J. R. Paine & Associates Ltd.

Gravel Quarry Investigation (1988)

McLean Lake, Whitehorse, Yukon Territory

J. R. Paine & Associates Ltd.

*REPORT NO. **8002-301***

GRAVEL QUARRY INVESTIGATION (1988)
McLEAN LAKE, WHITEHORSE, YUKON TERRITORY

MARCH, 1988

J.R. PAINE & ASSOCIATES LTD.
14 Burns Road
Whitehorse, Yukon Territory
Y1A 4Y9

REPORT NO. 8002-301

GRAVEL QUARRY INVESTIGATION (1988)
McLEAN LAKE, WHITEHORSE, YUKON TERRITORY

TABLE OF CONTENTS

ATTACHED:

APPENDIX I
- Test hole (pit) logs 201-264
- Test summary sheets
  - from J.R. Paine & Associates' Gravel Quarry Investigation (1988)

APPENDIX II
- Test hole logs
- Test summary sheets
  - from previous Gravel Quarry Investigations by J.R. Paine & Associates, and others.

GRAVEL QUARRY INVESTIGATION (1988)

PROJECT: McLean Lake Gravel Quarry

LOCATION: Whitehorse, Yukon Territory

CLIENT: GOVERNMENT OF YUKON
Community & Transportation Services
Lands Branch
Box 2703
Whitehorse, Yukon Territory
Y1A 2C6

Attention: Mr. Bruce Gilroy

INTRODUCTION

This report presents the results of the gravel quarry investigation made for the McLean Lake Gravel Quarry area. The sites of the investigation include various lots within the existing McLean Lake Quarry leases as well as an area west of Lot W and an area south of Lots T, U and W.

The objective of the investigation was to assess the gravel reserves with regards to potential for development.

Authorization to proceed was received from Mr. Bruce Gilroy of the Yukon Territorial Government, Community and Transportation Services, Lands Branch. Field work was completed in March, 1988.

FIELD AND LABORATORY INVESTIGATION

The field investigation consisted of excavating 64 test pits to a maximum depth of 5.0 meters. Lesser test pit depths were attained in many test pits for a number of reasons including the following:

-sloughage of test pit side walls
-refusal due to bedrock or layer of cobbles and boulders
-unsuitable material

During excavation, field samples were obtained to allow for visual inspection and classification of soils. This information was utilized to detail field test pit logs.

The laboratory investigation consisted of performing grain size analyses and trial laboratory crushing (to 20 millimeter maximum size) on selected samples. This information is utilized to assess the potential for the granular material suitability for various construction materials.

The results of the laboratory testing have been enclosed in the Appendix of this report on the individual test summary sheets. Also enclosed are the subsurface soil profiles which are given in detail on the individual test hole (pit) logs.

The location of the test pits are shown on the attached topographical map of the McLean Lake Gravel Quarry area.

DISCUSSION AND CONCLUSIONS

The following are our findings regarding material quality and quantity for the McLean Lake Gravel Quarry area. A major assumption made to facilitate estimating quantities of suitable granular material is that the material types found at the test pit locations are consistent in the vicinity of the test pit. However, we cannot be responsible for any inconveniences or inaccuracies caused by variations and discontinuities in material types and stratums.

The test pit locations have been located in various areas with varying material types. To simplify the assessment of materials, we have subdivided the quarry area into small parcels. These parcels include the various leases or groups of leases within the previously subdivided gravel lease area. Also, the areas investigated outside of the existing gravel lease limits have been subdivided into two parcels. The following are the subdivisions used:

-lease Lots A and B
-lease Lot I
-lease Lot J
-lease Lot K
-lease Lot P
-lease Lot Q
-lease Lot S
-east of lease Lot W
-south of lease Lots U, T and W
(south of existing gravel quarry leases)

In the following discussions with regards to material suitability or potential for usage as construction materials such as surface base course, asphalt or concrete aggregates, it is assumed that some deletions or additions of certain grain sizes may be required. Two examples of altering a natural product to service a specific use may be:

1/ Reducing the silt or fines content of a concrete aggregate by mechanical washing.

2/ Altering the proportions of asphalt aggregate by splitting the crushed aggregates and recombining the aggregate stockpiles to obtain an appropriate blend.

An evaluation of the above noted designated subdivisions is as folows:

<u>Lease Lots A and B</u>

A total of five test pits were excavated on Lots A and B. The test pits include test pits 201 to 204 and 264. Test pits 201 to 204 were excavated to an average depth of 1.5 meters with bedrock attained in all four test pits. Test pit number 264 was excavated to 4.50 meters with no bedrock attained.

The subsurface soil profiles have been given on the individual test hole (pit) logs enclosed. However, in general, the soil profiles consist of predominately gravelly sand and sandy gravel with cobbles and boulders up to 1.0 meter in diameter, in test pits 201, 202 and 264 located on Lot A. In test pits 203 and 204 located on Lot B, the predominate material type is silty sandy gravel and silty gravel with cobbles and boulders. The materials noted were overlain by a surface stratum of, on average, 0.15 meters of organic silty sandy gravel.

The materials located on lease Lot A appear to be suitable for construction materials such as surface base coarse, asphalt or concrete aggregates. However, the quantity of gravel is limited by the depth to bedrock and the presence of cobbles and boulders. An estimate of the quantity of gravels on Lot A would be up to 15,000 M^3.

The materials located on lease Lot B appear to be unsuitable for construction materials because of silt contents greater than 15 percent by total weight. Also, the shallow depth to bedrock of 1.0 meter (as noted in test pits 203 and 204) would limit the feasibility of lot development.

The potential for development on lease Lots A and B varies between poor and fair. Lease Lot B has a poor rating because of poor quality material found and the shallow depth to bedrock. Lease Lot A has a fair rating because the material appears to be of suitable quality, however, quantity may be limited by the presence of bedrock and cobbles and large boulders.

Lease Lot I

A total of 6 test pits were excavated on Lot I including test pits 205, 206, 208, 210, 211 and 217. The test pits were excavated to an average depth of 3.0 meters with test pit 205 limited in depth to 3.25 meters due to the presence of bedrock or a layer of large boulders.

The subsurface soil profiles have been given on the individual test hole logs enclosed. However, in general, the soil profile consists of a surface stratum of organic silts, sands and gravels with an average depth of 0.25 meters. Underlying the surface stratum are predominately silty sandy gravels, silty gravelly sands, and sands (with varying amounts of silt). Also, cobbles and boulders up to 0.8 meters noted in 4 of 6 test pits.

The materials noted on Lot I appear to be unsuitable for construction material such as surface base coarse, asphalt or concrete aggregates. The reason for this materials limited potential for construction material production is because of the high silt content which are, in general, above 15 percent by total weight.

Lease Lot K

A total of five test pits were excavated on Lot K. The test pits include test pits 212 to 216. The test pits were excavated to an average depth of 4.25 meters.

The subsurface soil profiles have been given on the individual test hole (pit) logs enclosed. However, in general, the soil profiles consist of a surface stratum of organic silts, sands and gravels which extend to depths of, on average, 0.27 meters below the ground surface. Below the surface stratum in test pits 212, 213 and 215 are predominately sandy gravels and gravelly sands which extended to the average maximum depth of excavation of 4.67 meters. Below the surface organic stratum in test pits 214 and 216 were found predominately silty sandy gravels and silty gravelly sands which extended to the maximum depth of excavation of 3.55 meters. In the five test pits cobbles and boulders, up to 0.8 meters in diameter, were found at varying depths and concentrations.

The materials found on Lease Lot K are considered poor to good with regards to there suitability for potential construction material production.

The materials considered poor or unsuitable for construction material production, as indicated in test pits 214 and 216, are located in the centre and north west portions of the site. The materials poor rating is due to the relatively high silt content.

The materials considered fair to good for construction material production, as indicated in test pits 212, 213 and 215, are located on the south and east portions of the site. An estimated quantity of suitable material on Lot K would be in excess of 20,000 M^3. This quantity is based on the assumption that suitable material extends to the maximum average depth of the test pit excavation of 4.67 meters. However, it is likely that the depth of the granular material extends to much greater depths. Bore hole 26, drilled adjacent to the south west corner of Lease Lot K (adjacent to test pit 213), extended to refusal at 8.8 meters below the ground surface.

Lease Lot J

Two test pits were excavated on the north portion of Lot J. The two test pits include test pits 207 and 209. The test pits were excavated to an average depth of 4.63 meters.

The subsurface soil profiles have been given on the individual test hole (pit) logs enclosed. However, in general, the soil profiles consist of a surface stratum of, on average, 0.38 meter of organic gravelly silt and organic silty sandy gravel. Underlying the surface stratum in test pit 207 are sandy gravels with some silt and cobbles to 0.2 meter in diameter which extend to 3.60 meters below the ground surface. Underlying this stratum are silty sands with some gravel which extend to the maximum depth of excavation of 4.75 meters. In test pit 209, the surface stratum is underlain by silty sandy gravel with cobbles and boulders to 0.4 meter in diameter which extend to the maximum depth of drilling of 4.5 meters.

In addition to the two test pits excavated, two test holes have previously been drilled on Lease Lot J. The test holes included test holes 27 and 37. The test holes were located on the north (test hole 37) and south (test hole 27) portions of the site.

The subsurface soil profiles for the test holes drilled are given on the individual test hole logs enclosed. However, in general, the profiles consisted of predominately sandy gravels with traces to some silt and some cobbles. This material was found to extend to a depth of approximately 7.0 meters. Below 7.0 meters was found granular material. However, no representative samples were retained on the augers.

This site is presently being utilized by the City of Whitehorse as a source of pitrun gravels. The portion of the site being utilized is the hill on the south east corner of the site. The exposed bank is approximately 15 meters high with the predominate material type being sandy gravel with some silt.

Lot J has good potential for construction material production such as for surface base course and asphalt aggregate production. With regards to concrete aggregate production, the materials found have a poor to fair potential for development because of the relatively high silt content.

An estimate of the quantity of suitable construction material reserves would be in excess of 115,000 M^3. The location of these reserves is on the south parimeter and east portions of the site. The north portion of Lot J has not been included in this quantity estimate because the four test pits on, or adjacent to, the north portion of the site show generally silty materials (greater than 15 percent silt). If the material below the depth of the test pit excavations becomes cleaner (less silt) the actual gravel reserve quantity may be increased by as much as 40,000 M^3.

The potential for development on Lease Lot J regarding construction material production appears good.

Lease Lot S

Two test pits were excavated in Lot S. The test pits include test pits 226 and 256. The test pits were excavated to a maximum depth of, on average, 4.63 meters.

The subsurface soil profiles have been given on the individual test hole (pit) logs exclosed. However, in general, the soil profile consists of a surface stratum of organic sandy silts and organic silty sandy gravel which extend to 0.25 meters below the ground surface. Underlying the surface stratum in test pit 226 are silty sandy gravels which extend to 1.0 meter below the ground surface. Underlying the surface stratums of silty materials and organics in test pits 226 and 256, and extending to the maximum depth of excavation are sandy gravels with cobbles and traces of silt.

In addition to the two test pits excavated, three test holes have previously been drilled, on or adjacent to, Lot S. These test holes include test holes 26, 28 and 36. The test holes were drilled to 2.6 (refusal), 8.8 (refusal) and 14.6 meters respectively.

The subsurface soil profiles for the test holes are given on the individual test hole logs enclosed. However, in general, the soil profiles consist predominately of sandy gravels with traces of silt and some cobbles throughout.

An estimate of the quantity of suitable construction material reserves would be 50,000 M^3. This estimate was arrived at assuming that all material above an elevation of 820 meters would be suitable material. This elevation corresponds to 2.0 meters above refusal depth in test hole 26 (located at the north west corner of Lot S), and at the maximum depth attained in test hole 36 (located at the south west corner of Lot S).

The potential for development on Lease Lot S regarding construction material production appears good.

Lease Lot P

A total of seven test pits were excavated on Lot P. The test pits include test pits 218 to 222, 227 and 228. The test pits were excavated to a depth of, on average, 4.33 meters. This depth does not include test pit number 221 which was discontinued at 1.75 meters in frozen glacial till formation.

The subsurface soil profiles have been given on the individual test hole (pit) logs enclosed. However, in general, the profile consists of a surface stratum of organics, organic silty sandy gravels and organic gravelly silty sand which extend to 0.25 meters below the ground surface. Underlying the surface organic stratum in test pits 218, 219, 220, 222 and 228 is a sandy gravel and cobble stratum with a very high rock content which extends to, on average, 2.8 meters below the ground surface. Underlying the coarse gravel and cobble stratum are sandier materials with the odd cobble which varies between sandy gravels and sands with some gravel. This stratum extends to the maximum depth of excavation. In test pit 221 the organic surface stratum is underlain by silty sandy gravel which extends to 1.0 meter below the ground surface. Underlying this stratum is frozen glacial till which extended to the maximum depth of excavation of 1.75 meters. In test pit 227 the organic surface stratum was underlain by a stratum of sandy gravel which was sandier with depth and extended to 4.3 meters below the ground surface. Below the sandy gravel stratum to the maximum depth of excavation of 5.00 meters was a sand stratum with a trace of gravel.

In addition to the seven test pits excavated on Lot P, test hole 13 was previously drilled adjacent to the east centre of the lot. Test hole 13 was drilled to a depth of 6.5 meters.

The subsurface soil profile for test hole 13 is given on the individual test hole log enclosed. However, in general, the soil profile consists of a surface stratum of gravel with some sand and some silt which extends to 1.0 meter below the ground surface. Underlying the surface stratum are stratums of silty sandy gravel, sandy gravel with some silt, sandy fine gravel and sandy gravel which extend to the maximum depth of drilling.

Lot P has fair potential for construction material production such as for surface base course, asphalt, and concrete aggregates. The reason for the fair potential is the high rock content and depth of the surface stratums in five of the seven test pits excavated in this site. In consideration of the high rock content the gravel lease development would have to include some mode of operation to obtain appropriate sand-gravel proportions. This could involve a high bank feed or selective crushing (ie. split sand and gravel stockpiles).

An estimate of the quantity of construction material reserves would be 45,000 M^3. This is assuming that the material above an elevation of 825 meters would be suitable. This elevation corresponds to 4.0 meters above the maximum depth attained in test hole 13.

The potential for development on Lease Lot P regarding construction material production appears fair. However, consideration must be given to the method of reserve production to accomodate the stratifications of the materials encountered on this site.

Lease Lot Q

A total of five test pits were excavated on Lot Q. The test pits include test pits 219, 223, 224, 225 and 229. The test pits were excavated to a depth of, on average, 4.15 meters.

The subsurface soil profiles have been given on the individual test hole (pit) logs enclosed. However, in general, the soil profile consists of a surface stratum of 0.25 meters of organic silty sandy gravels. In test pits 219 and 223, the surface stratum is underlain by a sandy gravel and cobble stratum with a high rock content which extends to, on average, 2.38 meters below the ground surface. Underlying the coarse gravel and cobble stratum are gravelly sands which extend to the maximum depth of excavation in test pit 219 of 4.00 meters and to 3.50 meters below the ground surface in test pit 223. In test pit 223, the gravelly sand stratum is underlain by fine to medium sand which extends to the maximum depth of excavation. In test pits 224, 225 and 229, the surface stratum is underlain by sandy gravels and gravelly sands which vary between clean and traces of silt. In test pit 229 the sandy gravels and gravelly sands contained cobbles.

In addition to the five test pits excavated on Lot Q, test hole 31 was previously drilled adjacent to the south east corner of the lot. Test hole 31 was drilled to refusal at a depth of 9.5 meters.

The subsurface profile for test hole 31, is given on the individual test hole logs enclosed. However, in general, the soil profile consists of a surface stratum of gravel and cobbles with some sand. The surface stratum is underlain by stratums of sandy gravels and gravelly sands with some cobbles which extend to the maximum depth of drilling of 9.5 meters (refusal).

Lot Q has a fair to good potential for construction material production. The reason for the fair potential is presence of a coarse gravel and cobble stratum which must be integrated with other materials on site to produce adequate sand-gravel proportions to be suitable for construction materials such as surface base coarse, asphalt or concrete aggregates.

An estimate of the suitable material reserves on Lot Q would be 60,000 M^3. This is assuming that the material above an elevation of 830 meters would be suitable material. This elevation corresponds to 3.0 meters above the refusal depth attained in test hole 31.

The potential for development on Lease Lot Q, regarding construction material production, appears fair to good. The fair rating is given to those portions of the site (ie. adjacent to test pits 219 and 223) where the surface stratum is a sandy gravel and cobble stratum with a very high rock content. In these areas consideration must be given to the method of gravel reserve production to accomodate the stratifications of the materials.

East of Lease Lot W

A total of five test pits were excavated in this area, including test pits 241 to 245. The test pits were excavated to an average depth of 3.35 meters. Test pits 241 and 242 were excavated to depths of 1.50 meters and 3.50 meters respectively at which depth refusal was attained, due to the presence of bedrock or a layer of large boulders. Test pit 243 was excavated to a depth of 3.75 meters then abandoned due to the presence of bouldery frozen material.

The subsurface soil profiles have been given on the individual test hole (pit) logs enclosed. However, in general, the soil profiles consist of a 0.25 meter surface stratum of organic silty sandy gravel. In test pits 241 and 242 the organic surface stratum was underlain by sandy gravels which contained a trace to some silt and cobbles and boulders to 0.5 meter in diameter, which extend to the maximum depth of excavation. In test pits 243, 244 and 245, the surface organic stratum was underlain by silty sandy gravels and silty gravelly sands with cobbles and boulders to 1.1 meters in diameter. The silty gravels and sands extended to depths of 1.50 meters and 2.75 meters in test pits 243 and 245 respectively, and

extended to the maximum depth of excavation of 3.50 meters in test pit 244. In test pits 243 and 245, the silty gravel and sand stratum was underlain by sandy gravels with a trace to some silt and cobbles and boulders, which extend to the maximum depth of excavation of 3.75 meters in test pit 243 and 4.50 meters in test pit 245.

The area west of Lot W is considered to have a limited potential for production of construction materials. Several reasons exist for the limited potential. These include the following:

1/ The depth of the gravel reserves may be limited by the depth of bedrock or large boulders below the ground surface as noted in test pits 241, 242, 243 and 244.

2/ The presence of granular materials with unsuitably high silt contents in the surface stratum in test pits 243 and 245 and throughout the full depth of test pit 244.

3/ The depth of the gravel reserves adjacent to test pit 245 may be limited by the elevation of the natural drainage path which is a maximum of 5.0 meters (at test pit 245 location) lower than the surrounding area.

South of Lease Lots U, T and W

A total of twenty-eight test pits were excavated between the south lease lot lines of Lots U, T and W, and 375 meters south. The area investigated was bounded on the west by an existing trail and on the east by a line approximated by the extension of the east lot line of Lot W. The total area investigated was approximately 16.5 hectares. The test pits include test pits 230 to 240, 246 to 255 and 257 to 263. The test pits were located to best define the material types within the apparent gravel bearing topographical features.

The subsurface soil profiles have been given on the individual test hole (pit) logs enclosed. Due to the number of test pits within the area, it would be difficult to make general comments regarding the soil profiles found. Thus, no attempt has been made.

From the total of twenty-eight test pits within this area, twenty-two test pits contained materials which would be suitable for construction material production such as surface base course, asphalt and concrete aggregates. The twenty-two test pits contained materials which range between sandy gravels (clean to some silt) to gravelly sand (clean to some silt). Within these gravel and sand stratums cobbles and boulders were found which ranged in size, up to 0.7 meter. The concentration of cobbles and boulders ranged between the odd cobble and cobbles and boulders throughout. The sands and gravels were overlain by, on average, 0.25 meters of organic silts, sands and gravels.

The remaining six test pits where the materials may have a limited potential for construction material production include test pits 234, 236, 238, 239, 250 and 252. A more detailed discussion of these test pits, is as follows:

1/ *Test pits 234 and 239 are located approximately 100 meters south of Lease Lot T in a depression. These pits may be represent an area of limited potential for development because of the, on average, 2.4 meters of silty sands and gravels which overlay the suitable sandy gravels. However, these pits are located in a lower area which has been designated as a proposed access right of way.*

2/ *Test pits 236 and 238 are located approximately 60 meters south of the south west corner of Lease Lot W. These test pits have surface stratums of suitable sandy gravels and gravelly sands which extend to, on average, 2.6 meters below the ground surface, however, underlying this stratum are sands with only small amounts of gravel. Depending on the depth of the sand stratum the area may have limited potential for the production of construction materials. In regards to the continuity on the sand stratum, test holes 39 and 40 previously drilled approximately 40 meters north of the test pit locations indicate sandy gravels and gravelly sands extending through the full depths of drilling, (test hole 39, 12.8 meters to refusal, test hole 40, 14.6 meters).*

3/ Test pit 250 is located approximately 220 meters south of the south east corner of Lot W. Test pit 250 was excavated to a depth of 1.25 meters at which depth refusal was reached due to the presence of bedrock or a layer of large boulders. Test pit 250 is located in an area with known bedrock outcroppings.

4/ Test pit 252 is located approximately 130 meters south and 130 meters west of the south east corner of Lot W. Test pit 252 has a soil profile consisting of a silty sand stratum extending to 1.0 meter below the ground surface overlaying a fine sand stratum which extends to the maximum depth of excavation of 3.25 meters.

The reserves of granular material suitable for construction material aggregates such as surface base course, asphalt or concrete aggregates, has been estimated at 600,000 M^3. This value was arrived at by utilizing a topographical map with the interpreted bedrock surface contours overlain.

The potential for development of the granular reserves south of the existing gravel lease Lots U, T and W, appear to be good to excellent. The good to excellent rating is based on our findings which showed suitable granular materials in twenty-two of the twenty-eight test pits excavated. The sporadic nature with regards to the location of the silty and sandy deposits is characteristic of glacial deposits. The deposits of silty and sandy material may not be altogether a negative aspect when production of various types of construction materials is concerned.

We trust the above is satisfactory for your purpose. If you should have any questions or comments, please feel free to contact the undersigned.

Yours truly,

PROFESSIONAL ENGINEER YUKON TERRITORY WILBUR C. KOFOED

Wilbur C. Kofoed, P. Eng.
J.R. Paine & Associates Ltd.

A P P E N D I X

APPENDIX I

J. R. Paine & Associates Ltd.

PROJECT: *McLean Lake Gravel Quarry Investigation (1988)*

CLIENT: *GOVERNMENT OF YUKON*
Community & Transportation Services
Lands Branch
Box 2703
Whitehorse, Yukon Territory
Y1A 2C6

Attention: Mr. Bruce Gilroy

Enclosed in ***Appendix*** *I are the test hole (pit) logs for test pits 201 to 264. The test hole (pit) logs are followed by the grain size analysis test summary sheets completed on pitrun, and laboratory crushed samples obtained during the field investigation.*

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WLC	8002-301	1988.03.25	201	1

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE | SAMPLES

DEPTH / ELEV. M.	CLASSIFICATION (DATUM GROUND SURFACE ELEVATION)	SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE	DEPTH SCALE
	ORGANIC SILTY SANDY GRAVEL 0.25M						1.
	0.25-1.75M SANDY GRAVEL SOME SILT COBBLES AND BOULDERS TO 1.0M						
	1.75M						2.
	REFUSAL-BEDROCK						

SOIL TYPES
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK

CONDITION
-UNDISTURBED
-DISTURBED
-LOST SAMPLE

SAMPLE TYPE
U - 76mm SHELBY TUBE
D.S. - DRIVE SAMPLE
M - MOISTURE CONTENT
R.C. - ROCK CORE

LABORATORY TEST SYMBOLS
Qu - UNCONFINED COMP. STR. kPa
γd - DRY WEIGHT kg/m³
C - CONSOLIDATION TEST
MA - GRAIN SIZE ANALYSIS

PENETRATION RESISTANCE
(N) - NUMBER OF BLOWS OF A 140 lb. HAMMER DROPPED 30 ins. (FREE FALL) REQUIRED TO DRIVE A 2" ø O.D. RAYMOND TYPE SAMPLER A DISTANCE OF 12" INTO THE SOIL.

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WCK	8002-301	1988.03.25	202	2

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES					
DEPTH / ELEV. M.	CLASSIFICATION / DATUM GROUND SURFACE ELEVATION	SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE	DEPTH SCALE
	ORGANIC SILTY SANDY GRAVEL 0.25M						
	0.25-2.25M SANDY GRAVEL TRACE OF SILT ODD COBBLE OR BOULDER TO 1.0M						1.0
	2.25M						2.0
	REFUSAL-BEDROCK						3.0

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED, -DISTURBED, -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γ_d - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A 140 lb. HAMMER DROPPED 30 ins. (FREE FALL) REQUIRED TO DRIVE A 2" ø O.D. RAYMOND TYPE SAMPLER A DISTANCE OF 12" INTO THE SOIL.

PLATE NO. .....

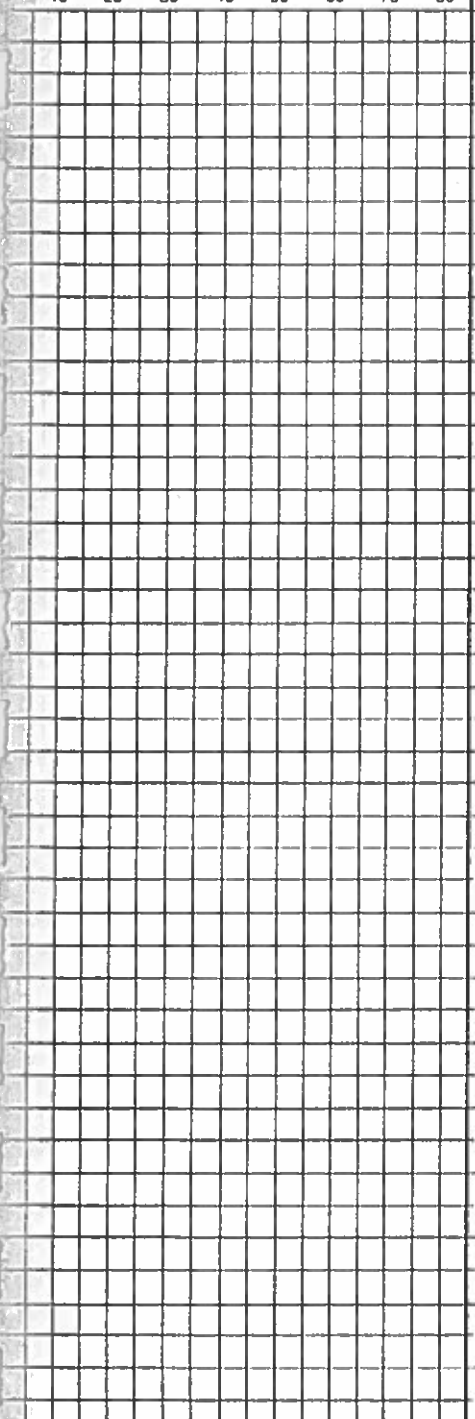
J. R. Paine & Associates Ltd

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK		8002-301	1988.03.25	203	3

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80



SOIL PROFILE			SAMPLES					
DEPTH / ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION	SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE	DEPTH SCALE
	0.00-1.00M BOULDERY SILTY GRAVEL 1.00M						1.0
	REFUSAL-BEDROCK						2.0

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED -DISTURBED -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γ_d - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A 140 lb. HAMMER DROPPED 30 ins. (FREE FALL) REQUIRED TO DRIVE A 2" O.D. RAYMOND TYPE SAMPLER A DISTANCE OF 12" INTO THE SOIL

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WCK	8002-301	1988.03.25	204	4

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

DEPTH ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION	SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE	DEPTH SCALE
	0.00-1.00M SILTY SANDY GRAVEL COBBLES 1.00M						1.0
	REFUSAL-BEDROCK						2.0

SOIL PROFILE | SAMPLES

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	–UNDISTURBED –DISTURBED –LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γd - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A 140 lb. HAMMER DROPPED 30 ins. (FREE FALL) REQUIRED TO DRIVE A 2" O.D. RAYMOND TYPE SAMPLER A DISTANCE OF 12" INTO THE SOIL.

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988) WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK		8002-301	1988.03.25	205	5

MOISTURE CONTENT ● ●
LIQUID LIMIT (W.L.) ■ ■
PLASTIC LIMIT (W.P) ▲ ▲
STANDARD PENETRATION TEST X X
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE | SAMPLES

DEPTH ELEV. M.	CLASSIFICATION (DATUM GROUND SURFACE ELEVATION)	SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE	DEPTH SCALE
	ORGANIC SILTY SANDY GRAVEL 0.25M						
	0.00-3.25M SILTY SANDY GRAVEL						1.- 2.- 3.-
	3.25M						
	REFUSAL-BEDROCK OR LAYER OF LARGE BOULDERS						4.-

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED, -DISTURBED, -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γd - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A 140 lb. HAMMER DROPPED 30 ins. (FREE FALL) REQUIRED TO DRIVE A 2" O.D. RAYMOND TYPE SAMPLER A DISTANCE OF 12" INTO THE SOIL

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WCK	8002-301	1988.03.25	206	6

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE | SAMPLES

DEPTH ELEV. M.	CLASSIFICATION (DATUM GROUND SURFACE ELEVATION)	SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE	DEPTH SCALE
	ORGANIC SILT, SOME SAND & GRAVEL 0.25M						
	0.25-3.50M SILTY GRAVELLY SAND SOME BOULDERS TO 0.8M						1 2 3
	3.50M						
	END OF HOLE						4

SOIL TYPES
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK

CONDITION
-UNDISTURBED
-DISTURBED
-LOST SAMPLE

SAMPLE TYPE
U - 76mm SHELBY TUBE
D.S. - DRIVE SAMPLE
M - MOISTURE CONTENT
R.C. - ROCK CORE

LABORATORY TEST SYMBOLS
Qu - UNCONFINED COMP. STR. kPa
γd - DRY WEIGHT kg/m³
C - CONSOLIDATION TEST
MA - GRAIN SIZE ANALYSIS

PENETRATION RESISTANCE
(N) - NUMBER OF BLOWS OF A 140 lb HAMMER DROPPED 30 ins. (FREE FALL) REQUIRED TO DRIVE A 2" ø O.D. RAYMOND TYPE SAMPLER A DISTANCE OF 12" INTO THE SOIL.

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WCK	8002-301	1988.03.25	207	7

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE | SAMPLES

DEPTH / ELEV. M.	CLASSIFICATION (DATUM GROUND SURFACE ELEVATION)	SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE	DEPTH SCALE
	ORGANIC GRAVELLY SILT 0.50M 0.50-3.60M SANDY GRAVEL SOME SILT HIGH ROCK CONTENT COBBLES TO 0.2M						1.J 2.J 3.J
	3.60M 3.60-4.75M SILTY SAND SOME GRAVEL						4.J
	4.75M END OF HOLE -EXCAVATION INTO SIDE OF KNOLL						5.J

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED, -DISTURBED, -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γd - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A 140 lb. HAMMER DROPPED 30 ins. (FREE FALL) REQUIRED TO DRIVE A 2" ø O.D. RAYMOND TYPE SAMPLER A DISTANCE OF 12" INTO THE SOIL.

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	W.C.K.	8002-301	1988.03.25	208	8

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE | SAMPLES

DEPTH / ELEV. M.	CLASSIFICATION (DATUM GROUND SURFACE ELEVATION)	SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE	DEPTH SCALE
	ORGANIC SILTY SANDY GRAVEL 0.25M						
	0.00-4.00M SILTY SANDY GRAVEL SOME BOULDERS TO 0.2M						1. 2. 3.
	4.00M						4.
	END OF HOLE						5.

SOIL TYPES
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK

CONDITION
-UNDISTURBED
-DISTURBED
-LOST SAMPLE

SAMPLE TYPE
U - 76mm SHELBY TUBE
D.S. - DRIVE SAMPLE
M - MOISTURE CONTENT
R.C. - ROCK CORE

LABORATORY TEST SYMBOLS
Qu - UNCONFINED COMP. STR. kPa
γ_d - DRY WEIGHT kg/m³
C - CONSOLIDATION TEST
MA - GRAIN SIZE ANALYSIS

PENETRATION RESISTANCE
(N) - NUMBER OF BLOWS OF A 140 lb. HAMMER DROPPED 30 ins. (FREE FALL) REQUIRED TO DRIVE A 2" ø O.D. RAYMOND TYPE SAMPLER A DISTANCE OF 12" INTO THE SOIL.

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WCK	8002-301	1988.03.25	209	9

MOISTURE CONTENT
LIQUID LIMIT (W.L.)
PLASTIC LIMIT (W.P)
STANDARD PENETRATION TEST
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE | SAMPLES

DEPTH / ELEV. M.	CLASSIFICATION (DATUM GROUND SURFACE ELEVATION)	SOIL SYMBOL	OTHER TESTS	Uncontined Compressive Strength kPa	SAMPLE COND.	TYPE	DEPTH SCALE
	ORGANIC SILTY SANDY GRAVEL 0.25M						
	0.25-4.50M SILTY SANDY GRAVEL COBBLES AND BOULDERS TO 0.4M						1. 2. 3.
	4.50M						4.
	END OF HOLE -TEST PIT LOCATED ON TOP OF RIDGE.						5.

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED, -DISTURBED, -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γd - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A 140 lb. HAMMER DROPPED 30 ins. (FREE FALL) REQUIRED TO DRIVE A 2" ø O.D. RAYMOND TYPE SAMPLER A DISTANCE OF 12" INTO THE SOIL.

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WCK	8002-301	1988.03.25	210	10

MOISTURE CONTENT
LIQUID LIMIT (W.L.)
PLASTIC LIMIT (W.P)
STANDARD PENETRATION TEST
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE | SAMPLES

DEPTH ELEV. M.	CLASSIFICATION (DATUM GROUND SURFACE ELEVATION)	SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE	DEPTH SCALE
	ORGANIC SILTY SANDY GRAVEL 0.25M						
	0.00-2.00M SILTY SANDY GRAVEL COBBLES TO 0.3M 2.00M						1.0 2.0
	2.00-3.25M SAND FINE TO MEDIUM 3.25M						3.0
	3.25-4.50M SAND FINE TO MEDIUM SOME GRAVEL ODD BOULDER TO 0.8M 4.50M						4.0
	END OF HOLE						5.0

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	UNDISTURBED, DISTURBED, LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γ_d - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A 140 lb. HAMMER DROPPED 30 ins. (FREE FALL) REQUIRED TO DRIVE A 2" ø O.D. RAYMOND TYPE SAMPLER A DISTANCE OF 12" INTO THE SOIL.

PLATE NO. .....

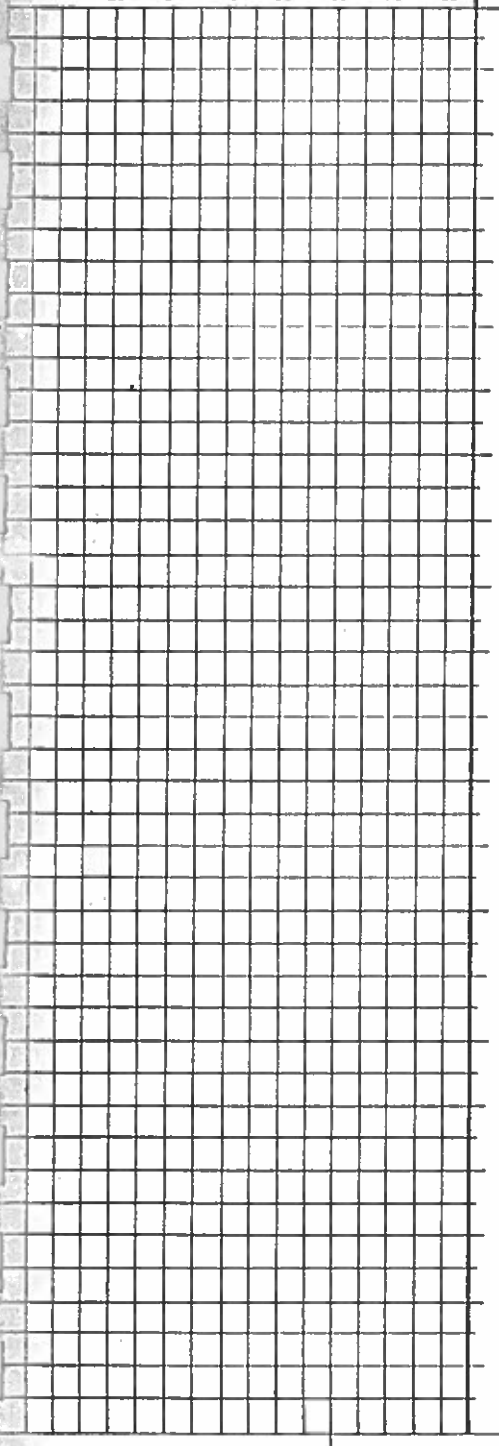
J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	w.c.f.	8002-301	1988.03.25	211	11

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80



SOIL PROFILE			SAMPLES					
DEPTH / ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION		SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE	DEPTH SCALE
	ORGANIC GRAVELLY SILT	0.25						
	SILTY SAND SOME GRAVEL AND COBBLES FROZEN							1.
		1.50						
	END OF HOLE							2.

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED, -DISTURBED, -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γ_d - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A 140 lb. HAMMER DROPPED 30 ins. (FREE FALL) REQUIRED TO DRIVE A 2" ø O.D. RAYMOND TYPE SAMPLER A DISTANCE OF 12" INTO THE SOIL.

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WC/C	8002-301	1988.03.25	212	12

MOISTURE CONTENT
LIQUID LIMIT (W.L.)
PLASTIC LIMIT (W.P)
STANDARD PENETRATION TEST
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE | SAMPLES

DEPTH / ELEV. M.	CLASSIFICATION (DATUM GROUND SURFACE ELEVATION)	SOIL SYMBOL	OTHER TESTS	Uncontined Compressive Strength kPa	SAMPLE COND.	TYPE	DEPTH SCALE
	ORGANIC SILTY SANDY GRAVEL 0.25M						
	0.25-5.00M SANDY GRAVEL SOME SILT HIGH ROCK CONTENT COBBLES AND BOULDERS TO 0.3M						1. 2. 3. 4. 5.
	5.00M						
	END OF HOLE -TEST LOCATED ON SIDE OF RIDGE (ESKER)						6.

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED, -DISTURBED, -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γ_d - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A 140 lb. HAMMER DROPPED 30 ins. (FREE FALL) REQUIRED TO DRIVE A 2" ø O.D. RAYMOND TYPE SAMPLER A DISTANCE OF 12" INTO THE SOIL

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WCK	8002-301	1988.03.25	213	13

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES					
DEPTH / ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION		SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE	DEPTH SCALE
	ORGANIC SILTY SANDY GRAVEL 0.25M							
	0.25-3.75M SANDY GRAVEL SOME SILT SOME BOULDERS TO 0.8M							1. 2. 3.
		3.75M						
	3.75-5.00M GRAVELLY SAND TRACE OF SILT							4. 5.
		5.00M						
	END OF HOLE							6.

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED, -DISTURBED, -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γ_d - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A 140 lb. HAMMER DROPPED 30 ins. (FREE FALL) REQUIRED TO DRIVE A 2" O.D. RAYMOND TYPE SAMPLER A DISTANCE OF 12" INTO THE SOIL

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WCK	8002-301	1988.03.25	214	14

MOISTURE CONTENT
LIQUID LIMIT (W.L.)
PLASTIC LIMIT (W.P)
STANDARD PENETRATION TEST
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE | SAMPLES

DEPTH / ELEV. M	CLASSIFICATION (DATUM GROUND SURFACE ELEVATION)	SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE	DEPTH SCALE
	ORGANIC SILTY SANDY GRAVEL 0.35M 0.35-2.60M SILTY SANDY GRAVEL AT TOP TO TRACE OF SILT AT BOTTOM		MA -pitrun -crushed				1.t 2.t
	2.60M 2.60-3.60M SILTY GRAVELLY SAND SOME BOULDERS TO 0.7M						3.t
	3.60M END OF HOLE						4.t

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED, -DISTURBED, -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A 140 lb. HAMMER DROPPED 30 ins. (FREE FALL) REQUIRED TO DRIVE A 2" O.D. RAYMOND TYPE SAMPLER A DISTANCE OF 12" INTO THE SOIL.

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WCK	8002-301	1988.03.25	215	15

MOISTURE CONTENT
LIQUID LIMIT (W.L.)
PLASTIC LIMIT (W.P.)
STANDARD PENETRATION TEST
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

DEPTH / ELEV. M.	CLASSIFICATION (DATUM GROUND SURFACE ELEVATION)	SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE	DEPTH SCALE
	ORGANIC SILTY SANDY GRAVEL 0.25M						
	0.25-1.00M SILTY SANDY GRAVEL ODD COBBLE TO 0.2M 1.00M						1.
	1.00-2.75M SANDY GRAVEL ODD COBBLE TO 0.2M 2.75M						2.
	2.75-4.00M SANDY GRAVEL COARSE SAND 4.00M						3. / 4.
	END OF HOLE						5.

SOIL TYPES: TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK

CONDITION: -UNDISTURBED, -DISTURBED, -LOST SAMPLE

SAMPLE TYPE: U - 76mm SHELBY TUBE; D.S. - DRIVE SAMPLE; M - MOISTURE CONTENT; R.C. - ROCK CORE

LABORATORY TEST SYMBOLS: Qu - UNCONFINED COMP. STR. kPa; γd - DRY WEIGHT kg/m³; C - CONSOLIDATION TEST; MA - GRAIN SIZE ANALYSIS

PENETRATION RESISTANCE: (N) - NUMBER OF BLOWS OF A 140 lb. HAMMER DROPPED 30 ins. (FREE FALL) REQUIRED TO DRIVE A 2" O.D. RAYMOND TYPE SAMPLER A DISTANCE OF 12" INTO THE SOIL.

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WLK	8002-301	1988.03.25	216	16

MOISTURE CONTENT
LIQUID LIMIT (W.L.)
PLASTIC LIMIT (W.P.)
STANDARD PENETRATION TEST
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES					
DEPTH / ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION	SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE	DEPTH SCALE
	ORGANIC GRAVELLY SILT 0.25M						
	0.25-1.50M SANDY SILTY GRAVEL HIGH ROCK CONTENT COBBLE TO 0.2M 1.50M						1
	1.50-3.50M SILTY GRAVELLY SAND FINE SAND COBBLES TO 0.3M 3.50M				X		2 3
	END OF HOLE						4

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED, -DISTURBED, -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γ_d - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A 140 lb. HAMMER DROPPED 30 ins (FREE FALL) REQUIRED TO DRIVE A 2" O.D. RAYMOND TYPE SAMPLER A DISTANCE OF 12" INTO THE SOIL

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WCK	8002-301	1988.03.25	217	17

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES					
DEPTH / ELEV. M.	CLASSIFICATION / DATUM GROUND SURFACE ELEVATION		SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE	DEPTH SCALE
	ORGANIC SILTY SANDY GRAVEL	0.25						
	0.25-1.00M SILTY SANDY GRAVEL FROZEN	1.00						1.0
	END OF HOLE							2.0

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED -DISTURBED -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γd - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A 140 lb. HAMMER DROPPED 30 ins. (FREE FALL) REQUIRED TO DRIVE A 2" Ø O.D. RAYMOND TYPE SAMPLER A DISTANCE OF 12" INTO THE SOIL.

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WCK	8002-301	1988.03.25	218	18

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

DEPTH / ELEV. M.	CLASSIFICATION (DATUM GROUND SURFACE ELEVATION)	SOIL SYMBOL	OTHER TESTS	Uncontined Compressive Strength kPa	SAMPLE COND.	TYPE	DEPTH SCALE
	ORGANIC SILTY SANDY GRAVEL 0.25M						
	0.25-3.60M SANDY GRAVEL SOME SILT HIGH ROCK CONTENT						1.0 2.0 3.0
	3.60M						
	3.60-4.75M SANDY GRAVEL						4.0
	4.75M						
	END OF HOLE -TEST PIT LOCATED ON TOP OF KNOLL						5.0

SOIL TYPES
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK

CONDITION
-UNDISTURBED
-DISTURBED
-LOST SAMPLE

SAMPLE TYPE
U - 76mm SHELBY TUBE
D.S. - DRIVE SAMPLE
M - MOISTURE CONTENT
R.C. - ROCK CORE

LABORATORY TEST SYMBOLS
Qu - UNCONFINED COMP. STR. kPa
γ_d - DRY WEIGHT kg/m³
C - CONSOLIDATION TEST
MA - GRAIN SIZE ANALYSIS

PENETRATION RESISTANCE
(N) - NUMBER OF BLOWS OF A 140 lb. HAMMER DROPPED 30 ins. (FREE FALL) REQUIRED TO DRIVE A 2" ø O.D. RAYMOND TYPE SAMPLER A DISTANCE OF 12" INTO THE SOIL.

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WCK	8002-301	1988.03.25	219	19

MOISTURE CONTENT ● ●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES					
DEPTH / ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION	SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE	DEPTH SCALE
	ORGANIC GRAVELLY SILTY SAND 0.25M						
	0.25-3.00M SANDY GRAVEL TRACE OF SILT HIGH ROCK CONTENT COBBLES						1 2 3
	3.00M						
	3.00-4.00M GRAVELLY SAND FINE TO MEDIUM SAND						4
	4.00M						
	END OF HOLE						5

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED -DISTURBED -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γd - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A 140 lb. HAMMER DROPPED 30 ins. (FREE FALL) REQUIRED TO DRIVE A 2" ø O.D. RAYMOND TYPE SAMPLER A DISTANCE OF 12" INTO THE SOIL.

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK		8002-301	1988.03.25	220	20

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

DEPTH / ELEV. M.	CLASSIFICATION (DATUM GROUND SURFACE ELEVATION)	SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE	DEPTH SCALE
	ORGANIC GRAVELLY SILTY SAND 0.25M						
	0.25-2.50M SANDY GRAVEL HIGH ROCK CONTENT						1. 2.
	2.50M						
	2.50-3.75M SAND FINE TO MEDIUM SOME GRAVEL						3.
	3.75M						4.
	END OF HOLE						

SOIL TYPES
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK

CONDITION
–UNDISTURBED
–DISTURBED
–LOST SAMPLE

SAMPLE TYPE
U - 76mm SHELBY TUBE
D.S. - DRIVE SAMPLE
M - MOISTURE CONTENT
R.C. - ROCK CORE

LABORATORY TEST SYMBOLS
Qu - UNCONFINED COMP. STR. kPa
γd - DRY WEIGHT kg/m³
C - CONSOLIDATION TEST
MA - GRAIN SIZE ANALYSIS

PENETRATION RESISTANCE
(N) - NUMBER OF BLOWS OF A 140 lb. HAMMER DROPPED 30 ins. (FREE FALL) REQUIRED TO DRIVE A 2" ø O.D. RAYMOND TYPE SAMPLER A DISTANCE OF 12" INTO THE SOIL.

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WCK	8002-301	1988.03.25	221	21

MOISTURE CONTENT ●—●
LIQUID LIMIT (W L.) ■—■
PLASTIC LIMIT (W P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES					
DEPTH / ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION		SOIL SYMBOL	OTHER TESTS	Uncontined Compressive Strength kPa	SAMPLE COND.	TYPE	DEPTH SCALE
	ORGANIC SILTY SANDY GRAVEL	0.25M						
	0.25-1.00M SILTY SANDY GRAVEL	1.00M						1.
	GLACIAL TILL FROZEN	1.75						2.
	END OF HOLE							

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED -DISTURBED -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γ_d - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A 140 lb. HAMMER DROPPED 30 ins. (FREE FALL) REQUIRED TO DRIVE A 2" Ø O.D. RAYMOND TYPE SAMPLER A DISTANCE OF 12" INTO THE SOIL

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WLC	8002-301	1988.03.25	222	22

MOISTURE CONTENT
LIQUID LIMIT (W.L.)
PLASTIC LIMIT (W.P)
STANDARD PENETRATION TEST
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES					
DEPTH / ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION	SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE	DEPTH SCALE
	ORGANIC 0.25M 0.25-4.00M SANDY SILTY GRAVEL COBBLES TO 0.3M HIGH ROCK CONTENT MATERIAL SANDIER WITH DEPTH 4.00M						1 2 3 4
	END OF HOLE -TEST PIT LOCATED NEAR TOP OF KNOLL						5

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED -DISTURBED -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γ_d - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A 140 lb. HAMMER DROPPED 30 ins. (FREE FALL) REQUIRED TO DRIVE A 2" O.D. RAYMOND TYPE SAMPLER A DISTANCE OF 12" INTO THE SOIL.

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WCIL	8002-301	1988.03.25	223	

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES				
DEPTH ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION		SOIL SYMBOL	OTHER TESTS	Uncontined Compressive Strengin kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL	0.25M					
	0.25-1.75M SANDY GRAVEL HIGH ROCK CONTENT						
		1.75M					
	PARTIALLY CEMENTED SILT AND GRAVEL	2.00M					
	2.00-3.50M GRAVELLY SAND						
		3.50M					
	3.50-4.25M SAND, FINE TO MEDIUM ODD PEBBLES						
		4.25M					
	END OF HOLE						

SOIL TYPES
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK

CONDITION
-UNDISTURBED
-DISTURBED
-LOST SAMPLE

SAMPLE TYPE
U - 76mm SHELBY TUBE
D.S. - DRIVE SAMPLE
M - MOISTURE CONTENT
R.C. - ROCK CORE

LABORATORY TEST SYMBOLS
Qu - UNCONFINED COMP. STR. kPa
γd - DRY WEIGHT kg/m³
C - CONSOLIDATION TEST
MA - GRAIN SIZE ANALYSIS

PENETRATION RESISTANCE
(N) - NUMBER OF BLOWS OF A lb. HAMMER DROPPED 30 ins (f FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPLE DISTANCE OF 12" INTO THE

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGAITON (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK		8002-301	1988.03.25	224	

MOISTURE CONTENT
LIQUID LIMIT (W.L.)
PLASTIC LIMIT (W P)
STANDARD PENETRATION TEST
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES				
DEPTH ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION	SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL 0.25M 0.25-4.00M SANDY GRAVEL, TRACE OF SILT		MA -pitrun -crushed			
	4.00M END OF HOLE -TEST PIT LOCATED ON TOP OF RIDGE					

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED -DISTURBED -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γd - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A lb. HAMMER DROPPED 30 ins. (F FALL) REQUIRED TO DRIVE A O.D RAYMOND TYPE SAMPLE DISTANCE OF 12" INTO THE S

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK		8002-301	1988.03.25	225	

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES				
DEPTH / ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION		SOIL SYMBOL	OTHER TESTS	Uncontined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL	0.25M					
	0.25-1.80M SANDY GRAVEL TRACE OF SILT	1.80M					
	1.80-4.00M SANDY GRAVEL	4.00M					
	END OF HOLE						

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED -DISTURBED -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A lb. HAMMER DROPPED 30 ins. (F FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPLE DISTANCE OF 12" INTO THE

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK		8002-301	1988.03.25	226	

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES				
DEPTH / ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION	SOIL SYMBOL	OTHER TESTS	Uncontined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SANDY SILT 0.25M					
	0.25-1.00M SILTY SANDY GRAVEL 1.00M					
	SANDY GRAVEL SANDIER WITH DEPTH COBBLES TO 0.28M					
	5.00M					
	END OF HOLE					

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED -DISTURBED -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γd - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A lb. HAMMER DROPPED 30 ins. (F FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPLE DISTANCE OF 12" INTO THE S

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	[illegible]	8002-301	1988.03.25	227	

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES				
DEPTH ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION		SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL	0.25M					
	SANDY GRAVEL COARSE SAND SANDIER WITH DEPTH						
		4.30M					
	SANDY TRACE OF GRAVEL						
		5.00M					
	END OF HOLE						

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	–UNDISTURBED –DISTURBED –LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP STR kPa γ_d - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A lb. HAMMER DROPPED 30 ins. (FI FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPLE DISTANCE OF 12" INTO THE S

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988) . WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK		8002-301	1988.03.25	228	

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES				
DEPTH / ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION		SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL	0.25M					
	0.25-2.10M SANDY GRAVEL HIGH ROCK CONTENT						
	PARTIALLY CEMENTED	2.25M					
	CLAYEY SILTY SANDY GRAVEL	2.50M					
	2.50-3.00M GRAVELLY SAND	3.00M					
	3.00-5.00M GRAVELLY SAND SOME SILT ODD COBBLES TO 0.3M						
		4.50M					
	END OF HOLE						

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED -DISTURBED -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γd - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A lb. HAMMER DROPPED 30 ins. (F FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPLE DISTANCE OF 12" INTO THE S

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WCK	8002-301	1988.03.25	229	

MOISTURE CONTENT ●—●
LIQUID LIMIT (W L.) ■—■
PLASTIC LIMIT (W P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES				
DEPTH / ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION	SOIL SYMBOL	OTHER TESTS	Uncontined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL 0.25M					
	0.25-3.50M SANDY GRAVEL COBBLES TO 0.2M					
	3.50M					
	3.50-4.50M GRAVELLY SAND COBBLES TO 0.3M					
	4.50M					
	END OF HOLE					

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED -DISTURBED -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γd - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A lb. HAMMER DROPPED 30 ins. (F FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPLE DISTANCE OF 12" INTO THE S

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WCK	8002-301	1988.03.25	230	

MOISTURE CONTENT
LIQUID LIMIT (W.L.)
PLASTIC LIMIT (W.P)
STANDARD PENETRATION TEST
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES				
DEPTH / ELEV. M.	CLASSIFICATION / DATUM GROUND SURFACE ELEVATION		SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL 0.25M						
	0.25-4.50M SANDY GRAVEL TRACE OF SILT SANDIER WITH DEPTH ODD BOULDER TO 0.7M			MA -pitrun			
	4.50M						
	END OF HOLE -TEST PIT LOCATED ON TOP OF RIDGE.						

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED, -DISTURBED, -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γd - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A lb. HAMMER DROPPED 30 ins. (F FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPLE DISTANCE OF 12" INTO THE S

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK		8002-301	1988.03.25	231	

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES				
DEPTH / ELEV. M.	CLASSIFICATION / DATUM GROUND SURFACE ELEVATION		SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL	0.25M					
	0.25-4.00M SANDY GRAVEL COARSE SAND ODD COBBLE TO 0.3M SANDIER WITH DEPTH						
		4.00M					
	END OF HOLE -TEST PIT LOCATED ON TOP OF RIDGE.						

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANC
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED -DISTURBED -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γ_d - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF lb. HAMMER DROPPED 30 ins. (FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPL DISTANCE OF 12" INTO THE

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WCR	8002-301	1988.03.25	232	

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES				
DEPTH / ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION		SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL 0.25M						
	0.25-4.50M SANDY GRAVEL ODD COBBLE TO 0.3M SANDIER WITH DEPTH						
	4.50M						
	END OF HOLE -TEST PIT LOCATED AT BASE OF RIDGE.						

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED -DISTURBED -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γd - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A lb. HAMMER DROPPED 30 ins. (FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPL DISTANCE OF 12" INTO THE

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WCK	8002-301	1988.03.25	233	

MOISTURE CONTENT ●—●
LIQUID LIMIT (W L) ■—■
PLASTIC LIMIT (W P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE | SAMPLES

DEPTH / ELEV. M.	CLASSIFICATION (DATUM GROUND SURFACE ELEVATION)	SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL 0.25M					
	0.25-4.50M SANDY GRAVEL ODD COBBLE TO 0.3M SANDIER WITH DEPTH		MA -pitrun -crushed			
	4.50M					
	END OF HOLE -TEST PIT LOCATED AT BASE OF RIDGE.					

SOIL TYPES: TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK

CONDITION: -UNDISTURBED, -DISTURBED, -LOST SAMPLE

SAMPLE TYPE: D.S. - DRIVE SAMPLE; M - MOISTURE CONTENT; R.C. - ROCK CORE

LABORATORY TEST SYMBOLS: C - CONSOLIDATION TEST; MA - GRAIN SIZE ANALYSIS

PENETRATION RESISTANCE: (N) - NUMBER OF BLOWS OF ... lb HAMMER DROPPED 30 ins (FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPL DISTANCE OF 12" INTO THE

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WCK	8002-301	1988.03.25	234	

MOISTURE CONTENT
LIQUID LIMIT (W L.)
PLASTIC LIMIT (W P)
STANDARD PENETRATION TEST
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES				
DEPTH / ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION		SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL	0.25M					
	0.25-1.75M SILTY SAND SOME GRAVEL						
		1.75M					
	1.75-4.50M SANDY GRAVEL TRACE OF SILT ODD COBBLE AND BOULDER TO 0.4M						
		4.50M					
	END OF HOLE						
	-TEST PIT LOCATED IN DRAW AT BASE OF TWO KNOLLS.						

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED -DISTURBED -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γd - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A lb HAMMER DROPPED 30 ins (F FALL) REQUIRED TO DRIVE A O.D RAYMOND TYPE SAMPLE DISTANCE OF 12" INTO THE S

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WLL	8002-301	1988.03.25	235	

MOISTURE CONTENT
LIQUID LIMIT (W.L.)
PLASTIC LIMIT (W.P)
STANDARD PENETRATION TEST
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES				
DEPTH ELEV. M	CLASSIFICATION DATUM GROUND SURFACE ELEVATION		SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL 0.25M						
	0.25-4.50M SANDY GRAVEL TRACE OF SILT ODD BOULDER TO 0.35M						
	4.50M						
	END OF HOLE						
	-TEST PIT LOCATED ON SIDE OF RIDGE, IN DRAW BETWEEN TWO KNOLLS.						

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED, -DISTURBED, -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γd - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A lb HAMMER DROPPED 30 ins. (FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPLI DISTANCE OF 12" INTO THE

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WCP	8002-301	1988.03.25	236	

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

DEPTH / ELEV. M.	CLASSIFICATION (DATUM GROUND SURFACE ELEVATION)	SOIL SYMBOL	OTHER TESTS	Uncontined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL 0.25M					
	0.25-2.75M SANDY GRAVEL ODD COBBLE TO 0.3M					
	1.75M					
	1.75-4.50M SAND FINE TO MEDIUM SANDY GRAVEL LENSES					
	4.50M					
	END OF HOLE -TEST PIT LOCATED ON TOP OF KNOLL					

SOIL TYPES: TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK

CONDITION: -UNDISTURBED, -DISTURBED, -LOST SAMPLE

SAMPLE TYPE: U - 76mm SHELBY TUBE; D.S. - DRIVE SAMPLE; M - MOISTURE CONTENT; R.C. - ROCK CORE

LABORATORY TEST SYMBOLS: Qu - UNCONFINED COMP. STR. kPa; γd - DRY WEIGHT kg/m³; C - CONSOLIDATION TEST; MA - GRAIN SIZE ANALYSIS

PENETRATION RESISTANCE: (N) NUMBER OF BLOWS OF A lb. HAMMER DROPPED 30 ins (F FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPLE DISTANCE OF 12 INTO THE S

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	W C/L	8002-301	1988.03.25	237	

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES				
DEPTH / ELEV. M	CLASSIFICATION DATUM GROUND SURFACE ELEVATION		SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL 0.25M						
	0.25-2.75M SANDY GRAVEL ODD COBBLE TO 0.3M	2.75M					
	2.75-4.00M GRAVELLY SAND COARSE SAND COBBLES TO 0.3M	4.00M					
	END OF HOLE -TEST PIT LOCATED ON TOP OF RIDGE.						

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANC
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED -DISTURBED -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γd - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF lb. HAMMER DROPPED 30 ins FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPL DISTANCE OF 12" INTO THE

PLATE NO. .....

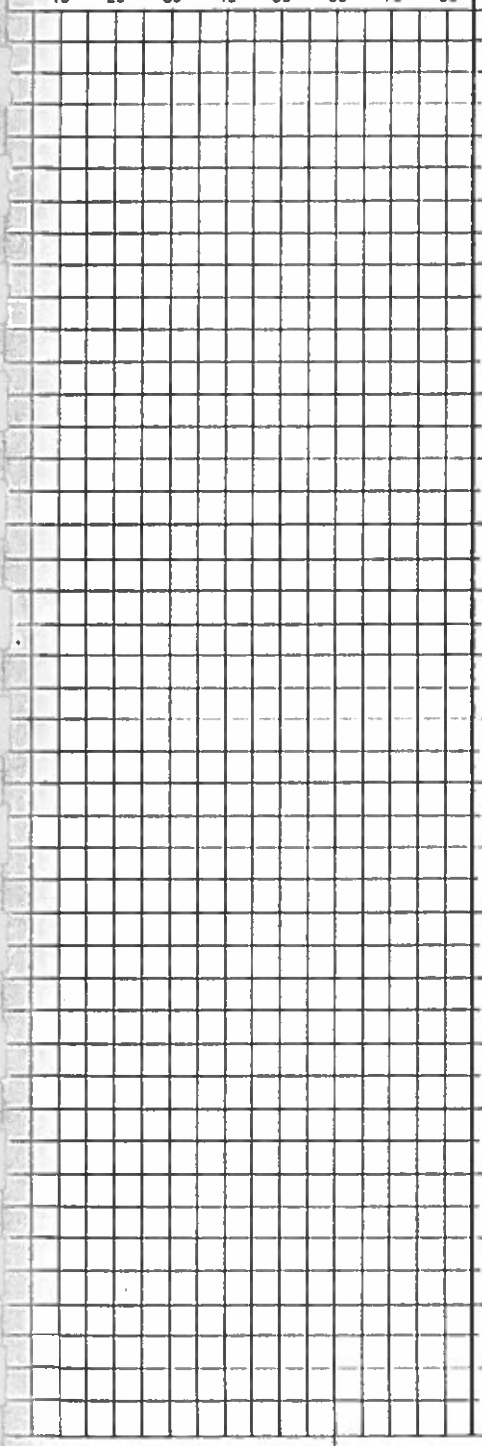
J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WCK	8002-301	1988.03.26	238	

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND PENETRATION (N)
10 20 30 40 50 60 70 80



SOIL PROFILE			SAMPLES				
DEPTH ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION		SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL	0.25M					
	0.25-3.50M GRAVELLY SAND						
		3.50M					
	3.50-4.50M SAND, FINE TO COARSE SOME GRAVEL						
		4.50M					
	END OF HOLE						

SOIL TYPES
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK

CONDITION
-UNDISTURBED
-DISTURBED
-LOST SAMPLE

SAMPLE TYPE
U - 76mm SHELBY TUBE
D.S. - DRIVE SAMPLE
M - MOISTURE CONTENT
R.C. - ROCK CORE

LABORATORY TEST SYMBOLS
Qu - UNCONFINED COMP. STR. kPa
γd - DRY WEIGHT kg/m³
C - CONSOLIDATION TEST
MA - GRAIN SIZE ANALYSIS

PENETRATION RESISTANCE
(N) - NUMBER OF BLOWS OF A
lb. HAMMER DROPPED 30 ins. (
FALL) REQUIRED TO DRIVE A
O.D. RAYMOND TYPE SAMPLE
DISTANCE OF 12" INTO THE

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WCK	8002-301	1988.03.26	239	

MOISTURE CONTENT
LIQUID LIMIT (W.L.)
PLASTIC LIMIT (W.P)
STANDARD PENETRATION TEST
MOISTURE CONTENT (%) & STAND PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES				
DEPTH / ELEV M	CLASSIFICATION DATUM GROUND SURFACE ELEVATION	SOIL SYMBOL	OTHER TESTS	Uncontined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL 0.25M					
	0.25-1.00M SILTY SAND BOULDERS 1.00M					
	1.00-3.00M SILTY SANDY GRAVEL FINE SAND 3.00M					
	3.00-4.50M SANDY GRAVEL TRACE OF SILT 4.50M		MA -pitrun -crushed			
	END OF HOLE					

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED -DISTURBED -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γd - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A lb. HAMMER DROPPED 30 ins. (F FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPLE DISTANCE OF 12" INTO THE S

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WCK	8002-301	1988.03.26	240	

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES				
DEPTH / ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION		SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL 0.25M						
	0.25-2.75M SANDY GRAVEL BOULDERS TO 0.35M AT SURFACE						
		2.75M					
	2.75-4.50M SANDY GRAVEL BOULDERS TO 0.7M						
		4.50M					
	END OF HOLE						

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED, -DISTURBED, -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γ_d - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A lb. HAMMER DROPPED 30 ins. (FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPLE DISTANCE OF 12" INTO THE

PLATE NO. .....

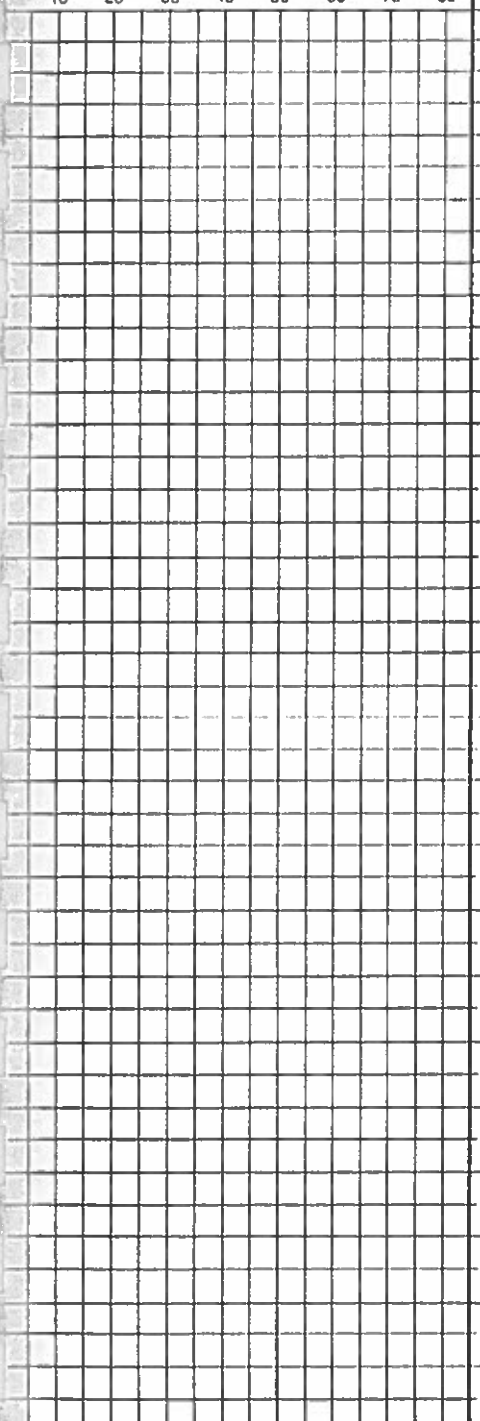
J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WLC	8002-301	1988.03.26	241	

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80



SOIL PROFILE			SAMPLES				
DEPTH / ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION	SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL 0.25M					
	0.25-1.50M SANDY GRAVEL SOME SILT					
	1.50M					
	REFUSAL-BEDROCK OR LAYER OF BOULDERS.					

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED -DISTURBED -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γd - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A lb. HAMMER DROPPED 30 ins. (F FALL) REQUIRED TO DRIVE A O.D RAYMOND TYPE SAMPLE DISTANCE OF 12" INTO THE S

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WCK	8002-301	1988.03.26	242	

MOISTURE CONTENT
LIQUID LIMIT (W.L.)
PLASTIC LIMIT (W.P.)
STANDARD PENETRATION TEST
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES				
DEPTH / ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION	SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL 0.25M 0.25-3.50M SANDY GRAVEL TRACE OF SILT BOULDERS TO 0.5M -MATERIAL SANDIER WITH DEPTH 3.50M		MA -pitrun -crushed			
	REFUSAL-LAYER OF BOULDERS					

SOIL TYPES: TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK

CONDITION: -UNDISTURBED, -DISTURBED, -LOST SAMPLE

SAMPLE TYPE: U - 76mm SHELBY TUBE; D.S. - DRIVE SAMPLE; M - MOISTURE CONTENT; R.C. - ROCK CORE

LABORATORY TEST SYMBOLS: Qu - UNCONFINED COMP. STR. kPa; - DRY WEIGHT kg/m³; C - CONSOLIDATION TEST; MA - GRAIN SIZE ANALYSIS

PENETRATION RESISTANC: (N) - NUMBER OF BLOWS OF lb. HAMMER DROPPED 30 ins. (FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPL DISTANCE OF 12" INTO THE

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WLC	8002-301	1988.03.26	243	

MOISTURE CONTENT ● — ●
LIQUID LIMIT (W.L.) ■ — ■
PLASTIC LIMIT (W.P) ▲ — ▲
STANDARD PENETRATION TEST X — X
MOISTURE CONTENT (%) & STAND PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES				
DEPTH / ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION		SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL 0.25						
	0.25-1.50M SILTY SANDY GRAVEL FROZEN BOULDERS TO 0.7M						
		1.50					
	1.50-3.75M SANDY GRAVEL SOME SILT ODD COBBLE TO 0.3M			MA -pitrun			
		3.75M					
	END OF HOLE -BOULDERS AND FROZEN						

SOIL TYPES
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK

CONDITION
-UNDISTURBED
-DISTURBED
-LOST SAMPLE

SAMPLE TYPE
U - 76mm SHELBY TUBE
D.S. - DRIVE SAMPLE
M - MOISTURE CONTENT
R.C. - ROCK CORE

LABORATORY TEST SYMBOLS
Qu - UNCONFINED COMP STR kPa
γd - DRY WEIGHT kg/m³
C - CONSOLIDATION TEST
MA - GRAIN SIZE ANALYSIS

PENETRATION RESISTANCE
(N) - NUMBER OF BLOWS OF lb. HAMMER DROPPED 30 ins. (FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPL DISTANCE OF 12" INTO THE

PLATE NO. .....

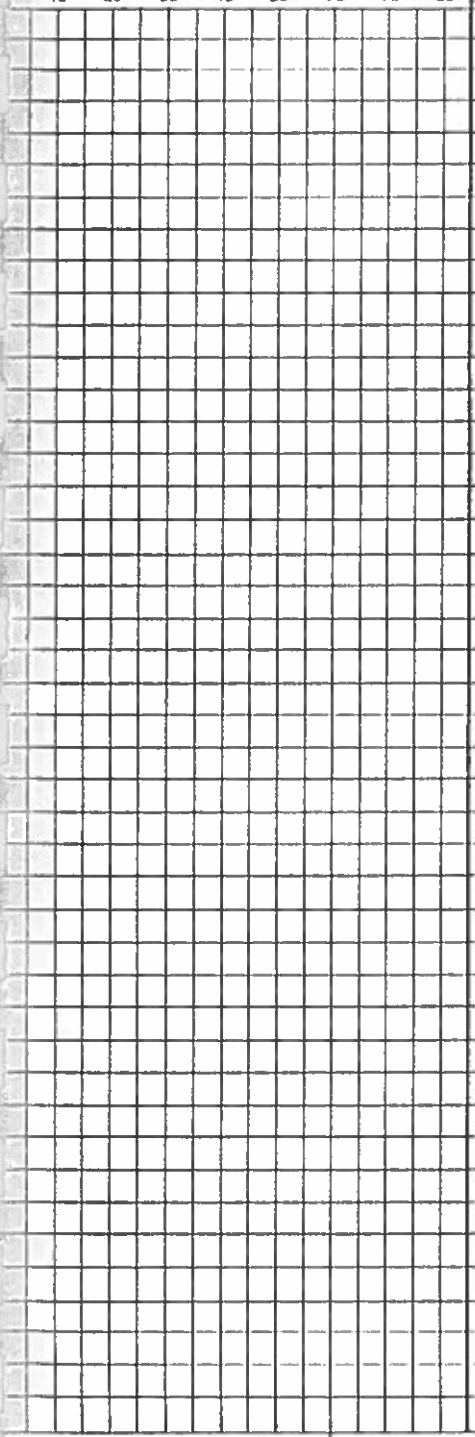
J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WCK	8002-301	1988.03.26	244	

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND PENETRATION (N)
10 20 30 40 50 60 70 80



SOIL PROFILE			SAMPLES				
DEPTH / ELEV M	CLASSIFICATION DATUM GROUND SURFACE ELEVATION		SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL	0.25					
	0.25-1.25M SILTY SANDY GRAVEL VERY BOULDERY TO 0.7M	1.25					
	1.25-3.50M SILTY GRAVELLY SAND FINE SAND BOULDERS (frozen to 2.2M)	3.50M					
	END OF HOLE						

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED, -DISTURBED, -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γd - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A lb. HAMMER DROPPED 30 ins (F FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPLE DISTANCE OF 12" INTO THE S

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WLP	8002-301	1988.03.26	245	

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND PENETRATION (N)
10 20 30 40 50 60 70 80

DEPTH / ELEV. M.	CLASSIFICATION (DATUM GROUND SURFACE ELEVATION)	SOIL SYMBOL	OTHER TESTS	Uncontined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL 0.25M					
	0.25-2.75M SILTY SANDY GRAVEL BOULDERS TO 1.1M					
	2.75M					
	2.75-4.50M SANDY GRAVEL TRACE OF SILT SOME BOULDERS TO 0.5M -SANDIER THAN UPPER STRATUM					
	4.50M					
	END OF HOLE					

SOIL PROFILE | SAMPLES

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANC
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED, -DISTURBED, -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γd - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF lb. HAMMER DROPPED 30 ins (FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPL DISTANCE OF 12" INTO THE

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	W C R.	8002-301	1988.03.26	246	

MOISTURE CONTENT ●—●
LIQUID LIMIT (W L.) ■—■
PLASTIC LIMIT (W P) ▲—▲
STANDARD PENETRATION TEST ×—×
MOISTURE CONTENT (%) & STAND PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES				
DEPTH ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION		SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL 0.25						
	0.25-4.50M SANDY GRAVEL TRACE OF SILT COBBLE TO 0.2M						
	(frozen to 2.6M)						
		4.50M					
	END OF HOLE -TEST PIT LOCATED AT BASE OF KNOLL						

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED -DISTURBED -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP STR kPa γ_d - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) NUMBER OF BLOWS OF A lb HAMMER DROPPED 30 ins (F FALL) REQUIRED TO DRIVE A O D RAYMOND TYPE SAMPLE DISTANCE OF 12 INTO THE S

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	W.C.P.	8002-301	1988.03.26	247	

MOISTURE CONTENT ●—●
LIQUID LIMIT (W L.) ■—■
PLASTIC LIMIT (W P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE				SAMPLES			
DEPTH / ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION	SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL 0.25M					
	0.25-3.80M SANDY GRAVEL SOME COBBLES AND BOULDERS TO 0.7M -MATERIAL FINER WITH DEPTH		MA -pitrun -crushed			
	3.80M					
	END OF HOLE					

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED, -DISTURBED, -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γ_d - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A lb. HAMMER DROPPED 30 ins. (FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPLI DISTANCE OF 12" INTO THE

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WCK	8002-301	1988.03.26	248	

MOISTURE CONTENT ●—●
LIQUID LIMIT (W L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X

MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES				
DEPTH / ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION		SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL 0.25M						
	0.25-4.25M SANDY GRAVEL COBBLES AND BOULDERS TO 1.0M SANDIER WITH DEPTH						
	4.25M						
	END OF HOLE -TEST PIT LOCATED ON TOP OF KNOLL						

SOIL TYPES: TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK

CONDITION: -UNDISTURBED, -DISTURBED, -LOST SAMPLE

SAMPLE TYPE: U - 76mm SHELBY TUBE; D.S. - DRIVE SAMPLE; M - MOISTURE CONTENT; R.C. - ROCK CORE

LABORATORY TEST SYMBOLS: Qu - UNCONFINED COMP. STR. kPa; γd - DRY WEIGHT kg/m³; C - CONSOLIDATION TEST; MA - GRAIN SIZE ANALYSIS

PENETRATION RESISTANCE: (N) - NUMBER OF BLOWS OF lb. HAMMER DROPPED 30 ins. (FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPL DISTANCE OF 12 INTO THE

PLATE NO. .....

J. R. Paine & Associates Ltd

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WLC	8002-301	1988.03.26	249	

MOISTURE CONTENT ● ●
LIQUID LIMIT (W L.) ■ — ■
PLASTIC LIMIT (W P) ▲ — ▲
STANDARD PENETRATION TEST X — X
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE | SAMPLES

DEPTH ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION	SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND	TYPE
	ORGANIC SILTY SANDY GRAVEL 0.25M					
	0.25-4.25M SANDY GRAVEL HIGH ROCK CONTENT COBBLES AND BOULDERS TO 0.4M SANDIER WITH DEPTH					
	4.25M					
	END OF HOLE -TEST PIT LOCATED ON BENCH					

SOIL TYPES
TOPSOIL, SILT, PEAT, SAND, FILL, TILL, CLAY, BEDROCK

CONDITION
-UNDISTURBED
-DISTURBED
-LOST SAMPLE

SAMPLE TYPE
U - 76mm SHELBY TUBE
D.S. - DRIVE SAMPLE
M - MOISTURE CONTENT
R.C. - ROCK CORE

LABORATORY TEST SYMBOLS
Qu - UNCONFINED COMP. STR. kPa
γd - DRY WEIGHT kg/m³
C - CONSOLIDATION TEST
MA - GRAIN SIZE ANALYSIS

PENETRATION RESISTANCE
(N) - NUMBER OF BLOWS OF A lb. HAMMER DROPPED 30 ins. (FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPL DISTANCE OF 12" INTO THE

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK		8002-301	1988.03.26	250	

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

DEPTH ELEV. M	CLASSIFICATION DATUM GROUND SURFACE ELEVATION	SOIL SYMBOL	OTHER TESTS	Uncontined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL 0.25M					
	0.25-1.25M SILTY SANDY GRAVEL					
	1.25M					
	REFUSAL-BEDROCK OR LAYER OF BOULDERS.					
	NOTE: BEDROCK OUTCROPPING 50.0M SOUTH OF TEST PIT 250 LOCATION.					

SOIL TYPES
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK

CONDITION
-UNDISTURBED
-DISTURBED
-LOST SAMPLE

SAMPLE TYPE
U - 76mm SHELBY TUBE
D.S. - DRIVE SAMPLE
M - MOISTURE CONTENT
R.C. - ROCK CORE

LABORATORY TEST SYMBOLS
Qu - UNCONFINED COMP. STR kPa
γd - DRY WEIGHT kg/m³
C - CONSOLIDATION TEST
MA - GRAIN SIZE ANALYSIS

PENETRATION RESISTANCE
(N) - NUMBER OF BLOWS OF A lb. HAMMER DROPPED 30 ins (I FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPLE DISTANCE OF 12" INTO THE

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	DCR	8002-301	1988.03.26	251	

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST ×—×
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES				
DEPTH / ELEV M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION		SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL 0.25M						
	0.25-3.75M SANDY GRAVEL TRACE OF SILT COBBLES AND BOULDERS TO 0.5M						
	3.75M						
	REFUSAL-BEDROCK OR LAYER OF LARGE ANGULAR BOULDERS						

SOIL TYPES
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK

CONDITION
-UNDISTURBED
-DISTURBED
-LOST SAMPLE

SAMPLE TYPE
U - 76mm SHELBY TUBE
D.S. - DRIVE SAMPLE
M - MOISTURE CONTENT
R.C. - ROCK CORE

LABORATORY TEST SYMBOLS
Qu - UNCONFINED COMP. STR. kPa
γd - DRY WEIGHT kg/m³
C - CONSOLIDATION TEST
MA - GRAIN SIZE ANALYSIS

PENETRATION RESISTANCE
(N) - NUMBER OF BLOWS OF 7 lb. HAMMER DROPPED 30 ins. (FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPLE DISTANCE OF 12" INTO THE

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK		8002-301	1988.03.26	252	

MOISTURE CONTENT
LIQUID LIMIT (W.L.)
PLASTIC LIMIT (W.P)
STANDARD PENETRATION TEST
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES				
DEPTH / ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION	SOIL SYMBOL	OTHER TESTS	Uncontined Compressive Strength kPa	SAMPLE COND.	TYPE
	0.00-1.00M SILTY SAND FINE					
	1.00M					
	1.00-3.25M SAND FINE TRACE OF SILT					
	3.25M					
	END OF HOLE -TEST PIT LOCATED ON SCOPE OF KNOLL					

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	UNDISTURBED, DISTURBED, LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γd - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A lb. HAMMER DROPPED 30 ins. (F FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPLE DISTANCE OF 12" INTO THE S

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	[illegible]	8002-301	1988.03.26	253	

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE | SAMPLES

DEPTH / ELEV. M	CLASSIFICATION (DATUM GROUND SURFACE ELEVATION)	SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL 0.25M					
	0.25-4.25M SANDY GRAVEL TRACE OF SILT COARSE SAND -COBBLES AND BOULDERS TO 0.35M -FINER AND LESS SILT WITH DEPTH					
	4.25M					
	END OF HOLE -TEST PIT LOCATED ON TOP OF KNOLL.					

SOIL TYPES
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK

CONDITION
-UNDISTURBED
-DISTURBED
-LOST SAMPLE

SAMPLE TYPE
U - 76mm SHELBY TUBE
D.S. - DRIVE SAMPLE
M - MOISTURE CONTENT
R.C. - ROCK CORE

LABORATORY TEST SYMBOLS
Qu - UNCONFINED COMP. STR. kPa
γd - DRY WEIGHT kg/m³
C - CONSOLIDATION TEST
MA - GRAIN SIZE ANALYSIS

PENETRATION RESISTANCE
(N) - NUMBER OF BLOWS OF A lb. HAMMER DROPPED 30 ins. (I FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPLE DISTANCE OF 12" INTO THE

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WCK	8002-301	1988.03.26	254	

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES				
DEPTH ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION		SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL 0.25M						
	0.25-4.00M SANDY GRAVEL TRACE OF SILT COBBLES AND BOULDERS TO 0.5M			MA -pitrun -crushed			
	4.00M						
	END OF HOLE -TEST PIT LOCATED ON TOP OF KNOLL.						

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED -DISTURBED -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γ_d - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A lb. HAMMER DROPPED 30 ins (F FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPLE DISTANCE OF 12" INTO THE S

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK		8002-301	1988.03.26	255	

MOISTURE CONTENT
LIQUID LIMIT (W.L.)
PLASTIC LIMIT (W.P)
STANDARD PENETRATION TEST
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE | SAMPLES

DEPTH / ELEV. M.	CLASSIFICATION (DATUM GROUND SURFACE ELEVATION)	SOIL SYMBOL	OTHER TESTS	Uncontined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL 0.25M					
	0.25-4.25M SANDY GRAVEL TRACE OF SILT COARSE SAND COBBLES AND BOULDERS TO 0.5M -FINER AND LESS SILT WITH DEPTH					
	4.25M					
	END OF HOLE -TEST PIT LOCATED ON TOP OF KNOLL					

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED, -DISTURBED, -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γd - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A lb. HAMMER DROPPED 30 ins (FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPL DISTANCE OF 12" INTO THE

PLATE NO. .....

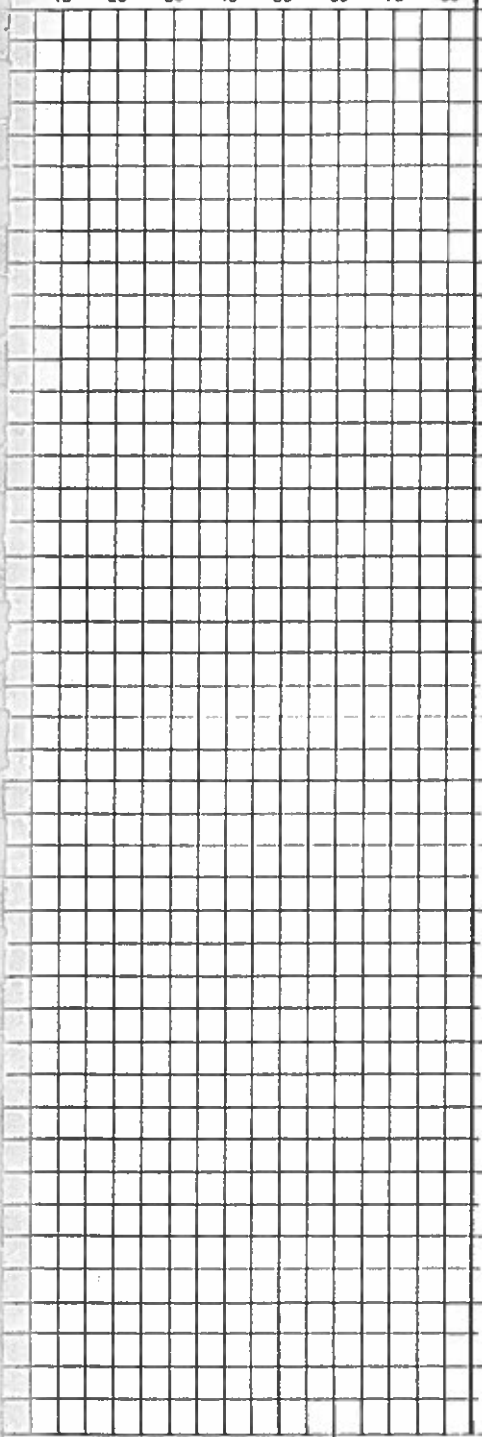
J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WCP	8002-301	1988.03.26	256	

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80



SOIL PROFILE			SAMPLES				
DEPTH ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION	SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL 0.25M 0.25-4.25M SANDY GRAVEL TRACE OF SILT -COBBLES TO 0.2M 4.25M		MA -pitrun -crushed			
	END OF HOLE -TEST PIT LOCATED ON TOP OF RIDGE.					

SOIL TYPES: TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK

CONDITION: -UNDISTURBED, -DISTURBED, -LOST SAMPLE

SAMPLE TYPE: U - 76mm SHELBY TUBE; D.S. - DRIVE SAMPLE; M - MOISTURE CONTENT; R.C. - ROCK CORE

LABORATORY TEST SYMBOLS: Qu - UNCONFINED COMP. STR. kPa; γd - DRY WEIGHT kg/m³; C - CONSOLIDATION TEST; MA - GRAIN SIZE ANALYSIS

PENETRATION RESISTANCE: (N) - NUMBER OF BLOWS OF A lb. HAMMER DROPPED 30 ins (FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPL DISTANCE OF 12" INTO THE

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WCK	8002-301	1988.03.26	257	

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE | SAMPLES

DEPTH / ELEV. M.	CLASSIFICATION (DATUM GROUND SURFACE ELEVATION)	SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL 0.25M					
	0.25-4.50M SANDY GRAVEL TRACE OF SILT COBBLES AND BOULDERS TO 0.35M		MA -pitrun -crushed			
	4.50M					
	END OF HOLE					

SOIL TYPES
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK

CONDITION
-UNDISTURBED
-DISTURBED
-LOST SAMPLE

SAMPLE TYPE
U - 76mm SHELBY TUBE
D.S. - DRIVE SAMPLE
M - MOISTURE CONTENT
R.C. - ROCK CORE

LABORATORY TEST SYMBOLS
Qu - UNCONFINED COMP. STR. kPa
γd - DRY WEIGHT kg/m³
C - CONSOLIDATION TEST
MA - GRAIN SIZE ANALYSIS

PENETRATION RESISTANCE
(N) - NUMBER OF BLOWS OF A lb. HAMMER DROPPED 30 ins (FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPL DISTANCE OF 12" INTO THE

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	W C W	8002-301	1988.03.26	258	

MOISTURE CONTENT ●—●
LIQUID LIMIT (W L.) ■—■
PLASTIC LIMIT (W P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES				
DEPTH / ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION		SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL 0.25M						
	SANDY GRAVEL TRACE OF SILT COARSE SAND COBBLES AND BOULDERS TO 0.5M						
		3.75M					
	3.75-4.75M SANDY GRAVEL COBBLES TO 0.3M						
		4.75M					
	END OF HOLE						

SOIL TYPES
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK

CONDITION
-UNDISTURBED
-DISTURBED
-LOST SAMPLE

SAMPLE TYPE
U - 76mm SHELBY TUBE
D.S. - DRIVE SAMPLE
M - MOISTURE CONTENT
R.C. - ROCK CORE

LABORATORY TEST SYMBOLS
Qu - UNCONFINED COMP. STR. kPa
γd - DRY WEIGHT kg/m³
C - CONSOLIDATION TEST
MA - GRAIN SIZE ANALYSIS

PENETRATION RESISTANCE
(N) - NUMBER OF BLOWS OF A
lb. HAMMER DROPPED 30 ins. (F
FALL) REQUIRED TO DRIVE A
O.D. RAYMOND TYPE SAMPLE
DISTANCE OF 12" INTO THE

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	[illegible]	8002-301	1988.03.26	259	

MOISTURE CONTENT
LIQUID LIMIT (W.L.)
PLASTIC LIMIT (W.P)
STANDARD PENETRATION TEST
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE | SAMPLES

DEPTH / ELEV. M.	CLASSIFICATION (DATUM GROUND SURFACE ELEVATION)	SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL 0.25M					
	0.25-4.25M SANDY GRAVEL TRACE OF SILT COBBLES AND BOULDERS TO 0.5M					
	4.25M					
	END OF HOLE -TEST PIT LOCATED ON TOP OF KNOLL					

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED, -DISTURBED, -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γd - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A lb. HAMMER DROPPED 30 ins. (F FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPLE DISTANCE OF 12" INTO THE S

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WCK	8002-301	1988.03.26	260	

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES				
DEPTH ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION	SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL 0.25M 0.25-4.25M SANDY GRAVEL SOME COBBLES TO 0.3M		MA -pitrun			
	4.25M END OF HOLE -TEST PIT LOCATED ON TOP OF RIDGE.					

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED -DISTURBED -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γd - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A lb. HAMMER DROPPED 30 ins. (F FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPLE DISTANCE OF 12" INTO THE

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK		8002-301	1988.03.26	261	

MOISTURE CONTENT ● ●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES				
DEPTH ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION		SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SAND	0.25M					
	0.25-4.50M SILTY SAND SOME GRAVEL ODD COBBLE TO 0.3M						
		4.50M					
	END OF HOLE -TEST PIT LOCATED ON LOW POINT OF RIDGE.						

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED -DISTURBED -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γ_d - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) NUMBER OF BLOWS OF / lb. HAMMER DROPPED 30 ins (FALL) REQUIRED TO DRIVE A O.D RAYMOND TYPE SAMPLI DISTANCE OF 12" INTO THE

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK		8002-301	1988.03.26	262	

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE | SAMPLES

DEPTH / ELEV. M.	CLASSIFICATION (DATUM GROUND SURFACE ELEVATION)	SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL 0.25M					
	0.25-5.25M SANDY GRAVEL SOME SILT COBBLES AND BOULDERS TO 0.7M					
	5.25M					
	END OF HOLE					
	-TEST PIT LOCATED ON RIDGE, DUG INTO HIGHER PORTION OF RIDGE.					

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANC
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED, -DISTURBED, -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP STR. kPa γd - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF lb. HAMMER DROPPED 30 ins. (FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPL DISTANCE OF 12" INTO THE

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	W.C.L.	8002-301	1988.03.26	263	

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES				
DEPTH ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION	SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL 0.25M 0.25-4.50M SANDY GRAVEL TRACE OF SILT SOME COBBLES AND BOULDERS TO 0.7M		MA -pitrun -crushed			
	4.50M END OF HOLE -TEST PIT LOCATED NEAR TOP OF KNOLL.					

SOIL TYPES
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK

CONDITION
-UNDISTURBED
-DISTURBED
-LOST SAMPLE

SAMPLE TYPE
U - 76mm SHELBY TUBE
D.S. - DRIVE SAMPLE
M - MOISTURE CONTENT
R.C. - ROCK CORE

LABORATORY TEST SYMBOLS
Qu - UNCONFINED COMP. STR. kPa
γ_d - DRY WEIGHT kg/m³
C - CONSOLIDATION TEST
MA - GRAIN SIZE ANALYSIS

PENETRATION RESISTANCE
(N) - NUMBER OF BLOWS OF A
lb. HAMMER DROPPED 30 ins. (F
FALL) REQUIRED TO DRIVE A
O.D. RAYMOND TYPE SAMPLE
DISTANCE OF 12" INTO THE S

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLEAN LAKE GRAVEL QUARRY INVESTIGATION (1988)
WHITEHORSE, YT

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
WCK	WCP	8002-301	1988.03.26	264	

MOISTURE CONTENT ● ●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE | SAMPLES

DEPTH / ELEV. M.	CLASSIFICATION (DATUM GROUND SURFACE ELEVATION)	SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE
	ORGANIC SILTY SANDY GRAVEL 0.25M					
	0.25-1.00M SANDY GRAVEL					
	1.00-4.50M GRAVELLY SAND SOME COBBLES TO 0.3M					
	4.50M					
	END OF HOLE					

SOIL TYPES
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK

CONDITION
-UNDISTURBED
-DISTURBED
-LOST SAMPLE

SAMPLE TYPE
U - 76mm SHELBY TUBE
D.S. - DRIVE SAMPLE
M - MOISTURE CONTENT
R.C. - ROCK CORE

LABORATORY TEST SYMBOLS
Qu - UNCONFINED COMP. STR. kPa
γd - DRY WEIGHT kg/m³
C - CONSOLIDATION TEST
MA - GRAIN SIZE ANALYSIS

PENETRATION RESISTANCE
(N) - NUMBER OF BLOWS OF A lb HAMMER DROPPED 30 ins (F FALL) REQUIRED TO DRIVE A O.D. RAYMOND TYPE SAMPLE DISTANCE OF 12" INTO THE

PLATE NO. .....

J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

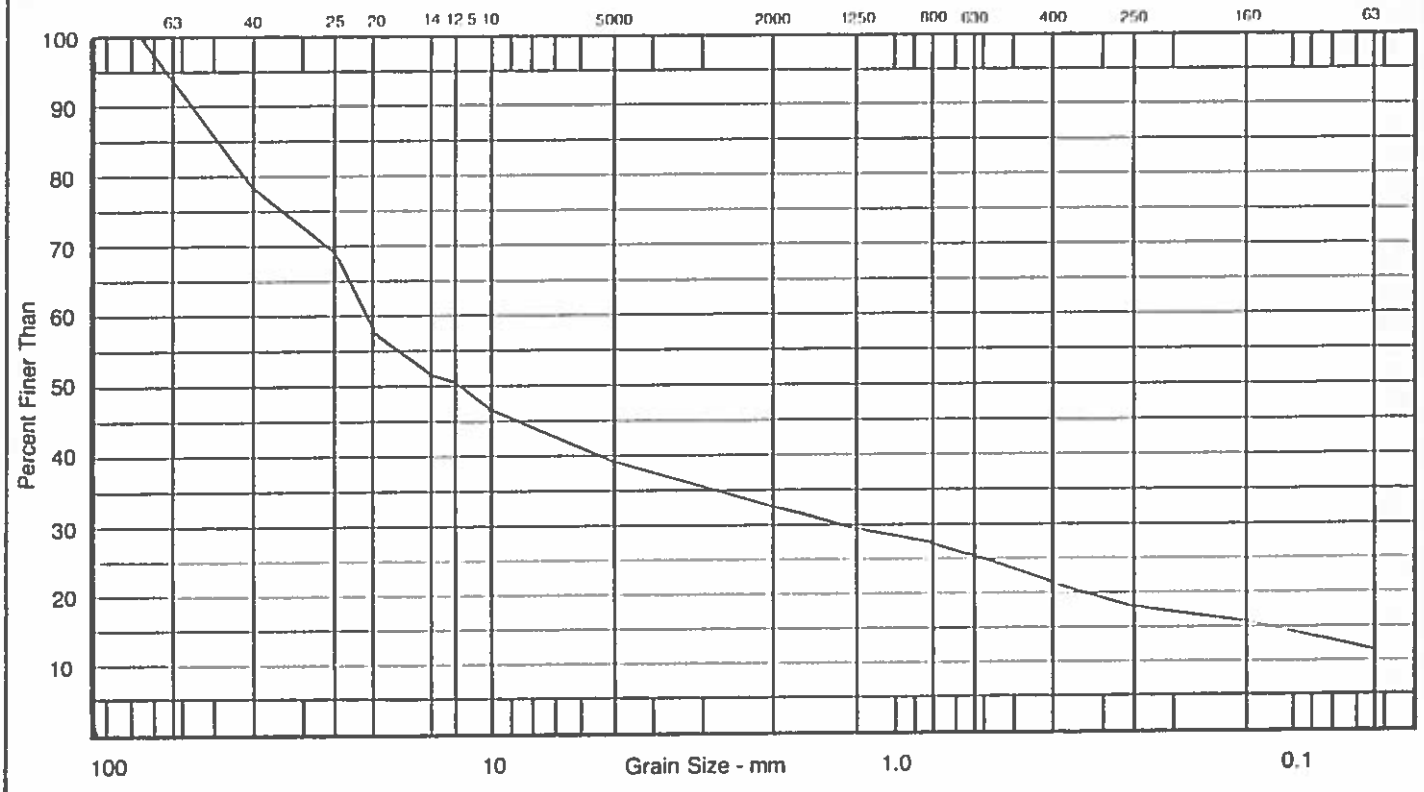
Client: YTG.C&T SERVICES.LANDS BRANCH
Sample: Depth: .35-2.6M
Project: McLEAN LAKE GRAVEL QUARRY INV. (1988)
Location: LOT K, TP 214
Made by LK Job No. 8002-301
Ck'd by: LL/CC Date: 1988.03.24

Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig Sample
75000	75.0					100.0
40000	40.0					78.1
25000	25.0					69.4
20000	20.0					57.6
14000	14.0					51.8
12500	12.5					50.2
10000	10.0					46.9
5000	5.0					39.0
2000	2.0					32.8
1250	1.250					29.9
800	0.800					27.1
630	0.630					25.3
400	0.400					21.5
250	0.250					18.3
160	0.160					15.9
63	0.063					11.6

Description of Sample
SANDY GRAVEL
SOME SILT

Time of Sieving Min. 15

Method of Preparation Dry Washed X
Remarks PITRUN



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Client: YTG, C&T SERVICES, LANDS BRANCH

Sample: ..... Depth: 1.35-2.60M ..... Project: McLEAN LAKE GRAVEL QUARRY INV. (1988)

Location: LOT K, TP 214 ..... Made by: LK ..... Job. No: 8002-301

..... Ck'd by: RJC/L ..... Date: 1988.03.25

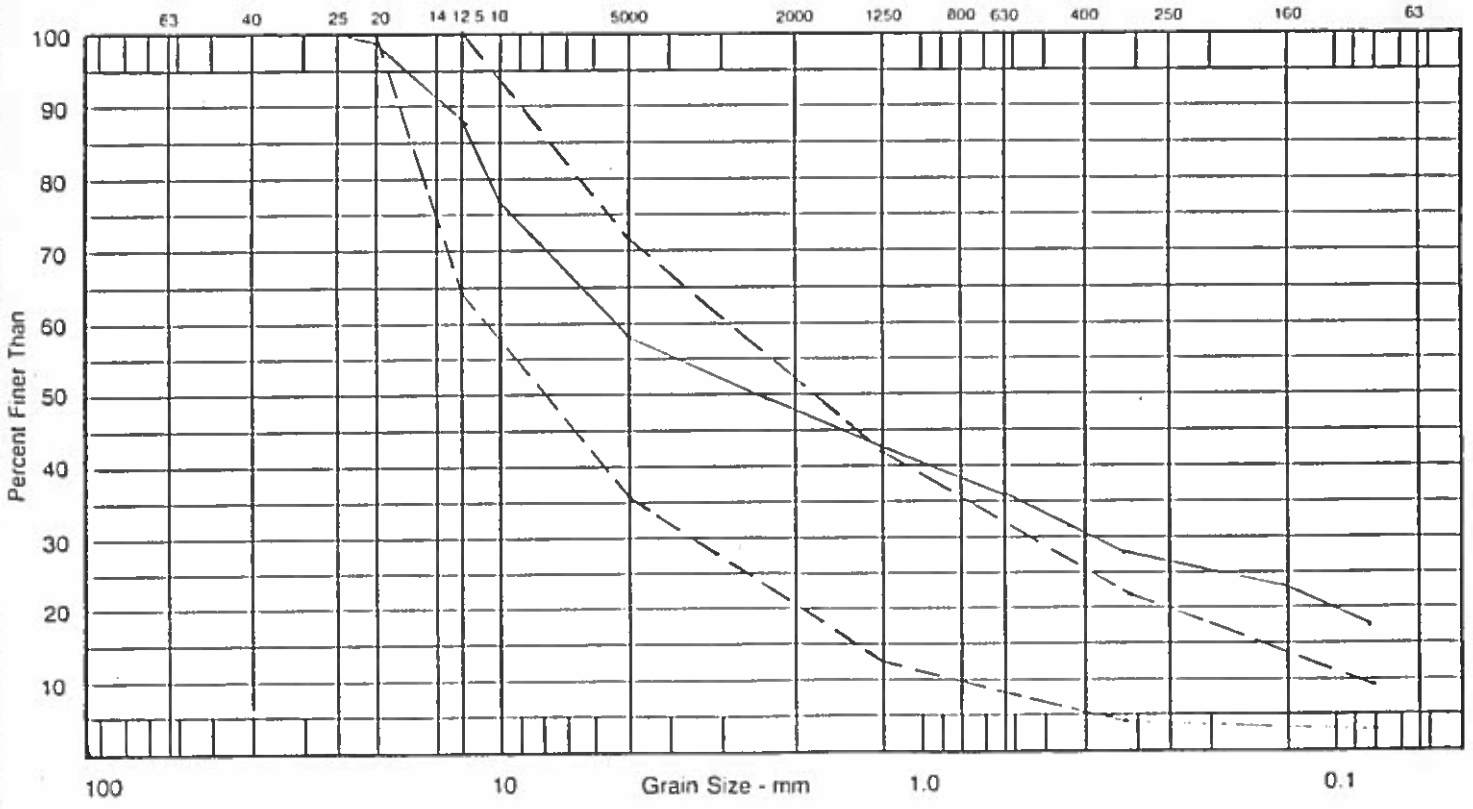
Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig.Sample
40000	40.0					
25000	25.0					100.0
20000	20.0					99.1
16000	16.0					----
12500	12.5					88.8
10000	10.0					76.2
5000	5.0					58.4
2500	2.5					49.5
1250	1.250					42.5
800	0.800					----
630	0.630					35.6
315	0.315					----
250	0.250					27.8
160	0.160					22.3
80	0.080					17.7

Description of Sample .....
20MM CRUSH

Time of Sieving ..... Min. 15

Method of Preparation ..... Dry ..... Washed X

Remarks ..... GRAVEL SURFACE BASE COURSE SPEC. BAND
CRUSHED-1 FACE 75.2%
CRUSHED-2 FACE 70.0%



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Client: YTG.C&T SERVICES. LANDS BRANCH

Sample: ..... Depth: .25-4.00M

Project: McLEAN LAKE GRAVEL QUARRY INV. (1988)

Location: LOT Q, TP 224

Made by LK Job. No. 8002-301

Ck'd by: [illegible] Date: 1988.03.24

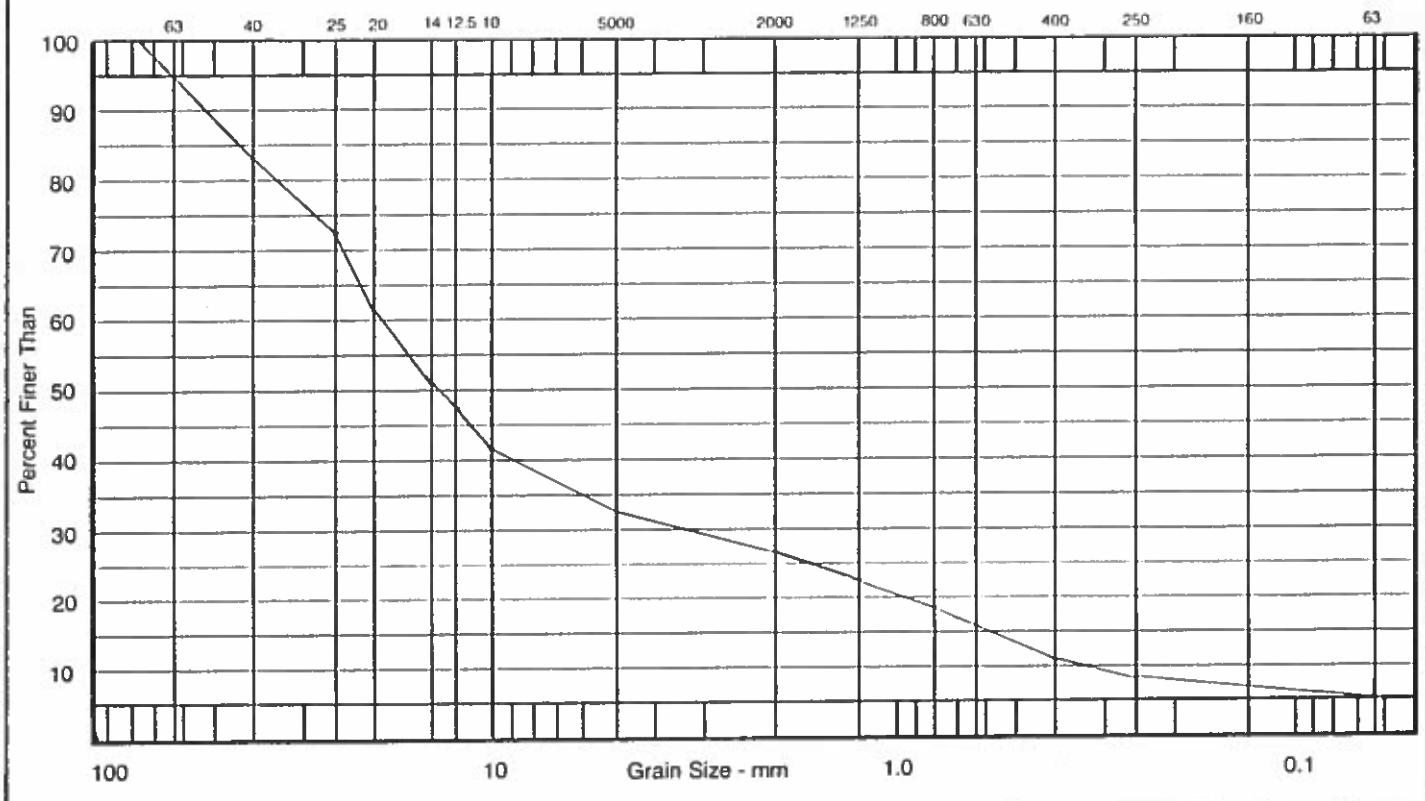
Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig Sample
75000	75.0					100.0
40000	40.0					83.6
25000	25.0					72.1
20000	20.0					61.9
14000	14.0					50.9
12500	12.5					47.8
10000	10.0					41.8
5000	5.0					33.2
2000	2.0					26.5
1250	1.250					22.9
800	0.800					18.9
630	0.630					15.9
400	0.400					10.5
250	0.250					8.0
160	0.160					6.7
63	0.063					5.0

Description of Sample .....
SANDY GRAVEL
TRACE OF SILT

Time of Sieving ..... Min. 15

Method of Preparation ..... Dry ..... Washed X

Remarks PITRUN



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Client: YTG.C&T SERVICES.LANDS BRANCH
Sample: ..... Depth: 0.25-4.00M ..... Project: McLEAN LAKE GRAVEL QUARRY INV. (1988)
Location: LOT Q, TP224 ..... Made by: LK ..... Job. No. 8002-301
..... Ck'd by: WCK ..... Date: 1988.03.25

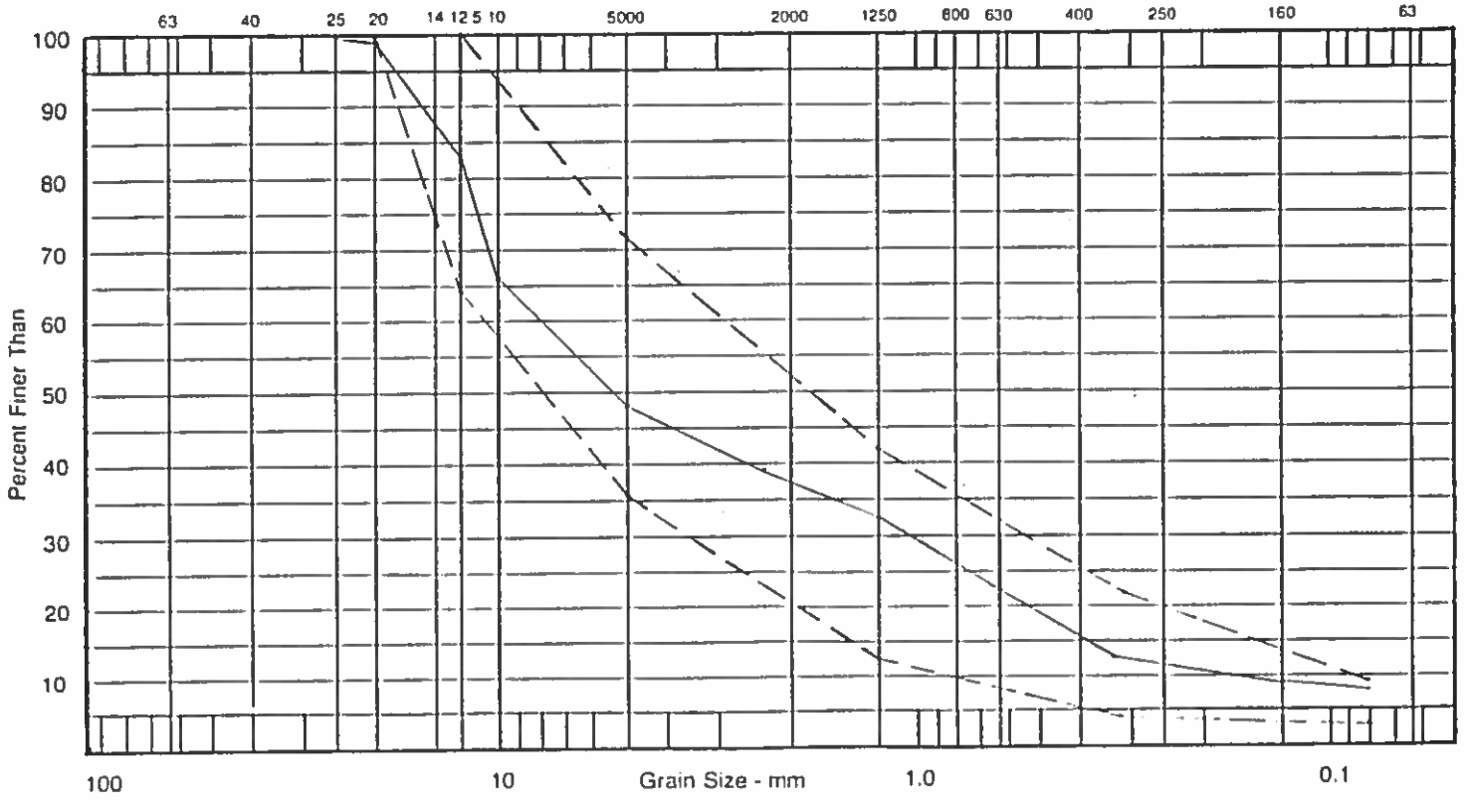
Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig.Sample
40000	40.0					
25000	25.0					100.0
20000	20.0					99.2
16000	16.0					----
12500	12.5					82.0
10000	10.0					65.6
5000	5.0					48.3
2500	2.5					39.4
1250	1.250					32.2
800	0.800					----
630	0.630					22.4
315	0.315					----
250	0.250					12.9
160	0.160					9.5
80	0.080					7.5

Description of Sample .....
20MM CRUSH

Time of Sieving ..... Min. 15

Method of Preparation ..... Dry ..... Washed X

Remarks GRAVEL SURFACE BASE COURSE SPEC. BAND
CRUSHED-1FACE 70.4%
CRUSHED-2FACE 63.4%



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Client: YTG.C&T SERVICES. LANDS BRANCH

Sample: ..... Depth: .25-4.30M

Project: McLEAN LAKE GRAVEL QUARRY INV. (1988)

Location: LOT P, TP 227

Made by LK Job. No. 8002-301

Ck'd by: WJC Date: 1988.03.24

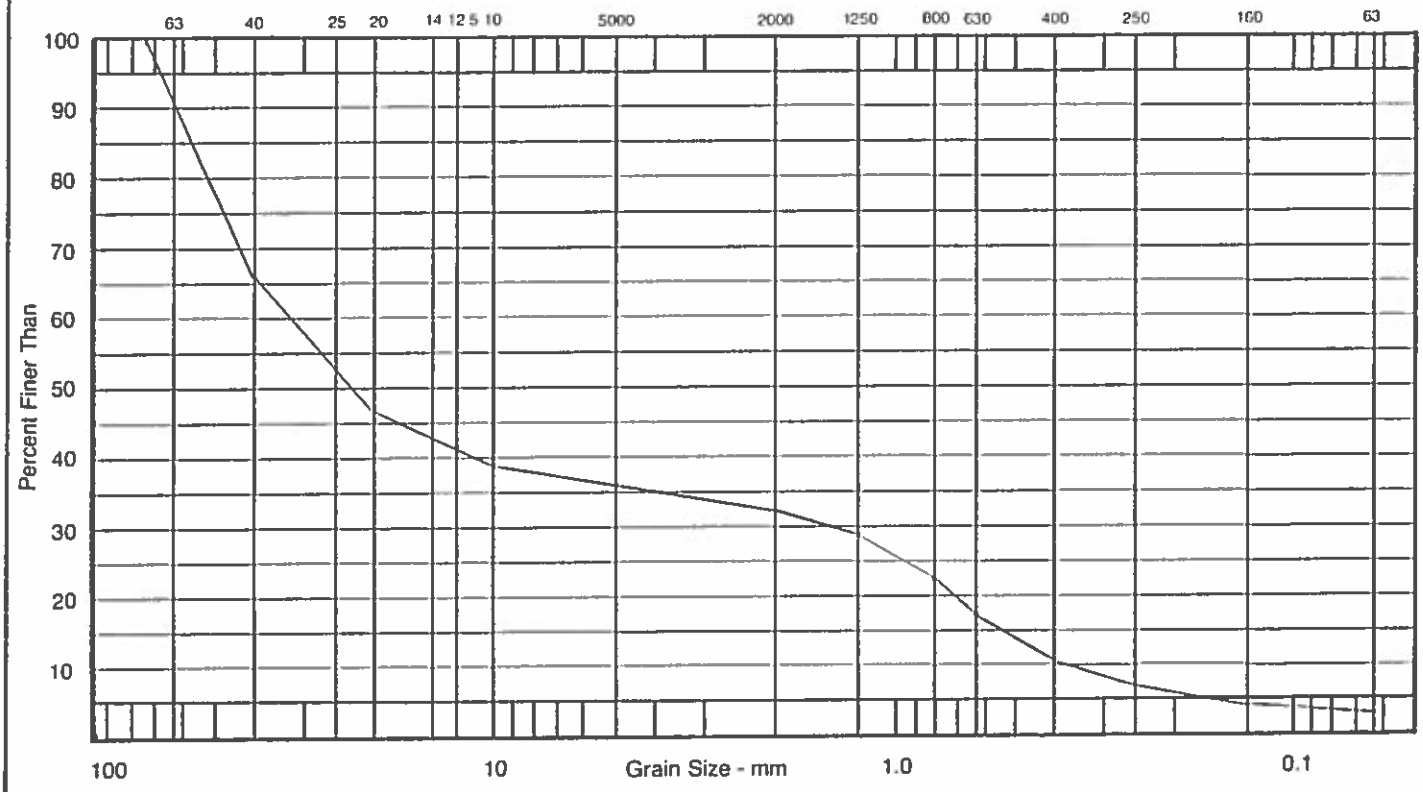
Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig.Sample
75000	75.0					100.0
40000	40.0					65.5
25000	25.0					53.0
20000	20.0					46.4
14000	14.0					42.9
12500	12.5					41.9
10000	10.0					39.2
5000	5.0					35.4
2000	2.0					32.1
1250	1.250					29.1
800	0.800					22.4
630	0.630					17.1
400	0.400					10.2
250	0.250					6.7
160	0.160					4.8
63	0.063					3.0

Description of Sample 2+100MM ROCK
SANDY GRAVEL

Time of Sieving ..... Min. 15

Method of Preparation ..... Dry ..... Washed X

Remarks PITRUN



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Client: YTG C&T SERVICES - LANDS BRANCH
Sample: Depth: 0.25-4.30M
Project: McLEAN LAKE GRAVEL QUARRY INV. (1988)
Location: LOT P, TP227
Made by: LK Job. No. 8002-301
Ck'd by: WEK Date: 1988.03.25

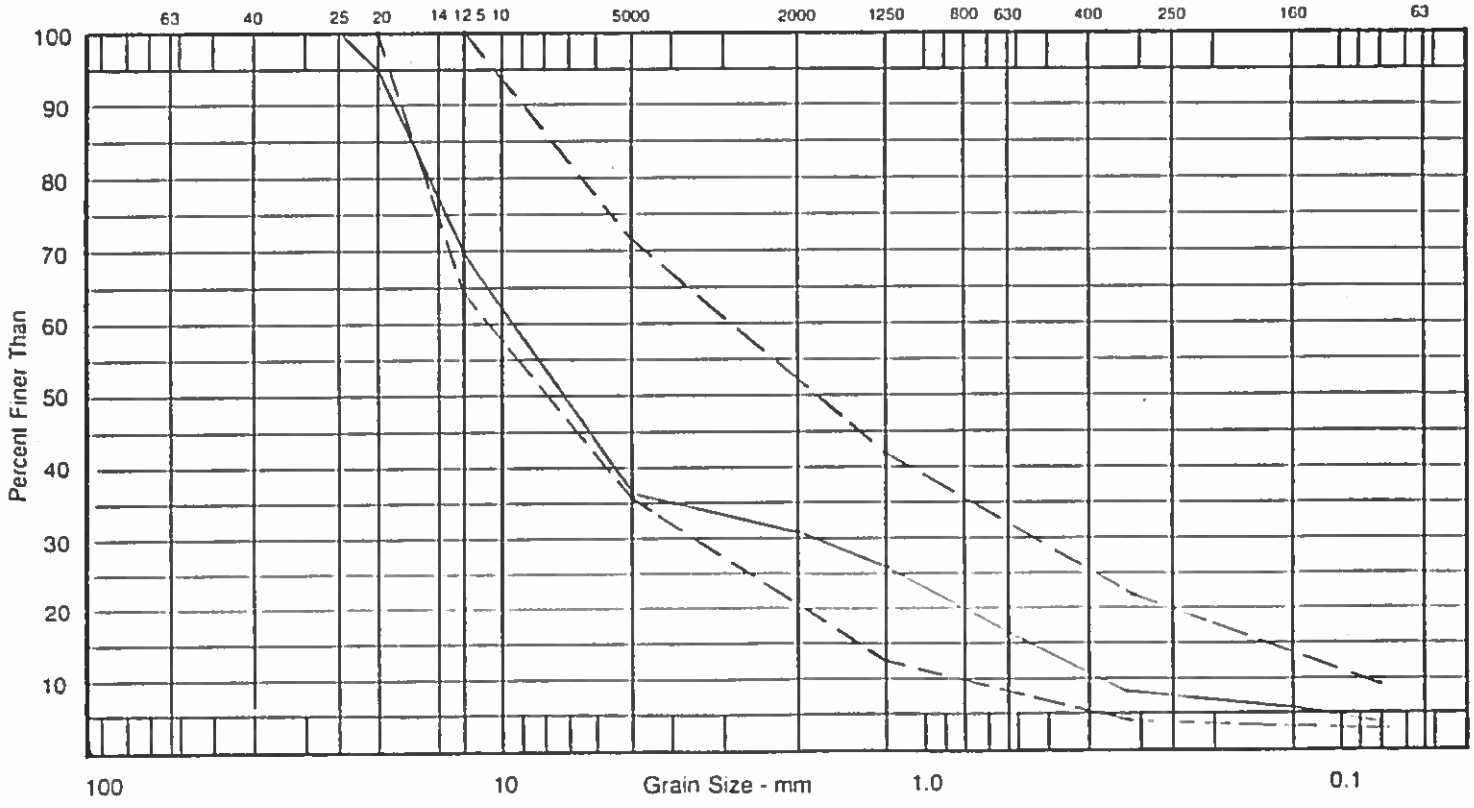
Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig. Sample
40000	40.0					
25000	25.0					100.0
20000	20.0					95.0
16000	16.0					----
12500	12.5					69.4
10000	10.0					54.1
5000	5.0					36.7
2500	2.5					30.6
1250	1.250					25.7
800	0.800					----
630	0.630					16.1
315	0.315					----
250	0.250					8.5
160	0.160					5.3
80	0.080					3.7

Description of Sample: 20MM CRUSH

Time of Sieving: Min. 15

Method of Preparation: Dry ____ Washed X

Remarks: GRAVEL SURFACE BASE COURSE SPEC. BAND
CRUSHED-1FACE 94.3%
CRUSHED-2FACE 90.0%



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Client: YTG.C&T SERVICES.LANDS BRANCH
Sample: BF Depth: .25-4.50M
Project: McLEAN LAKE GRAVEL QUARRY INV. (1988)
Location: SOUTH LOT U, TP 230
Made by: LK Job. No. 8002-301
Ck'd by: [illegible] Date: 1988.03.24

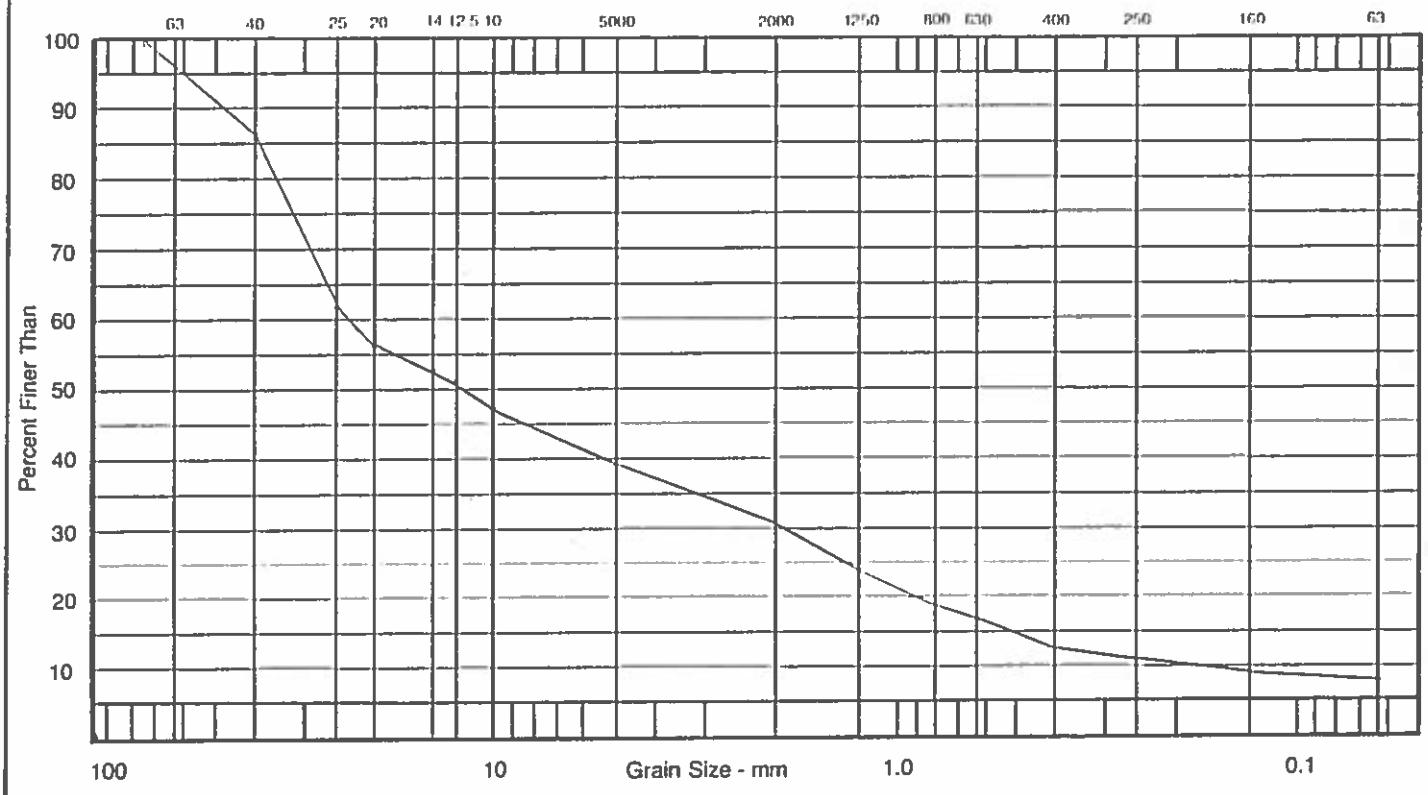
Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig. Sample
75000	75.0					100.0
40000	40.0					86.8
25000	25.0					61.6
20000	20.0					56.0
14000	14.0					52.8
12500	12.5					51.0
10000	10.0					47.6
5000	5.0					39.4
2000	2.0					30.5
1250	1.250					24.3
800	0.800					19.0
630	0.630					16.3
400	0.400					12.6
250	0.250					10.7
160	0.160					9.5
63	0.063					7.6

Description of Sample: SANDY GRAVEL, TRACE OF SILT

Time of Sieving: Min. 15

Method of Preparation: Dry: Washed: X

Remarks: PITRUN ONLY



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Client: YTG C&T SERVICES LANDS BRANCH

Sample: ..... Depth: 25-4.50M Project: McLEAN LAKE GRAVEL QUARRY INV. (1988)

Location: SOUTH OF LOT U, TP 233 Made by: LK Job. No. 8002-301

Ck'd by: WC/C Date: 1988.03.24

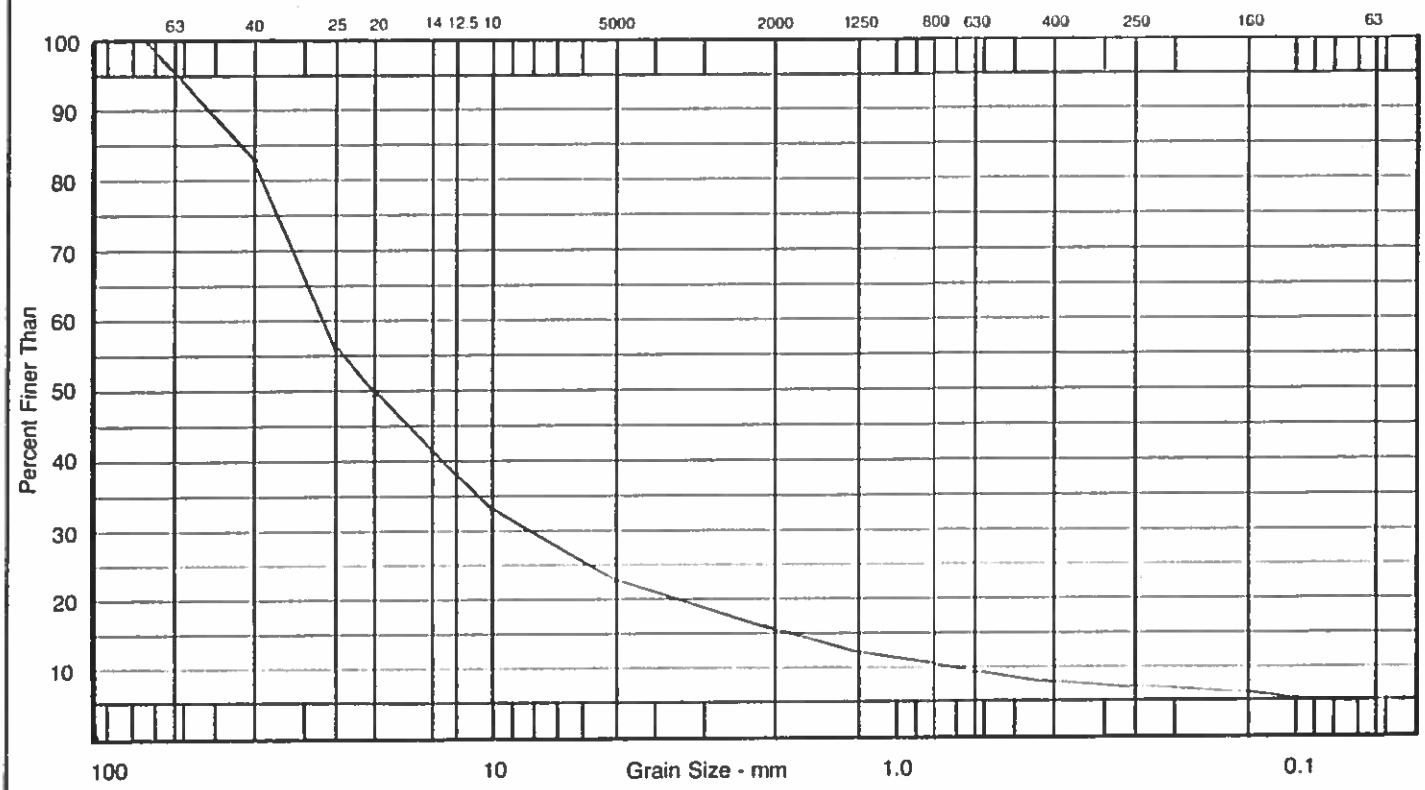
Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig.Sample
75000	75.0					100.0
40000	40.0					83.3
25000	25.0					55.3
20000	20.0					49.5
14000	14.0					41.6
12500	12.5					38.4
10000	10.0					33.1
5000	5.0					22.8
2000	2.0					15.1
1250	1.250					12.1
800	0.800					10.1
630	0.630					9.1
400	0.400					7.5
250	0.250					6.3
160	0.160					5.5
63	0.063					4.3

Description of Sample .....
SANDY GRAVEL

Time of Sieving ..... Min. 15

Method of Preparation ..... Dry ..... Washed X

Remarks PITRUN



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Client: YTG.C&T SERVICES.LANDS BRANCH

Sample: ..... Depth: 4.25-4.50M ..... Project: McLEAN LAKE GRAVEL QUARRY INV. (1988)

Location: SOUTH OF LOT U, TP 233 ..... Made by: LK ..... Job. No. 8002-301

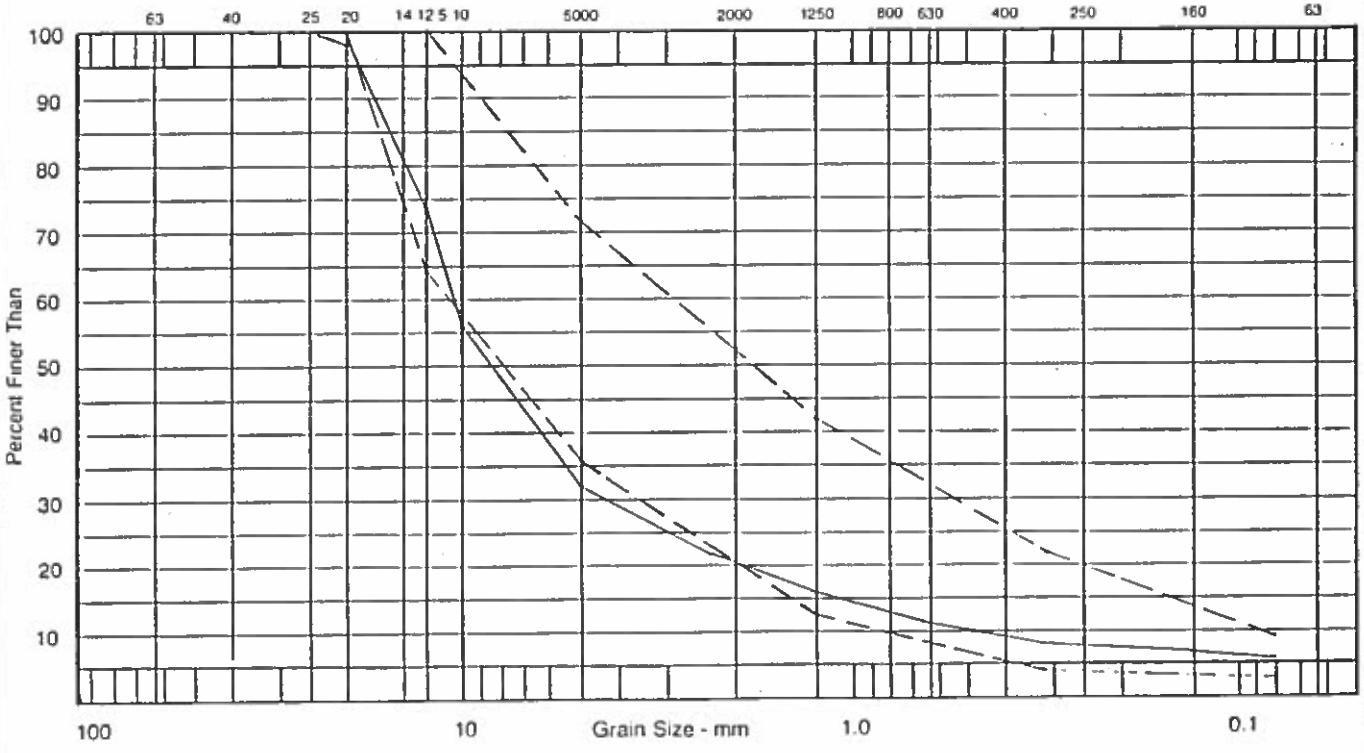
..... Ck'd by: ..... Date: 1988.03.25

Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig.Sample
75000	75.0					
40000	40.0					
25000	25.0					100.0
20000	20.0					98.7
16000	16.0					----
12500	12.5					73.8
10000	10.0					55.3
5000	5.0					32.0
2500	2.5					21.7
1250	1.250					15.4
800	0.800					----
630	0.630					11.4
315	0.315					----
250	0.250					8.5
160	0.160					6.7
80	0.080					5.4

Description of Sample ..... Method of Preparation ..... Dry ..... Washed X

20MM CRUSH ..... Remarks ..... GRAVEL SURFACE BASE COURSE SPEC. BAND

Time of Sieving ..... Min. 15



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Client: YTG.C&T SERVICES. LANDS BRANCH

Sample: ..... Depth: 3.0-4.50M

Project: McLEAN LAKE GRAVEL QUARRY INV. (1988)

Location: SOUTH OF LOT T, TP 239

Made by: LK Job. No. 8002-301

Ck'd by: a.c.r. Date: 1988.03.24

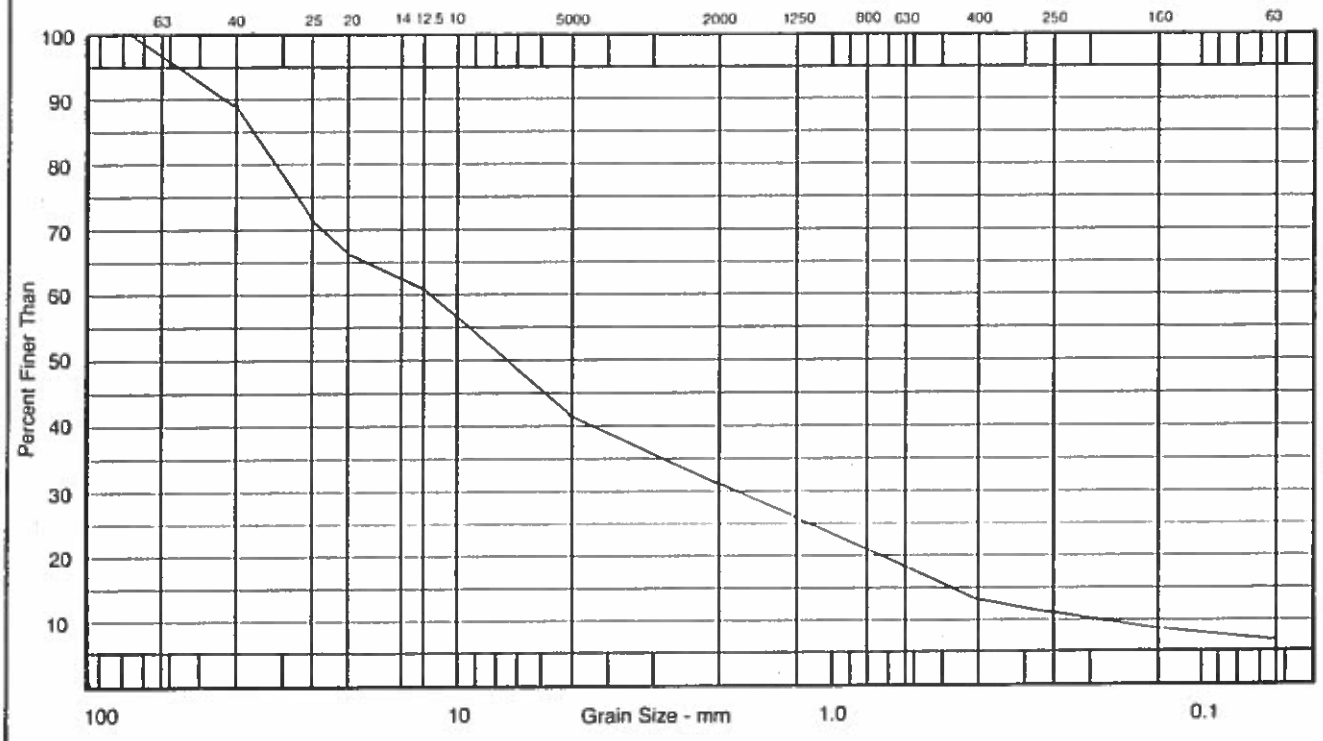
Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig.Sample
75000	75.0					100.0
40000	40.0					89.0
25000	25.0					71.3
20000	20.0					65.5
14000	14.0					57.6
12500	12.5					55.7
10000	10.0					51.1
5000	5.0					40.7
2000	2.0					30.6
1250	1.250					25.4
800	0.800					20.8
630	0.630					18.0
400	0.400					13.2
250	0.250					10.4
160	0.160					8.8
63	0.063					6.4

Description of Sample
SANDY GRAVEL
TRACE OF SILT

Time of Sieving ..... Min 15

Method of Preparation ..... Dry ..... Washed X

Remarks PITRUN



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Client: YTG.C&T SERVICES.LANDS BRANCH

Sample: ..... Depth: 3.00-4.50M ..... Project: McLEAN LAKE GRAVEL QUARRY INV. (1988)

Location: SOUTH OF LOT T, TP 239 ..... Made by: LK ..... Job. No. 8002-301

..... Ck'd by: ..... Date: 1988.03.25

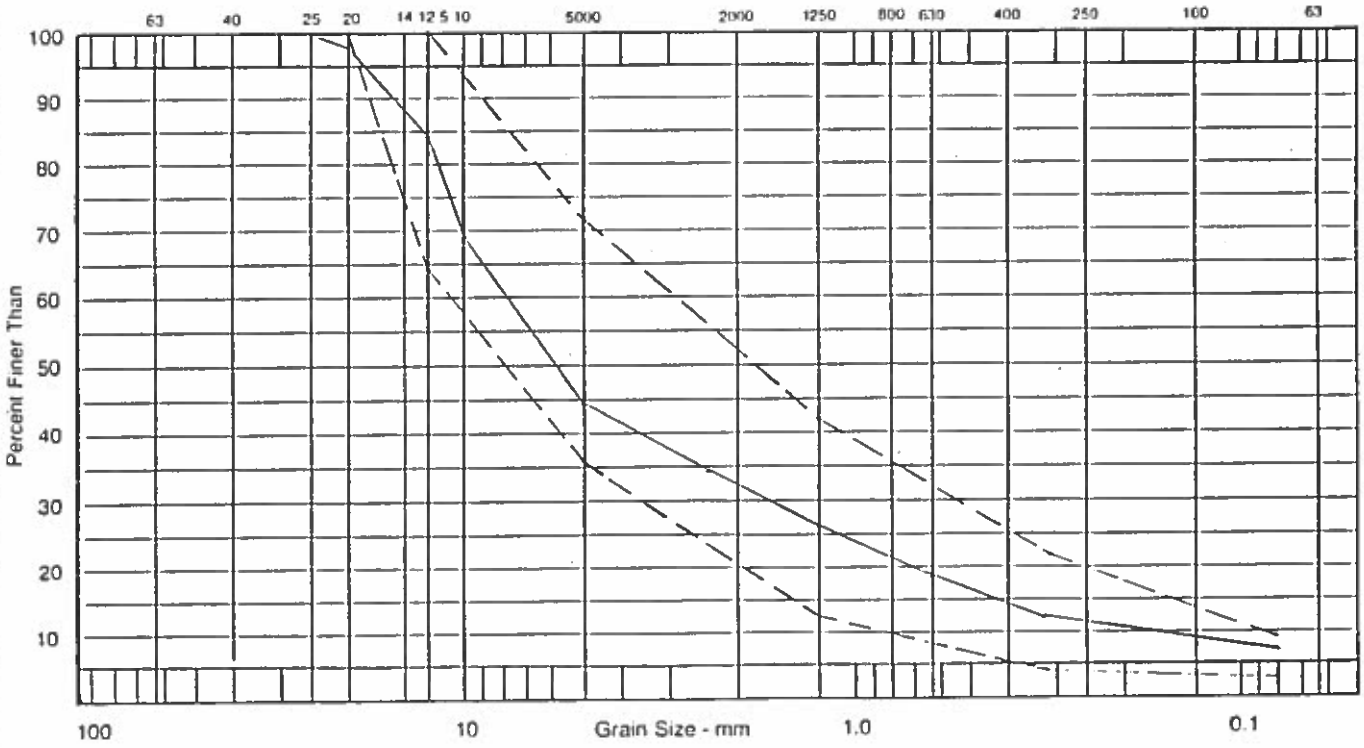
Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig.Sample
40000	40.0					
25000	25.0					100.0
20000	20.0					98.9
16000	16.0					----
12500	12.5					84.2
10000	10.0					69.0
5000	5.0					44.9
2500	2.5					34.3
1250	1.250					26.1
800	0.800					----
630	0.630					18.5
315	0.315					----
250	0.250					12.1
160	0.160					9.0
80	0.080					7.0

Description of Sample: 20MM CRUSH

Time of Sieving ..... Min. 15

Method of Preparation ..... Dry ..... Washed X

Remarks: GRAVEL SURFACE BASE COURSE SPEC. BAND
CRUSHED-1FACE 70.0%
CRUSHED-2FACE 66.0%



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Client: YTG.C&T SERVICES. LANDS BRANCH
Sample: Depth: .25-3.50M Project: McLEAN LAKE GRAVEL QUARRY INV. (1988)
Location: EAST OF LOT W, TP 242 Made by: LK Job. No. 8002-301
Ck'd by: Date: 1988.03.24

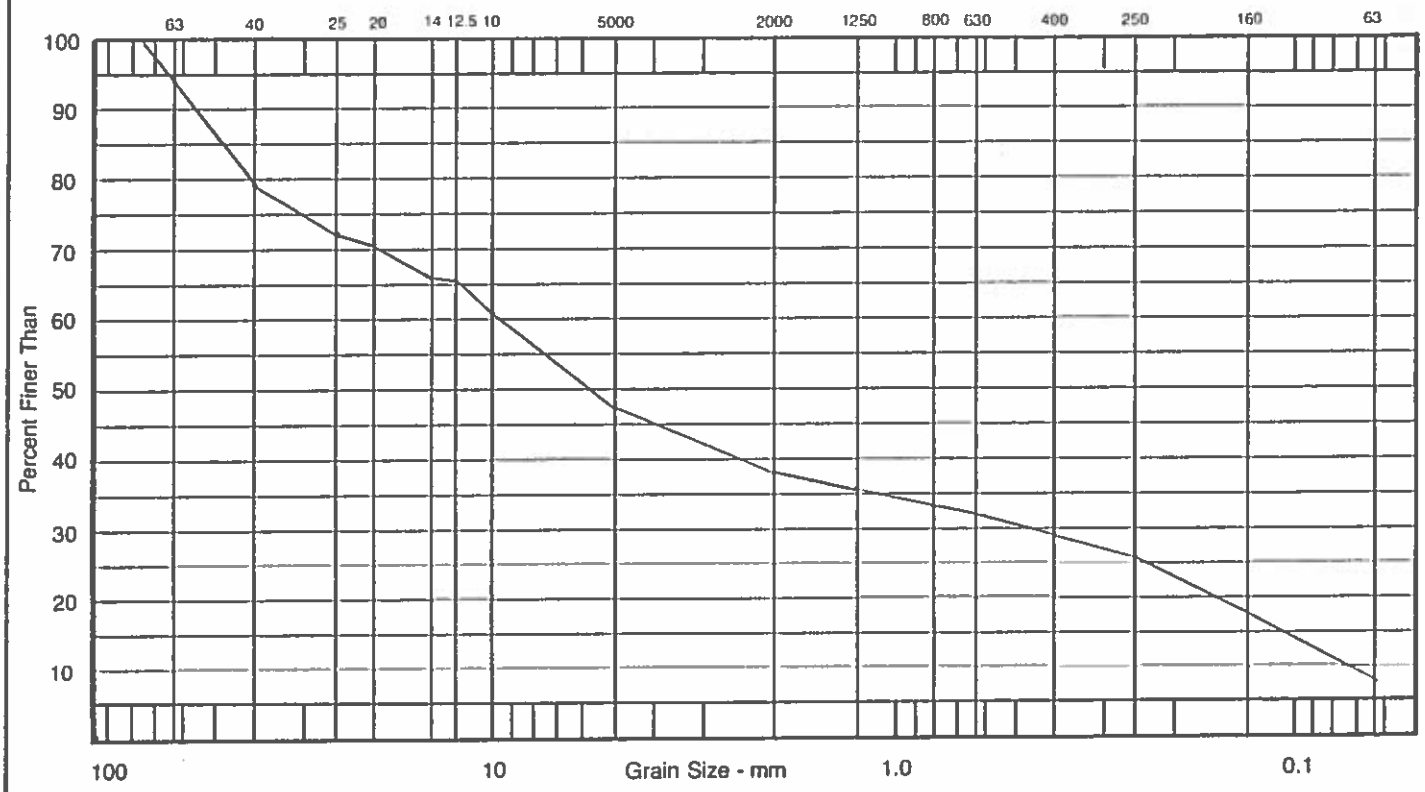
Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig Sample
75000	75.0					100.0
40000	40.0					79.2
25000	25.0					72.6
20000	20.0					70.4
14000	14.0					65.8
12500	12.5					65.2
10000	10.0					60.9
5000	5.0					47.8
2000	2.0					38.6
1250	1.250					35.3
800	0.800					33.2
630	0.630					32.1
400	0.400					29.9
250	0.250					25.9
160	0.160					18.6
63	0.063					7.8

Description of Sample
SANDY GRAVEL
TRACE OF SILT

Time of Sieving Min. 15

Method of Preparation Dry Washed X

Remarks PITRUN



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Client: YTG.C&T SERVICES.LANDS BRANCH

Sample: ..... Depth: 0.25-3.50M

Project: McLEAN LAKE GRAVEL QUARRY INV. (1988)

Location: EAST OF LOT W, TP 242

Made by: LK Job. No. 8002-301

Ck'd by: WJC Date: 1988.03.25

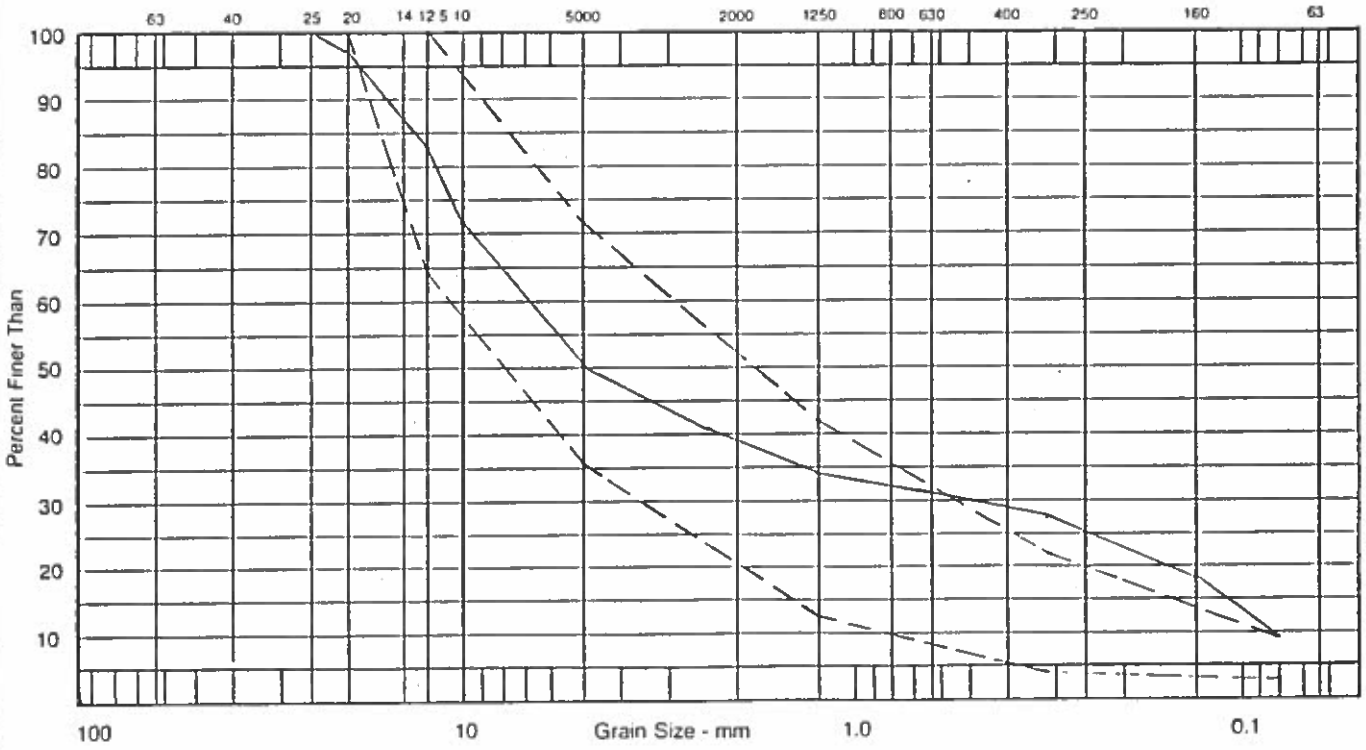
Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig.Sample
40000	40.0					
25000	25.0					100.0
20000	20.0					97.6
16000	16.0					----
12500	12.5					83.6
10000	10.0					71.5
5000	5.0					50.0
2500	2.5					40.2
1250	1.250					34.6
800	0.800					----
630	0.630					31.1
315	0.315					27.3
250	0.250					----
160	0.160					18.6
80	0.080					9.7

Description of Sample: 20MM CRUSH

Time of Sieving ..... Min. 15

Method of Preparation ..... Dry ..... Washed X

Remarks: GRAVEL SURFACE BASE COURSE SPEC. BAND
CRUSHED-1FACE 64.8%
CRUSHED-2FACE 58.9%
ROUND



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

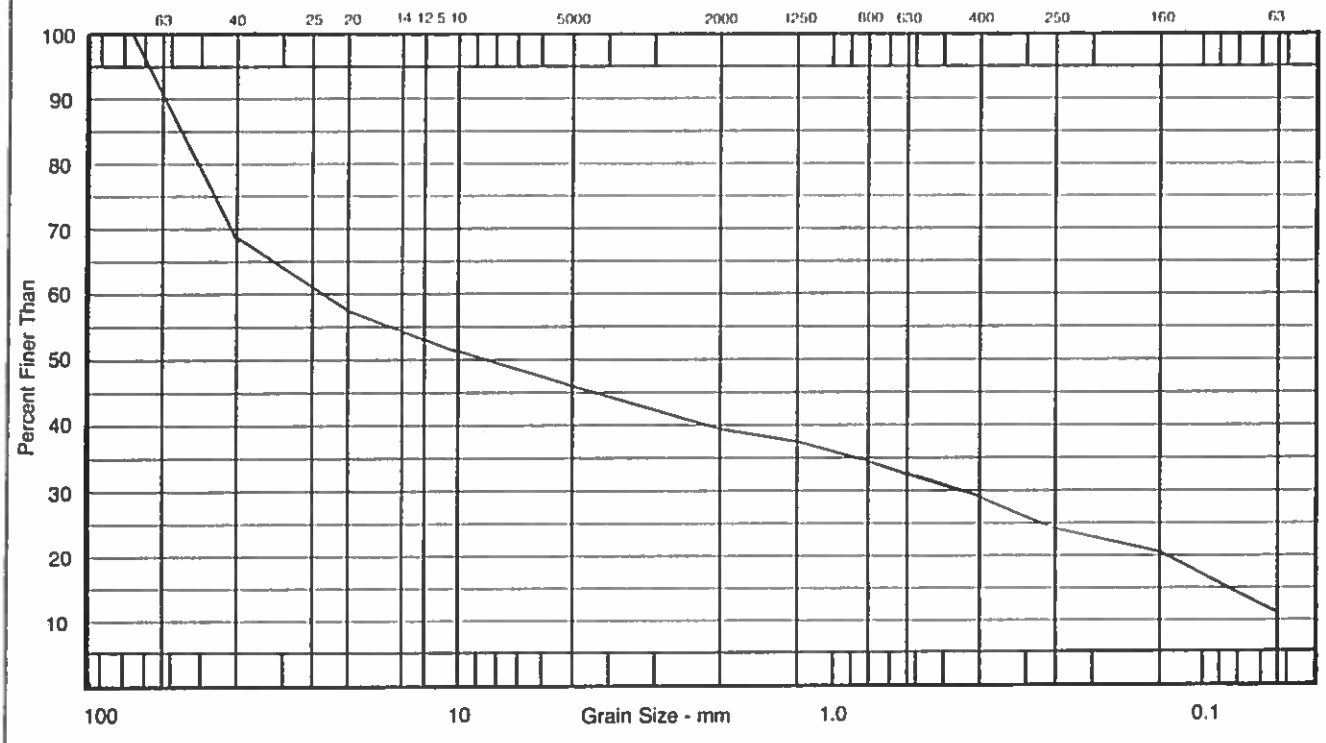
Client: YTG.C&T SERVICES.LANDS BRANCH
Sample: ..... Depth: 1.5-3.75M
Project: McLEAN LAKE GRAVEL QUARRY INV. (1988)
Location: EAST OF LOT W, TP 243
Made by: LK Job. No. 8002-301
Ck'd by: WCK Date: 1988.03.24

Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig.Sample
75000	75.0					100.0
40000	40.0					68.5
25000	25.0					61.4
20000	20.0					57.2
14000	14.0					54.3
12500	12.5					53.4
10000	10.0					51.4
5000	5.0					45.4
2000	2.0					39.9
1250	1.250					37.0
800	0.800					34.5
630	0.630					32.8
400	0.400					29.1
250	0.250					24.8
160	0.160					20.2
63	0.063					11.4

Description of Sample
SANDY GRAVEL
SOME SILT

Time of Sieving ..... Min. 15

Method of Preparation ..... Dry ..... Washed X
Remarks PITRUN ONLY



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

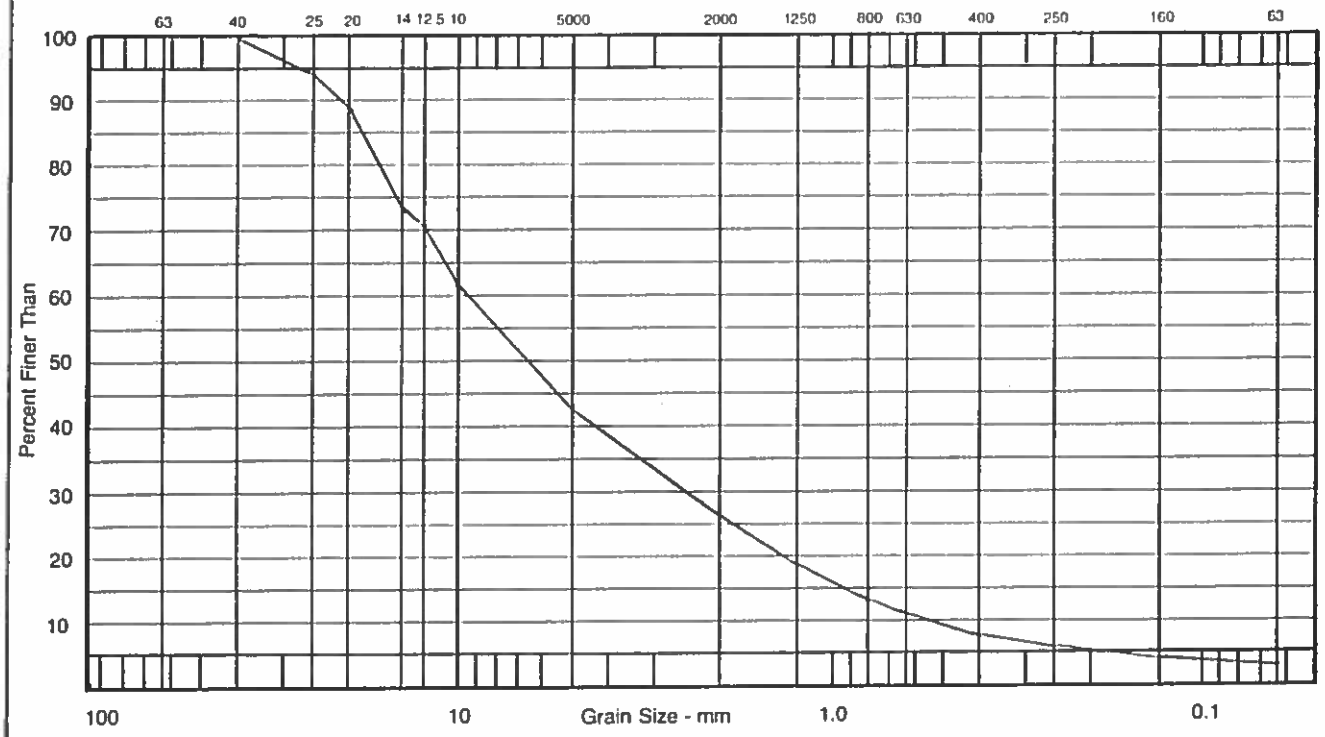
Client: YTG.C&T SERVICES.LANDS BRANCH
Sample: Depth: .25-3.80M
Project: McLEAN LAKE GRAVEL QUARRY INV. (1988)
Location: SOUTH OF LOT W, TP 247
Made by: LK Job. No. 8002-301
Ck'd by: WJC Date: 1988.03.24

Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig.Sample
40000	40.0					100.0
25000	25.0					94.0
20000	20.0					88.7
14000	14.0					73.3
12500	12.5					70.6
10000	10.0					61.9
5000	5.0					42.6
2000	2.0					26.4
1250	1.250					18.8
800	0.800					13.4
630	0.630					10.7
400	0.400					7.0
250	0.250					5.3
160	0.160					4.3
63	0.063					3.0

Description of Sample
SANDY GRAVEL

Time of Sieving Min. 15

Method of Preparation Dry Washed X
Remarks PITRUN



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Client: YTG.C&T SERVICES.LANDS BRANCH

Sample: Depth: 0.25-3.80M

Project: McLEAN LAKE GRAVEL QUARRY INV. (1988)

Location: SOUTH OF LOT W, TP 247

Made by: LK Job. No. 8002-301

Ck'd by: WLK Date: 1988.03.25

Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig.Sample
40000	40.0					
25000	25.0					100.0
20000	20.0					96.7
16000	16.0					----
12500	12.5					79.4
10000	10.0					67.7
5000	5.0					46.6
2500	2.5					32.8
1250	1.250					21.6
800	0.800					----
630	0.630					12.8
315	0.315					----
250	0.250					7.7
160	0.160					5.6
80	0.080					4.3

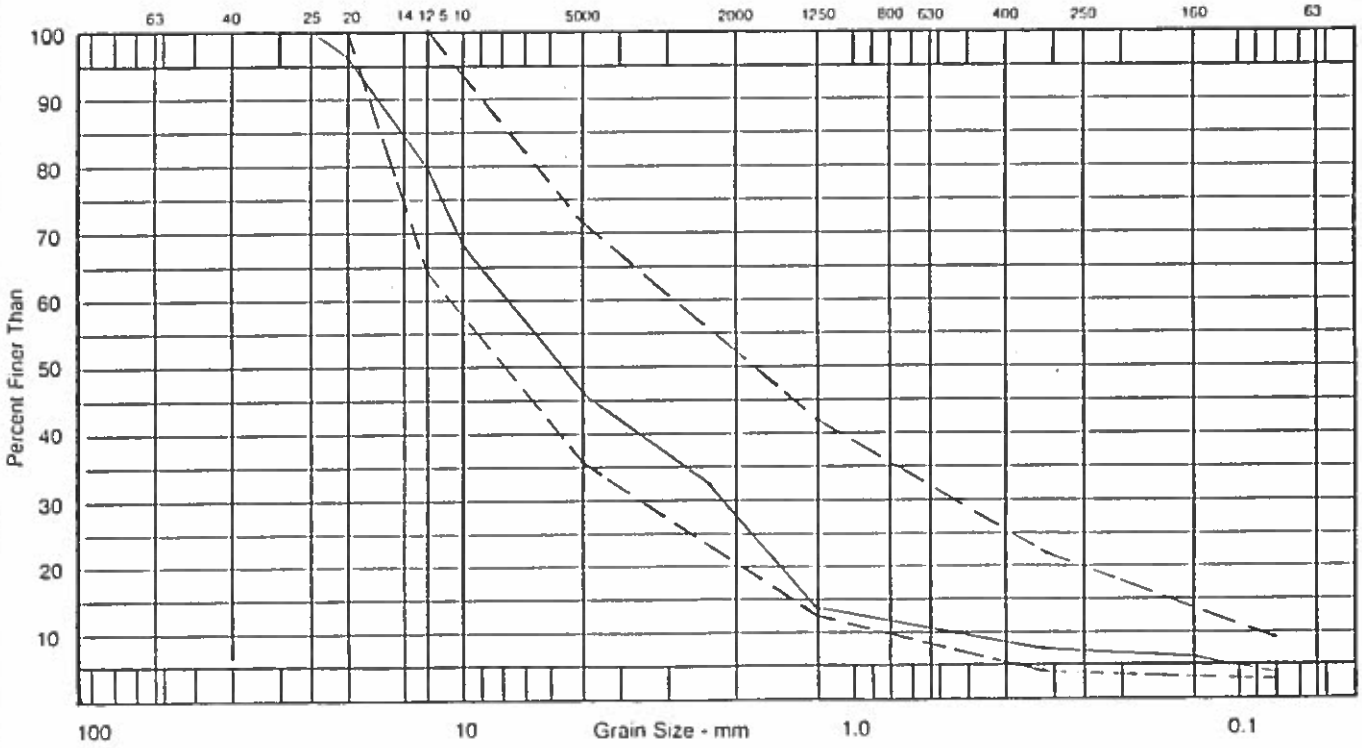
Description of Sample

20MM CRUSH

Time of Sieving Min. 15

Method of Preparation Dry Washed X

Remarks GRAVEL SURFACE BASE COURSE SPEC. BAND



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Client: YTG.C&T SERVICES. LANDS BRANCH
Sample: Depth: .25-4.00M Project: McLEAN LAKE GRAVEL QUARRY INV. (1988)
Location: SOUTH OF LOT W, TP 254 Made by LK Job. No. 8002-301
Ck'd by: Date: 1988.03.24

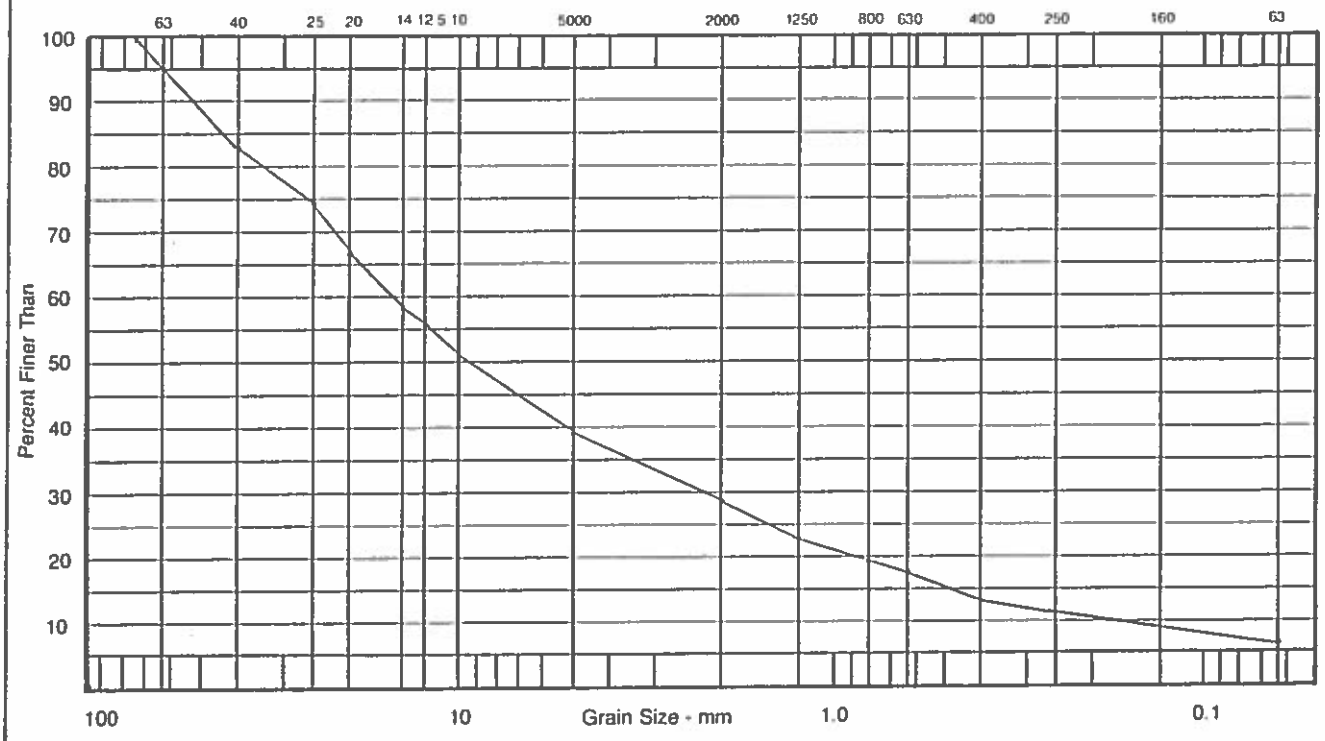
Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig Sample
75000	75.0					100.0
40000	40.0					83.5
25000	25.0					74.8
20000	20.0					66.8
14000	14.0					58.2
12500	12.5					55.6
10000	10.0					50.4
5000	5.0					39.4
2000	2.0					28.4
1250	1.250					23.2
800	0.800					19.5
630	0.630					17.5
400	0.400					13.8
250	0.250					11.1
160	0.160					9.2
63	0.063					6.4

Description of Sample
SANDY GRAVEL
TRACE OF SILT

Time of Sieving Min. 15

Method of Preparation Dry Washed X

Remarks PITRUN



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Client: YTG C&T SERVICES LANDS BRANCH

Sample: Depth: 0.25-4.00M Project: McLEAN LAKE GRAVEL QUARRY INV. (1988)

Location: SOUTH OF LOT W, TP 254 Made by: LK Job. No. 8002-301

Ck'd by: WLC Date: 1988.03.25

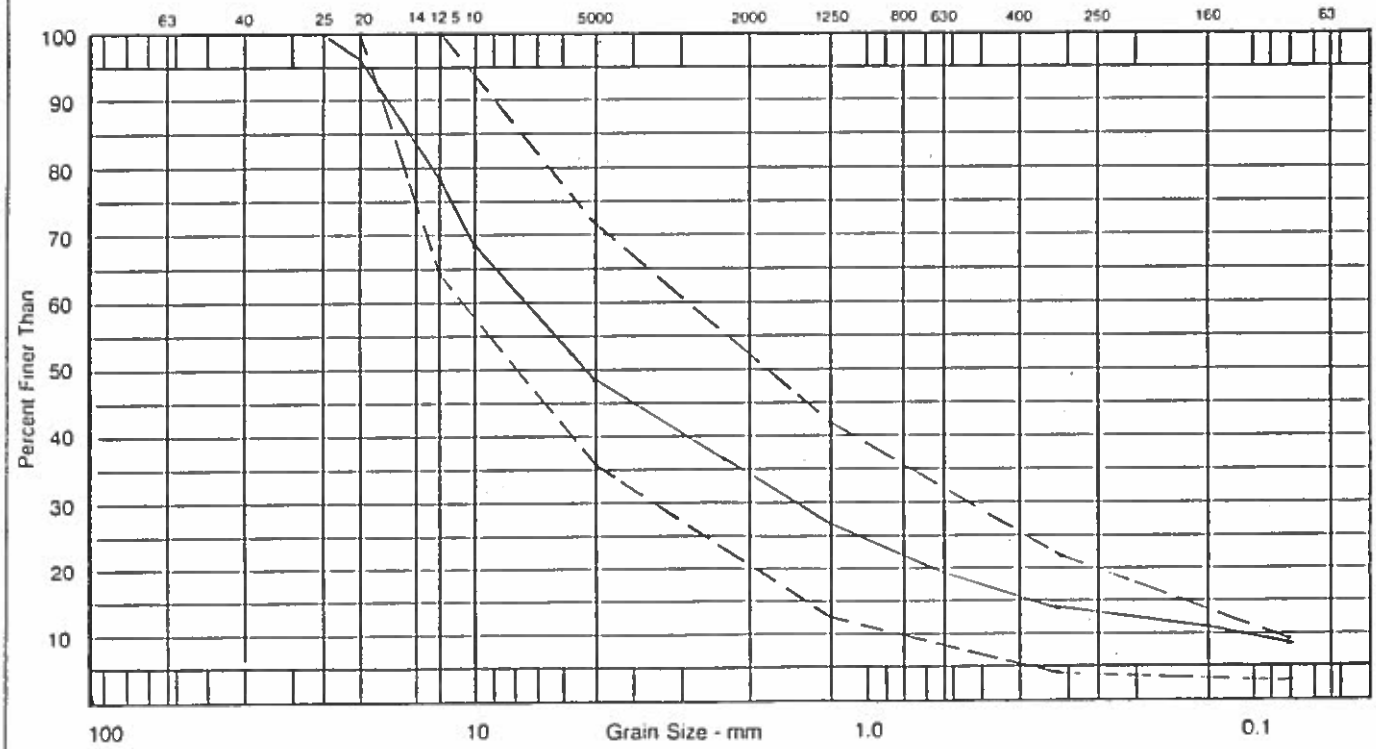
Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig.Sample
40000	40.0					
25000	25.0					100.0
20000	20.0					96.1
16000	16.0					----
12500	12.5					78.4
10000	10.0					68.2
5000	5.0					48.3
2500	2.5					36.0
1250	1.250					26.8
800	0.800					----
630	0.630					19.9
315	0.315					----
250	0.250					14.2
160	0.160					10.6
80	0.080					8.0

Description of Sample: 20MM CRUSH

Time of Sieving: Min. 15

Method of Preparation: Dry Washed X

Remarks: GRAVEL SURFACE BASE COURSE SPEC. BAND
CRUSHED-1FACE 77.5%
CRUSHED-2FACE 70.7%



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Client: YTG, C&T SERVICES, LANDS BRANCH
Sample: ..... Depth: 2.5-4.25M
Project: McLEAN LAKE GRAVEL QUARRY INV. (1988)
Location: LOT 5, TP 256
Made by: LK Job. No. 8002-301
Ck'd by: [illegible] Date: 1988.03.24

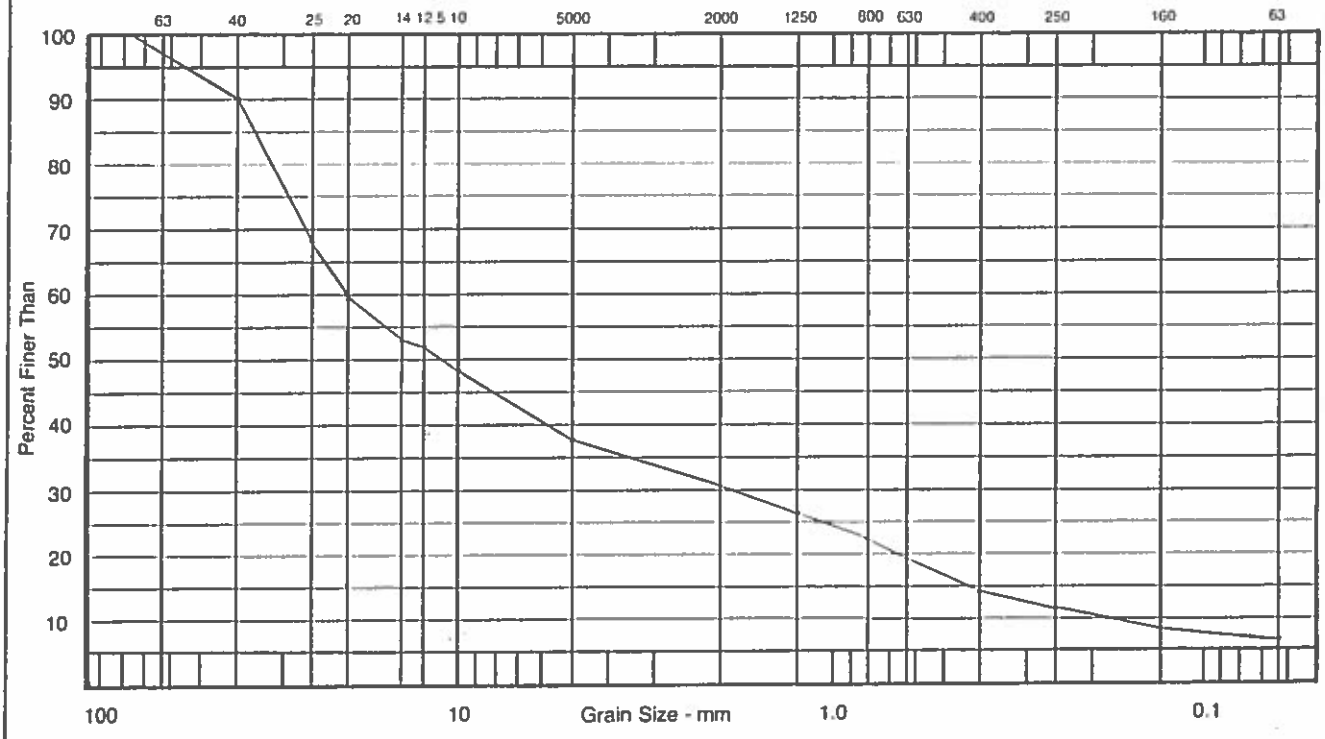
Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig Sample
75000	75.0					100.0
40000	40.0					90.0
25000	25.0					68.6
20000	20.0					59.4
14000	14.0					53.6
12500	12.5					52.4
10000	10.0					48.0
5000	5.0					37.9
2000	2.0					30.4
1250	1.250					26.2
800	0.800					22.2
630	0.630					19.6
400	0.400					14.6
250	0.250					11.1
160	0.160					8.8
63	0.063					6.0

Description of Sample
SANDY GRAVEL
TRACE OF SILT

Time of Sieving ..... Min. 15

Method of Preparation ..... Dry ..... Washed X

Remarks PITRUN



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Client: YTG.C&T SERVICES.LANDS BRANCH
Sample: ..... Depth: 0.25-4.25M ..... Project: McLEAN LAKE GRAVEL QUARRY INV. (1988)
Location: LOT S, TP 256 ..... Made by: LK ..... Job. No. 8002-301
..... Ck'd by: ..... Date: 1988.03.25

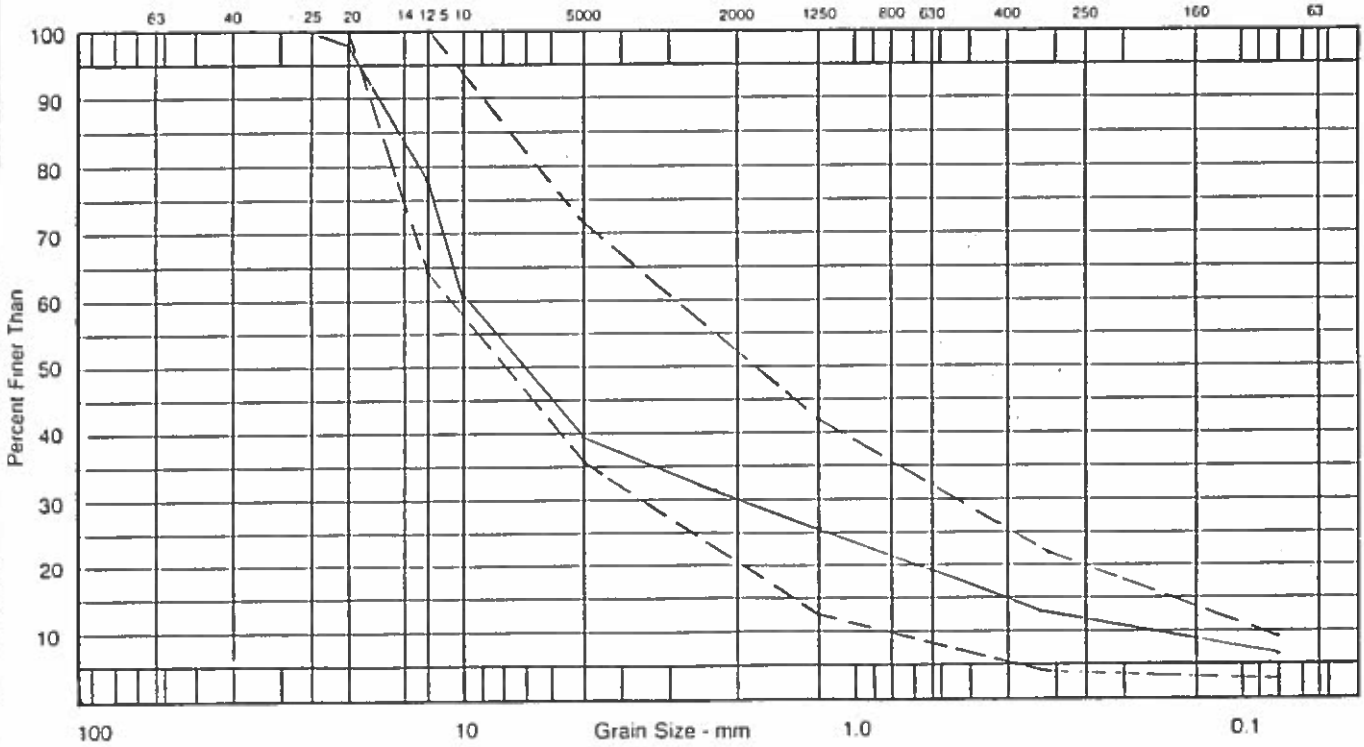
Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig.Sample
40000	40.0					
25000	25.0					100.0
20000	20.0					98.3
16000	16.0					----
12500	12.5					77.9
10000	10.0					60.6
5000	5.0					39.9
2500	2.5					31.4
1250	1.250					25.2
800	0.800					----
630	0.630					19.0
315	0.315					----
250	0.250					12.8
160	0.160					9.1
80	0.080					6.8

Description of Sample ..... 20MM CRUSH

Time of Sieving ..... Min. 15

Method of Preparation ..... Dry ..... Washed X

Remarks ..... GRAVEL SURFACE BASE COURSE SPEC. BAND
CRUSHED-1FACE 70.5%
CRUSHED-2FACE 62.2%



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Client: YTG.C&T SERVICES.LANDS BRANCH

Sample: ..... Depth: 3.25-4.50M

Project: McLEAN LAKE GRAVEL QUARRY INV. (1988)

Location: SOUTH OF LOT U, TP 257

Made by: LK Job. No. 8002-301

Ck'd by: WJK Date: 1988.03.24

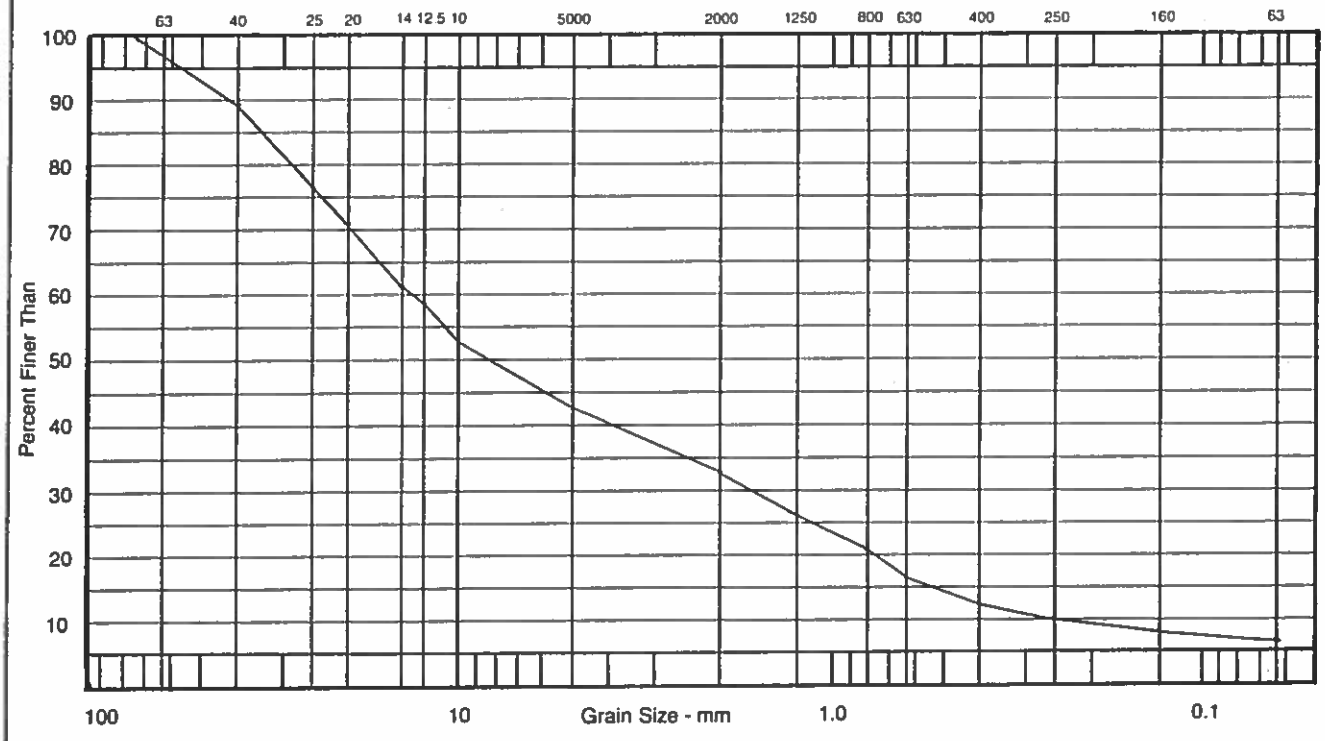
Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig.Sample
75000	75.0					100.0
40000	40.0					89.5
25000	25.0					76.5
20000	20.0					70.7
14000	14.0					61.0
12500	12.5					58.9
10000	10.0					52.3
5000	5.0					42.8
2000	2.0					32.9
1250	1.250					26.1
800	0.800					20.1
630	0.630					16.9
400	0.400					12.3
250	0.250					10.0
160	0.160					8.6
63	0.063					6.6

Description of Sample: SANDY GRAVEL
TRACE OF SILT

Time of Sieving ..... Min. 15

Method of Preparation ..... Dry ..... Washed X

Remarks: PITRUN



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Client: YTG C&T SERVICES LANDS BRANCH

Sample: Depth: 0.25-4.50M Project: McLEAN LAKE GRAVEL QUARRY INV. (1988)

Location: SOUTH OF LOT U, TP 257 Made by: LK Job. No. 8002-301

Ck'd by: Date: 1988.03.25

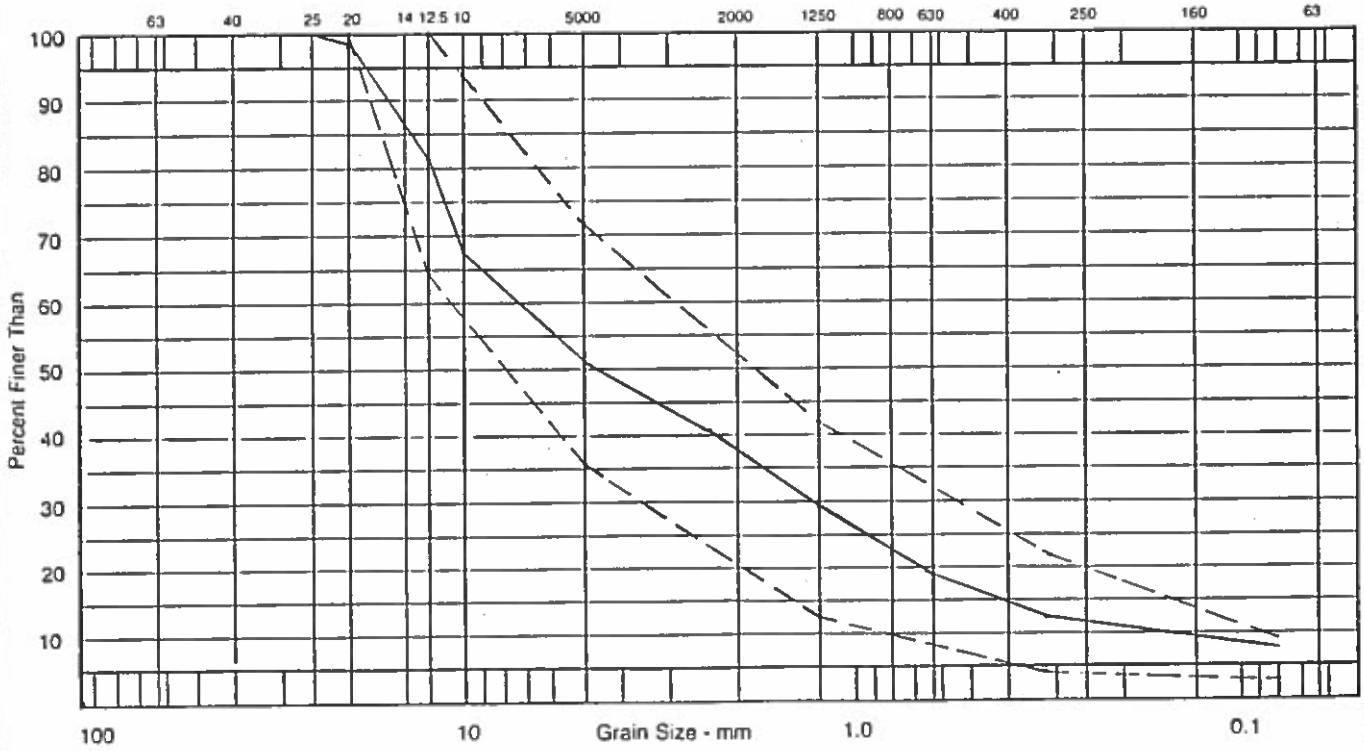
Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig Sample
40000	40.0					
25000	25.0					100.0
20000	20.0					98.0
16000	16.0					----
12500	12.5					81.2
10000	10.0					67.6
5000	5.0					50.6
2500	2.5					40.1
1250	1.250					29.5
800	0.800					----
630	0.630					19.2
315	0.315					----
250	0.250					12.6
160	0.160					9.8
80	0.080					7.9

Description of Sample: 20MM CRUSH

Method of Preparation: Dry X Washed

Remarks: GRAVEL SURFACE BASE COURSE SPEC., BAND

Time of Sieving: Min. 15



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Client: XTG.C&T SERVICES.LANDS BRANCH

Sample: ..... Depth: .25-4.25M

Project: McLEAN LAKE GRAVEL QUARRY INV. (1988)

Location: SOUTH OF LOT W, TP 260

Made by: LK Job. No. 8002-301

Ck'd by: WKK Date: 1988.03.24

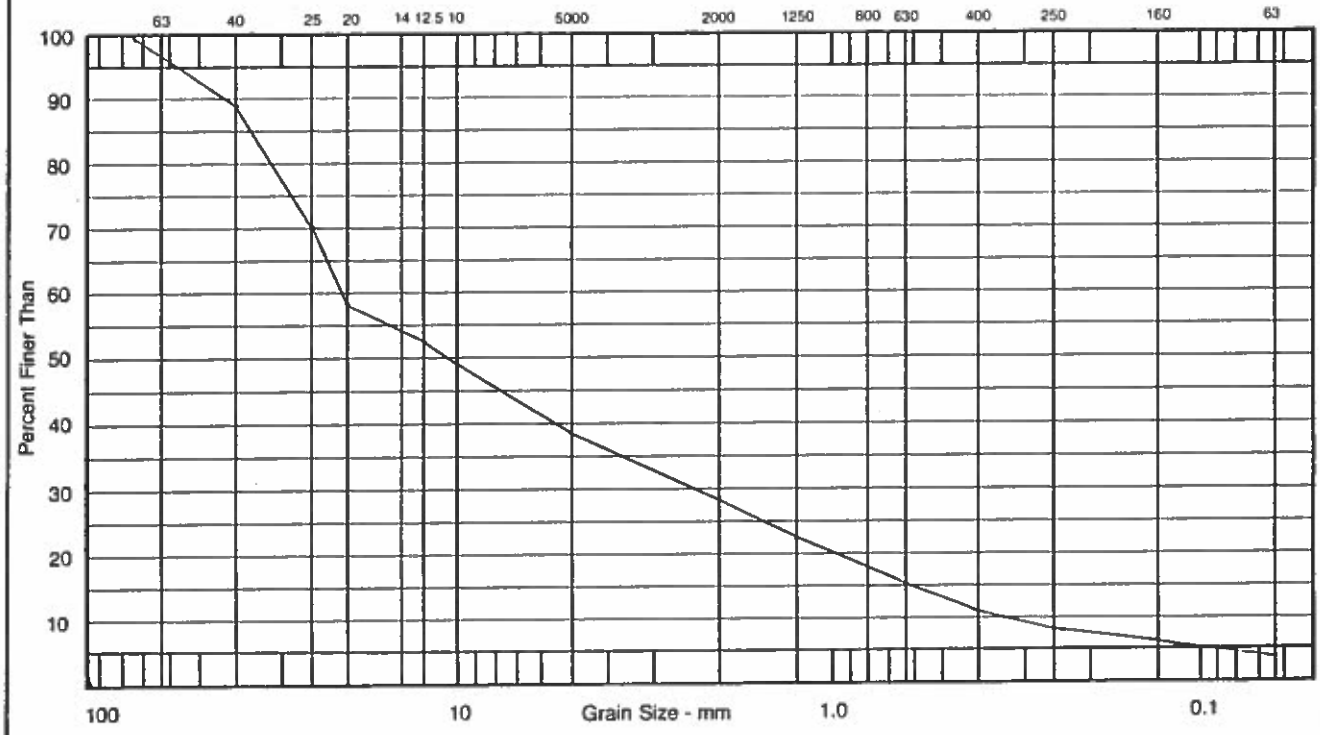
Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig. Sample
75000	75.0					100.0
40000	40.0					89.7
25000	25.0					70.0
20000	20.0					58.9
14000	14.0					54.0
12500	12.5					52.5
10000	10.0					48.8
5000	5.0					38.4
2000	2.0					28.6
1250	1.250					22.8
800	0.800					17.9
630	0.630					15.1
400	0.400					10.6
250	0.250					8.0
160	0.160					6.4
63	0.063					4.3

Description of Sample ..... SANDY GRAVEL

Time of Sieving ..... Min. 15

Method of Preparation ..... Dry ..... Washed X

Remarks ..... PIT RUN ONLY



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Client: YTG.C&T SERVICES.LANDS BRANCH

Sample: ..... Depth: .25-4.50M

Project: McLEAN LAKE GRAVEL QUARRY INV. (1988)

Location: SOUTH OF LOT U, TP 263

Made by: LK Job. No. 8002-301

Ck'd by: WCR Date: 1988.03.24

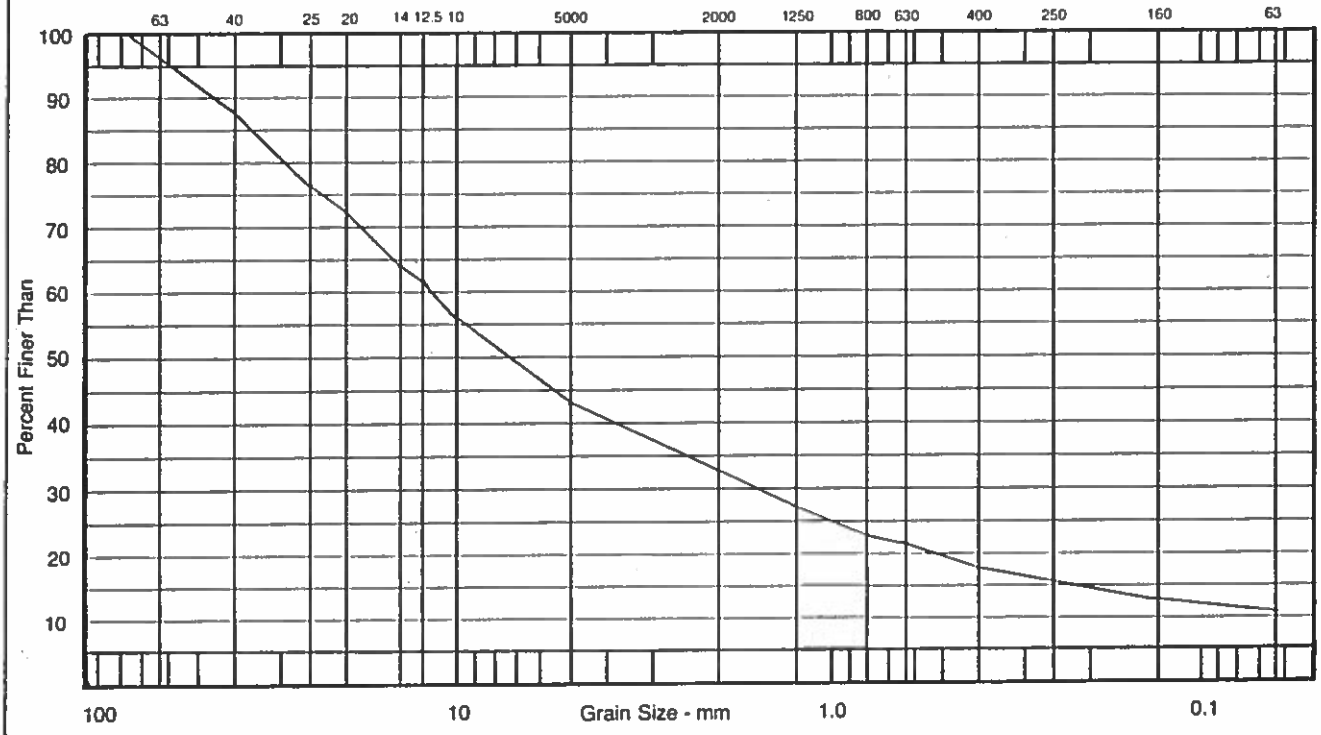
Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig.Sample
75000	75.0					100.0
40000	40.0					88.1
25000	25.0					76.3
20000	20.0					72.2
14000	14.0					64.2
12500	12.5					61.4
10000	10.0					55.4
5000	5.0					43.8
2000	2.0					33.2
1250	1.250					27.8
800	0.800					23.6
630	0.630					21.4
400	0.400					17.7
250	0.250					15.3
160	0.160					13.5
63	0.063					10.5

Description of Sample .....
SANDY GRAVEL
TRACE OF SILT

Time of Sieving ..... Min. 15

Method of Preparation ..... Dry ..... Washed X

Remarks PITRUN



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Client: YTG.C&T SERVICES.LANDS BRANCH

Sample: ..... Depth: 0.25-4.30M

Project: McLEAN LAKE GRAVEL QUARRY INV. (1988)

Location: SOUTH OF LOT U, TP 263

Made by: LK Job. No. 8002-301

Ck'd by: WCK Date: 1988.03.25

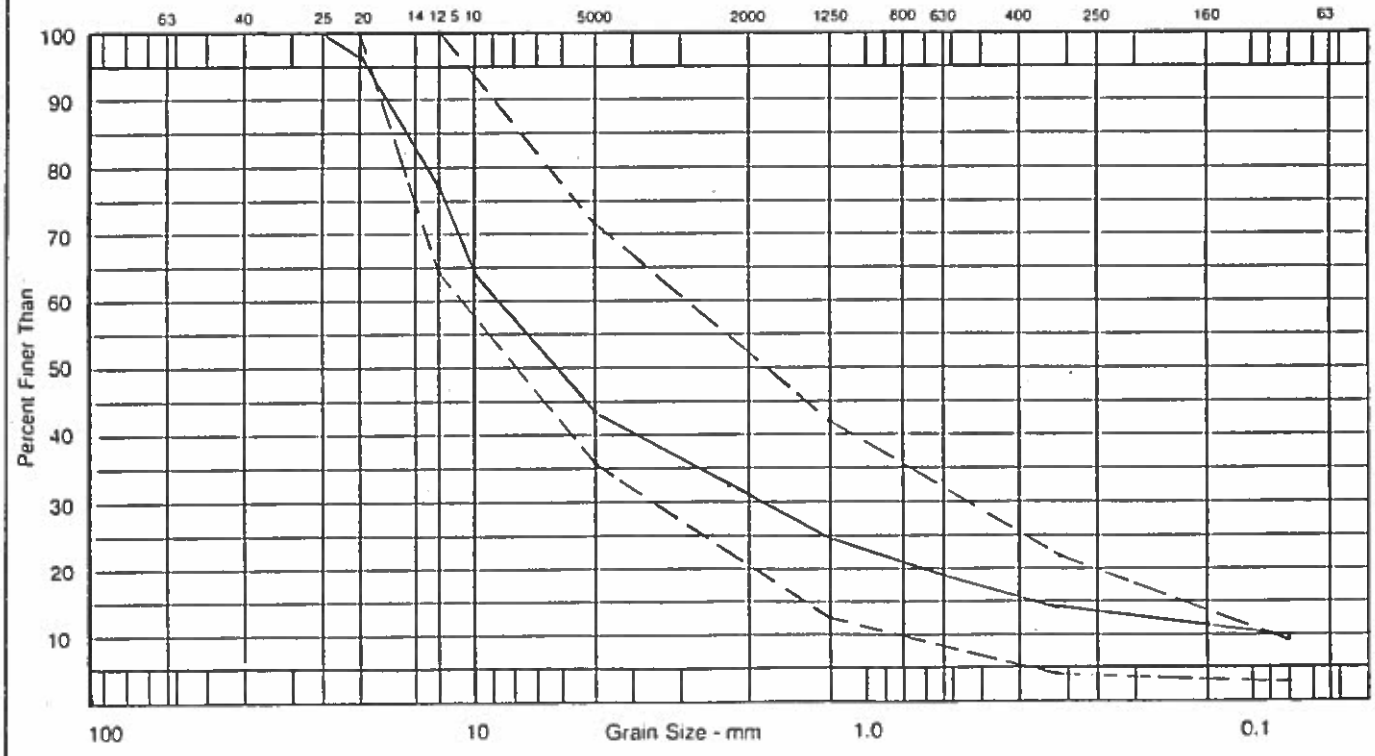
Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig.Sample
40000	40.0					
25000	25.0					100.0
20000	20.0					96.9
16000	16.0					----
12500	12.5					77.2
10000	10.0					64.1
5000	5.0					43.3
2500	2.5					32.6
1250	1.250					24.9
800	0.800					----
630	0.630					19.0
315	0.315					----
250	0.250					14.5
160	0.160					11.7
80	0.080					9.6

Description of Sample .....
20MM CRUSH

Time of Sieving ..... Min. 15

Method of Preparation ..... Dry ..... Washed X

Remarks ..... GRAVEL SURFACE BASE COURSE SPEC. BAND
CRUSHED-1FACE 77.3%
CRUSHED-2FACE 73.1%
ROUND



APPENDIX II

J. R. Paine & Associates Ltd.

PROJECT: *McLean Lake Gravel Quarry Investigation (1988)*

CLIENT: *GOVERNMENT OF YUKON*
Community & Transportation Services
Lands Branch
Box 2703
Whitehorse, Yukon Territory
Y1A 2C6

Attention: Mr. Bruce Gilroy

Enclosed in ***Appendix*** *II are the test hole logs for the test holes which are located within or adjacent to, the areas investigated in the 1988 Gravel Quarry Investigation completed by J.R. Paine & Associates Ltd. Also enclosed, are the grain size analysis and test summary sheets completed on pitrun samples obtained at the time of the investigation.*

Enclosed test hole logs include: 13, 20, 21, 23, 27, 31, 37, 39 and 40.

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLean Lake Road Gravel Search

DWN.	CKD.	JOB NO.	DATE	HOLE NO.	PLATE NO.
bg		8002-25	82 11 03	BH 13	

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L.) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X

MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE			SAMPLES					
DEPTH ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION	SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE	DEPTH SCALE
1.0	Gravel Some Sand Some Silt		m=3.3			GS	1.0
	Silty Sandy Gravel		m= 5.8			GS	
2.0	Sandy Gravel Some Silt		m=2.8 MA			GS	2.0
3.0	Sandy Fine Gravel		m=2.6			GS	3.0
4.0	Sandy Fine Gravel						4.0
5.0	Sandy Gravel		m=2.6			GS	5.0
6.0	Sandy Gravel						6.0
7.0							7.0

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	–UNDISTURBED, –DISTURBED, –LOST SAMPLE	U - 76mm SHELDY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γd - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A 140 lb. HAMMER DROPPED 30 ins. (FREE FALL) REQUIRED TO DRIVE A 2" O.D. RAYMOND TYPE SAMPLER A DISTANCE OF 12" INTO THE SOIL.

PLATE NO. .....

RECORD OF BOREHOLE B.H.20

LOCATION (See Figure. .)
BOREHOLE TYPE Solid Stem Flight Auger
SAMPLE HAMMER WEIGHT N/A DROP

BORING DATE 20 March 1984
BOREHOLE DIAMETER 150 mm
DATUM Project

ELEV. / DEPTH. (m)	DESCRIPTION	STRATIGRAPHY PLOT	SAMPLE NUMBER	SAMPLE TYPE	BLOWS /	(Estimated) ELEVATION SCALE (m)	WATER CONTENT PERCENT W_p W W_l	PIEZOMETER OR STANDPIPE INSTALLATION / ADDITIONAL LAB. TESTING
840	Ground Surface					840		
0.0	Topsoil (Stripping) < 100 mm							
	Sandy Gravel, some cobbles to 150 mm$^{\phi}$, some silt. Subrdd to subangl		1	GS				
	Sandy Gravel, some cobbles, trace silt hard drilling, 1.5 to 2.5 m		2	GS		838		Sieve Analysis
	Gravel and some cobbles, Less sand than above Hard Drilling, 2.5 to 3.5 m Refusal at 3.5 m		3	GS				
836.5								
3.5	End of Borehole					836		
				GS	-	Grab Sample from Flight Auger Return.		

VERTICAL SCALE 1:50

BORE HOLE No. BH20
SHEET 1 OF 1

Project No. _____ Drawn _____ Revised _____ Date March '84

RECORD OF BOREHOLE B.H. 21

LOCATION (See Figure. .)
BOREHOLE TYPE Solid Stem Flight Auger
SAMPLE HAMMER WEIGHT N/A DROP

BORING DATE 20 March 1984
BOREHOLE DIAMETER 150 mm
DATUM Project

ELEV. / DEPTH. (m)	DESCRIPTION	STRATIGRAPHY PLOT	SAMPLE NUMBER	SAMPLE TYPE	BLOWS /	(Estimated) ELEVATION SCALE (m)	WATER CONTENT PERCENT W_P — W — W_L	PIEZOMETER OR STANDPIPE INSTALLATION / ADDITIONAL LAB. TESTING
844	Ground Surface					844		
0.0	Topsoil (Stripping) < 100mm							
	Sand & Gravel, sm cobbles to 100 mm, trace silt. Subrdd to subanglr.		1	GS				
	Sand & Gravel, as above, loose.		2	GS		842		Sieve Analysis
	No auger cuttings return 2.5 to 4 m - Drilling action similar to 1.5 to 2.5 m - Sand & gravel w/sm cobbles - not hard drilling.					840		
	No auger return 4.0 to 5.5 m - drilling action similar to 1.5 to 2.5 m.							
	Harder drilling 6.0 to 7.0 m - more cobbles. No auger return.					838		
	Harder drilling cont'd to 8.5 m - drilling action indicates graval w/sm cobbles. No auger return		3	GS				Sieve Analysis
835.5						836		
8.5	Cont'd on Sheet 2							

VERTICAL SCALE 1:50

BORE HOLE No. BH21
SHEET 1 OF 2

Drawn _____ Date March '84
Project No. _____

RECORD OF BOREHOLE B.H. 21 (continued)

LOCATION (See Figure. .)
BOREHOLE TYPE Solid Stem Flight Auger
SAMPLE HAMMER WEIGHT N/A DROP

BORING DATE 20 March 1984
BOREHOLE DIAMETER 150 mm
DATUM Project

ELEV. DEPTH. (m)	DESCRIPTION	STRATIGRAPHY PLOT	SAMPLE NUMBER	SAMPLE TYPE	BLOWS/	(Estimated) ELEVATION SCALE (m)	WATER CONTENT PERCENT W_p W W_l	PIEZOMETER OR STANDPIPE INSTALLATION / ADDITIONAL LAB. TESTING
835.5	(Continued from Sheet 1)							
8.5	Hard drilling cont'd to 10.0 m – drilling action as above. (No auger return)		3	GS				Sieve Analysis Sa. 3 taken from flight auger when B.H. completed
	Sa. 3 – Gravel w/sm sand and trace silt.					834		
	No auger return 10 m to 11.5 m. Drilling action similar to above and indicates loose, clean gravel w/sm cobbles							
						832		
	No auger return 11.5 m to 13 m – similar drilling action to above.							Sa. 4 taken from flight auger when B.H. completed
	Sa. 4 – Gravel w/sm sand and trace silt. Subrdd to subanglr.		4	GS				
	No auger return 13 m to 15 m – Similar drilling action to above.					830		
	No auger return 15 m to 16.5 m – drilling action similar to above.							
827.5						828		
16.5	End of Borehole (Not Refusal)							

GS – Grab Sample from Flight Auger Return

Project No. _____ Drawn _____ Date March '84

VERTICAL SCALE 1:50

BORE HOLE No. BH21 (cont'd)
SHEET 2 OF 2

RECORD OF BOREHOLE B.H. 23

LOCATION (See Figure. .)
BOREHOLE TYPE Solid Stem Flight Auger
SAMPLE HAMMER WEIGHT DROP

BORING DATE 19 March 1984
BOREHOLE DIAMETER 150 mm
DATUM Project

ELEV. DEPTH. (m)	DESCRIPTION	STRATIGRAPHY PLOT	SAMPLE NUMBER	SAMPLE TYPE	BLOWS /	(Estimated) ELEVATION SCALE (m)	WATER CONTENT PERCENT W_p W W_l	PIEZOMETER OR STANDPIPE INSTALLATION / ADDITIONAL LAB. TESTING
822	Ground Surface					822		
0.0	Topsoil (Stripping) < 100 mm							
	Sand & Fine Gravel. Silty		1	GS				
	Gravel w/sm sand, sm cobble to 150 mm. Cleaner & coarser than above.		2	GS		820		
	(Becomes coarser at 3 m)							
	Coarse gravel w/sm cobbles; Subrdd to subanglr		3	GS				
						818		
	Gravel, sm cobbles, sm sand, clean.		4	GS				Sieve Analysis
	(Hard drilling below 5.5m							
	Gravel continues as above sm cobbles, subrdd to subanglr		5	GS		816		
	(Hard drilling continued)							
	Gravel w/sm cobbles, sm sand, clean and coarse.		6	GS				
						814		
813.5								
8.5	Continued on Sheet 2							

VERTICAL SCALE 1:50

BORE HOLE No. BH23
SHEET 1 OF 2

Date March '84

RECORD OF BOREHOLE B.H. 23 (continued)

LOCATION (See Figure. .)
BORING DATE 19 March 1984
BOREHOLE TYPE Solid Stem Flight Auger
BOREHOLE DIAMETER 150 mm
SAMPLE HAMMER WEIGHT N/A DROP
DATUM Project

SOIL PROFILE ELEV. / DEPTH. (m)	DESCRIPTION	STRATIGRAPHY PLOT	SAMPLE NUMBER	SAMPLE TYPE	BLOWS / (Estimated) ELEVATION SCALE (m)	WATER CONTENT PERCENT W_p W W_l	PIEZOMETER OR STANDPIPE INSTALLATION / ADDITIONAL LAB. TESTING
813.5	(Cont'd from Sheet 1)						
8.5	Gravel, sm cobbles, coarse, clean, sm sand, trace silt, subrdd to subanglr		7	GS			
812.5							
9.5	(Refusal at 9.5 m)						
	End of Borehole				812		

GS - Grab Sample from Flight Auger Return

VERTICAL SCALE 1:50

BORE HOLE No. BH23 (contd)
SHEET 2 OF 2

March '84
Drawn
Project No.

RECORD OF BOREHOLE B.H. 27

LOCATION (See Figure .)
BOREHOLE TYPE Solid Stem Flight Auger
SAMPLE HAMMER WEIGHT N/A DROP

BORING DATE 19 March 1984
BOREHOLE DIAMETER 150 mm
DATUM Project

ELEV. / DEPTH. (m)	DESCRIPTION	SAMPLE NUMBER	SAMPLE TYPE	BLOWS /	(Estimated) ELEVATION SCALE (m)	WATER CONTENT PERCENT W_p W W_l	PIEZOMETER OR STANDPIPE INSTALLATION / ADDITIONAL LAB. TESTING
822	Ground Surface						
0.0	Topsoil (Stripping) < 100 mm				822		
	Gravel w/sm cobbles, sm sand, trace silt. Subrdd to subanglr. (Harder drilling below 1 m)	1	GS				
	Fine to coarse gravel, sm fine to med.sand, trace silt (easier drilling 2.5 to 3.7 m)	2	GS		820		
	Gravel w/sm sand, sm silt (finer than above).	3	GS				
	(Harder drilling below 4m)				818		
	Fine to coarse gravel w/sm sand and sm silt. Subrdd to subanglr (like Sa. 3)	4	GS				Sieve Analysis
	(Hard drilling continued)						
	Fine to coarse gravel, sm sand, trace silt. Subrdd to subanglr (less fines than Sa. 4).	5	GS		816		
	(Hard drilling continued)						
	Fine to coarse gravel. No sand or silt returned on flight auger.	6	GS				
	(Hard drilling continued)				814		
8.5	Cont'd on Sheet 2						

VERTICAL SCALE 1:50

BORE HOLE No. BH27
SHEET 1 OF 2

Drawn ____ Date March '84
Project No. ____

RECORD OF BOREHOLE B.H. 27 (Cont'd)

LOCATION (See Figure. .)
BOREHOLE TYPE Solid Stem Flight Auger
SAMPLE HAMMER WEIGHT N/A DROP

BORING DATE 19 March 1984
BOREHOLE DIAMETER 150 mm
DATUM Project

SOIL PROFILE ELEV. DEPTH. (m)	DESCRIPTION	STRATIGRAPHY PLOT	SAMPLE NUMBER	SAMPLE TYPE	BLOWS/	(Estimated) ELEVATION (m)	WATER CONTENT PERCENT W_p W W_l	PIEZOMETER OR STANDPIPE INSTALLATION / ADDITIONAL LAB. TESTING
813.5	Cont'd from Sheet 1							
8.5	(Hard drilling cont'd) Fine to coarse gravel, subanglr to subrdd. No sand or silt return on auger.		6	GS				
			7	GS		812		
	(Easier drilling at 10.5m) Fine to coarse gravel, as above		8	GS				
	(Harder drilling)					810		
	Fine to coarse gravel, as above, subrdd to subanglr. No sand or silt return on flight auger.		9	GS				
						808		
807								
15.0	End of Borehole (No Refusal)							

GS - Grab Sample from Flight Auger Return.

VERTICAL SCALE 1:50

BORE HOLE No. BH27 (cont)
SHEET 2 OF 2

Date March '84

RECORD OF BOREHOLE B.H. 31

LOCATION (See Figure. .)
BOREHOLE TYPE Solid Stem Flight Auger
SAMPLE HAMMER WEIGHT N/A DROP

BORING DATE 20 March 1984
BOREHOLE DIAMETER 150 mm
DATUM Project

ELEV. DEPTH. (m)	DESCRIPTION	STRATIGRAPHY PLOT	SAMPLE NUMBER	SAMPLE TYPE	BLOWS /	(Estimated) ELEVATION SCALE (m)	WATER CONTENT PERCENT W_p W W_l	PIEZOMETER OR STANDPIPE INSTALLATION / ADDITIONAL LAB. TESTING
837	Ground Surface							
0.0	Gravel and Cobbles, sm sand, trace silt. Subrdd to subanglr.		1	GS				
						836		
	(Hard drilling 1.0 to 1.5 m and easier 1.5 to 2.5 m)							
	Gravel & Cobbles, sm sand		2	GS				
	(Easier drilling 2.5 to 4 m)							
	Fine to medium Gravel and medium to coarse Sand, trace silt					834		Sieve Analysis
	(Hard drilling below 4m)		3	GS				
	Fine to coarse Gravel, sm Cobbles and sand trace silt. Subanglr to subrdd		4	GS				
						832		
	(Hard drilling cont. below 5.5 m) and more cobbles below 6 m)							
	Fine to coarse Gravel w/sm Cobbles - like Sa. 4		5	GS				
	(Hard drilling cont. below 7.5 m)							
						830		
	Coarse Gravel, sm Cobbles and sm sand. Coarser than Sa. 5, subanglr to subrdd		6	GS				Sieve Analysis
828.5	(Hard drilling cont'd)							
8.5	Cont'd on Sheet 2							

VERTICAL SCALE 1:50

BORE HOLE No. BH31
SHEET 1 OF 2

Drawn _____ Date March '84
Project No. _____

RECORD OF BOREHOLE B.H. 31

LOCATION (See Figure. .)
BOREHOLE TYPE Solid Stem Flight Auger
SAMPLE HAMMER WEIGHT N/A DROP

BORING DATE 20 March 1984
BOREHOLE DIAMETER 150 mm
DATUM Project

SOIL PROFILE ELEV. / DEPTH. (m)	DESCRIPTION	STRATIGRAPHY PLOT	SAMPLE NUMBER	SAMPLE TYPE	BLOWS /	ELEVATION (Estimated) (m)	WATER CONTENT PERCENT W_p W W_l	PIEZOMETER OR STANDPIPE INSTALLATION / ADDITIONAL LAB. TESTING
828.5	Cont'd from Sheet 1							
8.5	Coarse Gravel, sm Cobbles, Sm fine to coarse sand, trace silt. Subrdd to subanglr.		7	GS		828		
827.5								
9.5	End of Borehole (Refusal at 9.5 m)					826		

GS - Grab sample from flight auger return

Project No. _____ Drawn _____ Prepared [signature] Date March '84

VERTICAL SCALE 1:50

BORE HOLE No. BH31 (cont'd)
SHEET 2 OF 2

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLean Lake Gravel Leases, Gravel Lease

DWN. bk | CKD.

JOB NO. 8006-2 | DATE 85.05.28 | HOLE NO. 39 | PLATE NO. 18

MOISTURE CONTENT
LIQUID LIMIT (W.L.)
PLASTIC LIMIT (W.P.)
STANDARD PENETRATION TEST
MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

SOIL PROFILE

DEPTH ELEV. M.	CLASSIFICATION (DATUM GROUND SURFACE ELEVATION)
0.60+ 0.90m	Sandy Gravel Coarse Brown
2.15+ 2.35m	
3.65+ 3.95m	
8.25+ 8.55m	
9.75+ 10.05m	
14.60m	End of Hole

SAMPLES

SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND	TYPE
	M=5.5% MA		X	
	M=1.7% MA		X	
	M=2.1%		X	
	M=2.5% MA		X	
	M=2.4%		X	

DEPTH SCALE: 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

SOIL TYPES: TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK

CONDITION: -UNDISTURBED, -DISTURBED, -LOST SAMPLE

SAMPLE TYPE: U - 76mm SHELBY TUBE; D.S. - DRIVE SAMPLE; M - MOISTURE CONTENT; R.C. - ROCK CORE

LABORATORY TEST SYMBOLS: Qu - UNCONFINED COMP. STR. kPa; γd - DRY WEIGHT kg/m³; C - CONSOLIDATION TEST; MA - GRAIN SIZE ANALYSIS

PENETRATION RESISTANCE: (N) - NUMBER OF BLOWS OF A 140 lb. HAMMER DROPPED 30 ins. (FREE FALL) REQUIRED TO DRIVE A 2" Ø O.D. RAYMOND TYPE SAMPLER A DISTANCE OF 12" INTO THE SOIL

PLATE NO. .....

J. R. Paine & Associates Ltd.

TEST HOLE LOG AND LABORATORY TEST DATA

PROJECT: McLean Lake Gravel Leases, Gravel Lease

DWN. bk | CKD. | JOB NO. 8006-2 | DATE 85.05.28 | HOLE NO. 40 | PLATE NO. 19

MOISTURE CONTENT ●—●
LIQUID LIMIT (W.L) ■—■
PLASTIC LIMIT (W.P) ▲—▲
STANDARD PENETRATION TEST X—X

MOISTURE CONTENT (%) & STAND. PENETRATION (N)
10 20 30 40 50 60 70 80

DEPTH ELEV. M.	CLASSIFICATION DATUM GROUND SURFACE ELEVATION	SOIL SYMBOL	OTHER TESTS	Unconfined Compressive Strength kPa	SAMPLE COND.	TYPE	DEPTH SCALE
	Gravelly Silty Sand, Brown						
0.60	200mm Maximum		M=1.8%		☒		
0.90m	1.20m						2.0
	Sandy Gravel at Top to Gravelly Sand at Bottom						
2.45	Coarse		M=1.2%		☒		
2.75m	75mm Maximum		MA				
3.65	Light Brown		M=2.2%		☒		4.0
3.95m			MA				
							6.0
6.70			M=1.5%		☒		
7.00m							8.0
							10.0
			M=2.4%		☒		12.0
12.20	12.80m		MA				
12.80m	Refusal (Bedrock)						14.0

SOIL TYPES	CONDITION	SAMPLE TYPE	LABORATORY TEST SYMBOLS	PENETRATION RESISTANCE
TOPSOIL, PEAT, FILL, CLAY, SILT, SAND, TILL, BEDROCK	-UNDISTURBED, -DISTURBED, -LOST SAMPLE	U - 76mm SHELBY TUBE D.S. - DRIVE SAMPLE M - MOISTURE CONTENT R.C. - ROCK CORE	Qu - UNCONFINED COMP. STR. kPa γd - DRY WEIGHT kg/m³ C - CONSOLIDATION TEST MA - GRAIN SIZE ANALYSIS	(N) - NUMBER OF BLOWS OF A 140 lb. HAMMER DROPPED 30 ins. (FREE FALL) REQUIRED TO DRIVE A 2" O.D. RAYMOND TYPE SAMPLER A DISTANCE OF 12" INTO THE SOIL

PLATE NO.

J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Client: Y.T.G. Municipal & Community Affairs

Sample: BH #13 Depth: 5' - 7' Project: McLean Lake Road Gravel Search

Location: Made by: bg Job. No. 8002-25

Ck'd by: Date: 82 11 03

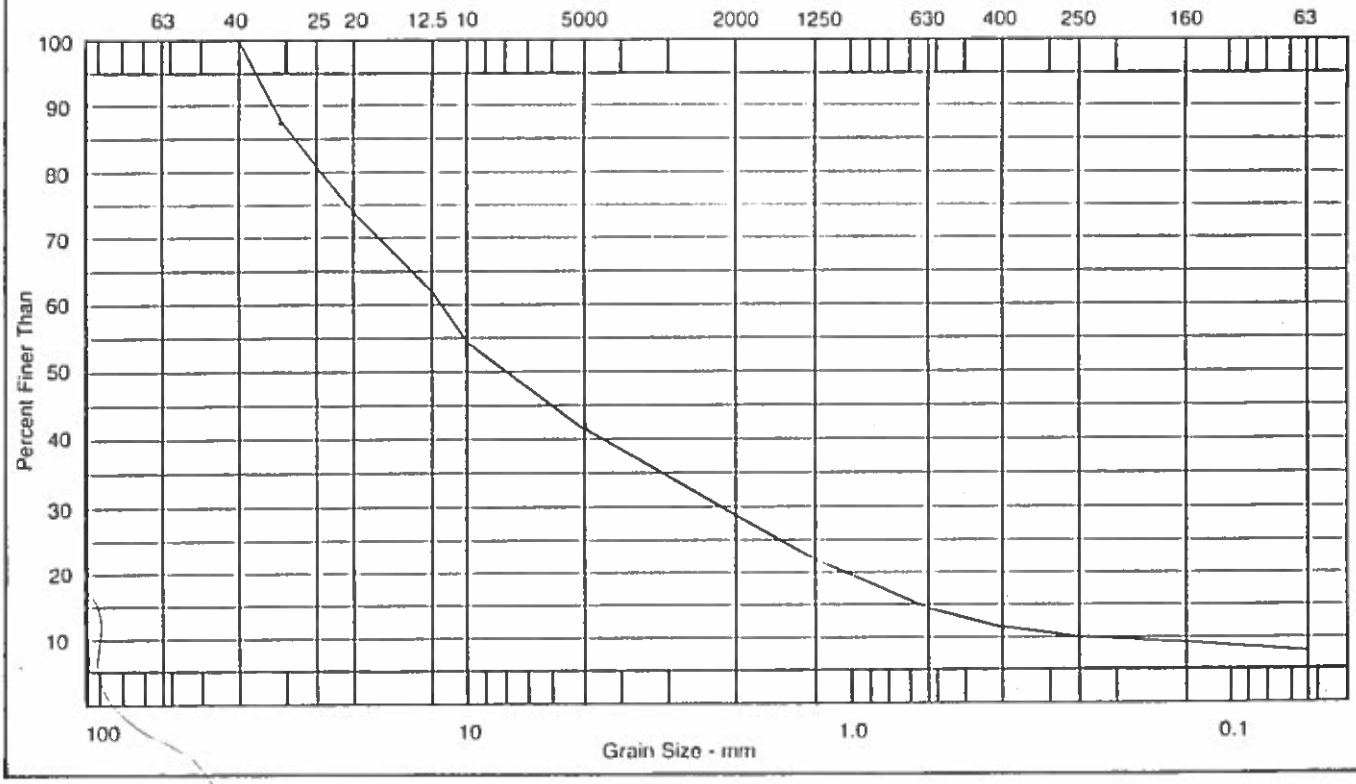
	Sieve No.	Size of Opening MM	Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig.Sample
Initial dry Weight						
	63000	63.0				
	40000	40.0				100
	28000	28.0				87.9
	20000	20.0				74.2
	12500	12.5				61.6
	10000	10.0				54.3
	5000	5.0				41.8
	2000	2.0				29.3
	1250	1.250				22.1
	630	0.630				14.5
	400	0.400				11.6
	250	0.250				10.0
	160	0.160				9.1
	63	0.063				7.6
	PAN					

Description of Sample: Sandy Gravel Some Silt

Time of Sieving: 10 Min.

Method of Preparation: Dry Washed: x

Remarks:



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Sample: 2 Depth: 1.5 - 2.5m

Location: BH 20

Client: Stanley Associates Engineering Ltd.

Project: Job. #49 - 028-01-01

Made by: lk Job. No. 8006

Ck'd by: [illegible] Date: 84 03 26

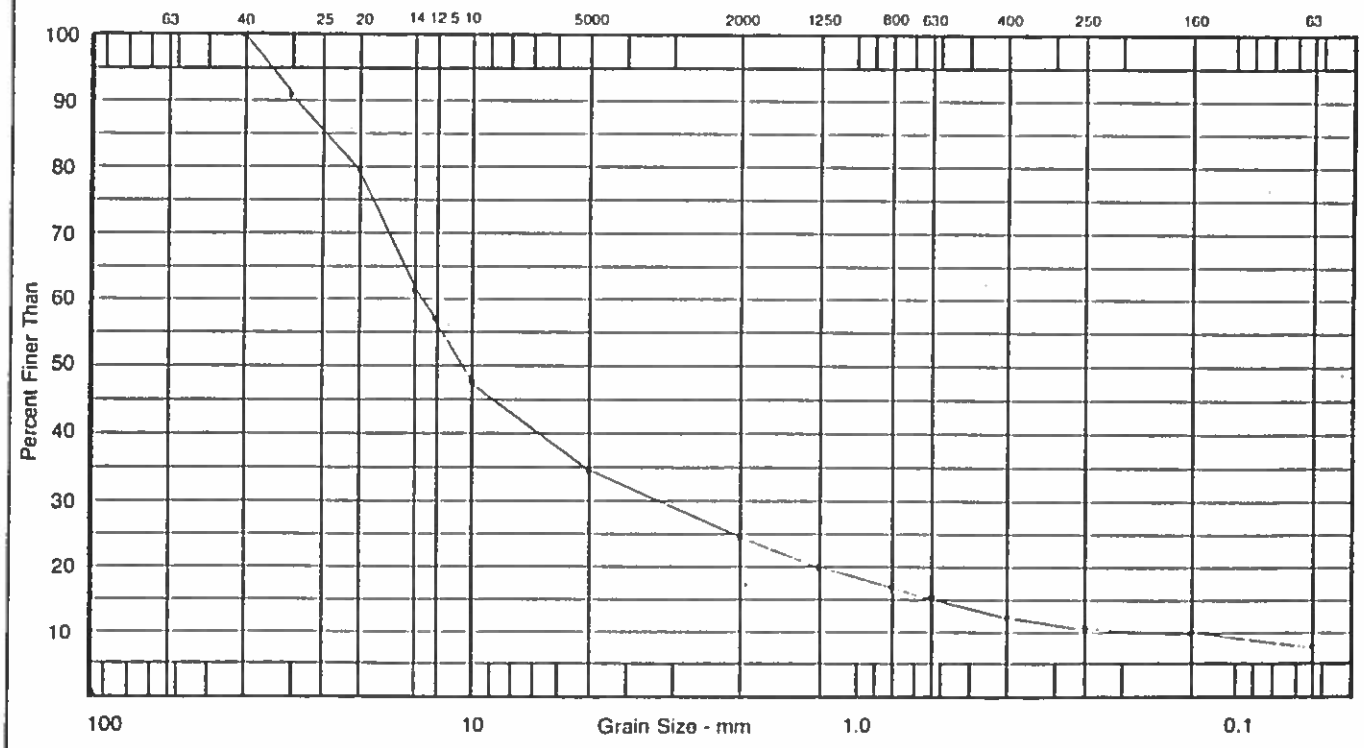
Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig. Sample
40000	40.0					100
25000	28.0					91.3
20000	20.0					79.5
14000	14.0					61.7
12500	12.5					57.1
10000	10.0					47.9
5000	5.0					33.9
2000	2.0					24.4
1250	1.250					20.4
800	0.800					17.4
630	0.630					16.0
400	0.400					13.4
250	0.250					11.5
160	0.160					10.2
63	0.063					8.4

Description of Sample: Sandy Gravel - Trace Silt

Time of Sieving: 10 Min.

Method of Preparation: Dry: Washed: x

Remarks:



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Sample: 2 Depth: 1.0 - 2.5m
Location: BH 21

Client: Stanley Associates Engineering Ltd.
Project: Job. #49-028-10-01
Made by: lk Job. No. 8006
Ck'd by: [illegible] Date: 84 03 26

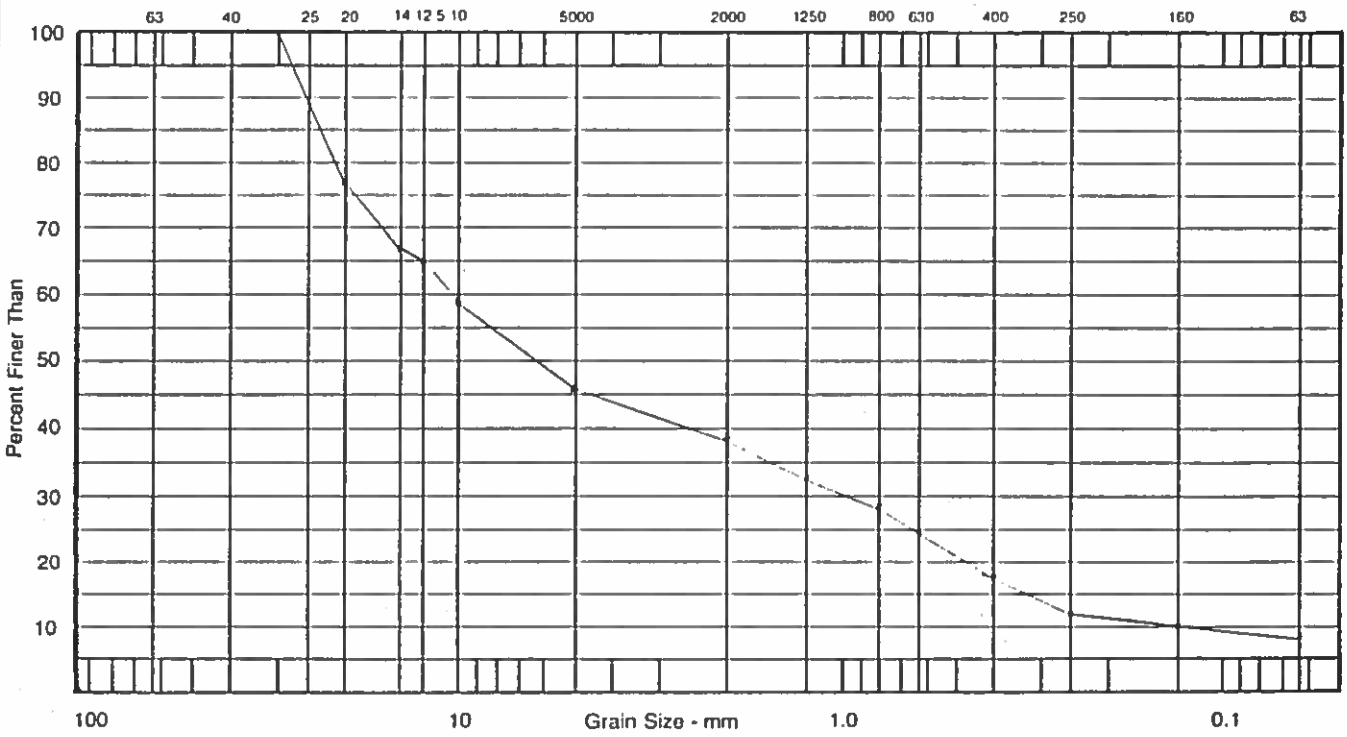
Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig.Sample
40000	40.0					
25000	28.0					100
20000	20.0					77.7
14000	14.0					67.7
12500	12.5					65.2
10000	10.0					58.6
5000	5.0					46.4
2000	2.0					38.0
1250	1.250					33.7
800	0.800					28.4
630	0.630					24.6
400	0.400					17.0
250	0.250					13.0
160	0.160					10.6
63	0.063					7.9

Description of Sample: Sandy Gravel - Trace Organics
Trace Silt

Time of Sieving: 10 Min.

Method of Preparation: Dry Washed: x

Remarks:



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Client: Stanley Associates Engineering Ltd.

Sample: 3 Depth: 7 - 10m Project: Job. #49-028-01-01

Location: BH 21 Made by: lk Job. No. 8006

Ck'd by: [illegible] Date: 84.03.26

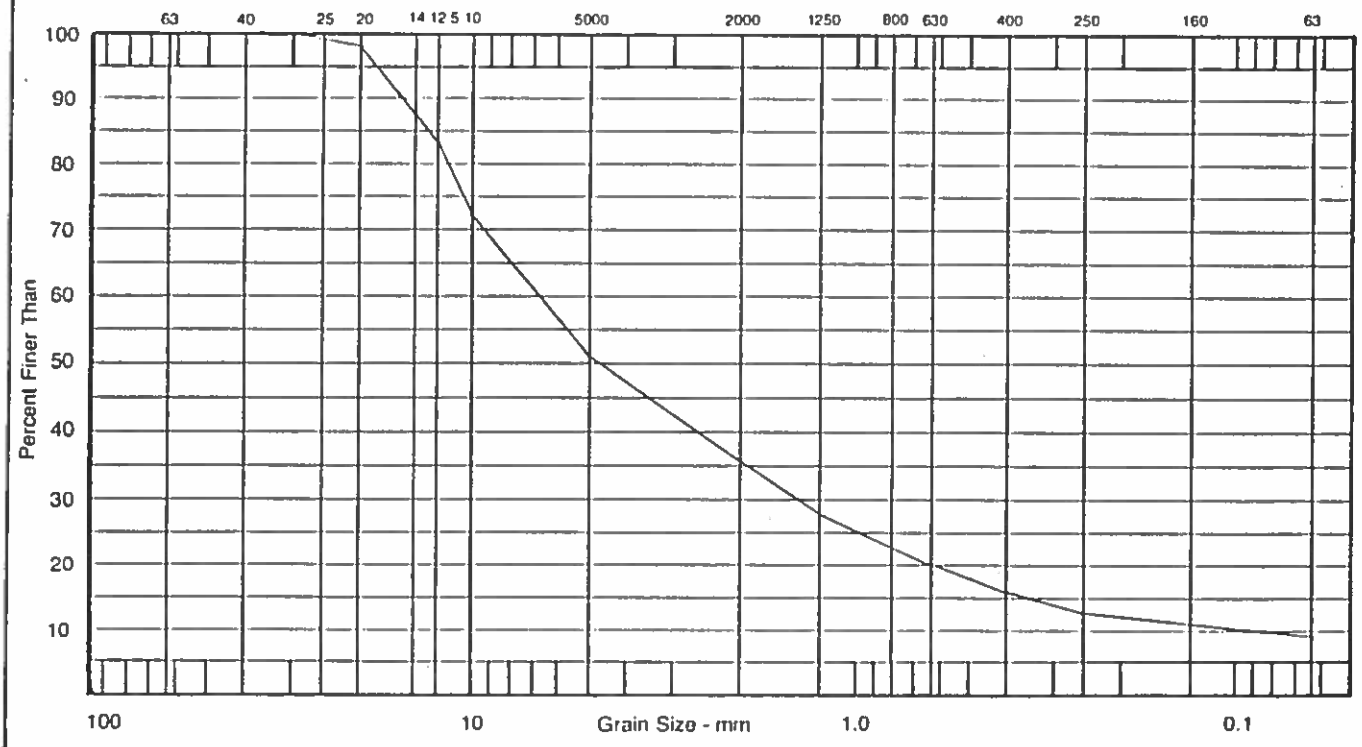
Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig Sample
40000	40.0					
25000	25.0					100
20000	20.0					98.3
14000	14.0					87.4
12500	12.5					83.0
10000	10.0					72.3
5000	5.0					50.6
2000	2.0					35.3
1250	1.250					28.4
800	0.800					22.9
630	0.630					20.0
400	0.400					15.3
250	0.250					12.6
160	0.160					10.9
63	0.063					9.1

Description of Sample: Sandy Gravel - Trace Silt

Time of Sieving: 10 Min.

Method of Preparation: Dry Washed: X

Remarks:



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Sample: 4 Depth: 4.0 - 5.5m
Location: B.H. 23

Client: Stanley Associates Engineering Ltd.
Project: Job. # 49 - 028-01-01
Made by: lk Job. No. 8006
Ck'd by: [illegible] Date: 84 03 26

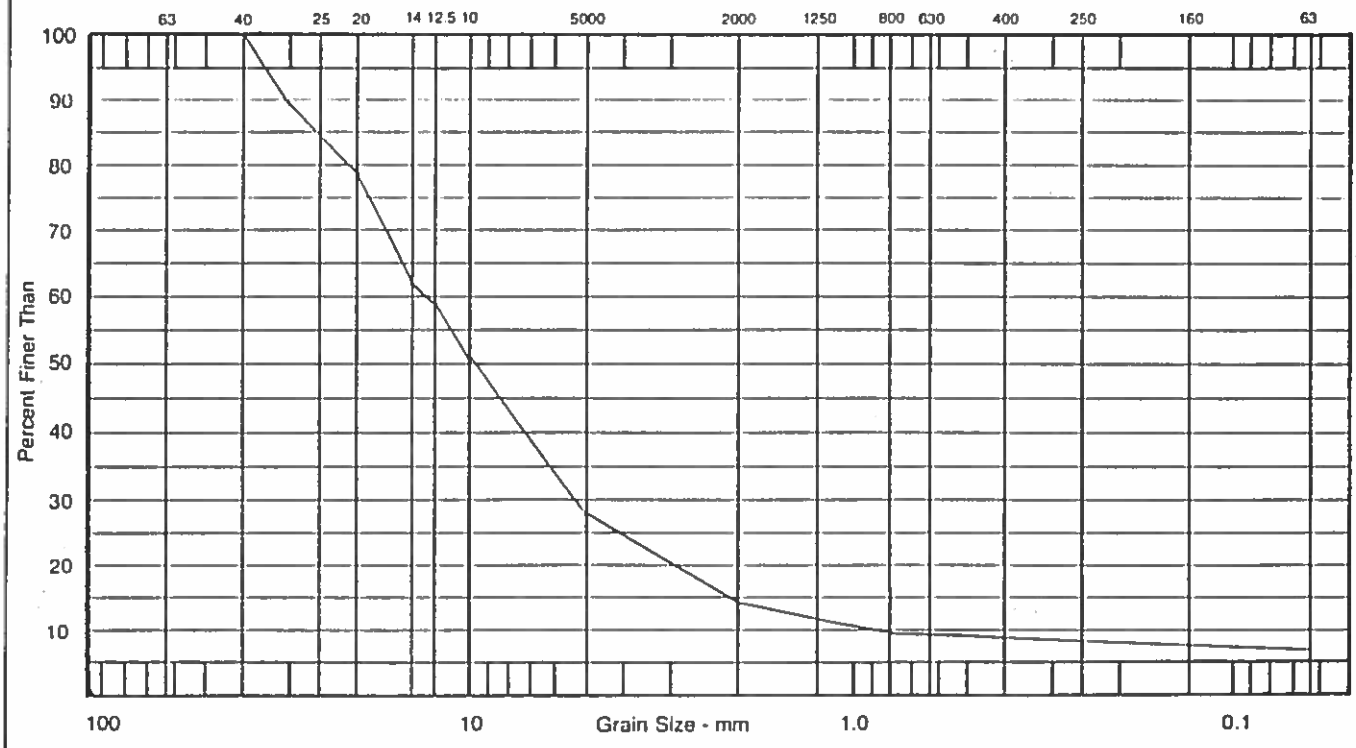
Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig. Sample
40000	40.0					100
25000	25.0					89.5
20000	20.0					78.9
14000	14.0					62.0
12500	12.5					58.1
10000	10.0					50.2
5000	5.0					27.9
2000	2.0					14.8
1250	1.250					11.4
800	0.800					9.9
630	0.630					9.4
400	0.400					8.6
250	0.250					8.0
160	0.160					7.5
63	0.063					6.5

Description of Sample: Sandy Gravel - Trace of Silt

Time of Sieving: 10 Min.

Method of Preparation: Dry Washed: x

Remarks:



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Sample: 4 Depth: 4.0 - 5.5m

Location: B.H. 27

Client: Stanley Associates Engineering Ltd.

Project: Job #49-028-01-01

Made by: TK Job. No. 8006

Ck'd by: JJ Date: 84 03 26

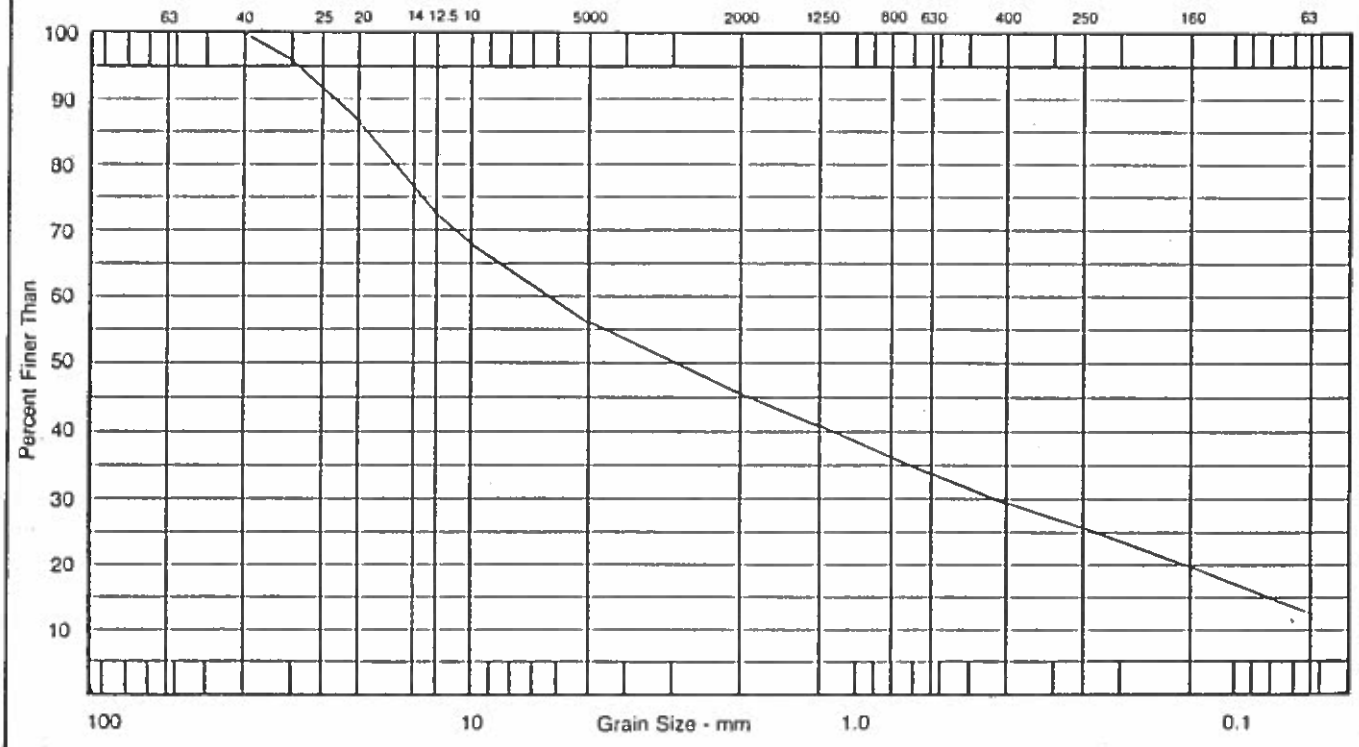
Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig.Sample
40000	40.0					100
25000	28.0					95.2
20000	20.0					86.3
14000	14.0					74.5
12500	12.5					72.4
10000	10.0					68.3
5000	5.0					55.5
2000	2.0					45.1
1250	1.250					40.3
800	0.800					36.2
630	0.630					34.0
400	0.400					29.7
250	0.250					25.1
160	0.160					19.9
63	0.063					12.7

Description of Sample: Silty Sandy Gravel

Time of Sieving: 10 Min.

Method of Preparation: Dry Washed: x

Remarks:



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Sample: 3 Depth: 2.5 - 4.0 m

Location: B.H. 31

Client: Stanley Associates Engineering Ltd.

Project: Job. #49 - 028-01-01

Made by: ?lk Job. No. 8006

Ck'd by: [illegible] Date: 84.03.26

Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig. Sample
40000	40.0					
25000	25.0					100
20000	20.0					97.6
14000	14.0					91.3
12500	12.5					88.7
10000	10.0					82.5
5000	5.0					67.5
2000	2.0					51.7
1250	1.250					42.9
800	0.800					34.0
630	0.630					29.4
400	0.400					21.1
250	0.250					14.6
160	0.160					11.1
63	0.063					8.3

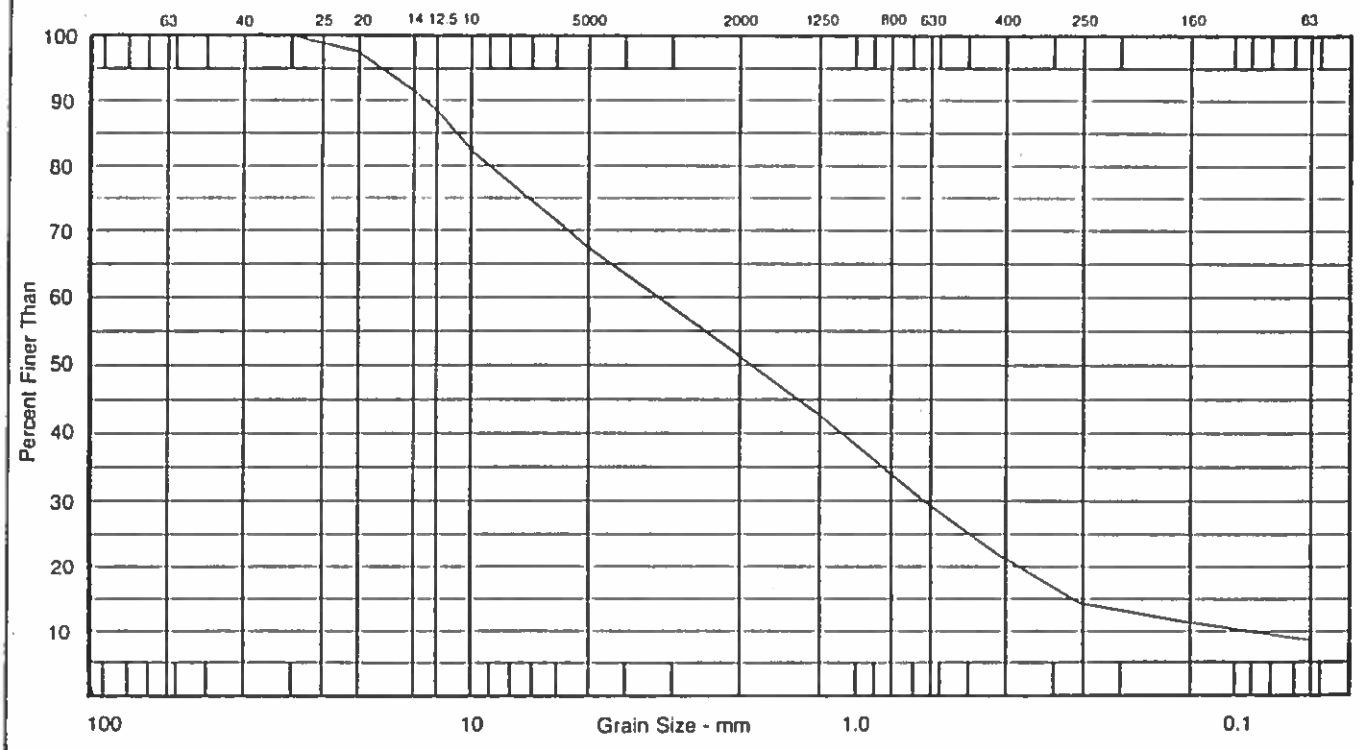
Description of Sample

Gravelly Sand - Trace Silt

Time of Sieving ..... Min. .....

Method of Preparation ..... Dry ..... Washed ..... X .....

Remarks .....



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Sample: 6 Depth: 7.0 - 8.5m
Location: BH 31

Client: Stanley Associates Engineering Ltd.
Project: Job #49-028-01-01
Made by: lk Job. No. 8006
Ck'd by: [illegible] Date: 84 03 26

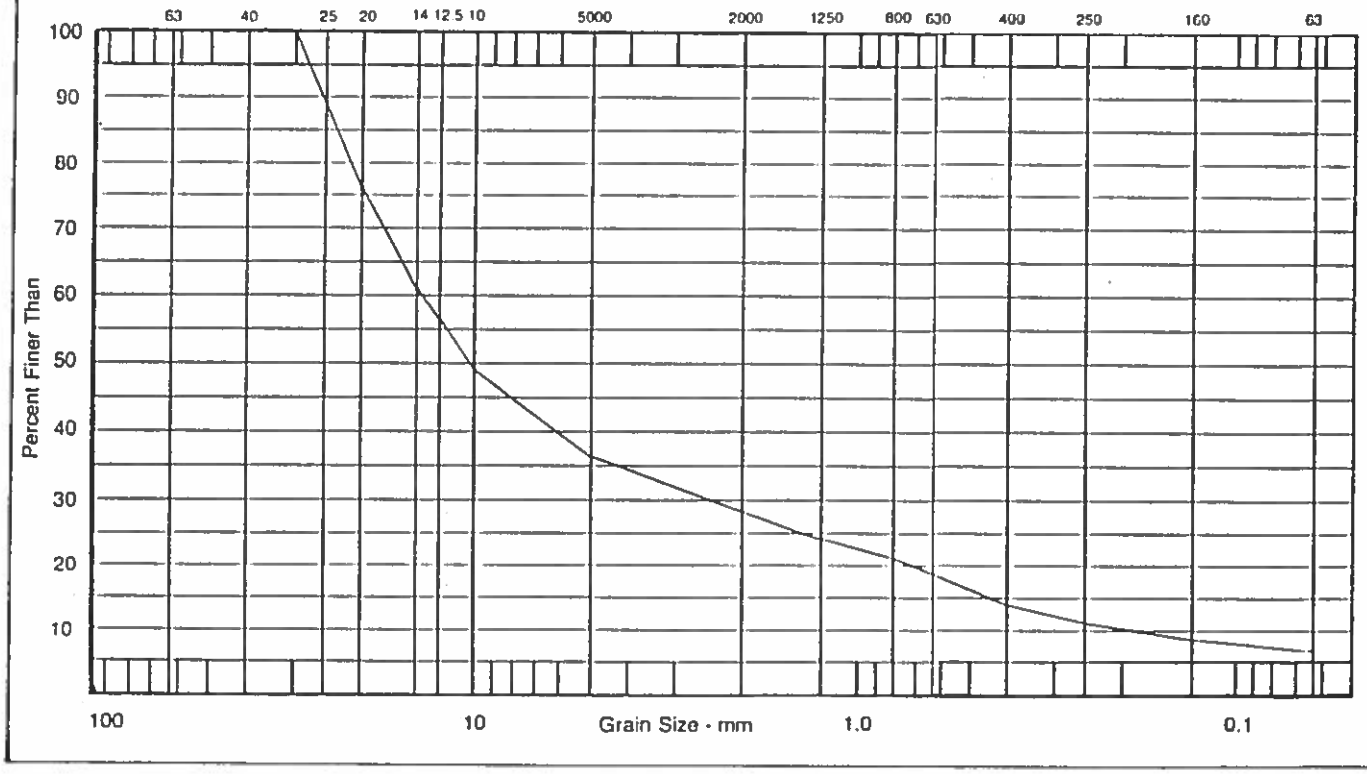
Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig. Sample
40000	40.0					
25000	28.0					
20000	20.0					100
14000	14.0					75.4
12500	12.5					60.3
10000	10.0					55.8
5000	5.0					48.7
2000	2.0					36.3
1250	1.250					28.3
800	0.800					24.4
630	0.630					20.6
400	0.400					18.3
250	0.250					14.0
160	0.160					10.7
63	0.063					8.5
						6.6

Description of Sample: Sandy Gravel - Trace of Silt

Time of Sieving: 10 Min.

Method of Preparation: Dry: Washed: x

Remarks:



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Client: Stanley Assoc. Engineering Ltd

Sample: BH# 37 Depth: 0.60-0.90m Project: McLean Lake Gravel Leases

Location: Gravel Lease Made by: bk Job. No. 8006-2

Ck'd by: Date: 85.05.22

Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig.Sample
40000	40.0					
25000	25.0					100.0
20000	20.0					95.9
14000	14.0					88.8
12500	12.5					88.8
10000	10.0					86.1
5000	5.0					82.3
2000	2.0					78.6
1250	1.250					76.6
800	0.800					72.3
630	0.630					63.5
400	0.400					37.4
250	0.250					19.9
160	0.160					13.7
63	0.063					10.2

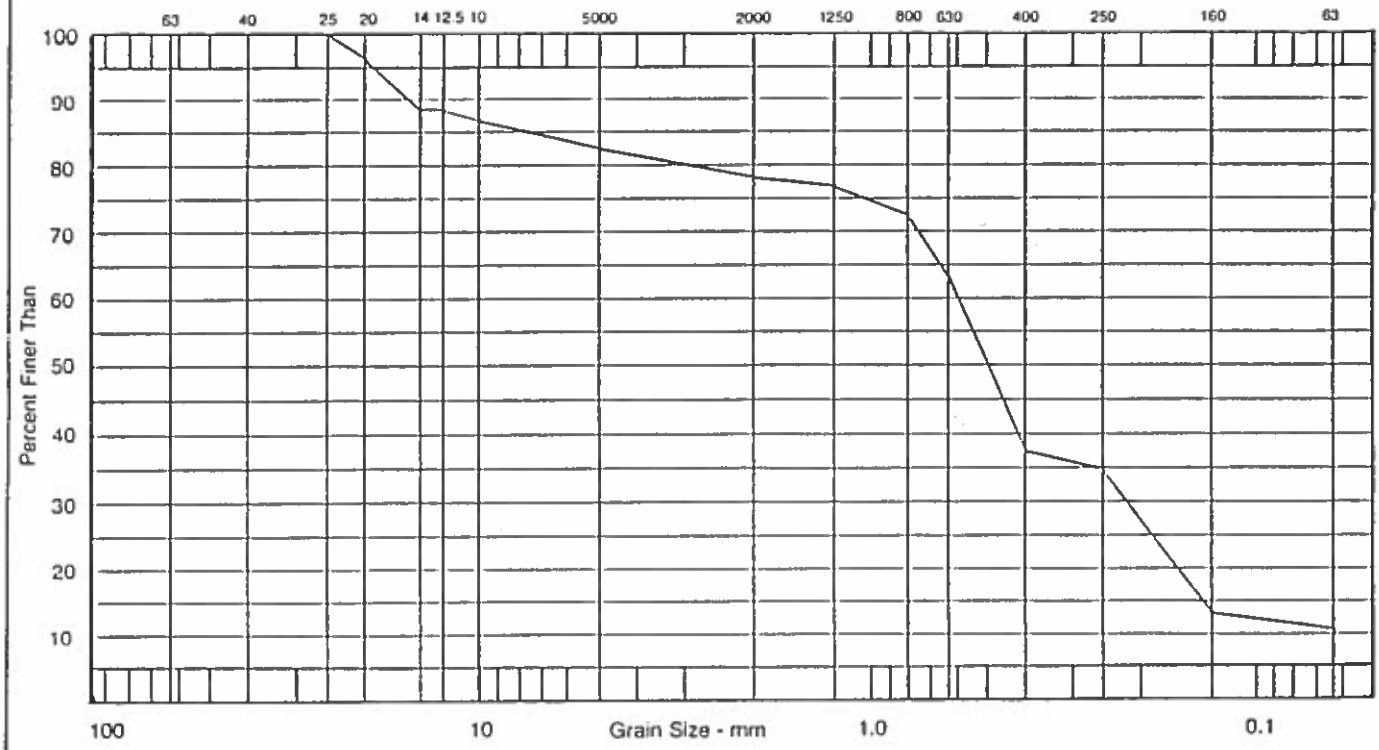
Description of Sample

Gravelly Sand
Brown

Time of Sieving 12 Min.

Method of Preparation Dry Washed X

Remarks



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Sample: BH# 37 Depth: 6.70-7.00m
Location: Gravel Lease

Client: Stanley Assoc. Engineering Ltd
Project: McLean Lake Gravel Leases
Made by: bk Job. No. 8006-2
Ck'd by: Date: 85.05.22

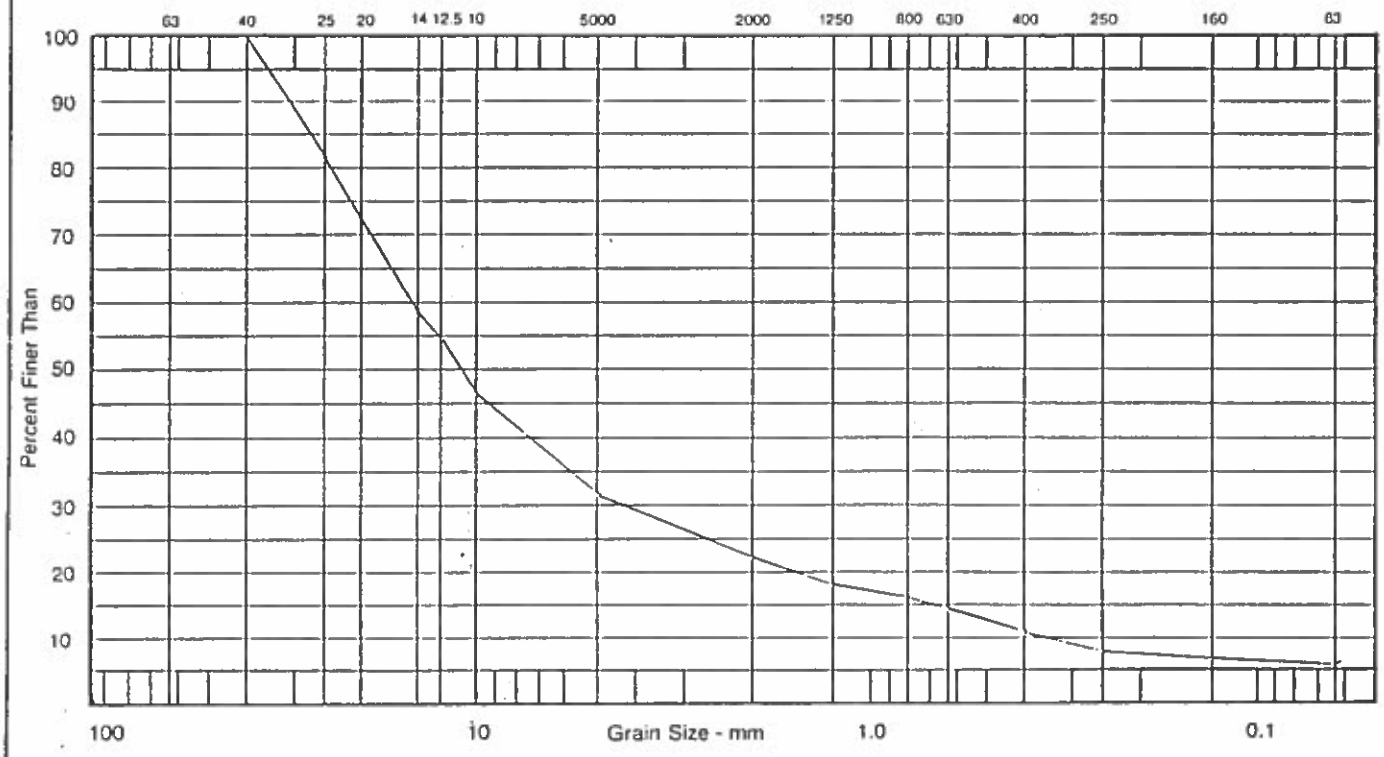
Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig.Sample
40000	40.0					100.0
25000	25.0					81.2
20000	20.0					71.9
14000	14.0					58.4
12500	12.5					54.5
10000	10.0					45.6
5000	5.0					30.7
2000	2.0					21.8
1250	1.250					18.4
800	0.800					15.8
630	0.630					14.2
400	0.400					10.5
250	0.250					7.7
160	0.160					6.3
63	0.063					5.4

Description of Sample: Coarse Sandy Gravel, Brown

Time of Sieving: 12 Min.

Method of Preparation: Dry ____ Washed x

Remarks:



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Client: Stanley Assoc. Engineering Ltd.
Sample: BH # 39 Depth: 2.15-2.45m Project: McLean Lake Gravel Leases
Location: Gravel Lease Made by: bk Job. No. 8006-2
Ck'd by: Date: 85.05.22

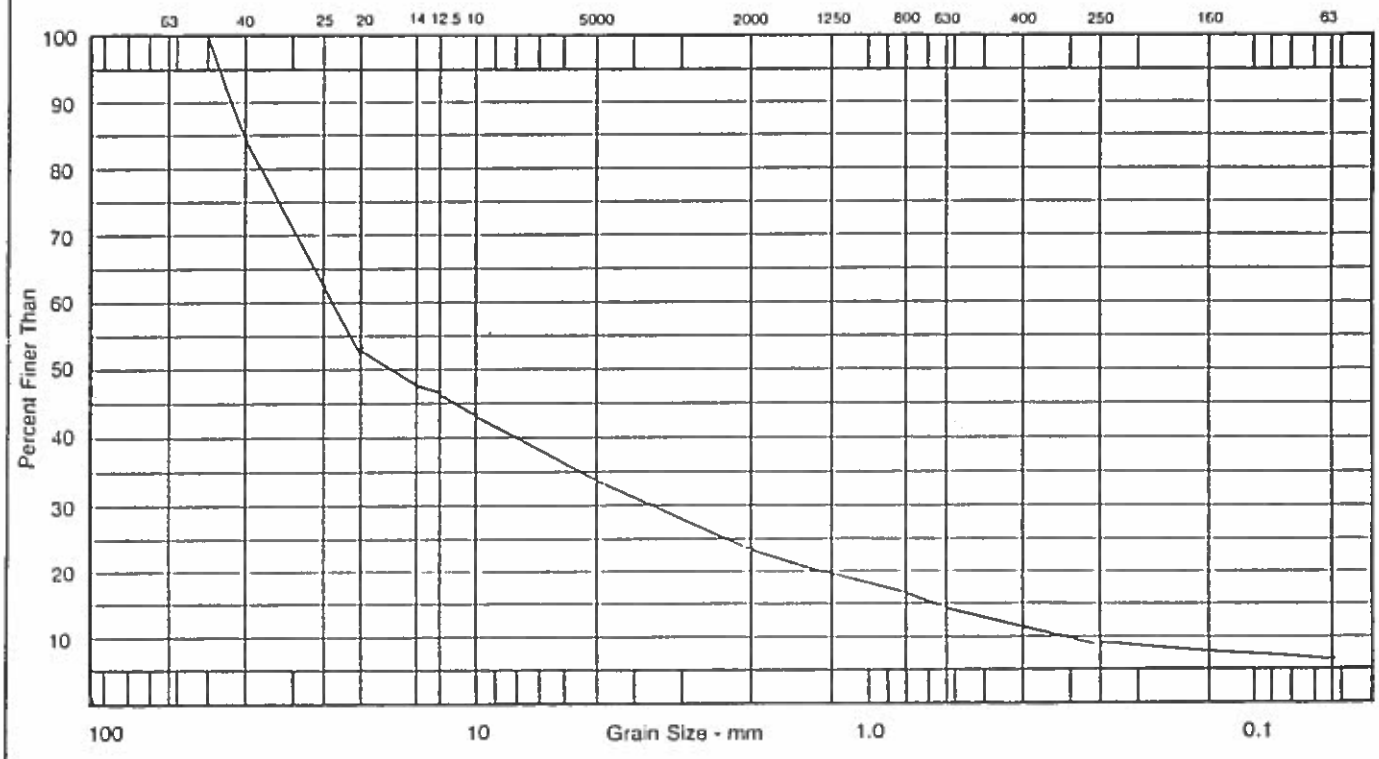
Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig.Sample
	50.0					100.0
40000	40.0					84.4
25000	25.0					62.1
20000	20.0					53.8
14000	14.0					47.5
12500	12.5					46.0
10000	10.0					43.1
5000	5.0					34.0
2000	2.0					23.3
1250	1.250					19.2
800	0.800					15.9
630	0.630					14.2
400	0.400					11.1
250	0.250					8.9
160	0.160					7.5
63	0.063					6.1

Description of Sample
Coarse Sandy Gravel
Light Brown

Time of Sieving 12 Min.

Method of Preparation Dry Washed X

Remarks



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

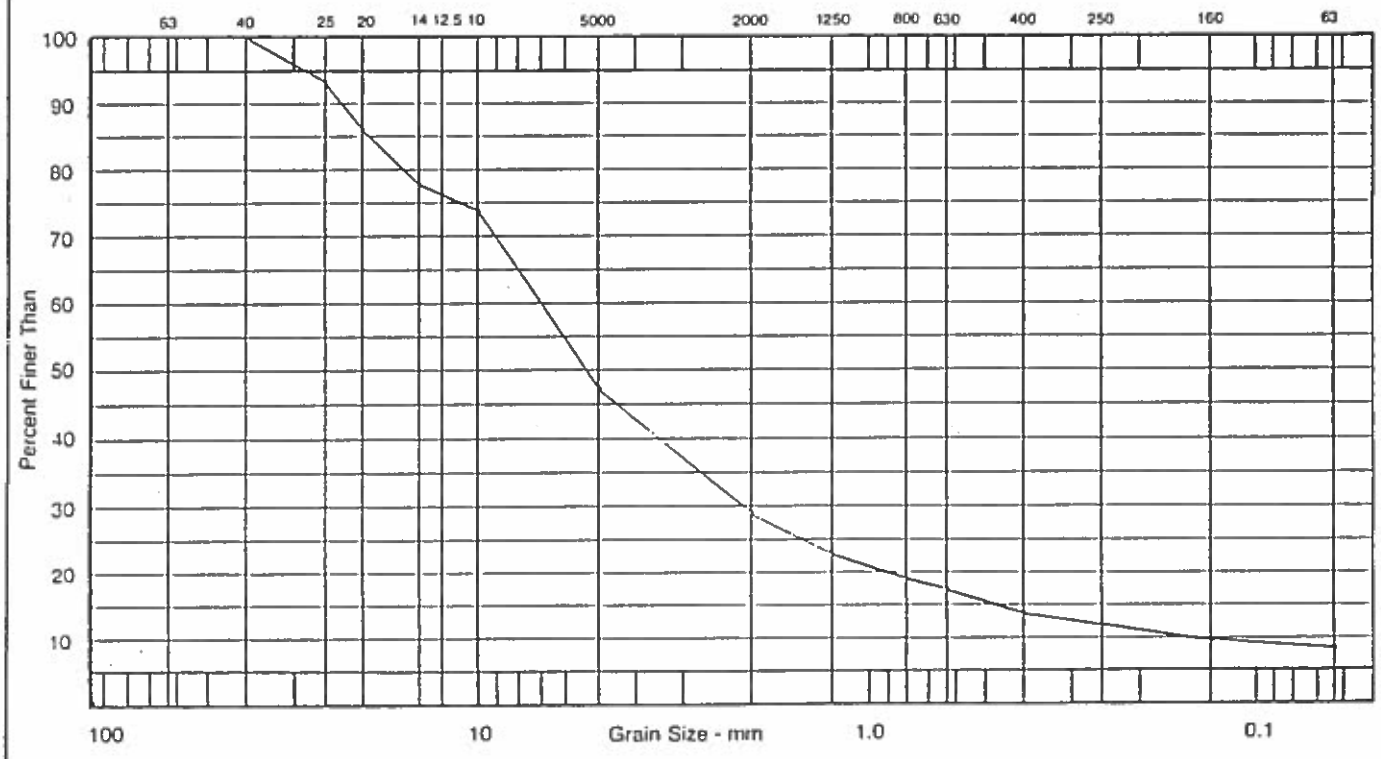
Client: Stanley Assoc. Engineering Ltd
Sample: BH# 39 Depth: 8.25-8.55m Project: McLean Lake Gravel Leases
Location: Gravel Lease Made by: bk Job. No. 8006-2
Ck'd by: Date: 85.05.22

Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig.Sample
40000	40.0					100.0
25000	25.0					93.5
20000	20.0					85.8
14000	14.0					77.8
12500	12.5					76.2
10000	10.0					68.9
5000	5.0					47.2
2000	2.0					29.3
1250	1.250					23.1
800	0.800					19.0
630	0.630					17.1
400	0.400					13.8
250	0.250					11.5
160	0.160					9.9
63	0.063					8.3

Description of Sample
Coarse Sandy Gravel
Light Brown

Time of Sieving 12 Min.

Method of Preparation Dry Washed X
Remarks



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Client: Stanley Assoc. Engineering Ltd.

Sample: BH# 40 Depth: 2.45-2.75m Project: McLean Lake Gravel Leases

Location: Gravel Lease Made by: bk Job. No. 8006-2

Ck'd by: Date: 85.05.22

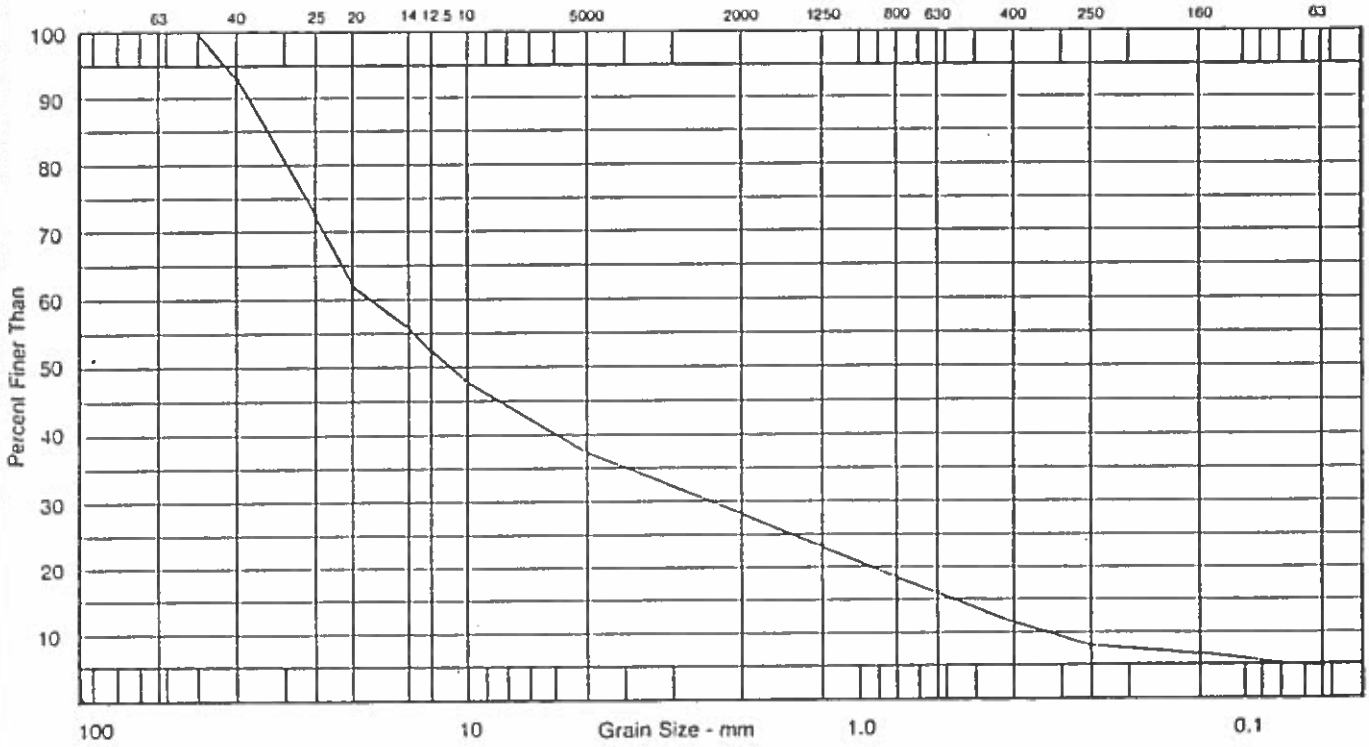
Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig Sample
	50.0					100.0
40000	40.0					93.1
25000	25.0					72.2
20000	20.0					61.9
14000	14.0					55.2
12500	12.5					52.3
10000	10.0					47.6
5000	5.0					37.2
2000	2.0					28.9
1250	1.250					23.8
800	0.800					18.6
630	0.630					15.6
400	0.400					10.8
250	0.250					7.9
160	0.160					6.3
63	0.063					4.6

Description of Sample
Coarse Sandy Gravel
Light Brown

Time of Sieving 12 Min.

Method of Preparation Dry Washed X

Remarks



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Sample: BH#. 40 Depth: 3.65-3.95m
Location: Gravel Lease

Client: Stanley Assoc. Engineering Ltd.
Project: McLean Lake Gravel Leases
Made by: bk Job. No. 8006-2
Ck'd by: Date: 85.05.22

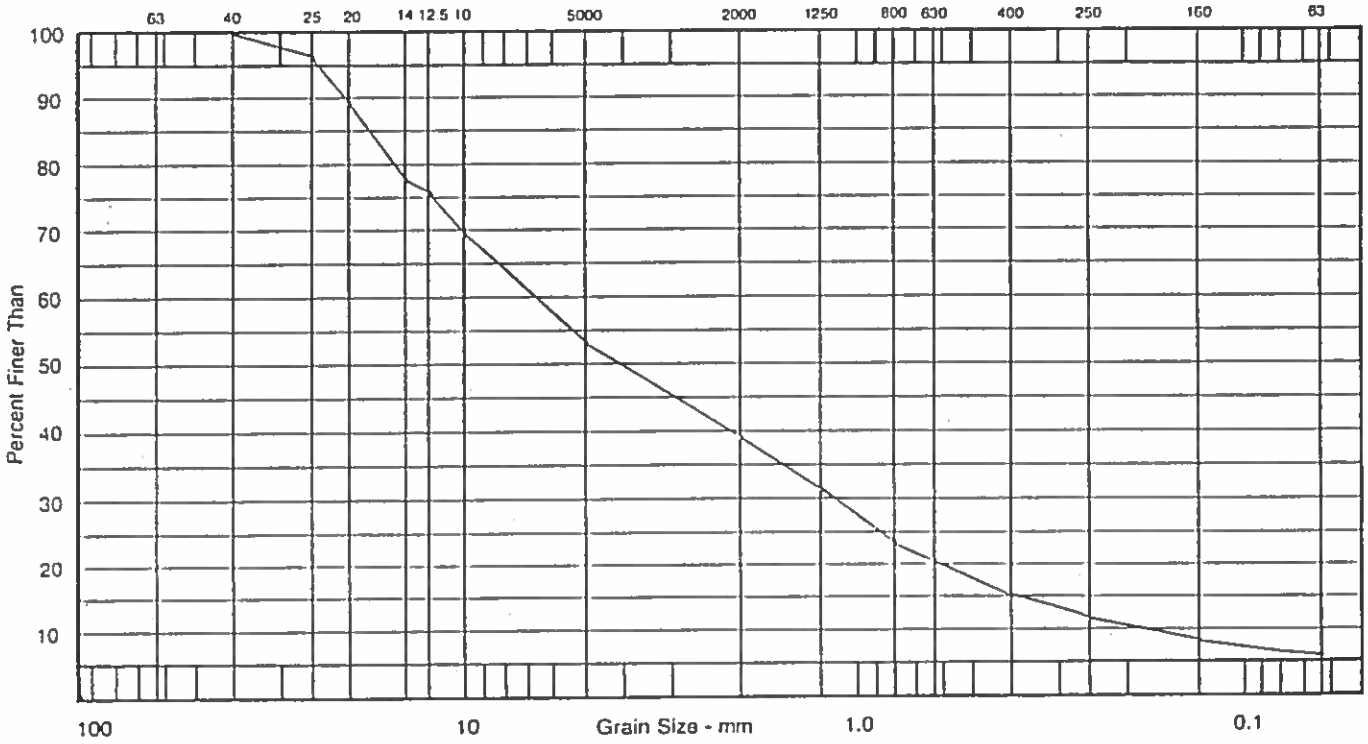
Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig.Sample
40000	40.0					100.0
25000	25.0					96.1
20000	20.0					89.3
14000	14.0					77.5
12500	12.5					75.5
10000	10.0					69.2
5000	5.0					53.7
2000	2.0					39.1
1250	1.250					30.9
800	0.800					23.7
630	0.630					20.1
400	0.400					15.0
250	0.250					11.1
160	0.160					8.5
63	0.063					5.5

Description of Sample
Coarse Gravelly Sand
Brown

Time of Sieving 12 Min.

Method of Preparation Dry Washed x

Remarks



J. R. Paine & Associates Ltd.

CONSULTING AND TESTING ENGINEERS

SCREEN ANALYSIS

Client: Stanley Assoc. Engineering Ltd

Sample: BH #40 Depth: 12.20-12.80m Project: McLean Lake Gravel Leases

Location: Gravel Lease Made by: bk Job. No. 8006-2

Ck'd by: Date: 85.05.23

Sieve No.	Size of Opening MM		Weight Retained gms	Total Wt. Finer Than gms	Percent Finer Than	% Finer Than Basis Orig. Sample
40000	40.0					
25000	25.0					100.0
20000	20.0					96.7
14000	14.0					89.6
12500	12.5					86.4
10000	10.0					81.1
5000	5.0					61.9
2000	2.0					38.4
1250	1.250					27.5
800	0.800					20.1
630	0.630					16.6
400	0.400					11.5
250	0.250					8.5
160	0.160					6,8
63	0.063					5.1

Description of Sample

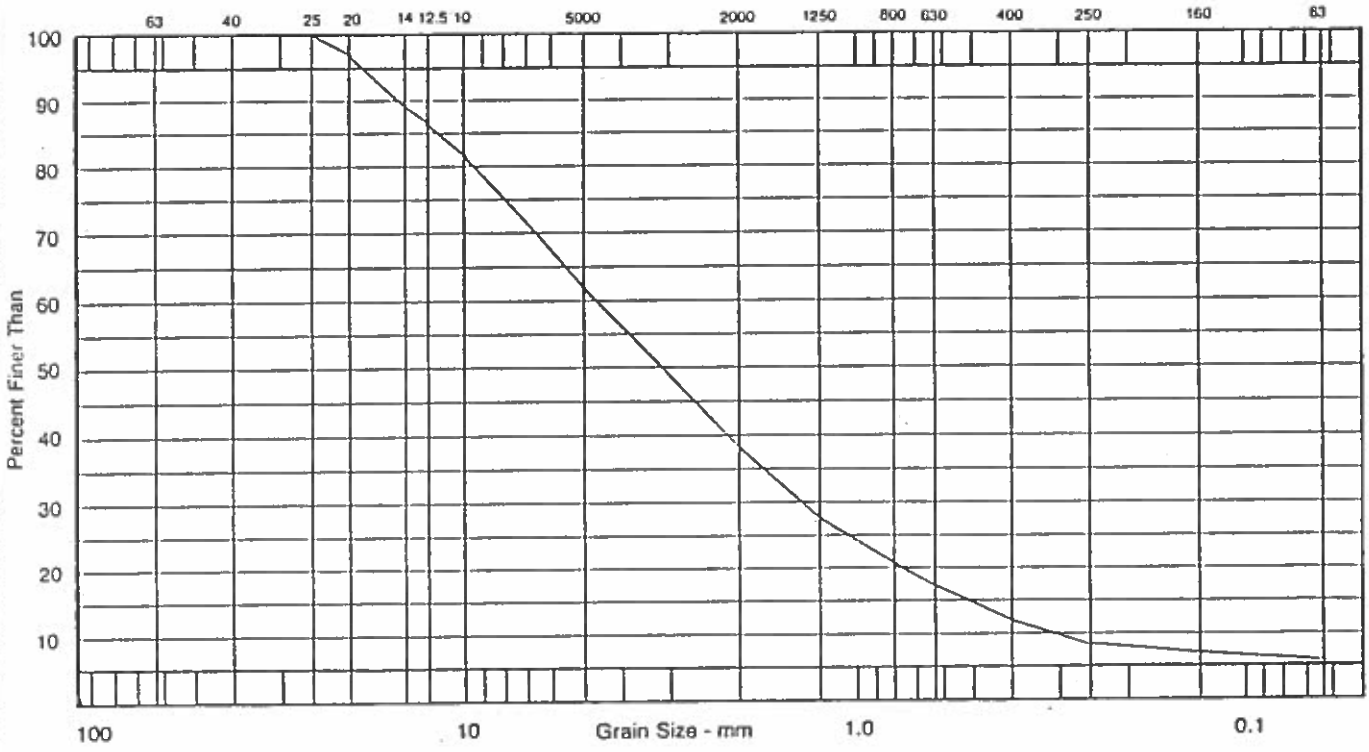
Coarse Gravelly Sand

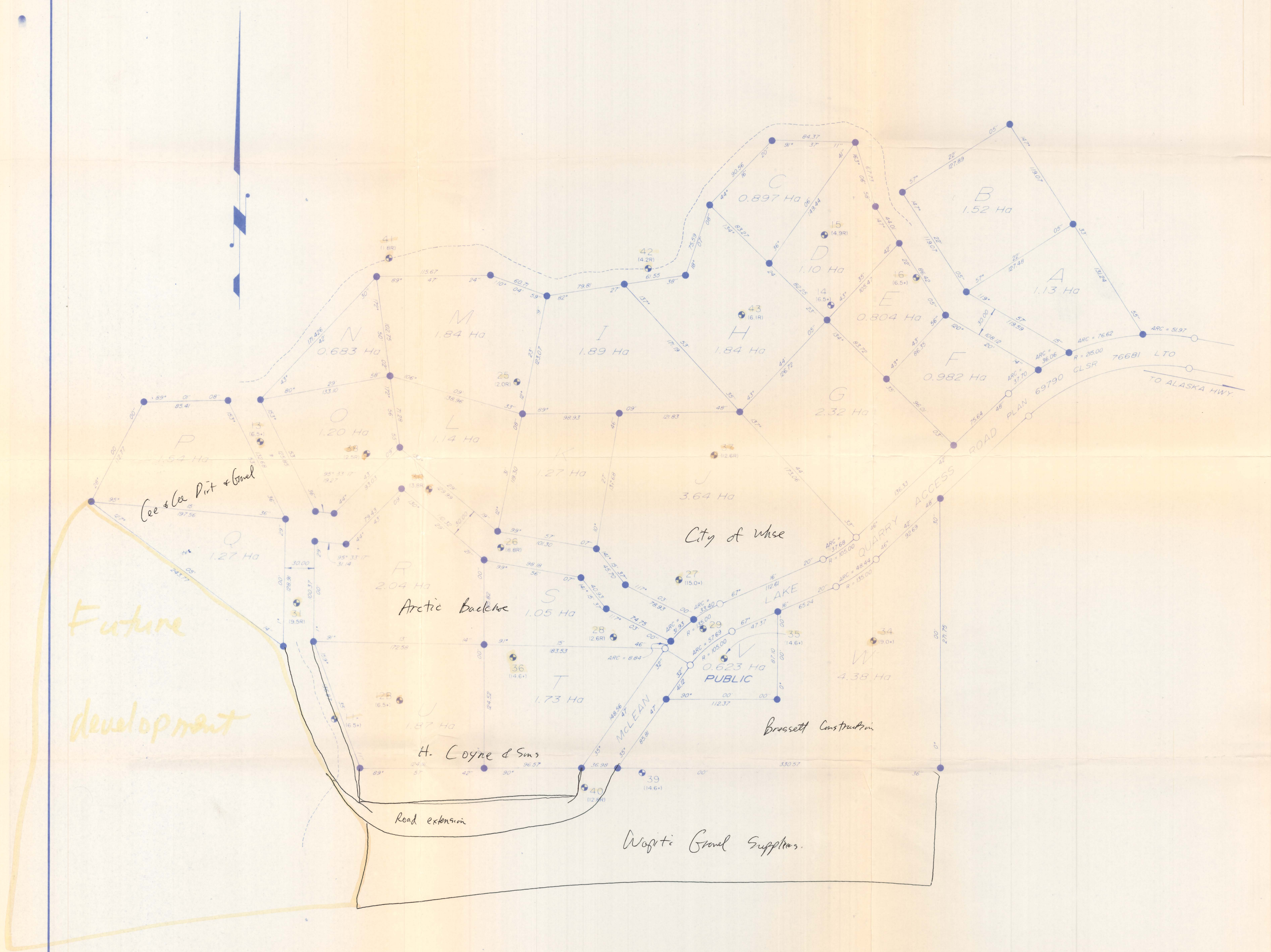
Brown

Time of Sieving 12 Min.

Method of Preparation Dry Washed X

Remarks





McLEAN LAKE QUARRY LEASES

SCALE 1 : 2000

50 0 50 100 150 200 METRES

LEGEND:

Bearings are astronomic derived from Plan 69790 CLSR, 76681 LTO.

Distances are in metres and decimals thereof.

Legal Survey Posts shown thus ○

12 mm Φ iron bars shown thus (marked with 0.8 m high red posts) ●

Boreholes shown thus

Trails shown thus

CERTIFIED CORRECT:

Canada Lands Surveyor

July 22, 1986
Date

NOTE: This is not a legal survey as per the Canada Lands Surveys Act.
Borehole information obtained from Stanley Associates Engineering Ltd.

THOMSON & ILES
SURVEYORS & ENGINEERS
WHITEHORSE, YUKON

1340 F.B. 119 Pg 1-39

LEGEND

- ● BOREHOLE LOCATION
- 8 BOREHOLE NUMBER
- (6.5+) DRILLED TO 6.5m NO REFUSAL
- (3.1R) DRILLED TO 3.1m HIT ROCK
- ACCESS ROAD R.O.W. (ROAD TO BE CONSTRUCTED 1985)
- POSSIBLE FUTURE EXTENSION OF ROADWAY
- ■ TEST PIT LOCATION (1988)

J. R. Paine & Associates Ltd.
CONSULTING AND TESTING ENGINEERS

McLEAN LAKE GRAVEL QUARRY INVESTIGATION
WHITEHORSE, YUKON

Dwn. By WCK	Date 88/03/31
Scale	Plate No. 1

GOVERNMENT OF YUKON
COMMUNITY AND TRANSPORTATION SERVICES

McLEAN LAKE GRAVEL QUARRY
BOREHOLE LOCATION PLAN

Stanley
STANLEY ASSOCIATES ENGINEERING LTD.