EBA Engineering Consultants Ltd.

M. NAHIR

PHASE 1 AND 2
VENUS MINE TAILINGS REHABILITATION PROGRAM
NEAR CARCROSS, YUKON

Prepared by:

EBA ENGINEERING CONSULTANTS LTD.
Whitehorse, Yukon

Submitted to:

Public Works and Government Services Canada
Environmental Services

Project No. 0201-98-13604

May, 1999

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1.0 INTRODUCTION

EBA Engineering Consultants Ltd. (EBA) was retained by Public Works and Government Services Canada (PWGSC), Environmental Services, to provide specifications and construction management during the 1998 - Venus Mine Tailings Rehabilitation Program (Program) at the Venus Mine Site (Site) near Carcross, Yukon. A contract (Order # E2676-8-0061/001/XSB) was awarded to proceed with the project in October of 1998.

2.0 BACKGROUND

PWGSC initiated the Venus Mine Tailings Rehabilitation Program to address a potential slope instability issue and to place additional cover material on the cap for long term maintenance of the Venus Mine Tailings Impoundment Facility. For the slope instability concern, PWGSC retained Steffen Robertson and Kristen Inc. (SRK) to conduct a slope stability analysis and recommend a buttress configuration. This information was then used by EBA in the preparation of specifications for the Program's buttress construction.

Cap maintenance requirements included placement of additional coarse drain rock on the tailings and minor upgrades to the corrugated steel pipe (CSP) overflow structure. The work program herein describes the execution of work outlined in the specifications.

Photographs were taken throughout all phases of the Program. The photos were compiled and cataloged in a photo album for PWGSC. The Program Photo Documentation Binder was received by PWGSC on March 18th, 1999. All references to photos correspond to the numbering system used in the binder.

3.0 WORK PROGRAM RESULTS

3.1 Specifications Development

Specifications developed by EBA were required for the following rehabilitation activities:

- Access road repair,
- Construction of buttress support,
- Placement of additional coarse drain rock, and
- Two miscellaneous items: CSP repair & placement of additional fill material along sheet pile wall

Specification details for the above activities, enclosed in Appendix A, formed the basis of construction methods and procedures during the Program.

3.2 Access Road Repair

The access road repair is described in Section 1002 of the Program specifications (Appendix A). The road repair was required to permit vehicular and equipment access to the buttress for a 2 week period during buttress construction. Ed Grozic, P. Eng. was the EBA representative on-site during the access road repair. Daily Reports (Appendix B) confirm that the road repairs started on November 1st, 1998 and were completed on November 2nd, 1998. Reconstruction of the abandoned access road involved repairing numerous ditches perpendicular to the access road. In general the access road repair work was conducted in accordance with the Program specifications with the exception of additional minor repairs at the truck turn around. During the buttress construction the turn around area became soft and two loads of pit-run material were placed to stabilize the area. Upon completion of the buttress construction phase, both buttress and tailings area access roads were decommissioned by placement of a 1.2 m high rock and soil obstruction at each entrance.

Photographs that were taken during the Access Road Repair phase of the Program are identified as Photos #16 through #19 and # 86 in the Program Photo Documentation Binder.

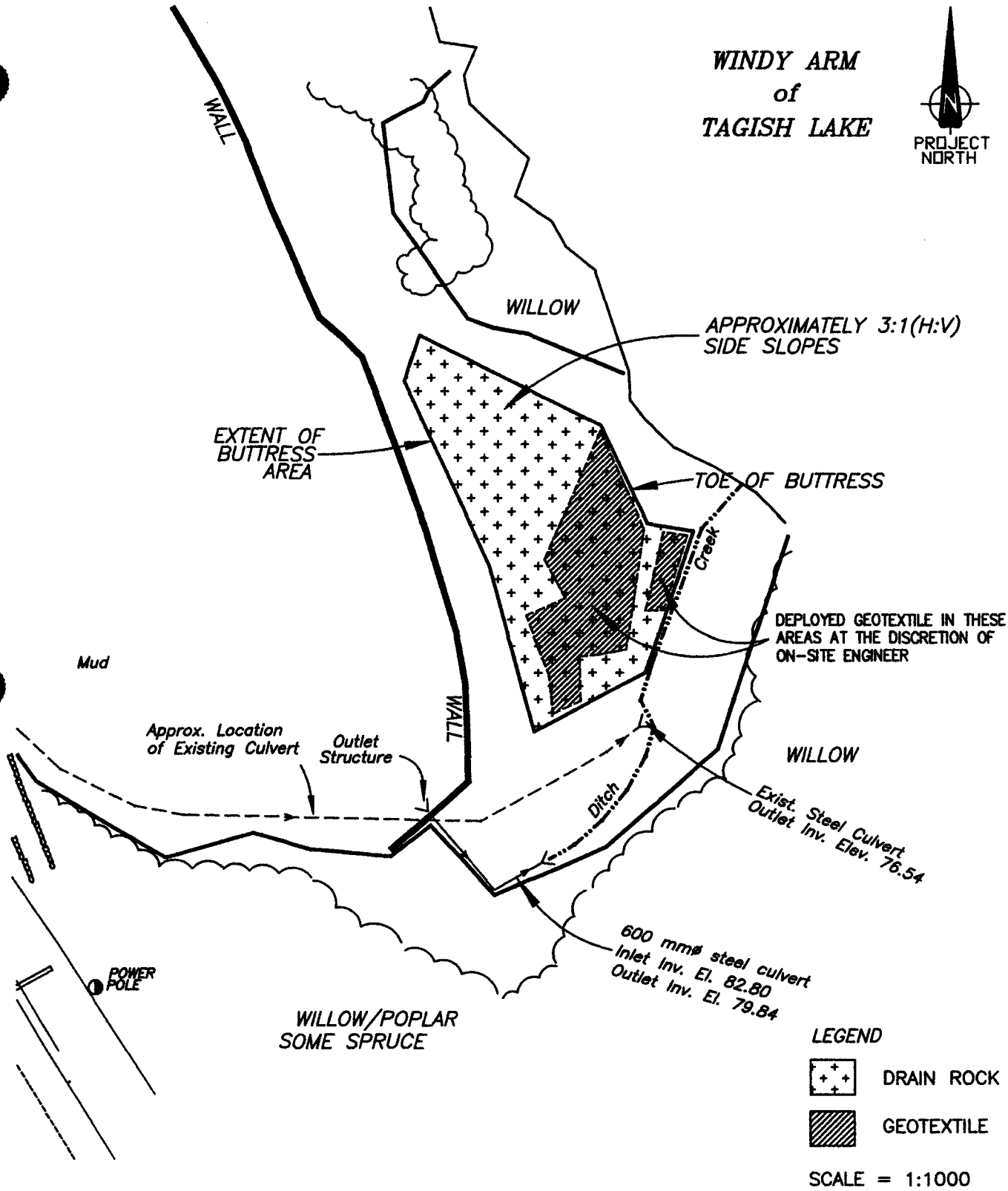
3.3 Buttress Construction

The buttress construction is described in Section 1003 of the Program specifications (Appendix A). The construction initially involved placing a non-woven geotextile over the saturated, soft soil areas. Pit run material was then hauled to the site and placed in the appropriate areas to meet the required buttress specifications. EBA representatives Mr. Ed Grozic, P. Eng., or Mr. Chad Cowan, E.I.T., or Mr. Mike Billowits, P. Eng, were on site during the construction of the buttress, which commenced on November 2nd, 1998 and finished on November 7th, 1998. Daily Reports, located in Appendix B, describe the procedure followed for construction of the buttress. During the construction it was noticed that there was a soft spot in an area of groundwater seepage between the buttress toe and small creek to the east. To alleviate this problem, additional drain rock, geotextile, and pit run were placed in the area. Figure 1 shows the location of actual geotextile that was placed beneath the buttress fill material and also identifies the approximate completion boundaries of the constructed buttress.

Photographs that were taken during the Buttress Construction phase of the Program are identified as Photos #25 through #34 and #83 through #94 in the Program Photo Documentation Binder.

3.4 Drain Rock Production

A gravel borrow pit (Conrad Pit), km 90 on the South Klondike Highway north of the site, was used to produce and stockpile the screened capping material (Drain Rock). A large volume of Drain Rock was required to meet a specification band created by EBA (Appendix C). Cost



EBA Engineering Consultants Ltd.			PROJECT 1998-99 VENUS MINE TAILINGS REHABILITATION PROGRAM NEAR CARCROSS, YUKON
PUBLIC WORKS AND GOVERNMENT SERVICES CANADA (PWGSC) - ENVIRONMENTAL SERVICES			TITLE SITE PLAN OF CONSTRUCTED BUTTRESS
TE 99/04/28	DWN. CPC	CHKD. MEB	FILE NO. 0201-98-13604	FIGURE 1

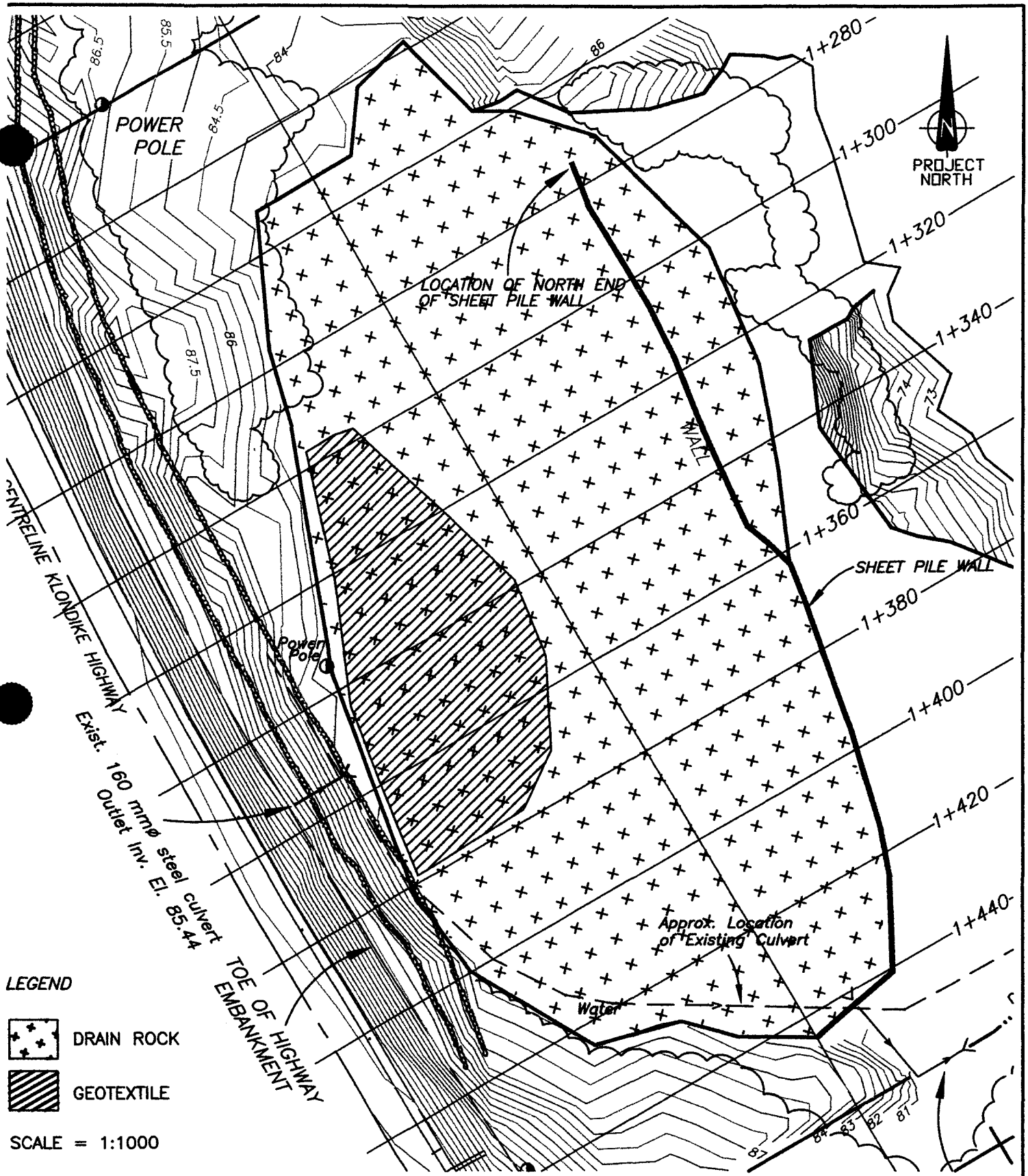
estimates for screening and stockpiling the drain rock were solicited from two Whitehorse contractors. NuWay Crushing Ltd. was awarded the job and they completed the Drain Rock stockpile on October 17th, 1998. Mr. Ed Grozic, P. Eng (EBA representative) was on site during screening operations and carried out the Quality Control/ Quality Assurance (QC/QA) program to ensure that the aggregate being produced met the grain size distribution limits. The results for the QC/QA program are located in Appendix C. On October 19th, 1998 the screened material stockpile was surveyed by Underhill Geomatics Ltd. of Whitehorse and found to be 4280 m^3 in quantity.

Photographs that were taken during the Drain Rock Production phase of the Program are identified as Photos #11, #12 and #22 in the Program Photo Documentation Binder.

3.5 Drain Rock Placement

The Drain Rock placement is described in Section 1004 of the Program specifications (Appendix A). Mr. Michael Billowits, P. Eng., or Mr. James Buyck, Eng. Assist., were the EBA representatives on site during this part of the Program which was performed between March 3rd, 1999 and March 9th, 1999. The Daily Reports included in Appendix B summarize the work that was completed during this phase of the Program. The Program tasks for Drain Rock placement involved laying out non-woven geotextile in the appropriate areas and then spreading Drain Rock on top of the tailings area including the area of geotextile. The boundaries for the geotextile and Drain Rock placed on the site are shown on Figure 2. In general the Drain Rock placement was conducted in accordance with the Program specifications with the exception of one item that has yet to be completed. The Drain Rock at the site requires a final grading which is scheduled for May, 1999.

Photographs that were taken during the Drain Rock Placement phase of the Program are identified as Photos #35 through #82 in the Program Photo Documentation Binder.



EBA Engineering Consultants Ltd.

PROJECT: 1998-99 VENUS MINE TAILINGS REHABILITATION PROGRAM NEAR CARCROSS, YUKON

PUBLIC WORKS AND GOVERNMENT SERVICES CANADA (PWGSC) - ENVIRONMENTAL SERVICES

TITLE: SITE PLAN OF DRAIN ROCK AND AND GEOTEXTILE PLACEMENT

DATE	DWN.	CHKD.	FILE NO.	
99/04/28	JSB	MEB	0201-98-13604	FIGURE 2

3.6 Miscellaneous Items

The Miscellaneous Items are described in Section 1005 of the program specifications (Appendix A). Daily Reports (Appendix B) confirm that the miscellaneous items were started on October 30th,1998 and completed on November 2nd,1998. The items consisted of:

- filling in voids along the sheet pile wall with 20 mm crush,
- placing 20 mm crush in void beneath culvert inlet flange, and
- re-fastening both inlet and outlet flanges to the existing outfall culvert structure.

Photographs that were taken during Miscellaneous Items phase of the Program are identified as Photos #14, #15, #20, #21 and #24 in the Program Photo Documentation Binder.

4.0 REPORT CLOSURE

The Venus Mine Tailings Rehabilitation Program was conducted in accordance with the Program specifications. All specification items were completed except for the final grading of the drain rock in the tailings area of the site. The final grading will be completed in May, 1999.

EBA Engineering Consultants Ltd. trusts this summary report meets your present requirements. If you have any questions please do not hesitate to contact the undersigned.

Respectfully submitted,
EBA Engineering Consultants Ltd.

Chadwyck P. Cowan, CET, E.I.T.
Junior Engineer, Environmental

Reviewed by:

99.4.30

Michael E. Billowits, M.Sc., P.Eng.
Project Engineer, Environmental

James S. Buyck
Engineering Assistant

CPC/JSB/MEB/cc/jb

Alberta
CHILDREN'S SERVICES
Day Care Staff Qualifications

EXEMPTION REQUEST
for STAFF QUALIFICATIONS

The information we are collecting on this form will be used to process exemptions for day care centre staff.
We are authorized to do this under section 34 of the Alberta Day Care Regulation.
The information collected on this form will not be shared with anyone without your permission.

- Exemptions cannot be processed without a staff registration number.
- If a staff member does not have a registration number, **attach a completed Application for Certification form.**
- If requesting an exemption renewal, **attach proof of course completion and course registration and/or recruitment efforts.**
- If requesting a Level 1, 2 or 3 exemption, **attach proof of course completion and/or course registration and/or recruitment efforts.**
- Please provide full and complete information on this form.

SECTION A: DAY CARE CENTRE INFORMATION

Name of Day Care Centre | Facility I.D. Number

Address Street

City/Town | Province | Postal Code | Business Phone

Name of Contact Person | Position | Fax Number

SECTION B: EXEMPTION(S) REQUESTED

NOTE: All staff must sign to verify their exemption request

Print Name of Staff	Registration Number	Level Requested	Proof of Course Registration: Attached	Proof of Course Registration: To Follow	For Office Use Only Time Period: From / To
1.			☐	☐	/
Staff signature:					
2.			☐	☐	/
Staff signature:					
3.			☐	☐	/
Staff signature:					
4.			☐	☐	/
Staff signature:					

Comments: (e.g., reason for request, etc.)

- Send blue copy to:
  - Alberta Children's Services
    Day Care Staff Qualifications
    3rd Floor, Centre West, 10035 - 108 Street
    Edmonton, Alberta T5J 3E1
- For more information, call the Staff Qualifications Information Line at:
  - **1-800- 661-9754 (Toll Free)**
    422-1119 (In Edmonton)
    Fax: (780) 427-1258

I authorize the Day Care Staff Qualifications Office to verify any information contained in this exemption request.

Signature of Operator/Program Director | Print Name | Date

CS2458 (2009/11)

APPENDIX A

Venus Mine Tailings Rehabilitation Program Specifications

INDEX TO SPECIFICATIONS

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1. Description of Work

.1 This specification describes various remedial works that are to be conducted at the Venus Tailings Impoundment Facility (Site) located at approximately Km 86.5 on the South Klondike Highway. This work is subsequent to the Venus Mine Tailings Site Rehabilitation Program initiated by Public Works and Government Services Canada in July, 1995.

.2 The work under the 1998-9 Venus Tailings Rehabilitation Program includes the following four items:

- Access road upgrading to facilitate site access during construction and road decommissioning following construction,
- Construction of a buttress support along the slope at the south-east portion of the site,
- Placement of additional coarse drain rock on the existing tailings cap, and
- Two miscellaneous items involving a repair to the existing outfall culvert structure and the placement of additional fill material adjacent to the existing sheet pile wall.

.3 There will be two phases of work to complete the tasks described herein. The first phase will involve the access road upgrade, buttress construction, and miscellaneous items and will be performed prior to November 7, 1998. The second phase will involve the placement of drain rock and will be performed after January 15, 1998 but prior to March 1, 1998.

.4 Details of the work under this contract are provided in the subsequent sections and the accompanying figures.

2. Items peculiar to this contract include:

.1 The Contractor is free to use his discretion on the selection and utilization of equipment for this project. However, consideration should be given to the soft soils over part of the site.

.2 To the extent indicated on the contract drawings and specifications, the Owner's intent is to have the bulk of the work completed prior to March 31, 1999.

.3 Access by the Contractors equipment onto the existing tailings area is to be prohibited at all times unless indicated on the contract drawings and specifications.

3. Work Areas

.1 The Contractor shall remove all temporary structures and shall clean up the construction area, borrow area, and access road to the satisfaction of

the on-site Engineer. This may include, but not be limited to, removal of brush and other construction waste materials and site grading to ensure the site is left in a reasonable aesthetic condition.

.2 All damage caused to the existing site due to the Work under this Contract, and not called for as Work under this Contract, shall be made good by the Contractor at no extra cost to the Owner and to the satisfaction of the on-site Engineer.

.3 The Contractor shall conduct operations with minimal interference to adjacent public or private roadways, and keep such areas free of materials and debris.

4. Fill Materials

.1 Three types of fill materials will be used for the construction work described herein. All fill materials are available (no processing necessary) at the Conrad Pit which is located at Km 90 on the South Klondike Highway, approximately 3.5 Km north of the Site. The materials include the following:

Material Type	Description	Application
Pit Run	Sandy gravel pit run (see Appendix A for source description)	Buttress Construction
Drain Rock	Coarse crushed gravel meeting the gradation described in Section 1005	Tailings Cap Material
20 mm minus Crushed Rock	Sand and gravel meeting YTG "Granular A" (20mm minus) Specification	Road upgrading

5. Project Meetings

.1 The Contractor and the on-site Engineer will develop an appropriate schedule for holding project meetings. The time and locations for such meetings shall be approved by the on-site Engineer.

.2 An initial meeting shall take place prior to the start of work to discuss a work methodology plan which will be proposed by the Contractor and agreed upon by the Owner's site representative. This work methodology plan shall demonstrate how the various activities will be carried out, and indicates the equipment to be used and the anticipated duration.

6. Site Supervision

.1 The Contractor shall designate a competent and qualified supervisor to be on site at all times during construction, to have full authority to make decisions for the Contractor, to be knowledgeable of the requirements of the contract, and to act in accordance with the on-site Engineer's instructions.

1. General

.1 This section describes the necessary upgrading work required for the use of the old access road to the tailings area, the decommissioning of access routes following construction, and scheduling considerations

2. Old Access Road Repair - General

.1 The old access road is located along the east side of the tailings area as shown on Figure 1. The road was abandoned during the 1995 construction program and has since been replaced with the existing access road which leads directly onto the tailings area. It will be critical that during non-frozen conditions of the tailings (during the October, 1998 work program) that there is no vehicular traffic on the tailings area. As such, the old access road which is located to the east of the tailings area is to be used during construction. As part of the abandoning of this road in 1995, two areas of the upper section (shown on Figure 1) have been damaged to restrict vehicular access. There is a 20 m long section and a 25 m long section of this road which requires grading work to a necessary standard which will permit access to the site by all vehicles and equipment for approximately a 2 week period (during buttress construction).

3. Old Access Road Repair - Execution

.1 Three to five gullies were excavated perpendicular to the access road when the road was decommissioned in 1995. This has caused ditches approximately 1.5 m deep in these locations, along with soil piles stockpiled adjacent to the ditch excavations. Some grading work will be required to restore the road to an operational condition for the maximum two week construction period in October, and early November 1998. This grading work will include some compactive effort during filling procedures to prevent settlement or rutting. Compactive effort will be required to achieve approximately 98% of the corresponding Standard Proctor Density (to the satisfaction of the on-site Engineer). Following grading, a 100 mm thick surface coarse of 20 mm minus crushed rock gravel (available at the Conrad Pit at Km 90) is to be applied along the restored section (approximately 45 m in length).

.2 The road repair is to include provision for a turn around area in the vicinity shown on Figure 1. An alternate turn around location may be selected by the contractor with the prior approval of the on-site Engineer. Every effort should be made to avoid vehicles travelling onto the tailings area when the trucks turn around. If this cannot be avoided, a 0.5 m thick lift of Drain Rock material is to be placed on those areas of tailings where trucks intend to travel (areas to be approved by on-site Engineer). Fill materials for the turn around area (outside of tailings area) shall consist of a levelling coarse of 20 mm minus crushed rock gravel from the Km 90

borrow pit, compacted to achieve a suitable surface area for travel by the haul trucks (to the satisfaction of the on-site Engineer).

.3 The lower portion of the Old Access Road that leads down to the area of the buttress shall be redirected toward the lower reaches of the slope to facilitate construction of the buttress in this area first. Fill material required for this shall consist of Pit Run material. The final site grading of the Buttress shall incorporate this lower part of road.

4. Existing Access Road – Decommissioning

.1 Immediately following the repair of the Old Access Road as described above, the existing access route which leads directly onto the tailings is to be blocked from vehicular traffic by placing boulders and soil along the width of the road as shown on Figure 1. There are currently boulders in this area that simply have to be relocated to restrict access. As well, soil shall be pushed to supplement the barrier created by the boulders.

5. Site Access – Decommissioning

.1 Following completion of the buttress construction, the Old Access Road is to be blocked from vehicular traffic by placing a minimum of 1.2 m high soil and rock obstruction with steep side slopes such that vehicles could not pass the obstruction.

1. General

.1 The work necessary for the buttress involves hauling and placing Pit Run material at the south-east portion of the site as shown on Figure 2. The order of execution will involve initially placing a non-woven geotextile in areas where existing saturated, soft soils occur and then placing Pit Run material to the lateral and vertical specifications described herein.

2. Schedule

.1 The buttress construction must be completed within 14 days from the date that the Contract is awarded.

3. Fill Material Source

.1 The fill material used for construction of the buttress shall consist of Pit Run which can be obtained from the south portion of the Conrad Pit (denoted as "Future Source Area" on the site plan drawing of the Conrad Pit located in Appendix A). Care must be taken during borrowing activities to restrict materials greater than 400 mm diameter from entering the haul trucks. Hand removal of material greater than 400 mm diameter may be necessary during spreading of the fill during buttress construction.

.2 The Pit Run material used as fill at the Site shall consist of hard, durable particles, shall be free of roots, topsoil, and other deleterious material, and shall have a grain size distribution conforming to the following table. Direction will be provided by the on-site Engineer to ensure that the Pit Run source at the Conrad Pit meets the gradation shown below.

Grain Size (mm)	% Passing
400	100
50	60-100
20	30-60
0.08	2-10

.3 The Conrad Pit site is to be cleaned of debris caused during borrowing activities at the completion of the October, 1998 construction program, to the satisfaction of the on-site Engineer.

4. Geotextile Placement

.1 The geotextile is intended as a base below the Pit Run fill. The geotextile will act as a separating layer to avoid mixing of the soft saturated silt and sand native material and the Pit Run fill material.

.2 The geotextile material shall consist of non-woven, needle punched polypropylene, selected from the following list of approved materials:

- Armtec 200 Non-woven (available at Kilrich Industries)

.3 The geotextile material is to be placed directly on the existing ground surface in the area described in Figure 2. The surface must be free of sharp objects. To achieve an acceptable surface, hand clearing of vegetation or obtuse rocks may be necessary.

.4 Seams shall have a minimum overlap distance of 600 mm.

.5 Place Pit Run fill material immediately after laying the geotextile. Pit Run material must be placed so as to avoid damage to the geotextile. This shall include a maximum drop height of 1.0 m for fill directly onto the geotextile and a minimum lift thickness of 0.5 m for the first lift of fill material. Lifts thicker than 0.5 m may be required in wet areas.

5. Fill Placement

.1 Pit Run shall be obtained from the Conrad Pit (Pit) as previously described in Section 1001 and Section 1003, Subsection 2. above.

.2 The fill construction shall conform to the lines, grades, and elevations shown on the plan and profile drawings described herein (refer to Figures 2 through 5). Fill thickness shall not exceed 600 mm for each lift. Satisfactory compaction will be obtained by regular operations of the equipment during spreading.

.3 Fill shall not be placed on significant amounts (greater than 25 mm thickness) of snow. If snow clearing is necessary (as directed by the on-site Engineer), care must be taken to avoid disturbing the underlying native soil profile. Snow removal practices must be approved by the on-site Engineer prior to initiation.

.4 The sequence of fill placement must be such that fill is initially placed at the lower reaches (east side of buttress area) of the slope. Once the top of fill is near the design elevation, filling activities would progress up the slope toward the west until the final buttress design configuration is realized.

.5 Care must be taken not to disturb the existing wells within the buttress area during construction. Damage to the existing wells will result in replacement at the cost of the Contractor.

.6 During dumping and spreading, the Contractor shall remove and dispose of off-site, to the satisfaction of the on-site Engineer, all debris, vegetation, or any material not conforming to the requirements specified herein.

.7 Elevations for the fill material will be verified by the on-site Engineer during construction by the placement of cut/fill stakes for the use of the Contractor. Surveying assistance will be provided by the on-site Engineer during final grading.

.8 Final grading of the Pit Run fill material will be necessary to obtain a relatively smooth surface and to ensure that the fill material matches the existing grade along the perimeter of the buttress.

1. General

.1 This section describes the placement of coarse Drain Rock material on the existing tailings area to supplement existing rock cover at the Site.

2. Schedule

.1 The schedule for the placement of the Drain Rock is such that it must be completed when the tailings are completely frozen. The Drain Rock placement is to occur after January 15, 1999 and must be completed before March 1, 1999. The actual scheduling of the work could occur during favourable weather conditions between this period, at the discretion of the Contractor. However, scheduling shall be coordinated by the on-site Engineer.

3. Drain Rock Source

.1 The material to be used for the Drain Rock placement on the tailings cap shall consist of the existing stockpile at the Conrad Pit. This material has been produced by others and meets the following gradation. It may be assumed that the existing stockpile at the pit meets this specification and no further confirmatory testing is required.

Sieve Size (mm)	Passing by Mass (%)
150	100
75	30-100
50	0-70
25	0-15
10	1

4. Execution

.1 All snow shall be removed from the tailings area prior to placement of the Drain Rock material. This shall be accomplished in such a way as to avoid disturbing the underlying rock cap, tailings, or frozen zones at the surface. The method of snow removal must be approved by the on-site Engineer prior to initiation.

.2 The material must be placed and graded to accomplish the fill requirements provided on existing grade stakes within the tailings impoundment area.

.3 The area in the vicinity of existing seepage water running onto the tailings impoundment may not be completely frozen at the time of rock placement. If this is the case, a combination of geotextile and/or geogrid material may be necessary to facilitate rock placement in this area (refer to Figure 1 for

potential unfrozen area). The necessity and extent of the geotextile and/or geogrid placement will be made by the on-site Engineer prior to construction in mid-January, 1999. The geotextile shall meet the specification described in Section 1003. The geogrid shall be selected from the following list of approved materials:

- Layfield Plastics Geogrid (Style 8T) (or equivalent as approved by on-site Engineer)

The geotextile shall be placed immediately on top of existing material, overlain by the geogrid, overlain by the rock fill in the general area depicted in Figure 1.

.4 Care must be taken during rock placement and grading activities to ensure that the existing drive points are not damaged. The drive points consist of approximately 10 vertical pipes (maximum outside diameters of 40 mm) located in 4 clusters within the tailings area. Damage to the drive points will result in replacement at the cost of the Contractor.

5. Final Grading

.1 Final grading shall be performed *after* the ice has melted and the rock has settled but *prior* to the succession of frost from the underlying silt cap and tailings material. Although this is estimated to occur in the latter part of April, 1999, the actual timing will reflect weather conditions this coming spring. As such, the Engineer will be responsible for monitoring the situation and informing the Contractor of the actual date of the grading activity.

1. General

.1 The work under this section describes two minor items related to securing the flange connections at each end of the existing tailings impoundment outlet culvert and placing fill material in an existing cavity adjacent to the sheet pile wall.

2. Flange Connections

.1 The flange connections at the culvert inlet and outlet have not been securely fastened to the culvert. Secure connections shall be made by installing 2 - 20 mm diameter bolts at convenient locations between the culvert and flange, as illustrated in Figure 7. The bolt locations and method of installation are to be approved by the on-site Engineer. Provision shall be made to place a small quantity of 20 mm minus crushed gravel (less than 1 m^3) underneath the existing culverty inlet where a small void (less than 200 mm deep) occurs. Minimal compactive effort of this fill material shall be made with hand tools. Damage to the culvert during this exercise shall result in repair at the expense of the Contractor.

3. Fill Material Adjacent to Existing Sheet Pile Wall

.1 There is a cavity adjacent to the sheet pile wall at the location described in Figure 6. Approximately 15 m^3 of Pit Run material (as described in Section 1003) shall be placed in this cavity and graded to match the existing topography. Some compactive effort should be made with existing equipment on site during fill placement.

.1 Due to the nature of the work, a combination of lump sum payments and unit price items will be used to enumerate the Contractor on this contract.

.2 Items which the contractor will submit prices for are as follows:

.1 Upgrade existing site access road and decommission access road following construction activities, in accordance with the construction drawings and specifications. Price to include all labour, materials and equipment necessary to complete the work and all costs related to maintaining the access road during construction.

Lump Sum: _____

.2 Construction of the buttress in accordance with the construction drawings and specifications. Price to include all labour, materials and equipment necessary to construct the buttress and all costs related to material loading, hauling, placing, compacting and grading.

.1 Supply and install 650 m^2 of non-woven geotextile.

Lump Sum: _____

.2 Load, haul, place, and grade an estimated 2600 m^3 (estimated 'in-place' volume) of Pit Run material to construct the buttress. Payment will be based on the actual volume of placed material (which will be confirmed by surveying following construction) at the unit rate price indicated below.

2600 m^3 @ _____ **/ m^3 =** _____

.3 Placement of 4000 m^3 (estimated 'in-place' volume) of Drain Rock material for surfacing of the mine tailings, in accordance with the construction drawings and specifications. Price to include all labour, materials and equipment necessary to complete the work and all costs related to material loading, hauling, placing, and grading. Payment will be based on the actual volume of placed material (as confirmed by surveying the source pile prior to and after construction) at the unit rate price indicated below.

4000 m^3 @ _____ **/ m^3 =** _____

.4 Supply and install fasteners for the flange/culvert connections and backfill exposed sheet pile wall in accordance with the construction drawings and specifications (Section 1005 – Miscellaneous Items).

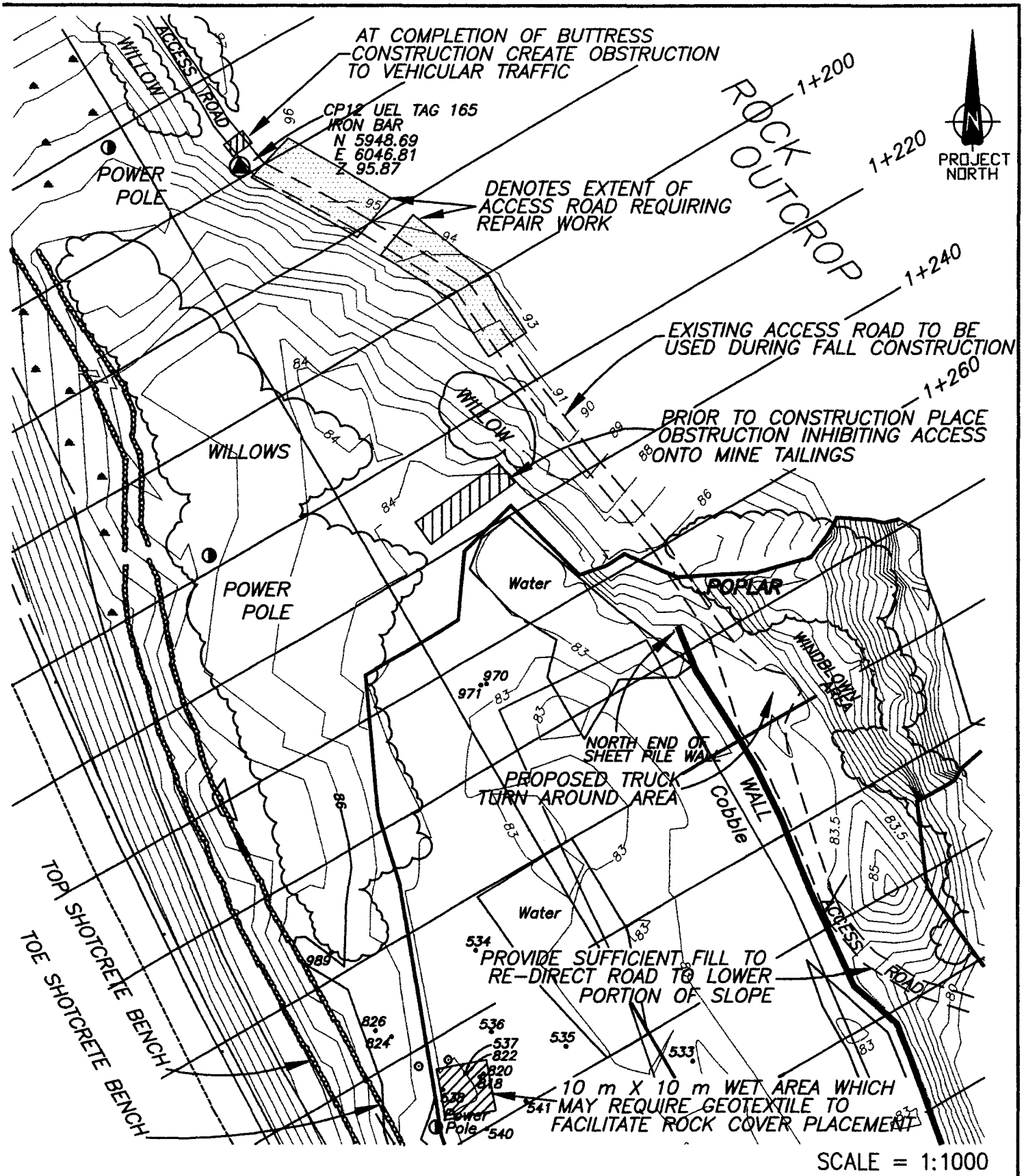
Lump Sum: _____

.5 Provisional Item: Supply and install an estimated 100 m^2 non-woven geotextile and geogrid material at the tailings impoundment water source as detailed in the construction specifications (Section 1004, Subsection 4.3). Unit rate price to include all labour, materials and equipment, and site preparation necessary to complete the work. The actual area for each type of material which will be required will be confirmed by the on-site Engineer prior to the initiation of the second phase of construction in January, 1999. Payment will be based on the actual area of placement for each material at the unit rate indicated below.

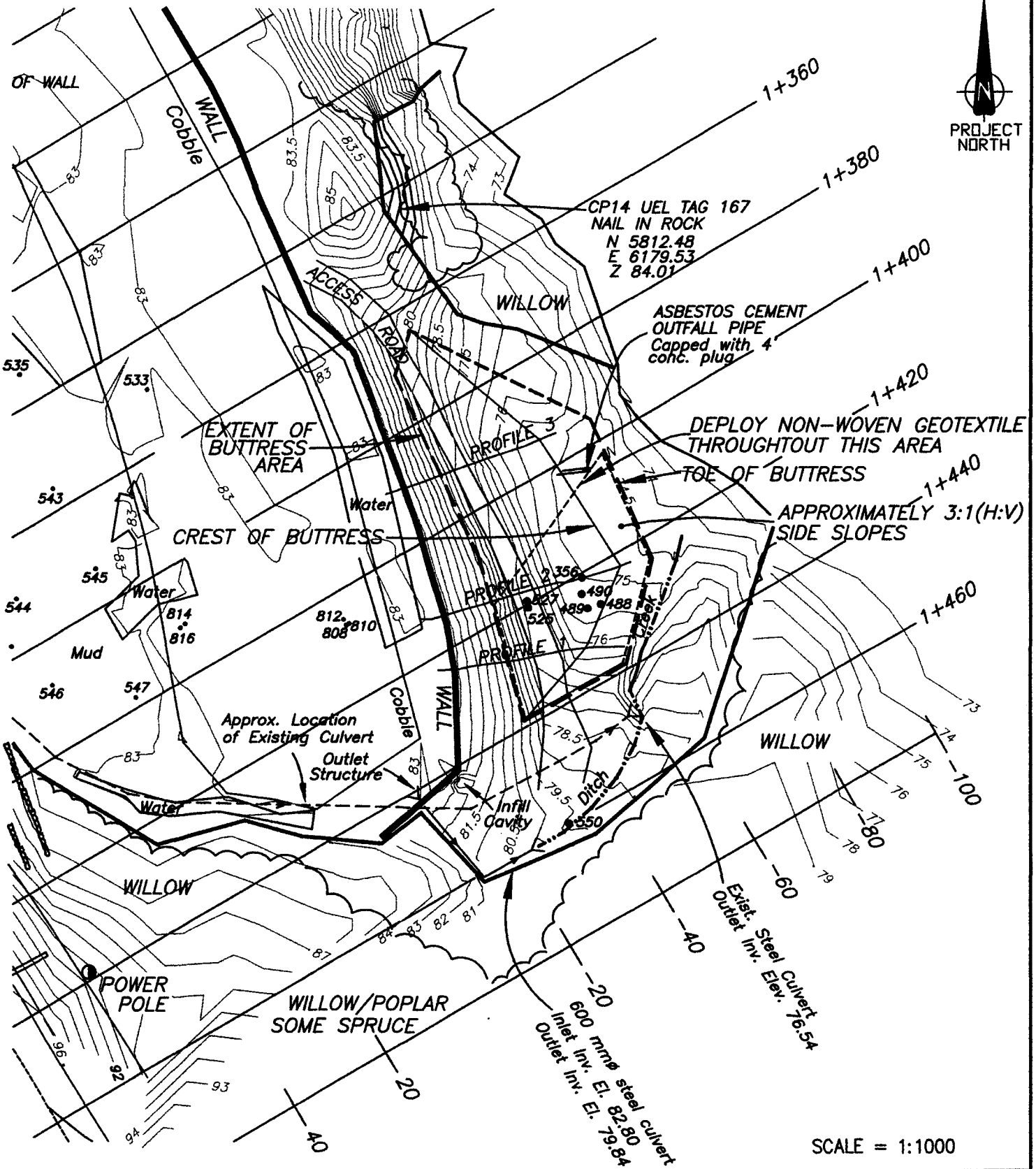
100 m^2 geotextile @ _____ **/ m^2 =** _____

100 m^2 geogrid @ _____ **/ m^2 =** _____

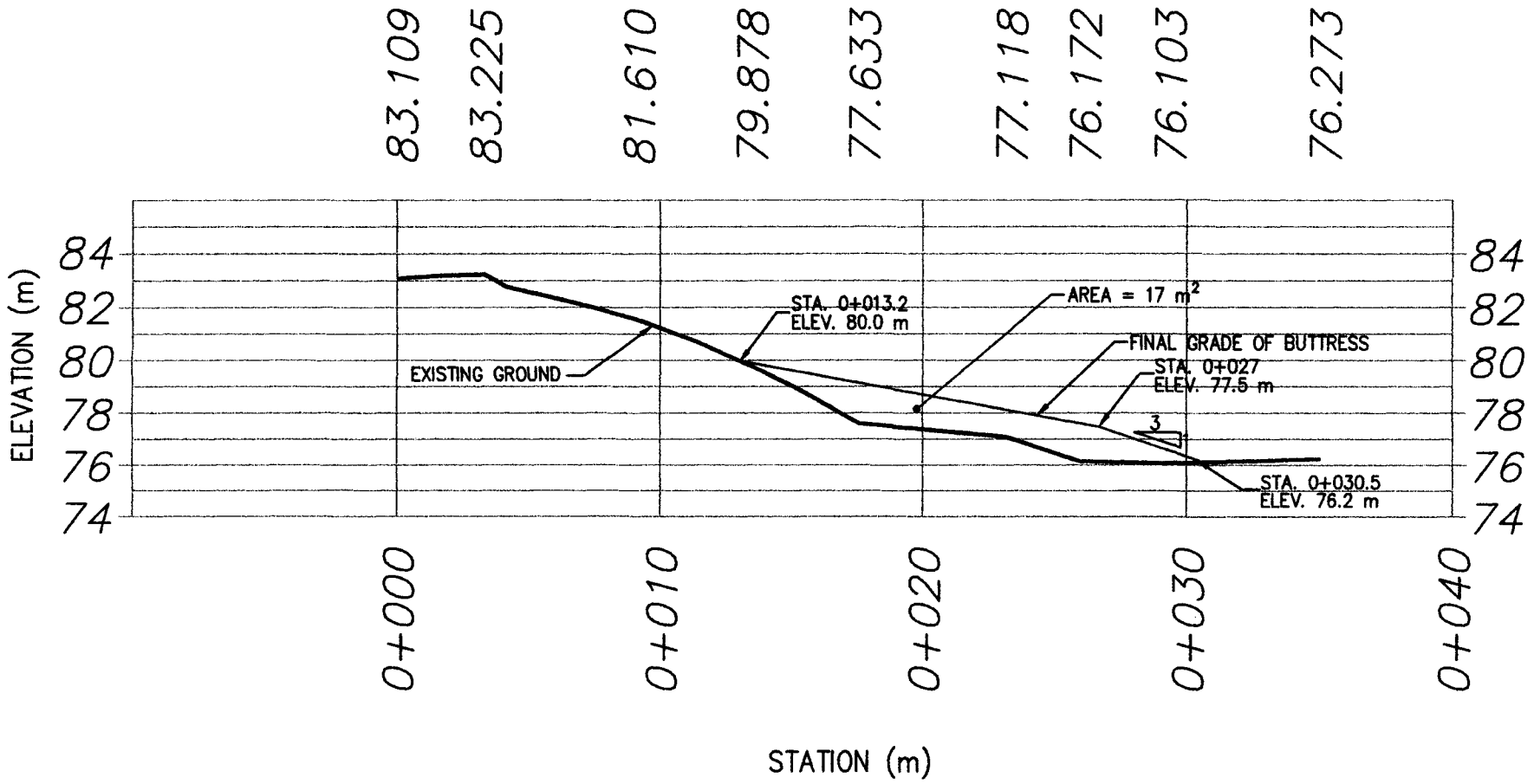
FIGURES



EBA Engineering Consultants Ltd.				PROJECT 1998-99 VENUS MINE TAILINGS REHABILITATION PROGRAM NEAR CARCROSS, YUKON	
ENT PUBLIC WORKS AND GOVERNMENT SERVICES CANADA (PWGSC) - ENVIRONMENTAL SERVICES				TITLE PLAN DRAWING OF ACCESS ROAD FOR 1998 CONSTRUCTION PROGRAM	
TE 98/10/15	DWN. JSB	CHKD. MEB		FILE NO. 0201-98-13604	FIGURE 1

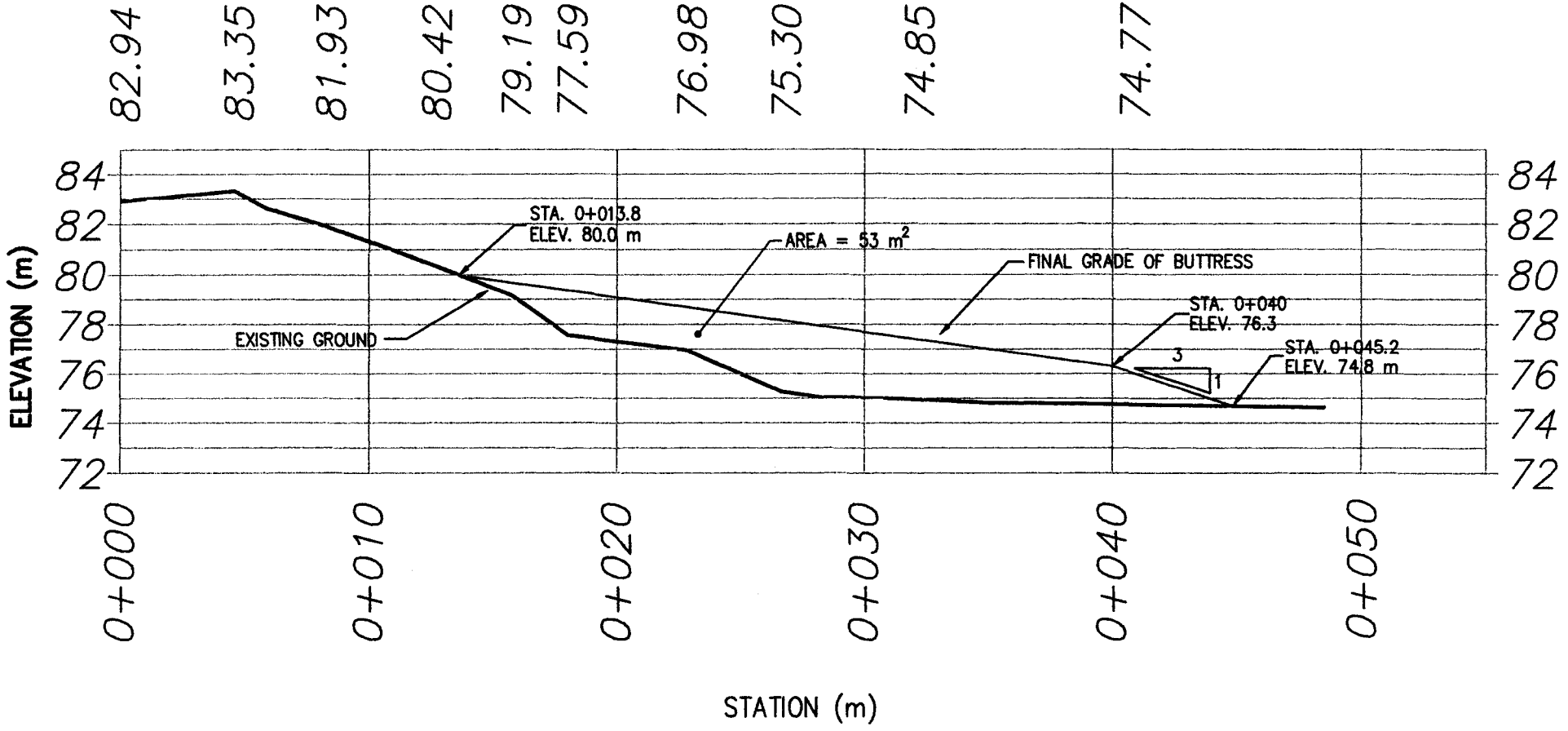


EBA Engineering Consultants Ltd.				PROJECT	1998-99 VENUS MINE TAILINGS REHABILITATION PROGRAM NEAR CARCROSS, YUKON
IENT	PUBLIC WORKS AND GOVERNMENT SERVICES CANADA (PWGSC) - ENVIRONMENTAL SERVICES			TITLE	PLAN DRAWING BUTTRESS
TE	98/10/16	DWN. JSB	CHKD. MEB	FILE NO.	0201-98-13604 FIGURE 2



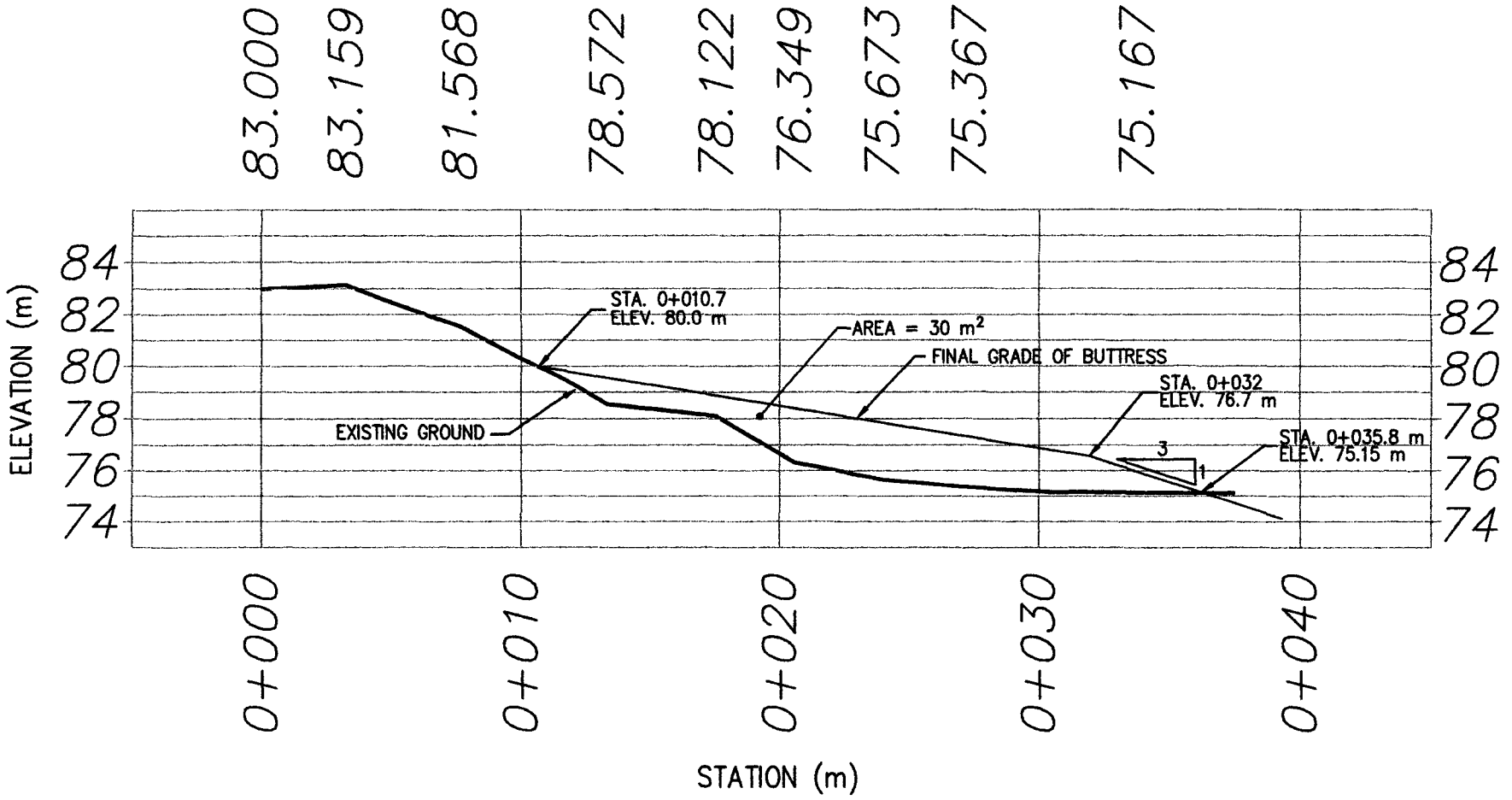
SCALE = 1:250

EBA Engineering Consultants Ltd.			PROJECT 1998-99 VENUS MINE TAILINGS REHABILITATION PROGRAM NEAR CARCROSS, YUKON
CLIENT PUBLIC WORKS AND GOVERNMENT SERVICES CANADA (PWGSC) ENVIRONMENTAL SERVICES			TITLE PROFILE 1 FINAL BUTTRESS GRADES AND ELEVATIONS
DATE 98/10/15	DWN. JSB	CHKD. MEB	FILE NO. 0201-98-13604	FIGURE 3



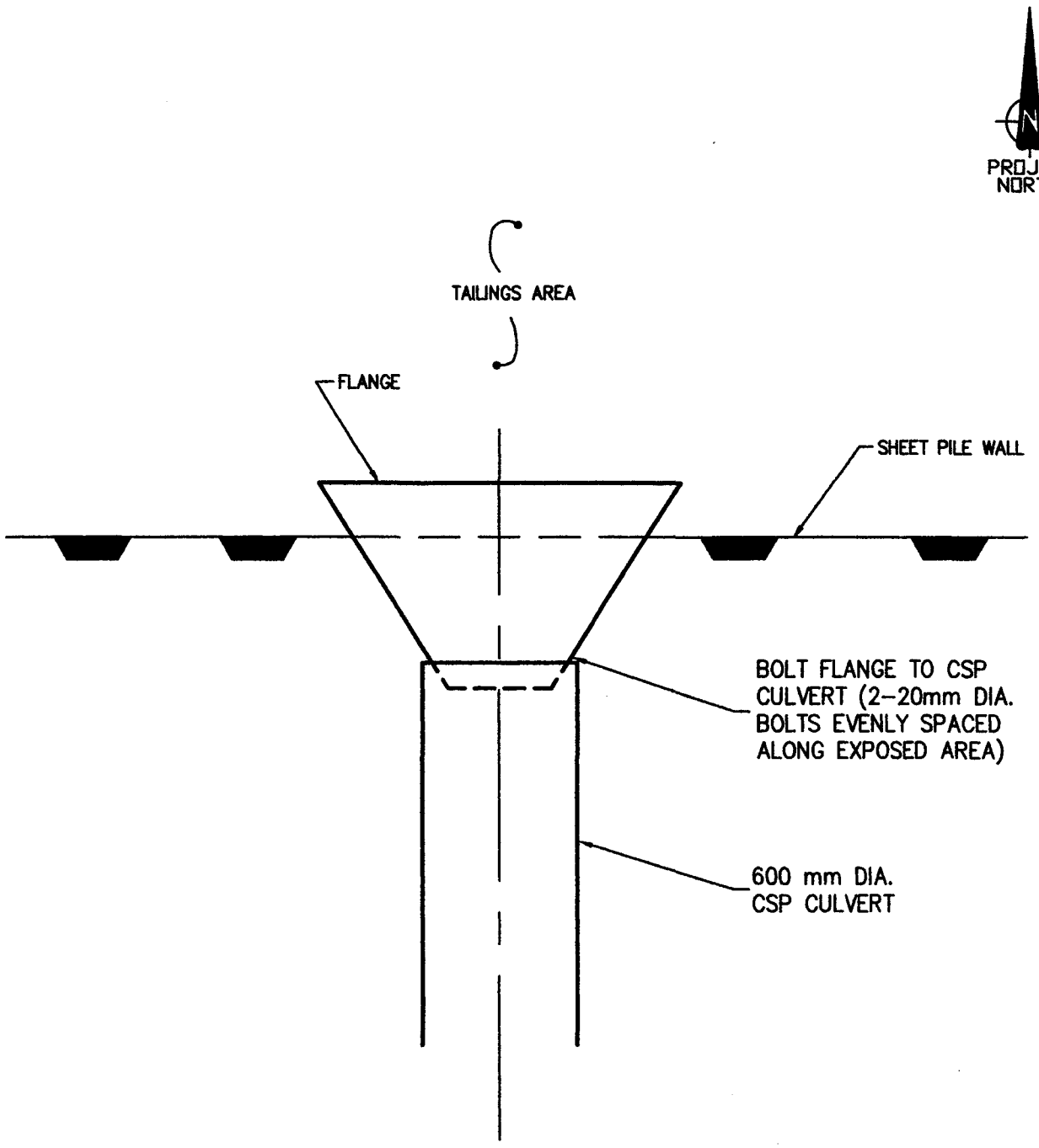
SCALE = 1:250

EBA Engineering Consultants Ltd.			PROJECT 1998-98 VENUS MINE TAILINGS REHABILITATION PROGRAM NEAR CARCROSS, YUKON
CLIENT PUBLIC WORKS AND GOVERNMENT SERVICES CANADA (PWGSC) ENVIRONMENTAL SERVICES			TITLE PROFILE 2 FINAL BUTTRESS GRADES AND ELEVATIONS
DATE 98/10/15	DWN. JSB	CHKD. MEB	FILE NO. 0201-98-13604	FIGURE 4



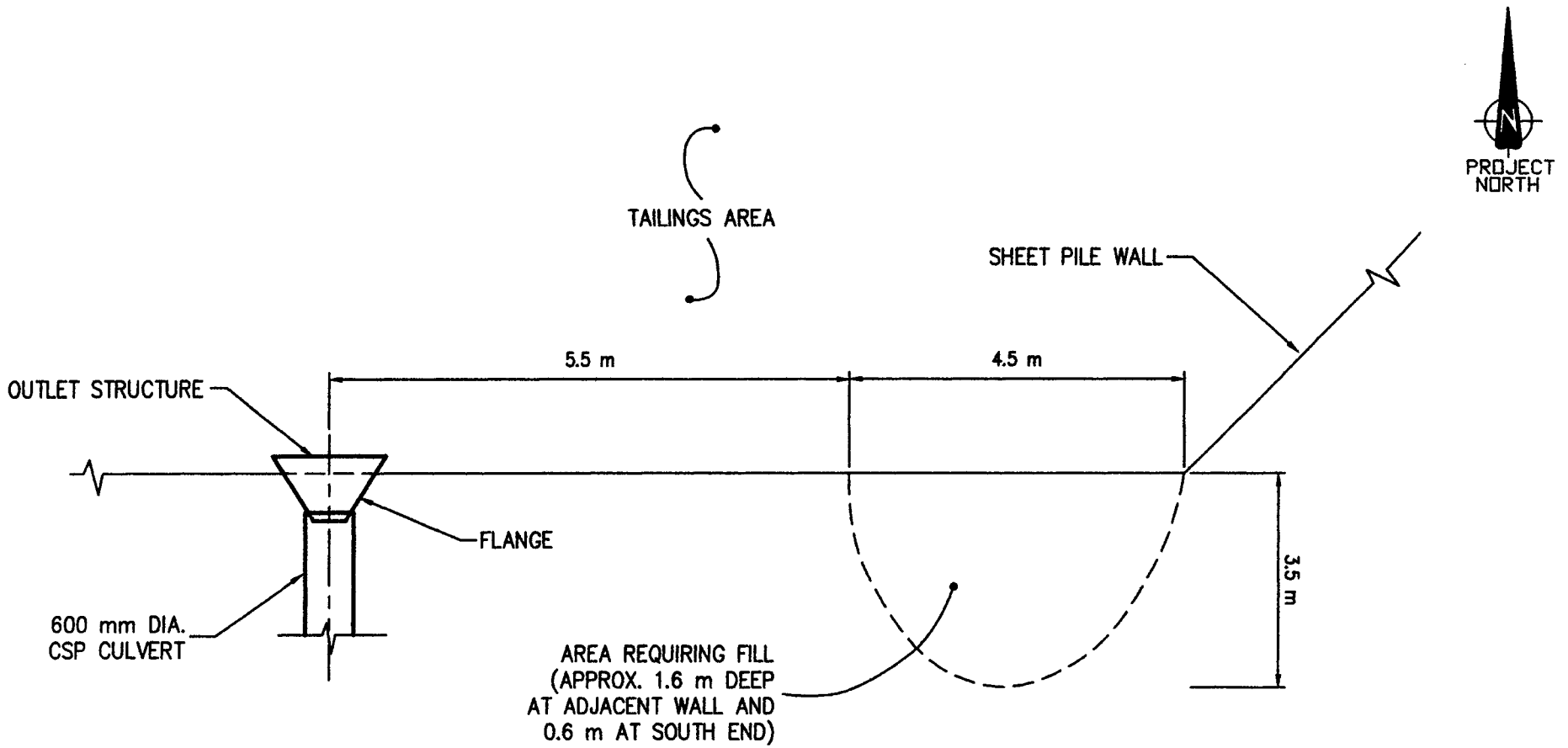
SCALE = 1:250

EBA Engineering Consultants Ltd.			PROJECT 1998-99 VENUS MINE TAILINGS REHABILITATION PROGRAM NEAR CARCROSS, YUKON
CLIENT PUBLIC WORKS AND GOVERNMENT SERVICES CANADA (PWGSC) ENVIRONMENTAL SERVICES			TITLE PROFILE 3 FINAL BUTTRESS GRADES AND ELEVATIONS
DATE 98/10/15	DWN. JSB	CHKD. MEB	FILE NO. 0201-98-13604	FIGURE 5



SCALE = 1:25

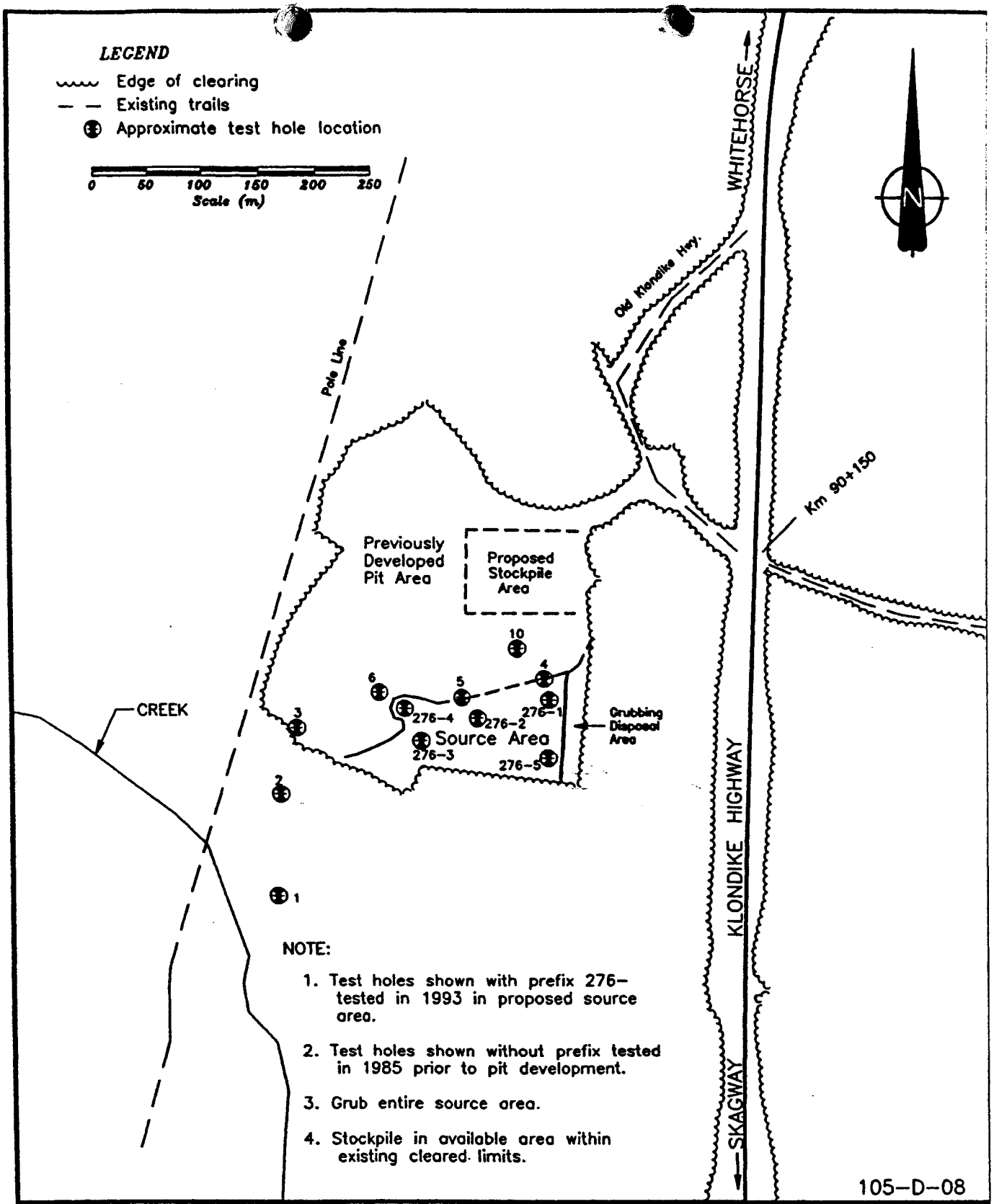
EBA Engineering Consultants Ltd.			PROJECT 1998-99 VENUS MINE TAILINGS REHABILITATION PROGRAM NEAR CARCROSS, YUKON
NT PUBLIC WORKS AND GOVERNMENT SERVICES CANADA (PWGSC) ENVIRONMENTAL SERVICES			TITLE PLAN DRAWING FLANGE CONNECTION AT OUTLET STRUCTURE
98/10/15	DWN. JSB	CHKD. MEB	FILE NO. 0201-98-13604	FIGURE 7



N.T.S.

EBA Engineering Consultants Ltd.		PROJECT	1998-99 VENUS MINE REMEDIATION NEAR CARCROSS, YUKON
CLIENT	PUBLIC WORKS AND GOVERNMENT SERVICES CANADA (PWGSC) ENVIRONMENTAL SERVICES	TITLE	PLAN DRAWING CAVITY ADJACENT SHEET PILE WALL
DATE 98/10/15	DWN. JSB / CHKD. MEB	FILE NO. 0201-98-13604	FIGURE 6

APPENDIX A



Yukon
Community and Transportation Services

Transportation Engineering Branch

SITE PLAN
PRODUCE AND STOCKPILE AGGREGATE
km 0090 LHS
(CONRAD PIT)
ALASKA HIGHWAY, YUKON

designed:	D. Stilwell
drawn:	WAE/D.S.
app'd:	
date:	94-12-16
scale:	See Plan
drwg:	02-0090-SP

APPENDIX B

Daily Reports

EBA Engineering

DAILY
~~INSPECTION~~ REPORT

Project: VENUS TAILINGS REHABILITATION PROGRAM
Date: OCTOBER 30, 98
Location: NEAR CARCROSS
General Contractor: L.W. DICKSON TRUCKING
Contractor's Representative: LAWRENCE
Project No.: 0201-98-13604
EBA Representative: EMG.

WEATHER: OVERCAST, APPROXIMATELY -8°C
EBA ON SITE AT 08:30h.

FLAT BED TRAILER MOBILIZED CAT 950C LOADER TO SITE AT 10:30h

WATER ACTIVELY PONDING BETWEEN STA 1+290 AND STA. 1+310 ALONG THE EAST SIDE OF THE SHEET PILE WALL (WHERE THE ACCESS ROAD TURN AROUND AREA IS PROPOSED). WATER HAS ONLY BEGAN TO POND IN THE LAST 2-3 DAYS.

LAWRENCE DICKSON ARRIVED ON SITE AT 11:30h

LOADER BEGAN WORKING ON ACCESS ROAD AT 12:00h (OPERATOR: LAWRENCE DIXON) LOADER ABLE TO INFILL THE GULLIES AND SMOOTH OUT THE ROAD, BUT SOME DOZER WORK WILL STILL BE REQUIRED.

INSTRUCTED LOADER TO GET 1 BUCKET OF 20 mm MINUS CRUSH FROM CONRAD PIT TO FILL VOID UNDERNEATH FLANGE AT CULVERT INLET AND UNDERNEATH A SECTION OF THE CULVERT. WORK COMPLETED

LOADER TO CONTINUE WORKING ON ACCESS ROAD UNTIL THE END OF THE DAY. DOZER EXPECTED TO BE ON SITE TOMORROW.

Hours Worked: LOADER (CAT 950C) 5 hrs.

eba

EBA Engineering

DAILY
~~INSPECTION~~ REPORT

Project: VENUS TAILINGS REHABILITATION PROGRAM
Date: OCTOBER 31, 1998
Location: NEAR CARCROSS
General Contractor: L.W. DICKSON TRUCKING
Contractor's Representative: LAWRENCE [redacted]
Project No.: 0201-98-13604
EBA Representative: EMG

WEATHER: OVERCAST WITH LIGHT FLURRIES, APPROXIMATELY -5°C
DOZER ARRIVED ON SITE LATE LAST NIGHT APPROX. 19:00h. DOZER WAS RENTED FROM GUARANTEED RENTALS, WHITEHORSE. IT'S A KOMATSU 480?

CONTRACTOR ARRIVED ON SITE AT 09:00h.
DOZER OPERATOR ARRIVED ON SITE AT 09:30h. (OPERATOR: LARRY BARRET)

DISCUSSED ROAD UPGRADING REQUIREMENTS AND BUTTRESS CONSTRUCTION SEQUENCE WITH CONTRACTOR AND DOZER OPERATOR.

DOZER BEGAN WORKING ON ACCESS ROAD AT 10:00h.

CAT 950C HEADED OVER TO CONRAD PIT TO MEET TANDEM TRUCK AND OPERATOR (11:00h) WILL BEGIN HAULING A FEW LOADS OF PIT RUN [redacted] FOR ACCESS ROAD AND TURN AROUND AREA.
FIRST LOAD OF PIT RUN FOR THE ACCESS ROAD ARRIVED AT 12:00h.

HAULED 5 TANDEM LOADS OF PIT RUN FOR THE ACCESS ROAD AND TURN AROUND AREA.
5 LOADS OF PIT RUN WERE HAULED FOR THE BUTTRESS
TANDEM TRUCK EXPERIENCING PROBLEMS WITH BRAKES. LAWRENCE WANTS TO STOP HAULING AT ~~[redacted]~~ 17:00h, SO HE CAN REPAIR THE BRAKES ON THE TRUCK.

EQUIPMENT TIME	MATERIAL
KOMATSU DOZER 7½ hrs.	5 loads of Pit Run for Access Road
CAT 950C LOADER 6½ hrs.	3 loads of Pit Run for Buttress
1 TANDEM TRUCK 5¼ hrs.	

Hours Worked:

eba

).CDR

EBA Engineering

INSPECTION REPORT

Project: VENUS MINE TAILINGS REHABILITATION PROGRAM Date: NOVEMBER 1, 1998

Location: NEAR CARCROSS General Contractor: L.W. DICKSON TRUCKING

Contractor's Representative: Lawrence Dickson

Project No.: 0201-98-13604 EBA Representative: EMG

WEATHER: Overcast, approx. -5°C

DOZER OPERATOR ARRIVED ON SITE AT 09:00h.

TANDEM TRUCKS BEGAN HAULING TO SITE AT 10:00h.

MEASURED TANDEM TRUCK BOXES

TRUCK #1 BLUE KENWORTH 4.5m x 2.2m x 1.0m = 9.9m³

TRUCK #2 BLACK KENWORTH 5.0m x 2.2m x 0.9m = 9.9m³

Use between 9.5 & 10m³ / 12.4-13yd³

THE CONTRACTOR IS FINDING THAT BORROWING INTO THE PIT RUN IS TOO SLOW AND DIFFICULT WITH A SMOOTH BUCKET. HE'S PUTTING TEETH ON HIS BUCKET THIS MORNING.

THE TANDEM TRUCK DRIVERS ARE LOADING THEIR OWN TRUCKS. THERE IS NO EXCLUSIVE LOADER OPERATOR.

FASTENED FLANGES TO CULVERT AT BOTH THE CULVERT INLET AND OUTLET. USED 2 - 1/2" DIAM. BOLTS WITH WASHERS AT CULVERT INLET. USED 4 - 1/2" DIAM BOLTS W/ WASHERS AT CULVERT OUTLET.

BUTTRESS CONSTRUCTION IS GOING WELL. CONSTRUCTING RAMP TO ACCESS LOWER PORTION OF BUTTRESS.

MATERIAL

310 m³ of Pit Run placed for buttress

EQUIPMENT	HOURS
CAT 950C LOADER	7
KOMATSU DOZER	7
2 - TANDEM TRUCKS	7 each / 14 hrs. total.

Hours Worked:

eba

EBA Engineering

DAILY
~~INSPECTION~~ REPORT

Project: VENUS MINE TAILINGS REHABILITATION PROGRAM Date: NOVEMBER 02, 1998

Location: NEAR CARCROSS General Contractor: L.W. DICKSON TRUCKING

Contractor's Representative: LAWRENCE DICKSON

Project No.: 0201-98-13604 EBA Representative: EMG

WEATHER: OVERCAST, -2°C

EBA ARRIVED ON SITE AT 08:30h.

TANDEM TRUCKS BEGAN HAULING PIT RUN AT 09:00h.

BACKFILLED VOID ADJACENT TO SHEET PILE WALL AT 12:00h. REQUIRED APPROX. 16m^3

NON-WOVEN GEOTEXTILE ARRIVED ON SITE AT 15:30h. DELIVERED BY KILRICH IND.

DEPLOYED GEOTEXTILE AS PER CONSTRUCTION SPECIFICATIONS.

BEGAN PLACING PIT RUN ON TOP OF GEOTEXTILE

DEPLOYED 1½ ROLLS OF GEOTEXTILE
SEE FIGURE 2 IN SPECS FOR EXACT LOCATION
INSTALLATION WENT WELL.

CONTRACTOR WORKED TILL 17:00h.

MATERIAL PLACED	TYPE	QUANTITY
BUTTRESS	Pit Run	400m^3
VOID ADJACENT SHEET PILE WALL	Pit Run	~ 16m^3

EQUIPMENT	OPERATING HOURS
CAT 950C LOADER	9
KOMATSU DOZER	9
2 - TANDEM TRUCKS	9x2 = 18

Hours Worked:

eba

EBA Engineering

DAILY
~~INSPECTION~~ REPORT

Project: VENUS MINE TAILINGS REHABILITATION PROGRAM Date: NOVEMBER 03, 1998

Location: NEAR CARCROSS General Contractor: L.W. DICKSON TRUCKING

Contractor's Representative: LAWRENCE DICKSON

Project No.: 0201-98-13604 EBA Representative: EMG / CC

WEATHER: PARTLY OVERCAST, -1°C

CONTRACTOR STARTED AT 08:30h

Ed Grozic's final day on site, replaced by Chad Cowan.

- REMOVED METAL HOUSINGS AROUND 3 MONITORING WELLS LOCATED WITHIN BUTTRESS AREA. THE 3 MONITORING WELLS WILL BE EXTENDED AS THE BUTTRESS IS CONSTRUCTED. FOLLOWING COMPLETION OF THE BUTTRESS THE THE PROTECTIVE METAL CASINGS WILL BE PUT BACK ON.

- PLACED GRADE STAKES ALONG TOP OF TOE OF BUTTRESS. (POSITIONED ALONG PROFILES #1, #2 & #3) TO ASSIST THE DOZER OPERATOR.

- ONE OF THE TANDEM TRUCKS BROKE A DRIVE SHAFT @ 15:00h. CONTRACTOR IS ATTEMPTING TO FIX IT. THE TRUCK HAD TO BE PULLED ACROSS THE TAILINGS AREA TO GET IT OUT OF THE WAY.
- TRUCK TURN AROUND IS GETTING VERY SOFT. DUMPED 1 LOAD OF PIT RUN ON SOFT SPOT.

MATERIAL PLACED	QUANTITY	TYPE
PIT RUN AT BUTTRESS	~~990~~ m^3	Pit run
PIT RUN AT SOFT SPOT (TURN AROUND)	10 m^3	

EQUIPMENT	OPERATING HOURS
CAT 950C LOADER	9
KOMATSU DOZER	9
2- TANDEM TRUCKS	7+9 = 16

Hours Worked:

eba

EBA Engineering

DAILY ~~INSPECTION~~ REPORT

Project: YUKON MINE TAILINGS REHABILITATION PROGRAM
Location: NEAR CARCROSS, YUKON
Project No.: 0201-98-13604
Date: 98/11/04
General Contractor: L.W. DICKSON TRUCKING
Contractor's Representative: LAWRENCE DICKSON
EBA Representative: CPC

WEATHER: OVERCAST & COOL, -5°C

CONTRACTOR STARTED AT 8:30 h

- BOTH TANDEM TRUCKS RUNNING.
- CONTRACTOR WAS TOLD THAT THE WEST ENTRANCE TO THE TAILINGS AREA HAS TO BE BLOCK WITH LARGE BOULDERS.
- ADDED ADDITIONAL SECTIONS OF PVC TO MONITORING WELLS MW1, MW2-S & MW2-D (including small PVC @ MW2-D location).
  LENGTHS OF ADDITIONAL SECTIONS:
  - MW1 = 1.65 m
  - MW2-S = 1.46 m
  - MW2-D (50mm) = 1.24 m
  - MW2-D = 1.10 m
- TANDEM TRUCK BROKE DOWN @ 15:30 h @ HIGHWAY ENTRANCE TO TAILINGS AREA.

MATERIAL PLACED	QUANTITY
BUTTRESS (PITRUN)	410 m^3

EQUIPMENT	OPERATING HOURS
CAT 950C LOADER	9
KOMATSU DOZER	9
2-TANDEM TRUCKS	8 + 9 = 17

Hours Worked:

eba

EBA Engineering

DAILY
~~INSPECTION~~ REPORT

Project: VENUS MINE TAILINGS REHABILITATION PROGRAM
Location: NEAR CARCROSS.
Project No.: 0201-98-13604

Date: 98/11/05
General Contractor: L.W. DICKSON TRUCKING
Contractor's Representative: LAWRENCE DICKSON
EBA Representative: CPC

WEATHER: OVERCAST & COOL (-2°C)

CONTRACTOR STARTED @ 8:30h

- BOTH TANDEM TRUCKS RUNNING.

- MIKE BILLOWITS & MIKE NAHIR VISITED THE SITE @ 14:00h. THEY DECIDED THAT THE PONDED AREA @ BASE (TOE) OF BUTTRESS SHOULD BE FILLED IN WITH DRAIN ROCK UNTIL NO WATER IS SHOWING. THE DRAIN ROCK SHOULD THEN BE COVERED WITH GEOTEXTILE AND THEN COVERED WITH PITRUN UP TO THE CREEK'S EDGE. FINAL GRADE SHOULD BE HIGHER THEN THE WATER LEVEL OF THE CREEK. A BERM IS TO BE PLACED ALONG THE CREEK'S EDGE.

- THE TURN AROUND AREA WAS GETTING SOFT, HAD TO DUMP 1 LOAD OF PITRUN IN SOFT AREA. (15:00h)

- HAULED 5 LOADS OF DRAIN ROCK TO FILL IN PONDED AREA AT TOE OF BUTTRESS

MATERIAL PLACED	QUANTITY	EQUIPMENT	OPERATING HOURS
PITRUN FOR BUTTRESS	450 m^3	CAT 950C LOADER	9
DRAIN ROCK	50 m^3	KAMATSU DOZER	9
PITRUN AT TURN AROUND	10 m^3	2-TANDEM TRUCKS	9+9=18

Hours Worked:

eba

EBA Engineering

DAILY
~~INSPECTION~~ REPORT

Project: VENUS MINE TAILINGS REHABILITATION PROGRAM.
Location: NEAR CARCROSS
Project No.: 0201-98-13604

Date: 98/11/06
General Contractor: L.W. DICKSON TRUCKING
Contractor's Representative: LAWRENCE DICKSON
EBA Representative: CPC

WEATHER: - OVERCAST & COOL (-2°C)
- SNOWED OVER NIGHT, JUST A THIN LAYER (0.010m)

CONTRACTOR STARTED @ 8:30h, BOTH TANDEM TRUCK RUNNING.

AFTER A CONVERSATION WITH MIKE NAHIR @ 8:30h, IT WAS DECIDED THAT THE PONDED AREA AT THE TURN AROUND WOULD BE FILLED IN WITH DRAIN ROCK.

PLACED GEOTEXTILE OVER DRAIN ROCK AT THE TOE OF BUTTRESS NEAR THE CREEK. SPREADING PITRUN OVER GEOTEXTILE UP TO EDGE OF CREEK. (10:45h)
AMOUNT OF GEOTEXTILE - SEE FIGURE 2 (SPECS)
(4m x 16m) = 64 m^2

- GRADE STAKES HAVE BEEN PLACED ALONG TOP OF TOE OF BUTTRESS.
- METAL WELL CAPS WERE PUT BACK IN PLACE (MW1, MW2-S, MW-D)
- WATER SAMPLES WERE TAKEN (LOCATIONS IDENTIFIED BY MIKE NAHIR)
SAMPLE LOCATIONS LOCATED ON FIGURE 2. (SPECS).
SAMPLES: VE98-WQ-1, -2, -3, -4.

MATERIAL PLACED	QUANTITY	EQUIPMENT	OPERATING HOURS
PITRUN FOR BUTTRESS		CAT 950C LOADER	
		KAMATSU DOZER	
		2-TANDEM TRUCKS	

Hours Worked:

eba

EBA Engineering

DAILY ~~INSPECTION~~ REPORT

Project: 1998-9 VENUS TAILINGS REHABILITATION PROGRAM
Location: NEAR CARCROSS
Project No.: 0201-98-13604

Date: 98.11.7
General Contractor: L.W. DICKSON TRUCKING
Contractor's Representative: LAWRENCE DICKSON
EBA Representative: M. BILLOWITS

WEATHER: OVERCAST, -10°C
NO SNOW PRESENT SINCE LAST INSPECTION 98.11.6

- MEB ON-SITE 3pm TO PROVIDE GRADE STAKES AT NORTH MOST PORTION OF FILL AREA (AT PROFILE 3). SEVERAL ELEVATIONS TAKEN; EXISTING GRADES WITHIN 0.15 m OF DESIGN (UP TO 0.15 m LESS MATERIAL THAN DESIGN). SLIGHT VARIANCE ATTRIBUTED TO CHANGE IN FINAL SLOPE TO HAVE CONSISTENT GRADE FROM TOP (80.00 m ELEV. CONTOUR) TO BOTTOM OF BUTTRESS. CONTRACTOR COMPLETED FINAL GRADING AT ~ 5:30 pm

- MEB DIRECTED L.W. DICKSON TO PLACE BOULDERS TO BLOCK LOWER ACCESS ROAD AND SOIL AT UPPER ACCESS ROAD AS PER SPEC. ASKED HIM ALSO TO GRADE SOFT PORTION OF ACCESS ROAD (NEAR ROCK OUTCROP)

- MATERIAL HAULED 98.11.6 REPORTED AT 49 TRUCK LOADS BY CONTRACTOR; HAUL RECORDS FOR 98.11.7 NOT AVAILABLE.
- COLLECTED SAMPLE VE-98-WQ5 AT CREEK OUTLET (NEAR LAKE)
- APPROX HOURS FOR 2 TRUCKS & LOADER: 9 AM - 5 pm
  " " DOZER 9 AM - 6 pm.
- NOTED TO CONTRACTOR PIT WALL HAD TO BE GRADED TO 3:1 (H:V) WHERE PIT RUN WAS REMOVED, L.W.D SAID THIS TO BE DONE 98.11.8

Hours Worked:

eba

).CDR

EBA Engineering

INSPECTION REPORT

Project: VENUS REHABIL - PHASE 2
Location: NEAR CARCROSS
Project No.: 0201-98-13604
Date: 99/3/3
General Contractor: DICKSON TRUCKING
Contractor's Representative: LAWRENCE DICKSON
EBA Representative: M. BILLOWITS

WEATHER: OVERCAST, APPROX. -10 °C
EBA ON SITE AT 14:00 h

- CAT 950C LOADER MOBILIZED FROM CARCROSS TO CONRAD PIT @ 10:30 am.

- LOADER CLEARED ACCESS TO COARSE ROCK PILE AT CONRAD PIT AND ACCESS TO TAILINGS (DIRECT ROUTE, NOT UPPER ROAD). LOADER STARTED CLEARING SNOW FROM TAILINGS AREA AT 14:30 h AND WAS SUPPORTED VERY WELL BY FROZEN TAILINGS AND ICE. LAWRENCE INSTRUCTED TO CONTINUE SNOW REMOVAL ALONG CENTRAL AND EAST PORTION OF TAILINGS (NOT TO THE WEST OF 20m W OF BASELINE STAKES)

- SOME OPEN WATER ALONG WEST EDGE OF TAILINGS SIMILAR TO SKETCH DEPICTING OPEN WATER ON 99.2.12 (SEE FILE). OPEN WATER JUST TO WEST OF 40m W OF BASELINE STAKES, BETWEEN 1+360 and 1+300 chainages ONLY.

- CONFIRMED EQUIPMENT USAGE W/ LAWRENCE FOR 99/3/4
- CAT 950 C LOADER CLEARED SNOW UNTIL 6 pm

Hours Worked: 7.5 950 LOADER

eba

EBA Engineering

INSPECTION REPORT

Project: VENUS REHAB - PHASE 2
Location: NEAR CARCROSS
Project No.: 0201-98-13604

Date: 99.3.4
General Contractor: L. DICKSON TRUCKING
Contractor's Representative: L. DICKSON
EBA Representative: M. BILLOWITS

WEATHER: OVERCAST, APPROX. -20 °C
EBA ON SITE AT 10:00 AM

CAT 950 LOADER STARTED CLEARING SNOW AT 9 AM
D3C DOZER ON SITE BY 10:00 AM

THE SNOW REMOVAL PROCEEDED WELL WITH THE USE OF THE LOADER WORING IN CONJUNCTION WITH THE DOZER. THE LOADER WAS MUCH MORE EFFECTIVE (AND FASTER) IN MOVING THE SNOW, THEREFORE, LOADER USED FOR MAJORITY OF AREA. THE DOZER WAS USED TO CLEAR SNOW IN AREA WHERE ICE COLLAPSED AND WATER BECAME EXPOSED. SEE FIGURE 99/3/4 - ① FOR AREA OF BROKEN ICE.

95% SNOW REMOVED BY 5 pm. LOADER & CAT D3 TO WORK UNTIL 6 pm TO CLEAN UP CERTAIN AREAS (ESP. AREA WHERE GEOTEXTILE TO BE PLACED AND ALONG EDGE OF TAILINGS AREA).

GEOTEXTILE TO BE DELIVERED 99.3.5

1 TRUCK TO BE HAULING TONIGHT (BETWEEN 1+280 AND 1+240) TO ENSURE SOME ROCK PRESENT FOR D3 TO SPREAD IN MORNING. TRUCK DRIVER WILL LOAD HIMSELF (WITH LOADER AT PIT). - START 6 pm (2 TRUCKS 6 pm - 10 pm; 1 TRUCK 10 pm - 9 am) per L. Dickson
DOZER STOPPED AT 5:30 pm;
LOADER FINISHED AT TAILINGS AREA BY 6 pm

Hours Worked: 7.5 D3 DOZER
9.0 950 LOADER

eba

0.CDR

EBA Engineering

INSPECTION REPORT

Project: VENUS REHAB - PHASE 2
Date: 99/3/5
Location: NEAR CARCROSS
General Contractor: L. DICKSON TRUCKING
Contractor's Representative: L. DICKSON
Project No.: 0201-98-13604
EBA Representative: M. BILLOWITS

WEATHER: OVERCAST, -25°C
EBA ON SITE 10:30 h UNTIL 17:00 h

HAULING WASTE ROCK NIGHT PREVIOUS - APPROXIMATELY 26 LOADS (2 TRUCKS TILL 10pm, 1 TRUCK REMAINDER OF NIGHT) SELF HAULED.
LOADER OPERATOR STARTED AT APPROX. 8:30 am AND D3 OPERATOR AT APPROX. 9 AM
GEOTEXTILE DELIVERED BY KILRICH IN A.M. (5 ROLLS)

ROCK PLACEMENT PROCEEDED WELL. FLAGGING PLACED ON GRADE STAKES TO INDICATE FILL DEPTH FOR DOZER OPERATOR. (DEPTH ACCOUNTED FOR ICE THICKNESS). ROCK PROCEED BETWEEN ℄ AND 20m E STAKES, 20m WIDE PAD RUNNING NORTH-SOUTH ALONG TAILINGS. ADVISED CONTRACTOR TO FILL TOWARD EAST PERIPHERY ONCE THIS WAS COMPLETE AND THEN WHOLE AREA NORTH OF 1+280 STATION. NEXT, WHOLE AREA SOUTH OF 1+380 STATION.
LAST AREA TO BE COVERED WITH GEOTEXTILE PRIOR TO ROCK PLACEMENT.
SEVERAL PHOTOS TAKEN TO DOCUMENT EXTENT OF ROCK PLACEMENT 99/3/5.
SOME GLACIATION NEAR/ALONG ℄ STAKES RADIATING OUT FROM AREA WHERE ICE WAS BROKEN DURING SNOW REMOVAL (SEE FG. 99/3/4 - ①)
BLACK TRUCK BROKE AIRLINE 3:45 pm - ADVISED L. DICKSON TRUCK SHOULD BE GIVEN OVERALL MECH. CHECK

Hours Worked:
Page 1 of 1

eba

EBA Engineering

INSPECTION REPORT

Project: VENUS REHAB - PHASE 2
Date: 99/3/6
Location: NEAR CARCROSS
General Contractor: L. DICKSON TRUCKING
Contractor's Representative: L. DICKSON
Project No.: 0201-98-13604
EBA Representative: M. BILLOWITS

WEATHER: OVERCAST, -20 °C
- EBA ON-SITE AT 12:30 h UNTIL 18:00 h
- ROCK PLACEMENT CONTINUED
- COVERAGE EXTENDED TO SOUTH END OF TAILINGS AND TOWARD EAST EDGE OF TAILINGS (EAST OF ℄ STAKES)

- DOZER STARTED AT 08:30 h (PER L. DICKSON) AND ENDED AT ~18:00 h

- MORE GLACIATION B/W ℄ AND 20 m W FROM 1+290 TO 1+400
- EXTENDED REFERENCE ELEV. ON STAKES TO 83.8 SINCE 83.3 MARK ENCROACHED / COVERED BY ICE IN GLACIATED AREA.
- ADVISED CONTRACTOR RE: AREAS FOR ROCK FILL SEQUENCE AS PER REPORT 99/3/5

Hours Worked:

eba

EBA Engineering

INSPECTION REPORT

Project: VENUS REHAB. - PHASE II
Location: NEAR CARCROSS, Y.T.
Project No.: 0201-98-13604

Date: 99.03.07
General Contractor: L. DICKSON TRUCKING
Contractor's Representative: L. DICKSON
EBA Representative: J. BUYCK

WEATHER: SOME CLOUD, APPROX. -15°C
JSB ON SITE AT 12:00 h.

TWO TRUCKS CONTINUING TO HAUL ROCK, AND DOZER SPREADING TO THE EAST SIDE OF THE PAD AREA. MATERIAL ALSO BEING STOCKPILED ALONG THE CENTERLINE

SOME MINOR ADJUSTMENTS MADE TO FILL STAKES (CL STA 0+400, STA. 0+420, ~~EOW, STA. 0+420, STA 0+420~~) TO ACCOUNT FOR ICE BUILD-UP

PHOTO'S TAKEN (ROLL DATED 03.05 #9, 10, 11, 12)

DOWN TO ONE TRUCK FROM 1300 - 1500 HRS. (FLAT TIRE)
DRIVER LOADING HIMSELF WHILE LAWRENCE IN TOWN REPAIRING.
~~LAWRENCE BACK ON LOADER 1500 hrs~~
MET WITH LAWRENCE, ISSUES OF REMAINING SNOW REMOVAL, AND GEOTEXTILE PLACEMENT DISCUSSED
- LAWRENCE THINKS HE CAN GET IN WITH THE CAT RATHER THAN HAND REMOVAL.
- GEOTEXTILE WILL BE READY TO BE PLACED AROUND NOON TOMORROW, HE WILL HAVE A COUPLE EXTRA HANDS.

NIGHT SHIFT HAD HAULED A TOTAL OF 92 LOADS, ONE TRUCK RAN UNTIL MIDNIGHT ~~HAULING~~ HAULING 16 LOADS.

EAST SIDE OF FILL AREA COMPLETE AT 1600 HRS, DOZER NOW SPREADING STOCKPILED MATERIAL FROM CL TO S. WEST SIDE.
1630 JSB ~~HEAD~~ BACK TO WHITEHORSE.

Hours Worked:

eba

EBA Engineering

INSPECTION REPORT

Project: VENUS REHAB - PHASE II
Location: NEAR CARCROSS, YT.
Project No.: 0201-98-13604

Date: 99.03.08
General Contractor: L. DICKSON TRUCKING
Contractor's Representative: L. DICKSON
EBA Representative: J. BUYCK

WEATHER: SUNNY L -25°C, H -10°C
JSR ON SITE 10:30 hrs.

TWO TRUCKS HAULING, DOZER SPREADING ROCK AT SOUTH END. MATERIAL STOCKPILED ALONG ℄ OF FILL AREA.

CAT OPERATOR HAD ASKED JSR TO SHOW HIM WHERE THE EDGE OF GEOTEXTILE STARTS. JSR LAID OUT FLAGGING TO INDICATE THE OUTERMOST EDGE.

TWO LABOURERS (SAM & ROSS) ARRIVE ON SITE @ 1210 hrs, BOTH DO NOT HAVE RUBBER BOOTS. THEY WERE TOLD BY LAWRENCE THAT THEY WILL BE MET AT 1200 hrs. A PAIR OF BOOTS WAS BORROWED FROM ONE OF THE TRUCK DRIVERS
1230 hrs — 1430 hrs:
GEOTEXTILE WAS LAID STARTING FROM THE SOUTH END AT STA. 1+410. WITH A 600 mm OVERLAP. ~~THE FABRIC~~ THE GEOTEXTILE RAN OUT AT ~~THE~~ STA 1+320. ~~SNOW~~
1430 hrs — 1530 hrs
TIME WAS SPENT REMOVING SNOW IN THE AREA AROUND STA. 1+320, ~~320~~ 1+410. ATTEMPTED TO LOCATE GEOTEXTILE LEFT ON SITE FROM LAST YEAR, SNOW DEPTH ≈ 2-3' DEEP, NO LUCK FINDING THE ROLL.
JSR HEAD BACK TO WHITEHORSE @ 1600 HRS.
PHOTOGRAPHS 1-5 ON ROLL DATED 99.03.08.
NIGHT SHIFT (L. DICKSON) ONE TRUCK RAN ALL NIGHT HAULING 26 LOADS, ONE TRUCK UNTIL MIDNIGHT HAULING 13 LOADS
39 LOADS TOTAL

Hours Worked: _____ Page _____ of _____

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EBA Engineering

INSPECTION REPORT

Project: VENUS REHAB PHASE II
Location: NEAR CARCROSS, YT
Project No.: 0201-98-13604

Date: 99.03.09
General Contractor: L. DICKSON TRUCKING
Contractor's Representative: LAWRENCE
EBA Representative: J. BUYCK

WEATHER: -10°C, SNOWING.
JSB ON SITE: 1030 hrs

MET WITH LAWRENCE AT PIT, ACCORDING TO HIS RECORDS UP TO LAST NIGHT A TOTAL OF 349 LOADS HAVE BEEN HAULED TO THE SITE. IT APPEARS THAT THERE IS SUFFICIENT STOCKPILE LEFT TO FINISH THE JOB AND ALSO TO BUILD UP THE AREAS AS PREVIOUSLY PLANNED. I INFORMED LAWRENCE THAT THE GEOTEXTILE WILL BE DELIVERED BY NOON, AND HE WOULD HAVE THE 2 LABOURERS HERE BY THEN.
ON-SITE: BOTH TRUCKS ARE RUNNING 1 DOZER SPREADING MAINLY AT THE NORTHWEST SECTION.
GEOTEXTILE DELIVERED BY GUARANTEED RENTALS AT 11:30.
TWO LABOURERS ARRIVE @ 12:00 BOTH HAVE PROPER FOOTWEAR (SAM & ROSS)
12:10 - 13:10 GEOTEXTILE PLACED FROM STA 1+330 - STA. 1+298.
APPROXIMATELY 1 1/2 ROLLS USED (170m).
13:20 - 13:30 ROCKS PLACED ALONG EDGE OF FABRIC FROM THE SIDE
DOZER WILL BEGIN PUSHING FILL MATERIAL FROM.
1330 - 1400 AREAS AROUND STAKES AND WELL POINTS BACKFILLED AND LEVELLED BY HAND.
PHOTOGRAPHS TAKEN 5-12 ON ROW DATED 99.03.08
SEE ATTACHED SITE PLAN DATED 99.03.09 FOR PROGRESSION OF FILL PLACEMENT AND EXTENT OF GEOTEXTILE PLACED FOR THE DAY.
ACCORDING TO LAWRENCE 22 LOADS WERE HAULED DURING NIGHT-SHIFT. LOADER SPENT A FEW HOURS AT SITE PLACING ROCK ON GEOTEXTILE TO PREVENT PUSHING OF THE FABRIC IN PLACE.
20 & 23 LOADS WERE HAULED FOR DAY SHIFT (99.03.08)

Hours Worked:
1445 JSB HEAD BACK TO WHSE.

Page ____ of ____

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EBA Engineering

INSPECTION REPORT

Project: VENUS REHAB - PHASE II
Location: NEAR CARCROSS, Y.T.
Project No.: 0201-98-13604

Date: 99.03.10
General Contractor: L.W. DICKSON TRUCKING
Contractor's Representative: L. DICKSON
EBA Representative: J. BUYCK

WEATHER: SOME CLOUD, SUNNY L-8, H-3
JSB ON SITE @ 10:15

JSB MET WITH LAWRENCE AT PIT, ACCORDING TO LAWRENCE, TRUCK HAULING RAN UP TO 12:00 MIDNIGHT, A TOTAL OF 77 LOADS WERE HAULED. A TOTAL OF OF 426 LOADS UP TO THAT POINT. LAWRENCE INTENTION IS THAT THE REMAINING STOCKPILE ~~SHOULD~~ BE COMPLETE LATE TODAY.

DOZER SPREADING ALONG THE WEST SIDE OF THE SITE, OVER THE GEOTEXTILE. SPOKE WITH DON (OPERATOR) WORKED UNTIL 19:00 HRS IN ORDER TO KEEP UP

PHOTOGRAPHS 2-5 ON ROLL DATED 99.03.09

MICHEAL BILLOWITS & MARK PALMER ON SITE 1350 HRS TO OVERSEE PROJECT. DEPART @ 1440 HRS.

WORK COMPLETED UP TO 1500 HRS SHOWN ON SITE PLAN DATED 99.03.10.

JSB DEPART SITE @ 1540 HRS.

Hours Worked:

Page ____ of ____

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EBA Engineering

INSPECTION REPORT

Project: VENUS REHAB - PHASE II
Location: NEAR CARCROSS, YT.
Project No.: DOT-98-13604

Date: 99.03.11
General Contractor: L.W. DICKSON TRUCKING
Contractor's Representative: L. DICKSON
EBA Representative: J. BUTLER

WEATHER: OVERCAST -8°C
JSB ON SITE @ 9:30 hrs.

PIT IS NOW CLEAR, TRUCKS & LOADER NO LONGER ON SITE.

DOZER PUSHING FILL INTO AREAS ALONG THE WEST SIDE OF THE SITE. OPERATOR DETERMINES ANOTHER 2 HRS. TO FINISH

-APPROXIMATELY 6 LOADS PILED ALONG THE CENTRELINE AT STA. 1+340 - 1+380. WILL BE SPREAD AND LEVELLED.

ACCORDING TO DON (DOZER OPERATOR) DOZER WORKED UP TO 2000 hrs. TO CATCH UP AND DIRECT WHERE LOADS WERE TO BE DUMPED.

PHOTOGRAPHS 6-12 ON ROLL DATED 99.03.09.

JSB MOB BACK TO WHITEHORSE @ 1030 hrs. MET LAWRENCE NEAR PIT ENTRANCE ON HIS WAY TO SITE. LAWRENCE STATED THAT ONE TRUCK RAN UNTIL 1800 hrs HAULING 29 LOADS, THE SECOND TRUCK RAN UNTIL 2100 hrs HAULING 39 LOADS. LOADER DEMOBBED TO CARCROSS AT THAT TIME.

LABOURERS HOURS TOTALLED 20 HRS @ 16.00 $/hr/hour.

Hours Worked:

Page ____ of ____

CDR

APPENDIX C

Quality Control/Quality Assurance Results for Drain Rock Production

EBA Engineering Consultants Ltd.

LARGE AGGREGATE ANALYSIS REPORT

Project: VENUS TAILINGS CONSTRUCTION - 1998 **Sample Number:** n/a

Address: Km. 66 PIT, S. KLONDIKE HWY **Sample Location:** stock

Project Number: 0201-98-13604

Date Sampled: _____ **By:** _____ **Time:** _____ **Temp.:** _____ °C

Client: PWGSC - Environmental Services **Date Tested:** n/a

Tested By: _____

Natural Moisture Content: _____

Crushed Faces: _____ ☐1 _____ ☐2

Attention: Mr. Michael Nahir, P.Eng.

Soil Description: n/a.

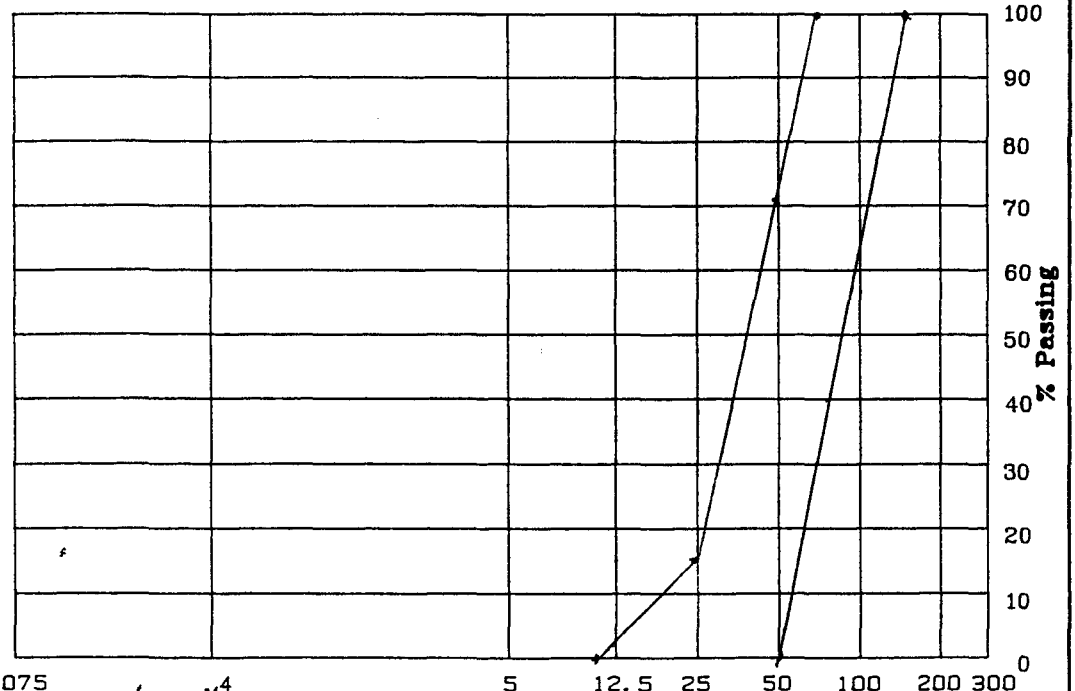
Cu: _____

Cc: _____

Remarks: Proposed Spec Band for course aggregate material for use as cap on tailings area.

Grading Curve of Aggregate

SIEVE SIZE (mm)	% PASSING
150	100
75	30 - 100
50	0 - 70
25	0 - 15
10	0



Reviewed By: _____ **P.Eng.**

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EBA Engineering Consultants Ltd.

FAXED

TELECOPY COVER SHEET

Calcite Business Centre
Unit 6, 151 Industrial Road
WHITEHORSE, Yukon, Canada, Y1A 2V3
Telephone (867) 668-3068 FAX (867) 668-4349
From the desk of: Michael E. Billowits, M.Sc.(Eng), P.Eng.
INTERNET: mbillowits@eba.ca

e Created: 10/6/98 Time Created: 2:00:04 PM

ntion: Rod

ıpany: NuWay Crushing

No.: 668-3668 Telephone No.:

File No.: 0201-98-13604 Client File No.:

BJECT: SCREEN AND STOCKPILE OVER-SIZE AGGREGATE AT EXISTING BORROW PIT, KM 90 (CONRAD PIT), S. KLONDIKE HIGHWAY

quires a cost estimate to screen and stockpile 4000 cubic metres of over-size aggregate meeting the specified gradation hown below. The source would be as shown on the attached site plan drawing and associated test pit and grain size tion.

ize (mm)	Passing by Mass (%)
	100
	30 - 100
	0 - 70
	0 - 15
	1

ıterial would be stockpiled at the pit, within 200 m from the aggregate source (location which will not interfere with existing ɔckpiles). The screened material shall consist of hard, clean, durable material, free from deleterious materials and contain no matter. The Contractor shall obtain and ship to EBA representative samples of the material containing not less than 25 kg for ɔreening shift (1 per day). Acceptance of the material (for payment) will be based on a report by EBA which contains sieve s results and a written approval by the Engineer. Surveying will be provided by Underhill Ltd. to verify that a minimum volume) m^3 has been produced. Payment will be based on an upset limit, lump sum cost to produce 4000 m^3 of aggregate meeting wo performance criteria. The screening operation is to commence on or before October 13, 1998. Please provide a lump sum timate to produce 4000 m^3 of aggregate described above. As well, provide a unit rate per cubic metre to produce material in ı to the 4000 m^3 estimate. It may be assumed that the additional material would be produced immediately following tion of the 4000 m^3 stockpile (as necessary). The lump sum (upset limit to produce 4000 m^3) and unit rate (to produce ıl in addition to the 4000 m3) costs are required by 2 pm, Oct. 7, 1998. This request for quotation supercedes all previous ıondance provided by EBA to date. EBA reserves the right to refuse any or all price quotations.

ls,

eba

ıl number of pages including this page: 1

EBA Engineering Consultants Ltd.

October 19, 1998

Public Works and Government Services Canada
Environmental Services
1000-9700 Jasper Avenue
Edmonton, Alberta
T5J 4E2

EBA File: 0201-98-13604

Attention: Mr. Michael Nahir, M.Eng., P.Eng.

Dear Sir:

Subject: Crushed Aggregate Surfacing Material,
Venus Mine Tailings Rehabilitation Program
Near Carcross, YT

Production of the crushed aggregate for use as surfacing material for the Venus Mine Tailings Rehabilitation Program has been completed. This letter summarizes the crushing activities and the Quality Control/Quality Assurance (QC/QA) program undertaken by EBA Engineering Consultants Ltd. (EBA).

The crushing program was carried out by NuWay Crushing Ltd. (NuWay) of Whitehorse, Yukon, at the Kilometer 90 Borrow Pit (Conrad Pit) located along the South Klondike Highway. NuWay mobilized equipment and personnel between October 14 and 15, and began producing crushed aggregate at 2 pm on October 15, 1998. The crushing program was completed on October 17, 1998 at 12 am.

The crushed aggregate stockpile was surveyed on October 19, 1998 by Underhill Geomatics Ltd. of Whitehorse, Yukon, and found to be 4280 m^3 in size.

EBA carried out a QC/QA program during the crushing operations to ensure that the aggregate being produced was meeting the grain size distribution limits specified, as presented in Table 1.

Table 1 - Grain Size Distribution Limits for Capping Material

Sieve Size (mm)	Percent Passing by Mass (%)
150	100
75	30 – 100
50	0 – 70
25	0 – 15
10	0

Seven samples were collected during the crushing program. The samples were returned to EBA's Whitehorse laboratory for sieve analysis. Results of the sieve analysis, presented on the attached sheets, indicates that the crushed aggregate meets the gradation requirements specified for the surfacing material.

We trust this information satisfies your present requirements. If you require any additional information, please contact our office at your convenience.

Respectfully submitted,
EBA Engineering Consultants Ltd.

Ed M. Grozic, P.Eng
Project Engineer

PROFESSIONAL ENGINEER YUKON TERRITORY

Michael E. Billowits, M.Sc., P.Eng.
Project Engineer

EBA Engineering

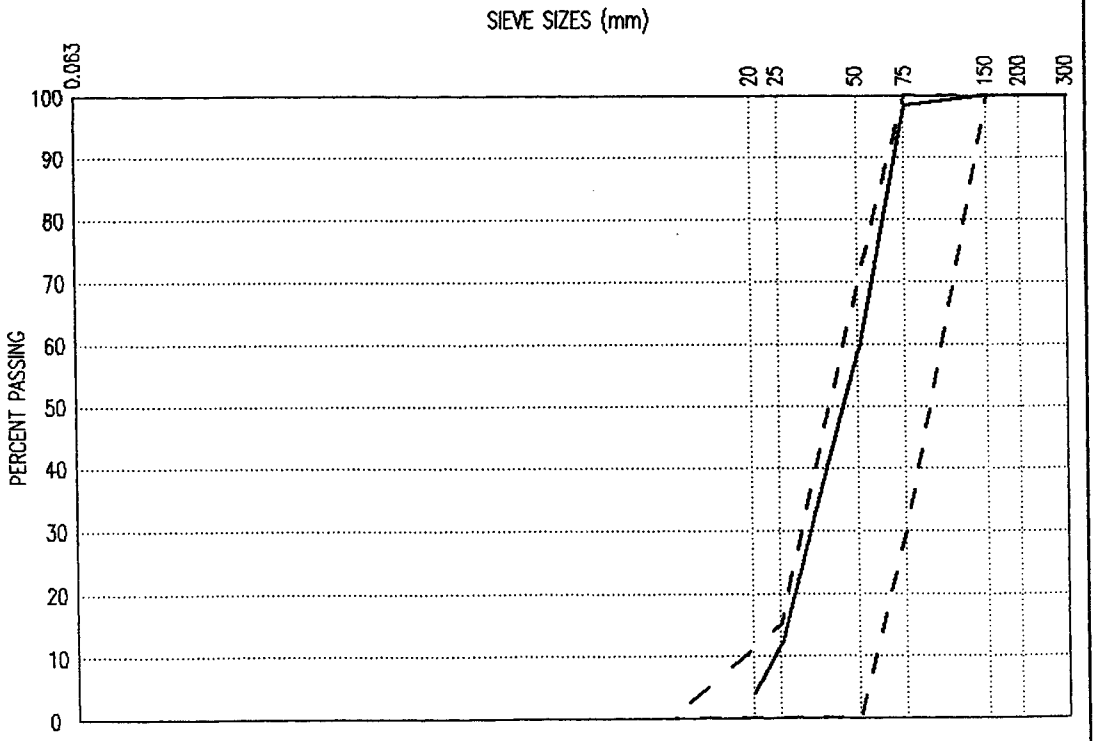
LARGE AGGREGATE ANALYSIS REPORT

Project: VENUS MINE TAILINGS REHABILITATION
Address: CARCROSS, YT
Project Number: 0201-98-13604
Date Sampled: 98/10/15 By: EG
Client: Public Works and Government Services Canada
Attention: Mr. Michael Nahir, P. Eng.
Soil Description: GRAVEL

Sample Number: 1
Sample Location: Sample Taken from Stacker Belt
Time: 16:00 Temp:
Date Tested: 98/10/15 By: MS
Natural Moisture Content:
Crushed Faces: Faces:

Remarks: Capping Material for Venus Mine Tailings
Material source - km 90 Borrow Pit (Conrad Pit) along South Klondike Hwy.

Sieve	% Passing
300	100
200	100
150	100
75	98
50	59
25	12
20	4.0



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EBA Engineering

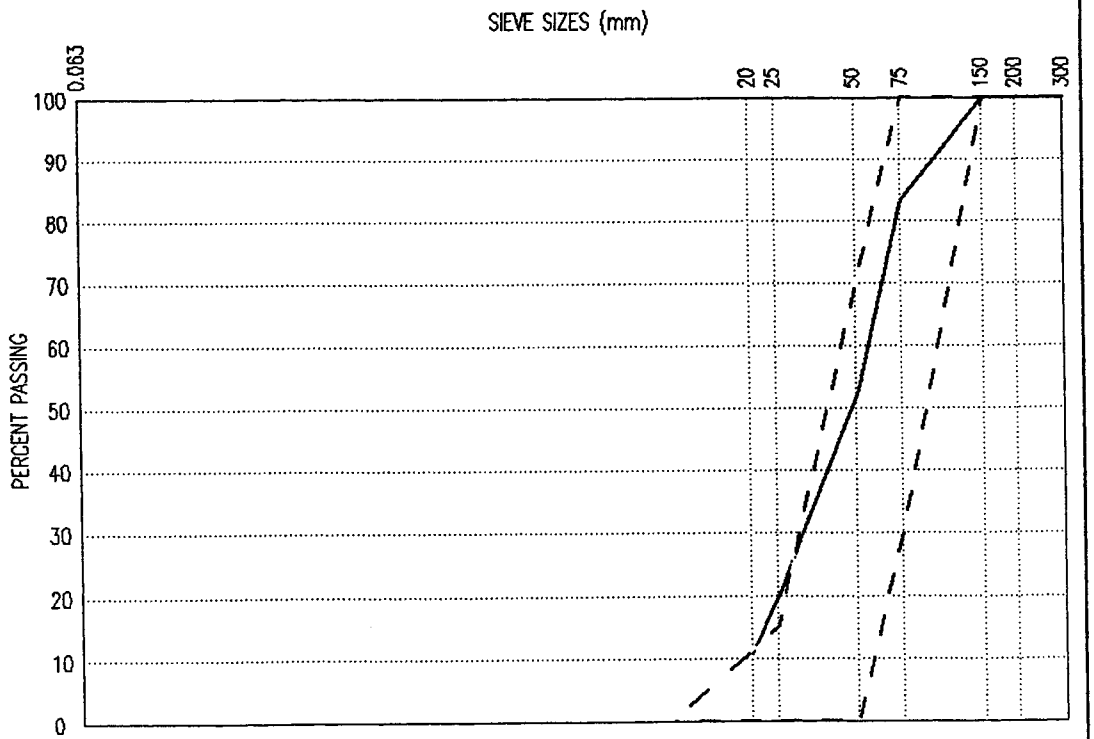
LARGE AGGREGATE ANALYSIS REPORT

Project: VENUS MINE TAILINGS REHABILITATION
Address: CARCROSS, YT
Project Number: 0201-98-13604
Date Sampled: 98/10/16 By: Nuway
Client: Public Works and Government Services Canada
Attention: Mr. Michael Nahir, P. Eng.
Soil Description: GRAVEL

Sample Number: 2
Sample Location: Sample taken from stacker belt
Time: 01:00 Temp:
Date Tested: 98/10/16 By: MS
Natural Moisture Content:
Crushed Faces: Faces:

Remarks: Capping Material from Venus Mine Tailings
Material source – km 90 Borrow Pit (Conrad Pit) along South Klondike Hwy.

Sieve	% Passing
300	100
200	100
150	100
75	83
50	52
25	20
20	11



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EBA Engineering

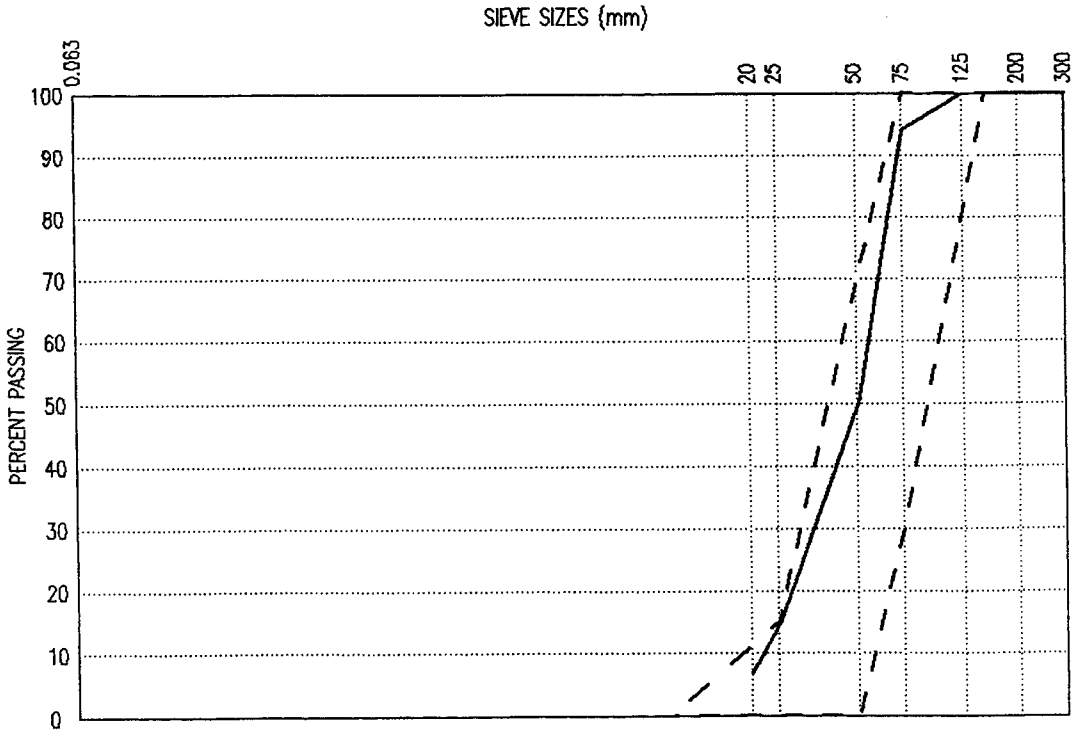
LARGE AGGREGATE ANALYSIS REPORT

Project: VENUS MINE TAILINGS REHABILITATION
Address: CARCROSS, YT
Project Number: 0201-98-13604
Date Sampled: 98/10/16 By: EG
Client: Public Works and Government Services Canada
Attention: Mr. Michael Nahir, P. Eng.
Soil Description: GRAVEL

Sample Number: 3
Sample Location: Sample taken from Stacker belt
Time: 11:00 Temp:
Date Tested: 98/10/16 By: MS
Natural Moisture Content:
Crushed Faces: Faces:

Remarks: Capping Material for Venus Mine Tailings
Material Source – km 90 Borrow Pit (Conrad Pit) along south Klondike Hwy.

Sieve	% Passing
300	100
200	100
125	100
75	94
50	49
25	14
20	7



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EBA Engineering

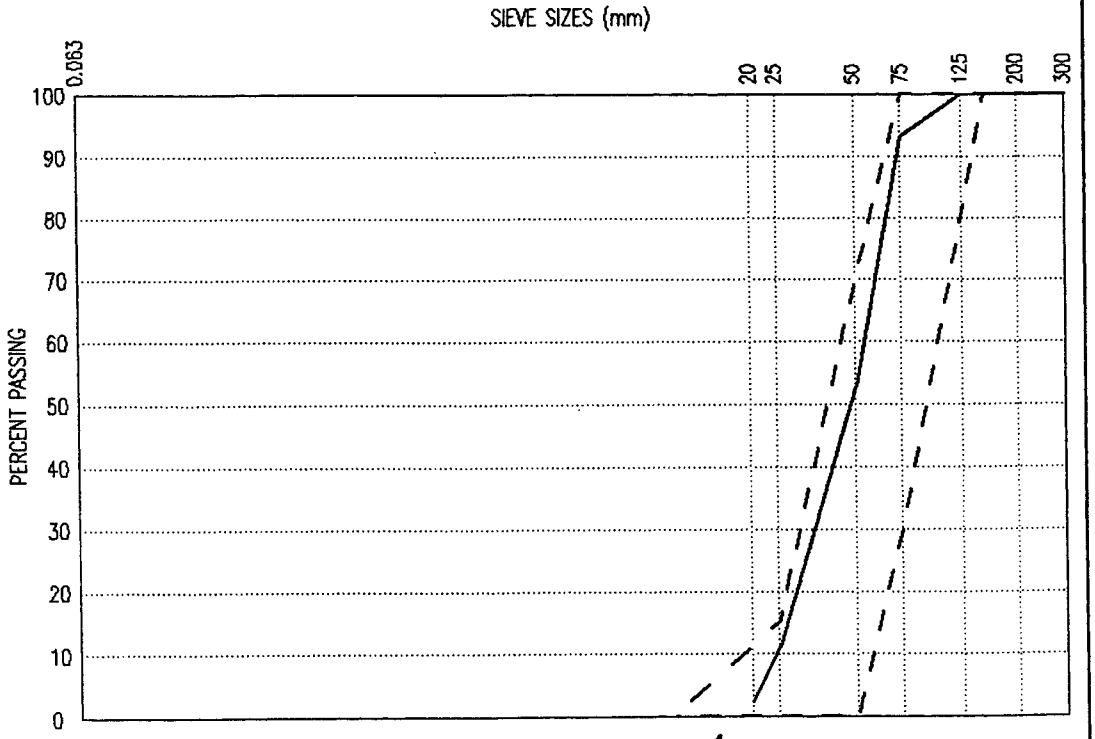
LARGE AGGREGATE ANALYSIS REPORT

Project: VENUS MINE TAILINGS REHABILITATION
Address: CARCROSS, YT
Project Number: 0201-98-13604
Date Sampled: 98/10/16 By: Nuway
Client: Public Works and Government Services Canada
Attention: Mr. Michael Nahir, P. Eng.
Soil Description: GRAVEL

Sample Number: 4
Sample Location: Sample taken from Stacker belt
Time: 14:00 Temp:
Date Tested: 98/10/19 By: MS
Natural Moisture Content:
Crushed Faces: Faces:

Remarks: Capping material for Venus Mine Tailings
Material Source – km 90 Borrow Pit (Conrad Pit) along South Klondike Hwy.

Sieve	% Passing
300	100
200	100
125	100
75	93
50	53
25	11
20	2.3



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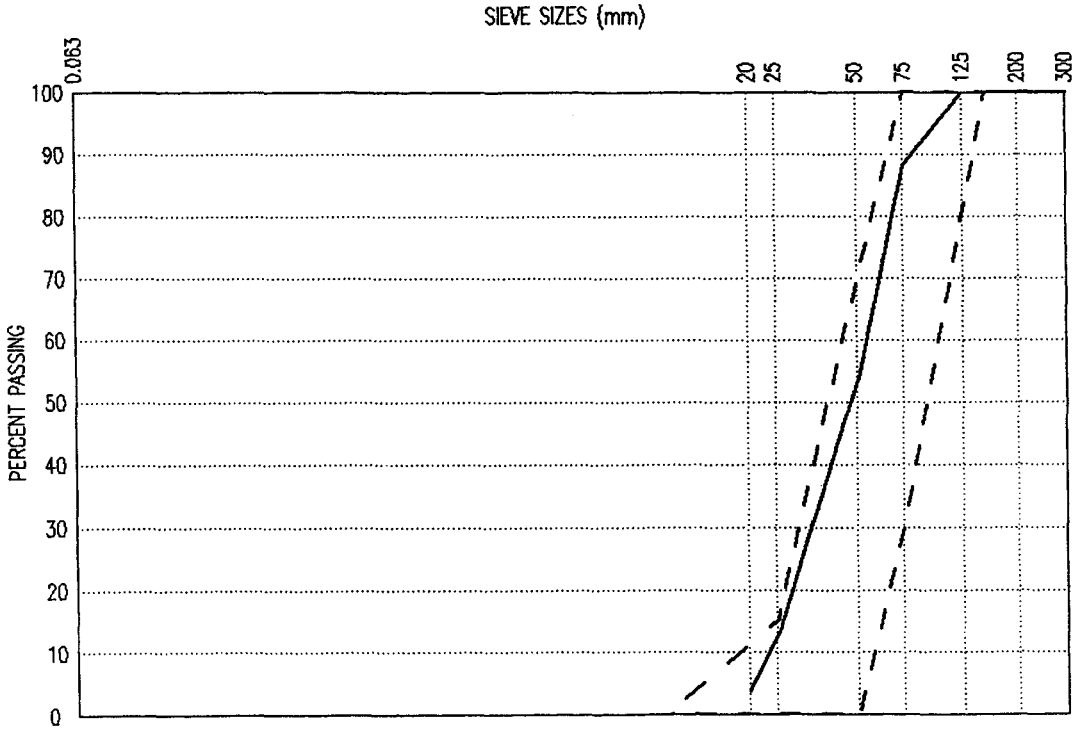
LARGE AGGREGATE ANALYSIS REPORT

Project: VENUS MINE TAILINGS REHABILITATION
Address: CARCROSS, YT
Project Number: 0201-98-13604
Date Sampled: 98/10/17 By: Nuway
Client: Public Works and Government Services Canada
Attention: Mr. Michael Nahir, P. Eng.
Soil Description: GRAVEL
Remarks: Capping material from Venus Mine Tailings
Material Source – km 90 Borrow Pit (Conrad Pit) along South Klondike Hwy.

Sample Number: 5
Sample Location: Sample taken from stacker belt
Time: 01:00 Temp:
Date Tested: 98/10/19 By: MS
Natural Moisture Content:
Crushed Faces: Faces:

Sieve	% Passing
300	100
200	100
125	100
75	88
50	53
25	13
20	3.9



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EBA Engineering

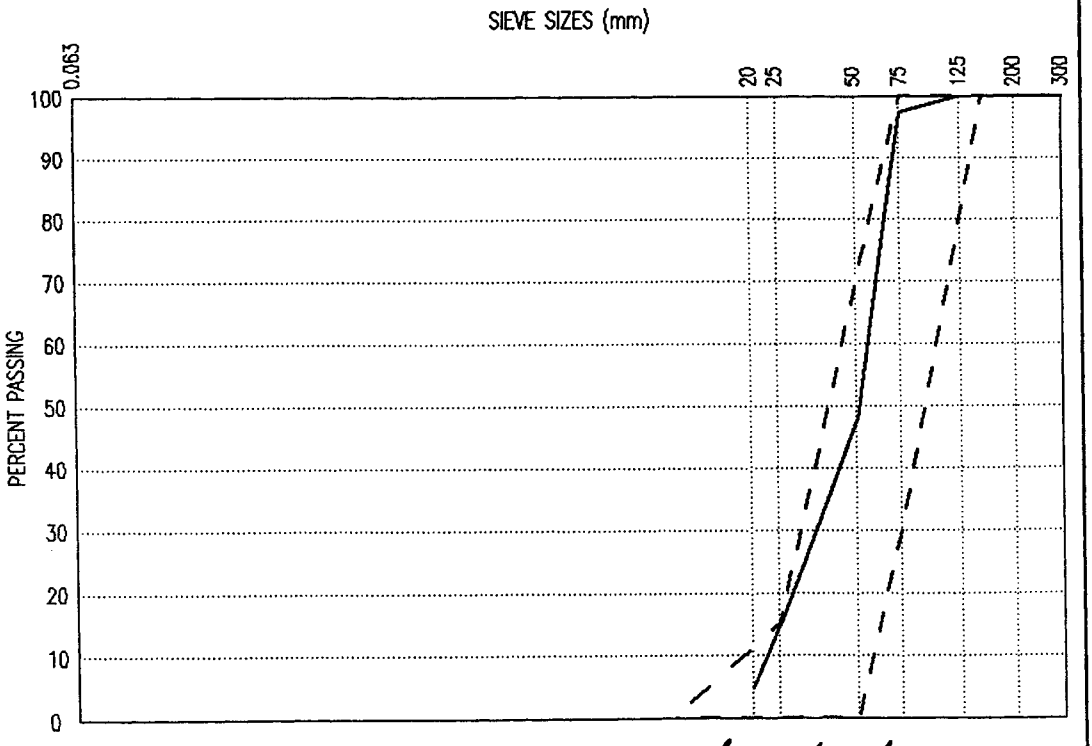
LARGE AGGREGATE ANALYSIS REPORT

Project: VENUS MINE TAILINGS REHABILITATION
Address: CARCROSS, YT
Project Number: 0201-98-13604
Date Sampled: 98/10/17 By: EG
Client: Public Works and Government Services Canada
Attention: Mr. Michael Nahir, P. Eng.
Soil Description: GRAVEL

Sample Number: 6
Sample Location: Sample taken from Stacker Belt
Time: 18:00 Temp:
Date Tested: 98/10/19 By: MS
Natural Moisture Content:
Crushed Faces: Faces:

Remarks: Capping material for Venus Mine Tailings
Material Source - km 90 Borrow Pit (Conrad Pit) along South Klondike Hwy.

Sieve	% Passing
300	100
200	100
125	100
75	97
50	47
25	15
20	4.7



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EBA Engineering

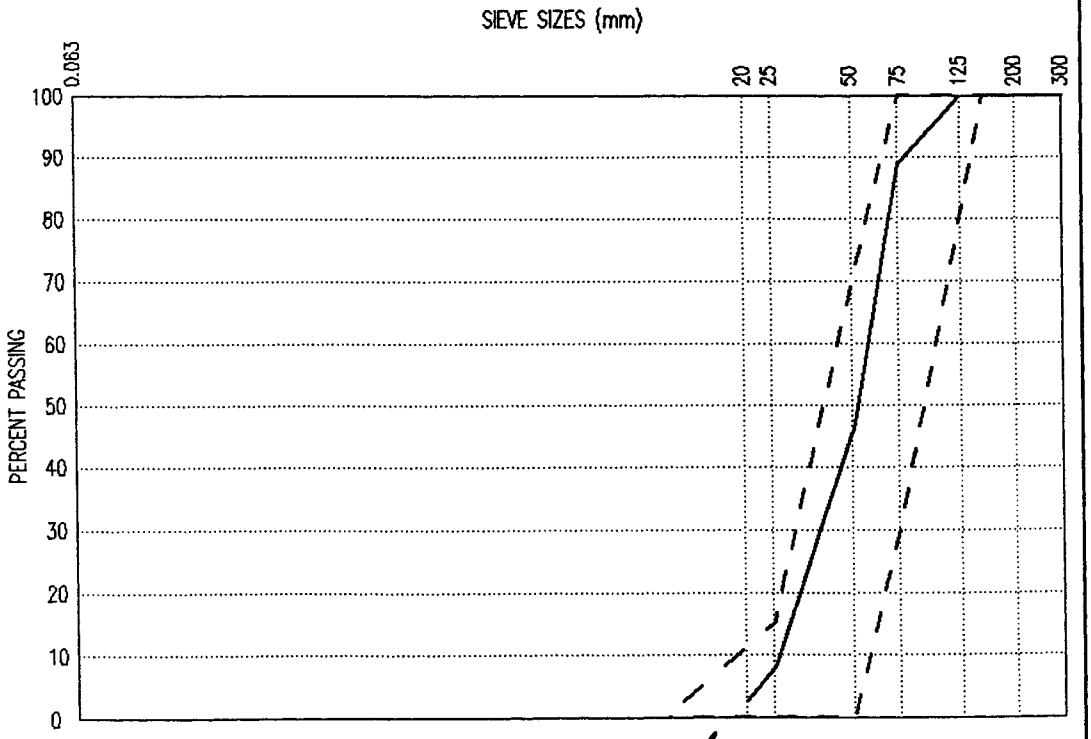
LARGE AGGREGATE ANALYSIS REPORT

Project: VENUS MINE TAILINGS REHABILITATION
Address: CARCROSS, YT
Project Number: 0201-98-13604
Date Sampled: 98/10/17 By: Nuway
Client: Public Works and Government Services Canada
Attention: Mr. Michael Nahir, P. Eng.
Soil Description: GRAVEL

Sample Number: 7
Sample Location: Sample taken from Stacker belt
Time: 22:30 Temp:
Date Tested: 98/10/19 By: MS
Natural Moisture Content:
Crushed Faces: Faces:

Remarks: Capping Material for Venus Mine Tailings
Material Source - km 90 Borrow Pit (Conrad Pit) along South Klondike Hwy.

Sieve	% Passing
300	100
200	100
125	100
75	89
50	46
25	8
20	2.5



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