EAGLE GOLD PROJECT

MINE DEVELOPMENT, OPERATIONS AND MATERIAL MANAGEMENT PLAN

Version 2014-01

JULY 2014

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1 INTRODUCTION

1.1 PROJECT OVERVIEW

The Project will involve open pit mining at a production rate of approximately 10 Mt/y ore and an average strip ratio of 1:45:1.00 over the 9.2-year production life of the mine. Gold extraction will continue to occur for 1-2 years upon cessation of active mining operations depending upon metallurgical results (gold recovery rates) and market conditions. Current mineable reserves of leachable ore are 92 Mt at 0.78 grams per tonne (g/t) average head grade. A total of 132.4 Mt of waste rock will be stored in Waste Rock Storage Areas (WRSAs) adjacent to and south (Platinum Gulch) and north (Eagle Pup) of the open pit.

Ore will be crushed to 80 percent passing (P80) a particle size of 6.4 mm in a three stage crushing process. All three crushing stages will be located north of the open pit. Ore will be conveyed between each crushing stage by covered conveyor. After the tertiary crushing stage, ore will be transported by covered conveyor into the heap leach facility (HLF) area and will be stacked on the heap leach pad by mobile stacking conveyors.

Gold extraction will utilize cyanide heap leaching technology with process solution containing cyanide applied to the ore to extract gold that is then collected by the HLF leachate collection and recovery system.

Gold-bearing pregnant leach solution (PLS) will be pumped from the heap to the gold recovery plant. Gold will be recovered from the PLS by activated carbon adsorption and pressurized caustic desorption, followed by electro-winning onto steel anodes, and on-site smelting to gold Dore. The gold-barren leach solution that remains after passing through the carbon columns will be re-circulated back to the HLF.

Figure 1.1-1 provides the overall process flow sheet for the Project.

1.2 MINE FACILITIES

The Eagle Gold Mine will be comprised of the following five major facilities as shown on Figure 1.2-1.

- **Open Pit**: Economic gold-bearing ore and uneconomic barren waste rock will be removed from the Eagle deposit by conventional drill, blast, shovel and truck mining. The footprint of the final open pit will have a surface area of approximately 85 ha, and an ultimate pit size of approximately 1,420 m long and 780 m wide. Based on the surface topography, the open pit will be scalloped-shaped with a lower west highwall. The minimum elevation of the pit is estimated to be 847.5 masl with a maximum crest elevation along the east highwall of approximately 1,409 masl, The west highwall crest elevation is estimated at 925 masl.
- **Waste Rock Storage Areas**: Uneconomic barren waste rock will be deposited in one of two waste rock storage areas (WRSAs) or utilized in the construction of various mine facilities. During the first several years of operations, waste rock will be delivered to both the Platinum

Gulch WRSA and the Eagle Pup WRSA. For the remainder of the life of the Project, waste rock will be trucked to the Eagle Pup WRSA. Details regarding the development and operation of the WRSAs are described in the Waste Rock and Overburden Facility Management Plan.

- **Crusher and Conveyor System**: Ore will be delivered by haul truck to the primary crusher, located adjacent to the northern rim of the open pit, at a rate of 29,500 tonnes per day (tpd). Ore will be crushed and then conveyed by covered conveyor to the secondary crusher, secondary screens and tertiary crushers and screens. During an approximate 100-day period during each winter, ore will be temporarily stored on a prepared pad following primary crushing. The stored ore will be blended back into the crushing circuit over an approximate 250-day period so that the total ore delivery rate to the HLF will be approximately 41,300 tonnes tpd.

  During the construction phase of the project, a portable crushing and screening plant will be developed to process select construction materials.

- **Heap Leach Facility**: Crushed ore will be delivered and stacked on a lined solution collection pad. Process solution containing cyanide will be applied to the ore to extract gold and collected by the HLF pad leachate collection and recovery system. The HLF pad will consist of a composite liner system in the upper and lower reaches of the facility. The lower section of the HLF pad acts as an 'in-heap pond' for primary storage of pregnant solution. A lined pond external to the HLF will be constructed to temporarily store excess process solution during rare upset events, and/or freshet events as needed, and normal precipitation that occurs on the pond; any solution contained in the pond will be recycled back into the heap leach circuit. Details regarding the development and operation of the HLF are described in the Heap Leach and Process Facilities Plan.

- **Process Plant**: Gold containing solution collected from the HLF will be processed via conventional gold recovery methods. Gold-bearing solution will be pumped from the in-heap pond to the process plant via heat traced pipes. Solution will be recycled back to the HLF after gold recovery. The process plant area will be located at the toe of the HLF. Details regarding the development and operation of the Process Plant are described in the Heap Leach and Process Facilities Plan.

The mine will be supported by additional mine infrastructure including water management facilities, a truck shop and maintenance buildings, fuel storage facilities, an explosives and magazine storage facility, a main access road and laydown areas, and a transmission line and substation.

Water management facilities including ponds and sediment basins, diversion and interceptor ditches, as well as pumping and piping systems have been developed to proactively manage sediment-laden, contact and non-contact water throughout the construction, operation and closure phases of the Project. Further, pumping and piping infrastructure has also been developed for the distribution of fresh groundwater and/or surface water runoff to meet various process and potable water requirements. Details regarding the development and operation of the water management facilities are described in the Water Management Plan. The Water Management Plan has several functional components including a construction water management plan, a sediment and erosion control plan, an operational water management plan, a closure water management plan, and a post-closure water management plan. Each plan was developed from specific design bases and criteria, and supported by the integration of baseline studies and various water-related modeling exercises.

A mine water treatment plant (MWTP) will be constructed sometime during the operational phase of the Project to treat contact water and later during closure, process water to meet effluent quality criteria for discharge to Haggart Creek. Details regarding the development and operation of the MWTP is found in Linkan (2014).

1.3 TABLES OF CONCORDANCE

The following two tables of concordance summarize how applicable commitments made by StrataGold during the environmental assessment process, including the decision document terms and conditions and our project commitments, have been addressed.

Table 1.3-1: Table of Concordance for the Project Decision Document Relevant to this Plan

No.	Terms and Conditions	Where Addressed
To ensure proper function of the sediment control ponds and minimize the potential for release of water with high concentrations of Total Suspended Solids:		
45.	The Proponent shall ensure that sediment control ponds are sized adequately to meet Total Suspended Solids concentration effluent criteria.	See Section 4.0 (Design Basis and Criteria) of the Water Management Plan
To reduce risks associated with the Dublin Gulch Diversion Channel:		
46.	Where portions of the Dublin Gulch Diversion Channel and Velocity Reduction Pond abut critical mine site infrastructure, the Proponent shall ensure armouring more durable than turf reinforced armouring is constructed to account for a 500-year, 24-hour storm event.	See Response to YWB Comments for Hydrotechnical Design Issues Q1 and the Dublin Gulch Diversion Channel Final Design Report to Tetra Tech (2014b)
47.	The Proponent shall design and construct the Dublin Gulch Diversion Channel using more natural features such as step pool features rather than concrete block armouring. If the construction of more natural features is not possible, prior to the regulatory approval process the Proponent shall provide responsible regulators with: appropriate rationale for the use of concrete block armouring; a detailed analysis of stability; and a monitoring and maintenance plan.	See Response to YWB Comments for Hydrotechnical Design Issues Q1, Q2 and Q3 and the Dublin Gulch Diversion Channel Final Design Report to Tetra Tech (2014b)
48.	The Proponent shall use Type III Antecedent Moisture Content (AMC), rather than Type II AMC to compute the Inflow Design Flood of the Dublin Gulch Diversion Channel.	See Section 3.7 of Appendix A – Dublin Gulch Diversion Channel Final Design Report to Tetra Tech (2014b) – Heap Leach Facility Design Report
To ensure stability of diversion ditches and interceptor ditches:		
49.	The Proponent shall ensure temporary diversion or interceptor ditches are sized to account for infilling of sediments. This includes increasing the minimum depth from 300 mm where conditions warrant (e.g. ditches constructed with minimal to no grade).	See Section 4.0 (Design Basis and Criteria) and in particular Section 4.2.3 Monitoring Strategies of the Water Management Plan
50.	The Proponent shall ensure that lined temporary and permanent diversion or interceptor ditches that are lined in a manner that is stable.	See Section 4.0 (Design Basis and Criteria) and in particular Section 4.2.3 Monitoring Strategies of the Water Management Plan

No.	Terms and Conditions	Where Addressed
		Section 3.3 of this Plan; will be part of Construction Quality Assurance and Quality Control Plan
51.	The Proponent shall ensure that temporary and permanent diversion or interceptor ditches that convey water away from key mine site infrastructure (e.g. the HLF, WRSAs, and event ponds) are sized to accommodate a 100-year, 24-hour design storm event.	See Section 4.0 (Design Basis and Criteria) of the Water Management Plan
To minimize the likelihood of inaccurate water quality model predictions leading to effects on the aquatic ecosystems		
52.	As proposed, the Proponent shall ensure that a revised groundwater model is submitted to responsible regulators during the regulatory approval process.	See Eagle Gold Project Numerical Hydrogeological Model (BGC 2014)
53.	The Proponent shall, in discussions with responsible regulators, ensure groundwater monitoring occurs at appropriate locations down gradient from potential sources of contamination to enable early detection and timely intervention of potential groundwater contamination.	See Section 2.3 (Groundwater Quantity) and 2.4 (Groundwater Quality) of the Environmental Monitoring and Adaptive Management Plan
To decrease variability around geochemical characterization and validate hydrogeochemical predictions:		
54.	The Proponent shall complete geochemical characterization of the expanded open pit including representative rock units for the total amount of waste rock and ore being mined (132 million tonnes of waste rock and 92 million tonnes of ore). This characterization should include kinetic testing to predict metal leaching potential.	See Final Report: Geochemical Characterization – Eagle Gold Project (SRK 2014)
55.	The Proponent shall incorporate results of the new geochemical characterization into the overall geochemical characterization of rock units to be excavated by the Project and revise the source term predictions accordingly. The Proponent shall ensure that this information is available prior to the regulatory approval process.	See Final Report: Geochemical Characterization – Eagle Gold Project (SRK 2014); See Mine Waste Geochemical Source Term Predictions – Model Description and Results (Lorax 2014a)
56.	The Proponent shall update the water quality model and predictions using the revised geochemical characterization and source term predictions prior to the regulatory approval process.	See Water Quality Model Report (Lorax 2014b)
57.	The Proponent shall conduct appropriate testing of on-site materials to compare on-site materials to analog site materials. The Proponent shall consider additional on-site testing results as well as long-term trends at analog sites to provide confidence that the analog site data used to bound upper limits of source term concentrations accurately reflect the characteristics of the Eagle Gold Mine material. The Proponent shall ensure that this information is available prior to the regulatory approval process.	See Mine Waste Geochemical Source Term Predictions – Model Description and Results (Lorax 2014a)
58.	The Proponent shall conduct monitoring of water quantity and quality from contact waters during operations, closure and post-closure to characterize contact waters from the different sources, verify assumptions and inform the site closure plan. The monitoring program should specify routine surface water monitoring from waste rock storage areas, the open pit, and the HLF. The data should be reviewed periodically to update loading assumptions for constituents of particular concern in the site water balance and water quality models.	See Environmental Monitoring and Adaptive Management Plan

No.	Terms and Conditions	Where Addressed
To minimize potential effects due to metal leaching from waste rock used as construction material:		
60.	The Proponent shall ensure waste rock used to construct on-site infrastructure does not contribute to exceedance of water quality guidelines due to metal leaching. The Proponent shall actively segregate waste rock based on metal leaching potential so that it is used appropriately.	See Final Report: Geochemical Characterization – Eagle Gold Project (SRK 2014) See Section 3.0 (Geochemical Monitoring Program) in the Environmental Monitoring and Adaptive Management Plan
To minimize the likelihood of inaccurate water quality model predictions leading to effects on the aquatic ecosystems:		
68.	The Proponent shall conduct monitoring of water quantity and quality from contact waters (e.g. waste rock storage areas) and non-contact waters (e.g. reference locations) during operations, closure and post-closure to verify assumptions and inform the site closure plan.	See Environmental Monitoring and Adaptive Management Plan
To ensure the effectiveness of passive treatment systems for the protection of aquatic ecosystems during post-closure		
69.	The Proponent shall provide responsible regulators with updated long-term, post-closure water quality predictions based on updated water quality modeling, water balance modeling, and groundwater modeling.	See Water Quality Model Report (Lorax 2014b)
71.	The Proponent shall ensure that the proposed approach for developing the passive treatment follow a phased approach that includes laboratory scale, bench scale, pilot scale, and full scale testing.	See Section 7.0 (Reclamation and Closure Research Programs) of the Reclamation and Closure Plan
72.	The Proponent shall ensure that the passive treatment system development and testing begins early enough in the Project development to ensure that detailed plans are submitted, reviewed and accepted by responsible regulators prior to decommissioning.	See Section 7.0 (Reclamation and Closure Research Programs) of the Reclamation and Closure Plan
73.	The Proponent shall ensure that the passive treatment system development includes a monitoring plan with follow-up on the performance and predicted longevity of the systems and a maintenance plan in the case that the performance and/or longevity of the systems are somehow compromised.	See Section 7.0 (Reclamation and Closure Research Programs) of the Reclamation and Closure Plan
To mitigate significant adverse effects to fish and fish habitat:		
79.	The Proponent shall construct the parking and staging areas along the access road in a manner that: a) where possible, avoids impacts to riparian vegetation within 30 m of the high water mark; b) where possible, avoids impacts to stream channels; and c) avoids the introduction of sediments into surface waters.	Section 3.3 of this Plan; will be part of design criteria for the road upgrade design
80.	The overhead transmission line shall be constructed in a manner that: a) applies the mitigation measures described in the Fisheries and Oceans Canada Operational Statement for Overhead Line Construction; b) to the extent possible, ensures watercourse crossings to occur as close to the road crossing as possible to minimize	Section 3.3 of this Plan; will be part of the design basis incorporated into the final design for the overhead transmission line.

No.	Terms and Conditions	Where Addressed
	the amount of riparian area clearing; c) to the extent possible, ensures short riparian shrubs and grasses are left undisturbed; d) ensures riparian trees and tall shrubs are topped as opposed to completely removed; e) ensures a qualified environmental professional (QEP) is on-site at the time of final pole location selection, and while the clearing is taking place for Haldane Creek, North Star Creek, South McQuesten River, Bighorn Creek, Secret Creek and Haggart Creek; and f) ensures the QEP is tasked with ensuring minimal disturbance of riparian vegetation and avoiding a harmful alteration, disruption or destruction to fish habitat as a result of the clearing.	
To mitigate significant adverse effects related to permafrost degradation on environmental quality:		
81.	As proposed, the Proponent shall submit the consolidated results from its subsurface investigations in conjunction with their applications for a Quartz Mining License and Type A Water Use Licence.	See the following: 2011 Geotechnical Investigation for Mine Site Infrastructure Factual Data Report (BGC 2012a). 2011 Geotechnical Investigation for Mine Site Infrastructure Foundation Report. Final Report (BGC 2012b). Geotechnical Assessment and Design of the Waste Rock Storage Areas (BGC 2012c) 2012 Geotechnical Investigation for Mine Site Infrastructure Factual Data Report (BGC 2012e) Geotechnical Design Ice-Rich Overburden Storage Area Berms (NELPCo 2013).
82.	The Proponent shall ensure sufficient storage is available for temporary containment, management, and thawing of excavated ice rich soils/permafrost.	See Frozen Material Management Plan and Geotechnical Design Ice-Rich Overburden Storage Area Berms (NELPCo 2013).
To mitigate significant adverse effects to air quality:		
93.	As proposed, the Proponent shall cover ore conveyance equipment.	Section 3.5 of this Plan. This has been included in the design criteria for final design.
94.	The Proponent shall cover equipment where ore is loaded or discharged onto conveyors and other equipment. This is referenced in the Executive Summary to the proposal but not itemized in the Fugitive Dust Control Plan.	Section 3.5 of this Plan. This has been included in the design criteria for final design.
To eliminate, reduce or control significant adverse effects from the Project on bird injury/mortality, the following mitigative measures are required:		
105.	If nests are discovered, the Proponent shall record these locations and avoid them until they are no longer in use by birds.	See Wildlife Protection Plan

No.	Terms and Conditions	Where Addressed
106.	The Proponent shall avoid clearing vegetation during the migratory bird nesting season (approximately May 1st to July 31st). If clearing must occur during this period, the Proponent shall ensure nest surveys are conducted by qualified and experienced personnel prior to clearing. If active nests or migratory birds are discovered, the Proponent shall postpone activities in the nesting area until nesting is completed.	See Wildlife Protection Plan

Table 1.3-2: Table of Concordance for Project Commitments (made June 2011) Relevant to this Plan

No.	Proponent Commitments	Where Addressed
Surficial Geology, Terrain, and Soils		
1	VIT will complete geotechnical investigations as part of detailed mine planning during the permitting stage, prior to construction. Once exact locations for Project infrastructure have been identified, qualified professionals will carry out on-site terrain stability assessments in areas identified as having potential terrain stability issues.	See the following: 2011 Geotechnical Investigation for Mine Site Infrastructure Factual Data Report (BGC 2012a). 2011 Geotechnical Investigation for Mine Site Infrastructure Foundation Report. Final Report (BGC 2012b). 2012 Geotechnical Investigation for Mine Site Infrastructure Factual Data Report (BGC 2012e) Geotechnical Design Ice-Rich Overburden Storage Area Berms (NELPCo 2013).
2	VIT will establish a program to monitor permafrost conditions adjacent to cleared areas within the Project footprint once mine infrastructure is constructed. Downslope movement and soil moisture will be monitored. Monitoring frequency will be sufficient to assess the effects of freshet, large storm events, and other weather conditions that may affect terrain stability.	See Sections 4.0 (Design Basis and Criteria) and 6.0 (Construction Water Management) of the Water Management Plan See Construction Environmental Monitoring and Adaptive Management Plan
3	A qualified environmental professional/technician with appropriate knowledge and training will monitor Project construction and closure activities. The professional/technician will: 1) ensure that soil material suitable for reclamation is salvaged and stored; and 2) evaluate topsoil volumes, based on soil stockpile dimensions, to determine whether there is sufficient material for reclamation. If a shortage is calculated, additional areas of overburden salvage will be identified. If the quality of topsoil does not meet the requirements of the Conceptual Closure and Reclamation Plan (Appendix 24), additional areas of soil salvage will need to be identified.	Section 3.3 of this Plan; will be part of Construction Quality Assurance and Quality Control Plan

4	Soil stockpiles will be checked regularly, after storm events, and during/following freshet to ensure vegetation cover is maintained and erosion control measures are effective.	See Environmental Monitoring and Adaptive Management Plan See Sections 4.0 (Design Basis and Criteria) and 6.0 (Construction Water Management) of the Water Management Plan
5	VIT will monitor the effectiveness of soil mitigation to evaluate compaction, rutting, drainage and re-contouring prior to re-vegetation.	See Section 6.3 (Soils) of the Environmental Monitoring and Adaptive Management Plan
7	VIT will implement a monitoring program (e.g., for vegetation vigour and growth, soil moisture and groundwater levels) in areas outside the mine footprint that are expected to be affected by changes in groundwater levels. These monitoring sites will be established prior to the commencement of construction activities (to establish baseline conditions) and continue through the post-closure monitoring phase.	See Sections 2.3 (Groundwater Quantity), 6.2 (Vegetation) and 6.3 (Soils) in the Environmental Monitoring and Adaptive Management Plan
8	VIT will establish long-term soil and vegetation monitoring sites, outside the Project footprint, to monitor for element concentrations, in particular arsenic, in soil and foliage. These monitoring sites will be established prior to construction activities (to establish baseline conditions) and continue until Year 8 of operations (when dusting is complete). Approximately 10 sites will be established throughout the area of predicted arsenic exceedance from metal loading.	See Sections 6.2 (Vegetation) and 6.3 (Soils) of Environmental Monitoring and Adaptive Management Plan
9	VIT will implement an Erosion and Sediment Control Plan for the footprint area during construction, operations and closure and reclamation (Environmental Management Plans – Appendix 30).	See Water Management Plan
Water Quality and Aquatic Biota		
14	VIT will implement codified erosion prevention and sediment control practices and the Water Management Plan (Appendix 18) to prevent sediment release during construction (sediment control ponds).	See Water Management Plan
16	VIT will construct and maintain diversion channels to keep non-contact water away from mine activities. These will be built with erosion protection measures and designed to convey large runoff volumes. Design criteria will be determined based on water license requirements.	See Water Management Plan
17	Sediment control ponds will be constructed and maintained to allow fine sediments to settle out. Permanent sediment control ponds will be sized for a 1:200 year 24-hour flood event and temporary sediment control ponds will be sized for a 1:100 year 24-hour flood event.	See Section 4.0 (Design Basis and Criteria) of Water Management Plan
Vegetation Resources		

31	VIT makes the following commitments to mitigate against invasive species: a) Vegetation communities adjacent to Project disturbance will be monitored throughout all Project phases to ensure that populations of invasive plant species are promptly identified as they become established and that appropriate control measures are applied in a timely manner. b) Follow guidelines to prevent the introduction and spread of invasive plants as per the Invasive Plants Management Plan during all Project phases (Appendix 24 – Eagle Gold Conceptual Closure and Reclamation Plan). c) Minimize the extent of grubbing, soil stripping, and the removal of shrubs and herbaceous species, where possible, to reduce the area of bare ground potentially subject to invasive plant establishment. d) Mitigate against the establishment of invasive species and reduce erosion potential by re-establishing native vegetation on disturbed areas as soon as possible. e) Ensure that construction equipment is clean and free of soil and seeds before mobilizing to the Project site f) Use native species, to the greatest extent possible, during all Project phases, but most specifically during closure and reclamation phases to re-vegetate disturbed sites.	Section 3.3 of this Plan; will be part of Construction Quality Assurance and Quality Control Plan See Section 6.2 (Vegetation) in the Environmental Monitoring and Adaptive Management Plan
32	VIT makes the following commitments to minimize potential effects of clearing on vegetation resources: a) Flag and stake known rare plant locations near the maximum disturbance boundary and instruct equipment operators to avoid these areas. Conduct regular monitoring of these sites during construction and operations. b) Reduce vegetation loss in areas around the footprint perimeter by adhering closely to construction plans, and avoiding off- site machine use. c) Clear the necessary trees and tall shrubs within the transmission line RoW during periods when the ground is frozen and snow-covered to minimize the disturbance to low shrubs, the moss layer, and topsoil. d) Minimize the extent of grubbing, stripping, and the removal of shrubs and herbaceous species where possible. e) When clearing is required, retain the humus layer and vegetation root mat, when possible. f) Re-vegetation of disturbed soils where appropriate to encourage slope stability and minimize soil degradation and erosion.	Section 3.3 of this Plan; will be part of Construction Quality Assurance and Quality Control Plan See Section 6.2 (Vegetation) in the Environmental Monitoring and Adaptive Management Plan

33	VIT makes the following commitments to minimize potential effects on wetlands and riparian areas: a) Minimize disturbance in sensitive areas by implementing best management practices including the creation and maintenance of buffer zones around riparian and wetland ecosystems. b) Maintain existing drainage patterns to and from wetlands in areas outside of the disturbance footprint. c) When clearing is required, retain the humus layer and vegetation root mat to the extent practical, to reduce the potential for soil erosion and deposition in riparian and wetland ecosystems. d) Employ hand cutting of vegetation near access road and transmission line stream crossings to reduce disturbance to riparian areas during construction of the transmission line.	Section 3.3 of this Plan; will be part of Construction Quality Assurance and Quality Control Plan
Wildlife		
38	VIT will implement the following clearing practices to minimize potential effects on wildlife: a) Minimize Project footprint. Site clearing will be minimized to only the area needed to safely construct and operate the Project. Before clearing, wildlife habitat features (e.g., mineral licks, dens, nest trees, snags, rocky outcrops, small ponds/seepages) will be identified and evaluated to determine if they can be maintained. Even if small, these patches will benefit wildlife and contribute to reclamation. b) Clear vegetation outside of the breeding bird windows. Where this is not possible, VIT will consult with the appropriate regulators (Yukon Government, CWS) and develop management strategies. These strategies are likely to include surveying the area to be cleared for nests a maximum of one week prior to clearing. Bird nests will be identified and protected until nesting has completed.	See Section 3.3 of this Plan; will be part of Construction Quality Assurance and Quality Control Plan See Wildlife Protection Plan
40	Implement a progressive Conceptual Closure and Reclamation Plan (Appendix 24). VIT will: a) re-vegetate reclamation areas with native species consistent with surrounding vegetation, except where regulatory agencies indicate that natural succession is preferable; and b) maximize use of direct placement techniques (minimizing stockpiling) to minimize the loss of biological activity in reclamation capping materials.	See Section 8.0 (Progressive Reclamation) of the Reclamation and Closure Plan
Accidents and Malfunctions		

97	VIT will implement the following to maximize road and transport safety: a) Work with the Department of Highways and Public Works to ensure both public and private portions of the access road are properly maintained and upgraded as required b) Enforce speed limits for all Project vehicles c) Ensure trucking/hauling contractors have appropriate driver training, radio contact capabilities, vehicle maintenance requirements, and spill response capabilities d) Ensure all hazardous materials are transported and handled in accordance with the Transportation of Dangerous Goods Act and Regulations e) Require bulk carriers to carry two-way radios to communicate with the mine site f) Post signage along Haggart Creek Road (a two-way, one-lane radio controlled access road with regular vehicle pull-outs to allow passing) and ensure non-Project traffic is aware of radio protocols g) Identify wildlife migration corridors and crossings along the road and provide signage in high risk areas h) Plow wildlife crossing and escape points in the access road snow banks (i.e., 0.5 m or less at regular intervals).	See Section 4.2 of this Plan and the Road Construction Plan

98	VIT commits to the following spill prevention and response measures: a) If there is any doubt regarding the size of a spill, material involved, and whether it is reportable, VIT will err on the side of caution and report the spill. b) Caches of spill response materials will be placed along the access road as required by the Spill Contingency Plan (Appendix 30), including at the Haggart Creek crossing. c) Project staff will have appropriate emergency response and spill contingency training and knowledge. Equipment, materials, and procedures will be maintained to limit the consequences of releases to the environment through prompt containment and clean-up. d) Fuels, hydrogen peroxide, and other hazardous liquids will be transferred from tanker trucks to storage tanks by enclosed lines, hoses, and pumps equipped with pressure transducers and volume counters to ensure tanks cannot be overfilled. e) No lubrication, refueling or maintenance of equipment will occur within 30 m of wetlands or watercourses. f) All fuelling and lubrication of construction equipment will be carried out in a manner that minimizes the possibility of spills. All containers, hoses, and nozzles will be free of leaks and all fuel nozzles equipped with functional automatic shut-offs. g) Where stationary equipment cannot be relocated more than 30 m from a watercourse, it will be situated in a designated area that has been bermed and lined with an impermeable barrier with a holding capacity equal to 125% of the largest tank within the berm. h) h) Equipment operators will be appropriately trained in spill response procedures and carry spill kits capable of handling spills on land and water.	See Section 4.5 of this Plan and the Spill Response Plan
100	VIT will store and handle explosives in accordance with a magazine license issued by Natural Resources Canada. Explosives and blast caps will be stored in separate facilities, away from operational areas.	See Section 4.4 of this Plan and the Explosives Management Plan
Conceptual Closure and Reclamation Plan		

<table>
<tr><td>105</td><td>During construction, an environmental monitor will be on site to monitor activities and to verify compliance with the provisions of all applicable permits, licenses and approvals. The environmental monitor will:
a) Conduct monitoring programs as required under the respective permits, licenses, and approvals, and report the results of such programs, as required
b) Ensure that soil salvage and replacement activities are completed appropriately to meet reclamation objectives
c) Ensure that vegetative erosion control cover is established on soil stockpiles and on any other areas of disturbance, as appropriate
d) Provide direction and recommend implementation measures aimed at avoiding or minimizing adverse environmental effects
e) Implement erosion control measures such as installation of riprap, erosion control blankets, silt fences and filter fabrics.</td><td>Section 3.3 of this Plan; will be part of Construction Quality Assurance and Quality Control Plan</td></tr>
<tr><td>106</td><td>As soon as reclamation areas become available, VIT will establish trials testing plant species suitable for reclamation in the Project footprint and trials testing vegetation establishment/growth on various topsoil depths and waste rock material. Information obtained from the trials/monitoring programs will be used to adjust reclamation activities or methods that will be best suited for reclaiming remaining mine disturbance areas.</td><td>Section 3.3 of this Plan; will be part of Construction Quality Assurance and Quality Control Plan
See Section 7.0 (Reclamation and Closure Research Programs) of the Reclamation and Closure Plan</td></tr>
<tr><td colspan="3">Environmental Management Plans</td></tr>
<tr><td>110</td><td>VIT is committed to developing and implementing Environmental Management Plans (Appendix 30) with the following components:
a) Erosion and Sediment Control Plan
b) Fugitive Dust Control Plan
c) Combustion Source Control Plan
d) Vegetation Management Plan
e) Wildlife Protection and Management Plan
f) Environmental Monitoring Plan
g) Schedule of Environmentally Sensitive Activity
h) Heritage Resources Protection Plan
i) Traffic and Access Management Plan
j) Occupational Health and Safety Plan
k) Cyanide Transportation Management Plan
l) Spill Contingency Plan
m) Noise Abatement Plan
n) Waste Management Plan
o) Water Management Plan
p) Closure and Reclamation Plan.</td><td>See the following:
Water Management Plan
Dust Control Plan
Wildlife Protection Plan
Environmental Monitoring and Adaptive Management Plan
Spill Response Plan
Solid Waste and Special Waste Management Plan
Cyanide Management Plan
Heritage Resources Protection Plan
Decommissioning and Reclamation Plan
Traffic Management Plan</td></tr>
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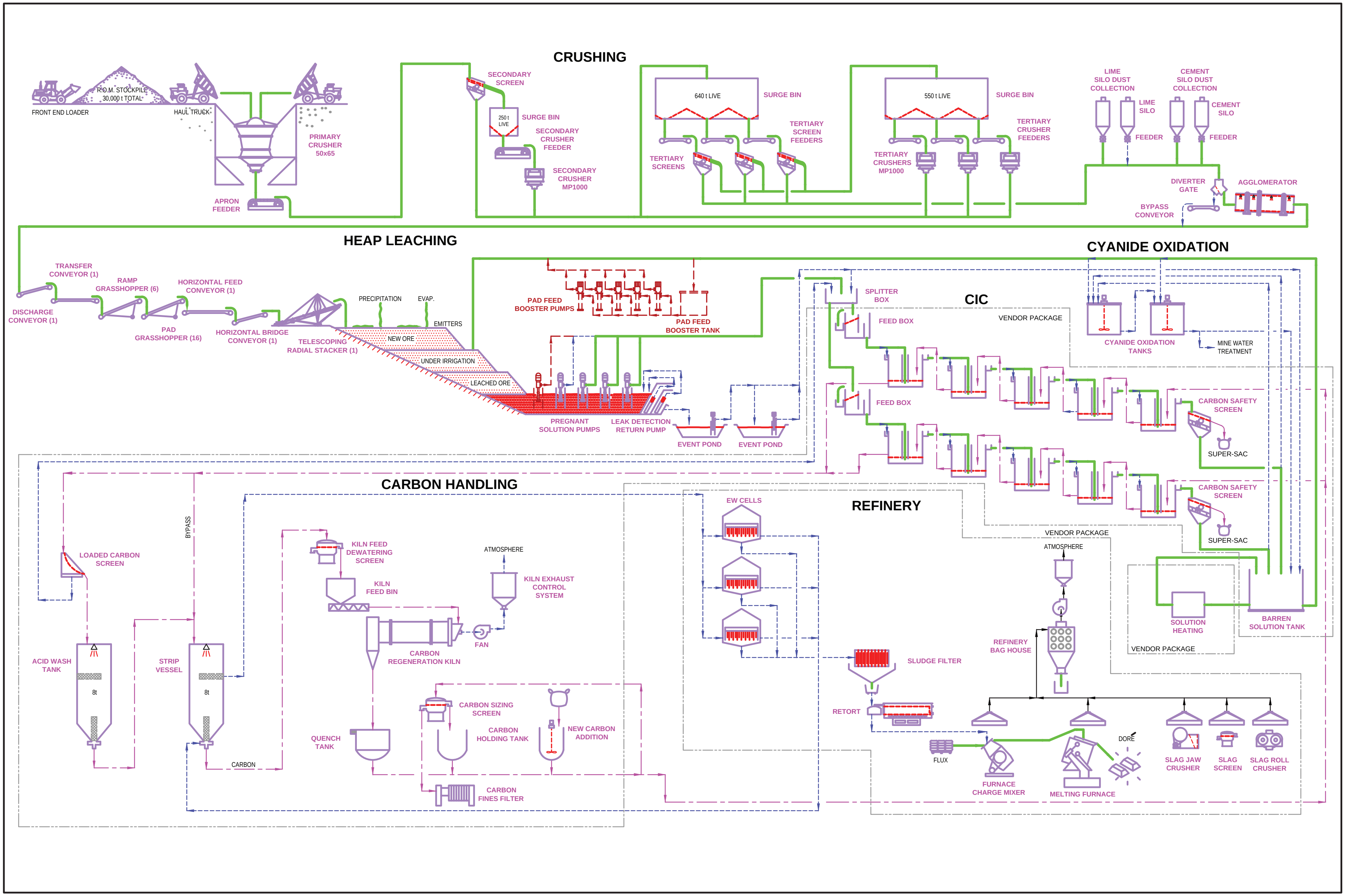
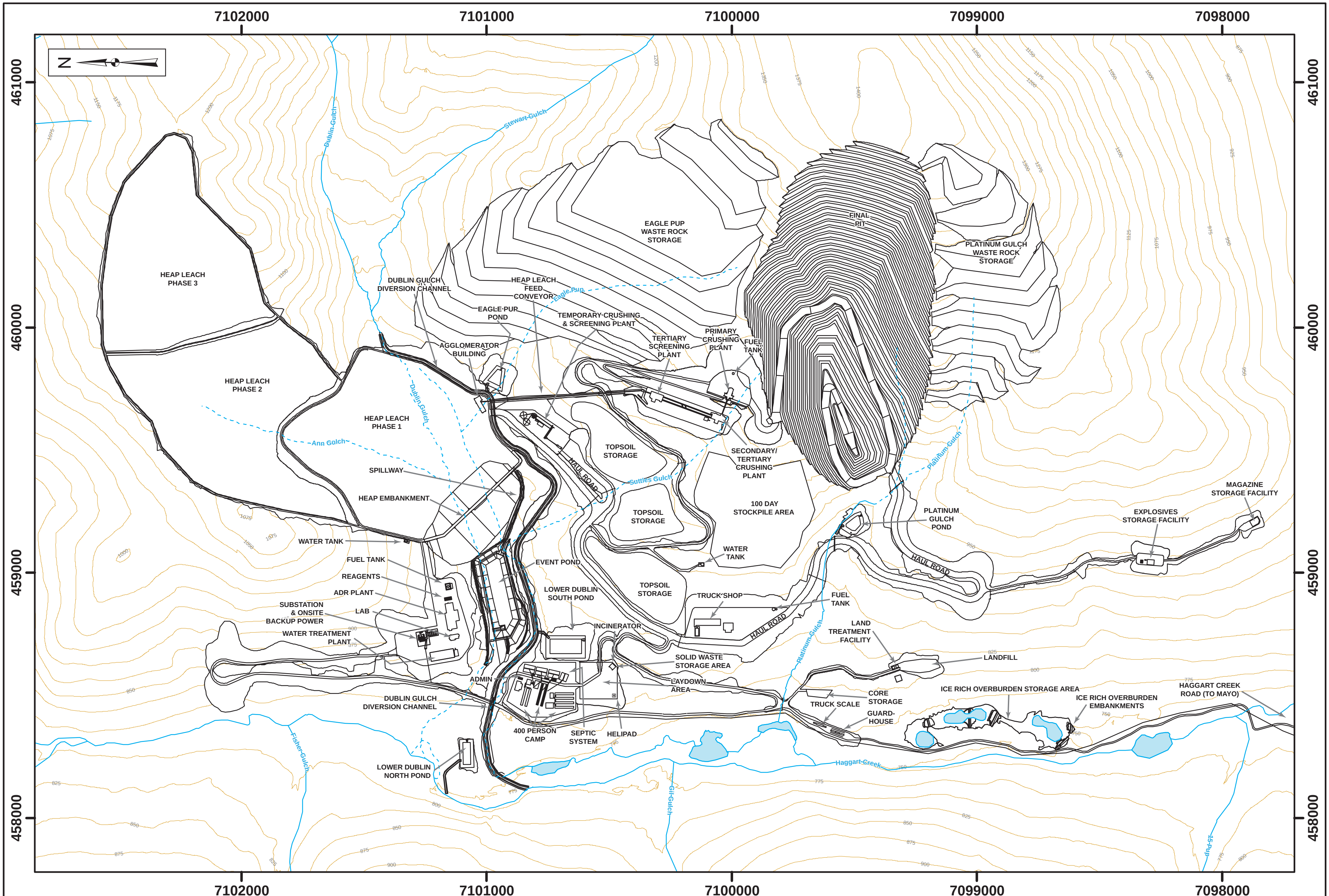


Legend:

Main Process Flow	Equipment Package
Carbon	Future
Intermittent Flow	

StrataGold Corporation

Projection: N/A	Drawn By: SS	EAGLE GOLD PROJECT YUKON TERRITORY
Date: 2014/07/16	Figure: 1.1-1	Process Flowsheet



Legend:

- General Arrangement Infrastructure
- Contour (25m)
- Watercourse
- Watercourse (Diverted)
- Waterbody

StrataGold Corporation

0 125 250 500
Metres
Scale = As Shown

Projection: NAD83 UTM Zone 8N	Drawn By: SS	EAGLE GOLD PROJECT YUKON TERRITORY
Date: 2014/07/16	Figure: 1.2-1	Site General Arrangement

2 DESIGN BASIS AND CRITERIA

2.1 ORE QUANTITIES

2.1.1 Geology Overview

Property Geology

The Property is located on the northern limb of the McQuesten Antiform and is underlain by Proterozoic to Lower Cambrian-age Hyland Group metasediments and the Dublin Gulch intrusion, a granodioritic stock. The stock has been dated at approximately 93 Ma, and is assigned to the Tombstone Plutonic Suite (Figure 2.1-1)

The Hyland Group is comprised of interbedded quartzite and phyllite. The quartzite is variably gritty, micaceous, and massive. The phyllite is composed of muscovitesericite and chlorite. Limestone is a relatively minor constituent of this stratigraphic sequence.

The Dublin Gulch anticline, located midway between Dublin Gulch and Lynx Creek to the south, has folded the metasediments about an axis that trends at an azimuth of 070° and plunges gently to the west-southwest.

The metasediments are the product of greenschist-grade regional metamorphism. Proximal to the Dublin Gulch stock, they have undergone metasomatism and contact metamorphism. A hornfelsic thermal halo surrounds the stock and within the halo, the coarse clastic components of the Hyland Group have been altered to quartzbiotite; the argillaceous components to sericite-biotite-chlorite schist and the carbonates to marble, wollastonite-quartz skarn and pyroxenite skarn. The halo extends from 80 to 200 m outward from the intrusive.

The Dublin Gulch stock is comprised of four phases, the most significant of which is granodiorite. Quartz diorite, quartz monzonite, leucogranite and aplite comprise younger intrusive phases that occur predominantly as dikes and sills and cut both the granodiorite and surrounding country rocks. The stock has intruded the Hyland Group metasediments near their contact with the underlying Upper Schist.

The granodiorite stock is elongate, measuring approximately 5 km in length and trends 070°. It has a maximum width of approximately 2 km. The long axis of the stock is coincident with the axis of the interpreted Dublin Gulch anticline. Sheet-like sills of granodiorite extend from the stock and cut the metasedimentary strata at low angles.

The intrusive-metasediment contact dips shallowly to steeply to the north and northwest on the northern side of the intrusive, and steeply to the north or south along its southern margin. No chilled margin is apparent at the contact.

At least four periods of faulting have been documented in the Dublin Gulch area including low-angle thrusting and bedding-plane faults and normal faults with north, northeast, northwest, and easterly trends. North-trending faults are inferred to have displaced portions of the Dublin Gulch stock and one of these is interpreted to form the eastern boundary of the Eagle Zone.

Deposit Geology

Geologically the deposit can be simplified and described as an intrusive suite, predominantly granodiorite in composition, emplaced within a metasediment package, predominantly phyllitic in nature (Figure 2.1-2 to Figure 2.1-4). The granodiorite has been subdivided into three units, an oxidized unit, an altered unit and an unaltered unit, though geochemical differences in these three units are minimal. Alteration tends to be dominated by albite, potassium feldspar, sericite, carbonate and chlorite and only occurs very locally around veining. While mineralization is associated with the intrusive stock, it is not spatially limited to the intrusive. Gold-bearing veins are found in all of the main geological units including the metasediments.

2.1.2 Ore Zone

Gold occurs primarily as pure gold and in association with very small amounts of metallic bismuth [Bi] and arsenopyrite [FeAsS]. Other vein minerals include pyrite/marcasite [FeS_2] > pyrrhotite [$Fe_{1-x}S$] >> sphalerite [(Zn,Fe)S], chalcopyrite [$CuFeS_2$], galena [PbS], molybdenite [MoS_2] and iron oxides/hydroxides as well as metallic bismuth, Pb-Sb-(Cu,Zn) sulphosalts (e.g. bournonite [$PbCuSbS_3$] and boulangerite [$Pb_5Sb_4S_{11}$]) and tetrahedrite [$Cu_{12}Sb_4S_{13}$].

A range of geologic, economic and geotechnical inputs were used to develop the final open pit design for the Project to maximize value while minimizing potential risk.

2.1.3 Ore Reserves Estimate

A Probable Mineral Reserve is by definition, "…the economically mineable part of an Indicated Mineral Resource demonstrated by at least a Preliminary Feasibility Study (that)…must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified" (CIM 2005). These factors were considered in the Feasibility Study (Tetra Tech 2012) in developing the classification of the Probable Mineral Reserve figures shown in Table 2.1-1. The figures were estimated by selection of an optimum final pit based on the block model data, and they represent that portion of the Indicated Mineral Resource that falls within the optimum final pit. Although the block model included some Inferred Mineral Resource, this portion of the model was not included in the Probable Mineral Reserve and remains classified as waste; Inferred Mineral Resources do not meet the standards required for inclusion in mineral reserves.

A total Probable Mineral Reserve of 91.6 Mt exists inside the final pit. Table 2.1-1 tabulates the reserve by class and ore type.

Table 2.1-1: Mineral Reserves

Resource Class	Reserve Class	Ore Type	Diluted Tonnes (Mt)	Diluted Grade (g/t)	Contained Ounces (oz)
Indicated	Probable	A	32.0	0.875	900,686

Resource Class	Reserve Class	Ore Type	Diluted Tonnes (Mt)	Diluted Grade (g/t)	Contained Ounces (oz)
		B	41.8	0.727	977,692
		C	11.0	0.715	252,724
		E	6.8	0.780	169,667
		Total	**91.6**	**0.781**	**2,300,768**
Inferred	n/a	**Total**	**2.2**	**0.456**	**32,256**

2.1.4 Open Pit Mine Plan

Over the life of the Project, the open pit will be advanced in four major stages, as shown in Figure 2.1-5 through Figure 2.1-8, with an ultimate pit size of approximately 1,420 m long and 780 m wide. The minimum elevation of the pit is 847.5 masl and there will be a maximum crest elevation at approximately 1,409 masl, giving the pit a depth of 562 m along the east highwall. Based on the surface topography, the open pit is scalloped-shaped with a lower west highwall. The west highwall crest elevation is approximately 925 masl, giving the west highwall a height of approximately 77 m. To maintain access to the primary crusher, a single ramp will spiral down to the bottom of the final pit. This ramp will also connect to the external access road that leads to the truck shop. No ramps will be maintained inside the final pit above the crusher elevation to minimize stripping requirements.

During a pre-production period, a total of 4.8 Mt of waste material will be mined and this material will be used to develop haul roads, the HLF embankment and for other construction purposes. Following the pre-production period, ore production will increase to the nominal production rate of 29,500 t/d.

Using the designed phases and cut-off grade strategy, a detailed production schedule was developed. Operational constraints were added to ensure realistic mining sequences with scheduling conducted quarterly for the first two years of production, and then annually. Table 2.1-2 provides a summary of the mine production schedule and mining development phases are shown in Figure 2.1-9 through Figure 2.1-16.

Table 2.1-2: Mine Production Schedule

←Pre-Production		Operations →										
Year	**1**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**Total**
Ore Tonnes (000's)		1,284	9,720	10,607	10,544	10,589	10,634	10,647	10,654	10,302	6,613	**91,594**
Ore Grade		0.890	0.933	0.963	0.889	0.804	0.781	0.785	0.630	0.590	0.581	**0.782**
Contained oz (000's)		37	291	328	301	274	267	269	216	195	123	**2,300**
Expected Recovery		75.7%	74.9%	76.4%	73.3%	73.0%	72.8%	70.6%	70.4%	69.9%	69.1%	**72.8%**
Recovered oz (000's)		28	218	251	221	200	194	190	152	137	85	**1,676**
Ore Mined (000's)		1,284	9,720	10,607	10,544	10,589	10,634	10,647	10,654	10,302	6,613	**91,594**
Waste Mined (000's)	4,805	1,089	17,735	15,214	16,622	17,921	17,841	12,908	12,570	11,767	3,938	**132,410**
Total Mined (000's)	**4,805**	**2,373**	**27,455**	**25,821**	**27,166**	**28,510**	**28,475**	**23,555**	**23,224**	**22,069**	**10,551**	**224,004**

Assuming an average mine production rate of 29,500 t/d of ore for 350 d/a (10.3 Mt/a) over the life of the Project, a cut-off optimized production schedule was produced using Gemcom Whittle™. The estimated mining production schedule with diluted averages is provided in summarized in Table 2.1-3.

Table 2.1-3: Mining Production Schedule

Period Year	Material Mined				Gold				Cut-off ($/t)
	Ore (kt)	Waste (kt)	Total (kt)	SR (t:t)	Grade (g/t)	Contained (oz)	Recovered (oz)	Recovery (%)	
1	10,325	18,029	28,354	1.75	1.058	351,270	265,037	75.5	12.00
2	10,325	23,577	33,902	2.28	0.982	326,040	250,083	76.7	11.00
3	10,325	19,317	29,642	1.87	0.889	295,001	211,931	71.8	11.00
4	10,325	16,921	27,246	1.64	0.797	264,579	192,527	72.8	10.00
5	10,325	14,599	24,924	1.41	0.784	260,322	191,228	73.5	9.00
6	10,325	15,676	26,001	1.52	0.788	261,613	185,939	71.1	9.00
7	10,325	14,984	25,309	1.45	0.603	200,106	139,564	69.7	8.00
8	10,325	15,207	25,532	1.47	0.614	203,770	142,391	69.9	7.00
9	5,539	1,930	7,469	0.35	0.662	117,802	81,238	69.0	6.55
Total	**88,139**	**140,240**	**228,379**	**1.59**	**0.805**	**2,280,503**	**1,659,938**	**72.8**	**-**

2.2 OPEN PIT GEOTECHNICAL ASSESSMENT

2.2.1 Methods to Assess Rock Mass Quality

Geotechnical investigations to support the final open pit design were supported by field work undertaken in 2009, 2010 and 2011 and included geotechnical mapping, geotechnical drilling, oriented core measurements, one borehole televiewer survey, hydrogeologic (packer) testing, installation of borehole instrumentation to measure groundwater pressures and laboratory testing of rock core samples. Thirteen geotechnical diamond drillholes were completed over three field seasons, and approximately 3,320 m of rock core was logged. All core logged for geotechnical purposes was oriented using the Reflex ACE Core Orientation Tool. Historical geotechnical data, as well as outcrop mapping and geotechnical logging of exploration holes, were also used for the open pit design (Appendix A).

Rock core samples were selected from geotechnical drillholes for geomechanical laboratory testing, including uniaxial compressive strength, Brazilian tensile strength, small-scale direct shear, and index tests. Eight of the geotechnical drillholes were instrumented with grouted-in vibrating wire piezometers (VWPs) to measure groundwater elevations in the proposed open pit area. An additional six VWPs were installed in two instrument nests installed specifically for hydrogeological characterization of the rock mass.

Geotechnical assessments for the pit included rock mass characterization, structural geology interpretations, and slope stability analyses (Appendix A). The rock mass of the Project pit area was divided into six geotechnical units, following the main geological units and weathering/alterations patterns, as follows:

- fault zones
- surface weathered intrusives
- clay altered intrusives
- intrusives
- surface weathered metasediments
- metasediments.

2.2.2 Rock Mass Quality

The unweathered/unaltered rocks, which make up the majority of the rock mass in the open pit, are medium strong to very strong; the quality of the rock mass varies from “fair” to “good”. The surface weathered rocks are medium strong to very strong; the quality of the rock mass varies from “poor” to “good”. The clay altered intrusive rocks are weak to very strong; the rock mass quality varies from “poor” to “fair”. The metasedimentary rocks are strongly foliated with the foliation dipping on average approximately 30° to the west-southwest. For the purpose of design, the intrusive rocks were grouped together and the metasedimentary rocks have been grouped together, as the primary control on the stability of the pit slopes is structural discontinuity orientation, which is consistent within the primary rock type.

Geomechanical design parameters were estimated for each geotechnical unit from core logging, point load testing and laboratory testing results. These parameters include: intact rock strength, discontinuity frequency/spacing (RQD and fracture intercept), blockiness index (indicates block size), and the average condition of each discontinuity surface (JC). Table 2.2-1 summarizes the upper, lower and median (design) values of the various geomechanical properties of the geotechnical units used to estimate the rock mass ratings.

Table 2.2-1: Rock Mass Properties

Geotechnical Unit[1]	Length Obsd (m)	Case	RQD (%)	FI (m)	Blockiness Index	Intact Strength				Joint Condition (’76)	RMR’76	
						Is50[2] (MPa)	UCS[2] (MPa)	Description	Rating		Rating	Descrip
Fault Zones FLTZ	120	Lower Quartile	0	0.02	9	0.3	7	Weak	2	0	21	Poor
		Median	**14**	**0.05**	**12**	**0.4**	**9**	**Weak**	**2**	**0**	**23**	**Poor**
		Upper Quartile	36	0.12	17	0.7	16	Weak	2	6	35	Poor
Surface Weathered Intrusives SINT	277	Lower Quartile	12	0.05	11	2.3	53	Strong	6	9	36	Poor
		Median	**32**	**0.10**	**16**	**5.9**	**135**	**Very strong**	**12**	**12**	**49**	**Fair**

Geotechnical Unit[1]	Length Obsd (m)	Case	RQD (%)	FI (m)	Blockiness Index	Intact Strength				Joint Condition ('76)	RMR'76	
						Is50[2] (MPa)	UCS[2] (MPa)	Description	Rating		Rating	Descrip
		Upper Quartile	59	0.17	23	9.3	214	Very strong	15	14	61	Good
Clay Altered Intrusives CINT	450	Lower Quartile	24	0.08	14	0.6	14	Weak	2	6	32	Poor
		Median	**46**	**0.11**	**19**	**2.2**	**51**	**Strong**	**6**	**12**	**47**	**Fair**
		Upper Quartile	72	0.21	25	4.7	108	Very strong	10	14	59	Fair
Intrusives INT	1451	Lower Quartile	40	0.12	17	2.5	57	Strong	6	6	39	Poor
		Median	**73**	**0.20**	**25**	**5.9**	**135**	**Very strong**	**12**	**12**	**59**	**Fair**
		Upper Quartile	90	0.35	33	9.3	213	Very strong	15	16	74	Good
Surface Weathered Metasediments SSED	422	Lower Quartile	16	0.05	12	1.4	34	Medium Strong	4	6	32	Poor
		Median	**36**	**0.09**	**16**	**3.1**	**76**	**Strong**	**8**	**7**	**41**	**Fair**
		Upper Quartile	60	0.14	21	4.4	106	Very strong	10	12	53	Fair
Metasediments SED	940	Lower Quartile	42	0.09	17	1.9	45	Medium Strong	5	12	44	Fair
		Median	**64**	**0.14**	**22**	**3.5**	**83**	**Strong**	**8**	**15**	**55**	**Fair**
		Upper Quartile	82	0.22	28	6.0	143	Very strong	12	18	68	Good

NOTES:
1. INT unit includes unaltered and clay altered intrusives. CINT is a subset of INT that was not used specifically for design.
2. Is50 and UCS values of INT were applied to the SINT, as relatively few (69) point load tests were conducted for SINT and these were biased towards more competent pieces of core in the SINT unit.
3. Groundwater rating of 10 has been assumed in all cases to estimate the RMR'76 value.
4. RQD – rock quality designation, FI – fracture intercept, Is_{50} – point load test data, UCS – uniaxial compressive strength, RMR'76 – rock mass rating system published in 1976 by Bieniawski
5. Source: BGC (2012d). Eagle Gold Project, Feasibility Study Open Pit Slope Design

The median value of each geomechanical parameter for each geotechnical unit has been used for design. For intact rock strength estimation, Is_{50} is considered to have greater precision and accuracy than field estimates or laboratory UCS tests. Therefore, Is_{50} values have been used to estimate the design UCS of each geotechnical unit using the following intact strength correlation factors:

- Metasedimentary Rocks: UCS = 17 x DTS, UCS = 24 x Is_{50}
- Intrusive Rocks UCS = 20 x DTS, UCS = 23 x Is_{50}

Design uniaxial compressive strengths for each geotechnical unit and sub-unit were then estimated from the point load Is_{50} values.

2.2.3 Point Load Strength Index

Field point load testing of the core, packer testing of the rock mass, and piezometer installations were carried out at the site during drilling. A laboratory testing program to support core logging information and improve the estimates of rock mass properties in the Project area was also conducted on rock core samples collected following the site investigation program.

Point load testing was completed as described in Appendix A at the site using a RocTest PIL7 point load testing machine. Point load testing results are provided on the geotechnical logs in Appendix A of Appendix A and were used to estimate rock mass strength ratings.

Point load testing provides an index value (Is_{50}) that can be used to predict uniaxial compressive strength, where site specific correlation factors have been estimated through laboratory testing. Diametral (i.e. perpendicular to core axis) point load testing was conducted on rock samples from all core holes during the 2009, 2010 and 2011 drilling programs. Test locations were selected based on suitability of the core for testing and whether they provided representative point load values for each geotechnical unit. Testing standards described in the 'Standard Test Method for Determination of the Point Load Strength Index and Application to Rock Strength Classifications' (ASTM D5731 - 08) were used.

Point load results are plotted on Drawing 12 of Appendix A. Average Is_{50} values are summarized in Table 2.2-2. There is general consistency between the point load index strengths and field grade strengths estimated during core logging, however, the Is_{50} strength estimates have a higher degree of precision than the field estimations and have therefore been used to estimate in-situ rock strength properties for design.

Table 2.2-2: Intact Rock Properties

Geotechnical Unit	Average Lab UCS[1] (MPa)	Median Is_{50} (MPa)	k^2	Design UCS [2,3] (MPa)	Y (KN/m^3)	BTS (MPa)	DTS (MPa)	m_i
FLTZ		0.4	23	9	27.0			15
SINT		5.9	23	135	26.4			20
CINT		2.2	23	51	26.4			15
INT	141	5.9	23	135	26.4	12.1	7.1	20
SSED		3.1	24	76	27.3			17
SED	85	3.5	24	83	27.3	10.6	6.3	17

NOTES:
1. Insufficient laboratory testing was available to warrant breaking out the sub-units of the intrusive and metasedimentary units. As a result, the results shown include all tests in the primary rock units.
2. Is50 values are based on field index testing. Design UCS values for each unit are derived from k values according to UCS results in Drawing 13.
3. Is50 and UCS values of unaltered intrusive (INT) were applied to the surface weathered intrusives (SINT). Point load testing in SINT unit was based on relatively few tests (69) which were likely biased toward remaining corestones, estimating a higher than reasonable UCS value.
4. UCS – uniaxial compressive strength, Is50 - , k - , Y - , BTS - , DTS - , m -
5. Source: BGC (2012)

2.2.4 Slope Design Criteria

Open pit slopes can be divided into three scales: bench scale, interberm / interramp scale, and overall scale. Open pit geotechnical and regulatory constraints that have been considered in developing the slope design criteria are specified in Table 2.2-3. The stability of each scale is considered in developing the overall slope geometry, which is achieved by specifying the dimensions of bench face angles, catch bench widths, locations of ramps, and the frequency and width of geotechnical / dewatering berms (Drawing 19 in Appendix A). Design criteria recommended are proposed to reduce the likelihood of pit slope failures which could result in injuries, lost production time, and the loss of access to resources.

Table 2.2-3: Design Constraints

Requirement	Value	Source
Design factor of safety (FOS) - Discontinuity controlled stability	1.2	BGC
Design factor of safety (FOS) - Rock mass controlled stability	1.3	BGC
Single bench height	7.5 m	Pit Optimization Study
Minimum catch bench width	8 m	BC Mines Act 6.23.2
Minimum interberm / interramp height	150 m	BGC
Minimum geotechnical berm width	16 m	BGC
Ramp width	24 m	Pit Optimization Study

Source – Appendix A (BGC 2012)

Potential bench scale instability could be controlled by both small and large scale discontinuities, as well as blasting / excavation practices. Interberm / interramp and overall slope stability are controlled by major geological discontinuities, persistent rock mass fabric (e.g. foliation), rock mass quality, and pore water pressures.

2.2.5 Overall Slope Scale and Factors of Safety

Open pit slope design criteria (Table 2.2-4) were used to develop an economic pit shell that was used as a guide for the ultimate pit, which includes benches, ramps, and geotechnical / dewatering berms; all of the slopes of the ultimate pit satisfy the slope design geometry parameters summarized in Table 2.2-3 and 2.2-4. Maximum interberm/interramp angles for all slopes range from 31 to 43° (Table 2.2-4).

Limit equilibrium method of slices stability analyses were conducted for six sections through the slopes of the proposed ultimate pit (Drawing D1 of Appendix A), to confirm that the design factor of safety (Table 2.2-3) for overall slope stability was met. A 3D geological model developed by StrataGold was used to define the material boundaries for the stability analysis.

Estimates of pore pressure distributions for each slope stability analysis section assume that 250 m long horizontal drain holes have been installed throughout the pit and that they would effectively depressurize the rock mass behind the slope face to a distance of half of the length of the drainhole. Drawings D2 to D7 of Appendix A show the results of each limit equilibrium analysis and present the calculated factor of safety (FS) of the overall slope along each cross-section.

The FS values for the six representative cross sections used in the limit equilibrium slope stability analyses are summarized in Table 2.2-5. The east slope of the ultimate pit (cross sections C and D of Appendix A) is the highest wall currently proposed in the open pit; the proposed strike of this slope is parallel to the strike of a pervasive west dipping fault set and foliation. To simulate these structural fabrics in the slope stability analysis for these sections (Drawings D4 and D5 in Appendix A) an anisotropic weakness was included in the metasediments which applies a friction angle of 30° to any potential failure surface segments with dip angles of 31° to 37°.

Table 2.2-4: Open Pit Slope Design Parameters

Domain [1]	Design Sector [2]	Slope Azimuth		Recommended Catch Bench Geometry			Modified Catch Bench Geometry [3]			Inteberm Geometry [4]		Overall Slope Geometry		Slope Design Control	Comments
		Start (°)	End (°)	Height (m)	Angle (°)	Width (m)	Height (m)	Angle (°)	Width (m)	Height (m)	Angle (°)	Height (m)	Angle (°)		
M	M-016	0	32	15	65	10.1	15	60	8.4	150	41	90	44	Interberm (FB1-FF1)	-
	M-061	32	89	15	65	17.9	15	60	16.2	150	31	240	32	Interberm (FB1-FF1)	-
	M-105	89	120	15	65	16.9	15	60	15.3	150	32	270	33	Interberm (FB1)	-
	M-132	120	144	15	60	9.0	15	60	9.0	150	40	270	41	Interberm (bench Geometry)	Bench face angle limited by dip of fault set FB2
	M-160	144	175	15	60	9.0	15	60	9.0	150	40	225	41	Interberm (bench Geometry)	Bench face angle limited by dip of fault set FB2
	M-192	175	209	15	65	9.0	15	60	7.3	150	43	225	43	Interberm(bench Geometry)	-
	M-239	209	269	15	63	9.0	15	60	8.0	150	42	75	45	Interberm(bench Geometry)	Bench face angle lilmited by dip of fault set FC1
	M-315	269	0	15	65	9.0	15	60	7.3	150	43	75	47	Interberm(bench Geometry)	No structural control
I	I-016	5	26	15	65	11.4	15	60	9.7	150	36	210	40	Interberm (FD1-FA2)	-
	I-056	26	86	15	65	14.3	15	60	12.7	150	35	210	36	Interberm (FD1-FA2)	-
	I-110	86	134	15	65	15.2	15	60	13.5	150	34	150	36	Interberm (FA1-FB1)	-
	I-170	134	205	15	65	17.9	15	60	16.2	150	31	285	32	Interberm (FB1-FC2)	-
	I-243	205	280	15	65	11.4	15	60	9.7	150	39	105	42	Interberm (FD2-FC2)	-
	I-295	280	310	15	65	9.0	15	60	7.3	150	43	75	47	Interberm (bench Geometry	-
	I-338	310	5	15	65	9.0	15	60	7.3	150	43	180	43	Interberm (bench Geometry	-

[1] Domain M refers to all metasedimentary rocks, Domain I refers to all intrusive rocks.
[2] Bench face angle in sector's M-132 and M-160 reduced to avoid undercutting fault set FB2.
[3] In the modified case, all bench face angles have been reduced to 60º and bench widths adjusted to maintain the recommended interberm angle to accommodate the pit design software. Actual pit geometry shall resemble actual catch bench geometry.
[4] Geotechnical berms (minimum 16 m) must be added to the slopes every 150 m in sectors in which bench width is less than 16 m

The results of the limit-equilibrium method-of-slices analysis confirm that the overall slope stability criteria are met for the assumed pore pressure conditions from the installation of 250 m horizontal drainholes (Drawings D2 to D7 in Appendix A). These analyses indicate that depressurization requirements will be driven by the bench scale of the pit. Numerical groundwater modeling results (BGC 2014) indicate that complete depressurization must be attained for a setback of approximately 125 m from the excavated bench face to achieve sufficient stability. Due to the low hydraulic conductivity of the rock mass, except in a few locations where fracture flow is dominant, pumping wells are not likely to provide a practical or economically efficient means of depressurizing the open pit slopes. Therefore, a series of horizontal drains along various bench faces will be used for depressurization to maintain stability of the pit walls. The number and location of the horizontal drains will be adapted in the field to match conditions in the pit as it is excavated. Where the interberm angle is controlled by kinematically possible wedges and planar failures, these features must be completely depressurized to meet the design criteria.

Table 2.2-5: Open Pit Cross Section Factors of Safety Associated with Slope Stability Analyses

Cross Section	Cross Section Location and Direction	Factor of Safety
A	North highwall to south highwall across shortest section of open pit	2.2
B	North highwall to south southeast highwall	2.1
C	East northeast to east southeast up southeast highwall	1.3
D	East to west up east highwall across longest section of open pit	1.3
E	Southwest to northeast up northeast highwall (1)	1.9
F	Southwest to northeast up northeast highwall (2)	1.9

2.2.6 Seismic Design Events

A seismic hazard analysis (SHA) was conducted for the Project site (Appendix C in Tetra Tech 2014a). The SHA establishes results from both deterministic and probabilistic methods. Deterministic analyses were performed using five equally weighted attenuation relationships to evaluate seismic hazards for the Property resulting from a maximum credible earthquake (MCE). A MCE, by definition, has no specific recurrence interval and is the largest reasonably conceivable earthquake that appears possible along a recognized fault or within a geographically defined tectonic province, under the presently known or presumed tectonic framework. Theoretically, no ground motion should occur which exceeds that of the MCE. A deterministic analysis therefore allows for a more conservative approach to the determination of risks associated with identified seismic hazards.

Data published by NRCan were used in the probabilistic analysis to estimate the probability of exceedance of peak ground accelerations (PGA) at the site for various return periods.

Considering the level of conservatism inherent in a deterministic analysis, and the added conservatism discussed in the SHA, Tetra Tech recommends a design PGA of 0.27 g for high hazard facilities, based on an MCE of moment magnitude 7.0 generated in the Ogilvie Mountains area. This PGA is anticipated to reflect the current tectonic environment with greater accuracy than a low probability value based on the very short historic seismic record available, such as a 5,000-year event would produce. For facilities requiring a PGA based on a return period of 1,000 years or less, the mean National Building Code of Canada (NBCC) values provided in Table 2.2-6 may be used.

Table 2.2-6: Probabilistic Ground Motions for the Project Site

Probability of Exceedance in 50 Years (%)	Approximate Equivalent Return Period (a)	Median Peak Ground Acceleration (g)
10	475	0.14
5	975	0.18
2	2,475	0.25

Note: *NRCan 2005 NBCC Seismic Hazard Interpolation

While the SHA applies generally to the Project Site, no specific seismic stability analysis was carried out for the open pit. Most of the proposed overall slopes have relatively high safety factors, as they are controlled by bench geometry (i.e., bench height and minimum berm width dictate the interramp and overall slopes). Bench heights greater than 15 m (i.e., no triple benching) were not considered in the design. This conservative approach limits the interramp slope angle in many of the design sectors, so that the pit wall angles are not fully optimized. As a result, the FOS of the overall slopes ranges from 1.3 to > 2 (Table 2.2-5). Since pit walls would normally be designed for a FS of 1.0 to 1.1 under seismic loading, it is unlikely that the seismic design event for this area would result in a FS below 1.0. Thus, a seismic stability assessment specifically for the open pit is not warranted.

2.3 GEOTECHNICAL ASSESSMENT FOR MINE INFRASTRUCTURE

Geotechnical site investigation programs were undertaken in 2009, 2010, 2011 and 2012 to investigate subsurface conditions at selected mine facilities and support the design basis and criteria for Project site infrastructure including the crushers, truck shop, process and mine water treatment plant, temporary ore stockpile, and the Dublin Gulch Diversion Channel (BGC2010, 2011a, 2012a and 2012b). Field work included geotechnical outcrop mapping, geotechnical drilling, oriented core measurements, plate load testing, installation of borehole instrumentation to measure groundwater pressures and ground temperature and laboratory testing of rock core samples. Detailed boring and test pit logs for the sub surface conditions at the minesite infrastructure locations are found in BGC 2010, 2011a, 2011b, 2012a, 2012b and 2012c.

2.3.1 Site Grading Cuts

Slope geometry for cut slopes associated with site facilities are provided in Table 2.3-1 and specific slope material are provided in Table 2.3-2.

Table 2.3-1: Permanent Cut Slope Angles – By Facility

Area	Overburden		Slope Below Overburden		Notes
	Thickness (m)	Steepest Cut Angle	Material	Steepest Cut Angle[1]	
Crushers	2 - 4	2.5H:1V	Type 1, 2, 3 rock	1.75H:1V	Design FS = 1.5; maximum slope height ~107 m; slope angle controlled by dip of foliation at about 30 to 32 degrees; benched slopes to be used where feasible; 8 m maximum bench height; 13 m minimum bench width; 0.25H:1V bench face angle.
Temporary Ore Stockpile	3 - 4	2.5H:1V	Type 2, 3 rock	1.75H:1V	[2]Design FS = 1.5; slope angle controlled by dip of foliation at about 30 to 32 degrees; minimum distance of 80 to 100 m required between slope crest and toe of haul road/crusher platform fill slopes. Benched slope design as detailed above for primary crusher.
Truck Shop	5 - 8	2.5H:1V	Type 3 rock	1.75H:1V	Design FS = 1.5; maximum slope height = ~22 m; slope angle controlled by dip of foliation. Recommend 5 m wide bench at rock-overburden contact for slope maintenance.
Process Plant and Mine Water Treatment Plant Site	3 - 7	2.5H:1V	Highly to completely weathered rock	2H:1V	Design FS = 1.5; maximum slope height ~35 m; assume a 5 m wide bench at rock-overburden contact for slope maintenance.
Dublin Gulch Diversion Channel	2 - 5	2.5H:1V	Till	2H:1V[3]	Design FS = 1.5; maximum slope height ~28 m; maximum cut angle assumes that the cut slope is dry.

Notes: [1]Maximum overall slope angle in the slope materials below the overburden depth. Overall slope angle defined by the line that connects the toe of the slope with the slope crest at the rock-overburden contact.

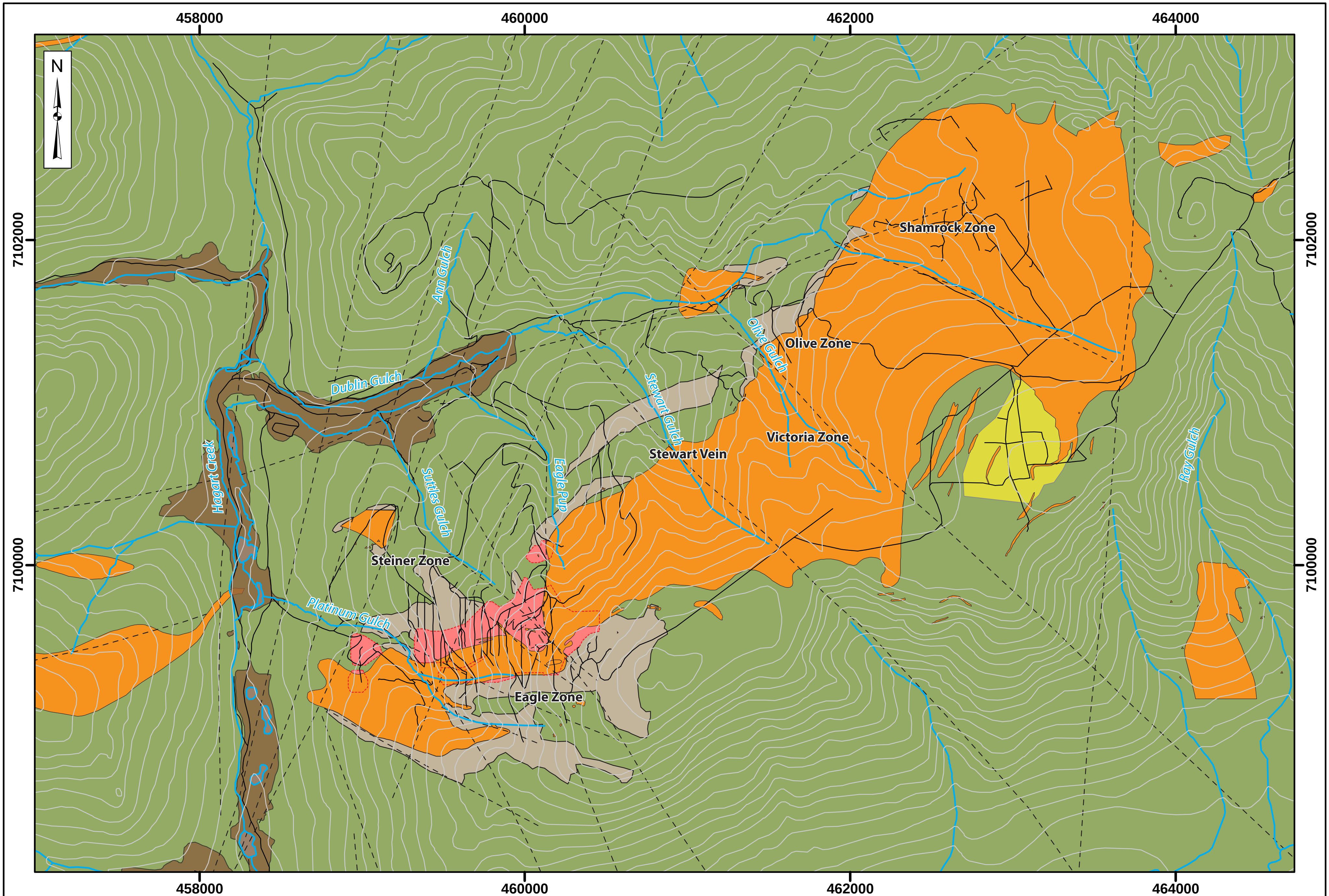
[2]The FS for the upper cuts associated with the temporary ore stockpile is 1.5 due to its proximity to the crushers and potential to undermine them in case of failure. FS = 1.3 is to be used when the cut (on any lower cuts) is moved 80 to 100 m further from the crushers, however, the overall slope angle will still be controlled by the dip of the foliation and cannot be steepened significantly.

[3]Assumes groundwater level is greater than 6 m below existing ground surface.

Table 2.3-2: Permanent Cut Slope Angles – By Lithology

Slope Material	Maximum Cut Slope Angle[1]	Maximum Cut Slope Height	Notes
Colluvium	2.5H:1V	10 m	-
Till	2H:1V	10 m	-
Highly to completely weathered rock (excavatable)	2H:1V	10 m	-
Type 3 rock (generally excavatable)	1.5H:1V	10 m	May have to decrease to as flat as 1.75H:1V to avoid undercutting adverse geologic structure, if it is encountered
Type 2 rock (generally rippable)	1H:1V	10 m	May have to decrease to as flat as 1.75H:1V to avoid undercutting adverse geologic structure, if it is encountered
Type 1 rock (may require blasting)	0.5H:1V	10 m	May have to decrease to as flat as 1.75H:1V to avoid undercutting adverse geologic structure, if it is encountered

Note: [1]Maximum cut slope angles assume the slope is < 10 m high, unsaturated, and without adverse geologic structure.



Legend:

Granodiorite	Wolf Tungsten Deposit
Eagle Deposit	Hyland Group Metasediments
Placer Workings	Hornfelsed Sediments

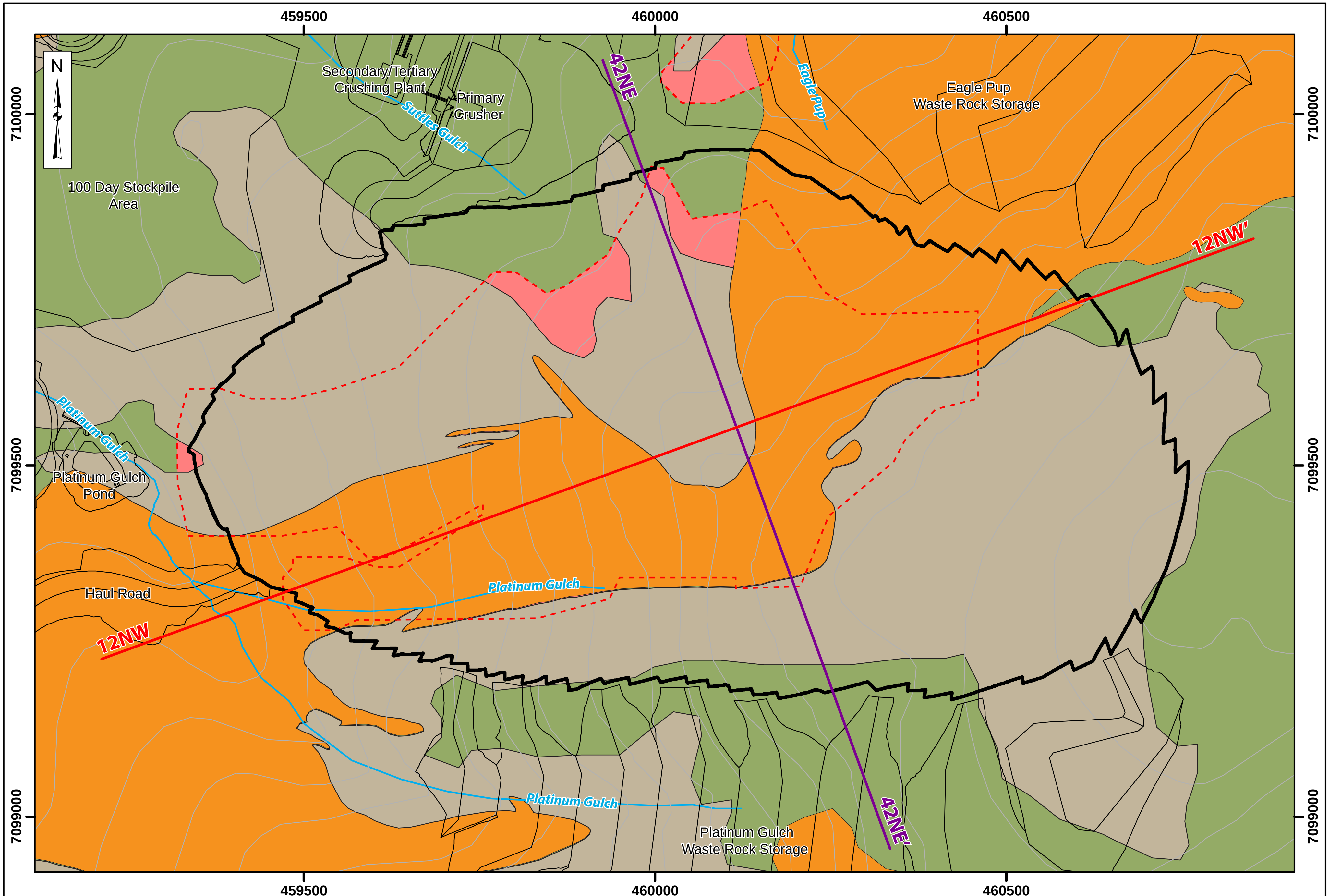
Contour (100ft Interval)

Interpreted Geologic Fault

StrataGold Corporation

0 0.5 1
Kilometres
Scale = As Shown

Projection:	Drawn By:	EAGLE GOLD PROJECT YUKON TERRITORY
NAD83 UTM Zone 8N	SS	
Date: 2014/07/16	Figure: 2.1-1	Property Geology



Legend:

Granodiorite	Eagle Deposit	Open Pit
Hornfelsed Sediments	Section Line 12NW (Looking North)	General Arrangement Infrastructure
Hyland Group Metasediments	Section Line 42NE (Looking East)	Watercourse
		Contour (100ft Interval)

StrataGold Corporation

0 100 200
Metres
Scale = As Shown

Projection: NAD83 UTM Zone 8N

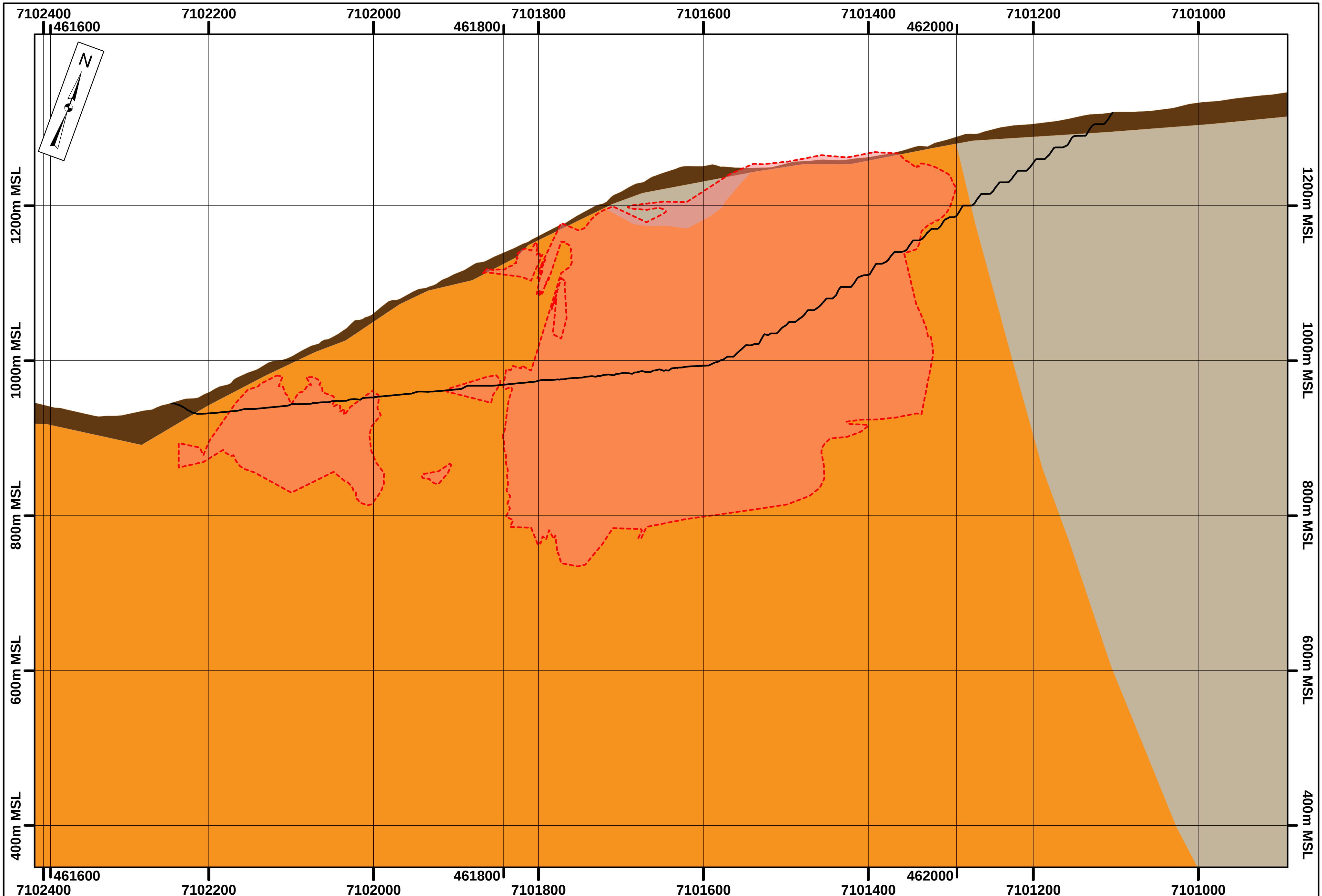
Drawn By: SS

Date: 2014/07/16

Figure: 2.1-2

EAGLE GOLD PROJECT
YUKON TERRITORY

Deposit Geology



Legend:

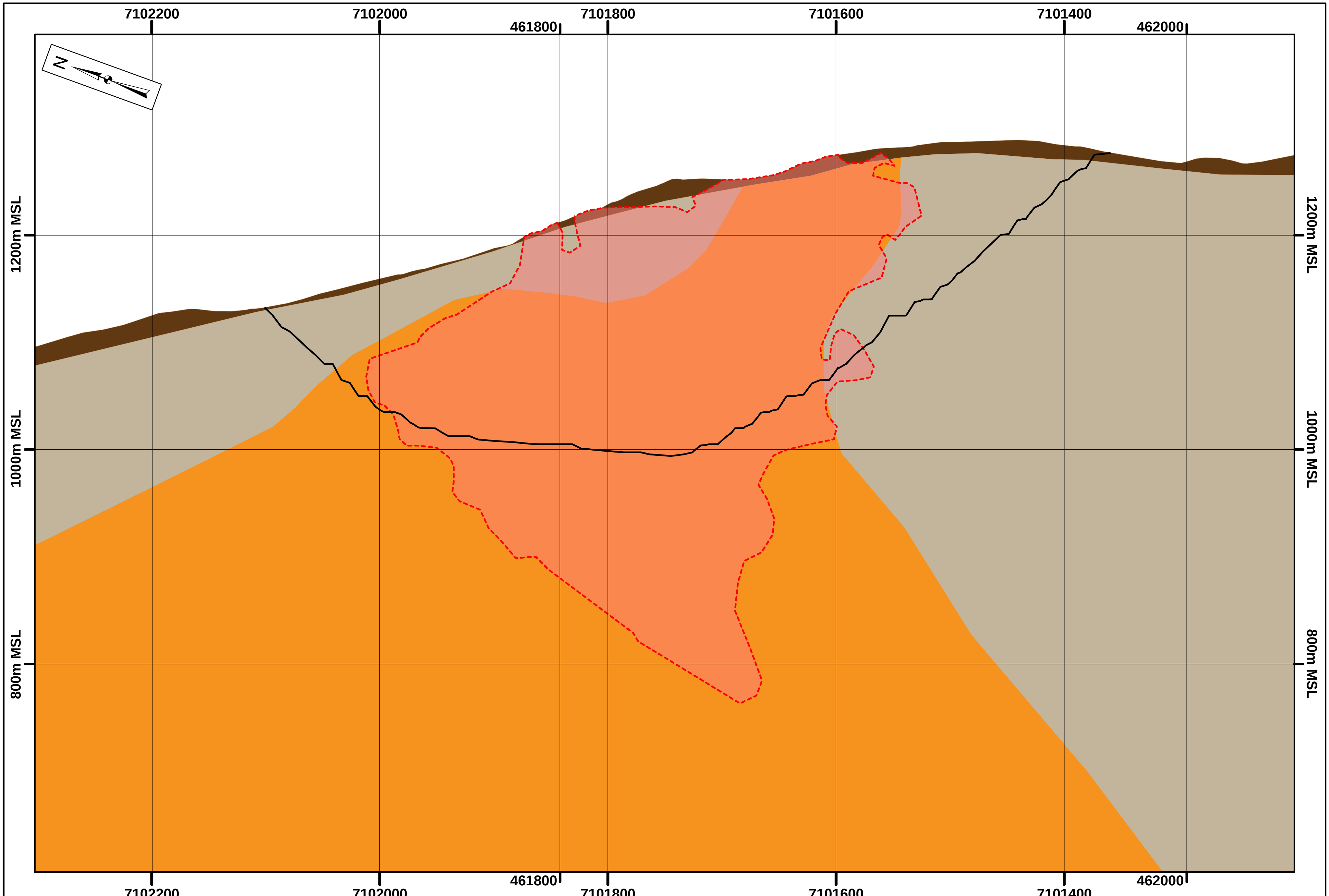
- Granodiorite
- Eagle Deposit
- Hornfels Sediments
- Overburden
- Open Pit

*MSL = Mean Sea Level

StrataGold Corporation

0 100 200 Metres
Scale = As Shown

Projection: NAD83 UTM Zone 8N	Drawn By: SS	EAGLE GOLD PROJECT YUKON TERRITORY
Date: 2014/07/16	Figure: 2.1-3	Deposit Section 12NW (Looking North - 25m Window)



Legend:

Granodiorite

Eagle Deposit

Hornfels Sediments

Overburden

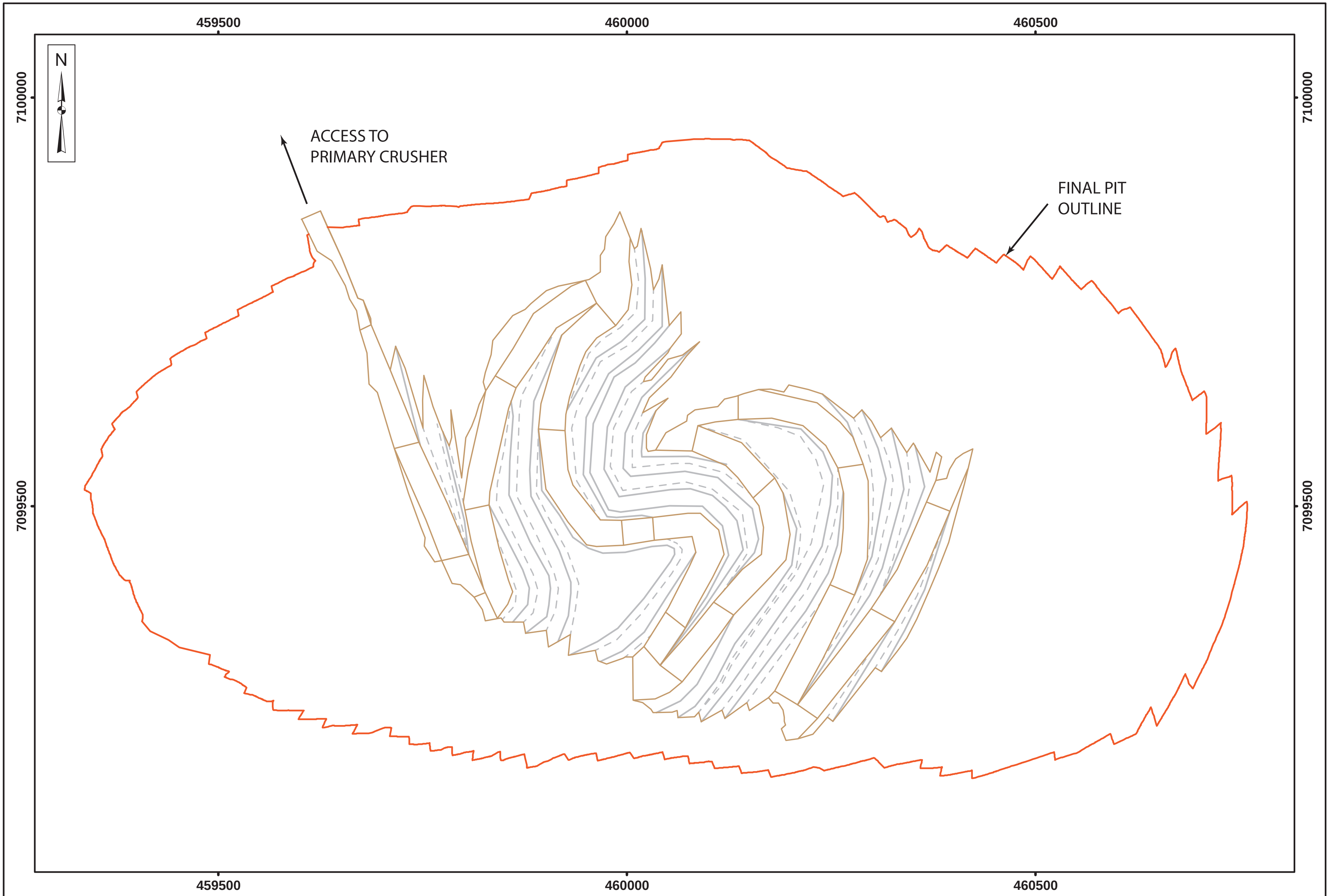
Open Pit

*MSL = Mean Sea Level

StrataGold Corporation

0 50 100
Metres
Scale = As Shown

Projection:	Drawn By:	
NAD83 UTM Zone 8N	SS	**EAGLE GOLD PROJECT YUKON TERRITORY**
Date: 2014/07/16	Figure: 2.1-4	**Deposit Section 42NE** **(Looking East - 25m Window)**



Legend:

Pit Outline

Bench

Road

StrataGold Corporation

0 100 200
Metres
Scale = As Shown

Projection: NAD83 UTM Zone 8N

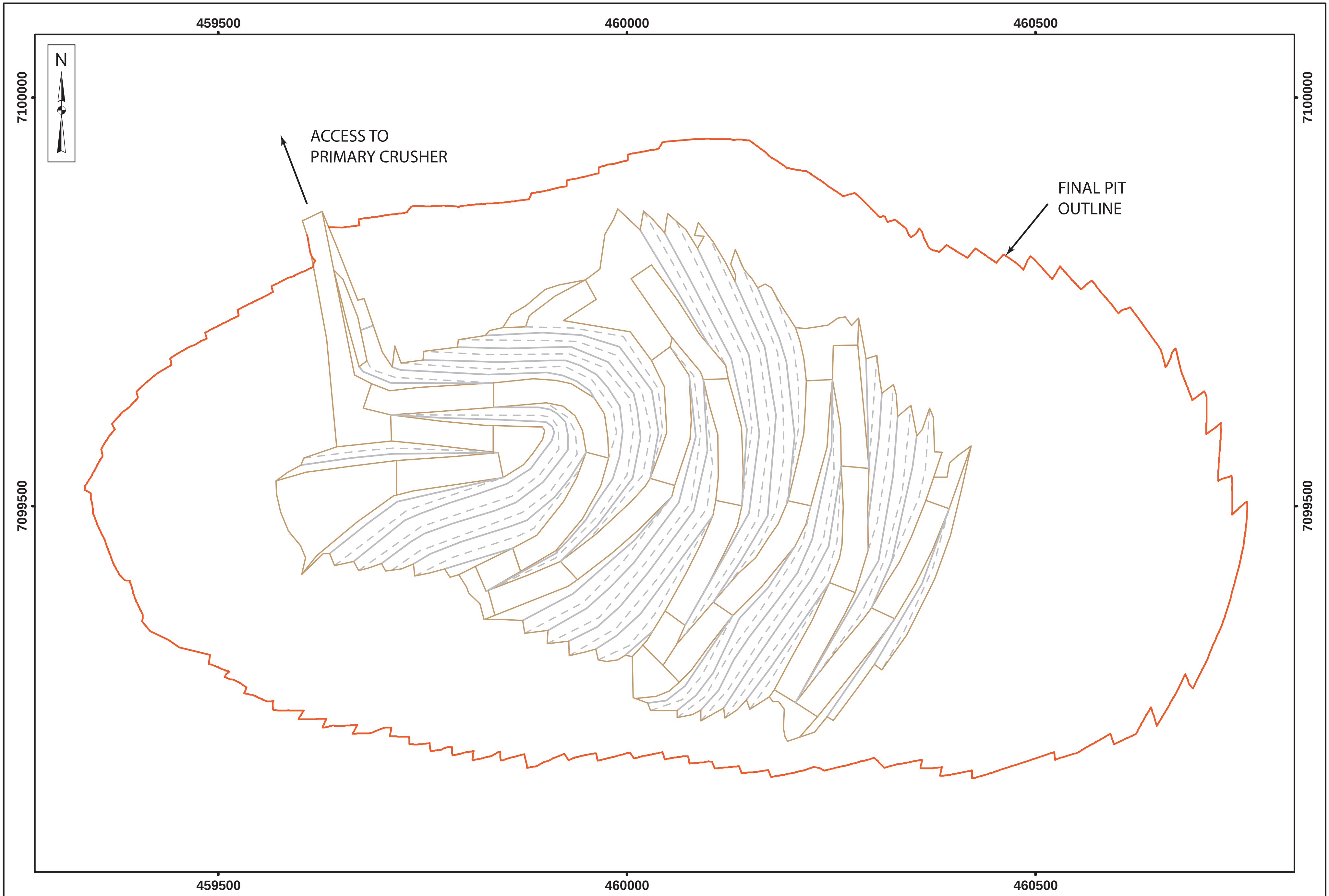
Drawn By: SS

Date: 2014/07/16

Figure: 2.1-5

EAGLE GOLD PROJECT
YUKON TERRITORY

Civil Mining Pushback
1 of 4



Legend:

Pit Outline

Bench

Road

StrataGold Corporation

0 100 200
Metres
Scale = As Shown

Projection: NAD83 UTM Zone 8N

Drawn By: SS

Date: 2014/07/16

Figure: 2.1-6

EAGLE GOLD PROJECT
YUKON TERRITORY

Civil Mining Pushback
2 of 4

Legend:

Pit Outline

Bench

Road

StrataGold Corporation

0 100 200
Metres
Scale = As Shown

Projection: NAD83 UTM Zone 8N

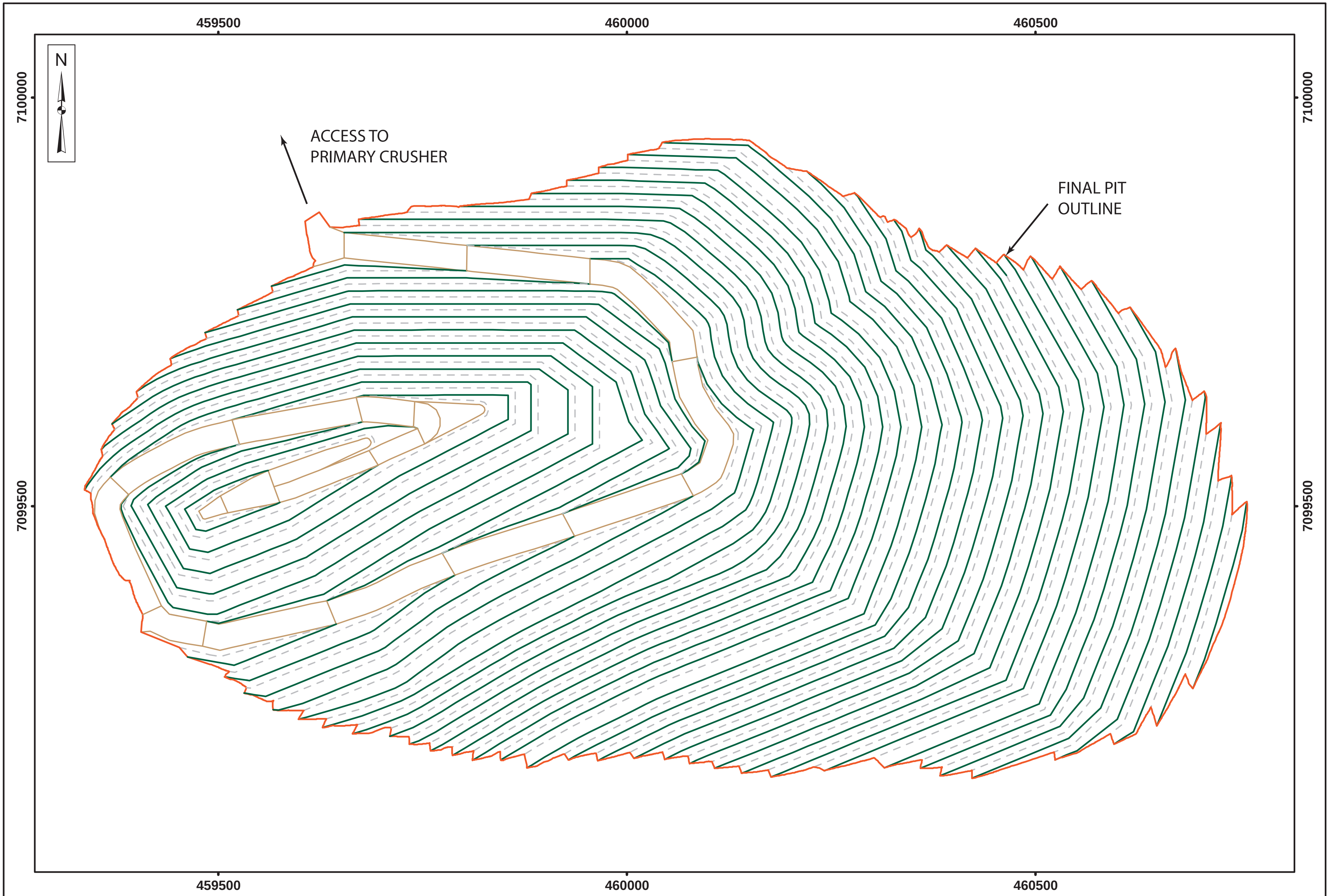
Drawn By: SS

Date: 2014/07/16

Figure: 2.1-7

EAGLE GOLD PROJECT
YUKON TERRITORY

Civil Mining Pushback
3 of 4



Legend:

Pit Outline

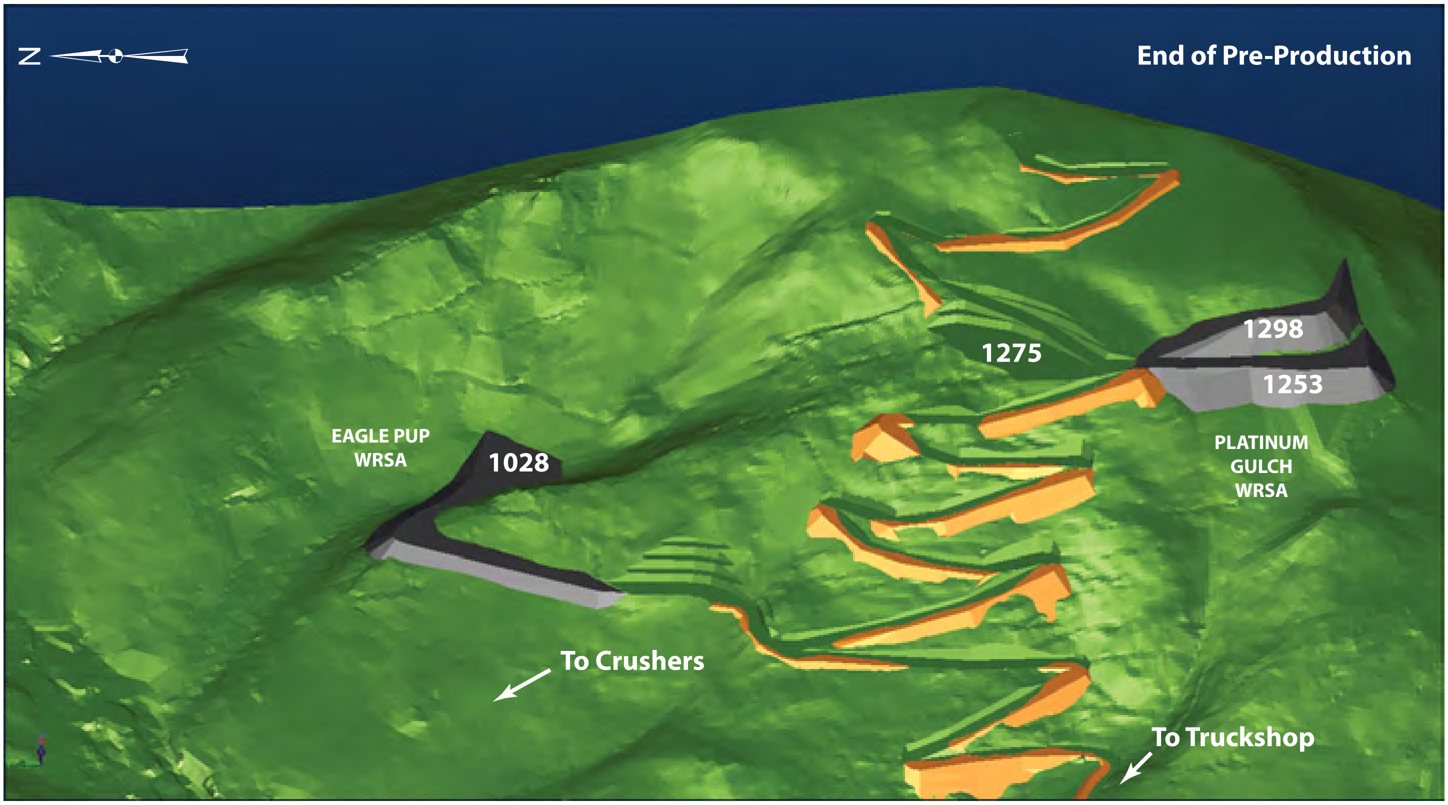
Bench

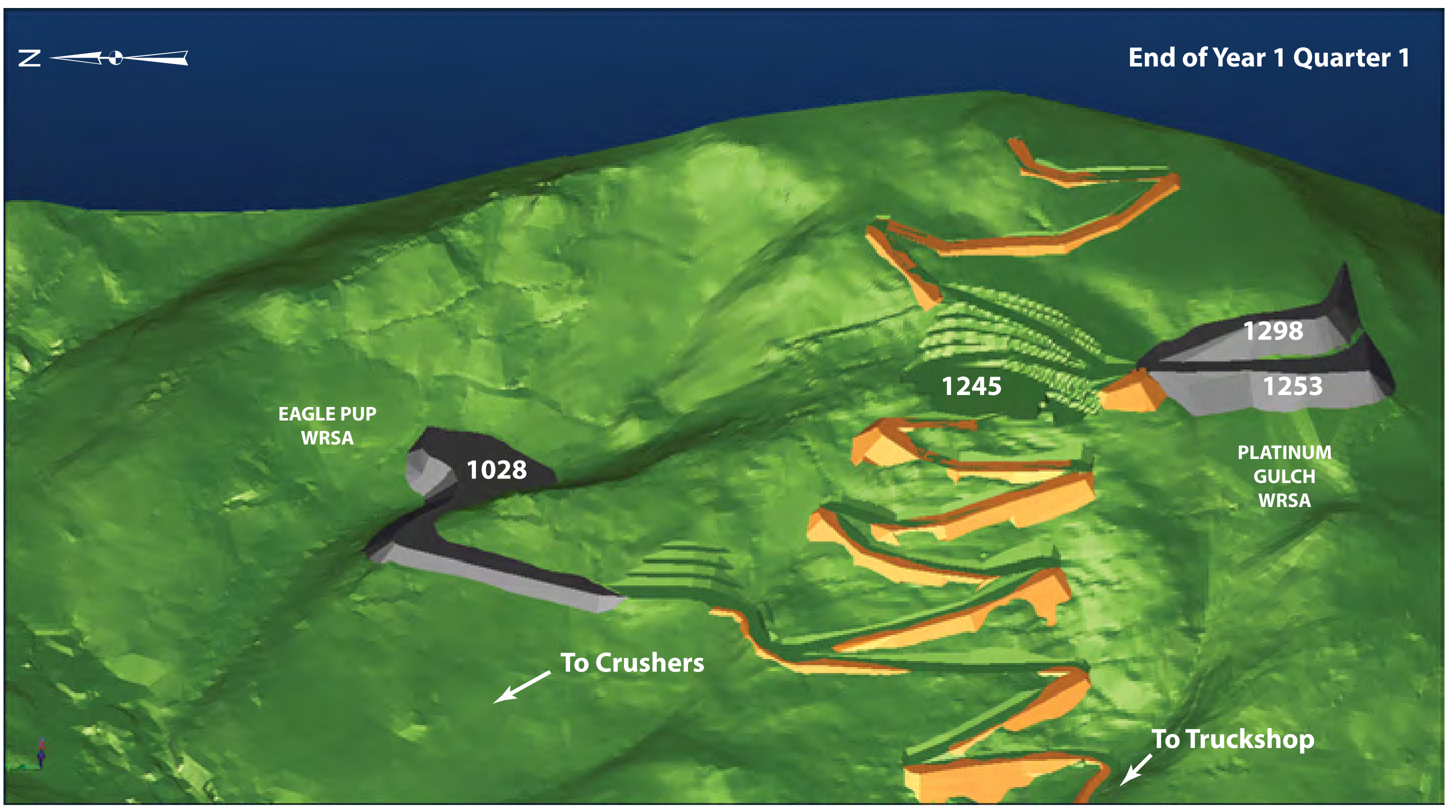
Road

StrataGold Corporation

0 100 200
Metres
Scale = As Shown

Projection: NAD83 UTM Zone 8N	Drawn By: SS	**EAGLE GOLD PROJECT YUKON TERRITORY**
Date: 2014/07/16	Figure: 2.1-8	**Civil Mining Pushback 4 of 4**





Legend:

- Topo/Pit/Road Cuts
- WRSA's/Road Fill
- Road Fill

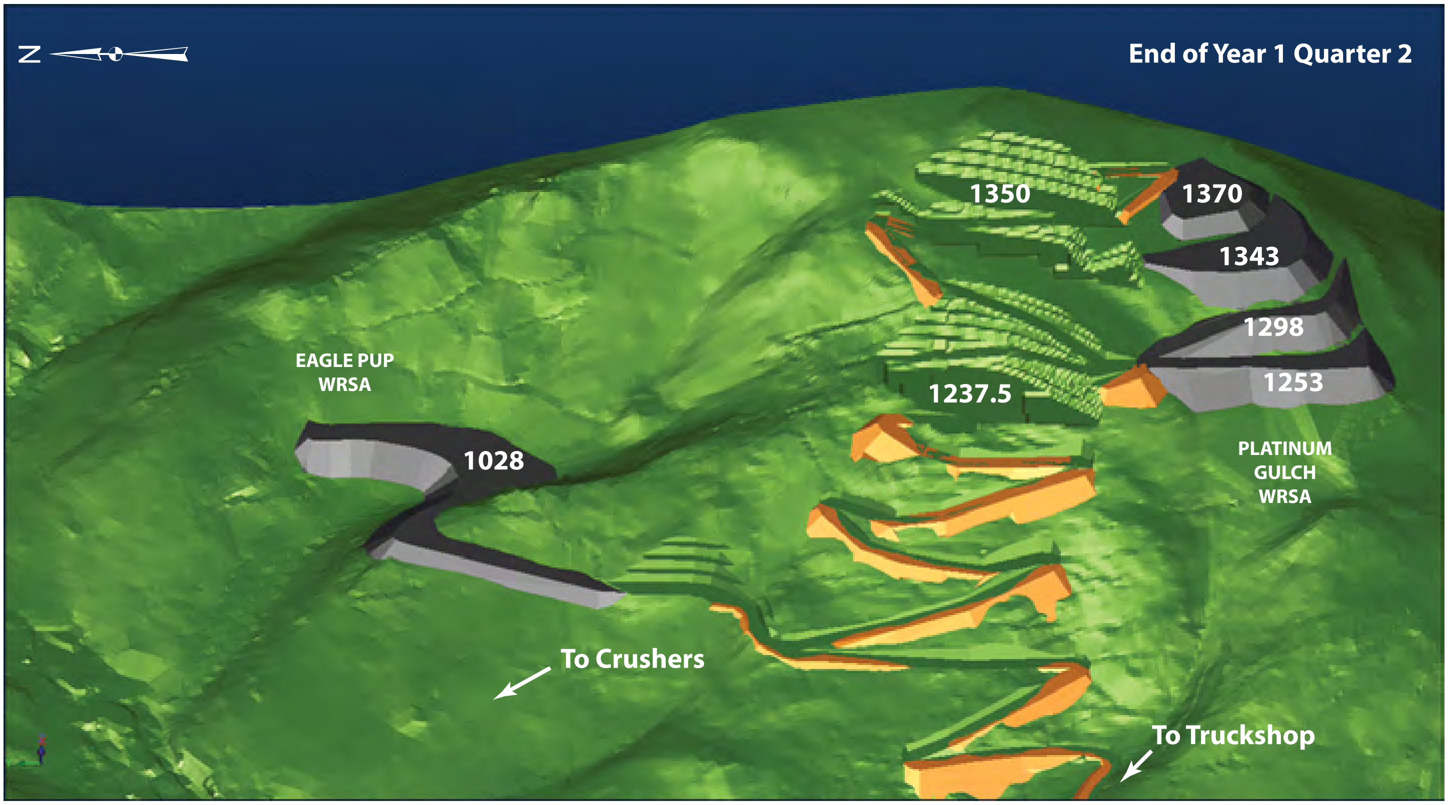
StrataGold Corporation

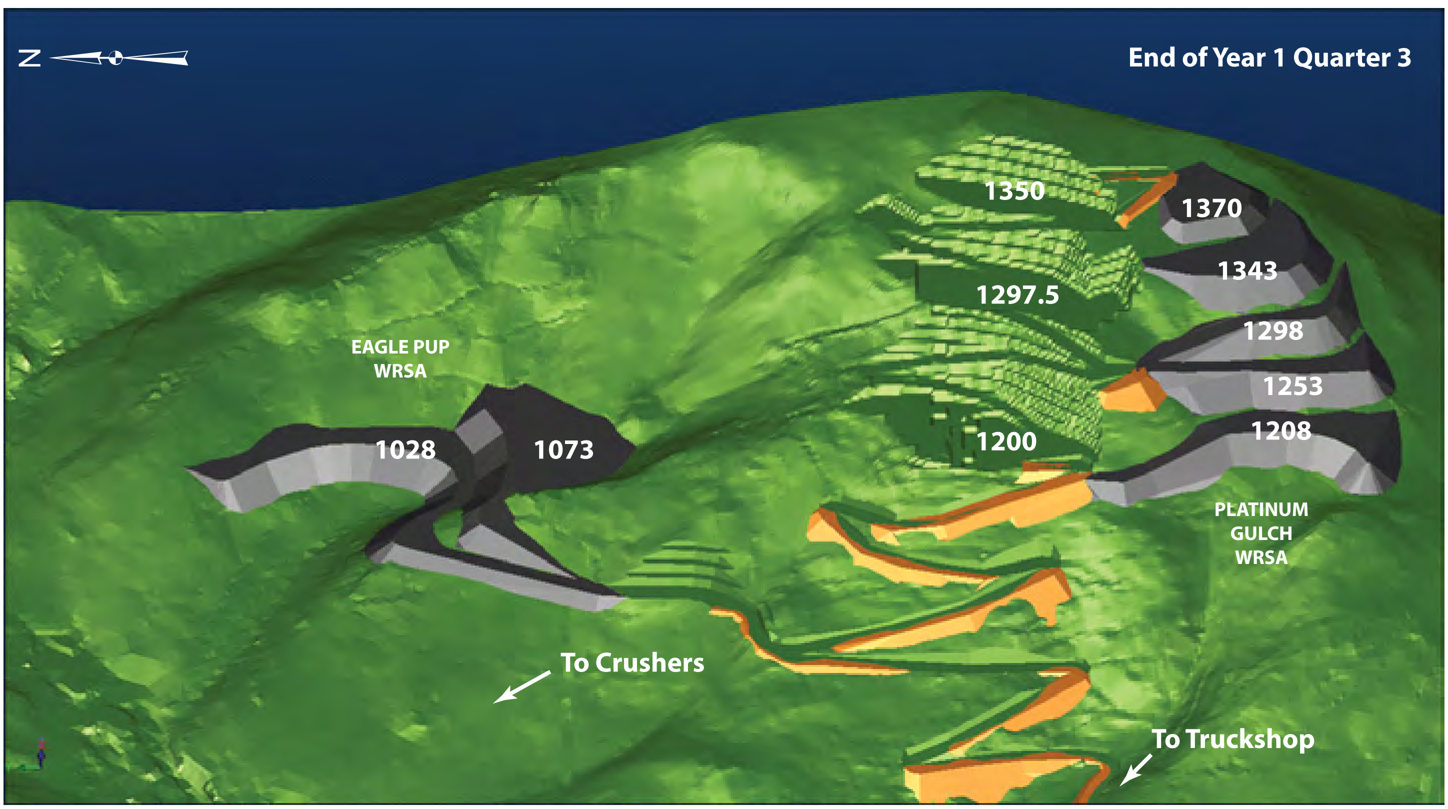
0 100 200 300 400
Metres
Scale = As Shown

EAGLE GOLD PROJECT
YUKON TERRITORY

Mine Development Phase:
End of Pre-Production
& End of Year 1 Quarter 1

Projection:	Drawn By:	Date:	Figure:
N/A	SS	2014/07/16	2.1-9





Legend:

- Topo/Pit/Road Cuts
- WRSA's/Road Fill
- Road Fill

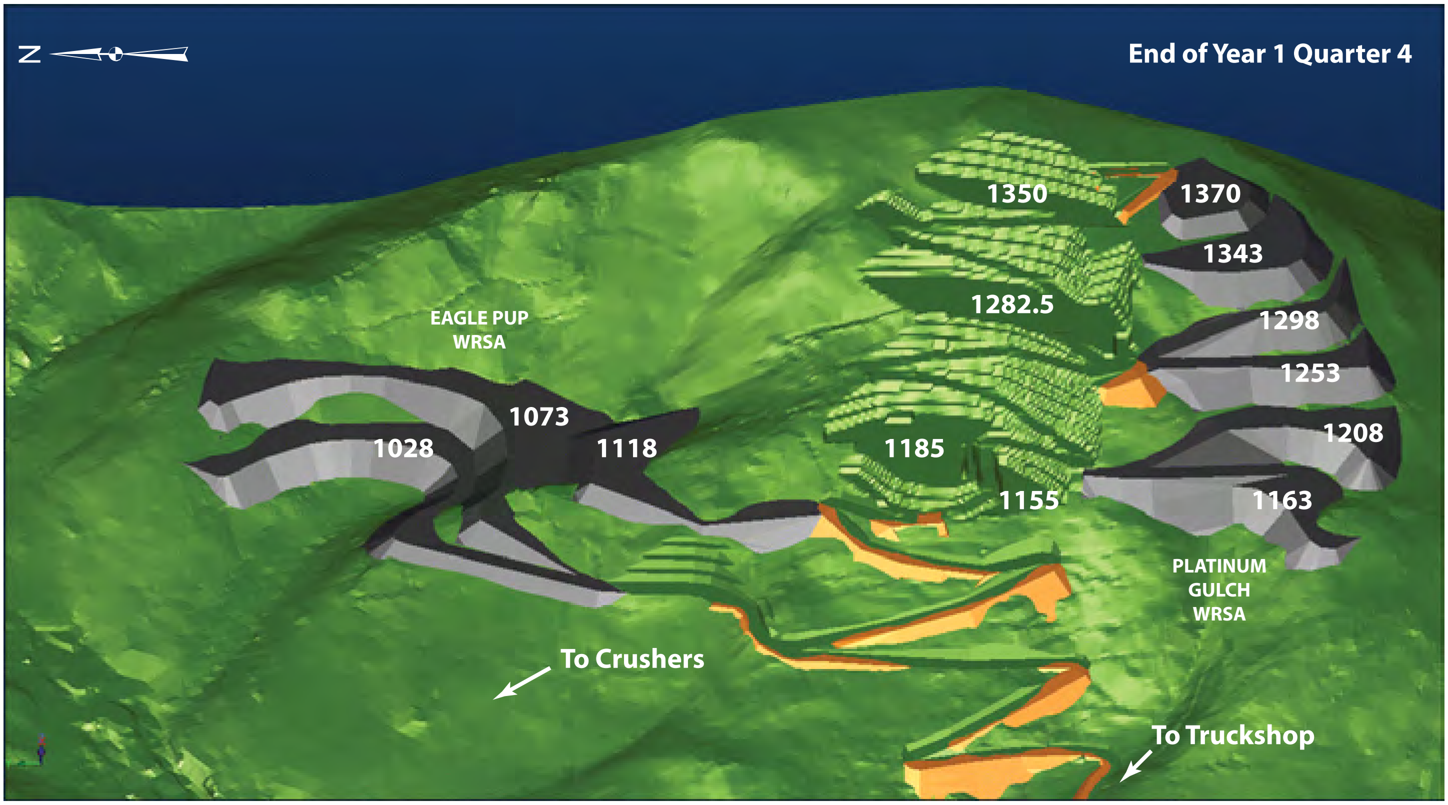
StrataGold Corporation

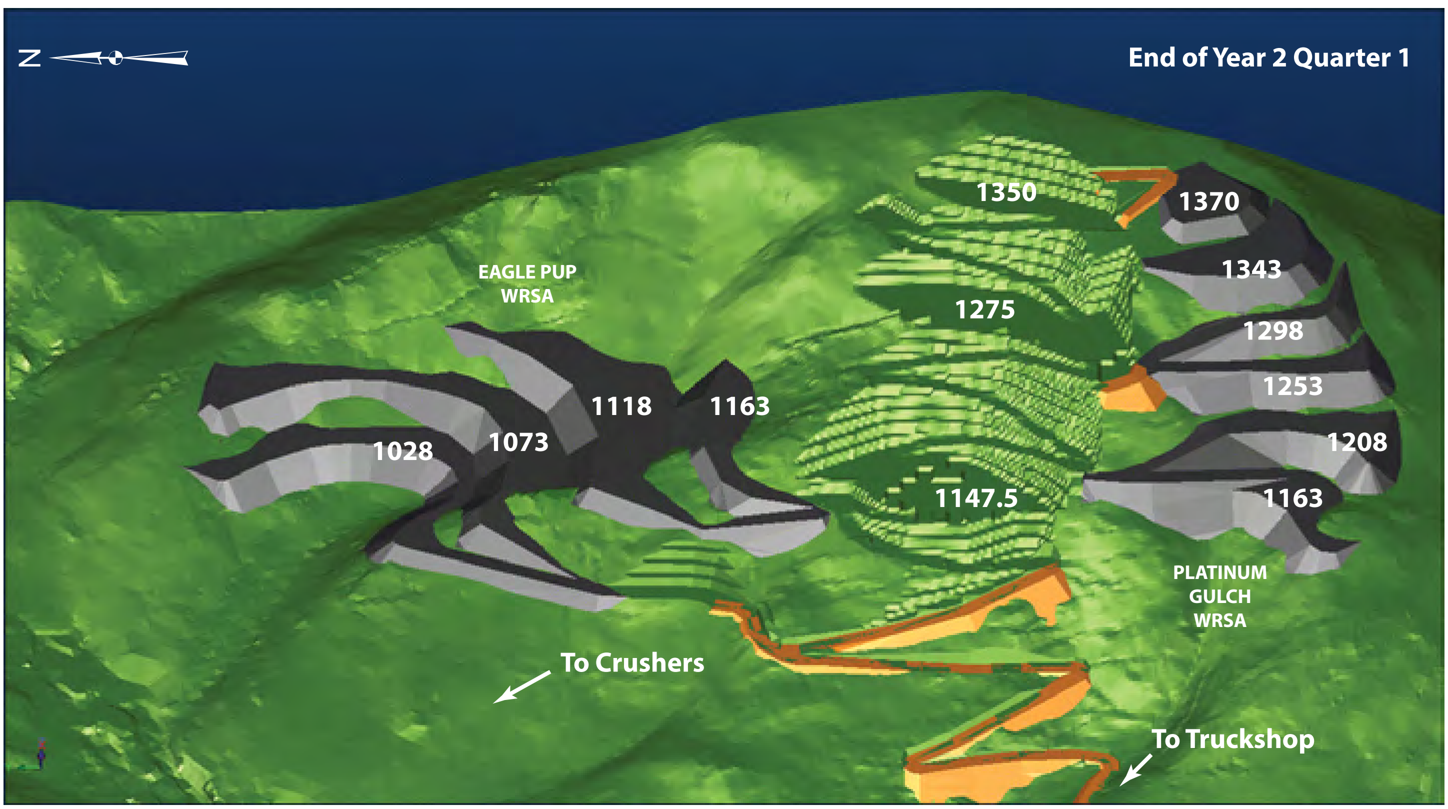
0 100 200 300 400
Metres
Scale = As Shown

EAGLE GOLD PROJECT
YUKON TERRITORY

Mine Development Phase:
End of Year 1 Quarter 2
& End of Year 1 Quarter 3

Projection:	Drawn By:	Date:	Figure:
N/A	SS	2014/07/16	2.1-10





Legend:

- Topo/Pit/Road Cuts
- WRSA's/Road Fill
- Road Fill

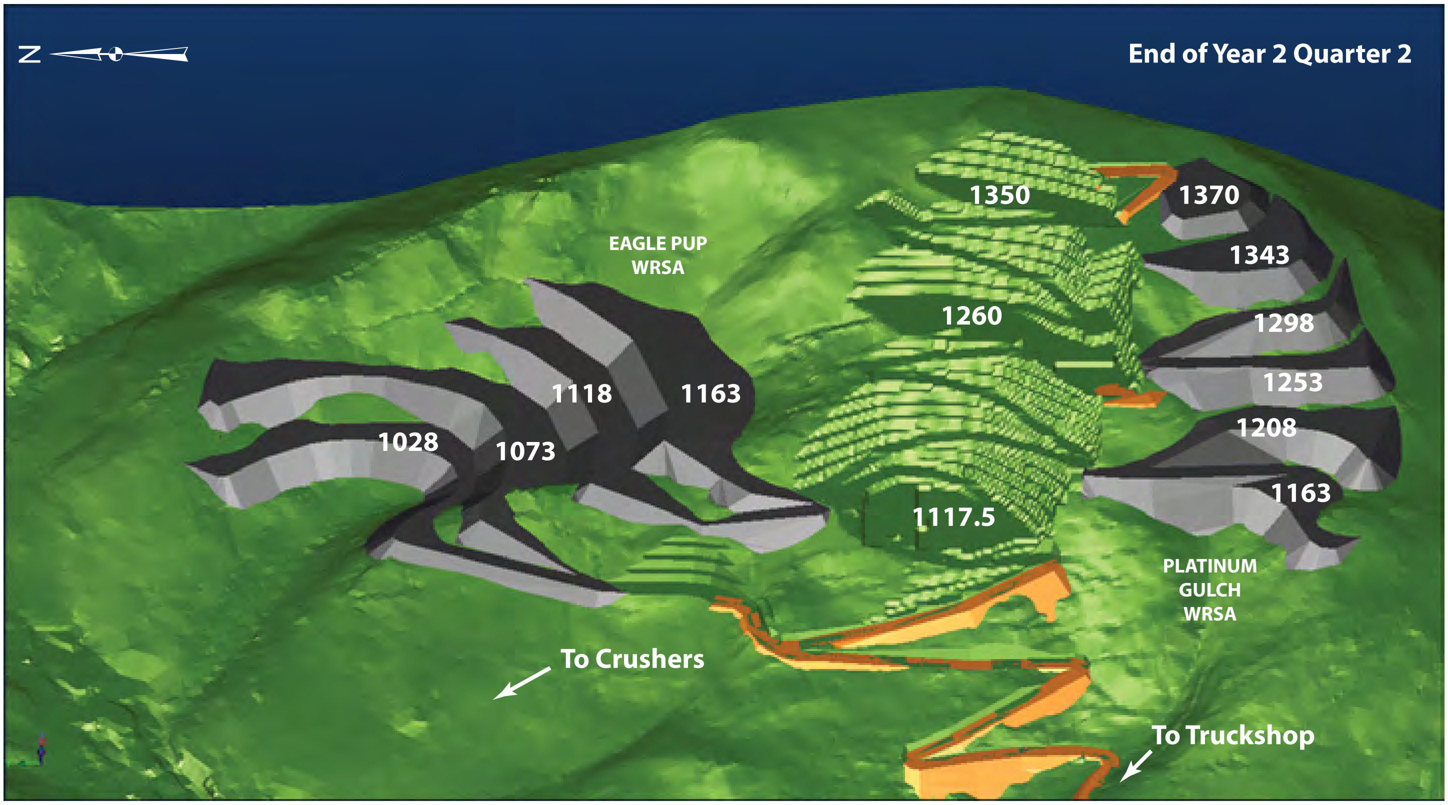
StrataGold Corporation

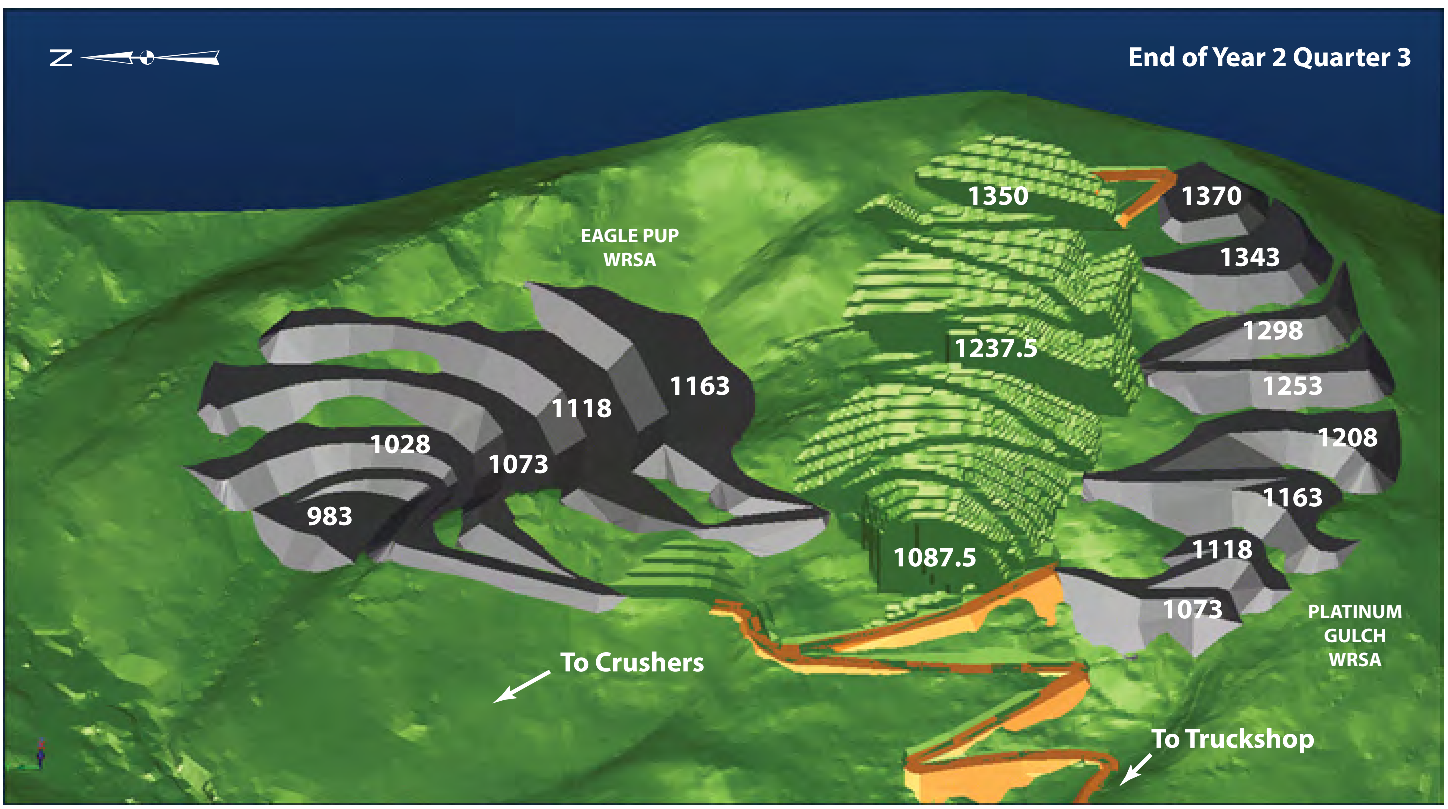
0 100 200 300 400
Metres
Scale = As Shown

EAGLE GOLD PROJECT
YUKON TERRITORY

Mine Development Phase:
End of Year 1 Quarter 3
& End of Year 2 Quarter 1

Projection:	Drawn By:	Date:	Figure:
N/A	SS	2014/07/16	2.1-11





Legend:

Topo/Pit/Road Cuts

WRSA's/Road Fill

Road Fill

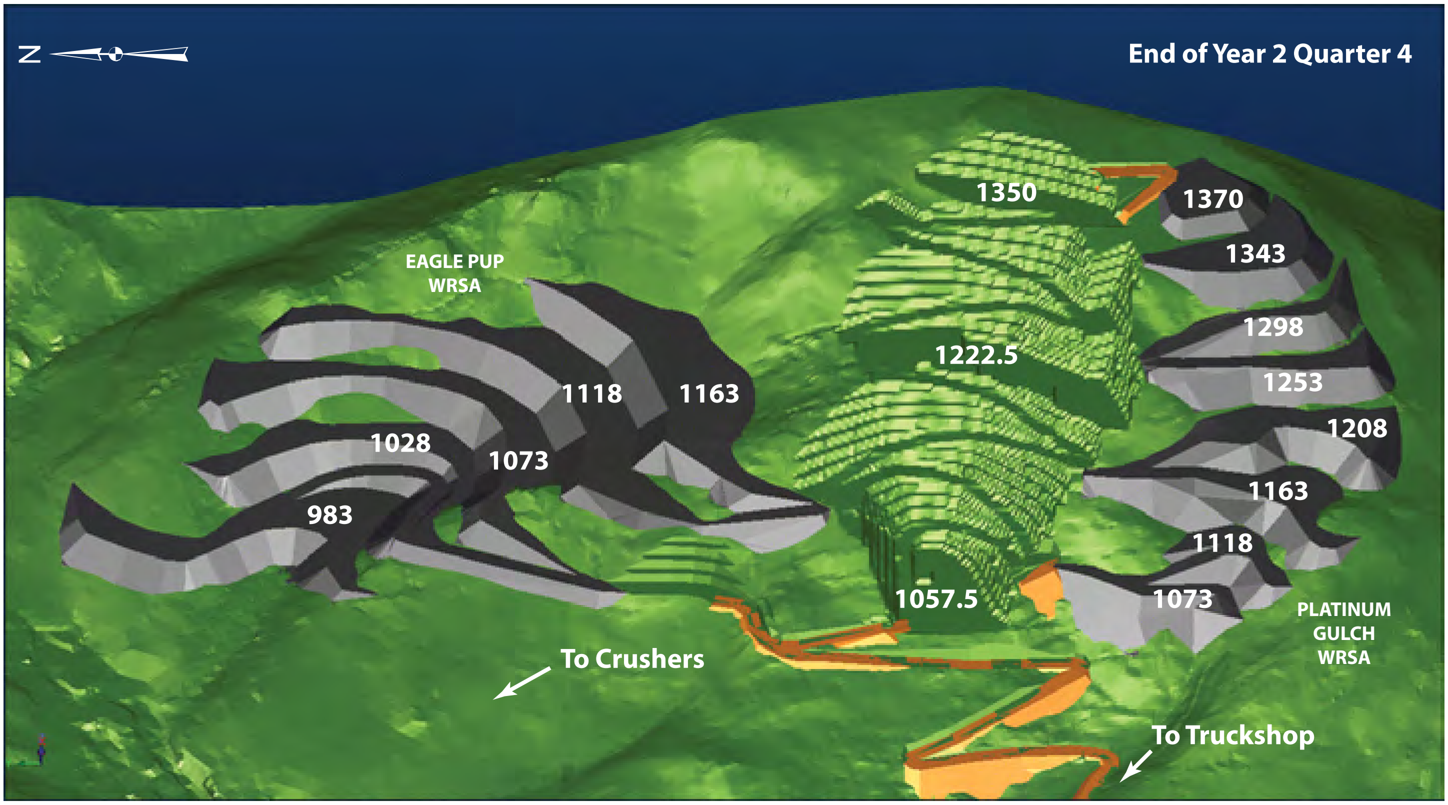
StrataGold Corporation

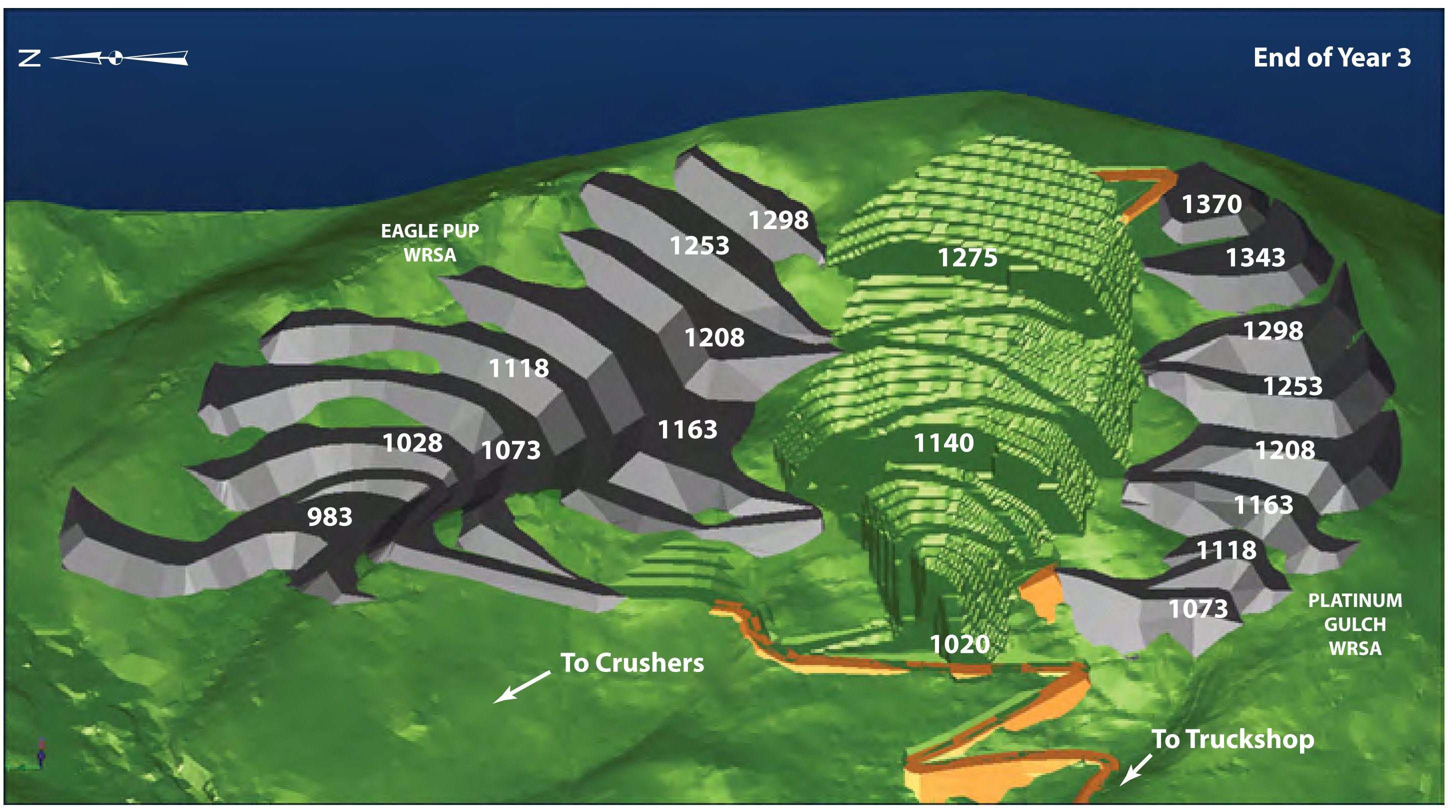
0 100 200 300 400
Metres
Scale = As Shown

EAGLE GOLD PROJECT
YUKON TERRITORY

Mine Development Phase:
End of Year 2 Quarter 2
& End of Year 2 Quarter 3

Projection:	Drawn By:	Date:	Figure:
N/A	SS	2014/07/16	2.1-12





Legend:

- Topo/Pit/Road Cuts
- WRSA's/Road Fill
- Road Fill

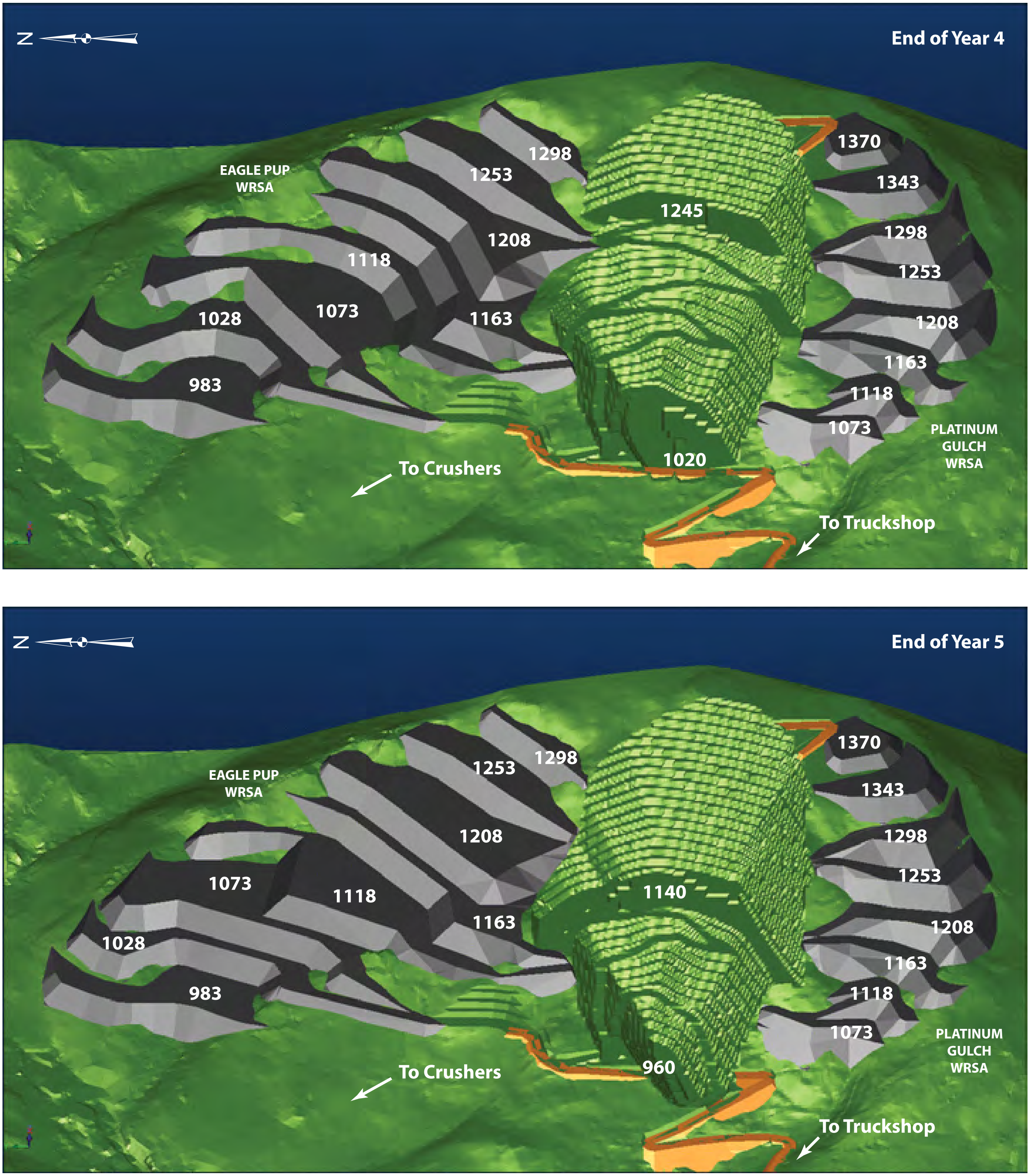
StrataGold Corporation

0 100 200 300 400
Metres
Scale = As Shown

EAGLE GOLD PROJECT
YUKON TERRITORY

Mine Development Phase:
End of Year 2 Quarter 4
& End of Year 3

Projection:	Drawn By:	Date:	Figure:
N/A	SS	2014/07/16	2.1-13



Legend:

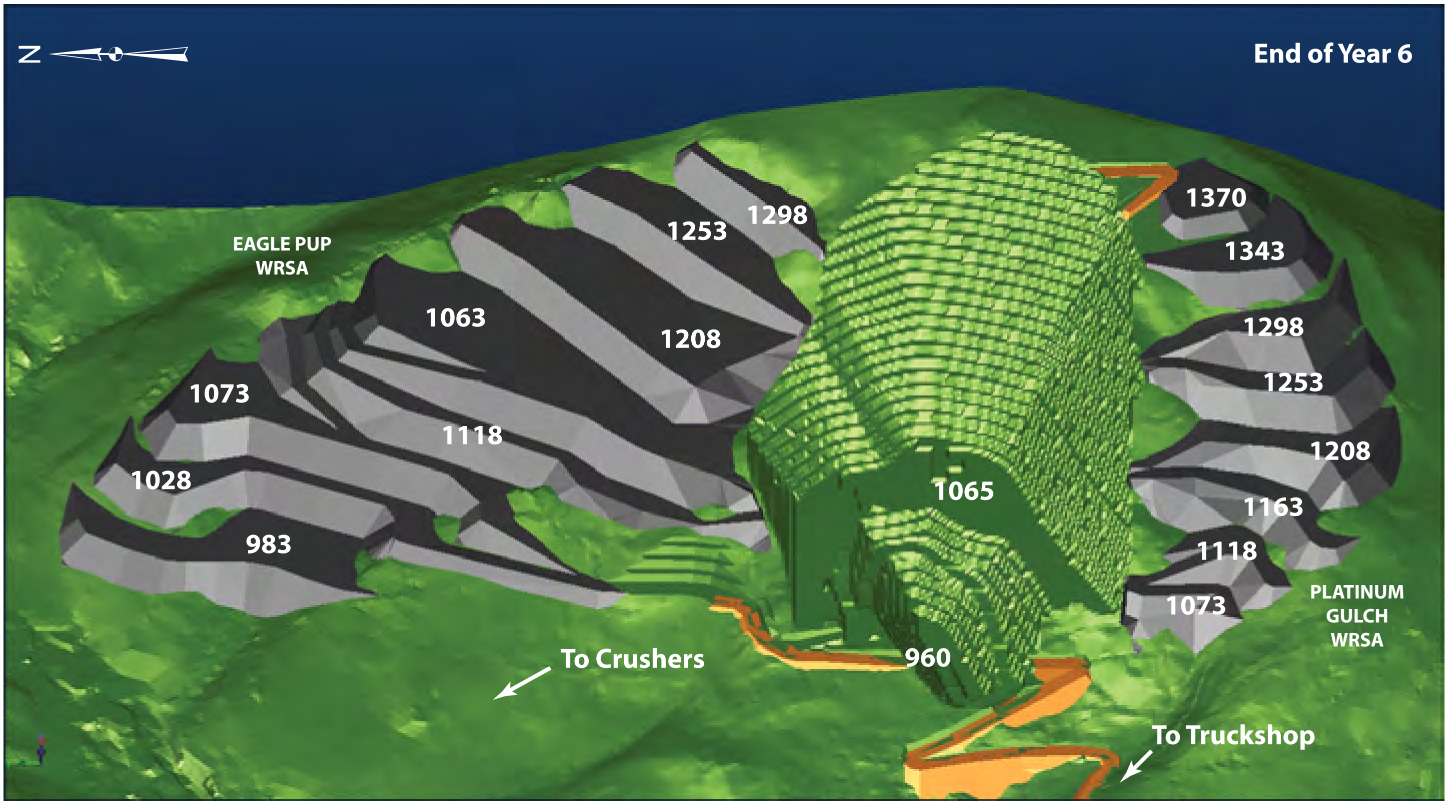
- Topo/Pit/Road Cuts
- WRSA's/Road Fill
- Road Fill

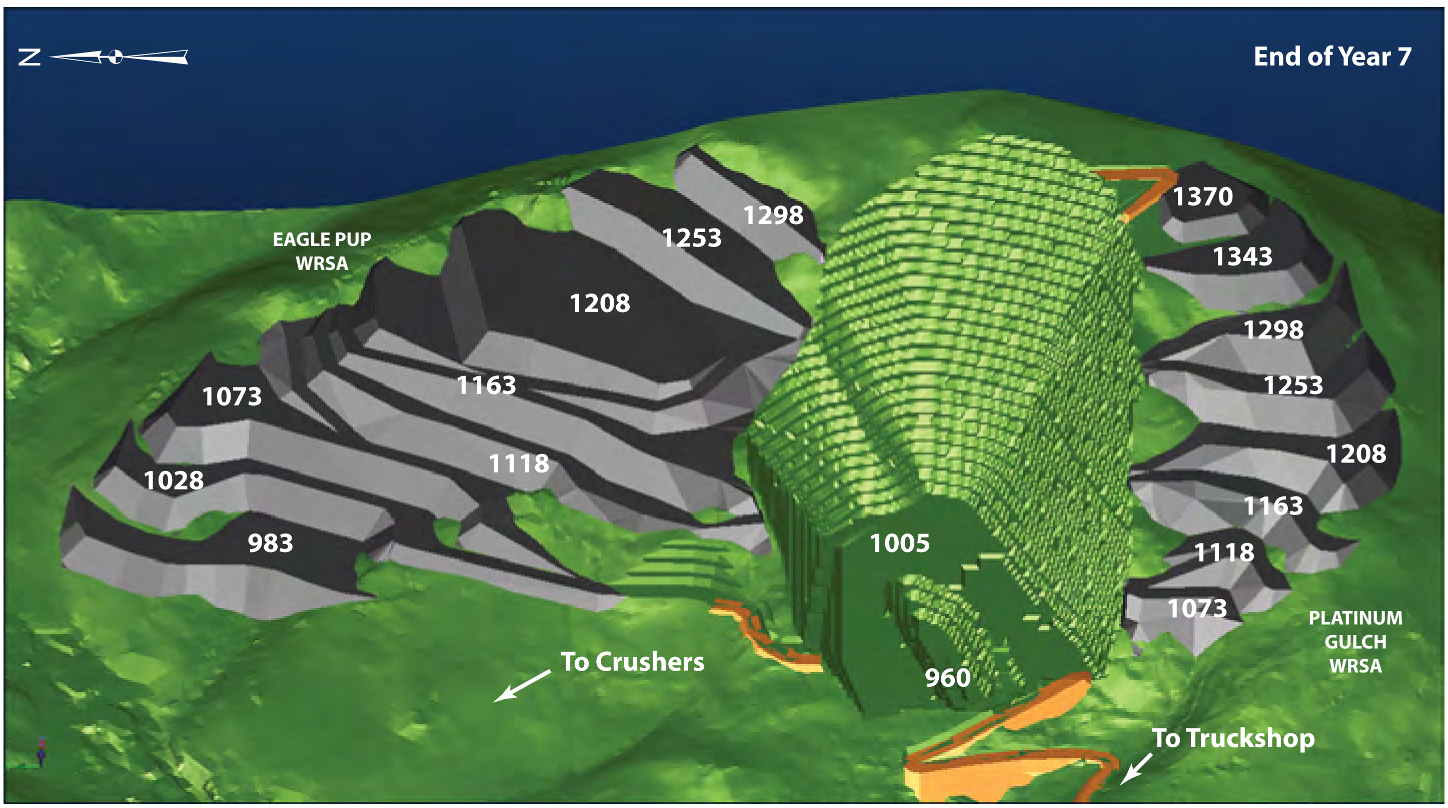
StrataGold Corporation

0 100 200 300 400
Metres
Scale = As Shown

EAGLE GOLD PROJECT YUKON TERRITORY	
Mine Development Phase: End of Year 3 & End of Year 5	

Projection:	Drawn By:	Date:	Figure:
N/A	SS	2014/07/16	2.1-14





Legend:

- Topo/Pit/Road Cuts
- WRSA's/Road Fill
- Road Fill

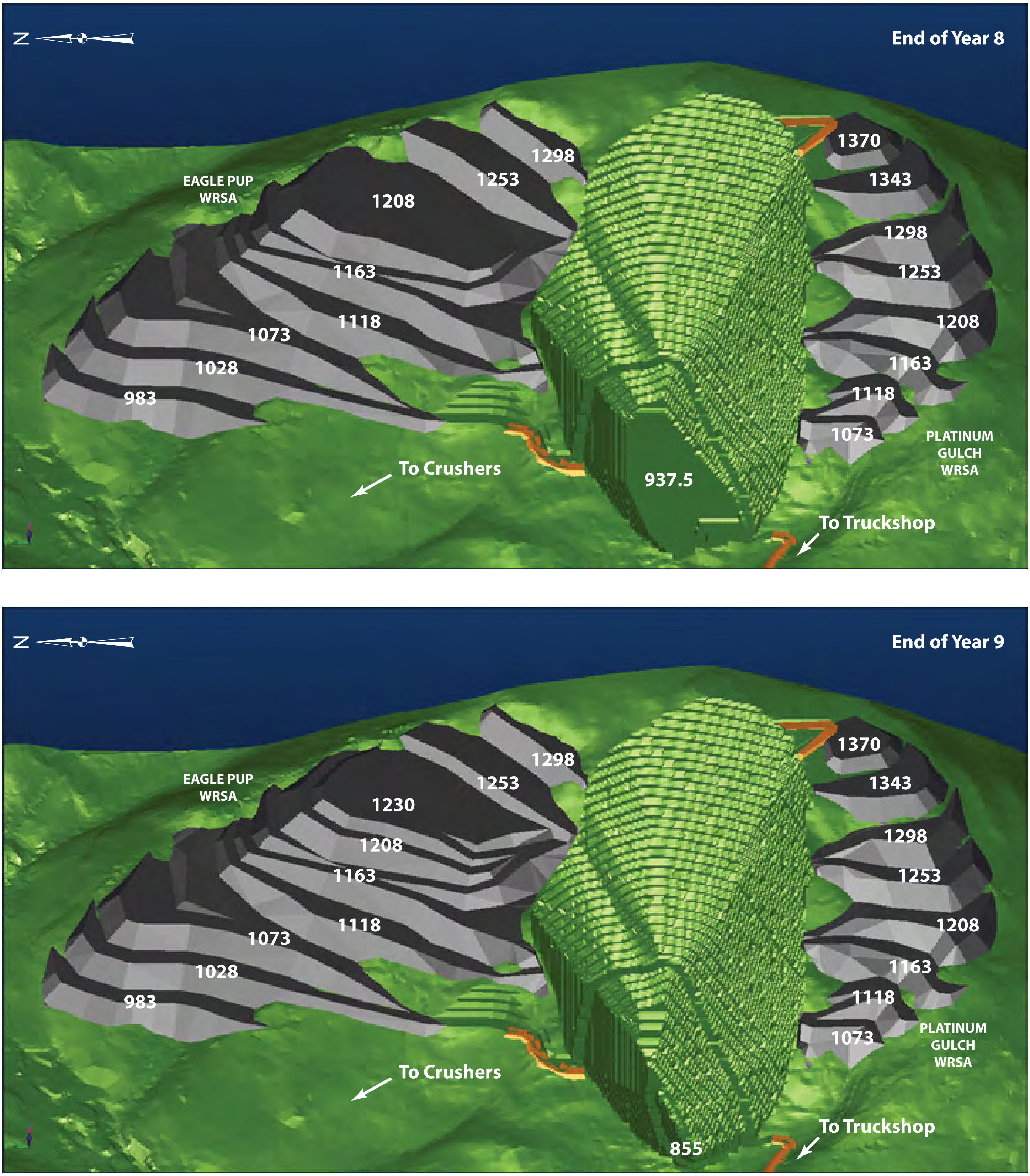
StrataGold Corporation

0 100 200 300 400
Metres
Scale = As Shown

EAGLE GOLD PROJECT
YUKON TERRITORY

Mine Development Phase:
End of Year 6
& End of Year 7

Projection:	Drawn By:	Date:	Figure:
N/A	SS	2014/07/16	2.1-15



Legend:

- Topo/Pit/Road Cuts
- WRSA's/Road Fill
- Road Fill

0 100 200 300 400
Metres
Scale = As Shown

EAGLE GOLD PROJECT YUKON TERRITORY	
Mine Development Phases: End of Year 8 & End of Year 9	

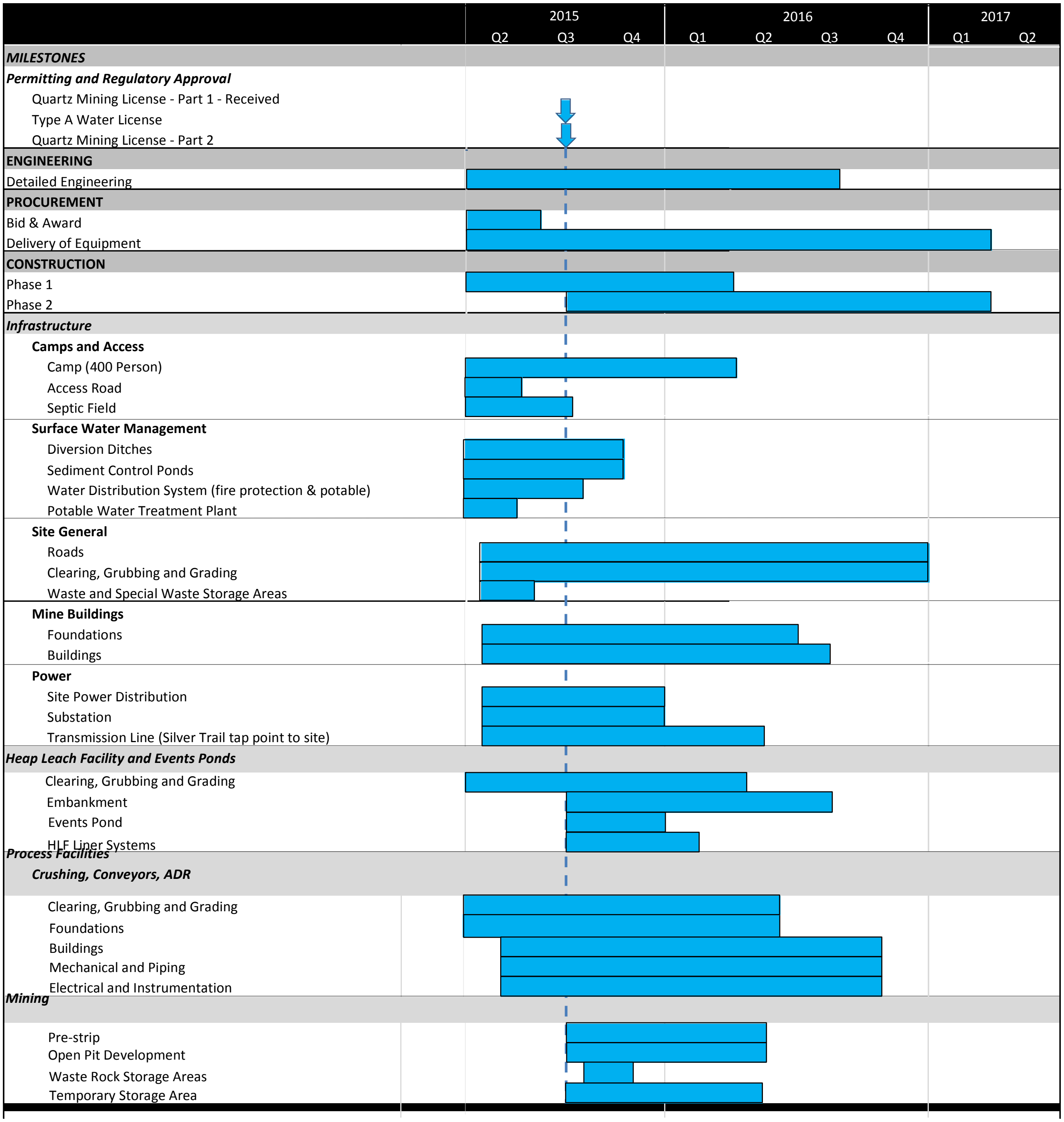
Projection:	Drawn By:	Date:	Figure:
N/A	SS	2014/07/16	2.1-16

3 DESIGN AND CONSTRUCTION

Construction is currently assumed to begin in Q2 2015, pending receipt of regulatory approvals, project financing and contractor availability. Activities planned for 2015 include site clearing and grubbing, road upgrades, civil earthworks, concrete foundations, building erection, DGDC construction, and camp expansion. The remaining construction activities are expected to be completed by Q2 2017.

A construction schedule is provided in Table 2.3-1.

Table 2.3-1: Tentative Construction Schedule



3.1.1 Stage 1

Stage 1 Construction activities are currently scheduled to begin Q2 2015 and include camp expansion, access road and bridge upgrades, site road construction, diversions and ditching, clearing and grubbing, civil earthworks, concrete foundations, septic system upgrade, and borrow source development. The scope of Stage 1 construction activities for the Project is limited to activities that do not require a Type A Water Use Licence. StrataGold Corporation (SGC) has submitted an application for the amendment of an existing Type B Water Use Licence to support certain construction activities for the Project. The scope of the amendment application only includes a request for authorization of water uses, watercourse diversion and the potential deposit of a waste during the Stage 1 Construction stage of the Project.

Stage 1 Construction will include:

- Upgrades to the Haggart Creek Road that includes minor realignments, construction of pullouts, grading, resurfacing, bridge upgrades and drainage improvements
- Camp expansion
- Septic field expansion - Installation and commissioning of septic field to accommodate peak construction and operations labor force
- Potable water treatment plant - Installation and commissioning
- Upgrade of existing site access roads by widening and grading to provide access to construction areas.
- Construction of new site roads to provide access to construction areas
- Haul road construction
- Construction of a solid waste storage area that includes an incinerator
- Construction of a hazardous waste storage area for temporary storage of hazardous waste prior to hauling offsite for final disposal in approved facilities.
- Clearing, grubbing and grading for roads, infrastructure and facilities.
- Excavation and bulk earthworks
- Heap Leach Facility Phase 1 subgrade preparation and temporary upstream runoff interceptor ditch construction
- Concrete foundations
- Complete construction for:
  - Dublin Gulch Diversion Channel
  - Filter berms, as required, in the Ice-Rich Overburden Storage Area
  - Septic system upgrade

3.1.2 Stage 2

Stage 2 construction activities will begin upon issuance of a Type A Water Use Licence and approval of development and operations plans as required under the *Quartz Mining Act.*

Stage 2 Construction will include:

- Transmission line from Silver Trail tap point to site including clearing and grubbing of right of way (RoW), pole installation, conductors and substation construction.
- Construction of the sub-station and the site electrical distribution system.
- Erections of buildings including of mechanical, piping, electrical and instrumentation for the following:
  - Crushing and Screening Plant
  - Overland Conveying System
  - Cement and Lime Silos
  - Adsorption, Desorption and Recovery Plant, Metallurgical Laboratories, Administration Office and Reagent Storage Buildings
  - Truck Shop, warehouse and mine offices
  - ANFO, Emulsion Plant and Detonator Storage
- Water Distribution Systems
  - Process water for ADR
  - Crusher dust suppression systems
  - Water for road dust control
  - Potable water facilities in addition to camp
  - Fire water including ring main, hydrants, and pumps
- Fuel Storage and Distribution Systems
  - Propane
  - Diesel
  - Gasoline
  - Waste Oil
- Eagle Pup Waste Rock Storage Area
  - Clearing and grubbing
  - Bulk earthworks
  - Rock drain and toe berm construction

- Platinum Gulch Waste Rock Storage Area
  - Clearing and grubbing
  - Bulk earthworks
  - Rock drain and toe berm construction
- Temporary Ore Stockpile pad construction
  - Clearing and grubbing
  - Bulk earthworks
- Events Pond
  - Groundwater drainage system installation (geotextile, gravel and piping)
  - Subgrade preparation
  - Bedding layer placement
  - Primary Geomembrane liner installation
  - Pumps and sampler installation
  - Leak detection and recovery system
  - Upper secondary geomembrane liner installation
- Heap Leach Facility Phase I
  - Groundwater drainage system installation (geotextile, gravel and piping)
  - HLF confining embankment earth and rock fill placement
  - Geosynthetic Clay Liner (GCL) installation
  - In-heap pond secondary geomembrane liner installation
  - Leak Collection and Recovery System installation
  - Overliner installation (crushed rock for drainage and cushion layer)
  - In-heap pond primary geomembrane liner installation
  - In-heap pond upper secondary geomembrane liner installation
  - Phase 1 heap leach piping installation
  - Solution collection system (primary and secondary piping) installation

During Stage 2 Construction, a part of the open pit will be cleared and grubbed progressively to enable the quarrying of durable and non-durable rock to develop the haul roads and for other facility construction materials. Overburden and extremely weathered or altered material will be mined by ripping or excavation with bulldozers and backhoes. Standard drill and blast technology will then be used to advance the pit.

3.2 SITE PREPARATION

This section provides a general description of site preparation activities during construction, which will include:

- Vegetation clearing and grubbing for infrastructure and mine site facilities
- Bulk earthworks for foundation preparation
- Overburden management (frozen and non-frozen material)
- Borrow requirements and the development of one or more construction borrow source sites, and
- Foundation requirements.

3.2.1 Vegetation Clearing and Grubbing

Vegetation will be cleared as required from infrastructure and facility areas prior to earthworks and or construction activities. Clearing will be done on an as needed basis sequentially to reduce erosion and sediment as well as permafrost degradation during construction. Figure 3.2-1 depicts the maximum extent of cleared area that will occur as part of site preparations.

It is estimated that a volume of approximately 20,000 m^3 of timber will be available from areas cleared for Project activities. This includes approximately 15,000 m^3 of wood cleared during site construction and 5,000 m^3 of wood associated with clearing of the road and transmission corridor.

Trees will be cleared and harvested using best management practices and methods suitable to the terrain and timber size. The majority of timber will be harvested by mechanical methods. Hand falling (chainsaws) may be used in specific areas as required (i.e., steep slopes, riparian areas).

Timber not required for Project uses will be removed from the cleared areas within the mine site, road, and transmission line corridor and placed in temporary piles. These temporary timber stockpiles on the mine site will be chipped or ground in-situ prior to hauling wood chips or mixed material to the reclamation material storage areas on site. During the period of construction when grubbing and clearing of vegetation will take place along the access road and transmission line, SGC will work with their contractors to, where logistically feasible, stockpile timber deemed appropriate for fuel wood. Upon completion of construction and/or when the SGC Manager of Health and Safety and/or Site Manager determines that it is safe for the public to access the timber stockpiles, SGC will provide written notification to the First Nation of Na-Cho Nyäk Dun and the village of Mayo so that interested parties may salvage timber for fuel wood.

Timber and brush cleared from the mine site and not claimed for fuel wood from the access road right of way will be processed using standard methods including whole tree drum chippers, tub grinders or horizontal wood grinders. Mixed wood and topsoil feedstock will provide a blend of organic material that will be transported to the reclamation storage areas.

Topsoil and organic matter will be stripped and hauled to designated reclamation material storage areas. Further detail with reclamation uses for this material is provided in the Reclamation and Closure Plan.

3.2.2 Foundation Preparation - Bulk Earthworks

Bulk earthworks will include general cut excavation, rock blasting excavation, general fill, structural fill, screening and stockpiling of surfacing and concrete aggregate, and grading. General cut excavation shall include the excavation of roads, pads, embankment foundations, diversion channels, embankment abutments, placer tailings and placer material. General cut will include rippable rock, which is defined as material that can be ripped with a D10T track-type tractor or equivalent. Non-rippable rock will be blasted using drilling and blasting followed by excavation. Blasted rock will be sized and stockpiled for rip rap.

Construction of infrastructure pads will involve clearing the overburden soil and, if required, blasting the bedrock to the desired elevation. Gravel and broken blast rock fill will be used to extend the desired pad width and to grade the pad to the design elevation. The fill used to create the infrastructure pads will be placed and compacted to support foundations for buildings and equipment.

General fill will be hauled and placed as required in suitable locations. A temporary, portable crushing and screening plant(s) will be located in the Dublin Gulch valley to produce suitable structural fill, surfacing aggregate and concrete aggregate to design specifications. Structural fill will be constructed in layers of uniform thickness and compacted to a desired unit density in a manner to control the compressibility, strength, and hydraulic conductivity of the fill. Structural fill will be produced via crushing and screening of excavated on site material. Surfacing and concrete aggregate will be sourced on site via multiple borrow sources, crushed screened, stockpiled and placed as required.

3.2.3 Overburden Management

The topography of the Property area is characterized by rolling hills and plateaus and is drained by deeply incised creeks. The ground surface is covered by colluvium, weathered rock, and felsenmeer. Outcrops are rare, generally less than two percent of the surface area, and are limited to ridge tops and creek walls. Lower elevations are vegetated with black spruce, willow, alder and moss, and higher elevations by sub-alpine vegetation.

Construction will require the management of various types of overburden including organic top soil, colluvium, weathered metasedimentary and granodiorite bedrock, durable rock, placer tailings (poorly sorted cobble to silt materials), silt, and frozen material. Waste rock and overburden quantities, including a summary of cut and fill materials balance, are described in the Waste Rock and Overburden Facility Management Plan.

3.2.3.1 Frozen Soil

The Project will be constructed and operated in a region of widespread discontinuous permafrost. Previous geotechnical investigations have confirmed the sporadic presence of frozen ground, some of which contains excess ice that will require some level of management depending on ice content during construction. The term "excess ice" is used to describe ice that occupies a larger pore space in the soil than water in an unfrozen state. When this ice thaws, the resulting water exceeds the water holding capacity of the soil and excess water will be present. Some of the frozen soil with excess ice, hereafter called "ice rich", may become unstable upon thawing, particularly if it is fine-grained and excess pore water pressure cannot drain readily. Some of these materials, which could potentially be useful in closure activities (e.g. as cover for reclamation) while thawing and draining, may require temporary containment during construction and operation of the mine.

A Frozen Materials Management Plan has been developed to support Stage 1 and Stage 2 Construction. The plan provides the sources and estimated volumes of frozen materials, management approach to various types of frozen soil, and engineering design of containment berms for ice-rich material that requires on site disposal. Details regarding the site investigation and engineering design of containment berms for ice-rich material is provided in the Frozen Materials Management Plan.

Project design has been optimized to minimize disturbance of ice-rich soils during construction, and ice-rich materials that are excavated will be drained and dried and re-used as much as possible. The excavated ice-rich materials will derive from several different lithological units, including till, colluvium, alluvium and weathered rock. These materials vary in grain size and natural moisture content, or ice content. Difficulties in handling thawing ice-rich materials will vary depending primarily on grain size and ice content. Coarser soils, like sand and gravel, will tend to drain more freely on thawing, and will thus be less difficult to handle than finer soils, which will drain more slowly, and retain excess pore pressures, and lower strength, for longer periods.

Frozen ground, where encountered, contains varying amounts of ice, and in some cases can be considered as "excess ice" (as defined above), as described in the detailed records of test pits and cored geotechnical drillholes used to characterize the site. Based on this previous work, it is apparent that frozen ground will be encountered during construction of a number of proposed project facilities, primarily on north-facing slopes. Frozen soils will be identified as one of five material management types using initially previous data, confirmed in the field during clearing, grubbing and general earthworks activities, and then managed as described in Table 3.2-1.

Table 3.2-1: Management Strategies for Frozen Soils

Material Management Type	Frozen Material Type	Strategy	Management Description
I	Fine and/or coarse-grained colluvial/alluvial soils or weathered bedrock with little or no ice content	Used as Fill or Stockpiled for Closure	Used as general fill or if excess to a local fill requirement stored for reclamation.
II	Coarse-grained sands and gravels with zones of variable ice content	Used as Fill	Exposed and readily thawed and drained, and then used as general fill within embankments and platforms.
III	Fine-grained soils with relatively thin zones (lenses) of low proportions of “excess ice”,	Stockpiled for closure	Separated and co-disposed with other non-frozen soils within stockpiles to be used for reclamation.
IV	Fine-grained silty and clayey soils with relatively thick lenses of highly visible “excess ice”	To IROSA	Segregated at excavation site based on prior field data/information, and additional observations during excavations, excavated and hauled to the ice-rich overburden storage area located in the Haggart Creek valley.
V	Small quantities of ice-rich soils (fine or coarse)	Locally stored	Disposed of adjacent to excavation sites where thawing and drainage can be managed locally rather than hauled to the IROSA.

The management strategies described in Table 3.2-1 recognizes that the excavation of frozen ground, particularly ice-rich frozen ground, requires additional effort and care beyond that required for typical excavation of unfrozen ground, or for ice-poor frozen ground. Well-bonded, ice-rich material will be difficult to excavate and for planning purposes, is assumed to require some degree of ripping. Consideration will be given to the thaw behavior of this material, and allowances made for adequate drainage and associated erosion and sediment control, as well as additional time and effort for the work. The strategy for managing drainage and sediment is described in the Water Management Plan. Exposure of ice-rich material, particularly thick soil horizons, and the associated thaw may result in wet, muddy, soft ground, and poor trafficability, along with local slumping and other nuisance effects. Each of these effects related to exposure of ice-rich material requires consideration in the planning, design, and construction of mine site infrastructure. When ice-rich fine-grained soils are excavated and stockpiled, they may become unstable while thawing, and may stand at only very gentle slopes of a few degrees. Water draining from the thawing soil must also be managed, along with any associated sediment load.

3.2.3.2 Non–Frozen Overburden Material

Bulk earthworks during construction will require multiple material types that meet specific geotechnical criteria. Construction materials will be sourced from available placer spoils, overburden, silt borrow pits and rock excavations located on site and from the access road alignment as required. Top soil will be salvaged and transported for storage at reclamation material stockpiles in the Dublin Gulch valley for reclamation purposes.

Non–frozen overburden material produced by construction will be transported for use as fill for cut/fill balance in excavation areas and/or an area for screening and temporary storage for construction material. The material will be further processed (crushed or screened) and used as engineered fill where this is required. An area within the northeast reclamation material stockpile area will be utilized for non-ice-rich overburden management. This area will include a screening plant, crusher plant, bins and feeders along with portable transfer and stacking conveyors. The area will be used to process materials and temporarily store them by material type. Screened materials will then be used in various construction applications. Borrow material types stored in this location include rock fill, silt, general fill, rip rap, road base and resurfacing material, concrete aggregate etc.

3.2.4 Borrow Materials

Bulk earthworks will require multiple material types that meet specific geotechnical criteria. Construction materials will be sourced from available placer spoils, overburden, silt borrow pits and rock excavations located on site and from the access road alignment as required.

3.2.4.1 Borrow Requirements

In the summer of 2011, field investigations in support of geotechnical recommendations for mine site infrastructure were completed (BGC 2011a and 2012a). That work involved the excavation of ninety-six test pits, drilling forty-six test holes (29 diamond drillholes and 17 auger holes), and mapping of fifty-nine outcrops (natural exposures, existing road cuts and drill pads cuts) to characterize subsurface conditions relevant for foundation and earthworks design. Samples were taken from selected test pits and drillholes for index testing of soil and rock. Bulk samples of rock and placer tailings were also analyzed for a range of parameters related to the potential for re-use as select fill or aggregate. Downhole and surface geophysical investigations were completed, and plate load tests were conducted at selected locations of proposed building and equipment foundations.

Borrow material types required for the Project include the following:

- ***Silt -*** These are fine-grained fills that can be used as a barrier for chemical and physical migration of fluids. Preliminary design criteria for silt liner materials would contain a minimum of 35% passing the No. 200 sieve and be free of all deleterious materials including oversize clasts of 75 mm or greater, frozen soils, and organics.
- ***Rock Fill -*** Rock fill can be classified as one of two types: 1) that derived from strong rock, yielding durable rock fragments larger than gravel size and containing sand and gravel with minimal fines when excavated/blasted; and, 2) that derived from weak, fissile rock, generating non-durable rock fragments. The first type may be placed and compacted as a rock fill in 1 m lifts, whereas the second type placed and compacted in thinner lifts, with watering and compaction similar to that required for an earth fill.

- ***Structural Fill -*** Structural Fill is an engineered soil material placed and compacted for use beneath lightly to moderately loaded structures to provide a uniform bearing surface with tolerable movements under load through the life of the structure.

  Materials that do not satisfy the specifications for structural fill may be used as structural fill in specific applications, at the discretion of the design engineer. For example, locally excavated weathered rock that contain more than 8% fines may serve as structural fill provided compaction objectives can be met and drainage/frost susceptibility issues are less important, e.g., used only at depth in thick fills.

- ***General Fill -*** General Fill is an inorganic granular material used for general site grading, thermal insulation cover and/or protection of pipes, or similar applications. General fill will be compacted to yield a stiff surface and will not be used for support of settlement-sensitive structures.

- ***Grading Fill -*** This is a soil material used as an intermediate layer between in-situ soil or rock subgrade and higher quality engineering materials above, such as road base, for example. Any granular material that can be placed and compacted to 95 % Modified Proctor maximum dry density (MPMDD) to provide a uniform bearing surface may be suitable for this purpose. Selected materials should have a maximum particle size of 150 mm. Oversize materials may be screened out, or can be removed from the surface of placed materials by hand. Suitable materials would include materials identified as suitable for structural fill or general fill, and may include local colluvium.

- ***Rip rap -*** Riprap consists of cobble and boulder size rock fragments, typically angular or sub-angular as derived from blasting or crushing, and is used as a protective barrier from erosion and scour due to water currents and/or ice. Material should consist of hard, durable rock fragments free from splits, seams or defects that could impair its soundness. Thicknesses of riprap layers typically vary from 1.0 to 1.5 times the maximum rock size. Riprap is typically specified by the median particle size, D50. Additional grain size criteria may be presented if the riprap needs to be either well graded or uniformly graded, depending on the specific application.

- ***Drainage Material -*** This is an open or gap-graded granular material intended for allowing free drainage of fluids to pipes and/or seepage collection systems. Drainage material should consist of crushed or uncrushed screened rock or gravel free of fines and flat, elongated particles. Grain size requirements depend on the specific drainage application.

- ***Filter/transition Material -*** Filters are a transition zone material used for preventing soil migration due to fluid flow between granular materials, and/or between rock fill and finer silt and clay layers. Filter material gradations are generally designed based on the specific material gradations that they will transition. Filter materials can be derived from rock excavations or gravel borrow areas, and may require crushing, screening and/or washing to attain the necessary gradations.

- ***Concrete Aggregate -*** Concrete aggregate includes fine and coarse aggregate meeting CSA A23.1 specifications for designing and proportioning concrete mix. Aggregates can be derived from crushed durable rock or gravel such as placer tailings.
- ***Road Base and Surfacing Material -*** This is an engineered material, consisting of a well-graded, hard, durable, sand and gravel or rock. Material should be free of flat and elongated pieces.

3.2.4.2 Borrow Sources

SGC and predecessor companies involved with development of quartz mining at Dublin Gulch have engaged in numerous and extensive site investigations which have examined subsurface conditions at the locations of proposed mine site infrastructure, using a variety of field and laboratory techniques. Given the presence of discontinuous permafrost in the area, close attention was given to observing and describing frozen ground in all of these investigations, including observations of excess ice where encountered. These investigations have resulted in reasonably accurate volume estimates of borrow sources and ice-rich material throughout the Project site.

Site subsurface conditions observed at the Project site have been described in several reports as follows:

- Report on 1995 Geotechnical Investigations for Four Potential Heap Leach Facility Site Alternatives, First Dynasty Mines, Dublin Gulch Property. (Knight Piésold, 1996a).
- Report on Feasibility Design of the Mine Waste Rock Storage Area, First Dynasty Mines, Dublin Gulch Property. (Knight Piésold, 1996b).
- Field Investigation Data Report, Dublin Gulch Project, New Millennium Mining. (Sitka Corp, 1996).
- Hydrogeological Characterization and Assessment, Dublin Gulch Project, New Millennium Mining. (GeoEnviro Engineering, 1996).
- BGC Engineering Inc. 2009. Site Facilities Geotechnical Investigation Factual Data Report. Eagle Gold Project, Victoria Gold Corporation.
- Stantec. 2011. Project Proposal for Executive Committee Review. Pursuant to the Yukon Environmental and Socio-Economic Assessment Act. Eagle Gold Project, Victoria Gold Corp. June 2011.
- BGC Engineering Inc. 2011a. 2010 Geotechnical Investigation for Mine Site Infrastructure, Factual Data Report. Eagle Gold Project, Victoria Gold Corporation.
- BGC Engineering Inc. 2011b. Eagle Gold – Borrow Evaluation Report, Project Memorandum, April 21, 2011; Appendix 34 in Stantec 2011. Eagle Gold Project, Victoria Gold Corporation.
- BGC Engineering Inc. 2012a. 2011 Geotechnical Investigation for Mine Site Infrastructure, Factual Data Report. Eagle Gold Project, Victoria Gold Corporation.

- BGC Engineering Inc. 2012b. 2012 Geotechnical Investigation for Mine Site Infrastructure, Factual Data Report. Eagle Gold Project, prepared for Victoria Gold Corporation, December 2012.

Sources of borrow material have been identified via previous geotechnical investigations.

Durable meta-sedimentary rock (quartzite) and relatively un-weathered granodiorite is available from certain cut areas (e.g., HLF Phase 1 pad, crusher pads, stockpile areas, plant site large road cuts, etc.), and from some of the placer tailings in the Dublin Gulch valley.

Most construction materials can be derived from local sources, including placer tailings and overburden stripped during mine development, and silt near the laydown area. Some processing will be required to manufacture select materials, including crushing, screening and/or washing. Some of the placer tailings are suitable for use as concrete aggregate.

The sources and approximate volumes of borrow materials are listed in Table 3.2-2. Borrow material sources are depicted in Figure 3.2-2.

Table 3.2-2: Summary of Borrow Material Availability

<table>
<tr><th>Borrow Source</th><th>Material Types</th><th>Comments</th></tr>
<tr><td>Open Pit Pre-strip</td><td>Durable rock fill
Non-durable rock fill
Concrete aggregate
Heap overliner
Rip rap</td><td>Source consists of weathered granodiorite and weathered silicified metasedimentary rock (i.e. typically quartzite).
Materials to be source prior to mining activities.
Most near surface weathered rock suggests majority of excavated block size of approximately 100-300 mm. Larger block size for rip-rap may be possible.</td></tr>
<tr><td>Large road cuts, crusher pads, stockpile areas</td><td>Durable rock fill
Non-durable rock fill
Concrete aggregate
Heap overliner
Rip rap</td><td>Source consists of weathered granodiorite and weathered silicified metasedimentary rock (i.e. typically quartzite).
Materials to be sourced prior to mining activities.
Most near surface weathered rock suggests majority of excavated block size of approximately 100-300 mm. Larger block size for rip-rap may be possible.</td></tr>
<tr><td>Ann Gulch Central Knob</td><td>Mostly non-durable rock fill</td><td>None</td></tr>
<tr><td>Steiner Zone</td><td>Durable rock fill
Non-durable rock fill
Concrete aggregate
Heap overliner
Rip rap</td><td>Assumes quarry depth of 5 m.</td></tr>
<tr><td>Dublin Gulch Placer Tailings/Stockpile Areas</td><td>General Fill
Structural Fill
Concrete Aggregate
Heap overliner
Rip rap</td><td rowspan="2">Material types from placer tailings are highly variable, and will require processing through screening, crushing, and/or washing to develop the required material specifications.
Oversized materials (> 75 mm) screened from the tailings may be suitable for use after crushing, as heap overliner, or concrete aggregate.
Rip rap is expected from the screened oversize material; however the quantity of 500-600 mm particles is expected to be small.</td></tr>
<tr><td>Haggart Creek Placer Tailings</td><td>General Fill
Structural Fill</td></tr>
</table>

Borrow Source	Material Types	Comments
Laydown area/LDSP Area	Silt liner	Available silt materials are frozen and ice-rich, and will require thawing and drying prior to use.

3.2.5 Foundations

Buildings will be founded on horizontal conventional spread footings or other mass concrete foundations, covering a layer (minimum 150 mm thick) of compacted free-draining sand and gravel above subgrades. Foundations will be constructed below the maximum estimated 3 m depth for frost protection, or be insulated by sufficient Styrofoam or polystyrene insulation, between two layers of bedding sand. Buildings should be set back a minimum of 10 m from the crest of fill slopes. Conveyor foundations will be constructed on concrete-filled steel pipe piles socketed into rock (BGC, 2012c).

The primary crusher will be located on a 12 x 18 m mat on Type 1 rock subgrade, with an allowable bearing pressure of 1,000 kPa. The secondary and tertiary crushers will be located on mats of 16 x 16 m and 9 x 14 m, respectively, and on Type 2 rock subgrade with allowable bearing pressures of 400 kPa. Conveyors from the tertiary crusher to the HLF will be placed on bents on 1.5 x 6 m footings. Rock type definitions and allowable bearing pressures for ancillary facilities is provided in Table 3.2-3 and Table 3.2-4, respectively.

Table 3.2-3: Rock Type Definitions

<table>
<tr><th>Rock Type</th><th>Weathering Grade</th><th>Intact Rock Strength</th><th>GSI - RMR_{76} - RQD*</th><th>Core Recovery</th><th>Comments</th></tr>
<tr><td>3</td><td rowspan="3">W4 or better for all rock types 1, 2 or 3</td><td rowspan="3">> R0, ie. UCS ≥ 1 MPa for all rock types 1, 2 or 3</td><td>N/A</td><td>N/A</td><td>It is expected that Type 3 rock can be excavated with normal excavating equipment.</td></tr>
<tr><td>2</td><td>GSI or RMR_{76} ≥ 30;
or
RQD > 10</td><td rowspan="2">≥ 50% for rock types 1 or 2</td><td>It is expected that Type 2 rock will require ripping.</td></tr>
<tr><td>1</td><td>GSI or RMR_{76} ≥ 40;
or
RQD > 40</td><td>It is expected that Type 1 rock may require blasting.</td></tr>
</table>

Notes: (*) RQD criterion can be used on the absence of Geological Strength Index (GSI) or Rock Mass Rating 1976 (RMR76).

Table 3.2-4: Allowable Bearing Pressures for Ancillary Facilities

Bearing Stratum	Allowable Bearing Capacity (kPa)	
	Up to 2m x 2m Pad Footing	Up to 2m x 20m Strip Footing
Structural Fill[1]	250	150
Highly to Completely Weathered Rock	250	150
Type 3 Rock	500	300
Type 2 Rock	1,000	600
Type 1 Rock	1,500	1,000

Notes: [1]Footings founded on structural fill require a minimum of 1.5 m of embedment (depth of bottom of footing below surrounding grade) to obtain the indicated allowance bearing capacity. Separate consideration of frost protection may be necessary.

A concrete batch plant consisting of a bulk storage silo, cement weigh batcher, twin shaft mixer, controls and motor control center, water weigh batcher and holding tank, mixer charging conveyor, aggregate feed system and generator will be located at the site of the future landfill. Sumps will be constructed to contain, settle solids, and then reuse all concrete wash water with zero discharge to watercourses.

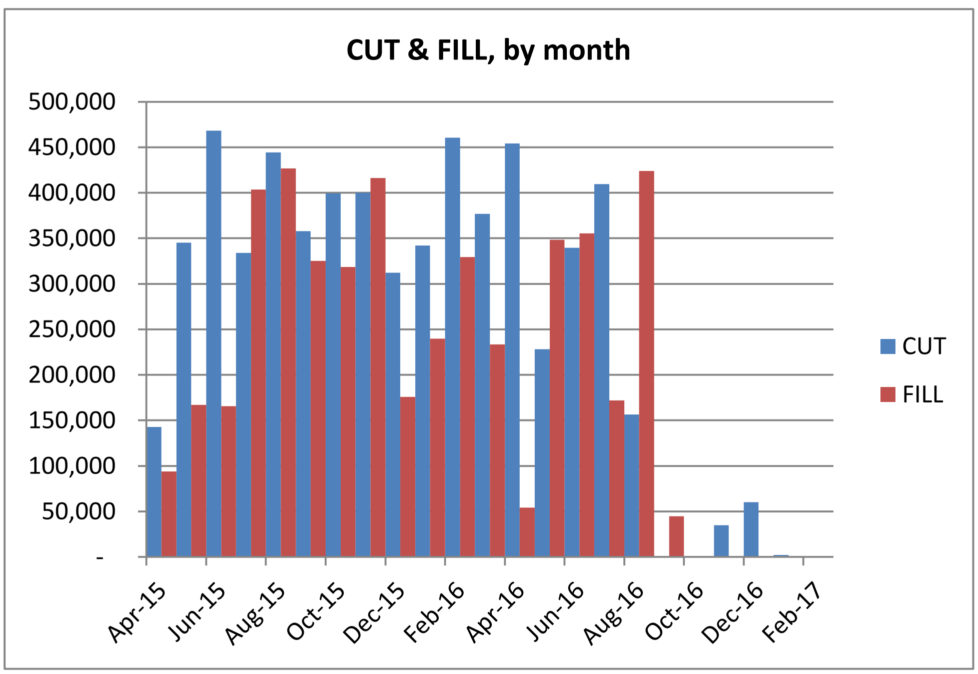
3.3 CONSTRUCTION QUALITY ASSURANCE / QUALITY CONTROL

A construction quality assurance and quality control plan will be developed as part of the detailed design and packaged with issued for construction drawing packages for specific infrastructure components.

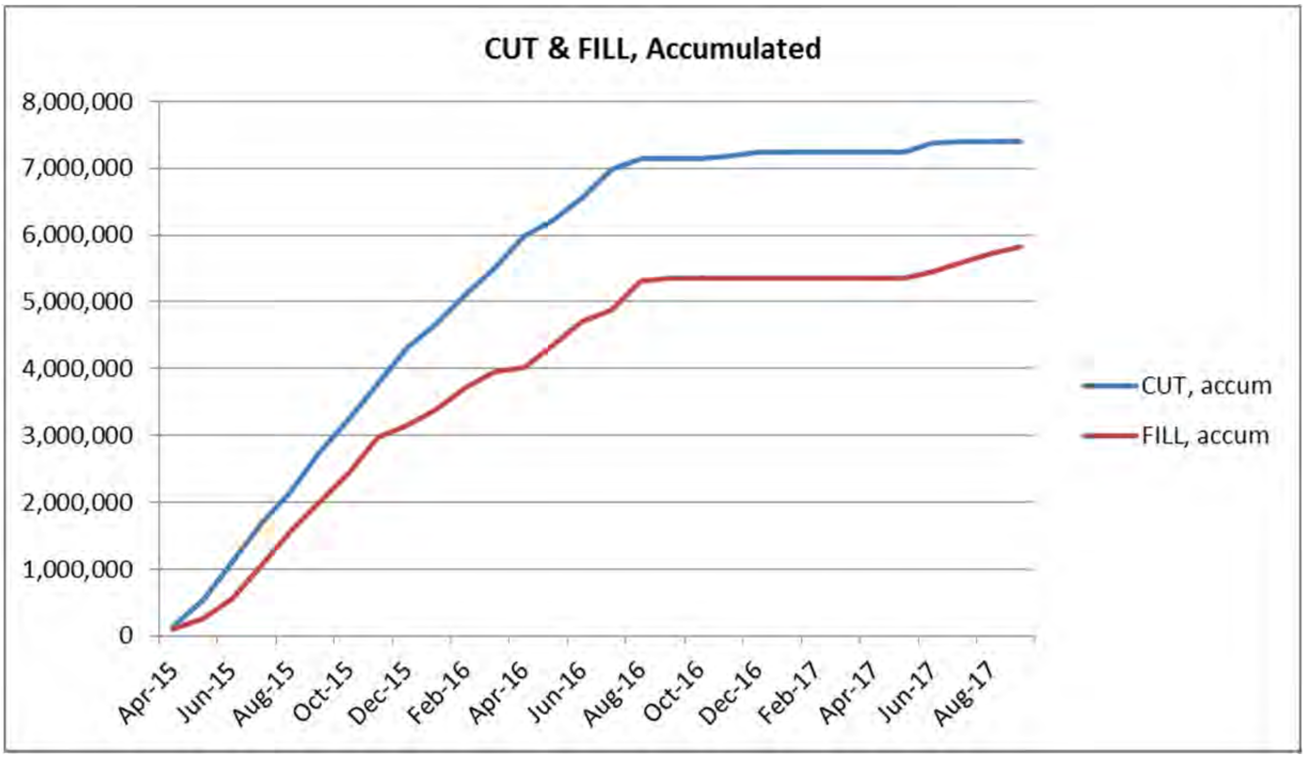
Detailed specifications and quality control measures will be part of the preparation of Issued for Construction design drawing packages.

3.4 MATERIAL RELEASE SCHEDULE

The Project will involve the movement of large quantities of earth and rock fill in a relatively short construction period and within a limited footprint. Infrastructure pads will generally be constructed as cut and fill operations when the material requirements described in Section 3.2.4 can be met. The figure below depicts the currently planned cut and fill operations for the construction phase of the project.



It is anticipated that there will be an excess of approximately 1.6 Mm^3 of cut material, as shown below, primarily composed of topsoil, colluvium and weathered bedrock. This excess material will be stored in the reclamation stockpiles for use during the closure phase of the Project as discussed in the Closure and Reclamation Plan.



The Waste Rock and Overburden Facility Management Plan provide the various material types removed from the pit by year and to each destination (waste material to Eagle Pup or Platinum Gulch WRSAs and ore to primary crusher, temporary ore stockpile and HLF

3.5 ORE HANDLING PROCEDURES

3.5.1 Crusher and Conveyor System Overview

Ore will be mined and delivered to the primary crusher at an average rate of 29,500 t/d (10.3 Mt/a). The remaining crusher units, conveyor and portable stacking system are designed to crush and place ore at a rate of 41,300 t/d. The locations of the crushing system are shown on Figure 3.5-1.

The HLF will operate year-round. During most of the year (250 d/a) ore will be crushed, agglomerated, stacked and leached using a 1,219 mm wide conveyor stacking system. Primary crushed ore will be stockpiled on the temporary ore stockpile during the coldest 100 d each winter while leaching continues on the HLF.

A temporary ore stockpile will be developed to store up to approximately 2.9 Mt (i.e., assuming 100 days) of crushed ore (primary only) during the coldest 100 days of each winter (November to March).

Ore from the temporary ore stockpile will be reclaimed back into the crushing circuit, so that the secondary and tertiary crushers will process 41,300 t/d. The locations and design of the temporary ore stockpile are described in the Waste Rock and Overburden Facility Management Plan.

Ore will first be delivered by haul truck to the primary crusher, located north of the open pit. During regular operations (250 d/a), the ore will be transported by covered conveyor from the primary crusher to the secondary crushers and following crushing onto the tertiary crushers. The ore processing plant will include secondary and tertiary cone crushers and associated conveyors, feeders, chutes, bins, screens, head sampler, dust collection system, overhead cranes and ancillary equipment, including but not limited to plant air, lube systems, heating, and lighting. For the gyratory crusher a storage area/stand for a fully dressed main–shaft is to be provided with appropriate crane coverage to facilitate crusher maintenance. Chutes and chute liners are designed to allow for easy liner replacement, with a pre-engineered replacement liner system. The dust collection system is designed together with all chute transfers, crusher and screen covers and conveyor skirting to reduce dust generation and optimize dust collection.

During the coldest part of winter (100 d/a), the primary crushed ore will be conveyed to the temporary ore stockpile. Once climate conditions meet operational criteria for HLF pad stacking, the ore stored on the temporary ore stockpile will be reclaimed and fed back into the crushing system at the secondary crushing plant. The crushing system will produce an average particle size P80 6.4 mm.

The crushed ore will then be transported by covered conveyor to the heap leach pad for stacking. Agglomeration may occur during the first three years using lime and cement. After which only lime will be added to the ore before it is stacked on the heap leach pad. Agglomeration will be achieved with cement and lime additions to the ore following tertiary crushing either while the ore is traveling down the overland conveyor system or in a drum agglomerator located at the base of the HLF feed conveyor. Ore will be stacked on a composite liner system in 10 m lifts using a stacking conveyor system.

3.5.2 Primary Crushing and Conveying

The primary crushing and screening plant will have a gyratory primary crusher with ore dump pocket having a capacity of 300 metric tonnes, and the ability to truck dump from two sides. The Project will employ a mobile rock breaker. Primary crusher capacity will be to crush run-of-mine ore (at a maximum nominal size of 1,000 mm) at a rate of not less than 29,500 metric tonnes per day, feeding a fine ore crushing and screening plant. The primary crusher dump pocket will be located at 1,050 masl, just over 250 m north of the final open pit rim. During regular operations, run-of-mine (ROM) ore will be direct-dumped into the dump pocket, or a small temporary ROM stockpile, if the primary crusher is not available for direct dumping. The primary crushed ore will be collected in the discharge pocket below the primary crusher. A belt feeder will regulate the discharge rate of the primary crushed ore, nominally at 1,444 t/h onto the 1,524 mm wide primary crushing discharge conveyor. The conveyors will be fitted with covers.

3.5.3 Secondary Crushing and Conveying

The primary crushing discharge conveyor will deliver the primary crushed ore to a surge bin. Two belt feeders will regulate the ore feed rate from the surge bins to a nominal rate of 1,012 t/h each (to accommodate primary crushed ore reporting from current mining operations and reclaimed ore coming from the temporary stock pile), to double deck vibrating screens (secondary screens) with apertures of 89 (3.5 inch) and 38 mm (1.5 inch), respectively. The two separation decks produce a coarse and a fine product.

The coarse product material will discharge to secondary crushers with a closed side setting of 19 mm (3/4 inch).The undersize material from the secondary screens will report directly to the tertiary crusher surge bin.

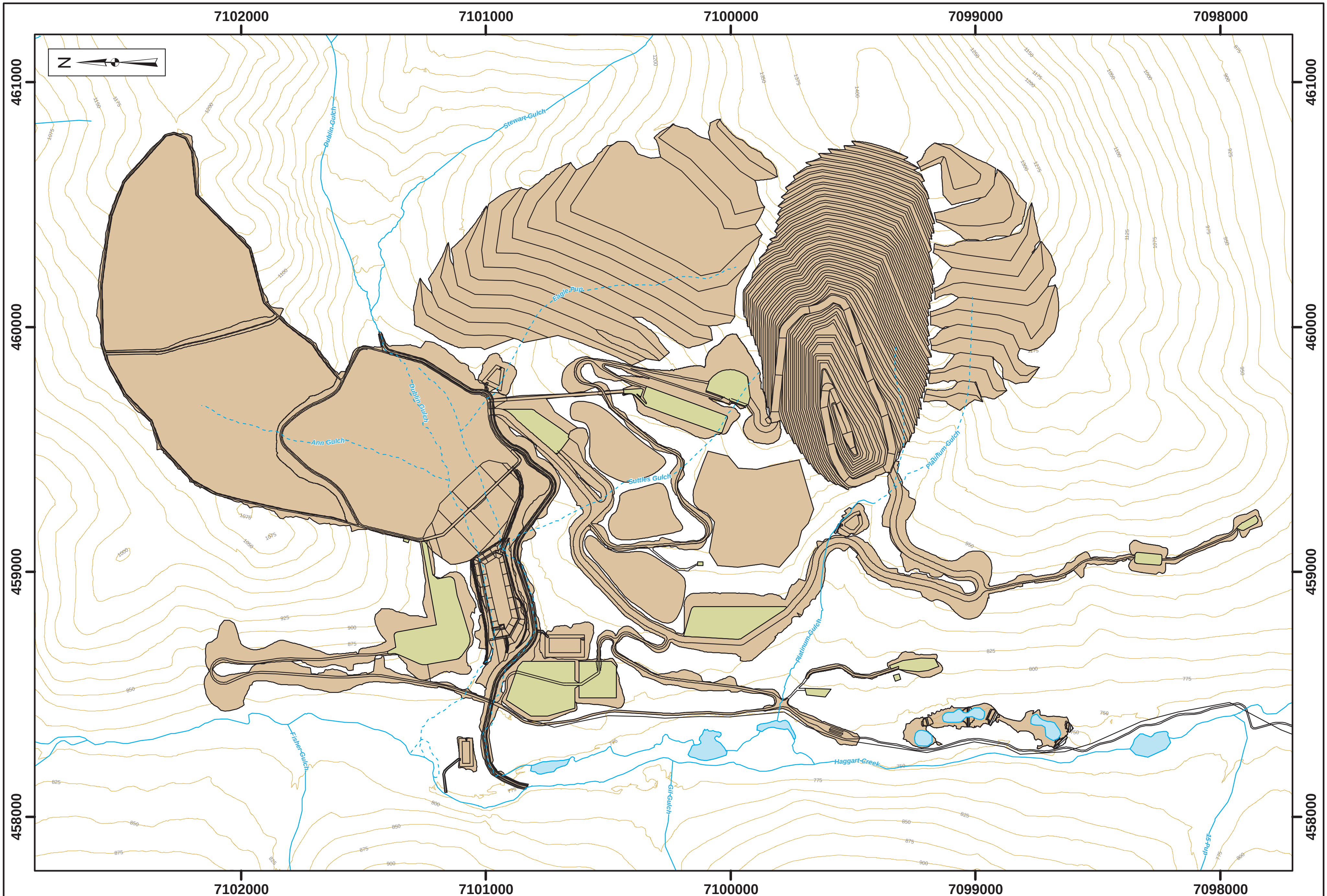
The combined secondary crusher discharge product and screen undersize will be transported by a secondary crushing discharge conveyor to the tertiary crusher feed bins. The discharge conveyor will be equipped with a magnet to remove any tramp steel that may be mixed in with the ore that may damage the conveyor belts and crushers. The conveyors will be fitted with covers.

3.5.4 Tertiary Crushing and Conveying

Ore from the secondary crushing circuit will be conveyed to a feed bin prior to the final crushing stage. Material from the feed bin will be fed, in parallel, to inclined vibrating screens. The screen oversize material from the screens will be fed to tertiary crushers operating in a closed circuit.

Screen undersize material will be conveyed directly to the heap leach pad. The tertiary crusher discharge will be fed back to the vibratory screens thereby completing the closed circuit. The final crushed ore will be reduced to a P80 size of 6.4 mm.

Various ancillary equipment will include a dust collection system, overhead cranes, weightometers, samplers, maintenance hoists, and lubrication units for the crushers.



Legend:

- General Arrangement Infrastructure
- Contour (25m)
- Watercourse
- Watercourse (Diverted)
- Clearing Extent
- Pad
- Waterbody

StrataGold Corporation

0 125 250 500
Metres
Scale = As Shown

Projection:
NAD83 UTM
Zone 8N

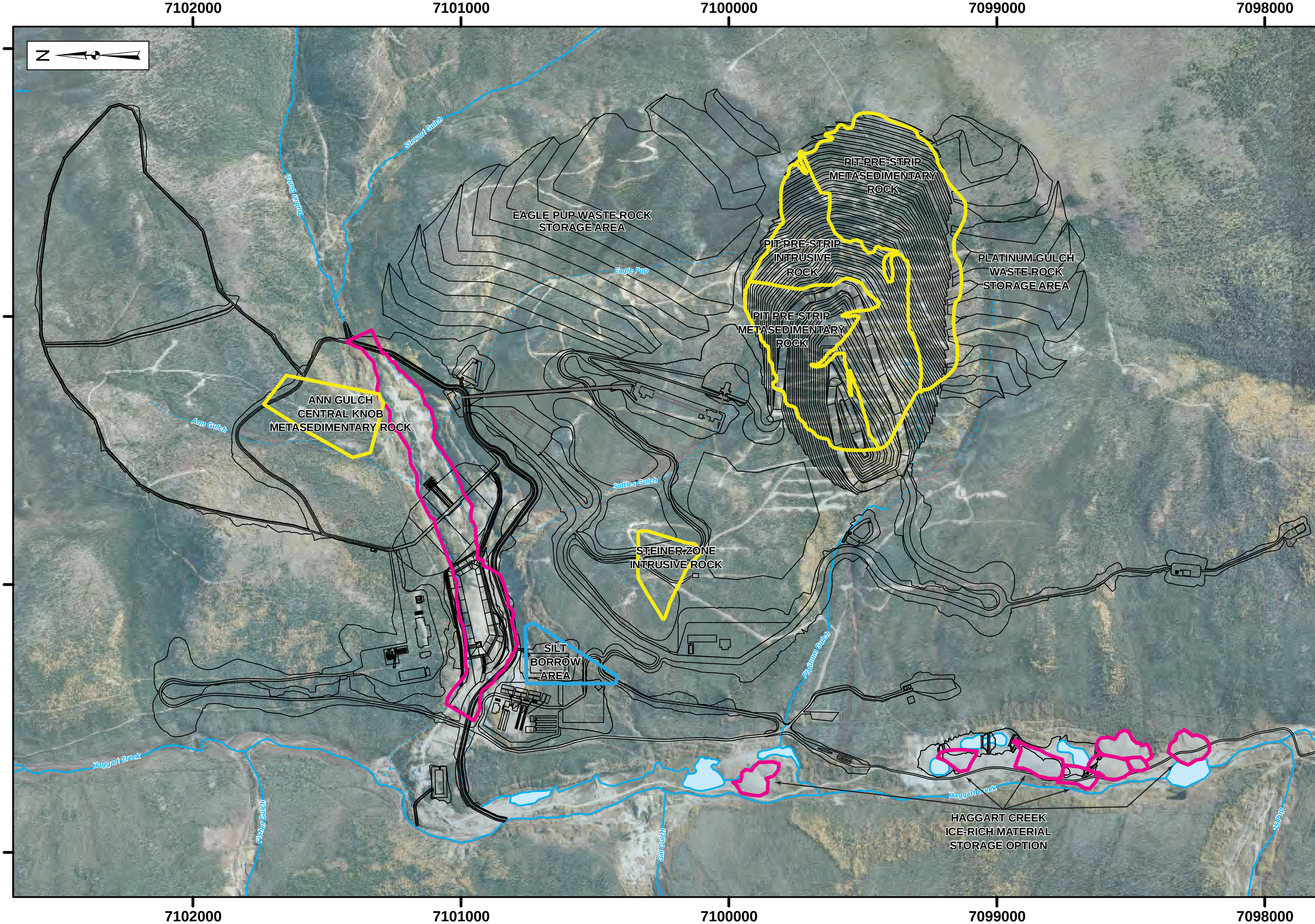
Drawn By:
SS

Date:
2014/07/16

Figure:
3.2-1

EAGLE GOLD PROJECT
YUKON TERRITORY

Site Clearing Extent



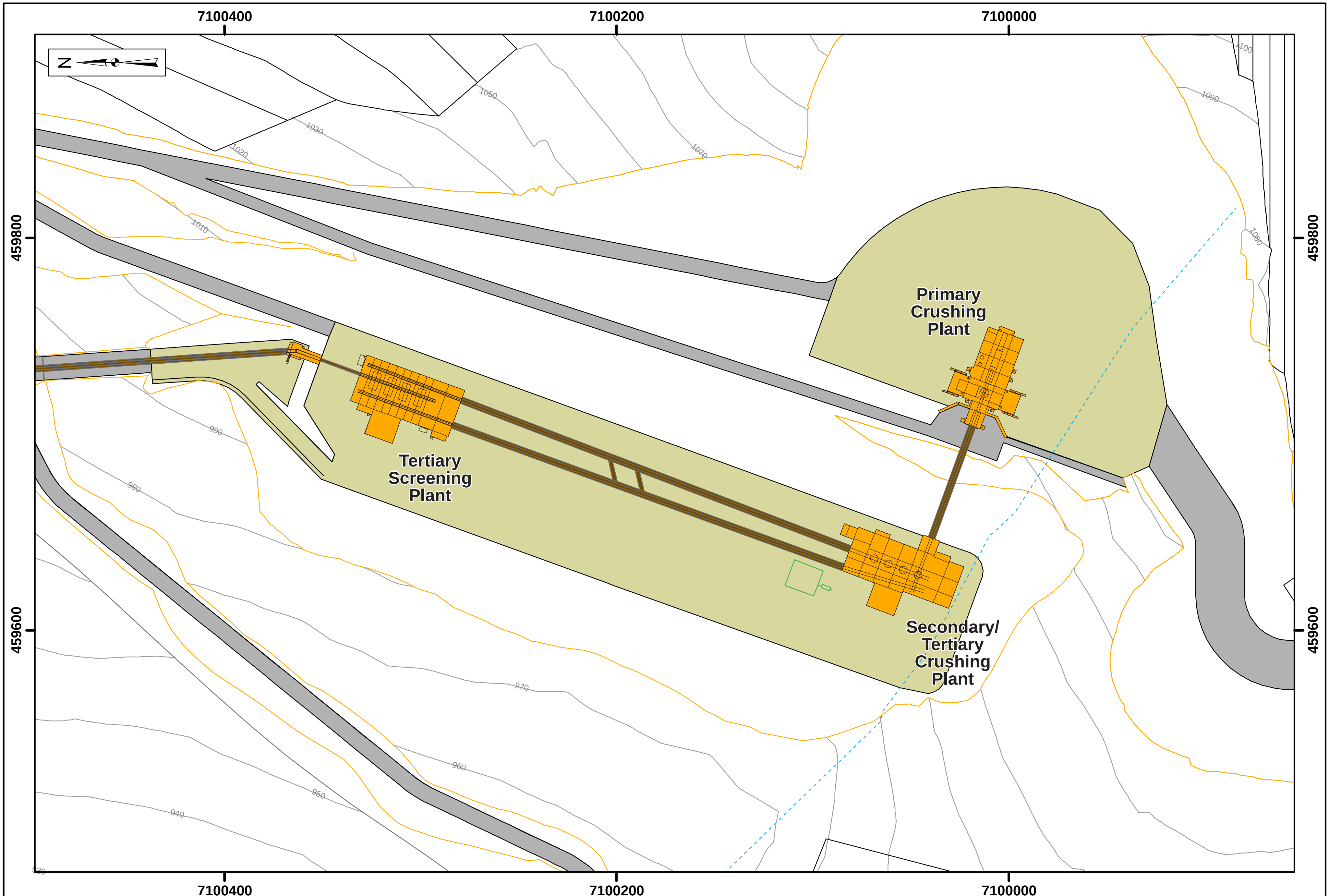
Legend:

- Site General Arrangement
- Watercourse
- Watercourse (Diverted or Infilled)
- Placer Tailings
- Rock Material Source
- Silt Material Source
- Waterbody

StrataGold Corporation

0 125 250 500
Metres
Scale = As Shown

Projection: NAD83 UTM Zone 8N	Drawn By: SS	**EAGLE GOLD PROJECT YUKON TERRITORY**
Date: 2014/07/16	Figure: 3.2-2	**Construction Borrow Material Locations**



Legend:

Cut/Fill	Watercourse (Diverted)	Conveyor
Septic Tank	Building	Road Bed
Contour (10m)	Pad	Septic Tank

StrataGold Corporation

0 25 50
Metres
Scale = As Shown

Projection: NAD83 UTM Zone 8N

Drawn By: SS

Date: 2014/07/16

Figure: 3.5-1

EAGLE GOLD PROJECT YUKON TERRITORY

Crushing and Screening Area

4 ASSOCIATED MINE SERVICES AND INFRASTRUCTURE

The Eagle Gold Mine will be supported by ancillary infrastructure, and industrial complex and fuel storage facilities. All infrastructure associated with the mine is shown on Figure 1.2-1.

4.1 BUILDINGS

The Project will include permanent accommodations for 250 people and temporary accommodations for an additional 150 people during construction (total peak construction camp capacity at 400 people). The camp will consist of modular dorm units, washroom facilities, a kitchen and dining area, and laundry facilities. Administration, mine offices, and camp dry will be integrated into the camp complex.

A modular assay laboratory, mine truck shop, truck scale, and guardhouse will also be developed.

4.2 ACCESS ROAD AND LAYDOWN AREAS

From Mayo, access to the Project site is along approximately 85 km of existing paved and gravel roads. Roads from Mayo to the site include the Silver Trail (Highway 11) and via the existing South McQuesten Road (SMR) and the Haggart Creek Road (HCR). All but the HCR is government maintained road. The HCR will be upgraded to a single lane, radio controlled gravel surface road with pullouts appropriately spaced. The HCR will require minor alignment and drainage upgrades to support construction and operations phase traffic.

StrataGold will implement the following to maximize road and transport safety:

a) Work with the Department of Highways and Public Works to ensure both public and private portions of the access road are properly maintained and upgraded as required

b) Enforce speed limits for all Project vehicles

c) Ensure trucking/hauling contractors have appropriate driver training, radio contact capabilities, vehicle maintenance requirements, and spill response capabilities

d) Ensure all hazardous materials are transported and handled in accordance with the Transportation of Dangerous Goods Act and Regulations

e) Require bulk carriers to carry two-way radios to communicate with the mine site

f) Post signage along Haggart Creek Road and ensure non-Project traffic is aware of radio protocols

g) Identify wildlife migration corridors and crossings along the road and provide signage in high risk areas

h) Plow snow at wildlife crossing and escape points in the access road snow banks (i.e., 0.5 m or less at regular intervals).

4.3 TRANSMISSION LINE AND SUBSTATION

Power to the site will be supplied by a new 45 km transmission line connection to the Yukon Energy Corporation grid, routed along the access road (Figure 4.3-1). The 69 kV transmission line will feed a main substation on site (Figure 4.3-2) to provide power to mine site infrastructure and related loads.

The fenced site 69 kV substation will contain an incoming structure and isolation switches, a main circuit breaker, provision for utility metering, and bus work to deliver 69 kV power to two-step down transformers, each with a primary circuit breaker and isolating switches. The transformers will deliver power to a secondary substation, which will provide 25 kV power via overhead lines to the pit, crushing, processing plant and other local facilities. A filtered capacitor bank connected to the 25 kV bus will provide power factor correction. Three 1.5 MW emergency generators connected to the 25 kV bus will provide back-up power.

4.4 EXPLOSIVES AND MAGAZINE STORAGE FACILITIES

Explosives will be stored and handled in accordance with a magazine license issued by Natural Resources Canada. Explosives and blast caps will be stored in separate facilities, away from operational areas. Two containers will be placed to house explosives components. Both of these structures will be located southwest of the open pit (Figure 4.4-1). One container will house explosives, while the other magazine storage facility will house blasting caps.

4.5 FUEL STORAGE

The largest fuel storage facility will be located near the truck shop and will contain two 750,000 L diesel fuel tanks. Smaller fuel storage facilities will be located adjacent to the ADR plant and the primary crushing plant and each location will have 100,000 L diesel fuel storage capacities. A 10,000 L storage tank that will store waste lubricating oil collected from mine equipment will be located near the ADR plant, as well. Three 5,000 gallon capacity propane tanks will be located adjacent to the permanent camp. The camp fuel storage capacities assume a reserve storage of two weeks to last during winter operations.

SGC will implement the following spill prevention and response measures:

a) If there is any doubt regarding the size of a spill, material involved, and whether it is reportable, SGC will err on the side of caution and report the spill.

b) Caches of spill response materials will be placed along the access road as required by the Spill Response Plan, including at the Haggart Creek crossing.

c) Project staff will have appropriate emergency response and spill contingency training and knowledge. Equipment, materials, and procedures will be maintained to limit the consequences of releases to the environment through prompt containment and clean-up.

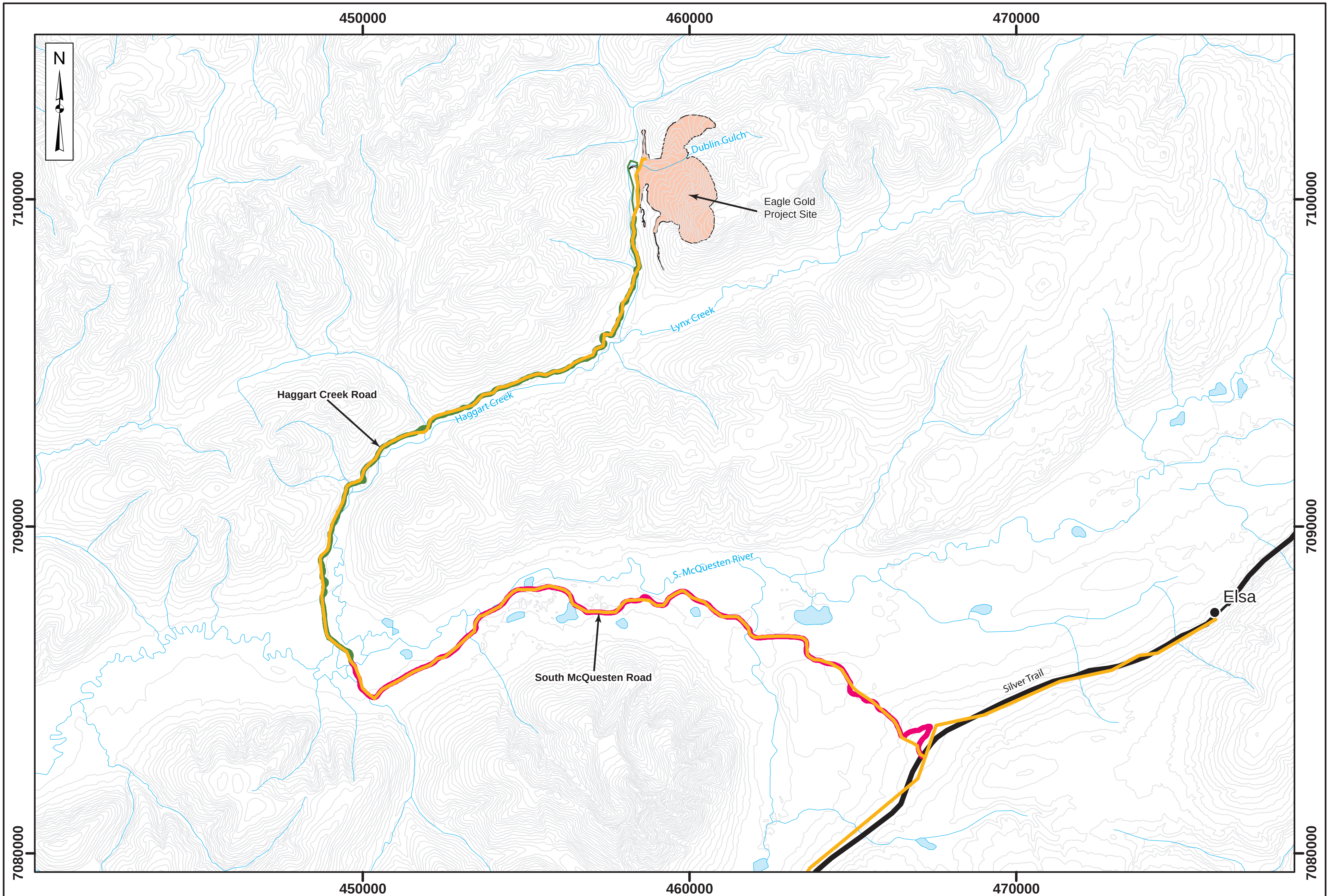
d) Fuels, hydrogen peroxide, and other hazardous liquids will be transferred from tanker trucks to storage tanks by enclosed lines, hoses, and pumps equipped with pressure transducers and volume counters to ensure tanks cannot be overfilled.

e) No lubrication, refueling or maintenance of equipment will occur within 30 m of wetlands or watercourses.

f) All fuelling and lubrication of construction equipment will be carried out in a manner that minimizes the possibility of spills. All containers, hoses, and nozzles will be free of leaks and all fuel nozzles equipped with functional automatic shut-offs.

g) Where stationary equipment cannot be relocated more than 30 m from a watercourse, it will be situated in a designated area that has been bermed and lined with an impermeable barrier with a holding capacity equal to 125% of the largest tank within the berm.

h) Equipment operators will be appropriately trained in spill response procedures and carry spill kits capable of handling spills on land and water.



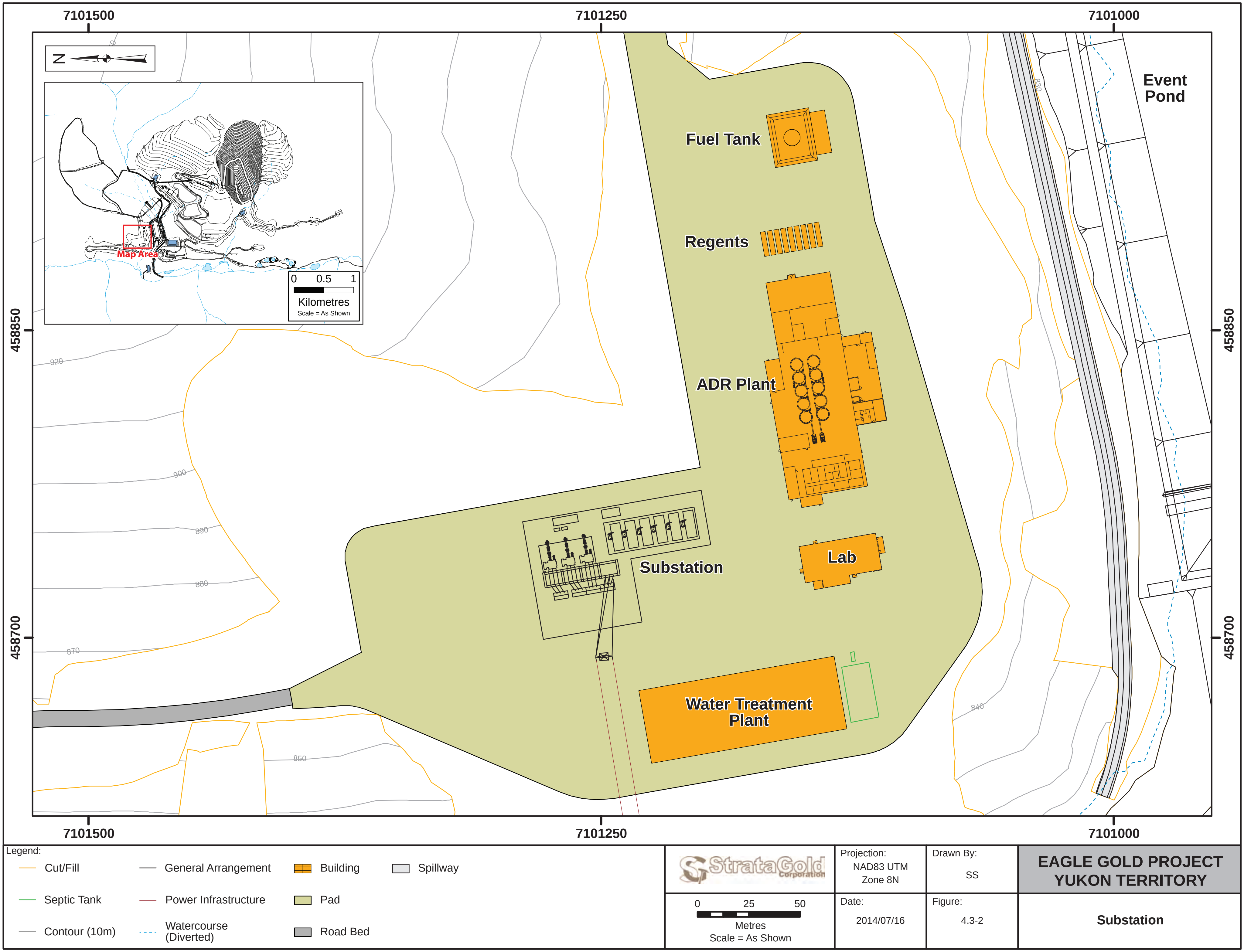
Legend:

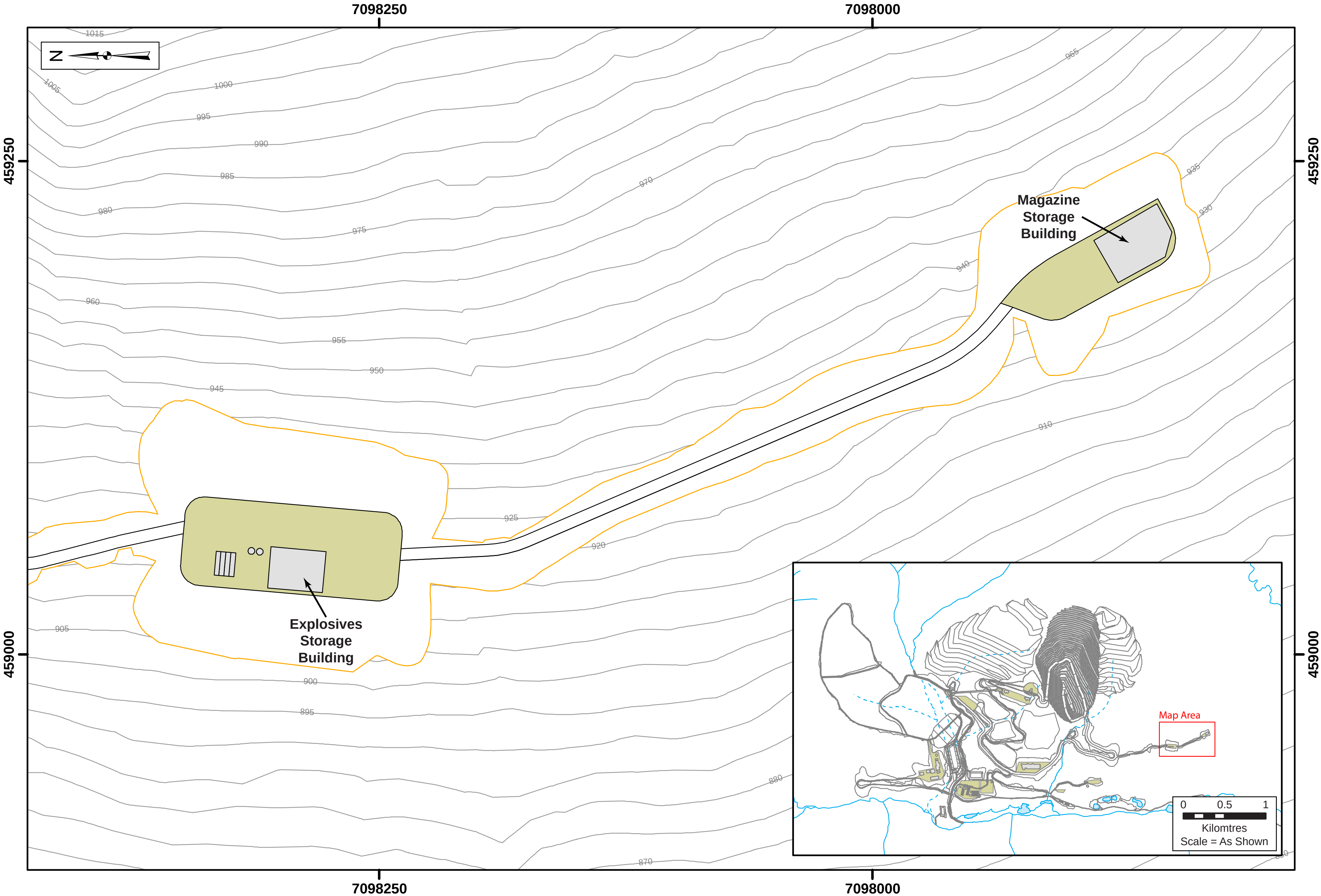
- Town / Village
- Haggart Creek Gravel Road
- South McQuesten Gravel Road
- Road - Paved
- Transmission Line
- Watercourse
- Contour (100ft)
- Project Site Outline
- Waterbody

StrataGold Corporation

0 2.5 5
Metres
Scale = As Shown

Projection:	Drawn By:	
NAD83 UTM Zone 8N	SS	**EAGLE GOLD PROJECT YUKON TERRITORY**
Date: 2014/07/16	Figure: 4.3-1	**Transmission Line**


7101500
7101250
7101000
458850
458700
Event Pond
Fuel Tank
Regents
ADR Plant
Substation
Lab
Water Treatment Plant
Map Area
0 0.5 1
Kilometres
Scale = As Shown
920
900
890
880
870
850
840
830
Legend:
Cut/Fill
General Arrangement
Building
Spillway
Septic Tank
Power Infrastructure
Pad
Contour (10m)
Watercourse (Diverted)
Road Bed
StrataGold Corporation
0 25 50
Metres
Scale = As Shown
Projection:
NAD83 UTM Zone 8N
Drawn By:
SS
Date:
2014/07/16
Figure:
4.3-2
EAGLE GOLD PROJECT
YUKON TERRITORY
Substation



Legend:

Cut/Fill	Building
Road	Pad
Contour (5m)	

Inset Legend:

General Arangement	Pad
Watercourse	Waterbody
Watercourse (Diverted)	

StrataGold Corporation

0 25 50
Metres
Scale = As Shown

Projection: NAD83 UTM Zone 8N

Drawn By: SS

Date: 2014/07/16

Figure: 4.4-1

EAGLE GOLD PROJECT
YUKON TERRITORY

Explosives & Magazine Storage Area

5 ADDITIONAL OPEN PIT DESIGN CONSIDERATIONS

5.1 OPEN PIT CONSTRUCTION SEQUENCING

During Stage 2 Construction, a part of the open pit will be cleared and grubbed progressively to enable the quarrying of durable and non-durable rock to develop the haul roads and for other facility construction materials. Overburden and extremely weathered or altered material will be mined by ripping or excavation with bulldozers and backhoes. Standard drill and blast technology will then be used to advance the pit.

Following the pre-production period, the open pit will be mined initially in 7.5 m benches and then double-benched as mining proceeds towards the final highwall. Typically, two benches will be mined at the same time in different mining pushbacks. The maximum dropdown rate is 16 benches in a year but is on average 10 benches per year.

5.2 DEPRESSURIZATION

The open pit slope angles have been developed assuming varying levels of depressurization to maintain the stability of the walls. Achieving the open pit slope design parameters will require the installation of a sufficient amount of horizontal drainholes to depressurize the pit wall approximately 125 m horizontally from the pit wall face. It is currently estimated that it could take approximately 41 km of horizontal drains, or approximately 300 drainholes, each assumed to be 150 m in length, to depressurize the pit walls over LoM. Vertical depressurization wells will likely not be required throughout the majority of the pit due to the relatively low hydraulic conductivity of the bedrock. If areas of enhanced permeability are encountered as the pit advances, increased rates of groundwater inflow could occur and it may be advantageous to install a number of depressurization wells to aid in managing the groundwater. It is estimated that approximately 10 vertical pumping wells may be required as a contingency to support the horizontal drain depressurization through LoM. The number and location of the drainholes will be adapted in the field to match conditions observed as the open pit is excavated.

Water collected within the open pit footprint, including pit wall runoff, water from the depressurization wells, and groundwater inflows, will be gathered at a common open pit sump and then transferred to the Platinum Gulch Pond and then to the Lower Dublin South Pond. The Surface Water Balance Model Report provides estimates for the volume of water that will need to be managed from the open pit during all phases of the Project. Further discussion on routing and management of open pit water can be found in the Water Management Plan.

5.3 GROUND MOVEMENT MONITORING

Ground movement monitoring of the open pit will consist of visual observations by Project staff and the use of theodolites (robotic or manual) and a network of survey prisms. Approximately 40 prisms will be installed around the pit perimeter, including three backsights (control points), during the mine start-up to establish the initial survey monitoring system. These initial prisms will be monitored with a single theodolite surveying from two or three locations around the pit. The selected monitoring locations will be stable with good visibility of the prisms. During the development and expansion of the pit, another 50 to 100 prisms may be required, with higher prism density in the east pit wall area.

If areas of instability have been identified either through visual inspections or surveying, specific locations within the failure areas may require more detailed monitoring that could include installation of time domain reflectometry (TDR) cables, slope inclinometer, or extensometers to measure displacements across specific features such as shear zones or cracks.

Visual inspections of the open pit slopes will be undertaken daily. Monthly surveys will be carried out on the survey prisms. More detailed inspections of the open pit walls may be completed on a monthly basis by the mine’s geotechnical engineer or a competent person who has appropriate geotechnical experience and is familiar with the technical aspects of the open pit design, construction and monitoring.

5.4 BLASTING AND WALL CONTROL

Controlled blasting will be utilized to protect the highwall from blast damage, thereby achieving the geotechnical recommendations for drained steep slopes. Controlled blasting requires a series of techniques to minimize damage to the rock at the limits of open pit mines and excavations due to the action of ground shock wave generated during the blast. Controlled blasting is used to preserve the natural strength and integrity of the rock at the perimeter of the pit. The range of techniques that may be employed includes presplitting, trim blasting, buffer blasting and line drilling. The common feature of controlled blasting techniques is a row of holes drilled at reduced spacing along, or just in front of the final wall usually loaded with smaller amount of charge.

Rotary blasthole drills will be 203 mm in diameter and have a spacing of 6.6 m in order to provide suitable fragmentation for the loading equipment. A diesel powered hydraulic track drill with a 159 mm diameter drill bit will be used for secondary drilling and highwall slope work.

Blasting will be performed using bulk ANFO as the main explosive, with plastic hole liners in wet conditions. The average powder factor for the holes is expected to be 0.57 kg/m^3 (or 0.21 kg/tonne of ore or waste) with an average annual consumption of 5,500 tonnes. Further detail regarding blasting operations on the Project site is provided in the Explosives Management Plan.

5.5 HAUL ROADS

Ramp widths used in the designs were 3.5 times the maximum truck width plus a berm and ditch. A width of 31 m was calculated for 136 t class haul trucks and designed at a maximum gradient of 10% with flat turning surfaces at switchback locations to reduce road maintenance and wear to the haulage trucks. Ramp widths were reduced to single carriageways and steepened to 12% at the base of the pits in order to minimize overall waste stripping volumes.

Switch-backs were strategically located every 90 vertical meters within the various phase designs to maintain constant access points to the surrounding WRSAs. From these access points, two dump lifts can be built by either ramping up or down.

The following standards, in order of highest to lowest priority, apply to rights-of-way at any area not controlled by traffic signs:

- Emergency vehicles - when lights flashing
- Trucks transporting dangerous goods (TDG):
  - Explosives transport vehicles
  - Reagent transport trucks
  - Fuel trucks
  - Other TDG trucks
- Haul trucks
- Bulk carriers (non-TDG)
- Heavy equipment - from large to small
- All other vehicles

When two comparable trucks/vehicles meet, the blind side vehicle has the right-of-way.

Passing is permitted only when safe to do so. Radio or visual contact must be made before passing any heavy equipment.

6 REFERENCES

BGC (2012a). 2011 Geotechnical Investigation for Mine Site Infrastructure Factual Data Report

BGC (2012b). .2011 Geotechnical Investigation for Mine Site Infrastructure Foundation Report. Final Report

BGC (2012c), Geotechnical Assessment and Design of the Waste Rock Storage Areas

BGC (2012d). Eagle Gold Project, Dublin Gulch, Yukon, Feasibility Study Open Pit Slope Design, Final Report, prepared January 20, 2012 by BGC Engineering Inc. Kamloops, BC for Victoria Gold Corp., Vancouver, BC

BGC (2012e). 2012 Geotechnical Investigation for Mine Site Infrastructure Factual Data Report

BGC (2014). Eagle Gold Project Numerical Hydrogeological Model

CIM (2005). CIM Definition Standards – For Mineral Resources and Mineral Reserves. Prepared by the CIM Standing Committee on Reserve Definitions, December 11, 2005.

Lorax (2014a). Mine Waste Geochemical Source Term Predictions – Model Description and Results

Lorax (2014b). Water Quality Model Report.

Linkan (2014). Preliminary Design Mine Water Treatment Plant.

NELPCo 2013). Geotechnical Design Ice-Rich Overburden Storage Area Berms

SRK (2014). Final Report: Geochemical Characterization – Eagle Gold Project

Tetra Tech (2014a). Eagle Gold Project Heap Leach Facility Detailed Design Report, prepared for StrataGold, by Tetra Tech, Grand Junction, CO, April 23, 2014.

Tetra Tech (2014b). Dublin Gulch Diversion Channel Final Design Report, Appendix A of Tetra Tech (2014a)

APPENDIX A

Eagle Gold Project, Dublin Gulch, Yukon, Feasibility Study Open Pit Slope Design, Final Report, prepared January 20, 2012 by BGC Engineering Inc. Kamloops, BC for Victoria Gold Corp., Vancouver, BC.

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BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

VICTORIA GOLD CORPORATION

EAGLE GOLD PROJECT
DUBLIN GULCH, YUKON

FEASIBILITY STUDY OPEN PIT SLOPE DESIGN

FINAL

PROJECT NO:	0792-005	DISTRIBUTION:	
DATE:	January 20, 2012	Victoria Gold:	2 copies
DOCUMENT NO:	0792-005-R03-2012	BGC:	2 copies
		Wardrop:	1 copy

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY
234 St. Paul Street
Kamloops, BC V2C 6G4
Tel: 250.374.8600
Fax: 250.374.8606

January 20, 2012
Project No: 0792-005

Michael Padula
Victoria Gold Corporation
584 – Bentall #4
1055 Dunsmuir Street
PO Box 49215
Vancouver, BC
V7X 1K8

Dear Mr. Padula,

Re: Eagle Gold Project Feasibility Study Open Pit Slope Design Final Report

Please find attached a copy of the above referenced report. It has been our pleasure to work with the staff of Victoria Gold on this project.

Should you have any questions, please do not hesitate to contact the undersigned at 250-374-8600, Ext. 206.

Yours sincerely,

BGC ENGINEERING INC.
per:

H. Warren Newcomen, M.S., P.Eng., P.E.
Senior Geotechnical Engineer

Att.

HWN/ej

EXECUTIVE SUMMARY

BGC Engineering Inc. (BGC) conducted a geotechnical site investigation and design study for the open pit of the Eagle Gold Project to support feasibility level designs of the pit slope angles. The proposed open pit will be located in metasedimentary rocks of the Hyland Group and intrusive rocks associated with the Mid-Cretaceous Dublin Gulch Stock. The maximum depth of the proposed open pit is approximately 580 m.

BGC carried out site investigations to collect geotechnical data for the current study, including: geotechnical drilling, core orientation, packer testing, installation of piezometers and laboratory testing of rock samples. Geotechnical information collected by BGC from thirteen holes drilled between 2009 and 2011 has been used as the primary basis for the open pit geotechnical database. Additional data collected by Sitka (Sitka, 1996) and Knight Piesold (Knight Piesold, 1996), as well as outcrop mapping and geotechnical logging of exploration holes, have also been used for the design.

Five geotechnical units have been interpreted based on the geologic and geomechanical properties of the rocks encountered. They include: metasedimentary (SED), surface weathered metasedimentary (SSED), intrusive (INT), clay altered intrusive (CINT), and surface weathered intrusive (SINT). The unweathered / unaltered rocks are medium strong to very strong; the quality of the rock mass varies from fair to good. The surface weathered rocks are medium strong to very strong; the quality of the rock mass varies from poor to good. The clay altered intrusive rocks are weak to very strong; the rock mass quality varies from poor to fair. The metasedimentary rocks are strongly foliated with the foliation dipping at an average of 30° to the west-southwest.

The pit has been divided into design sectors based on proposed slope heights and the potential for structurally controlled failures. The slope designs developed for each design sector include: bench height, catch bench width, bench face angle, interberm / interramp angle, interberm / interramp height, geotechnical berm width, and overall angle. Designs have been developed for each of the geotechnical units; maximum interberm / interramp angles range from 31° to 43°. As part of the design process, BGC has also checked the "Final Pit" pit shell (Wardrop, November 15, 2011) to confirm that design parameters provided by BGC were properly applied. BGC's design criteria have been met and the overall stability of the proposed slopes is confirmed based on the design factors of safety and assumed hydrologic conditions.

Achieving the proposed open pit slope design parameters will require depressurization of the rock mass and controlled blasting. Potential risks to the pit design include uncertainties in the geologic/geotechnical model for the east wall, which may undercut faulting parallel to foliation and several zones of intense faulting/alteration, possibly related to the intrusion. This wall will require completely depressurization to achieve the design angles. Hydrogeologic investigations and analyses to confirm that this is practically achievable are still underway.

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LIMITATIONS

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1.0 INTRODUCTION

BGC Engineering Inc. (BGC) has been retained by Victoria Gold Corp. (Victoria) to provide Feasibility Study (FS) level open pit slope geotechnical designs for the Eagle Gold Zone (EGZ) located within Victoria's Eagle Gold Project (the "Project"). This report summarizes previous work completed, the site geology as it pertains to slope stability, the data collected to develop open pit slope designs, and the methodologies and assumptions used. The open pit designs have been summarized for use by Victoria Gold's mine planners. Potential uncertainties and opportunities pertaining to the open pit slope designs have been summarized and recommendations for further work to address specific areas of the pit have been provided.

1.1. Previous Work

Mineral exploration activities have been carried out in the Dublin Gulch area since the late 1800's, with drilling of the EGZ initiated in 1978. Structural surface mapping data was collected in the late 1970's (Smit et al., 1995), and geotechnical drilling began in 1995 (Knight Piesold, 1996). Geological and engineering reports pertinent to the pit design work include:

- Knight Piesold Consulting, 1996. Report on the feasibility design of the open pit slopes (Ref. No. 1882/3) - Dublin Gulch Property (Yukon), for First Dynasty Mines.
- Sitka Corp., 1996. Field Investigation Report - Dublin Gulch Property (Yukon), for New Millennium Mining Ltd.
- Sitka Corp., 1996. Open Pit Geotechnical Design - Dublin Gulch Property (Yukon), for New Millennium Mining Ltd.
- Golder Associates, 2007. Technical Review of Dublin Gulch Pit Slope Designs (DRAFT), for KD Engineering Co.
- BGC Engineering, 2010. Pre-Feasibility Open Pit Slope Design, for Victoria Gold Corp.

Engineering design work was previously completed to a level considered to be feasibility level (Sitka, 1996); however, changes in property ownership, a mineral resource update, new mine plan options, and changes to resource/reserve reporting requirements have resulted in a need to update the pit slope designs. Based on the amount of information available at the time, the 2010 BGC report was considered to be at a Pre-Feasibility Study (PFS) level. The current study is considered to be at a Feasibility Study (FS) level, as the current work incorporates additional geological information and geotechnical data collected since completion of the PFS, and supersedes all previous geotechnical design work.

Geological and hydrogeological studies completed by others have also been utilized in the current design study. The key reports include:

- GeoViro Engineering Ltd., 1996. Hydrogeology Characterization and Assessment – Dublin Gulch Gold Project (Yukon), New Millennium Mining Ltd.
- Sieb M and Anonby L, 1997. 1996 Final Exploration Program on the Dublin Gulch Property, New Millennium Mining Ltd.
- Rescan Engineering Ltd., 1997. Dublin Gulch Project Feasibility Report – Volumes 1-3, for New Millennium Mining Ltd.
- Wardrop, 2009. Technical Report on the Dublin Gulch Property, Yukon Territory, Canada, StrataGold Corp.
- Stantec, 2010. Environmental Baseline Report: Climate. For Victoria Gold Corp.

Previous geological assessments vary in scale and level of detail. Geological interpretations completed by Victoria staff in 2011 supersede previous work. Interpretations used in this report were provided by Victoria in the form of 3D geological solids representing the distribution of intrusive and metasedimentary rock units within the study area.

1.2. Current Work

BGC's scope of work for the FS includes engineering geology field investigations and geotechnical designs for a proposed open pit in the Eagle Gold Zone (Drawing 1). These designs are based on geological information provided by Victoria, geotechnical data collected by BGC from 2009 through 2011 and historical geotechnical data collected by others (Drawing 2). In addition to the slope designs for the open pit, BGC is providing geotechnical designs for the waste rock storage facilities and mine facilities (BGC, 2011b). BGC is also undertaking hydrogeologic field investigations to evaluate pit wall depressurization systems to support the feasibility level pit slope designs (BGC, 2012). Mine layout design and environmental assessments for the project are being provided by Wardrop, A Tetra Tech Company (Wardrop) and Stantec Inc. (Stantec), respectively.

This report summarizes the main elements of BGC's pit slope design study, including:

- The field investigations and geotechnical database (Section 2.0).
- The structural domains, i.e. the character and orientations of major structures and the rock mass fabric (Section 3.0).
- The geotechnical units and rock mass model i.e. the engineering properties of the EGZ rock mass (Section 4.0).
- Recommended FS open pit slope design criteria, design methodology, and design assumptions (Section 5.0).
- Important factors for consideration during the pit design and implementation of the design criteria (Section 6.0).
- A review of potential risks and opportunities related to the open pit slope geotechnical design (Section 7.0).
- Recommendations for additional work at future stages of study (Section 8.0).

The work completed for the current study and the data used is considered to be adequate for the development of a feasibility study level slope design. There are numerous assumptions that have been made with respect to the final highwall stability that will need to be investigated further at detailed design stage.

1.3. Study Location

The EGZ is located at the southwest end of the Dublin Gulch property in the Mayo Mining District, approximately 40 km northeast of Mayo, Yukon. The project area is located within a historically active mining region (Figure 1-1). Exploration targets and mines near the site include: Mt. Haldane, McQuestern, Keno Hill, and Brewery Creek.

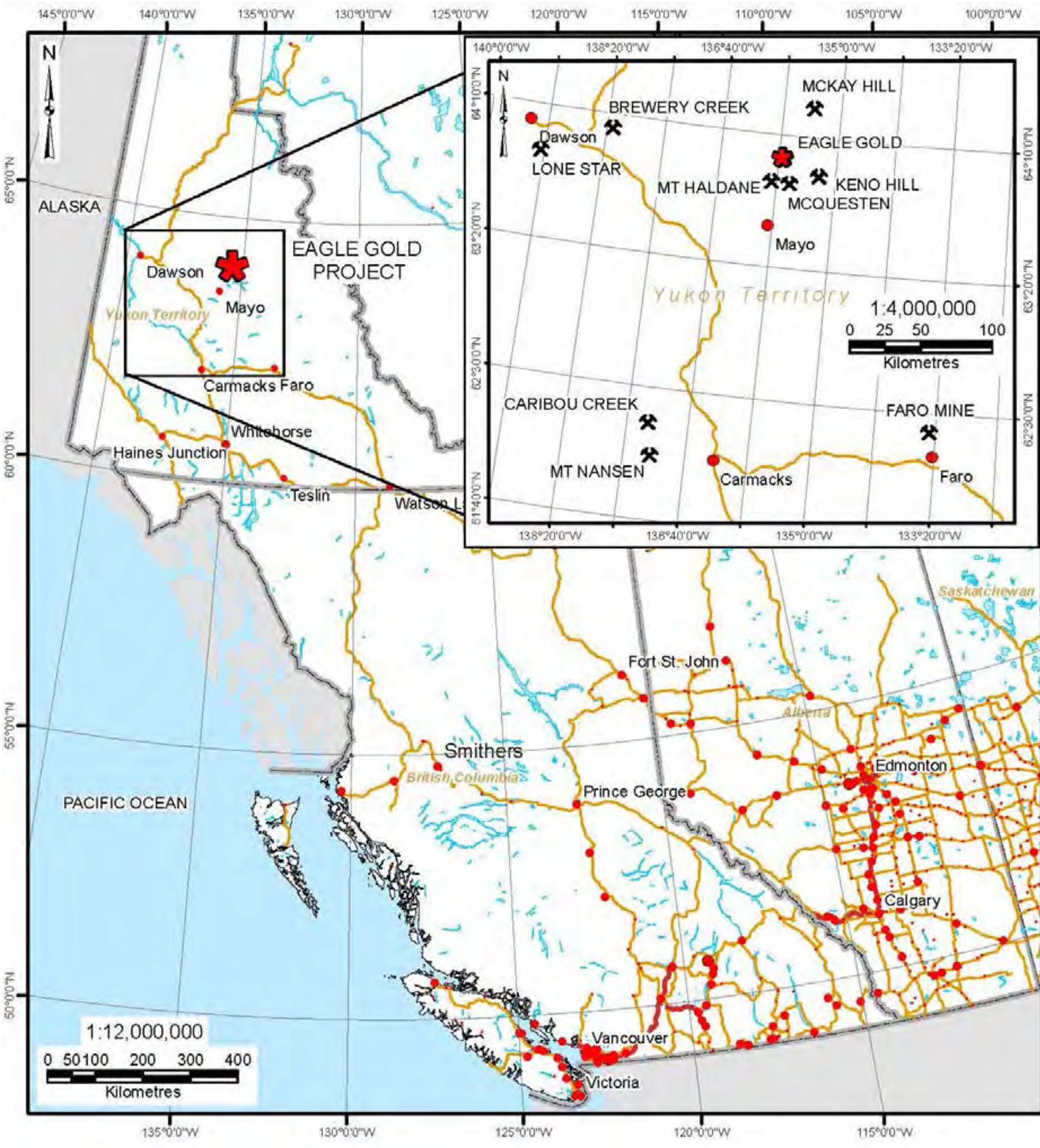

Figure 1-1. Eagle Gold Project Location

1.4. Area Physiography

The EGZ is located on the west flank of a ridge east of Haggart Creek (Drawing 1) near its confluence with Dublin Gulch. The ridge peak east of the EGZ is approximately 1400 metres above sea level (masl); with the valley floor to the west of the mineralized zone at an elevation of approximately 750 masl. The valley floor has been modified by extensive placer mining. The pit area has a northwest aspect sloping at approximately 15°, and is transected by the Eagle Pup and Stuttle Gulch drainages. Platinum Gulch is located on the south side of the proposed pit area.

1.5. Climate

The EGZ is located within the Stewart Plateau subdivision of the May Lake-Ross River Eco-region. The property is located in an area characterized by moderate total annual precipitation and extreme variations in temperature (Rescan, 1997). Average annual precipitation over the property ranges from 375 to 600 mm, half of which falls as snow (Rescan, 1997). Winter temperatures as low as -60°C have been recorded between October and April.

1.6. Geologic Setting and Overview

The Project area is underlain by Upper Proterozoic to Mississippian sedimentary rocks of the Selwyn Basin (Smit et al., 1995). Metamorphic rocks consisting of quartzites, schists, and phyllites of the Hyland Group represent the dominant country rock of the study area. These rocks have been folded and faulted on a regional scale and subsequently intruded by granitic rocks of the Tombstone suite during the Late Cretaceous. The Dublin Gulch Stock is the dominant intrusive rock of the study area hosting the mineralization targeted by ongoing exploration work, and is responsible for local alteration of the country rocks.

1.6.1. Regional Geology

The Project area is located approximately 100 km northeast of the Tintina Fault trench within the Tombstone Gold Belt of the Yukon Territory and is underlain by metamorphosed sedimentary rocks of the Selwyn Basin (Figure 1-2). The Selwyn Basin rocks are not part of an accreted terrane; however, deformation of these rocks is prevalent. Three major thrust faults have been identified at the regional scale near the project area. These are, from west to east, the Robert Service, Tombstone, and Dawson Faults. The Project area lies in the hanging wall of the Robert Service Thrust sheet where Hyland Group sediments juxtapose against Keno Hill Quartzites (Figure 1-2). Folding of the sedimentary and meta-sedimentary rocks is observed throughout the region with synclines and anticlines of multiple scales interpreted from surface mapping observations.

The EGZ, and other mineralized zones, are associated with the intrusion of the Mid-Cretaceous Tombstone Plutonic Suite (Stephens et al., 2004). These post-deformation intrusions host gold, silver, tungsten, lead and zinc deposits as veins, shears or skarns. The EGZ is an example of one of the vein hosted gold deposits of this group.

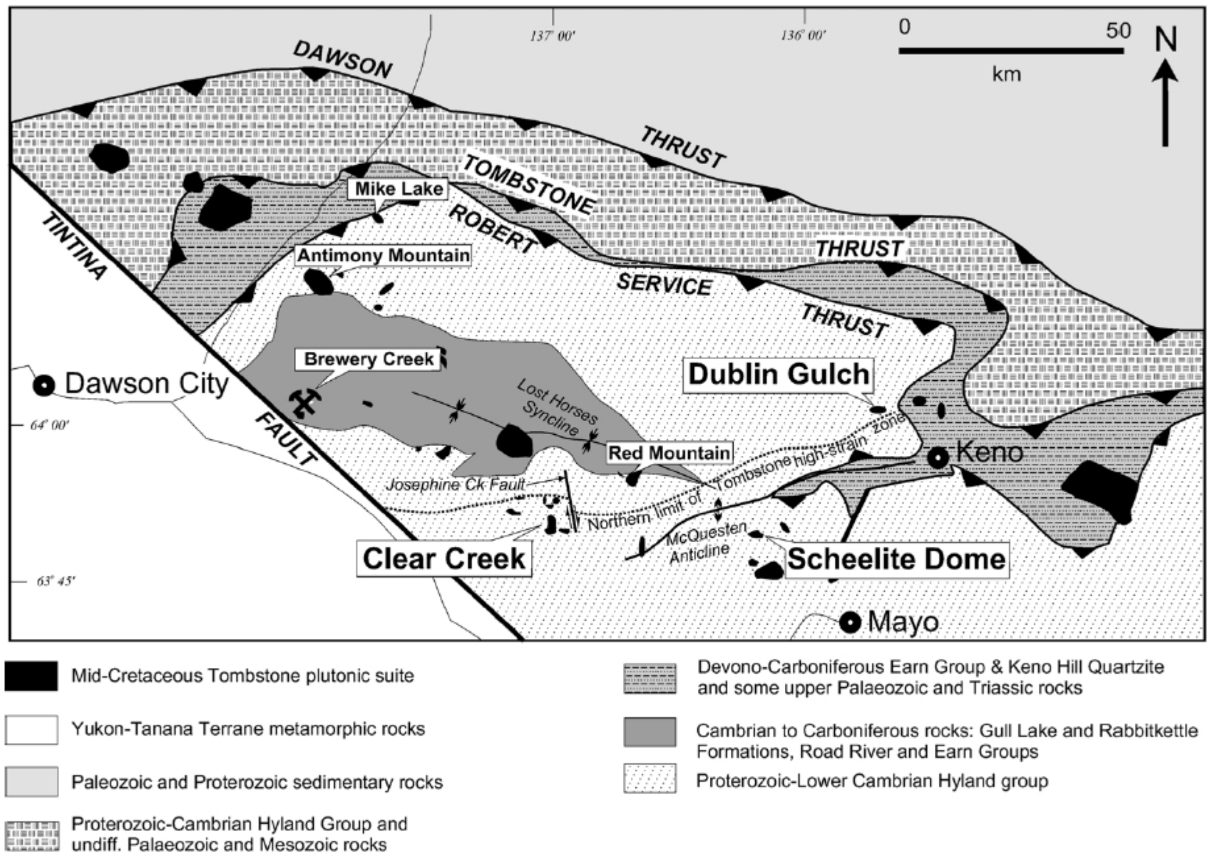

Figure 1-2. Regional geology setting of the Dublin Gulch area (after Stephens et al., 2004).

1.6.2. Lithologies of the Study Area

The bedrock of the EGZ and the property area is divided into two main units: the Hyland Group metasediments and the Dublin Gulch Stock. The bedrock units are described below. Overburden materials are also discussed briefly in this section.

The Hyland Group metasediments are the predominant country rock within the area of the EGZ. These rocks comprise a package of metamorphosed sediments consisting of quartz-rich and locally calcareous phyllite, mudstone, siltstone, quartzite, schists, minor carbonates, and quartz-biotite-andalusite schists. These rocks are foliated; in the EGZ area the foliation is generally moderately dipping (20° to 50°) to the southwest to northwest. Near the intrusive contact the metasediments have been hornfelsed, resulting in an apparent hardening of the rock.

The EGZ occurs near the southwest end of the Dublin Gulch Stock which trends northeast from Platinum Gulch. The surface expression of the stock in the EGZ area measures approximately 2 km in length by 0.5 km in width. The granodiorite of the stock is generally coarse grained. Dykes associated with the Dublin Gulch Stock consist of very fine grained diorite to granodiorite. The dykes tend to cut the stock and the metasediments, particularly along the south margin of the deposit area. For the purpose of the FS both the intrusive stock and the dikes are considered to be the same geologic unit. The granodiorite hosts the majority of mineralization via sheeted quartz veins (Smit et al., 1995). A three dimensional geologic model was provided to BGC by Victoria and was used as the basis for the distribution of the geotechnical units, structural domains, and design sector presented in this report. The geological boundaries can be seen in section in Drawings 3 to 8.

1.6.3. Bedrock Alteration

Alteration of the host bedrock in the Project area has occurred due to intrusion of the Dublin Gulch Stock. The Hyland Group sediments adjacent to the intrusion have been hornfelsed and skarns have developed in carbonate-rich units along the trend of the stock. Quartz veining related to the stock and the mineralization is observed to extend only locally into the Hyland Group sediments in the EGZ.

For geotechnical design purposes, the primary distinction in the study area is between the intrusive and the metasedimentary rocks. For geotechnical purposes, the intrusive rocks have been broken into three classes based on alteration and weathering: fresh and unaltered, clay altered, and weathered. The fresh and unaltered rocks at depth are generally strong to very strong. Some of the intrusives at depth are clay altered at the contact with the metasediments, resulting in a decrease in the intact strength of the rock. The spatial extent of the clay alteration is not well understood at this time; however, it has been postulated to be prevalent around the intrusive – metasedimentary contact and has been characterized as a separate geotechnical sub-unit. A surface weathered unit has also been identified as a distinct geotechnical unit in each of the primary rock types. These are described in detail in Section 4, and their impact on the pit design is described in Section 6.

1.6.4. Overburden in the Project Area

Overburden material in the open pit area was difficult to recover with diamond drilling techniques; however, extensive test pitting in the area around the pit has been carried out for the mine infrastructure site investigation (BGC, 2011a). The overburden in the open pit area consists of a thin layer of organic soil comprised of roots, moss, silt and sand overlying a layer of colluvium of varying thickness (Bond, 1997). The colluvium ranges from loose to compact and consists of boulders and cobbles with some silt and sand, to silty sand with some gravel. The colluvium was typically underlain by a variable thickness layer of highly weathered metasedimentary or intrusive rock. The metasediments were typically observed to be weathered to silt and clay, with some to trace gravel to highly weathered sand and gravel with cobbles and trace to some silt and clay. The intrusive rock (e.g. granodiorite) was typically observed to be either completely weathered to a silty sand or sandy silt, or highly weathered to a poorly graded sand.

The base of the overburden was difficult to define in the open pit area, and as a result, the depth of casing installed or the depth of zero to limited recovery has been used as an indicator of the depth of overburden around the pit. The overburden extends to an average depth of about 10 m below ground surface, and has been observed to be as thick as 36 m below ground surface in the proposed open pit area.

1.6.5. Structural Geology of the Project Area

Major geological structures within the Project area include faults and folds. Distinct structural fabrics are observed in the meta-sedimentary rocks of the Hyland Group and the intrusive rocks of the Dublin Gulch stock, and are supported by mapping and drilling completed in the study area. An overview of the structural geology model is provided below, with additional details in Section 3.0.

1.6.5.1. Faults

The Project area is situated within a zone of regional faulting and compression, however, regional scale faults that have been mapped in the study area do not appear to intersect the proposed open pit (Stephens et. al, 2004). The trace of the Robert Service Thrust fault is interpreted north and east of the Project area (Figure 1-2). The fault dips to the southwest; at an unknown dip. While the regional fault is not mapped in the proposed pit area, a pervasive fabric associated with this (and other) regional thrusts may be visible in the Project area (Smit et al., 1995). The interpreted surface trace of the Haggart Creek Normal Fault coincides with the Haggart Creek drainage, 1 km west of the EGZ. This fault strikes north-south and dips to the west; the dip is unknown. Numerous structural discontinuities observed in geotechnical drill holes have been logged as faults. These are interpreted to be 'project scale' faults (Section 3.2.).

In the metasedimentary rocks, five main fault sets have been observed (Drawing 9). These include one pervasive fault set parallel to the widely observed foliation (Drawing 10) and four weaker fault sets; two of the fault sets have strikes approximately orthogonal to the foliation, one sub-vertical and one opposite the foliation. One of the sets (Set FF1) strikes subparallel to the Haggart Creek Fault. A weaker set (FB2) dipping moderately to the northwest and a sub-horizontal dipping set (FI1) were also observed. In the Intrusive structural domain, several faults were also observed (Drawing 11). Some of the fault sets had similar orientations to those noted in the metasediments; however, a set parallel to the foliation was notably absent. The faults in both the intrusive and metasedimentary unit range in thickness and character from a few centimeters of broken rock infilling to several meters of poor recovery and broken rock in a clayey gouge matrix. The spatial extents of the faulting can be seen in the borehole logs (Appendix A) and the geotechnical sections (Drawings 3 to 8).

Zones of weak rock and large scale faulting up to 13 m thick were encountered in the metasediments in drillholes 09-BGC-GTH-2a and 10-BGC-GTH-06. One fault zone was interpreted to be dipping to the west at an unfavourable angle of approximately 25°. Based on observations along cross-section A (Drawing 3), it appears that these zones could be continuous; however, this feature could not be three-dimensionally rectified during 2011 drilling and therefore the cause for the weak rock and faulting in the east wall of the proposed pit could not be confirmed. Therefore, there remains some uncertainty as to whether or not this fault feature is a result of gravitational movement (BGC, 2010b) or tectonism.

1.6.5.2. Foliation

The metasedimentary rocks in the EGZ exhibit a pervasive foliation fabric in both the quartzites and the phyllites. The foliation typically dips from northwest to southwest at 20° to 50° (Drawing 10). Sub-horizontal foliation was observed in test trenches during previous and current investigation programs, and was also indicated in the oriented core data. The sub-horizontal foliation is believed to be associated with the surface weathered metasedimentary rock. However, the presence of thrust faulting in the region implies that flat structures cutting across the foliation could also occur in the deposit.

At the regional scale, there appears to be evidence of foliation folding along a northeast to southwest system of synclines and anticlines. Local folding is observed in outcrop features observed but it is unclear if this is a result of regional folding or faulting in the pit area. The foliation in the metasediments was observed in every drill hole that intersected metasedimentary rock and as such, it has been assumed for the FS level designs that the foliation represents a strong anisotropy in the metasedimentary rockmass and is persistent throughout the EGZ. The foliation measurements taken from drilling are displayed in Drawing 10.

1.7. Hydrogeologic Setting

The hydrostratigraphy of the site consists of overburden that is composed of a thin veneer of colluvium in the uplands; along with alluvium, glacial till, and reworked placer tailings in the valley bottoms; all overlying bedrock. The results of hydraulic tests conducted in the bedrock show that the hydraulic conductivity of the intrusive and metasediment units is generally similar, although considerable variations are apparent for each unit at any given depth (i.e. two to four orders of magnitude). A general trend of decreasing permeability with depth is discernable from the data. Additional details on the hydrogeology of the study area and how it could impact the pit slope designs are provided in the prefeasibility hydrogeologic report: “Pre-Feasibility Open Pit Depressurization” (BGC, 2010a). Additional interpretations will be available in early 2012 as soon as Feasibility level open pit depressurization evaluations are completed.

Groundwater elevations measured in drillholes completed in the Project area (shown in Drawings 3 to 8) suggest that the water table is a subdued replica of topography, with depths to groundwater typically greater in the uplands than in the valley bottom. Groundwater enters the flow system from infiltration of precipitation and snowmelt, with lesser components supplied by surface water infiltration in creeks and gullies. Groundwater discharge zones are generally restricted to creeks, gullies, and breaks in slope.

2.0 GEOTECHNICAL PROGRAM

2.1. Overview

To support the development of FS level open pit slope designs, BGC has compiled available data from existing reports, databases, and geological models. To augment the 2009 geotechnical site investigation for the PFS and bring the geotechnical database up to FS level, BGC completed two site investigation programs from August 2010 to October 2010 and from June 2011 to July 2011. This work included drilling and logging five and three geotechnical core holes, respectively. The locations and orientations of the geotechnical holes drilled and logged for this study are summarized in Table 1 and shown in Drawing 2. Field point load testing of the core, packer testing of the rock mass, and piezometer installations were carried out at the site during drilling. A laboratory testing program to support core logging information and improve the estimates of rock mass properties in the Project area was also conducted on rock core samples collected following the site investigation program.

Geotechnical data collected by BGC during the 2009, 2010, and 2011 field programs were used for the interpretation of structural domains, rock mass classification and pit design criteria development. Geotechnical information collected in these drillholes is presented in Appendices A through C. Data from other sources was also used to assist in geologic interpretations and model confirmation.

2.2. Geotechnical Drilling Summary

A total of thirteen dedicated geotechnical holes were drilled during the field programs conducted by BGC between 2009 and 2011. The collar location, depth and orientation of these holes are given in Table 1 and shown on Drawing 2. Diamond drilling was completed by Lyncorp Drilling Services Inc using a triple-tube HQ (HQ3) core barrel system, which yields 61 mm diameter core. BGC staff performed geotechnical core logging at the drill rig (day and night shift), conducted hydrogeological (packer) tests at select intervals in the geotechnical core holes, and supervised the installation of piezometers. The Reflex Ace Core Orientation Tool (ACT) was used in all holes to orient the drill core for measurements of discontinuity orientations. Downhole surveys were also performed by Lyncorp staff at approximately 30 m intervals. After the core was transported to camp, additional geological logging was performed by Victoria staff, and point load testing and sampling was carried out by BGC staff.

The following geotechnical data were collected or calculated for each interval:

- Core recovery length (m)
- Rock quality designation (RQD) length (m)
- Number of natural discontinuities
- Longest stick length (m)

- Strength grade ("R", ISRM 1978)
- Weathering grade
- Average joint condition (RMR '76).

The following data were collected when logging individual discontinuities within the core run:

- Depth to discontinuity, along core axis (m)
- Discontinuity type
- Angle to core axis, Alpha (°)
- Beta angle (°)
- Infilling type
- Aperture (mm)
- Joint roughness co-efficient (JRC)
- Joint wall compressive strength ("R").

The locations of drillholes logged by BGC are shown in Drawing 2. Summary geotechnical borehole logs for each hole are provided in Appendix A.

2.3. Instrumentation

Nine vibrating wire piezometers (VWPs) were installed during the 2009 and 2010 field investigations. An additional four VWPs were installed in two of the three geotechnical holes drilled in 2011. The location and depth of the vibrating wire piezometers within the drillholes and the heads measured in those piezometers are shown in Drawings 2 to 8 and Appendix A.

Standpipe piezometers were installed in geotechnical holes 09-BGC-GTH3 and 09-BGC-GTH4 to facilitate groundwater sampling, as well as to provide water table elevations. Installation details are provided in the geotechnical logs in Appendix A.

2.4. Point Load Testing

Point load testing was completed by BGC staff at the site using a RocTest PIL7 point load testing machine. Point load testing results are provided on the geotechnical logs in Appendix A and were used to estimate rock mass strength ratings, as per the procedure described in Section 4.0.

2.5. Field Mapping

Mapping of geological structures and discontinuities was undertaken by Victoria staff in 2009 and 2010 and the information collected was provided to BGC. These data included the discontinuity type and orientation. Field mapping of discontinuities and geomechanical characterization of outcrops in the metasediments and intrusives was also carried out by BGC between 2009 and 2011. In addition to discontinuity type and orientation, information on the discontinuity persistence, aperture, infill characteristics, discontinuity spacing, the shape of the discontinuity, and the strength of the wall rock were also collected. Information from field mapping is included in Mine Site Infrastructure Factual Data Report (BGC, 2011a).

2.6. Laboratory Testing

Representative core samples collected during the geotechnical drilling program were tested in the laboratory to estimate intact compressive strength, tensile strength and shear strength parameters for the FS design work. Testing was conducted by Golder Associates geotechnical laboratory in Burnaby, B.C. A summary of the tests performed and final testing reports are provided in Appendix C. The results of the tests are discussed in Section 4.0.

2.7. Geological Logs

All geotechnical holes from the 2009, 2010, and 2011 program have been logged for lithology and alteration by Victoria Gold geologists. These logs were provided to BGC and used to assign geotechnical units for the EGZ.

2.8. Geological Maps and Sections

The geological maps and sections presented in the report are based on 3D geological solids representing the intrusive and metasedimentary units provided by Victoria Gold.

2.9. Open Pit Shells

Preliminary open pit shells were generated by Wardrop using Whittle software to estimate pit extent, depth, and wall orientations, and to generate ore and waste tonnages using FS geotechnical designs provided by BGC. These pit shells were used to provide initial estimates of the proposed pit slope heights, final depth, and general slope orientations to guide the pit slope design process. A series of pit phases were developed by Wardrop and a detailed pit design was provided to BGC on May 18, 2011. This pit design was subsequently modified based on revisions to the block model, provided to Wardrop in early November, 2011. Following further pit design work by Wardrop, the ultimate pit phase, designated “pit_design_r5_phase4” was provided to BGC on November 15, 2011. This pit design forms the basis for our evaluations of the stability of the ultimate pit walls, as discussed in Section 5.4.

2.10. Data Confidence Levels and Limitations

Data available and utilized are considered to be appropriate for FS level open pit slope designs. The data density is adequate for a project of this scale and complexity; however, additional drilling will be required at the detailed design stage.

The application of geotechnical data collected by BGC should be limited to the proposed EGZ proposed open pit area. Extrapolation of rock mass quality or structural geology from the EGZ to surrounding areas may not be reasonable due to the natural variability of the study area geology.

3.0 STRUCTURAL DOMAINS

3.1. Overview

The structural geology in the Eagle Gold Zone will have a strong influence on the achievable wall angles for various potential pit wall orientations (Section 5). A structural geology compilation and preliminary structural geology model was developed as part of the PFS study (BGC 2010b). This compilation was updated for the FS with additional oriented core and surface mapping data collected during the 2010 and 2011 field programs.

3.2. Structural Domains

The Eagle Gold Zone has two distinct primary rock types and associated structural zones:

- Metasediments
- Intrusives.

The distribution of these primary rock types projected to the ground surface is shown in Drawing 2, and on the proposed open pit in engineering geology cross-sections shown in Drawings 3 thru 8. No structural differences were observed between the surface weathered and unweathered units; therefore these units were grouped together for kinematic stability analyses and design purposes. The clay altered intrusive sub-unit also showed similar structural fabric as the intrusive unit and was therefore grouped with the broader unit for purpose of structural zonation of the proposed open pit area.

3.2.1. Domain M (Metasediments)

The metasediments will be encountered predominantly in the upper sections of the northwest to west dipping walls, and to a lesser extent the upper portions of the southeast to south dipping walls of the proposed open pit. The controlling structures for the stability of the metasediments in the west dipping wall will be discontinuity set FB1, which is a west dipping fault set parallel to foliation, with an average dip of 34°. There are 4 additional fault sets in the metasediments, described as follows:

- FC1, which is sub-parallel to the Haggart Creek Fault and cross cuts the foliation parallel fault set
- FI1, a near horizontal set
- FF1, a near vertical set dipping to the north-northwest
- FB2, a steeply dipping set to the northwest.

The orientation, design strengths and significance of each of the design sets in the metasediments are summarized in Table 2. The interberm / interramp scale sets used for design are displayed in Drawing 9.

The rock mass fabric is defined by the structural discontinuity sets forming the individual blocks of the rock mass. The block sizes of the metasedimentary host rock in the EGZ are defined by foliation, faults, shears and joints, and are typically greater in the quartzites than the phyllites. Figures 3-1 (see Drawing 2 for location) and 3-2 show typical outcrops of quartzite and phyllite rock types. No phyllite outcrops were found within the open pit area; OC-BGC11-52 (Figure 3-2) is located near the proposed heap leach pad to the north of the pit. Outcrop mapping logs are included in Appendix B of the Mine Site Infrastructure Factual Data Report (BGC. 2011).

Figure 3-1. Metasedimentary - Quartzite Outcrop (OC-BGC11-16) Near Eastern Limit of Pit

Figure 3-2. Metasedimentary - Phyllite Outcrop (OC-BGC11-52)

3.2.2. Domain I (Intrusives)

The rock types grouped into the intrusive structural domain generally occur in the lower portions of the proposed final pit below the metasedimentary host rock. As a result, the intrusive rocks will play a significant role in the stability of the overall slopes of the pit. There are ten fault sets in the intrusive rocks, with associated sub-parallel jointing. The fault orientations and associated shear strengths have been used for the interberm / interramp scale slope designs. The orientation, design strengths, and significance of each intrusive design set are summarized in Table 3. The design sets used for interberm / interramp designs in the intrusive are displayed in Drawing 11.

The rock mass fabric is defined by the structural discontinuity sets forming the individual blocks of the rock mass. The block sizes in the intrusive rock are defined by faults, shears, and joints. The rock mass fabric of the granodiorite is influenced by the presence of pervasive sheeted quartz veins. These mineralized veins strike from 060° to 085° and dip approximately 60° to the south. The veins range in width from less than 1 mm to over 10 cm. Vein densities are generally greater near the margins of the stock. Figure 3-3 shows a typical outcrop of intrusive rock types (see Drawing 2 for locations). OC-BGC11-11 is located near the north extent of the proposed open pit. Outcrop mapping logs are included in Appendix B of the Mine Site Infrastructure Factual Data Report (BGC. 2011).

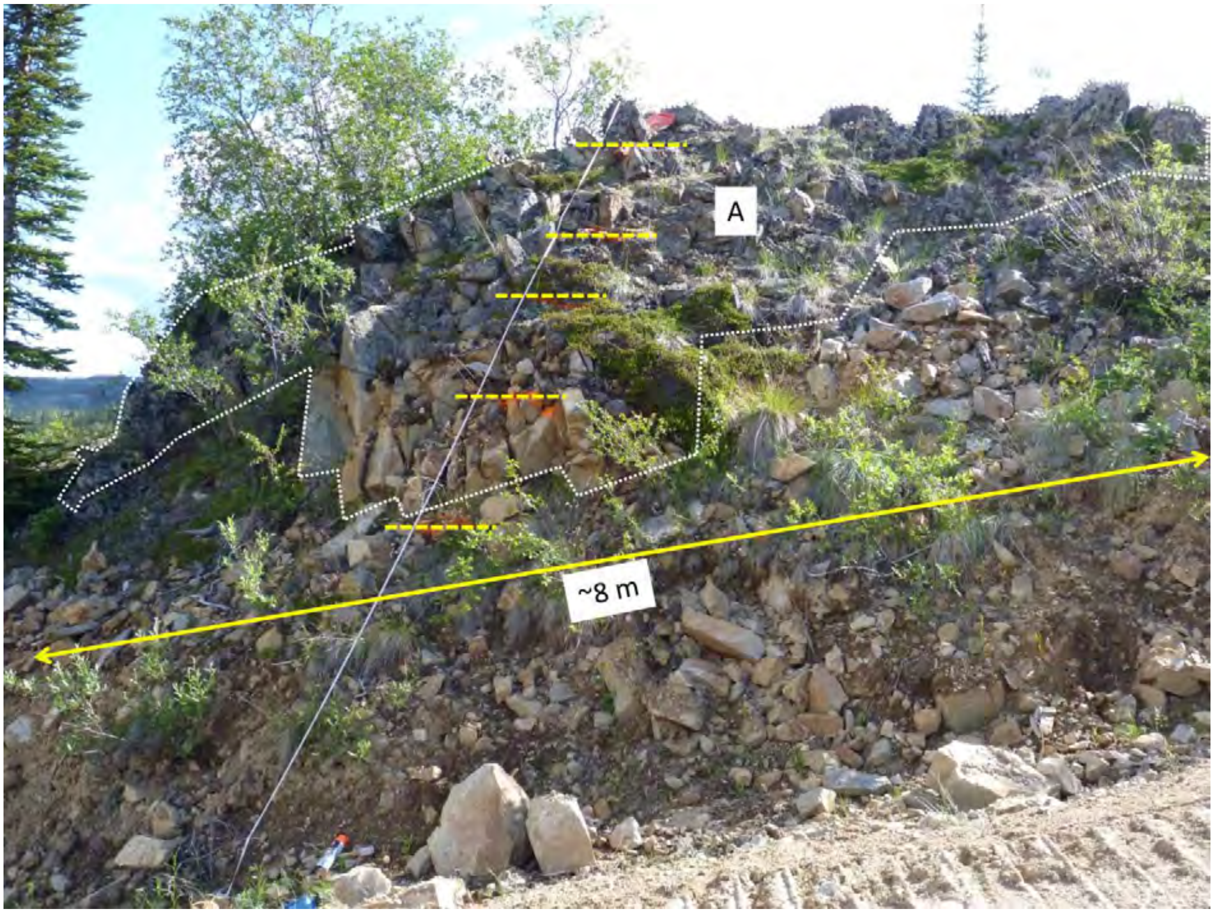

Figure 3-3. Intrusive Outcrop (OC-BGC11-11)

4.0 GEOTECHNICAL UNITS

4.1. Overview and Geotechnical Units

The geomechanical parameters of the rock mass at EGZ have been estimated based on the results of the 2009, 2010 and 2011 geotechnical drilling programs. Estimates are based on a combination of field observations of the rock (core and outcrop) and laboratory testing of representative core samples. The geomechanical properties, along with lithology and degree of weathering or alteration, have been used to group the rock mass into unique geotechnical units. Six geotechnical units have been defined at EGZ (Table 4), as follows:

- Fault Zones (FLTZ)
- Surface weathered intrusives (SINT)
- Clay altered intrusive sub-unit (CINT)
- Intrusives (INT)
- Surface weathered metasediments (SSED)
- Metasediments (SED).

The SINT and CINT are sub-units of the INT primary geotechnical unit. The SSED is a sub-unit of the SED primary geotechnical unit.

4.2. Intact Rock Properties

4.2.1. Strength Grade

Field estimates of intact rock strength, based on BGC's 2009, 2010 and 2011 geotechnical drilling programs from standard field tests and observations were made in the field using strength grades developed by the International Society of Rock Mechanics (ISRM, 1978). The strength estimates have been used to group the rocks into different geotechnical units. Site specific relationships have been developed between the point load index and Uniaxial Compressive Strength (UCS) laboratory testing results. An average strength grade was assigned for each drilled interval of rock core. The resulting cumulative fraction plot of strength grades for each geotechnical unit, based on core collected during BGC's geotechnical drilling program, is displayed in Drawing 12.

On average the metasedimentary units have a lower strength grade than the intrusive units, with median values of about R3.5 for the surface weathered medasedimentary unit (SSED), and R4 for the unweathered/unaltered intrusive unit (INT), the surface weathered intrusive (SINT), and the fresh metasedimentary unit (SED). Where the clay altered intrusive (CINT) was broken out from the other intrusive units, the average strength grade for this sub-unit was slightly lower at R3.5.

4.2.2. Point Load Index

Point load testing provides an index value (Is_{50}) that can be used to predict uniaxial compressive strength, where site specific correlation factors have been estimated through laboratory testing. Diametral (i.e. perpendicular to core axis) point load testing was conducted by BGC on rock samples from all core holes during the 2010 and 2011 drilling programs. Point load testing was performed by Victoria Gold staff under the supervision of BGC during the 2009 field program. Test locations were selected based on suitability of the core for testing and to provide representative point load values for each geotechnical unit. Testing was performed at approximately 5 m intervals (i.e. every third drill run) on average. BGC used the testing standards described in the 'Standard Test Method for Determination of the Point Load Strength Index and Application to Rock Strength Classifications' (ASTM D5731 - 08).

Point load results are plotted on Drawing 12 and on the drill logs in Appendix A. Average Is_{50} values are summarized in Table 4. There is general consistency between the point load index strengths and field grade strengths estimated during core logging, however, the Is_{50} strength estimates have a higher degree of precision than the field estimations and have therefore been used to estimate in-situ rock strength properties for design.

4.2.3. Brazilian Tensile Strength

The tensile strength of the intact rock was estimated by performing a Brazilian Tensile Strength (BTS) test on samples cut from the ends of each UCS sample. Where possible, two BTS tests were conducted for each associated UCS sample. The BTS is converted to Direct Tensile Strength (DTS) using a conversion factor of 0.6, based on a database of Direct Tensile testing and Brazilian Tensile testing compiled by BGC from other sources, and is used for estimating the Hoek-Brown material constant for each geotechnical unit.

4.2.4. Uniaxial Compressive Strength

The Uniaxial Compressive Strength (UCS) was estimated by laboratory testing of samples of intrusive and metasedimentary rock units (Appendix C). Twenty-seven UCS tests were conducted on rock core samples collected during from the 2009 and 2010 drilling programs. The results are summarized in Table 4.

From these tests, correlation factors were developed between the UCS and the DTS results from the laboratory and the Is_{50} field testing results, as shown in Table 4 and Drawing 13. The following intact strength correlations were developed:

- Metasedimentary Rocks: UCS = 17 x DTS, UCS = 24 x Is_{50}
- Intrusive Rocks UCS = 20 x DTS, UCS = 23 x Is_{50}

Design uniaxial compressive strengths for each geotechnical unit and sub-unit were then estimated from the point load Is_{50} values.

4.2.5. Hoek-Brown Material Constant

The Hoek-Brown material constant (m_i) reflects the induration, grain or crystal interlocking, and mineralogy of the rock sample. For each UCS test sample, m_i was estimated from the ratio of UCS to Tensile Strength, as proposed by Cai (2009) based on laboratory testing.

Average values of this ratio were used to estimate the m_i value for the SINT, INT, SSED, and SED geotechnical units. Due to a limited amount of laboratory testing for the CINT and FLTZ geotechnical units, and their higher clay content and fine grained characteristics, m_i was estimated from published values of similar rock type (Hoek, 2007), with consideration of the m_i values calculated for the less altered primary rock types.

4.2.6. Specific Gravity and Unit Weight

The specific gravity was estimated for each of the UCS samples tested in the program (Appendix C). The average unit weight of each geotechnical unit is summarized in Table 4.

4.3. Rock Mass Properties

Geomechanical design parameters have been estimated for each geotechnical unit, from core logging, point load testing and laboratory testing results. These parameters include: intact rock strength, discontinuity frequency/spacing (RQD and fracture intercept), blockiness index (indicates block size), and the average condition of each discontinuity surface (JC), based on Bieniawski (1976). The geomechanical properties are summarized in Table 5.

The median value of each geomechanical parameter for each geotechnical unit has been used for design. For intact rock strength estimation, Is_{50} is considered to have greater precision and accuracy than field estimates or laboratory UCS tests. Therefore, Is_{50} values have been used to estimate the design UCS of each geotechnical unit using the correlation factors described in 4.2.4.

The rock mass within the Eagle Gold Zone can be generally described as “fair” (Bienawski, 1976) with the exception of the fault zones which are described as “poor”. Throughout the open pit area both the metasedimentary and intrusive units have undergone surface weathering, which is seen in all geotechnical holes at depths ranging from 30 m to 100 m below ground surface. Based on Victoria Gold’s geologic logging of BGC’s geotechnical drill holes, there is a zone of clay altered intrusive rocks that were intersected in holes GTH2a, GTH3, GTH4, GTH-7 and GTH-8. This clay altered zone appears to be concentrated around the SED / INT contact and has distinctly different geotechnical properties from the unaltered intrusive units. More specifically, the RMR rating is on average 12 points lower and the design UCS value of 51 MPa is significantly lower than the value of 135 MPa for the unaltered intrusives (Table 5).

The unaltered and unweathered metasedimentary unit has a lower rock mass rating than the unaltered and unweathered intrusive unit. This is primarily due to its highly foliated fabric, which results in a higher fracture intercept, but is also due to its lower unconfined compressive strength.

Table 5 summarizes the upper, lower and median (design) values of the various geomechanical properties of the geotechnical units used to estimate the rock mass ratings, as seen in the cumulative frequency plots (Drawings 12, 14, and 15).

4.4. Rock Mass Strength

Strength envelopes using the formulation proposed by (Hoek and Brown, 1997) have been developed for each geotechnical unit (Table 6), based on:

- The design UCS of the intact rock (estimated from Is_{50}).
- The material constant (m_i) of the intact rock (estimated from DTS).
- The geological strength index (GSI) of the rock mass (estimated from core logging).
- A rock mass disturbance factor (“D”) which is a function of the excavation method and stress relief.

The GSI is estimated from RMR ’76 (Hoek et al., 2000):

For RMR’76 > 18:

GSI = RMR’76

The rock mass disturbance factor (“D”) is a subjective factor representing the effects of mining on the rock mass properties. Blast damage, stress relief, and mining induced relaxation will dilate or “loosen” the fabric of the rock mass and may generate new fractures. For FS design, in consultation with pit designers from Wardrop, BGC has assumed that good quality blasting with limited disturbance to the pit walls will be implemented during excavation of the pit slopes. Based on this assumption, a disturbance factor (”D”) of 0.85 is considered to be appropriate (Hoek et al., 2002). This disturbance factor has been assumed for the entire pit slope and adjacent/underlying rock mass. Brown (2008) suggests that the application of the disturbance factor should be limited to a zone adjacent and sub-parallel to the excavation face; however, at this stage of design the appropriate extent of disturbance cannot be estimated.

4.4.1. Metasediments and Surface Weathered Metasediments

The metasediments observed in the EGZ range in composition from quartzites to phyllites. The quartzites are generally strongly foliated and consist of pure quartz to quartz-feldspar, with laminations of muscovite and sericite. Grain sizes are typically 1 mm to 2 mm, with individual quartzite beds ranging from centimeters to several meters in thickness. The phyllites are generally strongly foliated and contain compact aggregates of biotite and sericite intercalated with irregular lenses of quartz. Surface weathered sediments are present from 30 m to 100 m below ground. The surface weathered metasedimentary rock has greater fracture frequency than the fresh metasedimetary rock, possibly due to surface weathering processes.

The intact fresh metasedimentary rocks (SED) (Figure 4-1) have a median (design) UCS of 83 MPa classifying it as “strong”, with a lower (25^{th}) percentile UCS value of 45 MPa and an upper (75^{th}) percentile UCS value of 143 MPa. The design m_i value is estimated as 17. The median fracture intercept is 0.14 m and rock quality designation is 64% (Table 5).

The intact surface weathered metasedimentary rock (SSED) (Figure 4-2) has a median (design) UCS of 76 MPa, classifying it as “strong” with a lower (25th) percentile UCS value of 34 MPa and an upper (75th) percentile UCS value of 106 MPa. The design m_i value is estimated as 17. The median fracture intercept is 0.09 m and rock quality designation is 36% (Table 5).

Discontinuities in the metasediments and surface weathered metasediments have slightly rough surfaces and highly weathered contacts with the wall rock based on joint condition data from core logging. Surface weathered metasediments joint surfaces frequently show signs of iron staining. The median RMR of the metasediments is 55 and the median RMR of the surface weathered metasediments is 41, classifying both of these units as “fair” (Bieniawski, 1976).

Figure 4-1. Metasediments from drillhole 10-BGC-GTH-06 (216.08 to 217.60 m).

Figure 4-2. Surface weathered metasediments from drillhole 10-BGC-GTH-10 (38.56 to 40.08 m).

4.4.2. Intrusives and Surface Weathered Intrusives

The granodiorites of the Dublin Gulch Stock are medium grey coloured, medium to coarse grained and equi-granular with up to 15 percent biotite. Surface weathered intrusives are present from 30 m to 100 m below ground. The surface weathered intrusive rocks have increased frequency of discontinuities and fractures, possibly as a result of surface weathering processes.

The intact non surface weathered intrusive rocks (INT) (Figure 4-3) have a median (design) UCS of 135 MPa, classifying it as ‘very strong”, with a lower (25th) percentile UCS value of 57 MPa and an upper (75th) percentile UCS value of 213 MPa. The design m_i value is estimated as 20. The median fracture intercept is 0.20 m and RQD is 73% (Table 5).

The intact surface weathered intrusive rocks (SINT) (Figure 4-4) have a median (design) UCS of 135 MPa, classifying it as ‘very strong’ with a lower (25th) percentile UCS value of 53 MPa and an upper (75th) percentile UCS value of 214 MPa. The median (design) UCS value for INT has been applied to SINT because there are relatively few (69) Is_{50} values for SINT due to a lack of suitable samples. The samples that were available for SINT were considered to be unrepresentatively competent of the geotechnical unit. The design m_i value is estimated as 20. The median fracture intercept is 0.10 m and RQD is 32% (Table 5). Note that the rock mass properties of the core recovered from the CINT unit have been included in the estimation of the non-surface weathered intrusive rock mass (INT) properties, as approximately 450 m of the 1451 m of INT recovered in the core was clay altered. This has resulted in a slight reduction in the average rock mass properties of the intrusive units. As the spatial distribution of the clay altered unit is not well defined, this is considered to be an appropriate method to account for the presence of the weaker sub-unit.

Discontinuities in the intrusives and surface weathered intrusives have slightly rough surfaces and highly weathered contacts with the wall rocks based on joint condition data obtained from core logging. Surface weathered intrusives joint surfaces frequently show signs of iron staining. The median RMR of the intrusives is 59 and the median RMR of the surface weathered intrusives is 49, classifying both of these units as “fair” (Bieniawski, 1976).

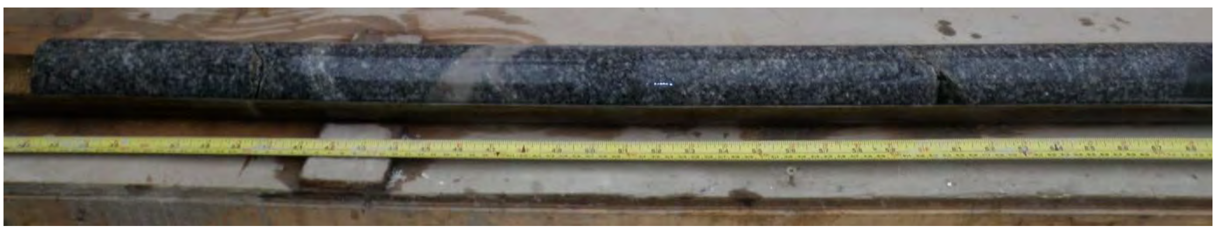

Figure 4-3. Intrusives from drillhole 10-BGC-GTH-08 (288.95 to 290.47 m).

Figure 4-4. Surface weathered intrusives from drillhole 09-BGC-GTH4 (24.41 to 25.39 m).

4.4.3. Clay Altered Intrusive

A weaker subunit of the intrusive was observed in drillholes GTH2a, GTH3, GTH4, GTH-07, and GTH-08. Based on Victoria Gold’s geologic interpretations, this unit shows clay alteration which results in lower intact strengths and low joint condition values.

The intact clay altered intrusive rocks have (CINT) (Figure 4-5) a median (design) UCS of 51 MPa classifying it as “strong” with a lower (25^{th}) percentile UCS value of 14 MPa and an upper (75^{th}) percentile UCS value of 108 MPa. The design m_i value is estimated as 15, scaled down from the value for the non-surface weathered intrusive rocks. The median fracture intercept is 0.11 m and RQD is 46% (Table 5). The median RMR of the clay altered intrusives is 47, classifying this unit as “fair” (Bieniawski, 1976).

Figure 4-5. Clay altered intrusive from drillhole 10-BGC-GTH-08 (81.69 to 83.21 m)

4.4.4. Overburden and Weathered Rock

For the purposes of pit slope design the heavily weathered and decomposed rock near the surface has been considered to be similar to an unconsolidated gravelly silt or gravelly sand. Relatively flat slope angles will be required along final slopes in this unit to maintain long-term stability, and to compensate for the potential impacts of thawing of these materials, which are anticipated to contain pockets of localized permafrost. Hoek-Brown strength criterion parameters are not considered to be appropriate for this type of material and therefore have not been estimated. For the purpose of the current design work, an average friction angle of 35° has been assumed for these materials.

4.5. Discontinuity Strengths

The estimated shear strengths of discontinuities used for interberm / interramp and bench scale design for the intrusive and metasedimentary units are presented in Tables 2 and 3. Residual friction values have been estimated for fault gouge and discontinuity infills from grain size and index tests (Stark and Eid, 1994) (Drawing 16). The residual shear strength of clean discontinuities has been estimated from small scale direct shear testing. The direct shear results were corrected for the effects of surface roughness using the method described in Hencher and Richards (1989) and Hencher (1995), and are summarized in Drawings 17 and 18.

Joints observed within the EGZ project area are typically slightly rough to rough (JRC 8-20) with <1 mm aperture typical in both the metasedimentary and intrusive rock units. A carbonate bearing clayey infill has been observed on some of the joints. X-Ray Diffraction (XRD) analysis performed during the PFS study on samples of this material indicates that the clay minerals consist primarily of kaolinite and illite, with lesser amounts of montmorillonite observed in one sample. Minor amounts of calcite and quartz were also indicated in the XRD results.

The corrected direct shear test results provide an estimate of the lower bound for discontinuity shear strength, irrespective of the surface roughness of the samples tested. For individual discontinuity sets, an appropriate increase in shear strength for large-scale (i.e. interramp) waviness could be applied based on the variability of the discontinuity dip angles, the direct shear results, and field and core observations of joint roughness. However, this has not been implemented in the SED unit to provide some conservatisms to the designs. In addition, the majority of the samples had trace amounts of calcite / clay infill and some of the samples near surface also had oxidized joint surfaces; suggesting that the infilling materials (as opposed to the wall rock) could dictate the shear strength of the discontinuities.

The residual friction angle from direct shear testing (Drawing 17) for the metasedimentary unit is 31°, slightly higher than the average friction angle of 30° estimated from index testing of the fault infilling (Drawing 16). For design, the friction angle for the metasedimentary unit has been set at 30° (Table 2) due to the pervasive nature of the foliation and the potential impact of instability along the foliation on the east highwall.

With respect to the intrusive geotechnical unit, a residual friction angle of 34° was estimated from direct shear testing which is higher than the average friction angle of 31° estimated from index testing of the fault infilling (Drawing 16). Observations of large-scale roughness on discontinuities in the intrusive rocks have been to adjust the base friction angle nominally by +3° for the fault sets in the intrusives. Therefore, a design friction angle of 34° (Table 3) has been assumed for the intrusive rocks.

5.0 SLOPE DESIGN CRITERIA

Open pit slopes can be divided into three scales: bench scale, interberm / interramp scale, and overall scale. Open pit geotechnical and regulatory constraints that have been considered in developing the slope design criteria are specified in Table 7. The stability of each scale is considered in developing the overall slope geometry, which is achieved by specifying the dimensions of bench face angles, catch bench widths, locations of ramps, and the frequency and width of geotechnical / dewatering berms (Drawing 19). Design criteria recommended are proposed to reduce the likelihood of pit slope failures which could result in harm to mine personnel, lost production time, and the loss of access to resources.

Potential bench scale instability could be controlled by both small and large scale discontinuities, as well as blasting / excavation practices. Interberm / interramp and overall slope stability are controlled by major geological discontinuities, persistent rock mass fabric (e.g. foliation), rock mass quality, and pore water pressures. Geometric criteria for the benches and interberm slope scales are given in Table 8.

5.1. Domains and Design Sectors

Pit slope designs have been completed for geotechnical “domains”. All intrusive rocks (SINT, CINT, and INT) are included in the “I” Domain, and all metasedimentary rocks (SSED and SED) are included in the “M” Domain. The domains have been divided into design sectors based on anticipated pit wall orientations and major geological structural controls on slope stability, where appropriate, as shown on Drawing 20.

Slope design criteria have been provided by design sector for each geotechnical unit and are specific only to the walls within the specified wall orientations. Blending of design criteria for adjacent design sectors is required when the design criteria differ significantly. The bench and interberm design criteria provided for each sector are the maximum angles that can be excavated in that sector; therefore, blending of the slope angles must always take place in the steeper sector. The slope angle can be reduced by the mine planners to accommodate the geometry of the ore body or to incorporate pit ramps or geotechnical berms.

5.2. Bench Scale Design

The required bench scale design criteria include:

- Bench height (Bh)
- Bench face angle (Ba)
- Catch bench width (Bw).

The minimum design catch bench width must satisfy both regulatory and geotechnical requirements. Geotechnical requirements include catchment of discrete rock falls and retention of bench scale failures. The minimum catch bench width is 8.0 m based on the BC Mines Act (Section 6.23.2) which is the current standard for mines in Western Canada. Additional width may be necessary to account for crest break-back over the life of mine and beyond. With controlled blasting, which is expected to be employed at Eagle Gold, a break-back of less than 1.0 m has been assumed.

Victoria Gold has selected 7.5 m as the bench height for grade control purposes, and double bench mining techniques have been employed for the pit designs by Wardrop. Based on BGC's database of industry experience, a 65° bench face angle (Ba) can typically be achieved in intrusive hard rock deposits with similar rock quality to that observed in the Eagle Gold pit area where conventional drilling and blasting methods have been employed. If structural discontinuities are present that strike sub-parallel to the bench faces, these will usually end up being the controlling factor for the bench face angles, as the bench faces will tend to end at an angle close to the dip angle of the discontinuities. For the "Recommended Catch Bench Geometries" summarized in Table 8, this is applicable for most of the design sectors. However, due to the presence of moderately dipping faults sub-parallel to bench faces in Design Sectors M-132, M-160, and M-239, bench face angles have been reduced to 60° and 63° in these sectors, respectively, to reduce the potential for bench scale planar failures.

At the request of Wardrop, a set of modified bench geometries implementing a consistent 60° bench face angle was also developed (Table 8). The modified bench geometry shown achieves the same design interberm / interramp angle for all of the design sectors defined; however, in some cases (e.g. Design Sectors M-192, M-239, M-315, I-295, and I-338) the flatter bench face angle results in berm widths less than the specified 9.0 m (minimum 8.0 m plus 1.0 m of break-back). The result of this is that less berm will be available to contain rockfalls in these domains, and access may be limited for cleaning of the berms. Interramp stability is still maintained in these design sectors with the modified bench geometries; however, where possible, Victoria is encouraged to follow the recommended catch bench geometry (Table 8) requirements to maintain adequate rockfall protection in the pit. Refinement of the bench face angles in these design sectors is recommended at the next level of pit design.

5.3. Interberm/Interramp Scale

The interberm / interramp scale is an intermediate stage between the bench and overall pit scales. For the purpose of the FS level report, interberm / interramp scale refers to the portion of the slope separated by geotechnical / dewatering berms and / or haul truck ramps. A width of 16 m for the geotechnical berm has been selected based on anticipated operational needs to allow access for pit dewatering and slope monitoring. In design sectors where the design catch bench width is greater than 16 m, no additional geotechnical berms are required. Design criteria required for interberm scale are:

- Interberm angle (Iba)
- Interberm height (Ibh).

Maximum interberm angles may be controlled by large-scale geologic structures, such as the faulting parallel to foliation present in the metasediments. Where such structures are present, the allowable interberm angle will be dictated by the plunge and dip angles of kinematically possible wedge and planar failures for that particular pit wall orientation, estimated from the mean orientations of the design discontinuity sets in that domain. Shear strengths have been assigned to these structures based on the residual shear strengths of the discontinuities, as estimated from laboratory testing of fault gouge and direct shear testing. Kinematic analyses completed for all possible slope orientations in each domain are shown in Drawings 21 and 22.

Interberm design criteria are also estimated by a combination of geometric factors related to the bench configuration and geotechnical slope stability analysis. Depending on the rock quality and the height of the interberm slopes, the maximum achievable interberm angle may be controlled by the strength of the rockmass of each geotechnical unit present in the final walls. Generic limit-equilibrium method of slices stability analyses of potential non-linear failure surfaces have been completed for both the intrusive and the metasedimentary geotechnical units (Drawings 23 and 24, respectively). Pore pressure assumptions for the analyses included fully depressurized (Ru = 0 or dry), "partially depressurized" (Ru = 0.09 or approximately 25% saturated), and "partially saturated" (Ru = 0.18 or approximately 50% saturated) conditions. "Partially saturated" pore pressures have been used for design based on assumptions regarding the achievable amount of pit slope dewatering.

Maximum interberm heights may also be dictated by requirement for geotechnical berms to accommodate equipment access for pit slope dewatering and slope monitoring efforts during operations. A maximum interberm height of 150 m, equivalent to 10 double benches, has been used for EGZ as the minimum distance between geotechnical berms required to facilitate pit wall dewatering efforts.

5.3.1. Domain M

Domain M comprises the metasedimentary rock units, which are typically present in the upper portions of the pit walls (Drawing 20). The achievable angles of west dipping pit walls in the metasedimentary rocks will be controlled by potential planar failures on faulting parallel to the foliation, i.e. fault set FB1 (Drawing 21). Wedge failures could also be formed by a combination of foliation parallel faulting and a near vertical fault set dipping to the northwest (Set FF1). The pervasive foliation and associated parallel faulting creates an anisotropic strength distribution within the rock mass in Design Sectors M-061 and M-105. The anisotropy was evaluated in generic limit equilibrium analysis (Drawing 23) conducted for the metasedimentary rocks in these design sectors. However, the analyses indicated that interberm slope heights should not be limited by rock mass strength, even with consideration of the anisotropy.

For design purposes, the structural fabric of the surface weathered and un-weathered metasedimentary units has been assumed to be similar. As a result, the surface weathered unit has been assigned the same slope angles as the underlying fresh rocks in that design sector. Surface weathered metasediments (SSED) are likely to be present in the top 50 m to

100 m of this domain; however, based on the relatively shallow depths to which these weathered sediments occur, rock mass stability is not anticipated to control the achievable slope angles.

5.3.2. Domain I

Domain I, comprised of intrusive rocks, will be typically present in the lower portions of the proposed pit walls (Drawing 20). The pit wall angles for design sectors in Domain I are primarily controlled by the geologic structures (Drawing 22), with the exception of Design Sectors I-295 and I-338 which are controlled by the interberm geometry. The maximum interberm slope angles vary from 31° to 43° depending on wall orientation. The steeper interberm geometries are limited by bench geometry. If bench face angles steeper than 65° can be attained through controlled blasting practices, these angles could potentially be steepened.

5.4. Overall Slope Scale

Open pit slope design criteria (Table 8) provided by BGC were used by Wardrop to develop an economic pit shell that was used as a guide for the ultimate pit, which includes benches, ramps, and geotechnical / dewatering berms. The ultimate pit, consisting of files "pitdesign_r5_phase4_lines.dxf" and "pitdesign_r5_phase4_surface.dxf" were provided to BGC by Wardrop on November 15, 2011. BGC reviewed the final pit shell to confirm that the pit slope design criteria developed by BGC was followed. Our review of the final pit did not identify any geometric issues; all of the slopes of the 'phase4' pit satisfy the slope design geometry parameters provided by BGC.

Limit equilibrium method of slices stability analyses were conducted for six sections through the slopes of the proposed ultimate pit (Drawing D1, Appendix D), to confirm that the design factor of safety (Table 7) for overall slope stability was met. The 3D geological model developed by Victoria was used to define the material boundaries for the stability analysis. Estimates of pore pressure distributions for each slope stability analysis section assume that 250 m long horizontal drain holes have been installed throughout the pit and that they would effectively depressurize the rock mass behind the slope face to a distance of half of the length of the drainhole. Drawings D2 to D7 show the results of each limit equilibrium analysis and present the calculated factor of safety (FS) of the overall slope along each cross-section. The factor of safety values are summarized in Table D1.

The east slope of the ultimate pit is the highest wall currently proposed in the open pit; the proposed strike of this slope is parallel to the strike of a pervasive west dipping fault set and foliation. To simulate these structural fabrics in the slope stability analysis for these sections (Drawings D4 and D5) an anisotropic weakness was included in the metasediments which applies a friction angle of 30° to any potential failure surface segments with dip angles of 31° to 37°.

The results of the limit-equilibrium method-of-slices analysis confirm that the overall slope stability criteria are met for the assumed pore pressure conditions from the installation of 250 m horizontal drainholes (Drawings D2 to D7). It is expected that the depressurization requirements can be achieved with vertical wells and horizontal drains; however, this still needs to be confirmed by open pit hydrogeologic studies still in progress. Where the interberm angle is controlled by kinematically possible wedges and planar failures, these features must be completely depressurized to meet the design criteria.

5.5. Overburden Slope Designs

While high overburden slopes are not anticipated in the ultimate pit slope, overburden in localized regions at the top of the pit walls will be common. The overburden is 10 m thick on average with some holes intersecting up to 15 m of overburden. Where overburden is encountered, a maximum interberm slope angle of 1.5H:1V (34°) should be applied to the open pit design. There may be portions of the overburden that are ice-rich or clay rich / heavily altered. These areas will likely require flatter slope angles, possibly as flat as 2H:1V (27°). Further definition of these overburden rich areas will be required at the detailed design stage and the operational stage of the pit design. The overburden and bedrock contact may also require additional width in the berms and ramps to properly manage mass wasting and erosion. This will be particularly important if a perched water table is present at the contact of the overburden and the rock. Further details on the overburden found at EGP can be found in the 2012 Infrastructure report (BGC, 2011b).

6.0 SLOPE DESIGN IMPLEMENTATION

6.1. Overview

Further guidance to achieve the recommended FS level slope designs presented in Table 8 is outlined in the following sections.

6.2. Ramps, Step-Outs, and Wide Berms

Ramps, step outs, and wide berms will have an impact on the overall slope angle. Geotechnical berms are recommended for dewatering wells, piezometers to monitor pit slope depressurization progress, and for pit wall monitoring. The berms should have a minimum width of approximately 16 m and should be placed every 150 m vertically, particularly in design sectors that have catch benches significantly less than 16 m. The precise placement of geotechnical berms will ultimately be up to the mine engineers / long term planners based on specific operational needs, and may require consideration of other factors such as equipment size and ramp grade restrictions.

6.3. Blasting

Blasting methods can have a significant impact on the interramp / interramp and bench scale stability, depending on the resulting induced disturbance to the rock mass. To reduce disturbance to the rock mass in the ultimate pit wall, it has been assumed that controlled blasting techniques will be used. Pre-split blasting could substantially reduce the level of disturbance on the proposed pit walls, but perhaps more importantly could allow bench face angles to be steepened in some design sectors. In addition, reducing the powder factor on 'ultimate' pit wall blasts can have a significant impact on the depth of disturbance on the final wall.

6.4. Slope Depressurization

The open pit slope angles have been developed assuming varying levels of depressurization. Bench scale designs have assumed complete depressurization of potential bench scale failures. Interberm / interramp rock mass stability has been assessed assuming relatively conservative, partially saturated (Ru=0.18) conditions. Overall slopes of the proposed ultimate pit have been analyzed assuming that a sufficient amount of horizontal drainholes have been installed to depressurize the pit wall 125 m horizontally from the pit wall face.

Passive dewatering of the pit walls initiated during excavation may occur naturally, but it is recommended that the passive depressurization be augmented by the installation of horizontal drains, especially in the east wall. Further investigation is required to spatially define any potential large continuous faults in the open pit for depressurization specifications.

The required depths of depressurization will be different for each design sector, depending on the location of any controlling structures and the depth of the predicted critical failure surface. To achieve the required level of depressurization for the proposed pit in the EGZ, horizontal drains and potentially vertical dewatering wells will have to be implemented.

Dewatering requirements will be available pending the completion of a feasibility level hydrogeologic modeling for pit depressurization studies.

6.5. Pit Slope Monitoring

Deformation of the pit walls should be expected throughout the life of the mine. Monitoring of these deformations will be important for successful mining and risk management of the proposed Eagle Gold pit. In addition, monitoring of the pit slopes during excavation (Call and Savely, 1990) is required to:

- Maintain safe operational practices for personnel, equipment, and facilities.
- Provide warning of slope instability.
- Provide geotechnical information for slope designs to assist in making subsequent modifications, should they be required, to achieve the desired slope performance.

Verification and validation of the slope design criteria and assumptions is required to determine if design modifications are needed. A well-developed risk management system, which includes active monitoring, may allow additional optimization of the slope designs during operation of the mine.

For the proposed EGZ open pit, a multi-layered monitoring system should be developed. Slope deformation monitoring systems and pore pressure / pit dewatering monitoring systems will be needed. Costs should be included in economic studies to account for an appropriate combination of slope monitoring methods; BGC can assist the mine planners with those cost estimates, if required.

7.0 RISKS AND OPPORTUNITIES

7.1. Risks

7.1.1. Potential Mass Movement

The initial review of the structural data in the eastern pit wall identified a potential 10 m thick west dipping shallow fault zone. After additional drilling of the proposed east wall in the 2011 program, it has been postulated that this apparent feature is part of the faulting parallel to foliation fault set as it could not be identified in the intrusive unit and it could not be found in any additional drillholes. During mining, care should be taken not to undercut this faulting parallel to foliation.

7.1.2. Dewatering

Artesian conditions were observed below a clay rich “cap” in 09-BGC-GTH2a which was described as a faulted/weak or altered zone. Additional efforts may be required and thus associated costs may be incurred to depressurize the pit slopes if artesian pressures are widespread.

7.1.3. Structural Model Updates

To date, there has been a limited amount of regional structural interpretations in the project area. If the updated structural model includes major faults oriented such that they daylight out of the highwall, the final pit slope angles may need to be modified. In addition, folding of the metasedimentary rocks is apparent across the project area. The location of fold axes in the vicinity of the open pit will be particularly important for pit designs.

7.2. Opportunities

7.2.1. Design Sector Optimization

The pit slope design criteria (Table 8) presented apply to a fixed set of design sectors based on the most recent optimized pit shell provided to BGC by Wardrop and the current interpretation of the major structural fabric / features that controls the pit wall angles. There may exist opportunities to steepen the pit slopes by altering the orientations of the walls such that the unfavourable pit wall orientations are avoided or minimized.

8.0 RECOMMENDATIONS FOR FURTHER WORK

8.1. Geological Model

BGC recommends that work be under taken to deliver a 3D geological model of the open pit area as soon as possible. The model should include:

- The spatial extent of the clay altered intrusive zone as well as its relationship to the intrusive – metasediment contact.
- 3-D interpretations of major faults cross cutting the pit area.
- The limit of weathering should be interpreted as a 3-D surface for the area of the proposed pit.
- A structural geology model that identifies potential fold structures, considers the stress and tectonic regime, and provides a framework for the geologic structures identified in the proposed open pit area.

8.2. East Wall Fault Interpretations

The 2011 site investigations targeted the east to allow the pit designs to be brought up to the FS level. The 10 m thick fault dipping at approximately 25° to the west in the metasedimentary geotechnical unit observed in drillholes 09-BGC-GTH2a and 10-BGC-GTH-06 could not be clearly defined in the additional holes. Due to the control this fault set has on the overall angle of the east highwall, more investigation may be warranted at the detailed design stage to:

- Further define the spatial extent of this fault zone
- Determine if it is continuous through the intrusive unit
- Better define the properties of the fault infilling.

The results of the additional site investigations completed in 2011 suggest that this fault or set of faults is not continuous throughout the east wall; rather, they appear to be part of a pervasive fault set (FB1) which parallels foliation. Additional drilling may allow more aggressive designs to be undertaken on this wall.

9.0 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:

ISSUED AS DIGITAL DOCUMENT.
SIGNED HARDCOPY ON FILE WITH
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TABLES

TABLE 1. GEOTECHNICAL HOLES DRILLED BY BGC 2009-2011

Hole Name[1]	Easting (m)	Northing (m)	Elev.[2] (m)	Trend (°)	Plunge (°)	Length (m)	Survey Method[2]	Comments
09-BGC-GTH1	460263	7099647	1250	80	-70	375	DGPS	
09-BGC-GTH2	460100	7099500	1298	135	-75	41	Handheld	Hole Abandoned
09-BGC-GTH2a	460334	7099498	1298	132	-81	335	DGPS	
09-BGC-GTH3	460061	7099603	1224	348	-81	285	DGPS	
09-BGC-GTH4	460135	7099452	1255	205	-76	326	DGPS	
10-BGC-GTH-05	459790	7099604	1111	322	-64	276	DGPS	
10-BGC-GTH-06	460411	7099523	1315	80	-65	225	DGPS	
10-BGC-GTH-07	460122	7099546	1252	62	-58	325	DGPS	
10-BGC-GTH-08	460134	7099552	1252	149	-56	300	DGPS	
10-BGC-GTH-09	460047	7099351	1215	180	-62	216	Handheld	Surveyed using handheld GPS
11-BGC-GTH-10	460411	7099425	1322	135	-70	200	DGPS	
11-BGC-GTH-11	460555	7099544	1336	95	-79	195	DGPS	
11-BGC-GTH-12	460309	7099389	1312	170	-75	220	DGPS	

NOTES:

1. Refer to Drawing 1 for hole locations

TABLE 2. DESIGN STRUCTURAL SETS - DOMAIN M (METASEDIMENTS)

Discontinuity Set ID[1]	Dip (°)	Dip Direction (°)	Design Friction Angle φ[2,3] (°)	Description
FO1	*30*	*260*	*31*	*Foliation*
FB1	34	270	30	Faulting sub parallel to foliation
FF1	83	342	30	
FC1	63	059	30	Faults cross cutting foliation sub parallel to Haggart Creek fault
FI1	03	346	30	
FB2	60	322	30	

NOTES:

1. Refer to Drawings 9 and 10 for lower hemisphere equal area stereographic projections of discontinuity sets
2. Italicized set excluded from interberm / interramp design
3. Refer to Drawing 16 for residual friction angle estimates estimates on fault infilling and Drawing 17 for direct shear testing results in metasedimentary rocks

TABLE 3. DESIGN STRUCTURAL SETS - DOMAIN I (INTRUSIVES)

Discontinuity Set ID	Dip (°)	Dip Direction (°)	Design Friction Angle φ[2,3] (°)	Description
FD1	65	167	34	
FE1	89	222	34	
FA1	*67*	*266*	*34*	Weak set
FD2	52	111	34	Faults cross cutting foliation sub parallel to Haggart Creek fault
FB2	68	346	34	
FB1	33	344	34	
FC2	45	034	34	
FC1	54	070	34	Faults cross cutting foliation sub parallel to Haggart Creek fault
FA2	*37*	*237*	*34*	Weak set
FI1	04	052	34	

NOTES:
1. Refer to Drawing 11 for lower hemisphere equal area stereographic projections of discontinuity sets
2. Italicized set excluded from bench stack scale design
3. Refer to Drawing 16 for residual friction angle estimates on fault infilling and Drawing 18 for direct shear testing results in intrusive rocks.

TABLE 4. INTACT ROCK PROPERTIES

UNIT	Average Lab UCS[1] (MPa)	Median Is_{50} (MPa)	k[2]	Design UCS[2,3] (MPa)	γ (KN/m3)	BTS (MPa)	DTS (MPa)	m_i
FLTZ		0.4	23	9	27.0			15
SINT		5.9	23	135	26.4			20
CINT		2.2	23	51	26.4			15
INT	141	5.9	23	135	26.4	12.1	7.1	20
SSED		3.1	24	76	27.3			17
SED	85	3.5	24	83	27.3	10.6	6.3	17

NOTES:

1. Insufficient laboratory testing was available to warrant breaking out the sub-units of the intrusive and metasedimentary units. As a result, the results shown include all tests in the primary rock units.

2. Is_{50} values are based on field index testing. Design UCS values for each unit are derived from k values according to UCS results in Drawing 13.

3. Is_{50} and UCS values of unaltered intrusive (INT) were applied to the surface weathered intrusives (SINT). Point load testing in SINT unit was based on relatively few tests (69) which were likely biased toward remaining corestones, estimating a higher than reasonable UCS value.

TABLE 5. ROCK MASS PROPERTIES

Geotechnical Unit[1]	Length Observed (m)	Case	RQD (%)	FI (m)	Blockiness Index	Intact Strength				Joint Condition ('76)	RMR'76[3]	
						Is_{50}[2] (MPa)	UCS[2] (MPa)	Description	Rating		Rating	Description
Fault Zones FLTZ	120	Lower Quartile	0	0.02	9	0.3	7	Weak	2	0	21	Poor
		Median	**14**	**0.05**	**12**	**0.4**	**9**	**Weak**	**2**	**0**	**23**	**Poor**
		Upper Quartile	36	0.12	17	0.7	16	Weak	2	6	35	Poor
Surface Weathered Intrustives SINT	277	Lower Quartile	12	0.05	11	2.3	53	Strong	6	9	36	Poor
		Median	**32**	**0.10**	**16**	**5.9**	**135**	**Very Strong**	**12**	**12**	**49**	**Fair**
		Upper Quartile	59	0.17	23	9.3	214	Very Strong	15	14	61	Good
Clay Altered Intrusives subset CINT	450	Lower Quartile	24	0.08	14	0.6	14	Weak	2	6	32	Poor
		Median	**46**	**0.11**	**19**	**2.2**	**51**	**Strong**	**6**	**12**	**47**	**Fair**
		Upper Quartile	72	0.21	25	4.7	108	Very Strong	10	14	59	Fair
Intrusives INT	1451	Lower Quartile	40	0.12	17	2.5	57	Strong	6	6	39	Poor
		Median	**73**	**0.20**	**25**	**5.9**	**135**	**Very Strong**	**12**	**12**	**59**	**Fair**
		Upper Quartile	90	0.35	33	9.3	213	Very Strong	15	16	74	Good
Surface Weathered Sediments SSED	422	Lower Quartile	16	0.05	12	1.4	34	Medium Strong	4	6	32	Poor
		Median	**36**	**0.09**	**16**	**3.1**	**76**	**Strong**	**8**	**7**	**41**	**Fair**
		Upper Quartile	60	0.14	21	4.4	106	Very Strong	10	12	53	Fair
Sediments SED	940	Lower Quartile	42	0.09	17	1.9	45	Medium Strong	5	12	44	Fair
		Median	**64**	**0.14**	**22**	**3.5**	**83**	**Strong**	**8**	**15**	**55**	**Fair**
		Upper Quartile	82	0.22	28	6.0	143	Very Strong	12	18	68	Good

NOTES:
1. INT unit includes unaltered and clay altered intrusives. CINT is a subset of INT that was not used specifically for design.
2. Is_{50} and UCS values of INT were applied to the SINT, as relatively few (69) point load tests were conducted for SINT and these were biased towards more competent pieces of core in the SINT unit.
3. Groundwater rating of 10 has been assumed in all cases to estimate the RMR'76 value.

TABLE 6. HOEK-BROWN FAILURE CRITERION FOR EACH GEOTECHNICAL UNIT

UNIT	UCS[1] (MPa)	GSI[2]	m_i	m_b[3]	s[3]
FLTZ	9	23	15	0.126	0.0000065
SINT	135	49	20	0.896	0.0004
CINT	51	47	15	0.558	0.0003
INT	135	59	20	1.567	0.0017
SSED	76	41	17	0.435	0.0001
SED	83	55	17	1.039	0.0009

NOTES:
1. Design UCS values for each unit based on Is_{50} field index values.
2. Median GSI (RMR'76) values are used for each geotechnical unit.
3. The Hoek-Brown failure criterion have been estimated using a disturbance factor ('D') of 0.85 for all units.

TABLE 7. DESIGN CONSTRAINTS

Requirement	Value	Source
Design factor of safety (FOS) - Discontinuity controlled stability	1.2	BGC
Design factor of safety (FOS) - Rock mass controlled stability	1.3	BGC
Single bench height	7.5 m	Victoria Gold Corp.
Minimum catch bench width	8 m	BC Mines Act 6.23.2
Minimum interberm / interramp height	150 m	BGC
Minimum geotechnical berm width	16 m	BGC
Ramp width	24 m	Victoria Gold Corp.

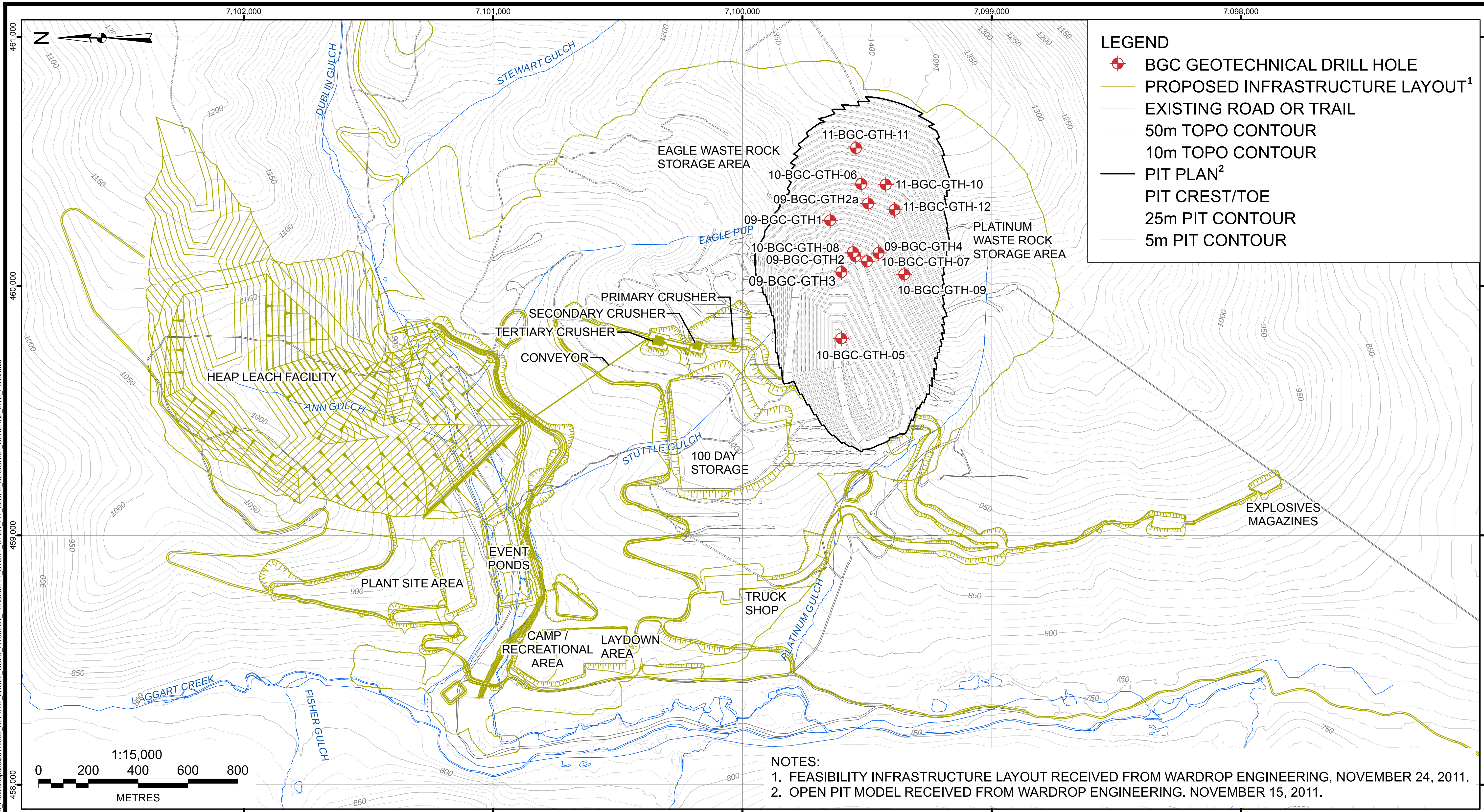
TABLE 8. EAGLE GOLD FEASIBILITY STUDY OPEN PIT SLOPE DESIGN PARAMETERS

Domain[1]	Design Sector[2]	Slope Azimuth[3]		Recommended Catch Bench Geometry[3]			Modified Catch Bench Geometry[3,4]			Interberm Geometry[5]		Slope Design Control	Comments
				Height	Angle	Width	Height	Angle	Width	Maximum Height	Angle		
		Start (°)	End (°)	Bh (m)	Ba (°)	Bw (m)	Bh (m)	Ba (°)	Bw (m)	Ibh (m)	Iba (°)		
M	M-016	0	32	15	65	10.1	15	60	8.4	150	41	Interberm (FB1-FF1)	
	M-061	32	89	15	65	17.9	15	60	16.2	150	31	Interberm (FB1-FF1)	
	M-105	89	120	15	65	16.9	15	60	15.3	150	32	Interberm (FB1)	
	M-132	120	144	15	60	9.0	15	60	9.0	150	40	Interberm (Bench geometry)	Bench face angle limited by dip of fault set FB2.
	M-160	144	175	15	60	9.0	15	60	9.0	150	40	Interberm (Bench geometry)	Bench face angle limited by dip of fault set FB2.
	M-192	175	209	15	65	9.0	15	60	7.3	150	43	Interberm (Bench geometry)	
	M-239	209	269	15	63	9.0	15	60	8.0	150	42	Interberm (Bench geometry)	Bench face angle limited by dip of fault set FC1.
	M-315	269	0	15	65	9.0	15	60	7.3	150	43	Interberm (Bench geometry)	No structural control.
I	I-016	5	26	15	65	11.4	15	60	9.7	150	39	Interberm (FD1-FA2)	
	I-056	26	86	15	65	14.3	15	60	12.7	150	35	Interberm (FD1-FA2)	
	I-110	86	134	15	65	15.2	15	60	13.5	150	34	Interberm (FA1-FB1)	
	I-170	134	205	15	65	17.9	15	60	16.2	150	31	Interberm (FB1-FC2)	
	I-243	205	280	15	65	11.4	15	60	9.7	150	39	Interberm (FD2-FC2)	
	I-295	280	310	15	65	9.0	15	60	7.3	150	43	Interberm (Bench geometry)	
	I-338	310	5	15	65	9.0	15	60	7.3	150	43	Interberm (Bench geometry)	

Notes:

1. Domain M refers to all metasedimentary rocks, Domain I refers to all intrusive rocks.
2. Bench face angle in sector's M-132 and M-160 reduced to avoid undercutting FB2.
3. Refer to Drawing 19 for slope geometry definitions.
4. In modified case, all bench face angles have been reduced to 60º and bench widths adjusted to maintain the required interberm angle. This simplification was done to accommodate the pit design software. Actual pit geometry shall resemble actual catch bench geometry.
5. Geotechnical berms (minimum 16 m) must be added to the slopes every 150 m in sectors in which bench width is <16m.

DRAWINGS



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DESIGNED: DS
CHECKED: HWN
APPROVED: HWN

PROFESSIONAL SEAL:

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

CLIENT: Victoria Gold Corp

PROJECT: EAGLE GOLD PROJECT FEASIBILITY STUDY
OPEN PIT SLOPE DESIGN

TITLE: GENERAL SITE PLAN

PROJECT No.: 0792-005
DWG No.: 1
REV.:

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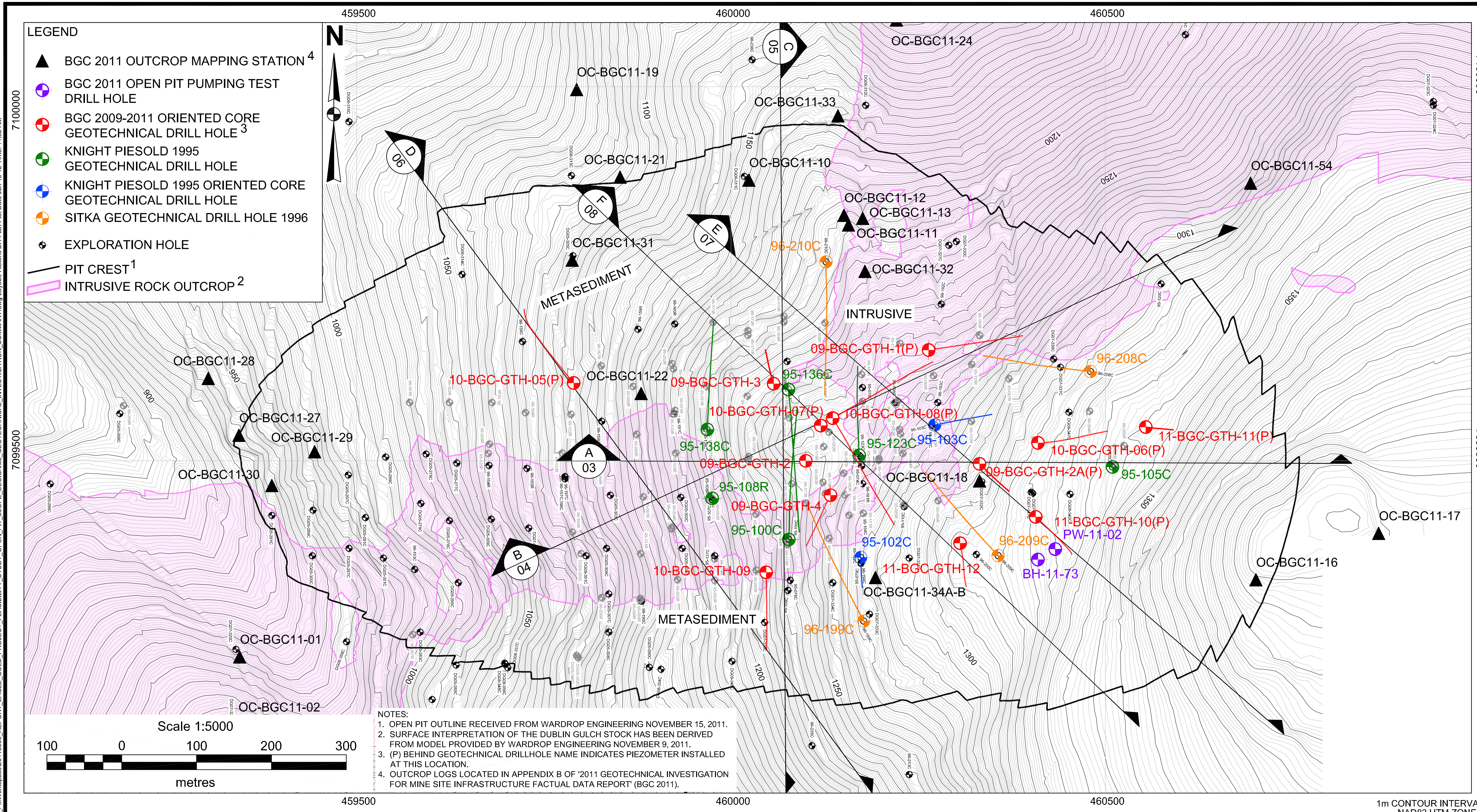

NOTES:
1. OPEN PIT OUTLINE RECEIVED FROM WARDROP ENGINEERING NOVEMBER 15, 2011.
2. SURFACE INTERPRETATION OF THE DUBLIN GULCH STOCK HAS BEEN DERIVED FROM MODEL PROVIDED BY WARDROP ENGINEERING NOVEMBER 9, 2011.
3. (P) BEHIND GEOTECHNICAL DRILLHOLE NAME INDICATES PIEZOMETER INSTALLED AT THIS LOCATION.
4. OUTCROP LOGS LOCATED IN APPENDIX B OF '2011 GEOTECHNICAL INVESTIGATION FOR MINE SITE INFRASTRUCTURE FACTUAL DATA REPORT' (BGC 2011).

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BGC ENGINEERING INC.
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CLIENT: Victoria Gold Corp

PROJECT: EAGLE GOLD PROJECT FEASIBILITY STUDY OPEN PIT SLOPE DESIGN

TITLE: GEOTECHNICAL INVESTIGATION SUMMARY

PROJECT No.:	DWG No.:	REV.:
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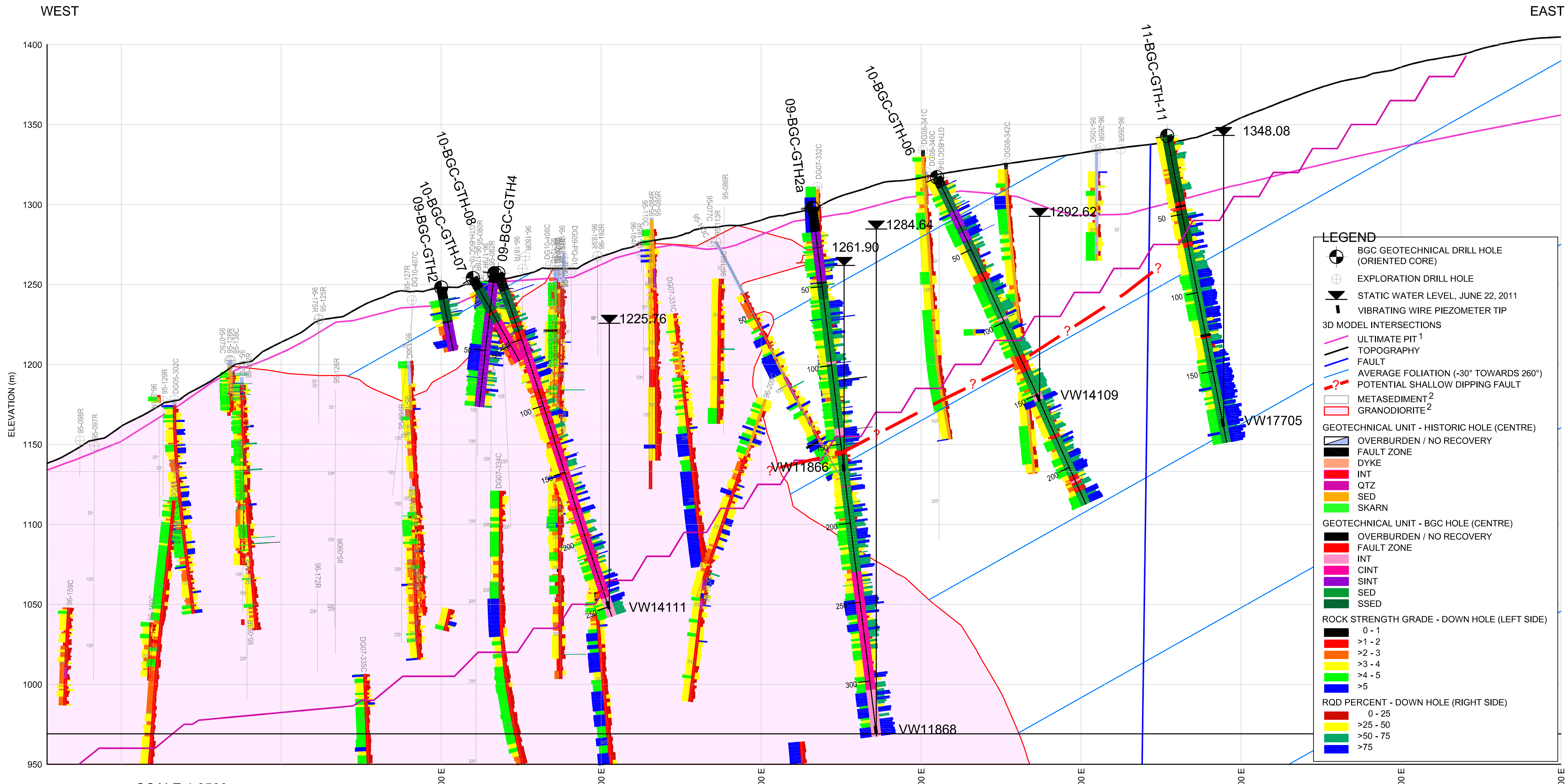

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METRES

CROSS SECTION A/2

NOTES:

1. OPEN PIT OUTLINE RECEIVED FROM WARDROP ENGINEERING NOVEMBER 15, 2011.
2. GEOLOGIC MODEL PROVIDED BY VICTORIA GOLD CORP. NOVEMBER 09, 2011.
3. HEAD IN VIBRATING WIRE (VW) PIEZOMETERS MEASURED JUNE 22, 2011.
4. SECTION ENVELOPE +/- 65m.

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CHECKED:	HWN
APPROVED:	HWN

PROFESSIONAL SEAL:

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

CLIENT: Victoria Gold Corp

PROJECT: EAGLE GOLD PROJECT FEASIBILITY STUDY OPEN PIT SLOPE DESIGN

TITLE: SECTION A

PROJECT No.:	DWG No.:	REV.:
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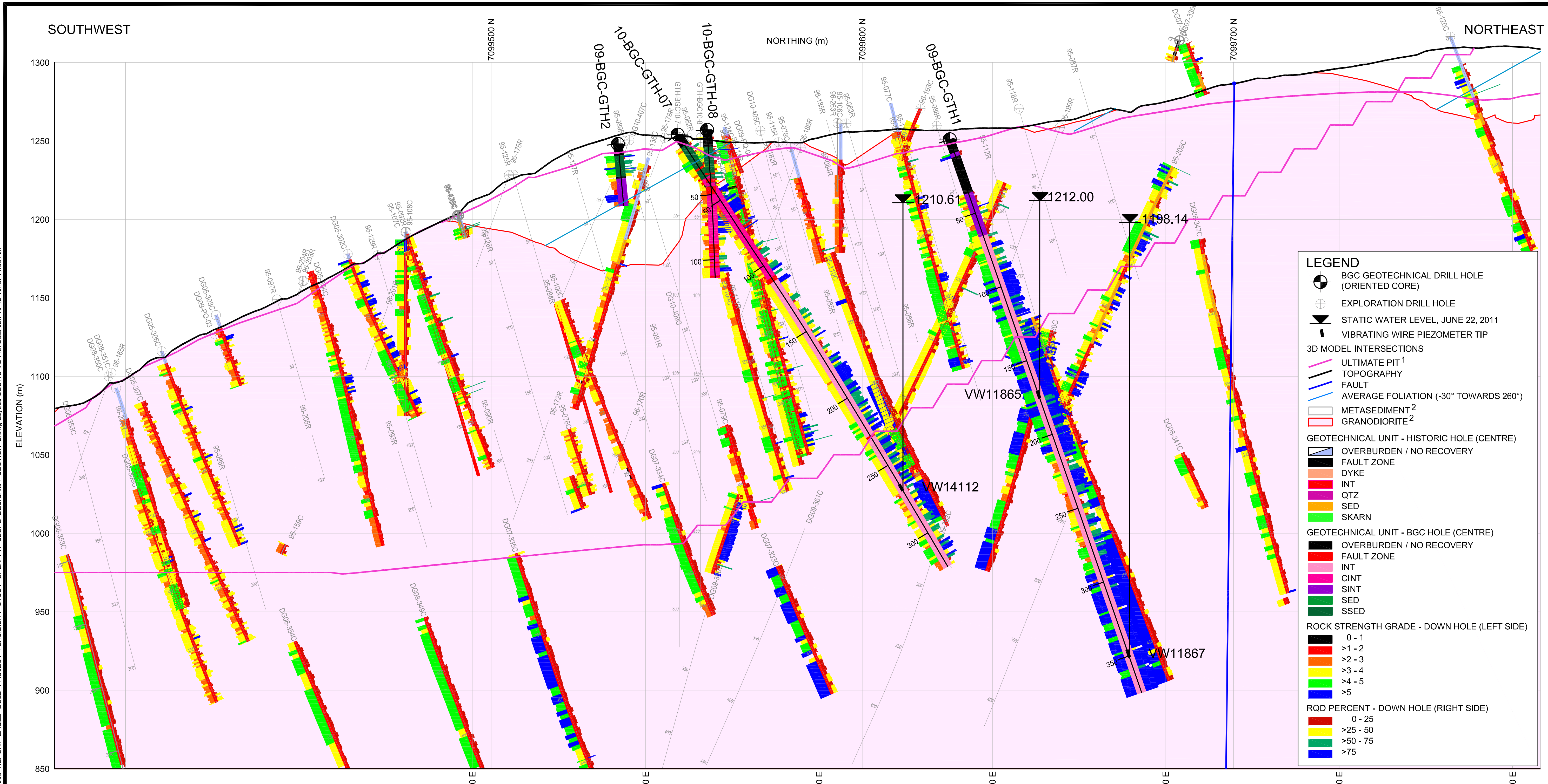

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METRES

CROSS SECTION B/2

NOTES:

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2. GEOLOGIC MODEL PROVIDED BY VICTORIA GOLD CORP. NOVEMBER 09, 2011.
3. HEAD IN VIBRATING WIRE (VW) PIEZOMETERS MEASURED JUNE 22, 2011.
4. SECTION ENVELOPE +/- 65m.

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APPROVED:	HWN

PROFESSIONAL SEAL:

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

CLIENT: Victoria Gold Corp

PROJECT: EAGLE GOLD PROJECT FEASIBILITY STUDY
OPEN PIT SLOPE DESIGN

TITLE: SECTION B

PROJECT No.:	DWG No.:	REV.:
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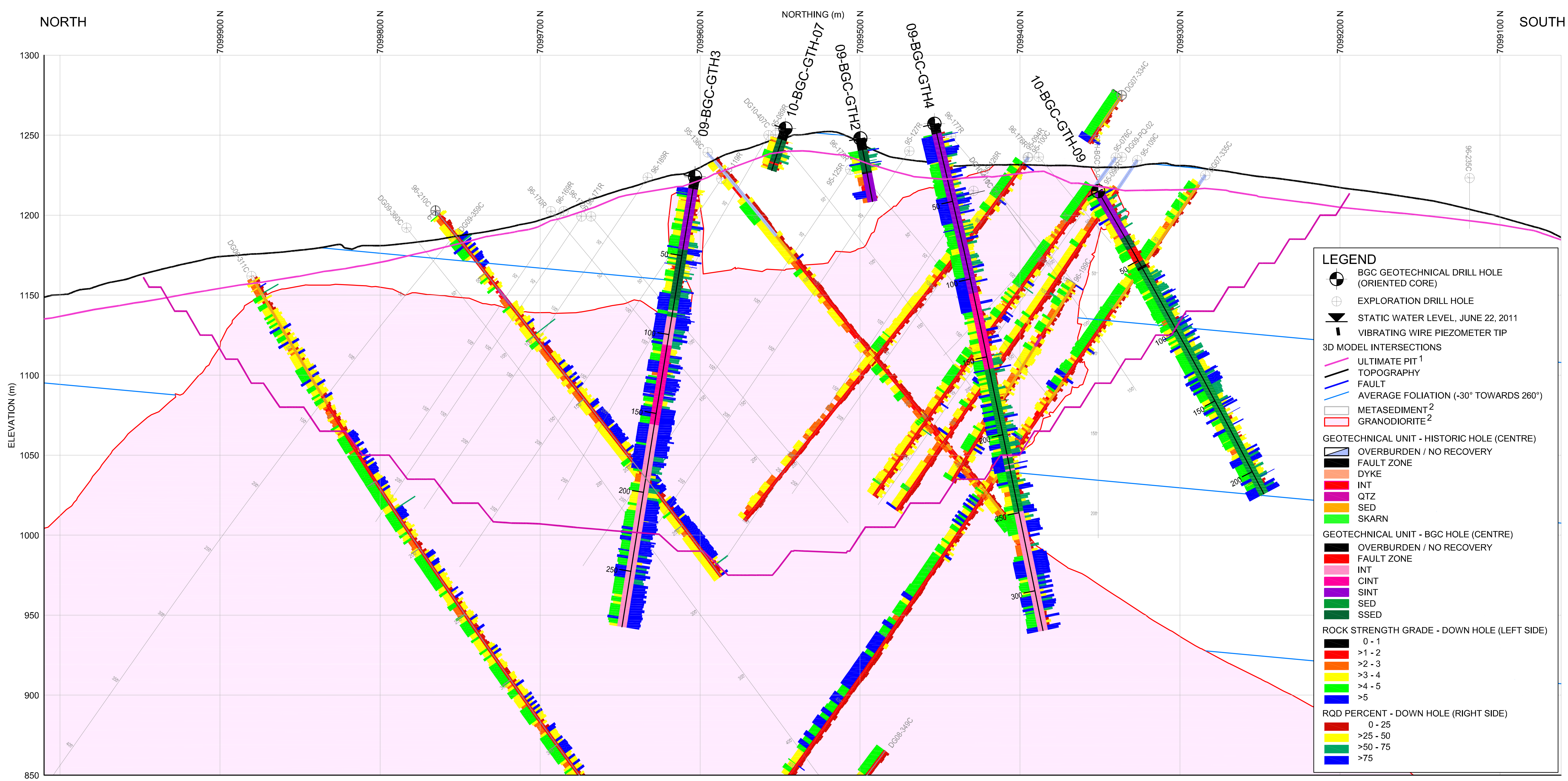

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METRES

CROSS SECTION C/2

NOTES:
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2. GEOLOGIC MODEL PROVIDED BY VICTORIA GOLD CORP. NOVEMBER 09, 2011.
3. SECTION ENVELOPE +/- 65m.

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PROFESSIONAL SEAL:

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PROJECT: EAGLE GOLD PROJECT FEASIBILITY STUDY OPEN PIT SLOPE DESIGN

TITLE: SECTION C

PROJECT No.:	DWG No.:	REV.:
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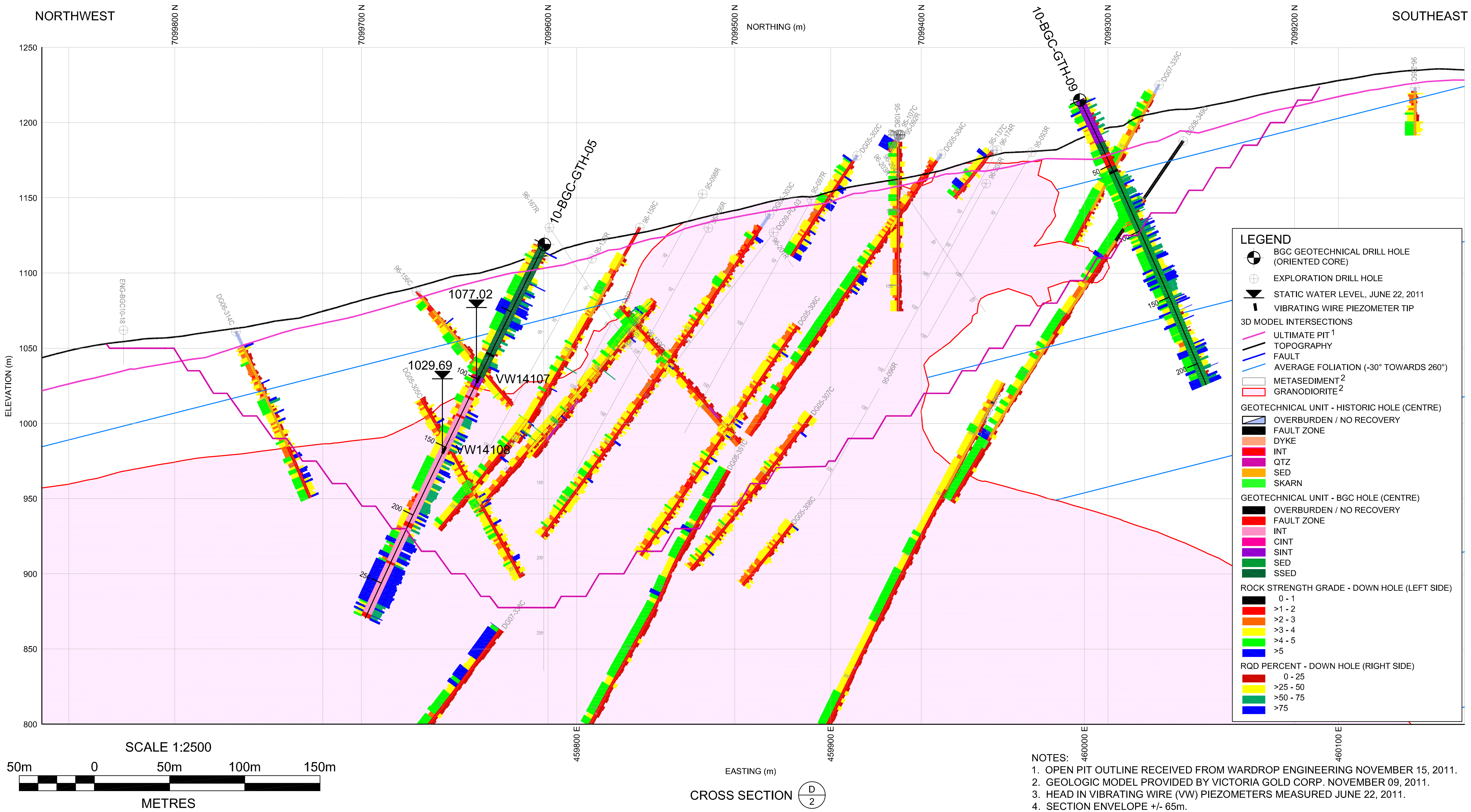

NOTES:
1. OPEN PIT OUTLINE RECEIVED FROM WARDROP ENGINEERING NOVEMBER 15, 2011.
2. GEOLOGIC MODEL PROVIDED BY VICTORIA GOLD CORP. NOVEMBER 09, 2011.
3. HEAD IN VIBRATING WIRE (VW) PIEZOMETERS MEASURED JUNE 22, 2011.
4. SECTION ENVELOPE +/- 65m.

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PROFESSIONAL SEAL:

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TITLE: SECTION D

PROJECT No.:	DWG No.:	REV.:
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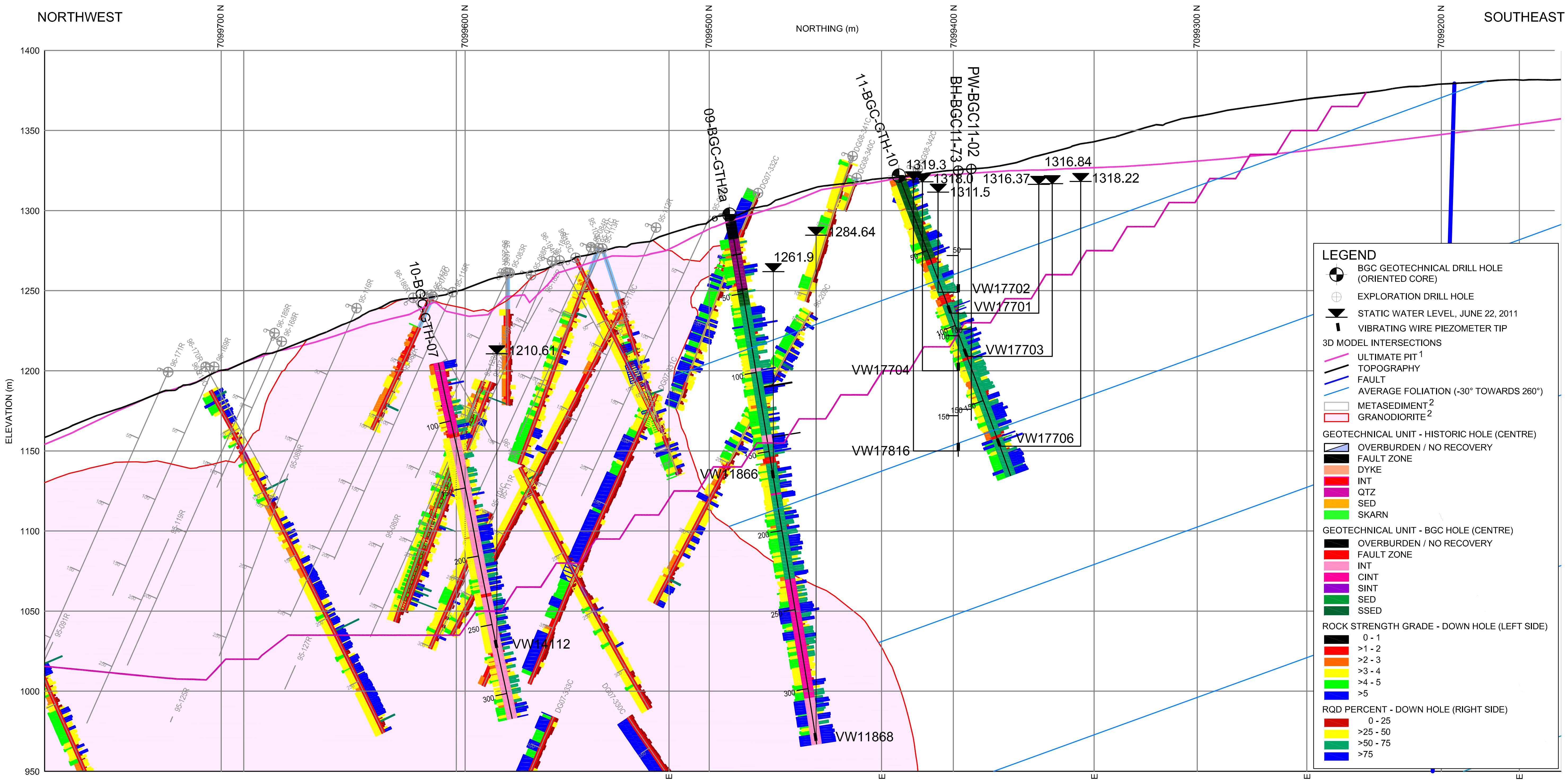

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METRES

CROSS SECTION D/2

NOTES:
1. OPEN PIT OUTLINE RECEIVED FROM WARDROP ENGINEERING NOVEMBER 15, 2011.
2. GEOLOGIC MODEL PROVIDED BY VICTORIA GOLD CORP. NOVEMBER 09, 2011.
3. HEAD IN VIBRATING WIRE (VW) PIEZOMETERS MEASURED JUNE 22, 2011.
4. SECTION ENVELOPE +/- 65m.

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APPROVED:	HWN

PROFESSIONAL SEAL:

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TITLE: SECTION E

PROJECT No.:	DWG No.:	REV.:
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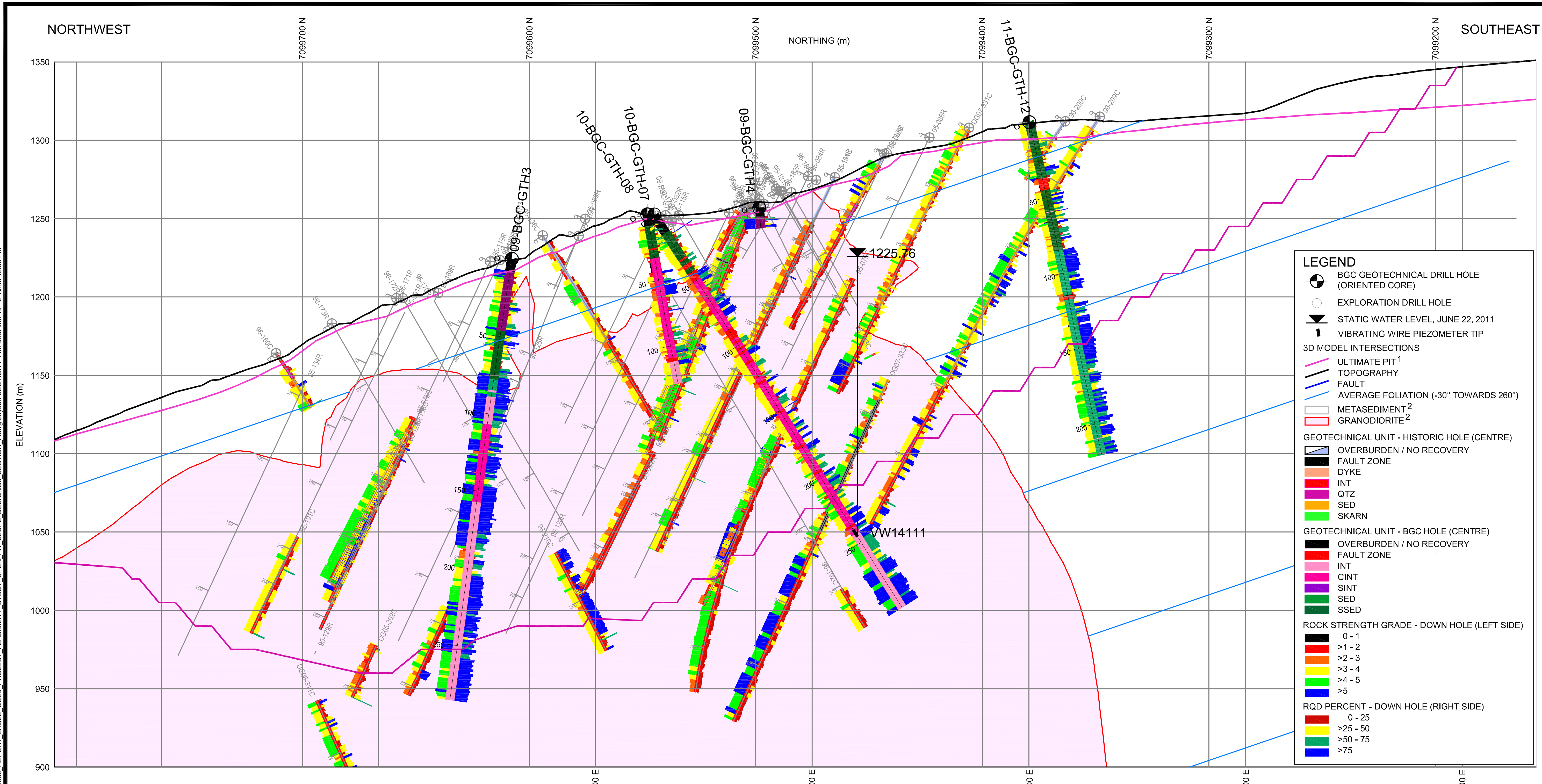

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METRES

CROSS SECTION F/2

NOTES:
1. OPEN PIT OUTLINE RECEIVED FROM WARDROP ENGINEERING NOVEMBER 15, 2011.
2. GEOLOGIC MODEL PROVIDED BY VICTORIA GOLD CORP. NOVEMBER 09, 2011.
3. HEAD IN VIBRATING WIRE (VW) PIEZOMETERS MEASURED JUNE 22, 2011.
4. SECTION ENVELOPE +/- 65m.

REV.	DATE	REVISION NOTES	DRAWN	CHECK	APPR.

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APPROVED:	HWN

PROFESSIONAL SEAL:

BGC ENGINEERING INC.
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PROJECT: EAGLE GOLD PROJECT FEASIBILITY STUDY
OPEN PIT SLOPE DESIGN

TITLE: SECTION F

PROJECT No.:	DWG No.:	REV.:
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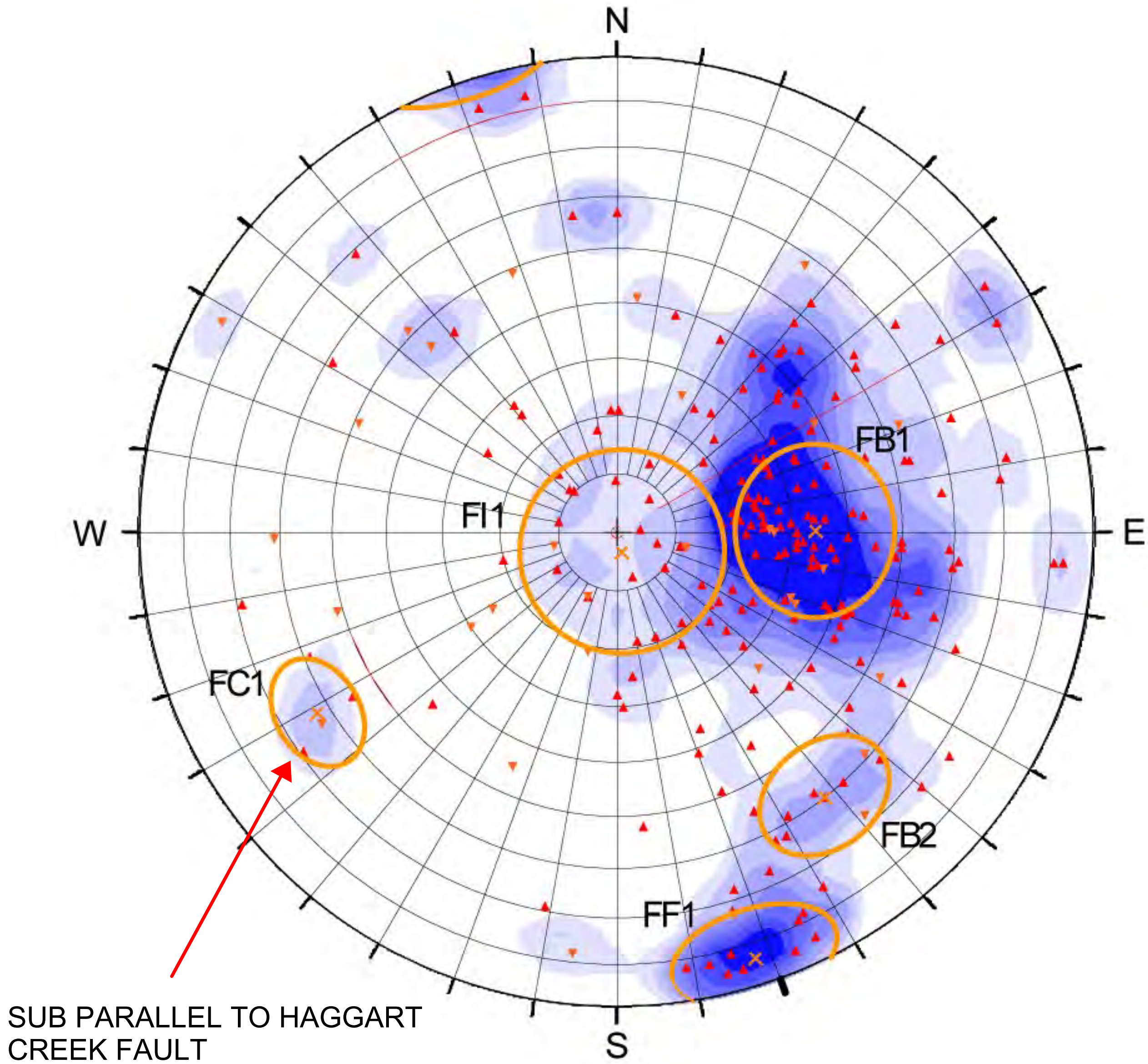


228 POLES

SYMBOL LEGEND

- ▲ FAULT
- ▲ FAULT ALONG FOLIATION
- ▲ FAULT ALONG VEIN
- ▼ SHEAR
- ▼ SHEAR ALONG FOLIATION
- ▼ SHEAR ALONG VEIN

NOTES:
1. DATA SHOWN WAS COLLECTED FROM BGC'S 2009, 2010, AND 2011 GEOTECHNICAL DRILLING PROGRAMS.
2. EQUAL AREA STEREONET PLOTS HAVE BEEN USED WITH TERZAGHI WEIGHTED CONTOURS. CONTOUR INTERVALS SHOWN ARE 0.5% POLE CONCENTRATIONS WITH A 1% POLE CONCENTRATION CUTOFF.

SCALE:	AS SHOWN	DESIGNED:	MAB
DATE:	JAN 2012	CHECKED:	HWN
DRAWN:	DNS	APPROVED:	HWN

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

PROJECT:
EAGLE GOLD PROJECT FEASIBILITY STUDY
OPEN PIT SLOPE DESIGN

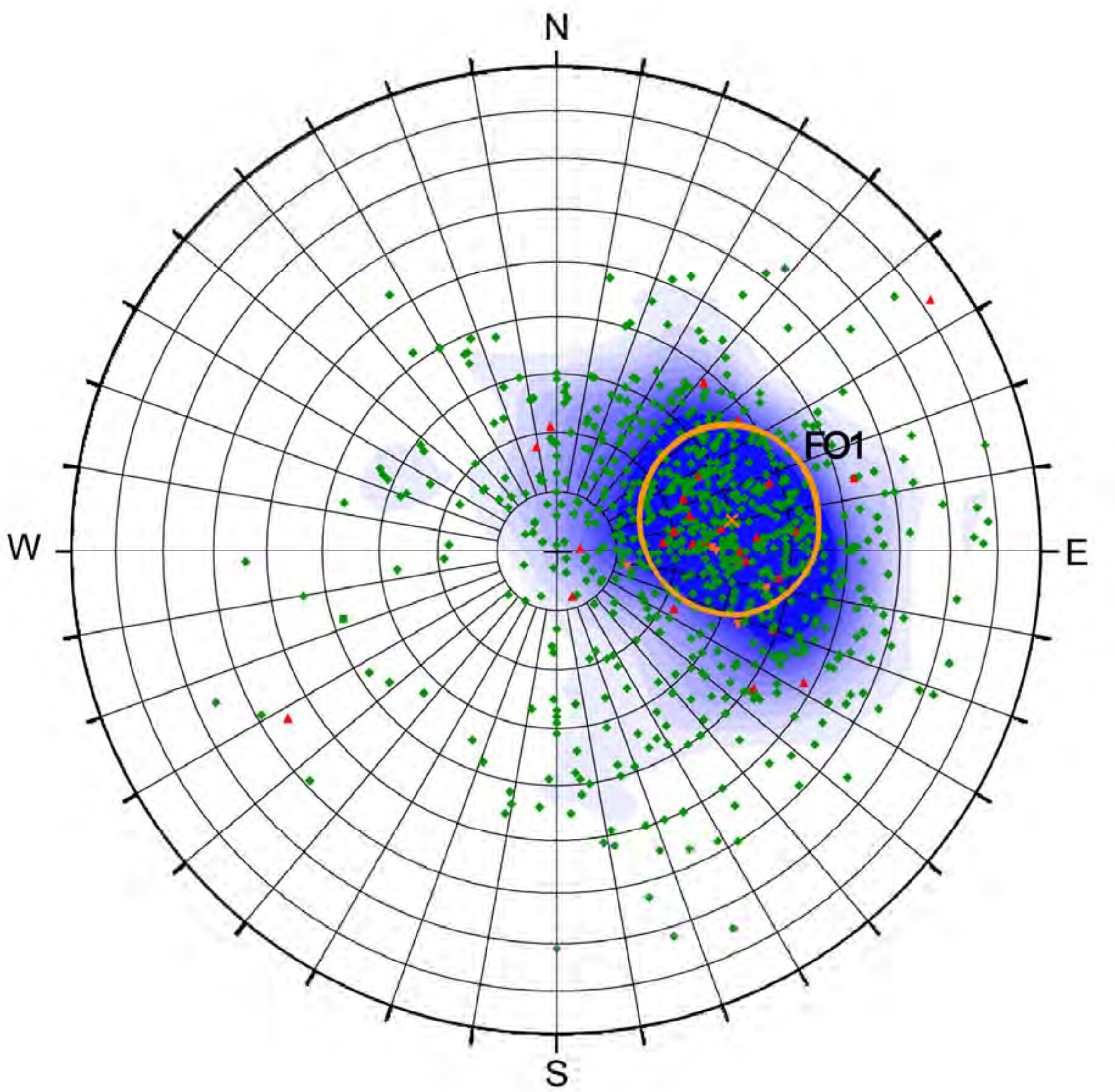
TITLE:
METASEDIMENTARY INTERBERM SCALE
DESIGN SETS - FAULTS AND SHEARS

CLIENT: Victoria Gold Corp

PROJECT No.:	DWG No.:	REV.:
0792-005	9	

N:\BGC\Projects\0792 Victoria Gold\005 EG FS Open Pit\05 Analysis\05 Structural Model\DESIGN STEREONET\INT\SED FAULT SHEAR.grf

DWG TO BE READ WITH BGC REPORT TITLED "EAGLE GOLDPROJECT FEASBILITY STUDY OPEN PIT SLOPE DESIGN" DATED JAN 2012



829 POLES

SYMBOL LEGEND

- ▲ FAULT ALONG FOLIATION
- ◆ JOINT ALONG FOLIATION
- ■ FOLIATION
- ▼ SHEAR ALONG FOLIATION

NOTES:
1. DATA SHOWN WAS COLLECTED FROM BGC'S 2009, 2010, AND 2011 GEOTECHNICAL DRILLING PROGRAM.
2. EQUAL AREA STEREONET PLOTS HAVE BEEN USED WITH TERZAGHI WEIGHTED CONTOURS. CONTOUR INTERVALS SHOWN ARE 0.5% POLE CONCENTRATIONS WITH A 1% POLE CONCENTRATION CUTOFF.

SCALE:	AS SHOWN	DESIGNED:	MAB
DATE:	JAN 2012	CHECKED:	HWN
DRAWN:	DNS	APPROVED:	HWN

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

PROJECT:
EAGLE GOLD PROJECT FEASIBILITY STUDY
OPEN PIT SLOPE DESIGN

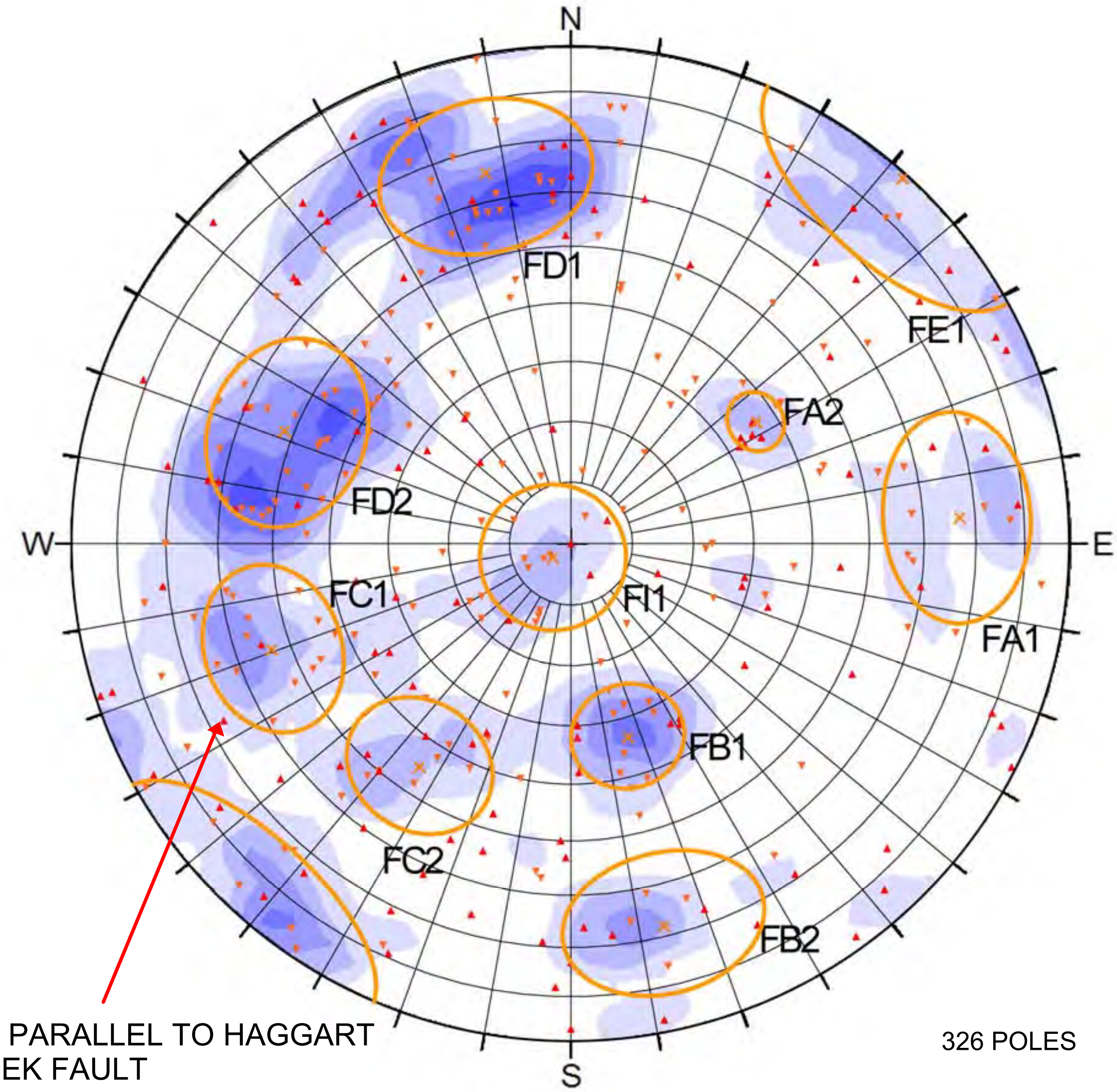
TITLE:
METASEDIMENTARY INTERBERM SCALE
DESIGN SET - FOLIATION

CLIENT: Victoria GOLD CORP

PROJECT No.:	DWG No.:	REV.:
0792-005	10	

N:\BGC\Projects\0792 Victoria Gold\005 EG FS Open Pit\05 Analysis\05 Structural Model\DESIGN STEREONET\INT\SED FAULT SHEAR.grf

DWG TO BE READ WITH BGC REPORT TITLED "EAGLE GOLD PROJECT FEASBILITY STUDY OPEN PIT SLOPE DESIGN" DATED JAN 2012



SUB PARALLEL TO HAGGART CREEK FAULT

326 POLES

SYMBOL LEGEND

- ▲ FAULT
- ▲ FAULT ALONG FOLIATION
- ▲ FAULT ALONG VEIN
- ▼ SHEAR
- ▼ SHEAR ALONG FOLIATION
- ▼ SHEAR ALONG VEIN

NOTES:

1. DATA SHOWN WAS COLLECTED FROM BGC'S 2009 AND 2010 GEOTECHNICAL DRILLING PROGRAMS.
2. EQUAL AREA STEREONET PLOTS HAVE BEEN USED WITH TERZAGHI WEIGHTED CONTOURS. CONTOUR INTERVALS SHOWN ARE 0.5% POLE CONCENTRATIONS WITH A 1% POLE CONCENTRATION CUTOFF.
3. FAULT SETS FA1 AND FA2 WERE NOT USED IN THE SLOPE DESIGNS.

SCALE:	AS SHOWN	DESIGNED:	MAB
DATE:	JAN 2012	CHECKED:	HWN
DRAWN:	DNS	APPROVED:	HWN

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

PROJECT: EAGLE GOLD PROJECT FEASIBILITY STUDY
OPEN PIT SLOPE DESIGN

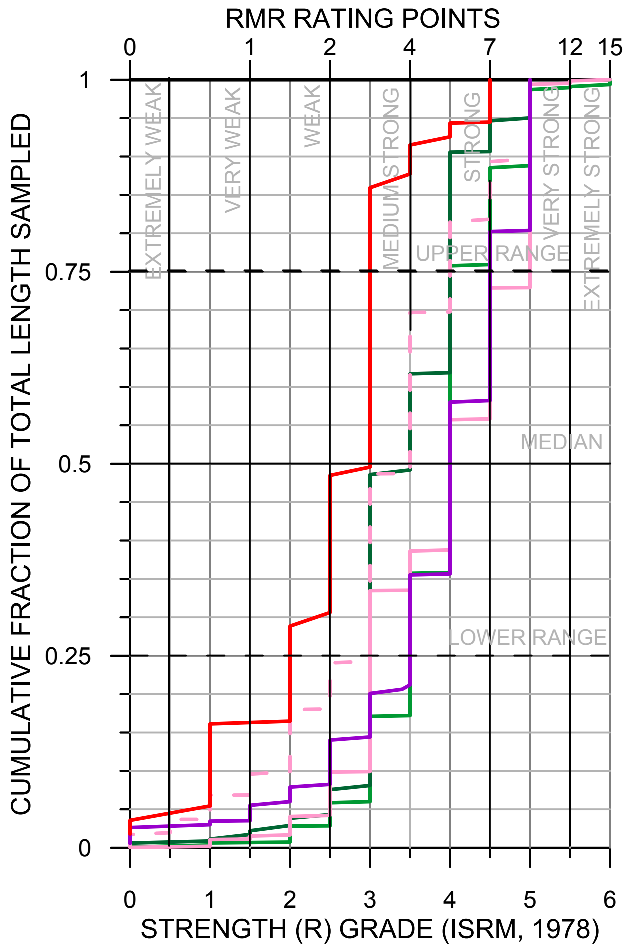
TITLE: INTRUSIVE INTERBERM SCALE DESIGN SETS
FAULTS AND SHEARS

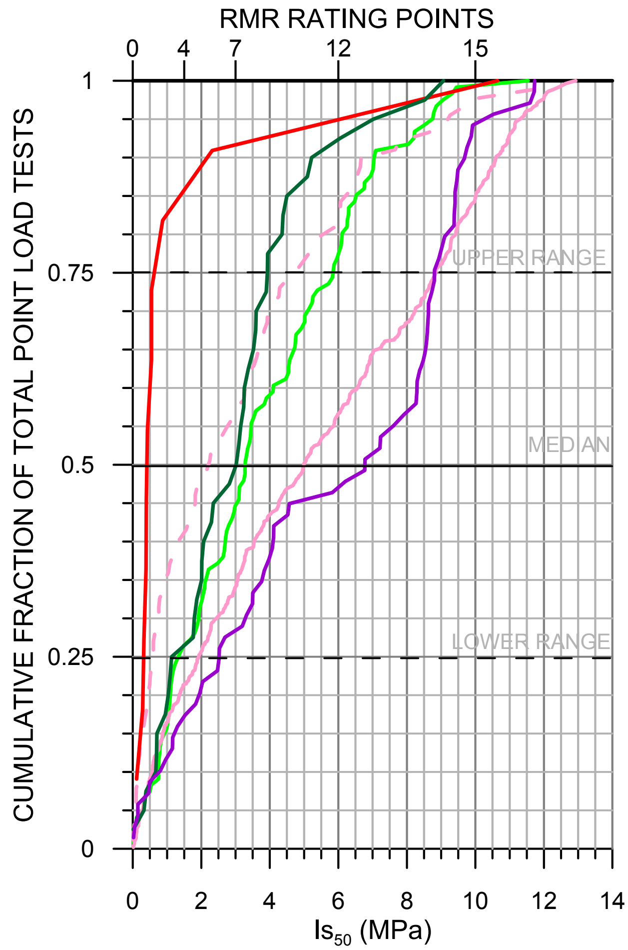
CLIENT: Victoria GOLD CORP

PROJECT No.:	DWG No.:	REV.:
0792-005	11	

N:\BGC\Projects\0792 Victoria Gold\005 EG FS Open Pit\05 Analysis\05 Structural Model\DESIGN STEREONET\INT\INT FAULT SHEAR.grf

DWG TO BE READ WITH BGC REPORT TITLED "EAGLE GOLD PROJECT FEASBILITY STUDY OPEN PIT SLOPE DESIGN" DATED JAN 2012





NOTES:

1. QUALITATIVE DESCRIPTIONS HAVE BEEN SHOWN FOR STRENGTH GRADE (ISRM, 1978).
2. SEE TABLE 4 FOR INTACT ROCK PROPERTIES FOR EACH OF THE UNITS.
3. NUMBER OF VALID POINT LOAD TESTS FOR EACH UNIT PROVIDED IN LEGEND.

GEOTECHNICAL UNITS

- FLTZ
- SINT (69)
- INT and CINT (507)
- - CINT (89)
- SSED (40)
- SED (95)

SCALE:	AS SHOWN	DESIGNED:	MAB
DATE:	JAN 2012	CHECKED:	HWN
DRAWN:	DNS	APPROVED:	HWN

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

PROJECT: EAGLE GOLD PROJECT FEASIBILITY STUDY OPEN PIT SLOPE DESIGN

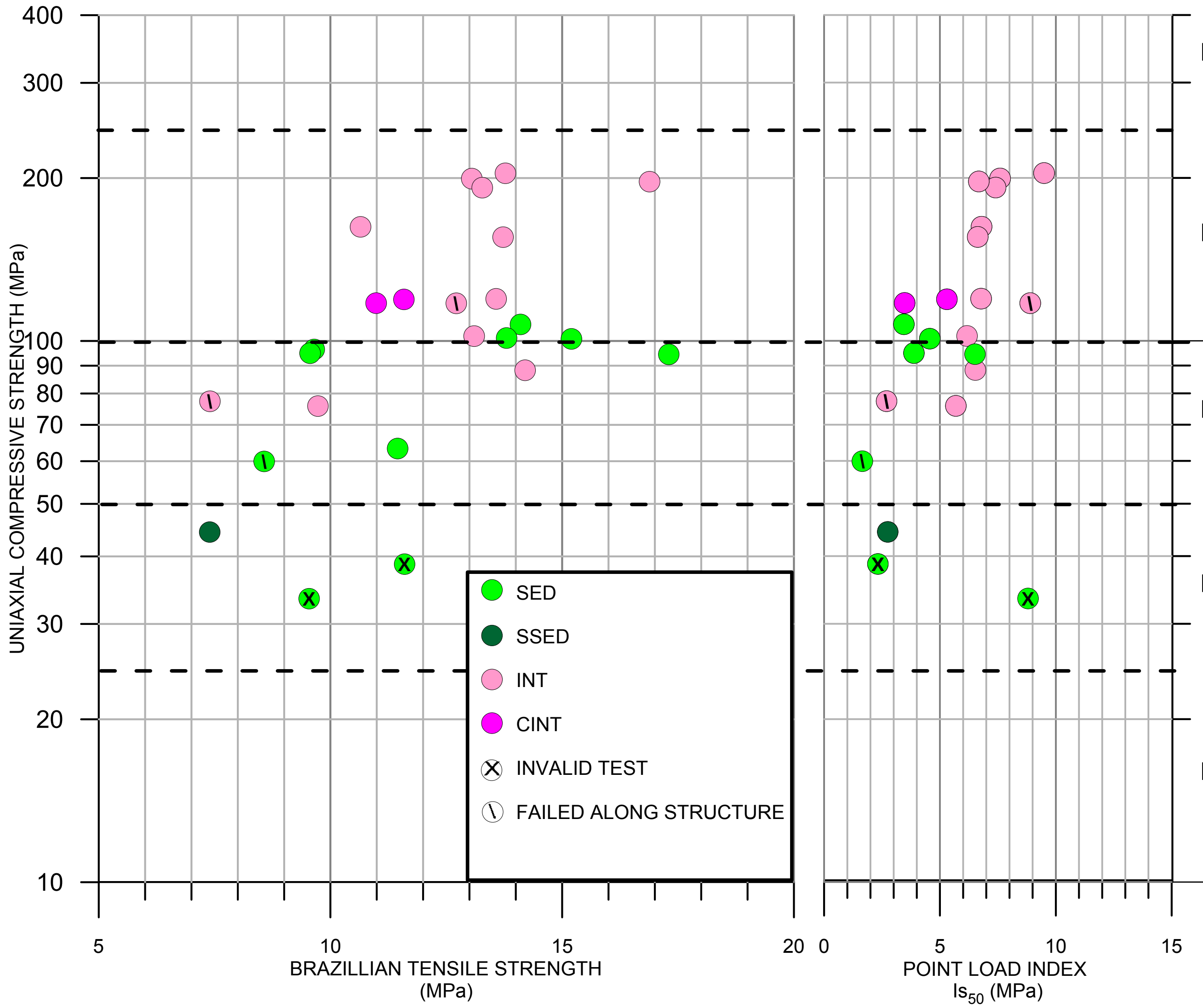
TITLE: INTACT ROCK STRENGTH ESTIMATES FROM STRENGTH GRADE AND Is_{50}

CLIENT: Victoria GOLD CORP

PROJECT No.:	DWG No.:	REV.:
0792-005	12	

N:\BGC\Projects\0792 Victoria Gold\005 EG FS Open Pit\05 Analysis\02 Rock Mass Classification\Cumulative Frequency Plots\Cumulative Frequency Plot_UCS AND Is50.grf

DWG. TO BE READ WITH BGC REPORT TITLED "EAGLE GOLD PROJECT FEASIBILITY STUDY OPEN PIT SLOPE DESIGN" DATED JAN 2012



(SED / SSED)	
AVG. UCS	84.7 MPa
AVG. BTS	10.6 MPa
EST. DTS	6.3 MPa
m_i	16.9
k	24

(INT / CINT)	
AVG. UCS	141.0 MPa
AVG. BTS	12.1 MPa
EST. DTS	7.1 MPa
m_i	19.9
k	23

NOTES:
1. LABORATORY TEST REPORTS PROVIDED IN APPENDIX C.
2. WHERE POSSIBLE, TWO BRAZILIAN TENSILE STRENGTH TESTS HAVE BEEN COMPLETED FROM OFF-CUTS OF EACH UNIAXIAL COMPRESSIVE STRENGTH SAMPLE. THE AVERAGE OF THESE VALES IS PLOTTED.
3. THE RESULTS OF TWO TO FOUR POINT LOAD TESTS ADJACENT TO EACH UCS SAMPLE HAVE BEEN AVERAGED TO DEVELOP 'k,' THE RELATIONSHIP BETWEEN POINT LOAD INDEX (Is_{50}) AND UNIAXIAL COMPRESSIVE STRENGTH.
4. ALL TESTING RESULTS HAVE BEEN PLOTTED WITH LABELS INDICATING FAILED TESTS "X" AND THOSE THAT FAILED ALONG FOLIATION OR ANOTHER PLANE OF WEAKNESS WITHIN THE ROCK MASS "\". RESULTS HAVE BEEN CALCULATED BASED ON VALID UCS TESTS ONLY.
5. DTS IS ESTIMATED FROM THE AVERAGE BTS VALUE OF EACH SAMPLE. THE RATIO OF UCS TO ESTIMATED DTS IS USED TO ESTIMATE THE m_i VALUE FOR EACH ROCK UNIT.

SCALE:	AS SHOWN	DESIGNED:	DK
DATE:	JAN 2012	CHECKED:	HWN
DRAWN:	DNS	APPROVED:	HWN

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

CLIENT: Victoria GOLD CORP

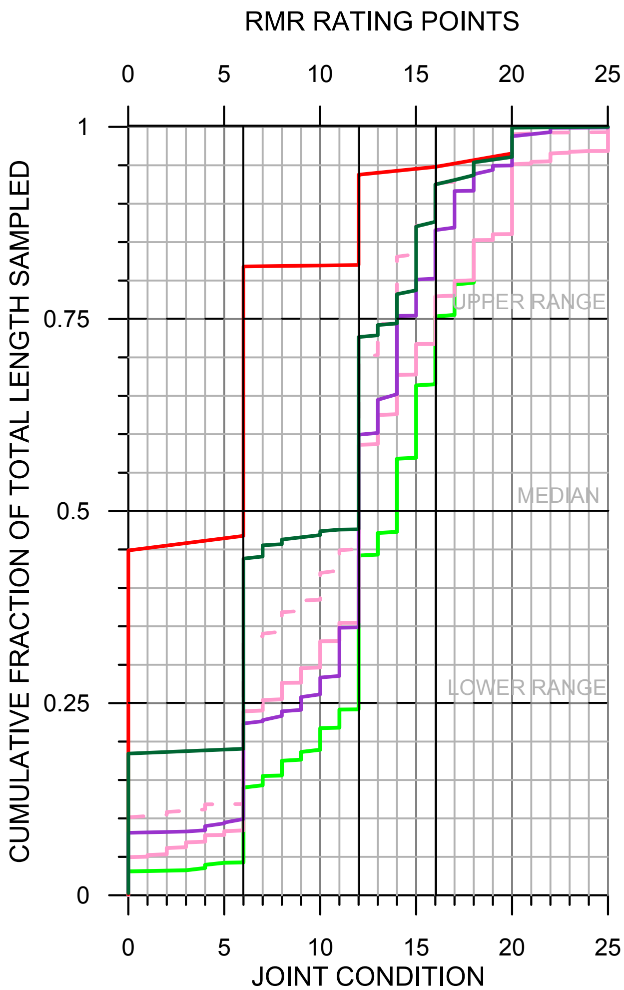
PROJECT: EAGLE GOLD PROJECT FEASIBILITY STUDY OPEN PIT SLOPE DESIGN

TITLE: LABORATORY AND FIELD INDEX INTACT ROCK STRENGTH

PROJECT No.:	DWG No.:	REV.:
0792-005	13	

N:\BGC\Projects\0792 Victoria Gold\005 EG FS Open Pit\05 Analysis\04 Lab Testing Data\01 Intact Strength\0792-005 Intact Strength.grf

DWG. TO BE READ WITH BGC REPORT TITLED "EAGLE GOLD FEASIBILITY STUDY - OPEN PIT SLOPE DESIGN" DATED JAN 2012.



NOTES:
1. SEE TABLE 5 FOR DESIGN ROCK MASS PROPERTIES FOR EACH OF THE UNITS.
2. OVERBURDEN ABOVE THE BEDROCK WAS NOT USED IN THE PLOTS

JC '76 RATING	CONDITION OF DISCONTINUITY	ADDITIONAL NOTES [BGC,2010]
25	VERY ROUGH SURFACE; NOT CONTINUOUS; NO SEPARATION; UNWEATHERED (HARD) WALLS	INCLUDES INTERVALS WITH NO DISCONTINUITIES, 16≤ JRC
20	SLIGHTLY ROUGH SURFACES, SEPARATION <1 mm; SLIGHTLY WEATHERED (HARD, ≥R3) WALLS	> R3 WALL ROCK; INTERLOCKING DISCONTINUITIES WITH 8 < JRC < 14
12	SLIGHTLY ROUGH SURFACES; SEPARATION <1 mm; HIGHLY WEATHERED (SOFT, <R3) WALLS	< R3 WALL ROCK AND SLIGHTLY ROUGH OR > R3 WALL ROCK; PLANAR/SMOOTH SURFACES WITH NO INFILL
6	SLICKENSIDED SURFACES OR GOUGE <5 mm THICK OR SEPARATION 1 TO 5 mm; CONTINUOUS	VEINS ≤ R1 OR MOHS # ≤ 3 INCLUDED AS INFILLING
0	SOFT GOUGE >5 mm OR SEPARATION >5 mm; CONTINUOUS	VEINS ≤ R1 OR MOHS # ≤ 3 INCLUDED AS INFILLING

SCALE:	AS SHOWN	DESIGNED:	MAB
DATE:	JAN 2012	CHECKED:	HWN
DRAWN:	DNS	APPROVED:	HWN

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

PROJECT: EAGLE GOLD PROJECT FEASIBILITY STUDY
OPEN PIT SLOPE DESIGN

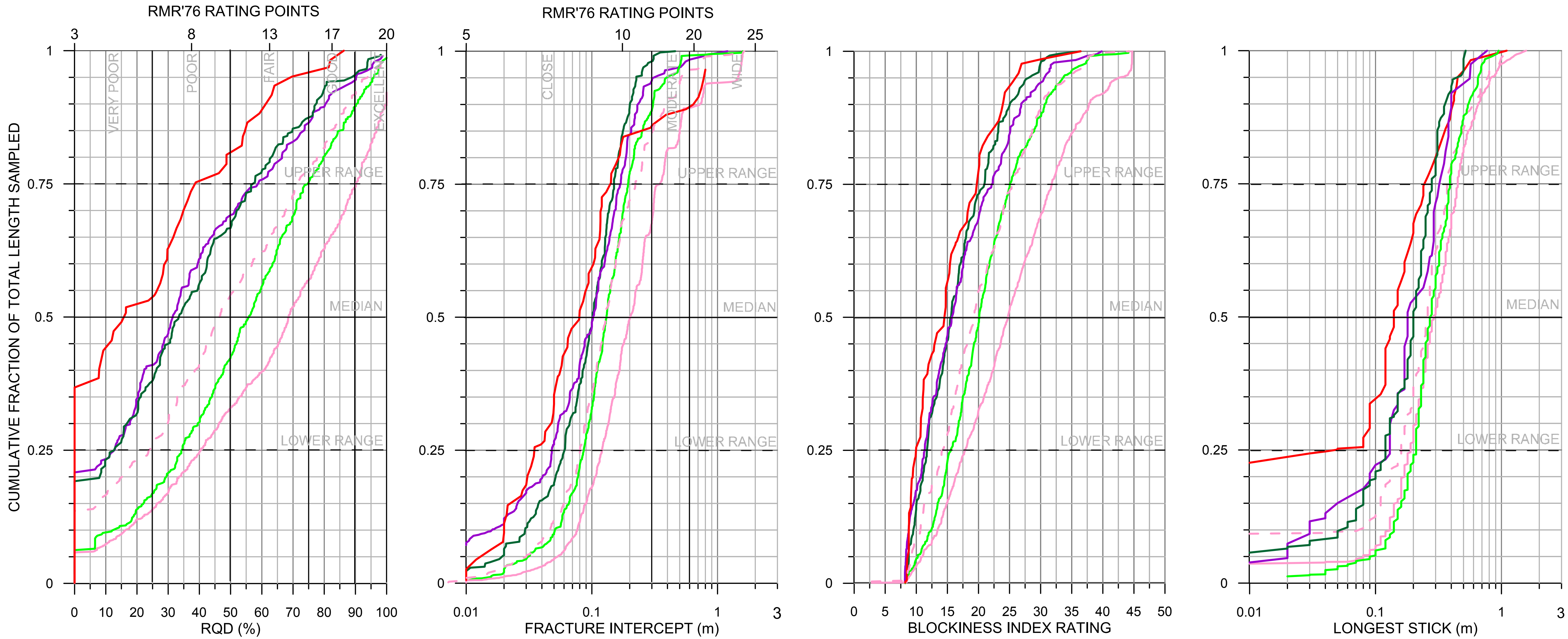
TITLE: CUMULATIVE FRACTION
JOINT CONDITION

CLIENT: Victoria GOLD CORP

PROJECT No.:	DWG No.:	REV.:
0792-005	14	

N:\BGC\Projects\0792 Victoria Gold\005 EG FS Open Pit\05Analysis\02 Rock Mass Classification\Cumulative Frequency Plots\Cumulative Frequency Plot_JC.grf

DWG. TO BE READ WITH BGC REPORT TITLED "EAGLE GOLD PROJECT FEASIBILITY STUDY OPEN PIT SLOPE DESIGN" DATED JAN 2012.



NOTES:
1. QUALITATIVE DESCRIPTIONS HAVE BEEN SHOWN FOR RQD (DEERE AND DEERE, 1989), AND FRACTURE INTERCEPT (ISRM, 1981).
2. BLOCKINESS INDEX IS THE SUM OF RMR '76 RATING POINTS FOR RQD AND FRACTURE INTERCEPT.
3. SEE TABLE 5 FOR DESIGN ROCK MASS PROPERTIES FOR EACH OF THE UNITS.
4. LONGEST STICK DATA WAS NOT COLLECTED IN 2009.
5. TOTAL LENGTH SAMPLED FOR EACH UNIT IS SHOWN IN LEGEND.

GEOTECHNICAL UNITS
- FLTZ (88 m)
- SINT (277 m)
- INT and CINT (1451 m)
- - CINT (450 m)
- SSED (252 m)
- SED (453 m)

N:\BGC\Projects\0792 Victoria Gold\005 EG FS Open Pit\05 Analysis\02 Rock Mass Classification\Cumulative Frequency Plots\Sulphurets\Cumulative Frequency Plot_RQD FI LS BLOCK.grf

REV.	DATE	REVISION NOTES	DRAWN	CHECK	APPR.

SCALE:	AS SHOWN
DATE:	JAN 2012
DRAWN:	DNS
DESIGNED:	MAB
CHECKED:	HWN
APPROVED:	HWN

PROFESSIONAL SEAL:

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

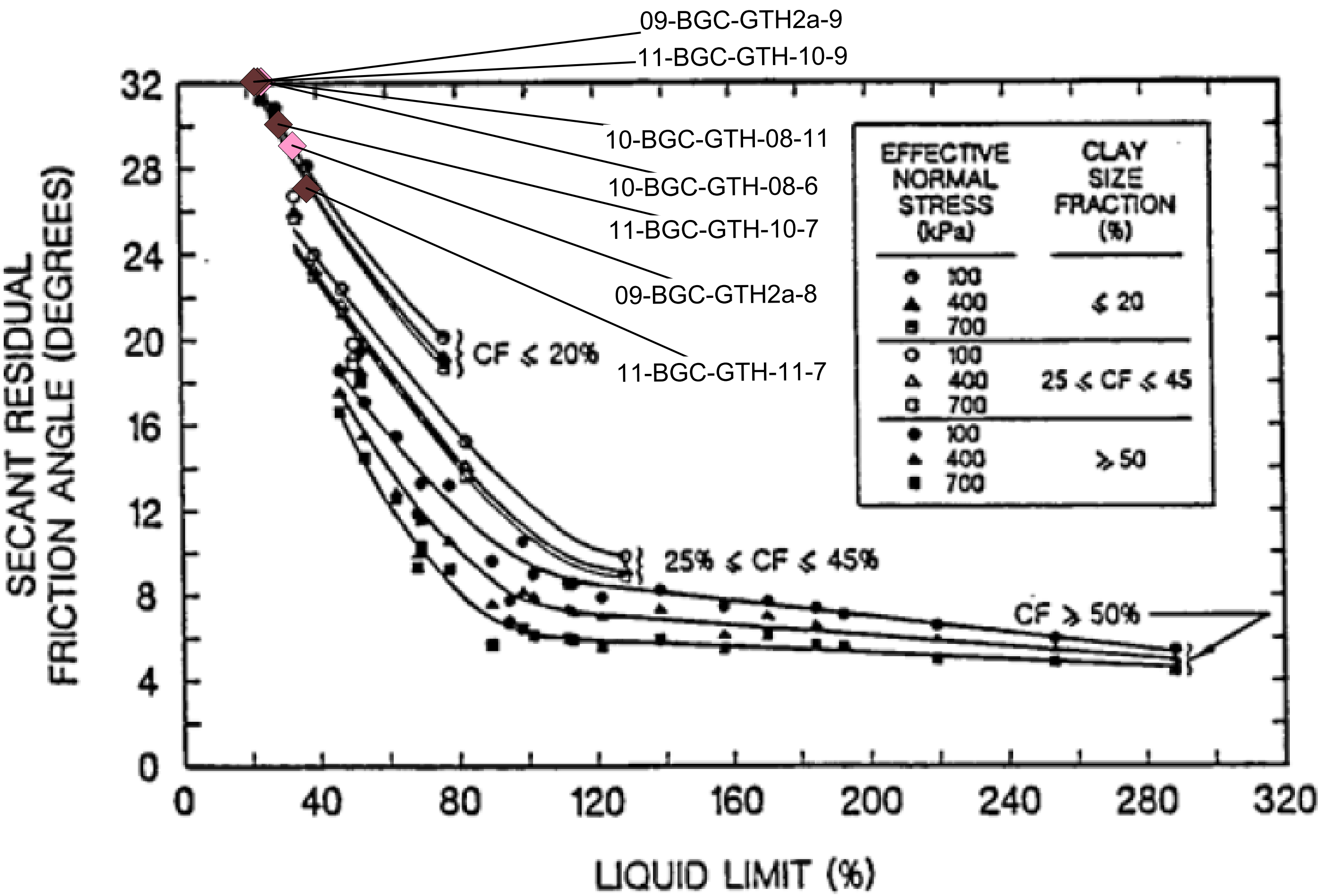
CLIENT: Victoria GOLD CORP

PROJECT: EAGLE GOLD PROJECT FEASIBILITY STUDY OPEN PIT DESIGN

TITLE: DISTRIBUTION OF RQD, FRACTURE INTERCEPT, BLOCKINESS INDEX AND LONGEST STICK BY GEOTECHNICAL UNIT

PROJECT No.:	DWG No.:	REV.:
0792-005	15	

DWG. TO BE READ WITH BGC REPORT TITLED "EAGLE GOLD PROJECT FEASIBILITY STUDY OPEN PIT SLOPE DESIGN" DATED JAN 2012.



ZONE	SAMPLE NO.	SOIL CLASSIFICATION	LIQUID LIMIT	CLAY FRACTION (%)	ϕ_r	ϕ_r DETERMINED BY[4,5]	AVERAGE φr
INT	10-BGC-GTH-08-6	SILTY SAND (SM), SOME CLAY	24	10	32	FINE FRACTION	31
	10-BGC-GTH-08-11	SILTY SAND (SM) WITH GRAVEL, SOME CLAY	24	11	32	FINE FRACTION	
	09-BGC-GTH2a-8	SILT AND CLAY (CL-ML), SOME SAND	33	17	29	FINE FRACTION	
SED	10-BGC-GTH-09-9	SILTY SAND (SM) WITH GRAVEL	27	0	31	GRANULAR	30
	09-BGC-GTH2a-9	SILTY SAND (SM) WITH GRAVEL, TRACE CLAY	23	4	32	FINE FRACTION	
	11-BGC-GTH-10-7	SILTY SAND (SM), SOME SILT AND CLAY, TRACE GRAVEL	29	<20	30	FINE FRACTION	
	11-BGC-GTH-10-9	SANDY GRAVEL (GM), SOME SILT AND CLAY	22	<10	32	FINE FRACTION	
	11-BGC-GTH-11-7	WELL GRADED SAND (SW), SOME GRAVEL, SOME SILT	37	0	27	FINE FRACTION	

NOTES:
1. ALL AVAILABLE DATA FROM THE EGP PROJECT SITE HAS BEEN PLOTTED.
2. SEE APPENDIX C FOR LABORATORY TESTING RESULTS.
3. SEE TABLE 2 AND 3 FOR DESIGN STRENGTH SUMMARY.
4. FINE FRACTION ESTIMATED ϕ_r FROM PLOT ABOVE (STARK AND EID, 1994).
5. GRANULAR FRACTION ESTIMATED ϕ_{cs} AS PER BUDHU, 2007 AND EMPIRICAL SOIL CLASSIFICATION CORRELATIONS.

SCALE: AS SHOWN	DESIGNED: MAB/DK
DATE: JAN 2012	CHECKED: HWN
DRAWN: DNS	APPROVED: HWN

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

PROJECT:
EAGLE GOLD PROJECT FEASIBILITY STUDY
OPEN PIT SLOPE DESIGN

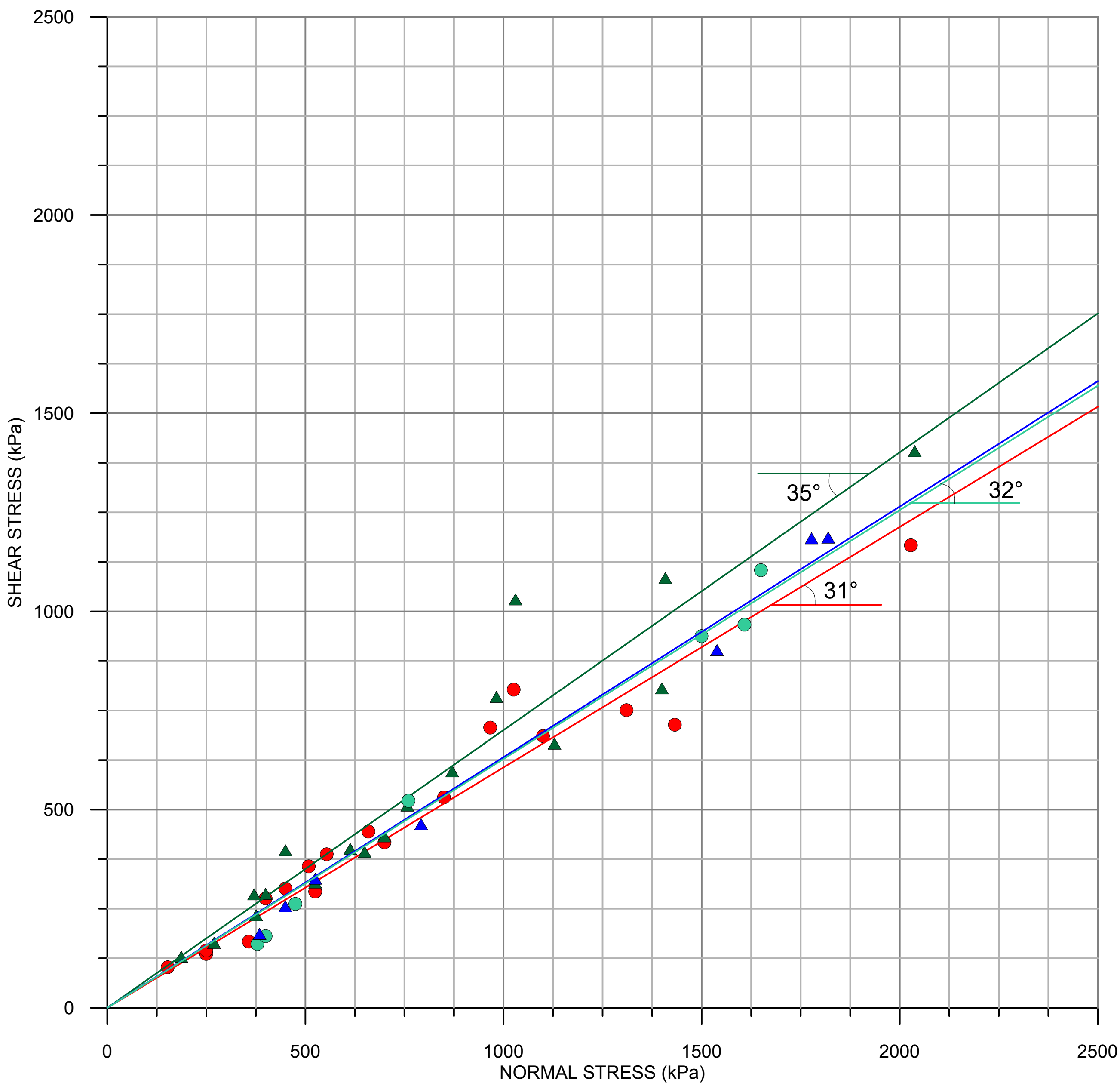
TITLE:
RESIDUAL FRICTION ANGLE OF FAULT INFILL
AFTER STARK AND EID, 1994

CLIENT: Victoria GOLD CORP

PROJECT No.:	DWG No.:	REV.:
0792-005	16	

N:\BGC\Projects\0792 Victoria Gold\005 EG FS Open Pit PFS\05 Analysis\04 Lab Testing\02 Discon Strength\Gouge\EGP STARK AND EID, 1994.grf

DWG. TO BE READ WITH BGC REPORT TITLED "EAGLE GOLD PROJECT FEASIBILITY STUDY OPEN PIT SLOPE DESIGN" DATED JAN 2012



- ▲ PEAK STRENGTH FOLIATION: 35°
- ● RESIDUAL STRENGTH FOLIATION: 31°
- ▲ PEAK STRENGTH CROSS JOINT: 32°
- ● RESIDUAL STRENGTH CROSS JOINT:32°

NOTES:
1. RESULTS WERE CORRECTED ACCORDING TO METHODS DESCRIBED BY HENCHER, 1995.

SCALE:	AS SHOWN	DESIGNED:	MAB
DATE:	JAN 2012	CHECKED:	HWN
DRAWN:	DNS	APPROVED:	HWN

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

CLIENT: Victoria GOLD CORP

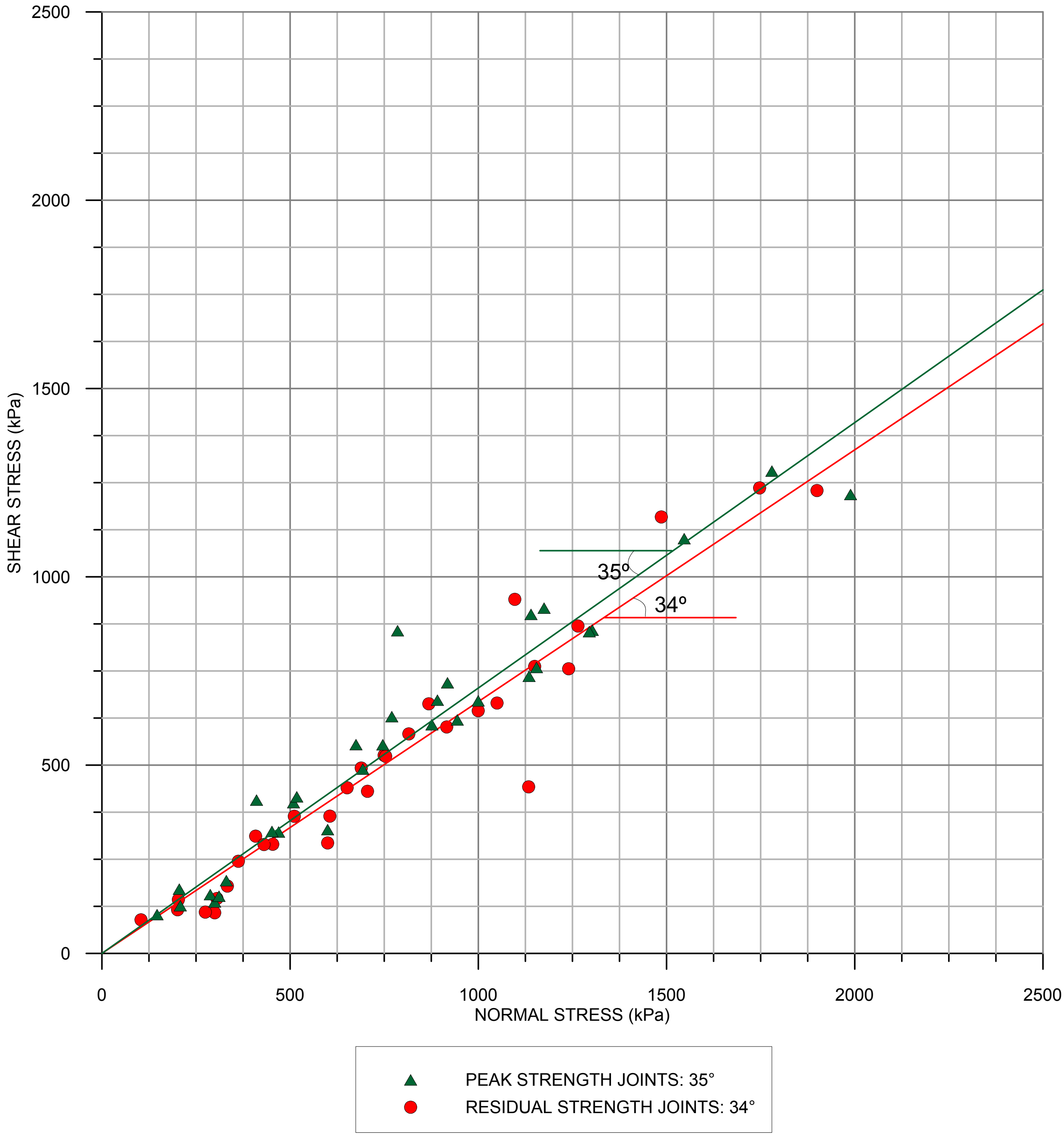
PROJECT:
EAGLE GOLD PROJECT FEASIBILITY STUDY
OPEN PIT SLOPE DESIGN

TITLE:
SMALL SCALE DIRECT SHEAR TESTING RESULTS
METASEDIMENTARY ROCKS

PROJECT No.:	DWG No.:	REV.:
0792-005	17	

DWG. TO BE READ WITH BGC REPORT TITLED "EAGLE GOLD FEASIBILITY STUDY - OPEN PIT SLOPE DESIGN" DATED JAN 2012.

N:\BGC\Projects\0792 Victoria Gold\005 EG FS Open Pit\04 Lab Testing\02 Discon Strength\Direct Shear\SEDIMENTS DS Results_corrected.grf



NOTES:
1. RESULTS WERE CORRECTED ACCORDING TO METHODS DESCRIBED BY HENCHER, 1995.

SCALE:	AS SHOWN	DESIGNED:	MAB
DATE:	JAN 2012	CHECKED:	HWN
DRAWN:	DNS	APPROVED:	HWN

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

PROJECT:
EAGLE GOLD PROJECT FEASIBILITY STUDY
OPEN PIT SLOPE DESIGN

TITLE:
SMALL SCALE DIRECT SHEAR TESTING RESULTS
INTRUSIVE ROCKS

CLIENT: Victoria GOLD CORP

PROJECT No.:	DWG No.:	REV.:
0792-005	18	

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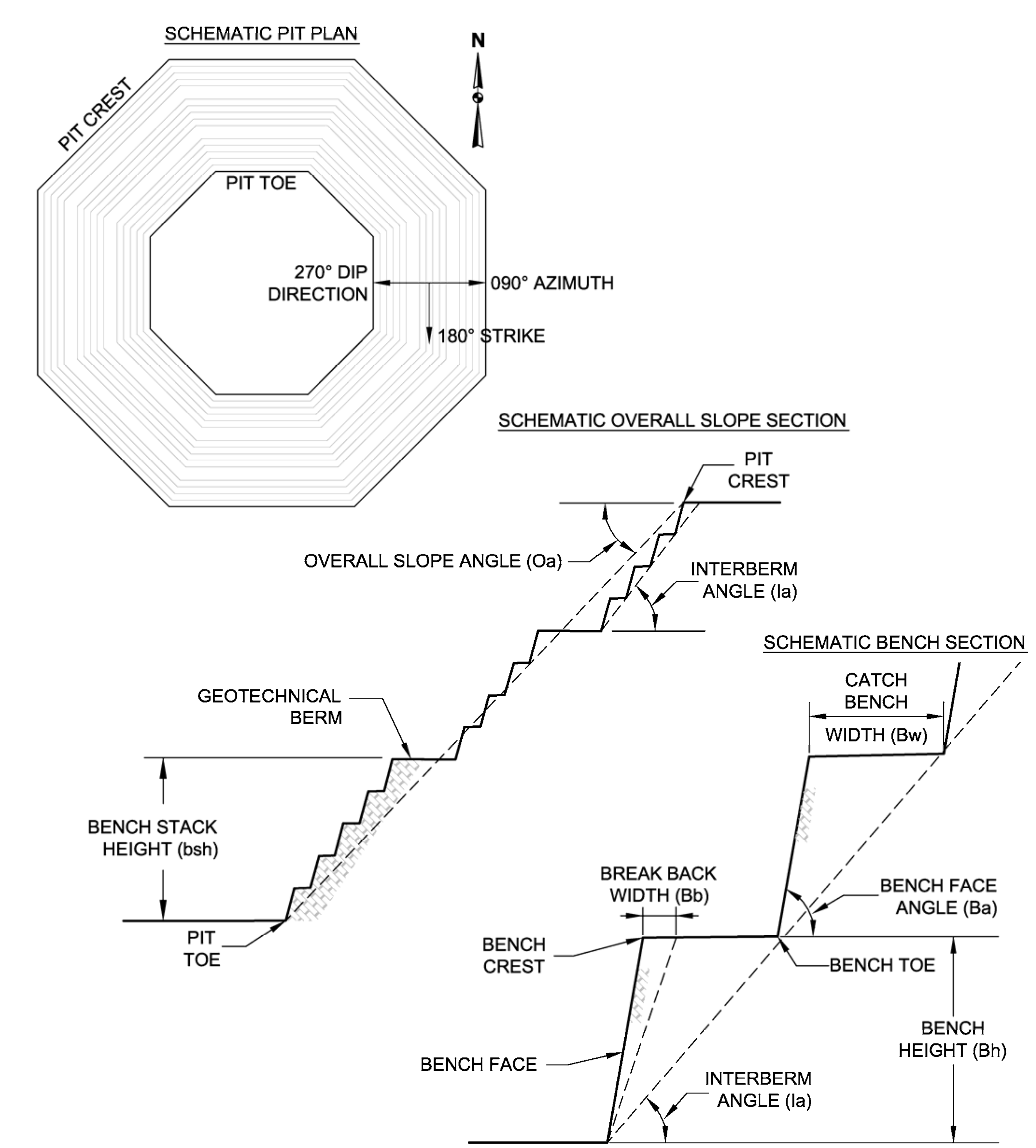
DWG. TO BE READ WITH BGC REPORT TITLED "EAGLE GOLD FEASIBILITY STUDY - OPEN PIT SLOPE DESIGN" DATED JAN 2012.



SCALE:	NTS	DESIGNED:	MAB
DATE:	JAN 2012	CHECKED:	HWN
DRAWN:	DS	APPROVED:	HWN

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

PROJECT:
EAGLE GOLD PROJECT FEASIBILITY STUDY
OPEN PIT SLOPE DESIGN

TITLE:
PIT SLOPE GEOMETRY PARAMETERS AND DEFINITIONS

CLIENT:
Victoria GOLD CORP

PROJECT No.:	DWG No.:	REV.:
0792-005	19	

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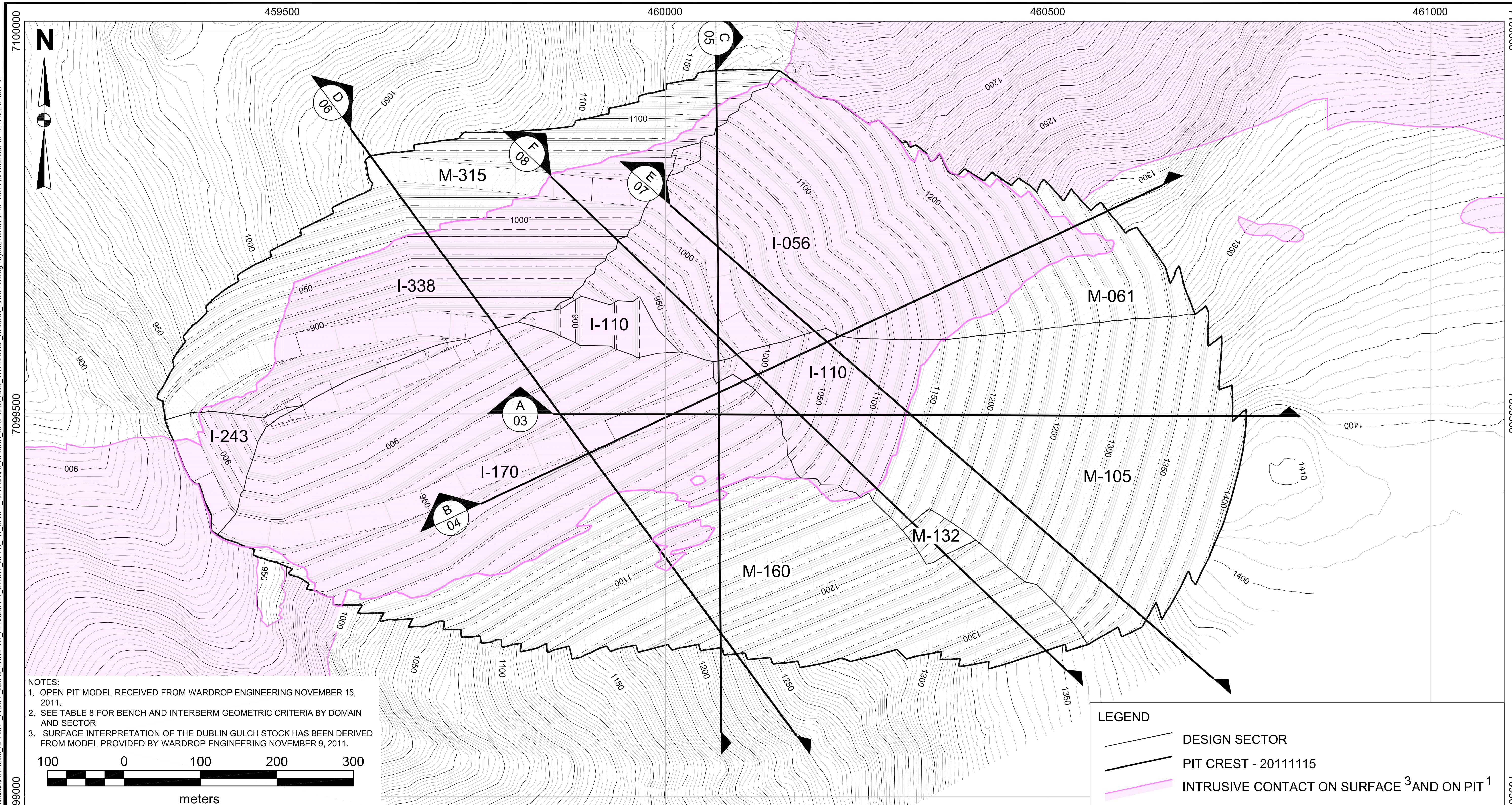
DWG TO BE READ WITH BGC REPORT TITLED "EAGLE GOLD PROJECT FEASBILITY STUDY OPEN PIT SLOPE DESIGN" DATED JAN 2012



NOTES:
1. OPEN PIT MODEL RECEIVED FROM WARDROP ENGINEERING NOVEMBER 15, 2011.
2. SEE TABLE 8 FOR BENCH AND INTERBERM GEOMETRIC CRITERIA BY DOMAIN AND SECTOR
3. SURFACE INTERPRETATION OF THE DUBLIN GULCH STOCK HAS BEEN DERIVED FROM MODEL PROVIDED BY WARDROP ENGINEERING NOVEMBER 9, 2011.

100 0 100 200 300
meters

LEGEND
- DESIGN SECTOR
- PIT CREST - 20111115
- INTRUSIVE CONTACT ON SURFACE [3] AND ON PIT [1]

REV.	DATE	REVISION NOTES	DRAWN	CHECK	APPR.

SCALE:	1:5,000
DATE:	JAN 2012
DRAWN:	WKL/RG
DESIGNED:	DS
CHECKED:	HWN
APPROVED:	HWN

PROFESSIONAL SEAL:

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

CLIENT: Victoria Gold Corp

PROJECT: EAGLE GOLD PROJECT FEASIBILITY STUDY OPEN PIT SLOPE DESIGN

TITLE: DESIGN SECTORS

PROJECT No.:	DWG No.:	REV.:
0792-005	20	

DRAWING TO BE READ WITH BGC REPORT TITLED "EAGLE GOLD PROJECT FEASIBILITY STUDY - OPEN PIT SLOPE DESIGN" DATED JANUARY 2012

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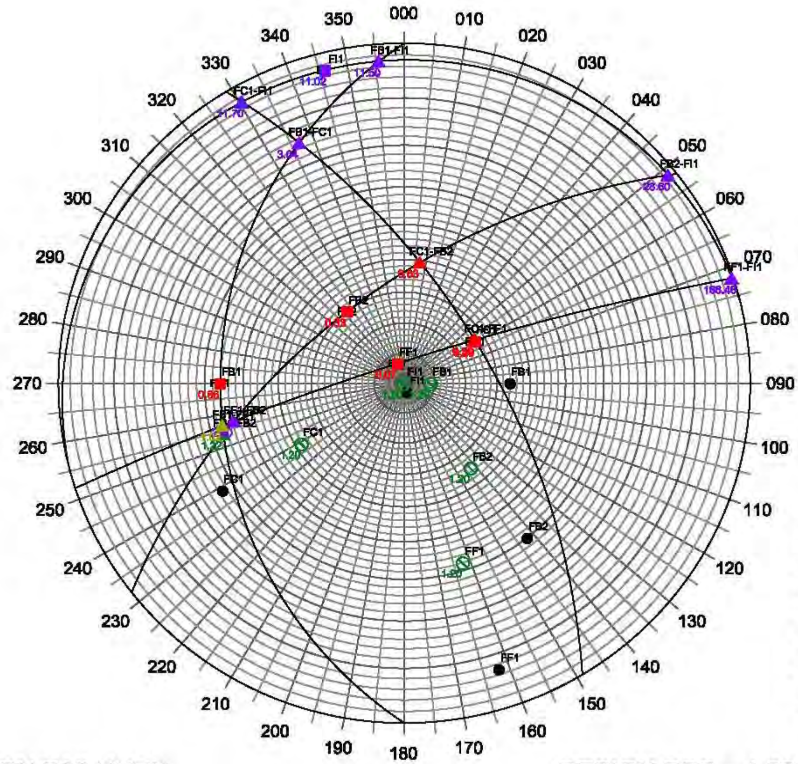
KINEMATIC ANALYSIS SUMMARY

LEGEND

- ■ PLANAR
- ▲ WEDGE
- ⊘ TOPPLE

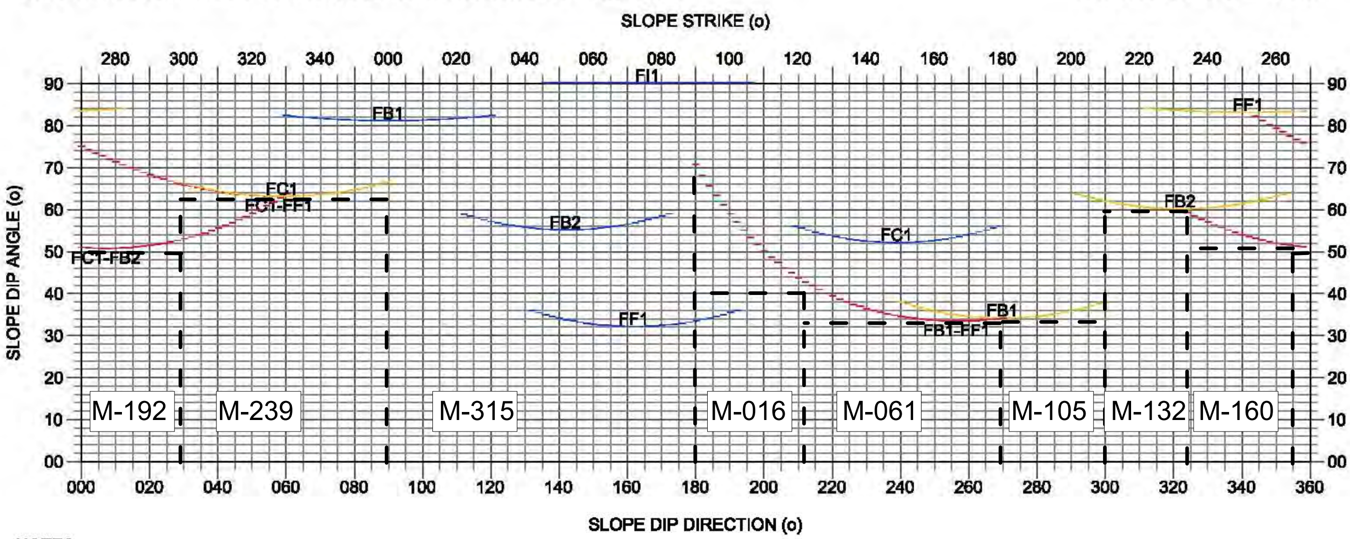
FACTOR OF SAFETY (FOS):

- FOS <= 1.0
- 1.2 >= FOS > 1.0
- 1.5 >= FOS > 1.2
- 2.0 >= FOS > 1.5
- FOS > 2.0



SLOPE ANGLE TO NOT UNDERCUT DESIGN FAILURES

DESIGN FOS = 1.20



NOTES:

1. EQUAL ANGLE LOWER HEMISPHERE STEREOGRAPHIC PROJECTIONS PRESENTED.
2. SEE DESIGN REPORT FOR LOWER HEMISPHERE STEREOGRAPHIC PROJECTIONS WITH RAW DISCONTINUITY DATA.
3. ALL POTENTIAL FAILURES ANALYSED FOR FULLY DEPRESSURIZED CONDITIONS.
4. SEE DESIGN REPORT FOR SHEAR STRENGTH PARAMETER SUMMARY.
5. WEDGE AND PLANE SHEAR STABILTY SOLUTIONS AFTER HOEK AND BRAY, 1981.
6. NO TENSION CRACKS CONSIDERED.
7. HORIZONTAL BENCH ABOVE ANALYSIS SLOPE ASSUMED.

SCALE:	AS SHOWN	DESIGNED:	DK
DATE:	JAN 2012	CHECKED:	HWN
DRAWN:	DNS	APPROVED:	HWN

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

PROJECT: EAGLE GOLD PROJECT FEASIBILITY STUDY
OPEN PIT SLOPE DESIGN

TITLE: KINEMATIC ANALYSIS
M

CLIENT: Victoria Gold Corp

PROJECT No.:	DWG No.:	REV.:
0792-005	21	

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DWG TO BE READ WITH BGC REPORT TITLED "EAGLE GOLDPROJECT FEASBILITY STUDY OPEN PIT SLOPE DESIGN" DATED JAN 2012

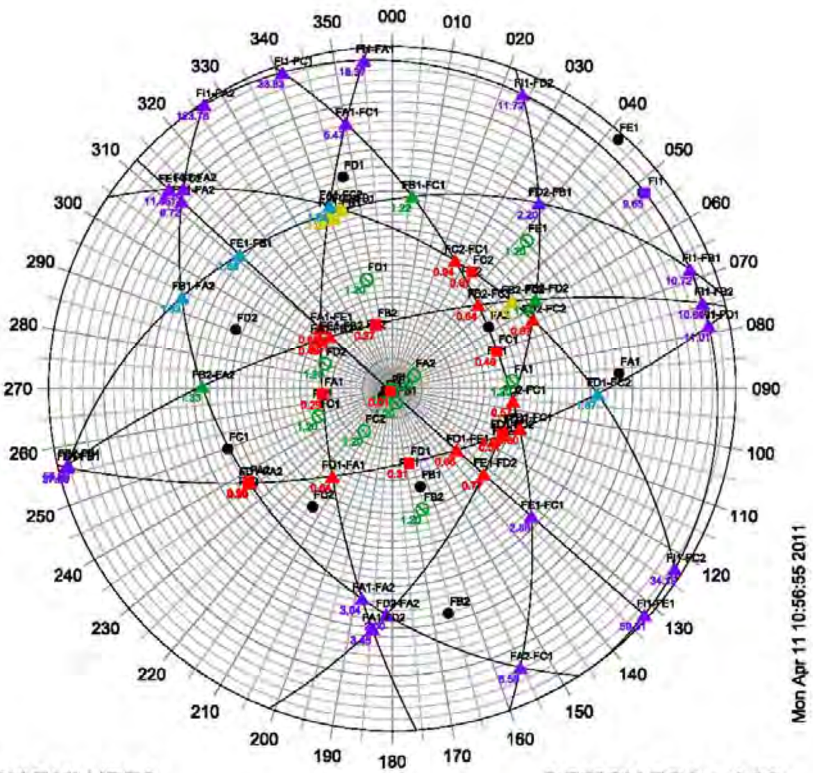
KINEMATIC ANALYSIS SUMMARY

LEGEND

- ■ PLANAR
- ▲ WEDGE
- ⊘ TOPPLE

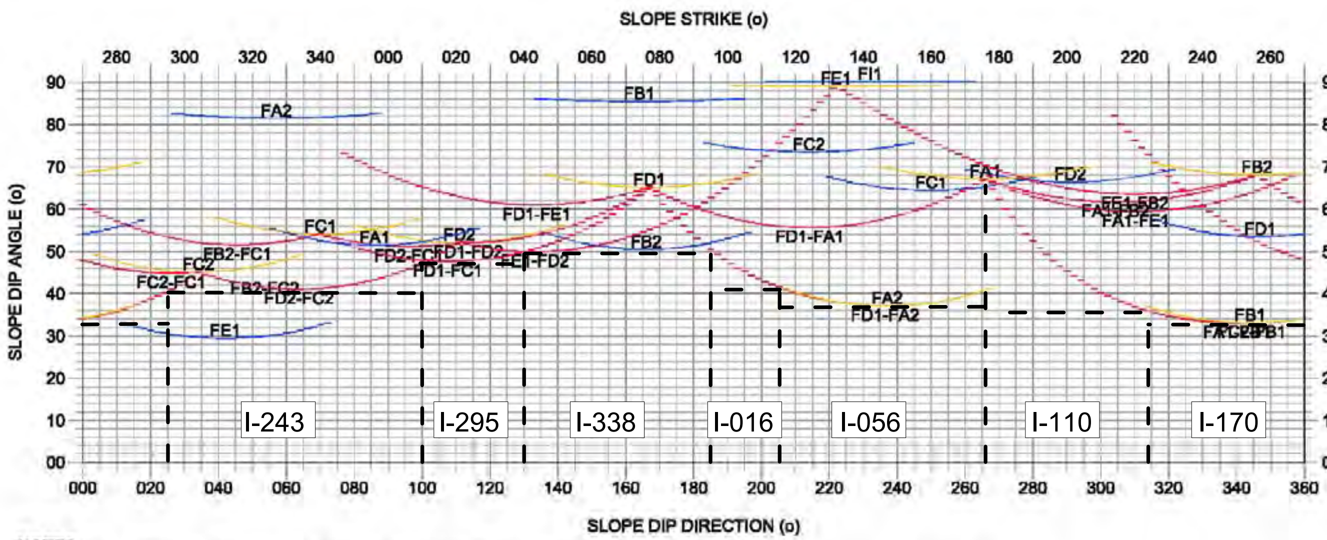
FACTOR OF SAFETY (FOS):

- FOS <= 1.0
- 1.2 >= FOS > 1.0
- 1.5 >= FOS > 1.2
- 2.0 >= FOS > 1.5
- FOS > 2.0



SLOPE ANGLE TO NOT UNDERCUT DESIGN FAILURES

DESIGN FOS = 1.20



NOTES:

1. EQUAL ANGLE LOWER HEMISPHERE STEREOGRAPHIC PROJECTIONS PRESENTED.
2. SEE DESIGN REPORT FOR LOWER HEMISPHERE STEREOGRAPHIC PROJECTIONS WITH RAW DISCONTINUITY DATA.
3. ALL POTENTIAL FAILURES ANALYSED FOR FULLY DEPRESSURIZED CONDITIONS.
4. SEE DESIGN REPORT FOR SHEAR STRENGTH PARAMETER SUMMARY.
5. WEDGE AND PLANE SHEAR STABILTY SOLUTIONS AFTER HOEK AND BRAY, 1981.
6. NO TENSION CRACKS CONSIDERED.
7. HORIZONTAL BENCH ABOVE ANALYSIS SLOPE ASSUMED.

SCALE: AS SHOWN	DESIGNED: DK
DATE: JAN 2012	CHECKED: HWN
DRAWN: DNS	APPROVED: HWN

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

PROJECT: EAGLE GOLD PROJECT FEASIBILITY STUDY
OPEN PIT SLOPE DESIGN

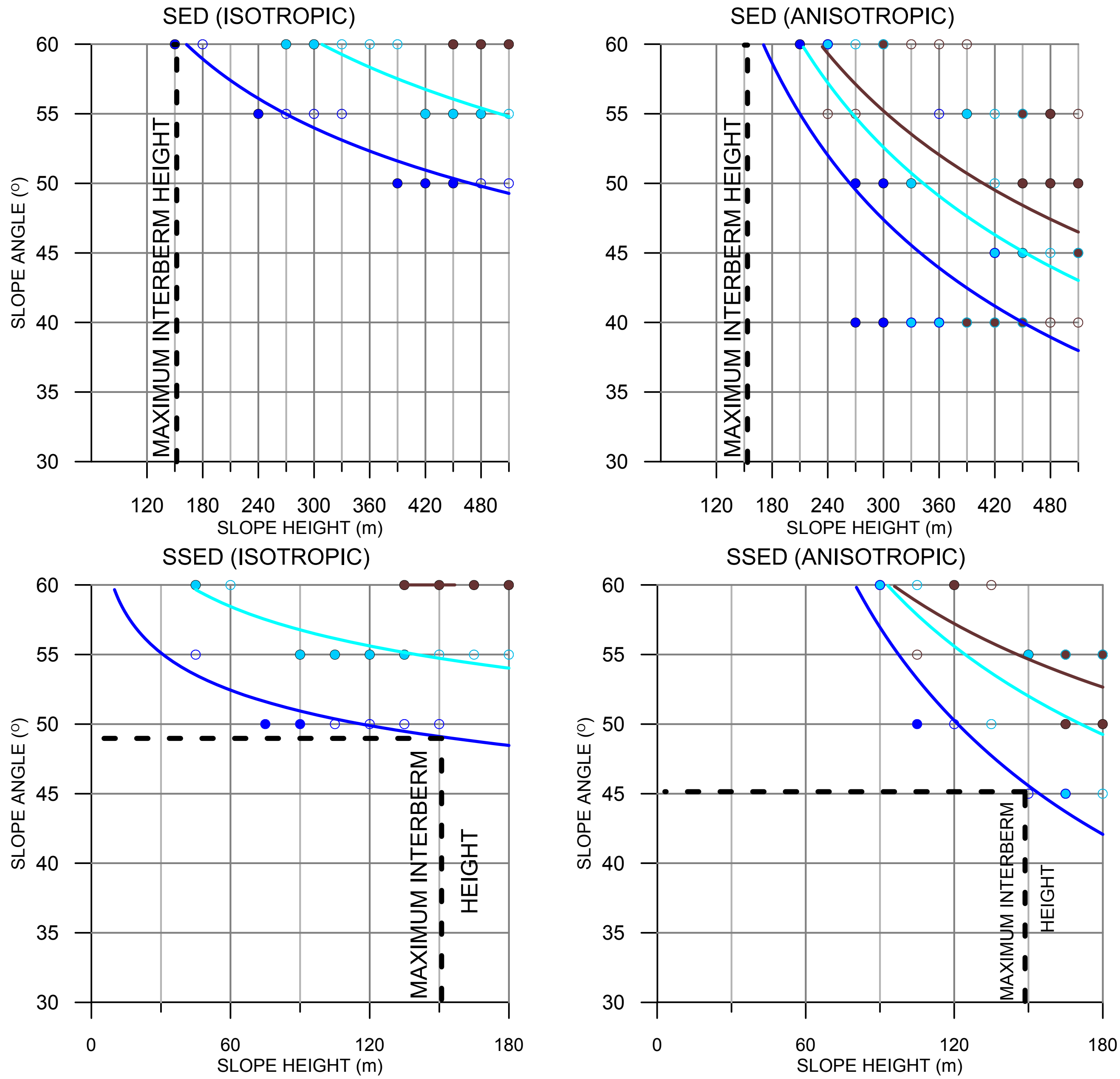
TITLE: KINEMATIC ANALYSIS
I

CLIENT: Victoria Gold Corp

PROJECT No.:	DWG No.:	REV.:
0792-005	22	

N:\BGC\Projects\0792 Victoria Gold\005 EG FS Open Pit\05 Analysis\05 Structural Model\DESIGN STEREONET\INTSED FAULT SHEAR.grf

DWG TO BE READ WITH BGC REPORT TITLED "EAGLE GOLDPROJECT FEASBILITY STUDY OPEN PIT SLOPE DESIGN" DATED JAN 2012



NOTES:

1. RESULTS OF NON-CIRCULAR SLOPE ANALYSES USING THE SPENCER METHOD WHERE THE FACTOR OF SAFETY FALLS INTO THE RANGE 1.3±0.1 ARE PLOTTED, DESIGN CURVES USE A POWER FIT.
2. LIMIT EQUILIBRIUM ANALYSES HAVE BEEN CONDUCTED FOR PORE WATER COEFFICIENT (Ru) EQUIVALENT TO A WATER COLUMN THAT IS 50%, 25%, AND 0% THE HEIGHT OF THE ROCK. THE DESIGN CURVE CORRESPONDING TO Ru = 0.18 (50%) HAS BEEN USED FOR BENCH STACK HEIGHT DESIGN AND FOR OVERALL ANGLE.
3. CURVES SHOWN REPRESENT POTENTIAL ROCK MASS STABILITY CONTROLLED SLOPE ANGLES, NOT FINAL DESIGN ANGLES.

LEGEND

CASE[2,3]	Ru	FS	
		1.2-1.3	1.3-1.4
Dry	0	○ (brown, open)	● (brown, filled)
1	0.09	○ (cyan, open)	● (cyan, filled)
2	0.18	○ (blue, open)	● (blue, filled)

SCALE:	AS SHOWN	DESIGNED:	DNS
DATE:	JAN 2012	CHECKED:	HWN
DRAWN:	DNS	APPROVED:	HWN

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

PROJECT: EAGLE GOLD PROJECT FEASIBILITY STUDY
OPEN PIT SLOPE DESIGN

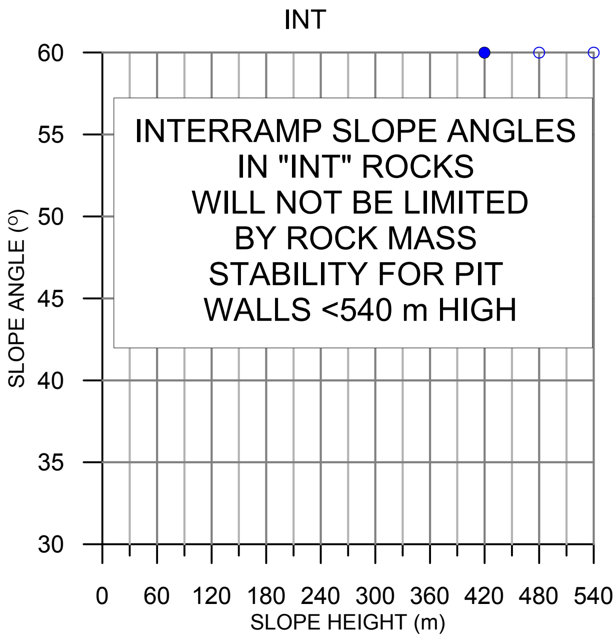
TITLE: GENERIC SLOPE STABILITY ANALYSIS RESULTS
METASEDIMENTARY GEOTECHNICAL UNITS

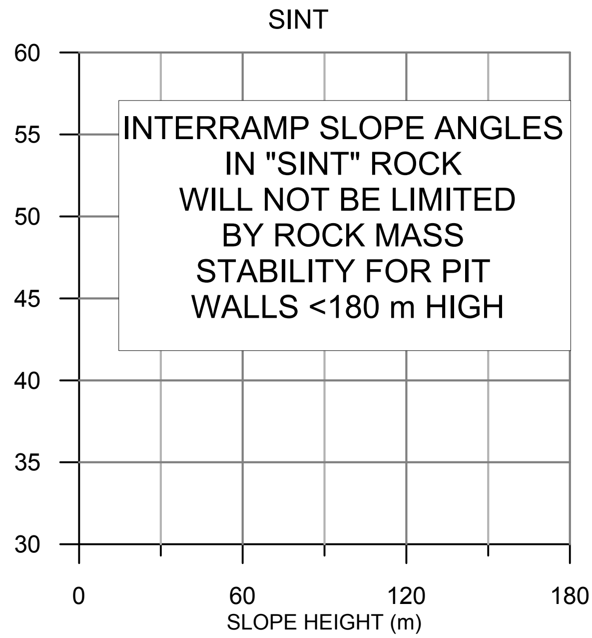
CLIENT: Victoria GOLD CORP

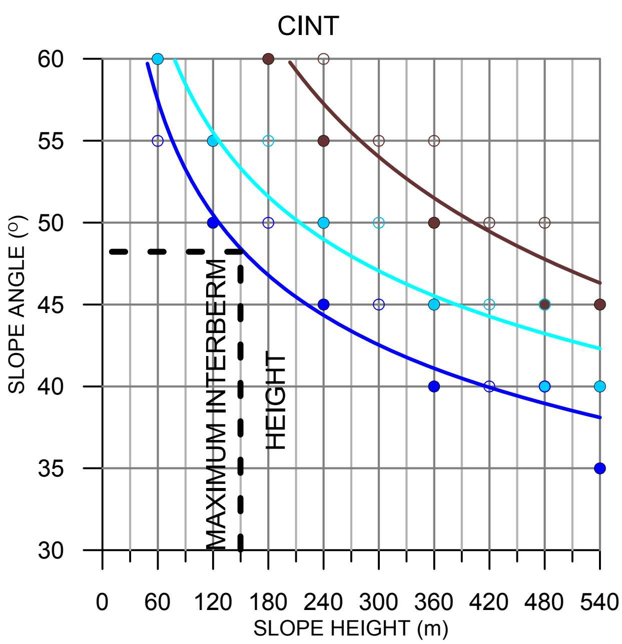
PROJECT No.:	DWG No.:	REV.:
0792-005	23	

N:\BGC\Projects\0792 Victoria Gold\005 EG FS Open Pit\05 Analysis\06 Generic Slope Analyses\SED-SSED Stability.grf

DWG. TO BE READ WITH BGC REPORT TITLED "EAGLE GOLD PROJECT FEASIBILITY STUDY OPEN PIT SLOPE DESIGN" DATED JAN 2012







LEGEND

CASE[2]	Ru	FS	
		1.2-1.3	1.3-1.4
Dry	0	○	●
1	0.09	○	●
2	0.18	○	●

NOTES:

1. RESULTS OF NON-CIRCULAR SLOPE ANALYSES USING THE SPENCER METHOD WHERE THE FACTOR OF SAFETY FALLS INTO THE RANGE 1.3±0.1 ARE PLOTTED, DESIGN CURVES USE A POWER FIT.
2. LIMIT EQUILIBRIUM ANALYSES HAVE BEEN CONDUCTED FOR PORE WATER COEFFICIENT (Ru) EQUIVALENT TO A WATER COLUMN THAT IS 50%, 25%, AND 0% THE HEIGHT OF THE ROCK. THE DESIGN CURVE CORRESPONDING TO Ru = 0.18 (50%) HAS BEEN USED FOR BENCH STACK HEIGHT DESIGN AND OVERALL ANGLE.
3. CURVES SHOWN REPRESENT POTENTIAL ROCK MASS STABILITY CONTROLLED SLOPE ANGLES, NOT FINAL DESIGN ANGLES.

SCALE:	AS SHOWN	DESIGNED:	DNS
DATE:	JAN 2012	CHECKED:	HWN
DRAWN:	DNS	APPROVED:	HWN

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

PROJECT:
EAGLE GOLD PROJECT FEASIBILITY STUDY
OPEN PIT SLOPE DESIGN

TITLE:
GENERIC SLOPE STABILITY ANALYSIS RESULTS
INTRUSIVE GEOTECHNICAL UNITS

CLIENT: Victoria GOLD CORP

PROJECT No.:	DWG No.:	REV.:
0792-005	24	

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DWG. TO BE READ WITH BGC REPORT TITLED "EAGLE GOLD ROJECT FEASIBILITY STUDY OPEN PIT SLOPE DESIGN" DATED JAN 2012

APPENDIX A
BOREHOLE LOGS

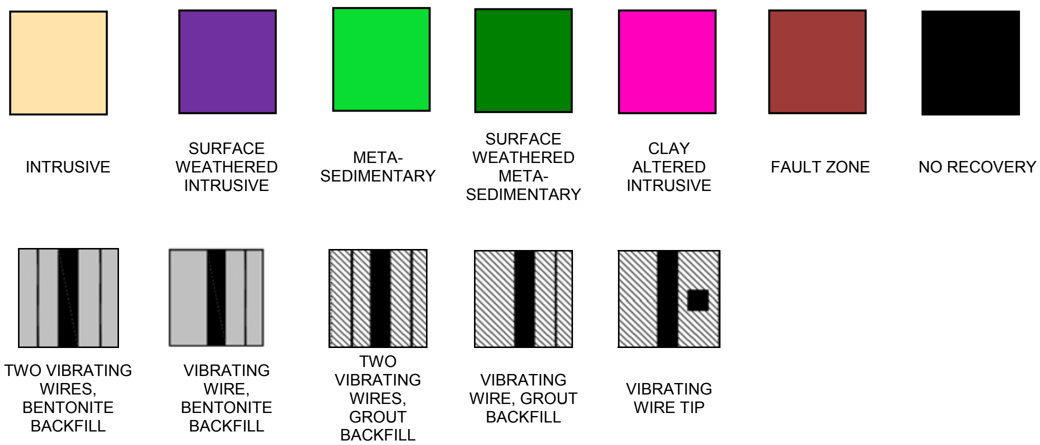
LEGEND FOR DIAMOND DRILL HOLE LOGS

The various parameters depicted on the drill holes logs are described below according to the column headings found on the logs.

Depth

Depth below ground surface is measured in metres.

Symbols - Rock Type and Instrument Details



RQD %

The Rock Quality Designation (RQD) is defined as the percentage of core recovered of intact pieces of 100 mm or more in length for the total length of core interval (Deere and Deere, 1988). Only natural core breaks (i.e. joints) are considered in this calculation. Mechanical breaks due to drilling or handling are ignored. The percentage of RQD is defined in the following formula:

$$RQD = \frac{\sum \text{Length of core pieces} > 100 \text{ mm}}{\text{Total length of core interval}} \times 100\%$$

Longest Stick

Longest stick is the longest piece of core measured in each interval. This measurement helps overcome the limited sensitivity of RQD to block size. Core pieces which are very weak (strength grade $\leq$ R1) or are weathered/altered to a soil-like material are not considered for the longest stick measurement. Mechanical breaks due to drilling or handling are ignored.

Fracture Intercept (m)

Fracture intercept is the average distance between discontinuities and is calculated from fracture frequency. Fracture frequency is the number of discontinuities mapped per meter, averaged over the length of each interval.

Point Load Index

Point load test data (Is50) provides a relative indication of rock strength, and can be used to predict uniaxial compressive strength using site specific correlation factors. The results presented on the logs are all from diametral tests.

Strength Grade

The Strength Grade is based on simple mechanical tests, which are performed in the field using a rock hammer, pocket knife, and fingernail. The grades vary from extremely strong (Grade R6) to extremely weak (Grade R0), as shown in Table D-1.

Table A-1: Rock Strength Grades (ISRM, 1978)

Grade	Description	Field Identification	UCS (MPa)	Point Load Index (MPa)
R6	Extremely Strong	Specimen can only be chipped with flat end geological hammer.	> 250	> 10
R5	Very Strong	Specimen requires many blows with flat end geological hammer to fracture.	100-250	4-10
R4	Strong	Specimen requires more than one blow of flat end geological hammer to fracture.	50-100	2-4
R3	Medium Strong	Cannot be scraped or peeled with pocket knife; can be fractured with single firm blow of flat end geological hammer.	25-50	1-2
R2	Weak	Can be peeled by a pocket knife with difficulty; shallow indentation made by firm blow with point geologic hammer.	5-25	-
R1	Very Weak	Crumbles under firm blows with point of geological hammer.	1-5	-
R0	Extremely Weak	Indented by thumbnail.	< 1	-

Joint Condition

The joint condition (Jc) is a numeric index which summarizes the typical surface properties and infilling of discontinuities within an interval. The joint condition can be a preliminary indication of the shear strength of a discontinuity.

The Jc will be logged based the descriptions proposed by Bieniawski (1976), as provided in Table D-1.

Table A-2: Joint Condition

RATING	Condition of Discontinuity (RMR 1976)	BGC Notes
25	Very rough surface; not continuous; no separation; unweathered wall rock	Includes intervals with no discontinuities; JRC > 16
20	Slightly rough surfaces; separation <1 mm; slightly weathered walls	> R3 wall rock; interlocking discontinuities with 8 < JRC < 14
12	Slightly rough surfaces; separation <1 mm; highly weathered walls	< R3 wall rock and slightly rough OR > R3 planar/smooth surfaces with no infill
6	Slickensided surfaces or gouge < 5 mm thick or separation 1 to 5 mm; continuous	Veins ≤ R1 or Mohs # ≤ ~3 included as "infilling"
0	Soft gouge >5mm or separation > 5 mm; continuous joints	Veins ≤ R1 or Mohs # ≤ ~3 included as "infilling"

RMR ‘76

The Rock Mass Rating (RMR) system, published in 1976 by Bieniawski, classifies rock on a scale of 0-100 based on the sum of the ratings given to six parameters. The six parameters are:

- Uniaxial compressive strength
- Rock Quality Designation (RQD)
- Spacing of discontinuities
- Condition of discontinuities
- Groundwater conditions
- Orientation of discontinuities

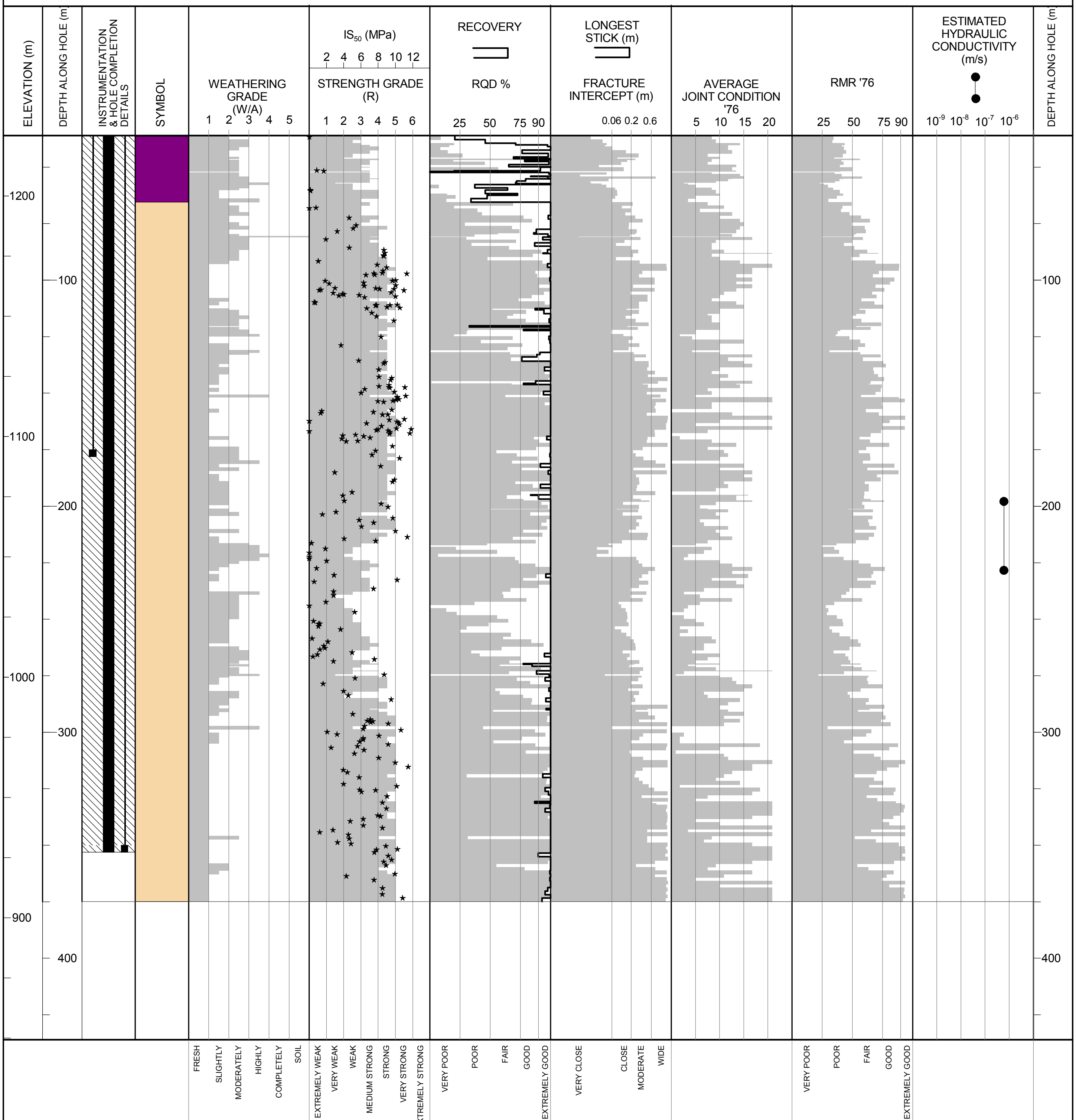
Hydraulic Conductivity

Hydraulic conductivity values have been shown for the intervals on which packer tests were performed; it is the rate at which water can move through the rock mass in m/s.

SUMMARY LOG # 09-BGC-GTH1

PROJECT NAME: Eagle Gold Project - Open Pit
PROJECT NO. : 0792-005

CO-ORDINATES (m) : 460,264.00E, 7,099,648.00N	DRILL DESIGNATION : Atlas Copco CS1000	START DATE : 18 Jul 09
GROUND ELEVATION (m) : 1259.0	DRILLING CONTRACTOR : Lyncorp	FINISH DATE : 29 Jul 09
SURVEY METHOD : DGPS	DRILL METHOD : Diamond	FINAL DEPTH (m) : 374.9
DATUM : UTM NAD 83	CORE SIZE : HQ3	DEPTH TO TOP OF ROCK : 36.0
PLUNGE (°) : -70	FLUID : Bentonite	LOGGED BY : BL/KLB
TREND (°) : 080	CASED TO (m): 36.35	REVIEWED BY : HWN



EOH NOTES:
1. VW11865 at 175 m along hole.
2. VW11867 at 350 m along hole.

CLIENT: Victoria Gold Corporation

SCALE: 1:2,500

PRINT DATE: : 12/12/2011

EGP SUMMARY LOG EGP_SUMMARYLOG_OPENPITS.GDL BGC.GDT 12/12/11

SUMMARY LOG # 09-BGC-GTH2

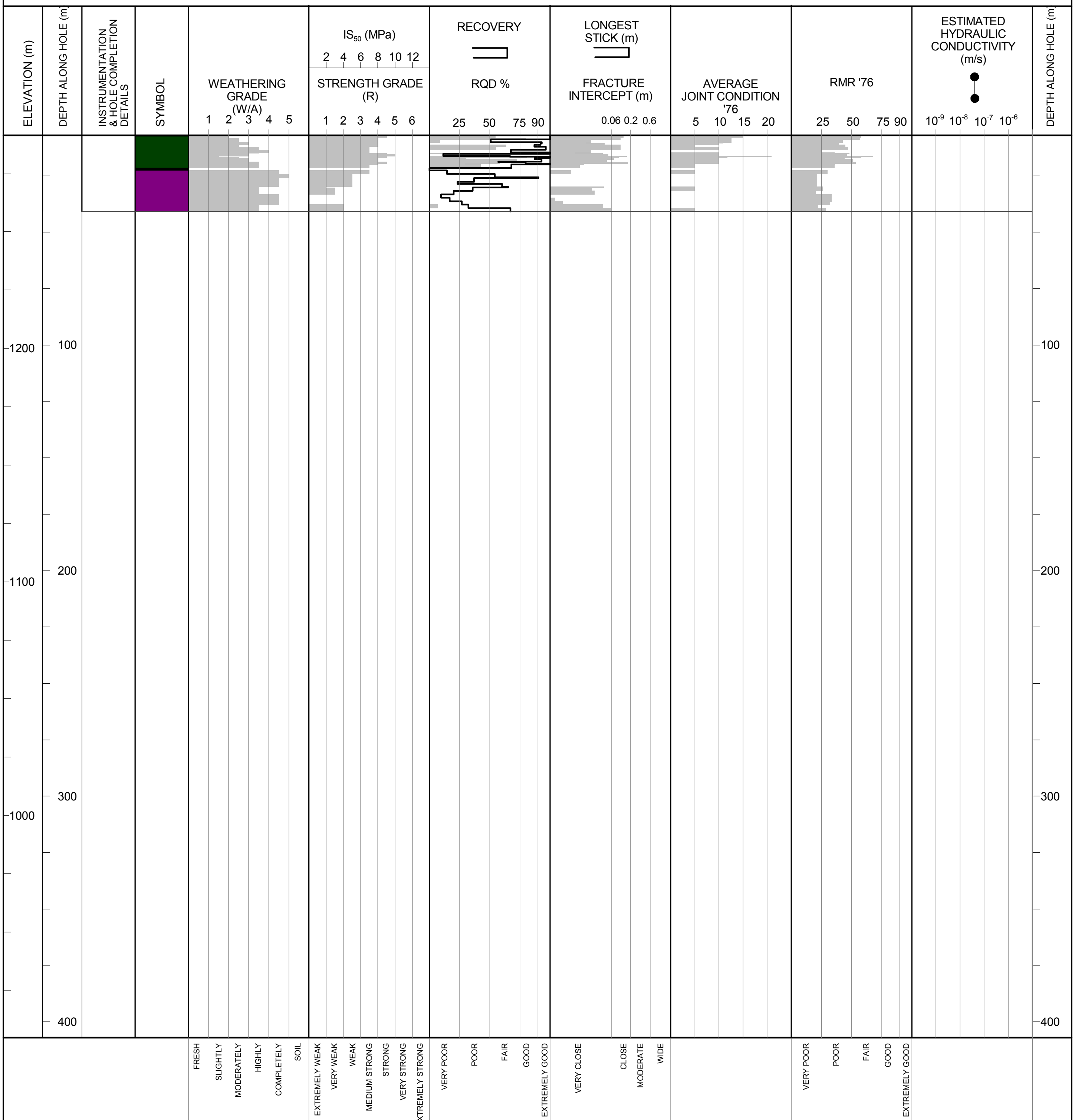
PROJECT NAME: Eagle Gold Project - Open Pit

PROJECT NO. : 0792-005

CO-ORDINATES (m) : 460,100.E, 7,099,500.N
GROUND ELEVATION (m) : 1298.0
SURVEY METHOD : Handheld GPS
DATUM : UTM NAD 83
PLUNGE (°) : -75
TREND (°) : 135

DRILL DESIGNATION : Atlas Copco CS1000
DRILLING CONTRACTOR : Lyncorp
DRILL METHOD : Diamond
CORE SIZE : HQ3
FLUID : Bentonite
CASED TO (m): 7.5

START DATE : 29 Jul 09
FINISH DATE : 30 Jul 09
FINAL DEPTH (m) : 40.8
DEPTH TO TOP OF ROCK : 7.0
LOGGED BY : BL/EEL
REVIEWED BY : HWN



BGC

CLIENT: Victoria Gold Corporation

SCALE: 1:2,500

PRINT DATE: : 12/12/2011

PROJECT NAME: Eagle Gold Project - Open Pit

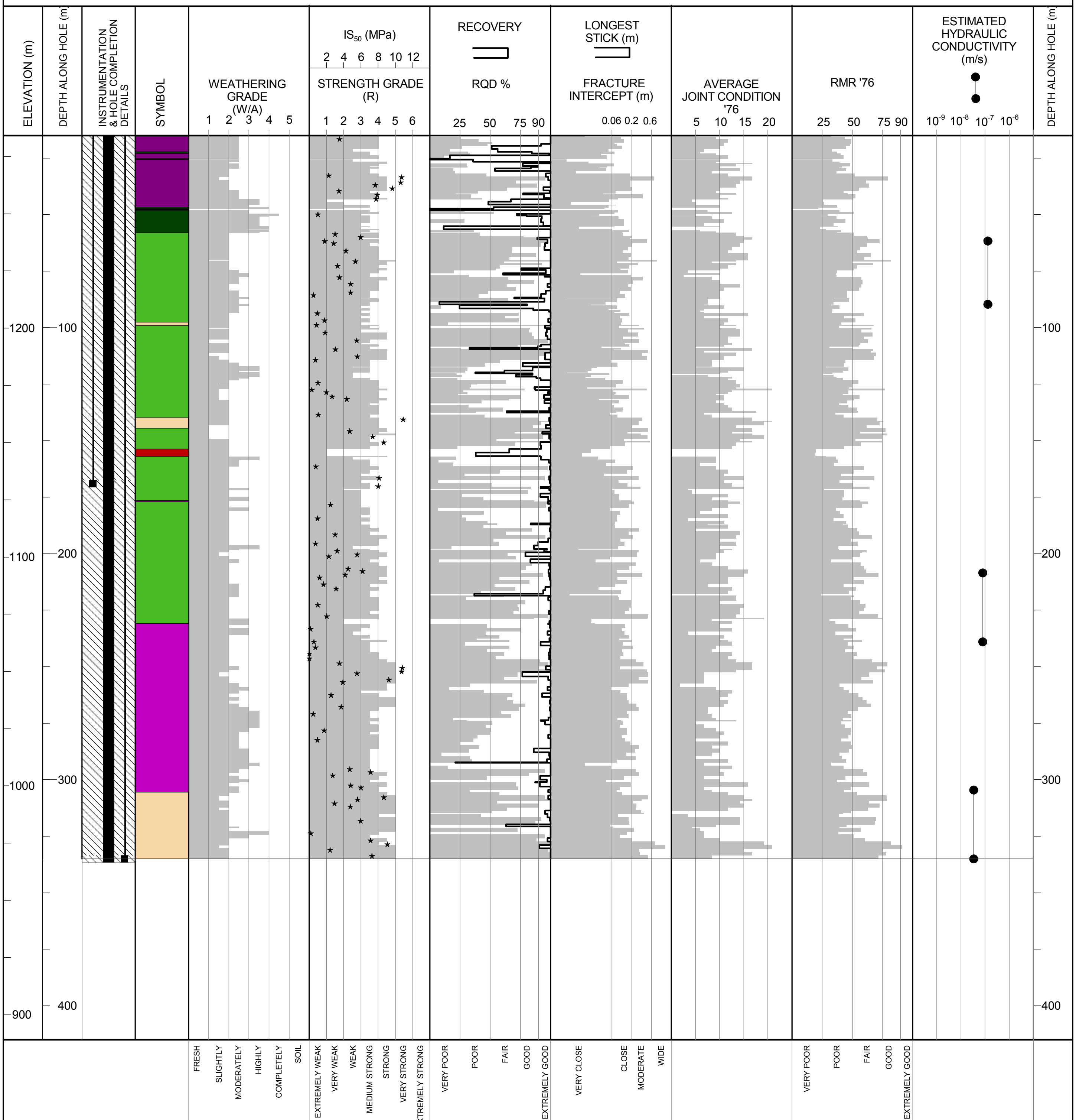
PROJECT NO. : 0792-005

SUMMARY LOG # 09-BGC-GTH2a

CO-ORDINATES (m) : 460,332.00E, 7,099,496.00N
GROUND ELEVATION (m) : 1299.0
SURVEY METHOD : DGPS
DATUM : UTM NAD 83
PLUNGE (°) : -81
TREND (°) : 132

DRILL DESIGNATION : Atlas Copco CS1000
DRILLING CONTRACTOR : Lyncorp
DRILL METHOD : Diamond
CORE SIZE : HQ3
FLUID : Bentonite
CASED TO (m): 15.25

START DATE : 31 Jul 09
FINISH DATE : 09 Aug 09
FINAL DEPTH (m) : 335.0
DEPTH TO TOP OF ROCK : 15.0
LOGGED BY : BL/EEL
REVIEWED BY : HWN



EOH NOTES:
1. VW11866 at 167.5 m along hole.
2. VW11868 at 333.5 m along hole.

CLIENT: Victoria Gold Corporation

SCALE: 1:2,500

PRINT DATE: : 12/12/2011

SUMMARY LOG # 09-BGC-GTH3

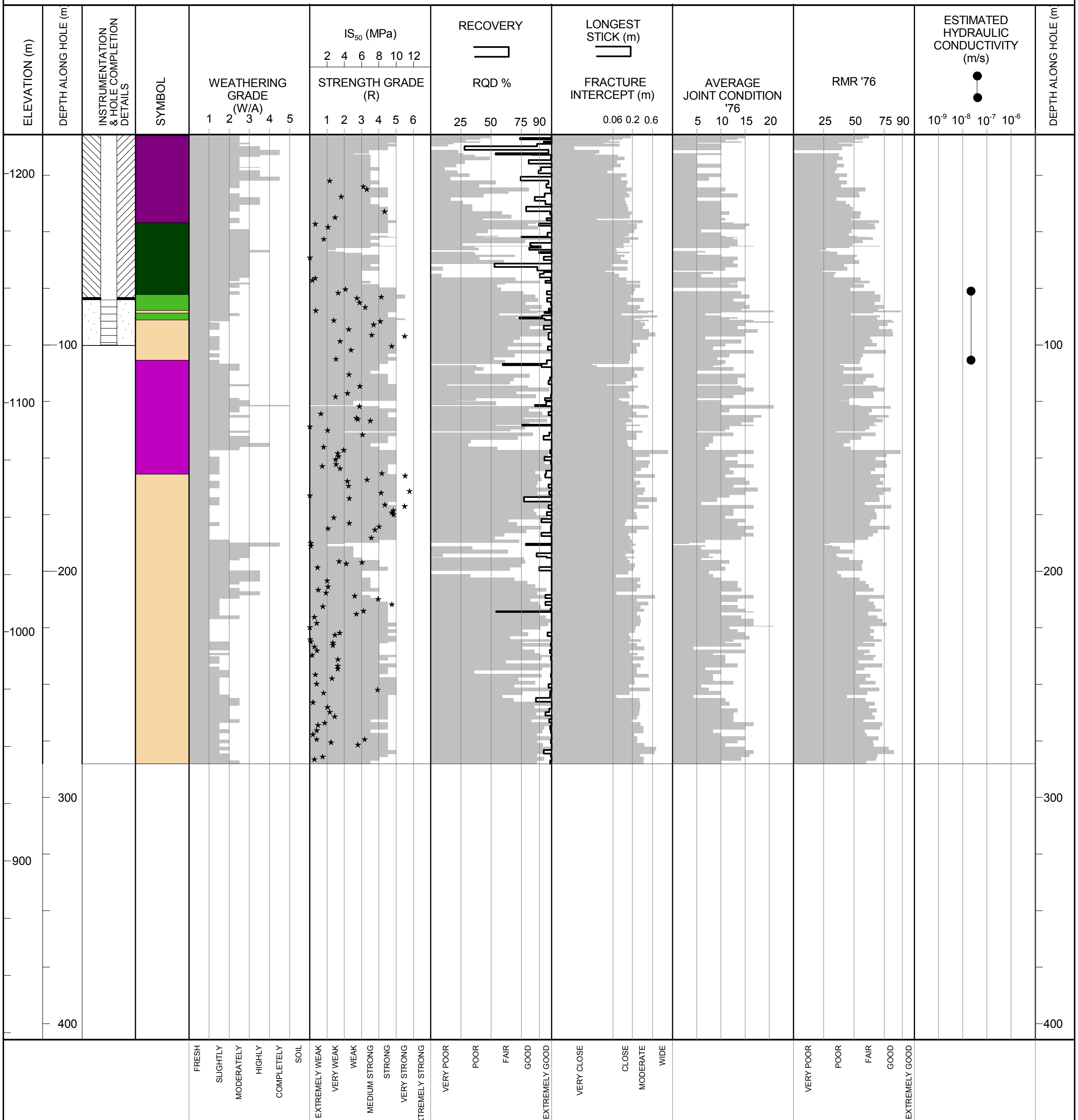
PROJECT NAME: Eagle Gold Project - Open Pit
PROJECT NO. : 0792-005

Page 1 **of** 1

CO-ORDINATES (m) : 460,057.00E, 7,099,603.00N
GROUND ELEVATION (m) : 1224.0
SURVEY METHOD : DGPS
DATUM : UTM NAD 83
PLUNGE (°) : -81
TREND (°) : 348

DRILL DESIGNATION : Atlas Copco CS1000
DRILLING CONTRACTOR : Lyncorp
DRILL METHOD : Diamond
CORE SIZE : HQ3
FLUID : Bentonite
CASED TO (m): 7.62

START DATE : 09 Aug 09
FINISH DATE : 14 Aug 09
FINAL DEPTH (m) : 285.2
DEPTH TO TOP OF ROCK : 7.0
LOGGED BY : BL/EEL
REVIEWED BY : HWN



EOH NOTES:
1. Standpipe Piezometer installed.

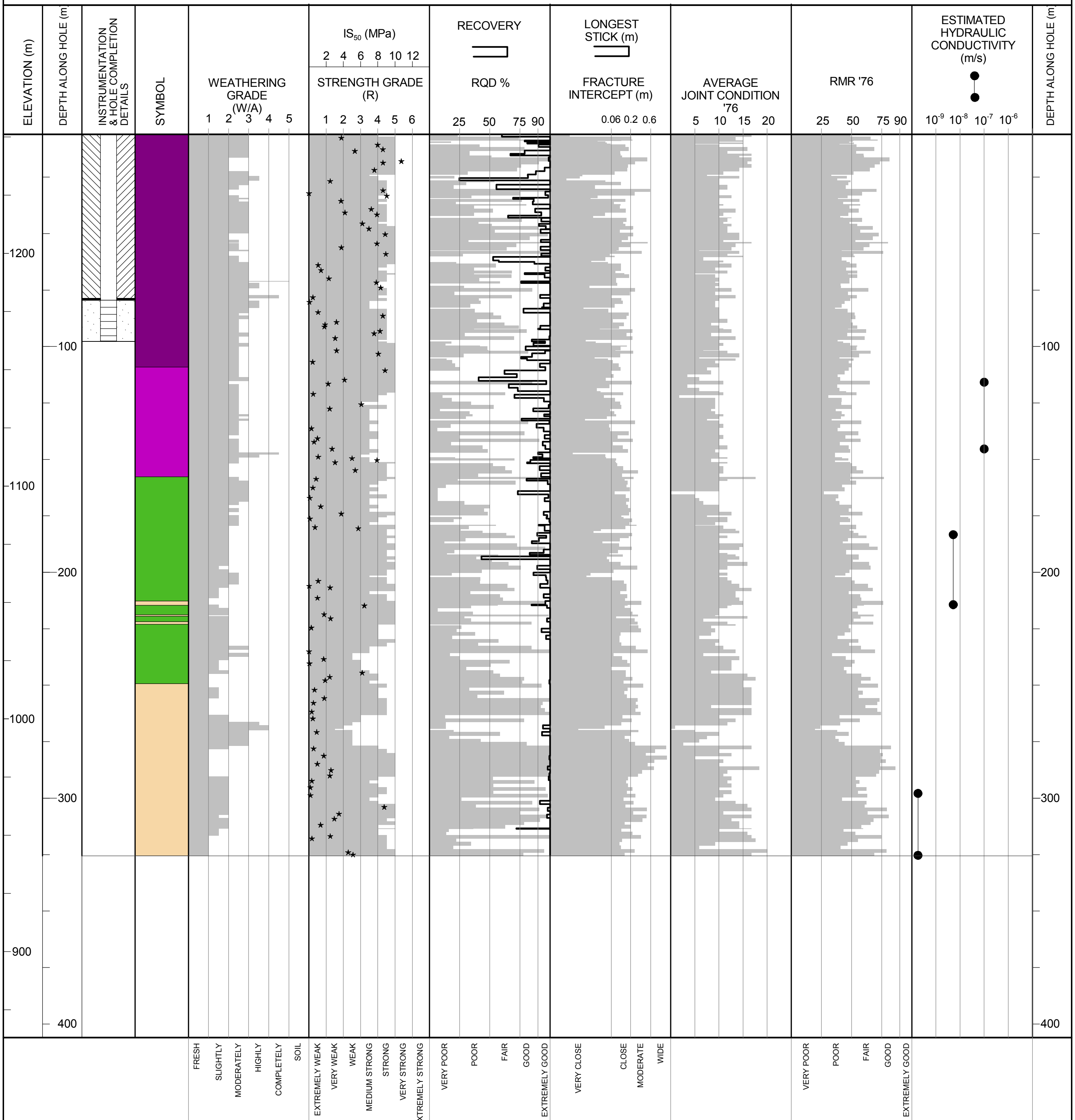
CLIENT: Victoria Gold Corporation
SCALE: 1:2,500
PRINT DATE: : 12/12/2011

EGP SUMMARY LOG EGP_SUMMARYLOG_OPENPITS.GDL BGC.GDT 12/12/11

SUMMARY LOG # 09-BGC-GTH4

PROJECT NAME: Eagle Gold Project - Open Pit
PROJECT NO. : 0792-005

CO-ORDINATES (m) : 460,133.00E, 7,099,454.00N	DRILL DESIGNATION : Atlas Copco CS1000	START DATE : 15 Aug 09
GROUND ELEVATION (m) : 1257.0	DRILLING CONTRACTOR : Lyncorp	FINISH DATE : 21 Aug 09
SURVEY METHOD : DGPS	DRILL METHOD : Diamond	FINAL DEPTH (m) : 325.6
DATUM : UTM NAD 83	CORE SIZE : HQ3	DEPTH TO TOP OF ROCK : 6.0
PLUNGE (°) : -76	FLUID : Bentonite	LOGGED BY : BL/EEL/KLB
TREND (°) : 205	CASED TO (m): 6.1	REVIEWED BY : HWN



EOH NOTES:
1. Standpipe Piezometer installed.

BGC

CLIENT: Victoria Gold Corporation
SCALE: 1:2,500
PRINT DATE: : 12/12/2011

PROJECT NAME: Eagle Gold Project - Open Pit

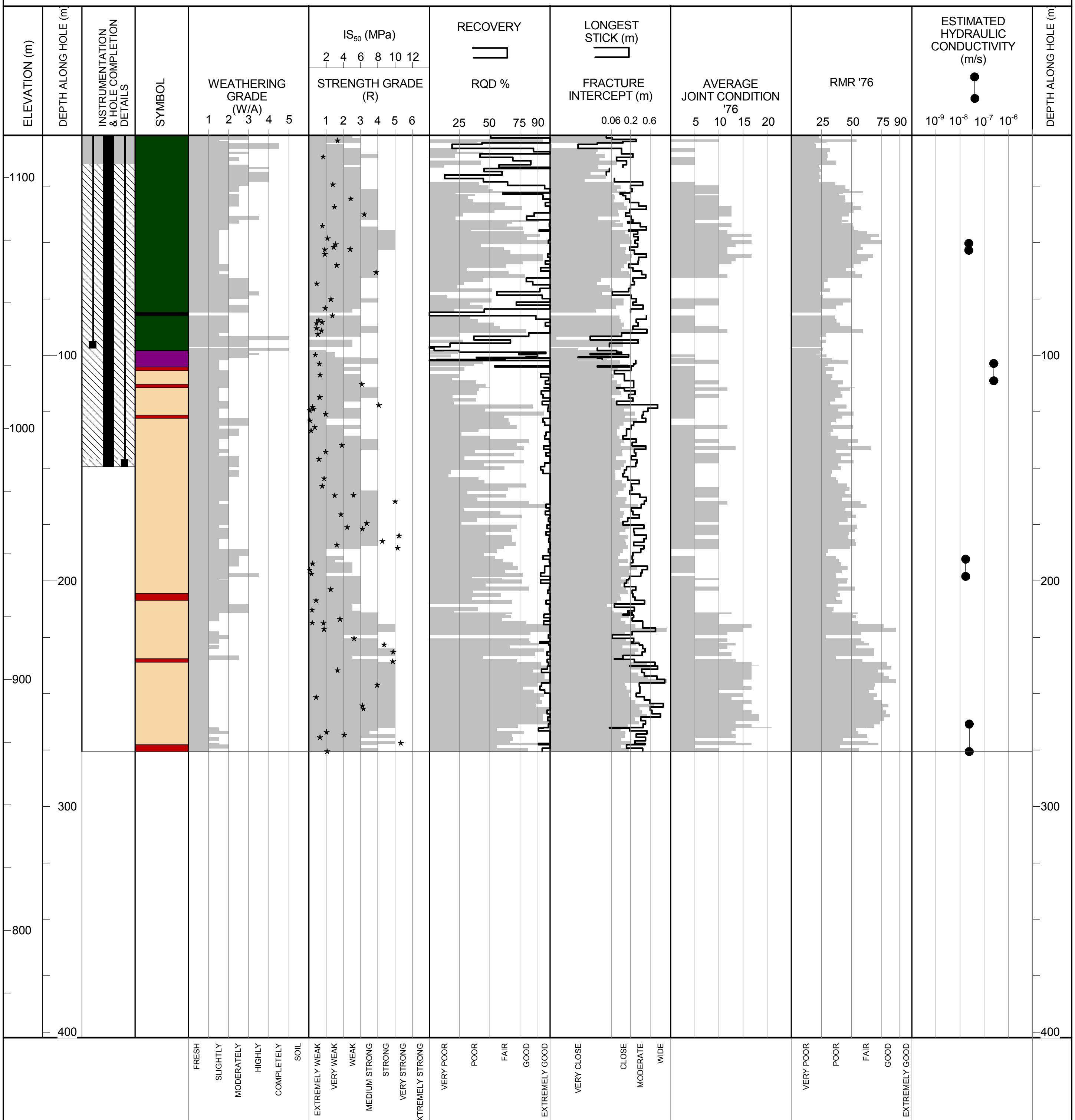
PROJECT NO. : 0792-005

SUMMARY LOG # 10-BGC-GTH-05

CO-ORDINATES (m) : 459,790.00E, 7,099,604.00N
GROUND ELEVATION (m) : 1119.0
SURVEY METHOD : DGPS
DATUM : UTM NAD 83
PLUNGE (°) : -64
TREND (°) : 322

DRILL DESIGNATION : CS 1000
DRILLING CONTRACTOR : Lyncorp
DRILL METHOD : Diamond
CORE SIZE : HQ3
FLUID : Water / Polymer
CASED TO (m): 3

START DATE : 22 Aug 10
FINISH DATE : 01 Sep 10
FINAL DEPTH (m) : 275.6
DEPTH TO TOP OF ROCK : 2.4
LOGGED BY : DNS/LGT
REVIEWED BY : HWN



EOH NOTES:
1. VW14107 at 93.82 m along hole.
2. VW14108 at 146.17 m along hole.

CLIENT: Victoria Gold Corporation

SCALE: 1:2,500

PRINT DATE: : 12/12/2011

PROJECT NAME: Eagle Gold Project - Open Pit

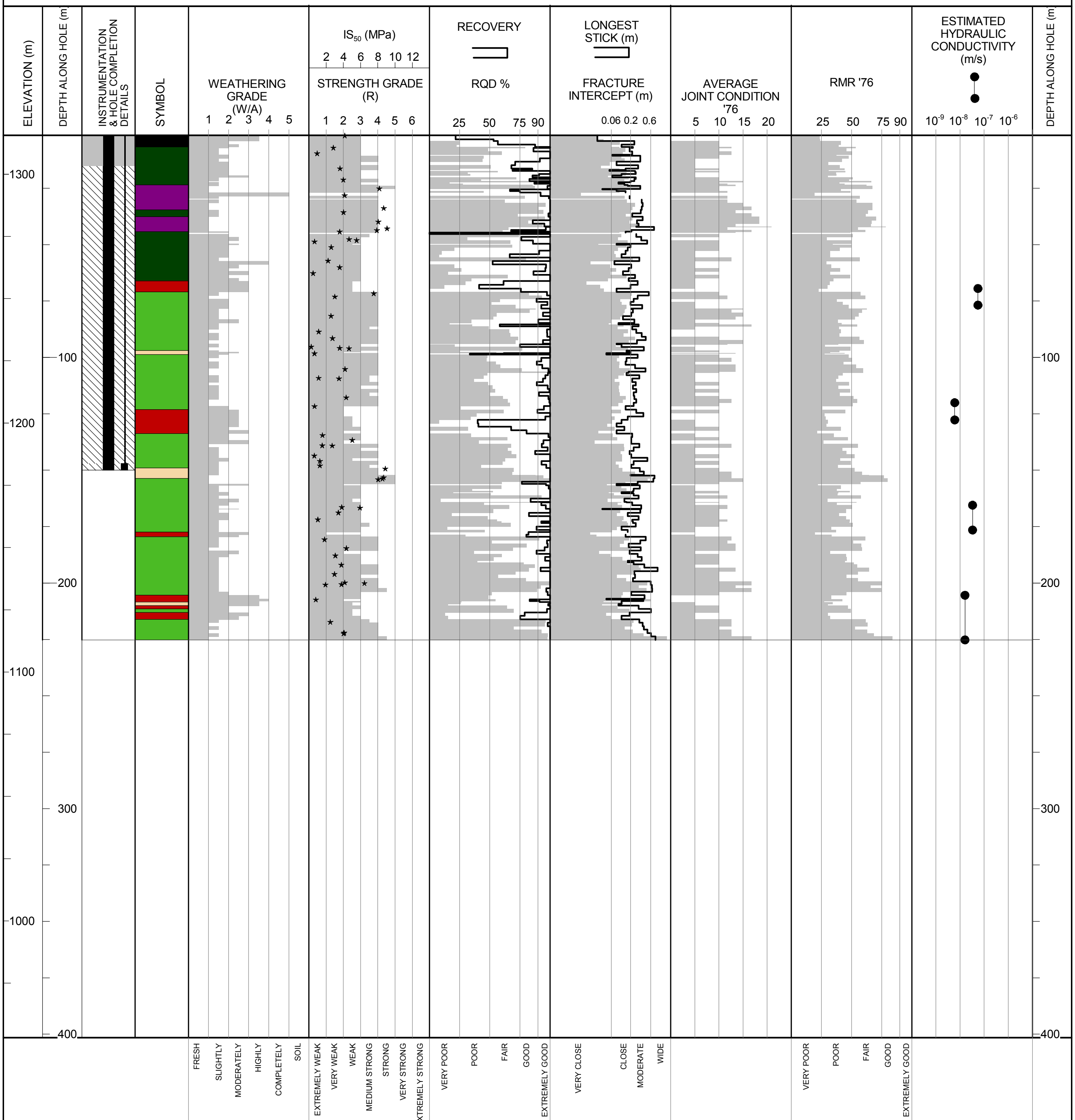
SUMMARY LOG # 10-BGC-GTH-06

PROJECT NO. : 0792-005

CO-ORDINATES (m) : 460,410.00E, 7,099,524.00N
GROUND ELEVATION (m) : 1317.0
SURVEY METHOD : DGPS
DATUM : UTM NAD 83
PLUNGE (°) : -65
TREND (°) : 080

DRILL DESIGNATION : CS 1000
DRILLING CONTRACTOR : Lyncorp
DRILL METHOD : Diamond
CORE SIZE : HQ3
FLUID : Water / Polymer
CASED TO (m): 3.04

START DATE : 01 Sep 10
FINISH DATE : 15 Sep 10
FINAL DEPTH (m) : 225.2
DEPTH TO TOP OF ROCK : 1.5
LOGGED BY : DNS/LGT/CA
REVIEWED BY : HWN



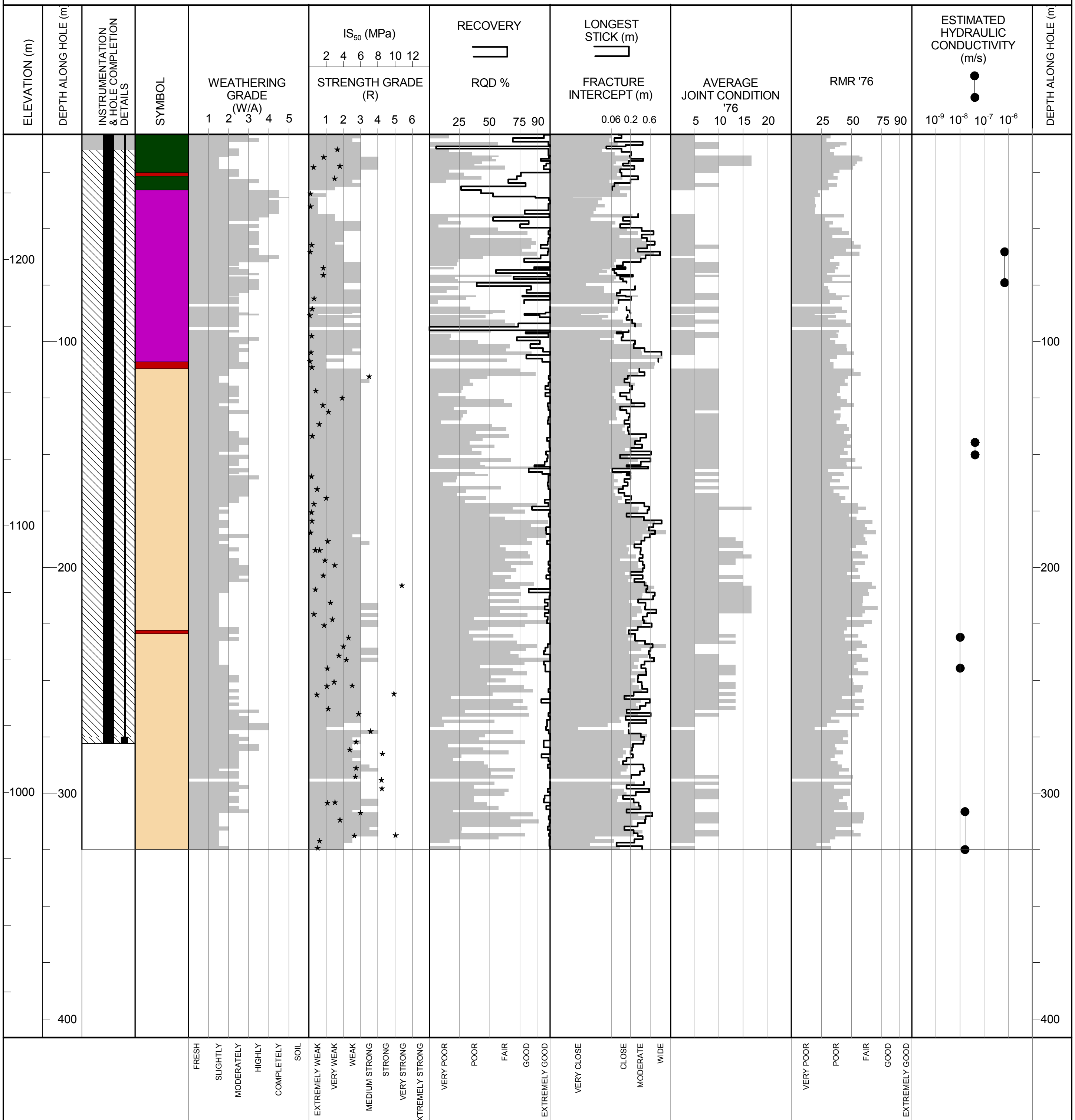
EOH NOTES:
1.VW14109 at 147 m along hole.

CLIENT: Victoria Gold Corporation
SCALE: 1:2,500
PRINT DATE: : 12/12/2011

SUMMARY LOG # 10-BGC-GTH-07

PROJECT NAME: Eagle Gold Project - Open Pit
PROJECT NO. : 0792-005

CO-ORDINATES (m) : 460,120.00E, 7,099,547.00N	DRILL DESIGNATION : CS 1000	START DATE : 16 Sep 10
GROUND ELEVATION (m) : 1254.0	DRILLING CONTRACTOR : Lyncorp	FINISH DATE : 27 Sep 10
SURVEY METHOD : DGPS	DRILL METHOD : Diamond	FINAL DEPTH (m) : 324.9
DATUM : UTM NAD 83	CORE SIZE : HQ3	DEPTH TO TOP OF ROCK : 8.2
PLUNGE (°) : -58	FLUID : Water / Polymer	LOGGED BY : BS/SW
TREND (°) : 062	CASED TO (m): 10	REVIEWED BY : HWN



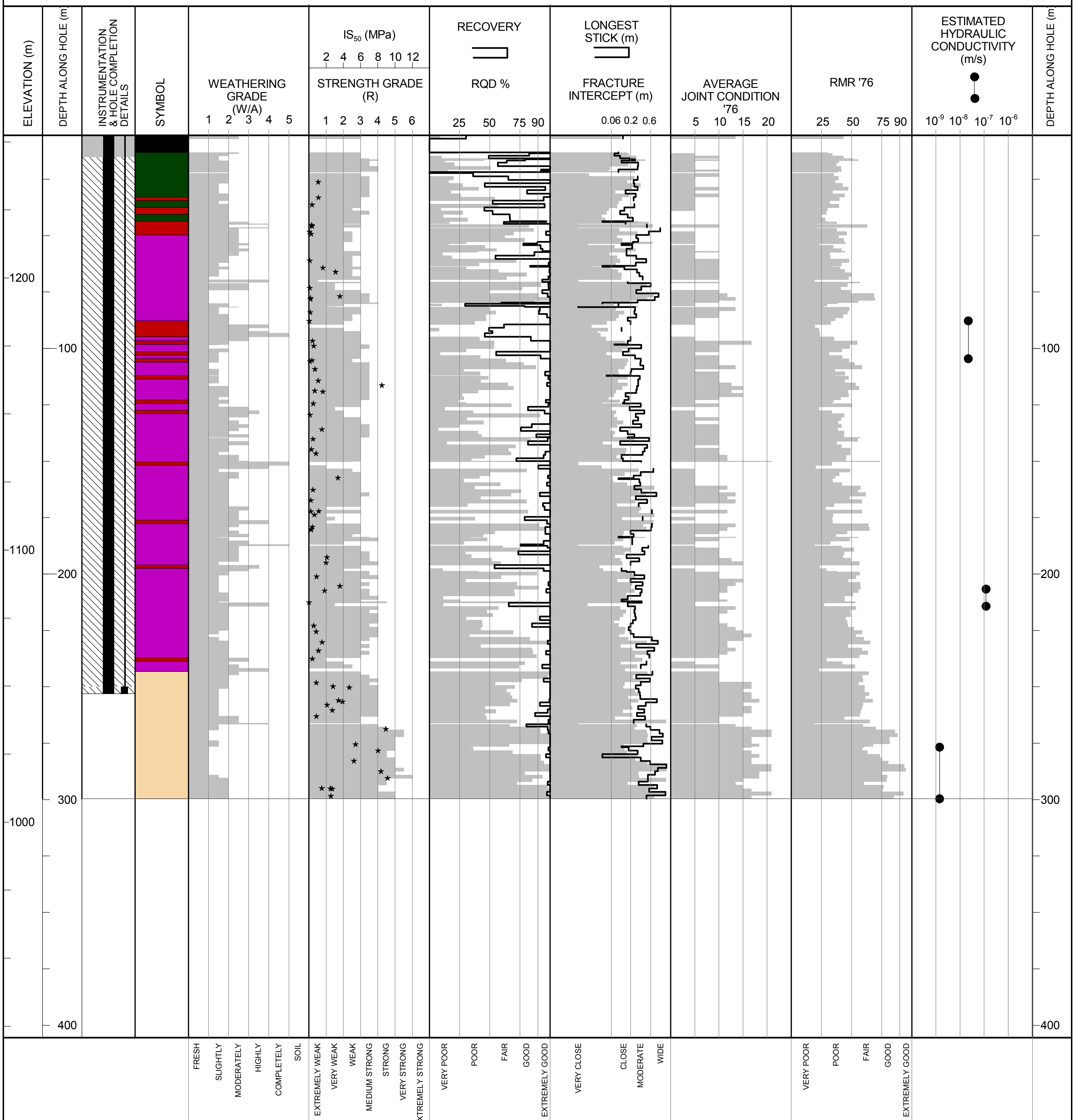
EOH NOTES:
1. VW14112 at 275 m along hole.

CLIENT: Victoria Gold Corporation
SCALE: 1:2,500
PRINT DATE: : 1/10/2012

SUMMARY LOG # 10-BGC-GTH-08

PROJECT NAME: Eagle Gold Project - Open Pit
PROJECT NO. : 0792-005

CO-ORDINATES (m) : 460,136.00E, 7,099,557.00N	DRILL DESIGNATION : CS 1000	START DATE : 16 Sep 10
GROUND ELEVATION (m) : 1257.0	DRILLING CONTRACTOR : Lyncorp	FINISH DATE : 26 Sep 10
SURVEY METHOD : DGPS	DRILL METHOD : Diamond	FINAL DEPTH (m) : 299.6
DATUM : UTM NAD 83	CORE SIZE : HQ3	DEPTH TO TOP OF ROCK : 5.5
PLUNGE (°) : -56	FLUID : Water / Polymer	LOGGED BY : CAEA/TS
TREND (°) : 149	CASED TO (m):	REVIEWED BY : HWN



EOH NOTES:
1. VW14111 at 250 m along hole.

CLIENT: Victoria Gold Corporation
SCALE: 1:2,500
PRINT DATE: : 12/12/2011

PROJECT NAME: Eagle Gold Project - Open Pit

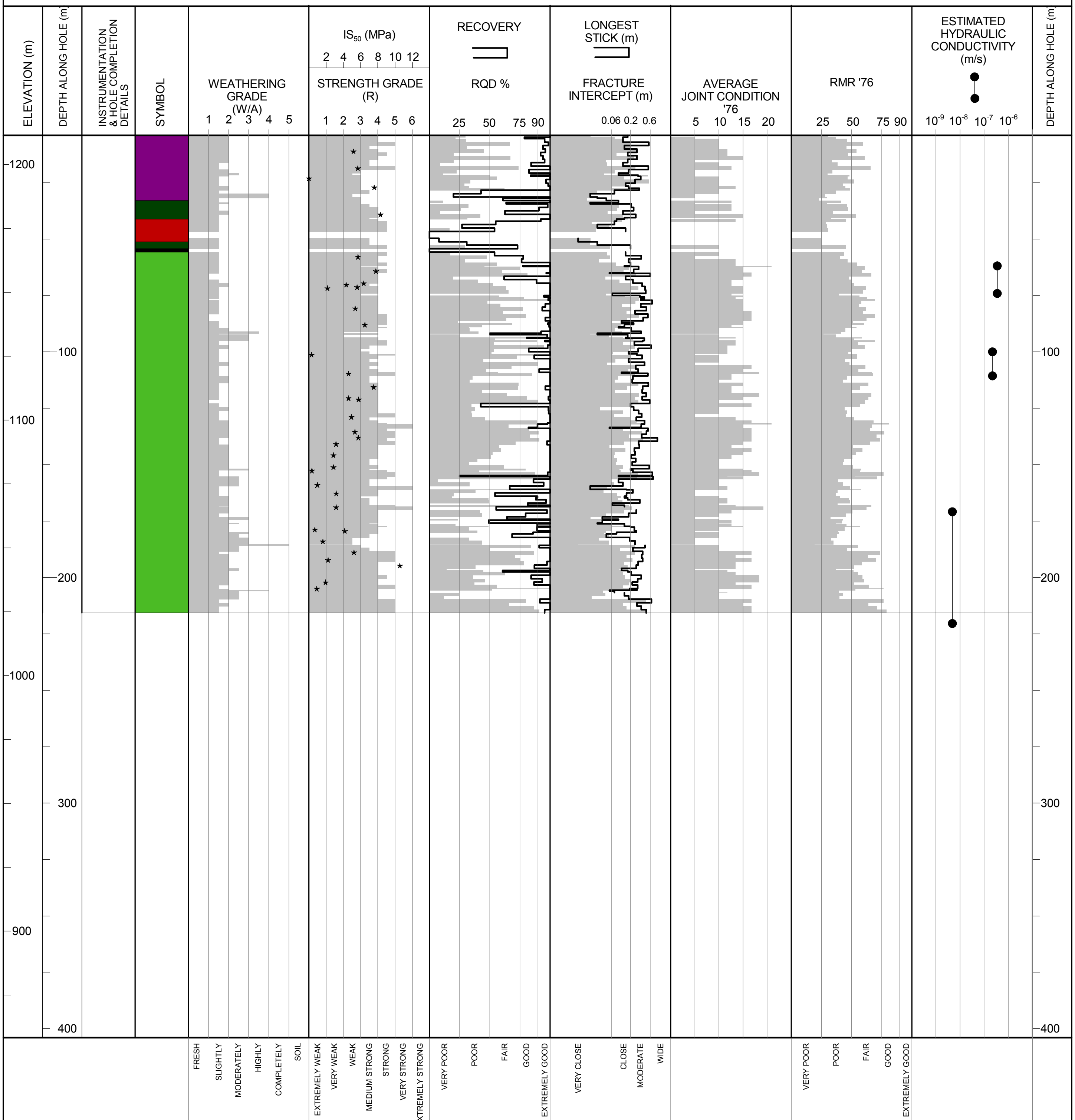
PROJECT NO. : 0792-005

SUMMARY LOG # 10-BGC-GTH-09

CO-ORDINATES (m) : 460,047.E, 7,099,351.N
GROUND ELEVATION (m) : 1215.0
SURVEY METHOD : Handheld GPS
DATUM : UTM NAD 83
PLUNGE (°) : -62
TREND (°) : 180

DRILL DESIGNATION : CS 1000
DRILLING CONTRACTOR : Lyncorp
DRILL METHOD : Diamond
CORE SIZE : HQ3
FLUID : Water / Polymer
CASED TO (m): 12.19

START DATE : 28 Sep 10
FINISH DATE : 04 Oct 10
FINAL DEPTH (m) : 215.8
DEPTH TO TOP OF ROCK : 4.0
LOGGED BY : TS/CAEA
REVIEWED BY : HWN



BGC

CLIENT: Victoria Gold Corporation
SCALE: 1:2,500
PRINT DATE: : 12/12/2011

PROJECT NAME: Eagle Gold Project - Open Pit

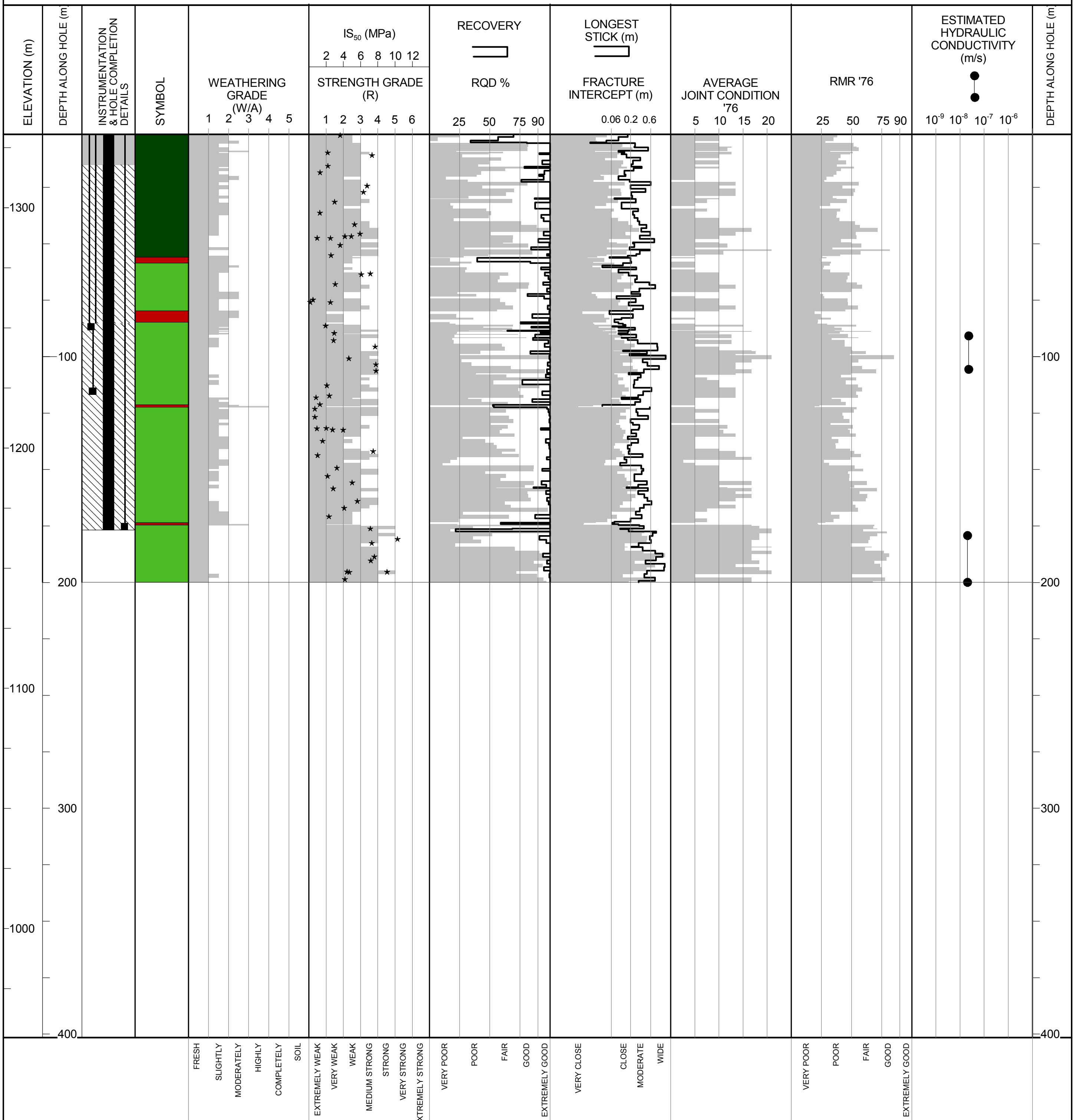
PROJECT NO. : 0792-005

SUMMARY LOG # 11-BGC-GTH-10

CO-ORDINATES (m) : 460,407.00E, 7,099,425.00N
GROUND ELEVATION (m) : 1332.0
SURVEY METHOD : DGPS
DATUM : UTM NAD 83
PLUNGE (°) : -70
TREND (°) : 135

DRILL DESIGNATION : CS 1000
DRILLING CONTRACTOR : Lyncorp
DRILL METHOD : Diamond
CORE SIZE : HQ3
FLUID : Water / Polymer
CASED TO (m): 5.5

START DATE : 07 Jun 11
FINISH DATE : 15 Jun 11
FINAL DEPTH (m) : 200.0
DEPTH TO TOP OF ROCK : 1.5
LOGGED BY : DS/SP/JD
REVIEWED BY : HWN



EOH NOTES:
1. VW17701 at 91.5 along hole
2. VW17703 at 120.0 along hole
3. VW17706 at 180.0 along hole
4. Datalogger: DL01861

CLIENT: Victoria Gold Corporation

SCALE: 1:2,500

PRINT DATE: : 12/12/2011

PROJECT NAME: Eagle Gold Project - Open Pit

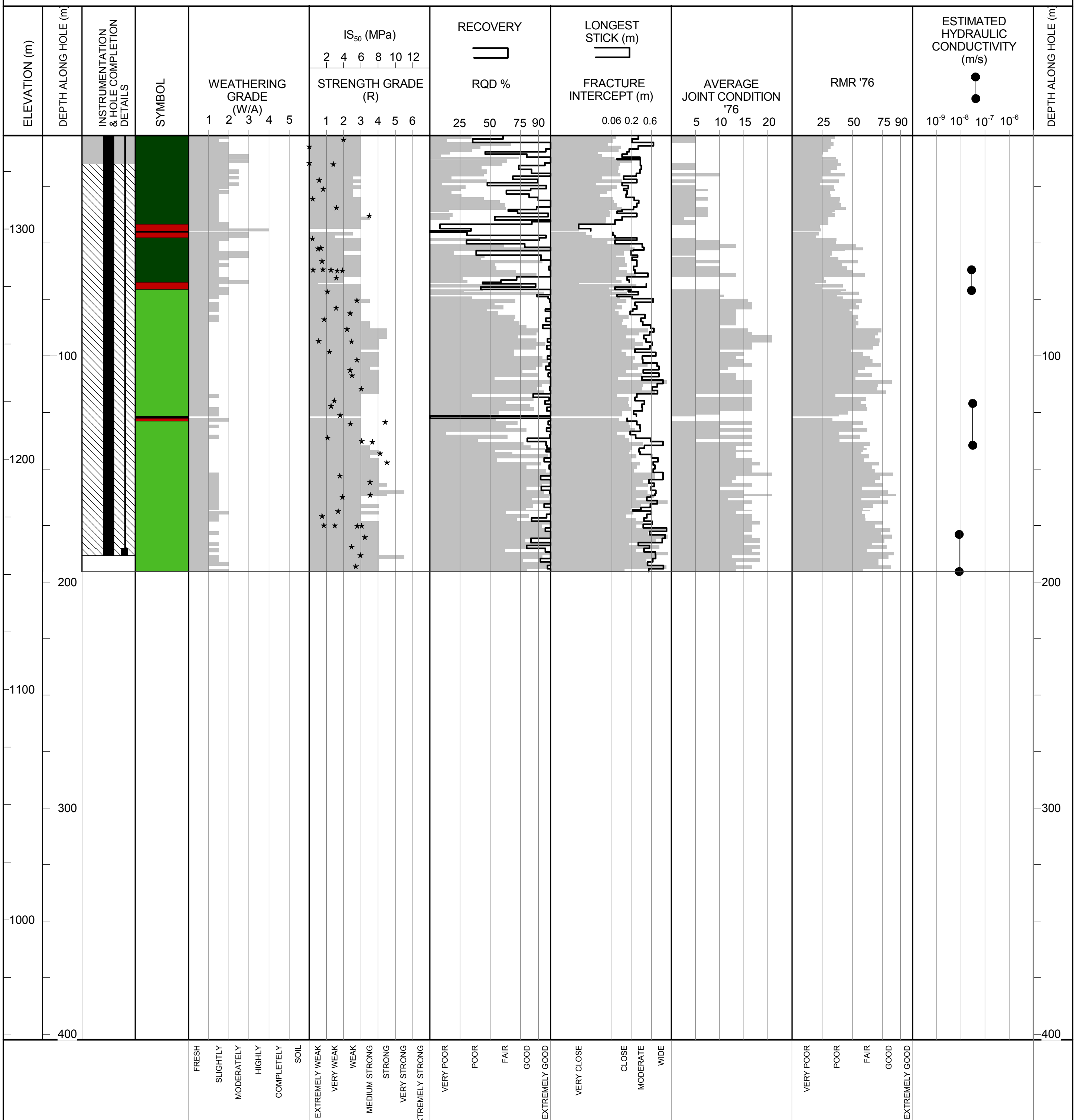
PROJECT NO. : 0792-005

SUMMARY LOG # 11-BGC-GTH-11

CO-ORDINATES (m) : 460,554.00E, 7,099,545.00N
GROUND ELEVATION (m) : 1343.0
SURVEY METHOD : DGPS
DATUM : UTM NAD 83
PLUNGE (°) : -79
TREND (°) : 095

DRILL DESIGNATION : CS 1000
DRILLING CONTRACTOR : Lyncorp
DRILL METHOD : Diamond
CORE SIZE : HQ3
FLUID : Water/Polymer
CASED TO (m): 3

START DATE : 16 Jun 11
FINISH DATE : 20 Jun 11
FINAL DEPTH (m) : 195.4
DEPTH TO TOP OF ROCK : 2.4
LOGGED BY : DS/SP/JD
REVIEWED BY : HWN



EOH NOTES:
1. VW17705 at 185.21 m along hole.

CLIENT: Victoria Gold Corporation

SCALE: 1:2,500

PRINT DATE: : 12/12/2011

SUMMARY LOG # 11-BGC-GTH-12

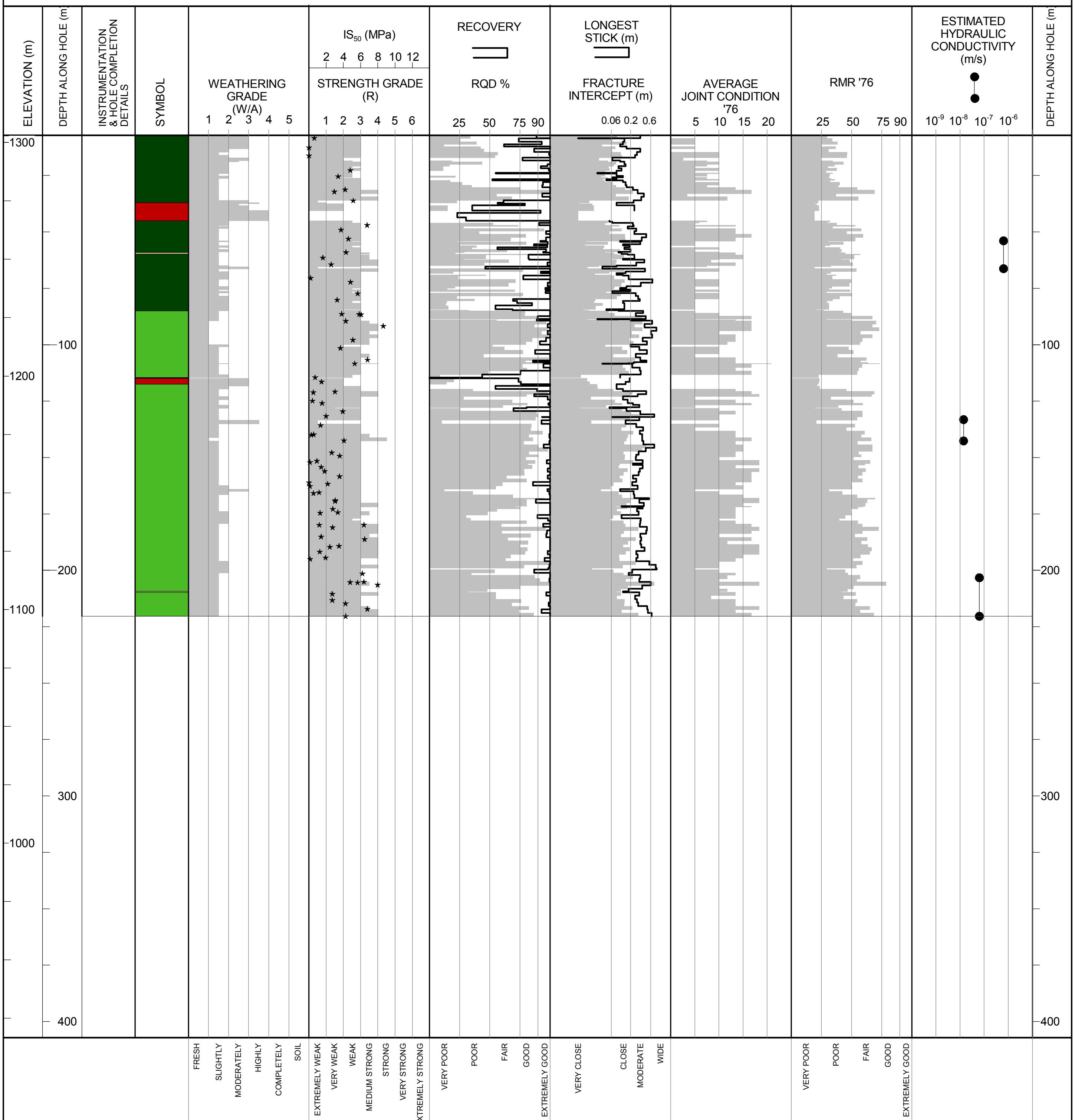
PROJECT NAME: Eagle Gold Project - Open Pit

PROJECT NO. : 0792-005

CO-ORDINATES (m) : 460,306.00E, 7,099,390.00N
GROUND ELEVATION (m) : 1310.0
SURVEY METHOD : DGPS
DATUM : UTM NAD 83
PLUNGE (°) : -75
TREND (°) : 170

DRILL DESIGNATION : CS-1000
DRILLING CONTRACTOR : Lyncorp
DRILL METHOD : Diamond
CORE SIZE : HQ3
FLUID : Water/Polymer
CASED TO (m): 4

START DATE : 20 Jun 11
FINISH DATE : 26 Jun 11
FINAL DEPTH (m) : 220.4
DEPTH TO TOP OF ROCK : 7.1
LOGGED BY : SP/JD
REVIEWED BY : HWN



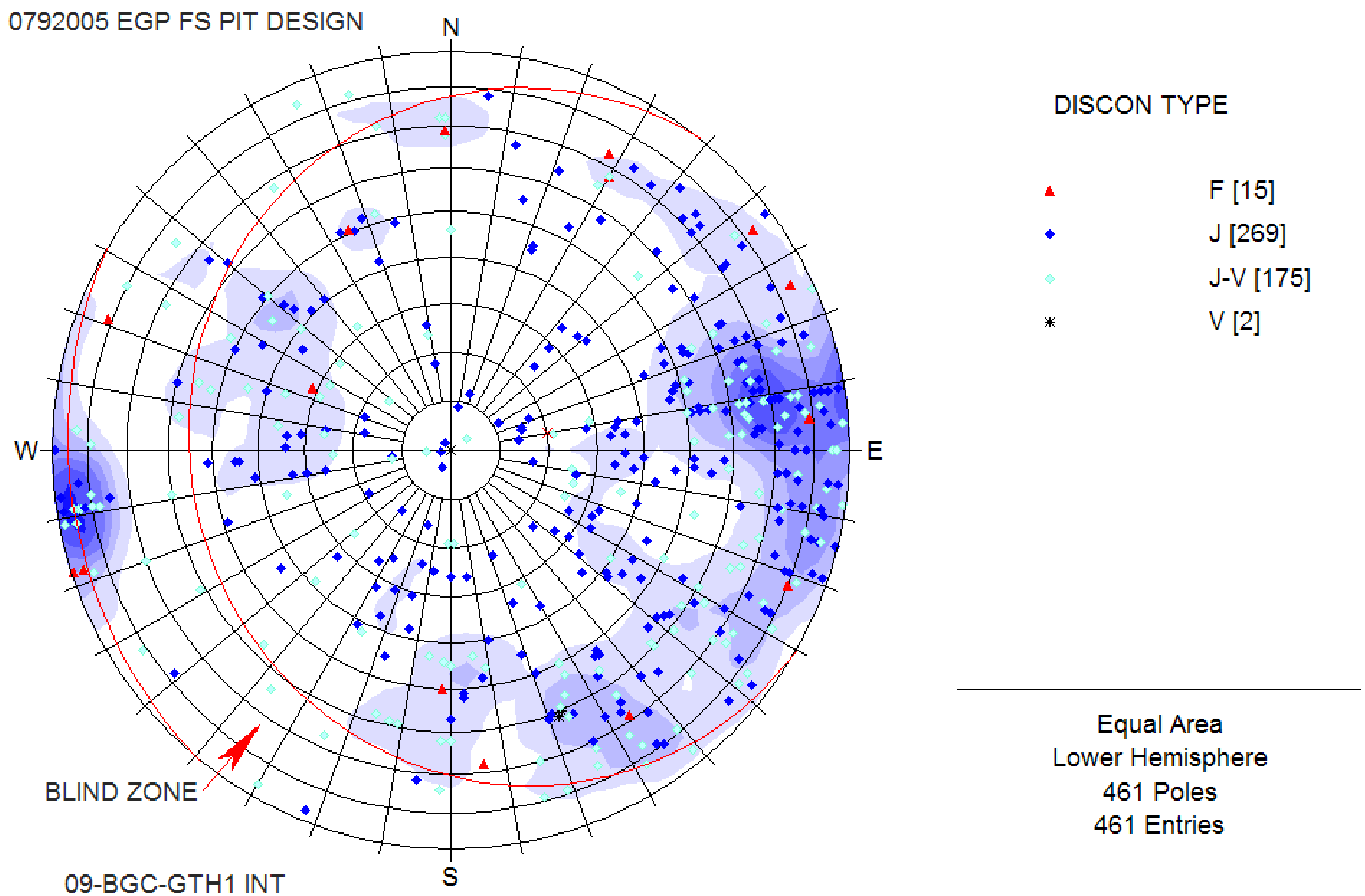
BGC

CLIENT: Victoria Gold Corporation

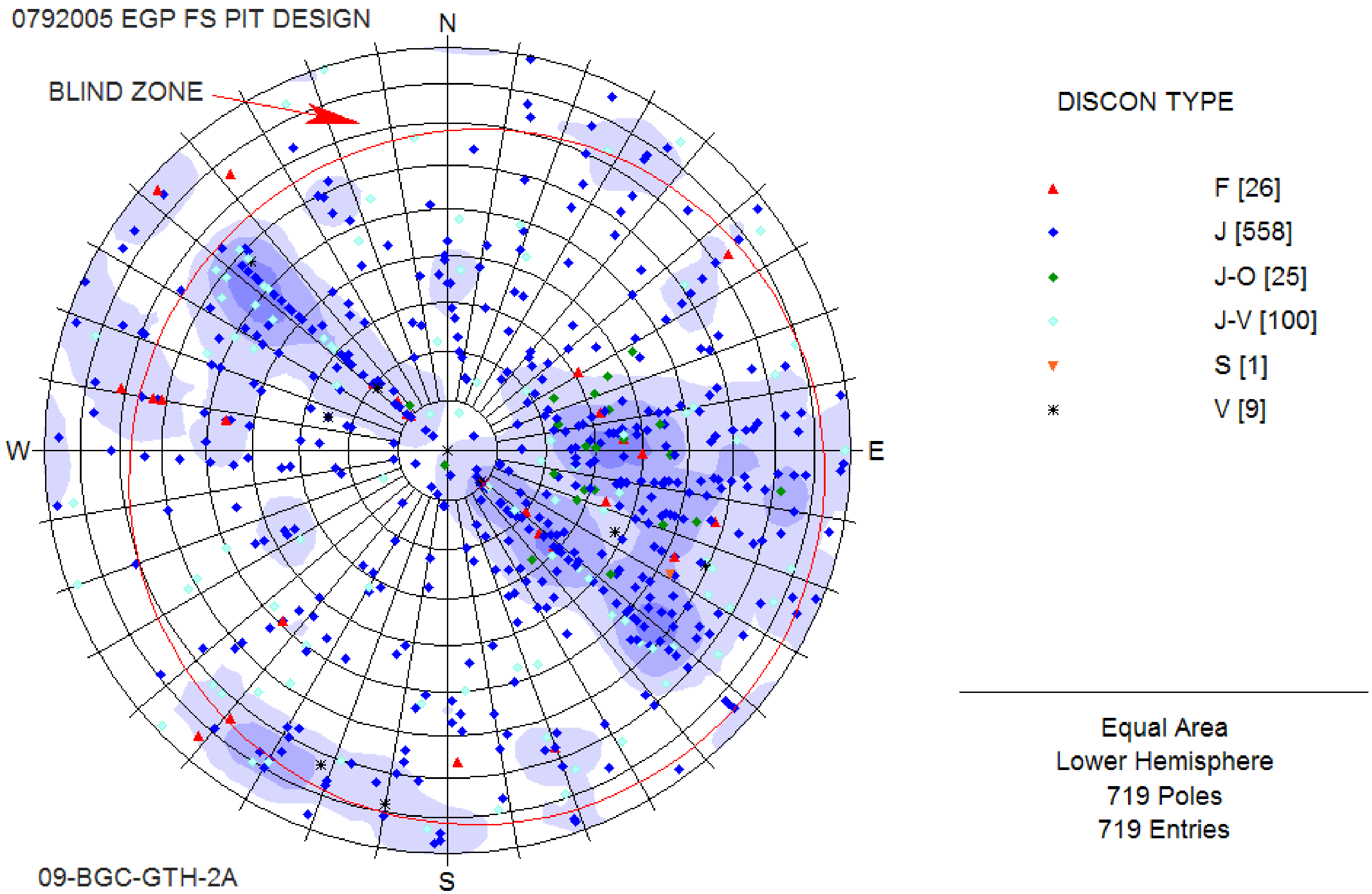
SCALE: 1:2,500

PRINT DATE: : 12/12/2011

APPENDIX B
STEREONETS BY HOLE



0792005 EGP FS PIT DESIGN
N
W
E
S
BLIND ZONE
09-BGC-GTH1 INT
DISCON TYPE
F [15]
J [269]
J-V [175]
V [2]
Equal Area
Lower Hemisphere
461 Poles
461 Entries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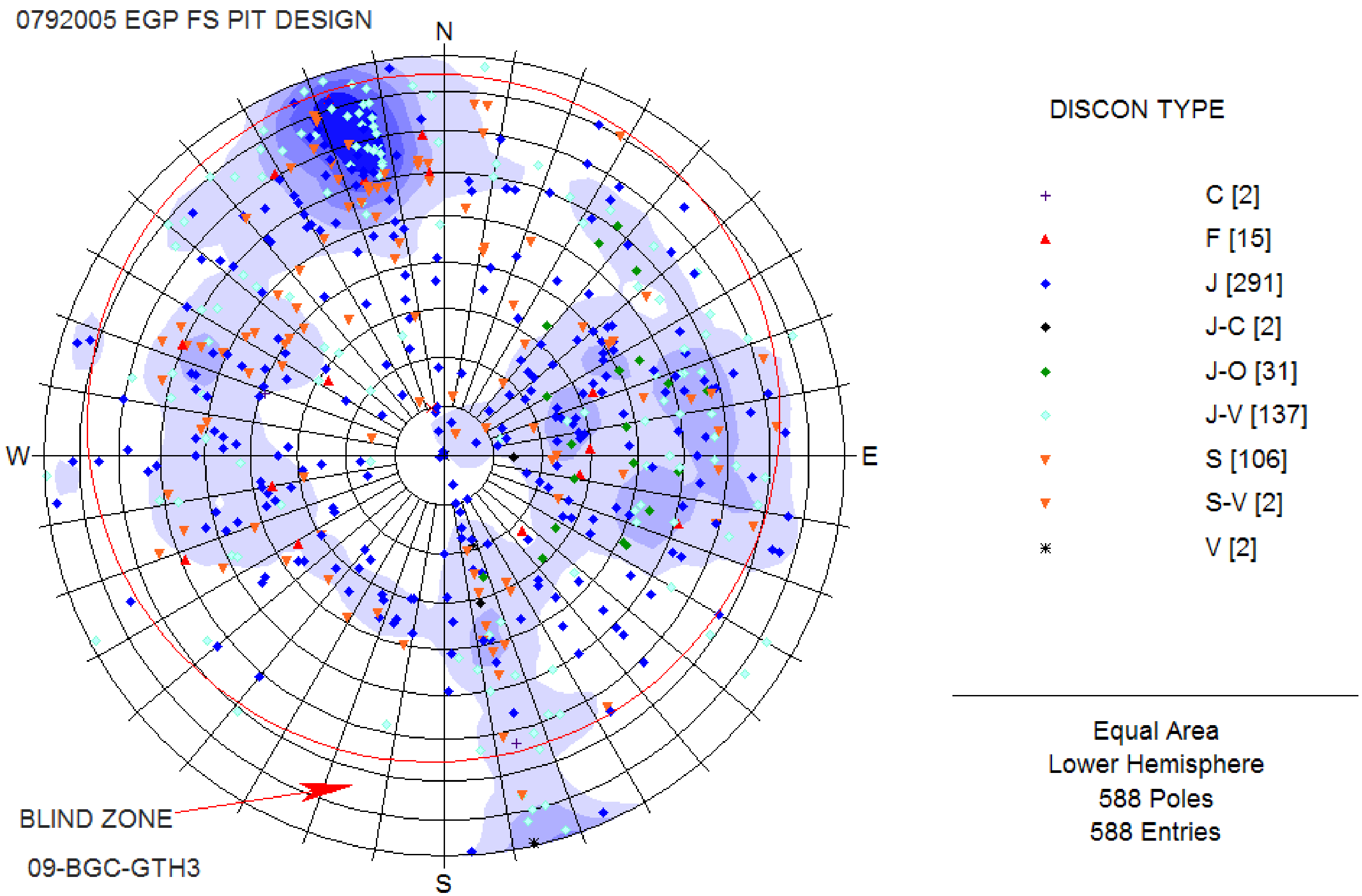
BLIND ZONE
N
W
E
S
09-BGC-GTH-2A
DISCON TYPE
F [26]
J [558]
J-O [25]
J-V [100]
S [1]
V [9]
Equal Area
Lower Hemisphere
719 Poles
719 Entries



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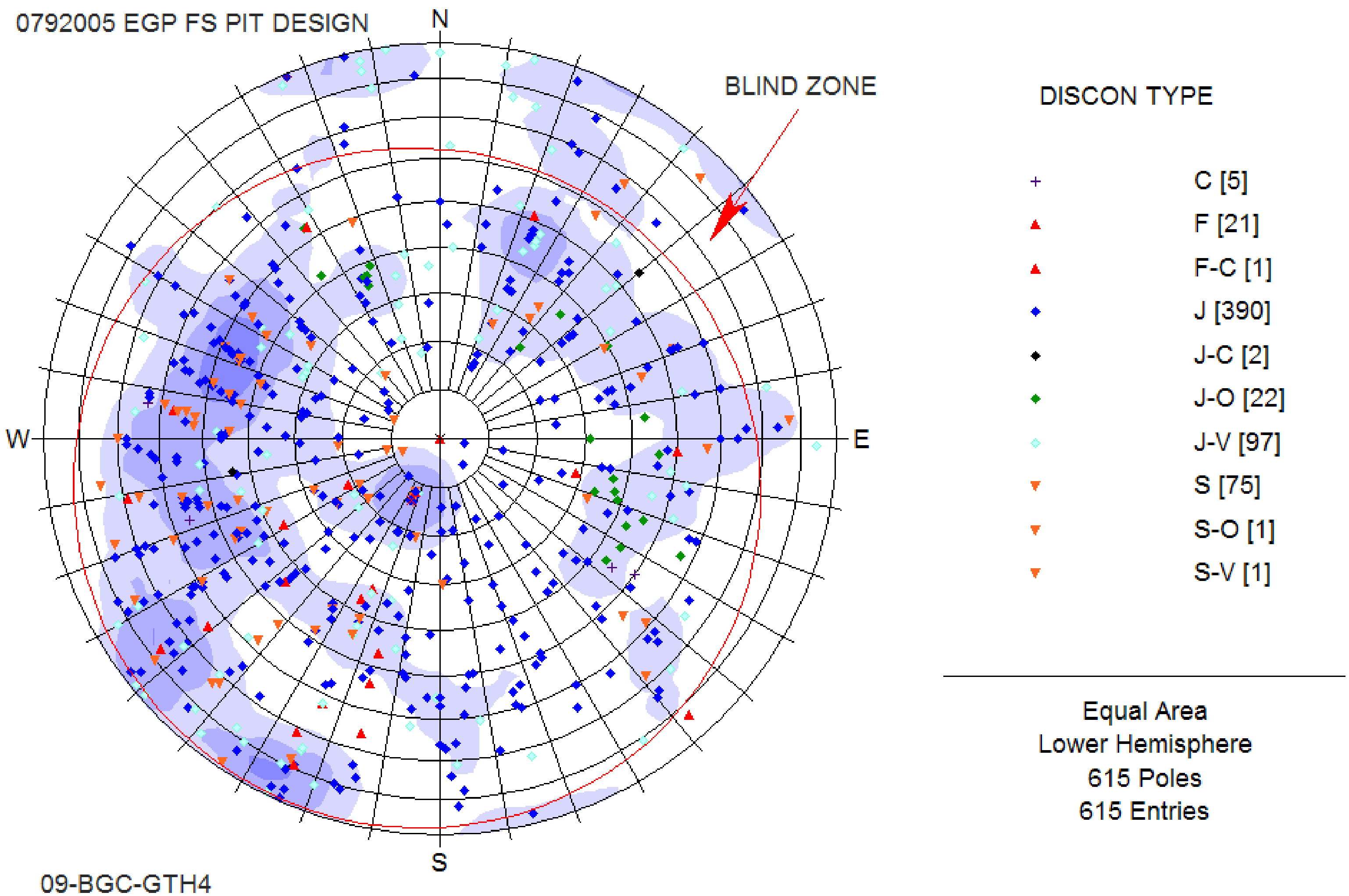
W
E
S
BLIND ZONE
09-BGC-GTH3
DISCON TYPE
C [2]
F [15]
J [291]
J-C [2]
J-O [31]
J-V [137]
S [106]
S-V [2]
V [2]
Equal Area
Lower Hemisphere
588 Poles
588 Entries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W
E
S
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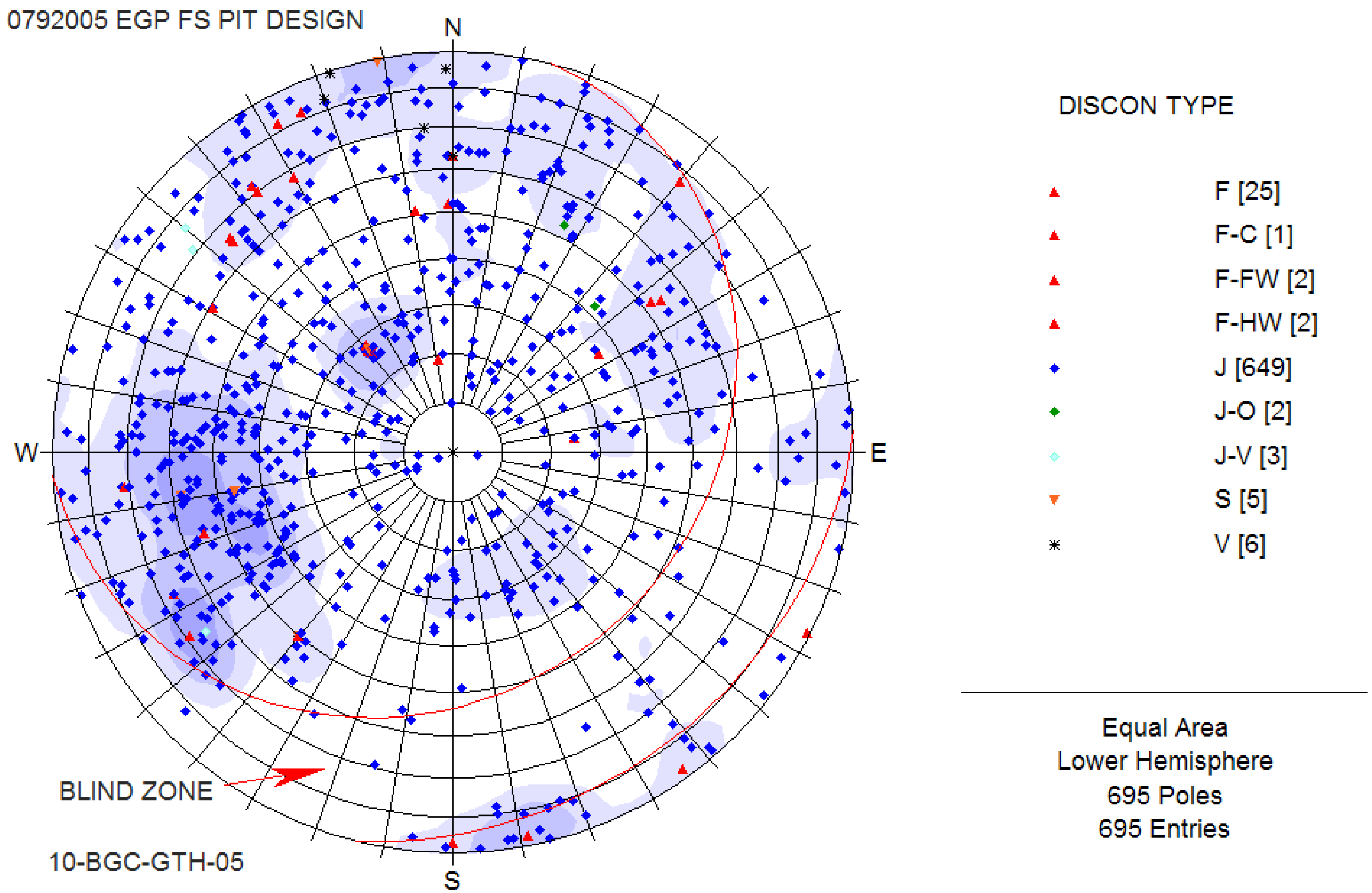
DISCON TYPE
C [5]
F [21]
F-C [1]
J [390]
J-C [2]
J-O [22]
J-V [97]
S [75]
S-O [1]
S-V [1]
Equal Area
Lower Hemisphere
615 Poles
615 Entries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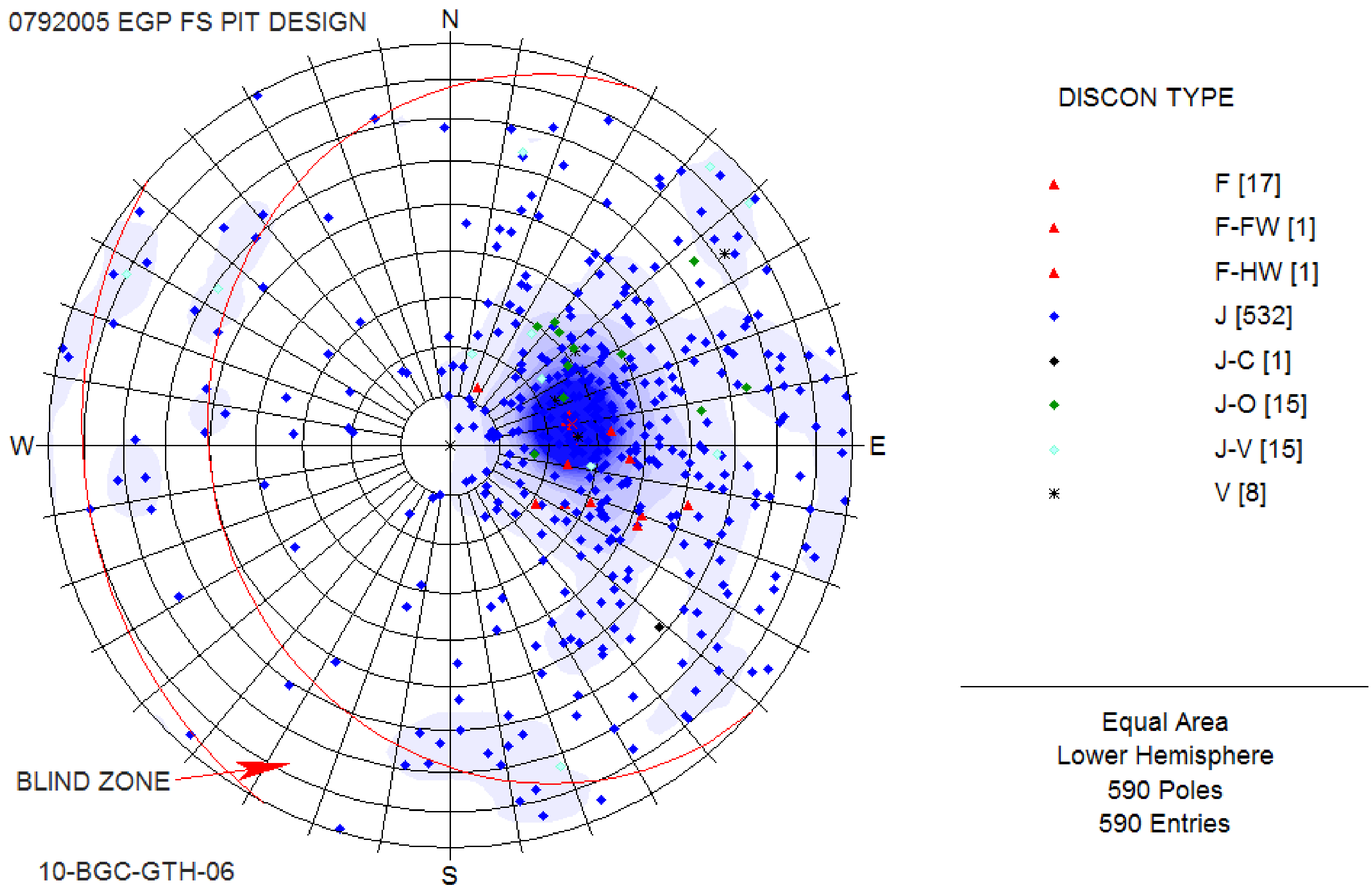
N
W
E
S
BLIND ZONE
10-BGC-GTH-05
DISCON TYPE
F [25]
F-C [1]
F-FW [2]
F-HW [2]
J [649]
J-O [2]
J-V [3]
S [5]
V [6]
Equal Area
Lower Hemisphere
695 Poles
695 Entries



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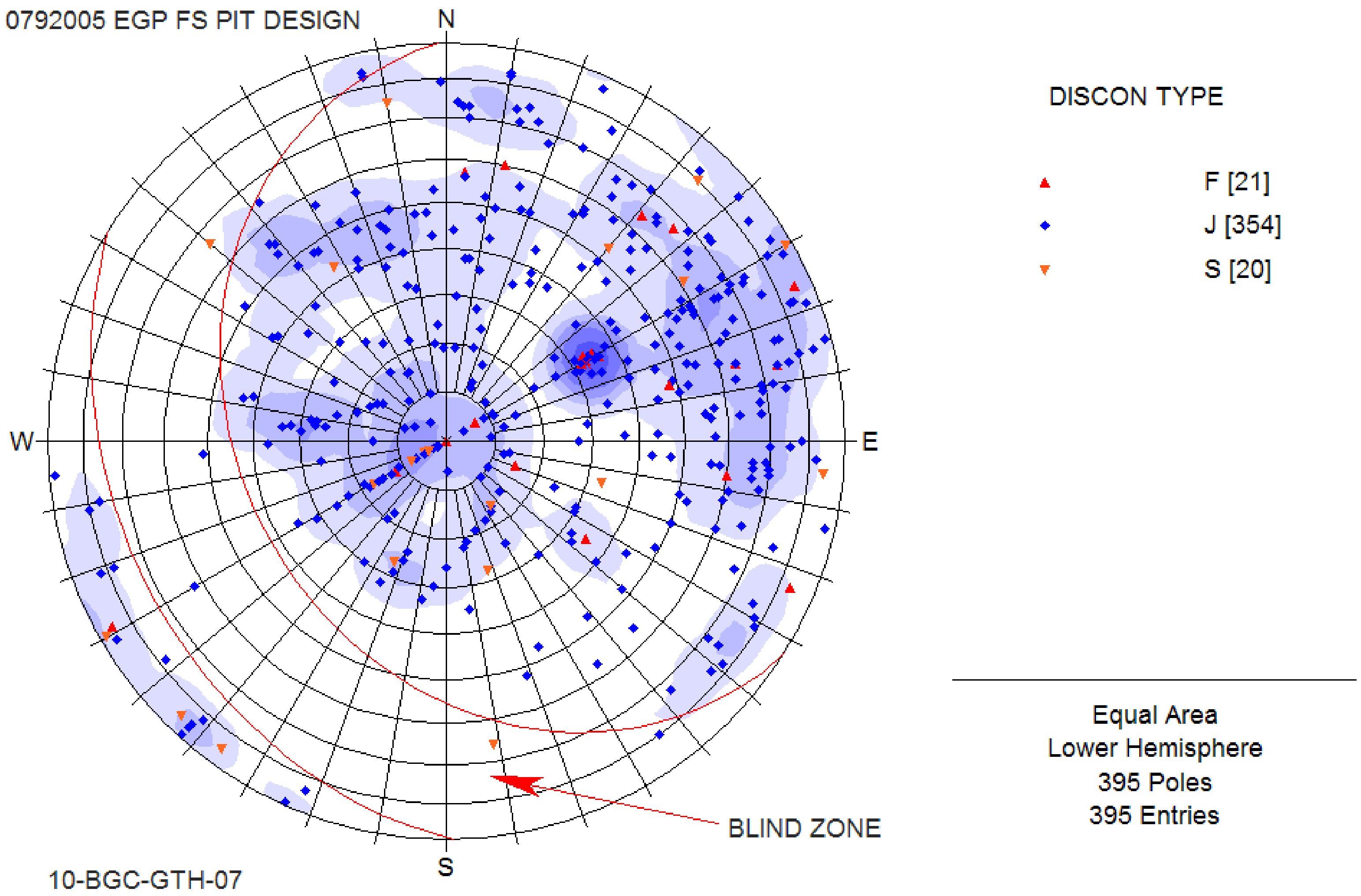
N
W
E
S
BLIND ZONE
10-BGC-GTH-06
DISCON TYPE
F [17]
F-FW [1]
F-HW [1]
J [532]
J-C [1]
J-O [15]
J-V [15]
V [8]
Equal Area
Lower Hemisphere
590 Poles
590 Entries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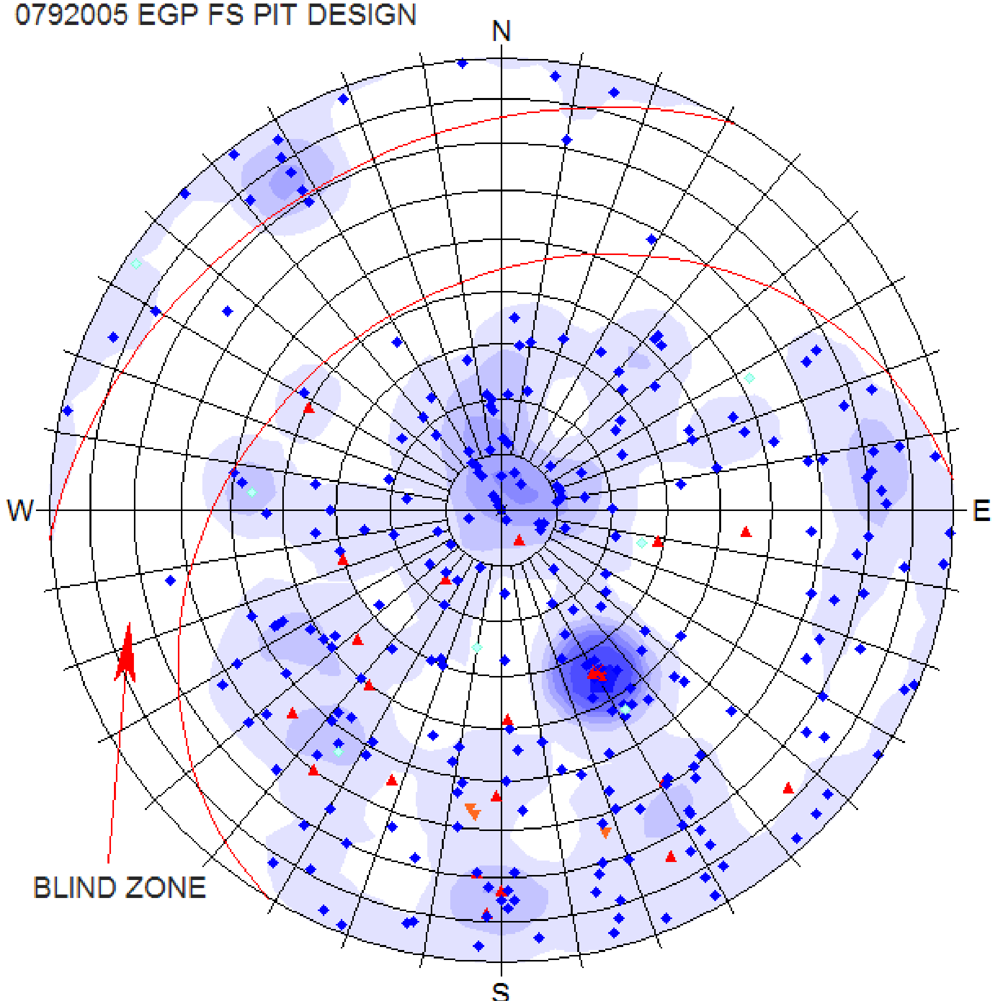
N
W
E
S
BLIND ZONE
10-BGC-GTH-07
DISCON TYPE
F [21]
J [354]
S [20]
Equal Area
Lower Hemisphere
395 Poles
395 Entries

0792005 EGP FS PIT DESIGN

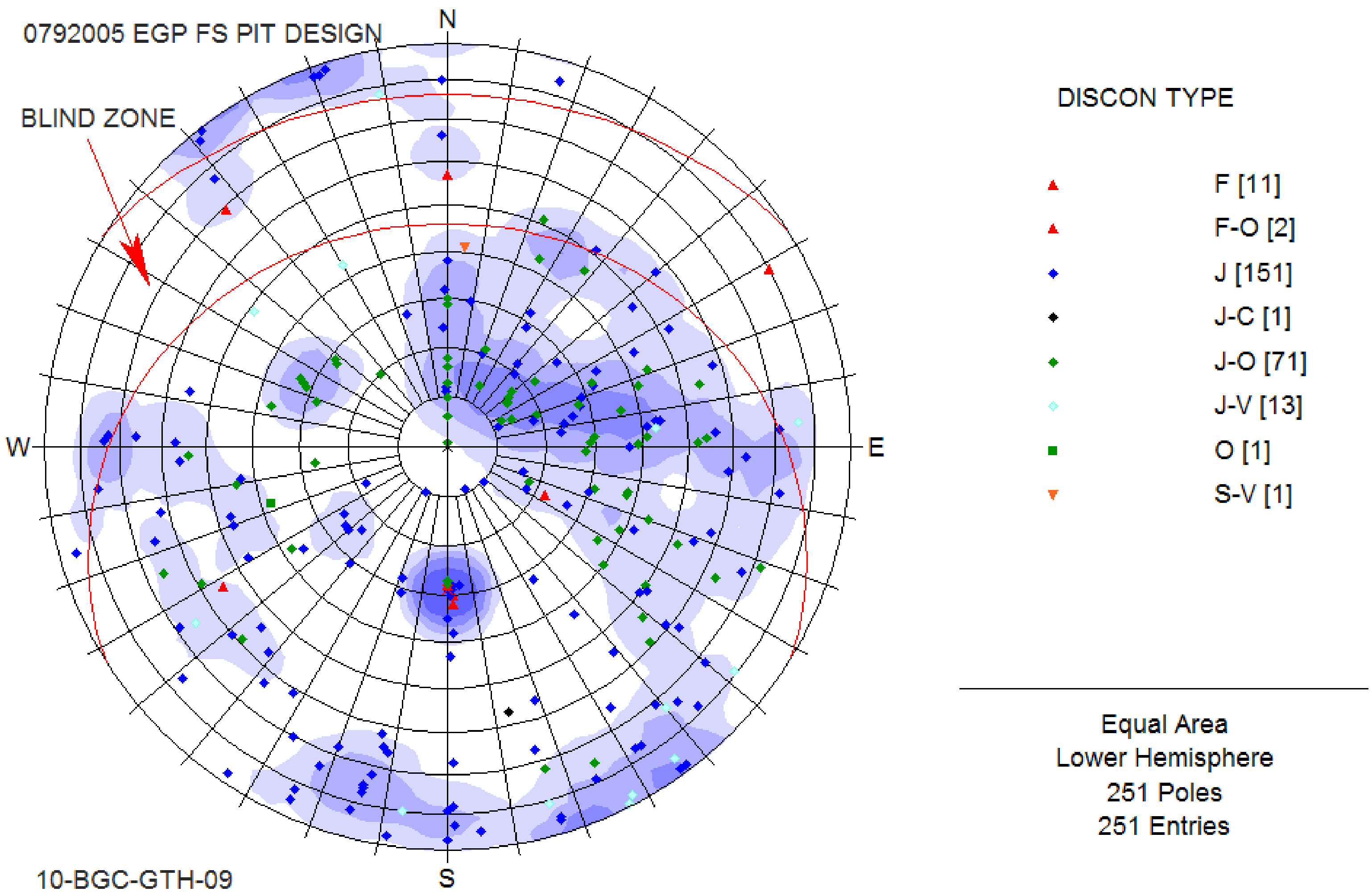


10-BGC-GTH-08

DISCON TYPE

▲	F [26]
◆	J [273]
◆	J-V [8]
▼	S [3]

Equal Area
Lower Hemisphere
310 Poles
310 Entries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BLIND ZONE
N
E
S
W
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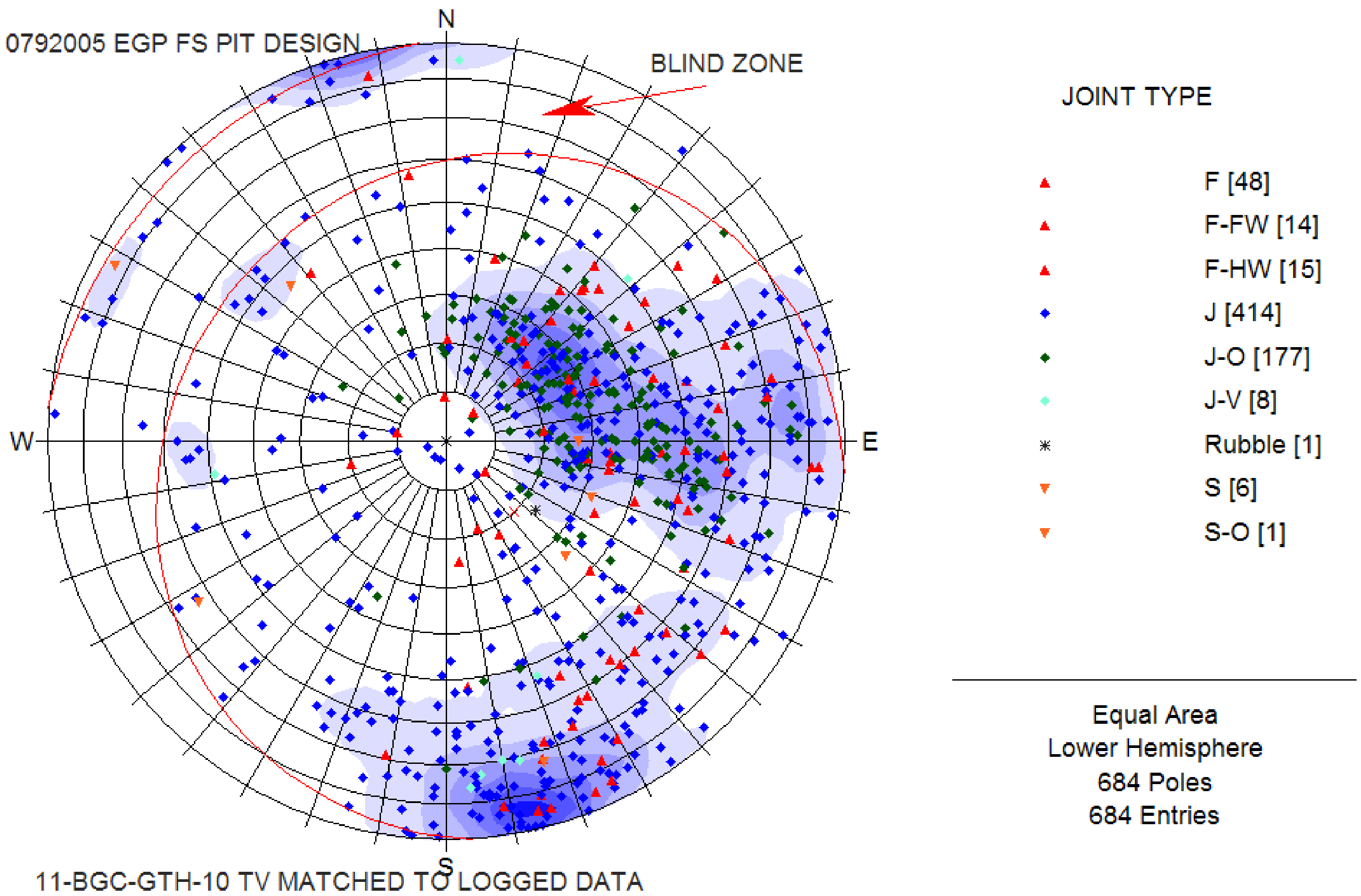
DISCON TYPE
F [11]
F-O [2]
J [151]
J-C [1]
J-O [71]
J-V [13]
O [1]
S-V [1]
Equal Area
Lower Hemisphere
251 Poles
251 Entries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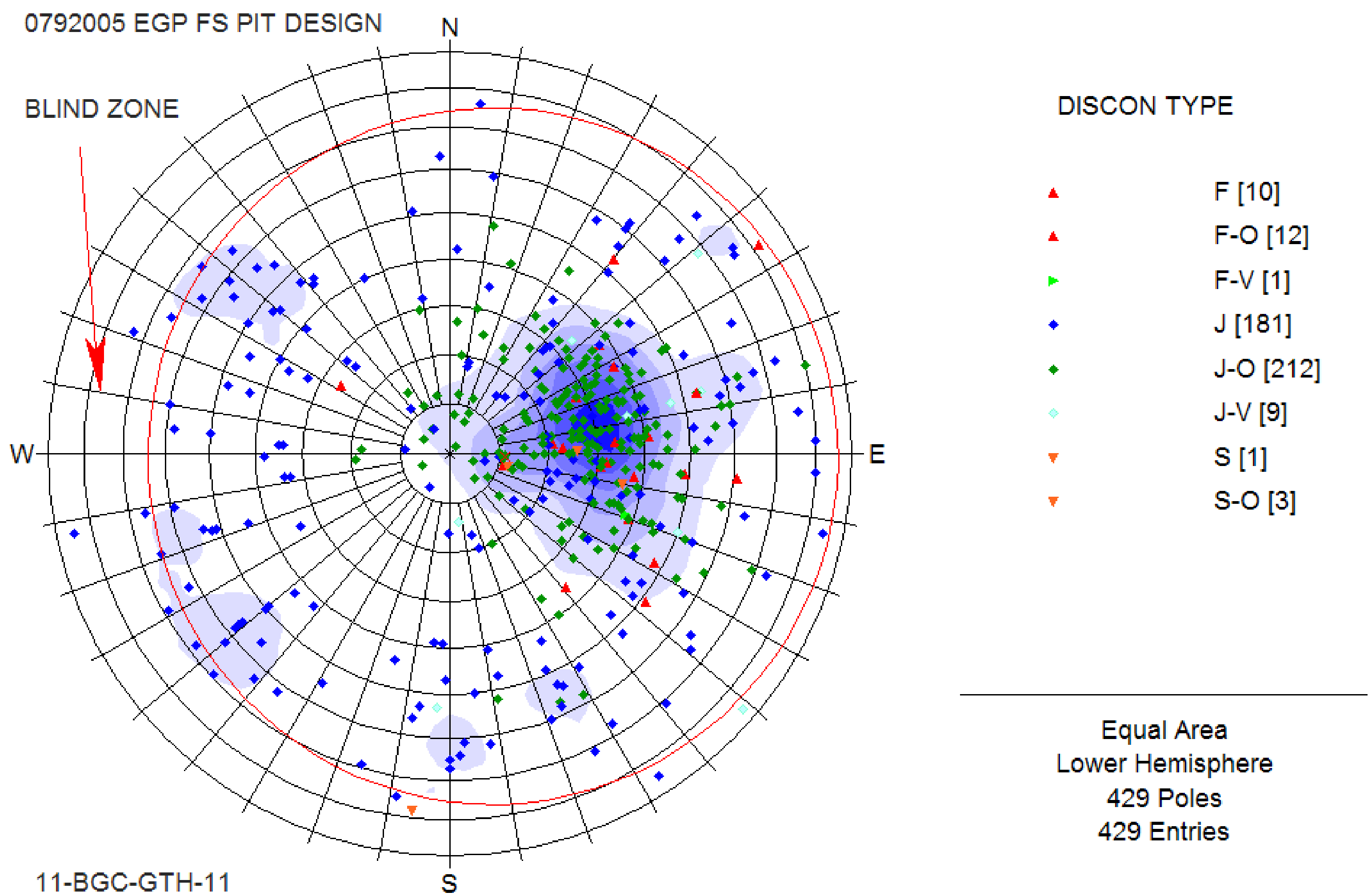
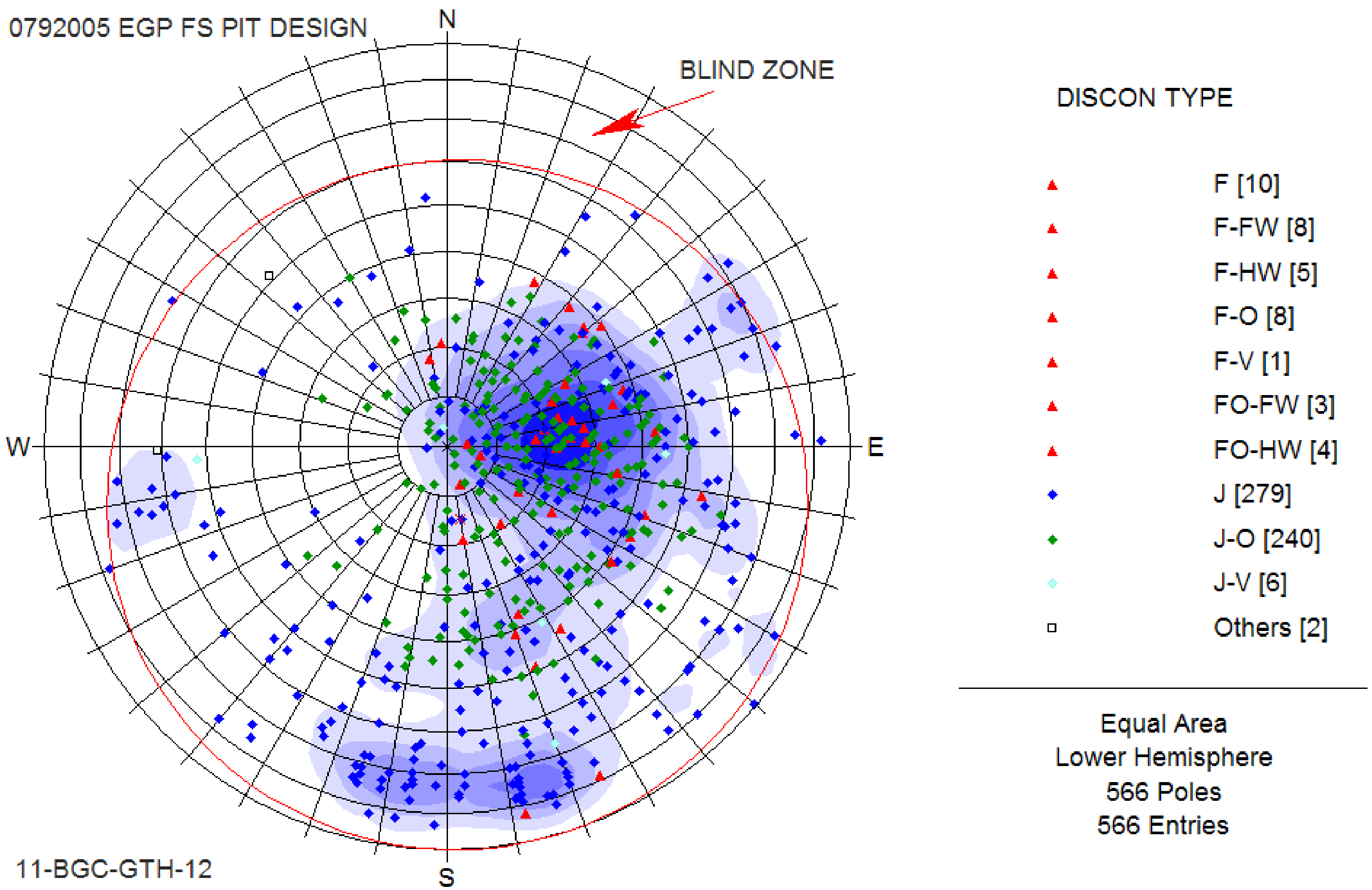
N
BLIND ZONE
W
E
S
11-BGC-GTH-10 TV MATCHED TO LOGGED DATA
JOINT TYPE
F [48]
F-FW [14]
F-HW [15]
J [414]
J-O [177]
J-V [8]
Rubble [1]
S [6]
S-O [1]
Equal Area
Lower Hemisphere
684 Poles
684 Entries



0792005 EGP FS PIT DESIGN
BLIND ZONE
N
W
E
S
11-BGC-GTH-11
DISCON TYPE
F [10]
F-O [12]
F-V [1]
J [181]
J-O [212]
J-V [9]
S [1]
S-O [3]
Equal Area
Lower Hemisphere
429 Poles
429 Entries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BLIND ZONE
W
E
S
11-BGC-GTH-12
DISCON TYPE
F [10]
F-FW [8]
F-HW [5]
F-O [8]
F-V [1]
FO-FW [3]
FO-HW [4]
J [279]
J-O [240]
J-V [6]
Others [2]
Equal Area
Lower Hemisphere
566 Poles
566 Entries

APPENDIX C
LABORATORY RESULTS

TABLE C-1. LABORATORY TESTING PROGRAM SUMMARY

TEST TYPE[1]	HOLE ID	SAMPLE ID	DEPTH FROM (m)	DEPTH TO (m)	LITHOLOGY
UCS + BT	GTH1	1-3	110.34	110.8	INT
	GTH1	1-4	156.13	156.46	INT
	GTH1	1-5	352.15	352.6	INT
	GTH1	1-7	289.48	289.76	INT
	GTH1	1-11	275.82	276.01	INT
	GTH2	2-2	296.76	297.49	CINT
	GTH2	2-3	222.65	222.89	SED
	GTH2	2-4	170.44	170.91	SED
	GTH2	2-6	327.76	328.04	INT
	GTH2	2-7	64.78	64.98	SED
	GTH3	3-1A	47.28	47.87	SSED
	GTH3	3-2	89.98	90.6	INT
	GTH3	3-7	47.87	48.04	SED
	GTH4	4-5	114.93	115.19	CINT
	GTH4	4-6	58.64	58.83	INT
	GTH-05	5-6	84.73	85.02	SSED
	GTH-05	5-10	176.16	176.51	INT
	GTH-05	5-15	266.37	266.60	INT
	GTH-06	6-4	95.52	95.74	SED
	GTH-06	6-8	139.12	139.36	SED
	GTH-06	6-12	200.21	200.43	SED
	GTH-07	7-11	318.52	318.75	INT
	GTH-08	8-12	279.89	281.01	INT
	GTH-09	9-2	97.10	97.33	SED
	GTH-09	9-3	71.38	71.67	INT
	GTH-09	9-4	120.61	120.81	SED
	GTH-09	9-8	210.73	211.05	SED
DS	GTH1	1-11	275.82	276.01	INT
	GTH1	1-1	75.15	75.39	INT
	GTH1	1-9	249.39	249.6	INT
	GTH3	3-6	273.91	274.3	INT
	GTH2a	2-4	170.44	170.91	SED
	GTH2a	2-5	170.44	170.91	SED
	GTH3	3-1	47.28	47.87	SSED
	GTH4	4-7	45.66	46.15	SINT
	GTH-05	5-7	88.06	88.41	SSED
	GTH-05	5-11	184.22	184.31	INT
	GTH-05	5-16	274.38	274.76	INT
	GTH-06	6-2	47.91	48.17	SSED
	GTH-06	6-5	96.42	96.75	SED
	GTH-06	6-7	149.4	149.61	SED
	GTH-06	6-13	204.03	204.23	SED
	GTH-07	7-7	198.98	199.27	INT
	GTH-08	8-7	206.4	206.75	CINT
	GTH-08	8-8	256.32	256.42	INT
	GTH-09	9-1	69.69	70.02	INT
	GTH-09	9-5	136.9	137.16	SED
XRD	GTH1	1-6	315.62	315.89	INT
	GTH3	3-4	149.45	149.66	INT
AT+GS	GTH2A	2-8	293	290.06	INT
	GTH2A	2-9	155.3		SED
	GTH4	4-8	167.3	167.4	INT
	GTH-08	6	186.84	187.14	CINT
	GTH-08	11	266.45	266.55	INT
	GTH-09	9	180.47	180.57	SED
	GTH-10	7	122.25	122.3	SED
	GTH-10	9	168.91	168.98	SED
	GTH-11	7	118.02	118.08	SED

NOTES:

1. Test types: Uniaxial Compression Strength (UCS), Brazillian Tensile (BT), Direct Shear (DS), X-Ray Diffraction (XRD), Atterberg Limits (AT), Grain Size (GS).

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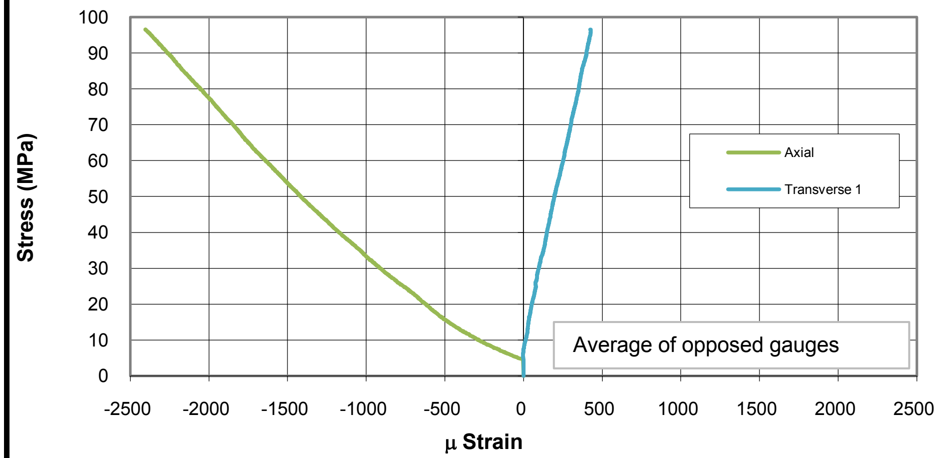

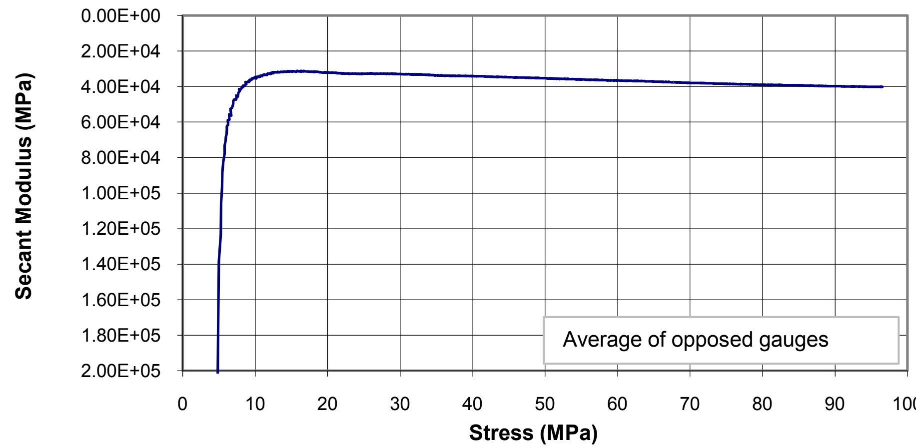

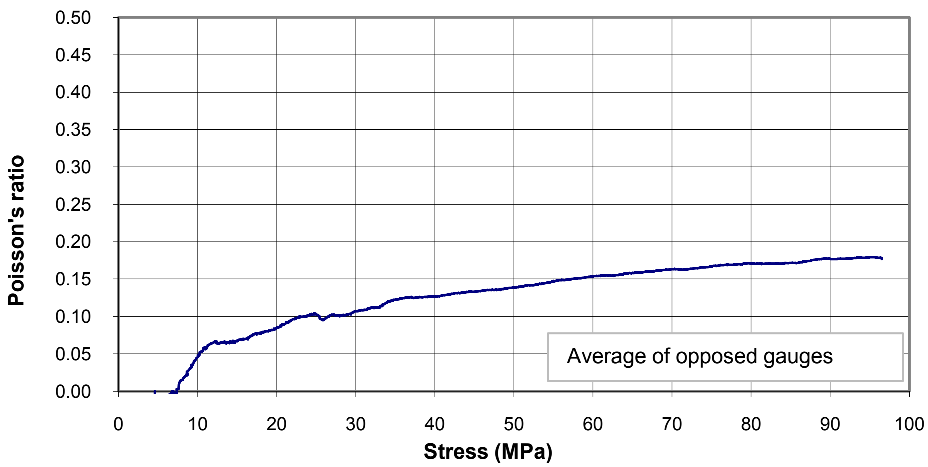

Before Test

After Test

Test Summary			ASTM D7012-07 Method D Modulus in Uniaxial Compression		Project Details	
Peak Stress σ_{peak}	96.5	MPa				
Secant Modulus, ε_{50}	35.1	GPa	Borehole:	10-BGC-GTH-05	Project No.:	10-1416-0029/18000
Poisson's Ratio, ν_{50}	0.14		Sample:	06	Project:	Eagle Gold FS
Height:	122.29	mm	Depth (m):	84.73-85.02	Location	Not Provided
Diameter:	60.89	mm	Tested By:	G. Patton	Client	BGC Engineering Inc.
Failure Mode:	Multi-Vertical / Shear ~18°		Reviewed By	J. Richmond		

The test data given herein pertain to the sample provided only. This report constitutes a testing service only. Interpretation of the data can be provided upon request.

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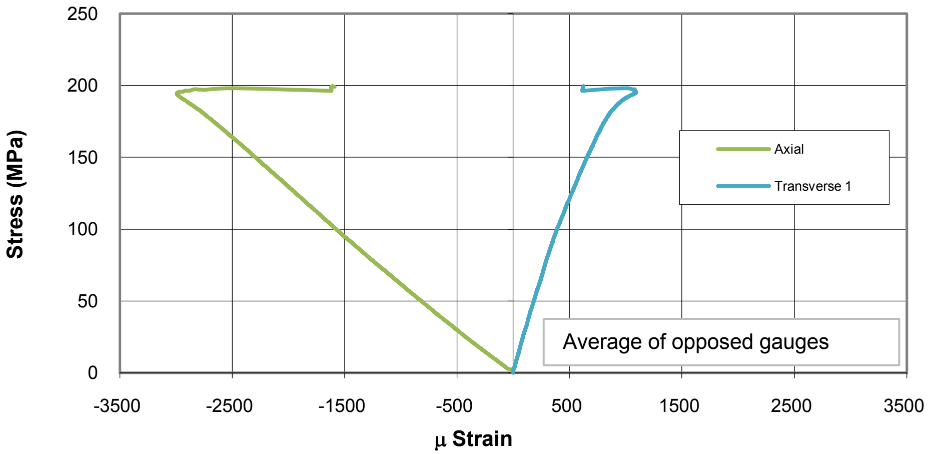

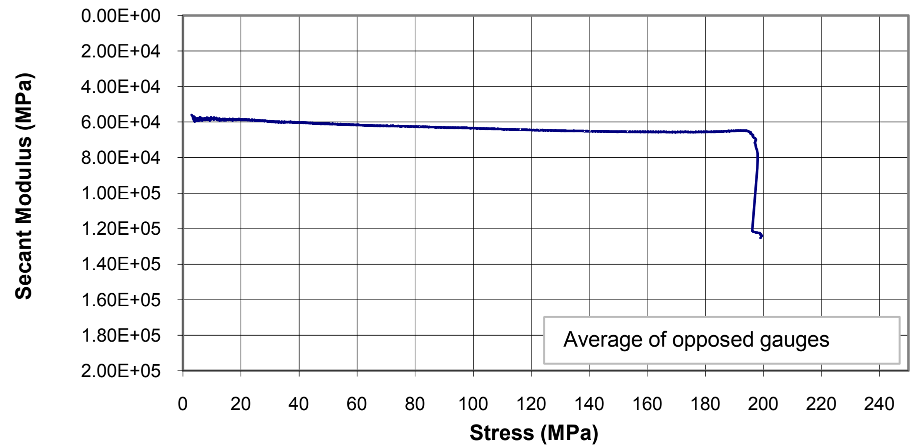

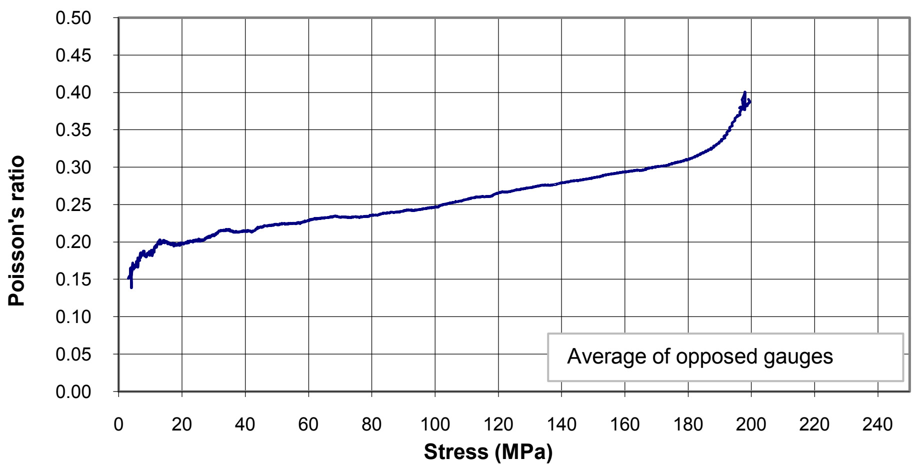

Before Test


After Test

Test Summary			ASTM D7012-07 Method D Modulus in Uniaxial Compression		Project Details	
Peak Stress σ_{peak}	199.6	MPa				
Secant Modulus, ε_{50}	63.4	GPa	Borehole:	10-BGC-GTH-05	Project No.:	10-1416-0029/18000
Poisson's Ratio, ν_{50}	0.25		Sample:	10	Project:	Eagle Gold FS
Height:	122.70	mm	Depth (m):	176.16-176.51	Location	Not Provided
Diameter:	60.91	mm	Tested By:	G. Patton	Client	BGC Engineering Inc.
Failure Mode:	Shear ~13°		Reviewed By	J. Richmond		

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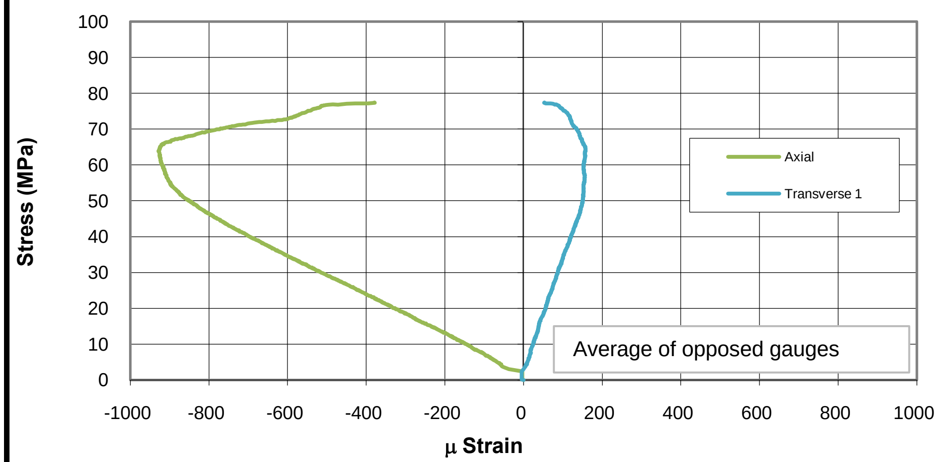

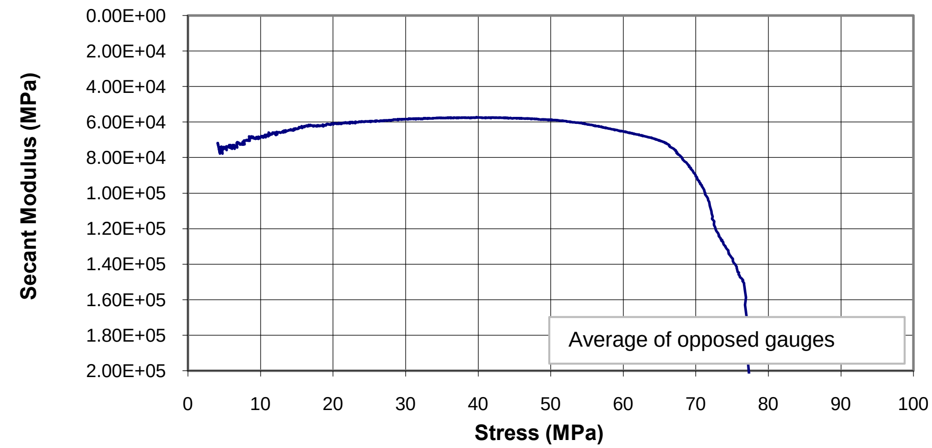

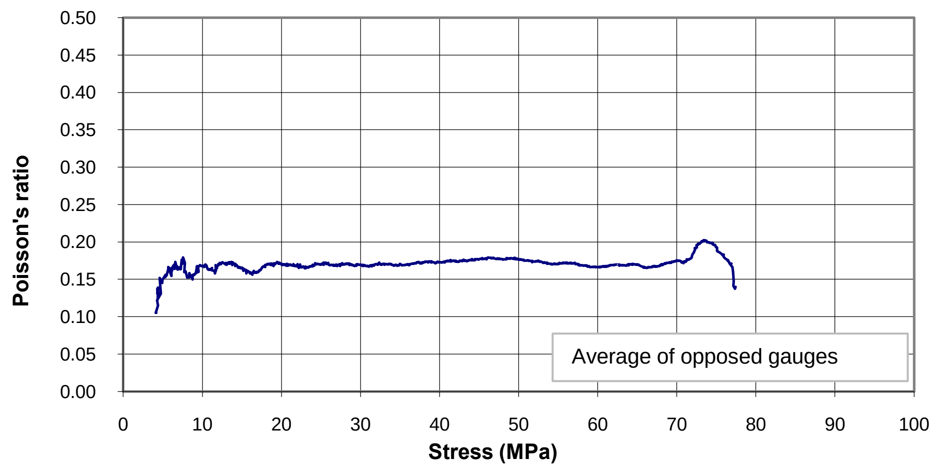

Before Test

After Test

Test Summary

Peak Stress σ_{peak}	77.4	MPa
Secant Modulus, ε_{50}	57.5	GPa
Poisson's Ratio, ν_{50}	0.17	
Height:	123.67	mm
Diameter:	60.79	mm
Failure Mode:	Along foliation ~27°	

ASTM D7012-07 Method D
Modulus in Uniaxial Compression

Borehole:	10-BGC-GTH-05
Sample:	15
Depth (m):	266.60-266.37
Tested By:	G. Patton
Reviewed By	J. Richmond

Project Details

Project No.:	10-1416-0029/18000
Project:	Eagle Gold FS
Location	Not Provided
Client	BGC Engineering Inc.

The test data given herein pertain to the sample provided only. This report constitutes a testing service only. Interpretation of the data can be provided upon request.

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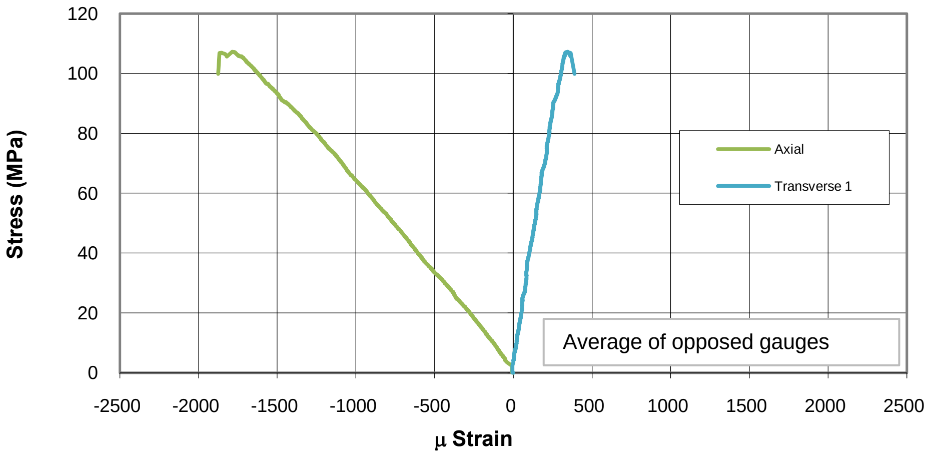

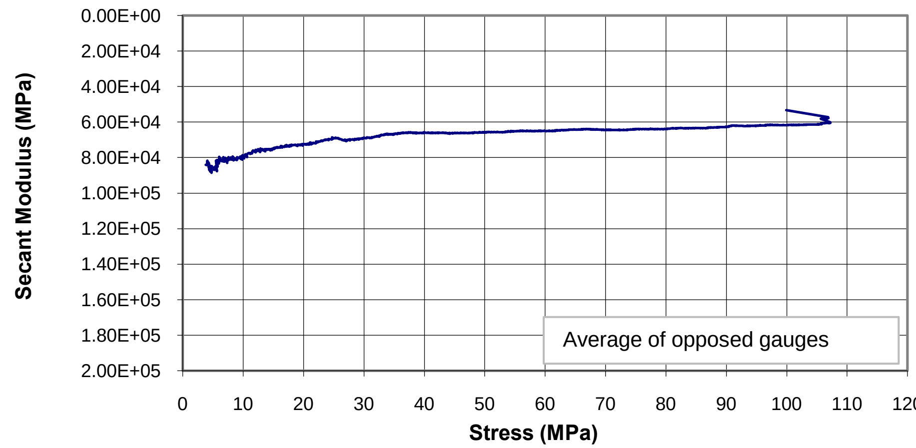

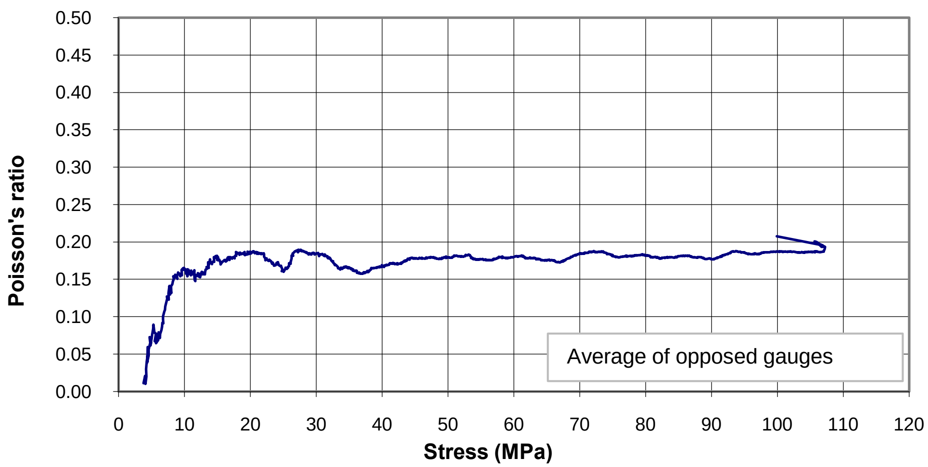

Before Test

After Test

Test Summary

Peak Stress σ_{peak}	107.3	MPa
Secant Modulus, ε_{50}	65.3	GPa
Poisson's Ratio, ν_{50}	0.18	
Height:	122.85	mm
Diameter:	60.52	mm
Failure Mode:	Shear ~14° / Spalling	

ASTM D7012-07 Method D
Modulus in Uniaxial Compression

Borehole:	10-BGC-GTH-06
Sample:	04
Depth (m):	95.52-95.74
Tested By:	G. Patton
Reviewed By	J. Richmond

Project Details

Project No.:	10-1416-0029/18000
Project:	Eagle Gold FS
Location	Not Provided
Client	BGC Engineering Inc.

The test data given herein pertain to the sample provided only. This report constitutes a testing service only. Interpretation of the data can be provided upon request.

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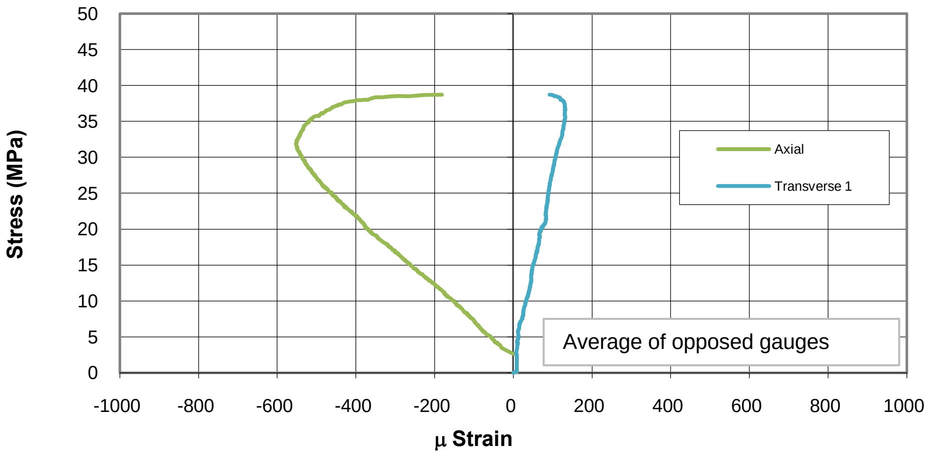

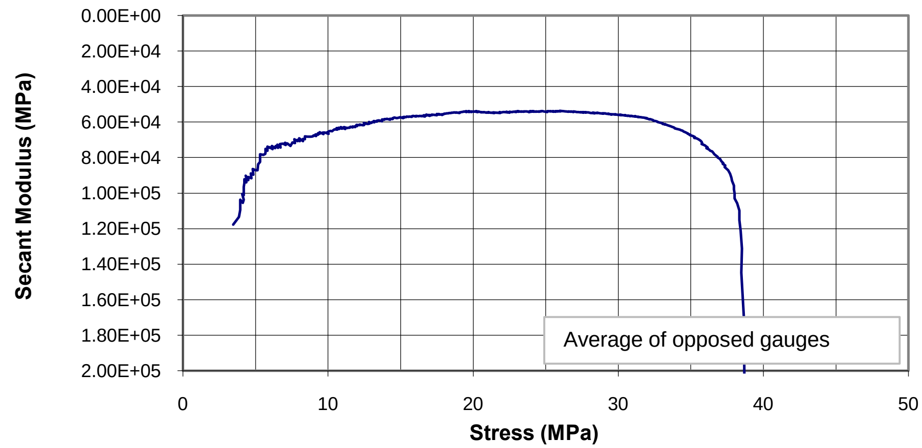

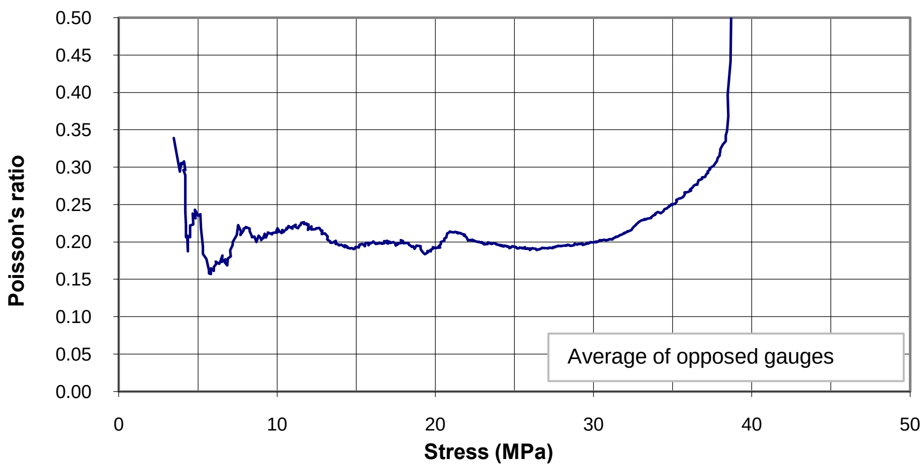

Before Test

After Test

Test Summary

Peak Stress σ_{peak}	38.7	MPa
Secant Modulus, ε_{50}	54.0	GPa
Poisson's Ratio, ν_{50}	0.18	
Height:	122.45	mm
Diameter:	60.97	mm
Failure Mode:	Along discontinuities	

ASTM D7012-07 Method D
Modulus in Uniaxial Compression

Borehole:	10-BGC-GTH-06
Sample:	08
Depth (m):	139.12-139.36
Tested By:	G. Patton
Reviewed By	J. Richmond

Project Details

Project No.:	10-1416-0029/18000
Project:	Eagle Gold FS
Location	Not Provided
Client	BGC Engineering Inc.

The test data given herein pertain to the sample provided only. This report constitutes a testing service only. Interpretation of the data can be provided upon request.

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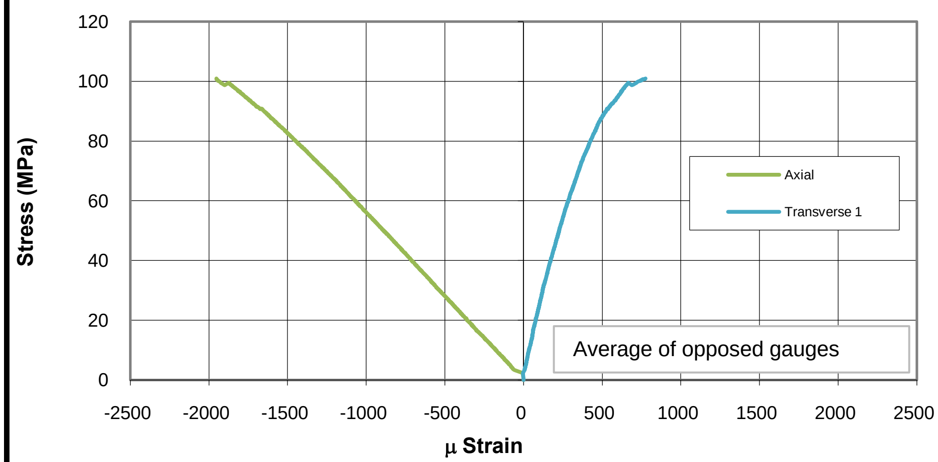

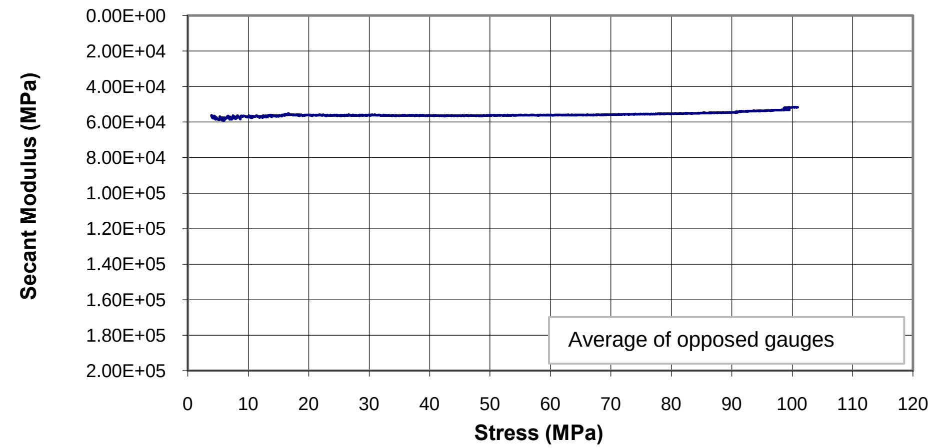

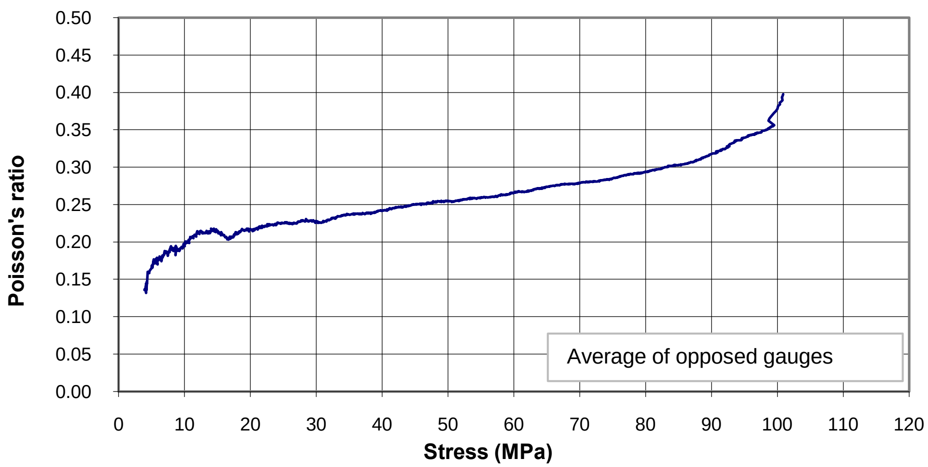

Before Test

After Test

Test Summary

Peak Stress σ_{peak}	100.9	MPa
Secant Modulus, ε_{50}	56.2	GPa
Poisson's Ratio, ν_{50}	0.25	
Height:	120.51	mm
Diameter:	60.74	mm
Failure Mode:	Partial shear ~20°	

ASTM D7012-07 Method D
Modulus in Uniaxial Compression

Borehole:	10-BGC-GTH-06
Sample:	12
Depth (m):	200.21-200.43
Tested By:	G. Patton
Reviewed By	J. Richmond

Project Details

Project No.:	10-1416-0029/18000
Project:	Eagle Gold FS
Location	Not Provided
Client	BGC Engineering Inc.

The test data given herein pertain to the sample provided only. This report constitutes a testing service only. Interpretation of the data can be provided upon request.

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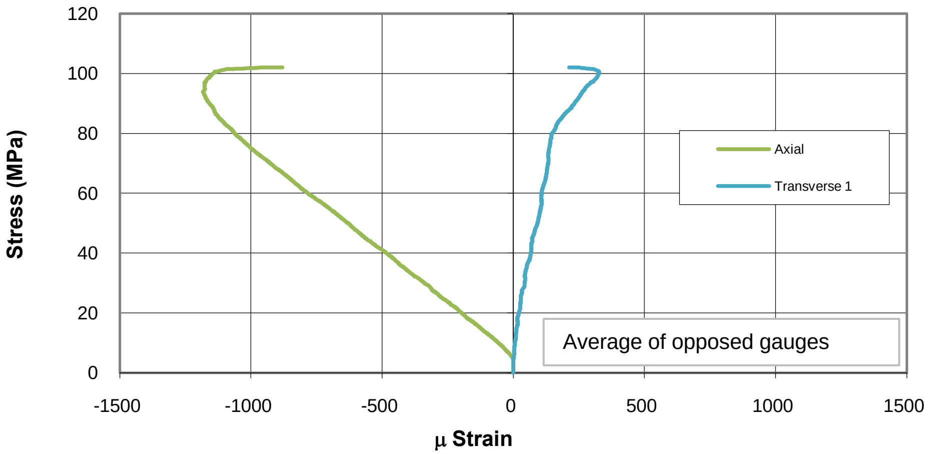

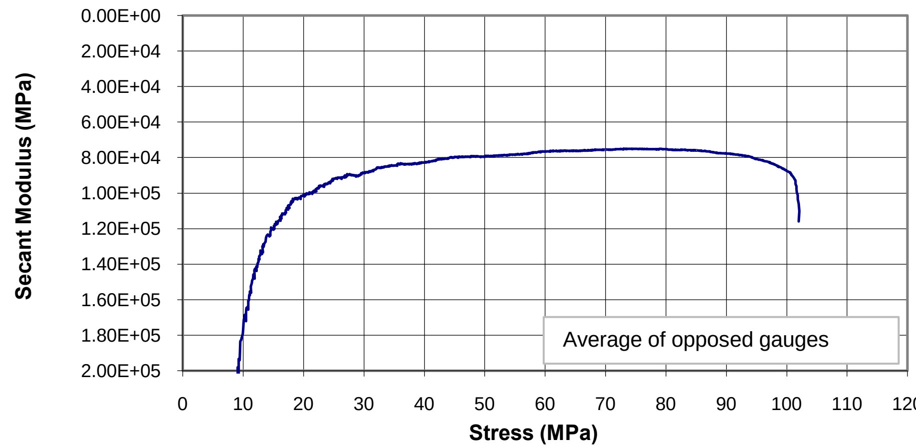

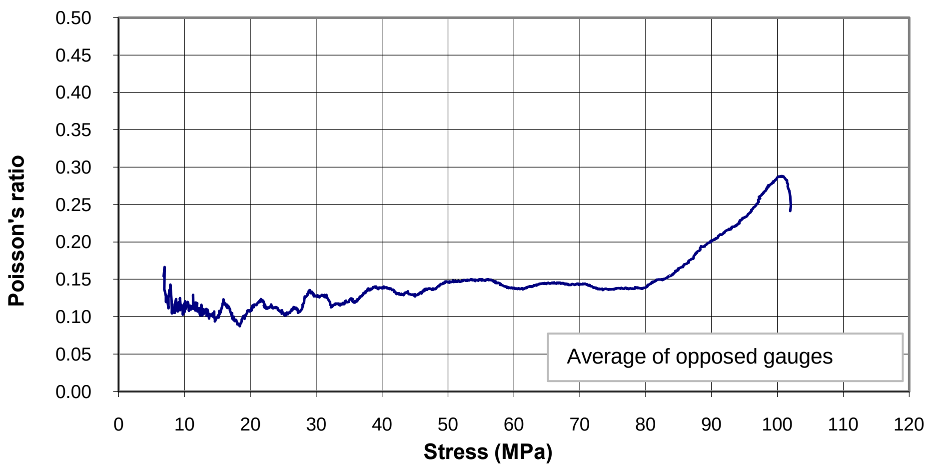

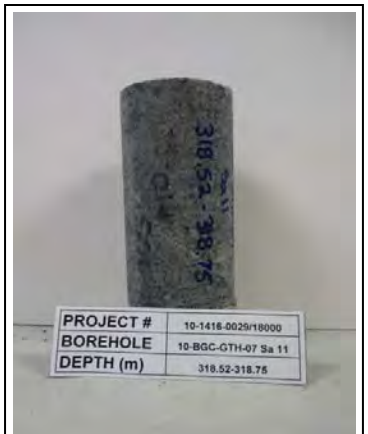

Before Test

After Test

Test Summary		
Peak Stress σ_{peak}	102.1	MPa
Secant Modulus, ε_{50}	79.0	GPa
Poisson's Ratio, ν_{50}	0.15	
Height:	120.72	mm
Diameter:	60.60	mm
Failure Mode:	Shear ~23°	

ASTM D7012-07 Method D
Modulus in Uniaxial Compression

Borehole:	10-BGC-GTH-07
Sample:	11
Depth (m):	318.52-318.75
Tested By:	G. Patton
Reviewed By	J. Richmond

Project Details	
Project No.:	10-1416-0029/18000
Project:	Eagle Gold FS
Location	Not Provided
Client	BGC Engineering Inc.

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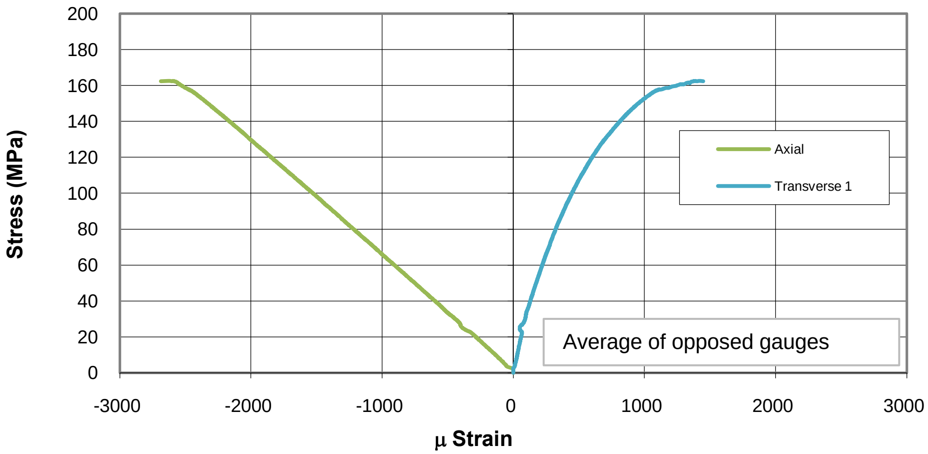

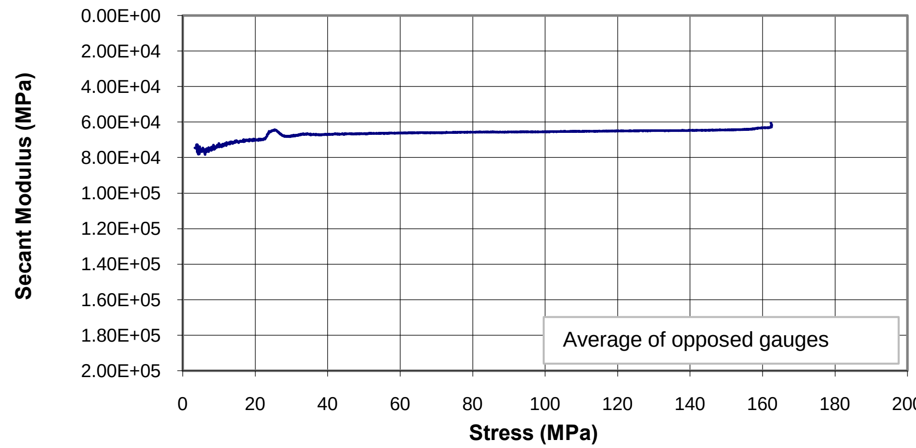

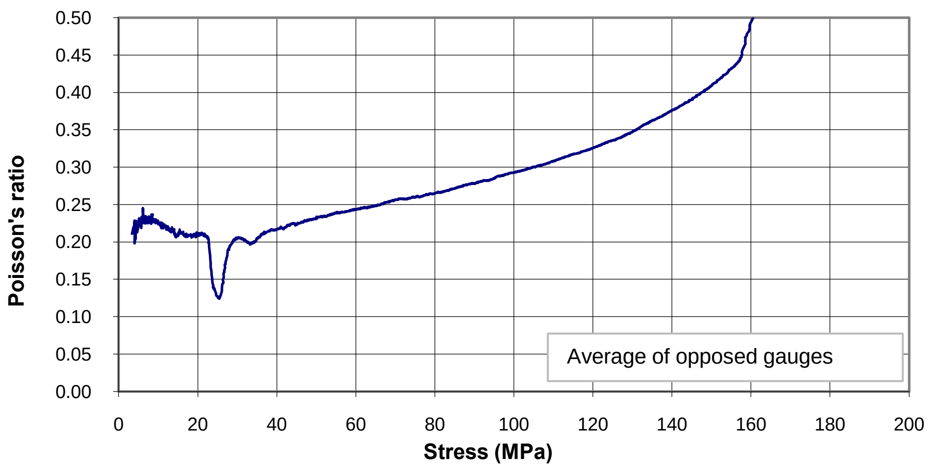

Before Test

After Test

Test Summary

Peak Stress σ_{peak}	162.5	MPa
Secant Modulus, ε_{50}	65.6	GPa
Poisson's Ratio, ν_{50}	0.27	
Height:	123.30	mm
Diameter:	60.88	mm
Failure Mode:	Shear ~27°/ Spalling	

ASTM D7012-07 Method D
Modulus in Uniaxial Compression

Borehole:	10-BGC-GTH-08
Sample:	12
Depth (m):	279.89-281.01
Tested By:	G. Patton
Reviewed By	J. Richmond

Project Details

Project No.:	10-1416-0029/18000
Project:	Eagle Gold FS
Location	Not Provided
Client	BGC Engineering Inc.

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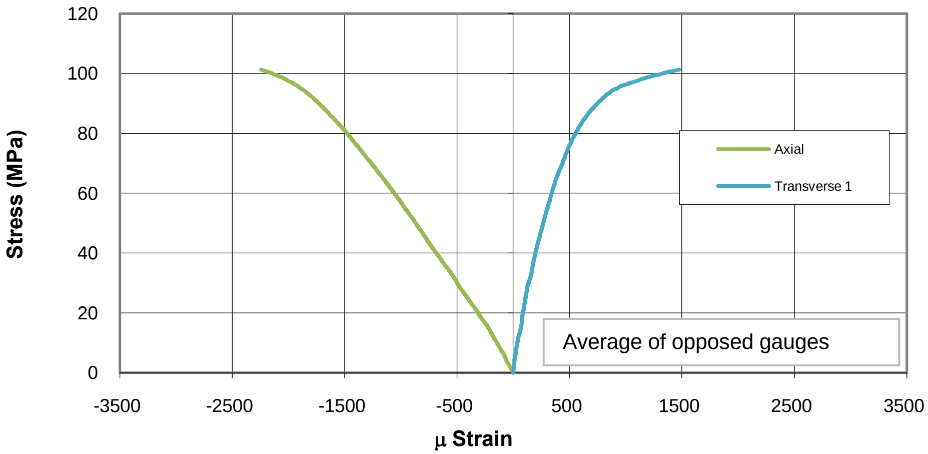

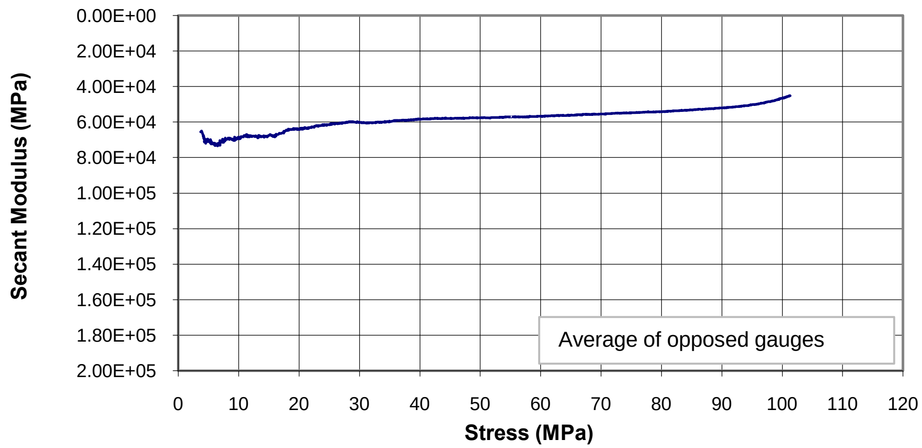

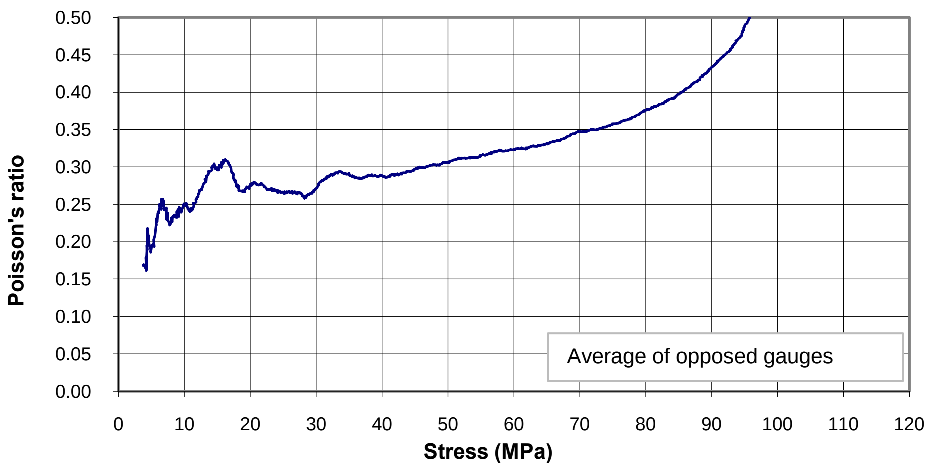

Before Test

After Test

Test Summary			ASTM D7012-07 Method D Modulus in Uniaxial Compression		Project Details	
Peak Stress σ_{peak}	101.3	MPa				
Secant Modulus, ε_{50}	57.5	GPa	Borehole:	10-BGC-GTH-09	Project No.:	10-1416-0029/18000
Poisson's Ratio, ν_{50}	0.31		Sample:	02	Project:	Eagle Gold FS
Height:	122.76	mm	Depth (m):	91.10-97.33	Location	Not Provided
Diameter:	60.81	mm	Tested By:	G. Patton	Client	BGC Engineering Inc.
Failure Mode:	Along foliation ~56°		Reviewed By	J. Richmond		

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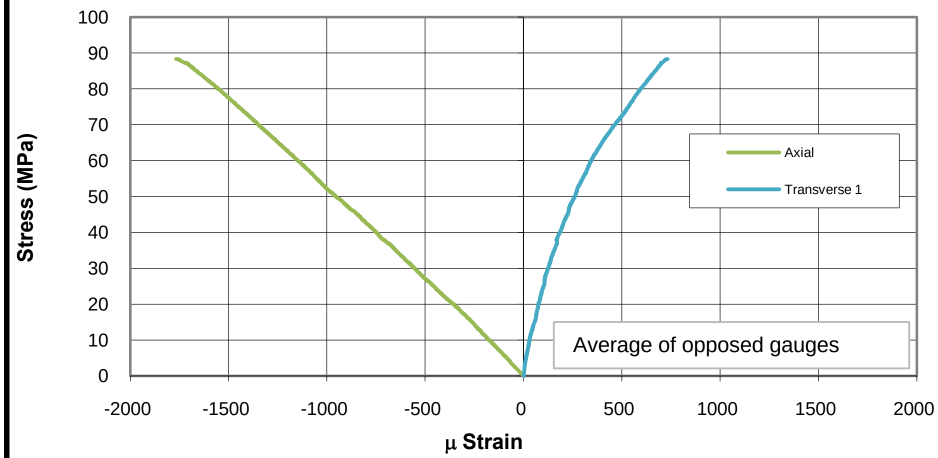

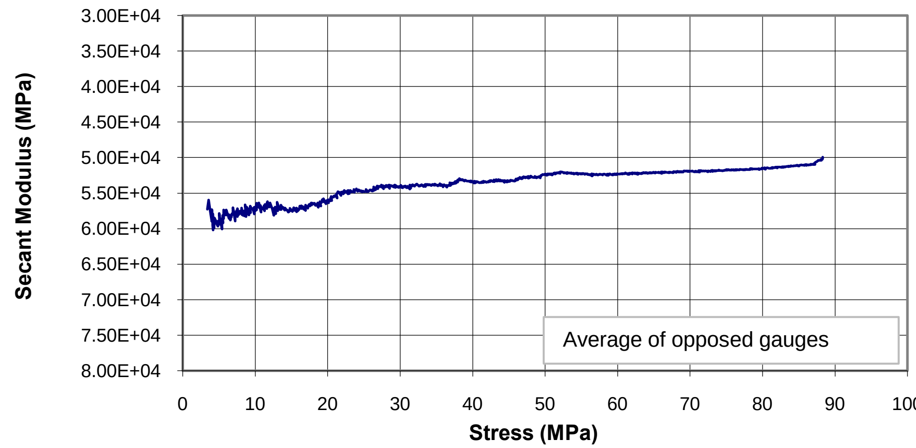

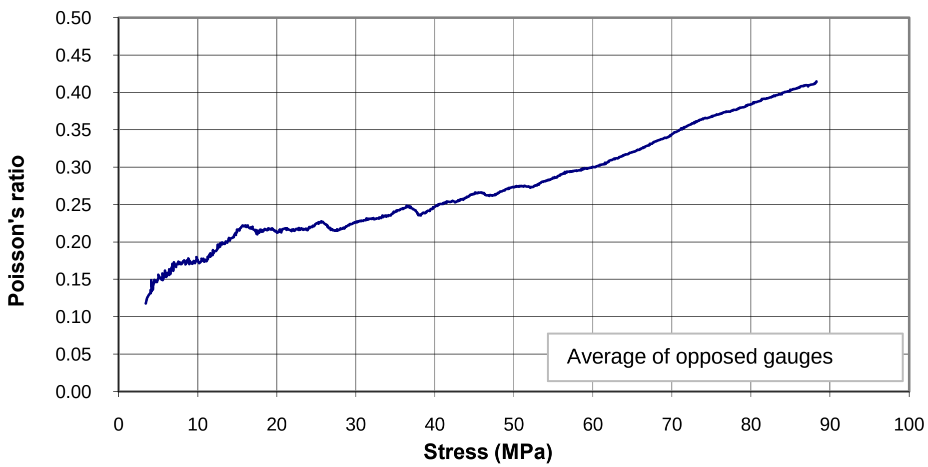

Before Test

After Test

Test Summary

Peak Stress σ_{peak}	88.3	MPa
Secant Modulus, ε_{50}	53.2	GPa
Poisson's Ratio, ν_{50}	0.26	
Height:	122.35	mm
Diameter:	60.77	mm
Failure Mode:	Multi-Vertical	

ASTM D7012-07 Method D
Modulus in Uniaxial Compression

Borehole:	10-BGC-GTH-09
Sample:	03
Depth (m):	71.38-71.67
Tested By:	G. Patton
Reviewed By	J. Richmond

Project Details

Project No.:	10-1416-0029/18000
Project:	Eagle Gold FS
Location	Not Provided
Client	BGC Engineering Inc.

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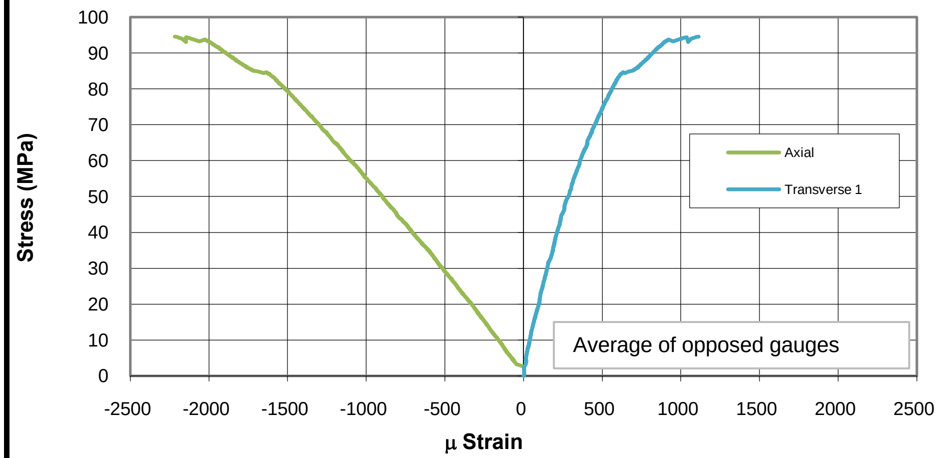

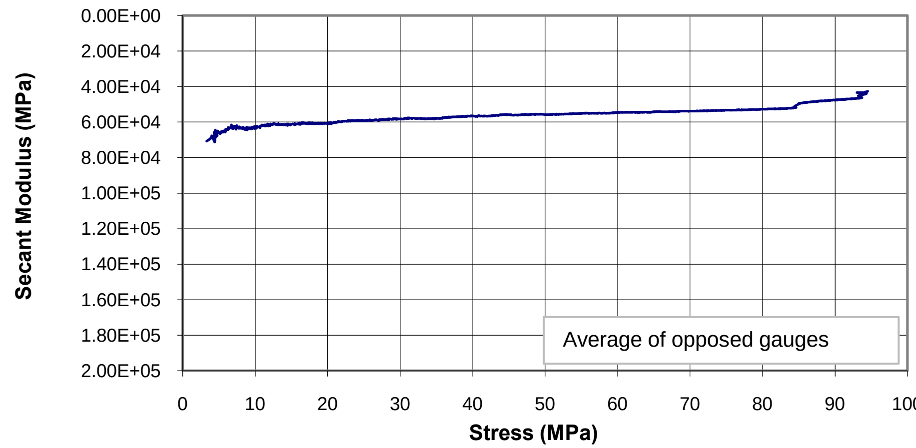

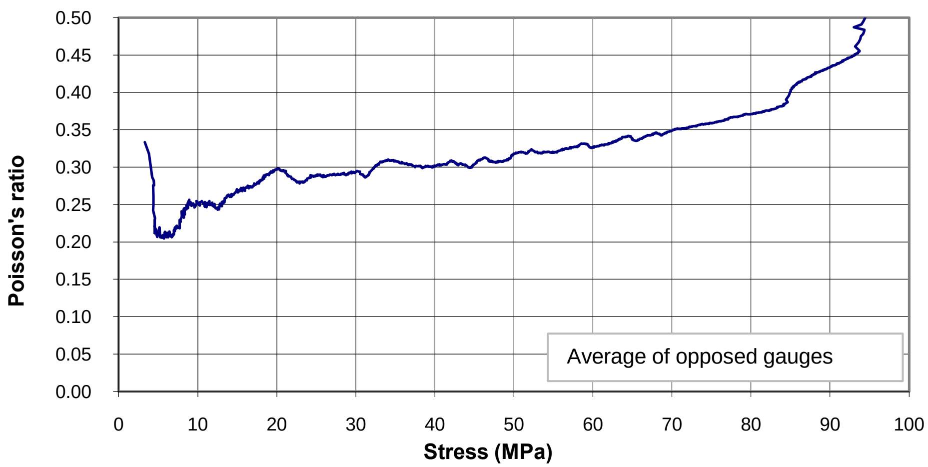

Before Test

After Test

Test Summary

Peak Stress σ_{peak}	94.5	MPa
Secant Modulus, ε_{50}	55.8	GPa
Poisson's Ratio, ν_{50}	0.31	
Height:	122.39	mm
Diameter:	60.64	mm
Failure Mode:	Partial shear ~25°	

ASTM D7012-07 Method D
Modulus in Uniaxial Compression

Borehole:	10-BGC-GTH-09
Sample:	04
Depth (m):	120.61-120.81
Tested By:	G. Patton
Reviewed By	J. Richmond

Project Details

Project No.:	10-1416-0029/18000
Project:	Eagle Gold FS
Location	Not Provided
Client	BGC Engineering Inc.

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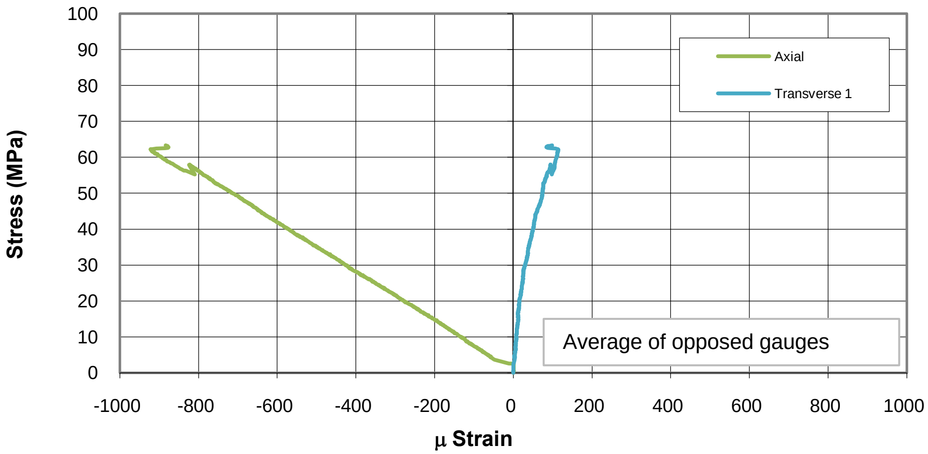

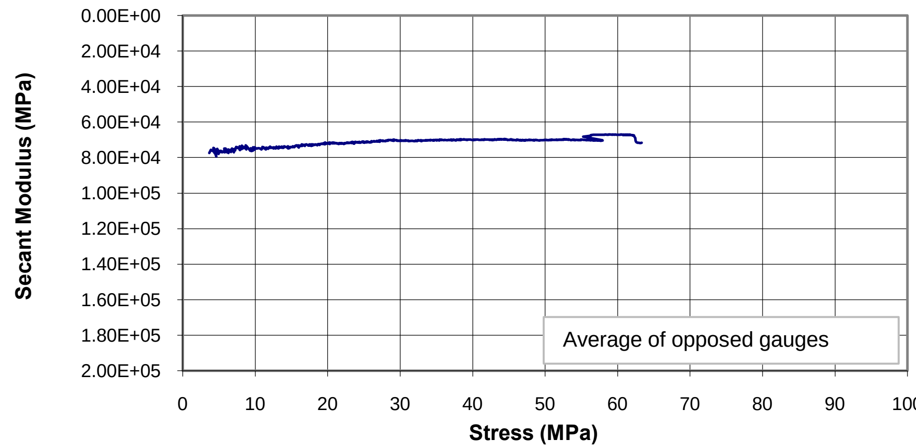

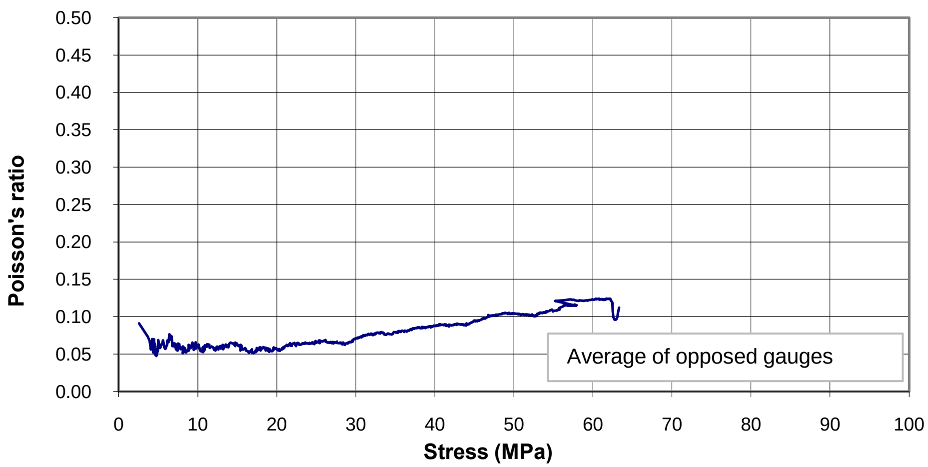

Before Test

After Test

Test Summary			ASTM D7012-07 Method D Modulus in Uniaxial Compression		Project Details	
Peak Stress σ_{peak}	63.3	MPa				
Secant Modulus, ε_{50}	70.5	GPa	Borehole:	10-BGC-GTH-09	Project No.:	10-1416-0029/18000
Poisson's Ratio, ν_{50}	0.08		Sample:	08	Project:	Eagle Gold FS
Height:	123.33	mm	Depth (m):	210.78-211.05	Location	Not Provided
Diameter:	60.33	mm	Tested By:	G. Patton	Client	BGC Engineering Inc.
Failure Mode:	Along foliation ~40°		Reviewed By	J. Richmond		

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Tensile Strength By The Brazil Test

Reference
ISRM 1981 (p120-121)

Project No.:	10-1416-0029/18000	**Borehole:**	**10-BGC-GTH-05**
Project:	Eagle Gold FS	**Sample Number:**	Sa 10 BTS 1
Location:	Not Provided	**Depth (m):**	176.16-176.51
Client:	BGC Engineering Inc.	**Lab ID No:**	002

Testing Results

Max Load (MN)	**0.0319**
Tensile Stress (MPa)	**12.9**

Sample Measurements

Diameter (mm)	60.84
Thickness (mm)	25.76
Area (cm^2)	29.07
Volume (cm^3)	74.89
Mass (g)	196.30
Moisture Content (%)	0.20
Wet Density (Kg/m^3)	2621.24
Dry Density (Kg/m^3)	2616.00

Failure Mode

Type: Vertical Splitting

Calibration

Machine ID ELE

Load Orientation

Direction of loading axis with respect to bedding or foliation plane

in degrees N/A

Comments

Lithology: Not Provided

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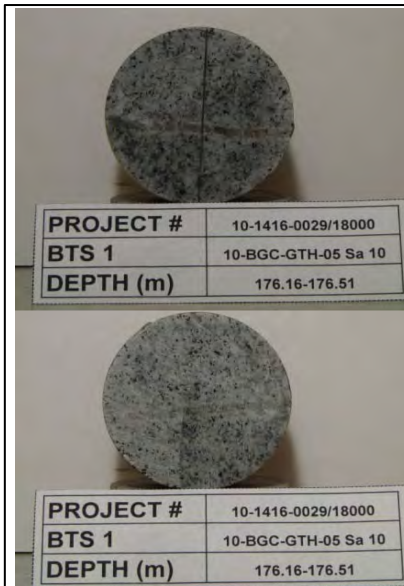
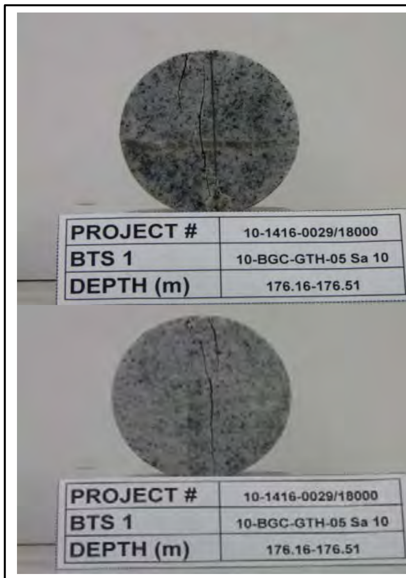


BEFORE TEST



AFTER TEST

G. Patton	February 1, 2011	J. Richmond	February 15, 2011
TESTED BY	DATE	CHECKED BY	DATE

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Tensile Strength By The Brazil Test

Reference
ISRM 1981 (p120-121)

Project No.:	10-1416-0029/18000	**Borehole:**	**10-BGC-GTH-05**
Project:	Eagle Gold FS	**Sample Number:**	Sa 10 BTS 2
Location:	Not Provided	**Depth (m):**	176.16-176.51
Client:	BGC Engineering Inc.	**Lab ID No:**	002

Testing Results

Max Load (MN)	**0.0335**
Tensile Stress (MPa)	**13.2**

Sample Measurements

Diameter (mm)	60.90
Thickness (mm)	26.53
Area (cm^2)	29.13
Volume (cm^3)	77.28
Mass (g)	205.90
Moisture Content (%)	0.20
Wet Density (Kg/m^3)	2664.37
Dry Density (Kg/m^3)	2659.05

Failure Mode

Type: Vertical Splitting

Calibration

Machine ID: ELE

Load Orientation

Direction of loading axis with respect to bedding or foliation plane in degrees: N/A

Comments

Lithology: Not Provided

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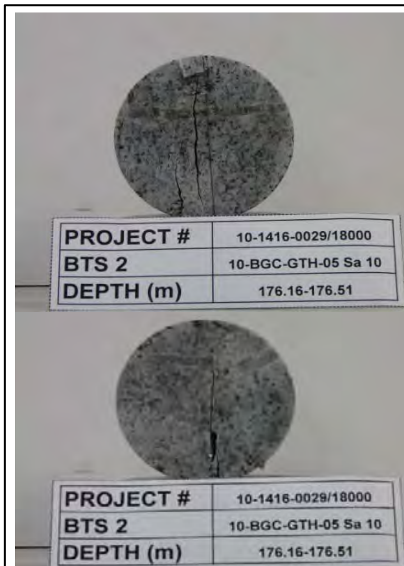
BEFORE TEST



AFTER TEST

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TESTED BY	DATE	CHECKED BY	DATE

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Tensile Strength By The Brazil Test

Reference
ISRM 1981 (p120-121)

Project No.:	10-1416-0029/18000	**Borehole:**	**10-BGC-GTH-05**
Project:	Eagle Gold FS	**Sample Number:**	Sa 15 BTS 1
Location:	Not Provided	**Depth (m):**	266.60-266.37
Client:	BGC Engineering Inc.	**Lab ID No:**	002

Testing Results

Max Load (MN)	**0.0171**
Tensile Stress (MPa)	**6.7**

Sample Measurements

Diameter (mm)	60.70
Thickness (mm)	26.65
Area (cm^2)	28.94
Volume (cm^3)	77.12
Mass (g)	208.80
Moisture Content (%)	0.20
Wet Density (Kg/m^3)	2707.48
Dry Density (Kg/m^3)	2702.08

Failure Mode

Type: Vertical Splitting

Calibration

Machine ID ELE

Load Orientation

Direction of loading axis with respect to bedding or foliation plane
in degrees 90

Comments

Lithology: Not Provided

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BEFORE TEST

AFTER TEST

G. Patton	February 1, 2011	J. Richmond	February 15, 2011
TESTED BY	DATE	CHECKED BY	DATE

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Tensile Strength By The Brazil Test

Reference
ISRM 1981 (p120-121)

Project No.:	10-1416-0029/18000	**Borehole:**	**10-BGC-GTH-05**
Project:	Eagle Gold FS	**Sample Number:**	Sa 15 BTS 2
Location:	Not Provided	**Depth (m):**	266.60-266.37
Client:	BGC Engineering Inc.	**Lab ID No:**	002

Testing Results

Max Load (MN)	**0.0202**
Tensile Stress (MPa)	**8.1**

Sample Measurements

Diameter (mm)	60.04
Thickness (mm)	26.37
Area (cm^2)	28.31
Volume (cm^3)	74.66
Mass (g)	198.00
Moisture Content (%)	0.20
Wet Density (Kg/m^3)	2652.06
Dry Density (Kg/m^3)	2646.77

Failure Mode

Type: Vertical Splitting

Calibration

Machine ID ELE

Load Orientation

Direction of loading axis with respect to bedding or foliation plane
in degrees 46

Comments

Lithology: Not Provided

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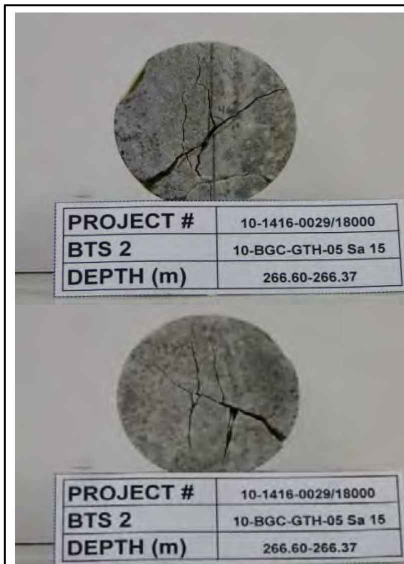
BEFORE TEST



AFTER TEST

G. Patton	February 1, 2011	J. Richmond	February 15, 2011
TESTED BY	DATE	CHECKED BY	DATE

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Tensile Strength By The Brazil Test

Reference
ISRM 1981 (p120-121)

Project No.:	10-1416-0029/18000	**Borehole:**	**10-BGC-GTH-05**
Project:	Eagle Gold FS	**Sample Number:**	Sa 06 BTS 1
Location:	Not Provided	**Depth (m):**	84.73-85.02
Client:	BGC Engineering Inc.	**Lab ID No:**	002

Testing Results

Max Load (MN)	**0.0269**
Tensile Stress (MPa)	**10.6**

Sample Measurements

Diameter (mm)	60.85
Thickness (mm)	26.57
Area (cm^2)	29.08
Volume (cm^3)	77.27
Mass (g)	200.50
Moisture Content (%)	0.20
Wet Density (Kg/m^3)	2594.85
Dry Density (Kg/m^3)	2589.67

Failure Mode

Type: Shear

Calibration

Machine ID: ELE

Load Orientation

Direction of loading axis with respect to bedding or foliation plane in degrees: 90

Comments

Lithology: Not Provided

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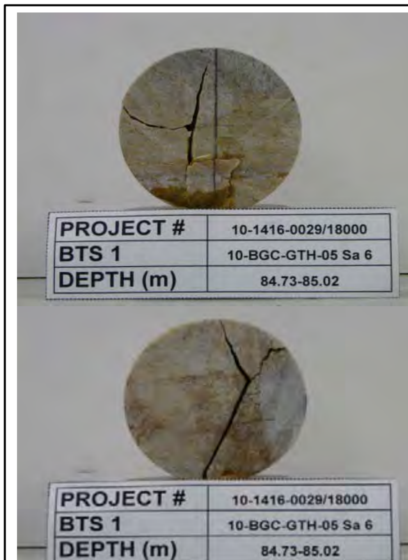
BEFORE TEST



AFTER TEST

G. Patton	February 1, 2011	J. Richmond	February 15, 2011
TESTED BY	DATE	CHECKED BY	DATE

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Tensile Strength By The Brazil Test

Reference
ISRM 1981 (p120-121)

Project No.:	10-1416-0029/18000	**Borehole:**	**10-BGC-GTH-05**
Project:	Eagle Gold FS	**Sample Number:**	Sa 06 BTS 2
Location:	Not Provided	**Depth (m):**	84.73-85.02
Client:	BGC Engineering Inc.	**Lab ID No:**	002

Testing Results

Max Load (MN)	**0.0224**
Tensile Stress (MPa)	**8.7**

Sample Measurements

Diameter (mm)	60.85
Thickness (mm)	26.78
Area (cm^2)	29.08
Volume (cm^3)	77.88
Mass (g)	201.50
Moisture Content (%)	0.20
Wet Density (Kg/m^3)	2587.34
Dry Density (Kg/m^3)	2582.18

Failure Mode

Type: Vertical Splitting

Calibration

Machine ID: ELE

Load Orientation

Direction of loading axis with respect to bedding or foliation plane in degrees: 90

Comments

Lithology: Not Provided

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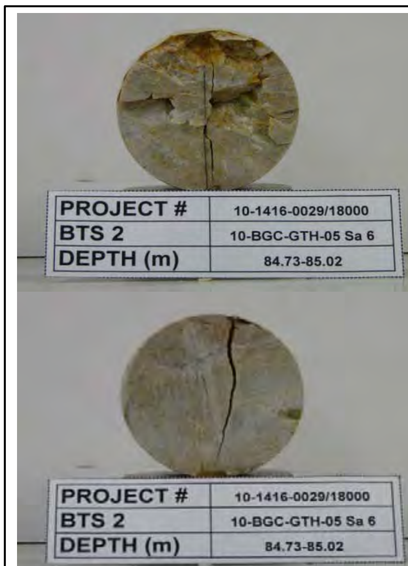
BEFORE TEST



AFTER TEST

G. Patton	February 1, 2011	J. Richmond	February 15, 2011
TESTED BY	DATE	CHECKED BY	DATE

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Tensile Strength By The Brazil Test

Reference
ISRM 1981 (p120-121)

Project No.:	10-1416-0029/18000	**Borehole:**	**10-BGC-GTH-06**
Project:	Eagle Gold FS	**Sample Number:**	Sa 04 BTS 1
Location:	Not Provided	**Depth (m):**	95.52-95.74
Client:	BGC Engineering Inc.	**Lab ID No:**	002

Testing Results

Max Load (MN)	**0.0244**
Tensile Stress (MPa)	**9.5**

Sample Measurements

Diameter (mm)	60.44
Thickness (mm)	26.92
Area (cm^2)	28.69
Volume (cm^3)	77.23
Mass (g)	208.40
Moisture Content (%)	0.10
Wet Density (Kg/m^3)	2698.26
Dry Density (Kg/m^3)	2695.56

Failure Mode

Type: Vertical Splitting

Calibration

Machine ID: ELE

Load Orientation

Direction of loading axis with respect to bedding or foliation plane in degrees: N/A

Comments

Lithology: Not Provided

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BEFORE TEST

AFTER TEST

G. Patton	February 1, 2011	J. Richmond	February 15, 2011
TESTED BY	DATE	CHECKED BY	DATE

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Tensile Strength By The Brazil Test

Reference
ISRM 1981 (p120-121)

Project No.:	10-1416-0029/18000	**Borehole:**	**10-BGC-GTH-06**
Project:	Eagle Gold FS	**Sample Number:**	Sa 04 BTS 2
Location:	Not Provided	**Depth (m):**	95.52-95.74
Client:	BGC Engineering Inc.	**Lab ID No:**	002

Testing Results

Max Load (MN)	**0.0414**
Tensile Stress (MPa)	**18.7**

Sample Measurements

Diameter (mm)	60.51
Thickness (mm)	23.26
Area (cm^2)	28.76
Volume (cm^3)	66.89
Mass (g)	186.50
Moisture Content (%)	0.10
Wet Density (Kg/m^3)	2788.21
Dry Density (Kg/m^3)	2785.42

Failure Mode

Type: Vertical Splitting *

Calibration

Machine ID: ELE

Load Orientation

Direction of loading axis with respect to bedding or foliation plane in degrees: 90

Comments

Lithology: Not Provided

* Sample failed via vertical splitting as well as along a horizontal discontinuity.

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BEFORE TEST

AFTER TEST

G. Patton	February 1, 2011	J. Richmond	February 15, 2011
TESTED BY	DATE	CHECKED BY	DATE

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Tensile Strength By The Brazil Test

Reference
ISRM 1981 (p120-121)

Project No.:	10-1416-0029/18000	**Borehole:**	**10-BGC-GTH-06**
Project:	Eagle Gold FS	**Sample Number:**	Sa 12 BTS 1
Location:	Not Provided	**Depth (m):**	200.21-200.43
Client:	BGC Engineering Inc.	**Lab ID No:**	002

Testing Results

Max Load (MN)	**0.0354**
Tensile Stress (MPa)	**15.8**

Sample Measurements

Diameter (mm)	60.65
Thickness (mm)	23.53
Area (cm^2)	28.89
Volume (cm^3)	67.98
Mass (g)	190.90
Moisture Content (%)	0.10
Wet Density (Kg/m^3)	2808.23
Dry Density (Kg/m^3)	2805.42

Failure Mode

Type: Vertical Splitting

Load Orientation

Direction of loading axis with respect to bedding or foliation plane
in degrees 90

Calibration

Machine ID ELE

BEFORE TEST

AFTER TEST

Comments

Lithology: Not Provided

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G. Patton	February 1, 2011	J. Richmond	February 15, 2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates Ltd. - Burnaby Lab
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Tensile Strength By The Brazil Test

Reference
ISRM 1981 (p120-121)

Project No.:	10-1416-0029/18000	**Borehole:**	**10-BGC-GTH-06**
Project:	Eagle Gold FS	**Sample Number:**	Sa 12 BTS 2
Location:	Not Provided	**Depth (m):**	200.21-200.43
Client:	BGC Engineering Inc.	**Lab ID No:**	002

Testing Results

Max Load (MN)	**0.0367**
Tensile Stress (MPa)	**14.6**

Sample Measurements

Diameter (mm)	60.64
Thickness (mm)	26.29
Area (cm^2)	28.88
Volume (cm^3)	75.93
Mass (g)	213.30
Moisture Content (%)	0.10
Wet Density (Kg/m^3)	2809.26
Dry Density (Kg/m^3)	2806.45

Failure Mode

Type: Vertical Splitting

Load Orientation

Direction of loading axis with respect to bedding or foliation plane in degrees: N/A

Calibration

Machine ID: ELE

Comments

Lithology: Not Provided

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BEFORE TEST

AFTER TEST

G. Patton	February 1, 2011	J. Richmond	February 15, 2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates

Golder Associates Ltd. - Burnaby Lab
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Tensile Strength By The Brazil Test

Reference
ISRM 1981 (p120-121)

Project No.:	10-1416-0029/18000	**Borehole:**	**10-BGC-GTH-06**
Project:	Eagle Gold FS	**Sample Number:**	Sa 8 BTS 1
Location:	Not Provided	**Depth (m):**	139.12-139.36
Client:	BGC Engineering Inc.	**Lab ID No:**	002

Testing Results

Max Load (MN)	**0.0233**
Tensile Stress (MPa)	**9.1**

Sample Measurements

Diameter (mm)	61.03
Thickness (mm)	26.55
Area (cm^2)	29.25
Volume (cm^3)	77.67
Mass (g)	209.90
Moisture Content (%)	0.30
Wet Density (Kg/m^3)	2702.53
Dry Density (Kg/m^3)	2694.45

Failure Mode

Type: Vertical Splitting *

Calibration

Machine ID: ELE

Load Orientation

Direction of loading axis with respect to bedding or foliation plane in degrees: 1

Comments

Lithology: Not Provided

* Sample failed via vertical splitting as well as along discontinuity.

** The test data given herein pertain to the sample provided only. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.*

BEFORE TEST

AFTER TEST

G. Patton	February 1, 2011	J. Richmond	February 15, 2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates

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Tensile Strength By The Brazil Test

Reference: ISRM 1981 (p120-121)

Project No.:	10-1416-0029/18000	**Borehole:**	**10-BGC-GTH-06**
Project:	Eagle Gold FS	**Sample Number:**	Sa 8 BTS 2
Location:	Not Provided	**Depth (m):**	139.12-139.36
Client:	BGC Engineering Inc.	**Lab ID No:**	002

Testing Results

Max Load (MN)	**0.0359**
Tensile Stress (MPa)	**14.1**

Sample Measurements

Diameter (mm)	60.93
Thickness (mm)	26.58
Area (cm^2)	29.16
Volume (cm^3)	77.50
Mass (g)	204.30
Moisture Content (%)	0.30
Wet Density (Kg/m^3)	2636.10
Dry Density (Kg/m^3)	2628.21

BEFORE TEST

Failure Mode

Type: Vertical Splitting *

Calibration

Machine ID: ELE

Load Orientation

Direction of loading axis with respect to bedding or foliation plane in degrees: 90

AFTER TEST

Comments

Lithology: Not Provided

* Sample failed via vertical splitting as well as along discontinuity.

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G. Patton	February 1, 2011	J. Richmond	February 15, 2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates

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Tensile Strength By The Brazil Test

Reference
ISRM 1981 (p120-121)

Project No.:	10-1416-0029/18000	**Borehole:**	**10-BGC-GTH-07**
Project:	Eagle Gold FS	**Sample Number:**	Sa 11 BTS 1
Location:	Not Provided	**Depth (m):**	318.52-318.75
Client:	BGC Engineering Inc.	**Lab ID No:**	002

Testing Results

Max Load (MN)	**0.0324**
Tensile Stress (MPa)	**13.1**

Sample Measurements

Diameter (mm)	60.56
Thickness (mm)	25.95
Area (cm^2)	28.80
Volume (cm^3)	74.75
Mass (g)	199.00
Moisture Content (%)	0.10
Wet Density (Kg/m^3)	2662.28
Dry Density (Kg/m^3)	2659.62

Failure Mode

Type: Vertical Splitting

Load Orientation

Direction of loading axis with respect to bedding or foliation plane in degrees N/A

Calibration

Machine ID ELE

Comments

Lithology: Not Provided

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BEFORE TEST

AFTER TEST

G. Patton	February 1, 2011	J. Richmond	February 15, 2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates

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Tensile Strength By The Brazil Test

Reference
ISRM 1981 (p120-121)

Project No.:	10-1416-0029/18000	**Borehole:**	**10-BGC-GTH-08**
Project:	Eagle Gold FS	**Sample Number:**	Sa 12 BTS 1
Location:	Not Provided	**Depth (m):**	279.89-281.01
Client:	BGC Engineering Inc.	**Lab ID No:**	002

Testing Results

Max Load (MN)	**0.0264**
Tensile Stress (MPa)	**10.9**

Sample Measurements

Diameter (mm)	60.85
Thickness (mm)	25.29
Area (cm^2)	29.08
Volume (cm^3)	73.55
Mass (g)	196.90
Moisture Content (%)	0.20
Wet Density (Kg/m^3)	2677.23
Dry Density (Kg/m^3)	2671.89

Failure Mode

Type: Vertical Splitting

Load Orientation

Direction of loading axis with respect to bedding or foliation plane in degrees N/A

Calibration

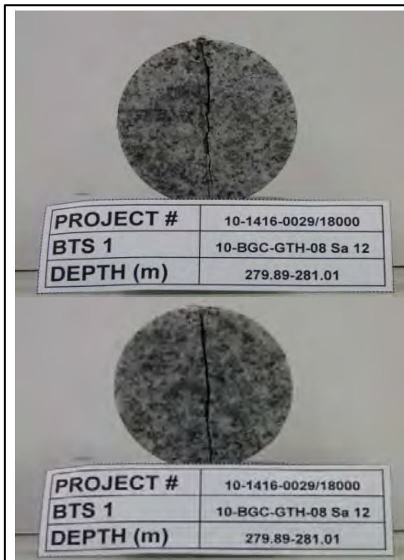
Machine ID ELE

Comments

Lithology: Not Provided

** The test data given herein pertain to the sample provided only. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.*

BEFORE TEST



AFTER TEST

G. Patton	February 1, 2011	J. Richmond	February 15, 2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates

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4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Tensile Strength By The Brazil Test

Reference
ISRM 1981 (p120-121)

Project No.:	10-1416-0029/18000	**Borehole:**	**10-BGC-GTH-08**
Project:	Eagle Gold FS	**Sample Number:**	Sa 12 BTS 2
Location:	Not Provided	**Depth (m):**	279.89-281.01
Client:	BGC Engineering Inc.	**Lab ID No:**	002

Testing Results

Max Load (MN)	**0.0261**
Tensile Stress (MPa)	**10.4**

Sample Measurements

Diameter (mm)	60.86
Thickness (mm)	26.27
Area (cm^2)	29.09
Volume (cm^3)	76.42
Mass (g)	204.30
Moisture Content (%)	0.20
Wet Density (Kg/m^3)	2673.34
Dry Density (Kg/m^3)	2668.01

Failure Mode

Type: Vertical Splitting

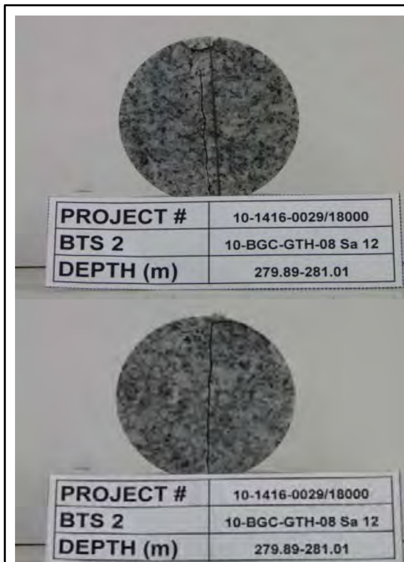
Calibration

Machine ID: ELE

Load Orientation

Direction of loading axis with respect to bedding or foliation plane in degrees: N/A

BEFORE TEST



AFTER TEST

Comments

Lithology: Not Provided

** The test data given herein pertain to the sample provided only. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.*

G. Patton	February 1, 2011	J. Richmond	February 15, 2011
TESTED BY	DATE	CHECKED BY	DATE

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Tensile Strength By The Brazil Test

Reference: ISRM 1981 (p120-121)

Project No.:	10-1416-0029/18000	**Borehole:**	**10-BGC-GTH-09**
Project:	Eagle Gold FS	**Sample Number:**	Sa 2 BTS 1
Location:	Not Provided	**Depth (m):**	91.10-97.33
Client:	BGC Engineering Inc.	**Lab ID No:**	002

Testing Results

Max Load (MN)	**0.0336**
Tensile Stress (MPa)	**13.8**

Sample Measurements

Diameter (mm)	60.76
Thickness (mm)	25.49
Area (cm^2)	29.00
Volume (cm^3)	73.91
Mass (g)	209.00
Moisture Content (%)	0.10
Wet Density (Kg/m^3)	2827.82
Dry Density (Kg/m^3)	2824.99

Failure Mode

Type: Vertical Splitting

Load Orientation

Direction of loading axis with respect to bedding or foliation plane in degrees 90

Calibration

Machine ID ELE

Comments

Lithology: Not Provided

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BEFORE TEST

AFTER TEST

G. Patton	February 1, 2011	J. Richmond	February 15, 2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates Ltd. - Burnaby Lab
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Tensile Strength By The Brazil Test

Reference
ISRM 1981 (p120-121)

Project No.:	10-1416-0029/18000	**Borehole:**	**10-BGC-GTH-09**
Project:	Eagle Gold FS	**Sample Number:**	Sa 3 BTS 1
Location:	Not Provided	**Depth (m):**	71.38-71.67
Client:	BGC Engineering Inc.	**Lab ID No:**	002

Testing Results

Max Load (MN)	**0.0342**
Tensile Stress (MPa)	**14.2**

Sample Measurements

Diameter (mm)	60.76
Thickness (mm)	25.16
Area (cm^2)	29.00
Volume (cm^3)	72.95
Mass (g)	193.30
Moisture Content (%)	0.20
Wet Density (Kg/m^3)	2649.69
Dry Density (Kg/m^3)	2644.41

Failure Mode

Type: Vertical Splitting

Calibration

Machine ID: ELE

Load Orientation

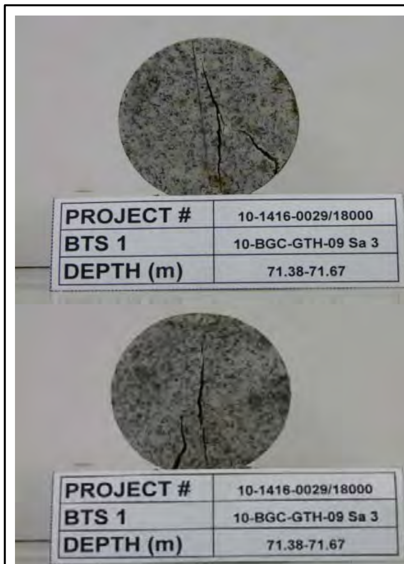
Direction of loading axis with respect to bedding or foliation plane in degrees: 90

Comments

Lithology: Not Provided

** The test data given herein pertain to the sample provided only. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.*

BEFORE TEST



AFTER TEST

G. Patton	February 1, 2011	J. Richmond	February 15, 2011
TESTED BY	DATE	CHECKED BY	DATE

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Tensile Strength By The Brazil Test

Reference
ISRM 1981 (p120-121)

Project No.:	10-1416-0029/18000	**Borehole:**	**10-BGC-GTH-09**
Project:	Eagle Gold FS	**Sample Number:**	Sa 4 BTS 1
Location:	Not Provided	**Depth (m):**	120.61-120.81
Client:	BGC Engineering Inc.	**Lab ID No:**	002

Testing Results

Max Load (MN)	**0.0415**
Tensile Stress (MPa)	**17.3**

Sample Measurements

Diameter (mm)	60.63
Thickness (mm)	25.22
Area (cm^2)	28.87
Volume (cm^3)	72.81
Mass (g)	206.20
Moisture Content (%)	0.00
Wet Density (Kg/m^3)	2831.90
Dry Density (Kg/m^3)	2831.90

Failure Mode

Type: Vertical Splitting

Calibration

Machine ID: ELE

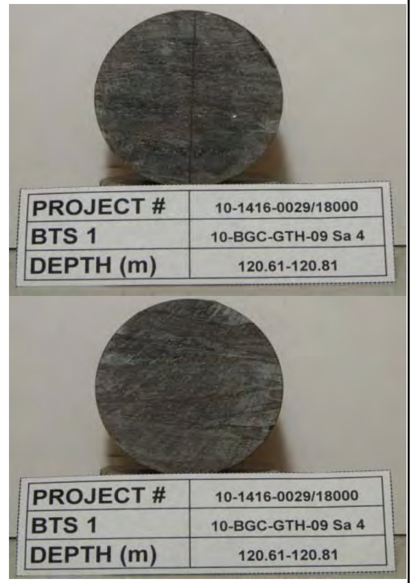
Load Orientation

Direction of loading axis with respect to bedding or foliation plane
in degrees: 90

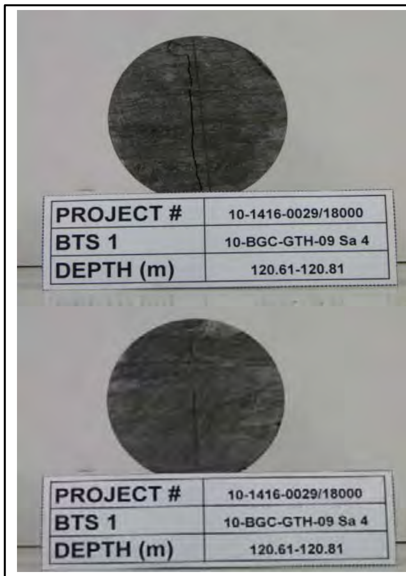
Comments

Lithology: Not Provided

** The test data given herein pertain to the sample provided only. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.*



BEFORE TEST



AFTER TEST

G. Patton	February 1, 2011	J. Richmond	February 15, 2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates

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Tensile Strength By The Brazil Test

Reference
ISRM 1981 (p120-121)

Project No.:	10-1416-0029/18000	**Borehole:**	**10-BGC-GTH-09**
Project:	Eagle Gold FS	**Sample Number:**	Sa 08 BTS 1
Location:	Not Provided	**Depth (m):**	210.78-211.05
Client:	BGC Engineering Inc.	**Lab ID No:**	002

Testing Results

Max Load (MN)	**0.0336**
Tensile Stress (MPa)	**13.5**

Sample Measurements

Diameter (mm)	60.35
Thickness (mm)	26.21
Area (cm^2)	28.61
Volume (cm^3)	74.97
Mass (g)	215.70
Moisture Content (%)	0.10
Wet Density (Kg/m^3)	2876.99
Dry Density (Kg/m^3)	2874.12

Failure Mode

Type: Shear

Calibration

Machine ID ELE

Load Orientation

Direction of loading axis with respect to bedding or foliation plane

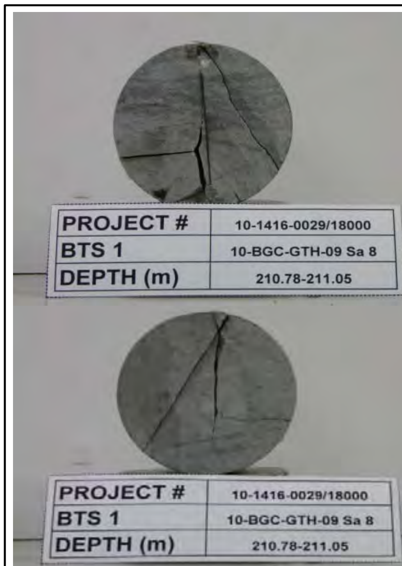
in degrees 90

Comments

Lithology: Not Provided

** The test data given herein pertain to the sample provided only. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.*

BEFORE TEST



AFTER TEST

G. Patton	February 1, 2011	J. Richmond	February 15, 2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates

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4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Tensile Strength By The Brazil Test

Reference
ISRM 1981 (p120-121)

Project No.:	10-1416-0029/18000	**Borehole:**	**10-BGC-GTH-09**
Project:	Eagle Gold FS	**Sample Number:**	Sa 08 BTS 2
Location:	Not Provided	**Depth (m):**	210.78-211.05
Client:	BGC Engineering Inc.	**Lab ID No:**	002

Testing Results

Max Load (MN)	**0.0236**
Tensile Stress (MPa)	**9.4**

Sample Measurements

Diameter (mm)	60.31
Thickness (mm)	26.41
Area (cm^2)	28.57
Volume (cm^3)	75.45
Mass (g)	210.40
Moisture Content (%)	0.10
Wet Density (Kg/m^3)	2788.74
Dry Density (Kg/m^3)	2785.96

Failure Mode

Type: Vertical Splitting

Load Orientation

Direction of loading axis with respect to bedding or foliation plane

in degrees 90

Calibration

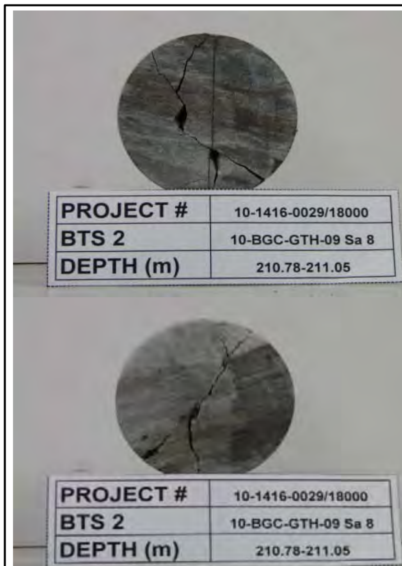
Machine ID ELE

Comments

Lithology: Not Provided

** The test data given herein pertain to the sample provided only. This report constitutes a testing service only. Interpretation of the data given here may be provided upon request.*

BEFORE TEST



AFTER TEST

G. Patton	February 1, 2011	J. Richmond	February 15, 2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates

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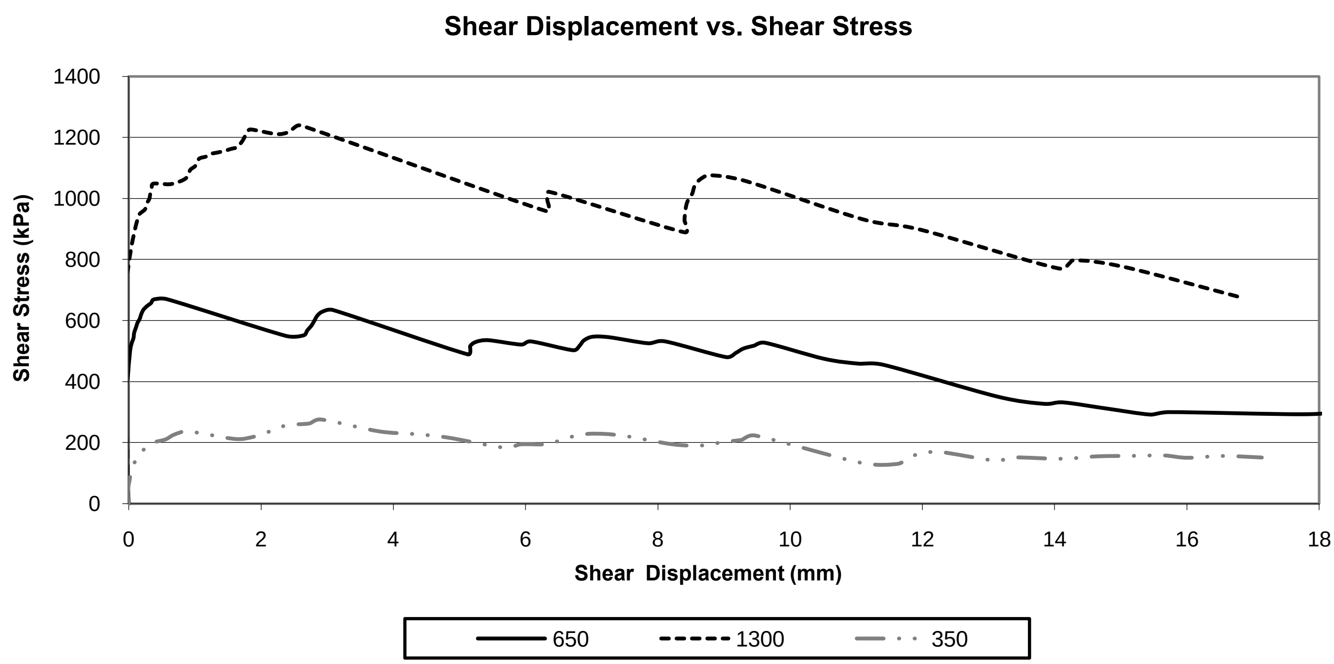
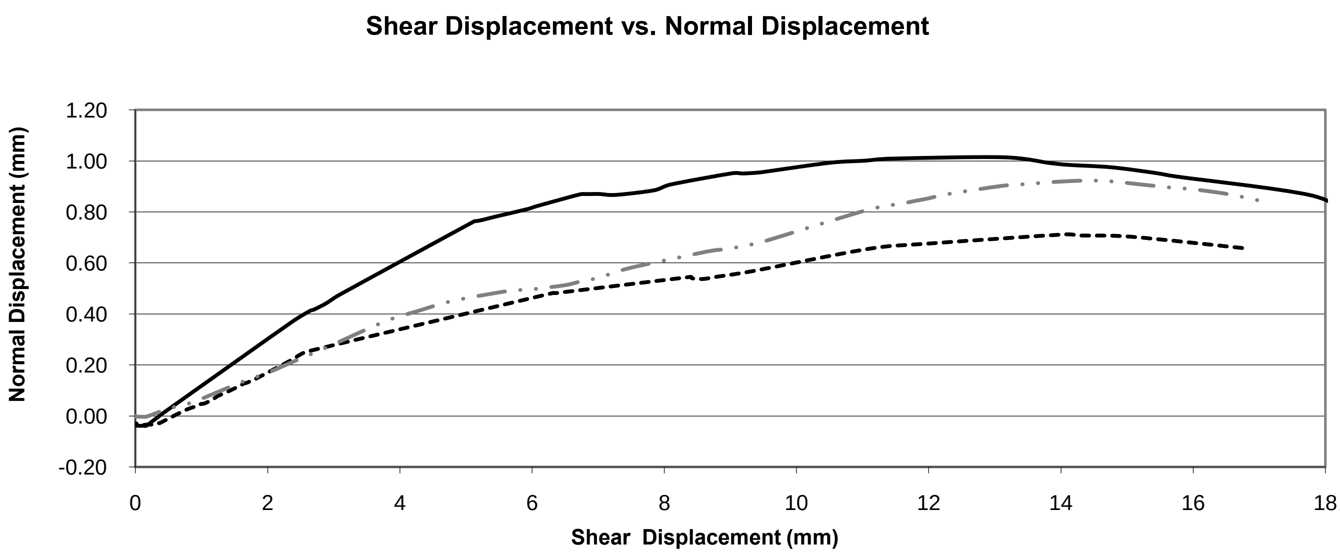
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force	Reference ASTM D5607-08

Project No.:	10-1416-0029 PHASE18000	**Borehole:**	**10BGC GTH-05**
Client:	BGC ENGINEERING INC.	**Sample No.:**	7
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Depth (m):**	88.06-88.41
Location:	-	**Lab ID No:**	2

Specimen		Machine ID's	
Joint Type	OPEN FACE	Pressure Transducer	PT0001
Shape	Elliptical	Horizontal LVDT	ID0002
Joint Angle	72	Vertical LVDT	ID0003





LP	1/30/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY:	DATE

Golder Associates Ltd. - Burnaby Lab
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force			Reference ASTM D5607-08
Project No.:	10-1416-0029 PHASE18000	**Borehole:**	**10BGC GTH-05**
Client:	BGC ENGINEERING INC.	**Sample No.:**	7
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Depth (m):**	88.06-88.41
Location:	-	**Lab ID No:**	2

BEFORE TEST

AFTER TEST

LP	1/30/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY:	DATE

Golder Associates

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference
ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-05**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	7
Location:	-	**Depth (m):**	88.06-88.41
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1			Residual 1			Residual 2			Residual 3		
Normal Stress , kPa		650	Normal Stress , kPa		1300	Normal Stress , kPa		350	Normal Stress , kPa		-
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
0.00	0.00	0.0000	0.00	0.00	0.00	0.00	0.00	0.00			
0.00	0.68	0.00	0.00	4.70	0.00	0.00	0.81	0.00			
-0.01	8.60	0.00	-0.03	48.86	0.00	0.00	4.55	0.00			
-0.01	28.84	0.00	-0.02	86.94	0.00	-0.02	26.55	0.00			
-0.01	50.58	0.00	-0.02	123.74	0.00	-0.01	50.36	0.00			
-0.02	73.94	0.00	-0.02	163.46	0.00	0.01	73.56	0.00			
-0.02	97.68	0.00	-0.02	206.12	0.00	0.03	97.20	0.00			
-0.03	120.75	-0.01	-0.03	248.51	0.00	0.06	120.51	0.00			
-0.04	143.80	-0.01	-0.03	289.27	0.00	0.10	141.95	0.00			
-0.04	166.50	-0.01	-0.04	329.35	0.00	0.16	162.69	0.00			
-0.05	188.94	-0.01	-0.06	370.75	-0.01	0.25	181.15	0.00			
-0.06	211.16	-0.01	-0.06	410.52	-0.02	0.35	199.30	0.02			
-0.07	233.40	-0.02	-0.08	449.45	-0.02	0.55	210.41	0.03			
-0.08	254.77	-0.02	-0.10	487.28	-0.02	0.69	226.55	0.04			
-0.09	276.80	-0.02	-0.12	524.34	-0.02	0.90	236.72	0.06			
-0.11	297.19	-0.02	-0.12	559.52	-0.02	1.60	212.08	0.13			
-0.12	318.11	-0.02	-0.11	594.33	-0.02	1.88	219.23	0.16			
-0.13	338.43	-0.03	-0.10	627.33	-0.02	2.08	232.74	0.18			
-0.05	353.14	-0.04	-0.08	658.07	-0.03	2.23	247.52	0.20			
-0.04	373.74	-0.04	-0.07	688.02	-0.03	2.44	258.49	0.22			
-0.03	393.71	-0.04	-0.05	716.71	-0.03	2.73	262.86	0.25			
-0.02	413.42	-0.04	-0.03	745.16	-0.03	2.91	275.87	0.27			
-0.01	432.47	-0.04	-0.01	772.42	-0.03	3.77	237.44	0.37			
0.00	451.71	-0.04	0.01	798.16	-0.03	4.27	229.03	0.41			
0.00	470.88	-0.04	0.03	822.91	-0.03	4.80	217.45	0.45			
0.01	490.09	-0.04	0.05	848.23	-0.03	5.68	183.58	0.49			
0.02	508.71	-0.04	0.07	871.34	-0.03	5.92	194.54	0.49			
0.04	526.25	-0.04	0.09	893.36	-0.03	6.32	194.81	0.51			
0.07	542.67	-0.04	0.11	913.53	-0.03	6.53	208.39	0.51			
0.08	560.21	-0.04	0.14	932.59	-0.03	6.74	221.42	0.53			

LP	1/30/2011	JR	Feb14.2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-05**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	7
Location:	-	**Depth (m):**	88.06-88.41
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1			Residual 1			Residual 2			Residual 3		
Normal Stress , kPa		650	Normal Stress , kPa		1300	Normal Stress , kPa		350	Normal Stress , kPa		-
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
0.10	576.00	-0.04	0.16	948.87	-0.03	7.01	229.45	0.54			
0.13	592.02	-0.04	0.25	964.11	-0.03	7.47	223.08	0.58			
0.16	605.90	-0.04	0.27	982.29	-0.03	8.24	194.20	0.62			
0.18	620.07	-0.03	0.31	997.82	-0.03	8.71	191.12	0.65			
0.22	635.06	-0.03	0.33	1015.33	-0.03	8.97	201.77	0.66			
0.27	646.96	-0.02	0.35	1032.08	-0.03	9.27	209.27	0.67			
0.33	657.64	-0.01	0.37	1048.12	-0.03	9.47	223.38	0.68			
0.38	669.07	0.00	0.62	1046.19	0.00	11.07	134.02	0.81			
0.57	670.10	0.04	0.77	1055.28	0.02	11.62	130.16	0.83			
2.37	550.06	0.37	0.87	1066.90	0.03	11.77	147.70	0.84			
2.64	551.49	0.41	0.91	1082.72	0.04	11.98	164.77	0.85			
2.70	568.07	0.42	0.94	1094.73	0.04	12.29	168.87	0.87			
2.76	583.68	0.42	1.00	1105.09	0.05	13.10	141.38	0.90			
2.80	599.86	0.43	1.03	1117.86	0.05	13.38	151.60	0.91			
2.85	616.53	0.44	1.07	1131.05	0.05	14.11	147.17	0.92			
2.93	629.26	0.45	1.18	1137.27	0.07	14.64	155.11	0.92			
3.09	634.52	0.48	1.25	1145.96	0.08	15.23	156.87	0.91			
5.13	489.31	0.76	1.34	1150.08	0.09	15.66	158.05	0.90			
5.16	515.68	0.76	1.45	1155.35	0.10	16.00	150.46	0.89			
5.25	530.43	0.77	1.54	1161.79	0.11	16.54	156.38	0.87			
5.43	535.76	0.78	1.64	1167.42	0.13	17.13	151.29	0.84			
5.93	521.39	0.81	1.69	1179.40	0.13						
6.08	531.71	0.82	1.72	1189.99	0.13						
6.72	502.78	0.87	1.76	1202.94	0.14						
6.82	517.99	0.87	1.79	1214.66	0.14						
6.88	535.65	0.87	1.84	1225.66	0.15						
7.02	547.18	0.87	2.23	1210.51	0.20						
7.26	545.33	0.87	2.40	1215.49	0.23						
7.85	525.64	0.89	2.49	1228.63	0.24						
8.10	531.95	0.91	2.61	1238.68	0.25						

LP	1/30/2011	JR	Feb14.2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-05**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	7
Location:	-	**Depth (m):**	88.06-88.41
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1			Residual 1			Residual 2			Residual 3		
Normal Stress , kPa		650	Normal Stress , kPa		1300	Normal Stress , kPa		350	Normal Stress , kPa		-
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
9.03	480.29	0.95	6.32	957.40	0.48						
9.17	493.66	0.95	6.33	991.21	0.48						
9.29	508.25	0.95	6.36	1021.21	0.48						
9.45	517.98	0.96	8.41	888.70	0.55						
9.62	527.43	0.96	8.40	927.12	0.54						
10.51	475.07	0.99	8.42	960.73	0.54						
11.03	458.88	1.00	8.45	989.06	0.54						
11.42	454.66	1.01	8.52	1014.56	0.54						
13.13	351.19	1.01	8.56	1040.30	0.54						
13.83	327.30	0.99	8.64	1061.94	0.54						
14.13	331.88	0.98	8.80	1075.61	0.55						
14.77	312.17	0.98	9.33	1056.33	0.57						
15.45	291.92	0.95	11.10	931.49	0.66						
15.73	300.04	0.94	11.98	896.98	0.68						
17.77	293.03	0.87	14.07	770.20	0.71						
18.45	303.18	0.78	14.28	797.15	0.71						
			15.06	774.83	0.70						
			16.79	677.41	0.66						

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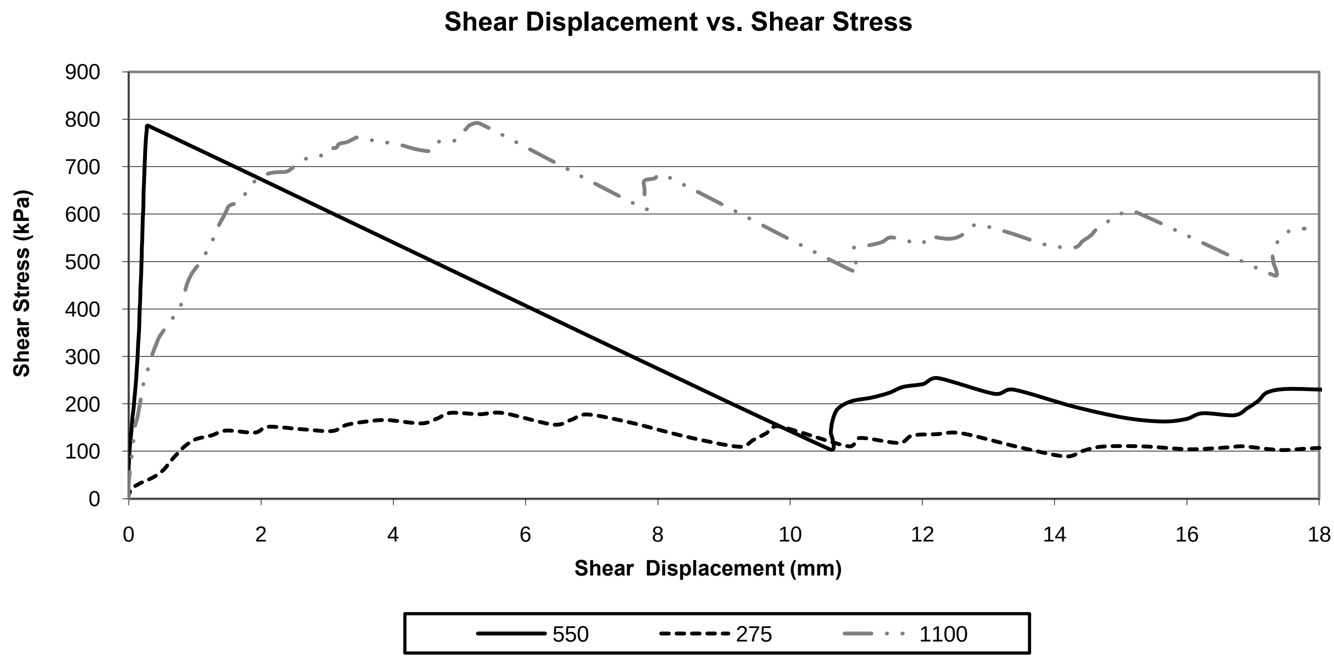
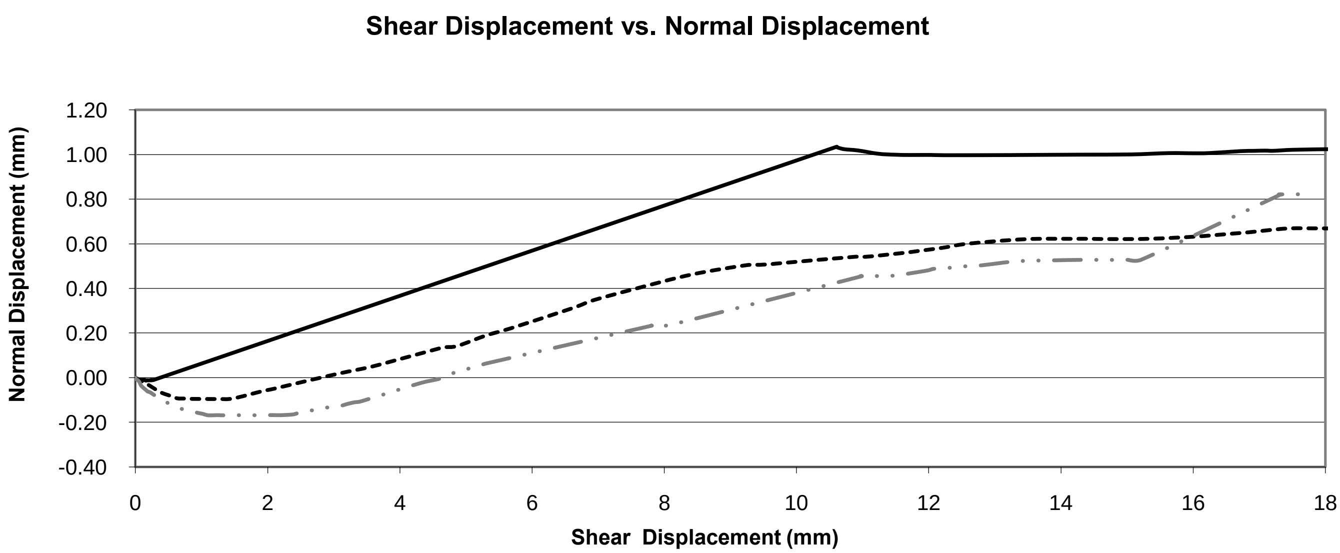
Direct Shear Strength Testing Under Constant Normal Force			Reference ASTM D5607-08
Project No.:	10-1416-0029 PHASE18000	**Borehole:**	**10BGC GTH-05**
Client:	BGC ENGINEERING INC.	**Sample No.:**	11
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Depth (m):**	184.22-184.31
Location:	-	**Lab ID No:**	2

Specimen		Machine ID's	
Joint Type	OPEN FACE	Pressure Transducer	PT0001
Shape	Elliptical	Horizontal LVDT	ID0002
Joint Angle	65	Vertical LVDT	ID0003





LP	1/30/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY:	DATE

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Direct Shear Strength Testing Under Constant Normal Force			Reference ASTM D5607-08
Project No.:	10-1416-0029 PHASE18000	**Borehole:**	**10BGC GTH-05**
Client:	BGC ENGINEERING INC.	**Sample No.:**	11
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Depth (m):**	184.22-184.31
Location:	-	**Lab ID No:**	2

BEFORE TEST

AFTER TEST

LP	1/30/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY:	DATE

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-05**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	11
Location:	-	**Depth (m):**	184.22-184.31
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1		Residual 1		Residual 2		Residual 3	
Normal Stress , kPa	550	Normal Stress , kPa	275	Normal Stress , kPa	1100	Normal Stress , kPa	-

Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
0.00	0.00	0.0000	0.00	0.00	0.00	0.00	0.00	0.00			
0.00	-0.20	0.00	0.00	0.64	0.00	0.00	-0.19	0.00			
-0.01	7.32	0.00	0.00	7.62	0.00	0.00	4.36	0.00			
-0.01	24.51	0.00	0.05	22.31	-0.01	0.00	22.62	0.00			
-0.01	45.38	0.00	0.19	33.68	-0.03	0.01	43.97	-0.01			
0.00	67.36	-0.01	0.37	45.63	-0.06	0.02	65.96	-0.01			
0.01	89.21	-0.01	0.53	60.78	-0.08	0.04	86.98	-0.01			
0.02	110.03	-0.01	0.63	78.73	-0.09	0.06	108.40	-0.02			
0.03	130.95	-0.01	0.74	95.34	-0.09	0.07	129.55	-0.03			
0.04	151.87	-0.01	0.86	111.81	-0.09	0.09	150.54	-0.04			
0.06	172.26	-0.01	1.01	125.24	-0.09	0.13	170.71	-0.05			
0.07	192.79	-0.01	1.26	133.65	-0.09	0.16	191.46	-0.05			
0.09	213.48	-0.01	1.47	143.69	-0.09	0.18	212.02	-0.06			
0.10	233.47	-0.01	1.91	139.43	-0.06	0.21	232.13	-0.06			
0.11	253.82	-0.01	2.11	151.63	-0.05	0.24	251.66	-0.07			
0.12	272.82	-0.01	2.61	146.57	-0.01	0.28	270.36	-0.08			
0.13	292.60	-0.01	3.07	142.75	0.02	0.33	288.71	-0.08			
0.14	312.17	-0.01	3.29	155.39	0.03	0.36	306.99	-0.09			
0.14	331.46	-0.01	3.58	162.45	0.05	0.41	324.12	-0.10			
0.15	350.62	-0.01	3.91	165.89	0.08	0.46	340.75	-0.11			
0.16	369.64	-0.01	4.42	158.84	0.12	0.53	355.61	-0.12			
0.16	388.30	-0.01	4.67	169.04	0.14	0.60	370.67	-0.13			
0.17	406.30	-0.01	4.87	180.95	0.14	0.68	384.14	-0.14			
0.17	424.85	-0.01	5.30	178.14	0.19	0.76	398.38	-0.14			
0.18	442.72	-0.01	5.66	180.49	0.22	0.80	414.96	-0.15			
0.18	460.12	-0.01	6.42	156.20	0.29	0.84	430.70	-0.15			
0.19	477.23	-0.01	6.69	166.54	0.32	0.87	447.20	-0.15			
0.19	494.37	-0.01	6.93	177.67	0.35	0.91	461.32	-0.15			
0.19	511.70	-0.01	7.58	160.75	0.40	0.96	475.46	-0.16			
0.20	528.50	-0.01	8.42	131.04	0.46	1.02	487.57	-0.16			

LP	1/30/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference: ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-05**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	11
Location:	-	**Depth (m):**	184.22-184.31
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1			Residual 1			Residual 2			Residual 3		
Normal Stress , kPa		550	Normal Stress , kPa		275	Normal Stress , kPa		1100	Normal Stress , kPa		-
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
0.20	544.73	-0.01	9.23	109.65	0.50	1.09	499.97	-0.17			
0.20	560.60	-0.01	9.44	123.81	0.51	1.15	513.83	-0.17			
0.21	575.78	-0.01	9.64	138.19	0.51	1.21	526.23	-0.17			
0.21	591.43	-0.01	9.82	152.86	0.51	1.25	540.34	-0.17			
0.22	606.16	-0.01	10.89	110.50	0.54	1.30	553.29	-0.17			
0.22	621.24	-0.01	11.05	128.15	0.54	1.34	567.48	-0.17			
0.22	635.00	-0.01	11.65	117.65	0.56	1.38	580.54	-0.17			
0.22	648.72	-0.01	11.84	133.24	0.57	1.43	593.57	-0.17			
0.23	662.60	-0.01	12.21	136.10	0.58	1.47	606.26	-0.17			
0.23	676.52	-0.01	12.59	138.12	0.60	1.52	617.37	-0.17			
0.24	689.89	-0.01	13.46	108.88	0.62	1.65	624.60	-0.17			
0.24	702.38	-0.01	14.16	89.23	0.62	1.72	634.21	-0.17			
0.24	715.62	-0.01	14.43	100.76	0.62	1.78	645.68	-0.17			
0.25	727.90	-0.01	14.72	109.91	0.62	1.84	655.97	-0.17			
0.25	740.49	-0.01	15.34	110.38	0.62	1.89	667.39	-0.17			
0.26	752.98	-0.01	16.03	104.38	0.63	1.98	675.15	-0.17			
0.26	765.65	-0.01	16.62	108.23	0.65	2.07	683.41	-0.17			
0.27	777.03	-0.01	16.86	110.47	0.65	2.21	687.79	-0.17			
0.29	786.52	-0.01	17.40	102.66	0.67	2.38	689.36	-0.16			
10.61	103.60	1.03	17.80	105.75	0.67	2.47	697.17	-0.16			
10.62	138.49	1.03	18.04	107.35	0.67	2.55	704.53	-0.15			
10.65	166.92	1.03				2.63	712.05	-0.15			
10.73	190.40	1.02				2.72	719.10	-0.14			
10.93	205.66	1.02				2.86	721.08	-0.13			
11.23	213.14	1.00				2.95	727.44	-0.13			
11.50	222.96	1.00				3.00	737.40	-0.13			
11.71	235.66	1.00				3.13	739.65	-0.12			
12.02	241.95	1.00				3.18	747.90	-0.12			
12.23	254.26	1.00				3.30	751.77	-0.11			
13.10	221.05	1.00				3.39	757.57	-0.11			

LP	1/30/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY	DATE

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Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force	Reference ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-05**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	11
Location:	-	**Depth (m):**	184.22-184.31
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1			Residual 1			Residual 2			Residual 3		
Normal Stress , kPa		550	Normal Stress , kPa		275	Normal Stress , kPa		1100	Normal Stress , kPa		-
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
13.38	229.91	1.00				3.48	761.90	-0.10			
14.29	194.03	1.00				3.81	751.18	-0.07			
15.06	170.55	1.00				4.00	749.68	-0.05			
15.63	162.75	1.01				4.33	737.09	-0.02			
15.99	167.99	1.01				4.58	732.61	-0.01			
16.24	180.09	1.01				4.65	742.88	0.00			
16.72	175.95	1.01				4.70	753.26	0.01			
16.92	190.76	1.02				4.90	753.15	0.03			
17.09	206.64	1.02				4.98	761.40	0.04			
17.22	224.15	1.02				5.03	770.93	0.04			
17.51	231.35	1.02				5.10	779.30	0.05			
18.08	229.71	1.02				5.17	787.84	0.05			
						5.31	790.56	0.06			
						7.81	610.33	0.23			
						7.80	633.12	0.23			
						7.80	652.72	0.23			
						7.80	670.19	0.23			
						7.96	675.43	0.23			
						8.08	683.54	0.23			
						10.99	477.45	0.45			
						10.97	505.49	0.45			
						10.96	529.18	0.45			
						11.19	533.94	0.46			
						11.39	540.78	0.46			
						11.54	550.63	0.46			
						11.98	537.34	0.48			
						12.08	552.05	0.49			
						12.40	547.69	0.49			
						12.59	554.97	0.50			
						12.68	568.97	0.50			

LP	1/30/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY	DATE

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Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference
ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-05**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	11
Location:	-	**Depth (m):**	184.22-184.31
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1	
Normal Stress , kPa	550

Horz Disp mm	Shear Stress kPa	Vert Disp mm

Residual 1	
Normal Stress , kPa	275

Horz Disp mm	Shear Stress kPa	Vert Disp mm

Residual 2	
Normal Stress , kPa	1100

Horz Disp mm	Shear Stress kPa	Vert Disp mm
12.85	577.19	0.50
13.34	559.60	0.52
13.89	534.43	0.53
14.30	529.54	0.53
14.42	542.77	0.53
14.55	554.97	0.53
14.64	569.11	0.53
14.76	579.47	0.53
14.87	591.52	0.53
15.01	601.09	0.53
15.22	604.67	0.53
17.33	470.39	0.82
17.31	497.09	0.82
17.29	520.98	0.82
17.35	537.48	0.82
17.44	552.75	0.82
17.57	565.02	0.82
17.78	569.37	0.83

Residual 3	
Normal Stress , kPa	-

Horz Disp mm	Shear Stress kPa	Vert Disp mm

LP	1/30/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY	DATE

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4280 Still Creek Drive
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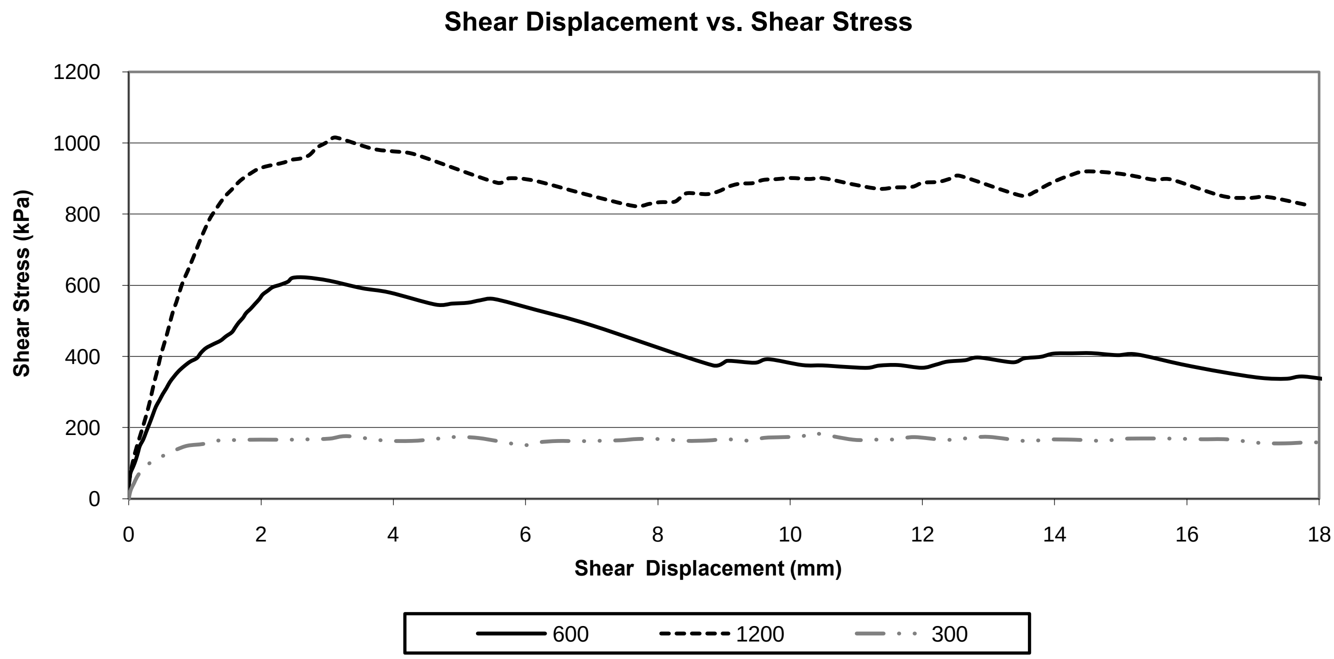
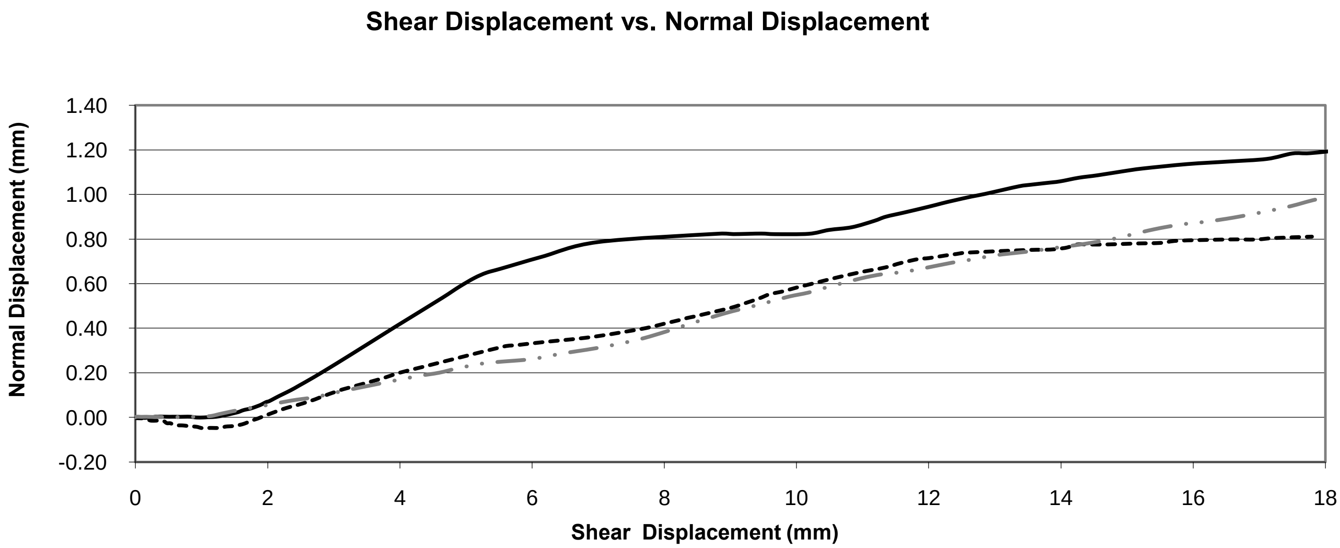
Direct Shear Strength Testing Under Constant Normal Force	Reference ASTM D5607-08

Project No.:	10-1416-0029 PHASE18000	**Borehole:**	**10BGC GTH-05**
Client:	BGC ENGINEERING INC.	**Sample No.:**	16
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Depth (m):**	274.38-274.76
Location:	-	**Lab ID No:**	2

Specimen		Machine ID's	
Joint Type	OPEN FACE	Pressure Transducer	PT0001
Shape	Elliptical	Horizontal LVDT	ID0002
Joint Angle	67	Vertical LVDT	ID0003





LP	1/30/2011	JR	Feb.14,2011
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Direct Shear Strength Testing Under Constant Normal Force	Reference ASTM D5607-08

Project No.:	10-1416-0029 PHASE18000	**Borehole:**	**10BGC GTH-05**
Client:	BGC ENGINEERING INC.	**Sample No.:**	16
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Depth (m):**	274.38-274.76
Location:	-	**Lab ID No:**	2

BEFORE TEST

AFTER TEST

LP	1/30/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY:	DATE

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-05**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	16
Location:	-	**Depth (m):**	274.38-274.76
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1		Residual 1		Residual 2		Residual 3	
Normal Stress , kPa	600	Normal Stress , kPa	1200	Normal Stress , kPa	300	Normal Stress , kPa	-

Peak 1 Horz Disp mm	Peak 1 Shear Stress kPa	Peak 1 Vert Disp mm	Residual 1 Horz Disp mm	Residual 1 Shear Stress kPa	Residual 1 Vert Disp mm	Residual 2 Horz Disp mm	Residual 2 Shear Stress kPa	Residual 2 Vert Disp mm	Residual 3 Horz Disp mm	Residual 3 Shear Stress kPa	Residual 3 Vert Disp mm
0.00	0.00	0.0000	0.00	0.00	0.00	0.00	0.00	0.00			
0.00	0.21	0.00	0.00	7.64	0.00	0.00	-0.21	0.00			
-0.01	7.08	0.00	0.00	43.88	0.00	0.01	4.98	0.00			
-0.01	22.08	0.00	0.04	86.23	0.00	0.02	14.21	0.00			
0.00	39.05	0.00	0.09	127.41	0.00	0.04	27.74	0.00			
0.01	55.76	0.00	0.16	168.19	-0.01	0.08	42.41	0.00			
0.03	73.87	0.00	0.22	207.57	-0.01	0.12	58.42	0.00			
0.07	91.85	0.00	0.28	246.65	-0.02	0.17	74.20	0.00			
0.11	110.61	0.00	0.33	285.26	-0.01	0.24	89.35	0.00			
0.14	129.47	0.00	0.38	323.56	-0.02	0.34	102.51	0.00			
0.17	148.50	0.00	0.43	359.99	-0.02	0.46	115.40	0.00			
0.22	167.20	0.00	0.48	396.65	-0.03	0.60	126.77	0.00			
0.26	186.26	0.00	0.53	431.40	-0.03	0.73	138.72	0.00			
0.30	204.34	0.00	0.58	464.21	-0.03	0.89	148.95	0.00			
0.34	223.16	0.00	0.62	494.87	-0.04	1.13	153.77	0.01			
0.37	241.58	0.00	0.67	525.11	-0.04	1.33	162.82	0.02			
0.41	259.58	0.00	0.72	553.77	-0.04	1.65	164.81	0.04			
0.46	276.78	0.00	0.77	583.82	-0.04	2.00	165.78	0.05			
0.51	294.19	0.00	0.82	611.68	-0.04	2.36	165.53	0.08			
0.57	310.44	0.00	0.89	638.54	-0.04	2.71	166.61	0.09			
0.62	327.23	0.00	0.94	663.31	-0.04	3.04	168.72	0.11			
0.68	342.70	0.00	1.00	686.95	-0.05	3.31	175.58	0.13			
0.75	358.28	0.00	1.04	709.58	-0.05	3.85	163.43	0.16			
0.83	372.07	0.00	1.09	731.36	-0.05	4.28	162.28	0.19			
0.92	385.13	0.00	1.14	752.55	-0.05	4.59	166.74	0.20			
1.03	395.47	0.00	1.19	772.61	-0.05	4.88	172.97	0.22			
1.09	410.45	0.00	1.24	791.24	-0.05	5.29	170.32	0.24			
1.17	423.51	0.00	1.30	809.11	-0.05	5.95	150.47	0.26			
1.27	434.03	0.01	1.36	825.64	-0.04	6.20	158.28	0.27			
1.39	444.35	0.01	1.42	840.60	-0.04	6.49	162.07	0.29			

LP	1/30/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-05**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	16
Location:	-	**Depth (m):**	274.38-274.76
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1			Residual 1			Residual 2			Residual 3		
Normal Stress , kPa		600	Normal Stress , kPa		1200	Normal Stress , kPa		300	Normal Stress , kPa		-
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
1.47	456.52	0.02	1.48	855.17	-0.04	6.82	161.48	0.30			
1.56	468.17	0.02	1.55	867.70	-0.04	7.13	162.66	0.32			
1.61	481.75	0.03	1.62	880.99	-0.03	7.44	164.06	0.34			
1.66	495.59	0.03	1.68	893.72	-0.02	7.70	167.70	0.36			
1.72	508.14	0.04	1.76	904.75	-0.01	8.03	167.29	0.39			
1.77	521.99	0.04	1.84	914.62	-0.01	8.42	162.47	0.42			
1.84	534.49	0.05	1.94	925.66	0.01	8.75	163.49	0.45			
1.91	547.58	0.06	2.07	933.76	0.02	9.03	167.00	0.48			
1.97	561.02	0.07	2.21	939.42	0.03	9.39	163.06	0.50			
2.02	574.08	0.07	2.35	945.02	0.05	9.61	170.85	0.52			
2.10	585.00	0.09	2.46	952.37	0.06	9.89	172.85	0.54			
2.18	594.83	0.10	2.60	956.47	0.07	10.17	174.80	0.56			
2.30	601.99	0.11	2.72	964.13	0.08	10.37	183.69	0.58			
2.41	610.24	0.13	2.78	974.69	0.09	10.95	165.72	0.62			
2.48	621.15	0.14	2.82	984.08	0.09	11.30	165.84	0.64			
2.69	621.87	0.18	2.89	991.52	0.10	11.60	166.72	0.65			
3.03	612.93	0.24	2.97	999.62	0.11	11.88	172.98	0.67			
3.52	592.05	0.33	3.04	1007.89	0.11	12.35	165.15	0.69			
3.94	579.87	0.41	3.14	1015.10	0.13	12.68	169.89	0.71			
4.64	545.70	0.54	3.68	983.87	0.17	13.00	173.57	0.73			
4.89	548.57	0.58	4.00	976.25	0.20	13.56	161.94	0.75			
5.13	551.09	0.62	4.33	967.75	0.22	13.90	166.18	0.76			
5.31	557.78	0.65	5.57	887.98	0.32	14.29	165.70	0.77			
5.52	561.53	0.67	5.75	900.75	0.32	14.72	162.53	0.80			
6.15	531.29	0.72	6.14	893.61	0.34	15.04	168.19	0.82			
7.00	487.57	0.79	6.90	856.33	0.36	15.41	169.07	0.84			
8.83	374.86	0.82	7.65	822.51	0.40	15.81	168.72	0.86			
9.04	387.56	0.82	7.87	828.52	0.41	16.22	166.92	0.88			
9.47	382.39	0.82	8.03	833.45	0.42	16.62	166.58	0.90			
9.67	392.28	0.82	8.25	834.33	0.44	17.10	156.54	0.92			

LP	1/30/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-05**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	16
Location:	-	**Depth (m):**	274.38-274.76
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1			Residual 1			Residual 2			Residual 3		
Normal Stress , kPa		600	Normal Stress , kPa		1200	Normal Stress , kPa		300	Normal Stress , kPa		-
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
10.18	375.77	0.82	8.34	846.28	0.45	17.48	155.36	0.95			
10.49	374.83	0.84	8.45	858.89	0.45	17.86	158.15	0.98			
10.84	370.66	0.85	8.75	856.13	0.47	18.28	156.87	1.00			
11.17	368.06	0.88	8.93	864.89	0.49						
11.35	374.39	0.90	9.07	877.35	0.50						
11.63	375.85	0.92	9.24	885.39	0.51						
11.99	368.16	0.94	9.44	887.17	0.53						
12.20	376.83	0.96	9.59	896.04	0.55						
12.38	385.44	0.97	9.80	898.34	0.57						
12.65	389.40	0.99	10.01	901.40	0.58						
12.85	397.06	1.00	10.29	898.74	0.60						
13.37	383.60	1.04	10.51	900.74	0.62						
13.54	394.65	1.04	10.94	883.93	0.65						
13.79	399.04	1.05	11.34	871.14	0.67						
13.98	407.96	1.06	11.58	874.88	0.69						
14.27	408.89	1.07	11.85	876.64	0.71						
14.56	409.28	1.09	12.00	887.99	0.71						
14.95	403.64	1.10	12.25	890.63	0.73						
15.23	405.98	1.12	12.42	899.44	0.73						
15.91	378.09	1.14	12.56	907.80	0.74						
16.53	356.28	1.15	13.49	852.05	0.75						
17.11	339.80	1.16	13.70	862.57	0.75						
17.50	337.33	1.18	13.84	876.78	0.75						
17.76	343.64	1.18	13.96	888.63	0.76						
18.29	330.14	1.20	14.10	899.68	0.76						
			14.25	909.82	0.78						
			14.42	919.35	0.78						
			14.71	918.60	0.78						
			15.10	910.60	0.78						
			15.52	896.17	0.78						

LP	1/30/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference: ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-05**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	16
Location:	-	**Depth (m):**	274.38-274.76
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1			Residual 1			Residual 2			Residual 3		
Normal Stress , kPa		600	Normal Stress , kPa		1200	Normal Stress , kPa		300	Normal Stress , kPa		-
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
			15.76	897.29	0.79						
			16.53	851.04	0.80						
			16.94	845.55	0.80						
			17.23	848.00	0.80						
			17.80	826.39	0.81						

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Golder Associates Ltd. - Burnaby Lab
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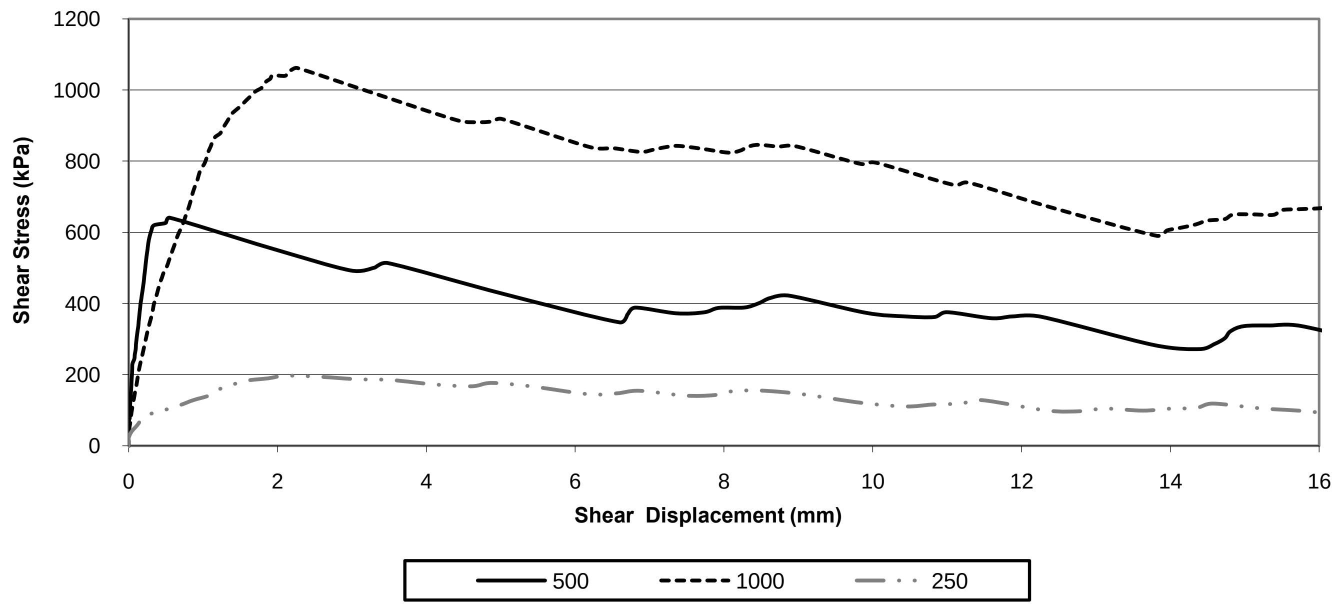
Burnaby, B.C. Canada V5C 6C6

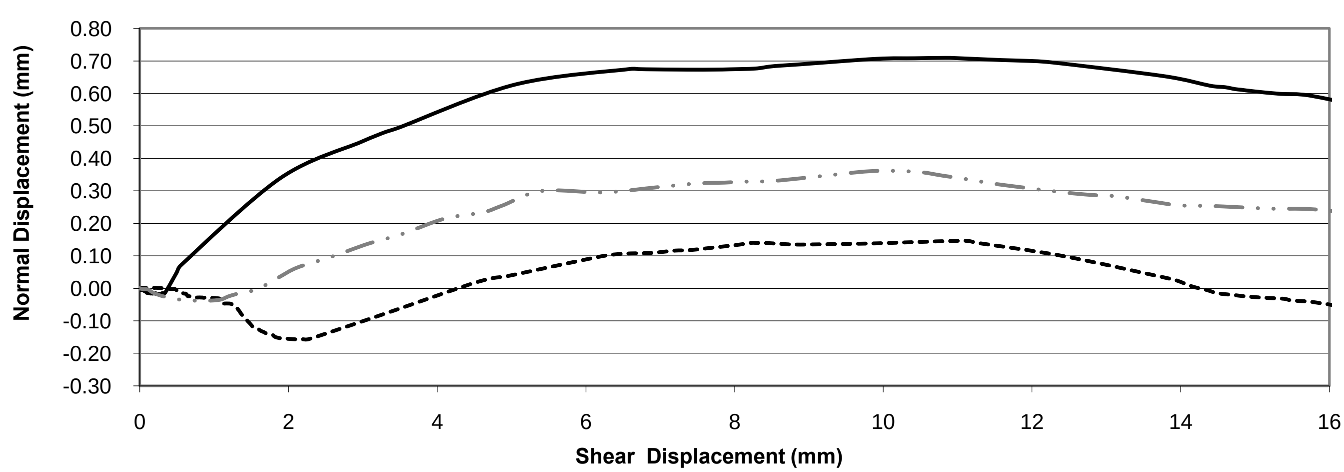
Direct Shear Strength Testing Under Constant Normal Force		Reference ASTM D5607-08	
Project No.:	10-1416-0029 PHASE18000	**Borehole:**	**10BGC GTH-06**
Client:	BGC ENGINEERING INC.	**Sample No.:**	2
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Depth (m):**	47.91-48.17
Location:	-	**Lab ID No:**	2

Specimen		Machine ID's	
Joint Type	OPEN FACE	Pressure Transducer	PT0001
Shape	Elliptical	Horizontal LVDT	ID0002
Joint Angle	76	Vertical LVDT	ID0003

Shear Displacement vs. Shear Stress



Shear Displacement vs. Normal Displacement



LP	1/30/2011	JR	Feb.14,2011
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Golder Associates Ltd. - Burnaby Lab
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force			**Reference** ASTM D5607-08
Project No.:	10-1416-0029 PHASE18000	**Borehole:**	**10BGC GTH-06**
Client:	BGC ENGINEERING INC.	**Sample No.:**	2
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Depth (m):**	47.91-48.17
Location:	-	**Lab ID No:**	2

BEFORE TEST

AFTER TEST

LP	1/30/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY:	DATE

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference
ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-06**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	2
Location:	-	**Depth (m):**	47.91-48.17
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1			Residual 1			Residual 2			Residual 3		
Normal Stress , kPa		500	Normal Stress , kPa		1000	Normal Stress , kPa		250	Normal Stress , kPa		-
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
0.00	0.00	0.0000	0.00	0.00	0.00	0.00	0.00	0.00			
0.00	0.16	0.00	-0.01	17.53	0.00	0.00	0.02	0.00			
0.00	4.07	0.00	0.00	35.76	0.00	-0.01	16.50	0.00			
-0.01	16.99	0.00	0.01	53.64	0.00	0.03	38.06	0.00			
-0.01	31.00	0.00	0.02	70.58	0.00	0.11	57.37	0.00			
0.00	44.23	0.00	0.03	87.13	0.00	0.18	73.48	-0.01			
0.00	58.54	0.00	0.04	102.63	0.00	0.31	90.48	-0.02			
0.00	74.08	0.00	0.05	118.90	0.00	0.51	102.11	-0.03			
0.01	77.71	0.00	0.07	133.27	0.00	0.70	114.85	-0.04			
0.01	95.09	0.00	0.08	149.67	0.00	0.87	128.32	-0.04			
0.02	111.27	0.00	0.10	165.35	0.00	1.08	140.89	-0.04			
0.02	127.05	0.00	0.11	180.20	0.00	1.20	157.46	-0.02			
0.03	143.10	0.00	0.12	196.87	0.00	1.39	171.03	-0.01			
0.03	158.01	0.00	0.14	214.05	0.00	1.58	182.95	0.00			
0.03	173.13	-0.01	0.15	231.95	0.00	1.87	189.34	0.03			
0.04	188.00	-0.01	0.17	248.91	0.00	2.12	196.98	0.06			
0.04	202.41	-0.01	0.19	265.91	0.00	2.58	193.67	0.10			
0.05	216.69	-0.01	0.21	282.97	0.00	3.07	186.93	0.14			
0.05	230.55	-0.01	0.23	299.97	0.00	3.52	184.91	0.17			
0.07	244.59	-0.01	0.25	317.19	0.00	4.10	172.45	0.21			
0.08	257.88	-0.01	0.27	334.53	0.00	4.61	167.13	0.23			
0.09	271.49	-0.01	0.29	350.88	0.00	4.88	176.52	0.26			
0.10	285.10	-0.01	0.31	368.01	0.00	5.40	167.23	0.30			
0.10	298.53	-0.01	0.32	383.58	0.00	6.17	145.04	0.30			
0.11	311.42	-0.01	0.34	398.22	0.00	6.56	147.24	0.30			
0.12	324.22	-0.01	0.36	412.13	0.00	6.87	154.52	0.31			
0.13	336.65	-0.01	0.38	427.47	0.00	7.47	141.03	0.32			
0.13	348.99	-0.02	0.40	442.71	0.00	7.87	142.31	0.33			
0.14	361.86	-0.02	0.42	458.18	0.00	8.11	153.11	0.33			
0.15	375.70	-0.02	0.44	472.11	0.00	8.49	155.11	0.33			

LP	1/30/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force	Reference ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-06**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	2
Location:	-	**Depth (m):**	47.91-48.17
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1			Residual 1			Residual 2			Residual 3		
Normal Stress , kPa		500	Normal Stress , kPa		1000	Normal Stress , kPa		250	Normal Stress , kPa		-
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
0.15	388.31	-0.02	0.47	489.11	0.00	9.05	144.93	0.34			
0.16	400.45	-0.02	0.51	504.59	-0.01	9.84	120.95	0.36			
0.17	413.21	-0.02	0.54	519.69	-0.01	10.44	110.50	0.36			
0.18	426.26	-0.02	0.56	535.71	-0.01	10.81	115.86	0.35			
0.19	438.21	-0.02	0.59	552.53	-0.02	11.19	118.75	0.33			
0.19	451.12	-0.02	0.62	568.27	-0.02	11.47	128.13	0.32			
0.20	462.79	-0.02	0.65	584.65	-0.02	12.34	99.05	0.30			
0.21	474.75	-0.02	0.68	599.62	-0.02	12.80	97.25	0.29			
0.21	486.28	-0.01	0.71	614.56	-0.03	13.12	104.58	0.28			
0.22	497.65	-0.02	0.74	628.41	-0.03	13.63	98.79	0.27			
0.23	513.94	-0.02	0.76	642.57	-0.03	13.98	104.11	0.26			
0.24	533.47	-0.02	0.78	656.49	-0.03	14.35	106.39	0.25			
0.25	552.69	-0.02	0.80	669.10	-0.03	14.57	118.55	0.25			
0.26	570.55	-0.02	0.82	682.64	-0.03	15.21	105.33	0.25			
0.28	588.00	-0.02	0.84	694.67	-0.03	15.74	98.56	0.24			
0.30	604.70	-0.01	0.86	708.20	-0.03	16.34	88.21	0.23			
0.34	619.96	-0.01	0.87	720.73	-0.03	16.60	99.05	0.22			
0.50	626.84	0.05	0.90	732.80	-0.03	16.99	103.26	0.21			
0.55	641.15	0.07	0.92	743.45	-0.03	17.22	115.58	0.19			
1.89	556.91	0.34	0.93	755.39	-0.03	17.61	119.03	0.18			
2.98	492.93	0.45	0.95	768.67	-0.03						
3.30	500.85	0.48	0.97	780.13	-0.03						
3.48	513.71	0.49	1.01	790.88	-0.03						
5.04	426.72	0.63	1.04	803.18	-0.03						
6.60	347.08	0.68	1.06	815.57	-0.03						
6.70	369.44	0.67	1.07	828.08	-0.03						
6.81	388.43	0.67	1.10	841.70	-0.05						
7.36	372.47	0.67	1.12	855.02	-0.05						
7.73	375.24	0.67	1.16	867.58	-0.05						
7.93	387.75	0.67	1.23	878.09	-0.05						

LP	1/30/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference
ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-06**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	2
Location:	-	**Depth (m):**	47.91-48.17
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1		Residual 1		Residual 2		Residual 3	
Normal Stress , kPa	500	Normal Stress , kPa	1000	Normal Stress , kPa	250	Normal Stress , kPa	-

Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
8.27	388.76	0.68	1.26	891.50	-0.06						
8.47	400.86	0.68	1.30	904.20	-0.06						
8.62	415.58	0.69	1.34	916.23	-0.07						
8.88	422.02	0.69	1.37	929.25	-0.08						
9.90	374.22	0.71	1.42	939.48	-0.09						
10.42	363.89	0.71	1.48	949.49	-0.11						
10.83	362.06	0.71	1.53	959.63	-0.12						
11.00	375.61	0.71	1.58	970.12	-0.12						
11.59	358.76	0.70	1.62	979.51	-0.13						
11.88	363.74	0.70	1.66	988.69	-0.13						
12.27	362.66	0.70	1.71	996.35	-0.14						
13.78	283.08	0.65	1.78	1004.73	-0.14						
14.40	271.90	0.62	1.81	1013.54	-0.15						
14.59	286.07	0.62	1.84	1023.06	-0.15						
14.73	302.51	0.61	1.90	1031.22	-0.15						
14.81	322.11	0.61	1.93	1040.64	-0.15						
14.99	336.42	0.61	2.10	1039.26	-0.16						
15.34	338.24	0.60	2.13	1048.97	-0.16						
15.76	336.79	0.59	2.19	1056.07	-0.16						
17.13	271.46	0.53	2.27	1061.16	-0.16						
17.49	275.24	0.51	3.19	997.36	-0.09						
17.97	269.31	0.48	4.41	914.72	0.01						
			4.71	909.23	0.03						
			4.90	911.66	0.04						
			5.01	918.40	0.04						
			6.20	839.13	0.10						
			6.51	836.07	0.11						
			6.88	825.77	0.11						
			7.05	831.90	0.11						
			7.21	838.64	0.12						

LP	1/30/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference
ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-06**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	2
Location:	-	**Depth (m):**	47.91-48.17
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1			Residual 1			Residual 2			Residual 3		
Normal Stress , kPa		500	Normal Stress , kPa		1000	Normal Stress , kPa		250	Normal Stress , kPa		-
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
			7.39	842.54	0.12						
			7.70	834.70	0.12						
			8.06	823.59	0.13						
			8.22	829.48	0.14						
			8.31	839.49	0.14						
			8.46	845.54	0.14						
			8.74	840.73	0.13						
			8.97	841.53	0.13						
			9.84	791.92	0.14						
			10.03	795.76	0.14						
			11.09	733.03	0.15						
			11.29	739.15	0.14						
			12.42	668.24	0.10						
			13.82	589.99	0.03						
			13.96	604.96	0.02						
			14.16	613.29	0.01						
			14.34	621.81	0.00						
			14.50	632.69	-0.02						
			14.73	636.81	-0.02						
			14.84	649.35	-0.02						
			15.09	650.29	-0.03						
			15.39	648.80	-0.03						
			15.49	662.09	-0.04						
			15.73	664.75	-0.04						
			15.98	666.92	-0.05						
			16.18	672.17	-0.06						
			16.37	678.44	-0.06						
			16.78	666.36	-0.08						
			17.45	630.92	-0.11						
			17.92	619.51	-0.13						

LP	1/30/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY	DATE

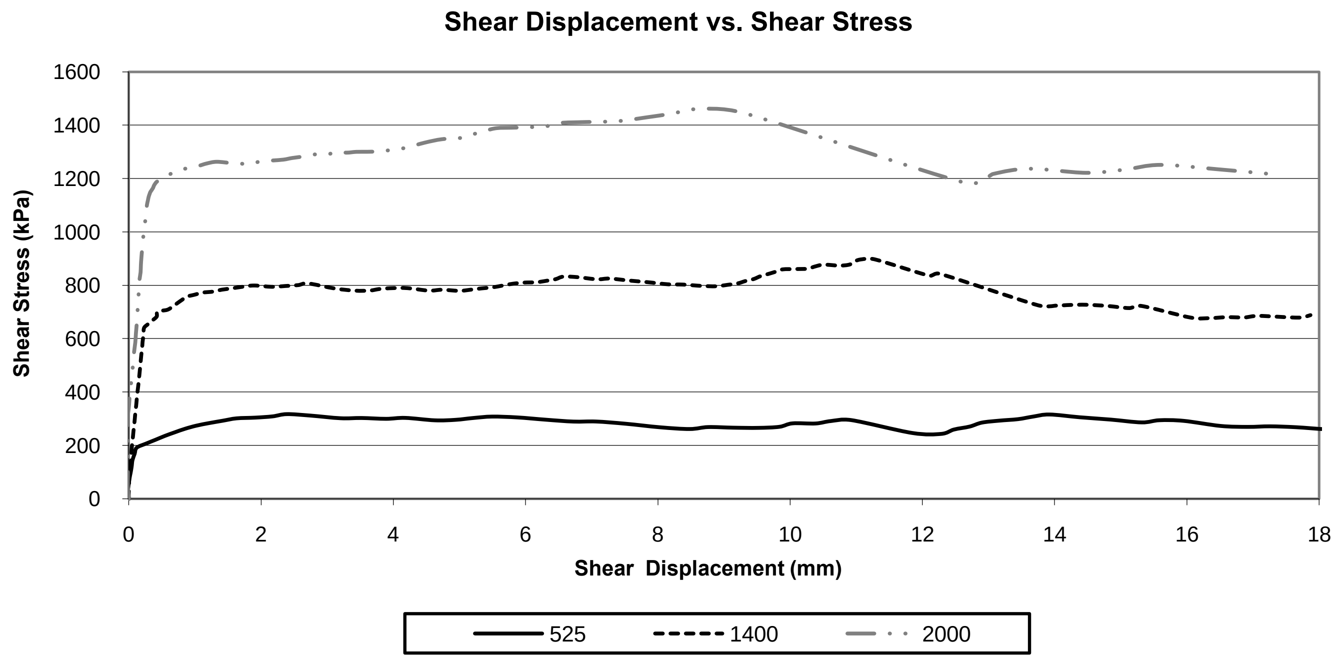
Golder Associates Ltd. - Burnaby Lab
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

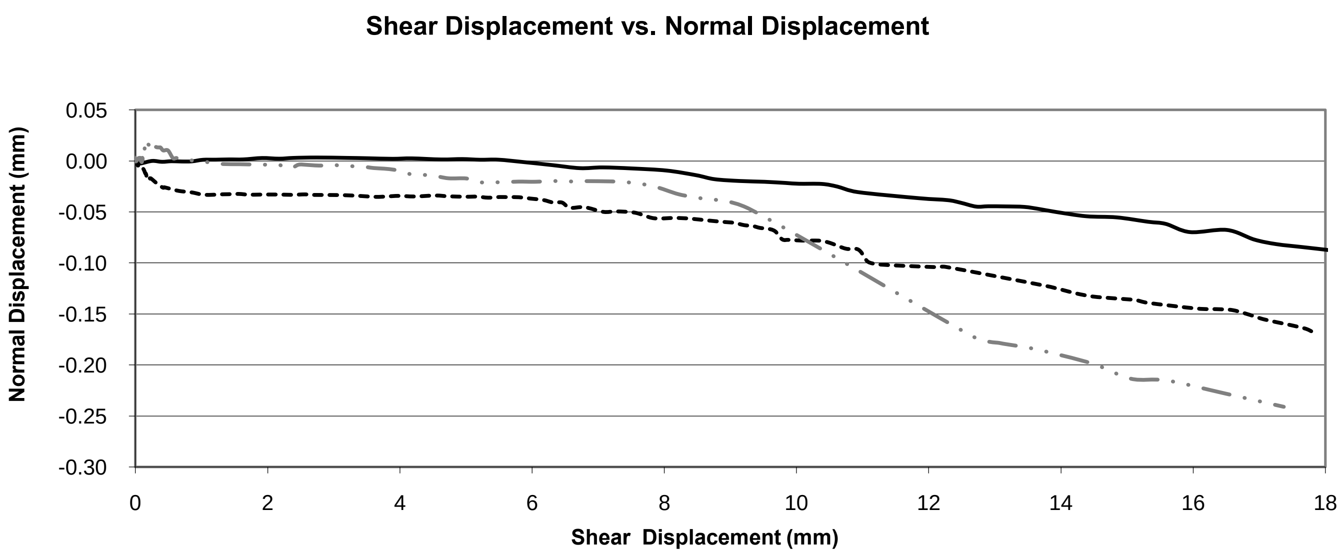
Direct Shear Strength Testing Under Constant Normal Force

Reference
ASTM D5607-08

Project No.:	10-1416-0029 PHASE18000	**Borehole:**	**10BGC GTH-06**
Client:	BGC ENGINEERING INC.	**Sample No.:**	05
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Depth (m):**	96.42-96.75
Location:	-	**Lab ID No:**	2

Specimen		Machine ID's	
Joint Type	SAW CUT	Pressure Transducer	PT0001
Shape	Elliptical	Horizontal LVDT	ID0002
Joint Angle	-	Vertical LVDT	ID0003





LP	1/30/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY:	DATE

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4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force	Reference ASTM D5607-08

Project No.:	10-1416-0029 PHASE18000	**Borehole:**	**10BGC GTH-06**
Client:	BGC ENGINEERING INC.	**Sample No.:**	05
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Depth (m):**	96.42-96.75
Location:	-	**Lab ID No:**	2

BEFORE TEST

AFTER TEST

LP	1/30/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY:	DATE

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference
ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-06**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	05
Location:	-	**Depth (m):**	96.42-96.75
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1			Residual 1			Residual 2			Residual 3		
Normal Stress , kPa		525	Normal Stress , kPa		1400	Normal Stress , kPa		2000	Normal Stress , kPa		-
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
0.00	0.00	0.0000	0.00	0.00	0.00	0.00	0.00	0.00			
0.00	2.36	0.00	0.00	2.52	0.00	-0.02	45.38	0.00			
-0.01	12.51	0.00	0.00	14.33	0.00	-0.02	85.82	0.00			
-0.01	29.57	0.00	0.00	33.21	0.00	-0.02	136.19	0.00			
0.01	73.82	0.00	0.00	53.94	0.00	-0.02	191.40	0.00			
0.03	97.20	0.00	0.00	75.43	0.00	-0.02	247.42	0.00			
0.04	120.89	0.00	0.01	98.24	0.00	-0.02	301.86	0.00			
0.05	144.83	0.00	0.02	124.02	0.00	0.00	353.95	0.00			
0.09	168.15	0.00	0.03	149.82	0.00	0.02	403.99	0.00			
0.12	191.05	0.00	0.04	174.96	0.00	0.04	453.32	0.00			
0.26	206.17	0.00	0.05	201.52	0.00	0.06	499.81	0.00			
0.40	220.64	0.00	0.06	225.58	0.00	0.08	543.47	0.00			
0.54	235.08	0.00	0.07	251.12	0.00	0.10	585.70	0.00			
0.69	248.57	0.00	0.08	275.68	0.00	0.11	619.52	0.00			
0.85	262.04	0.00	0.09	300.36	-0.01	0.12	648.70	0.00			
1.02	273.51	0.00	0.10	324.31	-0.01	0.12	674.18	0.00			
1.22	283.24	0.00	0.11	348.60	-0.01	0.13	697.57	0.00			
1.42	291.90	0.00	0.12	372.31	-0.01	0.14	721.90	0.01			
1.63	300.90	0.00	0.13	395.43	-0.01	0.14	745.05	0.01			
1.91	303.66	0.00	0.14	417.79	-0.01	0.15	766.91	0.01			
2.17	308.26	0.00	0.15	439.78	-0.01	0.15	793.11	0.02			
2.39	316.67	0.00	0.16	461.90	-0.01	0.16	821.12	0.02			
2.74	311.27	0.00	0.17	483.50	-0.01	0.18	848.37	0.02			
3.20	301.28	0.00	0.17	504.76	-0.02	0.18	874.56	0.01			
3.52	302.19	0.00	0.18	526.23	-0.02	0.19	898.85	0.01			
3.89	299.16	0.00	0.19	546.98	-0.02	0.20	922.93	0.02			
4.18	302.64	0.00	0.20	567.14	-0.02	0.20	946.04	0.02			
4.63	293.56	0.00	0.21	586.90	-0.02	0.21	969.30	0.02			
4.94	295.44	0.00	0.21	604.15	-0.02	0.22	992.28	0.01			
5.21	302.34	0.00	0.22	622.76	-0.02	0.23	1011.84	0.01			

LP	1/30/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-06**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	05
Location:	-	**Depth (m):**	96.42-96.75
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1		Residual 1		Residual 2		Residual 3	
Normal Stress , kPa	525	Normal Stress , kPa	1400	Normal Stress , kPa	2000	Normal Stress , kPa	-

Peak 1 Horz Disp mm	Peak 1 Shear Stress kPa	Peak 1 Vert Disp mm	Residual 1 Horz Disp mm	Residual 1 Shear Stress kPa	Residual 1 Vert Disp mm	Residual 2 Horz Disp mm	Residual 2 Shear Stress kPa	Residual 2 Vert Disp mm	Residual 3 Horz Disp mm	Residual 3 Shear Stress kPa	Residual 3 Vert Disp mm
5.49	307.47	0.00	0.23	641.05	-0.02	0.24	1031.03	0.01			
5.87	304.44	0.00	0.29	653.89	-0.02	0.25	1049.44	0.01			
6.31	295.78	0.00	0.35	667.80	-0.02	0.26	1068.29	0.01			
6.72	288.82	-0.01	0.42	682.41	-0.03	0.26	1085.13	0.01			
7.06	289.05	-0.01	0.43	700.77	-0.03	0.27	1103.07	0.01			
7.51	280.80	-0.01	0.58	707.39	-0.03	0.29	1118.26	0.01			
8.03	267.43	-0.01	0.66	719.31	-0.03	0.30	1131.93	0.01			
8.48	260.99	-0.01	0.73	732.24	-0.03	0.32	1143.48	0.01			
8.76	268.27	-0.02	0.80	744.37	-0.03	0.33	1150.29	0.01			
9.14	266.03	-0.02	0.87	756.76	-0.03	0.36	1163.06	0.01			
9.52	265.28	-0.02	0.99	763.83	-0.03	0.38	1175.10	0.01			
9.84	269.33	-0.02	1.11	771.85	-0.03	0.42	1187.89	0.01			
10.04	282.20	-0.02	1.28	775.81	-0.03	0.49	1198.15	0.01			
10.38	281.71	-0.02	1.40	782.88	-0.03	0.57	1208.21	0.00			
10.62	290.81	-0.03	1.56	787.98	-0.03	0.62	1216.45	0.00			
10.92	294.29	-0.03	1.71	793.73	-0.03	0.70	1224.93	0.00			
11.85	246.06	-0.04	1.89	798.47	-0.03	0.79	1231.98	0.00			
12.28	242.80	-0.04	2.16	793.73	-0.03	0.89	1239.13	0.00			
12.48	259.06	-0.04	2.37	796.69	-0.03	1.05	1246.83	0.00			
12.72	270.20	-0.04	2.56	800.10	-0.03	1.18	1256.19	0.00			
12.90	284.97	-0.04	2.70	806.54	-0.03	1.33	1262.56	0.00			
13.16	292.28	-0.04	3.11	787.35	-0.03	1.58	1257.08	0.00			
13.44	297.87	-0.05	3.42	779.20	-0.03	1.84	1254.76	0.00			
13.68	307.56	-0.05	3.64	779.67	-0.04	1.98	1263.70	0.00			
13.92	315.29	-0.05	3.80	785.67	-0.03	2.17	1267.35	0.00			
14.38	304.91	-0.05	3.98	788.69	-0.03	2.34	1270.72	-0.01			
14.84	296.36	-0.06	4.22	788.63	-0.03	2.47	1276.71	0.00			
15.32	285.72	-0.06	4.53	779.30	-0.03	2.59	1280.74	0.00			
15.58	293.85	-0.06	4.73	782.61	-0.03	2.72	1286.60	0.00			
15.95	291.55	-0.07	5.00	778.64	-0.03	2.85	1290.88	0.00			

LP	1/30/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-06**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	05
Location:	-	**Depth (m):**	96.42-96.75
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1		Residual 1		Residual 2		Residual 3	
Normal Stress , kPa	525	Normal Stress , kPa	1400	Normal Stress , kPa	2000	Normal Stress , kPa	-

Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
16.51	272.54	-0.07	5.17	782.90	-0.03	3.02	1290.85	0.00			
16.93	269.00	-0.08	5.33	787.82	-0.04	3.11	1298.76	0.00			
17.26	271.12	-0.08	5.51	792.05	-0.04	3.29	1296.79	-0.01			
17.65	267.71	-0.08	5.65	798.52	-0.04	3.44	1299.83	-0.01			
18.11	260.26	-0.09	5.80	804.98	-0.04	3.60	1300.04	-0.01			
18.44	263.14	-0.09	5.97	809.41	-0.04	3.76	1301.50	-0.01			
			6.16	810.83	-0.04	3.92	1305.14	-0.01			
			6.32	816.32	-0.04	4.05	1310.96	-0.01			
			6.45	822.20	-0.04	4.19	1314.76	-0.01			
			6.57	831.82	-0.05	4.47	1334.31	-0.01			
			6.79	829.60	-0.05	4.73	1347.12	-0.02			
			7.08	821.71	-0.05	5.01	1351.68	-0.02			
			7.27	824.56	-0.05	5.20	1365.28	-0.02			
			7.56	817.17	-0.05	5.39	1378.90	-0.02			
			7.84	811.11	-0.06	5.56	1388.69	-0.02			
			8.15	803.02	-0.06	5.80	1390.31	-0.02			
			8.38	801.97	-0.06	6.05	1392.15	-0.02			
			8.66	797.05	-0.06	6.32	1395.92	-0.02			
			8.88	795.72	-0.06	6.53	1408.00	-0.02			
			9.05	801.05	-0.06	6.89	1411.30	-0.02			
			9.21	806.61	-0.06	7.40	1414.89	-0.02			
			9.32	815.42	-0.06	7.83	1428.93	-0.02			
			9.45	822.68	-0.07	8.22	1443.57	-0.03			
			9.55	833.60	-0.07	8.59	1459.86	-0.04			
			9.67	841.98	-0.07	9.29	1445.51	-0.05			
			9.78	850.46	-0.08	12.66	1182.95	-0.17			
			9.89	858.99	-0.08	13.07	1216.85	-0.18			
			10.08	860.13	-0.08	13.63	1236.49	-0.18			
			10.27	861.56	-0.08	14.47	1221.24	-0.20			
			10.38	869.95	-0.08	15.06	1233.12	-0.21			

LP	1/30/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-06**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	05
Location:	-	**Depth (m):**	96.42-96.75
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1		Residual 1		Residual 2		Residual 3	
Normal Stress , kPa	525	Normal Stress , kPa	1400	Normal Stress , kPa	2000	Normal Stress , kPa	-

Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
			10.51	876.55	-0.08	15.60	1251.02	-0.22			
			10.75	873.04	-0.09	16.48	1234.18	-0.23			
			10.90	877.07	-0.09	17.37	1214.48	-0.24			
			10.97	889.03	-0.09						
			11.08	896.62	-0.10						
			11.28	896.42	-0.10						
			12.11	835.00	-0.10						
			12.26	842.67	-0.10						
			13.75	724.54	-0.12						
			14.02	723.20	-0.13						
			14.24	725.73	-0.13						
			14.48	726.36	-0.13						
			14.79	722.09	-0.13						
			15.13	714.04	-0.14						
			15.31	721.88	-0.14						
			16.06	678.33	-0.14						
			16.35	676.58	-0.15						
			16.60	679.87	-0.15						
			16.88	679.05	-0.15						
			17.08	684.88	-0.16						
			17.69	678.28	-0.16						
			17.87	687.70	-0.17						

LP	1/30/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY	DATE

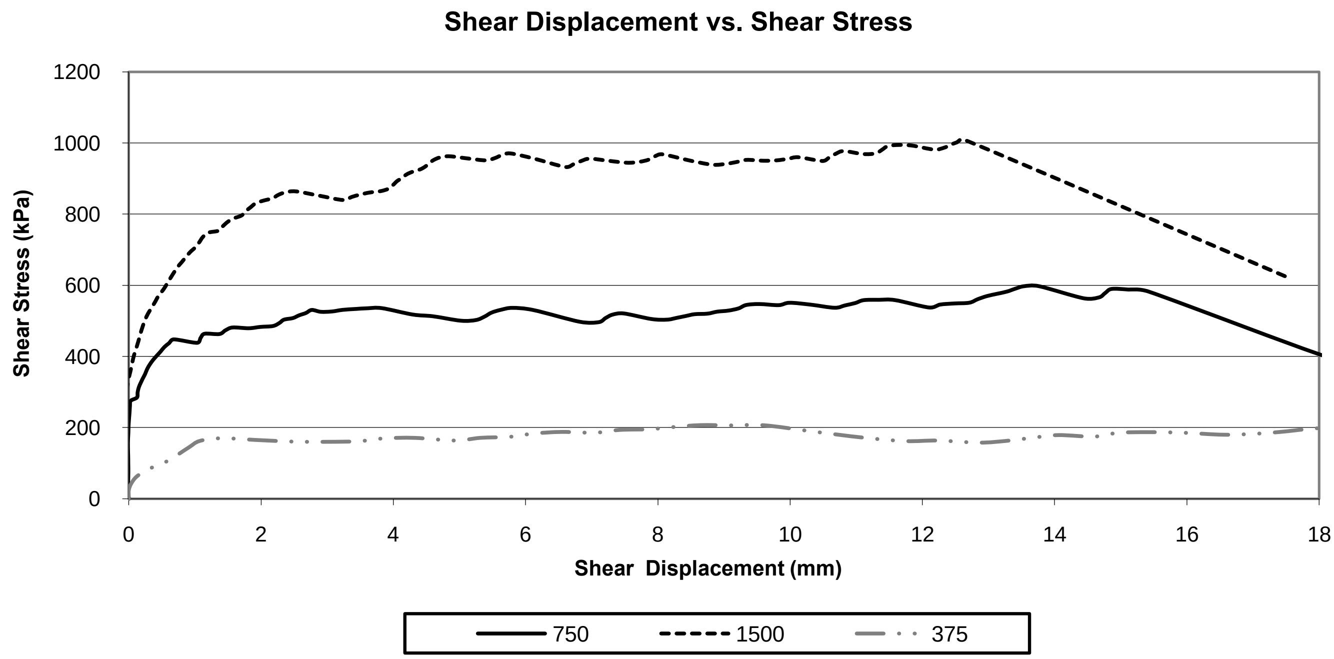
Golder Associates Ltd. - Burnaby Lab
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

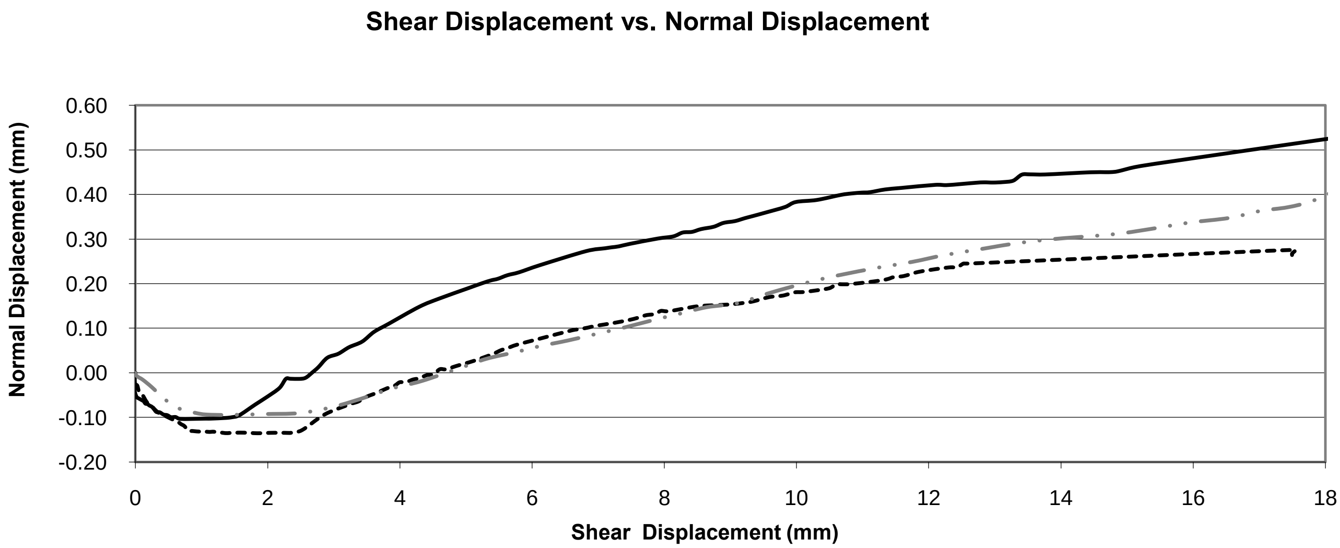
Direct Shear Strength Testing Under Constant Normal Force

Reference
ASTM D5607-08

Project No.:	10-1416-0029 PHASE18000	**Borehole:**	**10BGC GTH-06**
Client:	BGC ENGINEERING INC.	**Sample No.:**	07
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Depth (m):**	149.4-149.61
Location:	-	**Lab ID No:**	2

Specimen		Machine ID's	
Joint Type	OPEN FACE	Pressure Transducer	PT0001
Shape	Elliptical	Horizontal LVDT	ID0002
Joint Angle	56	Vertical LVDT	ID0003





LP	1/30/2011	JR	Feb.14.2011
TESTED BY	DATE	CHECKED BY:	DATE

Golder Associates Ltd. - Burnaby Lab
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force			Reference ASTM D5607-08
Project No.:	10-1416-0029 PHASE18000	**Borehole:**	**10BGC GTH-06**
Client:	BGC ENGINEERING INC.	**Sample No.:**	07
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Depth (m):**	149.4-149.61
Location:	-	**Lab ID No:**	2

BEFORE TEST

AFTER TEST

LP	1/30/2011	JR	Feb.14.2011
TESTED BY	DATE	CHECKED BY:	DATE

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-06**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	07
Location:	-	**Depth (m):**	149.4-149.61
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1			Residual 1			Residual 2			Residual 3		
Normal Stress , kPa		750	Normal Stress , kPa		1500	Normal Stress , kPa		375	Normal Stress , kPa		-
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
0.00	0.00	0.0000	0.00	0.00	0.00	0.00	0.00	0.00			
0.00	4.87	0.00	-0.01	7.64	0.00	0.00	6.88	0.00			
-0.01	16.39	-0.01	-0.02	24.08	0.00	0.00	24.94	0.00			
-0.01	29.86	-0.01	-0.03	44.05	0.00	0.04	42.74	-0.01			
-0.01	46.29	-0.02	-0.04	64.41	-0.01	0.11	61.60	-0.02			
-0.01	64.76	-0.02	-0.05	84.81	-0.01	0.25	78.72	-0.03			
-0.01	82.79	-0.03	-0.05	106.66	-0.01	0.43	94.16	-0.06			
-0.01	101.50	-0.03	-0.06	129.85	-0.01	0.62	109.11	-0.08			
-0.01	119.39	-0.04	-0.07	152.86	-0.01	0.76	126.76	-0.08			
-0.01	136.76	-0.04	-0.06	175.12	-0.01	0.91	145.12	-0.09			
-0.02	153.89	-0.04	-0.06	197.76	-0.01	1.07	162.61	-0.09			
-0.01	170.47	-0.04	-0.05	219.72	-0.02	1.40	169.96	-0.09			
-0.01	186.75	-0.04	-0.05	240.73	-0.02	1.93	165.04	-0.09			
0.00	201.57	-0.04	-0.04	261.80	-0.02	2.49	160.54	-0.09			
0.00	216.78	-0.05	-0.04	282.08	-0.02	3.00	159.94	-0.08			
0.01	231.23	-0.05	-0.03	302.22	-0.02	3.49	161.69	-0.05			
0.01	246.54	-0.05	-0.02	321.44	-0.02	3.87	169.78	-0.04			
0.02	261.01	-0.05	0.00	341.47	-0.03	4.33	170.95	-0.02			
0.03	275.59	-0.06	0.03	361.01	-0.03	4.93	163.55	0.01			
0.12	284.61	-0.06	0.05	381.78	-0.04	5.32	171.11	0.03			
0.13	299.19	-0.07	0.07	402.13	-0.04	5.77	174.13	0.05			
0.15	313.05	-0.07	0.11	422.63	-0.05	6.12	183.15	0.06			
0.18	326.60	-0.07	0.14	442.82	-0.06	6.54	187.73	0.07			
0.21	338.30	-0.07	0.17	463.14	-0.07	7.05	185.56	0.09			
0.25	351.00	-0.08	0.21	482.97	-0.07	7.42	193.35	0.10			
0.28	364.50	-0.08	0.24	502.28	-0.07	7.87	195.41	0.12			
0.32	377.66	-0.09	0.29	520.81	-0.08	8.25	201.67	0.13			
0.37	390.45	-0.09	0.35	537.76	-0.09	8.64	206.76	0.15			
0.43	402.77	-0.09	0.40	554.90	-0.09	9.12	206.10	0.16			
0.48	414.45	-0.09	0.45	572.25	-0.10	9.60	206.45	0.18			

LP	1/30/2011	JR	Feb.14.2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference
ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-06**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	07
Location:	-	**Depth (m):**	149.4-149.61
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1		Residual 1		Residual 2		Residual 3	
Normal Stress , kPa	750	Normal Stress , kPa	1500	Normal Stress , kPa	375	Normal Stress , kPa	-

Peak 1 Horz Disp mm	Peak 1 Shear Stress kPa	Peak 1 Vert Disp mm	Residual 1 Horz Disp mm	Residual 1 Shear Stress kPa	Residual 1 Vert Disp mm	Residual 2 Horz Disp mm	Residual 2 Shear Stress kPa	Residual 2 Vert Disp mm	Residual 3 Horz Disp mm	Residual 3 Shear Stress kPa	Residual 3 Vert Disp mm
0.54	426.61	-0.10	0.52	587.51	-0.10	10.34	188.97	0.21			
0.61	437.60	-0.10	0.58	604.36	-0.11	11.10	171.77	0.23			
0.68	448.14	-0.10	0.63	620.63	-0.11	11.74	161.99	0.25			
1.03	438.52	-0.10	0.68	636.80	-0.11	12.24	163.55	0.26			
1.08	452.11	-0.10	0.74	651.66	-0.12	12.86	157.66	0.28			
1.15	463.96	-0.10	0.80	664.83	-0.13	13.28	162.82	0.29			
1.37	463.17	-0.10	0.86	679.60	-0.13	13.67	171.34	0.30			
1.46	473.64	-0.10	0.93	693.13	-0.13	14.06	178.80	0.30			
1.57	481.56	-0.10	1.00	705.94	-0.13	14.60	174.65	0.31			
1.81	479.45	-0.07	1.06	720.74	-0.13	14.95	185.10	0.31			
1.99	483.21	-0.05	1.12	734.75	-0.13	15.42	187.10	0.32			
2.18	485.68	-0.03	1.19	747.29	-0.13	15.95	185.45	0.34			
2.28	494.14	-0.01	1.36	753.10	-0.14	16.55	179.90	0.35			
2.35	503.54	-0.01	1.42	765.77	-0.13	17.02	182.42	0.36			
2.48	508.02	-0.01	1.49	777.37	-0.13	17.43	187.95	0.37			
2.58	515.85	-0.01	1.58	787.09	-0.13	17.79	195.21	0.39			
2.68	522.26	0.00	1.70	795.59	-0.13	18.19	201.28	0.41			
2.77	530.86	0.01	1.77	807.63	-0.13						
2.90	525.67	0.03	1.84	818.93	-0.14						
3.07	526.52	0.04	1.92	830.39	-0.14						
3.23	531.12	0.06	2.04	837.68	-0.13						
3.43	533.65	0.07	2.17	843.98	-0.13						
3.61	535.61	0.09	2.26	853.81	-0.13						
3.83	535.81	0.11	2.36	860.58	-0.13						
4.29	518.02	0.15	2.52	863.55	-0.13						
4.60	513.01	0.17	2.86	851.94	-0.09						
5.02	500.67	0.19	3.24	839.19	-0.07						
5.25	502.59	0.20	3.37	847.79	-0.06						
5.38	512.30	0.21	3.50	854.42	-0.05						
5.48	523.33	0.21	3.64	860.20	-0.05						

LP	1/30/2011	JR	Feb.14.2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-06**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	07
Location:	-	**Depth (m):**	149.4-149.61
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1			Residual 1			Residual 2			Residual 3		
Normal Stress , kPa		750	Normal Stress , kPa		1500	Normal Stress , kPa		375	Normal Stress , kPa		-
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
5.63	531.40	0.22	3.80	864.06	-0.03						
5.80	536.70	0.23	3.92	870.62	-0.03						
6.12	530.47	0.24	3.99	881.02	-0.02						
6.82	497.63	0.27	4.05	892.25	-0.02						
7.11	496.58	0.28	4.13	901.20	-0.02						
7.21	508.09	0.28	4.20	911.11	-0.01						
7.31	517.68	0.28	4.29	918.76	-0.01						
7.48	521.05	0.29	4.40	925.21	-0.01						
7.90	505.40	0.30	4.48	933.06	0.00						
8.14	503.58	0.31	4.54	942.67	0.00						
8.28	508.41	0.31	4.61	951.64	0.01						
8.42	513.79	0.32	4.70	958.69	0.01						
8.56	518.95	0.32	4.85	962.15	0.02						
8.75	520.44	0.33	5.12	955.96	0.03						
8.90	525.99	0.34	5.40	950.67	0.04						
9.07	529.15	0.34	5.53	956.81	0.05						
9.22	535.29	0.35	5.63	964.87	0.06						
9.33	544.76	0.35	5.76	970.22	0.06						
9.53	547.48	0.36	6.12	955.78	0.08						
9.83	544.41	0.37	6.60	931.92	0.10						
9.99	551.02	0.38	6.73	940.40	0.10						
10.31	545.77	0.39	6.84	948.90	0.10						
10.67	537.07	0.40	6.97	955.30	0.11						
10.83	543.75	0.40	7.26	949.33	0.11						
10.98	550.31	0.40	7.53	943.89	0.12						
11.11	558.38	0.41	7.72	946.45	0.13						
11.34	559.40	0.41	7.86	952.47	0.13						
11.59	558.42	0.41	7.95	961.60	0.14						
12.10	537.80	0.42	8.07	967.63	0.14						
12.27	545.94	0.42	8.50	949.27	0.15						

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Direct Shear Strength Testing Under Constant Normal Force

Reference ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-06**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	07
Location:	-	**Depth (m):**	149.4-149.61
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1			Residual 1			Residual 2			Residual 3		
Normal Stress , kPa	750		Normal Stress , kPa	1500		Normal Stress , kPa	375		Normal Stress , kPa	-	
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
12.48	549.14	0.42	8.83	938.33	0.15						
12.71	551.17	0.43	9.04	941.02	0.15						
12.84	561.23	0.43	9.20	946.31	0.16						
12.97	569.82	0.43	9.35	951.97	0.16						
13.13	576.17	0.43	9.59	949.51	0.17						
13.28	582.53	0.43	9.80	950.66	0.17						
13.41	590.92	0.44	9.97	954.96	0.18						
13.54	597.57	0.45	10.12	959.45	0.18						
13.76	597.67	0.44	10.49	948.89	0.19						
14.44	563.59	0.45	10.59	959.00	0.20						
14.67	566.19	0.45	10.69	969.18	0.20						
14.76	578.52	0.45	10.81	976.71	0.20						
14.86	589.92	0.45	11.10	968.41	0.20						
15.12	588.17	0.46	11.29	970.33	0.21						
15.42	582.56	0.47	11.39	980.54	0.21						
18.13	398.03	0.53	11.47	990.09	0.21						
18.14	424.44	0.53	11.62	993.80	0.22						
			11.85	992.07	0.23						
			12.18	980.96	0.23						
			12.33	986.49	0.24						
			12.43	994.95	0.24						
			12.53	1001.66	0.25						
			12.62	1009.32	0.25						
			17.55	620.37	0.28						
			17.52	662.35	0.27						
			17.50	691.78	0.27						
			17.50	718.55	0.27						
			17.50	744.67	0.27						
			17.50	769.45	0.27						
			17.50	792.47	0.26						

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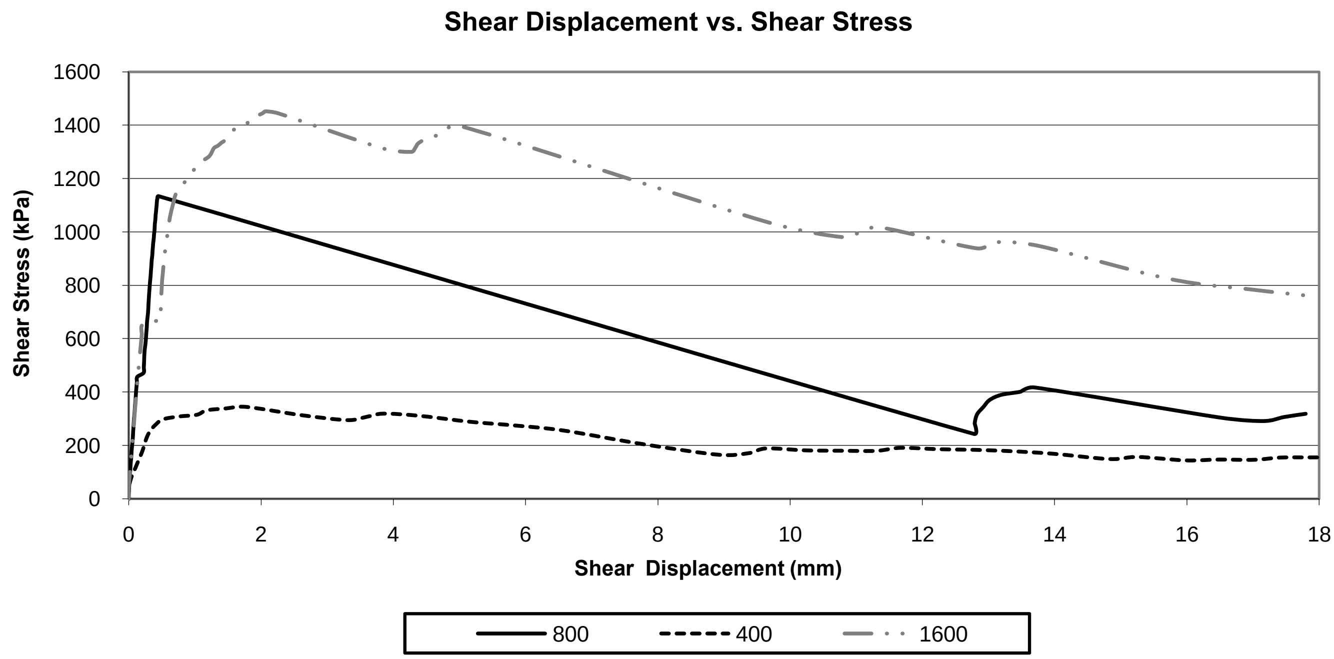
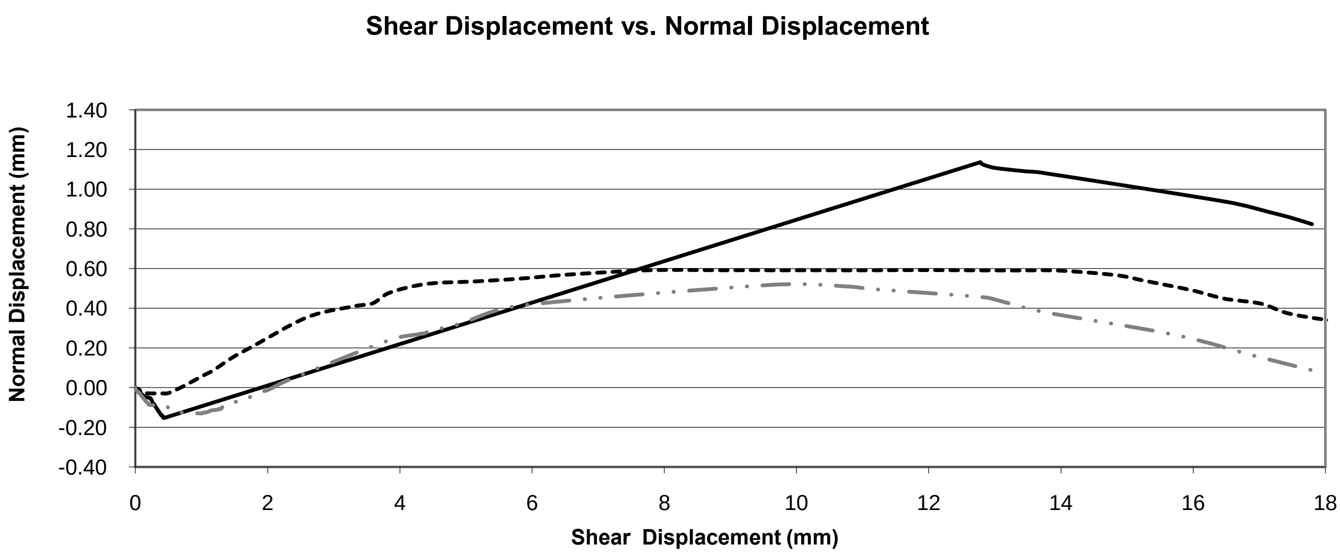
Golder Associates Ltd. - Burnaby Lab
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force	Reference ASTM D5607-08

Project No.:	10-1416-0029 PHASE18000	**Borehole:**	**10BGC GTH-06**
Client:	BGC ENGINEERING INC.	**Sample No.:**	13
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Depth (m):**	204.03-204.23
Location:	-	**Lab ID No:**	2

Specimen		Machine ID's	
Joint Type	OPEN FACE	Pressure Transducer	PT0001
Shape	Elliptical	Horizontal LVDT	ID0002
Joint Angle	52	Vertical LVDT	ID0003





LP	1/30/2011	JR	Feb.14.2011
TESTED BY	DATE	CHECKED BY:	DATE

Golder Associates Ltd. - Burnaby Lab
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force	Reference ASTM D5607-08

Project No.:	10-1416-0029 PHASE18000	**Borehole:**	**10BGC GTH-06**
Client:	BGC ENGINEERING INC.	**Sample No.:**	13
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Depth (m):**	204.03-204.23
Location:	-	**Lab ID No:**	2

BEFORE TEST

AFTER TEST

LP	1/30/2011	JR	Feb.14.2011
TESTED BY	DATE	CHECKED BY:	DATE

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-06**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	13
Location:	-	**Depth (m):**	204.03-204.23
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1			Residual 1			Residual 2			Residual 3		
Normal Stress , kPa		800	Normal Stress , kPa		400	Normal Stress , kPa		1600	Normal Stress , kPa		-
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
0.00	0.00	0.0000	0.00	0.00	0.00	0.00	0.00	0.00			
0.00	10.92	0.00	-0.01	8.82	0.00	0.00	28.77	-0.01			
0.00	30.61	0.00	-0.01	26.86	0.00	0.01	73.60	-0.01			
0.00	48.58	-0.01	0.00	46.21	0.00	0.03	121.32	-0.02			
0.01	67.57	-0.01	0.02	68.75	-0.01	0.04	173.83	-0.02			
0.02	88.25	-0.01	0.05	91.17	-0.01	0.06	228.52	-0.03			
0.02	109.43	-0.01	0.10	113.58	-0.03	0.08	281.06	-0.03			
0.03	131.48	-0.01	0.13	135.87	-0.03	0.09	332.44	-0.04			
0.04	153.40	-0.01	0.17	158.39	-0.03	0.11	382.93	-0.05			
0.04	178.10	-0.02	0.21	183.12	-0.03	0.13	432.15	-0.06			
0.05	203.13	-0.02	0.24	208.40	-0.03	0.15	480.11	-0.06			
0.06	228.09	-0.03	0.28	232.70	-0.03	0.16	527.08	-0.07			
0.07	252.45	-0.03	0.33	256.25	-0.03	0.18	571.66	-0.08			
0.07	276.61	-0.03	0.41	278.03	-0.03	0.20	613.42	-0.08			
0.08	300.56	-0.03	0.51	296.81	-0.03	0.22	654.48	-0.09			
0.09	323.81	-0.03	0.75	307.58	0.01	0.48	672.81	-0.09			
0.09	347.10	-0.03	1.03	314.20	0.06	0.48	713.71	-0.10			
0.10	370.23	-0.03	1.18	330.91	0.09	0.49	750.31	-0.10			
0.11	392.67	-0.04	1.47	337.88	0.15	0.50	785.05	-0.10			
0.11	414.73	-0.04	1.78	343.68	0.21	0.51	818.49	-0.10			
0.12	436.01	-0.04	2.60	313.08	0.36	0.52	850.54	-0.11			
0.13	456.70	-0.04	3.31	294.22	0.41	0.53	882.12	-0.11			
0.22	471.88	-0.05	3.59	306.11	0.42	0.54	911.81	-0.11			
0.23	493.20	-0.05	3.85	318.49	0.48	0.55	938.09	-0.11			
0.23	514.01	-0.05	4.41	310.08	0.52	0.57	962.55	-0.12			
0.23	536.13	-0.06	5.16	288.16	0.54	0.58	987.14	-0.12			
0.24	558.74	-0.06	5.82	274.62	0.55	0.60	1012.21	-0.12			
0.25	580.08	-0.07	6.58	255.27	0.57	0.61	1037.02	-0.12			
0.26	601.89	-0.08	7.78	204.22	0.59	0.63	1059.23	-0.12			
0.26	622.66	-0.08	8.92	164.70	0.59	0.65	1079.81	-0.12			

LP	1/30/2011	JR	Feb.14.2011
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Golder Associates

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-06**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	13
Location:	-	**Depth (m):**	204.03-204.23
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1			Residual 1			Residual 2			Residual 3		
Normal Stress , kPa		800	Normal Stress , kPa		400	Normal Stress , kPa		1600	Normal Stress , kPa		-
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
0.27	643.05	-0.08	9.38	170.87	0.59	0.67	1100.81	-0.13			
0.27	662.67	-0.08	9.64	188.38	0.59	0.69	1122.24	-0.13			
0.28	682.03	-0.08	10.24	181.16	0.59	0.71	1140.82	-0.13			
0.29	701.34	-0.09	10.76	179.78	0.59	0.74	1158.16	-0.13			
0.29	719.82	-0.09	11.31	179.45	0.59	0.78	1172.77	-0.13			
0.30	738.55	-0.09	11.67	190.59	0.59	0.84	1185.51	-0.13			
0.30	756.07	-0.10	12.25	185.37	0.59	0.88	1201.05	-0.13			
0.31	773.99	-0.10	12.79	183.13	0.59	0.92	1212.37	-0.13			
0.31	791.08	-0.10	13.35	177.95	0.59	0.95	1224.56	-0.13			
0.32	807.61	-0.10	13.98	168.39	0.59	1.00	1235.25	-0.13			
0.32	822.68	-0.11	14.83	148.59	0.57	1.04	1248.28	-0.13			
0.33	838.70	-0.11	15.26	156.50	0.54	1.08	1261.48	-0.12			
0.33	853.65	-0.11	15.98	143.62	0.49	1.15	1271.98	-0.12			
0.34	868.75	-0.12	16.47	146.74	0.45	1.21	1280.93	-0.11			
0.34	883.60	-0.12	17.02	145.88	0.42	1.24	1291.95	-0.11			
0.35	898.85	-0.12	17.43	154.35	0.38	1.26	1302.88	-0.11			
0.35	913.14	-0.12	17.96	154.86	0.34	1.29	1315.46	-0.11			
0.36	927.09	-0.12	18.45	156.90	0.33	1.35	1323.36	-0.08			
0.36	940.14	-0.12				1.40	1333.94	-0.08			
0.37	953.34	-0.13				1.44	1339.90	-0.08			
0.37	965.60	-0.13				1.47	1349.47	-0.07			
0.38	978.07	-0.13				1.50	1357.37	-0.07			
0.38	990.86	-0.13				1.53	1368.10	-0.07			
0.39	1002.94	-0.13				1.56	1378.09	-0.07			
0.39	1016.58	-0.14				1.61	1386.17	-0.07			
0.39	1029.05	-0.14				1.65	1393.27	-0.06			
0.40	1040.76	-0.14				1.69	1401.31	-0.06			
0.40	1052.11	-0.14				1.76	1405.06	-0.04			
0.40	1063.70	-0.14				1.81	1409.88	-0.04			
0.41	1075.35	-0.14				1.87	1417.53	-0.03			

LP	1/30/2011	JR	Feb.14.2011
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Golder Associates

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference
ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-06**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	13
Location:	-	**Depth (m):**	204.03-204.23
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1			Residual 1			Residual 2			Residual 3		
Normal Stress , kPa		800	Normal Stress , kPa		400	Normal Stress , kPa		1600	Normal Stress , kPa		-
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
0.41	1085.23	-0.15				1.90	1426.26	-0.02			
0.42	1096.20	-0.14				1.93	1436.10	-0.02			
0.42	1106.81	-0.15				1.98	1439.96	-0.01			
0.42	1114.88	-0.15				2.03	1445.80	-0.01			
0.43	1124.52	-0.15				2.07	1451.85	0.00			
0.45	1134.12	-0.15				2.27	1443.82	0.03			
12.78	243.13	1.14				3.83	1314.04	0.24			
12.79	282.05	1.13				4.27	1299.86	0.27			
12.83	316.54	1.12				4.33	1315.14	0.27			
12.92	344.28	1.11				4.37	1330.24	0.27			
13.02	370.37	1.11				4.45	1342.93	0.28			
13.19	389.64	1.10				4.53	1354.07	0.29			
13.48	401.30	1.09				4.67	1361.93	0.30			
13.69	417.33	1.08				4.73	1375.25	0.31			
16.50	304.55	0.94				4.81	1386.16	0.31			
17.15	291.31	0.88				4.87	1394.86	0.32			
17.47	306.53	0.86				5.00	1397.32	0.33			
17.80	318.59	0.82				5.81	1337.71	0.41			
						9.62	1039.32	0.52			
						10.77	981.15	0.51			
						11.07	1000.49	0.50			
						11.36	1017.29	0.49			
						12.83	938.48	0.46			
						13.10	961.33	0.44			
						13.75	948.00	0.38			
						15.73	824.51	0.27			
						16.96	784.56	0.16			
						17.96	757.49	0.07			

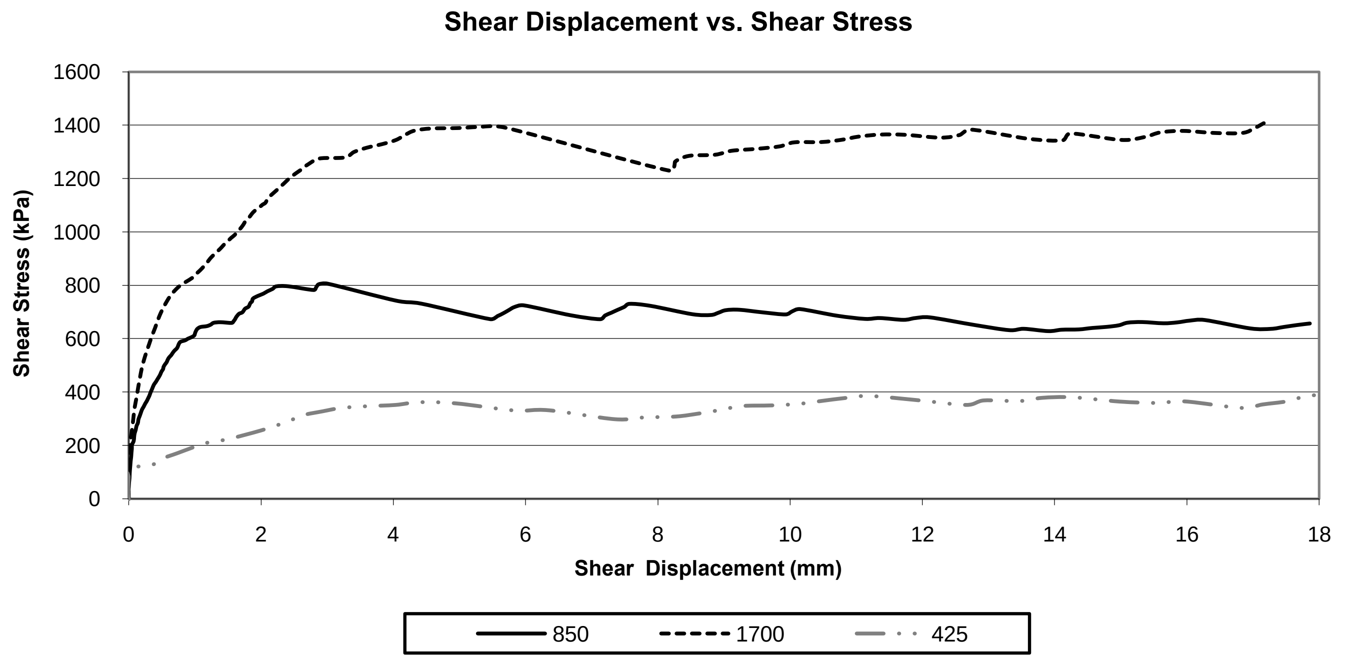
LP	1/30/2011	JR	Feb.14.2011
TESTED BY	DATE	CHECKED BY	DATE

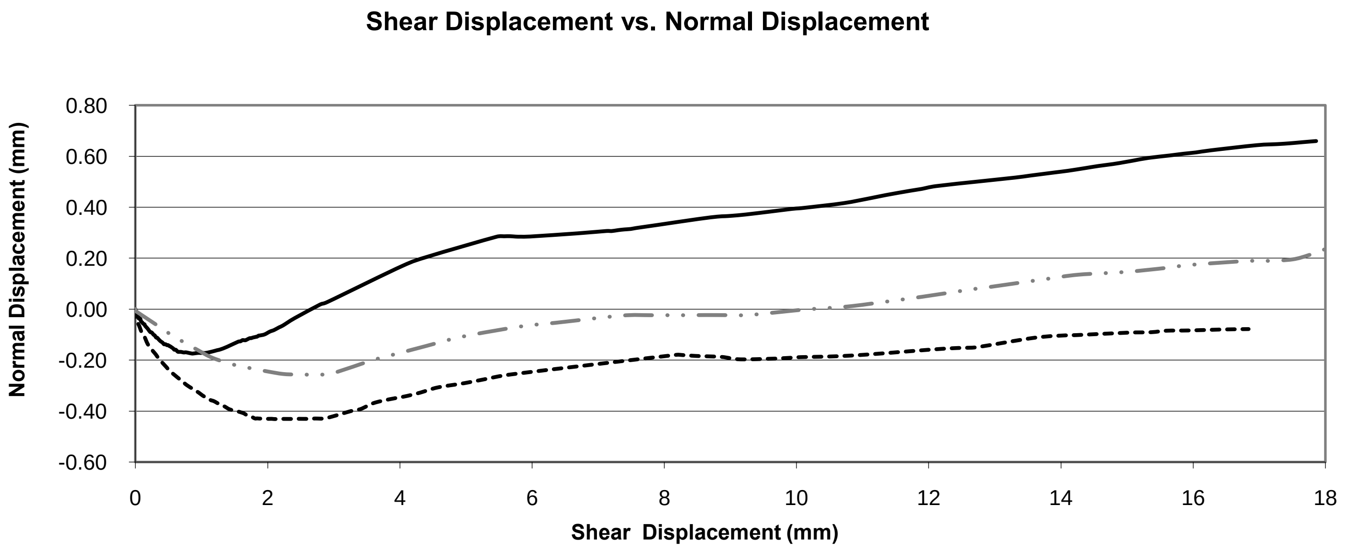
Golder Associates Ltd. - Burnaby Lab
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force	Reference ASTM D5607-08

Project No.:	10-1416-0029 PHASE18000	**Borehole:**	**10BGC GTH-07**
Client:	BGC ENGINEERING INC.	**Sample No.:**	7
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Depth (m):**	198.98-199.27
Location:	-	**Lab ID No:**	2

Specimen		Machine ID's	
Joint Type	OPEN FACE	Pressure Transducer	PT0001
Shape	Elliptical	Horizontal LVDT	ID0002
Joint Angle	60	Vertical LVDT	ID0003





LP	1/29/2011	JR	Feb.14.2011
TESTED BY	DATE	CHECKED BY:	DATE

Golder Associates Ltd. - Burnaby Lab
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force			Reference ASTM D5607-08
Project No.:	10-1416-0029 PHASE18000	**Borehole:**	**10BGC GTH-07**
Client:	BGC ENGINEERING INC.	**Sample No.:**	7
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Depth (m):**	198.98-199.27
Location:	-	**Lab ID No:**	2

BEFORE TEST

AFTER TEST

LP	1/29/2011	JR	Feb.14.2011
TESTED BY	DATE	CHECKED BY:	DATE

Golder Associates

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-07**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	7
Location:	-	**Depth (m):**	198.98-199.27
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1		Residual 1		Residual 2		Residual 3	
Normal Stress , kPa	850	Normal Stress , kPa	1700	Normal Stress , kPa	425	Normal Stress , kPa	-

Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
0.00	0.00	0.0000	0.00	0.00	0.00	0.00	0.00	0.00			
0.00	-0.85	0.00	0.00	3.13	0.00	0.00	-1.47	0.00			
0.00	-0.36	0.00	-0.01	47.48	-0.01	-0.01	18.93	0.00			
0.00	11.95	0.00	0.00	92.62	-0.02	-0.01	50.28	0.00			
0.00	29.31	0.00	0.00	137.66	-0.03	0.00	82.09	0.00			
0.00	44.29	-0.01	0.01	181.00	-0.04	0.00	114.84	-0.01			
0.00	60.91	0.00	0.03	223.52	-0.05	0.35	127.37	-0.07			
0.01	76.42	-0.01	0.05	263.86	-0.06	0.51	150.86	-0.10			
0.01	92.18	-0.01	0.07	304.38	-0.07	0.73	170.68	-0.13			
0.02	109.00	-0.01	0.09	343.24	-0.09	0.94	190.03	-0.16			
0.02	124.70	-0.02	0.12	380.55	-0.10	1.17	209.05	-0.19			
0.03	140.33	-0.02	0.14	417.17	-0.11	1.48	222.50	-0.22			
0.04	156.59	-0.02	0.17	453.23	-0.13	1.75	239.35	-0.23			
0.04	172.14	-0.02	0.20	488.33	-0.14	2.00	256.25	-0.24			
0.05	186.53	-0.03	0.23	520.87	-0.15	2.23	274.51	-0.25			
0.05	201.42	-0.04	0.27	550.68	-0.17	2.44	293.65	-0.26			
0.07	215.89	-0.04	0.31	579.66	-0.18	2.64	313.51	-0.26			
0.08	230.83	-0.04	0.35	609.83	-0.19	2.92	327.48	-0.25			
0.09	244.37	-0.05	0.40	639.63	-0.21	3.21	340.24	-0.23			
0.11	258.18	-0.05	0.44	667.76	-0.22	3.59	346.89	-0.20			
0.12	271.81	-0.06	0.48	692.84	-0.23	4.03	351.82	-0.17			
0.14	284.01	-0.06	0.52	716.32	-0.24	4.39	361.84	-0.14			
0.15	297.53	-0.06	0.57	738.57	-0.25	4.94	357.71	-0.11			
0.17	309.89	-0.07	0.63	760.73	-0.27	5.83	331.13	-0.07			
0.18	321.83	-0.08	0.69	779.56	-0.28	6.35	331.79	-0.05			
0.20	333.98	-0.08	0.77	797.53	-0.30	7.35	298.21	-0.03			
0.23	344.67	-0.09	0.86	812.35	-0.31	7.79	304.90	-0.02			
0.25	355.98	-0.09	0.96	826.99	-0.33	8.28	308.48	-0.02			
0.27	366.10	-0.10	1.02	841.82	-0.34	8.63	320.04	-0.02			
0.29	377.17	-0.10	1.08	855.55	-0.35	8.96	333.69	-0.02			

LP	1/29/2011	JR	Feb.14.2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-07**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	7
Location:	-	**Depth (m):**	198.98-199.27
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1			Residual 1			Residual 2			Residual 3		
Normal Stress , kPa		850	Normal Stress , kPa		1700	Normal Stress , kPa		425	Normal Stress , kPa		-
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
0.31	387.04	-0.11	1.14	870.88	-0.36	9.26	347.58	-0.02			
0.33	398.07	-0.11	1.19	885.26	-0.36	9.72	350.04	-0.01			
0.35	407.92	-0.12	1.23	901.00	-0.37	10.13	355.81	0.00			
0.36	418.32	-0.12	1.29	915.94	-0.38	10.48	366.73	0.00			
0.38	428.88	-0.13	1.35	929.33	-0.38	10.83	377.76	0.01			
0.41	438.02	-0.13	1.40	941.99	-0.39	11.20	385.44	0.02			
0.43	448.12	-0.14	1.45	954.32	-0.39	11.91	370.09	0.05			
0.46	456.73	-0.14	1.50	965.47	-0.40	12.67	351.80	0.08			
0.48	466.30	-0.14	1.55	976.94	-0.40	12.93	368.71	0.09			
0.50	476.88	-0.14	1.60	988.11	-0.40	13.47	366.24	0.11			
0.52	485.48	-0.15	1.65	1001.47	-0.41	13.81	378.37	0.12			
0.53	494.49	-0.15	1.68	1011.40	-0.42	14.27	380.49	0.14			
0.55	503.99	-0.15	1.72	1021.53	-0.42	14.98	364.52	0.15			
0.57	512.21	-0.15	1.74	1030.19	-0.42	15.55	359.15	0.16			
0.59	520.96	-0.16	1.76	1039.81	-0.42	15.97	365.00	0.17			
0.61	530.01	-0.16	1.81	1051.14	-0.43	16.82	340.64	0.19			
0.64	538.25	-0.17	1.84	1061.27	-0.43	17.15	353.68	0.19			
0.67	547.13	-0.17	1.88	1072.82	-0.43	17.50	364.93	0.20			
0.69	555.72	-0.17	1.93	1083.82	-0.43	17.76	382.10	0.21			
0.73	563.28	-0.17	1.98	1092.54	-0.43	18.09	393.34	0.24			
0.74	571.29	-0.17	2.02	1101.49	-0.43						
0.76	580.75	-0.17	2.07	1109.00	-0.43						
0.78	588.57	-0.17	2.11	1127.09	-0.43						
0.85	593.94	-0.17	2.23	1154.67	-0.43						
0.90	600.14	-0.17	2.35	1181.72	-0.43						
0.95	605.87	-0.17	2.46	1206.77	-0.43						
0.99	612.44	-0.17	2.59	1230.72	-0.43						
1.00	621.02	-0.17	2.72	1254.05	-0.43						
1.02	629.23	-0.17	2.89	1274.70	-0.43						
1.04	637.37	-0.17	3.27	1278.32	-0.40						

LP	1/29/2011	JR	Feb.14.2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-07**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	7
Location:	-	**Depth (m):**	198.98-199.27
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1		Residual 1		Residual 2		Residual 3	
Normal Stress , kPa	850	Normal Stress , kPa	1700	Normal Stress , kPa	425	Normal Stress , kPa	-

Peak 1 Horz Disp mm	Peak 1 Shear Stress kPa	Peak 1 Vert Disp mm	Residual 1 Horz Disp mm	Residual 1 Shear Stress kPa	Residual 1 Vert Disp mm	Residual 2 Horz Disp mm	Residual 2 Shear Stress kPa	Residual 2 Vert Disp mm	Residual 3 Horz Disp mm	Residual 3 Shear Stress kPa	Residual 3 Vert Disp mm
1.09	643.78	-0.17	3.41	1299.15	-0.39						
1.18	647.09	-0.16	3.60	1315.16	-0.37						
1.24	652.61	-0.16	3.84	1329.00	-0.35						
1.28	659.61	-0.16	4.04	1344.14	-0.34						
1.39	661.88	-0.15	4.17	1362.63	-0.34						
1.56	659.29	-0.13	4.32	1378.91	-0.33						
1.59	666.33	-0.13	4.57	1386.92	-0.31						
1.61	674.07	-0.12	4.98	1388.65	-0.29						
1.62	680.98	-0.12	5.30	1392.47	-0.27						
1.64	687.53	-0.12	5.69	1390.22	-0.26						
1.67	693.83	-0.12	8.18	1228.45	-0.18						
1.71	698.12	-0.12	8.26	1262.48	-0.18						
1.73	703.99	-0.11	8.47	1284.39	-0.18						
1.75	711.07	-0.11	8.86	1288.56	-0.19						
1.78	715.28	-0.11	9.12	1303.50	-0.20						
1.81	719.66	-0.11	9.50	1310.82	-0.20						
1.82	726.33	-0.11	9.84	1319.89	-0.19						
1.84	734.42	-0.11	10.06	1335.10	-0.19						
1.86	739.79	-0.10	10.46	1336.00	-0.19						
1.88	750.75	-0.10	10.78	1344.53	-0.18						
1.95	760.71	-0.10	11.04	1356.57	-0.18						
2.03	768.84	-0.09	11.36	1364.06	-0.17						
2.10	778.07	-0.08	11.75	1363.20	-0.16						
2.17	786.78	-0.07	12.27	1352.61	-0.15						
2.23	796.38	-0.06	12.56	1362.57	-0.15						
2.41	796.62	-0.03	12.74	1382.63	-0.15						
2.80	782.69	0.02	13.61	1348.18	-0.11						
2.84	794.14	0.02	14.12	1342.77	-0.10						
2.88	804.78	0.03	14.24	1368.25	-0.10						
3.01	806.40	0.04	15.01	1344.05	-0.09						

LP	1/29/2011	JR	Feb.14.2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference
ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-07**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	7
Location:	-	**Depth (m):**	198.98-199.27
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1			Residual 1			Residual 2			Residual 3		
Normal Stress , kPa		850	Normal Stress , kPa		1700	Normal Stress , kPa		425	Normal Stress , kPa		-
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
4.04	742.77	0.17	15.37	1355.54	-0.09						
4.43	731.26	0.21	15.60	1372.33	-0.08						
5.46	673.34	0.28	15.94	1377.89	-0.08						
5.57	684.64	0.29	16.41	1370.28	-0.08						
5.67	696.26	0.29	16.84	1370.34	-0.08						
5.75	708.07	0.28	17.03	1389.31	-0.08						
5.83	718.86	0.28	17.18	1409.45	-0.08						
5.97	725.07	0.28									
6.68	687.76	0.30									
7.13	673.16	0.31									
7.20	686.93	0.31									
7.30	697.58	0.31									
7.39	708.22	0.31									
7.49	719.23	0.31									
7.57	730.84	0.32									
7.89	722.98	0.33									
8.52	691.91	0.35									
8.80	688.98	0.36									
8.92	697.61	0.36									
9.03	707.00	0.37									
9.23	708.53	0.37									
9.59	698.68	0.38									
9.93	691.08	0.39									
10.03	702.14	0.40									
10.15	711.05	0.40									
10.71	686.28	0.42									
11.13	674.28	0.44									
11.36	677.49	0.45									
11.71	670.76	0.46									
11.89	677.36	0.47									

LP	1/29/2011	JR	Feb.14.2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-07**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	7
Location:	-	**Depth (m):**	198.98-199.27
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1			Residual 1			Residual 2			Residual 3		
Normal Stress , kPa		850	Normal Stress , kPa		1700	Normal Stress , kPa		425	Normal Stress , kPa		-
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
12.11	680.04	0.48									
12.78	651.64	0.50									
13.31	631.97	0.52									
13.53	637.08	0.52									
13.90	628.43	0.54									
14.10	633.61	0.54									
14.37	634.81	0.55									
14.57	640.26	0.56									
14.78	644.30	0.57									
14.97	650.30	0.58									
15.10	660.07	0.58									
15.32	662.44	0.59									
15.64	657.83	0.60									
15.85	661.11	0.61									
16.04	667.75	0.61									
16.27	670.07	0.62									
16.96	638.47	0.64									
17.27	636.93	0.65									
17.46	643.72	0.65									
17.66	651.06	0.65									
17.86	657.07	0.66									

LP	1/29/2011	JR	Feb.14.2011
TESTED BY	DATE	CHECKED BY	DATE

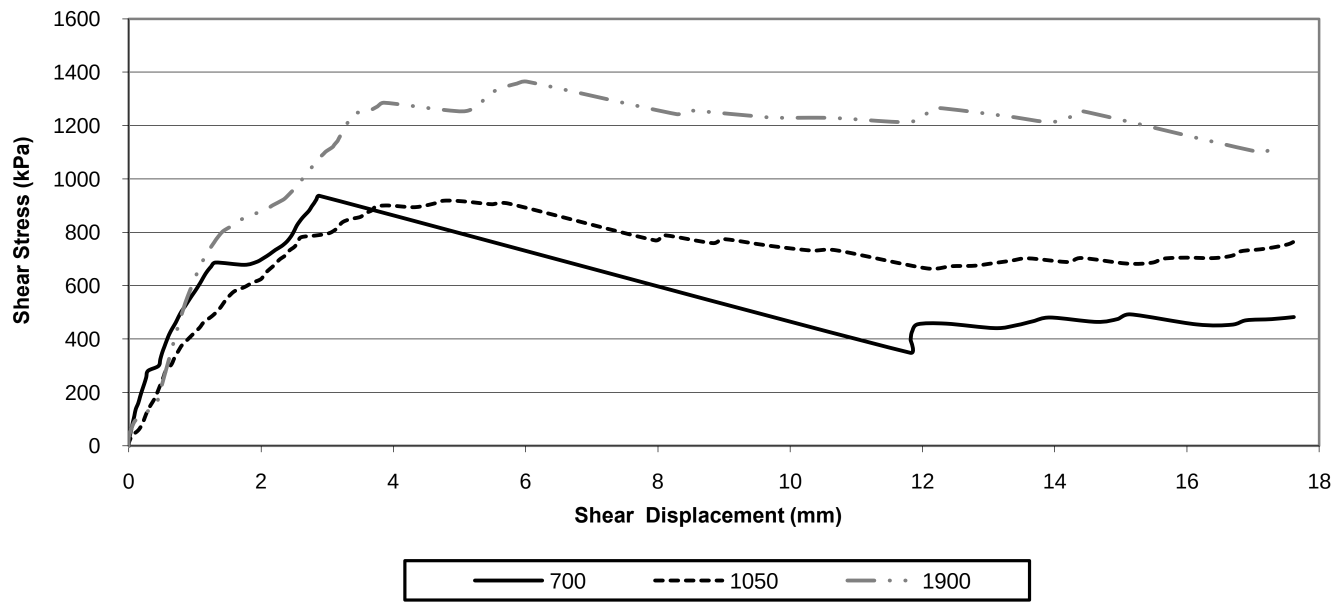
Golder Associates

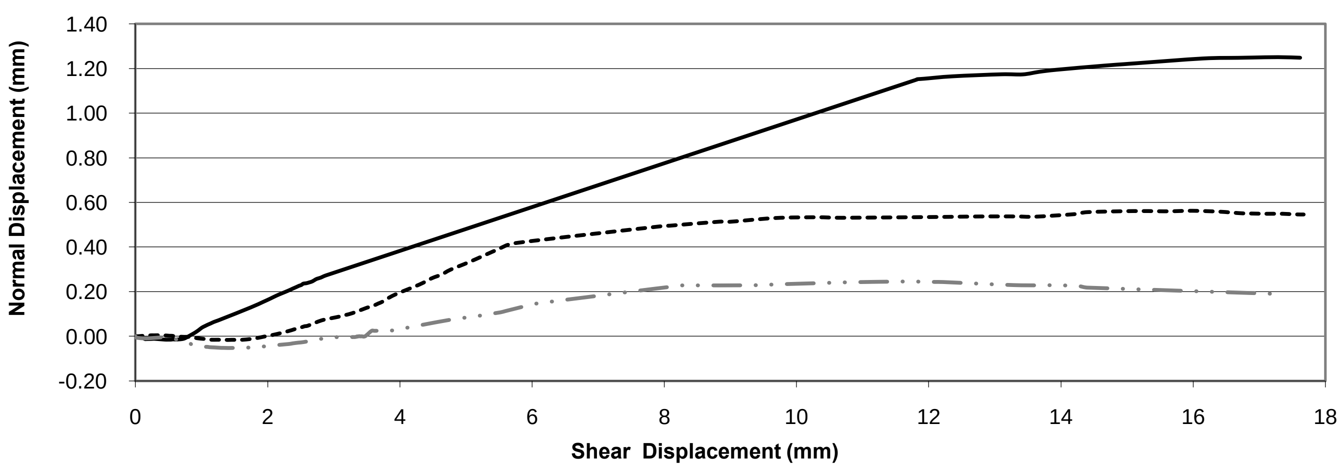
Golder Associates Ltd. - Burnaby Lab
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force	Reference ASTM D5607-08

Project No.:	10-1416-0029 PHASE18000	**Borehole:**	**10BGC GTH-08**
Client:	BGC ENGINEERING INC.	**Sample No.:**	7
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Depth (m):**	206.40-206.75
Location:	-	**Lab ID No:**	2

Specimen		Machine ID's	
Joint Type	OPEN FACE	Pressure Transducer	PT0001
Shape	Elliptical	Horizontal LVDT	ID0002
Joint Angle	30	Vertical LVDT	ID0003





LP	2/6/2011	JR	Feb.14.2011
TESTED BY	DATE	CHECKED BY:	DATE

Golder Associates Ltd. - Burnaby Lab
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force			Reference ASTM D5607-08
Project No.:	10-1416-0029 PHASE18000	**Borehole:**	**10BGC GTH-08**
Client:	BGC ENGINEERING INC.	**Sample No.:**	7
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Depth (m):**	206.40-206.75
Location:	-	**Lab ID No:**	2

BEFORE TEST

AFTER TEST

LP	2/6/2011	JR	Feb.14.2011
TESTED BY	DATE	CHECKED BY:	DATE

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-08**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	7
Location:	-	**Depth (m):**	206.40-206.75
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1			Residual 1			Residual 2			Residual 3		
Normal Stress , kPa		700	Normal Stress , kPa		1050	Normal Stress , kPa		1900	Normal Stress , kPa		-
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
0.00	0.00	0.0000	0.00	0.00	0.00	0.00	0.00	0.00			
0.00	2.64	0.00	0.00	6.59	0.00	0.00	18.82	0.00			
0.00	13.64	0.00	0.02	22.70	0.00	0.01	40.51	-0.01			
0.01	29.98	0.00	0.06	40.02	0.00	0.09	90.27	-0.01			
0.02	47.00	0.00	0.14	57.97	0.00	0.20	111.89	-0.01			
0.04	66.63	0.00	0.20	79.16	0.00	0.41	156.56	0.00			
0.06	88.92	0.00	0.24	104.25	0.00	0.45	182.94	-0.01			
0.08	112.64	-0.01	0.28	129.66	0.00	0.51	234.78	-0.01			
0.10	136.83	-0.01	0.33	154.02	0.00	0.54	260.17	-0.01			
0.14	160.49	-0.01	0.39	178.50	0.00	0.59	311.24	-0.01			
0.17	183.69	-0.01	0.44	204.42	0.00	0.62	336.16	-0.01			
0.20	208.72	-0.01	0.48	230.10	0.00	0.68	384.78	-0.02			
0.23	233.02	-0.01	0.52	255.88	0.00	0.70	407.76	-0.02			
0.26	256.08	-0.01	0.56	281.52	0.00	0.75	453.53	-0.03			
0.29	280.40	-0.01	0.64	304.37	0.00	0.78	475.93	-0.03			
0.45	298.65	-0.01	0.69	329.38	0.00	0.83	518.69	-0.03			
0.47	323.88	-0.01	0.75	354.02	0.00	0.86	539.74	-0.04			
0.50	347.91	-0.01	0.81	377.85	0.00	0.92	580.53	-0.04			
0.54	371.20	-0.01	0.90	399.95	-0.01	0.96	598.58	-0.05			
0.57	394.27	-0.01	0.98	421.57	-0.01	1.01	632.18	-0.05			
0.61	416.44	-0.01	1.07	442.52	-0.01	1.03	647.93	-0.05			
0.65	438.84	-0.01	1.14	464.47	-0.02	1.10	678.42	-0.05			
0.71	460.15	-0.01	1.25	483.61	-0.02	1.12	693.53	-0.05			
0.75	481.58	-0.01	1.33	503.06	-0.02	1.19	721.92	-0.05			
0.79	502.24	0.00	1.40	522.98	-0.02	1.22	736.37	-0.05			
0.85	522.27	0.01	1.45	543.06	-0.02	1.30	763.33	-0.05			
0.90	541.81	0.02	1.52	562.43	-0.02	1.33	776.09	-0.05			
0.95	561.57	0.03	1.60	580.18	-0.02	1.41	800.13	-0.05			
1.00	580.26	0.04	1.75	594.89	-0.01	1.47	811.25	-0.05			
1.05	599.37	0.05	1.87	610.90	-0.01	1.61	832.05	-0.05			

LP	2/6/2011	JR	Feb.14.2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-08**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	7
Location:	-	**Depth (m):**	206.40-206.75
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1			Residual 1			Residual 2			Residual 3		
Normal Stress , kPa	700		Normal Stress , kPa	1050		Normal Stress , kPa	1900		Normal Stress , kPa	-	
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
1.10	617.32	0.05	2.00	624.85	0.00	1.67	843.47	-0.05			
1.14	635.58	0.06	2.05	644.67	0.00	1.82	862.43	-0.05			
1.18	653.10	0.06	2.13	662.40	0.01	1.92	870.75	-0.05			
1.24	670.21	0.07	2.21	679.60	0.01	2.11	890.98	-0.04			
1.31	686.10	0.08	2.28	697.67	0.02	2.18	901.54	-0.04			
1.74	677.54	0.13	2.37	713.65	0.03	2.33	921.20	-0.03			
1.93	688.12	0.15	2.43	731.52	0.03	2.38	931.19	-0.03			
2.04	702.66	0.17	2.51	746.90	0.04	2.47	953.02	-0.03			
2.13	717.98	0.18	2.56	764.70	0.04	2.51	963.85	-0.03			
2.21	733.28	0.19	2.61	781.93	0.05	2.59	986.04	-0.02			
2.31	747.39	0.20	2.82	787.98	0.07	2.61	996.02	-0.02			
2.38	762.31	0.21	3.01	795.66	0.08	2.68	1015.92	-0.02			
2.43	777.60	0.22	3.12	808.88	0.09	2.71	1024.74	-0.02			
2.47	793.22	0.23	3.17	823.71	0.09	2.77	1044.71	-0.01			
2.51	808.92	0.23	3.24	838.84	0.10	2.81	1054.46	-0.01			
2.54	824.64	0.24	3.34	849.39	0.11	2.87	1071.18	-0.01			
2.58	839.49	0.24	3.50	857.79	0.13	2.89	1080.34	-0.01			
2.63	854.18	0.24	3.58	871.43	0.13	2.95	1095.24	-0.01			
2.68	867.68	0.25	3.68	882.77	0.15	2.98	1102.77	-0.01			
2.73	881.07	0.26	3.74	896.43	0.15	3.08	1119.28	0.00			
2.76	895.65	0.26	3.92	900.79	0.19	3.11	1128.60	0.00			
2.80	909.14	0.26	4.29	894.34	0.23	3.15	1141.04	0.00			
2.84	923.04	0.27	4.48	900.44	0.26	3.16	1145.03	0.00			
2.88	936.01	0.27	4.63	909.14	0.28	3.18	1153.61	0.00			
11.82	348.27	1.15	4.77	918.83	0.30	3.19	1157.22	0.00			
11.82	395.44	1.15	5.06	916.33	0.33	3.21	1166.03	0.00			
11.84	428.40	1.15	5.49	905.40	0.39	3.21	1170.61	0.00			
11.93	455.14	1.15	5.74	908.39	0.42	3.23	1178.41	0.00			
12.36	457.36	1.16	7.96	769.96	0.49	3.24	1182.58	0.00			
13.10	440.46	1.17	8.08	789.59	0.50	3.26	1189.48	0.00			

LP	2/6/2011	JR	Feb.14.2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference
ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-08**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	7
Location:	-	**Depth (m):**	206.40-206.75
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1			Residual 1			Residual 2			Residual 3		
Normal Stress , kPa		700	Normal Stress , kPa		1050	Normal Stress , kPa		1900	Normal Stress , kPa		-
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
13.42	451.39	1.17	8.83	759.70	0.51	3.27	1192.13	0.00			
13.67	466.22	1.18	8.99	774.76	0.51	3.28	1198.29	0.00			
13.93	480.28	1.19	9.68	750.19	0.53	3.29	1202.62	0.00			
14.63	463.88	1.21	10.34	731.69	0.53	3.31	1211.38	0.00			
14.95	474.66	1.22	10.69	733.02	0.53	3.32	1214.99	0.00			
15.14	492.08	1.22	12.06	665.11	0.53	3.35	1219.90	0.00			
16.14	454.42	1.24	12.42	673.15	0.54	3.35	1222.15	0.00			
16.68	453.36	1.25	12.79	675.00	0.54	3.37	1227.60	0.00			
16.90	469.91	1.25	13.06	684.11	0.54	3.38	1230.19	0.00			
17.28	474.22	1.25	13.34	693.75	0.54	3.39	1237.39	0.00			
17.62	482.00	1.25	13.60	702.61	0.54	3.40	1240.56	0.00			
			14.20	688.90	0.55	3.42	1247.74	0.00			
			14.40	703.95	0.56	3.48	1248.71	0.00			
			15.09	683.06	0.56	3.57	1249.41	0.02			
			15.47	686.22	0.56	3.62	1252.53	0.02			
			15.65	701.64	0.56	3.76	1271.70	0.02			
			15.99	705.19	0.56	3.86	1285.51	0.02			
			16.40	703.67	0.56	4.74	1259.36	0.07			
			16.68	712.32	0.55	5.11	1254.53	0.09			
			16.82	729.44	0.55	5.32	1283.61	0.10			
			17.11	736.46	0.55	5.38	1300.14	0.10			
			17.35	745.75	0.55	5.52	1327.46	0.11			
			17.55	757.17	0.55	5.61	1339.45	0.11			
			17.67	774.07	0.55	5.87	1357.44	0.13			
						6.02	1364.63	0.14			
						8.29	1242.67	0.23			
						8.42	1257.15	0.23			
						9.31	1238.85	0.23			
						9.77	1229.58	0.23			
						10.42	1229.38	0.24			

LP	2/6/2011	JR	Feb.14.2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference
ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-08**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	7
Location:	-	**Depth (m):**	206.40-206.75
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1			Residual 1			Residual 2			Residual 3		
Normal Stress , kPa	700		Normal Stress , kPa	1050		Normal Stress , kPa	1900		Normal Stress , kPa	-	
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
						10.77	1227.01	0.24			
						11.61	1213.48	0.24			
						11.90	1217.96	0.24			
						12.10	1251.48	0.24			
						12.22	1266.41	0.24			
						13.29	1234.43	0.23			
						13.94	1213.27	0.23			
						14.29	1237.57	0.22			
						14.40	1254.78	0.22			
						17.14	1098.38	0.19			
						17.27	1121.75	0.19			

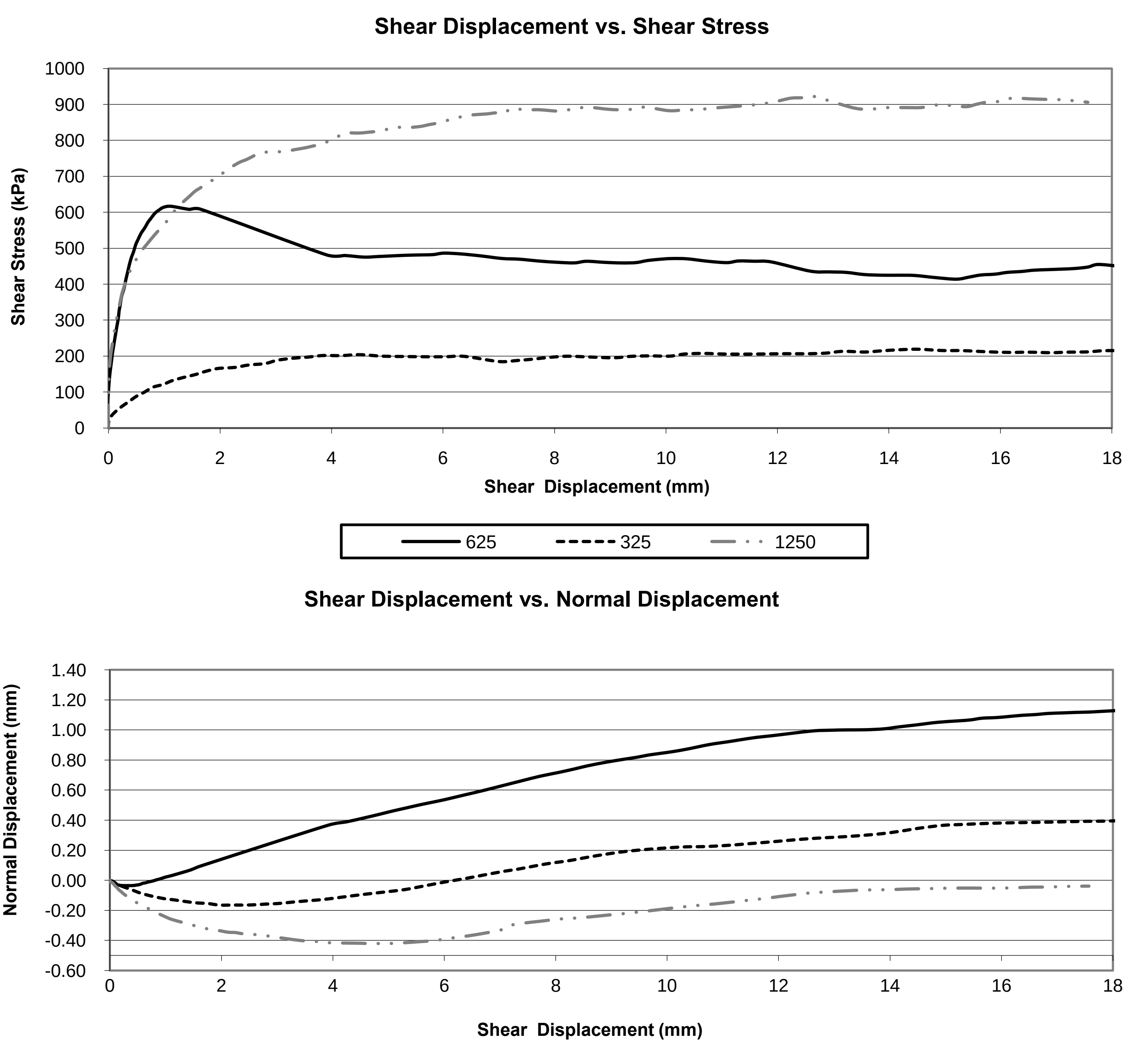
LP	2/6/2011	JR	Feb.14.2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates Ltd. - Burnaby Lab
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force	Reference ASTM D5607-08

Project No.:	10-1416-0029 PHASE18000	**Borehole:**	**10BGC GTH-08**
Client:	BGC ENGINEERING INC.	**Sample No.:**	8
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Depth (m):**	256.32-256.42
Location:	-	**Lab ID No:**	2

Specimen		Machine ID's	
Joint Type	OPEN FACE	Pressure Transducer	PT0001
Shape	Elliptical	Horizontal LVDT	ID0002
Joint Angle	50	Vertical LVDT	ID0003

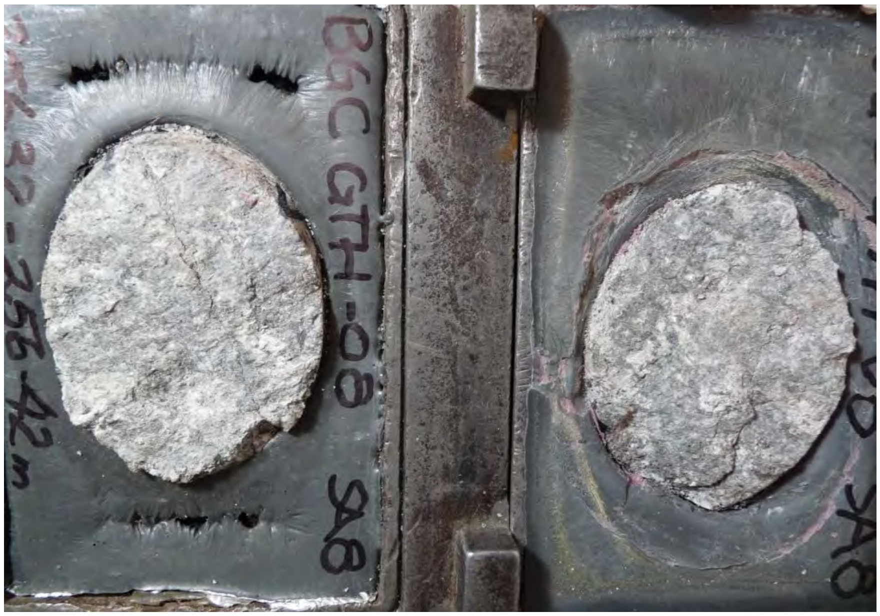


LP	1/29/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY:	DATE

Golder Associates Ltd. - Burnaby Lab
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force	Reference ASTM D5607-08

Project No.:	10-1416-0029 PHASE18000	**Borehole:**	**10BGC GTH-08**
Client:	BGC ENGINEERING INC.	**Sample No.:**	8
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Depth (m):**	256.32-256.42
Location:	-	**Lab ID No:**	2



BEFORE TEST

AFTER TEST

LP	1/29/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY:	DATE

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference
ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-08**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	8
Location:	-	**Depth (m):**	256.32-256.42
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1			Residual 1			Residual 2			Residual 3		
Normal Stress , kPa		625	Normal Stress , kPa		325	Normal Stress , kPa		1250	Normal Stress , kPa		-
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
0.00	0.00	0.0000	0.00	0.00	0.00	0.00	0.00	0.00			
0.00	-1.06	0.00	0.00	0.13	0.00	0.00	11.02	0.00			
-0.01	14.51	0.00	0.00	17.20	0.00	0.00	47.27	0.00			
-0.02	31.80	0.00	0.05	33.90	-0.01	0.00	84.97	0.00			
-0.02	50.08	0.00	0.15	48.79	-0.03	0.00	121.52	-0.01			
-0.01	67.10	-0.01	0.26	62.25	-0.04	0.01	156.47	-0.01			
-0.01	84.25	-0.01	0.38	75.24	-0.06	0.03	189.42	-0.01			
0.00	101.41	-0.01	0.50	88.66	-0.08	0.06	222.44	-0.02			
0.01	119.15	-0.01	0.65	100.39	-0.10	0.09	254.96	-0.04			
0.02	137.26	-0.01	0.79	113.05	-0.11	0.12	285.64	-0.05			
0.03	154.40	-0.01	0.98	121.13	-0.12	0.16	315.53	-0.06			
0.04	171.91	-0.01	1.14	131.75	-0.13	0.20	343.38	-0.07			
0.06	189.50	-0.02	1.34	140.40	-0.14	0.24	371.55	-0.09			
0.07	205.53	-0.02	1.56	148.64	-0.15	0.29	397.27	-0.10			
0.08	221.15	-0.02	1.75	157.90	-0.15	0.34	421.58	-0.12			
0.10	236.40	-0.02	1.97	165.47	-0.16	0.41	445.54	-0.14			
0.12	251.09	-0.02	2.27	168.37	-0.16	0.49	467.98	-0.15			
0.13	266.20	-0.03	2.51	175.11	-0.16	0.57	489.26	-0.17			
0.15	281.69	-0.03	2.81	178.95	-0.16	0.67	508.71	-0.19			
0.17	296.83	-0.03	3.02	188.00	-0.15	0.78	528.01	-0.20			
0.18	312.27	-0.03	3.28	193.48	-0.14	0.88	546.94	-0.22			
0.19	327.01	-0.03	3.57	196.99	-0.13	0.98	563.87	-0.24			
0.21	340.90	-0.03	3.84	201.32	-0.13	1.07	580.97	-0.26			
0.22	355.60	-0.04	4.17	201.05	-0.11	1.15	598.20	-0.26			
0.24	370.16	-0.04	4.50	203.68	-0.10	1.25	614.50	-0.28			
0.27	383.70	-0.04	4.92	199.46	-0.08	1.34	629.75	-0.28			
0.29	397.50	-0.04	5.29	198.62	-0.06	1.45	644.11	-0.29			
0.31	410.78	-0.04	5.65	197.96	-0.04	1.55	658.52	-0.31			
0.33	424.42	-0.04	6.04	197.93	-0.01	1.67	670.52	-0.31			
0.35	437.68	-0.04	6.39	198.91	0.01	1.79	682.68	-0.33			

LP	1/29/2011	JR	Feb.14,2011
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Golder Associates

Golder Associates Ltd. - Burnaby Laboratory
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Direct Shear Strength Testing Under Constant Normal Force

Reference ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-08**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	8
Location:	-	**Depth (m):**	256.32-256.42
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1		Residual 1		Residual 2		Residual 3	
Normal Stress , kPa	625	Normal Stress , kPa	325	Normal Stress , kPa	1250	Normal Stress , kPa	-

Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
0.37	451.10	-0.04	7.00	184.70	0.06	1.92	695.04	-0.33			
0.39	463.90	-0.04	7.34	187.67	0.08	2.03	707.03	-0.34			
0.42	476.26	-0.03	7.64	191.76	0.10	2.13	719.53	-0.35			
0.45	488.65	-0.03	7.92	196.40	0.12	2.25	730.39	-0.35			
0.47	500.49	-0.03	8.24	199.36	0.13	2.36	739.99	-0.35			
0.49	511.67	-0.03	8.64	197.18	0.16	2.48	747.49	-0.36			
0.53	522.92	-0.03	9.06	195.05	0.18	2.60	756.77	-0.36			
0.56	533.18	-0.03	9.36	198.92	0.20	2.72	765.59	-0.36			
0.59	543.13	-0.02	9.70	200.35	0.21	2.92	768.28	-0.38			
0.63	552.12	-0.02	10.07	199.63	0.22	3.17	769.20	-0.39			
0.67	562.41	-0.01	10.34	205.58	0.22	3.34	774.40	-0.40			
0.71	571.75	-0.01	10.68	207.14	0.23	3.52	779.42	-0.40			
0.75	581.13	-0.01	11.05	205.44	0.23	3.68	784.81	-0.41			
0.80	589.85	0.00	11.44	205.28	0.24	3.85	790.27	-0.41			
0.84	597.91	0.00	11.80	205.74	0.25	3.95	799.27	-0.42			
0.90	605.84	0.01	12.16	206.45	0.27	4.07	807.07	-0.42			
0.99	613.51	0.02	12.52	206.25	0.28	4.17	815.05	-0.42			
1.12	616.35	0.03	12.87	208.08	0.28	4.28	820.86	-0.42			
1.45	607.77	0.07	13.18	212.99	0.29	4.50	820.62	-0.42			
1.65	608.58	0.10	13.57	211.03	0.30	4.67	822.98	-0.42			
3.91	481.31	0.37	13.88	214.44	0.31	4.86	826.23	-0.42			
4.24	479.61	0.39	14.19	217.34	0.33	5.01	831.51	-0.42			
4.59	475.13	0.42	14.53	218.80	0.35	5.16	836.48	-0.42			
4.83	476.66	0.44	14.95	215.25	0.37	5.41	836.27	-0.41			
5.07	478.39	0.46	15.33	214.89	0.37	5.60	839.14	-0.41			
5.31	480.08	0.48	15.75	211.84	0.38	5.76	844.19	-0.40			
5.56	481.09	0.50	16.16	210.00	0.38	5.89	847.93	-0.40			
5.82	482.08	0.52	16.51	210.63	0.39	6.01	853.12	-0.39			
6.02	486.14	0.54	16.90	209.25	0.39	6.12	857.38	-0.39			
6.32	484.01	0.56	17.22	210.72	0.39	6.25	861.66	-0.38			

LP	1/29/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-08**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	8
Location:	-	**Depth (m):**	256.32-256.42
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1			Residual 1			Residual 2			Residual 3		
Normal Stress , kPa		625	Normal Stress , kPa		325	Normal Stress , kPa		1250	Normal Stress , kPa		-
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
6.68	478.52	0.59	17.56	211.39	0.39	6.37	868.18	-0.37			
7.06	471.27	0.63	17.86	214.82	0.39	6.56	871.56	-0.36			
7.37	469.37	0.66	18.22	214.71	0.40	6.78	873.80	-0.35			
7.72	464.26	0.69				6.94	876.78	-0.34			
8.05	460.69	0.72				7.04	876.54	-0.33			
8.36	459.09	0.74				7.08	875.84	-0.32			
8.57	463.56	0.76				7.10	875.73	-0.31			
8.90	460.54	0.78				7.13	879.10	-0.31			
9.21	458.91	0.80				7.16	882.96	-0.30			
9.47	459.91	0.82				7.22	888.79	-0.30			
9.66	465.33	0.83				7.49	885.26	-0.28			
9.87	468.87	0.84				7.73	885.43	-0.27			
10.10	471.09	0.86				8.05	881.79	-0.26			
10.38	470.35	0.87				8.24	884.86	-0.25			
10.75	463.53	0.90				8.42	890.16	-0.25			
11.10	459.79	0.92				8.64	892.02	-0.24			
11.30	464.36	0.93				8.98	886.51	-0.23			
11.59	463.59	0.95				9.26	885.02	-0.22			
11.89	461.85	0.96				9.44	888.00	-0.21			
12.59	436.19	0.99				9.64	892.65	-0.21			
12.92	434.03	1.00				10.04	882.96	-0.19			
13.23	432.70	1.00				10.31	884.61	-0.18			
13.56	426.61	1.00				10.59	886.15	-0.17			
13.89	424.78	1.01				10.82	889.66	-0.16			
14.18	424.77	1.02				11.05	892.49	-0.15			
14.46	424.08	1.03				11.27	895.02	-0.14			
14.85	418.04	1.05				11.52	897.96	-0.13			
15.21	413.78	1.06				11.72	901.83	-0.12			
15.44	419.79	1.07				11.94	906.47	-0.11			
15.65	425.37	1.08				12.09	912.76	-0.10			

LP	1/29/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference
ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-08**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	8
Location:	-	**Depth (m):**	256.32-256.42
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1			Residual 1			Residual 2			Residual 3		
Normal Stress , kPa		625	Normal Stress , kPa		325	Normal Stress , kPa		1250	Normal Stress , kPa		-
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
15.91	427.79	1.08				12.26	918.01	-0.10			
16.12	432.66	1.09				12.47	919.17	-0.09			
16.38	435.17	1.10				12.64	923.07	-0.08			
16.60	438.73	1.10				13.38	890.10	-0.07			
16.84	440.29	1.11				13.71	887.74	-0.06			
17.10	441.74	1.11				13.97	891.35	-0.06			
17.34	443.59	1.12				14.28	891.42	-0.06			
17.57	447.59	1.12				14.59	891.68	-0.06			
17.75	454.66	1.12				14.78	897.93	-0.05			
18.09	450.44	1.13				15.05	898.26	-0.05			
						15.39	893.99	-0.05			
						15.58	900.86	-0.05			
						15.76	906.62	-0.05			
						16.02	909.20	-0.05			
						16.21	917.78	-0.05			
						16.52	915.85	-0.05			
						16.84	914.12	-0.05			
						17.16	912.71	-0.04			
						17.57	906.18	-0.04			

LP	1/29/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY	DATE

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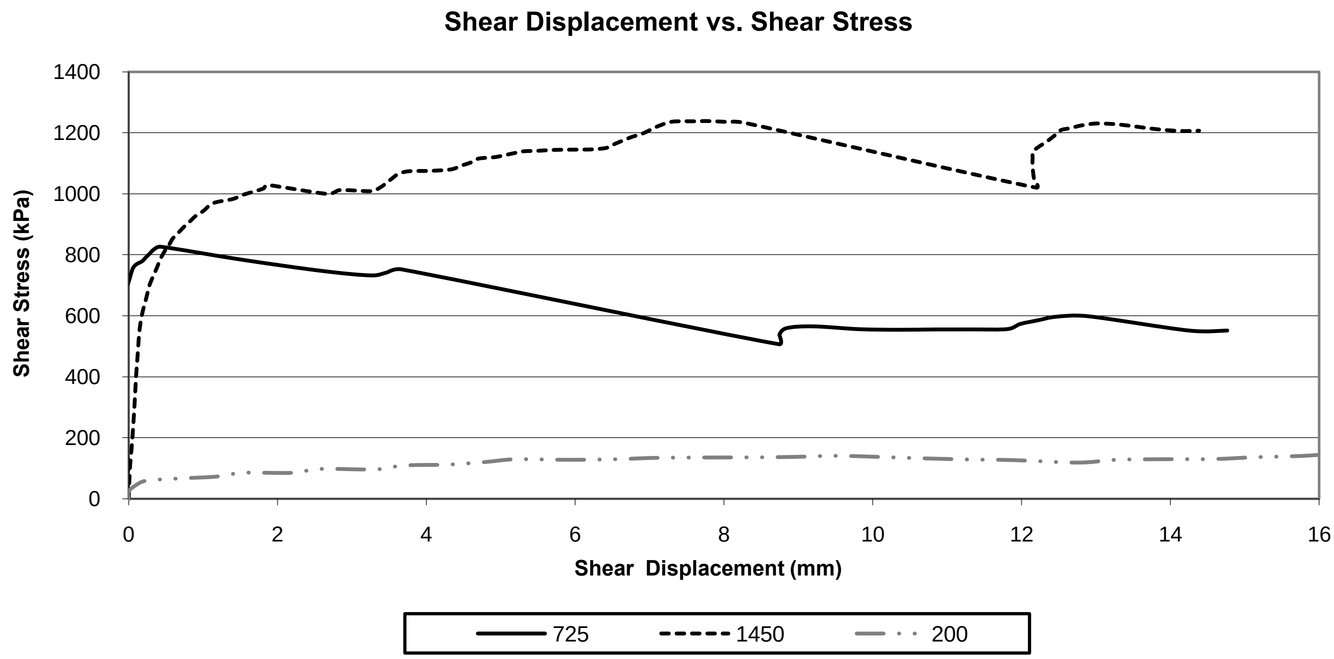
Golder Associates Ltd. - Burnaby Lab
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

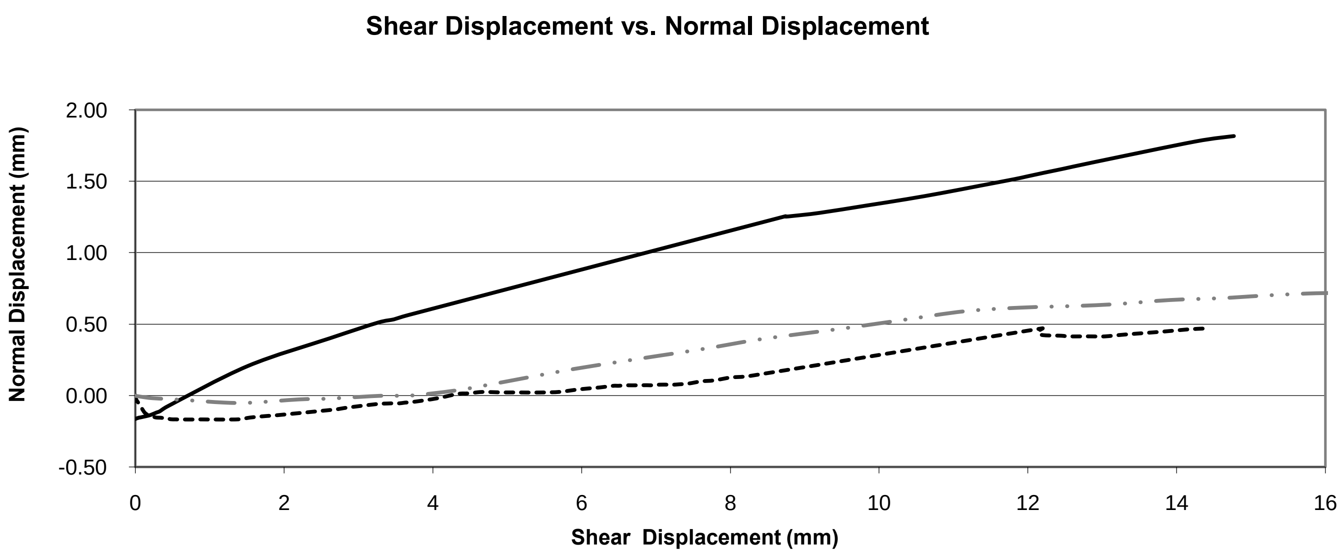
Direct Shear Strength Testing Under Constant Normal Force

Reference
ASTM D5607-08

Project No.:	10-1416-0029 PHASE18000	**Borehole:**	**10BGC GTH-09**
Client:	BGC ENGINEERING INC.	**Sample No.:**	1
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Depth (m):**	69.69-70.02
Location:	-	**Lab ID No:**	2

Specimen		Machine ID's	
Joint Type	OPEN FACE	Pressure Transducer	PT0001
Shape	Elliptical	Horizontal LVDT	ID0002
Joint Angle	31	Vertical LVDT	ID0003





LP	2/8/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY:	DATE

Golder Associates Ltd. - Burnaby Lab
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force			**Reference** ASTM D5607-08
Project No.:	10-1416-0029 PHASE18000	**Borehole:**	**10BGC GTH-09**
Client:	BGC ENGINEERING INC.	**Sample No.:**	1
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Depth (m):**	69.69-70.02
Location:	-	**Lab ID No:**	2

BEFORE TEST

AFTER TEST

LP	2/8/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY:	DATE

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-09**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	1
Location:	-	**Depth (m):**	69.69-70.02
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1			Residual 1			Residual 2			Residual 3		
Normal Stress , kPa		725	Normal Stress , kPa		1450	Normal Stress , kPa		200	Normal Stress , kPa		-
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
0.00	0.00	0.0000	0.00	0.00	0.00	0.00	0.00	0.00			
0.00	3.29	0.00	0.00	22.73	-0.01	-0.01	5.99	0.00			
-0.01	14.44	-0.01	0.01	65.16	-0.02	0.00	23.98	0.00			
-0.01	33.97	-0.01	0.02	111.71	-0.04	0.08	42.39	-0.01			
-0.02	56.05	-0.02	0.03	159.66	-0.05	0.23	59.20	-0.02			
-0.02	78.98	-0.03	0.05	206.61	-0.06	0.67	66.57	-0.03			
-0.01	101.11	-0.04	0.06	253.16	-0.07	1.18	72.74	-0.05			
-0.01	124.63	-0.04	0.07	299.01	-0.08	1.54	85.21	-0.05			
-0.02	147.80	-0.05	0.08	343.50	-0.09	2.20	85.12	-0.03			
-0.02	170.38	-0.06	0.09	387.07	-0.10	2.58	97.85	-0.02			
-0.03	193.37	-0.06	0.10	430.21	-0.11	3.32	96.21	0.00			
-0.04	216.00	-0.07	0.12	473.30	-0.12	3.69	109.12	0.00			
-0.04	239.07	-0.08	0.13	514.56	-0.12	4.29	112.03	0.03			
-0.05	261.74	-0.08	0.14	554.41	-0.13	4.78	120.14	0.08			
-0.06	284.29	-0.09	0.16	589.66	-0.14	5.20	129.55	0.12			
-0.07	307.22	-0.09	0.19	621.65	-0.14	5.89	127.73	0.19			
-0.08	329.13	-0.10	0.23	652.06	-0.15	6.52	129.50	0.24			
-0.08	349.77	-0.11	0.25	679.33	-0.15	7.07	134.06	0.28			
-0.10	370.54	-0.11	0.29	706.64	-0.15	7.68	135.17	0.33			
-0.10	391.68	-0.12	0.33	733.88	-0.16	8.32	135.61	0.39			
-0.11	413.29	-0.12	0.38	759.23	-0.16	8.94	137.22	0.43			
-0.13	434.53	-0.12	0.42	784.09	-0.16	9.54	140.83	0.47			
-0.05	450.08	-0.14	0.47	808.46	-0.17	10.34	135.10	0.53			
-0.06	471.24	-0.15	0.54	830.74	-0.17	11.15	129.46	0.59			
-0.08	491.25	-0.15	0.59	852.54	-0.17	11.90	126.63	0.62			
-0.10	511.03	-0.16	0.67	872.92	-0.17	12.76	118.60	0.63			
-0.11	530.28	-0.16	0.75	892.97	-0.17	13.26	127.61	0.64			
-0.13	548.77	-0.16	0.82	910.23	-0.17	13.91	129.67	0.67			
-0.15	567.34	-0.16	0.90	927.69	-0.17	14.59	130.21	0.68			
-0.15	586.25	-0.17	1.00	944.06	-0.17	15.15	136.34	0.70			

LP	2/8/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-09**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	1
Location:	-	**Depth (m):**	69.69-70.02
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1			Residual 1			Residual 2			Residual 3		
Normal Stress , kPa	725		Normal Stress , kPa	1450		Normal Stress , kPa	200		Normal Stress , kPa	-	
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
-0.14	604.09	-0.17	1.08	961.10	-0.17	15.74	140.17	0.71			
-0.12	621.23	-0.17	1.17	972.03	-0.17	16.23	147.31	0.72			
-0.10	637.89	-0.17	1.40	982.87	-0.17	16.81	149.87	0.74			
-0.08	654.36	-0.17	1.54	997.02	-0.15						
-0.06	671.23	-0.17	1.70	1008.29	-0.15						
-0.04	687.71	-0.17	1.81	1017.86	-0.14						
-0.02	700.76	-0.17	1.87	1028.52	-0.14						
0.00	712.90	-0.16	2.67	999.59	-0.10						
0.02	724.61	-0.16	2.84	1012.17	-0.09						
0.03	736.37	-0.16	3.26	1008.62	-0.06						
0.04	747.49	-0.16	3.38	1021.46	-0.06						
0.06	759.28	-0.15	3.47	1037.27	-0.05						
0.11	769.64	-0.15	3.55	1052.41	-0.05						
0.18	779.48	-0.14	3.62	1064.64	-0.05						
0.23	791.60	-0.13	3.76	1073.78	-0.04						
0.28	803.93	-0.12	4.06	1075.27	-0.02						
0.33	816.43	-0.11	4.33	1080.02	0.01						
0.43	826.72	-0.08	4.47	1092.50	0.01						
1.51	784.58	0.21	4.61	1103.36	0.02						
2.61	747.03	0.40	4.70	1115.41	0.02						
3.27	732.68	0.51	4.92	1119.95	0.02						
3.48	742.76	0.53	5.08	1127.92	0.02						
3.67	752.60	0.56	5.21	1134.74	0.02						
8.74	506.97	1.26	5.31	1139.52	0.02						
8.75	537.79	1.25	5.50	1140.89	0.02						
8.84	559.60	1.26	5.71	1143.77	0.03						
9.20	565.70	1.28	5.97	1144.62	0.04						
9.82	556.33	1.33	6.24	1145.68	0.06						
10.37	554.44	1.38	6.42	1150.60	0.07						
10.85	555.53	1.42	6.50	1159.84	0.07						

LP	2/8/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference	ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-09**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	1
Location:	-	**Depth (m):**	69.69-70.02
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1		Residual 1		Residual 2		Residual 3	
Normal Stress , kPa	725	Normal Stress , kPa	1450	Normal Stress , kPa	200	Normal Stress , kPa	-

Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
11.34	555.56	1.47	6.59	1169.12	0.07						
11.81	556.73	1.51	6.68	1177.81	0.07						
11.98	573.34	1.53	6.76	1186.74	0.07						
12.22	585.31	1.56	6.88	1194.79	0.07						
12.47	597.26	1.59	6.95	1202.81	0.07						
12.90	598.78	1.63	7.02	1210.66	0.07						
14.25	551.86	1.78	7.08	1218.46	0.08						
14.77	551.88	1.82	7.15	1224.96	0.08						
			7.22	1230.97	0.07						
			7.31	1236.63	0.08						
			7.44	1237.79	0.08						
			7.61	1237.56	0.10						
			7.78	1238.41	0.11						
			8.03	1235.64	0.13						
			8.27	1232.82	0.14						
			12.20	1020.18	0.47						
			12.17	1049.95	0.46						
			12.16	1073.83	0.45						
			12.15	1094.82	0.44						
			12.15	1116.26	0.43						
			12.15	1136.75	0.43						
			12.21	1149.87	0.42						
			12.28	1162.25	0.42						
			12.36	1173.88	0.42						
			12.42	1186.04	0.42						
			12.48	1197.45	0.42						
			12.54	1209.28	0.41						
			12.65	1215.08	0.41						
			12.76	1221.68	0.41						
			12.87	1226.84	0.41						

LP	2/8/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference
ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-09**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	1
Location:	-	**Depth (m):**	69.69-70.02
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1		Residual 1		Residual 2		Residual 3	
Normal Stress , kPa	725	Normal Stress , kPa	1450	Normal Stress , kPa	200	Normal Stress , kPa	-

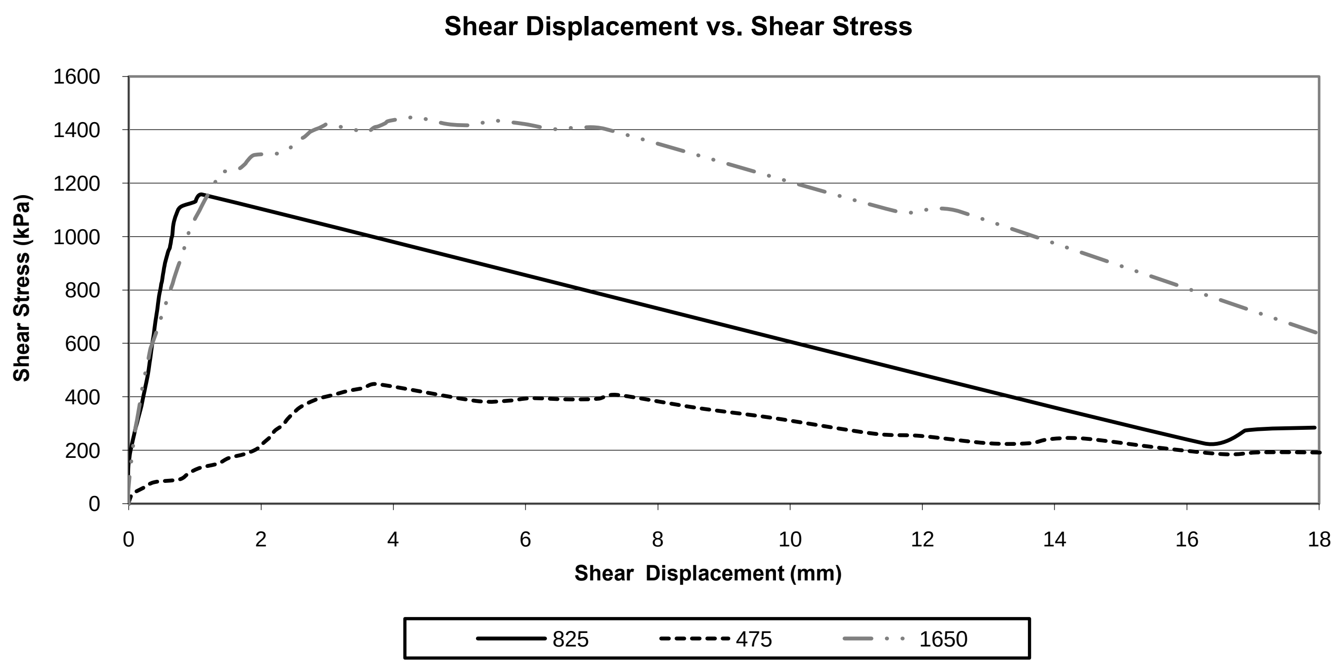
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
			13.04	1230.56	0.41						
			13.32	1226.68	0.43						
			13.83	1211.42	0.45						
			14.15	1205.88	0.46						
			14.39	1206.71	0.47						
			14.50	1213.79	0.47						
			14.66	1217.70	0.47						
			14.84	1221.20	0.47						
			15.20	1213.59	0.50						
			15.39	1215.87	0.51						

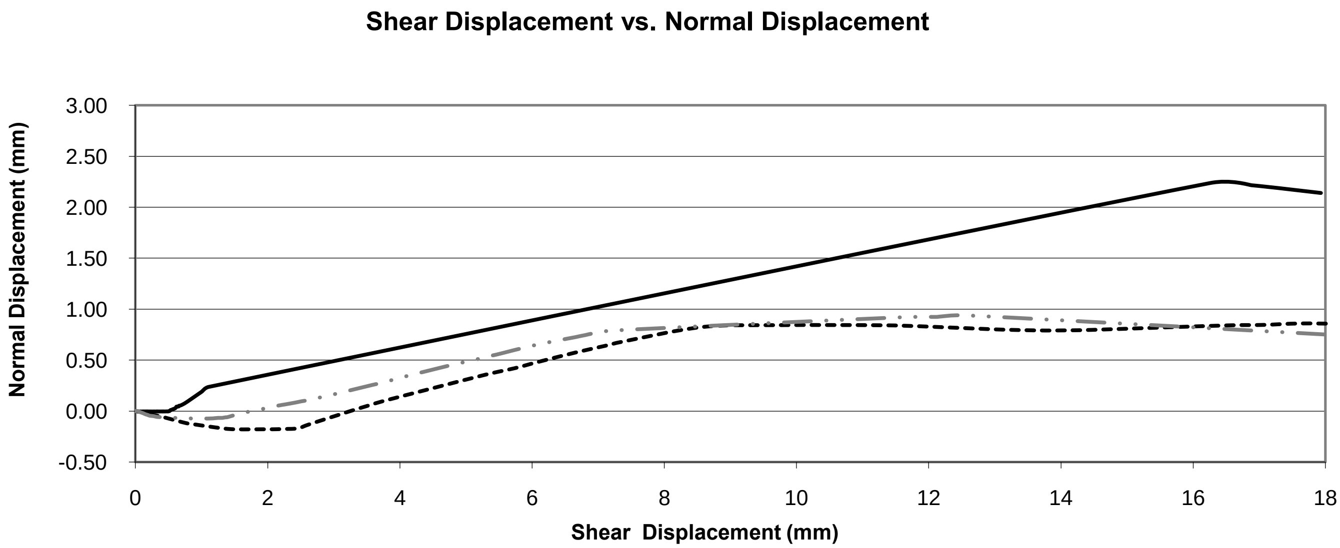
LP	2/8/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates Ltd. - Burnaby Lab
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force			**Reference** ASTM D5607-08
Project No.:	10-1416-0029 PHASE18000	**Borehole:**	**10BGC GTH-09**
Client:	BGC ENGINEERING INC.	**Sample No.:**	5
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Depth (m):**	136.90-137.16
Location:	-	**Lab ID No:**	2

Specimen		Machine ID's	
Joint Type	OPEN FACE	Pressure Transducer	PT0001
Shape	Elliptical	Horizontal LVDT	ID0002
Joint Angle	53	Vertical LVDT	ID0003





LP	2/9/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY:	DATE

Golder Associates Ltd. - Burnaby Lab
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force	Reference ASTM D5607-08

Project No.:	10-1416-0029 PHASE18000	**Borehole:**	**10BGC GTH-09**
Client:	BGC ENGINEERING INC.	**Sample No.:**	5
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Depth (m):**	136.90-137.16
Location:	-	**Lab ID No:**	2

BEFORE TEST

AFTER TEST

LP	2/9/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY:	DATE

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-09**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	5
Location:	-	**Depth (m):**	136.90-137.16
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1			Residual 1			Residual 2			Residual 3		
Normal Stress , kPa	825		Normal Stress , kPa	475		Normal Stress , kPa	1650		Normal Stress , kPa	-	
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
0.00	0.00	0.0000	0.00	0.00	0.00	0.00	0.00	0.00			
0.00	-1.26	0.00	0.00	10.39	0.00	-0.01	29.74	0.00			
-0.01	21.41	0.00	0.06	36.96	-0.01	-0.01	59.28	0.00			
-0.02	44.59	0.00	0.21	58.81	-0.03	0.02	117.44	0.00			
-0.01	67.61	0.00	0.39	80.47	-0.05	0.03	147.01	0.00			
-0.01	88.83	0.00	0.76	90.79	-0.12	0.06	203.75	-0.01			
-0.01	109.73	0.00	0.91	114.35	-0.13	0.07	231.49	-0.01			
-0.01	131.02	0.00	1.08	134.68	-0.15	0.10	284.72	-0.02			
0.00	150.72	0.00	1.35	149.80	-0.17	0.12	310.76	-0.02			
0.01	169.92	0.00	1.51	170.75	-0.18	0.16	362.97	-0.03			
0.02	187.46	0.00	1.75	186.02	-0.18	0.17	388.43	-0.04			
0.03	205.09	0.00	1.93	204.75	-0.18	0.21	438.84	-0.05			
0.05	222.65	0.00	2.04	227.72	-0.18	0.22	463.52	-0.05			
0.06	239.10	0.00	2.14	249.62	-0.18	0.27	511.08	-0.05			
0.08	255.81	0.00	2.21	273.30	-0.18	0.29	534.27	-0.05			
0.09	271.71	-0.01	2.33	294.04	-0.18	0.32	576.74	-0.06			
0.11	287.78	0.00	2.40	316.61	-0.18	0.35	600.55	-0.06			
0.13	303.29	0.00	2.49	338.21	-0.17	0.42	644.33	-0.06			
0.14	318.54	0.00	2.58	358.84	-0.14	0.44	666.01	-0.06			
0.16	332.55	0.00	2.71	376.91	-0.11	0.50	706.64	-0.06			
0.17	345.16	0.00	2.88	393.69	-0.08	0.53	727.09	-0.06			
0.18	357.99	0.00	3.09	406.99	-0.04	0.58	767.15	-0.07			
0.20	371.05	0.00	3.30	421.39	0.01	0.61	786.99	-0.07			
0.21	393.07	0.00	3.56	433.41	0.06	0.66	823.69	-0.07			
0.24	422.76	0.00	3.74	447.64	0.10	0.68	841.73	-0.07			
0.26	449.74	-0.01	5.25	384.35	0.35	0.73	876.58	-0.07			
0.28	475.54	0.00	5.74	385.28	0.42	0.75	892.95	-0.07			
0.30	500.86	-0.01	6.08	394.49	0.48	0.80	925.43	-0.07			
0.32	526.40	0.00	6.65	390.02	0.57	0.82	941.59	-0.07			
0.33	550.13	0.00	7.11	392.82	0.64	0.85	972.14	-0.08			

LP	2/9/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-09**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	5
Location:	-	**Depth (m):**	136.90-137.16
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1			Residual 1			Residual 2			Residual 3		
Normal Stress , kPa		825	Normal Stress , kPa		475	Normal Stress , kPa		1650	Normal Stress , kPa		-
Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm	Horz Disp mm	Shear Stress kPa	Vert Disp mm
0.34	573.21	0.00	7.37	407.20	0.68	0.87	987.39	-0.08			
0.35	593.51	0.00	8.58	358.88	0.82	0.91	1015.92	-0.08			
0.36	612.82	0.00	9.73	320.82	0.84	0.92	1030.54	-0.08			
0.38	630.78	0.00	11.25	262.48	0.84	0.98	1057.87	-0.08			
0.39	648.03	0.00	11.97	253.57	0.83	1.01	1071.88	-0.08			
0.39	665.16	0.00	12.99	226.22	0.80	1.07	1096.71	-0.07			
0.40	681.75	0.00	13.61	225.90	0.79	1.09	1109.36	-0.07			
0.41	697.39	-0.01	13.93	241.44	0.79	1.14	1134.75	-0.07			
0.42	712.08	0.00	14.45	243.58	0.79	1.17	1147.06	-0.07			
0.43	726.11	0.00	15.61	208.43	0.82	1.23	1172.36	-0.07			
0.44	739.30	0.00	16.57	184.91	0.84	1.26	1182.92	-0.07			
0.44	751.67	0.00	17.06	191.58	0.84	1.30	1202.45	-0.07			
0.45	763.29	0.00	17.61	192.41	0.86	1.32	1211.97	-0.07			
0.46	776.04	0.00	18.23	190.17	0.85	1.37	1232.43	-0.06			
0.47	787.55	0.00				1.39	1241.89	-0.06			
0.47	797.89	0.00				1.61	1249.21	-0.02			
0.48	806.34	0.00				1.68	1256.56	-0.01			
0.49	814.30	0.00				1.76	1272.59	0.00			
0.49	823.00	0.00				1.78	1280.95	0.00			
0.50	829.52	0.00				1.84	1298.40	0.01			
0.51	838.82	0.00				1.90	1305.93	0.02			
0.51	849.18	0.00				2.14	1310.49	0.05			
0.52	859.63	0.00				2.27	1311.91	0.07			
0.53	872.22	0.01				2.40	1324.46	0.08			
0.53	882.16	0.01				2.44	1332.86	0.09			
0.54	891.86	0.01				2.51	1350.58	0.09			
0.55	900.70	0.01				2.53	1358.04	0.10			
0.56	908.40	0.01				2.63	1370.38	0.11			
0.57	917.74	0.02				2.67	1375.90	0.11			
0.58	926.62	0.02				2.72	1387.98	0.12			

LP	2/9/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY	DATE

Golder Associates Ltd. - Burnaby Laboratory
4280 Still Creek Drive
Burnaby, B.C. Canada V5C 6C6

Direct Shear Strength Testing Under Constant Normal Force

Reference
ASTM D5607-08

Client:	BGC ENGINEERING INC.	**Borehole:**	**10BGC GTH-09**
Project:	EAGLE GOLD FS PROJECT 0792005-03	**Sample No.:**	5
Location:	-	**Depth (m):**	136.90-137.16
Project No.:	10-1416-0029 PHASE18000	**Lab ID No:**	2

Peak 1		Residual 1		Residual 2		Residual 3	
Normal Stress , kPa	825	Normal Stress , kPa	475	Normal Stress , kPa	1650	Normal Stress , kPa	-

Peak 1 Horz Disp mm	Peak 1 Shear Stress kPa	Peak 1 Vert Disp mm	Residual 1 Horz Disp mm	Residual 1 Shear Stress kPa	Residual 1 Vert Disp mm	Residual 2 Horz Disp mm	Residual 2 Shear Stress kPa	Residual 2 Vert Disp mm	Residual 3 Horz Disp mm	Residual 3 Shear Stress kPa	Residual 3 Vert Disp mm
0.59	935.02	0.02				2.75	1393.09	0.12			
0.60	944.44	0.02				2.82	1401.99	0.14			
0.61	951.78	0.03				2.88	1406.65	0.14			
0.62	958.36	0.04				2.96	1416.87	0.15			
0.63	965.24	0.04				3.00	1421.17	0.16			
0.63	972.12	0.04				3.59	1391.39	0.26			
0.64	978.38	0.04				3.64	1396.38	0.26			
0.64	986.10	0.04				3.71	1408.70	0.27			
0.65	994.56	0.04				3.78	1413.35	0.29			
0.65	999.55	0.04				3.88	1424.47	0.30			
0.66	1007.30	0.05				3.91	1432.02	0.31			
0.68	1047.27	0.05				4.08	1439.57	0.34			
0.72	1081.44	0.06				4.17	1441.52	0.36			
0.79	1111.66	0.09				4.36	1446.88	0.38			
1.01	1131.83	0.19				4.81	1421.58	0.46			
1.11	1157.89	0.24				5.17	1416.88	0.51			
16.26	225.44	2.24				5.26	1421.69	0.53			
16.88	273.56	2.22				5.45	1431.81	0.55			
17.93	284.29	2.14				5.54	1434.53	0.57			
						5.98	1421.65	0.64			
						6.39	1402.94	0.69			
						6.65	1406.45	0.72			
						6.81	1407.23	0.75			
						7.20	1403.10	0.79			
						11.61	1094.13	0.92			
						12.12	1104.40	0.92			
						12.57	1093.53	0.94			
						21.61	337.93	0.62			
						21.58	400.04	0.61			

LP	2/9/2011	JR	Feb.14,2011
TESTED BY	DATE	CHECKED BY	DATE

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LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS

Reference(s)
ASTM D 4318-05

Client:	BGC Engineering Inc	**Sample Location:**	10-BGCGTH-08
Project:	Eagle Gold	**Sample No.:**	6
Location:	PO#0792995-03	**Depth Interval (m):**	186.84 to 187.14
Project No.:	10-1416-0029 **Phase:** 180000	**Lab Schedule No.:**	002

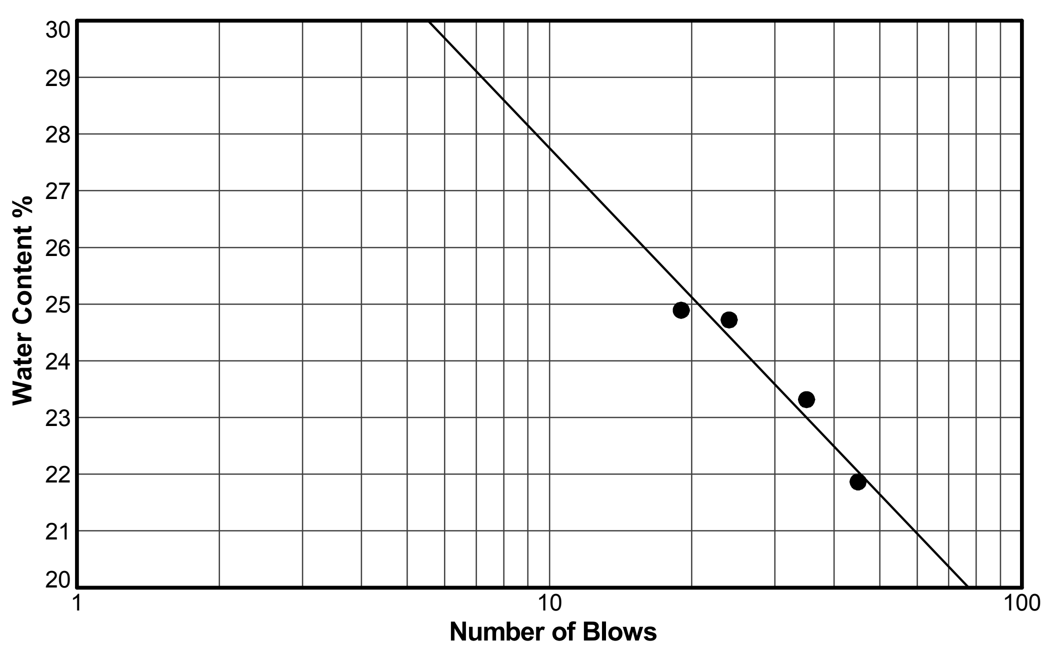
Classification and Definition: CL - Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.

Other Remarks: **N/A**

Test Method: A-Multi Point

Preparation Method: Air Dried

SUMMARY	
Percent Passing #40 Sieve (%)	**53**
Liquid Limit	**24**
Plastic Limit	**16**
Plasticity Index	**8**
Natural Water Content (%)	**8.2**
Liquidity Index	**-1.0**



Note: The test data given herein pertain to the sample provided only. This report constitutes a testing service only.

EB	**1/12/2011**	**LP**	**1/31/2011**
Tech	Date	Checked	Date

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LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS

Reference(s)
ASTM D 4318-05

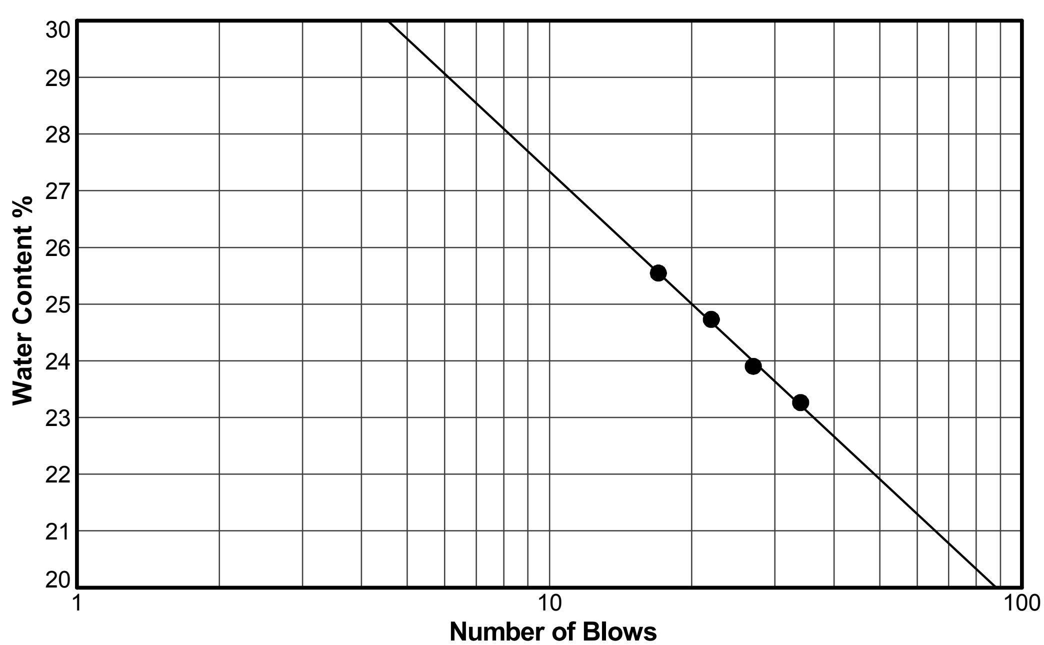
Client:	BGC Engineering Inc	**Sample Location:**	10-BGCGTH-08
Project:	Eagle Gold	**Sample No.:**	11
Location:	PO#0792995-03	**Depth Interval (m):**	266.45 to 266.55
Project No.:	10-1416-0029 **Phase:** 180000	**Lab Schedule No.:**	002

Classification and Definition: CL - Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.

Other Remarks: **N/A**

Test Method: A-Multi Point | **Preparation Method: Air Dried**

SUMMARY	
Percent Passing #40 Sieve (%)	**46**
Liquid Limit	**24**
Plastic Limit	**13**
Plasticity Index	**11**
Natural Water Content (%)	**8.9**
Liquidity Index	**-0.4**



Note: The test data given herein pertain to the sample provided only. This report constitutes a testing service only.

EB	**1/12/2011**	**LP**	**1/31/2011**
Tech	Date	Checked	Date

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LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS

Reference(s)
ASTM D 4318-05

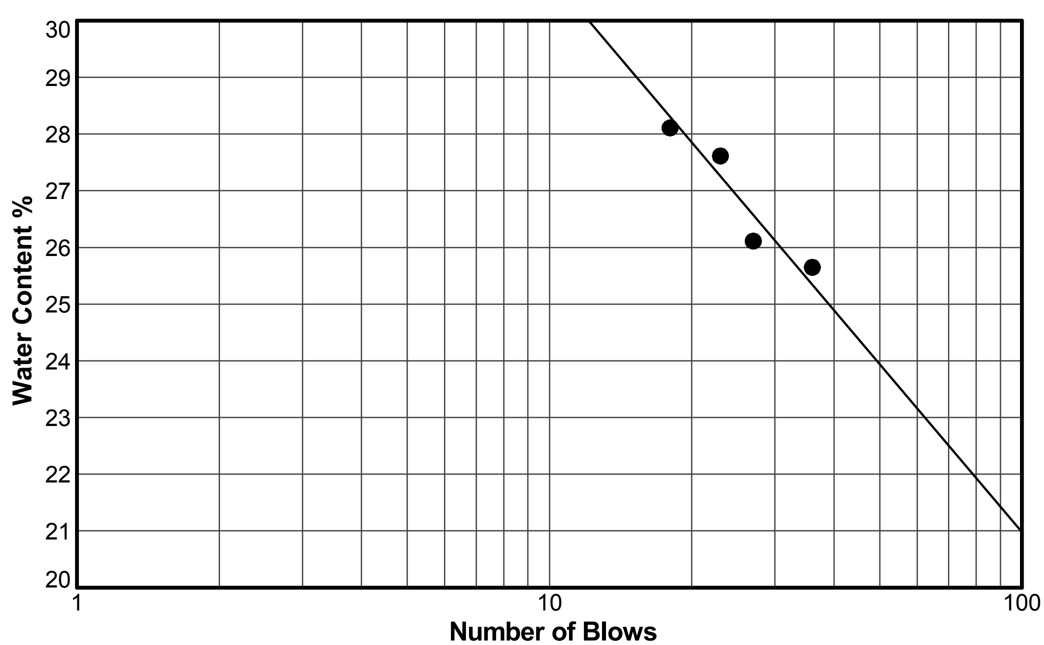
Client:	BGC Engineering Inc	**Sample Location:**	10-BGCGTH-09
Project:	Eagle Gold	**Sample No.:**	9
Location:	PO#0792995-03	**Depth Interval (m):**	180.47 to 180.57
Project No.:	10-1416-0029 **Phase:** 180000	**Lab Schedule No.:**	002

Classification and Definition: ML - Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.

Other Remarks: **N/A**

Test Method: A-Multi Point | **Preparation Method: Air Dried**

SUMMARY	
Percent Passing #40 Sieve (%)	**55**
Liquid Limit	**27**
Plastic Limit	**24**
Plasticity Index	**3**
Natural Water Content (%)	**13.8**
Liquidity Index	**-3.4**



Note: The test data given herein pertain to the sample provided only. This report constitutes a testing service only.

EB	**1/12/2011**	**LP**	**1/31/2011**
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LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS

Reference(s)
ASTM D 4318-05

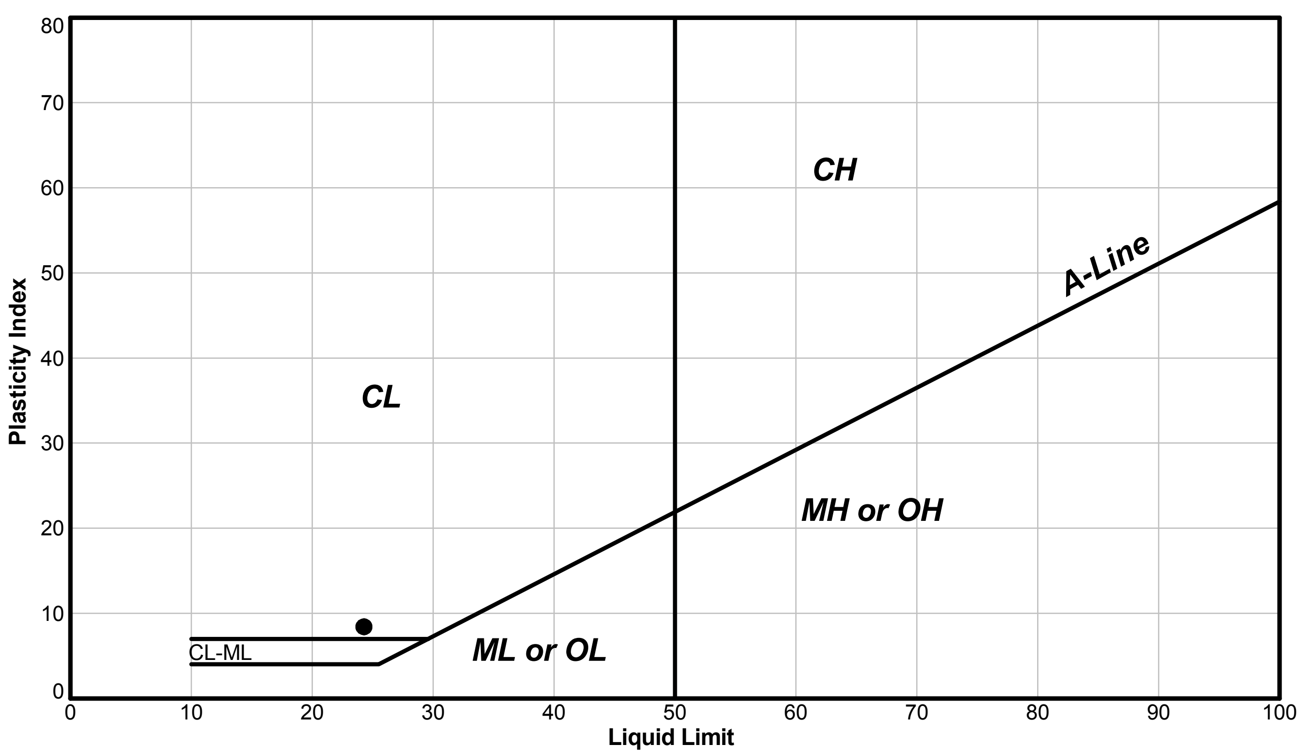
Client:	BGC Engineering Inc	**Sample Location:**	10-BGCGTH-08
Project:	Eagle Gold	**Sample No.:**	6
Location:	PO#0792995-03	**Depth Interval (m):**	186.84 to 187.14
Project No.:	10-1416-0029 **Phase:** 180000	**Lab Schedule No.:**	002

Classification and Definition: CL - Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.

Other Remarks: **N/A**

Test Method: A-Multi Point | **Preparation Method: Air Dried**

PLASTICITY CHART



Sym.	Sample Location	Sample Number	Depth (m)	Bottom (m)	Percent Passing #40 Sieve (%)	Liquid Limit	Plastic Limit	Plasticity Index	Natural Water Content (%)	Liquidity Index
●	10-BGCGTH-08	6	186.84	187.14	53	24	16	8	8.2	-1.0

Note: The test data given herein pertain to the sample provided only. This report constitutes a testing service only.

EB	**1/12/2011**	**LP**	**1/31/2011**
Tech	Date	Checked	Date

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LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS	Reference(s) ASTM D 4318-05

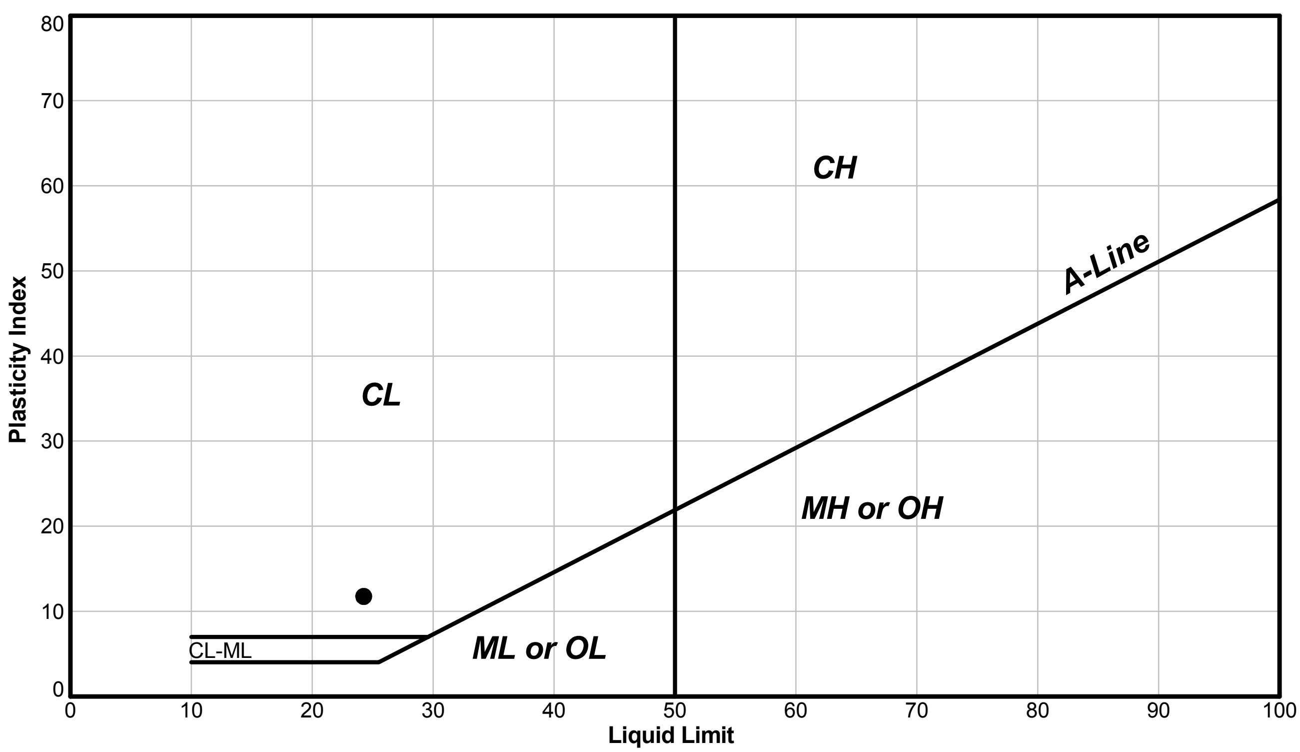
Client:	BGC Engineering Inc	**Sample Location:**	10-BGCGTH-08
Project:	Eagle Gold	**Sample No.:**	11
Location:	PO#0792995-03	**Depth Interval (m):**	266.45 to 266.55
Project No.:	10-1416-0029 **Phase:** 180000	**Lab Schedule No.:**	002

Classification and Definition: CL - Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.

Other Remarks: **N/A**

Test Method: A-Multi Point	**Preparation Method: Air Dried**

PLASTICITY CHART



Sym.	Sample Location	Sample Number	Depth (m)	Bottom (m)	Percent Passing #40 Sieve (%)	Liquid Limit	Plastic Limit	Plasticity Index	Natural Water Content (%)	Liquidity Index
●	10-BGCGTH-08	11	266.45	266.55	46	24	13	11	8.9	-0.4

Note: The test data given herein pertain to the sample provided only. This report constitutes a testing service only.

EB	**1/12/2011**	**LP**	**1/31/2011**
Tech	Date	Checked	Date

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LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS

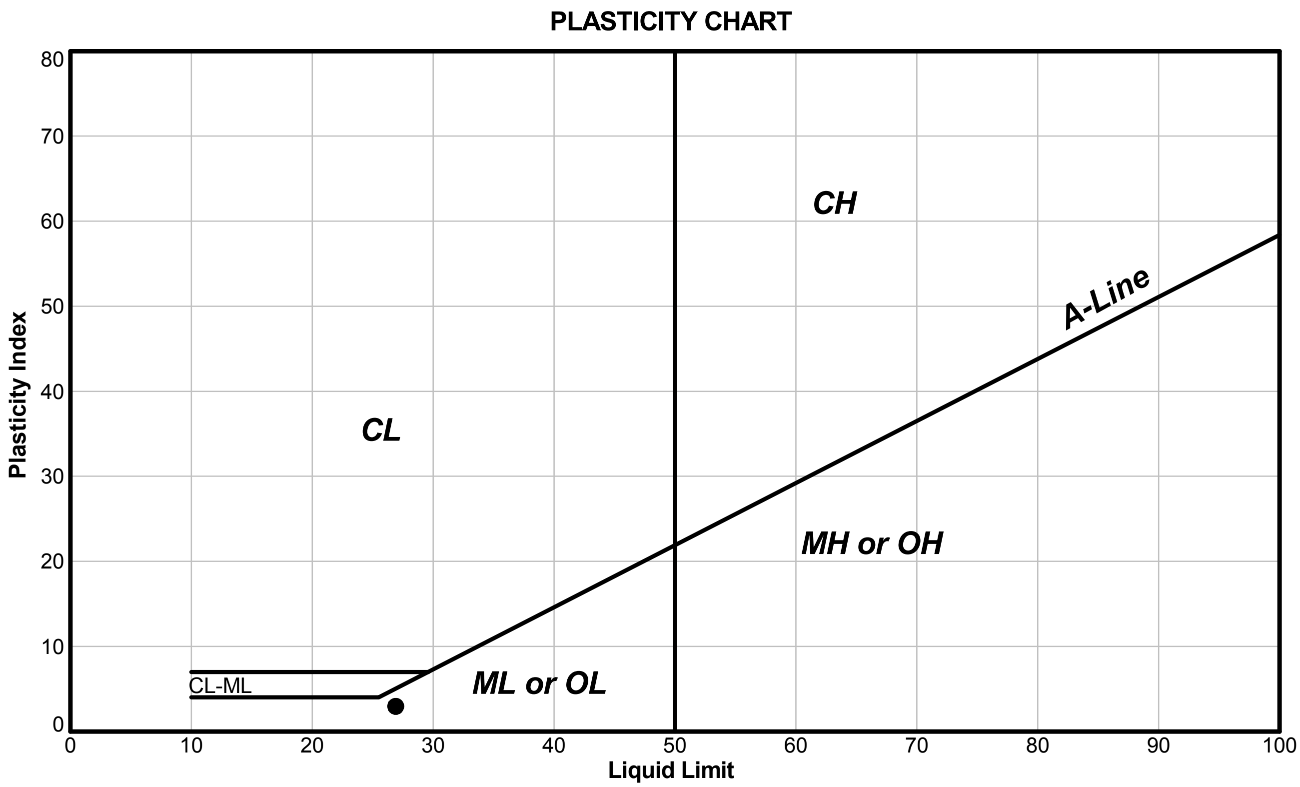
Reference(s): **ASTM D 4318-05**

Client:	BGC Engineering Inc	**Sample Location:**	10-BGCGTH-09
Project:	Eagle Gold	**Sample No.:**	9
Location:	PO#0792995-03	**Depth Interval (m):**	180.47 to 180.57
Project No.:	10-1416-0029 **Phase:** 180000	**Lab Schedule No.:**	002

Classification and Definition: ML - Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.

Other Remarks: N/A

Test Method: A-Multi Point | **Preparation Method:** Air Dried



Sym.	Sample Location	Sample Number	Depth (m)	Bottom (m)	Percent Passing #40 Sieve (%)	Liquid Limit	Plastic Limit	Plasticity Index	Natural Water Content (%)	Liquidity Index
●	10-BGCGTH-09	9	180.47	180.57	55	27	24	3	13.8	-3.4

Note: The test data given herein pertain to the sample provided only. This report constitutes a testing service only.

EB	1/12/2011	LP	1/31/2011
Tech	Date	Checked	Date

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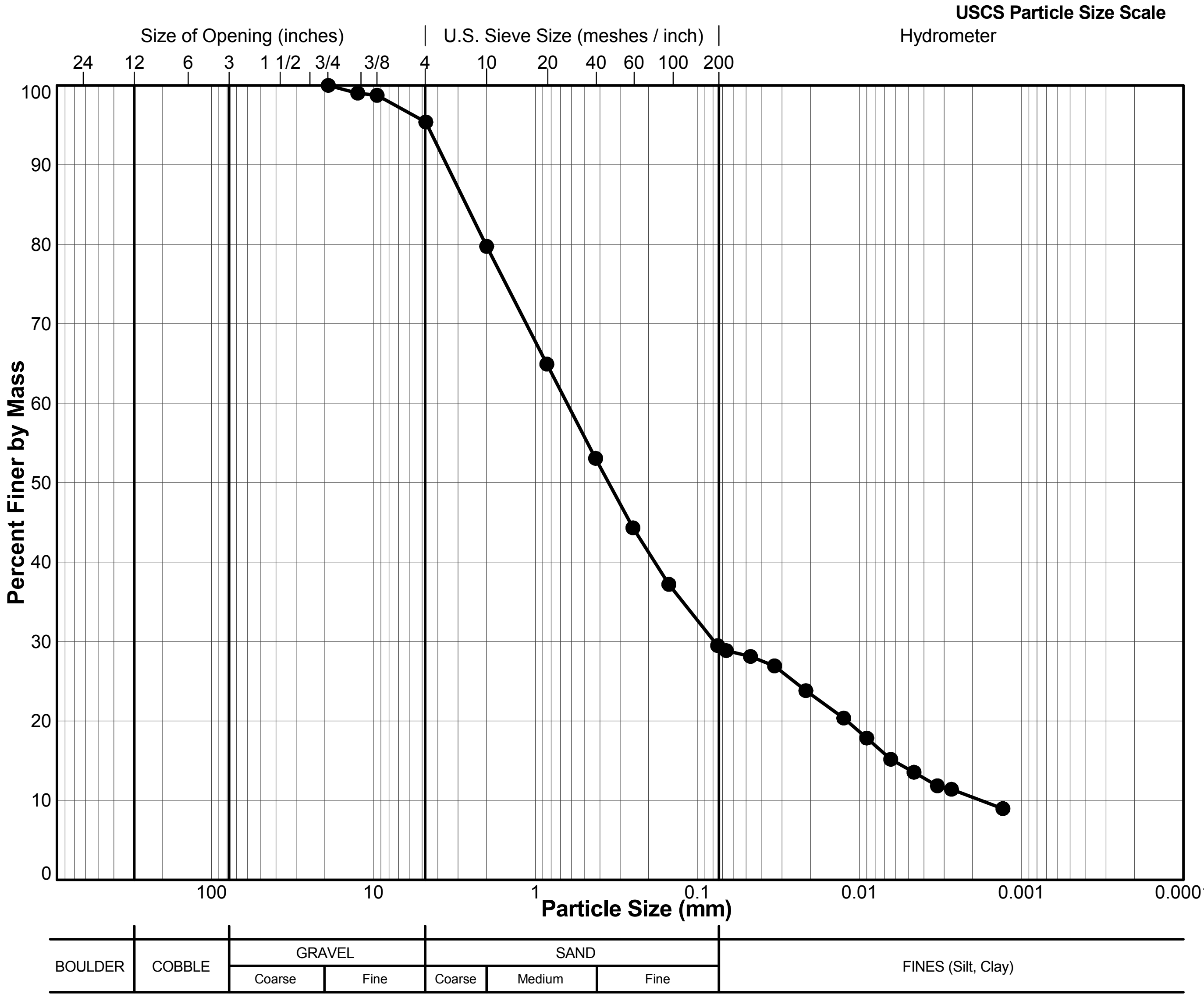
PARTICLE SIZE ANALYSIS OF SOILS

Reference(s)	**ASTM D 422-63 (2007)**

Client: BGC Engineering Inc	**Sample Location:** 10-BGCGTH-08
Project: Eagle Gold	**Sample No.:** 6
Location: PO#0792995-03	**Depth Interval (m):** 186.84 to 187.14
Project No.: 10-1416-0029 **Phase:** 180000	**Lab Schedule No.:** 002

Other Remarks: N/A

Specific Gravity (assumed): 2.65	**Shape: N/A**
Max. Particle Size Passing (mm): 19	**Hardness: N/A**
Method: Split, Washed	**Dispersion Method: Stirring**
Hydrometer ID: BURNABY - 87024	**Dispersion Period (min): 1**



EB/SK	**1/12/2011**	**LP**	**1/31/2011**
Tech	Date	Checked	Date

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Golder Associates

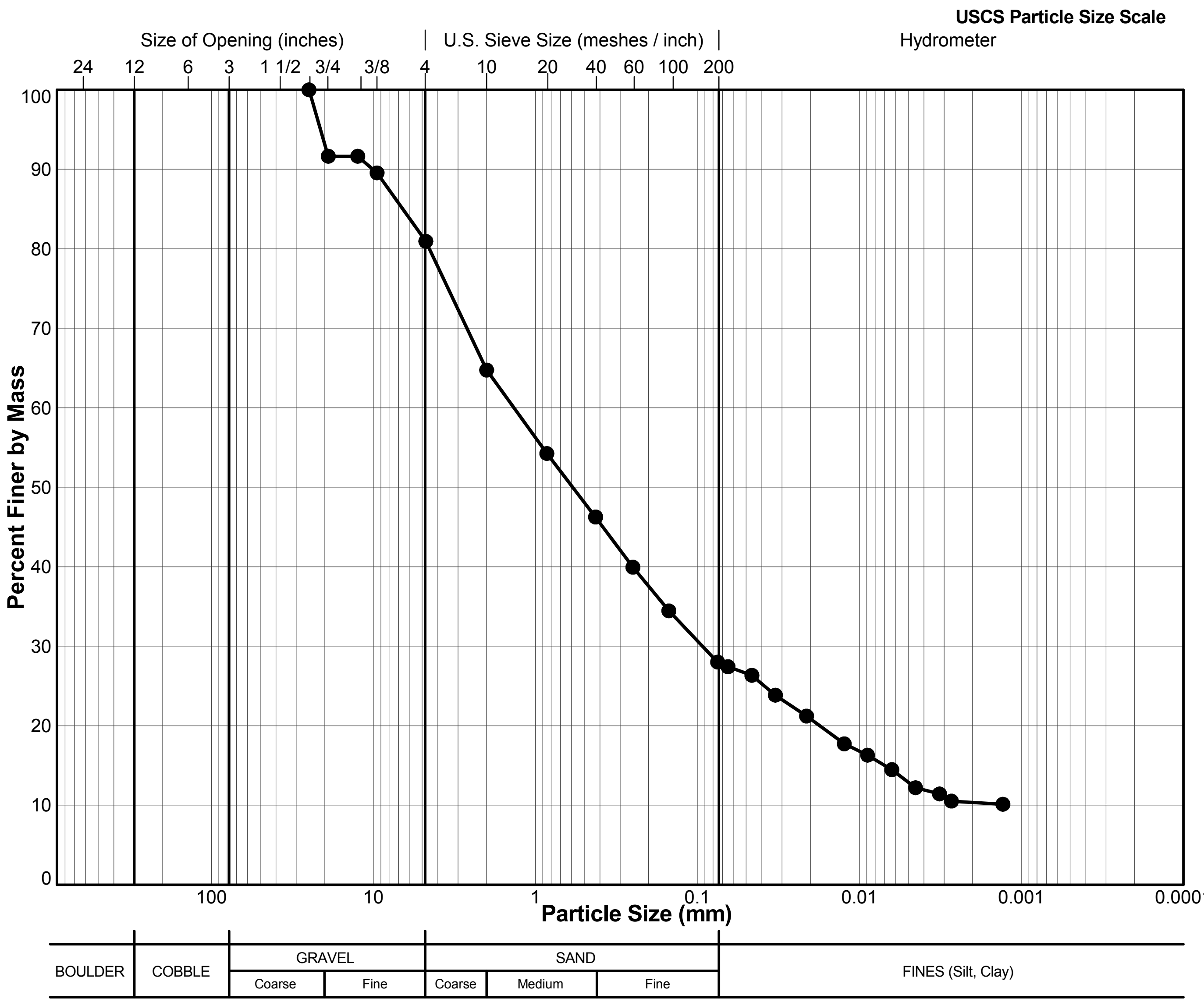
PARTICLE SIZE ANALYSIS OF SOILS

Reference(s)	**ASTM D 422-63 (2007)**

Client: BGC Engineering Inc	**Sample Location:** 10-BGCGTH-08
Project: Eagle Gold	**Sample No.:** 11
Location: PO#0792995-03	**Depth Interval (m):** 266.45 to 266.55
Project No.: 10-1416-0029 **Phase:** 180000	**Lab Schedule No.:** 002

Other Remarks: **N/A**

Specific Gravity (assumed): 2.65	**Shape: N/A**
Max. Particle Size Passing (mm): 25	**Hardness: N/A**
Method: Split, Washed	**Dispersion Method: Stirring**
Hydrometer ID: BURNABY - 87024	**Dispersion Period (min): 1**



EB/SK	1/12/2011	LP	1/31/2011
Tech	Date	Checked	Date

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Golder Associates

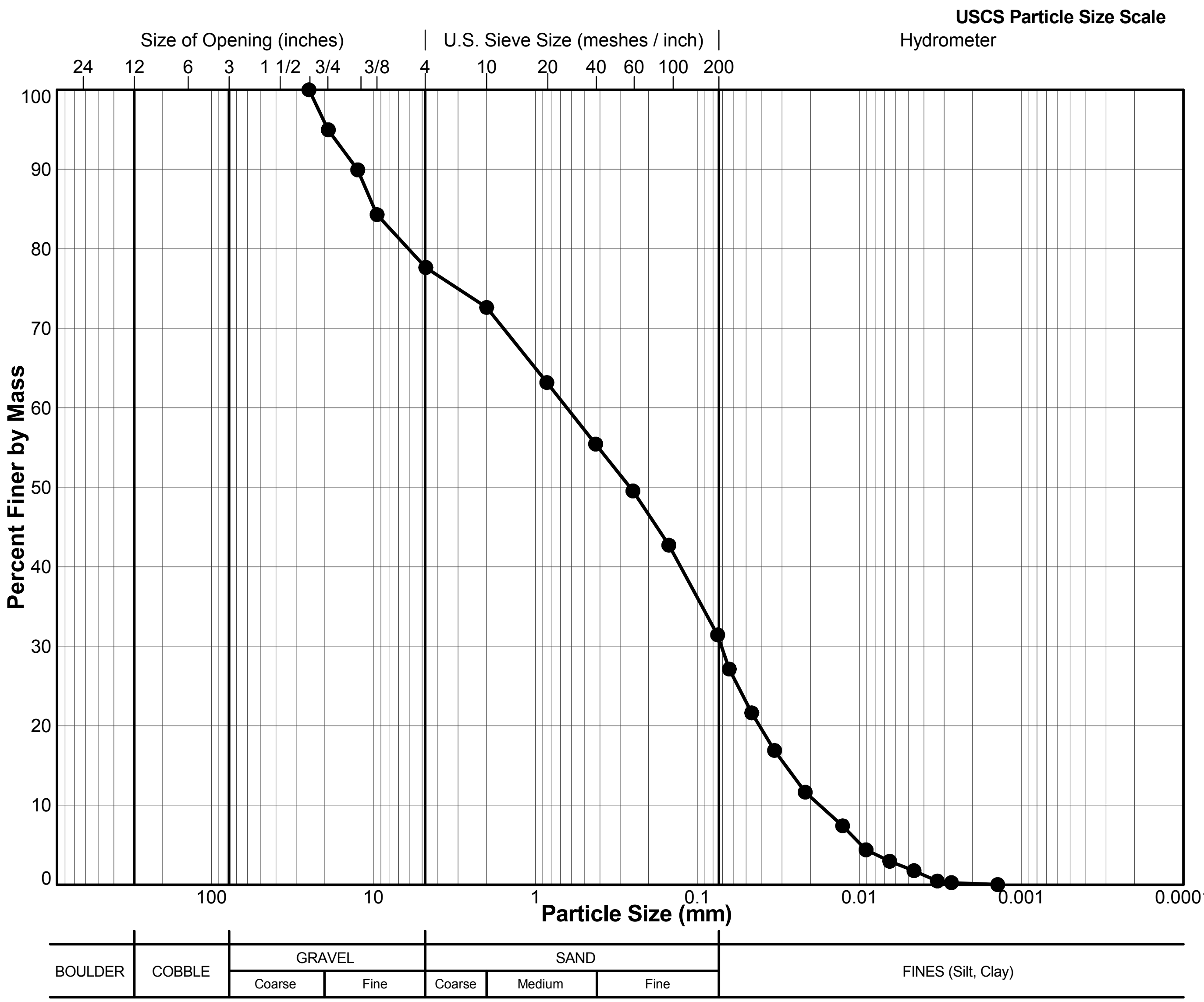
PARTICLE SIZE ANALYSIS OF SOILS

Reference(s): **ASTM D 422-63 (2007)**

Client:	BGC Engineering Inc	**Sample Location:**	10-BGCGTH-09
Project:	Eagle Gold	**Sample No.:**	9
Location:	PO#0792995-03	**Depth Interval (m):**	180.47 to 180.57
Project No.:	10-1416-0029 **Phase:** 180000	**Lab Schedule No.:**	002

Other Remarks: **N/A**

Specific Gravity (assumed): 2.65	**Shape: N/A**
Max. Particle Size Passing (mm): 25	**Hardness: N/A**
Method: Split, Washed	**Dispersion Method: Stirring**
Hydrometer ID: BURNABY - 541360	**Dispersion Period (min): 1**



EB/SK	**1/12/2011**	**LP**	**1/31/2011**
Tech	Date	Checked	Date

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WATER CONTENT DETERMINATION

Reference(s)
ASTM D 4959

Client:	BGC Engineering Inc	**Project No.:** 10-1416-0029	**Phase:** 180000
Project:	Eagle Gold	**Lab Schedule No.:** 002	
Location:	PO#0792995-03		

Sample Location	Sample No.	Sample Interval		Water Content (%)
		Depth (m)	Bottom (m)	
10-BGCGTH-08	**6**	186.84	187.14	**8.2**
10-BGCGTH-08	**11**	266.45	266.55	**8.9**
10-BGCGTH-09	**9**	180.47	180.57	**13.8**

File:O:\ACTIVE_2010\1416\10-1416-0029 BGC ENGINEERING\10-1416-0029 PHASE 18000 EAGLE GOLD\GINT\10-1416-0029-18000 EAGLE GOLD.GPJ Output Form:_LAB_WATER CONTENT (REPORT) Template:BC REGION TEMPLATE BETA 1.GDT Library:BC REGION LIBRARY.GLB EBarnes 02/08/11

LP	1/31/2011
Checked	Date

LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS

Reference(s)
ASTM D 4318-05

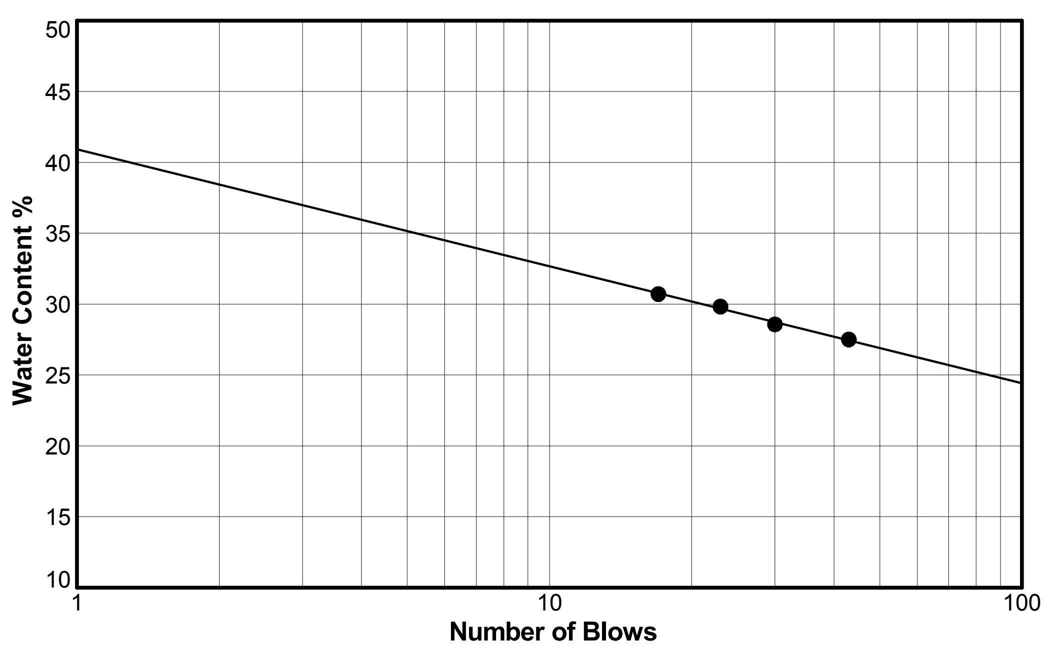
Client:	BGC	**Sample Location:**	11-BGC-GTH-10
Project:	Proj# 0792-005-08	**Sample No.:**	7
Location:	Eagle Gold	**Depth Interval (m):**	122.25 to 122.30
Project No.:	11-1415-0029 **Phase:** 7000	**Lab Schedule No.:**	102

Classification and Definition: CL - Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.

Other Remarks: **N/A**

Test Method: A-Multi Point | **Preparation Method: Wet**

SUMMARY	
Percent Passing #40 Sieve (%)	**46**
Liquid Limit	**29**
Plastic Limit	**16**
Plasticity Index	**13**
Natural Water Content (%)	**11.3**
Liquidity Index	**-0.4**



Note: The test data given herein pertain to the sample provided only. This report constitutes a testing service only.

SK	**19/07/2011**	**LP**	**20/07/2011**
Tech	Date	Checked	Date

File:N:\BUR-GRAPHICS\PROJECTS\2011\1415\11-1415-0029\PHASE 7000\11-1415-0029 EAGLE GOLD.GPJ Output Form:_LAB_ATTERBERG LIMITS (REPORT) Template:BC REGION TEMPLATE BETA 1.GDT Library:BC REGION LIBRARY.GLB SKim 21/07/11

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LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS

Reference(s): **ASTM D 4318-05**

Client:	BGC	**Sample Location:**	11-BGC-GTH-10
Project:	Proj# 0792-005-08	**Sample No.:**	9
Location:	Eagle Gold	**Depth Interval (m):**	168.91 to 168.98
Project No.:	11-1415-0029 **Phase:** 7000	**Lab Schedule No.:**	102

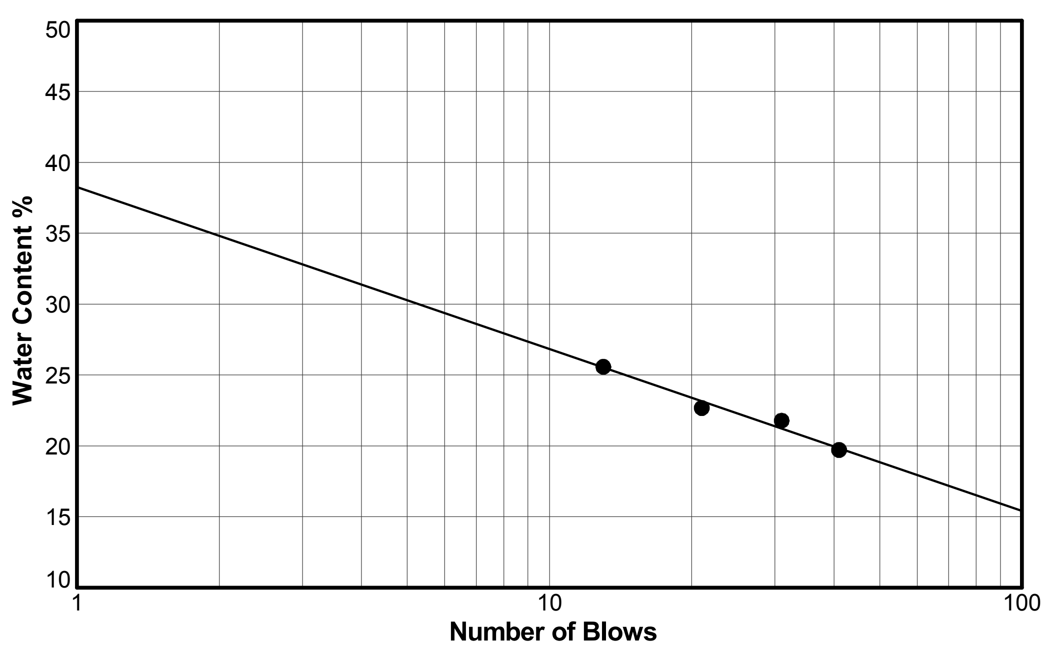
Classification and Definition: CL-ML - Inorganic clays of low to medium plasticity --- Inorganic silts and very fine sands, clayey silts with slight plasticity.

Other Remarks: N/A

Test Method: A-Multi Point

Preparation Method: Wet

SUMMARY	
Percent Passing #40 Sieve (%)	23
Liquid Limit	22
Plastic Limit	18
Plasticity Index	4
Natural Water Content (%)	6.9
Liquidity Index	-2.8



Note: The test data given herein pertain to the sample provided only. This report constitutes a testing service only.

SK	19/07/2011	LP	20/07/2011
Tech	Date	Checked	Date

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LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS	Reference(s) **ASTM D 4318-05**

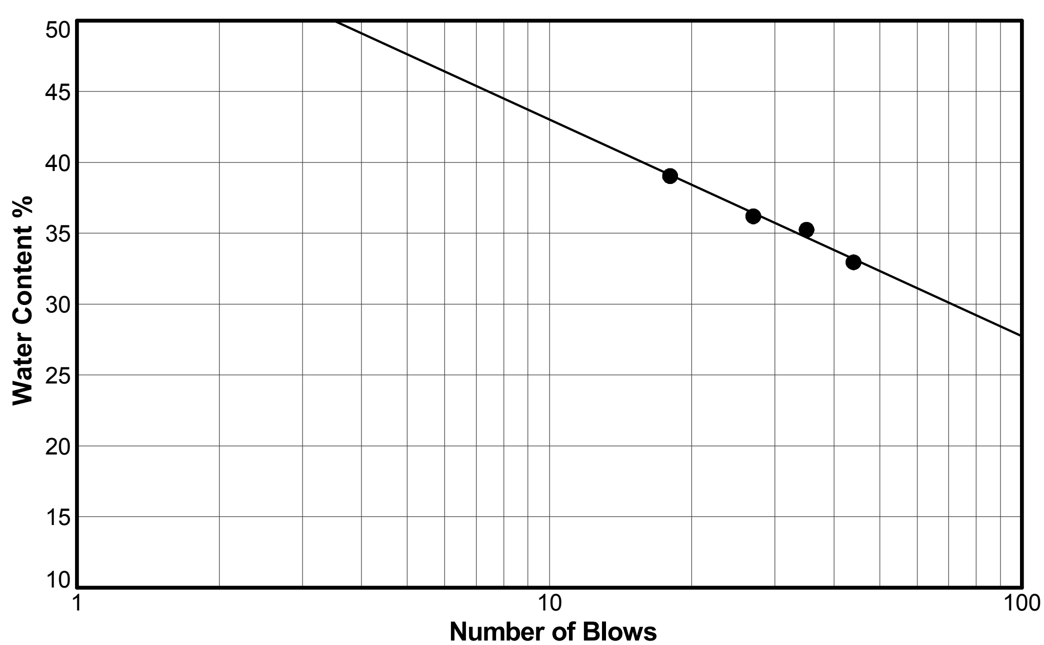
Client:	BGC	**Sample Location:**	11-BGC-GTH-11
Project:	Proj# 0792-005-08	**Sample No.:**	7
Location:	Eagle Gold	**Depth Interval (m):**	118.02 to 118.08
Project No.:	11-1415-0029 **Phase:** 7000	**Lab Schedule No.:**	102

Classification and Definition: CL - Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.

Other Remarks: **N/A**

Test Method: A-Multi Point | **Preparation Method: Wet**

SUMMARY	
Percent Passing #40 Sieve (%)	**30**
Liquid Limit	**37**
Plastic Limit	**22**
Plasticity Index	**15**
Natural Water Content (%)	**10.0**
Liquidity Index	**-0.8**



Note: The test data given herein pertain to the sample provided only. This report constitutes a testing service only.

SK	**19/07/2011**	**LP**	**20/07/2011**
Tech	Date	Checked	Date

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LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS	Reference(s) **ASTM D 4318-05**

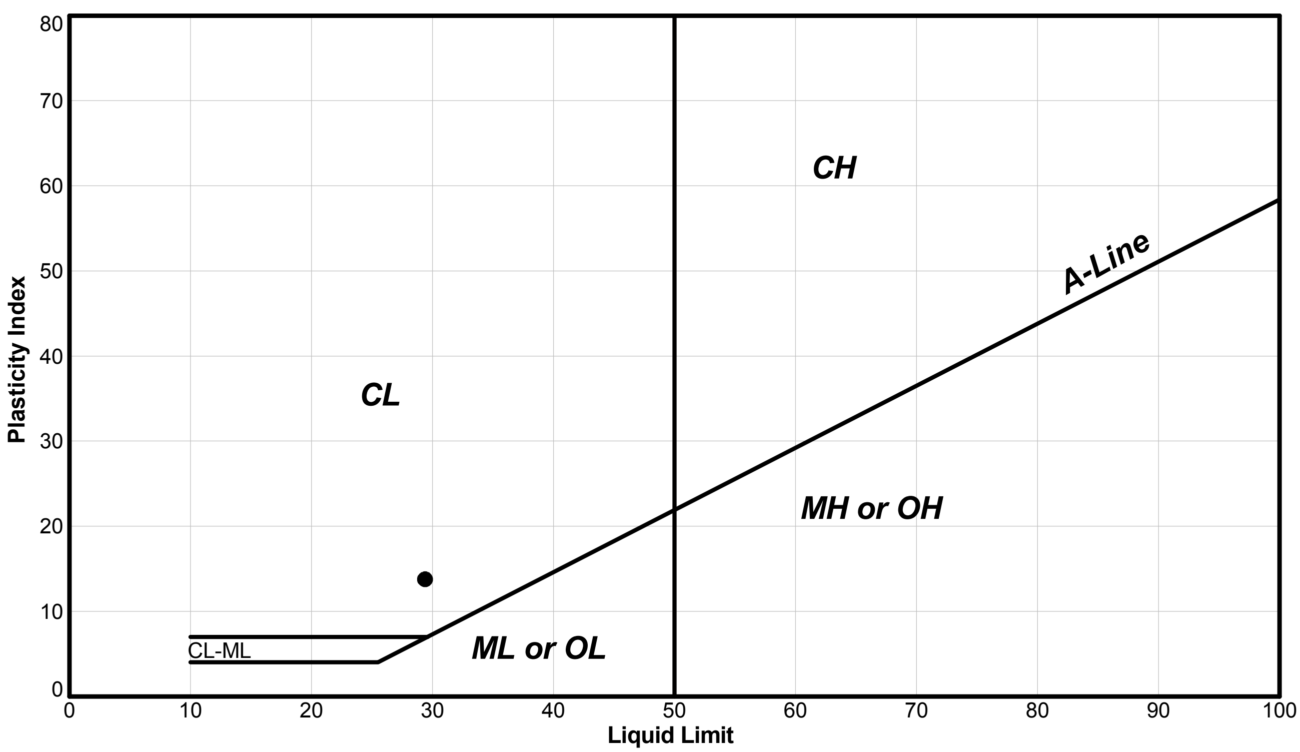
Client: BGC	**Sample Location:** 11-BGC-GTH-10
Project: Proj# 0792-005-08	**Sample No.:** 7
Location: Eagle Gold	**Depth Interval (m):** 122.25 to 122.30
Project No.: 11-1415-0029 **Phase:** 7000	**Lab Schedule No.:** 102

Classification and Definition: CL - Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.

Other Remarks: **N/A**

Test Method: A-Multi Point	**Preparation Method: Wet**

PLASTICITY CHART



Sym.	Sample Location	Sample Number	Depth (m)	Bottom (m)	Percent Passing #40 Sieve (%)	Liquid Limit	Plastic Limit	Plasticity Index	Natural Water Content (%)	Liquidity Index
●	11-BGC-GTH-10	7	122.25	122.30	46	29	16	13	11.3	-0.4

Note: The test data given herein pertain to the sample provided only. This report constitutes a testing service only.

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LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS

Reference(s)
ASTM D 4318-05

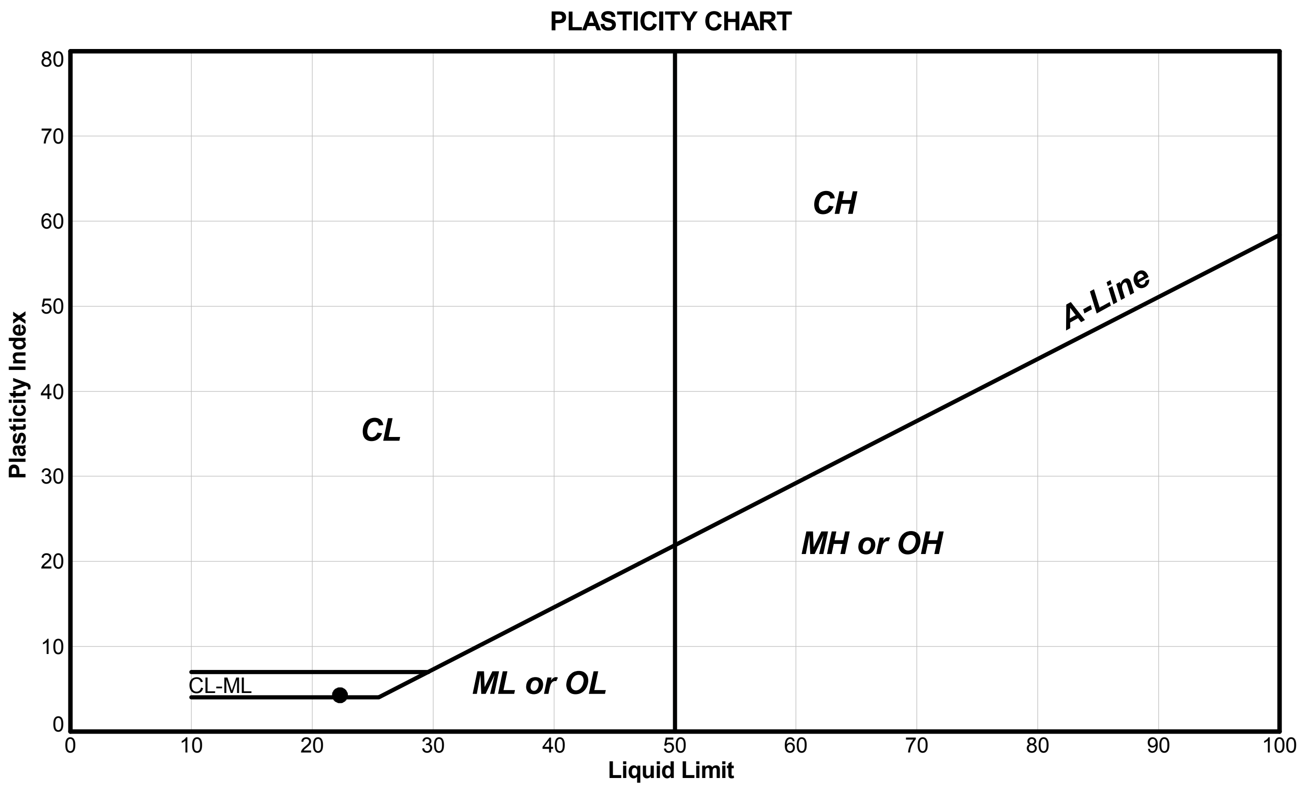
Client:	BGC	**Sample Location:**	11-BGC-GTH-10
Project:	Proj# 0792-005-08	**Sample No.:**	9
Location:	Eagle Gold	**Depth Interval (m):**	168.91 to 168.98
Project No.:	11-1415-0029 **Phase:** 7000	**Lab Schedule No.:**	102

Classification and Definition: CL-ML - Inorganic clays of low to medium plasticity --- Inorganic silts and very fine sands, clayey silts with slight plasticity.

Other Remarks: N/A

Test Method: A-Multi Point

Preparation Method: Wet



Sym.	Sample Location	Sample Number	Depth (m)	Bottom (m)	Percent Passing #40 Sieve (%)	Liquid Limit	Plastic Limit	Plasticity Index	Natural Water Content (%)	Liquidity Index
●	11-BGC-GTH-10	9	168.91	168.98	23	22	18	4	6.9	-2.8

Note: The test data given herein pertain to the sample provided only. This report constitutes a testing service only.

SK	19/07/2011	LP	20/07/2011
Tech	Date	Checked	Date

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LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS

Reference(s)
ASTM D 4318-05

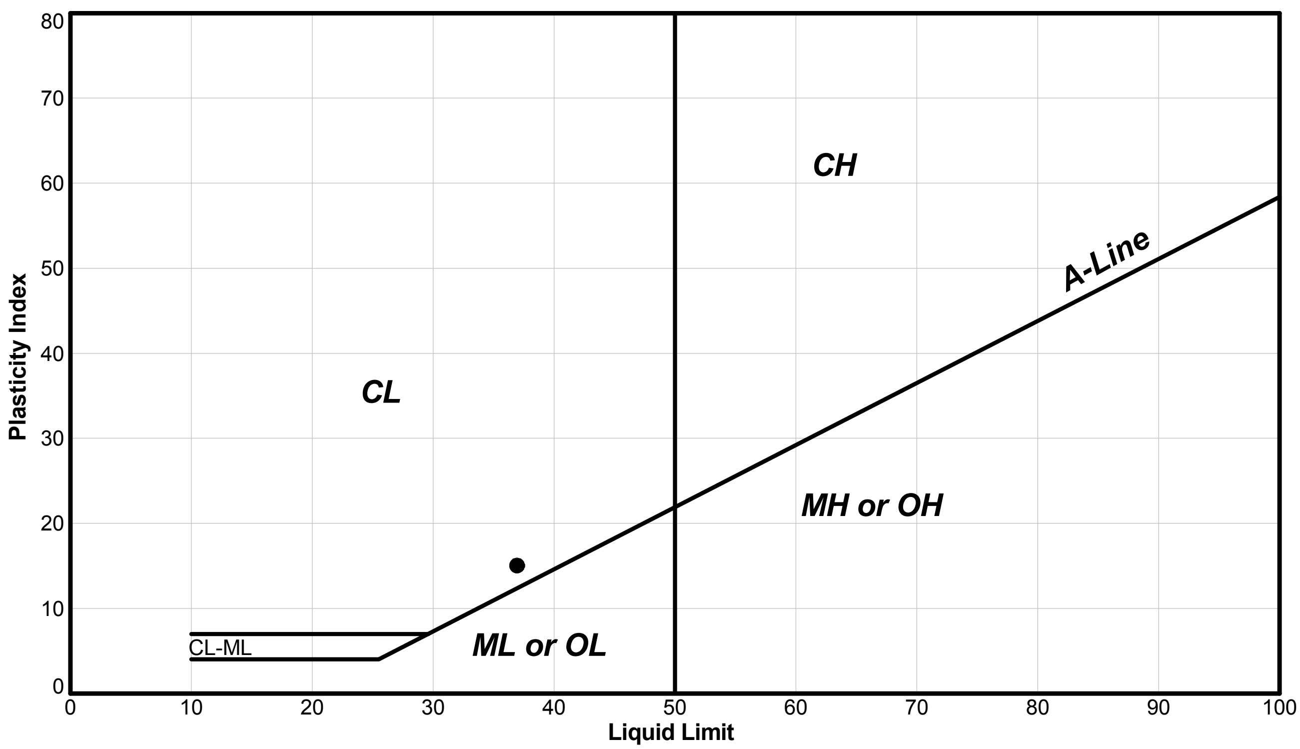
Client:	BGC	**Sample Location:**	11-BGC-GTH-11
Project:	Proj# 0792-005-08	**Sample No.:**	7
Location:	Eagle Gold	**Depth Interval (m):**	118.02 to 118.08
Project No.:	11-1415-0029 **Phase:** 7000	**Lab Schedule No.:**	102

Classification and Definition: CL - Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.

Other Remarks: N/A

Test Method: A-Multi Point | **Preparation Method: Wet**

PLASTICITY CHART



Sym.	Sample Location	Sample Number	Depth (m)	Bottom (m)	Percent Passing #40 Sieve (%)	Liquid Limit	Plastic Limit	Plasticity Index	Natural Water Content (%)	Liquidity Index
●	11-BGC-GTH-11	7	118.02	118.08	30	37	22	15	10.0	-0.8

Note: The test data given herein pertain to the sample provided only. This report constitutes a testing service only.

SK	19/07/2011	LP	20/07/2011
Tech	Date	Checked	Date

File:N:\BUR-GRAPHICS\PROJECTS\2011\1415\11-1415-0029\PHASE 7000\11-1415-0029 EAGLE GOLD.GPJ Output Form:_LAB_ATTERBERG CASAGRANDE (SINGLE) Template:BC REGION TEMPLATE BETA 1.GDT Library:BC REGION LIBRARY.GLB SKim 21/07/11

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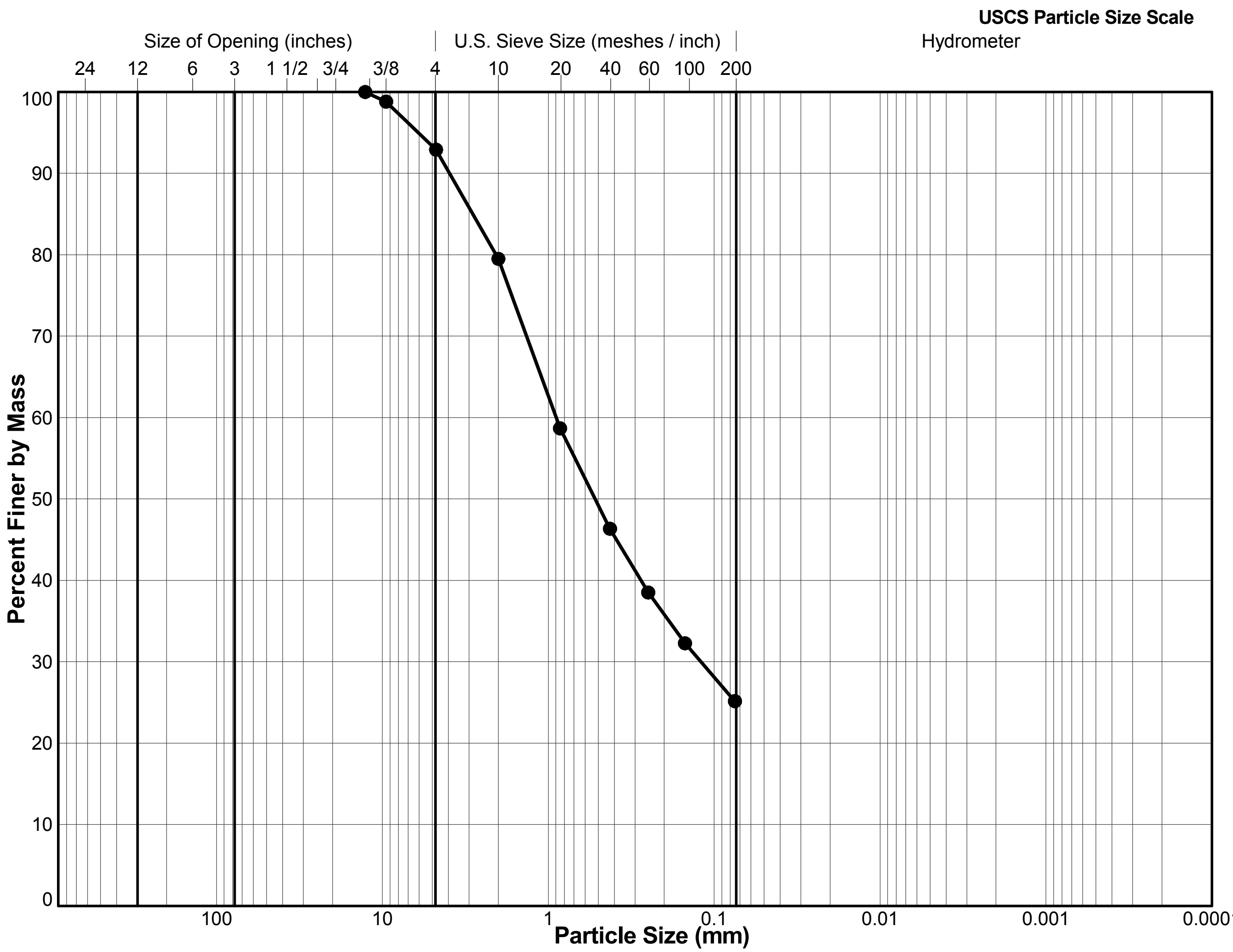
PARTICLE SIZE ANALYSIS OF SOILS

Reference(s): **ASTM D 422-63 (2007)**

Client:	BGC	**Sample Location:**	11-BGC-GTH-10
Project:	Proj# 0792-005-08	**Sample No.:**	7
Location:	Eagle Gold	**Depth Interval (m):**	122.25 to 122.30
Project No.:	11-1415-0029 **Phase:** 7000	**Lab Schedule No.:**	102

Other Remarks: **N/A**

Specific Gravity (assumed):	**Shape:**
Max. Particle Size Passing (mm): 12.7	
Method: Split, Washed	



BOULDER	COBBLE	GRAVEL		SAND			FINES (Silt, Clay)
		Coarse	Fine	Coarse	Medium	Fine	

SK	**20/07/2011**	**LP**	**20/07/2011**
Tech	Date	Checked	Date

File:N:\BUR-GRAPHICS\PROJECTS\2011\1415\11-1415-0029\PHASE 7000\11-1415-0029 EAGLE GOLD.GPJ Output Form:_LAB_PARTICLE SIZE (SINGLE) Template:BC REGION TEMPLATE BETA 1.GDT Library:BC REGION LIBRARY.GLB SKm 21/07/11

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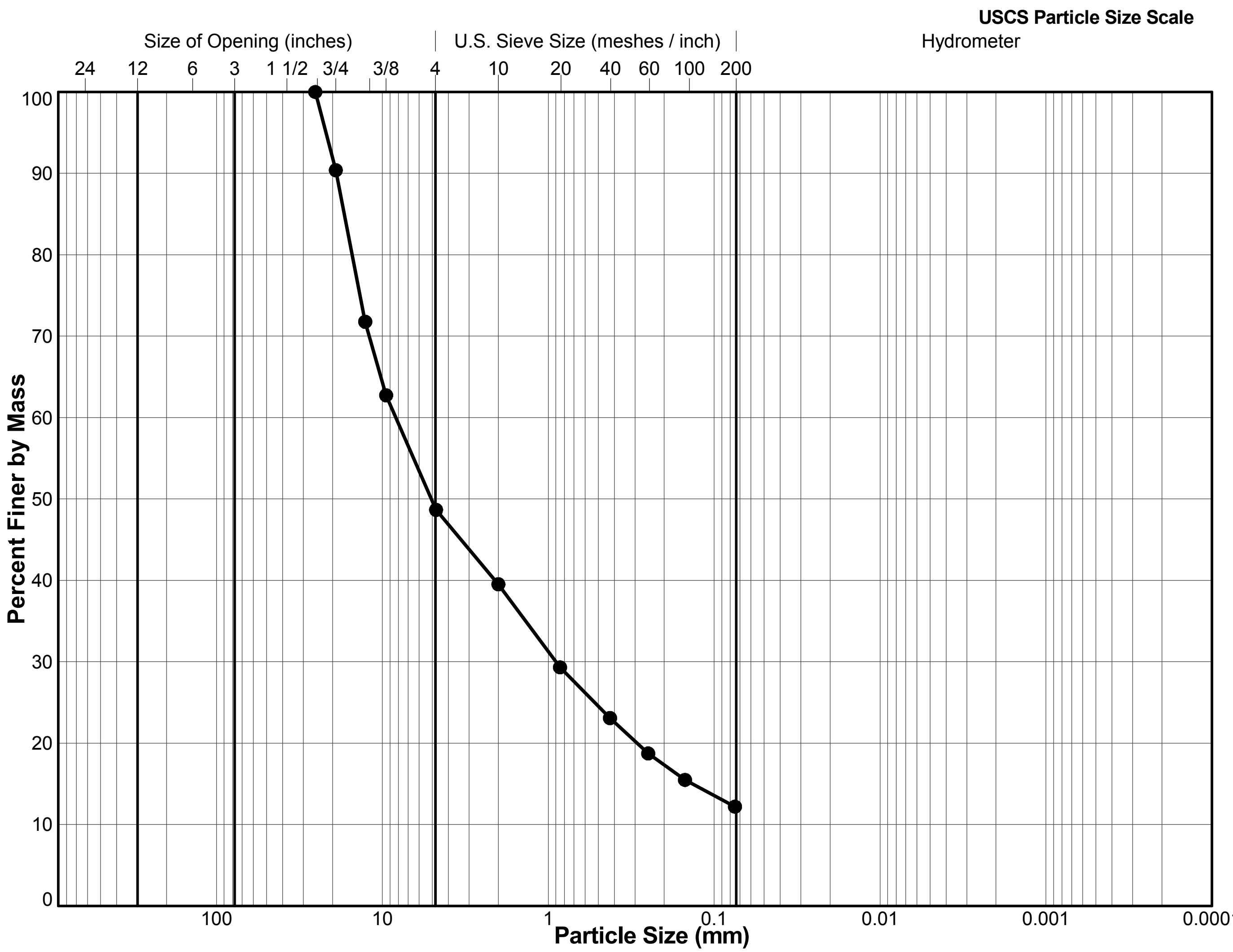
PARTICLE SIZE ANALYSIS OF SOILS

Reference(s): **ASTM D 422-63 (2007)**

Client:	BGC	**Sample Location:**	11-BGC-GTH-10
Project:	Proj# 0792-005-08	**Sample No.:**	9
Location:	Eagle Gold	**Depth Interval (m):**	168.91 to 168.98
Project No.:	11-1415-0029 **Phase:** 7000	**Lab Schedule No.:**	102

Other Remarks: **N/A**

Specific Gravity (assumed):	**Shape:**
Max. Particle Size Passing (mm): 25.4	
Method: Split, Washed	



BOULDER	COBBLE	GRAVEL		SAND			FINES (Silt, Clay)
		Coarse	Fine	Coarse	Medium	Fine	

SK	**20/07/2011**	**LP**	**20/07/2011**
Tech	Date	Checked	Date

File:N:\BUR-GRAPHICS\PROJECTS\2011\1415\11-1415-0029\PHASE 7000\11-1415-0029 EAGLE GOLD.GPJ Output Form:_LAB_PARTICLE SIZE (SINGLE) Template:BC REGION TEMPLATE BETA 1.GDT Library:BC REGION LIBRARY.GLB SKim 21/07/11

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PARTICLE SIZE ANALYSIS OF SOILS

Reference(s): **ASTM D 422-63 (2007)**

Client:	BGC	**Sample Location:**	11-BGC-GTH-11
Project:	Proj# 0792-005-08	**Sample No.:**	7
Location:	Eagle Gold	**Depth Interval (m):**	118.02 to 118.08
Project No.:	11-1415-0029 **Phase:** 7000	**Lab Schedule No.:**	102

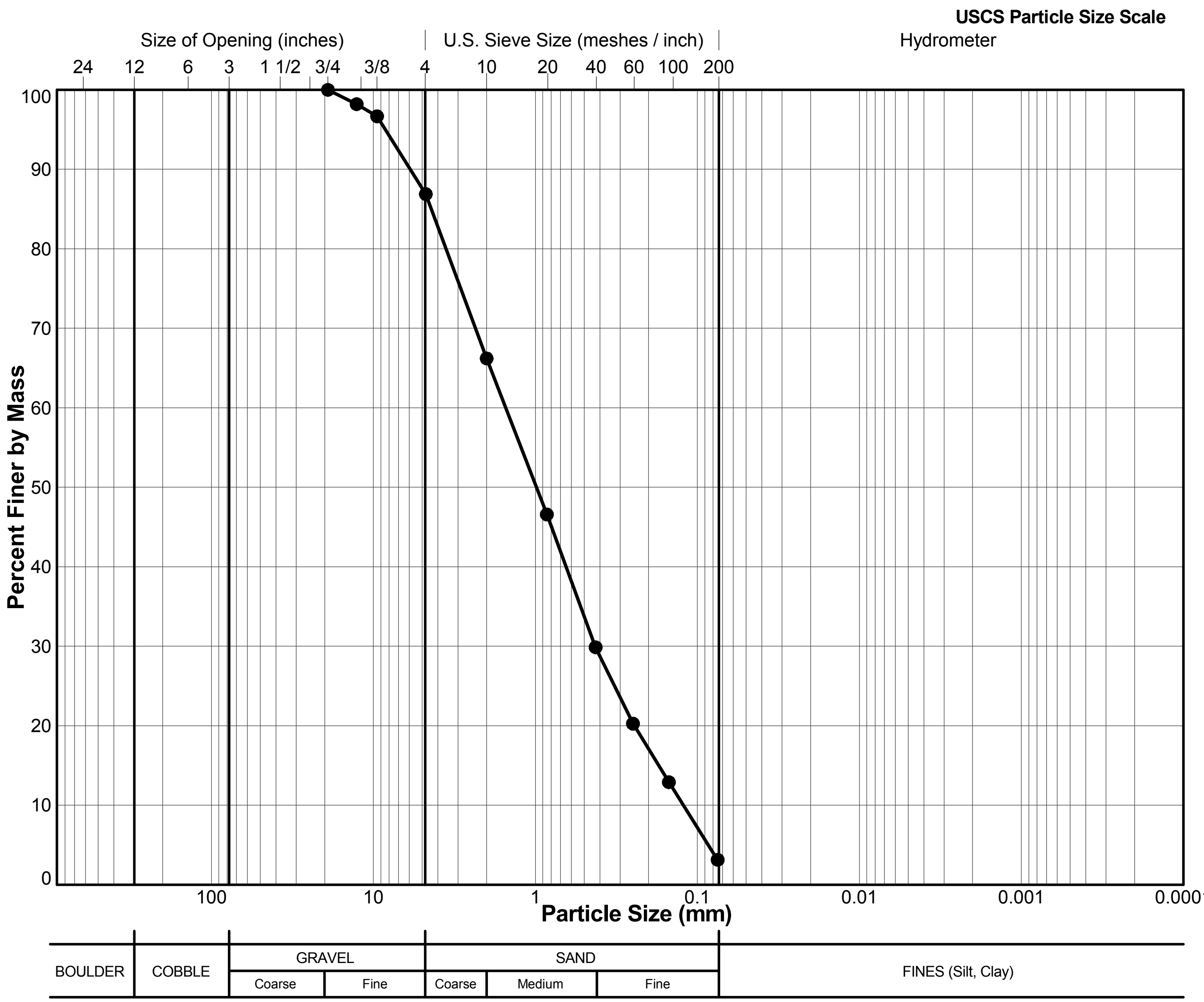
Other Remarks: **N/A**

Specific Gravity (assumed):

Shape:

Max. Particle Size Passing (mm): 19.1

Method: Split, Washed



SK	20/07/2011	LP	20/07/2011
Tech	Date	Checked	Date

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WATER CONTENT DETERMINATION

Reference(s)
ASTM D 4959

Client: BGC
Project No.: 11-1415-0029 **Phase:** 7000
Project: Proj# 0792-005-08
Lab Schedule No.: 102
Location: Eagle Gold

Sample Location	Sample No.	Sample Interval		Water Content (%)
		Depth (m)	Bottom (m)	
11-BGC-GTH-10	**7**	122.25	122.30	**11.3**
11-BGC-GTH-10	**9**	168.91	168.98	**6.9**
11-BGC-GTH-11	**7**	118.02	118.08	**10.0**

File:N:\BUR-GRAPHICS\PROJECTS\2011\1415\11-1415-0029\PHASE 7000\11-1415-0029 EAGLE GOLD.GPJ Output Form:_LAB_WATER CONTENT (REPORT) Template:BC REGION TEMPLATE BETA 1.GDT Library:BC REGION LIBRARY.GLB SKim 21/07/11

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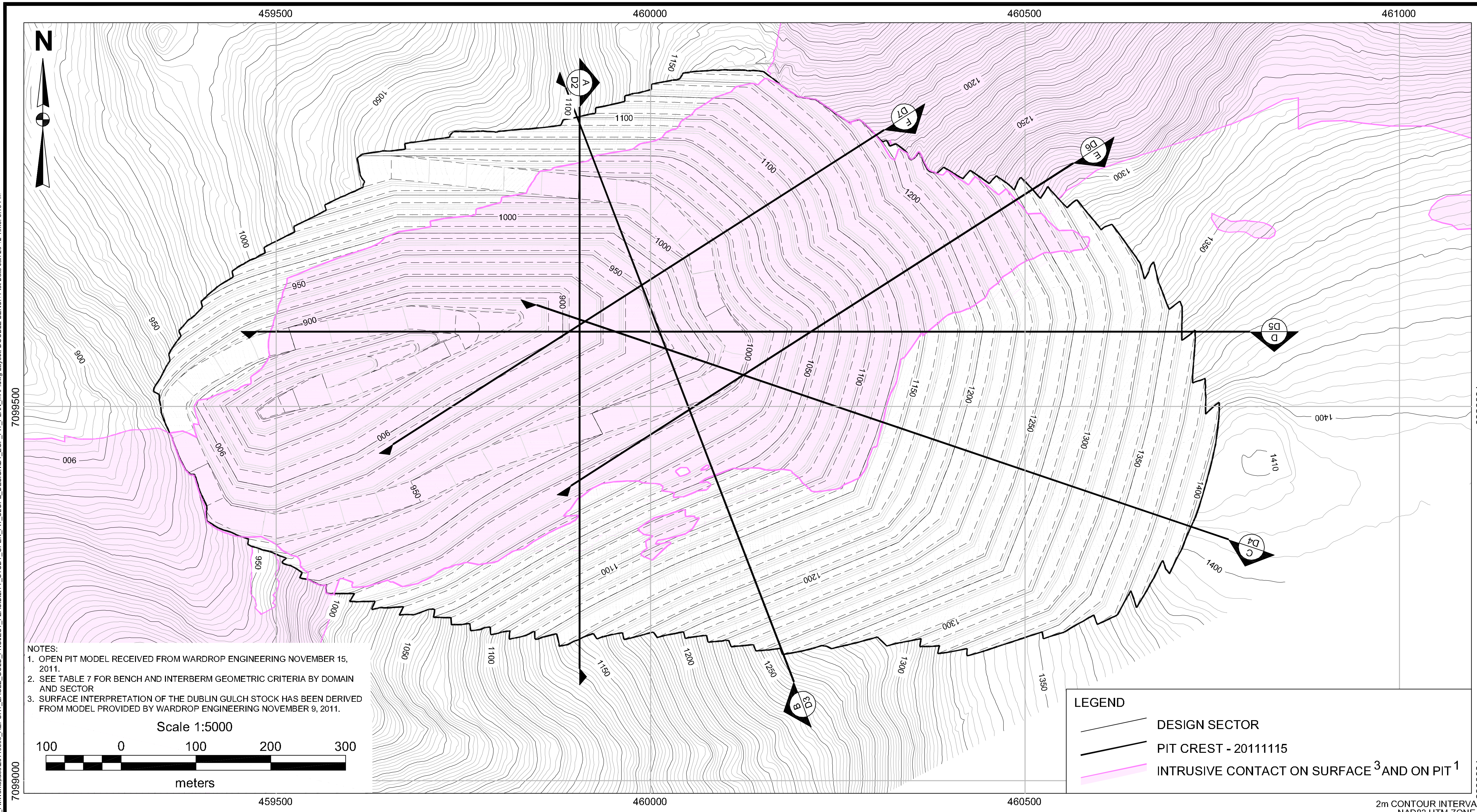
APPENDIX D
PIT VALIDATION

TABLE D1. FACTOR OF SAFETY SUMMARY

Section Name	Length of Horizontal Drainholes (m)	Factor of Safety
A	250	2.2
B	250	2.1
C	250	1.3
D	250	1.3
E	250	1.9
F	250	1.9



NOTES:
1. OPEN PIT MODEL RECEIVED FROM WARDROP ENGINEERING NOVEMBER 15, 2011.
2. SEE TABLE 7 FOR BENCH AND INTERBERM GEOMETRIC CRITERIA BY DOMAIN AND SECTOR
3. SURFACE INTERPRETATION OF THE DUBLIN GULCH STOCK HAS BEEN DERIVED FROM MODEL PROVIDED BY WARDROP ENGINEERING NOVEMBER 9, 2011.

Scale 1:5000

100 0 100 200 300

meters

LEGEND

- DESIGN SECTOR
- PIT CREST - 20111115
- INTRUSIVE CONTACT ON SURFACE [3] AND ON PIT [1]

2m CONTOUR INTERVAL
NAD83 UTM ZONE 8

X:\Projects\0792 Victoria Gold\005_EG_FS_Open_Pit\Workspace\20110509_REPORT_EAGLE_GOLD_PROJECT_FEASIBILITY_STUDY_OPEN_PIT_SLOPE_DESIGN\D1_EGP_PIT_PLAN_MAP.dwg Layout: DOUBLE BENCH Plot Date Jan 20 12 Time: 3:16 PM

REV.	DATE	REVISION NOTES	DRAWN	CHECK	APPR.

SCALE:	1:5,000
DATE:	JAN 2012
DRAWN:	WKL
DESIGNED:	DS
CHECKED:	HWN
APPROVED:	HWN

PROFESSIONAL SEAL:

BGC ENGINEERING INC.
AN APPLIED EARTH SCIENCES COMPANY

CLIENT: Victoria GOLD CORP

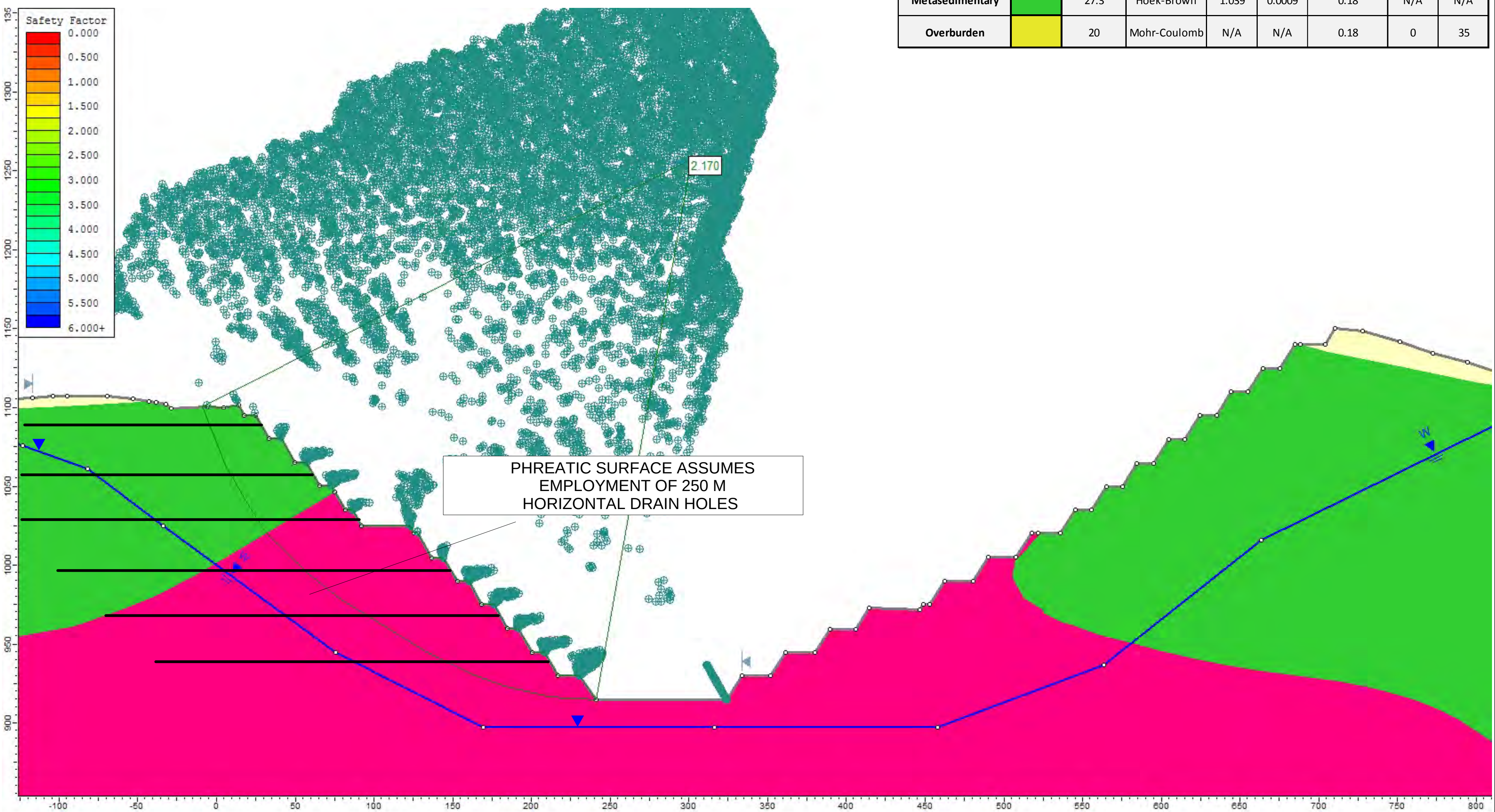
PROJECT: EAGLE GOLD PROJECT FEASIBILITY STUDY OPEN PIT SLOPE DESIGN

TITLE: PIT PLAN MAP

PROJECT No.:	DWG No.:	REV.:
0792-005	D1	

DRAWING TO BE READ WITH BGC REPORT TITLED "EAGLE GOLD PROJECT FEASIBILITY STUDY - OPEN PIT SLOPE DESIGN" DATED JANUARY 2012

Material Name	Colour	Unit Weight (kN/m^3)	Strength Type	mb	s	Water Surface (Ru Value)	c (kPa)	Phi (°)
Clay Altered Intrusive		26.4	Hoek-Brown	0.558	0.0003	0.18	N/A	N/A
Metasedimentary		27.3	Hoek-Brown	1.039	0.0009	0.18	N/A	N/A
Overburden		20	Mohr-Coulomb	N/A	N/A	0.18	0	35



SCALE: AS SHOWN	DATE: JAN 2012	DRAWN: DS	DESIGNED: DS	CHECKED: HWN	APPROVED: HWN

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Vancouver, BC Phone: (604) 684 5900

PROJECT: EAGLE GOLD FEASIBILITY STUDY OPEN PIT SLOPE DESIGN

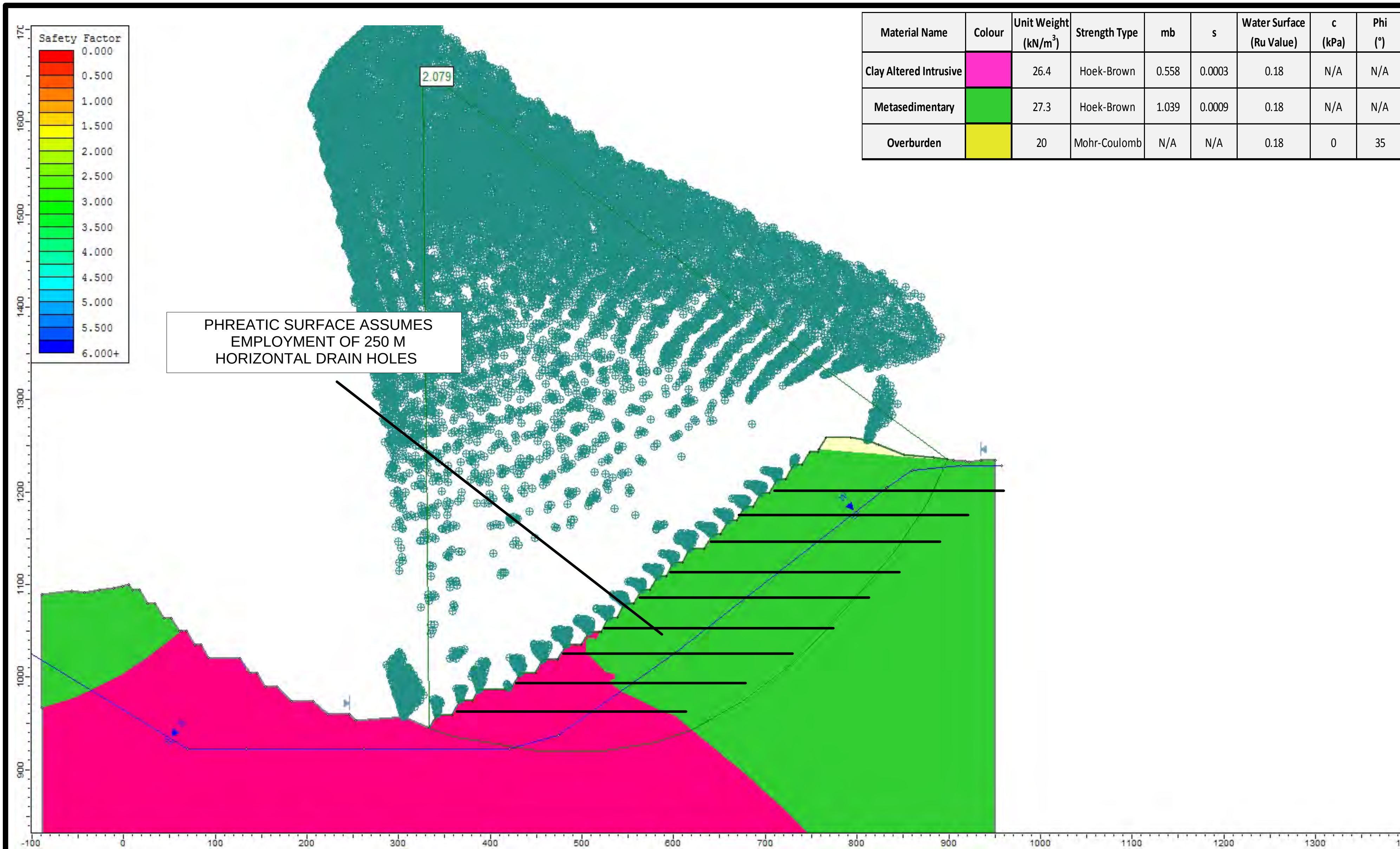
TITLE: PIT CHECKING - SECTION A

CLIENT: Victoria Gold Corp

PROJECT No. 0792-005

DWG No. D2

REV. A



Material Name	Colour	Unit Weight (kN/m^3)	Strength Type	mb	s	Water Surface (Ru Value)	c (kPa)	Phi (°)
Clay Altered Intrusive		26.4	Hoek-Brown	0.558	0.0003	0.18	N/A	N/A
Metasedimentary		27.3	Hoek-Brown	1.039	0.0009	0.18	N/A	N/A
Overburden		20	Mohr-Coulomb	N/A	N/A	0.18	0	35

SCALE: AS SHOWN	DATE: JAN 2012	DRAWN: DS	DESIGNED: DS	CHECKED: HWN	APPROVED: HWN

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PROJECT: EAGLE GOLD FEASIBILITY STUDY OPEN PIT SLOPE DESIGN

TITLE: PIT CHECKING - SECTION B

CLIENT: Victoria GOLD CORP

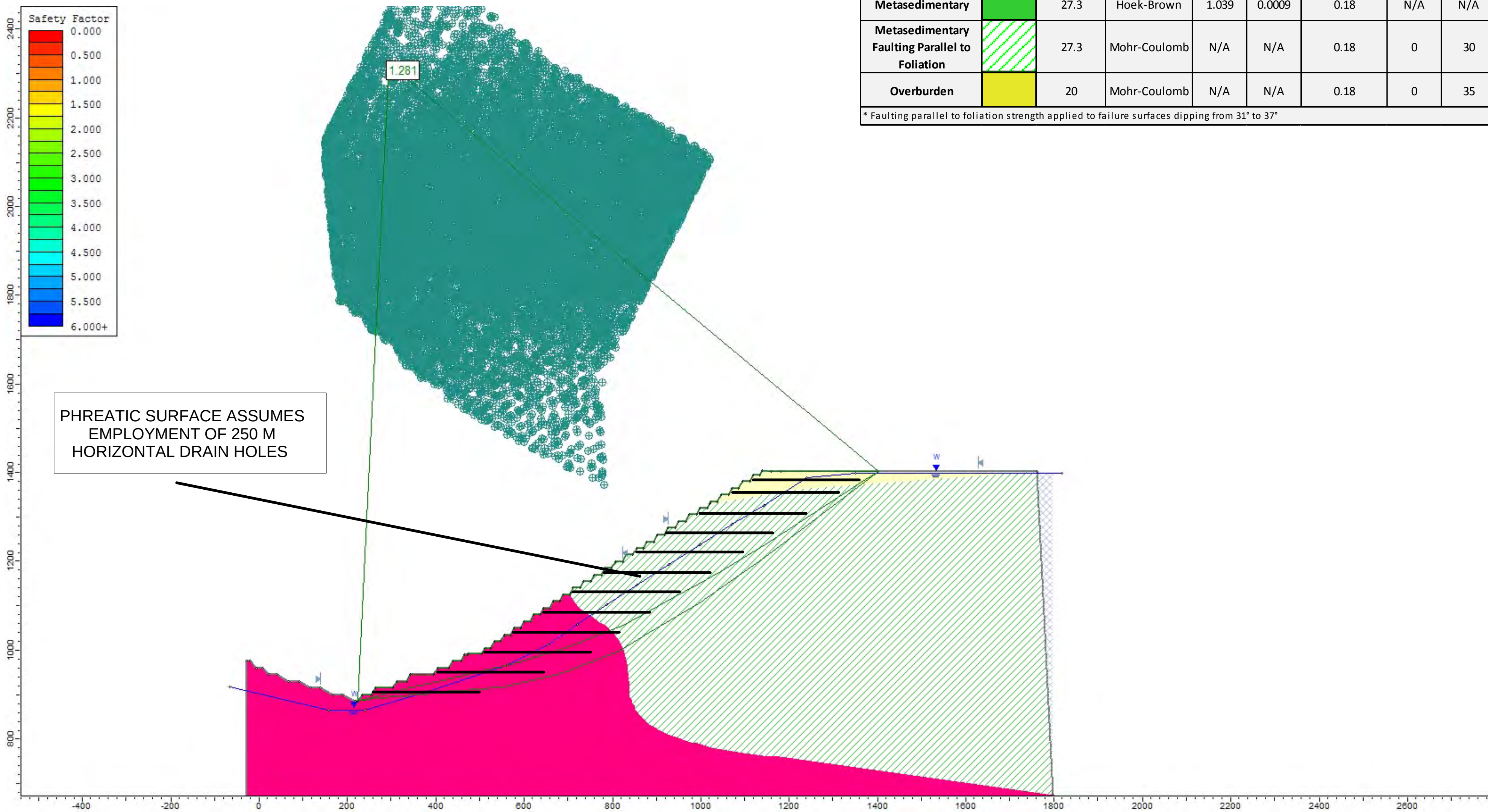
PROJECT No. 0792-005

DWG No. D3

REV. A

Material Name	Colour	Unit Weight (kN/m^3)	Strength Type	mb	s	Water Surface (Ru Value)	c (kPa)	Phi (°)
Clay Altered Intrusive		26.4	Hoek-Brown	0.558	0.0003	0.18	N/A	N/A
Metasedimentary		27.3	Hoek-Brown	1.039	0.0009	0.18	N/A	N/A
Metasedimentary Faulting Parallel to Foliation		27.3	Mohr-Coulomb	N/A	N/A	0.18	0	30
Overburden		20	Mohr-Coulomb	N/A	N/A	0.18	0	35

* Faulting parallel to foliation strength applied to failure surfaces dipping from 31° to 37°



SCALE: AS SHOWN	DATE: JAN 2012	DRAWN: DS	DESIGNED: DS	CHECKED: HWN	APPROVED: HWN

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Vancouver, BC

Phone: (604) 684 5900

PROJECT: EAGLE GOLD FEASIBILITY STUDY OPEN PIT SLOPE DESIGN

TITLE: PIT CHECKING - SECTION C

CLIENT: Victoria GOLD CORP

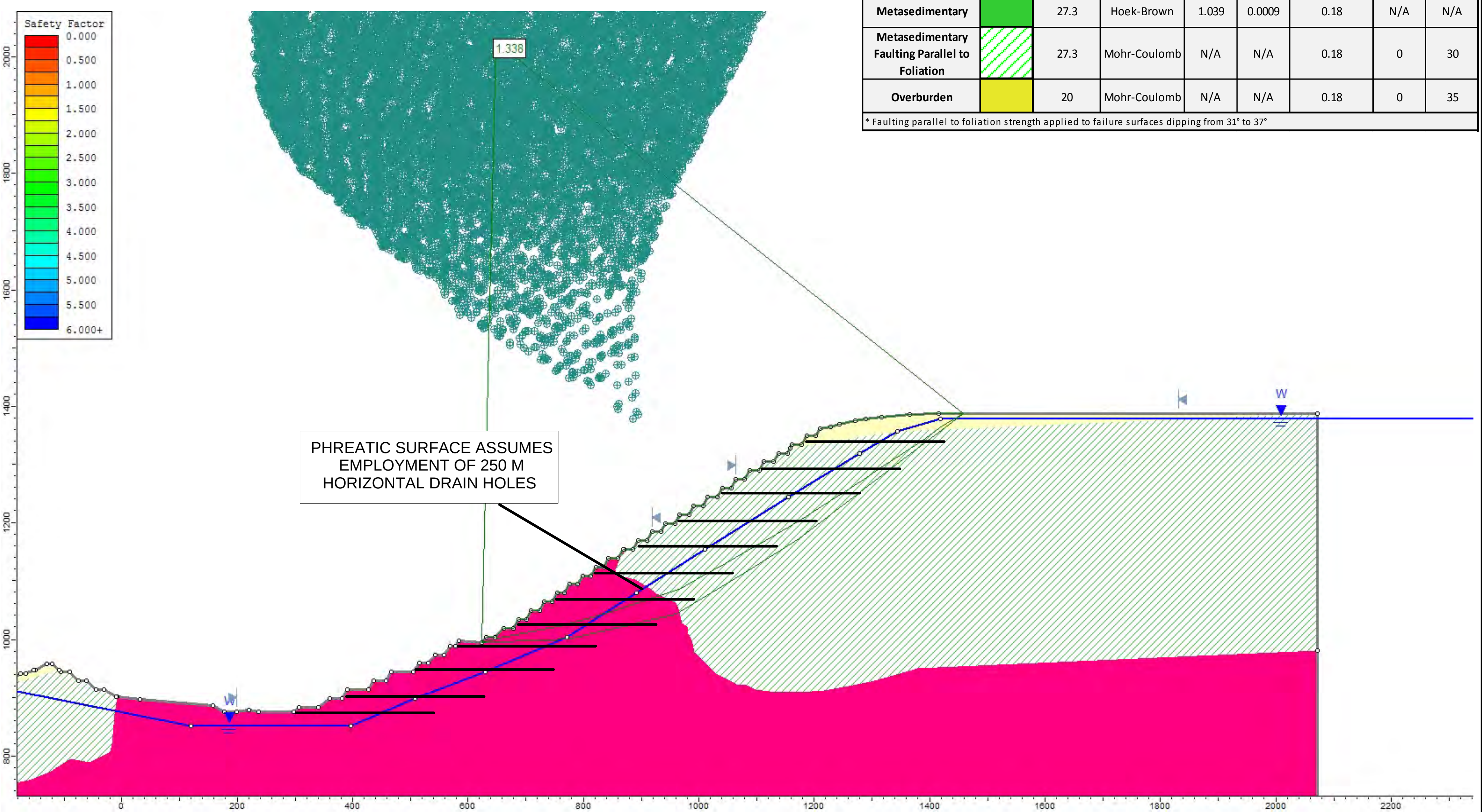
PROJECT No. 0792-005

DWG No. D4

REV. A

Material Name	Colour	Unit Weight (kN/m^3)	Strength Type	mb	s	Water Surface (Ru Value)	c (kPa)	Phi (°)
Clay Altered Intrusive		26.4	Hoek-Brown	0.558	0.0003	0.18	N/A	N/A
Metasedimentary		27.3	Hoek-Brown	1.039	0.0009	0.18	N/A	N/A
Metasedimentary Faulting Parallel to Foliation		27.3	Mohr-Coulomb	N/A	N/A	0.18	0	30
Overburden		20	Mohr-Coulomb	N/A	N/A	0.18	0	35

* Faulting parallel to foliation strength applied to failure surfaces dipping from 31° to 37°



SCALE: AS SHOWN | DATE: JAN 2012 | DRAWN: DS | DESIGNED: DS | CHECKED: HWN | APPROVED: HWN

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Vancouver, BC
Phone: (604) 684 5900

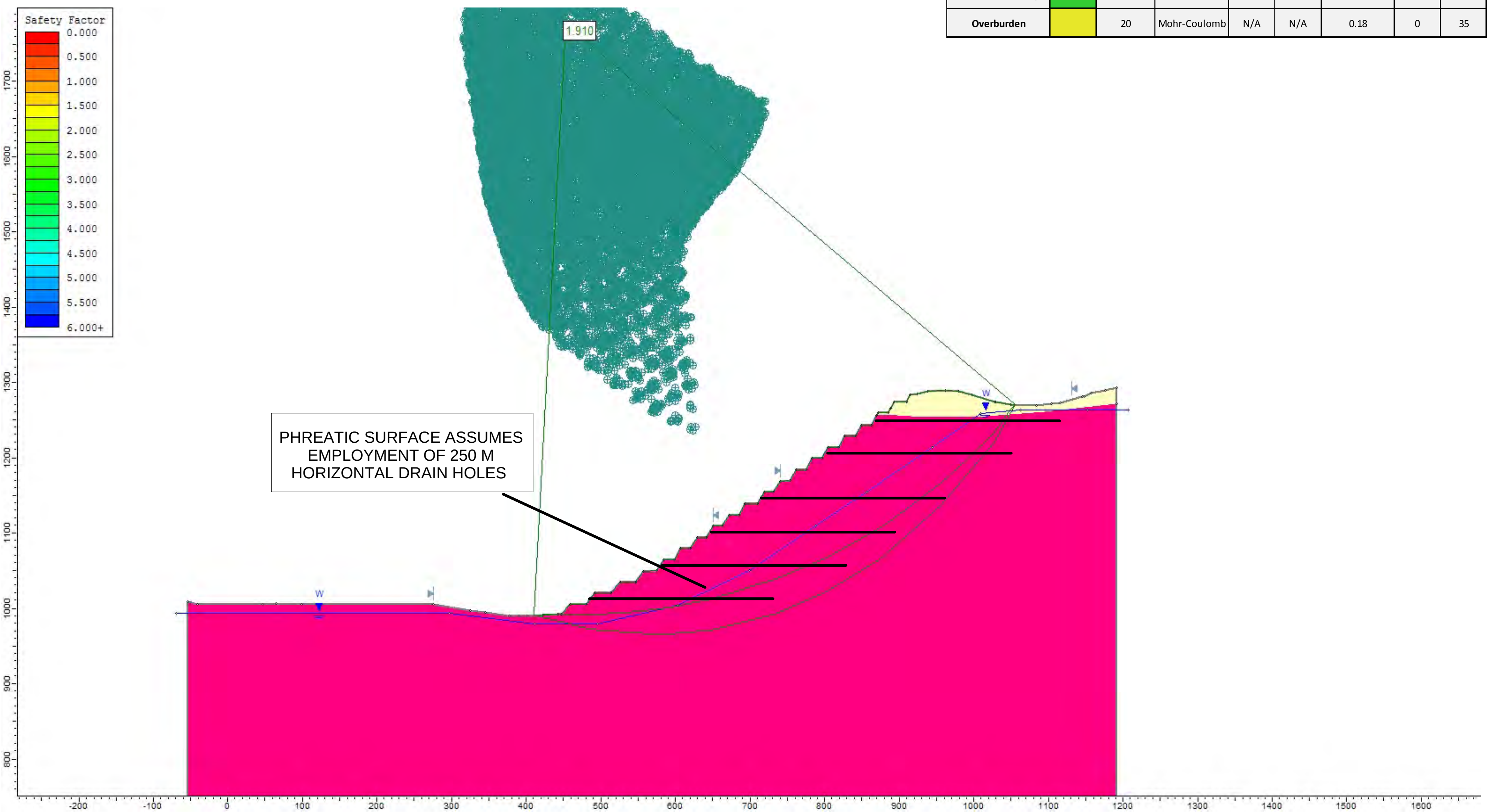
PROJECT: EAGLE GOLD FEASIBILITY STUDY OPEN PIT SLOPE DESIGN

TITLE: PIT CHECKING - SECTION D

CLIENT: Victoria Gold Corp

PROJECT No. 0792-005 | DWG No. D5 | REV. A

Material Name	Colour	Unit Weight (kN/m^3)	Strength Type	mb	s	Water Surface (Ru Value)	c (kPa)	Phi (°)
Clay Altered Intrusive		26.4	Hoek-Brown	0.558	0.0003	0.18	N/A	N/A
Metasedimentary		27.3	Hoek-Brown	1.039	0.0009	0.18	N/A	N/A
Overburden		20	Mohr-Coulomb	N/A	N/A	0.18	0	35



SCALE: AS SHOWN	DATE: JAN 2012	DRAWN: DS	DESIGNED: DS	CHECKED: HWN	APPROVED: HWN

BGC

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Vancouver, BC

Phone: (604) 684 5900

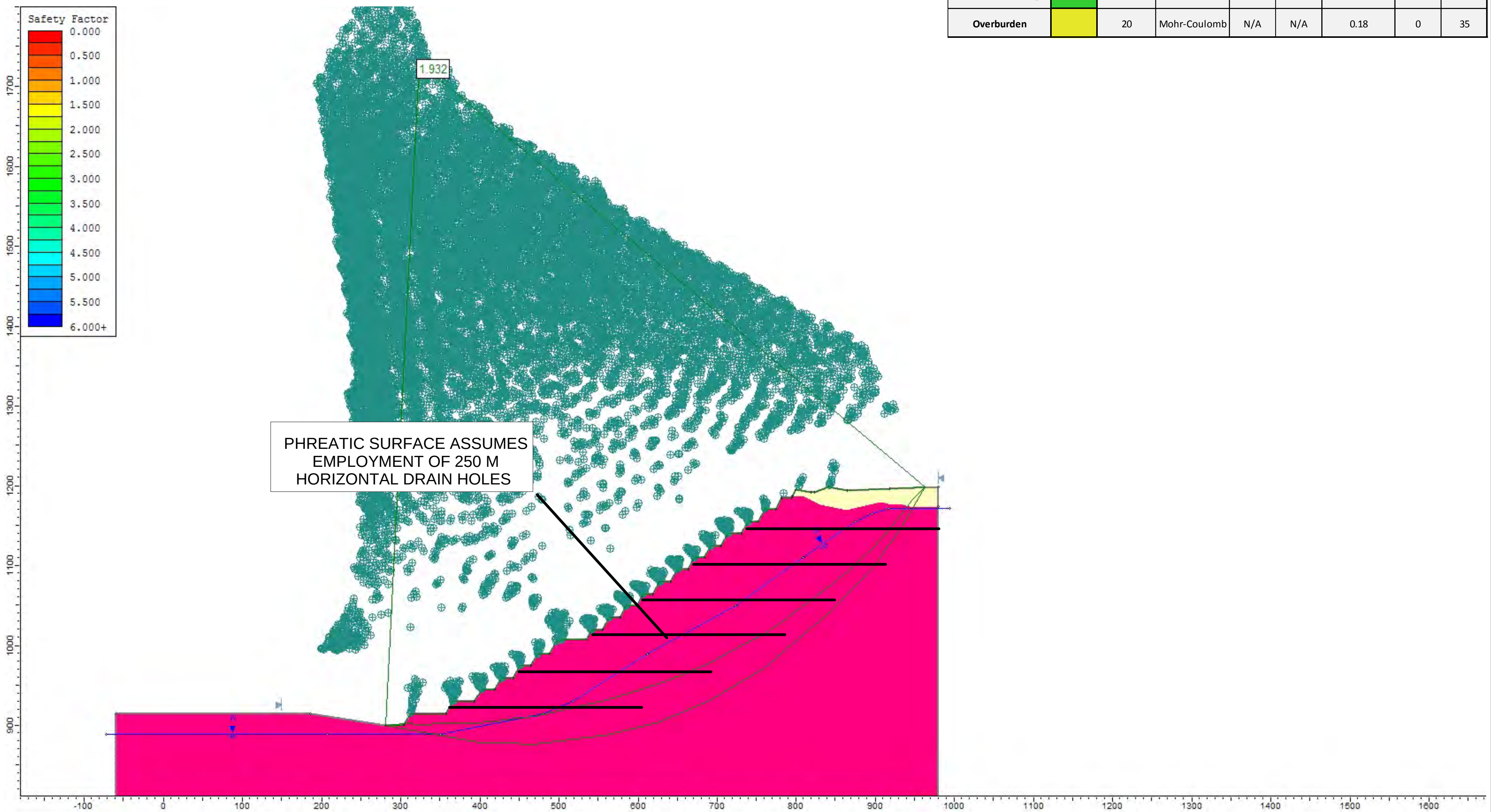
PROJECT: EAGLE GOLD FEASIBILITY STUDY OPEN PIT SLOPE DESIGN

TITLE: PIT CHECKING - SECTION E

CLIENT: Victoria GOLD CORP

PROJECT No.	DWG No.	REV.
0792-005	D6	A

Material Name	Colour	Unit Weight (kN/m^3)	Strength Type	mb	s	Water Surface (Ru Value)	c (kPa)	Phi (°)
Clay Altered Intrusive		26.4	Hoek-Brown	0.558	0.0003	0.18	N/A	N/A
Metasedimentary		27.3	Hoek-Brown	1.039	0.0009	0.18	N/A	N/A
Overburden		20	Mohr-Coulomb	N/A	N/A	0.18	0	35



SCALE: AS SHOWN	DATE: JAN 2012	DRAWN: DS	DESIGNED: DS	CHECKED: HWN	APPROVED: HWN

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PROJECT: EAGLE GOLD FEASIBILITY STUDY
OPEN PIT SLOPE DESIGN

TITLE: PIT CHECKING - SECTION F

CLIENT: Victoria GOLD CORP

PROJECT No.	DWG No.	REV.
0792-005	D7	A