APPENDIX R15D

Site Facilities Geotechnical Factual Data Report

Victoria GOLD CORP

Stantec

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

VICTORIA GOLD CORPORATION

EAGLE GOLD PROJECT

DUBLIN GULCH, YUKON

SITE FACILITIES GEOTECHNICAL INVESTIGATION FACTUAL DATA REPORT

FINAL

PROJECT NO: 0792-002

DATE: March 5, 2010

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BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY
#500-1045 Howe Street
Vancouver, B.C.
Canada V6Z 2A9
Tel: 604.684.5900
Fax: 604.684.5909

March 5, 2010

Project No. 0792-002

Mike Padula

Victoria Gold Corporation

2550-1066 West Hastings

Vancouver, BC

Canada V6E 3X2

Dear Mr. Padula,

RE: EAGLE GOLD PROJECT SITE FACILITIES GEOTECHNICAL INVESTIGATION FACTUAL DATA REPORT

Please find attached a final version of the aforementioned report for your records. Should you have any questions or comments do not hesitate to contact the undersigned.

Yours sincerely,

BGC ENGINEERING INC.
per:

Pete Quinn, Ph.D., P.Eng.
Senior Geotechnical Engineer

EXECUTIVE SUMMARY

This report summarizes the findings of the geotechnical site investigation program conducted in July and August of 2009, at the Eagle Gold Project, located near Mayo, Yukon Territory. Several areas on site were explored as part of a pre-feasibility study for potential heap leach and waste rock containment facilities.

A total of 69 test pits and 7 auger/drill holes were completed in order to characterize the overburden material and shallow bedrock conditions. Laboratory testing was completed of most samples for moisture content, and representative samples were also tested for Atterberg limits and grain size analysis. Three permanent thermistor strings were installed to obtain ground temperature profiles in areas of suspected permafrost.

The data have been organized into terrain units that divide the overall project site into smaller segments for ease of visualization, and generally correspond to drainage basins or sub-basins within the larger Dublin Gulch catchment.

This report presents factual data only, and does not include any engineering interpretation of the data nor engineering recommendations in relation to the proposed mine facilities.

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LIMITATIONS OF REPORT

BGC Engineering Inc. (BGC) prepared this document for the account of Victoria Gold Corporation. The material in it reflects the judgment of BGC staff in light of the information available to BGC at the time of document preparation. Any use which a third party makes of this document or any reliance on decisions to be based on it are the responsibility of such third parties. BGC accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this document.

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This report presents factual data only. BGC was not commissioned to provide engineering interpretations of the data contained herein in relation to the proposed development. Any such interpretation by others is solely their responsibility.

1.0 INTRODUCTION

1.1. General

Victoria Gold Corporation (VGC) is completing a prefeasibility study (PFS) for development of the proposed Eagle Gold mine at Dublin Gulch, Yukon Territory. BGC Engineering Inc. (BGC) was engaged by VGC to design the open pit and to complete geotechnical subsurface exploration work for the other mine facilities. This report presents factual data resulting from a geotechnical investigation of proposed locations for the heap leach and waste rock facilities. Studies related to the design of the open pit will be submitted in a separate report.

1.2. Project Description

The Eagle Gold property is located in the Yukon Territory approximately 40 km north of Mayo, and 15 km northwest of Elsa, as illustrated in Figure 1. The mine will comprise an open pit and heap leach ore processing facility, haul roads, waste rock storage area, crushers, process water ponds, drainage ditches, sediment control structures plus various ancillary facilities.

The arrangement of mine facilities has not been finalized. Three heap leach locations were initially proposed, labeled Options #1, #2 and #3 in Figure 2. Option #1 would be a valley fill at the outlet of the Dublin Gulch drainage basin. Option #2 would be a mid-valley fill further up Dublin Gulch, and Option #3 would be constructed at the height of land approximately 4 km east of the open pit at Bawn Boy Gulch. Each of these options was noted to have specific disadvantages, and during the 2009 site investigation program, additional Options #4 and #5 were proposed. Option #4 would be in the Stuttle Gulch drainage above Dublin Gulch, and Option #5 would be east of the open pit at Olive Gulch.

A sixth option in Ann Gulch was proposed late in the field program. This option and option #5 (Olive Gulch) have reportedly emerged as the preferred heap leach alternatives. Figure 3 shows the approximate layout of these two heap leach pads and their associated ponds, plus the waste rock dump in Eagle Pup, the open pit, and the camp site.

1.3. Previous Studies

Previous geotechnical site investigations were carried out at the Eagle Gold property in 1995 by Knight Piesold and in 1996 by Sitka Corporation. The purpose of those studies was to investigate potential heap leach and waste rock facility locations for feasibility design. The following are the key previous site investigation reports:

- Report on 1995 Geotechnical Investigations for Four Potential Heap Leach Facility Site Alternatives, First Dynasty Mines, Dublin Gulch Property. (Knight Piesold, 1996a)
- Report on Feasibility Design of the Mine Waste Rock Storage Area, First Dynasty Mines, Dublin Gulch Property. (Knight Piesold, 1996b)

- Field Investigation Data Report, Dublin Gulch Project, New Millennium Mining. (Sitka Corporation, 1996.)
- Hydrogeological Characterization and Assessment, Dublin Gulch Project, New Millennium Mining. (GeoEnviro Engineering, 1996)

Knight Piesold completed a feasibility level geotechnical study to evaluate the surficial materials and bedrock conditions at four potential heap leach pad locations, two potential waste rock areas, and the open pit. Groundwater wells and two thermistors were installed in selected drillholes. Test pitting and diamond drilling were completed from June to September 1995 at upper Bawn Bay Gulch, lower Dublin Gulch, the north side of Lynx Creek, and at the confluence of Haggart and Lynx Creeks.

In 1996, Sitka Corporation completed test pits and diamond drillholes in Bawn Bay Gulch, Eagle Pup, Stewart Gulch, and Platinum Gulch for preliminary design of the heap leach and waste rock facilities. Auger holes were drilled in Gill Gulch to evaluate it as a potential borrow source of silt material as a liner for the heap leach facility. Monitoring wells were installed in Bawn Bay Gulch and Eagle Pup. Eight thermistor strings were installed.

1.4. Scope of Work

BGC was engaged to gather factual data regarding subsurface conditions at the proposed heap leach and waste rock facilities. Engineering interpretation of these factual data for design of specific facilities is the responsibility of others. The work involved the excavation of 69 test pits and advancement of seven boreholes. Thermistor strings were installed in three boreholes to gather temperature measurements. Dynamic cone penetration profiles were obtained at two borehole locations to obtain information about material density. Dynamic cone soundings were attempted in two other holes. Groundwater monitoring wells were installed by Stantec in two of the seven boreholes. Stantec supervised the logging and installation of several other monitoring wells around the site.

2.0 SITE CONDITIONS

2.1. Climate

Available information for the nearest permanent weather station, at Mayo Airport, YT, suggests daily average temperatures ranging from -25.7°C in January to 16.0°C in July (Environment Canada Canadian Climate Normals 1971-2000), with a mean annual air temperature of -3.1 °C and mean annual precipitation of 313 mm, with 205 mm of rainfall and 147 cm of snowfall. According to Knight Piesold (1996b), the Dublin Gulch basin receives moderate precipitation and has extreme variations in temperature. Based on analysis of climate data collected intermittently from site during 1979-80, 1984-85, and 1993-95, combined with long-term regional values from Keno Hill and Mayo, Knight Piesold (1996b) estimated average annual precipitation of about 375 mm at the mouth of Dublin Gulch and about 600 mm at the headwaters in the uplands above the valley. Average monthly temperatures range from about -23°C in January to about 13°C in July, with recorded extreme temperatures ranging between -60°C to 35°C.

2.2. Physiography, Drainage and Vegetation

The project site is located within the Dublin Gulch drainage basin. Dublin Gulch drains the surrounding highlands to the west toward Haggart Creek, which flows from north to south. Several streams drain the surrounding highlands, forming a trellis drainage pattern of roughly perpendicular streams, as illustrated in Figure 4.

The project site is characterized by rugged hilly terrain, with ground elevations ranging between approximately 800 and 1500 m above sea level. Figure 5 shows the distribution of slope angles across the Dublin Gulch basin. Slope angles often exceed 20 degrees, particularly near the planned open pit, along the north valley wall above Dublin Gulch, and in much of the drainage basins for Eagle Pup, Stewart Gulch and Olive Gulch.

Most of the site is vegetated, with black spruce forests being relatively common. The lower reach of Dublin Gulch has been completely reworked by placer mining activities and is therefore largely devoid of vegetation.

2.3. Bedrock Geology

According to Knight Piesold (1996a and 1996b), the Eagle Gold project is located in the Selwyn Basin, a geological region characterized by chert, shale and schist. The Selwyn Basin comprises four main lithological units (Lower Schist, Keno Hill Quartzite, Upper Schist, and Hyland Group) and has several granite masses with nearby gold veins rich in silver, lead, zinc and quartz. The Lower Schist and Keno Hill Quartzite are of Mesozoic-age, the Upper Schist is of Paleozoic-age and the Hyland Group of Proterozoic to Lower Cambrian age. There are three principal thrust sheets in the Selwyn Basin, from east to west, the Dawson, Tombstone, and Robert Service. Four phases of deformation have been identified, of which only the first two resulted in the generation of prominent structures. Thrusting

during the first phase resulted in the widespread development of foliation that was subsequently deformed by gentle, regional-scale folding during the second phase of deformation. Several east-trending, south-plunging anticlines in the Dublin Gulch area are attributed to this second deformational event. During the Cretaceous period, there were three events of granitoid intrusion associated with numerous mineral deposits including the Eagle Gold property.

A thin veneer of residual, heavily weathered and decomposed rock overlies much of the project area, varying in thickness from 1 to 2 m, grading down to coarser, heavily-fractured bedrock at relatively shallow depths. Bedrock is comprised of granodiorite and various metasediments. The Dublin Gulch deposit area is dominated by a northeast trending intrusive stock, roughly 2 km long by 500 m wide. This granodiorite stock intruded into the surrounding host sediments, which consist of strongly foliated quartzose and locally calcareous phyllites to quartz-biotite-andalusite schists. The granodiorite and metasediments have both been described as fresh, moderately strong to strong, and heavily jointed and fractured.

2.4. Surficial Geology

The surficial geology of the Eagle Gold property has been mapped by Bond (1998) and is illustrated in Figure 6. The valley bottom is dominated by alluvium and placer mining tailings. The uplands are dominated by an apron or blanket of colluvium over bedrock, with some areas of shallower bedrock with a thinner veneer of colluvium. The Haggart Creek Valley to the west of the project site is filled with a mix of alluvial deposits and placer tailings. A till blanket has been mapped along the east side of Haggart Creek, south of its confluence with Dublin Gulch.

2.5. Seismicity

Site specific seismic hazard information was obtained from Natural Resources Canada at www.EarthquakesCanada.ca. The National Building Code of Canada (NBCC) design ground motions, corresponding to a 2 % probability of exceedence in 50 years (0.000404 per annum) are detailed in Table 1 below.

Table 1. National Building Code of Canada Recommended Design Motions.

Sa(0.2)	Sa(0.5)	Sa(1.0)	Sa(2.0)	PGA (g)
0.513	0.312	0.155	0.086	0.245

It is noted that these design motions are significantly higher than reported in the Knight Piesold reports from 1996, as seismic design in Canada underwent a complete overhaul coincident with the introduction of the 2005 update of the National Building Code.

Ground motions for other return periods are provided in Table 2 below.

Table 2. Ground Motions for other Probabilities.

Probability of exceedence per annum	0.010	0.0021	0.001
Probability of exceedence in 50 years	**40 %**	**10 %**	**5 %**
Sa(0.2)	0.131	0.272	0.368
Sa(0.5)	0.076	0.160	0.219
Sa(1.0)	0.037	0.077	0.107
Sa(2.0)	0.020	0.043	0.059
PGA	0.072	0.139	0.182

The distribution of recorded seismic events in the vicinity of the project site, as obtained from Natural Resources Canada, is illustrated in Figure 7.

The seismic hazard described above can be re-stated in terms of a representative earthquake event. An earthquake of M5.65 located at a distance of 17 km from the site would yield ground motions similar to those reported above. This de-aggregation of the seismic hazard was provided by the Geological Survey of Canada (GSC) on the basis of site coordinates. They were requested to do the de-aggregation for peak ground acceleration, and using the return period/annual probability specified in the National Building Code (therefore applicable to buildings). Slightly different values may apply for other structures to which the NBCC does not apply, and for which other components of the hazard (specific spectral acceleration values, rather than PGA) may be more important. The information provided by GSC was accompanied by the following qualifying notes:

> *De-aggregations of the NBCC Robust seismic hazard generate a suite of files, one for each period, for each site.*
>
> *"Robust" hazard values are the ones used in the NBCC and are the higher of the H, R, C, and F model values at each site. Where any of the three other models give hazard values "sub-equal" to that from the highest model for any period, for that period the de-aggregations for those other models should also be considered for engineering purposes. This is because certain hazard and risk contributions of those other models may exceed those of the Robust model.*
>
> *A hazard example might be for liquefaction, where nearby, small-magnitude sources from the H model may give the Robust value of PGA (suitable for structural design of short-period buildings), but the liquefaction hazard may come from mid-distance large-magnitude earthquakes in the R model (because of the longer duration of ground motions from those sources).*
>
> *A risk example might be for structural damage, to the degree that it is influenced by duration effects not captured by the 5%-damped spectral values.*

"Sub-equal" can be generally taken as 70% or greater of the Robust value for any period, but there is no certainty that this is the correct value for all cases. The user needs to decide.

3.0 GEOTECHNICAL INVESTIGATIONS

3.1. General

The field work for this project was conducted in July and August, 2009, and included the following tasks:

- Initial reconnaissance to refine the test pit and borehole plans;
- Excavation of test pits to refusal or the limit of reach of a CAT 235B excavator;
- Visual classification and sampling of overburden materials;
- Ground ice classification, where encountered;
- Supervision of drilling using solid stem auger and triple tube coring;
- Supervision of dynamic cone penetration testing of overburden materials at selected boreholes, where possible;
- Visual classification of bedrock core; and
- Installation of instrumentation, including standpipe piezometers, monitoring wells (for others), and thermistor strings.

The test pit program was designed to develop an understanding of the engineering properties of the overburden materials. The borehole program was planned to penetrate bedrock where it was expected to be deep, and to characterize overburden and bedrock conditions at those locations.

Overburden materials were described according to the Unified Soil Classification System (USCS) (ASTM D24887) using Canadian Foundation Engineering Manual (CFEM 2006) grain size boundaries. Frozen soils were classified according to ASTM D4083.

The locations of all test pits and boreholes were estimated using a handheld GPS unit. Coordinates are expected to be accurate to within 5-20 m horizontally, depending on satellite coverage, and 5-20 m vertically.

Certain areas of the site were inaccessible due to steep slopes, heavy vegetation, or soft wet ground, necessitating the selection of alternate test pit locations.

3.2. Terrain Units for Data Presentation

The subsurface exploration program focused on probable heap leach pad and waste rock dump locations. However, as described in Section 1.2, prospective locations for facilities were added during the planning and execution of the field work. It is understood that the Ann Gulch and Olive Gulch heap leach options are currently considered the preferred options, but it is also understood that VGC may still wish to consider some of the earlier options.

The data in this report are presented in accordance with the specific area of the property that they were obtained. Therefore, for the purposes of data presentation, the site has been subdivided into a number of terrain units, as follows:

- Bawn Boy Gulch catchment;
- Olive Gulch catchment;
- Stewart Gulch catchment;
- Eagle Pup catchment;
- Stuttle Gulch catchment;
- East side of Haggart Creek between Dublin and Platinum Gulches;
- Ann Gulch Catchment;
- Lower reach of Dublin Gulch;
- Middle reach of Dublin Gulch; and
- Open pit area.

These terrain units are illustrated in Figure 8. The data have been so organized to allow VGC to consider facility alternatives without requiring BGC to reorganize and reinterpret the data.

3.3. Test Pitting

The testpitting program was carried out between 18 July and 8 August, 2009. A total of 69 test pits were excavated throughout the project area, using VGC's onsite Caterpillar 325B excavator, which has a maximum reach of about 6.5m to 7m. Test pit locations are illustrated in Figure 9. Test pit observations allowed for characterization of subsurface conditions and collection of disturbed soil samples for laboratory testing.

A summary of the overburden materials observed in the test pits is provided in Table 3, and test pit logs are provided in Appendix A. PVC casing with the bottom end capped was installed in ten backfilled test pits exhibiting frozen ground, used to allow for later insertion of a thermistor string for shallow ground temperature measurements. Two slotted groundwater monitoring standpipes were installed in test pits where notable seepage was observed.

Representative samples were collected from many test pits for laboratory index testing, including moisture content determination, and Atterberg limits and grain size analysis on selected representative samples. Bulk samples were also collected from several test pits and stored for later laboratory testing to assess their suitability as construction borrow materials. Laboratory test results to date are provided in Appendix B and summarized in Section 2.5.

Table 3. Test Pit Summary

Terrain Unit	TP ID#	Coordinates (NAD 83)		Depth of Frozen Ground		Excess Ice	End of Test Pit	
		Easting (m)	Northing (m)	Top (m)	Bottom (m)		Depth (m)	Reason
Ann Gulch	TP-BGC09-A-1	459466	7101320	0.5	0.0	N	1.3	frozen
Ann Gulch	TP-BGC09-HL1-1	458948	7101250	0.3	2.0	Y	6.5	bedrock
Ann Gulch	TP-BGC09-HL1-2	458936	7101100	0.3	4.5	N	6.2	limit of reach
Ann Gulch	TP-BGC09-HL6-1	459796	7102150	N/A	N/A	N	6.5	limit of reach
Ann Gulch	TP-BGC09-HL6-10	459543	7101640	2.0	3.0	N	4.8	bedrock
Ann Gulch	TP-BGC09-HL6-11	459726	7101620	N/A	N/A	N	2.8	bedrock
Ann Gulch	TP-BGC09-HL6-12	459355	7101600	N/A	N/A	N	5.8	sloughing
Ann Gulch	TP-BGC09-HL6-13	459238	7101510	N/A	N/A	N	3.3	bedrock
Ann Gulch	TP-BGC09-HL6-14	459282	7101200	N/A	N/A	N	6.2	bedrock
Ann Gulch	TP-BGC09-HL6-15	459687	7101790	0.2	0.8	Y	5.3	bedrock
Ann Gulch	TP-BGC09-HL6-16	459570	7101990	N/A	N/A	N	5.3	bedrock
Ann Gulch	TP-BGC09-HL6-17	459551	7101770	N/A	N/A	N	3.3	bedrock
Ann Gulch	TP-BGC09-HL6-2	459724	7102130	N/A	N/A	N	4.4	bedrock
Ann Gulch	TP-BGC09-HL6-3	459658	7102090	0.9	2.0	N	6.2	bedrock
Ann Gulch	TP-BGC09-HL6-4	459407	7101750	2.8	3.0	N	4.8	bedrock
Ann Gulch	TP-BGC09-HL6-5	459308	7101830	N/A	N/A	N	4.0	sloughing
Ann Gulch	TP-BGC09-HL6-6	459757	7102380	0.5	1.7	Y	5.5	bedrock
Ann Gulch	TP-BGC09-HL6-7	459883	7102300	N/A	N/A	N	5.4	bedrock
Ann Gulch	TP-BGC09-HL6-8	459200	7101350	1.2	N/A	N	2.6	sloughing
Ann Gulch	TP-BGC09-HL6-9	459933	7101890	1.2	1.5	N	3.8	bedrock
Eagle Pup	TP-BGC09-WR-1	460089	7100710	N/A	N/A	N	6.0	limit of reach
Eagle Pup	TP-BGC09-WR-2	460204	7100820	4.0	5.0	N	6.0	limit of reach
Eagle Pup	TP-BGC09-WR-3	460469	7100950	N/A	N/A	N	5.8	bedrock
Eagle Pup	TP-BGC09-WR-4	460385	7100960	N/A	N/A	N	3.0	bedrock
Eagle Pup	TP-BGC09-WR-5	460212	7100990	N/A	N/A	N	4.7	bedrock
Eagle Pup	TP-BGC09-WR-6	460060	7100840	1.5	N/A	Y	6.5	limit of reach
Eagle Pup	TP-BGC09-WR-7	459893	7100900	0.3	1.5	Y	2.5	seepage
Eagle Pup	TP-BGC09-WR-8	460165	7100360	0.4	0.5	Y	3.5	seepage
Eagle Pup	TP-BGC09-WR-9	460174	7100580	1.1	1.4	N	6.5	limit of reach
Lower Reach Dublin Gulch	TP-BGC09-A-2	458713	7100790	3.5	4.0	N	4.5	limit of reach
Lower Reach Dublin Gulch	TP-BGC09-DG-1	459318	7101010	N/A	N/A	N	0.0	seepage
Lower Reach Dublin Gulch	TP-BGC09-DG-3	458987	7100940	N/A	N/A	N	5.0	boulders
Lower Reach Dublin Gulch	TP-BGC09-DG-4	458311	7100860	1.0	N/A	Y	3.0	frozen
Lower Reach Dublin Gulch	TP-BGC09-HL4-10	458464	7100780	N/A	N/A	N	6.5	limit of reach
Olive Gulch	TP-BGC09-HL5-1	461916	7100360	N/A	N/A	N	4.4	bedrock
Olive Gulch	TP-BGC09-HL5-10	462461	7100370	N/A	N/A	N	2.8	seepage
Olive Gulch	TP-BGC09-HL5-2	461745	7100620	N/A	N/A	N	6.0	limit of reach
Olive Gulch	TP-BGC09-HL5-3	461696	7100760	0.2	N/A	Y	2.0	frozen
Olive Gulch	TP-BGC09-HL5-4	462119	7100180	N/A	N/A	N	5.5	limit of reach
Olive Gulch	TP-BGC09-HL5-5	462404	7100180	N/A	N/A	N	2.0	bedrock
Olive Gulch	TP-BGC09-HL5-6	462551	7100380	N/A	N/A	N	5.5	seepage
Olive Gulch	TP-BGC09-HL5-7	462478	7100680	N/A	N/A	N	4.8	bedrock

Table 3. Test Pit Summary

Olive Gulch	TP-BGC09-HL5-8	462283	7100690	N/A	N/A	N	0.9	bedrock
Olive Gulch	TP-BGC09-HL5-9	462139	7100720	N/A	N/A	N	1.4	bedrock
Stuttle Gulch	TP-BGC09-HL4-1	459711	7100710	0.3	N/A	Y	1.9	frozen
Stuttle Gulch	TP-BGC09-HL4-13	459109	7100570	0.2	N/A	Y	1.5	frozen
Stuttle Gulch	TP-BGC09-HL4-14	459268	7100520	0.3	N/A	Y	1.9	frozen
Stuttle Gulch	TP-BGC09-HL4-15	459317	7100250	0.2	N/A	Y	1.3	frozen
Stuttle Gulch	TP-BGC09-HL4-2	459530	7100890	0.3	N/A	Y	2.3	frozen
Stuttle Gulch	TP-BGC09-HL4-3	459427	7100720	0.6	N/A	Y	5.0	frozen
Stuttle Gulch	TP-BGC09-HL4-4	459594	7100560	0.5	N/A	N	2.2	frozen
Stuttle Gulch	TP-BGC09-HL4-5	459685	7100410	0.2	N/A	Y	6.5	limit of reach
Stuttle Gulch	TP-BGC09-HL4-6	459609	7100220	N/A	N/A	N	6.0	limit of reach
Stuttle Gulch	TP-BGC09-HL4-7	459297	7100620	0.3	N/A	Y	2.8	frozen
Stuttle Gulch	TP-BGC09-HL4-8	459413	7100410	0.5	N/A	Y	2.2	frozen
Stuttle Gulch	TP-BGC09-HL4-9	459853	7100600	N/A	N/A	N	5.7	sloughing
Stuttle Gulch	TP-BGC09-STU-3	459086	7100700	0.8	N/A	Y	1.9	frozen
Stuttle Gulch	TP-BGC09-STU-4	459038	7100630	0.3	N/A	Y	2.6	frozen
West Haggart Creek	TP-BGC09-A-3	458472	7100540	0.9	1.3	Y	5.5	limit of reach
West Haggart Creek	TP-BGC09-A-4	458984	7100210	1.1	N/A	Y	4.3	frozen
West Haggart Creek	TP-BGC09-HL4-11	458653	7100630	0.2	N/A	Y	1.5	frozen
West Haggart Creek	TP-BGC09-HL4-12	458885	7100460	0.8	N/A	Y	1.9	frozen
West Haggart Creek	TP-BGC09-HL4-16	458835	7100220	0.5	N/A	Y	2.0	frozen
West Haggart Creek	TP-BGC09-HL4-17	458655	7100230	0.6	N/A	Y	1.6	frozen
West Haggart Creek	TP-BGC09-HL4-18	458499	7100230	1.6	N/A	Y	4.7	frozen
Open Pit	TP-BGC09-P-1	460470	7099260	N/A	N/A	N	3.5	bedrock
Open Pit	TP-BGC09-P-2	460318	7099420	N/A	N/A	N	2.5	bedrock
Open Pit	TP-BGC09-P-3	459826	7099380	N/A	N/A	N	5.5	sloughing
Open Pit	TP-BGC09-P-4	459931	7099710	N/A	N/A	N	2.2	bedrock

3.4. Borehole Drilling

Boreholes were drilled by Top Rank Diamond Drilling, subcontracted to Aggressive Drilling of Kelowna, BC. Top Rank Diamond Drilling used a Pioneer 2 rubber tire mounted auger drill rig equipped with an HQ3 core barrel for rock coring and a 4.5" solid stem auger for overburden drilling and sampling. An AST bobcat was used to transport the drill rig around site.

BGC and Stantec shared the drill rig for geotechnical and hydrogeological investigations, respectively. A total of nineteen boreholes were drilled between August 10, 2009 and September 3, 2009, seven boreholes under the supervision of BGC to characterize the groundwater, overburden and near surface bedrock, and twelve under the supervision of Stantec for the installation of monitoring wells. For the BGC boreholes, a field engineer was with the drill rig at all times to observe drilling progress, log the soil for geotechnical and ground ice properties, take photographs, and conduct dynamic cone penetration testing.

Borehole locations were surveyed using a hand held GPS unit and are illustrated in Figure 10. Borehole completion details are summarized in Table 4. Detailed borehole logs are presented in Appendix C.

Table 4. Summary of Boreholes Supervised by BGC.

	HOLE ID	Northing (m)	Easting (m)	Final Depth (m)	Depth to Rock (m)	Depth to Water (m)	Excess Ice Observed? Yes/No	Installation Type
Ann Gulch	AG-3	459502	7101320	13.7	7.6	N/A	No	DCPT, Thermistor
Lower Reach Dublin Gulch	DG-2	458992	7100880	16.3	14.3	4.9	No	DCPT, Monitoring Well
Lower Reach Dublin Gulch	DG-3	458985	7100920	20.7	12.1	N/A	No	DCPT
Lower Reach Dublin Gulch	DG-1	459302	7101060	12.8	7.6	2.0	No	DCPT, Monitoring Well
Stuttle Gulch	STU-3	459083	7100690	31.1	N/A	N/A	Yes	Thermistor
Stuttle Gulch	STU-4	459050	7100720	18.3	N/A	N/A	Yes	DCPT, Thermistor
West side Haggart Creek	DG-7	458783	7100460	19.8	N/A	N/A	No	DCPT

Three thermistor strings were installed to 10 m depth in selected auger holes. Ground temperature profiles are provided in Appendix D.

Stantec supervised nine additional boreholes for the installation of monitoring wells, as outlined in Table 5. Well construction details for the BGC boreholes can be found on the borehole logs in Appendix C.

Table 5. Summary of Boreholes Supervised by Stantec.

	HOLE ID	Northing (m)	Easting (m)	Final Depth (m)	Depth to Rock (m)	Depth to Water[1] (m)	Installation Type
Ann Gulch	AG-1	459364	7101840	15.9	9.8	14.0	MW
Ann Gulch	AG-2	459732	7101880	15.9	12.8	14.9	MW
Lower Reach Dublin Gulch	DG-4	458318	7100870	16.8	N/A	6.0	MW
Olive Gulch	OG-1	461892	7100460	6.1	0.3	N/A	N/A[2]
Olive Gulch	OG-2	462246	7100680	15.9	0.3	6.6	MW
Olive Gulch	OG-3	461347	7101450	8.4	N/A	1.9	MW
Stuttle Gulch	STU-1	459647	7100430	14.3	9.0	14.0	MW
Stuttle Gulch	STU-2	459331	7100660	10.1	N/A	0.0	MW
West side Haggart Creek	DG-5	458448	7100430	13.7	N/A	13.2	MW

Notes: 1. Groundwater measurements made between 18 August and 2 September 2009 after development of wells.
2. No well installed by Stantec in this hole.

3.4.1. Auger Drilling

Solid stem auger drilling was advanced to the limits of drilling capability (i.e. length of auger) or to refusal, typically on boulders or bedrock. Select disturbed soil samples were sent for laboratory testing. Test results are provided in Appendix B and summarized in Section 3.5.

3.4.2. Rock Coring

The rock coring program comprised coring bedrock at four borehole locations (see Table 4 – rock was cored in the four boreholes where it was encountered). All coring was done using an HQ core barrel, which provided 61.2 mm diameter core. The recovered rock core was placed in core boxes, photographed, and transported to a core logging shack at camp. Rock core photographs are provided in Appendix E.

As part of the geotechnical diamond drill investigation, the following data were collected to allow the assessment of rock mass properties according to the Rock Mass Rating (RMR) Classification system proposed by Bieniawski (1976):

- top of run depth (m);
- bottom of run depth (m);

- lithology;
- core recovery length (m);
- Rock Quality Designation (RQD) length (m);
- number of discontinuities;
- hardness;
- alteration/weathering; and
- average and minimum joint condition.

These characteristics are noted in the borehole logs in Appendix C.

3.4.3. Dynamic Cone Penetration Testing

The drill rig was equipped with an automatic trip hammer for dynamic cone penetration testing of the overburden. Dynamic cone penetration testing (DCPT) is an in-situ test widely used in geotechnical engineering for assessing the in situ strength of soils. The dynamic cone was connected to the end of AWJ rods and pushed with the automatic trip hammer until practical refusal (100 blows/ft) or the cone was observed to bounce. Blow counts were measured in 0.3 m (1 ft) increments.

Table 6. Summary of Dynamic Cone Penetration Testing

Hole ID												
DH-BGC09-DG-3	Depth (m)	1.22	1.52	1.83	2.13	2.44	2.74	3.05	3.35	3.66	3.96	4.27
	Blows per foot	3	3	10	14	20	14	12	33	47	41	71
	Depth (m)	4.57	4.88	5.18	5.49	5.79	6.10					
	Blows per foot	48	39	20	21	46	100					
DH-BGC09-DG-2	Depth (m)	1.52	1.83	2.13	2.44	2.74	3.05	3.35	3.66	3.96	4.27	4.57
	Blows per foot	9	7	9	7	6	12	10	13	14	18	22
	Depth (m)	4.88	5.18	5.49	5.79	6.10	6.40	6.71	7.01	7.32	7.62	7.92
	Blows per foot	15	13	14	21	27	20	16	18	18	18	12
	Depth (m)	8.23	8.53	8.84	9.14	9.45						
	Blows per foot	19	28	22	18	50						
DH-BGC09-STU-3	Depth (m)	1.52	2.44	3.05								
	Blows per foot	No penetration, frozen ground										
DH-BGC09-STU-4	Depth (m)	1.52	3.1	6.1	1.06							
	Blows per foot	No penetration, boulders										
DH-BGC09-DG-7	Depth (m)	6.71	7.01	19.8								
	Blows per foot	1	100	100								
DH-BGC09-AG-3	Depth (m)	2.1	2.4	3.2								
	Blows per foot	7	100	100								

These results are also noted and/or illustrated graphically in the borehole logs in Appendix C.

3.4.4. Thermistor Installations

Thermistor strings were installed in three drilholes to measure ground temperatures up to 10.0 m depth at these locations. Thermistor strings were installed in 50 mm, schedule 80 PVC casing. Installation details are summarized in Table 7 below. The ground temperature cables were manufactured by EBA Engineering Consultants Ltd. During the 2009 site investigation, ground temperatures were periodically measured with a multi-meter and switch box. Tables summarizing the thermistor node depths, recorded temperatures, temperature profiles, and thermistor manufacturer calibration sheets are presented in Appendix D. The first set of temperature measurements were recorded two days after borehole completion. Ground temperature profiles are presented in Appendix D. The ground temperature measurements indicate warm permafrost (warmer than -0.5^{o}C) conditions at two locations (i.e. both boreholes in Stuttle Gulch), and an absence of permafrost at the third (i.e. in Ann

Gulch). Notably, frozen ground was observed to a depth of 19.7 m at BH-BGC09-STU-3 during drilling.

Table 7. Summary of 2009 Thermistor String Installations

Hole ID	Northing (m)	Easting (m)	Location
DH-BGC09-AG-3	459502	7101320	Ann Gulch
DH-BGC09-STU-3	459083	7100690	Stuttle Gulch
DH-BGC09-STU-4	459050	7100720	Stuttle Gulch

3.4.5. Monitoring Wells and Standpipe Piezometers

A total of 14 monitoring wells were installed by Stantec during the 2009 site investigation program. Monitoring wells were constructed using 50 mm diameter, Schedule 40, threaded PVC pipe with a screened section of slotted PVC at the bottom. A cap was placed at the bottom of each well assembly. The sand pack around the PVC consisted of silica sand (#10 - #20 U.S. standard sieve size), filled to approximately 0.6 m above the screen. Typically, bentonite seals of 0.6 m to 1.5 m thickness were placed above the sand pack.

3.5. Laboratory Testing

Representative grab samples were collected by BGC staff for laboratory index testing. Natural moisture content tests were conducted according to ASTM standard D2216. Grain size distributions were determined for selected samples using sieves only (i.e. no hydrometers), according to ASTM standard D422. The complete laboratory results are presented in Appendix B. Table 8 summarizes the laboratory test results.

Table 8. Summary of Laboratory Index Tests.

Terrain Unit	Test Hole ID#	Sample Depth (m)	Material Genesis	Descriptive Texture	Moisture Content (% dry weight)	Grain Size Distribution			
						% <2µm	% <75 µm	% <4.75mm	% <75mm
Ann Gulch	TP-BGC09-A-4	1.2	Colluvium	GRAVEL, sandy, trace to some silt.	19.5	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-1	0.5-0.6	Colluvium	Gravelly SAND, some silt, trace clay.	12.9	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-1	2.5-3.0	Weathered Bedrock	Highly to completely weathered Metasedimentary Bedrock.	15.2	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-1	5.0-5.5	Weathered Bedrock	Highly to completely weathered Metasedimentary Bedrock.	9.3	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-2	0.4-0.5	Colluvium	Silty SAND and GRAVEL, trace clay.	11.8	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-2	1.0-1.1	Weathered Bedrock	Highly to completely weathered Metasedimentary Bedrock.	7.9	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-3	0.4-0.5	Colluvium	Silty GRAVEL, some sand, trace clay.	11.7	5	33	29	33
Ann Gulch	TP-BGC09-HL6-3	1.0-1.2	Colluvium	Sandy SILT and GRAVEL.	7.9	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-3	2.0-2.5	not classified	SAND, trace gravel, trace silt.	9.8	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-3	5.0-5.5	Weathered Bedrock	Completely weathered Metasedimentary rock.	7.3	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-4	0.4-0.6	not classified	Sandy GRAVEL, trace silt.	3.9	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-4	0.8-1.0	not classified	Sandy GRAVEL, trace silt.	3.8	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-4	2.8	not classified	Sandy GRAVEL, trace silt.	11.2	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-4	4.0-4.4	Weathered Bedrock	Completely to highly weathered Metasedimentary Bedrock.	6.3		8	43	50
Ann Gulch	TP-BGC09-HL6-5	0.3-0.4	Colluvium	Silty GRAVEL, some sand.	12.1	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-5	0.9-1.0	Completely Weathered Bedrock	Sandy GRAVEL, some silt, trace clay.	7	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-5	3.5-4	Weathered Bedrock	Highly weathered Metasedimentary bedrock.	5.1	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-6	0.3-0.4	not classified	Gravelly SILT, some sand.	13.8	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-6	1.0-1.2	not classified	Gravelly SILT, some sand.	12.6		32	29	39
Ann Gulch	TP-BGC09-HL6-7	0.2-0.3	not classified	Sandy GRAVEL, some silt.	13.3	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-7	0.8-0.9	Colluvium	Gravelly SILT, some sand, trace clay.	11	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-7	2.0-2.5	Colluvium	Sandy GRAVEL, some silt.	8.6	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-8	0.3	Organics	SILT and ORGANICS.	246.4	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-8	1	Colluvium	Gravelly SILT, some sand, trace clay.	13.6	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-8	2.0-2.4	Colluvium	Gravelly SILT, some sand, trace clay.	13.4	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-9	0.3-0.4	Colluvium	Gravelly SILT, some sand.	13.2	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-9	0.9-1.1	not classified	Gravelly SILT, some sand, trace clay.	11.8	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-10	0.5-0.6	not classified	Gravelly SILT, some sand.	17.1	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-10	0.8-0.9	not classified	Gravelly SILT, some sand.	10.6	2	34	27	37
Ann Gulch	TP-BGC09-HL6-10	2.2-2.7	Weathered Bedrock	Completely weathered Metasedimentary Rock.	10.6	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-11	0.8	Weathered Bedrock	Highly weathered Mica Schist, some sand infill.	14 .0	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-12	1	Colluvium	SAND and GRAVEL, some clay.	10.0	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-12	4.3	not classified	Coarse GRAVEL, some sand.	9.9	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-13	1	not classified	SANDY GRAVEL, some silt, trace cobble.	8.2	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-14	1	Colluvium	SAND and GRAVEL, some silt, trace clay.	15.6	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-15	3	Colluvium	Gravelly SAND, trace cobbles.	13.2	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-16	0.45	not classified	SAND and GRAVEL, some silt.	10.5	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL6-17	1	Colluvium	SAND and GRAVEL, some cobble, trace silt.	4.8	N/A	N/A	N/A	N/A

Terrain Unit	Test Hole ID#	Sample Depth (m)	Material Genesis	Descriptive Texture	Moisture Content (% dry weight)	Grain Size Distribution			
						% <2µm	% <75 µm	% <4.75mm	% <75mm
Ann Gulch	TP-BGC09-HL1-1	1.5	not classified	Gravelly CLAY, trace sand.	10.1	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL1-2	1	not classified	Clayey SAND and GRAVEL.	11.5	N/A	N/A	N/A	N/A
Ann Gulch	TP-BGC09-HL1-2	5.8	not classified	Clayey SAND and GRAVEL, silty SAND lens from 5.5-5.8m	30.4	N/A	N/A	N/A	N/A
Ann Gulch	DH-BGC09-AG-3	4.57	not classified	Silty SAND, some gravel.	4.2	N/A	N/A	N/A	N/A
Eagle Pup	TP-BGC09-WR-1	0.6	Colluvium	Silty GRAVEL, some sand, trace clay.	10.2	N/A	N/A	N/A	N/A
Eagle Pup	TP-BGC09-WR-1	5	not classified	Sandy CLAY, some gravel.	8.2	N/A	N/A	N/A	N/A
Eagle Pup	TP-BGC09-WR-1	6	not classified	SAND, some gravel, trace silt.	12.5	N/A	N/A	N/A	N/A
Eagle Pup	TP-BGC09-WR-2	0.8-0.9	Colluvium	Sandy GRAVEL, some silt, trace clay, trace cobbles/boulders.	9.4	N/A	N/A	N/A	N/A
Eagle Pup	TP-BGC09-WR-2	4	not classified	Sandy GRAVEL, some clay, trace silt.	11	N/A	N/A	N/A	N/A
Eagle Pup	TP-BGC09-WR-3	2	Weathered Bedrock	Highly fractured Metasedimentary rock, trace fines.	17.7	N/A	N/A	N/A	N/A
Eagle Pup	TP-BGC09-WR-4	0.5	not classified	Gravelly SILT, some cobbles.	16.8	4	41	22	34
Eagle Pup	TP-BGC09-WR-4	0.9	not classified	Gravelly SAND, some cobbles.	16.9	N/A	N/A	N/A	N/A
Eagle Pup	TP-BGC09-WR-5	0.5	not classified	Silty GRAVEL, some sand.	9.7	N/A	N/A	N/A	N/A
Eagle Pup	TP-BGC09-WR-5	1	not classified	Silty GRAVEL, some sand.	4.8	N/A	N/A	N/A	N/A
Eagle Pup	TP-BGC09-WR-6	0.9-1.0	Colluvium	Gravelly SILT, some clay.	16.2	N/A	N/A	N/A	N/A
Eagle Pup	TP-BGC09-WR-6	1.0-1.2	Colluvium	Gravelly SILT, some clay.	10.2	N/A	N/A	N/A	N/A
Eagle Pup	TP-BGC09-WR-6	4	Colluvium	Gravelly SILT, some clay.	14.7	N/A	N/A	N/A	N/A
Eagle Pup	TP-BGC09-WR-7	0.9	Colluvium	Silty GRAVEL, trace sand.	17		19	43	38
Eagle Pup	TP-BGC09-WR-8	0.9-1.0	not classified	Silty SAND, some gravel.	11.8	N/A	N/A	N/A	N/A
Eagle Pup	TP-BGC09-WR-8	2	not classified	Silty SAND, some gravel.	8	N/A	N/A	N/A	N/A
Eagle Pup	TP-BGC09-WR-9	0.5-0.7	Colluvium	Silty SAND, some gravel.	19.3	N/A	N/A	N/A	N/A
Eagle Pup	TP-BGC09-WR-9	2.0-2.5	not classified	SAND, some gravel, trace silt.	9.7	N/A	16	25	60
Lower Reach Dublin Gulch	TP-BGC09-HL4-10	0.5-0.6	not classified	Gravelly SILT, some sand, trace clay.	12.8	N/A	N/A	N/A	N/A
Lower Reach Dublin Gulch	TP-BGC09-HL4-10	3.0-3.4	not classified	Silty SAND, some gravel.	12.6	7	15	63	15
Lower Reach Dublin Gulch	TP-BGC09-HL4-10	5.0-5.5	not classified	SILT, some sand, some gravel.	9.4	N/A	N/A	N/A	N/A
Lower Reach Dublin Gulch	TP-BGC09-HL4-10	6.5	not classified	SILT, some sand, some gravel.	14	N/A	N/A	N/A	N/A
Lower Reach Dublin Gulch	TP-BGC09-DG-1	0.5	not classified	SAND and GRAVEL, silty.	9.7	N/A	N/A	N/A	N/A
Lower Reach Dublin Gulch	TP-BGC09-DG-1	1.5	Possibly Fluvial	SAND and GRAVEL, some silt, some cobbles, trace boulders.	5.2	N/A	N/A	N/A	N/A
Lower Reach Dublin Gulch	TP-BGC09-DG-3	1	Placer Tailings	Clayey SILT.	38.7	N/A	N/A	N/A	N/A
Lower Reach Dublin Gulch	TP-BGC09-DG-3	3	not classified	SAND and GRAVEL, trace silt.	7.0	N/A	N/A	N/A	N/A
Lower Reach Dublin Gulch	TP-BGC09-DG-4	1	Till	SILT and COBBLES, some gravel.	31.5	N/A	N/A	N/A	N/A
Lower Reach Dublin Gulch	TP-BGC09-DG-4	1.8	not classified	Sandy SILT, trace clay.	27.5	N/A	N/A	N/A	N/A
Lower Reach Dublin Gulch	DH-BGC09-DG-1	4.57	not classified	Silty GRAVEL, some sand, some cobbles.	12.7	N/A	N/A	N/A	N/A
Lower Reach	DH-BGC09-DG-2	7.62	not classified	Sandy GRAVEL, some silt, cobbly.	11.9	N/A	N/A	N/A	N/A

Terrain Unit	Test Hole ID#	Sample Depth (m)	Material Genesis	Descriptive Texture	Moisture Content (% dry weight)	Grain Size Distribution			
						% <2µm	% <75 µm	% <4.75mm	% <75mm
Dublin Gulch									
Lower Reach Dublin Gulch	DH-BGC09-DG-2	1.52	not classified	Clayey GRAVEL, some sand, some silt.	16.8	N/A	N/A	N/A	N/A
Lower Reach Dublin Gulch	DH-BGC09-DG-3	1.52	Placer Tailings	Clayey SILT, some sand.	25.4	N/A	N/A	N/A	N/A
Lower Reach Dublin Gulch	DH-BGC09-DG-3	6.10	not classified	GRAVEL, COBBLES and BOULDERS, silty, some sand.	14.1	N/A	N/A	N/A	N/A
Olive Gulch	TP-BGC09-HL5-2	0.7	not classified	Granodiorite BOULDERS and COBBLES, silty sand infill.		N/A	N/A	N/A	N/A
Olive Gulch	TP-BGC09-HL5-3	1	not classified	Sandy GRAVEL, trace cobbles and boulders.	8.8	N/A	N/A	N/A	N/A
Olive Gulch	TP-BGC09-HL5-3	1.5	not classified	Sandy GRAVEL, trace cobbles and boulders.	1.5	N/A	N/A	N/A	N/A
Olive Gulch	TP-BGC09-HL5-3	1.8	not classified	Sandy GRAVEL, trace cobbles and boulders.	1.8	N/A	N/A	N/A	N/A
Olive Gulch	TP-BGC09-HL5-4	0.5-0.6	not classified	Gravelly SILT, some sand.	12		34	24	42
Olive Gulch	TP-BGC09-HL5-4	2.0-2.5	not classified	Gravelly SAND, some silt.	9.1	N/A	N/A	N/A	N/A
Olive Gulch	TP-BGC09-HL5-4	4.0-4.5	Weathered Granodiorite	Completely weathered granodiorite, SAND.	6	N/A	N/A	N/A	N/A
Olive Gulch	TP-BGC09-HL5-5	0.5-0.6	not classified	SILT, some sand.	17.8	N/A	N/A	N/A	N/A
Olive Gulch	TP-BGC09-HL5-6	0.6-0.7	Colluvium	SILT, some gravel, trace sand.	17.6	N/A	N/A	N/A	N/A
Olive Gulch	TP-BGC09-HL5-6	2.0-2.5	Weathered Granodiorite	Completely weathered granodiorite, SAND, trace silt, trace gravel.	13.9	N/A	N/A	N/A	N/A
Olive Gulch	TP-BGC09-HL5-6	5.0-5.5	not classified	SAND, some subrounded gravel.	11.9	N/A	N/A	N/A	N/A
Olive Gulch	TP-BGC09-HL5-7	0.4-0.5	not classified	SILT, some gravel.	17.9	N/A	N/A	N/A	N/A
Olive Gulch	TP-BGC09-HL5-7	0.8-0.9	Colluvium	Silty SAND, some gravel.	9.5	N/A	N/A	N/A	N/A
Olive Gulch	TP-BGC09-HL5-7	2.0-2.5	Colluvium	Gravelly SAND, some silt.	11.7	6	38	30	25
Olive Gulch	TP-BGC09-HL5-8	0.2-0.4	Colluvium	Sandy SILT, trace gravel.	10.6	N/A	N/A	N/A	N/A
Olive Gulch	TP-BGC09-HL5-8	1.5	Bedrock	Granodiorite Bedrock, fractured tabular boulders.	16.7	N/A	N/A	N/A	N/A
Olive Gulch	TP-BGC09-HL5-9	0.4-0.5	not classified	SILT, some sand, some gravel.	29	N/A	N/A	N/A	N/A
Olive Gulch	TP-BGC09-HL5-10	0.5	Colluvium	Silty GRAVEL, some sand.	23.8	N/A	N/A	N/A	N/A
Stuttle Gulch	TP-BGC09-HL4-1	0.5	not classified	SILT, some gravel, trace sand, trace clay.	29	N/A	N/A	N/A	N/A
Stuttle Gulch	TP-BGC09-HL4-1	1.8-1.9	not classified	SILT, some gravel, trace sand, trace clay.	18	N/A	N/A	N/A	N/A
Stuttle Gulch	TP-BGC09-HL4-2	0.2-0.4	not classified	SILT, some gravel, trace sand, trace clay.	35.9	N/A	N/A	N/A	N/A
Stuttle Gulch	TP-BGC09-HL4-2	06.-0.7	not classified	SILT, some gravel, trace sand, trace clay.	74.8	N/A	N/A	N/A	N/A
Stuttle Gulch	TP-BGC09-HL4-2	2.3	not classified	SILT, some gravel, trace sand, trace clay.	25.6	N/A	N/A	N/A	N/A
Stuttle Gulch	TP-BGC09-HL4-3	0.4-0.5	not classified	Silty SAND, some cobbles, some boulders.	18.6	N/A	N/A	N/A	N/A
Stuttle Gulch	TP-BGC09-HL4-3	2.5	not classified	Silty SAND, some gravel, trace clay.	8.8	N/A	N/A	N/A	N/A
Stuttle Gulch	TP-BGC09-HL4-3	4.5	not classified	CLAY, trace gravel, trace silt.	31.5	13	86	1	N/A
Stuttle Gulch	TP-BGC09-HL4-4	0.4-0.5	not classified	Sandy SILT, trace clay, trace gravel.	14.7	N/A	N/A	N/A	N/A
Stuttle Gulch	TP-BGC09-HL4-4	1.5	not classified	Gravelly SAND, trace silt.	10.7	N/A	N/A	N/A	N/A
Stuttle Gulch	TP-BGC09-HL4-5	0.4-0.5	Colluvium	Sandy SILT, some gravel, trace clay.	23.6	N/A	N/A	N/A	N/A
Stuttle Gulch	TP-BGC09-HL4-5	2.5-3.0	Colluvium	Sandy SILT, some gravel, trace clay.	10.4	N/A	N/A	N/A	N/A
Stuttle Gulch	TP-BGC09-HL4-5	5.5-6.0	Colluvium	Sandy GRAVEL, some silt.	7.8	N/A	N/A	N/A	N/A
Stuttle Gulch	TP-BGC09-HL4-6	0.6-0.7	Colluvium	Silty SAND and GRAVEL.	10.4	N/A	N/A	N/A	N/A
Stuttle Gulch	TP-BGC09-HL4-6	3.0-3.5	not classified	Sandy GRAVEL, some silt.	5.7		15	40	45
Stuttle Gulch	TP-BGC09-HL4-7	0.5-0.7	Colluvium	Sandy SILT, some gravel.	14.9	N/A	N/A	N/A	N/A
Stuttle Gulch	TP-BGC09-HL4-7	1.5-1.85	Colluvium	Gravelly SAND, some silt.	33.2	N/A	N/A	N/A	N/A

Terrain Unit	Test Hole ID#	Sample Depth (m)	Material Genesis	Descriptive Texture	Moisture Content (% dry weight)	Grain Size Distribution			
						% <2µm	% <75 µm	% <4.75mm	% <75mm
Stuttle Gulch	TP-BGC09-HL4-8	0.3-0.4	Organics	SILT, trace sand, trace gravel.	92.5	N/A	N/A	N/A	N/A
Stuttle Gulch	TP-BGC09-HL4-8	1.5	Colluvium	Sandy SILT and GRAVEL.	15.6	N/A	N/A	N/A	N/A
Stuttle Gulch	TP-BGC09-HL4-9	0.8-0.9	Fill	Gravelly SAND, some silt.	11.2	N/A	N/A	N/A	N/A
Stuttle Gulch	TP-BGC09-HL4-9	3.3-3.8	Weathered Bedrock	Highly weathered Metasedimentary rock.	5.6	N/A	N/A	N/A	N/A
Stuttle Gulch	TP-BGC09-HL4-13	0.4-0.5	not classified	SILT, some sand, some gravel.	13.2	N/A	N/A	N/A	N/A
Stuttle Gulch	TP-BGC09-HL4-13	0.9-1.0	not classified	SILT, some sand, some gravel.	83.2	N/A	N/A	N/A	N/A
Stuttle Gulch	TP-BGC09-HL4-13	1.3-1.5	not classified	Gravelly SAND, some silt.	14.8	N/A	N/A	N/A	N/A
Stuttle Gulch	TP-BGC09-HL4-14	0.7-0.8	Colluvium	Gravelly SILT, some sand.	25.7	N/A	N/A	N/A	N/A
Stuttle Gulch	TP-BGC09-HL4-14	1.5	Colluvium	Gravelly SILT, some sand.	33.5	N/A	N/A	N/A	N/A
Stuttle Gulch	TP-BGC09-HL4-14	1.9	Colluvium	Gravelly SILT, some sand.	25.9	N/A	N/A	N/A	N/A
Stuttle Gulch	TP-BGC09-HL4-15	0.2-0.3	Colluvium	SILT, some sand, some gravel.	12.3	N/A	N/A	N/A	N/A
Stuttle Gulch	TP-BGC09-HL4-15	0.9-1.0	Colluvium	SILT, some sand, some gravel.	13.2	N/A	N/A	N/A	N/A
Stuttle Gulch	TP-BGC09-STU-3	0.5	not classified	SAND and GRAVEL, some silt, trace cobble.	12.1	N/A	N/A	N/A	N/A
Stuttle Gulch	TP-BGC09-STU-3	1.5	not classified	SAND and GRAVEL, some silt, trace cobble.	17.1	N/A	N/A	N/A	N/A
Stuttle Gulch	TP-BGC09-STU-4	1	not classified	Sandy SILT, some gravel.	119.3	N/A	N/A	N/A	N/A
Stuttle Gulch	TP-BGC09-STU-4	1.8	not classified	Sandy SILT, some subrounded to subangular gravel.	21.1	N/A	N/A	N/A	N/A
Stuttle Gulch	DH-BGC09-STU-3	1.52	not classified	SAND and GRAVEL, some silt, trace cobble.	21.2	N/A	N/A	N/A	N/A
Stuttle Gulch	DH-BGC09-STU-3	7.62	not classified	SILTY SAND and GRAVEL, some clay.	14.3	N/A	N/A	N/A	N/A
Stuttle Gulch	DH-BGC09-STU-3	9.14	not classified	SILTY SAND and GRAVEL, some clay.	MISSING	N/A	N/A	N/A	N/A
Stuttle Gulch	DH-BGC09-STU-3	13.72	not classified	SILT and GRAVEL, sandy, trace clay.	13.2	N/A	N/A	N/A	N/A
Stuttle Gulch	DH-BGC09-STU-3	18.29	not classified	SILT and CLAY, some sand, trace gravel.	14.6	N/A	N/A	N/A	N/A
Stuttle Gulch	DH-BGC09-STU-4	15.24	Till	Gravelly CLAY, some sand, some silt, boulders.	12.6	N/A	N/A	N/A	N/A
Stuttle Gulch	DH-BGC09-STU-4	1.52	Colluvium	Silty SAND and GRAVEL, some clay.	27.0	N/A	N/A	N/A	N/A
Stuttle Gulch	DH-BGC09-STU-4	7.62	Till	Gravelly CLAY, some sand, some silt, boulders.	15.2	N/A	N/A	N/A	N/A
West Haggart Creek	TP-BGC09-HL4-11	0.4-0.6	not classified	SILT, trace clay, trace sand.	57.8	N/A	N/A	N/A	N/A
West Haggart Creek	TP-BGC09-HL4-11	0.9-1.1	not classified	Sandy GRAVEL, some silt.	11.8	N/A	N/A	N/A	N/A
West Haggart Creek	TP-BGC09-HL4-12	0.3-0.4	not classified	SILT, some gravel, some sand.	18.5	N/A	N/A	N/A	N/A
West Haggart Creek	TP-BGC09-HL4-12	1.0-1.1	not classified	SILT, some gravel, some sand.	53.1	N/A	N/A	N/A	N/A
West Haggart Creek	TP-BGC09-HL4-12	1.3-1.4	not classified	Sandy GRAVEL, some silt.	51.4	3	30	35	33
West Haggart Creek	TP-BGC09-HL4-16	0.4-0.5	not classified	Silty SAND and GRAVEL.	13.2	N/A	N/A	N/A	N/A
West Haggart Creek	TP-BGC09-HL4-16	0.9-1.0	not classified	Silty SAND and GRAVEL.	13.4	N/A	N/A	N/A	N/A
West Haggart Creek	TP-BGC09-HL4-16	1.8-2.0	not classified	Silty SAND, some gravel.	15.6	3	48	19	29
West Haggart Creek	TP-BGC09-HL4-17	0.3-0.5	not classified	SILT, trace clay, trace gravel.	80.4	N/A	N/A	N/A	N/A
West Haggart Creek	TP-BGC09-HL4-17	0.7-0.8	not classified	Silty SAND and GRAVEL.	20.3	N/A	N/A	N/A	N/A
West Haggart Creek	TP-BGC09-HL4-17	0.7-0.8	not classified	Silty SAND and GRAVEL.	16.9	N/A	N/A	N/A	N/A

Terrain Unit	Test Hole ID#	Sample Depth (m)	Material Genesis	Descriptive Texture	Moisture Content (% dry weight)	Grain Size Distribution			
						% <2µm	% <75 µm	% <4.75mm	% <75mm
West Haggart Creek	TP-BGC09-HL4-18	0.3-0.4	not classified	Silty SAND and GRAVEL.	9.6	N/A	N/A	N/A	N/A
West Haggart Creek	TP-BGC09-HL4-18	1.1-1.2	not classified	Silty SAND and GRAVEL.	6.1	N/A	N/A	N/A	N/A
West Haggart Creek	TP-BGC09-HL4-18	1.6-1.8	not classified	Silty SAND and GRAVEL.	6.4	N/A	N/A	N/A	N/A
West Haggart Creek	TP-BGC09-HL4-18	2.0-2.4	not classified	Silty SAND and GRAVEL.	8.6	N/A	N/A	N/A	N/A
West Haggart Creek	TP-BGC09-HL4-18	3.5-4.0	not classified	SILT, some clay, trace gravel, trace sand.	64.3	N/A	N/A	N/A	N/A
West Haggart Creek	DH-BGC09-DG-7	15.24	not classified	Sandy CLAY, some silt, some fine gravel.	13.9	N/A	N/A	N/A	N/A
West Haggart Creek	DH-BGC09-DG-7	6.10	Colluvium	Silty SAND and GRAVEL, cobbly.	21.8	N/A	N/A	N/A	N/A
West Haggart Creek	DH-BGC09-DG-7	18.29	Till	Sandy CLAY, some gravel.	17.8	N/A	N/A	N/A	N/A
West Haggart Creek	DH-BGC09-DG-7	12.19	not classified	Clayey GRAVEL, cobbly.	17.1	N/A	N/A	N/A	N/A
West Haggart Creek	DH-BGC09-DG-7	3.05	not classified	Silty GRAVEL, some sand, some clay.	16.1	N/A	N/A	N/A	N/A
						N/A	N/A	N/A	N/A
Open Pit	TP-BGC09-P1	0.7-0.8	Weathered Bedrock	SAND and BOULDERS, some silt, some gravel, some cobbles.	10.5	N/A	N/A	N/A	N/A
Open Pit	TP-BGC09-P1	2.7-3.2	Weathered Bedrock	SAND and BOULDERS, some silt, some gravel, some cobbles.	5.2	N/A	N/A	N/A	N/A
Open Pit	TP-BGC09-P2	0.3-0.4	Colluvium	SAND and GRAVEL, some silt, trace clay.	8.4	N/A	N/A	N/A	N/A
Open Pit	TP-BGC09-P2	1-1.1	not classified	SAND and GRAVEL, some silt, trace clay, trace cobbles.	6.2	N/A	N/A	N/A	N/A
Open Pit	TP-BGC09-P3	0.6-0.7	Colluvium	Sandy GRAVEL, some silt, trace clay.	8.6	N/A	N/A	N/A	N/A
Open Pit	TP-BGC09-P4	0.9-1.0	Colluvium	SAND, some silt, some gravel and cobbles.	6.8	N/A	N/A	N/A	N/A
Open Pit	TP-BGC09-P4	1.8-2	Completely Weathered Bedrock	Sandy GRAVEL, some strong granodiorite clasts.	6.8	N/A	N/A	N/A	N/A

3.6. Bulk Samples

Representative bulk samples were collected from 60 test pits, at depths varying from 0.2 m to 5.5 m, for future use by VGC in determining potential construction borrow materials. No laboratory testing has yet been conducted on these samples - they are currently being stored in the core shack on the Eagle Gold Project site (Photograph 1). A complete inventory of bulk samples is shown in Table 9.

Photograph 1 Storage of Bulk Samples under logging racks in the core shack.

Table 9. Bulk Samples.

Terrain Unit	Test ID#	Depth (m)	Genesis	Texture
Ann Gulch	TP-BGC09-HL1-1	2	Weathered rock	Completely weathered QUARTZITE, to gravelly SAND.
Ann Gulch	TP-BGC09-HL6-1	2.5-3.0	Weathered Bedrock	Highly to completely weathered Metasedimentary Bedrock.
Ann Gulch	TP-BGC09-HL6-2	0.2-0.6	Colluvium	Silty SAND and GRAVEL, trace clay.
Ann Gulch	TP-BGC09-HL6-3	2.0-2.5	not classified	SAND, trace gravel, trace silt.
Ann Gulch	TP-BGC09-HL6-4	4.0-4.5	Weathered Bedrock	Completely to highly weathered Metasedimentary Bedrock.
Ann Gulch	TP-BGC09-HL6-5	0.9	Completely Weathered Bedrock	Sandy GRAVEL, some silt, trace clay.
Ann Gulch	TP-BGC09-HL6-6	2.8-3.2	not classified	Gravelly SILT, some sand.
Ann Gulch	TP-BGC09-HL6-7	2.0-2.5	Colluvium	Sandy GRAVEL, some silt.
Ann Gulch	TP-BGC09-HL6-8	2.0-2.4	Colluvium	Gravelly SILT, some sand, trace clay.
Ann Gulch	TP-BGC09-HL6-9	1.5-2.0	Weathered Bedrock	Completely weathered Metasedimentary Rock.
Ann Gulch	TP-BGC09-HL6-10	0.6-1.0	not classified	Gravelly SILT, some sand.
Ann Gulch	TP-BGC09-HL6-10	2.2-2.7	Weathered Bedrock	Completely weathered Metasedimentary Rock.
Ann Gulch	TP-BGC09-HL6-11	1.5	Weathered Bedrock	Highly weathered Metasedimentary bedrock, trace sand infill.
Ann Gulch	TP-BGC09-HL6-12	2	not classified	Coarse GRAVEL, some sand.
Ann Gulch	TP-BGC09-HL6-13	2.2	Weathered Bedrock	Highly weathered Metasedimentary bedrock, sand and gravel infill.
Ann Gulch	TP-BGC09-HL6-15	2	Colluvium	Gravelly SAND, trace cobbles.
Ann Gulch	TP-BGC09-HL6-16	2	Completely Weathered Bedrock	Sandy GRAVEL, trace silt.
Ann Gulch	TP-BGC09-HL6-17	2.3	Weathered Bedrock	Highly weathered Metasedimentary bedrock, gravelly sand and cobbles.
Eagle Pup	TP-BGC09-WR-4	2	Weathered Bedrock	Highly fractured metasedimentary rock.
Eagle Pup	TP-BGC09-WR-5	0.5-0.7	not classified	Silty GRAVEL, some sand.
Eagle Pup	TP-BGC09-WR-6	1	Colluvium	Gravelly SILT, some clay.
Eagle Pup	TP-BGC09-WR-6	4.0-4.5	Colluvium	Gravelly SILT, some clay.
Eagle Pup	TP-BGC09-WR-8	2	not classified	Silty SAND, some gravel.
Eagle Pup	TP-BGC09-WR-9	2.0-2.5	not classified	SAND, some gravel, trace silt.
Lower Reach Dublin Gulch	TP-BGC09-HL4-10	3.0-3.4	not classified	Silty SAND, some gravel.
Lower Reach Dublin Gulch	TP-BGC09-DG-1	2	not classified	Gravelly cobbles and boulders.
Lower Reach Dublin Gulch	TP-BGC09-DG-3	2	not classified	SAND and GRAVEL, trace silt.
Lower Reach Dublin Gulch	TP-BGC09-DG-4	1.5	Till	SILT and COBBLES, some gravel.
Olive Gulch	TP-BGC09-HL5-4	2.0-2.5	not classified	Gravelly SAND, some silt.
Olive Gulch	TP-BGC09-HL5-4	4.0-4.5	Weathered Granodiorite	Completely weathered granodiorite, SAND.
Olive Gulch	TP-BGC09-HL5-6	2.0-2.5	Weathered Granodiorite	Completely weathered granodiorite, SAND, trace silt, trace gravel.
Olive Gulch	TP-BGC09-HL5-6	5.0-5.5	not classified	SAND, some subrounded gravel.
Olive Gulch	TP-BGC09-HL5-7	2-2.5	Colluvium	Gravelly SAND, some silt.
Olive Gulch	TP-BGC09-HL5-8	0.2-0.5	Colluvium	Sandy SILT, trace gravel.
Olive Gulch	TP-BGC09-HL5-9	3.3-3.8	Bedrock	Fresh tabular Granodiorite Rock.
Olive Gulch	TP-BGC09-HL5-10	0.5	Colluvium	Silty GRAVEL, some sand.
Stuttle Gulch	TP-BGC09-HL4-1	1.8-1.9	not classified	SILT, some gravel, trace sand, trace clay.
Stuttle Gulch	TP-BGC09-HL4-2	1.5-2	not classified	SILT, some gravel, trace sand, trace clay.
Stuttle Gulch	TP-BGC09-HL4-3	2.0-2.5	not classified	Silty SAND, some gravel, trace clay.
Stuttle Gulch	TP-BGC09-HL4-3	4.0-5.0	not classified	CLAY, trace gravel, trace silt.
Stuttle Gulch	TP-BGC09-HL4-4	1.5	not classified	Gravelly SAND, trace silt.
Stuttle Gulch	TP-BGC09-HL4-5	2.5-3.0	Colluvium	Sandy SILT, some gravel, trace clay.
Stuttle Gulch	TP-BGC09-HL4-6	3.0-3.5	not classified	Sandy GRAVEL, some silt.
Stuttle Gulch	TP-BGC09-HL4-7	1.5-1.8	Colluvium	Gravelly SAND, some silt.

Terrain Unit	Test ID#	Depth (m)	Genesis	Texture
Stuttle Gulch	TP-BGC09-HL4-8	1.5	Colluvium	Sandy SILT and GRAVEL.
Stuttle Gulch	TP-BGC09-HL4-9	3.3-3.8	Weathered Bedrock	Highly weathered Metasedimentary rock.
Stuttle Gulch	TP-BGC09-HL4-13	1.3-1.5	not classified	Gravelly SAND, some silt.
Stuttle Gulch	TP-BGC09-HL4-14	1.5	Colluvium	Gravelly SILT, some sand.
Stuttle Gulch	TP-BGC09-HL4-15	1.3	Colluvium	SILT, some sand, some gravel.
Stuttle Gulch	TP-BGC09-STU-4	1.5	not classified	Sandy SILT, some subrounded to subangular gravel.
Stuttle Gulch	TP-BGC09-STU-3	1.5	not classified	SAND and GRAVEL, some silt, trace cobble.
West Haggart Creek	TP-BGC09-HL4-11	0.5-0.8	not classified	SILT, trace clay, trace sand.
West Haggart Creek	TP-BGC09-HL4-12	1.3-1.4	not classified	Sandy GRAVEL, some silt.
West Haggart Creek	TP-BGC09-HL4-16	1.5-1.7	not classified	Silty SAND, some gravel, trace clay.
West Haggart Creek	TP-BGC09-HL4-17	1.6	not classified	Silty SAND and GRAVEL.
West Haggart Creek	TP-BGC09-HL4-18	2.0-2.4	not classified	Silty SAND and GRAVEL.
Open Pit	TP-BGC09-P1	2.7-3.2	Weathered Bedrock	SAND and BOULDERS, some silt, some gravel, some cobbles.
Open Pit	TP-BGC09-P2	1.7-2.2	Bedrock	Biotite Schist.
Open Pit	TP-BGC09-P3	1.3-1.7	Weathered Bedrock	Moderately weathered Metasedimentary bedrock, some silty sand infill.
Open Pit	TP-BGC09-P4	2-2.3	Completely Weathered Bedrock	Sandy GRAVEL, some strong granodiorite clasts.

4.0 RESULTS

4.1. Observed Overburden Soil Conditions

Overburden in the Eagle Gold project area is most commonly a thin cover of organic soils underlain by colluvium, followed by either a metasedimentary or granodiorite weathered rock profile. The overburden thickness and consistency varies spatially throughout the project area and any generalizations or conclusions drawn are naturally biased by the investigation of predetermined potential site facility locations. Ground conditions may vary considerably between test holes.

4.1.1. Organic Soils

Organic cover is widespread across the project site, and consists of predominantly peat and silt in varying proportions. The distribution of organic thickness is illustrated in Figure 11. Organic cover averaged 0.2 m thickness. Previously-disturbed areas, such as old drill pads, road construction or placer mining, had no organic cover. The thickness of organic cover was greater, up to 0.5m, in the valley bottoms and shallow slopes. All organic layers were penetrated by roots, with varying compositions of moss or needle mats.

4.1.2. Colluvium

The nature and distribution of colluvium layer(s) varied across site, ranging from 0.2 m to 6.3 m thickness, where observed. The distribution of thickness of colluvium is illustrated in Figure 12. The colluvium was generally gravelly silt or gravelly sand. The clasts comprised of metasedimentary rock or granodiorite and clasts ranged from angular to subangular/ subrounded. In areas of steeper exposed rock faces, more recent and active rockfall accounted for thicker colluvium layers.

Occasionally colluvial deposits were observed to be separated by fluvial deposits, in the test pits adjacent to gulches and streams.

The moisture content of the colluvial materials ranged between 6.8 % and 33.5 % and averaged 4.6 %.

4.1.3. Till

Till was encountered in drillholes BH-BGC09-STU-3 and BH-BGC09-DG-7 at 15.0 m and 15.6 m depths, respectively. These boreholes were drilled along the lower flanks of the hillside above Dublin Gulch, west of Stuttle Gulch, above the exposed bluffs adjacent to the placer tailings at the valley bottom. Till was also encountered at 0.1 m depth in test pit TP-BGC09-A-3, located east of the main access road beside Haggart Creek.

The till was generally a silty or sandy clay matrix with some proportion of larger clasts up to cobble size. A typical core sample of unfrozen till is shown in Photograph 2 below.

The till was observed to be hard in the two boreholes, and compact to dense in the test pit.

Photograph 2. Till core from 25 m depth at DH-BGC09-STU-3.

The south side slopes of lower Dublin Gulch have been stripped of vegetation (Photograph 3), exposing a fine grained matrix with randomly distributed gravel and cobble sized clasts. The exposed materials are weathered and cemented, so the genesis isn't certain, but these exposed banks appear to be till, with a thin veneer of glaciofluvial, glaciolacustrine and aeolian materials at the top.

Photograph 3. Exposed banks south of Dublin Gulch, west of Stuttle Gulch, looking south.

4.1.4. Weathered Rock

There are two main rock types found on site: metasediments and granodiorite. Consequently two weathering profiles were observed where in situ weathering occurred. Decomposed granodiorite was observed in the Olive Gulch zone, having been completely weathered to coarse sand with friable, relict corestones in places. Metasedimentary weathering profiles were most apparent in Ann Gulch, where in situ soils also contained easily friable pieces of remnant mica schist. Weathered rock was most often observed directly below colluvium, and above more intact rock. The observed thickness of weathered rock across the site is illustrated in Figure 13.

It should be noted that the distinction between colluvium and weathered rock was often subtle, as the two materials are similar in character. Consequently, the transition depths noted in the test hole logs are approximate.

4.1.5. Placer Tailings

The surficial materials in the lower reaches of Dublin Gulch have been reworked by placer mining operations for several decades. Large stockpiles of washed sands and gravels and fine grained tailings settling ponds are present. Photograph 4 illustrates the topography in the tailings deposits, and gives a sense of the variability of texture.

Three drillholes and two test pits were completed in the reworked Dublin Gulch placer tailings area. In general, the placer tailings are compact to dense well graded sands and gravels

with cobbles and trace boulders. Placer tailings typically comprise subrounded metasedimentary and granodiorite clasts. Drillhole DH-BGC09-DG-2 was drilled in an abandoned placer tailings settling pond where sediments comprised wet compact clayey silt overlying silty sand and gravel. Boulders were observed in gravel tailings above bedrock from 5.4 m to 12.2 m depth at DG-3.

Dynamic cone penetration tests were completed at DG-2 and DG-3, and showed that the material strength is highly variable, ranging from loose to very dense. Surface observations, combined with test hole observations, suggest that the texture and density of the placer tailings is highly variable both horizontally and with depth.

Photograph 4. Placer tailings in Dublin Gulch valley bottom.

4.2. Frozen Ground and Permafrost

Frozen ground was encountered in approximately half of the test pits, as detailed in Table 3. Frozen ground was also encountered in two of the three boreholes on the north facing slopes above the Dublin Gulch valley bottom (DH-BGC09-STU-3 and STU-4). The placer tailings in the valley bottom were not frozen at the three borehole locations. Frozen ground was also not observed at boreholes DH-BGC09-DG-7 and DH-BGC09-AG-3.

Frozen soil, when observed, was generally encountered immediately below the organic cover, although frozen organics were also encountered on north facing slopes and under a dense spruce forest canopy. Three thermistor strings were installed, as shown in Figure 14. At boreholes DH-BGC09-STU-3 and STU-4, thermistor strings were installed with multiple

temperature-measuring beads to 10 m depth. At DH-BGC09-AG-3, a single temperature-measuring bead was installed at 10 m depth.

The distribution of observed frozen ground from the test pit locations is illustrated in Figure 15. This figure includes observations from BGC's current work, as well as compiled observations from the Knight Piesold and Sitka work in 1995 and 1996. The distribution of frozen ground is highly variable across the site, with frozen ground being present within a few metres of other test pits that were unfrozen. Similar variability was observed within individual test pits, where part of a side wall was observed to be frozen at shallow depth, whereas the opposite wall, or a different section of the wall, was unfrozen.

The term frozen ground is used, rather than permafrost, since the observations were made in July and August, prior to the maximum extent of thaw, which is expected by September. Permafrost was confirmed with temperature measurements in 1996 at one of ten thermistors installed by Knight Piesold and Sitka (GT96-33). Their other nine thermistors showed an absence of permafrost. Two of BGC's thermistors from 2009 (STU-3 and STU-4) confirmed permafrost at those locations. In all three cases of confirmed permafrost, ground temperatures showed the permafrost to be warm, at close to 0^{o}C.

Excess ice was noted in the frozen ground at several test pit locations. The distribution of observations of excess ice is illustrated in Figure 16.

4.3. Bedrock

Bedrock was encountered at shallow depth in many test pits. The observed depth to bedrock in test pits is illustrated in Figure 17. Bedrock was also observed in four of the seven drilled boreholes supervised by BGC.

Metasedimentary bedrock was penetrated between 7.6 m and 14.3 m depth in the three drillholes advanced through the placer tailings in the Dublin Gulch valley bottom (DH-BGC09-DG-1, DG-2, and DG-3). At drillhole DH-BGC09-DG-3, a brecciated fault gouge was present from 12.1 m to 19.0 m. Metasedimentary bedrock was also encountered at DH-BGC09-AG-3, which was advanced in the lower part of Ann Gulch, close to its confluence with Dublin Gulch.

Bedrock was not encountered at DH-BGC09-STU-3, DH-BGC09-STU-4 and DH-BGC09-DG-7, which were terminated at 31.1 m, 18.3 m and 19.8 m. These holes were drilled on the lower flanks of the hills above Dublin Gulch to the south, west of Stuttle Gulch.

Where rock was encountered, it was generally very poor quality, with RQD values typically ranging from 0 to 20. Metasedimentary bedrock ranged from extremely weak to medium strong.

4.4. Groundwater Conditions

Groundwater was observed in nine of 69 test pits, and in two of the seven boreholes supervised by BGC. In all other test pits, the permanent water table appeared to be lower

than the limits of excavation. Groundwater observations made by BGC are summarized in Table 10 below. Table 11 summarizes data supplied from Stantec's groundwater monitoring, including older wells from previous site investigation programs.

Observations of groundwater seepage are illustrated in Figure 18. Observed depth to groundwater is illustrated in Figure 19.

Table 10. Summary of Groundwater Observations

Test Pit/Borehole ID	Depth (m)	Seepage*	GW Pipe**	Comments
TP-BGC09-HL4-14	0-1.9	L	N	Excavation left open for 25 minutes, weepy walls from ice melting.
TP-BGC09-HL4-17	0-0.5	L-M	N	Seepage likely rain from showers in area, released from disturbed moss covering.
TP-BGC09-HL5-6	5.5	M-H	Y	
TP-BGC09-HL5-10	0-2.8	H	N	Ponded water on surface, boggy area.
TP-BGC09-HL6-8	0-2.6	M-H	N	Ponded water on surface in day old excavator tracks.
TP-BGC09-WR-7	0-2.5	M-H	N	Test pit located adjacent to Eagle Pup.
TP-BGC09-WR-8	3.5	H	Y	Inflow from Eagle Pup.
DH-BGC09-DG-1	2	M-H	Y	Groundwater table encountered at 2.0m.
DH-BGC09-DG-2	4.9	M-H	Y	Groundwater table encountered at 4.9m.
TP-BGC09-DG-1	2	H	N	Seepage filled testpit then sloughed in.
TP-BGC09-DG-3	2.9	M	N	

*L=light, M=moderate, H=heavy
**Slotted 2" PVC for groundwater monitoring installed

Table 11. Summary of Depth to Groundwater Table.

Monitoring Well ID	Date	Easting	Northing	Depth to Groundwater (m bgs)
GT96-26	24-Jul-09	462585.133	7101834.681	4.21
	27-Aug-09			4.22
MW96-8	24-Jul-09	463252.365	7101258.356	1.36
	27-Aug-09			1.53
MW96-9a/b	24-Jul-09	463074.143	7101059.862	7.16
	27-Aug-09			7.61
MW96-13a/b	25-Jul-09	460176.627	7100649.791	16.52
	27-Aug-09			17.85
MW96-15a	25-Jul-09	459996.865	7100730.109	7.68
	27-Aug-09			7.88
MW96-15b	25-Jul-09	459996.865	7100730.109	8.66
MW95-152	25-Jul-09	459146.957	7100752.290	3.48
	27-Aug-09			3.71
MW96-1	21-Aug-09	463759.664	7100773.192	26.10
	27-Aug-09			23.97
MW96-18	25-Jul-09	460521.066	7099296.894	18.56
	27-Aug-09			21.25
MW96-10b	24-Jul-09	462935.908	7100938.914	2.54
MW96-2	24-Jul-09	463672.639	7100852.218	10.57
MW96-3	24-Jul-09	463595.519	7100942.276	3.33
DH95-147	24-Jul-09	463443.952	7100932.907	5.00
MW96-4	24-Jul-09	463503.748	7101032.507	6.53
MW96-5	24-Jul-09	463426.376	7101100.282	3.35
DH95-144	24-Jul-09	463670.673	7101520.915	3.49
MW96-7b	24-Jul-09	463592.005	7101477.256	1.26
MW96-19	23-Aug-09	460536.011	7099318.994	27.73
MW96-17b	23-Aug-09	460487.700	7099364.185	44.70
MW96-17a	23-Aug-09	460487.700	7099364.185	dry
MW96-25	23-Aug-09	459182.590	7099369.868	dry
MW06-24	23-Aug-09	459685.139	7099296.455	dry
MW96-23	27-Aug-09	459584.496	7099074.864	9.64
MW09-DG2	27-Aug-09	458989.746	7100687.488	1.71
MW09-DG1	27-Aug-09	459318.818	7100816.909	2.19
MW09-Stu2	27-Aug-09	458953.530	7100164.159	-0.18
MW09-Stu1	27-Aug-09	459768.539	7100454.432	14.79

Monitoring Well ID	Date	Easting	Northing	Depth to Groundwater (m bgs)
MW09-AG2	4-Sep-09	459775.905	7101780.566	14.02
MW09-AG1	26-Aug-09	459418.958	7101751.765	13.97
MW09-OG3	3-Sep-09	461221.378	7101361.009	2.75
MW09-OG2	4-Sep-09	462216.068	7100401.481	5.50
MW09-DG4	4-Sep-09	458279.458	7100919.823	6.02
MW09-DG5	4-Sep-09	458394.885	7100416.760	14.24

4.5. Slope Instability

Explicit consideration of slope stability was not included in BGC's scope, and terrain mapping is being completed by others. However, BGC brought aerial photographs into the field to aid in planning of the work, and air photo observations during field reconnaissance suggested the possibility of a large ancient landslide on the hillside above Dublin Gulch (see Figure 20). If an old landslide exists, this would need to be considered in the planning, design and construction of mine infrastructure in the area. Loading the top, or excavating the toe, of such a landslide could potentially lead to reactivation. Additional study of this feature is recommended for any facilities alternative that it may affect.

There are numerous smaller instability features across the project area. For example, steep rock slopes in Olive Gulch are subject to rockfall. Similarly, a near vertical rock face along the west valley wall of Eagle Pup is also subject to rockfall. Other types of slope failure, including probable creep features, are evident in the other creek basins. Each should be considered in relation to planning and design once facilities locations and layouts have been finalized.

5.0 OBSERVATIONS IN SPECIFIC TERRAIN UNITS

Section 4 presented the detailed observations resulting from the field investigation. These findings have been compiled in summary form in Table 12 to provide a general overview of conditions in each terrain unit outlined in Figure 8. This Table also presents a snapshot of the more significant geotechnical issues that would be encountered in specific terrain units. These comments are intended to be very general in nature, as facility locations have not been finalized, and within each terrain unit, there is spatial heterogeneity, particularly between the steep and relatively level areas. Areas with steep slopes have been denoted where slope angles are steeper than about 20 degrees. The detailed data should be consulted to develop a more complete understanding of these issues. Issues that are common across all terrain units, such as encountering scattered permafrost, potentially including ice rich soil, are not specifically mentioned.

Table 12. Observations in specific terrain units.

Terrain Unit Name	Associated Facility	General Description of Terrain	Number of Test Holes	Typical Soil Conditions	Bedrock Depth	Groundwater Conditions	Frozen Ground and Permafrost	Significant Issues
Ann Gulch	Heap Leach Option #6	Ann Gulch is a relatively short valley draining toward Dublin Gulch. It was dry during the field work, and likely only carries surface water during spring runoff or significant rainfall. Slope angles are relatively gentle, typically less than 20 degrees, with isolated steeper areas.	20 test pits 1 borehole	Organics over colluvium over weathered rock over intact bedrock.	Typically shallow, ranging from 2.8 m to 6.5 m where observed, and relatively few holes where rock was not encountered.	Test holes were all dry, except one test pit where groundwater seepage was observed at 2.6 m depth.	Less frozen ground than typically observed elsewhere in the project area. Very little excess ice where frozen ground was observed.	
Bawn Boy Gulch	Heap Leach Option #3	This unit is predominantly very gently sloping, with some steep slopes to the north, where the creek has carved a relatively deep channel.	No work done by BGC in 2009. Numerous test pits and boreholes completed by Knight Piesold and Sitka in 1995 and 1996.	Organics over colluvium over weathered rock over intact bedrock.	From Knight Piesold and Sitka reports, bedrock is relatively shallow, generally.	From Knight Piesold and Sitka reports, test pits were generally dry.	From Knight Piesold and Sitka reports, frozen ground observed randomly. No information available regarding excess ice.	
Eagle Pup	Waste Rock Dump	This drainage basin is dominated by steep slopes along both valley walls, being typically steeper along the east-facing wall. This basin may be affected by a potential existing large landslide.	9 test pits	Organics over colluvium over weathered rock over intact bedrock.	Bedrock was only encountered in 3 of 9 holes, suggesting it is relatively deep.	Test holes were all dry, except two test pits where groundwater seepage was observed at 2.5 m and 3.5 m depth.	Frozen ground observed randomly. Some observations of excess ice.	Steep slopes. Thick frozen ground. Thick colluvium. Potential large instability.
Lower Reach of Dublin Gulch	Heap Leach Option #1	This area has been completely reshaped by anthropogenic influence. The valley floor is covered by large mounds of reworked placer tailings. Relatively low, steep banks exist to the south.	5 test pits 3 boreholes	Placer tailings over bedrock.	Bedrock depth below placer tailings can be expected to vary considerably, but was observed at 7.6 to 14.3 m depth in three boreholes.	Relatively shallow groundwater is observed near streams.	Some frozen ground. No observations of excess ice in the placer tailings. Ice-rich permafrost in till and colluvium on southern valley bluffs.	Thick, variable surficial soils. Exccess ice in till and colluvium on southern valley bluffs.
Middle Reach of Dublin Gulch	Heap Leach Option #2	The middle part of the Dublin Gulch valley is relatively wide at the bottom, with very steep exposed rock faces to the north.	No work done by BGC in 2009. Option #2 was set aside from further consideration.	No data.	No data.	No data.	No data.	Steep rock slopes.
Olive Gulch	Heap Leach	The upper part of this terrain	10 test pits	Organics over colluvium	Bedrock depth tends to be		Frozen ground	Rockfall along steep

Terrain Unit Name	Associated Facility	General Description of Terrain	Number of Test Holes	Typical Soil Conditions	Bedrock Depth	Groundwater Conditions	Frozen Ground and Permafrost	Significant Issues
	Option #5	unit consists of gently sloping terrain, which is bisected by a deep channel with steep rock slope sides. The valley bottom is covered with a blanket of boulders. The lower part of the valley has steep sides.		over weathered rock over intact bedrock.	shallow, and was encountered at 5 of 9 test pits at depths between 0.9 m and 4.8 m.		observed randomly. Excess ice observed rarely.	valley sides. Steep slopes in lower part of the valley.
Stewart Gulch	Nil	This small drainage basin is dominated by steep slopes throughout.	None.	No data.	No data.	No data.	No data.	Steep slopes. Unknown subsurface conditions.
Stuttle Gulch	Heap Leach Option #4	The drainage basin has relatively gentle slopes in its lower half, becoming gradually steeper with increased elevation. This basin may be affected by a potential existing large landslide.	15 test pits 2 boreholes	Organics over thick colluvium over thick hard till (till present at lower flanks only).	Bedrock was not encountered in any test holes, including two boreholes to 18.3 m and 31.1 m, suggesting that it is relatively thick.	Test holes were all dry, except two test pits where groundwater seepage was observed at 2.8 m and 5.5 m depth.	Frozen ground very common. Excess ice very common.	Thick colluvium. Thick frozen ground with excess ice. Potential large instability.
West Haggart Creek	Heap Leach Option #4	This unit contains primarily west facing slopes, and is outside the Dublin Gulch drainage basin. Slopes are relatively gentle on the lower flanks, and increase with elevation. This terrain unit may be affected by a potential existing large landslide.	7 test pits 1 borehole	Organics over thick colluvium over thick hard till (till present at lower flanks only).	Bedrock was not encountered in any test holes, including one borehole to 19.8 m depth, suggesting that it is relatively thick.	Test holes were all dry, except one test pit where groundwater seepage was observed at 0.5 m depth.	Frozen ground very common. Excess ice very common.	Thick colluvium. Thick frozen ground with excess ice. Steep slopes near open pit. Potential large instability.

6.0 RECOMMENDATIONS FOR FURTHER STUDY

The intent of this work was to gather sufficient geotechnical data to support prefeasibility level designs for the proposed mine development. Additional subsurface data will be required at subsequent stages to support the more detailed levels of design once the facilities locations and grades have been finalized.

Some evidence emerged during the field work suggesting the potential existence of a large instability feature on the south facing slopes above Dublin Gulch in the Stuttle Gulch and Eagle Pup drainage basins. If such a feature exists, it could have a material impact on the development of facilities downslope, particularly activities that would undermine the toe of the slope, load the crest, or result in additional groundwater infiltration. Therefore, if facilities are planned in this area, further study is recommended to either rule out the interpreted instability, or to determine how to modify design and construction to avoid problems should the feature exist.

7.0 CLOSURE

We trust the above satisfies your requirements at this time. Should you have any questions or comments, please do not hesitate to contact us.

Yours sincerely,

BGC ENGINEERING INC.
per:

Heather Grinde, B.Eng., E.I.T.
Junior Engineer

Megan Roworth,B.Eng., E.I.T.
Junior Engineer

Reviewed by:

Pete Quinn, Ph.D., P.Eng.
Senior Geotechnical Engineer

Jack Seto, M.Sc., P.Eng. (NWT/NU)
Senior Geotechnical Engineer

APEY Permit to Practice Number PP092

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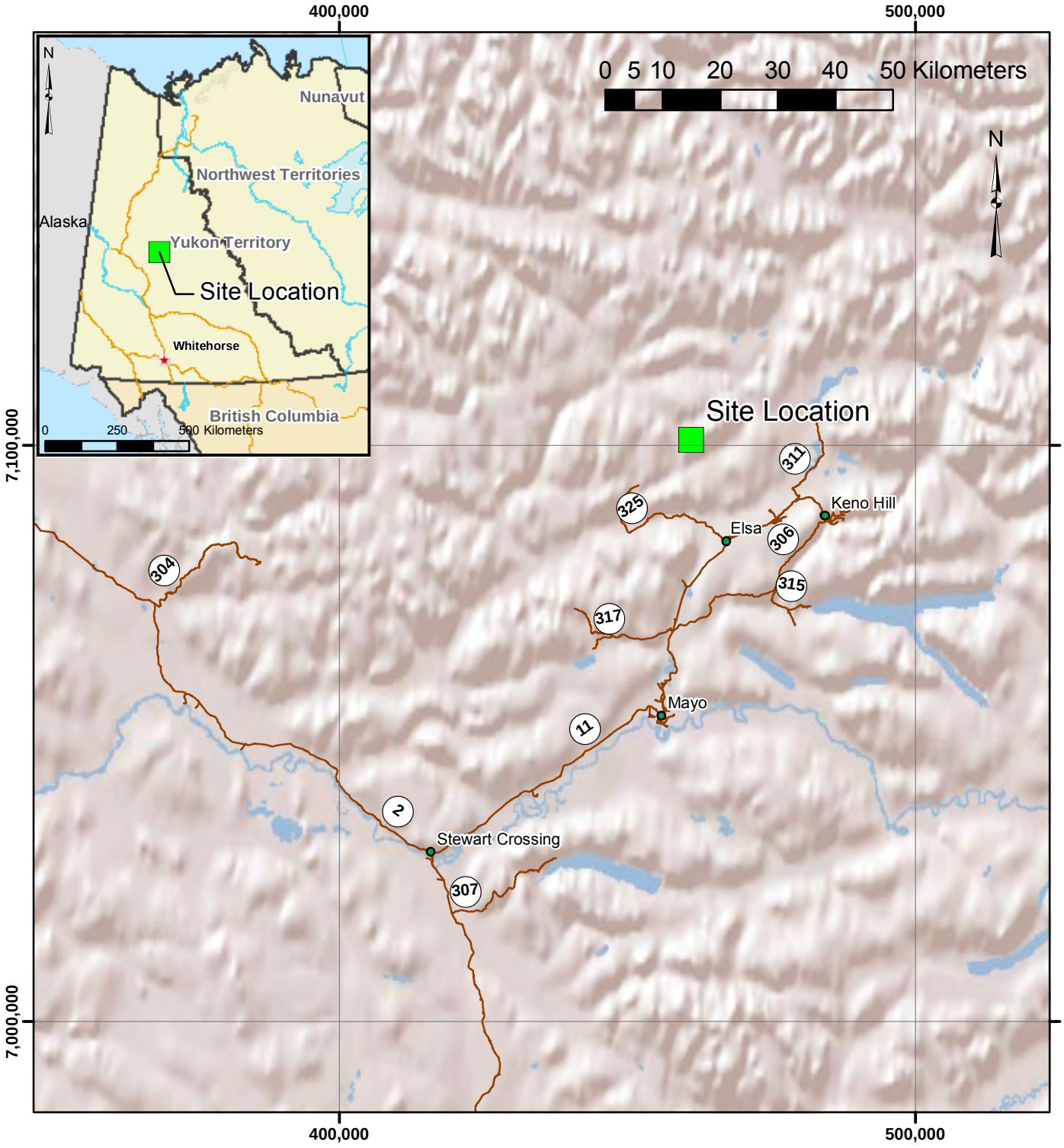
FIGURES



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BGC ENGINEERING INC.
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CLIENT: VICTORIA GOLD CORP.

PROJECT: EAGLE GOLD PROJECT
PRE-FEASIBILITY OPEN PIT DEPRESSURIZATION

TITLE: GENERAL SITE LOCATION

PROJECT No.:	FIG No.:	REV.:
0792-002	1	

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7,102,000

7,100,000

Heap leach option #1

Heap leach option #2

Heap leach option #3

Heap leach option #4

Waste rock dump

PAG dump

Heap leach option #5

Based on information provided by Scott Wilson RPA, 2009.
Air photo imagery provided by Stantec.
Facilities footprint from Scott Wilson RPA, 2009.

Facilities

Roads and Trails

0 500 1,000 Meters

N

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CLIENT:
VICTORIA GOLD

PROJECT:
EAGLE GOLD PROJECT
SITE FACILITIES GEOTECHNICAL ASSESSMENT

TITLE:
SITE FACILITIES – ORIGINAL HEAP LEACH OPTIONS AND WASTE ROCK DUMPS

PROJECT No.:	FIG No.:	REV.:
0792-002	2	

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Ann Gulch Heap Leach Option
Mine site camp and plant area
Possible Ann Gulch ponds
Waste rock dump footprint
Crusher area
Open pit footprint (approximate)
Possible Olive Gulch ponds
Olive Gulch heap leach option

Based on information provided by Scott Wilson RPA, 2009.
Air photo imagery provided by Stantec.
Facilities footprint from Scott Wilson RPA, 2009.

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Facilities
Roads and Trails
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APPROVED:	JTCS

PROFESSIONAL SEAL:

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

CLIENT:
VICTORIA GOLD

PROJECT:
EAGLE GOLD PROJECT
SITE FACILITIES GEOTECHNICAL ASSESSMENT

TITLE:
SITE FACILITIES – PREFERRED HEAP LEACH OPTIONS AND WASTE ROCK DUMP

PROJECT No.:	FIG No.:	REV.:
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Fisher Gulch
Ann Gulch
Dublin Gulch
Cassellan Gulch
Dawn Bell Gulch
Olive Gulch
Stewart Gulch
Eagle Pup
Stuttle Gulch
Gil Gulch
Haggart Creek
Haggart Creek
Eagle Gulch

Watercourse (perennial)
Watercourse (intermittent)
Watercourse (ephemeral)
Waterbody
N
0 500 1,000 Meters

Based on information provided by Scott Wilson RPA, 2009.
Topography interpreted from 2 m contours provided by Victoria Gold Corporation, July 2009.
Watercourse layer provided by Stantec, October 2009.

NAD 1983 UTM Zone 8N

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BGC ENGINEERING INC.
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CLIENT: VICTORIA GOLD

PROJECT: EAGLE GOLD PROJECT
SITE FACILITIES GEOTECHNICAL ASSESSMENT

TITLE: PHYSIOGRAPHY AND DRAINAGE

PROJECT No.:	FIG No.:	REV.:
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Ann Gulch
Ann Gulch Heap Leach Option
Middle Reach Dublin Gulch
Bawn Boy Gulch
Possible Olive Gulch ponds
Mine site camp and plant area
Possible Ann Gulch ponds
Lower Reach Dublin Gulch
Olive Gulch
Waste rock dump footprint
Stewart Gulch
Olive Gulch heap leach option
Eagle Pup
Stuttle Gulch
West side Haggart Creek
Crusher area
Open pit footprint (approximate)

Facilities
Terrain Units

Slope Angle

- < 10
- 10 - 15
- 15 - 19
- 19 - 21.8
- 21.8 - 26.6
- 26.6 - 33.7
- 33.70 - 90

N

0 500 1,000 Meters

Topography interpreted from 2 m contours provided by Victoria Gold Corporation, July 2009.
Facilities footprint from Scott Wilson RPA, 2009.

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NAD 1983 UTM Zone 8N

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AN APPLIED EARTH SCIENCES COMPANY

CLIENT:
VICTORIA GOLD

PROJECT:
EAGLE GOLD PROJECT
SITE FACILITIES GEOTECHNICAL ASSESSMENT

TITLE:
SLOPE ANGLES

PROJECT No.:	FIG No.:	REV.:
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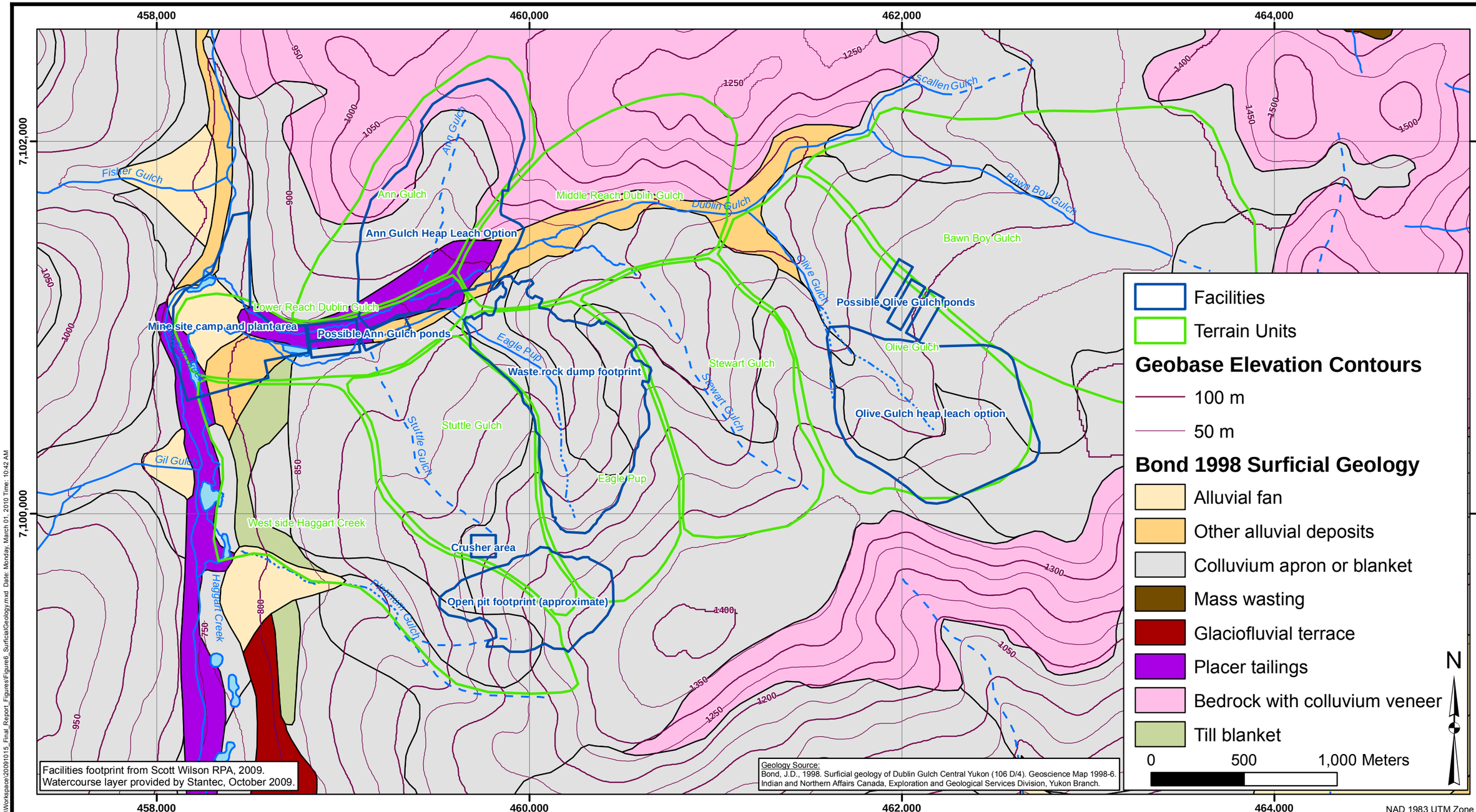

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APPROVED:	JTCS

PROFESSIONAL SEAL:

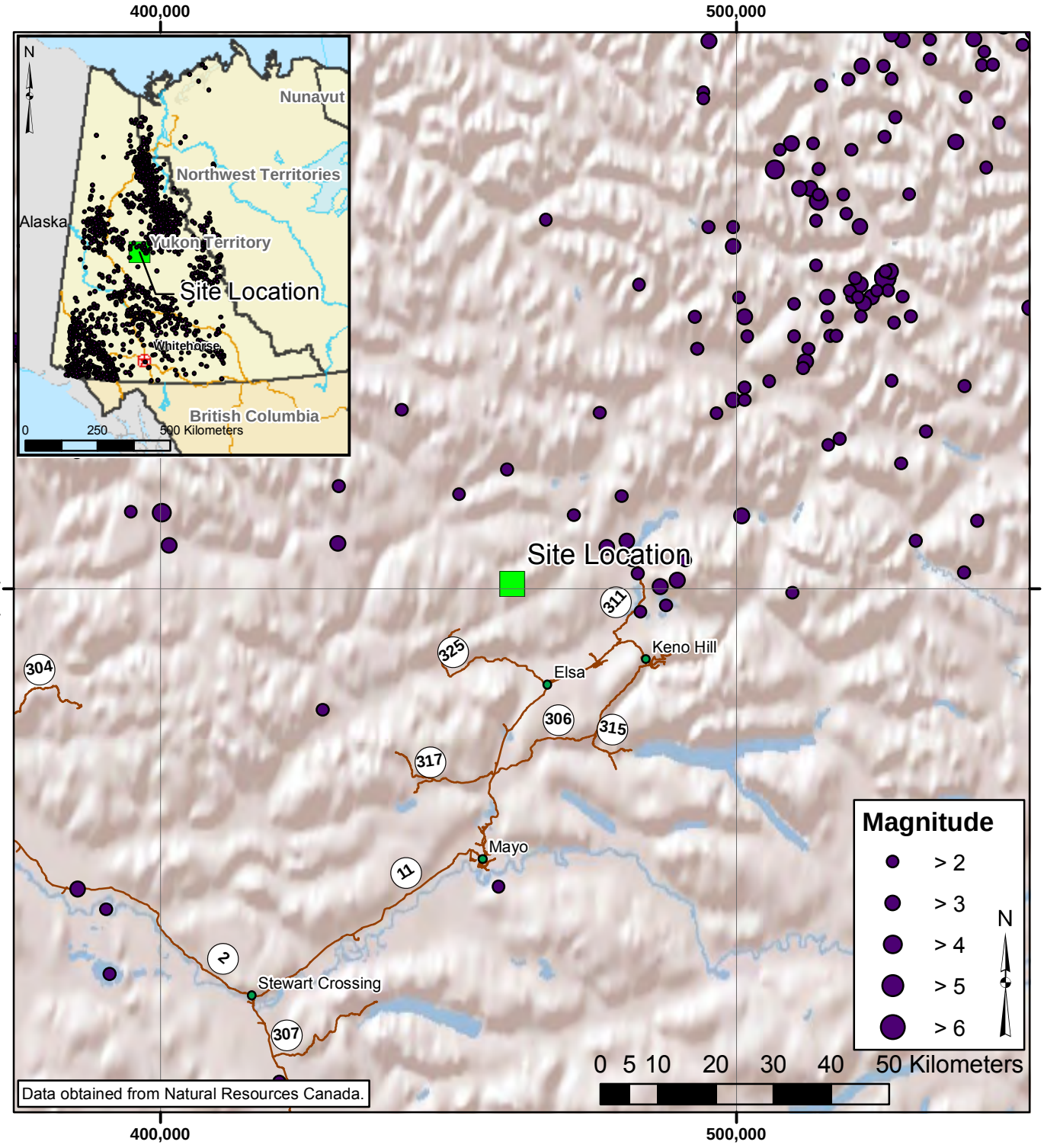
BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

CLIENT:
VICTORIA GOLD

PROJECT:
EAGLE GOLD PROJECT
SITE FACILITIES GEOTECHNICAL ASSESSMENT

TITLE:
SURFICIAL GEOLOGY MAP

PROJECT No.:	FIG No.:	REV.:
0792-002	6	



NAD 1983 UTM Zone 8N

SCALE:	1:1,000,000	DESIGNED:	PQ
DATE:	MAR 2010	CHECKED:	PQ
DRAWN:	GLT	APPROVED:	JTCS

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

CLIENT: VICTORIA GOLD

PROJECT: EAGLE GOLD PROJECT
SITE FACILITIES GEOTECHNICAL ASSESSMENT

TITLE: DISTRIBUTION OF RECORDED SEISMIC EVENTS

PROJECT No.:	FIG No.:	REV.:
0792-002	7	

X:\Projects\0792 Victoria Gold\002 Eagle Creek\Workspace\20091015_Final_Report_Figures\Figure7_Seismic.mxd Date: Monday, March 01, 2010 Time: 10:50 AM

458,000 460,000 462,000 464,000

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Ann Gulch

Middle Reach Dublin Gulch

Ann Gulch Heap Leach Option

Bawn Boy Gulch

Possible Olive Gulch ponds

Mine site camp and plant area

Possible Ann Gulch ponds

Lower Reach Dublin Gulch

Olive Gulch

Waste rock dump footprint

Stewart Gulch

Olive Gulch heap leach option

Eagle Pup

Stuttle Gulch

West side Haggart Creek

Crusher area

Open pit footprint (approximate)

Topography interpreted from 2 m contours provided by Victoria Gold Corporation, July 2009.
Facilities footprint from Scott Wilson RPA, 2009.

Facilities

Terrain Units

Geobase Elevation Contours

100m

50m

10m

0 500 1,000 Meters

N

NAD 1983 UTM Zone 8N

X:\Projects\0792 Victoria Gold\002 Eagle Creek\Workspace\20091015_Final_Report_Figures\Figure8_TerrainUnits.mxd Date: Monday, March 01, 2010 Time: 10:59 AM

REV.	DATE	REVISION NOTES	DRAWN	CHECK	APPR.

SCALE: 1:20,000
DATE: MAR 2010
DRAWN: GLT
DESIGNED: PQ
CHECKED: PQ
APPROVED: JTCS

PROFESSIONAL SEAL:

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

CLIENT: VICTORIA GOLD

PROJECT: EAGLE GOLD PROJECT
SITE FACILITIES GEOTECHNICAL ASSESSMENT

TITLE: TERRAIN UNITS SELECTED FOR DATA ORGANIZATION

PROJECT No.:	FIG No.:	REV.:
0792-002	8	

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BGC09-HL6-6 BGC09-HL6-2 BGC09-HL6-7 BGC09-HL6-3 BGC09-HL6-1 BGC09-HL6-16 BGC09-HL6-17 BGC09-HL6-5 BGC09-HL6-9 BGC09-HL6-4 BGC09-HL6-15 BGC09-HL6-10 BGC09-HL6-12 BGC09-HL6-11 BGC09-HL6-13 BGC09-HL6-8 BGC09-HL1-1 BGC09-WR-5 TP-BGC09-A-1 BGC09-HL6-14 BGC09-WR-7 BGC09-WR-4 BGC09-HL1-2 BGC09-DC-1 BGC09-WR-3 TP-BGC09-A-2 BGC09-WR-2 BGC09-DC-4 BGC09-HL4-2 BGC09-WR-6 BGC09-HL4-10 BGC09-HL4-3 BGC09-HL4-1 BGC09-DC-3 BGC09-WR-1 BGC09-HL4-11 BGC09-STU-4 BGC09-HL4-7 BGC09-WR-9 TP-BGC09-A-3 BGC09-STU-3 BGC09-HL4-4 BGC09-HL4-12 BGC09-HL4-13 BGC09-HL4-8 BGC09-WR-8 BGC09-HL4-14 BGC09-HL4-18 BGC09-HL4-9 BGC09-HL4-17 BGC09-HL4-6 BGC09-HL4-5 BGC09-HL4-16 TP-BGC09-A-4 BGC09-HL4-15 BGC09-P-4 BGC09-P-2 BGC09-P-3 BGC09-P-1 BGC09-HL5-8 BGC09-HL5-3 BGC09-HL5-9 BGC09-HL5-7 BGC09-HL5-2 BGC09-HL5-6 BGC09-HL5-1 BGC09-HL5-10 BGC09-HL5-4 BGC09-HL5-5

Ann Gulch
Middle Reach Dublin Gulch
Ann Gulch Heap Leach Option
Bawn Boy Gulch
Lower Reach Dublin Gulch
Possible Olive Gulch ponds
Mine site camp and plant area
Possible Ann Gulch ponds
Olive Gulch
Waste rock dump footprint
Stewart Gulch
Olive Gulch heap leach option
Eagle Pup
Stuttle Gulch
Crusher area
West side Haggart Creek
Open pit footprint (approximate)

Test Pit
Facilities
Terrain Units

N

0 500 1,000 Meters

Topography interpreted from 2 m contours provided by Victoria Gold Corporation, July 2009.
Facilities footprint from Scott Wilson RPA, 2009.

NAD 1983 UTM Zone 8N

REV.	DATE	REVISION NOTES	DRAWN	CHECK	APPR.

SCALE: 1:20,000
DATE: MAR 2010
DRAWN: GLT
DESIGNED: PQ
CHECKED: PQ
APPROVED: JTCS

PROFESSIONAL SEAL:

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

CLIENT: VICTORIA GOLD

PROJECT: EAGLE GOLD PROJECT
SITE FACILITIES GEOTECHNICAL ASSESSMENT

TITLE: TEST PIT LOCATION PLAN

PROJECT No.: 0792-002
FIG No.: 9
REV.:

X:\Projects\0792 Victoria Gold\002 Eagle Creek\Workspace\20091015_Final_Report_Figures\Figure9_TestPit.mxd Date: Monday, March 01, 2010 Time: 11:05 AM

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AG-1
AG-2
AG-3
Ann Gulch
Ann Gulch Heap Leach Option
Middle Reach Dublin Gulch
OG-3
Bawn Boy Gulch
Possible Olive Gulch ponds
Mine site camp and plant area
DG-4
Lower Reach Dublin Gulch
Possible Ann Gulch ponds
EP-3
EP-2
STU-3
STU-4
STU-2
Waste rock dump footprint
Stewart Gulch
Olive Gulch
OG-2
Olive Gulch heap leach option
OG-1
DG-5
DG-7
STU-1
EP-1
Eagle Pup
Stuttle Gulch
West side Haggart Creek
Crusher area
Open pit footprint (approximate)

Monitoring Wells Completed by Stantec
BGC Completed Boreholes
Facilities
Terrain Units
0 500 1,000 Meters
N

Topography interpreted from 2 m contours provided by Victoria Gold Corporation, July 2009.
Facilities footprint from Scott Wilson RPA, 2009.

458,000 460,000 462,000 464,000

NAD 1983 UTM Zone 8N

X:\Projects\0792 Victoria Gold\002 Eagle Creek\Workspace\20091015_Final_Report_Figures\Figure10_BoreHoles.mxd Date: Wednesday, March 03, 2010 Time: 11:46 AM

REV.	DATE	REVISION NOTES	DRAWN	CHECK	APPR.

SCALE: 1:20,000
DATE: MAR 2010
DRAWN: GLT
DESIGNED: PQ
CHECKED: PQ
APPROVED: JTCS

PROFESSIONAL SEAL:

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

CLIENT: VICTORIA GOLD

PROJECT: EAGLE GOLD PROJECT
SITE FACILITIES GEOTECHNICAL ASSESSMENT

TITLE: BOREHOLE LOCATION PLAN

PROJECT No.:	FIG No.:	REV.:
0792-002	10	

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7,100,000

Ann Gulch
Middle Reach Dublin Gulch
Bawn Boy Gulch
Olive Gulch
Lower Reach Dublin Gulch
Stewart Gulch
Eagle Pup
Stuttle Gulch
West side Haggart Creek

Topography interpreted from 2 m contours provided by Victoria Gold Corporation, July 2009.

Organic Soil Thickness (m)

- 0.1
- 0.25
- 0.5
- 0.75
- 1
- Terrain Units

0 500 1,000 Meters

N

NAD 1983 UTM Zone 8N

REV.	DATE	REVISION NOTES	DRAWN	CHECK	APPR.

SCALE:	1:20,000
DATE:	MAR 2010
DRAWN:	GLT
DESIGNED:	PQ
CHECKED:	PQ
APPROVED:	JTCS

PROFESSIONAL SEAL:

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

CLIENT: VICTORIA GOLD

PROJECT: EAGLE GOLD PROJECT
SITE FACILITIES GEOTECHNICAL ASSESSMENT

TITLE: DISTRIBUTION OF ORGANIC SOIL THICKNESS IN TEST PITS

PROJECT No.:	FIG No.:	REV.:
0792-002	11	

X:\Projects\0792 Victoria Gold\002 Eagle Creek\Workspace\20091015_Final_Report_Figures\Figure11_OrganicSoil.mxd Date: Monday, March 01, 2010 Time: 11:08 AM

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Lower Reach Dublin Gulch
Ann Gulch
Middle Reach Dublin Gulch
Bawn Boy Gulch
Olive Gulch
Stewart Gulch
Eagle Pup
Stuttle Gulch
West side Haggart Creek

1.5 2.3 0.6 2.5 0.4 3 0.6 0.6 1.1 4.7 3.8 5.7 1 0.5 1.5 2.2 1.1 1.7 5.6 5.9
4.5 2 1.7 3.4 0.7 1.3 2.5 1.6 2 0.6 1.6 1.7 6.3 2.8 1.3 1.7 4 1.1 4.3
1.1 1.8 2.2 6.3 5.4 1.5 4.8 6.2 3.2
1.8 0.4 0.2 3.8 1.3 2.3 1.8 3.1 1
1.4 1.4 0.5

Topography interpreted from 2 m contours provided by Victoria Gold Corporation, July 2009.

Thickness of Colluvium (m)

- 0.1
- 0.5
- 1
- 5
- 10
- Terrain Units

0 500 1,000 Meters

N

NAD 1983 UTM Zone 8N

REV.	DATE	REVISION NOTES	DRAWN	CHECK	APPR.

SCALE:	1:20,000
DATE:	MAR 2010
DRAWN:	GLT
DESIGNED:	PQ
CHECKED:	PQ
APPROVED:	JTCS

PROFESSIONAL SEAL:

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

CLIENT: VICTORIA GOLD

PROJECT: EAGLE GOLD PROJECT
SITE FACILITIES GEOTECHNICAL ASSESSMENT

TITLE: DISTRIBUTION OF COLLUVIUM THICKNESS FROM 2009 TEST HOLES

PROJECT No.:	FIG No.:	REV.:
0792-002	12	

X:\Projects\0792 Victoria Gold\002 Eagle Creek\Workspace\20091015_Final_Report_Figures\Figure 12_Colluvium.mxd Date: Monday, March 01, 2010 Time: 11:09 AM

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Ann Gulch
Middle Reach Dublin Gulch
Bawn Boy Gulch
Lower Reach Dublin Gulch
Olive Gulch
Stewart Gulch
Eagle Pup
Stuttle Gulch
West side Haggart Creek

2.5 2.9 3.7 4 4.8 3 3 3.3 2 0.4 0.8 3.6 2.1 0.8 4.5
3.4 1 3.8 1 4
0.8 0.5 0.8 4.5 4.1 0.3 3.5 2.3 0.8
1.5
0.7 4 1.8 3.3

Topography interpreted from 2 m contours provided by Victoria Gold Corporation, July 2009.

Thickness of Weathered Rock (m)

- 0 - 1
- 1 - 2
- 2 - 3
- 3 - 4
- 4 - 5
- Terrain Units

0 500 1,000 Meters

N

NAD 1983 UTM Zone 8N

REV.	DATE	REVISION NOTES	DRAWN	CHECK	APPR.

SCALE: 1:20,000
DATE: MAR 2010
DRAWN: GLT
DESIGNED: PQ
CHECKED: PQ
APPROVED: JTCS

PROFESSIONAL SEAL:

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

CLIENT: VICTORIA GOLD

PROJECT: EAGLE GOLD PROJECT
SITE FACILITIES GEOTECHNICAL ASSESSMENT

TITLE: DISTRIBUTION OF THICKNESS OF WEATHERED ROCK FROM 2009 TEST HOLES

PROJECT No.:	FIG No.:	REV.:
0792-002	13	

X:\Projects\0792 Victoria Gold\002 Eagle Creek\Workspace\20091015_Final_Report_Figures\Figure13_WeatheredRock.mxd Date: Monday, March 01, 2010 Time: 11:13 AM

458,000
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Ann Gulch
Ann Gulch Heap Leach Option
AG-3
Middle Reach Dublin Gulch
MW96-07a
GT96-02
Bawn Boy Gulch
95-148
95-140
GT96-30
Possible Olive Gulch ponds
Mine site camp and plant area
Possible Ann Gulch ponds
Lower Reach Dublin Gulch
TR96-08
STU-4
STU-3
Waste rock dump footprint
TR96-09
Stewart Gulch
Olive Gulch
TR96-10
Eagle Pup
Olive Gulch heap leach option
Stuttle Gulch
West side Haggart Creek
Crusher area
95-138
Open pit footprint (approximate)
GT96-36
GT96-33

1995 and 1996 Thermistors
2009 Thermistors
Facilities
Terrain Units
0 500 1,000 Meters
N

Topography interpreted from 2 m contours provided by Victoria Gold Corporation, July 2009.
Facilities footprint from Scott Wilson RPA, 2009.

458,000
460,000
462,000
464,000
NAD 1983 UTM Zone 8N

X:\Projects\0792 Victoria Gold\002 Eagle Creek\Workspace\20091015_Final_Report_Figures\Figure14_Thermistors.mxd Date: Monday, March 01, 2010 Time: 11:14 AM

REV.	DATE	REVISION NOTES	DRAWN	CHECK	APPR.

SCALE:	1:20,000
DATE:	MAR 2010
DRAWN:	GLT
DESIGNED:	PQ
CHECKED:	PQ
APPROVED:	JTCS

PROFESSIONAL SEAL:

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

CLIENT:
VICTORIA GOLD

PROJECT:
EAGLE GOLD PROJECT
SITE FACILITIES GEOTECHNICAL ASSESSMENT

TITLE:
LOCATIONS OF PRESENT AND PAST THERMISTORS

PROJECT No.:	FIG No.:	REV.:
0792-002	14	

458,000 460,000 462,000 464,000

7,102,000

7,100,000

Ann Gulch

Middle Reach Dublin Gulch

Bawn Boy Gulch

Lower Reach Dublin Gulch

Olive Gulch

Stewart Gulch

Eagle Pup

Stuttle Gulch

West side Haggart Creek

No frozen soil

Frozen soil

Terrain units

0 500 1,000 Meters

N

Based on investigation programs in summer 1995 (Knight Piesold 1996); summer 1996 (Sitka 1996) and July to August 2009 (this study).
Topography interpreted from 2 m contours provided by Victoria Gold Corporation, July 2009.

458,000 460,000 462,000 464,000

NAD 1983 UTM Zone 8N

X:\Projects\0792 Victoria Gold\002 Eagle Creek\Workspace\20091015_Final_Report_Figures\Figure15_FrozenGround.mxd Date: Monday, March 01, 2010 Time: 11:18 AM

REV.	DATE	REVISION NOTES	DRAWN	CHECK	APPR.

SCALE:	1:20,000
DATE:	MAR 2010
DRAWN:	GLT
DESIGNED:	PQ
CHECKED:	PQ
APPROVED:	JTCS

PROFESSIONAL SEAL:

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

CLIENT: VICTORIA GOLD

PROJECT: EAGLE GOLD PROJECT
SITE FACILITIES GEOTECHNICAL ASSESSMENT

TITLE: FROZEN GROUND OBSERVATIONS

PROJECT No.:	FIG No.:	REV.:
0792-002	15	

458,000 460,000 462,000 464,000

7,102,000

7,100,000

Ann Gulch

Middle Reach Dublin Gulch

Bawn Boy Gulch

Lower Reach Dublin Gulch

Olive Gulch

Stewart Gulch

Eagle Pup

Stuttle Gulch

West side Haggart Creek

Observations from between July and August, 2009.
Topography interpreted from 2 m contours provided by Victoria Gold Corporation, July 2009.

No Excess Ice

Excess Ice

Terrain Units

0 500 1,000 Meters

N

458,000 460,000 462,000 464,000

NAD 1983 UTM Zone 8N

X:\Projects\0792 Victoria Gold\002 Eagle Creek\Workspace\20091015_Final_Report_Figures\Figure16_Excessice.mxd Date: Monday, March 01, 2010 Time: 11:20 AM

REV.	DATE	REVISION NOTES	DRAWN	CHECK	APPR.

SCALE:	1:20,000
DATE:	MAR 2010
DRAWN:	GLT
DESIGNED:	PQ
CHECKED:	PQ
APPROVED:	JTCS

PROFESSIONAL SEAL:

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

CLIENT:
VICTORIA GOLD

PROJECT:
EAGLE GOLD PROJECT
SITE FACILITIES GEOTECHNICAL ASSESSMENT

TITLE:
GROUND ICE OBSERVATIONS IN 2009 TEST HOLES

PROJECT No.:	FIG No.:	REV.:
0792-002	16	

458,000 460,000 462,000 464,000

7,102,000

7,100,000

Ann Gulch
Middle Reach Dublin Gulch
Bawn Boy Gulch
Lower Reach Dublin Gulch
Stewart Gulch
Olive Gulch
Eagle Pup
Stuttle Gulch
West side Haggart Creek

5.5 m, 5.4 m, > 6.5 m, 6.2 m, 5.3 m, 4.4 m, 3.8 m, > 4 m, 3.3 m, 5.3 m, 4.8 m, 2.8 m, > 5.8 m, 3.3 m, > 2.6 m, > 1.3 m, 6.5 m, 6.2 m, > 6.2 m, > 0 m, > 5 m, > 3 m, > 6.5 m, > 4.5 m, > 2.3 m, > 2.5 m, 4.7 m, 3 m, 5.8 m, > 6.5 m, > 6 m, > 1.9 m, > 5 m, > 1.9 m, > 6 m, > 1.5 m, > 2.6 m, > 2.8 m, > 5.5 m, > 5.7 m, > 6.5 m, > 2.2 m, > 1.9 m, > 1.9 m, > 1.5 m, > 2.2 m, > 6.5 m, > 3.5 m, > 4.7 m, > 1.6 m, > 2 m, > 4.3 m, > 1.3 m, > 6 m, 2.2 m, > 5.5 m, 2.5 m, 3.5 m, > 2 m, 1.4 m, 4.8 m, > 6 m, 0.9 m, 4.4 m, > 2.8 m, > 5.5 m, > 5.5 m, 2 m

Topography interpreted from 2 m contours provided by Victoria Gold Corporation, July 2009.
Facilities footprint from Scott Wilson RPA, 2009.

Bedrock Depth (m)

- 0 - 1
- 1 - 2.5
- 2.5 - 5
- 5 - 7.5
- > 7.5
- Bedrock not Encountered
- Terrain units

0 500 1,000 Meters

N

458,000 460,000 462,000 464,000

NAD 1983 UTM Zone 8N

X:\Projects\0792 Victoria Gold\002 Eagle Creek\Workspace\20091015_Final_Report_Figures\Figure17_Bedrock.mxd Date: Monday, March 01, 2010 Time: 11:25 AM

REV.	DATE	REVISION NOTES	DRAWN	CHECK	APPR.

SCALE:	1:20,000
DATE:	MAR 2010
DRAWN:	GLT
DESIGNED:	PQ
CHECKED:	PQ
APPROVED:	JTCS

PROFESSIONAL SEAL:

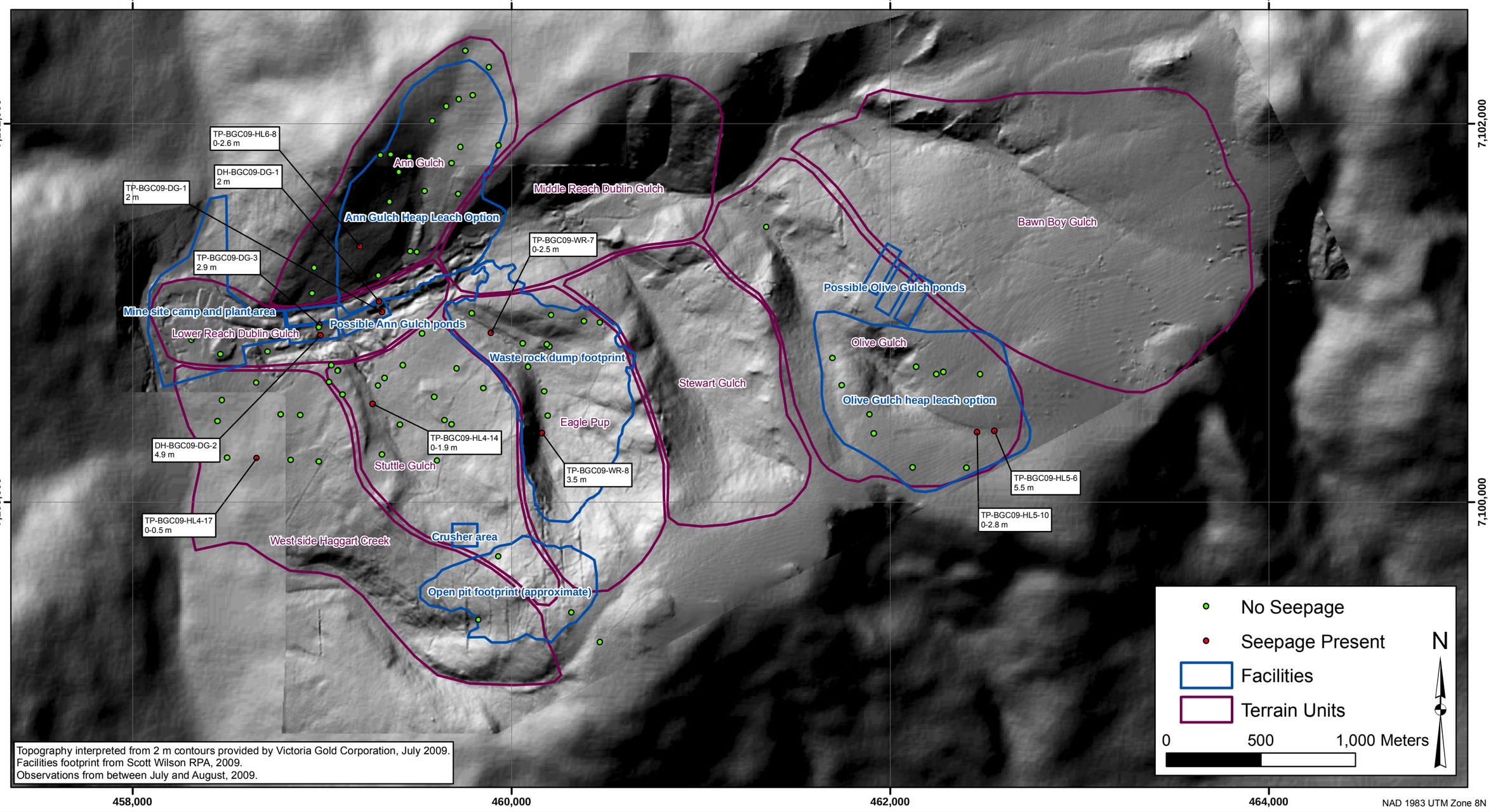
BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

CLIENT: VICTORIA GOLD

PROJECT: EAGLE GOLD PROJECT
SITE FACILITIES GEOTECHNICAL ASSESSMENT

TITLE: DEPTH TO BEDROCK OBSERVED IN TEST PITS

PROJECT No.:	FIG No.:	REV.:
0792-002	17	



X:\Projects\0792 Victoria Gold\002 Eagle Creek\Workspace\20091015_Final_Report_Figures\Figure18_Seepage.mxd Date: Monday, March 01, 2010 Time: 11:28 AM

REV.	DATE	REVISION NOTES	DRAWN	CHECK	APPR.

SCALE: 1:20,000
DATE: MAR 2010
DRAWN: GLT
DESIGNED: PQ
CHECKED: PQ
APPROVED: JTCS

PROFESSIONAL SEAL:

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

CLIENT: VICTORIA GOLD

PROJECT: EAGLE GOLD PROJECT
SITE FACILITIES GEOTECHNICAL ASSESSMENT

TITLE: TEST PIT AND BOREHOLE SEEPAGE OBSERVATIONS AND DEPTH

PROJECT No.:	FIG No.:	REV.:
0792-002	18	

458,000 460,000 462,000 464,000

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MW09-AG2
9/4/2009: 14.02 m

MW09-AG1
8/26/2009: 13.97 m

MW96-15a
7/25/2009: 7.68 m
8/27/2009: 7.875 m

MW09-OG3
9/3/2009: 2.75 m

GT96-26
7/24/2009: 4.21 m
8/27/2009: 4.217 m

MW96-5
7/24/2009: 3.35 m

MW96-7b
7/24/2009: 1.26 m

MW96-8
7/24/2009: 1.36 m
8/27/2009: 1.528 m

DH95-144
7/24/2009: 3.49 m

MW96-15b
7/25/2009: 8.66 m

MW09-DG4
9/4/2009: 6.02 m

MW09-DG1
8/27/2009: 2.19 m

MW96-9a/b
7/24/2009: 7.16 m
8/27/2009: 7.612 m

Ann Gulch

Ann Gulch Heap Leach Option

Middle Reach Dublin Gulch

Bawn Boy Gulch

MW96-4
7/24/2009: 6.53 m

MW96-3
7/24/2009: 3.33 m

Possible Olive Gulch ponds

MW96-2
7/24/2009: 10.57 m

Lower Reach Dublin Gulch

Mine site camp and plant area

MW96-13a/b
7/25/2009: 16.52 m
8/27/2009: 17.851 m

MW09-OG2
9/4/2009: 5.50 m

DH95-147
7/24/2009: 5.00 m

MW96-1
8/21/2009: 26.10 m
8/27/2009: 23.969 m

Possible Ann Gulch ponds

MW09-DG2
8/27/2009: 1.71 m

Olive Gulch

Stewart Gulch

Waste rock dump footprint

Olive Gulch heap leach option

MW09-Stu1
8/27/2009: 14.79 m

MW09-DG5
9/4/2009: 14.24 m

Eagle Pup

Stuttle Gulch

MW09-Stu2
8/27/2009: -0.18 m

West side Haggart Creek

Crusher area

MW96-17a
8/23/2009: dry m

Open pit footprint (approximate)

MW96-25
8/23/2009: dry m

MW96-19
8/23/2009: 27.73 m

MW96-18
7/25/2009: 18.56 m
8/27/2009: 21.247 m

MW96-23
8/27/2009: 9.64 m

MW96-17b
8/23/2009: 44.70 m

Topography interpreted from 2 m contours provided by Victoria Gold Corporation, July 2009.
Facilities footprint from Scott Wilson RPA, 2009.

Monitoring Wells
Facilities
Terrain Units

N

0 500 1,000 Meters

NAD 1983 UTM Zone 8N

X:\Projects\0792 Victoria Gold\002 Eagle Creek\Workspace\20091015_Final_Report_Figures\Figure19_GroundwaterDepths.mxd Date: Wednesday, March 03, 2010 Time: 9:59 AM

REV.	DATE	REVISION NOTES	DRAWN	CHECK	APPR.

SCALE: 1:20,000
DATE: MAR 2010
DRAWN: GLT
DESIGNED: PQ
CHECKED: PQ
APPROVED: JTCS

PROFESSIONAL SEAL:

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

CLIENT: VICTORIA GOLD

PROJECT: EAGLE GOLD PROJECT
SITE FACILITIES GEOTECHNICAL ASSESSMENT

TITLE: GROUNDWATER DEPTHS

PROJECT No.:	FIG No.:	REV.:
0792-002	19	

458,000 460,000 462,000 464,000

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Fisher Gulch
Ann Gulch
Ann Gulch Heap Leach Option
Mine site camp and plant area
Possible Ann Gulch ponds
Calgart Creek
Fawie Gulch
Waste rock dump footprint
Skull Gulch
Gil Gulch
Crusher area
Open pit footprint (approximate)
Pleasant Valley
Hollister Creek
Queen Gulch
Olive Gulch
Possible Olive Gulch ponds
Olive Gulch heap leach option
Bald Eagle Gulch
Bald Eagle Gulch

Air photo imagery provided by Stantec.
Facilities footprint from Scott Wilson RPA, 2009.
Watercourse layer provided by Stantec, October 2009.

N

Scarp of Potential Instability

Facilities

0 500 1,000 Meters

458,000 460,000 462,000 464,000

NAD 1983 UTM Zone 8N

X:\Projects\0792 Victoria Gold\002 Eagle Creek\Workspace\20091015_Final_Report_Figures\Figure20_Instability.mxd Date: Wednesday, March 03, 2010 Time: 10:02 AM

REV.	DATE	REVISION NOTES	DRAWN	CHECK	APPR.

SCALE:	1:20,000
DATE:	MAR 2010
DRAWN:	GLT
DESIGNED:	PQ
CHECKED:	PQ
APPROVED:	JTCS

PROFESSIONAL SEAL:

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

CLIENT:
VICTORIA GOLD

PROJECT:
EAGLE GOLD PROJECT
SITE FACILITIES GEOTECHNICAL ASSESSMENT

TITLE:
POTENTIAL INSTABILITY FEATURE

PROJECT No.:	FIG No.:	REV.:
0792-002	20	

APPENDIX A
TEST PIT LOGS

ANN GULCH

TP-BGC09-A-1

TP-BGC09-HL1-1

TP-BGC09-HL1-2

TP-BGC09-HL6-1

TP-BGC09-HL6-2

TP-BGC09-HL6-3

TP-BGC09-HL6-4

TP-BGC09-HL6-5

TP-BGC09-HL6-6

TP-BGC09-HL6-7

TP-BGC09-HL6-8

TP-BGC09-HL6-9

TP-BGC09-HL6-10

TP-BGC09-HL6-11

TP-BGC09-HL6-12

TP-BGC09-HL6-13

TP-BGC09-HL6-14

TP-BGC09-HL6-15

TP-BGC09-HL6-16

TP-BGC09-HL6-17

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-A-1

Location : Heap Leach #1

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459464E, 7101321N
Ground Elevation (m) 884
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 18 Jul 09
Finish Date: 18 Jul 09
Final Depth of Pit (m) : 2.2
Logged by : PQ
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS Root mat, forest litter.
					SAND (SW), Silty, fine grained, compact, damp, brown, occasional cobbles, trace gravel. [COLLUVIUM]
1					GRAVEL (GW) Sandy, trace silt, occasional cobbles, FROZEN: Nf, Nbn. [COLLUVIUM] 1.0m - Refused on clean out bucket, changed to ripper bucket.
2					SILT (ML) Organic, trace sand, occasional gravel and cobbles, grey, FROZEN: Nbn. [TILL?]
					END OF TP @ 2.2m. REFUSAL ON FROZEN GROUND. NOTES: 1) No samples collected. 2) No seepage. 3) Hole left open, backfilled to surface later.
3					
4					
5					
6					
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB
PEAK ◆ ■
REMOLD ◇ □
▲ UC/2
△ Pocket Pen /2
★ % Fines

Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

GENERAL BGC (TESTPIT) 0792-002_03.GPJ BGC.GDT 10/2/09

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL1-1

Location : Dublin Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 458960E, 7101237N
Ground Elevation (m) 892
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 07 Aug 09
Finish Date: 07 Aug 09
Final Depth of Pit (m) : 6.5
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					PEAT (PT) Organics, dark brown, trace rootlets.
1					SAND and GRAVEL (SW/GW) Fine to Coarse, trace cobble, trace clay, dense, max particle size=15cm, angular, brown, moist to wet, partially FROZEN: Vx, 5%, stratified grey/orange horizons. [COLLUVIUM]
2					CLAY (CL) Gravelly, trace sand, non-plastic, firm, greyish blue, moist, homogeneous, clay has sheen possibly highly altered mica schist, partially FROZEN.
3					QUARTZITE Orangish grey, medium grained, sugary texture, very weak, completely weathered to gravelly sand, disintegrated, unfrozen.
4					Alternating mottled highly weathered quartzite sand and gravel and and highly weathered mica schist gravelly clay greyish blue to orangish grey, very dense, moist, mottled, gap graded, angular, max clast 5cm. [WEATHERED BEDROCK]
5					5.2m - Sloughing.
6					
7					End of TP @ 6.5m. REFUSAL ON QUARTZITE BEDROCK. NOTES: 1) Roots down to 0.30m. 2) No seepage. 3) Backfilled to surface.
8					
9					
10					

Su - kPa

40 80 120 160

VANE	FIELD	LAB	
PEAK	◆	■	▲ UC/2
REMOLD	◇	□	△ Pocket Pen /2

★ % Fines

Moisture Content

W_P% W% W_L%

20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL1-2

Location : Dublin Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 458947E, 7101102N
Ground Elevation (m) 854
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 07 Aug 09
Finish Date: 07 Aug 09
Final Depth of Pit (m) : 6.2
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					PEAT (PT) Organics, roots 10cm diam, dark brown
1					SAND and GRAVEL (SC/GC) Clayey, trace cobbles, fine to coarse, clayey, very dense, max particle size 20cm, angular, brown, moist, homogeneous, metasedimentary clasts, FROZEN: Vx, 1%. 1.5m to 4.0m - Hard digging.
2					
3					
4					4.5m - Partially FROZEN, trace clay, trace cobbles.
5					5.5m to 5.8m - Grey, laminated, silty fine sand lens, trace organics, compact.
6					End of TP @ 6.2m. EXTENT OF EXCAVATOR REACH. NOTES: 1) Roots down to 0.50m. 2) No seepage. 3) Backfilled to surface.
7					
8					
9					
10					

Su - kPa
40 80 120 160

VANE	FIELD	LAB		
PEAK	◆	■	▲	UC/2
REMOLD	◇	□	△	Pocket Pen /2

★ % Fines

Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL6-1

Location : Ann Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459795E, 7102150N
Ground Elevation (m) 1038
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 28 Jul 09
Finish Date: 28 Jul 09
Final Depth of Pit (m) : 6.5
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Very thin layer of leaves, needles and debris, small spruce seedlings.
0.5		S1			GRAVELLY SAND (SW) Some silt, trace clay, well graded, loose-compact, metasedimentary clasts (up to 6cm), subangular, brown, moist, thin grey silt with a trace of clay lenses (approx 2cm thick, spaced ~30cm apart), no evident structure, weak cementation. Occasional cobble from ~1m down. [COLLUVIUM]
2.5		S2			WEATHERED METASEDIMENTARY BEDROCK Brown and oxidized orangey-brown rock, fine grained corestones, medium strong (R3), highly-completely weathered (W4-W5), ground rock fines and fractured rock. [WEATHERED BEDROCK]
5.3		S3			
6.5					END OF TP @ 6.5m. EXTENT OF EXCAVATOR REACH, BEDROCK. NOTES: 1) Roots down to 1.0m. 2) No Seepage, minor sloughing, no visible ground ice. 3) Backfilled to surface.

Su - kPa: 40, 80, 120, 160

VANE PEAK ◆ ■ REMOLD ◇ □ ▲ UC/2 △ Pocket Pen /2

★ % Fines

Moisture Content: W_P% × — W% ○ — W_L% ×; 20, 40, 60, 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

GENERAL BGC (TESTPIT) 0792-002_03.GPJ BGC.GDT 10/209

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL6-2

Location : Ann Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459724E, 7102128N
Ground Elevation (m) 1024
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 28 Jul 09
Finish Date: 28 Jul 09
Final Depth of Pit (m) : 4.4
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Thin moss, needles and leaves over silty black soil.
		S1			SAND and GRAVEL (SW) Trace clay, well graded, loose-compact, metasedimentary clasts up to 6cm, subangular-angular, dry, greyish-brown, no visible structure, weak cementation. [COLLUVIUM]
1		S2			WEATHERED METASEDIMENTARY ROCK Color varies from brown to yellowish-brown and reddish-brown, fine grained, weak-medium-strong (R2-R3), laminated, visible folding, highly-completely weathered (W4-W5), ground rock fines and platy, fractured fragments. [WEATHERED BEDROCK]
2					
3					
4					
					END OF TP @ 4.4m. WEATHERED METASEDIMENTARY BEDROCK. NOTES: 1) Roots down to 1.2m. 2) No seepage, minor sloughing, no visible ground ice. 3) Backfilled to surface.
5					
6					
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB ▲ UC/2
PEAK ◆ ■
REMOLD ◇ □ △ Pocket Pen /2
★ % Fines
Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL6-3

Location : Ann Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459660E, 7102091N
Ground Elevation (m) 1010
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 28 Jul 09
Finish Date: 28 Jul 09
Final Depth of Pit (m) : 6.2
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Brown, silty topsoil, covered with moss, rootlets throughout.
		S1			GRAVEL (GM) Some sand, trace clay, well graded, fine - very coarse sand, loose, subangular, subrounded and angular clasts (max 6cm), brown, moist, no visible structure. [COLLUVIUM]
1		S2			SANDY SILT and GRAVEL (MH/GM) Loose, subrounded/angular and angular clasts, brown, moist, no evident structure, occasional cobble. FROZEN: Nf, 5-10%. [COLLUVIUM]
2		S3			SAND (SW) Trace silt, well graded, loose, occasional gravel clasts (up to 6cm), sub-rounded/angular particles, brown, cool but dry, no evident structure, none-weak cementation, occasional rounded-subrounded cobbles.
3					METASEDIMENTARY ROCK Brown with reddish zones and orange oxide staining, fine grained, firm (S2), completely weathered (W5), dry, platy fines, friable pieces of laminated rock crumble under finger pressure. Ground/broken rock fines. [WEATHERED BEDROCK]
4					
5		S4			
6					END OF TP @ 6.2m. BEDROCK. NOTES: 1) Roots down to 0.9m. 2) No seepage. No visible ground ice. 3) Backfilled to surface.
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB ▲ UC/2
PEAK ◆ ■
REMOLD ◇ □ △ Pocket Pen /2
★ % Fines
Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL6-4

Location : Ann Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459406E, 7101744N
Ground Elevation (m) 981
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 28 Jul 09
Finish Date: 28 Jul 09
Final Depth of Pit (m) : 4.8
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Leaves, needles and rootlets over thin, dry silty soil.
		S1			SANDY GRAVEL (GW) Trace silt, well graded, brown, dry, interlensing of grey clayey material and loose reddy sand (dipping downhill), metasedimentary subangular-angular clasts (up to 5cm), weakly cemented. [COLLUVIUM?]
1		S2			
2					
3		S3			2.8m - FROZEN: Nf.
4		S4			METASEDIMENTARY BEDROCK Mixture of colors (reds and brown), fine grained, completely-highly weathered (W4-W5) gravel and fines (crushed rock).
5					END OF TP @ 4.8m. WEATHERED BEDROCK. NOTES: 1) Roots down to 0.7m. 2) No seepage, minor sloughing, no visible ground ice. 4) Dug uphill off old road, approximately 28 degree slope. 5) Backfilled to surface.
6					
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB
PEAK ◆ ■
REMOLD ◇ □
▲ UC/2
△ Pocket Pen /2
★ % Fines
Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL6-5

Location : Ann Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459309E, 7101833N
Ground Elevation (m) 1022
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 30 Jul 09
Finish Date: 30 Jul 09
Final Depth of Pit (m) : 4.0
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Thin moss and lichen cover over silty soil.
		S1			
1		S2			SILTY GRAVEL (GM) Trace sand, trace clay, well graded, loose to compact, angular, grey-brown, dry, none to weak cementation. [COLLUVIUM]
2					SILTY GRAVEL (GM) Some sand, well graded, loose to compact, gravel (up to 6cm), occasional cobble (~10cm), angular to subangular, brown, dry, no structure, weak cementation. [COLLUVIUM]
3					GRAVEL (GW) Some silt, trace clay, well graded, loose to compact, gravel (up to 6cm) and odd cobble, subangular to angular,dark grey-black, possbile structure, weak cementation, oxide staining on metased clasts. [COMPLETELY WEATHERED BEDROCK]
4		S3			WEATHERED METASEDIMENTRAY ROCK Brown with oxide staining, fine grained, highly weathered (W4) rock, comprised of gravel and crushed rock fines. [HIGHLY WEATHERED BEDROCK]
					END OF TP @ 4.0m. WEATHERED BEDROCK. NOTES: 1) Roots down to 1.0m. 2) No seepage, major sloughing (under spoil pile), no visible ground ice. 3) Backfilled to surface.
5					
6					
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB
PEAK ◆ ■
REMOLD ◇ □
▲ UC/2
△ Pocket Pen /2
★ % Fines

Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL6-6

Location : Ann Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459758E, 7102385N
Ground Elevation (m) 1062
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 30 Jul 09
Finish Date: 30 Jul 09
Final Depth of Pit (m) : 5.5
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Moss and lichen cover over silty brown soil with some angular gravel.
		S1			GRAVELLY SILT (ML) Some sand, brown, moist, no structure, weak cementation, weathered metasedimentary clasts (up to 6cm), angular. [COLLUVIUM?]
1		S2			
2					
3					WEATHERED SEDIMENTARY BEDROCK Brown, crushed rock and fines, pockets of reddish brown sand, weathered gravel corestones (R2-R3) with oxidized surfaces and fracture planes, relict structure visible. [WEATHERED BEDROCK]
4					
5					
6					END OF TP @ 5.5m. EXTENT OF EXCAVATOR REACH. NOTES: 1) Roots down to 0.6m. 2) No seepage, no major sloughing, no visible ground ice. 3) Backfilled to surface.
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB
PEAK ◆ ■
REMOLD ◇ □
▲ UC/2
△ Pocket Pen /2
★ % Fines
Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL6-7

Location : Ann Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459883E, 7102297N
Ground Elevation (m) 1072
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 30 Jul 09
Finish Date: 30 Jul 09
Final Depth of Pit (m) : 5.4
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0		S1			ORGANICS/TOPSOIL Moss old tree decay and rootlets in brown, dry silt, with some gravel, trace sand.
1		S2			GRAVEL (GM) Some silt, trace sand well graded, brown, moist, angular to subangular clasts up to 6cm.
					GRAVELLY SILT (ML) Some sand, trace clay, low plastic, firm, brown, moist, no structure evident, weakly cemented, slow dilatancy, clasts of metasedimentary weathered rock (R3), angular, occasional cobble. [COLLUVIUM]
2		S3			GRAVEL (GW) Some silt, well graded, loose, angular and subangular particles, brown, cold and moist, no evident structure. [COLLUVIUM]
3					WEATHERED METASEDIMENTARY BEDROCK Brown, crushed rock and fines, occasional boulder, some cobbles, visible stratification, oxide staining, weathering grade decreases from W5 to W4 with depth. [WEATHERED BEDROCK]
4					
5					
6					END OF TP @ 5.4m. NEAR EXTENT OF EXCAVATOR REACH. NOTES: 1) Roots down to 0.6m. 2) No seepage, minor sloughing, no visible ground ice. 3) Backfilled to surface.
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB ▲ UC/2
PEAK ◆ ■
REMOLD ◇ □ △ Pocket Pen /2
★ % Fines
Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL6-8

Location : Ann Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459200E, 7101352N
Ground Elevation (m) 920
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 30 Jul 09
Finish Date: 30 Jul 09
Final Depth of Pit (m) : 2.6
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0		S1			ORGANICS/TOPSOIL Thin grass/needle cover over black, wet silty soil.
1		S2			GRAVELLY SILT (ML) Some sand, trace clay, grey, moist-wet, loose, rapid dilatancy, angular and subangular metasedimentary clasts with occasional subrounded cobble. [COLLUVIUM]
2		S3			GRAVELLY SILT (ML) Some sand, trace clay, brown, frozen: poorly bonded non-vsible ice (Nf), thin coatings near clasts, angular and subangular metased clasts, occasional subrounded cobble. [COLLUVIUM]
3					End of Hole @2.6m. SLOUGHING AND SEEPAGE. NOTES: 1) Root depth indistinguishable under mud. 2) Ponded water on surface, in ruts from the excavator getting stuck two days earlier. 3) Major sloughing, visible seepage, no visible ground ice. 4) Backfilled to surface.
4					
5					
6					
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB ▲ UC/2
PEAK ◆ ■
REMOLD ◇ □ △ Pocket Pen /2
★ % Fines
Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL6-9

Location : Ann Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459933E, 7101886N
Ground Elevation (m) 1042
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 31 Jul 09
Finish Date: 31 Jul 09
Final Depth of Pit (m) : 3.8
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Moss and lichen cover over silt, trace sand, trace gravel, brown, dry.
		S1			
1		S2			GRAVELLY SILT (ML) Some sand, firm, brown, dry, no stucture, weak cementation, subangular, weathered metased clasts (up to 6cm), interlensed with black organic material. [COLLUVIUM]
2					GRAVELLY SILT (ML) Some sand, trace clay, firm, orangey brown to brown, metallic sheen to materials completely weathered bedrock (crushed to gravel and fines). Grey layer of thin platy particles. [WEATHERED BEDROCK TO RESIDUAL SOIL?] 1.2m to 1.5m - FROZEN GROUND: Nf, 5-10%.
3					WEATHERED METASEDIMENTARY BEDROCK Reddish-brown/orangey-brown/brown rock, crushed, gravel and fines, some relict structure visible, shiny, platy particles rub into silt and clay between fingers; occasional boulders near bottom (8cm to 12cm), oxide staining, weak to medium strong (R2-R3). [WEATHERED BEDROCK]
4					END OF TP @ 3.8m. REFUSAL ON WEATHERED BEDROCK. NOTES: 1) Roots down to 0.6m. 2) No seepage, no sloughing. 4) Backfilled to surface.
5					
6					
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB
PEAK ◆ ■
REMOLD ◇ □
▲ UC/2
△ Pocket Pen /2
★ % Fines

Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL6-10

Location : Ann Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459542E, 7101644N
Ground Elevation (m) 939
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 31 Jul 09
Finish Date: 31 Jul 09
Final Depth of Pit (m) : 4.8
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Thin moss, needles, leaves and lichen covering brown, silty, dry soil, with some gravel and sand.
		S1			
		S2			GRAVELLY SILT (ML) Some sand, firm - stiff, brown, odourless, moist, no evident structure, weak cementation, weathered subangular to angular metasedimentary clasts up to 4cm, flat, platy, particles with metallic sheen. [FILL OR COLLUVIUM]
1					
2					WEATHERED METASEDIMENTARY BEDROCK Brown with layers of grey and reddish brown visible, friable weathered rock crushed to gravel sand and fines, platy shiny particles which rub into a siltey/clayey material persist, completely weathered bedrock (W5). FROZEN at 2.0m: Nbn. [WEATHERED BEDROCK].
3					
4					
5					END OF TP @ 4.8m. REFUSAL ON WEATHERED BEDROCK. NOTES: 1) Roots down to 0.5m. 2) No seepage, no sloughing. 3) PVC casing installed for thermistor string. 5) Backfilled to surface.
6					
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB ▲ UC/2
PEAK ◆ ■
REMOLD ◇ □ △ Pocket Pen /2
★ % Fines

Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL6-11

Location : Ann Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459720E, 7101628N
Ground Elevation (m) 976
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 06 Aug 09
Finish Date: 06 Aug 09
Final Depth of Pit (m) : 2.8
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS
					SAND (SP) Fine, silty, trace gravel, poorly graded, compact, max clast=5cm, subangular, orange brown, dry, homogeneous. [COLLUVIUM]
1					MICA SCHIST Greyish brown, fine grained, extremely weak, highly weathered ,disintegrated, some sand infill, joint spacing <1cm,
					0.9m - Blocky, orangish brown.
2					METASEDIMENT Orangish grey, medium grained, very weak, highly weathered, blocky, joint spacing 1-5cm, trace sand infill.
					1.8m - Moderately weathered, blocky, three, joint sets, joint spacing 1-10cm.
3					End of Test Pit @2.8m. REFUSAL ON BEDROCK. NOTES: 1) Roots down to 0.65m. 2) No seepage, no visible ground ice. 3) Backfilled to surface.
4					
5					
6					
7					
8					
9					
10					

Su - kPa

40 80 120 160

VANE	FIELD	LAB	
PEAK	◆	■	▲ UC/2
REMOLD	◇	□	△ Pocket Pen /2

★ % Fines

Moisture Content

W_P% W% W_L%

20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL6-12

Location : Ann Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459358E, 7101588N
Ground Elevation (m) 957
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 07 Aug 09
Finish Date: 07 Aug 09
Final Depth of Pit (m) : 6.0
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					PEAT (Pt) Organics, thin moss cover, dark brown roots, 10cm max diameter.
1					SAND and GRAVEL (SW/GW) Fine to coarse, some clay, well graded, compact, max clast size 10cm, angular, orangish brown, moist, homogeneous, trace wood fragments, metasedimentary and Micaschist clasts. [COLLUVIUM]
2					GRAVEL (GW) Coarse, some sand.
3					
4					
5					
6					5.8m - Hole sloughing. End of TP @ 6.0m. EXTENT OF EXCAVATOR REACH. NOTES: 1) No seepage, no visible ground ice. 2) Hole sloughing. 3) Backfilled to surface.
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB
PEAK ◆ ■
REMOLD ◇ □
▲ UC/2
△ Pocket Pen /2
★ % Fines
Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL6-13

Location : Ann Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459228E, 7101509N
Ground Elevation (m) 959
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 07 Aug 09
Finish Date: 07 Aug 09
Final Depth of Pit (m) : 2.4
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS Thin moss cover, dark brown, rootlets.
1					GRAVEL (GW) Fine to coarse, some silt, trace cobbles, compact, max particle size 20cm, subangular, orangish-brown, dry, homogeneous, from 1.0m to 1.1m fine silty sand lens, some gravel, moist.
2					SAND and GRAVEL (SW/GW) Fine to medium , silty, dense, max particle size = 3cm, subangular. [WEATHERED MICA SCHIST]
3					METASEDIMENTARY BEDROCK Orangish-grey, medium grained, highly weathered, disintegrated to blocky, very weak, sandy gravel infill.
4					END OF TP @ 2.4m. REFUSAL ON BEDROCK. NOTES: 1) Rootlets down to 0.65m. 2) No seepage, no visible ground ice. 3) Backfilled to surface.
5					
6					
7					
8					
9					
10					

Su - kPa

40 80 120 160

VANE	FIELD	LAB	
PEAK	◆	■	▲ UC/2
REMOLD	◇	□	△ Pocket Pen /2

★ % Fines

Moisture Content

W_P% W% W_L%

20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL6-14

Location : Dublin Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459299E, 7101197N
Ground Elevation (m) 870
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 07 Aug 09
Finish Date: 07 Aug 09
Final Depth of Pit (m) : 6.2
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS Peat, dark brown, rootlets.
1					SAND and GRAVEL (SM/GM) Fine to coarse, some silt, trace clay, trace cobble, very dense, max particle size 0.25m, subrounded to subangular, brown, moist, metasedimentary and quartzite clasts, homogeneous. [COLLUVIUM]
2					
3					SAND (SM) Silty, fine to medium grained, some gravel, dense, max particle size 10cm, subrounded to angular, brown, moist, homogeneous, trace wood fragments. [COLLUVIUM]
4					
5					
6					BOULDERS Some cobbles, some sand, max particle diameter 0.40m, subrounded, orangish-grey, dry, [old buried stream channel?].
7					END OF TP @ 6.20m. REFUSAL ON BEDROCK. NOTES: 1) No seepage, no visible ground ice. 2) Backfilled to surface.
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB
PEAK ◆ ■
REMOLD ◇ □
▲ UC/2
△ Pocket Pen /2
★ % Fines
Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL6-15

Location : Ann Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459685E, 7101790N
Ground Elevation (m) 979
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 06 Aug 09
Finish Date: 06 Aug 09
Final Depth of Pit (m) : 5.3
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					PEAT (Pt) and ORGANICS
					SAND and GRAVEL (SM/GM) Fine to coarse, silty, dense, max clast 5cm, subrounded to angular, orangish brown, moist, homogeneous, trace wood fragments. FROZEN: Vx, 1-5%. [COLLUVIUM]
1					
					SAND (SW) Gravelly, fine to coarse, trace cobbles, well graded, dense, subrounded to angular, grey, moist, stratified colluvium. [COLLUVIUM]
2					
3					
4					
5					BEDROCK Mica Schist, grey, fine grained, foliated, extremely weak, extremely weathered, disintegrated, gravel to cobble angular fragments, easily ripped.
					End of TP @ 5.3m. EXTENT OF EXCAVATOR REACH. NOTES: 1) No seepage. 2) Backfilled to surface.
6					
7					
8					
9					
10					

Su - kPa
40 80 120 160

VANE	FIELD	LAB	
PEAK	◆	■	▲ UC/2
REMOLD	◇	□	△ Pocket Pen /2

★ % Fines

Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL6-16

Location : Ann Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459584E, 7012014N
Ground Elevation (m) 999
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 06 Aug 09
Finish Date: 06 Aug 09
Final Depth of Pit (m) : 5.3
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					PEAT (Pt) Organics, moss, twigs 10mm in diameter, dark brown.
1					SAND and GRAVEL (SM/GM) Fine to coarse, some silt, compact, max particle size 10cm, subrounded to angular, orangish brown, trace rootlets to 0.7M. [COMPLETEY WEATHERED BEDROCK]
2					
3					2.5m - Cobbles and gravel, some sand, highly weathered metasedimentary. 3.3m to 4.5m - Loose, hole sloughing.
4					
5					METASEDIMENTARY Orangish grey, medium grained, very weak, highly weathered, blocky, joint spacing <5cm.
6					END OF TEST PIT @ 5.3m. REFUSAL ON BEDROCK. NOTES: 1) No seepage no visible ground ice. 2) Backfilled to surface.
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB ▲ UC/2
PEAK ◆ ■
REMOLD ◇ □ △ Pocket Pen /2
★ % Fines
Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL6-17

Location : Ann Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459463E, 7101825N
Ground Elevation (m) 984
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 06 Aug 09
Finish Date: 06 Aug 09
Final Depth of Pit (m) : 3.3
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					PEAT (Pt) Organics, sandy, dark brown.
1					SAND and GRAVEL (SW/GW) Fine to coarse, some cobbles, trace silt, loose, max particle size 10cm, subrounded to angular, orangish brown, dry, homogeneous, metasedimentary clasts. [COLLUVIUM]
2					BEDROCK Metasedimentary, orangish grey, medium grained, very weak, highly weathered, gravelly sand and cobbles, joint spacing mm to cm, loose to dense.
3					
4					END OF TP @ 3.3m. REFUSAL ON BEDROCK. NOTES: 1) Roots down to 1.1m. 2) No seepage, no visible ground ice. 3) Backfilled to surface.
5					
6					
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB ▲ UC/2
PEAK ◆ ■
REMOLD ◇ □ △ Pocket Pen /2
★ % Fines
Moisture Content
W_P% W% W_L%
20 40 60 80

GENERAL BGC (TESTPIT) 0792-002_03.GPJ BGC.GDT 10/2/09

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

EAGLE PUP

TP-BGC09-WR-1

TP-BGC09-WR-2

TP-BGC09-WR-3

TP-BGC09-WR-4

TP-BGC09-WR-5

TP-BGC09-WR-6

TP-BGC09-WR-7

TP-BGC09-WR-8

TP-BGC09-WR-9

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-WR-1

Location : Eagle Pup

Project No. : 0792-002

Survey Method : Handheld GPSHandheld GPS
Co-ordinates (m): 460086E, 7100715N
Ground Elevation (m) 971
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 21 Jul 09
Finish Date: 21 Jul 09
Final Depth of Pit (m) : 6.0
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Fine, dark brown-black silt, moss and rootlets.
		S1			SILTY GRAVEL (GM) Some sand, trace clay, particles vary from fine to coarse, cobbles up to 20cm, loose to compact, subangular metased gravel and weathered rock fragments, reddish brown, moist, homogeneous, weak-moderate cementation. [COLLUVIUM]
1					
2					
3					
4					GRAVEL (GM) Some silt and sand, well graded, loose, gravel up to 5cm, subangular and subrounded particles, greyish-brown, moist, none to weak cementation. [COLLUVIUM?]
5		S2			SAND (SW) Some gravel, trace silt, well graded, loose, subangular and subrounded particles, metased flakes, brown red and grey particles, moist, weak cementation. [COLLUVIUM?]
6		S3			END OF TP @ 6.0m. EXTENT OF EXCAVATOR REACH. NOTES: 1) Roots down to 0.3m. 2) No seepage, no visible ground ice. 3) Backfilled to surface.
7					
8					
9					
10					

Su - kPa: 40, 80, 120, 160

	VANE	FIELD	LAB	
	PEAK	◆	■	▲ UC/2
	REMOLD	◇	□	△ Pocket Pen /2

★ % Fines

Moisture Content: W_P% × — — — — — ○ — — — — — × W_L% ; 20, 40, 60, 80

BGC ENGINEERING INC.
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Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-WR-2

Location : Eagle Pup

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 460203E, 7100819N
Ground Elevation (m) 995
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 21 Jul 09
Finish Date: 21 Jul 09
Final Depth of Pit (m) : 6.0
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Moss, rootlets and black silty soil.
1		S1			SANDY GRAVEL (GW) Well graded, light grey-brown, dry, distinct contact zone with lower material. [FILL]
					ORGANICS/TOPSOIL Silty black soil with roots and some chunks of wood evident.
2					SANDY GRAVEL (GW) Some silt, trace clay, cobbles+boulders up to 20cm, fine-coarse grains, compact, angular and subangular, cold, moist, no evident structure, weak cementation. [COLLUVIUM]
3					
4		S2			SANDY GRAVEL (GW) Some clay, trace silt, dark brown with orange-cream mottling, some quartz evident. FROZEN: Nf.
5					SANDY GRAVEL (GW) Some silt, trace clay, occasional cobbles and boulders up to 20cm, fine-coarse grains, compact, angular and subangular, cold, moist, no evident structure, weak cementation. [COLLUVIUM]
6					END OF TP @ 6.0m. EXTENT OF EXCAVATOR REACH. NOTES: 1) Roots down to 0.3m. 2) No seepage, some sloughing. 3) Backfilled to surface.
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB ▲ UC/2
PEAK ◆ ■
REMOLD ◇ □ △ Pocket Pen /2
★ % Fines
Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-WR-3

Location : Eagle Pup area

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 460472E, 7100948N
Ground Elevation (m) 1088
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 21 Jul 09
Finish Date: 21 Jul 09
Final Depth of Pit (m) : 5.8
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					SAND (SM) Silty, some cobbles and boulders, grey-brown. [FILL]
1					SANDY GRAVEL (GM) Some silt, trace boulders, cool, moist, compact, no structure, angular gravel, grey brown. [COLLUVIUM]
2		S1			WEATHERED BEDROCK Highly fractured metasedimentary rock, visible relict structure, trace fines, loose - easy digging.
3					
4					
5					
6					END OF TP @ 5.8m. REFUSAL ON WEATHERED BEDROCK. NOTES: 1) Roots down to 0.3m. 2) No seepage, no visible ground ice. 3) Backfilled to surface.
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB
PEAK ◆ ■
REMOLD ◇ □
▲ UC/2
△ Pocket Pen /2
★ % Fines
Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-WR-4

Location : Eagle Pup area

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 460387E, 7100955N
Ground Elevation (m) 1068
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 22 Jul 09
Finish Date: 22 Jul 09
Final Depth of Pit (m) : 3.0
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Moss, rootlets, fine soil.
		S1			GRAVELLY SILT (ML) Some cobbles, non plastic, soft, moist, no visible structure, angular gravel, none to weak cementation, slow dilatancy. [COLLUVIUM]
1		S2			
					GRAVELLY SAND (SW) Fine, some cobbles, trace yellowish mottling in sandy brown material. [COLLUVIUM]
2					METASEDIMENTARY ROCK Highly fractured, dippiing down into pit, greyish blue with some oxide staining. [WEATHERED BEDROCK].
3					END OF TP @ 3.0m. REFUSAL ON BEDROCK. NOTES: 1) Roots down to 0.4m. 2) Note that at 0.4m a rounded granodiorite cobble (10cm) was found in the gravely silt material (fluvial origin?). 3) No seepage or visible ground ice. 4) Backfilled to surface.
4					
5					
6					
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB
PEAK ◆ ■
REMOLD ◇ □
▲ UC/2
△ Pocket Pen /2
★ % Fines

Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
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Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-WR-5

Location : Eagle Pup area

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 460212E, 7100988N
Ground Elevation (m) 1032
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 22 Jul 09
Finish Date: 22 Jul 09
Final Depth of Pit (m) : 4.7
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Rootlets and organic soil.
		S1			SILTY GRAVEL (GM) Some sand, angular, moist, some structure becoming evident at 07.m, compact.
1		S2			[COLLUVIUM transitioning into BEDROCK?]
					METASEDIMENTARY ROCK Some silt, coarse and fine sand, friable, visible relict bedding, stiff, highly weathered, some orange oxide staining visible, cobbles up to 15cm, medium strong to strong (R3-R4) bedrock, strengthening with depth.
2					
3					
4					
					END OF TP @ 4.7m. REFUSAL ON WEATHERED BEDROCK. NOTES: 1) Roots down to 0.6m. 2) No seepage, no visible ground ice, substantial sloughing. 3) Backfilled to surface.
5					
6					
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB
PEAK ◆ ■
REMOLD ◇ □
▲ UC/2
△ Pocket Pen /2
★ % Fines
Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-WR-6

Location : Eagle Pup

Project No. : 0792-002

Survey Method : Handheld GPSHandheld GPS
Co-ordinates (m): 460060E, 7100837N
Ground Elevation (m) 958
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 22 Jul 09
Finish Date: 22 Jul 09
Final Depth of Pit (m) : 6.5
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Moss cover, rootlets throughout black silty soil.
					GRAVEL and SILTY SAND (GW/SM) Trace cobbles (up to 15cm), angular gravel, coarse sand, very loose to loose, brown, dry, no evident structure or cementation.
1		S1			
		S2			SANDY SILT (ML) Some clay, firm to stiff, red brown to grey, moderate cementation, very slow dilatancy, moist, subangular to angular gravel. FROZEN from 1.5m: Nbe. [COLLUVIUM]
2					
3					
4		S3			
5					
6					
					END OF TP @ 6.5m. EXTENT OF EXCAVATOR REACH. NOTES: 1) Roots down to 0.5m. 2) No seepage. 3) Backfilled to surface.
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB ▲ UC/2
PEAK ◆ ■
REMOLD ◇ □ △ Pocket Pen /2
★ % Fines

Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-WR-7

Location : Eagle Pup

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459893E, 7100896N
Ground Elevation (m) 930
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 22 Jul 09
Finish Date: 22 Jul 09
Final Depth of Pit (m) : 2.5
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Moss cover, rootlets, wood in black silty soil.
1		S1			SILTY GRAVEL (GM) Trace sand,well graded, granodiorite and metasedimentary boulders (25cm), angular-subangular particles, grey to brown, no apparent structure. FROZEN: Nbe. [COLLUVIUM]
2					
3					END OF TP @ 2.5m. SEEPAGE & SLOUGHING. NOTES: 1) Roots down to 0.4m. 2) Eagle Pup creek approximately 8m north of testpit. 3) Backfilled to surface.
4					
5					
6					
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB ▲ UC/2
PEAK ◆ ■
REMOLD ◇ □ △ Pocket Pen /2
★ % Fines

Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-WR-8

Location : Eagle Pup area

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 460165E, 7100363N
Ground Elevation (m) 1031
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 23 Jul 09
Finish Date: 23 Jul 09
Final Depth of Pit (m) : 3.5
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS Moss and grasses covering black silt, rootlets throughout.
1		S1			SAND (SM) Some silt and gravel, well graded, occasional cobble/boulder (up to 25cm), loose to compact, some orange oxide staining, moist, no apparent structure. FROZEN from 0.4-0.5m: Vs, 5-10%. [COLLUVIUM]
2		S2			
3					
4					End of Test Pit @ 3.5m. SEEPAGE & SLOUGHING. NOTES: 1) Roots down to 0.5m. 2) Seepage and sloughing at 3.5m. 3) PVC casing installed for thermistor string. 4) Slotted PVC installed for ground water monitoring. 7) Backfilled to surface.
5					
6					
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB
PEAK ◆ ■
REMOLD ◇ □
▲ UC/2
△ Pocket Pen /2
★ % Fines

Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
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Client: Victoria Gold

GENERAL BGC (TESTPIT) 0792-002_03.GPJ BGC.GDT 10/209

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-WR-9

Location : Eagle Pup

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 460175E, 7100585N
Ground Elevation (m) 1003
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 23 Jul 09
Finish Date: 23 Jul 09
Final Depth of Pit (m) : 6.5
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Thick moss (10cm) covering, rootlets, dark brown-black soil.
1		S1			SILTY SAND (SM) Fine to coarse, some gravel, compact, brown w/ layers of reddy brown & dark grey organics, moist, weak to moderate cementation. FROZEN from 1.1m to 1.4m: Nbe. [COLLUVIUM]
2		S2			SAND (SW) Fine to coarse, some gravel, trace silt, well graded, loose to compact, occasional cobbles and boulders up to 25cm, subangular to angular gravel, orangey-brown, moist, homogeneous, weak cementation. [COLLUVIUM?]
3					SILTY SAND (SM) Trace boulders and cobbles, both subangular-angular, loose, grey, dry, no evident structure, weak cementation. [COLUVIUM?]
4					
5					
6					
7					END OF TP @ 6.5m. EXTENT OF EXCAVATOR REACH. NOTES: 1) Roots down to 0.9m. 2) No seepage. 3) Backfilled to surface.
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB ▲ UC/2
PEAK ◆ ■
REMOLD ◇ □ △ Pocket Pen /2
★ % Fines

Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

LOWER REACH DUBLIN GULCH

TP-BGC09-A-2

TP-BGC09-DG-1

TP-BGC09-DG-3

TP-BGC09-DG-4

TP-BGC09-HL4-10

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-A-2

Location : Heap Leach #1

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 458708E, 7100789N
Ground Elevation (m) 823
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 18 Jul 09
Finish Date: 18 Jul 09
Final Depth of Pit (m) : 4.5
Logged by : PQ
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					SAND AND GRAVEL (SM/GM) Silty, compact, light brown, damp. [TILL]
1					
					GRAVEL (GW) Sandy, cobbly, compact, reddish, damp. [COLLUVIUM]
2					SILT (ML) Sandy, light brown, FROZEN: Nbn. [TILL]
3					SAND and GRAVEL (SW/GW) Trace-some silt and cobbles, well graded, compact, brown, dry to damp. [TILL]
4					
					END OF TP @ 4.5m. LIMIT OF EXCAVATOR REACH. NOTES: 1) No seepage. 2) Backfilled to surface.
5					
6					
7					
8					
9					
10					

Su - kPa

40 80 120 160

VANE	FIELD	LAB	
PEAK	◆	■	▲ UC/2
REMOLD	◇	□	△ Pocket Pen /2

★ % Fines

Moisture Content

W_P% × — — — — — ○ — — — — — × W_L%

20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

GENERAL BGC (TESTPIT) 0792-002_03.GPJ BGC.GDT 10/2/09

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-DG-1

Location : Dublin Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459317E, 7101005N
Ground Elevation (m) 848
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 10 Aug 09
Finish Date: 10 Aug 09
Final Depth of Pit (m) : 2.5
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					SAND and GRAVEL (SM/GM) Silty, well graded, very dense, max clast 20cm, subrounded to subangular, brown, moist, homogeneous.
1					SAND and GRAVEL (SM/GM) Some silt, some cobbles, trace boulders, well graded, dense, max clast 0.40m, subrounded to subangular, orangish-brown, moist, homogeneous. [Possibly Fluvial] 0.70m - Trace Seepage.
2					2.0m - Becomes gravelly, with cobbles and boulders. Seepage.
3					END OF TP @ 2.5m. SLOUGHING. NOTES: 1) At 2.5m, the pit filled with water and caved in to 2.0m 2) No visible ground ice. 3) Backfilled to surface.
4					
5					
6					
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB
PEAK ◆ ■
REMOLD ◇ □
▲ UC/2
△ Pocket Pen /2
★ % Fines

Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

GENERAL BGC (TESTPIT) 0792-002_03.GPJ BGC.GDT 10/2/09

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-DG-3

Location : Dublin Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 458987E, 7100938N
Ground Elevation (m) 837
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 08 Aug 09
Finish Date: 08 Aug 09
Final Depth of Pit (m) : 5.0
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					SAND and GRAVEL (SW/GW) Fine to coarse, trace silt, loose, max clast 5cm, angular, brown, moist, homogeneous. [PLACER TAILINGS]
1		S1			CLAYEY SILT (ML) Low plastic, grey, moist, low dry strength, rapid dilatancy. [PLACER TAILINGS, Settling Pond]
2					SAND and GRAVEL (SM/GM) Fine to coarse, trace silt, compact, max clast 5cm, subrounded to angular, orangish brown, moist, homogeneous.
3		S2			2.9m - Seepage.
4					SILTY SAND and GRAVEL (SW/GW) Fine to coarse, trace clay, compact, max clast 10cm, subrounded to angular, tan, wet, homogeneous. 3.3m to 3.5m - Clayey silt. 3.5m - Subrounded boulders.
5					END OF TP @ 5.0m. REFUSAL ON BOULDERS. NOTES: 1) Rootlets to 0.6m. 2) Seepage at 2.9m, no visible ground ice. 3) Backfilled to surface.
6					
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB ▲ UC/2
PEAK ◆ ■
REMOLD ◇ □ △ Pocket Pen /2
★ % Fines

Moisture Content
W_p% × W% ○ W_L% ×
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-DG-4

Location : Haggart Creek

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 458311E, 7100857N
Ground Elevation (m) 801
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 08 Aug 09
Finish Date: 08 Aug 09
Final Depth of Pit (m) : 3.0
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS Moss, dark brown, rootlets.
					GRAVEL and BOULDERS Some sand, some silt, subrounded, compact, max clast 40cm, moist, grey silt laminations.
1					SILT and COBBLES Some gravel, subrounded to subangular, max clast 30cm, very dense, tan, homogeneous. FROZEN. 1.0m - FROZEN: Vs, 5%.
2					SANDY SILT (SM) Fine sand, trace clay, non plastic, very hard, tan, faint laminations, low dry strength. FROZEN: Vx, 3%. 2.20m - ICE, 2 cm thick horizontal laminations.
3					END OF TP @ 3.0m. REFUSAL ON FROZEN GROUND. NOTES: 1) Rootlets down to 0.4m. 2) No seepage. 3) Backfilled to surface.
4					
5					
6					
7					
8					
9					
10					

Su - kPa
40 80 120 160

VANE	FIELD	LAB	
PEAK	◆	■	▲ UC/2
REMOLD	◇	□	△ Pocket Pen /2

★ % Fines

Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

GENERAL BGC (TESTPIT) 0792-002_03.GPJ BGC.GDT 10/2/09

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL4-10

Location : Near weather station, by camp burn pit

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 458467E, 7100779N
Ground Elevation (m) 827
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 31 Jul 09
Finish Date: 31 Jul 09
Final Depth of Pit (m) : 6.5
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					SILT (ML) Some sand, some gravel, trace clay, firm - stiff, greyish-brown, moist, no evident structure, weak-moderate cementation. Gravel clasts (up to 6cm), occasional cobbles (up to 12cm), including medium strong (R3) metasedimetary subangular and extremely strong (R6) subrounded granodiorite. [FILL?]
		S1			
1					
2					
3		S2			SILTY SAND (SM) Some gravel, very fine to fine sand, poorly graded, loose, trace gravel (up to 6cm), occasional cobble (up to 12cm), subangular and subrounded particles, moist, no structure, none to weak cementation. [FILL?]
4					
5		S3			
6					SILT (ML) Some fine sand and gravel, firm brown, moist, subangular and subrounded gravel with occasional cobbles, no structure, weak cementation. [FILL?]
		S4			END OF TP @ 6.5m. EXTENT OF EXCAVATOR REACH. NOTES: 1) Roots down to 0.45m. 2) No seepage, no visible ground ice. 3) Backfilled to surface.
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB ▲ UC/2
PEAK ◆ ■
REMOLD ◇ □ △ Pocket Pen /2
★ % Fines
Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

OLIVE GULCH

TP-BGC09-HL5-1

TP-BGC09-HL5-2

TP-BGC09-HL5-3

TP-BGC09-HL5-4

TP-BGC09-HL5-5

TP-BGC09-HL5-6

TP-BGC09-HL5-7

TP-BGC09-HL5-8

TP-BGC09-HL5-9

TP-BGC09-HL5-10

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL5-1

Location : Olive Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 461915E, 7100367N
Ground Elevation (m) 1340
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 20 Jul 09
Finish Date: 20 Jul 09
Final Depth of Pit (m) : 4.4
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Scrub brush, small spruce and moss covering, boulders also visible on surface.
1					Grandorite BOULDERS and COBBLES Silty sand infill, subangular cobbles and angular boulders, slightly weathered, some oxide staining, strong to very strong, silty sand matrix, fine to med grains, some gravel, compact. [WEATHERED ROCK]
2					
3					
4					
5					END OF TP @ 4.4m. REFUSAL ON BEDROCK. NOTES: 1) Roots down to 0.4m. 2) No seepage or visible ground ice. 3) During excavation pit walls collapsed. 4) Relict joints visible in weathered rock along TP walls. 5) Backfilled to surface.
6					
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB ▲ UC/2
PEAK ◆ ■
REMOLD ◇ □ △ Pocket Pen /2
★ % Fines
Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
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Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL5-2

Location : Olive Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 461740E, 7100620N
Ground Elevation (m) 1290
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 20 Jul 09
Finish Date: 20 Jul 09
Final Depth of Pit (m) : 6.0
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Vegetation cover consists of sparse spruce, moss and some scrub brush.
1					Granodiorite BOULDERS and COBBLES Subangular, strong, in a dark grey silty sand (SM) infill. [COLLUVIUM?]
2					SAND (SM) Weathered Bedrock in a gravelly sand matrix, fine to coarse, some silt, some boulders and cobbles, compact, brown ocher colored sand, some oxide discoloration, moist, weak cementation.
3					
4					
5					
6					END OF TP @ 6.0m. EXTENT OF EXCAVATOR REACH. NOTES: 1) Roots down to 0.4m. 2) No seepage or visible ground ice. 3) Large variation in cobble/boulder strength, from weak to very strong (R2-R5). 4) Backfilled to surface.
7					
8					
9					
10					

Su - kPa
40 80 120 160

VANE	FIELD	LAB		
PEAK	◆	■	▲	UC/2
REMOLD	◇	□	△	Pocket Pen /2

★ % Fines

Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL5-3

Location : Olive Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 461692E, 7100763N
Ground Elevation (m) 1256
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 20 Jul 09
Finish Date: 20 Jul 09
Final Depth of Pit (m) : 2.0
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Fairly open vegetation, scattered spruce and shrubs, boulder field just East of testpit.
1		S1			GRAVEL (GW) Fine to med sand, trace cobbles and boulders, dark greyish-brown zone cold and moist, compact, FROZEN: Nf to Nbn.
		S2			
		S3			
2					END OF TP @ 2.0m. REFUSAL ON FROZEN GROUND. NOTES: 1) Roots down to 0.4m. 2) No seepage. 3) Backfilled to surface.
3					
4					
5					
6					
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB ▲ UC/2
PEAK ◆ ■
REMOLD ◇ □ △ Pocket Pen /2
★ % Fines
Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

GENERAL BGC (TESTPIT) 0792-002_03.GPJ BGC.GDT 3/2/10

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL5-4

Location : Olive Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 462120E, 7100182N
Ground Elevation (m) 1364
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 26 Jul 09
Finish Date: 26 Jul 09
Final Depth of Pit (m) : 5.5
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Moss and lichen cover over thin layer of black silty soil.
		S1			GRAVELLY SILT (ML), Some sand, low plastic, soft, brown, moist, no visible structure, none-weak cementation, slow dilatancy, weathered metasedimentary clasts and cobbles (up to 8cm), from medium strong to strong (R3-R4), surface staining, subangular to angular quartz evident.
1					
2		S2			GRAVELLY SAND (SM) Some silt, well graded, loose, angular metasedimentary clasts (up to 6cm), reddy-brown, dry, no evident structure, none-weak cementation.
3					
4		S3			SAND (SP) Medium-coarse grained, loose-compact, subrounded particles, yellowish-brown, dry visible relict structure in corestones which crumble under finger pressure, very weak to weak (R1-R2), completely weathered (W5) corestones. Strength improves with depth, angular cobble with surface staining observed was mediumstrong-strong (R3-R4). [WEATHERED GRANODIORITE]
5					
6					END OF TP @ 5.5m. EXTENT OF EXCAVATOR REACH. NOTES: 1) Roots down to 0.3m. 2) No seepage, minor sloughing, no visible ground ice. 3) Backfilled to surface.
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB
PEAK ◆ ■
REMOLD ◇ □
▲ UC/2
△ Pocket Pen /2
★ % Fines

Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL5-5

Location : Olive Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 462403E, 7100182N
Ground Elevation (m) 1378
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 27 Jul 09
Finish Date: 27 Jul 09
Final Depth of Pit (m) : 2.0
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL
		S1			SILT (ML) Some sand, low plastic, firm, brown, moist, no evident structure, weak cementation, metasediment clasts increasing in size with depth, surface and joint staining evident.
1					METASEDIMENTARY BEDROCK Brown fine, medium grained, stratified, strong (R3), slight moderate weathering (WII - WIII), dippiing (roughly) SW, oxide joint/surface staining.
2					END OF TP @ 2.0m. REFUSAL ON BEDROCK. NOTES: 1) Roots down to 0.65m. 2) No seepage, no visible ground ice. 3) Appears to be dipping South to Southwest. 4) Backfilled to surface.
3					
4					
5					
6					
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB ▲ UC/2
PEAK ◆ ■
REMOLD ◇ □ △ Pocket Pen /2
★ % Fines

Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL5-6

Location : Olive Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 462551E, 7100377N
Ground Elevation (m) 1370
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 27 Jul 09
Finish Date: 27 Jul 09
Final Depth of Pit (m) : 5.5
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Brown silty soil with rootlets, moss and grass cover.
1		S1			SILT (ML) Some gravel, trace sand, low plasticity, firm, brown with thin lenses of sandy reddish-brown and grey material near 1m depth, subangular to angular metasedimentary clasts, moist, no structure, none-weak cementation. Material changes to a grey color with depth, sand content increases with depth. [COLLUVIUM]
2		S2			SAND (SP) Fine to medium grained, poorly graded, trace silt, trace gravel, loose, some flat mineral grains, other brown and beige subrounded grains, dry, none-weak cementation. [COMPLETELY WEATHERED GRANODIORITE]
3					3.0m - Relict structure becomes evident in corestones, crumble to sand with finger pressure.
4					
5		S3			SAND (SW) Medium to coarse grained, some subrounded gravel, grey, moist-wet, seepage.
6					END OF TP @ 5.5m. SEEPAGE AND SLOUGHING. NOTES: 1) Roots down to 0.65m. 2) Seepage at 5.5m, no visible ground ice. 3) Slotted PVC groundwater monitoring standpipe installed. 4) Backfilled to surface.
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB
PEAK ◆ ■
REMOLD ◇ □
▲ UC/2
△ Pocket Pen /2
★ % Fines

Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL5-7

Location : Olive Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 462478E, 7100677N
Ground Elevation (m) 1366
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 27 Jul 09
Finish Date: 27 Jul 09
Final Depth of Pit (m) : 4.8
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Black silty soil with moss cover and rootlets throughout.
		S1			SILT (ML) Trace sand, trace gravel, low plastic, soft, brown, moist, weak cementation.
		S2			SILTY SAND (SM) Some gravel, loose, grey moist, some gravel/cobbles, clast size increasing with depth, both metasedimentary and granodiorite subrounded-subangular clasts. [COLLUVIUM]
2		S3			GRAVELLY SAND (SM) Some silt, silt content decreasing with depth, loose, subangular and subrounded gravel and clasts of both metasedimentary and granodiorite origin, brown, moist, no structure. [COLLUVIUM]
4					GRANODIORITE - grey with black and white flecks, coarse grained, very strong (R5), fresh-slightly weathered (W1-W2), angular-subangular cobbles. [BEDROCK]
5					END OF TP @ 4.8m. REFUSAL ON BEDROCK. NOTES: 1) Roots down to 0.5m. 2) Sharp contact between colluvium and bedrock at 4.0m, no evidence of a weathered intermediate zone. 3) No seepage or visible ground ice. 4) Backfilled to surface.
10					

Su - kPa
40 80 120 160
VANE FIELD LAB ▲ UC/2
PEAK ◆ ■
REMOLD ◇ □ △ Pocket Pen /2
★ % Fines
Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

GENERAL BGC (TESTPIT) 0792-002_03.GPJ BGC.GDT 3/2/10

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL5-8

Location : Olive Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 462281E, 7100688N
Ground Elevation (m) 1348
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 27 Jul 09
Finish Date: 27 Jul 09
Final Depth of Pit (m) : 0.9
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Dark brown silty soil covered with moss and lichen.
		S1			
					SANDY SILT (ML) Trace gravel, subrounded metasedimentary clasts (<5cm) and some weathered granodiorite clasts, brown matrix, moist, firm, no structure. [COLLUVIUM]
1					GRANODIORITE BEDROCK Black and white specs, coarse grains, homogeneous, strong - very strong (R4-R5), no notable weathering, slight surface discoloration, fractured tabular boulders (up to 1.1m on B axis). [BEDROCK]
2					END OF TP @ 0.9m. REFUSAL ON BEDROCK. NOTES: 1) Roots down to 0.3m. 2) Thin colluvium layer appears to be washed into fractured bedrock (0.2-0.4m). 3) No seepage or visible ground ice. 4) Backfilled to surface.
3					
4					
5					
6					
7					
8					
9					
10					

Su - kPa

40 80 120 160

VANE	FIELD	LAB	
PEAK	◆	■	▲ UC/2
REMOLD	◇	□	△ Pocket Pen /2

★ % Fines

Moisture Content

W_P% W% W_L%

20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL5-9

Location : Olive Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 462138E, 7100715N
Ground Elevation (m) 1320
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 27 Jul 09
Finish Date: 27 Jul 09
Final Depth of Pit (m) : 1.4
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Black silty soil, moist, thin moss and lichen cover.
		S1			SILT (ML) Some coarse sand, fine gravel, low plasticity, soft, brown, moist, no structure, rapid dilation, lenses of completely weathered granodiorite sand.
1					GRANODIORITE ROCK Black and white specs, coarse grains, tabular, strong-very strong (R4-R5), fresh (WI). [BEDROCK]
2					END OF TP @ 1.4m. REFUSAL ON BEDROCK. NOTES: 1) Roots down to 0.5m. 2) Dug into valley slope, granodiorite boulders and cobbles visible on surface. 3) No seepage, no visible ground ice. 4) Backfilled to surface.
3					
4					
5					
6					
7					
8					
9					
10					

Su - kPa
40 80 120 160

VANE	FIELD	LAB		
PEAK	◆	■	▲	UC/2
REMOLD	◇	□	△	Pocket Pen /2

★ % Fines

Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL5-10

Location : Olive Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 462460E, 7100369N
Ground Elevation (m) 1358
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 27 Jul 09
Finish Date: 27 Jul 09
Final Depth of Pit (m) : 2.8
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Silty, wet soil under grass hummocks.
		S1			SILTY GRAVEL (GM) Some sand, wet matrix with metasedimentary and granodiorite subangular clasts and the odd subrounded granodiorite boulder, brown. [COLLUVIUM]
1					
2					
					GRANODIORITE ROCK White and black rock, speckled, some structure visible under wet sloughing material. [BEDROCK]
3					END OF TP @ 2.8m. RAPID SEEPAGE AND SLOUGHING, BEDROCK ENCOUNTERED. NOTES: 1) Root depth unobservable. 2) Ponded water on surface in a 20m - 30m wide boggy area with hummocks. 3) Seepage and sloughing from initial excavation, measured only from ground level. 4) Backfilled to surface.
4					
5					
6					
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB ▲ UC/2
PEAK ◆ ■
REMOLD ◇ □ △ Pocket Pen /2
★ % Fines

Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

STUTTLE GULCH

TP-BGC09-HL4-1

TP-BGC09-HL4-2

TP-BGC09-HL4-3

TP-BGC09-HL4-4

TP-BGC09-HL4-5

TP-BGC09-HL4-6

TP-BGC09-HL4-7

TP-BGC09-HL4-8

TP-BGC09-HL4-9

TP-BGC09-HL4-13

TP-BGC09-HL4-14

TP-BGC09-HL4-15

TP-BGC09-STU-3

TP-BGC09-STU-4

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL4-1

Location : Eagle Pup area

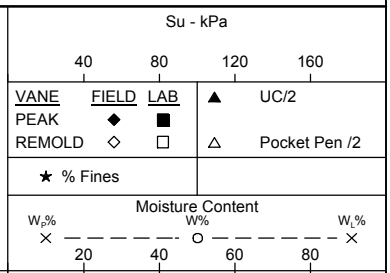
Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459710E, 7100706N
Ground Elevation (m) 963
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 24 Jul 09
Finish Date: 24 Jul 09
Final Depth of Pit (m) : 1.9
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Moss, roots, black to light brown silty soil.
		S1			SILT (ML) Some gravel, trace fine sand, trace clay, weathered metased clasts, FROZEN: Vx, Vr, 10 - 20%.
1					
		S2			
2					END OF TP @ 1.9m. REFUSAL ON FROZEN GROUND. NOTES: 1) Roots down to 0.3m. 2) No seepage. 3) PVC casing installed for thermistor string. 4) Backfilled to surface.
3					
4					
5					
6					
7					
8					
9					
10					



BGC ENGINEERING INC.
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Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL4-2

Location : Eagle Pup

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459528E, 7100891N
Ground Elevation (m) 910
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 24 Jul 09
Finish Date: 24 Jul 09
Final Depth of Pit (m) : 2.3
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Moss and lichens, rootlets, black silty soil.
		S1			
		S2			SILT (ML) Some gravel, trace fine sand, trace clay, subrounded and subangular clasts, slight mottling in brown soil. FROZEN from 0.3m down: Vs, 20-40%.
1					
2		S3			END OF TP @ 2.3m. REFUSAL ON FROZEN GROUND. NOTES: 1) Roots down to 0.4m. 2) No seepage. 3) PVC installed for thermistor string. 4) Backfilled to surface.
3					
4					
5					
6					
7					
8					
9					
10					

Su - kPa

40 80 120 160

VANE	FIELD	LAB		
PEAK	◆	■	▲	UC/2
REMOLD	◇	□	△	Pocket Pen /2

★ % Fines

Moisture Content

W_P% × — — — — ○ — — — — × W_L%

20 40 60 80

BGC ENGINEERING INC.
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Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL4-3

Location : Eagle Pup area

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459427E, 7100724N
Ground Elevation (m) 913
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 24 Jul 09
Finish Date: 24 Jul 09
Final Depth of Pit (m) : 5.0
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS Moss and lichen over brown silty soil, trace gravel.
		S1			SILTY SAND (SM) Some subrounded cobbles and boulders, up to 0.4m. [FILL?]
1					SILTY SAND (SW-SM) Some gravel, trace clay, grey brown with oxidized zones of orange sand (5 cm) and thin clay seams (1.5cm), angular to sub-angular clasts, occasional sub-rounded boulders (0.4m). FROZEN: Nf, Nbe. [TILL?]
2					
		S2			
3					
4					CLAY (CL), Trace gravel, trace silt, grey, wet when thawed, well bonded when fresh, FROZEN: Nbe, Vx. [TILL?]
		S3			
5					END OF TP @ 5.0m. EXTENT OF REACH IN FROZEN MATERIAL. NOTES: 1) Roots down to 0.5m. 2) No seepage. 3) Backfilled to surface.
6					
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB ▲ UC/2
PEAK ◆ ■
REMOLD ◇ □ △ Pocket Pen /2
★ % Fines

Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

GENERAL BGC (TESTPIT) 0792-002_03.GPJ BGC.GDT 10/2/09

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL4-4

Location : Eagle Pup

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459592E, 7100556N
Ground Elevation (m) 962
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 24 Jul 09
Finish Date: 24 Jul 09
Final Depth of Pit (m) : 2.3
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS Moss, roots and organic soil.
		S1			SANDY SILT (SM) Trace clay, trace gravel, firm, brown, moist, sub-angular clasts up to 6cm.
1					SAND (SW) Well graded, trace silt, sub-anglular clasts - mainly metasedimentary, grey and rust colored sand lenses, oxidized quartz clasts (up to 3cm),dry to wet. FROZEN from 0.5m: Nbn. [COLLUVIUM?]
		S2			
2					
					END OF TP @ 2.3m. REFUSAL ON FROZEN GROUND. NOTES: 1) Roots down to 0.5m. 2) No seepage. 3) Backfilled to surface.
3					
4					
5					
6					
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB
PEAK ◆ ■
REMOLD ◇ □
▲ UC/2
△ Pocket Pen /2
★ % Fines

Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL4-5

Location : Eagle Pup area

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459685E, 7100410N
Ground Elevation (m) 987
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 25 Jul 09
Finish Date: 25 Jul 09
Final Depth of Pit (m) : 6.5
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Moss, lichen, black soil, some sub-angular cobbles up to 7cm near surface.
1					SANDY SILT (ML) Some gravel, trace clay, low plastic, brown, moist with exposed pockets of visible free water, no visible structure, slow dilatancy, clasts up to 4cm of weathered subangular metasedimentary rock. FROZEN: Nf. [COLLUVIUM] 0.5m - Drier, friable sand lenses, no evident structure. Material becomes FROZEN: Nbe.
2					
3					SILT (ML) Some clay, trace sand, FROZEN: Nbe.
4					GRAVEL (GM) Some silt, well graded, angular to subangular clasts up to 6cm, light brown. FROZEN: Nf, trace Vx. [COLLUVIUM]
5					
6					
7					END OF TP @ 6.5m. EXTENT OF EXCAVATOR REACH. NOTES: 1) Roots down to 0.5m. 2) Some sloughing, no seepage. 3) Backfilled to surface.
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB
PEAK ◆ ■
REMOLD ◇ □
▲ UC/2
△ Pocket Pen /2
★ % Fines

Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
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Client: Victoria Gold

GENERAL BGC (TESTPIT) 0792-002_03.GPJ BGC.GDT 10/2/09

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL4-6

Location : Eagle Pup area

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459607E, 7100219N
Ground Elevation (m) 991
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 25 Jul 09
Finish Date: 25 Jul 09
Final Depth of Pit (m) : 6.0
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Moss and lichen cover, roots, dark brown top soil.
1					SAND (SM) Some silt, some angular gravel, cool not frozen, loose, brown, moist, no evident structure, weakly cemented. Gravel to cobble sized metasedientary clasts, orange oxide surface staining. [COLLUVIUM]
2					GRAVEL (GM) Some silt, well graded, loose, angular, brown, moist, no notable structure, weakly cemented, lenses of reddy brown sand. [COLLUVIUM?]
3					
4					
5					Highly Weathered Metasedimentary Rock Some sand, trace silt, oxidized surfaces, highly fractured rock. [WEATHERED BEDROCK]
6					END OF TP @ 6.0m. EXTENT OF EXCAVATOR REACH. NOTES: 1) Roots down to 0.5m. 2) No seepage, no visible ground ice, minor sloughing. 3) Backfilled to surface.
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB
PEAK ◆ ■
REMOLD ◇ □
▲ UC/2
△ Pocket Pen /2
★ % Fines
Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL4-7

Location : Stuttle Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459296E, 7100615N
Ground Elevation (m) 894
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 25 Jul 09
Finish Date: 25 Jul 09
Final Depth of Pit (m) : 2.8
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Moss and lichen cover, brown and black silty soil, rootlets throughout.
		S1			SILT (ML) Some gravel clasts, trace ice inclusions, poorly bonded. [COLLUVIUM]
1					SAND (SW) Gravelly, some silt, well graded, brown, weathered, metasedimentary clasts up to 4cm, orange oxide stained quartz clasts predominant. FROZEN: Vr, 20%. [COLLUVIUM]
		S2			
2					
3					END OF TP @ 2.75m. REFUSAL ON FROZEN GROUND. NOTES: 1) Roots down to 0.6m. 2) No seepage. 3) PVC casing installed for thermistor string. 4) Backfilled to surface.
4					
5					
6					
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB
PEAK ◆ ■
REMOLD ◇ □
▲ UC/2
△ Pocket Pen /2
★ % Fines

Moisture Content
W_P% W% W_L%
20 40 60 80

○ (S1)
○ (S2)

BGC ENGINEERING INC.
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Client: Victoria Gold

GENERAL BGC (TESTPIT) 0792-002_03.GPJ BGC.GDT 10/2/09

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL4-8

Location : Stuttle Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459412E, 7100409N
Ground Elevation (m) 928
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 25 Jul 09
Finish Date: 25 Jul 09
Final Depth of Pit (m) : 2.2
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0		S1			ORGANICS/TOPSOIL Black silty soil with rootlets thorughout, trace gravel, trace sand.
		S2			SILT and GRAVEL Sandy, well graded, clasts up to ~6cm, angular-subangular, colour changes gradationally from brown to grey with depth and back to brown, lenses of orangey brown sand, stratified 2cm thick, grey and black bands for ~20cm, very spatially variable. No notable structure. FROZEN from 0.8m: Vs, 10-20%. [COLLUVIUM]
1					
2					END OF TP @ 2.2m. REFUSAL ON FROZEN GROUND. NOTES: 1) Roots down to 0.6m. 2) Thick, 0.5m organic layer. 3) No water observed in Stuttle Gulch, however further upstream running water exposed at surface. 4) PVC casing installed for thermistor string. 5) Backfilled to surface.
3					
4					
5					
6					
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB ▲ UC/2
PEAK ◆ ■
REMOLD ◇ □ △ Pocket Pen /2
★ % Fines
Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
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Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL4-9

Location : Eagle Pup

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459853E, 7100602N
Ground Elevation (m) 1002
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 26 Jul 09
Finish Date: 26 Jul 09
Final Depth of Pit (m) : 5.7
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					GRAVELLY SAND (SM) Some silt, well graded, loose, gravel up to 6cm, angular-subangular, brown, damp to moist, no structure, none-weak cementation. Two visible 5cm thick organic layers (black soil and old wood) at 0.7m and 1.0m. [FILL]
1		S1			GRAVELLY SAND (SM) Some silt, well graded, loose, clasts, up to 6cm, angular-subangular, greyish-brown, dry, no structure, none-weak cementation. [COLLUVIUM]
2					METASEDIMENTARY ROCK Grey with oxide staining on fracture surfaces, stratified, strength varies weak to medium strong (R2-R3), highly weathered (W4), dipping downhill. [WEATHERED BEDROCK]
3					
4		S2			
5					
6					END OF TP @ 5.7m. SLOUGHING. NOTES: 1) Roots down to 1.0m. 2) Dry to bottom, no visible ground ice. 3) Sloughing in after 1.5m, undercutting occurring. 4) Backfilled to surface.
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB ▲ UC/2
PEAK ◆ ■
REMOLD ◇ □ △ Pocket Pen /2
★ % Fines
Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL4-13

Location : HL4 area

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459110E, 7100567N
Ground Elevation (m) 902
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 01 Aug 09
Finish Date: 01 Aug 09
Final Depth of Pit (m) : 1.5
Logged by : HG
Reviewed by : PQ

Su - kPa: 40, 80, 120, 160

VANE	FIELD	LAB		
PEAK	◆	■	▲	UC/2
REMOLD	◇	□	△	Pocket Pen /2

★ % Fines

Moisture Content: W_P% × — — o W% — — × W_L% (20, 40, 60, 80)

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Moss and lichen covering brown silty soil.
		S1			SILT (ML) Some fine interlensed grey and reddish-brown sand, some gravel, angular, subangular/rounded clasts (up to 6cm), FROZEN from 0.3m: Vs, 40-50%.
1		S2			
		S3			SAND (SW) Some silt, brown, well graded, subangular/subrounded and angular clasts (up to 6cm). FROZEN: trace Vx.
2					END OF TP @ 1.5m. REFUSAL ON FROZEN GROUND. NOTES: 1) Roots down to 0.3m. 2) No seepage. 3) Backfilled to surface.
3					
4					
5					
6					
7					
8					
9					
10					

BGC ENGINEERING INC.
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Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL4-14

Location : HL4 area

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459269E, 7100518N
Ground Elevation (m) 910
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 01 Aug 09
Finish Date: 01 Aug 09
Final Depth of Pit (m) : 1.9
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Moss and lichen mat over wet black silty soil.
1		S1			SILT (ML) Some gravel, some sand, brown, weathered angular and subangular metasedimentary clasts (up to 6cm) with an occasional cobble (up to 12cm). FROZEN from 0.2m down: Nbe. [COLLUVIUM].
		S2			
2					END OF TP @ 1.9m. REFUSAL ON FROZEN GROUND. NOTES: 1) Roots down to 0.3m. 2) Minor seepage/melting, weepy walls and pooling in bottom of test pit after 20-30 minutes. 3) PVC casing installed for thermistor string. 4) Backfilled to surface.
3					
4					
5					
6					
7					
8					
9					
10					

Su - kPa

40 80 120 160

	VANE	FIELD	LAB	
PEAK		◆	■	▲ UC/2
REMOLD		◇	□	△ Pocket Pen /2

★ % Fines

Moisture Content

W_P% W% W_L%

20 40 60 80

BGC ENGINEERING INC.
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Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL4-15

Location : HL4 area

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459317E, 7100252N
Ground Elevation (m) 961
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 01 Aug 09
Finish Date: 01 Aug 09
Final Depth of Pit (m) : 1.3
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0		S1			ORGANICS/TOPSOIL Thick moss over matt of decomposing organics and brown moist silty soil.
1		S2			SILT (ML) Some sand, some gravel, firm to stiff, brown, moist, no structure, weakly cemented, angular and subangular metasediment clasts (up to 6cm), [COLLUVIUM]
2					SILT (ML) Some sand, trace clay, brown, no evident strucuture, some angular and subangular and subrounded metasedimantary and granodiorite clasts, lens of grey silt with some gravel. FROZEN from 0.2m: Vr, 5-10%, 25mm thick ice lens at 0.2m. [COLLUVIUM]
3					END OF TP @ 1.3m. REFUSAL ON FROZEN GROUND. NOTES: 1) Roots down to 0.3m. 2) No seepage. 4) Backfilled to surface.
4					
5					
6					
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB
PEAK ◆ ■
REMOLD ◇ □
▲ UC/2
△ Pocket Pen /2
★ % Fines

Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-STU-3

Location : Stuttle Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459086E, 7100696N
Ground Elevation (m) 884
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 08 Aug 09
Finish Date: 08 Aug 09
Final Depth of Pit (m) : 1.9
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS Peat, dark brown, rootlets.
					SAND and GRAVEL (SW/GW) Some silt, trace cobbles and boulders, well graded, dense, subrounded to angular, max clast size 40cm, orangish brown, dry to moist, homogenous. Below 0.8m - FROZEN: Vx, 1-5%. Between 1.2m and 1.6m - part of test pit comprises sandy silt to silty sand and gravel with some clay At 1.6m - stratified sand and gravel layers, subrounded, tan, some silt, Vx, 1%. END OF TP @ 1.9m. REFUSAL ON FROZEN GROUND.
1					
2					NOTES: 1) Rootlets down to 0.4m. 2) No seepage. 3) Backfilled to surface.
3					
4					
5					
6					
7					
8					
9					
10					

Su - kPa
40 80 120 160

VANE	FIELD	LAB	
PEAK	◆	■	▲ UC/2
REMOLD	◇	□	△ Pocket Pen /2

★ % Fines

Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
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Client: Victoria Gold

GENERAL BGC (TESTPIT) 0792-002_03.GPJ BGC.GDT 10/2/09

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-STU-4

Location : Stuttle Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 459038E, 7100635N
Ground Elevation (m) 886
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 08 Aug 09
Finish Date: 08 Aug 09
Final Depth of Pit (m) : 2.6
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS Peat, dark brown, trace rootlets.
					SILTY SAND (SM) Some organic silt, fine to medium, loose, max clast 1mm, subrounded, dark brown, FROZEN.
1					SANDY SILT (SM) Some fine gravel (subrounded), non plastic, dark grey/orange, low dry strength, FROZEN: Vs, 20%, ice lenses 1-3mm thick.
					1.5m to 2.6m - Gravel is subrounded to subangular, max clast 10 cm, FROZEN, hard digging.
2					
					END OF TP @ 2.6m. REFUSAL ON FROZEN GROUND.
3					NOTES: 1) No seepage. 2) Backfilled to surface.
4					
5					
6					
7					
8					
9					
10					

Su - kPa

40 80 120 160

VANE	FIELD	LAB	
PEAK	◆	■	▲ UC/2
REMOLD	◇	□	△ Pocket Pen /2

★ % Fines

Moisture Content

W_P% × — — — — — O — — — — — × W_L%

20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

GENERAL BGC (TESTPIT) 0792-002_03.GPJ BGC.GDT 10/2/09

WEST HAGGART CREEK

TP-BGC09-A-3

TP-BGC09-A-4

TP-BGC09-HL4-11

TP-BGC09-HL4-12

TP-BGC09-HL4-16

TP-BGC09-HL4-17

TP-BGC09-HL4-18

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-A-3

Location : Haggart Creek

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 458464E, 7100539N
Ground Elevation (m) 804
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 19 Jul 09
Finish Date: 19 Jul 09
Final Depth of Pit (m) : 5.5
Logged by : PQ
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS Root mat.
					SILT (ML) Clayey, sandy, some cobbles and boulders, compact to dense, mottled light brown, damp. [TILL]
1					GRAVEL (GW) Sandy, trace silt, compact, brown. [TILL]
					SILT (ML) Clayey, sandy, some cobbles and boulders, compact to dense, mottled light brown, damp. Material becomes sandier with depth, with cobbles and boulders almost absent below 2.0m. [TILL] 0.9m to 1.3m - Becomes FROZEN: Vr, Vx, 5-10%, ice lenses.
2					
3					
4					4.0m - Becomes grey.
5					
6					END OF TP @ 5.5m. LIMIT OF EXCAVATOR REACH. NOTES: 1) No seepage. 2) Backfilled to surface.
7					
8					
9					
10					

Su - kPa
40 80 120 160

VANE	FIELD	LAB	
PEAK	◆	■	▲ UC/2
REMOLD	◇	□	△ Pocket Pen /2

★ % Fines

Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

GENERAL BGC (TESTPIT) 0792-002_03.GPJ BGC.GDT 10/2/09

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-A-4

Location : Heap Leach #4

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 458985E, 7100207N
Ground Elevation (m) 904
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 19 Jul 09
Finish Date: 19 Jul 09
Final Depth of Pit (m) : 4.3
Logged by : PQ
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS Root mat, forest litter.
1					SAND and GRAVEL (SW/GW) Trace to some silt, occasional cobbles, compact to dense, damp, brown. [COLLUVIUM] 0.9m to 1.1m - Old organic horizon.
2					GRAVEL (GW), Sandy, trace to some silt, clasts are subrounded to subangular, randomly oriented. FROZEN: Nbn, trace Vx. [COLLUVIUM]
3					
4					
5					END OF TP @ 4.3m. REFUSAL ON FROZEN GROUND. NOTES: 1) Very hard digging from 1.1m to 4.3m, only progress 0.5m in 20-30 minutes. 2) No seepage. 3) Backfilled to surface.
6					
7					
8					
9					
10					

Su - kPa
40 80 120 160

VANE	FIELD	LAB		
PEAK	◆	■	▲	UC/2
REMOLD	◇	□	△	Pocket Pen /2

★ % Fines

Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL4-11

Location : HL4 area

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 458652E, 7100630N
Ground Elevation (m) 831
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 01 Aug 09
Finish Date: 01 Aug 09
Final Depth of Pit (m) : 1.5
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Light brown silt and moss (0-0.2m); black silt , FROZEN: Nbn (0.2-0.4m).
		S1			SILT (ML) Trace clay, trace sand, silt is interbedded thin grey and brown layers. FROZEN:Vs, 40%.
1		S2			SANDY GRAVEL (GM) Some silt, well graded, FROZEN - well bonded, excess non-visible ice (Nbe), individual crystals and inclusions around clasts, angular and subangular+subrounded particles, metasedimentary and granodiorite present, quartz clasts (up to 6cm). [COLLUVIUM?]
2					END OF TP @ 1.5m. REFUSAL ON FROZEN GROUND. NOTES: 1) Roots down to 0.4m. 2) Sharp contact between silt and sandy gravel with silt, possibly old fluvial deposit? 3) No seepage. 4) PVC casing installed for thermistor string. 5) Backfilled to surface.
3					
4					
5					
6					
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB
PEAK ◆ ■
REMOLD ◇ □
▲ UC/2
△ Pocket Pen /2
★ % Fines

Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL4-12

Location : HL4 area

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 458884E, 7100459N
Ground Elevation (m) 870
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 01 Aug 09
Finish Date: 01 Aug 09
Final Depth of Pit (m) : 1.9
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS/TOPSOIL Depth varies from 0.2-0.3m thick, brown silty soil, trace clay, thick moss and lichen cover, roots thoughout.
		S1			
1		S2			SILT (ML) Some gravel, some sand, soft to firm until 0.8m, moist, no structure, weak cementation, thin zones of organics mixed in, angular and subangular metasedimentary clasts - predominantly oxide stained quartz (up to 4cm). FROZEN: Vr, 30%, trace Vx, ice lenses up to 5 cm thick. [COLLUVIUM]
		S3			
2					GRAVEL (GM) Some silt, well graded, angular, subangular to subrounded particles, both metasedimentary and granodiorite clasts. FROZEN: Nbe. [COLLUVIUM?]
3					END OF TP @ 1.9m. REFUSAL ON FROZEN GROUND. NOTES: 1) Roots down to 0.5m. 2) No seepage. 3) PVC casing installed for thermistor string. 4) Backfilled to surface.
4					
5					
6					
7					
8					
9					
10					

Su - kPa

40 80 120 160

VANE	FIELD	LAB	
PEAK	◆	■	▲ UC/2
REMOLD	◇	□	△ Pocket Pen /2

★ % Fines

Moisture Content

W_P% W% W_L%

20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL4-16

Location : Platinum Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 458836E, 7100222N
Ground Elevation (m) 865
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 02 Aug 09
Finish Date: 02 Aug 09
Final Depth of Pit (m) : 2.0
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS Thick moss coverage, rootlets throughout black, moist silt.
		S1			SAND (SM) Some silt, some gravel, well graded, loose to compact, metasedimentary clasts (up to 4cm), angular to subangular, brown, moist, no structure, weak cementation.
1		S2			
		S3			SAND (SM) Some silt, some gravel, trace clay, greyish-brown, angular metasedimentary clasts (up to 4cm). FROZEN from 0.5m: Nbe, 5-10%. [COLLUVIUM]
2					END OF TP @ 2.0m. REFUSAL ON FROZEN GROUND. NOTES: 1) Roots down to 0.3m. 2) No seepage. 3) Backfilled to surface.
3					
4					
5					
6					
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB ▲ UC/2
PEAK ◆ ■
REMOLD ◇ □ △ Pocket Pen /2
★ % Fines
Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL4-17

Location : Platinum Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 458655E, 7100232N
Ground Elevation (m) 844
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 02 Aug 09
Finish Date: 02 Aug 09
Final Depth of Pit (m) : 1.6
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS Thick moss coverage, wet black silty soil
		S1			
		S2B			SILT (ML) Traces of clay, gravel and organics, very soft, grey-black, moist-wet, homogeous. FROZEN from 0.60m down: Nf.
1					SAND (SM) Gravel, well graded, brown angular and subangular clasts, grey lenses and oxidized reddish-brown sand. FROZEN: Nbe to Vs, 10-20%. [COLLUVIUM]
2					END OF TP @ 1.6m. REFUSAL ON FROZEN GROUND. NOTES: 1) Roots down to 0.3m. 2) Some sloughing from the uphill (East) side wall, which had no visible ground ice. 3) Seepage, likely stored moisture in moss from showers the last few days. 4) PVC casing installed for thermistor string. 5) Backfilled to surface.
3					
4					
5					
6					
7					
8					
9					
10					

Su - kPa

40 80 120 160

VANE	FIELD	LAB		
PEAK	◆	■	▲	UC/2
REMOLD	◇	□	△	Pocket Pen /2

★ % Fines

Moisture Content

W_P% × — — — — — ○ — — — — — × W_L%

20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

TEST PIT # TP-BGC09-HL4-18

Location : Platinum Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m): 458499E, 7100230N
Ground Elevation (m) 790
Datum : UTM NAD 83

Excavator : CAT 325B
Operator : Larry Paulsen

Start Date : 03 Aug 09
Finish Date: 03 Aug 09
Final Depth of Pit (m) : 4.7
Logged by : HG
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS Moss and lichen covering moist, black silty soil.
		S1			SAND and GRAVEL (SM/GM) Silty, loose to compact, angular and subangular and subrounded metased clasts (up to 6cm), trace cobbles, brown, moist, interlensed with brown sandy gravel and grey silt. [COLLUVIUM?]
1		S2			1.0m - Organic lens.
		S3			
2		S4			
3					SILT (ML) Some clay, trace gravel, trace sand, FROZEN: Vx, Vr, 30-40%, ice lenses up to 1cm thick. [COLLUVIUM?]
		S5			
4					
5					END OF TP @ 4.7m. REFUSAL ON FROZEN GROUND. NOTES: 1) Roots down to 0.4m. 2) Sloughing from uphill side of test pit. 3) No seepage. 4) Backfilled to surface.
6					
7					
8					
9					
10					

Su - kPa
40 80 120 160
VANE FIELD LAB
PEAK ◆ ■
REMOLD ◇ □
▲ UC/2
△ Pocket Pen /2
★ % Fines

Moisture Content
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

GENERAL BGC (TESTPIT) 0792-002_03.GPJ BGC.GDT 10/2/09

APPENDIX B
LABORATORY TEST REPORTS

MOISTURE CONTENT TEST RESULTS

Project: Eagle Gold Project
Project No.: W14101304
Client: BGC Engineering Inc.
ATTN: Heather Grinde

Sample No.: TPBGC09-HL5
Date Tested: 8/14/2009
Tested By: IM
Page: 1 of 1

B.H. Number	Sample Number (depth)	Tare Number	Tare Mass (g)	Mass of Wet Soil & Tare (g)	Mass of Dry Soil & Tare (g)	Moisture Content (%)	Visual Description of Soil EBA Work Method WM4400
TP4-S1	0.5-0.6					12.0	SAND - sitly, some gravel
TP4-S2	2.0-2.5					9.1	SAND - sitly, some gravel
TP4-S3	4.0-4.5					6.0	Decomposed granite
TP5-S1	0.5-0.6					17.8	SAND - sitly, some gravel
TP6-S1	0.6-0.7					17.6	SILT and SAND
TP6-S2	2.0-2.5					13.9	SAND - some silt
TP6-S3	5.0-5.5					11.9	SAND and GRAVEL - trace silt
TP7-S1	0.4-0.5					17.9	SILT - some sand
TP7-S2	0.8-0.9					9.5	SAND - sitly, some gravel
TP7-S3	2.0-2.5					11.7	SAND - sitly, some gravel
TP8-S1	0.2-0.4					10.6	SILT - sand, some gravel
TP8-S2	1.5					16.7	GRAVEL and SILT - some sand
TP9-S1	0.4-0.5					29.0	SAND and SILT - trace gravel
TP10-S1	0.5					23.8	SAND - silty, some gravel, trace organics

Tested in accordance with ASTM standard D2216, subject to review .
issued for internal use

EBA Engineering Consultants Ltd.

MOISTURE CONTENT TEST RESULTS

Project: Eagle Gold Project
Project No.: W14101304
Client: BGC Engineering Inc.
ATTN: Heather Grinde

Sample No.: TPBGC09-HL4
Date Tested: 8/14/2009
Tested By: IM
Page: 1 of 1

B.H. Number	Sample Number (depth)	Tare Number	Tare Mass (g)	Mass of Wet Soil & Tare (g)	Mass of Dry Soil & Tare (g)	Moisture Content (%)	Visual Description of Soil EBA Work Method WM4400
TP1-S1	0.5					29.0	CLAY - sitly
TP1-S2	1.8-1.9					18.0	CLAY - sitly
TP2-S1	0.2-0.4					35.9	SAND - sitly, some gravel
TP2-S2	0.6-0.7					74.8	SAND - sitly, some gravel (mostly water)
TP2-S3	2.3					25.6	SILT - trace sand
TP3-S1	0.4-0.5					18.6	SILT - sandy
TP3-S2	2.5					8.8	SILT and CLAY - some sand
TP3-S3	2.3					31.5	SAND and SILT - trace gravel
TP4-S1	0.4-0.5					14.7	SILT and CLAY
TP4-S2	1.5					10.7	SILT - trace sand
TP5-S1						23.6	SAND - silty, trace gravel
TP5-S2							missing.
TP5-S3						10.4	SAND - sitly, some gravel
TP5-S4						7.8	SAND - sitly, some gravel
TP6-S1						10.4	SAND - gravelly, trace silt
TP6-S2						5.7	SAND - sitly, some gravel
TP7-S1	0.5-0.7					14.9	GRAVEL - sandy, trace silt
TP7-S2	1.5-1.85					33.2	GRAVEL - sandy, trace silt
TP8-S1	0.3-0.4					92.5	SILT - sandy
TP8-S2	0.7-0.8					15.6	SILT - sandy, some gravel
TP9-S1	0.8-0.9					11.2	GRAVEL - sandy, some silt
TP9-S2	3.3-3.8					5.6	GRAVEL - sandy, trace silt

Tested in accordance with ASTM standard D2216, subject to review .
issued for internal use

EBA Engineering Consultants Ltd.

MOISTURE CONTENT TEST RESULTS

Project: Eagle Gold Project
Project No.: W14101304
Client: BGC Engineering Inc.
ATTN: Heather Grinde

Sample No.: TPBGC09-WR#
Date Tested: 8/14/2009
Tested By: IM
Page: 1 of 1

B.H. Number	Sample Number (depth)	Tare Number	Tare Mass (g)	Mass of Wet Soil & Tare (g)	Mass of Dry Soil & Tare (g)	Moisture Content (%)	Visual Description of Soil EBA Work Method WM4400
TP1-S1	0.6					10.2	GRAVEL - some sand and silt
TP1-S2	5.0					8.2	GRAVEL - silty, some sand
TP1-S3	6.0					12.5	weathered bedrock
TP2-S1	0.8-0.9					9.4	GRAVEL - some sand and silt
TP2-S2	4.0					11.0	weathered bedrock
TP3-S1	2.0					17.7	Decomposed granite
TP4-S1	0.5					16.8	SAND and SILT - trace gravel
TP4-S2	0.9					16.9	SAND - sitly, some gravel
TP5-S1	0.5					9.7	GRAVEL and SAND - some silt
TP5-S2	1.0					4.8	weathered bedrock
TP6-S1	0.9					16.2	SAND - silty, trace gravel
TP6-S2	1.0-1.2					10.2	SAND - some silt, some gravel
TP6-S3	4.0					14.7	SILT - sandy, trace gravel
TP7-S1	0.9					17.0	SAND and SILT - some gravel
TP8-S1	0.9-1.0					11.8	SAND and SILT - some gravel
TP8-S2	2.0					8.0	SAND - some silt, some gravel
TP9-S1	0.5-0.7					19.3	SAND and GRAVEL - some silt
TP9-S2	2.0-2.5					9.7	GRAVEL - some sand, some silt

Tested in accordance with ASTM standard D2216, subject to review .
issued for internal use

EBA Engineering Consultants Ltd.

MOISTURE CONTENT TEST RESULTS

Project: Eagle Gold Project
Project No.: W14101304
Client: BGC Engineering Inc.
ATTN: Heather Grinde

Sample No.: TPBGC09-HL6
Date Tested: 8/14/2009
Tested By: IM
Page: 1 of 1

B.H. Number	Sample Number (depth)	Tare Number	Tare Mass (g)	Mass of Wet Soil & Tare (g)	Mass of Dry Soil & Tare (g)	Moisture Content (%)	Visual Description of Soil EBA Work Method WM4400
TP1-S1	0.5-0.6					12.9	GRAVEL - some sand, some silt
TP1-S2	2.5-3.0					15.2	SAND and SILT - trace gravel
TP1-S3	5.0-5.5					9.3	GRAVEL - some sand, some silt
TP2-S1	0.4-0.5					11.8	GRAVEL - silty, some sand
TP2-S2	1.0-11					7.9	GRAVEL - some sand, trace silt
TP3-S1	0.4-0.5					11.7	SAND and SILT - trace gravel
TP3-S1	1.0-1.2					7.9	GRAVEL - some sand, some silt
TP3-S3	2.0-2.5					9.8	SAND - gravelly, some silt
TP3-S4	5.0-5.5					7.3	GRAVEL - some sand, trace silt
TP4-S1	0.4-0.6						part of second lab program
TP4-S2	0.8-1.0						part of second lab program
TP4-S3	2.8						part of second lab program
TP4-S4	4.0-4.4						part of second lab program

Tested in accordance with ASTM standard D2216, subject to review .
issued for internal use

EBA Engineering Consultants Ltd.

MOISTURE CONTENT TEST RESULTS

Project: Eagle Gold Project
Project No.: W14101304
Client: BGC Engineering Inc.
ATTN: Heather Grinde

Sample No.: TPBGC09-P
Date Tested: 8/14/2009
Tested By: CH
Page: 1 of 1

B.H. Number	Sample Number (depth)	Tare Number	Tare Mass (g)	Mass of Wet Soil & Tare (g)	Mass of Dry Soil & Tare (g)	Moisture Content (%)	Visual Description of Soil EBA Work Method WM4400
1-S1	0.7-0.8					10.5	GRAVEL and SAND - silty
1-S2	2.7-3.2					5.2	GRAVEL - trace sand, trace silt
2-S1	0.3-0.4					8.4	GRAVEL - silty sand
2-S2	1.0-1.1					6.2	SAND and SILT - some gravel
3-S1	0.6-0.7					8.6	GRAVEL and SAND - some silt
4-S1	0.9-1.0					6.8	GRAVEL - some sand, some silt
4-S2	1.8-2.0					6.8	GRAVEL and SAND - trace silt
4-A-S1A	1.2					19.5	SAND - some gravel, some silt
A-3-S1	1.0					n\a	missing

Tested in accordance with ASTM standard D2216, subject to review .

EBA Engineering Consultants Ltd.

MOISTURE CONTENT TEST RESULTS

Project: Eagle Gold Project
Project No.: W14101304
Client: BGC Engineering Inc.
ATTN: Heather Grinde

Sample No.: TPBGC09-HL4
Date Tested: 8/14/2009
Tested By: CH
Page: 1 of 1

B.H. Number	Sample Number (depth)	Tare Number	Tare Mass (g)	Mass of Wet Soil & Tare (g)	Mass of Dry Soil & Tare (g)	Moisture Content (%)	Visual Description of Soil EBA Work Method WM4400
TP10-S1	0.5-0.6					12.8	SAND and SILT - some gravel
TP10-S2	3.0-3.4					12.6	GRAVEL and SILT - some sand
TP10-S3	5.0-5.5					9.4	GRAVEL and SILT - some sand
TP10-S4	6.5					14.0	SAND and SILT - trace gravel
TP11-S1	0.4-0.6					57.8	ORGANICS and SILT
TP11-S2	0.9-1.1					11.8	weathered bedrock, some sand, some silt
TP12-S1	0.3-0.4					18.5	SAND and SILT - trace gravel
TP12-S2	1.0-1.1					53.1	SILT - trace sand
TP12-S3	1.3-1.4					51.4	SAND and SILT - some gravel
TP13-S1	0.4-0.5					13.2	SILT - trace sand, trace gravel
TP13-S2	0.9-1.0					83.2	SILT - trace sand
TP13-S3	1.3-1.5					14.8	GRAVEL and SAND - some silt
TP14-S1	0.7-0.8					25.7	SAND and SILT - some gravel
TP14-S2	1.5					33.5	SILT - some sand, visible organics
TP15-S1	0.2-0.3					25.9	SAND and SILT
TP15-S2	0.9-1.0					12.3	SAND and SILT - trace gravel
TP16-S1	0.4-0.5					13.2	SILT - trace sand
TP16-S2	0.9-1.0					13.4	SAND and SILT
TP16-S3	1.8-2.0					15.6	SILT - trace sand, trace gravel
TP17-S1	0.3-0.5					80.4	ORGANICS and SILT
TP17-S2A	0.7-0.8					20.3	SILT - some sand
TP17-S2B	0.7-0.8					16.9	SAND and SILT - some gravel
TP18-S1	0.3-0.4					9.6	SAND and SILT - some gravel
TP18-S2	1.1-1.2					6.1	SAND and SILT - some gravel
TP18-S3	1.6-1.8					6.4	GRAVEL and SAND - some silt
TP18-S4	2.0-2.4					8.6	SILT - trace sand
TP18-S5	3.5-4.0					64.3	SILT and CLAY

Tested in accordance with ASTM standard D2216, subject to review .

EBA Engineering Consultants Ltd.

MOISTURE CONTENT TEST RESULTS

Project: Eagle Gold Project
Project No.: W14101304
Client: BGC Engineering Inc.
ATTN: Heather Grinde

Sample No.: TPBGC09-HL5
Date Tested: 8/14/2009
Tested By: CH
Page: 1 of 1

B.H. Number	Sample Number (depth)	Tare Number	Tare Mass (g)	Mass of Wet Soil & Tare (g)	Mass of Dry Soil & Tare (g)	Moisture Content (%)	Visual Description of Soil EBA Work Method WM4400
TP3-S1	1					8.8	GRAVEL and SAND - some silt
TP3-S2	1.5					10.7	GRAVEL and SAND - some silt
TP3-S3	1.8					7.9	SAND - some gravel, some silt

Tested in accordance with ASTM standard D2216, subject to review .

EBA Engineering Consultants Ltd.

MOISTURE CONTENT TEST RESULTS

Project: Eagle Gold Project
Project No.: W14101304
Client: BGC Engineering Inc.
ATTN: Heather Grinde

Sample No.: TPBGC09-HL6
Date Tested: 8/14/2009
Tested By: CH
Page: 1 of 1

B.H. Number	Sample Number (depth)	Tare Number	Tare Mass (g)	Mass of Wet Soil & Tare (g)	Mass of Dry Soil & Tare (g)	Moisture Content (%)	Visual Description of Soil EBA Work Method WM4400
TP4-S1	0.4-0.6					3.9	SAND - some gravel, some silt
TP4-S2	0.8-1.0					3.8	GRAVEL and SAND - some silt
TP4-S3	2.5					11.2	SAND and SILT - trace gravel
TP4-S4	4.0-4.4					6.3	GRAVEL and SAND - some silt
TP5-S1	0.3-0.4					12.1	SAND and GRAVEL - some silt
TP5-S2	0.9-1.0					7.0	SAND and GRAVEL - some silt
TP5-S3	3.5-4.0					5.1	SAND and GRAVEL - some silt
TP6-S1	0.3-0.4					13.8	SILT - trace sand
TP6-S2	1.0-1.2					12.6	SAND and SILT - trace gravel
TP7-S1	0.2-0.3					13.3	SAND and SILT - trace gravel
TP7-S2	0.8-0.9					11.0	SAND and SILT - trace gravel
TP7-S3	2.0-2.5					8.6	SAND and GRAVEL - some silt
TP8-S1	0.3					246.4	Orgsnics, silt (?)
TP8-S2	1.0					13.6	SAND and SILT - some gravel
TP8-S3	2.0-2.4					13.4	SILT - some sand, trace gravel
TP9-S1	0.3-0.4					13.2	SAND and GRAVEL - some silt
TP9-S2	0.9-1.1					11.8	SAND and GRAVEL - some silt
TP10-S1	0.2-0.4					17.1	SAND - some gravel, some silt w/ organics
TP10-S2	0.8-0.9					10.6	SAND - some gravel, some silt
TP10-S3	2.2-2.7					10.6	SILT and decomposed bedrock

Tested in accordance with ASTM standard D2216, subject to review .

EBA Engineering Consultants Ltd.

MOISTURE CONTENT TEST RESULTS

Project: Eagle Gold Project
Project No.: W14101304
Client: BGC Engineering Inc.
ATTN: Heather Grinde

Sample No.: TPBGC09-HL6
Date Tested: 9/2/2009
Tested By: CH
Page: 1 of 1

B.H. Number	Sample Number (depth)	Tare Number	Tare Mass (g)	Mass of Wet Soil & Tare (g)	Mass of Dry Soil & Tare (g)	Moisture Content (%)	Visual Description of Soil EBA Work Method WM4400
TP11-S1			11.9	635.0	558.7	14.0	GRAVEL - Silty, some sand
TP12-S1			16.5	692.0	630.8	10.0	SAND and GRAVEL - some silt
TP12-S2			11.6	555.7	506.8	9.9	SAND and GRAVEL - trace silt
TP13-S1			17.8	575.8	533.6	8.2	GRAVEL - Silty, some sand
TP14-S1			12.1	646.5	560.9	15.6	SAND and GRAVEL - silty
TP14-S2			12.2	567.2	495.6	14.8	SAND and GRAVEL - silty
TP15-S1			15.4	622.7	551.9	13.2	SAND and SILT - some gravel
TP15-S2			14.9	538.2	463.1	16.8	SILT - trace sand
TP16-S1			11.5	628.6	570.0	10.5	GRAVEL - Silty, some sand
TP17-S1			12.9	618.4	590.9	4.8	SAND and GRAVEL - some silt

Tested in accordance with ASTM standard D2216, subject to review .

EBA Engineering Consultants Ltd.

MOISTURE CONTENT TEST RESULTS

Project: Eagle Gold Project
Project No.: W14101304
Client: BGC Engineering Inc.
ATTN: Heather Grinde

Sample No.: TPBGC09-AG
Date Tested: 9/2/2009
Tested By: CH
Page: 1 of 1

B.H. Number	Sample Number (depth)	Tare Number	Tare Mass (g)	Mass of Wet Soil & Tare (g)	Mass of Dry Soil & Tare (g)	Moisture Content (%)	Visual Description of Soil EBA Work Method WM4400
DH3	15-20ft		18.5	295.8	284.5	4.2	SAND

Tested in accordance with ASTM standard D2216, subject to review .

EBA Engineering Consultants Ltd.

MOISTURE CONTENT TEST RESULTS

Project: Eagle Gold Project
Project No.: W14101304
Client: BGC Engineering Inc.
ATTN: Heather Grinde

Sample No.: TPBGC09-STU
Date Tested: 9/2/2009
Tested By: CH
Page: 1 of 1

B.H. Number	Sample Number (depth)	Tare Number	Tare Mass (g)	Mass of Wet Soil & Tare (g)	Mass of Dry Soil & Tare (g)	Moisture Content (%)	Visual Description of Soil EBA Work Method WM4400
TP3-S1			12.7	586.3	524.6	12.1	SAND and GRAVEL - some silt
TP3-S2			11.4	602.6	516.1	17.1	SILT - trace sand and gravel
TP4-S1			392.4	1572.8	930.6	119.3	SILT - trace sand
TP4-S2			404.0	1444.7	1263.3	21.1	SILT - some sand
DH3	5-10ft		16.7	403.1	335.5	21.2	SILT - trace sand
DH3	25-30ft		16.7	581.6	510.9	14.3	SILT and SAND
DH3	30-35ft						missing
DH3	45-50ft		15.3	601.2	532.7	13.2	SAND and GRAVEL - silty
DH3	60-70ft		14.8	260.3	229.0	14.6	SILT - trace sand
DH4	5-10ft		12.7	478.0	425.9	12.6	SAND and GRAVEL - silty
DH4	25-30ft		16.6	486.4	386.6	27.0	SILT - trace sand and gravel
DH4	50-60ft		16.8	829.2	722.1	15.2	SAND and SILT - trace gravel

Tested in accordance with ASTM standard D2216, subject to review .

EBA Engineering Consultants Ltd.

MOISTURE CONTENT TEST RESULTS

Project: Eagle Gold Project
Project No.: W14101304
Client: BGC Engineering Inc.
ATTN: Heather Grinde

Sample No.: TPBGC09-D6
Date Tested: 9/2/2009
Tested By: CH
Page: 1 of 1

B.H. Number	Sample Number (depth)	Tare Number	Tare Mass (g)	Mass of Wet Soil & Tare (g)	Mass of Dry Soil & Tare (g)	Moisture Content (%)	Visual Description of Soil EBA Work Method WM4400
TP1-S1			11.6	658.9	601.7	9.7	GRAVEL - silty, some sand
TP1-S2			15.3	765.9	728.5	5.2	SILT and SAND - some gravel
TP3-S1			14.7	671.7	488.5	38.7	SAND and SILT
TP3-S2			11.5	529.1	495.2	7.0	SAND and GRAVEL - some silt
TP4-S1			15.0	579.8	444.5	31.5	SILT - trace sand
TP4-S2			14.5	551.6	435.9	27.5	SILT
TP3-S2			11.5	529.1	495.2	7.0	SAND and GRAVEL - some silt
DH1	15-20ft		18.1	470.7	419.7	12.7	SILT - trace sand and gravel
DH2	5-10ft		15.5	579.0	519.0	11.9	SAND and SILT - trace gravel
DH2	25-30ft		12.2	659.0	566.1	16.8	SAND and SILT
DH3	5-10ft		14.5	622.7	499.5	25.4	SILT - some sand
DH3	20-25ft		16.9	558.5	491.4	14.1	SILT - some sand
DH7	10-15ft		12.1	437.1	385.3	13.9	SAND and GRAVEL - silty
DH7	20-25ft		17.0	276.3	229.9	21.8	SILT - trace sand and gravel
DH7	40-45ft		11.6	512.0	436.5	17.8	SILT
DH7	50-60ft		11.8	422.8	362.9	17.1	SILT
DH7	60-65ft		17.1	149.7	131.3	16.1	SAND - silty

Tested in accordance with ASTM standard D2216, subject to review .

EBA Engineering Consultants Ltd.

MOISTURE CONTENT TEST RESULTS

Project: Eagle Gold Project
Project No.: W14101304
Client: BGC Engineering Inc.
ATTN: Heather Grinde

Sample No.: TPBGC09-HL1
Date Tested: 9/2/2009
Tested By: CH
Page: 1 of 1

B.H. Number	Sample Number (depth)	Tare Number	Tare Mass (g)	Mass of Wet Soil & Tare (g)	Mass of Dry Soil & Tare (g)	Moisture Content (%)	Visual Description of Soil EBA Work Method WM4400
TP1-S1			12.2	854.6	777.0	10.1	GRAVEL - silty, some sand
TP2-S1			14.9	837.0	752.3	11.5	SILT and SAND - some gravel
TP2-S2			12.2	375.1	290.5	30.4	SILT - trace sand and gravel

Tested in accordance with ASTM standard D2216, subject to review .

EBA Engineering Consultants Ltd.

MOISTURE CONTENT TEST RESULTS

Project: Eagle Gold Project
Project No.: W14101304
Client: BGC Engineering Inc.
ATTN: Heather Grinde

Sample No.: TPBGC09-HL6
Date Tested: 9/2/2009
Tested By: CH
Page: 1 of 1

B.H. Number	Sample Number (depth)	Tare Number	Tare Mass (g)	Mass of Wet Soil & Tare (g)	Mass of Dry Soil & Tare (g)	Moisture Content (%)	Visual Description of Soil EBA Work Method WM4400
TP11-S1			11.9	635.0	558.7	14.0	GRAVEL - Silty, some sand
TP12-S1			16.5	692.0	630.8	10.0	SAND and GRAVEL - some silt
TP12-S2			11.6	555.7	506.8	9.9	SAND and GRAVEL - trace silt
TP13-S1			17.8	575.8	533.6	8.2	GRAVEL - Silty, some sand
TP14-S1			12.1	646.5	560.9	15.6	SAND and GRAVEL - silty
TP14-S2			12.2	567.2	495.6	14.8	SAND and GRAVEL - silty
TP15-S1			15.4	622.7	551.9	13.2	SAND and SILT - some gravel
TP15-S2			14.9	538.2	463.1	16.8	SILT - trace sand
TP16-S1			11.5	628.6	570.0	10.5	GRAVEL - Silty, some sand
TP17-S1			12.9	618.4	590.9	4.8	SAND and GRAVEL - some silt

Tested in accordance with ASTM standard D2216, subject to review .

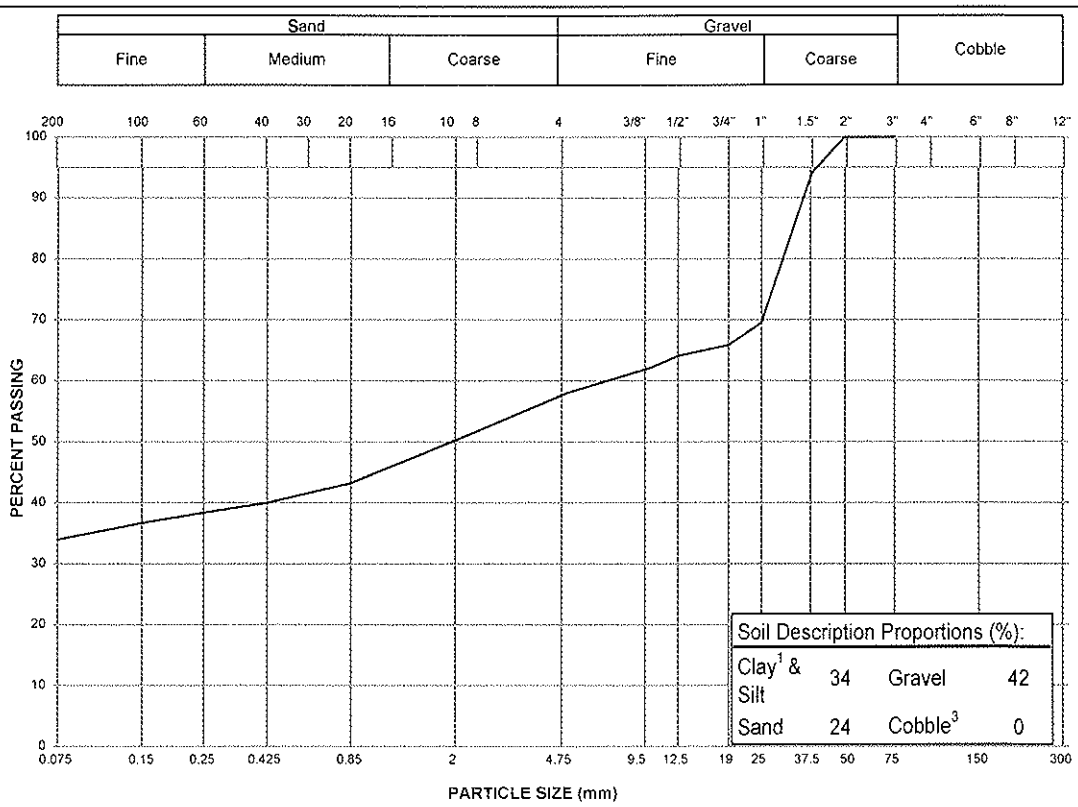
EBA Engineering Consultants Ltd.

PARTICLE SIZE ANALYSIS TEST REPORT

ASTM D422 & C136

Project:	Eagle Gold Project	Client:	BGC Engineering Inc.
Project No.:	W14101304	Client Rep.:	Heather Grinde
Site:			
Material Type:		Date Tested:	17-Sep-2009 By: IM
Sample No.:	HL5-4-S1	Soil Description[2]:	GRAVEL - silty, sandy
Sample Loc.:	0.5 - 0.6 m		
Sample Depth:		USC Classification:	Cu:
Sampling Method:			Cc:
Date sampled:	By:	Moisture Content:	17.0

Particle Size (mm)	Percent Passing
300	
200	
150	
100	
75	100
50	100
38	94
25	69
19	66
12.5	64
10	62
5	58
2	50
0.85	43
0.425	40
0.25	38
0.15	37
0.075	34



Notes:

[1] The upper clay size of 2 um, per the Canadian Foundation Engineering Manual

[2] The description is visually based & subject to EBA description protocols

[3] If cobbles are present, sampling procedure may not meet ASTM C702 & D75

Specification: _____

Remarks: _____

Reviewed By: _____

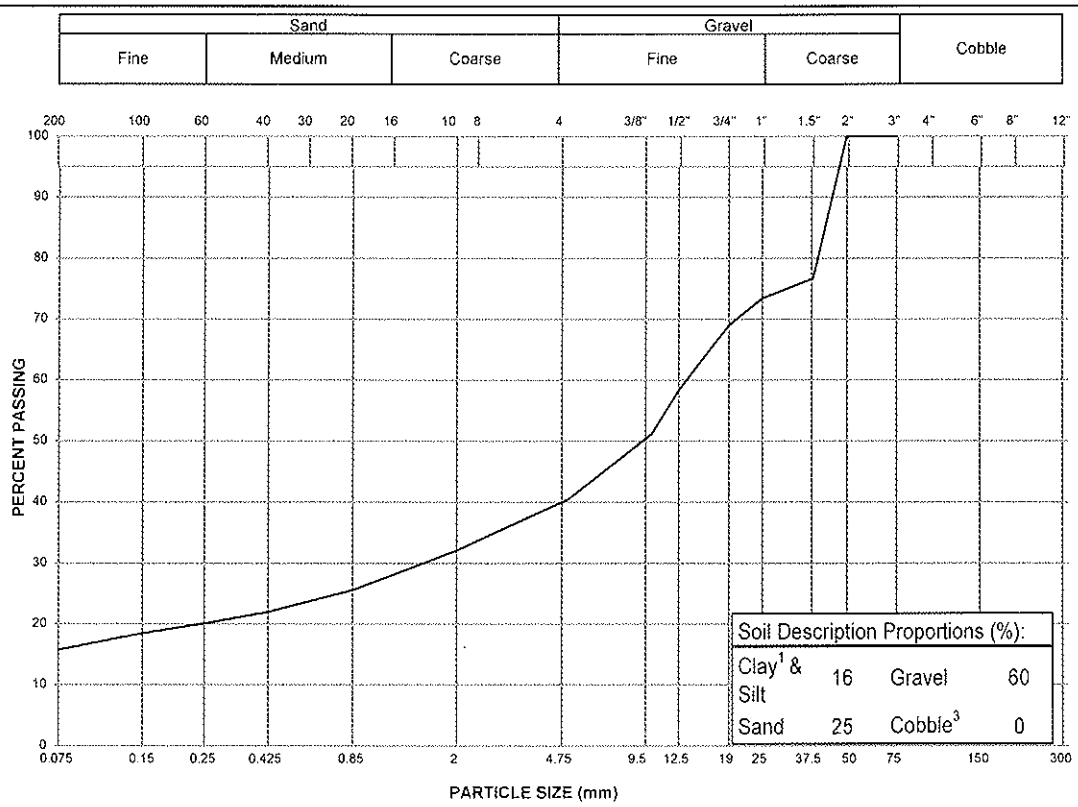
EBA Engineering Consultants Ltd.

PARTICLE SIZE ANALYSIS TEST REPORT

ASTM D422 & C136

Project:	Eagle Gold Project	Client:	BGC Engineering Inc.
Project No.:	W14101304	Client Rep.:	Heather Grinde
Site:			
Material Type:		Date Tested:	12-Sep-2009 By: IM
Sample No.:	WR-9-S2	Soil Description[2]:	GRAVEL - sandy, some silt
Sample Loc.:	2 - 2.5 m		
Sample Depth:		USC Classification:	Cu:
Sampling Method:			Cc:
Date sampled:	By:	Moisture Content:	7.9

Particle Size (mm)	Percent Passing
300	
200	
150	
100	
75	100
50	100
38	77
25	73
19	69
12.5	58
10	51
5	40
2	32
0.85	26
0.425	22
0.25	20
0.15	18
0.075	16



Notes:

[1] The upper clay size of 2 um, per the Canadian Foundation Engineering Manual

[2] The description is visually based & subject to EBA description protocols

[3] If cobbles are present, sampling procedure may not meet ASTM C702 & D75

Specification:

Remarks:

Reviewed By:

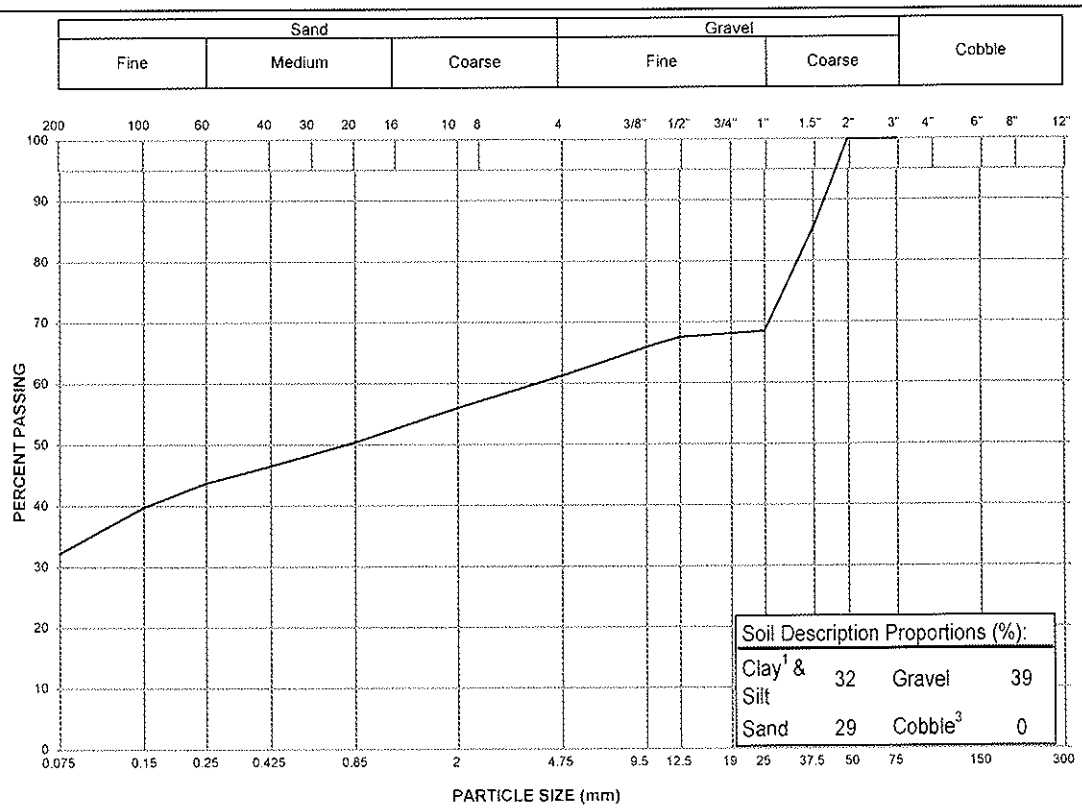
EBA Engineering Consultants Ltd.

PARTICLE SIZE ANALYSIS TEST REPORT

ASTM D422 & C136

Project:	Eagle Gold Project	Client:	BGC Engineering Inc.
Project No.:	W14101304	Client Rep.:	Heather Grinde
Site:			
Material Type:		Date Tested:	17-Sep-2009 By: IM
Sample No.:	HL6-6-S2	Soil Description[2]:	GRAVEL - silty, sandy
Sample Loc.:	1 - 1.2 m		
Sample Depth:		USC Classification:	Cu:
Sampling Method:			Cc:
Date sampled:	By:	Moisture Content:	0.6

Particle Size (mm)	Percent Passing
300	
200	
150	
100	
75	100
50	100
38	86
25	69
19	
12.5	67
10	66
5	62
2	56
0.85	50
0.425	46
0.25	44
0.15	40
0.075	32



Notes:

[1] The upper clay size of 2 um, per the Canadian Foundation Engineering Manual

[2] The description is visually based & subject to EBA description protocols

[3] If cobbles are present, sampling procedure may not meet ASTM C702 & D75

Specification: _____

Remarks: _____

Reviewed By: _____

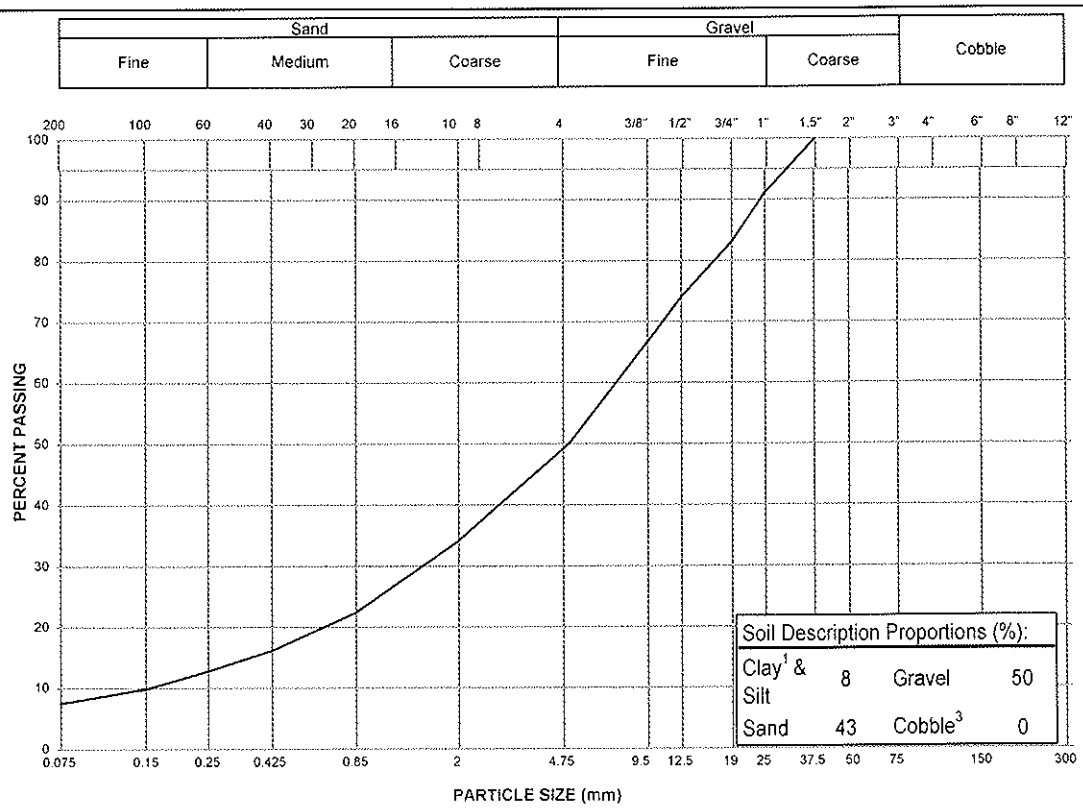
EBA Engineering Consultants Ltd. eba

PARTICLE SIZE ANALYSIS TEST REPORT

ASTM D422 & C136

Project:	Eagle Gold Project	Client:	BGC Engineering Inc.
Project No.:	W14101304	Client Rep.:	Heather Grinde
Site:			
Material Type:		Date Tested:	17-Sep-2009 By: IM
Sample No.:	HL6-4-S4	Soil Description[2]:	GRAVEL AND SAND - trace silt
Sample Loc.:	4 - 4.4 m		
Sample Depth:		USC Classification:	Cu:
Sampling Method:			Cc:
Date sampled:	By:	Moisture Content:	5.5

Particle Size (mm)	Percent Passing
300	
200	
150	
100	
75	
50	
38	100
25	91
19	83
12.5	74
10	68
5	50
2	34
0.85	22
0.425	16
0.25	13
0.15	10
0.075	8



Notes:

[1] The upper clay size of 2 um, per the Canadian Foundation Engineering Manual

[2] The description is visually based & subject to EBA description protocols

[3] If cobbles are present, sampling procedure may not meet ASTM C702 & D75

Specification: _____

Remarks: _____

Reviewed By: _____

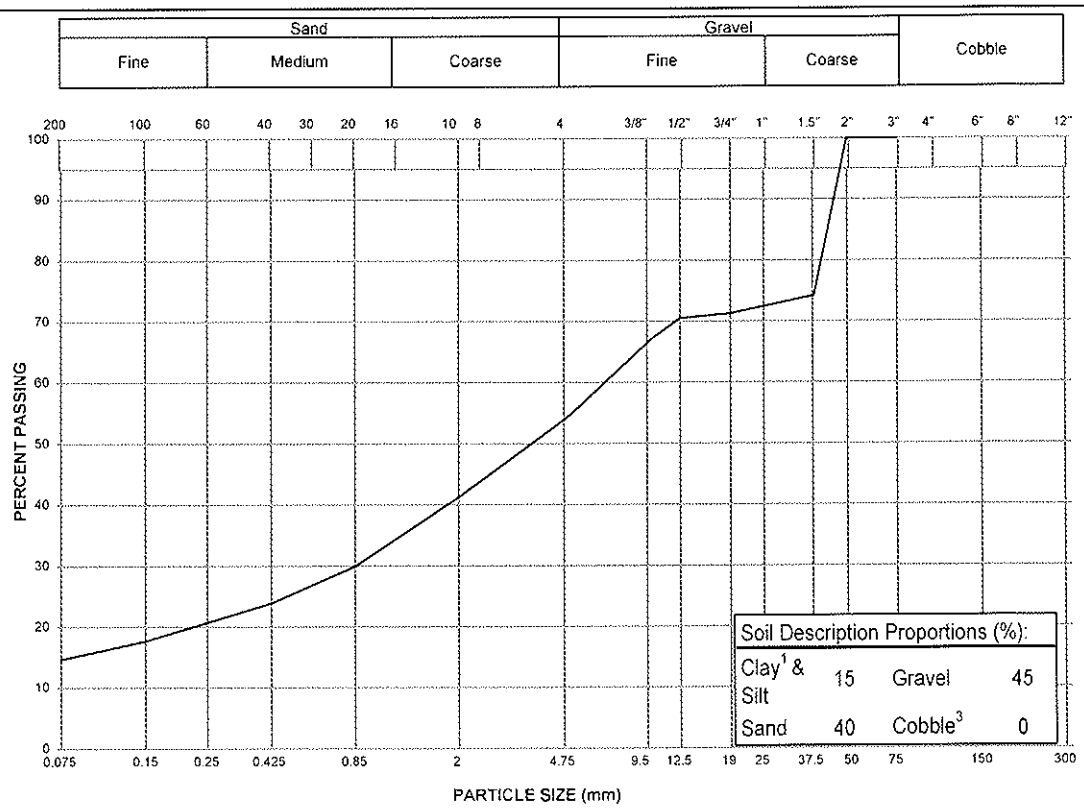
EBA Engineering Consultants Ltd. eba

PARTICLE SIZE ANALYSIS TEST REPORT

ASTM D422 & C136

Project:	Eagle Gold Project	Client:	BGC Engineering Inc.
Project No.:	W14101304	Client Rep.:	Heather Grinde
Site:			
Material Type:		Date Tested:	17-Sep-2009 By: IM
Sample No.:	HL4-6-S2	Soil Description[2]:	GRAVEL AND SAND - some silt
Sample Loc.:	3 - 3.5 m		
Sample Depth:		USC Classification:	Cu:
Sampling Method:			Cc:
Date sampled:	By:	Moisture Content:	10.1

Particle Size (mm)	Percent Passing
300	
200	
150	
100	
75	100
50	100
38	74
25	
19	71
12.5	71
10	67
5	55
2	41
0.85	30
0.425	24
0.25	21
0.15	18
0.075	15



Notes:

[1] The upper clay size of 2 um, per the Canadian Foundation Engineering Manual

[2] The description is visually based & subject to EBA description protocols

[3] If cobbles are present, sampling procedure may not meet ASTM C702 & D75

Specification: _____

Remarks: _____

_____

_____

_____

Reviewed By: _____

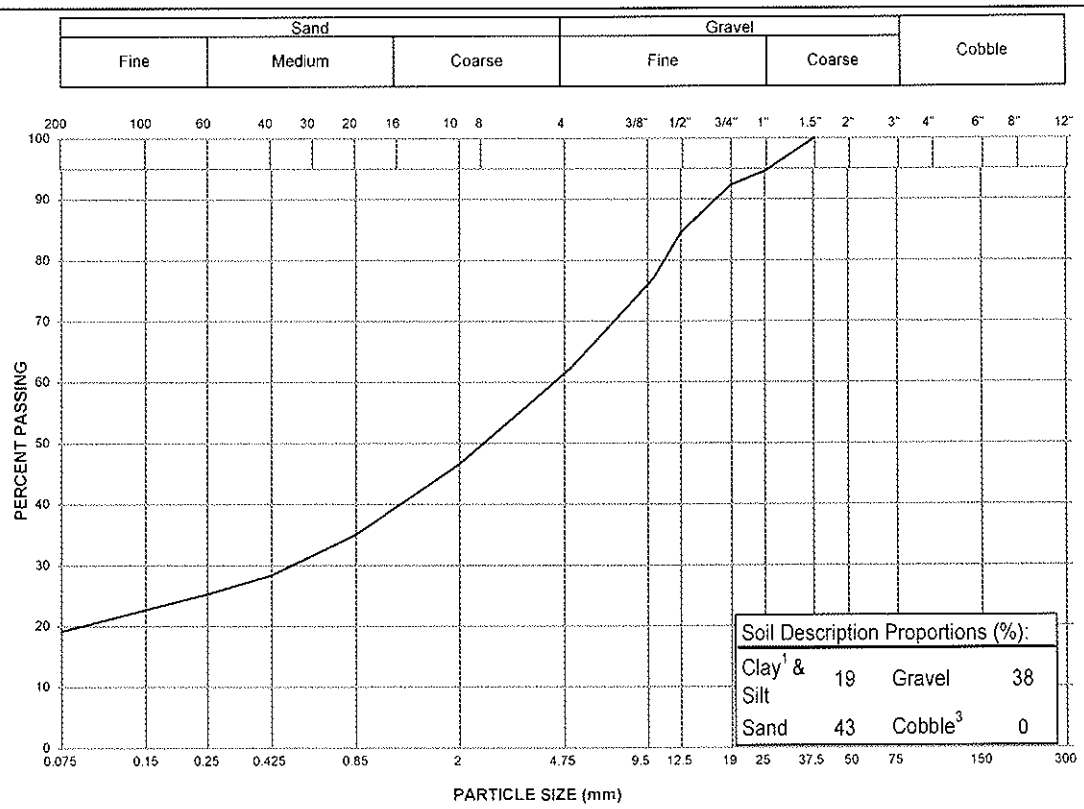
EBA Engineering Consultants Ltd. eba

PARTICLE SIZE ANALYSIS TEST REPORT

ASTM D422 & C136

Project:	Eagle Gold Project	Client:	BGC Engineering Inc.
Project No.:	W14101304	Client Rep.:	Heather Grinde
Site:			
Material Type:		Date Tested:	17-Sep-2009 By: IM
Sample No.:	WR-7-S1	Soil Description[2]:	SAND AND GRAVEL - some silt
Sample Loc.:	0.9 m		
Sample Depth:		USC Classification:	Cu:
Sampling Method:			Cc:
Date sampled:	By:	Moisture Content:	7.3

Particle Size (mm)	Percent Passing
300	
200	
150	
100	
75	
50	
38	100
25	95
19	92
12.5	84
10	77
5	62
2	47
0.85	35
0.425	28
0.25	25
0.15	23
0.075	19



Notes:

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[2] The description is visually based & subject to EBA description protocols

[3] If cobbles are present, sampling procedure may not meet ASTM C702 & D75

Specification: _____

Remarks: _____

Reviewed By: _____

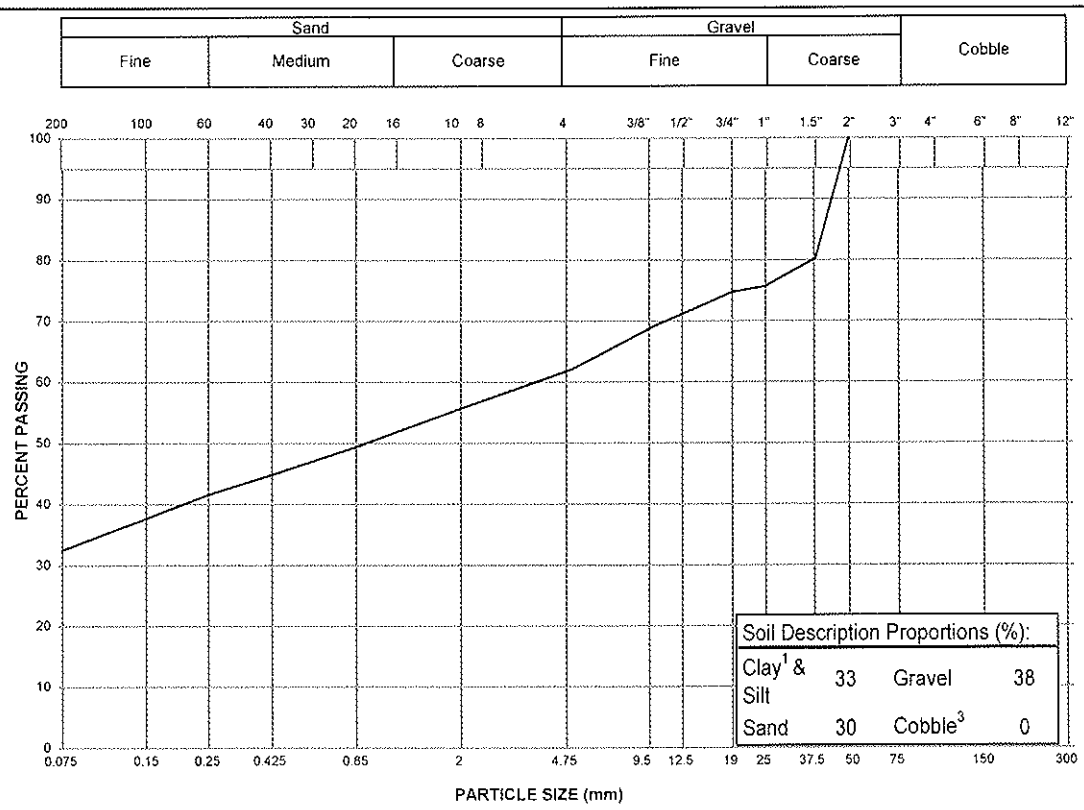
EBA Engineering Consultants Ltd. eba

PARTICLE SIZE ANALYSIS TEST REPORT

ASTM D422 & C136

Project:	Eagle Gold Project	Client:	BGC Engineering Inc.
Project No.:	W14101304	Client Rep.:	Heather Grinde
Site:			
Material Type:		Date Tested:	17-Sep-2009 By: IM
Sample No.:	P2-S2	Soil Description[2]:	GRAVEL - silty, sandy
Sample Loc.:	1.0 - 1.1 m		
Sample Depth:		USC Classification:	Cu:
Sampling Method:			Cc:
Date sampled:	By:	Moisture Content:	6.6

Particle Size (mm)	Percent Passing
300	
200	
150	
100	
75	
50	100
38	80
25	76
19	75
12.5	71
10	69
5	62
2	56
0.85	49
0.425	45
0.25	42
0.15	38
0.075	33



Notes:

[1] The upper clay size of 2 um, per the Canadian Foundation Engineering Manual

[2] The description is visually based & subject to EBA description protocols

[3] If cobbles are present, sampling procedure may not meet ASTM C702 & D75

Specification: _____

Remarks: _____

Reviewed By: _____

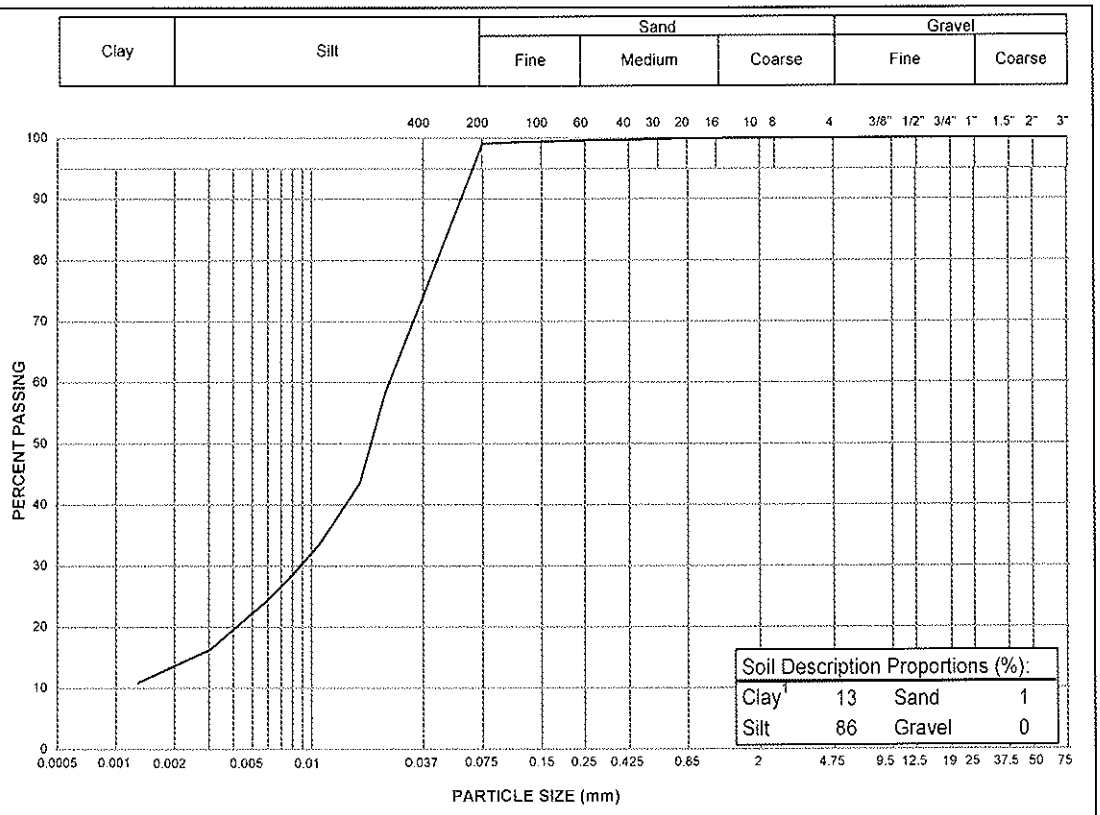
EBA Engineering Consultants Ltd. eba

PARTICLE SIZE ANALYSIS TEST REPORT

ASTM D422 & C136

Project:	Eagle Gold Project	Client:	BGC Engineering Inc.
Project No.:	W14101304	Client Rep.:	Heather Grinde
Site:			
Material Type:		Date Tested:	17-Sep-2009 By: CH
Sample No.:	HL4-3-S3	Soil Description[2]:	SILT - some clay, trace sand
Sample Loc.:			
Sample Depth:		USC Classification:	Cu:
Sampling Method:			Cc:
Date sampled:	By:	Moisture Content:	34.6

Particle Size (mm)	Percent Passing
75	100
50	100
38	100
25	100
19	100
12.5	100
10	100
5	100
2	100
0.85	100
0.425	100
0.25	100
0.15	99
0.075	99
0.0238	58.4
0.0177	43.6
0.0111	33.7
0.0081	28.7
0.0059	24.3
0.0031	16.3
0.0013	10.9



Notes:

[1] The upper clay size of 2 um, per the Canadian Foundation Engineering Manual

[2] The description is visually based & subject to EBA description protocols

Specification: _____

Remarks: _____

Reviewed By: _____

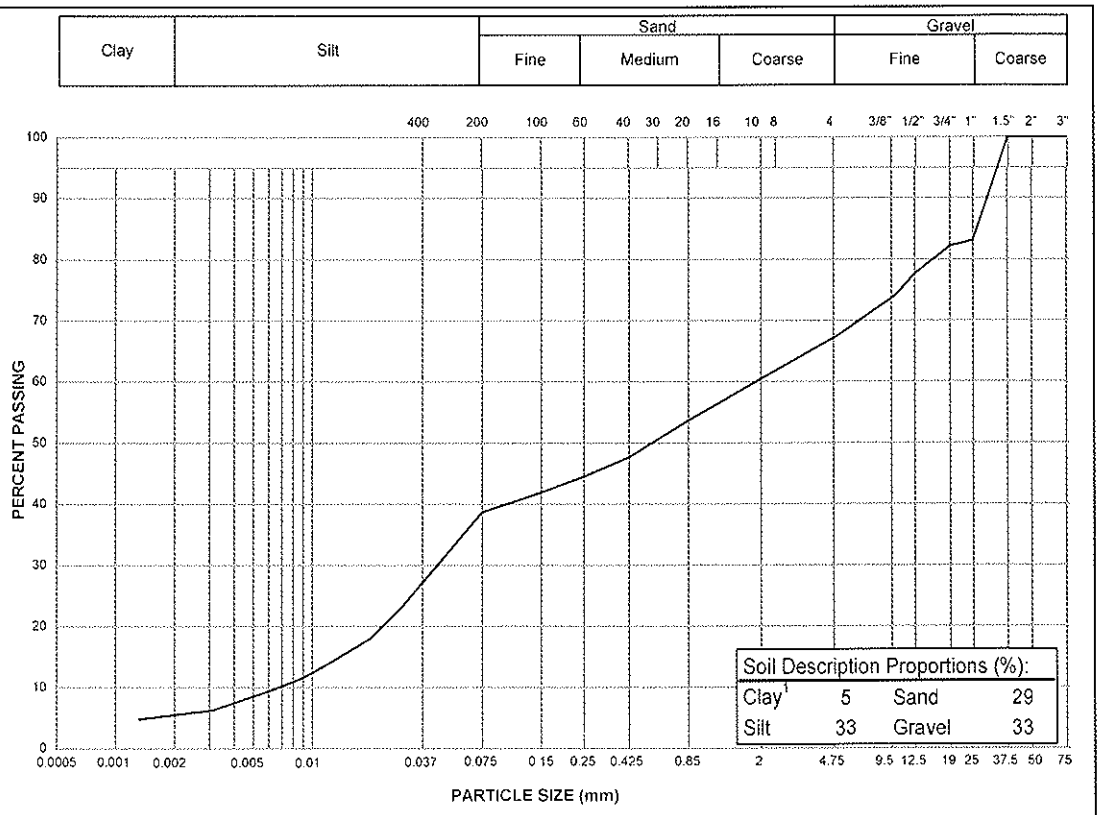
EBA Engineering Consultants Ltd.

PARTICLE SIZE ANALYSIS TEST REPORT

ASTM D422 & C136

Project:	Eagle Gold Project	Client:	BGC Engineering Inc.
Project No.:	W14101304	Client Rep.:	Heather Grinde
Site:			
Material Type:		Date Tested:	17-Sep-2009 By: CH
Sample No.:	HL6-3-S1	Soil Description[2]:	SILT and GRAVEL - sandy trace clay
Sample Loc.:			
Sample Depth:		USC Classification:	Cu:
Sampling Method:			Cc:
Date sampled:	By:	Moisture Content:	22.2

Particle Size (mm)	Percent Passing
75	100
50	100
38	100
25	83
19	82
12.5	78
10	74
5	68
2	60
0.85	54
0.425	48
0.25	44
0.15	42
0.075	39
0.0292	23.3
0.0198	17.9
0.0120	13.8
0.0087	11.4
0.0063	9.6
0.0031	6.3
0.0013	4.8



Notes:

[1] The upper clay size of 2 um, per the Canadian Foundation Engineering Manual

[2] The description is visually based & subject to EBA description protocols

Specification: _____

Remarks: _____

Reviewed By: _____

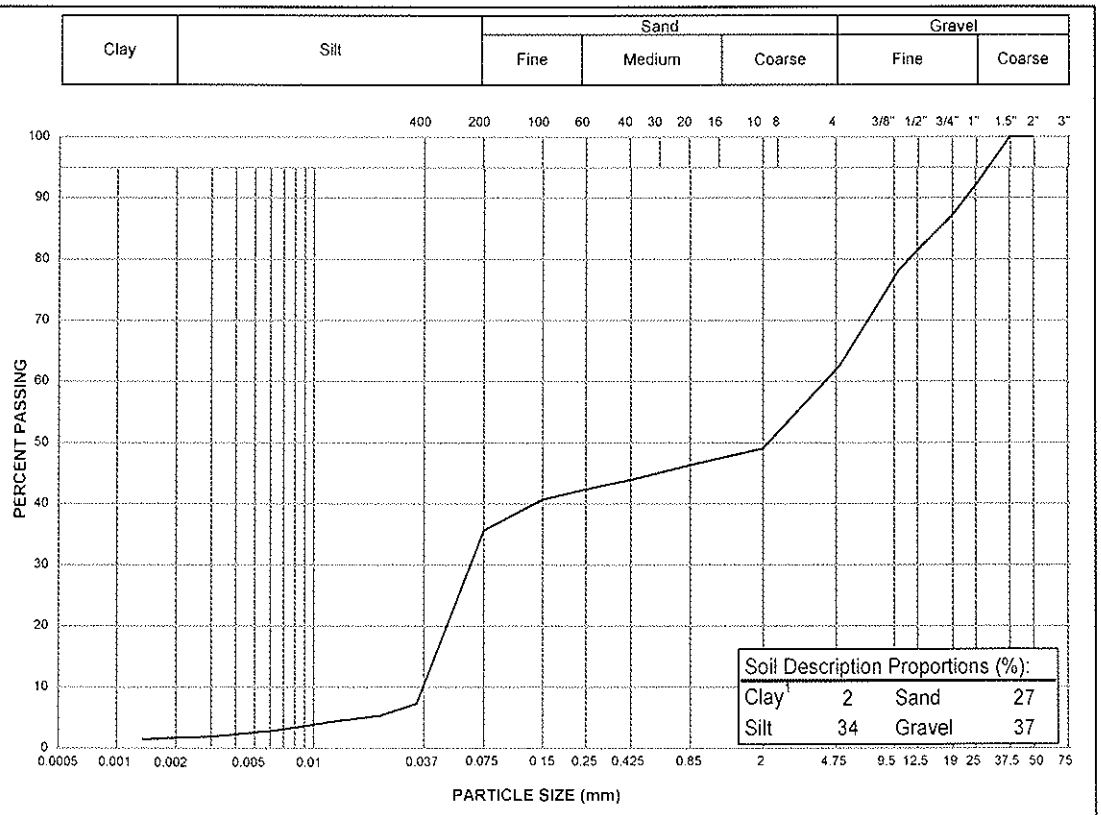
EBA Engineering Consultants Ltd. eba

PARTICLE SIZE ANALYSIS TEST REPORT

ASTM D422 & C136

Project:	Eagle Gold Project	Client:	BGC Engineering Inc.
Project No.:	W14101304	Client Rep.:	Heather Grinde
Site:			
Material Type:		Date Tested:	21-Sep-2009 By: CH
Sample No.:	HL6-10-S2	Soil Description[2]:	SILT AND GRAVEL - sandy trace clay
Sample Loc.:			
Sample Depth:		USC Classification:	Cu:
Sampling Method:			Cc:
Date sampled:	By:	Moisture Content:	9.5

Particle Size (mm)	Percent Passing
75	
50	100
38	100
25	92
19	87
12.5	81
10	78
5	63
2	49
0.85	46
0.425	44
0.25	42
0.15	41
0.075	36
0.0341	7.3
0.0221	5.3
0.0129	4.4
0.0092	3.6
0.0065	2.9
0.0032	1.9
0.0014	1.5



Notes:

[1] The upper clay size of 2 um, per the Canadian Foundation Engineering Manual

[2] The description is visually based & subject to EBA description protocols

Specification: _____

Remarks: _____

Reviewed By: _____

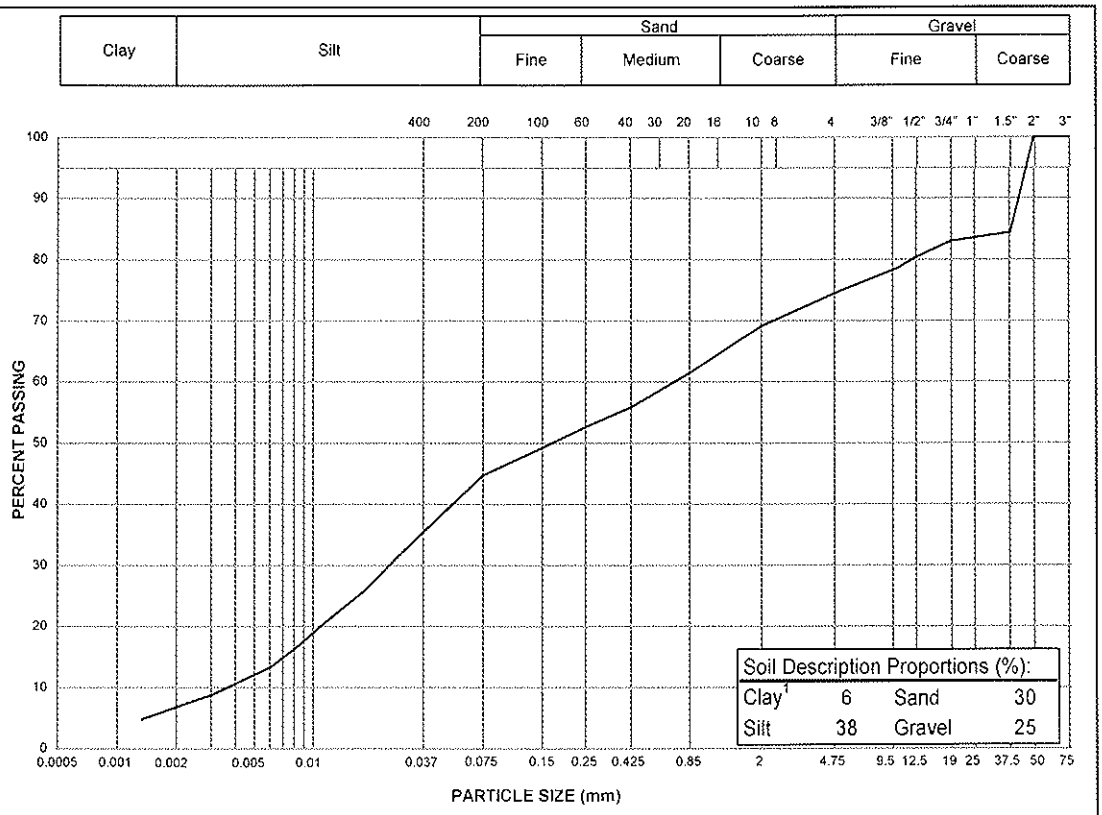
EBA Engineering Consultants Ltd.

PARTICLE SIZE ANALYSIS TEST REPORT

ASTM D422 & C136

Project:	Eagle Gold Project	Client:	BGC Engineering Inc.
Project No.:	W14101304	Client Rep.:	Heather Grinde
Site:			
Material Type:		Date Tested:	17-Sep-2009 By: CH
Sample No.:	HL5-7-S3	Soil Description[2]:	SILT - gravelly and sandy trace clay
Sample Loc.:			
Sample Depth:		USC Classification:	Cu:
Sampling Method:			Cc:
Date sampled:	By:	Moisture Content:	13.8

Particle Size (mm)	Percent Passing
75	100
50	100
38	84
25	
19	83
12.5	80
10	78
5	75
2	69
0.85	61
0.425	56
0.25	53
0.15	49
0.075	45
0.0275	31.5
0.0186	26.0
0.0114	20.5
0.0084	16.8
0.0061	13.3
0.0031	8.9
0.0013	4.8



Notes:

[1] The upper clay size of 2 um, per the Canadian Foundation Engineering Manual

[2] The description is visually based & subject to EBA description protocols

Specification: _____

Remarks: _____

Reviewed By: _____

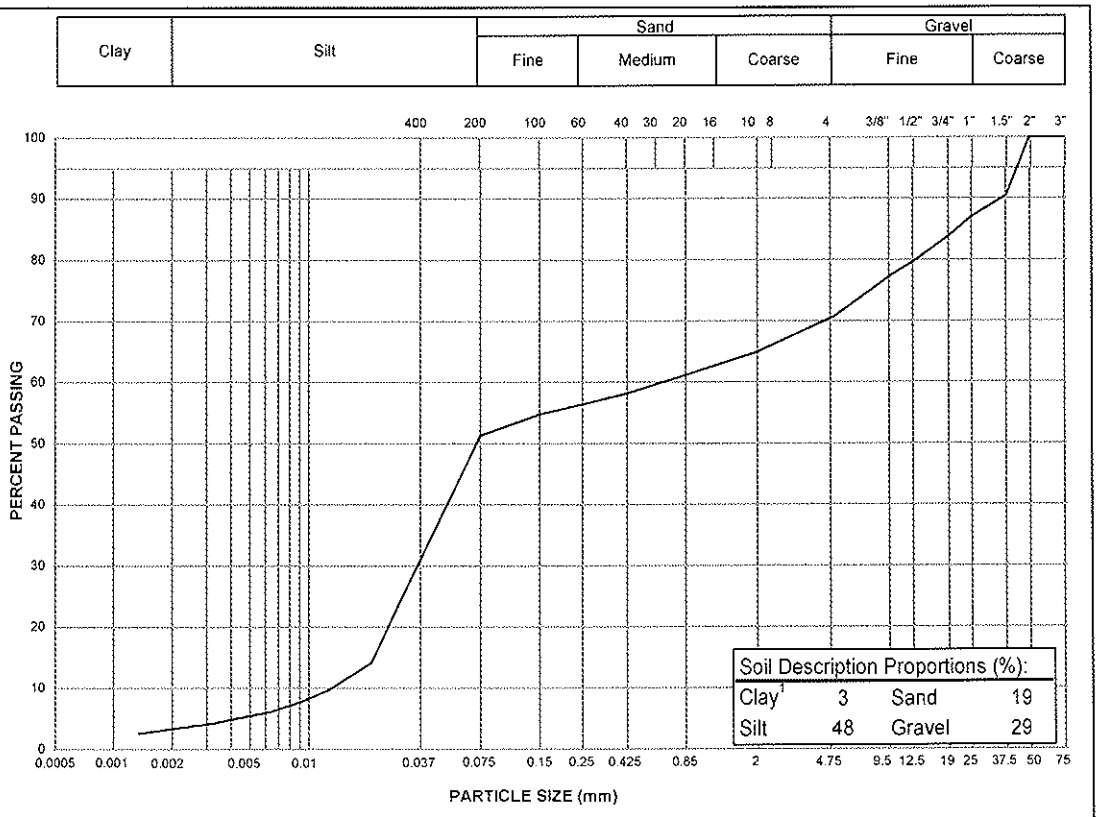
EBA Engineering Consultants Ltd. eba

PARTICLE SIZE ANALYSIS TEST REPORT

ASTM D422 & C136

Project:	Eagle Gold Project	Client:	BGC Engineering Inc.
Project No.:	W14101304	Client Rep.:	Heather Grinde
Site:			
Material Type:		Date Tested:	By:
Sample No.:	HL4-16-S3	Soil Description[2]:	SiLT - gravelly, some sand trace clay
Sample Loc.:			
Sample Depth:		USC Classification:	Cu:
Sampling Method:			Cc:
Date sampled:	By:	Moisture Content:	1.5

Particle Size (mm)	Percent Passing
75	100
50	100
38	90
25	87
19	84
12.5	80
10	78
5	71
2	65
0.85	61
0.425	58
0.25	56
0.15	55
0.075	51
0.0295	24.4
0.0209	14.1
0.0126	9.6
0.0091	7.7
0.0064	6.1
0.0032	4.2
0.0013	2.6



Notes:

[1] The upper clay size of 2 um, per the Canadian Foundation Engineering Manual

[2] The description is visually based & subject to EBA description protocols

Specification: _____

Remarks: _____

Reviewed By: _____

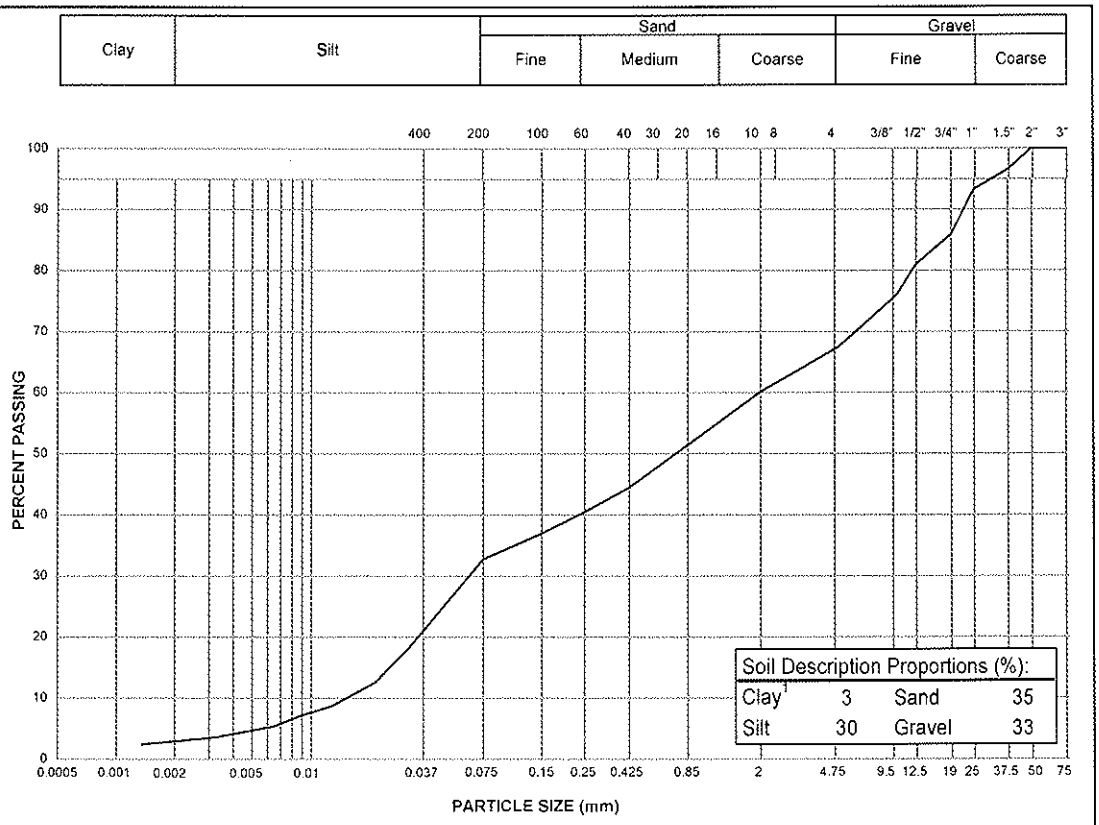
EBA Engineering Consultants Ltd. eba

PARTICLE SIZE ANALYSIS TEST REPORT

ASTM D422 & C136

Project:	Eagle Gold Project	Client:	BGC Engineering Inc.
Project No.:	W14101304	Client Rep.:	Heather Grinde
Site:			
Material Type:		Date Tested:	17-Sep-2009 By: CH
Sample No.:	HL4-12-S3	Soil Description[2]:	SAND - silty, gravelly, trace clay
Sample Loc.:			
Sample Depth:		USC Classification:	Cu:
Sampling Method:			Cc:
Date sampled:	By:	Moisture Content:	0.6

Particle Size (mm)	Percent Passing
75	100
50	100
38	97
25	93
19	86
12.5	81
10	76
5	68
2	60
0.85	51
0.425	44
0.25	40
0.15	37
0.075	33
0.0312	18.2
0.0211	12.5
0.0126	8.6
0.0090	7.1
0.0064	5.4
0.0032	3.6
0.0014	2.4



Notes:

[1] The upper clay size of 2 um, per the Canadian Foundation Engineering Manual

[2] The description is visually based & subject to EBA description protocols

Specification: _____

Remarks: _____

Reviewed By: _____

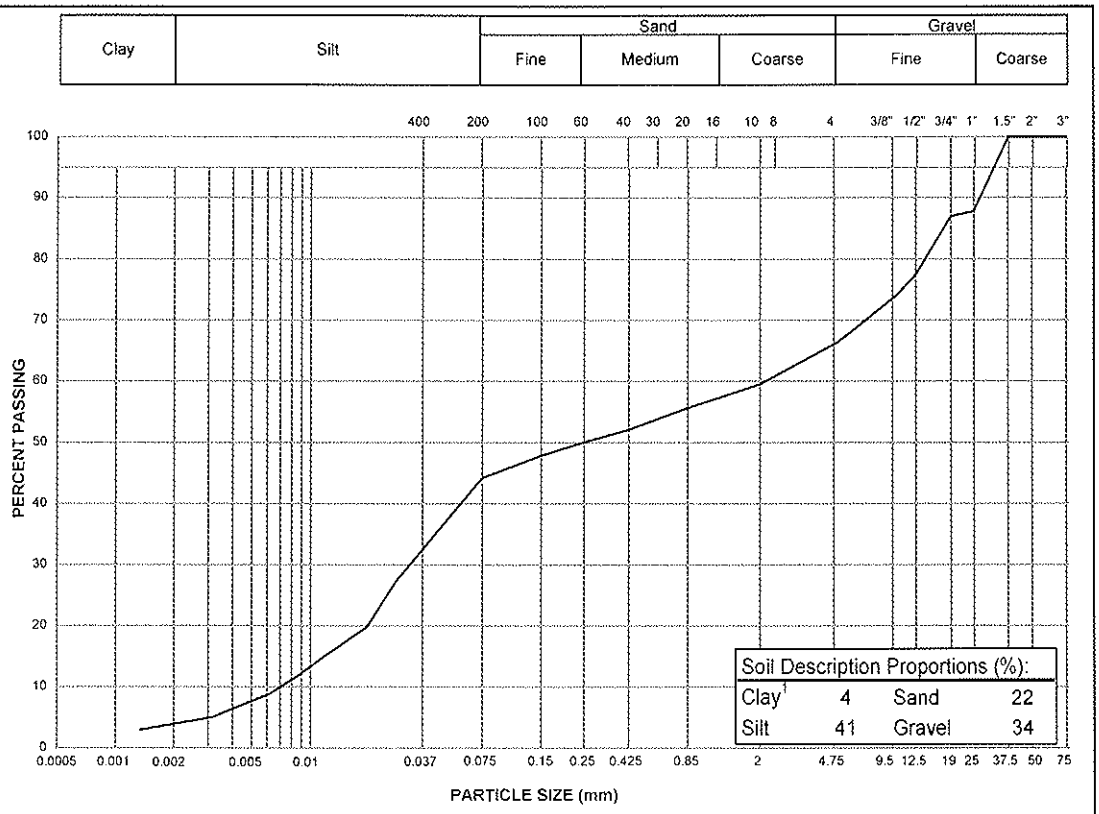
EBA Engineering Consultants Ltd. eba

PARTICLE SIZE ANALYSIS TEST REPORT

ASTM D422 & C136

Project:	Eagle Gold Project	Client:	BGC Engineering Inc.
Project No.:	W14101304	Client Rep.:	Heather Grinde
Site:			
Material Type:		Date Tested:	17-Sep-2009 By: CH
Sample No.:	WR-4-S1	Soil Description[2]:	SILT - gravelly, sandy, trace clay
Sample Loc.:			
Sample Depth:		USC Classification:	Cu:
Sampling Method:			Cc:
Date sampled:	By:	Moisture Content:	4.8

Particle Size (mm)	Percent Passing
75	100
50	100
38	100
25	88
19	87
12.5	77
10	74
5	66
2	60
0.85	56
0.425	52
0.25	50
0.15	48
0.075	44
0.0274	27.4
0.0193	19.7
0.0118	15.0
0.0086	11.8
0.0062	8.8
0.0032	5.0
0.0013	2.9



Notes:

[1] The upper clay size of 2 um, per the Canadian Foundation Engineering Manual

[2] The description is visually based & subject to EBA description protocols

Specification: _____

Remarks: _____

Reviewed By: _____

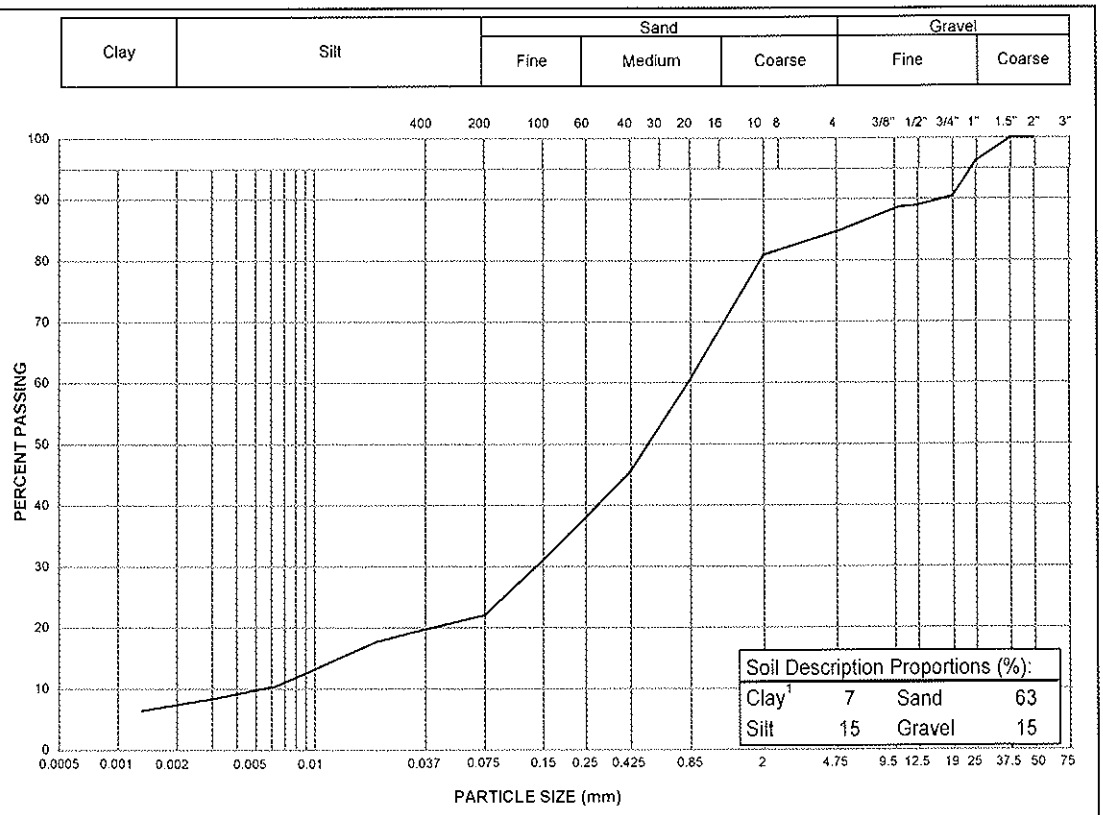
EBA Engineering Consultants Ltd.

PARTICLE SIZE ANALYSIS TEST REPORT

ASTM D422 & C136

Project:	Eagle Gold Project	Client:	BGC Engineering Inc.
Project No.:	W14101304	Client Rep.:	Heather Grinde
Site:			
Material Type:		Date Tested:	17-Sep-2009 By: CH
Sample No.:	HL4-10-S2	Soil Description[2]:	SAND - some gravel and silt trace clay
Sample Loc.:			
Sample Depth:	3 - 3.4 m	USC Classification:	Cu:
Sampling Method:			Cc:
Date sampled:	By:	Moisture Content:	14.1

Particle Size (mm)	Percent Passing
75	
50	100
38	100
25	96
19	90
12.5	89
10	89
5	85
2	81
0.85	61
0.425	46
0.25	38
0.15	31
0.075	22
0.0319	19.2
0.0204	17.6
0.0122	14.4
0.0088	12.4
0.0063	10.4
0.0031	8.4
0.0013	6.4



Notes:

[1] The upper clay size of 2 um, per the Canadian Foundation Engineering Manual

[2] The description is visually based & subject to EBA description protocols

Specification: _____

Remarks: _____

Reviewed By: _____

EBA Engineering Consultants Ltd. eba

APPENDIX C
BOREHOLE LOGS

Survey Method : Handheld GPS
Co-ordinates (m) : 459,479.E, 7,101,319.N
Ground Elevation (m) : 900.0
Datum : UTM NAD 83
Dip (degrees from horizontal) :
Direction : n/a

Drill Designation : Pioneer 2
Drilling Contractor : Aggressive Driling
Drill Method : Solid Stem Auger/HQ3
Core : HQ3
Fluid : polymer
Casing : **Cased To (m)** :

Start Date : 23 Aug 09
Finish Date: 23 Aug 09
Final Depth of Hole (m): : 13.7
Depth to Top of Rock (m) : 7.60
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description	Instrument Details	SPT Blows per 150mm	SPT-T Friction (kPa)	DCT Blows per 300mm
0					ORGANICS Peat, dark brown, silty, rootlets.				
1					SANDY SILT Non plastic, frozen, hard, brown, laminated, rapid dilatancy, trace rootlets. [ORGANIC]				
2					SAND and GRAVEL (SW/GW) Fine to coarse, some silt, trace clay, trace cobble, very dense, max particle 0.25m, subrounded to subangular, brown, moist, metasedimentary and quartz clasts, homogeneous. [COLLUVIUM]				
3					SILTY SAND (SP) Fine to medium, some gravel, dense, max particle size 10cm, subrounded to angular, brown, dry, homogeneous.				
4									
5									
6									
7									
8					7.60m - Switch from solid stem auger drilling to diamond driling. Rock encountered at 7.60 m depth. See DH-BGC09-AG-3 rock log.				
9									
10									

Su - kPa
40 80 120 160
VANE FIELD LAB
PEAK ◆ ■
REMOLD ◇ □
▲ UC/2
△ Pocket Pen /2
★ % Fines
Hydraulic Conductivity (m/sec) 10^{-8} 10^{-6} 10^{-4} 10^{-2}
DCT (blows/300mm)
● SPT (blows/300mm)
Core Recovery
20 40 60 80
Moisture Content & SPT N
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Survey Method :Handheld GPS
Co-ordinates (m) : 459,479.E, 7,101,319.N
Ground Elevation (m) : 900.0
Datum : UTM NAD 83
Dip (degrees from horizontal) : -90
Direction :

Drill Designation : Pioneer 2
Drilling Contractor : Aggressive Driling
Drill Method : Solid Stem Auger/HQ3
Core : HQ3
Fluid : polymer
Casing : **Cased To (m)** :

Start Date : 23 Aug 09
Finish Date: 23 Aug 09
Final Depth of Hole : 13.7
Depth to Top of Rock (m) : 7.60
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description	Instrument Details
0					0 to 7.60 m - See DH-BGC09-AG-3 soil log.	
7.60					METASEDIMENTARY (Quartzite) Greyish pink, medium grained, foliated, slightly to moderately weathered, weak, broken rock, sand and gravel, trace silt infill, joints rough planar, joints iron stained.	
9.10					9.10m to 10.6m - NO RECOVERY, mislatch.	
10						

Hydraulic Conductivity m/sec: 10^{-8} 10^{-6} 10^{-4} 10^{-2}
Core Recovery %
RQD %: 20 40 60 80

UCS - MPa: 50 100 150 200
■ Point Load
◇ Triaxial
RMR: 20 40 60 80

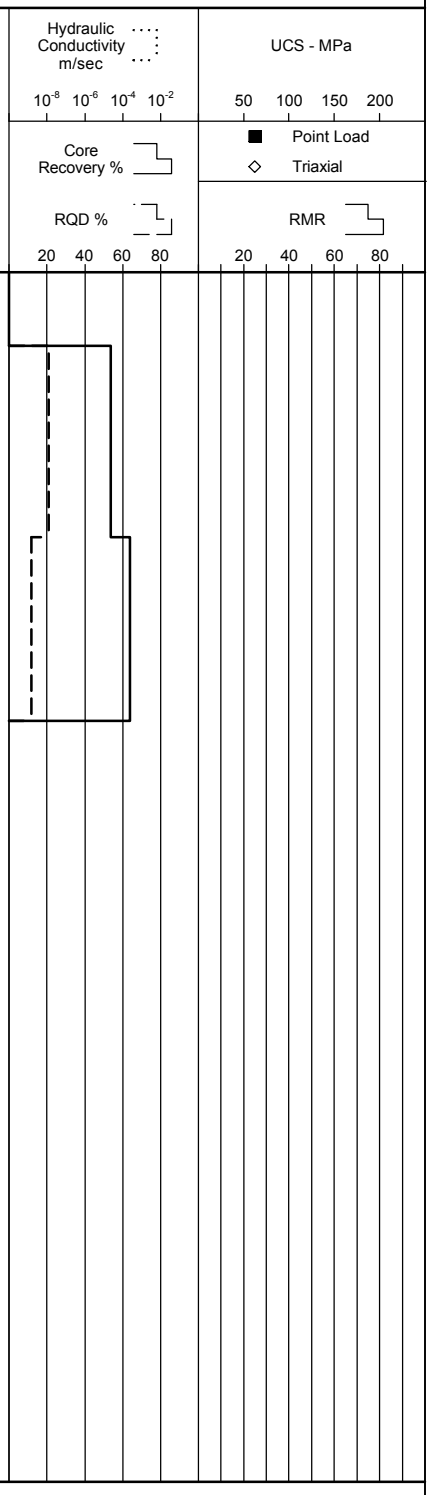
(Continued on next page)

Survey Method :Handheld GPS
Co-ordinates (m) : 459,479.E, 7,101,319.N
Ground Elevation (m) : 900.0
Datum : UTM NAD 83
Dip (degrees from horizontal) : -90
Direction :

Drill Designation : Pioneer 2
Drilling Contractor : Aggressive Driling
Drill Method : Solid Stem Auger/HQ3
Core : HQ3
Fluid : polymer
Casing : **Cased To (m)** :

Start Date : 23 Aug 09
Finish Date: 23 Aug 09
Final Depth of Hole : 13.7
Depth to Top of Rock (m) : 7.60
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description	Instrument Details
10						
11					METASEDIMENTARY ROCK (Biotite Schist) Grey, fine grained, phylitic, slightly to moderately weathered, weak, two joint sets plus random, predominant joint set parallel to foliation (subhorizontal), joints smooth planar, trace sand and clay infill.	
12						
13						
14					END OF HOLE @ 13.72m. NOTES: 1) PVC casing installed for thermistor string. 2) Dynamic cone testing attempted at: 2.1m - blow per foot @ 2ft = 7; @ 8ft = 24 (refusal at 5"); 3.2m - blows per foot = 40, bouncing at 10". 3) Hole backfilled upon completion.	
15						
16						
17						
18						
19						
20						



Project: Eagle Gold, Site Facilites

DRILL HOLE # DH-BGC09-DG-1

Location : Dublin Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m) : 459,302.E, 7,101,060.N
Ground Elevation (m) : 923.0
Datum : UTM NAD 83
Dip (degrees from horizontal) :
Direction : n/a

Drill Designation : Pioneer 2
Drilling Contractor : Aggressive Drilling
Drill Method : Solid Stem Auger/HQ3
Core : HQ3
Fluid : Polymer
Casing : ***Cased To (m)*** :

Start Date : 14 Aug 09
Finish Date: 15 Aug 09
Final Depth of Hole (m): : 12.8
Depth to Top of Rock (m) : 7.62
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description	Instrument Details	SPT Blows per 150mm	SPT-T Friction (kPa)	DCT Blows per 300mm
0					SAND and GRAVEL (SW/GW) Silty, well graded, very dense, max clast 20cm, subrounded to subangular, brown, moist, homogeneous. [PLACER TAILINGS]				
1					SAND and GRAVEL (SW/GW) Some silt, some cobbles, trace boulders, well graded, dense, max clast 40cm, subrounded to subangular, oranigsh brown, moist, homogeneous. [PLACER TAILINGS]				
2					2.0m - Gravelly cobbles and boulders, water table at 2.0m				
3									
4									
5					SILTY GRAVEL (GP) Some sand, medium to coarse, coarse gravel, some cobbles, poorly graded, very dense, max visible clast 3cm, subrounded to angular, brown, wet, homogeneous.				
6					CLAY and COBBLES (CL) Gravelly (fine, angular), some silt, poorly graded, very dense, slow dilatancy, non plastic, grey. [WEATHERED BEDROCK]				
7					6.71m - Switch from solid stem auger drilling to HQ3 coring.				
8					Rock encountered at 7.62 m depth. See DH-BGC09-DG-1 rock log.				
9									
10									

Su - kPa
40 80 120 160
VANE FIELD LAB
PEAK ◆ ■
REMOLD ◇ □
▲ UC/2
△ Pocket Pen /2
★ % Fines
DCT (blows/300mm)
SPT (blows/300mm)
Hydraulic Conductivity (m/sec)
10^{-8} 10^{-6} 10^{-4} 10^{-2}
Core Recovery
20 40 60 80
Moisture Content & SPT N
W_P% W% W_L%
20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Survey Method :Handheld GPS
Co-ordinates (m) : 459,302.E, 7,101,060.N
Ground Elevation (m) : 923.0
Datum : UTM NAD 83
Dip (degrees from horizontal) : -90
Direction :

Drill Designation : Pioneer 2
Drilling Contractor : Aggressive Drilling
Drill Method : Solid Stem Auger/HQ3
Core : HQ3
Fluid : Polymer
Casing : **Cased To (m)** :

Start Date : 14 Aug 09
Finish Date: 15 Aug 09
Final Depth of Hole : 12.8
Depth to Top of Rock (m) : 7.62
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description	Instrument Details
0					0 to 7.62 m - See DH-BGC09-DG-1 soil log.	
7.62					METASEDIMENTARY Dark-grey, fine grained, foliated, medium strong, slightly weathered, two joint sets plus random, trace clay and fine gravel infilling, joints rough and planar, core 1-4" pieces.	

Hydraulic Conductivity m/sec: 10^{-8} 10^{-6} 10^{-4} 10^{-2}
Core Recovery %
RQD %: 20 40 60 80
UCS - MPa: 50 100 150 200
■ Point Load
◇ Triaxial
RMR: 20 40 60 80

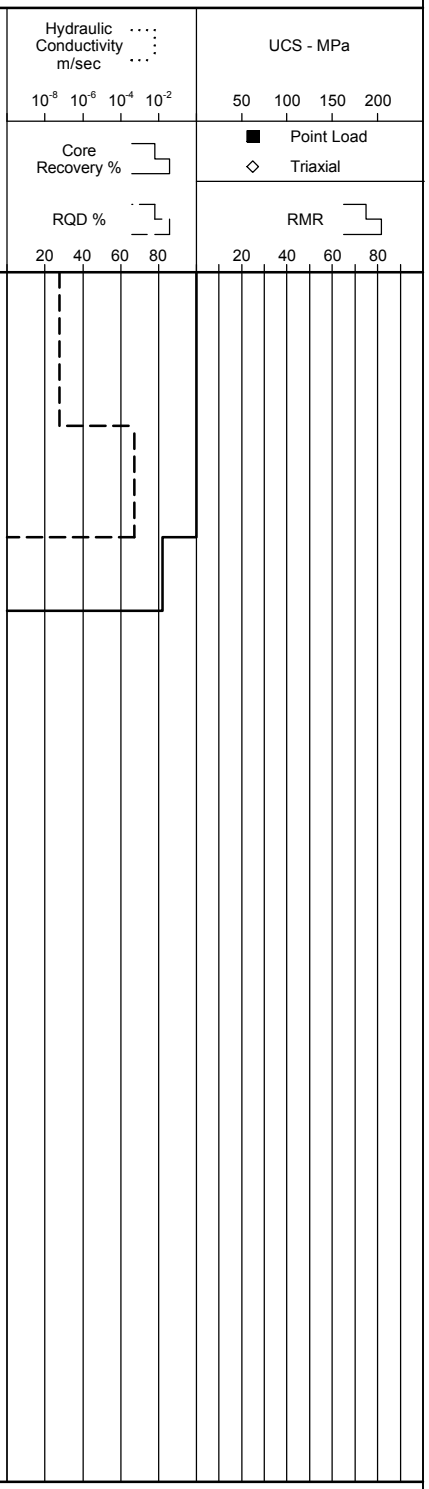
(Continued on next page)

Survey Method :Handheld GPS
Co-ordinates (m) : 459,302.E, 7,101,060.N
Ground Elevation (m) : 923.0
Datum : UTM NAD 83
Dip (degrees from horizontal) : -90
Direction :

Drill Designation : Pioneer 2
Drilling Contractor : Aggressive Drilling
Drill Method : Solid Stem Auger/HQ3
Core : HQ3
Fluid : Polymer
Casing : **Cased To (m)** :

Start Date : 14 Aug 09
Finish Date: 15 Aug 09
Final Depth of Hole : 12.8
Depth to Top of Rock (m) : 7.62
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description	Instrument Details
10						
11						
12					11.89m to 12.34m - Circulation lost, NO RECOVERY.	
13					END OF HOLE @ 12.8m. NOTES: 1) 2" slotted PVC pipe installed from 3.05m-6.10m. 2) No recovery zone from 11.89 to 12.34m, lost circulation.	
14						
15						
16						
17						
18						
19						
20						



Project: Eagle Gold, Site Facilites

DRILL HOLE # DH-BGC09-DG-2

Location : Dublin Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m) : 458,992.E, 7,100,880.N
Ground Elevation (m) : 828.0
Datum : UTM NAD 83
Dip (degrees from horizontal) :
Direction : n/a

Drill Designation : Pioneer 2
Drilling Contractor : Aggressive Drilling
Drill Method : Solid Stem Auger/HQ3
Core : HQ3
Fluid : polymer
Casing : **Cased To (m)** :

Start Date : 13 Aug 09
Finish Date: 14 Aug 09
Final Depth of Hole (m): : 16.3
Depth to Top of Rock (m) : 14.60
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					SILTY SAND (SW-SM) Some fine to medium gravel, loose, max visible clast 20mm, subangular, brown, dry. [PLACER TAILINGS]
1					
2					CLAYEY GRAVEL (GP) Some sand, some silt, loose to compact, max visible clast 25mm, subrounded to subangular, brown, moist. [PLACER TAILINGS]
3					
4					
5					SANDY GRAVEL (GP) Some silt, compact, max visible clast 40mm, subrounded to subangular, brown, wet. [PLACER TAILINGS] 4.9m - Water table encountered.
6					
7					
8					Below 7.6m - Cobbly.
9					9.1m - Switch from fishtail bit to cutter, little return on auger stem.
10					

Instrument Details | SPT Blows per 150mm | SPT-T Friction (kPa) | DCT Blows per 300mm

Su - kPa: 40, 80, 120, 160
VANE PEAK ◆ REMOLD ◇ | FIELD ■ | LAB □
▲ UC/2
△ Pocket Pen /2
★ % Fines
Hydraulic Conductivity (m/sec) 10^{-8} 10^{-6} 10^{-4} 10^{-2}
DCT (blows/300mm)
● SPT (blows/300mm)
Core Recovery: 20, 40, 60, 80
Moisture Content & SPT N
W_P% W% W_L%: 20, 40, 60, 80

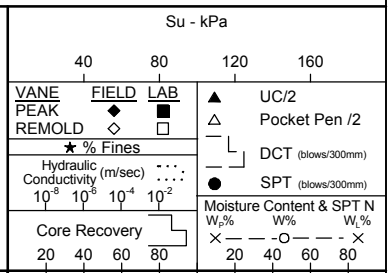
(Continued on next page)

Survey Method : Handheld GPS
Co-ordinates (m) : 458,992.E, 7,100,880.N
Ground Elevation (m) : 828.0
Datum : UTM NAD 83
Dip (degrees from horizontal) :
Direction : n/a

Drill Designation : Pioneer 2
Drilling Contractor : Aggressive Drilling
Drill Method : Solid Stem Auger/HQ3
Core : HQ3
Fluid : polymer
Casing : ***Cased To (m)*** :

Start Date : 13 Aug 09
Finish Date: 14 Aug 09
Final Depth of Hole (m): : 16.3
Depth to Top of Rock (m) : 14.60
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description	Instrument Details	SPT Blows per 150mm	SPT-T Friction (kPa)	DCT Blows per 300mm
10					10.0m to 14.10m - Poor recovery, cobbly.				
11									
12					12.1m - Switch from solid stem augering to HQ3 diamond drilling. 12.5m - Sandy, hole squeezing on drill pipes.				
13									
14									
15					Rock encountered at 14.60 m depth. See DH-BGC09-DG-2 rock log.				
16									
17									
18									
19									
20									



Survey Method :Handheld GPS
Co-ordinates (m) : 458,992.E, 7,100,880.N
Ground Elevation (m) : 828.0
Datum : UTM NAD 83
Dip (degrees from horizontal) : -90
Direction :

Drill Designation : Pioneer 2
Drilling Contractor : Aggressive Drilling
Drill Method : Solid Stem Auger/HQ3
Core : HQ3
Fluid : polymer
Casing : **Cased To (m)** :

Start Date : 13 Aug 09
Finish Date: 14 Aug 09
Final Depth of Hole : 16.3
Depth to Top of Rock (m) : 14.60
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description	Instrument Details
10					0 to 14.60 m - See DH-BGC09-DG-2 soil log.	
15					METASEDIMENTARY Grey, fine grained, phylitic, medium strong, slightly weathered, 3 joint sets plus random (predominant joints parallel to schistosity), trace clay infilling, joints planar and rough, typical joint spacing 2"-4", 1-3mm quartz veins.	
16					END OF HOLE @ 16.31m. NOTES: 1) Monitoring well installed by Stantec. 2) Dynamic cone pushed from 1.52m to 9.75m, DCPT bouncing at 9.75m.	
17						
18						
19						
20						

Hydraulic Conductivity m/sec: 10^{-8} 10^{-6} 10^{-4} 10^{-2}
Core Recovery %
RQD %: 20 40 60 80

UCS - MPa: 50 100 150 200
■ Point Load
◇ Triaxial
RMR: 20 40 60 80

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Project: Eagle Gold, Site Facilites

DRILL HOLE # DH-BGC09-DG-3

Location : Dublin Gulch

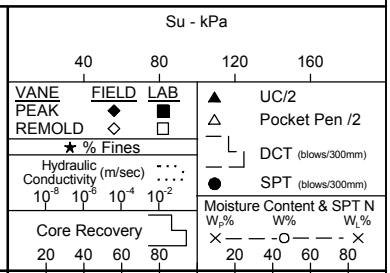
Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m) : 458,988.E, 7,100,919.N
Ground Elevation (m) : 844.0
Datum : UTM NAD 83
Dip (degrees from horizontal) :
Direction : n/a

Drill Designation : Pioneer 2
Drilling Contractor : Aggressive Drilling
Drill Method : Solid Stem Auger/HQ3
Core : HQ3
Fluid : polymer
Casing : **Cased To (m)** :

Start Date : 11 Aug 09
Finish Date: 12 Aug 09
Final Depth of Hole (m): : 20.7
Depth to Top of Rock (m) : 12.10
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description	Instrument Details	SPT Blows per 150mm	SPT-T Friction (kPa)	DCT Blows per 300mm
0					SAND and GRAVEL (SW/GW) Fine to coarse, trace silt, loose, max clast 5cm, angular, brown, moist, homogeneous. [PLACER TAILINGS]				
1					CLAYEY SILT (ML) Some fine sand, low plastic, firm, grey, moist, varved, low dry strength, rapid dilatancy. [PLACER TAILINGS - Settling Pond]				
2					SAND and GRAVEL (SW/GW) Fine to coarse, trace silt, compact, max clast 5cm, subrounded to angular, orangish-brown, moist, homogeneous.				
3					SILTY SAND and GRAVEL (SW/GW) Fine to coarse, trace clay, dense, max clast 10cm, subrounded to angular, tan, wet, homogeneous. [PLACER TAILINGS] 3.60m - Boulders, slow augering.				
4									
5									
6					GRAVEL, COBBLES and BOULDERS Silty, some sand, compact, wet, granodiorite and metasedimentary clasts. [PLACER TAILINGS]				
7									
8					7.60m - Switch from hollow stem auger to HQ3 coring.				
9									
10									



(Continued on next page)

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

Survey Method : Handheld GPS
Co-ordinates (m) : 458,988.E, 7,100,919.N
Ground Elevation (m) : 844.0
Datum : UTM NAD 83
Dip (degrees from horizontal) :
Direction : n/a

Drill Designation : Pioneer 2
Drilling Contractor : Aggressive Drilling
Drill Method : Solid Stem Auger/HQ3
Core : HQ3
Fluid : polymer
Casing : ***Cased To (m)*** :

Start Date : 11 Aug 09
Finish Date: 12 Aug 09
Final Depth of Hole (m): : 20.7
Depth to Top of Rock (m) : 12.10
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description	Instrument Details	SPT Blows per 150mm	SPT-T Friction (kPa)	DCT Blows per 300mm
10									
11									
12					Rock encountered at 12.10 m depth. See DH-BGC09-DG-3 rock log.				
13									
14									
15									
16									
17									
18									
19									
20									

Su - kPa
40 80 120 160
VANE FIELD LAB
PEAK ◆ ■
REMOLD ◇ □
▲ UC/2
△ Pocket Pen /2
★ % Fines
Hydraulic Conductivity (m/sec) 10^{-8} 10^{-6} 10^{-4} 10^{-2}
DCT (blows/300mm)
● SPT (blows/300mm)
Core Recovery
20 40 60 80
Moisture Content & SPT N
W_P% W% W_L%
20 40 60 80

Survey Method :Handheld GPS
Co-ordinates (m) : 458,988.E, 7,100,919.N
Ground Elevation (m) : 844.0
Datum : UTM NAD 83
Dip (degrees from horizontal) : -90
Direction :

Drill Designation : Pioneer 2
Drilling Contractor : Aggressive Drilling
Drill Method : Solid Stem Auger/HQ3
Core : HQ3
Fluid : polymer
Casing : **Cased To (m)** :

Start Date : 11 Aug 09
Finish Date: 12 Aug 09
Final Depth of Hole : 20.7
Depth to Top of Rock (m) : 12.10
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description	Instrument Details
10					0 to 12.10 m - See DH-BGC09-DG-3 soil log.	
12					METASEDIMENTARY Grey, fine to coarse, brecciated, extremely to very weak, moderately to highly weathered, dense clay with angular coarse gravel sized clasts, broken rock to fault gouge. [FAULT]	
16					METASEDIMENTARY (Quartzite) Grey to pink, fine grained, phyllitic, very weak to weak, slightly to moderately weathered, three joint sets plus random, some sandy clay gouge, joints rough and planar, quartzite veins (1-3mm), texture is healed breccia to 19m.	
20						

Hydraulic Conductivity m/sec: 10^{-8} 10^{-6} 10^{-4} 10^{-2}
Core Recovery %
RQD %: 20 40 60 80
UCS - MPa: 50 100 150 200
■ Point Load
◇ Triaxial
RMR: 20 40 60 80

(Continued on next page)

Survey Method :Handheld GPS
Co-ordinates (m) : 458,988.E, 7,100,919.N
Ground Elevation (m) : 844.0
Datum : UTM NAD 83
Dip (degrees from horizontal) : -90
Direction :

Drill Designation : Pioneer 2
Drilling Contractor : Aggressive Drilling
Drill Method : Solid Stem Auger/HQ3
Core : HQ3
Fluid : polymer
Casing : **Cased To (m)** :

Start Date : 11 Aug 09
Finish Date: 12 Aug 09
Final Depth of Hole : 20.7
Depth to Top of Rock (m) : 12.10
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description	Instrument Details
20						
21					END OF HOLE @ 20.73m. NOTES: 1) Dynamic cone pushed from 1.22m to 6.10m, refusal on boulders. 2) Hole backfilled upon completion.	
22						
23						
24						
25						
26						
27						
28						
29						
30						

Hydraulic Conductivity m/sec 10^{-8} 10^{-6} 10^{-4} 10^{-2}

Core Recovery %

RQD % 20 40 60 80

UCS - MPa 50 100 150 200

■ Point Load

◇ Triaxial

RMR 20 40 60 80

Survey Method : Handheld GPS
Co-ordinates (m) : 458,918.E, 7,100,426.N
Ground Elevation (m) : 878.0
Datum : UTM NAD 83
Dip (degrees from horizontal) : -90
Direction :

Drill Designation : Pioneer 2
Drilling Contractor : Aggressive Drilling
Drill Method : Solid Stem Auger
Core :
Fluid : polymer
Casing : **Cased To (m)** :

Start Date : 22 Aug 09
Finish Date: 22 Aug 09
Final Depth of Hole (m) : 19.8
Depth to Top of Rock (m) :
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description	Instrument Details	SPT Blows per 150mm	SPT-T Friction (kPa)	DCT Blows per 300mm
0					ORGANICS Peat, dark brown, silty, trace rootlets.				
1					SILT (ML) Some gravel, some sand, firm, brown, rapid dilatancy, no visible ice, excess moisture when thawed, trace organics, partially FROZEN.				
2					SILTY GRAVEL (GM) Some sand, some clay, gap graded, compact, max visible clast 3cm. [COLLUVIUM]				
3									
4									
5					SAND and GRAVEL (SM/GM) Silty, cobbly, well graded, very dense, max visible clast 3cm, subrounded to subangular, tan, moist, no cementation. [COLLUVIUM]				
6									
7					CLAY and GRAVEL Some sand, some silt, fine to medium gravel (subangular to angular), very dense, max visible clast 5mm, brown, moist, homogeneous. [COLLUVIUM]				
8									
9									
10					CLAYEY GRAVEL (GC) Some silt, poorly graded, subangular to subrounded, fine to medium gravel, dense, max visible clast 2cm, light orangish-brown, moist, fine angular mica gravel.				

Su - kPa
40 80 120 160
VANE FIELD LAB
PEAK ◆ ■
REMOLD ◇ □
★ % Fines
Core Recovery
20 40 60 80
▲ UC/2
△ Pocket Pen /2
DCT (blows/300mm)
● SPT (blows/300mm)
Moisture Content & SPT N
W_P% W% W_L%
20 40 60 80

(Continued on next page)

Survey Method : Handheld GPS
Co-ordinates (m) : 458,918.E, 7,100,426.N
Ground Elevation (m) : 878.0
Datum : UTM NAD 83
Dip (degrees from horizontal) : -90
Direction :

Drill Designation : Pioneer 2
Drilling Contractor : Aggressive Drilling
Drill Method : Solid Stem Auger
Core :
Fluid : polymer
Casing : **Cased To (m)** :

Start Date : 22 Aug 09
Finish Date: 22 Aug 09
Final Depth of Hole (m) : 19.8
Depth to Top of Rock (m) :
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description	Instrument Details	SPT Blows per 150mm	SPT-T Friction (kPa)	DCT Blows per 300mm
10									
11									
12									
13					SANDY CLAY (CL) Some silt, some fine gravel (angular), light brown, moist, hard, low plastic, low dry strength, homogeneous.				
14									
15									
16					SANDY CLAY (CL) Some fine to medium gravel (angular), low plastic, blueish-grey, moist, hard, no cementation, no dry strength, homogeneous. [TILL]				
17									
18									
19									
20					END OF HOLE @ 19.81m Maximum extent of available auger				

Su - kPa: 40, 80, 120, 160

VANE: FIELD / LAB — PEAK ◆ ■ — REMOLD ◇ □

★ % Fines

Core Recovery: 20, 40, 60, 80

▲ UC/2
△ Pocket Pen /2
DCT (blows/300mm)
● SPT (blows/300mm)

Moisture Content & SPT N
W_P% — W% — W_L%
20, 40, 60, 80

(Continued on next page)

Survey Method : Handheld GPS
Co-ordinates (m) : 458,918.E, 7,100,426.N
Ground Elevation (m) : 878.0
Datum : UTM NAD 83
Dip (degrees from horizontal) : -90
Direction :

Drill Designation : Pioneer 2
Drilling Contractor : Aggressive Drilling
Drill Method : Solid Stem Auger
Core :
Fluid : polymer
Casing : ***Cased To (m)*** :

Start Date : 22 Aug 09
Finish Date: 22 Aug 09
Final Depth of Hole (m) : 19.8
Depth to Top of Rock (m) :
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description	Instrument Details	SPT Blows per 150mm	SPT-T Friction (kPa)	DCT Blows per 300mm
20					rods. NOTES: 1) Dynamic cone test attempts at: 5.18m - refusal at 2"; 6.71m - @ 22ft - 1 blow, @ 23ft - refusal at 3"; 19.80m - 10 blows for 1"				
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									

Su - kPa
40 80 120 160
VANE FIELD LAB
PEAK ◆ ■
REMOLD ◇ □
★ % Fines
Core Recovery
20 40 60 80
▲ UC/2
△ Pocket Pen /2
DCT (blows/300mm)
● SPT (blows/300mm)
Moisture Content & SPT N
W_P% W% W_L%
20 40 60 80

Survey Method : Handheld GPS
Co-ordinates (m) : 459,098.E, 7,100,673.N
Ground Elevation (m) : 887.0
Datum : UTM NAD 83
Dip (degrees from horizontal) : -90
Direction :

Drill Designation : Pioneer 2
Drilling Contractor : Aggressive Drilling
Drill Method : Solid Stem Auger
Core :
Fluid : polymer
Casing : **Cased To (m)** :

Start Date : 18 Aug 09
Finish Date: 19 Aug 09
Final Depth of Hole (m) : 31.1
Depth to Top of Rock (m) :
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description	Instrument Details	SPT Blows per 150mm	SPT-T Friction (kPa)	DCT Blows per 300mm
0					ORGANICS Peat, dark brown, rootlets.				
1					SAND and GRAVEL (SM/GM) Some silt, trace cobbles, well graded, dense, subrounded to angular, max clast 40cm, orangish-brown, dry to moist, homogeneous. [COLLUVIUM] 0.80m - FROZEN: Vx, 1-5%. 1.60m - Stratified sand and gravel, subrounded, tan, some silt. FROZEN: Vx, 1%.				
2									
3					SAND and GRAVEL (SW/GW) Fine to coarse, trace silt, well graded, dense, max visible clast 3cm, subrounded to subangular, brown, dry, homogeneous, partially FROZEN: Nbn. [COLLUVIUM]				
4									
5					4.57m - FROZEN: Nbn.				
6					SILTY SAND and GRAVEL (SW/GW) Fine to coarse sand, fine to medium gravel, some clay, well graded, dense, max visible clast 2cm, angular to subangular, brown, moist, homogeneous, FROZEN: Nbn.				
7									
8									
9					9m - Subrounded to subangular, max clast 4cm.				
10									

Su - kPa
40 80 120 160

VANE	FIELD	LAB
PEAK	◆	■
REMOLD	◇	□

▲ UC/2
△ Pocket Pen /2
DCT (blows/300mm)
● SPT (blows/300mm)
★ % Fines
Core Recovery
20 40 60 80

Moisture Content & SPT N
W_P% W% W_L%
20 40 60 80

(Continued on next page)

Survey Method : Handheld GPS
Co-ordinates (m) : 459,098.E, 7,100,673.N
Ground Elevation (m) : 887.0
Datum : UTM NAD 83
Dip (degrees from horizontal) : -90
Direction :

Drill Designation : Pioneer 2
Drilling Contractor : Aggressive Drilling
Drill Method : Solid Stem Auger
Core :
Fluid : polymer
Casing : **Cased To (m)** :

Start Date : 18 Aug 09
Finish Date: 19 Aug 09
Final Depth of Hole (m) : 31.1
Depth to Top of Rock (m) :
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description	Instrument Details	SPT Blows per 150mm	SPT-T Friction (kPa)	DCT Blows per 300mm
10									
11									
12									
13									
14					SILT and GRAVEL (ML/GP) Sandy, trace clay, fine to medium gravel, gap graded, dense, max visible clast 3cm, subangular brown, moist, partially FROZEN. [COLLUVIUM]				
15									
16					SILT and CLAY (ML/CL) Low plastic, some fine to coarse sand, trace fine to medium gravel, hard, greyish brown, moist, homogeneous, no cementation, low dry strength, no dilatancy. FROZEN: Nbn, trace Vx, 1%.				
17									
18									
19									
20					19.70m - Unfrozen.				

Su - kPa: 40, 80, 120, 160

VANE: FIELD PEAK ◆, FIELD REMOLD ◇, LAB ■, LAB □

★ % Fines

Core Recovery: 20, 40, 60, 80

▲ UC/2
△ Pocket Pen /2
DCT (blows/300mm)
● SPT (blows/300mm)

Moisture Content & SPT N
W_P% W% W_L%
20, 40, 60, 80

(Continued on next page)

Survey Method : Handheld GPS
Co-ordinates (m) : 459,098.E, 7,100,673.N
Ground Elevation (m) : 887.0
Datum : UTM NAD 83
Dip (degrees from horizontal) : -90
Direction :

Drill Designation : Pioneer 2
Drilling Contractor : Aggressive Drilling
Drill Method : Solid Stem Auger
Core :
Fluid : polymer
Casing : **Cased To (m)** :

Start Date : 18 Aug 09
Finish Date: 19 Aug 09
Final Depth of Hole (m) : 31.1
Depth to Top of Rock (m) :
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description	Instrument Details	SPT Blows per 150mm	SPT-T Friction (kPa)	DCT Blows per 300mm
20					25m to 26.5m - Boulders.				
27					CLAYEY GRAVEL (GP) Some sand, trace silt, fine to coarse gravel, very dense, max visible clast 4cm, subangular to subrounded clasts (dark grey, green, pink) in brown matrix, moist, homogeneous, weak cementation. [TILL]				
30									

Su - kPa: 40, 80, 120, 160

VANE: FIELD PEAK ◆ REMOLD ◇ | LAB ■ □

★ % Fines

Core Recovery: 20, 40, 60, 80

▲ UC/2
△ Pocket Pen /2
DCT (blows/300mm)
● SPT (blows/300mm)

Moisture Content & SPT N
W_P% W% W_L%
20, 40, 60, 80

(Continued on next page)

Survey Method : Handheld GPS
Co-ordinates (m) : 459,098.E, 7,100,673.N
Ground Elevation (m) : 887.0
Datum : UTM NAD 83
Dip (degrees from horizontal) : -90
Direction :

Drill Designation : Pioneer 2
Drilling Contractor : Aggressive Drilling
Drill Method : Solid Stem Auger
Core :
Fluid : polymer
Casing : **Cased To (m)** :

Start Date : 18 Aug 09
Finish Date: 19 Aug 09
Final Depth of Hole (m) : 31.1
Depth to Top of Rock (m) :
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description	Instrument Details	SPT Blows per 150mm	SPT-T Friction (kPa)	DCT Blows per 300mm
30									
31					END OF HOLE @ 31.09m. Rods snapped off, rods and core barrel stuck in hole. NOTES: 1) At 24 m - switch from solid stem auger drilling to HQ3 diamond drilling. Drilling hard, slow augering, little recovery from 19m to 24m. 2) Thermistor EBA 2194 installed, 10m string; beads at 0.5, 1.5, 2.5, 4.0, 7.0, 10.0. 3) DCPT unable to penetrate frozen ground. Attempted to push at 1.52m, 2.44m, 3.05m.				
32									
33									
34									
35									
36									
37									
38									
39									
40									

Su - kPa
40 80 120 160
VANE FIELD LAB
PEAK ◆ ■
REMOLD ◇ □
★ % Fines
▲ UC/2
△ Pocket Pen /2
DCT (blows/300mm)
● SPT (blows/300mm)
Core Recovery
20 40 60 80
Moisture Content & SPT N
W_P% W% W_L%
20 40 60 80

Project: Eagle Gold, Site Facilites

DRILL HOLE # DH-BGC09-STU-4

Location : Stuttle Gulch

Project No. : 0792-002

Survey Method : Handheld GPS
Co-ordinates (m) : 459,057.E, 7,100,712.N
Ground Elevation (m) : 882.0
Datum : UTM NAD 83
Dip (degrees from horizontal) : N/A
Direction : N/A

Drill Designation : Pioneer 2
Drilling Contractor : Aggressive Drilling
Drill Method : Solid Stem Auger/HQ3
Core : N/A
Fluid : polymer
Casing : **Cased To (m)** :

Start Date : 20 Aug 09
Finish Date: 21 Aug 09
Final Depth of Hole (m) : 18.3
Depth to Top of Rock (m) :
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description
0					ORGANICS Peat, dark brown, rootlets.
1					SILTY SAND (SM) Gravelly, well graded, compact, max visible clast 4cm, subrounded, brown, homogeneous. FROZEN. [COLLUVIUM]
		S1			SILTY SAND and GRAVEL (SM/GW) Some clay, well graded, dense, max visible clast 3cm, subrounded, brown, homogeneous. FROZEN. [COLLUVIUM] 2.1m to 2.7m - Cobbly.
3					From 3.5m - Boulders.
7		S2			GRAVELLY CLAY (CL) Some sand, some silt, occasional boulders, low plastic, very stiff, grey, moist, homogeneous, no cementation, low dry strength, non dilatant, gravel clasts, fine to coarse (subangular to angular). [TILL]
10					

Instrument Details | SPT Blows per 150mm | SPT-T Friction (kPa) | DCT Blows per 300mm

Su - kPa
40 80 120 160
VANE FIELD LAB
PEAK ◆ ■
REMOLD ◇ □
★ % Fines
Core Recovery
20 40 60 80
▲ UC/2
△ Pocket Pen /2
DCT (blows/300mm)
● SPT (blows/300mm)
Moisture Content & SPT N
W_p% W% W_l%
20 40 60 80

(Continued on next page)

BGC ENGINEERING INC.
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Client: Victoria Gold

Survey Method : Handheld GPS
Co-ordinates (m) : 459,057.E, 7,100,712.N
Ground Elevation (m) : 882.0
Datum : UTM NAD 83
Dip (degrees from horizontal) : N/A
Direction : N/A

Drill Designation : Pioneer 2
Drilling Contractor : Aggressive Drilling
Drill Method : Solid Stem Auger/HQ3
Core : N/A
Fluid : polymer
Casing : **Cased To (m)** :

Start Date : 20 Aug 09
Finish Date: 21 Aug 09
Final Depth of Hole (m) : 18.3
Depth to Top of Rock (m) :
Logged by : MRR
Reviewed by : PQ

Depth (m)	Sample Type	Sample No.	Weathering Grade	Symbol	Lithologic Description	Instrument Details	SPT Blows per 150mm	SPT-T Friction (kPa)	DCT Blows per 300mm
10					From 10.6m - Boulders.				
11									
12									
13									
14									
15		S3							
16									
17									
18									
19					END OF HOLE @ 18.29m. Auger rig only has 60 ft of rods at present time. NOTES: 1) Thermistor EBA 2193; 10m string, beads at 0.5, 1.5, 2.5, 4.0, 7.0, 10.0m. 2) DCPT hit refusal at boulders at 1.52m, 3.10m, 6.10m, 10.6m.				
20									

Su - kPa
40 80 120 160
VANE FIELD LAB
PEAK ◆ ■
REMOLD ◇ □
★ % Fines
Core Recovery
20 40 60 80
▲ UC/2
△ Pocket Pen /2
DCT (blows/300mm)
● SPT (blows/300mm)
Moisture Content & SPT N
W_p% W% W_l%
20 40 60 80

GENERAL BGC (SOILONLY) 0792-002_03.GPJ BGC.GDT 3/2/10

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

Client: Victoria Gold

APPENDIX D
THERMISTOR DATA

Appendix D - Thermistor Readings

Thermistors were installed temporarily in standpipes in several test pits to obtain instantaneous temperature readings, and permanently installed in three boreholes to allow readings to be made over time. The temperature measurements are summarized in Tables D-1 and D-2 below. The resistance-temperature conversion chart is presented as Figure D-1. Calibration results, and appropriate temperature adjustment factors, are attached.

Table D-1. Temperature Measurements in Test Pits.

Test Pit	Date	Depth (m)	Temperature (^{o}C)
TP-BGC09-HL4-1	15-Aug-09	1.9	-0.1
TP-BGC09-HL4-2	16-Aug-09	2.3	-0.1
TP-BGC09-HL4-12	13-Aug-09	1.9	0
TP-BGC09-HL4-14	13-Aug-09	1.9	0
TP-BGC09-HL4-17	13-Aug-09	1.6	0
TP-BGC09-HL6-10	12-Aug-09	4.8	0
TP-BGC09-HL4-11	21-Aug-09	1.5	-0.1
TP-BGC09-HL4-8	17-Aug-09	2.2	0
TP-BGC09-WR-8	17-Aug-09	3.5	0.2
TP-BGC09-HL4-7	17-Aug-09	2.75	0

Table D-2. Temperature Measurements in Boreholes.

Borehole	Date	Temperature (^{o}C) at Depth					
		0.5 m	1.5 m	2.5 m	4.0 m	7.0 m	10.0 m
DH-BGC09-AG-3	25-Aug-09	3	0	0.3	1	1.6	1.4
	15-Sep-09	--	--	--	--	--	0.7
	12-Oct-09						0.7
DH-BGC09-STU-3	24-Aug-09	2.3	0.1	-0.1	0	-0.3	0.2
	15-Sep-09	2.2	-0.2	-0.3	-0.4	-0.4	-0.3
	12-Oct-09	-1	-0.1	-0.3	-0.4	-0.4	-0.3
DH-BGC09-STU-4	24-Aug-09	2.2	0.2	0.1	0	0	0
	15-Sep-09	2.5	0	-0.1	-0.1	0	0
	12-Oct-09	-0.4	0	-0.2	-0.2	-0.1	-0.2

Figure D-1. Thermistor Temperature-Resistance Curve.

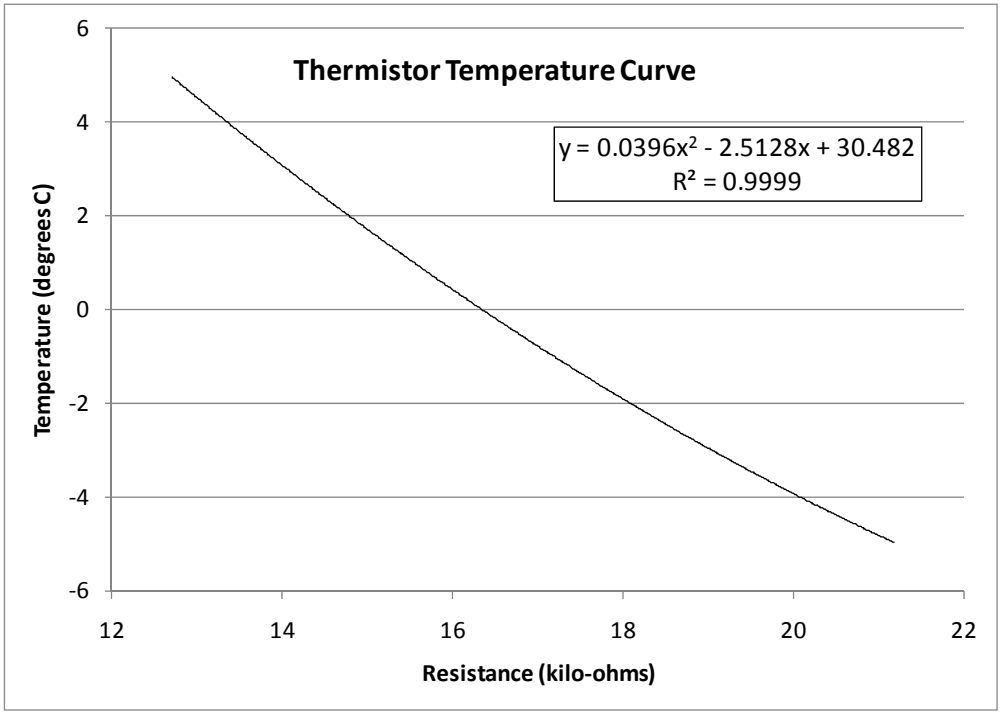


Figure D-2. Thermistor Temperature-Depth Curve DH-BGC09-STU-3.

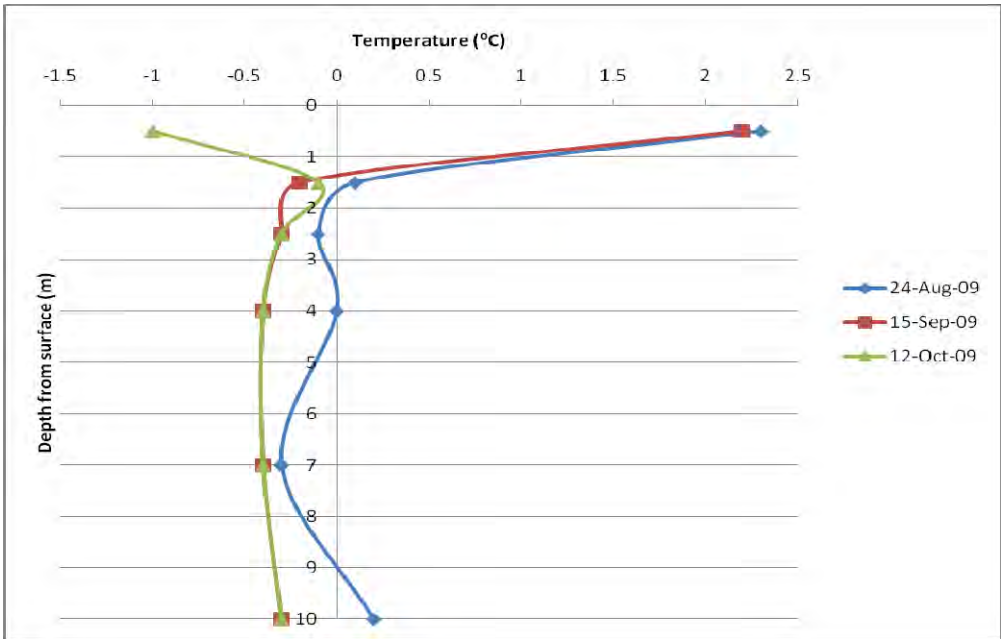
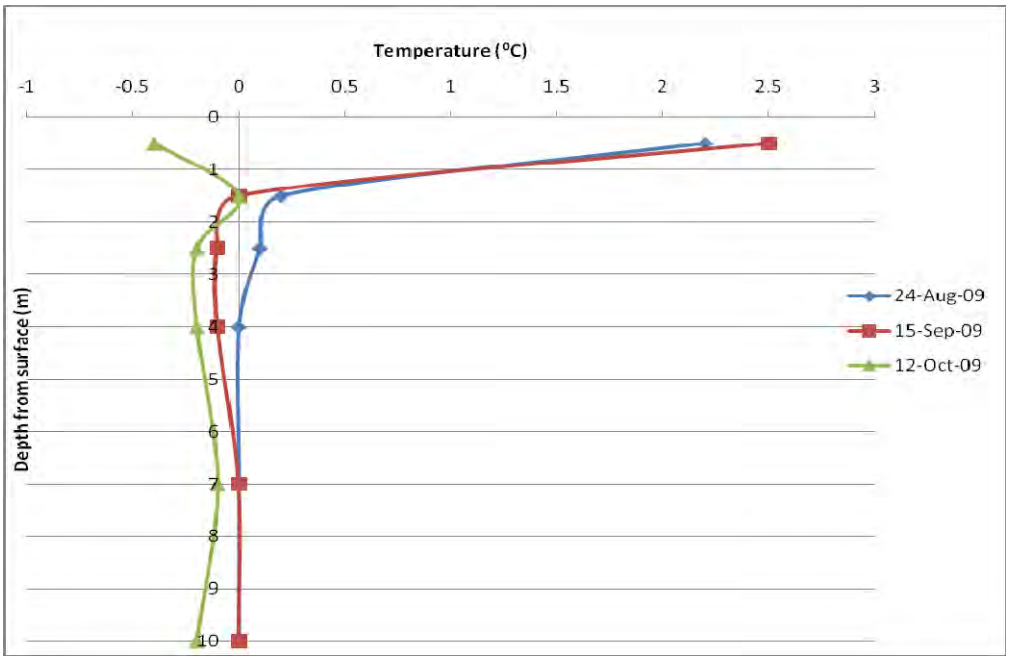


Figure D-3. Thermistor Temperature-Depth Curve DH-BGC09-STU-4.



EBA Engineering Consultants Ltd.

THERMISTOR STRING CALIBRATION

Project: Cable Fabrication
Client: BGC
Date: 09-07-21
Job No.: E12101148

EBA Thermistor String #: 2192
Client String number:
Location of Installation:
Calibration Temperature: 0.02

	Depth of Thermistor ☐ feet ■ meters	Color of Wire	Plug Letter	Calibration Resistance (Kilo-Ohms)			Temperature (deg C)	Calibration Factor (add deg C)
				Trial 1	Trial 2	Trial 3		
1	0.5	Black	A	16.30	16.30	16.30	0.03	-0.01
2	1.5	Purple	B	16.32	16.32	16.32	0.00	0.02
3	2.5	Tan	C	16.32	16.32	16.32	0.00	0.02
4	4.0	Grey	D	16.39	16.39	16.39	-0.08	0.10
5	7.0	Red	E	16.30	16.30	16.30	0.03	-0.01
6	10.0	Brown	F	16.29	16.29	16.29	0.04	-0.02
7		Pink	G					
8		Blue	H					
9		Green	J					
10		Yellow	K					
11		Silver	L					
12		Orange	N					
13		Orange/Wh	P					
14		Black/Wh	R					
15		Brown/Wh	S					
16		Red/Wh	T					
	Common	White	M					

Lead Length: **2m**

Date Shipped:
Carrier:
W/B Number

eba

EBA Engineering Consultants Ltd.

THERMISTOR STRING CALIBRATION

Project: Cable Fabrication
Client: BGC
Date: 09-07-21
Job No.: E12101148

EBA Thermistor String #: 2193
Client String number:
Location of Installation:
Calibration Temperature: 0.02

	Depth of Thermistor ☐ feet ▩ meters	Color of Wire	Plug Letter	Calibration Resistance (Kilo-Ohms) Trial 1	Trial 2	Trial 3	Temperature (deg C)	Calibration Factor (add deg C)
1	0.5	Black	A	16.39	16.39	16.39	-0.08	0.10
2	1.5	Purple	B	16.31	16.31	16.31	0.02	0.00
3	2.5	Tan	C	16.33	16.33	16.33	-0.01	0.03
4	4.0	Grey	D	16.30	16.30	16.30	0.03	-0.01
5	7.0	Red	E	16.29	16.29	16.29	0.04	-0.02
6	10.0	Brown	F	16.32	16.32	16.32	0.00	0.02
7		Pink	G					
8		Blue	H					
9		Green	J					
10		Yellow	K					
11		Silver	L					
12		Orange	N					
13		Orange/Wh	P					
14		Black/Wh	R					
15		Brown/Wh	S					
16		Red/Wh	T					
	Common	White	M					

Lead Length: **2m**

Date Shipped:
Carrier:
W/B Number

eba

EBA Engineering Consultants Ltd.

THERMISTOR STRING CALIBRATION

Project: Cable Fabrication
Client: BGC
Date: 09-07-21
Job No.: E12101148

EBA Thermistor String #: 2194
Client String number:
Location of Installation:
Calibration Temperature: 0.02

	Depth of Thermistor ☐ feet ■ meters	Color of Wire	Plug Letter	Calibration Resistance (Kilo-Ohms)			Temperature (deg C)	Calibration Factor (add deg C)
				Trial 1	Trial 2	Trial 3		
1	0.5	Black	A	16.31	16.31	16.31	0.02	0.00
2	1.5	Purple	B	16.31	16.31	16.31	0.02	0.00
3	2.5	Tan	C	16.33	16.33	16.33	-0.01	0.03
4	4.0	Grey	D	16.29	16.29	16.29	0.04	-0.02
5	7.0	Red	E	16.31	16.32	16.32	0.00	0.02
6	10.0	Brown	F	16.32	16.33	16.33	-0.01	0.03
7		Pink	G					
8		Blue	H					
9		Green	J					
10		Yellow	K					
11		Silver	L					
12		Orange	N					
13		Orange/Wh	P					
14		Black/Wh	R					
15		Brown/Wh	S					
16		Red/Wh	T					
	Common	White	M					

Lead Length: **2m**

Date Shipped:
Carrier:
W/B Number

APPENDIX E
PHOTOGRAPHS

ANN GULCH

TP-BGC09-HL1-1

TP-BGC09-HL1-1

TP-BGC09-HL1-2

TP-BGC09-HL1-2

TP-BGC09-HL6-1

TP-BGC09-HL6-1

TP-BGC09-HL6-2

TP-BGC09-HL6-2

TP-BGC09-HL6-3

TP-BGC09-HL6-3

TP-BGC09-HL6-4

TP-BGC09-HL6-4

TP-BGC09-HL6-5

TP-BGC09-HL6-5

TP-BGC09-HL6-6

TP-BGC09-HL6-6

TP-BGC09-HL6-7

TP-BGC09-HL6-7

TP-BGC09-HL6-8

TP-BGC09-HL6-8

TP-BGC09-HL6-9

TP-BGC09-HL6-9

TP-BGC09-HL6-10

TP-BGC09-HL6-10

TP-BGC09-HL6-11

TP-BGC09-HL6-11

TP-BGC09-HL6-12

TP-BGC09-HL6-12

TP-BGC09-HL6-13

TP-BGC09-HL6-13

TP-BGC09-HL6-14

TP-BGC09-HL6-14

TP-BGC09-HL6-15

TP-BGC09-HL6-15

TP-BGC09-HL6-16

TP-BGC09-HL6-16

TP-BGC09-HL6-17

TP-BGC09-HL6-17

DH-BGC09-AG-3

DH-BGC09-AG-3

EAGLE PUP

TP-BGC09-WR-1

TP-BGC09-WR-1

TP-BGC09-WR-2

TP-BGC09-WR-2

TP-BGC09-WR-3

TP-BGC09-WR-3

TP-BGC09-WR-4

TP-BGC09-WR-4

TP-BGC09-WR-5

TP-BGC09-WR-5

TP-BGC09-WR-6

TP-BGC09-WR-6

TP-BGC09-WR-7

TP-BGC09-WR-7

TP-BGC09-WR-8

TP-BGC09-WR-8

TP-BGC09-WR-9

TP-BGC09-WR-9

LOWER REACH
DUBLIN GULCH

TP-BGC09-DG-1

TP-BGC09-DG-1

TP-BGC09-DG-3

TP-BGC09-DG-3

TP-BGC09-DG-4

TP-BGC09-DG-4

TP-BGC09-HL4-10

TP-BGC09-HL4-10

DH-BGC09-DG-1

DH-BGC09-DG-1

DH-BGC09-DG-2

DH-BGC09-DG-2

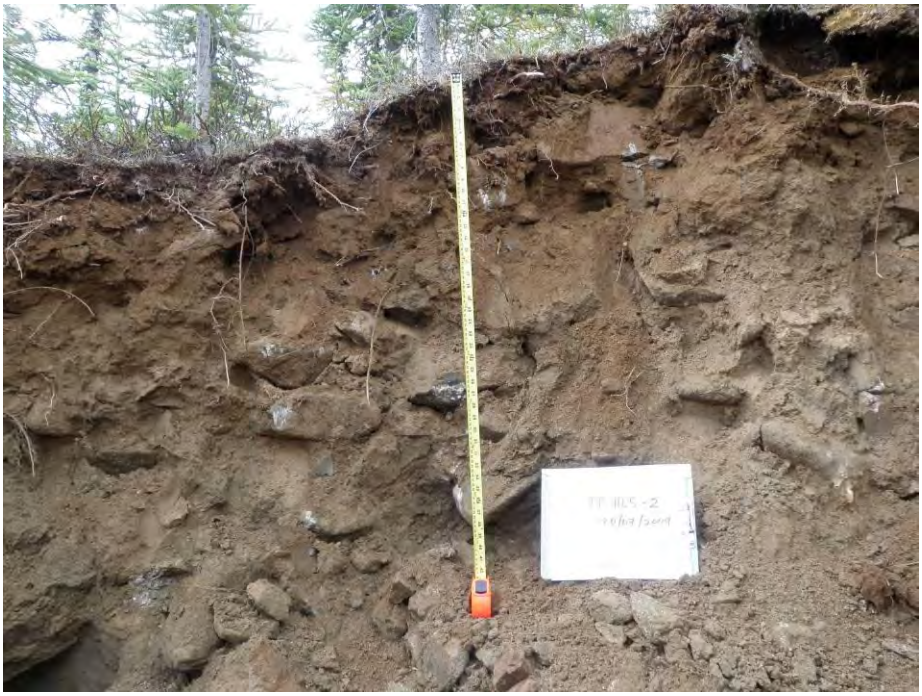
DH-BGC09-DG-3

DH-BGC09-DG-3

OLIVE GULCH

TP-BGC09-HL5-1

TP-BGC09-HL5-1



TP-BGC09-HL5-2

TP-BGC09-HL5-2

TP-BGC09-HL5-3

TP-BGC09-HL5-3

TP-BGC09-HL5-4

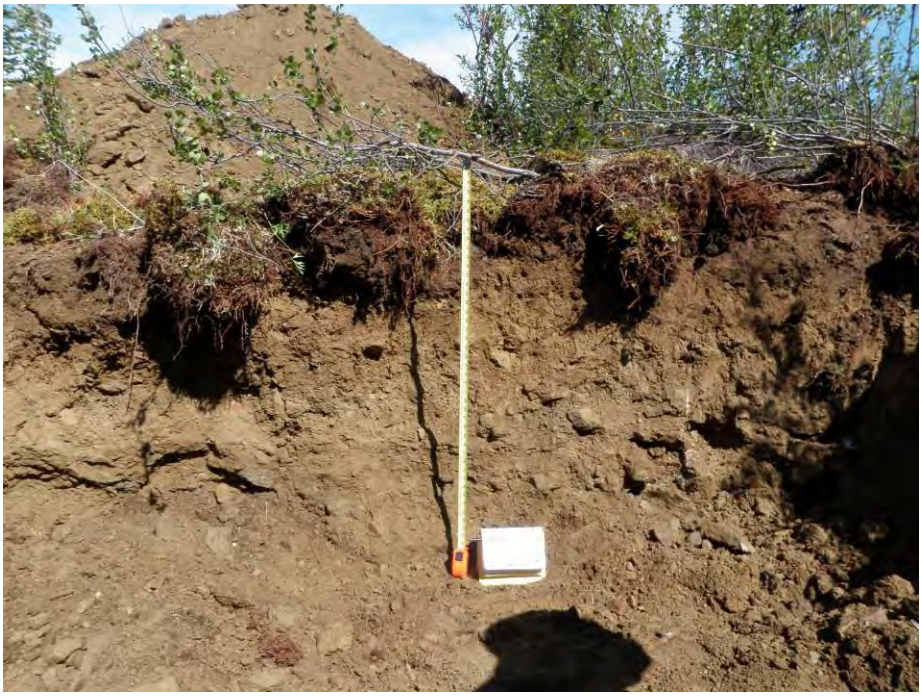
TP-BGC09-HL5-4

TP-BGC09-HL5-5

TP-BGC09-HL5-5

TP-BGC09-HL5-6

TP-BGC09-HL5-6



TP-BGC09-HL5-7

TP-BGC09-HL5-7

TP-BGC09-HL5-8

TP-BGC09-HL5-8

TP-BGC09-HL5-9

TP-BGC09-HL5-9

TP-BGC09-HL5-10

TP-BGC09-HL5-10

STUTTLE GULCH

TP-BGC09-HL4-1

TP-BGC09-HL4-1

TP-BGC09-HL4-2

TP-BGC09-HL4-3

TP-BGC09-HL4-4

TP-BGC09-HL4-5

TP-BGC09-HL4-5

TP-BGC09-HL4-6

TP-BGC09-HL7

TP-BGC09-HL4-8

TP-BGC09-HL4-9

TP-BGC09-HL4-13

TP-BGC09-HL4-14

TP-BGC09-HL4-14

TP-BGC09-HL5-15

TP-BGC09-STU-3

TP-BGC09-STU-4

DH-BGC09-STU-3

DH-BGC09-STU-3

DH-BGC09-STU-4

WEST HAGGART CREEK

TP-BGC09-HL4-11

TP-BGC09-HL4-11

TP-BGC09-HL4-12

TP-BGC09-HL4-12

TP-BGC09-HL4-16

TP-BGC09-HL4-16

TP-BGC09-HL4-17

TP-BGC09-HL4-17

TP-BGC09-HL4-18

TP-BGC09-HL4-18

DH-BGC09-DG-7

DH-BGC09-DG-7 Grab sample from 20ft deep.