APPENDIX 19

Eagle Gold Access Road Report

Victoria GOLD CORP

Stantec

DESIGN REPORT

Victoria Gold Corp

Eagle Gold Project: Access Road

NOVEMBER 2010

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1.0 Introduction

Victoria Gold Corporation (VIT) is the owner of the Eagle Gold Property, located within the Mayo Mining District of Central Yukon. This property was obtained in 2009 by VIT through the acquisition of StrataGold, and has historically been called Dublin Gulch. Course gold was first found there in 1889 by Thomas Haggart who, in 1896, built the first cabin on the gulch and gave it its name. It is believed the road was constructed in 1940 to facilitate mineral exploration in the Dublin Gulch area. The left limit of Haggart Creek (east) borders a large Na-Cho Nyak Dun First Nation land claim parcel.

Yukon Engineering Services (YES) was engaged by New Millenuim Mining Ltd. in 1996 to investigate road access options to the mine property, and through that process produced the *Dublin Gulch Access Road Design Brief Report* (YES 1996 Report). In the fall of 2009 YES was retained by Victoria Gold Corp. to update the YES 1996 Report, and provide recommendations with which VIT could approach the Yukon Government Department of Highways and Public Works (YG HPW), and enter into discussions regarding access requirements, permitting and regulatory approvals. That updated design brief was provided in January 2010 as the *YES 2010 Draft Report*.

As a result of the discussions between VIT and YG HPW the decision was made to proceed with the upgrading of the existing Haggart Creek Road from the South McQuesten River Bridge to the mine property as a one lane two way radio controlled access, with the improvements as identified in the Draft Report.

This report summarizes the outcome of these discussions and the progress achieved to date.

2.0 Background

The Eagle Gold Project is located at approximately kilometer 45 on the South McQuesten/ Haggart Creek Road (YG # 325), located off the Silver Trail north of Mayo, Yukon. The original design for access to the Eagle Gold Property was completed in 1996 for New Millennium Mining Ltd., and presented two options based on the reconstruction of the road to a full 8 metre width (see Appendix A):

Option 1: South McQuesten Route - Utilizing and upgrading the South McQuesten Road for approximately 23 km to the South McQuesten River Bridge, then utilizing and upgrading the Haggart Creek Road for approximately 22 km.

Option 2: Mount Haldane Route - Constructing along the old Mt. Haldane Route for 16.9 km to the South McQuesten River Bridge, then utilizing and upgrading the Haggart Creek Road for approximately 22 kms to the mine site.

Originally, the Mount Haldane option was selected because of the total distance that would be shortened to the mine site. This route consisted of a road starting near Halfway Lakes on the Silver Trail, traversing the west side of Mt. Haldane and rejoining the existing access road near the South McQuesten River Bridge. Since 1996, however, the Haldane route has not been utilized, and is now overgrown and returned to an almost natural state.

The Yukon Government has put considerable effort over the past few years into upgrading and maintaining the section of the South McQuesten Road (SMR) from the Silver Trail to the crossing of the South McQuesten River, and in August of 2010 completed the reconstruction of the abutments and decking of the bridge.

The Haggart Creek Road (HCR) portion of the access road is considered an unmaintained public resource road and maintenance of this section has been undertaken by the local mining interests on an as needed basis.

Based on our discussions with VIT and the current condition of the South McQuesten Route maintained by YG, only the Haggart Creek Road upgrades, from the river crossing to the mine property, were considered in the *2010 Draft Report*, and will be considered in this report.

3.0 Existing Road Access

Currently the mine is accessed by the South McQuesten Road (SMR) starting at kilometer 87.2 of the Silver Trail. The Silver Trail is an 80 km/hr year-round gravel road which provides access to the Community of Keno and other mining activity in the area. The SMR is a seasonal road which is in generally fair condition.

The Yukon Government currently maintains the SMR between the Silver Trail and the South McQuesten River Bridge (approx. Km 23), which is approximately half of the 45 km route. In the summer of 2009 the Yukon Government undertook some further maintenance upgrades of this section of the road, consisting of brushing, grading, culvert installation and miscellaneous drainage improvements. As a result of the 2009 upgrades this section of the road would not require significant upgrades for project use, although some minor improvements may be required to ensure year round and winter operation.

Of major importance, at approximately km 23 of the South McQuesten Road, the SMR crosses the South McQuesten River. This Bailey structure has been upgraded by YG this past summer with new abutments, bridge decking, and approaches. YG HPW will continue to maintain the SMR portion of the access to the property.

Between the bridge and the mine site maintenance is performed on an as and when required basis by local placer miners or VIT. Throughout this section, the HCR requires upgrading to safely

carry the anticipated increased traffic that will result from continuing exploration, the proposed mine development and eventual eight year mining project life.

4.0 Engineering Tasks

We noted during our site visit in the fall of 2009 and again in the spring of 2010 that the HCR section showed signs of structural failures, poor drainage, and areas of sub standard geometry. In general, the major issue for this section of the road is drainage. Although, during dry periods, this road is suitable for travel in standard pickup trucks, larger equipment or travel during spring runoff/rainfall may make this road difficult to travel.

In order to improve the level of service and increase safety on this section of the road, YES proposed the following options for consideration.

> **Option 1.** Implementation of radio controlled single lane access utilizing the existing grade, with general improvements throughout to the drainage and sight lines, the construction of sufficient turnouts along the grade to ensure safe passage, and the realignment of three road sections to improve grade and safety.
>
> **Option 2.** **O**verall road upgrades. YES proposed a phased approach to upgrading the road to the full 1996 design two lane road suitable for year round access as follows:
>
> - Minor upgrading, to facilitate further exploration work,
> - Additional upgrading to support increased traffic for mine construction,
> - Final upgrades, if required, for mine operation.

In the spring of 2010 VIT met with YG HPW seeking specific information and guidance from HPW on the access road which would assist VIT in developing the proposed scope of the Project Proposal for consideration by YESAB, and to help ensure their Proposal was consistent with the regulatory requirements and expectations. HPW agreed with YES' evaluation that further significant upgrades would not be required from the Silver Trail to the South McQuesten Bridge (SMB) to support project use. Any additional improvements needed for all season use would be relatively minor, not requiring additional regulatory approvals.

HPW confirmed that the SMB would be upgraded in 2010 to current load standards (as opposed to highway limits) and would remain subject to seasonal restrictions. In addition, HPW supported the approach in principle proposed by YES and Victoria Gold to upgrade and improve the road from the bridge to the mine site as proposed above within the preliminary engineering evaluation, to utilize the existing road as a single-lane, radio controlled access road, with additional turnouts and safety measures included. As well, three sections of the road will be upgraded based on the realignments identified above in Option 1 of the Draft Report, along with the overall upgrades described above. Given the historical low public use of this area, the safety measures proposed, and the relatively modest life span (10 years) of the project, it was felt that the considerable costs associated with expanding the road to a full two lanes 8 metre width would not be warranted. As

well, a positive benefit of limiting the potential footprint of the project by maintaining a single lane width along Haggart Creek would be realized.

5.0 Design Parameters

In order to properly design upgrades to the Haggart Creek Road (HCR), Yukon Engineering Services has assigned vehicle types and volumes in order to classify the proposed upgrades. YES considers the volume of proposed traffic on this road to be low and within YG's legal axle limits for Gross Vehicle Weight (GVW). We have been provided the following:

General assumptions:

- the estimated project life is 10 years, including approximately the first two years of construction;
- the mine will operate year round;
- turn-arounds of personnel expected to occur approximately every two weeks. Personnel will, for the most part travel from Mayo to the mine site by bus (approximately 100-120 round trips per year);
- heavier loads will occur going into the mine site, lighter loads will occur returning,
- largest vehicles will be B-Train (fuel), trucks with long loads (steel members, crane components, wide loads (truck boxes, tanks, Pre Fabricated camp modules);
- loads would be adjusted for seasonal load restrictions, and volumes would coincide with construction and operational needs.

Construction period (16-18 months, up to two years):

- approximately 1500-1800 semi-trailer (round trip) loads over the construction period;
- approximately 10-20 1 tonne to 5 tonne trucks per day on the average, or 600-800 round trips over the construction period;
- approximately 10 passenger car or pickup trucks per day;
- estimates do not include traffic for exploration programs or public / tourism users;
- higher traffic volumes would be expected during peak construction times, seasonally, and trip numbers would depend on the location of the construction camp.

Operations (estimated 7 years)

- Total truck loads are estimated at 1944 trucks per year (round trips), based on an average year where 18.6M tonnes of rock are moved. As with the estimates for the construction period, these numbers do not account for potential seasonal load limits, which would determine potential truck size and load types.

The design work completed considered the following specific geometric design considerations. All parameters fall under the Transportation Association of Canada (TAC) design standards for Low Volume Roads (LVR 50), one-lane two-way roads, and acceptable engineering practice.

Description of Design Parameter	TAC	Achieved
Minimum Radius Horizontal Curves	80 m	(170 m targeted, with 150 m Radius the lowest achieved, except within proposed revision areas, suggesting a 40 km/hr horizontal alignment Design, with one "Reduce Speed" to 40 km/hr sign.)
Maximum Gradient (Mountainous TAC)	10-14%	(9.9% suggesting a 70 km/hr vertical alignment Design, with one more "Reduce Speed" to 40 km/hr sign)
Minimum K Value (Sag)	12	Governed by comfort control. (Lowest Sag K Option 1 = 20, Option 2 = 11
Minimum K Value (Crest) *Refer to Plans Appendix A*	18	Governed by stopping sight distance (85m), a driver's eye height of 1.05m (passenger car), and height of object (tail light, small animal) of 0.38m. (Lowest Crest K = 21.1, suggesting 70 km/hr posting.)
Minimum Length of Vertical Curve (Sag)	50 m	Lowest 60 m, as original design speed.
Minimum Length of Vertical Curve (Crest)	50 m	Lowest 80 m, to better complement Stopping Sight Distance.
Maximum Rate of Super Elevation on Curves	6% / 8%	8% used throughout, except on grades of greater than 8% in loaded (towards mine site) direction, then 6% used. This is to lessen side-slipping and spinning out of loaded trucks on steep grades in the winter time.
Road width	5 m	5 metres. This allows for one 3m traveled lane, plus, two, 1m shoulders.
Side Slopes (Cut)	3H:1V	3H:1V
Back Slopes (Cut)	2H:1V	2H:1V Cuts less than 5m in height. 1.5H:1V Cuts greater than 5m in height. 1H:1V Cuts in competent, rippable schist.
Fill Slopes	2H:1V	2H:1V Fills less than 5m in height. 1.5H:1V Fills greater than 5m in height.
Surfacing Gravel Thickness	N/A	100mm. YTG specification Granular Surfacing "A".
Subbase Granular Thickness	N/A	Varies from 0mm - 350mm. YTG specification Granular Subbase "E" (Gran "E")

6.0 Soil and Other Design Conditions

EBA Engineering Consultants Ltd. completed a field test-pitting and centerline drilling program of both routing options as part of the 1996 design process. As there has been little to no development along the road since the field testing this geotechnical report is considered valid. As well, we assume the data presented by EBA in the 1996 report would be suitable for preliminary transmission line designers. The detailed 1996 geotechnical report is included in Appendix C.

Borrow pits were investigated within the original geotechnical report; however, the majority of the sources investigated were located on the SMR and within the first 4 kilometers of the HCR. This has necessitated a further geotechnical investigation to:

- ensure constructability of the three revision areas as per the design;
- assess the availability of suitable sub base and road surfacing materials along the HCR;
- and confirm the soil conditions at Haggart Creek and Secret Creeks for culvert and headwall/wing wall installation.

A 2010 geotechnical investigation program has been designed and will be completed in November of 2010. This work required a YESAB District Office screening. The application was submitted in August and the required approvals and permits have been received.

It is known that schist rock is located under or adjacent to the road for the section from the South McQuesten River to the mine site. This has been verified both from site inspections and from the original geotechnical investigation in 1996. As such, the depth of cut within the original road design was a major driving factor within the design. Generally refusal rock was encountered 3 – 4 m below the surface.

Transmission line construction may be affected by this schist rock if the poles are not able to be drilled for placement. Further geotechnical testing on the schist may be required.

Reducing the design road from the full two lane RLU 60 classification with an 8 metre road top to the one-lane two-way 5 metre top LVR 50 with pullouts, and utilizing the existing structure wherever practical, will significantly reduce the required borrow material and disturbance. Other considerations influencing the proposed construction include:

- Portions of the existing road grade have been built on the side slopes using the cut and fill method. The caterpillar tractor simply cut into the side slope and rolled the fill into the trees below, stabilizing the grade. This has resulted in steep slopes both above and below the road grade with a narrowed road top. Care will be taken to pull down the high side to provide sufficient width for ditching, and where required, pullouts. This material, where suitable, will be used for fill material.

- Unsuitable cut material will be placed along the toe of existing or constructed slopes to encourage vegetation, or used to re-contour and reclaim exhausted borrow areas.
- No pullouts will be constructed or fill material placed that will encroach on the creek.
- The 1996 geotechnical investigation along the HCR road encountered no permafrost in the constructed grade. Test pits within the South McQuesten River valley did however encounter permafrost and visible ice. The 2010 program will further define potential borrow sources for grade raising and surfacing materials. It should be noted that in newer road sections where granular materials are encountered in the subgrade, only surfacing is required.
- Road sections near the SMB have experienced flooding or high ground water in the past and is the predominant cause of the structural failures noted. Culvert installation or replacement, along with grade raising where required and improved ditching will stabilize these locations.

7.0 Road Upgrades

7.1 Yukon Government Road Upgrades

During the summer of 2009 the Yukon Government completed a number of upgrades to the South McQuesten road between the Silver Trail and the crossing of the South McQuesten River. These upgrades where part of the Resource Access Road Program (RARP) and included approximately $100,000 for:

- Grading of the road;
- Brushing to improve sightlines;
- Minor ditching;
- Culvert installation.

With these improvements the access road to the South McQuesten River is now capable of handling larger loads with regards to horizontal and vertical geometry. During a November 2009 site visit YES did not note any signs of structural problems, but it can be assumed that during spring thaw and freshet that load restriction will be necessary. It was also noted that the culverts installed are quite small and may not have adequate capacity. Additional work may be required by YG on this section of the road to obtain a year round operational status.

7.2 South McQuesten Bridge Upgrade

In August of 2010 work was completed on the South McQuesten Bridge that included removal of the 27.5 metre Bailey bridge, replacement of the abutments to raise and lengthen the structure, replacement of the bridge, and replacement of the bridge decking.

8.0 Proposed Upgrades

8.1 Proposed Haggart Creek Road Upgrades

As noted in 4.0 above, HPW supported the approach to utilize the existing road as a single lane, radio controlled access road, with additional turnouts and safety measures included, along with the construction of three revisions to improve grade and horizontal alignment as well as move the road away from Haggart Creek, along with the general upgrading of the entire length of the road from the bridge to the mine site.

8.1.1 General Maintenance Upgrades 2011

This general upgrading will include

- increasing the width of the clearing within the right of way to increase sight lines for the safety of the vehicles as well as to allow more light and air movement to reach the road surface to aid in the melting or drying of the road bed to obtain a longer season or reduced down time.
- both the repair and replacement of damaged or undersized culverts as well as the installation of additional culverts in selected areas to improve the drainage of the road bed.
- installation of new and maintenance of the existing ditching along the roadway to ensure the road bed does not become saturated with ground water.
- where required, importing fill and raising the road grade through selected areas to ensure a stronger base for the traffic.
- the construction of pullouts are required to provide vehicles the space to stop in order for an oncoming vehicle to pass.
- manufacture and installation of 100 mm surfacing gravel throughout the length of the road.

Typical road sections are provided in Appendix A.

8.1.2 Proposed Realignment Upgrades

We have identified three areas through site inspection and evaluating the 1996 design which we consider a priority to improve the horizontal and vertical alignment elements of the road, and have listed them in order of priority. These realignment sections have been set out on the ground, surveyed, and a preliminary design completed. A further geotechnical investigation of these routes is necessary, however, to examine soil and constructability issues, and evaluate the usability of materials from the cuts for embankment construction. The assumption made in the preliminary design for each section was that the excavated materials would be used for road

embankment, and no borrow pits would be required. The planned November 2010 investigation will also identify the depth to bedrock, and the presence of permafrost , which could influence the vertical design grade of the access road and future power line construction,. Appendix A contains drawings of the three realignment areas. Advancement of the construction of the revision segments will be determined after the completion of the geotechnical investigation.

Km 25+800 to 26+500

This section of road currently dips down into a creek with grades as steep as 15%, and curve radii of 26m. The re-alignment will result in the removal of 4 curves and a maximum gradient of 8.8%, with horizontal curves of 170m, and 300m radius, eliminating the need for trucks to chain up in wet and frozen conditions. One new culvert is anticipated and one culvert replacement (2000mm) at Secret Creek with headwall and wingwall installation and rip-rap protection at inlet and outlet (see 8.1.5 Secret Creek Upgrade). This revision would require approximately 5,300 m^3 of common excavation and 4700 m^3 of fill material.

Km 23+000 to 23+600

This section of road dips down into a creek with grades as steep as 15%. This section requires re-alignment and culvert replacement (1200mm) with rip-rap protection at inlet and outlet. This revision would require approximately 4400 m3 of common excavation and 4100 m3 of embankment. This would result in reducing the grade from the creek to the top of the hill, improving both sightlines and driving conditions.

Km 19+400 to 20+500

This section rises up from the McQuesten River valley and winds up to the start of the Haggart Creek Valley. There are sharp curves with limited visibility and radii of 27m. Improvements to this area would help large loads in wet and frozen conditions. The earthworks for this section would be approximately 5700 m3 of cut and 5300 m3 of road embankment and the installation of 2-600mm culverts.

8.1.3 Radio Control One Lane Access Road Upgrade

This option assumes only certain sections of the road would be upgraded and the entire access road from the South McQuesten Bridge to the mine site would become a one-lane, two-way radio controlled access road. This would involve the installation of kilometer markers along the entire alignment and signage to direct the use of radios and appropriate channels. Pullouts would be constructed thus alleviating the need to re-construct the road to a full two lane width with a higher TAC standard for the proposed 10 year project duration.

Radio Controlled Roads

Entrance Sign

- Located where it can be easily read and contain the following information
    - Road name
    - Frequency of the radio channel
    - Calling protocol
    - Load Restrictions
    - Primary User Name
    - Contact Phone Number
- Placed where the two lane public road finishes and changes to the radio protocol
- Adequate pullout in front of the sign to allow for the user to stop and safely read it

Km Marker Boards

- Marker boards would be placed one kilometre apart
- Visible from both directions

Radio Calling Protocol

1. "Up" and "Down" used to identify the direction of travel.
    - Up, assigned to direction of increasing kilometre signs,
    - Down, assigned to direction of decreasing kilometre signs.

2. Order of calling procedures; "vehicle type, kilometre location and travel direction".

3. Must call situations when traveling up and down.
    - When leaving and entering the road,
    - When stopping and parking on the road, and again when you resume,
    - Whenever you encounter a vehicle traveling without a radio.

4. Never pass any vehicle without notifying them on the radio and receiving the "OK" or seeing them pull over.

5. Avoid distractions while monitoring the road channel.
    - No unnecessary radio talk,
    - Avoid noise distractions.
    - Stay on designated road channel at all times while traveling.

Local residents and local placer miners are known to use this road and may not have the radio equipment to comply with this requirement. Sourcing and selection of suitable radio equipment will occur prior to the commencement.

The total estimated cost for Option 1 is $1.2 million and should result in approximately the same level of services as the YG maintained road from the Silver Trail to the crossing of the South McQuesten River.

As these roads are open to the public, it may be necessary to achieve this level of upgrades in order to increase safety along them. This would be especially important during the construction and mining stages when vehicle traffic will be at its highest.

8.1.4 Haggart Creek Crossing Upgrade

The existing culverts and embankment located at Haggart Creek are in good repair but do not meet the required 1:100 year flood event standard. The recommendation for this location is the installation of a suitably sized overflow culvert to the north of the existing culverts. This will exceed the design standard and cause no disturbance to the existing fish habitat and wetted stream area. See Appendix E: Haggart and Secret Creek Recommendations. Conceptual design drawings are provided in Appendix A. Detailed design and construction drawing will be presented upon the completion of the geotechnical program.

8.1.5 Secret Creek Upgrade

The existing culvert is too short for the embankment in place resulting in a narrow road top and sloughing of embankment materials into both Secret and Haggart Creeks. The capacity of the culvert does not meet design standards. The recommendation for this location includes the installation of a properly sized culvert(s) and overflow pipe complete with head and wing walls. See Appendix E: Haggart and Secret Creek Recommendations. Conceptual design drawings are provided in Appendix A. Detailed design and construction drawing will be presented upon the completion of the geotechnical program.

8.1.6 South McQuesten Parking Area

Consultations with the First Nation of Na Cho Nyak Dun and residents of the Village of Mayo have led to a request for a parking area near the South McQuesten bridge to facilitate both traditional and recreational activities at the river. A suitable pull off area has been identified that could accommodate 5 to 6 vehicles and boat trailers on either side of the road, to the north of the bridge. Work required to complete the proposed parking area includes simple fill and grading.

8.2.0 Slope Stabilization Areas

The *Eagle Gold 2010 Fish and Fish Habitat Baseline Report* identifies 12 areas of "Road Encroachment" (RE) along the existing access route. Road encroachment is defined as locations where the bank of the creek is within 30 metres of the centerline of the road. The proximity of the slope of the constructed road to the creek could be of concern to fish habitat where the slope of the road fill is steep and embankment materials may slough into the creek, or the base of the fill is eroded by the scour action of the creek.

RE1 to RE3 are located from station 21+250 to 21+600, where the access road has entered the Haggart Creek Valley. Although the creek is as near as 15 metres from the road, the slopes are well vegetated and stabilized. The stream bed in these areas is comprised of a heavier cobble that does not appear to be eroded. No stabilization works are necessary at this time.

RE4 is located at approximately station 26+000 where there is a large 1800mm culvert carrying the flow of Secret Creek through the road and into Haggart Creek. This culvert installation is of concern due to the shortness of the pipe and potential road material sloughing into the creek. This location has been further investigated and is discussed further in *8.1.5 Secret Creek Upgrade*. The installation of headwalls and wing walls on both the inlet and outlet will be required to carry the design event flow, provide a safe crossing, and prevent materials from sloughing into the creeks.

RE5 and RE6 are located at 29+050 and 29+300. The road slope at RE5 is heavily vegetated and stable. The slope at RE6 is less vegetated but appears stable and the heavier cobble at the toe shows no sign of scour. No stabilization works are necessary at this time.

At RE7 (sta. 31+150), RE8 (sta. 31+750), RE9 (sta. 32+100), RE10 (sta. 32+950), and RE11 (sta. 33+300) the road bed is separated from the top of the creek bank by a strip of natural vegetation and does not impact the creek. No stabilization works are necessary at this time.

RE12 is located at approximately sta. 35+200 in an area that has been previously mined, and the road fill slopes down from the shoulder of the road to the edge of Haggart Creek and a man made settlement or recirculation pond. The road alignment could possibly be shifted away from the creek into the stockpiled material, and, if required, cobble material or rip rap placed along the toe of the slope. No stabilization works are necessary at this time.

8.2.1 Borrow Source Requirements

The objective of the subgrade design of the Haggart Creek portion is to take advantage of the sidehill terrain as much as possible, in order to allow construction with little hauling of embankment material, and by strategically locating side-borrows (ditch widenings) and quarries where possible. Borrow material required to complete the construction will include:

- 10,000 m3 of road base material for general upgrades and grade raising;
- 10,000 m3 of base material for pullouts;
- 1000 m3 of culvert bedding material for culvert installation;
- 16,000 m3 of road surfacing material.

8.2.2 Construction Staging Areas

It is anticipated that local contractors and forces within the Mayo area will be utilized to complete the planned road upgrades and no construction camp facilities are required along the access road. Areas may be required however for the temporary storage of culvert materials and equipment parking. There are a few suitable locations that could be utilized as laydown areas. The first would be at the South McQuesten Bridge (station 16+950) on the north side of the river. This area will be re-graded and utilized as a parking area after completion of the road upgrades. The second suitable location would be at the cleared area south east of Secret Creek. This area located at approximately station 26+000 has been used in the past by placer miners as a camp. The third possible staging area is located north of the Haggart Creek crossing at station 35+000. This area has been extensively mined in the past and has many cleared areas.

8.2.3 Construction Schedule

General maintenance of the Haggart Creek Road is ongoing in order to provide continued access to the Eagle Gold site for exploration and environmental monitoring activities.

The repair and maintenance upgrade of the culvert at Secret Creek is critical for slope stabilization of the road and the protection of fish and fish habitat downstream, as it is currently in a state of disrepair. The addition of the overflow culvert at Haggart Creek is also a necessary item for maintenance and repair as it is currently undersized for a 1:100 year event, and poses a risk to fish and fish habitat downstream. VIT anticipates completion of the repair and maintenance to the above noted culverts in spring of 2011, upon obtention of required permits.

Users of the road would benefit from the improved safety offered by the installation of the proposed pullouts in the near term. VIT will propose this work, along with general drainage ditching improvements, be carried out following the completion of the culvert repairs during the 2011 season.

9.0 Road Maintenance

The Yukon Territorial Government will maintain the South McQuesten River portion of the access road to the bridge at the South McQuesten River. From the bridge to the mine operations maintenance will be performed by a local contractor engaged by VIT. Road maintenance is essential to ensure user safety, preserve the existing condition of the road, and ensure convenient and efficient travel to the project area. Roads that are not properly maintained are susceptible to failure from vehicular and environmental impacts. The road maintenance includes:

Summer/Fall Months:

- Ensure all culverts are delineated;
- Removal of deadfall and brushing along the cleared right-of-way;
- Repair potholes and ruts and reblade washboard areas;
- Ensure that there is proper drainage off of the road structure (uniform crown of 3%);
- Ditches pulled where needed and are clear and clean of obstructions;
- Culverts are operating and draining correctly.

Winter/Spring Months:

- Removal of snow from the driving surface and pullouts;
- Sanding and scarifying the road surface;
- Ensure that there is proper drainage off of the road structure;
- Steaming of culverts as required to maintain adequate flow.

In addition to the seasonal maintenance requirements the following should also be maintained on an as needed basis:

- Clearly visible km signs;
- Road signage;
- Identification and reconstruction of road structure failure;
- Removal of large rocks that may have fallen onto the road surface or been bladed up during the reshaping.

As with many infrastructure investments, low initial cost can mean high maintenance costs, and thus high overall Whole Life Costs. To reduce the maintenance burden of LVRs to affordable and sustainable levels, the routes should be designed to minimize the maintenance burden to realistically achievable and economic levels. Recommendations to achieve low cost maintenance of LVR will be carefully considered:

- Establish the ownership and responsibility for the route;
- Design for low maintenance, using appropriate and affordable standards for the category of route and traffic;
- Use local resources in the construction and maintenance (materials, labour, skills, enterprises, communities, intermediate equipment) to provide local socio-economic benefits;
- Mobilize central government, local government and community funds and resources where possible;
- Monitor the maintenance work and discuss ways to improve it through dialogue with the implementers and stakeholders;
- Inform stakeholders regularly of the maintenance performance; including resources consumed and output achieved.

It is estimated that the yearly maintenance costs for the Haggart Creek Section will be in the range of $80,000 to $100,000.

10.0 Transmission Line Route

A review of the topographic and terrain type for the installation of a transmission line was assessed using a pole height of 9.15m (30') and an average tree height of 12.1m (40'). Based on our discussions with VIT we understand the proposed structure would be a single pole, 69 kV line running from the Silver Trail and South McQuesten Road intersection, along the SMR and HCR, to the mine site, within addition clearing along the existing road. We have attached a typical road section with power line drawing in Appendix A.

Soil conditions along the South McQuesten Road range from cuts through schist and silty glacial till to ice rich permafrost. The side hill area near Haggart Creek shows signs of schist overlaid with silt. It may be possible to install the poles using the conventional drill method, though further geotechnical testing is recommended prior to completion of detailed engineering design.

The location of the transmission line will be dictated by the topography and generally the line will be on the outside of the curve to provide extra clearance for guy wires. The line would remain on that side of the road until the road alignment dictates a switch. In the Haggart Creek area it is anticipated that the transmission line would remain on the high side as the creek is quite close to the existing and proposed road. Creek crossings should not require any special treatment, and the spans would not change dramatically.

Our assessment shows that there are routes available for such a transmission line. VIT has requested that YES provide mapping and digital terrain files to Yukon Energy Corp. to investigate possible alignments from the Silver Trail to the Eagle Gold Property. As well, Stantec Transmission & Distribution has been retained to develop a conceptual design of the preferred transmission route.

11.0 Digital Terrain Mapping and Updated Drawings

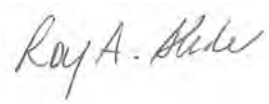
Over the course of carrying out the updated design works for the road, as well as completing various surveys along the HCR up to the mine site, all the historic digital files were re-coordinated from NAD 27 datum to NAD 83 values. This included the original digital terrain models generated from the orthophoto mapping and original ground truthing and surveys. All current project data is collected in NAD 83 values.

12.0 Closing

As Victoria Gold Corp. proceeds with mining permitting and development, a reliable safe road access to the site will become a major consideration. Based on our review of the 1996 work and our recent site inspections we recommend VIT undertake the initial steps as described in Option 1 with the upgrading and improvements to complete a one-lane two-way radio controlled road. As the initial step, clearing the road right of way will have a dramatic effect to improve safety on the road.

We thank Victoria Gold Corp. for providing the opportunity for Yukon Engineering Services to support their efforts on the Eagle Gold Property, and mining in the Yukon. We are open to discussion based on this report. Please feel free to contact the undersigned at any time.

Sincerely,



Roy A. Slade, C.S.T.
Yukon Engineering Services

APPENDIX A: Drawings

Typical Road Cross Section

Typical Road Cross Section with Pullout

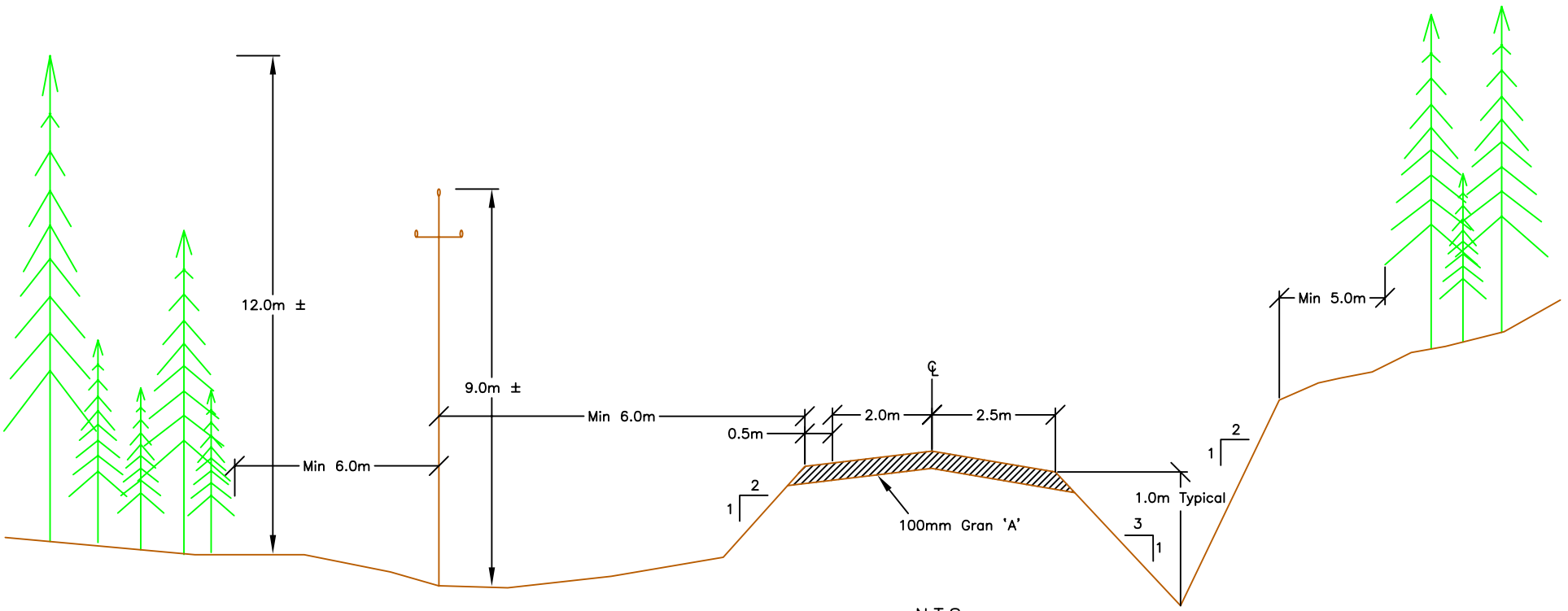
Revision Areas Overall with Proposed Borrow

Revision Areas Plan / Profile

Haggart Creek Conceptual

Secret Creek Conceptual

Preliminary Plan / Profile Drawings



N.T.S.

NOTE: Clearing limits from powerline will vary with tree heights. Powerline design and risk analysis will determine clearing limits.

SECTION:	
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DESIGNED BY: RS	13/07/10
DRAWN BY: RC	13/07/10
CHECKED BY: RS	13/07/10
APPROVED BY:	

FILENAME:	PROJECT NUMBER	DRAWING NUMBER	REV.
vic10_1.dwg	E10-023	Typ-Sec	1

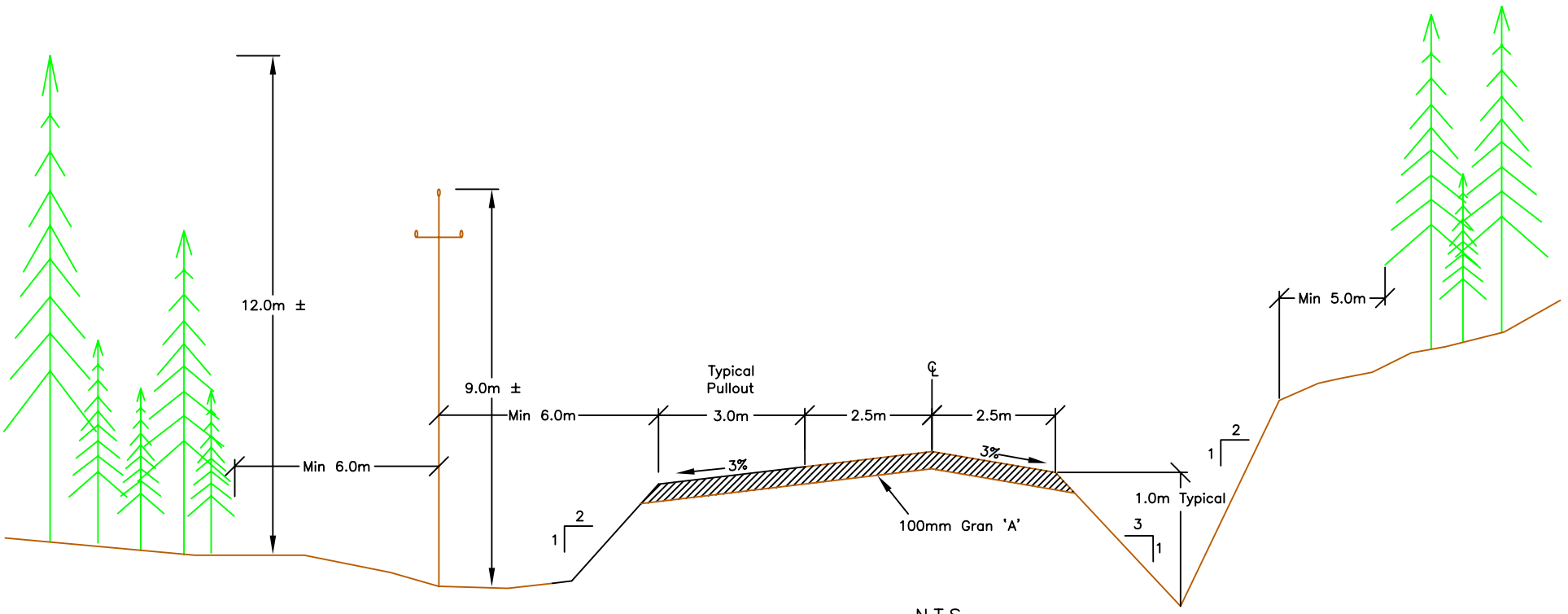
YUKON ENGINEERING SERVICES

Typical Section

VICTORIA GOLD CORP

EAGLE GOLD

South McQuesten Crossing to Eagle Gold Property



N.T.S.

NOTE: Clearing limits from powerline will vary with tree heights. Powerline design and risk analysis will determine clearing limits.

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DRAWN BY: RS	13/07/10				
CHECKED BY: RS	13/07/10				
APPROVED BY:					

Victoria GOLD CORP

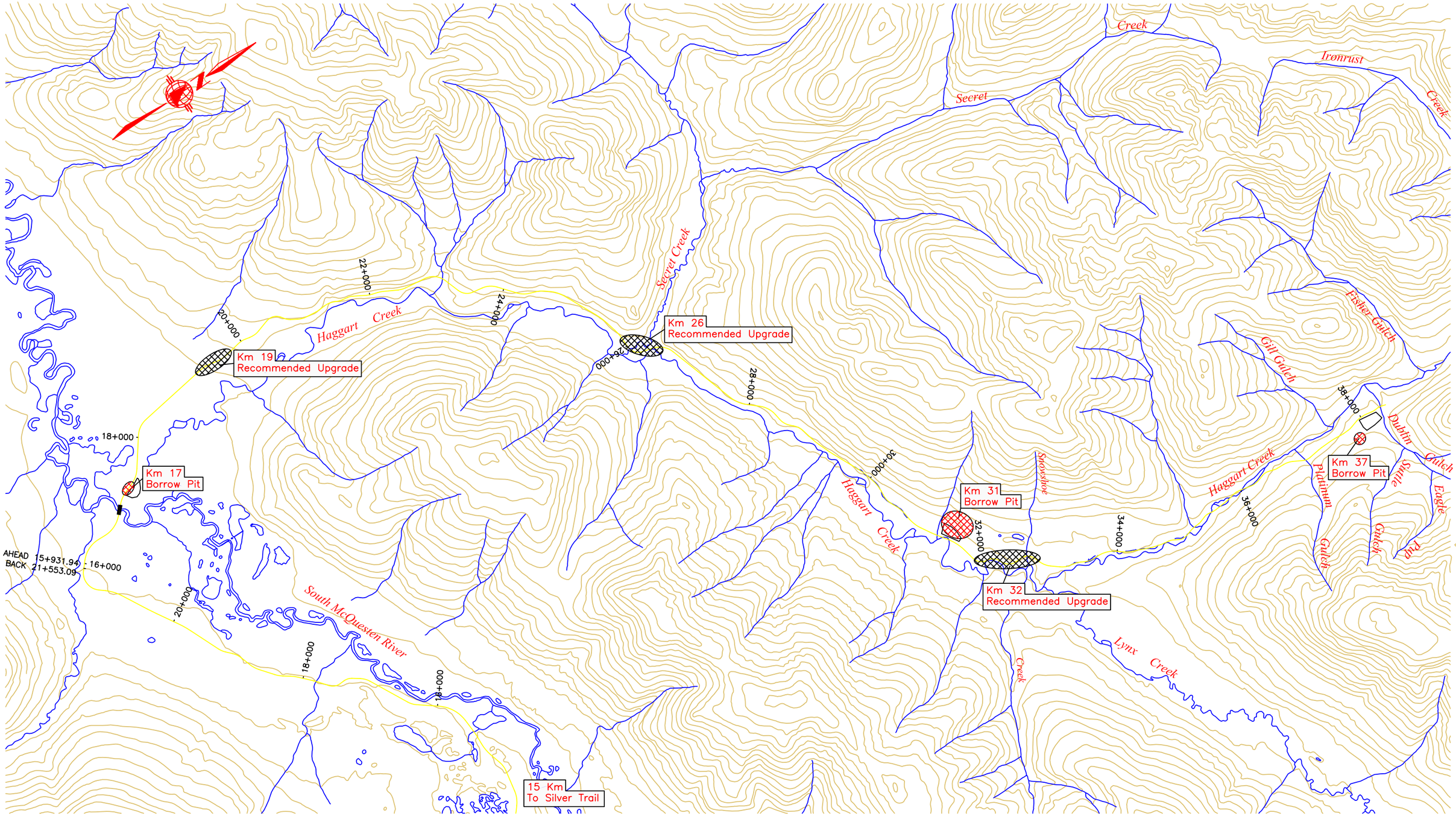
YUKON ENGINEERING SERVICES

Typical Section with Pullout

VICTORIA GOLD CORP

EAGLE GOLD

South McQuesten Crossing to Eagle Gold Property



NOTES:
1. Contour Interval 100'

Victoria GOLD CORP

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NO	DESCRIPTION	BY	DATE
	ISSUE/REVISIONS		

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APPROVED BY:	

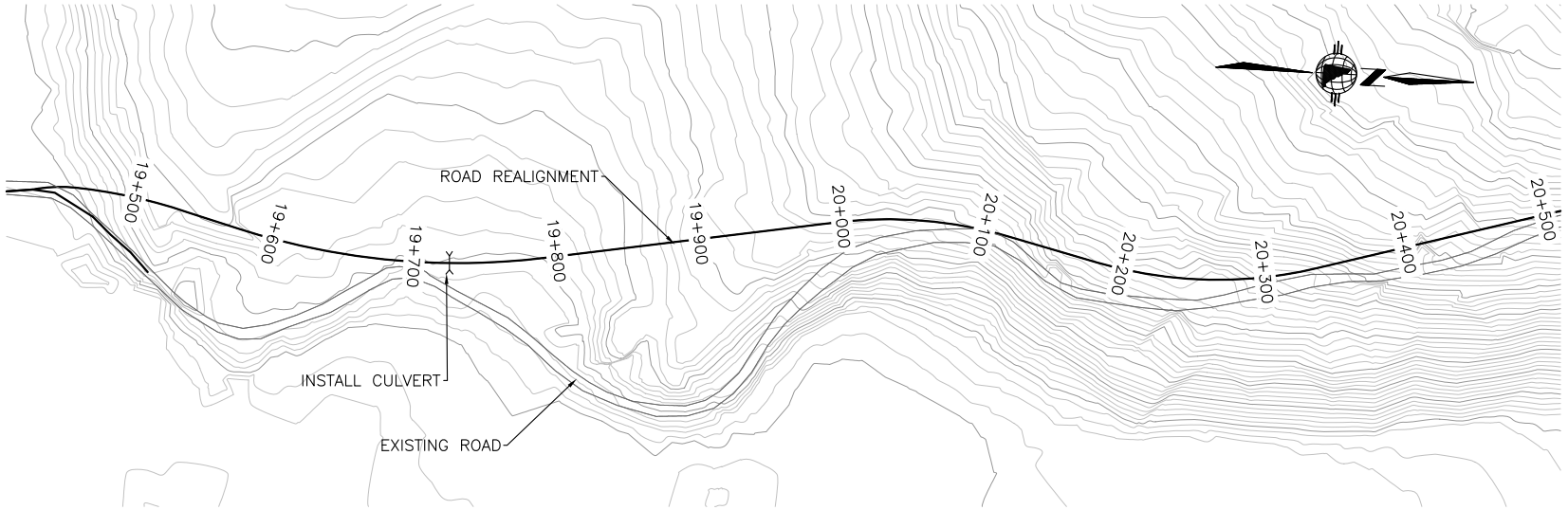
FILENAME:	PROJECT NUMBER	DRAWING NUMBER	REV.
vic10.dwg	E09-077	KM16-38	0

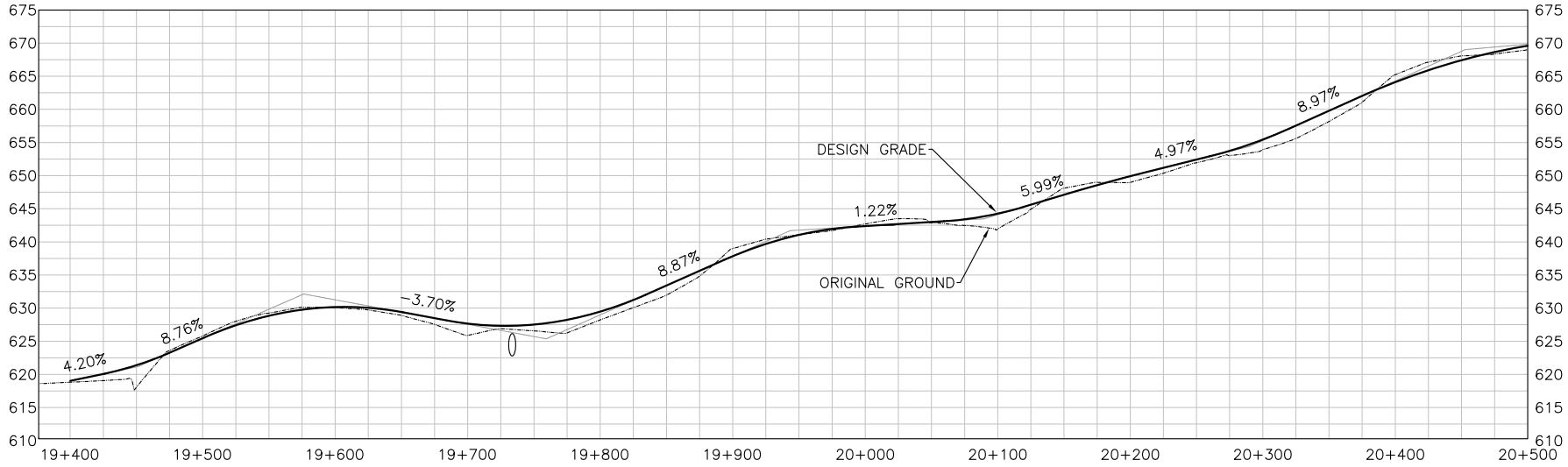
YUKON ENGINEERING SERVICES

Proposed Upgrades and Borrow Sources

VICTORIA GOLD CORP
EAGLE GOLD

South McQuesten Crossing to
Eagle Gold Property





LEGEND

PR ALIGNMENT CENTERLINE

EX ROAD SHOULDER

EX WATER COURSE

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	REVISIONS		

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DRAWN BY: RSC	19/07/10
CHECKED BY:	dd/mm/yy
APPROVED BY:	

FILENAME:	PROJECT NUMBER	DRAWING NUMBER	REV.
REVISIONS	E10023	1 of 3	0

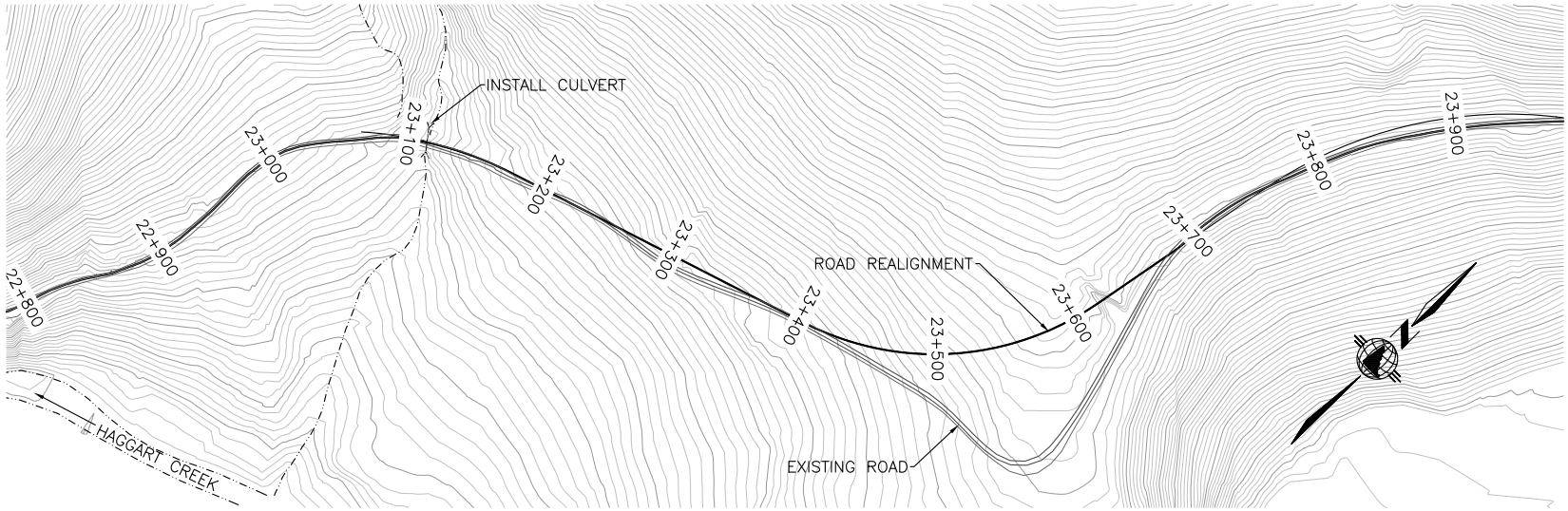
YUKON ENGINEERING SERVICES

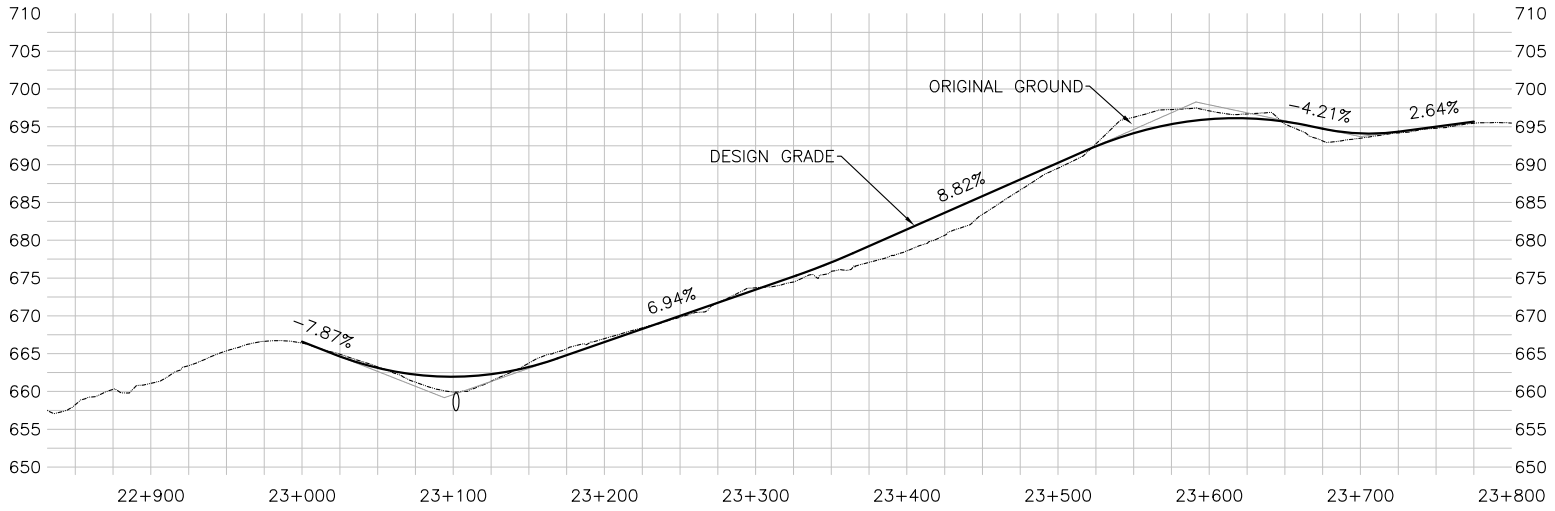
DUBLIN GULCH ACCESS ROAD

VICTORIA GOLD

REVISION 19+400 to 20+500

PLOT DATE: 7/14/2010 FILENAME:REVISION.dwg





LEGEND

PR ALIGNMENT CENTERLINE

EX ROAD SHOULDER

EX WATER COURSE

NO	DESCRIPTION	BY	DATE
	REVISIONS		

SCALE: 1:5000	
	DATE
DESIGNED BY: YES	19/07/10
DRAWN BY: RSC	19/07/10
CHECKED BY:	dd/mm/yy
APPROVED BY:	

FILENAME:	PROJECT NUMBER	DRAWING NUMBER	REV.
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YUKON ENGINEERING SERVICES

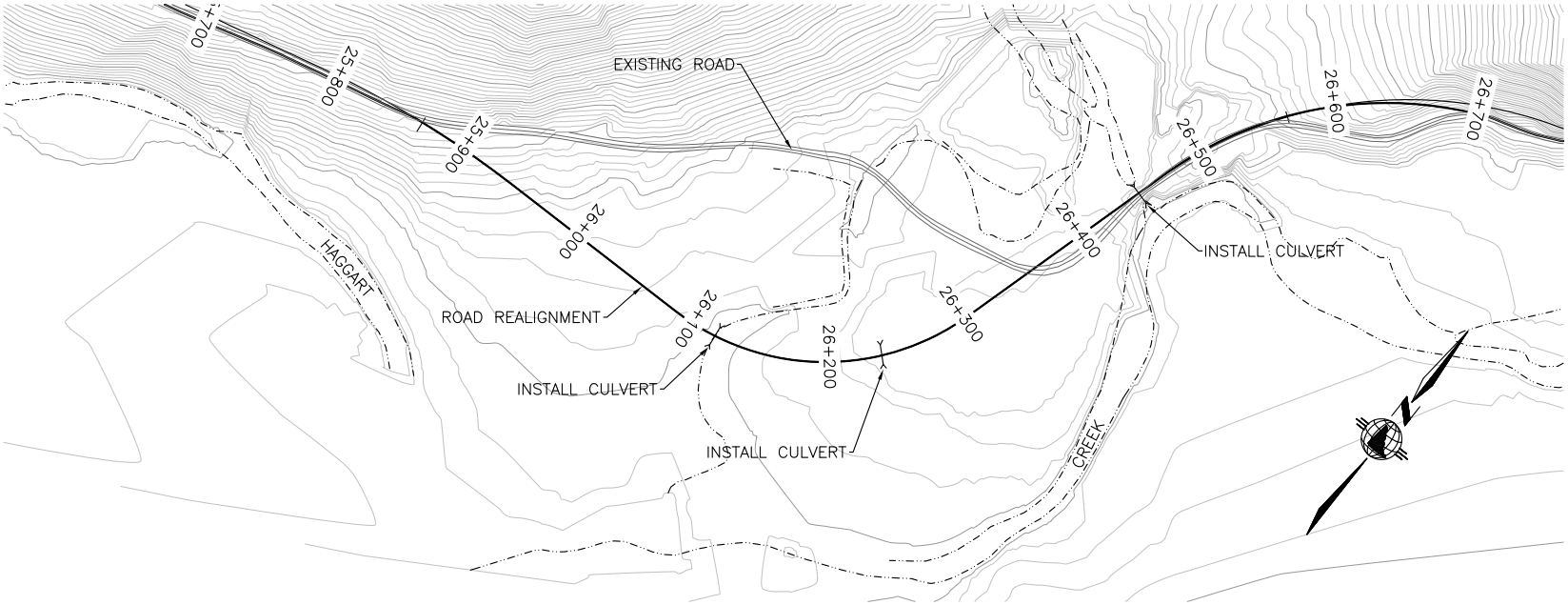
DUBLIN GULCH ACCESS ROAD

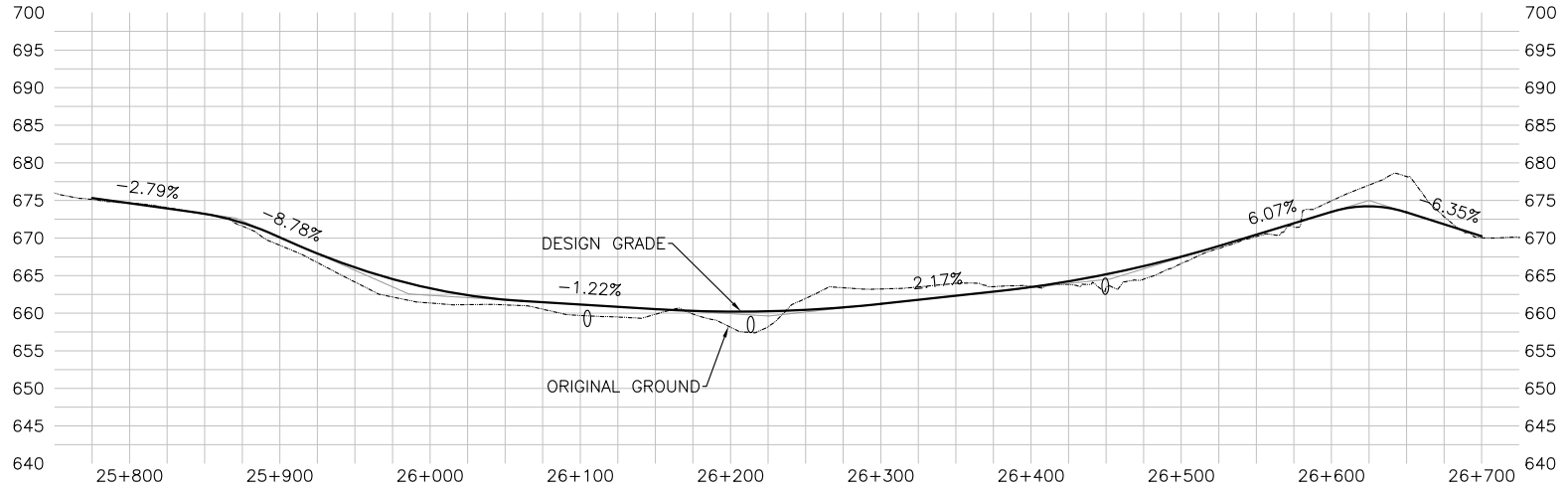
VICTORIA GOLD

REVISION 23+075 to 23+700

FILENAME: REVISION.dwg

PLOT DATE: 7/14/2010





LEGEND

PR ALIGNMENT CENTERLINE

EX ROAD SHOULDER

EX WATER COURSE

NO	DESCRIPTION	BY	DATE
	REVISIONS		

SCALE: 1:5000

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DRAWN BY: RSC	19/07/10
CHECKED BY:	dd/mm/yy
APPROVED BY:	

FILENAME:	PROJECT NUMBER	DRAWING NUMBER	REV.
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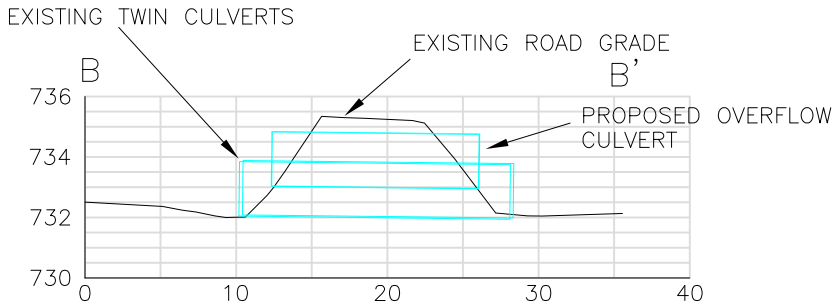
YUKON ENGINEERING SERVICES

DUBLIN GULCH ACCESS ROAD

VICTORIA GOLD

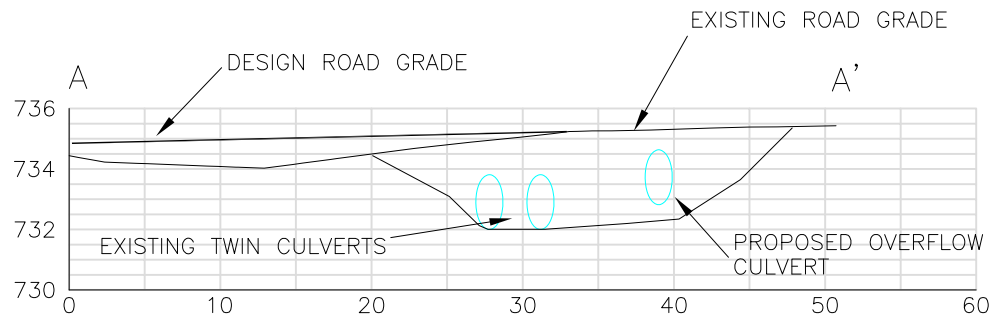
REVISION 25+780 to 26+700

PLOT DATE: 7/14/2010 FILENAME: REVISION.dwg



ROAD CROSS SECTION B–B'

SCALE 1:500 HORIZ. 1:250 VERT.

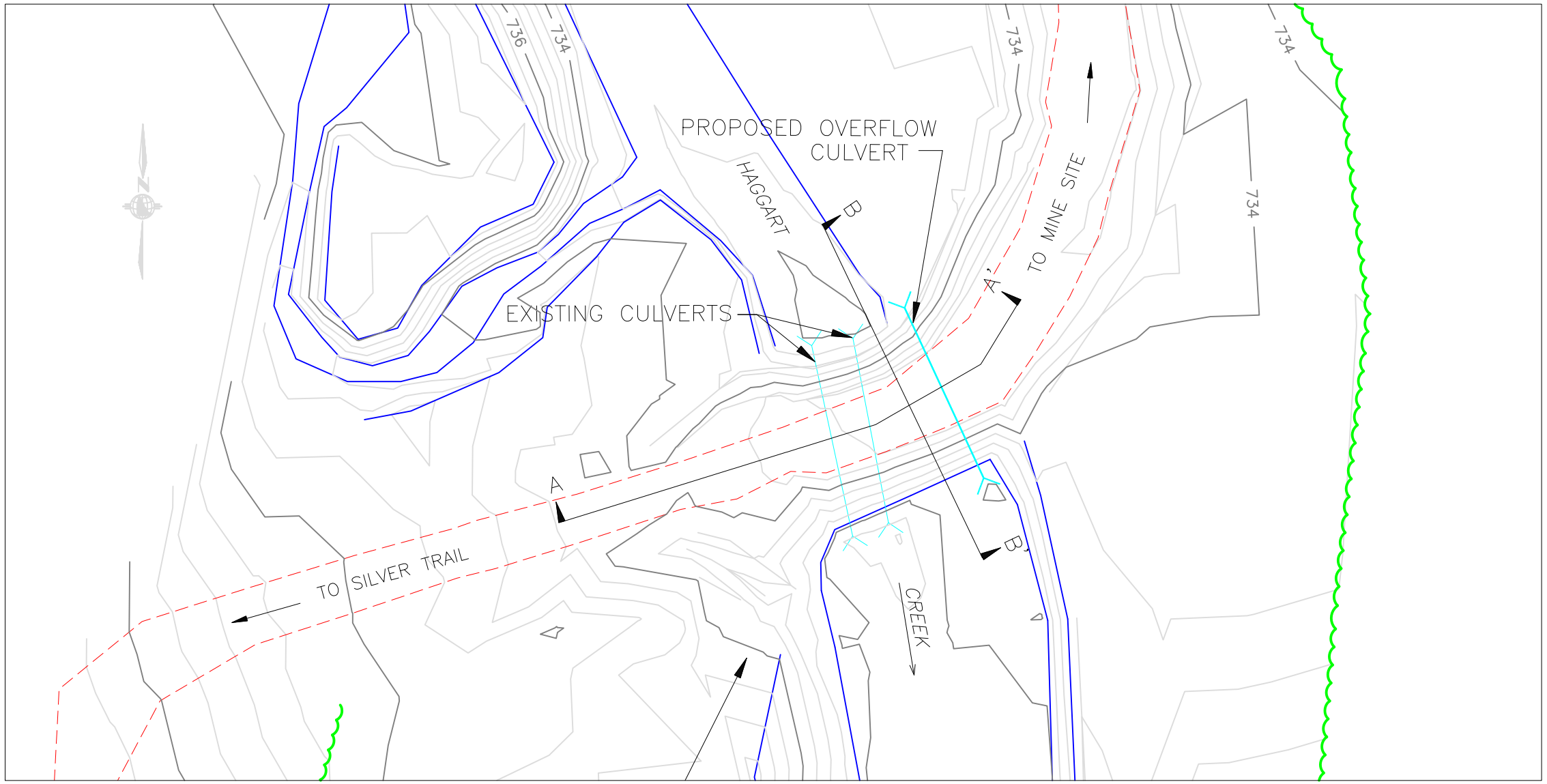


EXISTING ROAD PROFILE A–A'

SCALE 1:500 HORIZ. 1:250 VERT.

NOTES:

1. PROPOSED CULVERT LOCATION, LENGTH, AND SIZING TO BE DETERMINED BY CONTRIBUTING DRAINAGE AREA CALCULATIONS TO A 1:100 YEAR EVENT.
2. RIP RAP GRADUATION FOR SLOPE ARMOURING AND INLET SCOUR PROTECTION SUBJECT TO MAXIMUM STREAM VELOCITY CALCULATIONS AT A 1:100 YEAR EVENT.
3. FINAL DESIGN TO BE DETERMINED SUBJECT TO GEOTECHNICAL INVESTIGATION AND RECOMMENDATIONS.
4. SILT FENCING TO BE EMPLOYED DURING INSTALLATION AS REQUIRED.
5. NO MACHINE CLEARING TO BE EMPLOYED WITHIN 30 METRES OF THE WETTED PERIMETER (OHWM).
6. DETAILED DESIGNS WILL BE SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE YUKON, AND SUBMITTED TO THE APPROPRIATE AGENCCIES PRIOR TO CONSTRUCTION.



LEGEND

NOT FOR CONSTRUCTION

Victoria GOLD CORP

NO	DESCRIPTION	BY	DATE

REVISIONS

SCALE: 1:500	
	DATE
DESIGNED BY: R SLADE	22/09/2010
DRAWN BY: R COLBERG	22/09/2010
CHECKED BY: R SLADE	22/09/2010
APPROVED BY:	

FILENAME:	PROJECT NUMBER	DRAWING NUMBER	REV.
HAGGART_CREEK	E10023	1 of 1	0

YUKON ENGINEERING SERVICES

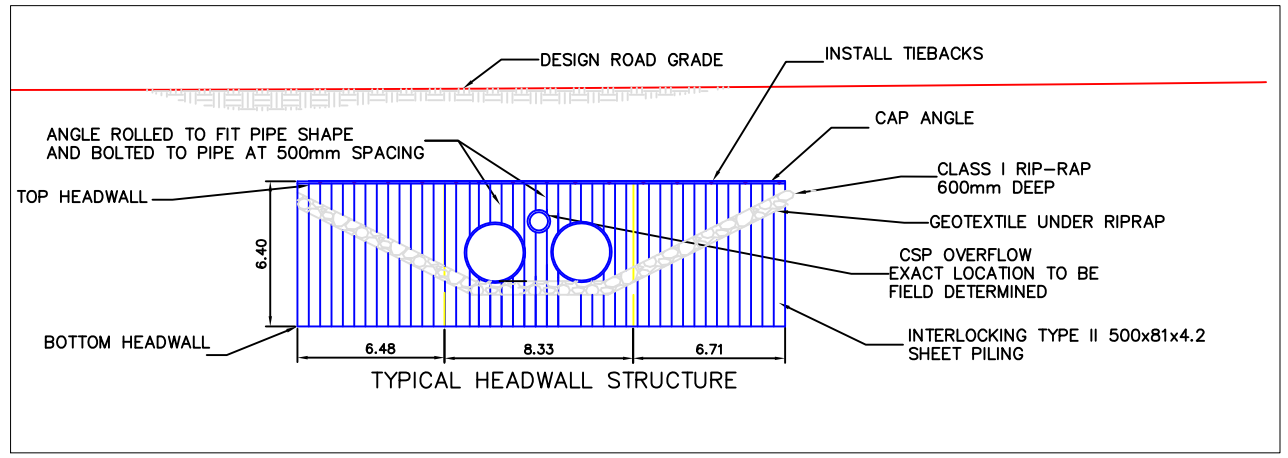
HAGGART CREEK CROSSING

EAGLE GOLD PROJECT

CONCEPTUAL DESIGN

FILENAME: TITLEBLOCK.dwg

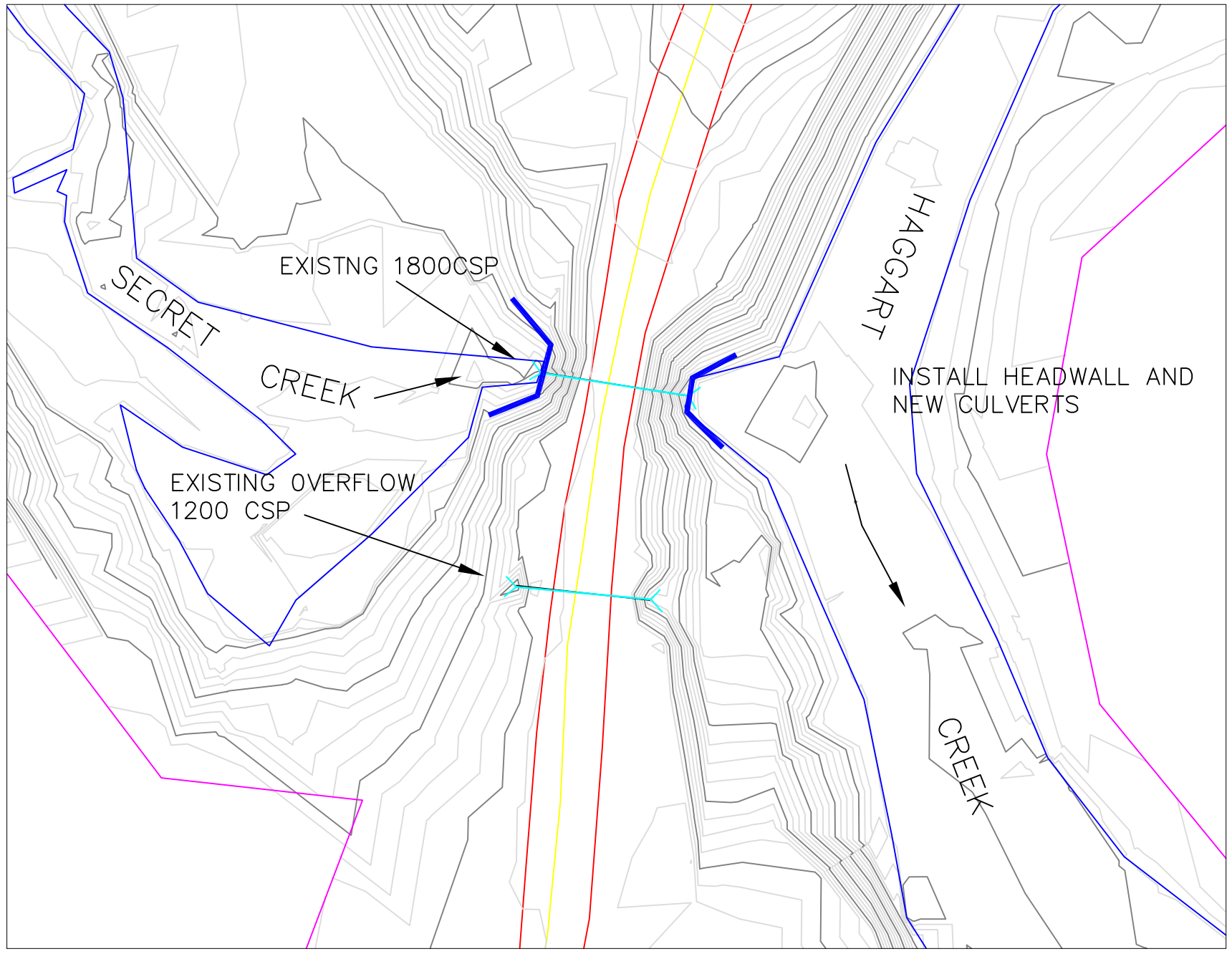
PLOT DATE: 9/23/2010

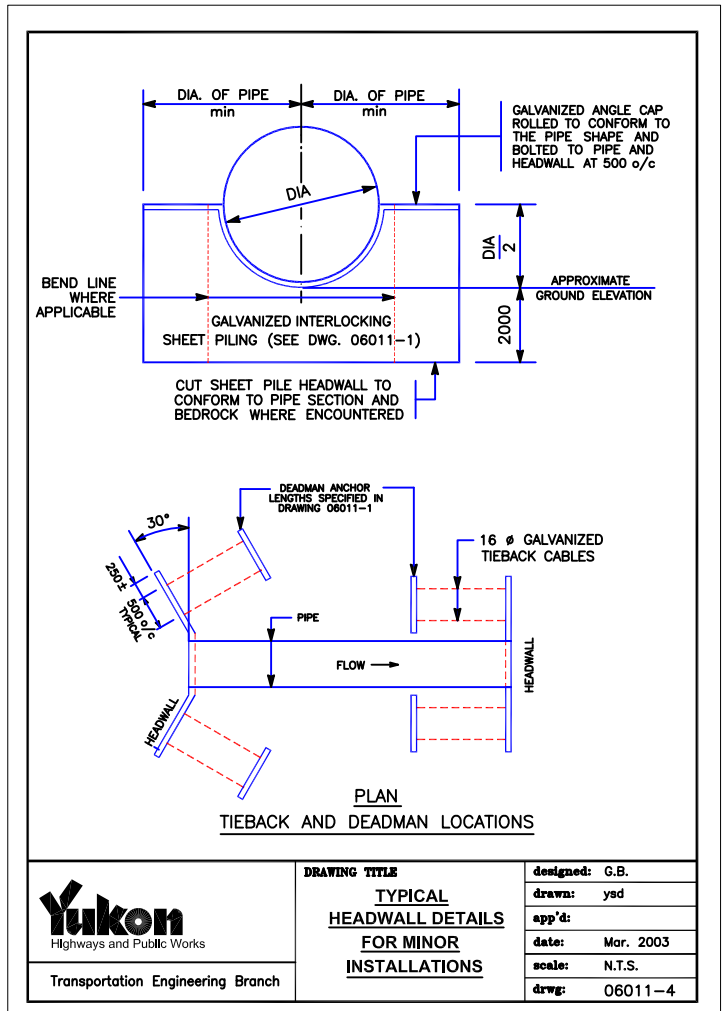


TYPICAL HEADWALL STRUCTURE

NOTES:

1. CULVERT SIZING TO BE DETERMINED BY CONTRIBUTING DRAINAGE AREA CALCULATIONS TO A 1:100 YEAR FLOOD EVENT.
2. EXACT LOCATION OF PIPE AND HEADWALL STRUCTURES AND EXTENT OF CHANNEL WORKS TO BE DETERMINED UPON COMPLETION OF THE GEOTECHNICAL INVESTIGATION AND DETAILED DESIGN.
3. GEOTEXTILE REQUIRED UNDER RIP-RAP
4. RIP RAP GRADUATION TO BE CONFIRMED SUBJECT TO MAXIMUM STREAM VELOCITY CALCULATIONS AT A 1:100 YEAR FLOOR EVENT.
5. SILT FENCING TO BE EMPLOYED DURING INSTALLATION AS REQUIRED.
6. NO MACHINE CLEARING TO BE EMPLOYED WITHIN 30 METRES OF THE WETTED PERIMTER (OHWM).
7. CREEK CHANNEL WORK: DO NOT DISTURB EXISTING CREEK CHANNEL BEYOND LIMITS REQUIRED FOR CONSTRUCTION OF WORKS. CONSTRUCT STREAMBED AND SIDESLOPES OF CHANNEL TO LINES AND GRADES APPROVED BY ENGINEER
8. DETAILED DESIGNS WILL BE SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE YUKON, AND SUBMITTED TO THE APPROPRIATE AGENCIES PRIOR TO CONSTRUCTION.





PLAN
TIEBACK AND DEADMAN LOCATIONS

Yukon
Highways and Public Works
Transportation Engineering Branch

DRAWING TITLE
TYPICAL
HEADWALL DETAILS
FOR MINOR
INSTALLATIONS

designed:	G.B.
drawn:	ysd
app'd:	
date:	Mar. 2003
scale:	N.T.S.
drwg:	06011-4

LEGEND

NOT FOR CONSTRUCTION

Victoria GOLD CORP

NO	DESCRIPTION	BY	DATE
	REVISIONS		

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DESIGNED BY:	22/10/2010
DRAWN BY: R SLADE	22/10/2010
CHECKED BY: R SLADE	22/10/2010
APPROVED BY:	

FILENAME:	PROJECT NUMBER	DRAWING NUMBER	REV.
SECRET	E10023	1 of 1	0

YUKON ENGINEERING SERVICES

SECRET CREEK CROSSING

EAGLE GOLD PROJECT

CONCEPTUAL DESIGN

PLOT DATE: 9/23/2010 FILENAME: TITLEBLOCK.dwg

APPENDIX B: 1996 Detailed Design Report

November 14, 1996 Our File: DESBRF-1.DOC

Rescan Engineering Ltd.
PO Box 8 - Suite 900
1140 West Pender St.
Vancouver, B.C. V6E 4G1

Attention: Mr. Adam Majorkiewicz, P.Eng.
Project Manager

Dear Sir:

Regarding: Dublin Gulch Access Road - Final Design Brief

Please find enclosed our **Final Design Brief Report and Recommendations** for the Dublin Gulch Access Road Options Project. As requested by Mr. Hans Smit of New Millennium Mining Ltd., the following initial distribution list is being used:

3	New Millennium Mining Ltd.	Sally Howson, Hans Smit, Stephen Stine
2	Hallam, Knight, Piesold	Bob Hallam, Susan Blundell
1	Rescan Engineering Ltd.	Adam Majorkiewicz

As well, digital copies of the master Acad drawing design file is being sent to HKP, as are MSOffice files of this report, EBA's report (Appendix B) ,and appendices.

The design phase has considered socio-economic factors, traditional use, environmental issues, soils conditions, capital cost and O & M Costs. Based on the Benefit - Cost Analysis comparison with respect to the two Option Routes, using MicroBENCOST analysis, economic measures such as Internal Rate of Return (IRR), Net Present Value (NPV), and User Benefits favor the Mount Haldane Option 2 Route. A summary of this analysis appears in Section 4 . Based on this analysis and considering the above mentioned factors, we **strongly recommend the Option 2 Alignment**, Mount Haldane Route.

Should you have any questions concerning this report or its contents, kindly contact the undersigned.

Yours truly,

Rob Harvey
President
ENCLOSURES

Table of Contents

1.0 Introduction

1.1 Project Description

New Millennium Mining Ltd. (NMML) is a wholly owned subsidiary of First Dynasty Mines Ltd., the previous operators of the Dublin Gulch Project. NMML is in its Final Feasibility and Permitting stage for its Dublin Gulch Heap Leach Gold Mine development north of Mayo, YT.

1.2 Existing Access Road Description

The Dublin Gulch property is located some 45 km up the South McQuesten Road and Haggart Creek placer mining Access Road. The S. McQuesten Road is accessed via the Silver Trail. Both are maintained by the Government of Yukon, though the S. McQuesten Road is in poor repair, and was not built to acceptable public standards. The Silver Trail is an 80 km/hr year-round gravel road, typically 8.5m in width, and has undergone improvements in recent years.

The Haggart Creek placer Access Road requires considerable upgrading for safe, reliable continual use for the public, existing placer miners, and for the Dublin Gulch Mine.

The South McQuesten Road (SMR) requires less upgrading, with widening, improvement of some curves, replacement of existing culverts, ditching, line-of-sight improvements and grade raising through low, wet areas.

As an option to the SMR, (Option 1) NMML is considering re-constructing the Haldane Road, Option 2, which departs from the Silver Trail at Halfway Lakes (some 8 km south of the SMR/Silver Trail intersection), and ascends up the side of Mt. Haldane, then down into the Ross Creek valley to the South McQuesten River valley.

At approximately km 22.9 of the SMR, and km 16.9 of the Haldane alignment (Option 2) either route crosses the South McQuesten River. There is currently a Bailey Bridge at this location, which is maintained by YTG. This structure is in poor repair, and requires either:

- upgrading with a mid-span pier support, replacement of abutments, and extension to outside of the river channel, or:
- replacement with a new 120’ (36.6 m) clear span structure, with piling abutments.

Estimates have been secured for both bridge alternatives, and range from $150,000 for upgrading, to $220,000 for replacement of the structure. **Bridge construction work will be under a separate contract.**

1.3 Engineering Project Task

New Millennium Mining Ltd. and Rescan Engineering Ltd., retained Yukon Engineering Services to:

Undertake a pre-design of the two options for an acceptable access road from the Silver Trail to the Dublin Gulch Mine Site:

- Option 1 - Utilizing and upgrading the South McQuesten Road for 22.9 km to the South McQuesten River Bridge, then utilizing and upgrading the Haggart Creek Road for 21.9 km.

- Option 2 - Constructing along the old Mt. Haldane Route for 16.9 km to the South McQuesten River Bridge, then utilizing and upgrading the Haggart Creek Road for 21.9 km.

The pre-design information is reflected in our Sept. 3, 1996 *Letter Report Recommendation*. This Preliminary Report concluded that Option 2 was the preferred option, from both the NMML perspective, and from environmental as well as First Nations perspectives.

As a result, NMML instructed Yukon Engineering Services to:

- undertake ground surface and drainage inventory data collection, and a control survey for both options, in order to:
- complete a Detailed Design, as well as Detailed cost estimates of both Options, respecting the minimum 60 km/hr design requirements for the project.
- undertake a soils interpretation to develop and complete an informed soils testing program for both options.
- complete Detailed Plans of Option 2, **and to:**
- **develop and provide this *Design Brief Report,* explaining the design issues, investigations and design processes carried out for both options, and carry out Preliminary Class "C" Cost Estimates for both Options.**

> *Our Sept. 3, 1996 Letter Report Recommendation included an Evaluation Matrix which scored Option 2 slightly ahead of Option 1, based principally on Environmental, Socio-economic and Traditional Use considerations. We have re-done the Evaluation Matrix with current information, and include it as Appendix K..*

2.0 Design Issues and Process

NMML's Dublin Gulch Project is expected to have demands similar to that experienced by Loki Gold / Viceroy's Brewery Creek Project. Project issues which are critical to the design of an access from the Silver Trail include:

- Camp provided at mine site. Turnarounds of personnel expected to occur approximately every two weeks. Personnel will, for the most part travel from Mayo to the mine site by bus.
    - Approximately 8 semi-trailer loads plus bus loads per day, on the average.
    - Approximately 12 mid-size, single axle trucks (1 tonne to 5 tonne) expected per day.

- Approximately 30 passenger car or pickup trucks per day.

- Heavier loads will occur going into the mine site, lighter loads will occur returning. (*This affects different super-elevation on uphill curves for each direction.*)

The mine operating season will be year-around with stripping, mining, ore placement and leaching occurring in the summer months of May through to October, and waste mining and leaching being carried out in the months of November through April.

2.1 Design Parameters

The following Design Parameters were selected with respect to this project and its requirements. All parameters fall under the ***T**ransportation **A**ssociation of **C**anada* (**TAC**) design standard of **R**ural **L**ocal **U**ndivided 60 (**RLU 60**), and good engineering practice.

Description of Design Parameter	TAC	Achieved
Minimum Radius Horizontal Curves *Refer to Plans Appendix A* alignment km/hr sign.)	120 m	(170 m targeted, with 150 m Radius the lowest achieved, occurring only once on Haggart Creek Section, Option 1 & Option 2, suggesting a 70 km/hr horizontal Design, with one "Reduce Speed" to 60
Minimum Length of Spiral "A" Value *Refer to Plans Appendix A*	80 m	Spiral transitions were not used, as they serve little purpose on gravel roads. Most YTG C&TS program Designers have ceased using spirals.
Maximum Gradient (Mountainous TAC) *Refer to Plans Appendix A*	11%	(9.9% Option 1, 10.6%, 10.4% and 9.9% on Option 2, suggesting a 70 km/hr vertical alignment Design, with one more "Reduce Speed" to 60 km/hr sign for Option 1, and three more for Option 2.)
Minimum K Value (Sag) *Refer to Plans Appendix A*	10	Governed by comfort control. (Lowest Sag K Option 1 = 20, Option 2 = 11, suggesting one more "Reduce Speed" to 60 km/hr sign for Option 2, and none for Option 1.)
Minimum K Value (Crest) *Refer to Plans Appendix A*	13.4	Governed by stopping sight distance (85m), a driver's eye height of 1.05m (passenger car), and height of object (tail light, small animal) of 0.38m. (Lowest Crest K Option 1 = 21.1, Option 2 = 31.7, suggesting 70 km/hr posting.)
Minimum Length of Vertical Curve (Sag) *Refer to Plans Appendix A*	60 m	Lowest 60 m, as original design speed.
Minimum Length of Vertical Curve (Crest) *Refer to Plans Appendix A*	60 m	Lowest 80 m, to better complement Stopping Sight Distance.
Maximum Rate of Super Elevation on Curves	6% / 8%	8% used throughout, except on grades of greater than 8% in loaded (towards mine site) direction, then 6% used. This is to lessen side-slipping and spinning out of loaded trucks on steep grades in the winter time.
Road width *Refer to Typical Sections Appendix C* (Includes 0.5m each side for optional rounding)	9 m	8 metres. This allows for two, 3m traveled lanes, plus, two, 1m shoulders. Where fills are greater than 7m in height, an additional 0.5m width is added to the width on that side to accommodate possible guide rail installation.
Side Slopes (Cut) *Refer to Typical Sections Appendix C*	3H:1V	3H:1V
Back Slopes (Cut) *Refer to Typical Sections Appendix C*	2H:1V	2H:1V Cuts less than 5m in height. 1.5H:1V Cuts greater than 5m in height. 1H:1V Cuts in competent, rippable schist.
Fill Slopes *Refer to Typical Sections Appendix C*	2H:1V	2H:1V Fills less than 5m in height. 1.5H:1V Fills greater than 5m in height.
Surfacing Gravel Thickness *Refer to EBA Soils Report Appendix B*	N/A	100mm. YTG specification Granular Surfacing "A".
Subbase Granular Thickness *Refer to EBA Soils Report Appendix B*	N/A	Varies from 0mm - 350mm. YTG specification Granular Subbase "E" (Gran "E")
Minimum Angle at Perpendicular Intersection	70°	70° at Silver Trail, Option 1 and Option 2.

2.2 Other Design Considerations

2.2.1 Soils Conditions

EBA Engineering Consultants Ltd. completed a field test-pitting and centerline drilling program, as part of this design process. Their report is included here as Appendix B.

"Depth of cut" is of critical economic importance on the Haggart Creek portion of Option 1, and both the Haldane and Haggart Creek portions of Option 2. This is due to the proximity of schist rock to the surface,. The test pitting program previously mentioned, determined that while refusal (inability to dig further) varied from area to area, that refusal was generally encountered at 3 to 4m vertical from the surface.

As test pitting was completed by a Caterpillar™ 225 Excavator, and actual excavation during construction would be done by equipment with upwards of three times the breakout force, factors were used to determine the most likely depth to competent bedrock. A factor of 1.5 was applied to all refusal depths on a pit by pit basis.

From this "boring" file, a sub-surface was developed in the design database. This sub-surface was used as an objective for limit of excavation in all cuts. Where our design cross-section unavoidably intercepted the "rock" sub-surface, "Excavation Rock" was calculated below the intercept, for design, balance, and contract payment purposes.

Typically, on projects of this sort, a shrinkage factor of 15% is expected from excavation to embankment. Due to the volume of plate-like schist encountered, we have estimated shrinkage to be 10%, except where drilling and blasting are required, where we have estimated a swell of 10% from excavation to embankment.

2.2.2 Hauling of Embankment

Economy of Design and Construction is achievable without compromising either the Design Standards employed, or the safety of the traveling public. This is done, in the case of an efficient Mass Haul Design, by re-iterative adjustment of the horizontal and (especially) vertical alignments, and by strategically locating side-borrows (ditch widenings) and quarries where possible.

The objective of the subgrade design of the Haggart Creek portion of Option 1, and both the Haldane and Haggart Creek portions of Option 2 was to take advantage of the sidehill terrain as much as possible, in order to allow construction with little hauling of embankment material, and in the case of the SMR portion of Option 1, to shorten the haul lengths.

2.2.3 Major Alignment Revisions

There is only one major alignment revision planned for Option 1.

Km 0.5 to km 2.6 of Option 1 on the SMR portion is a major revision. The original road in this area was constructed to access the Elsa Air strip. The South McQuesten Road was then obviously built as an extension of this air strip access, with an abrupt change of direction, from a NE to SSW direction, resulting in a "switch-back" corner.

We have designed a much shorter compound curve descent from the Silver Trail to km 2.6 of the SMR. The revised Kilometre at this point is km 1.3. While this is descending a north-west facing slope, and some solufluction is evident, and in spite of the -9.9% gradient of the hill, we recommend this revision for the 1.3 km savings in length, and as a means to avoid the Trapper's cabin at (old) km 1. (Referred to as "SM#3" in S. Greer's, 1996 South McQuesten Archaeology /Heritage Report.).

Through this revision, except for stripping of organic material, all material excavated will be used in subgrade construction of the adjacent embankment. This will be over-laid with 350mm of Granular "E" and 100mm of Surfacing Granular "A". Special sub-cut treatment will also be applied at the transitions.

Option 2 incorporates many minor alignment revisions (where the design centreline deviates from the existing trail for more than 100m). These are shown clearly on the plans in Appendix A, under separate cover. Critical among these minor revisions, however is a required revision near km 0.7.

Josef Volf and Louise Volf currently hold a "Recreational Long Term Lease", bisected by a 30m road easement for the Haldane Trail. YES has had conversations with Mr. Volf wherein he has requested that should Option 2 be built, NMML divert the road towards the back (east limit) of Squatter Application 63A, as depicted in Appendix A herein.

2.2.4 Clearing & Grubbing

An assessment of the tree cover and terrain along both options suggests that there are three types of Clearing operations to be employed on this project. These are reflected in the Cost Estimates (Appendix I).

Clearing & Grubbing	Machine Clearing of trees <150mm in diameter, & Grubbing of organic root mat. Disposal of trees to be by burning, or hauling to an approved disposal site. Grub piles to be placed outside of the embankment area on the low side, and groomed against the slope during the cleanup process. Hand Clearing and salvage of trees >150mm in diameter. (Salvaged product to be bucked into 1200mm lengths and piled along the edges of clearing for later pickup by locals, or along the trail for immediate pickup by locals.) Disposal will require a Land Use Permit and a Fire Permit.
Hand Clearing	Hand Clearing and salvage of trees >150mm in diameter. No grubbing to be done. This applies to areas within 30m of a stream or lake, or in areas of extremely steep sidehill, where grubbing will be carried down with the excavation. (Salvage to be done as in Clearing & Grubbing.)
Merchantable Clearing	Machine and Hand logging of larger diameter trees along the Haldane Road. It is recommended that this be done by a logging subcontractor, and that product be commercially disposed to the contractor's best advantage.

Except in Hand Clearing areas, and for the first 3 km of Option 2, we have included:

- 10m buffer between the design toe of fill and design clearing limits, for storage and grooming of grubbing and stripping, during the cleanup process.
- 4m between the top of cut and design clearing limits, to avoid undermining of roots, and resulting timber falling onto the road.

2.2.5 Quarry Sources

Quarry sources required for this project are listed in Appendix F, for both options 1 and 2. EBA Engineering Consultants Ltd. has completed test pitting in all quarries, and finds them good sources for their respective applications. Their report is included as Appendix B.

2.2.6 Culverts

A detailed drainage design has been completed for this project. The following parameters were used in the design of culverts:

Minimum diameter	600mm	
Maximum gradient	6%	inlet to outlet
Maximum Camber gradient	10%	centreline to outlet
Culvert Type	CSP	Corrugated Steel Pipe, helical c/w annular collars. All parts to be galvanized and constructed as per YTG specification.
Minimum wall thickness	1.6mm	varies with diameter, up to 2mm for 2000mm diameter.

We recommend complete removal of all culverts currently along both Option alignments, as they are in poor repair and do not function well, with the exception of the triple 600mm CSP (c/w grates) at the Beaver Dam Pond near km 10.5 on Option 1. These will be extended to the right (north/outlet side).

- Culverts for Option 2 are shown on the plans in Appendix A.
- A detailed Culvert Summary Report is included for both options in Appendix E.

3.0 Construction

The quantities established through our design process suggest that all work can be completed in one season by a medium to large contractor. We estimate a phased schedule approximating:

Feb. 01/97 - Mar 30/97	Bridge Construction
Feb. 15/97 - May 15/97	Clearing, Grubbing and some Subgrade Construction.
May 15/97 - Aug. 31/97	Subgrade, Drainage and Subbase Construction.
Aug. 31/97 - Oct. 15/97	Crushing, Surfacing and Cleanup Operations.

Optionally, initial capital expenditure can be partially deferred away from startup costs by constructing only the S. McQuesten Bridge and the Haggart Creek section fo road in Year 1 of the project, and postponing either the Mt. Haldane Section (Option 2) or SMR Section (Option 1) until Year 2 - 4. (This plan would call for approximately $150,000 of patching, widening, and grade raise of the SMR section in Year 1.) If selected, this option would require a schedule of:

Feb. 01/97 - Mar. 30/97	Bridge Construction
Feb. 15/97 - April 15/97	Clearing, Grubbing and some Subgrade Construction.
Apr. 15/97 - Aug. 01/97	Subgrade, Drainage and Subbase Construction.
Aug. 01/97 - Sept. 01/97	Crushing, Surfacing and Cleanup Operations.

3.1 Construction Camp

We estimate that 40 people will be employed on this project at its peak, including the Contractor's and Engineer's personnel. One 40 person camp will accommodate all people employed on the project, through all phases. Should more accommodation be required for short periods, this will likely be obtained from Half Way Lakes or from Mayo facilities. The most suitable camp location is near km 15.0 of the Option 2 Alignment. This is recommended due to:

- Location some 200m from Ross Creek.
- Good access to potable water.
- Apparently favorable soils for septic percolation.
- Roughly the mid-point of both Options 1 and 2.
- Existing clearings and large level areas.
- Far enough back from Ross Creek and from S. McQuesten River.

We recommend that a cistern well and pump be situated within the camp area itself, as the volume of potable water required is expected to be approximately 7,000 litres per day, or 1,700,000 litres over the duration of the project. Either an open sewage lagoon or closed septic system will be required for the construction camp. Appropriate Land Use Permits must be secured.

3.2 Equipment and Fuel Required

Our projections indicate that 1,500,000 litres of fuel will be used in the construction of the Dublin Gulch Access Road. Please refer to Appendix H for a detailed breakdown of anticipated equipment and fuel.
Fuel will be imported to the project by commercial supplier/carriers, in approved highway transport trailer units, and pumped into the project approved On Site Storage Facility. On site storage will consist of one central 30,000 to 50,000 litre Approved Steel Tank.

- This central fuel tank will be situated within an approved fuel containment dike (lined with either an impervious clay material, or a geo-membrane liner, and backfilled with sand or screened gravel) which will have a capacity equal to the capacity of the tank. The tank will not be situated within 100m of a water course.
- Roving fuel and/or service trucks will obtain fuel from the central fuel tank, one to three times daily.
- Fuel cleanup devices such as Sorbal™ batts and pads, shovels and buckets will be kept at the Central Tank location and in the roving Fuel/Service Trucks.

Appropriate Land Use Permits must be secured.

4.0 Construction Cost Estimates

Identical effort has been used for both Options 1 and 2, in calculating quantities, and in developing complete cost comparisons for all items. Plans have been developed for Option 2, and NOT Option 1, only because the outcome of our Letter Report Recommendation favored Option 2. Plans for Option 1 can be developed in a short time (approx. 3 weeks), if required.

The following are our Class "C" Construction Cost Estimates for both Options 1 and 2. For detailed breakdowns in spreadsheet format, please refer to Appendix I.

Option 1	South McQuesten Road and Haggart Creek Trail	$**7,090,380**
Option 2	Haldane Road and Haggart Creek Trail	**$7,871,932**

4.1 Maintenance Cost Estimates

Yearly anticipated maintenance costs are similar for the two options with the higher cost being associated with Option 1.

Option 1	South McQuesten Road and Haggart Creek Trail	$**127,150**
Option 2	Haldane Road and Haggart Creek Trail	**$119,380**

4.3 Benefit - Cost Analysis

The Benefit - Cost Analysis was done using the MicroBENCOST program. The two alignment options were analyzed over a 10 year period; Option 1 considered as the existing route in the upgraded state with Option 2 considered as the proposed route. The analysis output is summarized below, with additional economic measures contained in Appendix J.

- Total Discounted User Benefits is $7.195 million.
- Discounted Saving in Maintenance costs for Option 2 is $256,000.00
- Fuel Consumption Savings of approximately 908,000 liters.
- Net Present Value of $3.078 million.
- Netted Benefit - cost Ratio of 1.4
- Internal Rate of Return of 12.23%

5.0 Closing and Recommendations

The information included herein was developed using good and acceptable Engineering and Management practices. Its use is restricted to permitting and Pre-Engineering applications, as it in no way represents Tender Documents or information to be used for Tendering or Contracting without the express written consent of Yukon Engineering Services.

With the detail developed through this design process, and the more accurate cost estimating procedures, we state herein that Option 1 will be less costly to construct. As identified in our Evaluation Matrix (Appendix K), however, Traditional Use, Environmental Issues and Operating costs favor Option 2, with the weighting values applied.

Our recommendation is to plan to construct Option 2.

In the event that questions arise concerning this Design Brief Report, its content or implications, kindly contact either of the under-signed representatives.

Yours truly,

Yukon Engineering Services

Rob Harvey
President & Project Designer

Yukon Engineering Services

John M. Grainger, P.Eng.
Project Engineer

APPENDICES

/CA

Appendix A:

- **Option 2 Plans - Under Separate Cover**
- **Squatter Application #63 and Long Term Lease**

Appendix B:

- **Geotechnical Assessment of Dublin Gulch Access Road Mt. Haldane Option and South McQuesten Options for First Dynasty Mines, near Mayo, YT**

Appendix L
Letters From MRRC, SRS, & BM

Miscellaneous Appendices:

Appendix D - Clearing Report Summary
Appendix E - Culvert Summary
Appendix F - Quarry Requirements Summary
Appendix G - Overhaul Summary
Appendix H - Project Equipment and Fuel Summary
Appendix I - Class "C" Cost Estimate
Appendix J - Summary Benefits, Costs, and Economic Measures
Appendix K - Evaluation Matrix
Appendix L - Letters From MRRC, SRS, & BM

APPENDIX C: 1996 Geotechnical Report

GEOTECNICAL REPORT
Dublin Gulch Mine Access Road
S.McQuesten and Mt.Haldane Options
north of Mayo, Yukon

0201-96-12289

October, 1996

October 7, 1996

Yukon Engineering Services Ltd.
Calcite Business Centre
Unit 1, 151 Industrial Road
Whitehorse, YT
Y1A 2V3

EBA File: 0201-96-12289

Attention: Mr. Rob Harvey

Dear Rob:

Subject: Geotechnical Assessment of Dublin Gulch Mine Access Road
Mt. Haldane Option and South McQuesten Road Option
for First Dynasty Mines, near Mayo, YT

This report summarizes the recently completed geotechnical assessments of the two alternatives proposed for the upgrading of the access road into First Dynasty's Dublin Gulch Mine north of Mayo, YT.

The first option evaluated was the 16.5 km long Mt. Haldane Lookout Road, starting at approximately km 77 (Halfway Lakes) of the Silver Trail, and ending at about km 23.8 at the South McQuesten River Bridge. One of the main advantages to this route is that it shortens the one-way trip to the mine by about 16 km (as compared to the existing South McQuesten route). One potential construction materials borrow pit at about km 16.5 was also evaluated as part of this study. Several other potential borrow sources near the beginning of the road at the Silver Trail were not examined due to Land Use Permit restrictions.

The second option evaluated was the existing South McQuesten Road from km 0 (at approximately km 87 of the Silver Trail) into the Dublin Gulch property at about km 42. Nine (9) borrow sources at km 7.4, 15.2, 17.5, 22.6, 24.5, 25.3, 26.4, 26.7, and the Secret Creek tailings at km 33 were also examined. Land Use Permit restrictions prevented the evaluation of potential sources between km 10 to 12.

1.0 GEOTECHNICAL SITE INVESTIGATION

1.1 South McQuesten Road and South McQuesten River Bridge

Centreline drilling on the South McQuesten Road was completed on August 22 and 26, 1996, during which a total of 27 boreholes were completed. This includes one deep and one shallow borehole drilled at each abutment of the South McQuesten River bridge site on August 25 and 26. A CME 750 drill, using both solid shaft and hollow stem augers, was contracted from Midnight Sun Drilling Co. Ltd. in Whitehorse to complete the drilling program. Soil samples were taken at regular intervals in all boreholes and returned to EBA's Whitehorse laboratory for classification testing. The bridge site geotechnical information was submitted on September 3/96, and is not included herein.

The potential borrow sites identified on the basis of airphoto interpretation were also tested on August 24 and 28, 1996. Three testpits to about 4.5 m depth were advanced at each prospective site, access permitting. Soil samples were taken at regular intervals in all testpits and returned to EBA's Whitehorse laboratory for classification testing.

The locations of all boreholes and testpits are shown on Figure 1, following. A senior technologist from EBA's Whitehorse Office supervised the drilling and testpitting program. All borehole and testpit logs, including laboratory test data, completed for the South McQuesten Road are included in Appendix A.

1.2 Mt. Haldane Lookout Road

A total of 12 testpits were excavated along a revised centreline of the Mt. Haldane Lookout Road on August 23 and 24, 1996. In addition, three (3) testpits were also excavated in one proposed borrow area at about km 16.5, near the north junction with the South McQuesten Road. Soil samples were taken at regular intervals in all testpits and returned to EBA's Whitehorse laboratory for classification testing. The locations of all testpits is shown on Figure 2, following.

A senior technologist from EBA's Whitehorse Office supervised the drilling and testpitting program. All testpit logs and laboratory test data completed for the Mt. Haldane Lookout Road are included in Appendix B.

2.0 CONSTRUCTION RECOMMENDATIONS

2.1 South McQuesten Road Option

2.1.1 Road Structure Design

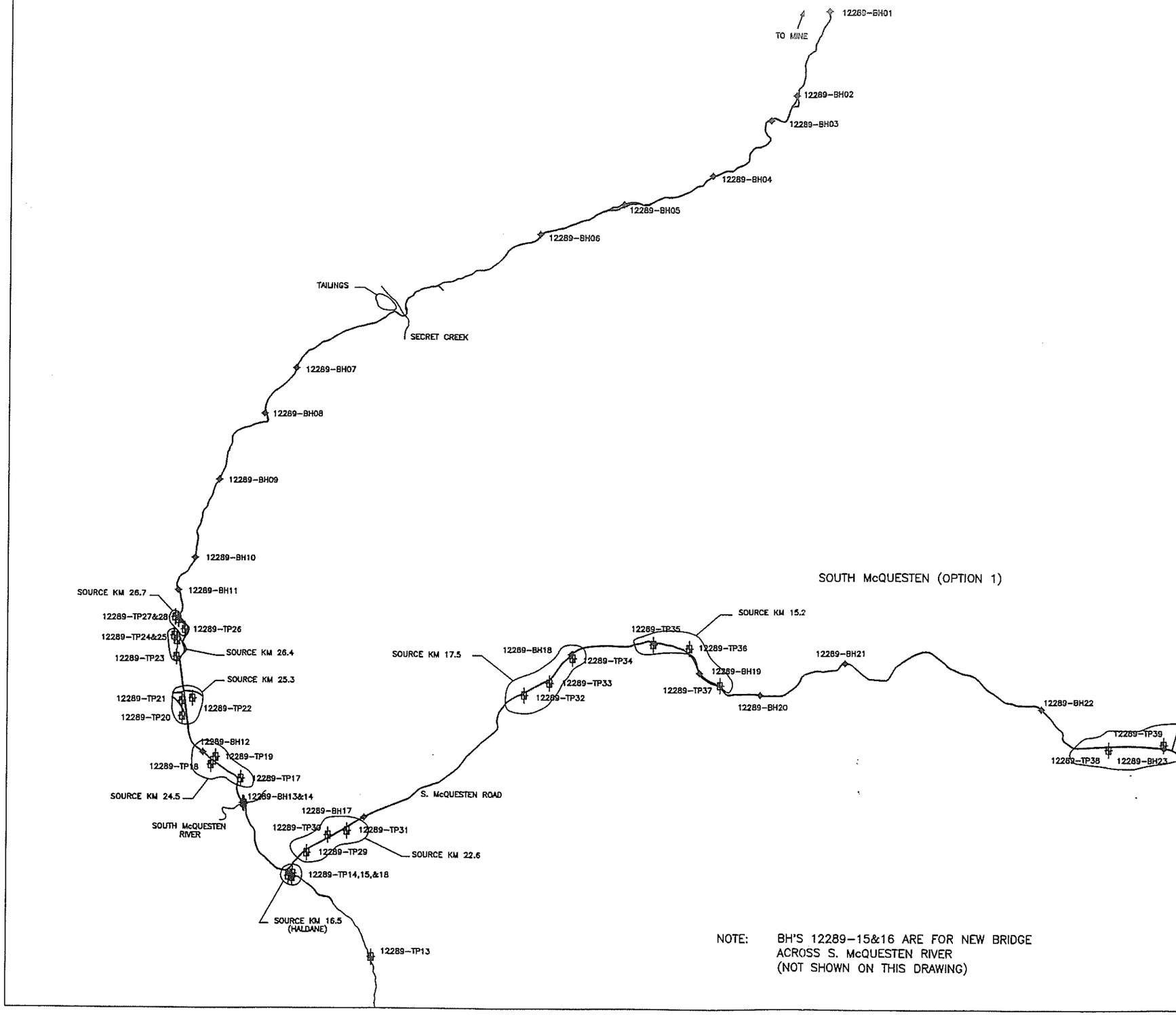
Soil conditions along the South McQuesten Road range from cuts through schist and silty glacial till, to ice-rich permafrost. The section from about km 26 to the Mine property requires the most effort with respect to subgrade preparation and surfacing. The first 26 km (approx.) from the Silver Trail has been well used, and is maintained by the Yukon Government.

For the purposes of road structure design, it has been assumed that 20 trucks per day will use the reconstructed access road. The following road structure applies:

Table 2.1.1
Recommended Road Structure Design
South McQuesten Road Option

Approximate km Range	Minimum Granular Structure
0 - 26	100 mm crushed gravel surface (Granular A) over 250 mm pit run granular base (Granular E)
26 - 46	100 mm crushed gravel surface (Granular A) over 350 mm pit run granular base (Granular E)

Note: In all cases the road subgrade and all imported materials must be compacted to at least 98% of Standard Proctor maximum dry density (ASTM D698). Granular A and Granular E refer to Yukon Government Highways specifications.



NOTE: BH'S 12289-15&16 ARE FOR NEW BRIDGE ACROSS S. McQUESTEN RIVER (NOT SHOWN ON THIS DRAWING)

EBA Engineering Consultants Ltd.

NEW MILLENIUM MINING LTD.

DUBLIN GULCH ACCESS ROAD

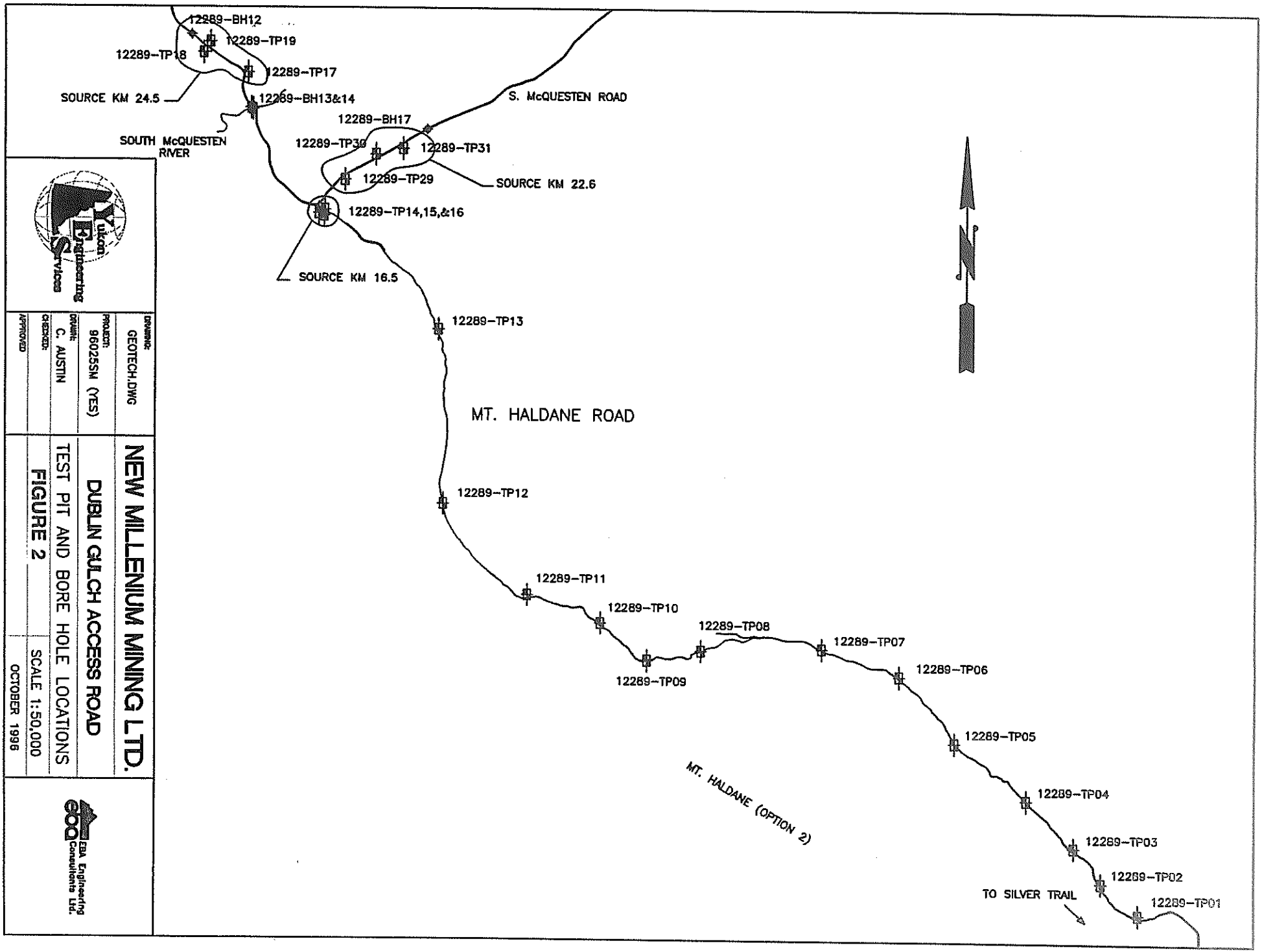
TESTPIT AND BOREHOLE LOCATIONS

FIGURE 1 SCALE 1:60,000

OCTOBER 1996

DRAWING: GEOTECH.DWG
PROJECT: 96025SM (YES)
DRAWN: C. AUSTIN
CHECKED:
APPROVED

Yukon Engineering Services


12289-BH12
12289-TP19
12289-TP18
12289-TP17
SOURCE KM 24.5
12289-BH13&14
S. McQUESTEN ROAD
12289-BH17
SOUTH McQUESTEN RIVER
12289-TP30
12289-TP31
12289-TP29
SOURCE KM 22.6
12289-TP14,15,&16
SOURCE KM 16.5
12289-TP13
MT. HALDANE ROAD
12289-TP12
12289-TP11
12289-TP10
12289-TP08
12289-TP07
12289-TP09
12289-TP06
12289-TP05
MT. HALDANE (OPTION 2)
12289-TP04
12289-TP03
12289-TP02
TO SILVER TRAIL
12289-TP01
N
Yukon Engineering Services
DRAWING: GEOTECH.DWG
PROJECT: 96025SM (YES)
DRAWN: C. AUSTIN
CHECKED:
APPROVED
NEW MILLENIUM MINING LTD.
DUBLIN GULCH ACCESS ROAD
TEST PIT AND BORE HOLE LOCATIONS
FIGURE 2
SCALE 1:50,000
OCTOBER 1996
EBA Engineering Consultants Ltd.

It should be noted that in new road sections where granular materials (with less than 15% fines) are encountered in the subgrade, or are imported and used for embankment construction, the Granular E requirement in the above table may be waived, and only the surfacing (Granular A) is required.

2.1.3 Borrow Source Evaluation

The following Table summarizes the borrow materials evaluated along the South McQuesten Road, and recommendations for their use:

Table 2.1.3
Summary of Prospective Borrow Sources
South McQuesten Road Option

km Post	Soil/Permafrost Description	Recommendations
7.4 (TP's 38/39/40)	GRAVEL AND SAND to SAND	Gravel in west end of deposit, sand to the east. Keep pit development on the west end.
15.2 (TP's 35/36/37)	SILTY SAND over GRAVEL AND SAND	Not recommended due to thick silty sand overburden (up to 1.8 m)
17.5 (TP's 32/33/34)	SAND AND GRAVEL	Recommended for development - up to 0.8 m overburden may have to be stripped
22.6 (TP's 29/30/31)	SANDY GRAVEL	Recommended for development - up to 0.5 m silty sand overburden
24.5 (TP's 17/18/19)	SAND AND SILT	Not recommended due to high water table and permafrost - small deposit of granular at N end
25.3 (TP's 20/21/22)	GRAVEL AND SAND	Recommended but up to 1.2 m of sand and silt overburden may have to be stripped
26.4 (TP's 23/24/25)	SILT-Permafrost	Not recommended
26.7 (TP's 26/27/28)	GRAVEL AND SAND	In existing borrow pit - small deposit of granular materials remain near TP 26
33.0	Secret Creek Tailings	Suitable for subgrade construction. The high concentration of soft schist fragments will result in particle breakdown when used for surfacing. This infers that road will be "greasy" when wet and "dusty" when dry. (see Trial Crush and L.A. Abrasion test results after the Site Plan in Appendix A)
Minesite	Tailings	Not sampled or tested, but probably similar to Secret Creek Tailings

2.2 Mt. Haldane Lookout Road Option

2.2.1 Road Structure Design

Soil conditions along the Mt. Haldane Lookout Road range from granular cuts and fills through permafrost fens for the first three kilometres or so, and then changing to sidehill cuts through thin colluvium over schist bedrock. Nearer to the junction with the South McQuesten Road, soil conditions change to granular materials with ice-poor permafrost on the north-west facing section (km 13 to 16), and unfrozen granular materials at the junction.

For the purposes of road structure design, it has been assumed that 20 trucks per day will use the reconstructed access road. The following road structure applies:

Table 2.2.1
Recommended Road Structure Design
Mt. Haldane Lookout Road Option

Approximate km Range	Minimum Granular Structure
0 - 3	100 mm crushed gravel surface (Granular A) over 250 mm pit run granular base (Granular E)
3 - 13	100 mm crushed gravel surface (Granular A) over compacted schist bedrock subgrade
13 - 16.5	100 mm crushed gravel surface (Granular A) over 350 mm pit run granular base (Granular E)

Note: In all cases the road subgrade and all imported materials must be compacted to at least 98% of Standard Proctor maximum dry density (ASTM D698). Granular A and Granular E refer to Yukon Government Highways specifications.

2.2.2 Borrow Source Evaluation

The following Table summarizes the one borrow material source evaluated along the Mt. Haldane Lookout Road, and presents general recommendations for it's use:

Table 2.2.2
Summary of Prospective Borrow Sources
Mt. Haldane Lookout Road Option

km Post	Soil/Permafrost Description	Recommendations
16.5 (TP's 14/15/16)	SANDY GRAVEL	Recommended for use - up to 0.8 m silty overburden to be stripped

There will be significant side hill cuts during construction of this route -- all the schist materials excavated will be acceptable for road fill. Vibratory "pad foot" or "grid" type packers will be required to break up the larger rock fragments into acceptable fill materials.

3.0 GEOTEXTILE AND MINIMUM FILL THICKNESS REQUIREMENTS

The placement of geotextile (Trevira Spunbond 018/200, or approved alternate) is recommended in all areas of new construction where permafrost or wet subgrade conditions are encountered. In these cases, the organics should not be stripped, and a minimum fill thickness of 1.5 m applies, plus surfacing with Granular A. The fill should be tapered at the transition into the existing road -- vertical cuts at transitions must be avoided in all cases.

4.0 DRAINAGE

Drainage conditions throughout the majority of the South McQuesten Road are poor at the present time. The soft conditions encountered from poor drainage control are further aggravated by thawing permafrost at several locations. This drainage must be improved by ditching and the installation of culverts, at as many locations as possible.

The Mt. Haldane Lookout Road was observed to contain a few "washouts". Although drainage problems on this side hill cut are not as severe as on the South McQuesten Road, proper ditching and new culvert installations will be required.

Glaciation will also be a problem in several locations -- all culverts should be provided with a means of thawing ice, as appropriate.

5.0 CONSTRUCTION INSPECTION

It is strongly recommended that all geotechnical aspects of construction be monitored by a qualified geotechnical engineer or his/her representative. The design information presented in this report is of a general nature, and there will be instances develop where field decisions are required for the purposes of adding or deleting geotextile, and reducing or increasing the granular fill thicknesses to correspond to existing subgrade conditions.

I trust this report satisfies your design requirements at this time. Please contact the undersigned if you require clarification of any item, or additional information.

Yours truly,
EBA Engineering Consultants Ltd.

PROFESSIONAL ENGINEER
YUKON TERRITORY
CORD R. HAMILTON
96 11 15

for J. Richard Trimble, P.Eng.
Project Director, Yukon Region

JRT/jrt

Attach.

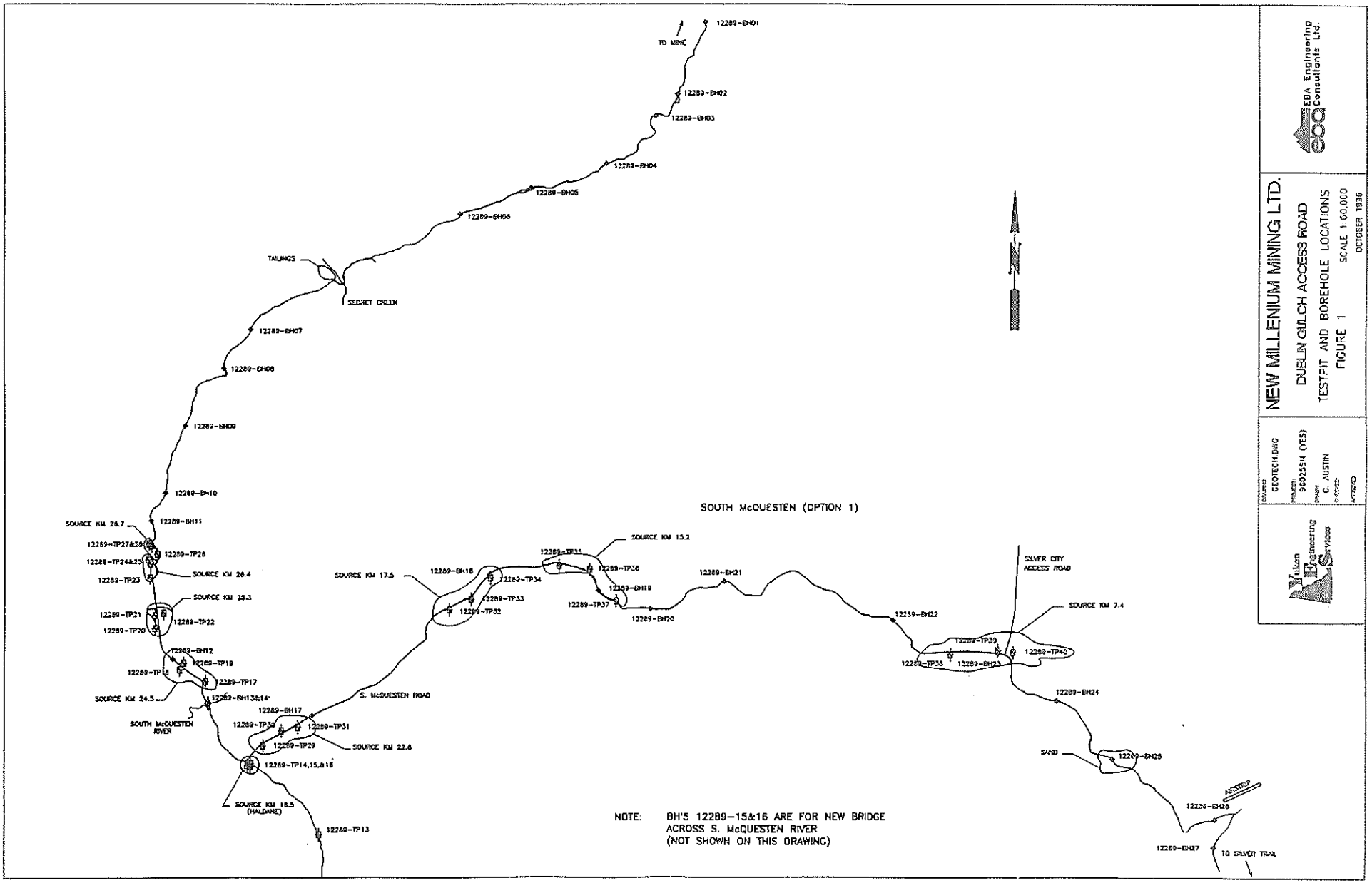
APPENDIX A

South McQuesten Road Option

Centreline Drilling Borehole Logs

and Borrow Source Testpit Logs

(including laboratory test data)


12289-BH01
TO MINE
12289-BH02
12289-BH03
12289-BH04
12289-BH05
12289-BH06
TAILINGS
SECRET CREEK
12289-BH07
12289-BH08
12289-BH09
12289-BH10
12289-BH11
SOURCE KM 28.7
12289-TP27&28
12289-TP26
12289-TP24&25
SOURCE KM 26.4
12289-TP23
SOURCE KM 25.3
12289-TP21
12289-TP22
12289-TP20
12289-BH12
12289-TP19
12289-TP18
12289-TP17
SOURCE KM 24.5
12289-BH13&14
SOUTH McQUESTEN RIVER
12289-BH17
12289-TP30
12289-TP31
12289-TP29
SOURCE KM 22.6
12289-TP14,15,&16
SOURCE KM 18.5 (HALDANE)
12289-TP13
S. McQUESTEN ROAD
SOURCE KM 17.5
12289-BH18
12289-TP34
12289-TP33
12289-TP32
12289-TP35
SOURCE KM 15.1
12289-TP36
12289-BH19
12289-TP37
12289-BH20
12289-BH21
12289-BH22
SILVER CITY ACCESS ROAD
SOURCE KM 7.4
12289-TP39
12289-TP40
12289-TP38
12289-BH23
12289-BH24
SAND
12289-BH25
12289-BH26
12289-BH27
TO SILVER TRAIL
SOUTH McQUESTEN (OPTION 1)
NOTE: BH'S 12289-15&16 ARE FOR NEW BRIDGE ACROSS S. McQUESTEN RIVER (NOT SHOWN ON THIS DRAWING)
EDA Engineering Consultants Ltd.
NEW MILLENIUM MINING LTD.
DUBLIN GULCH ACCESS ROAD
TESTPIT AND BOREHOLE LOCATIONS
FIGURE 1
SCALE 1:60,000
OCTOBER 1996
DRAWN: GEOTECH.DWG
PROJECT: 96025M (YES)
DRAWN: C. AUSTIN
CHECKED:
APPROVED:
Yukon Engineering Services

EBA Engineering

AGGREGATE ANALYSIS REPORT

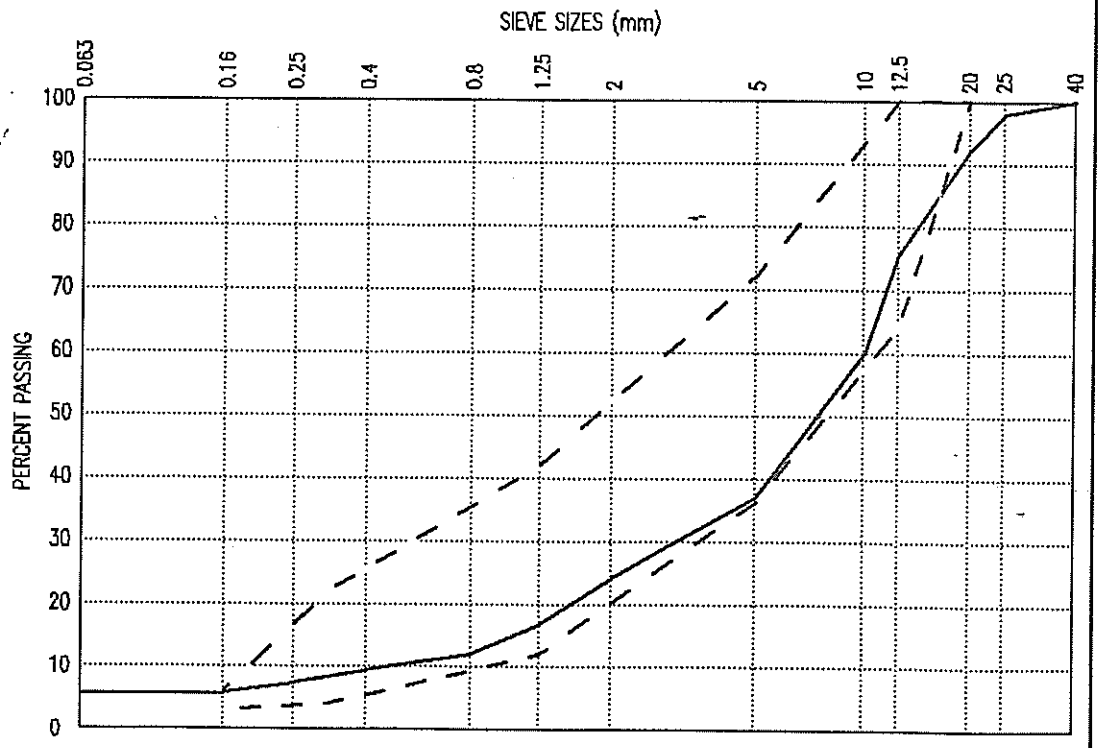
Project: DUBLIN GULCH ACCESS ROAD
Address: SOUTH McQUESTEN ROAD, YT
Project Number: 0201-96-12289
Date Sampled: / / By:
Client: YUKON ENGINEERING SERVICES
Attention:

Sample Number: 3702
Sample Location: SECRET CREEK TAILINGS STOCKPILE
Time: Temp:
Date Tested: 96/11/08 By: RY
Natural Moisture Content: 0.1 %
Crushed Faces: Faces:

Soil Description: SAND & GRAVEL, 150mm MAX. TRACE CLAY LUMPS & ORGANIX FIBRES
(SAMPLE WAS CRUSHED TO 20mm TOP SIZE FOR SIEVE ANALYSIS)

Remarks: LOS ANGELES ABRASION RESULT FOR TRIAL CRUSH MATERIALS IS 34.9% LOSS.
(ASTM C131 – GRADING "B") – YTG GRANULAR A SPEC. BAND ALSO SHOWN

Sieve	% Passing
40	100.0
25	97.8
20	92.0
12.5	75.5
10	59.7
5	36.9
2	24.0
1.25	16.6
0.8	12.0
0.4	9.2
0.25	7.2
0.16	5.5
0.063	5.5



Reviewed By:

DUBLIN GULCH MINE ACCESS RD	CLIENT: YUKON ENGINEERING SERVICES	BOREHOLE NO: 12289-BH01
km 34.2, S. MCQUESTEN RD OPTION	DRILL: CME 75 C/W SOLID SHAFT AUGERS	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7097275.4 E458365.01	ELEVATION:

SAMPLE TYPE: GRAB | NO RECOVERY | STANDARD PEN. | 75 mm SPOON | CRREL BARREL | DISTURBED

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	SPT(N)	USC	SOIL SYMBOL
0.0	GRAB	1			
1.0	GRAB	2			
2.0	GRAB	3			
3.0	GRAB	4			
4.0					
5.0					

SOIL DESCRIPTION

ORGANIC LAYER

SILT – sandy, trace of gravel; fine to medium grained, sub-rounded gravel; fine grained; soft; moist; greyish brown
- no gravel below 0.3 m
- layered grey, brown and rust below 0.6 m

- no gravel below 0.3 m
- trace of clay below 0.3 m

- colour changes to grey below 3.8 m
- clay content increases slightly below 3.8 m

END OF BOREHOLE @ 4.5 m
- no water
- some slough

STANDARD PENETRATION 20 40 60 80

PLASTIC M.C. LIQUID
10 20 30 40

PERCENT GRAVEL 20 40 60 80
PERCENT SAND 20 40 60 80
PERCENT SILT OR FINES 20 40 60 80
PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: JSB	COMPLETION DEPTH: 4.5 m
	REVIEWED BY: JRT	COMPLETE: 96/08/22
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96/10/04 07:31AM (YUKON-5)

DUBLIN GULCH MINE ACCESS RD	CLIENT: YUKON ENGINEERING SERVICES	BOREHOLE NO: 12289-BH02
km 33.2, S. MCQUESTEN RD OPTION	DRILL: CME 75 C/W SOLID SHAFT AUGERS	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7096050.25 E457884.87	ELEVATION:

SAMPLE TYPE ■ GRAB ⊘ NO RECOVERY ⊠ STANDARD PEN. 〓 75 mm SPOON ||| CRREL BARREL ▮ DISTURBED

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0						ORGANIC ROOT MAT
	■	1				SAND – silty, some gravel; fine grained sand; fine to medium grained gravel; soft; moist; greyish brown
						– gravel becomes fine grained below 0.6 m
						– colour becomes more greyish below 0.6 m
1.0						
	■	2				
						– no gravel below 1.6 m
						– possibly more silt, less sand below 1.6 m
2.0						
	■	3				
3.0						END OF BOREHOLE @ 3.0 m
						– no water
						– some slough
4.0						
5.0						

STANDARD PENETRATION 20 40 60 80

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: JSB	COMPLETION DEPTH: 3.0 m
	REVIEWED BY: JRT	COMPLETE: 96/08/22
	Fig. No:	Page 1 of 1

96/10/04 07:32AM (YUKON-5)

DUBLIN GULCH MINE ACCESS RD	CLIENT: YUKON ENGINEERING SERVICES	BOREHOLE NO: 12289-BH03
km 33.39, S. MCQUESTEN RD OPTION	DRILL: CME 75 C/W SOLID SHAFT AUGERS	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7095678.1 E457508.28	ELEVATION:

SAMPLE TYPE: GRAB | NO RECOVERY | STANDARD PEN. | 75 mm SPOON | CRREL BARREL | DISTURBED

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0						
		1				SAND – silty, trace of gravel, trace of organics; fine grained sand and gravel; soft; damp; brown
1.0						– less organics below 1.0 m – little to no gravel below 1.0 m
		2				– very hard drilling for 0.2 m below 1.6 m – same fine to medium grained gravels below 1.6 m
2.0						
		3				– no gravel below 3.1 m
3.0						
4.0		4				
						END OF BOREHOLE @ 4.5 m – no water – little slough
5.0						

STANDARD PENETRATION 20 40 60 80

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

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REVIEWED BY: JRT	COMPLETE: 96/08/22
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96/10/04 07:33AM (YUKON-5)

DUBLIN GULCH MINE ACCESS RD	CLIENT: YUKON ENGINEERING SERVICES	BOREHOLE NO: 12289-BH04
km 31.17, S. MCQUESTEN RD OPTION	DRILL: CME 75 C/W SOLID SHAFT AUGERS	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7094864.87 E456650.68	ELEVATION:

SAMPLE TYPE: GRAB | NO RECOVERY | STANDARD PEN. | 75 mm SPOON | CRREL BARREL | DISTURBED

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0						
		1				SAND AND GRAVEL – trace of silt; well graded sub-angular gravel; loose to compact; damp; medium brown
1.0						
		2				
2.0						– gravel content increases, becomes larger and cobbly at 2.0 m
		3				
3.0						– becomes wet, possible water table
						– becomes silty below 3.5 m – colour mottled grey and brown below 3.5 m
4.0		4				
5.0						END OF BOREHOLE @ 4.5 m – possible water table at 3.5 m – some slough

STANDARD PENETRATION 20 40 60 80

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: JSB	COMPLETION DEPTH: 4.5 m
	REVIEWED BY: JRT	COMPLETE: 96/08/22
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96/10/04 07:34AM (YUKON-S)

DUBLIN GULCH MINE ACCESS RD	CLIENT: YUKON ENGINEERING SERVICES	BOREHOLE NO: 12289-BH05
km 29.8, S. MCQUESTEN RD OPTION	DRILL: CME 75 C/W SOLID SHAFT AUGERS	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7094441.29 E455345.8	ELEVATION:

SAMPLE TYPE ■ GRAB ⊘ NO RECOVERY ⊠ STANDARD PEN. ☰ 75 mm SPOON ▯▯ CRREL BARREL ▯▯ DISTURBED

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0						SAND – silty, some gravel, trace of organics; fine to medium grained sand; fine grained, angular gravel; loose to compact; olive brown
		1				
						– no organics below 0.8 m
1.0						
		2				
2.0						– colour changes to dark grey
		3				
3.0						– becomes gravelly below 3.3 m
4.0		4				
5.0						END OF BOREHOLE @ 4.5 m – no water – little slough

STANDARD PENETRATION 20 40 60 80

PLASTIC M.C. LIQUID
10 20 30 40

PERCENT GRAVEL 20 40 60 80
PERCENT SAND 20 40 60 80
PERCENT SILT OR FINES 20 40 60 80
PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

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LOGGED BY: JSB	COMPLETION DEPTH: 4.5 m
REVIEWED BY: JRT	COMPLETE: 96/08/22
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96/10/04 07:35AM (YUKON-5)

DUBLIN GULCH MINE ACCESS RD	CLIENT: YUKON ENGINEERING SERVICES	BOREHOLE NO: 12289-BH06
km 28.3, S. MCQUESTEN RD OPTION	DRILL: CME 75 C/W SOLID SHAFT AUGERS	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7093992.92 E454126.62	ELEVATION:

SAMPLE TYPE: GRAB | NO RECOVERY | STANDARD PEN. | 75 mm SPOON | CRREL BARREL | DISTURBED

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0						SAND AND GRAVEL – some silt; uniform sand and gravel; angular; loose; damp; light greyish brown – grinding below 0.0 m
1.0		1				
2.0						SILT – trace of sand, some clay fine grained sand soft; moist; grey
3.0		2				END OF BOREHOLE @ 3.0 m – no water – some slough in SAND & GRAVEL zone
4.0						
5.0						

STANDARD PENETRATION 20 40 60 80

PLASTIC M.C. LIQUID

10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: JSB	COMPLETION DEPTH: 3.0 m
	REVIEWED BY: JRT	COMPLETE: 96/08/22
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96/10/04 07:36AM (YUKON-5)

DUBLIN GULCH MINE ACCESS RD	CLIENT: YUKON ENGINEERING SERVICES	BOREHOLE NO: 12289-BH07
km 24.25, S. MCQUESTEN RD OPTION	DRILL: CME 75 C/W SOLID SHAFT AUGERS	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7092014.45 E450552.94	ELEVATION:

SAMPLE TYPE: GRAB | NO RECOVERY | STANDARD PEN. | 75 mm SPOON | CRREL BARREL | DISTURBED

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0	GRAB	1				SAND – gravelly, silty; uniform sand; fine to medium grained angular gravel; compact; damp to moist; brownish grey – becomes trace to some silt below 1.0 m
1.0	GRAB	2				
2.0	GRAB	3				– becomes wet below 3.5 m
3.0	GRAB	4				SILT – clayey, trace of sand, soft, moist, grey
4.0						END OF BOREHOLE @ 4.5 m – wet below 3.5 m – some slough throughout
5.0						

STANDARD PENETRATION 20 40 60 80

PLASTIC M.C. LIQUID

10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

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LOGGED BY: JSB	COMPLETION DEPTH: 4.5 m
REVIEWED BY: JRT	COMPLETE: 96/08/22
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96/10/04 11:26PM (YUKON-S)

DUBLIN GULCH MINE ACCESS RD	CLIENT: YUKON ENGINEERING SERVICES	BOREHOLE NO: 12289-BH08
km 23.42, S.MCQUESTEN RD OPTION	DRILL: CME 75 C/W SOLID SHAFT AUGERS	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7091341.18 E450087.52	ELEVATION:

SAMPLE TYPE: GRAB | NO RECOVERY | STANDARD PEN. | 75 mm SPOON | CRREL BARREL | DISTURBED

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0						SAND AND SILT – fine grained; soft; moist; greyish brown
		1				
1.0						
		2				
2.0						– becomes damp below 2.0 m – becomes firm below 2.0 m
		3				
3.0						
4.0		4				
4.5						END OF BOREHOLE @ 4.5 m – no water – little slough
5.0						

STANDARD PENETRATION 20 40 60 80 | PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80 | PERCENT SAND 20 40 60 80 | PERCENT SILT OR FINES 20 40 60 80 | PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

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LOGGED BY: JSB	COMPLETION DEPTH: 4.5 m
REVIEWED BY: JRT	COMPLETE: 96/08/22
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96/10/04 07:38AM (YUKON-S)

DUBLIN GULCH MINE ACCESS RD	CLIENT: YUKON ENGINEERING SERVICES	BOREHOLE NO: 12289-BH09
km 22.15, S. MCQUESTEN RD OPTION	DRILL: CME 75 C/W SOLID SHAFT AUGERS	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7090356.49 E449416.07	ELEVATION:

SAMPLE TYPE: GRAB | NO RECOVERY | STANDARD PEN. | 75 mm SPOON | CRREL BARREL | DISTURBED

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0						SAND – gravelly, some silt; well graded sand; fine to medium grained angular gravel; loose to compact; moist; olive brown
		1				
1.0						
		2				
2.0						– becomes silty below 2.0 m – gravel becomes sub-rounded – colour changes to greyish brown below 2.0 m
		3				
3.0						– some gravel becomes flat and elongated, brittle schist below 3.5 m – evidence of organics throughout length of auger, from original ground below 3.5 m
4.0		4				
5.0						END OF BOREHOLE @ 4.5 m – no water – little slough

STANDARD PENETRATION 20 40 60 80

PLASTIC M.C. LIQUID

10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: JSB	COMPLETION DEPTH: 4.5 m
	REVIEWED BY: JRT	COMPLETE: 96/08/22
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96/10/04 07:30AM (YUKON-5)

DUBLIN GULCH MINE ACCESS RD	CLIENT: YUKON ENGINEERING SERVICES	BOREHOLE NO: 12289-BH10
km 20.9, S. MCQUESTEN RD OPTION	DRILL: CME 75 C/W SOLID SHAFT AUGERS	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7089192.67 E449065.64	ELEVATION:

SAMPLE TYPE: GRAB | NO RECOVERY | STANDARD PEN. | 75 mm SPOON | CRREL BARREL | DISTURBED

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0						SAND – gravelly, trace to some silt; uniform, angular sand; fine to medium grained, elongated gravel; loose to compact; damp; light yellowish brown
		1				
1.0						
		2				
2.0						
						– very hard drilling, grinding below 2.8 m – grinding on boulder (?)
		3				
3.0						END OF BOREHOLE @ 3.0 m – no water – some slough
4.0						
5.0						

STANDARD PENETRATION 20 40 60 80 | PLASTIC M.C. LIQUID 10 20 30 40 | PERCENT GRAVEL 20 40 60 80 | PERCENT SAND 20 40 60 80 | PERCENT SILT OR FINES 20 40 60 80 | PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: JSB	COMPLETION DEPTH: 3.0 m
	REVIEWED BY: JRT	COMPLETE: 96/08/22
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96/10/04 07:40AM (YUKON-S)

DUBLIN GULCH MINE ACCESS RD	CLIENT: YUKON ENGINEERING SERVICES	BOREHOLE NO: 12289-BH11
km 20.3, S. MCQUESTEN RD OPTION	DRILL: CME 75 C/W SOLID SHAFT AUGERS	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7088707.14 E448820.4	ELEVATION:

SAMPLE TYPE ■ GRAB ⊘ NO RECOVERY ⊠ STANDARD PEN. ▤ 75 mm SPOON ▯ CRREL BARREL ▯ DISTURBED

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0	■	1				SAND AND GRAVEL – trace to some silt; well graded sand; well graded sub-rounded gravel; loose to to compact; moist; greyish brown
1.0						– trace of silt below 1.0 m
	■	2				
2.0						– becomes silty below 2.7 m – colour changes to grey below 2.7 m – less gravel below 2.7 m
	■	3				
3.0						END OF BOREHOLE @ 3.0 m – no water – some slough
4.0						
5.0						

STANDARD PENETRATION 20 40 60 80

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

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LOGGED BY: JSB	COMPLETION DEPTH: 3.0 m
REVIEWED BY: JRT	COMPLETE: 96/08/22
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96/10/04 07:41AM (YUKON-S)

DUBLIN GULCH MINE ACCESS RD	CLIENT: YUKON ENGINEERING SERVICES	BOREHOLE NO: 12289-BH12
km 17.8, S. MCQUESTEN RD OPTION	DRILL: CME 75 C/W SOLID SHAFT AUGERS	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7086317.74 E449203.36	ELEVATION:

SAMPLE TYPE: GRAB | NO RECOVERY | STANDARD PEN. | 75 mm SPOON | CRREL BARREL | DISTURBED

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0						SAND AND GRAVEL – some silt, well graded, compact, moist, brown
		1				SAND – silty; fine grained sand; soft; moist; olive brown
1.0						
		2				
2.0						
		3				SAND – gravelly, some silt; coarse grained sand; fine to medium grained gravel; loose; saturated; mottled greyish brown
3.0						END OF BOREHOLE @ 3.0 m – possible water table at 2.6 m – some slough throughout
4.0						
5.0						

STANDARD PENETRATION 20 40 60 80

PLASTIC M.C. LIQUID

10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: JSB REVIEWED BY: JRT Fig. No:	COMPLETION DEPTH: 3.0 m COMPLETE: 96/08/22 Page 1 of 1

96/10/04 07:42AM (YUKON-S)

DUBLIN GULCH MINE ACCESS RD	CLIENT: YUKON ENGINEERING SERVICES	BOREHOLE NO: 12289-BH13
NORTH ABUTMENT - S. MCQUESTEN R. BRIDGE	DRILL: CME 75 C/W SOLID SHAFT AUGERS	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7085593.04 E449803.1	ELEVATION:

SAMPLE TYPE: GRAB | NO RECOVERY | STANDARD PEN. | 75 mm SPOON | CRREL BARREL | DISTURBED

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	SPT(N)	USC	SOIL SYMBOL
0.0	GRAB	1			
1.0	GRAB	2			
2.0	GRAB	3			
3.0					
4.0					
5.0					

SOIL DESCRIPTION

SAND AND GRAVEL (FILL) - trace to some silt; well graded sand; well graded sub-rounded gravel; compact; moist; olive brown

- becomes damp below 0.8 m

- becomes moist to wet below 1.2 m

END OF BOREHOLE @ 3.0 m
- no water
- some slough

STANDARD PENETRATION 20 40 60 80

PLASTIC M.C. LIQUID
10 20 30 40

PERCENT GRAVEL 20 40 60 80
PERCENT SAND 20 40 60 80
PERCENT SILT OR FINES 20 40 60 80
PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: JSB	COMPLETION DEPTH: 3.0 m
	REVIEWED BY: JRT	COMPLETE: 96/08/22
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96/11/08 08:14AM (YUKON-5)

DUBLIN GULCH MINE ACCESS RD	CLIENT: YUKON ENGINEERING SERVICES	BOREHOLE NO: 12289-BH14
SOUTH ABUTMENT – S. MCQUESTEN R. BRIDGE	DRILL: CME 75 C/W SOLID SHAFT AUGERS	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7085571.11 E449824.8	ELEVATION:

SAMPLE TYPE ■ GRAB ⊘ NO RECOVERY ⊠ STANDARD PEN. ☰ 75 mm SPOON ▯▯ CRREL BARREL ▯▯ DISTURBED

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0						
	■	1				SAND (FILL) – gravelly, some silt; coarse grained sand; fine to medium grained sub-rounded gravel; moist; olive
1.0						
	■	2				
2.0						SAND – silty, trace of gravel, trace of organics; fine grained; moist; grey brown
	■	3				
3.0						END OF BOREHOLE @ 3.0 m – no water – little slough
4.0						
5.0						

STANDARD PENETRATION 20 40 60 80

PLASTIC M.C. LIQUID
10 20 30 40

PERCENT GRAVEL 20 40 60 80
PERCENT SAND 20 40 60 80
PERCENT SILT OR FINES 20 40 60 80
PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

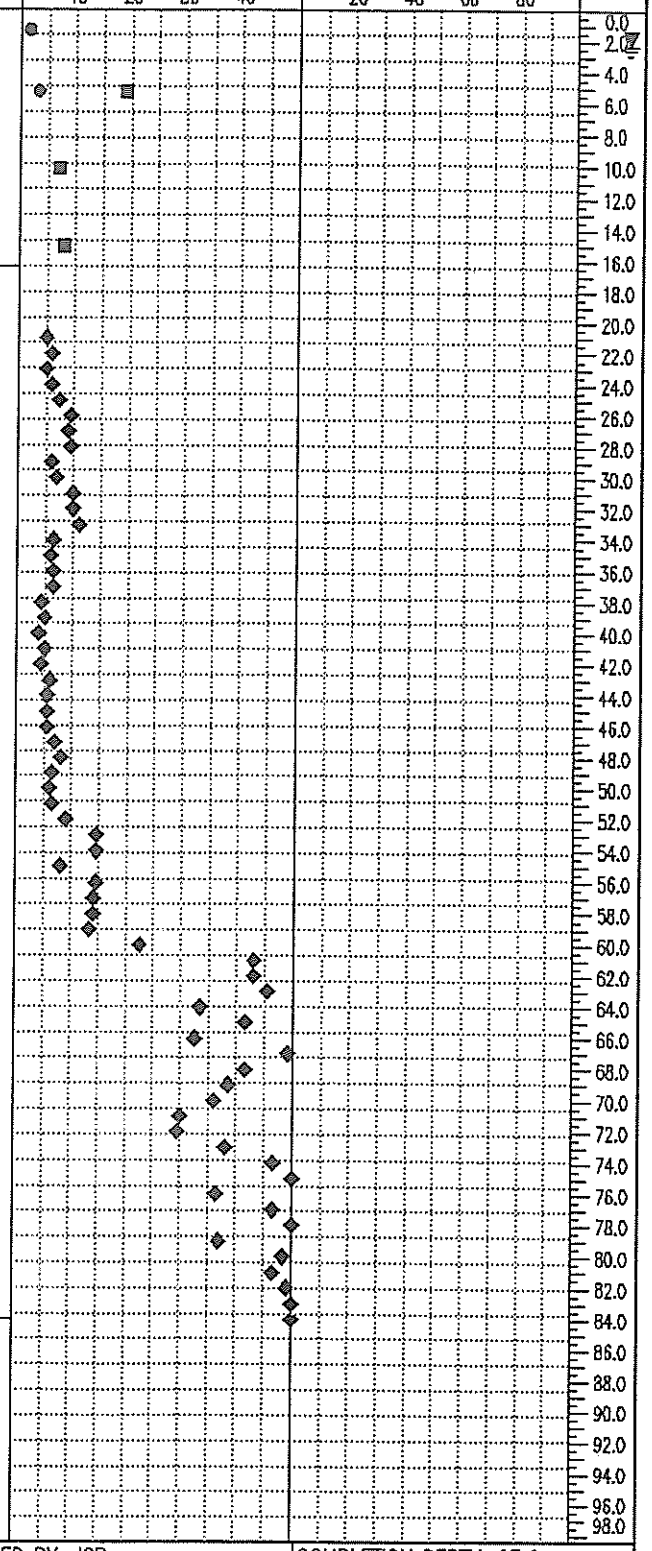
EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: JSB REVIEWED BY: JRT Fig. No:	COMPLETION DEPTH: 3.0 m COMPLETE: 96/08/22 Page 1 of 1

96/11/05 08:14AM (YUKON-S)

DUBLIN GULCH MINE ACCESS RD	CLIENT: YUKON ENGINEERING SERVICES	BOREHOLE NO: 12289-BH15
NORTH ABUTMENT - S. MCQUESTEN R. BRIDGE	DRILL: CME 75 C/W HOLLOW STEM AUGERS	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7085579.51 E449799.78	ELEVATION:

SAMPLE TYPE: GRAB | NO RECOVERY | STANDARD PEN. | 75 mm SPOON | CRREL BARREL | CORE

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0						
1.0		1				SAND - silty, trace of clay; fine grained uniform sand; soft; wet; greyish brown
2.0		2	19			- colour changes to grey below 0.5 m
3.0		3	7			- water table at 0.7 m sand; fine to medium grained gravel; loose; saturated; grey
4.0						
5.0		4	8			
6.0						SAND AND GRAVEL - silty; coarse grained - becomes gravelly and fine grained below 1.2 m - trace to some silt at 3.0 m - trace of fine gravel at 3.0 m - medium grained; uniform - very difficult to pull centre rod - switch to CPT at 6 m
7.0						
8.0						
9.0						
10.0						
11.0						
12.0						
13.0						
14.0						
15.0						
16.0						
17.0						
18.0						- density increases at 18 m
19.0						
20.0						
21.0						
22.0						
23.0						
24.0						
25.0						
26.0						END OF BOREHOLE @ 25.6 m NOTE: Hole drilled through sand bar at river level.
27.0						
28.0						
29.0						
30.0						



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LOGGED BY: JSB	COMPLETION DEPTH: 25.6 m
REVIEWED BY: JRT	COMPLETE: 96/08/26
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96/11/08 08:15AM (CPT30)

DUBLIN GULCH MINE ACCESS RD	CLIENT: YUKON ENGINEERING SERVICES	BOREHOLE NO: 12289-BH16
SOUTH ABUTMENT – S. MCQUESTEN R. BRIDGE	DRILL: CME 75 C/W HOLLOW STEM AUGERS	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7085574.83 E449825.43	ELEVATION:

SAMPLE TYPE: GRAB | NO RECOVERY | STANDARD PEN. | 75 mm SPOON | CRREL BARREL | CORE

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0						GRAVEL AND SAND (FILL) – trace of silt; sub-rounded gravel; coarse grained sand; moist; compact; greyish brown – soft, easy drilling
3.0						SAND – silty, trace of gravel; brown – water table at 3.0 m – sand filling hollow stem – switch to CPT at 6 m depth
19.5						END OF BOREHOLE @ 19.5 m NOTE: Hole drilled through shoulder of road.

STANDARD PENETRATION 10 20 30 40 | CONE PENETRATION 20 40 60 80 | PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80 | PERCENT SAND 20 40 60 80 | PERCENT SILT OR FINES 20 40 60 80 | PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0 38.0 40.0 42.0 44.0 46.0 48.0 50.0 52.0 54.0 56.0 58.0 60.0 62.0 64.0 66.0 68.0 70.0 72.0 74.0 76.0 78.0 80.0 82.0 84.0 86.0 88.0 90.0 92.0 94.0 96.0 98.0

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LOGGED BY: JSB	COMPLETION DEPTH: 19.5 m
REVIEWED BY: JRT	COMPLETE: 96/08/27
Fig. No:	Page 1 of 1

96/11/08 08:17AM (CPT30)

DUBLIN GULCH MINE ACCESS RD	CLIENT: YUKON ENGINEERING SERVICES	BOREHOLE NO: 12289-BH17
km 20.9, S. MCQUESTEN RD. OPTION	DRILL: CME 75 C/W SOLID SHAFT AUGERS	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7085366.09 E451605.3	ELEVATION:

SAMPLE TYPE: GRAB | NO RECOVERY | STANDARD PEN. | 75 mm SPOON | CRREL BARREL | DISTURBED

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0						SAND AND GRAVEL – some silt; coarse grained sand; fine to medium grained, sub-rounded gravel; compact; moist; brown
		1				
						GRAVEL AND SAND – trace of silt; sub-rounded gravel; coarse grained sand; compact; damp; grey – grinding and hard drilling below 0.1 m
1.0						
		2				
2.0						
3.0		3				END OF BOREHOLE @ 3.0 m – no water
4.0		4				
5.0						

STANDARD PENETRATION 20 40 60 80

PLASTIC M.C. LIQUID

10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: JSB	COMPLETION DEPTH: 3.0 m
	REVIEWED BY: JRT	COMPLETE: 96/08/27
	Fig. No:	Page 1 of 1

96/10/08 8:38AM (YUKON-S)

DUBLIN GULCH MINE ACCESS RD	CLIENT: YUKON ENGINEERING SERVICES	BOREHOLE NO: 12289-BH18
KM 17.2, S. MCQUESTEN RD. OPTION	DRILL: CME 75 C/W SOLID SHAFT AUGERS	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7087774 E454644.76	ELEVATION:

SAMPLE TYPE: GRAB | NO RECOVERY | STANDARD PEN. | 75 mm SPOON | CRREL BARREL | DISTURBED

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0						GRAVEL AND SAND – trace of silt, well graded, sub-rounded gravel; coarse grained sand; compact; damp; grey
1.0						
		1				
2.0						
		2				
3.0						END OF BOREHOLE @ 3.0 m – no water
4.0						
5.0						

STANDARD PENETRATION 20 40 60 80

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

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LOGGED BY: JSB	COMPLETION DEPTH: 3.0 m
REVIEWED BY: JRT	COMPLETE: 96/08/27
Fig. No:	Page 1 of 1

96/10/08 0337AM (YUKON-5)

DUBLIN GULCH MINE ACCESS RD	CLIENT: YUKON ENGINEERING SERVICES	BOREHOLE NO: 12289-BH19
km 15.3, S. MCQUESTEN RD OPTION	DRILL: CME 75 C/W SOLID SHAFT AUGERS	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7087511.54 E456519.56	ELEVATION:

SAMPLE TYPE: GRAB | NO RECOVERY | STANDARD PEN. | 75 mm SPOON | CORREL BARREL | DISTURBED

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0						SAND – trace of silt;fine to med grained sand; firm; damp; brownish grey
		1				
1.0						SAND AND GRAVEL – trace of silt; well graded sand; well graded, sub–rounded gravel; compact; damp; grey
		2				
						– 0.3 m thick layer of silt at 1.7 m
		3				
2.0						– becomes gravelly below 2.0 m – silt content increases slightly below 2.0 m
		4				
3.0						END OF BOREHOLE @ 3.0 m – no water
4.0						
5.0						

STANDARD PENETRATION 20 40 60 80

PLASTIC M.C. LIQUID

10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

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LOGGED BY: JSB	COMPLETION DEPTH: 3.0 m
REVIEWED BY: JRT	COMPLETE: 96/08/27
Fig. No:	Page 1 of 1

96/10/04 07:50AM (YUKON-5)

DUBLIN GULCH MINE ACCESS RD	CLIENT: YUKON ENGINEERING SERVICES	BOREHOLE NO: 12289-BH20
km 14.2, S. MCQUESTEN RD OPTION	DRILL: CME 75 C/W SOLID SHAFT AUGERS	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7087192.43 E457427.39	ELEVATION:

SAMPLE TYPE: GRAB | NO RECOVERY | STANDARD PEN. | 75 mm SPOON | CRREL BARREL | DISTURBED

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0						GRAVEL AND SAND – trace of silt; well graded, sub-rounded gravel; coarse grained sand; compact; damp; brown
		1				– colour changes to light grey below 0.5 m
1.0						– colour changes to brown below 0.9 m
		2				– grinding and hard drilling below 1.2 m
2.0						
		3				
3.0						END OF BOREHOLE @ 3.0 m – no water
4.0						
5.0						

STANDARD PENETRATION 20 40 60 80

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: JSB REVIEWED BY: JRT Fig. No:	COMPLETION DEPTH: 3.0 m COMPLETE: 96/08/27 Page 1 of 1

96/10/04 07:51AM (YUKON-S)

DUBLIN GULCH MINE ACCESS RD	CLIENT: YUKON ENGINEERING SERVICES	BOREHOLE NO: 12289-BH21
km 12.7, S. MCQUESTEN RD OPTION	DRILL: CME 75 C/W SOLID SHAFT AUGERS	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7087667.83 E458699.09	ELEVATION:

SAMPLE TYPE: GRAB | NO RECOVERY | STANDARD PEN. | 75 mm SPOON | CRREL BARREL | DISTURBED

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0						SAND AND GRAVEL – trace of silt; coarse grained sand; fine to medium grained gravel; compact; damp; grey
		1				
						– some gravel below 0.7 m
1.0						– sand becomes well graded at 1.3 m
		2				
						– becomes gravelly below 1.6 m
2.0						
		3				
3.0						END OF BOREHOLE @ 3.0 m – no water
4.0						
5.0						

STANDARD PENETRATION 20 40 60 80

PLASTIC M.C. LIQUID

10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

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LOGGED BY: JSB	COMPLETION DEPTH: 3.0 m
REVIEWED BY: JRT	COMPLETE: 96/08/27
Fig. No:	Page 1 of 1

96/10/04 07:52AM (YUKON-5)

DUBLIN GULCH MINE ACCESS RD	CLIENT: YUKON ENGINEERING SERVICES	BOREHOLE NO: 12289-BH22
km 8.9, S. MCQUESTEN RD OPTION	DRILL: CME 75 C/W SOLID SHAFT AUGERS	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7086993.67 E461612.18	ELEVATION:

SAMPLE TYPE: GRAB | NO RECOVERY | STANDARD PEN. | 75 mm SPOON | CRREL BARREL | DISTURBED

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0						
		1				SAND – trace of gravel, trace of silt; medium to coarse grained sand; fine grained gravel; firm; moist; brownish grey
1.0						
		2				
2.0						SAND AND GRAVEL – trace of silt; coarse grained sand; well graded gravel; compact; damp; grey – hard drilling and grinding below 2.5 m
		3				
3.0						END OF BOREHOLE @ ?.? m
4.0						
5.0						

STANDARD PENETRATION 20 40 60 80

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: JSB	COMPLETION DEPTH: 3.0 m
	REVIEWED BY: JRT	COMPLETE: 96/08/27
	Fig. No:	Page 1 of 1

96/10/04 07:53AM (TUKON-5)

DUBLIN GULCH MINE ACCESS RD	CLIENT: YUKON ENGINEERING SERVICES	BOREHOLE NO: 12289-BH23
km 7.0, S. MCQUESTEN RD OPTION	DRILL: CME 75 C/W SOLID SHAFT AUGERS	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7086426.38 E463424	ELEVATION:

SAMPLE TYPE: GRAB | NO RECOVERY | STANDARD PEN. | 75 mm SPOON | CRREL BARREL | DISTURBED

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0						SAND – trace of silt; medium grained, uniform sand; firm; damp to moist; brownish grey
	GRAB	1				
1.0						– fine to medium grained gravel below 1.2 m
	GRAB	2				
2.0						– gravel becomes well graded around 2.2 m
	GRAB	3				
3.0						END OF BOREHOLE @ 3.0 m – no water
4.0						
5.0						

STANDARD PENETRATION 20 40 60 80

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: JSB	COMPLETION DEPTH: 3.0 m
	REVIEWED BY: JRT	COMPLETE: 96/08/27
	Fig. No:	Page 1 of 1

96/10/04 07:54AM (YUKON-S)

DUBLIN GULCH MINE ACCESS RD	CLIENT: YUKON ENGINEERING SERVICES	BOREHOLE NO: 12289-BH24
km 5.5, S. MCQUESTEN RD OPTION	DRILL: CME 75 C/W SOLID SHAFT AUGERS	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7085626.3 E464415.64	ELEVATION:

SAMPLE TYPE: GRAB | NO RECOVERY | STANDARD PEN. | 75 mm SPOON | CRREL BARREL | DISTURBED

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0						SAND – gravelly, some silt; well graded sand; well graded sub-rounded gravel; compact; moist; grey
		1				
1.0						
		2				
2.0						– becomes silty below 2.5 m – some fine to medium grained gravel below 2.5 m
		3				
3.0						END OF BOREHOLE @ 3.0 m
4.0						
5.0						

STANDARD PENETRATION 20 40 60 80

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 15.0

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LOGGED BY: JSB	COMPLETION DEPTH: 3.0 m
REVIEWED BY: JRT	COMPLETE: 96/08/27
Fig. No:	Page 1 of 1

96/10/04 07:55AM (YUKON-5)

DUBLIN GULCH MINE ACCESS RD	CLIENT: YUKON ENGINEERING SERVICES	BOREHOLE NO: 12289-BH25
km 4.0, S. MCQUESTEN RD OPTION	DRILL: CME 75 C/W SOLID SHAFT AUGERS	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7084626.04 E465366.9	ELEVATION:

SAMPLE TYPE: GRAB | NO RECOVERY | STANDARD PEN. | 75 mm SPOON | CRREL BARREL | DISTURBED

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0						
		1				SAND – gravelly, trace of silt; coarse grained sand; fine to medium, sub–rounded gravels; soft to firm; moist; grey
		2				– gravel content increases and becomes coarser grained below 0.6 m
1.0						
		3				SAND – silty; fine grained uniform sand; soft; moist to wet; dark grey
2.0						– moisture content increases with depth
		4				
3.0						END OF BOREHOLE @ 3.0 m – no water
4.0						
5.0						

STANDARD PENETRATION 20 40 60 80

PLASTIC M.C. LIQUID

10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

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LOGGED BY: JSB	COMPLETION DEPTH: 3.0 m
REVIEWED BY: JRT	COMPLETE: 96/08/27
Fig. No:	Page 1 of 1

96/10/04 07:56AM (YUKON-S)

DUBLIN GULCH MINE ACCESS RD	CLIENT: YUKON ENGINEERING SERVICES	BOREHOLE NO: 12289-BH26
km 1.6, S. MCQUESTEN RD OPTION	DRILL: CME 75 C/W SOLID SHAFT AUGERS	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7083594.29 E467123.54	ELEVATION:

SAMPLE TYPE: GRAB | NO RECOVERY | STANDARD PEN. | 75 mm SPOON | CRREL BARREL | DISTURBED

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0						
		1				SAND – gravelly (schist), some silt; well graded sand; fine to medium grained, flat elongated and sub-rounded gravels; compact; damp; brownish grey
1.0						
		2				
2.0						ORGANIC ROOT MAT – rootlets and wood chips; soft; moist; black – becomes black topsoil below 1.8 m
		3				
						SAND – gravelly, silty; well graded sand; fine to medium grained, flat elongated gravels (schist); compact moist; mattled yellowish brown and grey
3.0		4				END OF BOREHOLE @ 3.0 m – no water
4.0						
5.0						

STANDARD PENETRATION 20 40 60 80

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: JSB	COMPLETION DEPTH: 3.0 m
	REVIEWED BY: JRT	COMPLETE: 96/08/27
	Fig. No:	Page 1 of 1

96/10/04 07:57AM (YUKON-5)

DUBLIN GULCH MINE ACCESS RD	CLIENT: YUKON ENGINEERING SERVICES	BOREHOLE NO: 12289-BH27
km 0.5, S. MCQUESTEN RD OPTION	DRILL: CME 75 C/W SOLID SHAFT AUGERS	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7083109.41 E467099.72	ELEVATION:

SAMPLE TYPE ▨ GRAB ▨ NO RECOVERY ▨ STANDARD PEN. ▨ 75 mm SPOON ▨ CRREL BARREL ▨ DISTURBED

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	SPT(N)	USC	SOIL SYMBOL	SOIL DESCRIPTION	STANDARD PENETRATION 20 40 60 80 / PLASTIC M.C. LIQUID 10 20 30 40	PERCENT GRAVEL 20 40 60 80 / PERCENT SAND 20 40 60 80 / PERCENT SILT OR FINES 20 40 60 80 / PERCENT CLAY 20 40 60 80	DEPTH(ft)
0.0						SAND – gravelly, some silt; well graded sand; fine to medium grained, sub-rounded gravel; compact; moist; grey			0.0
		1							
						– becomes silty; some fine grained gravel below 0.7 m			
1.0									2.0
		2							4.0
2.0						– moisture content decreases slightly below 2.2 m – gravel content increases and becomes coarser below 2.2 m – becomes some silt below 2.2 m			6.0
		3							8.0
3.0						END OF BOREHOLE @ 3.0 m – no water – little slough			10.0
									12.0
4.0									14.0
5.0									16.0

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LOGGED BY: JSB	COMPLETION DEPTH: 3.0 m
REVIEWED BY: JRT	COMPLETE: 96/08/27
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96/10/04 07:58AM (YUKON-5)

DUBLIN GULCH MINE ACCESS RD – BORROW	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP17
km 24.5, S MCQUESTEN OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7085932.32 E449774.3	ELEVATION:

SAMPLE TYPE ▨ GRAB ⊘ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
	▨	1			SILT – sandy, trace of clay; fine grained, moist, brownish grey
1.0					– permsfrost; visible ice <5% @ 1.5 m
2.0					– becomes easier to dig below 1.9 m
	▨	2			
					END OF TESTPIT @ 2.4 m – no water – no slough
3.0					
4.0					
5.0					

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

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LOGGED BY: JSB	COMPLETION DEPTH: 2.4 m
REVIEWED BY: JRT	COMPLETE: 96/08/25
Fig. No:	Page 1 of 1

96/10/08 01:50AM (YUKON-TS)

DUBLIN GULCH MINE ACCESS RD – BORROW	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP18
km 24.5, S. MCQUESTEN OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7086134.07 E449323.65	ELEVATION:

SAMPLE TYPE ▩ GRAB ▨ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
	▩	1			SILT – sandy, fine grained, moist, brownish grey
1.0					
	▩	2			SAND AND GRAVEL – trace of silt; well graded; loose; saturated; grey – water table at 1.6 m
2.0					END OF TESTPIT @ 2.0 m – water at 2.0 m – no slough
3.0					
4.0					
5.0					

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

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LOGGED BY: JSB	COMPLETION DEPTH: 2.0 m
REVIEWED BY: JRT	COMPLETE: 96/08/25
Fig. No:	Page 1 of 1

96/10/04 06:42AM (YUKON-TS)

DUBLIN GULCH MINE ACCESS RD – BORROW SOU	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP19
km 24.5, S. MCQUESTEN OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7086244.63 E449394.37	ELEVATION:

SAMPLE TYPE ▩ GRAB ⊘ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
	▩	1			SAND – some gravel, some silt; coarse grained sand; fine to medium grained gravel; compact; moist brownish
					SAND AND GRAVEL – trace of silt; coarse grained sand; well graded sub-rounded gravel; loose; saturated; grey – water at 1.1 m
1.0	▩	2			
					END OF TESTPIT @ 1.2 m – water at 1.1 m – slough below 0.3 m
2.0					
3.0					
4.0					
5.0					

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL ▩ 20 40 60 80

PERCENT SAND ● 20 40 60 80

PERCENT SILT OR FINES ▲ 20 40 60 80

PERCENT CLAY ◆ 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

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LOGGED BY: JSB	COMPLETION DEPTH: 1.2 m
REVIEWED BY: JRT	COMPLETE: 96/08/25
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96/11/12 09:42AM (YUKON-15)

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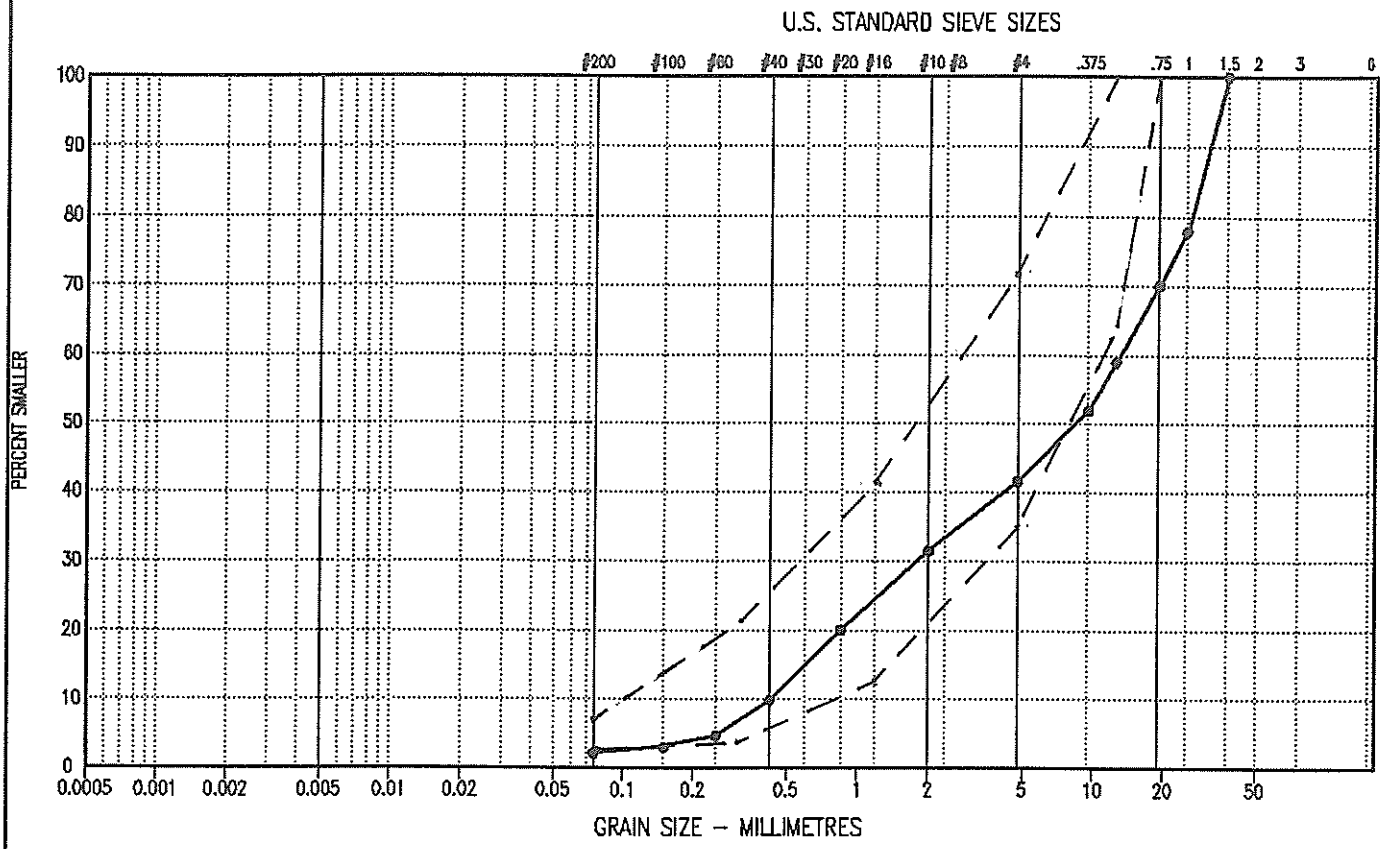
PARTICLE SIZE – ANALYSIS OF SOILS

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



SYMBOL	BOREHOLE NUMBER	DEPTH (m)	DESCRIPTION			Cu	Cc	U.S.C
			CLAY & SILT %	SAND %	GRAVEL %			
●——●	12289–TP19	0.80 – 1.00	2.1	39.4	58.5	30.5	0.6	GP

Project: 0201–96–12289 Date Tested: 96/10/01 BY: JSB

Tested in accordance with ASTM D422 unless otherwise noted.

DUBLIN GULCH MINE ACCESS RD – BORROW SOU	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP20
km 25.3, S. MCQUESTEN OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7086842.1 E448892.76	ELEVATION:

SAMPLE TYPE ■ GRAB ⊘ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
	■	1			SAND AND SILT – fine grained; soft; wet; greyish brown – cobbly below 0.2 m – major sloughing below 0.2 m
1.0					GRAVEL – sandy, trace of silt; well graded, sub-rounded gravel; coarse grained sand; loose; compact; moist; mottled grey and brown
	■	2			
2.0					
	■	3			
3.0					END OF TESTPIT @ 3.0 m – no water – major slough
4.0					
5.0					

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

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LOGGED BY: JSB	COMPLETION DEPTH: 3.0 m
REVIEWED BY: JRT	COMPLETE: 96/08/25
Fig. No:	Page 1 of 1

96/11/12 09:43AM (YUKON-TS)

DUBLIN GULCH MINE ACCESS RD - BORROW	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP21
km 25.3, S. MCQUESTEN OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7087068.64 E448588.67	ELEVATION:

SAMPLE TYPE ▩ GRAB ▨ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT - trace of clay
	▩	1			SAND AND SILT - fine grained; soft; moist to wet; mottled grey and brown
1.0					
2.0	▩	2			GRAVEL AND SAND - trace of silt; well graded rounded gravel; coarse grained sand; loose; damp; grey - sloughing below 1.2 m
3.0	▩	3			END OF TESTPIT @ 3.2 m - no water - sloughing below 1.2 m
4.0					
5.0					

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

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LOGGED BY: JSB	COMPLETION DEPTH: 3.2 m
REVIEWED BY: JRT	COMPLETE: 96/08/25
Fig. No:	Page 1 of 1

96/10/04 06:45AM (YUKON-TS)

DUBLIN GULCH MINE ACCESS RD – BORROW SOU	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP22
km 25.3, S. MCQUESTEN OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7087106.82 E449043.29	ELEVATION:

SAMPLE TYPE ▩ GRAB ⊘ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
	▩	1			SAND AND SILT – fine grained; soft; wet; greyish brown
					GRAVEL AND SAND – trace of silt; well graded, rounded gravel; coarse graded sand; compact; damp; grey
1.0					– becomes cobbly below 1.2 m
	▩	2			
2.0					
	▩	3			
3.0	▩	4			
					END OF TESTPIT @ 3.2 m – no water – little slough
4.0					
5.0					

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

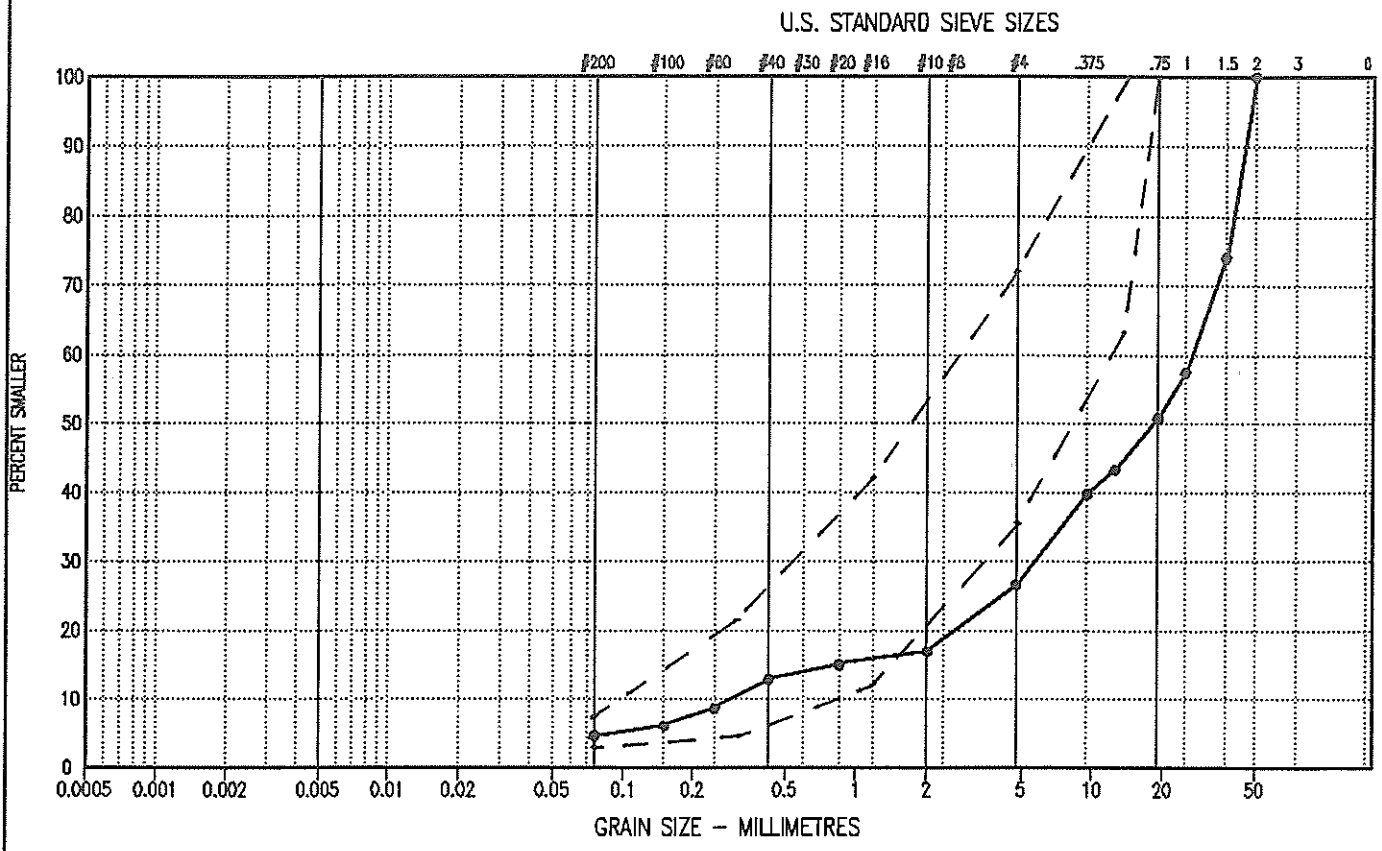
EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: JSB	COMPLETION DEPTH: 3.2 m
	REVIEWED BY: JRT	COMPLETE: 96/08/25
	Fig. No:	Page 1 of 1

96/11/12 09:44AM (YUKON-TS)

EBA Engineering

PARTICLE SIZE – ANALYSIS OF SOILS

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



SYMBOL	BOREHOLE NUMBER	DEPTH (m)	DESCRIPTION			Cu	Cc	U.S.C
			CLAY & SILT %	SAND %	GRAVEL %			
●——●	12289–TP22	1.40 – 1.60	4.7	22.0	73.3	88.3	4.3	GP

Project: 0201–96–12289 Date Tested: 96/10/01 BY: JSB

Tested in accordance with ASTM D422 unless otherwise noted.

DUBLIN GULCH MINE ACCESS ROAD – BORROW	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP23
km 26.4, S. MCQUESTEN OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7087717.32 E448802.99	ELEVATION:

SAMPLE TYPE ▩ GRAB ▨ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
	▩	1			SAND – gravelly, some silt; well graded sand; fine to medium grained, flat, elongated particles; firm; damp to moist; greyish brown
1.0					
	▩	2			GRAVEL AND SAND – trace of silt; well graded sub-rounded gravel; coarse grained sand; compact; damp; grey
2.0					SAND – silty; fine grained; firm; moist; brownish grey
	▩	3			
3.0		4			END OF TESTPIT @ 3.2 m – no water – no slough
4.0					
5.0					

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: JSB	COMPLETION DEPTH: 3.2 m
	REVIEWED BY: JRT	COMPLETE: 96/08/25
	Fig. No:	Page 1 of 1

96/10/04 08:47AM (YUKON-TS)

DUBLIN GULCH MINE ACCESS RD – BORROW	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP24
km 26.4, S.MCQUESTEN OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7087953.33 E448813.16	ELEVATION:

SAMPLE TYPE ■ GRAB ⊘ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
	■	1			SILT AND SAND – fine grained; permfrost, visible ice>15% – very difficult to dig
1.0					END OF TESTPIT @ 0.5 m (refusal) – no water – no slough – frozen, visible ice>15%
2.0					
3.0					
4.0					
5.0					

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft) 0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0

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LOGGED BY: JSB	COMPLETION DEPTH: 0.5 m
REVIEWED BY: JRT	COMPLETE: 96/08/25
Fig. No:	Page 1 of 1

96/10/04 06:40AM (YUKON-TS)

DUBLIN GULCH MINE ACCESS RD – BORROW	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP25
km 26.4, S. MCQUESTEN OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7088027.89 E448769.4	ELEVATION:

SAMPLE TYPE ▩ GRAB ⧸ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
					SILT AND SAND – fine grained; permfrost, visible ice>15% – very difficult to dig
					END OF TESTPIT @ 0.5 m (refusal) – no water – no slough – frozen, visible ice>15%
1.0					
2.0					
3.0					
4.0					
5.0					

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

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LOGGED BY: JSB	COMPLETION DEPTH: 0.5 m
REVIEWED BY: JRT	COMPLETE: 96/08/25
Fig. No:	Page 1 of 1

96/10/04 08:50AM (YUKON-15)

DUBLIN GULCH MINE ACCESS RD – BORROW OPT	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP26
km 26.7, S. MCQUESTEN OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7088122.38 E448924.74	ELEVATION:

SAMPLE TYPE ▩ GRAB ▨ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0	▩	1			SAND – gravelly, some silt; well graded sand; fine to medium graded gravel
					SAND – some silt; fine grained; firm; moist; light greyish brown
1.0					GRAVEL AND SAND – trace of silt; well graded, sub-rounded gravel; coarse grained sand; compact; damp; brownish grey
	▩	2			
2.0					– cobbly with some boulders below 2.0 m
	▩	3			
3.0					END OF TESTPIT @ 3.0 m – no water – no slough
4.0					
5.0					

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID

10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft) 0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0

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LOGGED BY: JSB	COMPLETION DEPTH: 3.0 m
REVIEWED BY: JRT	COMPLETE: 96/08/25
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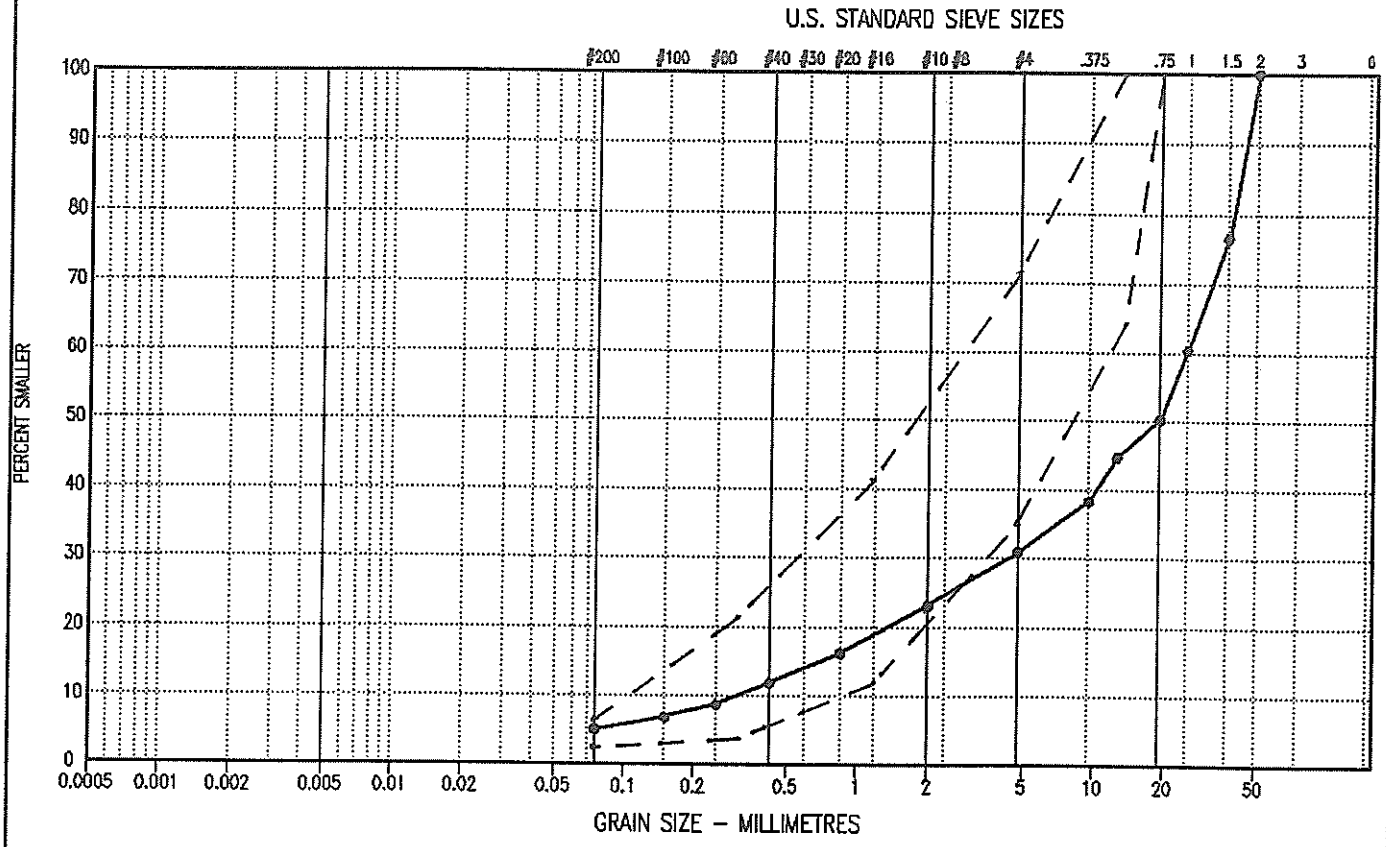
96/11/12 09:45AM (YUKON-TS)

EBA Engineering

PARTICLE SIZE – ANALYSIS OF SOILS

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



SYMBOL	BOREHOLE NUMBER	DEPTH (m)	DESCRIPTION			Cu	Cc	U.S.C
			CLAY & SILT %	SAND %	GRAVEL %			
——●	12289–TP26	1.40 – 1.60	5.0	25.8	69.2	77.6	2.5	GW–GM

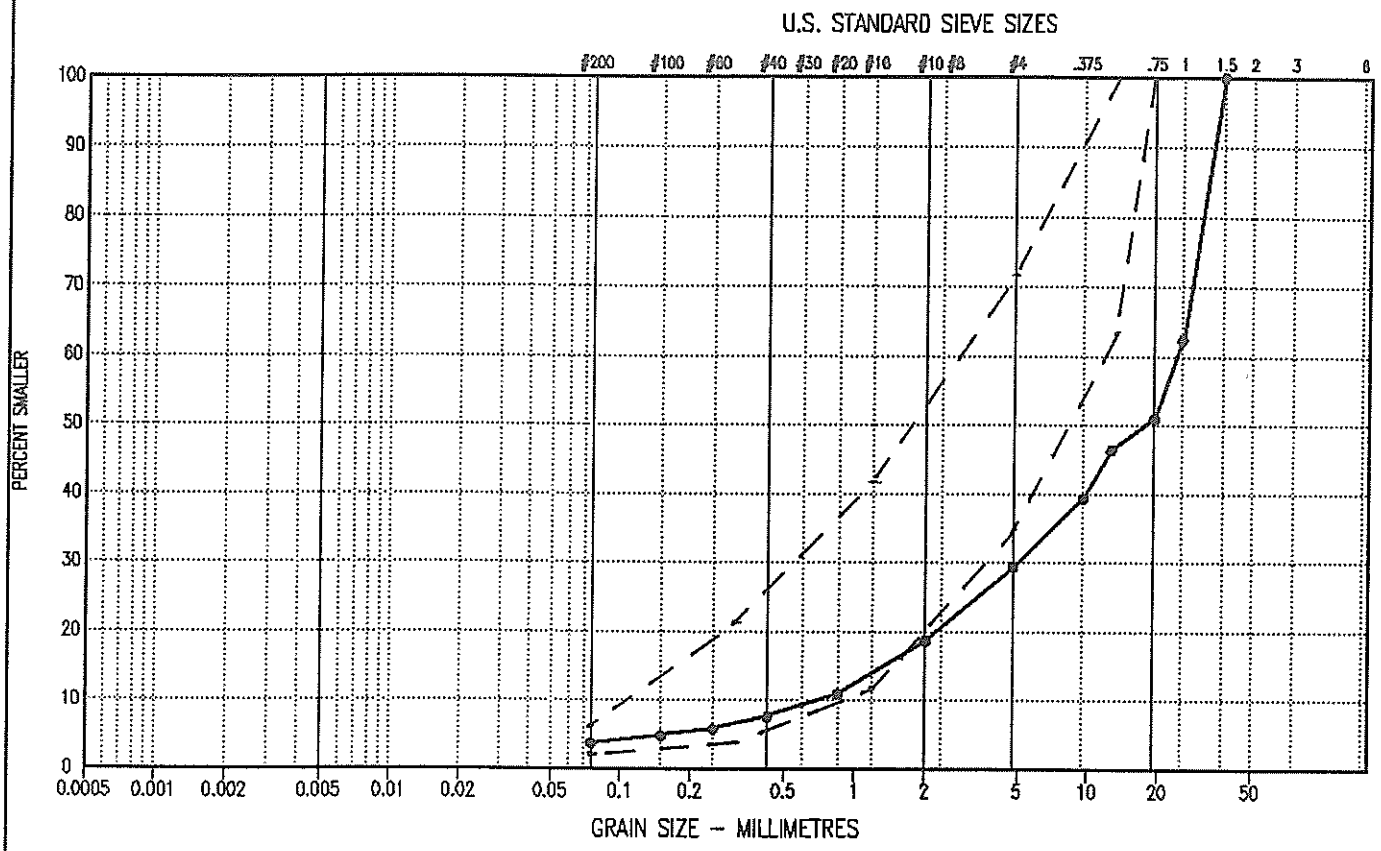
Project: 0201–96–12289 Date Tested: 96/10/01 BY: JSB

Tested in accordance with ASTM D422 unless otherwise noted.

EBA Engineering

PARTICLE SIZE – ANALYSIS OF SOILS

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



SYMBOL	BOREHOLE NUMBER	DEPTH (m)	DESCRIPTION			Cu	Cc	U.S.C
			CLAY & SILT %	SAND %	GRAVEL %			
●——●	12289–TP26	2.80 – 3.00	3.7	25.6	70.7	32.5	1.5	GW

Project: 0201–96–12289 Date Tested: 96/10/02 BY: JSB

Tested in accordance with ASTM D422 unless otherwise noted.

DUBLIN GULCH MINE ACCESS RD – BORROW	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP27
km 26.7, S. MCQUESTEN OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7088304.34 E448783.24	ELEVATION:

SAMPLE TYPE ■ GRAB ☒ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
		1			SAND AND SILT – fine grained, moist, greyish brown
		2			– colour changes to a darker brown below 0.4 m
					– trace fo fine grained gravel below 0.4 m
1.0					END OF TESTPIT @ 0.7 m (refusal)
					– no water
					– permafrost, visible ice >10%
2.0					
3.0					
4.0					
5.0					

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft) 0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0

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LOGGED BY: JSB	COMPLETION DEPTH: 0.7 m
REVIEWED BY: JRT	COMPLETE: 96/08/25
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96/10/04 08:52AM (YUKON-TS)

DUBLIN GULCH MINE ACCESS RD – BORROW	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP28
km 26.7, S. MCQUESTEN OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7088268.95 E448829.01	ELEVATION:

SAMPLE TYPE ▩ GRAB ▨ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
	▩	1			SAND – silty, trace of gravel; fine grained sand; fine grained gravel; soft; moist to wet; greyish brown – becomes gravelly, larger grained below 0.4 m – permafrost visible ice 10 to 15%
	▩	2			
1.0					END OF TESTPIT @ 0.6 m – no water – some slough
2.0					
3.0					
4.0					
5.0					

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID

10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

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LOGGED BY: JSB	COMPLETION DEPTH: 0.6 m
REVIEWED BY: JRT	COMPLETE: 96/08/25
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96/10/04 08:53AM (YUKON-TS)

DUBLIN GULCH MINE ACCESS RD – BORROW SOU	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP29
km 22.1, S. MCQUESTEN OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7084851.18 E450766.73	ELEVATION:

SAMPLE TYPE ■ GRAB ⊘ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
					SAND – some silt to silty; fine grained; soft; moist; light brown
		1			GRAVEL – sandy, trace of silt; well graded, sub-rounded gravel; coarse grained sand; very compact; damp; grey
1.0					– some cobble throughout testpit
		2			
2.0					
		3			
3.0					END OF TESTPIT @ 3.0 m – no water – no slough
4.0					
5.0					

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft) 0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0

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LOGGED BY: JSB	COMPLETION DEPTH: 3.0 m
REVIEWED BY: JRT	COMPLETE: 96/08/29
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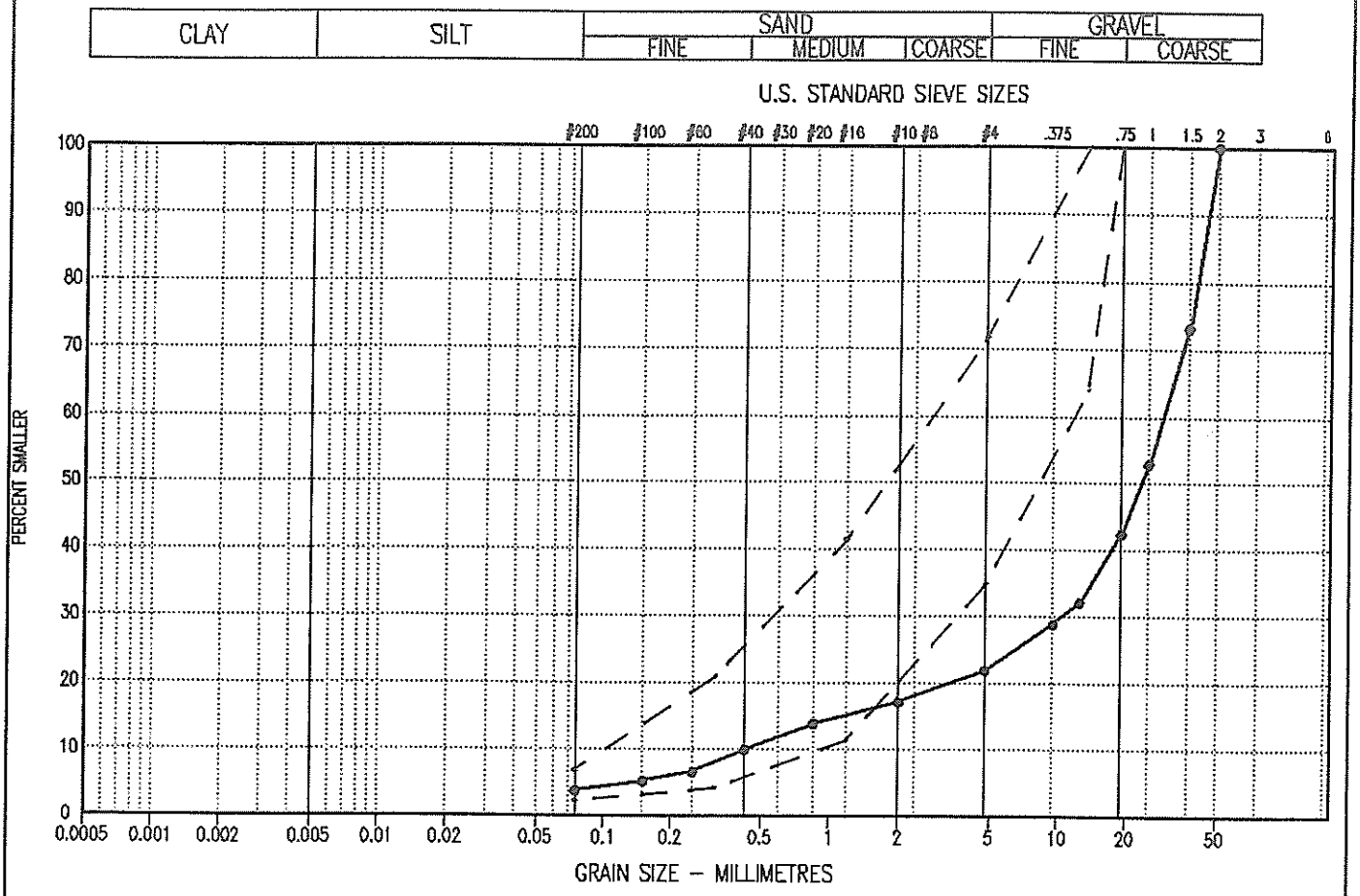
96/11/12 09:46AM (YUKON-TS)

EBA Engineering

PARTICLE SIZE – ANALYSIS OF SOILS



SYMBOL	BOREHOLE NUMBER	DEPTH (m)	DESCRIPTION			Cu	Cc	U.S.C
			CLAY & SILT %	SAND %	GRAVEL %			
●—●	12289–TP29	0.05 – 0.07	3.8	18.0	78.2	68.1	8.8	GP

Project: 0201–96–12289 Date Tested: 96/10/01 BY: JSB

Tested in accordance with ASTM D422 unless otherwise noted.

DUBLIN GULCH MINE ACCESS ROAD – BORROW S	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP30
km 22.1, S. MCQUESTEN OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7085108.32 E451080.89	ELEVATION:

SAMPLE TYPE ■ GRAB ⧸ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
					SAND – some silt to silty; fine grained; soft; moist; light brown
		1			GRAVEL – sandy, trace of silt; well graded, sub-rounded gravel; coarse sand; compact; damp; grey – some cobbles below 0.3 m
1.0					
		2			
2.0					
		3			
3.0					END OF TESTPIT @ 3.0 m – no water – no slough
4.0					
5.0					

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: JSB	COMPLETION DEPTH: 3.0 m
	REVIEWED BY: JRT	COMPLETE: 96/08/29
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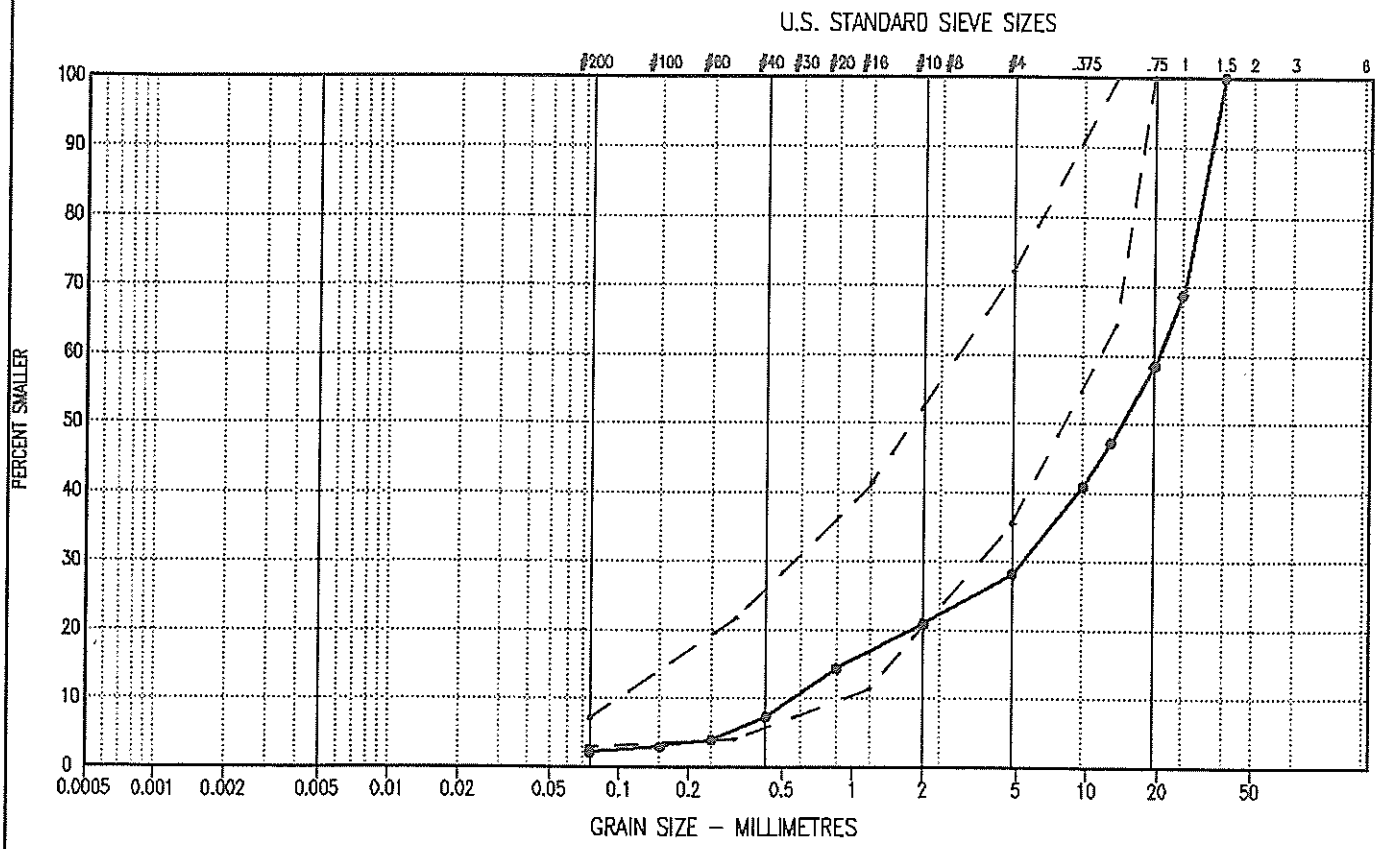
96/11/12 08:47AM (YUKON-15)

EBA Engineering

PARTICLE SIZE – ANALYSIS OF SOILS

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



SYMBOL	BOREHOLE NUMBER	DEPTH (m)	DESCRIPTION			Cu	Cc	U.S.C
			CLAY & SILT %	SAND %	GRAVEL %			
●——●	12289-TP30	1.40 – 1.60	2.1	26.1	71.8	34.0	2.5	GW

Project: 0201-96-12289 Date Tested: 96/10/02 BY: JSB

Tested in accordance with ASTM D422 unless otherwise noted.

DUBLIN GULCH MINE ACCESS ROAD – BORROW S	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP31
km 22.1, S. MCQUESTEN OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7085167.48 E451360.23	ELEVATION:

SAMPLE TYPE ■ GRAB ⊘ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
					SAND – silty
	■	1			GRAVEL – sandy, trace of silt; well graded, sub-rounded gravel; coarse grained sand; very compact; damp; grey – cobble throughout testpit
1.0					
					– 0.2 m thick layer of medium grained, uniform sand at 1.4 m
	■	2			
2.0					
	■	3			
3.0					END OF TESTPIT @ 3.0 m – no water – no slough
4.0					
5.0					

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft) 0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0

EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: JSB	COMPLETION DEPTH: 3.0 m
	REVIEWED BY: JRT	COMPLETE: 96/08/29
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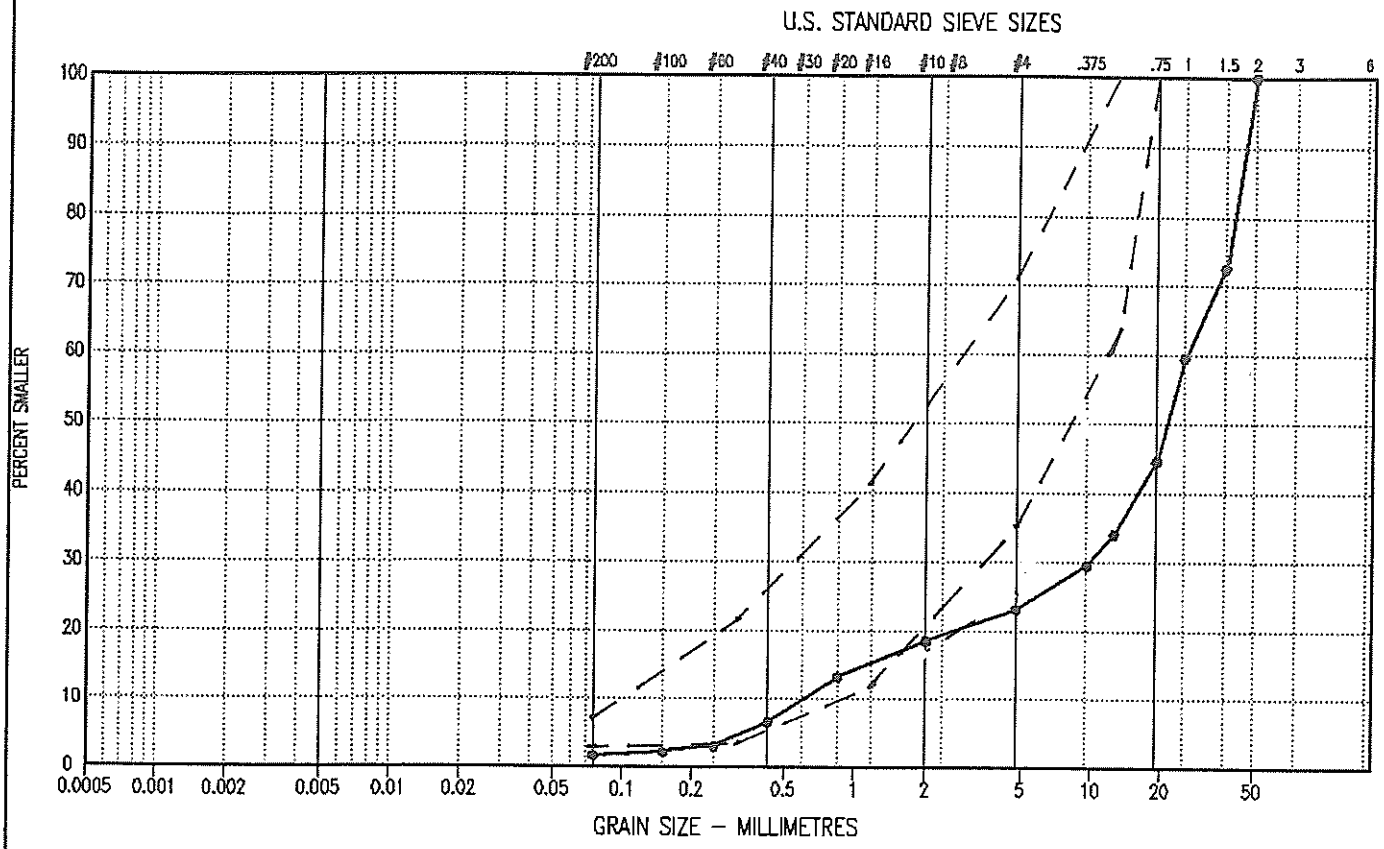
96/11/12 09:48AM (YUKON-TS)

EBA Engineering

PARTICLE SIZE – ANALYSIS OF SOILS

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



SYMBOL	BOREHOLE NUMBER	DEPTH (m)	DESCRIPTION			Cu	Cc	U.S.C
			CLAY & SILT %	SAND %	GRAVEL %			
●——●	12289-TP31	1.80 – 2.00	1.6	21.5	76.9	39.7	5.9	GP

Project: 0201-96-12289 Date Tested: 96/10/02 BY: JSB

Tested in accordance with ASTM D422 unless otherwise noted.

DUBLIN GULCH MINE ACCESS RD – BORROW	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP32
km 17.5, S. MCQUESTEN OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7087168.78 E453945.97	ELEVATION:

SAMPLE TYPE ■ GRAB ⊘ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
	■	1			SAND – trace of silt; fine to medium grained sand; firm; moist; grey
	■	2			GRAVEL AND SAND – trace of silt; well graded, sub-rounded gravel; compact; damp; grey
3.0	■	3			END OF TESTPIT @ 3.0 m – no water – some slough
5.0					

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft) 0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0

EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: JSB	COMPLETION DEPTH: 3.0 m
	REVIEWED BY: JRT	COMPLETE: 96/08/29
	Fig. No:	Page 1 of 1

96/10/05 12:34AM (YUKON-TS)

DUBLIN GULCH MINE ACCESS RD – BORROW SOU	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP33
km 17.5, S. MCQUESTEN OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7087348.64 E454328.88	ELEVATION:

SAMPLE TYPE ▨ GRAB ▨ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
	▨	1			SILT – sandy; fine grained; soft; moist; reddish brown
1.0					GRAVEL – sandy, trace of silt; well graded, sub-rounded grovel; coarse grained sand; compact; damp; grey – sloughing below 0.5 m
2.0	▨	2			
					END OF TESTPIT @ 2.5 m – no water – major sloughing below 0.5 m
3.0					
4.0					
5.0					

STANDARD PENETRATION 10 20 30 40
PLASTIC M.C. LIQUID
10 20 30 40

PERCENT GRAVEL 20 40 60 80
PERCENT SAND 20 40 60 80
PERCENT SILT OR FINES 20 40 60 80
PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

EBA Engineering Consultants Ltd.
Whitehorse, Yukon

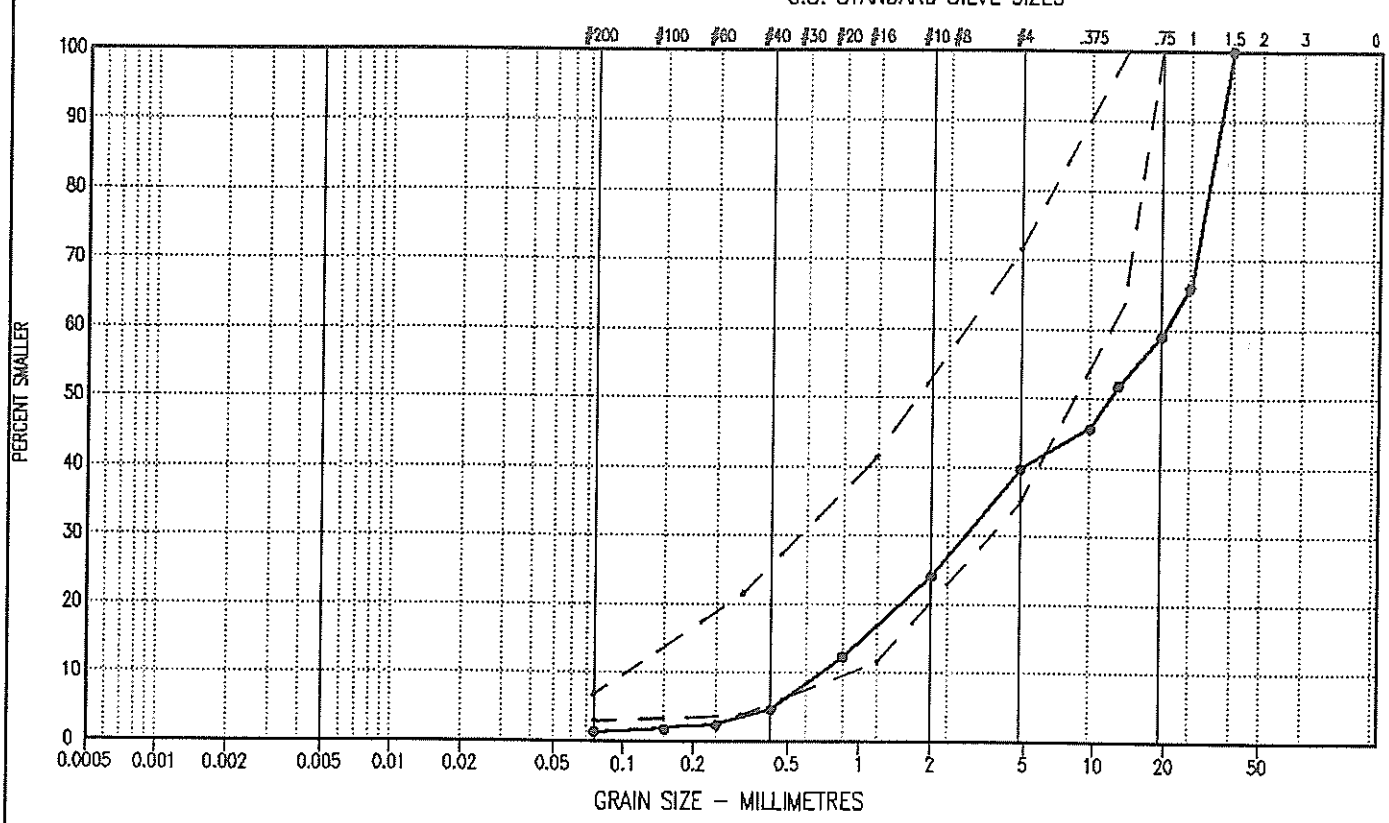
LOGGED BY: JSB	COMPLETION DEPTH: 2.5 m
REVIEWED BY: JRT	COMPLETE: 96/08/29
Fig. No:	Page 1 of 1

96/11/12 09:49AM (YUKON-15)

EBA Engineering

PARTICLE SIZE – ANALYSIS OF SOILS

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



SYMBOL	BOREHOLE NUMBER	DEPTH (m)	DESCRIPTION			Cu	Cc	U.S.C
			CLAY & SILT %	SAND %	GRAVEL %			
●——●	12289–TP33	0.40 – 0.60	1.3	38.4	60.3	27.4	0.6	GP

Project: 0201–96–12289 Date Tested: 96/10/02 BY: JSB

Tested in accordance with ASTM D422 unless otherwise noted.

DUBLIN GULCH MINE ACCESS RD - BORROW	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP34
km 17.5, S. MCQUESTEN OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7087717.48 E454664.16	ELEVATION:

SAMPLE TYPE ▨ GRAB ⊘ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
	▨	1			SAND - silty, some gravel; well graded sand; fine to medium grained gravel; soft; moist; reddish brown
1.0					GRAVEL - sandy, trace of silt; well graded, sub-rounded gravel; loose to compact; damp; moist; grey - cobbly with some boulders below 0.2 to 0.5 m - gravel becomes fine to medium grained below 0.5 to 1.8 m
2.0	▨	2			
3.0	▨	3			END OF TESTPIT @ 3.0 m - no water - some slough below 0.2 m
4.0					
5.0					

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft) 0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0

EBA Engineering Consultants Ltd.
Whitehorse, Yukon

LOGGED BY: JSB	COMPLETION DEPTH: 3.0 m
REVIEWED BY: JRT	COMPLETE: 96/08/29
Fig. No:	Page 1 of 1

96/10/05 12:35am (YUKON-TS)

DUBLIN GULCH MINE ACCESS RD – BORROW	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP35
km 15.2, S. MCQUESTEN OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7087932.09 E455841.33	ELEVATION:

SAMPLE TYPE ▩ GRAB ⧸ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
	▩	1			SAND – silty, fine grained; soft; moist; yellowish brown
1.0					GRAVEL – sandy, trace of silt; well graded, sub-rounded gravel; coarse grained sand; very compact; damp; grey – cobbly with some boulders below 0.2 m
	▩	2			
2.0					– possible water table at 2.6 m
	▩	3			– frozen at 2.7 m
3.0					SAND – some silt to silty; fine grained, uniform sand; moist to wet; grey
					END OF TESTPIT @ 2.7 m – water at 2.6 m – little slough
4.0					
5.0					

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: JSB	COMPLETION DEPTH: 2.7 m
	REVIEWED BY: JRT	COMPLETE: 96/08/29
	Fig. No:	Page 1 of 1

96/10/05 12:36AM (YUKON-TS)

DUBLIN GULCH MINE ACCESS ROAD – BORROW	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP36
km 15.2, S. MCQUESTEN OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7087874.66 E456368.04	ELEVATION:

SAMPLE TYPE ▩ GRAB ▨ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
	▩	1			SAND – silty; fine grained; firm; moist; light yellowish brown
1.0					
	▩	2			GRAVEL AND SAND – trace of silt, well graded, sub-rounded gravel; coarse grained sand; very compact; damp; grey – cobbly below 1.8 m
2.0					
	▩	3			SAND AND SILT – trace of gravel; fine grained, uniform sand; fine grained, sub-rounded gravel; dense; moist; dark grey
3.0					END OF TESTPIT @ 3.0 m – no water – little to no slough
4.0					
5.0					

STANDARD PENETRATION ▩ 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL ▩ 20 40 60 80

PERCENT SAND ● 20 40 60 80

PERCENT SILT OR FINES △ 20 40 60 80

PERCENT CLAY ◇ 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

EBA Engineering Consultants Ltd.
Whitehorse, Yukon

LOGGED BY: JSB	COMPLETION DEPTH: 3.0 m
REVIEWED BY: JRT	COMPLETE: 96/08/29
Fig. No:	Page 1 of 1

96/10/04 07:01AM (YUKON-TS)

DUBLIN GULCH MINE ACCESS ROAD – BORROW	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP37
km 15.2, S. MCQUESTEN OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7087328.06 E456828.57	ELEVATION:

SAMPLE TYPE ▩ GRAB ▨ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
	▩	1			SAND – gravelly, some silt; well graded sand; well graded, sub-rounded gravel; firm; moist; light grey
1.0					
	▩	2			GRAVEL – sandy, trace of silt; well graded, sub-rounded gravel; coarse grained sand; compact; damp; grey
2.0					
	▩	3			– possible water table at 2.8 m
3.0					END OF TESTPIT @ 3.0 m – water at 2.8 m – sloughing throughout testpit
4.0					
5.0					

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft) 0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0

EBA Engineering Consultants Ltd.
Whitehorse, Yukon

LOGGED BY: JSB	COMPLETION DEPTH: 3.0 m
REVIEWED BY: JRT	COMPLETE: 96/08/29
Fig. No:	Page 1 of 1

96/10/04 07:12AM (YUKON-TS)

DUBLIN GULCH MINE ACCESS RD - BORROW	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP38
km 7.4, S. MCQUESTEN OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7086400.98 E462614.31	ELEVATION:

SAMPLE TYPE ▨ GRAB ▨ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
	▨	1			SAND - trace of silt; medium grained; uniform sand; firm; moist; grey
					SAND AND GRAVEL - trace of silt; coarse grained sand; fine to medium groined gravel; compact; damp; grey
1.0					- coarser gravels below 1.0 m
	▨	2			
2.0					
	▨	3			
3.0					END OF TESTPIT @ 3.0 m - no water - some sloughing throughout testpit
4.0					
5.0					

▨ STANDARD PENETRATION ▨ 10 20 30 40

PLASTIC M.C. LIQUID

10 20 30 40

▨ PERCENT GRAVEL ▨ 20 40 60 80

● PERCENT SAND ● 20 40 60 80

▲ PERCENT SILT OR FINES ▲ 20 40 60 80

◆ PERCENT CLAY ◆ 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

EBA Engineering Consultants Ltd.
Whitehorse, Yukon

LOGGED BY: JSB	COMPLETION DEPTH: 3.0 m
REVIEWED BY: JRT	COMPLETE: 96/08/29
Fig. No:	Page 1 of 1

96/10/04 07:03AM (YUKON-T5)

DUBLIN GULCH MINE ACCESS ROAD – BORROW S	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP39
km 7.4, S. MCQUESTEN OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7086474.06 E463420.67	ELEVATION:

SAMPLE TYPE ▩ GRAB ⊘ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
	▩	1			SAND – some silt; fine to medium grained sand; soft; moist; greyish brown
1.0					GRAVEL – sandy, trace of silt; well graded, sub-rounded gravel, well graded sand, compact, moist, grey
	▩	2			
2.0					– gravel becomes fine to medium grained below 2.2 m
	▩	3			
3.0					END OF TESTPIT @ 3.0 m – water at 2.7 m – some sloughing below 3.0 m
4.0					
5.0					

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

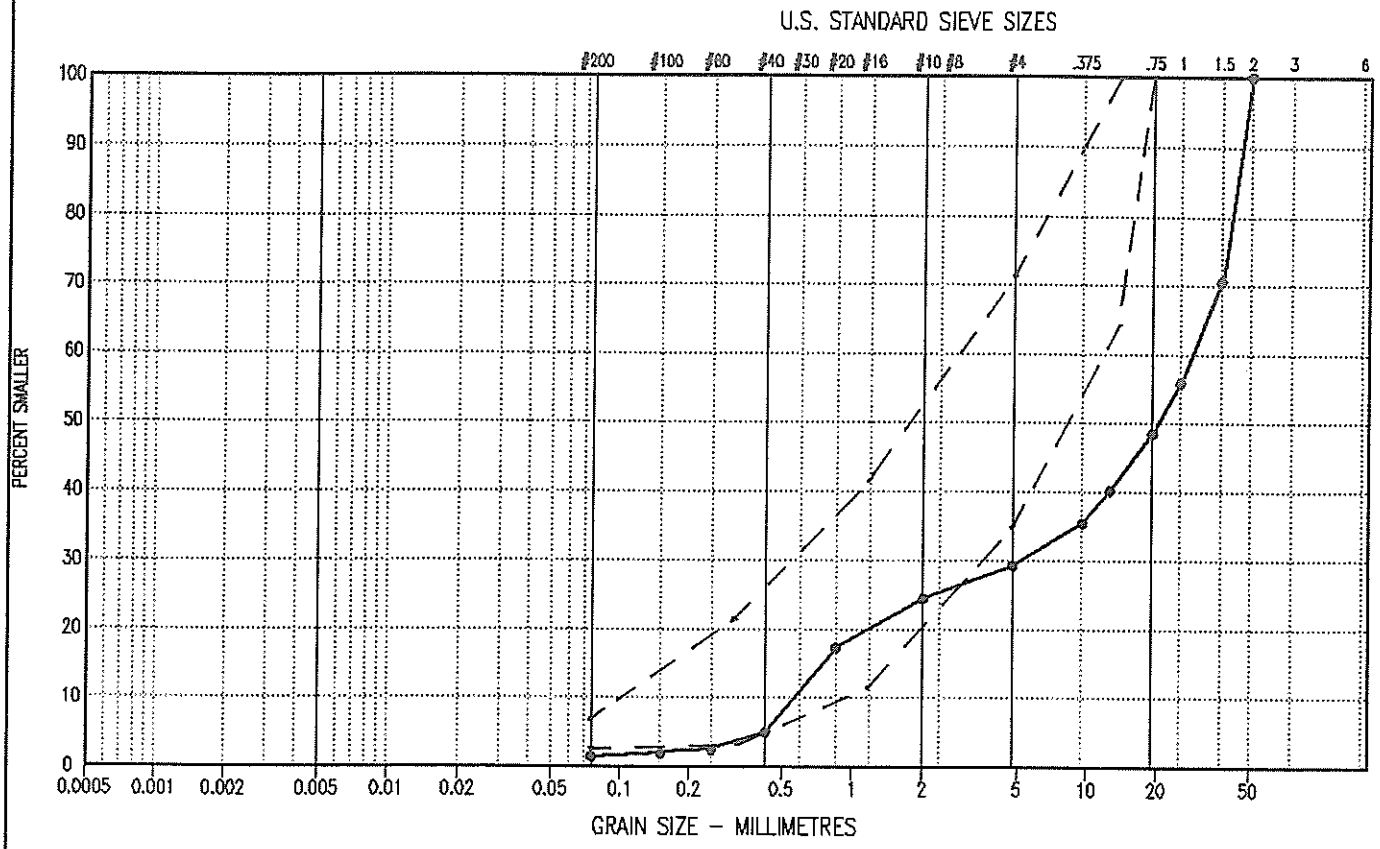
EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: JSB	COMPLETION DEPTH: 3.0 m
	REVIEWED BY: JRT	COMPLETE: 96/08/29
	Fig. No:	Page 1 of 1

96/11/12 09:50AM (YUKON-T5)

EBA Engineering

PARTICLE SIZE – ANALYSIS OF SOILS

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



SYMBOL	BOREHOLE NUMBER	DEPTH (m)	DESCRIPTION			Cu	Cc	U.S.C
			CLAY & SILT %	SAND %	GRAVEL %			
●——●	12289-TP39	1.60 – 1.80	1.4	27.8	70.8	47.8	1.7	GW

Project: 0201-96-12289 Date Tested: 96/10/02 BY: JSB

Tested in accordance with ASTM D422 unless otherwise noted.

DUBLIN GULCH MINE ACCESS RD – BORROW	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP40
km 7.4, S. MCQUESTEN OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7086443.62 E463681.96	ELEVATION:

SAMPLE TYPE ▩ GRAB ⊘ NO RECOVERY

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
	▩	1			SAND – trace of silt; fine to medium grained uniform sand; soft to firm; moist; grey
1.0					
	▩	2			
2.0					
	▩	3			
3.0					END OF TESTPIT @ 3.0 m – no water – slough throughout testpit
4.0					
5.0					

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

EBA Engineering Consultants Ltd.
Whitehorse, Yukon

LOGGED BY: JSB	COMPLETION DEPTH: 3.0 m
REVIEWED BY: JRT	COMPLETE: 96/08/29
Fig. No:	Page 1 of 1

96/10/04 07:35AM (YUKON-TS)

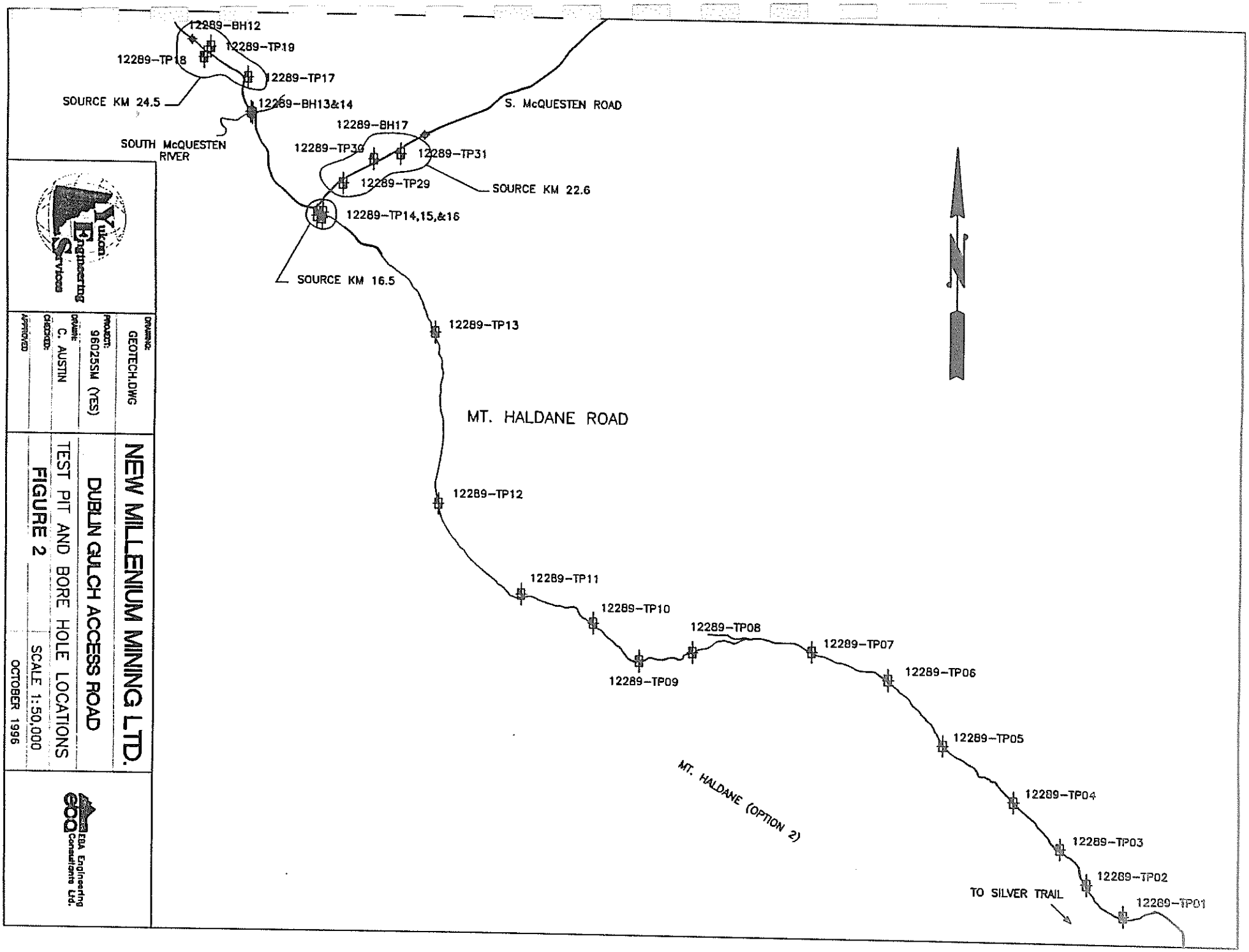
APPENDIX B

Mt. Haldane Lookout Road Option

Sidehill Cut Testpit Logs

and Borrow Source Testpit Logs

(including laboratory test data)


12289-BH12
12289-TP19
12289-TP18
12289-TP17
SOURCE KM 24.5
12289-BH13&14
S. McQUESTEN ROAD
12289-BH17
SOUTH McQUESTEN RIVER
12289-TP30
12289-TP31
12289-TP29
SOURCE KM 22.6
12289-TP14,15,&16
SOURCE KM 16.5
12289-TP13
MT. HALDANE ROAD
12289-TP12
12289-TP11
12289-TP10
12289-TP08
12289-TP07
12289-TP09
12289-TP06
12289-TP05
MT. HALDANE (OPTION 2)
12289-TP04
12289-TP03
12289-TP02
TO SILVER TRAIL
12289-TP01
Yukon Engineering Services
DRAWING: GEOTECH.DWG
PROJECT: 96025SM (YES)
DRAWN: C. AUSTIN
CHECKED:
APPROVED:
NEW MILLENIUM MINING LTD.
DUBLIN GULCH ACCESS ROAD
TEST PIT AND BORE HOLE LOCATIONS
FIGURE 2
SCALE 1:50,000
OCTOBER 1996
EBA Engineering Consultants Ltd.

DUBLIN GULCH MINE ACCESS RD – SIDE HILL	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP01
km 3.1, MT. HALDANE LOOKOUT RD. OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7077406.55 E458833.88	ELEVATION:

SAMPLE TYPE ▩ GRAB ▨ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					SAND – gravelly, silty: flat, shaly elongated gravels; dense, light greyish brown
		1			
					BEDROCK (Schist) – weathered for 1.6 m, competent below this depth
		2			
1.0					– larger sized rock (shale) below 1.0 m
					– less breakage during excavation
2.0					– becoming difficult to excavate at 2.0 m depth
					REFUSAL – VERY HARD, DURABLE ROCK;
					END OF TESTPIT @ 2.7 m – no water – no sloughing
3.0					
4.0					
5.0					

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

EBA Engineering Consultants Ltd.
Whitehorse, Yukon

LOGGED BY: JSB	COMPLETION DEPTH: 2.7 m
REVIEWED BY: JRT	COMPLETE: 96/08/23
Fig. No:	Page 1 of 1

96/10/08 03:39AM (YUKON-15)

DUBLIN GULCH MINE ACCESS RD – SIDE HILL	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP02
km 3.65, MT. HALDANE LOOKOUT RD OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7077726.14 E458464.78	ELEVATION:

SAMPLE TYPE ▩ GRAB ▨ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
	▩	1			SAND – silty, rootlets; fine grained; firm; light brown
1.0					BEDROCK (Schist) – weathered for 2.1 m, competent below this depth
	▩	2			
2.0					– becoming difficult to excavate at 2.5 m depth
3.0					END OF TESTPIT @ 3.0 m (refusal) – no water – no slough
4.0					
5.0					

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: JSB	COMPLETION DEPTH: 3.0 m
	REVIEWED BY: JRT	COMPLETE: 96/08/23
	Fig. No:	Page 1 of 1

96/10/08 03:14AM (YUKON-15)

DUBLIN GULCH MINE ACCESS RD – SIDE HILL	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP03
km 4.1, MT. HALDANE LOOKOUT RD OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7078088.23 E458191.76	ELEVATION:

SAMPLE TYPE ▩ GRAB ⊘ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
	▩	1			
					SAND – gravelly, silty; flat, elongated gravels; (shale); soft; moist
	▩	2			
1.0					BEDROCK (Schict) – weathered for 2.1 m, competent below this depth – becomes larger and more solid with depth below 0.4 m
2.0					
	▩	3			
3.0					END OF TESTPIT @ 2.9 m (refusal) – no water – no slough
4.0					
5.0					

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID

10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: JSB	COMPLETION DEPTH: 2.9 m
	REVIEWED BY: JRT	COMPLETE: 96/08/23
	Fig. No:	Page 1 of 1

96/10/08 03:15AM (TUKON-15)

DUBLIN GULCH MINE ACCESS RD - SIDE HILL	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP04
km 4.8, MT. HALDANE LOOKOUT RD OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7078568.06 E457709.04	ELEVATION:

SAMPLE TYPE ▩ GRAB ⊘ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
	▩	1			
					SAND - gravelly, silty; fine to medium grained elongated gravel; soft; moist; medium grey
1.0					
					- colour changes to blackish grey below 1.5 m
	▩	2			
					BEDROCK (Schist) - weatheres for 1.7 m, competent below this depth
2.0					
3.0	▩	3			
					END OF TESTPIT @ 3.2 m (refusal)
					- no water
					- no slough
4.0					
5.0					

STANDARD PENETRATION ▩ 10 20 30 40

PLASTIC M.C. LIQUID

10 20 30 40

PERCENT GRAVEL ▩ 20 40 60 80

PERCENT SAND ● 20 40 60 80

PERCENT SILT OR FINES △ 20 40 60 80

PERCENT CLAY ◇ 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

EBA Engineering Consultants Ltd.
Whitehorse, Yukon

LOGGED BY: JSB	COMPLETION DEPTH: 3.2 m
REVIEWED BY: JRT	COMPLETE: 96/08/23
Fig. No:	Page 1 of 1

96/10/08 03:16AM (YUKON-TS)

DUBLIN GULCH MINE ACCESS RD – SIDE HILL	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP05
km 5.7, MT. HALDANE LOOKOUT RD OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7079138.44 E456978.28	ELEVATION:

SAMPLE TYPE ▩ GRAB ⊘ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
	▩	1			SAND – silty, some gravel; fine grained sand; fine to medium grained elongated gravel; soft; moist; light brown
1.0					SAND – gravelly, some silt; coarse grained sand; well graded flat, elongated gravel; firm; moist; grey – becomes coarser with depth
	▩	2			
2.0					BEDROCK – weathered for 0.4 m becoming competent below this depth
					END OF TESTPIT @ 2.2 m (refusal) – no water – no slough
3.0					
4.0					
5.0					

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES △ 20 40 60 80

PERCENT CLAY ◆ 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

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LOGGED BY: JSB	COMPLETION DEPTH: 2.2 m
REVIEWED BY: JRT	COMPLETE: 96/08/23
Fig. No:	Page 1 of 1

96/10/08 03:34AM (YUKON-TS)

DUBLIN GULCH MINE ACCESS ROAD – SIDE HIL	LLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP06
km 6.6, MT. HALDANE LOOKOUT RD. OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7079803.36 E456420.56	ELEVATION:

SAMPLE TYPE ▩ GRAB ⧄ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
	▩	1			SILT – some sand, trace of gravel, fine grained, moist, firm, brownish grey
1.0					
	▩	2			
					GRAVEL – silty, some sand; coarse grained angular gravel, med. to coarse grained sand, moist to wet, compact, grey – cobby and boulders below 1.5 m
2.0					
3.0					BEDROCK (Schist) – weathered, but becoming more competent with depth
					END OF TESTPIT @ 3.5 m (refusal) – no water – little slough
4.0					
5.0					

▩ STANDARD PENETRATION ▩ 10 20 30 40

PLASTIC M.C. LIQUID

10 20 30 40

▩ PERCENT GRAVEL ▩ 20 40 60 80

● PERCENT SAND ● 20 40 60 80

△ PERCENT SILT OR FINES △ 20 40 60 80

◈ PERCENT CLAY ◈ 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: JSB	COMPLETION DEPTH: 3.5 m
	REVIEWED BY: JRT	COMPLETE: 96/08/23
	Fig. No:	Page 1 of 1

96/10/08 03:35AM (YUKON-TS)

DUBLIN GULCH MINE ACCESS ROAD – SIDE HIL	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP07
km 7.45, MT. HALDANE LOOKOUT RD OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7080076.12 E455634.83	ELEVATION:

SAMPLE TYPE ▒ GRAB ⊘ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
	▒	1			SAND – gravelly, some silt; coarse grained sand; fine to medium grained, angular gravel; compact; saturated; brownish grey
1.0					
		2			SAND AND SILT – trace of clay; fine grained; mattled grey and rust; permafrost – permafrost to 2.0 m (no visible ice); cold and hard to break apart
2.0					SAND – gravelly, some silt; well graded sand; well graded, angular and elongated gravel; loose to compact; moist; dark grey – cobbly and some boulders between 2.0 and 3.1 m
	▒	3			
3.0					SILT – sandy, fine grained; soft; moist; olive brown
	▒	4			
4.0					END OF TESTPIT @ 4.0 m – water from upper 0.1 to 1.2 m – some sloughing from 2.0 to 3.1 m
5.0					

STANDARD PENETRATION ▒ 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL ▒ 20 40 60 80

PERCENT SAND ● 20 40 60 80

PERCENT SILT OR FINES ▲ 20 40 60 80

PERCENT CLAY ◆ 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

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Whitehorse, Yukon

LOGGED BY: JSB	COMPLETION DEPTH: 4.0 m
REVIEWED BY: JRT	COMPLETE: 96/08/23
Fig. No:	Page 1 of 1

96/10/08 03:19AM (YUKON-TS)

DUBLIN GULCH MINE ACCESS RD – SIDE HILL	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP08
km 8.7, MT. HALDANE LOOKOUT RD. OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7080048.17 E454406.67	ELEVATION:

SAMPLE TYPE ▩ GRAB ▨ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
	▩	1			SAND – silty, gravelly; fine grained; fine to medium grained elongated gravel; firm; moist; light greyish brown
1.0					BEDROCK (Schist) – weathered for 1.9m, becoming competent below this depth
	▩	2			– less breakage during excavation
2.0					END OF TESTPIT @ 2.2 m (refusal) – no water – some slough
3.0					
4.0					
5.0					

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID

10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: JSB	COMPLETION DEPTH: 2.2 m
	REVIEWED BY: JRT	COMPLETE: 96/08/24
	Fig. No:	Page 1 of 1

96/10/08 03:20AM (YUKON-TS)

DUBLIN GULCH MINE ACCESS RD – SIDE HILL	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP09
km 9.27, MT. HALDANE LOOKOUT RD OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7079950.55 E453856.4	ELEVATION:

SAMPLE TYPE ▩ GRAB ⊘ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
	▩	1			SAND AND SILT – some gravel, fine graines, moist, firm, browish grey
1.0					BEDROCK (Schist) – weathered for 2.2 m, becoming competent at 2.5 m
	▩	2			– less breakage during excavation
2.0					
3.0					END OF TESTPIT @ 2.7 m (refusal) – no water – major sloughing
4.0					
5.0					

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL ▩ 20 40 60 80

PERCENT SAND ● 20 40 60 80

PERCENT SILT OR FINES ▲ 20 40 60 80

PERCENT CLAY ◆ 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

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LOGGED BY: JSB	COMPLETION DEPTH: 2.7 m
REVIEWED BY: JRT	COMPLETE: 96/08/24
Fig. No:	Page 1 of 1

96/10/08 8:21AM (YUKON-TS)

DUBLIN GULCH MINE ACCESS RD – SIDE HILL	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP10
km 9.88, MT. HALDANE LOOKOUT RD OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7080330.52 E453377.78	ELEVATION:

SAMPLE TYPE ▩ GRAB ⊘ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					SAND – silty, gravelly; fine grained sand; sub-rounded and angular fine to medium grained gravel; compact moist, brownish grey
	▩	1			– graines become coarser with depth 0.8 m
1.0	▩	2			BEDROCK (Schist) – weathered for 1.2 m, becoming competent at 2.8 m
	▩	3			– less breakage during excavation
2.0					
3.0					END OF TESTPIT @ 3.2 m (refusal) – no water – little slough from 1.2 to 2.5 m
4.0					
5.0					

STANDARD PENETRATION 10 20 30 40 | PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80 | PERCENT SAND 20 40 60 80 | PERCENT SILT OR FINES 20 40 60 80 | PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

EBA Engineering Consultants Ltd.
Whitehorse, Yukon

LOGGED BY: JSB	COMPLETION DEPTH: 3.2 m
REVIEWED BY: JRT	COMPLETE: 96/08/24
Fig. No:	Page 1 of 1

96/10/08 03:22AM (YUKON-TS)

DUBLIN GULCH MINE ACCESS RD – SIDE HILL	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP11
km 10.7, MT. HALDANE LOOKOUT RD. OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7080618.44 E452633.06	ELEVATION:

SAMPLE TYPE ▩ GRAB ⊘ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
					SAND – silty, trace of gravel; fine grained sand; fine to medium grained, sub-rounded gravel; firm; moist; grey
1.0		1			– some cobbles below 0.2 m
		2			– no gravel below 1.4 m – colour changes to rusty brown below 1.4 m
2.0					BEDROCK (Schist) – weatheres far 1.4 m, competent at 2.8 m
		3			
3.0					– less breakage during excavation
4.0					END OF TESTPIT @ 4.2 m (refusal) – no water – major slough below 1.6 m
5.0					

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft) 0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0

EBA Engineering Consultants Ltd.
Whitehorse, Yukon

LOGGED BY: JSB	COMPLETION DEPTH: 4.2 m
REVIEWED BY: JRT	COMPLETE: 96/08/24
Fig. No:	Page 1 of 1

96/10/08 8:24AM (YUKON-1S)

DUBLIN GULCH MINE ACCESS RD – SIDE HILL	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP12
km 12.0, MT. HALDANE LOOKOUT RD OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7081554.01 E451776.7	ELEVATION:

SAMPLE TYPE ▩ GRAB ⊘ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					SAND – silty, some gravel; well graded sand; well graded elongated gravel (shale)
	▩	1			– some cobble below 0.2 m
1.0					
					BEDROCK (Schist) – weathered for 0.8 m, competent at 2.0 m
2.0					– less breakage during excavation
					END OF TESTPIT @ 2.8 m (refusal)
3.0					– no water
					– no slough
4.0					
5.0					

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: JSB	COMPLETION DEPTH: 2.8 m
	REVIEWED BY: JRT	COMPLETE: 96/08/24
	Fig. No:	Page 1 of 1

96/10/08 03:25AM (YUKON-15)

DUBLIN GULCH MINE ACCESS RD – SIDE HILL	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP13
km 13.8, MT. HALDANE LOOKOUT RD OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7083328.39 E451723.26	ELEVATION:

SAMPLE TYPE ▩ GRAB ⊘ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
	▩	1			SAND – gravelly, silty; well graded sand; fine to medium grained, angular gravels; firm; damp; light brown
1.0					
	▩	2			GRAVEL AND SAND – trace of silt; well graded, sub-rounded gravel; coarse graded sand; loose; damp; mottled grey and brown
2.0					
	▩	3			– permafrost – very little visible ice lenses, less than 5%
3.0					SILT – some sand, trace of clay; frozen (no visible ice); grey
	▩	4			
4.0					END OF TESTPIT @ 4.0 m (refusal) – no water – some slough from 1.2 to 3.8 m
5.0					

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: JSB	COMPLETION DEPTH: 4.0 m
	REVIEWED BY: JRT	COMPLETE: 96/08/24
	Fig. No:	Page 1 of 1

96/10/08 8:32AM (YUKON-TS)

DUBLIN GULCH MINE ACCESS RD - BORROW SOU	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP14
km 15.5, MT. HALDANE LOOKOUT RD OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7084492.27 E450552.64	ELEVATION:

SAMPLE TYPE ▩ GRAB ▨ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
	▩	1			SAND – silty, some gravel, well graded sand; fine to medium grained gravel; firm; damp; yellowish brown – becomes gravelly with depth – becomes siltier with depth
	▩	2			
1.0					GRAVEL – sandy, some silt, well graded sub-rounded gravel, well graded sand, compact, moist to wet, brownish grey – cobbly, some boulders below 1.0 m – becomes coarser with depth at 1.0 m – trace of silt below 1.0 m
	▩	3			
2.0					
3.0	▩	4			
					END OF TESTPIT @ 3.2 m – no water – little slough
4.0					
5.0					

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

EBA Engineering Consultants Ltd.
Whitehorse, Yukon

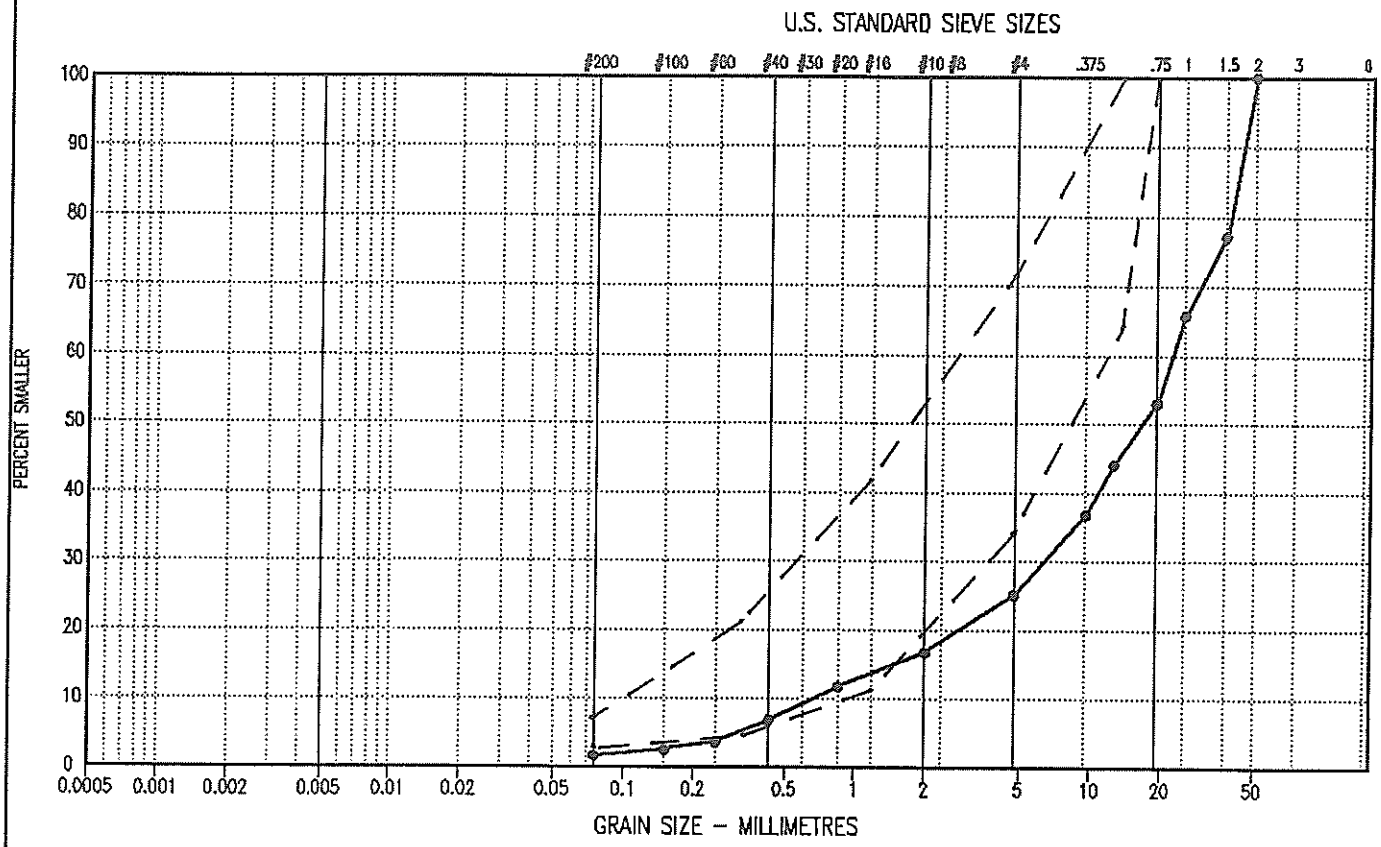
LOGGED BY: JSB	COMPLETION DEPTH: 3.2 m
REVIEWED BY: JRT	COMPLETE: 96/08/24
Fig. No:	Page 1 of 1

96/11/12 09:41AM (YUKON-TS)

EBA Engineering

PARTICLE SIZE – ANALYSIS OF SOILS

CLAY	SILT	SAND			GRAVEL	
		FINE	MEDIUM	COARSE	FINE	COARSE



SYMBOL	BOREHOLE NUMBER	DEPTH (m)	DESCRIPTION			Cu	Cc	U.S.C
			CLAY & SILT %	SAND %	GRAVEL %			
●—●	12289–TP14	1.40 – 1.60	1.6	23.5	74.9	32.1	2.9	GW

Project: 0201–96–12289 Date Tested: 96/10/01 BY: JSB

Tested in accordance with ASTM D422 unless otherwise noted.

DUBLIN GULCH MINE ACCESS RD – BORROW	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP15
km 15.5, MT. HALDANE LOOKOUT RD OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7084514.29 E450498.83	ELEVATION:

SAMPLE TYPE ▩ GRAB ⊘ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					ORGANIC ROOT MAT
	▩	1			SAND – silty, some gravel, fine to medium grained sand, fine to medium grained gravel; firm; damp; yellowish brown
1.0					GRAVEL – sandy, trace of silt; well graded, sub-rounded grovel; coarse sand; loose; damp; grey – sloughing below 0.5 m
2.0	▩	2			
	▩	3			
3.0					END OF TESTPIT @ 3.0 m – no water – major slough
4.0					
5.0					

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

DEPTH(ft): 0.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 14.0, 16.0

EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: JSB	COMPLETION DEPTH: 3.0 m
	REVIEWED BY: JRT	COMPLETE: 96/08/24
	Fig. No:	Page 1 of 1

96/10/08 12:00AM (YUKON-15)

DUBLIN GULCH MINE ACCESS RD – BORROW	CLIENT: YUKON ENGINEERING SERVICES	TEST PIT NO: 12289-TP16
km 15.5, MT. HALDANE LOOKOUT RD OPTION	EXCAVATOR: CAT 225 BACKHOE	PROJECT NO: 0201-96-12289
NEAR MAYO, YUKON	UTM ZONE: 8 N7084549.07 E450560.52	ELEVATION:

SAMPLE TYPE ▩ GRAB ⊘ NO RECOVERY

DEPTH(m)	SAMPLE TYPE	SAMPLE NO	USC	SOIL SYMBOL	SOIL DESCRIPTION
0.0					SAND AND GRAVEL – some silt, well graded sand; well graded, sub-rounded gravel; compact; damp; grey
	▩	1			
1.0					SAND – some silt; fine grained, uniform sand; firm; damp; light brown
					GRAVEL – sandy, trace of silt; well graded, sub-rounded gravel; coarse graded sand; compact; damp; grey – cobbly below 0.6 m
	▩	2			
2.0					
	▩	3			
3.0					END OF TESTPIT @ 3.0 m – no water – little slough
4.0					
5.0					

STANDARD PENETRATION 10 20 30 40

PLASTIC M.C. LIQUID 10 20 30 40

PERCENT GRAVEL 20 40 60 80

PERCENT SAND 20 40 60 80

PERCENT SILT OR FINES 20 40 60 80

PERCENT CLAY 20 40 60 80

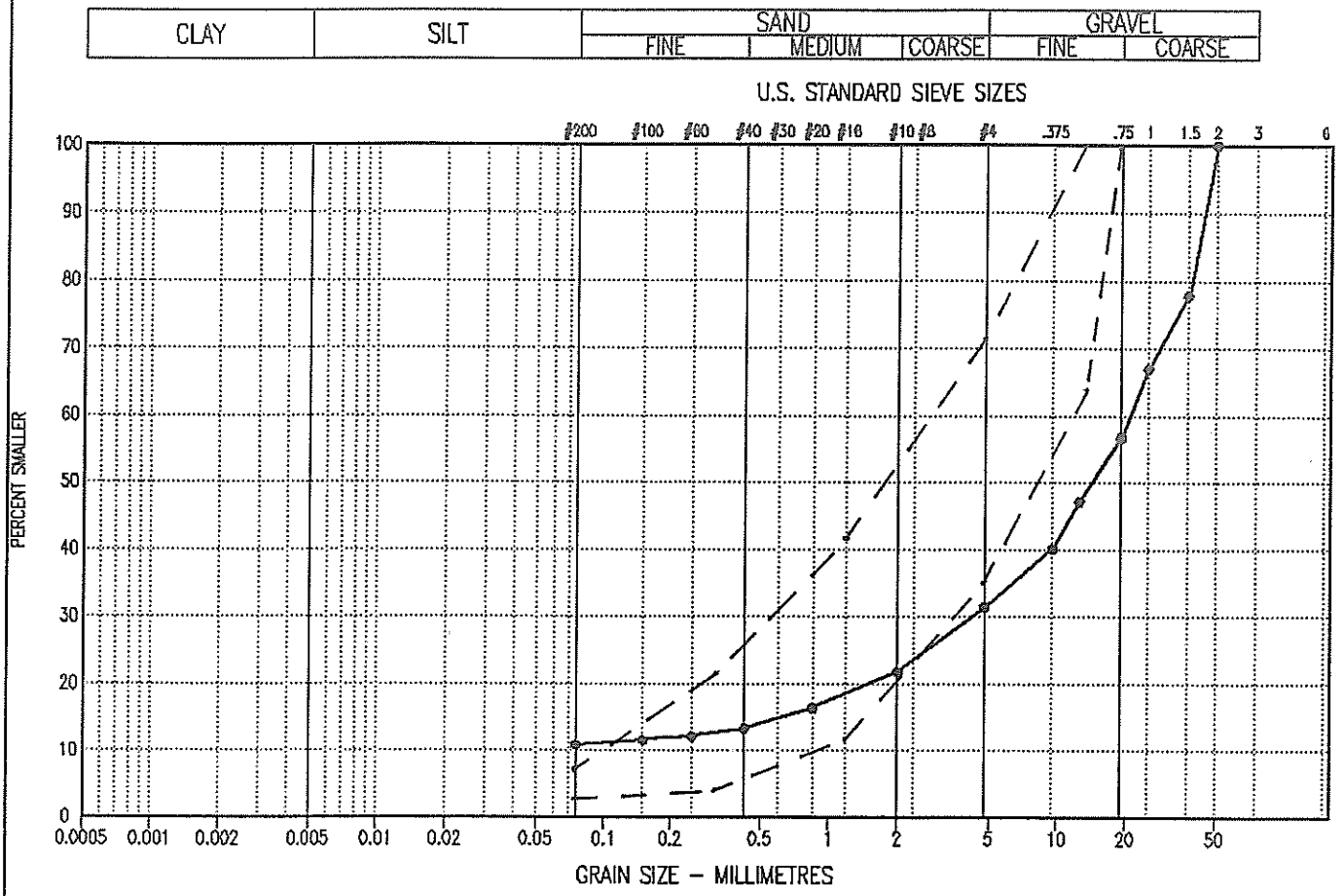
DEPTH(ft) 0.0 2.0 4.0 6.0 8.0 10.0 12.0 14.0 16.0

EBA Engineering Consultants Ltd. Whitehorse, Yukon	LOGGED BY: JSB	COMPLETION DEPTH: 3.0 m
	REVIEWED BY: JRT	COMPLETE: 96/08/24
	Fig. No:	Page 1 of 1

96/10/04 06:40AM (YUKON-TS)

EBA Engineering

PARTICLE SIZE – ANALYSIS OF SOILS



SYMBOL	BOREHOLE NUMBER	DEPTH (m)	DESCRIPTION			Cu	Cc	U.S.C
			CLAY & SILT %	SAND %	GRAVEL %			
●	12289-TP20	1.40 - 1.60	10.8	20.6	68.6	300.9	13.0	GP-GM

Project: 0201-96-12289 Date Tested: 96/10/01 BY: JSB

Tested in accordance with ASTM D422 unless otherwise noted.

EBA Engineering

AGGREGATE ANALYSIS REPORT

Project: DUBLIN GULCH ACCESS ROAD
Address: SOUTH McQUESTEN ROAD, YT

Project Number: 0201-96-12289
Date Sampled: / / By:
Client: YUKON ENGINEERING SERVICES

Attention:

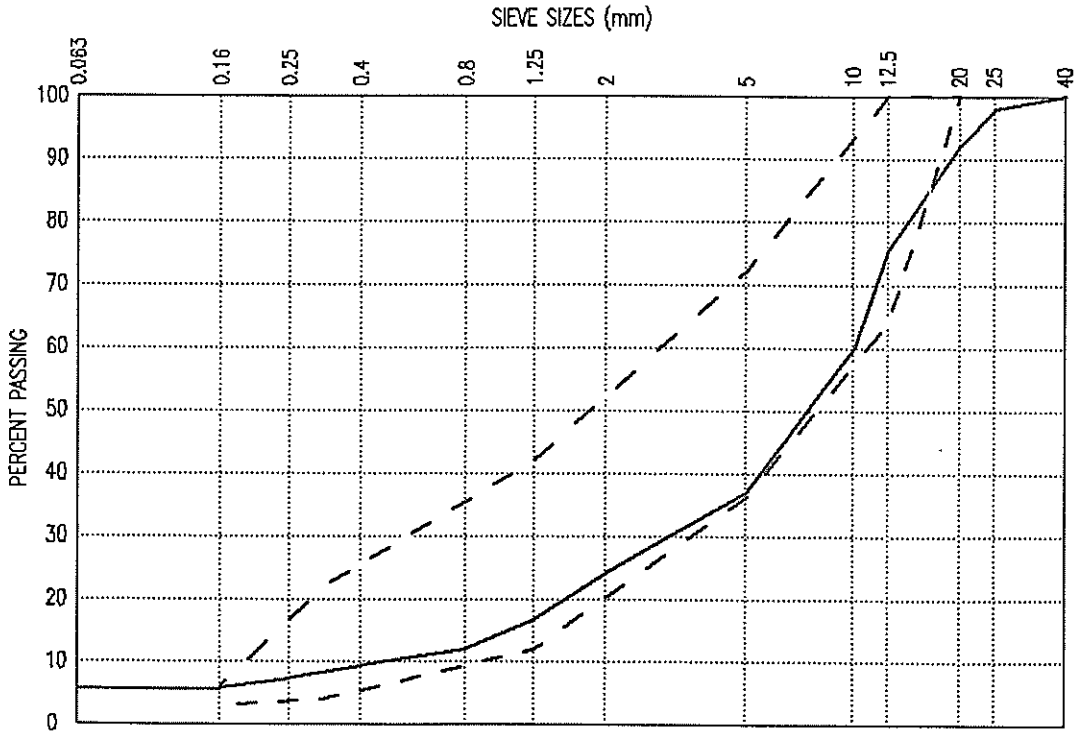
Sample Number: 3702
Sample Location: SECRET CREEK TAILINGS STOCKPILE

Time: Temp:
Date Tested: 96/11/08 By: RY
Natural Moisture Content: 0.1 %
Crushed Faces: Faces:

Soil Description: SAND & GRAVEL, 150mm MAX. TRACE CLAY LUMPS & ORGANIX FIBRES
(SAMPLE WAS CRUSHED TO 20mm TOP SIZE FOR SIEVE ANALYSIS)

Remarks: LOS ANGELES ABRASION RESULT FOR TRIAL CRUSH MATERIALS IS 34.9% LOSS.
(ASTM C131 – GRADING "B") – YTG GRANULAR A SPEC. BAND ALSO SHOWN

Sieve	% Passing
40	100.0
25	97.8
20	92.0
12.5	75.5
10	59.7
5	36.9
2	24.0
1.25	16.6
0.8	12.0
0.4	9.2
0.25	7.2
0.16	5.5
0.063	5.5



Reviewed By:

APPENDIX D: Cost Estimates

#1 Calcite Business Centre
151 Industrial Road
Whitehorse, Yukon, Canada
Y1A 2V3
Tel. (867) 668-2000 Fax. (867) 667-2220

HAGGART CREEK ROAD COST ESTIMATES

The following cost estimates are Class "C".

1. General Road Upgrades, South McQuesten Bridge to Haggart Creek Crossing		
-clearing 12 metre added throughout - 25.2 ha. @ $12,000/ha.		$302,400
-culvert extension and installation – 400 metres @ $900/m		$360,000
-grade raising, ditching, pullout construction, signage, etc. –		$250,000
-surfacing 100 mm crushed gravel- 12,000 m3 @ $35.00/m3-		$420,000
2. Revision Sections		
2.1	Km 25+800 to Km 26+500	$200,000
2.2	Km 23+000 to Km 23+600	$225,000
2.3	Km 19+400 to Km 20+500	$170,000
3. Haggart Creek Overflow Culvert		$ 50,000
4. Secret Creek Culvert, Headwall and Wingwalls		$200,000
Total Estimate		**$2,177,400**

Sincerely yours,

Roy A. Slade, CST.
Managing Partner and COO
Yukon Engineering Services Inc.

APPENDIX E: Haggart and Secret Creek Recommendations

EAGLE GOLD PROJECT
SECRET AND HAGGART CREEK RECOMMENDATIONS

Introduction

As part of the mandate to improve the Haggart Crrek Road (SMR), Yukon Engineering Services Inc. enlisted the support of SNC Lavalin, Montreal and Vancouver, M & M office for improvement recommendations of the site stability and capacity of the existing culvert structure at Secret Creek and the twin culverts crossing at Haggart Creek.

Secret Creek

Observations at Secret Creek Site

It is understood that the creek on the day (July 22, 2010) of visit is at a low flow, such that the water level at the culvert is approximately one third the diameter. As the water level coincides with the corrosion line, this would be the normal flow for quite a long period. At about half of the diameter, there is another line of corrosion mark, indicating the normal high water level and anything above that would indicate floods of long return periods (Photograph 1). Above that, there is a general sign of corrosion that the galvanizing has depleted and the steel plate is rusted. At both inlet and outlet, there are signs of torn metal and slight deformation at edge, indicating possible settlement of fill and culvert itself. It is also an indication of a bedding defect.

The side slopes at inlet form a prominent U shape arrangement with the culvert at the tip of the U. The invert of the creek immediately in front of the inlet is deepened into a stilling pond and the water is pretty calm. At the outlet, the side slopes form a sharp V and the discharge is quite turbulent with potential scouring and erosion of side slopes.

Along the top edge of the inlet head slopes, there is a prominent crack line in the fill, indicating settlement of the newly maintained head slope. The gradient of the slope appears to be greater than 1:1, and the road surface above forms a noticeable restriction. Painted rubble is placed along the top of the slope as a warning to vehicle traffic.

Analysis

The instability of the road surface is a direct result of insufficient length of the culvert that forces steep head and side slopes. That in turn, as a result of erosion, has resulted in the loss of road surface. During high water, the side slopes would be subject to progressive erosion as the stilling pond would not be sufficient to slow down the flow. At the outlet, the flow would be more severe during high flows and so the risk of erosion would be more severe.

Proposed Improvement

- Install sufficiently sized culvert to carry 100 year event
- Improve the stream beds by installing scour protection at inlet and outlet.
- Install crib walls along both side slopes of inlet and outlet to protect side slope from erosion, and keep the slope above the wall more gentle, possibly 1V:1.5H.
- Install head walls across the culvert at both inlet and outlet so as to tie them across. Keep head slopes more gentle, at 1V:1.5H.
- Maintain vegetation cover over all slopes to improve surface washout.
- Install reflective markers or railing along both sides of roadway for improved safety.

Haggart Creek

Observation at Haggart Creek Site

The creek bed is filled with an embankment to form a roadway which is wider than the adjacent sections. The fill is well maintained and shows no sign of distress. The inlet head slope is armored with riprap above the water level while natural vegetation is starting to take root on the outlet head slope.

Of the two culverts, the smaller and older one is badly deformed at outlet. Both culverts are only mildly corroded at the flow mark. Inlet flow is turbulent but the flow outlet is calm. The main flow apparently is carried by the newer and larger culvert but the inlet

water is already half way full. All side slopes of the creek appear well maintained and show indications of major river training effort.

Analysis

According to hydrological data, the creek/culvert system does not appear to handle the 1:100 year flood.

Proposed Improvement

Pending a geotechnical investigation, this site could be improved with either:

1. a bridge installation adjacent to the existing road, and subsequently removal of the embankment and existing culverts across the stream bed, freeing the stream for the higher flow of 1 in 100 year flood event.

- The bridge would be a steel Bailey bridge with floor beams and timber deck; capable of carrying one lane traffic with the heaviest vehicle being the fully loaded B-train fuel truck.
- The girders would be supported by pre-cast concrete pile cap and steel screw piles. Foundation configuration is subject to geotechnical investigation results and recommendations.
- Install riprap around abutment to protect washout in high flood periods.
- The above proposal is based on small components capable of delivery to site and assembled without the use of heavy lifting equipment.
- For optimum efficiency, one bore hole would be drilled in each abutment location.

2. or, the addition of an overflow culvert. It appears from the site visit that the existing culverts are handling the present flow quite well and if additional capacity is needed, could be provided by an additional culvert. This new culvert could be pushed through the existing fill with the invert above the present water level, thus avoiding in-stream work which would impact on the fish habitat.

EAGLE GOLD PROJECT
SECRET AND HAGGART CREEK RECOMMENDATIONS

- Based on the discharge capacity of the existing culverts, determine the size of additional culvert which would act as overflow culvert for high flood water only.
- Improve scour resistance of stream invert at inlets to existing culverts by installing riprap.

Photograph 1 Secret Creek - Inlet


Photograph 2 Secret Creek - Fill failing

Photograph 3 Secret Creek – Outlet to Haggart Creek

Photograph 4 Haggart Creek - Inlet

Photograph 5 Haggart Creek – Outlet

Photograph 6 Proposed location of overflow CSP

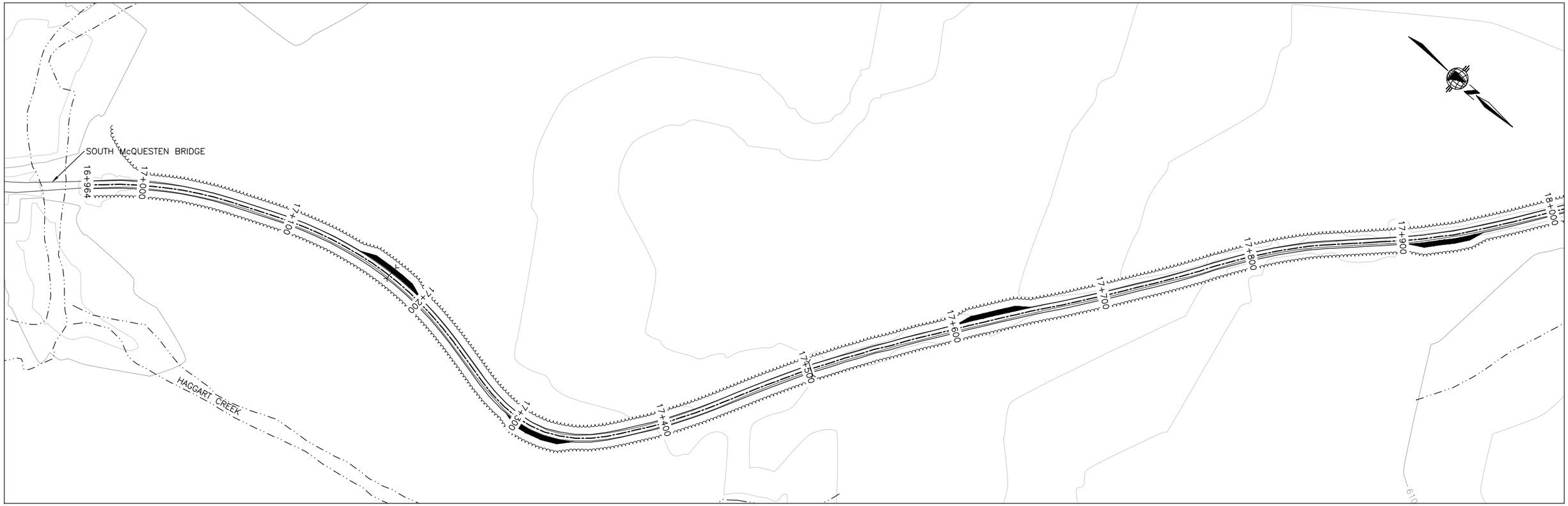
PRELIMINARY PLAN/PROFILE DRAWINGS FOR

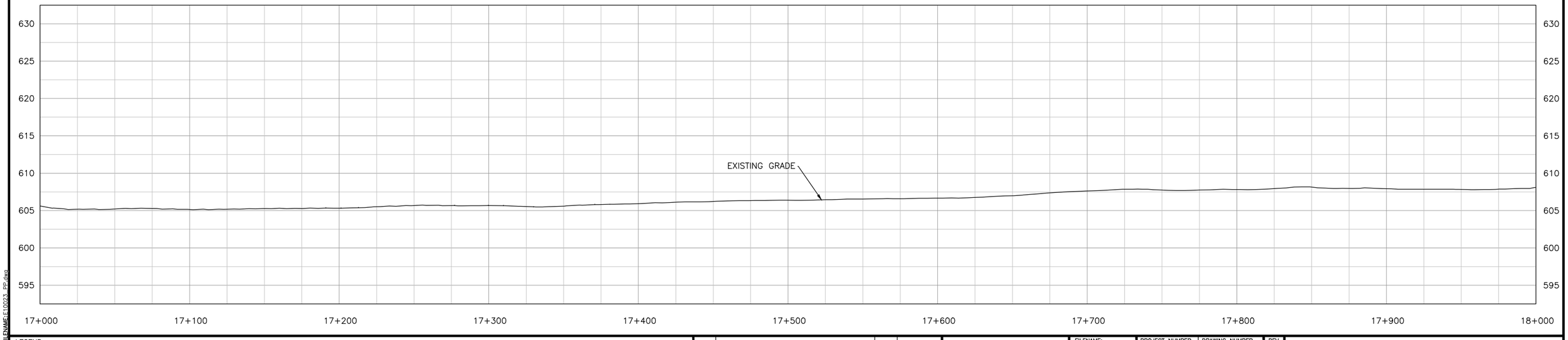
VICTORIA GOLD

EAGLE PROPERTY, YUKON

2010

YUKON ENGINEERING SERVICES





LEGEND

- PR ALIGNMENT CENTERLINE
- EX ROAD SHOULDER
- EX WATER COURSE
- PR PULLOUT
- CLEARING LIMITS
- CULVERT

NO	DESCRIPTION	BY	DATE

SCALE:	
	DATE
DESIGNED BY: YES	29/07/10
DRAWN BY: RSC	29/07/10
CHECKED BY:	dd/mm/yy
APPROVED BY:	

FILENAME:	PROJECT NUMBER	DRAWING NUMBER	REV.
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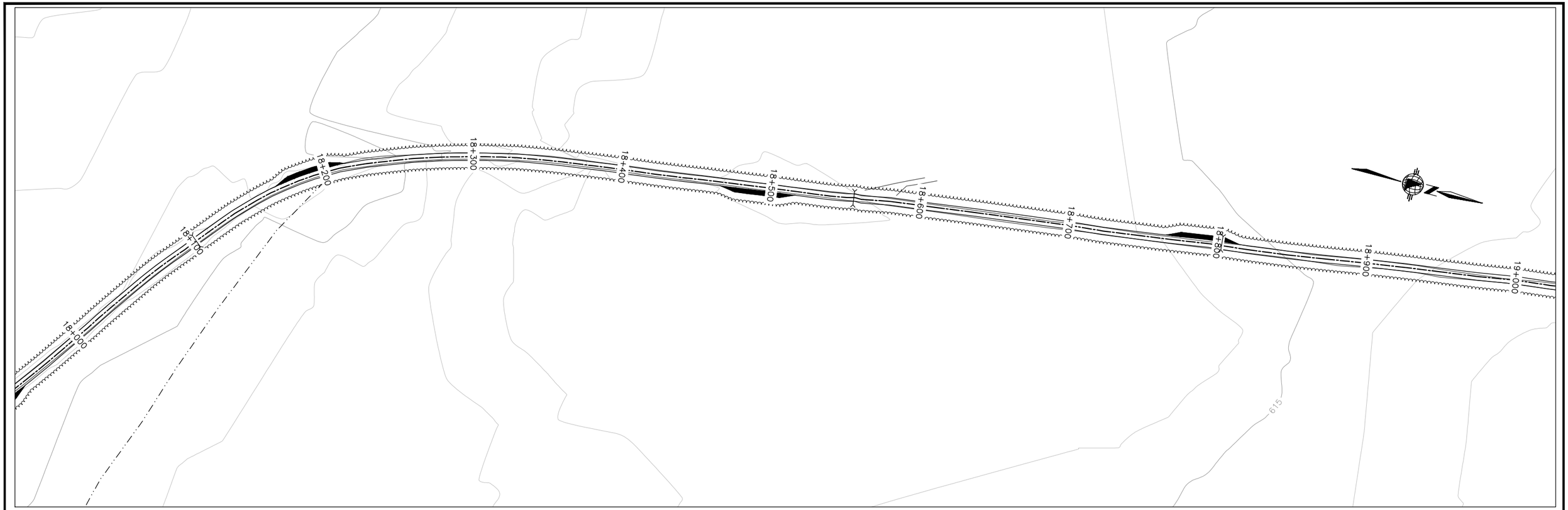
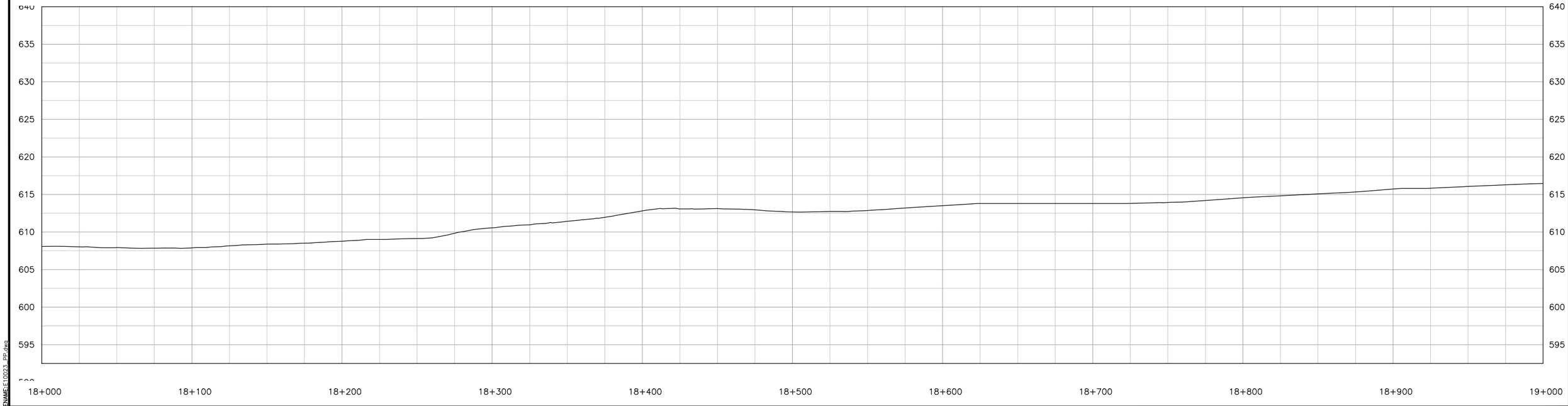
YUKON ENGINEERING SERVICES

EAGLE GOLD PROPERTY ACCESS ROAD

VICTORIA GOLD

PLOT DATE: 7/29/2010 FILENAME: E10023_PP.dwg





LEGEND

- PR ALIGNMENT CENTERLINE
- EX ROAD SHOULDER
- EX WATER COURSE
- PR PULLOUT
- CLEARING LIMITS
- CULVERT

NO	DESCRIPTION	BY	DATE

SCALE:	
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CHECKED BY:	dd/mm/yy
APPROVED BY:	

FILENAME:	PROJECT NUMBER	DRAWING NUMBER	REV.
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YUKON ENGINEERING SERVICES

EAGLE GOLD PROPERTY ACCESS ROAD

VICTORIA GOLD

PLAN / PROFILE
18+000 to 19+000

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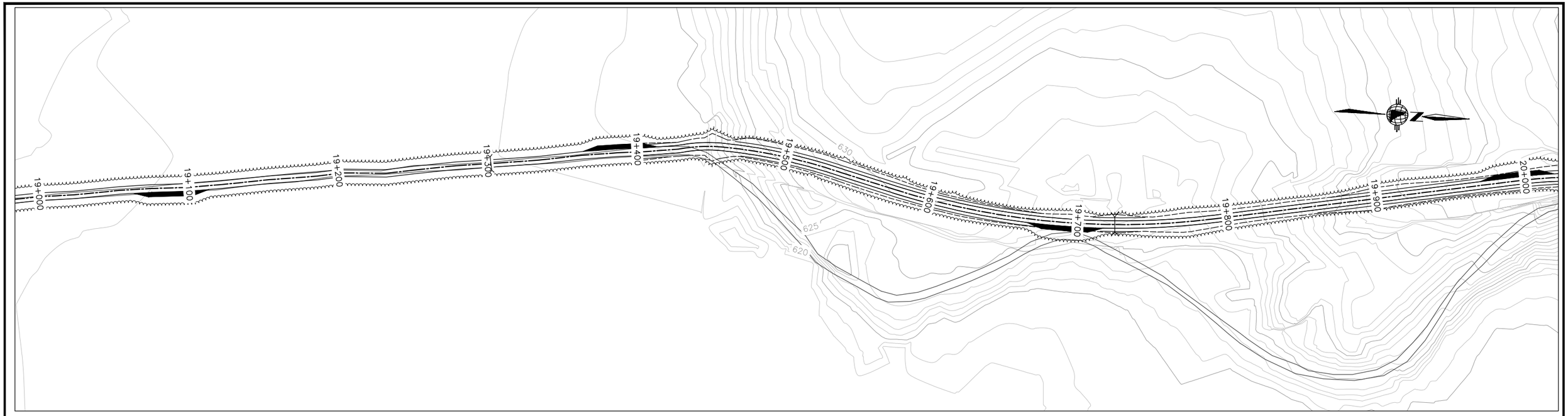
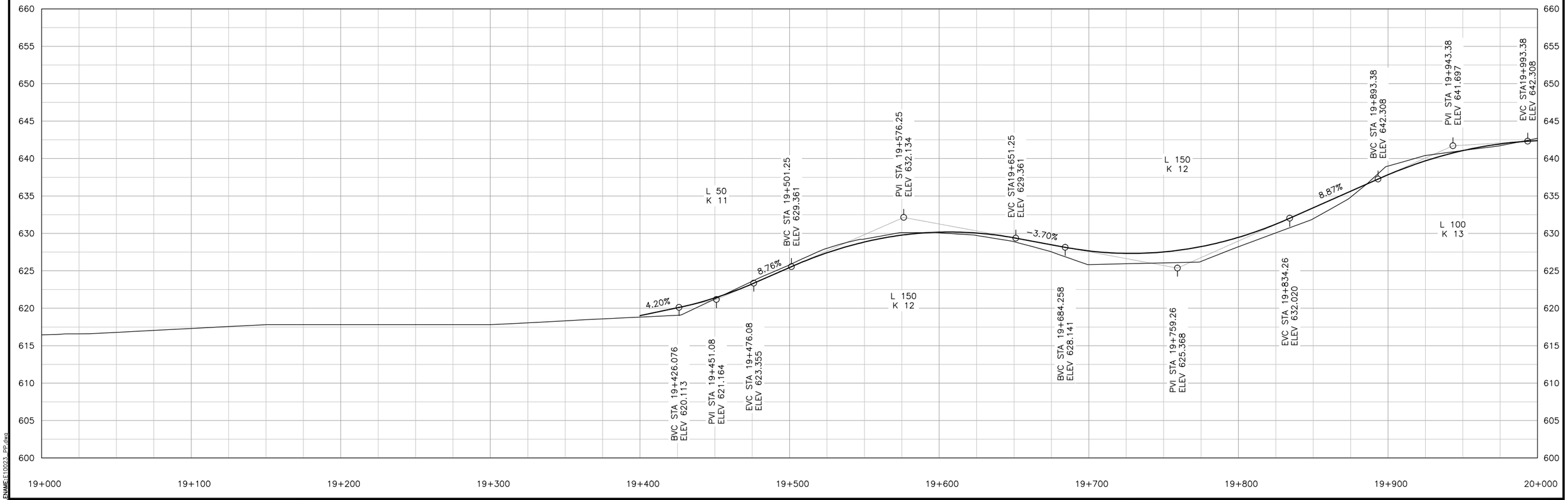
PLOT DATE: 7/29/2010





LEGEND

- PR ALIGNMENT CENTERLINE
- EX ROAD SHOULDER
- EX WATER COURSE
- PR PULLOUT
- CLEARING LIMITS
- CULVERT

NO	DESCRIPTION	BY	DATE

SCALE:

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CHECKED BY:	dd/mm/yy
APPROVED BY:	

FILENAME:	PROJECT NUMBER	DRAWING NUMBER	REV.
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YUKON ENGINEERING SERVICES

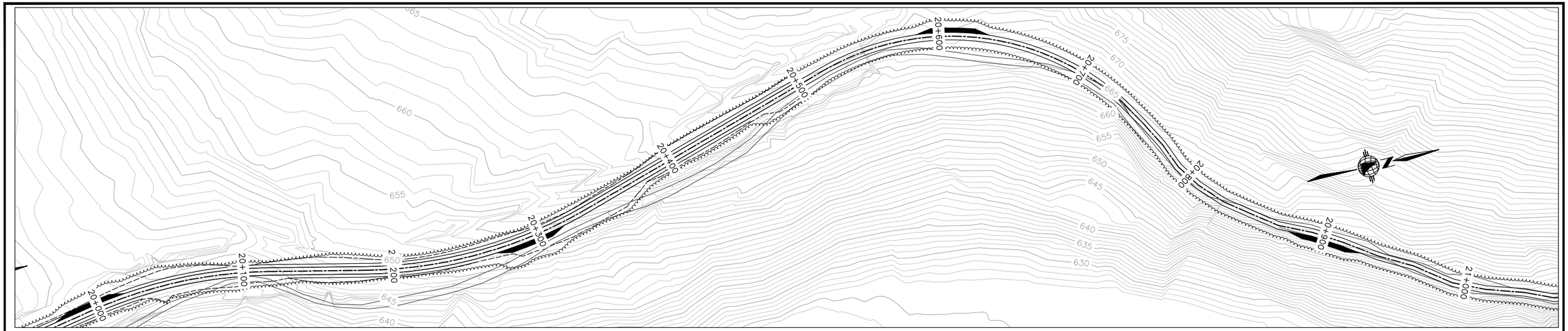
EAGLE GOLD PROPERTY ACCESS ROAD

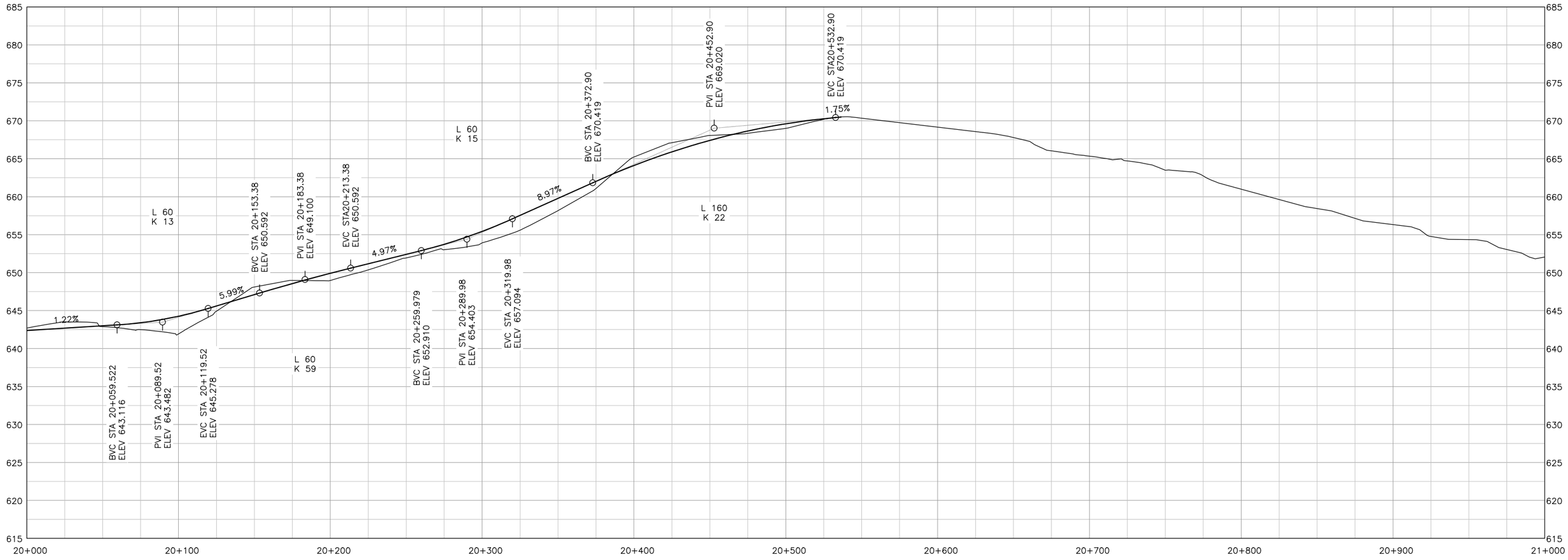
VICTORIA GOLD

PLAN / PROFILE
19+000 to 20+000

FILENAME:E10023_PP.dwg

PLOT DATE: 7/29/2010





LEGEND

- PR ALIGNMENT CENTERLINE
- EX ROAD SHOULDER
- EX WATER COURSE
- PR PULLOUT
- CLEARING LIMITS
- CULVERT

NO	DESCRIPTION	BY	DATE

SCALE:	
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APPROVED BY:	

FILENAME:	PROJECT NUMBER	DRAWING NUMBER	REV.
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YUKON ENGINEERING SERVICES

EAGLE GOLD PROPERTY ACCESS ROAD

VICTORIA GOLD

PLAN / PROFILE
20+000 to 21+000

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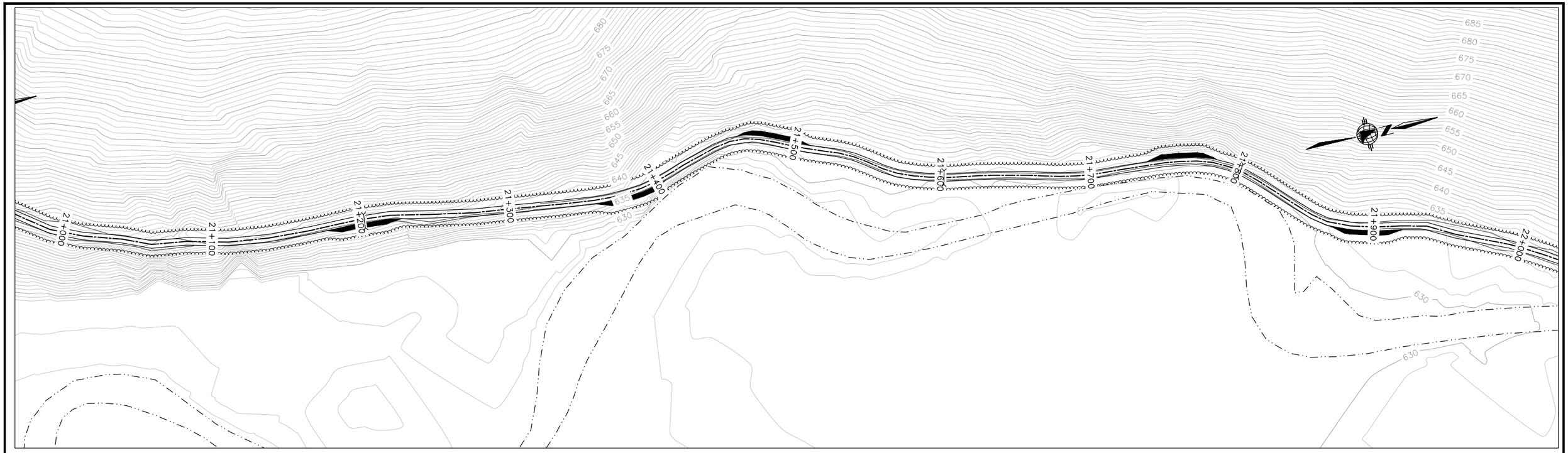
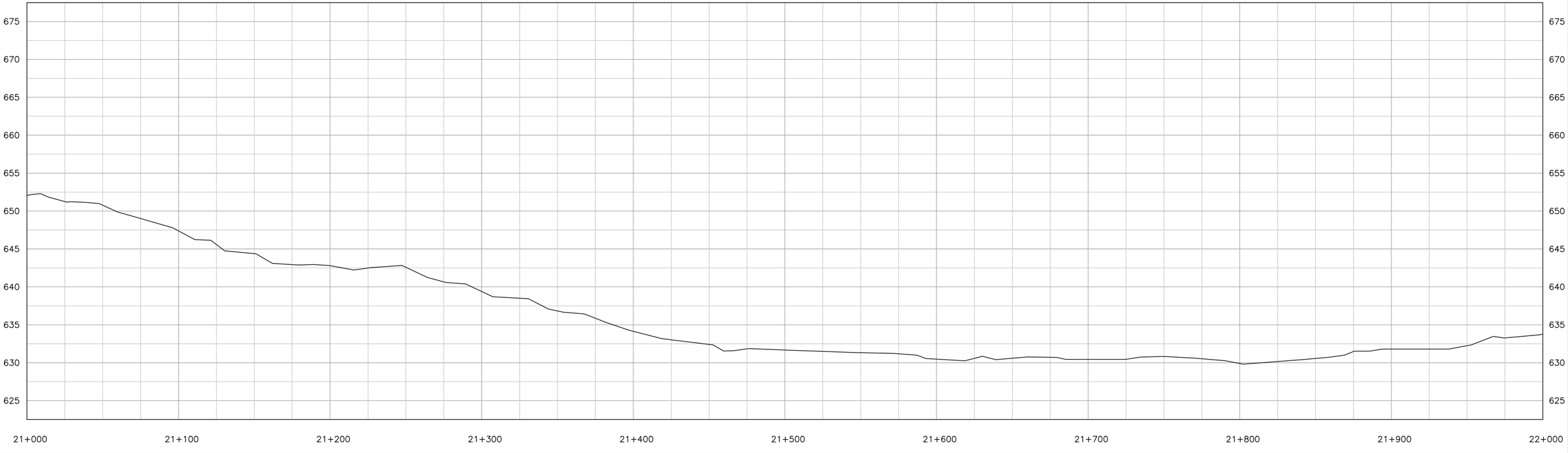
PLOT DATE: 7/29/2010





LEGEND

- PR ALIGNMENT CENTERLINE
- EX ROAD SHOULDER
- EX WATER COURSE
- PR PULLOUT
- CLEARING LIMITS
- CULVERT

NO	DESCRIPTION	BY	DATE

SCALE:	
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DRAWN BY: RSC	29/07/10
CHECKED BY:	dd/mm/yy
APPROVED BY:	

FILENAME:	PROJECT NUMBER	DRAWING NUMBER	REV.
E10023	E10023	6 of 22	0

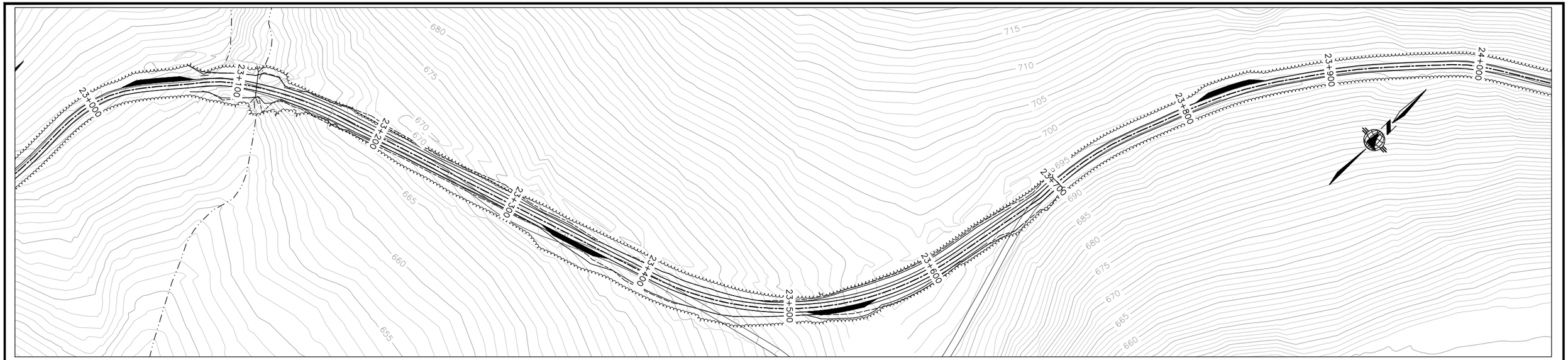
YUKON ENGINEERING SERVICES

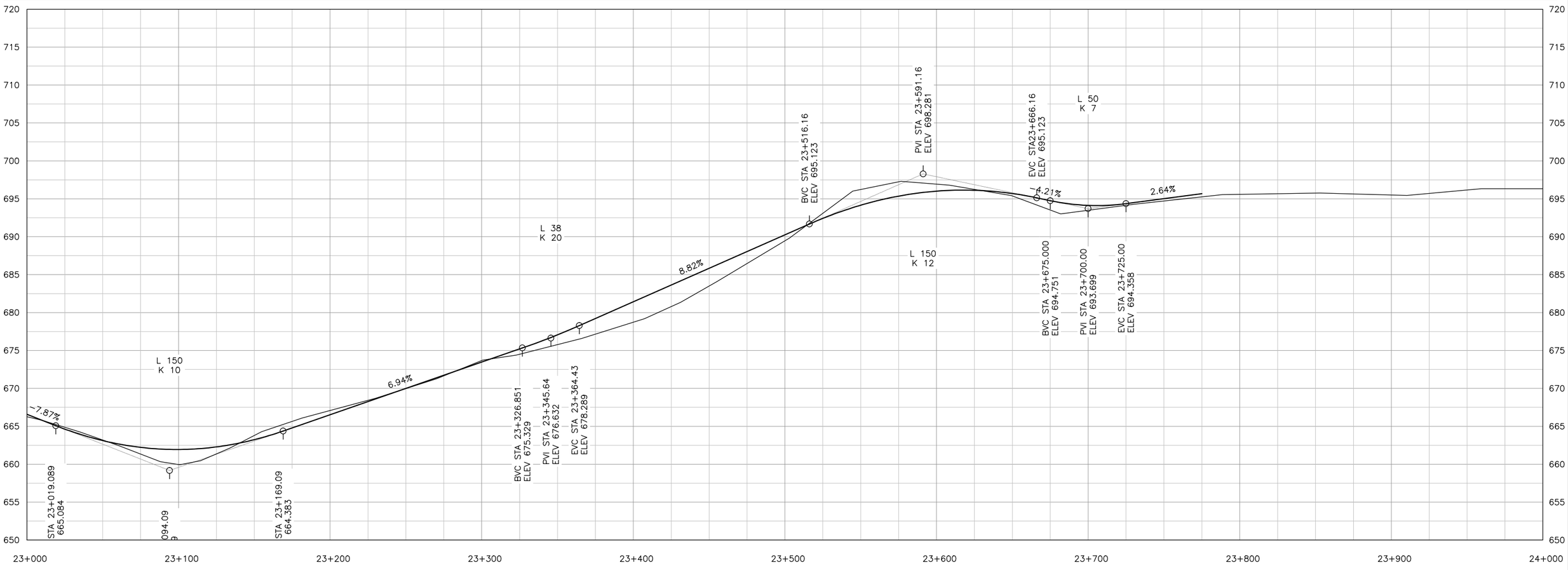
EAGLE GOLD PROPERTY ACCESS ROAD

VICTORIA GOLD

PLAN / PROFILE
21+000 to 22+000

PLOT DATE: 7/29/2010 FILENAME:E10023_PP.dwg





LEGEND

- PR ALIGNMENT CENTERLINE
- EX ROAD SHOULDER
- EX WATER COURSE
- PR PULLOUT
- CLEARING LIMITS
- CULVERT

NO	DESCRIPTION	BY	DATE

SCALE:	
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DESIGNED BY: YES	29/07/10
DRAWN BY: RSC	29/07/10
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APPROVED BY:	

FILENAME:	PROJECT NUMBER	DRAWING NUMBER	REV.
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YUKON ENGINEERING SERVICES

EAGLE GOLD PROPERTY ACCESS ROAD

VICTORIA GOLD

PLAN / PROFILE
23+000 to 24+000

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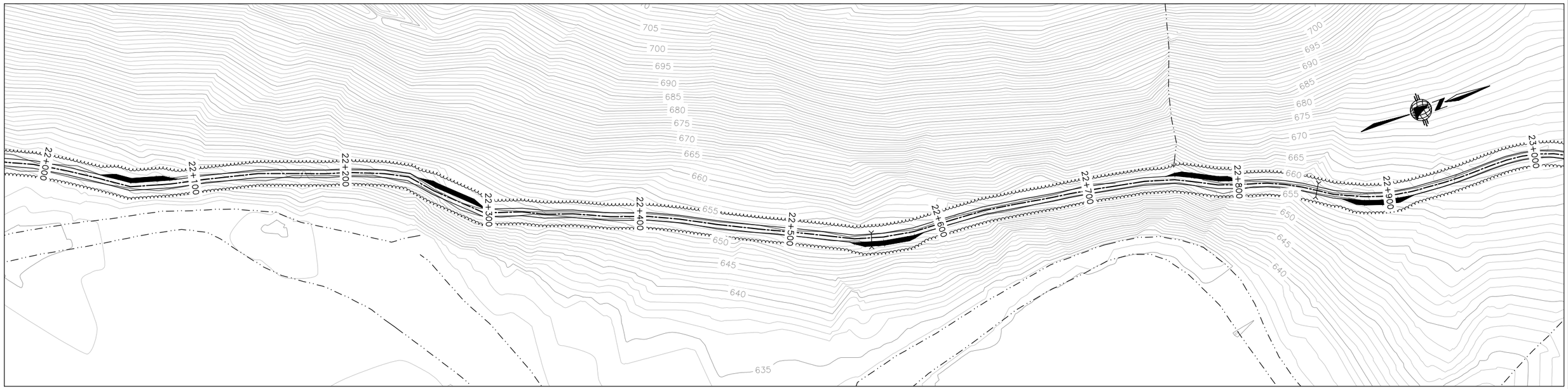

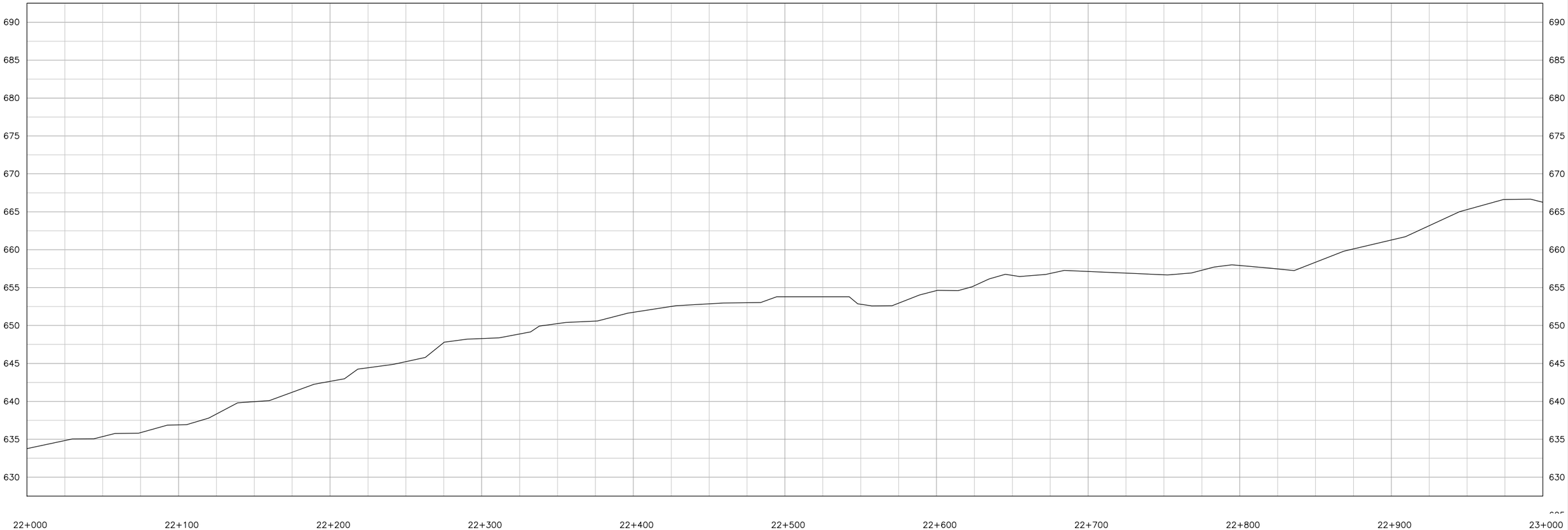

LEGEND

- PR ALIGNMENT CENTERLINE
- EX ROAD SHOULDER
- EX WATER COURSE
- PR PULLOUT
- CLEARING LIMITS
- CULVERT

NO	DESCRIPTION	BY	DATE

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DRAWN BY: RSC	29/07/10
CHECKED BY:	dd/mm/yy
APPROVED BY:	

FILENAME:	PROJECT NUMBER	DRAWING NUMBER	REV.
E10023	E10023	7 of 22	0

YUKON ENGINEERING SERVICES

EAGLE GOLD PROPERTY ACCESS ROAD

VICTORIA GOLD

PLAN / PROFILE
22+000 to 23+000

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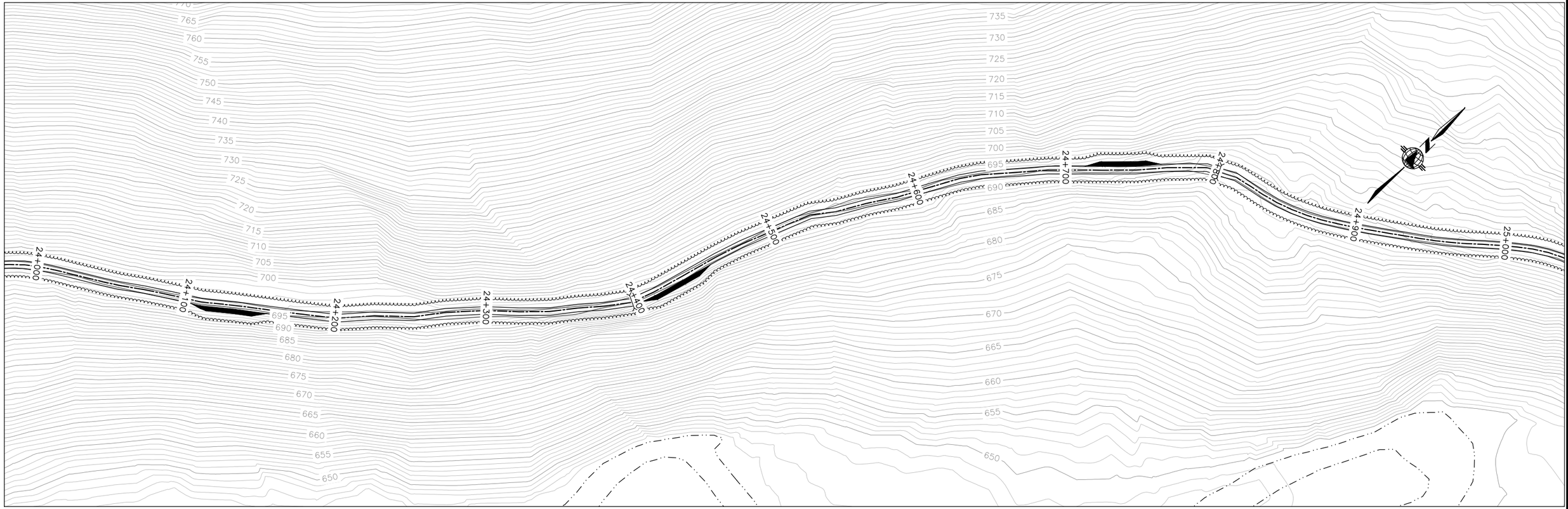
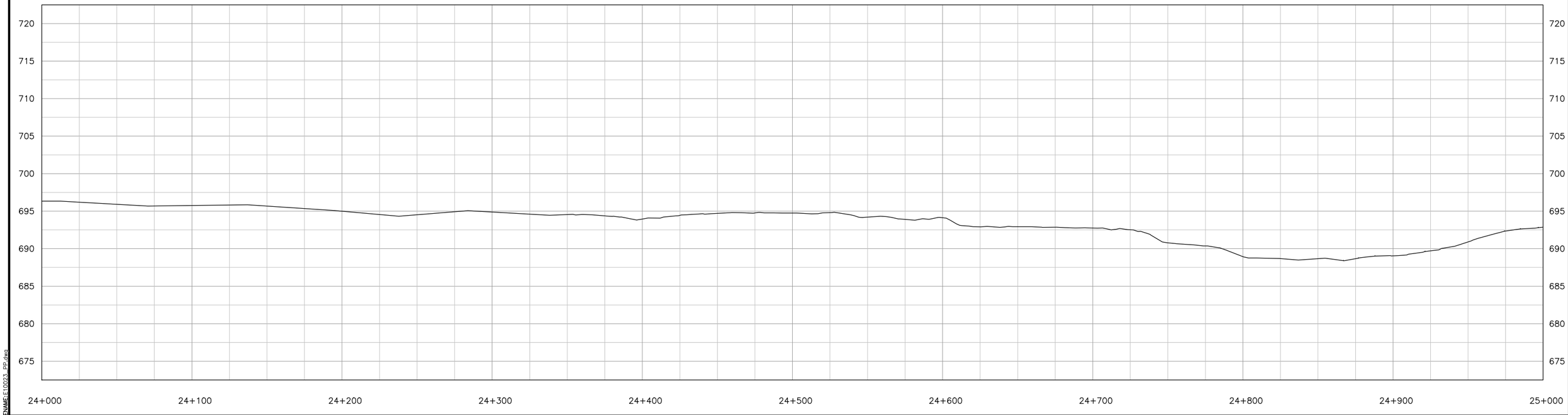
PLOT DATE: 7/29/2010





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- EX WATER COURSE
- PR PULLOUT
- CLEARING LIMITS
- CULVERT

NO	DESCRIPTION	BY	DATE

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FILENAME:	PROJECT NUMBER	DRAWING NUMBER	REV.
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YUKON ENGINEERING SERVICES

EAGLE GOLD PROPERTY ACCESS ROAD

VICTORIA GOLD

PLAN / PROFILE
24+000 to 25+000

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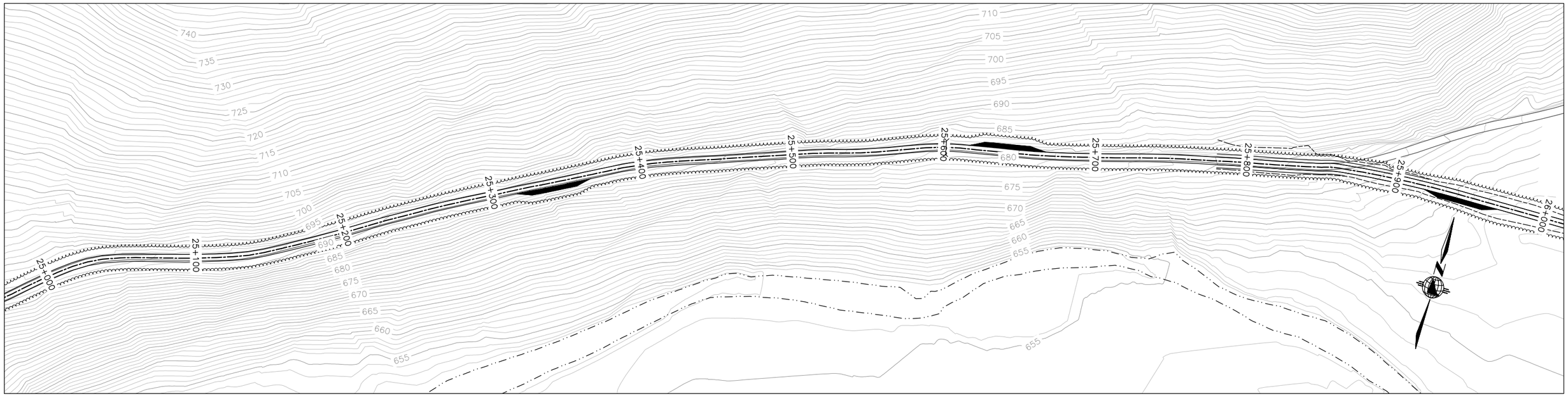
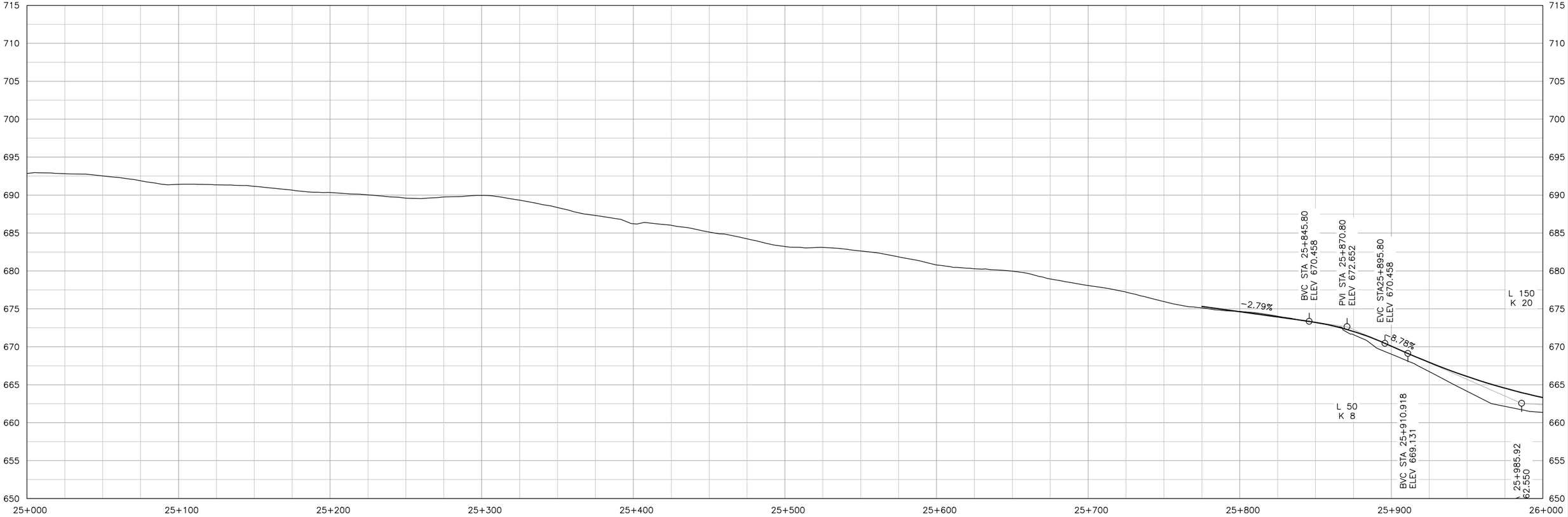
PLOT DATE: 7/29/2010





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- EX WATER COURSE
- PR PULLOUT
- CLEARING LIMITS
- CULVERT

NO	DESCRIPTION	BY	DATE

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CHECKED BY:	dd/mm/yy
APPROVED BY:	

FILENAME:	PROJECT NUMBER	DRAWING NUMBER	REV.
E10023	E10023	10 of 22	0

YUKON ENGINEERING SERVICES

EAGLE GOLD PROPERTY ACCESS ROAD

VICTORIA GOLD

PLAN / PROFILE
25+000 to 26+000

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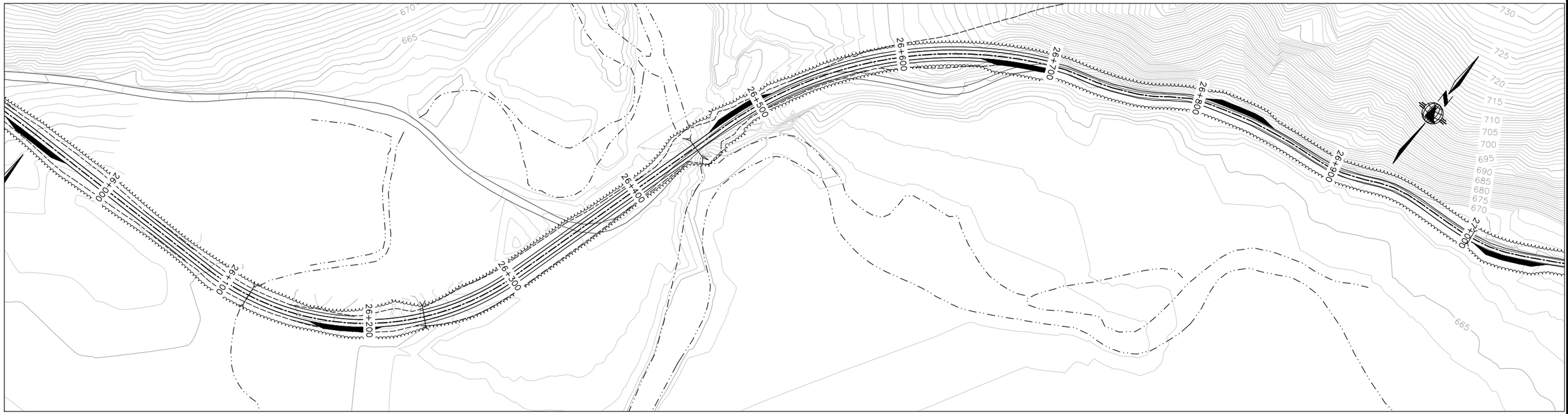

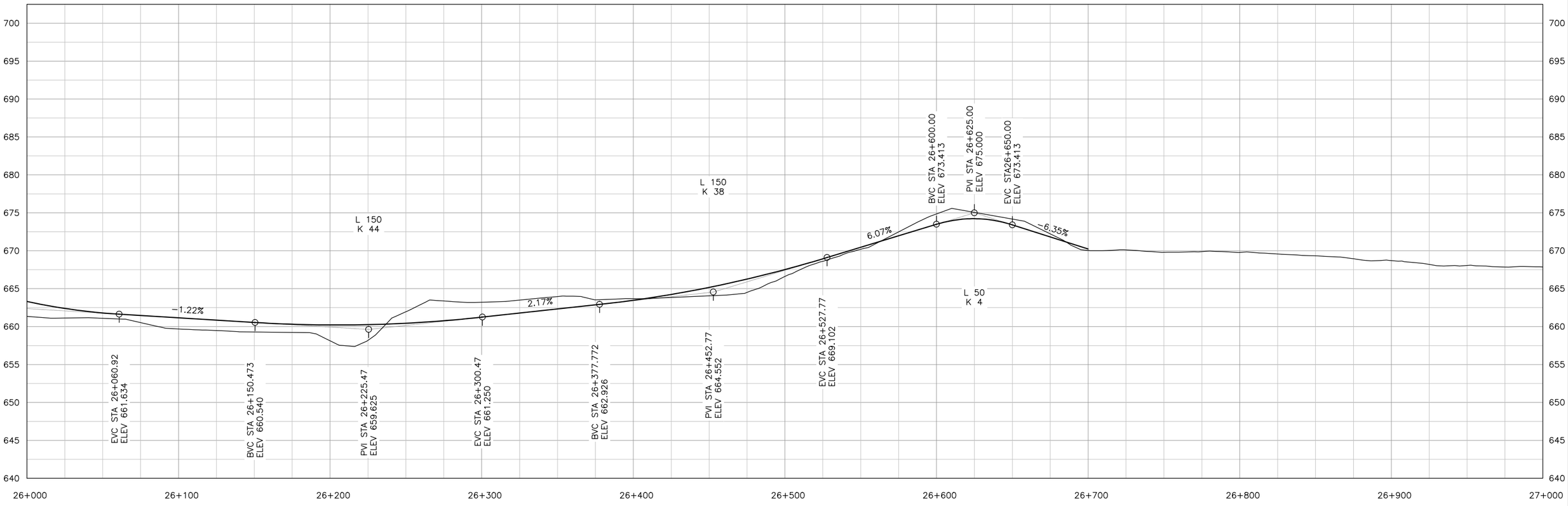

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- PR PULLOUT
- CLEARING LIMITS
- CULVERT

NO	DESCRIPTION	BY	DATE

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APPROVED BY:	

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YUKON ENGINEERING SERVICES

EAGLE GOLD PROPERTY ACCESS ROAD

VICTORIA GOLD

PLAN / PROFILE
26+000 to 27+000

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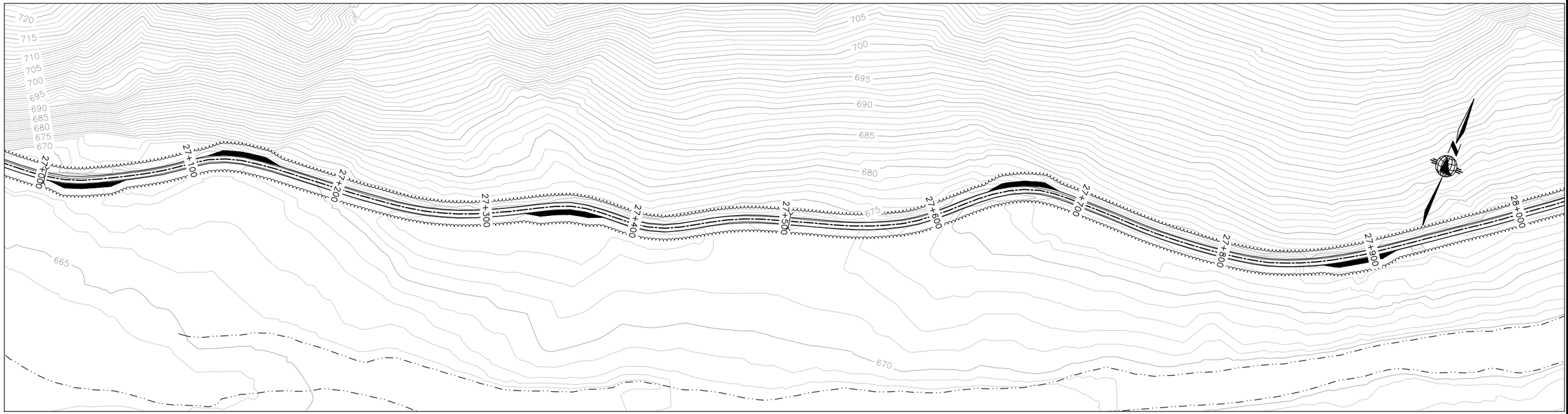

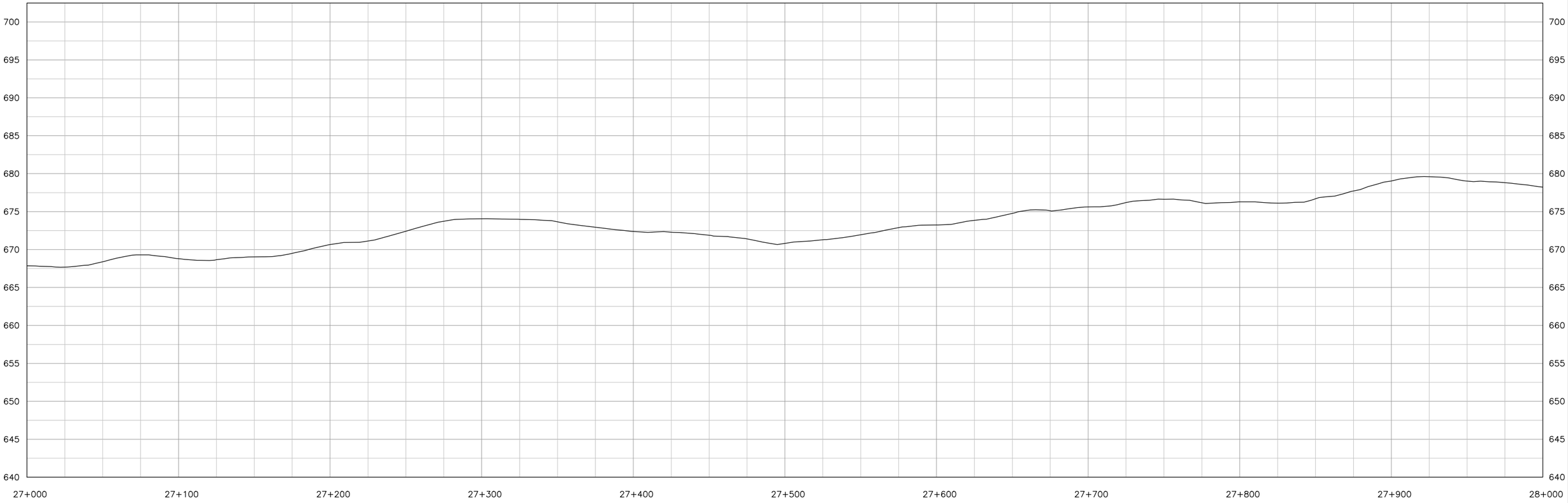

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- EX WATER COURSE
- PR PULLOUT
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- CULVERT

NO	DESCRIPTION	BY	DATE

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APPROVED BY:	

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YUKON ENGINEERING SERVICES

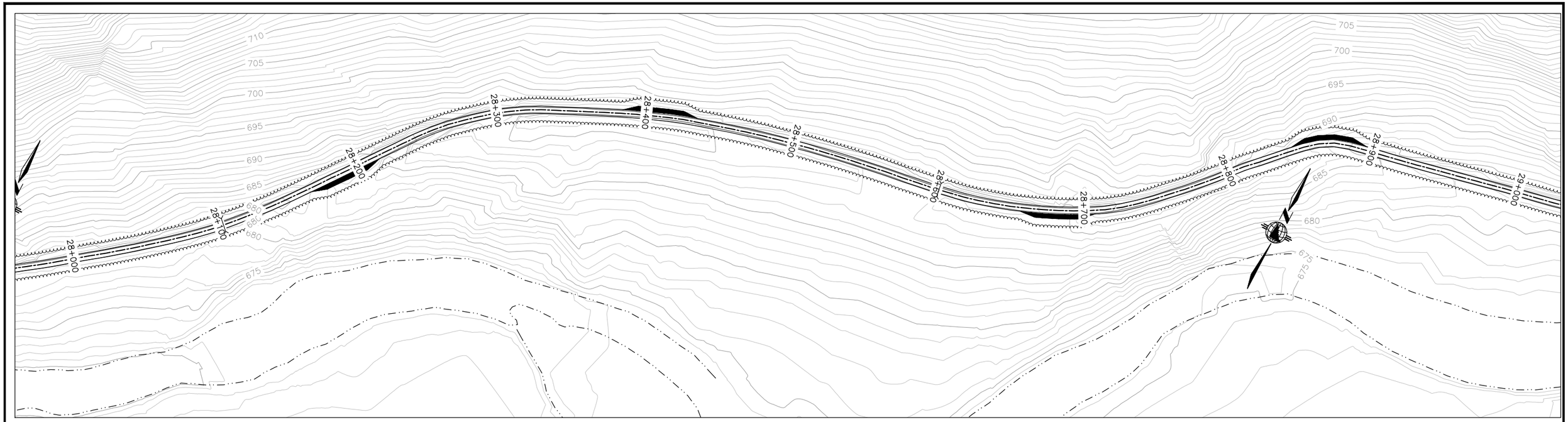
EAGLE GOLD PROPERTY ACCESS ROAD

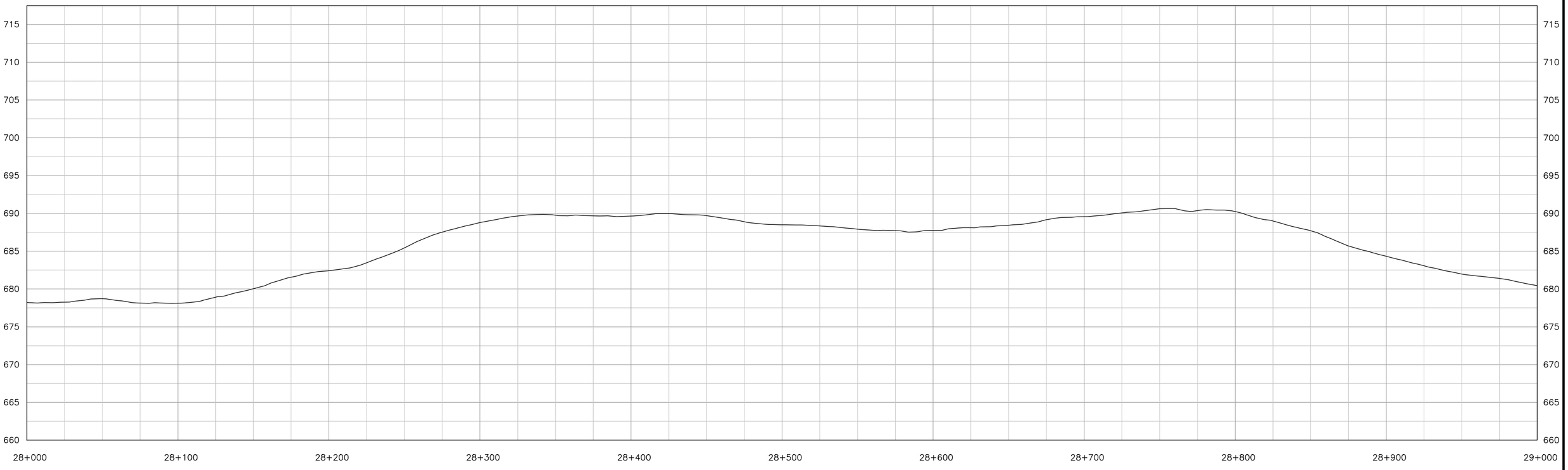
VICTORIA GOLD

PLAN / PROFILE
27+000 to 28+000

FILENAME: E10023_PP.dwg

PLOT DATE: 7/29/2010





LEGEND

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- EX WATER COURSE
- PR PULLOUT
- CLEARING LIMITS
- CULVERT

NO	DESCRIPTION	BY	DATE

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CHECKED BY:	dd/mm/yy
APPROVED BY:	

FILENAME:	PROJECT NUMBER	DRAWING NUMBER	REV.
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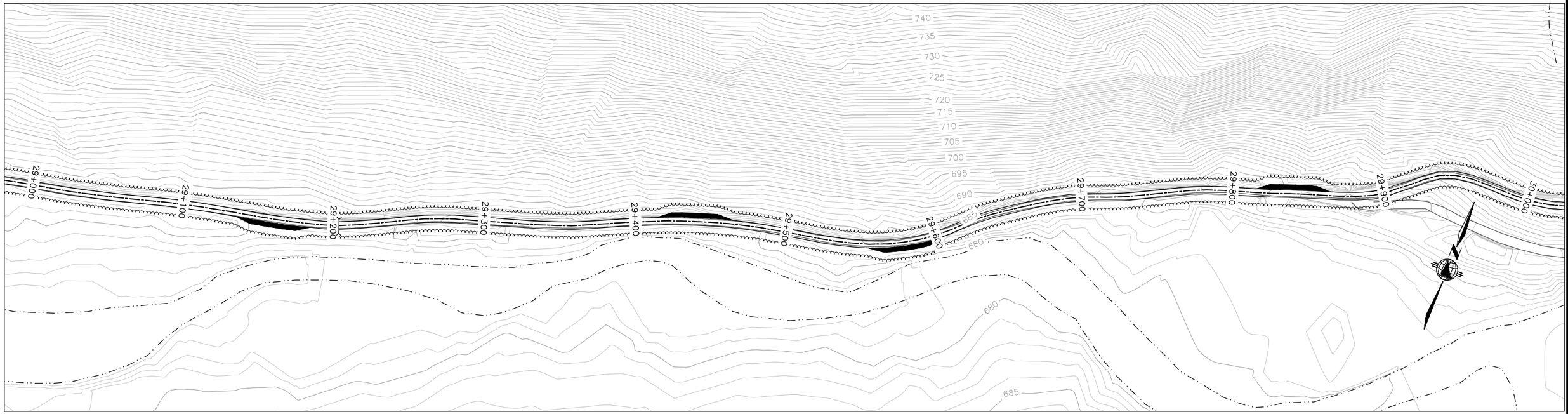
YUKON ENGINEERING SERVICES

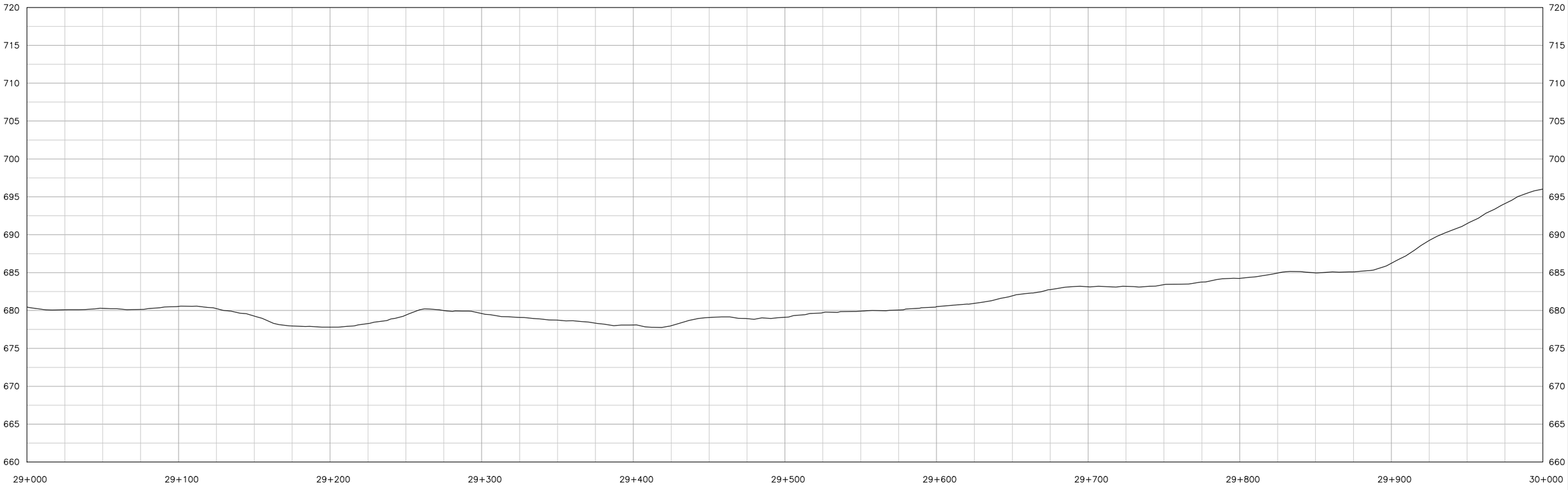
EAGLE GOLD PROPERTY ACCESS ROAD

VICTORIA GOLD

PLAN / PROFILE
27+000 to 28+000

PLOT DATE: 7/29/2010 FILENAME: E10023_PP.dwg





LEGEND

- PR ALIGNMENT CENTERLINE
- EX ROAD SHOULDER
- EX WATER COURSE
- PR PULLOUT
- CLEARING LIMITS
- CULVERT

NO	DESCRIPTION	BY	DATE

SCALE:	
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DRAWN BY: RSC	29/07/10
CHECKED BY:	dd/mm/yy
APPROVED BY:	

FILENAME:	PROJECT NUMBER	DRAWING NUMBER	REV.
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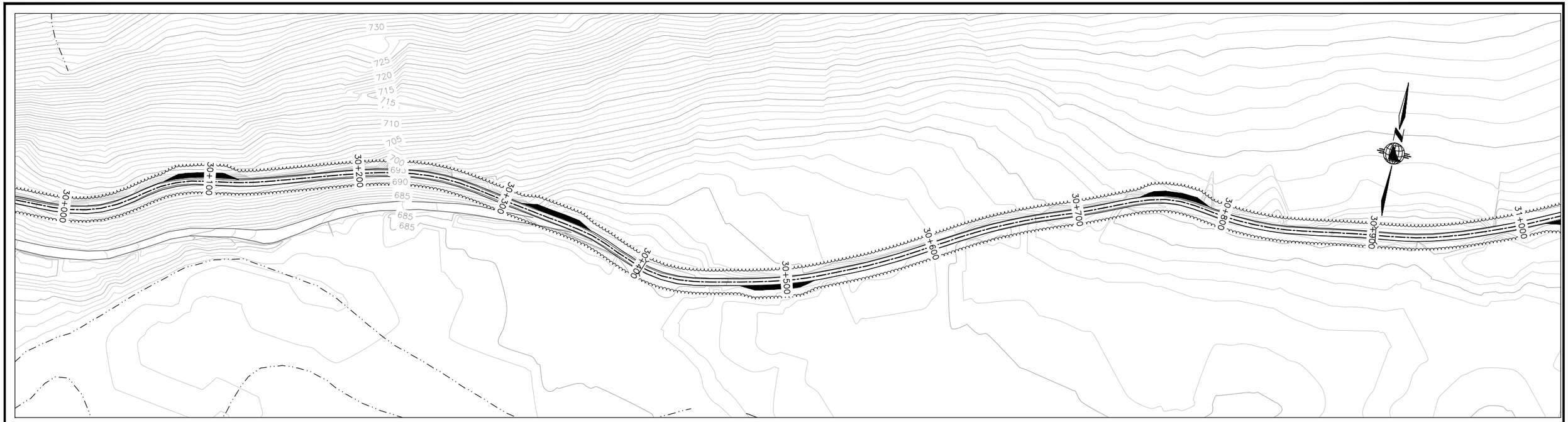
YUKON ENGINEERING SERVICES

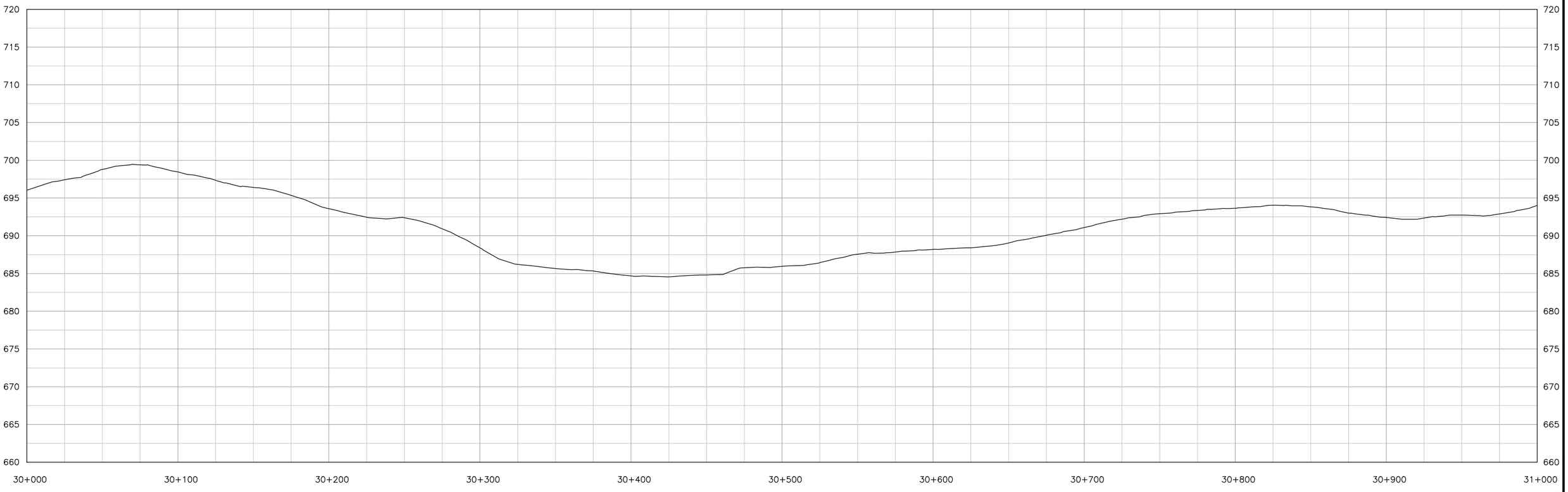
EAGLE GOLD PROPERTY ACCESS ROAD

VICTORIA GOLD

PLAN / PROFILE
29+000 to 30+000

PLOT DATE: 7/29/2010 FILENAME: E10023_PP.dwg





LEGEND

- PR ALIGNMENT CENTERLINE
- EX ROAD SHOULDER
- EX WATER COURSE
- PR PULLOUT
- CLEARING LIMITS
- CULVERT

NO	DESCRIPTION	BY	DATE

SCALE:	
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CHECKED BY:	dd/mm/yy
APPROVED BY:	

FILENAME:	PROJECT NUMBER	DRAWING NUMBER	REV.
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YUKON ENGINEERING SERVICES

EAGLE GOLD PROPERTY ACCESS ROAD

VICTORIA GOLD

PLAN / PROFILE
30+000 to 31+000

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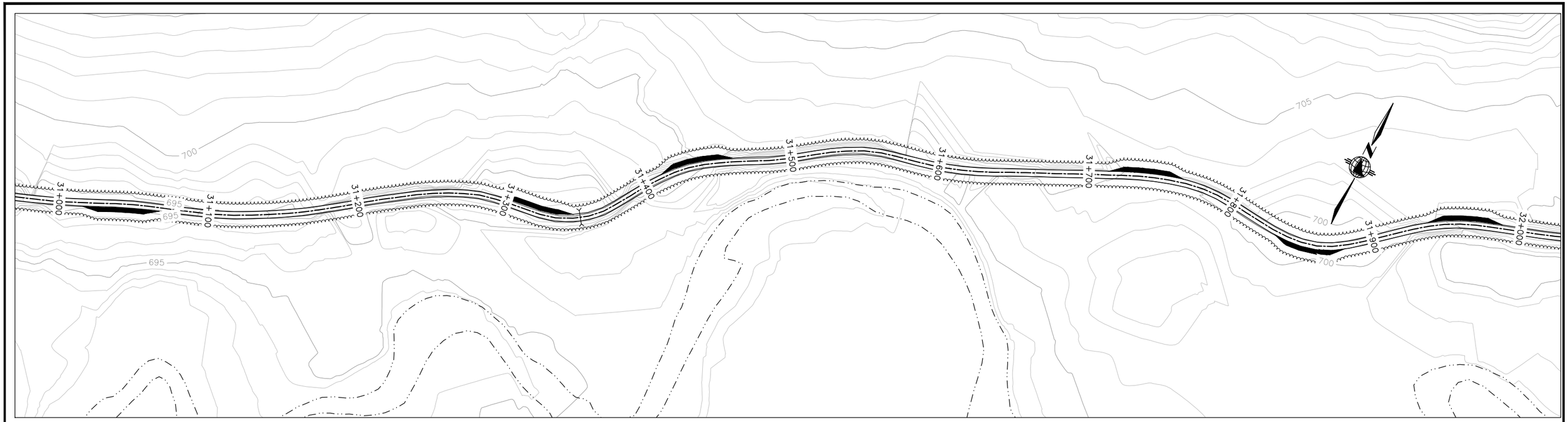
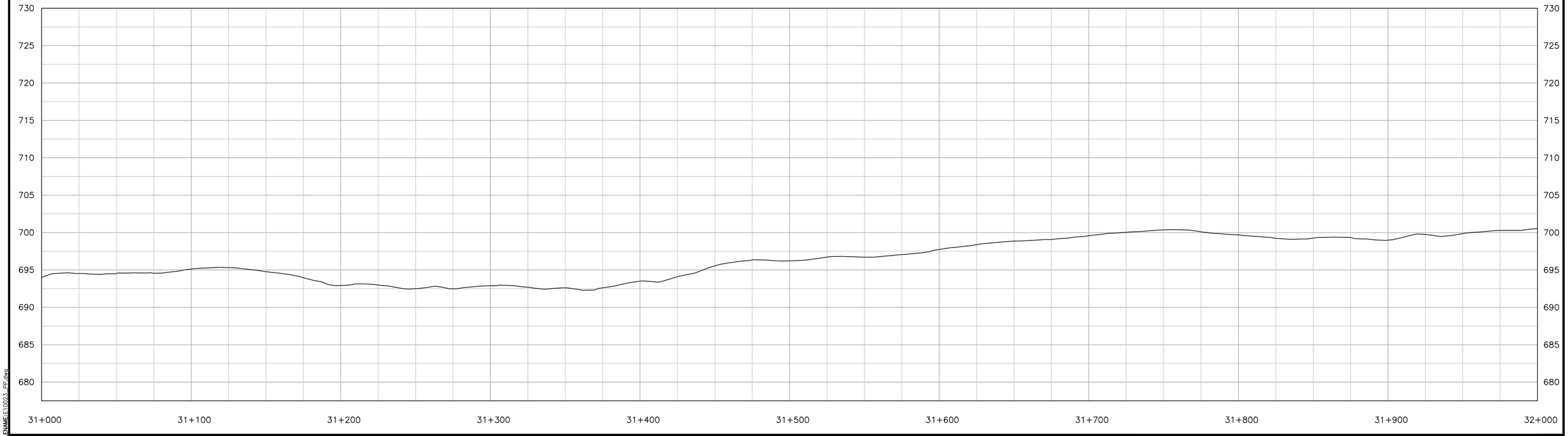
PLOT DATE: 7/29/2010





LEGEND

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- CULVERT

NO	DESCRIPTION	BY	DATE

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CHECKED BY:	dd/mm/yy
APPROVED BY:	

FILENAME:	PROJECT NUMBER	DRAWING NUMBER	REV.
E10023	E10023	16 of 22	0

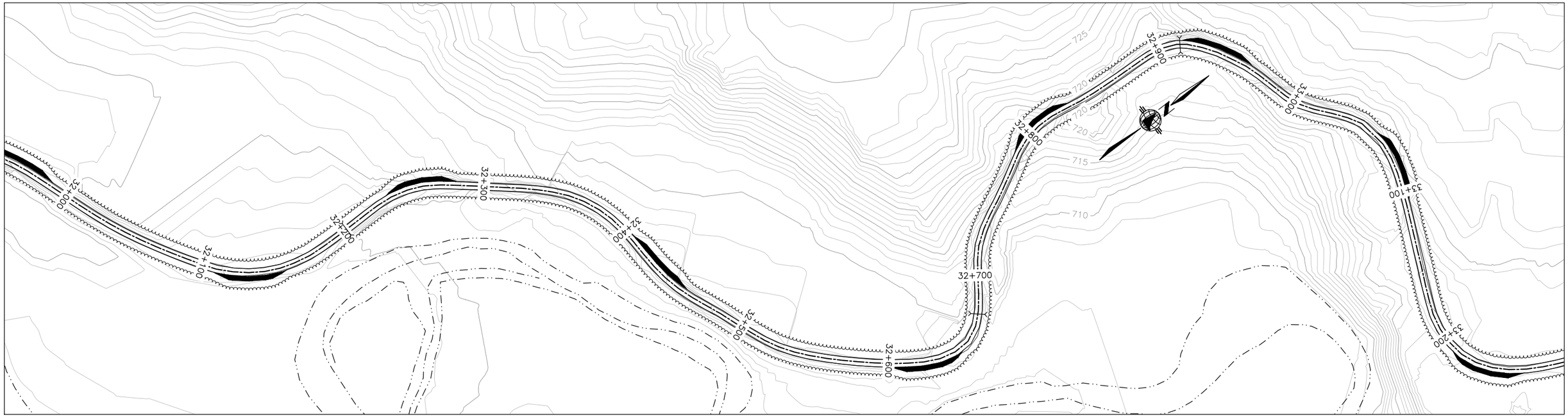
YUKON ENGINEERING SERVICES

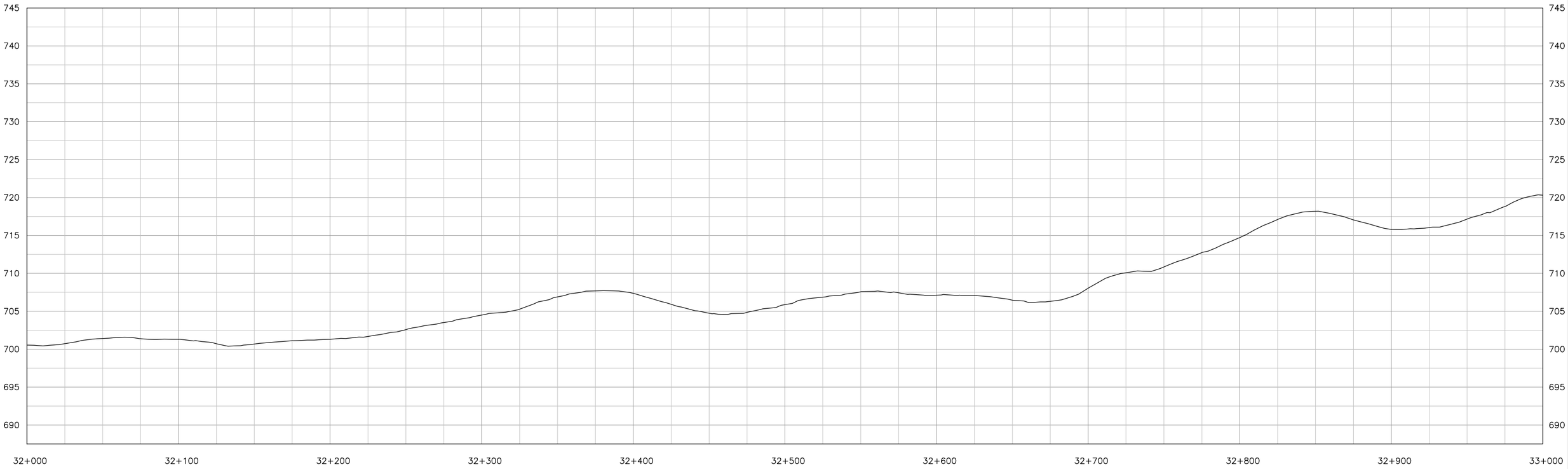
EAGLE GOLD PROPERTY ACCESS ROAD

VICTORIA GOLD

PLAN / PROFILE
31+000 to 32+000

FILENAME: E10023_PP.dwg
PLOT DATE: 7/29/2010





LEGEND

- PR ALIGNMENT CENTERLINE
- EX ROAD SHOULDER
- EX WATER COURSE
- PR PULLOUT
- CLEARING LIMITS
- CULVERT

NO	DESCRIPTION	BY	DATE

SCALE:	
	DATE
DESIGNED BY: YES	29/07/10
DRAWN BY: RSC	29/07/10
CHECKED BY:	dd/mm/yy
APPROVED BY:	

FILENAME:	PROJECT NUMBER	DRAWING NUMBER	REV.
E10023	E10023	17 of 22	0

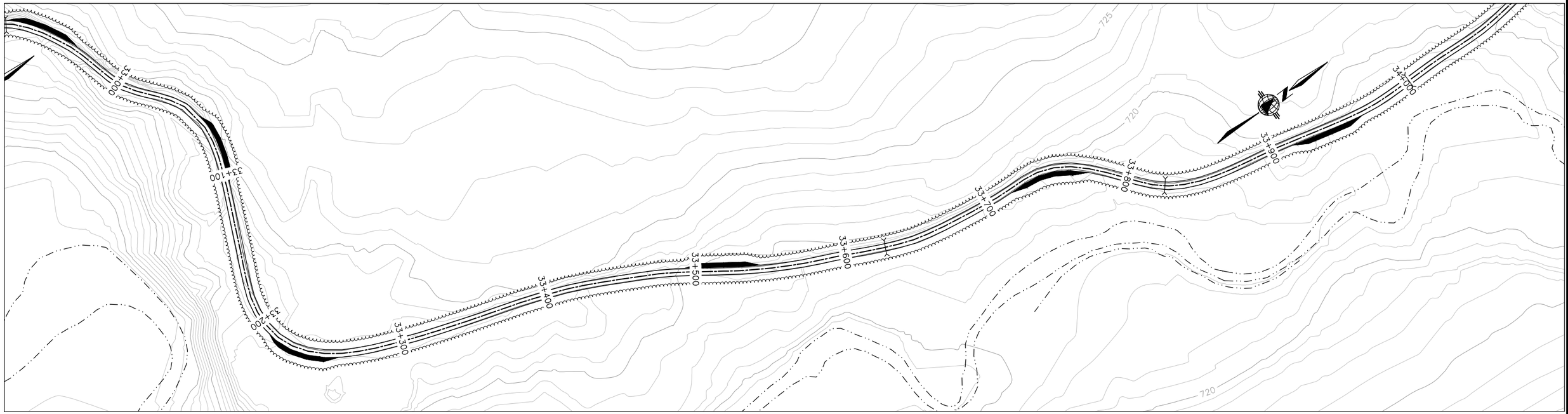
YUKON ENGINEERING SERVICES

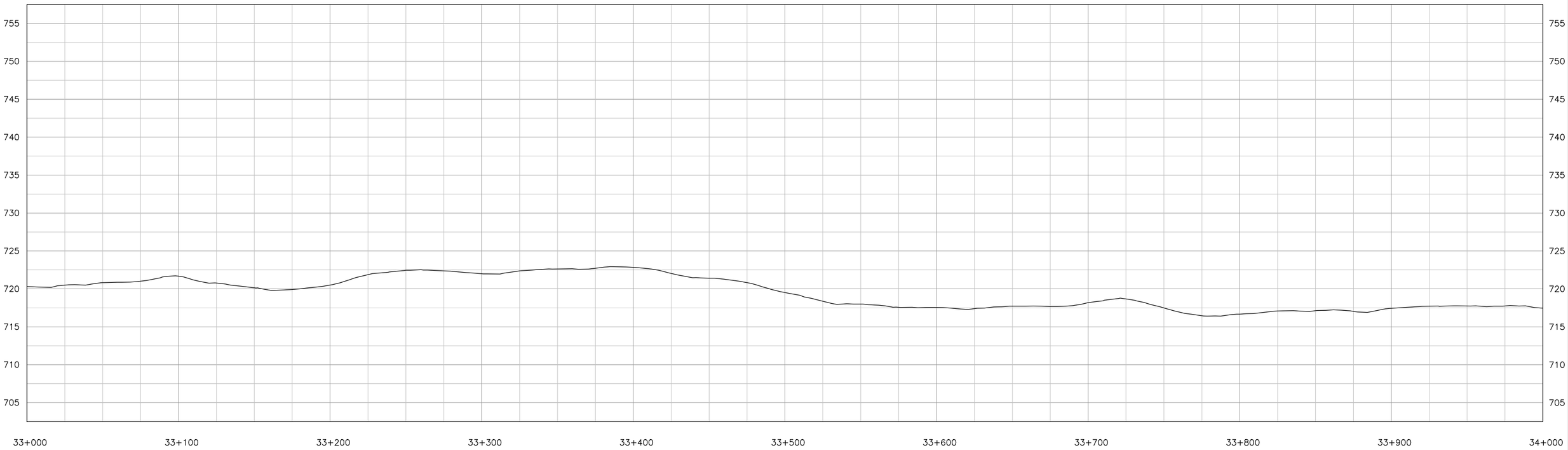
EAGLE GOLD PROPERTY ACCESS ROAD

VICTORIA GOLD

PLAN / PROFILE
32+000 to 33+000

FILENAME: E10023_PP.dwg
PLOT DATE: 7/29/2010





LEGEND

- PR ALIGNMENT CENTERLINE
- EX ROAD SHOULDER
- EX WATER COURSE
- PR PULLOUT
- CLEARING LIMITS
- CULVERT

NO	DESCRIPTION	BY	DATE

SCALE:

	DATE
DESIGNED BY: YES	29/07/10
DRAWN BY: RSC	29/07/10
CHECKED BY:	dd/mm/yy
APPROVED BY:	

FILENAME:	PROJECT NUMBER	DRAWING NUMBER	REV.
E10023	E10023	18 of 22	0

YUKON ENGINEERING SERVICES

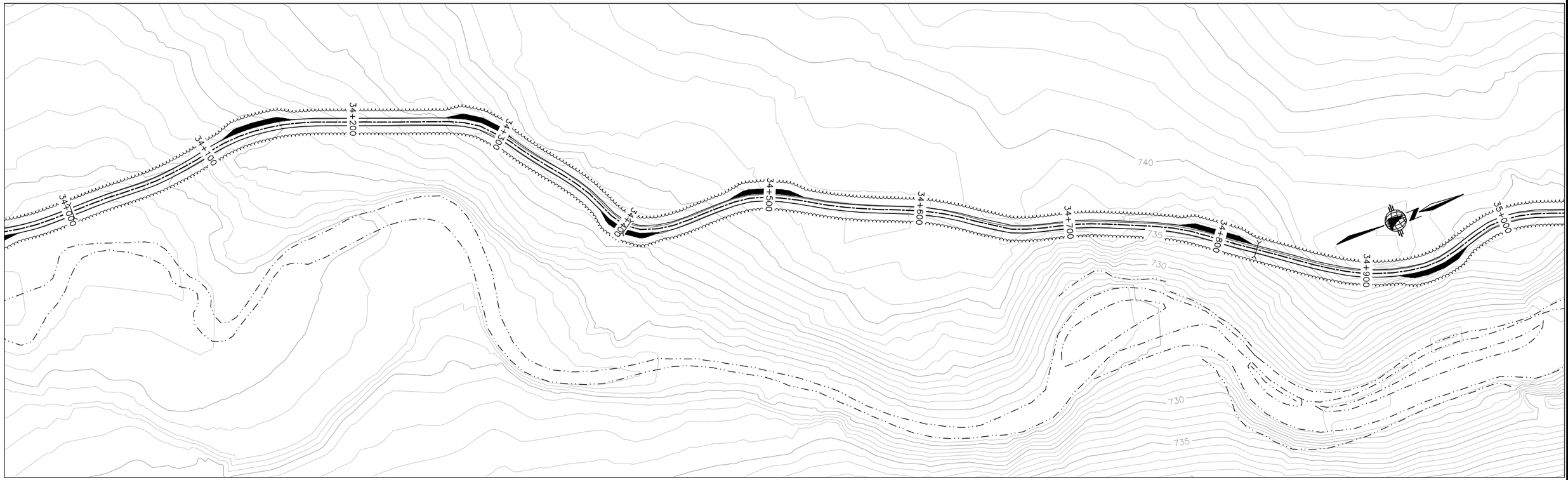
EAGLE GOLD PROPERTY ACCESS ROAD

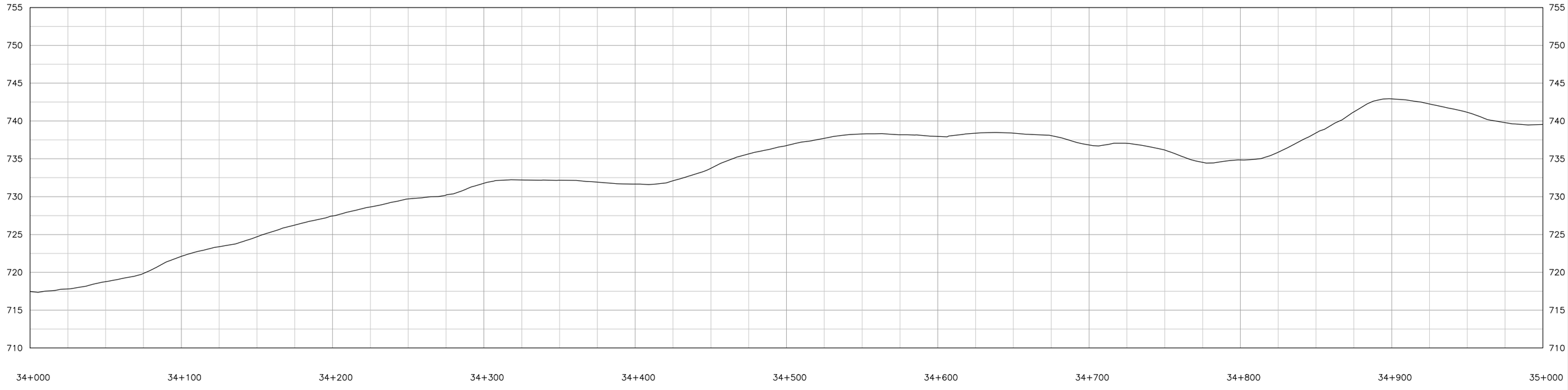
VICTORIA GOLD

PLAN / PROFILE
33+000 to 34+000

FILENAME:E10023_PP.dwg

PLOT DATE: 7/29/2010





LEGEND

- PR ALIGNMENT CENTERLINE
- EX ROAD SHOULDER
- EX WATER COURSE
- PR PULLOUT
- CLEARING LIMITS
- CULVERT

NO	DESCRIPTION	BY	DATE

SCALE:	
	DATE
DESIGNED BY: YES	29/07/10
DRAWN BY: RSC	29/07/10
CHECKED BY:	dd/mm/yy
APPROVED BY:	

FILENAME:	PROJECT NUMBER	DRAWING NUMBER	REV.
E10023	E10023	19 of 22	0

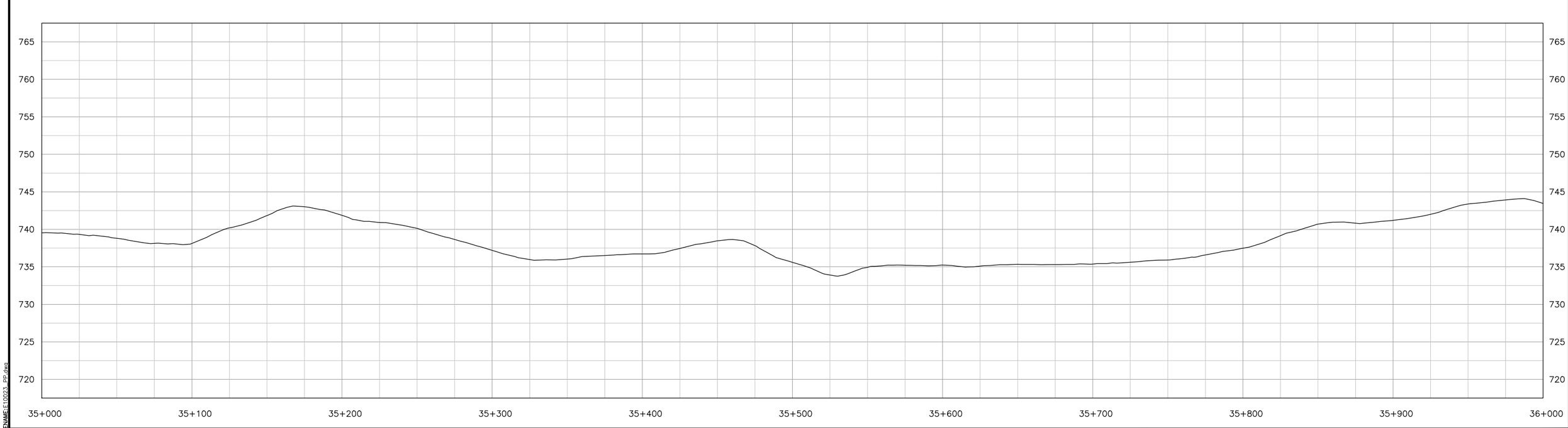
YUKON ENGINEERING SERVICES

EAGLE GOLD PROPERTY ACCESS ROAD

VICTORIA GOLD

PLAN / PROFILE
33+000 to 34+000

FILENAME: E10023_PP.dwg
PLOT DATE: 7/29/2010



LEGEND

- PR ALIGNMENT CENTERLINE
- EX ROAD SHOULDER
- EX WATER COURSE
- PR PULLOUT
- CLEARING LIMITS
- CULVERT

NO	DESCRIPTION	BY	DATE

SCALE:	
	DATE
DESIGNED BY: YES	29/07/10
DRAWN BY: RSC	29/07/10
CHECKED BY:	dd/mm/yy
APPROVED BY:	

FILENAME:	PROJECT NUMBER	DRAWING NUMBER	REV.
E10023	E10023	20 of 22	0

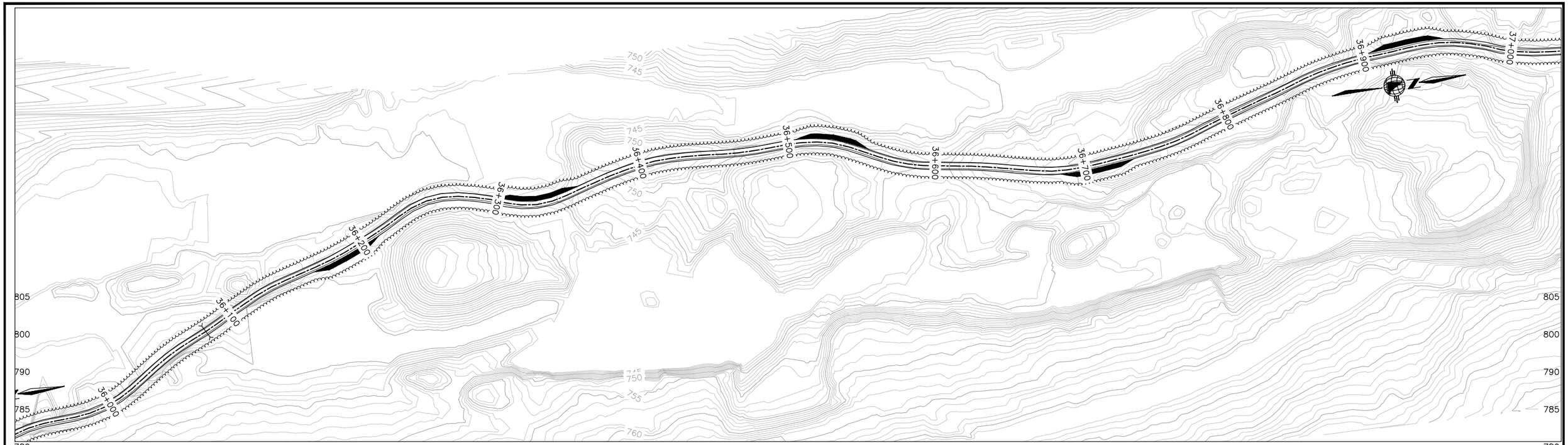
YUKON ENGINEERING SERVICES

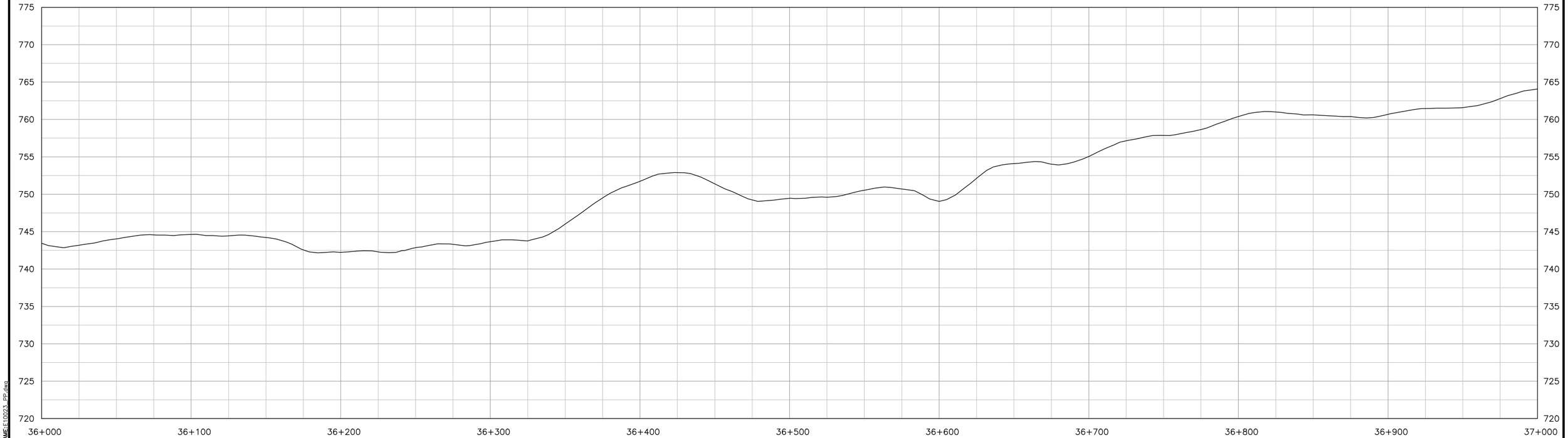
EAGLE GOLD PROPERTY ACCESS ROAD

VICTORIA GOLD

PLAN / PROFILE
35+000 to 36+000

FILENAME: E10023_PP.dwg
PLOT DATE: 7/29/2010





LEGEND

- PR ALIGNMENT CENTERLINE
- EX ROAD SHOULDER
- EX WATER COURSE
- PR PULLOUT
- CLEARING LIMITS
- CULVERT

NO	DESCRIPTION	BY	DATE

SCALE:	
	DATE
DESIGNED BY: YES	29/07/10
DRAWN BY: RSC	29/07/10
CHECKED BY:	dd/mm/yy
APPROVED BY:	

FILENAME:	PROJECT NUMBER	DRAWING NUMBER	REV.
E10023	E10023	21 of 22	0

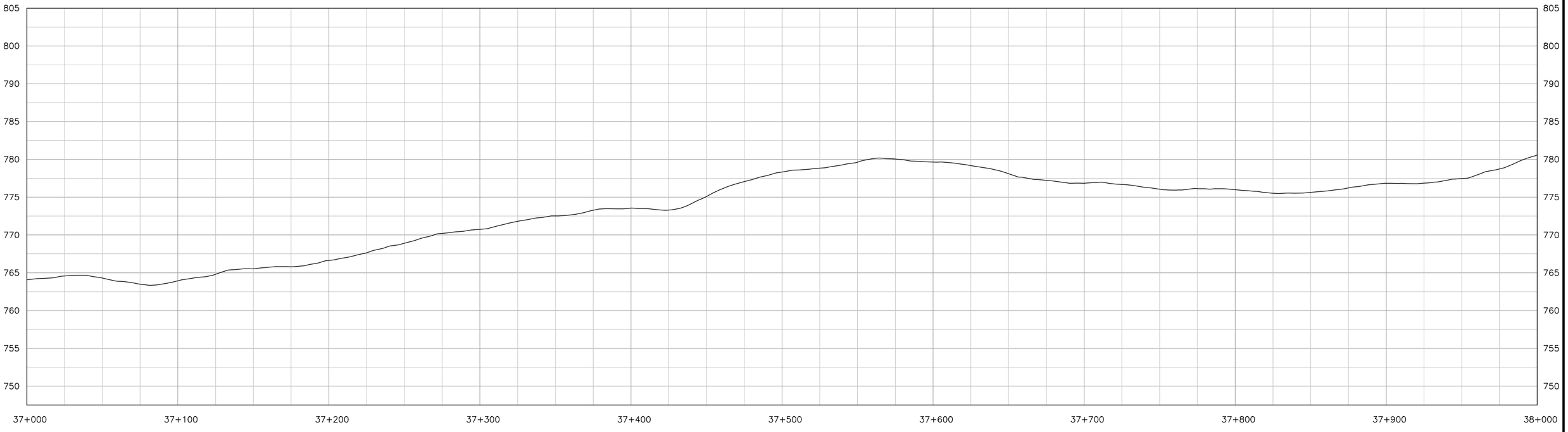
YUKON ENGINEERING SERVICES

EAGLE GOLD PROPERTY ACCESS ROAD

VICTORIA GOLD

PLAN / PROFILE
36+000 to 37+000

FILENAME:E10023_PP.dwg
PLOT DATE: 7/29/2010



LEGEND

- PR ALIGNMENT CENTERLINE
- EX ROAD SHOULDER
- EX WATER COURSE
- PR PULLOUT
- CLEARING LIMITS
- CULVERT

NO	DESCRIPTION	BY	DATE

SCALE:	
	DATE
DESIGNED BY: YES	29/07/10
DRAWN BY: RSC	29/07/10
CHECKED BY:	dd/mm/yy
APPROVED BY:	

FILENAME:	PROJECT NUMBER	DRAWING NUMBER	REV.
E10023	E10023	22 of 22	0

YUKON ENGINEERING SERVICES

EAGLE GOLD PROPERTY ACCESS ROAD

VICTORIA GOLD

PLAN / PROFILE
37+000 to 38+000

FILENAME:E10023_P2.dwg
PLOT DATE: 7/29/2010