Appendix 2.2A-4
Geotechnical Characterization Report

NEW GOLD INC.
BLACKWATER GOLD PROJECT



GEOTECHNICAL CHARACTERIZATION REPORT

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0	Issued in Final	November 29, 2013	KB

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EXECUTIVE SUMMARY

Site investigations were conducted in 2012 and 2013 in a series of phases to evaluate geotechnical and hydrogeological conditions for the proposed Tailings Storage Facility (TSF) and waste dumps at the Blackwater Gold Project. Drillhole, ground geophysics, and test pit locations were adjusted as the program progressed as a greater understanding of site conditions was acquired. Geotechnical site investigation programs carried out in 2012 and 2013 collected significant amounts of data to characterize the geology, hydrogeology and geotechnical conditions. No pre-existing geotechnical or hydrogeological information was available prior to 2012. The factual data from the 2012 and 2013 site investigation programs were reported on previously in the following documents.

- **2012 Site Investigations –** Knight Piésold report "2012 Site Investigation Report, Ref. No. VA101-457/6-1" dated September 23, 2013.
- **2013 Site Investigations –** Knight Piésold report "2013 Site Investigation Report, Ref. No. VA101-457/6-4" dated November 7, 2013.

This report summarizes the geotechnical conditions encountered at the project site and presents the compilation and assessment of the findings from the 2012 and 2013 site investigation data with other relevant data from the Project area to support preparation of the Feasibility Study (FS) and Environmental Assessment (EA) for the project.

<u>Geomorphology</u>

Bedrock exposure in the Project area is rare and restricted to higher elevations. Soil cover is generally thick within the Davidson Creek watershed averaging over 60 meters. Bedrock is deepest along the Davidson Creek valley bottom where it is encountered at up to 107 meters depth. The surficial deposits are from the Fraser Glaciation, the last period of ice sheet glaciation in British Columbia. Dr. John Clague, a specialist geomorphology consultant, assessed the surficial geology of the Blackwater Project to defined a stratigraphic sequence and develop a geomorphological model. Stratigraphic units and the corresponding USCS classification that define engineering properties of the soil from surface downward to bedrock are as follows:

- **Holocene Deposits** – classified as a topsoil layer (OL, Pt).
- **Fraser Glaciation Deposits:**
  - Glaciofluvial Deposits – classified as coarse grained soils (GP-GW), coarse grained soils with sands and fines (GM, GW-GP) and coarse grained soils with fines (SP-SM).
  - Glacial Till – identified as coarse grained soils with gravels and fines (SM-SC and GM-GC).
  - Glaciolacustrine Deposits – classified as fine grained soils silts and clays (ML-CL).
- **Interglacial Fluvial Deposits** – classified as coarse grained soils with fines (GM, GW-GP) and coarse grained soils with fines (SP-SM).
- **Older Glacial Deposits** – classified as coarse grained soils with gravels and fines (SM-SC and GM-GC).
- **Reworked and In-Situ Regolith** – classified as coarse grained soils with fines (GC) to fine grained soils (CL).
- **Intact Bedrock** – classified as andesite and fragmental rocks that are strong to very strong, RMR^{89} classified as FAIR to GOOD rock, compressional wave velocities from 2,550 m/s to 5,460 m/s and low hydraulic conductivity values ranging in the order of 10^{-6} to 10^{-8} m/s.

Tailings Storage Facility and Waste Rock Disposal Areas Foundation Characterization

The site investigations and geotechnical assessments provided specific information on the foundation characteristics for the following proposed Project components:

Site D Main Dam – The dominant surficial material type is lodgement glacial till. Glaciofluvial deposits overlie the glacial till deposits to form meltwater channel terraces between 10 m and 20 m thick on either side of Davidson Creek. A large esker deposit overlies the glacial till deposits to the northeast and downstream of the TSF. Bedrock is shallow on the southern extent of the Site D Main Dam.

TSF Site D Basin – The dominant surficial material type in the basin is glacial till, glaciofluvial meltwater channel deposits and kame deposits overlie the glacial till deposits to form terraces approximately 10 m and 20 m thick on either side of Davidson Creek.

Site D South Abutment – The south abutment of the Site D Main Dam creates a surface water divide between the Davidson Creek and Creek 661 catchments. This isolated segment of the Site D Main Dam at the catchment divide is planned for construction late in the mine life. Bedrock near the South Abutment is typically near surface, except in the meltwater channel. Seismic lines and drillholes encountered glacial till and glaciofluvial deposits at 20 m to 40 m depth overlying bedrock in the meltwater channel.

Site C Main Dam – The dominant surficial material type is glacial till ranging in thickness from 27 m to 89 m. Glaciofluvial deposits are also prevalent in this area and overlie the glacial till to form meltwater channel terraces approximately 10 m and 35 m thick along either side of Davidson Creek.

TSF Site C Basin – Characterized by shallow 1 m to 7 m thick glaciofluvial deposits overlying bedrock.

Site C West Dam – Dense fluvial deposits approximately 6 m depth cover the bedrock in the valley bottom and glacial till and colluvium are present on the upper side slopes.

Environmental Control Dam – Secondary seepage control (ECD) and interception trenches will be located 1 km downstream of the Site D Main Dam. The surficial material sequence ranges from 24 m to 108 m thick. The dominant surficial materials are glacial lodgement till to the south of Davidson Creek and glaciofluvial deposits overlying the glacial till to the north of Davidson Creek.

West Dump – The ground slopes gently to the northwest with surficial materials increasing in thickness from 18 m to 75 m at lower elevations. Several eskers, localized kames and ablation till were identified in the footprint area of the West Dump. Bedrock is shallow on the upper slopes at 3 to 4 m depth.

East Dump – The ground slopes gently to the northeast with surficial materials ranging in thickness from approximately 24 m in the upper elevations to 108 m in thickness at the lower elevations. The dominant surficial material type is glacial (lodgment) till. A small glaciofluvial meltwater corridor was identified in the footprint area of the East Dump.

Low-Grade Ore Stockpile – The dominant surficial material type is glacial (lodgment) till. Glaciofluvial materials overlie the glacial till deposits within a meltwater corridor, and include a kame complex up to 18 m thick.

Construction Borrow Materials – Potential borrow material locations were identified and assessed for suitability in dam construction, as Plant Site backfill and for concrete aggregate.

TSF Areas of Interest

Specific 'areas of interest' were identified from the 2012 site investigations program and are discussed in this report, including:

- **Topsoil layer** – The topsoil thickness is typically 0.1 m to 0.2 m, with localized wetlands accumulations where the thickness increases to greater than 1 m.
- **Groundwater conditions** – In the general vicinity of the tailings basin, groundwater was found to be approximately 25 m below the surface and generally forms a subdued reflection of topography. Groundwater depths become shallower closer to Davidson Creek.
- **Davidson Creek meltwater channel** – Terrain landform mapping identified a meltwater channel corridor in the Davidson Creek drainage. Additional mapping confirmed the surficial meltwater channel within the TSF basin is a surficial unit and not hydraulically connected to the interglacial fluvial deposits.
- **Interglacial fluvial deposits beneath the TSF** – Detailed investigations and data compilation confirmed interglacial fluvial deposits within the TSF were uncommon, discontinuous and not hydraulically connected.
- **Ablation till distribution** – Ablation till frequency and distribution were mapped within the mine site footprint and was found to be restricted to the higher elevations and not associated within the tailings basin.
- **Highly weathered bedrock** – The potential for highly weathered bedrock to have high hydraulic conductivity values was tested. This zone has been conservatively identified as having the potential to act as a seepage pathway beneath the TSF where the bedrock surface is shallow at Site D Main Dam southern extent.
- **Inferred faults** – The previously identified inferred fault (inactive) of the Site D Main Dam southern extent was found to have low hydraulic conductivity.
- **Characterize surficial material along embankments** – The material characteristics along the embankments were assessed and the depth to Low Permeability Subgrade (LPS) or bedrock were identified along the Site D Main Dam, Site C West Dam and ECD interception trench alignments to provide depths for the cutoff trench designs.
- **Environmental Control Dam** – The hydrogeological assessment indicated that secondary seepage control is required downstream of the tailings embankment to intercept potential upwelling seepage. The ECD should be located 1 km downstream of the Site D Main Dam across Davidson Creek to collect seepage for recycle to the TSF.

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ABBREVIATIONS

ARD .... Acid Rock Drainage
Blackwater Gold Project .... the project
ECD .... Environmental Control Dam
FS .... Feasibility Study
LPS .... Low Permeability Subgrade
New Gold .... New Gold Inc.
PEA .... Preliminary Economic Assessment
PSA .... Particle Size Analysis
Richfield .... Richfield Ventures Corp.
TSF .... Tailings Storage Facility

1 – INTRODUCTION

1.1 PROJECT DESCRIPTION

The Blackwater Gold Project (the project) is a large gold-silver deposit located approximately 112 km southwest of Vanderhoof in Central British Columbia, as shown on Figure 1.1. Knight Piésold Ltd. (KP) was retained by New Gold Inc. (New Gold) to complete site investigations at the Blackwater and provide geotechnical information for the tailings and waste water management designs. The major components of the project include: an open pit, tailings storage facilities (TSFs), fresh water reservoir and supply system, a Plant Site and ore processing facility, and infrastructure to support the mining operation. Two site investigation programs were conducted from March to October, 2012 and March to July, 2013 to investigate the Tailings Storage Facility and waste rock disposal area components.

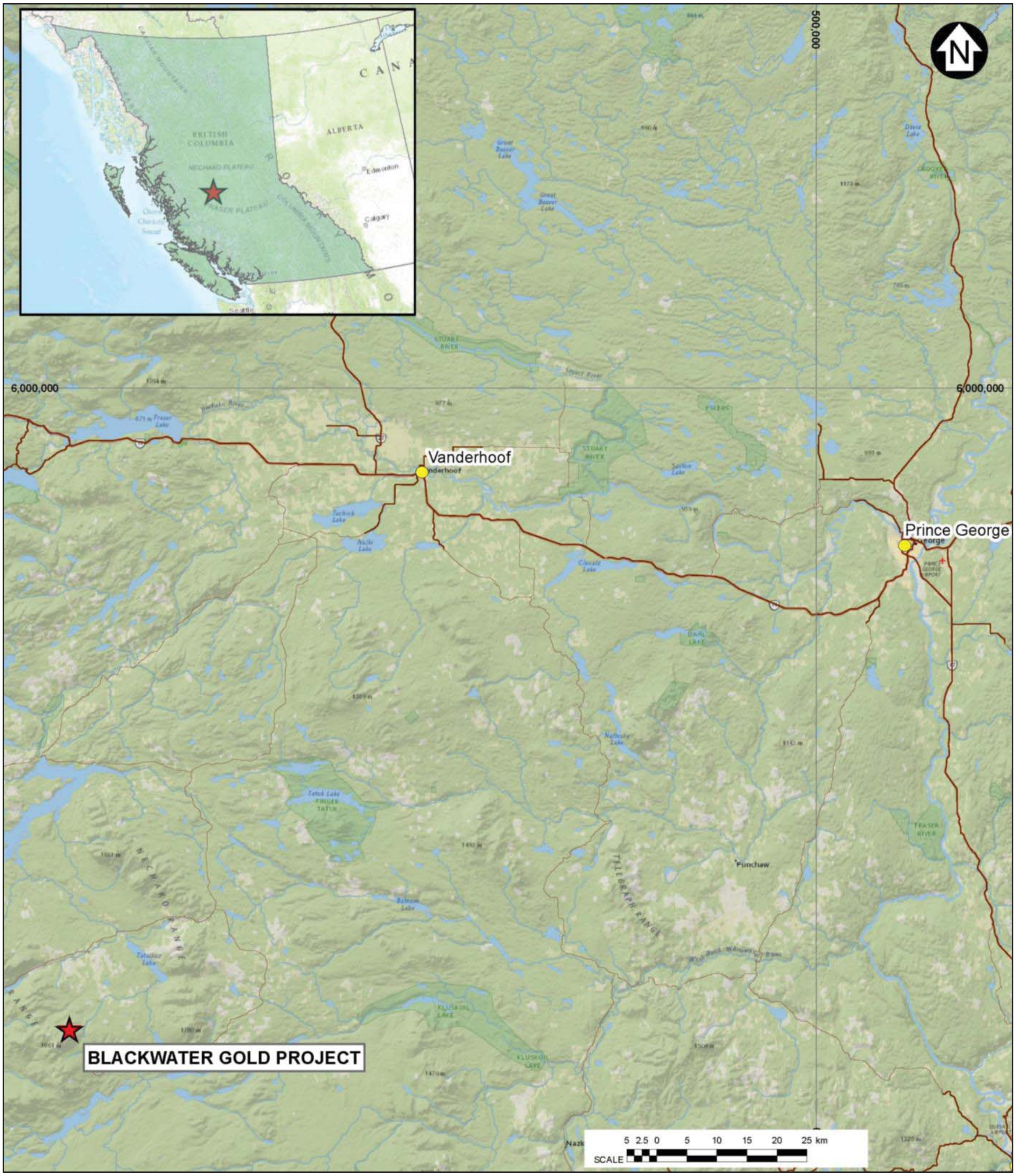


Figure 1.1 Project Location Map

1.2 PROJECT HISTORY

The Blackwater area was actively explored by Richfield Ventures Corp. (Richfield) starting in 2009. New Gold obtained the Blackwater property through the acquisition of Richfield in June 2011. KP was retained in early 2011 to complete a preliminary mine development assessment desktop study for the project. This was followed by a series of alternatives assessments for various mine development concepts for the waste and water management for the project from the middle of 2011 through early 2012. A Preliminary Economic Assessment (PEA) of the project was completed in the third quarter of 2012.

KP was commissioned in 2012 and 2013 to complete a series of six geotechnical and hydrogeological site investigation programs to support engineering studies for the tailings and water management systems, open pit, and associated mine site infrastructure in the project area. No pre-existing geotechnical or hydrogeological information was available prior to 2012. Findings from the 2012 site investigation program have led to extensive site investigations in 2013 to fill data gaps and areas of interest identified after the 2012 site investigation.

1.3 REFERENCE DOCUMENTS

Site conditions for the Blackwater Project were previously presented; the following reference documents are relevant to this report:

- **Reconnaissance Terrain and Terrain Stability Mapping** – Knight Piésold report, Reconnaissance Terrain and Terrain Stability Mapping, Ref. No. VA101-457/4-4 dated February 14, 2013.
- **Condemnation Drilling Program** – New Gold data 2012.
- **Geomorphology Model Document** – John J. Clague, Blackwater Site Visit, May 2-4, 2013.
- **Open Pit Slope Design** – Knight Piésold report, Feasibility Open Pit Slope Design, Ref. No. VA101-457/6-2, dated November 4, 2013.
- **Glacial Landform Mapping** – Knight Piésold letter, Findings of Glacial Landform Mapping, Ref. No. VA13-01568, dated September 4, 2013.
- **Borrow Source Assessment** – Knight Piésold Memorandum, Preliminary Borrow Source Assessment, Ref. No. VA13-01697, dated September 9, 2013.
- **2012 Site Investigations –** Knight Piésold report, 2012 Site Investigation Report, Ref. No. VA101-457/6-1, dated September 23, 2013.
- **2013 Site Investigations –** Knight Piésold report, 2013 Site Investigation Report, Ref. No. VA101-457/6-4, dated November 7, 2013.
- **Blackwater Mine Area Glacial History** – John J. Clague, Blackwater Site Visit, October 23, 2013.
- **Plant Site Geotechnical Report** – Knight Piésold report, Plant Site Geotechnical Design Report, Ref. No. VA101-457/6-5, dated November 27, 2013.

1.4 SCOPE OF REPORT

This report presents the findings and interpretation from the 2012 and 2013 site investigation data with other relevant data from the Project area into a stand-alone characterization report. The report characterizes the geotechnical conditions encountered at the proposed project site and integrates these findings into the TSF and disposal area foundation design.

The main objectives of this report include:

- Describe the geomorphological glacial history of the Davidson Creek watershed.
- Describe the surficial material properties, locations and distributions within the project.
- Describe bedrock geotechnical and hydrogeology properties.
- Investigate foundation conditions along the tailings embankments; Site D Main Dam, Site C Main Dam and Site C West Dam.
- Investigate the foundation conditions at the proposed waste rock dumps and the low-grade stockpile.
- Identify construction borrow materials locations and suitability for dam construction, Plant Site backfill and concrete aggregate.

Specific site characterization 'areas of interest' were identified after the 2012 site investigations, which are addressed in this report. These include:

- **Topsoil layer** – occurrence, handling and stockpiling.
- **Groundwater conditions** – characterize the groundwater conditions at the Project.
- **Davidson Creek meltwater channel** – confirmation that surficial sand and gravel deposits within the tailings basin are shallow and not hydraulically connected to interglacial fluvial deposits.
- **Interglacial fluvial deposits beneath the TSF** – confirm that interglacial fluvial within the TSF is not hydraulically connected.
- **Ablation till distribution** – discuss frequency and distribution of ablation till at the Project, which are considered potentially to have higher permeability than lodgement till.
- **Highly weathered bedrock** – investigation of the hydraulic conductivity of the highly weathered bedrock to identify potentially high permeability layer between the completely weathered bedrock and moderately weathered bedrock.
- **Inferred fault at dam site** – evaluation of an inferred fault (inactive) at the southern end of Site D Main Dam as possible hydraulic pathway.
- **Characterize surficial material along embankments** – investigation of surficial material and bedrock at the Site D and Site C West Dam for dam foundation and seepage control design.
- **Environmental Control Dam** – secondary seepage control downstream of Site D Main Dam.

2 – REVIEW OF 2012 AND 2013 SITE INVESTIGATION PROGRAMS

Site investigations were conducted in 2012 and 2013 in a series of phases to evaluate geotechnical and hydrogeological conditions for the proposed TSF and waste dumps. Drillhole, ground geophysics, and test pit locations were adjusted as the program progressed and a greater understanding of site conditions was acquired. Geotechnical site investigation programs carried out in 2012 and 2013 collected significant amounts of data to characterize the geology, hydrogeology and geotechnical conditions at the Blackwater site. No pre-existing geotechnical or hydrogeological information was available prior to 2012.

The 2012 and 2013 site investigation programs included:

- Excavating 305 test pits (TP12-001 to TP12-159 and TP13-160 to TP13-305) to investigate the near surface material characteristics and foundation conditions.
- Drilling 28 geotechnical drillholes (GT12-01 to GT12-12, GT12-28 and GT13-07 to GT13-21) utilizing ODEX drilling and Standard Penetration Tests (SPTs) in the surficial material and diamond drill coring (HQ3) and packer tests in the bedrock.
- Drilling 66 geotechnical drillholes (GT12-13 to GT12-27, GT12-29 to GT12-47, GT13-01 to GT13-06 and GT13-22 to GT13-47) utilizing sonic drilling techniques. SPTs were conducted in drillholes GT13-22 to GT13-47.
- Completing 76 in-situ Lugeon (single packer) permeability tests during rock mass drilling in ODEX drillholes.
- Installing 35 standpipe piezometers (GT12-01, GT12-03, GT12-04, GT12-06 to GT12-012, GT12-28, GT13-07 to GT13-13, GT13-19 to GT13-25, GT13-30 to GT13-37, GT13-42, GT13-43, and GT13-46) and five vibrating-wire piezometers (GT12-01, GT12-02, GT12-05, GT13-02 and GT13-04) in select geotechnical drillholes to investigate groundwater levels and to evaluate the rock mass permeability.
- Installing 28 monitoring wells to allow for long-term groundwater quality monitoring (MW12-01D to MW12-13S and DK/MW-05 to DK/MW-06).
- Laboratory testing of surficial materials to determine geotechnical parameters for the different types of materials encountered.
- Rock strength laboratory testing of selected representative core samples to evaluate the strength properties and to verify rock mass classification.
- Conducting 35.3 km of seismic refraction surveys, 5.2 km of high resolution resistivity and IP surveys, and seven downhole seismic surveys (GT13-14 to GT13-18) to develop profiles for the bedrock elevation and the saturated groundwater table.

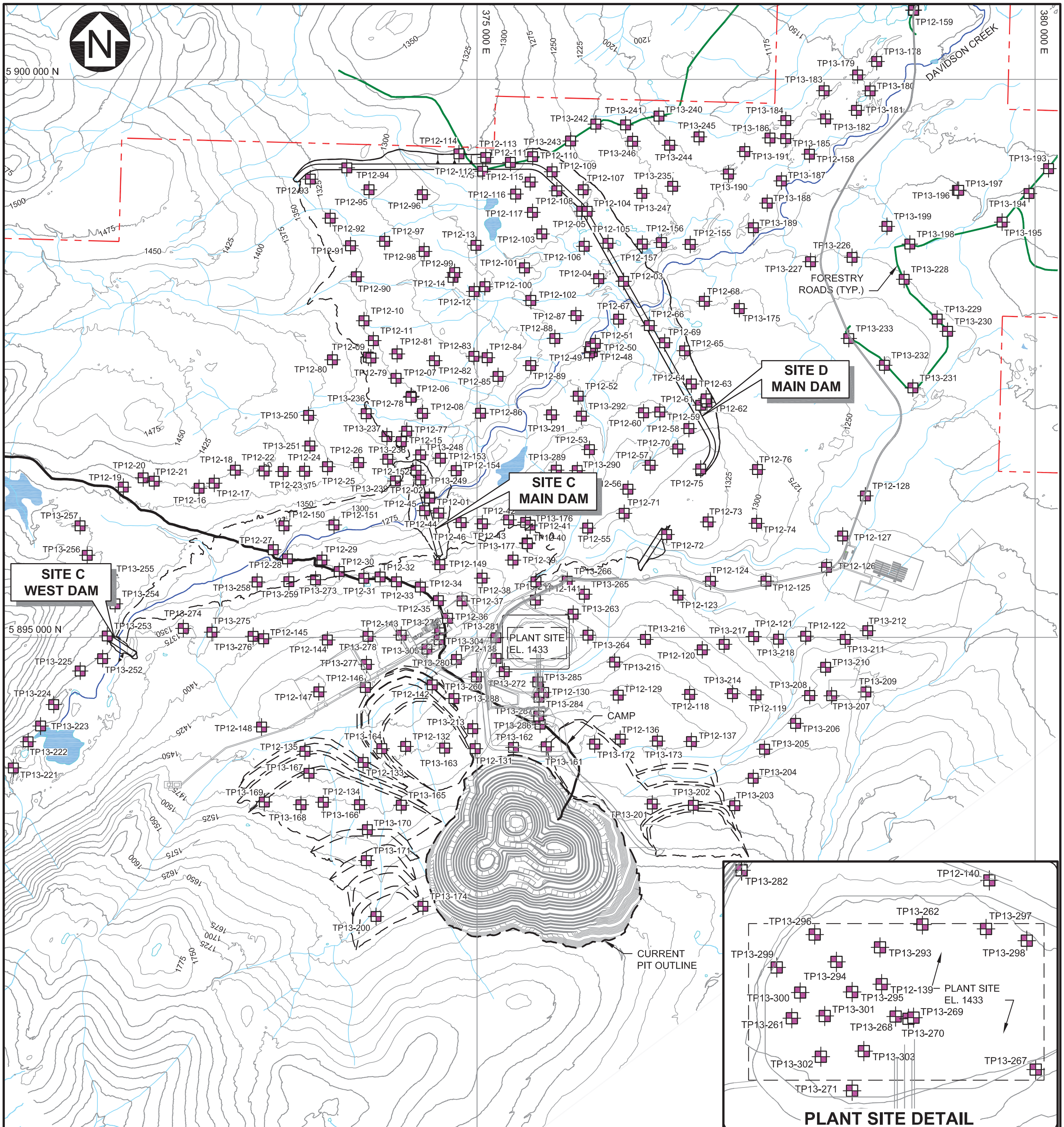
The numbers of drillholes and test pits collected at each mine site infrastructure location are summarized in Table 2.1. The simplified general arrangement of the overall project site and 2012 and 2013 site investigation test pits and drilling plans are illustrated on Figure 2.1 and Figure 2.2, respectively. Appendix Figures A.1 and A.2 includes enlargements of test pit and drillhole locations for clarity. Appendix B includes reference summary tables of test pits, drillholes, and laboratory testing results for all 2012 and 2013 site investigation programs.

Table 2.1 Summary of 2012 and 2013 Site Investigation Data Collection

Infrastructure Components		Drillholes	Test Pits	PSD[1]	Hydrometer Test	Atterberg Limits	Natural Moisture Content	Density[2]/ Compaction[3]/ Triaxial[4]
Environmental Control Dam		6	-	61	61	61	52	-
Site D	Downstream Site D	13	41	91	93	86	56	-
Site D	Site D Main Dam	23	24	54	61	56	52	1 (SP)
Site D	Site D Basin	17	68	106	94	94	91	-
Site C	Site C Main Dam	11	8	47	46	46	44	-
Site C	Site C Basin	1	9	3	3	3	1	-
Site C	Site C West Dam	3	8	8	8	6	1	-
Plant Site		7	46	37	37	34	25	1 (SP) 1 (MP)
Coarse Ore Stockpile		1	-	2	2	2	2	1 (SP) 1 (MP)
Truck Shop		1	-	4	4	4	4	-
Waste Rock Dumps	West Dump	3	23	33	33	26	24	2 (SP) 1 (MP)
Waste Rock Dumps	East Dump	4	7	36	36	31	25	-
Low Grade Stockpile		2	5	5	5	5	4	-
Open Pit Borrow		2	-	16	16	2	15	2 (MP) 28 (D) 4 (TX)
General site		-	65	74	43	50	18	2 (SP)
TOTAL		**94**	**304**	**577**	**542**	**506**	**414**	**10** (MP+SP) **28** (D) **4** (TX)

NOTE:

1 PSD Particle Size Distribution analysis.
2 Density testing (D).
3 Compaction Testing; (SP) Standard Proctor, (MP) Modified Proctor.
4 Shear Strength Testing: (TX) Triaxial.



NOTES:

1. CONTOUR INTERVAL IS 25 METRES.
2. ALL MINE SITE FACILITIES ARE CONCEPTUAL ONLY AND ARE ONLY INTENDED TO SUPPORT SITE INVESTIGATIONS.

SCALE A: 500 250 0 500 1000 1500 2000 2500 m

LEGEND:

- TP-174 — TEST PITS
- EXISTING ROAD
- NEW GOLD PROPERTY BOUNDARY

NEW GOLD INC.

BLACKWATER GOLD PROJECT

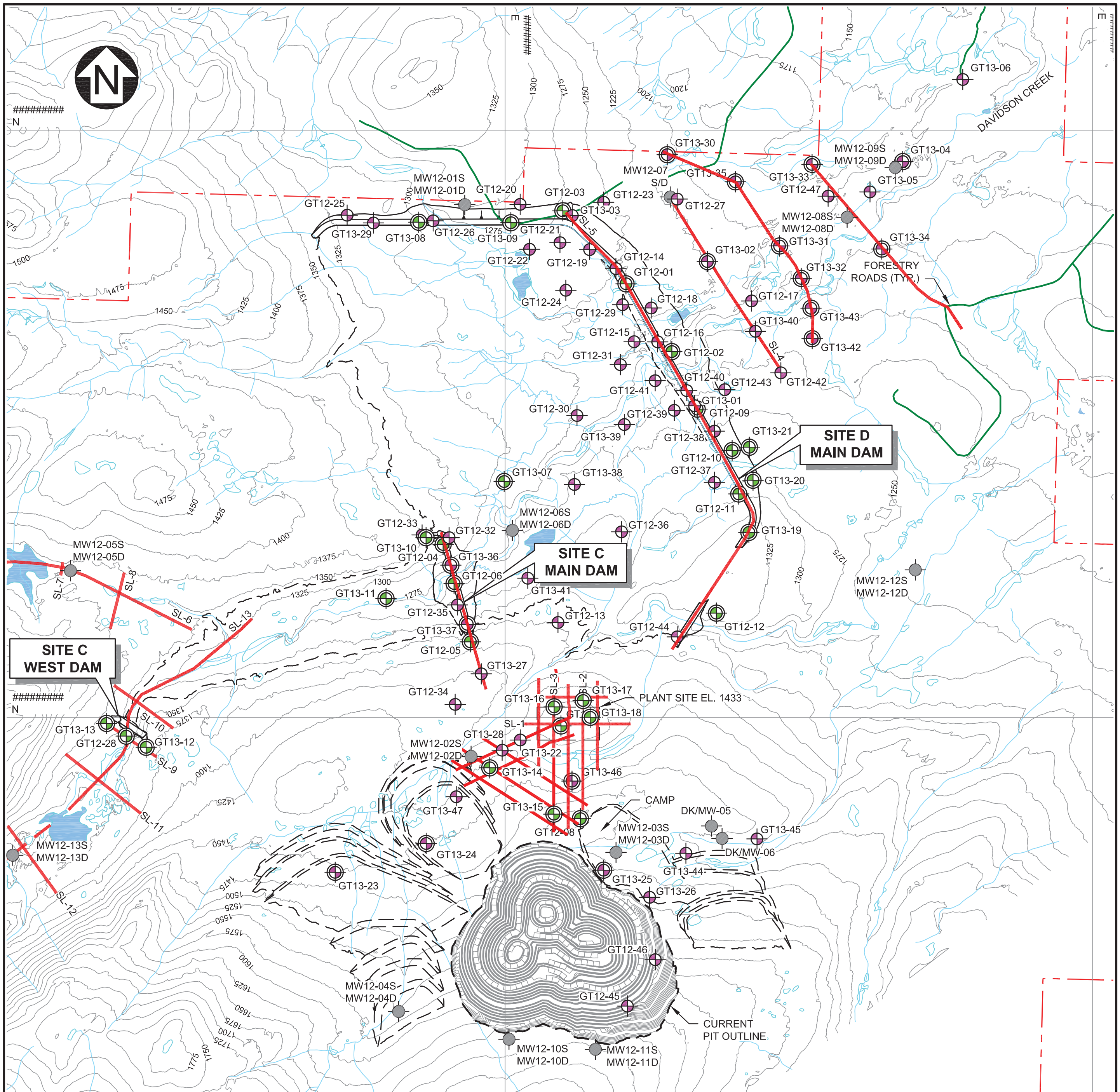
TEST PIT PLAN

Knight Piésold CONSULTING

P/A NO.	REF NO.
VA101-457/6	8

FIGURE 2.1 REV 0

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	CHK'D	APP'D
0	28NOV'13	ISSUED WITH REPORT	JS	NSD/DP	BB	KJB



LEGEND:

- GEOTECHNICAL SONIC DRILLHOLE (50)
- GEOTECHNICAL SONIC DRILLHOLE WITH PIEZOMETER (16)
- GEOTECHNICAL ODEX DRILLHOLE WITH PIEZOMETER (28)
- MW12-01 MONITORING WELLS (30)
- EXISTING ROAD
- SEISMIC LINES (32.08 km)
- NEW GOLD PROPERTY BOUNDARY

500 250 0 500 1000 1500 2000 2500 m
SCALE A

NOTES:

1. CONTOUR INTERVAL IS 25 METRES.
2. ALL MINE SITE FACILITIES ARE CONCEPTUAL ONLY AND BASED ON PEA LAYOUT AND ARE ONLY INTENDED TO SUPPORT SITE INVESTIGATIONS.

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	CHK'D	APP'D
0	28NOV'13	ISSUED FOR REPORT	JS	NSD/DP	BB	KJB

NEW GOLD INC.

BLACKWATER GOLD PROJECT

DRILLHOLE AND MONITORING WELL PLAN

Knight Piésold CONSULTING

P/A NO.	REF NO.
VA101-457/6	8

FIGURE 2.2 REV 0

3 – SITE CHARACTERIZATION

3.1 PHYSIOGRAPHY

The Project site is situated on the Nechako Plateau of British Columbia, part of the Interior Plateau east of the Coast Mountain Range. In an area of moderate relief characterized by gently undulating, northwest-trending hills cut by small to medium-sized drainages. The elevation of the Blackwater property ranges from just over 1,000 m in low-lying areas northeast of the proposed mine site to 1,800 m at the summit of Mt. Davidson on the southwest side of the property; Mt. Davidson is the highest peak in the Fawnie Range. The Blackwater deposit is located on the northern flanks of the mountain. Most of the proposed TSF, waste dumps, and mine site infrastructure areas lie within the Davidson Creek watershed, the Site D Main Dam south abutment crosses into the catchment of Creek 661 watershed.

The Davidson Creek valley is incised locally and flows northeast from the site toward Chedakuz Creek downstream of Tatelkuz Lake. Creek 661 flows to Tatelkuz Lake. The footprint area of the proposed TSF lies within the upper reaches of the Davidson Creek catchment area. The terrain within this footprint is predominantly gently inclined, except along the incised portions of Davidson Creek. The latter areas are between the site of the proposed Site C Main Dam and the Site D Main Dam, where the slopes adjacent to the drainage are moderate to moderately steeply inclined.

3.2 REGIONAL GEOMORPHOLOGY

The surficial deposits in the Project area are from the Fraser Glaciation, the last period of ice sheet glaciation in British Columbia. The Cordilleran ice sheet covered the Interior Plateau from approximately 20,000 to 12,000 years ago, reaching elevations of 2,500 masl. At the peak of glaciation, the localized ice flow direction in the Project area was toward the northeast, as evidenced by drumlins, eskers, and other streamlined glacial landforms.

Deglaciation commenced approximately 15,000 to 16,000 years ago and proceeded with a frontal retreat to the west and southwest toward the Coast Mountains. The surface of the ice sheets was progressively lowered by down-wasting in the area. The pattern of ice-margin and subglacial meltwater channels indicates that areas of higher elevation in the vicinity of the mine site became ice-free before lower-elevation areas. Glacial ice appears to have stagnated in the Davidson Creek valley during late deglaciation producing ice-stagnation landforms such as kettles and kames. A large amount of glacial meltwater was channeled along Davidson Creek and other valleys in the area, producing eskers and meltwater channels.

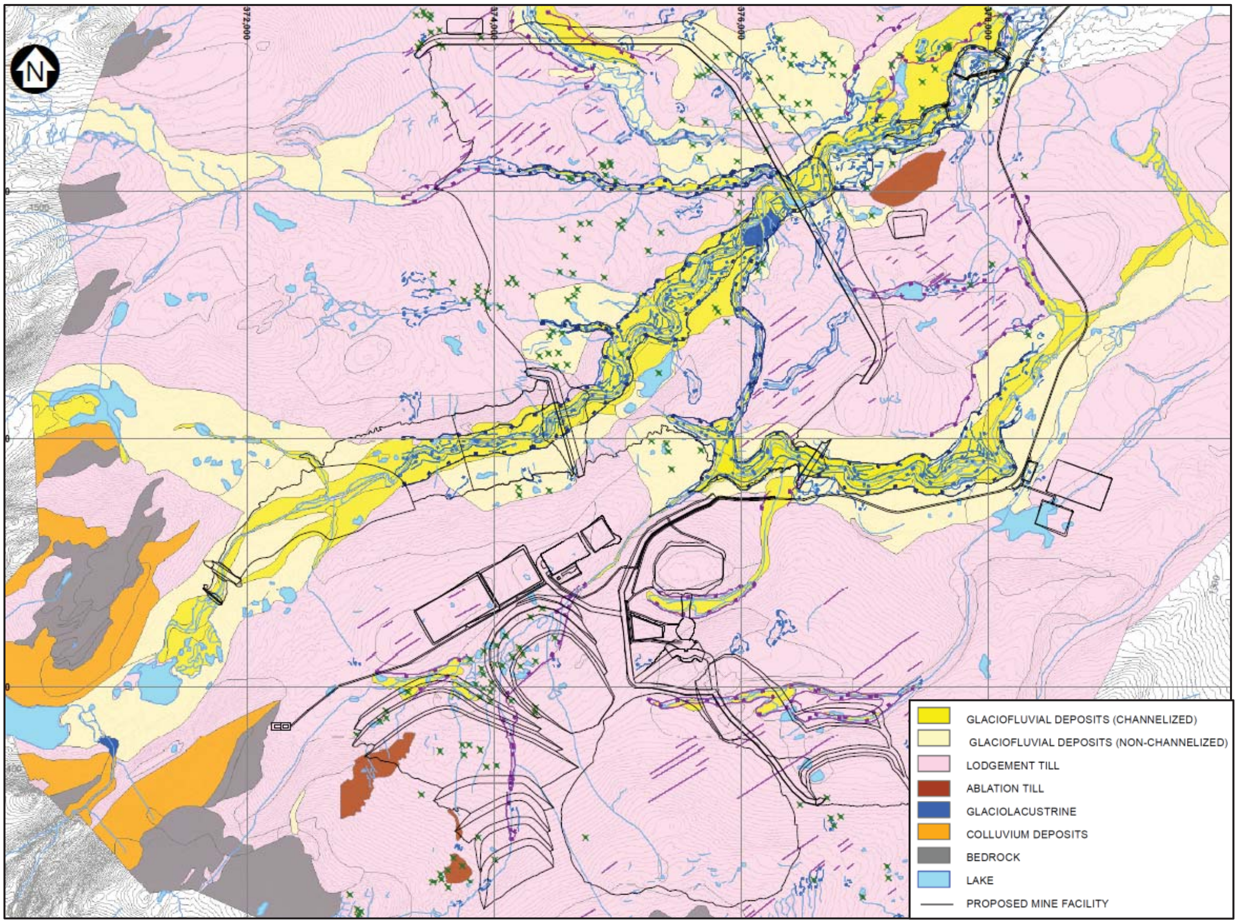
Geomorphological evidence of glaciation suggests that at the height of the Fraser Glaciation, the ice elevation exceeded 1,750 m, higher than the tallest peaks in the Project region. An estimated 80% of the surficial materials in the Davidson Creek valley is classified as lodgement glacial till (Plouffe et. al. 2004), with the other 20% made up of ablation till, glaciofluvial, glaciolacustrine, fluvial, and organic material. The glacial till in the region ranges up to 100 m in thickness, and it is extremely rare to encounter large areas of naturally exposed bedrock outcrop (Giles et al., 1994). Uncommon ablation till is predominantly found at higher elevations on the valley sides while dominant deposits of lodgement till was encountered in the valley basin.

3.3 GEOMORPHOLOGY

Assessment of the geomorphology model of the Project area was developed from the results of the 2012 and 2013 site investigation programs. A technical review of the geomorphology assessment and the sonic core from the 2012 site investigation was provided by Dr. John Clague, P.Geo. of the Department of Earth Sciences at Simon Fraser University to aid in the development of a surficial material geology model of the Project area. The stratigraphy of the surficial materials and bedrock from surface downward is as follows:

- Holocene Deposits
- Fraser Glaciation Deposits
    - Glaciofluvial Deposits
    - Glacial Till
    - Glaciolacustrine Deposits
- Interglacial Fluvial Deposits
- Older Glacial Deposits (predominantly glacial till from an earlier period of glaciation)
- Reworked regolith
- In-situ regolith, and
- Intact Bedrock.

The distribution of the surficial materials at the Project site is shown on Figure 3.1 and enlarged for clarity on Appendix Figure A.3.



NOTES:
1. Cropped from Appendix Figure A.3.

Figure 3.1 Surficial Geology and Landforms Map

3.3.1 Holocene Deposits

The Davidson Creek watershed comprises meandering streams and wetlands. The floodplains of the streams contain deposits of fine sands, silts, and organic material. The landscape in the valley bottoms is dominated by marshes and shallow lakes filled with organic sediments formed from decaying marsh vegetation. Accumulations of peat are encountered in areas where drainage was restricted during the post-glacial period.

3.3.2 Fraser Glaciation Deposits

The Fraser Glaciation sequence at the Blackwater project includes glaciofluvial, glacial till and glaciolacturine deposits outlined below.

3.3.2.1 Glaciofluvial Deposits

Glaciofluvial deposits, including eskers, kames, and meltwater channels, consist predominantly of coarse-grained sand and gravels with trace fines and cobbles. Three types of glaciofluvial deposits have been defined:

- Glaciofluvial deposit (coarse grained) – These deposits were formed by meltwater runoff from the advancing and retreating ice sheet and within subglacial cavities and channels. These deposits were encountered in the hummocky kame topography and were formed from non-channelized glaciofluvial deposits. The kame deposits have a significant proportion of silt and are inferred to have lower permeability than channel deposits. Kame deposits of various thicknesses occur around Davidson Creek in areas of shallow relief above the creek valley. Meltwater channel deposits form terraces between 10 m and 20 m thick on either side of Davidson Creek. Coarse grained glaciofluvial deposits are predominantly sand and gravel with more than 15% fines fraction (silt and clay content).
- Glaciofluvial deposits (fine grained) – These deposits are fine-grained meltwater channel deposits and are uncommon onsite. Fine grained glaciofluvial deposits are classified as sand with some silt and trace gravel.
- Glaciofluvial esker deposits – These deposits extend north in the Chedakuz valley and on the western margin of the Top Lake valley as it cuts through the Fawnie Range. The depositional pattern suggests that they were formed subglacially as meltwater flowed out of the Top Lake valley. Glaciofluvial esker deposits are well-graded, coarse-grained sand and gravels with the lowest proportion of fines (-200 mesh) of all surficial materials in the area.

3.3.2.2 Glacial Till Deposits

Glacial till deposits are the most dominant surficial material in the region and consist of compact to very dense lodgement till with uncommon loose to compact ablation till. Glacial till thickness is variable, ranging from a few to tens of metres. The material is predominantly well graded, stiff to very dense, sandy silt to silty sand with some gravel and trace clay and cobbles. Lodgement till is dense or stiff and contains a significant percentage of fines (silt and clay) that greatly lowers the permeability. Ablation till is less dense and may contain less fines; however this is hard to distinguish in particle size testing results and easier to identify in landform mapping. Lodgement till was the dominate material encountered in the valley basin of the Davidson Creek watershed, and ablation till is found in a few locations on site at higher elevations on the valley sides.

3.3.2.3 Glaciolacustrine

Glaciolacustrine deposits were identified in most of the drillholes in the TSF basin and northeast of the TSF Site D Main Dam in thicknesses of up to 20 m. Glaciolacustrine deposits consist of massive silts with trace clay, sand, and poorly graded gravel. Glaciolacustrine layers consistently lie below the Fraser glacial till deposits. Glaciolacustrine sediments were deposited locally in an ephemeral lake that formed between the advancing Cordilleran ice sheet and higher ground to the west and south. Sediment-laden meltwater flowing along the margin of the ice sheet entered the lake, and silt-sized particles settled out of suspension onto the lake bed. The lake was overridden by the advancing Fraser ice sheet, which terminated glaciolacustrine deposition and compacted the deposits. The glaciolacustrine deposits are very dense, massive sandy silt, and did not exhibit any fine laminated layers or weaker clayey laminations.

3.3.3 Interglacial Fluvial Deposits

Davidson Creek deposited fluvial deposits consisting of sands and gravels during the interglacial period. An unconformity exists between the two glacial periods, as evidenced by localized, absent, or thin interglacial fluvial deposits in drill core from the Project site. Interglacial intervals resulted in the deposition of a layer of permeable glaciofluvial material. This layer should be located sequentially overlying the older glacial till deposits, but in most of the drillholes this layer is absent. The absence of these deposits cannot be explained by subsequent glacial erosion, as the overlying glaciolacustrine sediments would have also been eroded. Localized, discontinuous lenses of glaciofluvial deposits indicate that Davidson Creek was a minor stream with limited extent during the interglacial period.

3.3.4 Older Glacial Till Deposits

An older glacial sequence predominantly composed of glacial till and rare interbedded glaciofluvial and glaciolacustrine deposits lies stratigraphically below the Fraser glacial deposit sequence or locally below the interglacial deposits. These glacial deposits are similar in composition to the Fraser glacial till deposits and are indistinguishable by field description and laboratory particle size testing.

3.3.5 Reworked Regolith (Reworked Completely Weathered Bedrock)

The older glacial sequence rests on reworked and in-situ regolith horizon (completely weathered bedrock). The reworked and in-situ regolith was found ranging in thickness from a few metres to over 30 m. It is thin or absent in topographically high areas and thicker in topographic low areas, indicating that the Davidson Creek watershed may have been shielded from glacial erosion. A wide range of gradation is observed, indicative of the various states of decomposition of the weathered bedrock. The original bedrock texture or fabric is evident in the majority of samples.

The boundary between the reworked and in-situ regolith is difficult to discern in all drillholes. The reworked regolith comprises poorly graded sediments containing abundant weathered bedrock clasts. It is presumed that gravitational processes and recorded landscape instability controlled the deposition, potentially during the onset of cold climatic conditions during the early Pleistocene, ca. 2.6 Ma.

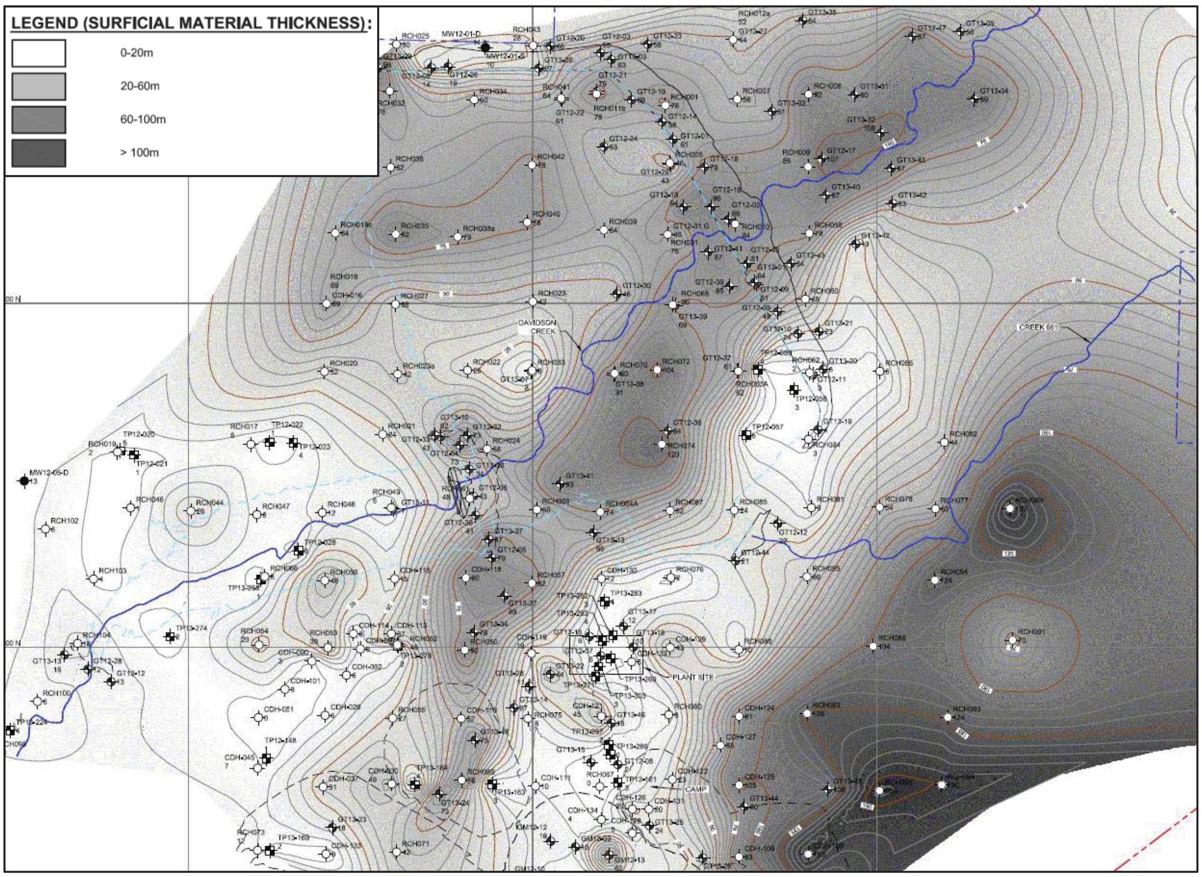
3.3.6 In-situ Regolith (Completely Weathered Bedrock)

In-situ regolith is the deepest surficial material unit. The extent of weathering indicates a stable landscape with a humid, warm climate that persisted for potentially millions of years during the Pliocene and/or Miocene. The presence of this stratum is unusual in British Columbia, as it is typically scoured by the process of glaciation.

Thicknesses of this unit range from a few metres to over 30 metres, averaging approximately 15 metres. It is thin or absent in topographically high areas and thicker in topographic low areas, indicating that the Davidson Creek watershed may have been shielded from glacial erosion. A wide range of gradation is observed, indicative of the various states of decomposition found in the completely weathered bedrock profile. The original bedrock texture or fabric was evident in the majority of drillholes. A zone of white to light brown silt and clay sized sediments near the top of the layer is either a soil horizon or a weathered tuff (volcanic ash).

3.4 SURFICIAL MATERIAL THICKNESS

Bedrock exposure is rare and restricted to higher elevations. The surficial material is generally thick within the Davidson Creek watershed area averaging over 60 meters. Bedrock is deepest along the Davidson Creek valley bottom where it is encountered at up to 107 meters depth. Drillholes and test pits located south side of Site D Main Dam, at the Plant Site and west of Site C Main Dam encountered shallow bedrock. Data from the 2012 and 2013 site investigation programs and New Gold's condemnation drilling program were combined to illustrate the thickness of surficial material found throughout the Project site is illustrated on Figure 3.1 and on Appendix Figure A.4.



NOTES:
1. Cropped from Appendix Figure A.4.

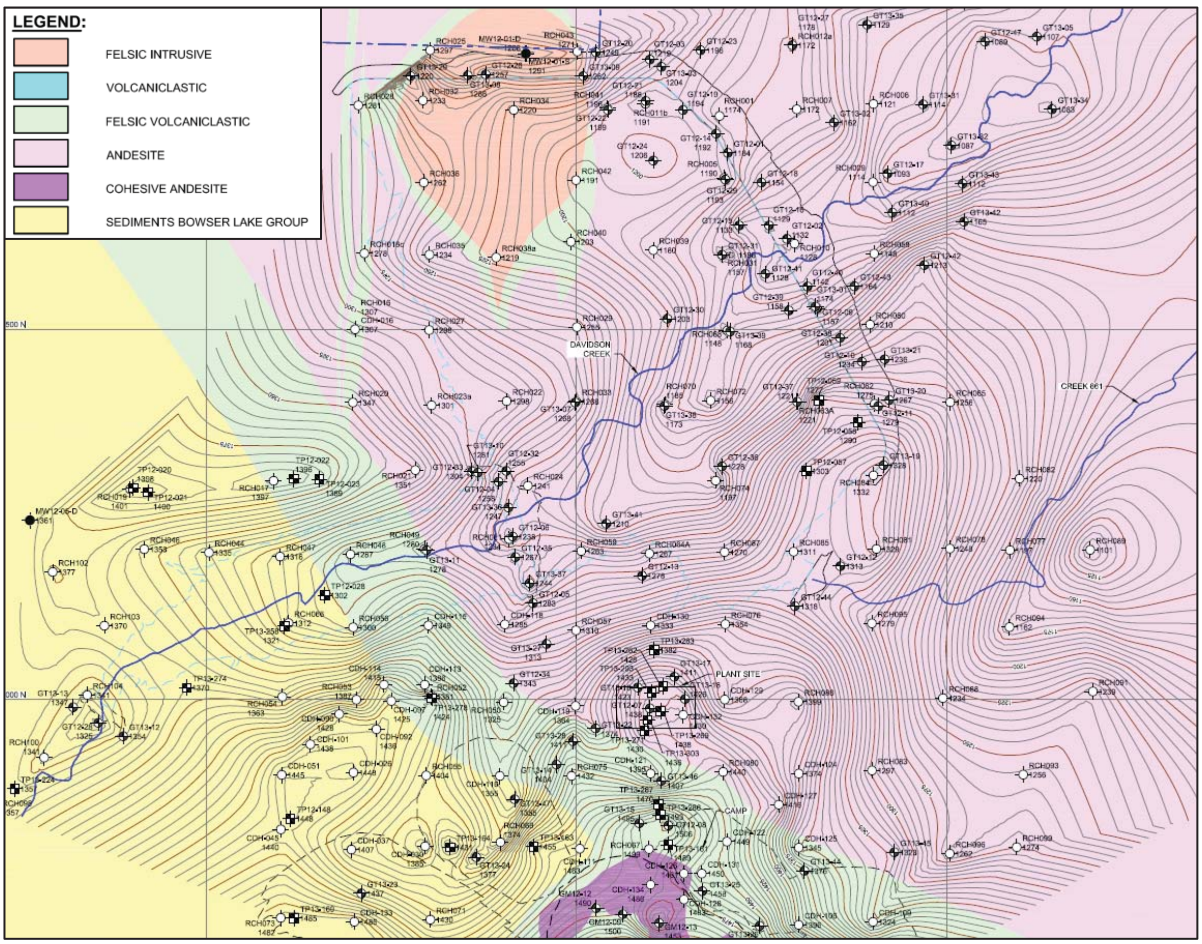
Figure 3.2 Surficial Material Thickness

3.5 BEDROCK GEOLOGY

Detailed geology can be found in the works of Diakow and Webster (1994), Diakow and Levson (1997), and Diakow et. al. (1997). The southern Nechako Plateau has a lower unit of Upper Jurassic volcaniclastic, sedimentary, and mafic to felsic volcanic rocks of the Bowser Lake Group. The Bowser Lake group are intruded by Late Cretaceous granitic to granodioritic plutons. Widespread Eocene volcanic arc-related extensional felsic volcanic rocks and minor sedimentary rocks of the Ootsa Lake Group overlie the Bowser Lake Group and are themselves overlain on higher ridges by basalt and andesite of the Eocene Endako Group. Intact bedrock exposure is rare and restricted to higher elevations in the area.

Two bedrock lithologies were encountered in the Davidson Creek watershed; an andesite from the Cenozoic Ootsa Lake Formation and fragmentals volcanics from Cretaceous Volcaniclastics and Flows. Bedrock in the west part of the TSF footprint also belongs to the Ootsa Lake Formation, but comprises rhyolites and felsic volcanic rocks. The bedrock in the southeast portion of the project area, including the footprint of the proposed Open Pit, is rhyolites and felsic volcanic rocks of the Entiako Formation, which belongs to the Middle Jurassic Hazelton Group. Bedrock to the west is basement rock from the Bowser Lake Group.

A bedrock elevation contour map was generated by using the 2012 and 2013 site investigation data and New Gold's 2012 condemnation drilling data as shown on Figure 3.3 and enlarged for clarity on Appendix Figure A.5.



NOTES:

1. Cropped from Appendix Figure A.5.

Figure 3.3 Bedrock Elevation and Geology

4 – MATERIAL CHARACTERIZATION

The ultimate goal of the subsurface investigations is to develop a working model depicting major subsurface layers exhibiting distinct engineering characteristics. The Unified Soil Classification System (USCS) has been used for describing and categorizing soil within groups to allow for the development of distinct soil properties. The classification and description requirements are easily associated with actual soils and the system is flexible and adaptable in the both field and laboratory conditions. The USCS classification group or description allows quickly development of the approximate permeability, shear strength, compaction characteristics, workability and volume change potential of a soil and how it will be affected by water, frost and other physical conditions.

The surficial materials and intact bedrock for the Project have been assessed using the geological and geotechnical information collected from drillhole and test pit data, laboratory testing, and seismic refraction surveys. A preliminary assessment of the material types at the Blackwater Gold project were previously summarized in the Knight Piésold reports: the ‘2012 Site Investigation Report’, Ref. No. VA101-457/6-1 and ‘2013 Site Investigation Report’, Ref. No. VA101-457/6-4 using deposition process. This current report supersedes the previous assessment and provides additional site investigations and data on material properties.

4.1 SURFICIAL MATERIAL GEOTECHNICAL PROPERTIES

The stratigraphic units outlined in the geomorphological model have been grouped with the USCS material classification system. The surficial material and weathered bedrock at the project has been grouped using the following material types (generally described from surface down):

- Holocene deposits – topsoil layer (OL, Pt).
- Glaciofluvial esker deposits – coarse grained soils (GW-GP).
- Coarse grained glaciofluvial deposits – coarse grained soils with sands and fines (GM-GP, SM-SP).
- Fine grained glaciofluvial deposits – coarse grained soils with sands and fines (SP-SM).
- Glacial till deposits – coarse grained soils with gravels and fines (SM-SC and GM-GC).
- Glaciolacustrine deposits – fine grained soils silts and clays (ML-CL).
- Regolith derived (in-situ and reworked) – coarse grained soils gravels with plastic fines (GC) to fine grained soils (CL).

Descriptions of the material properties are provided in the sections below and are summarized in Table 4.1.

Table 4.1 Surficial Material Geotechnical Properties

USCS Classification		GW-GP	GM-GW, SM-SP	SP-SM	GM-GC, SM-SC	ML-CL	GC to CL
Geomorphological Model		**Glaciofluvial Esker Deposits**	**Glaciofluvial Deposits – coarse**	**Glaciofluvial Deposits – fine**	**Glacial Till Deposits**	**Glaciolacustrine Deposits**	**Regolith**
Particle Size Analysis	Gravel %	39 – 68 (52)	25 – 84 (46)	0 – 27 (7)	2 – 48 (25)	0 – 23 (3)	0 – 44 (13)
	Sand %	24 – 57 (39)	14 – 59 (37)	35 – 98 (71)	22 – 70 (41)	1 – 63 (21)	10 – 70 (45)
	Silt %	14	7 – 26 (14)	6 – 25 (19)	12 – 42 (27)	29 – 92 (62)	11 – 76 (32)
	Clay %	1	0 – 8 (3)	0 – 5 (3)	4 – 26 (7)	1 – 35 (13)	0 – 36 (10)
Moisture Content %		4 – 8 (6)	2 – 28 (9)	8 – 23 (15)	1 – 26 (11)	6 – 36 (18)	4 – 32 (17)
Atterberg Limits for <200# Sieve	Liquid Limit		13 – 39 (24)	12 – 39 (24)	8 – 44 (24)	9 – 67 (28)	11 – 60 (33)
	Plastic Limit		6 – 29 (15)	7 – 32 (20)	5 - 31 (15)	6 – 33 (19)	7 – 32 (17)
	Plasticity Index		NP – 28 (9)	NP – 16 (8)	0 – 33 (9)	NP – 43 (11)	3 – 33 (17)
Seismic	Refraction Velocities		320 – 1050 m/s	200 – 800 m/s	1900 – 2500 m/s		2250 – 2600 m/s
Specific Gravity	Specific Gravity				2.7 – 2.8		
Compaction Testing (Std. Proctor)	Maximum Dry Density		2015 – 2090 kg/m^3		2008 – 2158 kg/m^3		
	Optimum Moisture Content		9 – 10 %		10 – 11%		
Compaction Testing (Mod. Proctor)	Maximum Dry Density		2159 kg/m^3		2028 – 2286 kg/m^3		
	Optimum Moisture Content		8.6 %		10 – 11%		
Triaxial Testing	Cohesion (c)				13 kPa		
	Friction Angle (Ø)				37°		
Permeability Laboratory Test	Constant head				10^{-7} – 10^{-11} m/s		
	Falling head				10^{-6} – 10^{-8} m/s		
Bulk and Dry Density	Moisture Content				7 – 11%		
	Dry Density				1789 – 2417 kg/m^3		
	Bulk Density				2061 – 2622 kg/m^3		

NOTE:

1 Results in brackets are the weighted average i.e. (12).
2 NP: Non-plastic.

4.1.1 Holocene Deposits – Topsoil Layer (OL, Pt)

A topsoil layer (OL) of varying thickness is present over the entire project area, and comprises wet, dark reddish brown silty sand with a high organic cover. The drillhole pad areas and test pit excavations indicate the topsoil layer varies in thickness from only 0.1 to 0.3 m Isolated topsoil pockets may be present over 1 m thick in organic swamp areas and wetland (Pt).

4.1.2 Glaciofluvial Esker Deposits (GP-GW)

Subglacial meltwater corridors are channelized deposits that formed beneath the degrading ice sheet forming terraces and eskers with little to no fines. Esker deposits are well-graded to poorly sorted, coarse grained sand and gravels with trace fines classifying as GP-GW using the UCSC classification system. These deposits have the lowest proportion of fines (-200 mesh) of all surficial materials in the area. Particle Size Analysis (PSA) results found grain size ranging from 39 to 68% gravel, 24 to 57% sand, and 5 to 15% fines. A total of nine particle size distribution tests were completed on the esker deposits (GP-GW), the average particle size, along with the 95th and 5th percentile distributions is shown in Figure 4.1, and the material properties are summarized in Table 4.1.

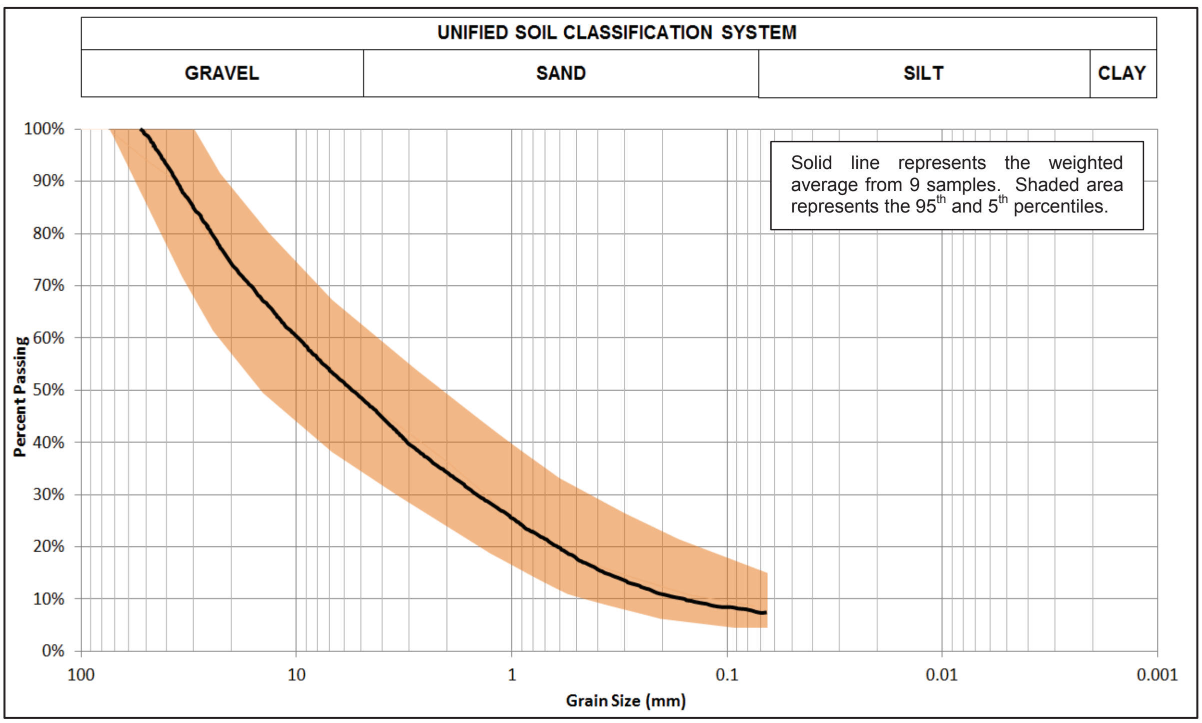


Figure 4.1 Grading Summary of Glaciofluvial Esker Deposits (GP-GW)

4.1.3 Coarse Grained Glaciofluvial Deposits (GM-GP, SM-SP)

Coarse grained soils with fines have been identified on the site as glaciofluvial and interglacial fluvial deposits. This material classifies as GM-GP and SM-SP using the UCSC classification system. The majority of the SPT's were driven to refusal with 'N' values ranging from 14 to refusal (50+). The relative density of these deposits was compact becoming very dense below 3 meters. Numerous cobbles were encountered and the variable high SPT blow counts are partly due to the presence of cobbles. Samples were collected from the drillholes and test pits for laboratory testing typically contained in the order of 25 to 84% gravel, 14 to 59% sand, and 7 to 34% fines. A total of 119 particle size distribution tests were completed on the coarse grained soils with fines (GM-GP, SM-SP), the average particle size, along with the 95th and 5th percentile distributions is shown on Figure 4.2, and the material properties are summarized in Table 4.1. The natural moisture contents ranged between 2% and 35%. The Atterberg Limit test work indicates non plastic to low plasticity materials with plasticity indices ranging between non-plastic and 5%. Seismic refraction velocities were found to range from 350 m/s to 1050 m/s.

The 2012 site investigation program identified coarse grained soils with a range of fines content from 3 to 30%. The 2013 site investigation program specifically focused on characterizing the subsurface material types and improving the data set to develop a working model depicting major subsurface layers exhibiting distinct engineering characteristics. A total of 75 samples were collected to determine the grading characteristics of the subsurface materials from drillholes and test pits during the 2013 site investigation program. Half of these samples were found to have more than 15% fines content signifying relatively low permeability behavior.

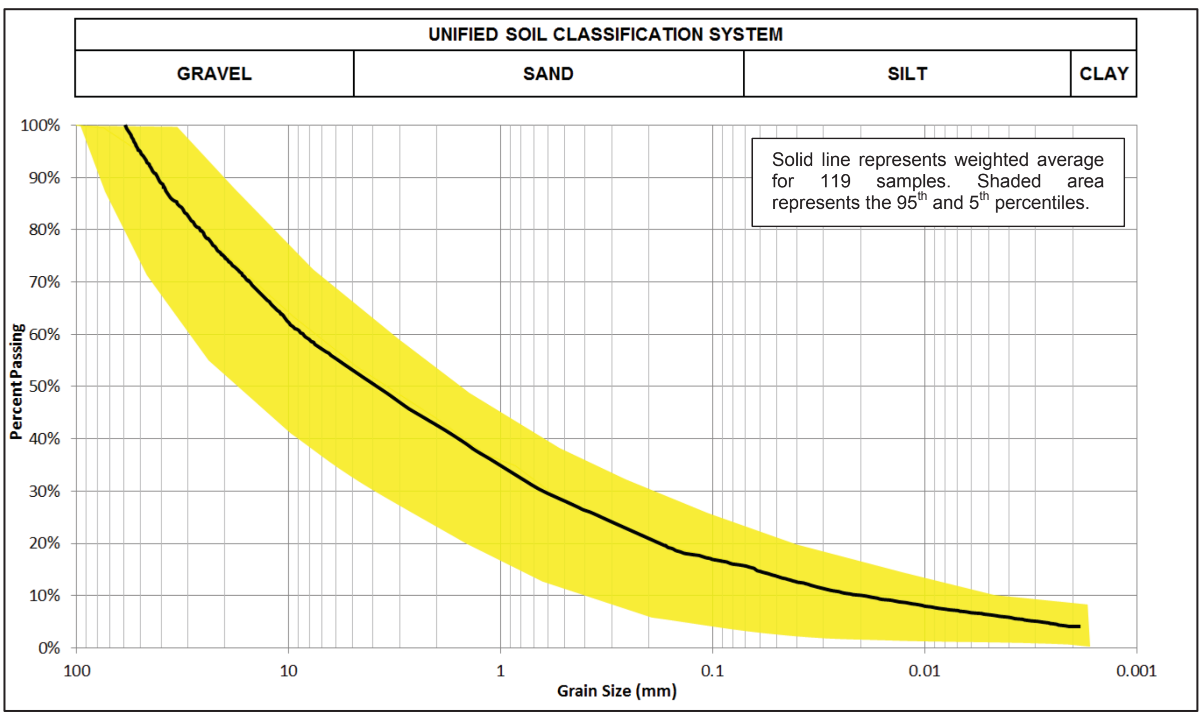


Figure 4.2 Grading Summary of Coarse Grained Glaciofluvial Deposits (GM-GP, SM-SP)

4.1.4 Fine Grained Glaciofluvial Deposits (SP-SM)

Coarse grained soils with sands have been identified on site as fine grained glaciofluvial deposits. The USCS designation for these materials is classified as SP-SM. These deposits are typically encountered in the hummocky kame topography and formed from non-channelized glaciofluvial deposits. Kame deposits are mounds of gravel and sand with trace to some silt that were formed where streams deposited coarse sediment within cavities in the ice sheet. PSA results encountered uniformly graded material with mean values of approximately 0 to 27% gravel, 35 to 98% sand, 6 to 25% silt and 0 to 5% clay. Twenty-nine percent of samples tested had less than 15% fines. A total of 13 particle size distribution tests were completed on the fine grained glaciofluvial deposits (SP-SM), the average particle size, along with the 95th and 5th percentile distributions is shown on Figure 4.3, and the material properties are summarized in Table 4.1. Fine grained glaciofluvial samples were typically low plasticity materials with plasticity indices ranging from non-plastic to 16.

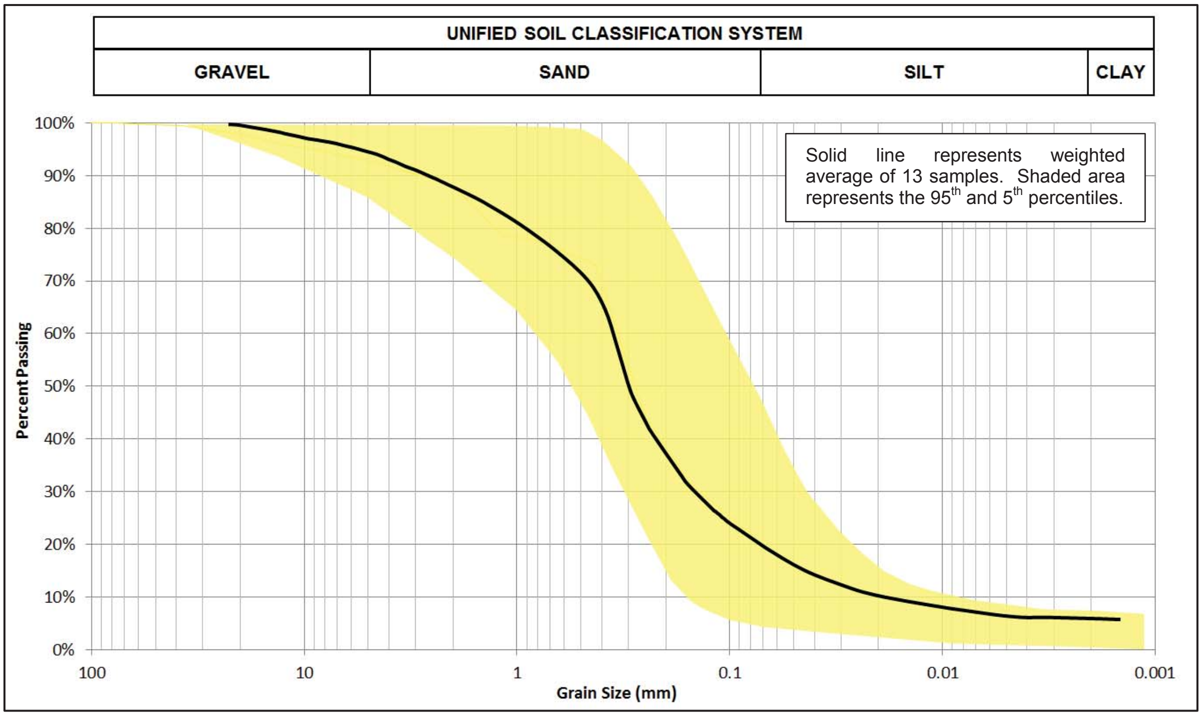


Figure 4.3 Grading Summary of Fine Grained Glaciofluvial Deposits (SP-SM)

4.1.5 Glacial Till Deposits (SM-SC and GM-GC)

Coarse grained soils with gravels and fines are the dominant surficial material encountered across the site deposited as glacial till. The USCS designations for these materials are classified as SM-SC to GM-GC. Permeability in this unit varies based on the fines content or presence of lenses or layers of finer grained material. Wet weather construction in these deposits is often difficult because of the relatively high fines content. These soil types become muddy and unstable, and operation of equipment can become difficult when the moisture content is more than a few percent above the optimum moisture content.

The compactness/consistency condition of the material was compact to very dense or firm to hard. The majority of the SPT tests were driven to refusal resulting in high 'N' values of 30 to refusal (50+). Numerous cobbles were encountered and the variable high blow counts of the SPT's are partly due to the presence of cobbles. PSA of samples collected from the drillholes and test pits for laboratory testing typically contained in the order of 5 to 50% gravel, 20 to 70% sand, and 10 to 50% silt and 0 to 17% clay. A total of 108 particle size distribution tests were completed on the glacial till deposits (SM-SC, GM-GC), the average particle size, along with the 95th and 5th percentile distributions is shown on Figure 4.4, and the material properties are summarized in Table 4.1.

Natural moisture contents of the glacial till materials were between 4% and 25%. The Atterberg Limits classified low plasticity materials with liquid limits less than 60%, plastic limits from 5 to 30% and plasticity indices NP to less than 30%. The specific gravity of glacial till samples ranged from 2.7 to 2.8. Compaction test work yielded a maximum dry density ranging between 2008 kg/m^3 and 2286 kg/m^3 with optimum moisture contents ranging from 10% to 11% respectively. In-situ density measurements on selected sonic core samples yielded a dry density of 1789 kg/m^3 to 2417 kg/m^3. Bulk densities ranged from 2061 kg/m^3 to 2622 kg/m^3. Triaxial strength testing (in-situ) indicated the glacial till has an average cohesion of 13 kPa and a friction angle of 37 degrees. Seismic refraction velocities in this layer ranged from 1,750 m/s to 2,600 m/s and correlated to a compact to dense saturated layer.

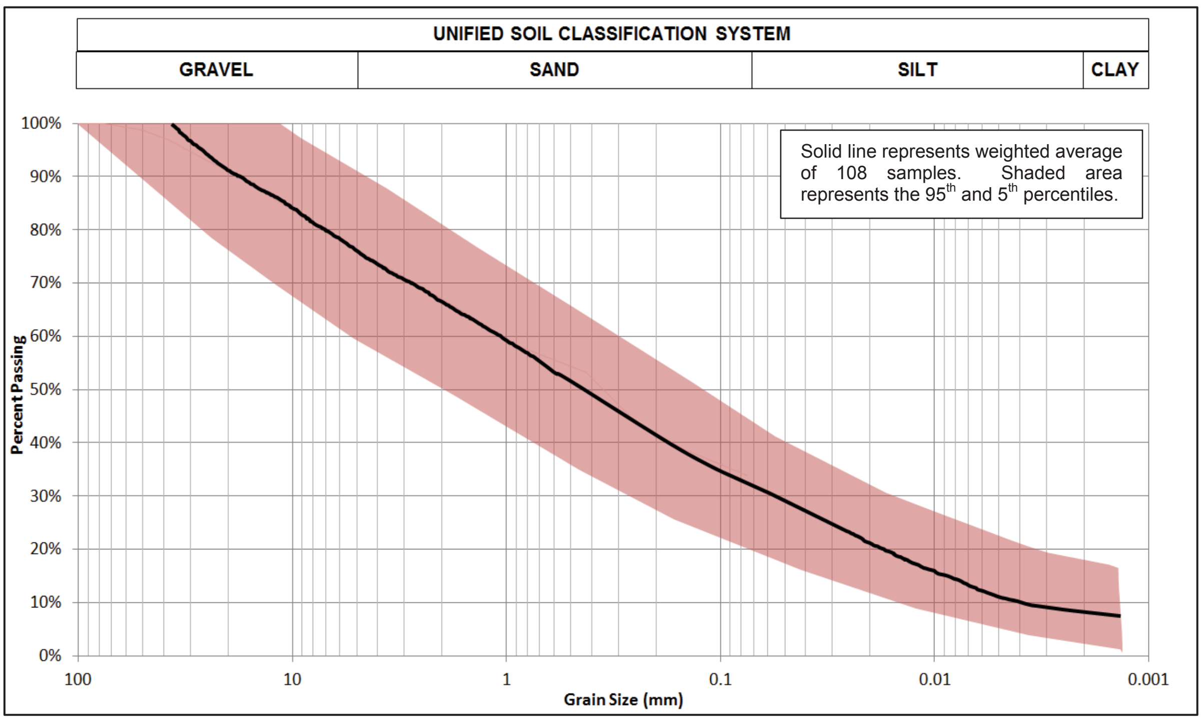


Figure 4.4 Grading Summary of Glacial Till Deposits (SM-SC and GM-GC)

4.1.6 Glaciolacustrine Deposits (ML-CL)

Fine grained soils have been identified in the majority of drillholes in the TSF basin and northeast of the TSF Site D Main Dam. The particle size distributions indicate a material containing

0 to 23% gravel, 1 to 63% sand, 29 to 92% silt and 1 to 35% clay. These deposits classify as ML-CL using the USCS classification. A total of 40 particle size distribution tests were completed on the glaciolactrusitine deposits (ML-CL), the average particle size, along with the 95th and 5th percentile distributions is shown on Figure 4.5, and the material properties are summarized in Table 4.1. Atterberg testing indicated medium to high plasticity materials with liquid limit values range from 10 to 77%, plastic limits ranging from 6 to 38% and plasticity indices ranging from non-plastic to 66%. The natural moisture contents ranged between 6 to 42%.

The fine grained deposits are typically dense and massive and did not exhibit any fine laminated layers or weaker clayey laminations. The seismic refraction velocities did not distinguish this layer as a specific material type. Pinhole dispersion tests were used to evaluate undisturbed glaciolacustrine samples for erodibility and found the samples to be slightly dispersive. X-Ray Diffraction (XRD) analytical results were conducted on select samples and the composition was approximately 46% smectite, 27% plagioclase feldspar, 10% quartz, and 10% k-feldspar for bulk samples and 90% smectite at the -2 μm fraction.

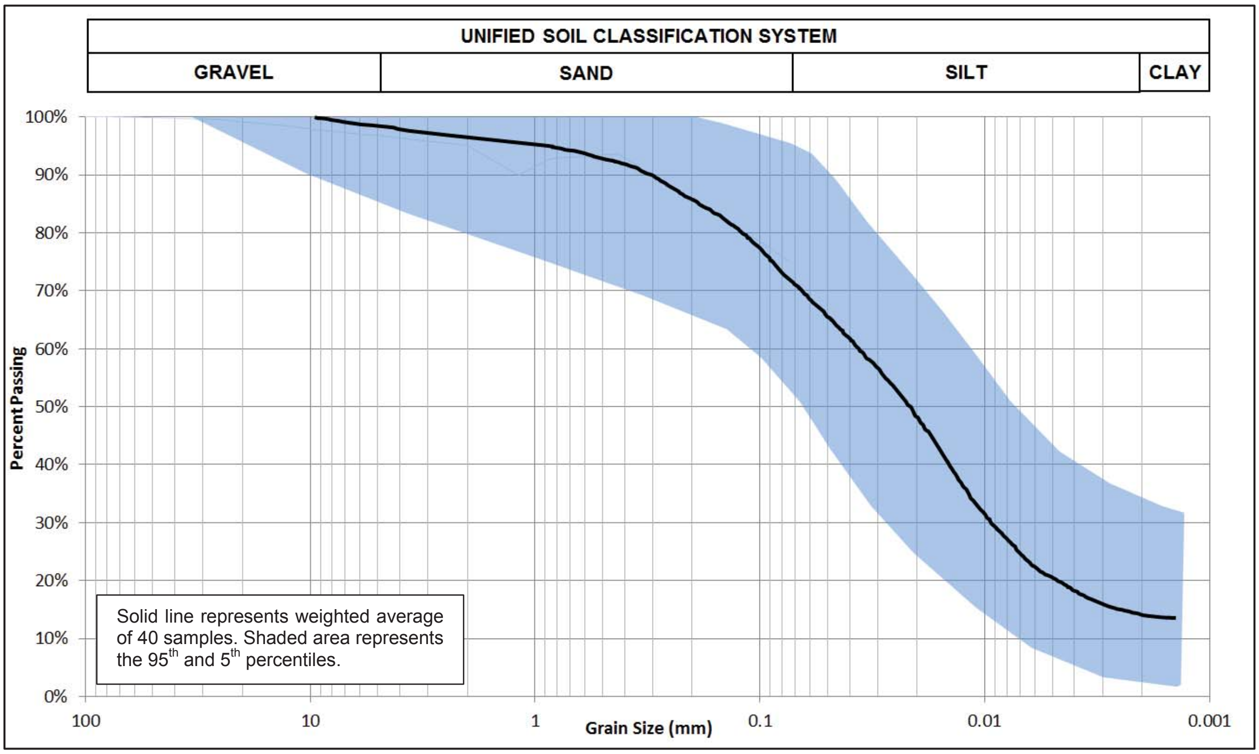


Figure 4.5 Grading Summary of Glaciolacustrine Deposits (ML-CL)

4.1.7 Reworked and In-situ Regolith (GC to CL)

Coarse grained soils with plastic fines deposited as in-situ and reworked regolith were encountered in the majority of drillholes with thicknesses ranging from a few metres to over 30 metres, averaging approximately 15 metres thick. The original bedrock texture or fabric is evident in the majority of samples, however the material behaves similar to a soil and is included as part of the surficial materials. The UCSC designation for these materials is classified as GC to CL. PSA results of the completely weathered bedrock horizon determined a variety of material gradation with values ranging from 0 to 44% gravel, 10 to 70% sand, 4 to 76% silt and 0 to 36% clay. A total of 32 particle size distribution tests were completed on the regolith deposits (GC to CL), the average particle size, along with the 95th and 5th percentile distributions is shown on Figure 4.6, and the material properties are summarized in Table 4.1. A wide range of gradation is observed, indicative of the various states of decomposition of the weathered bedrock. Completely weathered bedrock samples were typically medium to high plasticity with plasticity indices ranging between 3 and 33. Seismic refraction velocities for this unit ranged from 2,250 m/s to 2,600 m/s. Variation in seismic refraction velocity may indicate the presence of increased zones of weathering for the lower velocity with the higher velocity zones signifying more competent bedrock. The wide range of potential grading of this material suggests a wide range in potential permeability values.

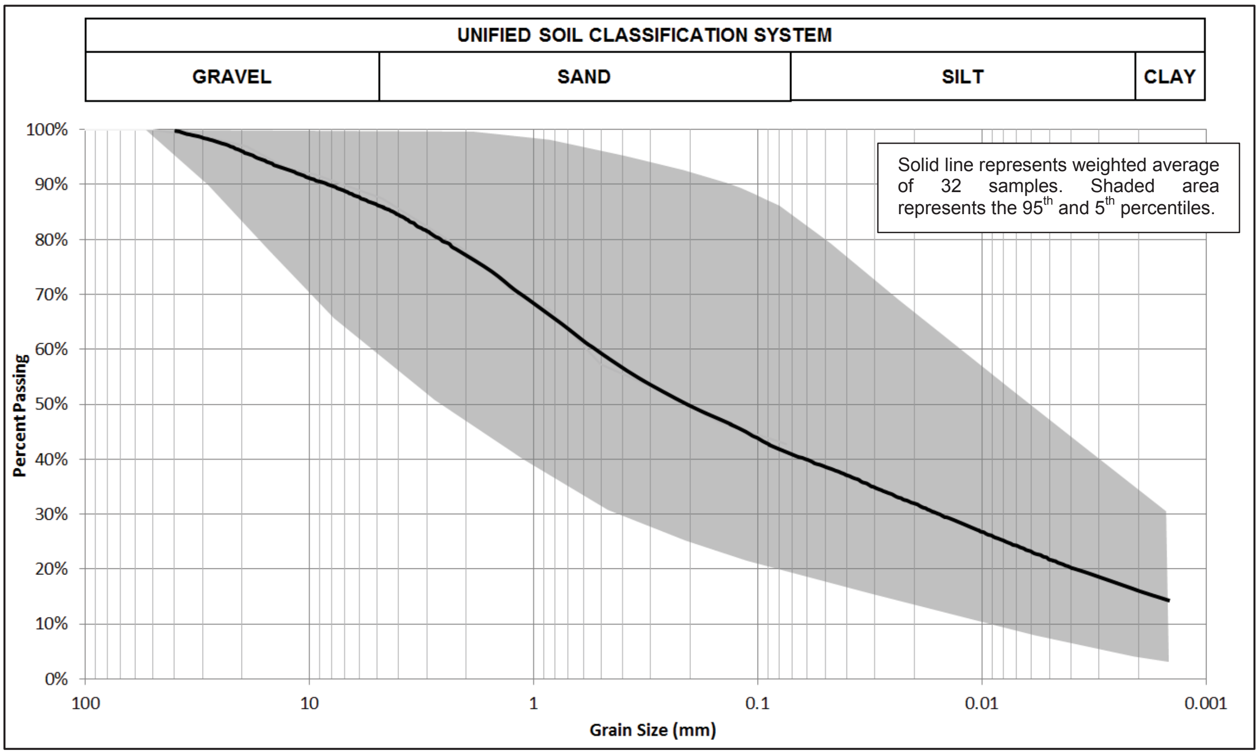


Figure 4.6 Grading Summary of In-situ and Reworked Regolith (GC to CL)

4.2 INTACT BEDROCK GEOTECHNICAL PROPERTIES

Bedrock exposure is rare and generally restricted to higher elevations in the area. Bedrock is typically overlain by 40 to 50 metres of glacial deposits. Two geologic rock units were encountered in the TSF area; andesite from the Cenozoic Ootsa Lake Formation and fragmentals volcanics from the Cretaceous Volcaniclastics and Flows. The andesite and fragmentals units were highly weathered to approximately 20 m depth, becoming moderately to slightly weathered below this depth. The intact bedrock surface elevation contour map of the project was developed using drillhole and test pit data as shown on Figure 3.3.

4.2.1 Rock Mass Properties

The andesite is a light grey to purple grey, fine-grained, porphyritic volcanic rock. The rock mass rating (RMR) and rock quality designation (RQD) for andesite was classified as GOOD, with intact rock strength ranging from medium strong to very strong (70 to 275 MPa).

The fragmentals unit comprised of felsic lapilli tuffs (FPLT), andesite breccia (ABX) and volcaniclastic (VC) rocks. ABX is a clast to matrix-supported, mafic breccia with angular to sub-angular andesite clasts. VC rocks are poorly to moderately sorted polymicitic volcanic breccia with a light to dark coloured matrix. The matrix of all the fragmental unit lithologies can be bleached and altered to silica, sericite and/or clay. The RMR and RQD of this unit were FAIR to GOOD with intact rock strength ranging from medium strong to very strong (60 to 189 MPa).

Compressional wave velocities for intact bedrock ranged from 2,550 m/s to 5,460 m/s. The majority of intact bedrock has velocities exceeding 3,500 m/s. Narrow isolated bedrock zones with lower velocities varying from 2,500 m/s to 3,460 m/s and have been interpreted as shear or fault zones and correlate to topographically low areas. The rock properties are summarized in Table 4.2.

Table 4.2 Summary of Rock Mass Properties

<table>
<tr><th colspan="2">Bedrock</th><th>Rock Strength (MPa)</th><th>Strength Description</th><th>Young's Modulus (GPa)</th><th>Poisson Ratio</th><th>RQD %</th><th>RMR^{89}</th><th>RMR Rating</th></tr>
<tr><td rowspan="2">Andesite</td><td>Median</td><td>212</td><td rowspan="2">MEDIUM STRONG TO VERY STRONG</td><td>58</td><td>0.19</td><td>55</td><td>59</td><td rowspan="2">GOOD</td></tr>
<tr><td>Range</td><td>70 - 275</td><td>5 - 134</td><td>0.05 - 0.30</td><td>0 - 100</td><td>28 - 92</td></tr>
<tr><td rowspan="2">Fragmentals</td><td>Median</td><td>125</td><td rowspan="2">MEDIUM STRONG TO VERY STRONG</td><td>36</td><td>0.10</td><td>38</td><td>50</td><td rowspan="2">FAIR to GOOD</td></tr>
<tr><td>Range</td><td>60 - 189</td><td>19 - 53</td><td>0.08 - 0.31</td><td>0 - 93</td><td>28 - 67</td></tr>
</table>

4.2.2 Rock Mass Permeability

Permeability testing of the rock mass generally indicated low hydraulic conductivity values ranging in the order of 10^{-6} to 10^{-8} m/s. The majority of tests exhibited laminar flow and lugeon values were typically between less than 1 and 5. The hydraulic conductivity results are summarized on Figures 4.7 and 4.8.

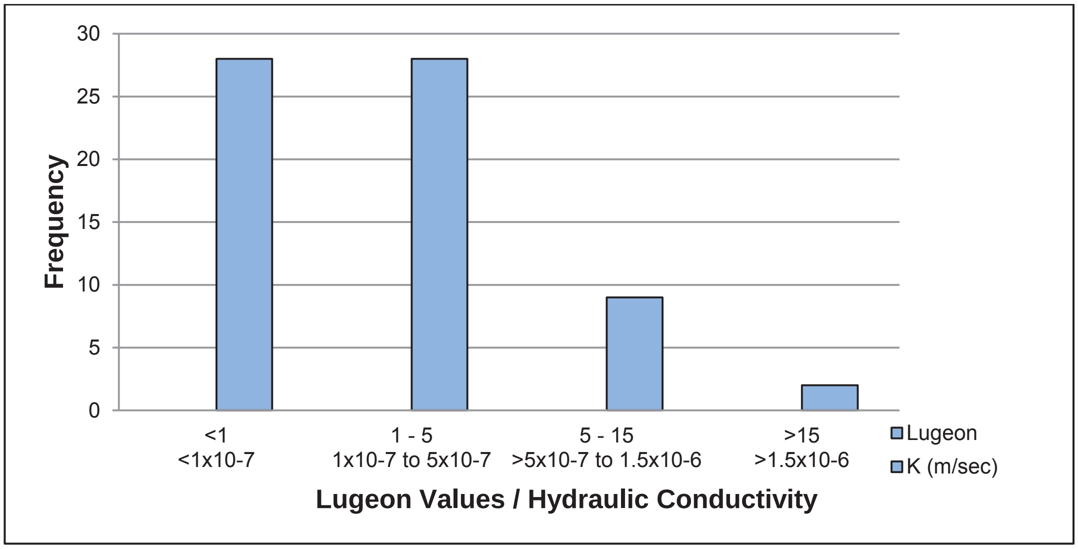


Figure 4.7 Lugeon Values and Hydraulic Conductivity verses Frequency

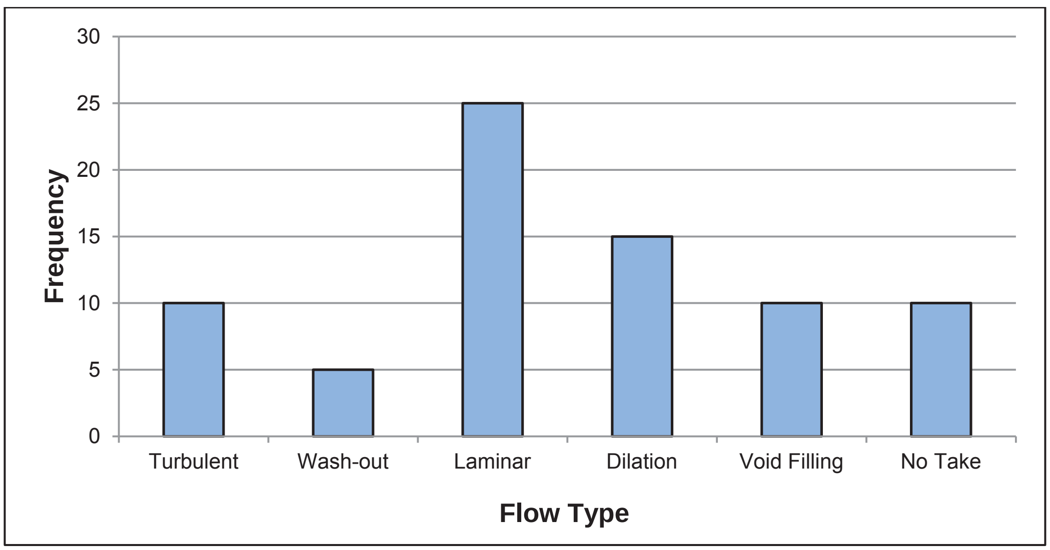


Figure 4.8 Hydraulic Conductivity Flow Type from Packer Tests

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5 – TSF AND MINE SITE INFRASTRUCTURE FOUNDATION CONDITIONS

5.1 MINE DEVELOPMENT CONCEPT

The Tailings Storage Facility (TSF) and mine infrastructure geotechnical foundation conditions were developed using the extensive geotechnical database complied during the 2012 and 2013 geotechnical investigation programs. The Plant Site and Open Pit geotechnical conditions have been presented in separate reports. The TSF and waste dump areas along with the mine site infrastructure are shown on Figure 5.1. The surface and subsurface material characteristics in the TSF and disposal areas are described below and include the following components:

- Site D Main Dam – primary seepage control for Davidson Creek watershed
- Site D Basin – TSF Site D tailings storage basin area
- Site D south abutment – primary seepage control for Creek 661 drainage divide
- Site C Main Dam – limited seepage control, Site D Main Dam will provide primary seepage control measures
- Site C Basin – TSF Site C tailings storage basin area
- Site C West Dam – primary seepage control for tailings past the drainage divide
- Environmental Control Dam – secondary seepage control downstream of Site D Main Dam, and
- Waste Rock Dumps – East and West Dumps and Low-Grade Ore Stockpile.

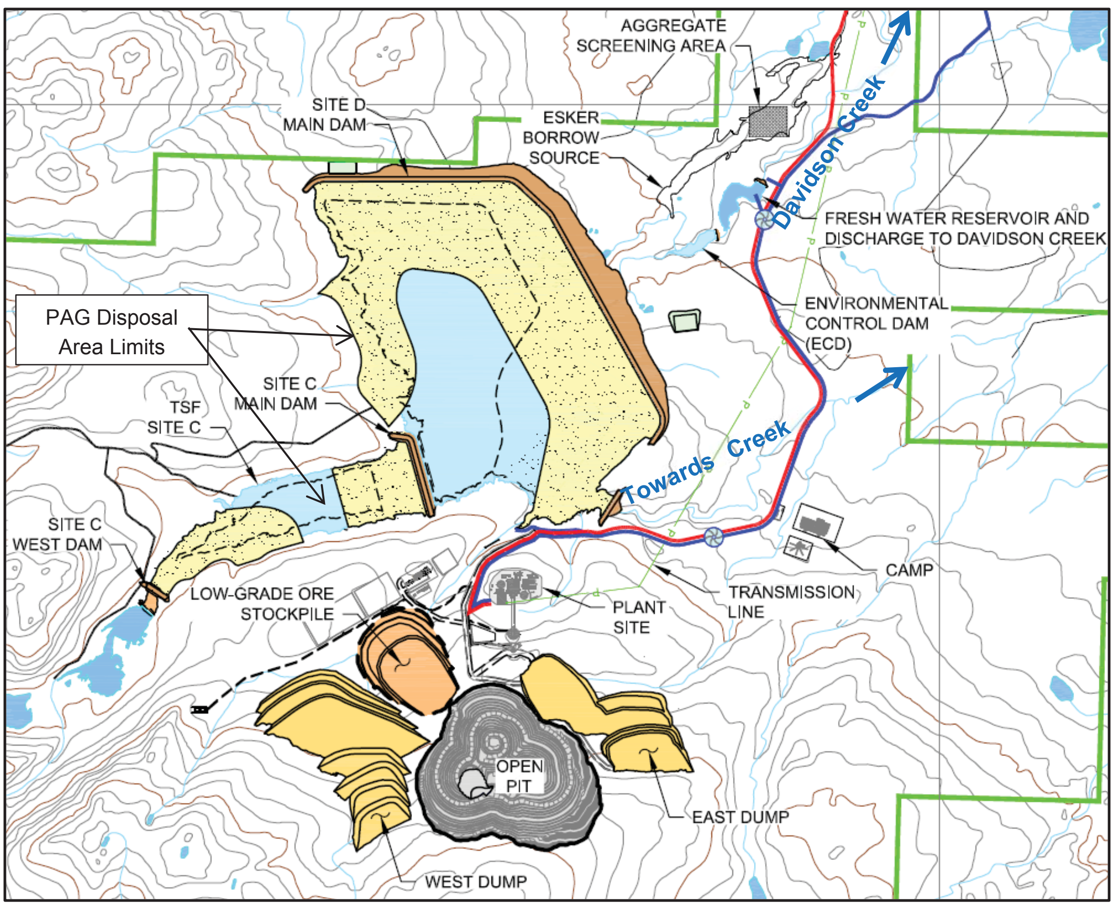


Figure 5.1 Mine Site FS Design General Arrangement

5.2 TAILINGS STORAGE FACILITY

5.2.1 Site D Main Dam Geotechnical Conditions

The Site D Main Dam alignment was established to optimize use of the natural topography of the Davidson Creek watershed, allowing for efficient and long-term storage of mine waste. Twenty-four drillholes and 24 test pits were completed in the vicinity of the Site D Main Dam alignment. The foundation conditions have been characterized by a surficial glacial sequence ranging from 4 m to 96 m thick overlying bedrock. These deposits are thickest in the centre of the Davidson Creek valley. Surficial materials at the north abutment are particularly thick, ranging from 14 m to 96 m. The regolith horizon ranges in thickness from approximately 2 m to 30 m. Static groundwater levels range from 7 m to 32 m below ground surface, mirroring the surface topography. The groundwater depth is consistent with the saturated zone identified by the seismic refraction survey lines.

The dominant surficial material type in the Site D Main Dam area is low-permeability lodgement glacial till. Glaciofluvial deposits overlie the glacial till deposits to form meltwater channel with terraces between approximately 10 m and 20 m thick on either side of Davidson Creek. Bedrock is close to surface on the southern side of the Site D Main Dam. The Site D Main Dam crosses the Davidson Creek pro-glacial meltwater corridor. A glaciofluvial kame complex extends beneath approximately half of the Site D Main Dam on the north side of Davidson Creek. Meltwater channels, a few small eskers, and meltwater erosional scarps were mapped on the south side of Site D Main Dam. Interglacial fluvial deposits were identified within the glacial till. These zones were found to be discontinuous and displayed no lateral continuity between adjacent drillholes. A schematic of the inferred stratigraphy at the Site D Main Dam is shown on Figure 5.2.

The bedrock geology consists of andesitic volcanic rocks that are highly to moderately weathered to approximately 20 m depth. In-situ hydraulic conductivity testing demonstrates the rock mass has low permeability ranging from $1x10^{-6}$ to $1x10^{-9}$ m/s. An inactive fault was inferred on the south side of Davidson Creek, based on the 2012 site investigation program drilling. Two drillholes targeted the inferred fault (inactive) during the 2013 site investigations to determine hydraulic conductivity the orientation of the fault. The fault zone was found to be a high angle near vertical fault and to have a low permeability ranging from $6x10^{-7}$ to $9x10^{-9}$ m/s.

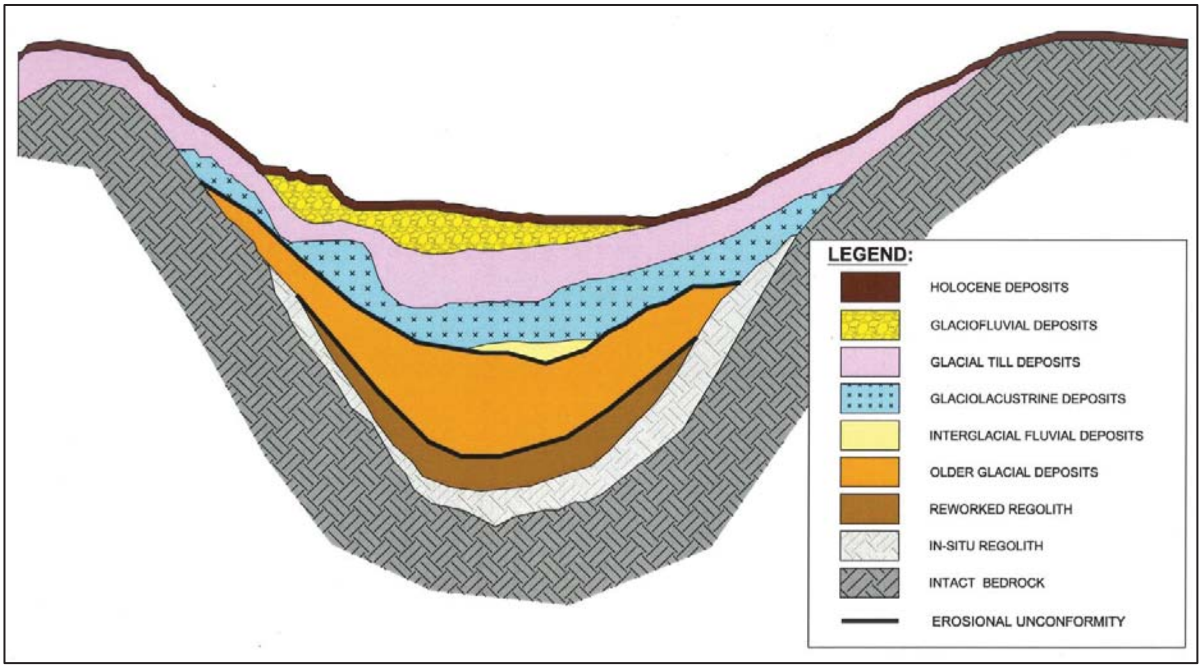


Figure 5.2 Schematic of Site D Main Dam Inferred Stratigraphy

5.2.2 TSF Site D Basin Geotechnical Conditions

Seventeen drillholes and 68 test pits were completed in the TSF Site D basin area to evaluate the near surface conditions to identify the presence of potential seepage pathways. The geotechnical foundation conditions are characterized by a surficial glacial sequence ranging from 3 m to 94 m thick overlying bedrock; this sequence is deepest in the centre of the Davidson Creek valley. The regolith ranges from approximately 3 m to 30 m thick. Static groundwater levels range between 4 m to 25 m depth mirroring the surface topography.

The dominant surficial material type in the Site D basin is low-permeability glacial till. Glaciofluvial meltwater channel deposits overlie the glacial till deposits to form terraces between approximately 10 m and 20 m thick on either side of Davidson Creek. The Davidson Creek drainage basin contains a succession of meltwater channels expressed by a series of up to six glaciofluvial terraces. The terraces provide evidence of sequential down cutting erosion by meltwater streams. Interglacial fluvial deposits were identified within the glacial till; these zones were found to be discontinuous and displayed no lateral continuity between adjacent drillholes.

The bedrock geology consists of andesitic volcanic rocks highly to moderately weathered to a depth of approximately 20 m. In-situ hydraulic conductivity testing has shown the rock mass has relatively low permeability ranging from 10^{-7} to 10^{-8} m/s.

5.2.3 TSF Site D Main Dam South Abutment

The south abutment of the Site D Main Dam creates a surface water divide between the Davidson Creek and Creek 661 catchments. A meltwater channel drains this area. This isolated segment of the Site D Main Dam will be constructed at the catchment divide late in the mine life. Bedrock near the South Abutment is typically near surface, except in the meltwater channel. Seismic lines and drillholes encountered glacial till and glaciofluvial deposits at 20 to 40 m depth overlying bedrock in the meltwater channel.

5.2.4 Site C Main Dam Geotechnical Conditions

Eleven drillholes and eight test pits were completed in the area of the Site C Main Dam alignment. The dominant surficial material type at the Site C Main Dam site is glacial till ranging in thickness from 27 m to 89 m. Glaciofluvial deposits are prevalent in this area and overlie the glacial till to form meltwater channel terraces between approximately 10 m and 35 m thick on either side of Davidson Creek. A regolith horizon was identified on the south side of the valley, ranging from approximately 12 m to 35 m in thickness. The completely weathered bedrock horizon was not encountered on the north side of the valley.

Static groundwater levels range from 3 m to 31 m mirroring topography. The TSF Site C Main Dam crosses the Davidson Creek pro-glacial meltwater corridor. Kames, meltwater channels, and meltwater erosional scarps occur immediately north and southwest of the dam. Potentially high-permeability interglacial fluvial deposits were identified within the glacial till. Infill drilling to determine the extents of these deposits found them to be discontinuous lenses and displayed no lateral continuity between adjacent drillholes. A schematic of the inferred stratigraphy at Site C Main Dam is shown on Figure 5.3.

The bedrock geology consists of andesitic volcanic rocks that are highly to moderately weathered to approximately 25 m depth. In-situ hydraulic conductivity testing indicates the rock mass has low permeability with typical values of $9x10^{-7}$ to $6x10^{-9}$ m/s.

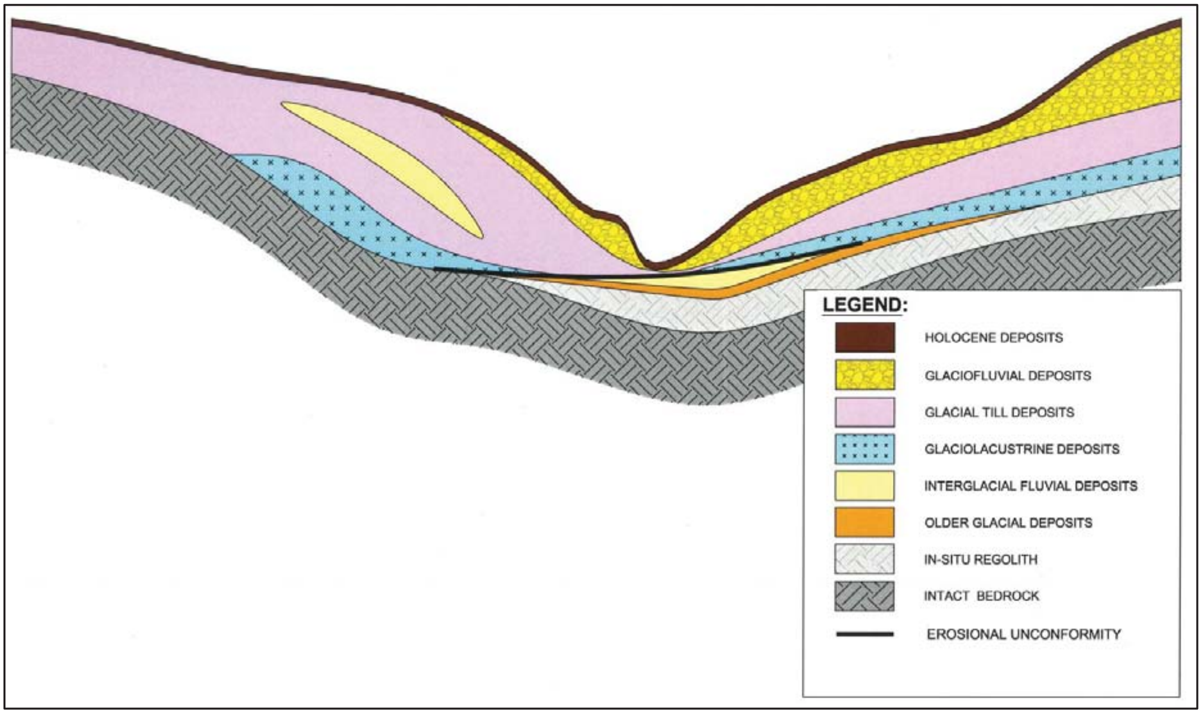


Figure 5.3 Schematic of Site C Main Dam Inferred Stratigraphy

5.2.5 TSF Site C Basin Geotechnical Conditions

One drillhole and 26 test pits were completed within the TSF Site C basin area to evaluate the near-surface conditions to identify the presence of potential seepage pathways. The geotechnical foundation conditions are characterized by glaciofluvial deposits ranging from 1 m to 7 m thick overlying intact bedrock. Bedrock is much shallower in this area than the rest of the TSF. Static groundwater levels range from 1 m to 4 m and mirror the surface topography. The bedrock geology consists of slightly weathered andesitic volcanic and fragmentals rocks. In-situ hydraulic conductivity testing indicates the rock mass has low permeability with a range of 10^{-6} m/s to 10^{-8} m/s.

5.2.6 Site C West Dam Geotechnical Conditions

The Site C West Dam is located at the west end of TSF Site C downstream of the drainage divide of Davidson Creek. Drillholes and seismic lines have been completed in this area to investigate the subsurface conditions and optimize the dam alignment. The potential for terrain slope instability on the steep slopes and environmental concerns (small lake to west of dam) were identified further upstream at the drainage divide, and the Site C West Dam location was shifted downstream to its current position to avoid these concerns. Seismic refraction surveys conducted in the area of the dam indicated favourable foundation conditions with near surface intact bedrock. Intact bedrock was found at approximately 6 m depth surficial materials comprised dense fluvial sand and gravel deposits overly bedrock in the valley bottom contained glacial till on side slopes.

Bedrock at this location is fragmentals (felsic tuff and felsic lapilli tuff). The regolith horizon was not encountered. Hydraulic conductivity in the bedrock is low, with values ranging from 4×10^{-7} m/s to 3×10^{-8} m/s. The static groundwater level is shallow, at 3 m depth. A schematic of the inferred stratigraphy at the Site C West Dam is shown on Figure 5.4.

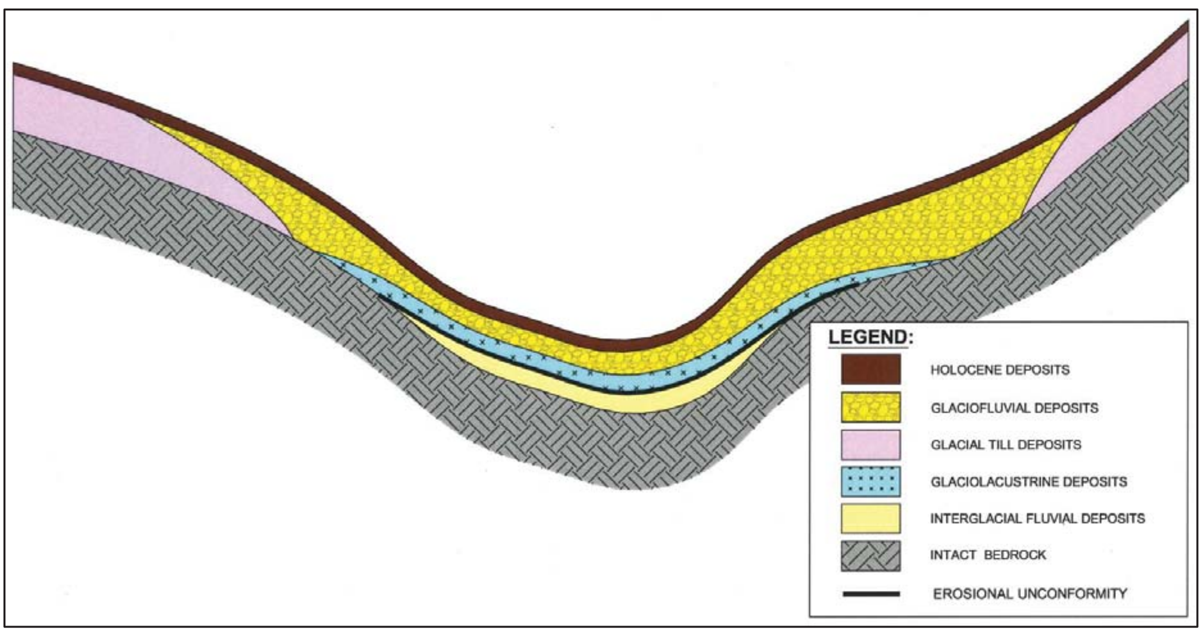


Figure 5.4 Schematic of Site C West Dam Inferred Stratigraphy

5.3 ENVIRONMENTAL CONTROL DAM (ECD) GEOTECHNICAL CONDITIONS

The ECD and interception trenches will be located 1 km downstream of the Site D Main Dam. Six drillholes and five test pits were completed in the area of the ECD and interception trenches. The ECD and interception trench foundation conditions are characterized by a surficial material sequence ranging from 24 m to 108 m thick with the deepest portion in the centre of the Davidson Creek valley. The regolith horizon ranges from approximately 2 m to 30 m thick in this area. The static groundwater level is a reflection of the surficial topography and ranges from 21 m to 53 m.

The dominant surficial material types encountered in the ECD and interception trench consists of glacial lodgement till to the south of Davidson Creek and glaciofluvial deposit to the north. The glaciofluvial deposits overlie the glacial till deposits to form terraces up to approximately 30 m thick on either side of the Davidson Creek meltwater channel and extending towards the north. The northern glaciofluvial deposits are found on the southwestern edge of a large esker and kame deposit. The bedrock geology consists of andesitic volcanic rocks that are highly to moderately weathered for approximately 20 m depth.

5.4 WASTE ROCK DISPOSAL AREAS

5.4.1 General

Two waste rock dumps and a Low Grade Ore (LGO) stockpile will be constructed; the West Dump to the west of the open pit, the East Dump to the east and the LGO stockpile is located directly north of the open pit. Seven drillholes and 30 test pits were completed in the area of the waste rock dumps to characterize the foundation conditions. One drillhole and three test pits were completed in the area of the LGO stockpile.

5.4.2 West Dump Geotechnical Conditions

The West Dump will be situated on gentle northwest sloping ground. The geotechnical foundation conditions are characterized by surficial materials ranging from 18 m to 75 m in thickness, being thickest at lower elevations. The dominant surficial material type is glacial (lodgment) till. Several eskers and localized kames and ablation till were identified in the footprint area of the West Dump. Bedrock is shallow on the upper slopes at 3 to 4 m depth. The bedrock geology consists of highly weathered andesitic volcanic rocks. Static groundwater levels range from 3 m to 4 m below surface and mirror the topography.

5.4.3 East Dump Geotechnical Conditions

The East Dump will be situated on a gentle northeast sloping ground. The geotechnical foundation conditions in this area are characterized by a surficial material sequence ranging from 24 m to 108 m thick, with the thickest deposits at the lower elevations. The dominant surficial material type is glacial (lodgement till) a small glaciofluvial deposit from a sub-glacial meltwater corridor was identified in the footprint area of the East Dump. Static groundwater levels range between artesian conditions to a depth of 12 m. The bedrock geology consists of highly weathered andesitic volcanic rocks.

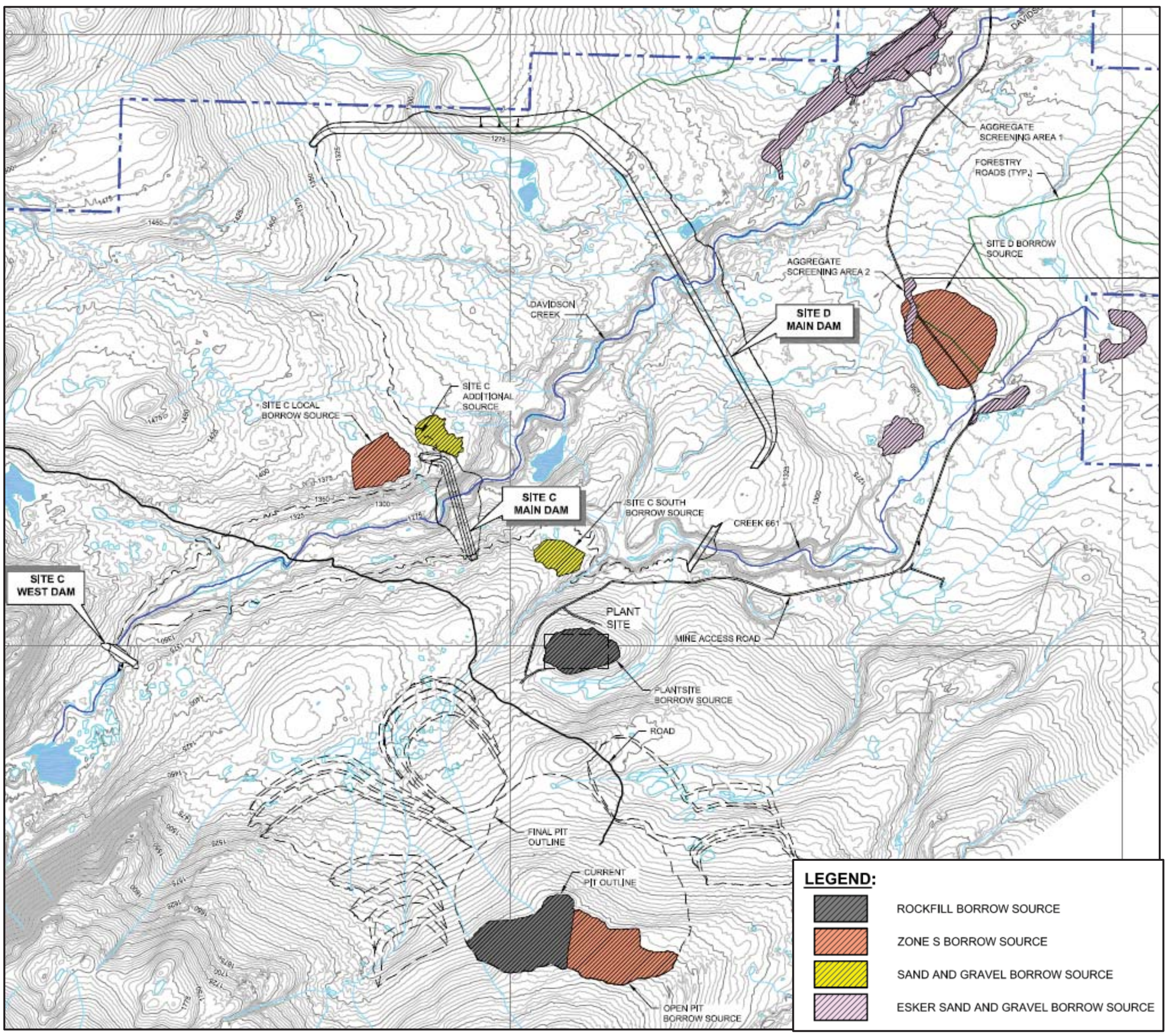
5.4.4 Low-Grade Ore Stockpile Geotechnical Conditions

The LGO stockpile will be situated on a flat low-lying ground north of the open pit. The dominant surficial material type is glacial (lodgment) till. Glaciofluvial materials overlie the glacial till deposits within a meltwater corridor, and include a kame complex identified in the footprint of the stockpile. The foundation materials are characterized by glaciofluvial surficial deposits up to 18 m thick overlying the highly weathered andesitic bedrock. The static groundwater level is at approximately 13 m depth below ground surface.

6 – AGGREGATE AND BORROW SOURCES FOR CONSTRUCTION

6.1 AGGREGATE AND BORROW SOURCES FOR CONSTRUCTION

Borrow sources have been identified for use as construction materials. The borrow sources were investigated during the site investigation programs undertaken during 2012 and 2013 site investigations and an interim borrow assessment was completed in September 2013 (KP memorandum VA13-01697). The suitability and estimated volume of granular soil at each borrow site for general use as backfill, dam construction materials, road base, surfacing materials and concrete aggregate was reported in this memo. Construction borrow sources are shown on Figure 6.1 and enlarged for clarity on Appendix Figure A.12.



NOTES:

1. Cropped from Appendix Figure A.12.

Figure 6.1 Construction Borrow Sources

6.1.1 Open Pit Borrow Source

The open pit borrow area is located on the east side open pit and will be the first area of pit development. Extensive exploration drilling has been completed in the area and found glacial till between 5 to 10 m for most of the open pit area that sharply thickens to 100 m on the east side of the deposit. Drillhole, test pit and laboratory analyses from two sonic drillholes (GT12-45 and GT12-46) were used to characterize this glacial till borrow source. These materials would also be suitable for the core zone (Zone S) and the shell zone (Zone C) for TSF dam construction.

6.1.2 Plant Site Borrow Source

The Plant Site will be located on the north slopes of Mt. Davidson on a localized topographic high with a maximum elevation 1,443 m. The current Plant Site design indicates a finished surface elevation of approximately 1,433 meters. Bulk excavation of the Plant Site would generate approximately 500,000 cubic meters of material. Sub excavation, if required as part of foundation design, could provide additional material. Drillholes (GT13-22, GT13-28 and GT12-07) and test pit logs describe glaciofluvial deposits of varying grading and distribution of boulders, cobbles, gravel, sand and silt soil mixtures.

Moderately weathered bedrock will be present above the finished surface elevation and some proportion of the Plant Site rough grading will include bedrock excavation. Excavated surficial materials and bedrock from the Plant Site would be suitable as a sub-base course material with removal of materials larger than 600 mm or crushing to designated particle sizes. Oversized material could be stockpiled for later use as riprap armouring.

6.1.3 Site C South Borrow Source

The Site C south borrow source is located between the Plant Site and Site C Main Dam within 2 km of the Plant Site area. This area was identified as the location for a temporary sedimentation pond area approximately 2000 square meters, and several TSF roads will pass through this area. Glacial landform mapping identified the surficial materials as non-channelized glaciofluvial deposits including several kames. Laboratory analyses and visual assessment of the test pits confirmed that this borrow area is sand and gravel with generally between 10 to 25% fines and is classified as GM-GW-GP. Four test pits (TP12-39, TP12-40, TP13-176 and TP13-177) and three drillholes (GT12- 13, GT13-27, and GT13-37) were considered in the assessment. Bedrock was located in Drillhole GT12-13 and described as moderately weathered bedrock at 1,338 meters elevation. Test pit and drillhole results indicate that the area is overlain by organics and topsoil up to 1 m depth, with peat locally to 0.6 m depth.

Borrow materials from the Site C South Borrow area may be suitable as surfacing materials for roads and yards, and haul roads. The proportion and distribution of boulders cobbles, gravel and sand size particles was found to vary, with material containing up to 15% boulders, 45% cobble sizes, gravel proportions ranging from 10 to 40% and sand sizes in the range of 20 to 40%. Crushing and screening of this material would produce the specified material types. The volume of suitable borrow materials may be in the order of 400,000 cubic meters. Excavation may be affected by groundwater infiltration from the shallow water table.

6.1.4 Site C Local Borrow Source

The Site C Local Borrow area is located immediately north of the Site C Main Dam. This area requires excavation to construct a spillway from TSF Site C in Year 3 of operations to TSF Site D for dam safety considerations. Terrain mapping identified this area as glacial (lodgement) till. There are additional deposits of glaciofluvial material including several kames further to the east of the dam abutment (Site C Additional Source).

Drillhole, test pit (TP12-25, TP12-26, and TP-13-238) and laboratory analyses are consistent with the terrain mapping interpretation of glacial till materials in this area. The results from these analyses indicate varying size and distribution of boulders, cobbles, gravel, sand, silt and clay. Drillhole GT12-33 describes bedrock contact as highly weathered bedrock at 1,345 m elevation.

Borrow materials from this site may be used as sub-base course material by excluding boulders larger than 600 mm. These materials would also be suitable for the core zone (Zone S) and the shell zone (Zone C) for TSF dam construction. Bulk excavation of this borrow area to 1,360 m elevation would generate approximately 2,300,000 cubic meters of material. The Site C Main Dam crest is at 1,353 m elevation and the final spillway inlet is at 1,346 m elevation, indicating that a substantial additional amount of borrow material is available at this location.

6.1.5 Site C Additional Borrow Source

This site is identified further to the north of the Site C Main Dam may be considered as another borrow source option. Materials could be sourced to the northeast of the Site C Main Dam and within the lower TSF Site D containment area as long as the borrow area was a sufficient distance from the Site C Main Dam. Seven test pits located above 1,335 meters elevation were excavated in this area including: TP12-06, TP12-08, TP12-15, TP12-77, TP12-78, TP13-236 and TP13-237. These test pits generally encountered minimal topsoil cover underlain by non-channelized glaciofluvial deposits gravelly sand with trace cobbles. This borrow source has a potential volume in the order of at least 180,000 cubic meters of material. These materials could be processed to produce surfacing materials for roads, yards and haul roads.

6.1.6 Aggregate Screening Area (1)

The aggregate screening area is located downstream of the Site D Main Dam on the north side of Davidson Creek. Glacial landform mapping delineates an area of eskers and kame deposits. The average relief of the 400 metres wide esker field is 10 to 30 metres. Some kettled depressions contain small seasonal ponds, but the majority of the area is dry and free draining. Esker deposits are characterized as well graded sand and gravel that is free draining with a higher proportion of fines averaging 9%. Drillhole, test pit and laboratory analyses results indicate that the material consists of sand and gravel with some cobbles and trace to some silt. Sixteen test pits were considered in this assessment and included: TP12-158, TP12-159, TP13-178, TP13-179, TP13-180, TP13-181, TP13-182, TP13-183, TP13-184, TP13-185, TP13-186, TP13-187, TP-188, TP13-189, TP13-190 and TP13-191 and two drillholes GT12-47 and GT13-33. This aggregate screening area has a shallow cover of topsoil and peat to a typical depth of 200 mm. Drillhole GT12-47 was drilled to a depth of 1,084 meters where bedrock was intersected at the drillhole bottom. The available volume of borrow materials is substantial from this site, and is expected to be in excess of 3 million cubic meters. These materials require minimal processing for use as road base and surfacing materials, and for filter (Zone F) and transition (Zone T) for TSF dam construction.

6.1.7 Site D South Borrow Source

The Site D South Borrow Source is located downstream of the Site D Main Dam on a prominent knoll near the proposed Mine Access Road approximately 2 km away from the proposed construction camp. Terrain mapping interprets this area as lodgement till with narrow sinuous deposits of meltwater channel materials skirting the west and north toe of the slope. Three test pits TP13-231, TP13-232 and TP13-233 define a centreline of the area. Excavation of borrow materials to 1,235 meters elevation would generate approximately 3.2 million cubic meters suitable for use as sub-base material.

6.1.8 Aggregate Screening Area (2)

The esker deposit identified in this borrow source area is a potential concrete aggregate source as it is located closer to the construction work areas (2 km haul distance) and Plant Site (4.5 km haul distance) than the aggregate screening area (1). The esker deposits are located in three distinct areas; one is located outside of New Gold property and not considered. The estimated aggregate in this deposit is approximately 1.2 million cubic metres of material.

6.2 CONCRETE AGGREGATE TESTING

In June 2013, KP commissioned Levelton Consultants Ltd. (LCL) to undertake concrete aggregate suitability testing on two bulk samples recovered from the 2013 geotechnical site investigation. The following samples were tested:

- Sandy GRAVEL (GM-GW) recovered from test pit TP13-160, located within the Esker field in the Aggregate Screening Area (1).
- Slightly Weathered ANDESITE comprising combined drill core samples recovered drillholes GT13-16, GT13-17 and GT13-18 located within general vicinity of the Plant Site borrow source.

The samples were tested in accordance with the applicable test methods for the acceptance or rejection of concrete aggregates as described in Section 4.2.3 of Canadian Standard CSA A23.2-09 – Test Methods and Standard Practice for Concrete. A summary of the results of the laboratory testing is provided in Tables 6.1 and 6.2. The test results have been compared to the limits provided in Table 12 of CSA A23.2-09.

Table 6.1 Summary of Concrete Aggregate Testing using criteria from Table 12 of CSA A23.2-09

CSA Test Method	Test Name	Slightly Weathered Andesite (crushed) Combined core samples Drillholes GT13-16 to GT13-18		Sandy GRAVEL (natural) Bulk sample Test Pit TP13-160	
		Fine Aggregate	Coarse Aggregate	Fine Aggregate	Coarse Aggregate
CSA A23.2-3A	Clay lumps in natural aggregate	N/A [1]	N/A [1]	0.3% Clay Lumps COMPLIANT	0.0% Clay Lumps COMPLIANT
CSA A23.2-4A	Low-density granular material in aggregate	N/A [2]	N/A [2]	0.0% Low Density Material COMPLIANT	0.0% Low Density Material COMPLIANT
CSA A23.2-5A	Amount of material finer than 80 µm	N/A [1]	N/A [1]	15.1% Passing 80 µm NON COMPLIANT[3]	0.0% Passing 80 µm COMPLIANT
CSA A23.2-13A	Flat and elongated particles in coarse aggregate	N/A [1]	N/A [1]	0.0% Flat or Elongated COMPLIANT	0.0% Flat or Elongated COMPLIANT
CSA A23.2-23A	Test Method for the resistance of fine aggregate to degradation by abrasion in the Micro-Deval apparatus	21% Loss NON COMPLIANT[4]	N/A [5]	9.9% Loss COMPLIANT	N/A [4]
CSA A23.2-29A	Test Method for the resistance of coarse aggregate to degradation by abrasion in the Micro-Deval apparatus	N/A [6]	12.4% Loss COMPLIANT	N/A [6]	9.0% Loss COMPLIANT
CSA A23.2-24A	Test method for the resistance of unconfined coarse aggregate to freezing and thawing	N/A [6]	5.52% Loss COMPLIANT	N/A [6]	4.4% Loss COMPLIANT
CSA A23.2-16A	Resistance to degradation of small-size coarse aggregate by abrasion and impact in the Los Angeles machine	N/A [6]	15.9% Loss COMPLIANT	N/A [6]	14.2% Loss COMPLIANT
CSA A23.2-17A	Resistance to degradation of large size coarse aggregate by abrasion and impact in the Los Angeles machine	N/A [6]	N/A [7]	N/A [6]	N/A [7]
CSA A23.2-9A	Soundness of fine and coarse aggregate by use of magnesium sulphate	12.36% Loss COMPLIANT	6.88% Loss COMPLIANT	N/A [8]	N/A [8]

NOTES:

1. Test not applicable to crushed (non-natural) aggregate.
2. Test not applicable to volcanic rock types (such as Andesite).
3. Material was not washed for use as a construction material.
4. Alternative test CSA A23.2-9A to be conducted when material fails the requirements of CSA A23.2-23A.
5. Test not applicable to coarse aggregate.
6. Test not applicable to fine aggregate.
7. Test not applicable as nominal maximum particle size requires CSA A23.2-16A to be conducted instead.
8. Test not applicable as sample passed the requirements as per CSA A23.2-23A.

Table 6.2 Summary of Concrete Aggregate Testing using criteria from Section 4.2.3 of CSA A23.2-09

CSA Test Method	Test Name	Slightly Weathered Andesite (crushed) Combined core samples Drillholes GT13-16 to GT13-18		Sandy GRAVEL (natural) Bulk sample Test Pit TP160	
		Fine Aggregate	Coarse Aggregate	Fine Aggregate	Coarse Aggregate
CSA A23.2-6A	Relative density and absorption of fine aggregate	2.610 Density, 2.69% Absorption NORMAL DENSITY Aggregate	N/A [1]	2.541 Density, 2.22% Absorption NORMAL DENSITY Aggregate	N/A [1]
CSA A23.2-7A	Test for organic impurities in fine aggregates by use of magnesium sulphate	N/A [2]	N/A [2]	No.1 Color Plate Index COMPLIANT	N/A [1]
CSA A23.2-12A	Relative density and absorption of coarse aggregate	N/A [3]	2.689 Density, 1.15% Absorption NORMAL DENSITY Aggregate	N/A [3]	2.616 Density, 1.76% Absorption NORMAL DENSITY Aggregate
CSA A23.2-15A	Petrographic examination of aggregates	NOT COMPLETED	NOT COMPLETED	COMPLETED	COMPLETED
CSA A23.2-25A	Test method for detection of alkali-silica reactive aggregate by accelerated expansion of mortar bars	NOT COMPLETED	NOT COMPLETED	0.170% Expansion NON COMPLIANT[9]	0.161% Expansion NON COMPLIANT[9]

NOTES:

1. Test not applicable to coarse aggregate.
2. Test not applicable to volcanic rock types (such as Andesite).
3. Test not applicable to fine aggregate.

The materials are generally found to be in compliance with the limits specified in Table 12 and Section 4.2.3 of CSA A23.2-09 with the exception of the testing for alkali-silica reactivity as per the Mortar Bar test described in CSA A23.2-25A. Tests conducted in accordance with Mortar Bar test on the bulk sample recovered from TP13-160 indicate that the aggregate found to exceed the limits of for alkali-silica reactivity. The standard recommends when Mortar Bar samples exceed 0.150%, but is less than 0.400%, additional testing is undertaken according to the Concrete Prism tests as described CSA A23.2-14A to determine the degree of alkali-silica reactivity. Supplementary cementation materials such as Fly-Ash or Blast Furnace Slag for counteracting alkali-silica reaction may be considered if additional testing confirms the alkali-silica reactivity of the aggregates. The addition of supplementary cementations materials such as Fly-Ash mitigate against the potential for alkali-silica reactivity expansion by neutralizing the excessive alkalinity of the cement with silicic acid at the early stage of the cement setting.

It is recommended that further testing be undertaken during detailed design on potential aggregate samples to further assess the materials compliance with the limits set out in CSA A23.2-09. Testing includes Mortar Bar testing in accordance with CSA A23.2-25A and the Concrete Prism testing in accordance with CSA A23.2-14A.

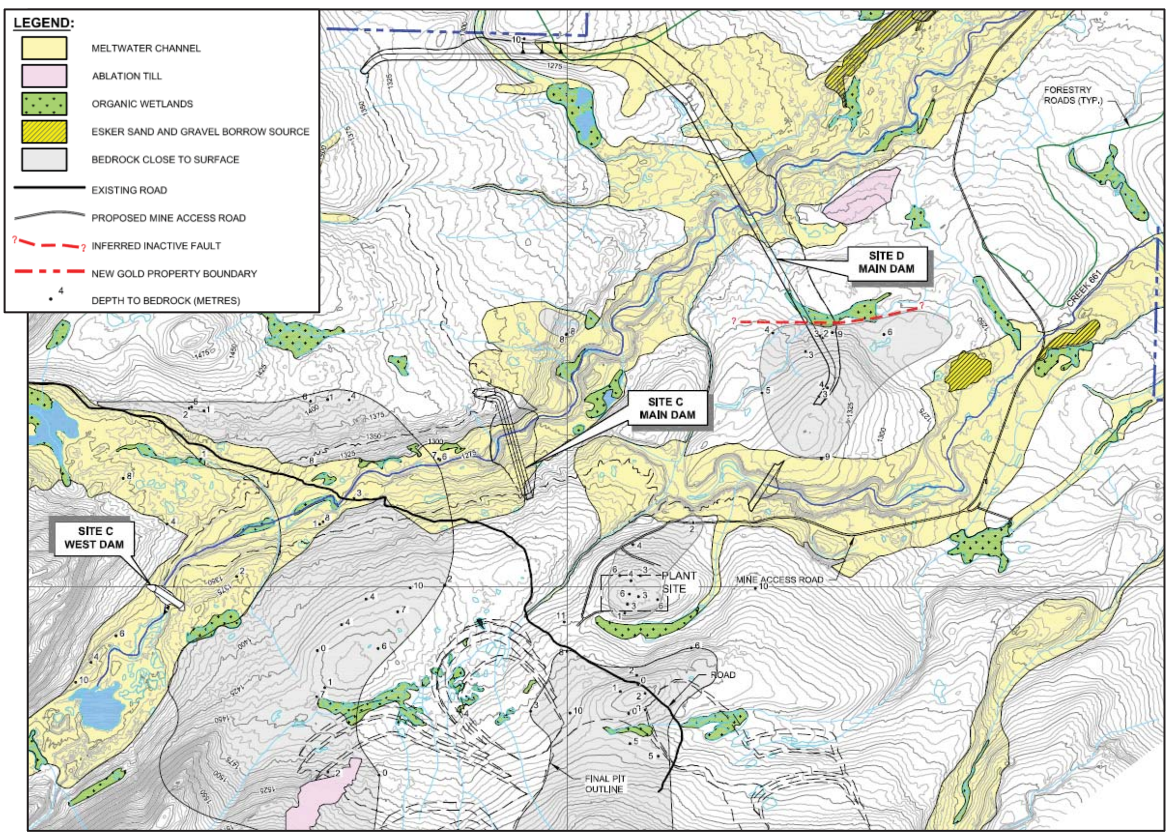
7 – ADDITIONAL GEOTECHNICAL CONSIDERATIONS FOR TSF

7.1 GENERAL

Specific 'areas of interest' were identified in review meetings after initial site investigations at the TSF and disposal areas as follows:

- Topsoil distribution
- Groundwater conditions
- Davidson Creek meltwater channel
- Interglacial fluvial deposits beneath the TSF
- Ablation till distribution
- Highly weathered bedrock
- Inferred inactive faults at the dam sites
- Characterize surficial materials along embankments, and
- Environmental Control Dam.

The findings of the studies on each of these 'areas of interest' are discussed in the following sections. The geological conditions are summarized on Figure 7.1 and enlarged for clarity on Appendix Figure A.13.



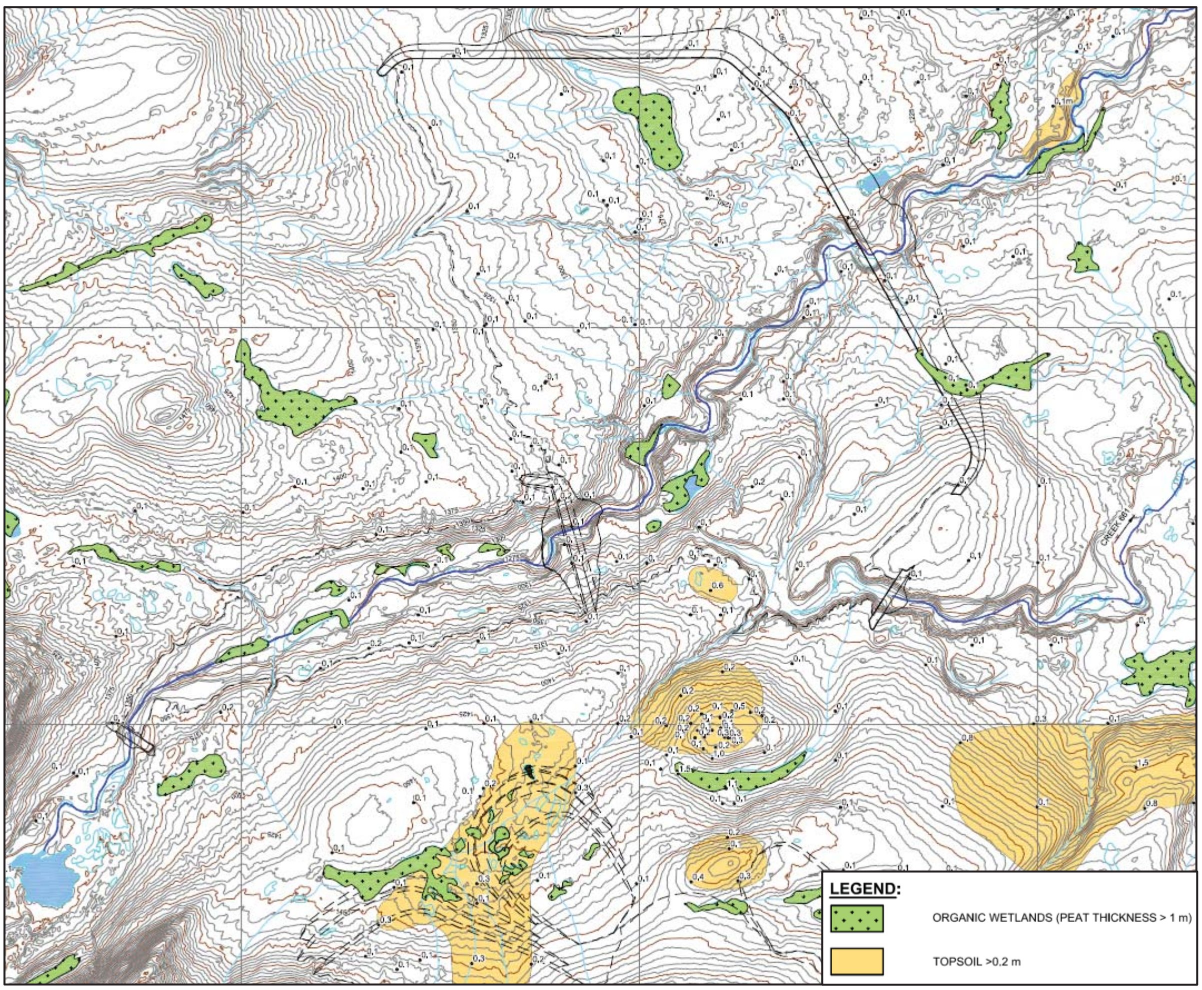
NOTES:

1. Cropped from Appendix Figure A.13.

Figure 7.1 Geological Conditions Summary

7.2 TOPSOIL DISTRIBUTION

Organic peat deposits encountered in the valley bottoms require stripping from embankment footprint areas. These deposits and other geotechnically unsuitable surficial materials will be excavated from the embankment footprint area stockpiled in stable configurations and retained for use in reclamation and closure activities. Topsoil was found to be 0.1 m thick in test pits for the majority of the TSF area with a few areas noted with greater than 0.2 m thickness. Localized wetland organic accumulations are anticipated to be greater than 1 m were mapped as part of the landforms mapping investigations. The topsoil thickness and wetlands mapping is shown on Figure 7.2 and in detail on Appendix Figure A.14.



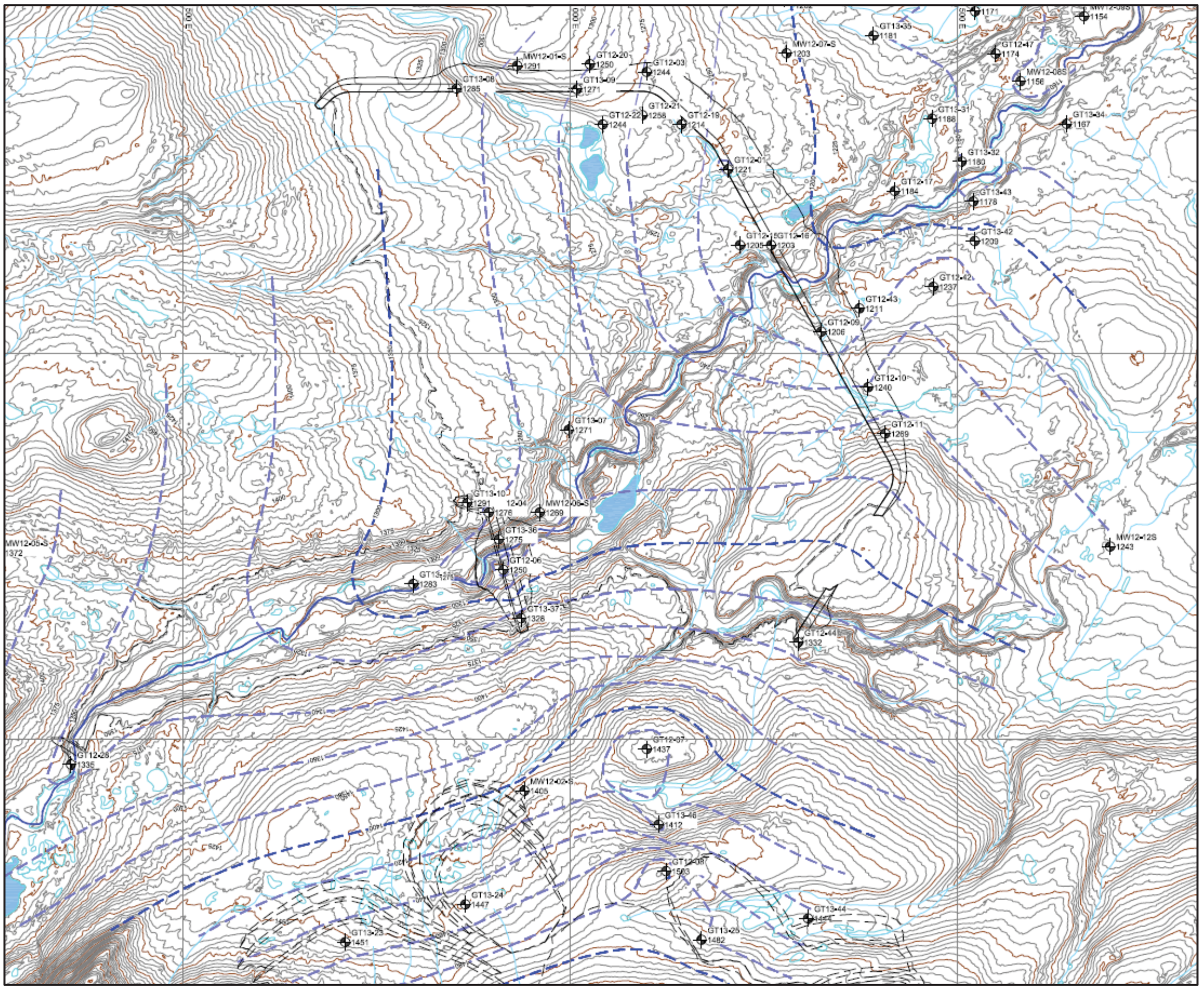
NOTES:

1. Cropped from Appendix Figure A.14.

Figure 7.2 Topsoil Thickness

7.3 GROUNDWATER CONDITIONS

Groundwater conditions in the general vicinity of the tailings basin were found to be approximately 25 m below the surface and generally forms a subdued reflection of topography. Groundwater depths become shallower closer to Davidson Creek. Groundwater flow is generally upland to lowland flow where groundwater is recharged at higher altitudes and discharged along the lower slopes and valley bottoms towards Davison Creek valley. The groundwater elevation contours are shown on Figure 7.3 and in detail on Appendix Figure A.15.



NOTES:

1. Cropped from Appendix Figure A.15.

Figure 7.3 Groundwater Elevation Contours

7.4 DAVIDSON CREEK MELTWATER CHANNEL

The 2012 site investigation program identified glaciofluvial meltwater channel deposits as potential seepage pathway. The thickness and extent of surficial glaciofluvial deposits along Davidson Creek in the TSF Site C and Site D basins was investigated. The glaciofluvial deposits overlie the glacial till deposits to form a meltwater channel corridor in a series of terraces between approximately 10 m and 20 m thick on either side of Davidson Creek. The surficial glaciofluvial deposits were mapped and drilled within the TSF basin, and were not found to be continuous or hydraulically connected to interglacial fluvial deposits. The Davidson Creek glaciofluvial meltwater corridor was mapped during glacial landform mapping and shown on Figure 7.1 and enlarged for clarity on Appendix Figure A.13.

7.5 INTERGLACIAL FLUVIAL DEPOSITS BENEATH THE TSF

Interglacial fluvial deposits between the Fraser glacial till deposits and older glacial till deposits were identified as potential water seepage pathways below the TSF as part of 2012 site investigations. The 2013 site investigation program examined the extent, depth, and occurrence of the interglacial fluvial deposits and found an unconformity between the two glacial till periods (the Fraser glaciation and earlier). Dr. John Clague conducted a geomorphology assessment and concluded that the absence of these deposits cannot be explained by subsequent glacial erosion, as the overlying glaciolacustrine sediments would have also been eroded. Localized, discontinuous lenses of glaciofluvial deposits indicate that Davidson Creek was a minor stream with limited extent during the interglacial period. The interglacial fluvial deposits at the Project were found to be localized, discontinuous deposits absent or thin in drillhole core.

7.6 ABLATION TILL DISTRIBUTION

In preliminary desktop studies and peer review meetings ablation till was identified as a potential problem material with a higher permeability than glacial till. Lodgement till is dense or stiff and contains a significant percentage of fines (silt and clay) that greatly lowers the permeability. Ablation till is less dense and may contain less fines. Glacial landform mapping has found that low-permeability lodgement till is the dominant surficial material type in the TSF area. Ablation till was only mapped at a few locations on downstream of Site D Main Dam and an area located on the outskirts of the West Dump. The ablation till distribution based on landform mapping is shown on Figure 7.1 and in detail on Appendix Figure A.13.

7.7 HIGHLY WEATHERED BEDROCK

Site investigations conducted in 2012 identified the highly weathered bedrock as a possible seepage pathway beneath the TSF. Highly weathered bedrock was encountered in the majority of drillholes with thicknesses ranging from a few metres to over 30 metres, and averaging approximately 15 metres. In 2013, the hydraulic conductivities of the highly weathered bedrock were assessed yielding hydraulic conductivities of $3x10^{-5}$ to $7x10^{-8}$ m/s. This zone has been conservatively identified as having the potential to act as a possible seepage pathway beneath the TSF. Bedrock is commonly covered by greater than 60 m of low permeability subgrade as shown on Figure 3.2. Shallow bedrock is found with limited low permeability subgrade on the Site D Main Dam southern extent and upstream of Site C Main Dam as shown on Figure 7.1 and enlarged for clarity on Appendix Figure A.13.

7.8 INFERRED FAULT

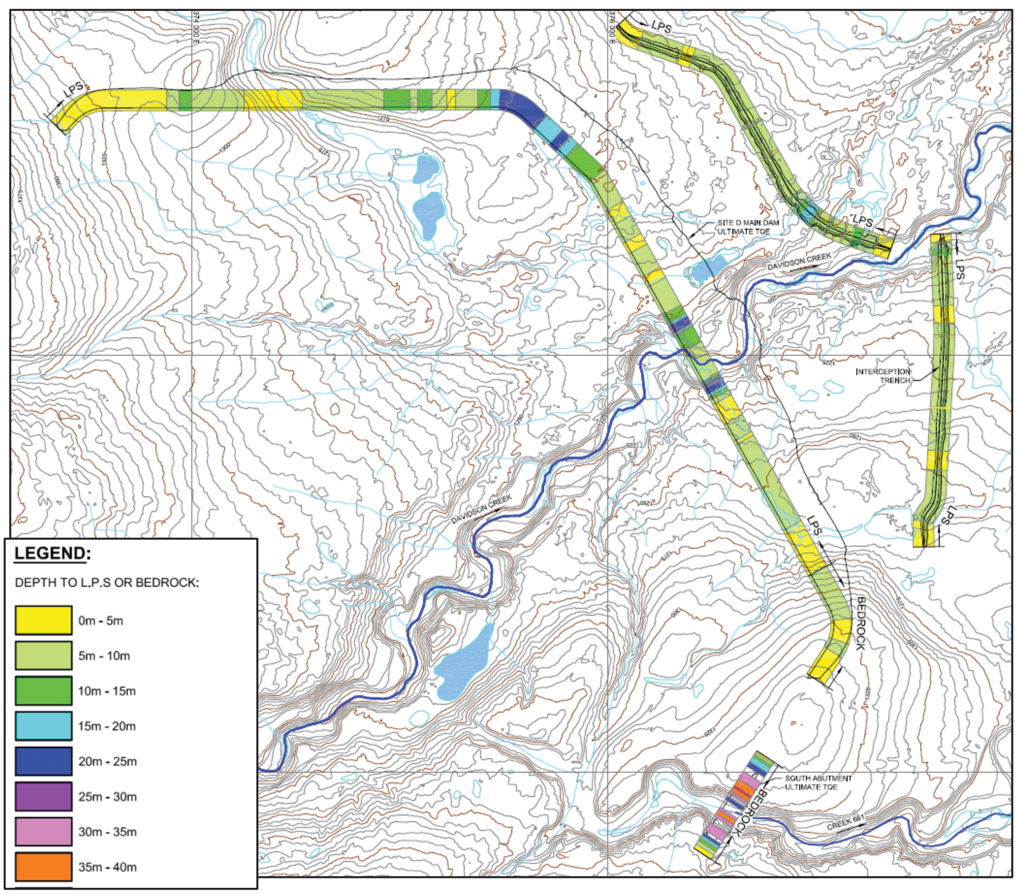
An inferred fault (inactive) was interpreted on the south abutment of Site D Main Dam southern extent based on 2012 site investigation results and shown on Figure 7.1 and in detail on Appendix Figure A.13. Two drillholes (GT13-20 and GT13-21) targeted the inferred fault during the 2013 site investigations to collect information on hydraulic conductivity and evaluate the existence of a hydraulic pathway and determine the orientation of the fault. The fault zone was found to be near vertical and have a low permeability ranging from $6x10^{-7}$ to $9x10^{-9}$ m/s.

7.9 CHARACTERIZE SURFICIAL MATERIALS ALONG EMBANKMENTS

Extensive drilling, test pitting and lab testing was completed along the Site D Main Dam alignment to characterize the material type beneath the dam and investigate the depth to LPS (Low Permeability Subgrade) materials. LPS material has been defined using the following criteria:

- USCS material criteria as SW-SC, GM-GC, ML-CL material
- Dense and/or compact
- greater than 15% fines, and
- Underlying material acts as an aquitard.

The drillholes encountered suitable LPS materials at depths ranging from 5 m to 15 m along the Site D Main Dam centreline. Depths to suitable LPS materials were greater adjacent to Davidson Creek and on the northeastern side of the dam alignment crossing the meltwater corridor eroded down into the glacial lodgement till deposits and in filled with surficial sands and gravels; thus increasing the cutoff trench depth. The Site C West Dam will require a 5 to 10 m cutoff trench to key the dam into bedrock. The south abutment of the Site D Main Dam that enters Creek 661 catchment will be founded on bedrock at estimated depths of 30 to 40 m. The estimated depth to LPS or bedrock for the dams requiring a cutoff trench is shown on Figure 7.4 and Appendix Figure A.16.



NOTES:

1. Cropped from Appendix Figure A.16.

Figure 7.4 Depth to LPS or Bedrock

7.10 ENVIRONMENTAL CONTROL DAM AND INTERCEPTION TRENCH

The ECD and interception trenches have been sited approximately 1 km downstream of the Site D Main Dam at a topographic low point in Davidson Creek where seepage is expected to daylight. Geotechnical drillholes, test pits, and seismic refraction lines identified the elevation of a continuous low permeability subgrade horizon. The depth of the low-permeability subgrade horizon ranged from approximately 5 to 15 metres to the north and 5 to 10 metres to the south of Davidson Creek.

Two seepage interception trenches (one on each side of Davidson Creek named north and south) will be excavated through the glaciofluvial deposits downstream of the Site D Main Dam and will drain to the ECD pond. The seepage interception trench locations are based on the results of geotechnical drilling along the proposed alignments. The trenches will be excavated and keyed into the low-permeability subgrade horizon and will be approximately 3.3 km long with a depth typically ranging from 5 to 15 m. The ECD and interception trench layout is shown on Figure 7.4 and in detail on Appendix Figure A.16 with the depth to LPS shown along the alignment.

8 – SUMMARY AND CONCLUSIONS

8.1 SUMMARY OF FINDINGS

8.1.1 Surficial Material Types

Bedrock exposure in the Project area is rare and restricted to higher elevations. The soil cover is generally thick within the Davidson Creek watershed area averaging over 60 meters. Bedrock is deepest along the Davidson Creek valley bottom where it is encountered at up to 107 meters depth. The surficial deposits are from the Fraser Glaciation, the last period of ice sheet glaciation in British Columbia. The surficial geology of the Blackwater project was found to be complex and a specialist geomorphologist consultant Dr. John Clague was consulted to define a stratigraphic sequence and develop a geomorphological model. Stratigraphic units and the corresponding USCS classification to define engineering properties of the soil from surface downward to bedrock are as follows:

- **Holocene Deposits** – classified as a topsoil layer (OL, Pt).
- **Fraser Glaciation Deposits:**
  - Glaciofluvial Deposits – classified as coarse grained soils (GP-GW), coarse grained soils with sands and fines (GM, GW-GP) and coarse grained soils with fines (SP-SM).
  - Glacial Till – identified as coarse grained soils with gravels and fines (SM-SC and GM-GC).
  - Glaciolacustrine Deposits – classified as fine grained soils silts and clays (ML-CL).
- **Interglacial Fluvial Deposits** – classified as coarse grained soils with fines (GM, GW-GP) and coarse grained soils with fines (SP-SM).
- **Older Glacial Deposits** – classified as coarse grained soils with gravels and fines (SM-SC and GM-GC).
- **Reworked and in-situ regolith** – classified as coarse grained soils with fines (GC) to fine grained soils (CL).
- **Intact Bedrock** – classified as andesite and fragmental rocks that are strong to very strong, FAIR to GOOD rock, compressional wave velocities from 2,550 m/s to 5,460 m/s and low hydraulic conductivity values ranging in the order of 10^{-6} to 10^{-8} m/s.
- **Intact Bedrock** – classified as andesite and fragmental rocks that are strong to very strong, RMR^{89} classified as FAIR to GOOD rock, compressional wave velocities from 2,550 m/s to 5,460 m/s and low hydraulic conductivity values ranging in the order of 10^{-6} to 10^{-8} m/s.

8.1.2 TSF and Waste Rock Disposal Areas Foundation Characterization

The site investigations and geotechnical assessments provided specific information on the foundation characteristics for the following proposed Project components:

Site D Main Dam – The dominant surficial material type is lodgement glacial till. Glaciofluvial deposits overlie the glacial till deposits to form meltwater channel terraces between 10 m and 20 m thick on either side of Davidson Creek. A large esker deposit overlies the glacial till deposits to the northeast and downstream of the TSF. Bedrock is shallow on the southern extent of the Site D Main Dam.

TSF Site D Basin – The dominant surficial material type in the basin is glacial till, glaciofluvial meltwater channel deposits and kame deposits overlie the glacial till deposits to form terraces approximately 10 m and 20 m thick on either side of Davidson Creek.

Site D South Abutment – The south abutment of the Site D Main Dam creates a surface water divide between the Davidson Creek and Creek 661 catchments. This isolated segment of the Site D Main Dam at the catchment divide is planned for construction late in the mine life. Bedrock near the South Abutment is typically near surface, except in the meltwater channel. Seismic lines and drillholes encountered glacial till and glaciofluvial deposits at 20 m to 40 m depth overlying bedrock in the meltwater channel.

Site C Main Dam – The dominant surficial material type is glacial till ranging in thickness from 27 m to 89 m. Glaciofluvial deposits are also prevalent in this area and overlie the glacial till to form meltwater channel terraces approximately 10 m and 35 m thick along either side of Davidson Creek.

TSF Site C Basin – Characterized by shallow 1 m to 7 m thick glaciofluvial deposits overlying bedrock.

Site C West Dam – Dense fluvial deposits approximately 6 m depth cover the bedrock in the valley bottom and glacial till and colluvium are present on the upper side slopes.

Environmental Control Dam – Secondary seepage control (ECD) and interception trenches will be located 1 km downstream of the Site D Main Dam. The surficial material sequence ranges from 24 m to 108 m thick. The dominant surficial materials are glacial lodgement till to the south of Davidson Creek and glaciofluvial deposits overlying the glacial till to the north of Davidson Creek.

West Dump – The ground slopes gently to the northwest with surficial materials increasing in thickness from 18 m to 75 m at lower elevations. Several eskers, localized kames and ablation till were identified in the footprint area of the West Dump. Bedrock is shallow on the upper slopes at 3 to 4 m depth.

East Dump – The ground slopes gently to the northeast with surficial materials ranging in thickness from approximately 24 m in the upper elevations to 108 m in thickness at the lower elevations. The dominant surficial material type is glacial (lodgment) till. A small glaciofluvial meltwater corridor was identified in the footprint area of the East Dump.

Low-Grade Ore Stockpile – The dominant surficial material type is glacial (lodgment) till. Glaciofluvial materials overlie the glacial till deposits within a meltwater corridor, and include a kame complex up to 18 m thick.

Construction Borrow Materials – Potential borrow material locations were identified and assessed for suitability in dam construction, as Plant Site backfill and for concrete aggregate.

8.2 TSF ADDITIONAL GEOTECHNICAL CONSIDERATIONS

Specific ‘areas of interest’ were identified from the 2012 site investigations program and are discussed in this report, including:

- **Topsoil layer** – The topsoil thickness is typically 0.1 m to 0.2 m, with localized wetlands accumulations where the thickness increases to greater than 1 m.

- **Groundwater conditions** – In the general vicinity of the tailings basin, groundwater was found to be approximately 25 m below the surface and generally forms a subdued reflection of topography. Groundwater depths become shallower closer to Davidson Creek.
- **Davidson Creek meltwater channel** – Terrain landform mapping identified a meltwater channel corridor in the Davidson Creek drainage. Additional mapping confirmed the surficial meltwater channel within the TSF basin is a surficial unit and not hydraulically connected to the interglacial fluvial deposits.
- **Interglacial fluvial deposits beneath the TSF** – Detailed investigations and data compilation confirmed interglacial fluvial deposits within the TSF were uncommon, discontinuous and not hydraulically connected.
- **Ablation till distribution** – Ablation till frequency and distribution were mapped within the mine site footprint and was found to be restricted to the higher elevations and not associated within the tailings basin.
- **Highly weathered bedrock** – The potential for highly weathered bedrock to have high hydraulic conductivity values was tested. This zone has been conservatively identified as having the potential to act as a seepage pathway beneath the TSF where the bedrock surface is shallow at Site D Main Dam southern extent.
- **Inferred faults** – The previously identified inferred fault (inactive) of the Site D Main Dam southern extent was found to have low hydraulic conductivity.
- **Characterize surficial material along embankments** – The material characteristics along the embankments were assessed and the depth to Low Permeability Subgrade (LPS) or bedrock were identified along the Site D Main Dam, Site C West Dam and ECD interception trench alignments to provide depths for the cutoff trench designs.
- **Environmental Control Dam** – The hydrogeological assessment indicated that secondary seepage control is required downstream of the tailings embankment to intercept potential upwelling seepage. The ECD should be located 1 km downstream of the Site D Main Dam across Davidson Creek to collect seepage for recycle to the TSF.

9 – REFERENCES

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10 – CERTIFICATION

This report was prepared, reviewed and approved by the undersigned.

Prepared: Speed

Josephine Speed, M.Sc.
Project Geotechnical Specialist

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA B. Borntraeger

Reviewed: Bruno Borntraeger Nov 29, 2013

Bruno Borntraeger, P.Eng.
Specialist Engineer

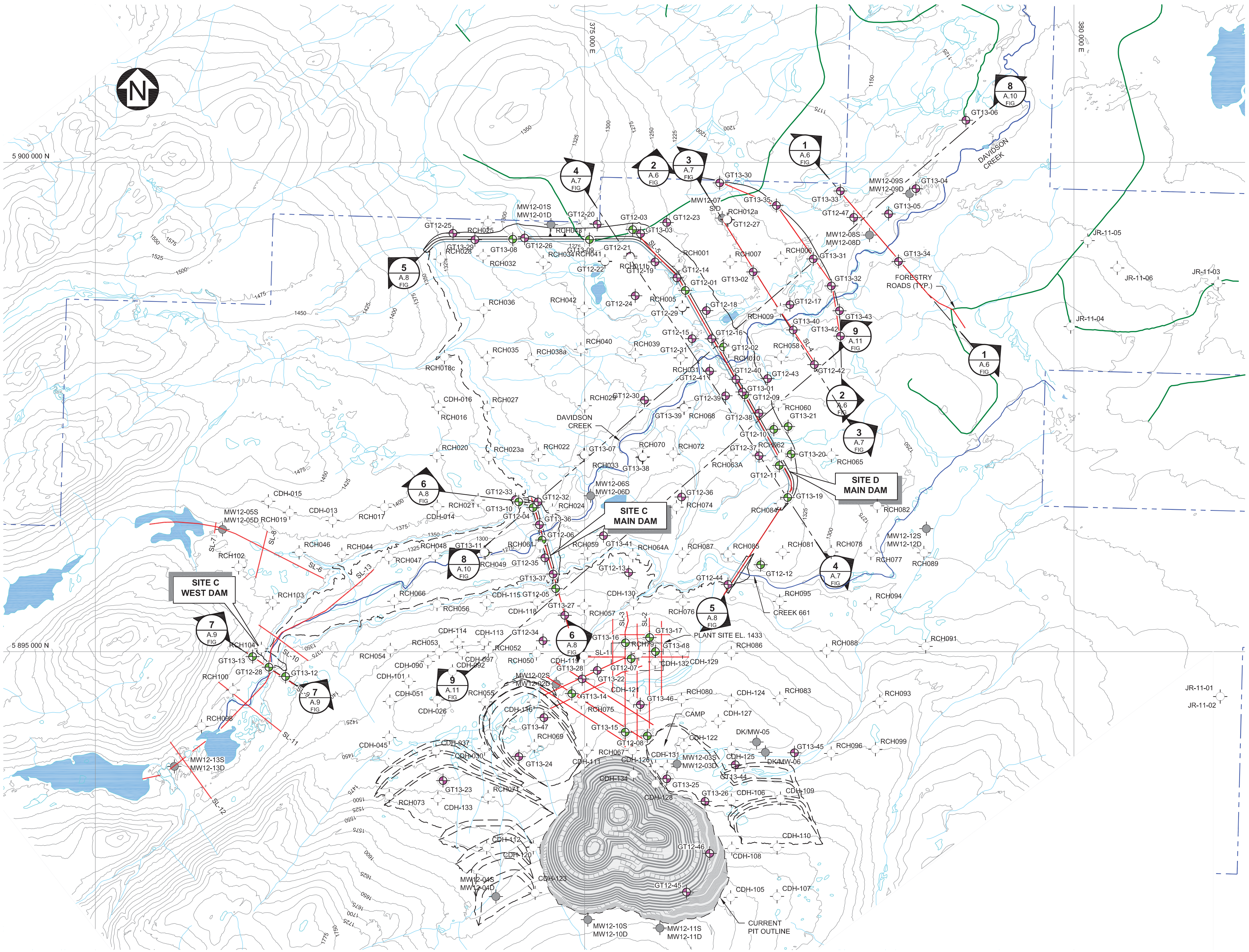
Approved: K. Brouwer

Ken J. Brouwer, P.Eng.
President

APPENDIX A

REFERENCE FIGURES

(Pages A-1 to A-16)



LEGEND:

- GEOTECHNICAL SONIC DRILLHOLE (50)
- GEOTECHNICAL SONIC DRILLHOLE WITH PIEZOMETER (16)
- GEOTECHNICAL ODEX DRILLHOLE WITH PIEZOMETER (28)
- MW12-01 MONITORING WELLS (30)
- RCH094 CONDEMNATION DRILLHOLE
- EXISTING ROAD
- SEISMIC LINES
- NEW GOLD PROPERTY BOUNDARY

NOTES:

1. CONTOUR INTERVAL IS 25 METRES.
2. ALL MINE SITE FACILITIES ARE CONCEPTUAL ONLY AND BASED ON FS LAYOUT AND ARE ONLY INTENDED TO SUPPORT SITE INVESTIGATIONS.

SCALE A 400 200 0 400 800 1200 1600 2000 m

NEW GOLD INC.

BLACKWATER GOLD PROJECT

DRILLHOLE AND MONITORING WELL PLAN

Knight Piésold CONSULTING

P/A NO. VA101-457/6 | REF NO. 8

FIGURE A.1 REV 0

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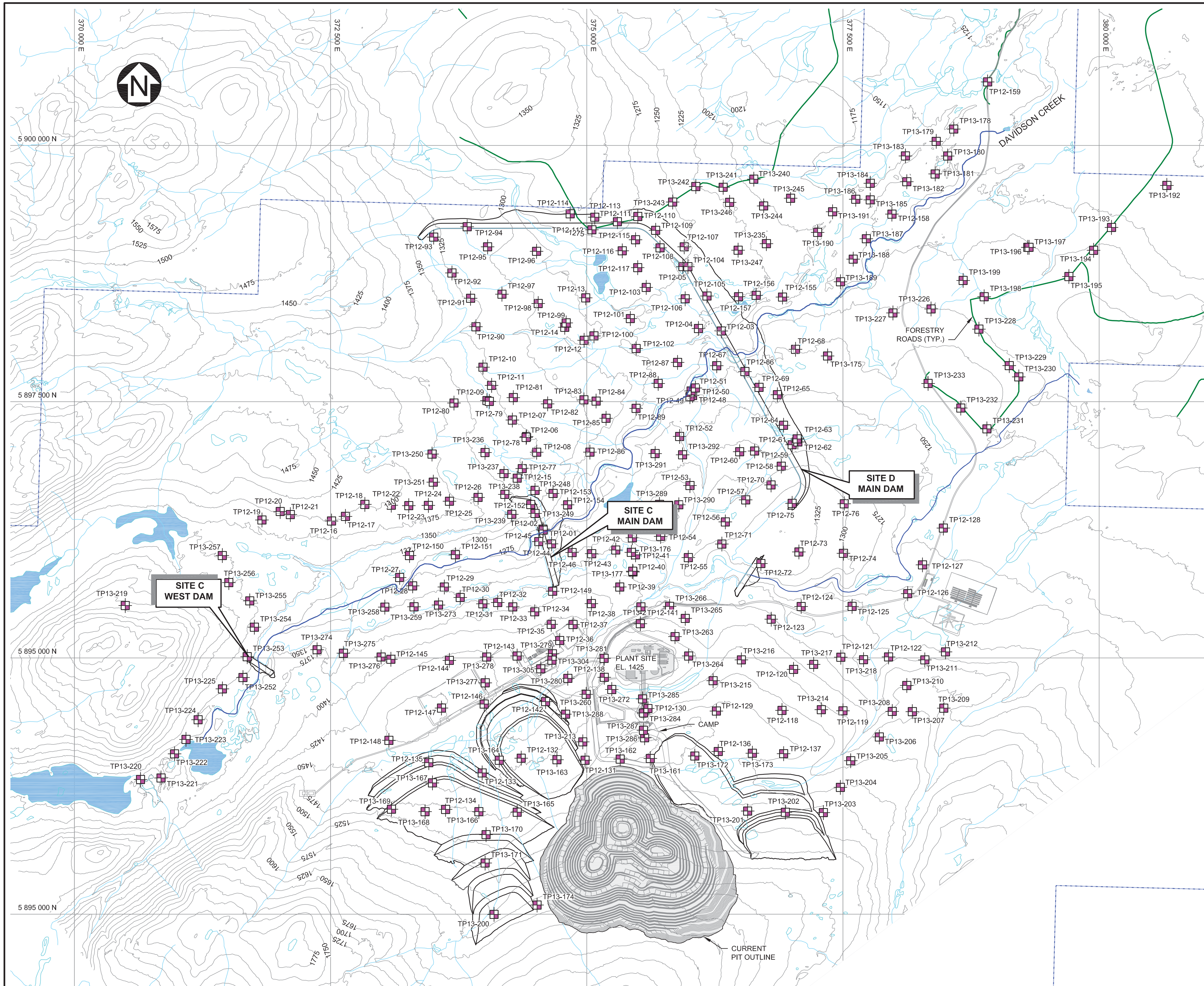

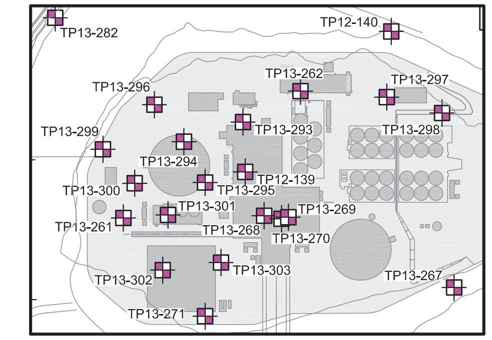

PLANT SITE DETAIL

LEGEND:

TP-174 — TEST PITS

EXISTING ROAD

NEW GOLD PROPERTY BOUNDARY

NOTES:

1. CONTOUR INTERVAL IS 25 METRES.
2. ALL MINE SITE FACILITIES ARE CONCEPTUAL ONLY AND ARE ONLY INTENDED TO SUPPORT SITE INVESTIGATIONS.

SCALE A 400 200 0 400 800 1200 1600 2000 m

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BLACKWATER GOLD PROJECT

TEST PIT PLAN

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FIGURE A.2 REV 0

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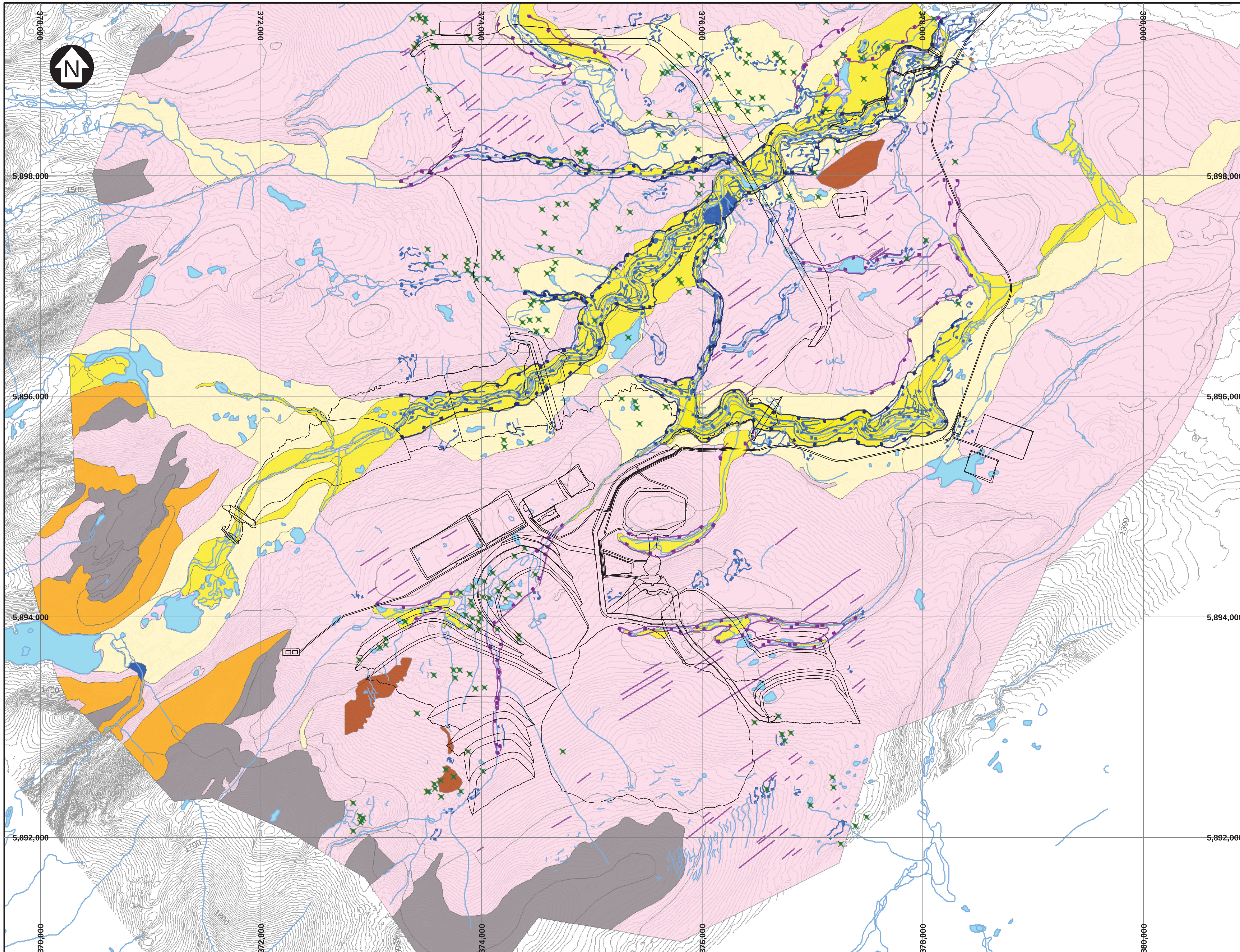

LEGEND:

- KAME
- RIVER/CREEK
- CONTOUR (5m)
- FLUTING
- INCISED MELTWATER CHANNEL
- MAJOR MELTWATER CHANNEL
- MELTWATER CHANNEL
- PRO-GLACIAL MELTWATER CORRIDOR
- SUB-GLACIAL MELTWATER CORRIDOR
- GLACIOFLUVIAL DEPOSITS (CHANNELIZED)
- GLACIOFLUVIAL DEPOSITS (NON-CHANNELIZED)
- LODGEMENT TILL
- ABLATION TILL
- GLACIOLACUSTRINE
- COLLUVIUM DEPOSITS
- BEDROCK
- LAKE
- PROPOSED MINE FACILITY

NOTES:

1. COORDINATE GRID IS IN METRES.
COORDINATE SYSTEM: NAD 1983 UTM ZONE 10N.
2. THIS FIGURE IS PRODUCED AT A NOMINAL SCALE OF 1:35,000 FOR 11x17 (TABLOID) PAPER. ACTUAL SCALE MAY DIFFER ACCORDING TO CHANGES IN PRINTER SETTINGS OR PRINTED PAPER SIZE.
3. THE CONTOUR INTERVAL IS 5 METRES; SOURCE: EAGLE MAPPING.
4. FACILITIES BASED ON 24MAY'13 VERSION OF THE GENERAL ARRANGEMENT.
5. CROSSMARKS POINT TOWARDS CENTRE LINE.

SCALE 350 175 0 350 700 1,050 1,400 1,750 m

NEW GOLD INC.

BLACKWATER GOLD PROJECT

SURFICIAL GEOLOGY AND LANDFORMS MAP

Knight Piésold CONSULTING

P/A NO.	REF NO.
VA101-457/6	8

FIGURE A.3 REV 0

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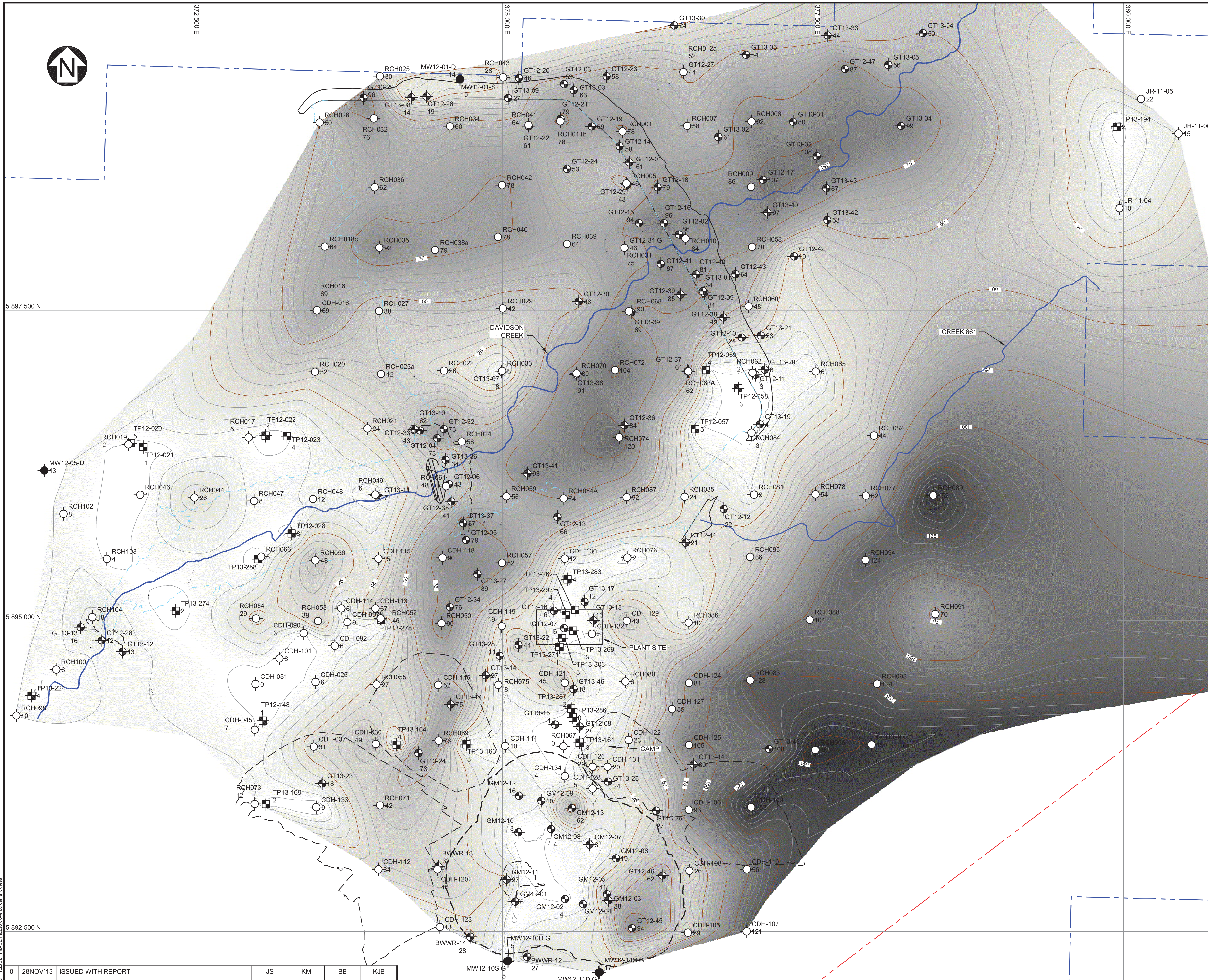

LEGEND (SURFICIAL MATERIAL THICKNESS):

- 0-20m
- 20-60m
- 60-100m
- > 100m
- PROPOSED WORKS
- NEW GOLD PROPERTY BOUNDARY
- DAVIDSON CREEK
- DNRB — DID NOT REACH BEDROCK
- RCH089 43 — CONDEMNATION DRILLHOLES
- GT12-12 24 — GEOTECHNICAL/GEOMECHANICAL/WASTE DRILL HOLE
- MW12-10S 5 — MONITORING WELLS
- TP12-058 6 — TESTPIT
  - POINT IDENTIFIER
  - OVERBURDEN THICKNESS (m)
  - DID NOT REACH BEDROCK

NOTES:

1. OVERBURDEN THICKNESS CONTOUR INTERVAL IS 5 METRES.
2. ALL MINE SITE FACILITIES ARE CONCEPTUAL ONLY AND ARE ONLY INTENDED TO SUPPORT SITE INVESTIGATIONS.

SCALE A 300 150 0 500 1000 1500 m

NEW GOLD INC.

BLACKWATER GOLD PROJECT

SURFICIAL MATERIAL THICKNESS

Knight Piésold CONSULTING

P/A NO. VA101-457/6 | REF NO. 8

FIGURE A.4 | REV 0

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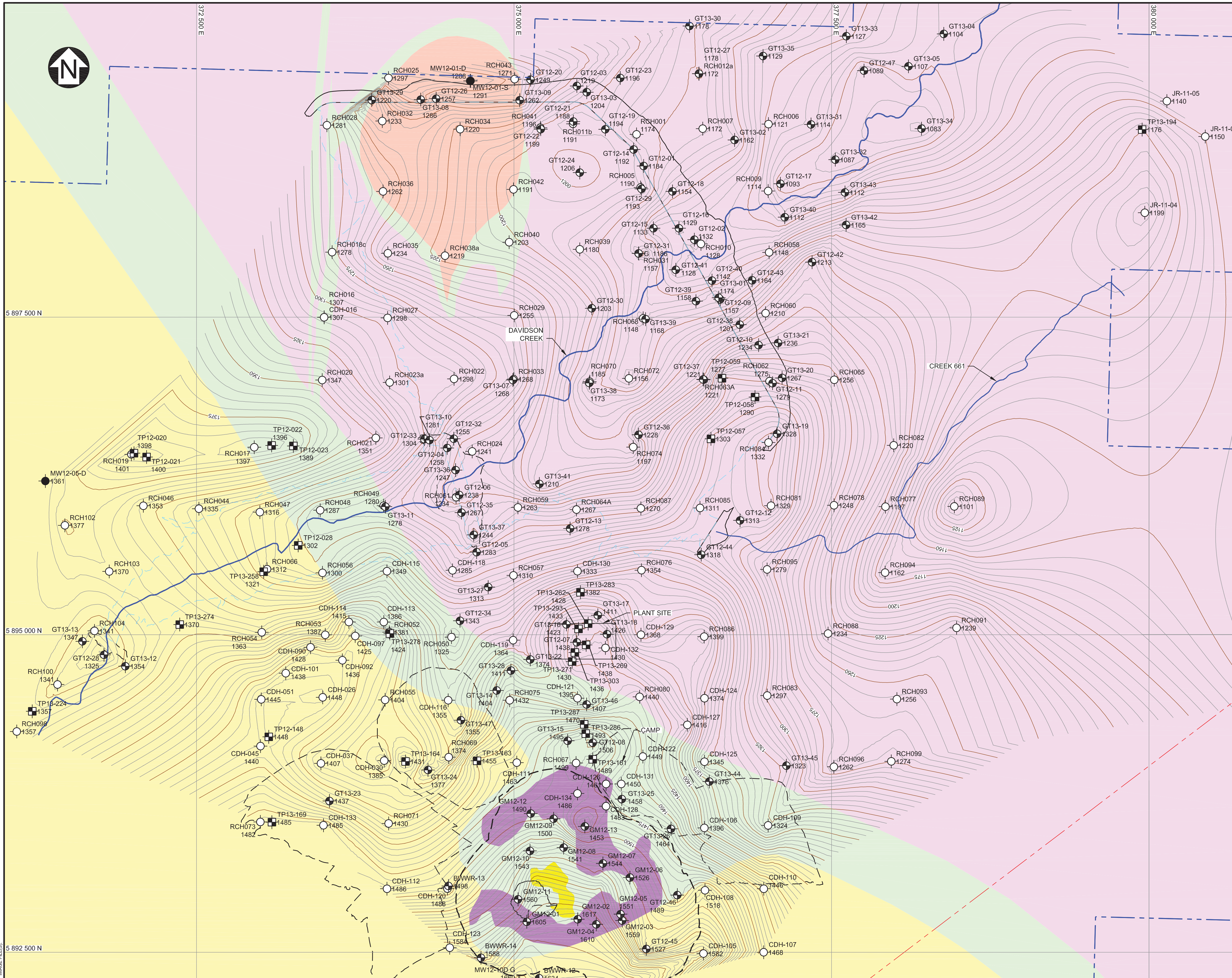

LEGEND:

- FELSIC INTRUSIVE
- VOLCANICLASTIC
- FELSIC VOLCANICLASTIC
- ANDESITE
- COHESIVE ANDESITE
- SEDIMENTS BOWSER LAKE GROUP
- LAMINATED FELSIC VOLCANICS
- RCH089 1253 — CONDEMNATION DRILLHOLES
- GT12-12 1335 — GEOTECHNICAL / GEOMECHANICAL / WASTE DRILL HOLE
- MW12-05 1564 — MONITORING WELLS
- TP12-058 1293 — TESTPIT
- PROPOSED WORKS
- NEW GOLD PROPERTY BOUNDARY
- DAVIDSON CREEK
- BEDROCK ELEVATION CONTOURS

NOTES:

1. BEDROCK CONTOUR INTERVAL IS 5 METRES.
2. ALL MINE SITE FACILITIES ARE CONCEPTUAL ONLY AND ARE ONLY INTENDED TO SUPPORT SITE INVESTIGATIONS.
3. BEDROCK GOLOGY PROVIDED BY NEW GOLD INC. FROM CONDEMNATION DRILLING PROGRAM.

SCALE A: 300 150 0 500 1000 1500 m

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BLACKWATER GOLD PROJECT

BEDROCK ELEVATION AND GEOLOGY

Knight Piésold CONSULTING

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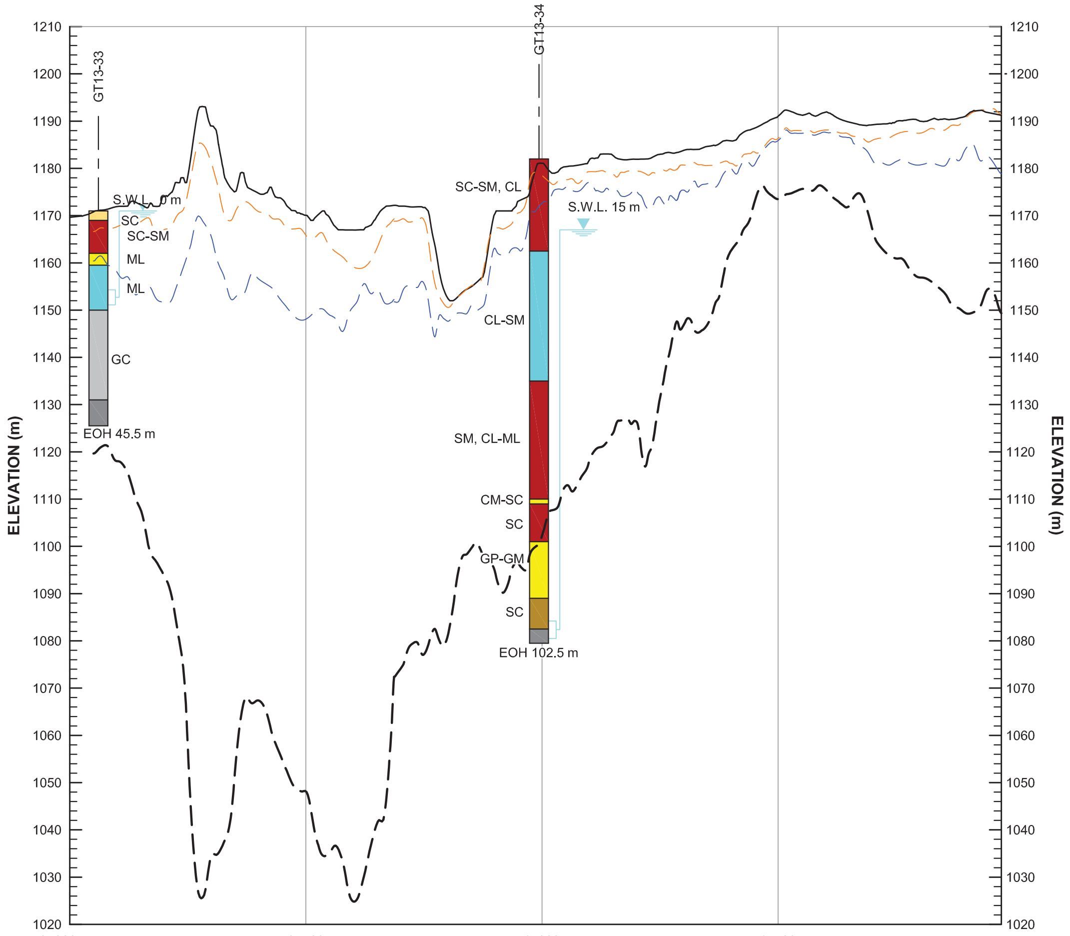
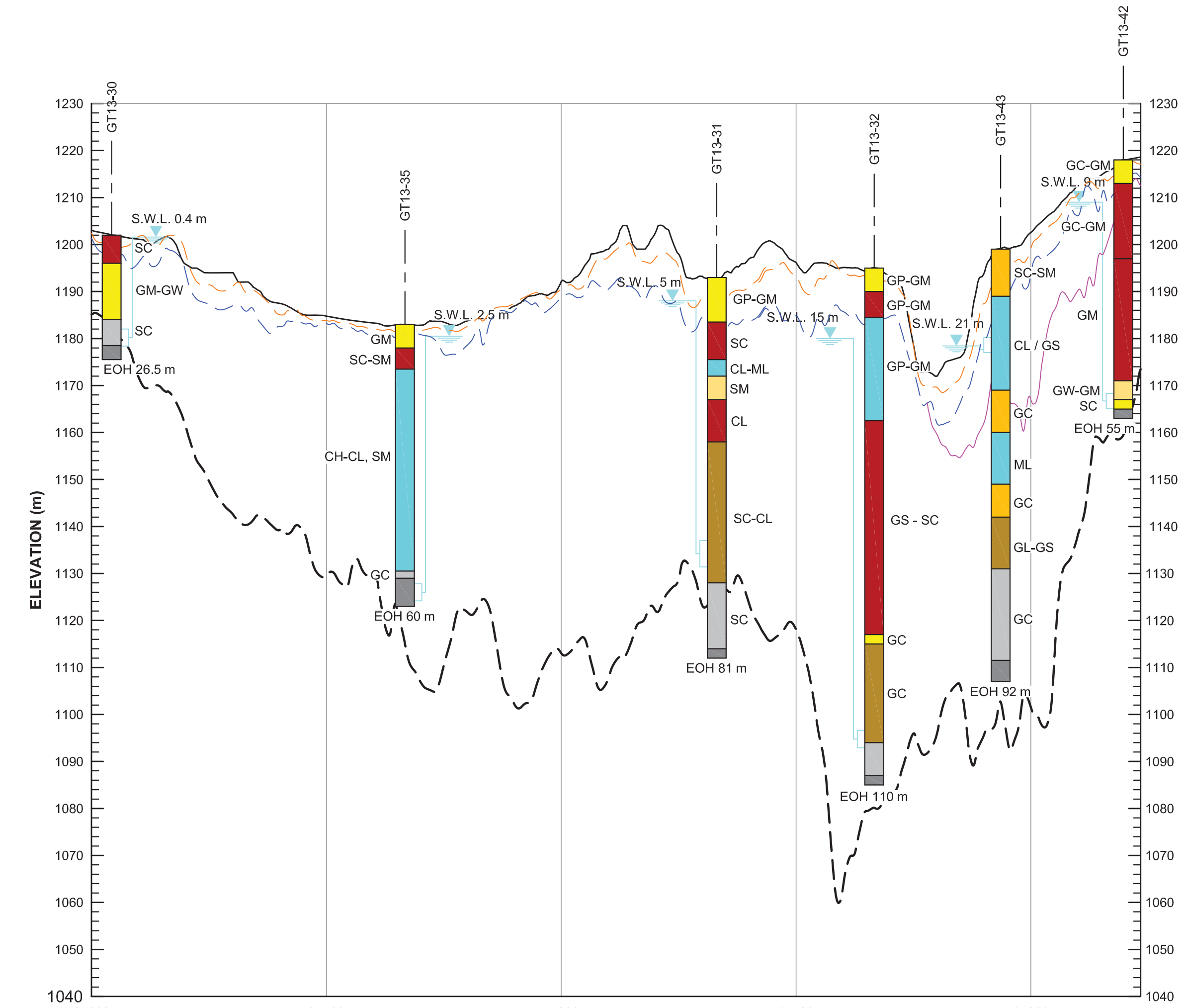
FIGURE A.5 | REV 0



1 A.1 FIG **SECTION**
HORIZONTAL: SCALE A
VERTICAL: SCALE B



2 A.1 FIG **SECTION**
HORIZONTAL: SCALE A
VERTICAL: SCALE B

NOTES:

1. DIMENSIONS ARE IN METRES AND ELEVATIONS ARE IN METRES, UNLESS NOTED OTHERWISE.

LEGEND:

- SAND AND GRAVEL GLACIOFLUVIAL (COARSE) <15% FINES - (GM, GW-GP)
- GLACIOFLUVIAL (COARSE) >15% FINES - (GM-GC)
- SAND GLACIOFLUVIAL (FINE) - (SP-SM)
- SANDY SILT GLACIOLACUSTRINE - (ML-CL)
- GLACIAL TILL - (SM-SC, GM-GC)
- REWORKED REGOLITH - (GC, CL)
- IN-SITU REGOLITH
- INTACT BEDROCK
- INTACT ROCK
- WEATHERED BEDROCK
- LOOSE SILTY SAND AND GRAVEL (SEISMIC)
- COMPACT SATURATED SAND, GRAVEL AND SILT (SEISMIC)
- INTACT BEDROCK (SEISMIC)
- $K = 3 \times 10^{-5}$ HYDRAULIC CONDUCTIVITY (m/sec)
- S.W.L. STATIC WATER LEVEL
- PIEZOMETERS
- VIBRATING WIRES
- EOH END OF HOLE AT EACH DRILLHOLE

SCALE B: 16 8 0 16 32 48 64 80 m
SCALE A: 160 80 0 160 320 480 640 800 m

NEW GOLD INC.

BLACKWATER GOLD PROJECT

SECTIONS 1 AND 2

Knight Piésold CONSULTING

P/A NO. VA101-457/6 | REF NO. 8

FIGURE A.6 REV 0

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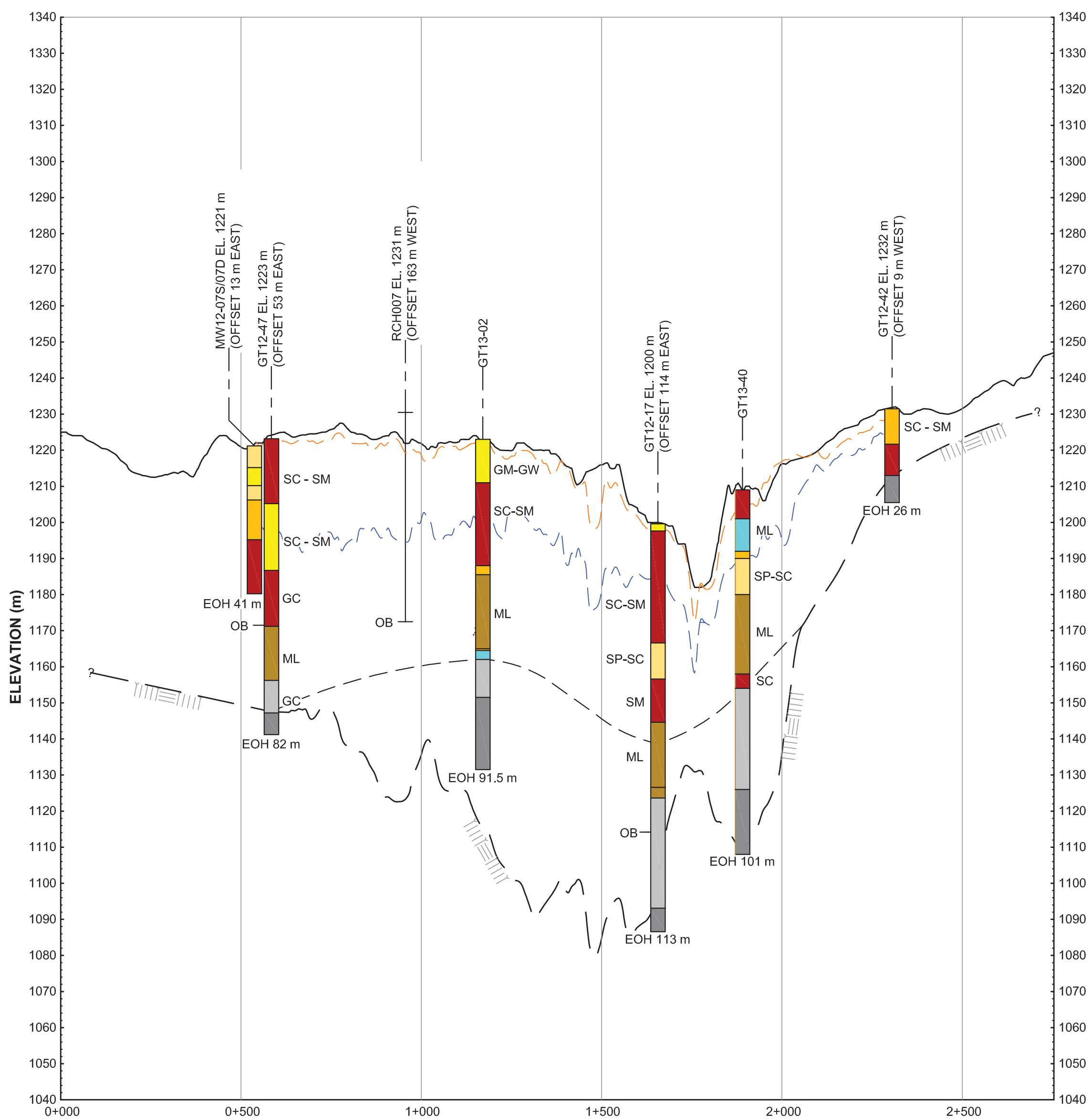
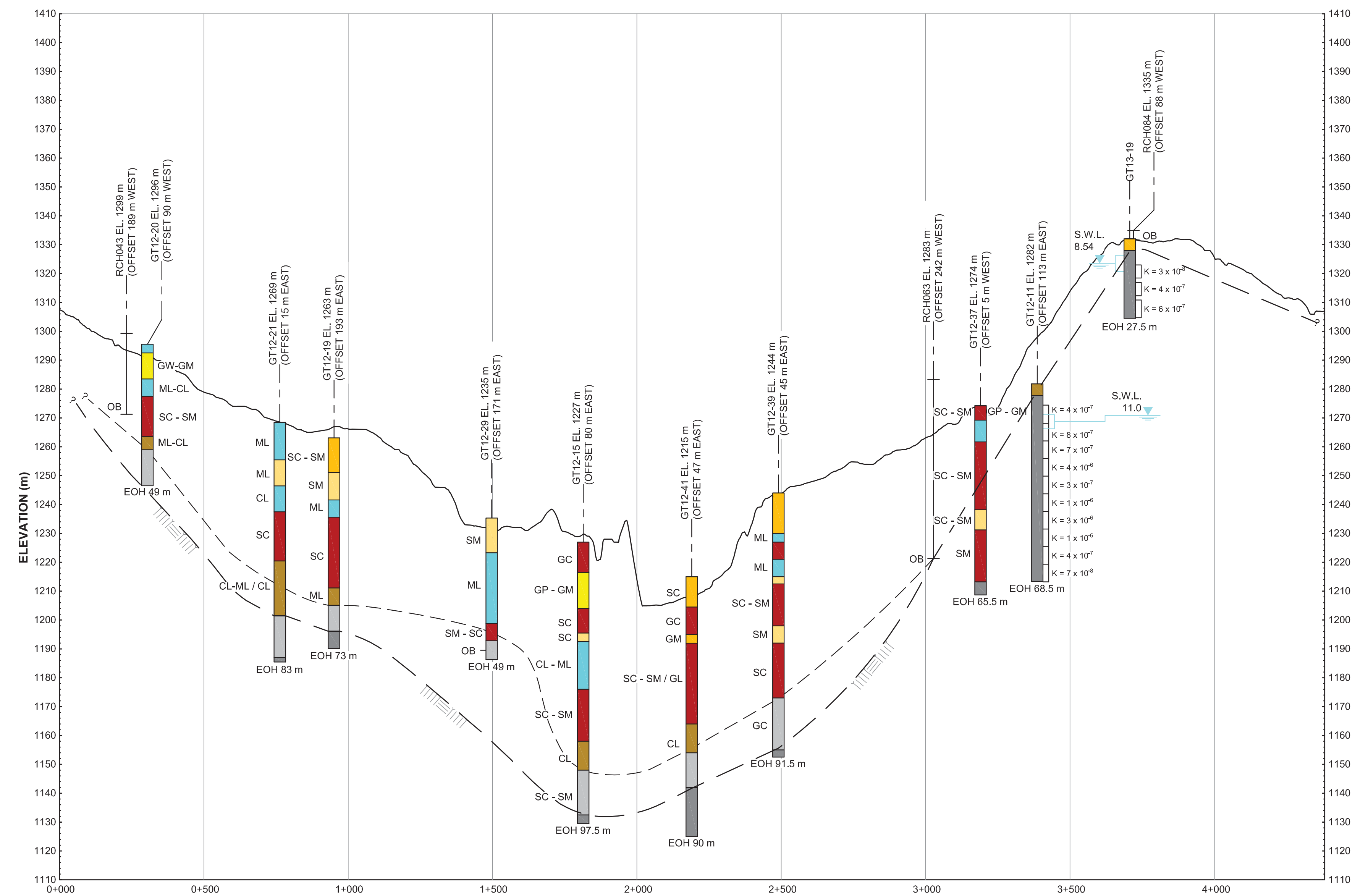


3 A.1 FIG **SECTION**
HORIZONTAL: SCALE A
VERTICAL: SCALE B



4 A.1 FIG **SECTION**
HORIZONTAL: SCALE A
VERTICAL: SCALE B

NOTES:

1. DIMENSIONS AND ELEVATIONS ARE IN METRES, UNLESS NOTED OTHERWISE.

LEGEND:

- SAND AND GRAVEL GLACIOFLUVIAL (COARSE) <15% FINES - (GM, GW-GP)
- GLACIOFLUVIAL (COARSE) >15% FINES - (GM-GC)
- SAND GLACIOFLUVIAL (FINE) - (SP-SM)
- SANDY SILT GLACIOLACUSTRINE - (ML-CL)
- GLACIAL TILL - (SM-SC, GM-GC)
- REWORKED REGOLITH - (GC, CL)
- IN-SITU REGOLITH
- INTACT BEDROCK
- INTACT ROCK
- WEATHERED BEDROCK
- LOOSE SILTY SAND AND GRAVEL (SEISMIC)
- COMPACT SATURATED SAND, GRAVEL AND SILT (SEISMIC)
- INTACT BEDROCK (SEISMIC)
- $K = 3 \times 10^{-5}$ HYDRAULIC CONDUCTIVITY (m/sec)
- S.W.L. STATIC WATER LEVEL
- PIEZOMETERS
- VIBRATING WIRES
- EOH END OF HOLE AT EACH DRILLHOLE

SCALE B: 20 10 0 20 40 60 80 100 m
SCALE A: 200 100 0 200 400 600 800 1000 m

NEW GOLD INC.

BLACKWATER GOLD PROJECT

SECTIONS 3 AND 4

Knight Piésold CONSULTING

P/A NO.	REF NO.
VA101-457/6	8

FIGURE A.7 REV 0

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	CHK'D	APP'D
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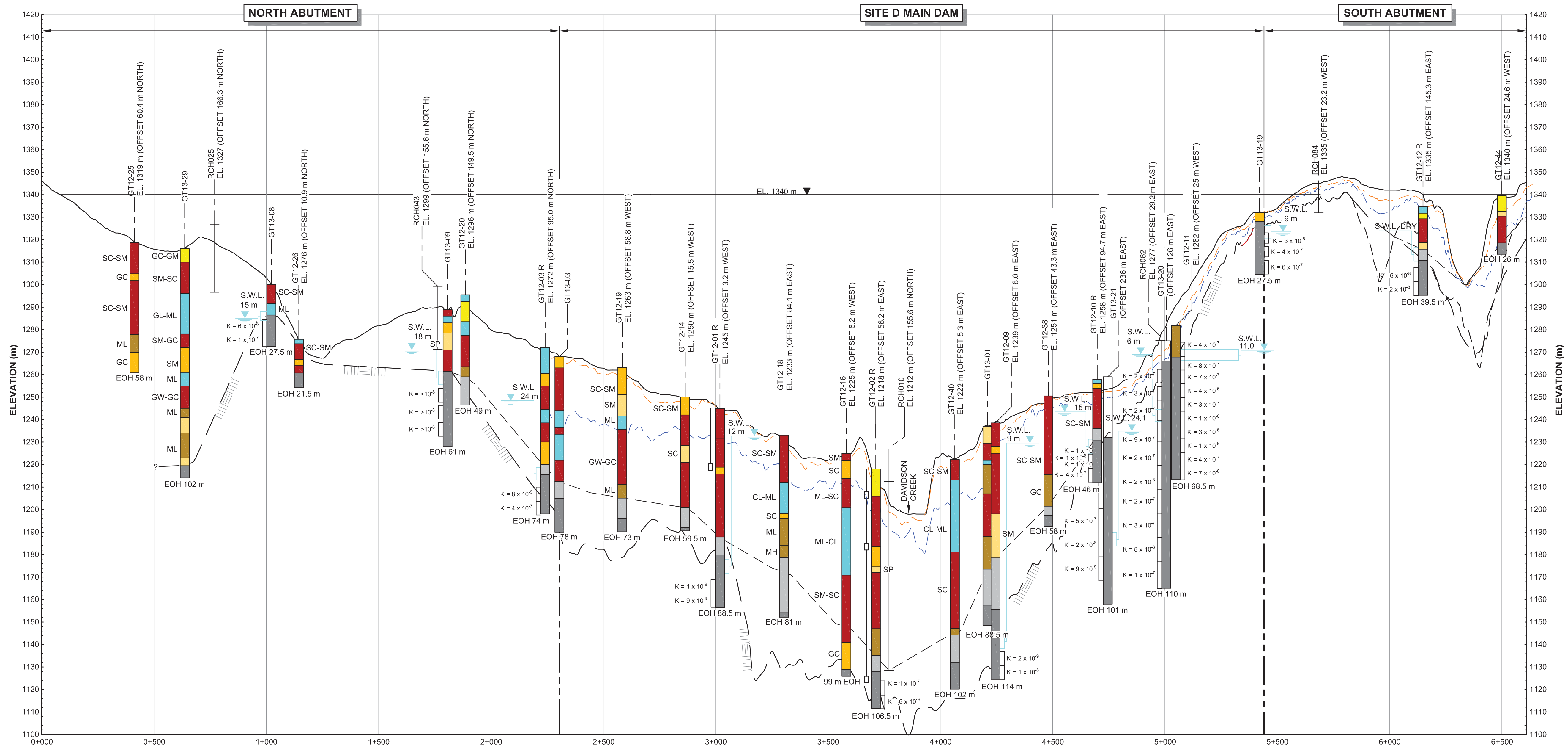

5 A.1 FIG

SECTION
SITE D MAIN DAM
HORIZONTAL: SCALE A
VERTICAL: SCALE B

NOTES:

1. DIMENSIONS AND ELEVATIONS ARE IN METRES, UNLESS NOTED OTHERWISE.

LEGEND:

- SAND AND GRAVEL GLACIOFLUVIAL (COARSE) <15% FINES - (GM, GW-GP)
- GLACIOFLUVIAL (COARSE) >15% FINES - (GM-GC)
- SAND GLACIOFLUVIAL (FINE) - (SP-SM)
- SANDY SILT GLACIOLACUSTRINE - (ML-CL)
- GLACIAL TILL - (SM-SC, GM-GC)
- REWORKED REGOLITH - (GC, CL)
- IN-SITU REGOLITH
- INTACT BEDROCK
- INTACT ROCK
- WEATHERED BEDROCK
- LOOSE SILTY SAND AND GRAVEL (SEISMIC)
- COMPACT SATURATED SAND, GRAVEL AND SILT (SEISMIC)
- INTACT BEDROCK (SEISMIC)
- K = 3 x 10^{-5} HYDRAULIC CONDUCTIVITY (m/sec)
- S.W.L. STATIC WATER LEVEL
- PIEZOMETERS
- VIBRATING WIRES
- EOH END OF HOLE AT EACH DRILLHOLE

SCALE B: 20 10 0 20 40 60 80 100 m
SCALE A: 200 100 0 200 400 600 800 1000 m

NEW GOLD INC.

BLACKWATER GOLD PROJECT

SECTION 5

Knight Piésold CONSULTING

P/A NO.	REF NO.
VA101-457/6	8

FIGURE A.8 REV 0

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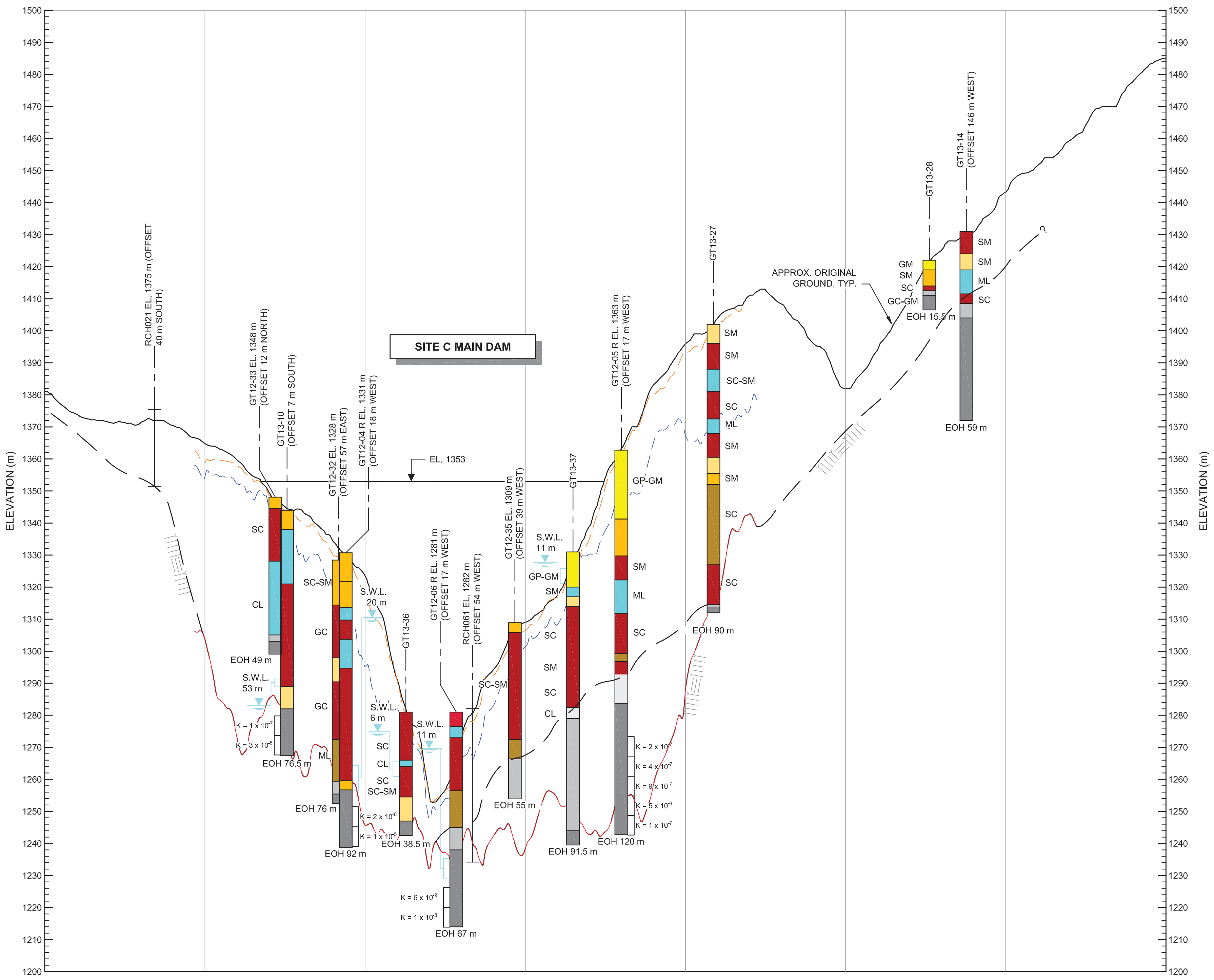
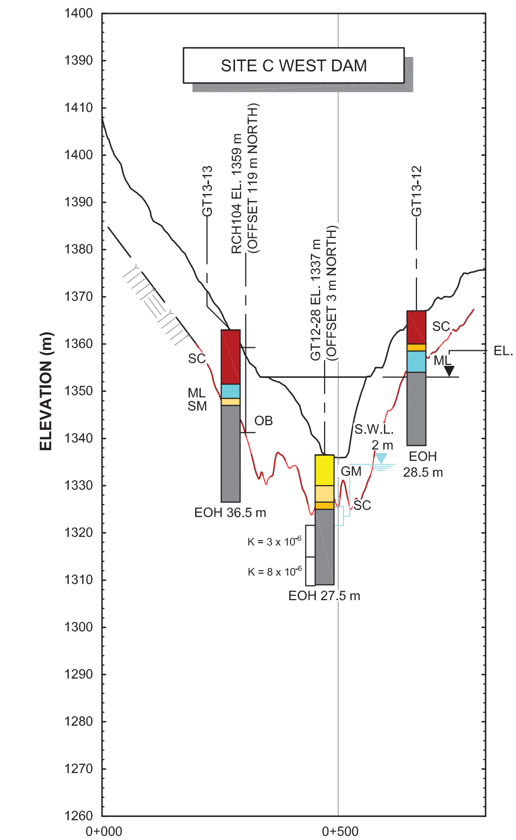


6 A.1 FIG
SECTION
PROFILE ALONG C MAIN DAM
HORIZONTAL: SCALE A
VERTICAL: SCALE B



7 A.1 FIG
SECTION
PROFILE ALONG C WEST DAM
HORIZONTAL: SCALE A
VERTICAL: SCALE B

NOTES:

1. DIMENSIONS AND ELEVATIONS ARE IN METRES, UNLESS NOTED OTHERWISE.

LEGEND:

- SAND AND GRAVEL GLACIOFLUVIAL (COARSE) <15% FINES - (GM, GW-GP)
- GLACIOFLUVIAL (COARSE) >15% FINES - (GM-GC)
- SAND GLACIOFLUVIAL (FINE) - (SP-SM)
- SANDY SILT GLACIOLACUSTRINE - (ML-CL)
- GLACIAL TILL - (SM-SC, GM-GC)
- REWORKED REGOLITH - (GC, CL)
- IN-SITU REGOLITH
- INTACT BEDROCK
- INTACT ROCK
- WEATHERED BEDROCK
- LOOSE SILTY SAND AND GRAVEL (SEISMIC)
- COMPACT SATURATED SAND, GRAVEL AND SILT (SEISMIC)
- INTACT BEDROCK (SEISMIC)
- $K = 3 \times 10^{-5}$ HYDRAULIC CONDUCTIVITY (m/sec)
- S.W.L. STATIC WATER LEVEL
- PIEZOMETERS
- VIBRATING WIRES
- EOH END OF HOLE AT EACH DRILLHOLE

SCALE B: 16 8 0 16 32 48 64 80 m
SCALE A: 160 80 0 160 320 480 640 800 m

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	CHK'D	APP'D
0	28NOV'13	ISSUED WITH REPORT	JS	DP	BB	KJB

NEW GOLD INC.

BLACKWATER GOLD PROJECT

SECTIONS 6 AND 7

Knight Piésold CONSULTING

P/A NO. VA101-457/6 | REF NO. 8

FIGURE A.9 | REV 0

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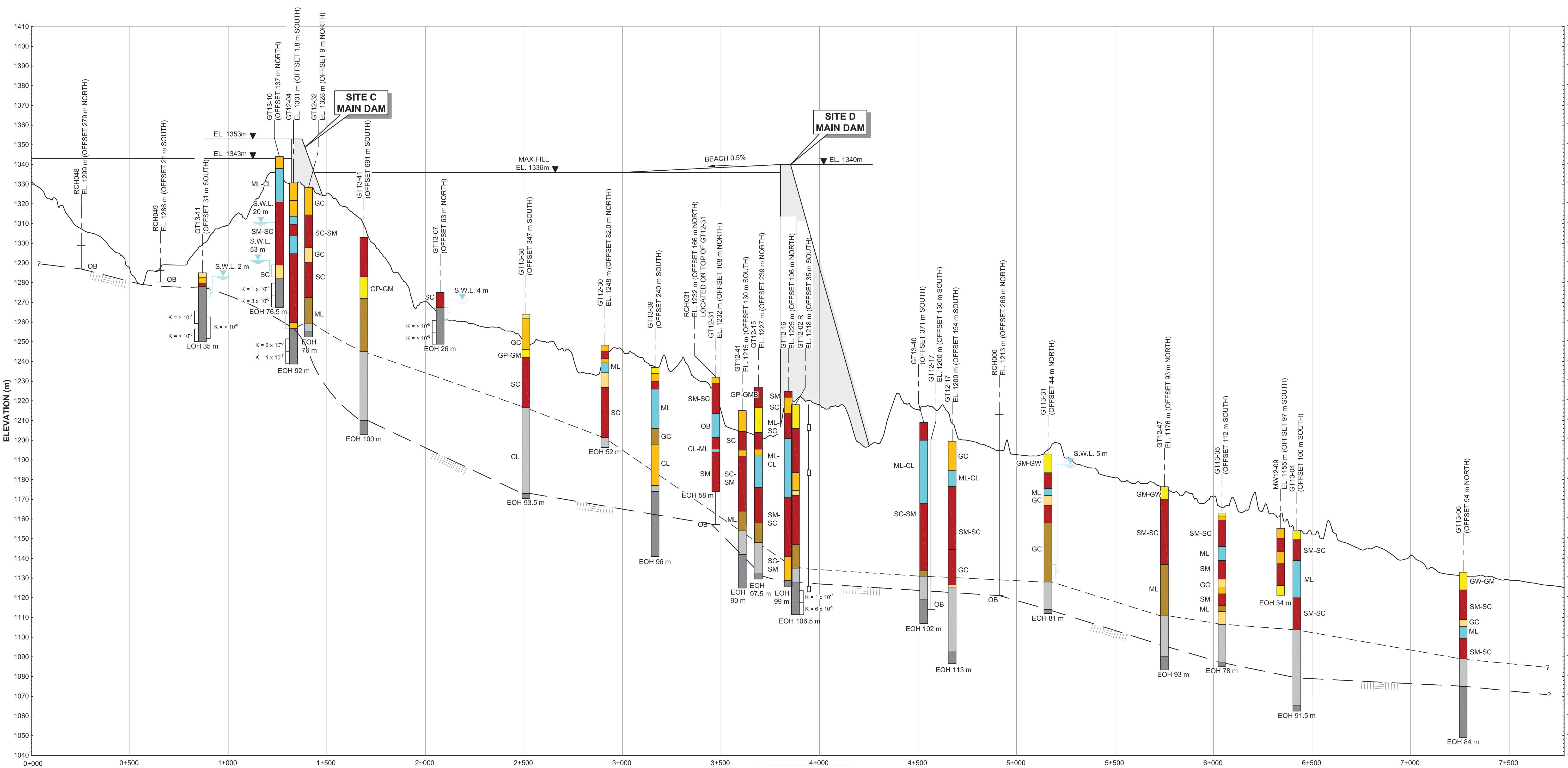

SECTION 8

A.1 FIG

HORIZONTAL: SCALE A
VERTICAL: SCALE B

LEGEND:

- SAND AND GRAVEL GLACIOFLUVIAL (COARSE) <15% FINES - (GM, GW-GP)
- GLACIOFLUVIAL (COARSE) >15% FINES - (GM-GC)
- SAND GLACIOFLUVIAL (FINE) - (SP-SM)
- SANDY SILT GLACIOLACUSTRINE - (ML-CL)
- GLACIAL TILL - (SM-SC, GM-GC)
- REWORKED REGOLITH - (GC, CL)
- IN-SITU REGOLITH
- INTACT BEDROCK
- INTACT ROCK
- WEATHERED BEDROCK
- LOOSE SILTY SAND AND GRAVEL (SEISMIC)
- COMPACT SATURATED SAND, GRAVEL AND SILT (SEISMIC)
- INTACT BEDROCK (SEISMIC)
- $K = 3 \times 10^{-5}$ HYDRAULIC CONDUCTIVITY (m/sec)
- S.W.L. STATIC WATER LEVEL
- PIEZOMETERS
- VIBRATING WIRES
- EOH END OF HOLE AT EACH DRILLHOLE

NOTES:

1. DIMENSIONS AND ELEVATIONS ARE IN METRES, UNLESS NOTED OTHERWISE.

SCALE B: 20 10 0 20 40 60 80 100 m
SCALE A: 200 100 0 200 400 600 800 1000 m

NEW GOLD INC.

BLACKWATER GOLD PROJECT

SECTION 8

Knight Piésold CONSULTING

P/A NO.	REF NO.
VA101-457/6	8

FIGURE A.10 REV 0

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	CHK'D	APP'D
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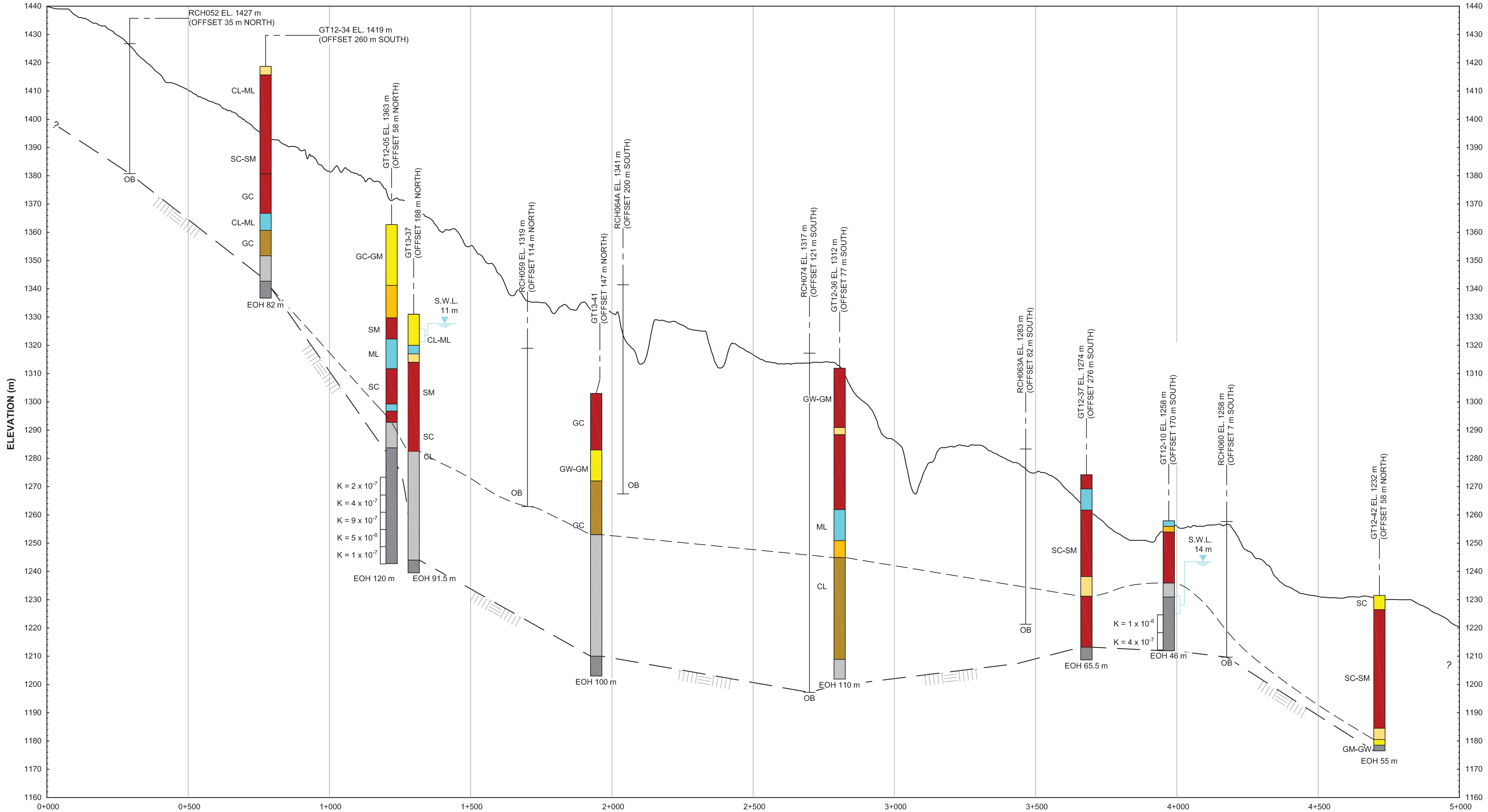

LEGEND:

- SAND AND GRAVEL GLACIOFLUVIAL (COARSE) <15% FINES - (GM, GW-GP)
- GLACIOFLUVIAL (COARSE) >15% FINES - (GM-GC)
- SAND GLACIOFLUVIAL (FINE) - (SP-SM)
- SANDY SILT GLACIOLACUSTRINE - (ML-CL)
- GLACIAL TILL - (SM-SC, GM-GC)
- REWORKED REGOLITH - (GC, CL)
- IN-SITU REGOLITH
- INTACT BEDROCK
- INTACT ROCK
- WEATHERED BEDROCK
- LOOSE SILTY SAND AND GRAVEL (SEISMIC)
- COMPACT SATURATED SAND, GRAVEL AND SILT (SEISMIC)
- INTACT BEDROCK (SEISMIC)
- $K = 3 \times 10^{-5}$ HYDRAULIC CONDUCTIVITY (m/sec)
- S.W.L. STATIC WATER LEVEL
- PIEZOMETERS
- VIBRATING WIRES
- EOH END OF HOLE AT EACH DRILLHOLE

NOTES:

1. DIMENSIONS AND ELEVATIONS ARE IN METRES, UNLESS NOTED OTHERWISE.

9 / A.1 FIG — SECTION
HORIZONTAL: SCALE A
VERTICAL: SCALE B

SCALE B: 16 8 0 16 32 48 64 80 m
SCALE A: 160 80 0 160 320 480 640 800 m

NEW GOLD INC.

BLACKWATER GOLD PROJECT

SECTION 9

Knight Piésold CONSULTING

P/A NO.	REF NO.
VA101-457/6	8

FIGURE A.11 REV 0

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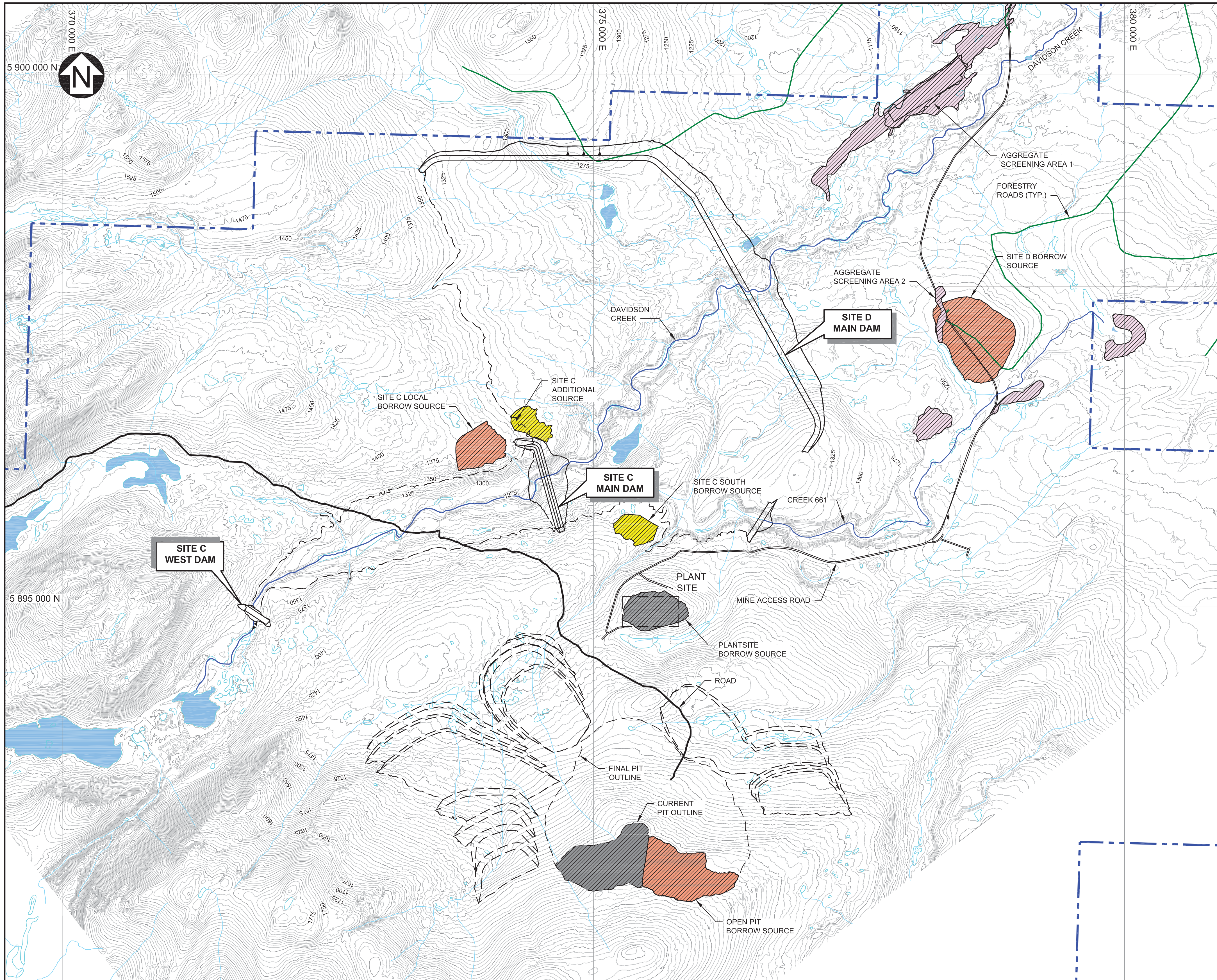

LEGEND:

- ROCKFILL BORROW SOURCE
- ZONE S BORROW SOURCE
- SAND AND GRAVEL BORROW SOURCE
- ESKER SAND AND GRAVEL BORROW SOURCE
- EXISTING ROAD
- PROPOSED MINE ACCESS ROAD
- NEW GOLD PROPERTY BOUNDARY

NOTES:

1. CONTOUR INTERVAL IS 25 METRES.
2. ALL MINE SITE FACILITIES ARE CONCEPTUAL ONLY AND ARE ONLY INTENDED TO SUPPORT SITE INVESTIGATIONS.
3. DRILLHOLE AND TEST PIT LOCATIONS NOT SHOWN FOR CLARITY.

SCALE A 400 200 0 400 800 1200 1600 2000 m

NEW GOLD INC.

BLACKWATER GOLD PROJECT

CONSTRUCTION BORROW SOURCES

Knight Piésold CONSULTING

P/A NO.	REF NO.
VA101-457/6	8

FIGURE A.12 REV 0

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	CHK'D	APP'D
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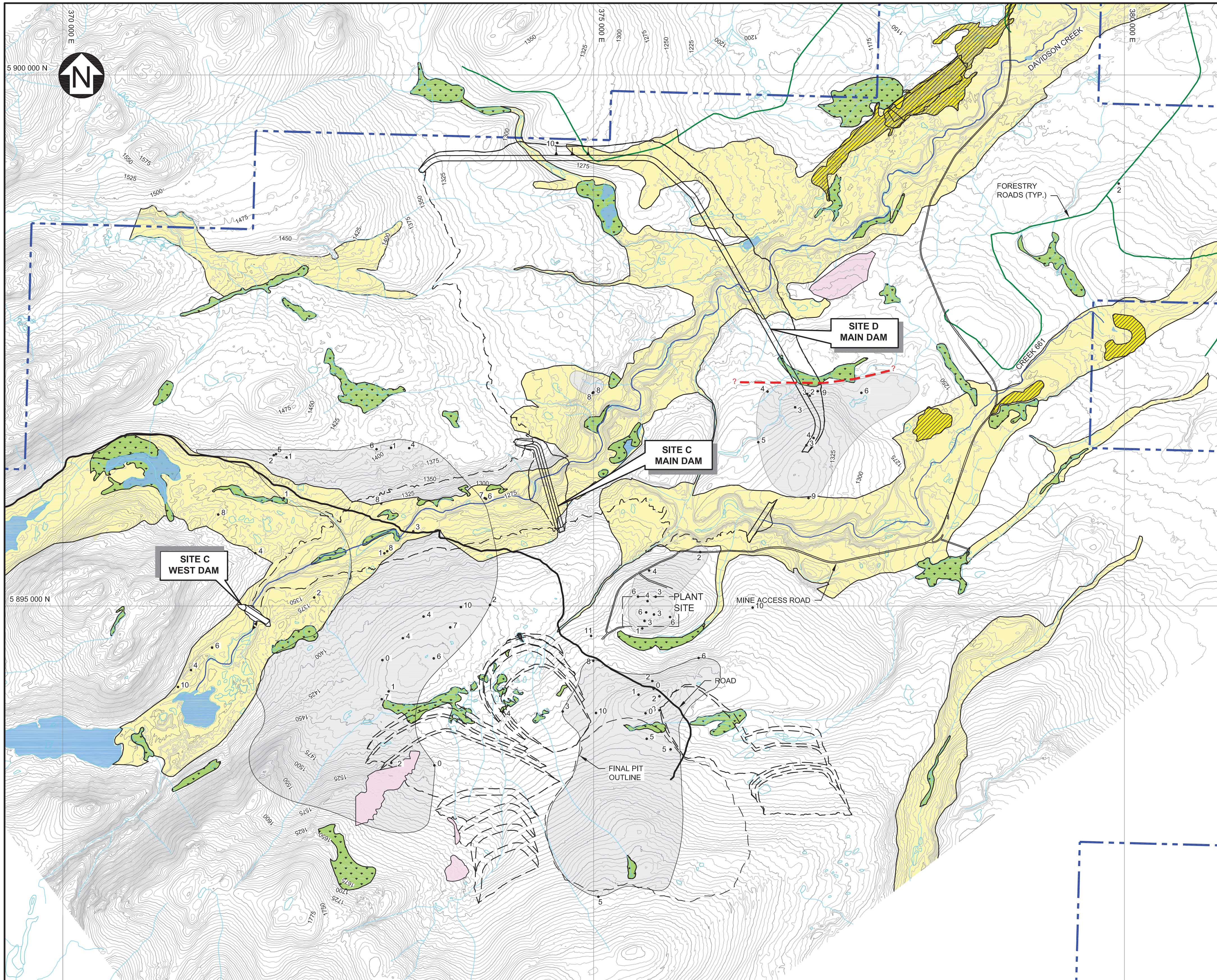

LEGEND:

- MELTWATER CHANNEL
- ABLATION TILL
- ORGANIC WETLANDS
- ESKER SAND AND GRAVEL BORROW SOURCE
- BEDROCK CLOSE TO SURFACE
- EXISTING ROAD
- PROPOSED MINE ACCESS ROAD
- INFERRED INACTIVE FAULT
- NEW GOLD PROPERTY BOUNDARY
- DEPTH TO BEDROCK (METRES)

NOTES:

1. CONTOUR INTERVAL IS 25 METRES.
2. ALL MINE SITE FACILITIES ARE CONCEPTUAL ONLY AND ARE ONLY INTENDED TO SUPPORT SITE INVESTIGATIONS.
3. DRILLHOLE AND TEST PIT LOCATIONS NOT SHOWN FOR CLARITY.

SCALE A 400 200 0 400 800 1200 1600 2000 m

NEW GOLD INC.

BLACKWATER GOLD PROJECT

GEOLOGICAL CONDITIONS SUMMARY

Knight Piésold CONSULTING

P/A NO. VA101-457/6 | REF NO. 8

FIGURE A.13 REV 0

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	CHK'D	APP'D
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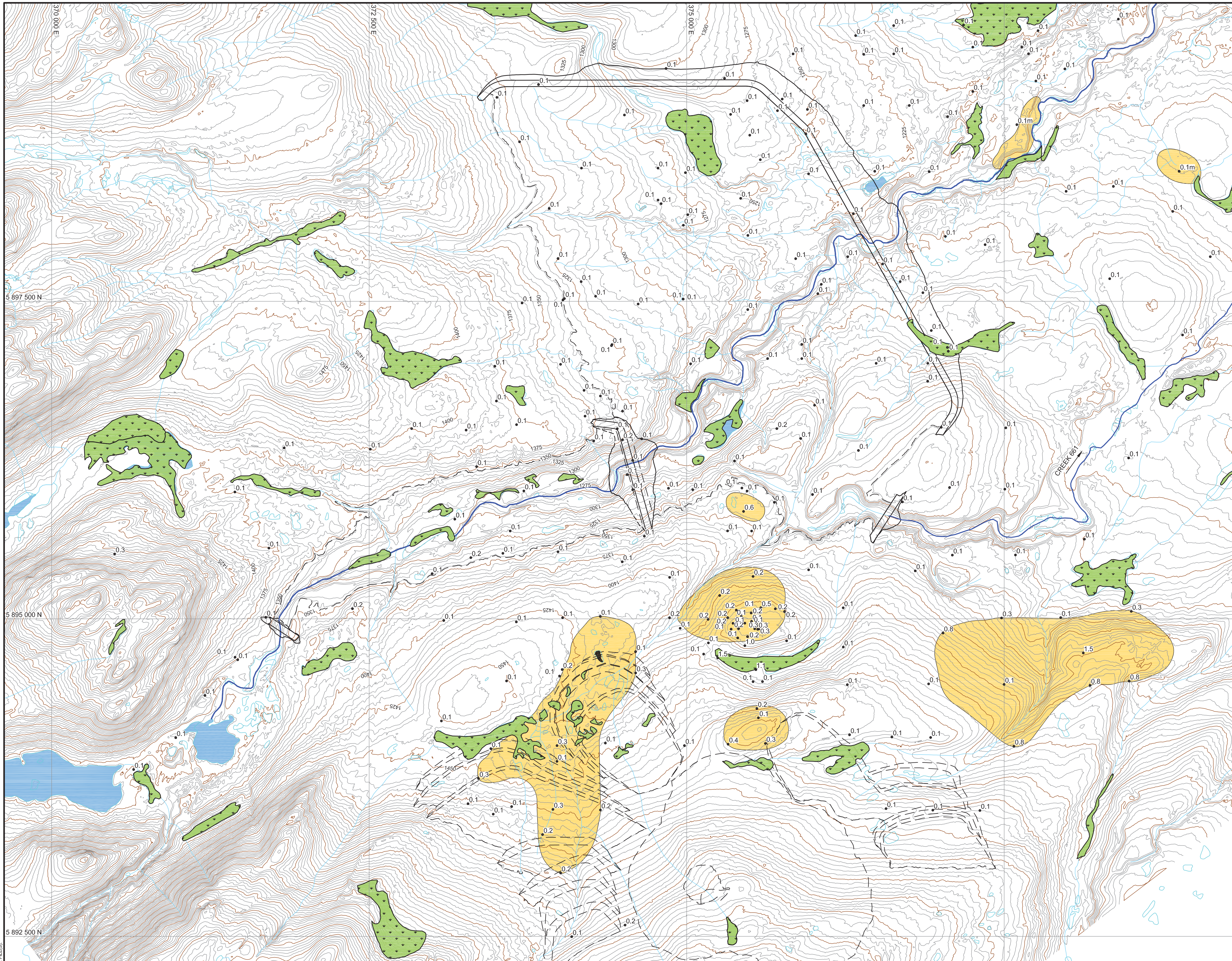

LEGEND:

- ORGANIC WETLANDS (PEAT THICKNESS > 1 m)
- TOPSOIL >0.2 m
- 0.1 TEST PITS WITH TOPSOIL THICKNESS (METRES)
- DAVIDSON CREEK

NOTES:

1. CONTOUR INTERVAL IS 2.5 METRES.

SCALE A 300 150 0 500 1000 1500 m

NEW GOLD INC

BLACKWATER GOLD PROJECT

TOPSOIL THICKNESS

Knight Piésold CONSULTING

P/A NO.	REF NO.
VA101-457/6	8

FIGURE A.14	REV 0

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	CHK'D	APP'D
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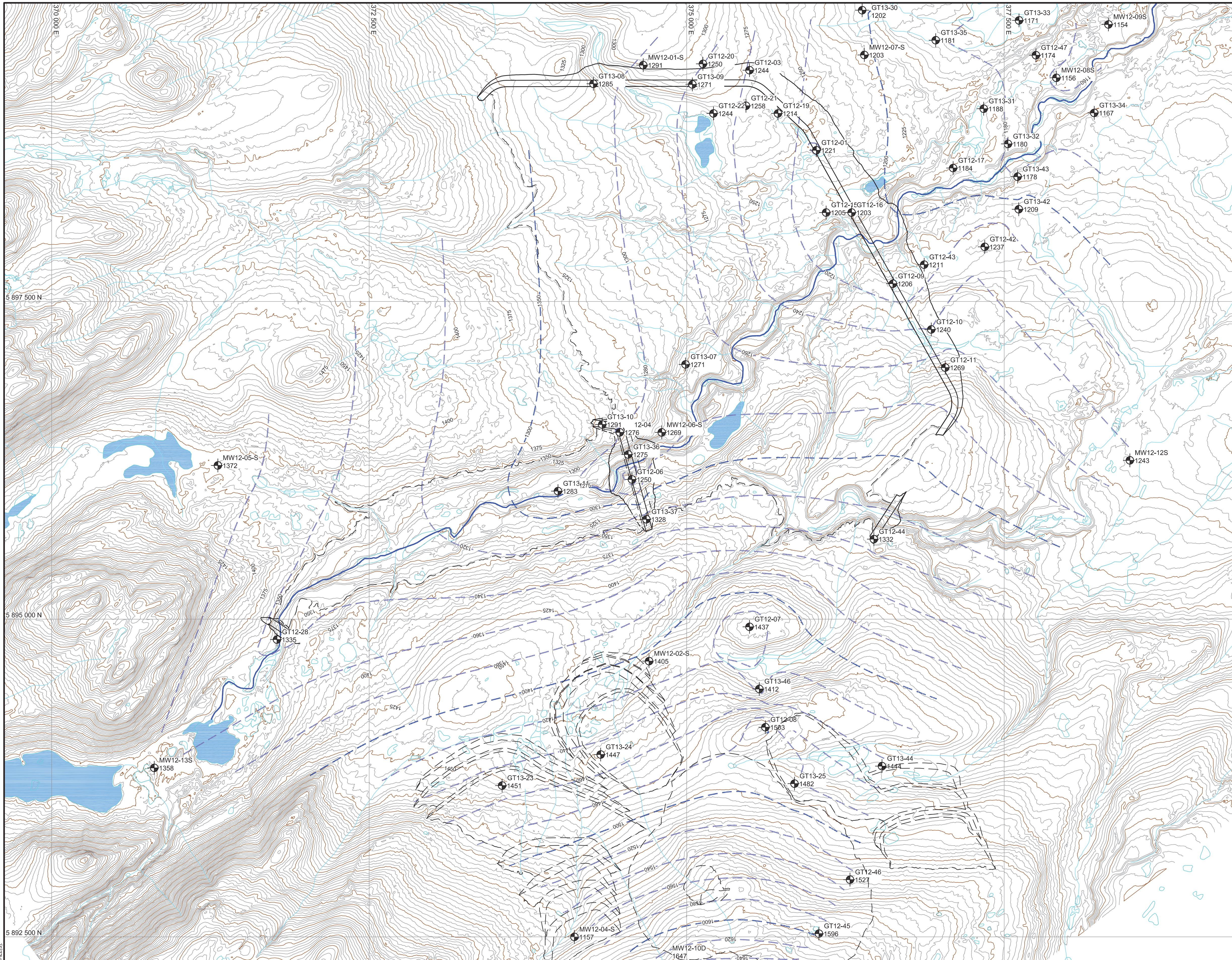

LEGEND:

- GROUNDWATER ELEVATION CONTOURS
- DAVIDSON CREEK
- GT13-44 1444 — DRILLHOLE WITH GROUNDWATER ELEVATION

NOTES:

1. CONTOUR INTERVAL IS 25 METRES.
2. ALL MINE SITE FACILITIES ARE CONCEPTUAL ONLY AND ARE ONLY INTENDED TO SUPPORT SITE INVESTIGATIONS.

300 150 0 500 1000 1500 m
SCALE A

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0	28NOV'13	ISSUED WITH REPORT	JS	AN	BB	KJB

NEW GOLD INC

BLACKWATER GOLD PROJECT

GROUNDWATER ELEVATION CONTOURS

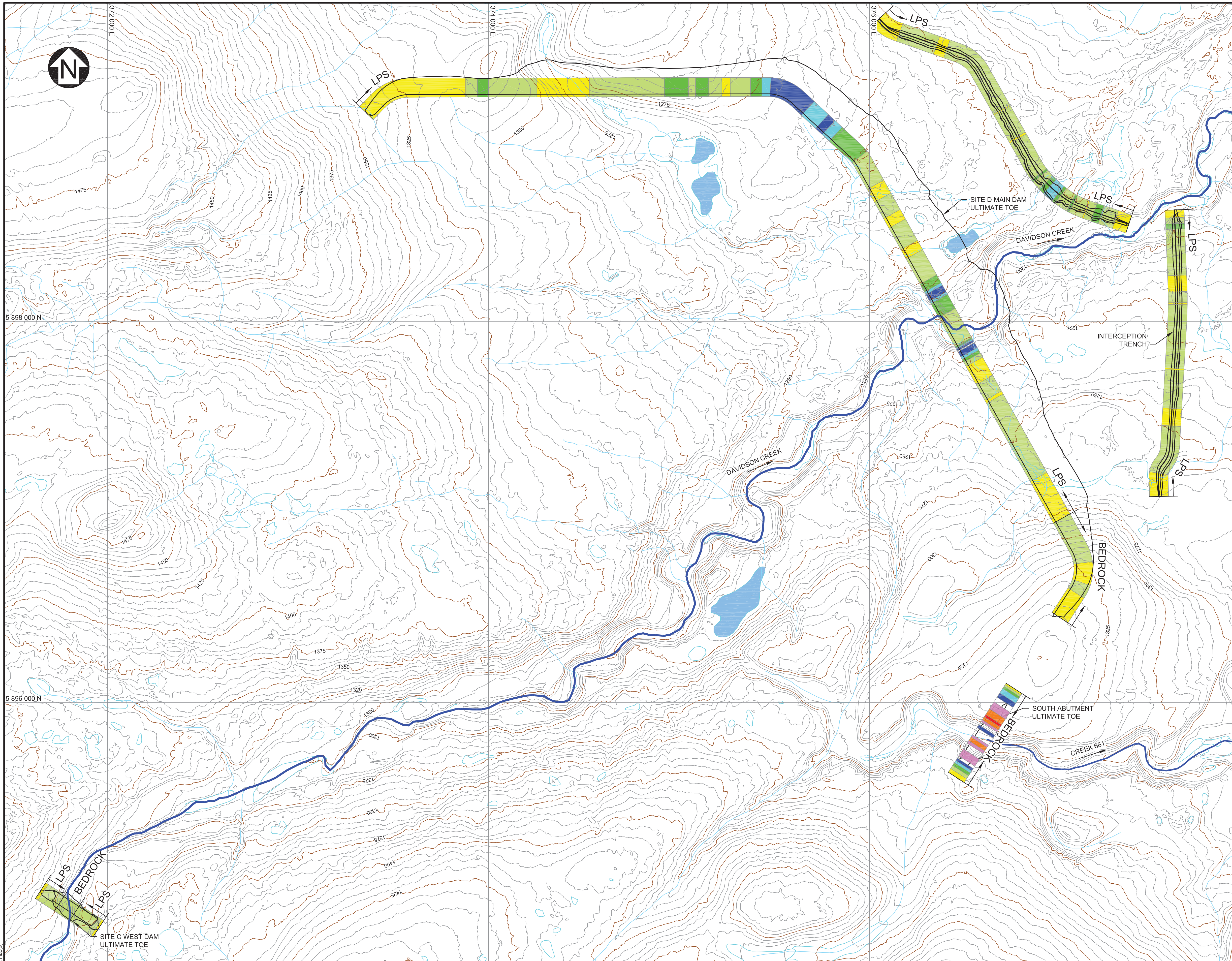
Knight Piésold CONSULTING

P/A NO. VA101-457/6

REF NO. 8

FIGURE A.15

REV 0



LEGEND:

DEPTH TO L.P.S OR BEDROCK:

- 0m - 5m
- 5m - 10m
- 10m - 15m
- 15m - 20m
- 20m - 25m
- 25m - 30m
- 30m - 35m
- 35m - 40m
- 40m - 45m

REPRESENTS DEPTH TO LPS OR BEDROCK FOR PLANNING PURPOSES

NOTES:

1. COORDINATE GRID IS UTM NAD83 ZONE Z.
2. CONTOUR INTERVAL IS 5 METRES.
3. L.P.S LOW PERMABILITY SUBGRADE (COMPACT MATERIAL WITH >15% FINES).

SCALE A 200 100 0 200 400 600 800 1000 m

NEW GOLD INC

BLACKWATER GOLD PROJECT

PLAN
DEPTH TO LPS OR BEDROCK

Knight Piésold CONSULTING

P/A NO.	REF NO.
VA101-457/6	8

FIGURE A.16 REV 0

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	CHK'D	APP'D
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APPENDIX B

REFERENCE TABLES

(Pages B-1 to B-14)

TABLE B.1

NEW GOLD INC.
BLACKWATER GOLD PROJECT

GEOTECHNICAL CHARACTERIZATION REPORT
TEST PIT SUMMARY

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Test Pit	Location	Northing	Easting	Elevation	Total Depth	Date	Water Level	Geotechnical Conditions
		m	m	m	m		m	
TP12-001	TSF Site C Alignment	5896247	374575	1271	3.7	6/27/2012	Not Encountered	0-0.9 silt and sand; 0.9-3.7 till
TP12-002	TSF Site C Alignment	5896257	374572	1278	4.3	6/27/2012	2.3 slow seepage	0-2.3 silty gravel; 2.3- 4.28 silty gravel and sand
TP12-003	TSF Site D Alignment	5898190	376313	1227	3.3	6/29/2012	2.7 slow seepage	0-2.65 sand and gravel; 2.65-3.75 till
TP12-004	TSF Site D Containment	5898214	376090	1229	5.7	6/29/2012	5.0 slow seepage	0-5.7 sand and gravel
TP12-005	TSF Site D Alignment	5898818	375938	1255	6.5	6/29/2012	6.0 slow seepage	0-6.5 sand and gravel
TP12-006	TSF Site D Containment	5897160	374412	1336	5.3	7/1/2012	Not Encountered	0-1.5 sand and gravel; 1.5-5.3 till
TP12-007	TSF Site D Containment	5897321	374274	1331	6.0	7/1/2012	2.0 slow seepage	0-2 sand and gravel; 2-6 till
TP12-008	TSF Site D Containment	5897007	374511	1332	5.2	7/1/2012	2.0 slow seepage	0-2.35 sand and gravel; 2.35-5.16 till
TP12-009	TSF Site D Containment	5897511	374026	1338	4.7	7/1/2012	2.0 slow seepage	0-2.7 sand and gravel; 2.7-4.65 till
TP12-010	TSF Site D Containment	5897837	373987	1329	5.1	7/3/2012	Not Encountered	0-5.12 sand and silt
TP12-011	TSF Site D Containment	5897659	374071	1332	4.7	7/3/2012	2.0 slow seepage	0-4.6 sand and gravel; 4.6-4.7 till
TP12-012	TSF Site D Containment	5898099	374974	1288	4.2	7/3/2012	Not Encountered	0-4.15 sand
TP12-013	TSF Site D Containment	5898513	374990	1275	1.2	7/3/2012	Not Encountered	0-1.15 till
TP12-014	TSF Site D Containment	5898226	374785	1290	3.0	7/4/2012	Not Encountered	0-2 sand and gravel; 2-3 till
TP12-015	TSF Site D Containment	5896754	374321	1323	5.8	7/4/2012	Not Encountered	0-5.8 till
TP12-016	TSF Site C Containment	5896336	372509	1402	2.7	7/4/2012	Not Encountered	0-2.7 till
TP12-017	TSF Site C Containment	5896381	372645	1411	3.1	7/4/2012	Not Encountered	0-3.13 sand and gravel
TP12-018	TSF Site C Containment	5896498	372834	1409	3.2	7/4/2012	Not Encountered	0-3.15 sand and gravel
TP12-019	TSF Site C Containment	5896346	371830	1386	4.7	7/4/2012	Not Encountered	0-0.4 sand and gravel; 0.4-4.7 till
TP12-020	TSF Site C Containment	5896429	372008	1409	4.6	7/4/2012	Not Encountered	0-4.6 till; 4.6-4.7 bedrock
TP12-021	TSF Site C Containment	5896399	372107	1405	1.4	7/4/2012	1.4 slow seepage	0-1.35 sand and silt; 1.35-1.36 bedrock
TP12-022	TSF Site C Containment	5896490	373092	1402	3.5	7/4/2012	Not Encountered	0-1.1 sand and gravel; 1.1-1.85 decomposed bedrock; 1.85-3.45 bedrock
TP12-023	TSF Site C Containment	5896486	373263	1397	3.5	7/6/2012	Not Encountered	0-3.5 till; 3.5-3.6 bedrock
TP12-024	TSF Site C Containment	5896488	373454	1394	4.8	7/6/2012	4.0 slow seepage	0-4 silt; 4-4.8 gravel
TP12-025	TSF Site C Containment	5896529	373660	1382	4.8	7/6/2012	1.2 slow seepage	0-4.8 till
TP12-026	TSF Site C Containment	5896566	373939	1381	6.0	7/6/2012	Not Encountered	0-6 till
TP12-027	TSF Site C Containment	5895785	373174	1312	4.0	8/10/2012	2.0 slow seepage	0-2 sand and gravel; 2-4 clay
TP12-028	TSF Site C Containment	5895703	373301	1313	3.2	8/10/2012	1.0 fast seepage	0-1 clay; 1-3 silt; 3-3.2 decomposed bedrock
TP12-029	TSF Site C Containment	5895692	373610	1333	5.0	8/10/2012	Not Encountered	0-4 sand; 4-5 sand and gravel
TP12-030	TSF Site C Containment	5895590	373765	1344	4.5	8/10/2012	Not Encountered	0-0.5 sand; 0.5-4.5 sand and gravel
TP12-031	TSF Site C Containment	5895528	373986	1368	5.0	8/10/2012	Not Encountered	0-4 sand; 4-5 sand and gravel
TP12-032	TSF Site C Containment	5895541	374131	1370	5.0	8/10/2012	1.0 slow seepage	0-5 sand and gravel
TP12-033	TSF Site C Containment	5895498	374278	1376	5.0	8/10/2012	3.5 moderate seepage	0-1.5 sand; 1.5-5 sand and gravel
TP12-034	TSF Site C Containment	5895450	374492	1383	6.0	8/10/2012	3.0 moderate seepage	0-1 sand; 1-6 sand and gravel
TP12-035	Geotechnical Characterization	5895328	374653	1416	6.5	8/10/2012	6.3 slow seepage	0-6.5 till
TP12-036	Geotechnical Characterization	5895170	374736	1424	6.8	8/10/2012	6.3 slow seepage	0-6.75 till
TP12-037	Geotechnical Characterization	5895326	374866	1410	6.0	8/10/2012	5.0 slow seepage	0-6 till
TP12-038	Geotechnical Characterization	5895530	375045	1404	5.5	8/11/2012	Not Encountered	0-4 sand and gravel; 4-5.5 till
TP12-039	Geotechnical Characterization	5895692	375322	1370	5.0	8/11/2012	3.5 moderate seepage	0-5 sand
TP12-040	TSF Site D Containment	5895839	375451	1351	6.0	8/11/2012	4.5 slow seepage	0-6 sand
TP12-041	TSF Site D Containment	5896006	375476	1348	6.0	8/11/2012	Not Encountered	0-0.5 silt and gravel; 0.5-6 gravel
TP12-042	TSF Site D Containment	5896053	375283	1339	5.0	8/11/2012	2.0 moderate seepage	0-5 sand
TP12-043	TSF Site D Containment	5896017	375048	1328	6.0	8/11/2012	Not Encountered	0-6 sand
TP12-044	TSF Site C Alignment	5896113	374656	1294	4.8	8/11/2012	1.8 slow seepage	0-4.8 sand and gravel
TP12-045	TSF Site C Alignment	5896135	374531	1289	6.0	8/11/2012	Not Encountered	0-1 sand; 1-6 gravel
TP12-046	TSF Site D Containment	5896028	374857	1308	4.5	8/11/2012	1.5 slow seepage	0-4.5 silt and gravel
TP12-047	TSF Site D Containment	5896172	375445	1233	5.0	8/11/2012	3.5 slow seepage	0-5 sand
TP12-048	TSF Site D Containment	5897560	376033	1231	5.8	8/12/2012	3.0 slow seepage	0-2 sand and gravel, 2-5.75 sand
TP12-049	TSF Site D Containment	5897549	376007	1232	5.0	8/12/2012	2.5 fast seepage	0-3 sand and silt; 3-5 sand
TP12-050	TSF Site D Containment	5897605	376018	1224	3.5	8/12/2012	3.5 moderate seepage	0-5 sand and gravel
TP12-051	TSF Site D Containment	5897634	376060	1233	5.0	8/12/2012	1.5 slow seepage	0-1 sand and silt; 1-1.5 gravel;1.5-5 sand and gravel
TP12-052	TSF Site D Containment	5897161	375906	1264	4.5	8/12/2012	Not Encountered	0-4.5 sand and gravel
TP12-053	TSF Site D Containment	5896682	376007	1307	5.0	8/12/2012	Not Encountered	0-0.4 silt; 0.4-5 sand and gravel
TP12-054	TSF Site D Containment	5896186	375721	1337	5.0	8/12/2012	Not Encountered	0.2- sand; 2-5 till
TP12-055	TSF Site D Containment	5895979	375991	1330	7.0	8/12/2012	6.0 slow seepage	0-7 sand and gravel
TP12-056	TSF Site D Containment	5896327	376352	1324	5.0	8/12/2012	Not Encountered	0-5 till
TP12-057	TSF Site D Containment	5896542	376551	1317	4.8	8/12/2012	2.5 moderate seepage	0-4.75 sand; 4.75-5 till
TP12-058	TSF Site D Containment	5896871	376898	1310	3.0	8/13/2012	Not Encountered	0-3 gravel and silt; 3-3.2 bedrock
TP12-059	TSF Site D Containment	5897019	376638	1295	4.0	8/13/2012	3.5 fast seepage	0-4 till; 4-4.2 bedrock
TP12-060	TSF Site D Containment	5897012	376492	1295	6.5	8/13/2012	3.5 moderate seepage	0-1.5 sand; 1.5-6.5 till
TP12-061	TSF Site D Alignment	5897080	377004	1275	3.5	8/13/2012	2.5 fast seepage	0-3 sand; 3-3.5 sand and gravel
TP12-062	TSF Site D Alignment	5897107	377060	1272	4.0	8/13/2012	4.0 slow seepage	0-1.5 silt ; 1.5-4 sand
TP12-063	TSF Site D Alignment	5897137	377053	1266	5.0	8/13/2012	0.7 fast seepage	0-5 till
TP12-064	TSF Site D Alignment	5897270	376926	1270	5.0	8/13/2012	Not Encountered	0-5 till
TP12-065	TSF Site D Alignment	5897568	376860	1255	5.0	8/13/2012	1.5 moderate seepage	0-5 sand
TP12-066	TSF Site D Alignment	5897794	376543	1235	3.3	8/13/2012	3.0 slow seepage	0-3.25 sand and gravel
TP12-067	TSF Site D Containment	5897851	376268	1221	4.5	8/13/2012	Not Encountered	0-4.5 sand
TP12-068	Geotechnical Characterization	5898011	377037	1246	4.0	8/13/2012	0.3 moderate seepage	0-4 gravel and silt
TP12-069	TSF Site D Alignment	5897640	376681	1240	6.0	8/14/2012	3.5 moderate seepage	0-1 sand; 1-6 till
TP12-070	TSF Site D Containment	5896688	376798	1315	5.5	8/14/2012	1.0 slow seepage	0-5.5 till
TP12-071	TSF Site D Containment	5896111	376318	1331	5.0	8/14/2012	4.0 slow seepage	0-1 sand; 1-5 till
TP12-072	TSF Site D Alignment	5895921	376699	1331	5.0	8/14/2012	2.0 slow seepage	0-5 sand
TP12-073	Downstream of Pit	5896034	377070	1332	5.0	8/14/2012	Not Encountered	0-5 gravel and silt
TP12-074	Downstream of Pit	5896021	377505	1301	5.0	8/14/2012	Not Encountered	0-5 sand and gravel
TP12-075	TSF Site D Alignment	5896508	377004	1342	2.0	8/14/2012	Not Encountered	0-0.5 sand; 0.5-2 silt
TP12-076	Downstream of Pit	5896504	377513	1312	5.0	8/14/2012	Not Encountered	0-5 till
TP12-077	TSF Site D Containment	5896847	374370	1333	5.5	8/15/2012	2.0 fast seepage	0-1.5 sand; 1.5-5.5 sand and gravel
TP12-078	TSF Site D Containment	5897151	374408	1332	6.5	8/15/2012	2.5 moderate seepage	0-5.5 sand; 5.5-6.5 till
TP12-079	TSF Site D Containment	5897503	374049	1337	6.0	8/15/2012	0.3 moderate seepage	0-6 sand and gravel
TP12-080	TSF Site D Containment	5897487	373704	1366	6.0	8/15/2012	0.3 slow seepage	0-1.5 sand; 1.5-6 till
TP12-081	TSF Site D Containment	5897540	374283	1320	6.5	8/15/2012	Not Encountered	0-1 sand; 1-6.5 gravel and silt
TP12-082	TSF Site D Containment	5897479	374618	1315	4.0	8/15/2012	0.3 moderate seepage	0-4 sand and gravel
TP12-083	TSF Site D Containment	5897518	374972	1301	1.0	8/15/2012	0.3 fast seepage	0-1.5 sand and silt
TP12-084	TSF Site D Containment	5897506	375091	1298	1.0	8/15/2012	0.6 fast seepage	0-1.5 silt
TP12-085	TSF Site D Containment	5897338	375188	1301	6.5	8/15/2012	Not Encountered	0-1 sand; 1-6.5 sand and gravel
TP12-086	TSF Site D Containment	5897008	375031	1283	7.5	8/15/2012	Not Encountered	0-2 sand; 2-7.5 sand and gravel
TP12-087	TSF Site D Containment	5897883	375886	1245	6.7	8/15/2012	Not Encountered	0-6 sand; 6-7.5 silt and sand
TP12-088	TSF Site D Containment	5897678	375697	1246	7.0	8/16/2012	Not Encountered	0-7 sand and silt
TP12-089	TSF Site D Containment	5897435	375481	1265	4.0	8/16/2012	0.7 moderate seepage	0-0.5 gravel and silt; 0.5-4 gravel
TP12-090	TSF Site D Containment	5898231	373918	1327	6.5	8/16/2012	2.0 slow seepage	0-1 sand; 1-6 sand and gravel; 6-6.5 gravel and silt
TP12-091	TSF Site D Containment	5898509	373866	1329	8.0	8/16/2012	0.7 slow seepage	0-0.5 sand; 0.5-8 till
TP12-092	TSF Site D Containment	5898756	373684	1384	5.5	8/16/2012	4.0 slow seepage	0-2.5 sand; 2.5-5.5 sand and gravel
TP12-093	TSF Site D Alignment	5899106	373506	1338	6.5	8/16/2012	Not Encountered	0-1 sand; 1-6.5 gravel and silt
TP12-094	TSF Site D Alignment	5899207	373833	1324	8.5	8/16/2012	Not Encountered	0-8.5 sand and gravel
TP12-095	TSF Site D Containment	5899011	374032	1315	7.0	8/16/2012	Not Encountered	0-7 sand and silt
TP12-096	TSF Site D Containment	5898967	374510	1299	8.0	8/16/2012	4.0 slow seepage	0-8 sand
TP12-097	TSF Site D Containment	5898549	374172	1310	7.0	8/17/2012	1.0 slow seepage	0-1 sand; 1-7 till
TP12-098	TSF Site D Containment	5898458	374526	1308	7.0	8/17/2012	1.0 slow seepage	0-7 till
TP12-099	TSF Site D Containment	5898269	374799	1294	7.0	8/17/2012	Not Encountered	0-6.5 sand; 6.5-7 silt
TP12-100	TSF Site D Containment	5898142	375070	1289	7.0	8/17/2012	3.5 slow seepage	0-1 sand; 1-7 till
TP12-101	TSF Site D Containment	5898311	375425	1265	7.0	8/17/2012	Not Encountered	0-1 sand; 1-6.5 gravel and silt
TP12-102	TSF Site D Containment	5898019	375482	1244	6.5	8/17/2012	1.2 slow seepage	0-2 sand and gravel; 2-6.5 sand

Knight Piésold CONSULTING

TABLE B.1

NEW GOLD INC.
BLACKWATER GOLD PROJECT

GEOTECHNICAL CHARACTERIZATION REPORT
TEST PIT SUMMARY

Test Pit	Location	Northing m	Easting m	Elevation m	Total Depth m	Date	Water Level m	Geotechnical Conditions
TP12-103	TSF Site D Containment	5898615	375580	1260	7.5	8/17/2012	5.0 slow seepage	0-5 sand; 5-7.5 sand and gravel
TP12-104	TSF Site D Alignment	5898817	375987	1252	7.0	8/17/2012	Not Encountered	0-1 sand; 1-3 silt and sand; 3-7 gravel
TP12-105	TSF Site D Alignment	5898531	376173	1246	7.0	8/17/2012	3.0 slow seepage	0-3 sand; 3-7 till
TP12-106	TSF Site D Containment	5898504	375960	1240	7.0	8/17/2012	1.5 slow seepage	0-7 sand
TP12-107	TSF Site D Alignment	5899011	375951	1261	7.0	8/18/2012	Not Encountered	0-1 sand and gravel; 1-7 till
TP12-108	TSF Site D Alignment	5899001	375715	1268	7.5	8/18/2012	Not Encountered	0-6 sand; 6-7.5 sand and gravel
TP12-109	TSF Site D Alignment	5899172	375672	1270	6.0	8/18/2012	Not Encountered	0-6 gravel
TP12-110	TSF Site D Alignment	5899307	375498	1274	7.0	8/18/2012	Not Encountered	0-5 gravel; 5-7 sand
TP12-111	TSF Site D Alignment	5899256	375299	1284	8.0	8/18/2012	Not Encountered	0-1 sand and gravel; 1-8 sand
TP12-112	TSF Site D Alignment	5899177	375050	1296	5.7	8/18/2012	Not Encountered	0-4.5 sand; 4.5-5.7 sand and gravel
TP12-113	TSF Site D Alignment	5899300	375078	1306	7.0	8/18/2012	Not Encountered	0-4 silt and sand; 4-7 sand and gravel
TP12-114	TSF Site D Alignment	5899333	374838	1315	6.5	8/18/2012	5.0 slow seepage	0-6.5 gravel and sand
TP12-115	TSF Site D Containment	5899080	375476	1280	8.0	8/18/2012	Not Encountered	0-8 sand
TP12-116	TSF Site D Containment	5898972	375346	1268	7.0	8/19/2012	Not Encountered	0-7 sand
TP12-117	TSF Site D Containment	5898808	375497	1279	7.0	8/19/2012	Not Encountered	0-7 sand and gravel
TP12-118	Downstream of Pit	5894488	376905	1437	4.0	10/7/2012	1.5 slow seepage	0-0.6 sand; 0.6-4 till
TP12-119	Downstream of Pit	5894484	377500	1398	4.5	10/7/2012	Not Encountered	0-1 sand; 1-4.5 till
TP12-120	Downstream of Pit	5894888	377018	1394	5.0	10/7/2012	Not Encountered	0-1 sand; 1-5 silt
TP12-121	Downstream of Pit	5895007	377479	1347	5.5	10/7/2012	Not Encountered	0-0.7 sand; 0.7-5.5 sand and gravel
TP12-122	Downstream of Pit	5895010	377945	1317	5.0	10/7/2012	Not Encountered	0-1 sand; 1-5 sand and gravel
TP12-123	Downstream of Pit	5895378	376800	1366	4.0	10/7/2012	2.0 slow seepage	0-4 till
TP12-124	Downstream of Pit	5895502	377092	1324	3.5	10/7/2012	2.0 slow seepage	0-2 sand; 2-3.5 till
TP12-125	Downstream of Pit	5895503	377589	1315	5.0	10/7/2012	Not Encountered	0-1 sand; 1-5 till
TP12-126	Downstream of Pit	5895627	378132	1281	4.5	10/7/2012	Not Encountered	0-1.2 sand and silt; 1.2-4.5 sand
TP12-127	Downstream of Pit	5895908	378276	1268	4.0	10/7/2012	Not Encountered	0-0.5 sand, 0.5-4 sand and silt
TP12-128	Downstream of Pit	5896267	378480	1252	3.5	10/7/2012	3.0 moderate seepage	0-1.5 sand; 1.5-3.5 sand and gravel
TP12-129	Downstream of Pit	5894482	376265	1466	3.0	10/8/2012	Not Encountered	0-0.5 sand; 0.5-3 till
TP12-130	Plant Site	5894506	375597	1419	3.0	10/8/2012	Not Encountered	0-3 sand and silt
TP12-131	West Waste Dump	5894002	374983	1462	3.5	10/8/2012	3.0 fast seepage	0-3.5 sand and gravel
TP12-132	West Waste Dump	5894022	374360	1459	3.0	10/8/2012	3.0 fast seepage	0-3 sand and gravel
TP12-133	West Waste Dump	5893878	373979	1449	3.5	10/8/2012	Not Encountered	0-1.2 sand; 1.2-3.5 till
TP12-134	West Waste Dump	5893522	373622	1506	3.0	10/8/2012	Not Encountered	0-1.3 sand; 1.3-3 till
TP12-135	West Waste Dump	5893978	373458	1448	4.5	10/8/2012	Not Encountered	0-1 sand; 1-4.5 till
TP12-136	East Waste Dump	5894087	376283	1476	5.0	10/8/2012	Not Encountered	0-0.8 sand; 0.8-5 till
TP12-137	Downstream of Pit	5894066	376921	1461	5.0	10/8/2012	Not Encountered	0-5 till
TP12-138	Plant Site	5894811	375171	1425	5.0	10/8/2012	Not Encountered	0-1.4 sand; 1.4-5 till
TP12-139	Plant Site	5894980	375511	1446	4.0	10/8/2012	4.0 slow seepage	0-2.2 sand; 2.2-4 sand and silt
TP12-140	Plant Site	5895166	375704	1427	4.0	10/8/2012	Not Encountered	0-0.3 sand; 0.3-2.5 sand and silt;2.5-4 silt and
TP12-141	Plant Site	5895498	375528	1366	5.5	10/8/2012	Not Encountered	0-0.8 sand; 0.5-5.5 till
TP12-142	Downstream of Pit	5894574	374598	1413	4.0	10/9/2012	2.5 slow seepage	0-3.5 sand; 3.5-4 till
TP12-143	Downstream of Pit	5895019	374320	1426	4.0	10/9/2012	1.0 fast seepage	0-1.2 sand; 1.2-4 sand and gravel
TP12-144	Downstream of Pit	5894976	373659	1443	4.0	10/9/2012	Not Encountered	0-1 sand; 1-4 till
TP12-145	Downstream of Pit	5894987	373088	1413	4.5	10/9/2012	3.0 moderate seepage	0-3 sand; 3-4.5 till
TP12-146	Downstream of Pit	5894550	373999	1440	4.5	10/9/2012	2.5 slow seepage	0-0.8 sand; 0.8-4.5 sand and silt
TP12-147	Downstream of Pit	5894511	373582	1480	5.5	10/9/2012	Not Encountered	0-1.2 sand; 1.2-5.5 till
TP12-148	Downstream of Pit	5894196	373069	1446	3.5	10/9/2012	Not Encountered	0-1.2 sand; 1.2-3.5 bedrock
TP12-149	TSF Site C Alignment	5895651	374667	1371	5.0	10/9/2012	4.0 fast seepage	0-5 sand and gravel
TP12-150	TSF Site C Containment	5895999	373270	1314	3.0	10/9/2012	1.5 slow seepage	0-1.5 sand; 1.5-3 till
TP12-151	TSF Site C Containment	5896007	373718	1302	5.0	10/9/2012	4.0 moderate seepage	0-5 sand and silt
TP12-152	TSF Site C Alignment	5896497	374453	1346	5.5	10/10/2012	5.0 moderate seepage	0-0.5 sand; 0.5-5.5 sand and gravel
TP12-153	TSF Site D Containment	5896605	374671	1325	4.5	10/10/2012	Not Encountered	0-1 sand; a-4.5 sand and gravel
TP12-154	TSF Site D Containment	5896494	374813	1292	5.5	10/10/2012	Not Encountered	0-5.5 sand
TP12-155	Downstream of Pit	5898521	376910	1220	5.0	10/10/2012	Not Encountered	0-5 sand and gravel
TP12-156	Downstream of Pit	5898538	376653	1232	5.0	10/10/2012	Not Encountered	0-5 sand and gravel
TP12-157	TSF Site D Alignment	5898524	376481	1231	7.0	10/10/2012	Not Encountered	0-7 sand and gravel
TP12-158	Downstream of Pit	5899330	377978	1175	1.5	10/10/2012	Not Encountered	0-1.5 sand and gavel
TP12-159	Downstream of Pit	5900620	378912	1144	3.5	10/10/2012	Not Encountered	0-3.5 sand and gravel
TP13-161	West Waste Dump	5894019	375620	1492	3.1	6/27/2013	3.0 Slow Inflow	0-0.3 TOPSOIL; 0.3-3 Sandy GRAVEL; 3-3.1 BE
TP13-162	West Waste Dump	5894013	375326	1498	1.6	6/27/2013	Not Encountered	0-0.4 TOPSOIL; 0.4-1.6 Silty GRAVEL
TP13-163	West Waste Dump	5894007	374709	1458	3.5	6/27/2013	2.2 Slow Seepage	0-0.3 TOPSOIL; 0.3-3.5 SAND and GRAVEL; 3.5-3.
TP13-164	West Waste Dump	5894002	374146	1434	3.0	6/27/2013	1.7 Fast Inflow	0-3 SAND and GRAVEL; 3-3 BEDROCK
TP13-165	West Waste Dump	5893495	374321	1479	4.0	6/27/2013	0.2 Very Fast Inflow	0-0.2 PEAT; 0.2-4 Silty Sandy GRAVEL
TP13-166	West Waste Dump	5893500	373947	1473	3.8	6/27/2013	Not Encountered	0-0.3 PEAT; 0.3-3.8 Silty Sandy GRAVE
TP13-167	West Waste Dump	5893781	373494	1449	5.0	6/27/2013	4.0 Slow Inflow	0-0.3 PEAT; 0.3-4 Gravelly SAND; 4-5 Silty SAND a
TP13-168	West Waste Dump	5893500	373422	1484	2.3	6/27/2013	1.2 Slow Inflow	0-2.3 SAND and GRAVEL
TP13-169	West Waste Dump	5893524	373094	1487	2.6	6/27/2013	0.9 Slow Seepage	0-2.4 Gravelly SAND; 2.4-2.6 BEDROCK
TP13-170	West Waste Dump	5893276	374017	1491	4.8	6/27/2013	3.5 Moderate Inflow	0-0.2 PEAT; 0.2-3.6 Silty SAND and GRAVEL; 3.6-4.8
TP13-171	West Waste Dump	5892999	374008	1520	5.0	6/27/2013	2.7 Slow Seepage	0-0.2 PEAT; 0.2-3.9 Silty SAND and GRAVEL; 3
TP13-172	East Waste Dump	5894043	376054	1469	5.0	6/27/2013	2.6 Moderate Seepage	0-6 Silty SAND and GRAVEL
TP13-173	East Waste Dump	5894070	376616	1456	6.0	6/27/2013	3.0 Slow Inflow	0-2.7 Silty Gravelly SAND; 2.7-6 SAND and G
TP13-174	West Waste Dump	5892589	374515	1585	6.4	6/27/2013	1.0 Slow Inflow	0-0.2 PEAT; 0.3-6.4 Gravelly SAND
TP13-175	Downstream of Embankment D	5897946	377350	1232	3.8	7/8/2013	Not Encountered	0-3.8 Sandy SILT
TP13-176	Plant Site	5896030	375435	1337	5.0	7/8/2013	4.5 Slow Seepage	0-5 Gravelly SAND
TP13-177	Plant Site	5895846	375448	1343	1.8	7/8/2013	1.0 Slow Seepage	0-0.6 PEAT; 0.6-1.8 GRAVEL
TP13-178	Downstream of Embankment D	5900160	378581	1146	3.0	6/28/2013	Not Encountered	0-0.2 PEAT; 0.2-3 GRAVEL and SAND
TP13-179	Downstream of Embankment D	5900040	378410	1170	4.1	6/28/2013	Not Encountered	0-0.2 PEAT; 0.2-4.1 Gravelly SAND
TP13-180	Downstream of Embankment D	5899897	378522	1149	4.2	6/28/2013	Not Encountered	0-0.2 PEAT; 0.2-4.2 SAND and GRAVEL
TP13-181	Downstream of Embankment D	5899722	378400	1154	4.0	6/28/2013	Not Encountered	0-4 SAND and GRAVEL
TP13-182	Downstream of Embankment D	5899646	378123	1166	4.2	6/28/2013	Not Encountered	0-4.2 Sandy GRAVEL
TP13-183	Downstream of Embankment D	5899898	378110	1174	3.8	6/29/2013	Not Encountered	0-0.15 PEAT; 0.15-3.8 SAND
TP13-184	Downstream of Embankment D	5899631	377767	1174	3.8	6/29/2013	3.8 Slow Seepage	0-0.15 PEAT; 0.15-3.8 Sandy GRAVEL
TP13-185	Downstream of Embankment D	5899469	377766	1177	4.0	6/29/2013	Not Encountered	0-1.2 Gravelly SAND; 1.2-4 SAND and GRA
TP13-186	Downstream of Embankment D	5899475	377625	1188	4.2	6/29/2013	Not Encountered	0-4.2 SAND and GRAVEL
TP13-187	Downstream of Embankment D	5899090	377728	1181	4.3	6/29/2013	Not Encountered	0-0.15 PEAT; 0.15-4.3 SAND and GRAVE
TP13-188	Downstream of Embankment D	5898891	377600	1192	4.0	6/29/2013	Not Encountered	0-0.1 PEAT; 0.1-4 SAND and GRAVEL
TP13-189	Downstream of Embankment D	589670	377476	1198	4.7	6/30/2013	Not Encountered	0-0.2 PEAT; 0.2-4.7 Gravelly SAND
TP13-190	Downstream of Embankment D	5899152	377253	1199	5.0	6/30/2013	Not Encountered	0-0.1 PEAT; 0.1-5 SAND and GRAVEL
TP13-191	Downstream of Embankment D	5899353	377399	1193	6.2	6/30/2013	Not Encountered	0-0.1 PEAT; 0.1-6.2 SAND and GRAVEL
TP13-192	Downstream of Embankment D	5899610	380661	1129	4.1	7/1/2013	0.6 Fast Inflow	0-4.1 Sandy GRAVEL
TP13-193	Downstream of Embankment D	5899200	380121	1160	5.2	7/1/2013	0.4 Slow Seepage	0-5.2 Sandy Gravelly SILT
TP13-194	Downstream of Embankment D	5898977	379946	1178	2.4	7/1/2013	0.2 Slow Seepage	0-2.2 Sandy GRAVEL; 2.2-2.4 BEDROC
TP13-195	Downstream of Embankment D	5898721	379705	1188	4.0	7/1/2013	0.3 Slow Inflow	0-4 Sandy Gravelly SILT
TP13-196	Downstream of Embankment D	5899006	379304	1178	4.8	7/1/2013	4.0 Fast Inflow	0-4.8 SAND
TP13-197	Downstream of Embankment D	5899006	379316	1178	5.0	7/1/2013	4.2 Slow Seepage	0-0.15 Sandy SILT; 0.15-6 Gravelly SILT
TP13-198	Downstream of Embankment D	5898524	378878	1185	4.0	7/1/2013	3.8 Fast Inflow	0-0.2 TOPSOIL; 0.2-4 SAND and GRAVE
TP13-199	Downstream of Embankment D	5898683	378673	1185	3.9	7/1/2013	1.4 Moderate Seepage	0-0.15 PEAT; 0.15-3.9 Sandy Gravelly SI
TP13-200	West Waste Dump	5892498	374095	1555	5.2	6/28/2013	1.3 Slow Inflow	0-5.2 Silty Gravelly SAND
TP13-201	East Waste Dump	5893506	376570	1485	5.0	6/28/2013	2.0 Slow Seepage	0-4.2 Sandy Gravelly SILT
TP13-202	East Waste Dump	5893494	376938	1477	4.2	6/28/2013	2.0 Slow Seepage	0-4 Sandy Gravelly SILT
TP13-203	East Waste Dump	5893491	377309	1484	5.0	6/28/2013	1.0 Fast Seepage	0-4.7 Sandy Gravelly SILT
TP13-204	East Waste Dump	5893737	377475	1452	5.0	6/28/2013	3.0 Moderate Seepage	0-5 SAND and GRAVEL
TP13-205	Downstream of Pit	5893997	377576	1418	5.0	6/28/2013	1.0 Moderate Seepage	0-5 Sandy Gravelly SILT

Knight Piésold CONSULTING

TABLE B.1

NEW GOLD INC.
BLACKWATER GOLD PROJECT

GEOTECHNICAL CHARACTERIZATION REPORT
TEST PIT SUMMARY

Test Pit	Location	Northing m	Easting m	Elevation m	Total Depth m	Date	Water Level m	Geotechnical Conditions
TP13-206	Downstream of Pit	5894229	377855	1410	5.0	6/28/2013	2.5 Fast Seepage	0-0.75 TOPSOIL; 0.75-5 GRAVEL and SA
TP13-207	Downstream of Pit	5894476	378177	1396	5.0	6/28/2013	Not Encountered	0-0.5 TOPSOIL; 0.5-5 Sandy Gravelly SIL
TP13-208	Downstream of Pit	5894478	377981	1381	5.0	6/28/2013	3.0 Slow Seepage	0-0.75 TOPSOIL; 0.75-5 SAND and GRAV
TP13-209	Downstream of Pit	5894510	378484	1362	5.0	6/28/2013	4.0 Fast Seepage	0-0.75 TOPSOIL; 0.75-5 Sandy Gravelly S
TP13-210	Downstream of Pit	5894731	378123	1372	5.0	6/28/2013	Not Encountered	0-0.75 TOPSOIL; 0.75-5 SAND and GRAV
TP13-211	Downstream of Pit	5894981	378299	1326	5.0	6/28/2013	Not Encountered	0-1.5 TOPSOIL; 1.5-5 Sandy SILT
TP13-212	Downstream of Pit	5895059	378501	1307	4.0	6/28/2013	2.0 Moderate Seepage	0-0.25 TOPSOIL; 0.25-4 SAND and GRAV
TP13-213	West Waste Dump	5894181	374961	1460	4.5	6/29/2013	1.0 Fast Inflow	0-0.5 COBBLES; 0.5-4.5 Silty Gravelly SA
TP13-214	Downstream of Pit	5894495	377289	1406	4.5	6/29/2013	Not Encountered	0-4.5 Silty Gravelly SAND
TP13-215	Downstream of Pit	5894778	376233	1410	4.0	6/29/2013	1.0 Moderate Seepage	0-4 Silty Gravelly SAND
TP13-216	Plant Site	5894981	376509	1409	5.0	6/29/2013	Not Encountered	0-5 SAND
TP13-217	Downstream of Pit	5894937	377214	1364	5.0	6/29/2013	0.75 Moderate Seepage	0-0.75 TOPSOIL; 0.75-5 Sandy GRAVE
TP13-218	Downstream of Pit	5894983	377701	1315	5.0	6/29/2013	0.75 Slow Seepage	0-0.25 TOPSOIL; 0.25-5 Silty SAND
TP13-219	Plant Site	5895511	370496	1345	5.0	6/29/2013	Not Encountered	0-0.25 TOPSOIL; 0.25-5 Silty GRAVEL
TP13-220	Downstream of West Embankment	5893814	370645	1353	3.5	6/30/2013	Not Encountered	0-1 TOPSOIL; 1-3.5 SAND and GRAVE
TP13-221	Downstream of West Embankment	5893829	370845	1349	5.0	6/30/2013	5.0 Slow Seepage	0-1 Sandy GRAVEL; 1-5 Gravelly SAND
TP13-222	Downstream of West Embankment	5894064	370977	1347	4.0	6/30/2013	1.0 Slow Seepage	0-4 SAND and GRAVEL
TP13-223	Downstream of West Embankment	5894205	371089	1355	5.0	6/30/2013	Not Encountered	0-5 Sandy GRAVEL
TP13-224	Downstream of West Embankment	5894397	371207	1361	5.0	6/30/2013	Not Encountered	0-4 Gravelly SAND; 4-5 BEDROCK
TP13-225	Downstream of West Embankment	5894698	371444	1355	5.0	6/30/2013	5.0 Slow Seepage	0-5 Sandy Gravelly SILT
TP13-226	Downstream of Embankment D	5898405	378360	1201	5.0	7/2/2013	1.0 Moderate Seepage	0-5 SAND and GRAVEL
TP13-227	Downstream of Embankment D	5898366	377988	1202	5.0	7/2/2013	5.0 Moderate Seepage	0-5 Gravelly SILT
TP13-228	Downstream of Embankment D	5898208	378827	1200	4.0	7/2/2013	Not Encountered	0-4 Gravelly SAND
TP13-229	Downstream of Embankment D	5897852	379123	1207	5.0	7/2/2013	1.0 Moderate Seepage	0-5 Gravelly SILT
TP13-230	Downstream of Embankment D	5897742	379216	1208	5.0	7/2/2013	2.0 Slow Seepage	0-5 SAND and GRAVEL
TP13-231	Downstream of Embankment D	5897235	378905	1228	5.0	7/2/2013	1.5 Moderate Seepage	0-5 Silty Gravelly SAND
TP13-232	Downstream of Embankment D	5897438	378650	1250	5.0	7/2/2013	Not Encountered	0-5 SAND and GRAVEL
TP13-233	Downstream of Embankment D	5897678	378331	1242	4.0	7/2/2013	0.75 Moderate Seepage	0-4 Gravelly SILT
TP13-234	Downstream of Embankment D	5899017	376988	1211	4.0	7/4/2013	Not Encountered	0-4 SAND and GRAVEL
TP13-235	Downstream of Embankment D	5899042	376753	1218	4.0	7/4/2013	Not Encountered	0-4 SAND and GRAVEL
TP13-236	Embankment C Borrow Source	5897004	374007	1342	4.0	7/4/2013	1.8 Slow Inflow	0-0.9 Sandy SILT; 0.9-1.6 Sandy SILT; 1.6-4 Silty Sa
TP13-237	Embankment C Borrow Source	5896799	374192	1341	4.9	7/4/2013	1.6 Moderate Inflow	0-1.6 Sandy Gravelly SILT; 1.6-2.8 Silty Sandy GRAVEL; 2
TP13-238	Embankment C Borrow Source	5896596	374200	1358	4.4	7/4/2013	3.5 Moderate Seepage	0-4.4 SAND and GRAVEL
TP13-239	TSF Site C Containment	5896401	374268	1344	3.9	7/4/2013	Not Encountered	0-3.9 SAND and GRAVEL
TP13-240	Downstream of Embankment D	5899671	376630	1192	5.0	7/3/2013	4.9 Slow Inflow	0-5 Silty SAND
TP13-241	Downstream of Embankment D	5899592	376331	1210	4.8	7/3/2013	Not Encountered	0-4.8 Gravelly SILT
TP13-242	Downstream of Embankment D	5899599	376064	1228	4.5	7/3/2013	Not Encountered	0-4.5 Sandy SILT
TP13-243	Downstream of Embankment D	5899448	375838	1252	4.2	7/3/2013	1.0 Moderate Inflow	0-4.2 Silty Gravelly SAND
TP13-244	Downstream of Embankment D	5899410	376726	1202	4.0	7/3/2013	2.4 Moderate Seepage	0-4 Sandy SILT
TP13-245	Downstream of Embankment D	5899485	376989	1186	4.8	7/3/2013	Not Encountered	0-4.8 Silty SAND
TP13-246	Downstream of Embankment D	5899445	376394	1220	4.1	7/3/2013	Not Encountered	0-4.1 SAND
TP13-247	Downstream of Embankment D	5898978	376477	1230	5.1	7/3/2013	Not Encountered	0-5.1 SAND
TP13-248	TSF Site C Alignment	5896635	374495	1330	4.0	7/4/2013	Not Encountered	0-4 Gravelly SAND
TP13-249	TSF Site C Alignment	5896410	374495	1324	4.0	7/4/2013	0.5 Moderate Seepage	0-0.15 PEAT; 0.15-4 Silty SAND
TP13-250	Embankment C Borrow Source	5896989	373490	1379	3.8	7/5/2013	1.7 Moderate Seepage	0-3.8 Gravelly SAND
TP13-251	Embankment C Borrow Source	5896715	373502	1381	3.2	7/5/2013	2.8 Slow Seepage	0-2.8 Silty Gravelly SAND; 2.8-3.2 Gravelly
TP13-252	Downstream of West Embankment	5894809	371645	1348	4.4	7/5/2013	4.0 Very Fast Inflow	0-4.2 SAND and GRAVEL
TP13-253	TSF Site C Containment	5895012	371686	1357	5.3	7/5/2013	Not Encountered	0-4.5 Silty Gravelly SAND
TP13-254	West Embankment Borrow Source	5895300	371756	1366	4.4	7/5/2013	3.0 Slow Seepage	0-3.5 Silty Gravelly SAND; 3.5-4.4 Gravelly
TP13-255	West Embankment Borrow Source	5895557	371711	1376	3.3	7/5/2013	Not Encountered	0-3.3 Gravelly SAND
TP13-256	West Embankment Borrow Source	5895735	371507	1376	5.0	7/5/2013	Not Encountered	0-3.9 Sandy Gravelly SILT; 3.9-5 Gravelly S
TP13-257	West Embankment Borrow Source	5895999	371443	1374	4.9	7/5/2013	3.6 Slow Inflow	0-4.9 Sandy Gravelly SILT
TP13-258	TSF Site C Containment	5895496	373029	1321	1.2	7/5/2013	1.0 Slow Seepage	0-0.5 Silty Sandy GRAVEL; 0.5-1.2 BEDRO
TP13-259	TSF Site C Containment	5895499	373314	1338	4.2	7/6/2013	Not Encountered	0-0.15 PEAT; 0.15-4.2 Sandy Gravelly SI
TP13-260	Plant Site	5894645	374994	1429	5.0	7/5/2013	2.0 Slow Seepage	0-5 Sandy GRAVEL
TP13-261	Plant Site	5894919	375350	1437	5.0	7/5/2013	4.0 Slow Seepage	0-5 Gravelly SAND
TP13-262	Plant Site	5895087	375584	1431	3.2	7/5/2013	3.0 Moderate Seepage	0-0.5 TOPSOIL; 0.5-3 Silty Gravelly SAND; 3-3.2
TP13-263	Plant Site	5895208	375861	1395	5.0	7/5/2013	Not Encountered	0-3.5 Gravelly SILT; 3.5-5 Gravelly SILT
TP13-264	Plant Site	5895019	375994	1410	5.0	7/5/2013	1.5 Slow Seepage	0-4 Gravelly SILT; 4-5 Gravelly SILT
TP13-265	Plant Site	5895386	375961	1368	5.0	7/5/2013	2.0 Slow Seepage	0-5 Sandy Gravelly SILT
TP13-266	Plant Site	5895503	375808	1354	5.0	7/5/2013	Not Encountered	0-5 Silty Sandy GRAVEL
TP13-267	Plant Site	5894827	375787	1418	5.0	7/5/2013	Not Encountered	0-5 Sandy Gravelly SILT
TP13-268	Plant Site	5894922	375536	1443	5.0	7/5/2013	Not Encountered	0-0.25 TOPSOIL; 0.25-5 Silty Gravelly SA
TP13-269	Plant Site	5894920	375568	1441	3.2	7/5/2013	3.0 Moderate Seepage	0-0.25 TOPSOIL; 0.25-3 Silty Gravelly SAND; 3-3.2 WEAT
TP13-270	Plant Site	5894918	375559	1442	5.0	7/5/2013	Not Encountered	0-0.5 TOPSOIL; 0.5-5 Silty Gravelly SAN
TP13-271	Plant Site	5894789	375458	1431	5.0	7/5/2013	Not Encountered	0-1 TOPSOIL; 1-5 BEDROCK
TP13-272	Plant Site	5894692	375244	1412	4.0	7/5/2013	3.0 Moderate Inflow	0-1.5 TOPSOIL; 1.5-4 Sandy Gravelly SI
TP13-273	TSF Site C Containment	5895516	373553	1344	2.7	7/6/2013	Not Encountered	0-2.7 Silty Gravelly SAND
TP13-274	Plant Site	5895080	372368	1372	2.5	7/6/2013	Not Encountered	0-0.15 PEAT; 0.15-2.3 SAND and GRAVEL; 2.3-2.5
TP13-275	Plant Site	5895046	372625	1366	3.5	7/6/2013	1.2 Moderate Seepage	0-0.15 PEAT; 0.15-1.2 Silty SAND; 1.2-3.5 San
TP13-276	Plant Site	5895009	372993	1392	4.1	7/7/2013	0.6 Moderate Seepage	0-3.8 Silty Gravelly SAND; 3.8-4.1 Gravelly
TP13-277	West Waste Dump	5894757	374009	1432	4.0	7/7/2013	Not Encountered	0-0.2 PEAT; 0.2-4 Sandy SILT
TP13-278	West Waste Dump	5895009	374023	1426	2.8	7/7/2013	Not Encountered	0-2.4 SAND; 2.4-2.8 BEDROCK
TP13-279	West Waste Dump	5895040	374665	1417	4.2	7/7/2013	4.0 Very Fast Inflow	0-4.2 Silty Sandy GRAVEL
TP13-280	Plant Site	5894801	374815	1398	4.0	7/7/2013	Not Encountered	0-3.8 Silty gravelly SAND; 3.8-4 Gravelly S
TP13-281	Plant Site	5894996	375169	1401	4.0	7/7/2013	1.2 Slow Seepage	0-0.15 PEAT; 0.15-3.8 Sandy SILT; 3.8-4 Grav
TP13-282	Plant Site	5895184	375260	1401	4.2	7/7/2013	0.8 Slow Inflow	0-0.15 PEAT; 0.15-4.2 Sandy Gravelly SI
TP13-283	Plant Site	5895334	375523	1385	3.7	7/7/2013	3.5 Moderate Seepage	0-0.15 PEAT; 0.15-3.5 Sandy Gravelly SILT; 3.5-3.7
TP13-284	Plant Site	5894463	375555	1422	3.7	7/8/2013	1.4 Moderate Seepage	0-3.2 Silty Gravelly SAND
TP13-285	Plant Site	5894600	375545	1406	4.2	7/8/2013	0.0 Moderate Seepage	0-1.1 PEAT; 1.1-4.2 Silty SAND
TP13-286	Plant Site	5894221	375565	1493	5.0	7/8/2013	Not Encountered	0-0.3 Silty Gravelly SAND; 0.3-5 BEDROC
TP13-287	Plant Site	5894294	375553	1472	3.4	7/8/2013	1.6 Slow Seepage	0-0.2 PEAT; 0.2-2.3 Silty SAND and GRAVEL; 2.3-3
TP13-288	West Waste Dump	5894451	374793	1433	3.4	7/8/2013	2.1 Fast Inflow	0-0.3 PEAT; 0.3-2.8 Silty Gravelly SAND; 2.8-3.4 Silty
TP13-289	TSF Site D Containment	5896498	375710	1310	4.2	7/8/2013	Not Encountered	0-0.15 PEAT; 0.15-0.4 Gravelly SAND; 0.4-4.2 SAND
TP13-290	TSF Site D Containment	5896494	375898	1318	3.8	7/8/2013	2.8 Slow Seepage	0-3.8 SAND and GRAVEL
TP13-291	TSF Site D Containment	5896994	375667	1264	2.3	7/8/2013	0.6 Slow Inflow	0-1.7 Silty Sandy GRAVEL; 1.7-2.3 Gravelly
TP13-292	TSF Site D Containment	5896982	375935	1262	2.3	7/8/2013	Not Encountered	0-2.3 SAND
TP13-293	Plant Site	5895046	375508	1437	4.0	8/3/2013	4.0 Moderate Inflow	0-0.2 TOPSOIL; 0.2-0.5 Silty SAND; 0.5-3.8 Sandy SILT;
TP13-294	Plant Site	5895020	375430	1437	5.0	8/3/2013	3.8 Slow to Moderate Inflow	0-0.1 TOPSOIL; 0.1-1.0 Silty SAND; 1-1.5 SAND; 1.5
TP13-295	Plant Site	5894966	375458	1442	5.0	8/3/2013	4.2 Slow Seepage	0-0.1 TOPSOIL; 0.1-1.5 Silty SAND; 1.5-2.5 Silty GRAVEL
TP13-296	Plant Site	5895069	375391	1429	5.0	8/3/2013	4.0 Slow Inflow	0-0.2 TOPSOIL; 0.2-1.5 Silty SAND; 1.5-2 Silty GRAVEL
TP13-297	Plant Site	5895079	375698	1432	5.5	8/3/2013	Not Encountered	0-0.2 TOPSOIL; 0.2-5.5 Sandy SILT
TP13-298	Plant Site	5895058	375771	1428	5.0	8/3/2013	Not Encountered	0-0.15 TOPSOIL; 0.15-4.5 Silty SAND; 4.5-5 Sa
TP13-299	Plant Site	5895010	375323	1428	5.0	8/3/2013	4.2 Slow to Moderate Inflow	0-0.2 TOPSOIL; 0.2-0.5 Silty SAND; 0.5-5.0 Sa
TP13-300	Plant Site	5894965	375365	1437	5.0	8/3/2013	Not Encountered	0-0.2 TOPSOIL; 0.2-0.8 Silty SAND; 0.8-5.0 Gra
TP13-301	Plant Site	5894923	375409	1440	5.0	8/3/2013	Not Encountered	0-0.2 TOPSOIL; 0.2-1 Sandy SILT; 1-5 Silty G
TP13-302	Plant Site	5894850	375402	1435	5.0	8/3/2013	Not Encountered	0-0.1 TOPSOIL; 0.1-0.5 Silty SAND; 0.5-1.5 Silty GRA
TP13-303	Plant Site	5894860	375479	1439	3.5	8/3/2013	Not Encountered	0-0.2 TOPSOIL; 0.2-3 Sandy SILT; 3-3.5 BED
TP13-304	Plant Site	5894978	374660	1410	5.0	8/3/2013	0.5 Moderate Inflow	0-0.2 TOPSOIL; 0.2-5 Sandy SILT
TP13-305	Plant Site	5894894	374551	1411	5.0	8/3/2013	3.0 Moderate Inflow	0-0.1 TOPSOIL; 0.1-5 Sandy Gravelly SI

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REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	18NOV'13	ISSUED WITH REPORT	JBC	BB	KJB

TABLE B.2

NEW GOLD INC.
BLACKWATER GOLD PROJECT

GEOTECHNICAL CHARACTERIZATION REPORT
GEOTECHNICAL DRILLHOLE SUMMARY

Drillhole Identification #	Location	Coordinate[1] Northing	Coordinate[1] Easting	Elevation	Drilling Company	Drilling Technique	Drillhole Size (mm)	Total Depth	Depth to Bedrock	In-Situ Testing: Packer Tests Depth (m)	In-Situ Testing: Permeability (m/s)	In-Situ Installations: Standpipe (SP) Seismic Line (SL) Vibrating Wire (VW)
		m	m	m				m	m			
GT12-01	Site D Embankment	5,898,690	376,021	1,245	Westech	Odex	102	88.3	61.3	75.9 - 82.2 82.0 - 88.3	No Take 9E-09	SP 66.90 - 73.15 m VW 23.6 m
GT12-02	Site D Embankment	5,898,110	376,420	1,218	Westech	Odex	102	106.5	86.3	94.2 - 100.5 100.3 - 106.6	1E-07 6E-09	VW 13m, 36m, and 95
GT12-03	Site D Embankment	5,899,320	375,495	1,272	Westech	Odex	102	74.4	53.3	62.0 - 68.3 68.1 - 74.4	8E-09 4E-07	SP 53.34 - 58.82 m
GT12-04	Site C Embankment	5,896,470	374,474	1,331	Westech	Odex	102	91.6	72.5	79.2 - 85.5 85.3 - 91.6	1E-08 2E-07	SP 66.44 - 74.06 m
GT12-05	Site C Embankment	5,895,650	374,706	1,363	Westech	Odex	102	120.1	79.2	89.4 - 95.7 95.5 - 101.8 101.6 - 107.9 107.7 - 114.0 113.8 - 120.1	2E-07 4E-09 9E-07 5E-08 1E-05	VW 11m, 28m, and 80
GT12-06	Site C Embankment	5,896,100	374,569	1,281	Westech	Odex	102	67.1	42.7	54.7 - 61.0 60.8 - 67.1	6E-09 1E-08	SP 45.72 - 51.81 m
GT12-07	Plant Site, Option 1	5,894,940	375,495	1,444	Westech	Odex	102	36.4	5.8	17.9 - 24.2 24.0 - 30.3 30.1 - 36.4	8E-08 3E-08 1E-07	SP 13.72 - 19.81 m
GT12-08	TELUS Tower / Primary Crusher	5,894,150	375,620	1,507	Westech	Odex	102	30.4	1.5	8.8 - 15.1 14.9 - 21.2 21.0 - 25.8 25.6 - 30.3	8E-09 1E-07 1E-09 1E-07	SP 6.1 - 12.2 m
GT12-09	Site D Embankment	5,897,640	376,624	1,239	Westech	Odex	102	125.0	81.1	112.6 - 118.9 118.7 - 125	2E-09 1E-08	SP 105.0 - 111.28 m
GT12-10	Site D Embankment	5,897,280	376,926	1,258	Westech	Odex	102	45.7	24.4	33.3 - 39.6 39.4 - 45.7	1E-08 4E-07	SP 26.64 - 32.92 m
GT12-11	Site D Upstream, Site D Embankment	5,896,980	377,036	1,282	Westech	Odex	102	68.6	2.5	7.4 - 13.7 13.5 - 19.8	4E-07 8E-07	SP 10.67 - 15.54 m
GT12-12	Site D Embankment	5,895,900	376,780	1,335	Westech	Odex	102	39.6	22.3	27.2 - 33.5 33.3 - 39.6	6E-08 2E-08	SP 18.29 - 24.38 m
GT12-13	Inside Site D TSF	5,895,810	375,450	1,362	Major	Sonic	102	67.1	65.5			
GT12-14	Site D Embankment	5,898,820	375,942	1,250	Major	Sonic	102	59.5	57.9			
GT12-15	Inside Site D TSF Area	5,898,200	376,098	1,230	Major	Sonic	102	97.5	94.1			
GT12-16	Site D Embankment	5,898,200	376,299	1,229	Major	Sonic	102	99.1	96.4			
GT12-17	Downstream of Site D Embankment	5,898,550	377,098	1,209	Major	Sonic	102	112.8	107.0			
GT12-18	Site D Embankment	5,898,490	376,248	1,233	Major	Sonic	102	80.8	79.3			
GT12-19	Site D Upstream, Site D Embankment	5,898,980	375,719	1,266	Major	Sonic	102	73.2	68.8			
GT12-20	Site D Upstream, Site D Embankment	5,899,370	375,128	1,274	Major	Sonic	102	48.8	45.7			
GT12-21	Inside Site D TSF Area	5,899,040	375,467	1,278	Major	Sonic	102	82.3	79.3			
GT12-22	Inside Site D TSF Area	5,898,980	375,211	1,260	Major	Sonic	102	64.0	61.0			
GT12-23	Downstream of Site D Embankment	5,899,390	375,839	1,276	Major	Sonic	102	61.0	-			
GT12-24	Inside Site D TSF Area	5,898,640	375,517	1,258	Major	Sonic	102	59.2	53.3			
GT12-25	Site D Embankment, North Abutment	5,899,280	373,655	1,313	Major	Sonic	102	57.9	54.9			
GT12-26	Site D Embankment, North Abutment	5,899,220	374,387	1,276	Major	Sonic	102	21.3	18.6			
GT12-27	Downstream of Site D Embankment	5,899,410	376,465	1,229	Major	Sonic	102	82.3	44.2			
GT12-28	West Saddle Dam	5,894,840	371,774	1,338	Westech	Odex	102	27.7	11.6	14.9 - 21.6 21.6 - 27.7	3E-08 8E-08	SP 10.97 - 14.8 m
GT12-29	Inside Site D TSF Area	5,898,510	376,004	1,235	Major	Sonic	102	48.8	42.7			
GT12-30	Inside Site D TSF Area	5,897,570	375,613	1,248	Major	Sonic	102	51.8	45.7			
GT12-31	Inside Site D TSF Area	5,898,000	375,981	1,240	Major	Sonic	102	57.9	45.7			
GT12-32	Site C Embankment, North Profile Longsection	5,896,530	374,523	1,334	Major	Sonic	102	76.2	73.2			
GT12-33	Site C Embankment	5,896,550	374,293	1,350	Major	Sonic	102	48.8	42.8			
GT12-34	Plant Site, Option 2	5,895,110	374,575	1,423	Major	Sonic	102	82.3	76.2			
GT12-35	Site C Embankment	5,895,960	374,594	1,319	Major	Sonic	102	54.9	41.4			
GT12-36	Inside Site D TSF Area	5,896,580	375,991	1,321	Major	Sonic	102	109.7	84.2			
GT12-37	Inside Site D TSF Area	5,897,000	376,483	1,300	Major	Sonic	102	65.5	60.9			
GT12-38	Site D Embankment	5,897,440	376,782	1,261	Major	Sonic	102	57.9	48.8			
GT12-39	Inside Site D TSF Area	5,897,620	376,440	1,263	Major	Sonic	102	91.4	85.3			
GT12-40	Site D Embankment	5,897,780	376,546	1,231	Major	Sonic	102	102.1	80.8			
GT12-41	Inside Site D TSF Area	5,897,870	376,277	1,227	Major	Sonic	102	89.9	86.5			
GT12-42	Downstream of Site D Embankment	5,897,930	377,347	1,250	Major	Sonic	102	25.9	18.6			
GT12-43	Downstream of Site D Embankment	5,897,790	376,870	1,235	Major	Sonic	102	65.5	63.6			
GT12-44	Site D Embankment, South Abutment	5,895,630	376,474	1,340	Major	Sonic	102	25.9	21.2			
GT12-45	Open Pit - East Side	5,892,526	376,041	1,622	Major	Sonic	102	96.0	94.5			
GT12-46	Open Pit - East Side	5,892,950	376,286	1,551	Major	Sonic	102	65.5	62.5			
GT12-47	Downstream of Site D Embankment	5,899,438	377,750	1,198	Major	Sonic	102	93.0	87.2			
GT13-01	Site D Embankment	5,897,653	376,612	1,237	Major Drilling	Sonic	102	88	63.7			
GT13-02	Downstream of Site D Embankment	5,898,895	376,737	1,223	Major Drilling	Sonic	102	91	61.0			VW 36 m, 60 m, and 86.
GT13-03	Site D Embankment	5,899,271	375,573	1,268	Major Drilling	Sonic	102	78	63.2			
GT13-04	Downstream of Site D Embankment	5,899,730	378,384	1,154	Major Drilling	Sonic	102	92	50.3			VW 11 m, 50.5 m, and 88.
GT13-05	Downstream of Site D Embankment	5,899,475	378,106	1,163	Major Drilling	Sonic	102	78	56.4			
GT13-06	Downstream of Site D Embankment	5,900,430	378,895	1,133	Major Drilling	Sonic	102	84	44.2			
GT13-07	TSF	5,897,005	374,991	1,275	Westech Drilling	Odex / HQ3	140/96	26	7.7	14.10 - 20.13 20.12 - 26.21	No Take No Take	SP 7.5 - 13.0 m
GT13-08	Site D Embankment	5,899,213	374,266	1,300	Westech Drilling	Odex / HQ3	140/96	28	13.6	15.39 - 21.49 21.48 - 27.58	6E-06 1E-05	SP 12.0 - 16.0 m
GT13-09	Site D Embankment	5,899,208	375,045	1,289	Westech Drilling	Odex / HQ3	140/96	61	27.4	35.06 - 41.16 42.68 - 48.78 50.30 - 56.40	No Take No Take No Take	SP 27.4 - 33.5 m
GT13-10	Site C Embankment	5,896,532	374,335	1,344	Westech Drilling	Odex / HQ3	140/96	76	62.5	64.18 - 70.27 70.27 - 76.37	1E-05 3E-06	SP 54.9 - 61.0 m
GT13-11	TSF	5,896,008	373,987	1,285	Westech Drilling	Odex / HQ3	140/96	35	7.2	19.36 - 25.76 22.41 - 33.38 28.51 - 34.91	No Take No Take No Take	SP 7.3 - 12.7 m
GT13-12	West Embankment (saddle dam)	5,894,752	371,940	1,367	Westech Drilling	Odex / HQ3	140/96	29	13.2	16.46 - 22.56 22.56 - 28.66	2E-05 4E-05	SP 8.2 - 12.2 m
GT13-13	West Embankment (saddle dam)	5,894,948	371,602	1,363	Westech Drilling	Odex / HQ3	140/96	36	16.2	23.78 - 30.18 30.18 - 36.28	5E-06 2E-05	SP 16.8 - 21.0 m
GT13-14	Site C Embankment	5,894,561	374,864	1,431	Westech Drilling	Odex / HQ3	140/96	59	27.1	-	-	SL 0.0 - 59.0 m
GT13-15	Plant Site	5,894,165	375,423	1,496	Westech Drilling	Odex / HQ3	140/96	32	1.1	-	-	SL 0.0 - 32.0 m
GT13-16	Plant Site	5,895,081	375,413	1,429	Westech Drilling	Odex / HQ3	140/96	37	6.1	-	-	SL 0.0 - 37.0 m
GT13-17	Plant Site	5,895,153	375,660	1,423	Westech Drilling	Odex / HQ3	140/96	44	12.0	-	-	SL 0.0 - 44.0 m
GT13-18	Plant Site	5,895,004	375,732	1,436	Westech Drilling	Odex / HQ3	140/96	52	10.5	-	-	SL 0.0 - 52.0 m
GT13-19	Site D Upstream, Site D Embankment	5,896,582	377,072	1,332	Westech Drilling	Odex / HQ3	140/96	27	4.3	8.99 - 15.09 13.56 - 19.66 21.18 - 27.28	3E-06 4E-05 6E-05	SP 5.8 - 11.3 m

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TABLE B.2

NEW GOLD INC.
BLACKWATER GOLD PROJECT

GEOTECHNICAL CHARACTERIZATION REPORT
GEOTECHNICAL DRILLHOLE SUMMARY

Drillhole Identification #	Location	Coordinate[1]		Elevation	Drilling Company	Drilling Technique	Drillhole Size (mm)	Total Depth	Depth to Bedrock	In-Situ Testing		In-Situ Installations
		Northing	Easting							Packer Tests Depth (m)	Permeability (m/s)	Standpipe (SP) Seismic Line (SL) Vibrating Wire (VW)
		m	m	m				m	m			
GT13-20	Site D Embankment	5,897,022	377,111	1,275	Westech Drilling	Odex / HQ3	140/96	110	9.1	12.65 - 18.74	2E-05	SP 30.5 - 35.9 m
										20.27 - 26.36	3E-05	
										26.36 - 35.51	2E-05	
										35.51 - 44.65	9E-05	
										44.65 - 55.32	2E-05	
										55.32 - 65.99	2E-06	
										65.99 - 76.65	2E-05	
										76.65 - 87.32	3E-05	
										87.32 - 97.99	8E-06	
										97.99 - 110.18	1E-05	
GT13-21	Site D Embankment	5,897,297	377,080	1,259	Westech Drilling	Odex / HQ3	140/96	101	27.1	29.72 - 35.81	9E-06	SP 69.2- 75.3 m
										35.81 - 41.91	1E-04	
										41.91 - 52.58	Test Stopped	
										41.91 - 58.67	Test Stopped	
										58.67 - 69.34	5E-05	
										69.34 - 80.01	7E-05	
										69.34 - 80.01	6E-05	
										80.01 - 90.67	2E-06	
										90.67 - 101.34	7E-07	
GT13-22	Plant Site	5,894,805	375,128	1,418	Mud Bay Drilling	Sonic	102	47.27	44.0			
GT13-23	Waste Dump	5,893,691	373,547	1,455	Mud Bay Drilling	Sonic	102	23.16	18.0			SP 17.0- 21.5 m
GT13-24	Waste Dump	5,893,935	374,323	1,450	Mud Bay Drilling	Sonic	102	74.8	73.0			SP 68.6- 73.2 m
GT13-25	Waste Dump	5,893,706	375,849	1,482	Mud Bay Drilling	Sonic	102	29.5	24.2			SP 23.8- 28.4 m
GT13-26	Waste Dump	5,893,472	376,236	1,491	Mud Bay Drilling	Sonic	102	35.05	26.9			
GT13-27	Site C Embankment	5,895,375	374,797	1,402	Mud Bay Drilling	Sonic	102	90.22	88.6			
GT13-28	Plant Site	5,894,718	374,976	1,422	Mud Bay Drilling	Sonic	102	15.54	11.0			
GT13-29	Site D Embankment	5,899,209	373,880	1,316	Mud Bay Drilling	Sonic	102	102.4	96.4			
GT13-30	North Site D Profile, Cut-off trench	5,899,792	376,382	1,202	Mud Bay Drilling	Sonic	102	26.51	23.7			SP 20.0- 24.5 m
GT13-31	Cut-off trench	5,899,017	377,339	1,193	Mud Bay Drilling	Sonic	102	81.07	79.5			SP 56.0- 63.0 m
GT13-32	Cut-off trench	5,898,740	377,530	1,195	Mud Bay Drilling	Sonic	102	110.33	108.3			SP 98.4- 103.0 m
GT13-33	2 km Downstream of Site D	5,899,712	377,617	1,171	Mud Bay Drilling	Sonic	102	45.3	44.3			SP 16.7- 20.7 m
GT13-34	2 km Downstream of Site D	5,898,984	378,209	1,182	Mud Bay Drilling	Sonic	102	102.4	99.4			SP 97.8- 102.4 m
GT13-35	Cut-off trench	5,899,556	376,961	1,183	Mud Bay Drilling	Sonic	102	59.74	54.0			SP 55.2- 59.74 m
GT13-36	Site C Embankment	5,896,296	374,540	1,281	Mud Bay Drilling	Sonic	102	38.4	34.1			SP 15.5- 20.1 m
GT13-37	Site C Embankment, South Profile Longsection	5,895,786	374,683	1,331	Mud Bay Drilling	Sonic	102	91.4	87.0			SP 5.2- 9.8 m
GT13-38	TSF	5,896,982	375,593	1,264	Mud Bay Drilling	Sonic	102	93.3	91.2			
GT13-39	TSF	5,897,484	376,036	1,237	Mud Bay Drilling	Sonic	102	96.12	68.6			
GT13-40	Downstream Site D	5,898,287	377,132	1,209	Mud Bay Drilling	Sonic	102	100.58	97.2			
GT13-41	South Profile Longsection	5,896,187	375,200	1,303	Mud Bay Drilling	Sonic	102	100	93.0			
GT13-42	Cut-off trench	5,898,226	377,615	1,218	Mud Bay Drilling	Sonic	102	55.17	53.0			SP 49.7- 53.7 m
GT13-43	Cut-off trench	5,898,482	377,606	1,199	Mud Bay Drilling	Sonic	102	92.07	87.4			SP 18.8- 22.8 m
GT13-44	Waste Dump	5,893,844	376,538	1,456	Mud Bay Drilling	Sonic	102	85.7	80.0			
GT13-45	Waste Dump	5,893,969	377,145	1,431	Mud Bay Drilling	Sonic	102	109.8	107.7			
GT13-46	Plant Site	5,894,451	375,572	1,425	Mud Bay Drilling	Sonic	102	26.82	18.1			SP 22.3- 26.8 m
GT13-47	Waste Dump	5,894,327	374,582	1,430	Mud Bay Drilling	Sonic	102	76.5	75.0			

\\van11\prj_file\1\01\00457\06\A\Report\8 - Geotechnical Charterization\Rev 0\Appendicies\Appendix B_reference tables\[Table B.2 and B.3_DH and MW summary.xlsx]Table B.2

NOTES:

1. COORDINATES PRESENTED IN UTM ZONE 9 NAD 83.
2. DRILLHOLE COORDINATES REFER TO AS BUILT LOCATIONS AND WERE SURVEYED BY ALLNORTH CONSULTANTS.

0	18NOV'13	ISSUED WITH REPORT	JAS	BB	KJB
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D

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TABLE B.3

NEW GOLD INC.
BLACKWATER GOLD PROJECT

GEOTECHNICAL CHARACTERIZATION REPORT
MONITORING WELL SUMMARY

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Drillhole Identification #	Drill Sites	Coordinates[1] Northing	Coordinates[1] Easting	Elevation	Drilling Company	Drilling Technique	Drillhole Size	Total Depth	Depth to Bedrock	Completion Zone From (m)	Completion Zone To (m)	Date of Water Level Measurement	Water Level After Installation	Hydraulic Conductivity	Purpose of Drillhole
		m	m	m				m	m	From (m)	To (m)	(dd-mm-yy)	(m below PVC)	(m/s)	
MW12-01-D	MW-D	5,899,360.0	374,655	1,302	Westech Drilling	Odex Drilling	6"	40.8	13.6	30.42	40.84	4/4/2012	13.11	<1 x10^{-08}	Northern abutment of TSF
MW12-01-S		5,899,360.0	374,658	1,302	Westech Drilling	Odex Drilling	6"	13.6	10.4	7.62	13.56	4/4/2012	10.37	n/a	
MW12-02-D	MW-M	5,894,670.0	374,690	1,406	Westech Drilling	Odex Drilling	6"	41.2	-	34.75	39.01	4/14/2012	5.93	6 x10^{-6}	Downslope of NAG Waste Dump and Open Pit
MW12-02-S		5,894,670.0	374,704	1,407	Westech Drilling	Odex Drilling	6"	11.9	-	7.01	11.89	4/14/2012	1.55	9 x10^{-6}	
MW12-03-D	MW-P	5,893,860.0	376,013	1,465	Westech Drilling	Odex Drilling	6"	39.6	-	32.00	38.10	4/28/2012	25.99	4 x10^{-5}	Downslope of Open Pit
MW12-03-S		5,893,860.0	376,004	1,465	Westech Drilling	Odex Drilling	6"	24.4	-	14.32	23.47	4/28/2012	dry	n/a	
MW12-04-D	MW-Q	5,892,500.0	374,110	1,558	Westech Drilling	Odex Drilling	6"	38.0	-	31.79	37.95	4/28/2012	3.39	2 x10^{-5}	Outside Open Pit Area and upslope of NAG Waste rock
MW12-04-S		5,892,500.0	374,116	1,558	Westech Drilling	Odex Drilling	6"	14.8	-	8.99	14.78	4/28/2012	1.52	5 x10^{-7}	
MW12-05-D	MW-H	5,896,210.0	371,310	1,373	Westech Drilling	Odex Drilling	6"	27.7	12.5	21.64	27.74	4/30/2012	0.72	4 x10^{-6}	Southern Starter Dam
MW12-05-S		5,896,210.0	371,309	1,373	Westech Drilling	Odex Drilling	6"	11.9	-	6.10	11.89	4/30/2012	1.59	<1 x10^{-8}	
MW12-06-D	MW-G	5,896,470.0	374,807	1,278	Westech Drilling	Odex Drilling	6"	39.9	-	33.83	39.93	4/30/2012	36.69	<1 x10^{-8}	Downstream of Southern Starter Dam
MW12-06-S		5,896,470.0	374,804	1,278	Westech Drilling	Odex Drilling	6"	22.6	-	16.76	22.55	4/30/2012	9.77	8 x10^{-6}	
MW12-07-D	MW-E	5,899,440.0	376,395	1,221	Westech Drilling	Odex Drilling	6"	40.5	-	33.83	40.49	6/6/2012	18.23	2 x10^{-4}	Downstream of TSF
MW12-07-S		5,899,440.0	376,399	1,221	Westech Drilling	Odex Drilling	6"	24.1	-	18.29	24.08	6/5/2012	18.46	1 x10^{-4}	
MW12-08D	MW-V	5,899,260.0	377,911	1,168	Westech Drilling	Odex Drilling	6"	36.4	-	29.70	36.42	8/19/2012	10.65	2 x10^{-6}	Downstream of TSF
MW12-08S		5,899,260.0	377,911	1,168	Westech Drilling	Odex Drilling	6"	20.1	-	14.17	20.12	8/19/2012	12.27	9 x10^{-5}	
MW12-09D	MW-U	5,899,680.0	378,321	1,165	Westech Drilling	Odex Drilling	6"	34.4	-	28.65	34.44	8/19/2012	11.36	6 x10^{-6}	Downstream of TSF
MW12-09S		5,899,680.0	378,321	1,165	Westech Drilling	Odex Drilling	6"	15.9	-	10.36	15.85	8/19/2012	11.42	n/a	
MW12-10D	MW-W	5,892,260.0	375,033	1,665	Westech Drilling	Odex Drilling	6"	42.1	5.2	33.22	42.06	8/20/2012	18.00	<1 x10^{-8}	Upstream of Deposit, west
MW12-10S		5,892,260.0	375,033	1,665	Westech Drilling	Odex Drilling	6"	7.0	5.2	3.35	7.01	8/20/2012	dry	n/a	
MW12-11D	MW-X	5,892,180.0	375,769	1,680	Westech Drilling	Odex Drilling	6"	46.6	17.0	36.27	46.63	8/20/2012	8.50	7 x10^{-7}	Upstream of Deposit, east
MW12-11S		5,892,180.0	375,769	1,680	Westech Drilling	Odex Drilling	6"	19.8	17.0	14.02	19.81	8/21/2012	8.29	4 x10^{-5}	
MW12-12D	MW-T	5,896,250.0	378,490	1,245	Westech Drilling	Odex Drilling	6"	35.2	-	29.26	35.20	8/23/2012	2.18	1 x10^{-7}	Downstream of TSF and Camp area
MW12-12S		5,896,250.0	378,490	1,245	Westech Drilling	Odex Drilling	6"	15.2	-	9.45	15.24	8/23/2012	2.00	1 x10^{-4}	
MW12-13D	MW-S	5,893,830.0	370,808	1,368	Westech Drilling	Odex Drilling	6"	39.5	-	35.81	38.86	9/12/2012	8.73	1 x10^{-4}	West of TSF
MW12-13S		5,893,830.0	370,808	1,368	Westech Drilling	Odex Drilling	6"	13.4	-	9.14	13.41	9/12/2012	9.57	>1 x10^{-4}	
DK/MW-05	Opus Dayton and Knight	5,894,075.5	376,757	1,461	Westech Drilling	Odex Drilling	6"	39.3	-	33.4	39.32	8/21/2012	dry	n/a	Upstream of Camp Septic
DK/MW-06		5,893,974.5	376,837	1,445	Westech Drilling	Odex Drilling	6"	18.6	-	12.3	16.59	8/21/2012	dry	n/a	Downstream of Camp Septic

\\van11\prj_file\1\01\00457\06\A\Report\8 - Geotechnical Charterization\Rev 0\Appendicies\Appendix B_reference tables\[Table B.2 and B.3_DH and MW summary.xlsx]Table B.2

NOTES:

1. COORDINATE SYSTEM: UTM NAD83
2. GEOTECH (GT) DRILL HOLES ALONG EMBANKMENT ALIGNMENTS; EOH WHEN HYDRAULIC CONDUCTIVITY OF 10-5 cm/s OR LESS IN TWO CONSECTIVE PACKER TESTS
3. PACKER TESTS TO BE CONDUCTED EVERY APPROX. 6 m IN COMPETENT BEDROCK
2. HYDROGEO (MW) DRILL HOLES MAX DEPTH APPROX 40 m
3. MORE ACCURATE LOCATION OF DRILL HOLE COLLARS PENDING SURVEYING BY ALLNORTH

0	18NOV'13	ISSUED FOR REPORT	JS	BB	KJB
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D

TABLE B.4

NEW GOLD INC
BLACKWATER GOLD PROJECT

GEOTECHNICAL CHARACTERIZATION REPORT
SUMMARY OF SOIL TESTING RESULTS

Nov/29/13 11:30:27

					Grain Size				Atterberg Limits**				Plasticity	MC
					% Gravel	% Sand	% Fines		%					%
Drillhole/Test Pit	Sample No.	Depth From (mBGL)	Depth To (mBGL)	Classification	% Total Gravel	% Total Sand	% Silt	% Clay	PL	LL	PI	LI	<200# Sieve fines	
GT12-13	1	9.75	9.95	GRAVEL, some silt and sand, trace clay	67.6	18.8	10.1	3.5	12	19	7	-0.6	Low Plastic	8.0
GT12-13	2	18.15	18.3	SILT AND SAND, some clay, trace gravel	0.2	36.3	49.3	14.2	15	23	8	-0.1	Low Plastic	14.4
GT12-13	3	45.13	45.3	Gravelly SAND, some clay and silt	30	34.7	22.6	12.7	14	28	14	-0.4	Low Plastic	9.1
GT12-13	4	54.73	54.9	SILT AND SAND, some clay and gravel	14.4	49.1	36.5	0.0	13	29	16	-0.1	Low Plastic	10.8
GT12-14	1	36	36.2	Sandy SILT, some clay and gravel	18.5	31.2	33.6	16.7	14	33	19	-0.1	Medium Plastic	12.5
GT12-14	2	45	45.2	SILT, some clay, sand and gravel	6.3	13.9	60.6	19.2	20	34	14	0.0	Medium Plastic	19.4
GT12-14	3	51	51.2	SAND, some clay, silt and gravel	18.7	52.6	17.8	10.9	17	36	19	-0.3	Medium Plastic	12.2
GT12-15	1	5.4	5.6	SILT AND GRAVEL, some clay, trace sand	44.3	5.9	38.0	11.8	19	32	13	-0.3	Medium Plastic	14.9
GT12-15	2	11.2	11.4	Sandy GRAVEL some silt, trace clay	55.2	32.0	10.0	2.8	13	15	2		Low Plastic	
GT12-15	3	18.11	18.31	SAND AND GRAVEL, trace silt and clay	52.2	40.1	5.7	2.0	NP	NV	NP			
GT12-15	5	26.6	26.8	Silty Gravelly SAND, some clay	20.7	47.3	20.9	11.1	16	27	11		Low Plastic	
GT12-15	7	32.5	32.7	Gravelly SAND, some silt, trace clay	32.5	43.8	16.1	7.6	16	28	12		Low Plastic	
GT12-15	9	37.2	37.4	Sandy SILT, some clay	0	23.8	63.5	12.7	21	28	7	0.1	Low Plastic	22.0
GT12-15	10	52.35	52.55	Silty SAND, some clay, trace gravel	3.08	58.0	26.1	12.8	20	29	9	0.0	Low Plastic	20.0
GT12-15	11	53.1	53.3	Silty SAND, some gravel, trace clay	16.58	52.7	21.9	8.8	21	28	7	-1.0	Low Plastic	14.0
GT12-15	14	63	63.2	Gravelly SAND, some silt, trace clay	29.73	40.9	18.9	10.5	20	30	10	0.6	Low/Medium Plastic	26.0
GT12-15	15	66.65	66.85	SAND, some silt and gravel, trace clay	12.28	64.3	15.3	8.1	NP	NP	NP		None	
GT12-15	17	68.6	68.8	Silty SAND, some clay and gravel	10.06	50.0	27.3	12.7	21	34	13	-0.5	Medium Plastic	14.0
GT12-15	19	76.48	76.68	Clayey Sandy SILT, trace gravel	0.35	21.7	52.8	25.1	31	47	16	-0.3	Medium Plastic	27.0
GT12-15	22	81	81.2	Silty SAND, some clay, trace gravel	2	52.6	30.3	15.0	NP	NP	NP			
GT12-15	24	86.12	86.32	Gravelly SAND, some silt and clay	26.3	45.6	14.1	14.0	16	36	20	-0.8	Medium Plastic	-0.7
GT12-15	26	90.6	90.8	Silty SAND, trace clay and gravel	8.01	56.9	26.1	9.0	NP	NP	NP		None	
GT12-16	2	1.9	2.1	Silty Gravelly SAND, trace clay	25.28	38.8	30.5	5.5	14	16	2	-4.0	Low Plastic	6.0
GT12-16	4	6.75	6.95	SAND AND GRAVEL, some silt, trace clay	39.84	36.7	15.9	7.5	14	22	8	-1.1	Low Plastic	5.0
GT12-16	6	10	10.2	SAND AND GRAVEL, trace silt and clay	39.54	48.6	5.6	7.2	15	24	9	-1.0	Low Plastic	6.0
GT12-16	9	17.8	18	Sandy SILT, some gravel, trace clay	12.4	30.9	52.0	4.8	18	20	2	-2.5	Low Plastic	13.0
GT12-16	16	35.83	36.03	SILT, some clay and sand, trace gravel	5.01	13.5	67.2	14.3	25	36	11	-0.5	Medium Plastic	20.0
GT12-16	22	51.58	51.78	SILT, some clay and sand, trace gravel	0.33	22.8	53.7	23.2	20	28	8	-0.4	Low Plastic	17.0
GT12-16	24	54.29	54.49	Silty Gravelly SAND, some clay	27.46	37.6	22.1	12.5	NP	NP	NP			
GT12-16	26	59.32	59.52	Siltly Gravelly SAND, trace clay	29.26	40.0	20.2	10.5	20	30	10	-0.8	Low/Medium Plastic	12.0
GT12-16	31	67.46	67.66	Silty Gravelly SAND, some clay	23.93	40.5	25.3	10.3	23	33	10	-1.1	Medium Plastic	12.0
GT12-16	32	69.5	69.7	Silty SAND, some clay and gravel	14.01	46.4	25.3	14.3	17	28	11	-0.5	Low Plastic	12.0
GT12-16	35	77.5	77.7	Silty Gravelly SAND, trace clay	28.79	38.6	22.8	9.8	30	50	20	-0.3	Medium/High Plastic	24.0
GT12-16	39	89.66	89.86	Gravelly SAND, some silt, trace clay	25.53	53.7	12.5	8.3	IS	IS	IS			
GT12-17	1	1.1	1.3	Gravelly SAND, some silt and clay	32.9	41.6	25.5	0.0	0	0	0			
GT12-17	3	5.33	5.53	SILT, some sand, trace clay and gravel	0.04	10.6	84.0	5.3	24	29	5	-0.2	Low Plastic	23.1
GT12-17	10	25.46	25.66	Sandy SILT, some clay, trace gravel	1.25	23.8	63.5	11.5	20	24	4	-1.9	Low Plastic	12.6
GT12-17	14	36.94	37.14	SAND AND GRAVEL, some silt, trace clay	37.59	41.9	14.9	5.6	16	21	5	-1.6	Low Plastic	8.0
GT12-17	22	63.18	63.38	Silty SAND, some clay, trace gravel	3.24	46.9	32.7	17.1	20	29	9	-0.8	Low Plastic	13.0
GT12-17	26	73.48	73.68	SAND, trace silt and clay	0	98.3	1.7	0.0	0	0	0			
GT12-17	29	80.7	80.9	Clayey SILT, some sand	0	12.8	54.5	32.7	33	54	21	-0.2	High Plastic	28.0
GT12-17	33	93.85	94.05	Clayey SILT, some sand	0	10.5	68.4	21.1	38	50	12	-0.5	Medium/High Plastic	31.9
GT12-17	37	104.8	105	SAND, some clay and silt, trace gravel	1.66	69.0	17.2	12.2	31	53	22	-0.7	High Plastic	15.4
GT12-18	3	10.19	10.39	Silty Gravelly SAND, trace clay	29.27	34.3	27.2	9.2	15	21	6	-0.8	Low Plastic	10.0
GT12-18	4	12.98	13.18	Silty SAND, some gravel, trace clay	19.26	37.6	33.4	9.7	16	21	5	-1.0	Low Plastic	11.0
GT12-18	5	15.6	15.8	Silty SAND, some clay and gravel	16.4	38.4	30.5	14.7	11	26	15	0.2	Low Plastic	13.4
GT12-18	7	22.74	22.94	Sandy SILT, some clay, trace gravel	0.29	20.9	68.0	10.8	19	23	4	-1.1	Low Plastic	14.6
GT12-18	8	25.13	25.23	Clayey SILT, trace sand	0	3.5	74.2	22.3	16	21	5	0.0	Low Plastic	15.8
GT12-18	10	32.95	33.15	Clayey SILT, trace sand	0	1.8	81.9	16.3	18	25	7	0.3	Low Plastic	19.9
GT12-18	11	35.75	35.95	Gravelly SAND, some clay and silt	30.4	39.1	16.5	14.0	15	32	17	-0.2	Medium Plastic	11.1
GT12-18	12	38.67	38.87	Clayey SILT, trace clay	0	7.9	68.4	23.7	29	39	10	-0.6	Medium Plastic	23.0
GT12-18	16	51.49	51.69	Silty SAND, some clay, trace gravel	9.03	57.8	21.4	11.8	19	30	11	-0.5	Medium Plastic	14.0
GT12-18	20	69	69.2	CLAY and SILT, some sand	0	12.7	50.8	36.5	32	56	24	-0.6	High Plastic	17.4
GT12-19	2	5.45	5.65	Gravelly SAND, some silt, trace clay	25.08	58.8	11.0	5.1	17	24	7	-1.6	Low Plastic	5.6
GT12-19	3	11.26	11.46	SAND, trace clay, silt and gravel	1.7	84.4	13.9	0.0	0	0	0			0.0
GT12-19	6	22.04	22.24	Clayey SILT, trace sand and gravel	0.05	6.5	83.3	10.2	25	32	7	0.1	Medium Plastic	25.9
GT12-19	7	31.03	31.23	Silty Gravelly SAND, trace clay	21.37	40.6	32.2	5.8	17	18	1	-3.0	Low Plastic	14.0
GT12-20	2	5.14	5.34	Sandy GRAVEL, trace clay and silt	64.8	29.5	5.7	0.0	0	0	0			
GT12-20	3	9.96	10.16	Sandy SILT, trace clay	0	29.0	66.7	4.4	0	0	0			
GT12-20	4	20.2	20.4	Silty Gravelly SAND, trace clay	25.84	46.1	21.8	6.3	15	19	4	-1.8	Low Plastic	8.0
GT12-21	2	5.4	5.6	SILT, some sand, trace clay	0	15.1	76.8	8.2	19	19	0		Low Plastic	16.0
GT12-21	3	7.82	8.02	SILT, some sand, trace clay	0	19.1	76.7	4.3	NP	NP	NP			21.0
GT12-21	4	14.7	14.9	SILT AND SAND, trace clay	0	46.8	48.7	4.6	0	0	0			
GT12-21	5	20.26	20.46	SAND, some silt, trace clay and gravel	9.5	68.9	15.0	6.6	0	0	0			-
GT12-21	7	26.83	27.03	SILT, some clay, trace sand and gravel	0.3	8.0	81.1	10.6	24	33	9	0.0	Medium Plastic	24.0
GT12-21	8	32.76	32.96	Silty SAND, some clay and gravel	11.4	52.4	25.8	10.4	15	25	10	-0.5	Low Plastic	10.0
GT12-21	12	50.74	50.94	Sandy SILT, some clay	0	30.1	54.9	15.0	20	24	4	0.0	Low Plastic	20.0
GT12-21	13	56.41	56.61	Sandy SILT, some clay	0	25.1	59.8	15.1	18	26	8	-0.3	Low Plastic	16.0
GT12-21	14	59.52	59.72	Sandy SILT, some clay	0	30.9	54.3	14.8	20	28	8	0.0	Low Plastic	20.0
GT12-22	1	1.58	1.78	Silty Gravelly SAND, some clay	25.53	33.8	26.6	14.1	16	22	6	-1.8	Low Plastic	5.0
GT12-22	2	8.28	8.41	SILT, some clay	0	8.5	80.7	10.8	19	20	1	-10.0	Low Plastic	9.0
GT12-22	3	14.26	14.46	SILT, some clay, trace sand and gravel	4.9	9.6	72.0	13.4	19	24	5	-0.6	Low Plastic	16.0
GT12-22	7	33.78	33.98	Silty Gravelly SAND, trace clay	20.36	50.8	20.0	8.8	13	24	11	-0.8	Low Plastic	4.0
GT12-22	8	38.51	38.71	Silty SAND, trace clay and gravel	1.1	67.1	24.5	7.3	NP	NP	NP			13.0
GT12-22	9	44.8	45	Gravelly SAND, trace silt and clay	33.7	56.0	10.3	0.0	0	0	0			-
GT12-22	10	51.19	51.39	SILT AND SAND, trace clay	0	48.7	46.2	5.2	22	18	NP	0.8	Low Plastic	19.0
GT12-22	11	57.58	57.78	Silty SAND, some clay and gravel	11.7	54.8	20.7	12.8	19	35	16	-0.6	Medium Plastic	10.0
GT12-23	2	4.64	4.84	Silty SAND	0	75.2	24.8	0.0	19	35	16	-0.6	Medium Plastic	10.0
GT12-23	3	6.31	6.51	Silty Gravelly SAND, trace clay	33.04	35.3	24.6	7.1	14	21	7	-0.4	Low Plastic	11.0
GT12-23	4	11.99	12.19	SAND AND GRAVEL, trace silt and clay	40.2	47.1	12.1	0.0	0	0	0			5.9
GT12-23	5	14.25	14.45	Silty SAND, some gravel, trace clay	16.74	50.7	27.7	4.9	15	21	6	-1.0	Low Plastic	9.0
GT12-23	9	34.89	35.09	Silty SAND, some clay and gravel	16.14	40.4	30.8	12.7	14	18	4	-0.5	Low Plastic	12.0
GT12-24	BS1	16.17	16.42	SAND AND GRAVEL, some silt, trace clay	35.42	41.3	17.6	5.7	17	24	7	-1.1	Low Plastic	9.0

TABLE B.4

NEW GOLD INC
BLACKWATER GOLD PROJECT

GEOTECHNICAL CHARACTERIZATION REPORT
SUMMARY OF SOIL TESTING RESULTS

Drillhole/Test Pit	Sample No.	Depth From (mBGL)	Depth To (mBGL)	Classification	Grain Size				Atterberg Limits**				Plasti
					% Gravel	% Sand	% Fines		%				
					% Total Gravel	% Total Sand	% Silt	% Clay	PL	LL	PI	LI	<200# Sie
GT12-24	BS2	22.59	22.86	Sandy SILT, trace clay and gravel	0.03	21.1	75.0	3.9	15	21	6	1.2	Low Pl
GT12-24	BS3	32.33	32.53	SAND AND GRAVEL, some silt, trace clay	36.6	41.8	16.6	5.0	18	23	5	-1.4	Low Pl
GT12-24	BS4	37.04	37.24	SILT AND SAND, some clay, trace gravel	1.46	39.2	49.3	10.1	17	19	2	0.0	Low Pl
GT12-24	BS5	43.75	44	Silty SAND, some clay and gravel	16.74	42.2	27.0	14.0	20	27	7	-0.9	Low Pl
GT12-25	BS2	8.3	8.49	Silty SAND, some gravel, trace clay	16.13	57.3	20.2	6.4	14	20	6	-0.8	Low Pl
GT12-25	BS3	22.26	22.57	Silty Gravelly SAND, trace clay	24.75	37.6	29.3	8.4	15	21	6	-0.8	Low Pl
GT12-25	BS5	43.25	43.4	Silty SAND AND GRAVEL, trace clay	38.27	36.7	20.9	4.1	16	21	5	-1.2	Low Pl
GT12-25	BS6	42.35	42.55	Silty SAND, trace clay and gravel	2.4	69.3	22.7	5.6	0	0	0		
GT12-26	BS1	8.31	8.51	Silty SAND, some gravel, trace clay	12.06	47.6	31.4	8.9	15	20	5	-1.0	Low Pl
GT12-27	BS1	4.9	5.06	SILT AND SAND, some gravel, trace clay	14.11	40.0	38.6	7.3	14	18	4	-1.5	Low Pl
GT12-27	BS2	14.33	14.48	Silty Gravelly SAND, trace clay	28.83	45.0	21.6	4.5	15	20	5	-1.6	Low Pl
GT12-27	BS3	26.83	27	Sandy GRAVEL, some silt, trace clay	59.92	29.9	8.2	2.1	0	16	0		Low Pl
GT12-27	BS5	45.06	45.32	SAND AND GRAVEL, some silt, trace clay	48.09	34.1	12.4	5.4	16	28	12	-0.6	Low Pl
GT12-28	4	23	25	SAND, some clay, silt and gravel	11.4	67.7	20.9	0.0	0	0	0		
GT12-29	BS1	5.73	5.89	Silty SAND, trace clay	0	69.7	26.9	3.4	0	0	0		
GT12-29	BS2	14.74	14.94	Sandy SILT, some clay	0	27.9	61.9	10.1	0	17	0		Low Pl
GT12-29	BS4	32.73	32.93	Sandy SILT, some clay	0	32.3	56.1	11.6	NP	NP	NP		
GT12-29	BS5	40.64	40.85	Silty SAND, some clay and gravel	17.86	45.6	22.4	14.2	19	31	12	-0.3	Medium
GT12-31	1	4.57	4.87	Gravelly SAND, some silt, trace clay	34.9	46.4	14.4	4.3	14	17	3	-1.9	Low Pl
GT12-31	3	14.16	14.43	Silty Gravelly SAND, trace clay	31.8	33.1	26.2	8.9	12	22	10	-0.4	Low Pl
GT12-31	4	19.8	20	Sandy SILT, trace clay and gravel	4.8	33.8	52.2	9.2	16	19	3	-0.5	Low Pl
GT12-31	7	37.38	37.54	SILT, trace clay and sand	0	5.4	85.0	9.6	18	25	7	0.1	Low Pl
GT12-32	1	15.84	16.04	Silty Gravelly SAND, trace clay	32	34.9	26.6	6.5	13	17	4	-1.9	Low Pl
GT12-32	2a *	24.38	24.58	Sandy GRAVEL, some silt, trace clay	49	34.2	12.9	3.9	15	29	14	-0.6	Low Pl
GT12-32	2b *	39.63	39.83	Sandy GRAVEL, some silt, trace clay	45.1	28.8	19.1	7.0	14	22	8	-0.6	Low Pl
GT12-32	4	49.08	49.28	Silty Gravelly SAND, trace clay	27.5	39.1	24.4	9.0	14	23	9	-0.8	Low Pl
GT12-32	6	64.75	64.9		0	0.0	0.0	0.0	23	31	8	-1.2	Medium
GT12-33	1	4.6	4.8	Silty Gravelly SAND, some clay	21.4	35.4	30.6	12.6	12	28	16	-0.2	Low Pl
GT12-33	3	33.4	33.54	Silty Gravelly SAND, trace clay	20.7	39.5	30.6	9.2	13	24	11	-0.4	Low Pl
GT12-33	4	40.03	40.23	Clayey SILT, trace sand and gravel	2.1	9.9	63.7	24.3	21	41	20	-0.1	Medium
GT12-34	1	3.45	3.7	Sandy SILT, some clay, trace gravel	3.3	27.9	57.6	11.2	15	20	5	0.2	Low Pl
GT12-34	3	17.45	17.6	Silty SAND, some gravel, trace clay	12.4	43.7	34.0	9.9	12	19	7	-0.5	Low Pl
GT12-34	4	42.07	42.27	Silty Sandy GRAVEL, trace clay	40.1	30.7	22.6	6.6	13	22	9	-0.5	Low Pl
GT12-34	5	52.22	52.37	SILT, some clay, trace sand and gravel	0.4	4.1	80.5	15.0	17	24	7	-0.1	Low Pl
GT12-35	1	6.9	7.1	Silty Gravelly SAND, trace clay	32.8	39.2	21.5	6.5	15	21	6	-1.1	Low Pl
GT12-35	3	36.65	36.85	SILT, some clay, trace sand and gravel	1.7	2.3	77.6	18.4	22	34	12	0.1	Medium
GT12-35	4	41.13	41.33	SAND AND SILT, some clay	0	38.6	42.0	19.4	27	46	19	-0.1	Medium
GT12-36	1	10.2	10.4	Silty Gravelly SAND, trace clay	28.7	42.4	23.5	5.4	12	17	5	-0.8	Low Pl
GT12-36	3	41.18	41.32	SAND AND GRAVEL, some silt, trace clay	39.3	35.1	17.3	8.3	14	26	12	-0.5	Low Pl
GT12-36	4	53.3	53.5	SILT, trace clay and sand	0	0.8	94.2	5.0	NP	NV	NP		
GT12-36	5	78.35	78.55	CLAY AND SILT, some sand	0	16.2	42.9	40.9	27	55	28	0.3	High P
GT12-37	1	3.75	3.9	Silty SAND, some gravel, trace clay	19.6	49.4	22.3	8.7	13	19	6	-0.7	Low Pl
GT12-37	4	43.4	43.6	SAND, some clay, silt and gravel	17.3	46.6	19.5	16.6	15	19	4	-0.3	Low Pl
GT12-38	1	8.6	8.75	Silty Gravelly SAND, some clay	26.9	41.1	22.0	10.0	12	22	10	-0.4	Low Pl
GT12-38	2	15.65	15.83	Silty Gravelly SAND, trace clay	20.4	44.9	29.8	4.9	13	19	6	-0.5	Low Pl
GT12-39	2	16.6	16.75	SILT AND SAND, trace clay	0	43.3	47.8	8.9	NP	NV	NP		
GT12-39	4	59.3	59.45	Sandy GRAVEL, some silt, trace clay	48.3	33.6	13.5	4.6	14	28	14	-0.5	Low Pl
GT12-39	6	89.9	90.1	Clayey SILT, some sand	0	18.0	48.3	33.7	27	60	33	0.0	High P
GT12-40	1	7.35	7.5	Clayey, Silty, Gravelly SAND	25.7	39.3	35.0	0.0	13	20	7	-0.5	Low Pl
GT12-40	3	19.75	19.9	Sandy SILT, some clay, trace gravel	4.6	26.4	53.4	15.6	15	26	11	0.1	Low Pl
GT12-40	4	24.4	24.6	SILT, some clay and sand, trace gravel	0	13.3	76.6	10.1	17	23	6	0.1	Low Pl
GT12-40	7	57.5	57.7	Silty SAND, some gravel, trace clay	23.3	40.7	26.4	9.6	19	31	12	0.0	Medium
GT12-41	1	7	7.2	Silty Gravelly SAND, trace clay	31.1	41.9	20.1	6.9	13	22	9	-0.4	Low Pl
GT12-41	2	10	10.2	SAND AND GRAVEL, some silt, trace clay	39	38.2	15.7	7.1	13	24	11	-0.6	Low Pl
GT12-41	3	20	20.2	SAND AND GRAVEL, some silt, trace clay	44.1	38.6	12.5	4.8	0	0	0		
GT12-41	4	40	40.17	Silty SAND, some clay and gravel	17.6	40.6	27.7	14.1	15	25	10	-0.5	Low Pl
GT12-41	5	40	40.17	Silty SAND, some clay and gravel	10.5	48.2	27.5	13.8	0	0	0		
GT12-41	6	47	47.2	Silty Sandy GRAVEL, some clay	37.8	26.0	22.0	14.2	19	34	15	0.1	Medium
GT12-41	7	50	50.2	Clayey Silty SAND	0	38.3	32.2	29.5	18	37	19	-0.1	Medium
GT12-41	8	57.1	57.3	Sandy CLAY AND SILT, trace gravel	0.9	23.4	38.2	37.5	26	48	22	0.2	Medium
GT12-41	9	73	73.19	SILT AND SAND, some clay	0	48.3	35.0	16.7	20	43	23	0.1	Medium
GT12-41	10	80	80.3	SAND, some silt, trace clay and gravel	7.5	65.2	17.6	9.7	0	0	0		
GT12-42	1	10	10.2	Silty Gravelly SAND, some clay	30.7	37.7	21.4	10.2	0	0	0		
GT12-43	1	9.8	10	Gravelly SAND, some silt, trace clay	34.3	45.1	14.0	6.6	0	0	0		
GT12-43	2	21.5	21.7	Silty Gravelly SAND, some clay	28.6	35.7	25.7	10.0	0	0	0		
GT12-43	3	25	25.2	Silty Gravelly SAND, trace clay	28.2	42.3	20.7	8.8	15	24	9	-0.7	Low Pl
GT12-43	4	30	30.2	SILT AND SAND, some clay, trace gravel	0.3	51.5	36.4	11.8	14	18	4	0.0	Low Pl
GT12-43	5	43.8	44	Clayey Sandy SILT	0	21.4	44.5	34.1	0	0	0		
GT12-43	6	50	50.2	Clayey Silty SAND, some gravel	10.5	38.0	30.6	20.9	0	0	0		
GT12-43	7	53	53.2	SILT AND SAND, some clay	0	40.2	43.1	16.7	20	28	8	0.4	Low Pl
GT12-43	8	55	55.2	Clayey Sandy SILT	0	23.7	48.7	27.6	18	34	16	0.3	Medium
GT12-43	9	62	62.2	Silty Gravelly SAND, some clay	27	48.2	24.8	0.0	0	0	0		
GT12-44	1	7.14	7.24	SAND, trace clay, silt and gravel	5.2	86.3	8.5	0.0	0	0	0		
GT12-44	2	13.2	13.4	Silty SAND, trace clay and gravel	1.8	74.1	20.2	3.9	0	0	0		
GT12-44	3	15.6	15.8	Silty Gravelly SAND, some clay	29.2	34.2	26.4	10.2	13	25	12		Low Pl
GT12-45	1, 2, 3	10.67	25.91	Silty Gravelly SAND, some clay	28.8	33.1	26.7	10.3	14	23	9		Low Pl
GT12-45	1	5.6	5.8	Silty Gravelly SAND, trace clay	31.8	42.1	21.0	5.1	0	0	0		
GT12-45	5	30.05	30.2	SILT, some clay, trace sand and gravel	0.8	8.7	79.3	11.2	0	0	0		
GT12-45	6	36	36.2	SILT, some sand and gravel, trace clay	13.1	14.6	62.8	9.5	0	0	0		
GT12-45	8	43.5	43.7	Silty Gravelly SAND, some clay	25.5	34.8	28.6	11.1	0	0	0		
GT12-45	11	61.75	62	Silty Sandy GRAVEL, trace clay	33.4	27.9	28.8	9.9	0	0	0		
GT12-45	12	67.1	67.3	SILT, some sand, trace clay and gravel	3.4	13.6	76.7	6.3	0	0	0		
GT12-45	13	73.55	73.7	Sandy Gravelly SILT, trace clay	21.9	27.6	48.0	2.5	0	0	0		

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TABLE B.4

NEW GOLD INC
BLACKWATER GOLD PROJECT

GEOTECHNICAL CHARACTERIZATION REPORT
SUMMARY OF SOIL TESTING RESULTS

					Grain Size				Atterberg Limits**				Plasti
					% Gravel	% Sand	% Fines		%				
Drillhole/Test Pit	Sample No.	Depth From (mBGL)	Depth To (mBGL)	Classification	% Total Gravel	% Total Sand	% Silt	% Clay	PL	LL	PI	LI	<200# Sie
GT12-45	21	14.55	14.75	SAND AND GRAVEL, some clay and silt	34.7	34.0	19.5	11.8	0	0	0		
GT12-45	26	52.3	52.5	Sandy Gravelly SILT, some clay	24.6	25.6	39.1	10.7	0	0	0		
GT12-45	31	81	81.2	Silty Gravelly SAND, some clay	22.7	40.6	25.9	10.8	0	0	0		
GT12-46	1, 2, 3	10.67	35.05	Silty SAND, some clay, trace gravel	8.5	48.8	30.7	12.0	13	23	10		Low Pl
GT12-46	3	6.66	6.87	Gravelly SAND, some silt, trace clay	33.1	44.0	17.0	5.9	0	0	0		
GT12-46	5	12.8	13	Gravelly SAND, some clay and silt	24.7	47.7	17.0	10.6	0	0	0		
GT12-46	10	28.2	28.45	Sandy GRAVEL, some silt and clay	41.2	29.9	18.6	10.3	0	0	0		
GT12-46	16	46.3	46.5	Silty Gravelly SAND, some clay	32.9	35.0	20.1	12.0	0	0	0		
GT12-47	1	0	0	Sandy GRAVEL, trace silt and clay	53.8	37.2	9.0	0.0	NP	NP	NP		
GT12-47	3	6.83	7.05	Silty Gravelly SAND, trace clay	21.1	40.3	31.6	7.0	13	22	9	-0.7	Low Pl
GT12-47	5	12.9	13.1	Sandy SILT, some gravel, trace clay	12.3	24.0	54.1	9.6	17	29	12	-0.3	Low Pl
GT12-47	7	18.05	18.26	SILT AND SAND, trace clay and gravel	8.6	41.9	41.0	8.5	0	0	0		
GT12-47	9	23.5	23.75	SILT AND SAND, some gravel, trace clay	16.4	38.8	37.9	6.9	0	0	0		
GT12-47	14	34.33	34.53	Sandy Gravelly SILT, some clay	22.5	30.9	36.5	10.1	15	25	10	-0.3	Low Pl
GT12-47	18	43.3	43.5	Clayey SILT, some sand	0	12.9	52.9	34.2	24	67	43	0.1	High P
GT12-47	23	58.42	58.67	Clayey Sandy SILT, trace gravel	2.4	47.3	29.9	20.4	0	0	0		
GT12-47	25	64.8	64.97	Clayey Sandy SILT	0	20.9	47.5	31.6	31	57	26	0.0	High P
GT12-47	30	88.62	88.79	Sandy SILT, some clay	0	38.8	45.3	15.9	0	0	0		
TP12-31	S5	4	4.2	Gravelly SAND, some silt, trace clay	29.72	47.3	19.4	3.6	0	0	0		
TP12-40	S13	5	5.2	Silty SAND, some gravel, trace clay	12.08	64.2	21.1	2.7	0	0	0		
TP12-45	S14	5	5.2	Sandy GRAVEL, trace silt and clay	76.7	21.4	1.9	0.0	0	0	0		
TP12-48	S15	4.75	4.95	SILT, some clay, trace sand and gravel	0.64	8.3	80.7	10.4	20	21	1	-1.0	Low Pl
TP12-49	S16	4	4.2	SILT, trace clay, sand and gravel	0.02	2.3	88.9	8.8	21	21	0		Low Pl
TP12-55	S17	6	6.2	Gravelly SAND, trace silt and clay	30.66	63.1	4.2	2.1	0	0	0		
TP12-57	S18	3.75	3.95	Silty SAND, some gravel, trace clay	15.4	47.3	27.6	9.6	15	19	4	-1.5	Low Pl
TP12-61	S19	2.5	2.7	SILT AND SAND, some gravel, trace clay	12.36	35.3	47.1	5.3	24	25	1	7.0	Low Pl
TP12-62	S20	3	3.2	Silty SAND, some gravel, trace clay	11.12	47.5	34.8	6.6	0	0	0		
TP12-65	S21	4	4.2	Silty SAND, some gravel, trace clay	17.03	45.2	29.0	8.8	16	20	4	-2.0	Low Pl
TP12-67	S22	3.5	3.7	Silty SAND, some gravel, trace clay	12.42	48.7	32.9	5.9	18	20	2	-0.5	Low Pl
TP12-72	S23	4	4.2	Silty SAND, some gravel, trace clay	17.38	43.8	29.4	9.4	15	21	6	-1.2	Low Pl
TP12-77	S25	4.5	4.7	Silty Gravelly SAND, trace clay	29.01	38.4	30.3	2.4	19	15	NP	0.5	
TP12-85	S27	5.5	5.7	SAND AND GRAVEL, some silt, trace clay	35.61	40.6	19.5	4.3	15	18	3	-2.5	Low Pl
TP12-87	S28	5.7	5.9	SILT, trace clay, sand and gravel	1.51	6.9	90.3	1.4	0	0	0		
TP12-88	S29	6	6.2	SILT AND SAND, trace clay and gravel	1.12	41.7	55.1	2.0	22	20	NP	2.5	
TP12-89	S30	3	3.2	Gravelly Silty SAND, trace clay	31.62	43.6	22.2	2.5	0	0	0		
TP12-90	S31	5.5	5.7	SAND AND GRAVEL, some silt, trace clay	39.48	38.7	18.9	2.9	17	17	0		Low Pl
TP12-92	S32	4.5	4.7	SAND AND GRAVEL, trace silt and clay	37.5	44.0	18.5	0.0	0	0	0		
TP12-95	S33	6	6.2	SILT, some clay, trace sand and gravel	1.48	3.0	84.4	11.2	22	24	2	-4.5	Low Pl
TP12-96	S34	7	7.2	Silty SAND, some gravel, trace clay	18.63	48.1	31.8	1.4	0	0	0		
TP12-99	S35	6	6.2	SILT, some sand, trace clay and gravel	4.95	13.7	76.9	4.5	0	0	0		
TP12-102	S36	5.5	5.7	Silty SAND, some clay, trace gravel	6.63	52.2	28.2	13.0	13	20	7	-0.1	Low Pl
TP12-103	S37	6.5	6.7	SAND AND GRAVEL, trace silt and clay	46.8	46.7	6.5	0.0	0	0	0		
TP12-106	S38	6	6.2	SILT AND SAND, trace clay and gravel	0.25	54.6	42.8	2.4	0	0	0		
TP12-108	S39	6.5	6.7	SAND AND GRAVEL, trace silt and clay	38	46.6	15.4	0.0	0	0	0		
TP12-114	S41	5.5	5.7	Silty Gravelly SAND, trace clay	32.16	41.3	20.1	6.5	14	19	5	-1.0	Low Pl
TP12-117	S42	6	6.2	SAND AND GRAVEL, trace silt and clay	39.44	49.0	8.0	3.6	17	18	1	-9.0	Low Pl
TP12-121	36	5.5	5.7	Silty SAND, some clay and gravel	18.5	30.8	23.6	12.1	0	0	0		
TP12-122	37	5	5.2	GRAVEL, some sand, trace clay and silt	54.3	17.6	6.3	3.7	0	0	0		
TP12-123	38	4	4.2	Sandy GRAVEL, some silt and clay	40.7	34.8	24.5	0.0	15	23	8	-0.9	Low Pl
TP12-126	41	4.5	4.7	SAND ANS GRAVEL, trace clay and silt	46.5	46.8	4.6	2.1	0	0	0		
TP12-127	42	4	4.2	Sandy GRAVEL, some silt, trace clay	44.7	34.1	18.5	2.7	0	0	0		
TP12-130	28	3	3.2	Silty Gravelly SAND, trace clay and cobbles	27.3	29.3	29.0	6.8	16	22	6	-0.9	Low Pl
TP12-133	25	3.5	3.7	Sandy Gravelly SILT, some clay	20.1	30.3	34.2	15.4	14	26	12	-0.3	Low Pl
TP12-135	23	4.5	4.7	Sandy Gravelly SILT, some clay	20.8	32.1	32.4	14.7	13	25	12	-0.2	Low Pl
TP12-136	32	5	5.2	Gravelly SAND, some silt, trace clay	31.2	46.2	17.6	5.0	15	17	2	-4.1	Low Pl
TP12-138	12	5	5.2	SAND AND GRAVEL, trace silt and clay	51.5	37.8	9.5	1.2	NP	NV	NP		
TP12-139 (1	13	2	2.2	Gravelly SAND, trace clay and silt	31	55.8	9.5	3.7	0	0	0		
TP12-139 (2	0	4	4.2	Silty Gravelly SAND, trace clay	22.2	45.1	27.7	5.0	14	17	3	-0.7	Low Pl
TP12-142	22	4	4.2	Sandy Gravelly SILT, some clay	26.6	24.5	36.2	12.7	13	28	15	-0.2	Low Pl
TP12-144	17	4	4.2	Sandy Gravelly SILT, some clay	23.4	31.6	33.8	11.2	0	0	0		
TP12-146	19	4.5	4.7	Sandy Gravelly SILT, trace clay	25.6	25.7	41.0	7.7	0	0	0		
TP12-147	20	5.5	5.7	Silty Gravelly SAND, some clay	22	45.5	20.4	12.1	0	0	0		
TP12-150	8	3	3.2	Silty Gravelly SAND, trace clay	30.9	39.7	24.8	4.6	12	15	3	-1.5	Low Pl
TP12-151	9	5	5.2	SILT, trace clay, sand and gravel	0.9	2.5	87.0	9.6	0	0	0		
TP12-152	7	5.5	5.7	SAND AND GRAVEL, trace silt and clay	37.5	53.9	8.4	0.2	0	0	0		
TP12-155	3	5	5.2	SAND AND GRAVEL, trace silt and clay	37.5	52.5	8.4	1.6	0	0	0		
DH12-14	PROC 2	6	7	Sandy GRAVEL, some silt, trace clay	44.5	33.2	15.2	7.1	-	-	-	-	Non-Pl
GT13-22	BS 1	3	3.2	Sandy GRAVEL, trace silt	61.4	30.1	8.5	-	-	-	-	-	Non-Pl
GT13-22	BS 2	6	6.2	Sandy, gravelly SILT, trace clay	23.2	21.3	53.9	1.7	NP	18.9	NP	NP	Low Pl
GT13-22	BS 3	10	10.2	Gravelly SAND, some silt, trace clay	31.95	48.3	19.2	0.6	8.9	13.1	4.2	0.2	Low Pl
GT13-22	BS 4 I	19.5	19.7	Silty SAND, some gravel, trace clay	10.97	67.6	20.8	0.6	6.7	11.7	5	1.6	Low Pl
GT13-22	BS 4 II	20	20.2	Silty, gravelly SAND, trace clay	26.83	45.5	26.3	1.4	6.3	22.9	16.6	0.3	Low Pl
GT13-22	BS 5	32	32.2	Sandy SILT, trace clay, trace gravel	5.67	29.6	64.1	0.7	25	17.4	0	0.0	Low Pl
GT13-22	BS 6	41	41.2	Silty SAND, trace clay, trace gravel	1.7	66.0	31.0	1.3	13.4	35.6	22.2	0.5	Medium
GT13-23	BS 2	3	3.2	Silty, Sandy GRAVEL, trace clay	41.8	30.5	26.9	0.8	15.3	22.7	7.4	-1.3	Low Pl
GT13-23	BS 3	5.5	5.7	Silty, Sandy GRAVEL, trace clay	40	29.8	23.0	7.3	14.6	19.8	5.2	-1.5	Low Pl
GT13-23	BS 4	9	9.2	Silty, gravelly SAND, trace clay	30.3	43.1	25.9	0.8	12	23.1	11.1	-0.2	Low Pl
GT13-23	BS 6	16	16.2	Silty, gravelly SAND, some clay	25.9	35.2	27.6	11.3	15.1	24.9	9.8	-0.5	Low Pl
GT13-24	BS 2	4	4.2	Silty, gravelly SAND, trace clay	33.8	38.5	26.7	1.0	11.1	14.3	3.2	-0.6	Low Pl
GT13-24	BS 4	10	10.2	Sandy, gravelly SILT, trace clay	30.9	28.3	32.6	8.2	29.2	28.2	0	0.0	Low Pl
GT13-24	BS 5	-	-	Silty, gravelly, SAND, trace clay	33.5	43.2	19.4	3.9	31.3	19.3	0	0.0	Low Pl
GT13-24	BS 6	18.5	18.7	Silty, gravelly SAND, trace clay	33.6	40.3	25.8	0.3	17.2	21.3	4.1	-2.2	Low Pl

Knight Piésold CONSULTING

TABLE B.4

NEW GOLD INC
BLACKWATER GOLD PROJECT

GEOTECHNICAL CHARACTERIZATION REPORT
SUMMARY OF SOIL TESTING RESULTS

Drillhole/Test Pit	Sample No.	Depth From (mBGL)	Depth To (mBGL)	Classification	Grain Size				Atterberg Limits**				Plasti
					% Gravel	% Sand	% Fines		%				
					% Total Gravel	% Total Sand	% Silt	% Clay	PL	LL	PI	LI	<200# Sie
GT13-24	BS 7	21.5	21.7	Sandy GRAVEL, some silt, trace clay	61.3	20.7	17.8	0.2	-	-	-	-	Non-Pl
GT13-24	BS 8	30	30.2	Sandy SILT, some gravel, trace clay	11.8	29.7	57.9	0.6	7.2	32.6	25.4	0.2	Medium
GT13-24	BS 10	55	55.2	Silty, gravelly SAND, trace clay	32.4	42.9	17.5	7.1	25.8	31.7	5.9	-2.5	Medium
GT13-25	BS 1	2	2.2	Sandy GRAVEL, some silt	59	24.0	17.0	0.0	-	-	-	-	Non-Pl
GT13-25	BS 2	4	4.2	SAND and GRAVEL, some silt	41.8	39.8	18.3	0.0	28.6	22	0	0.0	Low Pl
GT13-25	BS 3	8	8.2	Silty SAND and GRAVEL, trace clay	38.1	40.4	21.1	0.4	26.4	32.3	5.9	-2.5	Medium
GT13-25	BS 4	11	11.2	Silty, gravelly SAND, some clay	32.3	40.0	16.6	11.1	13.6	23.1	9.5	0.2	Low Pl
GT13-25	BS 5	16.8	17	SAND and GRAVEL, some silt, trace clay	39	38.5	17.8	4.7	11	38.6	27.5	0.1	Medium
GT13-25	BS 6	22	22.2	SILT and SAND, some gravel, trace clay	13.1	48.4	38.1	0.4	8.4	11.2	2.8	1.5	Low Pl
GT13-26	BS 2	4	4.2	Silty, sandy GRAVEL	43.8	33.4	22.8	0.0	-	-	-	-	Non-Pl
GT13-26	BS 3	7	7.2	andy COBBLES, some silt, trace clay, trace grav	9.6	24.2	13.4	4.4	14.5	17.9	3.4	-2.2	Low Pl
GT13-26	BS 4	14	14.2	Sandy, gravelly SILT, trace clay	31.2	32.9	35.6	0.4	-	-	-	-	Non-Pl
GT13-26	BS 5	16	16.2	Sandy, SILT, some clay, some gravel	13.2	23.1	52.9	10.8	10.7	19.5	8.7	-0.6	Low Pl
GT13-26	BS 6	23	23.2	Gravelly SILT and SAND, trace clay	28.7	31.6	31.0	8.7	-	-	-	-	Non-Pl
GT13-27	BS 1	3.5	3.7	SAND, some silt, trace clay, trace gravel	2.86	78.6	18.4	0.2	NP	18.1	NP	NP	Low Pl
GT13-27	BS 2	5.5	5.7	SAND, some silt, trace clay, trace gravel	1.44	84.1	14.3	0.1	NP	NP	NP	NP	High P
GT13-27	BS 3	7.5	7.7	Sandy GRAVEL, some silt, trace clay	58.6	24.2	17.0	0.2	12.9	20.4	7.5	-1.2	Low Pl
GT13-27	BS 5	14.5	14.7	SILT, some sand, trace clay, trace gravel	2.28	12.6	78.3	6.8	NP	NP	NP	NP	High P
GT13-27	BS 6	21	21.2	Silty, gravelly SAND, trace clay	25.8	35.8	32.6	5.8	7.7	14.3	6.6	0.1	Low Pl
GT13-27	BS 7	27	27.2	SILT and SAND, some gravel, trace clay	18.9	42.2	37.7	1.2	6.7	20.7	14	-0.2	Low Pl
GT13-27	BS 8	30	30.2	SILT, some sand, trace clay, trace gravel	6.7	11.1	81.4	0.8	13.8	15	1.2	0.9	Low Pl
GT13-27	BS 9	34	34.2	Silty, gravelly SAND, trace clay	21.2	45.2	32.9	0.7	NP	11.4	NP	NP	Low Pl
GT13-27	BS 10	36	36.2	SILT and SAND and GRAVEL, trace clay	30.1	33.3	30.4	6.2	19.1	19.5	0.4	-30.8	Low Pl
GT13-27	BS 11	45.5	45.7	SAND, some silt, some gravel, trace clay	14.24	68.5	14.4	2.9	17.1	17.8	0.7	-8.6	Low Pl
GT13-27	BS 12	53	53.2	Gravelly SILT and SAND, trace clay	22.5	41.8	35.3	0.4	12.2	20.9	8.7	-0.4	Low Pl
GT13-27	BS 13	64	64.2	SILT and SAND, some gravel, trace clay	17.9	39.5	42.2	0.4	7.3	21.4	14.1	0.3	Low Pl
GT13-27	BS 14	65	65.2	SILT, some sand, trace clay, trace gravel	7.7	15.2	76.4	0.8	15	24.6	9.6	-0.7	Low Pl
GT13-27	BS 15	80	80.2	Silty SAND, some clay, some gravel	11.4	44.0	34.3	10.2	7.7	20.4	12.7	0.3	Low Pl
GT13-28	BS 1	1.5	1.7	Sandy GRAVEL, some silt	56.4	30.5	13.1	-	-	-	-	-	Non-Pl
GT13-28	BS 2	4	4.2	SAND and GRAVEL, some silt, trace clay	36.8	45.4	17.1	0.7	12.9	15.5	2.6	-2.2	Low Pl
GT13-28	BS 3	8.5	8.7	Silty, gravelly SAND, trace clay	29.1	42.4	27.7	0.9	9.8	20.1	10.3	-0.2	Low Pl
GT13-28	BS 4	10	10.2	Silty SAND, some gravel, trace clay	17.8	50.9	30.0	1.3	8.3	18.9	10.6	0.9	Low Pl
GT13-29	BS 2	4	4.2	Silty SAND and GRAVEL, trace clay	38.9	36.6	24.3	0.3	13.6	18.4	4.8	-2.0	Low Pl
GT13-29	BS 3	7	7.2	SAND and GRAVEL, trace clay, trace silt	49.3	41.4	9.2	0.1	NP	NP	NP	NP	High P
GT13-29	BS 5	14.5	14.7	SAND, some silt, trace clay, trace gravel	7.1	77.3	13.4	2.2	NP	NP	NP	NP	High P
GT13-29	BS 7	26	26.2	Sandy SILT, some clay, some gravel	15.8	33.2	36.7	14.3	20	26.6	6.6	-2.1	Low Pl
GT13-29	BS 8	32.33	32.5	Silty SAND, trace clay, trace gravel	2.9	72.6	20.1	4.4	31.7	18.6	NP	0.0	Low Pl
GT13-29	BS 9	35.18	35.38	Silty, gravelly SAND, trace clay	28.7	39.0	25.8	6.5	26.7	20.8	NP	0.0	Low Pl
GT13-29	BS 11	40.5	40.7	Sandy, gravelly SILT, trace clay	29.6	27.3	41.7	1.3	20	27.9	7.9	-1.2	Low Pl
GT13-29	BS 12	50.5	50.7	Gravelly SAND, some silt, trace clay	28.4	48.1	19.5	4.0	-	-	-	-	Non-Pl
GT13-29	BS 13	59.5	59.7	SILT, some clay, trace sand, trace gravel	0.51	7.8	77.9	13.8	21.6	23.2	1.6	-1.2	Low Pl
GT13-29	BS 14	64	64.2	SAND and GRAVEL, trace clay, trace sand	47.2	44.7	8.0	0.2	17.4	30.8	13.4	-0.7	Medium
GT13-29	BS 16	70	70.2	Sandy SILT, some clay, trace gravel	0.47	20.8	68.5	10.2	NP	NP	NP	NP	High P
GT13-29	BS 19	98	98.2	Silty, Sandy GRAVEL, trace clay	41.1	33.6	24.5	0.8	14.6	25.3	10.8	-0.6	Low Pl
GT13-30	BS 1	5	5.2	Sandy, gravelly, SILT, trace clay	25.7	27.5	41.2	5.6	7.7	22.9	15.2	0.1	Low Pl
GT13-30	BS 2	10	10.2	Sandy GRAVEL, some silt	60.9	26.8	12.3	-	-	-	-	-	Non-Pl
GT13-30	BS 3	15	15.2	Sandy GRAVEL, trace silt	67.4	26.9	5.6	-	-	-	-	-	Non-Pl
GT13-30	BS 4	20	20.2	Silty, gravelly SAND, trace clay	27	42.8	29.9	0.3	14.2	32	17.8	-0.1	Medium
GT13-31	BS 1	5	5.2	GRAVEL, some sand, trace silt	77	16.5	6.5	-	-	-	-	-	Non-Pl
GT13-31	BS 2	7	7.2	Gravelley SAND, trace silt	24.7	65.9	9.4	-	-	-	-	-	Non-Pl
GT13-31	BS 3	11	11.2	Silty, gravelly SAND, trace clay	27.1	40.2	31.6	1.0	7.7	17	9.3	0.0	Low Pl
GT13-31	BS 4	18	18.2	SILT, some clay, trace sand, trace gravel	0.5	1.6	86.2	11.8	17.4	23.4	6	0.3	Low Pl
GT13-31	BS 5	22	22.2	Silty SAND, trace clay, trace gravel	0.6	74.1	22.0	3.3	NP	NP	NP	NP	High P
GT13-31	BS 6	27	27.2	Sandy SILT, some clay, some gravel	10.6	29.1	49.4	10.9	12.2	24.6	12.4	0.0	Low Pl
GT13-31	BS 7	34	34.2	Sandy SILT, trace clay, trace gravel	4.6	26.1	67.9	1.4	7.5	29.9	22.4	0.4	Low Pl
GT13-31	BS 8	37	37.2	Silty SAND, some clay, some gravel	13.2	40.4	34.0	12.5	7.4	29.4	22	0.3	Low Pl
GT13-31	BS 9	48	48.2	Silty, Sandy GRAVEL, trace clay	41.8	28.9	28.9	0.3	7.5	32.8	25.3	0.0	Medium
GT13-31	BS 10	57	57.2	Silty, gravelly SAND, trace clay	33.7	45.8	20.3	0.2	13.6	27.2	13.6	-0.2	Low Pl
GT13-31	BS 11	64	64.2	SILT, some clay, some sand, some gravel	15	18.3	48.7	18.0	22.5	46.2	23.7	-0.4	Medium
GT13-31	BS 12	76	76.2	Silty SAND, trace clay, trace gravel	8.4	58.9	29.4	3.3	15	36.4	21.4	-0.1	Medium
GT13-32	BS 1	4	4.2	Sandy GRAVEL, some silt	55.2	34.2	10.6	-	-	-	-	-	Non-Pl
GT13-32	BS 2	6	6.2	Sandy, gravelly SILT, trace clay	33.2	29.3	37.1	0.4	7.7	26.8	19.1	0.0	Low Pl
GT13-32	BS 3	10	10.2	Silty, sandy GRAVEL, trace clay	36.1	31.9	31.7	0.3	13.9	22.3	8.4	-0.9	Low Pl
GT13-32	BS 4	13	13.2	SILT, some sand, trace clay, trace gravel	8	18.1	73.2	0.7	5.9	26.3	20.4	0.3	Low Pl
GT13-32	BS 5	15	15.2	SILT, some clay, some sand, some gravel	17.1	15.2	56.3	11.5	14.7	31.1	16.4	0.0	Medium
GT13-32	BS 6	25	25.2	SILT, trace clay, trace sand, trace gravel	0.2	5.4	92.5	1.9	25	28.7	3.7	-0.1	Low Pl
GT13-32	BS 7	37	37.2	Silty, gravelly SAND, trace clay	28.1	41.1	30.5	0.3	16.7	26.3	9.6	-0.5	Low Pl
GT13-32	BS 8	50	50.2	Silty SAND and GRAVEL, trace clay	38	35.4	26.3	0.3	13.8	26.9	13.1	0.0	Low Pl
GT13-32	BS 9	60	60.2	SILT, SAND, and GRAVEL, trace clay	34.9	33.5	31.2	0.3	23.3	42.3	19	-0.6	Medium
GT13-32	BS 10	70	70.2	Sandy, gravelly, SILT, trace clay	27.5	32.9	39.2	0.4	13.3	35.1	21.8	0.0	Medium
GT13-32	BS 11	78	78.2	Sandy GRAVEL, some silt, trace clay	59.9	26.7	13.3	0.1	24.9	37.2	12.3	-1.3	Medium
GT13-32	BS 12	88	88.2	Silty, gravelly SAND, trace clay	31.1	35.6	32.9	0.3	23.1	57.7	34.6	-0.1	High P
GT13-32	BS 13	100	100.2	Silty SAND and GRAVEL, trace clay	39.3	37.3	21.1	2.3	20.2	36	15.8	-0.3	Medium
GT13-32	BS 14	-	-	Silty, sandy, GRAVEL, trace clay	38.9	34.0	22.5	4.6	21.6	27.7	6.1	-1.8	Low Pl
GT13-33	BS 1	4	4.2	SILT, SAND, and GRAVEL, trace clay	34.3	30.7	34.3	0.7	12.6	22.1	9.5	-0.7	Low Pl
GT13-33	BS 2	7	7.2	Sandy, gravelly SILT	25.4	33.9	40.7	0.0	NP	22.5	NP	NP	Low Pl
GT13-33	BS 3	10	10.2	Gravelley SAND, trace clay, trace silt	26.5	66.9	6.5	0.1	-	-	-	-	Non-Pl
GT13-33	BS 4	18	18.2	Sandy SILT, trace clay, trace gravel	3	24.6	63.6	8.7	NP	29.8	NP	NP	Low Pl
GT13-33	BS 5	20	20.2	Silty SAND, trace clay, trace gravel	0.05	63.0	30.0	7.0	NP	NP	NP	NP	High P

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TABLE B.4

NEW GOLD INC
BLACKWATER GOLD PROJECT

GEOTECHNICAL CHARACTERIZATION REPORT
SUMMARY OF SOIL TESTING RESULTS

Drillhole/Test Pit	Sample No.	Depth From (mBGL)	Depth To (mBGL)	Classification	Grain Size				Atterberg Limits**				Plasti
					% Gravel	% Sand	% Fines		%				
					% Total Gravel	% Total Sand	% Silt	% Clay	PL	LL	PI	LI	<200# Sie
GT13-33	BS 6	21.5	21.7	Clayey SILT, some sand	0	12.7	56.7	30.5	26.8	56.3	29.5	0.2	High P
GT13-33	BS 7	24.5	24.7	Clayey SILT, some sand	0	10.4	64.6	25.1	28.6	55.5	26.9	-0.9	High P
GT13-33	BS 8	35	35.2	SILT and SAND, some clay, trace gravel	1.48	39.0	47.7	11.9	28.6	40.1	11.5	0.2	Medium
GT13-33	BS 9	40	40.2	Silty SAND, trace clay, trace gravel	6.44	52.7	33.6	7.4	18.4	27.3	8.9	-0.3	Low Pl
GT13-34	BS 1	4.3	4.5	Sandy SILT, some clay, trace gravel	9.7	31.0	42.1	17.2	19.2	30.8	11.6	-1.1	Medium
GT13-34	BS 2	10.3	10.5	SAND and GRAVEL, some silt, trace clay	37.4	48.1	14.3	0.1	15.2	20.3	5.1	-1.8	Low Pl
GT13-34	BS 3	15.5	15.7	Silty, sandy GRAVEL, trace clay	42.1	32.1	20.0	5.7	4.5	16.1	11.6	0.4	Low Pl
GT13-34	BS 4	20.2	20.4	Sandy SILT, trace clay, trace gravel	4	32.8	62.6	0.6	10.8	29.1	18.3	0.3	Low Pl
GT13-34	BS 5	26	26.2	SILT, some sand, some gravel, trace clay	14.9	16.4	67.3	1.4	23.4	15.9	NP	0.0	Low Pl
GT13-34	BS 6	36	36.2	SILT and SAND, some gravel, trace clay	17.58	35.6	37.5	9.4	29.2	29.4	0.2	-78.9	Low Pl
GT13-34	BS 7	46	46.2	SILT, some sand, trace clay, trace gravel	1.12	18.8	72.9	7.2	15.3	25.4	10.1	0.3	Low Pl
GT13-34	BS 8	50.4	50.6	Silty, gravelly SAND, trace clay	26.6	43.6	22.4	7.5	18.7	17.7	0	0.0	Low Pl
GT13-34	BS 9	58.8	59	Clayey, sandy SILT, trace gravel	6.7	27.6	40.1	25.6	13.7	19.8	6.1	-0.5	Low Pl
GT13-34	BS 10	72	72.2	Gravelly SAND, some silt, trace clay	32.8	55.7	11.4	0.1	13.7	15.7	2	9.5	Low Pl
GT13-34	BS 11	77.3	77.5	Gravelly SAND, some silt, trace clay	31.4	50.0	13.0	5.6	12.4	21.1	8.7	-1.0	Low Pl
GT13-34	BS 12	81.5	81.7	SAND and GRAVEL, trace silt	54.1	36.1	9.9	-	-	-	-	-	Non-Pl
GT13-34	BS 13	91.5	91.7	Sandy GRAVEL, trace silt	58.3	33.9	7.7	-	-	-	-	-	Non-Pl
GT13-34	BS 14	96.1	96.3	Silty SAND, some gravel, trace clay	11	59.3	21.7	8.0	19.1	42.5	23.4	-0.2	Medium
GT13-34	BS 15	97.5	97.7	Gravelly SAND, some silt, trace clay	29.7	53.2	12.1	5.0	14.9	35.7	20.8	0.0	Medium
GT13-34	BS 16	-	-	Gravelly SAND, some silt, trace clay	23.5	57.9	11.6	6.9	10.2	30.3	20.1	-0.5	Medium
GT13-35	BS 1	4	4.2	Sandy GRAVEL, some silt	55.2	31.3	13.5	-	-	-	-	-	Non-Pl
GT13-35	BS 2	10.7	10.9	Sandy SILT, trace clay	0	26.8	67.3	5.9	11.3	36.7	25.4	0.8	Medium
GT13-35	BS 3	21.2	21.4	SILT some clay, some sand	0	19.2	67.1	13.7	11.31	76.8	65.49	0.4	High P
GT13-35	BS 4	30.1	30.3	Clayey SILT, some sand	0.5	18.1	49.6	31.7	7.42	52.6	45.18	0.7	High P
GT13-35	BS 5	40.3	40.5	SILT some sand, trace clay	0	19.9	73.7	6.4	8.39	46	37.61	0.9	Medium
GT13-35	BS 6	48.8	49	Silty SAND, some clay, trace gravel	1.9	57.0	28.4	12.7	29.2	38.7	9.5	-0.8	Medium
GT13-35	BS 7	-	-	Gravelly SAND, some silt, trace clay	34.6	46.1	12.7	6.5	19.1	23.9	4.8	-0.3	Low Pl
GT13-36	BS 1	3.1	3.3	Silty, gravelly SAND, trace clay	27.2	39.2	28.6	5.0	15.1	27.7	12.6	-0.1	Low Pl
GT13-36	BS 2	4.6	4.8	SILT and SAND, some gravel, trace clay	17.6	41.6	36.3	4.5	11	40.5	29.5	0.2	Medium
GT13-36	BS 3	6.2	6.4	SILT and SAND, some gravel, trace clay	20	37.9	37.1	5.1	20.63	28.1	7.47	-0.7	Low Pl
GT13-36	BS 4	12	12.2	Silty, gravelly SAND, trace clay	26.6	41.3	27.4	4.8	13.44	51.1	37.66	0.0	High P
GT13-36	BS 5	15.7	15.9	SILT, some clay, trace sand, trace gravel	0.3	9.2	74.2	16.3	10.93	23.3	12.37	0.9	Low Pl
GT13-36	BS 6	18.8	19	Silty, gravelly SAND, trace clay	32.6	39.6	21.5	6.4	15.75	29.2	13.45	-0.3	Low Pl
GT13-36	BS 7	21.2	21.4	Silty SAND, some clay, trace gravel	5.6	58.2	26.0	10.1	17.42	22.2	4.78	0.8	Low Pl
GT13-36	BS 8	-	-	Gravelly SAND, some silt, trace clay	23.7	55.5	16.9	4.0	9.4	17.6	8.2	0.9	Low Pl
GT13-37	BS 1	4	4.2	SAND and GRAVEL, trace silt	53.2	37.1	9.6	-	-	-	-	-	Non-Pl
GT13-37	BS 2	9.2	9.4	SAND and GRAVEL, some silt	46.5	41.1	12.3	-	-	-	-	-	Non-Pl
GT13-37	BS 3	13.2	13.4	Silty SAND, trace clay, trace gravel	5.1	67.2	24.9	2.8	NP	20	NP	NP	Low Pl
GT13-37	BS 4	14.6	14.8	SAND, some silt, some gravel, trace clay	16.7	61.2	18.4	3.8	15.1	18.6	3.5	-1.8	Low Pl
GT13-37	BS 5	18	18.2	Silty, sandy GRAVEL, trace clay	40.5	31.7	23.1	4.7	21.1	20.8	0	0.0	Low Pl
GT13-37	BS 6	25.8	26	Silty, gravelly SAND, trace clay	26.6	38.3	30.9	4.2	10.55	20.1	9.55	-0.2	Low Pl
GT13-37	BS 7	34.8	35	Silty SAND, some gravel, trace clay	18.5	45.7	29.4	6.4	13.9	25.2	11.3	0.0	Low Pl
GT13-37	BS 8	47.3	47.5	SILT and SAND, trace clay, trace gravel	5.3	47.9	37.9	8.9	6.4	25.6	19.2	0.8	Low Pl
GT13-37	BS 9	50.4	50.6	SAND and GRAVEL, some silt	49.7	37.6	12.7	-	18.6	14.7	0	0.0	Low Pl
GT13-37	BS 10	52.5	52.7	SILT and SAND, some clay, trace gravel	2.3	47.6	37.0	13.0	19.11	33.1	13.99	0.8	Medium
GT13-37	BS 11	73.2	73.4	Gravelly SAND, some silt, trace clay	29.9	45.2	19.8	5.3	17.7	30.8	13.1	-0.1	Medium
GT13-38	BS 1	4	4.2	SAND and GRAVEL, some silt, trace clay	42.6	40.5	14.7	2.2	19.81	28.5	8.69	-1.6	Low Pl
GT13-38	BS 2	7.7	7.9	Sandy GRAVEL, some silt	62	27.6	10.4	-	-	-	-	-	Non-Pl
GT13-38	BS 3	8.8	9	Silty, sandy GRAVEL, trace clay	36	34.2	27.0	2.7	NP	31.8	NP	NP	Medium
GT13-38	BS 4	13.8	14	SAND and GRAVEL, some silt, trace clay	37.5	45.8	14.0	2.7	19.1	26.9	7.8	-0.8	Low Pl
GT13-38	BS 5	19.4	19.6	Sandy GRAVEL, trace silt	63	30.7	6.3	-	-	-	-	-	Non-Pl
GT13-38	BS 6	21.8	22	SAND and GRAVEL, some silt	40.7	48.4	10.9	-	-	-	-	-	Non-Pl
GT13-38	BS 7	27	27.2	Silty, gravelly SAND, trace clay	29.4	38.7	25.8	6.1	10.98	44.2	33.22	-0.1	Medium
GT13-38	BS 8	41.2	41.4	Silty, gravelly SAND, some clay	23.6	36.7	25.8	13.9	15.7	30.2	14.5	-0.2	Medium
GT13-38	BS 9	48.8	49	Sandy SILT, some clay, trace gravel	1.4	29.8	48.8	20.0	17.5	27	9.5	0.5	Low Pl
GT13-38	BS 10	55.8	56	Silty, gravelly, SAND, some clay	21.2	39.0	25.9	13.9	12.9	38.4	25.5	0.0	Medium
GT13-38	BS 11	66.8	67	SILT and SAND, some clay, trace gravel	0.1	40.4	47.6	11.9	22.9	43.1	20.2	-0.5	Medium
GT13-38	BS 12	84.8	85	Silty SAND, trace clay	0	61.9	28.2	9.9	12.9	30.2	17.3	0.0	Medium
GT13-39	BS 1	4	4.2	Sandy SILT, some gravel, trace clay	13.5	20.7	59.2	6.6	8.63	35.4	26.77	0.2	Medium
GT13-39	BS 2	9	9.2	Silty SAND, some gravel, trace clay	16.6	53.0	24.9	5.5	13.9	20.3	6.4	-0.3	Low Pl
GT13-39	BS 3	31.2	31.4	Silty, gravelly, SAND, trace clay	21.9	38.9	32.9	6.3	14.7	27.6	12.9	-0.4	Low Pl
GT13-39	BS 4	41.5	41.7	SAND and GRAVEL, some silt, trace clay	37.1	40.6	19.2	3.1	15.97	33.7	17.73	-0.3	Medium
GT13-39	BS 5	44.3	44.5	Sandy SILT, some clay, some gravel	16.8	26.5	43.7	13.1	17.1	23.5	6.4	-0.6	Low Pl
GT13-39	BS 6	55	55.2	Gravelly SAND, some silt, trace clay	32	42.8	17.7	7.6	18.23	-	-	0.0	Non-Pl
GT13-39	BS 7	60.8	61	SAND and GRAVEL, some silt, trace clay	40.4	35.0	14.9	9.7	19.6	29.5	9.9	-0.7	Low Pl
GT13-39	BS 8	65	65.2	Silty SAND, some gravel, trace clay	20	45.3	25.6	9.0	23.1	33.9	10.9	-0.9	Medium
GT13-39	BS 9	79.5	79.7	Clayey, sandy SILT	0	22.8	54.8	22.4	25.4	62.3	36.9	0.1	High P
GT13-40	BS 1	8	8.2	SILT and SAND, trace gravel	2.2	35.6	62.1	-	-	-	-	-	Non-Pl
GT13-40	BS 2	20.2	20.4	SAND, trace clay, trace silt, trace gravel	0.1	90.6	7.8	1.5	19	29.2	10.2	0.4	Low Pl
GT13-40	BS 3	39.8	40	SAND and GRAVEL, some silt, trace clay	40.9	42.5	11.6	5.0	-	-	-	-	Non-Pl
GT13-40	BS 4	52.95	53.15	Silty SAND, some clay, trace gravel	7.5	47.3	30.3	14.9	22.4	28	5.6	-0.9	Low Pl
GT13-40	BS 5	56.3	56.5	SAND and GRAVEL, some silt, trace clay	35.8	40.9	16.5	6.8	-	-	-	-	Non-Pl
GT13-40	BS 6	89.3	89.5	Silty SAND, some clay, trace gravel	2.7	58.2	27.4	11.7	16.8	43.2	26.4	0.0	Medium
GT13-41	BS 1	5.1	5.3	SAND and GRAVEL, some silt, trace clay	35.5	51.3	10.6	2.7	15.1	27.7	12.6	-0.6	Low Pl
GT13-41	BS 2	13.5	13.7	SILT, some clay, some sand, trace gravel	4.3	16.7	67.2	11.9	11	40.5	29.5	0.3	Medium
GT13-41	BS 3	19.9	20.1	Sandy GRAVEL, trace silt	64	29.7	6.3	-	-	-	-	-	Non-Pl
GT13-41	BS 4	31	31.2	SAND and GRAVEL, trace silt	54.1	40.3	5.6	-	-	-	-	-	Non-Pl
GT13-41	BS 5	43	43.2	SAND and GRAVEL, some silt, trace clay	40.3	37.5	14.7	7.5	10.9	23.3	12.4	0.5	Low Pl
GT13-41	BS 6	53.4	53.6	SAND and GRAVEL, some silt, trace clay	37.2	35.5	19.7	7.6	15.75	29.3	13.55	-0.2	Low Pl

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TABLE B.4

NEW GOLD INC
BLACKWATER GOLD PROJECT

GEOTECHNICAL CHARACTERIZATION REPORT
SUMMARY OF SOIL TESTING RESULTS

Drillhole/Test Pit	Sample No.	Depth From (mBGL)	Depth To (mBGL)	Classification	Grain Size				Atterberg Limits**				Plasti
					% Gravel	% Sand	% Fines		%				
					% Total Gravel	% Total Sand	% Silt	% Clay	PL	LL	PI	LI	<200# Sie
GT13-41	BS 7	61.1	61.3	Sandy SILT, some clay, trace gravel	0.1	33.9	48.2	17.8	12.6	32.1	19.5	1.0	Medium
GT13-41	BS 8	71.7	71.9	SAND, some silt, trace clay, trace gravel	4.9	69.6	18.6	6.9	8.2	31.7	23.5	1.0	Medium
GT13-41	BS 9	80	80.2	Silty SAND, trace clay, trace gravel	3.7	69.2	20.9	6.2	19.5	35.4	15.9	-0.6	Medium
GT13-41	BS 10	92.8	93	Gravelly SAND, some silt, trace clay	25.8	52.6	16.4	5.2	14.7	39.2	24.5	0.1	Medium
GT13-42	BS 1	3	3.2	SAND and GRAVEL, some silt, trace clay	50.5	35.6	10.9	3.1	11.9	18.2	6.3	-0.9	Low Pl
GT13-42	BS 2	6	6.2	Sandy SILT, some clay, some gravel	13.5	20.7	49.4	16.5	28.3	31.9	3.6	-3.9	Medium
GT13-42	BS 3	14.5	14.7	Sandy GRAVEL, some silt, trace clay	47.1	29.6	18.9	4.4	15.3	20.6	5.3	-1.4	Low Pl
GT13-42	BS 4	16	16.2	Silty, sandy GRAVEL, trace clay	38.9	33.4	21.3	6.4	14.7	20.4	5.7	-1.8	Low Pl
GT13-42	BS 5	26	26.2	Silty, sandy GRAVEL, trace clay	45.5	26.8	21.9	5.8	-	-	-	-	Non-Pl
GT13-42	BS 6	36	36.2	Sandy GRAVEL, some silt, trace clay	43.6	33.7	17.4	5.2	22.4	28.9	6.5	-2.6	Low Pl
GT13-42	BS 7	46.2	46.4	SAND and GRAVEL, trace clay, trace silt	51.6	36.4	9.1	2.9	-	-	-	-	Non-Pl
GT13-42	BS 8	50.5	50.7	SAND, some silt, some gravel, trace clay	14.1	70.3	12.3	3.3	29.8	45.7	15.9	-1.0	Medium
GT13-42	BS 9	52.4	52.6	SAND and GRAVEL, trace silt	53.6	41.1	5.3	-	-	-	-	-	Non-Pl
GT13-43	BS 1	4	4.2	Silty SAND, trace clay, trace gravel	8.2	50.0	34.3	7.5	22.6	59.7	37.1	-0.4	High P
GT13-43	BS 2	9	9.2	Gravelly SAND, some silt, trace clay	21	59.4	16.1	3.5	19.8	20.9	1.1	-8.3	Low Pl
GT13-43	BS 3	10.5	10.7	Sandy SILT, some clay	0	31.4	56.3	12.3	15.4	26.8	11.4	0.0	Low Pl
GT13-43	BS 4	21.1	21.3	SAND, some silt, some gravel, trace clay	17.7	60.0	16.5	5.8	14.7	30.6	15.9	-0.1	Medium
GT13-43	BS 5	31	31.2	Sandy GRAVEL, some silt, trace clay	52.3	28.3	16.3	3.1	8	20.7	12.7	-0.1	Low Pl
GT13-43	BS 6	36.6	36.8	Sandy GRAVEL, some silt, trace clay	45.5	33.7	17.7	3.1	15	33.2	18.2	-0.4	Medium
GT13-43	BS 7	41	41.2	SILT and SAND, some clay	0	43.3	39.6	17.0	12.7	16	3.3	1.2	Low Pl
GT13-43	BS 8	51	51.2	SAND and GRAVEL, trace clay, trace silt	38.3	52.3	6.8	2.6	9.7	25.9	16.2	1.1	Low Pl
GT13-43	BS 9	57	57.2	Silty SAND, some clay, trace gravel	6.9	45.7	31.8	15.7	21.9	21.3	0	0.0	Low Pl
GT13-43	BS 10	60.5	60.7	Clayey, sandy SILT, trace gravel	0.6	32.7	41.4	25.3	13.3	26.5	13.2	0.3	Low Pl
GT13-43	BS 11	61.2	61.4	SAND and Gravel, some silt, trace clay	40.6	41.1	12.3	6.1	14.4	62.8	48.4	0.0	High P
GT13-43	BS 12	62.6	62.8	Clayey, sandy SILT, trace gravel	4.3	22.6	40.2	32.9	13.54	40.14	26.6	0.3	Medium
GT13-43	BS 13	72	72.2	Sandy GRAVEL, some silt, trace clay	41.8	35.0	15.5	7.7	11.6	24.4	12.8	0.8	Low Pl
GT13-43	BS 14	80.2	80.4	Silty SAND, some clay, trace gravel	2.7	55.6	30.4	11.3	12.4	31.3	18.9	0.3	Medium
GT13-43	BS 15	88.6	88.8	Sandy GRAVEL, some silt, trace clay	44.1	34.3	16.2	5.4	12.4	33.3	20.9	0.2	Medium
GT13-44	BS 1	6.2	6.4	Silty SAND, some gravel, trace clay	19.7	42.8	29.3	8.3	6.7	8.2	1.5	8.9	Low Pl
GT13-44	BS 2	17.1	17.3	Sandy GRAVEL, some silt	62.2	26.5	11.3	-	-	-	-	-	Non-Pl
GT13-44	BS 3	26.2	26.4	Sandy GRAVEL, some silt	59.9	29.6	10.4	-	-	-	-	-	Non-Pl
GT13-44	BS 4	38	38.2	Silty, gravelly, SAND, trace clay	22.9	40.0	30.8	6.3	5.7	26.2	20.5	0.4	Low Pl
GT13-44	BS 5	46.5	46.7	Silty SAND, some gravel, trace clay	15.8	55.2	24.1	4.9	9.9	26.5	16.6	0.1	Low Pl
GT13-44	BS 6	55.3	55.5	Sandy GRAVEL, trace clay, trace silt	54.8	34.3	8.5	2.4	8.3	31.3	23	0.0	Medium
GT13-44	BS 7	64.3	64.5	Gravelly SAND, some silt, trace clay	31.1	55.2	11.2	2.5	10.9	17.2	6.3	-0.3	Low Pl
GT13-44	BS 8	74.8	75	SILT, SAND, and GRAVEL	32.8	33.2	27.2	6.8	7.95	26.6	18.65	0.4	Low Pl
GT13-45	BS 1	4.6	4.8	Silty, sandy GRAVEL, trace clay	49.2	27.5	20.3	3.0	8.2	13.2	5	-0.2	Low Pl
GT13-45	BS 2	18	18.2	SAND and GRAVEL, trace silt	52	38.4	9.5	-	-	-	-	-	Non-Pl
GT13-45	BS 3	28.8	29	SAND and GRAVEL, some silt, trace clay	47.5	35.1	14.1	3.3	8.3	NP	NP	0.0	High P
GT13-45	BS 4	44.3	44.5	Sandy GRAVEL, some silt, trace clay	44.2	34.6	18.2	3.0	6.9	14.3	7.4	-0.4	Low Pl
GT13-45	BS 5	47.8	48	SILT and SAND, trace clay	0	40.0	55.2	4.8	8.6	11.7	3.1	3.8	Low Pl
GT13-45	BS 6	52	52.2	SAND and GRAVEL, some silt, trace clay	46	35.9	15.6	2.5	9.9	15.9	6	2.6	Low Pl
GT13-45	BS 7	65.9	66.1	Silty SAND and GRAVEL, trace clay	37.2	38.4	20.7	3.7	15.9	20.1	4.2	-2.4	Low Pl
GT13-45	BS 8	85.8	86	Silty, gravelly SAND, trace clay	21.2	45.7	28.1	5.0	8.8	20.6	11.8	0.1	Low Pl
GT13-45	BS 9	93.8	94	Silty, gravelly SAND, trace clay	24.5	50.9	21.2	3.5	7.6	16.6	9	0.0	Low Pl
GT13-45	BS 10	104.4	104.6	Silty, sandy GRAVEL, trace clay	51.7	21.9	21.9	4.5	8.1	19.7	11.6	-0.1	Low Pl
GT13-45	BS 11	-	-	Sandy, gravelly SILT, trace clay	30	22.1	39.9	8.2	13.8	25.3	11.5	0.0	Low Pl
GT13-46	BS 1	5	5.2	Silty, sandy GRAVEL	47.7	27.1	24.2	1.0	7.6	17.6	10	0.0	Low Pl
GT13-46	BS 2	14.2	14.4	Sandy GRAVEL, some silt	48.3	33.7	16.4	1.6	8.5	13.4	4.9	-0.5	Low Pl
GT13-47	BS 1	3.4	3.6	SILT and SAND, some gravel	19.7	35.2	33.3	11.7	6.8	20.4	13.6	0.4	Low Pl
GT13-47	BS 2	10	10.2	SILT, trace sand, trace gravel	1.9	6.4	83.5	8.3	10.2	20.6	10.4	1.1	Low Pl
GT13-47	BS 3	21.2	21.4	Silty, gravelly SAND	24.2	41.0	28.8	5.9	15	22.85	7.85	-0.7	Low Pl
GT13-47	BS 4	32.7	32.9	Silty SAND, some gravel	10.9	64.3	20.8	4.0	NP	NP	NP	NP	High P
GT13-47	BS 5	37.6	37.8	Sandy SILT, trace gravel	5.7	26.6	53.5	14.2	18.4	9.3	0	0.0	Low Pl
GT13-47	BS 6	48.5	48.7	Silty, gravelly SAND	20.9	57.6	15.0	6.5	9.6	18.1	8.5	0.2	Low Pl
GT13-47	BS 7	57.5	57.7	SILT and SAND, some gravel	14.4	37.5	34.6	13.5	11.7	24.8	13.1	0.2	Low Pl
GT13-47	PROC 5	1.5	1.7	Silty, gravelly SAND	20.2	49.4	28.3	2.1	NP	NP	NP	NP	High P
TP13-160	BS1	4	5	Sandy GRAVEL, trace silt	65.7	26.5	7.8	-	-	-	-	-	Non-Pl
TP13-162	BS 1	4	5	Silty GRAVEL, some sand, trace clay	51	19.8	29.2	0.0	-	-	-	-	Non-Pl
TP13-162	BS1	4	5	SAND and GRAVEL, trace silt	43.54	46.9	9.6	-	-	-	-	-	Non-Pl
TP13-163	BS1	4	5	Silty SAND and GRAVEL	36	36.6	21.7	5.7	20.6	18	0	0.0	Low Pl
TP13-164	BS 1	4	5	SAND and GRAVEL, some silt, trace clay	39.8	41.2	19.0	0.0	-	-	-	-	Non-Pl
TP13-166	BS 1	4	5	Silty, sandy GRAVEL, trace clay	42.1	24.1	33.8	0.0	-	-	-	-	Non-Pl
TP13-168	BS 1	4	5	SAND and GRAVEL, some silt, trace clay	47.5	36.6	15.9	0.0	-	-	-	-	Non-Pl
TP13-170	BS 1	4	5	Silty, gravelly SAND, trace clay	32.4	36.0	31.6	0.0	-	-	-	-	Non-Pl
TP13-172	BS1	4	5	Silty, sandy GRAVEL	39.9	33.7	22.2	4.2	15.6	17.4	1.8	-4.9	Low Pl
TP13-173	BS1	4	4.2	Silty, gravelly SAND	33.4	39.3	22.0	5.2	-	-	-	-	Non-Pl
TP13-174	BS 1	4	5	Silty, Gravelly SAND, trace clay	33.8	48.1	18.1	0.0	-	-	-	-	Non-Pl
TP13-175	BS 1	4	5	Silty, gravelly SAND	28.8	41.8	22.9	6.5	20.9	18.7	0	0.0	Low Pl
TP13-176	BS 1	4	5	SAND and GRAVEL, some silt	39.2	42.4	18.4	0.0	6.4	NP	NP	0.0	High P
TP13-178	BS 1	2.8	3	SAND and GRAVEL, trace clay, trace silt	53.7	39.6	6.7	-	-	-	-	-	Non-Pl
TP13-182	BS 1	4	5	Sandy GRAVEL, trace clay, trace silt	65.1	27.7	7.2	-	-	-	-	-	Non-Pl
TP13-183	BS1	3.5	3.7	SAND and GRAVEL, trace silt	39.2	57.1	3.7	-	-	-	-	-	Non-Pl

Knight Piésold CONSULTING

TABLE B.4

NEW GOLD INC
BLACKWATER GOLD PROJECT

GEOTECHNICAL CHARACTERIZATION REPORT
SUMMARY OF SOIL TESTING RESULTS

Drillhole/Test Pit	Sample No.	Depth From (mBGL)	Depth To (mBGL)	Classification	Grain Size				Atterberg Limits**				Plasti
					% Gravel	% Sand	% Fines		%				
					% Total Gravel	% Total Sand	% Silt	% Clay	PL	LL	PI	LI	<200# Sie
TP13-184	BS 1	4	5	Sandy GRAVEL, trace silt	66.9	24.8	8.3	-	-	-	-	-	Non-Pl
TP13-186	BS 1	4	4.2	SAND and GRAVEL, trace silt	45.7	45.8	8.6	-	13	9.7	0	0.0	Low Pl
TP13-187	BS1	4	5	SAND and GRAVEL, some silt	39.2	45.5	14.0	1.2	-	-	-	-	Non-Pl
TP13-187	BS 2	4	5	SAND and GRAVEL, some silt	39.3	45.8	14.9	-	-	-	-	-	Non-Pl
TP13-189	BS 1	4	5	Sandy GRAVEL, trace silt	67.8	24.3	7.9	-	-	-	-	-	Non-Pl
TP13-190	BS 1	4.5	4.7	SAND and GRAVEL, trace silt	52	43.2	4.8	-	-	-	-	-	Non-Pl
TP13-192	BS 1	4	5	Sandy GRAVEL, some silt	54.5	30.5	15.0	-	-	-	-	-	Non-Pl
TP13-194	BS 1	2	2.2	Sandy GRAVEL, trace silt	77.3	21.4	1.3	-	-	-	-	-	Non-Pl
TP13-196	BS 1	4.5	4.6	SAND, some gravel, trace silt	18.5	77.9	3.7	-	-	-	-	-	Non-Pl
TP13-198	BS 1	3.8	4	SAND and GRAVEL, some silt	44.5	41.2	14.3	-	-	-	-	-	Non-Pl
TP13-200	BS 1	4.8	5	Silty, gravelly SAND	29.7	38.1	32.2	0.0	-	-	-	-	Non-Pl
TP13-201	BS 1	4	5	Silty, gravelly SAND	28.5	45.1	22.4	4.0	-	-	-	-	Non-Pl
TP13-202	BS 1	3.5	4	Sandy, gravelly SILT	26	34.9	39.0	0.0	-	-	-	-	Non-Pl
TP13-204	BS 1	4	4.5	Silty, gravelly SAND	25.1	42.1	32.8	0.0	-	-	-	-	Non-Pl
TP13-206	BS 1	3.5	4	SAND and GRAVEL, trace silt	50.8	44.2	5.1	-	-	-	-	-	Non-Pl
TP13-208	BS 1	4	5	SAND and GRAVEL, some silt	46.2	43.6	10.2	-	-	-	-	-	Non-Pl
TP13-210	BS 1	4	5	SAND and GRAVEL, trace silt	50	47.2	2.8	-	-	-	-	-	Non-Pl
TP13-212	BS 1	3.5	4	Gravelly SILT and SAND	27.6	36.0	36.4	0.0	-	-	-	-	Non-Pl
TP13-214	BS 1	4	4.5	Silty, gravelly SAND	23.5	42.8	33.7	0.0	-	-	-	-	Non-Pl
TP13-216	BS 1	4	5	SAND, trace silt, trace gravel	5.8	86.5	7.7	-	-	-	-	-	Non-Pl
TP13-218	BS 1	4	5	Silty SAND, some gravel	19	51.9	29.1	0.0	-	-	-	-	Non-Pl
TP13-220	BS 1	4	5	SAND and GRAVEL, trace silt	58.4	37.4	4.2	-	-	-	-	-	Non-Pl
TP13-221	BS 1	4	5	Sandy GRAVEL, trace silt	64.4	32.7	2.9	-	-	-	-	-	Non-Pl
TP13-222	BS 1	3.5	4	SAND and GRAVEL, trace silt	53.4	46.4	0.2	-	-	-	-	-	Non-Pl
TP13-223	BS 1	4	5	Silty, sandy GRAVEL	50.6	28.9	18.2	2.3	18.9	18.9	0	0.0	Low Pl
TP13-224	BS 1	3.5	4	Gravelly SILT and SAND	23.9	38.5	37.7	0.0	-	-	-	-	Non-Pl
TP13-226	BS 1	4	5	SAND and GRAVEL, some silt	45.5	44.4	10.1	-	-	-	-	-	Non-Pl
TP13-228	BS 1	3.5	4	Gravelly SAND, some silt	31.4	57.0	11.6	-	-	-	-	-	Non-Pl
TP13-230	BS 1	4	5	SAND and GRAVEL, some silt	44.3	42.2	13.6	-	-	-	-	-	Non-Pl
TP13-232	BS 1	4	5	SAND and GRAVEL, trace silt	47.2	44.4	8.4	-	-	-	-	-	Non-Pl
TP13-234	BS 1	0.8	4	Sandy GRAVEL, trace silt	69	29.0	2.0	-	-	-	-	-	Non-Pl
TP13-236	BS 1	3.5	3.7	SAND and GRAVEL, some silt	38.6	41.9	17.1	2.5	13.2	18.8	5.6	-0.6	Low Pl
TP13-237	PROC 1	3	5	Gravelly SILT and SAND	22.2	39.4	30.7	7.7	-	-	-	-	Non-Pl
TP13-238	BS 1	3.5	3.7	SAND and GRAVEL, trace silt	41.2	53.0	5.8	-	-	-	-	-	Non-Pl
TP13-239	BS 1	3.5	3.7	Gravelly SILT and SAND	22.3	38.4	31.8	7.5	7.7	18.8	11.1	0.0	Low Pl
TP13-240	BS 1	4	5	Gravelly SAND, some Silt	28	56.6	12.8	2.6	15	17	2	-4.0	Low Pl
TP13-242	BS 1	4	5	Silty, Gravelly SAND, trace clay	27.4	43.7	24.8	4.0	12.2	26.9	14.7	-0.1	Low Pl
TP13-243	BS 1	4	4.2	Silty, gravelly SAND	27.1	40.8	22.5	9.6	NP	NP	NP	NP	High P
TP13-244	BS 1	4	5	SAND and GRAVEL, some silt	39.3	48.8	11.9	-	-	-	-	-	Non-Pl
TP13-246	BS 1	4	5	Gravelly SAND some silt, trace clay	25.1	52.9	18.7	3.3	26.1	33.9	7.8	-2.0	Medium
TP13-248	BS 1	3	3.5	SAND and GRAVEL, some silt	37.3	44.0	16.6	2.1	13.3	36.2	22.9	-0.2	Medium
TP13-249	BS 1	4	5	Silty, sandy GRAVEL	46.1	25.1	21.0	7.8	30.3	20.5	0	0.0	Low Pl
TP13-250	BS 1	3.2	3.5	Silty SAND and GRAVEL	37.5	37.9	21.8	2.7	7.2	18.3	11.1	0.1	Low Pl
TP13-251	BS 1	4	5	Gravelly SILT and SAND	20.1	35.5	31.5	12.9	-	-	-	-	Non-Pl
TP13-252	BS 1	4	5	SAND and GRAVEL, trace silt	58.4	35.6	6.0	-	-	-	-	-	Non-Pl
TP13-253	BS 1	4	5	SAND and GRAVEL, some silt	38	49.7	12.2	-	-	-	-	-	Non-Pl
TP13-254	BS 1	4	5	SILT and SAND, some gravel	17.1	37.0	32.5	13.3	14.4	27	12.6	-0.4	Low Pl
TP13-256	BS 1	4	5	Gravelly SAND, some silt	34.2	48.5	14.7	2.6	8.9	18.2	9.3	-0.3	Low Pl
TP13-258	BS 1	4	5	Sandy GRAVEL, trace silt	65.1	30.4	4.5	-	-	-	-	-	Non-Pl
TP13-261	BS 1	4	5	SAND and GRAVEL, some silt	40	42.9	14.7	2.4	-	-	-	-	Non-Pl
TP13-264	BS 1	4	5	Silty, gravelly SAND	28	37.3	34.7	0.0	-	-	-	-	Non-Pl
TP13-265	BS 1	4	5	Silty, sandy GRAVEL	40.8	32.7	22.3	4.2	-	-	-	-	Non-Pl
TP13-266	BS 1	4	5	Sandy GRAVEL, some silt	52.5	33.4	14.1	-	-	-	-	-	Non-Pl
TP13-267	BS 1	4	5	Silty SAND and GRAVEL	34.7	35.9	26.0	3.5	14	20.3	6.3	-0.4	Low Pl
TP13-268	BS 1	4	5	SAND and GRAVEL, trace silt	54.2	40.7	5.1	-	-	-	-	-	Non-Pl
TP13-270	BS 1	4	5	Sandy GRAVEL, trace silt	56.3	34.6	7.0	2.0	-	-	-	-	Non-Pl
TP13-271	BS 1	4	5	GRAVEL, trace silt, trace sand	70.6	1.5	0.8	-	-	-	-	-	Non-Pl
TP13-272	BS 1	3.5	4	SAND and GRAVEL, some silt	35.2	51.2	13.5	-	15.49	28	12.51	0.1	Low Pl
TP13-274	BS 1	4	5	SAND and GRAVEL, trace silt	38.2	52.8	9.1	-	-	-	-	-	Non-Pl
TP13-276	BS 1	4	5	Silty SAND and GRAVEL	39.3	36.0	19.2	5.1	8.9	28.4	19.5	0.0	Low Pl
TP13-277	PROC 4	3	5	Silty, sandy GRAVEL	42.7	29.9	23.1	4.4	15.2	18.4	3.2	-2.1	Low Pl
TP13-278	BS 1	2.2	2.4	Silty, gravelly SAND	20.1	45.0	26.8	8.0	8.2	36.7	28.5	0.0	Medium
TP13-280	BS 1	3	3.2	Silty SAND, some gravel	17.4	48.6	29.6	4.4	8.6	29.5	20.9	0.5	Low Pl
TP13-281	BS 1	2	2.2	Silty, gravelly SAND	29.3	36.8	27.4	6.4	20.9	18.2	0	0.0	Low Pl
TP13-281	BS 2	4	5	Sandy SILT, some gravel	12.2	28.0	43.0	16.7	17	29.5	12.5	-0.5	Low Pl
TP13-282	PROC 3	3	5	Silty SAND and GRAVEL	37.4	40.3	19.2	3.1	7.9	30.8	22.9	0.1	Medium
TP13-282	BS 2	5	6	Silty, gravelly SAND	22.3	47.2	30.5	0.0	15.97	19.7	3.73	-1.3	Low Pl
TP13-283	BS 1	3	5.2	Sandy GRAVEL, some silt	50.3	31.2	14.5	3.9	24.9	20.4	0	0.0	Low Pl
TP13-284	BS 1	3	3.2	Silty, sandy GRAVEL	44.5	30.9	21.3	3.2	16.5	NP	NP	0.0	High P
TP13-285	BS 1	4	4.2	Silty SAND and GRAVEL	36.1	37.4	22.8	3.7	22.6	15.9	0	0.0	Low Pl
TP13-287	BS 1	4	5	Silty SAND and GRAVEL	40.6	37.0	18.6	3.8	23.5	23.1	0	0.0	Low Pl
TP13-288	BS 1	4	5	Sandy GRAVEL, trace silt	61.8	29.9	7.2	1.1	21.7	NP	NP	0.0	High P
TP13-289	BS 1	4	5	Silty, gravelly SAND	25.3	52.4	22.3	0.0	15.2	11.1	0	0.0	Low Pl
TP13-290	BS 1	4	5	SAND and GRAVEL, some silt	43.5	40.4	16.1	0.0	18.3	NP	NP	0.0	High P
TP13-292	BS 1	2	2.2	Sandy GRAVEL, some silt	47.5	33.9	18.6	0.0	15	NP	NP	0.0	High P

Note:

** Atterberg Limits: PL - Plastic Limit; LL - Liquid Limit; PI - Plasticity Index; LI - Liquidity Index

NP None Plastic

IS Insufficient Sample

Knight Piésold CONSULTING

TABLE B.5

NEW GOLD INC

BLACKWATER GOLD PROJECT

GEOTECHNICAL CHARACTERIZATION REPORT

BEDROCK STRENGTH TESTING RESULTS SUMMARY

Print Nov/29/13 11:35:01

Sample ID	UCS / PLT	Depth		UCS	Youngs Modulus	Poisson's Ratio	Lithology
		From (m)	To (m)	Mpa	Gpa		
GT12-03-S1	UCS	71.7	72.1	37.7	28.33	0.2	Andesite
GT12-07-S1	UCS	21.9	22.2	70.9	29.95	0.25	Andesite
GT12-07-S2	UCS	32.5	33	91.9	23.45	0.19	Andesite
GT12-08-S1	UCS	3.7	4	193	67.44	0.25	Andesite
GT12-08-S2	UCS	27.3	27.7	90.6	62.28	0.22	Andesite
GT13-07 RC1	UCS	14.02	14.24	50	34.90	0.18	Andesite
GT13-08 RC1	UCS	14.43	14.67	60	20.80	0.09	VC
GT13-08 RC2	UCS	26.33	26.63	70	18.90	0.08	VC
GT13-09 RC1	UCS	32.42	32.62	50	35.30	0.31	Andesite
GT13-09 PL1	PLT	42.97	43.33	32	-	-	Andesite
GT13-10 RC1	UCS	63.49	63.79	40	47.10	0.27	Andesite
GT13-10 PL1	PLT	64.15	64.26	242	-	-	Andesite
GT13-11 RC1	UCS	19.11	19.45	10	5.80	0.05	Andesite
GT13-11 PL1	PLT	18.93	19.11	108	-	-	Andesite
GT13-12 RC1	UCS	26.33	26.63	160	52.80	0.08	FPLT
GT13-12 PL1	PLT	15.56	15.7	189	-	-	FPLT
GT13-12 PL2	PLT	20.65	20.81	117	-	-	FPLT
GT13-12 PL3	PLT	25.82	26.03	78	-	-	FPLT
GT13-13 RC1	UCS	26.31	26.69	160	53.20	0.16	FPLT
GT13-13 PL1	PLT	27.27	27.38	166	-	-	FPLT
GT13-14 RC1	UCS	54.86	55.22	160	65.00	0.18	Andesite
GT13-14 RC2	UCS	58.01	58.41	100	50.20	0.18	Andesite
GT13-14 PL1	PLT	45.41	45.57	100	-	-	Andesite
GT13-14 PL2	PLT	56.08	56.32	112	-	-	Andesite
GT13-15 PL1	PLT	5.27	5.4	158	-	-	Andesite
GT13-15 PL2	PLT	13.72	13.83	275	-	-	Andesite
GT13-15 RC1	UCS	12.79	13.17	160	57.00	0.24	Andesite
GT13-15 RC2	UCS	13.83	14.13	160	76.00	0.12	Andesite
GT13-16 PL1	PLT	8.53	8.65	243	-	-	Andesite
GT13-16 RC1	UCS	12.64	12.91	80	101.00	0.25	Andesite
GT13-16 PL2	PLT	19.03	19.13	140	-	-	Andesite
GT13-16 PL3	PLT	25.53	25.73	114	-	-	Andesite
GT13-16 RC2	UCS	25.73	25.98	40	49.00	0.19	Andesite
GT13-17 RC1	UCS	34.63	34.95	110	60.00	0.18	Andesite
GT13-17 RC2	UCS	39.2	39.57	160	80.00	0.20	Andesite
GT13-17 RC3	UCS	43.85	44.2	160	80.00	0.18	Andesite
GT13-18 RC1	UCS	12.66	12.96	100	70.00	0.26	Andesite
GT13-18 PL1	PLT	15.24	15.44	105	-	-	Andesite
GT13-19 RC1	UCS	6.99	7.34	10	5.10	0.11	Andesite
GT13-19 RC2	UCS	25.38	25.76	160	75.20	0.09	Andesite
GT13-20 RC1	UCS	13.25	13.55	100	46.70	0.12	Andesite
GT13-20 RC2	UCS	20.84	21.17	60	27.10	0.13	Andesite
GT13-20 RC3	UCS	43.41	43.69	210	126.00	0.27	Andesite
GT13-21 RC1	UCS	37.48	37.71	220	74.70	0.07	Andesite
GT13-21 RC2	UCS	51.17	51.45	90	26.00	0.06	Andesite

\\van11\prj_file\1\01\00457\06\A\Report\8 - Geotechnical Charterization\Rev 0\Appendicies\Appendix B_reference tables\[Table B.5_Rock Testing Results.xlsx]Table B.5

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REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D

APPENDIX C

REFERENCE DOCUMENTS

(Pages C-1 to C-30)

Blackwater Mine Area Glacial History

Executive Summary

The Blackwater mine area was glaciated at least twice during the Pleistocene Epoch (2.6 Ma -12 ka) and is variably blanketed by unconsolidated glacial sediments. The surface sediments over much of the area are lodgment till deposited at the base of the Cordilleran ice sheet during the final glaciation of the Pleistocene ("Fraser Glaciation"). The till is typically streamlined in the direction of glacier flow. Ablation till, ice-contact gravels, and outwash gravels and sands are common in the lower-lying parts of the mine area, notably along Davidson Creek. These 'late-glacial' sediments were deposited at the end of the Fraser Glaciation, as the ice sheet was thinning and retreated back towards the Coast Mountains. The can be divided into two groups: a group of well graded gravels and diamicton deposited subglacially along meltwater corridors; and a group of clean, dominantly silt-free gravels deposited in front of the ice-sheet margin.

The stratigraphy of the Pleistocene sequence, revealed in sonic drill cores, comprises, from top to bottom: (1) Fraser Glaciation outwash and ice-contact sediments; (2) Fraser Glaciation till; (3) glaciolacustrine sediments deposited during the early, advance phase of the Fraser Glaciation; (4) glacial sediments of an earlier, although undated glaciation; (5) regolith reworked by mass movement processes; (6) altered andesite bedrock.

Geomorphology

The mine site is located in an area of moderate relief on the Interior Plateau east of the Coast Mountains. Most of the Blackwater Mine area is covered by unconsolidated sediments dating to the last period of ice sheet glaciation in British Columbia, termed the "Fraser Glaciation." The Cordilleran ice sheet covered this part of the Interior Plateau from about 20,000 until 12,000 years ago, and extended to elevations of about 2500 m asl (Fig. 1). The ice sheet covered all of British Columbia; extended into southern Yukon Territory and Alaska on the north; westernmost Alberta on the east; and northern Washington, Idaho, and Montana on the south. On the west, the ice sheet extended to the edge of the continental shelf. Local ice flow at the mine site at the peak of the Fraser Glaciation was toward the northeast, as indicted by drumlins, rock drumlins, and other streamlined glacial landforms.

Deglaciation commenced about 15,000-16,000 years ago and proceeded by: (1) frontal retreat toward the west or southwest, back towards the Coast Mountains; and (2) progressive lowering of the ice sheet surface by downwasting. The pattern of ice-marginal and subglacial meltwater channels indicates that high areas in the vicinity of the mine site became ice-free before valley floors and other low-lying areas (Fig. 2). Late during deglaciation, glacier ice stagnated in the valley of Davidson Creek, leaving kettles, kames, and other ice-contact deposits

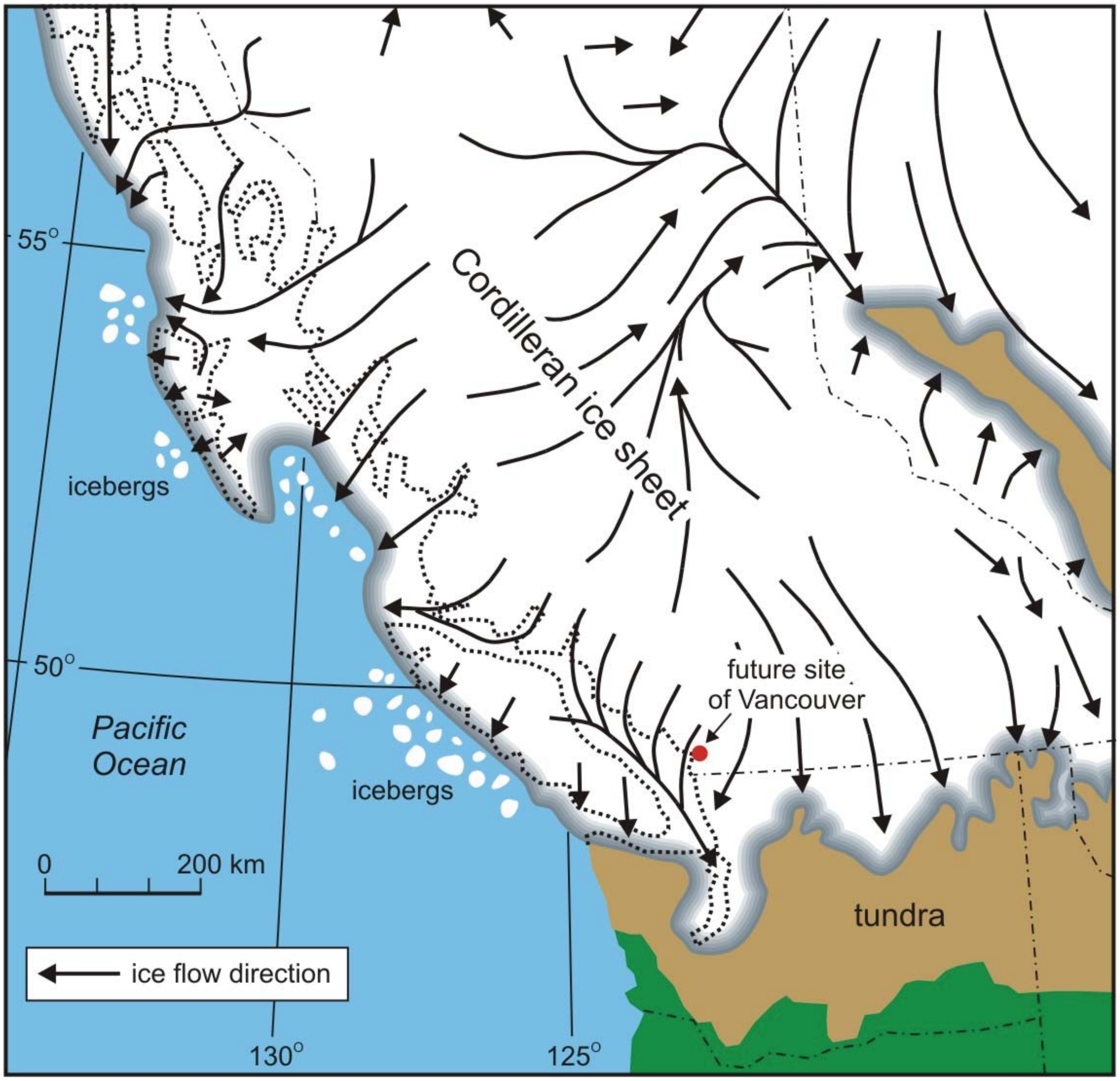


Figure 1. Southern and central portion of the Cordilleran ice sheet at its maximum extent during the Fraser Glaciation (after Clague and Turner, 2003).

and landforms (Fig. 3). Large amounts of glacial meltwater were channel along Davidson Creek and other valleys in the area, producing eskers and ablation till (Fig. 4).

Glacial sediments

Three groups of glacial sediments can be distinguished in the mine area:

The first group of sediments comprises **lodgment till** deposited mainly *beneath* Cordilleran ice sheet when it actively flowed over the mine area. Lodgment till is associated with glacially streamlined landforms, including flutings and drumlins. It consists of well graded, compact sediments with particles ranging from clay- to boulder-size.

The second group comprises **subglacial sediments** deposited *beneath* the decaying ice sheet along broad meltwater corridors – valleys such as that of Davidson Creek, into which subglacial water was channeled and flowed to the east. At the time these sediments were deposited, the ice sheet was thinning over the mine site area. In many areas, the sediments have a hummocky surface, reflective of kames and other ice-disintegration landforms. This group of sediments includes well graded sandy gravel, typically containing some matrix silt, and loose gravelly diamicton (note: "diamicton" is a descriptive term applied by geologists to massive sediments with a wide range of particle sizes – from clay or silt to boulders). Subglacial sediments cover slightly older lodgment till that is associated with streamlined glacial landforms and was deposited at the glacial maximum.

The third group is **proglacial sediments** deposited by meltwater streams *at and beyond the front* of the decaying ice sheet (Fig. 5). At the time of deposition, glacier ice was thinner over the mine site area than at the time the subglacial sediments were deposited. The proglacial sediment group comprises gravels that are more poorly graded than those of the subglacial sediment group. It also locally includes sands. Diamicton is rare within this group of sediments.

Stratigraphy

The stratigraphic interpretation that follows is based on my examination of 13 drill-hole sonic cores on May 2-4, 2013 (GT12-13, -14, -16, -18, -19, -24, -30, -32, -35, -36, -39. -41, and -47.

I recognize four units in the core; from top to bottom: (1) Fraser Glaciation sediments; (2) deposits of an earlier ice sheet glaciation; (3) reworked regolith; 4) in-situ regolith (hydrothermally altered? bedrock) (see Fig. 6).

1. Fraser Glaciation deposits

The Fraser Glaciation sequence includes, from top to bottom (a) subglacial and proglacial sediments deposited during deglaciation, (b) lodgement till, and (c) glaciolacustrine silt and sand deposited as the Cordilleran ice sheet grew during the early stage of the Fraser Glaciation.

Units (a) and (b) of the Fraser Glaciation sequence are described in the section **Glacial sediments** above. Unit (c) is present in most, but not all, boreholes and ranges up to about 20 m thick. It consists dominantly of silt, but in some boreholes includes minor sand, gravel, and diamicton. The sediments consistently lie below Fraser Glaciation till and were laid down in an ephemeral, local lake impounded between the advancing ice sheet and higher ground to the west and south. Sediment-laden meltwater flowing along the margin of the ice sheet entered the lake, and silt settled out of suspension onto the lake floor. Shortly afterwards, the lake was overridden by the advancing ice sheet, terminating glaciolacustrine deposition. Till was deposited on the former lake floor, on top of the glaciolacustrine unit.

2. Older glacial deposits

There is one or more **older glacial sequences** (mainly till) below the Fraser Glaciation drift sequence described above. Although not evident in the cores, the contact between Fraser Glaciation and older drift must be a significant unconformity (Fig. 7), because the two glaciations were separated by a lengthy period during which the landscape was ice-free and subject to weathering and erosion. One might expect fluvial sediments to have been deposited by proto-Davidson Creek during this 'interglacial' interval. Any such gravels would occur stratigraphically between the drift glacial sequences, i.e. between the glaciolacustrine subunit of the Fraser Glaciation glacial sequence and the older glacial sequence. It is possible, however, that Davidson Creek was a minor stream at that time and its sediments accordingly localized and thin. At any rate, such a gravel is a candidate localized subsurface permeable unit (Fig. 6).

2. *Reworked regolith*

The older glacial sequence rests on **reworked regolith**; reworking is due to gravitational and perhaps glacial processes. In some cores, the boundary between this reworked regolith and in-situ bedrock below is unclear. The reworked regolith, however, comprises diamicton containing abundant altered clasts. The diamicton lacks evidence for a glacial origin and thereafter is tentatively ascribed to gravitational processes. The reworked regolith unit records landscape instability, perhaps resulting from the onset of cold climatic conditions during the latest Pliocene or early Pleistocene, ca. 3–2.6 million years ago.

4. In-situ altered rock

Thick (>20 m), intensely altered andesite (**in-situ altered rock**) is the lowest unit in the boreholes. Some of the andesite has been so altered that its original texture has been destroyed. There are two possible origins for the alteration. The first explanation is surface weathering in a stable landscape and a humid, warm climate that persisted for at least hundreds of thousands of years, more likely millions of years during the Pliocene and/or Miocene. The second explanation, which I favor, is that the alteration is epithermal and the product of the passage of low-temperature aqueous fluids through the andesite host rock. This explanation is consistent with the present of the nearby gold deposit.

Figure 6. Schematic drawing of inferred stratigraphy at site of tailings dam, Blackwater mine site. Drawing is conceptual and not to scale.

John J. Clague
October 23, 2013

Blackwater Site Visit, May 2-4, 2013

The following stratigraphic interpretation is based on my examination of the 13 drill-hole sonic cores from the Blackwater mine site. The cores, examined on May 2-4, 2013, are:

GT12-13
GT12-14
GT12-16
GT12-18
GT12-19
GT12-24
GT12-30
GT12-32
GT12-35
GT12-36
GT12-39
GT12-41
GT12-47

I first qualify my comments by saying that there was considerable disturbance of the cores resulting from drilling. I have been involved in sonic drilling projects on several occasions in the past, and the cores from those projects is much less disturbed that the Blackwater cores. The soils encountered during drilling may explain this quality difference; alternatively, the sonic drill used in the Blackwater project may have been underpowered.

Geomorphology

The mine site is located in an area of moderate relief on the Interior Plateau east of the Coast Mountains. The surface soils date to the last period of ice sheet glaciation in British Columbia, termed the “Fraser Glaciation.” The Cordilleran ice sheet, covered this part of the Interior Plateau from about 20,000 until 12,000 years ago, and reached to elevations of about 2500 m asl. Local ice flow at the mine site at the peak of glaciation was toward the northeast and is recorded by drumlins, rock drumlins, and other streamlined glacial landforms.

Deglaciation commenced about 15,000-16,000 years ago and proceeded by: (1) frontal retreat to the west or southwest, back towards the Coast Mountains; and (2) progressive lowering of the ice sheet surface by downwasting. The pattern of ice-marginal and subglacial meltwater channels indicates that high areas in the vicinity of the mine site became ice-free before low areas. Late during deglaciation, glacier ice appears to have stagnated in the valley of Davidson Creek, producing ice-stagnation landforms such as kettles and kames. Large amounts of glacial meltwater were channel along Davidson Creek and other valleys in the area, producing eskers and ablation till.

Stratigraphy

I currently recognize four major units in the cores that I examined; they are, from top to bottom: (1) Fraser Glaciation sediments; (2) deposits of an earlier ice sheet glaciation; (3) reworked regolith; 4) in-situ regolith (weathered bedrock) (see Figure 1).

1. Fraser Glaciation deposits

The Fraser Glaciation sequence includes, from top to bottom (a) outwash deposited during deglaciation, (b) till (both ablation and lodgment types), and (c) glaciolacustrine silt and sand deposited as the Cordilleran ice sheet grew.

(b) Fraser Glaciation till has a silt-sand matrix and. Both loose (ablation till) and compact (lodgment till) varieties are present, the former on top of the latter.

(c) The **glaciolacustrine unit** is present in most, but not all, boreholes and ranges up to about 20 m thick. It consists dominantly of silt, but in some boreholes includes minor sand, gravel, and diamicton. The unit consistently lies below Fraser Glaciation till, described above. The glaciolacustrine sediments were laid down in an ephemeral, local lake impounded between the advancing ice sheet and higher ground to the west and south. Sediment-laden meltwater flowing along the margin of the ice sheet entered the lake, and silt settled out of suspension onto the lake floor. Shortly afterwards, the lake was overridden by the advancing ice sheet, terminating glaciolacustrine deposition. Till was deposited on the former lake floor, on top of the glaciolacustrine unit.

2. Older glacial deposits

There is an **older glacial sequence**, or sequences, of glacial deposits (mainly till) that lie stratigraphically below the Fraser Glaciation drift sequence. Although not evident in the cores, the contact between the two drift sequences must be a significant unconformity (Figure 1), because a lengthy period when the landscape was ice-free and subject to weathering and erosion separated the two glaciations. I would expect fluvial sediments would have been deposited by proto-Davidson Creek during this 'interglacial' interval. Any such gravels would occur stratigraphically between the drift glacial sequences, i.e. between the glaciolacustrine subunit of the Fraser Glaciation glacial sequence and the older glacial sequence. It is possible, however, that Davidson Creek was a minor stream at that time and its sediments accordingly localized and thin At any rate, such a gravel is a candidate localized subsurface permeable unit (Figure 1).

2. *Reworked regolith*

The older glacial sequence rests on **reworked regolith**; reworking is due to gravitational and perhaps glacial processes. In some cores, the boundary between this reworked regolith and in-situ weathered bedrock is unclear. The reworked regolith, however, comprises diamicton containing abundant weathered clasts. The diamicton lacks evidence for a glacial origin and thereafter is tentatively ascribed to gravitational processes. The reworked regolith unit records landscape instability, perhaps resulting from the onset of cold climatic conditions during the early Pleistocene, ca. 2.6 Ma.

4. In-situ regolith

Thick (>20 m), intensely weathered andesite (**in-situ regolith**) is the lowest unit in the boreholes. Some of the andesite has been so weathered that its original texture has been destroyed. A zone of whitish silt-clay-sized sediment near the top of the regolith is either a soil horizon or a weathered tuff (volcanic ash). The extent of the weathering indicates a stable landscape and a humid, warm climate that persisted for at least hundreds of thousands of years, more likely millions of years during the Pliocene and/or Miocene.

Questions

1. Absence of outwash at the top of the older glacial sequence.

I find the apparent absence of thick recessional outwash at the top of the older glacial sequence puzzling. My reasoning is that these sediments are common and locally thick at the top of the Fraser Glaciation sequence, and their apparent absence at the top of the older glacial sequence cannot be explained by subsequent glacial erosion because the glaciolacustrine sediments deposited during the Fraser Glaciation have not been removed by erosion. The best explanation is that significant recessional outwash was not deposited at the mine site at the end of the penultimate (older) glaciation.

2. Preservation of reworked and in-situ regolith

I am surprised that the thick regolith sequence is preserved. I would have expected the first glaciers that overrode the mine site to have scoured away the regolith. However, the regolith does vary in thickness—it is thin or absent in topographically high positions and thick in topographic lows. It seems likely that the topographic lows, and therefore the regolith, were shielded from glacial erosion.

John J. Clague
May 6, 2013

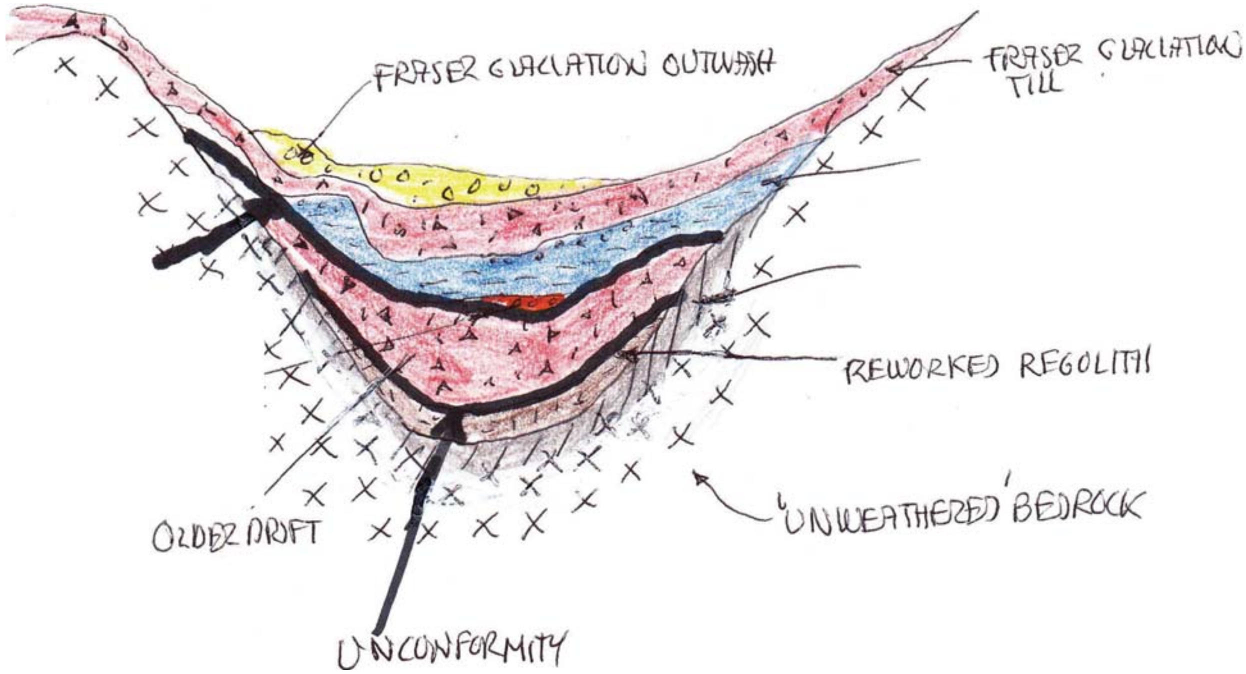


Figure 1. Schematic drawing of inferred stratigraphy at site of tailings dam, Blackwater Mine site. Drawing is conceptual and not to scale.

September 4, 2013

File No.:VA101-457/6-A.01
Cont. No.:VA13-01568

ISO 9001 - FS 64925
ISO 14001 - EMS 550121
OHSAS 18001 - OHS 550122

Mr. Paul Hosford
New Gold Inc.
Suite 1800, Two Bentall Centre
555 Burrard Street
Vancouver, British Columbia
Canada, V7X 1M9

Dear Paul,

Re: Blackwater Gold Project - Findings of Glacial Landform Mapping

Summary

This report details the findings of glacial landform mapping undertaken for the Blackwater Gold Project. The mapping was undertaken at the proposed Tailings Storage Facility sites (TSF Study Area) and in the proposed mine site, waste dumps and stockpiles area (Stockpiles Study Area). The glacial landform mapping was undertaken to develop the geomorphological and geological models for the site. The mapping was prepared with guidance and external technical review provided by Dr. John Clague, P.Geo., of the Department of Earth Sciences at Simon Fraser University.

The mapping was undertaken by interpreting a Bare Earth Digital Elevation Model (DEM) in 3D after applying the 'slope shader' function within the *Global Mapper* software package. A range of glacial landforms, including kames, kettles, eskers, glaciofluvial terraces, meltwater channels and glacial flutings, were readily identifiable on the Bare Earth DEM.

The glacial landform mapping for the TSF Study Area confirmed the presence of broad areas of glaciofluvial sands and gravels that extended considerable distances beyond the limits of the Davidson Creek Meltwater Corridor. These deposits were previously identified in the terrain mapping component of the project (KP, 2013). Glaciofluvial deposits were particularly extensive across the north part of the footprint (left abutment) of the proposed Site D Main Dam. It was possible to subdivide the glaciofluvial deposits through landform mapping into pro-glacial channel deposits, sub-glacial channel deposits, and non-channelized deposits. The findings of the mapping suggest that the extensive glaciofluvial deposits identified outside the meltwater corridors are generally non-channelized deposits and predominantly comprise kame complexes. This finding is of particular importance for the hydrogeological modelling and seepage analyses as kame deposits encountered tend to have a significant proportion of silt and therefore are inferred to have lower permeability than channel deposits.

The terrain mapping identified broad areas of glaciofluvial sands and gravels outside the Creek 505659 Meltwater Corridor. However, the glacial landform mapping provided only limited evidence of glaciofluvial deposits in these areas.

The landform mapping suggests that glaciofluvial deposits are more common in the Stockpiles Study Area than indicated by the terrain mapping. Several eskers and localized kames were identified in the footprint area of the proposed West Dump, and a kame complex was mapped at the north part of the footprint of the proposed Low Grade Stockpile.

Glacial flutings are widespread within both study areas. These landforms are low linear ridges of Lodgement Till that formed beneath the advancing ice sheet as it flowed to the northeast. The widespread occurrence of these features suggests that Lodgement Till is much more common within the Study Areas than Ablation Till. Lodgement Till is dense or stiff and contains significant interstitial silt that greatly lowers its permeability. Local areas of hummocky moraine were identified in the west part of the Stockpiles Study Area and extend locally into

the area of the proposed West Dump. These areas are interpreted to comprise Ablation Till and some ice-contact glaciofluvial deposits.

An esker field approximately 6 km east-northeast of the site of the proposed Site D Main Dam was previously identified as a potential aggregate source area. Aggregate suitability testing was carried out in this area as part of the Feasibility Study. The landform mapping study area was extended to include this area so that the eskers could be delineated. The landform mapping supported the presence of a potential extensive aggregate source in this area.

The landform mapping also highlighted other eskers closer to the mine site, which could be considered in future studies. A dissected esker, with a length of approximately 550 m, is located along the proposed Mine Access Road approximately 3 km to the north of the camp location and approximately 1.3 km east of the south (right) abutment of the Site D Main Dam. Another esker field lies approximately 1 km east of where the Site D Main Dam crosses the Creek 505659 Meltwater Corridor.

1. Introduction

The Blackwater Gold Project is a proposed gold-silver mine, located approximately 110 km southwest of Vanderhoof in central British Columbia. The TSF embankments will be centred along two drainage lines, referred to as Davidson Creek and Creek 505659. The Open Pit, Plant Site and Stockpiles will be located south of the Tailings Storage Facility (TSF) on the north slopes of Mount Davidson.

Knight Piésold Ltd. undertook reconnaissance terrain and terrain stability mapping of the project site in the summer of 2012 (KP, 2013) to provide baseline soils and terrain data pertinent to the project Environmental Assessment application. The terrain mapping indicated that Till is the dominant surficial material at the site. Glaciofluvial terraces were identified adjacent to Davidson Creek and Creek 50569, and glaciofluvial sands and gravels locally extend considerable distances beyond the limits of these terraces. They extend across approximately half of the footprint length of the proposed Site D Main Dam on the north side of Davidson Creek. The evidence that the glaciofluvial deposits extend beyond the limits of the terraces came, in part, from interpretation of digital stereo pairs and 1 m contour maps. The digital stereopairs and maps revealed hummocky kame topography. Subsequent site investigation programs confirmed these findings. The glaciofluvial soils at the site have a wide range of particle size distributions. Gravels and sands associated with glaciofluvial terraces and eskers contain negligible fines, whereas kame deposits can have significant quantities of silt.

A recommendation was made in the Terrain Mapping report to refine the mapping of glacial landforms at the site with the aid of a Bare Earth Digital Elevation Model. The key aims were to confirm the interpreted extents of the glaciofluvial deposits and to determine the distributions of channel deposits (glaciofluvial terraces and eskers) and non-channelized glaciofluvial deposits (kames). Furthermore, the additional glacial landform mapping could facilitate the distinction of Lodgement Till and Ablation Till at the site. The development of an accurate geological model for the glaciofluvial deposits at the site that differentiates units in relation to their particle size distribution improves the reliability of hydrogeological modelling and seepage analyses that have been undertaken for the project. The glacial landform mapping may also help identify aggregate sources.

This report presents the findings of the Bare Earth Digital Elevation Model glacial landform mapping. The mapping was undertaken for two study areas, hereafter referred to as the TSF Study Area and the Stockpiles Study Area.

2. Methodology

The mapping was completed using the *Global Mapper* Software package. The Bare Earth Digital Elevation Model was examined in 3D after applying the 'slope shader' function. The vertical scale was exaggerated to accentuate the landforms. The morphological features were digitized within *Global Mapper* and then exported to

ArcMap to produce the final maps. The mapping was prepared with guidance and external technical review provided by Dr. John Clague, P.Geo., of the Department of Earth Sciences at Simon Fraser University.

3. Findings

3.1 Geomorphological Model

3.1.1 General

The Glacial Landform Maps are presented on Drawings G0080 and G0081. The following landforms were identified in the mapping:

- Glacial flutings
- Hummocky Moraine
- Drumlins
- Subglacial Crevasse Infills
- Kames
- Kettles
- Eskers
- Meltwater Channels
- Pro-glacial Meltwater Corridors
- Sub-glacial Meltwater Corridors, and
- Meltwater Erosional Scarps.

Glacial flutings are widespread within both study areas. These landforms are low linear ridges of Lodgement Till that formed beneath the Cordilleran Ice Sheet as it flowed northeast during the last glaciation. The widespread occurrence of these features suggests that Lodgement Till is much more common within the Study Areas than Ablation Till. Areas of hummocky moraine, lacking flutings, have been mapped locally within the west part of the Stockpiles Study Area and in part of the proposed West Dump area. These areas are interpreted to comprise Ablation Till and some ice-contact glaciofluvial deposits, which were deposited when glacier ice stagnated and melted. A drumlin was identified in the northwest part of the TSF Study Area. This streamlined landform developed as the ice sheet advanced across the area. The drumlin has the same northeast orientation as the glacial flutings. Sub-glacial Crevasse Infills were identified in the northwest part of the TSF Study Area. These linear landforms are thought to consist of sediment that was washed into crevasses and deposited at the base of stagnant ice. They trend towards the northwest, perpendicular to the glacial flutings and the direction of ice movement.

Kames, kettles and eskers are readily apparent on the Bare Earth DEM. Kames are mounds of gravel and sand with trace to some silt. They formed where streams deposited coarse sediment in cavities in the ice sheet. The kames commonly occur in groups, referred to as kame complexes. Kettles are closed depressions that occur locally within the kame complexes. They formed when detached blocks of ice melted at the end of the last glaciation. Their floors are commonly below the water table, thus kettles are commonly occupied by ponds or lakes. Eskers are sinuous ridges that consist of sands and gravels with some cobbles deposited in sub-glacial channels. Esker complexes are present on the north sides of Davidson Creek and Creek 505659 in the east part of the TSF Study Area (Drawing G0080). The eskers have a general northeast trend.

Meltwater channels have been subdivided into ‘minor’ and ‘major’ channels depending upon their width. The meltwater channels provide evidence for water flow beneath and from the margin of the receding ice sheet. The major meltwater channels have a northeast trend. The valleys of both Davidson Creek and Creek 505659 contain a succession of meltwater channels, expressed by a series of up to six terraces (Drawing G0080). The terraces provide evidence of sequential downcutting by meltwater streams.

Pro-glacial and Sub-glacial Meltwater Corridors were delineated in the mapping. Pro-glacial Meltwater Corridors are complexes of meltwater channels that formed in front of the retreating ice sheet. Their margins are defined by the maximum lateral extents of the incised slopes adjacent to the main drainage lines. Sub-glacial Meltwater Corridors are meltwater features that formed beneath the decaying ice sheet. Their margins are defined by the maximum lateral extents of esker fields and also by the edges of meltwater plains in areas where there are no glaciofluvial terraces. Pro-glacial Meltwater Corridors occur at the site of the proposed TSF, whereas Sub-glacial Meltwater Corridors occur in the Stockpiles Study Area.

Meltwater erosional scarps were identified locally in areas outside the meltwater corridors. These features were formed by sub-glacial streams that eroded the ground on one bank but were bounded by ice on the other. The orientations of the meltwater erosional scarps provide further evidence that the prominent drainage direction was towards the northeast.

3.1.2 TSF Study Area

Davidson Creek and Creek 505659 are located along major Pro-glacial Meltwater Corridors. The TSF Site C and Site D Main Dams are to cross the Davidson Creek Pro-glacial Meltwater Corridor. Esker fields, marking Sub-glacial Meltwater Corridors, are present on the north sides of Davidson Creek and Creek 505659 in the east part of the TSF Study Area, downstream of the sites of the proposed TSF embankments (Drawing G0080).

The proposed footprint area of the Site D Main Dam extends into a kame complex north of the Davidson Creek Pro-glacial Meltwater Corridor. A large kettle and a small esker are present in this area. Meltwater channels and meltwater erosional scarps provide additional evidence for the passage of water and the likely presence of coarse soils in this area. The east-west trending, northern portion of the footprint of the proposed Site D Main Dam crosses an additional incised drainage line with a northwest orientation. No terraces were identified on the side slopes of the drainage line, but a small esker is present on the east slope. This drainage line is interpreted to be a Sub-glacial Meltwater Corridor. A kame complex occurs at the west edge of the footprint area of the proposed Site D Main Dam.

There are meltwater channels and a few small eskers and meltwater erosional scarps on the south side of the Davidson Creek in the vicinity of the proposed Site D Main Dam site that are orientated towards the main meltwater corridor. There are also a few kames in this area. The major meltwater channel in this area can be traced southwards, upslope to a pond. The pond lies along an east-west-oriented Sub-glacial Meltwater Corridor. Kames and kettles that were not identified in the terrain mapping exercise are present east of the pond. The meltwater corridor extends northward, east of the kames and kettles. A dissected esker is present in this area (Drawing G0080). The footprint area of the proposed Site D Main Dam extends across east-west-oriented meltwater erosional scarps to the south of east-west-oriented Sub-glacial Meltwater Corridor.

A small embankment will be constructed across Creek 505659 and aligned with the Site D Main Dam. The glacial landform mapping indicates that a Sub-glacial Meltwater Corridor intersects the south slopes of the Creek 505659 Drainage Line, immediately upstream of the proposed embankment site, and that there are a series of meandering Major Meltwater Channels in the area of the proposed south abutment (Drawing G0080).

Glacial landforms indicative of the presence of coarse glaciofluvial soils were also identified outside the Pro-glacial Meltwater Corridor in the vicinity of the site of the proposed Site C Main Dam. Kames, meltwater channels and meltwater erosional scarps occur immediately north and southwest of the proposed footprint of the dam on the meltwater corridor (Drawing G0080).

3.1.3 Stockpiles Study Area

A north-south-oriented Sub-glacial Meltwater Corridor lies within the west part of the Stockpiles Study Area, within the footprint area of the proposed West Dump (Drawing G0081). The meltwater corridor continues into a Kame complex located in the toe area of the footprint of the proposed Low Grade Stockpile. The kame complex lies within an east-northeast-oriented Sub-glacial Meltwater Corridor that extends towards Creek 505659. Kames were also mapped in the central and west parts of the footprint of the proposed West Dump. Two eskers are oriented towards the north and one to the northeast in the west part of the footprint area of the proposed West Dump.

An east-west-oriented Sub-glacial Meltwater Corridor crosses the footprint of the proposed East Dump. It comprises two channels separated by a mound with a fluting trending northeast. An east-west-oriented Sub-glacial Meltwater Corridor, located in the north part of the Stockpiles Study Area, is the upstream portion of the meltwater corridor that intersects the Creek 505659 Drainage Line immediately upstream of the footprint of the proposed Site D Main Dam.

3.2 Geological Model

Terrain Mapping revealed extensive glaciofluvial deposits at the TSF Site, which extend for considerable distances beyond the limits of the Davidson Creek Meltwater Corridor. These deposits are located:

- In the north part of the footprint area of the proposed Site D Main Dam (Terrain Polygon No. 206); glaciofluvial deposits extend beneath approximately half of the footprint length of the proposed Site D Main Dam on the north side of Davidson Creek.
- Southwest of the footprint of the proposed Site C Main Dam (Terrain Polygon No. 184).
- Northeast of the footprint of the proposed Site C Main Dam (Terrain Polygon No. 1509).
- Southeast of the footprint of the proposed Site C Main Dam (Terrain Polygon No. 2).

The glacial landform mapping confirmed the presence of glaciofluvial deposits in these areas. There are abundant kames and kame complexes, as well as some small eskers. The presence of meltwater channels and meltwater erosional scarps provide additional evidence of environments in which coarse soils are expected. Till was mapped in the area north of Polygon 1509 in the terrain mapping. Kames were mapped in this area in the glacial landform mapping and extend to near the Site D Main Dam footprint (Drawing G0080). It is interpreted, therefore, that glaciofluvial deposits occur locally within this area.

Terrain mapping previously identified large areas of glaciofluvial sands and gravels outside the Creek 505659 Meltwater Corridor (Polygons 52, 194, 285 and 96). However, the landform mapping provided limited evidence of the presence of glaciofluvial deposits in these areas.

The glacial landform mapping suggests that glaciofluvial deposits are more common in the Stockpiles Study Area than the terrain mapping indicated. Sub-glacial Meltwater Corridors in this area include channelized deposits in the narrow sections and kame deposits in open areas. Kame deposits are also present near the southwest margin of the footprint area of the proposed West Dump. In addition, kames, meltwater channels and meltwater erosional scarps in the south part of the Stockpiles Study Area provide evidence of deposits of coarse soils. The Sub-glacial Meltwater Corridor at the site of the proposed East Dump had been interpreted during terrain mapping to be an area of Ablation Till. This area was re-interpreted from the findings of the landform mapping and is now thought to comprise two old sub-glacial meltwater channels, separated by a mound of Lodgement Till. Coarse soils are expected along the old channels.

Terrain mapping highlighted the presence of both channelized and non-channelized glaciofluvial deposits at the TSF Site. The signature landforms of the channelized deposits are terraces and eskers, whereas hummocky kame topography is characteristic of non-channelized glaciofluvial deposits. The key distinction between the channelized deposits and the kame deposits is that the former have little or no fines, whereas the latter contain significant silt content and therefore are inferred to have a lower permeability. This difference has important implications for the hydrogeological modelling and seepage analyses at the site. A map showing the differentiation of the glaciofluvial deposits in the TSF area is presented in this report (Drawing G0082). Areas that had been mapped as glaciofluvial sands and gravels during terrain mapping, but were not substantiated as such during the glacial landform mapping, are labelled 'undifferentiated glaciofluvial deposits' on Drawing G0082. Drawing G0082 shows that the broad areas of non-channelized glaciofluvial sands and gravels that extend for considerable distances beyond the limits of the Davidson Creek Meltwater Corridor are mainly kame complexes, as opposed to channelized deposits.

3.3 Aggregate Source Areas

An esker field approximately 6 km east-northeast of the site of the proposed Site D Main Dam was previously identified as a potential aggregate source area. Aggregate suitability testing was carried out in this area as part of the Feasibility Study. The landform mapping study area was extended to include this area so that the eskers could be delineated. The landform mapping supported the presence of a potential extensive aggregate source in this area.

The landform mapping also highlighted other eskers closer to the mine site, which could be considered in future studies. A dissected esker, with a length of approximately 550 m, is located along the proposed Mine Access Road approximately 3 km to the north of the camp location and approximately 1.3 km east of the south (right) abutment of the Site D Main Dam. Another esker field lies approximately 1 km east of where the Site D Main Dam crosses the Creek 505659 Meltwater Corridor.

4. Conclusions and Discussion

Glacial landform mapping has been undertaken for the proposed TSF and Stockpile areas of the Blackwater Project. The mapping was completed with the aid of a Bare Earth Digital Elevation Model. A range of landforms, including kames, kettles, eskers, glaciofluvial terraces, meltwater channels and glacial flutings, were identified using the Bare Earth DEM.

The mapping reduced the uncertainties in the geomorphological and geological models for the project site. It was possible, from the results of the mapping, to subdivide the glaciofluvial deposits into pro-glacial and sub-glacial channel deposits, and non-channelized kame deposits. Extensive glaciofluvial deposits are present in the TSF area and extend for considerable distances beyond the Davidson Creek Meltwater Corridor. The glacial landform mapping suggests these deposits comprise kame complexes, as opposed to channelized deposits.

There are remaining uncertainties in the geological model. Terrain mapping indicated the presence of large areas of glaciofluvial sands and gravels outside the Creek 505659 Meltwater Corridor. However, the glacial landform mapping provided only limited evidence of glaciofluvial deposits in these areas. This uncertainty could be reduced or eliminated by excavating additional test pits in this area.

Glacial flutings are common within both study areas. These landforms are low linear ridges of Lodgement Till that formed beneath the advancing ice sheet as it flowed to the northeast. The widespread occurrence of these features suggests that Lodgement Till is much more common within the Study Areas than Ablation Till. Lodgement Till is dense or stiff and contains significant interstitial silt that greatly lowers its permeability. However, areas of Ablation Till are difficult to differentiate, and this is one limitation of the mapping method. Areas of hummocky moraine were identified in the west part of the Stockpiles Study Area and extend locally into the area of the proposed West Dump. These areas are interpreted to comprise Ablation Till and some ice-contact glaciofluvial deposits. This interpretation could be confirmed by excavating additional test pits in the area.

5. References

KP, 2013. Blackwater Gold Project. Reconnaissance Terrain and Terrain Stability Mapping (Report Ref. VA101-457/4-4)

Please do not hesitate to contact the undersigned, should you have any questions regarding this report.

Yours truly,
KNIGHT PIESOLD LTD.

PROFESSIONAL
PROVINCE OF
J. E. HALEY
33730
BRITISH COLUMBIA
ENGINEER

SEPTEMBER, 04, 2013

Signed:
James Haley, P.Eng.
Senior Geotechnical Engineer

Reviewed:
Daniel Fontaine, P.Eng.
Project Engineer

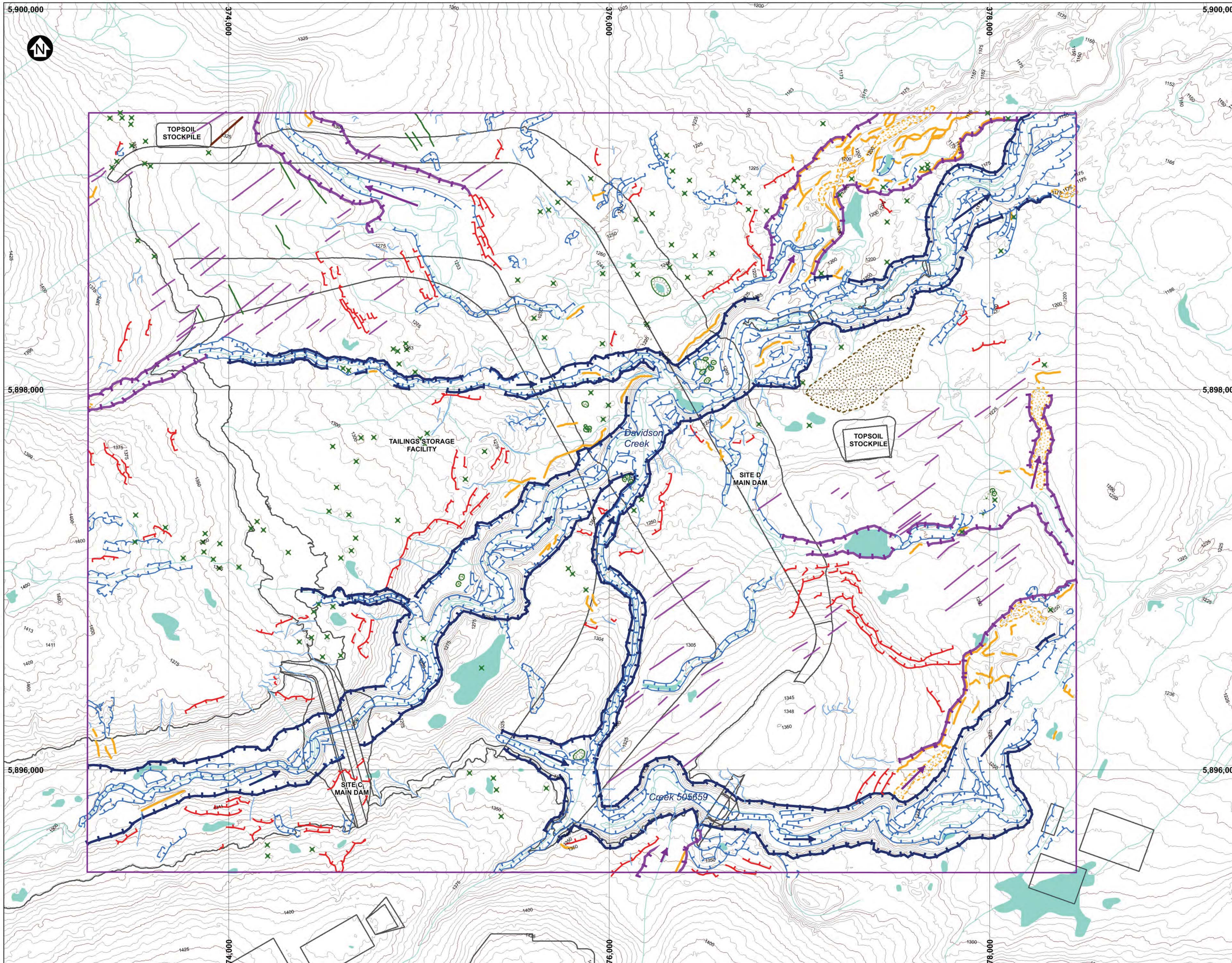
FOR

Approved:
Ken Brouwer, P.Eng.
President

Attachments:

Drawing G0080 Rev 0 Glacial Landform Map – TSF Area
Drawing G0081 Rev 0 Glacial Landform Map – Stockpiles Area
Drawing G0082 Rev 0 Surficial Geology Map – TSF Area

/jeh



LEGEND

GENERAL
- CONTOUR (5 M)
- CONTOUR (25 M)
- RIVER/CREEK
- LAKE
- STUDY AREA

PROPOSED FACILITIES
- MINE FACILITIES

GLACIAL LANDFORMS
- MINOR MELTWATER CHANNEL
- MAJOR MELTWATER CHANNEL (SEE NOTE 5)
- PRO-GLACIAL MELTWATER CORRIDOR (SEE NOTES 5 AND 6)
- SUB-GLACIAL MELTWATER CORRIDOR (SEE NOTES 5 AND 6)
- MELTWATER EROSIONAL SCARP
- ESKER
- ESKER
- KETTLE
- KAME
- SUBGLACIAL CREVASSE INFILL
- HUMMOCKY MORAINE
- DRUMLIN
- FLUTING

NOTES:

1. COORDINATE GRID IS IN METRES. COORDINATE SYSTEM: NAD 1983 UTM ZONE 10N.
2. THE CONTOUR INTERVAL IS 5 METRES; SOURCE: EAGLE MAPPING.
3. THIS FIGURE IS PRODUCED AT A NOMINAL SCALE OF 1:10,000 FOR 24x36 ("D" SIZE) PAPER. ACTUAL SCALE MAY DIFFER ACCORDING TO CHANGES IN PRINTER SETTINGS OR PRINTED PAPER SIZE.
4. FACILITIES BASED ON 24MAY'13 VERSION OF THE GENERAL ARRANGEMENT.
5. CROSSMARKS POINT TOWARDS CENTRE LINE.
6. ARROWS INDICATE INFERRED FLOW DIRECTION.

300 150 0 300 600 900 m
SCALE

DISCLAIMER
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PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA J. E. HALEY # 33730
J. Haley SEPT. 04, 2013

Knight Piésold CONSULTING

NEW GOLD INC.

BLACKWATER GOLD PROJECT

GLACIAL LANDFORM MAP
TSF AREA

DRG. NO.	DESCRIPTION	REV	DATE	DESCRIPTION	DESIGN	DRAWN	CHK'D	APP'D
-	-	0	04AUG'13	ISSUED FOR LETTER	JEH	KK	DDF	
REFERENCE DRAWINGS		REVISIONS						

P/A NO.	DRAWING NO.	REVISION
VA101-457/6	G0080	0

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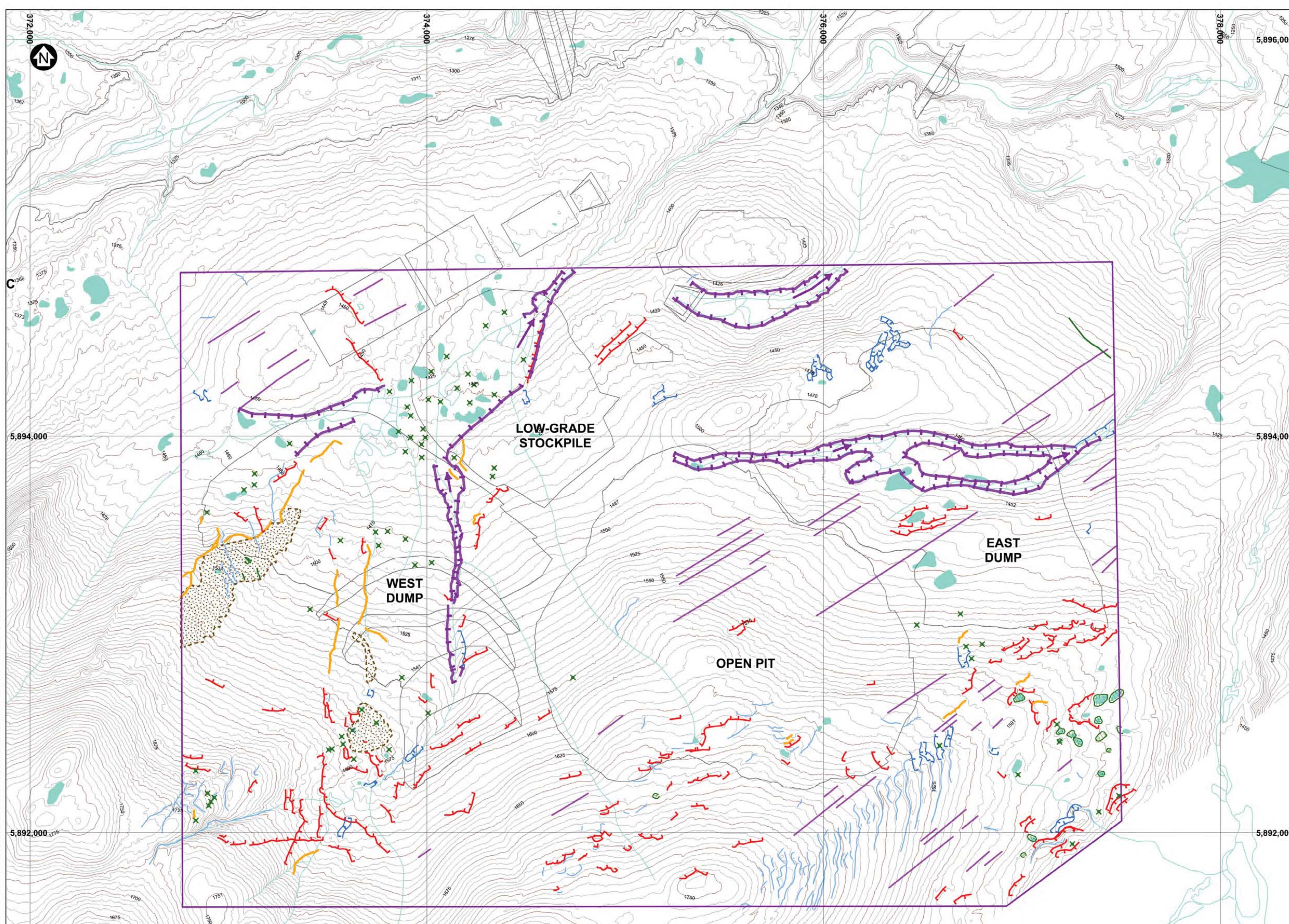

LEGEND

GENERAL

- CONTOUR (5 M)
- CONTOUR (25 M)
- RIVER/CREEK
- LAKE
- STUDY AREA

PROPOSED FACILITIES

- MINE FACILITIES

GLACIAL LANDFORMS

- MINOR MELTWATER CHANNEL
- MAJOR MELTWATER CHANNEL (SEE NOTE 5)
- PRO-GLACIAL MELTWATER CORRIDOR (SEE NOTES 5 AND 6)
- SUB-GLACIAL MELTWATER CORRIDOR (SEE NOTES 5 AND 6)
- MELTWATER EROSIONAL SCARP
- ESKER
- ESKER
- KETTLE
- KAME
- SUBGLACIAL CREVASSE INFILL
- HUMMOCKY MORAINE
- DRUMLIN
- FLUTING

NOTES:

1. COORDINATE GRID IS IN METRES.
COORDINATE SYSTEM: NAD 1983 UTM ZONE 10N.

2. THE CONTOUR INTERVAL IS 5 METRES; SOURCE: EAGLE MAPPING.

3. THIS FIGURE IS PRODUCED AT A NOMINAL SCALE OF 1:10,000 FOR 24x36 ("D" SIZE) PAPER. ACTUAL SCALE MAY DIFFER ACCORDING TO CHANGES IN PRINTER SETTINGS OR PRINTED PAPER SIZE.

4. FACILITIES BASED ON 24MAY'13 VERSION OF THE GENERAL ARRANGEMENT.

5. CROSSMARKS POINT TOWARDS CENTRE LINE.

6. ARROWS INDICATE INFERRED FLOW DIRECTION.

300 150 0 300 600 900 m

SCALE

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
J. E. HALEY
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J. Haley SEPT 04, 2013

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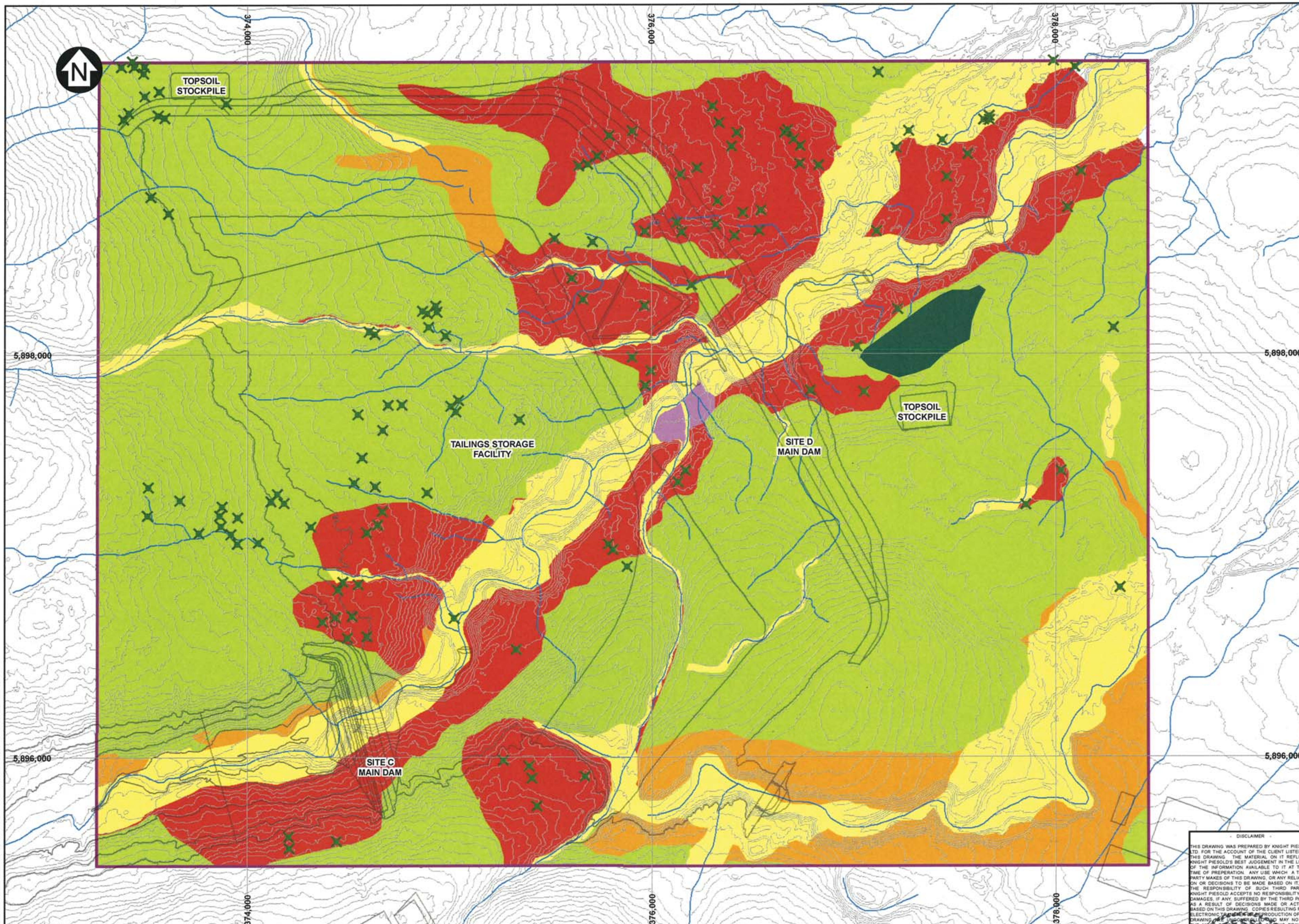

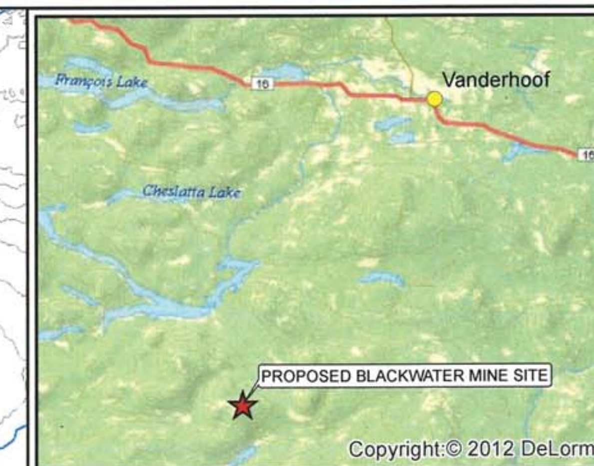

LEGEND:

GENERAL

- CONTOUR (5m)
- TRIM RIVER/CREEK
- LAKE
- GLACIAL LANDFORM MAPPING STUDY AREA
- GLACIOFLUVIAL DEPOSITS - CHANNEL DEPOSITS
- GLACIOFLUVIAL DEPOSITS - NON- CHANNELIZED DEPOSITS
- POSSIBLE GLACIOFLUVIAL DEPOSITS - UNDIFFERENTIATED
- ABLATION TILL
- LODGEMENT TILL
- GLACIAL LAKE DEPOSIT
- KAME

PROPOSED FACILITIES

- MINE FACILITIES

NOTES:

1. BASE MAP: BC TRIM MAPPING, EAGLE MAPPING, PHOTOSAT.
2. COORDINATE GRID IS IN METRES. COORDINATE SYSTEM: NAD 1983 UTM ZONE 10N.
3. THE CONTOUR INTERVAL IS 5 METRES; SOURCE: EAGLE MAPPING AND PHOTOSAT.
4. THIS FIGURE IS PRODUCED AT A NOMINAL SCALE OF 1:20,000 FOR 11x17 (TABLOID) PAPER. ACTUAL SCALE MAY DIFFER ACCORDING TO CHANGES IN PRINTER SETTINGS OR PRINTED PAPER SIZE.
5. CHANNELIZED GLACIOFLUVIAL DEPOSITS INCLUDE ESKERS AND TERRACES.
6. THE MAPPED AREAS OF TILL ARE EXPECTED TO INCLUDE GLACIOFLUVIAL DEPOSITS AT LOCATIONS WHERE KAMES AND ESKERS WERE IDENTIFIED IN THE GLACIAL LANDFORM MAPPING.

SCALE 200 100 0 200 400 600 800 Meters

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SEPT. 04, 2013

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NEW GOLD INC.

BLACKWATER GOLD PROJECT

SURFICIAL GEOLOGY MAP
TSF AREA

P/A NO.	DRAWING NO.	REVISION
VA101-457/6	G0082	0

DRG. NO.	DESCRIPTION
REFERENCE DRAWINGS	

REV	DATE		DESIGN	DRAWN	CHK'D	APP'D
REVISIONS						

REV	DATE	DESCRIPTION	DESIGN	DRAWN	CHK'D	APP'D
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REVISIONS

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MEMORANDUM

To:	Paul Hosford	Date:	September 9, 2013
Copy To:	Gary Christie, Mitch Lepage	File No.:	VA101-457/6-A.01
From:	Travis Brown	Cont. No.:	VA13-01697
Re:	Blackwater Gold Project - Preliminary Borrow Source Assessment		

1. Introduction

This memo presents results of a preliminary borrow source assessment for the New Gold Inc., Blackwater Gold Project, located approximately 112 kilometres southwest of Vanderhoof in Central British Columbia. The purpose of the assessment was to determine the suitability and estimated volume of granular soil at each site for general use as backfill, road base, and surfacing materials as provided by Peter Glover of AMEC:

- Road & Yard Surfacing – 162,000 cubic metres; of well graded 25 mm minus.
- Haul Road Surfacing – 20,000 cubic metres; of well graded 50mm minus.
- Base course – 358,000 cubic metres; of well graded 100mm minus.
- Sub-base course – 220,000 cubic metres; of well graded 600mm minus (or shot rock).

This assessment is based on data gathered by Knight Piésold Ltd. (KPL) during site investigation programs completed during 2012 and 2013 - including terrain and glacial landform mapping, geotechnical drilling, testpitting, and laboratory analyses. Some of the referenced data and reports are currently in draft, and therefore this assessment is considered preliminary and may be revised in the Geotechnical Characterisation Report (KPL Report VA101-457/6-8), if required.

Areas currently planned for excavation generally formed the basis of the assessment, however some additional potential borrow sources have been identified. The borrow areas considered in this assessment are shown in Figures 1.1 and 1.2

2. Borrow Area Assessment

Plant Site Borrow Source

The Plant Site Borrow area is indicated on Figure 1.1. The plant site will be located on the north slopes of Mount Davidson on a local rise with a maximum elevation 1443 meters elevation. The current plant site design indicates a finished surface elevation of approximately 1433 meters. Bulk excavation of the plant site would generate approximately 507,900 cubic meters of material. Sub excavation, if required as part of foundation design, may provide additional material quantity.

The drillholes and test pit logs describe varying sizes and distribution of boulders, cobbles, gravel, sand and silt. The surficial materials have generally been identified in three main groupings: glaciofluvial sand and gravel deposits, lacustrine deposits, and silty-sand and silty-gravel deposits (KPL Report VA101-457/6-5).

The glaciofluvial deposits were typically sand and gravel with less than 20% fines. The lacustrine deposits were sandy-silt or silt with a clay fraction less than 20% and very little gravel. The silty-sand and silty-gravel deposits typically included sand and gravel with greater than 20% fines and some cobbles and boulders.

Nine (9) test pits were considered in the assessment and included TP-12-139, TP13-260, TP13-261, TP13-262, TP13-268, TP13-269, TP13-270, TP13-271 and TP13-272.

Three (3) drillholes were considered in the assessment and included GT13-22, GT13-28 and GT12-07.

Bedrock was identified in two test pits and a drillhole. Drillhole GT12-07 indicates a moderately weathered bedrock surface at 1422 meters elevation. However bedrock may be present above the finished surface elevation as indicated in test pits TP13-271 and TP13-26, and some bedrock excavation is anticipated.

A summary of the available particle size analyses for this area is shown on Figure 2.1. Excavated overburden and bedrock materials from the plant site would be suitable as a sub-base course material with removal of materials larger than 600 mm or crushing to the designated particle size. Oversized material could be stockpiled for later use as riprap armouring.

The lacustrine deposits, if encountered, would not be suitable for use as backfill or road construction material and is not shown in the grading summary.

Site C South Borrow Source

The Site C South Borrow area is located between the plant site and Site C Main Dam as shown on Figure 1.1. This area was identified as the location for a temporary sedimentation pond area approximately 2000 square meters, and several TSF roads will pass through this area. Glacial landform mapping identified the surficial materials as non-channelized glaciofluvial deposits including several kames.

Bedrock was located in Drillhole GT12-13 and described as moderately weathered bedrock at 1338 meters elevation.

Test pit and drillhole results indicate that the area is overlain by organics and topsoil up to 1 m depth, with peat locally to 0.6 m depth. Laboratory analyses and visual assessment of the test pits confirmed that this borrow area is sand and gravel with generally between 10 to 25% fines. These deposits extend to a typical depth of at least 5 to 10 m. Four (4) test pits (TP12-39, TP12-40, TP13-176 and TP13-177) and three (3) drillholes (GT12-13, GT13-27, and GT13-37) were considered in the assessment.

Borrow materials from the Site C South Borrow area may be useable as surfacing materials for roads and yards, and haul roads. The proportion and distribution of boulders cobbles, gravel and sand size particles was found to vary, with material containing up to 15% boulders, 45% cobble sizes, gravel proportions ranging from 10 to 40% and sand sizes in the range of 20 to 40%. Crushing and screening of this material would produce the specified well graded material types.

The volume of suitable borrow materials may be in the order of 400,000 cubic meters, if required. Excavation may be affected by groundwater infiltration and may require further detailed site investigation and testing to define suitability of materials. A summary of the available particle size analyses for this area is provided in Figure 2.2.

Site C Local Borrow Source

The Site C Local Borrow area is located immediately north of the Site C Main Dam as shown on Figure 1.1. This area requires excavation to construct a spillway from TSF Site C in Year 3 of operations to TSF Site D for dam safety considerations. Terrain mapping identified this area as glacial (lodgement) till. There are additional deposits of glaciofluvial material including several kames further to the north of the dam abutment (Site C Additional Source).

Drillhole, test pit and laboratory analyses are consistent with the terrain mapping interpretation of glacial till materials in this area. Laboratory analyses and visual assessment from three (3) test pits (TP12-25, TP12-26, and TP-13-238) were included in this assessment. The results from these analyses indicate varying size and distribution of boulders, cobbles, gravel, sand, silt and clay. Drillhole GT12-33 describes bedrock contact as completely weathered bedrock at 1315 m elevation.

Borrow materials from this site may be useable as sub-base course material by excluding boulders larger than 600 mm. These materials would also be suitable for the core zone (Zone S) and the shell zone (Zone C) for TSF dam construction. Bulk excavation of this borrow area to EL. 1360 m would generate approximately 2,300,000 cubic meters of material. The Site C Main Dam crest is at EL. 1353 m and the final spillway inlet is at EL. 1346 m, indicating that a substantial additional amount of borrow material is available at this location.

A summary of the available particle size analyses for this area is shown on Figure 2.3.

Site C Additional Source

The deposits identified further to the north of Site C Main Dam may be considered as another borrow source option (Figure 1.1). Materials could be sourced to the northeast of the Site C dam and within the lower TSF Site D containment area as long as the borrow area was a sufficient distance from the Site C dam. There were seven (7) test pits located above 1335 meters elevation in this area including: TP12-06, TP12-08, TP12-15, TP12-77, TP12-78, TP13-236 and TP13-237.

These test pits generally encountered minimal topsoil underlain by gravelly sand with trace cobbles. This borrow source has a potential volume in the order of at least 180,000 cubic meters of material. These materials could be processed to produce surfacing materials for roads, yards and haul roads.

A summary of the available particle size analyses for this area is shown on Figure 2.3.

Aggregate Screening Area

The aggregate screening area is located downstream of the Site D Main Dam on the north side of Davidson Creek as shown on Figure 1.2. Glacial landform mapping delineates an area of eskers and kame deposits. This area has a shallow cover of topsoil and peat to a typical depth of 200 mm.

Drillhole, test pit and laboratory analyses results indicate that the material consists of sand and gravel with some cobbles and trace to some silt. Drillhole GT12-47 was drilled to a depth of 1084 meters elevation and did not locate bedrock.

Sixteen (16) test pits were considered in this assessment and included: TP12-158, TP12-159, TP13-178, TP13-179, TP13-180, TP13-181, TP13-182, TP13-183, TP13-184, TP13-185, TP13-186, TP13-187, TP-188, TP13-189, TP13-190 and TP13-191.

Two (2) drillholes were considered in this assessment and include: GT12-47 and GT13-33.

The available volume of borrow materials is substantial from this site, and is expected to be in excess of 3,000,000 cubic meters. These materials may require some processing for use as road base and surfacing materials, and for filter (Zone F) and transition (Zone T) for TSF dam construction. A summary of the available particle size analyses for this area is shown on Figure 2.4.

Site D South Borrow Source

The site D South Borrow Source is located downstream of the Site D Main Dam as shown on Figure 1.2. It would be located on a prominent knoll near the proposed Mine Access Road approximately 2 km away from the proposed construction camp. Terrain mapping interprets this area as lodgement till with narrow deposits of esker materials skirting the west and north toe of the slope. Three test pits (3) TP13-231, TP13-232 and TP13-233 define a centreline of the area. A fourth test pit, TP13-230, has been used in the assessment. Test pit TP13-232 is located at the height of existing ground at 1250 m elevation. Excavation of borrow materials to 1235 meters elevation would generate approximately 3,200,000 cubic meters suitable for use as sub-base material. A summary of the available particle size analyses for this area is shown on Figure 2.5.

The esker deposit identified in this borrow source area is a potential concrete aggregate source as it is located closer to the construction work areas than the aggregate screening areas as shown on Figure 1.2. The estimated aggregate in this deposit is approximately 100,000 cubic metres of material.

3. Closure

We trust the information presented in this memorandum meets your needs at this time. Please do not hesitate to contact the undersigned if you have any questions.

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
T. J. BROWN
35936
9 Sept 2013

Signed: ______________________
Travis Brown, P.Eng. – Senior Engineer

Reviewed: ______________________
Daniel Fontaine, P.Eng. – Project Engineer

Approved: ______________________
Ken Brouwer, P.Eng. – President

Attachments:

Figure 1.1 Rev 0	Borrow Source Assessment – Site C and Plant Site Areas
Figure 1.2 Rev 0	Borrow Source Assessment – Site D Downstream Area
Figure 2.1 Rev A	Plant Site – Summary of Particle Size Analyses Results
Figure 2.2 Rev A	Site C South Borrow Source – Summary of Particle Size Analyses Results
Figure 2.3 Rev A	Site C Local Borrow Source – Summary of Particle Size Analyses Results
Figure 2.4 Rev A	Aggregate Screening Area – Summary of Particle Size Analyses Results
Figure 2.5 Rev A	Site D South Borrow Source – Summary of Particle Size Analyses Results

References:

Knight Piésold Ltd, 2013. Blackwater Gold Project. Reconnaissance Terrain and Terrain Stability Mapping (KPL Ref. VA101-457/4-4)

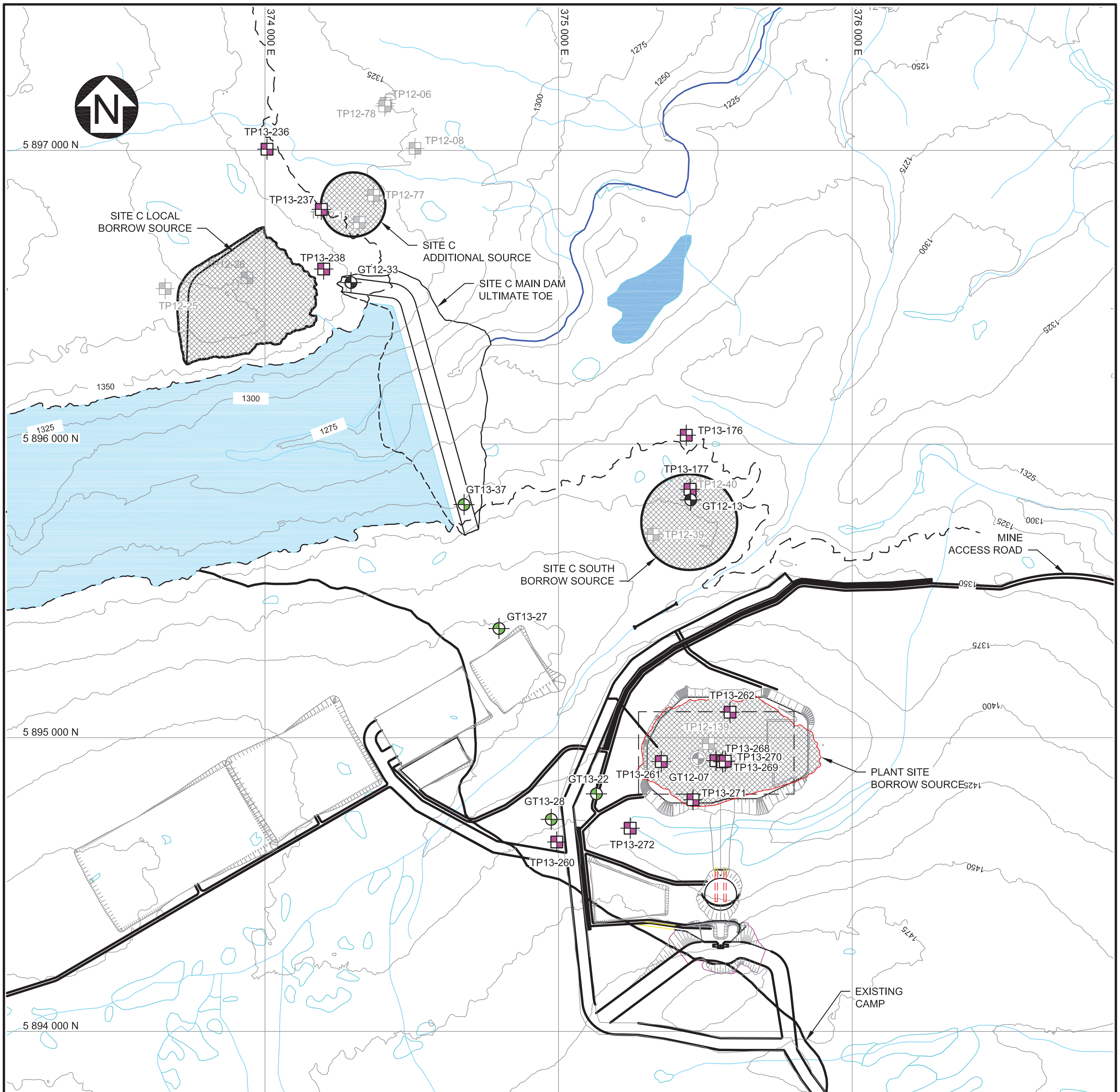
Knight Piésold Ltd, 2013. Blackwater Gold Project - Findings of Glacial Landform Mapping (KPL Reference VA13-01568)

Knight Piésold Ltd, 2013. Blackwater Gold Project - 2012 TSF Geotechnical SI Report (KPL Report VA101-457/6-1)

Knight Piésold Ltd, 2013. Blackwater Gold Project - 2013 TSF Geotechnical SI Report (KPL Report VA101-457/6-4)

Knight Piésold Ltd, 2013. Blackwater Gold Project - 2013 Plant Site Geotechnical SI Report (KPL Report VA101-457/6-5)

Knight Piésold Ltd, 2013. Blackwater Gold Project - Geotechnical Characterisation Report (KPL Report VA101-457/6-8)



LEGEND:

(hatched area)	BORROW SOURCE
TP13-174	2013 TEST PITS
TP12-03	2012 TEST PITS
GT13-37	2013 DRILLHOLES
GT12-13	2012 DRILLHOLES
(solid line)	EXISTING ROAD
(red dashed line)	NEW GOLD PROPERTY BOUNDARY

NOTES:

1. CONTOUR INTERVAL IS 25 METRES.
2. ONLY SELECT DRILL HOLE AND TEST PIT LOCATIONS CONSIDER IN THE ASSESSMENT ARE SHOWN.

SCALE A: 200 100 0 200 400 600 800 1000 m

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BLACKWATER GOLD PROJECT

BORROW SOURCE ASSESSMENT
SITE C AND PLANT SITE AREAS

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P/A NO. VA101-457/6 | REF NO. VA13-01697

FIGURE 1.1 | REV 0

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	CHK'D	APP'D
0	06SEP'13	ISSUED WITH MEMO	TB	RP	DDF	KJB

SAVED: M:\1\01\00457\06\A\Acad\FIGS\A36, 9/6/2013 4:15:20 PM , RPENG PRINTED: 9/6/2013 4:28:05 PM, Layout1, RPENG
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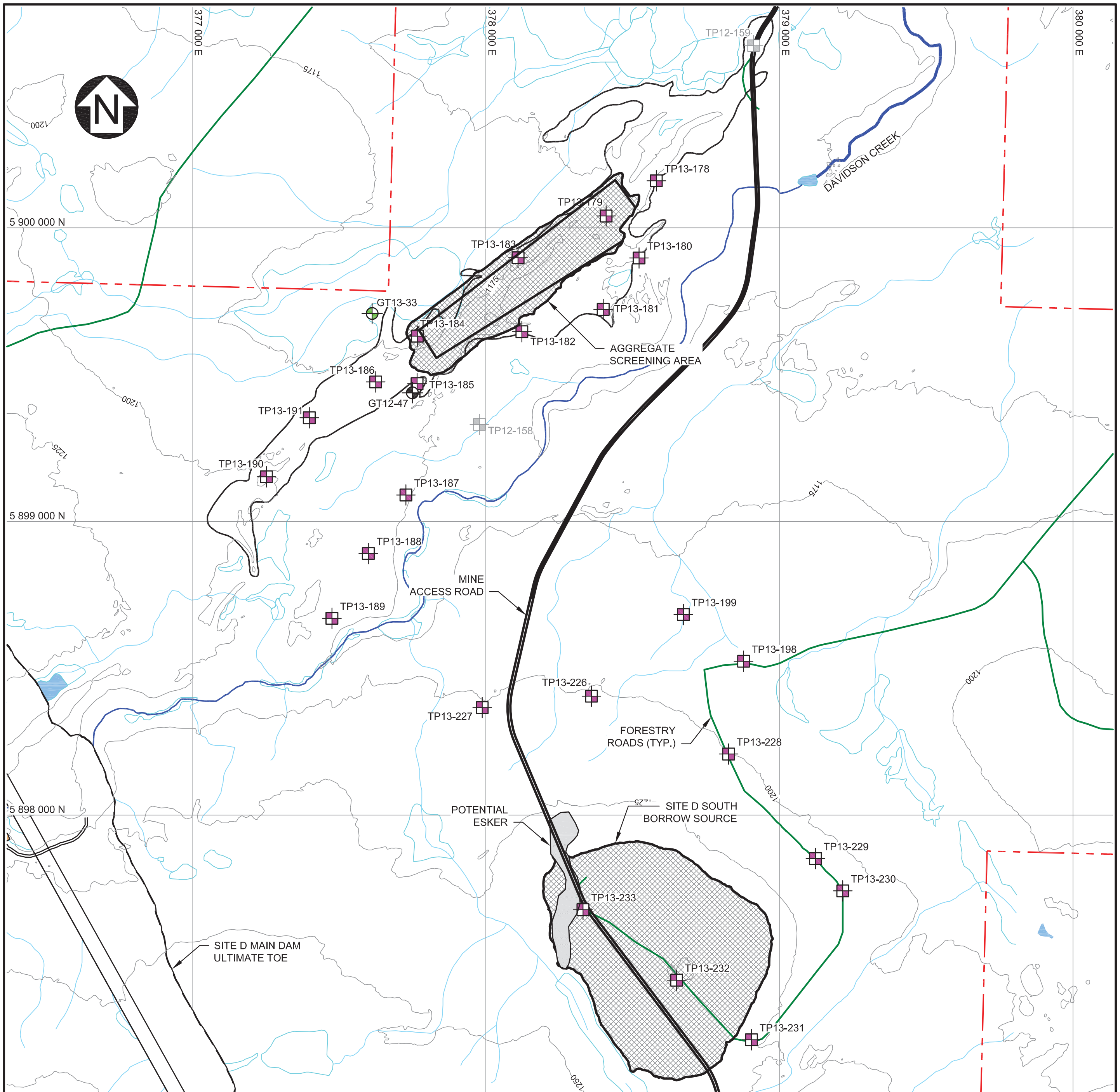

LEGEND:

- BORROW SOURCE
- TP13-174 — 2013 TEST PITS
- TP12-03 — 2012 TEST PITS
- GT13-37 — 2013 DRILLHOLES
- GT12-13 — 2012 DRILLHOLES
- EXISTING ROAD
- NEW GOLD PROPERTY BOUNDARY

NOTES:

1. CONTOUR INTERVAL IS 25 METRES.
2. ONLY SELECT DRILL HOLE AND TEST PIT LOCATIONS CONSIDER IN THE ASSESSMENT ARE SHOWN.

SCALE A: 200 100 0 200 400 600 800 1000 m

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BLACKWATER GOLD PROJECT

BORROW SOURCE ASSESSMENT
SITE D DOWNSTREAM AREA

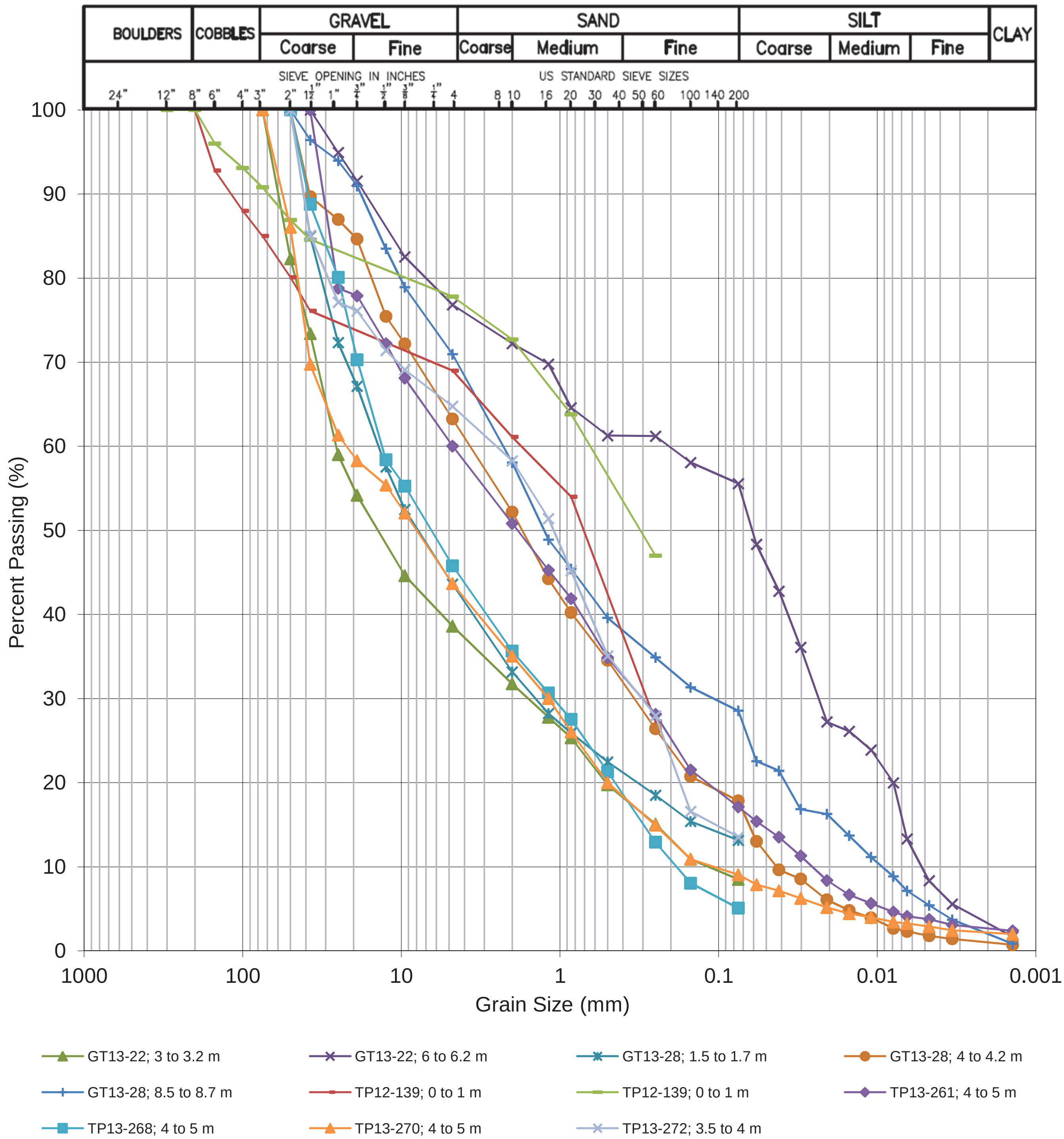
Knight Piésold CONSULTING

P/A NO.	REF NO.
VA101-457/6	VA13-01697

FIGURE 1.2 REV 0

REV	DATE	DESCRIPTION	DESIGNED	DRAWN	CHK'D	APP'D
0	06SEP'13	ISSUED WITH MEMO	TB	AN	DDF	KJB

SAVED: M:\1\01\00457\06\A\Acad\FIGS\A37_r0, 9/6/2013 4:30:12 PM , RPENG PRINTED: 9/6/2013 4:31:22 PM, Layout1, RPENG
XREF FILE(S): Cell D Stages; Topo 5m Contours; Hydro; Forestry Roads; Plant Site IMAGE FILE(S):



NOTES:

1. DATA SHOWN IS DRAFT AND MAY BE REVISED PENDING FINAL KPL GEOTECHNICAL SITE INVESTIGATION REPORTS.
2. GRAIN SIZE CLASSIFICATION IS BASED ON THE UNIFIED SOILS CLASSIFICATION SYSTEM (USCS)
3. SAMPLES BELOW 10 M DEPTH FROM NATURAL GROUND LEVEL HAVE BEEN EXCLUDED

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BLACKWATER GOLD PROJECT

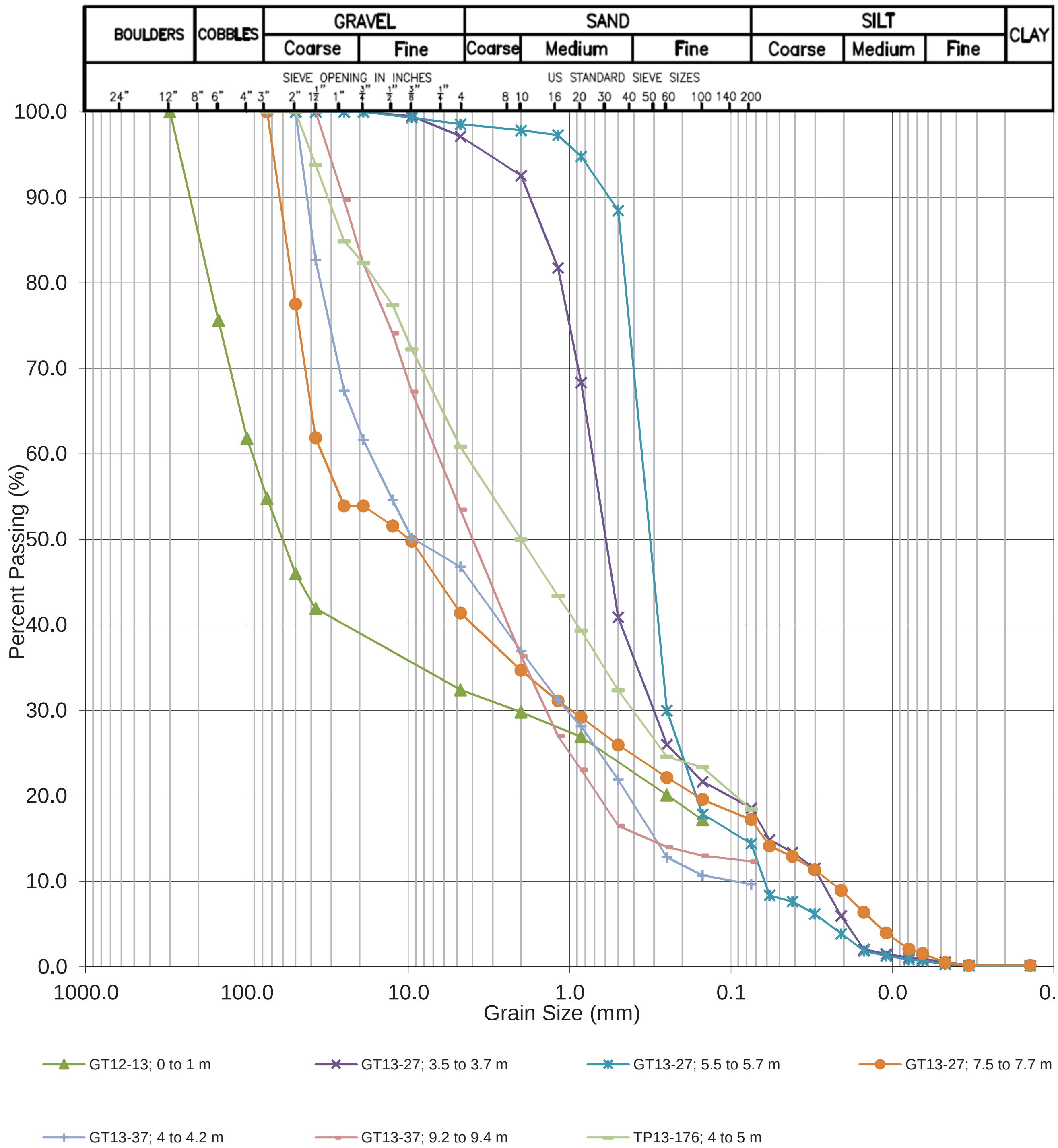
PLANT SITE
SUMMARY OF PARTICLE SIZE ANALYSIS RESULTS

Knight Piésold CONSULTING

P/A NO.	REF. NO.
VA101-457/06	VA13-01697

FIGURE 2.1 — REV 0

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	6SEP'13	ISSUED WITH MEMO	ACR	TJB	KDE



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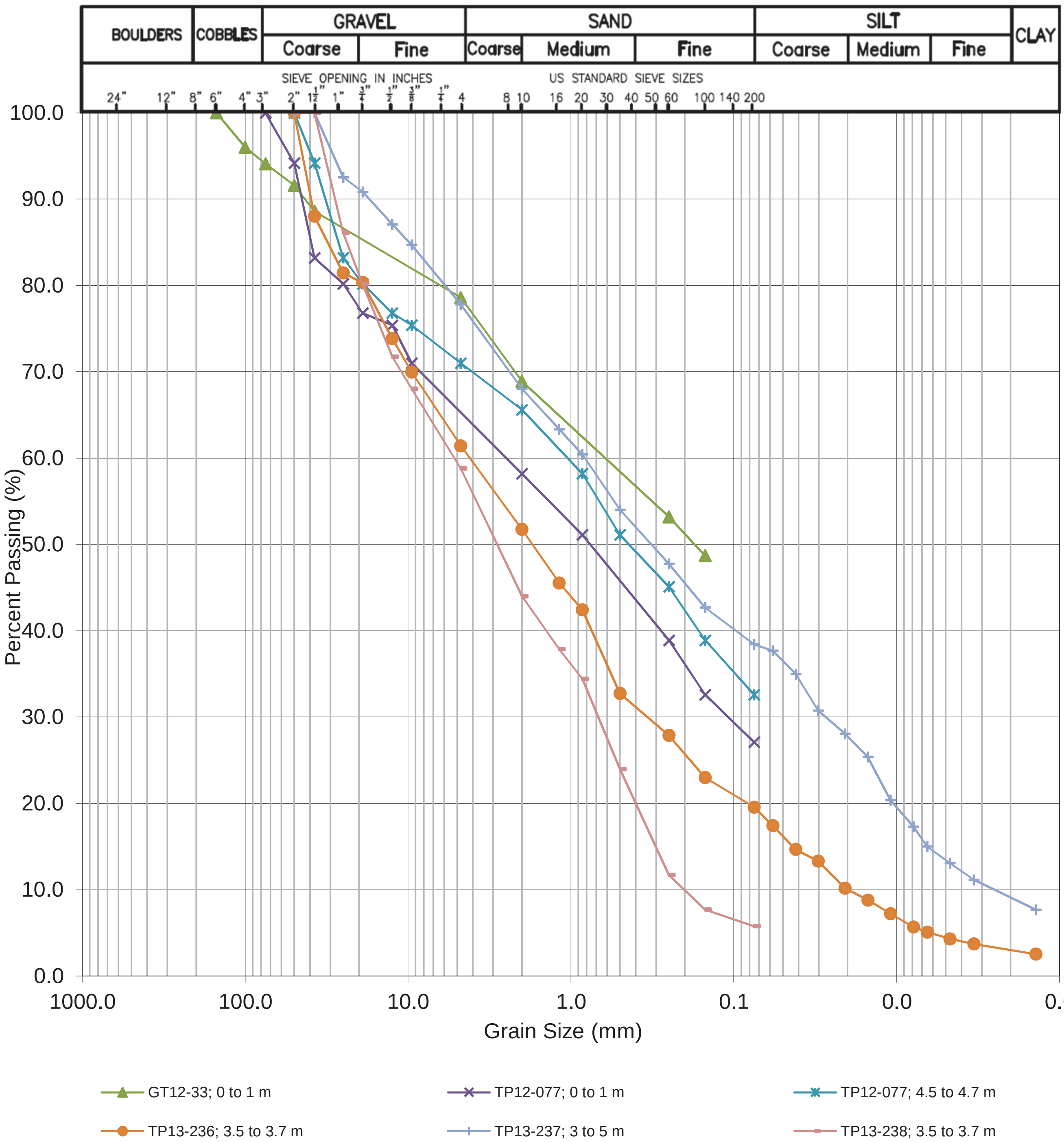
SITE C SOUTH BORROW SOURCE
SUMMARY OF PARTICLE SIZE ANALYSIS RESULTS

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	6SEP'13	ISSUED WITH MEMO	ACR	TJB	KDE

Knight Piésold CONSULTING

P/A NO.	REF. NO.
VA101-457/06	VA13-01697

FIGURE 2.2 REV 0



NOTES:
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2. GRAIN SIZE CLASSIFICATION IS BASED ON THE UNIFIED SOILS CLASSIFICATION SYSTEM (USCS)
3. SAMPLES BELOW 10 M DEPTH FROM NATURAL GROUND LEVEL HAVE BEEN EXCLUDED

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SITE C LOCAL BORROW SOURCE
SUMMARY OF PARTICLE SIZE ANALYSIS RESULTS

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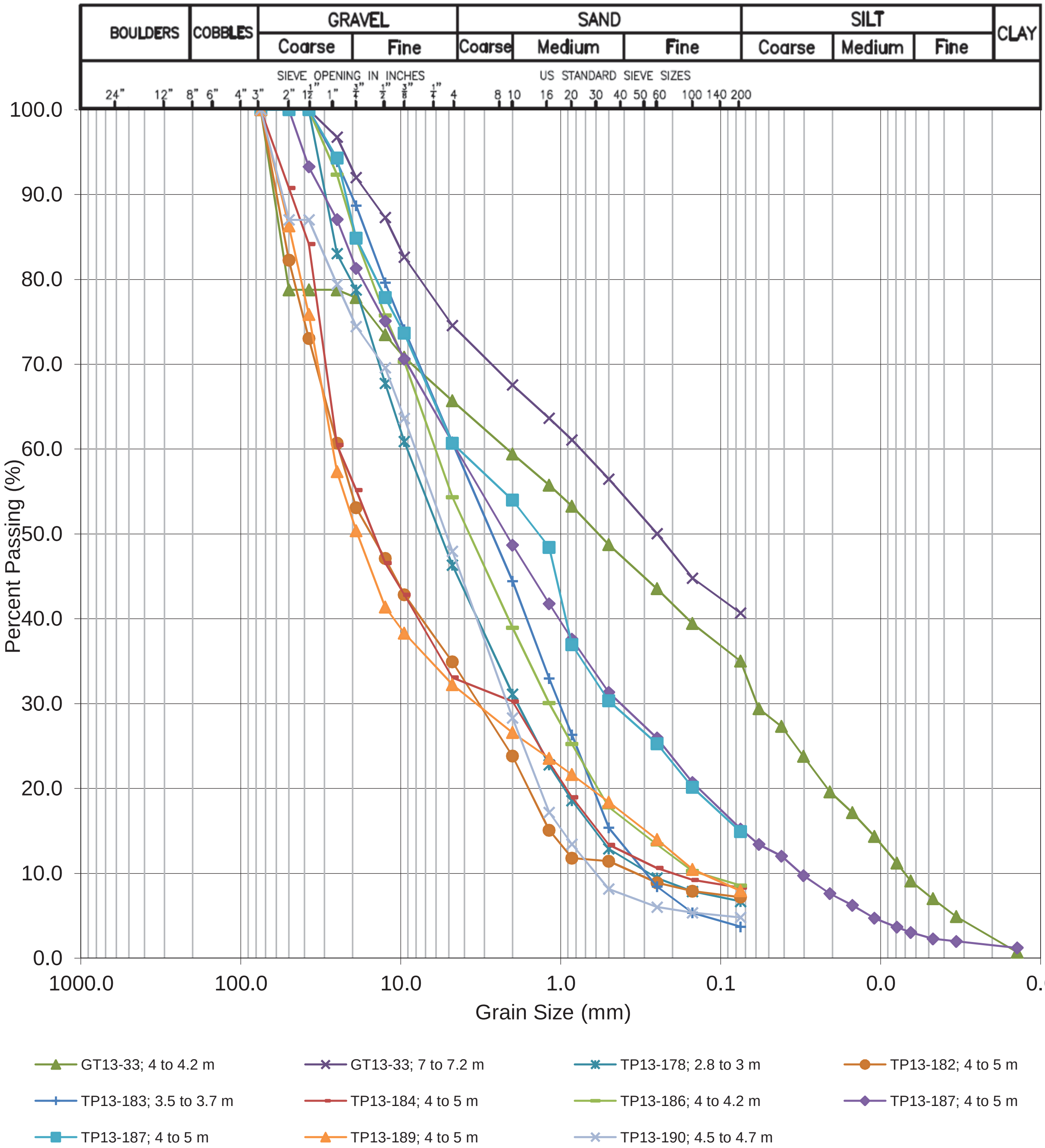
P/A NO. VA101-457/06 | REF. NO. VA13-01697

FIGURE 2.3 REV 0

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	6SEP'13	ISSUED WITH MEMO	ACR	TJB	KDE



NOTES:

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2. GRAIN SIZE CLASSIFICATION IS BASED ON THE UNIFIED SOILS CLASSIFICATION SYSTEM (USCS)
3. SAMPLES BELOW 10 M DEPTH FROM NATURAL GROUND LEVEL HAVE BEEN EXCLUDED

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BLACKWATER GOLD PROJECT

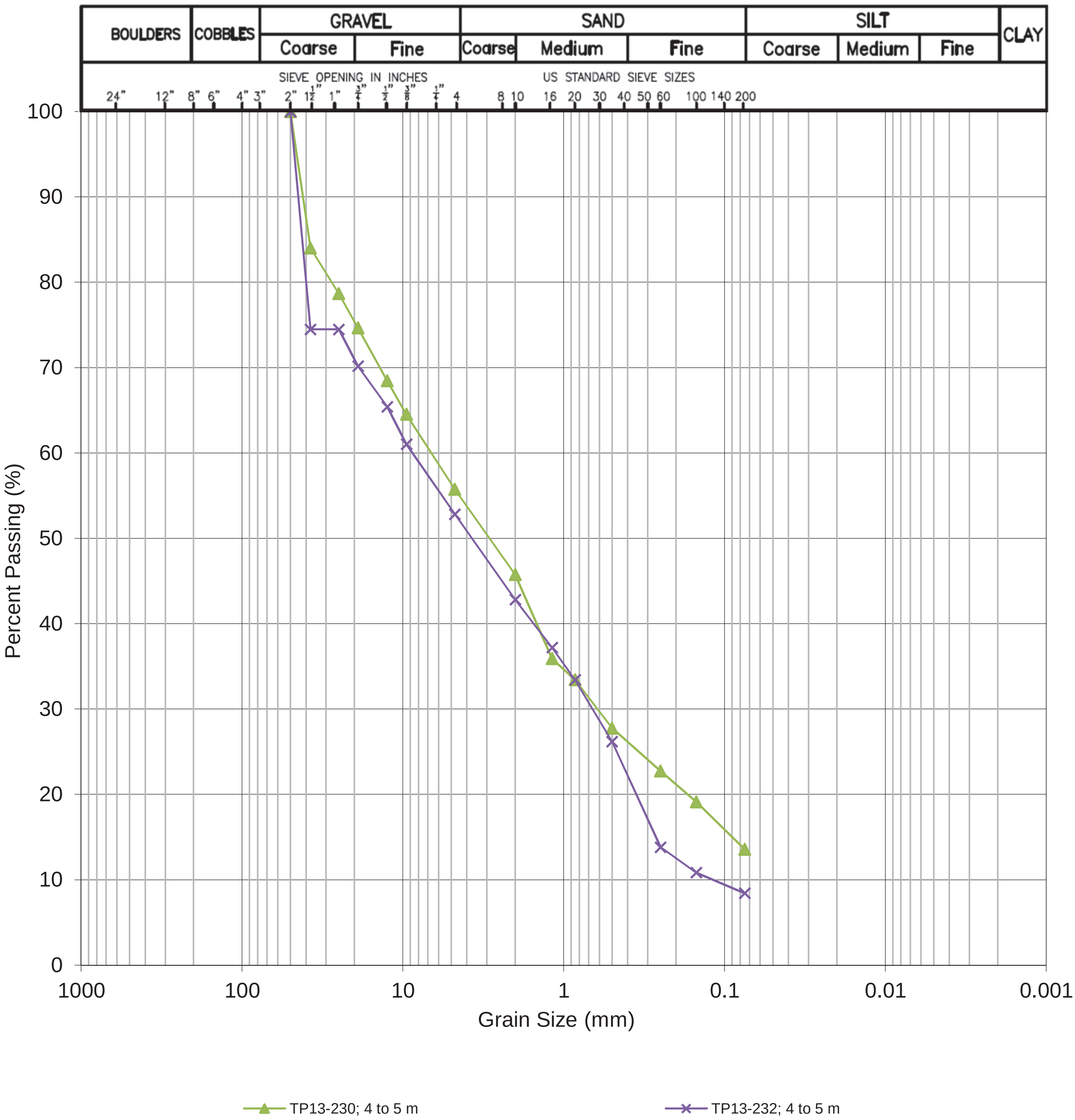
AGGREGATE SCREENING AREA
SUMMARY OF PARTICLE SIZE ANALYSIS RESULTS

Knight Piésold CONSULTING

P/A NO.	REF. NO.
VA101-457/06	VA13-01697

FIGURE 2.4 REV 0

0	6SEP'13	ISSUED WITH MEMO	ACR	TJB	KDE
REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D



NOTES:

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3. SAMPLES BELOW 10 M DEPTH FROM NATURAL GROUND LEVEL HAVE BEEN EXCLUDED

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BLACKWATER GOLD PROJECT

SITE D SOUTH BORROW SOURCE
SUMMARY OF PARTICLE SIZE ANALYSIS RESULTS

Knight Piésold CONSULTING

P/A NO.	REF. NO.
VA101-457/06	VA13-01697

FIGURE 2.5 REV 0

REV	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
0	6SEP'13	ISSUED WITH MEMO	ACR	TJB	KDE