Tyhee NWT Corp

April 2011

APPENDIX M

APPENDIX M REPORTS FROM 2005 TO 2010 GEOTECHNICAL INSPECTIONS OF AIRSTRIP, APRON AND ACCESS ROAD FOR YELLOWKNIFE GOLD PROJECT

Tyhee NWT Corp

AIRSTRIP AND ACCESS ROAD GEOTECHNICAL EVALUATION
YELLOWKNIFE GOLD PROJECT - DISCOVERY MINE, N.W.T.

1740082.022

November 2005

EBA Engineering Consultants Ltd.
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Tyhee N W T Corp

November 30, 2005

Mackenzie Valley Land and Water Board
P.O Box 2130
7th Floor - 4910 50th Avenue
Yellowknife, NT X1A 2P6
Phone: (867) 669-0506

Attention: Peter Lennie-Misgeld

Dear Mr. Lennie-Misgeld:

Re: Type "A" Land Use Permit MV2005C0001 –Airstrip Geotechnical Drilling

Further to our letter dated October 17, 2005 and your response to that letter dated October 18, 2005, both related to the above captioned subject, we are pleased to submit the geotechnical report prepared by EBA Engineering entitled "Airstrip and Access Road Geotechnical Evaluation – Discovery Mine N.W.T., dated November 2005 on work completed on the Discovery airstrip this summer as per Clause # 94 of our amended Type "A" Land Use Permit MV2005C0001.

Please acknowledge receipt and should you have any questions concerning this matter, please contact me on my cell (780) 975-2550.

Yours truly,

Original signed by "H.R.Wilson"

Hugh R. Wilson
Vice President–Environment and Community Affairs

Cc: Clint Ambrose , INAC , (via ftp site notification)
Carolyn Cornell , Tyhee Development Corp. (via ftp site notification)
Doug Levesque, Tyhee NWT Corp (via ftp site notification)

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1.0 INTRODUCTION

1.1 GENERAL

This report presents the results of a geotechnical investigation completed by EBA Engineering Consultants Ltd. (EBA) for Tyhee NWT Corp (Tyhee) on and around the airstrip at the former Discovery Gold Mine.

Authorization to proceed with the investigation was provided by Mr. Hugh Wilson, Vice President of Environment and Community Affairs for Tyhee NWT Corp via e-mail to Mr. Ed Hoeve P.Eng. on July 28, 2005.

1.2 BACKGROUND

The Discovery Gold Mine, located approximately 85 km northeast of Yellowknife, operated between 1950 and 1969. Figure 1 shows the location of the site. The ore was processed using the mercury amalgamation and cyanidation processes. During its operational lifespan, the mine produced an estimated 1.1 million tonnes of tailings waste, which was piped for disposal in nearby topographically low areas primarily south of the mine (EBA 1999b).

Since the late 1990's Indian and Northern Affairs Canada (INAC) have been completing environmental reclamation work for the mine site. In an effort to contain the tailings, a cap made from silty clay excavated from a local borrow source has been placed on the tailings in a nominal 0.3 m thickness. In order to protect the clay cap from erosion, a protective armour rock layer of 100 mm minus crushed rock was placed on top of the silty clay cap. The armour rock also had a nominal thickness of 0.3 m. Since completion of the tailings cap in 2000, numerous "frost boils" have been identified and can be characterized where fine material, either from the silty clay layer or from the tailings beneath, have migrated upward through the armour rock.

INAC had planned to complete their reclamation work in the fall of 2005. As part of the mine reclamation, INAC planned to decommission the existing airstrip. Tyhee applied for and received an amendment to its' current land use permit from the MVLWB that enables Tyhee to continue using the airstrip to serve its future site access needs. INAC expressed a concern over whether continued use of the airstrip might exacerbate their efforts to mitigate the frost boil phenomena and its possible implication on long-term reclamation integrity.

EBA considered INAC's concerns over continued airstrip use and provided comments to Tyhee in two letters, dated May 11, 2005 and May 26, 2005, both of which were used as supporting material to the above mentioned land use permit amendment application. Several assumptions were made in these letters and the INAC reviewer required justification for the assumptions. The scope of work, outlined below, was developed to validate the assumptions made by EBA and to address the concerns of the INAC reviewer.

1.3 SCOPE OF WORK

EBA provided the following scope of work to Tyhee in a letter proposal dated May 26, 2005. The proposal contained the following scope items:

- Determine thicknesses and engineering properties of the 20 mm minus crush airstrip surfacing, 100 minus armour rock; silty clay cap and underlying tailings, below the existing airstrip to support design;
- Assess the capacity of the current airstrip to maintain its performance and characteristics and resist rutting/consolidation and pumping of the subgrade;
- Evaluate the reported "frost boil" mechanism, as it relates to the potential for future occurrence in the airstrip area;
- Determine the subgrade conditions along the access road alignment; and
- Investigate the proposed apron area.

2.0 SITE INVESTIGATION

The site investigation was conducted from August 6, 2005 to August 25, 2005 on and around the Discovery Mine airstrip. Selected photographs taken during the site investigation are presented in Appendix E. Thirty-five boreholes were drilled with a TFD-8 helicopter transportable diamond drill, operated by Titan Drilling Ltd., of Yellowknife. The drill was converted to function as a geotechnical drill rig. Borehole locations are shown on Figure 2. Sampling conducted included Shelby tubes, Standard Penetration tests (SPT's), and the collection of disturbed samples.

Drilling was conducted in four general areas:

- The access road running from the south end of the runway to the current Tyhee camp;
- The proposed apron area, located south of the access road and airstrip intersection;
- The airstrip, at approximate 150 m intervals; and
- Two locations off the airstrip with concentrations of frost boils.

For each borehole, the same sampling procedure was followed. The armour rock, and airstrip surfacing gravel, if present, were removed with a needle pick, and pickaxe down to the silty clay cap. A Shelby tube was pushed with a constant force in order to collect a relatively undisturbed sample of the clay. After each Shelby tube, an SPT was completed, with the blow count recorded, and the sample logged, and retained for testing. After the first SPT, the borehole was augered down to 1.5 m, and a second SPT was completed. In most boreholes auger refusal was encountered within a depth of 3 m. Where tailings or overburden extended deeper, a third SPT was done. Borehole logs are presented in Appendix B.

Three thermistor boreholes were drilled along the centreline of the airstrip, at the north and south ends and at the settlement location approximately halfway along the runway. Two thermistor strings were installed in locations where frost boils were investigated, one on the east side of the airstrip (Area 4), and one on the west side (Area 7).

At each thermistor location, a borehole was drilled and sampled to bedrock in the same manner as the other boreholes. Once bedrock was encountered, the drill was converted to diamond drill rigging. A casing was run down to bedrock, and drilled part way into the bedrock in order to ensure that a good seal was made. Each thermistor hole was drilled to approximately 10.5 meters below grade.

Thermistors that were located on the centerline of the runway were drilled at night, to avoid interference with air traffic. At the start of the night shift, a backhoe operated by Aboriginal Engineering Ltd. (AEL) excavated a trench from the center of the runway out the eastern side of the runway. Posts were installed approximately 2 m off the runway surface. Once the boreholes were drilled, 50 mm OD PVC conduit was installed down the boreholes. Thermistor strings were installed, inside the conduit, and backfilled with sand. Thermistors installed on the runway had 15 m lead lengths. The leads were run inside 38 mm OD metal conduit and buried in the trenches at depths ranging from 0.3 m to 0.4 m. Initial thermistor readings are presented in Appendix D.

After backfilling each trench, the area was compacted with the wheels of the pick-up truck and later with the wheels of the backhoe. The area was raked clear of any rocks and was left smooth.

Ten standpipe piezometers were installed at locations adjacent to the airstrip, and at the two investigated frost boil locations, as shown on Figure 2. The standpipes were slotted from 0.5 m below grade down to the bottom of the pipes. Standpipes were installed on each side of the airstrip adjacent to each of the runway thermistor locations and also at the frost boil locations where thermistors were installed. An additional pair of standpipes were installed on each shoulder of the airstrip, roughly between the two investigated frost boil locations.

Testing of samples collected during the site investigation was completed in EBA's Yellowknife and Edmonton laboratories. The moisture content of all samples was determined. Classification testing included the determination of the gradations and plasticity (Atterberg Limits) of selected samples. Bulk densities, moisture-density relationship (Modified Proctor) and California Bearing Ratio (CBR) of the silty clay were determined in order to assess the subgrade support characteristics of the airstrip. Laboratory test results are presented in Appendix C.

3.0 SITE CONDITIONS

3.1 SURFACE CONDITIONS

The area around the Discovery Mine is generally rolling terrain, with numerous bedrock outcrops, lakes, and draws. In well-drained areas tree species include white spruce, trembling aspen, white birch, and balsam poplar. In areas that are poorly draining, black spruce, alder, and willow are common. (EBA 2004)

The area of investigation was limited to the tailings area from the historic Discovery mine which has undergone reclamation over the past years. The tailings area extended roughly from the old town site southward to Round Lake. The area has been covered with 100 mm minus armour rock. The airstrip is surfaced with 20 mm minus crushed rock.

3.2 GEOLOGICAL SETTING

The bedrock in the Discovery Mine area is Archean in age on the geological time scale and generally belongs to the Slave Formation of the Yellowknife Supragroup. The area is underlain by interlayered mafic to intermediate volcanic and sedimentary rocks, comprised of greywackes, mudstones, siltstones, and arenite. These rock units have been regionally metamorphosed to quartz-feldspar-mica schists quartzites, metaturbites, and amphibolites. Minor diabase dykes of Proterozic age, on the geological time scale, cross cutting the stratigraphic package are also present.

Structurally, the Discovery mine area is complex, with the bedrock formations exhibiting a generally northeasterly trend, emplaced either vertically, or dipping steeply to the northwest. Numerous axial planar traces of synclines and anticlines, trending northwesterly to northerly are present within the main metaturbidites sedimentary sequence. Regional structures, include the Swan Fault, the Discovery Fault, and the Ormsby Fault (EBA 1999a).

3.3 PERMAFROST

The area around Discovery Mine lies in the zone of widespread discontinuous permafrost. In previous site investigations conducted by EBA, permafrost was encountered in numerous test pits in the vicinity of Round Lake. Visible ice was encountered in two airstrip boreholes. The initial temperature readings in the thermistor cables installed near the north and south ends of the airstrip had sub-zero temperatures. Initial thermistor readings are presented in Appendix D.

3.4 AIRSTRIP

Twenty-three boreholes were drilled either directly on the runway surface or on the shoulder, approximately 2 m off the runway surface. The subsurface statigraphy is summarized below:

Surfacing Gravel: The runway was surfaced with 20 mm minus crushed gravel. The thickness of the surfacing gravel ranged from 0.10 mm to 0.25 m and averaged

0.15 m at borehole locations. The surfacing gravel was thicker in the depression located near the midpoint of the runway, were it reached thicknesses of about 0.4 m was observed in the wall of the trench excavated for the thermistor cable. The material was produced on-site from available quarried rock. The quarry rock is understood to be a mixture of siliceous greywacke and argillaceous greywacke (sandstone).

100 mm Minus Crushed Rock: The 100 mm minus crushed rock was produced as capping material to place over the silty clay tailings cover to protect it from erosion. The armour rock covers the tailings and extends from Round Lake, north to the old town site. In the vicinity of the airstrip, the thickness of this armour rock ranged from 0.20 m to 0.40 m and averaged 0.28 m.

Silty Clay Cap: The thickness of the silty clay tailings cover ranged from 0.20 m to 0.40 m and averaged 0.28 m in the boreholes drilled in the airstrip. This thickness of this layer ranged from 0.30 m to 0.35 m and averaged 0.32 m in the adjacent shoulder areas. Bulk densities averaged 2124 kg/m^3 (about 95% of Modified Proctor maximum dry density) below the airstrip and 2083 kg/m^3 (about 93% of Modified Proctor maximum dry density) adjacent to the airstrip. Measured moisture contents ranged 13.4 to 24.5 percent and averaged 18.4 percent below the airstrip, and ranged from 8.8 to 25.3 percent and averaged 19.4 percent below the shoulders. Taken together, these findings suggest that some greater compaction of the clay has occurred below the airstrip than in adjacent areas.

The consistency of the silty clay was generally hard. The silty clay was determined to be medium plastic. The soil is composed predominantly of silt, but since it behaves as clay, based on the Atterberg Limits, it is referred to as such.

Tailings: The gradation of the tailings was variable but ranged from predominantly sand to silt sized particles. The tailings were generally nonplastic, but one tested sample was determined to have low plasticity. The consistency of the tailings was generally very stiff and occasionally stiff.

Measured moisture contents ranged 6.8 to 41.8 percent (in a sample of frozen soil) and averaged 19.6 percent below the airstrip, and ranged from 10.5 to 36.0 percent and averaged 26.0 percent below the shoulders. The average bulk density of the tailings below the shoulders was determined to be 1951 kg/m^3 and a single measurement from below the airstrip gave a bulk density of 1779 kg/m^3. While the moisture content data suggest greater consolidation below the airstrip, the density data does not. However, there was only one bulk density determination from below the airstrip and the result was the lowest measured anywhere on the site. The anomalously low value may be a result of sample disturbance.

Native Soil: Native soil was encountered in three boreholes. The native soil was silt, with some sand, some clay, and trace gravel, and was interpreted to be till. The native till which was observed during the drilling program occurred just above bedrock, and did not exceed 0.3 m in thickness at borehole locations. In each borehole where native till was observed, a layer of organic soil less than 0.1 m thick overlaid the native till.

Bedrock: Interpreted bedrock was encountered in all boreholes at depths ranging from 0.8 m to 5.7 m.

The standpipe piezometers located at the north and south ends of the runway were dry prior to leaving site. The two piezometers located adjacent to the settlement area on the runway had water at depths of 2.60 m on the west side of the runway (groundwater elevation 300.42 m), and 2.57 m on the east side of the runway (groundwater elevation 300.44 m). While the elevations are considered to be comparable within the range of survey accuracy, there may be a slight groundwater gradient to the west at this location.

No frost boils were observed on the runway surface.

While removing the armour rock on the runway, it was noticed that the armour rock and clay were very difficult to excavate and more mixed together than in areas investigated off the runway. This also suggests that traffic on the runway has caused some consolidation of the clay layer.

Borehole logs are presented in Appendix B and laboratory results are presented in Appendix C. Initial thermistor readings are presented in Appendix D.

3.5 ACCESS ROAD

Six boreholes were advanced along the access road alignment in order to determine the subgrade conditions. The proposed alignment is understood to be the same as the “roadway” currently in use, which leads from the Tyhee camp located near the west quarry to the airstrip. The existing roadway is a route followed by on-site vehicles. Two ruts and some discoloration were observed where vehicles drive. No material appears to have been added along the access road, which is directly on top of the 100 mm minus armour rock.

The subsurface materials encountered were comprised of the following:

- 100 mm minus armour rock. The covering of armour rock ranged in depth from 0.30 m to 0.60 m and averaged 0.38 m;
- Silty clay cap. The clay cap ranged from 0.20 m to 0.35 m and averaged 0.28 m thick; and
- Tailings. The tailings extended down to bedrock in each of the boreholes, no native soil was observed in any of the access road boreholes.

Depths to probable bedrock were generally shallow along the proposed access route and ranged from 1.1 m to 2.3 m. The average moisture content of the clay samples collected was 18.8 percent, and the average moisture content of the tailings samples collected was 20.2 percent.

It appeared that there was some consolidation underneath the access road, however no damage to the tailings cap was observed or has been reported. No frost boils were observed on the access road, or directly adjacent to it.

3.6 APRON AREA

Five boreholes were drilled in the apron area in order to asses the subsurface conditions. The proposed apron area is located south of the area where the access road meets the airstrip shown in Figure 2.

The stratigraphy is summarized as follows:

- 100 mm minus armour rock. The covering of armour rock was 0.3 m thick at all borehole locations;
- Silty clay cap. The clay cap ranged from 0.20 m to 0.40 m and averaged 0.31 m thick; and
- Tailings. The tailings extended down to bedrock in each of the boreholes, no native soil was observed in any of the access road boreholes.

Depths to probable bedrock ranged from 1.7 m to 3.5 m. The average moisture content of the clay samples collected was 17.4 percent, and the average moisture content of the tailings samples collected was 22.3 percent.

Several frost boils were observed near northeast corner of the proposed apron area, close to Borehole 7.

3.7 FROST BOIL AREAS

An area with a concentration of frost boils west of the airstrip, within Area 7, was investigated with Borehole 17. This area is in a drainage swale. The stratigraphy was similar to other areas with layers of armour rock and tailings cap of 0.3 m each. The tailings cap at this location was determined to be very thin, as the Shelby tube sample at this location was predominantly tailings. Peat was encountered at a depth of 1.8 m and continued down to bedrock at 2.9 m. The peat was saturated and had a strong organic odour. The depth of water prior to leaving site was 2.4 m below grade. Thermistor readings are included in Appendix C.

Another concentration of frost boils east of the airstrip, near Area 4, was investigated with Borehole 18. The stratigraphy included layers of armour rock and clayey silt of approximately 0.3 m. Probable bedrock was encountered at 0.8 m, and the borehole was dry at completion. The piezometer was dry prior to leaving site.

Two additional piezometers were installed on the sides of the runway roughly in between the two investigated frost boil areas, in Boreholes 33 and 34. Both piezometers were dry prior to leaving site.

4.0 EVALUATION

4.1 AIRSTRIP STRUCTURE

The findings from the site investigation were analyzed to determine the adequacy of the pavement structure and generally assess the pavement capacity.

California Bearing Ratio (CBR) tests were conducted on composite samples of the silty clay cap below the airstrip. This represents what is considered to be the weakest layer in the stratigraphy. Samples were compacted to 98% of Modified Proctor density at optimum water content and tested using the procedure as outlined in ASTM D1883. The results of the testing indicated that the silty clay subgrade material had the following CBR values:

Sample Number	Unsoaked CBR	Soaked CBR
1 (Existing Airstrip)	54.4	4.3
2 (Adjacent to Airstrip)	66.5	3.1

The soaked CBR indicates the support level provided by the material in wet conditions like during spring thaw or after prolonged periods of rainfall. The unsoaked CBR provides an indication of the support level provided by the material shortly after construction or after periods of little or no rainfall.

A pavement design takes into consideration the support level of the subgrade and the size of the aircraft using the facility. Using this input the thickness of pavement structure required to reduce the stress immediately under the aircraft tire to a level that can be safely handled by the subgrade is selected. As can be noted from the above table this material is extremely sensitive to the amount of water in the sample (soaked verses unsoaked). A structure designed for spring conditions (soaked) will be extremely over-designed for summer conditions and a pavement designed for summer conditions will be extremely under-designed in the spring.

The pavement structure, by definition, is selected to limit the deflection of the surface to a value that will not cause overstressing of the subgrade. Therefore, settlement caused by loading and pumping caused by overstressing the subgrade should not occur in an adequately designed pavement structure. In addition rutting of the subgrade caused by loading should not occur in a properly design structure.

The existing structure, as determined during the geotechnical investigation, is approximately 100 mm of crushed granular base course over 300 mm of 100 mm diameter rock over a clay cap over tailings. Using the design procedures as outlined in “Pavement Structural Design Training Manual” the existing thickness of granular material will have a Pavement Load Rating (PLR) of 4.6 in the spring and 10.5 in the summer/fall.

It is understood that the aircraft that regularly or may use the runway are the Buffalo, Twin Otter, Dash 7, Beech 99, Sky-Van and the Cessna Caravan. Of these six planes the Buffalo has an Aircraft Load Rating (ALR) of 4.3/2.7 (fully loaded/minimum weight) and the Dash 7 has an ALR of 5.5/3.8 (fully loaded/minimum weight). The other four aircraft are relatively light and have fully loaded weights less than the minimum weight of the Buffalo or the Dash 7.

When considering a runway capacity, the PLR should not be exceeded by the aircraft ALR without special consideration. Thus in the summer this runway would have a PLR of 10.5 and all of the aircraft that regularly use the runway could land with no restriction. However, in the spring or the summer after rainfall the runway could have a PLR of 4.6 and, under that condition, the Dash 7 should not land without special consideration. Of course the runway capacity does not change overnight, the capacity gradually changes as water penetrates the structure. Thus to be safe the PLR is generally published at the minimum that will be achieved under the worst conditions (soaked CBR).

For this runway the worst case PLR would be 4.6. If a plane with an ALR over the published PLR requires landing rights special consideration can be provided based on the operators knowledge of weather conditions at the time of landing.

If all planes using the facility stay below the PLR of 4.6 then no pumping of the subgrade and no overstressing causing settlement due to load should occur.

In addition a gravel runway has a secondary restraint to landing. The secondary restraint is the surface CBR at the time when a plane wishes to land. Surface CBR is defined as CBR at the in-situ condition of the gravel. CBR of a granular material is measured at a predefined density and moisture content. Even very good gravel with normal CBR in excess of 80 may, under loose and wet conditions, develop a surface CBR that is so soft that planes may have difficulty landing and taking off. These soft conditions generally develop in the spring during thaw when snow trapped on the surface melts and the frost comes out of the pavement to some depth resulting in an oversaturated surface layer. Conditions in the spring period may dictate that surface must be bladed and rolled to re-compact the gravel and re-establish the CBR closer to the predefined density and moisture content. This in-situ CBR requirement is a function of plane size, tire size, tire pressure and load and cannot be set based on book values for a particular aircraft. It must be determine by the pilot for any given aircraft.

EBA's recommendations arising from this evaluation are as follows:

1. The existing runway should be sufficient to perform without rutting or settlements under normal conditions for aircraft types such as the Buffalo, Twin Otter and Cessna Caravan. Special consideration can be provided to allow the Dash 7 to land outside of the period when the structure is soft.

2. If the runway is to be strengthened to ensure that the Dash 7 can land at all times an additional 150 mm of crushed granular material would be required to the existing structure.
3. Even runways with sufficient structure thickness may have periods in the spring and after rainfall events when the surface CBR will not be sufficient for the aircraft using the runway. If aircraft, especially the Buffalo and the Dash 7, use the runway at these time rutting may occur. These issues can be minimized by maintenance blading and re-compaction of the surface.
4. A gravel surface is by its very nature a dynamically changing surface. Each time an aircraft takes off or lands, particles are dislodged from the surface and moved to the edge of the runway. In addition maintenance blading to ensure smoothness may cause the overall gravel structure to be reduced. Snow clearing may also remove some of the surface material. Therefore, to ensure that the thickness of the structure remains sufficient to handle the loads applied, approximately twice a year, additional gravel should be added to the surface, bladed and levelled, and the surface re-compacted.

4.2 FROST BOIL MECHANISM

Approximately 500 frost boils have been observed in the capped tailings area through the armour rock. The frost boils have been observed adjacent to the south end of the runway and at locations north past the end of the runway. The largest concentrations of the frost boils have been near the north end of the runway. No frost boils have been observed on the runway surface; however, they have been observed in areas adjacent to the airstrip, particularly on the west side of the airstrip. About 70 of the frost boils were reported to contain tailings with the remainder being silty clay, believed to represent the tailings cap.

Investigations of the frost boils have been conducted by BGC Engineering Inc. (BGC). BGC (2004) postulated 3 possible mechanisms for the phenomena for the frost boil occurrences in the upland tailings area:

1. Pumping of silty clay through the armour rock during placement and compaction;
2. High seepage pressures in areas proximal to sloping ground; and
3. Frost heave within the silty clay and underlying tailings, occurring preferentially where soils are saturated and cover materials contain a greater fraction of silty clay (the sorted circled phenomena).

BGC (2004) recognized that "It is likely that all three scenarios have lead to the formation of frost boils, although different parts of the uplands tailings areas are probably more susceptible to one process over the others. The first scenario is a one-time event, while the others are indicative of ongoing, seasonal processes." BGC concluded that processes in addition to the first scenario were occurring since new frost boils had formed in several areas. BGC found an earlier case history, which they termed the "Beaverlodge example", that reported similar frost boil observations on a cover constructed over a tailings delta in northern Saskatchewan. The case history concluded that piping and frost boils resulted where high pore pressures were generated when seepage was trapped by fine layers in the tailings and, more significantly, by a frozen cap during the spring.

EBA commented on BGC's findings in a letter to Tyhee dated May 11, 2005. EBA concurred with BGC's assessment of the possible mechanisms of the frost boil mechanism. It was EBA's opinion that the second mechanism is most likely the primary cause of the frost boils.

During this site investigation, no obvious correlation between the investigated frost boil sites was observed. The tailings at Borehole 17 (west of the airstrip, Area 7) were underlain with saturated peat, but not at Borehole 18 (east of the airstrip, Area 4). Water was observed in the piezometer installed in Borehole 17, but none was observed in the piezometer located at Borehole 4 (shallow bedrock), or on the nearby runway shoulder piezometers (Boreholes 33 and 34).

The investigation did not reveal an obvious cause for the frost boils. However, the frost boils are most prominently found in areas where sloping ground exists. Furthermore, the following observations lend support to the view that there are subtle differences within the subsurface conditions below the airstrip that could sufficiently account for the airstrip's demonstrated resistance to frost boil development:

- Apart from the settlement area near the mid-point of the airstrip where cross-flow subsurface seepage occurs, the temperature measurements suggest colder subsurface conditions exist beneath the airstrip than in the neighbouring areas that exhibit frost boil concentrations.
- The clay cap beneath the airstrip, and perhaps some depth of underlying tailings, appears to have been subjected to greater compaction and consolidation as a result of the historical surface traffic.

Both factors would tend to make the airstrip subsurface more resistant to seepage. It is our opinion that the seepage mechanism (Number 2 above), perhaps amplified on a seasonal preference basis, rather than the frost heave mechanism (Number 3 above), is more likely. If this interpretation is correct, then the term "frost boil" is misleading. It is recommended that the site and standpipes be examined next spring and during the thaw season, to investigate for seasonally elevated groundwater levels. It is also recommended that the thermistors be read regularly during freeze / thaw cycles, to monitor the penetration and recession of the frost line.

4.3 AIRSTRIP SETTLEMENT

It has been noted that a portion of the airstrip (located approximately at the mid point- see Figure 2) has historically experienced ongoing settlement. It was previously estimated that the settlement accumulation may have been up to about 0.6 m in depth. Observations made during the August 2004 inspection (BGC, 2005) were that, following backfill of the settled area earlier in the year by Aboriginal Engineering Ltd., “no further pronounced settlement has occurred since backfilling and grading carried out here”.

During the site investigation, the area of depression was noticeable. Considering that backfilling and grading were carried out the year before, it seems likely that settlement is continuing. The 20 mm minus crush was observed to be up to 0.4 m thick in the walls of the trench excavated for the thermistor cable lead. This suggests a settlement to-date of about 0.3 m in the vicinity of Borehole 20, which was selected as the centre of the settlement area as observed at the time of the site investigation.

Initial temperature readings from the installed thermistor string indicate that the ground beneath the area is not frozen. Other airstrip thermistors indicated marginally frozen soil. This suggests that there may have been permafrost degradation below the settlement area.

Auger refusal was reached in Borehole 20 at a depth of about 1.5 m. Another hole was attempted about 2 m to the north, with the same result. Then, another hole was attempted about 4 m to the south of the original hole, again with the same result. Probable bedrock was interpreted to be present at a depth of about 1.5 m. When coring for the thermistor cable, it was noted that fractured rock was present from about 1.5 m to 4.5 m, and the drill casing was sliding down through this zone. Sound bedrock was recovered from below 4.5 m. The zone of fractured rock is likely fractured bedrock, but it is possible that it was a bouldery till, with the fine fraction washed away during coring.

At Borehole 12, west of the airstrip at the settlement area, the moisture contents in the tailings were about 30 percent or more. This is significantly higher than the low 20 percent range typical elsewhere. At Borehole 22, east of the airstrip at the settlement area, similarly high moisture contents and sloughing conditions were encountered.. Due to the sloughing, it was difficult to recover relatively undisturbed soil samples. The full depth has been interpreted to be tailings sediment, but it is possible that there was native soil below about 2.5 m at this borehole location. The saturated, sloughing soil suggests that it may have been permafrost that has relatively recently thawed and is still consolidating.

The groundwater levels on the east and west sides of the airstrip are within 2 cm of each other at this location. While there may be flow to the west, this is considered to be within survey accuracy and suggests very little gradient.

It is our opinion that the settlement of the airstrip is attributable to the past thaw of permafrost. The soil appears to be consolidating. The fractured rock zone at Borehole 20 may not have been ice-rich, but it is possible that soil is creeping laterally to the east, due to loss of lateral support in the vicinity of Boreholes 12 and 22. Figure 3 presents a cross-section of the east half of the airstrip.

5.0 LIMITATIONS

The recommendations provided herein are based on a review of the available information listed in the references section of the report, and samples collected at discreet locations while on site. If conditions other than those described are encountered during subsequent phases of the project, EBA should be notified and given the opportunity to review the conclusions and recommendations of this report.

This report has been prepared for the exclusive use of the Tyhee NWT Corp and their agents for the specific application to the development described in Section 1 of this report. It has been prepared in accordance with generally accepted soil and foundation engineering practices. No other warranty is made, either expressed or implied. Reference should be made to the General Conditions presented in Appendix A for further limitations.

6.0 CLOSURE

We trust this report satisfies your present requirements. We would be pleased to provide any further information that may be needed. If you require any additional information or services please contact either of the undersigned at our Yellowknife office.

Respectfully submitted,

EBA ENGINEERING CONSULTANTS LTD.

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Nov 30/05
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THE ASSOCIATION OF
PROFESSIONAL ENGINEERS,
GEOLOGISTS and GEOPHYSICISTS
OF THE NORTHWEST TERRITORIES
PERMIT NUMBER
P 018
EBA ENGINEERING
CONSULTANTS LTD.

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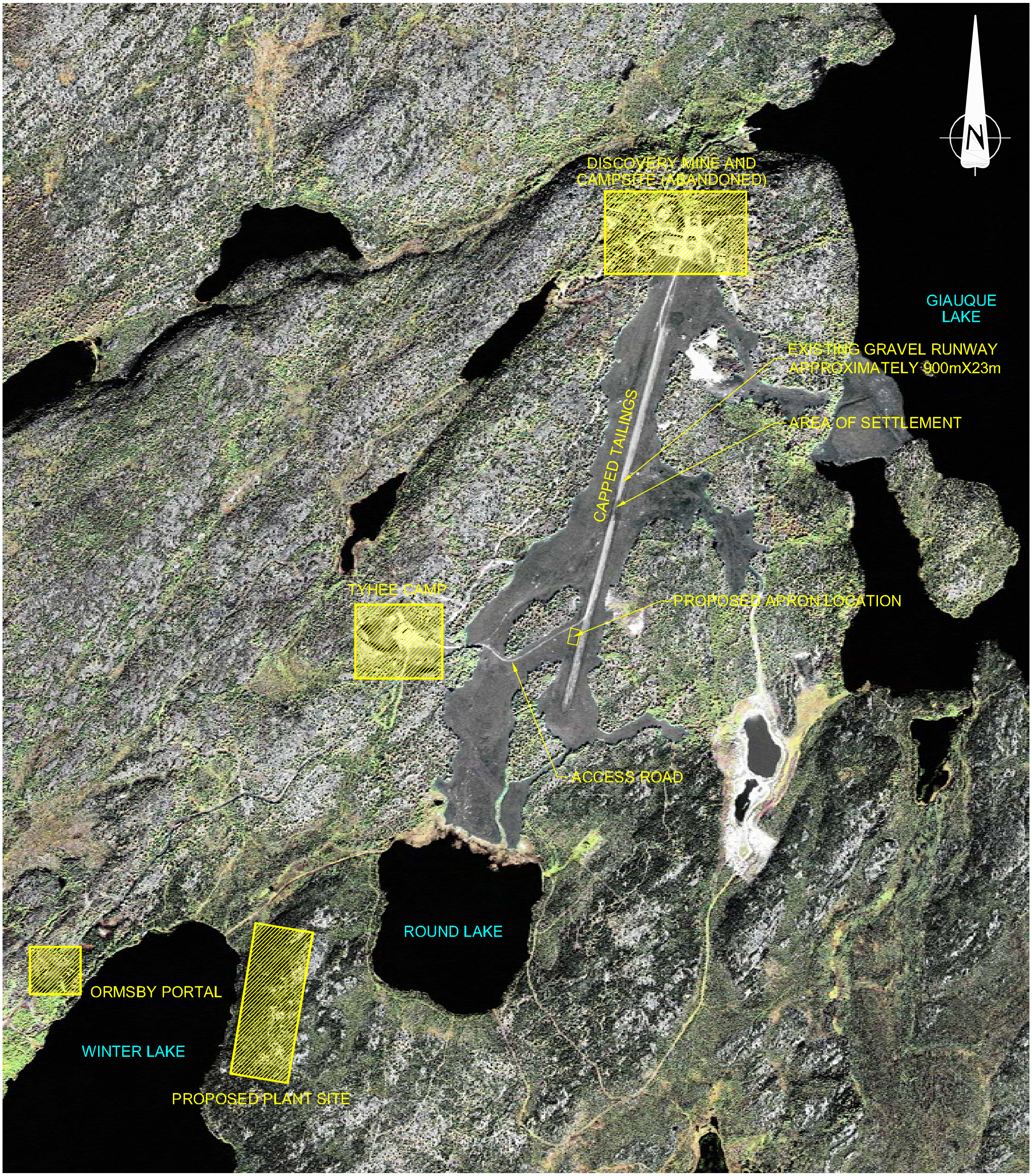
FIGURES



IMAGERY SOURCE: IKONOS (JULY 27 AND AUGUST 2, 2004)
LANDSAT TM (AUGUST 11, 2001)

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CLIENT/PROJECT DESCRIPTION
TYHEE DEVELOPMENT CORP
YELLOWKNIFE GOLD PROJECT

EBA Engineering Consultants Ltd.

SCALE/EBA PROJECT NO.
AS SHOWN
1740082-022

DATE/DRAWN BY:
04/12/21
ANS/JAG

TITLE/EBA DRAWING NO.
SITE PLAN
FIGURE 1

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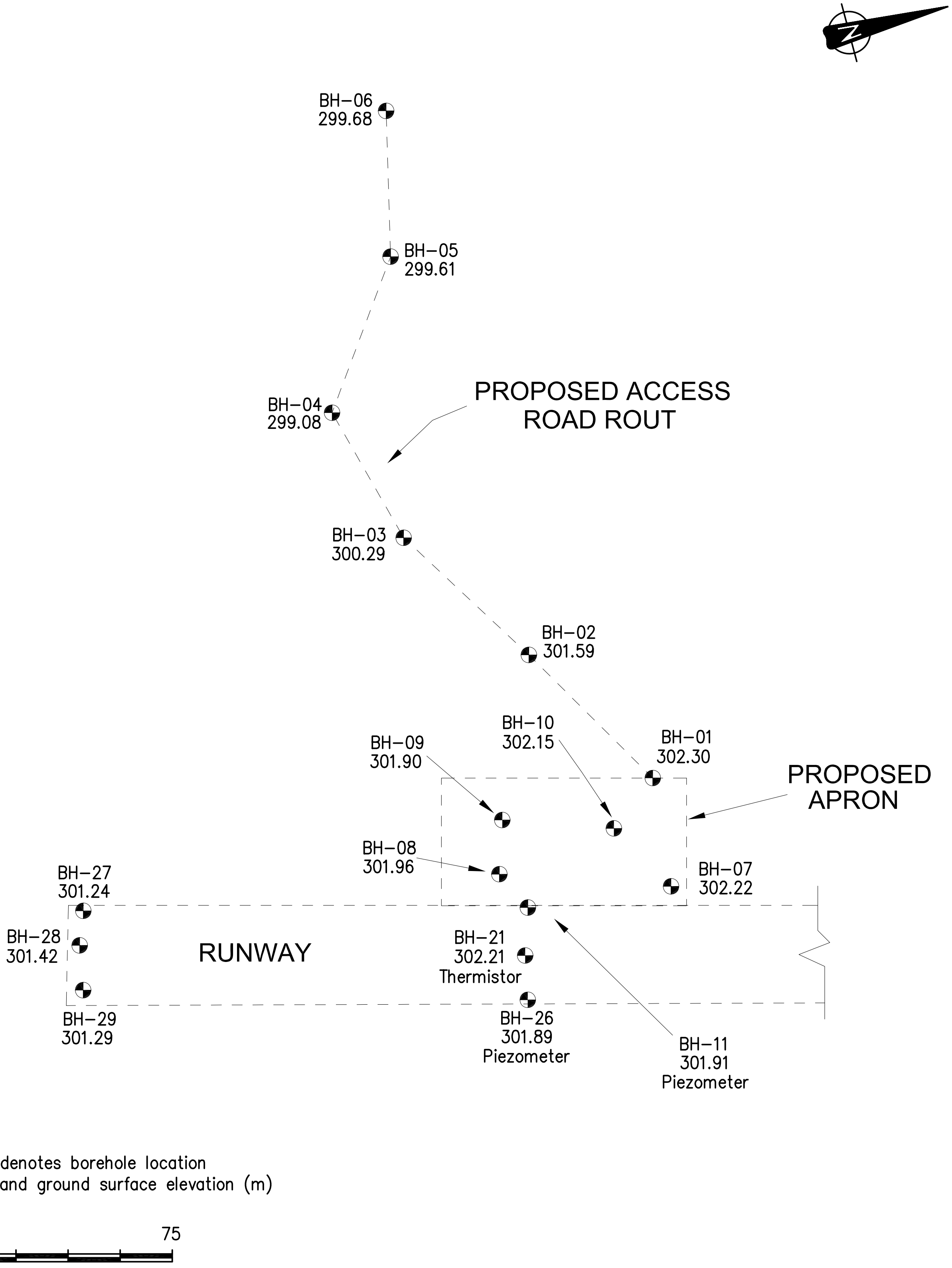

Figure 2
Borehole and Instrumentation Location Plan - Page 1 of 2

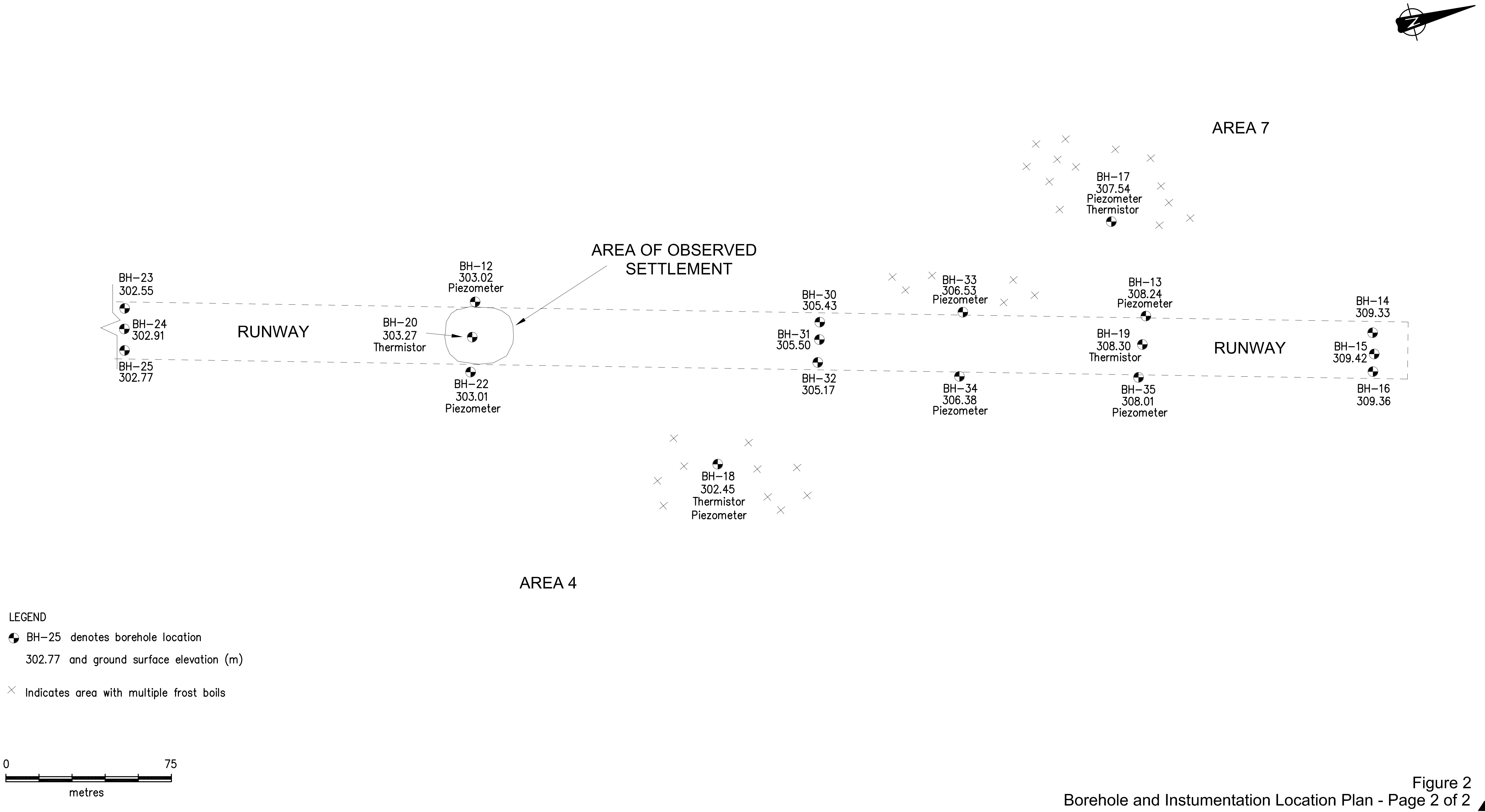

Figure 2
Borehole and Instumentation Location Plan - Page 2 of 2

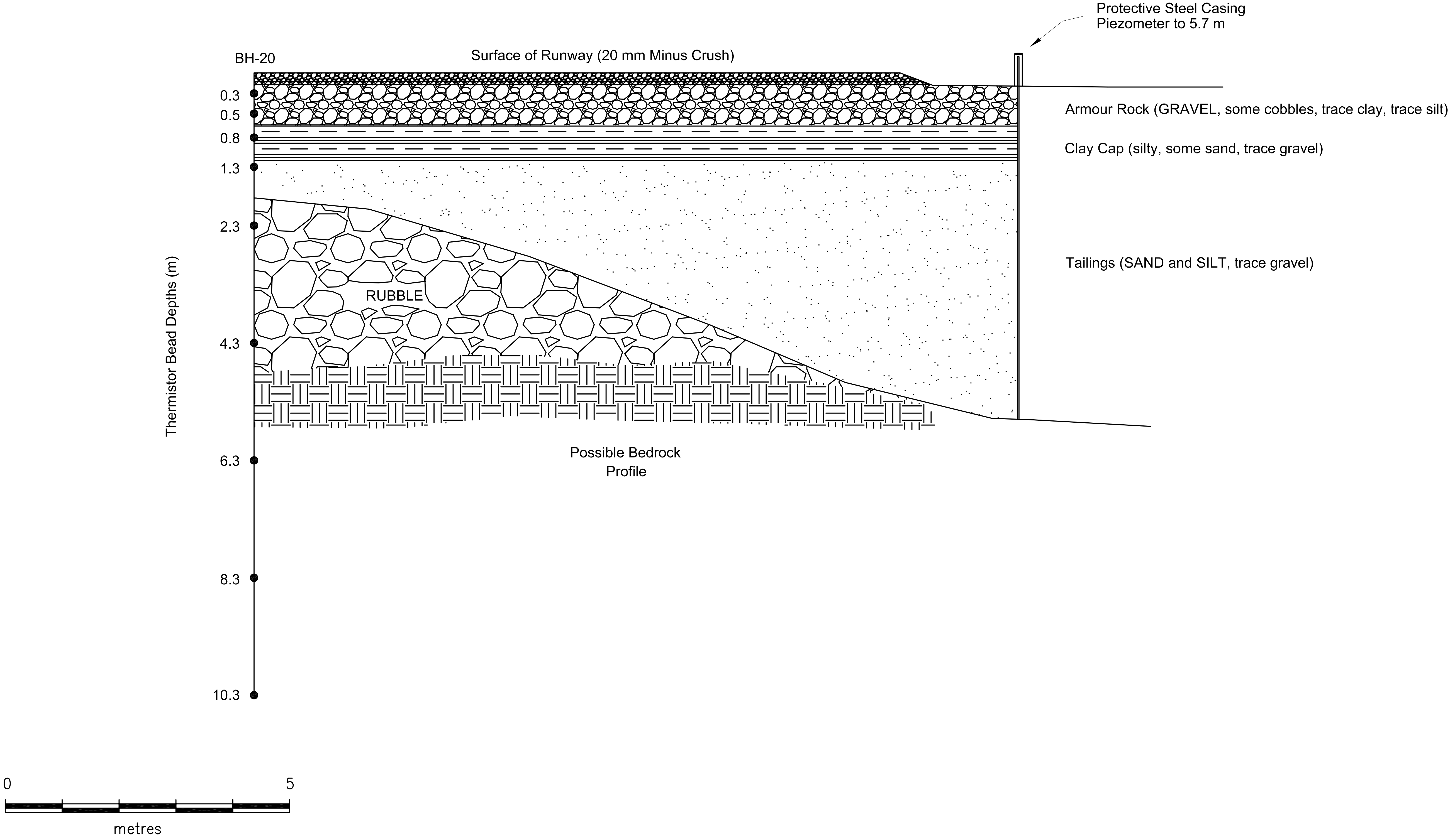

Figure 3
Interpreted Subsurface Stratigraphy Near Settlement Area

APPENDIX

APPENDIX A TERMS AND CONDITIONS

GEOTECHNICAL REPORT – GENERAL CONDITIONS

This report incorporates and is subject to these "General Conditions".

1.0 USE OF REPORT AND OWNERSHIP

This geotechnical report pertains to a specific site, a specific development and a specific scope of work. It is not applicable to any other sites nor should it be relied upon for types of development other than that to which it refers. Any variation from the site or development would necessitate a supplementary geotechnical assessment.

This report and the recommendations contained in it are intended for the sole use of EBA's client. EBA does not accept any responsibility for the accuracy of any of the data, the analyses or the recommendations contained or referenced in the report when the report is used or relied upon by any party other than EBA's client unless otherwise authorized in writing by EBA. Any unauthorized use of the report is at the sole risk of the user.

This report is subject to copyright and shall not be reproduced either wholly or in part without the prior, written permission of EBA. Additional copies of the report, if required, may be obtained upon request.

2.0 NATURE AND EXACTNESS OF SOIL AND ROCK DESCRIPTIONS

Classification and identification of soils and rocks are based upon commonly accepted systems and methods employed in professional geotechnical practice. This report contains descriptions of the systems and methods used. Where deviations from the system or method prevail, they are specifically mentioned.

Classification and identification of geological units are judgmental in nature as to both type and condition. EBA does not warrant conditions represented herein as exact, but infers accuracy only to the extent that is common in practice.

Where subsurface conditions encountered during development are different from those described in this report, qualified geotechnical personnel should revisit the site and review recommendations in light of the actual conditions encountered.

3.0 LOGS OF TESTHOLES

The testhole logs are a compilation of conditions and classification of soils and rocks as obtained from field observations and laboratory testing of selected samples. Soil and rock zones have been interpreted. Change from one geological zone to the other, indicated on the logs as a distinct line, can be, in fact, transitional. The extent of transition is interpretive. Any circumstance which requires precise definition of soil or rock zone transition elevations may require further investigation and review.

4.0 STRATIGRAPHIC AND GEOLOGICAL INFORMATION

The stratigraphic and geological information indicated on drawings contained in this report are inferred from logs of test holes and/or soil/rock exposures. Stratigraphy is known only at the locations of the test hole or exposure. Actual geology and stratigraphy between test holes and/or exposures may vary from that shown on these drawings. Natural variations in geological conditions are inherent and are a function of the historic environment. EBA does not represent the conditions illustrated as exact but recognizes that variations will exist. Where knowledge of more precise locations of geological units is necessary, additional investigation and review may be necessary.

5.0 SURFACE WATER AND GROUNDWATER CONDITIONS

Surface and groundwater conditions mentioned in this report are those observed at the times recorded in the report. These conditions vary with geological detail between observation sites; annual, seasonal and special meteorologic conditions; and with development activity. Interpretation of water conditions from observations and records is judgmental and constitutes an evaluation of circumstances as influenced by geology, meteorology and development activity. Deviations from these observations may occur during the course of development activities.

6.0 PROTECTION OF EXPOSED GROUND

Excavation and construction operations expose geological materials to climatic elements (freeze/thaw, wet/dry) and/or mechanical disturbance which can cause severe deterioration. Unless otherwise specifically indicated in this report, the walls and floors of excavations must be protected from the elements, particularly moisture, desiccation, frost action and construction traffic.

7.0 SUPPORT OF ADJACENT GROUND AND STRUCTURES

Unless otherwise specifically advised, support of ground and structures adjacent to the anticipated construction and preservation of adjacent ground and structures from the adverse impact of construction activity is required.

8.0 INFLUENCE OF CONSTRUCTION ACTIVITY

There is a direct correlation between construction activity and structural performance of adjacent buildings and other installations. The influence of all anticipated construction activities should be considered by the contractor, owner, architect and prime engineer in consultation with a geotechnical engineer when the final design and construction techniques are known.

9.0 OBSERVATIONS DURING CONSTRUCTION

Because of the nature of geological deposits, the judgmental nature of geotechnical engineering, as well as the potential of adverse circumstances arising from construction activity, observations during site preparation, excavation and construction should be carried out by a geotechnical engineer. These observations may then serve as the basis for confirmation and/or alteration of geotechnical recommendations or design guidelines presented herein.

10.0 DRAINAGE SYSTEMS

Where temporary or permanent drainage systems are installed within or around a structure, the systems which will be installed must protect the structure from loss of ground due to internal erosion and must be designed so as to assure continued performance of the drains. Specific design detail of such systems should be developed or reviewed by the geotechnical engineer. Unless otherwise specified, it is a condition of this report that effective temporary and permanent drainage systems are required and that they must be considered in relation to project purpose and function.

11.0 BEARING CAPACITY

Design bearing capacities, loads and allowable stresses quoted in this report relate to a specific soil or rock type and condition. Construction activity and environmental circumstances can materially change the condition of soil or rock. The elevation at which a soil or rock type occurs is variable. It is a requirement of this report that structural elements be founded in and/or upon geological materials of the type and in the condition assumed. Sufficient observations should be made by qualified geotechnical personnel during construction to assure that the soil and/or rock conditions assumed in this report in fact exist at the site.

12.0 SAMPLES

EBA will retain all soil and rock samples for 30 days after this report is issued. Further storage or transfer of samples can be made at the client's expense upon written request, otherwise samples will be discarded.

13.0 STANDARD OF CARE

Services performed by EBA for this report have been conducted in a manner consistent with the level of skill ordinarily exercised by members of the profession currently practising under similar conditions in the jurisdiction in which the services are provided. Engineering judgement has been applied in developing the conclusions and/or recommendations provided in this report. No warranty or guarantee, express or implied, is made concerning the test results, comments, recommendations, or any other portion of this report.

14.0 ENVIRONMENTAL AND REGULATORY ISSUES

Unless stipulated in the report, EBA has not been retained to investigate, address or consider and has not investigated, addressed or considered any environmental or regulatory issues associated with development on the subject site.

15.0 ALTERNATE REPORT FORMAT

Where EBA submits both electronic file and hard copy versions of reports, drawings and other project-related documents and deliverables (collectively termed EBA's instruments of professional service), the Client agrees that only the signed and sealed hard copy versions shall be considered final and legally binding. The hard copy versions submitted by EBA shall be the original documents for record and working purposes, and, in the event of a dispute or discrepancies, the hard copy versions shall govern over the electronic versions. Furthermore, the Client agrees and waives all future right of dispute that the original hard copy signed version archived by EBA shall be deemed to be the overall original for the Project.

The Client agrees that both electronic file and hard copy versions of EBA's instruments of professional service shall not, under any circumstances, no matter who owns or uses them, be altered by any party except EBA. The Client warrants that EBA's instruments of professional service will be used only and exactly as submitted by EBA.

The Client recognizes and agrees that electronic files submitted by EBA have been prepared and submitted using specific software and hardware systems. EBA makes no representation about the compatibility of these files with the Client's current or future software and hardware systems.

APPENDIX

APPENDIX B BOREHOLE LOGS

TERMS USED ON BOREHOLE LOGS

TERMS DESCRIBING CONSISTENCY OR CONDITION

COARSE GRAINED SOILS (major portion retained on 0.075mm sieve): includes (1) clean gravels and sands, and (2) silty or clayey gravels and sands. Condition is rated according to relative density, as inferred from laboratory or in situ tests.

DESCRIPTIVE TERM	RELATIVE DENSITY	N (blows per 0.3m)
Very Loose	0 to 20%	0 to 4
Loose	20 to 40%	4 to 10
Compact	40 to 75%	10 to 30
Dense	75 to 90%	30 to 50
Very Dense	90 to 100%	greater than 50

The number of blows, N, on a 51mm O.D. split spoon sampler of a 63.5kg weight falling 0.76m, required to drive the sampler a distance of 0.3m from 0.15m to 0.45m.

FINE GRAINED SOILS (major portion passing 0.075mm sieve): includes (1) inorganic and organic silts and clays, (2) gravelly, sandy, or silty clays, and (3) clayey silts. Consistency is rated according to shearing strength, as estimated from laboratory or in situ tests.

DESCRIPTIVE TERM	UNCONFINED COMPRESSIVE STRENGTH (kPa)
Very Soft	Less Than 25
Soft	25 to 50
Firm	50 to 100
Stiff	100 to 200
Very Stiff	200 to 400
Hard	Greater Than 400

NOTE: Slickensided and fissured clays may have lower unconfined compressive strengths than shown above, because of planes of weakness or cracks in the soil.

GENERAL DESCRIPTIVE TERMS

Slickensided	- having inclined planes of weakness that are slick and glossy in appearance.
Fissured	- containing shrinkage cracks, frequently filled with fine sand or silt; usually more or less vertical.
Laminated	- composed of thin layers of varying colour and texture.
Interbedded	- composed of alternate layers of different soil types.
Calcareous	- containing appreciable quantities of calcium carbonate.
Well Graded	- having wide range in grain sizes and substantial amounts of intermediate particle sizes.
Poorly graded	- predominantly of one grain size, or having a range of sizes with some intermediate size missing.

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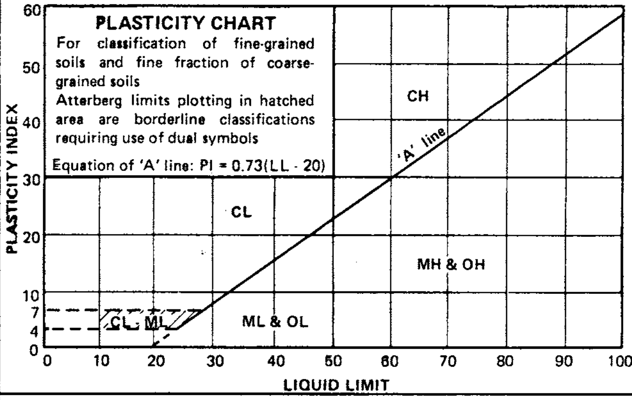
UNIFIED SOIL CLASSIFICATION†

MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES	CLASSIFICATION CRITERIA		
COARSE-GRAINED SOILS More than 50% retained on No. 200 sieve*	GRAVELS 50% or more of coarse fraction retained on No. 4 sieve	CLEAN GRAVELS	GW	Well-graded gravels and gravel-sand mixtures, little or no fines	Classification on basis of percentage of fines Less than 5% pass No. 200 sieve GW, GP, SW, SP More than 12% pass No. 200 sieve GM, GC, SM, SC 5% to 12% pass No. 200 sieve Borderline classification requiring use of dual symbols	$C_u = D_{60}/D_{10}$ Greater than 4 $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3	
			GP	Poorly-graded gravels and gravel-sand mixtures, little or no fines		Not meeting both criteria for GW	
		GRAVELS WITH FINES	GM	Silty gravels, gravel-sand-silt mixtures		Atterberg limits plot below 'A' line or plasticity index less than 4	Atterberg limits plotting in hatched area are borderline classifications requiring use of dual symbols
			GC	Clayey gravels, gravel-sand clay mixtures		Atterberg limits plot above 'A' line and plasticity index greater than 7	
	SANDS More than 50% of coarse fraction passes No. 4 sieve	CLEAN SANDS	SW	Well-graded sands and gravelly sands, little or no fines		$C_u = D_{60}/D_{10}$ Greater than 6 $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ Between 1 and 3	
			SP	Poorly - graded sands and gravelly sands, little or no fines		Not meeting both criteria for SW	
		SANDS WITH FINES	SM	Silty sands, sand-silt mixtures		Atterberg limits plot below 'A' line or plasticity index less than 4	Atterberg limits plotting in hatched area are borderline classifications requiring use of dual symbols
			SC	Clayey sands, sand-clay mixtures		Atterberg limits plot above 'A' line and plasticity index greater than 7	
FINE-GRAINED SOILS 50% or more passes No. 200 sieve*	SILTS AND CLAYS	Liquid limit 50% or less	ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands			
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays			
			OL	Organic silts and organic silty clays of low plasticity			
	SILTS AND CLAYS	Liquid limit greater than 50%	MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts			
			CH	Inorganic clay of high plasticity, fat clays			
			OH	Organic clays of medium to high plasticity			
HIGHLY ORGANIC SOILS			PT	Peat, muck and other highly organic soils	*Based on the material passing the 3 in. (75 mm) sieve †ASTM Designation D 2487, for identification procedure see D 2488		

GROUND ICE DESCRIPTION

ICE NOT VISIBLE

GROUP SYMBOLS	SYMBOLS	SUBGROUP DESCRIPTION	
N	Nf	Poorly-bonded or friable	▨
	Nbn	No excess ice, well-bonded	■
	Nbe	Excess ice, well - bonded	■

NOTE:

1. *Dual symbols are used to indicate borderline or mixed ice classifications*
2. *Visual estimates of ice contents indicated on borehole logs ± 5%*
3. *This system of ground ice description has been modified from NRC Technical Memo 79, Guide to the Field Description of Permafrost for Engineering Purposes*

LEGEND

Soil ▨ Ice ■

VISIBLE ICE LESS THAN 50% BY VOLUME

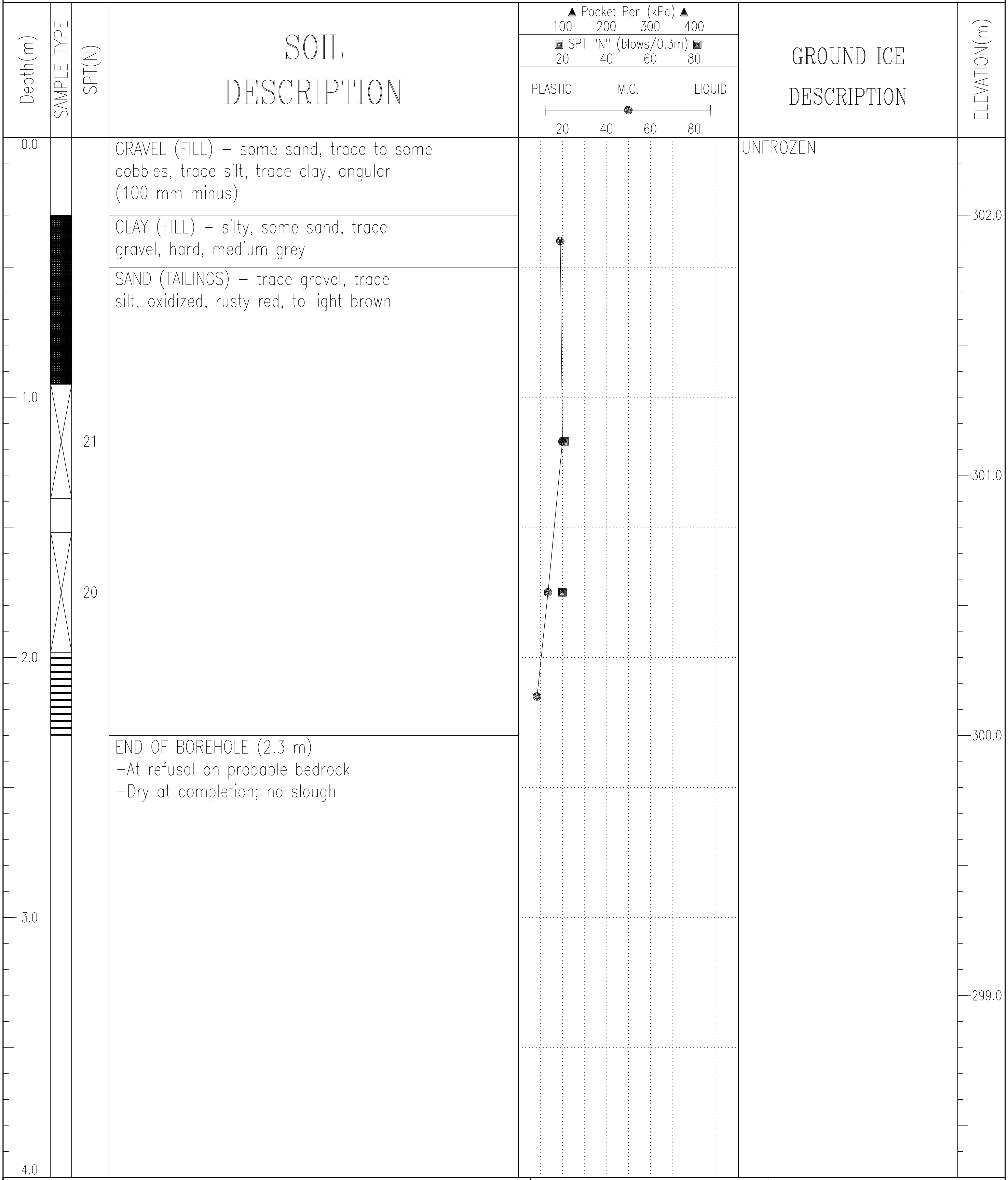
GROUP SYMBOLS	SYMBOLS	SUBGROUP DESCRIPTION	
V	Vx	Individual ice crystals or inclusions	■
	Vc	Ice coatings on particles	▨
	Vr	Random or irregularly oriented ice formations	■
	Vs	Stratified or distinctly oriented ice formations	■

VISIBLE ICE GREATER THAN 50% BY VOLUME

ICE	ICE + Soil Type	Ice with soil inclusions	■
	ICE	Ice without soil inclusions (greater than 25 mm (1 in.) thick)	■

PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-01
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: ACCESS ROAD (SEE FIGURE 2)	UTM ZONE: 12 N354035.8 E700889	ELEVATION: 302.30 m

SAMPLE TYPE ■ SHELBY TUBE ◿ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE



SOIL DESCRIPTION

GRAVEL (FILL) - some sand, trace to some cobbles, trace silt, trace clay, angular (100 mm minus)

CLAY (FILL) - silty, some sand, trace gravel, hard, medium grey

SAND (TAILINGS) - trace gravel, trace silt, oxidized, rusty red, to light brown

END OF BOREHOLE (2.3 m)
-At refusal on probable bedrock
-Dry at completion; no slough

GROUND ICE DESCRIPTION

UNFROZEN

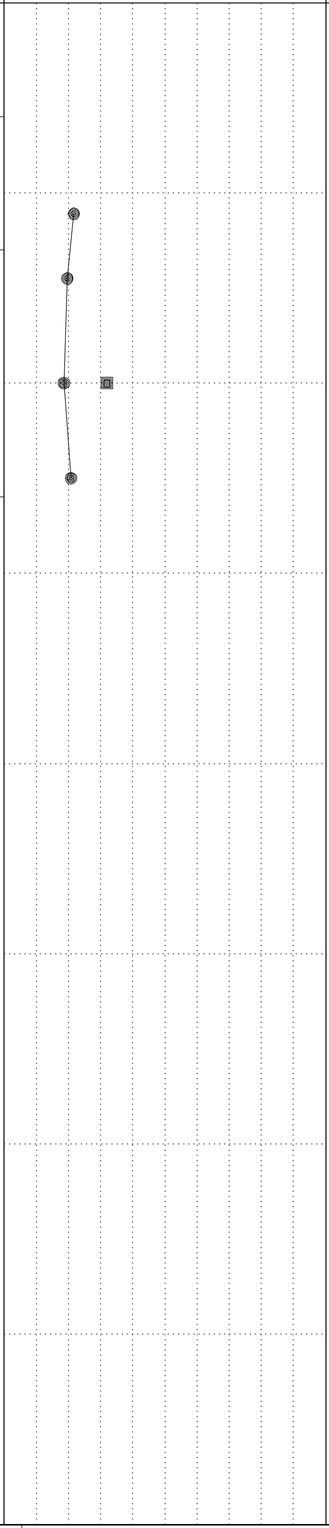
EBA Engineering Consultants Ltd. Yellowknife, N.W.T.	LOGGED BY: RSG	COMPLETION DEPTH: 2.3 m
	REVIEWED BY: TEH	COMPLETE: 08/06/05
		Page 1 of 1

05/11/30 10:50AM (1740082)

PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-02
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: ACCESS ROAD (SEE FIGURE 2)	UTM ZONE: 12 N353992.8 E700887	ELEVATION: 301.59 m

SAMPLE TYPE ■ SHELBY TUBE ◩ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE

Depth(m)	SAMPLE TYPE	SPT(N)	SOIL DESCRIPTION	▲ Pocket Pen (kPa) ▲ 100 200 300 400 ▣ SPT "N" (blows/0.3m) ▣ 20 40 60 80 PLASTIC M.C. LIQUID 20 40 60 80	GROUND ICE DESCRIPTION	ELEVATION(m)
0.0			GRAVEL (FILL) - some sand, trace to some cobbles, trace silt, trace clay, angular (100mm minus)		UNFROZEN	
	■		CLAY (FILL) - silty,some sand, trace gravel, hard, medium grey			301.0
			SAND (TAILINGS) - some silt, trace gravel,oxidized, rusty red to light brown -bulk density=2006 kg/m3			
1.0	☒	32			(16 blows/150mm)	
	☰		END OF BOREHOLE (1.3 m) -At refusal on probable bedrock -Dry at completion; no slough			300.0
2.0						299.0
3.0						298.0
4.0						

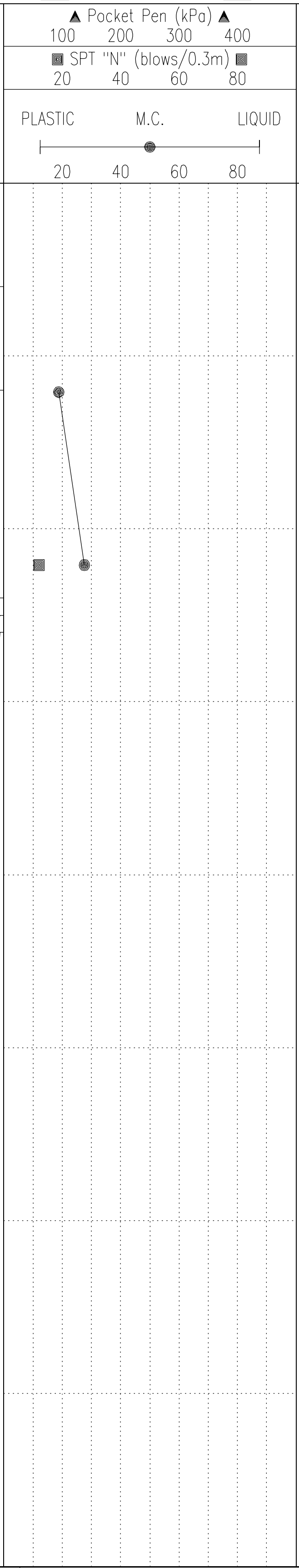


EBA Engineering Consultants Ltd. Yellowknife, N.W.T.	LOGGED BY: RSG	COMPLETION DEPTH: 1.3 m
	REVIEWED BY: TEH	COMPLETE: 08/06/05
		Page 1 of 1

PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-03
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: ACCESS ROAD (SEE FIGURE 2)	UTM ZONE: 12 N353951.4 E700884	ELEVATION: 300.29 m

SAMPLE TYPE ■ SHELBY TUBE ◿ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE

Depth(m)	SAMPLE TYPE	SPT(N)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	ELEVATION(m)
0.0			GRAVEL (FILL) - some sand, trace ti some cobbles, trace silt, trace clay, angular (100 mm minus)	UNFROZEN	
	■		CLAY (FILL) - silty, some sand, trace gravel, hard, medium grey		300.0
	■		SAND (TAILINGS) - some silt, trace gravel,oxidized, rusty red to light brown		
1.0	☒	12		(6 blows/150 mm)	
			PEAT - organic material, black		299.0
			SILT (TILL) - some sand, some clay, trace gravel, dark grey		
			END OF BOREHOLE (1.3 m) -At refusal on probable bedrock -Dry at completion; no slough		
2.0					298.0
3.0					297.0
4.0					



EBA Engineering Consultants Ltd. Yellowknife, N.W.T.	LOGGED BY: RSG	COMPLETION DEPTH: 1.3 m
	REVIEWED BY: TEH	COMPLETE: 08/06/05
		Page 1 of 1

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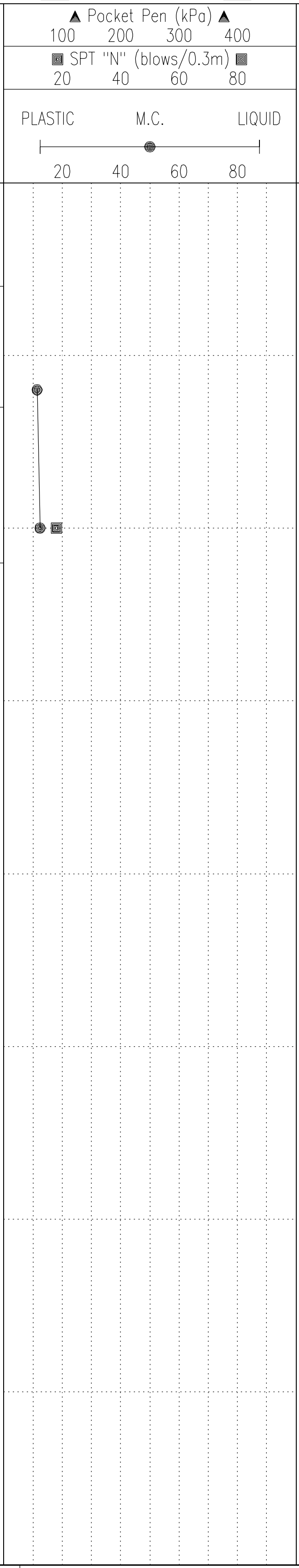
PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP	BOREHOLE NO: BH-04
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: ACCESS ROAD(SEE FIGURE 2)	UTM ZONE: 12 N353911.5 E700883.2	ELEVATION: 299.08 m

SAMPLE TYPE ▨ SHELBY TUBE ◱ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE



Depth(m)	SAMPLE TYPE	SPT(N)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	ELEVATION(m)
0.0			GRAVEL (FILL) – some sand, trace to some cobbles, trace silt, trace clay, angulat (100 mm minus)	UNFROZEN	299.0
	▨		CLAY (FILL) – silty, some sand, trace gravel, hard, medium grey		
			SAND (TAILINGS) – some silt, trace gravel, oxidized, rusty red to light brown		
1.0	☒	18		(9 blows/150 mm)	298.0
			END OF BOREHOLE (1.1m) –At refusal on possible bedrock –Dry at completion; no slough		
2.0					297.0
3.0					296.0
4.0					

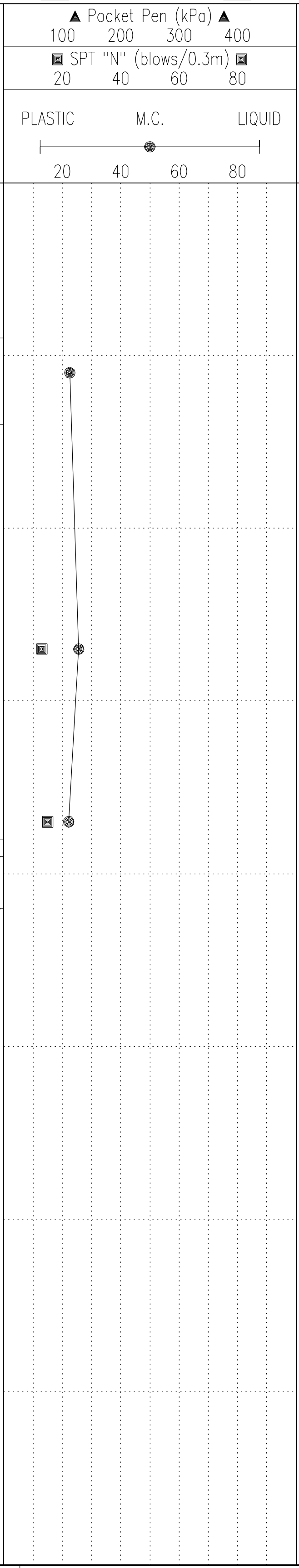
EBA Engineering Consultants Ltd. Yellowknife, N.W.T.	LOGGED BY: RSG	COMPLETION DEPTH: 1.1 m
	REVIEWED BY: TEH	COMPLETE: 08/06/05
		Page 1 of 1

05/11/30 11:05AM (1740082)

PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-05
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: ACCESS ROAD (SEE FIGURE 2)	UTM ZONE: 12 N353871.9 E700885.9	ELEVATION: 299.61 m

SAMPLE TYPE ■ SHELBY TUBE ◩ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▌ CORE

Depth(m)	SAMPLE TYPE	SPT(N)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	ELEVATION(m)
0.0			GRAVEL (FILL) - some sand, trace to some cobbles, trace silt, trace slay, angular, (100 mm minus)	UNFROZEN	
	■		CLAY (FILL) - silty,some sand, trace gravel, hard, medium grey -sand=9%, silt=62%, clay=29%		299.0
	■		SILT (TAILINGS) - sandy, trace clay, trace gravel, nonplastic, stiff, oxidized -gravel=7%, sand=16%, silt=68%,clay=9%		
1.0					
	☒	13			
	☒	15	-very stiff		298.0
			PEAT - organic material, black		
2.0			SILT (TILL) - some sand, some clay, trace gravel, dark grey		
			END OF BOREHOLE (2.1m) -At refusal on probbable bedrock -Dry at completion; no slough		
					297.0
3.0					
					296.0
4.0					



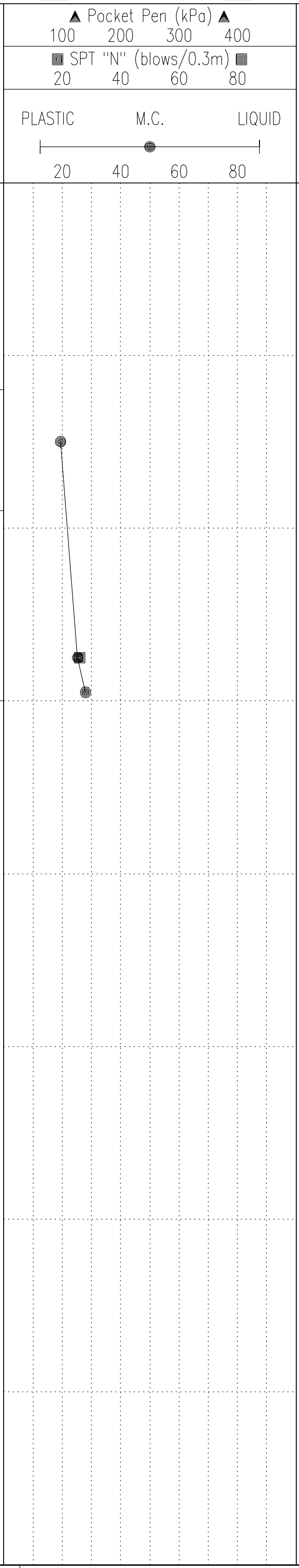
EBA Engineering Consultants Ltd.
Yellowknife, N.W.T.

LOGGED BY: RSG	COMPLETION DEPTH: 2.1 m
REVIEWED BY: TEH	COMPLETE: 08/06/05

PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-06
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: ACCESS ROAD (SEE FIGURE 2)	UTM ZONE: 12 N353830.8 E700886.8	ELEVATION: 299.68 m

SAMPLE TYPE ■ SHELBY TUBE ▨ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE

Depth(m)	SAMPLE TYPE	SPT(N)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	ELEVATION(m)
0.0			GRAVEL (FILL) - some sand, trace to some cobbles, trace silt, trace clay. angular, (100 mm minus)clay, trace	UNFROZEN	
	■		CLAY (FILL) - silty, some sand, trace gravel, hard, medium grey		299.0
1.0	■		SAND (TAILINGS) - some silt, trace gravel, oxidized		
	☒	26		(13 blows/150 mm)	
	☰		END OF BOREHOLE (1.5 m) -At refusal on probbable bedrock augered at completion to confirm bedrock -Dry at completion, no slough		298.0
2.0					
					297.0
3.0					
					296.0
4.0					



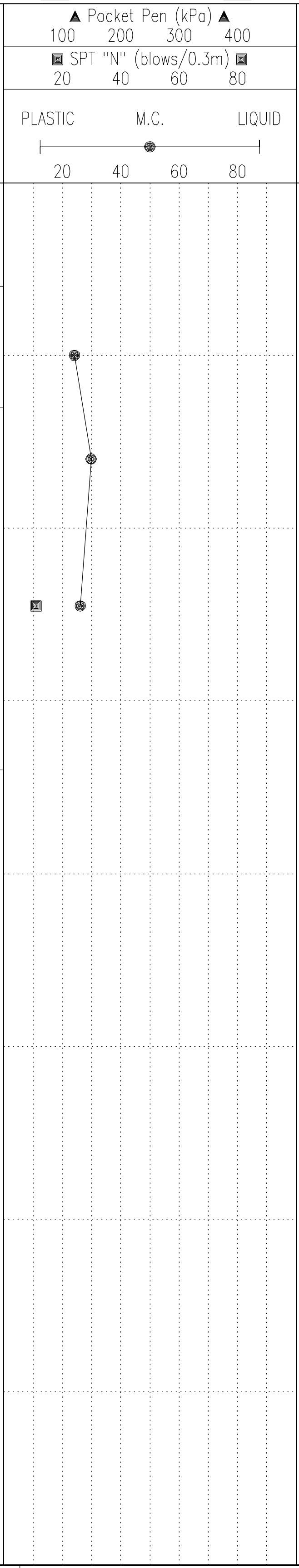
EBA Engineering Consultants Ltd.	LOGGED BY: RSG	COMPLETION DEPTH: 1.5 m
Yellowknife, N.W.T.	REVIEWED BY: TEH	COMPLETE: 08/07/05
		Page 1 of 1

05/11/30 11:05AM (1740082)

PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-07
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: APRON (SEE FIGURE 2)	UTM ZONE: 12 N354067.3 E700889	ELEVATION: 302.22 m

SAMPLE TYPE ■ SHELBY TUBE ▨ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE

Depth(m)	SAMPLE TYPE	SPT(N)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	ELEVATION(m)
0.0			GRAVEL (FILL) - some sand, trace to some cobbles, trace silt, trace clay, angular (100 mm minus)	UNFROZEN	302.0
	■		CLAY (FILL) - silty, some sand, trace gravel, hard, medium grey		
1.0	■ ☒	11	SAND (TAILINGS) - some silt, trace gravel,oxidized, rusty red to light brown -stiff -bulk density=1852 kg/m3		301.0
2.0			END OF BOREHOLE (1.7 m) -At refusal on probbable bedrock -Dry at Completion; no slough		300.0
3.0					299.0
4.0					



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LOGGED BY: RSG	COMPLETION DEPTH: 1.7 m
REVIEWED BY: TEH	COMPLETE: 08/07/05
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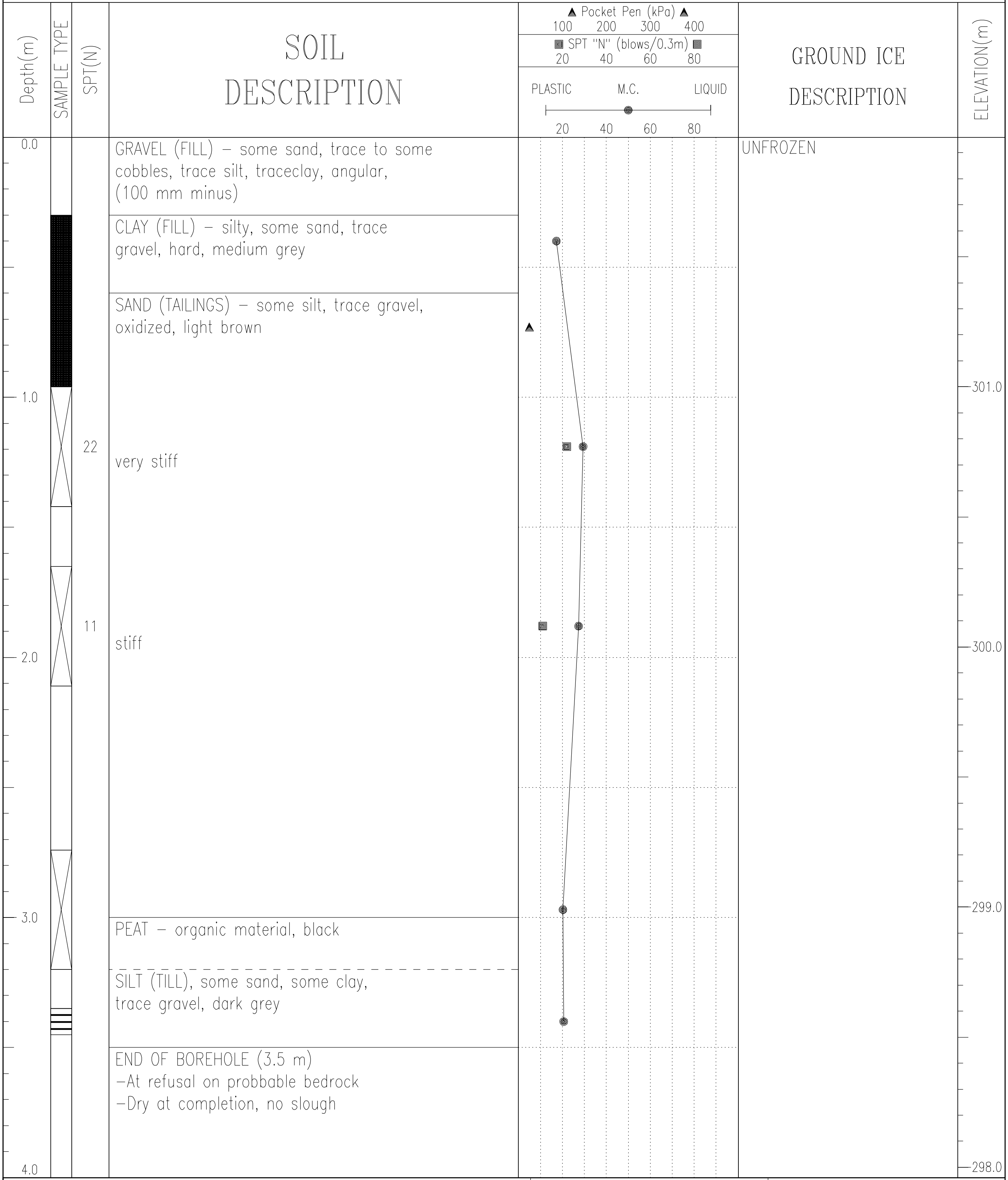
05/11/30 11:05AM (1740082)

PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-08
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: APRON (SEE FIGURE 2)	UTM ZONE: 12 N354052 E700884	ELEVATION: 301.96 m

SAMPLE TYPE ▨ SHELBY TUBE ◺ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE



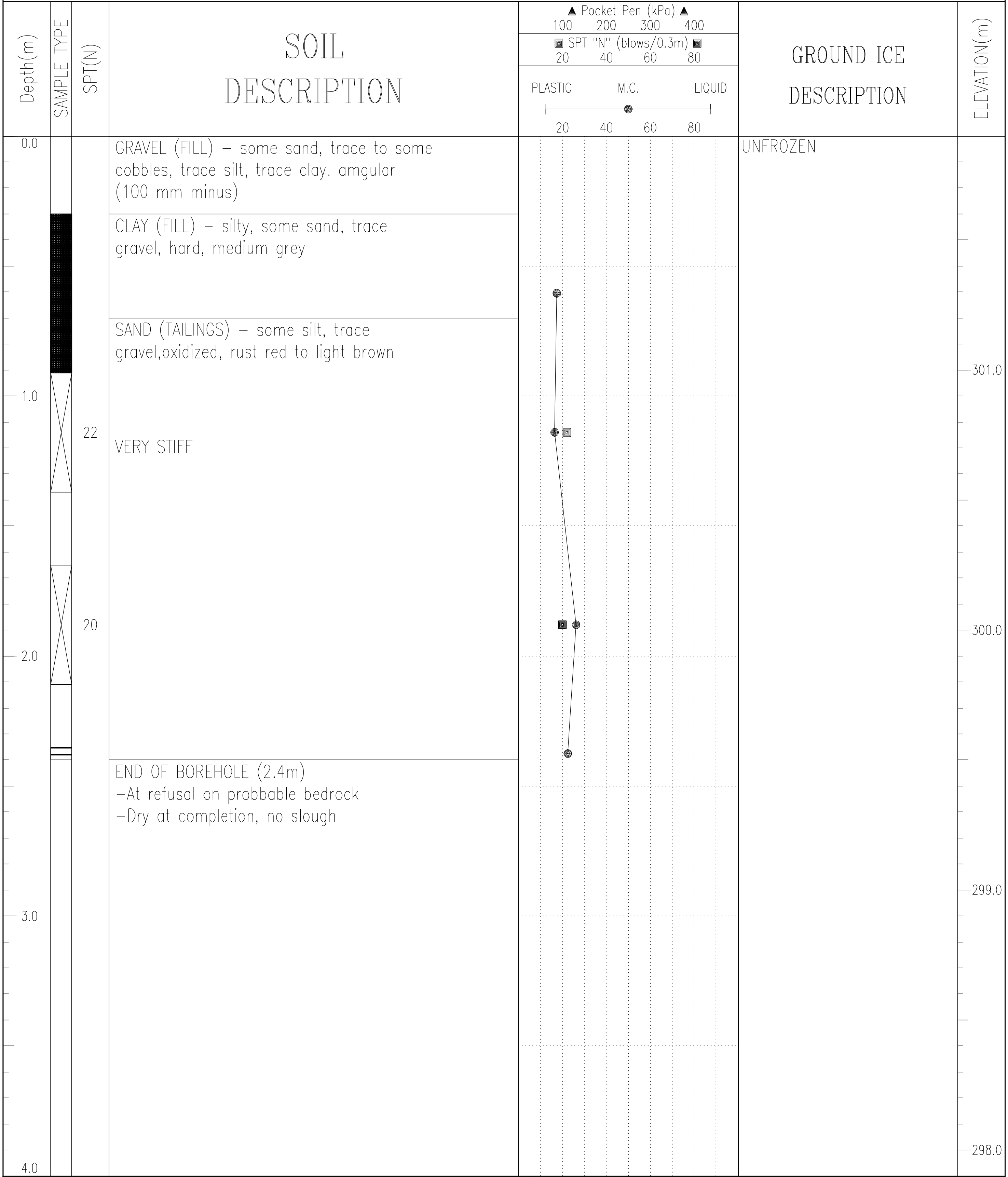
SPT(N)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION
	GRAVEL (FILL) – some sand, trace to some cobbles, trace silt, traceclay, angular, (100 mm minus)	UNFROZEN
	CLAY (FILL) – silty, some sand, trace gravel, hard, medium grey	
	SAND (TAILINGS) – some silt, trace gravel, oxidized, light brown	
22	very stiff	
11	stiff	
	PEAT – organic material, black	
	SILT (TILL), some sand, some clay, trace gravel, dark grey	
	END OF BOREHOLE (3.5 m) –At refusal on probbable bedrock –Dry at completion, no slough	

EBA Engineering Consultants Ltd.	LOGGED BY: RSG	COMPLETION DEPTH: 3.5 m
Yellowknife, N.W.T.	REVIEWED BY: TEH	COMPLETE: 08/07/05
		Page 1 of 1

05/11/30 11:05AM (1740082)

PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-09
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: APRON (SEE FIGURE 2)	UTM ZONE: 12 N354037.1 E700885	ELEVATION: 301.90 m

SAMPLE TYPE ■ SHELBY TUBE ▨ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE



GRAVEL (FILL) - some sand, trace to some cobbles, trace silt, trace clay. amgular (100 mm minus)

CLAY (FILL) - silty, some sand, trace gravel, hard, medium grey

SAND (TAILINGS) - some silt, trace gravel,oxidized, rust red to light brown

VERY STIFF

END OF BOREHOLE (2.4m)
-At refusal on probbable bedrock
-Dry at completion, no slough

UNFROZEN

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	REVIEWED BY: TEH	COMPLETE: 08/07/05
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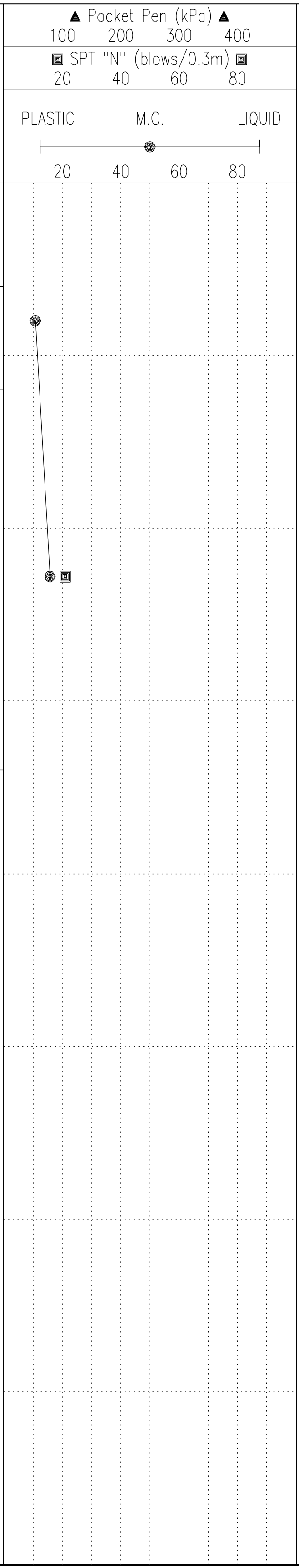
05/11/30 11:05AM (1740082)

PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-10
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: APRON (SEE FIGURE 2)	UTM ZONE: 12 N354047.2 E700888	ELEVATION: 302.15 m

SAMPLE TYPE ▩ SHELBY TUBE ▨ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE



Depth(m)	SAMPLE TYPE	SPT(N)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	ELEVATION(m)
0.0			GRAVEL (FILL) - some sand, trace to some cobbles, trace silt, trace clay, angular (100 mm minus)	UNFROZEN	302.0
	SHELBY TUBE		CLAY (FILL) - silty, some sand, trace gravel, hard, medium grey		
			SAND (tailings) - some silt, trace gravel, oxidized, rust red to light brown		
1.0	SPT	21	very stiff		301.0
			END OF BOREHOLE (1.7m) -At refusal on probable bedrock -Augered to confirm bedrock -Dry at completion; no slough		
2.0					300.0
3.0					299.0
4.0					

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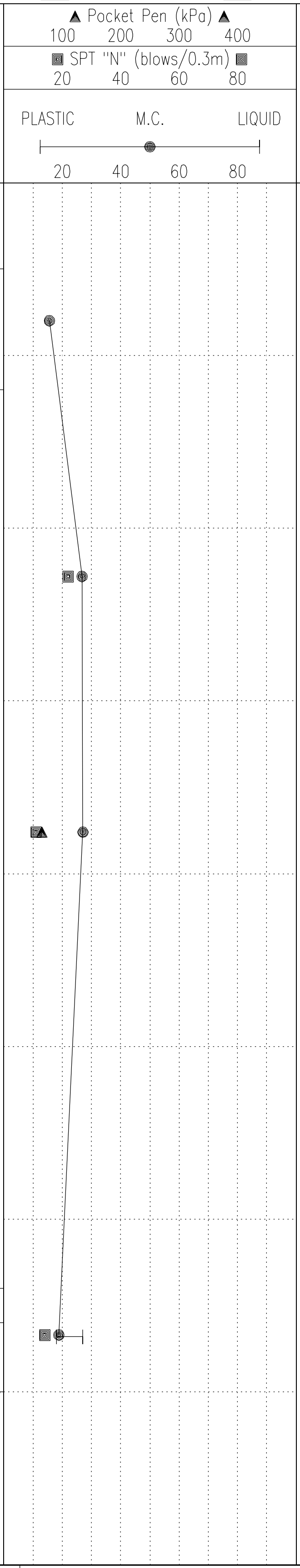
05/11/30 11:06AM (1740082)

PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-11
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: SHOULDER (SEE FIGURE 2)	UTM ZONE: 12 N354062 E700885	ELEVATION: 301.91 m

SAMPLE TYPE ■ SHELBY TUBE ◿ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE



Depth(m)	SAMPLE TYPE	SPT(N)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	ELEVATION(m)
0.0			GRAVEL (FILL) – some sand, trace to some cobbles, trace silt, trace clay, angular (100 mm minus)	UNFROZEN	
	■		CLAY (FILL) – silty, some sand, trace gravel, hard, medium grey		
	■		SAND (TAILINGS) – some silt, trace clay, trace gravel, oxidized, rust red to light brown		301.0
1.0	☒	22	very stiff		
	☒	11	–stiff, oxidized and unoxidized layers		300.0
2.0					
					299.0
3.0					
	☒		PEAT – organic material,black		
	☒	14	SILT (TILL) – some sand, some clay, trace gravel, dark grey –14%gravel, 21%sand, 62%silt, 10%clay	(7 blows/150 mm)	
			END OF BOREHOLE (3.5 m) –At refusal on probable bedrock –Some slough at completion –25mm diameter PVC standpipe installed to 3.5m below grade; bottom 3.0 m slotted		298.0
4.0					

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	REVIEWED BY: TEH	COMPLETE: 08/09/05
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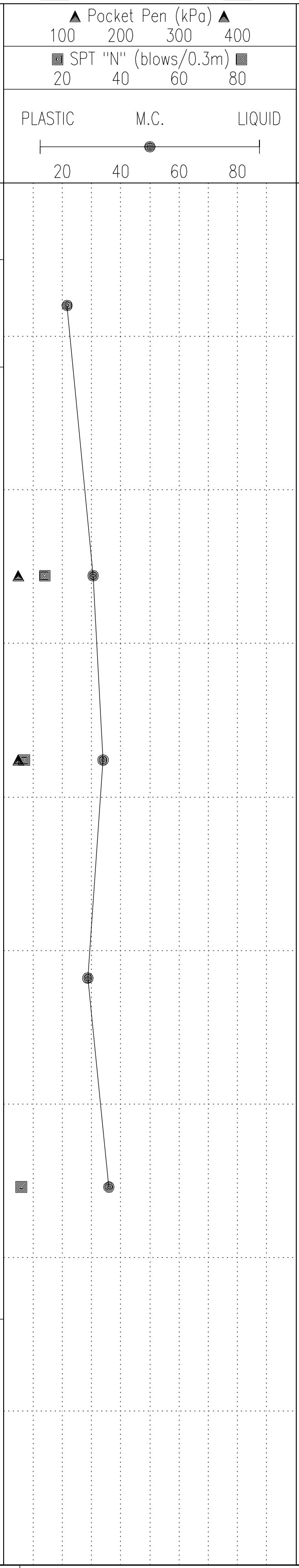
05/11/30 11:10AM (1740082)

PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-12
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: SHOULDER (SEE FIGURE 2)	UTM ZONE: 12 N354146.3 E700917	ELEVATION: 303.02 m

SAMPLE TYPE ▨ SHELBY TUBE ◪ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE

Depth(m)	SAMPLE TYPE	SPT(N)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	ELEVATION(m)
0.0			GRAVEL (FILL) - some sand, trace to some cobbles, trace silt, trace clay, angular (100 mm minus)	UNFROZEN	303.0
	▨		CLAY (FILL) - silty, some sand, trace gravel, medium grey		
	▨		SAND (TAILINGS) - some silt, trace clay, trace gravel, oxidized, rust red to light brown		
1.0			-bulk density = 1992 kg/m3		302.0
	☒	14	-very stiff		
	☒		-stiff, oxidized and unoxidized layers		
	☒	7			
2.0					301.0
	☰				
3.0					300.0
	☒	6	-firm		
			END OF BOREHOLE (3.7 m) -At refusal on probable bedrock -water and slough at completion -25 mm diameter standpipe installed to 3.6 m below grade; bottom 3.1 m slotted		
4.0					299.0



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REVIEWED BY: TEH	COMPLETE: 08/09/05
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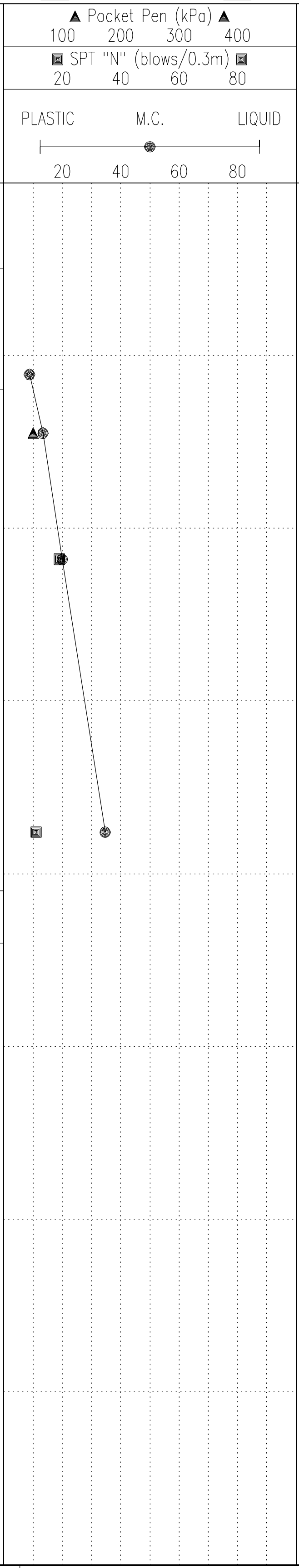
05/11/30 11:16AM (1740082)

PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-13
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: SHOULDER (SEE FIGURE 2)	UTM ZONE: 12 N354223.6 E700946	ELEVATION: 308.25 m

SAMPLE TYPE ■ SHELBY TUBE ▨ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE



Depth(m)	SAMPLE TYPE	SPT(N)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	ELEVATION(m)
0.0			GRAVEL (FILL) - some sand, trace to some cobbles, trace silt,trace clay, angular (100 mm minus)	UNFROZEN	
	■		CLAY (FILL) - silty, some sand, trace gravel, medium grey		308.0
	■		SAND (TAILINGS) - some silt, trace clay, trace gravel, oxidized, rust red to medium brown -bulk density = 1909 kg/m3		
1.0	☒	19	-very stiff		307.0
	☒	11	-stiff		
2.0			PEAT - organic material, black		
			END OF BOREHOLE (2.2 m) -At refusal on probable bedrock -Dry at completion, some slough -25 mm diameter standpipe piezometer installed to 2.2 m below grade; bottom 1.7 m slotted		306.0
3.0					305.0
4.0					

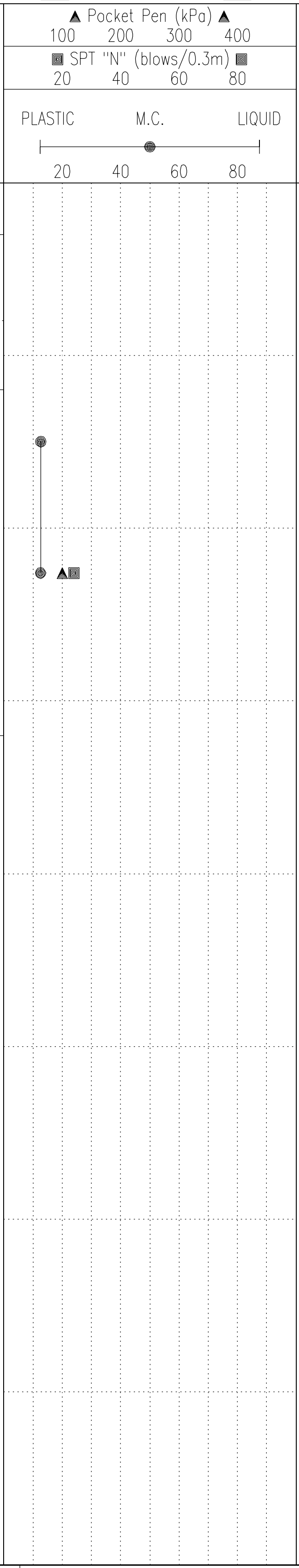
EBA Engineering Consultants Ltd. Yellowknife, N.W.T.	LOGGED BY: RSG	COMPLETION DEPTH: 2.2 m
	REVIEWED BY: TEH	COMPLETE: 08/10/05
		Page 1 of 1

05/11/30 11:19AM (1740082)

PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-14
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: RUNWAY (SEE FIGURE 2)	UTM ZONE: 12 N354255.6 E700956	ELEVATION: 309.33 m

SAMPLE TYPE ▩ SHELBY TUBE ◪ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE

Depth(m)	SAMPLE TYPE	SPT(N)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	ELEVATION(m)
0.0			GRAVEL (FILL) - some sand, trace silt, trace clay (20 mm minus)	UNFROZEN	
			GRAVEL (FILL) - some sand, trace to some cobbles, trace silt, trace clay, angular (100 mm minus)		309.0
			CLAY (FILL) - silty, some sand, trace gravel, medium grey		
	▩		SAND and SILT (TAILINGS) - some gravel, trace clay, oxidized, rust red to light brown		
1.0	☒	24	-very stiff		308.0
			END OF BOREHOLE (1.6 m) -At refusal on probable bedrock -Dry at completion; no slough		
2.0					307.0
3.0					306.0
4.0					



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REVIEWED BY: TEH	COMPLETE: 08/10/05
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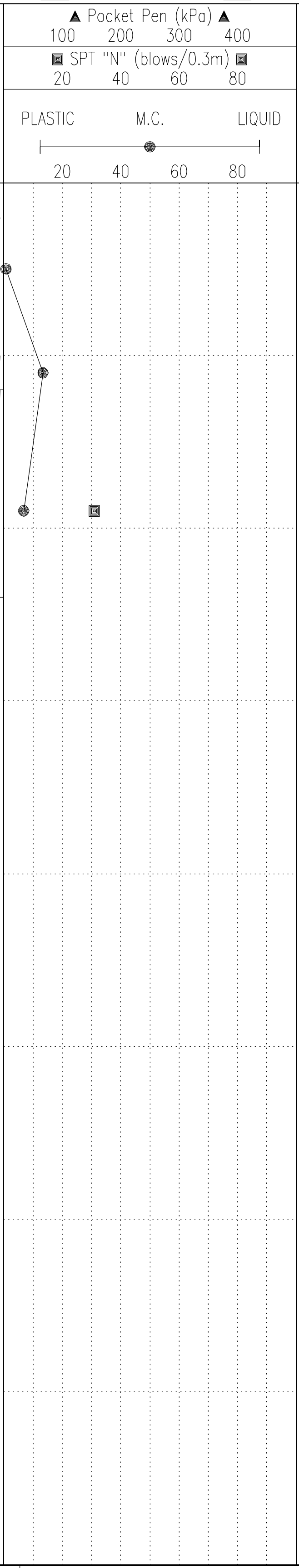
PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-15
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: RUNWAY:(SEE FIGURE 2)	UTM ZONE: 12 N354265.1 E700956	ELEVATION: 309.42 m

SAMPLE TYPE ■ SHELBY TUBE ▨ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE

Depth(m)	SAMPLE TYPE	SPT(N)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	ELEVATION(m)
0.0			GRAVEL (FILL) - some sand, trace silt, trace clay (20 mm minus)	UNFROZEN	
	☰		GRAVEL (FILL) - some sand, trace silt, trace clay (100 mm minus) gravel=69%, sand=24%, silt=5%, clay=2% -some cobbles		309.0
	■		-18% cobbles, 67% gravel, 12% sand, 2% silt, 1% clay		
	☒		CLAY (FILL) - silty, some sand, trace gravel, medium grey		
1.0	☒	31	SAND and SILT (TAILINGS) - trace clay, trace gravel, oxidized, rust red to light brown -hard		
			END OF BOREHOLE (1.2 m) -At refusal on probable bedrock -Dry at completion; no slough		308.0
2.0					
					307.0
3.0					
					306.0
4.0					



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Yellowknife, N.W.T.

LOGGED BY: RSG	COMPLETION DEPTH: 1.2 m
REVIEWED BY: TEH	COMPLETE: 08/10/05
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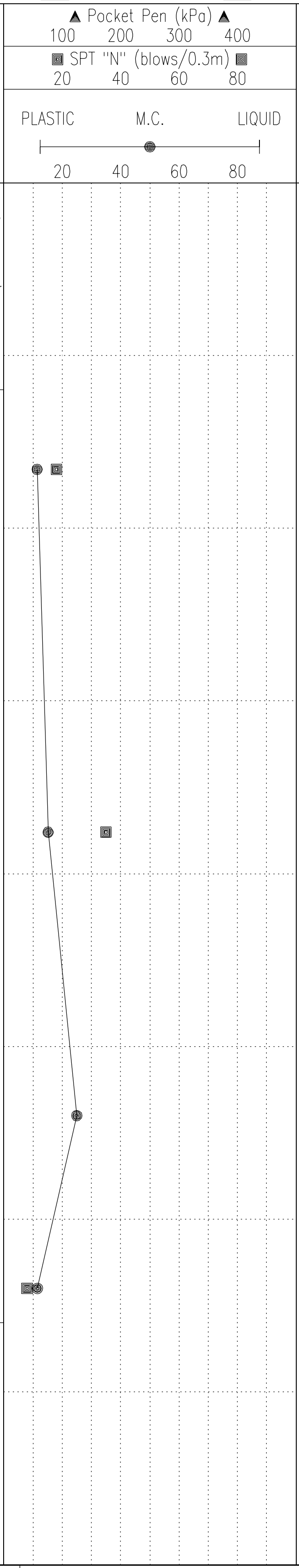
PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-16
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: RUNWAY (SEE FIGURE 2)	UTM ZONE: 12 N354272.7 E700955	ELEVATION: 309.36 m

SAMPLE TYPE ■ SHELBY TUBE ▧ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE

Depth(m)	SAMPLE TYPE	SPT(N)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	ELEVATION(m)
0.0			GRAVEL (FILL) - some sand, trace silt, trace clay (20 mm minus)	UNFROZEN	
			GRAVEL (FILL) - some clay, some silt, trace gravel		
			CLAY (FILL) - silty, some sand, trace gravel, medium grey		309.0
	☒	18	SAND and SILT (TAILINGS) - some gravel, trace clay, nonplastic, very stiff, oxidized, light brown		
1.0					308.0
	☒	35	-hard		
2.0					307.0
	☰				
3.0	☒	8	-nonplastic, greyish brown gravel=15%, sand=37%, silt=43%, clay=5%	(8 blows/150 mm)	306.0
			END OF BOREHOLE (3.3 m) -At refusal on probable bedrock -Dry at completion, no slough		
4.0					



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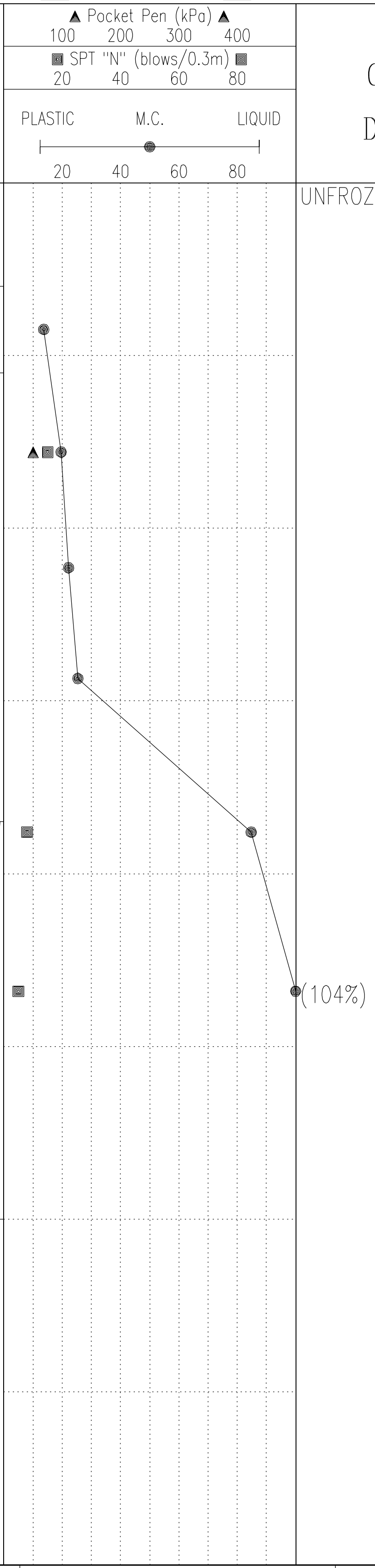
LOGGED BY: RSG	COMPLETION DEPTH: 3.3 m
REVIEWED BY: TEH	COMPLETE: 08/10/05

PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-17
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: FROST BOILS (SEE FIGURE 2)	UTM ZONE: 12 N354178.3 E700945	ELEVATION: 307.54 m

SAMPLE TYPE ■ SHELBY TUBE ▨ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE

Depth(m)	SAMPLE TYPE	SPT(N)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	ELEVATION(m)
0.0			GRAVEL (FILL) – some sand, trace to some cobbles, trace silt, trace clay, angular (100 mm minus)	UNFROZEN	
	■		SAND and SILT – trace clay, nonplastic sand=60%, silt=38%, clay=2%		307.0
	☒	15	SAND (TAILINGS) – some silt, trace clay, trace gravel, very stiff, nonplactic, oxidized, rust red to light brown		
1.0	☰				306.0
	☒	8	–stiff SILT – some sand, trace gravel, trace clay gravel=8%, sand=22%, silt=64%, clay=6%		
2.0			PEAT – fibrous organic matter, strong organic odour, black		
	☒	5	–firm		305.0
3.0			END OF AUGER HOLE (3.0 m) –at refusal on probable bedrock –25 mm PVC standpipe piezometer installed to 3.0 m; bottom 2.4 m slotted –Diamond drilled to 10.5 m, granitic rock core, light grey –installed 9 bead thermistor cable tp 10 m below grade		304.0
4.0					



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LOGGED BY: RSG	COMPLETION DEPTH: 3 m
REVIEWED BY: TEH	COMPLETE: 08/12/05
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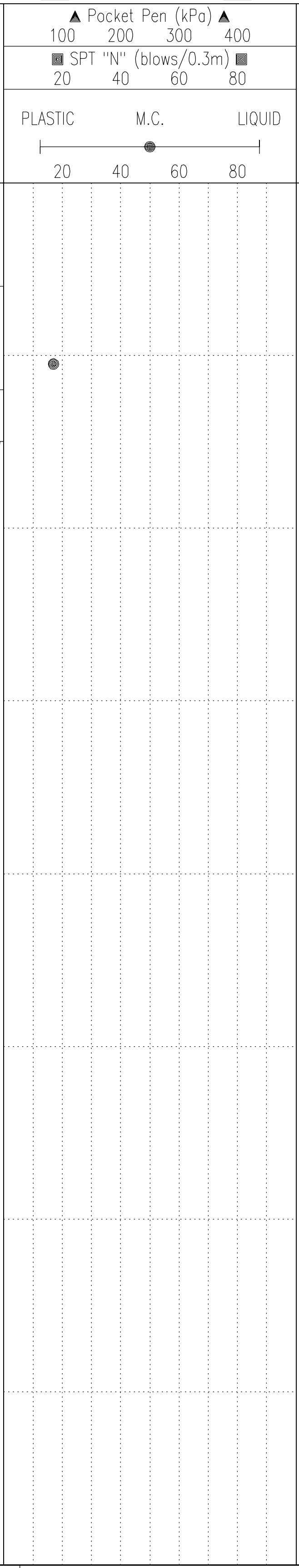
PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-18
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: FROST BOILS (SEE FIGURE 2)	UTM ZONE: 12 N354242.1 E700926	ELEVATION: 302.45 m

SAMPLE TYPE ■ SHELBY TUBE ▨ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE

Depth(m)	SAMPLE TYPE	SPT(N)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	ELEVATION(m)
0.0			GRAVEL (FILL) - some sand, trace to some cobbles, trace silt, trace clay, angular (100 mm minus)	UNFROZEN	
	■		CLAY (FILL) - silty, some sand, trace gravel, medium grey -bulk density = 2123 kg/m3		302.0
	■		SAND (TAILINGS) - some silt, trace clay, trace gravel, oxidized, rust red to light brown		
			END OF AUGER HOLE (0.8 m) -at refusal on probable bedrock -Diamond drilled to 10.5 m, granitic rock core, light grey -25 mm PVC standpipe piezometer, installed to 0.8 m; bottom 0.5 m slotted -installed nine-bead thermistor cable to 10.0 m below grade		
1.0					301.0
2.0					300.0
3.0					299.0
4.0					



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LOGGED BY: RSG	COMPLETION DEPTH: 0.8 m
REVIEWED BY: TEH	COMPLETE: 08/23/05
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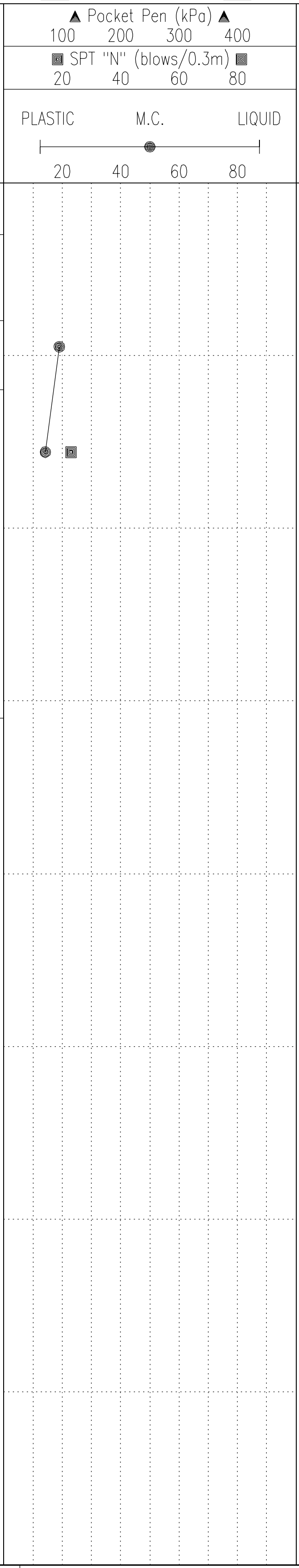
05/11/30 11:19AM (1740082)

PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-19
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: RUNWAY (SEE FIGURE 2)	UTM ZONE: 12 N354235.7 E700945	ELEVATION: 308.30 m

SAMPLE TYPE ■ SHELBY TUBE ◿ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE

Depth(m)	SAMPLE TYPE	SPT(N)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	ELEVATION(m)
0.0			GRAVEL (FILL) - some sand, trace silt, trace clay (20 mm minus)	UNFROZEN	
			GRAVEL (FILL) - some gravel, some clay, trace silt		308.0
	SHELBY TUBE		CLAY (FILL) - silty, some cobbles, some sand, trace gravel, medium grey		
	SPT	23	SAND (TAILINGS) - some silt, trace clay, trace gravel, very stiff, oxidized, rusty red to light brown		
1.0					307.0
			END OF AUGER HOLE (1.6 m) -at refusal on probable bedrock -diamond drilled to 10.5 m, granitic rock core,light grey -some sloughing occured before installation of PVC pipe, installed nine-bead thermistor cable to 9.8 m below grade		
2.0					306.0
3.0					305.0
4.0					



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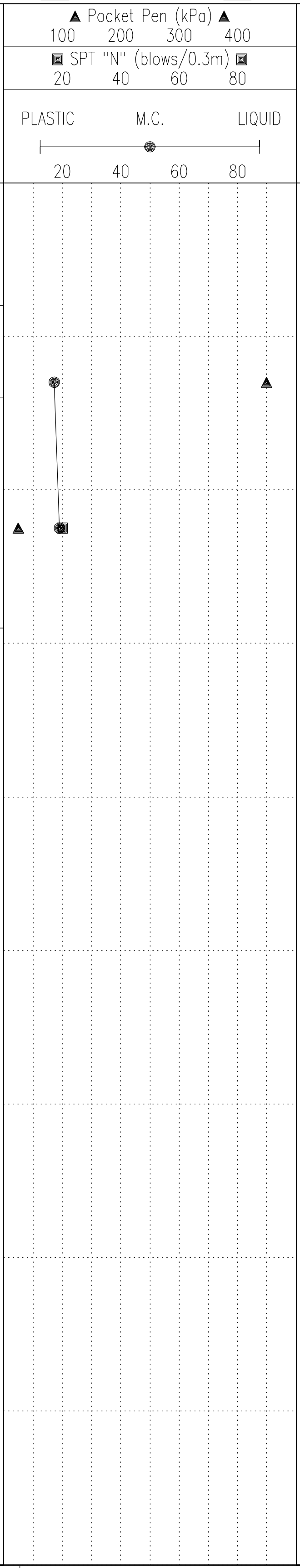
Yellowknife, N.W.T.

LOGGED BY: RSG
REVIEWED BY: TEH
COMPLETION DEPTH: 1.6 m
COMPLETE: 08/25/05

PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-20
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: RUNWAY (SEE FIGURE 2)	UTM ZONE: 12 N354159.6 E700916	ELEVATION: 302.30 m

SAMPLE TYPE ■ SHELBY TUBE ⧄ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE



Depth(m)	SAMPLE TYPE	SPT(N)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	ELEVATION(m)
0.0			GRAVEL (FILL) - some sand, trace silt, trace clay (20 mm minus) GRAVEL (FILL) - some gravel, some clay, trace silt	UNFROZEN	
					302.0
	■		CLAY (FILL) - silty, some cobbles, some sand, trace gravel, hard, medium grey -bulk density = 1987 kg/m3		
			SAND (TAILINGS) - some silt, trace clay, trace gravel, oxidized		
1.0	☒	20	-very stiff		
					301.0
			END OF BOREHOLE (1.5 m) -at refusal on possible bedrock -diamond drilled to 10.7 m -recovered shattered rock as core -installed nine-bead thermistor cable to 10.3 m below grade		
2.0					
					300.0
3.0					
					299.0
4.0					
			-sound bedrock		298.0

EBA Engineering Consultants Ltd. Yellowknife, N.W.T.	LOGGED BY: RSG	COMPLETION DEPTH: 1.5 m
	REVIEWED BY: TEH	COMPLETE: 08/23/05
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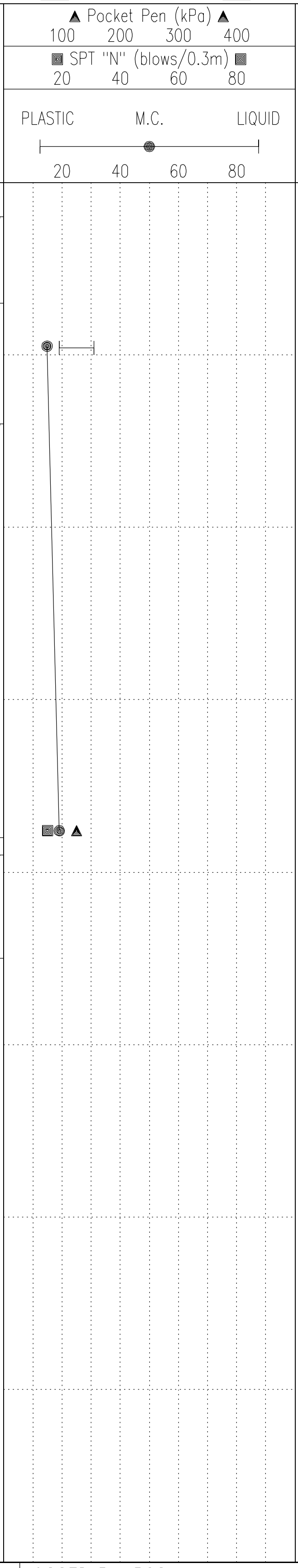
PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-21
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: RUNWAY (SEE FIGURE 2)	UTM ZONE: 12 N354076.6 E700884	ELEVATION: 302.21 m

SAMPLE TYPE ■ SHELBY TUBE ▨ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE

Depth(m)	SAMPLE TYPE	SPT(N)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	ELEVATION(m)
0.0			GRAVEL (FILL) - some sand, trace silt, trace clay (20 mm minus)	UNFROZEN	
			GRAVEL (FILL) - some gravel, some clay, trace silt		302.0
	■		CLAY (FILL) - silty, some cobbles, some sand, trace gravel, medium plastic, medium grey gravel=2%, sand=13%, silt=58%, clay=27% -bulk density = 2247 kg/m3		
			SILT (tailings) - sandy, some gravel, trace clay, nonplastic, oxidized		
1.0					301.0
	☒	15	-stiff gravel=12%, sand=22%, silt=61%, clay=5%		
			PEAT - organic material, black		
2.0			SAND - silty, some gravel, yellowish, light brown		
			END OF AUGER HOLE (2.2 m) -at refusal on probable bedrock -diamond drilled to 11.0 m -installed nine-bead thermistor cable to 10.3 m below grade		300.0
3.0					299.0
4.0					



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Yellowknife, N.W.T.

LOGGED BY: RSG	COMPLETION DEPTH: 2.2 m
REVIEWED BY: TEH	COMPLETE: 08/24/05
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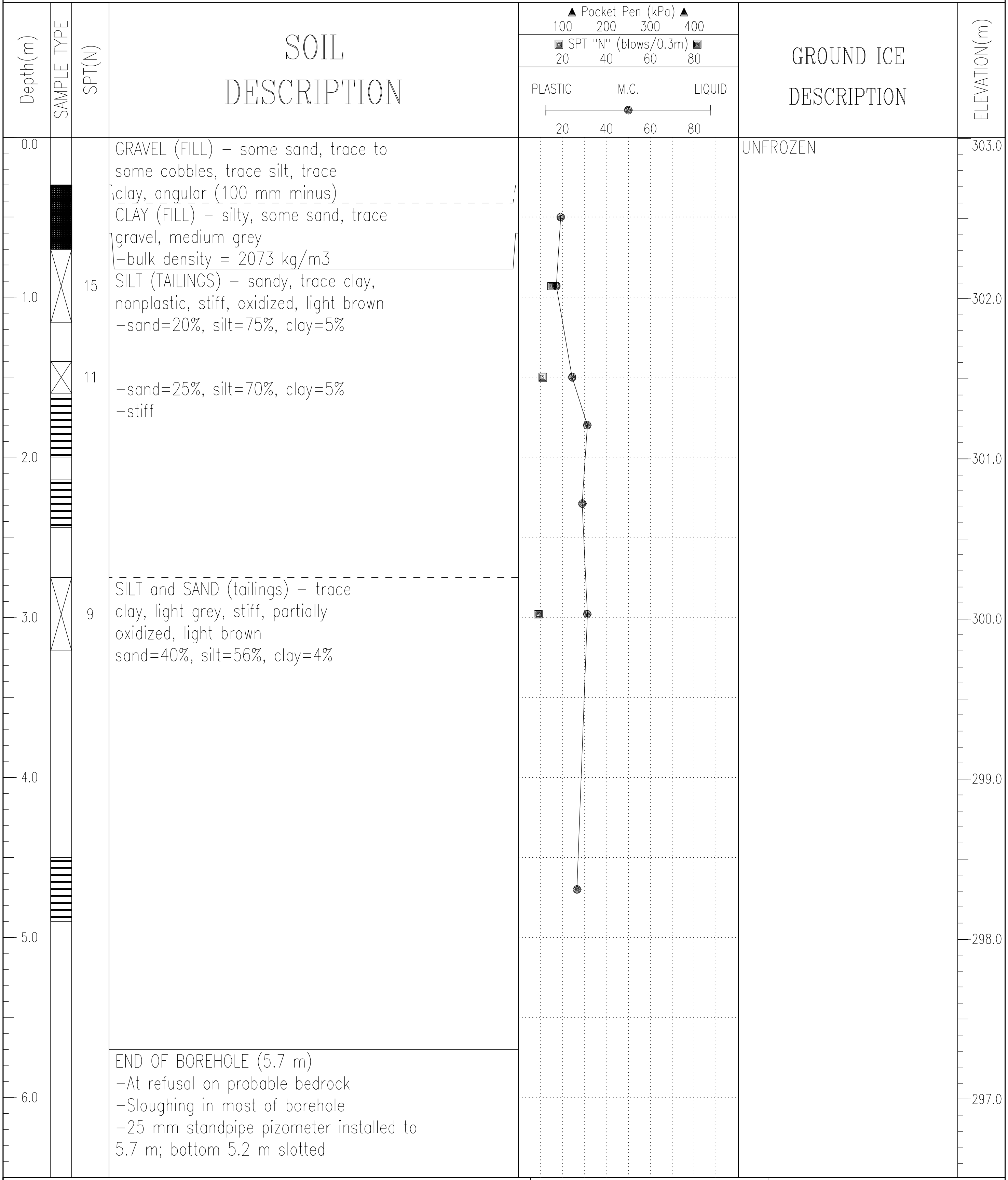
05/11/30 11:20AM (1740082)

PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-22
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: SHOULDER (SEE FIGURE 2)	UTM ZONE: 12 N354174.7 E700916	ELEVATION: 303.01 m

SAMPLE TYPE ▩ SHELBY TUBE ◪ NO RECOVERY ☒ SPT ☰ DISTURBED ◫ A-CASING ▮ CORE



GRAVEL (FILL) - some sand, trace to some cobbles, trace silt, trace clay, angular (100 mm minus)

CLAY (FILL) - silty, some sand, trace gravel, medium grey
-bulk density = 2073 kg/m3

SILT (TAILINGS) - sandy, trace clay, nonplastic, stiff, oxidized, light brown
-sand=20%, silt=75%, clay=5%

-sand=25%, silt=70%, clay=5%
-stiff

SILT and SAND (tailings) - trace clay, light grey, stiff, partially oxidized, light brown
sand=40%, silt=56%, clay=4%

END OF BOREHOLE (5.7 m)
-At refusal on probable bedrock
-Sloughing in most of borehole
-25 mm standpipe pizometer installed to 5.7 m; bottom 5.2 m slotted

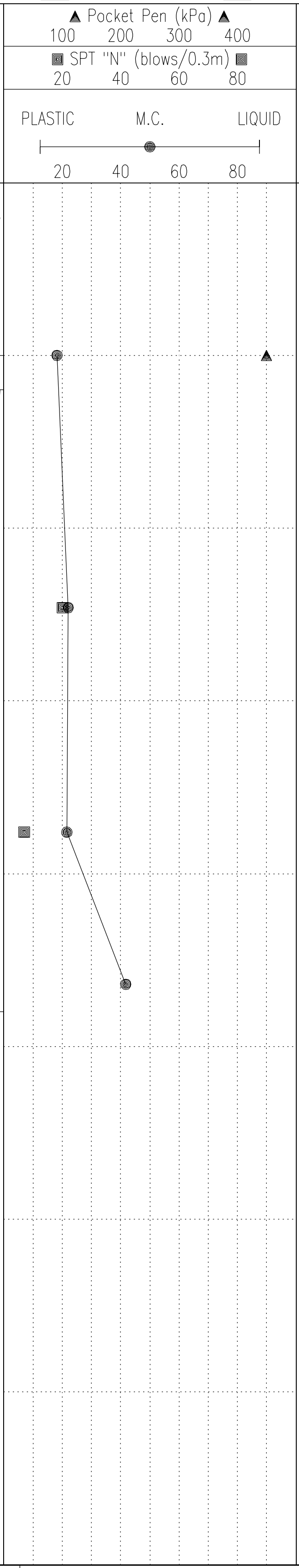
UNFROZEN

EBA Engineering Consultants Ltd. Yellowknife, N.W.T.	LOGGED BY: RSG	COMPLETION DEPTH: 5.7 m
	REVIEWED BY: TEH	COMPLETE: 08/22/05
		Page 1 of 1

PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-23
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: RUNWAY:(SEE FIGURE 2)	UTM ZONE: 12 N354272.7 E700955	ELEVATION: 309.36 m

SAMPLE TYPE ■ SHELBY TUBE ◿ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE

Depth(m)	SPT(N)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	ELEVATION(m)
0.0		GRAVEL (FILL) - some sand, trace silt, trace clay (20 mm minus)	UNFROZEN	
		GRAVEL (FILL) - some clay, some silt, trace gravel		309.0
		CLAY (FILL) - silty, some sand, trace gravel, medium grey -bulk density = 2130 kg/m3		
		SAND and SILT (TAILINGS) - trace clay, trace gravel dark brown to oxidized red		
1.0				
	20	-very stiff		308.0
	7	-firm		
2.0				
				307.0
		END OF BOREHOLE (2.4 m) -At refusal on probable bedrock		
3.0				306.0
4.0				



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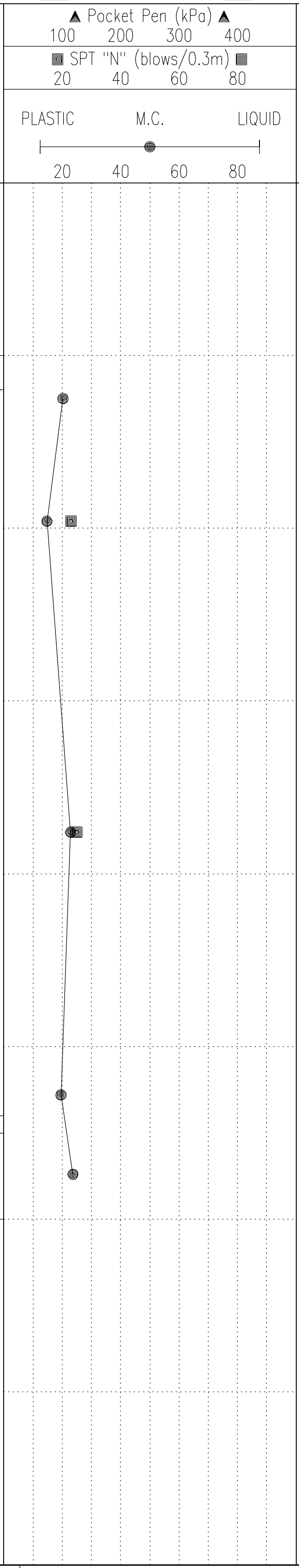
LOGGED BY: RSG	COMPLETION DEPTH: 2.4 m
REVIEWED BY: TEH	COMPLETE: 08/10/05

PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-24
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCTION: RUNWAY (SEE FIGURE 2)	UTM ZONE: 12 N3541181 E700901	ELEVATION: 302.91 m

SAMPLE TYPE ■ SHELBY TUBE ◿ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE



Depth(m)	SPT(N)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	ELEVATION(m)
0.0		GRAVEL (FILL) - some sand, trace silt, trace clay (20 mm minus)	UNFROZEN	
		GRAVEL (FILL) - some clay, some silt, trace gravel,		
		CLAY (FILL) - silty, some sand, trace gravel, medium grey		
		SAND and SILT (TAILINGS) - trace clay, trace gravel, oxidized		
				302.0
1.0	23	-very stiff		
	25	-very stiff	FROZEN,Vx 5%	301.0
2.0				
		PEAT - organic, black		
		SILT (TILL) - some sand, some clay, trace gravel, dark grey		300.0
3.0		END OF BOREHOLE (3.0 m) -at refusal on probable bedrock		
				299.0
4.0				

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Yellowknife, N.W.T.

LOGGED BY: RSG	COMPLETION DEPTH: 3 m
REVIEWED BY: TEH	COMPLETE: 08/23/05
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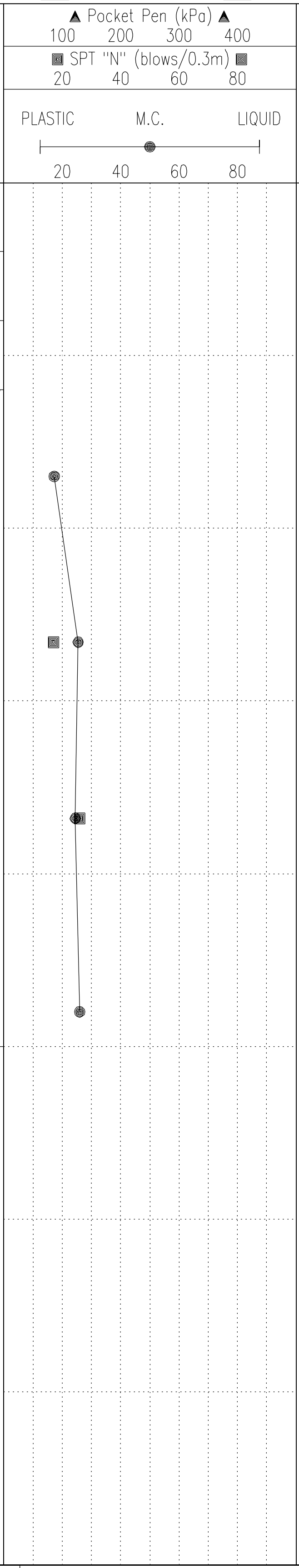
PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-25
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: RUNWAY (SEE FIGURE 2)	UTM ZONE: 12 N354127.6 E700901	ELEVATION: 302.77 m

SAMPLE TYPE ▇ SHELBY TUBE ⧄ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE



Depth(m)	SAMPLE TYPE	SPT(N)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	ELEVATION(m)
0.0			GRAVEL (FILL) - some sand, trace silt, trace clay (20 mm minus)	UNFROZEN	
			GRAVEL (FILL) - some clay, some silt, trace gravel		
			CLAY (FILL) silty, some sand, trace gravel, medium grey -bulk density = 1779 kg/m3		
	▇		SAND and SILT (TAILINGS) - trace clay, trace gravel, oxidized, light brown		302.0
1.0	▇				
	☒	17	-very stiff		
	☒	26	-very stiff		301.0
2.0	☒				
	☰				
			END OF BOREHOLE (2.5 m) -At refusal on probable bedrock		300.0
3.0					
					299.0
4.0					

EBA Engineering Consultants Ltd. Yellowknife, N.W.T.	LOGGED BY: RSG	COMPLETION DEPTH: 2.5 m
	REVIEWED BY: TEH	COMPLETE: 08/23/05
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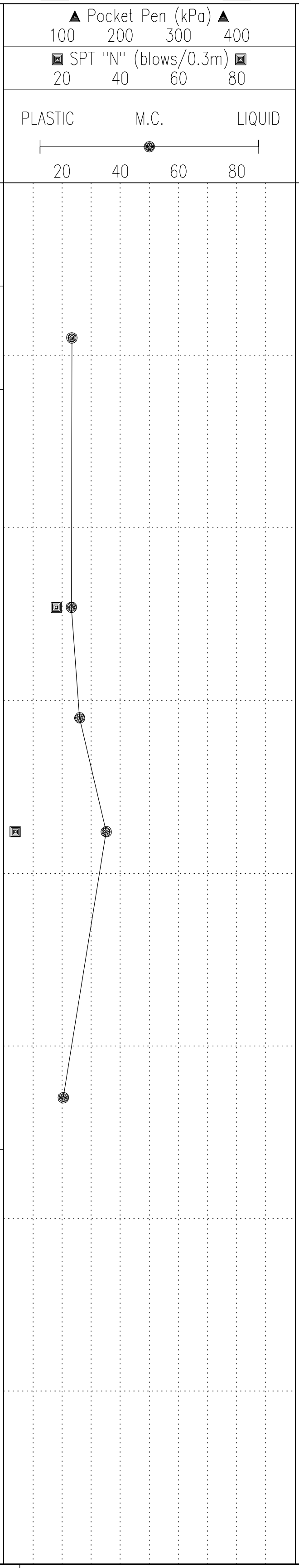
PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-26
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: SHOULDER (SEE FIGURE 2)	UTM ZONE: 12 N354089.1 E700884	ELEVATION: 301.89 m

SAMPLE TYPE ■ SHELBY TUBE ▨ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE

Depth(m)	SPT(N)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	ELEVATION(m)
0.0		GRAVEL (FILL) – some sand, trace to some cobbles, trace silt, trace clay, angular (100 mm minus)	UNFROZEN	
		CLAY (TILL) – silty, some sand, trace gravel, medium grey		
		SAND and SILT (TAILINGS) – trace clay, trace gravel, oxidized, light brown		
				301.0
1.0				
	18	–very stiff		
	4	–firm	FROZEN, Vx 5%	300.0
2.0				
		END OF BOREHOLE (2.8) –at refusal on probable bedrock –25 mm PVC standpipe piezopmeter installed to 2.6 m; bottom 2.1 m slotted –some sloughing at completion		299.0
3.0				
				298.0
4.0				



EBA Engineering Consultants Ltd. Yellowknife, N.W.T.	LOGGED BY: RSG	COMPLETION DEPTH: 2.8 m
	REVIEWED BY: TEH	COMPLETE: 08/23/05
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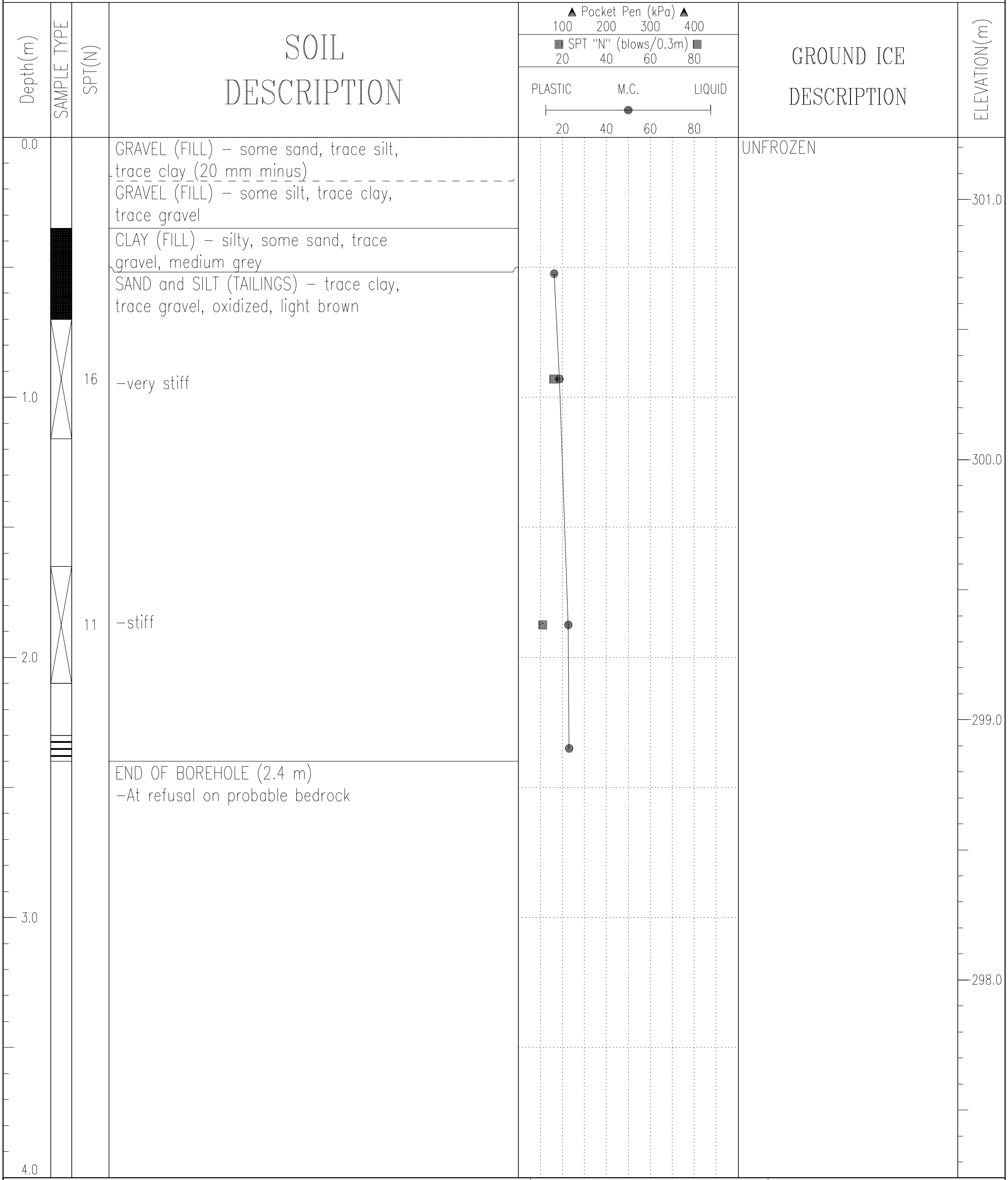
PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-27
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: RUNWAY (SEE FIGURE 2)	UTM ZONE: 12 N354033.5 E700872	ELEVATION: 301.24 m

SAMPLE TYPE ■ SHELBY TUBE ◸ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE



GRAVEL (FILL) - some sand, trace silt, trace clay (20 mm minus)

GRAVEL (FILL) - some silt, trace clay, trace gravel

CLAY (FILL) - silty, some sand, trace gravel, medium grey

SAND and SILT (TAILINGS) - trace clay, trace gravel, oxidized, light brown

-very stiff

-stiff

END OF BOREHOLE (2.4 m)
-At refusal on probable bedrock

UNFROZEN

EBA Engineering Consultants Ltd. Yellowknife, N.W.T.	LOGGED BY: RSG	COMPLETION DEPTH: 2.4 m
	REVIEWED BY: TEH	COMPLETE: 08/24/05
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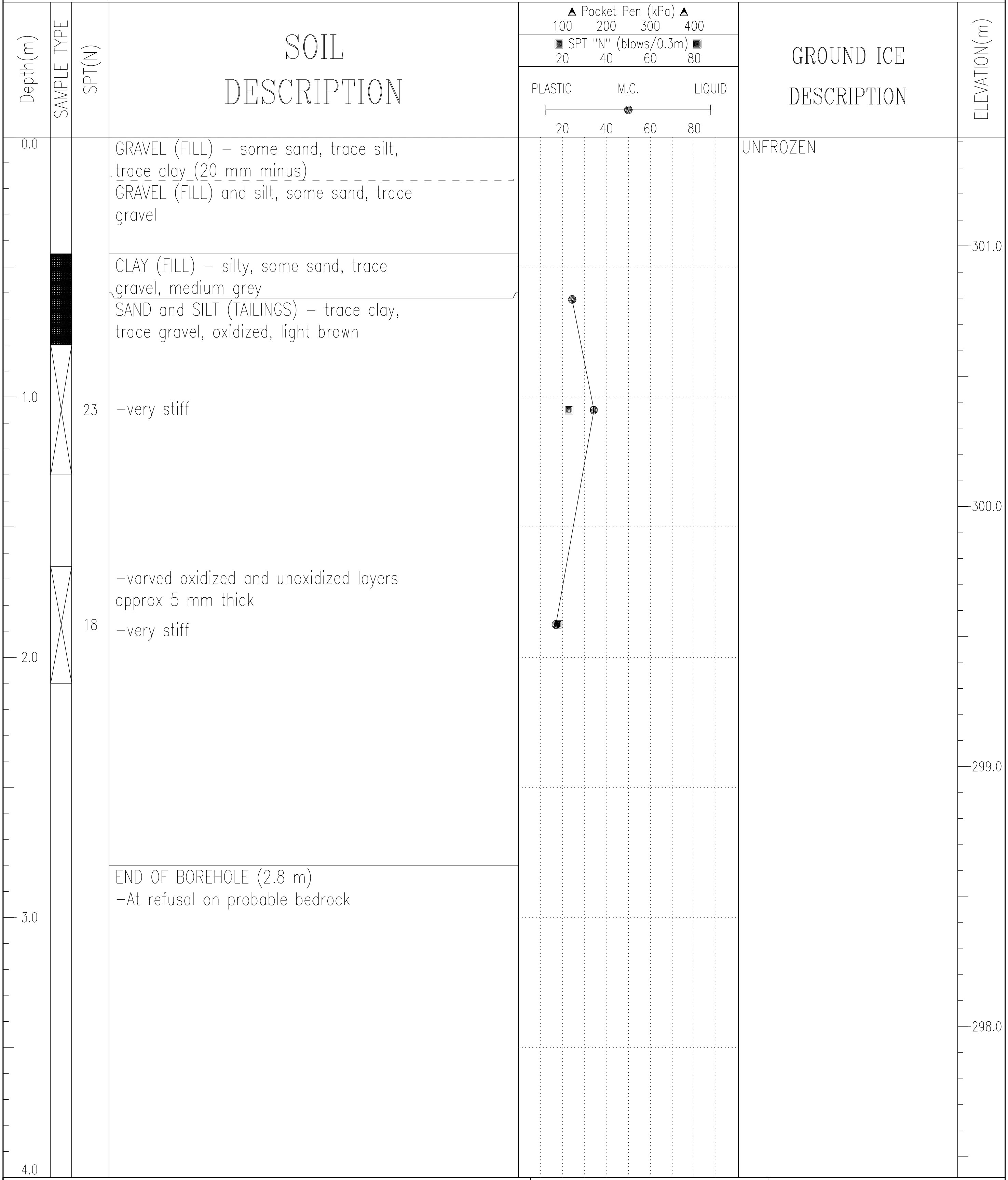
PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-28
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: RUNWAY (SEE FIGURE 2)	UTM ZONE: 12 N354042.9 E700872	ELEVATION: 301.42 m

SAMPLE TYPE ■ SHELBY TUBE ▨ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE

SAMPLE TYPE	SPT(N)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION
		GRAVEL (FILL) - some sand, trace silt, trace clay (20 mm minus)	UNFROZEN
		GRAVEL (FILL) and silt, some sand, trace gravel	
SHELBY TUBE		CLAY (FILL) - silty, some sand, trace gravel, medium grey	
		SAND and SILT (TAILINGS) - trace clay, trace gravel, oxidized, light brown	
SPT	23	-very stiff	
SPT		-varved oxidized and unoxidized layers approx 5 mm thick	
	18	-very stiff	
		END OF BOREHOLE (2.8 m) -At refusal on probable bedrock	



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LOGGED BY: RSG	COMPLETION DEPTH: 2.8 m
REVIEWED BY: TEH	COMPLETE: 08/24/05
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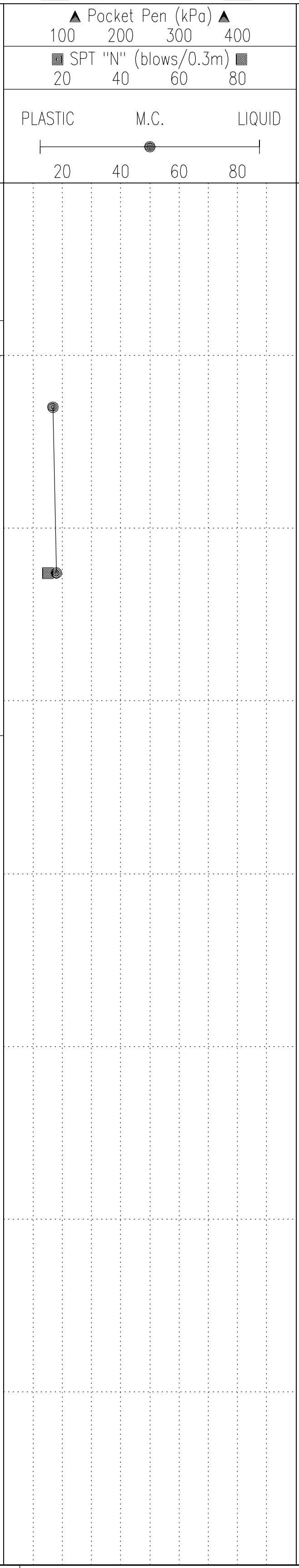
PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-29
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: RUNWAY (SEE FIGURE 2)	UTM ZONE: 12 N354053.7 E700872	ELEVATION: 301.29 m

SAMPLE TYPE ▪ SHELBY TUBE ◿ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE

Depth(m)	SAMPLE TYPE	SPT(N)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	ELEVATION(m)
0.0			GRAVEL (FILL) - some sand, trace silt, trace clay (20 mm minus)	UNFROZEN	
			GRAVEL (FILL) and silt - some sand, trace gravel		301.0
	▪		CLAY (FILL) - silty, some sand, trace gravel, medium grey		
	▪		SAND and SILT (TAILINGS) - trace clay, trace gravel, oxidized, light brown		
1.0	☒	15	-very stiff		300.0
			END OF BOREHOLE (1.6 m) -At refusal on probable bedrock		
2.0					299.0
3.0					298.0
4.0					



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Yellowknife, N.W.T.

LOGGED BY: RSG	COMPLETION DEPTH: 0.8 m
REVIEWED BY: TEH	COMPLETE: 08/24/05
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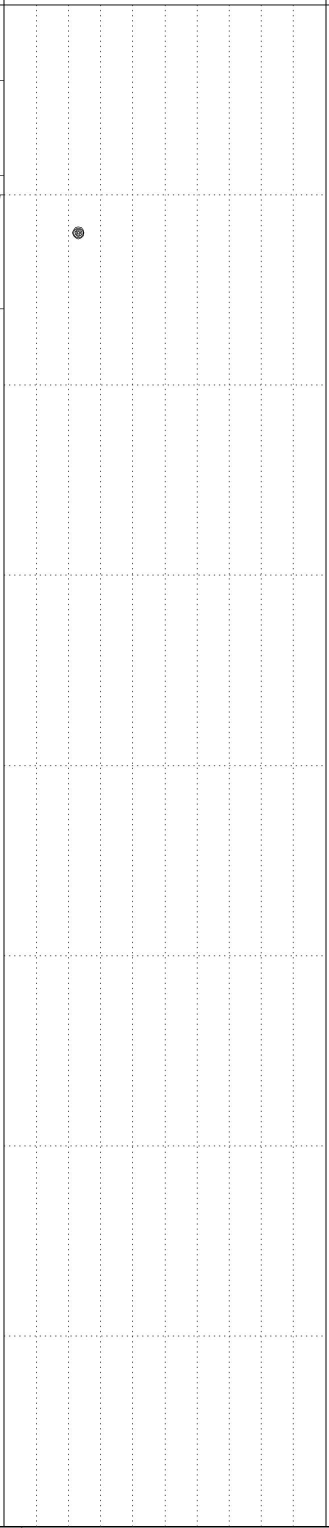
PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-30
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: RUNWAY (SEE FIGURE 2)	UTM ZONE: 12 N354190.8 E700932	ELEVATION: 305.43 m

SAMPLE TYPE ■ SHELBY TUBE ⧄ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE

Depth(m)	SAMPLE TYPE	SPT(N)	SOIL DESCRIPTION	▲ Pocket Pen (kPa) ▲ 100 200 300 400 ▨ SPT "N" (blows/0.3m) ▨ 20 40 60 80 PLASTIC M.C. LIQUID 20 40 60 80	GROUND ICE DESCRIPTION	ELEVATION(m)
0.0			GRAVEL (FILL) - some sand, trace silt, trace clay (20 mm minus)		UNFROZEN	
			GRAVEL (FILL) - some silt, some sand, trace gravel			
	■		CLAY (FILL) - silty, some sand, trace gravel, medium grey			305.0
	■		SAND and SILT (TAILINGS) - trace clay, trace gravel, oxidized			
			END OF BOREHOLE (0.8 m) -At refusal on probable bedrock			
1.0						304.0
2.0						303.0
3.0						302.0
4.0						



EBA Engineering Consultants Ltd. Yellowknife, N.W.T.	LOGGED BY: RSG	COMPLETION DEPTH: 0.8 m
	REVIEWED BY: TEH	COMPLETE: 08/24/05
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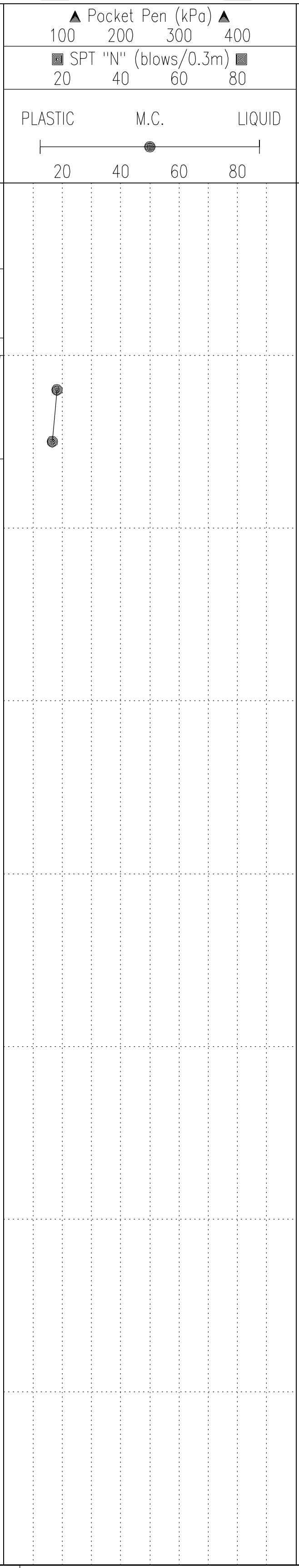
PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-31
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: RUNWAY (SEE FIGURE 2)	UTM ZONE: 12 N354198.4 E700931	ELEVATION: 305.50 m

SAMPLE TYPE ▨ SHELBY TUBE ⧄ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE



Depth(m)	SAMPLE TYPE	SPT(N)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	ELEVATION(m)
0.0			GRAVEL (FILL) – some sand, trace silt, trace clay (20 mm minus)	UNFROZEN	
			GRAVEL (FILL) – some silt, some sand, trace gravel		
	▨		CLAY (FILL) – silty, some sand, trace gravel, medium grey		305.0
	☰		SAND and SILT (TAILINGS) – trace clay, trace gravel, oxidized		
			END OF BOREHOLE (0.8 m) –At refusal on probable bedrock		
1.0					
					304.0
2.0					
					303.0
3.0					
					302.0
4.0					

EBA Engineering Consultants Ltd. Yellowknife, N.W.T.	LOGGED BY: RSG	COMPLETION DEPTH: 0.8 m
	REVIEWED BY: TEH	COMPLETE: 08/24/05
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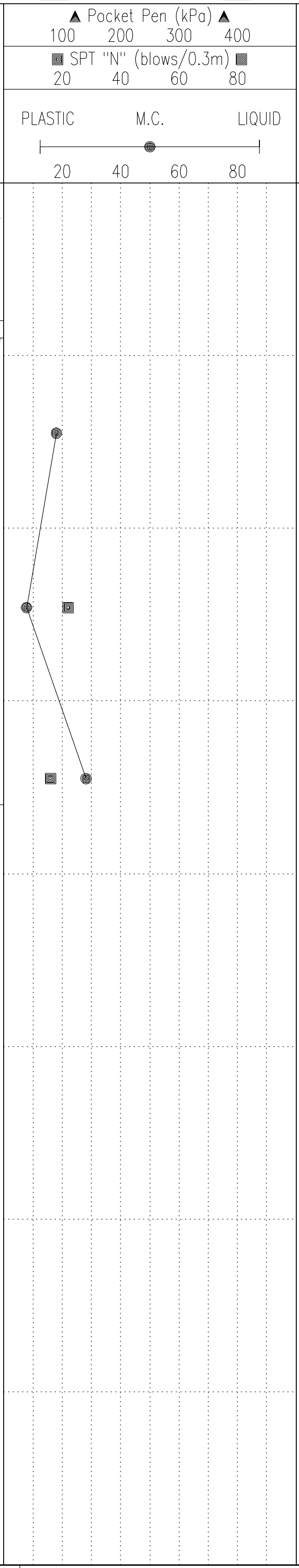
PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-32
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: RUNWAY (SEE FIGURE 2)	UTM ZONE: 12 N354208.3 E700931	ELEVATION: 305.17 m

SAMPLE TYPE ▦ SHELBY TUBE ▱ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE

Depth(m)	SAMPLE TYPE	SPT(N)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	ELEVATION(m)
0.0			GRAVEL (FILL) - some sand, trace silt, trace clay (20 mm minus)	UNFROZEN	
			GRAVEL (FILL) and clay - some silt, trace gravel		305.0
	▦		CLAY (FILL) - silty, some sand, trace gravel, medium grey		
	▦		SAND and SILT (TAILINGS) - trace clay, trace gravel, oxidized		
1.0					
	☒	22	-very stiff		304.0
	☒	16	-very stiff	(8 blows/150 mm)	
			END OF BOREHOLE (1.8 m) -At refusal on probable bedrock		
2.0					
					303.0
3.0					
					302.0
4.0					



EBA Engineering Consultants Ltd.	LOGGED BY: RSG	COMPLETION DEPTH: 1.8 m
Yellowknife, N.W.T.	REVIEWED BY: TEH	COMPLETE: 08/24/05
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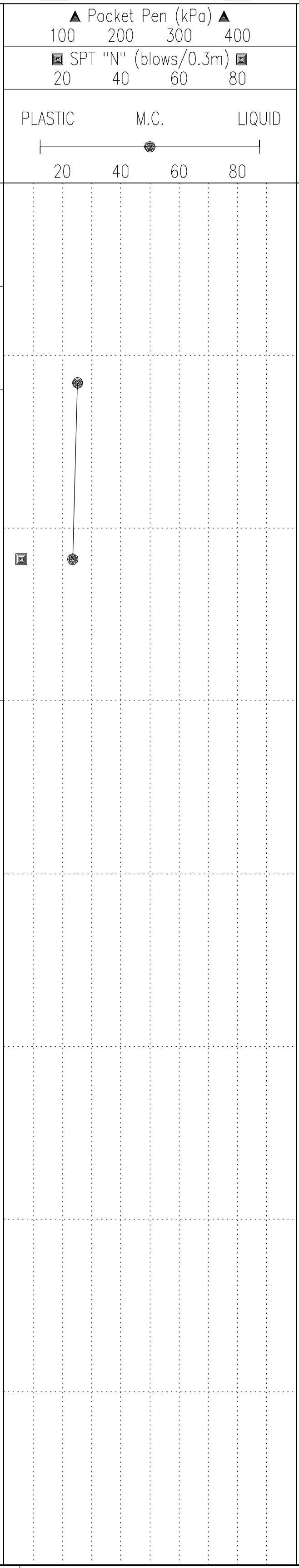
PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-33
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: SHOULDER (SEE FIGURE 2)	UTM ZONE: 12 N354202 E700938	ELEVATION: 306.53 m

SAMPLE TYPE ■ SHELBY TUBE ◿ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE

Depth(m)	SAMPLE TYPE	SPT(N)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	ELEVATION(m)
0.0			GRAVEL (FILL) - some sand, trace to some cobbles, trace silt, trace clay, angular (100 mm minus)	UNFROZEN	
	■		CLAY (FILL) - silty, some sand, trace gravel, medium grey		306.0
	■		SAND and SILT (TAILINGS) - trace clay, trace gravel, oxidized, light brown		
1.0	☒	6	-firm		
			END OF BOREHOLE (1.5 m) -at refusal on probable bedrock 25 mm PVC standpipe piezometer installed to 1.5 m; bottom 1.0 m slotted -no water or slough		305.0
2.0					
					304.0
3.0					
					303.0
4.0					



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Yellowknife, N.W.T.

LOGGED BY: RSG	COMPLETION DEPTH: 1.5 m
REVIEWED BY: TEH	COMPLETE: 08/25/05
	Page 1 of 1

05/11/30 11:24AM (1740082)

PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-34
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: SHOULDER (SEE FIGURE 2)	UTM ZONE: 12 N354229.9 E700937	ELEVATION: 306.38 m

SAMPLE TYPE ▩ SHELBY TUBE ◿ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE

Depth(m) | SAMPLE TYPE | SPT(N) | SOIL DESCRIPTION | GROUND ICE DESCRIPTION | ELEVATION(m)

0.0

GRAVEL (FILL) - some sand, trace to some cobbles, trace silt, trace clay, angular (100 mm minus)

CLAY (FILL) - silty, some sand, trace gravel, medium grey
-bulk density- 2093 kg/m3

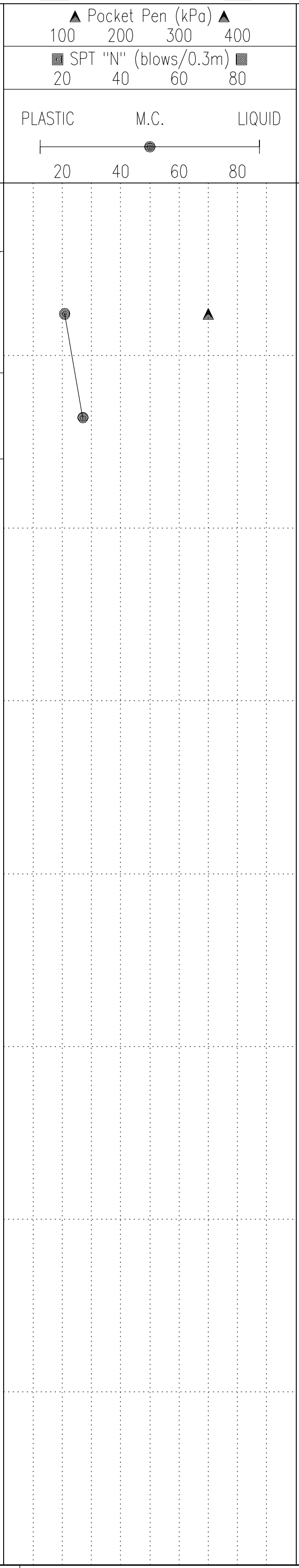
SAND and SILT (TAILINGS) - trace clay, trace gravel, oxidized, rust red to light brown

END OF BOREHOLE (0.8 m)
-at refusal on probable bedrock
-25 mm PVC pipe installed to 0.8 m; bottom 0.5 m slotted
-no slough or water at completion

GROUND ICE DESCRIPTION: UNFROZEN

Depth: 0.0, 1.0, 2.0, 3.0, 4.0

Elevation: 306.0, 305.0, 304.0, 303.0



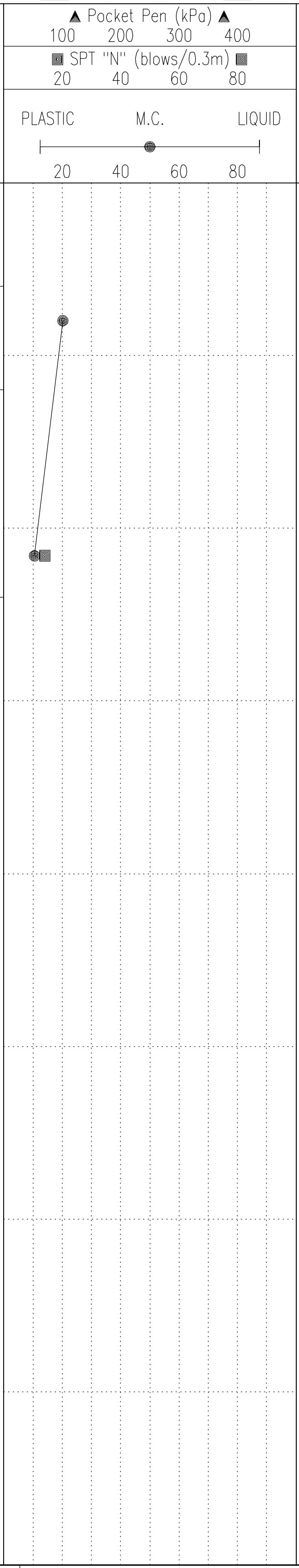
EBA Engineering Consultants Ltd. Yellowknife, N.W.T.	LOGGED BY: RSG	COMPLETION DEPTH: 0.8 m
	REVIEWED BY: TEH	COMPLETE: 08/25/05
		Page 1 of 1

05/11/30 11:25AM (1740082)

PROJECT: RUNWAY SITE INVESTIGATION	CLIENT: TYHEE NWT CORP.	BOREHOLE NO: BH-35
TYHEE SITE, GIAUQUE LAKE, N.W.T.	DRILL: TFD-8 (TITAN DRILLING)	PROJECT NO: 1740082.022
LOCATION: SHOULDER (SEE FIGURE 2)	UTM ZONE: 12 N354249.8 E700945	ELEVATION: 308.16 m

SAMPLE TYPE ■ SHELBY TUBE ◿ NO RECOVERY ☒ SPT ☰ DISTURBED ▥ A-CASING ▮ CORE

Depth(m)	SAMPLE TYPE	SPT(N)	SOIL DESCRIPTION	GROUND ICE DESCRIPTION	ELEVATION(m)
0.0			GRAVEL (FILL) - some sand, trace to some cobbles, tace silt, trace clay, angular (100 mm minus)	UNFROZEN	308.0
	■		CLAY (FILL) - silty, some sand, trace gravel, medium grey		
	■		SAND and SILT (TAILINGS) - trace clay, trace gravel, oxidized sand=40%, silt=60%, clay=5%		
1.0	☒	14	-very stiff	(7 blows/150 mm)	307.0
			END OF BOREHOLE (1.2 m) -at refusal on probable bedrock -25 mm PVC standpipe piezometer installed to 1.2 m; bottom 0.7 m slotted -no slough or water at completion		
2.0					306.0
3.0					305.0
4.0					



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Yellowknife, N.W.T.

LOGGED BY: RSG	COMPLETION DEPTH: 1.2 m
REVIEWED BY: TEH	COMPLETE: 08/25/05
	Page 1 of 1

05/11/30 11:25AM (1740082)

APPENDIX

APPENDIX C LABORATROY TEST RESULTS

TABLE C-1
TYHEE AIRSTRIP SITE INVESTIGATION
LABORATORY TEST RESULT SUMMARY

Borehole	Depth Top (m)	Bottom (m)	Soil Type	Moisture Content (%)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	Liquid Limit	Plastic Limit	Bulk Density (kg/m3)	Modified Proctor		California Bearing Ratio (lb. @ 0.1")	
												MDD (kg/m3)	Optimum (%)	Unsoaked	Soaked
1	0.3	0.9	Clay (Fill)	19.0											
1	0.9	1.4	Sand (Tailings)	20.0											
1	1.5	2.0	Sand (Tailings)	13.4											
1	2.0	2.3	Sand (Tailings)	8.5											
2	0.2	0.7	Clay (Fill)	21.7											
2	0.7	0.8	Sand (Tailings)	19.7							2006				
2	0.8	1.3	Sand (Tailings)	18.6											
2	1.1	1.3	Sand (Tailings)	20.8											
3	0.3	0.9	Clay (Fill)	18.8											
3	0.9	1.3	Sand (Tailings)	27.6											
4	0.3	0.9	Clay (Fill)	11.4											
4	0.9	1.1	Sand (Tailings)	12.4											
5	0.5	1.1	Clay (Fill)	22.6		9	62	29							
5	1.1	1.6	Sand (Tailings)	25.7											
5	1.6	2.0	Sand (Tailings)	22.3	7	16	68	9							
6	0.7	1.3	Clay (Fill)	19.5											
6	1.3	1.4	Sand (Tailings)	25.3											
6	1.4	1.5	Sand (Tailings)	28.0											
7	0.4	0.7	Clay (Fill)	24.2											
7	0.7	1.0	Sand (Tailings)	29.9							1852				
7	1.0	1.4	Sand (Tailings)	26.2											
8	0.4	1.0	Clay (Fill)	17.3											
8	1.0	1.4	Sand (Tailings)	29.4											
8	1.7	2.1	Sand (Tailings)	27.4											
8	2.7	3.2	Peat	20.3											
8	3.4	3.5	Silt (Till)	20.6											
9	0.3	0.9	Clay (Fill)	17.4											
9	0.9	1.4	Sand (Tailings)	16.5											
9	1.7	2.1	Sand (Tailings)	26.3											
9	2.4	2.4	Sand (Tailings)	22.5											

Note: 1 - n.d. denotes not determined
2 - NP denotes nonplastic

TABLE C-1
TYHEE AIRSTRIP SITE INVESTIGATION
LABORATORY TEST RESULT SUMMARY

Borehole	Depth Top (m)	Bottom (m)	Soil Type	Moisture Content (%)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	Liquid Limit	Plastic Limit	Bulk Density (kg/m3)	Modified Proctor MDD (kg/m3)	Modified Proctor Optimum (%)	California Bearing Ratio (lb. @ 0.1") Unsoaked	California Bearing Ratio (lb. @ 0.1") Soaked
10	0.3	0.9	Clay (Fill)	10.8											
10	0.9	1.4	Sand (Tailings)	15.8											
11	0.3	0.9	Clay (Fill)	15.6											
11	0.9	1.4	Sand (Tailings)	26.8											
11	1.7	2.1	Silt (Tailings)	27.1	1	21	62	16	27	18					
11	3.2	3.5	Peat	18.9											
12	0.3	0.6	Clay (Fill)	21.7											
12	0.6	0.9	Sand (Tailings)	19.9							1992				
12	1.1	1.5	Sand (Tailings)	30.6											
12	1.7	2.1	Silt and Sand (Tailings	34.0											
12	2.4	2.7	Silt and Sand (Tailings	28.8											
12	3.0	3.5	Silt and Sand (Tailings	36.0											
13	0.3	0.6	Clay (Fill)	8.8											
13	0.6	0.9	Silt (Tailings)	13.4							1909				
13	0.9	1.3	Sand (Tailings)	20.0											
13	1.7	2.1	Sand (Tailings)	34.7											
14	0.6	0.9	Silt and Sand (Tailings	12.7											
14	0.9	1.4	Silt and Sand (Tailings	12.6											
15	0.1	0.4	Gravel (Fill; Armour)	0.8	69	24	5	2							
15	0.4	0.5	Gravel (Fill; Armour)	n.d.	67	12	2	1							
15	0.5	0.7	Clay (Fill)	13.4											
15	0.7	1.2	Silt and Sand (Tailings	6.8											
16	0.6	1.1	Silt and Sand (Tailings	11.4											
16	1.7	2.1	Silt and Sand (Tailings	15.2											
16	2.6	2.8	Silt and Sand (Tailings	25.0											
16	3.1	3.3	Silt and Sand (Tailings	11.5	15	37	43	5		NP					

Note: 1 - n.d. denotes not determined
2 - NP denotes nonplastic

TABLE C-1
TYHEE AIRSTRIP SITE INVESTIGATION
LABORATORY TEST RESULT SUMMARY

Borehole	Depth		Soil	Moisture	Gravel	Sand	Silt	Clay	Liquid	Plastic	Bulk	Modified Proctor		California Bearing	
	Top	Bottom	Type	Content					Limit	Limit	Density	MDD	Optimum	Ratio (lb. @ 0.1")	
	(m)	(m)		(%)	(%)	(%)	(%)	(%)			(kg/m3)	(kg/m3)	(%)	Unsoaked	Soaked
17	0.3	0.6	Clay (Fill)	13.7		60	38	2		NP					
17	0.6	1.0	Sand (Tailings)	19.7											
17	1.0	1.2	Sand (Tailings)	22.2											
17	1.2	1.7	Silt (Tailings)	25.4	8	22	64	6		NP					
17	1.7	2.1	Peat	84.8											
17	2.1	2.6	Peat	103.9											
18	0.4	0.7	Clay (Fill)	17.0							2123				
19	0.4	0.6	Clay (Fill)	19.0											
19	0.6	1.0	Sand (Tailings)	14.2											
20	0.4	0.9	Clay (Fill)	17.3							1987				
20	0.9	1.4	Sand (Tailings)	19.1											
21	0.4	0.6	Clay (Fill)	14.9	2	13	58	27	31	19	2247				
21	1.7	2.1	Silt (Tailings)	19.4	12	22	61	5		NP					
22	0.3	0.7	Clay (Fill)	19.2							2073				
22	0.7	1.2	Silt (Tailings)	17.3		20	75	5		NP					
22	1.4	1.6	Silt (Tailings)	24.5		25	70	5							
22	1.6	2.0	Silt (Tailings)	31.3											
22	2.1	2.4	Silt (Tailings)	29.1											
22	2.8	3.2	Silt and Sand (Tailings	31.3		40	56	4							
22	4.5	4.9	Silt and Sand (Tailings	26.7											
23	0.4	1.0	Clay (Fill)	18.2							2138				
23	1.0	1.5	Silt and Sand (Tailings	22.1											
23	1.7	2.1	Silt and Sand (Tailings	21.6											
23	2.3	2.4	Silt and Sand (Tailings	41.8											
24	0.5	0.8	Clay (Fill)	20.3											
24	0.8	1.2	Silt and Sand (Tailings	14.8											
24	1.7	2.1	Silt and Sand (Tailings	22.9											
24	2.5	2.7	Silt and Sand (Tailings	19.6											
24	2.7	3.0	Silt (Till)	23.7											
25	0.6	1.1	Silt and Sand (Tailings	17.3							1779				
25	1.1	1.6	Silt and Sand (Tailings	25.5											

Note: 1 - n.d. denotes not determined
2 - NP denotes nonplastic

TABLE C-1
TYHEE AIRSTRIP SITE INVESTIGATION
LABORATORY TEST RESULT SUMMARY

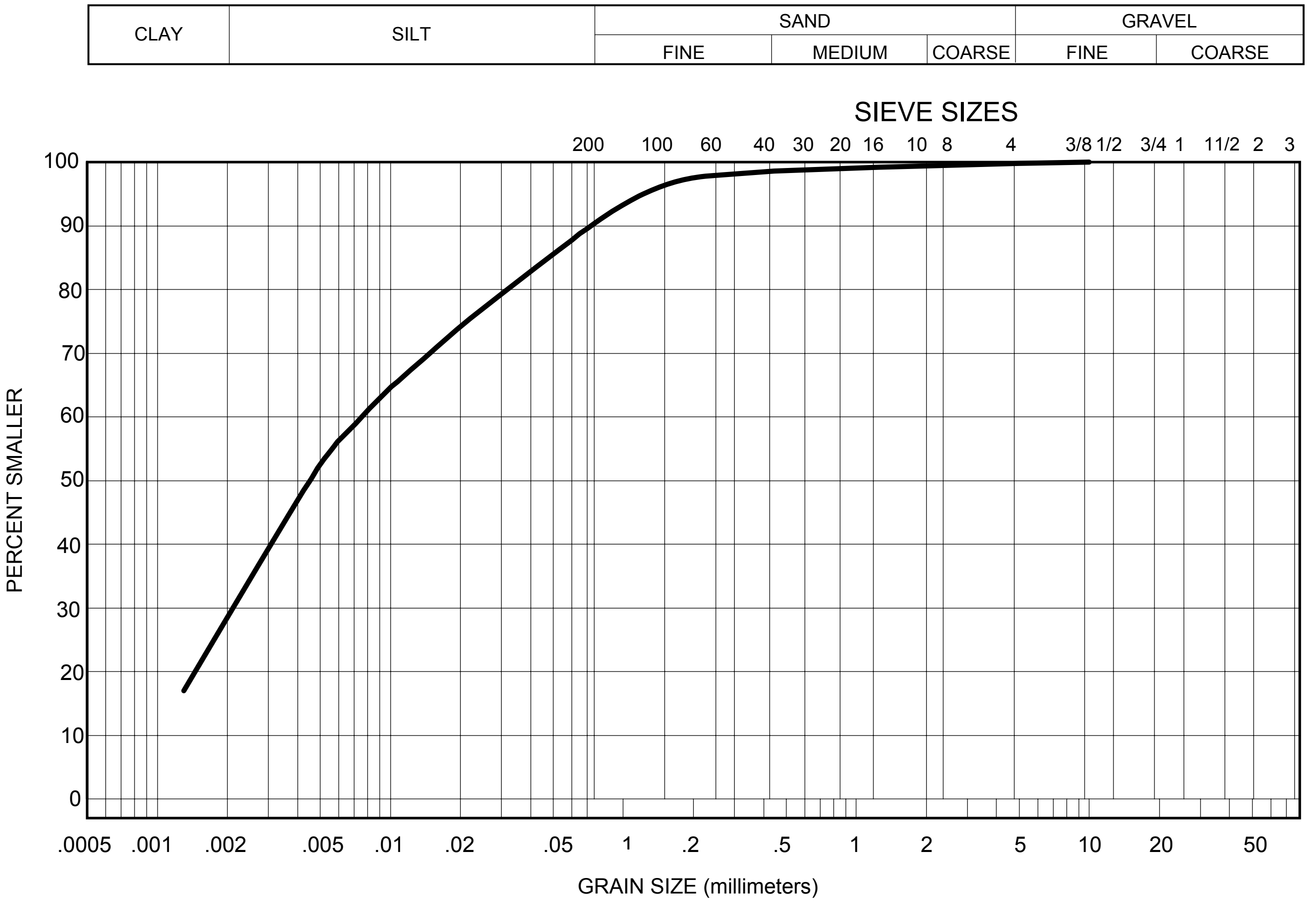
Borehole	Depth Top (m)	Bottom (m)	Soil Type	Moisture Content (%)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	Liquid Limit	Plastic Limit	Bulk Density (kg/m3)	Modified Proctor MDD (kg/m3)	Optimum (%)	California Bearing Ratio (lb. @ 0.1") Unsoaked	Soaked
25	1.6	2.1	Silt and Sand (Tailings	24.5											
25	2.4	2.5	Silt and Sand (Tailings	26.0											
26	0.3	1.0	Clay (Fill)	23.4											
26	1.0	1.5	Silt and Sand (Tailings	23.3											
26	1.5	1.7	Silt and Sand (Tailings	26.1											
26	1.7	2.1	Silt and Sand (Tailings	35.2											
26	2.6	2.8	Silt and Sand (Tailings	20.5											
27	0.4	0.7	Clay (Fill)	16.3											
27	0.7	1.2	Silt and Sand (Tailings	18.7											
27	1.7	2.1	Silt and Sand (Tailings	22.7											
27	2.3	2.4	Silt and Sand (Tailings	23.1											
28	0.5	0.8	Clay (Fill)	24.5											
28	0.8	1.3	Silt and Sand (Tailings	34.3											
28	1.7	2.1	Silt and Sand (Tailings	17.1											
29	0.4	0.9	Clay (Fill)	16.8											
29	0.9	1.4	Silt and Sand (Tailings	18.0											
30	0.5	0.7	Clay (Fill)	23.1											
31	0.5	0.7	Silt and Sand (Tailings	18.2											
31	0.7	0.8	Silt and Sand (Tailings	16.6											
32	0.5	1.0	Silt and Sand (Tailings	18.0											
32	1.0	1.5	Silt and Sand (Tailings	7.8											
32	1.7	1.8	Silt and Sand (Tailings	28.2											
33	0.3	0.9	Clay (Fill)	25.3											
33	0.9	1.3	Silt and Sand (Tailings	23.6											
34	0.2	0.6	Clay (Fill)	20.9							2093				
34	0.6	0.8	Silt and Sand (Tailings	27.1											
35	0.3	1.0	Clay (Fill)	20.2											
35	1.0	1.2	Silt and Sand (Tailings	10.5		40	60	5							
Sample 1	(on airstrip composite)		Silty Clay (Fill)	14.3							2129	1895	14.3	54.4	4.3
Sample 2	(off airstrip composite)		Silty Clay (Fill)	14.8							2116	1880	15.3	66.5	3.1

Note: 1 - n.d. denotes not determined
2 - NP denotes nonplastic

GRAIN SIZE DISTRIBUTION

Project: Discovery Airstrip Geotechnical Investigation
Project Number: 1740082.022.
Client: Tyhee NWT Corp..
Attention: Mr. Roger G. Silvestre
Date Tested: Oct 31-Nov 1, Nov 7, 2005
Borehole Number: BH-5
Depth: 0.5 - 1.1 m
Sample Number: n/a
Lab Number: 4103-12
Soil Description: SILT - clayey, trace sand
Natural Moisture Content: 22.6%
Remarks:

SIEVE	PERCENTAGE PASSING
40	
25	
20	
16	
12.5	
10	
5	
2.5	100
1.25	99
0.63	99
0.315	98
0.16	97
0.08	91



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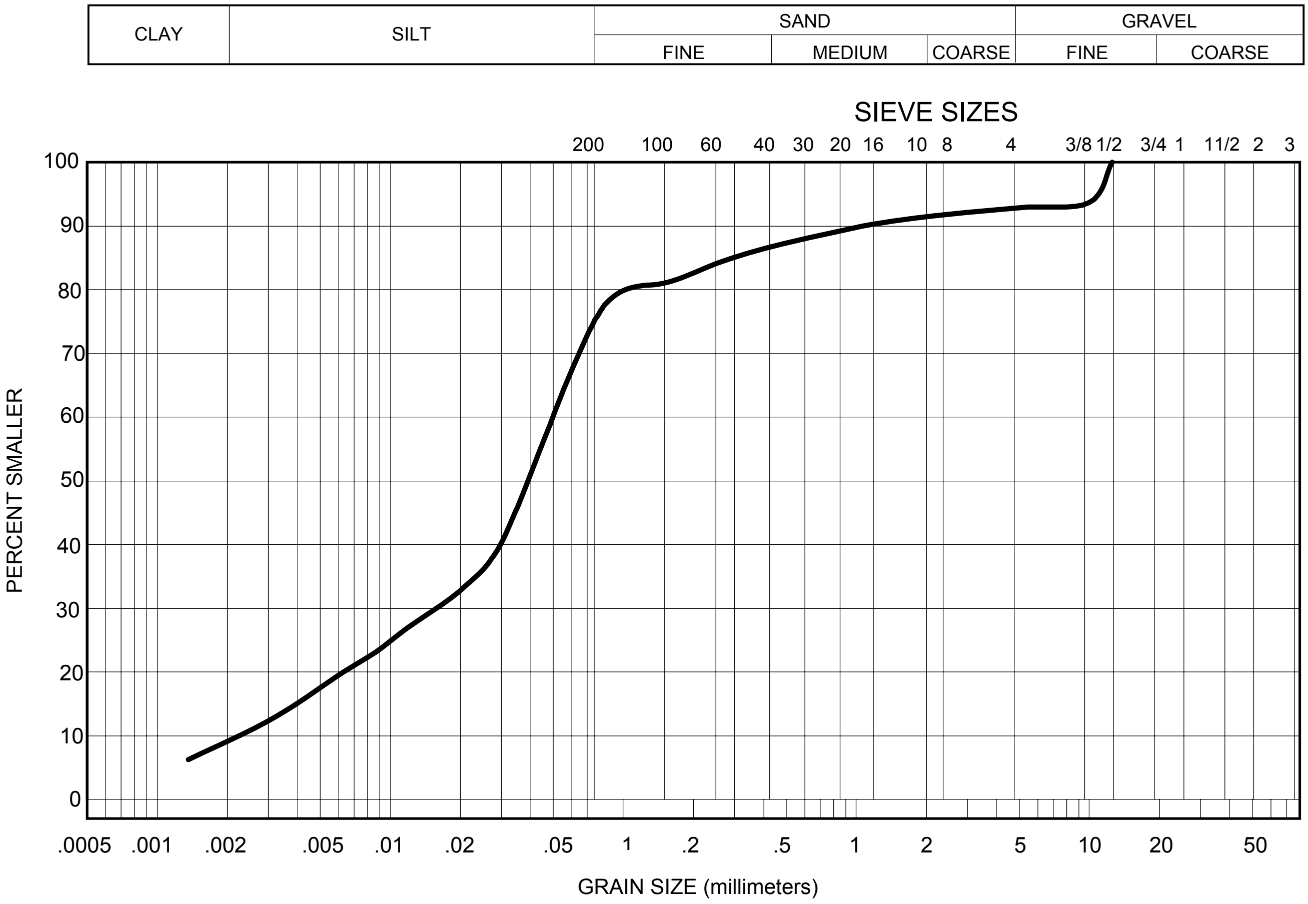
GRAIN SIZE DISTRIBUTION

Project: Discovery Airstrip Geotechnical Investigation
Project Number: 1740082.022.
Client: Tyhee NWT Corp.
Attention: Mr. Roger G. Silvestre
Date Tested: Oct 31-Nov 1, Nov 7, 2005
Borehole Number: BH-5
Depth: 1.57 - 2.03 m
Sample Number: n/a
Lab Number: 4103-14
Soil Description: SILT - some sand, trace clay, trace gravel
Natural Moisture Content: 22.3%
Remarks:

SIEVE	PERCENTAGE PASSING
40	
25	
20	
16	
12.5	100
10	94
5	93
2.5	92
1.25	90
0.63	88
0.315	85
0.16	81
0.08	77



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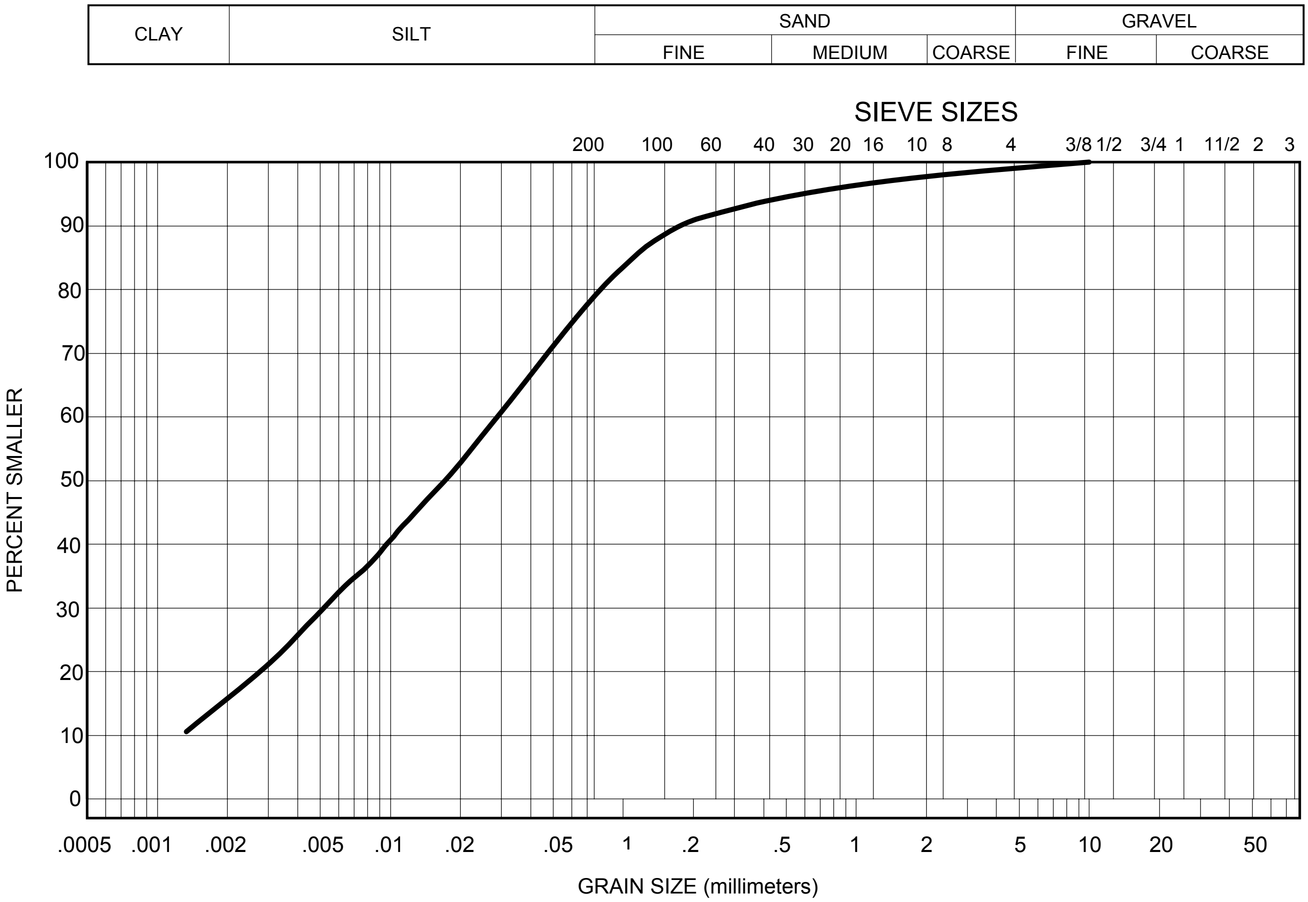
GRAIN SIZE DISTRIBUTION

Project: Discovery Airstrip Geotechnical Investigation
Project Number: 1740082.022.
Client: Tyhee NWT Corp.
Attention: Mr.Roger G. Silvestre
Date Tested: Nov 4-5, 7, 15-16, 2005
Borehole Number: BH-11
Depth: 3.17 - 3.53 m
Sample Number: n/a
Lab Number: 4103-34
Soil Description: SILT - some sand, some clay, trace gravel
Natural Moisture Content: 18.9%
Remarks: LL=27%, PL=18%, PI=9%

SIEVE	PERCENTAGE PASSING
40	
25	
20	
16	
12.5	
10	100
5	99
2.5	98
1.25	97
0.63	95
0.315	93
0.16	89
0.08	80



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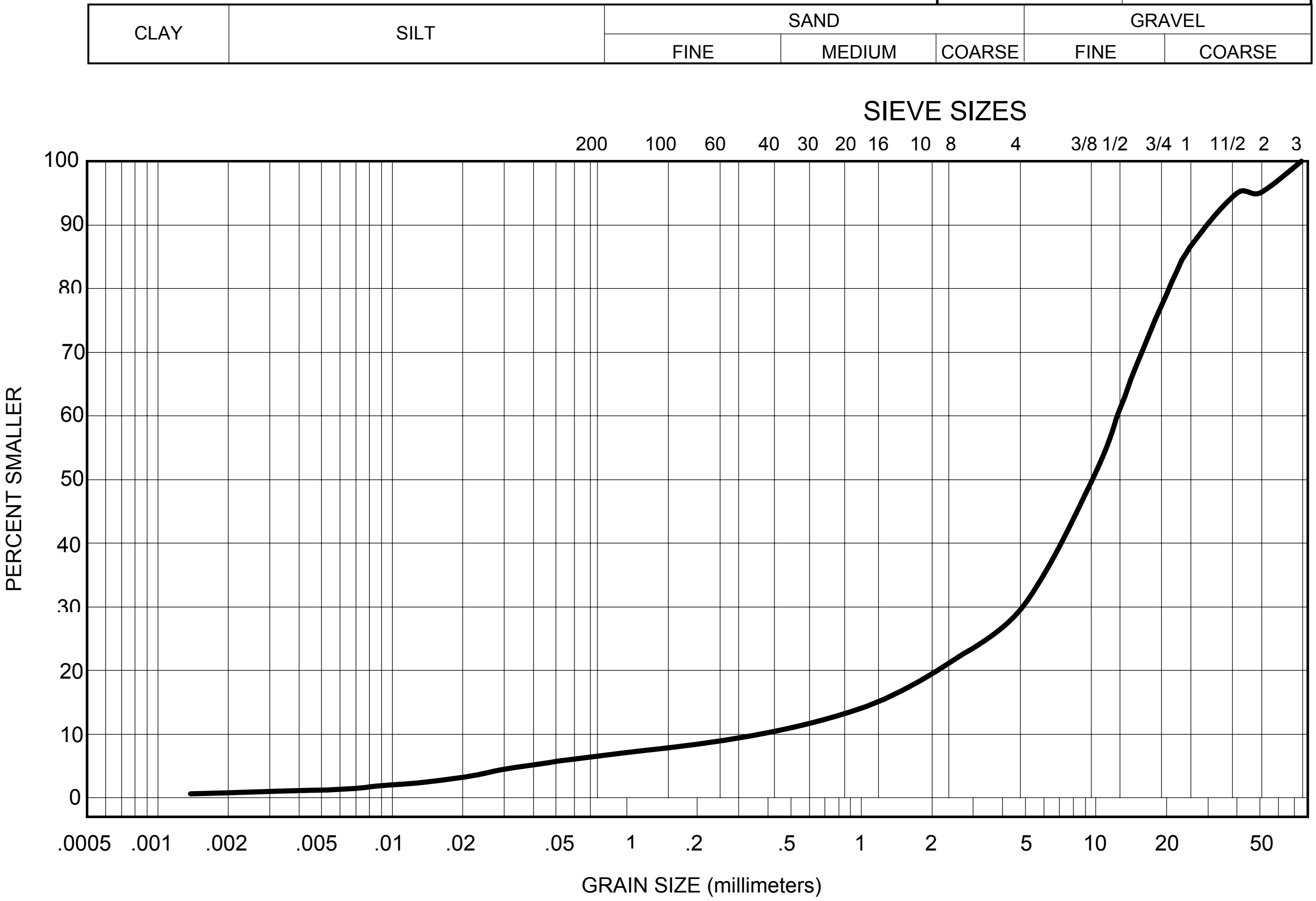
GRAIN SIZE DISTRIBUTION

Project: Discovery Airstrip Geotechnical Investigation
Project Number: 1740082.022
Client: Tyhee NWT Corp.
Attention: Mr. Roger G. Silvestre
Date Tested: Nov 4, Nov 6-7, 2005
Borehole Number: BH-15
Depth: 0.10 - 0.40 m
Sample Number: n/a
Lab Number: 4103-45
Soil Description: GRAVEL - sandy, trace silt, trace clay
Natural Moisture Content: 0.8%
Remarks:

SIEVE	PERCENTAGE PASSING
75	100
50	95
40	95
25	86
20	79
16	71
12.5	61
10	51
5	31
2.5	22
1.25	15
0.63	12
0.315	10
0.16	8
0.08	7



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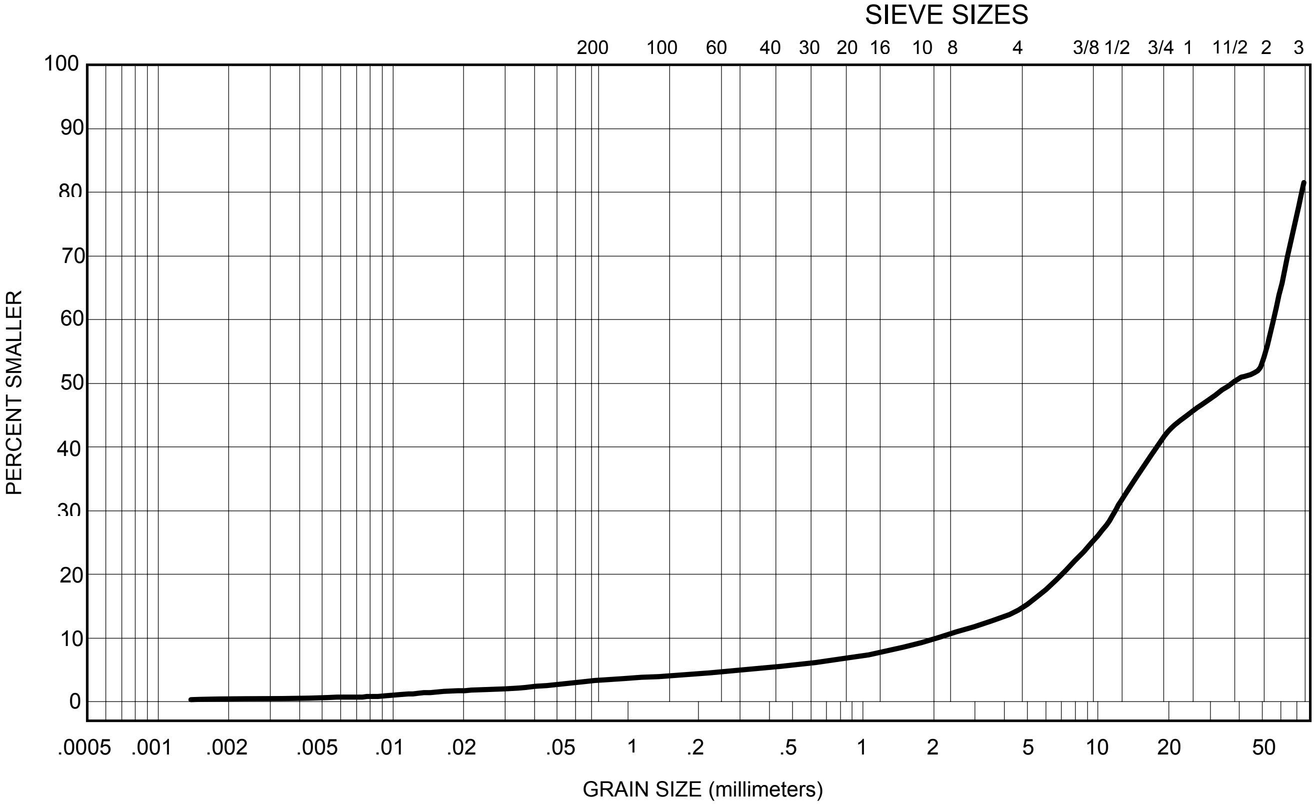
GRAIN SIZE DISTRIBUTION

Project: Discovery Airstrip geotechnical Investigation
Project Number: 1740082.022
Client: Tyhee NWT Corp.
Attention: MR. Roger G. Silvestre
Date Tested: Nov 4, Nov 6-7, 2005
Borehole Number: BH-15
Depth: 0.40 - 0.50 m
Sample Number: n/a
Lab Number: 4103-46
Soil Description: GRAVEL - some sand, trace silt, trace clay
Natural Moisture Content: Not done
Remarks:

SIEVE	PERCENTAGE PASSING
75	82
50	53
40	51
25	46
20	42
16	37
12.5	31
10	26
5	15
2.5	11
1.25	8
0.63	6
0.315	5
0.16	4
0.08	3

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



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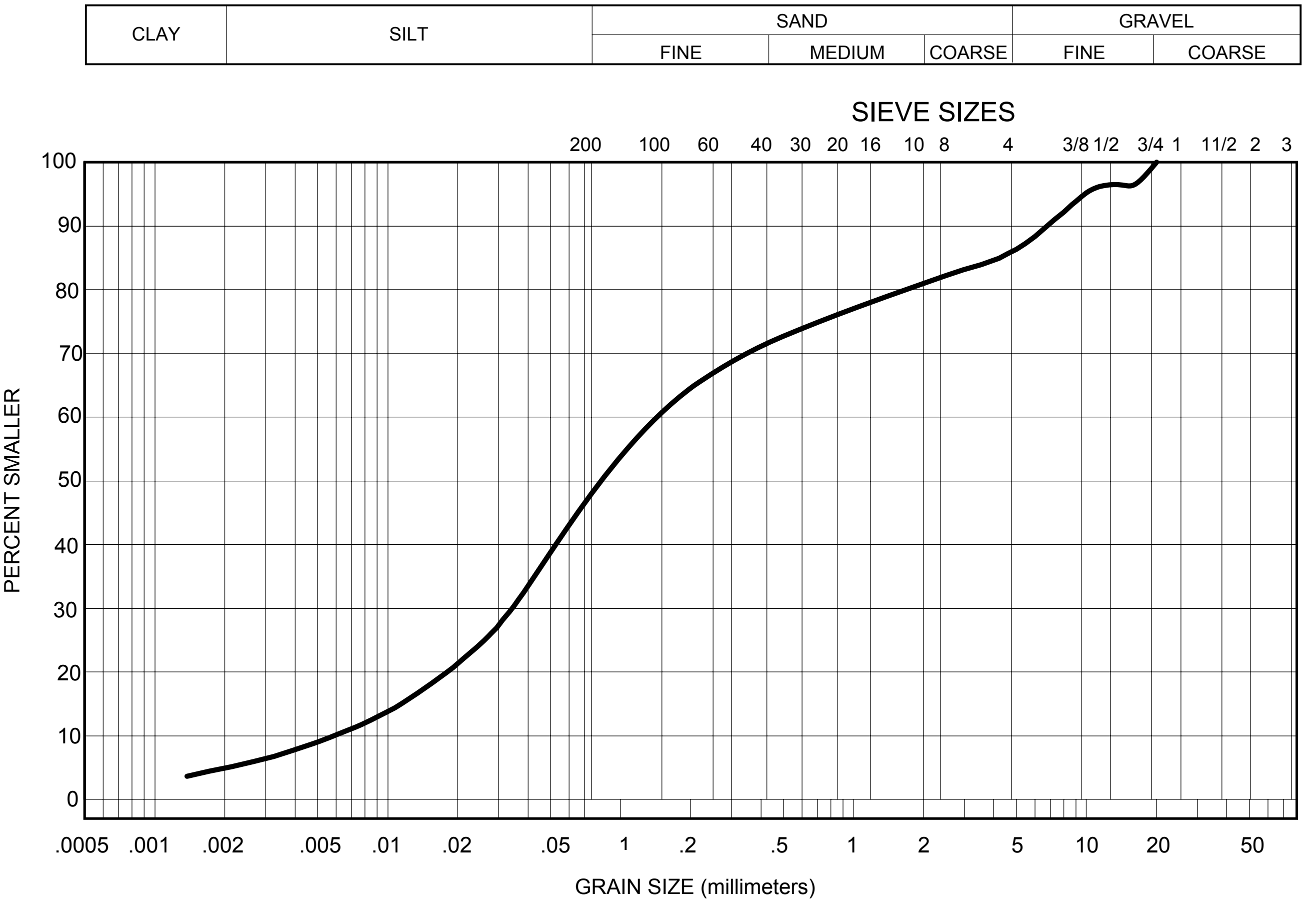
EBA Engineering Consultants Ltd.

GRAIN SIZE DISTRIBUTION

Project: Discovery Airstrip Geotechnical Investigation
Project Number: 1740082.022.
Client: Tyhee NWT Corp.
Attention: Mr. Roger G. Silvestre
Date Tested: Nov 7-8, 2005
Borehole Number: BH-16
Depth: 3.05 - 3.28 m
Sample Number: n/a
Lab Number: 4103-52
Soil Description: SILT and SAND - some gravel, trace clay
Natural Moisture Content: 11.5%
Remarks: N / P

SIEVE	PERCENTAGE PASSING
40	
25	
20	100
16	96
12.5	96
10	95
5	86
2.5	82
1.25	78
0.63	74
0.315	69
0.16	62
0.08	49



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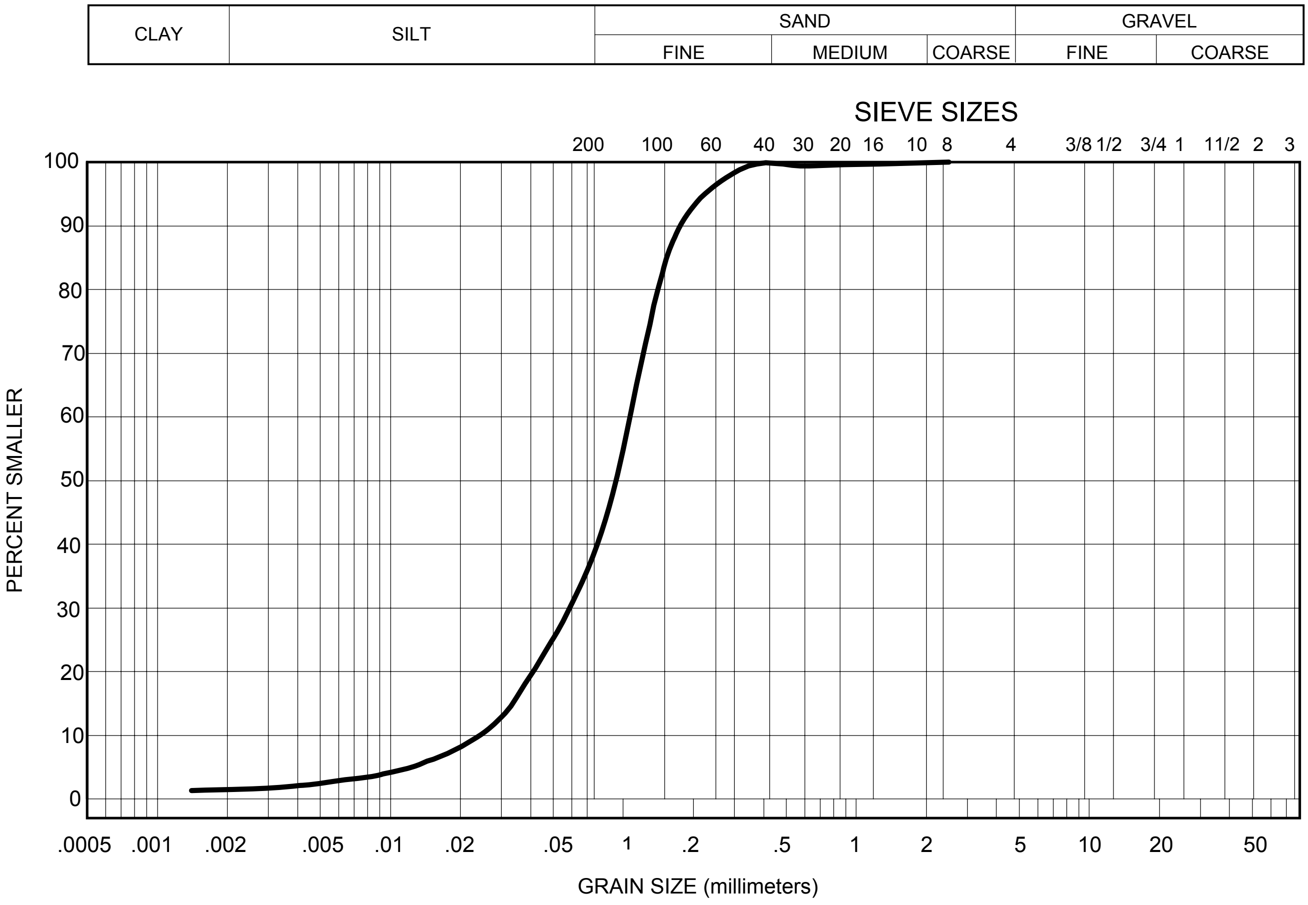
GRAIN SIZE DISTRIBUTION

Project: Discovery Airstrip Geotechnical Investigation
Project Number: 1740082.022.
Client: Tyhee NWT Corp.
Attention: Mr. Roger G. Silvestre
Date Tested: Nov 4-5, Nov 7 2005
Borehole Number: BH-17
Depth: 0.3 - 0.55m
Sample Number: n/a
Lab Number: 4103-53
Soil Description: SAND and SILT - trace clay
Natural Moisture Content: 13.7%
Remarks: N/P

SIEVE	PERCENTAGE PASSING
40	
25	
20	
16	
12.5	
10	
5	
2.5	
1.25	100
0.63	99
0.315	99
0.16	87
0.08	41



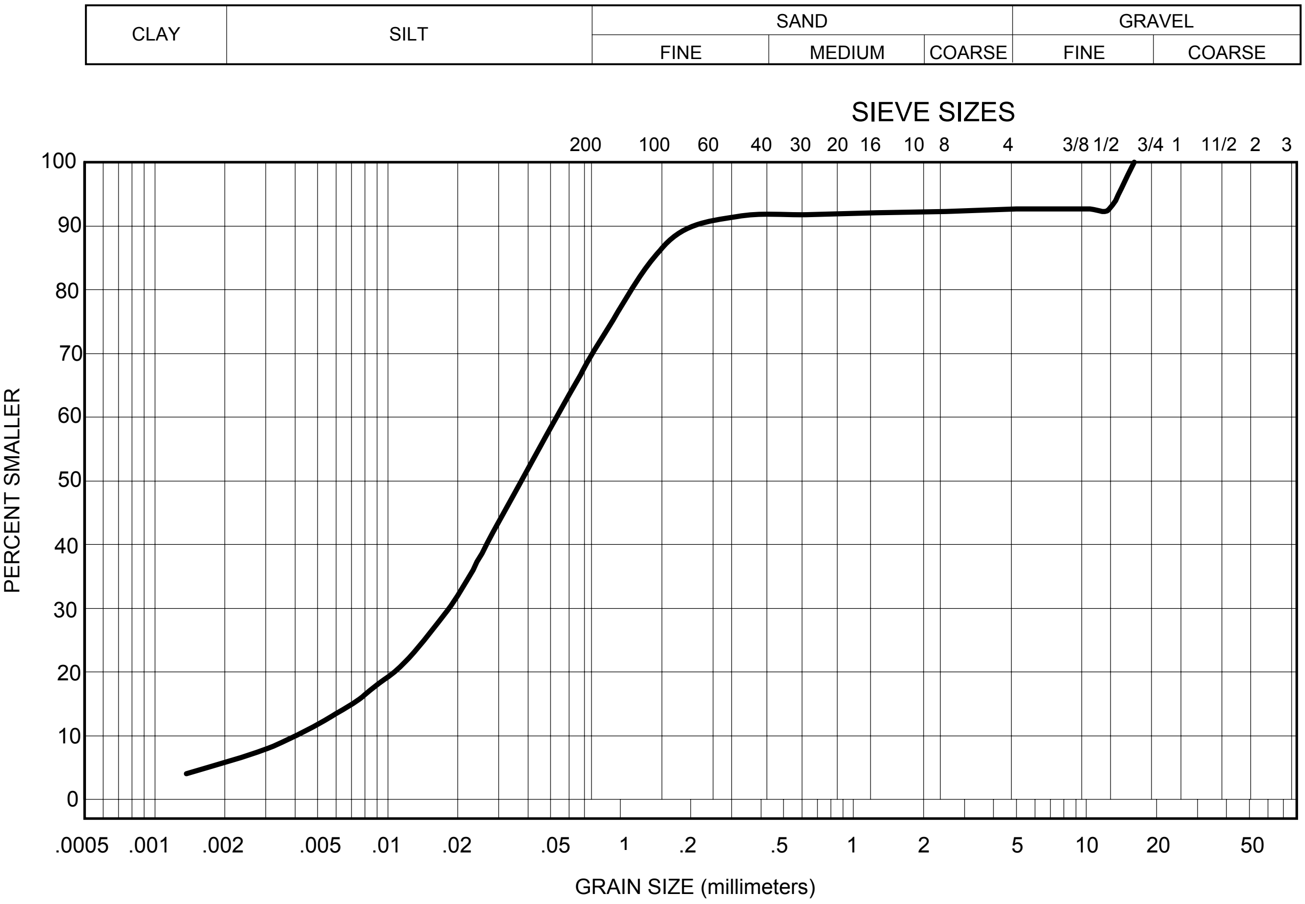
Reviewed By:__________________ P.Eng.

EBA Engineering Consultants Ltd.

GRAIN SIZE DISTRIBUTION

Project: Discovery Airstrip Geotechnical Investigation
Project Number: 1740082.022.
Client: Tyhee NWT Corp.
Attention: Mr. Roger G. Silvestre
Date Tested: Nov 7-8, 2005
Borehole Number: BH-17
Depth: 1.65 - 2.11m
Sample Number: n/a
Lab Number: 4103-57
Soil Description: SILT - sandy, trace gravel, trace clay
Natural Moisture Content: n/a
Remarks: N/P

SIEVE	PERCENTAGE PASSING
40	
25	
20	
16	100
12.5	93
10	93
5	93
2.5	92
1.25	92
0.63	92
0.315	91
0.16	88
0.08	71

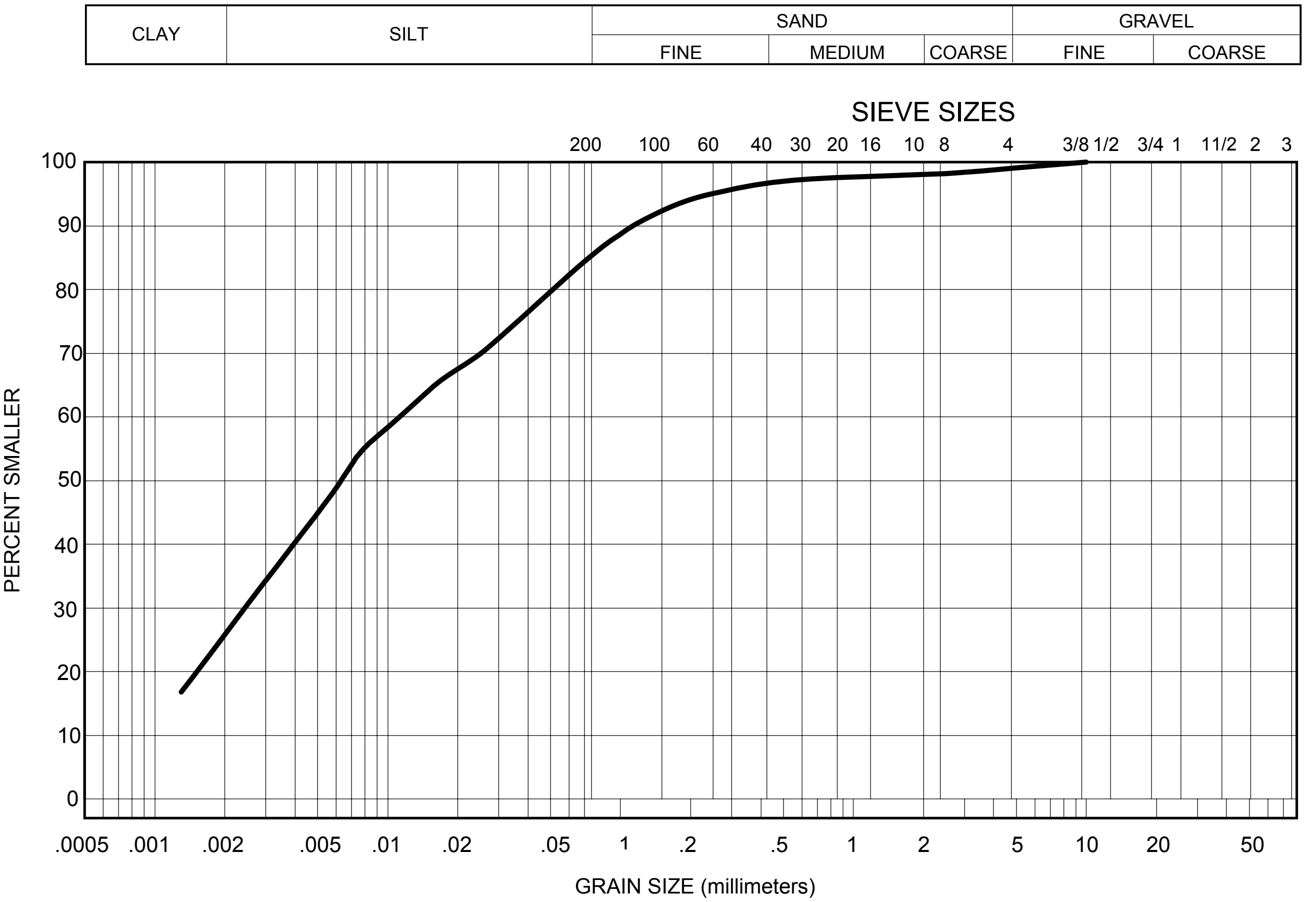


Reviewed By:__________________ P.Eng.

GRAIN SIZE DISTRIBUTION

Project: Discovery Airstrip Geotechnical Investigation
Project Number: 1740082.022.
Client: Tyhee NWT Corp.
Attention: Mr. Roger G. Silvestre
Date Tested: Nov 4-5, 8, 15-16, 2005
Borehole Number: BH-21
Depth: 0.35 - 0.60 m
Sample Number: n/a
Lab Number: 4103-64
Soil Description: SILT - clayey, some sand, trace gravel
Natural Moisture Content: 17.1%
Remarks: LL=31%, PL=19%, PI=12%

SIEVE	PERCENTAGE PASSING
40	
25	
20	
16	
12.5	
10	100
5	99
2.5	98
1.25	98
0.63	97
0.315	96
0.16	93
0.08	86



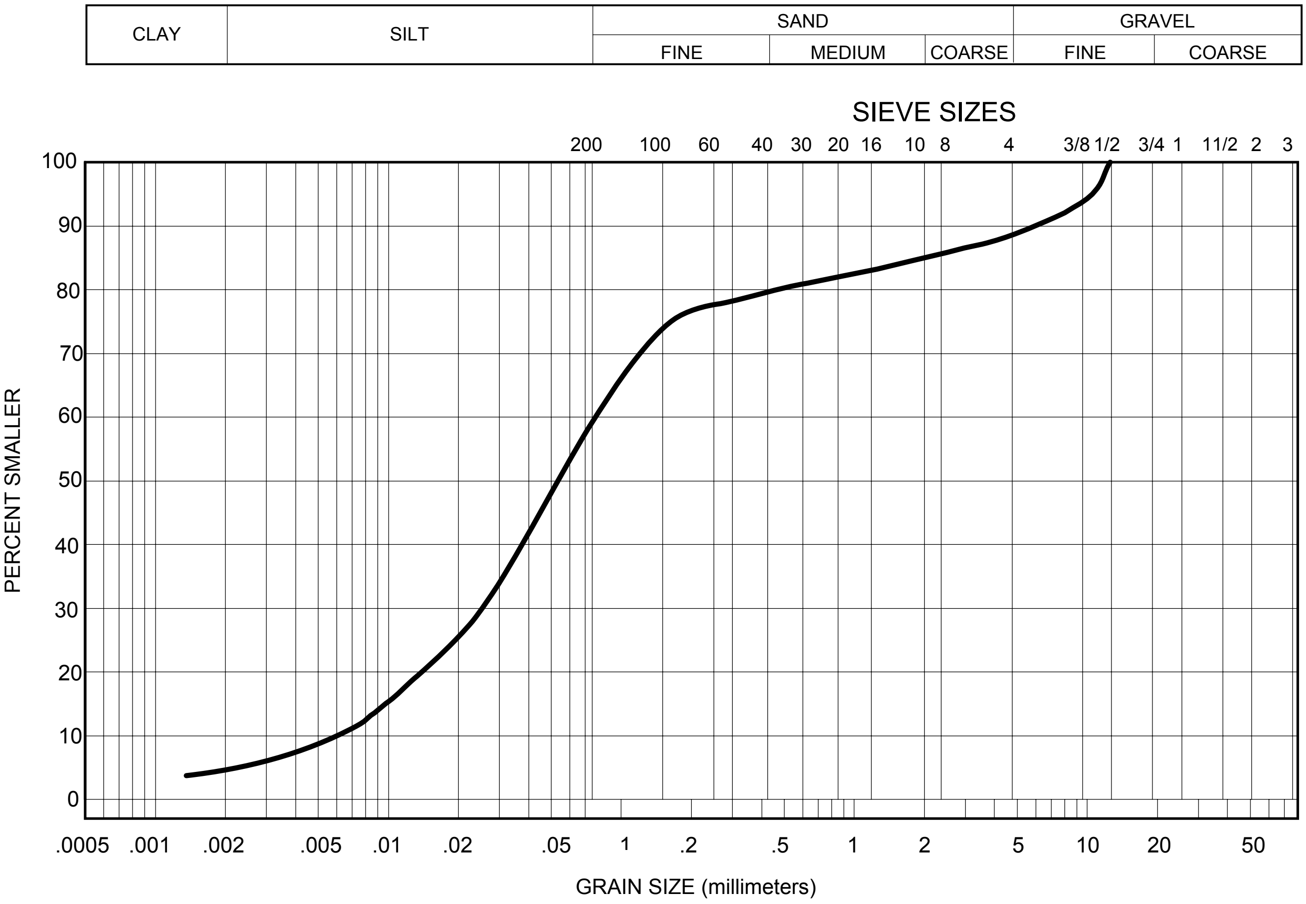
Reviewed By:__________________ P.Eng.

EBA Engineering Consultants Ltd.

GRAIN SIZE DISTRIBUTION

Project: Discovery Airstrip Geotechnical Investigation
Project Number: 1740082.022.
Client: Tyhee NWT Corp.
Attention: Mr. Roger G. Silvestre
Date Tested: Nov 6-7, Nov 8, 2005
Borehole Number: BH-21
Depth: 1.65 - 2.11 m
Sample Number: n/a
Lab Number: 4103-65
Soil Description: SILT - sandy, some gravel, trace clay
Natural Moisture Content: 19.4%
Remarks: N/P

SIEVE	PERCENTAGE PASSING
40	
25	
20	
16	
12.5	100
10	94
5	89
2.5	86
1.25	83
0.63	81
0.315	78
0.16	75
0.08	61



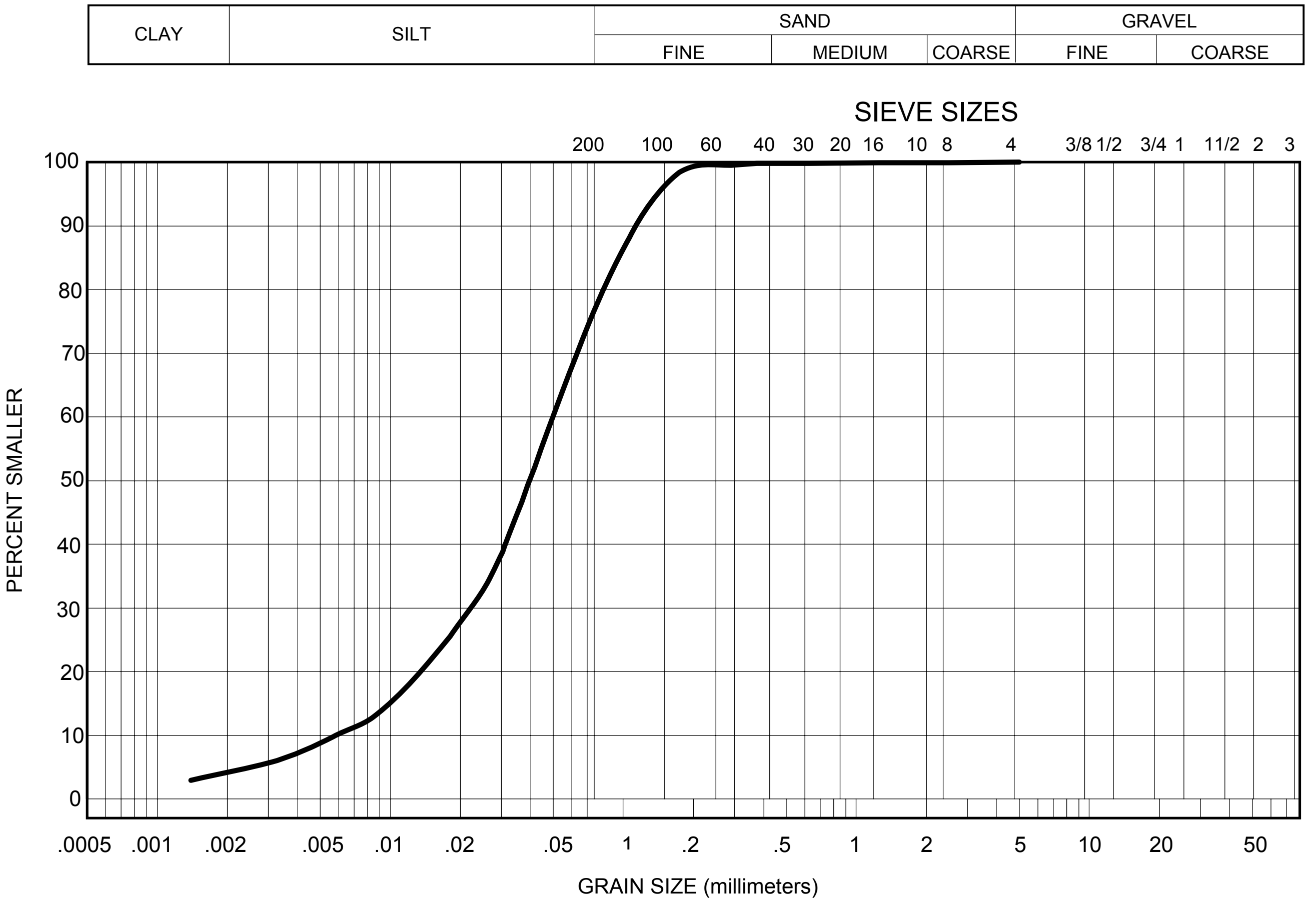
Reviewed By:__________________ P.Eng.

EBA Engineering Consultants Ltd.

GRAIN SIZE DISTRIBUTION

Project: Discovery Airstrip Geotechnical Investigation
Project Number: 1740082.022.
Client: Tyhee NWT Corp.
Attention: Mr. Roger G. Silvestre
Date Tested: Oct 31-Nov 1, Nov 8 2005
Borehole Number: BH-22
Depth: 0.3 - 0.7m
Sample Number: n/a
Lab Number: 4103-66
Soil Description: SILT - sandy, trace clay
Natural Moisture Content: 19.2%
Remarks: N/P

SIEVE	PERCENTAGE PASSING
40	
25	
20	
16	
12.5	
10	
5	
2.5	
1.25	
0.63	
0.315	100
0.16	97
0.08	79

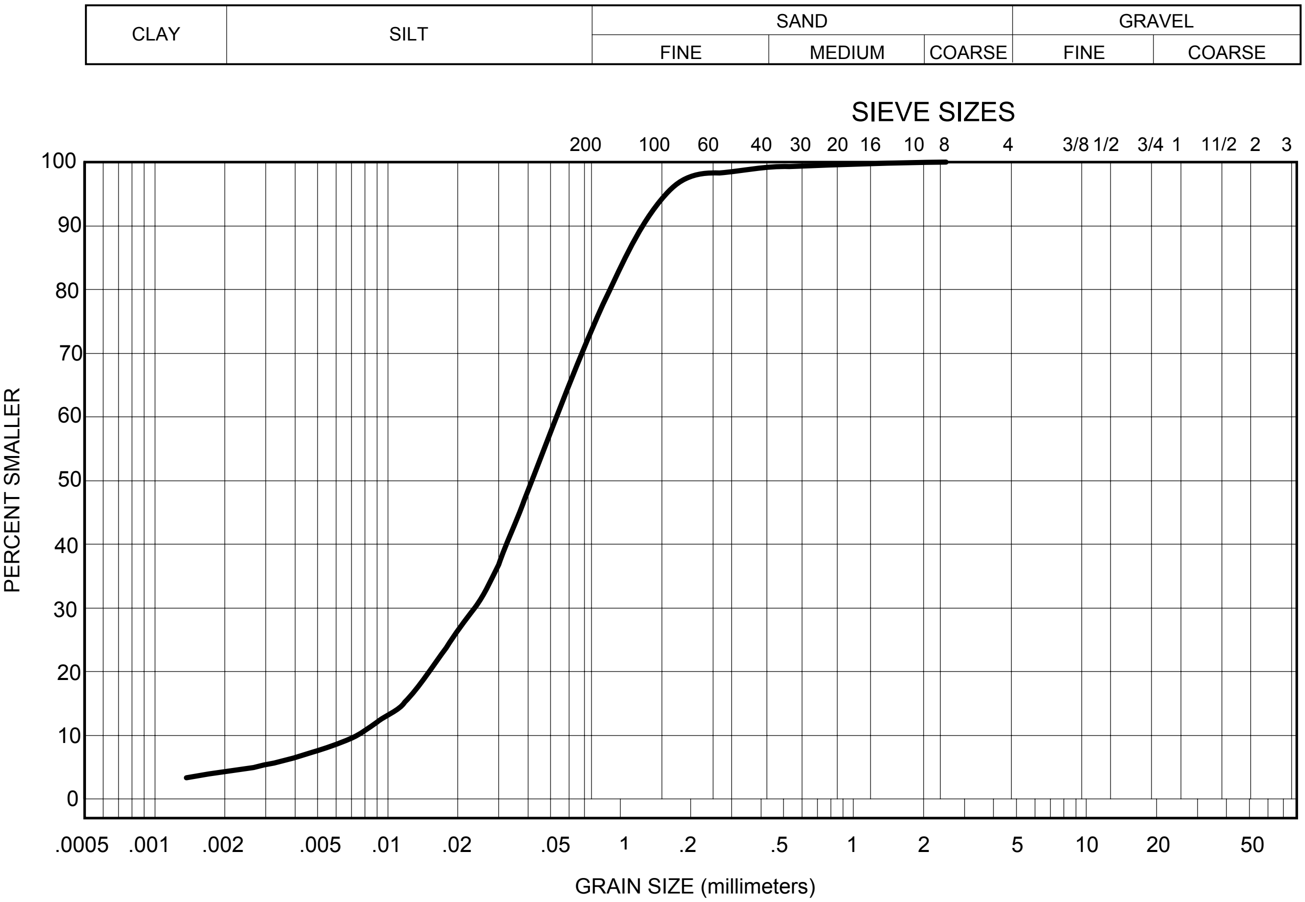


Reviewed By:__________________ P.Eng.

GRAIN SIZE DISTRIBUTION

Project: Discovery Airstrip Geotechnical Investigation
Project Number: 1740082.022.
Client: Tyhee NWT Corp.
Attention: Mr.Roger G. Sil;vestre
Date Tested: Nov 4-5, Nov 14, 2005
Borehole Number: BH-22
Depth: 1.16 - 1.60 m
Sample Number: n/a
Lab Number: 4103-68
Soil Description: SILT - sandy, trace clay
Natural Moisture Content: 24.5%
Remarks:

SIEVE	PERCENTAGE PASSING
40	
25	
20	
16	
12.5	
10	
5	
2.5	
1.25	100
0.63	99
0.315	99
0.16	95
0.08	76

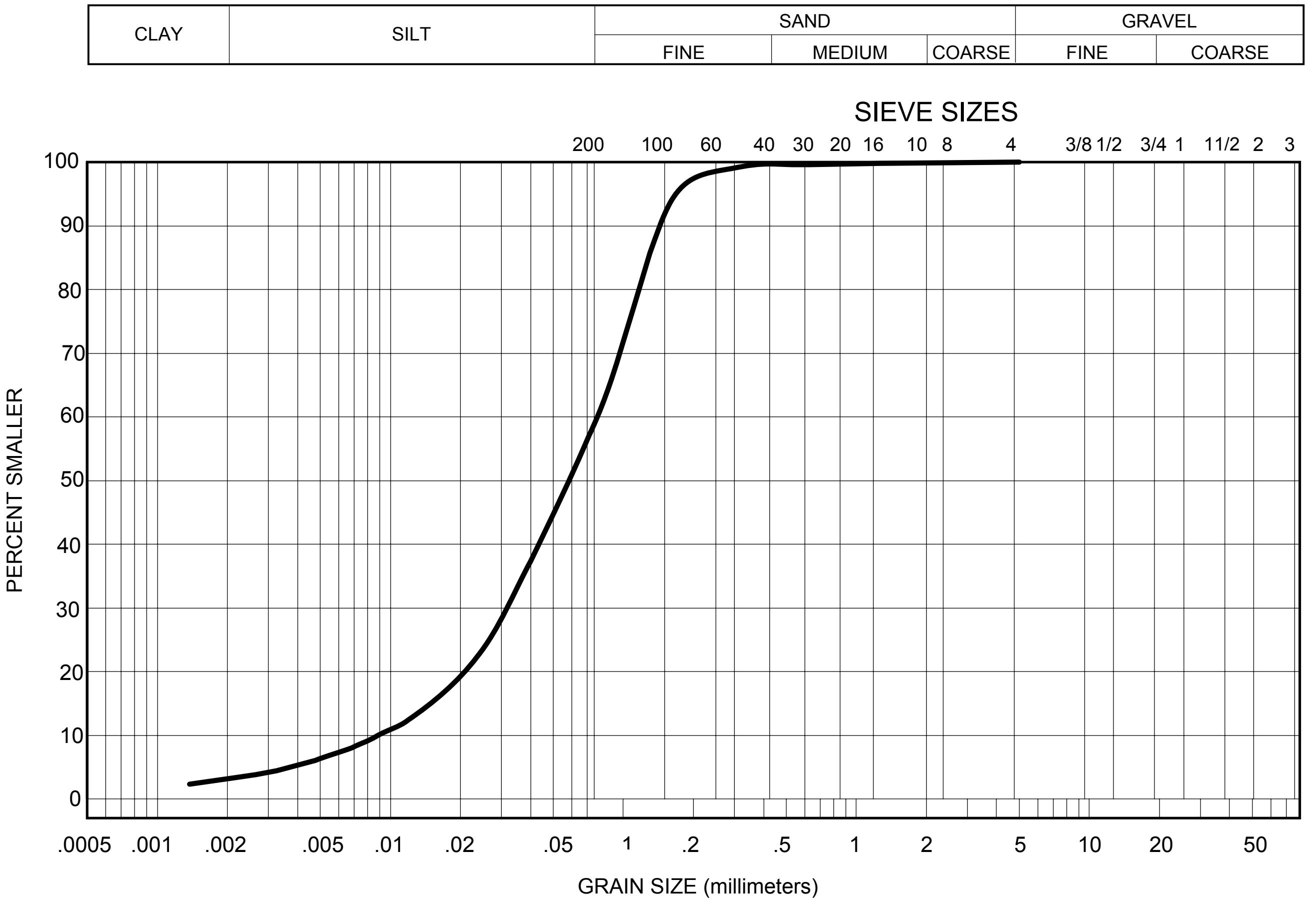


Reviewed By:__________________ P.Eng.

GRAIN SIZE DISTRIBUTION

Project: Discovery Airstrip Geotechnical Investigation
Project Number: 1740082.022.
Client: Tyhee NWT Corp.
Attention: Mr. Roger G. Silvestre
Date Tested: Nov 4-5, Nov 9, 2005
Borehole Number: BH-22
Depth: 2.75 - 3.21 m
Sample Number: n/a
Lab Number: 4103-70
Soil Description: SILT and SAND - trace clay
Natural Moisture Content: 31.3%
Remarks:

SIEVE	PERCENTAGE PASSING
40	
25	
20	
16	
12.5	
10	
5	
2.5	
1.25	
0.63	100
0.315	99
0.16	94
0.08	61

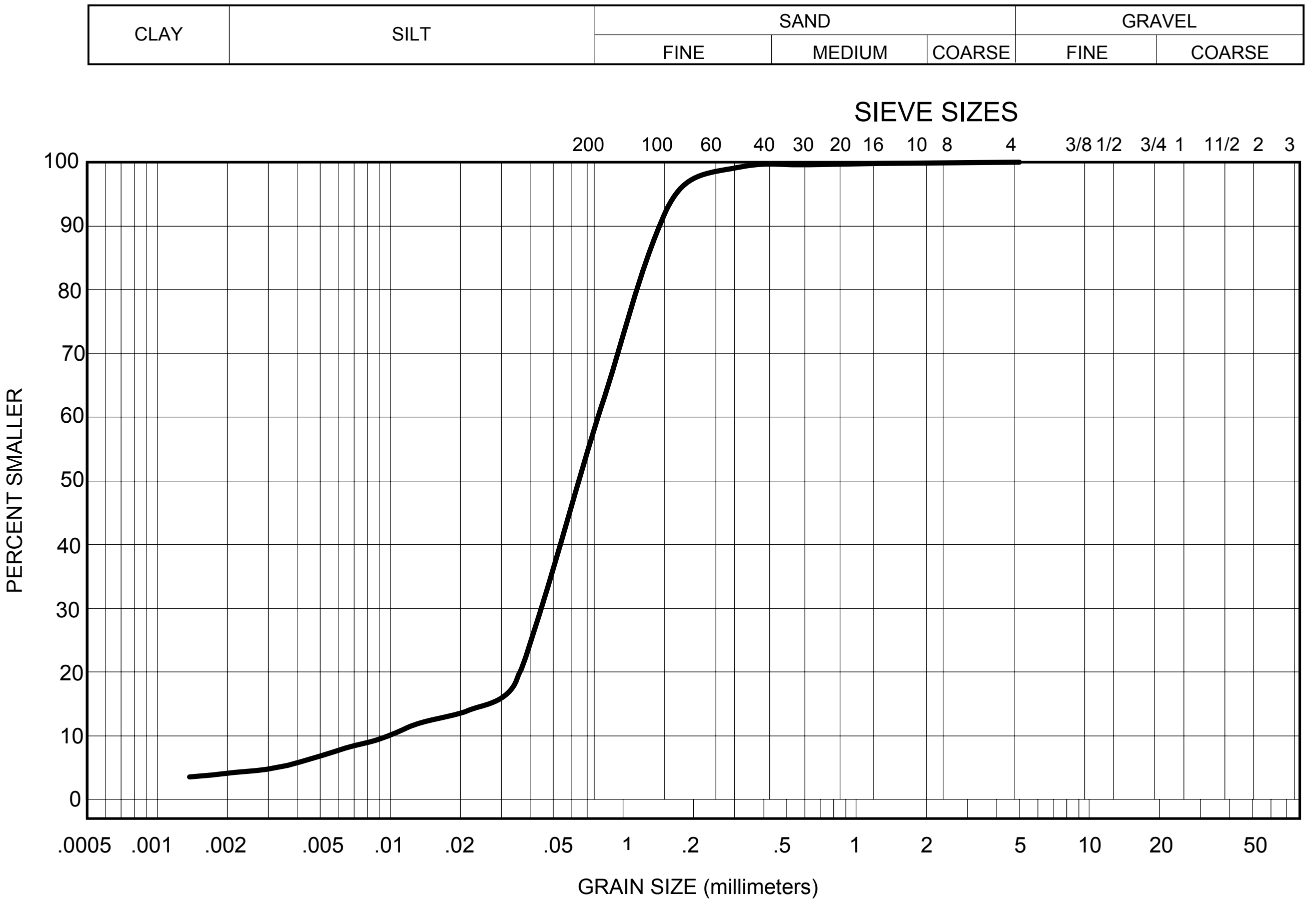


Reviewed By:__________________ P.Eng.

GRAIN SIZE DISTRIBUTIO

Project: Discovery Airstrip Geotechnical Investigation
Project Number: 1740082.022.
Client: Tyhee NWT Corp.
Attention: Mr. Roger G. Silvestre.
Date Tested: Nov 7-8, Nov 9 2005
Borehole Number: BH-35
Depth: 0.30 - 0.96 m
Sample Number: n/a
Lab Number: 4103-109
Soil Description: SILT & SAND- trace clay
Natural Moisture Content: 20.2%
Remarks:

SIEVE	PERCENTAGE PASSING
40	
25	
20	
16	
12.5	
10	
5	
2.5	
1.25	
0.63	100
0.315	99
0.16	94
0.08	61



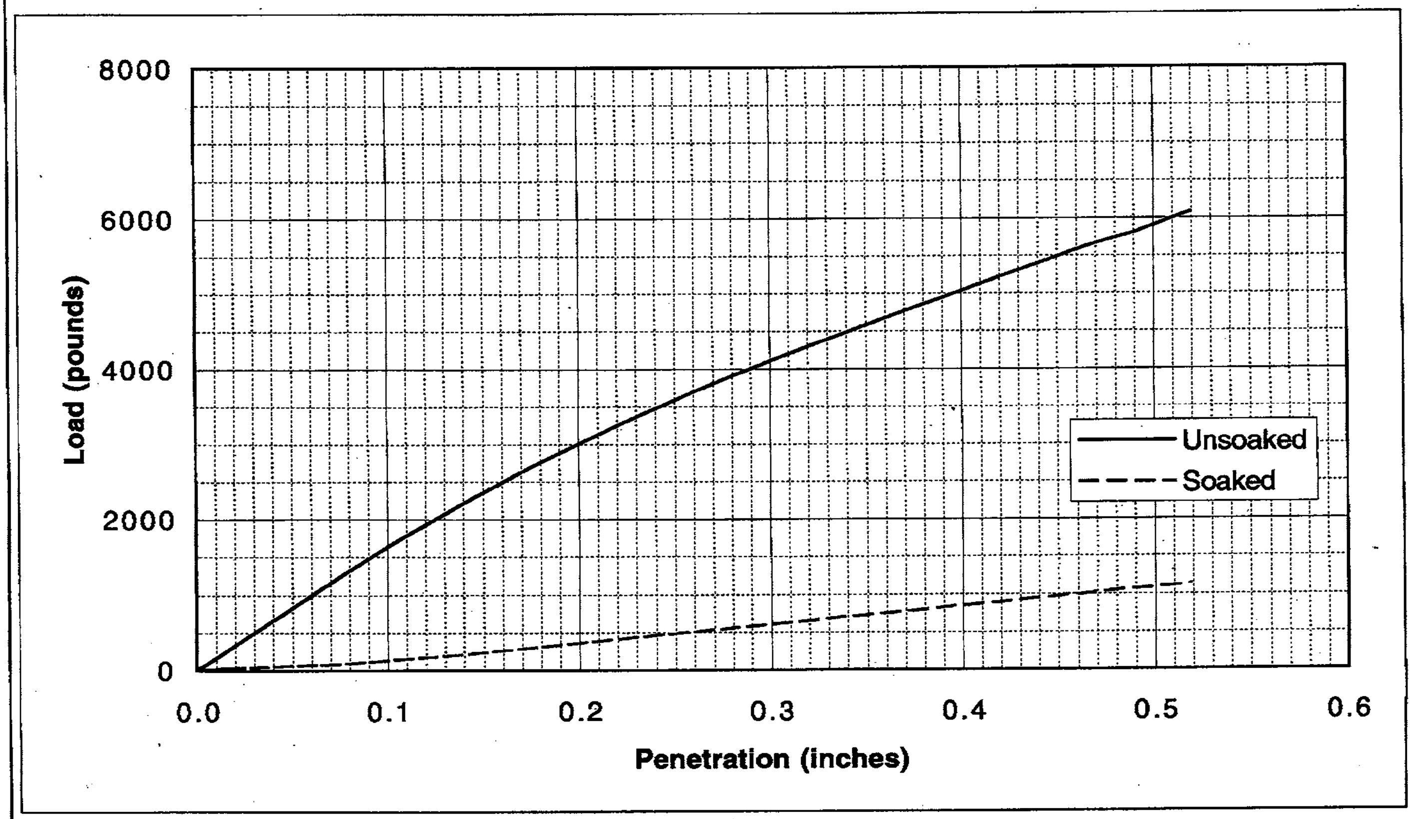
Reviewed By:__________________ P.Eng.

EBA Engineering Consultants Ltd.

CBR Test **Discovery Airstrip Geotechnical Investigation**

Project Number: 1740082.022
Date (Unsoaked): 05-11-23
Date (Soaked): 05-11-28

Sample Designation: Sample No.1



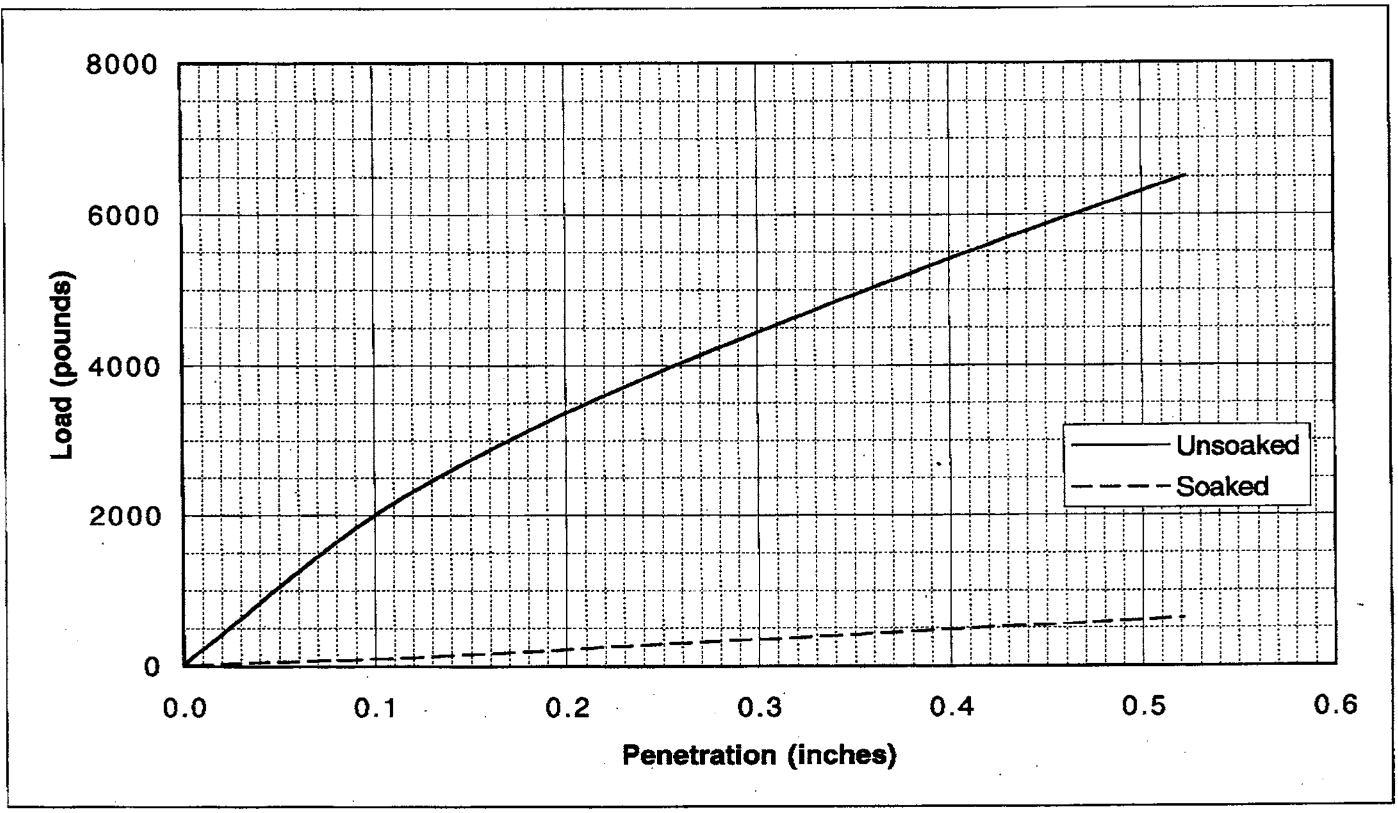
CBR Values (%)

	Unsoaked	Soaked
0.1"=	54.4	4.3
0.2"=	66.7	8.0

CBR Test **Discovery Airstrip Geotechnical Investigation**

Project Number: 1740082.022
Date (Unsoaked): 05-11-23
Date (Soaked): 05-11-28

Sample Designation: Sample No.2



CBR Values (%)

	Unsoaked	Soaked
0.1"=	66.5	3.1
0.2"=	74.6	4.8

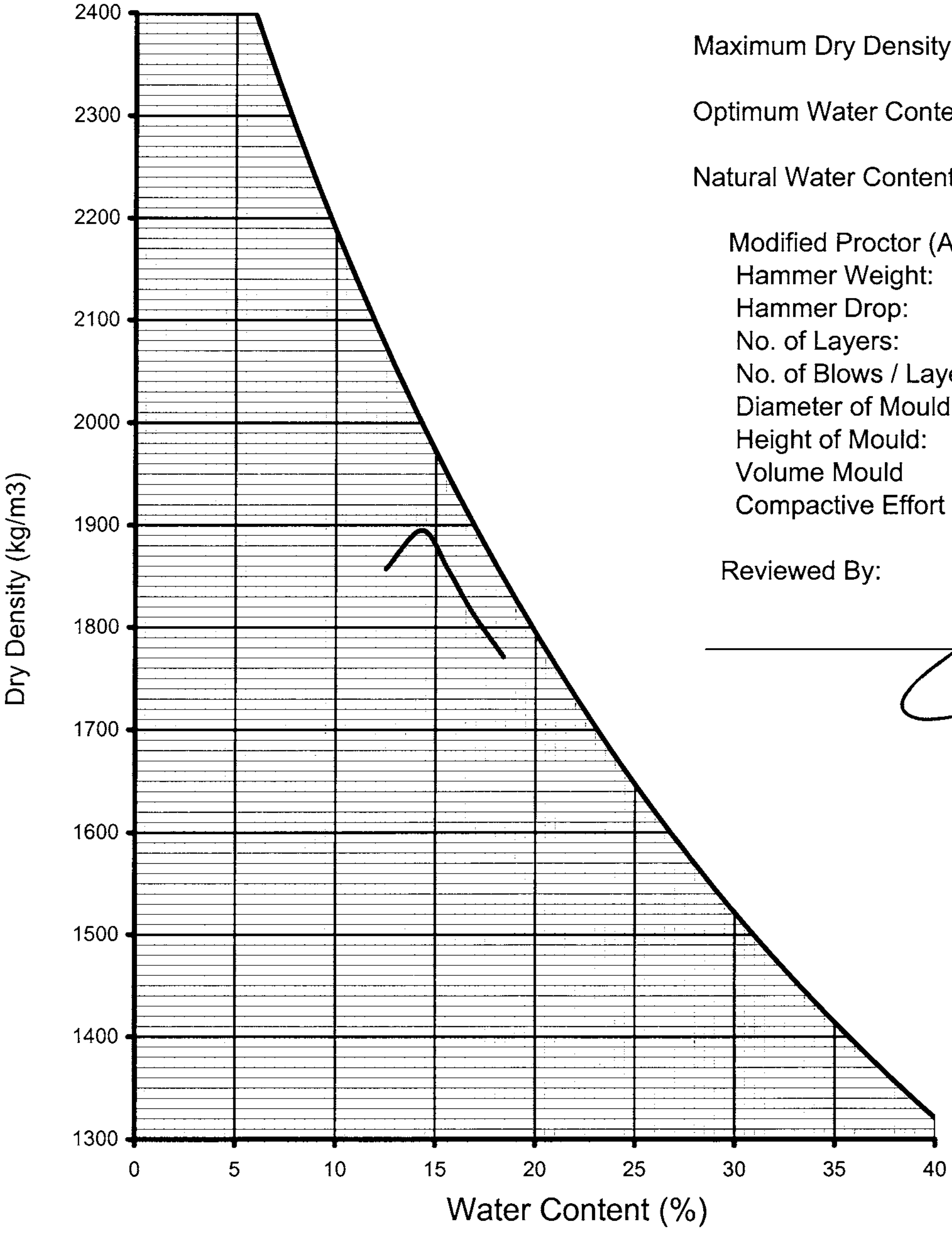
MOISTURE-DENSITY RELATIONSHIP

Project: Discovery Airstrip
Address: Giauque Lake, NT

Project No.: 1740082.022
Date Tested: November 23, 2005 By: KF
Client: Tyhee NWT Corp
Attention: Hugh Wilson

Sample No.: 1
Date Sampled: March 4, 2000
Sample Location: Below Airstrip

Sample Description: Clay - silty, trace sand



Maximum Dry Density :	1895	kg/m3
Optimum Water Content:	14.3	%
Natural Water Content:	7.0	%

Modified Proctor (ASTM D 1557)

Hammer Weight:	4.54	kg
Hammer Drop:	457.2	mm
No. of Layers:	5	
No. of Blows / Layer:	56	
Diameter of Mould:	101.4	mm
Height of Mould:	116.5	mm
Volume Mould	0.00938	m3
Compactive Effort	2700	kJ/m3

Reviewed By:

_________________ P. Eng.

EBA Engineering Consultants Ltd.

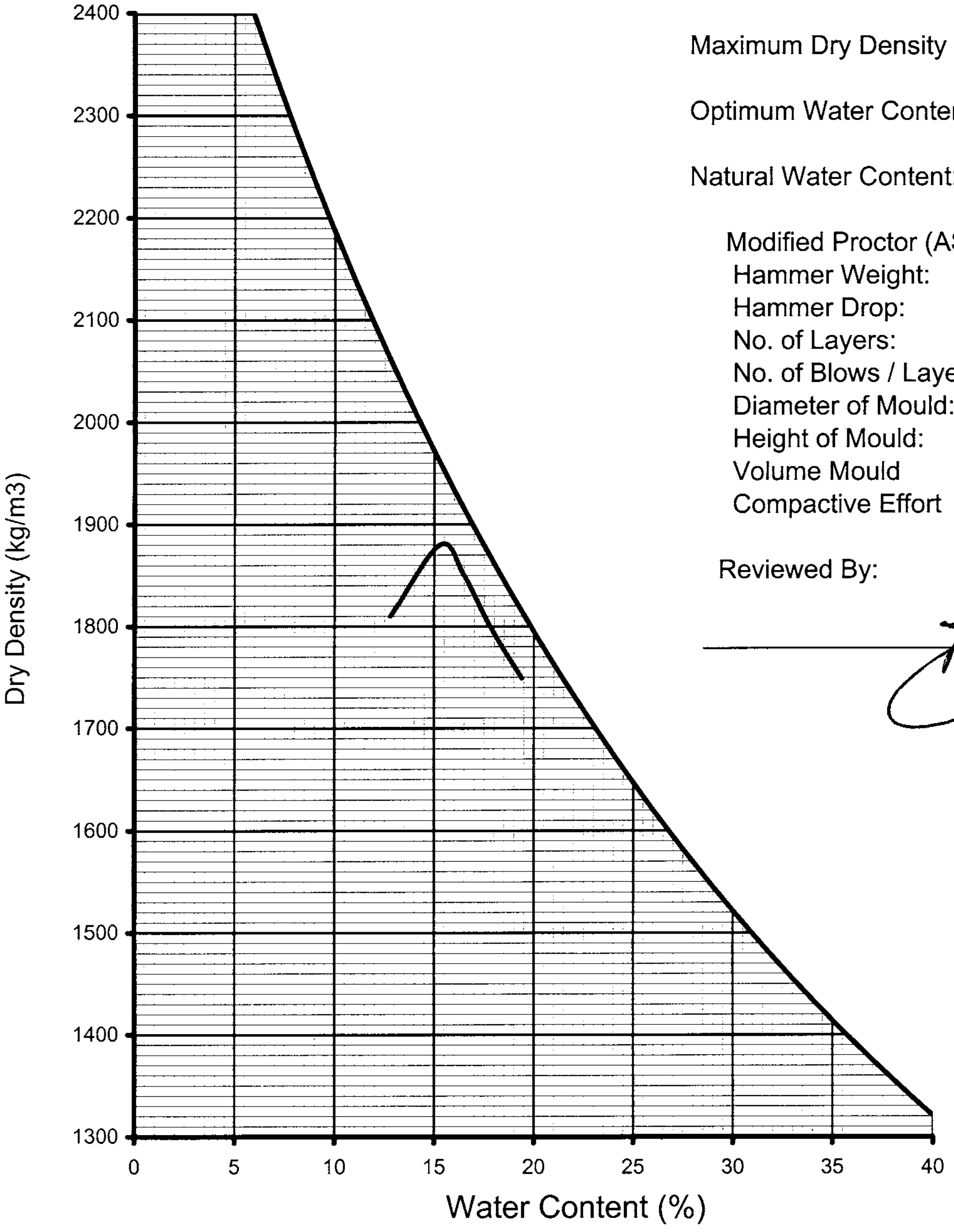
MOISTURE-DENSITY RELATIONSHIP

Project: Discovery Airstrip
Address: Giauque Lake, NT

Project No.: 1740082.022
Date Tested: November 23, 2005 By: KF
Client: Tyhee NWT Corp
Attention: Hugh Wilson

Sample No.: 2
Date Sampled: March 4, 2000
Sample Location: Below Shoulder

Sample Description: Clay - silty, trace sand



Maximum Dry Density :	1880	kg/m3
Optimum Water Content:	15.3	%
Natural Water Content:	12.6	%

Modified Proctor (ASTM D 1557)

Hammer Weight:	4.54	kg
Hammer Drop:	457.2	mm
No. of Layers:	5	
No. of Blows / Layer:	56	
Diameter of Mould:	101.4	mm
Height of Mould:	116.5	mm
Volume Mould	0.00938	m3
Compactive Effort	2700	kJ/m3

Reviewed By:

____________________ P. Eng.

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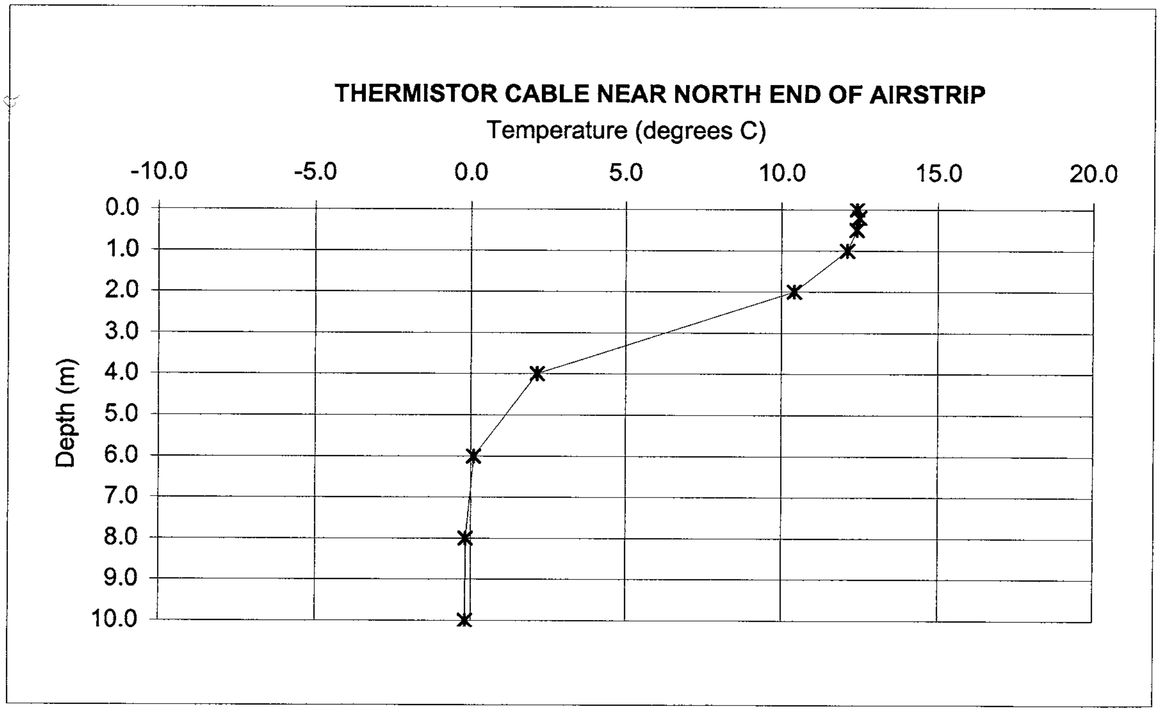
APPENDIX

APPENDIX D THERMISTOR READINGS

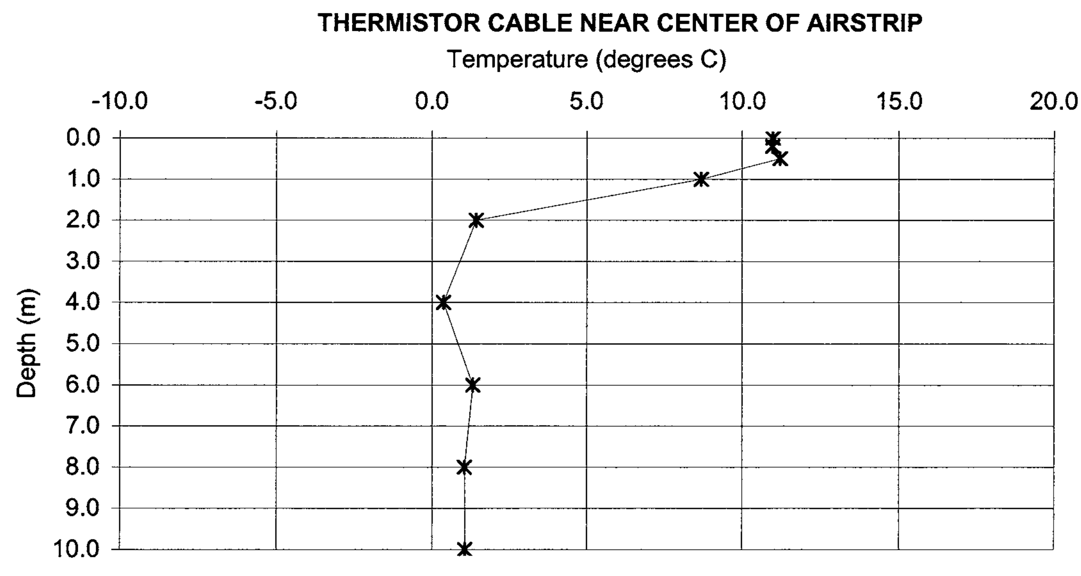
TEMPERATURE MONITORING SUMMARY
THERMISTOR CABLE NEAR NORTH END OF AIRSTRIP
BOREHOLE 20; CABLE 1801
Discovery Mine, N.W.T.

SENSOR	1	2	3	4	5	6	7	8	9
DEPTH (m)	0.0	0.2	0.5	1.0	2.0	4.0	6.0	8.0	10.0
CALIBRATION	-0.01	0.00	-0.02	-0.01	-0.01	-0.02	-0.02	0.01	-0.01
DATE	TEMPERATURE (deg. C)								
25-Aug-05	12.4	12.5	12.4	12.1	10.4	2.2	0.1	-0.2	-0.2



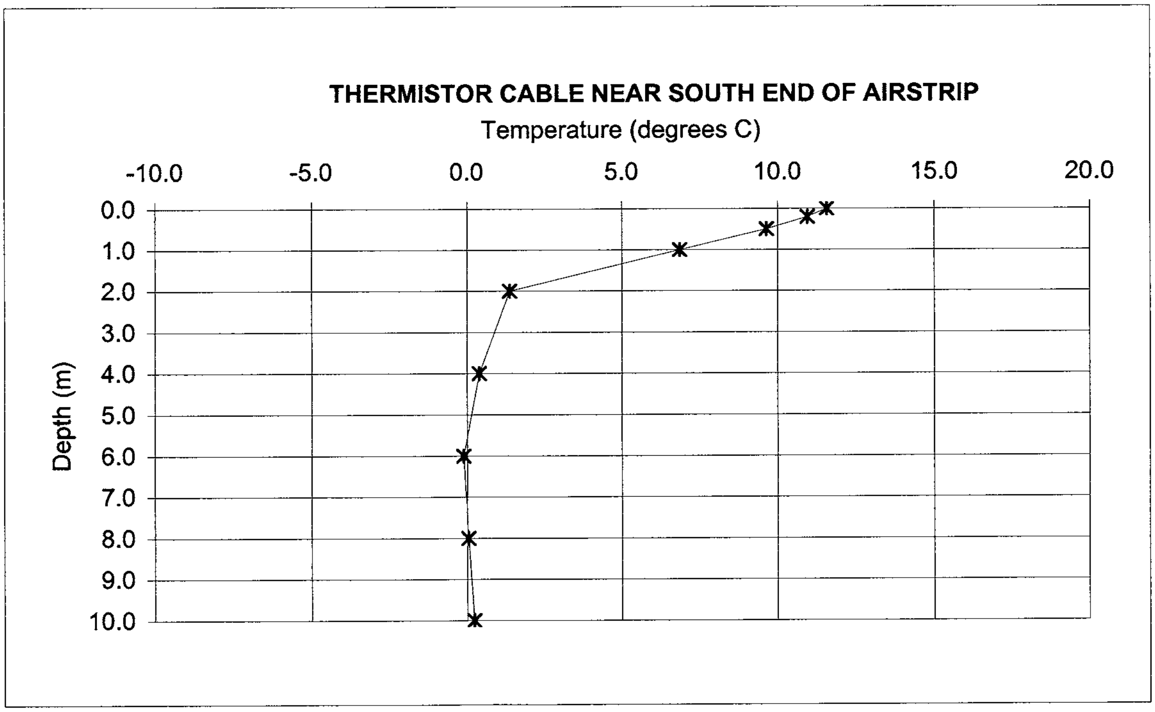
TEMPERATURE MONITORING SUMMARY
THERMISTOR CABLE NEAR CENTER OF AIRSTRIP
BOREHOLE 20; CABLE 1802
Discovery Mine, N.W.T.

SENSOR	1	2	3	4	5	6	7	8	9
DEPTH (m)	0.0	0.2	0.5	1.0	2.0	4.0	6.0	8.0	10.0
CALIBRATION	-0.02	0.01	-0.02	0.00	-0.01	-0.01	0.03	-0.02	-0.01
DATE	TEMPERATURE (deg. C)								
25-Aug-05	11.0	11.0	11.2	8.7	1.4	0.4	1.3	1.1	1.1



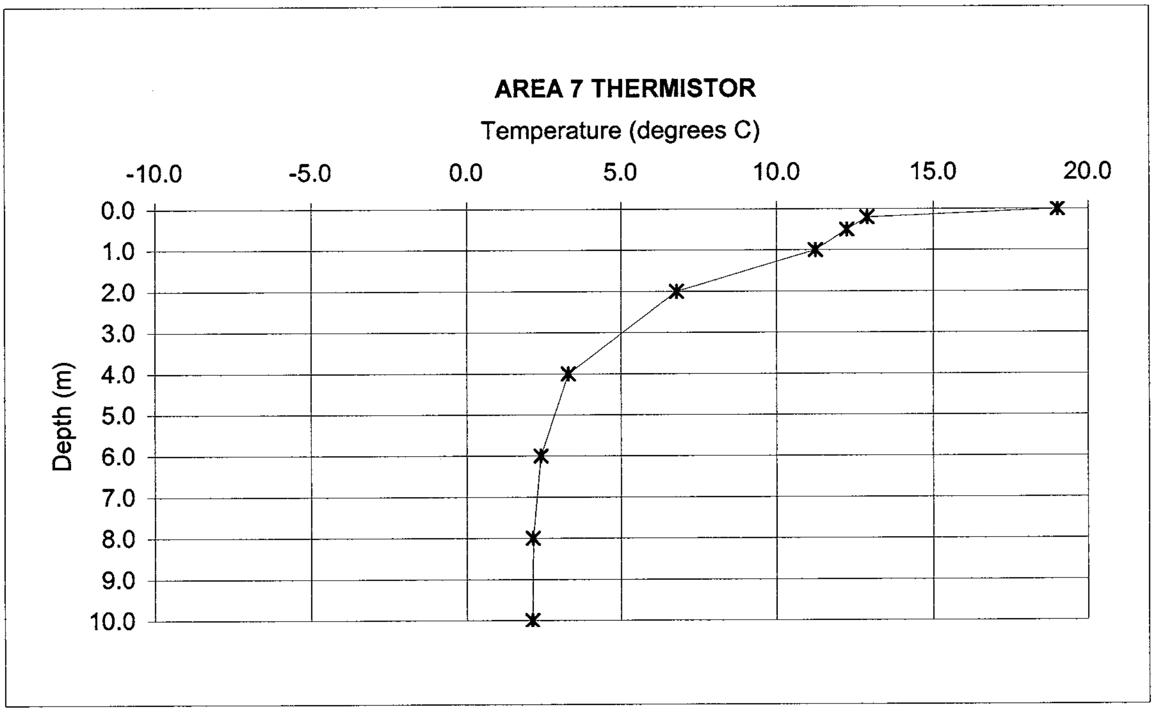
TEMPERATURE MONITORING SUMMARY
THERMISTOR CABLE NEAR SOUTH END OF AIRSTRIP
BOREHOLE 21; CABLE 1800
Discovery Mine, N.W.T.

SENSOR	1	2	3	4	5	6	7	8	9
DEPTH (m)	0.0	0.2	0.5	1.0	2.0	4.0	6.0	8.0	10.0
CALIBRATION	-0.01	0.01	-0.02	-0.01	-0.01	-0.02	-0.02	0.00	-0.02
DATE	TEMPERATURE (deg. C)								
25-Aug-05	11.6	10.9	9.6	6.9	1.4	0.4	-0.1	0.0	0.2



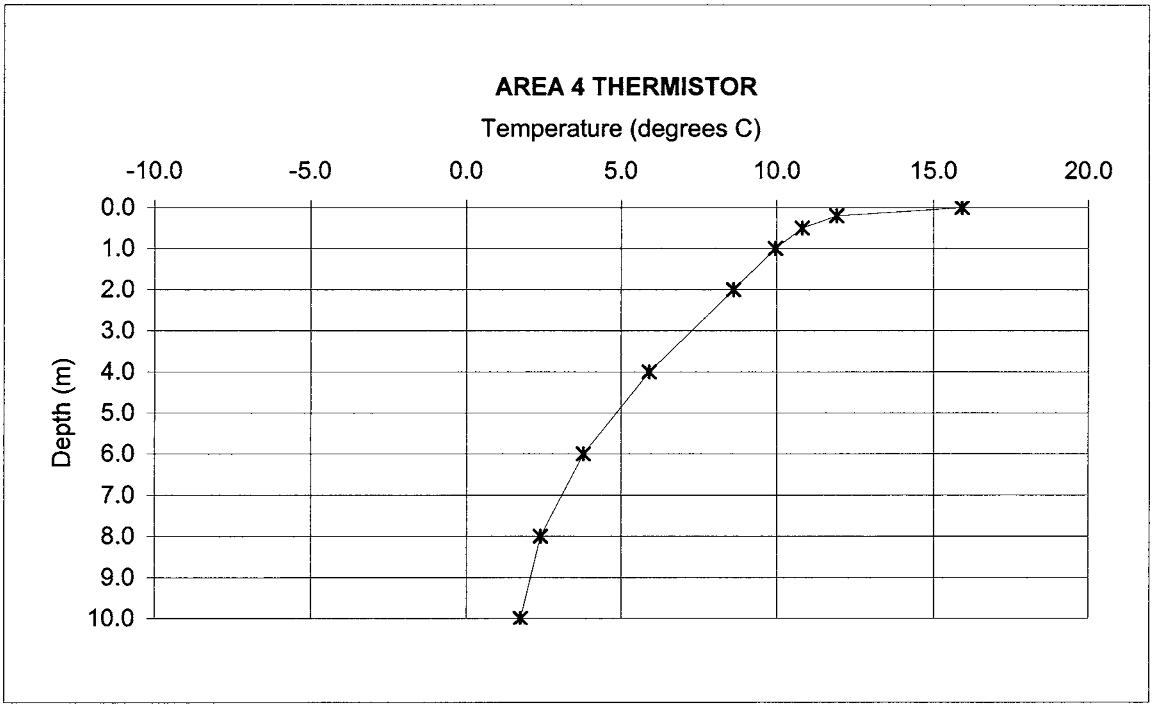
TEMPERATURE MONITORING SUMMARY
THERMISTOR CABLE NEAR AREA 7, WEST SIDE OF AIRSTRIP
BOREHOLE 17; CABLE 1803
Discovery Mine, N.W.T.

SENSOR	1	2	3	4	5	6	7	8	9
DEPTH (m)	0.0	0.2	0.5	1.0	2.0	4.0	6.0	8.0	10.0
CALIBRATION	-0.01	-0.01	-0.02	-0.01	-0.01	-0.01	0.03	0.00	-0.02
DATE	TEMPERATURE (deg. C)								
25-Aug-05	19.0	12.9	12.2	11.2	6.8	3.3	2.4	2.1	2.1



TEMPERATURE MONITORING SUMMARY
THERMISTOR CABLE NEAR AREA 4, EASTSIDE OF AIRSTRIP
BOREHOLE 18; CABLE 1804
Discovery Mine, N.W.T.

SENSOR	1	2	3	4	5	6	7	8	9
DEPTH (m)	0.0	0.2	0.5	1.0	2.0	4.0	6.0	8.0	10.0
CALIBRATION	-0.02	0.00	-0.01	-0.02	-0.02	-0.01	-0.01	0.00	-0.02
DATE	TEMPERATURE (deg. C)								
25-Aug-05	15.9	11.9	10.8	10.0	8.6	5.9	3.8	2.4	1.7



APPENDIX

APPENDIX E SELECTED PHOTOGRAPHS

Photo 1
Drill rig set up on BH-01 on Access Road

Photo 2
Removing armour rock at BH-17, north end of airstrip

Photo 3
Oxidized tailings coming to the surface during augering of BH-08

Photo 4
Layers of oxidized and unoxidized tailings in BH-12

Photo 5
Saturated tailings at BH-22, standpipe installed. Tailings later covered with bentonite and armour rock

Photo 6
BH-13 – Native soil at bottom of split spoon (right), tailings above.

Photo 7
Thermistor and standpipe in BH-18 at Area 4. Frost boils visible around post.

Photo 8
Thermistor and piezometer at south end of runway.

Photo 9
Thermistor Installation at North end of runway (BH-35)

Photo 10
Thermistor and standpipe near center of runway (BH-22) after installation.

Tyhee NWT Corp

2006 GEOTECHNICAL INSPECTION OF AIRSTRIP, APRON AND ACCESS ROAD
YELLOWKNIFE GOLD PROJECT, NT

1740082.022

September 2006

EBA Engineering Consultants Ltd.
p. 867.920.2287 • f. 867.873.3324
PO Box 2244 • 201, 4916 - 49 Street • Yellowknife, Northwest Territories X1A 2P7 • CANADA

Tyhee N W T Corp

October 1, 2006

Mackenzie Valley Land and Water Board
P.O. Box 2130
7th Floor – 4910 50th Avenue
Yellowknife, NT
X1A 2P6

Attention: Peter Lennie-Misgeld

Dear Mr. Lennie-Misgeld:

Re: Type "A" Land Use Permit MV2005C0001 – Airstrip Geotechnical Drilling

Please find attached a report entitled " 2006 Geotechnical Inspection of Airstrip, Apron and Access Road – Yellowknife Gold Project, NT" completed by EBA Engineering on the Discovery airstrip on September 14, 2006 as per Clause # 94 of our amended Land Use Permit MV2005C0001.

Please acknowledge receipt and should you have any questions concerning this matter, please contact me on my cell (780) 975-2550

Yours truly,

Original signed by "H.R.Wilson"

Hugh R. Wilson
Vice President – Environment and Community Affairs

Cc: Clint Ambrose, INAC (Via e-mail only)
Carolyn Cornell, Tyhee Development Corp (via e-mail only)
Doug Levesque, Tyhee NWT Corp (via e-mail only)

401 675 W. Hastings St., Vancouver, B.C. V6B 1N2 Ph: 604 681-2877, Fax: 604 681-2879

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TABLES

FIGURES

1.0 INTRODUCTION

This report describes EBA's Engineering Consultants Ltd.'s (EBA's) findings from an inspection and monitoring program related to Tyhee NWT Corp's (Tyhee's) continued use of the existing airstrip, apron and access road at the Yellowknife Gold Project (YGP, formerly the Discovery Mine site). It is understood that an annual inspection is required to comply with Condition #94 of Tyhee's Land Use Permit MV2005C0001.

2.0 BACKGROUND

Since the late 1990's Indian and Northern Affairs Canada (INAC) have been completing environmental reclamation work for the mine site. In an effort to contain the tailings, a cap made from silty clay excavated from a local borrow source has been placed on the tailings in a nominal 0.3 m thickness. In order to protect the clay cap from erosion, a protective armour rock layer of 100 mm minus crushed rock was placed on top of the silty clay cap. The armour rock also had a nominal thickness of 0.3 m. Since completion of the tailings cap in 2000, numerous "frost boils" have been identified and can be characterized where fine material, either from the silty clay layer or from the tailings beneath, have migrated upward through the armour rock.

INAC completed their reclamation work in the fall of 2005. As part of the mine reclamation, INAC planned to decommission the existing airstrip. Tyhee applied for and received an amendment to its' current land use permit from the MVLWB that allows Tyhee to continue using the airstrip to support ongoing advanced exploration and site access needs. INAC expressed a concern over whether continued use of the airstrip might exacerbate their efforts to mitigate the frost boil phenomena and its possible implication on long-term reclamation integrity.

EBA conducted a site investigation in the late summer of 2005 of the airstrip, apron and access road area in order to support continued operations of the airstrip and provide data for a potential upgraded design for long-term use of the airstrip during the operational phase of the YGP. EBA's investigation included two areas of frost boil occurrence near the airstrip with the objective that this data might assist INAC in determining the mechanism of frost boil formation. Standpipe piezometers and thermistor cables were installed during the site investigation. The site investigation is documented in a report entitled "Airstrip and Access Road Geotechnical Evaluation, Yellowknife Gold Project – Discovery Mine, N.W.T., prepared for Tyhee by EBA and submitted by Tyhee to the MVLWB in November 2005.

Initial readings of the instrumentation were taken soon after installation. Follow-up monitoring commenced this summer. This letter presents the monitoring results to date and describes other information related to the operation of the airstrip, apron and access road.

3.0 MONITORING RESULTS

3.1 GROUNDWATER LEVELS

Groundwater levels measured to-date are presented on Table 1. To assist with understanding borehole references, Figure 2 from the 2005 geotechnical evaluation report is also appended to this report.

It can be seen in Table 1 that most standpipes were dry in August of 2005 and 2006. The only standpipes that have consistently contained groundwater were at Borehole 12, on the west side of the airstrip at the area of past settlement, and Borehole 17, in a frost boil area west of the airstrip (referred to by INAC as Area 7). At these two locations, the groundwater levels were more than 1 m higher in August 2006 than in August 2005.

At Borehole 22, on the east side of the airstrip at the area of past settlement, there was groundwater in August 2005, but not in August 2006. This implies that the groundwater level has dropped in that area.

In September 2005, there was groundwater in 5 of 10 standpipes, suggesting an overall rise in groundwater levels since August 2006, likely as a result of precipitation during the monitoring interval. At Boreholes 12 and 17, the increase in water level was about 0.2 m between August 2006 and September 2006.

Comparison of groundwater levels at Boreholes 11 and 26, towards the south end of the airstrip, and at Boreholes 12 and 22, adjacent to the area of airstrip settlement, suggests that groundwater is flowing west to east, below the airstrip, at these locations. There is insufficient data to date at the other airstrip standpipe installations to draw any conclusions.

The interpretations about direction of groundwater flow should be viewed with caution. The data in Table 1 could also be interpreted to indicate that groundwater is flowing from north to south. On a broad scale, groundwater can be expected to roughly follow the surface gradient, but on a local scale, it is expected that groundwater flow will be controlled by undulations in the bedrock surface.

3.2 GROUND TEMPERATURES

Ground temperatures measured to-date are presented on Tables 2 to 6.

In general, the ground temperatures below a depth of about 4 m were comparable between August 2005 and August 2006. The exception was at Borehole 18, in Area 4 (Table 3). The ground temperatures at this location were warmer through the full installation depth, likely as a result of the shallow bedrock that underlies this location.

In general, the ground temperatures above a depth of 4 m were warmer in August 2006 than in August 2005, likely reflecting the warmer summer of 2006.

In general, the ground temperatures at depth were warmer in September 2006 than in August 2006. This indicates that the summer's heat was propagating downwards. The exception to this was at the location of Borehole 20, in the former settlement area (Table 5). The ground temperature did not change much between August and September 2006, likely a result of the high moisture soil/rock moisture contents, hence high specific heat, at this location.

The initial monitoring suggested that the ground below the off-airstrip areas was warmer than below the airstrip. Continued monitoring has confirmed this. This is attributable to snow clearing in the winter permitting more heat loss from the ground below the airstrip than in the adjacent areas that are insulated by snow cover.

The initial monitoring suggested that there may be permafrost below the north and south ends of the airstrip. September's monitoring results suggest that the below 0 °C ground temperatures measured in August of both 2005 and 2006 are indicative of residual seasonal frost and not permafrost. Permafrost does not seem to be present at any of the thermistor cable locations.

4.0 OTHER OBSERVATIONS / INFORMATION

The instrumentation installation and initial monitoring was completed by Robert Girvan, M.I.T. The monitoring visits this year were conducted by Ed Hoeve, P.Eng. Prior to this, Mr. Hoeve was last on the site in the fall of 1999, at the time armour rock and some airstrip surfacing material was being placed. As such, it is not possible to comment on observed changes to the airstrip and access road over the last year. What can be stated is that no indications of deterioration of the tailings cap below the airstrip or on the apron and access road have been observed during the monitoring to-date.

The following maintenance activities were reported to EBA:

- About 40 m^3 of rock fill was placed along the access road in the early spring. This was followed up by minor touch-up during the summer;
- Recently work has commenced on the access road bringing the thickness of rock fill up to 0.5 m, as requested in the explanatory comments of INAC's Inspection Report of September 15, 2006. Last year's site investigation determined that the average rock fill thickness at the borehole locations along the access road was about 0.4 m. To date, approximately 120 m^3 of material has been placed along the access road, and site personnel are continuing to place material to meet the comments by the Inspector; and
- There was about 40 m^3 of crushed gravel spread on the airstrip in the late spring/early summer.

In the past, additional fill has reportedly been required to maintain a settlement area in the vicinity of Borehole 12. Of the 40 m^3 mentioned above, it is estimated that the majority was used in the dip area with the remainder being placed, where needed, between the apron and the north end of the airstrip.

There was ponded surface water just north of Borehole 13 at the time of the September, 2006 monitoring visit. Examination of this area revealed a mixture of fine-grained soil with the armour rock adjacent to the airstrip. Tyhee reports that this is associated with the access route INAC used to their adjacent hazardous material landfill.

A trail indicating the path of vehicular traffic was observed along the west edge of the airstrip at the time of the September 2006 monitoring visit. Tyhee reports that site personnel use the west side of the airstrip as a travel-way to limit vehicular traffic on the airstrip, hence minimize maintenance and crushed gravel requirements. The traffic is not considered to be impacting the underlying tailings cap, but is rather a maintenance item for the airstrip surface.

5.0 CLOSURE

We trust the information presented herein satisfies your present requirements. Please contact the undersigned if you require additional information.

Respectfully submitted,
EBA Engineering Consultants Ltd.

Sept 29/06
T. E. HOEVE

T.E. Hoeve, P.Eng.
Principal Consultant, NT/NU
Direct: 867.766.3728 x114
ehoeve@eba.ca

Reviewed by:

D.C. Cathro, P.Eng.
Vice President, Arctic Practice

THE ASSOCIATION OF
PROFESSIONAL ENGINEERS,
GEOLOGISTS and GEOPHYSICISTS
OF THE NORTHWEST TERRITORIES
PERMIT NUMBER
P 018
EBA ENGINEERING
CONSULTANTS LTD.

TABLES

TABLE 1
GROUNDWATER LEVEL MONITORING SUMMARY
TYHEE, YELLOWKNIFE GOLD PROJECT

BOREHOLE	11	26	12	22	33	34	13	35	17	18
GROUND ELEVATION (m)	301.91	301.89	303.02	303.01	306.53	306.38	308.24	308.01	307.54	302.45
DATE	GROUNDWATER ELEVATION (m)									
25-Aug-05	<298.75	<299.68	300.42	300.44	<305.02	<305.47	<306.29	<306.91	305.14	<301.86
3-Aug-06	<298.75	<299.68	302.03	<299.76	<305.02	<305.47	<306.29	<306.91	306.24	<301.86
14-Sep-06	299.80	<299.68	302.27	299.60	<305.02	<305.47	<306.29	<306.91	306.43	301.95

Note: "<" symbol denotes there was no water in the standpipe at the time of reading, implying that the groundwater level at that location was below the bottom of the standpipe piezometer.

TABLE 2
TEMPERATURE MONITORING SUMMARY
THERMISTOR CABLE NEAR AREA 7, WEST SIDE OF AIRSTRIP
BOREHOLE 17; CABLE 1803
TYHEE, YELLOWKNIFE GOLD PROJECT

SENSOR	1	2	3	4	5	6	7	8	9
DEPTH (m)	0.0	0.2	0.5	1.0	2.0	4.0	6.0	8.0	10.0
CALIBRATION	-0.01	-0.01	-0.02	-0.01	-0.01	-0.01	0.03	0.00	-0.02
DATE	TEMPERATURE (deg. C)								
25-Aug-05	19.0	12.9	12.2	11.2	6.8	3.3	2.4	2.2	2.1
3-Aug-06	26.2	20.6	17.1	15.0	9.2	3.3	2.6	2.3	2.3
14-Sep-06	7.2	8.5	10.9	11.6	9.8	4.6	3.5	2.9	2.5

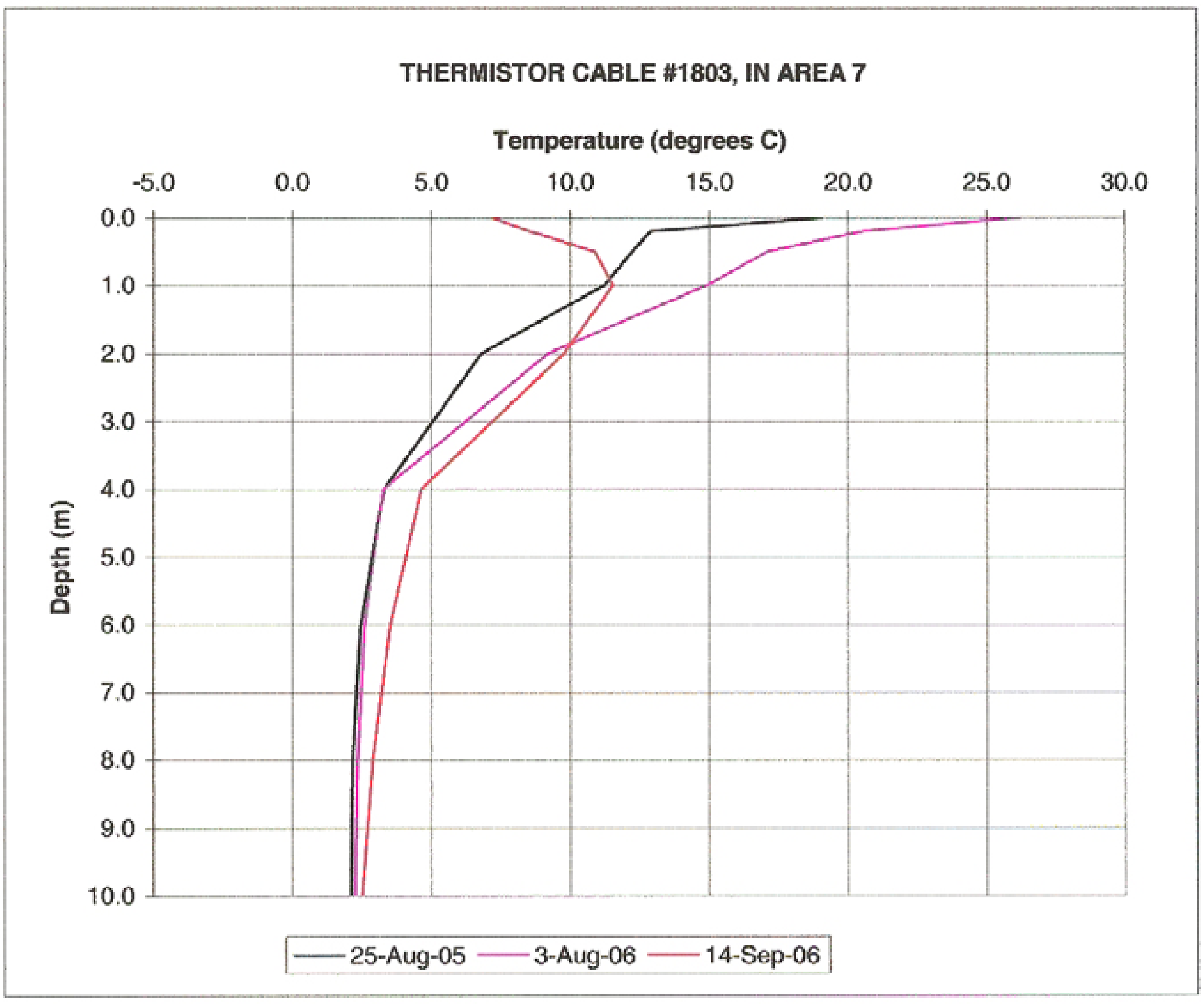


TABLE 3
TEMPERATURE MONITORING SUMMARY
THERMISTOR CABLE NEAR AREA 4, EAST SIDE OF AIRSTRIP
BOREHOLE 18; CABLE 1804
TYHEE, YELLOWKNIFE GOLD PROJECT

SENSOR	1	2	3	4	5	6	7	8	9
DEPTH (m)	0.0	0.2	0.5	1.0	2.0	4.0	6.0	8.0	10.0
CALIBRATION	-0.02	0.00	-0.01	-0.02	-0.02	-0.01	-0.01	0.00	-0.02
DATE	TEMPERATURE (deg. C)								
25-Aug-05	15.9	11.9	10.8	10.0	8.6	5.9	3.8	2.4	1.7
3-Aug-06	26.0	18.2	14.9	13.1	10.6	6.7	4.2	2.9	2.2
14-Sep-06	6.4	6.5	9.5	10.5	10.0	7.8	5.8	4.3	3.2

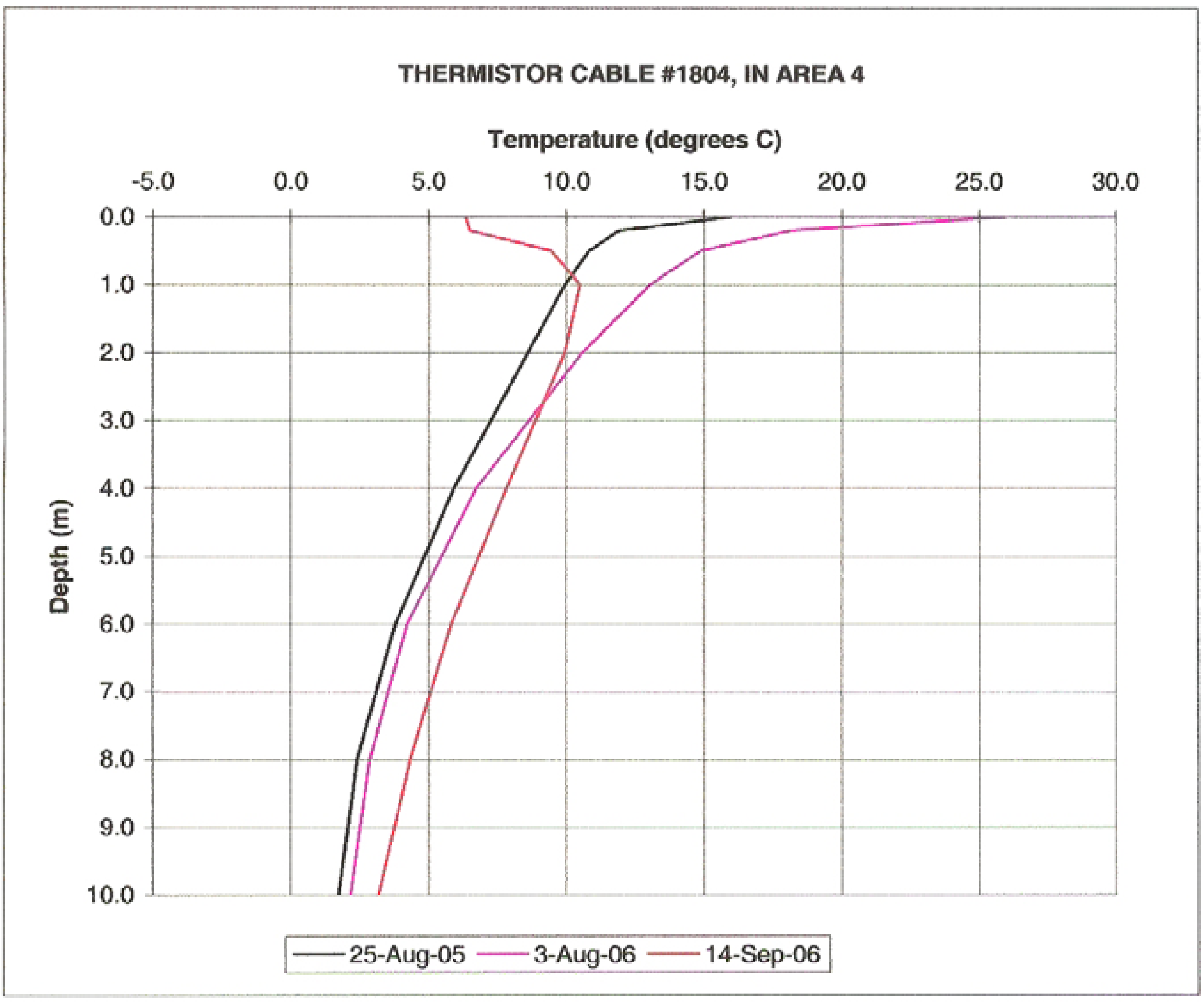


TABLE 4
TEMPERATURE MONITORING SUMMARY
THERMISTOR CABLE NEAR NORTH END OF AIRSTRIP
BOREHOLE 19; CABLE 1801
TYHEE, YELLOWKNIFE GOLD PROJECT

SENSOR	1	2	3	4	5	6	7	8	9
DEPTH (m)	0.0	0.2	0.5	1.0	2.0	4.0	6.0	8.0	10.0
CALIBRATION	-0.01	0.00	-0.02	-0.01	-0.01	-0.02	-0.02	0.01	-0.01
DATE	TEMPERATURE (deg. C)								
25-Aug-05	12.4	12.5	12.4	12.1	10.4	2.2	0.1	-0.1	-0.2
3-Aug-06	26.6	26.5	26.1	25.9	15.6	2.3	0.2	-0.3	-0.2
14-Sep-06	5.5	5.5	5.6	5.5	8.7	4.9	2.8	1.2	0.4

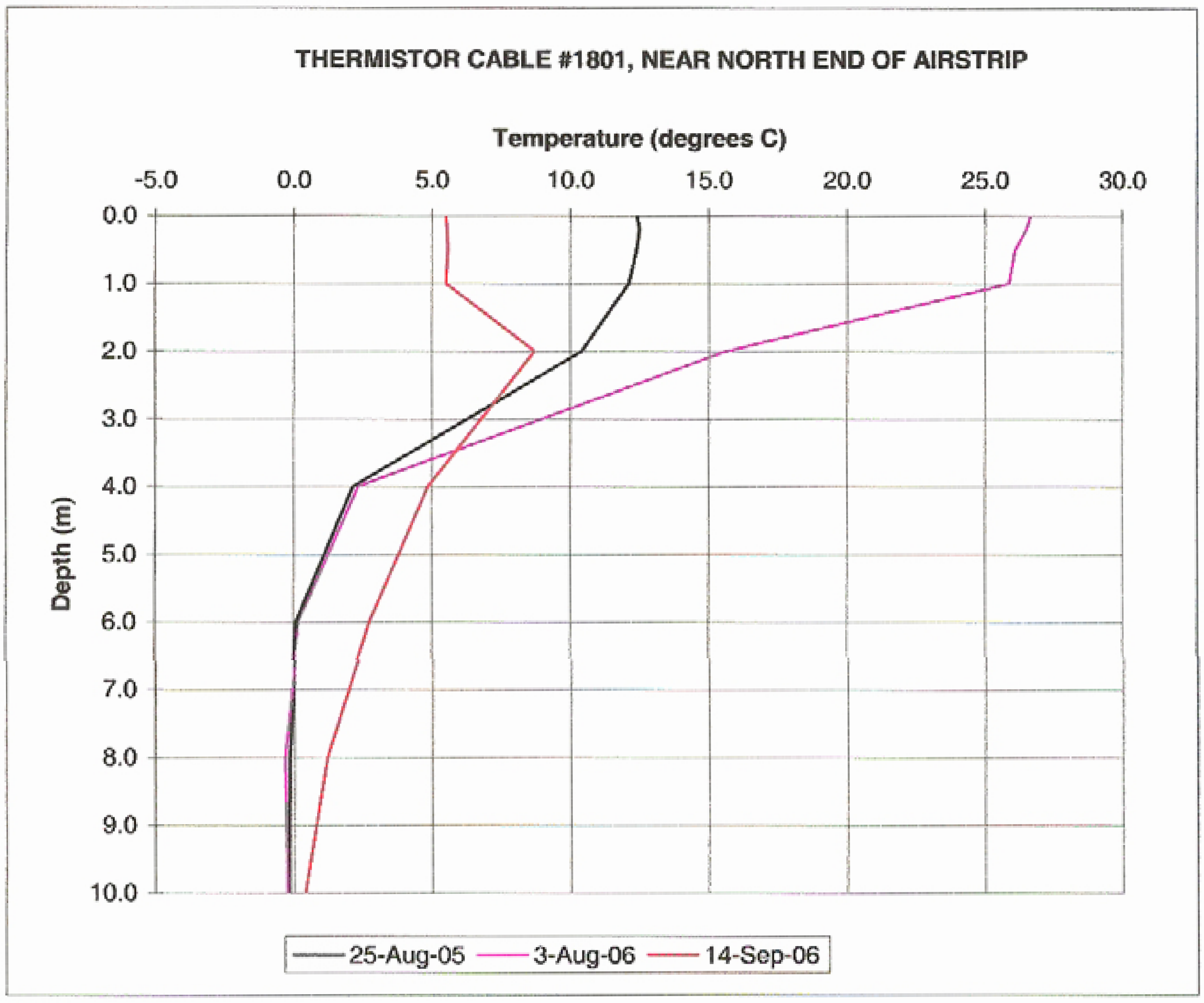


TABLE 5
TEMPERATURE MONITORING SUMMARY
THERMISTOR CABLE NEAR CENTER OF AIRSTRIP
BOREHOLE 20; CABLE 1800
TYHEE, YELLOWKNIFE GOLD PROJECT

SENSOR	1	2	3	4	5	6	7	8	9
DEPTH (m)	0.0	0.2	0.5	1.0	2.0	4.0	6.0	8.0	10.0
CALIBRATION	-0.01	0.01	-0.02	-0.01	-0.01	-0.02	-0.02	0.00	-0.02
DATE	TEMPERATURE (deg. C)								
25-Aug-05	11.0	11.0	11.2	8.7	1.4	0.4	1.3	1.1	1.0
3-Aug-06	18.6	18.7	19.8	13.3	2.3	0.0	0.7	0.9	0.9
14-Sep-06	4.4	4.4	4.3	6.3	2.9	0.0	0.7	0.9	0.9

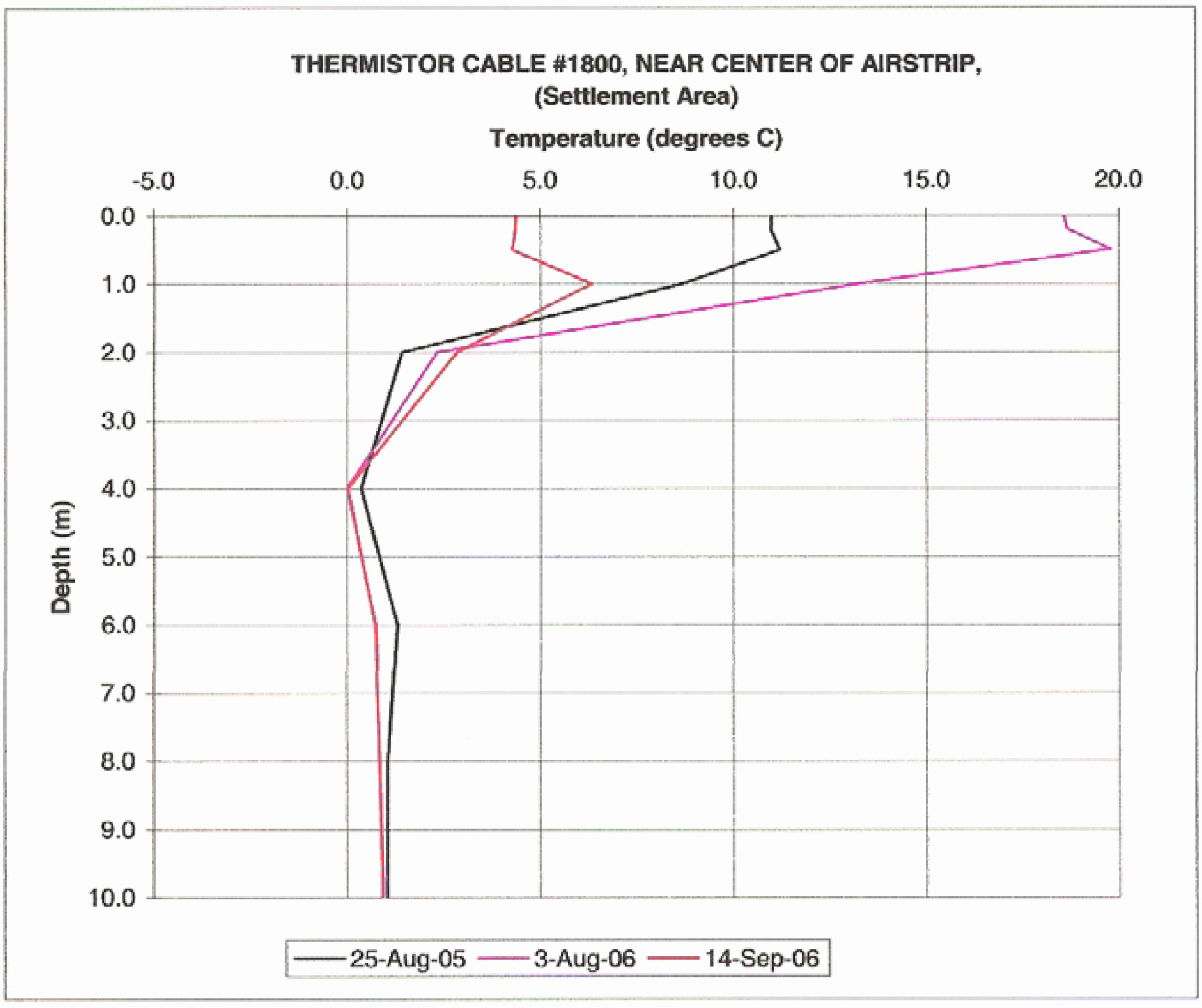
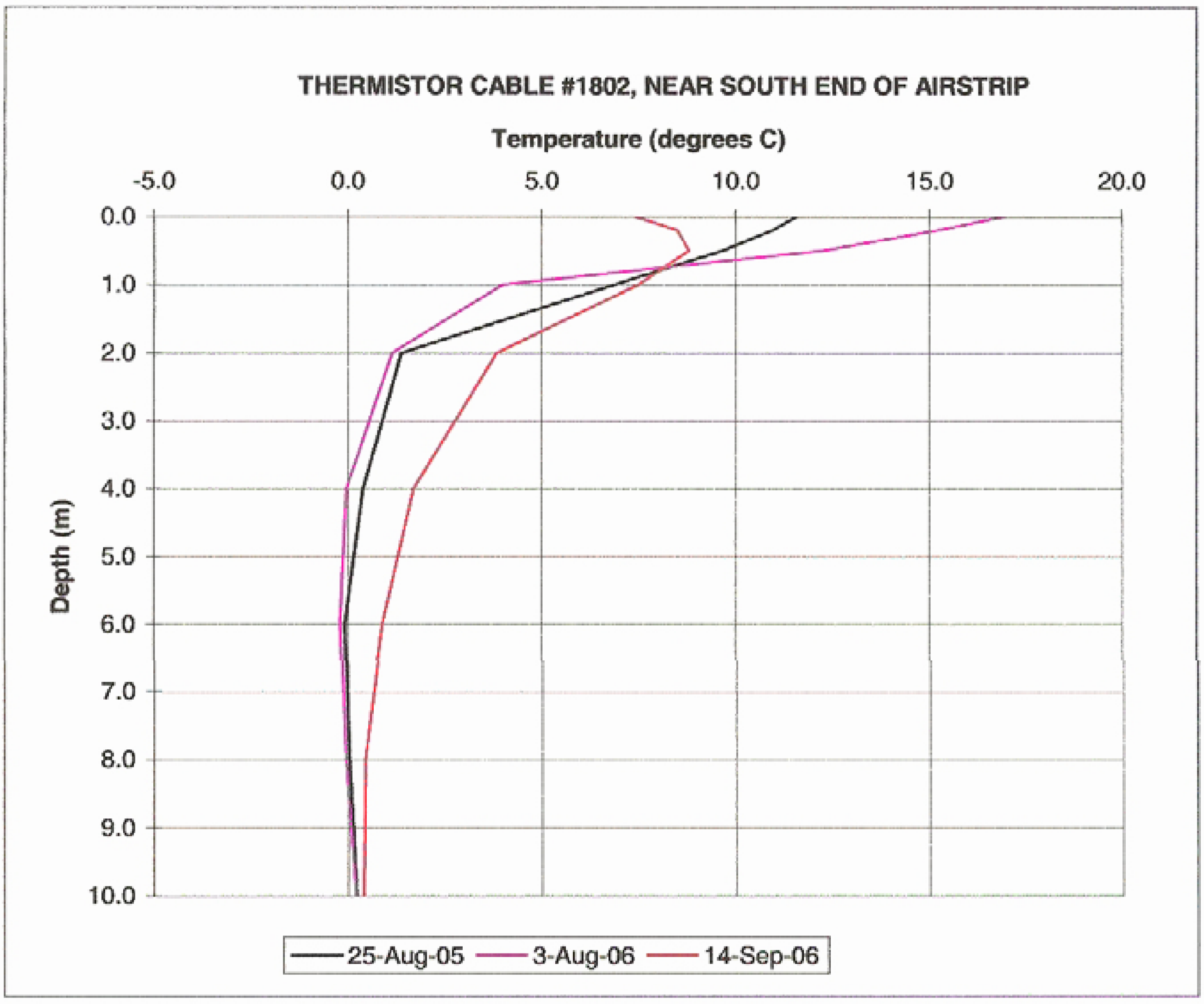


TABLE 6
TEMPERATURE MONITORING SUMMARY
THERMISTOR CABLE NEAR SOUTH END OF AIRSTRIP
BOREHOLE 21; CABLE 1802
TYHEE, YELLOWKNIFE GOLD PROJECT

SENSOR	1	2	3	4	5	6	7	8	9
DEPTH (m)	0.0	0.2	0.5	1.0	2.0	4.0	6.0	8.0	10.0
CALIBRATION	-0.02	0.01	-0.02	0.00	-0.01	-0.01	0.03	-0.02	-0.01
DATE	TEMPERATURE (deg. C)								
25-Aug-05	11.6	10.9	9.6	6.9	1.4	0.4	-0.1	0.0	0.2
3-Aug-06	16.9	15.2	12.3	4.0	1.1	0.0	-0.2	-0.1	0.2
14-Sep-06	7.4	8.5	8.8	7.5	3.9	1.7	0.9	0.4	0.4



FIGURES

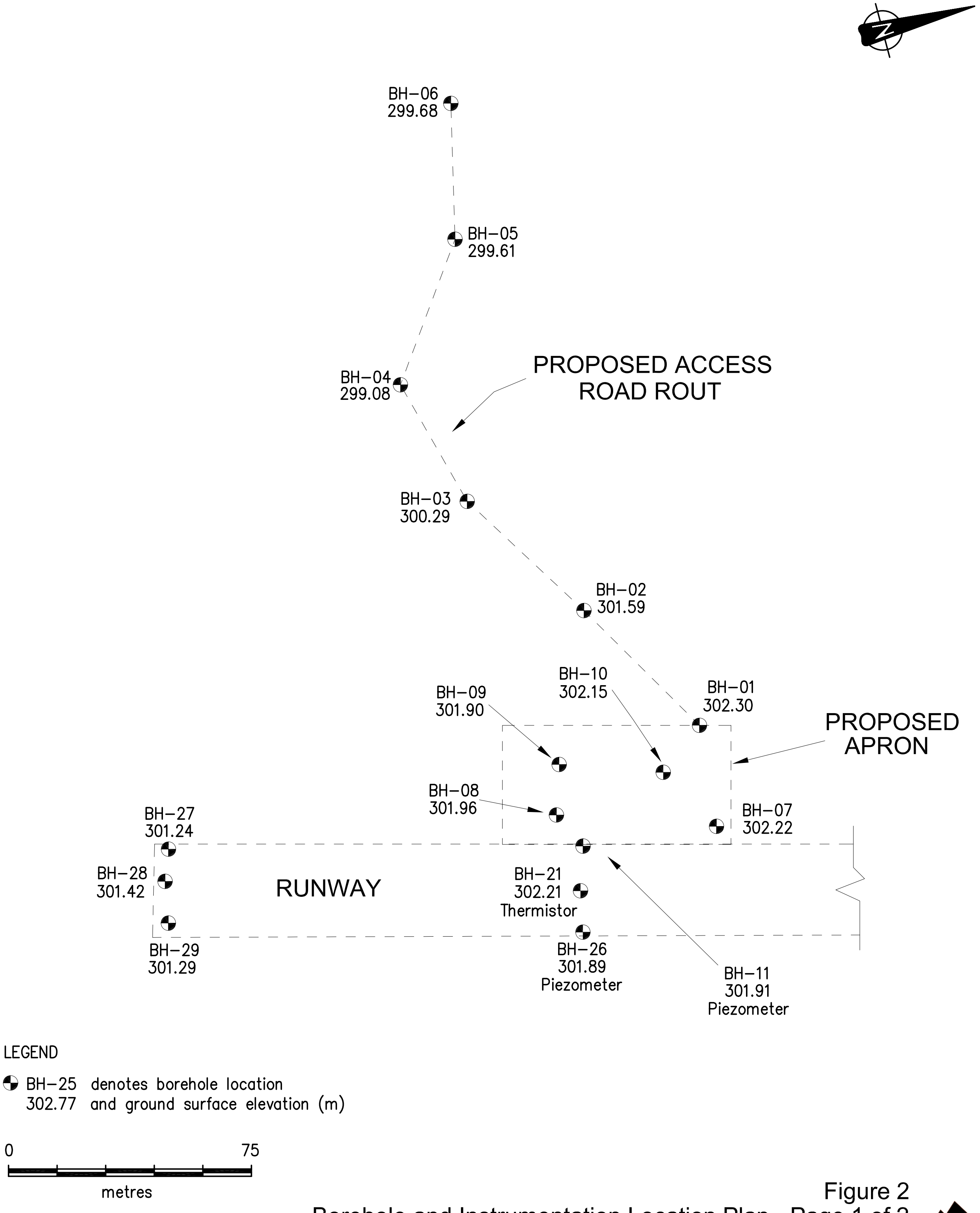


Figure 2
Borehole and Instrumentation Location Plan - Page 1 of 2

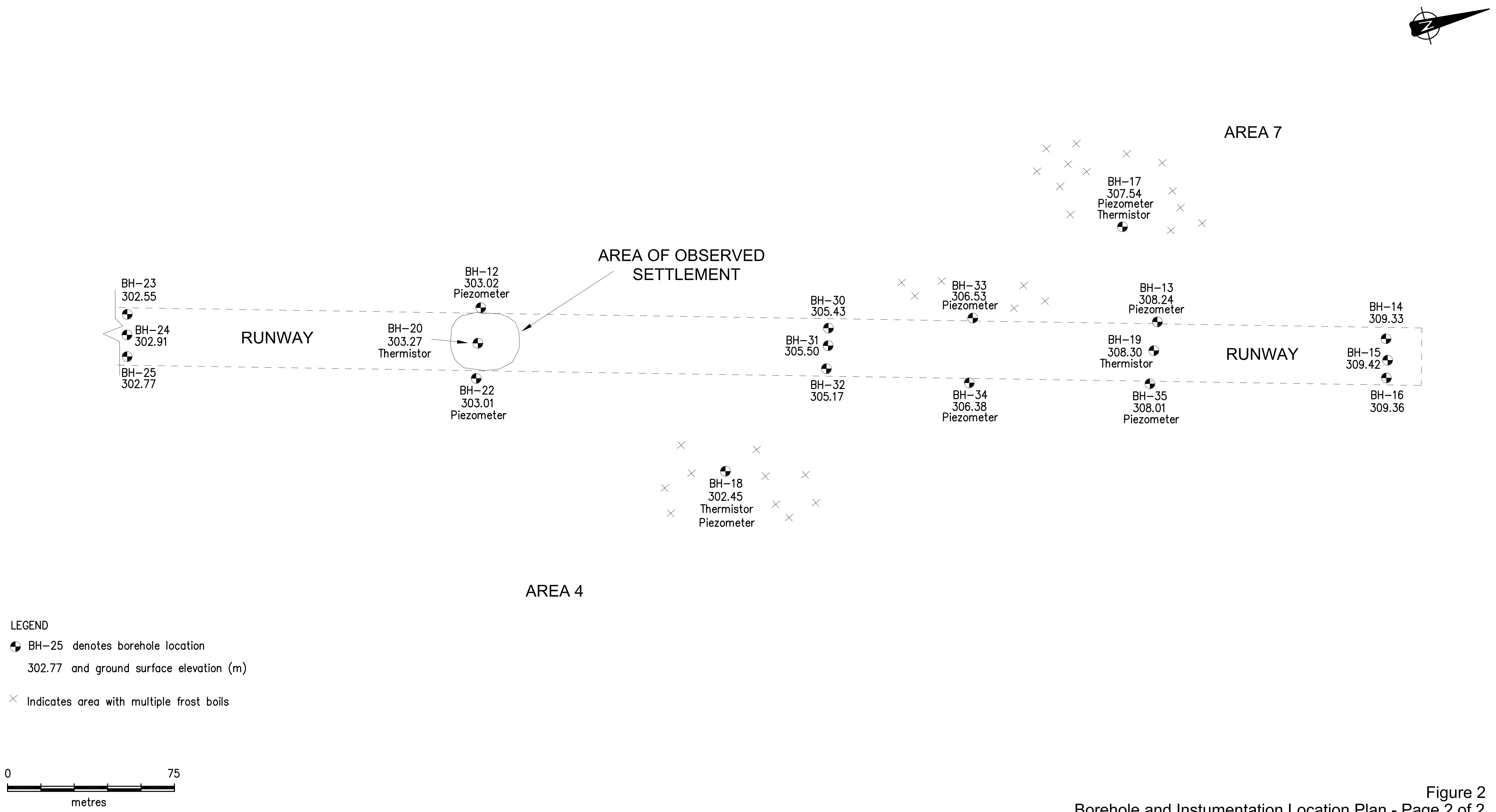


Figure 2
Borehole and Instumentation Location Plan - Page 2 of 2

Tyhee NWT Corp

2007 GEOTECHNICAL INSPECTION OF AIRSTRIP, APRON AND ACCESS ROAD
YELLOWKNIFE GOLD PROJECT, NT

1740082.022

September 2007

EBA Engineering Consultants Ltd.
p. 867.920.2287 • f. 867.873.3324
PO Box 2244 • 201, 4916 - 49 Street • Yellowknife, Northwest Territories X1A 2P7 • CANADA

Tyhee N W T Corp

October 1, 2007

Mackenzie Valley Land and Water Board
P.O. Box 2130
7th Floor – 4910 50th Avenue
Yellowknife, NT
X1A 2P6

Attention: Peter Lennie-Misgeld

Dear Mr. Lennie-Misgeld:

Re: Type "A" Land Use Permit MV2005C0001 – Airstrip Geotechnical Drilling

Please find attached a report entitled " 2007 Geotechnical Inspection of Airstrip, Apron and Access Road – Yellowknife Gold Project, NT" completed by EBA Engineering on the Discovery airstrip, dated September 2007 as per Clause # 94 and # 96 of our amended Land Use Permit MV2005C0001.

Please note that this report provides comments on the civil works recommended by EBA Engineering to upgrade the airstrip, access road and apron for longer term use, once the Yellowknife Gold Project moves closer to a production decision. It should also be noted that EBA's findings state that the airstrip can continue to be used under existing conditions with no impact on the underlying tailings cap. The report further suggests that monitoring of the instrumentation placed in the airstrip in 2005 can be discontinued.

Please acknowledge receipt and we look forward to receiving approval from the Board that this submission satisfies the terms and conditions of the amended land use permit.

Should you have any questions concerning this matter, please contact me on my cell (780) 975-2550

Yours truly,

Original signed by "H.R.Wilson"

Hugh R. Wilson
Vice President – Environment and Community Affairs

Cc: Clint Ambrose, INAC (Via e-mail only)
Carolyn Cornell, Tyhee Development Corp (via e-mail only)
Doug Levesque, Tyhee NWT Corp (via e-mail only)

401 675 W. Hastings St., Vancouver, B.C. V6B 1N2 Ph: 604 681-2877, Fax: 604 681-2879

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1.0 INTRODUCTION

This report describes EBA's Engineering Consultants Ltd.'s (EBA's) findings from an inspection and monitoring program related to Tyhee NWT Corp's (Tyhee's) continued use of the existing airstrip, apron and access road at the Yellowknife Gold Project (YGP, formerly the Discovery Mine site). It is understood that an annual inspection is required to comply with Condition #94 of Tyhee's Land Use Permit MV2005C0001.

2.0 BACKGROUND

From the late 1990's to 2005 Indian and Northern Affairs Canada (INAC) conducted environmental reclamation work for the abandoned Discovery Mine, which lands overlap with Tyhee's advanced exploration activities at it's Yellowknife Gold Project (YGP). In an effort to contain the tailings, a cap made from silty clay excavated from a local borrow source was placed on the tailings in a nominal 0.3 m thickness. In order to protect the clay cap from erosion, a protective armour rock layer of 100 mm minus crushed rock was placed on top of the silty clay cap. The armour rock also had a nominal thickness of 0.3 m. Since completion of the tailings cap in 2000, numerous "frost boils" have been identified and can be characterized where fine material, understood to be prevalently from the silty clay layer, has migrated upward through the armour rock.

As part of the mine reclamation, INAC planned to decommission the existing airstrip. Tyhee applied for and received an amendment to its current land use permit from the MVLWB that allows Tyhee to continue using the airstrip to support ongoing advanced exploration activities and site access needs. INAC expressed a concern over whether continued use of the airstrip might conflict with their efforts to mitigate the frost boil phenomena and its possible implication on long-term reclamation integrity.

EBA (2005) documents a site investigation of the airstrip, apron and access road area conducted in the late summer of 2005 in order to support continued operations of the airstrip and provide data for a potential upgraded design for long-term use of the airstrip during the operational phase of the YGP. EBA's investigation included two areas of frost boil occurrence near the airstrip with the objective that the data collected might assist INAC in determining the mechanism of "frost boil" formation. Standpipe piezometers (standpipes) and thermistor cables were installed during the site investigation.

Initial readings of the instrumentation were taken soon after installation. Follow-up monitoring commenced in 2006 and continued until August of this year (2007). This letter presents the monitoring results to date and describes other information related to the operation of the airstrip, apron and access road. Recommendations for finalization of an upgraded airstrip structure design, as required by the amended permit conditions, are also presented.

3.0 OBSERVATIONS

3.1 GROUNDWATER LEVELS

Groundwater levels measured to-date are presented on Table 1. Figure 1 shows borehole locations with respect to the airstrip and the surrounding area.

Over the monitoring period, four standpipes have remained dry (at Boreholes 13, 26, 33 and 34); three standpipes have always had water (at Boreholes 12, 17 and 22); and three standpipes have intermittently had water (at Boreholes 11, 18 and 35).

For the standpipes that always contained water, there are seasonal variations, with the annual high groundwater level recorded during the September or June monitoring visits and the annual low groundwater level recorded during the December, February or April monitoring visits. The fluctuation of groundwater levels ranged from 1.57 m to 2.71 m at these three standpipe locations, over the last year.

At the four locations where there are pairs of standpipes across the airstrip (at Boreholes 11 and 26; 12 and 22; 33 and 34; and 13 and 35), there is a slight surface gradient down to the east. Based on the intermittent measurements at Boreholes 11 and 26 and consistent measurements at Boreholes 12 and 22, the groundwater at these locations also seems to flow to the east.

The single recorded occurrence of groundwater in Borehole 35 suggests that groundwater flow may, at least partially, be towards the west in the area of Boreholes 13 and 35.

The interpretations about direction of groundwater flow should be viewed with caution. The data in Table 1 could also be interpreted to indicate that groundwater is flowing from north to south. On a broad scale, groundwater can be expected to roughly follow the surface gradient, but on a local scale, it is expected that groundwater flow will be controlled by undulations in the underlying bedrock surface.

3.2 GROUND TEMPERATURES

Ground temperatures measured to-date are presented on Tables 2 to 6. The thermistor cable at Borehole 19, near the north end of the airstrip was destroyed during snow clearing last winter.

The data presented represents at least one annual cycle. As ground temperatures at all locations and depths were above 0 °C for at least part of the year, permafrost does not underlie any of the monitoring locations.

At the off-airstrip locations, the active layer, which is the zone that freezes and thaws annually, was measured to be about 1.7 m thick at Borehole 17 and about 5.5 m thick at Borehole 18. Below the airstrip, the active layer thickness was measured to range from about 4.5 m at Borehole 20 to more than the full monitoring depth of 10 m at Boreholes 19 and 21.

It is interesting to note that the locations that always had groundwater in the standpipes are adjacent to the areas where the shallowest seasonal frost penetration depths were measured.

Boreholes 12 and 22 are adjacent to Borehole 20, which exhibited 4.5 m of frost penetration. Borehole 17, in Area 7, exhibited 1.7 m of frost penetration. This suggests that the active layer thickness is reduced by groundwater flow.

The seasonal fluctuation of ground temperatures is a minimum at the bottom of the thermistor cables, 10 m below grade. The measurements from this depth give an approximation of the mean annual ground temperature. The mean annual ground temperature data is summarized in the table below:

Borehole	Location	Mean Ground Temperature (degrees C)	Range (Celsius degrees)
17 (Table 2)	Area 7	2.7	1.1
18 (Table 3)	Area 4	2.6	2.4[2]
19 (Table 4)	Airstrip – north	0.7[1]	1.9
20 (Table 5)	Airstrip – centre	0.9	0.2
21 (Table 6)	Airstrip - south	0.3	1.6

1: This average is not based on a full year of data.

2: Large range at 10 m depth is likely because bedrock is 0.8 m below grade at this location.

The table above indicates that the ground below the off-airstrip areas is warmer than below the airstrip. The generally colder ground temperatures below the airstrip are attributable to snow clearing in the winter. The effect of snow clearing is also evident in the tables at the end of the report, where it can be seen that near-surface ground temperatures below the airstrip drop below -20 °C, whereas the near-surface ground temperatures below the off-airstrip areas don't drop below -10 °C.

3.3 GENERAL OBSERVATIONS/INFORMATION

1. The airstrip surface remains in good condition (Photos 1, 2 and 3). It is understood that no additional crushed surfacing gravel was placed for airstrip maintenance over the last year, except as described in Point 2. Of note in this regard is that the rate of settlement in the area of Boreholes 12, 20 and 22 has attenuated to the point that no additional fill was required. Another small area of settlement, between Boreholes 19 and 20, was reported to EBA, but to-date the magnitude of settlement has not required fill.

2. Tyhee reported that a small hole developed at the location of Borehole 20. This is attributable to settlement of the borehole backfill. The hole was backfilled with sand and then capped with about a 150 mm thickness of 20 mm minus crushed gravel.

3. A vehicle trail is evident along the west side of the airstrip, due to the lighter colour of the gravel. Tyhee reports that site personnel use the west side of the airstrip as a travel-way to limit vehicular traffic on the airstrip, hence minimize maintenance and crushed gravel requirements. Other than the difference in colour, the continued use of the vehicle trail has not shown any adverse impact on the integrity of the gravel surface.

4. EBA's 2005 site investigation determined that the average rock fill thickness at the borehole locations along the access road from the airstrip to the camp was about 0.4 m. It is understood that INAC had requested that the thickness of rock fill be brought up to 0.5 m, in the explanatory comments of their Inspection Report from September 15, 2006. At the time of the 2006 report preparation, Tyhee had commenced placing additional rock fill on the access road. This work was completed over the past year. The thickness of the additional rock fill was measured to range from about 0.25 m to 0.45 m and average about 0.33 m (Photos 5 and 6). Therefore, the overall rock fill thickness along the access road is estimated to be about 0.7 m. A thin lift of 20 mm minus crushed gravel was worked in to the surface of about the first 185 m from the airstrip, but this is not considered to contribute measurably to the thickness.

5. No changes in the quantity or characteristics of the "frost boils" in the vicinity of Boreholes 17 and 18 were noticed (Photos 7 and 8). Similar to the observation recorded in the 2006 report, no "frost boils" were observed on the airstrip.

6. The 100 mm minus crushed rock cover, on areas adjacent to the airstrip, is beginning to be revegetated by birch, grasses and fireweed.

4.0 AIRSTRIP DESIGN

4.1 DESIGN BASIS

EBA has been requested, "to assess the capacity of the current airstrip to maintain its performance and characteristics and resist rutting/consolidation and pumping of the subgrade." This section provides our analysis of the pavement structure for the airstrip and provides comments on the pavement capacity; and in addition, comments are provided for upgrading the apron and access road. The test data described below was originally presented in EBA (2005).

CBR tests were conducted on samples of the subgrade of the airstrip. Samples were compacted to 97% of modified Proctor maximum dry density at optimum water content and tested using the procedure as outlined in ASTM D1883. The results of the testing indicated that the silty clay subgrade material had the following CBR values:

Sample Number	Unsoaked CBR	Soaked CBR
1	54.4	4.3
2	66.5	3.1

The soaked CBR indicates the support level provided by the material in wet conditions, for example during spring thaw or after prolonged periods of rainfall. The unsoaked CBR provides an indication of the support level provided by the material shortly after construction or after periods of little or no rainfall.

A pavement design takes into consideration the support level of the subgrade and the size of the aircraft using the facility. Using this input the thickness of pavement structure required to reduce the stress immediately under the aircraft tire to a level that can be safely handled by the subgrade is selected. As noted in the table above, this material is extremely sensitive to the amount of water in the sample (soaked verses unsoaked values). A structure designed for spring conditions (soaked) will be extremely over-designed for summer conditions and a pavement designed for summer conditions will be extremely under-designed in the spring.

The pavement structure, by definition, is selected to limit the deflection of the surface to a value that will not cause overstressing of the subgrade. Therefore, settlement caused by loading and pumping caused by overstressing the subgrade should not occur in an adequately designed pavement structure. In addition, rutting of the subgrade caused by loading should not occur in a properly designed structure.

The existing structure, as determined during the geotechnical investigation, is conservatively approximated as 100 mm of 20 mm minus crushed granular base course over 300 mm of 100 mm diameter rock over a clay cap over tailings. Using the design procedures as outlined in “Pavement Structural Design Training Manual” the existing thickness of granular material will have a Pavement Load Rating (PLR) of 4.6 in the spring (thaw season) and 10.5 in the summer/fall.

Note that while the groundwater levels are at their annual low through the winter/spring, because of a lack of infiltration, the subgrade is typically softest in the spring because the near-surface ground is nearly saturated, due to infiltration being blocked by the remaining frozen ground below. This seasonal condition reflects a perched water table near the ground surface.

It is understood that the aircraft that regularly use or are contemplated for use of the airstrip are the Buffalo, Twin Otter, Dash 7 and the Cessna Caravan. Of these four aircraft types, the Buffalo has an Aircraft Load Rating (ALR) of 4.3/2.7 (fully loaded/minimum weight) and the Dash 7 has an ALR of 5.5/3.8 (fully loaded/minimum weight). The other two aircraft are considerably lighter and as such, have fully loaded weights less than the minimum weight of the Buffalo or the Dash 7. The airstrip capacity for these aircraft types has been checked using the Flexible Pavement Design and Evaluation Charts for the individual aircraft, keeping in mind that overstressing of the subgrade cannot occur.

When considering airstrip capacity, the PLR should not be exceeded by the aircraft ALR, without special consideration. Thus in the summer, this airstrip would have a PLR of 10.5 and all of the aircraft that regularly use the airstrip could land with no restriction. However, in the spring or the summer after rainfall the airstrip could have a PLR of 4.6 and, under those conditions, the Dash 7 should not land without special consideration. The overload ratio of the Dash 7 would be approximately 1.35 (based on the design and evaluation chart for the Dash 7). This would indicate that limited operation of this aircraft should be allowed. A slight increase in thickness by 50 mm to a total of 450 mm of granular material would reduce the overload ratio to 1.23 which would allow unlimited operation. However, since overstressing of the subgrade is not to occur, because of the underlying tailings, an increase in structure of 150 mm of granular material, to a total of 550 mm, would result in achieving the design line where the overload ratio is 1.0. The airstrip capacity does not change rapidly, the capacity gradually changes as water penetrates the structure. Thus the

PLR is generally published at the minimum that will be achieved under unfavourable conditions (soaked CBR).

For the existing airstrip, the worst case PLR would be 4.6. If a plane with an ALR over the published PLR requires landing rights, special consideration can be provided based on the operators knowledge of weather conditions at the time of landing.

If all planes using the facility stay below the PLR of 4.6 then pumping of the subgrade and overstressing causing settlement due to load are unlikely to occur.

In addition to the pavement structure, a gravel airstrip has a secondary restraint to landing. The secondary restraint is the surface CBR at the time when a plane wishes to land. Surface CBR is defined as CBR at the in-situ condition of the gravel. CBR of a granular material is measured at a predefined density and moisture content. Even very good gravel with normal CBR in excess of 80 may, under loose and wet conditions, develop a surface CBR that is so soft that planes may have difficulty landing and taking off. These soft conditions generally develop in the spring during thaw when snow trapped on the surface melts and the frost comes out of the pavement to some depth, resulting in an oversaturated surface layer. Conditions in the spring period may dictate that surface must be bladed and rolled to re-compact the gravel and re-establish the CBR closer to the predefined density and moisture content. This in-situ CBR requirement is a function of plane size, tire size, tire pressure and load and cannot be set based on book values for a particular aircraft. It must be determined by the pilot for any given aircraft.

The surface conditions of the airstrip have not been a constraint to operating the airstrip in the past, to EBA's knowledge. However, the surface CBR may become a seasonal consideration once heavier aircraft (i.e. Dash 7 and Buffalo) begin to use the airstrip. Note that these surface conditions do not adversely impact the subgrade, as long as it has been appropriately designed, as described above.

4.2 AIRSTRIP RECOMMENDATIONS

1. The existing airstrip should be sufficient to perform without rutting or settlement under normal conditions for the Buffalo, Twin Otter and the Cessna Caravan. Special consideration can be provided to allow the Dash 7 to land outside of the period when the structure is soft.
2. If the airstrip is to be strengthened to ensure that the Dash 7 can land at all times, an additional 150 mm of crushed granular material must be added to the existing structure. This is illustrated in Figure 2.
3. Even airstrips with sufficient structure thickness may have periods in the spring and after rainfall events when the surface CBR will not be sufficient for the aircraft using the airstrip. If aircraft, especially the Buffalo and the Dash 7, use the airstrip at these times, rutting may occur. These times of unstable surface conditions can be minimized by proper maintenance (blading and re-compaction) of the surface.
4. A gravel surface is, by its very nature, a dynamically changing surface. Each time an aircraft takes off or lands, particles are dislodged from the surface and moved to the

edge of the airstrip. In addition, maintenance blading to ensure smoothness may cause the overall gravel structure to be reduced. Snow clearing may also remove some of the surface material. Therefore, to ensure that the thickness of the structure remains sufficient to handle the loads applied, additional gravel should regularly be added to the surface, the surface bladed and levelled, and the gravel re-compacted. The frequency of this maintenance activity will be determined by evaluating the traffic volume and severity.

4.3 APRON AND ROADWAY RECOMMENDATIONS

1. At present, the apron area is not being used by aircraft (Photo 4). When commissioned, the apron structure should equal the airstrip structure because the same weight of plane will be operating on the apron as on the airstrip. Based on five boreholes in the apron, there is a 300 mm layer of 100 mm minus rock cap on the apron. If the airstrip is not to be improved, then a 100 mm layer of 20 mm crush should be added to the apron. If the airstrip is to be improve, then a 250 mm layer of 20 mm crush should be added to the apron. This is illustrated in Figure 2.

2. The roadway that provides access to and along the airstrip is presently used by relatively light traffic. A 5 ton truck was considered as the maximum vehicle that would use the roadway in the short term and a crew change bus or heavier truck may be used in the long term. Since both of these vehicles are considered to be light in comparison to highway transport vehicles, the design structure should be a total of 350 mm thick. This could be composed of a lower layer of 100 mm crush which is 250 mm thick and an upper layer of 20 mm crush which is 100 mm thick. Placement of the upper layer should to take into account the amount of rock that falls into the voids in the lower layer. This is illustrated in Figure 2.

   The west portion of the airstrip, currently used as an access road, satisfies these criteria. In addition, the rock fill between the airstrip and the camp exceeds the minimum granular structure requirement. The general absence of 20 mm minus crushed gravel on the segment to camp is considered to be more of an operational/driveability constraint, rather than a structural deficiency.

5.0 DISCUSSION OF FROST BOIL OCCURRENCE

The objective of the recommendations provided in the foregoing is to allow the airstrip to be used on an on-going basis without damage to the underlying tailings cover. A secondary objective of EBA's investigation and inspections was to attempt to verify that the "frost-boils" observed elsewhere on the tailings cap, including two areas adjacent to the airstrip, were occurring independently and were not caused or worsened by continued operation of the airstrip.

EBA's investigation included two areas of "frost boil" occurrence near the airstrip with the objective that the data collected might assist INAC in determining the mechanism of frost boil formation. Boreholes 17 and 18 were drilled in these adjacent areas (Figure 1). It seems to EBA that the groundwater and temperature data collected does not point to a clear mechanism for the formation of the "frost-boils". No consistent difference in groundwater fluctuations was evident between the off-airstrip and airstrip areas. The ground temperatures below the off-airstrip areas are generally warmer than below the airstrip. This suggests that there are probably also different rates of frost penetration between the two areas, which may result in different segregation (ice lens formation) behaviour, but this is speculative.

In light of the absence of definitive conclusions arising from the monitoring, EBA recommends that the monitoring of the standpipes and thermistors be discontinued. However, visual inspections of the airstrip should be conducted each spring. This can be done by Tyhee personnel. If these inspections reveal "frost boils" on the airstrip, EBA should be contacted to re-evaluate our recommendations.

EBA considered the gradations of the various materials present at the site with respect to a filter criterion, which gives an indication of the potential for migration of particles from one soil layer through another. Based on a review of old correspondence and information in EBA (2005) we have determined the key relevant parameters are approximately as follows:

Soil Type	D_{85} (mm)	D_{15} (mm)
Tailings	2.4	0.02
Silty Clay	0.1	0.01
100 mm minus rock	65	25
20 mm minus gravel	16	0.5

Cedergren (1977) shows that the D_{15} of the filter soil should be no more than 5 times larger than the D_{85} of the protected soil:

$$D_{15}\text{ filter}/D_{85}\text{ soil} \leq 5$$

This criterion is satisfied between the tailings and silty clay cover. This criterion is not satisfied between the silty clay and the 100 mm minus armour rock. Therefore, the silty clay would not be considered compatible with the armour rock if a hydraulic gradient is contributing to "frost boil" formation.

The D_{15} of the 20 mm minus gravel, divided by the D_{85} of the silty clay, is equal to 5. Therefore, the silty clay would be marginally compatible with the 20 mm minus gravel under the foregoing criterion. This suggests that the 20 mm minus gravel is an effective cap to resist further upward migration of fines.

While the mechanism for "frost boil" formation has not been determined, it is likely that it is not strictly a hydrologic process, and that the freeze-thaw cycle plays a role. The filter criterion was not developed to account for freeze-thaw action, but intuitively it seems reasonable that a similar relationship would apply. Therefore, it seems logical that the surfacing material on the airstrip effectively inhibits upwards migration of fines from below. We believe that rather than promoting "frost boil" formation, the airstrip granular structure is functioning more effectively as a tailings cover than the surrounding areas.

6.0 CLOSURE

We trust the information presented herein satisfies your present requirements. Please contact the undersigned if you require additional information.

Respectfully submitted,
EBA Engineering Consultants Ltd.

Prepared by:

REGISTERED PROFESSIONAL ENGINEER
Sept 26/07
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THE ASSOCIATION OF
PROFESSIONAL ENGINEERS,
GEOLOGISTS and GEOPHYSICISTS
OF THE NORTHWEST TERRITORIES
PERMIT NUMBER
P 018
EBA ENGINEERING
CONSULTANTS LTD.

REFERENCES

Cedergren, H.R., 1977. Seepage, Drainage and Flow Nets, 2nd Edition. John Wiley & Sons, pp 179-181.

EBA Engineering Consultants Ltd., 2005. Airstrip and Access Road Geotechnical Evaluation, Yellowknife Gold Project, Discovery Mine, N.W.T. Report submitted to Tyhee NWT Corp., November 2005

TABLES

TABLE 1
GROUNDWATER LEVEL MONITORING SUMMARY
TYHEE, YELLOWKNIFE GOLD PROJECT

BOREHOLE	11	26	12	22	33	34	13	35	17	18
GROUND ELEVATION (m)	301.91	301.89	303.02	303.01	306.53	306.38	308.24	308.01	307.54	302.45
DATE	GROUNDWATER ELEVATION (m)									
25-Aug-05	<298.84	<299.68	300.42	300.44	<305.02	<305.47	<306.29	<306.91	305.14	<301.86
3-Aug-06	<298.84	<299.68	302.10	299.78	<305.02	<305.47	<306.29	<306.91	306.24	<301.86
14-Sep-06	299.80	<299.68	302.34	299.62	<305.02	<305.47	<306.29	<306.91	306.43	301.96
19-Oct-06	299.51	<299.68	301.80	299.69	<305.02	<305.47	<306.29	<306.91	305.76	301.97
14-Dec-06	<298.84	<299.68	300.67	299.84	<305.02	<305.47	<306.29	<306.91	304.89	<301.86
22-Feb-07	<298.84	<299.68	299.72	299.25	<305.02	<305.47	<306.29	<306.91	304.91	<301.86
19-Apr-07	<298.84	<299.68	299.75	299.02	<305.02	<305.47	<306.29	<306.91	304.89	<301.86
28-Jun-07	<298.84	<299.68	301.91	301.73	<305.02	<305.47	<306.29	<306.91	306.46	<301.86
23-Aug-07	<298.84	<299.68	301.47	300.34	<305.02	<305.47	<306.29	306.96	305.23	301.99

Note: "<" symbol indicates there was no water in the standpipe at the time of reading, implying that the groundwater level at that location was below the bottom of the standpipe piezometer.

TABLE 2
TEMPERATURE MONITORING SUMMARY
THERMISTOR CABLE NEAR AREA 7, WEST SIDE OF AIRSTRIP
BOREHOLE 17; CABLE 1803
TYHEE, YELLOWKNIFE GOLD PROJECT

SENSOR	1	2	3	4	5	6	7	8	9
DEPTH (m)	0.0	0.2	0.5	1.0	2.0	4.0	6.0	8.0	10.0
CALIBRATION	-0.01	-0.01	-0.02	-0.01	-0.01	-0.01	0.03	0.00	-0.02
DATE	TEMPERATURE (deg. C)								
25-Aug-05	19.0	12.9	12.2	11.2	6.8	3.3	2.4	2.2	2.1
3-Aug-06	26.2	20.6	17.1	15.0	9.2	3.3	2.6	2.3	2.3
14-Sep-06	7.2	8.5	10.9	11.6	9.8	4.6	3.5	2.9	2.5
19-Oct-06	-1.7	-0.6	1.8	4.4	6.4	5.0	4.1	3.4	2.8
14-Dec-06	-6.2	-3.6	-1.7	0.0	2.1	4.0	3.9	3.6	3.2
22-Feb-07	-7.9	-4.4	-2.8	-1.1	1.0	3.0	3.2	3.2	3.1
19-Apr-07	-2.3	-1.6	-1.4	-1.0	0.6	2.5	2.7	2.7	2.8
28-Jun-07	22.6	15.4	11.8	3.0	0.5	2.1	2.4	2.5	2.6
23-Aug-07	10.3	9.9	12.5	12.7	8.6	3.2	2.7	2.5	2.5

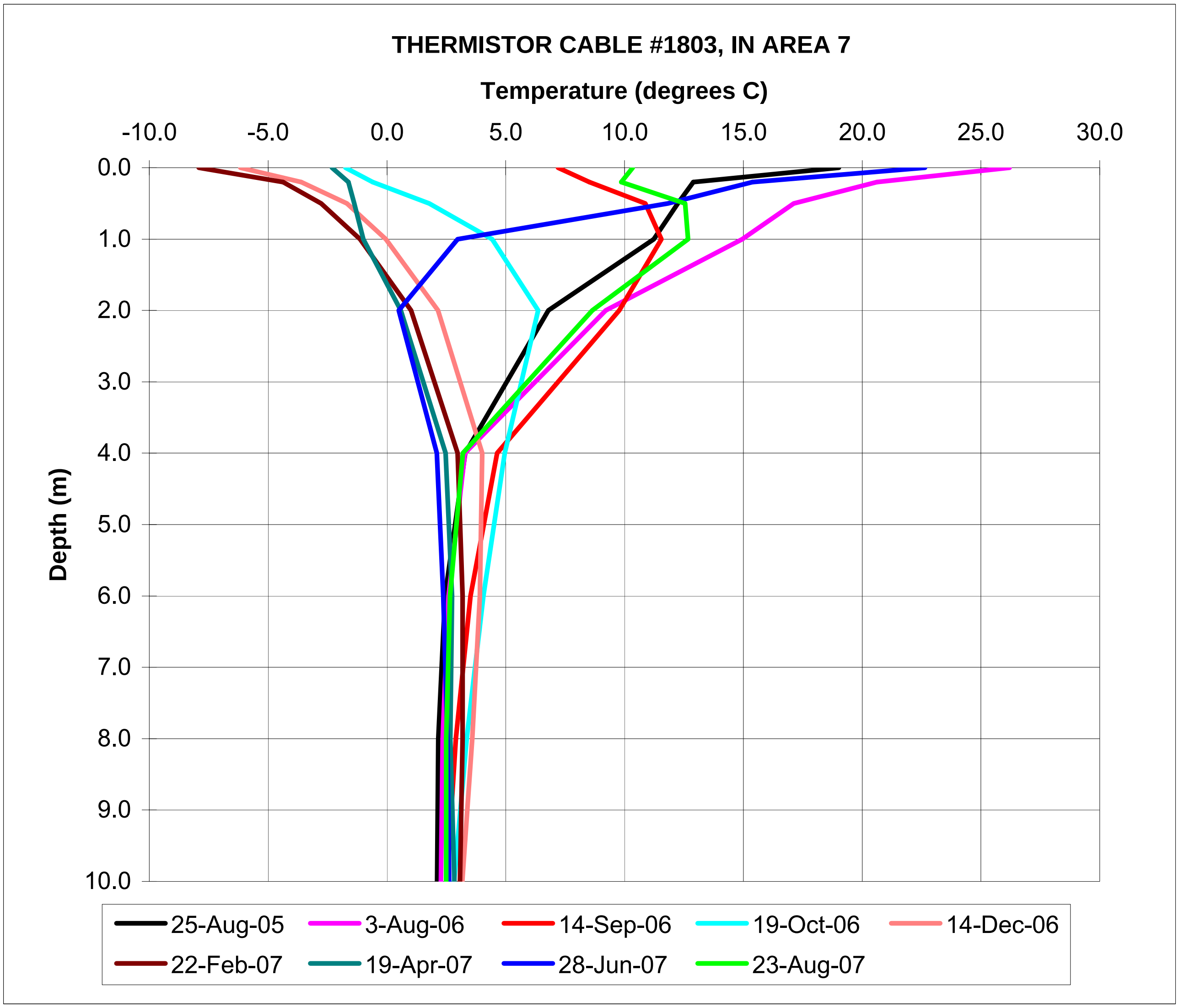


TABLE 3
TEMPERATURE MONITORING SUMMARY
THERMISTOR CABLE NEAR AREA 4, EAST SIDE OF AIRSTRIP
BOREHOLE 18; CABLE 1804
TYHEE, YELLOWKNIFE GOLD PROJECT

SENSOR	1	2	3	4	5	6	7	8	9
DEPTH (m)	0.0	0.2	0.5	1.0	2.0	4.0	6.0	8.0	10.0
CALIBRATION	-0.02	0.00	-0.01	-0.02	-0.02	-0.01	-0.01	0.00	-0.02
DATE	TEMPERATURE (deg. C)								
25-Aug-05	15.9	11.9	10.8	10.0	8.6	5.9	3.8	2.4	1.7
3-Aug-06	26.0	18.2	14.9	13.1	10.6	6.7	4.2	2.9	2.2
14-Sep-06	6.4	6.5	9.5	10.5	10.0	7.8	5.8	4.3	3.2
19-Oct-06	-1.2	-0.1	2.2	3.9	5.6	6.7	6.0	4.9	3.8
14-Dec-06	-5.0	-3.7	-2.6	-1.3	0.3	2.8	3.9	4.1	3.8
22-Feb-07	-9.4	-6.6	-4.8	-3.5	-2.2	0.1	1.5	2.4	2.8
19-Apr-07	-4.1	-3.5	-2.9	-2.6	-2.2	-0.9	0.3	1.3	1.9
28-Jun-07	18.9	16.4	13.5	9.7	5.9	2.4	1.2	1.1	1.4
23-Aug-07	9.9	10.0	11.6	11.6	10.2	7.3	4.9	3.3	2.3

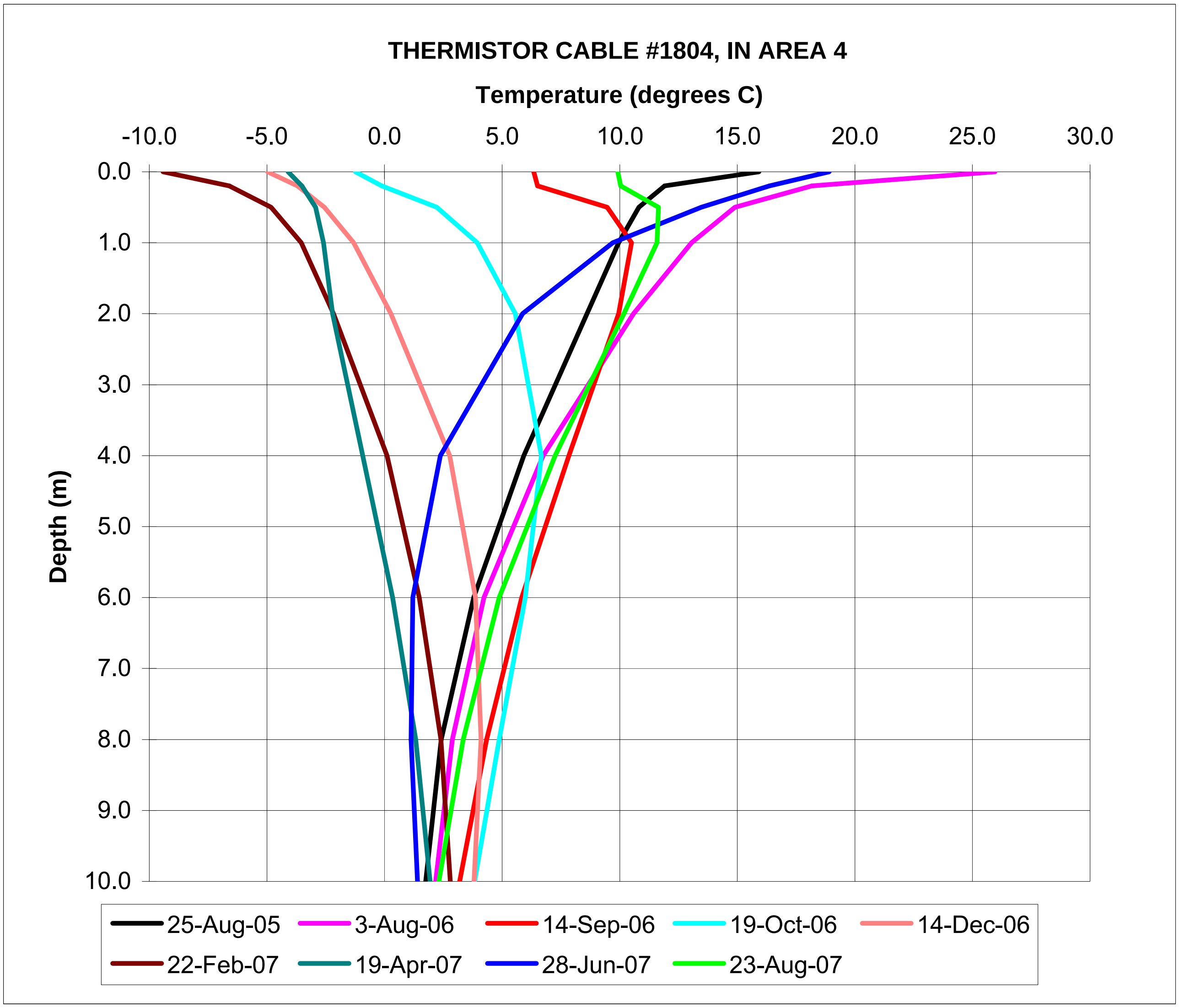
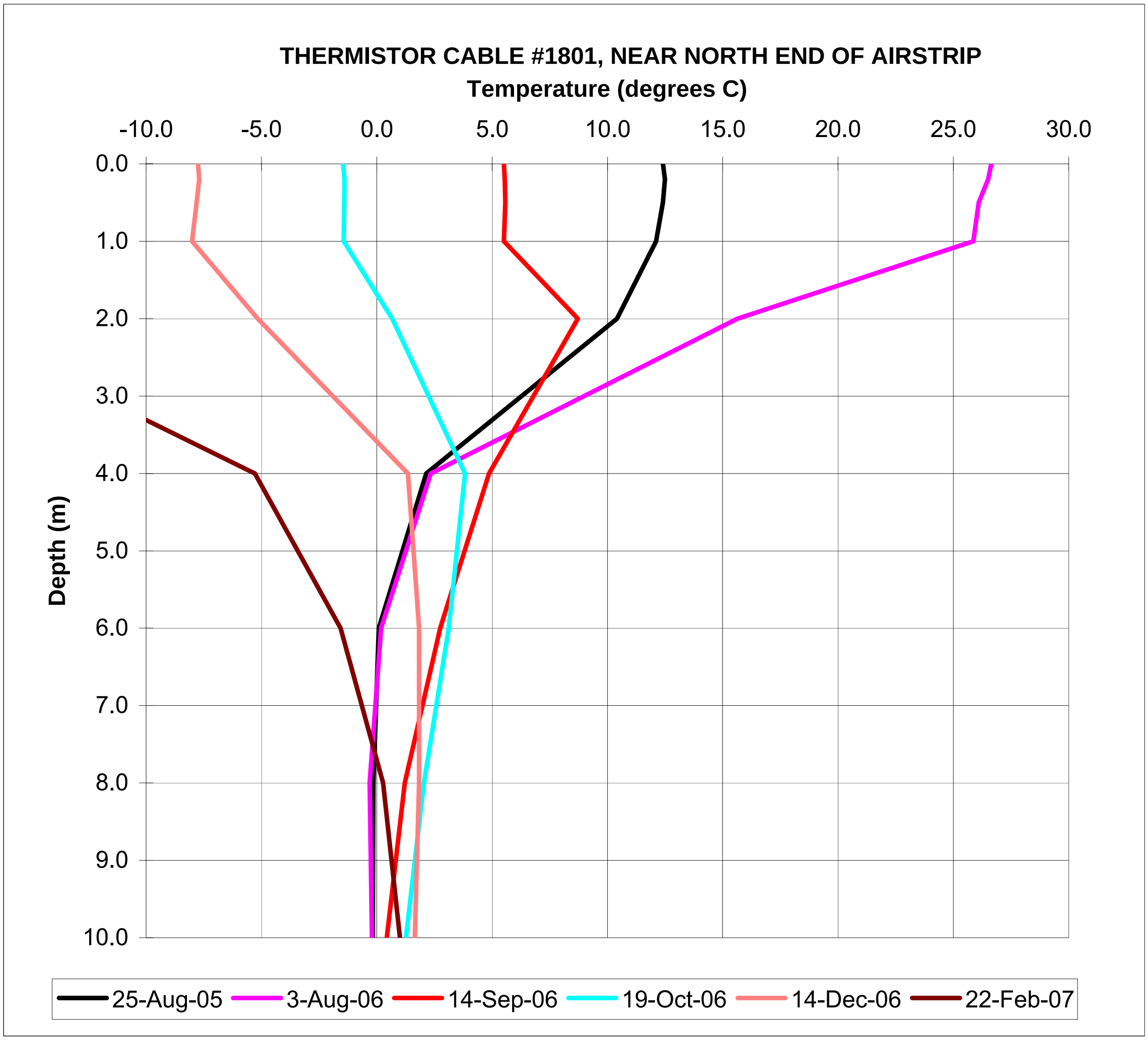


TABLE 4
TEMPERATURE MONITORING SUMMARY
THERMISTOR CABLE NEAR NORTH END OF AIRSTRIP
BOREHOLE 19; CABLE 1801
TYHEE, YELLOWKNIFE GOLD PROJECT

SENSOR	1	2	3	4	5	6	7	8	9
DEPTH (m)	0.0	0.2	0.5	1.0	2.0	4.0	6.0	8.0	10.0
CALIBRATION	-0.01	0.00	-0.02	-0.01	-0.01	-0.02	-0.02	0.01	-0.01
DATE	TEMPERATURE (deg. C)								
25-Aug-05	12.4	12.5	12.4	12.1	10.4	2.2	0.1	-0.1	-0.2
3-Aug-06	26.6	26.5	26.1	25.9	15.6	2.3	0.2	-0.3	-0.2
14-Sep-06	5.5	5.5	5.6	5.5	8.7	4.9	2.8	1.2	0.4
19-Oct-06	-1.5	-1.4	-1.4	-1.4	0.7	3.8	3.1	2.0	1.3
14-Dec-06	-7.7	-7.7	-7.8	-8.0	-5.2	1.4	1.8	1.8	1.7
22-Feb-07	-24.6	-24.6	-24.5	-24.6	-18.9	-5.3	-1.6	0.3	1.0



Note: Cable destroyed by snow clearing after February 22, 2007.

TABLE 5
TEMPERATURE MONITORING SUMMARY
THERMISTOR CABLE NEAR CENTER OF AIRSTRIP
BOREHOLE 20; CABLE 1800
TYHEE, YELLOWKNIFE GOLD PROJECT

SENSOR	1	2	3	4	5	6	7	8	9
DEPTH (m)	0.0	0.2	0.5	1.0	2.0	4.0	6.0	8.0	10.0
CALIBRATION	-0.01	0.01	-0.02	-0.01	-0.01	-0.02	-0.02	0.00	-0.02
DATE	TEMPERATURE (deg. C)								
25-Aug-05	11.0	11.0	11.2	8.7	1.4	0.4	1.3	1.1	1.0
3-Aug-06	18.6	18.7	19.8	13.3	2.3	0.0	0.7	0.9	0.9
14-Sep-06	4.4	4.4	4.3	6.3	2.9	0.0	0.7	0.9	0.9
19-Oct-06	-1.6	-1.6	-1.6	-0.3	0.7	0.0	0.7	0.8	0.9
14-Dec-06	-7.3	-7.4	-7.5	-5.5	-0.6	0.0	0.7	0.8	0.9
22-Feb-07	-20.7	-20.7	-21.2	-16.4	-7.3	0.0	0.7	0.8	0.9
19-Apr-07	-7.6	-7.5	-7.4	-6.3	-5.4	-0.2	0.6	0.7	0.8
28-Jun-07	14.9	15.0	15.2	12.1	0.8	-0.2	0.6	0.8	0.8
23-Aug-07	8.9	8.9	9.0	9.3	2.4	-0.1	0.6	0.7	0.8

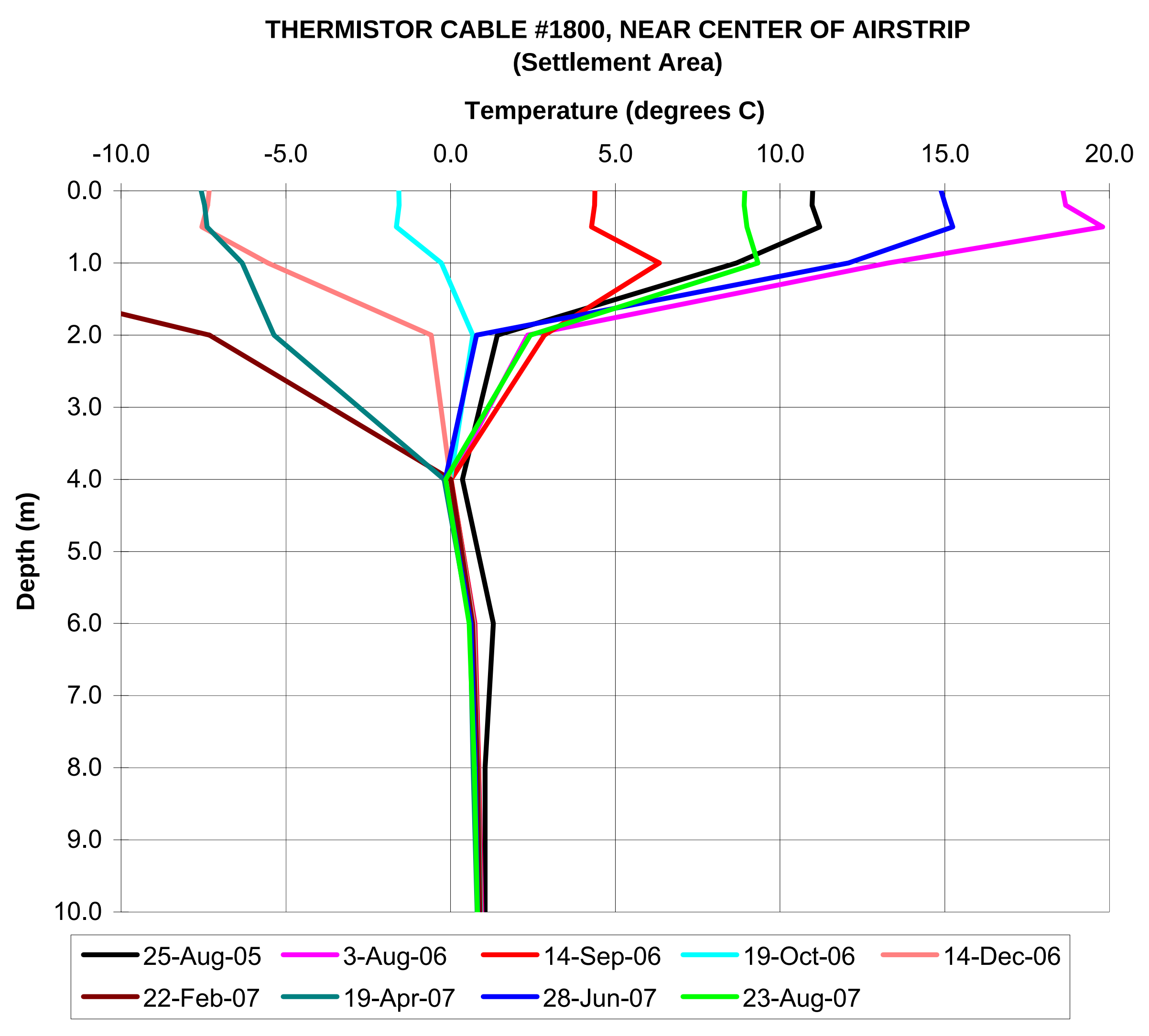
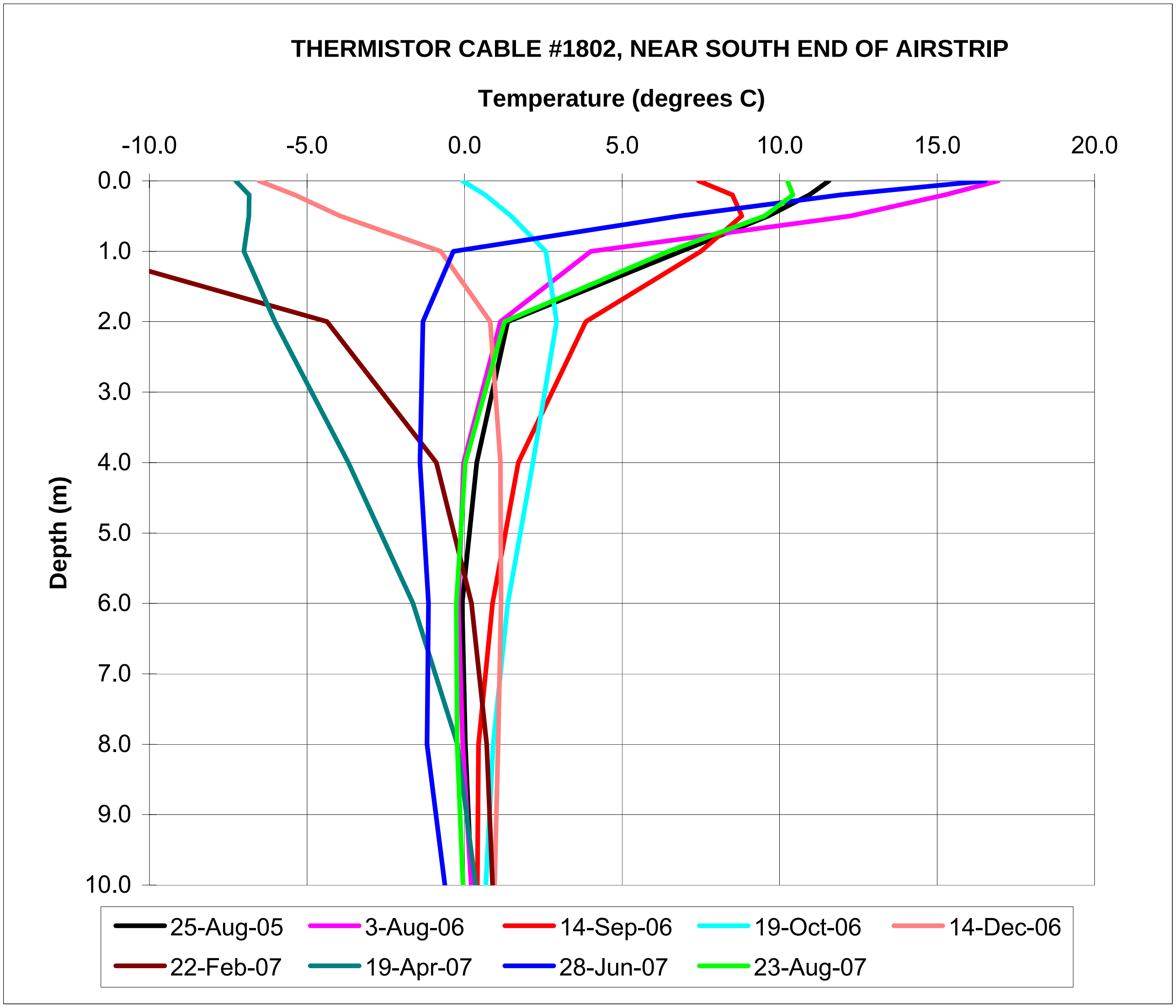


TABLE 6
TEMPERATURE MONITORING SUMMARY
THERMISTOR CABLE NEAR SOUTH END OF AIRSTRIP
BOREHOLE 21; CABLE 1802
TYHEE, YELLOWKNIFE GOLD PROJECT

SENSOR	1	2	3	4	5	6	7	8	9
DEPTH (m)	0.0	0.2	0.5	1.0	2.0	4.0	6.0	8.0	10.0
CALIBRATION	-0.02	0.01	-0.02	0.00	-0.01	-0.01	0.03	-0.02	-0.01
DATE	TEMPERATURE (deg. C)								
25-Aug-05	11.6	10.9	9.6	6.9	1.4	0.4	-0.1	0.0	0.2
3-Aug-06	16.9	15.2	12.3	4.0	1.1	0.0	-0.2	-0.1	0.2
14-Sep-06	7.4	8.5	8.8	7.5	3.9	1.7	0.9	0.4	0.4
19-Oct-06	-0.1	0.7	1.5	2.6	2.9	2.2	1.4	0.9	0.7
14-Dec-06	-6.5	-5.4	-3.9	-0.7	0.8	1.1	1.2	1.1	1.0
22-Feb-07	-20.3	-18.2	-16.1	-12.2	-4.4	-0.9	0.2	0.7	0.9
19-Apr-07	-7.3	-6.8	-6.8	-7.0	-6.0	-3.7	-1.6	-0.2	0.4
28-Jun-07	16.5	11.9	6.8	-0.4	-1.3	-1.4	-1.1	-1.2	-0.6
23-Aug-07	10.2	10.4	9.5	6.5	1.3	0.0	-0.3	-0.2	0.0



FIGURES

LEGEND

- < Standpipe Piezometer Location
- & Thermistor Location
- & Standpipe & Thermistor Location

NOTES

Base data source: Tyhee Airphoto georeferenced to 1:50,000 National Topographic Database

TYHEE AIRSTRIP INSPECTION

Site Plan

PROJECTION
UTM Zone 12N

DATUM
NAD83

Scale: 1:3,500

0.05 0.025 0 0.05
Kilometres

FILE NO.
1740082_airstrip_figure_11x17

PROJECT NO.	DWN	CKD	REV
1740082.002	KDA	TEH	0

OFFICE
EBA-YEL

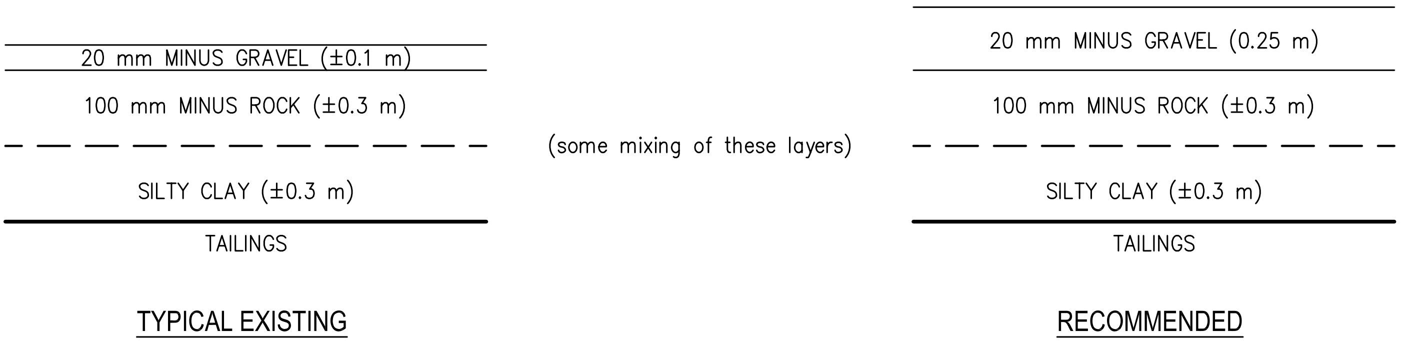
DATE
September 24, 2007

Tyhee NWT
Corp.

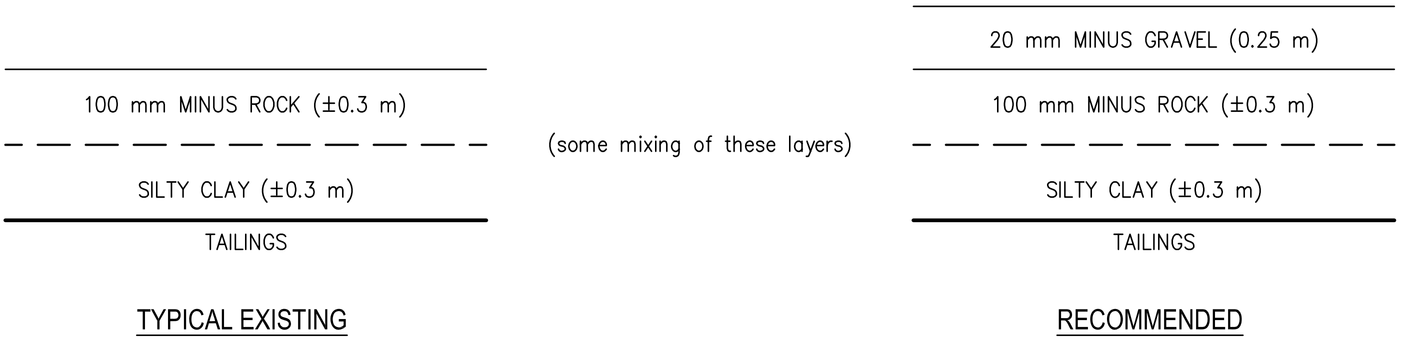
EBA Engineering
Consultants Ltd.

Figure 1

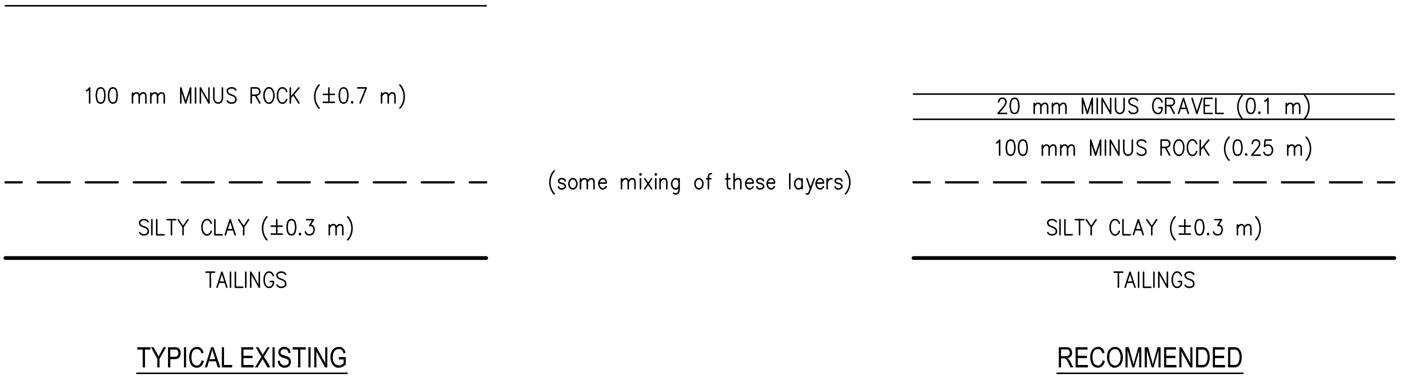
\\eba.local\corp\Yellowknife\Data\0701\Projects\2004\Environmental\1740082 Tyhee\1740082.022_Airstrip\2007 Activities\GIS\1740082_airstrip_figure_11x17.mxd



AIRSTRIP



APRON



ACCESS ROAD

CLIENT

Tyhee NWT Corporation

Tyhee Airstrip Inspection
Giauque Lake, NWT

Recommended Granular Structure

EBA Engineering Consultants Ltd.

PROJECT NO./FILE NO.	DWN	CKD	REV
1740082.022 1740082022M01b.dwg	MM	EH	

OFFICE	DATE
EBA-EDM	September 2007

Figure 2

Q:\Edmonton\Drafting\DIVISIONS\0701\Projects\1740082\022\1740082022M01.dwg [Figure 2] September 25, 2007 - 1:39pm mmarsh

PHOTOGRAPHS

Photo 1
Looking south along airstrip, from about 50 m north of Boreholes 13 and 35

Photo 2
Looking north along airstrip from 50 m south of Boreholes 12 and 22 (settlement area)

Photo 3
Looking north from south end of airstrip, about 150 m south of Boreholes 11 and 26

Photo 4
Looking west at apron area, from Borehole 26

Photo 5
Looking east along access road, from approximately 100 m west of airstrip

Photo 6
Looking east along access road, from approximately 280 m west of airstrip

Photo 7

Looking southeast across airstrip. Area of Borehole 17 (Area 7) in foreground. Area of Borehole 18 (Area 4) is in the distance

Photo 8

Area of Borehole 18 (Area 4), looking east from east edge of airstrip. Note frost heaved and shattered rock in the background

Tyhee NWT Corp

ISSUED FOR USE

2008 GEOTECHNICAL INSPECTION OF AIRSTRIP, APRON AND ACCESS ROAD
YELLOWKNIFE GOLD PROJECT, NT

1740082.022

October 1, 2008

EBA Engineering Consultants Ltd.
p. 867.920.2287 • f. 867.873.3324
PO Box 2244 • 201, 4916 - 49 Street • Yellowknife, Northwest Territories X1A 2P7 • CANADA

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1.0 INTRODUCTION

This report describes EBA's Engineering Consultants Ltd.'s (EBA's) findings from an annual inspection and monitoring program related to Tyhee NWT Corp's (Tyhee's) continued use of the existing airstrip, apron and access road at the Yellowknife Gold Project (YGP, formerly the Discovery Mine site). It is understood that an annual inspection is required to comply with Condition #94 of Tyhee's Land Use Permit MV2005C0001. The latest inspection of the subject area was conducted by Ed Hoeve, P.Eng., of EBA, on August 14, 2008.

2.0 BACKGROUND

Since the late 1990's Indian and Northern Affairs Canada (INAC) have been completing environmental reclamation work for the mine site. In an effort to contain the tailings, a cap made from silty clay excavated from a local borrow source has been placed on the tailings in a nominal 0.3 m thickness. In order to protect the clay cap from erosion, a protective armour rock layer of 100 mm minus crushed rock was placed on top of the silty clay cap. The armour rock also had a nominal thickness of 0.3 m. Since completion of the tailings cap in 2000, numerous "frost boils" have been identified and can be characterized where fine material, either from the silty clay layer or from the tailings beneath, have migrated upward through the armour rock.

INAC completed their reclamation work in the fall of 2005. As part of the mine reclamation, INAC planned to decommission the existing airstrip. Tyhee applied for and received an amendment to its' current land use permit from the MVLWB that allows Tyhee to continue using the airstrip to support ongoing advanced exploration and site access needs. INAC expressed a concern over whether continued use of the airstrip might exacerbate their efforts to mitigate the frost boil phenomena and its possible implication on long-term reclamation integrity.

EBA conducted a site investigation in the late summer of 2005 of the airstrip, apron and access road area in order to support continued operations of the airstrip and provide data for a potential upgraded design for long-term use of the airstrip during the operational phase of the YGP. EBA's investigation included two areas of frost boil occurrence near the airstrip with the objective that this data might assist INAC in determining the mechanism of frost boil formation. Standpipe piezometers and thermistor cables were installed during the site investigation. The site investigation is documented in a report entitled "Airstrip and Access Road Geotechnical Evaluation, Yellowknife Gold Project – Discovery Mine, N.W.T., prepared for Tyhee by EBA and submitted by Tyhee to the MVLWB in November 2005.

This letter presents the thermistor and piezometer monitoring results to date and describes other information related to the operation of the airstrip, apron and access road.

3.0 MONITORING RESULTS

3.1 GROUNDWATER LEVELS

Groundwater levels measured to-date are presented on Table 1. Figure 1 shows standpipe piezometer locations with respect to the airstrip and the surrounding area.

It can be seen in Table 1 that water levels in the standpipes were generally high at the time of the August 2008 monitoring visit. This was likely the result of heavy rain several days before the inspection visit.

The standpipes at Boreholes 26 and 34 indicated a water level for the first time since monitoring commenced. The standpipes at Boreholes 18, 22 and 35 had their highest water levels since monitoring began.

The observations from the standpipe at Borehole 17 appear to run counter to the trend described above. The water level in the standpipe was just above the bottom. It seems that the groundwater level at this location has gradually dropped over the last two years (by comparing August readings from each year).

Over the monitoring period, two standpipes have remained dry (at Boreholes 13 and 33); one standpipe has always had water (Borehole 22); and the remaining seven have shown intermittent water content. The groundwater levels appear to fluctuate approximately 1 to 2 meters annually. The highest annual groundwater levels occurred between June and September, and the lowest annual groundwater levels occured between December and May.

Previous interpretations of the groundwater levels have suggested that groundwater tended to flow west to east below the runway. The most recent data seems to contradict this, as three of the four locations where pairs of standpipes are present, adjacent to each other, on opposite sides of the runway, suggest groundwater may be flowing east to west (at Boreholes 11 and 26; 33 and 34; and 13 and 35). Only at the location of Boreholes 12 and 22 does the groundwater appear to be flowing west to east.

The interpretations about direction of groundwater flow should be viewed with caution. The data in Table 1 could also be interpreted to indicate that groundwater is flowing from north to south. On a broad scale, groundwater can be expected to roughly follow the surface gradient, but on a local scale, it is expected that groundwater flow will be controlled by undulations in the bedrock surface.

3.2 GROUND TEMPERATURES

Ground temperatures measured to-date is presented on Tables 2 to 6. The readings from this past year (2008) have been plotted with a heavier line weight than prior readings, with May's data being plotted in mauve and August's data being plotted in red.

The thermistor cable at Borehole 19, near the north end of the airstrip was destroyed by snow clearing equipment during the winter of 2007. It was dislodged from its position and is not repairable.

The 2007 inspection report provided a thorough discussion of the variations in ground temperature, following a year of regular monitoring. Ground temperatures were only measured twice during the 2008 report year. While nothing was recorded to contradict previous interpretations, the 2008 data does not provide additional insights into overall ground temperature trends.

However, some observations from this year's temperature monitoring can be noted. It can be seen that the measurements at depth from early May were among the coldest recorded. Under the airstrip, the effect of the colder winter ground temperatures has lingered through the summer, so that the August ground temperatures at depth are the coldest recorded. This lingering effect is not as pronounced at the off airstrip areas, i.e. at Boreholes 17 and 18.

In August, three of the four remaining thermistor cables exhibited the warmest ground temperatures recorded through the shallow to intermediate depths. At Boreholes 17 and 20, the warm zone extended from about 1.0 m to 3.5 m below grade. At Borehole 18, the warm zone extended from about 0.5 m to 7 m below grade.

4.0 OTHER OBSERVATIONS / INFORMATION

4.1 GENERAL

The August site inspection took place following a period of heavy rain. Consequently, there was ponded water on the ground surface at numerous locations near, but not on, the airstrip (Photo 1). This was the first time that water was observed in the drainage swale (Photo 2), again due to the recent rainfall events.

No "frost boils" were observed on the airstrip, apron or access road areas. No changes in the quantity or characteristics of the "frost boils" in the vicinity of Boreholes 17 and 18 were noticed. In May an area of "frost boils" was noticed near Borehole 26, east of the airstrip, near its south end (Photo 3). This had not previously been reported, but the nature of vegetation growing from the exposed fine-grained soil suggests that these "frost boils" have been present for some time.

The birch, grass, fireweed and horse tail vegetation on the 100 mm minus crushed rock cover, on areas adjacent to the airstrip, apron and access road is continuing to grow in size and prevalence/density (Photo 7).

4.2 AIRSTRIP

At the time of the of the early May monitoring visit, the frost was starting to come out of the ground and the surface of the airstrip was close to saturated (Photo 4), i.e. there was perched water at or near the surface of the airstrip. This was considered to be a time of low surface California Bearing Ratio (CBR), as discussed in the airstrip design recommendations provided with our 2007 inspection report.

Crushed gravel was added to the airstrip surface over the summer of 2008. Tyhee reported that about 200 m^3 was placed. It is understood that the pilots are satisfied with the airstrip surface. Photo 5 shows the surface of the airstrip at the time of the August site inspection.

The new gravel appeared to be somewhat coarser/cleaner than what would normally be specified for an airstrip surfacing gravel. EBA collected a sample and determined its gradation. The grain size distribution is shown in the Figures section of this report. The gradation is compared to the Government of the Northwest Territories, Arctic Airports specification band for surfacing gravel. This confirms EBA's visual assessment of the gravel.

4.3 APRON

A portion of the apron area was covered by a thin lift of crushed gravel during the summer of 2008 (Photo 6). The area is just to the south of the start of the access road from the airstrip to the camp. The surfaced area is about 23 m wide in the east–west direction. In the north-south direction, it is about 42 m wide adjacent to the airstrip and 19 m wide away from the airstrip, due to the angle of the access road.

The surfacing gravel used in this area was coarser than that used on the airstrip. It was visually estimated to contain about 20 percent particles in the 25 mm to 100 mm size range and then the remaining 80 percent finer than 25 mm.

4.4 ACCESS ROAD

The access road was surfaced with crushed gravel during the summer of 2008 (Photo 8). Observations with respect to the configuration of the access road embankment are summarized in the following table:

ACCESS ROAD MEASUREMENTS

Station	Embankment Top Width (m)	Surfaced Width (m)	South Height (m)	North Height (m)
0+100	6.3	5.0	0.42	0.40
0+200	6.7	5.0	0.52	0.62
0+300	6.4	4.7	0.62	0.40

In the foregoing, the height of the embankment is relative to the top of the underlying 100 mm minus armour rock, in all cases except Station 0+300 south, where the south edge of the embankment is on natural ground, adjacent to a forested area.

The surfacing gravel used in this area appeared to be coarser than what was used on the airstrip. It was visually estimated to contain about 10 percent particles in the 25 mm to 100 mm size range and then the remaining 90 percent finer than 25 mm.

Two culverts were installed through the access road embankment, to replace the installations of pipes that were previously reported to be present. The culvert installations are described in the following table:

CULVERT CONFIGURATION MEASUREMENTS

Station	Diameter (m)	Length (m)	Upstream Cover (m)	Downstream Cover (m)
0+262	0.3	9.0	0.35	0.55
0+327	0.3	7.2	0.59	0.62

The culvert at Station 0+262 is adjacent to the drainage swale (Photo 9), and was installed near the bottom of the road embankment, so that the underlying tailings cap was undisturbed. A small quantity of water was flowing through the culvert at the time of the August inspection, and infiltrating into the armour rock just downstream of the culvert. This is the first time that surface water flow through this area was observed, again possibly due the recent rainfall events.

The culvert at Station 0+327 is along a natural drainage path that pre-existed the tailing cap construction (Photo 10). There was some water flowing though the culvert at the time of the August inspection.

5.0 CLOSURE

We trust the information presented herein satisfies your present requirements. Please contact the undersigned if you require additional information.

Respectfully submitted,
EBA Engineering Consultants Ltd.

T.E. Hoeve, P.Eng.
Project Director, NT/NU Region
Direct: 867.766.3728 x114
ehoeve@eba.ca

TABLES

TABLE 1
GROUNDWATER LEVEL MONITORING SUMMARY
TYHEE, YELLOWKNIFE GOLD PROJECT

BOREHOLE	11	26	12	22	33	34	13	35	17	18
GROUND ELEVATION (m)	301.91	301.89	303.02	303.01	306.53	306.38	308.24	308.01	307.54	302.45
DATE	GROUNDWATER ELEVATION (m)									
25-Aug-05	<298.84	<299.68	300.42	300.44	<305.02	<305.47	<306.29	<306.91	305.14	<301.86
3-Aug-06	<298.84	<299.68	302.10	299.78	<305.02	<305.47	<306.29	<306.91	306.24	<301.86
14-Sep-06	299.81	<299.68	302.34	299.62	<305.02	<305.47	<306.29	<306.91	306.43	301.97
19-Oct-06	299.52	<299.68	301.80	299.69	<305.02	<305.47	<306.29	<306.91	305.76	301.98
14-Dec-06	<298.84	<299.68	300.67	299.84	<305.02	<305.47	<306.29	<306.91	304.89	<301.86
22-Feb-07	<298.84	<299.68	299.72	299.25	<305.02	<305.47	<306.29	<306.91	304.91	<301.86
19-Apr-07	<298.84	<299.68	299.75	299.02	<305.02	<305.47	<306.29	<306.91	304.89	<301.86
28-Jun-07	<298.84	<299.68	301.91	301.73	<305.02	<305.47	<306.29	<306.91	306.46	<301.86
23-Aug-07	<298.84	<299.68	301.47	300.34	<305.02	<305.47	<306.29	306.97	305.23	302.00
8-May-08	<298.84	<299.68	<299.60	299.86	<305.02	<305.47	<306.29	<306.91	<304.74	<301.86
14-Aug-08	<298.84	300.30	301.24	300.54	<305.02	306.00	<306.29	307.68	304.76	302.34

Note: "<" symbol indicates there was no water in the standpipe at the time of reading, implying that the groundwater level at that location was below the bottom of the standpipe piezometer.

TABLE 2
TEMPERATURE MONITORING SUMMARY
THERMISTOR CABLE NEAR AREA 7, WEST SIDE OF AIRSTRIP
BOREHOLE 17; CABLE 1803
TYHEE, YELLOWKNIFE GOLD PROJECT

SENSOR	1	2	3	4	5	6	7	8	9
DEPTH (m)	0.0	0.2	0.5	1.0	2.0	4.0	6.0	8.0	10.0
CALIBRATION	-0.01	-0.01	-0.02	-0.01	-0.01	-0.01	0.03	0.00	-0.02
DATE	TEMPERATURE (deg. C)								
25-Aug-05	19.0	12.9	12.2	11.2	6.8	3.3	2.4	2.2	2.1
3-Aug-06	26.2	20.6	17.1	15.0	9.2	3.3	2.6	2.3	2.3
14-Sep-06	7.2	8.5	10.9	11.6	9.8	4.6	3.5	2.9	2.5
19-Oct-06	-1.7	-0.6	1.8	4.4	6.4	5.0	4.1	3.4	2.8
14-Dec-06	-6.2	-3.6	-1.7	0.0	2.1	4.0	3.9	3.6	3.2
22-Feb-07	-7.9	-4.4	-2.8	-1.1	1.0	3.0	3.2	3.2	3.1
19-Apr-07	-2.3	-1.6	-1.4	-1.0	0.6	2.5	2.7	2.7	2.8
28-Jun-07	22.6	15.4	11.8	3.0	0.5	2.1	2.4	2.5	2.6
23-Aug-07	10.3	9.9	12.5	12.7	8.6	3.2	2.7	2.5	2.5
8-May-08	5.5	-0.2	-0.7	-0.7	0.6	2.2	2.5	2.6	2.7
14-Aug-08	22.0	17.5	16.0	15.7	13.1	2.9	2.5	2.4	2.4

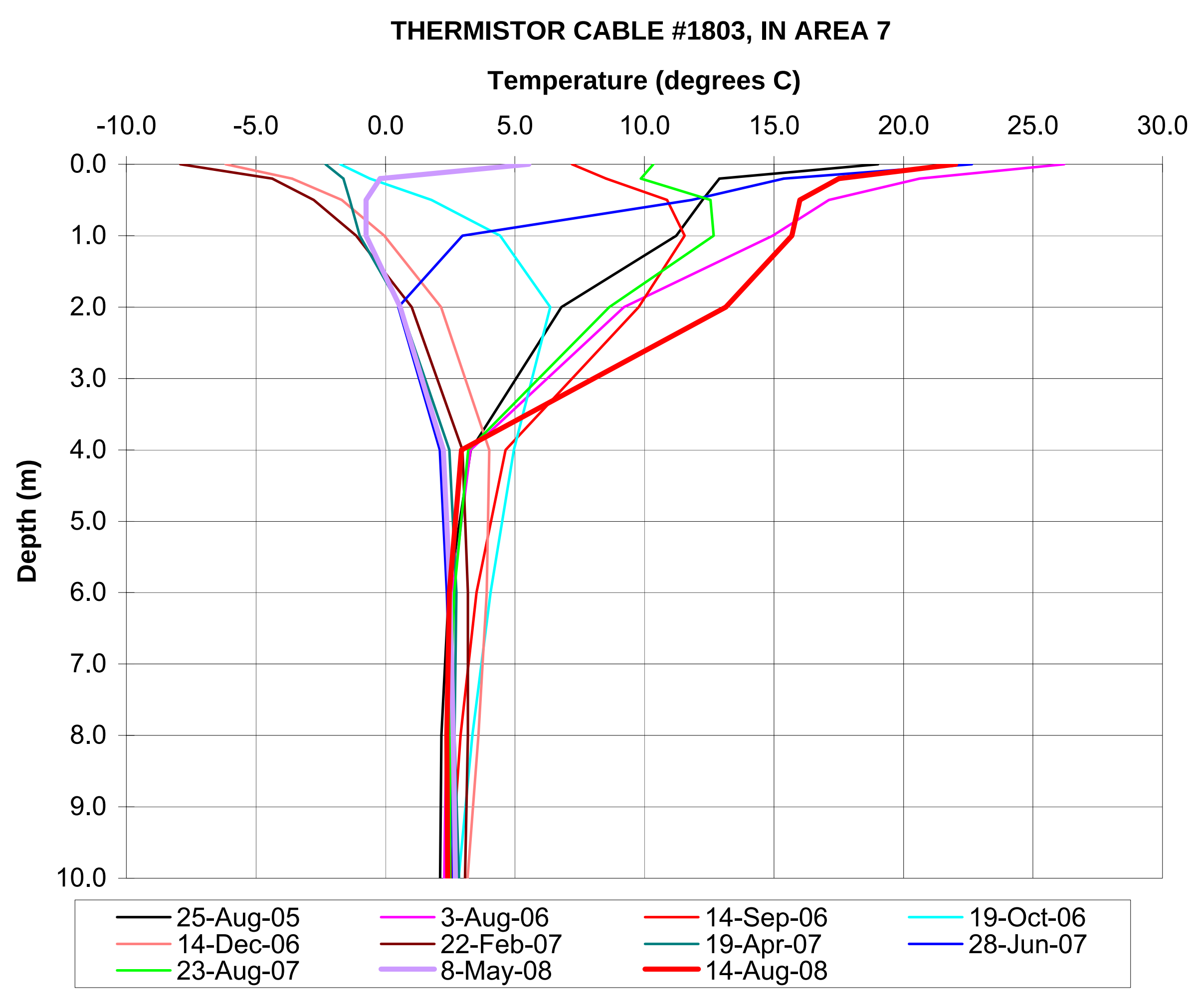


TABLE 3
TEMPERATURE MONITORING SUMMARY
THERMISTOR CABLE NEAR AREA 4, EAST SIDE OF AIRSTRIP
BOREHOLE 18; CABLE 1804
TYHEE, YELLOWKNIFE GOLD PROJECT

SENSOR	1	2	3	4	5	6	7	8	9
DEPTH (m)	0.0	0.2	0.5	1.0	2.0	4.0	6.0	8.0	10.0
CALIBRATION	-0.02	0.00	-0.01	-0.02	-0.02	-0.01	-0.01	0.00	-0.02
DATE	TEMPERATURE (deg. C)								
25-Aug-05	15.9	11.9	10.8	10.0	8.6	5.9	3.8	2.4	1.7
3-Aug-06	26.0	18.2	14.9	13.1	10.6	6.7	4.2	2.9	2.2
14-Sep-06	6.4	6.5	9.5	10.5	10.0	7.8	5.8	4.3	3.2
19-Oct-06	-1.2	-0.1	2.2	3.9	5.6	6.7	6.0	4.9	3.8
14-Dec-06	-5.0	-3.7	-2.6	-1.3	0.3	2.8	3.9	4.1	3.8
22-Feb-07	-9.4	-6.6	-4.8	-3.5	-2.2	0.1	1.5	2.4	2.8
19-Apr-07	-4.1	-3.5	-2.9	-2.6	-2.2	-0.9	0.3	1.3	1.9
28-Jun-07	18.9	16.4	13.5	9.7	5.9	2.4	1.2	1.1	1.4
23-Aug-07	9.9	10.0	11.6	11.6	10.2	7.3	4.9	3.3	2.3
8-May-08	1.7	-0.4	-1.3	-1.8	-2.0	-1.0	0.1	1.0	1.7
14-Aug-08	20.4	15.4	14.5	14.5	13.1	10.0	7.7	3.9	2.0

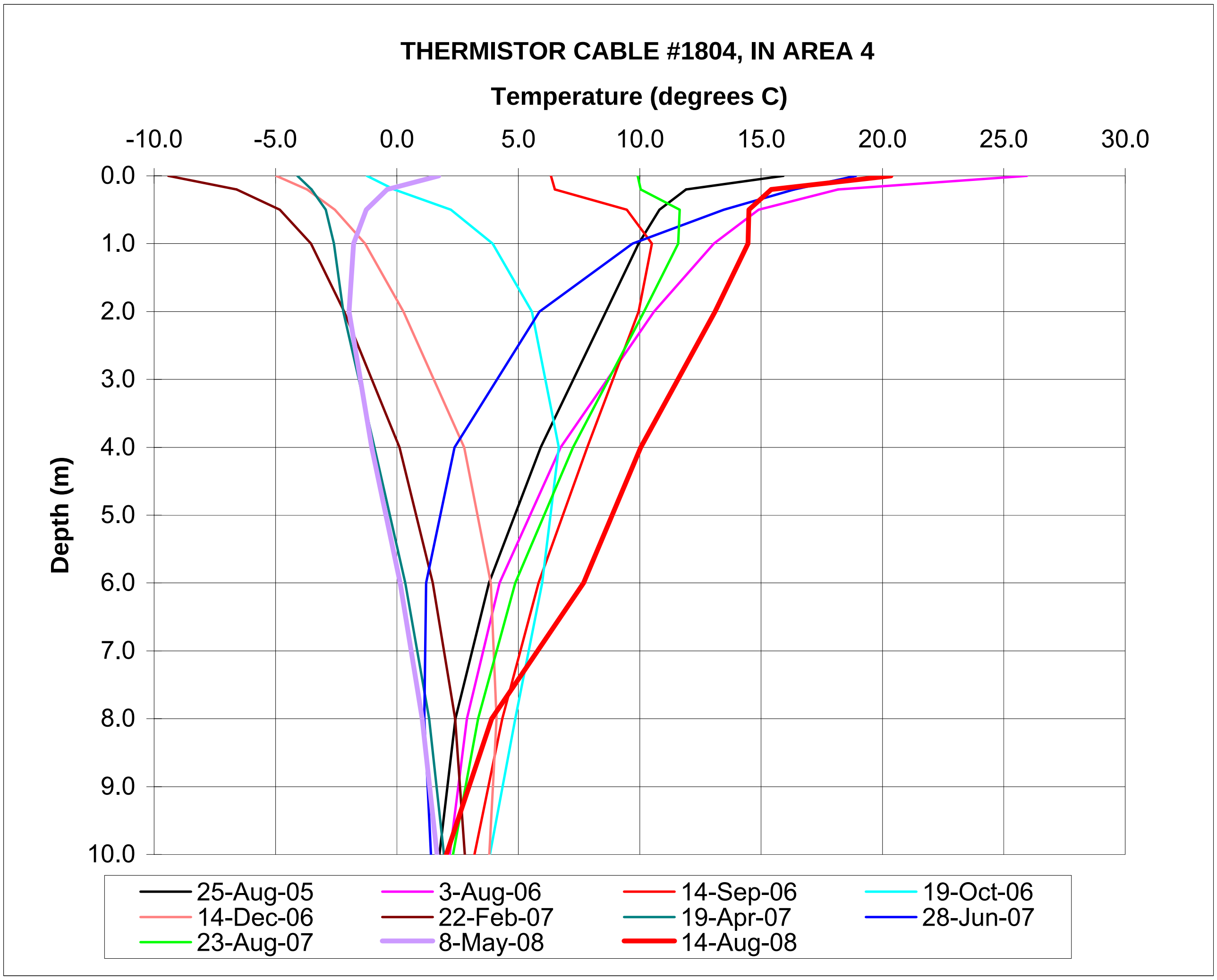
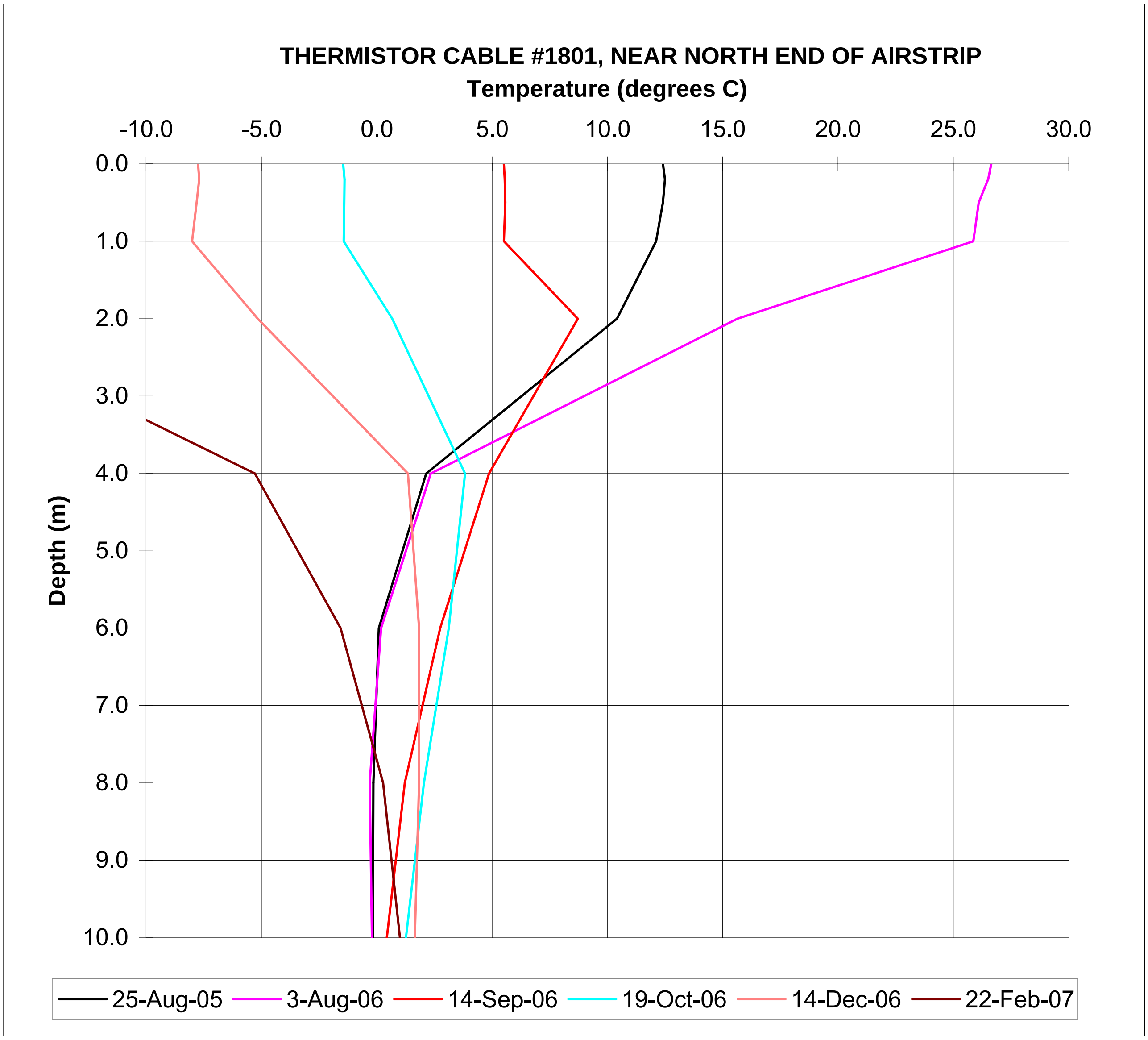


TABLE 4
TEMPERATURE MONITORING SUMMARY
THERMISTOR CABLE NEAR NORTH END OF AIRSTRIP
BOREHOLE 19; CABLE 1801
TYHEE, YELLOWKNIFE GOLD PROJECT

SENSOR	1	2	3	4	5	6	7	8	9
DEPTH (m)	0.0	0.2	0.5	1.0	2.0	4.0	6.0	8.0	10.0
CALIBRATION	-0.01	0.00	-0.02	-0.01	-0.01	-0.02	-0.02	0.01	-0.01
DATE	TEMPERATURE (deg. C)								
25-Aug-05	12.4	12.5	12.4	12.1	10.4	2.2	0.1	-0.1	-0.2
3-Aug-06	26.6	26.5	26.1	25.9	15.6	2.3	0.2	-0.3	-0.2
14-Sep-06	5.5	5.5	5.6	5.5	8.7	4.9	2.8	1.2	0.4
19-Oct-06	-1.5	-1.4	-1.4	-1.4	0.7	3.8	3.1	2.0	1.3
14-Dec-06	-7.7	-7.7	-7.8	-8.0	-5.2	1.4	1.8	1.8	1.7
22-Feb-07	-24.6	-24.6	-24.5	-24.6	-18.9	-5.3	-1.6	0.3	1.0



Note: Cable destroyed by snow clearing after February 22, 2007.

TABLE 5
TEMPERATURE MONITORING SUMMARY
THERMISTOR CABLE NEAR CENTER OF AIRSTRIP
BOREHOLE 20; CABLE 1800
TYHEE, YELLOWKNIFE GOLD PROJECT

SENSOR	1	2	3	4	5	6	7	8	9
DEPTH (m)	0.0	0.2	0.5	1.0	2.0	4.0	6.0	8.0	10.0
CALIBRATION	-0.01	0.01	-0.02	-0.01	-0.01	-0.02	-0.02	0.00	-0.02
DATE	TEMPERATURE (deg. C)								
25-Aug-05	11.0	11.0	11.2	8.7	1.4	0.4	1.3	1.1	1.0
3-Aug-06	18.6	18.7	19.8	13.3	2.3	0.0	0.7	0.9	0.9
14-Sep-06	4.4	4.4	4.3	6.3	2.9	0.0	0.7	0.9	0.9
19-Oct-06	-1.6	-1.6	-1.6	-0.3	0.7	0.0	0.7	0.8	0.9
14-Dec-06	-7.3	-7.4	-7.5	-5.5	-0.6	0.0	0.7	0.8	0.9
22-Feb-07	-20.7	-20.7	-21.2	-16.4	-7.3	0.0	0.7	0.8	0.9
19-Apr-07	-7.6	-7.5	-7.4	-6.3	-5.4	-0.2	0.6	0.7	0.8
28-Jun-07	14.9	15.0	15.2	12.1	0.8	-0.2	0.6	0.8	0.8
23-Aug-07	8.9	8.9	9.0	9.3	2.4	-0.1	0.6	0.7	0.8
8-May-08	-0.1	-0.1	-0.1	-0.4	-3.4	-1.9	0.5	0.6	0.7
14-Aug-08	14.9	15.5	17.8	13.5	4.2	-0.4	0.5	0.6	0.7

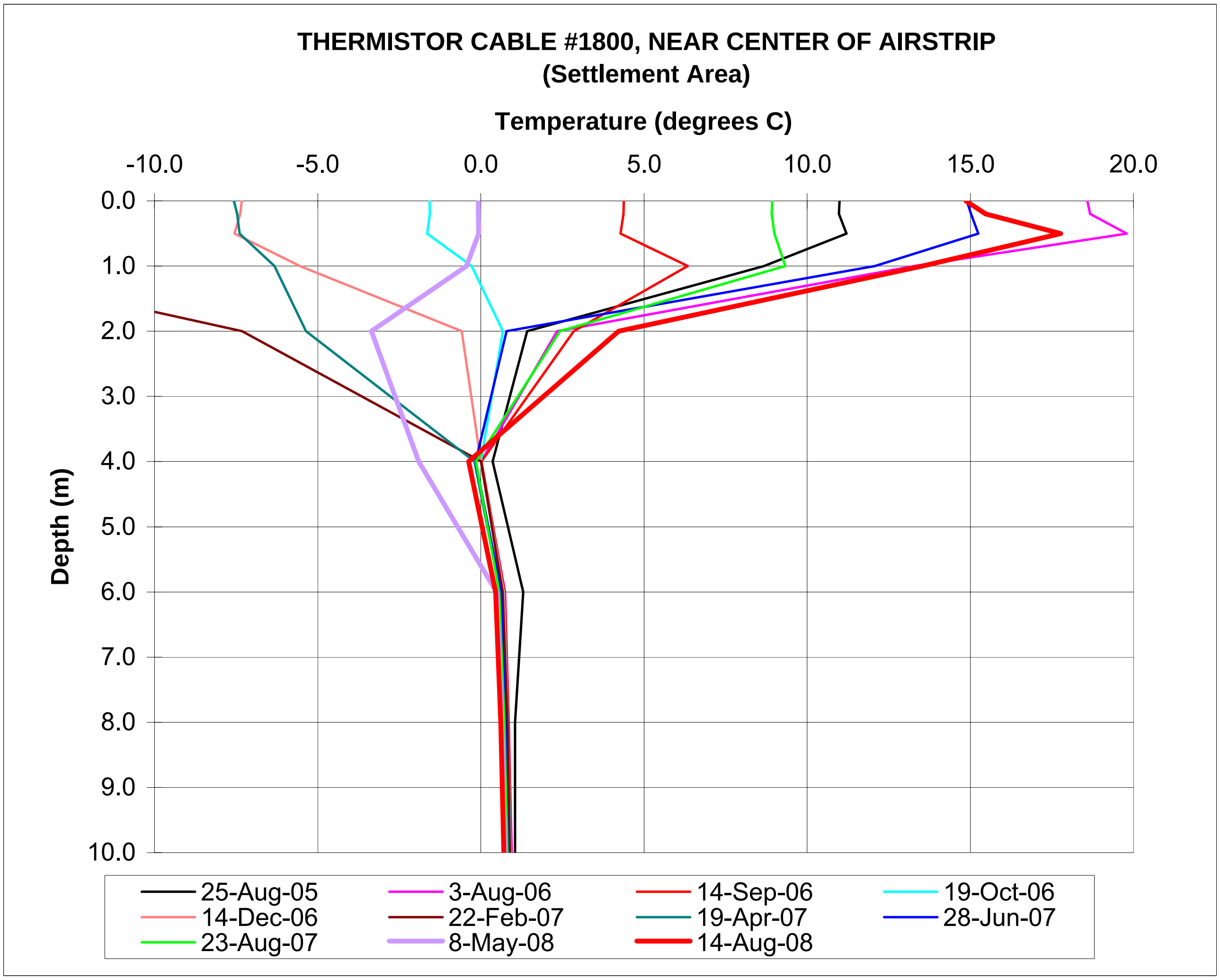
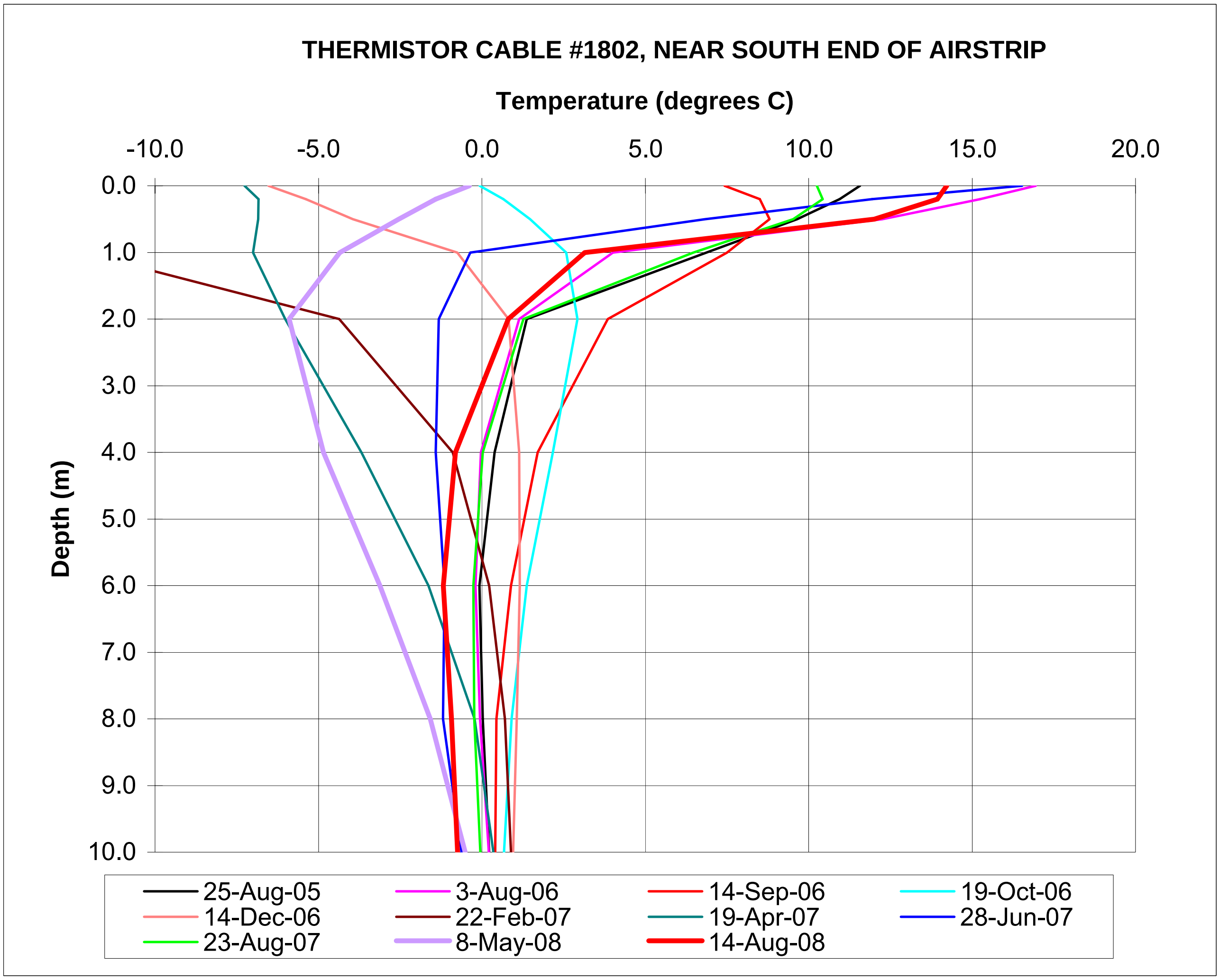


TABLE 6
TEMPERATURE MONITORING SUMMARY
THERMISTOR CABLE NEAR SOUTH END OF AIRSTRIP
BOREHOLE 21; CABLE 1802
TYHEE, YELLOWKNIFE GOLD PROJECT

SENSOR	1	2	3	4	5	6	7	8	9
DEPTH (m)	0.0	0.2	0.5	1.0	2.0	4.0	6.0	8.0	10.0
CALIBRATION	-0.02	0.01	-0.02	0.00	-0.01	-0.01	0.03	-0.02	-0.01
DATE	TEMPERATURE (deg. C)								
25-Aug-05	11.6	10.9	9.6	6.9	1.4	0.4	-0.1	0.0	0.2
3-Aug-06	16.9	15.2	12.3	4.0	1.1	0.0	-0.2	-0.1	0.2
14-Sep-06	7.4	8.5	8.8	7.5	3.9	1.7	0.9	0.4	0.4
19-Oct-06	-0.1	0.7	1.5	2.6	2.9	2.2	1.4	0.9	0.7
14-Dec-06	-6.5	-5.4	-3.9	-0.7	0.8	1.1	1.2	1.1	1.0
22-Feb-07	-20.3	-18.2	-16.1	-12.2	-4.4	-0.9	0.2	0.7	0.9
19-Apr-07	-7.3	-6.8	-6.8	-7.0	-6.0	-3.7	-1.6	-0.2	0.4
28-Jun-07	16.5	11.9	6.8	-0.4	-1.3	-1.4	-1.1	-1.2	-0.6
23-Aug-07	10.2	10.4	9.5	6.5	1.3	0.0	-0.3	-0.2	0.0
8-May-08	-0.4	-1.4	-2.5	-4.3	-5.9	-4.8	-3.1	-1.6	-0.5
14-Aug-08	14.2	13.9	12.0	3.1	0.8	-0.8	-1.2	-0.9	-0.7



FIGURES

LEGEND

- < Standpipe Piezometer Location
- & Thermistor Location
- & Standpipe & Thermistor Location

NOTES

Base data source: Tyhee Airphoto georeferenced to 1:50,000 National Topographic Database

TYHEE AIRSTRIP INSPECTION

Site Plan

PROJECTION
UTM Zone 12N

DATUM
NAD83

Scale: 1:3,500

0.05 0.025 0 0.05
Kilometres

Tyhee NWT
Corp.

EBA Engineering
Consultants Ltd.

FILE NO.
1740082_airstrip_figure_11x17

PROJECT NO.	DWN	CKD	REV
1740082.002	KDA	TEH	0

OFFICE	DATE
EBA-YEL	September 24, 2007

Figure 1

\\eba.local\corp\Yellowknife\Data\0701Projects\2004\Environmental\1740082 Tyhee\1740082.022_Airstrip\2007 Activities\GIS\1740082_airstrip_figure_11x17.mxd

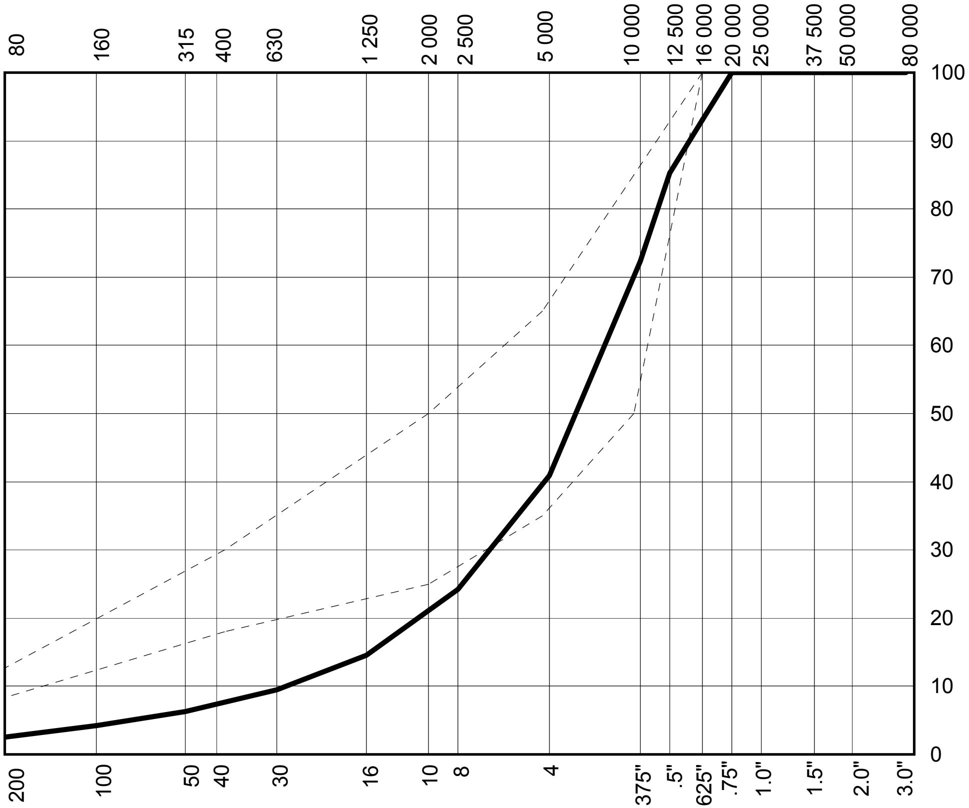
AGGREGATE ANALYSIS REPORT

Project: Granular Materials Evaluation
Address: Tyhee Mine Site
Project Number: 1740082.022
Date Tested: 10-Sep-08
Client: Tyhee NWT Corp
Attention: Hugh Wilson

Lab Number: 5019-13
Sample Description: GRAVEL and SAND - trace fines (silt/clay) (20 mm minus crush)
Sample # S-13
Natural Moisture Content: 2.9%
Colour Plate No.: n/d
Bulk Relative Density: n/d
Apparent Relative Density (SSD): n/d
Aparent Relative Density: n/d
Absorption: n/d

Sieve Sizes		%
U.S.	Metric	Passing
3"	80 000	
2"	50 000	
1.5"	37 500	
1"	25 000	
.75"	20 000	100
.625"	16 000	93
.5"	12 500	85
.375"	10 000	72
No. 4	5 000	41
No. 8	2 500	24
16	1250	15
30	630	9
50	315	6
100	160	4
200	80	2.5

Metric Sieve Size (C.G.S.B. Spec. 8-GP-2M)



U.S. Standard Sieve Size - approximate (A.S.T.M. Des. E 11)

Remarks: Sample collected by EBA from the back of a dump truck on site
Specification band plotted is GNWT, Arctic Airports surfacing specification

Reviewed By: ____________________ P.Eng.

PHOTOGRAPHS

Photo 1

Looking south at area of Borehole 11, showing ponded surface water due to recent rains

Photo 2

Looking north, along the west side of the airstrip, between the area of Boreholes 11 and 12. Some water is visible in the drainage swale in the distance

Photo 3
"Frost boils" just east of Borehole 26, looking west towards airstrip

Photo 4
Wet surface conditions on the airstrip in the spring

Photo 5
Looking south at airstrip, from near north end, approximately 100 m north of Borehole 19

Photo 6
Apron area, looking east. Darker, finer gravel in the vicinity of the core boxes is the thin lift of crushed gravel placed in this area.

Photo 7

Area of Borehole 17, looking south. Note vegetation growth. This is perhaps more than typical, but not unusual

Photo 8

Access road, looking west from Station 0+100

Photo 9
Culvert at Station 0+262, looking upstream. Note ponded water in drainage swale in the background.

Photo 10
Culvert at Station 0+327, looking downstream. Note natural, forested area in the background.

Tyhee NWT Corp

ISSUED FOR USE
2009 GEOTECHNICAL INSPECTION OF AIRSTRIP, APRON AND ACCESS ROAD
YELLOWKNIFE GOLD PROJECT, NT

Y14101177

October 1, 2009

EBA Engineering Consultants Ltd.
p. 867.920.2287 • f. 867.873.3324
PO Box 2244 • 201, 4916 - 49 Street • Yellowknife, Northwest Territories X1A 2P7 • CANADA

Tyhee N W T Corp

October 1, 2009

Mackenzie Valley Land and Water Board
P.O. Box 2130
7th Floor – 4910 50th Avenue
Yellowknife, NT
X1A 2P6

Attention: Mr. Jason Ash

Dear Mr. Ash:

Re: Type "A" Land Use Permit MV2005C0001
2008 Airstrip Geotechnical Report

Please find attached a report entitled " 2009 Geotechnical Inspection of Airstrip, Apron and Access Road – Yellowknife Gold Project, NT" completed by EBA Engineering on the Discovery airstrip, dated October 1, 2009 as per Clause # 94 and # 96 of our amended Land Use Permit MV2005C0001.

The information provided in the 2009 report includes all data collected to date including a summary of maintenance work carried out by Tyhee NWT Corp site personnel in 2009 on the airstrip, access road and apron area. You will note that in Section 3.2, EBA suggests that revising the submission date to November 30 of each year would enable an inspection to be held that would increase the understanding of the temperature regimes in some boreholes. With this in mind, Tyhee NWT Corp respectfully requests that the submission date for the 2010 and any subsequent Airstrip Geotechnical Reports be November 30 for the year reported.

Please acknowledge receipt and we look forward to receiving approval from the Board that this submission satisfies the terms and conditions of the amended land use permit.

Should you have any questions concerning this matter, please contact me on my cell (780) 975-2550

Yours truly,

Original signed by "H.R.Wilson"

Hugh R. Wilson
Vice President – Environment and Community Affairs

Cc: Clint Ambrose, INAC (Via e-mail only)
Carolyn Cornell, Tyhee Development Corp (via e-mail only)
Doug Levesque, Tyhee NWT Corp (via e-mail only)

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1.0 INTRODUCTION

This report describes EBA's Engineering Consultants Ltd.'s (EBA's) findings from an annual inspection and monitoring program related to Tyhee NWT Corp's (Tyhee's) continued use of the existing airstrip, apron and access road at the Yellowknife Gold Project (YGP, formerly the Discovery Mine site). It is understood that an annual inspection is required to comply with Condition #94 of Tyhee's Land Use Permit MV2005C0001. The latest inspection of the subject area was conducted by Ed Hoeve, P.Eng., of EBA, on August 18, 2009.

2.0 BACKGROUND

Since the late 1990's Indian and Northern Affairs Canada (INAC) have been completing environmental reclamation work for the mine site. In an effort to contain the tailings, a cap made from silty clay excavated from a local borrow source has been placed on the tailings in a nominal 0.3 m thickness. In order to protect the clay cap from erosion, a protective armour rock layer of 100 mm minus crushed rock was placed on top of the silty clay cap. The armour rock also had a nominal thickness of 0.3 m. Since completion of the tailings cap in 2000, numerous "frost boils" have been identified and can be characterized where fine material, either from the silty clay layer or from the tailings beneath, have migrated upward through the armour rock.

INAC completed their reclamation work in the fall of 2005. As part of the mine reclamation, INAC planned to decommission the existing airstrip. Tyhee applied for and received an amendment to its current land use permit from the MVLWB that allows Tyhee to continue using the airstrip to support ongoing advanced exploration and site access needs. INAC expressed a concern over whether continued use of the airstrip might exacerbate their efforts to mitigate the frost boil phenomena and its possible implication on long-term reclamation integrity.

EBA conducted a site investigation of the airstrip, apron and access road area, in the late summer of 2005, in order to support continued operations of the airstrip and provide data for a potential upgraded design for long-term use of the airstrip during the operational phase of the YGP. EBA's investigation included two areas of frost boil occurrence near the airstrip with the objective that this data might assist INAC in determining the mechanism of frost boil formation. Standpipe piezometers and thermistor cables were installed during the site investigation. The site investigation is documented in a report entitled "Airstrip and Access Road Geotechnical Evaluation, Yellowknife Gold Project – Discovery Mine, N.W.T.", prepared for Tyhee by EBA and submitted by Tyhee to the MVLWB in November 2005.

This letter presents the thermistor and piezometer monitoring results to date and describes other information related to the operation of the airstrip, apron and access road.

3.0 MONITORING RESULTS

3.1 GROUNDWATER LEVELS

Groundwater levels measured to-date are presented on Table 1. Figure 1 shows standpipe piezometer locations with respect to the airstrip and the surrounding area.

Over the monitoring period, two standpipes have remained dry (at Boreholes 13 and 33); one standpipe has always had water (Borehole 22); and the remaining seven have shown intermittent water content.

In general, the groundwater levels appear to fluctuate approximately 1 to 2 meters annually. The highest annual groundwater levels occurred between June and September, and the lowest annual groundwater levels occurred between December and May.

Two monitoring visits were conducted over the past year, on May 7 and on August 18, 2009. During both of these monitoring visits, groundwater was encountered at the four locations where it is often detected, and it was not encountered in the other six locations, where is it not often detected. Groundwater levels were generally higher in 2009 than in 2008 in those locations where it could be measured.

However, it should be noted that groundwater was measured in 7 of 10 standpipe piezometers in August of 2008, whereas, it was only measured in 4 of 10 standpipe piezometers in August of 2009. This seems to correlate with the observation that there was much ponded water on the ground surface at the time of the August 2008 monitoring visit, suggesting that the standpipe piezeometers were influenced by recent rainfall. There was little ponded surface water at the time of the August 2009 monitoring visit.

3.2 GROUND TEMPERATURES

Figure 1 shows the locations of the thermistor cables. Ground temperatures measured to-date are presented on Tables 2 to 6. While the plots appear “busy”, the intent is to show the range of observed ground temperatures over the monitoring period. To assist with interpreting the information, the readings from this past year (2009) have been plotted with a heavier line weight than prior readings, with May’s data being plotted in red and August’s data being plotted in black.

The thermistor cable at Borehole 19, near the north end of the airstrip was destroyed by snow clearing equipment during the winter of 2007. The thermistor cable at Borehole 20, in the former settlement area, near the centre of the airstrip, was severed by snow clearing equipment during the winter of 2009. Readings were taken from the individual wires at Borehole 19 and 20 cables during the August 2009 monitoring visit.

The 2007 inspection report provided a thorough discussion of the variations in ground temperature, following a year of regular monitoring. Ground temperatures were only measured twice during each of the subsequent years. While nothing was recorded to contradict previous interpretations, some supplemental observations can be noted.

The ground temperatures recorded in 2009 in the off-airstrip areas (Area 7 and Area 4; Tables 2 and 3) are within the range of previously measured temperatures.

The ground temperatures recorded in 2009 under the airstrip (Tables 4 to 6) are at the cold end of the range of previously recorded ground temperatures. This suggests a gradual cooling of the ground beneath the airstrip, likely as a result of snow clearing in the winter, which eliminates the insulation from the ground surface. Somewhat cooler annual air temperatures over the last couple of years may also have contributed to this apparent ground cooling, but it was not evident in the off-airstrip areas.

This cooling effect is most pronounced at the location of Borehole 20 near the centre of the airstrip (Table 5). The deepest sensors at that location all indicate progressive cooling since the cable was installed. This is the area of past settlement, which was attributed to thaw of permafrost. As the ground settled, by moisture draining away, the capacity of soil moisture to buffer seasonal temperature fluctuations diminishes, permitting the ground to gradually cool.

At the time of the August 2009 monitoring visit, the ground was frozen below a depth of about 4 m at the north end of the airstrip (Borehole 19; Table 4) and below a depth of about 3 m at the south end of the airstrip (Borehole 21; Table 6). This should not be interpreted to mean that there is permafrost at these locations. The ground at depth will continue to warm into the fall, so ground temperatures will likely rise above 0 °C.

In that regard, the required submission date for the annual inspection report is not ideal. The objective of measuring ground temperatures in late April or early May is to record the coldest ground temperatures in an annual cycle. It would be preferable to collect another set of readings in late October, to record the warmest ground temperatures in an annual cycle. The August monitoring visit is done because the inspection report is due at the beginning of October. If the report submission date was changed to the end of November, a set of readings could be obtained in late October, and incorporated in to the report.

4.0 OTHER OBSERVATIONS / INFORMATION

4.1 GENERAL

No “frost boils” were observed on the airstrip, apron or access road areas. No changes in the quantity or characteristics of the “frost boils” in the vicinity of Boreholes 17, 18 or 26 were noticed. It is likely that these features are changing over time, but if so, it is gradual, not dramatic, so difficult to notice during intermittent examinations.

As there was little activity at the site for most of the year, there was little maintenance activity in connection with the airstrip, apron and road.

4.2 AIRSTRIP

Maintenance comprised grading/dragging the airstrip; approximately 28 m^3 of screened gravel was added to the airstrip over the past year.

In early August, the thermistor casing at Borehole 20, near the centre of the airstrip, began to appear through the gravel surface (Photo 1). The area around the casing was exposed during the August monitoring visit (Photo 2), to attempt to find an explanation. The conclusion was that the upper portion of the casing was likely raised by frost-jacking, and then exposed by reworking of the surface gravel from grading and aircraft traffic.

The casing was heated, laid over on its side, and buried, about 0.3 m deep (Photo 3). This should not impact the operation of the thermistor cable, nor future airstrip maintenance activities.

The frost action in the last year seems to have resulted in frost-jacking in most of the instrumentation. The pipe stick-up is always recorded at each standpipe piezometer location. At the time of the August 2009 monitoring visit, the pipe stick-up at each standpipe piezometer location was higher than the average of all previous measurements at that location. The differences ranged from 0.02 m to 0.13 m, and averaged 0.07 m.

A new area of settlement developed along the west half of the airstrip, over the summer (Photo 4). It is about 290 m from the south end of the airstrip. It impacts an area about 30 m long and 10 m wide. There has been about 0.1 to 0.2 m of settlement in this area. The cause is unknown, but it could be attributed to localized permafrost thaw, perhaps in response to the generally increased groundwater levels, and associated flow, in 2008 and 2009.

4.3 APRON

There was no maintenance activity on the apron over the last year. No changes were observed.

4.4 ACCESS ROAD

There was no maintenance activity on the road over the last year. No changes were observed.

5.0 CLOSURE

We trust the information presented herein satisfies your present requirements. Please contact the undersigned if you require additional information.

Respectfully submitted,
EBA Engineering Consultants Ltd.

T.E. Hoeve, P.Eng.
Project Director, NT/NU Region
Direct: 867.766.3728 x114
ehoeve@eba.ca

TABLES

TABLE 1
GROUNDWATER LEVEL MONITORING SUMMARY
TYHEE, YELLOWKNIFE GOLD PROJECT

BOREHOLE	11	26	12	22	33	34	13	35	17	18
GROUND ELEVATION (m)	301.91	301.89	303.02	303.01	306.53	306.38	308.24	308.01	307.54	302.45
DATE	GROUNDWATER ELEVATION (m)									
25-Aug-05	<298.84	<299.68	300.42	300.44	<305.02	<305.47	<306.29	<306.91	305.14	<301.86
3-Aug-06	<298.84	<299.68	302.11	299.79	<305.02	<305.47	<306.29	<306.91	306.24	<301.86
14-Sep-06	299.82	<299.68	302.35	299.63	<305.02	<305.47	<306.29	<306.91	306.43	301.97
19-Oct-06	299.53	<299.68	301.81	299.70	<305.02	<305.47	<306.29	<306.91	305.77	301.98
14-Dec-06	<298.84	<299.68	300.68	299.85	<305.02	<305.47	<306.29	<306.91	304.90	<301.86
22-Feb-07	<298.84	<299.68	299.73	299.26	<305.02	<305.47	<306.29	<306.91	304.92	<301.86
19-Apr-07	<298.84	<299.68	299.76	299.03	<305.02	<305.47	<306.29	<306.91	304.90	<301.86
28-Jun-07	<298.84	<299.68	301.92	301.74	<305.02	<305.47	<306.29	<306.91	306.47	<301.86
23-Aug-07	<298.84	<299.68	301.48	300.35	<305.02	<305.47	<306.29	306.97	305.24	302.00
8-May-08	<298.84	<299.68	<299.60	299.87	<305.02	<305.47	<306.29	<306.91	<304.74	<301.86
14-Aug-08	<298.84	300.31	301.25	300.55	<305.02	306.00	<306.29	307.68	304.77	302.34
7-May-09	<298.84	<299.68	299.84	301.97	<305.02	<305.47	<306.29	<306.91	306.17	301.90
18-Aug-09	<298.84	<299.68	301.88	301.59	<305.02	<305.47	<306.29	<306.91	306.36	302.06

Note: "<" symbol indicates there was no water in the standpipe at the time of reading, implying that the groundwater level at that location was below the bottom of the standpipe piezometer.

TABLE 2
TEMPERATURE MONITORING SUMMARY
THERMISTOR CABLE NEAR AREA 7, WEST SIDE OF AIRSTRIP
BOREHOLE 17; CABLE 1803
TYHEE, YELLOWKNIFE GOLD PROJECT

SENSOR	1	2	3	4	5	6	7	8	9
DEPTH (m)	0.0	0.2	0.5	1.0	2.0	4.0	6.0	8.0	10.0
CALIBRATION	-0.01	-0.01	-0.02	-0.01	-0.01	-0.01	0.03	0.00	-0.02
DATE	TEMPERATURE (deg. C)								
25-Aug-05	19.0	12.9	12.2	11.2	6.8	3.3	2.4	2.2	2.1
3-Aug-06	26.2	20.6	17.1	15.0	9.2	3.3	2.6	2.3	2.3
14-Sep-06	7.2	8.5	10.9	11.6	9.8	4.6	3.5	2.9	2.5
19-Oct-06	-1.7	-0.6	1.8	4.4	6.4	5.0	4.1	3.4	2.8
14-Dec-06	-6.2	-3.6	-1.7	0.0	2.1	4.0	3.9	3.6	3.2
22-Feb-07	-7.9	-4.4	-2.8	-1.1	1.0	3.0	3.2	3.2	3.1
19-Apr-07	-2.3	-1.6	-1.4	-1.0	0.6	2.5	2.7	2.7	2.8
28-Jun-07	22.6	15.4	11.8	3.0	0.5	2.1	2.4	2.5	2.6
23-Aug-07	10.3	9.9	12.5	12.7	8.6	3.2	2.7	2.5	2.5
8-May-08	5.5	-0.2	-0.7	-0.7	0.6	2.2	2.5	2.6	2.7
14-Aug-08	22.0	17.5	16.0	15.7	13.1	2.9	2.5	2.4	2.4
7-May-09	1.8	-0.4	-0.5	-0.2	0.8	2.3	2.6	2.7	2.7
18-Aug-09	14.5	15.5	16.0	13.8	8.8	2.9	2.5	2.4	2.5

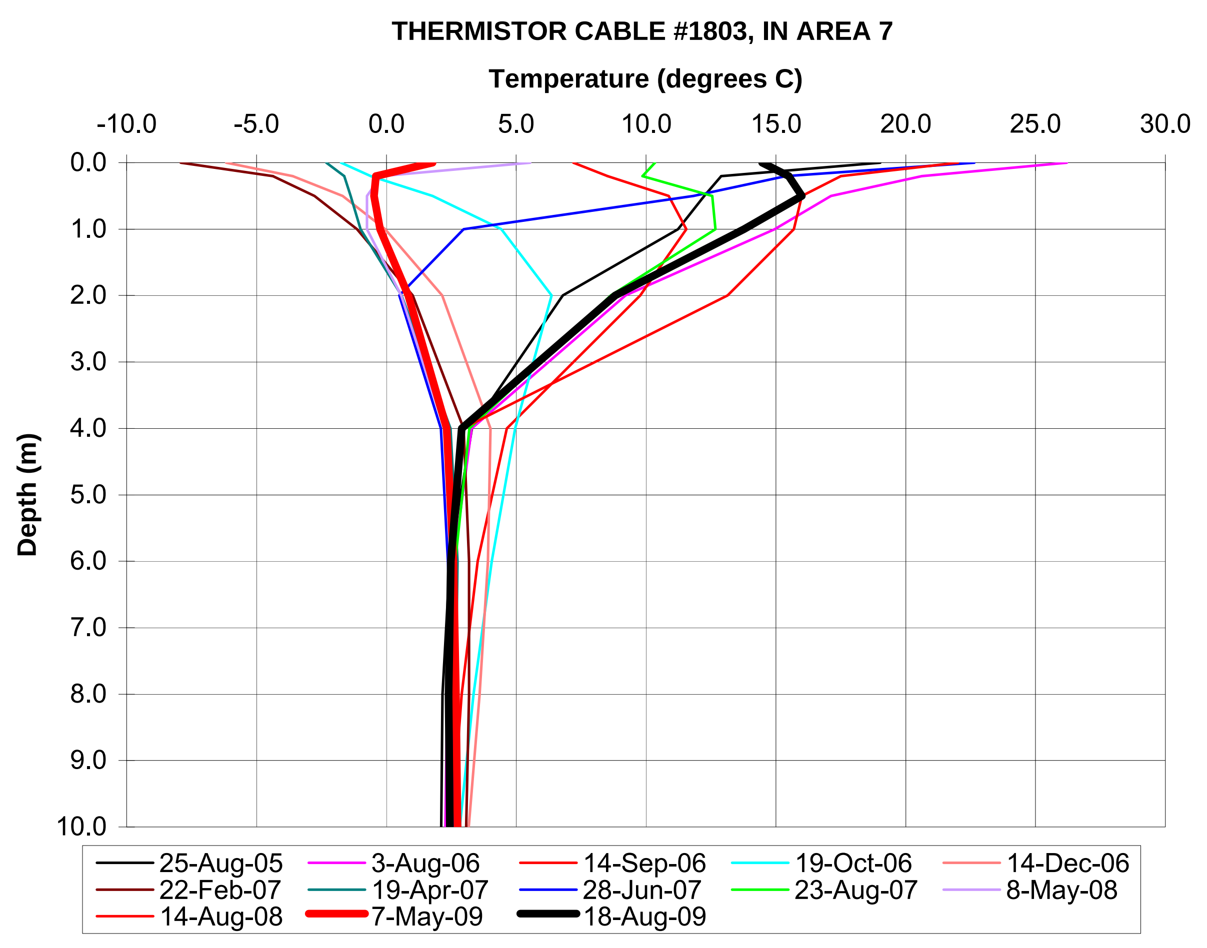


TABLE 3
TEMPERATURE MONITORING SUMMARY
THERMISTOR CABLE NEAR AREA 4, EAST SIDE OF AIRSTRIP
BOREHOLE 18; CABLE 1804
TYHEE, YELLOWKNIFE GOLD PROJECT

SENSOR	1	2	3	4	5	6	7	8	9
DEPTH (m)	0.0	0.2	0.5	1.0	2.0	4.0	6.0	8.0	10.0
CALIBRATION	-0.02	0.00	-0.01	-0.02	-0.02	-0.01	-0.01	0.00	-0.02
DATE	TEMPERATURE (deg. C)								
25-Aug-05	15.9	11.9	10.8	10.0	8.6	5.9	3.8	2.4	1.7
3-Aug-06	26.0	18.2	14.9	13.1	10.6	6.7	4.2	2.9	2.2
14-Sep-06	6.4	6.5	9.5	10.5	10.0	7.8	5.8	4.3	3.2
19-Oct-06	-1.2	-0.1	2.2	3.9	5.6	6.7	6.0	4.9	3.8
14-Dec-06	-5.0	-3.7	-2.6	-1.3	0.3	2.8	3.9	4.1	3.8
22-Feb-07	-9.4	-6.6	-4.8	-3.5	-2.2	0.1	1.5	2.4	2.8
19-Apr-07	-4.1	-3.5	-2.9	-2.6	-2.2	-0.9	0.3	1.3	1.9
28-Jun-07	18.9	16.4	13.5	9.7	5.9	2.4	1.2	1.1	1.4
23-Aug-07	9.9	10.0	11.6	11.6	10.2	7.3	4.9	3.3	2.3
8-May-08	1.7	-0.4	-1.3	-1.8	-2.0	-1.0	0.1	1.0	1.7
14-Aug-08	20.4	15.4	14.5	14.5	13.1	10.0	7.7	3.9	2.0
7-May-09	-0.1	-0.8	-1.1	-1.2	-1.2	-0.6	0.3	1.2	1.8
18-Aug-09	14.0	14.7	13.6	11.8	9.8	6.3	3.8	2.5	2.0

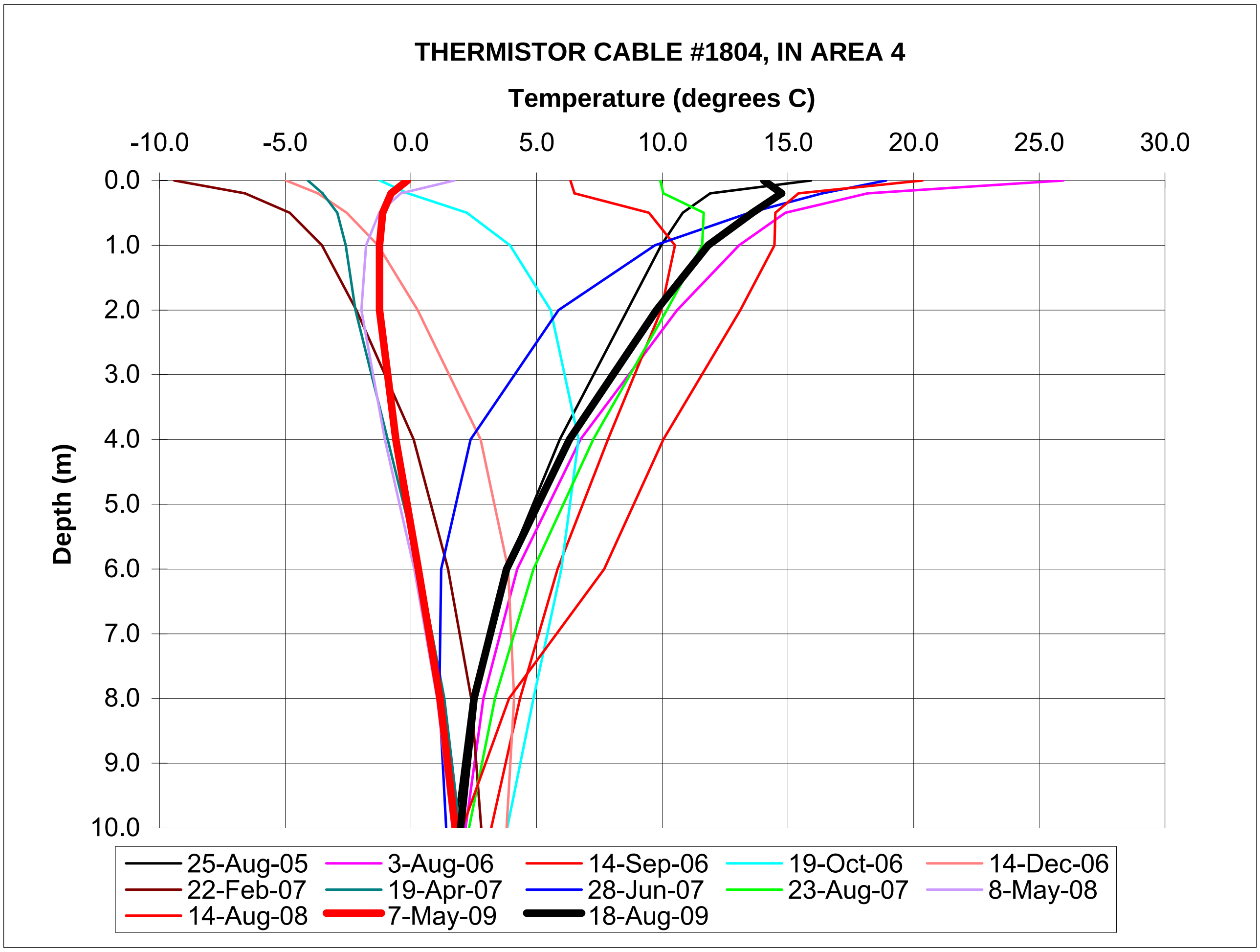
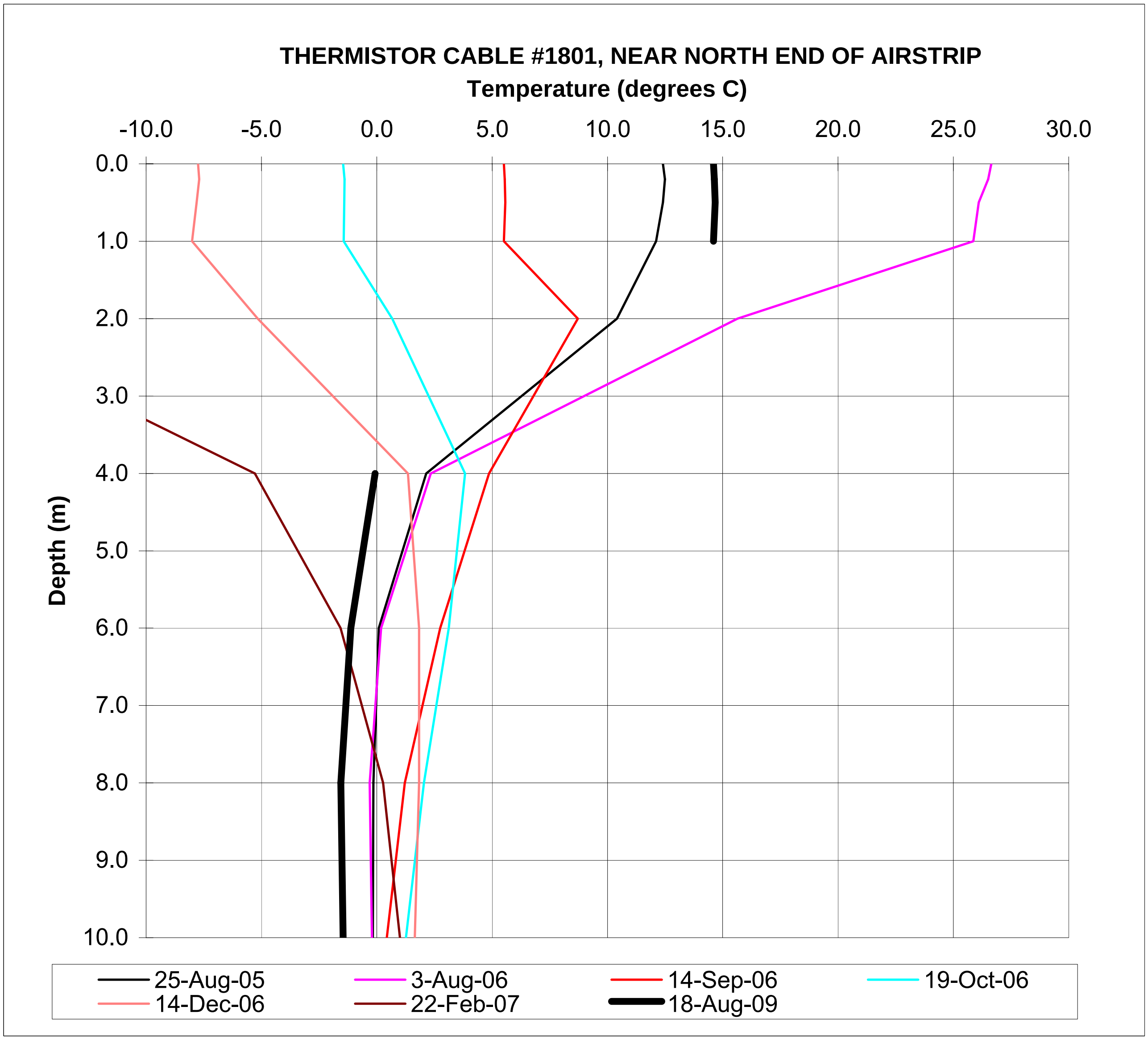


TABLE 4
TEMPERATURE MONITORING SUMMARY
THERMISTOR CABLE NEAR NORTH END OF AIRSTRIP
BOREHOLE 19; CABLE 1801
TYHEE, YELLOWKNIFE GOLD PROJECT

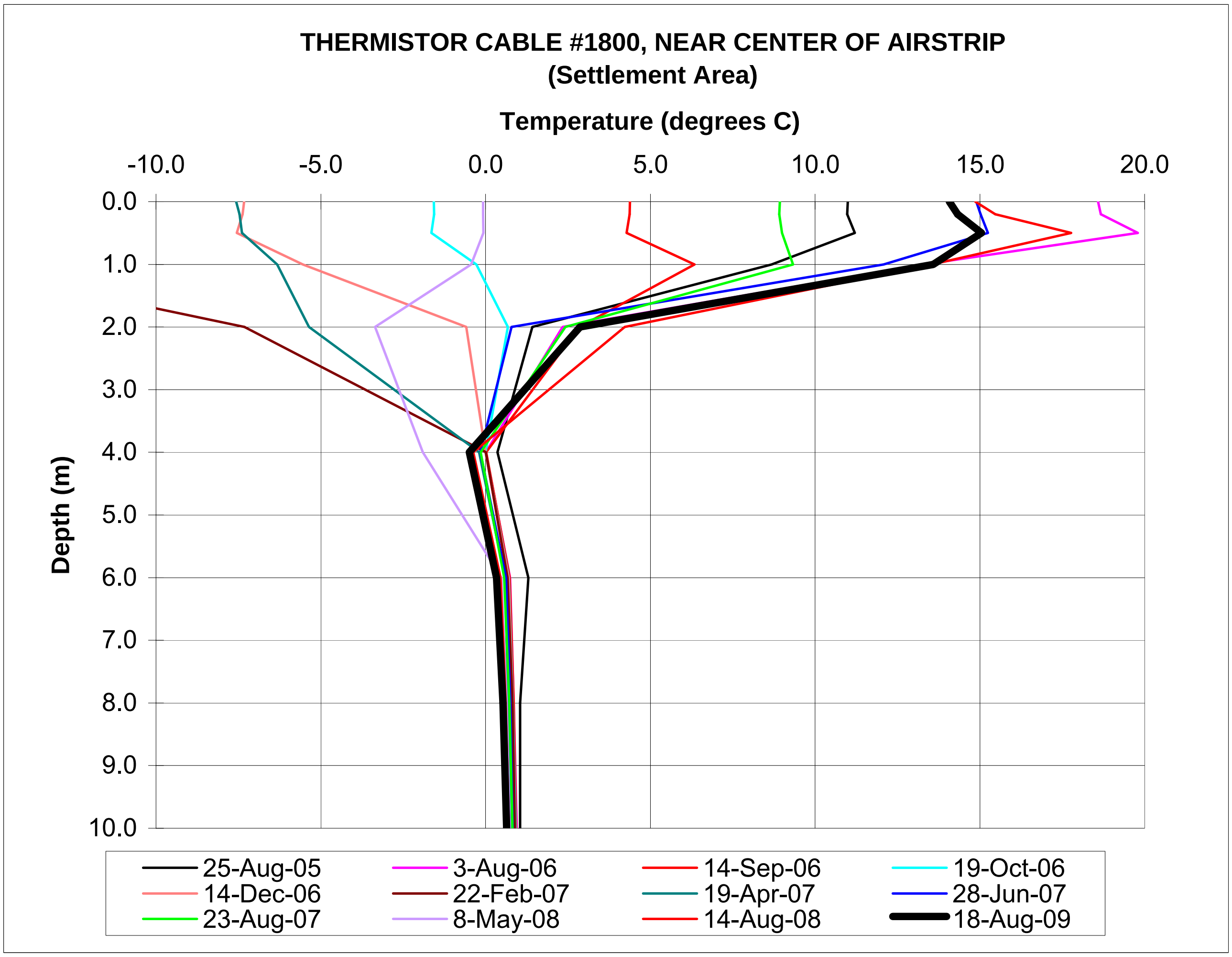
SENSOR	1	2	3	4	5	6	7	8	9
DEPTH (m)	0.0	0.2	0.5	1.0	2.0	4.0	6.0	8.0	10.0
CALIBRATION	-0.01	0.00	-0.02	-0.01	-0.01	-0.02	-0.02	0.01	-0.01
DATE	TEMPERATURE (deg. C)								
25-Aug-05	12.4	12.5	12.4	12.1	10.4	2.2	0.1	-0.1	-0.2
3-Aug-06	26.6	26.5	26.1	25.9	15.6	2.3	0.2	-0.3	-0.2
14-Sep-06	5.5	5.5	5.6	5.5	8.7	4.9	2.8	1.2	0.4
19-Oct-06	-1.5	-1.4	-1.4	-1.4	0.7	3.8	3.1	2.0	1.3
14-Dec-06	-7.7	-7.7	-7.8	-8.0	-5.2	1.4	1.8	1.8	1.7
22-Feb-07	-24.6	-24.6	-24.5	-24.6	-18.9	-5.3	-1.6	0.3	1.0
18-Aug-09	14.6	14.6	14.7	14.6		-0.1	-1.1	-1.6	-1.5



Note: Cable destroyed by snow clearing after February 22, 2007; read wires in August 2009.

TABLE 5
TEMPERATURE MONITORING SUMMARY
THERMISTOR CABLE NEAR CENTER OF AIRSTRIP
BOREHOLE 20; CABLE 1800
TYHEE, YELLOWKNIFE GOLD PROJECT

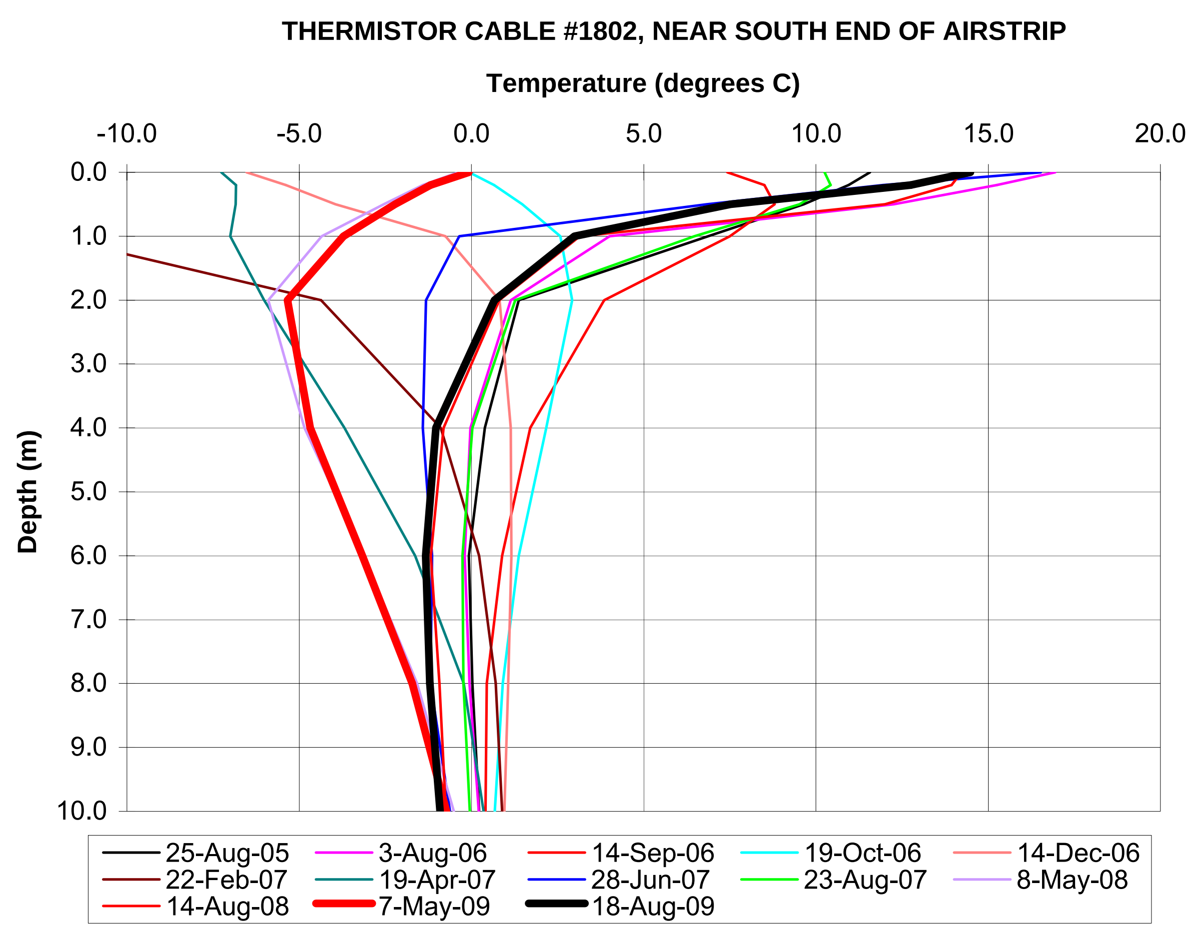
SENSOR	1	2	3	4	5	6	7	8	9
DEPTH (m)	0.0	0.2	0.5	1.0	2.0	4.0	6.0	8.0	10.0
CALIBRATION	-0.01	0.01	-0.02	-0.01	-0.01	-0.02	-0.02	0.00	-0.02
DATE	TEMPERATURE (deg. C)								
25-Aug-05	11.0	11.0	11.2	8.7	1.4	0.4	1.3	1.1	1.0
3-Aug-06	18.6	18.7	19.8	13.3	2.3	0.0	0.7	0.9	0.9
14-Sep-06	4.4	4.4	4.3	6.3	2.9	0.0	0.7	0.9	0.9
19-Oct-06	-1.6	-1.6	-1.6	-0.3	0.7	0.0	0.7	0.8	0.9
14-Dec-06	-7.3	-7.4	-7.5	-5.5	-0.6	0.0	0.7	0.8	0.9
22-Feb-07	-20.7	-20.7	-21.2	-16.4	-7.3	0.0	0.7	0.8	0.9
19-Apr-07	-7.6	-7.5	-7.4	-6.3	-5.4	-0.2	0.6	0.7	0.8
28-Jun-07	14.9	15.0	15.2	12.1	0.8	-0.2	0.6	0.8	0.8
23-Aug-07	8.9	8.9	9.0	9.3	2.4	-0.1	0.6	0.7	0.8
8-May-08	-0.1	-0.1	-0.1	-0.4	-3.4	-1.9	0.5	0.6	0.7
14-Aug-08	14.9	15.5	17.8	13.5	4.2	-0.4	0.5	0.6	0.7
18-Aug-09	14.1	14.3	15.0	13.6	2.9	-0.5	0.3	0.5	0.6



Note: Cable destroyed by snow clearing prior to May 7, 2009; read wires in August.

TABLE 6
TEMPERATURE MONITORING SUMMARY
THERMISTOR CABLE NEAR SOUTH END OF AIRSTRIP
BOREHOLE 21; CABLE 1802
TYHEE, YELLOWKNIFE GOLD PROJECT

SENSOR	1	2	3	4	5	6	7	8	9
DEPTH (m)	0.0	0.2	0.5	1.0	2.0	4.0	6.0	8.0	10.0
CALIBRATION	-0.02	0.01	-0.02	0.00	-0.01	-0.01	0.03	-0.02	-0.01
DATE	TEMPERATURE (deg. C)								
25-Aug-05	11.6	10.9	9.6	6.9	1.4	0.4	-0.1	0.0	0.2
3-Aug-06	16.9	15.2	12.3	4.0	1.1	0.0	-0.2	-0.1	0.2
14-Sep-06	7.4	8.5	8.8	7.5	3.9	1.7	0.9	0.4	0.4
19-Oct-06	-0.1	0.7	1.5	2.6	2.9	2.2	1.4	0.9	0.7
14-Dec-06	-6.5	-5.4	-3.9	-0.7	0.8	1.1	1.2	1.1	1.0
22-Feb-07	-20.3	-18.2	-16.1	-12.2	-4.4	-0.9	0.2	0.7	0.9
19-Apr-07	-7.3	-6.8	-6.8	-7.0	-6.0	-3.7	-1.6	-0.2	0.4
28-Jun-07	16.5	11.9	6.8	-0.4	-1.3	-1.4	-1.1	-1.2	-0.6
23-Aug-07	10.2	10.4	9.5	6.5	1.3	0.0	-0.3	-0.2	0.0
8-May-08	-0.4	-1.4	-2.5	-4.3	-5.9	-4.8	-3.1	-1.6	-0.5
14-Aug-08	14.2	13.9	12.0	3.1	0.8	-0.8	-1.2	-0.9	-0.7
7-May-09	-0.1	-1.2	-2.2	-3.7	-5.3	-4.7	-3.2	-1.7	-0.7
18-Aug-09	14.5	12.7	7.5	3.0	0.7	-1.0	-1.3	-1.2	-0.9



FIGURES

LEGEND

- ● Standpipe Piezometer Location
- ● Thermistor Location
- ● Standpipe & Thermistor Location

NOTES

Base data source: Tyhee Airphoto georeferenced to 1:50,000 National Topographic Database

TYHEE AIRSTRIP INSPECTION

Site Plan

PROJECTION
UTM Zone 12N

DATUM
NAD83

Scale 1:3,500

0.05 0.025 0 0.05
Kilometres

FILE NO.
Y14101177_FIG 1_RO.cdr

PROJECT NO.	DWN	CKD	REV
Y14101177	DRG	TEH	0

OFFICE	DATE
EDM	September 30, 2009

Tyhee NWT
Corp.

EBA Engineering
Consultants Ltd.

Figure 1

PHOTOGRAPHS

Photo 1
Area of exposed thermistor casing, at the location of Borehole 20, looking south

Photo 2
Area around thermistor casing at Borehole 20, dug up

Photo 3
Location of Borehole 20, following burial of thermistor casing, looking east

Photo 4
Looking south at settlement area, about 290 m from south end of airstrip

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ISSUED FOR USE

YELLOWKNIFE GOLD PROJECT AIRSTRIP 2010 MONITORING SERVICES
YELLOWKNIFE GOLD PROJECT, NT

Y14101260

November 30, 2010

EBA Engineering Consultants Ltd.
p. 867.920.2287 • f. 867.873.3324
PO Box 2244 • 201, 4916 - 49 Street • Yellowknife, Northwest Territories X1A 2P7 • CANADA

Tyhee NWT Corp

November 30, 2010

Mackenzie Valley Land and Water Board
P.O. Box 2130
7th Floor – 4910 50th Avenue
Yellowknife, NT
X1A 2P6

Attention: Ms. Lynn Carter

Dear Ms. Carter:

Re: Type "A" Land Use Permit MV2005C0001
2010 Airstrip Geotechnical Report

Please find attached a report entitled " 2010 Geotechnical Inspection of Airstrip, Apron and Access Road – Yellowknife Gold Project, NT" completed by EBA Engineering Consultants Ltd.on the Discovery airstrip, dated November 30, 2010, as per Clause # 94 and # 96 of our amended Land Use Permit MV2005C0001.

The submission date and date of the 2010 report is November 30, 2010 to correspond to the Board's approval to this date in your letter dated May 27, 2010 and received on June 1, 2010. We note that the change of the submission date is included in Clause # 93 of Land Use Permit MV2005C0001.

Please acknowledge receipt and we look forward to receiving approval from the Board that this submission satisfies the terms and conditions of the amended land use permit.

Should you have any questions concerning this matter, please contact me on my cell (780) 975-2550

Yours truly,

Original signed by "H.R.Wilson"

Hugh R. Wilson
Vice President – Environment and Community Affairs

Cc: Clint Ambrose, INAC (Via e-mail only)
Carolyn Cornell, Tyhee Development Corp (via e-mail only)
Doug Levesque, Tyhee NWT Corp (via e-mail only)

401 675 W. Hastings St., Vancouver, B.C. V6B 1N2 Ph: 604 681-2877, Fax: 604 681-2879

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1.0 INTRODUCTION

This report describes EBA's Engineering Consultants Ltd.'s (EBA's) findings from an annual inspection and monitoring program related to Tyhee NWT Corp's (Tyhee's) continued use of the existing airstrip, apron and access road at the Yellowknife Gold Project (YGP, formerly the Discovery Mine site). It is understood that an annual inspection is required to comply with Condition #94 of Tyhee's Land Use Permit MV2005C0001. The latest inspection of the subject area was conducted by Ed Hoeve, P.Eng., of EBA, on October 21, 2010.

2.0 BACKGROUND

In the late 1990's Indian and Northern Affairs Canada (INAC) began conducting environmental reclamation work for the mine site. In an effort to contain tailings from the previous mine, a cap made from silty clay excavated from a local borrow source, has been placed on the tailings in a nominal 0.3 m thickness. In order to protect the clay cap from erosion, a protective armour rock layer of 100 mm minus crushed rock was placed on top of the silty clay cap. The armour rock also had a nominal thickness of 0.3 m. Since completion of the tailings cap in 2000, numerous "frost boils" have been identified and can be characterized where fine material, either from the silty clay layer or from the tailings beneath, have migrated upward through the armour rock.

INAC completed their reclamation work in the fall of 2005. As part of the mine reclamation, INAC planned to decommission the existing airstrip. Tyhee applied for and received an amendment to its current land use permit from the MVLWB that allows Tyhee to continue using the airstrip to support ongoing advanced exploration and site access needs. INAC expressed a concern over whether continued use of the airstrip might exacerbate their efforts to mitigate the frost boil phenomena and its possible implication on long-term reclamation integrity.

EBA conducted a site investigation of the airstrip, apron and access road area, in the late summer of 2005, in order to support continued operations of the airstrip and provide data for a potential upgraded design for long-term use of the airstrip during the operational phase of the YGP. EBA's investigation included two areas of frost boil occurrence near the airstrip with the objective that this data might assist INAC in determining the mechanism of frost boil formation. Standpipe piezometers and thermistor cables were installed during the site investigation. The site investigation is documented in a report entitled "Airstrip and Access Road Geotechnical Evaluation, Yellowknife Gold Project – Discovery Mine, N.W.T.", prepared for Tyhee by EBA and submitted by Tyhee to the MVLWB in November 2005.

This report presents the thermistor and piezometer monitoring results to-date and describes other information related to the operation of the airstrip, apron and access road.

3.0 MONITORING RESULTS

3.1 GROUNDWATER LEVELS

Groundwater levels measured to-date are presented in Table 1. Figure 1 shows standpipe piezometer locations with respect to the airstrip and the surrounding area.

Over the monitoring period, two standpipes have remained dry (at Boreholes 13 and 33); one standpipe has always had water (Borehole 22); and the remaining seven have shown intermittent water content.

In general, the groundwater levels appear to fluctuate approximately 1 to 2 meters annually. Generally, the highest annual groundwater levels occurred between June and September, and the lowest annual groundwater levels occurred between December and May.

Two monitoring visits were conducted over the past year, on April 29 and on October 21, 2010. Groundwater was encountered in more of the standpipes in 2010 than in 2009, and groundwater levels were somewhat higher in 2010 as well.

Data from the site do not show an overall increase in precipitation. The spring was drier than normal and the precipitation in July was quite high, but overall the precipitation has been comparable to the previous year. Therefore, the difference is likely more a reflection of the timing of the monitoring visits.

It is noted that groundwater levels in off airstrip areas (Boreholes 17 and 18) were higher in the spring than in the fall, whereas groundwater levels immediately adjacent to the airstrip were higher in the fall than in the spring

A wet spot was observed just east of Borehole 18 during the April 2010 inspection (Photos 1 and 2); possibly as a result of groundwater discharge. This wet spot was not evident during the October 2010 inspection

Ponded water was observed in April to the south of Borehole 17 (Photo 3). This observation may contribute to the higher than normal groundwater readings at this location. The groundwater levels measured at Borehole 17 in 2010 were the highest recorded to-date.

3.2 GROUND TEMPERATURES

Figure 1 shows the locations of the thermistor cables. Ground temperatures measured to-date are presented on Tables 2 to 6. The plots below the tables show how the readings from 2010 compare with the range of ground temperatures measured prior to 2010.

The thermistor cable at Borehole 19, near the north end of the airstrip, was destroyed by snow clearing equipment during the winter of 2007. The thermistor cable at Borehole 20, in the former settlement area, near the centre of the airstrip, was severed by snow clearing equipment during the winter of 2009. These cables were reconnected in the fall of 2009, with the exception of one sensor at the north end of the airstrip.

The 2007 inspection report provided a thorough discussion of the variations in ground temperature, following a year of regular monitoring. Ground temperatures were only measured twice during each of the subsequent years. While nothing was recorded to contradict previous interpretations, some supplemental observations can be noted.

The ground temperatures recorded at depth in the off-airstrip areas (Area 7 and Area 4; Tables 2 and 3) in the fall of 2010 are the warmest since monitoring commenced. This indicates that moving the second data collection event to later in the year does come closer to recording the warmest temperatures at depth in an annual cycle, which was the objective of the recommendation in 2009.

The general trend of cooling ground temperatures below the airstrip, described in the 2009 inspection report, seems to be continuing, with no temperatures recorded at the warm end of the observed range, and certain sensors at both the north end (Table 4) and centre (Table 5) of the airstrip recording colder temperatures than previously.

As indicated in 2009, this cooling effect is most pronounced at the location of the former settlement area near the centre of the airstrip (Table 5). The deepest sensors at that location all indicate progressive cooling since the cable was installed. This is the area of past settlement, which was attributed to thaw of permafrost, soon after reclamation of the site. As the ground settled, by moisture draining away, the capacity of soil moisture to buffer seasonal temperature fluctuations diminished, permitting the ground to gradually cool.

The objective of moving the second data collection event of the year to later in the fall was to attempt to determine if permafrost is present below the airstrip. Based on the data collected in October 2010, it is possible that permafrost is present at a depth of about 4 m below the centre of the airstrip (Table 5), and below a depth of 6 m near the south end of the airstrip (Table 6). Permafrost is defined as ground that remains below a temperature of 0 °C for two consecutive years, so an additional year of data is required to comment further. If permafrost is present in the vicinity of the monitoring location near the north end of the airstrip, it is below a depth of the 10 m (the maximum depth of the instrumentation.

4.0 OTHER OBSERVATIONS / INFORMATION

4.1 GENERAL

No “frost boils” were observed on the airstrip, apron or access road areas. No changes in the quantity or characteristics of the “frost boils” in the vicinity of Boreholes 17, 18 or 26 were noticed. It is likely that these features are changing over time, but if so, the change is gradual, not dramatic, and so difficult to notice during intermittent examinations.

The ground was snow covered at the time of the October 21, 2010 site visit. While moving the second data collection event of the year to late October achieved the objectives with respect to ground temperature measurements, it has hampered the ability to conduct visual observations of the ground surface on and adjacent to the airstrip, apron and access road. Therefore, it is recommended that next year the fall site visit occur in early October.

4.2 AIRSTRIP

Maintenance comprised grading/dragging the airstrip. Approximately 90 m^3 of screened gravel was added to the airstrip over the past year. This amounts to an average thickness of about 5 mm over the surface of the airstrip.

A small pile of the maintenance gravel was observed on the apron, and it appeared to be of more suitable gradation than in past years (Photo 4). Therefore, a sample was collected from the stockpile at the screening site. The gradation of the sample collected is presented in the Figures section of this report. The Government of the Northwest Territories, Department of Transportation specification limits are also shown on the figure, for information. The sample collected in 2010 comes closer to conforming to the specification than the sample tested in 2008. It is understood that a 16 mm screen is now being used, rather than a 20 mm screen. This is evident in the figure, and results in a finer gradation. In addition, there are also more fine sand and silt sized particles in the 2010 sample than in the 2008 sample.

The settlement area about 290 m north of the south end of the airstrip, identified in 2009, has reportedly not undergone further, noticeable settlements in 2010.

The area of the thermistor casing repair at Borehole 20 in 2009 was examined. The area appears the same as the rest of the airstrip, with no indication of settlement or distress. Therefore, the repair is considered to be performing satisfactorily.

4.3 APRON

There was no maintenance activity on the apron in 2010, other than temporary storage of airstrip surfacing gravel. The only change observed at the apron was the construction of a timber crib loading ramp.

4.4 ACCESS ROAD

There was no maintenance activity on the road over the last year. No changes in the condition of the road were observed.

5.0 CLOSURE

Nothing was observed during the 2010 inspections to suggest that continued operation of the airstrip, apron and access road is compromising the performance of the underlying tailings cap.

We trust the information presented herein satisfies your present requirements. Please contact the undersigned if you require additional information.

Respectfully submitted,
EBA Engineering Consultants Ltd.

T.E. Hoeve, P.Eng.
Project Director, NT/NU Region
Direct: 867.766.3728 x222
ehoeve@eba.ca

TABLES

EBA File: Y14101260

TABLE 1
GROUNDWATER LEVEL MONITORING SUMMARY
TYHEE, YELLOWKNIFE GOLD PROJECT

BOREHOLE	11	26	12	22	33	34	13	35	17	18
GROUND ELEVATION (m)	301.91	301.89	303.02	303.01	306.53	306.38	308.24	308.01	307.54	302.45
DATE	GROUNDWATER ELEVATION (m)									
25-Aug-05	<298.84	<299.68	300.42	300.44	<305.02	<305.47	<306.29	<306.91	305.14	<301.86
3-Aug-06	<298.84	<299.68	302.13	299.81	<305.02	<305.47	<306.29	<306.91	306.24	<301.86
14-Sep-06	299.83	<299.68	302.37	299.65	<305.02	<305.47	<306.29	<306.91	306.43	301.96
19-Oct-06	299.54	<299.68	301.83	299.72	<305.02	<305.47	<306.29	<306.91	305.78	301.97
14-Dec-06	<298.84	<299.68	300.70	299.87	<305.02	<305.47	<306.29	<306.91	304.91	<301.86
22-Feb-07	<298.84	<299.68	299.75	299.28	<305.02	<305.47	<306.29	<306.91	304.93	<301.86
19-Apr-07	<298.84	<299.68	299.78	299.05	<305.02	<305.47	<306.29	<306.91	304.91	<301.86
28-Jun-07	<298.84	<299.68	301.94	301.76	<305.02	<305.47	<306.29	<306.91	306.48	<301.86
23-Aug-07	<298.84	<299.68	301.50	300.37	<305.02	<305.47	<306.29	306.98	305.25	301.99
8-May-08	<298.84	<299.68	<299.60	299.89	<305.02	<305.47	<306.29	<306.91	<304.74	<301.86
14-Aug-08	<298.84	300.32	301.27	300.57	<305.02	306.00	<306.29	307.69	304.78	302.33
7-May-09	<298.84	<299.68	299.86	301.99	<305.02	<305.47	<306.29	<306.91	306.18	301.89
18-Aug-09	<298.84	<299.68	301.90	301.61	<305.02	<305.47	<306.29	<306.91	306.37	302.05
29-Apr-10	<298.84	<299.68	300.53	300.41	<305.02	<305.47	<306.29	307.57	306.93	302.25
21-Oct-10	300.08	299.92	302.24	301.87	<305.02	<305.47	<306.29	<306.91	306.59	301.98

Note: "<" symbol indicates there was no water in the standpipe at the time of reading, implying that the groundwater level at that location was below the bottom of the standpipe piezometer.

Updated: November 22, 2010

TABLE 2
TEMPERATURE MONITORING SUMMARY
THERMISTOR CABLE NEAR AREA 7, WEST SIDE OF AIRSTRIP
BOREHOLE 17; CABLE 1803
TYHEE, YELLOWKNIFE GOLD PROJECT

SENSOR	1	2	3	4	5	6	7	8	9
DEPTH (m)	0.0	0.2	0.5	1.0	2.0	4.0	6.0	8.0	10.0
CALIBRATION	-0.01	-0.01	-0.02	-0.01	-0.01	-0.01	0.03	0.00	-0.02
DATE	TEMPERATURE (deg. C)								
25-Aug-05	19.0	12.9	12.2	11.2	6.8	3.3	2.4	2.2	2.1
3-Aug-06	26.2	20.6	17.1	15.0	9.2	3.3	2.6	2.3	2.3
14-Sep-06	7.2	8.5	10.9	11.6	9.8	4.6	3.5	2.9	2.5
19-Oct-06	-1.7	-0.6	1.8	4.4	6.4	5.0	4.1	3.4	2.8
14-Dec-06	-6.2	-3.6	-1.7	0.0	2.1	4.0	3.9	3.6	3.2
22-Feb-07	-7.9	-4.4	-2.8	-1.1	1.0	3.0	3.2	3.2	3.1
19-Apr-07	-2.3	-1.6	-1.4	-1.0	0.6	2.5	2.7	2.7	2.8
28-Jun-07	22.6	15.4	11.8	3.0	0.5	2.1	2.4	2.5	2.6
23-Aug-07	10.3	9.9	12.5	12.7	8.6	3.2	2.7	2.5	2.5
8-May-08	5.5	-0.2	-0.7	-0.7	0.6	2.2	2.5	2.6	2.7
14-Aug-08	22.0	17.5	16.0	15.7	13.1	2.9	2.5	2.4	2.4
7-May-09	1.8	-0.4	-0.5	-0.2	0.8	2.3	2.6	2.7	2.7
18-Aug-09	14.5	15.5	16.0	13.8	8.8	2.9	2.5	2.4	2.5
11-Nov-09	-3.9	-0.9	0.5	1.7	4.0	4.0	3.8	3.3	2.9
29-Apr-10	8.0	0.1	-0.2	0.0	1.0	2.4	2.7	2.7	2.8
21-Oct-10	-0.9	1.0	2.9	5.0	7.1	5.4	4.5	3.8	3.2

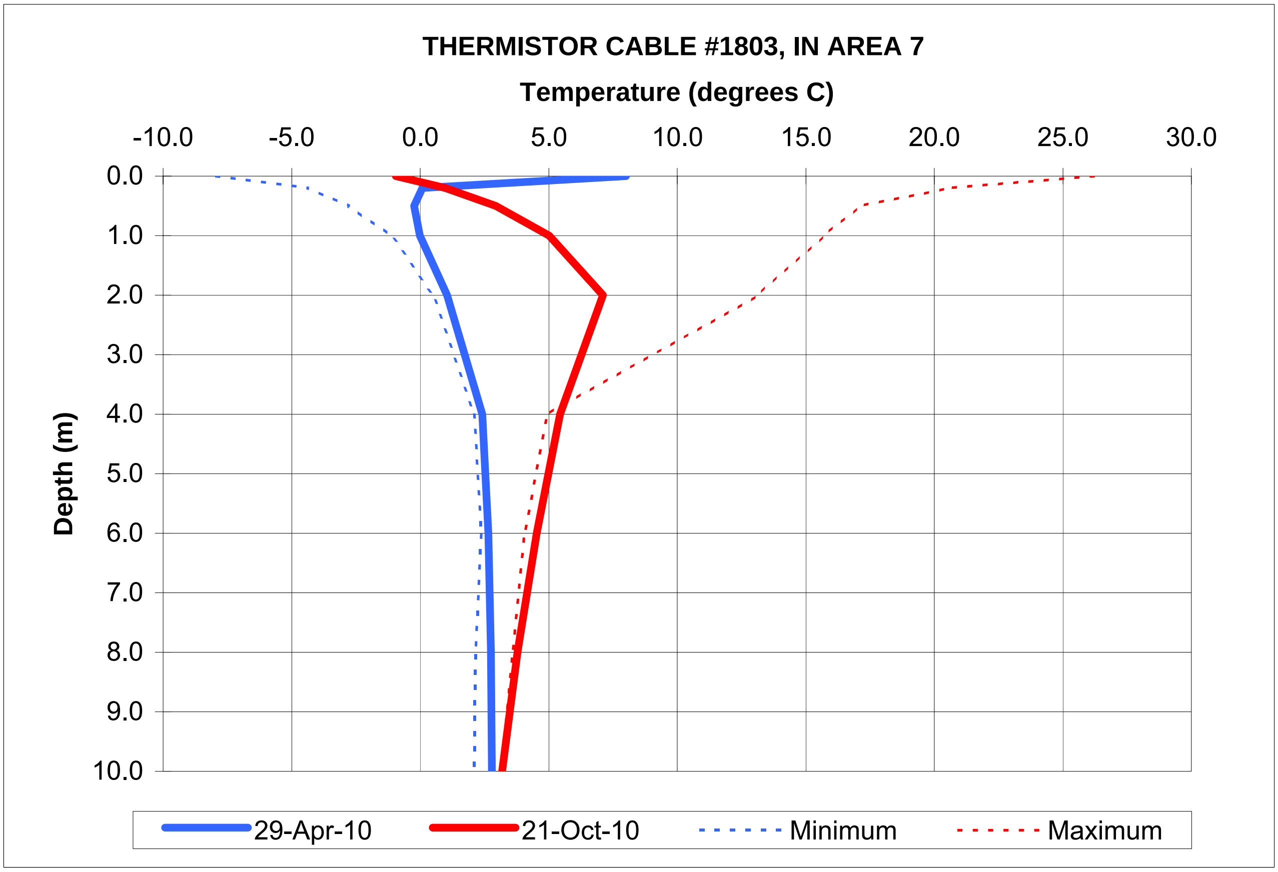


TABLE 3
TEMPERATURE MONITORING SUMMARY
THERMISTOR CABLE NEAR AREA 4, EAST SIDE OF AIRSTRIF
BOREHOLE 18; CABLE 1804
TYHEE, YELLOWKNIFE GOLD PROJECT

SENSOR	1	2	3	4	5	6	7	8	9
DEPTH (m)	0.0	0.2	0.5	1.0	2.0	4.0	6.0	8.0	10.0
CALIBRATION	-0.02	0.00	-0.01	-0.02	-0.02	-0.01	-0.01	0.00	-0.02
DATE	TEMPERATURE (deg. C)								
25-Aug-05	15.9	11.9	10.8	10.0	8.6	5.9	3.8	2.4	1.7
3-Aug-06	26.0	18.2	14.9	13.1	10.6	6.7	4.2	2.9	2.2
14-Sep-06	6.4	6.5	9.5	10.5	10.0	7.8	5.8	4.3	3.2
19-Oct-06	-1.2	-0.1	2.2	3.9	5.6	6.7	6.0	4.9	3.8
14-Dec-06	-5.0	-3.7	-2.6	-1.3	0.3	2.8	3.9	4.1	3.8
22-Feb-07	-9.4	-6.6	-4.8	-3.5	-2.2	0.1	1.5	2.4	2.8
19-Apr-07	-4.1	-3.5	-2.9	-2.6	-2.2	-0.9	0.3	1.3	1.9
28-Jun-07	18.9	16.4	13.5	9.7	5.9	2.4	1.2	1.1	1.4
23-Aug-07	9.9	10.0	11.6	11.6	10.2	7.3	4.9	3.3	2.3
8-May-08	1.7	-0.4	-1.3	-1.8	-2.0	-1.0	0.1	1.0	1.7
14-Aug-08	20.4	15.4	14.5	14.5	13.1	10.0	7.7	3.9	2.0
7-May-09	-0.1	-0.8	-1.1	-1.2	-1.2	-0.6	0.3	1.2	1.8
18-Aug-09	14.0	14.7	13.6	11.8	9.8	6.3	3.8	2.5	2.0
11-Nov-09	-3.5	-0.3	1.1	2.1	3.2	4.6	4.4	4.2	3.5
29-Apr-10	4.1	0.2	-0.2	-0.3	-0.2	0.4	1.2	1.8	2.2
21-Oct-10	-3.4	0.7	3.2	4.7	6.0	6.9	6.2	5.2	4.2

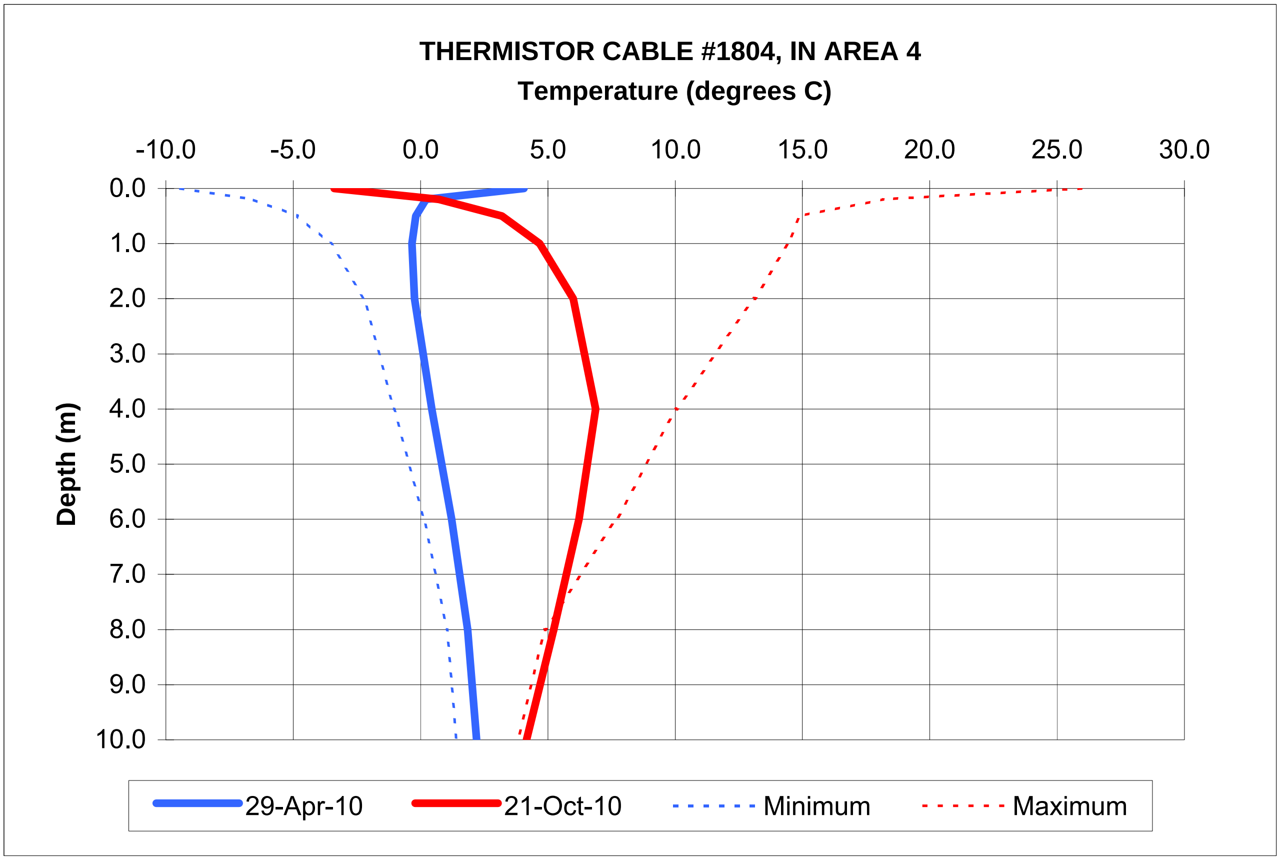
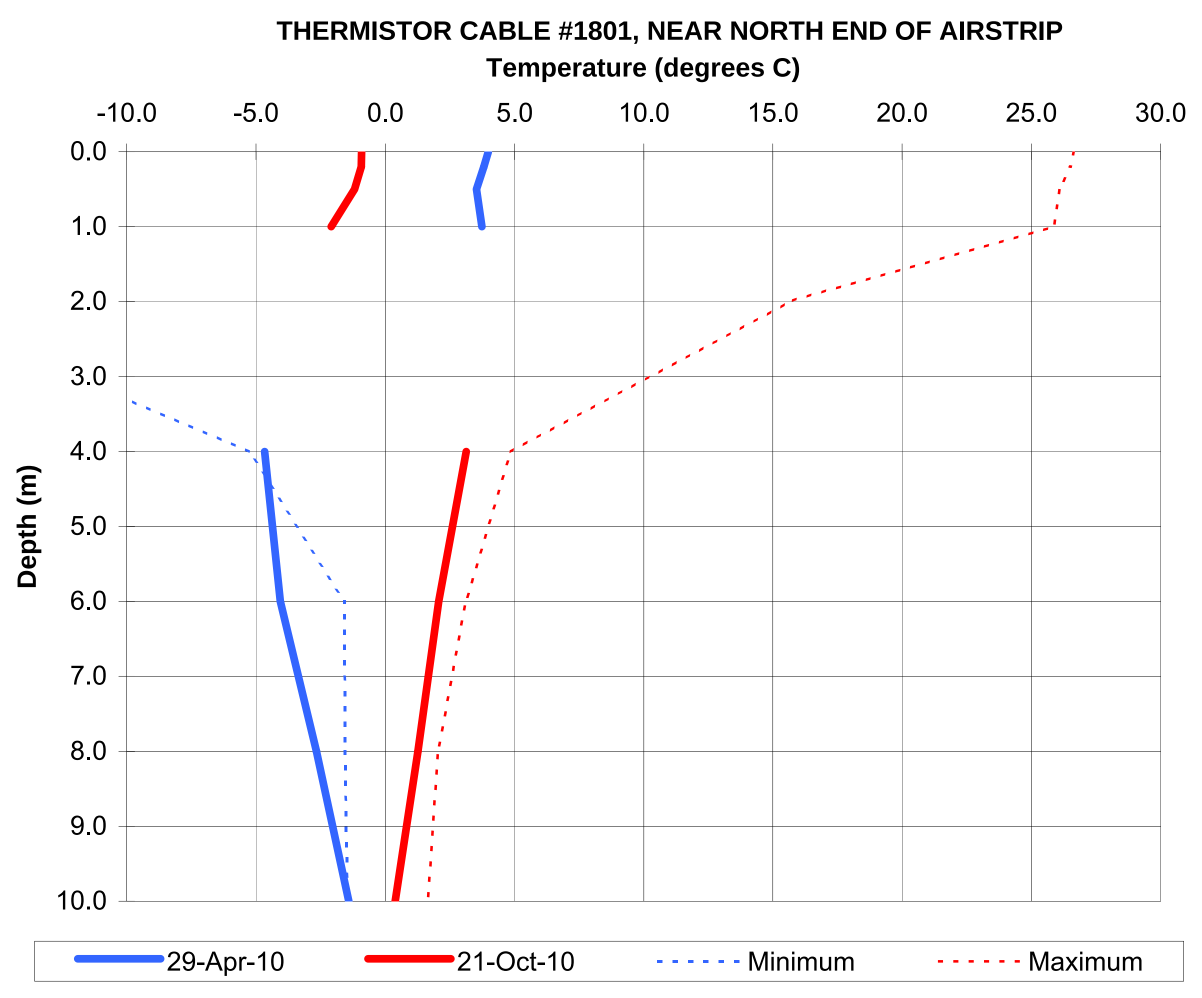


TABLE 4
TEMPERATURE MONITORING SUMMARY
THERMISTOR CABLE NEAR NORTH END OF AIRSTRIP
BOREHOLE 19; CABLE 1801
TYHEE, YELLOWKNIFE GOLD PROJECT

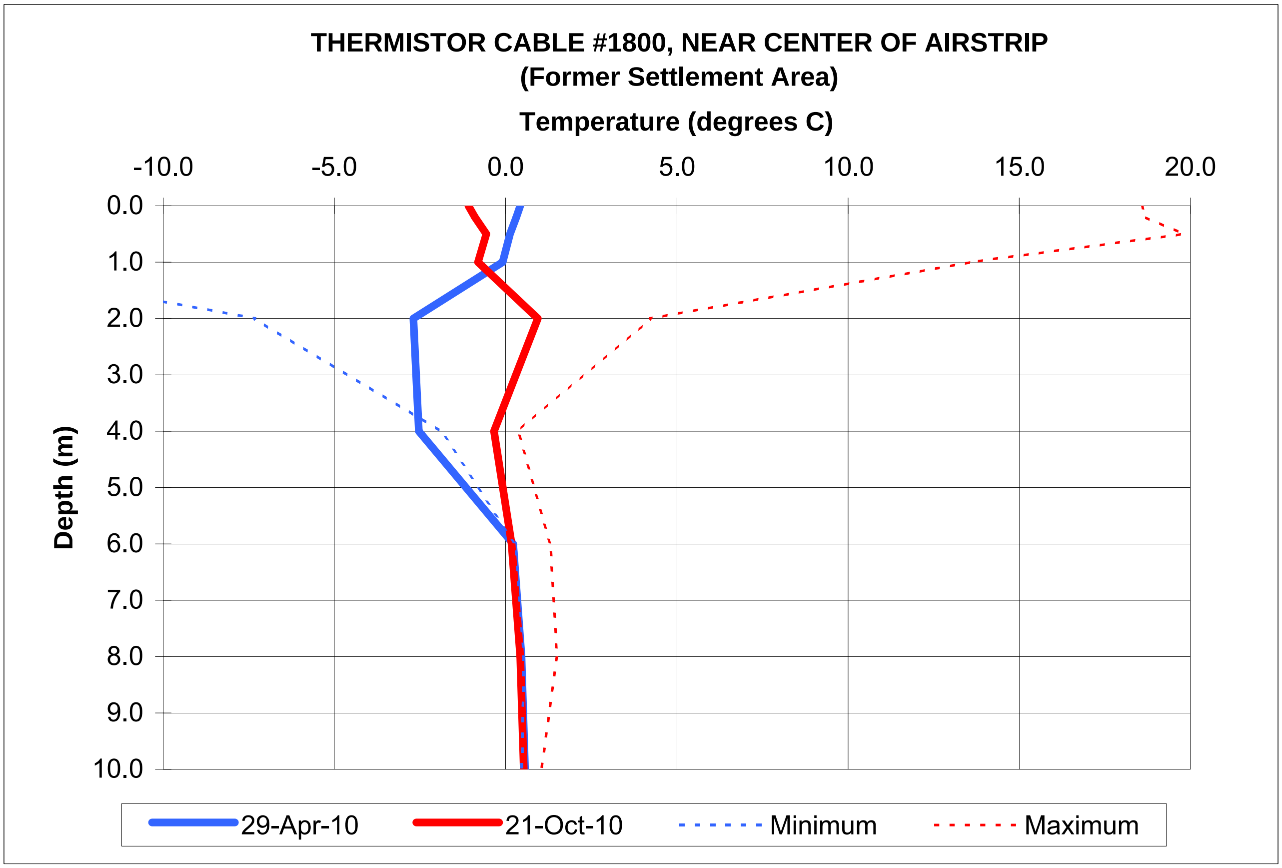
SENSOR	1	2	3	4	5	6	7	8	9
DEPTH (m)	0.0	0.2	0.5	1.0	2.0	4.0	6.0	8.0	10.0
CALIBRATION	-0.01	0.00	-0.02	-0.01	-0.01	-0.02	-0.02	0.01	-0.01
DATE	TEMPERATURE (deg. C)								
25-Aug-05	12.4	12.5	12.4	12.1	10.4	2.2	0.1	-0.1	-0.2
3-Aug-06	26.6	26.5	26.1	25.9	15.6	2.3	0.2	-0.3	-0.2
14-Sep-06	5.5	5.5	5.6	5.5	8.7	4.9	2.8	1.2	0.4
19-Oct-06	-1.5	-1.4	-1.4	-1.4	0.7	3.8	3.1	2.0	1.3
14-Dec-06	-7.7	-7.7	-7.8	-8.0	-5.2	1.4	1.8	1.8	1.7
22-Feb-07	-24.6	-24.6	-24.5	-24.6	-18.9	-5.3	-1.6	0.3	1.0
18-Aug-09	14.6	14.6	14.7	14.6		-0.1	-1.1	-1.6	-1.5
11-Nov-09	-3.2	3.9	6.1	0.7		1.3	1.2	1.2	0.5
29-Apr-10	4.0	3.8	3.5	3.7		-4.7	-4.1	-2.7	-1.4
21-Oct-10	-0.9	-0.9	-1.2	-2.1		3.1	2.1	1.3	0.4



Note: Cable destroyed by snow clearing after February 22, 2007; partially repaired in fall 2009.

TABLE 5
TEMPERATURE MONITORING SUMMARY
THERMISTOR CABLE NEAR CENTER OF AIRSTRIP
BOREHOLE 20; CABLE 1800
TYHEE, YELLOWKNIFE GOLD PROJECT

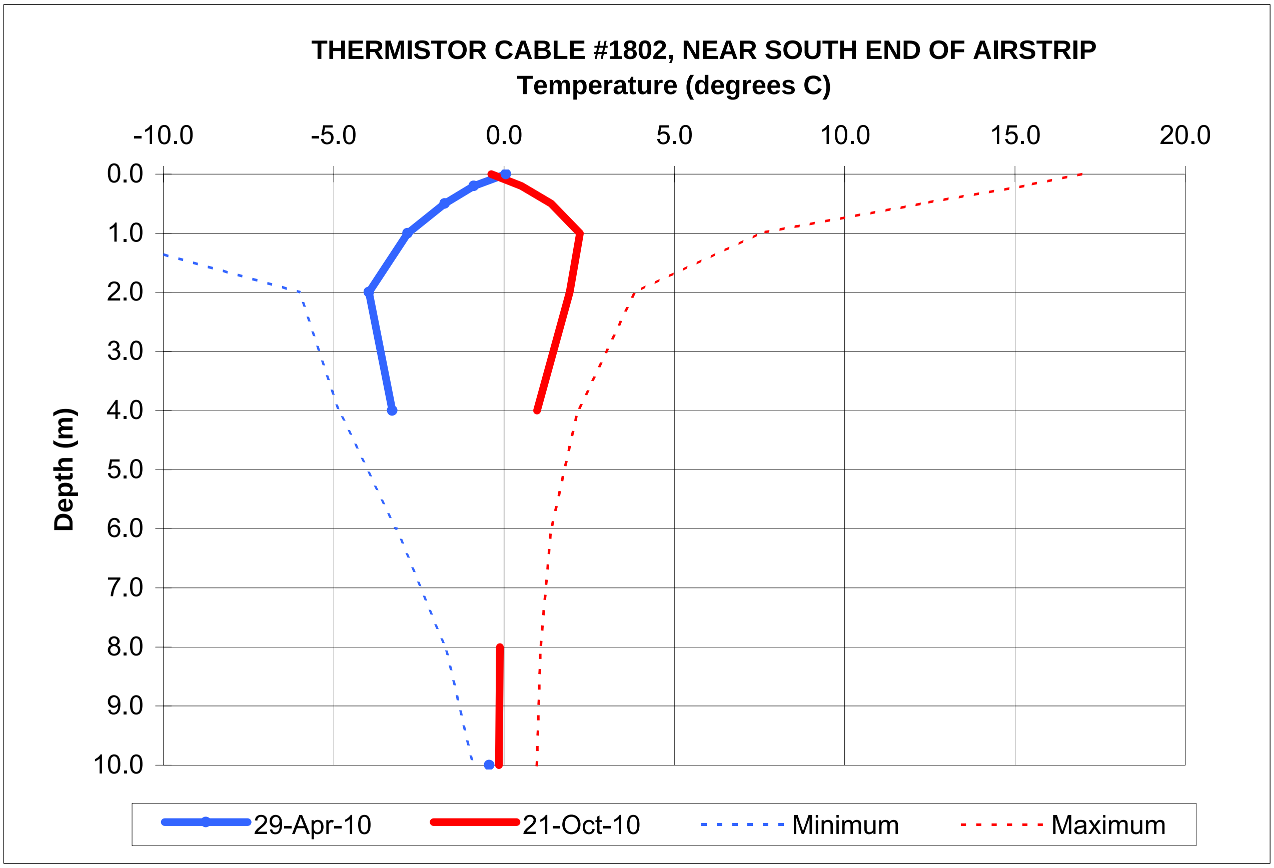
SENSOR	1	2	3	4	5	6	7	8	9
DEPTH (m)	0.0	0.2	0.5	1.0	2.0	4.0	6.0	8.0	10.0
CALIBRATION	-0.01	0.01	-0.02	-0.01	-0.01	-0.02	-0.02	0.00	-0.02
DATE	TEMPERATURE (deg. C)								
25-Aug-05	11.0	11.0	11.2	8.7	1.4	0.4	1.3	1.1	1.0
3-Aug-06	18.6	18.7	19.8	13.3	2.3	0.0	0.7	0.9	0.9
14-Sep-06	4.4	4.4	4.3	6.3	2.9	0.0	0.7	0.9	0.9
19-Oct-06	-1.6	-1.6	-1.6	-0.3	0.7	0.0	0.7	0.8	0.9
14-Dec-06	-7.3	-7.4	-7.5	-5.5	-0.6	0.0	0.7	0.8	0.9
22-Feb-07	-20.7	-20.7	-21.2	-16.4	-7.3	0.0	0.7	0.8	0.9
19-Apr-07	-7.6	-7.5	-7.4	-6.3	-5.4	-0.2	0.6	0.7	0.8
28-Jun-07	14.9	15.0	15.2	12.1	0.8	-0.2	0.6	0.8	0.8
23-Aug-07	8.9	8.9	9.0	9.3	2.4	-0.1	0.6	0.7	0.8
8-May-08	-0.1	-0.1	-0.1	-0.4	-3.4	-1.9	0.5	0.6	0.7
14-Aug-08	14.9	15.5	17.8	13.5	4.2	-0.4	0.5	0.6	0.7
18-Aug-09	14.1	14.3	15.0	13.6	2.9	-0.5	0.3	0.5	0.6
11-Nov-09	-3.0	-2.9	-2.8	-2.3	-0.1	-0.3	0.3	1.5	0.5
29-Apr-10	0.4	0.3	0.1	-0.1	-2.7	-2.5	0.2	0.5	0.6
21-Oct-10	-1.1	-0.9	-0.6	-0.8	0.9	-0.3	0.2	0.4	0.5


THERMISTOR CABLE #1800, NEAR CENTER OF AIRSTRIP
(Former Settlement Area)

Note: Cable destroyed by snow clearing prior to May 7, 2009; repaired in fall 2009.

TABLE 6
TEMPERATURE MONITORING SUMMARY
THERMISTOR CABLE NEAR SOUTH END OF AIRSTRIP
BOREHOLE 21; CABLE 1802
TYHEE, YELLOWKNIFE GOLD PROJECT

SENSOR	1	2	3	4	5	6	7	8	9
DEPTH (m)	0.0	0.2	0.5	1.0	2.0	4.0	6.0	8.0	10.0
CALIBRATION	-0.02	0.01	-0.02	0.00	-0.01	-0.01	0.03	-0.02	-0.01
DATE	TEMPERATURE (deg. C)								
25-Aug-05	11.6	10.9	9.6	6.9	1.4	0.4	-0.1	0.0	0.2
3-Aug-06	16.9	15.2	12.3	4.0	1.1	0.0	-0.2	-0.1	0.2
14-Sep-06	7.4	8.5	8.8	7.5	3.9	1.7	0.9	0.4	0.4
19-Oct-06	-0.1	0.7	1.5	2.6	2.9	2.2	1.4	0.9	0.7
14-Dec-06	-6.5	-5.4	-3.9	-0.7	0.8	1.1	1.2	1.1	1.0
22-Feb-07	-20.3	-18.2	-16.1	-12.2	-4.4	-0.9	0.2	0.7	0.9
19-Apr-07	-7.3	-6.8	-6.8	-7.0	-6.0	-3.7	-1.6	-0.2	0.4
28-Jun-07	16.5	11.9	6.8	-0.4	-1.3	-1.4	-1.1	-1.2	-0.6
23-Aug-07	10.2	10.4	9.5	6.5	1.3	0.0	-0.3	-0.2	0.0
8-May-08	-0.4	-1.4	-2.5	-4.3	-5.9	-4.8	-3.1	-1.6	-0.5
14-Aug-08	14.2	13.9	12.0	3.1	0.8	-0.8	-1.2	-0.9	-0.7
7-May-09	-0.1	-1.2	-2.2	-3.7	-5.3	-4.7	-3.2	-1.7	-0.7
18-Aug-09	14.5	12.7	7.5	3.0	0.7	-1.0	-1.3	-1.2	-0.9
11-Nov-09	-1.7	-0.8	0.0	0.2	0.4	0.2	-0.1	-0.3	-0.3
29-Apr-10	0.1	-0.9	-1.7	-2.8	-4.0	-3.3			-0.4
21-Oct-10	-0.4	0.5	1.4	2.2	1.9	1.0		-0.1	-0.1



FIGURES

LEGEND:

- 🟥 - Standpipe Piezometer Location
- 🟩 - Thermistor Location
- ● - Standpipe and Thermistor Location

NOTE:

Base Data Source: Tyhee Airphoto georeferenced to 1:50 000 National Topographic Database

Datum: NAD83, UTM Zone 12N

0 100

Scale: 1: 2 500 (metres)

CLIENT

Tyhee NWT Corp

EBA Engineering Consultants Ltd.

YGP Airstrip
2010 Monitoring Services

Site Plan

PROJECT NO.	DWN	CKD	REV
Y14101260	BR	AC	0

OFFICE	DATE
EDM	November 22, 2010

Figure 1

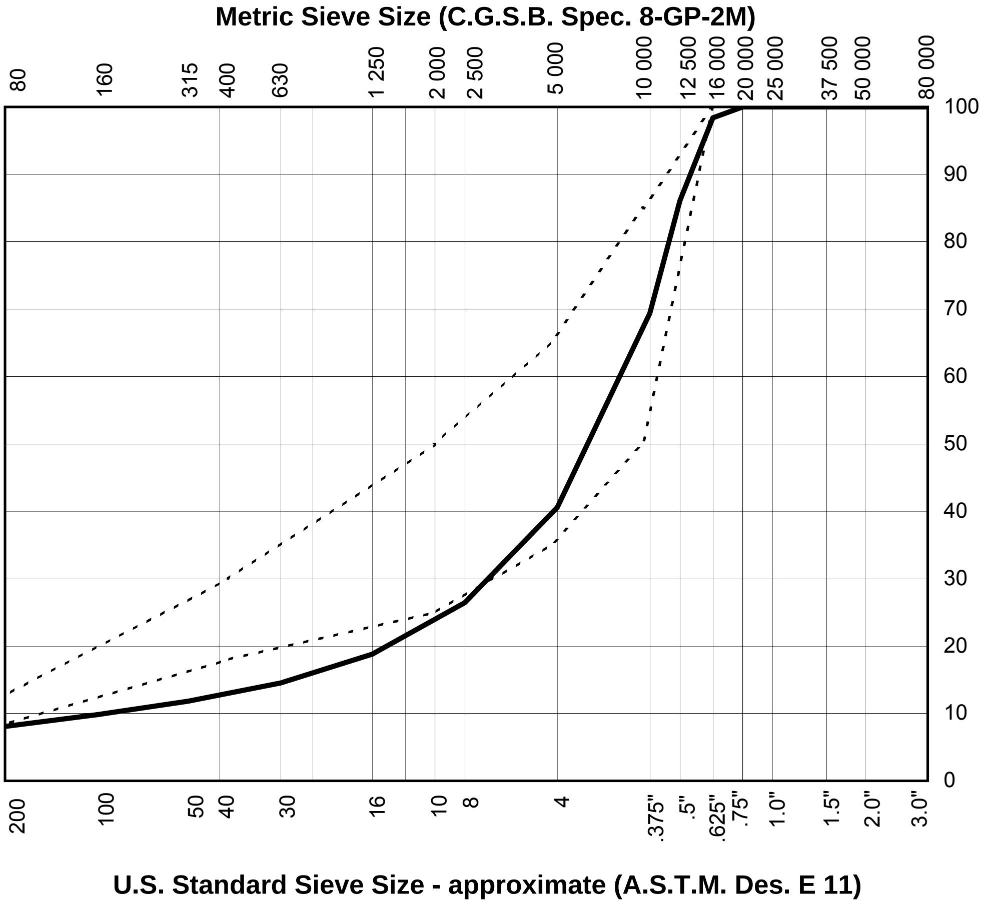
Q:\Edmonton\Drafting\DIVISIONS2007\Other Offices\Y141\Y14101260\Y14101260_Figure 1.dwg [FIGURE 1] November 22, 2010 - 2:22:16 pm (BY: RICHMOND, BOB)

GRAIN SIZE DISTRIBUTION

ASTM C-136

Project:	2010 Airstrip Monitoring	Lab Number:	5429
Address:	Yellowknife Gold Project	Sample Description:	GRAVEL - sandy, trace fines (silt/clay)
Project Number:	Y14101260	Lot Number :	n/a
Date Tested:	October 28, 2010	Daily Load Number:	n/a
Client:	Tyhee NWT Corp	Fracture Count:	n/a
		Natural Moisture Content:	6.8%
		Apparent Relative Density (SSD):	n/a
Attention:	Hugh Wilson	Aparent Relative Density:	n/a
		Absorption:	n/a

Sieve Sizes		%
U.S.	Metric	Passing
4"	100 000	
3"	80 000	
2"	50 000	
1.5"	37 500	
1"	25 000	
.75"	20 000	100
.625"	16 000	98
.5"	12 500	86
.375"	10 000	69
No. 4	5 000	41
No. 8	2 500	26
16	1250	19
30	630	15
50	315	12
100	160	10
200	80	8.1



Remarks: Sample S1: 16 mm minus screened gravel

Specification band plotted is GNWT, Arctic Airports surfacing specification

Reviewed By: ______________ P.Eng.

EBA Engineering
Consultants Ltd.

PHOTOGRAPHS

Photo 1
Looking north at the wet area just south of Borehole 18.

Photo 2
Looking west at area of wetness just to the south of Borehole 18. Airstrip in background.

Photo 3
Ponded water in depression, just east of Borehole 17. Borehole 17 is in the centre-right of photo.

Photo 4
Maintenance gravel pile at edge of airstrip/apron. Appears to be a well-graded mix this year, with sufficient fine fraction.