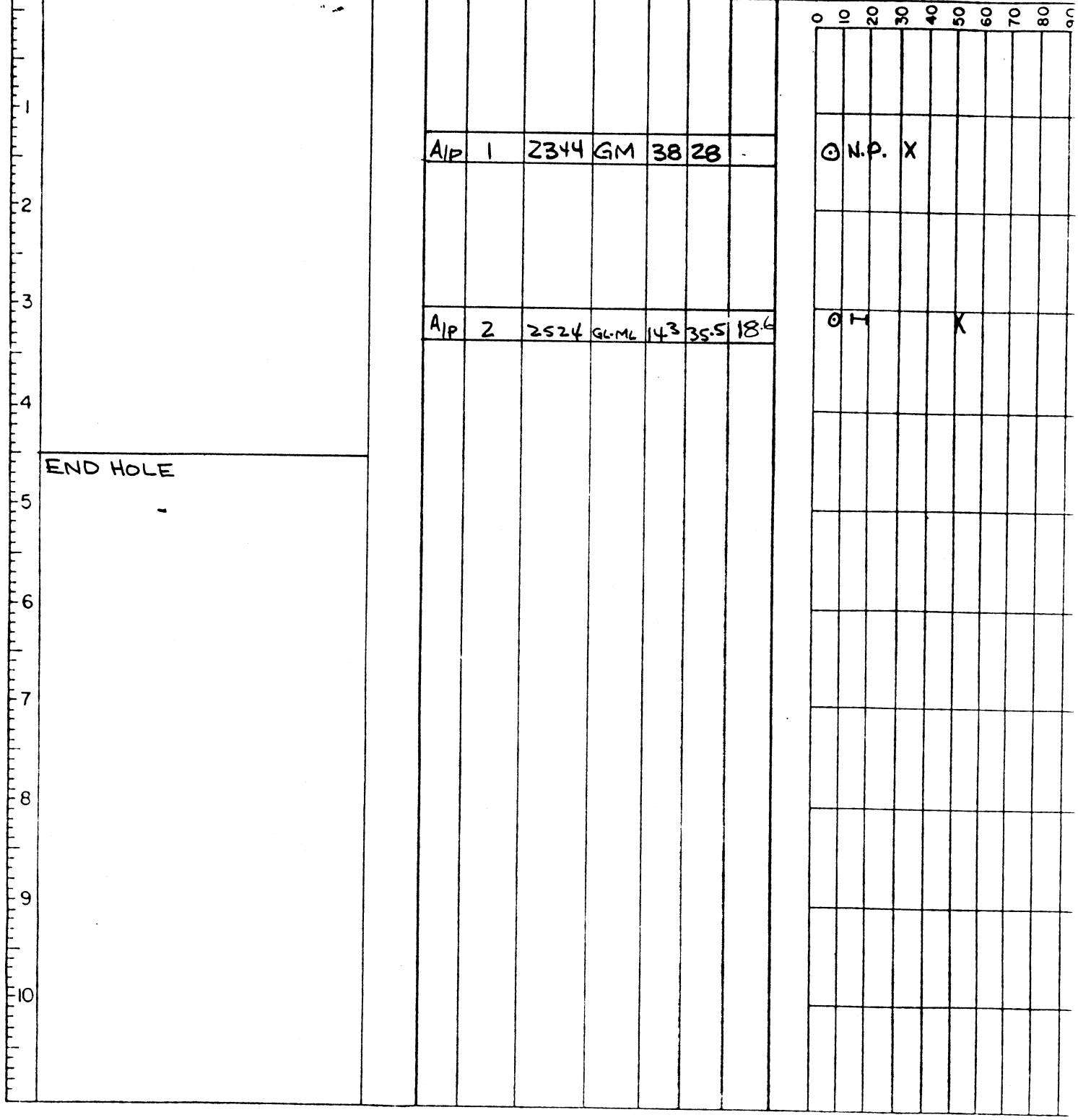
HOLE LOCATION 1680+975 — ELEV. — DEPTH TO G.W.L.

DATE DRILLED 78.11.03 — DRILL UNIT — TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
			A/P	1	2344	GM	38	28		
			A/P	2	2524	GL-ML	14.3	35.5	18.6	
	END HOLE									

0 – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

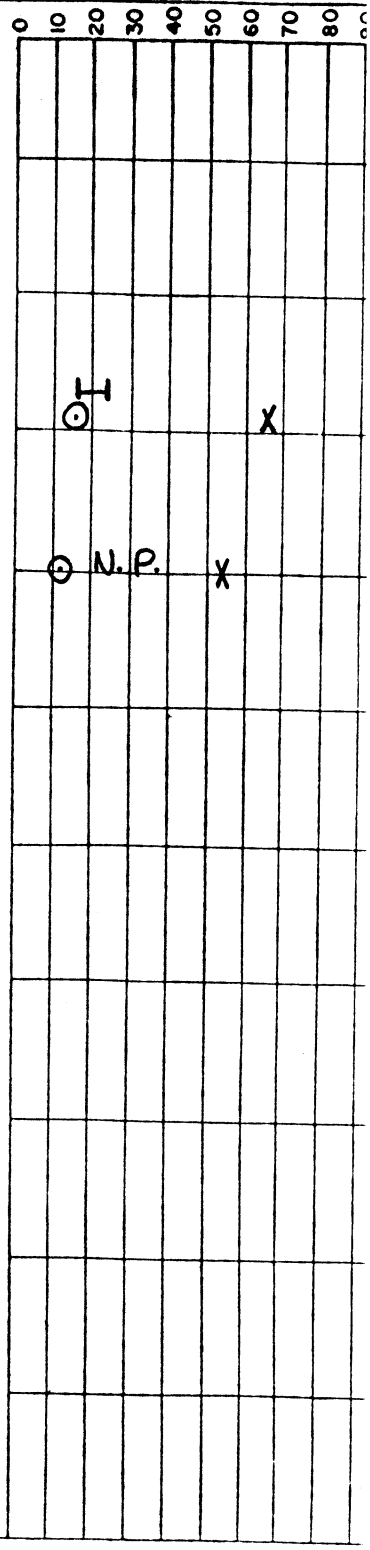
SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 257
HOLE LOCATION	1680+999	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78.11.03	DRILL UNIT	TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3		A	P	1	2296	CL	6	27	18	
4		A	P	2	2298	ML	17	28		
5	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT



Public Works Canada

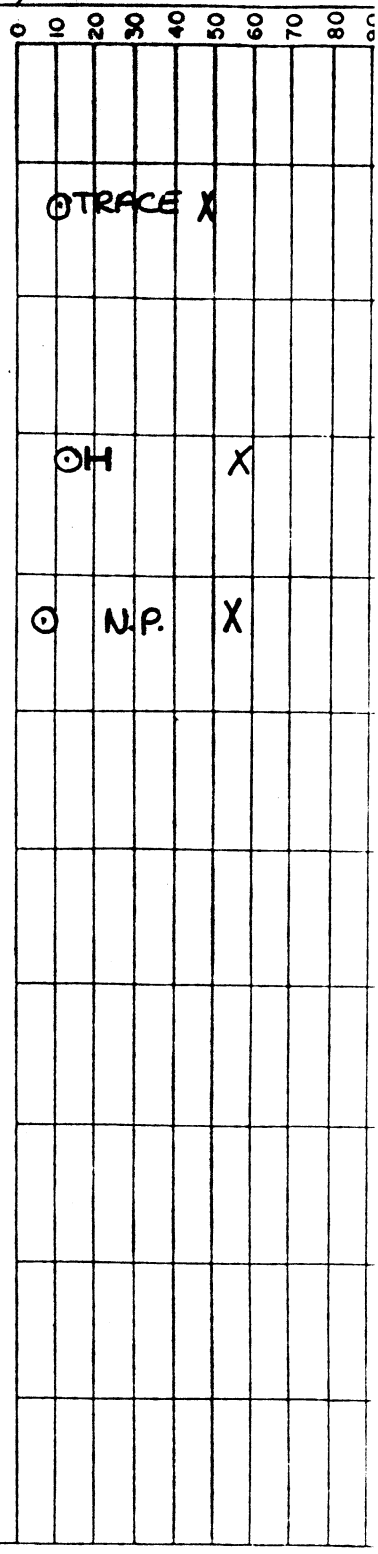
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 258
HOLE LOCATION	1681 + 138	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78.11.03	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1										
2			A/P	1	2295	SM	21	29		
3										
4			A/P	2	2292	CL-ML	11	32	18	
5	END HOLE		A/P	3	2297	ML	12	32		
6										
7										
8										
9										
10										

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 259
HOLE LOCATION	1681+217	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78.11.03	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1										
2			A/P	1	2290	SM	21	34		
3			A/P	2	2291	ML	15	30	16	
4										
5	END HOLE									
6										
7										
8										
9										
10										

SAMPLE DATA

0 – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80

⊙ TRACE X

⊙ TRACE X

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 260
HOLE LOCATION	1681+298	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78.11.03	DRILL UNIT	TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
1										
2		A	1P	1	2294	SM	15	35		
3		A	1P	2	2299	SM	24	31	15	
4										
5	END HOLE									
6										
7										
8										
9										
10										

0 – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

⊙ TRACE X

⊙ TRACE X

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

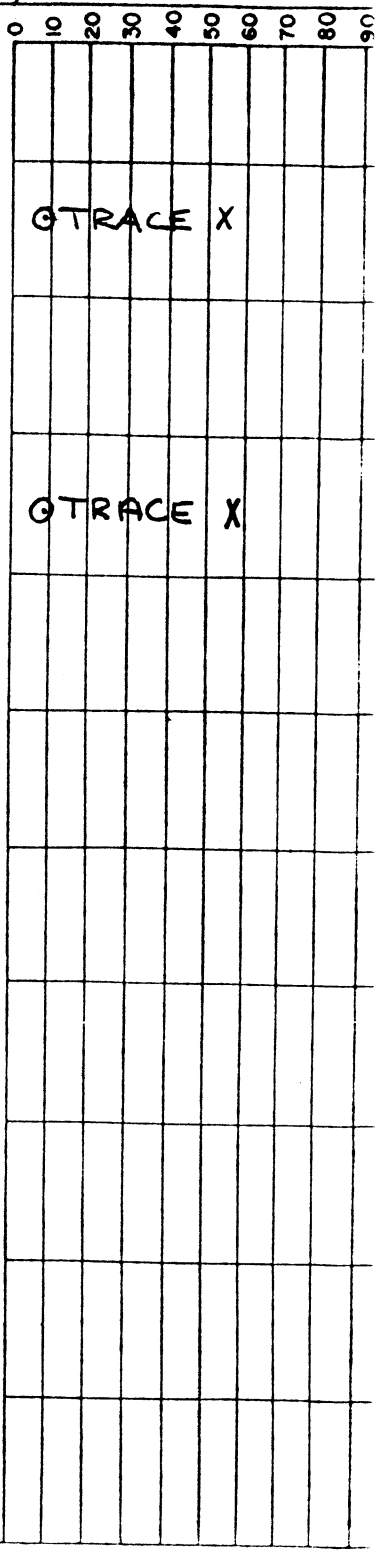
PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 261

HOLE LOCATION 1681+388 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78.11.03 | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300mm
1										
2			A/p	1	2367	ML	14	33	11	
3										
4			A/p	2	2190	ML	12	29	-	
5	END HOLE									
6										
7										
8										
9										
10										

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9		HOLE No. 262
HOLE LOCATION 1681+455	ELEV.	DEPTH TO G.W.L.
DATE DRILLED 78.11.03	DRILL UNIT	TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1			A|P	1	2372	ML	2	30	16	
2										
3										
4			A|P	2	2199	SM	24	32		
5	END HOLE									
6										
7										
8										
9										
10										

O - % MOISTURE CONTENT
X - % < .074 mm
LIQUID LIMIT ⊣ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80

O TRACE X

O TRACE X

Public Works Canada

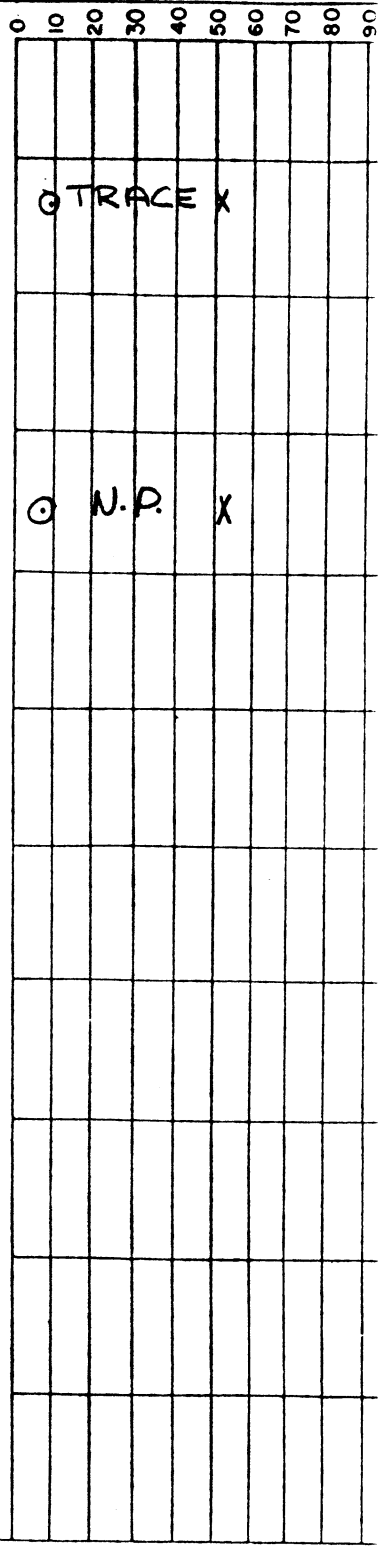
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 263
HOLE LOCATION	1681+530	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78.11.03	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1										
2			A|P	1	2191	ML	11	37		
3										
4			A|P	2	2202	ML	15	33	13	
5	END HOLE									
6										
7										
8										
9										
10										

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢⊣ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 — HOLE No. 264

HOLE LOCATION 1681+610 — ELEV. — DEPTH TO G.W.L.

DATE DRILLED 78.11.03 — DRILL UNIT — TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
		A|P	1	2371	SM	16.	40			
		A|P	2	2201	GM	29	28	12		
	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

1 2 3 4 5 6 7 8 9 10

⊙ N.P. X

N.P. ⊙ X

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 265

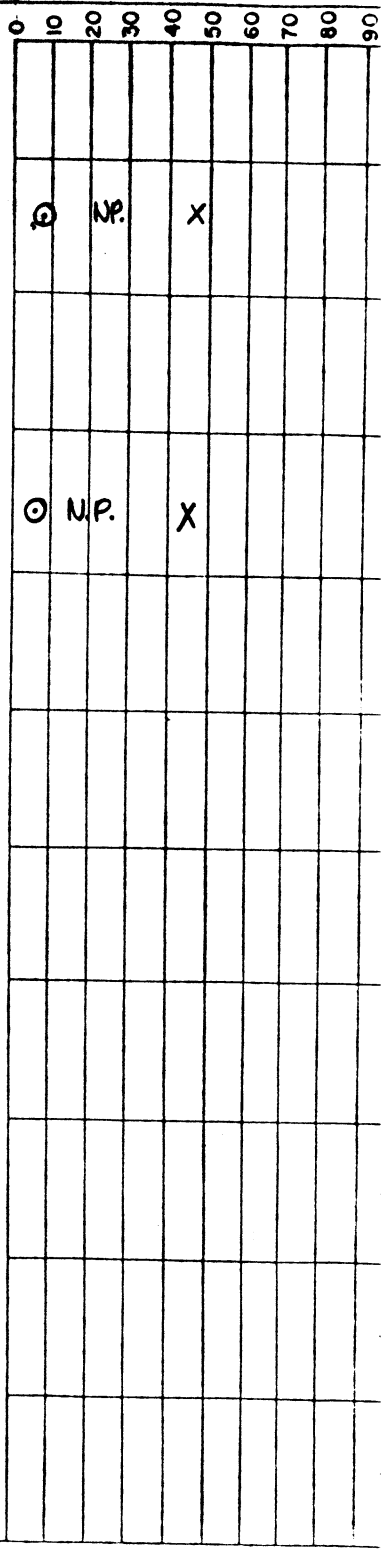
HOLE LOCATION 1681+690 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78.11.03 | DRILL UNIT | TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
		Alp	1		2198	SM	19	34		
		Alp	2		2200	SM	22	32	12	
	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 — HOLE No. 266

HOLE LOCATION 1681+767 — ELEV. — DEPTH TO G.W.L.

DATE DRILLED 78.11.06 — DRILL UNIT — TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300mm
1										
2			A|P	1						
3										
4			A|P	2	2196	GM	34	27		
5	END HOLE									
6										
7										
8										
9										
10										

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

⊙ N.P. x

Public Works Canada

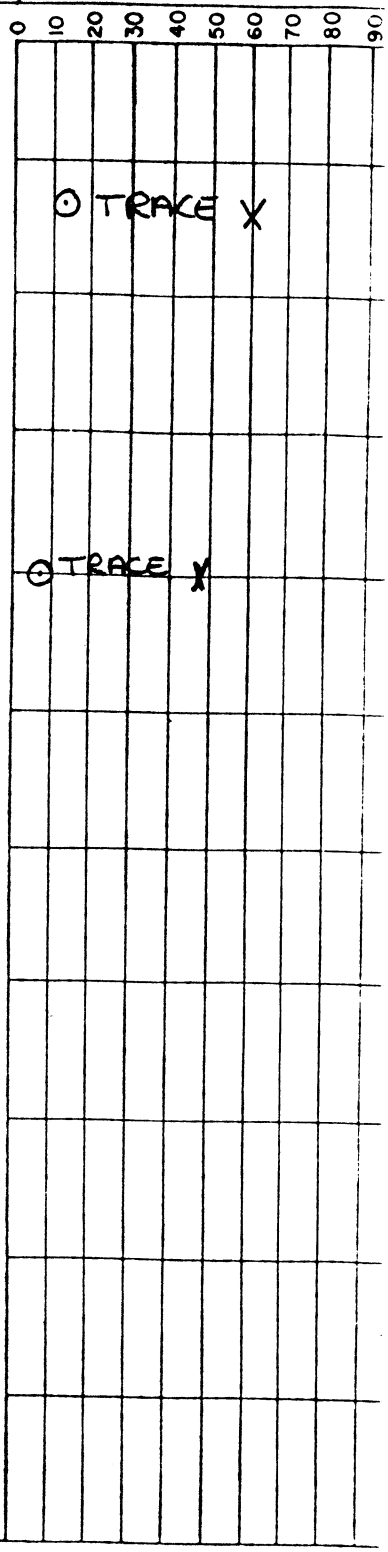
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 267
HOLE LOCATION	1681 + 844	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78.11.06	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1										
2			A|p	1	2197	ML	12	28		
3										
4			A|p	2	2174	SM	15	35	15	
5	END HOLE									
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 268
HOLE LOCATION 1681+920 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78.11.06 | DRILL UNIT | TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
			A/P	1	2581	SM	40	40	3	
			A/P	2	2236	SM	22	36		
	END HOLE									

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

1 2 3 4 5 6 7 8 9 10

⊙ X N.P.
⊙ X TRACE

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 — HOLE No. 269

HOLE LOCATION 1682+000 — ELEV. — DEPTH TO G.W.L.

DATE DRILLED 78-11-03 — DRILL UNIT — TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300mm
1										
2			A	P	1	2233	SM	16	36	12
3										
4			A	P	2	2159	CL-ML	17	25	
5	END HOLE									
6										
7										
8										
9										
10										

0 - % MOISTURE CONTENT
x - % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

1: ⊙ TRACE x
3: CH x

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 270

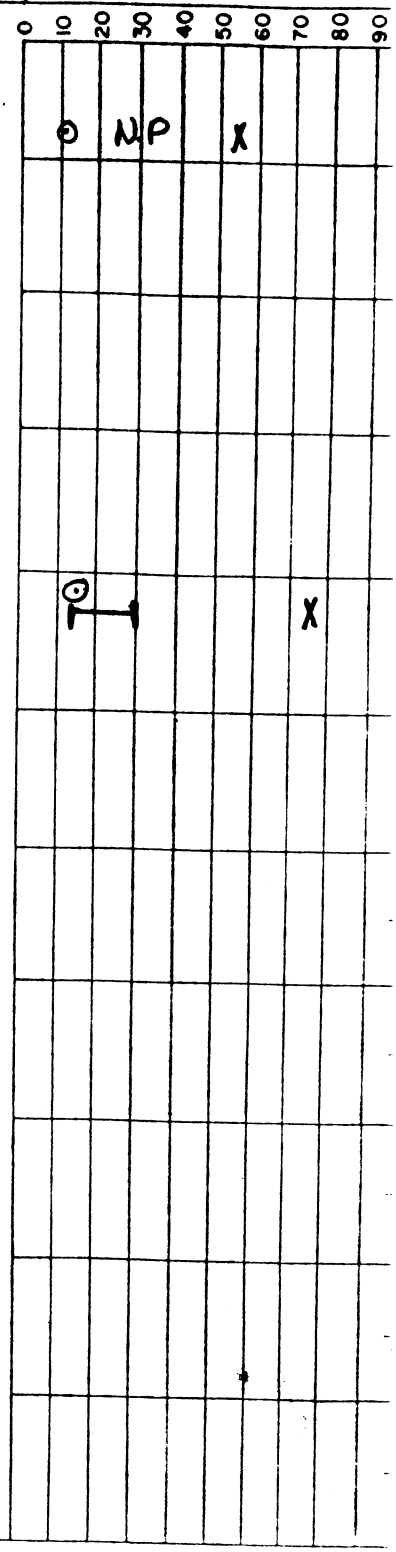
HOLE LOCATION 1682+080 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78.11.06 | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300mm
1		A/P	1		2583	ML	16	30	26	
2										
3										
4		A/P	2		2222	CL	4	20	47	
5	END HOLE									
6										
7										
8										
9										
10										

SAMPLE DATA

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 — HOLE No. 271

HOLE LOCATION 1682+152 — ELEV. — DEPTH TO G.W.L.

DATE DRILLED 78.11.06 — DRILL UNIT — TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
			A	P	1	2585	SM	17.6	41.6	12.3
			A	P	2	2248	CL-ML	14	32	
	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

1 2 3 4 5 6 7 8 9 10

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 272

HOLE LOCATION 1682+240 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78.11.03 | DRILL UNIT | TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
		A	P	1	2206	SM	28	33		
		A	P	2	2224	CL-ML	7	37	14	
	END HOLE									

0 – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

⊙ TRACE X

⊙ TRACE X

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. Z73

HOLE LOCATION ~1682+300 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78.11.03 | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1										
2		A|P	1	2172	SM	14.3	42.2			
3										
4		A|P	2	2231	ML	18.3	31.7			
5	END HOLE									
6										
7										
8										
9										
10										

SAMPLE DATA

O - % MOISTURE CONTENT
X - % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

⊙ NP X

⊙ X TRACE

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 274

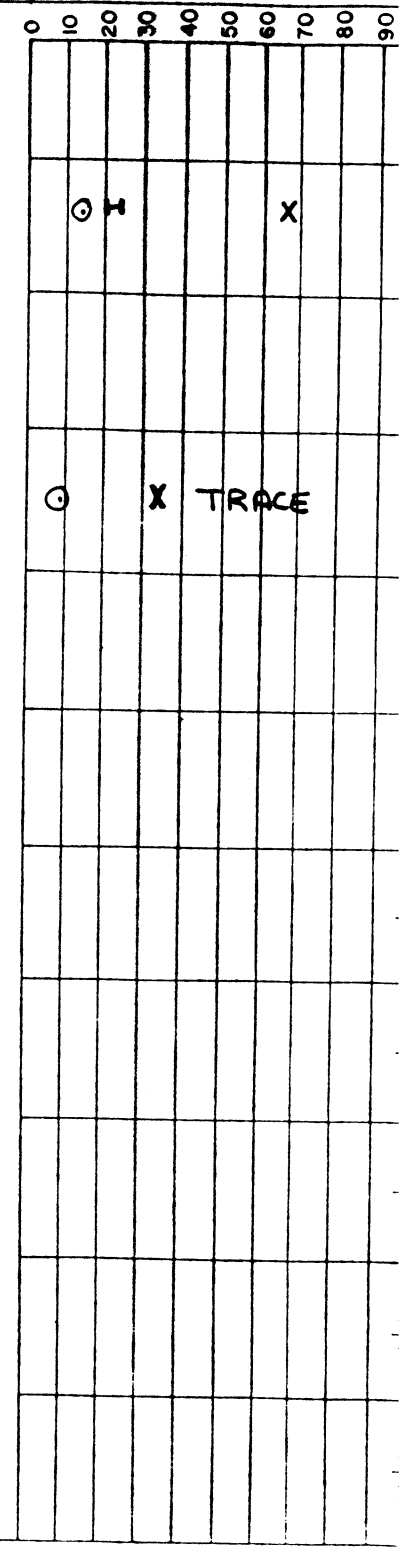
HOLE LOCATION 1682+400 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78.11.03 | DRILL UNIT | TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
		A/P	1		2160	ML	7	24		
		A/P	2		2250	SC	31	36	9	
	END HOLE									

0 - % MOISTURE CONTENT
x - % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 275

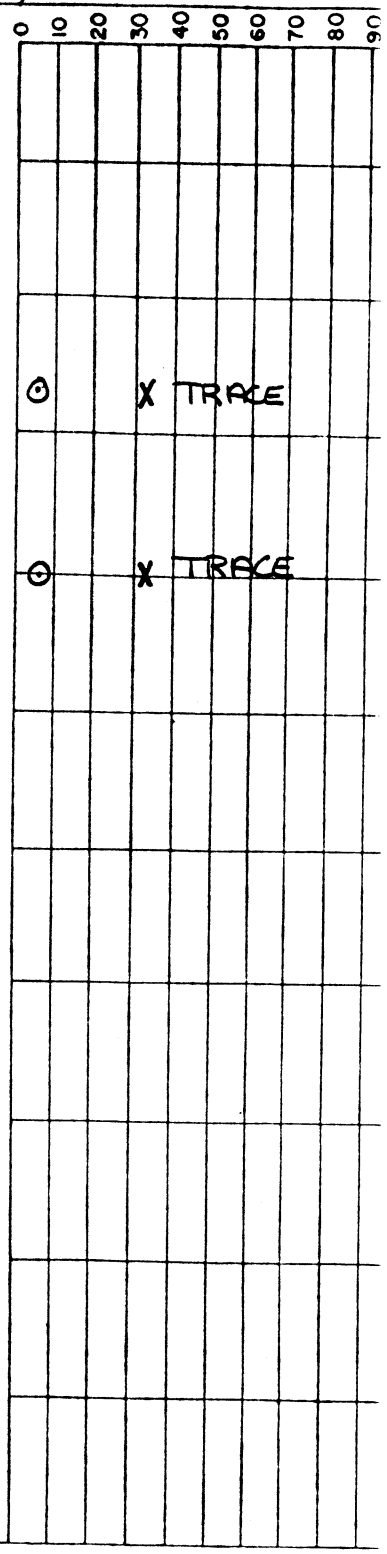
HOLE LOCATION 1682+448 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78.11.07 | DRILL UNIT | TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3			A	P	1	2209	SM	27	42	
4			A	P	2	2164	SC	34	34	9
4.6	END HOLE									

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

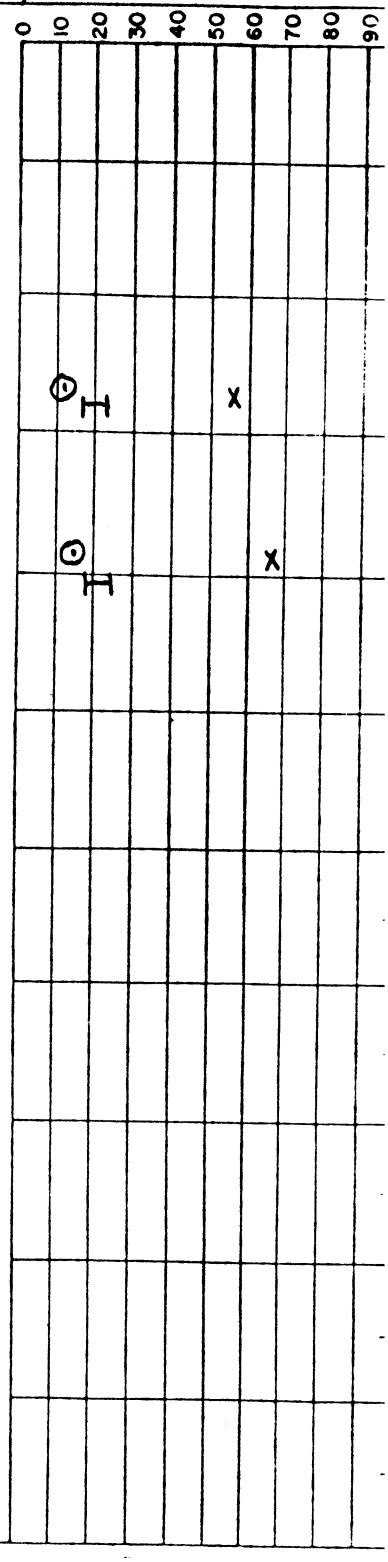
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 276
HOLE LOCATION	1682+518	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78.11.7	DRILL UNIT	TECHNICIAN S.C

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3			A/P	1	2168	CL-ML	9.6	33.8		
4			A/P	2	2176	CL-ML	5.0	29.4	22.9	
5	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 277
HOLE LOCATION	1682+589	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78·11·07	DRILL UNIT	TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
3			A/P	1	2163	SM	26	39	8	
4			A/P	2	2597	SM	33	46	9.1	
5	END HOLE									

0 - % MOISTURE CONTENT
x - % < .074mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

TRACE

NP

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 278

HOLE LOCATION 1682+672 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78.11.07 | DRILL UNIT | TECHNICIAN SC.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1										
2			A/P	1	2228	GM	40	31		
3										
4			A/P	2	2353	ML	0	0		
5	END HOLE									
6										
7										
8										
9										
10										

0 - % MOISTURE CONTENT
x - % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

⊙ X N.P

⊙ N.P.

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 279

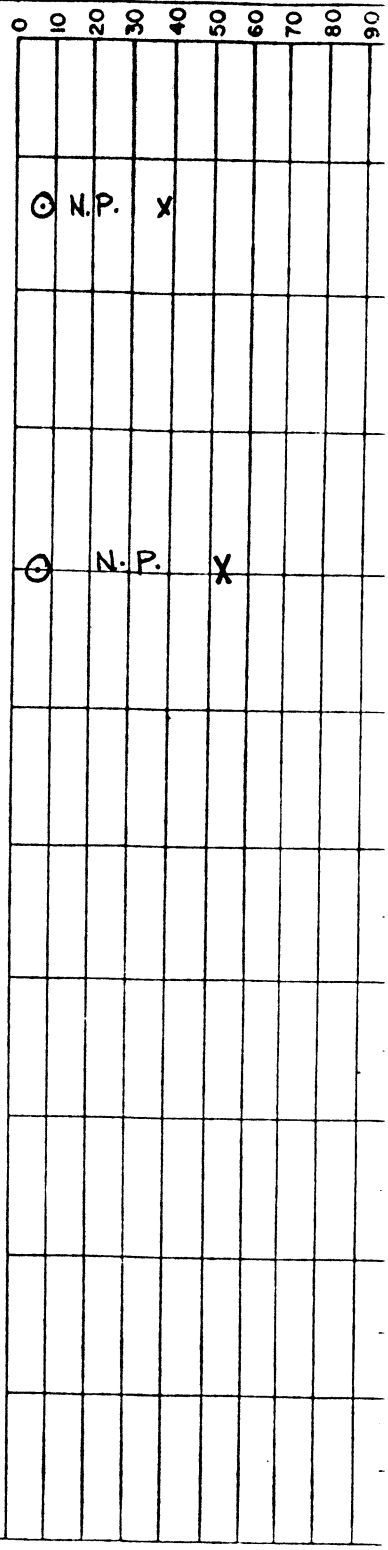
HOLE LOCATION 1682+770 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78·11·07 | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300mm
1										
2		A|P	1		2229	SM	23	40		
3										
4		A|P	2		2606	ML	14	33	14	
5	END HOLE									
6										
7										
8										
9										
10										

SAMPLE DATA

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 280
HOLE LOCATION 1682 + 838 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78.11.07 | DRILL UNIT | TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3		A/P	1		2569	ML-OL	12.1	35.4		
4		A/P	2		2169	SM	24.0	22.6	11.3	
5	END HOLE									

0 – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

TRACE

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 281

HOLE LOCATION 1682+908 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78-11-07 | DRILL UNIT. | TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1										
2			A	1P	1	2249	GM	39	35	5
3										
4			A	1P	2	2165	GM	54	25	
5	END HOLE									
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

⊙ X TRACE

⊙ X TRACE

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 — HOLE No. 282
HOLE LOCATION 1682+990 — ELEV. — DEPTH TO G.W.L.
DATE DRILLED 78.11.07 — DRILL UNIT — TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
		A|P	1	2220	SM	15	38			
		A|P	2	2232	SM	36	41			
	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

⊙ N.P. x

⊙ x N.P.

1 2 3 4 5 6 7 8 9 10

Public Works Canada

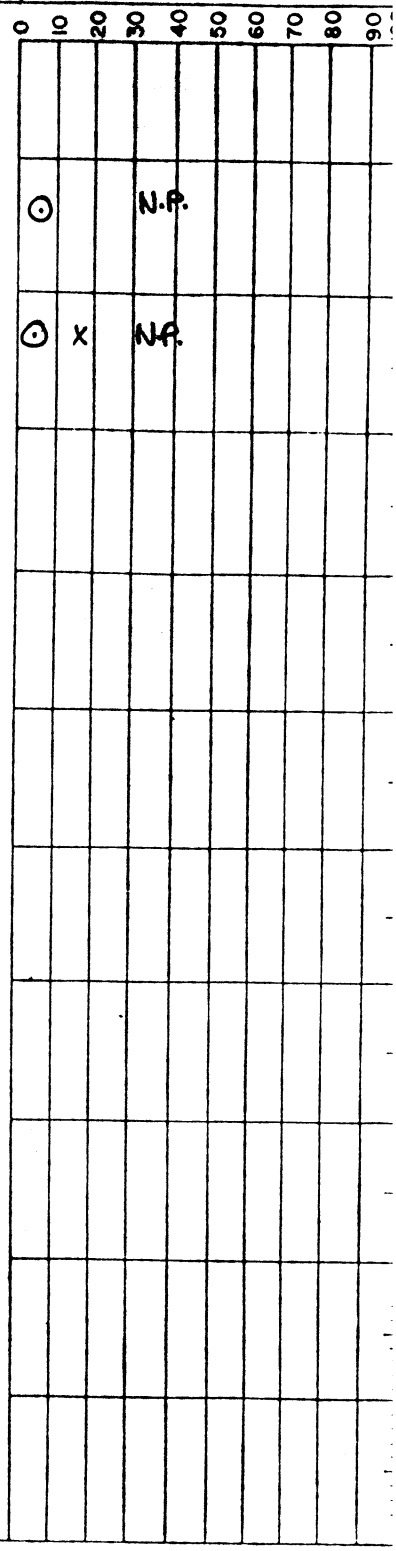
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 283
HOLE LOCATION	1683+045	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78.11.7	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1										
2			A/P	1	2235	ML	0	0		
			A/P	2	2508	GM	68	14		
3	REFUSAL									
4										
5										
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 — HOLE No. 284

HOLE LOCATION 1683+118 — ELEV. — DEPTH TO G.W.L.

DATE DRILLED 78.11.7 — DRILL UNIT — TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
3		Alp	1		2213	GC	34	22		
4		Alp	2		2223	GM	35	28	9	
4.6	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

1 2 3 4 5 6 7 8 9 10

⊙⊢ x

⊙ x NP

Public Works Canada

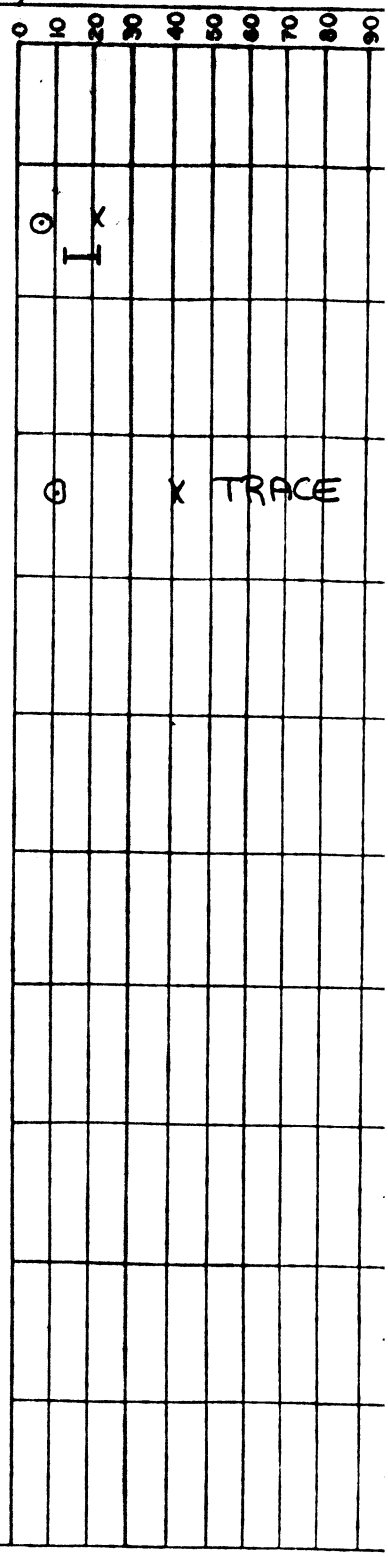
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9		HOLE No. 285
HOLE LOCATION 1683+187	ELEV.	DEPTH TO G.W.L.
DATE DRILLED 78·11·07	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1										
2			A/P	1	2175	SC	34	45		
3										
4			A/P	2	2212	SC	24	35	3	
5	END HOLE									
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

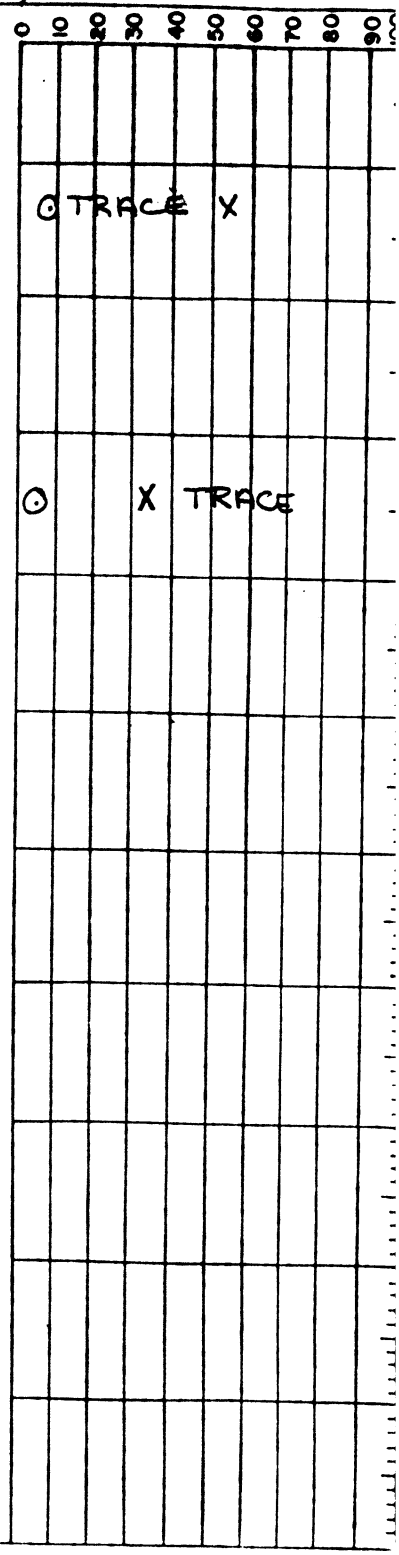
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 286
HOLE LOCATION 1683+245 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78·11·07 | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
1			A/P	1	2260	ML	8	38		
2										
3			A/P	2	2262	SC	28	39	6	
4										
5	END HOLE									
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 287

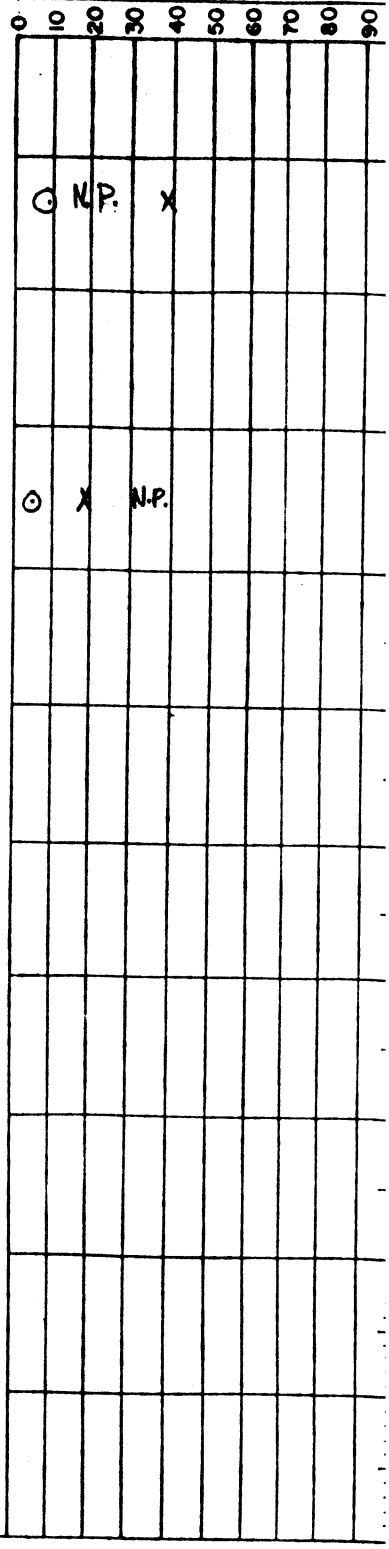
HOLE LOCATION 1683+328 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78.11.07 | DRILL UNIT | TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1										
2		A/P	1		2241	SM	30	31		
3										
4		A/P	2		2210	GM	58	22	2	
5	END HOLE									
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 28B
HOLE LOCATION	1683+403	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78.11.07	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1										
2			A/P	1	2302	SM	27	36	7	
3										
4			A/P	2	2230	GM	44	35		
5	END HOLE									
6										
7										
8										
9										
10										

0 - % MOISTURE CONTENT
x - % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

1 ⊙ N.P. X
2
3 ⊙ X N.P.

Public Works Canada

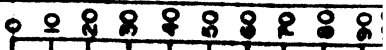
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

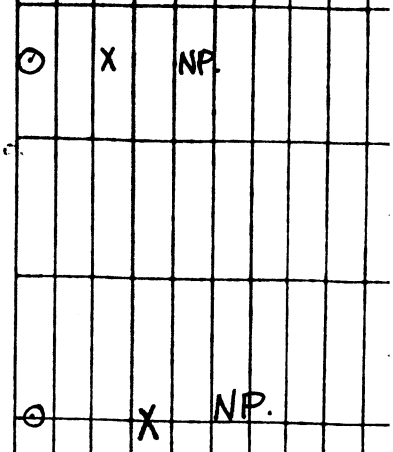
SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 289
HOLE LOCATION	1683+470	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78·11·07	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1			A/P	1	2478	SM	27.2	48.1	4.3	
2										
3										
4			A/P	2	2477	SM	31.1	36.9	7.3	
5										
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT





Public Works Canada

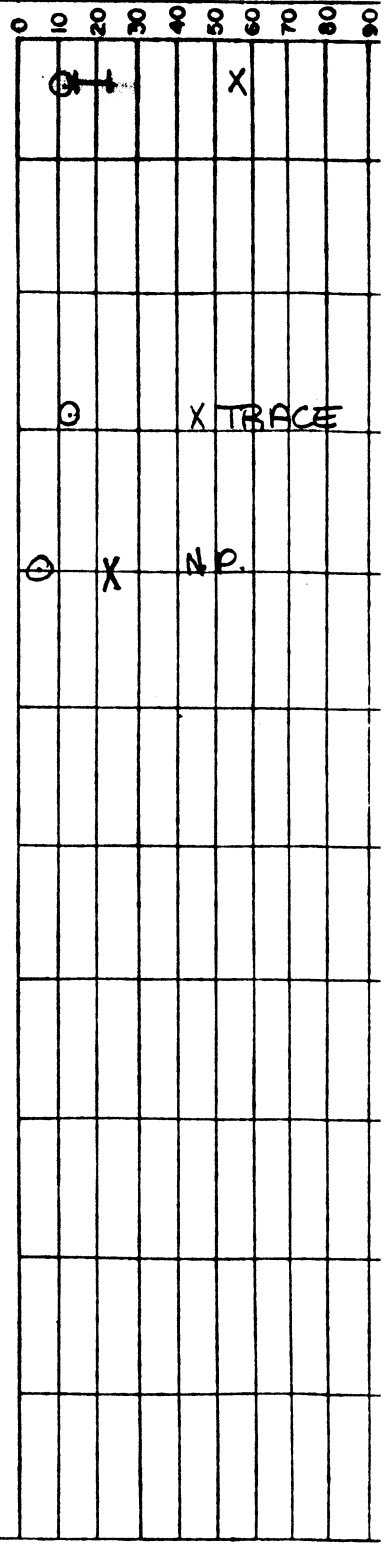
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 290
HOLE LOCATION	1683+535	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78-11-07	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
0			A/P	1	2476	CL-ML	12	31	3	
1										
2										
3			A/P	2	2162	SM	16	39	-	
4			A/P	3	2208	GM	50	27	2	
5	END HOLE									
6										
7										
8										
9										
10										

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

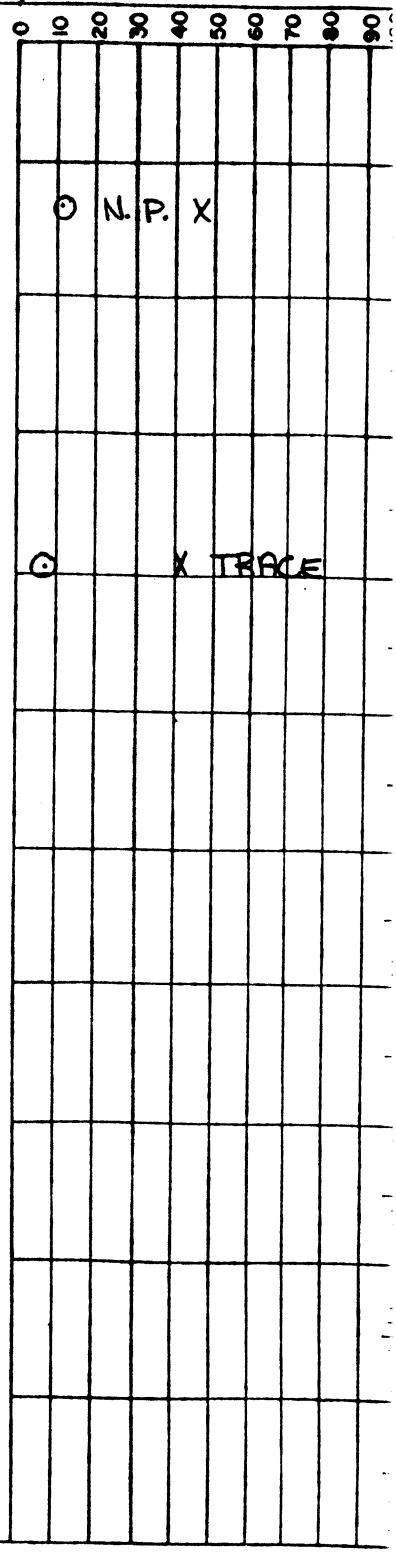
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 291
HOLE LOCATION	1683+630	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78.11.07	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1			A|P	1	2240	SM	21	31	-	
2										
3										
4			A|P	2	2173	SM	20	39	8	
5	END HOLE									
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 292
HOLE LOCATION 1683+710 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78.11.07 | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm	0 – % MOISTURE CONTENT; x – % < .074 mm; LIQUID LIMIT ⊢ PLASTIC LIMIT
1											
2			A/P	1	2473	GM.	49	35	4		⊙ x N.P.
3											
4			A/P	2	2234	GM	41	30			⊙ x TRACE.
5	END HOLE										
6											
7											
8											
9											
10											

0 10 20 30 40 50 60 70 80 90

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 293

HOLE LOCATION 1683+795 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78.11.08 | DRILL UNIT | TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
		A/P	1		2365	GM	42	41		
		A/P	2		2308	SM	13	42	11	
	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90 100

⊙ x TRACE

⊙ TRACE x

Public Works Canada

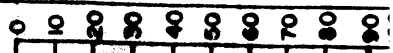
MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 294
HOLE LOCATION	1683+865	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78.11.08	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1			A/P	1	2580	SM	28	45	5	
2										
3			A/P	2	2590	SM	14	60		
4										
4.6	END HOLE									
5										
6										
7										
8										
9										
10										

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



1	⊙	x	N.P.
3	⊙	x	N.P.

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 295
HOLE LOCATION	1683+939	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78.11.08	DRILL UNIT	TECHNICIAN S.C.

DEPTH (m)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1	REFUSAL									

0 – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

1 2 3 4 5 6 7 8 9 10

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 296

HOLE LOCATION 1684+010 | ELEV. | DEPTH TO G.W.L.

DATE DRILLED 78-11-08 | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1										
2			A/P	1	2306	SM	9	44		
3			A/P	2	2263	ML	0	16	61	
4	REFUSAL.									
5										
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

⊙ TRACE X

⊙ TRACE X

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

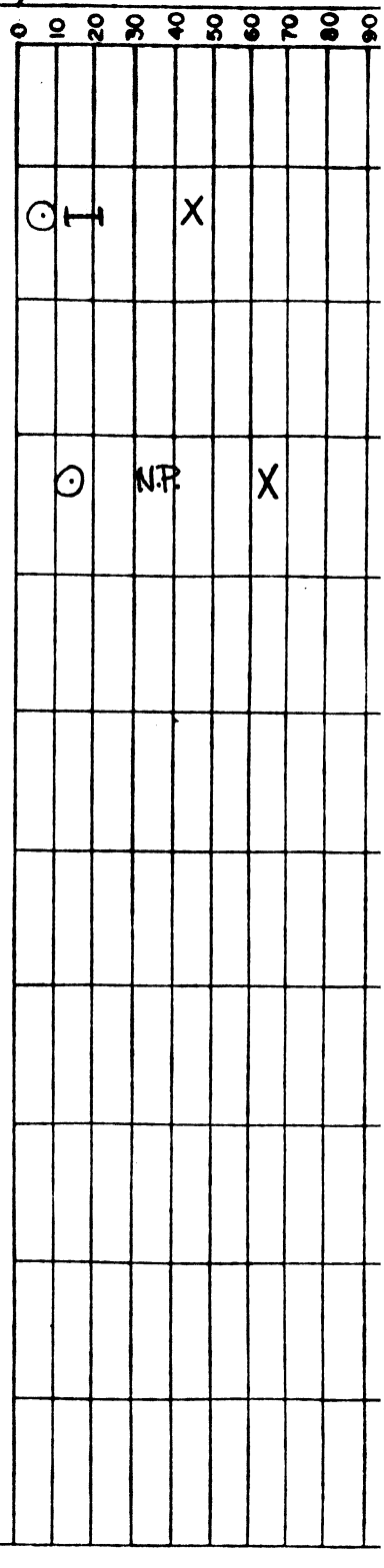
SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9			HOLE No. 297.
HOLE LOCATION 1684+088		ELEV.	DEPTH TO G.W.L.
DATE DRILLED 78.11.08	DRILL UNIT		TECHNICIAN S.C.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1										
2			A/P	1	2375	SC	25	31		
3										
4			A/P	2	2226	ML	11	24	37	
5	END HOLE									
6										
7										
8										
9										
10										

0 – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 298
HOLE LOCATION 1684+172 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78.11.08 | DRILL UNIT | TECHNICIAN S C.

SAMPLE DATA

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
			A/P	1	2471	ML	3	33	11	
			A/P	2	2243	SM	27	44		
			A/P	3	2257	SM	28	35	11	
	END HOLE									

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊣ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

1 2 3 4 5 6 7 8 9 10

⊙	N.P.	X	
⊙	X	TRACE	
⊙	X	TRACE	

Dwg No 60-253

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 299
HOLE LOCATION 1684+252 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78.11.08 | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1			A/P	1	2300	GM	0	0		
2										
3			A/P	2	2602	SM	22	37	13	
4										
5										
6										
7										
8										
9										
10										

0 – % MOISTURE CONTENT
x – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

⊙ TRACE

⊙ TRACE X

Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

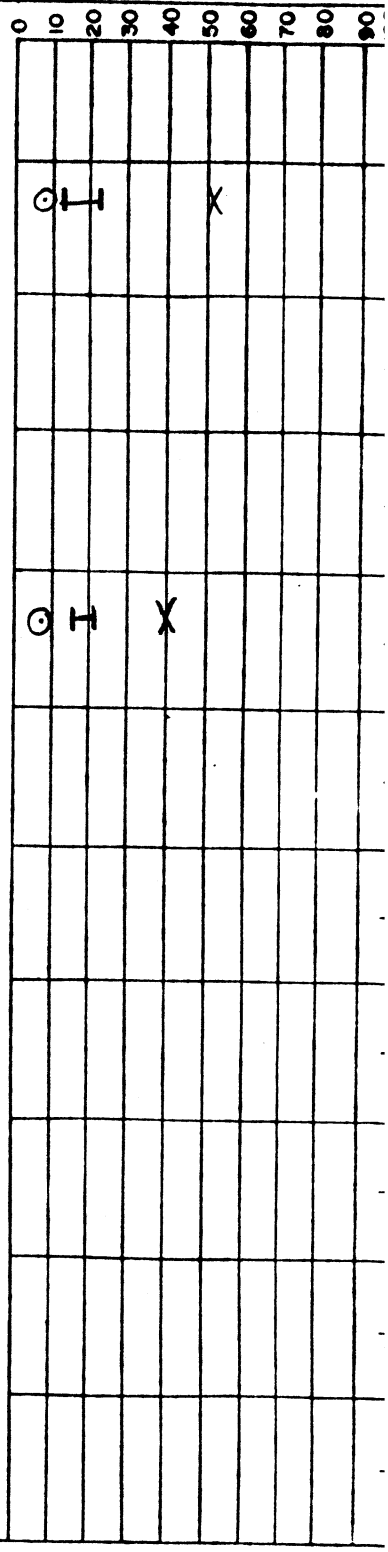
SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION SHAKWAK SEGMENT 9 | HOLE No. 300
HOLE LOCATION 1684+368 | ELEV. | DEPTH TO G.W.L.
DATE DRILLED 78.11.08 | DRILL UNIT | TECHNICIAN S.C.

DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE DATA: SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005mm	STD. PENETRATION BLOWS/300mm
1										
2			A/P	1	2167	CL	12	36		
3										
4			A/P	2	2261	GC-GM	30	30	10	
5	END HOLE									
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90



Public Works Canada

MATERIALS QUALITY CONTROL LABORATORY
WHITEHORSE, Y.T.

SUBSURFACE EXPLORATION AND TESTING REPORT

PROJECT/SECTION	SHAKWAK SEGMENT 9		HOLE No. 301
HOLE LOCATION	1684 + 487	ELEV.	DEPTH TO G.W.L.
DATE DRILLED	78.11.08	DRILL UNIT	TECHNICIAN S.C.

SAMPLE DATA

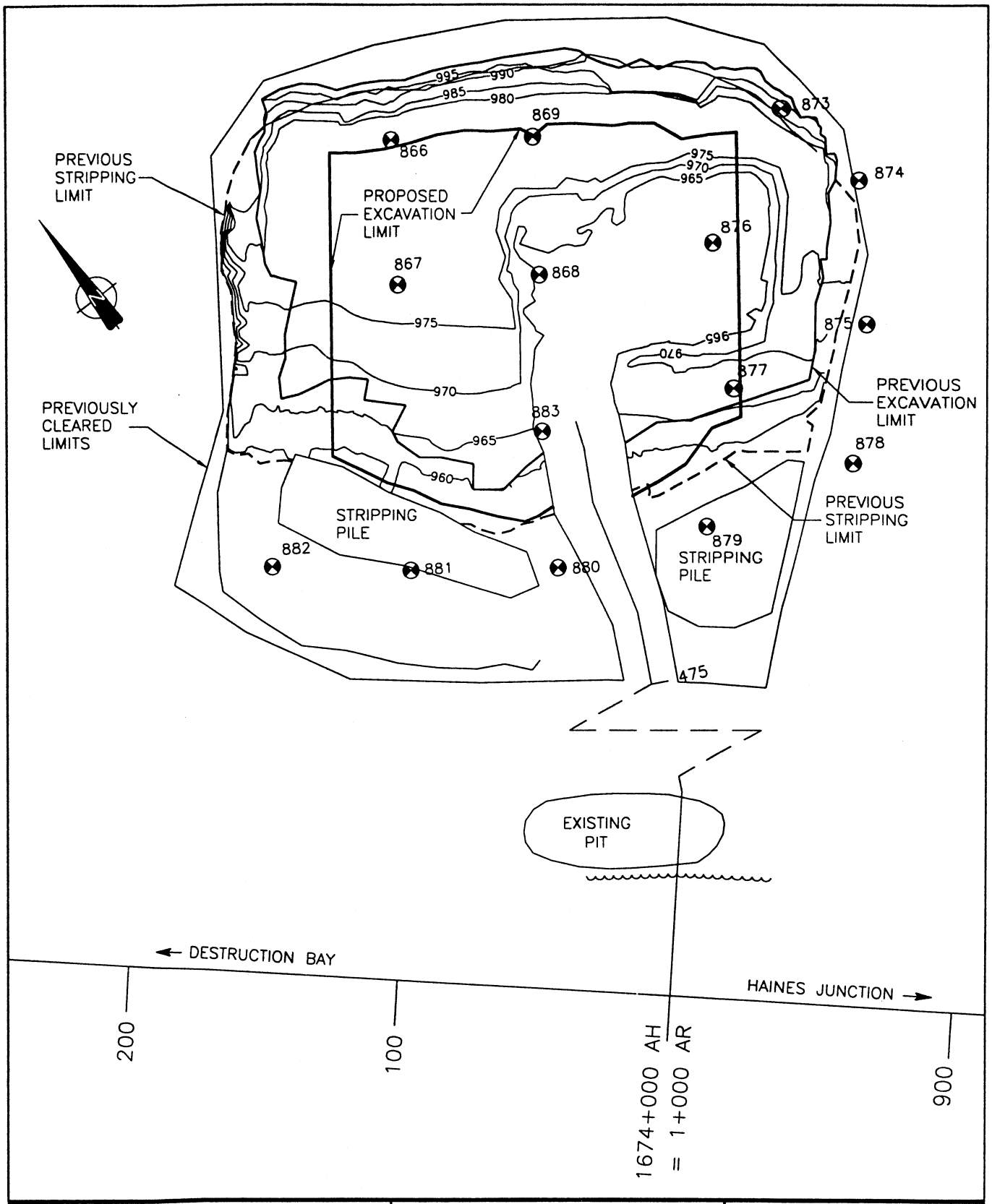
DEPTH (m.)	DESCRIPTION OF MATERIAL	PERMAFROST CLASSIFICATION	SAMPLE TYPE	FIELD No.	LAB No.	UNIFIED CLASSIFICATION	% GRAVEL	% SAND	% < .005 mm	STD. PENETRATION BLOWS/300 mm
1										
2		A/P	1	2211	SAMPLE LOST.					
3										
4		A/P	2	2355	SM	14	46	4		
5	END HOLE									
6										
7										
8										
9										
10										

O – % MOISTURE CONTENT
X – % < .074 mm
LIQUID LIMIT ⊢ PLASTIC LIMIT

0 10 20 30 40 50 60 70 80 90

⊙ TRACE X

QUARRY SOURCE TESTING
Km 1674 RHS
ALASKA HIGHWAY



Yukon Community and Transportation Services Transportation Engineering Branch	SITE PLAN SEG 9B ROCK QUARRY km 1674 RHS ALASKA HIGHWAY, YUKON	designed: J. BELISLE drawn: J. BELISLE app'd: date: 01-11-21 scale: 1:2000 drwg: 01-1674A-SP

SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 09	TEST HOLE NO: 576-866
ENGINEERING CAPITAL	KM 1674 RHS	Project No: 092-202101-0363
AIR ROTARY	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▯▯ TUBE ▯▯ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0								0.0
1.0								1.0
2.0	ROCK @ 2.1m -white rock dust 2.1 to 10.4m -slow drilling -no coarse chips							2.0
3.0								3.0
4.0								4.0
5.0								5.0
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0
11.0	END HOLE @ 10.4m Note: visible surface rock between testhole #866 & #865 -no water in testhole 2000-09-03							11.0
12.0								12.0
13.0								13.0
14.0								14.0
15.0								15.0
16.0								16.0

Government of Yukon
Transportation Engineering

LOGGED BY: G.C.	COMPLETION DEPTH: 10.4 m
REVIEWED BY:	COMPLETE: 00/08/31
Fig. No:	Page 1 of 1

00/12/11 02:52PM

SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 09	TEST HOLE NO: 576-867
ENGINEERING CAPITAL	KM 1674 RHS	Project No: 092-202101-0363
AIR ROTARY	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▯ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0								0.0
1.0								1.0
2.0	ROCK @ 1.5m -white rock dust 1.5m to 10.4m -slow drilling -no coarse chips							2.0
3.0								3.0
4.0								4.0
5.0								5.0
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0
11.0	END HOLE @ 10.4m Note: Steep slope below testhole -surface rock 3m upchain -water in hole 3 days after drilling							11.0
12.0								12.0
13.0								13.0
14.0								14.0
15.0								15.0
16.0								16.0

Government of Yukon
Transportation Engineering

LOGGED BY: G.C.	COMPLETION DEPTH: 10.4 m
REVIEWED BY:	COMPLETE: 00/09/01
Fig. No:	Page 1 of 1

00/12/14 09:30AM

SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 09	TEST HOLE NO: 576–868
ENGINEERING CAPITAL	KM 1674 RHS	Project No: 092-202101-0363
AIR ROTARY	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▥ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0								0.0
1.0	ROCK @ 1.1m –slow drilling –coarse rock chips							1.0
2.0								2.0
3.0								3.0
4.0								4.0
5.0								5.0
6.0								6.0
7.0	END HOLE @ 6.7m Note: surface rock 10 & 15m rt –steep slope below test hole –H20 in hole 3 days after drilling							7.0
8.0								8.0
9.0								9.0
10.0								10.0
11.0								11.0
12.0								12.0
13.0								13.0
14.0								14.0
15.0								15.0
16.0								16.0

Government of Yukon
Transportation Engineering

LOGGED BY: G.C.	COMPLETION DEPTH: 6.7 m
REVIEWED BY:	COMPLETE: 00/09/01
Fig. No:	Page 1 of 1

00/12/14 09:00AM

SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 09	TEST HOLE NO: 576-869
ENGINEERING CAPITAL	KM 1674 RHS	Project No: 092-202101-0363
AIR ROTARY	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▯ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0								0.0
1.0	ROCK @ .61m -slow drilling -no large rock chips							1.0
2.0								2.0
3.0								3.0
4.0								4.0
5.0								5.0
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0
11.0	END HOLE @ 10.4m Note: no visible surface rock. -water in hole 3 days after drilling							11.0
12.0								12.0
13.0								13.0
14.0								14.0
15.0								15.0
16.0								16.0

Government of Yukon
Transportation Engineering

LOGGED BY: G.C.	COMPLETION DEPTH: 10.4 m
REVIEWED BY:	COMPLETE: 00/09/01
Fig. No:	Page 1 of 1

00/12/11 02:52PM

SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 09	TEST HOLE NO: 576-873
ENGINEERING CAPITAL	KM 1674 RHS	Project No: 092-202101-0363
AIR ROTARY	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ☒ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▯ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0								0.0
1.0								1.0
2.0								2.0
3.0								3.0
4.0	ROCK @ 3.7m							4.0
5.0								5.0
6.0								6.0
7.0								7.0
8.0	-damp cuttings 7.3 to 9.1m -possibly sandstone -damp (moisture) -easy drilling							8.0
9.0	-dry dust below 9.1m							9.0
10.0								10.0
11.0	END HOLE @ 10.4m Note: test hole in gulley - water in hole imediately after drilling (5 min.)							11.0
12.0								12.0
13.0								13.0
14.0								14.0
15.0								15.0
16.0								16.0

Government of Yukon
Transportation Engineering

LOGGED BY: G.C.	COMPLETION DEPTH: 10.4 m
REVIEWED BY:	COMPLETE: 00/09/03
Fig. No:	Page 1 of 1

00/12/14 09:00AM

SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 09	TEST HOLE NO: 576-874
ENGINEERING CAPITAL	KM 1674 RHS	Project No: 092-202101-0363
AIR ROTARY	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▯ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0								0.0
1.0								1.0
	ROCK @ .1.5m							
2.0								2.0
3.0								3.0
4.0								4.0
5.0								5.0
6.0								6.0
7.0								7.0
8.0								8.0
	ROCK CHIPS 8.5m TO 10.4m –brown –large chips 12.5mm							
9.0								9.0
10.0								10.0
	END HOLE @ 10.4m Note: visible rock 15m lt & 3m rt –visible surface rock 25m downchain on trail 50m rt of testhole #877 –water in hole 3 days after drilling							
11.0								11.0
12.0								12.0
13.0								13.0
14.0								14.0
15.0								15.0
16.0								16.0

Government of Yukon
Transportation Engineering

LOGGED BY: G.C.	COMPLETION DEPTH: 10.4 m
REVIEWED BY:	COMPLETE: 00/08/31
Fig. No:	Page 1 of 1

00/12/14 09:00AM

SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 09	TEST HOLE NO: 576-875
ENGINEERING CAPITAL	KM 1674 RHS	Project No: 092-202101-0363
AIR ROTARY	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▯ TUBE ▯ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0								0.0
1.0	ROCK @ 0.9m							1.0
2.0								2.0
3.0								3.0
4.0								4.0
5.0								5.0
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0
11.0	END HOLE @ 10.4m Note: Visible surface rock 5m from Testhole.							11.0
12.0								12.0
13.0								13.0
14.0								14.0
15.0								15.0
16.0								16.0

Government of Yukon
Transportation Engineering

LOGGED BY: G.C.	COMPLETION DEPTH: 10.4 m
REVIEWED BY:	COMPLETE: 00/08/31
Fig. No:	Page 1 of 1

00/12/14 08:59AM

SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 09	TEST HOLE NO: 576-876
ENGINEERING CAPITAL	KM 1674 RHS	Project No: 092-202101-0363
AIR ROTARY	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ☰ BULK ▯▯ TUBE ▯▯ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0								0.0
1.0								1.0
2.0								2.0
	ROCK @ 2.4m							
3.0								3.0
4.0								4.0
5.0								5.0
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0
	END HOLE @ 10.4m							
11.0	Note: last length of steel was wet when it was removed.							11.0
12.0	-water in hole 5 mins after drilling							12.0
13.0								13.0
14.0								14.0
15.0								15.0
16.0								16.0

Government of Yukon
Transportation Engineering

LOGGED BY: G.C.	COMPLETION DEPTH: 10.4 m
REVIEWED BY:	COMPLETE: 00/09/03
Fig. No:	Page 1 of 1

00/12/11 02:53PM

SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 09	TEST HOLE NO: 576-877
ENGINEERING CAPITAL	KM 1674 RHS	Project No: 092-202101-0363
AIR ROTARY	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▯▯ TUBE ▯▯ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0								0.0
1.0								1.0
	ROCK @ 1.5m							
2.0	-12.5mm rock chips							2.0
3.0								3.0
4.0								4.0
5.0								5.0
6.0								6.0
	-brown dust & rock chips 6.1 to 7.3m							
7.0	-white dust below 7.3							7.0
8.0								8.0
	-brown seam @ 8.2m							
9.0								9.0
10.0								10.0
	END HOLE @ 10.4m							
11.0	Note: Hole was dry after drilling							11.0
12.0								12.0
13.0								13.0
14.0								14.0
15.0								15.0
16.0								16.0

Government of Yukon
Transportation Engineering

LOGGED BY: G.C.	COMPLETION DEPTH: 10.4 m
REVIEWED BY:	COMPLETE: 00/09/03
Fig. No:	Page 1 of 1

00/12/14 09:20AM

SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 09	TEST HOLE NO: 576-878
ENGINEERING CAPITAL	KM 1674 RHS	Project No: 092-202101-0363
AIR ROTARY	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ☒ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0								0.0
1.0								1.0
2.0								2.0
3.0	ROCK –harder drilling than testhole #879 –slower drilling –coarse rock chips 12.5mm							3.0
4.0								4.0
5.0								5.0
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0								10.0
11.0	END HOLE @ 10.4m Note: Water in hole 3 days after drilling.							11.0
12.0								12.0
13.0								13.0
14.0								14.0
15.0								15.0
16.0								16.0

Government of Yukon
Transportation Engineering

LOGGED BY: G.C.	COMPLETION DEPTH: 10.4 m
REVIEWED BY:	COMPLETE: 00/08/31
Fig. No:	Page 1 of 1

00/12/14 08:59AM

SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 09	TEST HOLE NO: 576-879
ENGINEERING CAPITAL	KM 1674 RHS	Project No: 092-202101-0363
AIR ROTARY	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ☒ AUGER ▤ BULK ▯ TUBE ▯ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0								0.0
1.0								1.0
2.0								2.0
3.0	-boulder @ 2.74m							3.0
4.0								4.0
5.0	ROCK @4.3m -white -drillers comment - rock was easy drilling							5.0
6.0								6.0
7.0								7.0
8.0								8.0
9.0								9.0
10.0	END HOLE @ 10.1m							10.0
11.0								11.0
12.0								12.0
13.0								13.0
14.0								14.0
15.0								15.0
16.0								16.0

Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 10.1 m
	REVIEWED BY:	COMPLETE: 00/08/31
	Fig. No:	Page 1 of 1

00/12/14 08:59AM

SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 09	TEST HOLE NO: 576-880
ENGINEERING CAPITAL	KM 1674 RHS	Project No: 092-202101-0363
AIR ROTARY	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▯ TUBE ▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SILT WITH SUB-ROUNDED GRAVEL							0.0
1.0								1.0
2.0								2.0
3.0								3.0
4.0								4.0
5.0								5.0
6.0								6.0
7.0								7.0
8.0								8.0
9.0	ROCK @ 8.5m -large rock chips -hard slow drilling -driller comment - granite -grey to white							9.0
10.0								10.0
11.0								11.0
12.0								12.0
13.0								13.0
14.0	END HOLE @ 14.0m							14.0
15.0								15.0
16.0								16.0

Government of Yukon
Transportation Engineering

LOGGED BY: C.C.	COMPLETION DEPTH: 14.0 m
REVIEWED BY:	COMPLETE: 00/09/03
Fig. No:	Page 1 of 1

00/12/14 09:00AM

SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 09	TEST HOLE NO: 576-881
ENGINEERING CAPITAL	KM 1674 RHS	Project No: 092-202101-0363
AIR ROTARY	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	BOULDER @ 4.6m -white - brown -(1500 pounds down press - soft rock)							0.0
7.0	WEATHERED ROCK -possibly wet -looked like wet coloured silt with rock chips							7.0
12.0	END HOLE @ 12.2m Note: Steel stuck - 45min to remove -Air rushing from hole for a couple minutes after removing steel.							12.0
16.0								16.0

Government of Yukon
Transportation Engineering

LOGGED BY: G.C.	COMPLETION DEPTH: 12.2 m
REVIEWED BY:	COMPLETE: 00/09/03
Fig. No:	Page 1 of 1

00/12/11 02:53PM

SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 09	TEST HOLE NO: 576-882
ENGINEERING CAPITAL	KM 1674 RHS	Project No: 092-202101-0363
AIR ROTARY	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ▤ BULK ▯▯ TUBE ▯ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0								0.0
1.0								1.0
▼	-water @ 1.5m - second length of steel							▼
2.0								2.0
3.0								3.0
4.0								4.0
5.0	ROCK @ 4.6m							5.0
6.0								6.0
7.0								7.0
8.0	-drillers comment was (very hard rock)							8.0
9.0								9.0
10.0								10.0
11.0	END HOLE @ 10.4m							11.0
12.0								12.0
13.0								13.0
14.0								14.0
15.0								15.0
16.0								16.0

Government of Yukon Transportation Engineering	LOGGED BY: G.C.	COMPLETION DEPTH: 10.4 m
	REVIEWED BY:	COMPLETE: 00/09/03
	Fig. No:	Page 1 of 1

00/12/11 02:53PM

SUBSURFACE EXPLORATION & TEST REPORT	SHAKWAK SEG 09	TEST HOLE NO: 576-883
ENGINEERING CAPITAL	KM 1674 RHS	Project No: 092-202101-0363
AIR ROTARY	LOCATION: SEE PLAN	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▥ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ROCK @ .05m							0.0
1.0								1.0
2.0								2.0
3.0								3.0
4.0								4.0
5.0								5.0
6.0								6.0
7.0	END HOLE @ 6.7m -no water in hole							7.0
8.0								8.0
9.0								9.0
10.0								10.0
11.0								11.0
12.0								12.0
13.0								13.0
14.0								14.0
15.0								15.0
16.0								16.0

Government of Yukon
Transportation Engineering

LOGGED BY: G.C.	COMPLETION DEPTH: 6.7 m
REVIEWED BY:	COMPLETE: 00/09/03
Fig. No:	Page 1 of 1

00/12/11 02:53PM

GRANULAR SOURCE TESTING
Km 1691.3 RHS
ALASKA HIGHWAY

HISTORY OF AGGREGATE PRODUCTION

Alaska Highway Km 1693.0 R.H.S. (Silver City)
115 G-07

Average Crusher Run Characteristics of Material Produced

File Number --- 2142-5-70 Contractor --- Nuway Crushing Ltd.
Commenced --- 92-06-04 Completed --- 92-06-05 No. of tests --- 11
Type of aggregate --- 20 mm B.S.T. Aggregate Type II
Amount Produced --- ??? m³

Sieve Size mm	20.0	12.5	5.00	2.50	1.25	0.315	0.080
Percent Passing	100	83.4	49.4	35.6	26.4	10.8	4.8

Moisture Content - 2.1 % Standard Proctor
Fracture - 70.9 % Kg/m³ @ % moisture

File Number --- 2142-5-70 Contractor --- Nuway Crushing Ltd.
Commenced --- 92-06-04 Completed --- 92-06-06 No. of tests --- 22
Type of aggregate --- 20 mm Granular A"
Amount Produced --- ??? m³

Sieve Size mm	20.0	12.5	5.00	2.50	1.25	0.315	0.080
Percent Passing	99.9	83.0	50.3	34.7	27.0	11.3	5.2

Moisture Content - 2.7 % Standard Proctor
Fracture - 64.3 % Kg/m³ @ % moisture

File Number --- 2145-4 Contractor --- Nuway Crushing Ltd.
Commenced --- 94-03-22 Completed --- 94-03-26 No. of tests --- 36
Type of aggregate --- 20 mm Granular "A"
Amount Produced --- 10,032 m³

Sieve Size mm	20.0	12.5	5.00	2.50	1.25	0.315	0.080
Percent Passing	100	85.5	59.0	-	34.4	13.8	5.9

Moisture Content - 2.4 % Standard Proctor
Fracture - 65.2 % Kg/m³ @ % moisture

File Number --- 2145-4 Contractor --- Nuway Crushing Ltd.
Commenced --- 94-03-26 Completed --- 94-03-31 No. of tests --- 40
Type of aggregate --- 20 mm B.S.T. Aggregate
Amount Produced --- 8,930 m³

Sieve Size mm	20.0	12.5	5.00	2.50	1.25	0.315	0.080
Percent Passing	100	72.6	36.3	26.2	19.0	6.4	4.8

Moisture Content - 1.6 % Standard Proctor
Fracture - 69.5 % Kg/m³ @ % moisture

115 G-07 cont'd

File Number --- 2550-22/01-24 Contractor --- North American Roads (Nuway Crushing)
Commenced --- 01-07-14 Completed --- 01-08-02 No. of tests --- 105
Type of aggregate --- 20 mm Granular "A" Base Course
Amount Produced --- 44,500 m³

Sieve Size mm	20.0	12.5	5.00	2.50	1.25	0.315	0.080
Percent Passing	100	87.2	52.9	38.5	28.4	11.7	5.9

Moisture Content - 2.2 % Standard Proctor
Fracture - 63.4 % 2246 Kg/m³ @ 7.4 % moisture

==========

File Number --- 2550-22/01-24 Contractor --- North American Roads (Nuway Crushing)
Commenced --- 01-07-26 Completed --- 01-08-01 No. of tests --- 38
Type of aggregate --- 20 mm B.S.T. Aggregate
Amount Produced --- 10,500 m³

Sieve Size mm	20.0	12.5	5.00	2.50	1.25	0.315	0.080
Percent Passing	100	83.3	41.4	28.3	20.4	9.0	4.4

Moisture Content - 1.5 % Standard Proctor
Fracture - 61.6 % Kg/m³ @ % moisture

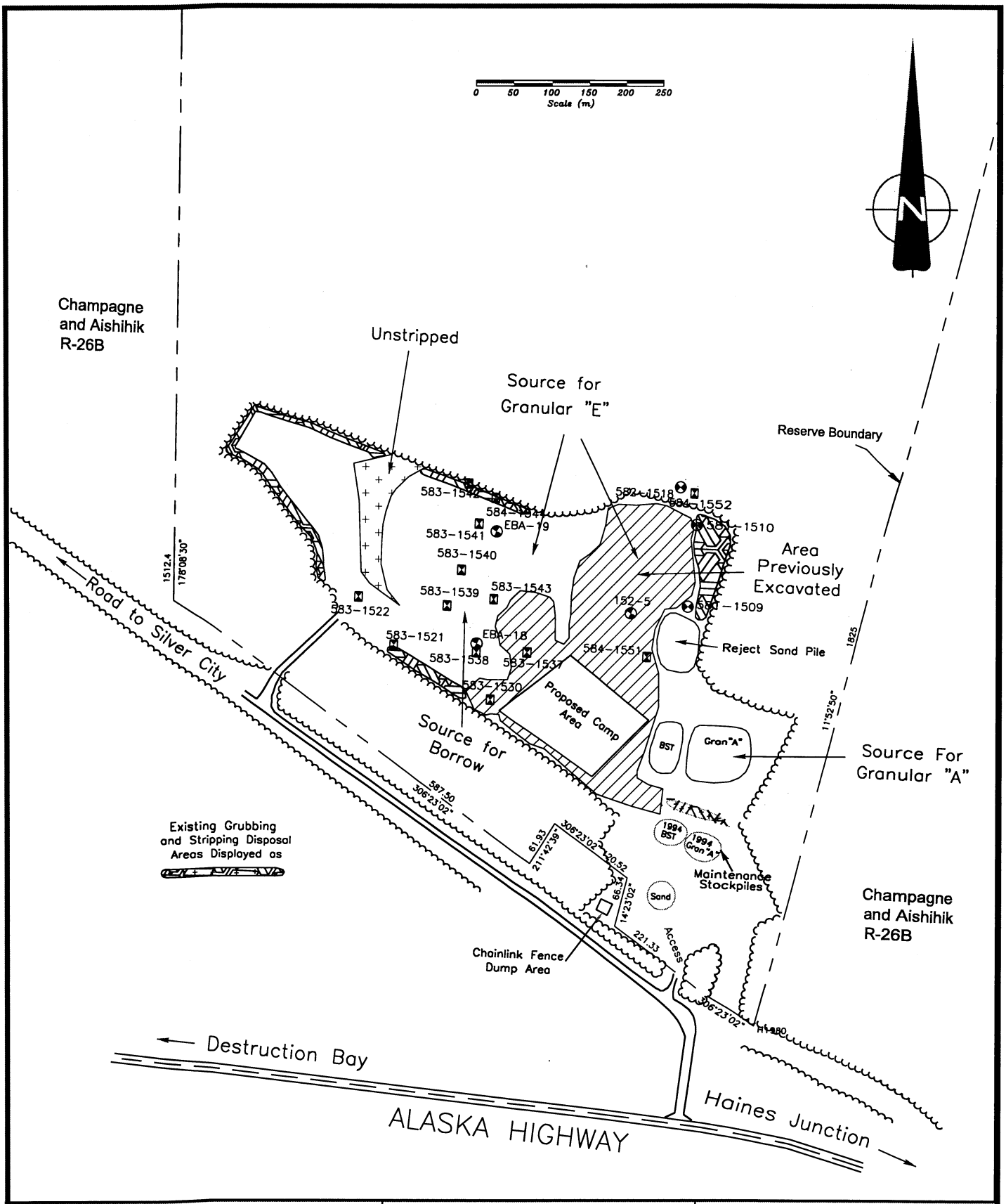
==========

File Number --- 2550-22/01-24 Contractor --- North American Roads (Nuway Crushing)
Commenced --- 01-10-10 Completed --- 01-10-19 No. of tests --- 78
Type of aggregate --- 20 mm Granular "A" Base Course
Amount Produced --- 18,200 m³

Sieve Size mm	20.0	12.5	5.00	2.50	1.25	0.315	0.080
Percent Passing	100	84.2	46.4	-	23.8	10.4	5.4

Moisture Content - 2.2 % Standard Proctor
Fracture - 66.1 % Kg/m³ @ % moisture
Note: Stockpile not complete. Approximately 18,200 m³ produced to date.
Stockpile to be completed in spring of 2002.

==========



Yukon
Community and Transportation Services

Transportation Engineering Branch

SITE PLAN
GRANULAR & BORROW SOURCE
Km 1691.3 R.H.S.
(Silver City)
ALASKA HWY. YUKON

app'd:	B. STANLEY
drawn:	YSD & BPT
date:	DEC .2001
scale:	1: 7,000
drwg:	0116913SP_4.dwg

SUBSURFACE EXPLORATION AND TEST REPORT	ALASKA HIGHWAY GRANULAR INVESTIGATION	BOREHOLE No. 152-05
PWC/O&M YUKON	A/H KM 1692 RHS	Project No: 859167
BACKHOE: CASE 688	LOCATION: See Plan	ELEVATION 0.000 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ■ BULK ▯▯ TUBE ▯▯ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC MATERIAL						0.0
	WELL-GRADED GRAVEL WITH SAND (GW) -brown -frozen to 0.3m (seasonal - Nb) -damp below 0.3m -maximum 200mm material -estimate 1% +100mm						
1.0		■	8 ▲		GW	◆ ■	1.0
2.0	-caving in below 2.1m						2.0
3.0							3.0
4.0	-estimate 2% +100mm below 4.0m	■	9 ▲		GW	◆ ■	4.0
5.0	END HOLE at 5.0m -on top of esker						5.0
6.0							6.0

Public Works Canada Whitehorse, Yukon Territory.	COMPLETION DEPTH 5.0 m	COMPLETE 91/11/05
	LOGGED BY DT	DWG NO.
		Page 1 of 1

PROJECT NUMBER:	859167	HOLE NUMBER:	152-05
CLIENT:	PWC/O&M YUKON		
PROJECT NAME:	ALASKA HIGHWAY GRANULAR INVESTIGATION		
PROJECT LOCATION:	115-G-07		
DRILL UNIT:	BACKHOE: CASE 688		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	DT	DATE COMPLETED:	91.11.05

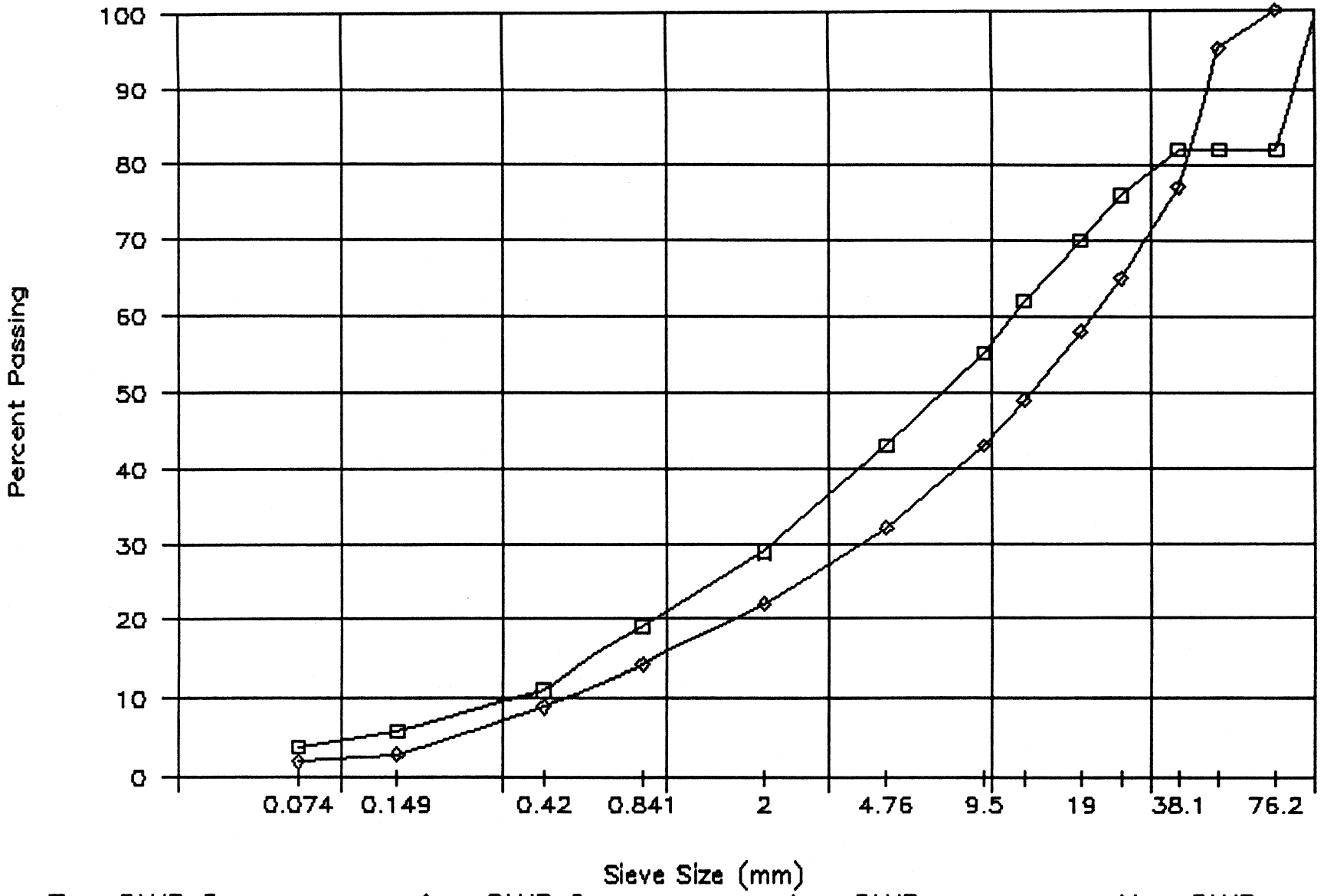
FIELD NO:	8	FIELD NO:	9
LAB NO:	5406	LAB NO:	5407
DEPTH:	1.0-1.4	DEPTH:	4.2-4.6
TYPE:	BULK	TYPE:	BULK

SIEVE SIZE	PERCENT PASSING	SIEVE SIZE	PERCENT PASSING
101.6	100	101.6	--
76.2	82	76.2	100
50.8	82	50.8	95
38.1	82	38.1	77
25.4	76	25.4	65
19.0	70	19.0	58
12.7	62	12.7	49
9.5	55	9.5	43
4.76	43	4.76	32
2.38	--	2.38	--
2.00	29	2.00	22
1.19	--	1.19	--
0.841	19	0.841	14
0.595	--	0.595	--
0.42	11	0.42	9
0.297	--	0.297	--
0.177	--	0.177	--
0.149	6	0.149	3
0.074	4	0.074	2

M.C.(%):	--	M.C.(%):	--
LIMITS		LIMITS	
LIQUID:	--	LIQUID:	--
PLASTIC:	--	PLASTIC:	--
P.I.:	N.P.	P.I.:	N.P.
% GRAVEL:	57	% GRAVEL:	68
% SAND:	39	% SAND:	30
% FINES:	4	% FINES:	2
CLASSIFICATION:		CLASSIFICATION:	
WELL-GRADED GRAVEL WITH SAND (GW)		WELL-GRADED GRAVEL WITH SAND (GW)	

PUBLIC WORKS CANADA — WHITEHORSE, Y.T.

Grain Size Analysis — Hole 152–05



GRANULAR SOURCE EVALUATION km 1693	CLIENT: YTG - TRANSPORTATION ENG.	BOREHOLE No: 92-018E
SILVER CITY AREA	HOE: CAT 225 TRACKED BACKHOE	Project No: 0201-10922
NORTH ALASKA HIGHWAY	UTM ZONE: 7 N6768517.00 E644046.00	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ GRAB SAMPLE ▨ NO RECOVERY ⊠ STANDARD PEN. ☰ 75 mm SPOON ▯▯ CRREL BARREL

DEPTH (m)	SAMPLE TYPE	SAMPLE NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0						SPARSE GRASS GROUND COVER ORGANICS AND SILT–seasonally frozen, dark brown
	■	1		GP		SILT WITH GRAVEL–some sand, rootlets to 0.7 m, seasonally frozen, greyish brown
1.0	■	2		GP		POORLY GRADED GRAVEL WITH SAND–trace of silt, occasional cobble to 150 mm maximum size, less than 5% over 100 mm, gravel is well graded, sand is medium to coarse, seasonally frozen to 2.0 m, discontinuous silty lenses of gravel at 1.3 m and 2.7 m
2.0	■	3		GW		
3.0	■	4		SP/SM		POORLY GRADED SAND WITH SILT–medium to fine grained, damp, brown
						POORLY GRADED SAND WITH GRAVEL–trace of silt, medium to coarse, damp, brown
4.0	■	5		SP		
						END OF TESTPIT 4.5 m
5.0						
6.0						
7.0						

■ STANDARD PENETRATION ■ 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

■ PERCENT GRAVEL ■ 20 40 60 80

● PERCENT SAND ● 20 40 60 80

▲ PERCENT SILT OR FINES ▲ 20 40 60 80

◆ PERCENT CLAY ◆ 20 40 60 80

DEPTH (ft) 0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0 22.0

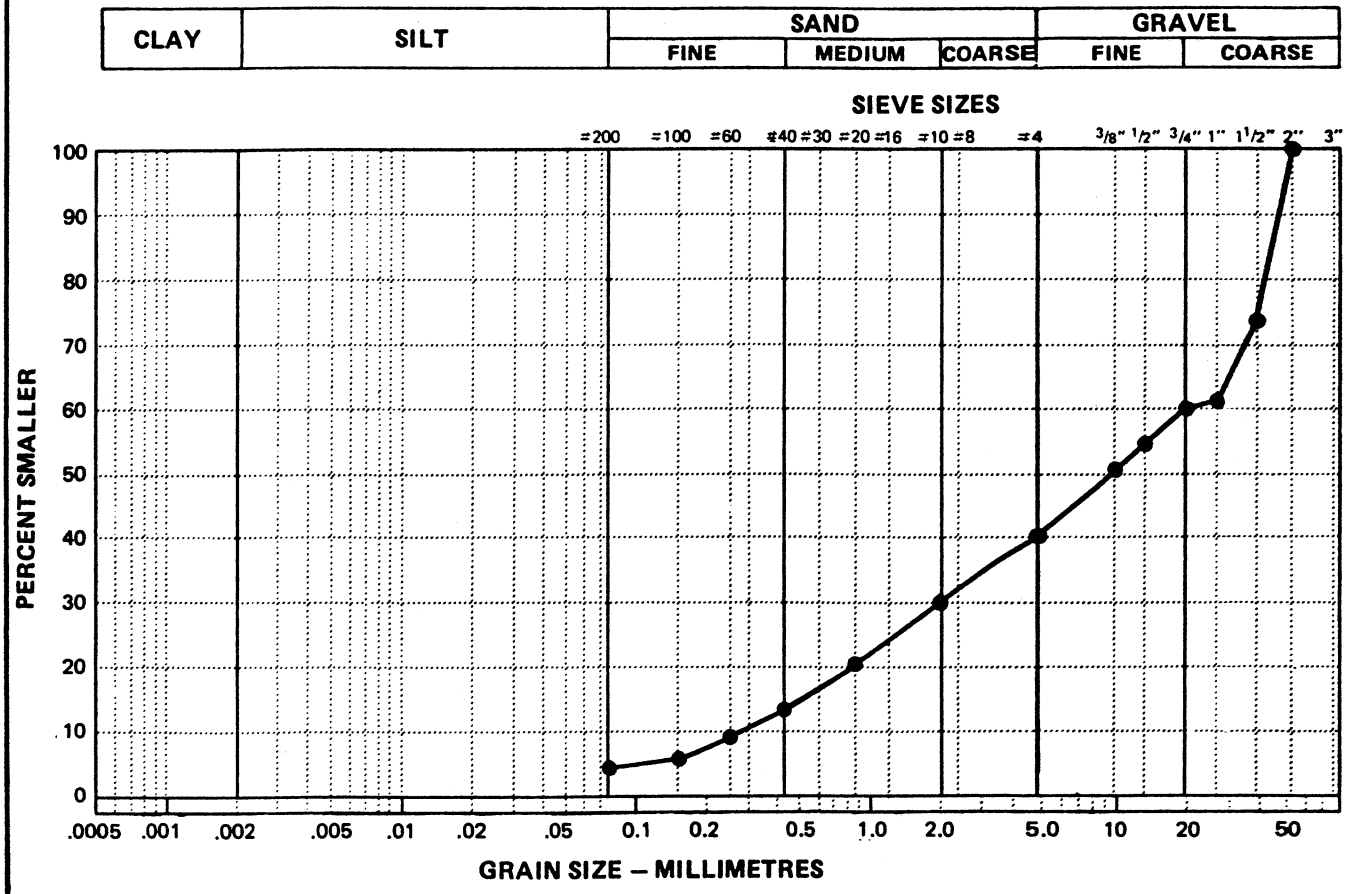
EBA Engineering Consultants Ltd.
Whitehorse, Yukon

LOGGED BY: MCP	COMPLETION DEPTH: 4.5 m
REVIEWED BY:	COMPLETE: 92/04/22
Fig. No:	Page 1 of 1

PARTICLE - SIZE ANALYSIS OF SOILS

Project: Granular Source Evaluation
km 1693 North Alaska Highway, Yukon
Project Number: 0201-10922
Date Tested: 92-04-29
Borehole Number: 92-018E
Depth: 0.5 m
Soil Description: POORLY GRADED GRAVEL WITH SAND (GP)
Cu: 71.4
Cc: 0.7
Natural Moisture Content: 4.4 %
Remarks: Gravel 59.6%
Sand 35.8%
Silt 4.6%

SIEVE	PERCENTAGE PASSING
3"	
2"	100.0
1 1/2"	72.7
1"	60.8
3/4"	60.0
3/8"	50.7
No. 4	40.4
No. 10	29.7
No. 20	20.9
No. 40	13.1
No. 60	8.7
No. 100	6.4
No. 200	4.6



Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA.

The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.

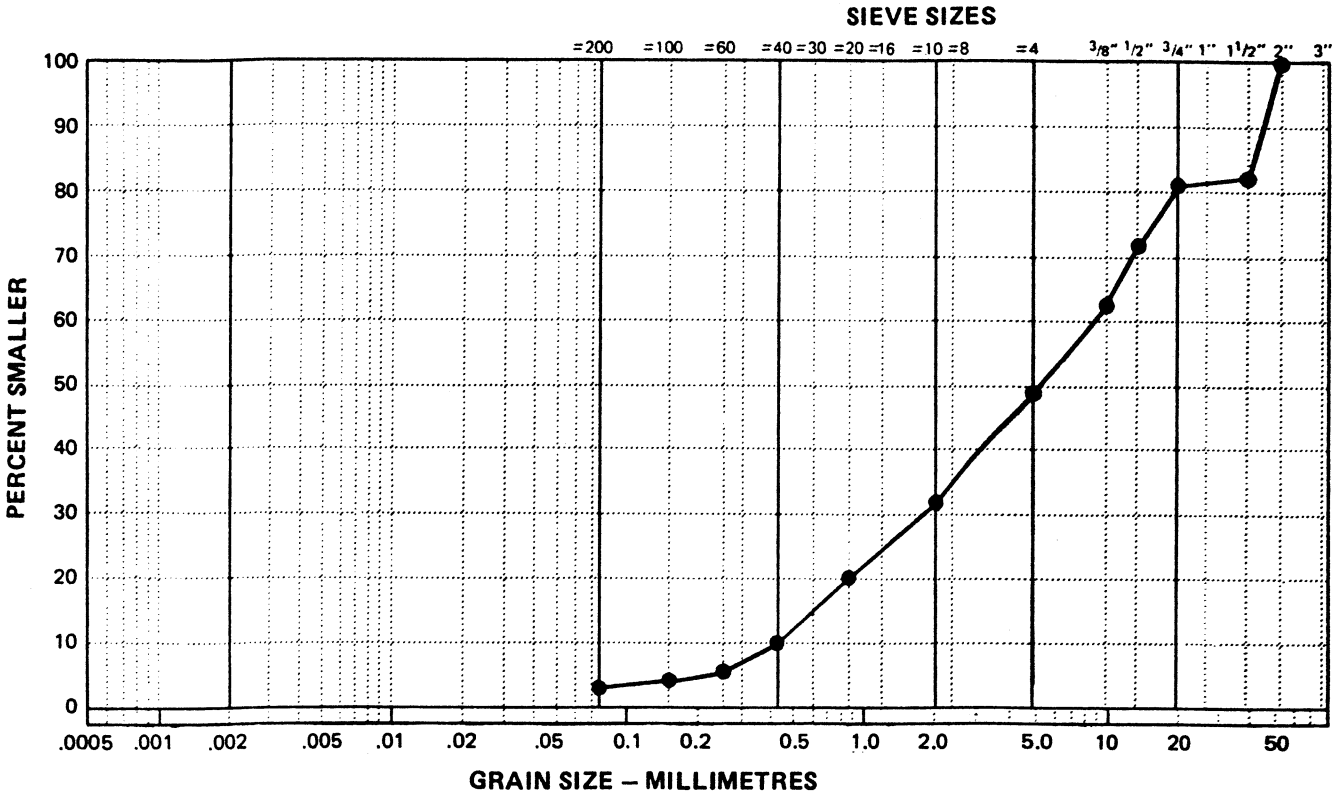
EBA Engineering Consultants Ltd.

PARTICLE - SIZE ANALYSIS OF SOILS

Project: Granular Source Evaluation
km 1693 North Alaska Highway, Yukon
Project Number: 0201-10922
Date Tested: 92-04-29
Borehole Number: 92-018E
Depth: 1.0 m
Soil Description: POORLY GRADED GRAVEL WITH SAND (GP)
Cu: 20
Cc: 0.8
Natural Moisture Content: 4.8 %
Remarks: Gravel 51.2%
Sand 46.0%
Silt 2.8%

SIEVE	PERCENTAGE PASSING
3"	
2"	100.0
1 1/2"	82.4
1"	
3/4"	80.7
3/8"	63.2
No. 4	48.8
No. 10	32.1
No. 20	19.7
No. 40	10.2
No. 60	5.8
No. 100	3.9
No. 200	2.8

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA.

The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.

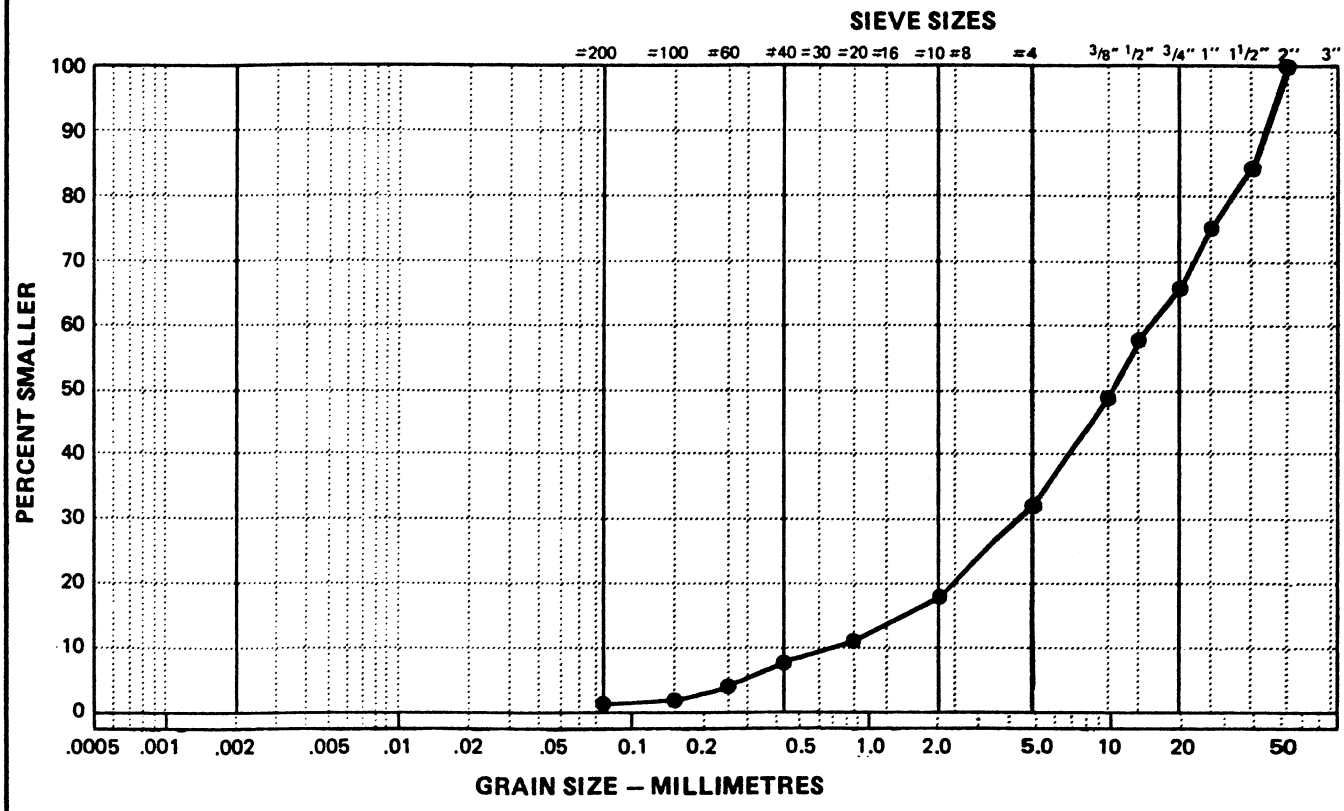
EBA Engineering Consultants Ltd.

PARTICLE - SIZE ANALYSIS OF SOILS

Project: Granular Source Evaluation
km 1693 North Alaska Highway, Yukon
Project Number: 0201-10922
Date Tested: 92-04-29
Borehole Number: 92-018E
Depth: 2.0 m
Soil Description: WELL GRADED GRAVEL WITH SAND (GW)
Cu: 21.4
Cc: 1.9
Natural Moisture Content: 1.5 %
Remarks: Gravel 68.0%
Sand 30.3%
Silt 1.7%

SIEVE	PERCENTAGE PASSING
3"	
2"	100.0
1 1/2"	83.6
1"	75.5
3/4"	65.6
3/8"	48.8
No. 4	32.0
No. 10	17.7
No. 20	10.7
No. 40	6.7
No. 60	3.6
No. 100	2.3
No. 200	1.7

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA.

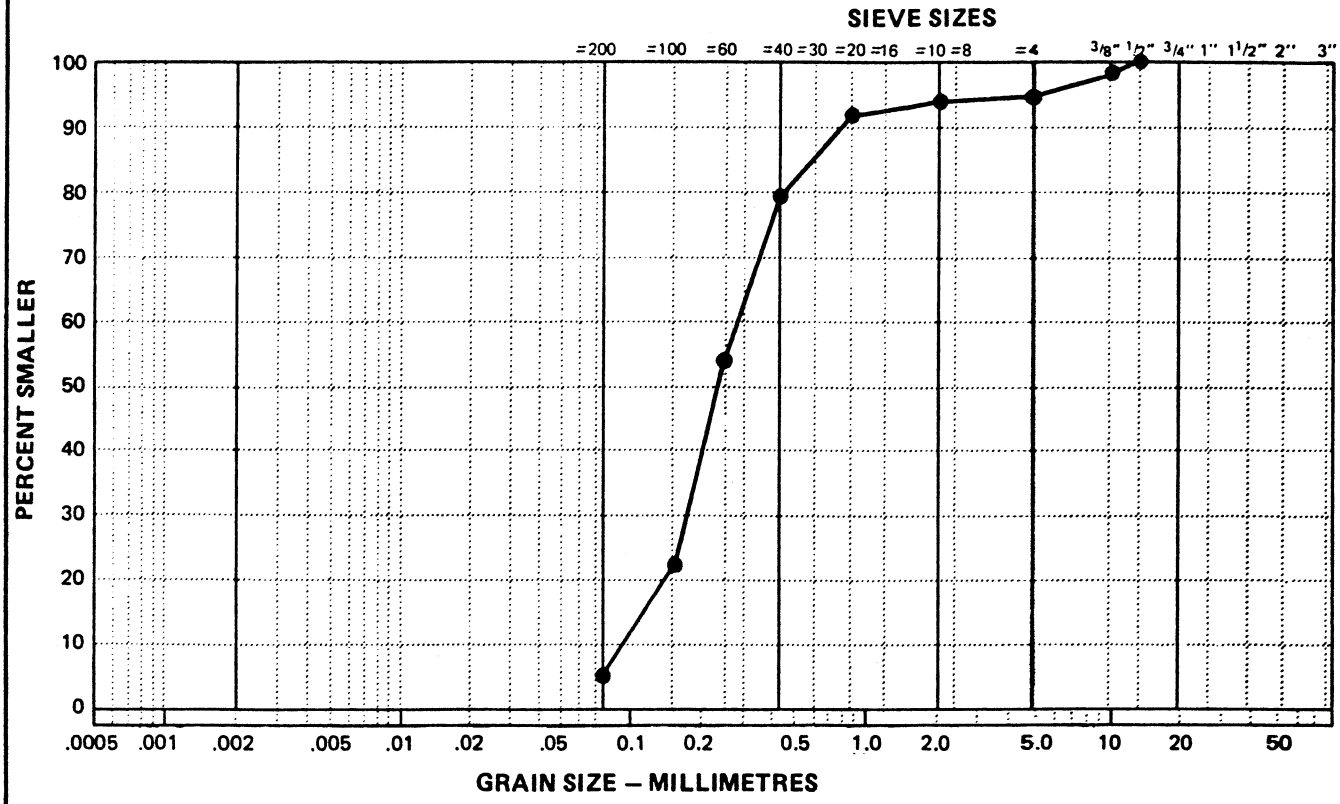
The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.

PARTICLE - SIZE ANALYSIS OF SOILS

Project: Granular Source Evaluation
km 1693 North Alaska Highway, Yukon
Project Number: 0201-10922
Date Tested: 92-04-29
Borehole Number: 92-018E
Depth: 3.0 m
Soil Description: POORLY GRADED SAND WITH SILT (SP/SM)
Cu: 3.2
Cc: 1.4
Natural Moisture Content: 2.7 %
Remarks: Gravel 4.2%
Sand 90.4%
Silt 5.4%

SIEVE	PERCENTAGE PASSING
3"	
2"	
1 1/2"	
1"	
3/4"	100.0
3/8"	97.1
No. 4	95.8
No. 10	94.6
No. 20	92.3
No. 40	78.5
No. 60	54.0
No. 100	22.0
No. 200	5.4

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA.

The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.

EBA Engineering Consultants Ltd.

PARTICLE - SIZE ANALYSIS OF SOILS

Project: Granular Source Evaluation
km 1693 North Alaska Highway, Yukon

Project Number: 0201-10922

Date Tested: 92-04-29

Borehole Number: 92-018E

Depth: 4.0 m

Soil Description: POORLY GRADED SAND WITH GRAVEL (SP)

Cu: 8.9

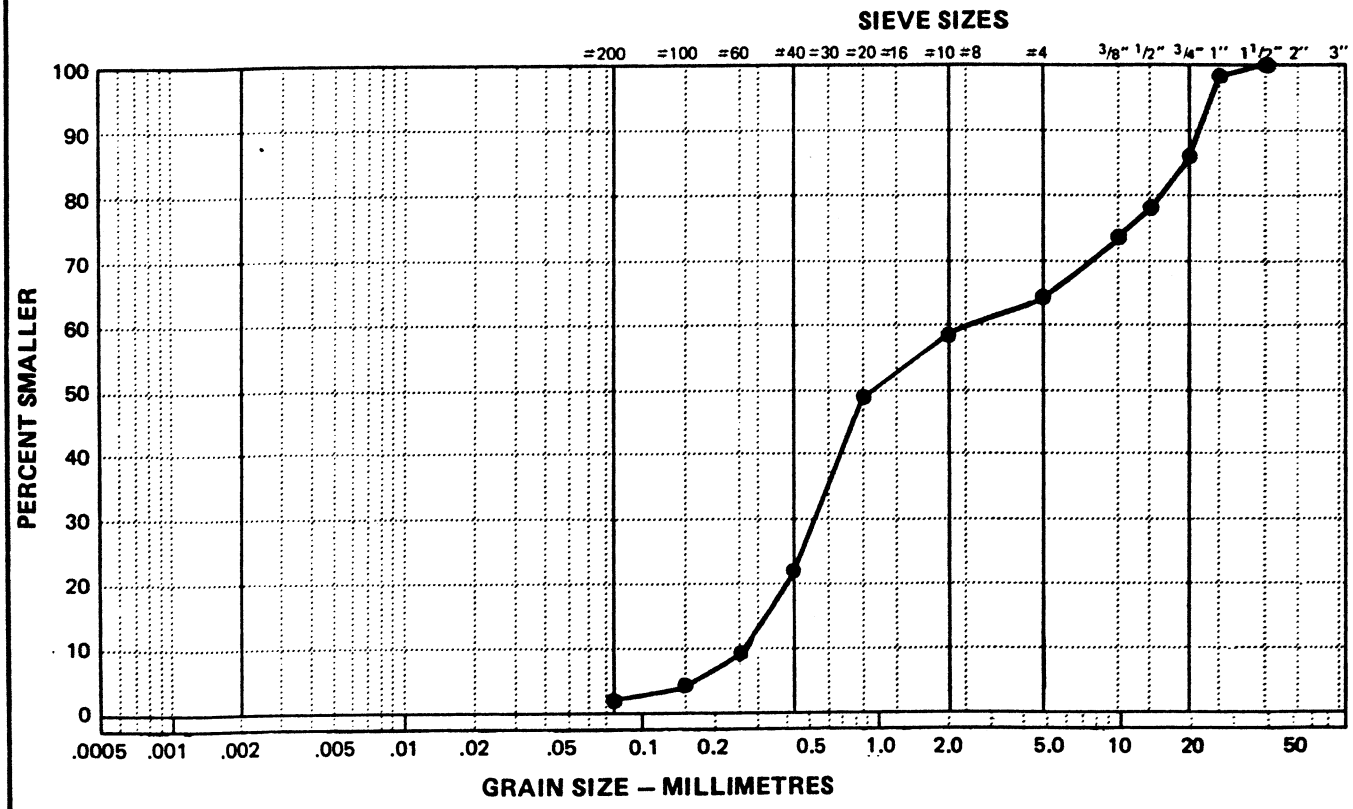
Cc: 0.4

Natural Moisture Content: 2.1 %

Remarks: Gravel 35.7%
Sand 62.0%
Silt 2.3%

SIEVE	PERCENTAGE PASSING
3"	
2"	
1 1/2"	100.0
1"	96.5
3/4"	86.1
3/8"	72.7
No. 4	64.3
No. 10	58.4
No. 20	48.8
No. 40	22.0
No. 60	9.0
No. 100	4.0
No. 200	2.3

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA.

The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.

GRANULAR SOURCE EVALUATION km 1693	CLIENT: YTG - TRANSPORTATION ENG.	BOREHOLE No: 92-019E
SILVER CITY AREA	HOE: CAT 225 TRACKED BACKHOE	Project No: 0201-10922
NORTH ALASKA HIGHWAY	UTM ZONE: 7 N6768572.00 E644108.00	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ GRAB SAMPLE ▨ NO RECOVERY ⊠ STANDARD PEN. ☰ 75 mm SPOON ▯▯ CRREL BARREL

DEPTH (m)	SAMPLE TYPE	SAMPLE NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0						SPARSE GRASS GROUND COVER ORGANIC SILT–rootlets throughout, seasonally frozen, olive brown
	■	1		GP/GM		POORLY GRADED GRAVEL WITH SILT AND SAND–rootlets to 1.3 m, subangular, up to 100 mm maximum size, seasonally frozen to 1.0 m, damp, medium brown
1.0	■	2		GP		POORLY GRADED GRAVEL WITH SAND–occasional cobble to 150 mm, gravel is well graded, sand is well graded, damp, medium greyish brown
2.0	■	3		SP		–finer from 2.0 – 2.5 m
3.0	■	4		GP		–siltier below 3.2 m
						SILTY GRAVEL WITH SAND–gravel is fine to 40 mm, moist, olive
4.0	■	5		GM		
						END OF TESTPIT 4.5 m
5.0						
6.0						
7.0						

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH (ft) 0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0 22.0

EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: MCP	COMPLETION DEPTH: 4.5 m
	REVIEWED BY:	COMPLETE: 92/04/22
	Fig. No:	Page 1 of 1

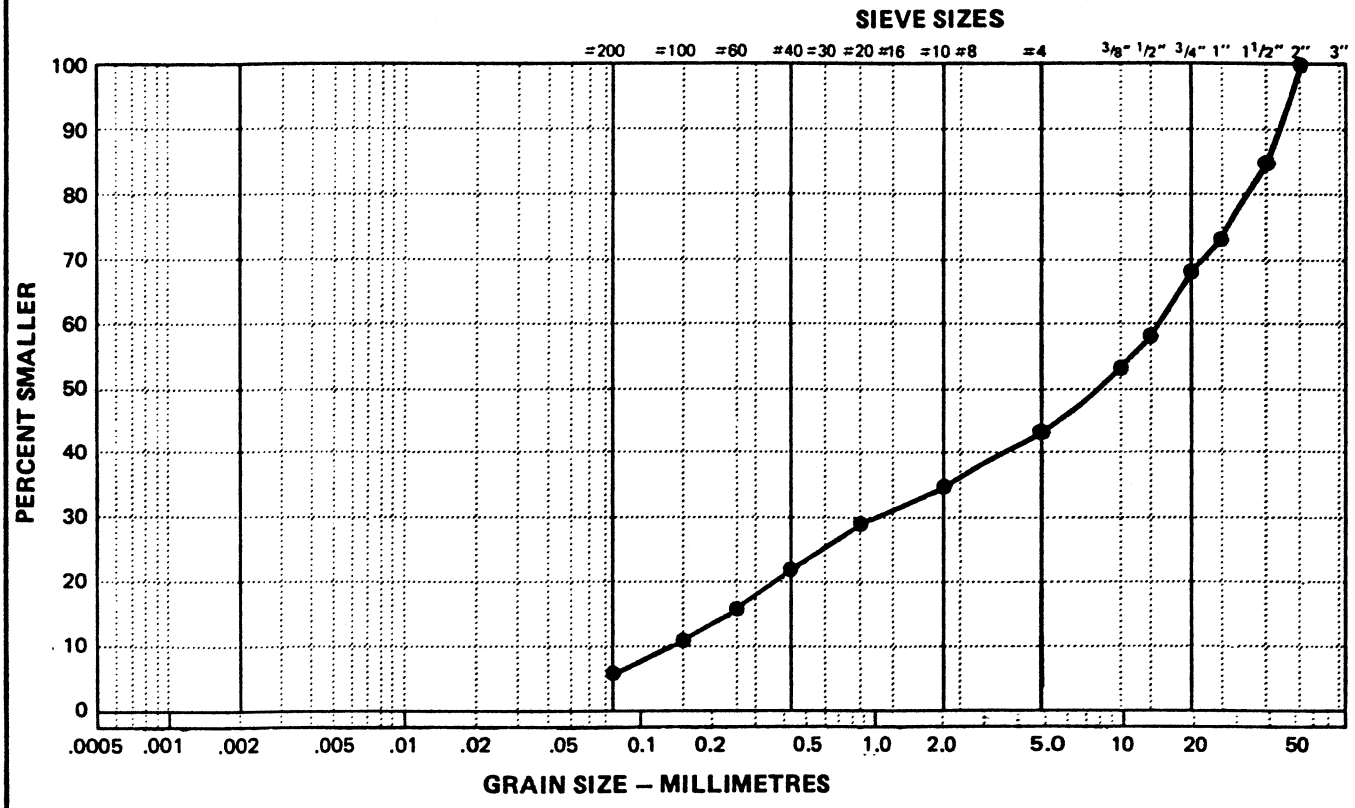
EBA Engineering Consultants Ltd.

PARTICLE - SIZE ANALYSIS OF SOILS

Project: Granular Source Evaluation
km 1693 North Alaska Highway, Yukon
Project Number: 0201-10922
Date Tested: 92-04-29
Borehole Number: 92-019E
Depth: 0.5 m
Soil Description: POORLY GRADED GRAVEL WITH SILT & SAND (GP/GM)
Cu: 115
Cc: 0.5
Natural Moisture Content: 5.5 %
Remarks: Gravel 57.1%
Sand 36.6%
Silt 6.3%

SIEVE	PERCENTAGE PASSING
3"	
2"	100.0
1 1/2"	85.0
1"	73.2
3/4"	68.1
3/8"	53.4
No. 4	42.9
No. 10	35.3
No. 20	29.1
No. 40	22.2
No. 60	15.6
No. 100	10.5
No. 200	6.3

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA.

The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.

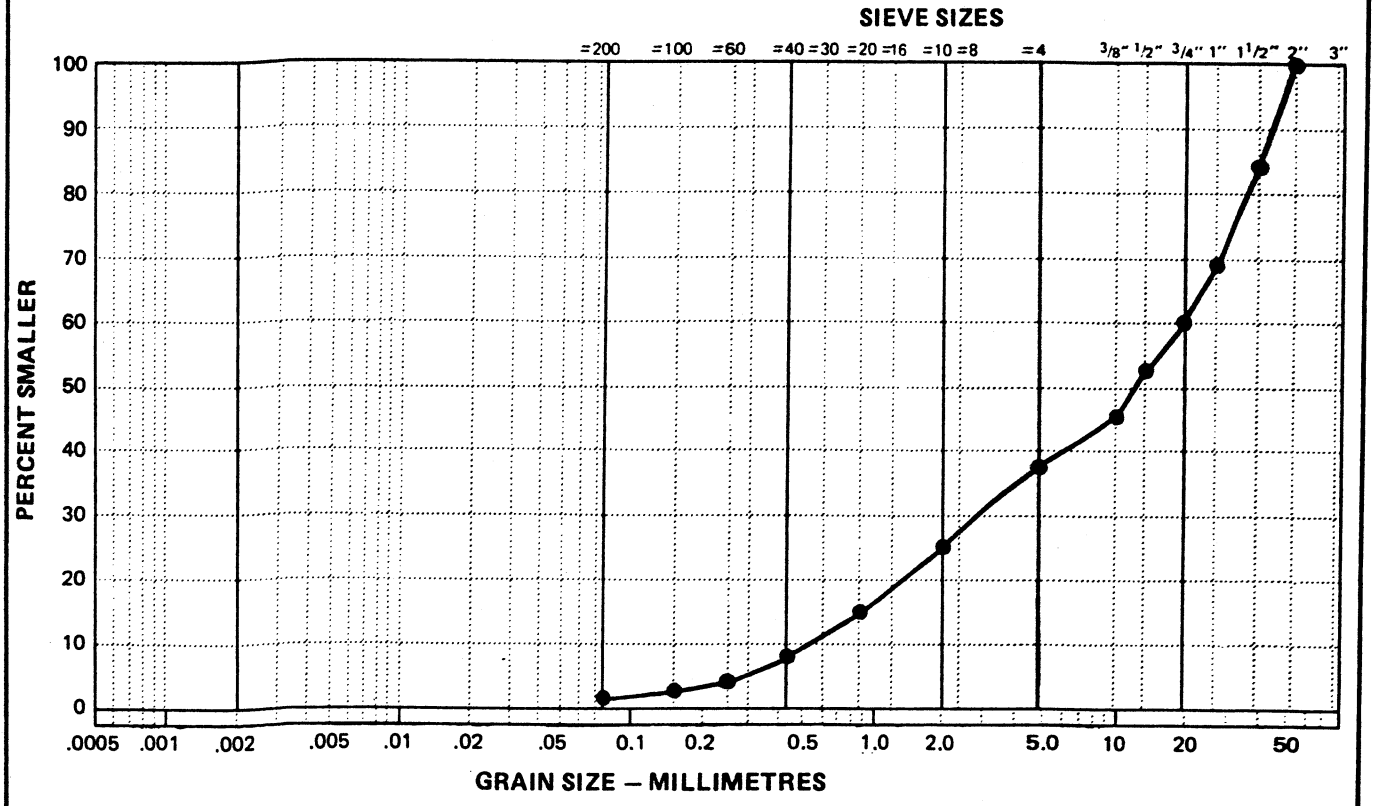
EBA Engineering Consultants Ltd.

PARTICLE - SIZE ANALYSIS OF SOILS

Project: Granular Source Evaluation
km 1693 North Alaska Highway
Project Number: 0201-10922
Date Tested: 92-04-29
Borehole Number: 92-019E
Depth: 1.0 m
Soil Description: POORLY GRADED GRAVEL WITH SAND (GP)
Cu: 40
Cc: 0.9
Natural Moisture Content: 1.5 %
Remarks: Gravel 64.4%
Sand 33.6%
Silt 2.0%

SIEVE	PERCENTAGE PASSING
3"	
2"	100.0
1 1/2"	83.9
1"	69.4
3/4"	60.4
3/8"	45.8
No. 4	35.6
No. 10	24.9
No. 20	15.4
No. 40	7.9
No. 60	4.4
No. 100	2.7
No. 200	2.0

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA.

The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.

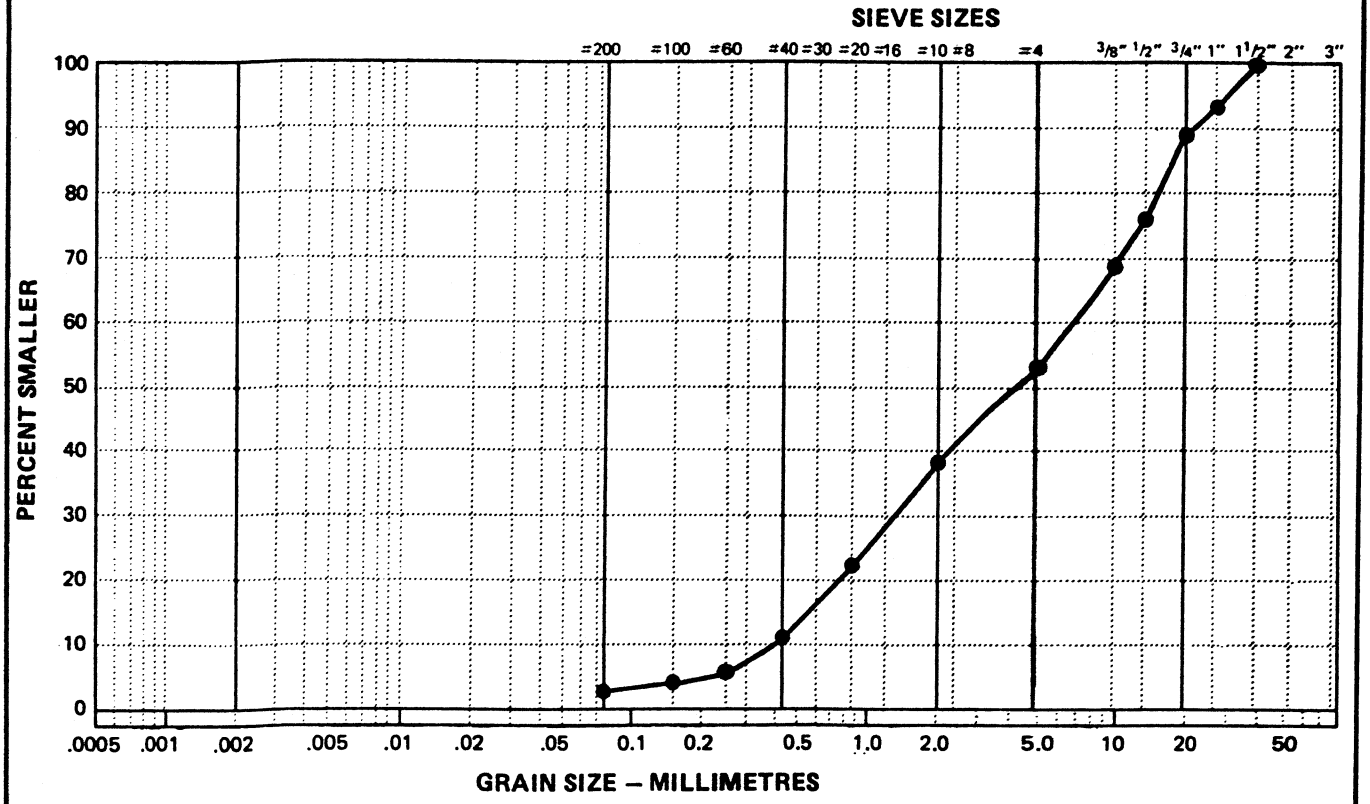
EBA Engineering Consultants Ltd.

PARTICLE - SIZE ANALYSIS OF SOILS

Project: Granular Source Evaluation
km 1693 North Alaska Highway, Yukon
Project Number: 0201-10922
Date Tested: 92-04-29
Borehole Number: 92-019E
Depth: 2.0 m
Soil Description: POORLY GRADED SAND WITH GRAVEL (SP)
Cu: 16.3
Cc: 0.9
Natural Moisture Content: 2.0 %
Remarks: Gravel 46.6%
Sand 50.2%
Silt 3.2%

SIEVE	PERCENTAGE PASSING
3"	
2"	
1 1/2"	100.0
1"	92.7
3/4"	88.6
3/8"	68.5
No. 4	53.4
No. 10	36.8
No. 20	22.2
No. 40	11.4
No. 60	6.4
No. 100	4.2
No. 200	3.2

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA.

The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.

EBA Engineering Consultants Ltd.

PARTICLE - SIZE ANALYSIS OF SOILS

Project: Granular Source Evaluation
km 1693 North Alaska Highway, Yukon

Project Number: 0201-10922

Date Tested: 92-04-29

Borehole Number: 92-019E

Depth: 3.0 m

Soil Description: POORLY GRADED GRAVEL WITH SAND (GP)

Cu: 22.2

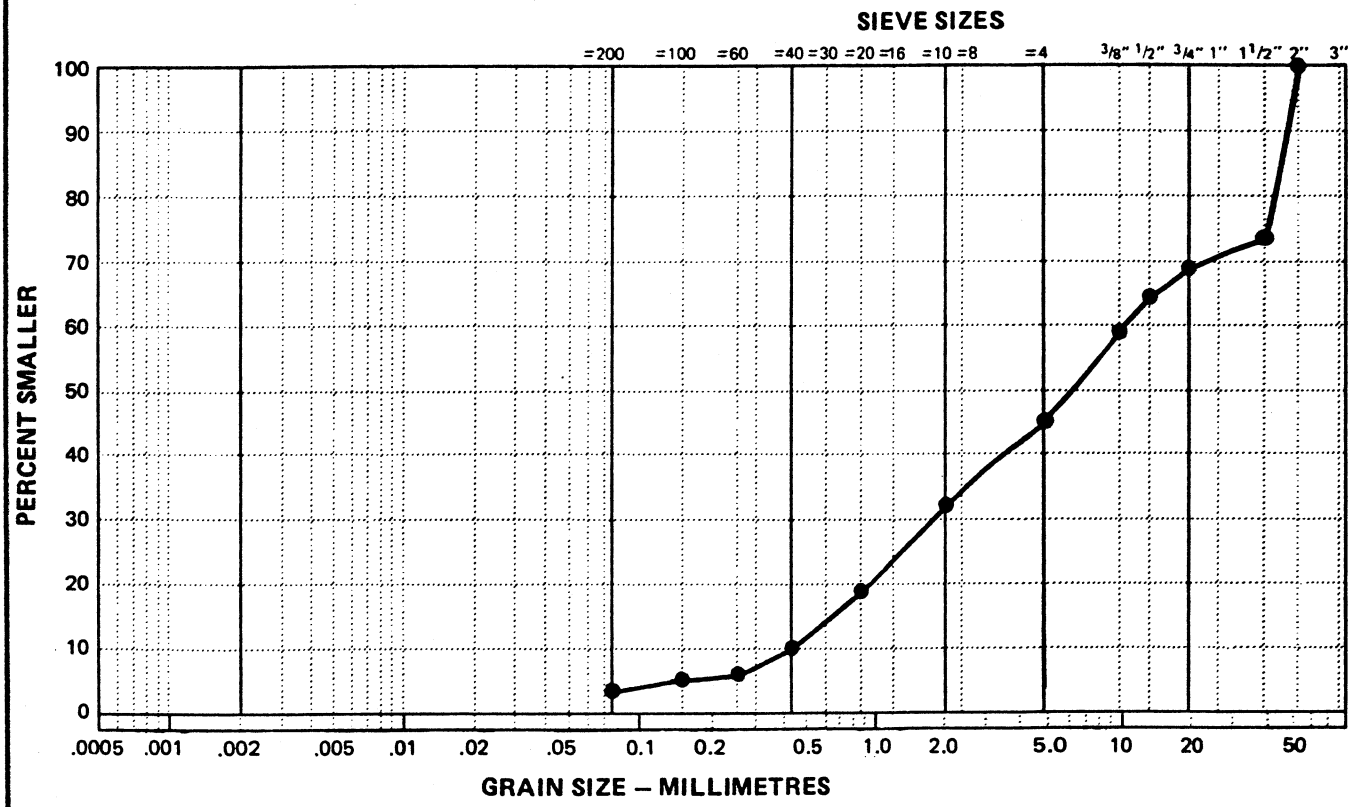
Cc: 0.7

Natural Moisture Content: 1.8 %

Remarks: Gravel 58.1%
Sand 41.1%
Silt 4.3%

SIEVE	PERCENTAGE PASSING
3"	
2"	100.0
1 1/2"	72.7
1"	
3/4"	69.1
3/8"	58.9
No. 4	45.4
No. 10	31.7
No. 20	19.1
No. 40	9.9
No. 60	6.3
No. 100	4.8
No. 200	4.3

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA.

The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.

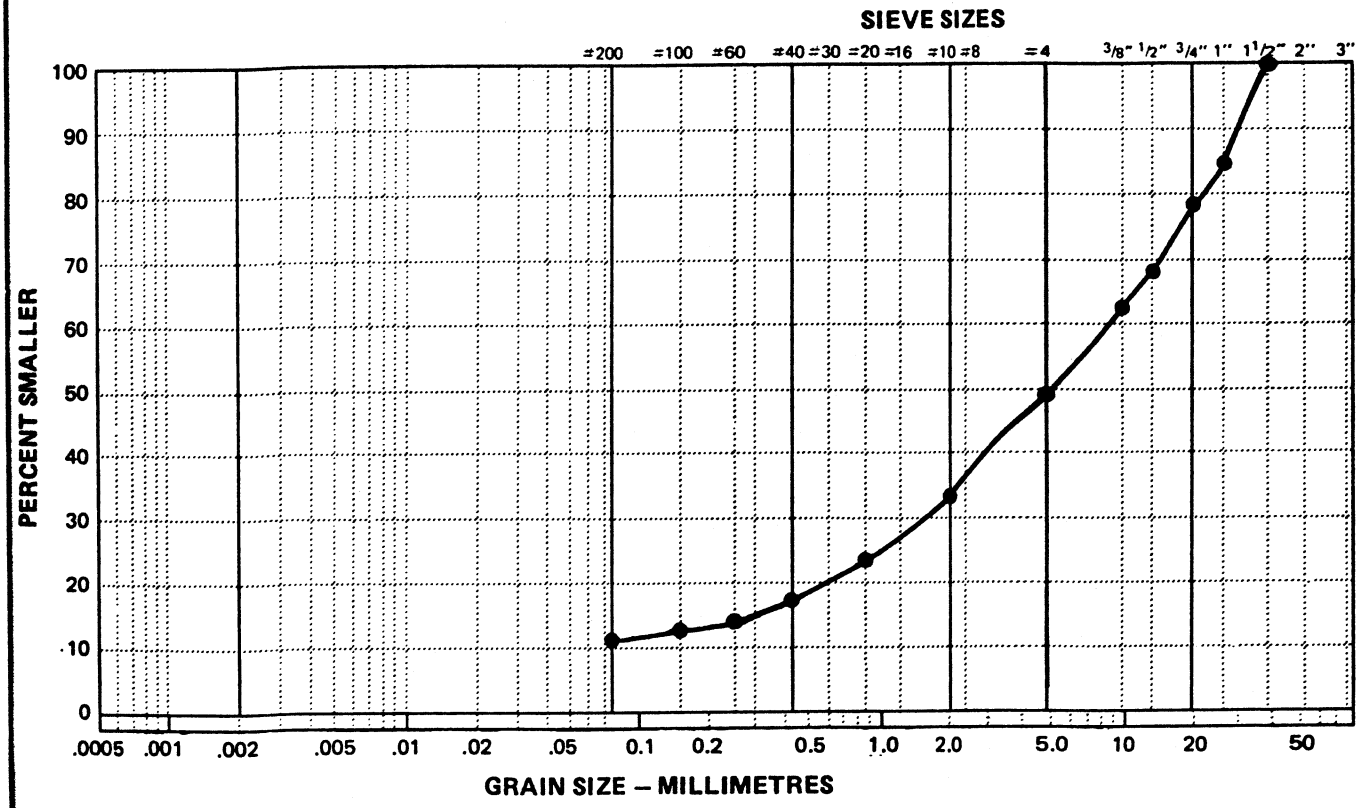
EBA Engineering Consultants Ltd.

PARTICLE - SIZE ANALYSIS OF SOILS

Project: Granular Source Evaluation
km 1693 North Alaska Highway, Yukon
Project Number: 0201-10922
Date Tested: 92-04-29
Borehole Number: 92-019E
Depth: 4.0 m
Soil Description: SILTY GRAVEL WITH SAND (GM)
Cu:
Cc:
Natural Moisture Content: 3.2 %
Remarks: Gravel 51.2%
Sand 36.7%
Silt 12.1%

SIEVE	PERCENTAGE PASSING
3"	
2"	
1 1/2"	100.0
1"	84.0
3/4"	78.3
3/8"	62.2
No. 4	48.8
No. 10	33.3
No. 20	23.1
No. 40	16.5
No. 60	13.8
No. 100	12.7
No. 200	12.1

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA.

The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583-1521
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
CAT 320 EXCAVATOR	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▥ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC -seasonal frozen (Nb) to 0.3m							0.0
	SANDY SILT -brown -frozen							
1.0	WELL-GRADED SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SAND (SW)-(GP) -brown -damp -maximum 100mm material -some frozen lumps		47 ▲		SW		■◆	1.0
2.0			48 ▲		GP		◆ ■	2.0
3.0								3.0
4.0	-very hard digging below 3.7m -frozen below 3.7m (Nb)		49 ▲		GP		◆ ■	4.0
	END HOLE @ 4.6m							
5.0								5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 4.6 m
REVIEWED BY:	COMPLETE: 01/03/12
Fig. No: 115-G-07	Page 1 of 1

01/03/27 04:47PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583–1522
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
CAT 320 EXCAVATOR	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▯ TUBE ▯ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL
0.0	ORGANIC –seasonal frozen				
	SANDY SILT –some organic				
	POORLY GRADED GRAVEL WITH SILT & SAND TO WELL–GRADED SAND WITH GRAVEL (GP–GM)–(SW) –brown –frozen (NF)to 2.3m –easy digging 0 to 2.3m –low moisture content –maximum 100mm material		50	GP–GM	
1.0					
2.0	–maximum 150mm material below 2.3m –damp below 2.3m –estimate 1% +100mm material		51	SW	
3.0					
4.0	–moist below 4.5m		52	GP–GM	
5.0	END HOLE @ 5.0m				
6.0					

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

DEPTH (m)

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 5.0 m
	REVIEWED BY:	COMPLETE: 01/03/12
	Fig. No: 115–G–07	Page 1 of 1

01/03/27 04:47PM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583–1530
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
CAT 320 EXCAVATOR	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL
0.0	ORGANIC –seasonal frozen				
	POORLY GRADED GRAVEL WITH SAMPLE (GP) –brown –frozen (Nf)to 2.2m –maximum 200mm material –estimate 5% +100mm material		70	GP	
1.0					
2.0	–thawed, damp below 2.2m				
			71	GP	
3.0					
4.0					
			72	GP	
5.0	END HOLE @ 5.0				
6.0					

▲ PERCENT FINES ▲ 20 40 60 80

PLASTIC M.C. LIQUID 20 40 60 80

◆ PERCENT SAND ◆ 20 40 60 80

■ PERCENT GRAVEL ■ 20 40 60 80

DEPTH (m)

Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 5.0 m
REVIEWED BY:	COMPLETE: 01/03/13
Fig. No: 115–G–07	Page 1 of 1

01/03/28 08:14AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583-1537
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
CAT 320 EXCAVATOR	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⧄ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▯ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC -seasonal frozen							0.0
	POORLY GRADED GRAVEL WITH SAND TO POORLY GRADED GRAVEL WITH SILT & SAND (GP)-(GP-GM) -some organic -brown -frozen (Nf)to 1.7m -maximum 100mm material		89 ▲		GP		◆ ■	
1.0								1.0
	-thawed below 1.7m -damp below 1.7m -maximum 200mm material below 1.7m -estimate 5% +100mm material below 1.7m							
2.0								2.0
			90 ▲		GP-GM		◆ ■	
3.0								3.0
	-maximum 250mm material below 4.0m -estimate 10% +100mm material below 4m							
4.0								4.0
			91 ▲		GP		◆ ■	
5.0	END HOLE @ 5.0m NOTE: located on esker ridge							5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 5.0 m
	REVIEWED BY:	COMPLETE: 01/03/13
	Fig. No: 115-G-07	Page 1 of 1

01/03/28 08:15AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583-1538
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
CAT 320 EXCAVATOR	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▯ TUBE ▯ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID / 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC -seasonal frozen							0.0
	WELL-GRADED SAND WITH SILT & GRAVEL TO WELLL-GRADED SAND WITH GRAVEL (SW-SM) - (SW) -brown -frozen (Nf)to 1.2m -maximum 100mm material -thawed, damp below 1.2m		92	▲	SW-SM		■ ◆	
1.0								1.0
2.0			93	▲	SW		■ ◆	2.0
3.0	SILT (TRACE SAND AND GRAVEL) -brown -moist -smooth easy digging							3.0
4.0								4.0
5.0	END HOLE @ 5.0m NOTE: located in-between eskers							5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 5.0 m
	REVIEWED BY:	COMPLETE: 01/03/13
	Fig. No: 115-G-07	Page 1 of 1

01/03/28 08:15AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583-1539
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
CAT 320 EXCAVATOR	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ☰ BULK ▯ TUBE ▯ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	WELL-GRADED SAND WITH SILT & GRAVEL TO POORLY GRADED GRAVEL WITH SAND (SW-SM)-(GP)							
	-brown							
	-frozen (Nf)to 1.9m		94 ▲		SW-SM		◆	
1.0	-maximum 100mm material							1.0
	-some organic contamination							
2.0	-thawed, damp from 1.9m							2.0
	-no organic contamination below 1.9m		95 ▲		GP		◆ ■	
3.0								3.0
4.0								4.0
			96 ▲		GP		◆ ■	
5.0	END HOLE @ 5.0m							5.0
	NOTE: located on top of esker							
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 5.0 m
	REVIEWED BY:	COMPLETE: 01/03/13
	Fig. No: 115-G-07	Page 1 of 1

01/03/28 08:15AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583-1540
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
CAT 320 EXCAVATOR	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▥ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC –seasonal frozen							0.0
	POORLY GRADED GRAVEL WITH SAND (GP) –brown –frozen (Nf)to 1.9m –maximum 200mm material –estimate 5% +100 material		97 ▲		GP			
1.0								1.0
2.0	–thawed, damp below 1.9m –estimate 10% +100mm material below 1.9							2.0
			98 ▲		GP			
3.0								3.0
4.0								4.0
			99 ▲		GP			
5.0	END HOLE @ 5.0m NOTE: located at intersection of 2 eskers							5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 5.0 m
	REVIEWED BY:	COMPLETE: 01/03/13
	Fig. No: 115-G-07	Page 1 of 1

01/03/28 08:15AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583–1541
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
CAT 320 EXCAVATOR	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ☒ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▥ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC –seasonal frozen							0.0
	POORLY GRADED GRAVEL WITH SILT & SAND TO POORLY GRADED GRAVEL WITH SAND (GP–GM)–(GP) –brown –frozen (Nf)to 1.6m –trace organic contamination		100 ▲		GP–GM			
1.0								1.0
	–thawed below 1.6m							
2.0	–maximum 150mm material below 2.0m –estimate 5% +100mm material		101 ▲		GP			2.0
3.0								3.0
4.0	–estimate 10% +100mm material below 4m		102 ▲		GP			4.0
5.0	END HOLE @ 5.0m NOTE: located on esker ridge							5.0
6.0								6.0

Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 5.0 m
REVIEWED BY:	COMPLETE: 01/03/13
Fig. No: 115-G-07	Page 1 of 1

01/03/28 08:15AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583-1542
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
CAT 320 EXCAVATOR	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ☰ BULK ▯▯ TUBE ▯ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC –seasonal frozen							0.0
	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM) –brown –frozen (Nf)to 1.6m –maximum 100mm material		103	▲	GP-GM		◆ ■	
1.0								1.0
	–thawed, damp below 1.6m							
2.0								2.0
			104	▲	GW-GM		◆ ■	
3.0								3.0
4.0								4.0
			05	▲	GP-GM		◆ ■	
5.0	END HOLE @ 5.0m NOTE: located on top of esker							5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 5.0 m
	REVIEWED BY:	COMPLETE: 01/03/13
	Fig. No: 115-G-07	Page 1 of 1

01/03/28 08:15AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 583-1543
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
CAT 320 EXCAVATOR	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⧸ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▥ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ▣ PERCENT GRAVEL ▣ 20 40 60 80	DEPTH (m)
0.0	ORGANIC –seasonal frozen							0.0
	POORLY GRADED GRAVEL WITH SILT & SAND (GP–GM) –brown –frozen (Nf)to 2.0m –maximum 100mm material		106 ▲		GP–GM		◆ ▣	
1.0								1.0
2.0	POORLY TO WELL GRADED SAND WITH GRAVEL (SP) – (SW) –brown –thawed, damp –maximum 100mm material		107 ▲		SP		◆	2.0
3.0								3.0
4.0	–frozen below 4.0m (Vc) –hard digging below 4.0m		108 ▲		SW		▣ ◆	4.0
	END HOLE @ 4.6m NOTE: located on small esker							
5.0								5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 4.6 m
	REVIEWED BY:	COMPLETE: 01/03/13
	Fig. No: 115-G-07	Page 1 of 1

01/03/28 08:15AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 584-1544
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
CAT 320 EXCAVATOR	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ⊘ S.P.T. ⊠ AUGER ☰ BULK ▯▯ TUBE ▯▯ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC –seasonal frozen –very hard digging							0.0
	GRAVEL, COBBLES, SAND, SILT & ORGANIC –dark grey –frozen (Nb)to 0.7m							
1.0	SILTY SAND WITH GRAVEL (SM) –brown –moist –easy digging		109	▲	SM		■ ◆	1.0
2.0	POORLY GRADED GRAVEL WITH SILT & SAND GP-GM) –brown –moist to wet –maximum 100mm material		110	▲	GP-GM		◆ ■	2.0
3.0								3.0
4.0	–H20 flowing into hole @ 3.9m							4.0
	SANDY SILT –brown –moist to wet							
5.0	END HOLE @ 5.0m NOTE: located in low area between eskers							5.0
6.0								6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 5.0 m
	REVIEWED BY:	COMPLETE: 01/03/15
	Fig. No: 115-G-07	Page 1 of 1

01/03/28 08:15AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 584-1551
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
CAT 320 EXCAVATOR	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▯▯ TUBE ▮▮ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	SANDY SILT WITH GRAVEL –brown –damp							
1.0	POORLY GRADED GRAVEL WITH SILT & SAND (GP–GM) –brown –damp –maximum 200mm material –estimate 5% +100mm material							1.0
2.0			132	▲	GP–GM		◆ ■	2.0
3.0								3.0
4.0			133	▲	GP–GM		◆ ■	4.0
5.0								5.0
6.0	END HOLE @ 6.0m NOTE: hole dug into side of esker		134	▲	GP–GM		◆ ■	6.0

Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 6.0 m
REVIEWED BY:	COMPLETE: 01/03/15
Fig. No: 115-G-07	Page 1 of 1

01/03/28 08:16AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST PIT NO: 584-1552
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
CAT 320 EXCAVATOR	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ☒ S.P.T. ☒ AUGER ☰ BULK ▯ TUBE ▯ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆PERCENT SAND◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	SANDY GRAVEL & SILT -brown -frozen (Nf)							
1.0	WELL-GRADED SAND WITH GRAVEL TO POORLY GRADED GRAVEL WITH SAND (SW)-(GP) -brown -damp -frozen (Nf) -maximum 100mm material		135 ▲		SW			1.0
2.0								2.0
3.0								3.0
4.0	-maximum 200mm material below 3.8m -estimate 5% +100mm material below 3.8m		136 ▲		GP			4.0
5.0			137 ▲		GP			5.0
6.0	END HOLE @ 5.5m NOTE: hole dug on side of esker, part way up slope, below hole 1518							6.0

Government of Yukon Transportation Engineering	LOGGED BY: D.T.	COMPLETION DEPTH: 5.5 m
	REVIEWED BY:	COMPLETE: 01/03/15
	Fig. No: 115-G-07	Page 1 of 1

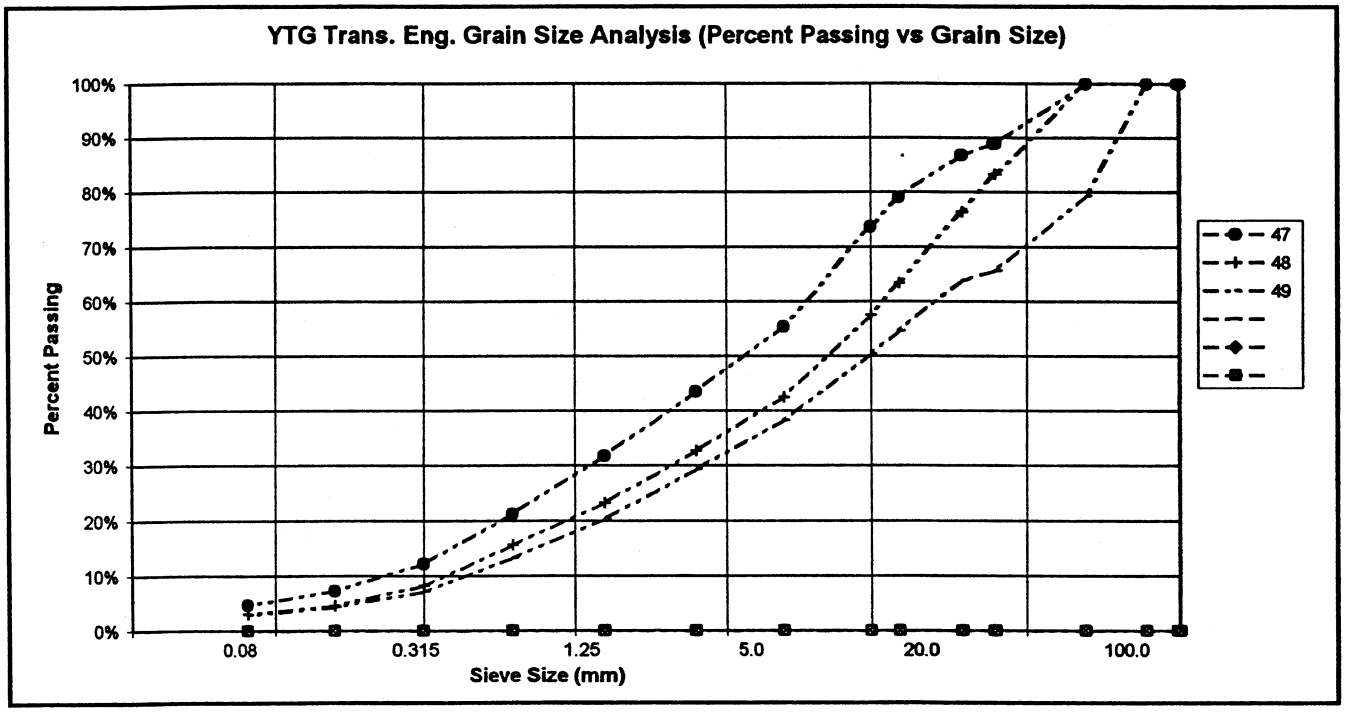
01/03/28 08:16AM

PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Km 1694 A/H Silver Creek
DRILL UNIT: Cat 320 Excavator
HOLE LOCATION: SEE PLAN
LOGGED BY: D.T.

HOLE No.: 583-1521

DATE COMP: 2001/03/12

FIELD NO:	47	48	49			
LAB NO:	47	48	49			
DEPTH:	0.9-1.3	2.3-2.7	4.4-4.6			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	79%			
25.0	89%	83%	66%			
20.0	87%	76%	64%			
12.5	79%	63%	55%			
10.0	74%	58%	50%			
5.0	55%	42%	38%			
2.5	44%	33%	29%			
1.25	32%	23%	20%			
0.630	21%	16%	13%			
0.315	12%	8%	7%			
0.160	7%	5%	4%			
0.080	5%	3%	3%			
M.C.(%):						
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	45	58	62			
% SAND:	51	39	35			
% FINES:	5	3	3			
CLASSIFICATION	WELL-GRADED SAND WITH GRAVEL (SW)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)			

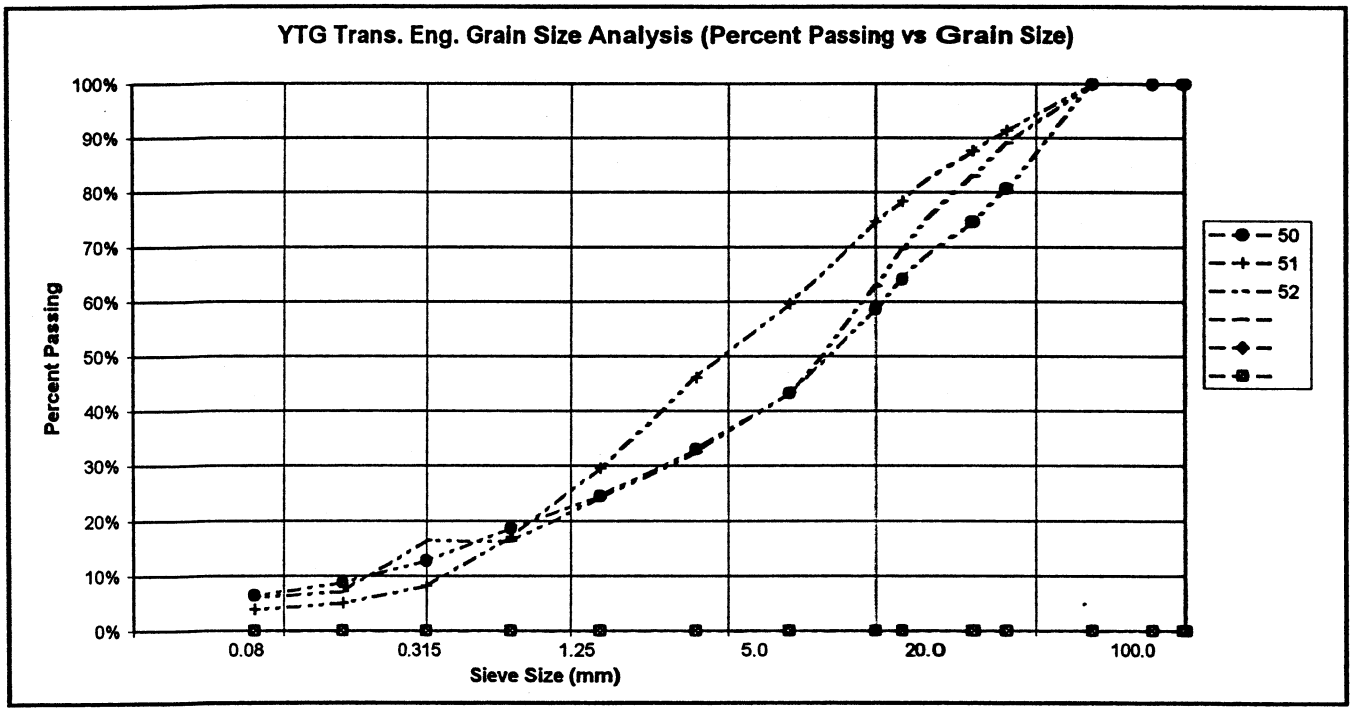


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1694 A/H Silver Creek
DRILL UNIT:	Cat 320 Excavator
HOLE LOCATION:	SEE PLAN
LOGGED BY:	D.T.

HOLE No.: 583-1522

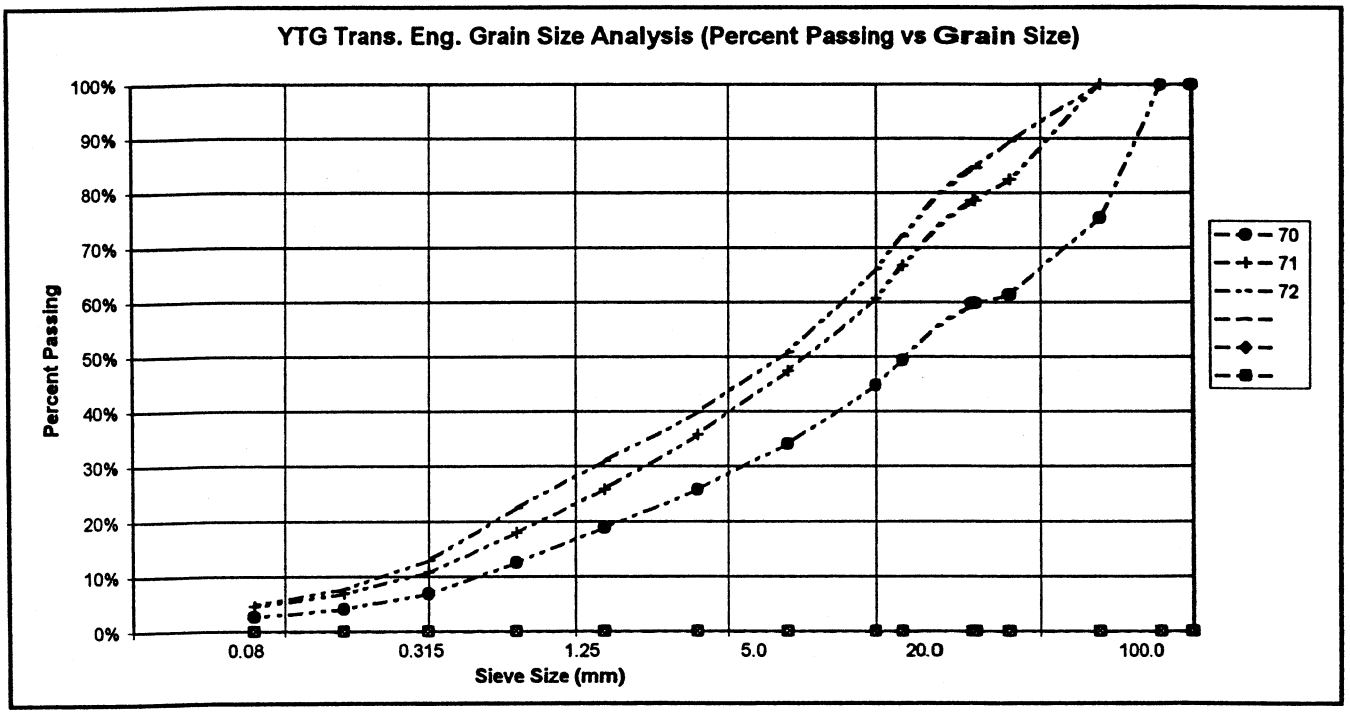
DATE COMP: 2001/03/12

FIELD NO:	50	51	52			
LAB NO:	50	51	52			
DEPTH:	0.7-1.0	2.4-2.8	4.7-5.0			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	100%	100%			
25.0	81%	91%	89%			
20.0	75%	88%	83%			
12.5	64%	78%	70%			
10.0	59%	75%	63%			
5.0	43%	60%	43%			
2.5	33%	46%	33%			
1.25	25%	30%	24%			
0.630	19%	17%	16%			
0.315	13%	8%	16%			
0.160	9%	5%	7%			
0.080	6%	4%	6%			
M.C.(%):						
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	57	40	57			
% SAND:	37	56	37			
% FINES:	6	4	6			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	WELL-GRADED SAND WITH GRAVEL (SW)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)			



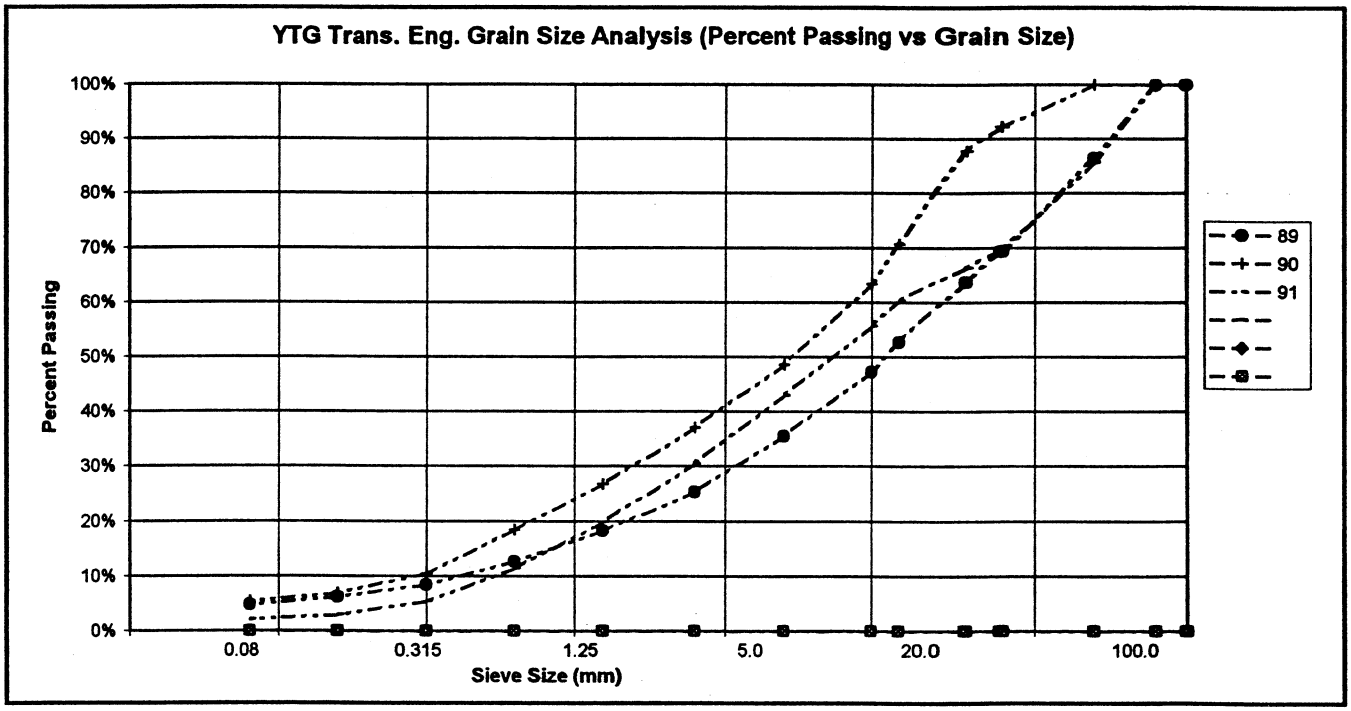
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 583-1530
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1694 A/H Silver Creek		
DRILL UNIT:	Cat 320 Excavator		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	D.T.		DATE COMP: 2001/03/13

FIELD NO:	70	71	72			
LAB NO:	70	71	72			
DEPTH:	0.9-1.1	2.7-3.0	4.8-5.0			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	75%	100%	100%			
25.0	61%	82%	90%			
20.0	60%	79%	85%			
12.5	49%	67%	72%			
10.0	45%	61%	66%			
5.0	34%	47%	51%			
2.5	26%	36%	40%			
1.25	19%	26%	31%			
0.630	13%	18%	22%			
0.315	7%	11%	13%			
0.160	4%	7%	8%			
0.080	3%	5%	5%			
M.C.(%):						
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	66	53	49			
% SAND:	31	43	46			
% FINES:	3	5	5			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)			



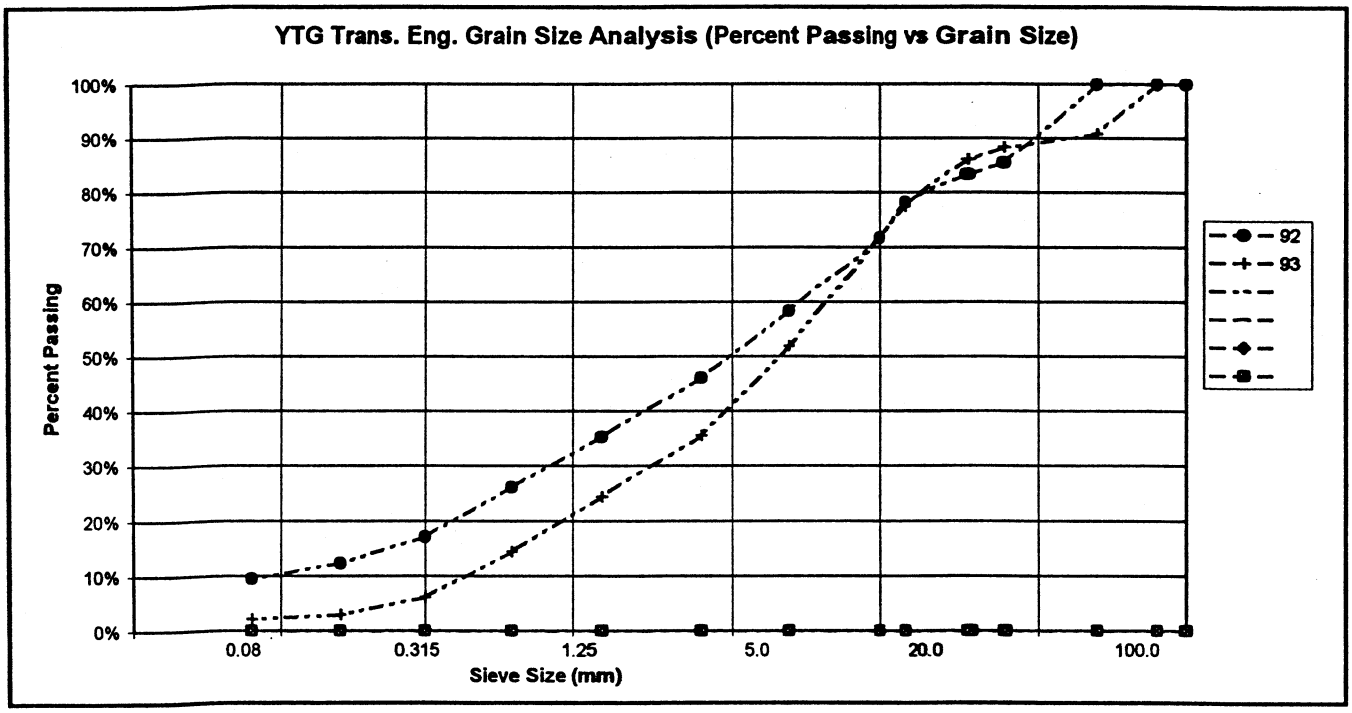
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 583-1537
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1694 A/H Silver Creek		
DRILL UNIT:	Cat 320 Excavator		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	D.T.		DATE COMP: 2001/03/14

FIELD NO:	89	90	91			
LAB NO:	89	90	91			
DEPTH:	0.3-0.7	2.4-2.8	4.6-5.0			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	87%	100%	86%			
25.0	69%	92%	70%			
20.0	64%	88%	66%			
12.5	53%	71%	60%			
10.0	47%	63%	56%			
5.0	36%	49%	43%			
2.5	25%	37%	30%			
1.25	18%	27%	20%			
0.630	13%	18%	11%			
0.315	8%	10%	5%			
0.160	6%	7%	3%			
0.080	5%	5%	2%			
M.C.(%):						
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	64	51	57			
% SAND:	31	43	41			
% FINES:	5	5	2			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SAND (GP)			



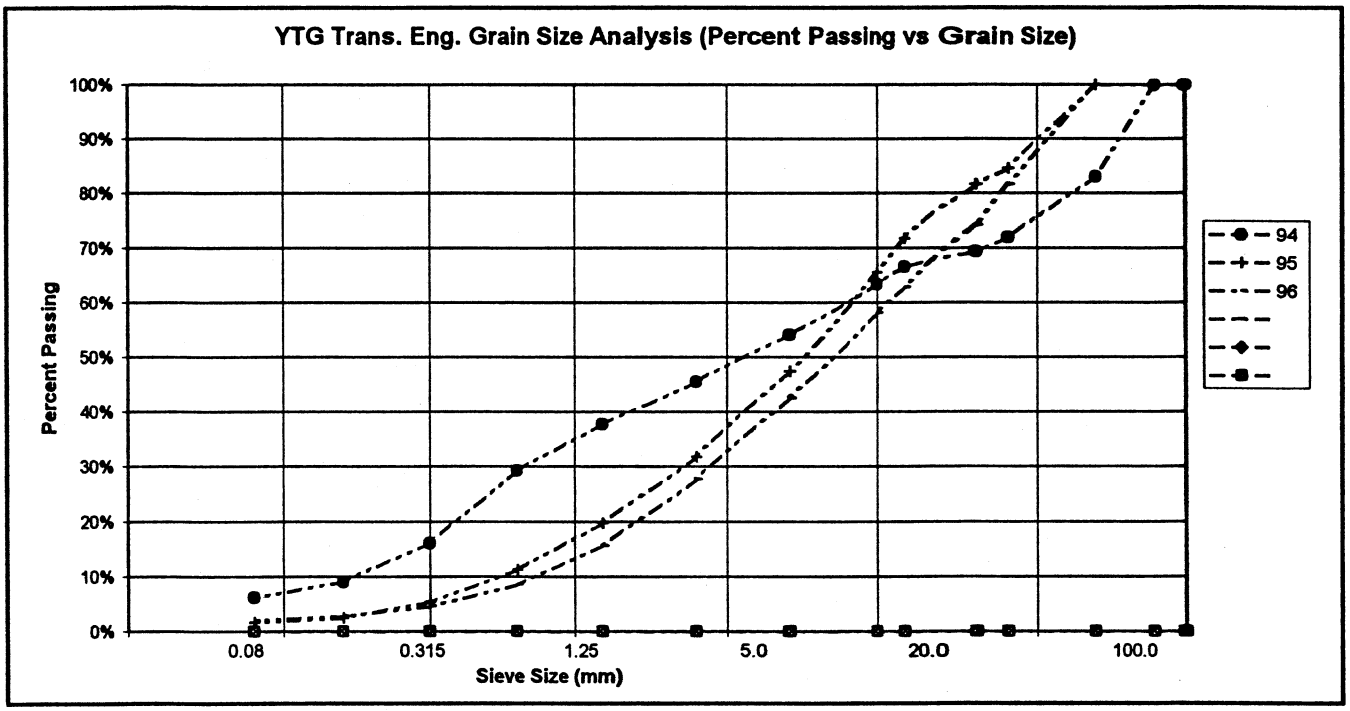
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 583-1538
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1694 A/H Silver Creek		
DRILL UNIT:	Cat 320 Excavator		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	D.T.		DATE COMP: 2001/03/14

FIELD NO:	92	93				
LAB NO:	92	93				
DEPTH:	0.4-0.7	2.3-2.7				
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	91%				
25.0	86%	88%				
20.0	83%	86%				
12.5	78%	78%				
10.0	72%	72%				
5.0	58%	52%				
2.5	46%	36%				
1.25	35%	24%				
0.630	26%	14%				
0.315	17%	6%				
0.160	12%	3%				
0.080	10%	2%				
M.C.(%):						
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	42	48				
% SAND:	49	50				
% FINES:	10	2				
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	WELL-GRADED SAND WITH GRAVEL (SW)				



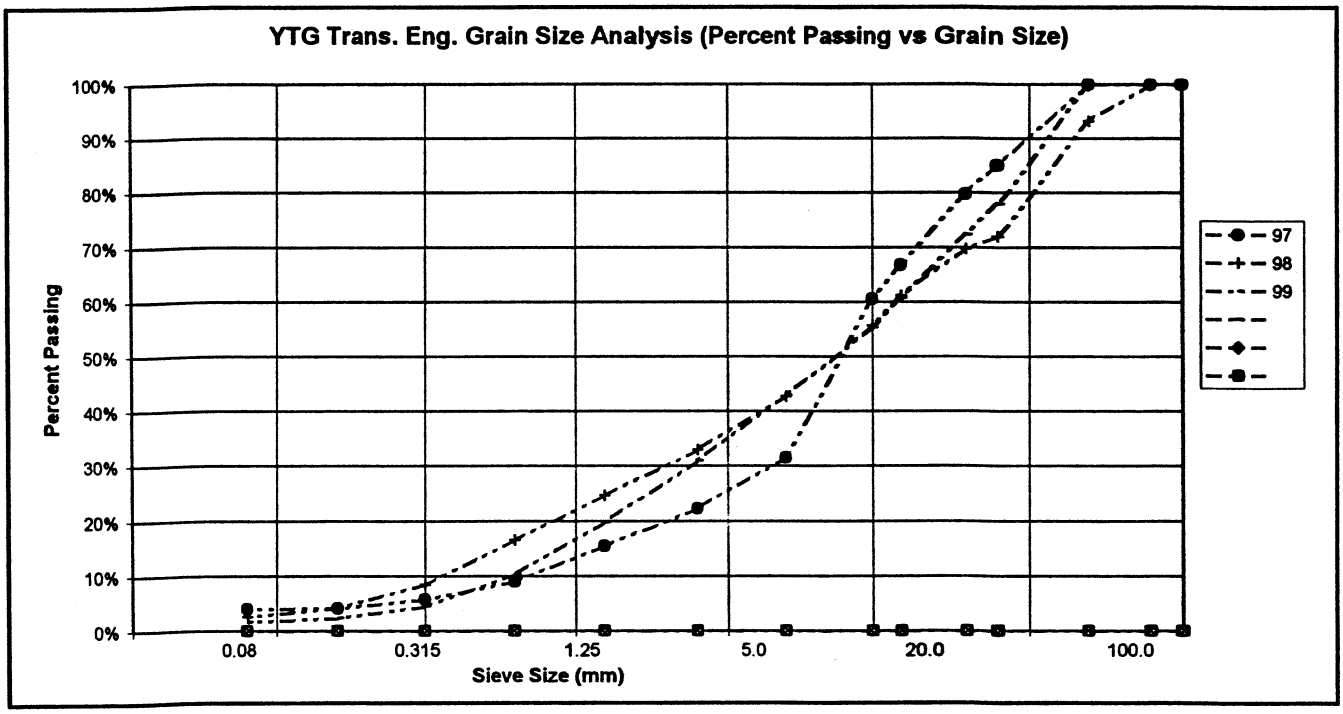
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 563-1539
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1694 A/H Silver Creek		
DRILL UNIT:	Cat 320 Excavator		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	D.T.		DATE COMP: 2001/03/14

FIELD NO:	94	95	96			
LAB NO:	94	95	96			
DEPTH:	0.7-1.0	2.4-2.8	4.6-5.0			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	83%	100%	100%			
25.0	72%	85%	82%			
20.0	69%	82%	74%			
12.5	67%	72%	63%			
10.0	63%	65%	58%			
5.0	54%	47%	43%			
2.5	46%	32%	28%			
1.25	38%	20%	16%			
0.630	29%	11%	9%			
0.315	16%	5%	5%			
0.160	9%	3%	3%			
0.080	6%	2%	2%			
M.C.(%):						
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	46	53	57			
% SAND:	48	46	41			
% FINES:	6	2	2			
CLASSIFICATION	WELL-GRADED SAND WITH SILT & GRAVEL (SW-SM)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)			



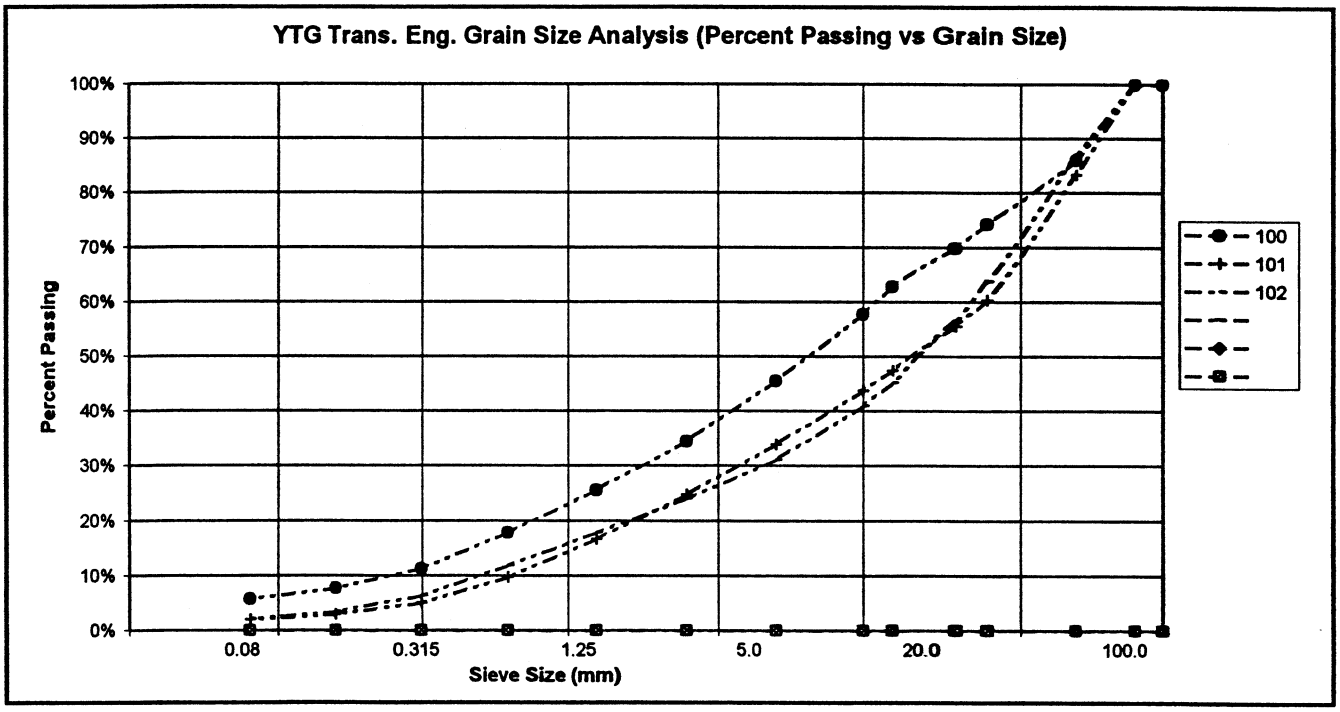
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 583-1540
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1694 A/H Silver Creek		
DRILL UNIT:	Cat 320 Excavator		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	D.T.		DATE COMP: 2001/03/14

FIELD NO:	97	98	99			
LAB NO:	97	98	99			
DEPTH:	0.6-0.9	2.6-3.0	4.6-5.0			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	93%	100%			
25.0	85%	72%	78%			
20.0	80%	70%	72%			
12.5	67%	61%	61%			
10.0	61%	56%	55%			
5.0	32%	43%	43%			
2.5	22%	33%	31%			
1.25	16%	25%	20%			
0.630	9%	17%	10%			
0.315	6%	8%	4%			
0.160	4%	4%	2%			
0.080	4%	3%	2%			
M.C.(%):						
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	68	57	57			
% SAND:	28	40	41			
% FINES:	4	3	2			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)			



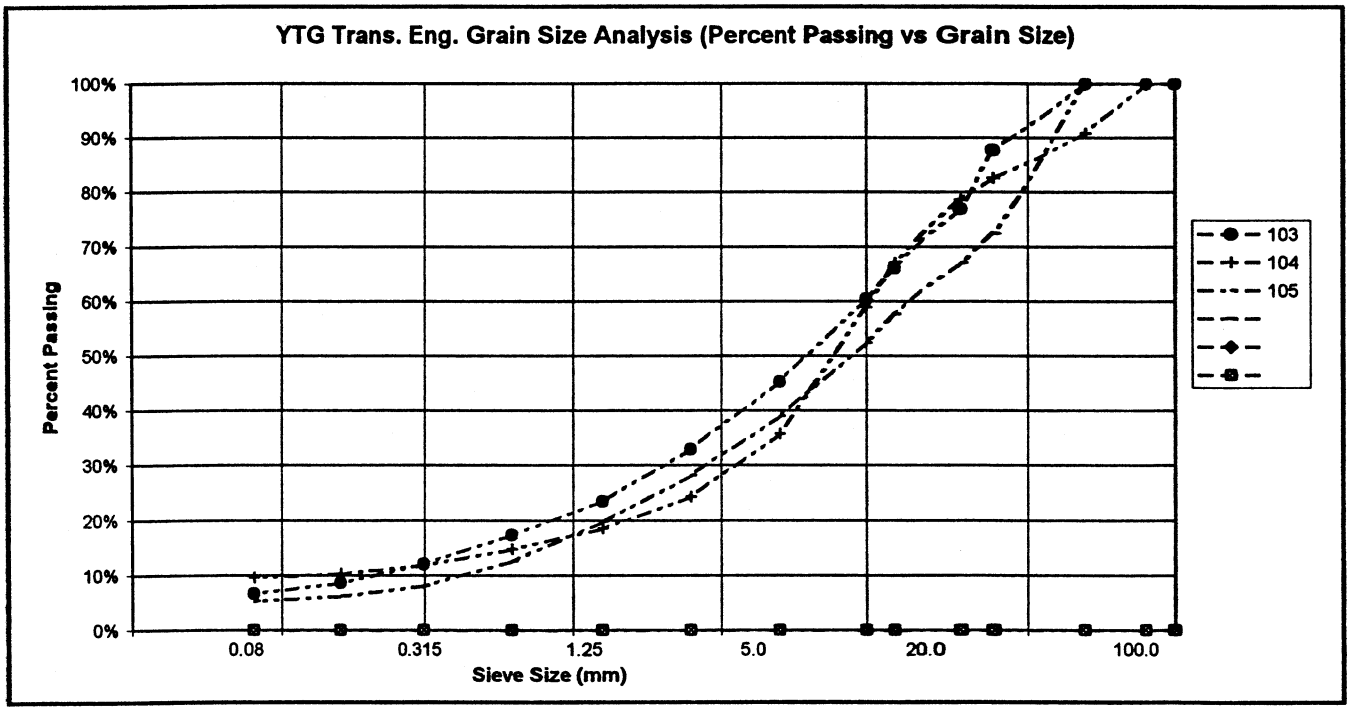
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 563-1541
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1694 A/H Silver Creek		
DRILL UNIT:	Cat 320 Excavator		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	D.T.		DATE COMP: 2001/03/14

FIELD NO:	100	101	102			
LAB NO:	100	101	102			
DEPTH:	0.3-0.6	2.2-2.6	4.6-5.0			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	86%	83%	87%			
25.0	74%	60%	64%			
20.0	70%	56%	56%			
12.5	63%	47%	45%			
10.0	58%	44%	41%			
5.0	46%	34%	31%			
2.5	35%	25%	24%			
1.25	26%	17%	18%			
0.630	18%	10%	12%			
0.315	11%	5%	6%			
0.160	8%	3%	3%			
0.080	6%	2%	2%			
M.C.(%):			#VALUE!			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	54	66	69			
% SAND:	40	32	29			
% FINES:	6	2	2			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)			



PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 583-1542
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Km 1694 A/H Silver Creek		
DRILL UNIT:	Cat 320 Excavator		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	D.T.		DATE COMP: 2001/03/14

FIELD NO:	103	104	105			
LAB NO:	103	104	105			
DEPTH:	0.4-0.7	2.6-3.0	4.6-5.0			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	91%	100%			
25.0	88%	83%	72%			
20.0	77%	79%	67%			
12.5	66%	67%	58%			
10.0	60%	59%	52%			
5.0	45%	36%	39%			
2.5	33%	24%	28%			
1.25	23%	19%	20%			
0.630	17%	15%	13%			
0.315	12%	12%	8%			
0.160	9%	10%	6%			
0.080	7%	10%	5%			
M.C.(%):						
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	55	64	61			
% SAND:	39	26	34			
% FINES:	7	10	5			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)			

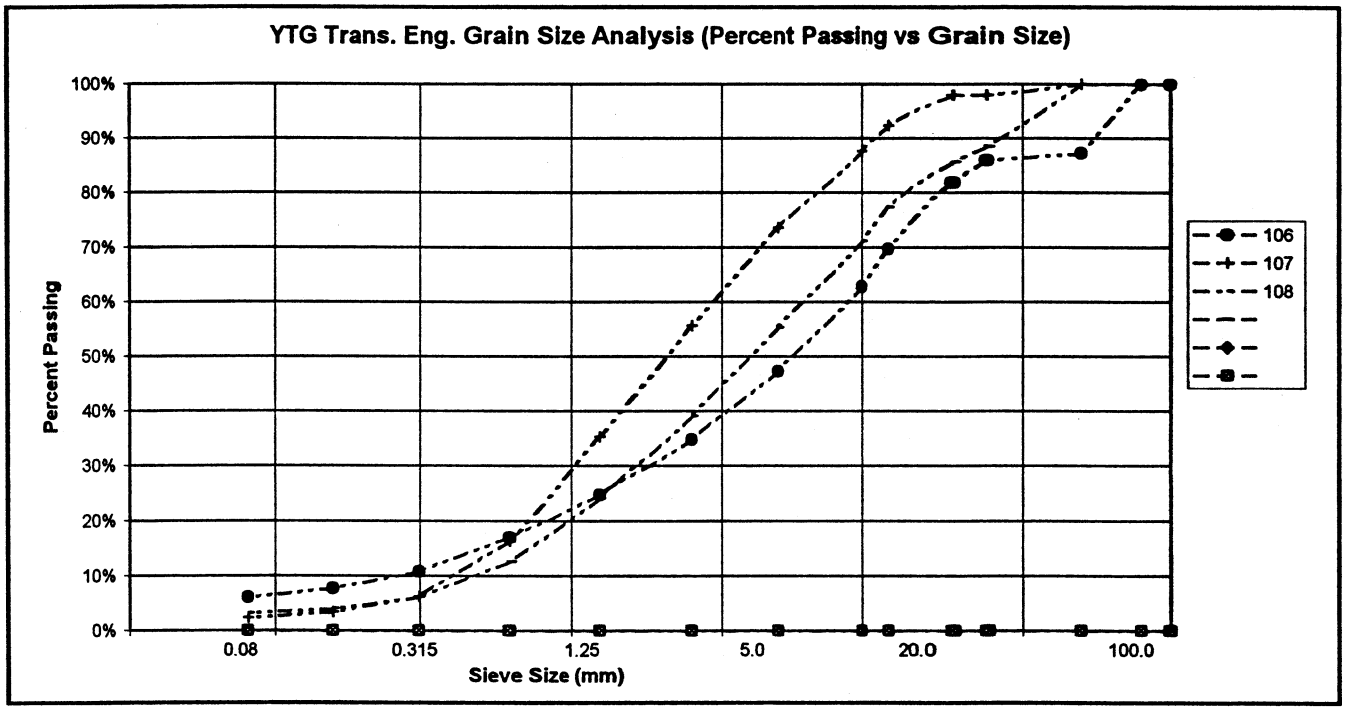


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Km 1694 A/H Silver Creek
DRILL UNIT: Cat 320 Excavator
HOLE LOCATION: SEE PLAN
LOGGED BY: D.T.

HOLE No.: 583-1543

DATE COMP: 2001/03/14

FIELD NO:	106	107	108			
LAB NO:	106	107	108			
DEPTH:	0.5-0.8	2.6-3.0	4.4-4.6			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	87%	100%	100%			
25.0	86%	98%	88%			
20.0	82%	98%	86%			
12.5	70%	92%	77%			
10.0	63%	88%	71%			
5.0	47%	74%	55%			
2.5	35%	56%	39%			
1.25	25%	35%	24%			
0.630	17%	16%	13%			
0.315	11%	6%	6%			
0.160	8%	3%	4%			
0.080	6%	2%	3%			
M.C.(%):						
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	53	26	45			
% SAND:	41	71	52			
% FINES:	6	2	3			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED SAND WITH GRAVEL (SP)	WELL-GRADED SAND WITH GRAVEL (SW)			

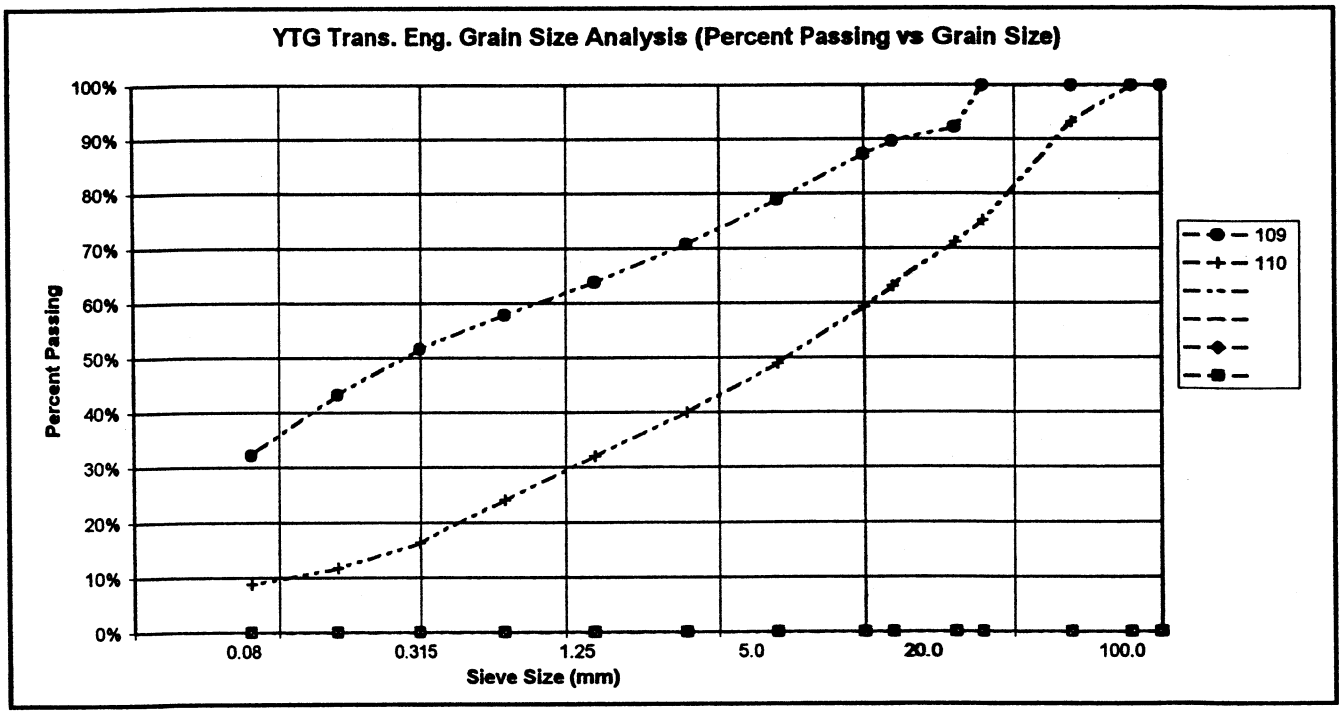


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1694 A/H
DRILL UNIT:	CAT 320 L EXCAVATOR
HOLE LOCATION:	SEE PLAN
LOGGED BY:	D.T.

HOLE No.: 584-1544

DATE COMP: 2001/03/15

FIELD NO:	109	110				
LAB NO:	109	110				
DEPTH:	1.1-1.5	2.4-2.7				
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING				
100.0	100%	100%				
80.0	100%	100%				
50.0	100%	83%				
25.0	100%	75%				
20.0	92%	71%				
12.5	90%	63%				
10.0	87%	59%				
5.0	79%	49%				
2.5	71%	40%				
1.25	64%	32%				
0.630	58%	24%				
0.315	52%	16%				
0.160	43%	12%				
0.080	32%	9%				
M.C.(%):						
LIQUID LIMIT:	0.0	0.0				
PLASTIC LIMIT:	0.0	0.0				
PLASTIC INDEX.:	0.0	0.0				
% GRAVEL:	21	51				
% SAND:	47	40				
% FINES:	32	9				
CLASSIFICATION	SILTY SAND WITH GRAVEL (SM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)				

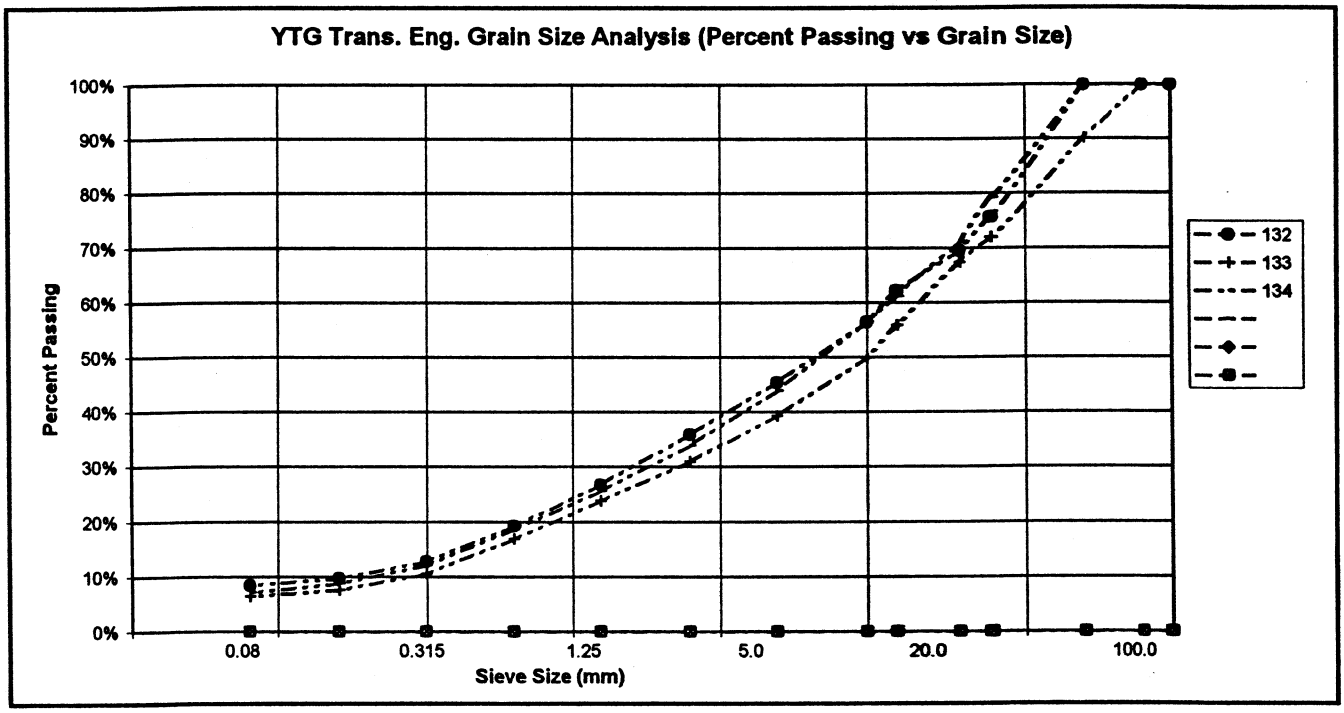


PROJECT NUMBER:	092-202101-0363-1
CLIENT:	ENGINEERING CAPITAL
PROJECT NAME:	SHAKWAK SEG 09
PROJECT LOCATION:	Km 1694 A/H
DRILL UNIT:	CAT 320 L EXCAVATOR
HOLE LOCATION:	SEE PLAN
LOGGED BY:	D.T.

HOLE No.: 584-1551

DATE COMP: 2001/03/15

FIELD NO:	132	133	134			
LAB NO:	132	133	134			
DEPTH:	2.2-2.4	3.9-4.3	5.7-6.0			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	90%	100%			
25.0	76%	72%	79%			
20.0	69%	67%	71%			
12.5	62%	56%	61%			
10.0	57%	50%	56%			
5.0	45%	39%	44%			
2.5	36%	31%	34%			
1.25	27%	24%	26%			
0.630	19%	17%	19%			
0.315	13%	11%	12%			
0.160	10%	8%	9%			
0.080	8%	6%	7%			
M.C.(%):						
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	55	61	56			
% SAND:	37	33	37			
% FINES:	8	6	7			
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)			

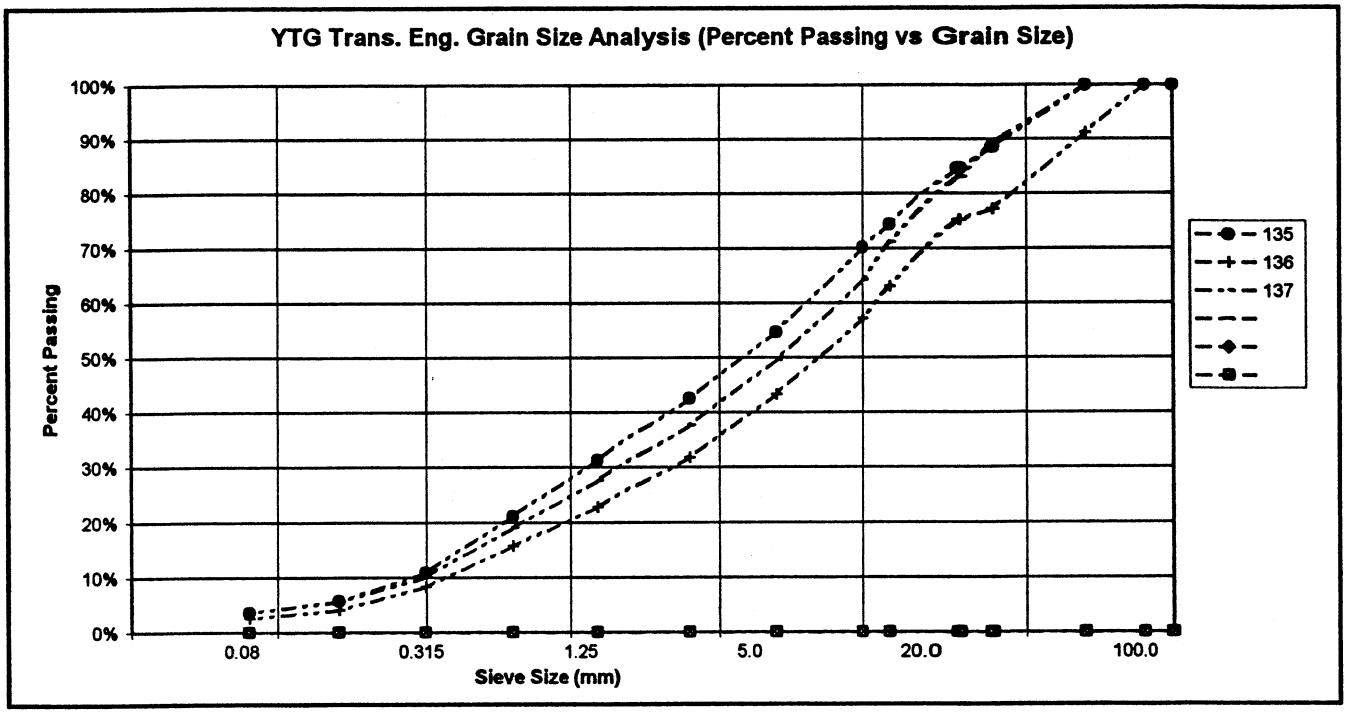


PROJECT NUMBER: 092-202101-0363-1
CLIENT: ENGINEERING CAPITAL
PROJECT NAME: SHAKWAK SEG 09
PROJECT LOCATION: Km 1694 A/H
DRILL UNIT: CAT 320 L EXCAVATOR
HOLE LOCATION: SEE PLAN
LOGGED BY: D.T.

HOLE No.: 584-1552

DATE COMP: 2001/03/15

FIELD NO:	135	136	137			
LAB NO:	135	136	137			
DEPTH:	1.5-1.9	4.1-4.5	5.1-5.5			
TYPE:	BULK	BULK	BULK	BULK		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	91%	100%			
25.0	89%	77%	89%			
20.0	85%	75%	83%			
12.5	74%	63%	71%			
10.0	70%	57%	64%			
5.0	55%	43%	50%			
2.5	43%	32%	38%			
1.25	31%	23%	28%			
0.630	21%	16%	19%			
0.315	11%	8%	10%			
0.160	6%	4%	6%			
0.080	4%	3%	4%			
M.C.(%):						
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	45	57	50			
% SAND:	51	41	46			
% FINES:	4	3	4			
CLASSIFICATION	WELL-GRADED SAND WITH GRAVEL (SW)	POORLY GRADED GRAVEL WITH SAND (GP)	POORLY GRADED GRAVEL WITH SAND (GP)			



SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST HOLE NO: 581-1509
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
D-4 CAT B40 L	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL
0.0	SANDY SILT –brown –moist				
1.0	SILTY GRAVEL WITH SAND (GM) –brown –damp to moist –grindy drilling	AUGER	12	GM	
2.0	WELL-GRADED GRAVEL WITH SAND (GW) –brown –damp				
3.0	–coarser grindier drilling below 2.8m –maximum 100mm material augered up				
4.0		AUGER	13	GW	
5.0	–grindy drilling below 5.0m –maximum 75mm material augered up				
6.0					
7.0	SILTY SAND WITH GRAVEL (SM) –grey –moist (some wet layers) –dense grindy drilling				
8.0	–very hard drilling @ 8.0m	AUGER	14	SM	
	END HOLE @ 8.1m Note: Spruce,willow cover				
9.0					
10.0					

PERCENT FINES (20 40 60 80) | PLASTIC M.C. LIQUID (20 40 60 80) | PERCENT SAND (20 40 60 80) | PERCENT GRAVEL (20 40 60 80)

DEPTH (m)

Government of Yukon Transportation Engineering	LOGGED BY: JM	COMPLETION DEPTH: 8.1 m
	REVIEWED BY:	COMPLETE: 01/02/21
	Fig. No: 115-G-07	Page 1 of 1

01/03/05 11:57AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST HOLE NO: 581-1510
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
D-4 CAT B40 L	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE: RETURN | S.P.T. | AUGER | BULK | TUBE | CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	SANDY SILT -brown -damp							0.0
1.0	SILTY GRAVEL WITH SAND (GM) -brown -damp -grindy drilling	X	15		GM			1.0
2.0	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM) -brown -damp -grindier drilling -maximum 60-80mm material augered up							2.0
3.0								3.0
4.0		X	16		GW-GM			4.0
	-easier grindy drilling below 4.5m							
5.0								5.0
	SILTY SAND (SM) -brown -moist							
6.0	-dense grindy drilling							6.0
	-wet below 6.5m, hard tight drilling							
7.0		X	17		SM			7.0
	END HOLE @ 7.3m Note: Spruce,willow cover							
8.0								8.0
9.0								9.0
10.0								10.0

Government of Yukon Transportation Engineering	LOGGED BY: JM	COMPLETION DEPTH: 7.3 m
	REVIEWED BY:	COMPLETE: 01/02/21
	Fig. No: 115-G-07	Page 1 of 1

01/03/05 11:57AM

SUBSURFACE EXPLORATION & TESTING REPORT	SHAKWAK SEG 9 KM 1694 A/H	TEST HOLE NO: 582-1518
ENGINEERING CAPITAL	SILVER CREEK RESERVE	Project No: 092-202101-0363
D-4 CAT B40 L	LOCATION : SEE PLAN / GPS	ELEVATION: 0.00 (m)

SAMPLE TYPE ■ RETURN ▨ S.P.T. ⊠ AUGER ▤ BULK ▥ TUBE ▥ CORE

DEPTH (m)	SOIL DESCRIPTION	SAMPLE TYPE	SAMPLE NO	▲ PERCENT FINES ▲ 20 40 60 80 / PLASTIC M.C. LIQUID 20 40 60 80	USC	SOIL SYMBOL	◆ PERCENT SAND ◆ 20 40 60 80 / ■ PERCENT GRAVEL ■ 20 40 60 80	DEPTH (m)
0.0	ORGANIC							0.0
	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)							
	-brown							
1.0	-damp							1.0
	-grindy drilling	⊠	41	●	GP-GM		◆ ■	
	-coarser material below 1.8m							
2.0								2.0
	-no fines augering up below 1.8m - just maximum 50mm sub-angular gravels							
3.0								3.0
4.0								4.0
5.0								5.0
	SAND							
	-smooth easy drilling below 5.4m							
6.0	-no sample recovered - material vibrated off flight							6.0
	-no evidance of change in moisture content							
7.0								7.0
	END HOLE @ 7.6m							
8.0								8.0
9.0								9.0
10.0								10.0

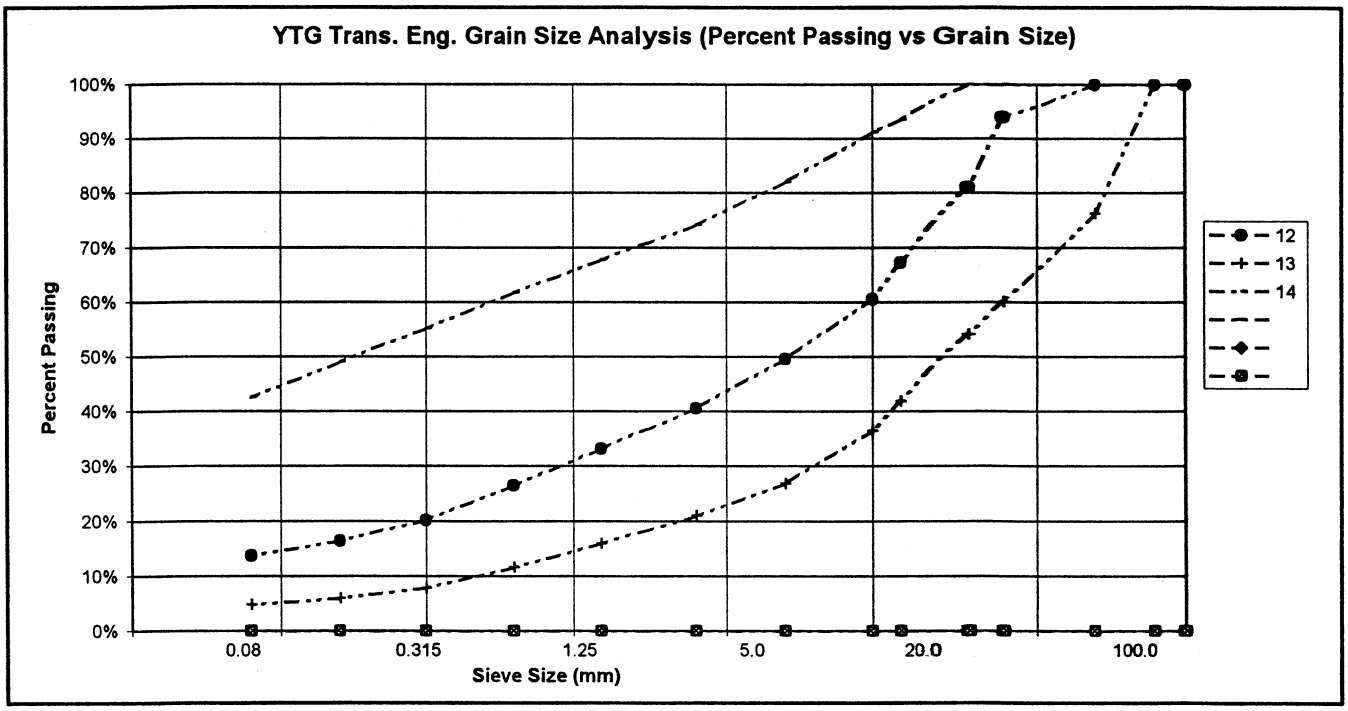
Government of Yukon
Transportation Engineering

LOGGED BY: D.T.	COMPLETION DEPTH: 7.6 m
REVIEWED BY:	COMPLETE: 01/02/28
Fig. No: 115-G-07	Page 1 of 1

01/03/29 03:50PM

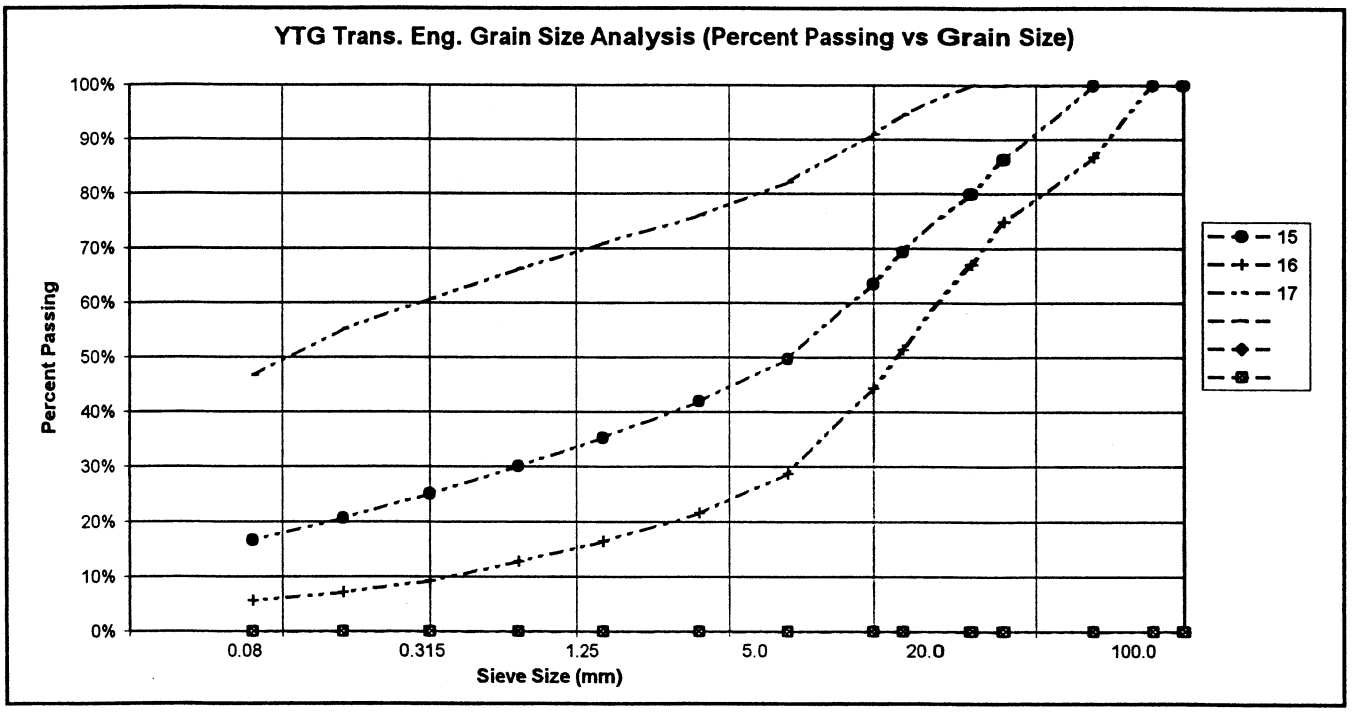
PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 581-1509
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Silver Creek Reserve Km 1694 A/H		
DRILL UNIT:	MOBILE B40 L - D-4 CAT		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	J.M.		DATE COMP: 2000/02/20

FIELD NO:	12	13	14			
LAB NO:	12	13	14			
DEPTH:	0.8-1.2	3.6-4.3	7.6-8.1			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	76%	100%			
25.0	94%	60%	100%			
20.0	81%	54%	100%			
12.5	67%	42%	94%			
10.0	61%	36%	91%			
5.0	50%	27%	82%			
2.5	41%	21%	74%			
1.25	33%	16%	68%			
0.630	26%	12%	62%			
0.315	20%	8%	55%			
0.160	16%	6%	49%			
0.080	14%	5%	43%			
M.C.(%):	4%	2%	9%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	50	73	18			
% SAND:	36	22	39			
% FINES:	14	5	43			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	WELL-GRADED GRAVEL WITH SAND (GW)	SILTY SAND WITH GRAVEL (SM)			



PROJECT NUMBER:	092-202101-0363-1		HOLE No.: 581-1510
CLIENT:	ENGINEERING CAPITAL		
PROJECT NAME:	SHAKWAK SEG 09		
PROJECT LOCATION:	Silver Creek Reserve Km 1694 A/H		
DRILL UNIT:	MOBILE B40 L - D-4 CAT		
HOLE LOCATION:	SEE PLAN		
LOGGED BY:	J.M.		DATE COMP: 2000/02/20

FIELD NO:	15	16	17			
LAB NO:	15	16	17			
DEPTH:	0.9-1.2	3.6-4.1	6.8-7.2			
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING	PERCENT PASSING	PERCENT PASSING			
100.0	100%	100%	100%			
80.0	100%	100%	100%			
50.0	100%	87%	100%			
25.0	86%	75%	100%			
20.0	80%	67%	100%			
12.5	69%	51%	95%			
10.0	64%	44%	91%			
5.0	50%	29%	82%			
2.5	42%	22%	76%			
1.25	35%	16%	71%			
0.630	30%	13%	66%			
0.315	25%	9%	61%			
0.160	21%	7%	55%			
0.080	17%	6%	47%			
M.C.(%):	4%	2%	13%			
LIQUID LIMIT:	0.0	0.0	0.0			
PLASTIC LIMIT:	0.0	0.0	0.0			
PLASTIC INDEX.:	0.0	0.0	0.0			
% GRAVEL:	50	71	18			
% SAND:	33	23	35			
% FINES:	17	6	47			
CLASSIFICATION	SILTY GRAVEL WITH SAND (GM)	WELL-GRADED GRAVEL WITH SILT & SAND (GW-GM)	SILTY SAND WITH GRAVEL (SM)			



PROJECT NUMBER:	092-202101-0363-1				HOLE No.: 582-1518	
CLIENT:	ENGINEERING CAPITAL					
PROJECT NAME:	SHAKWAK SEG 09					
PROJECT LOCATION:	Silver Cr Reserve Km 1694 A/H					
DRILL UNIT:	D-4 CAT					
HOLE LOCATION:	SEE PLAN					
LOGGED BY:	D.T.				DATE COMP: 2001/02/28	

FIELD NO:	41					
LAB NO:	41					
DEPTH:	1.1-1.3					
TYPE:	AUGER	AUGER	AUGER	AUGER		
SIEVE SIZE	PERCENT PASSING					
100.0	100%					
80.0	100%					
50.0	100%					
25.0	72%					
20.0	66%					
12.5	61%					
10.0	58%					
5.0	47%					
2.5	38%					
1.25	29%					
0.630	22%					
0.315	15%					
0.160	11%					
0.080	8%					
M.C.(%):	5%					
LIQUID LIMIT:	0.0					
PLASTIC LIMIT:	0.0					
PLASTIC INDEX.:	0.0					
% GRAVEL:	53					
% SAND:	39					
% FINES:	8					
CLASSIFICATION	POORLY GRADED GRAVEL WITH SILT & SAND (GP-GM)					

