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Borrow Management Plan
Jericho Diamond Mine
Nunavut
for Jericho Water Licence **NWB1JER0410**

Submitted to:

Tahera Diamond Corporation
Toronto, Ontario

Submitted by:

AMEC Earth & Environmental
A Division of AMEC Americas Ltd.
Burnaby, BC

March 2005

VE51295

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1.0 INTRODUCTION

The Jericho Diamond Project (Jericho) will require esker borrow material to provide a source of aggregate for mine construction. Use of esker material is necessary to supplement crushed run-of-mine rock and will be mostly used during years 1 and 2. This borrow management plan is submitted pursuant to Jericho Water Licence **NWBJJER0410** Part D, Conditions Applying to Construction, Item 4. The plan was developed in accordance with Water Licence Schedule D, Item 4.

2.0 BORROW PLAN

2.1 Location of Identified Borrow Areas

Figure 2-1 shows the locations of the identified borrow areas that will be drawn on for esker material and general arrangement drawing 1CT004.06 – G8 (Appendix 1) shows planned excavation areas. Photos of the sites are attached in Appendix 2. Four areas grouped near the southern end of the large esker system north of the Jericho property were identified in 1996 (Canamera 1996) as potential sources of esker material. The site designated Borrow Area B is located east of Lake O3 and would require a new road to be constructed to access. There are no plans at present to access this borrow area. Subsequently, Bruce Geotechnical Consultants Inc. (BGC) was contracted to provide a preliminary determination of the volume of the esker resources available and the extent of ice lenses in the esker (1996a, b)

2.2 Estimated Volume of Resource

2.2.1 Depth of Esker Sand and Presence of Ice

Although not presently being considered, the borrow area designated B (east of Lake O2 and not shown on Figure 2-1) has a potential esker sand depth of at least 18 m, based on BGC borehole investigations, and remains a potential source if required. However, the site was not included in the Project environmental impact assessment and would require an impact study and approval prior to permitting and use of the esker resource.

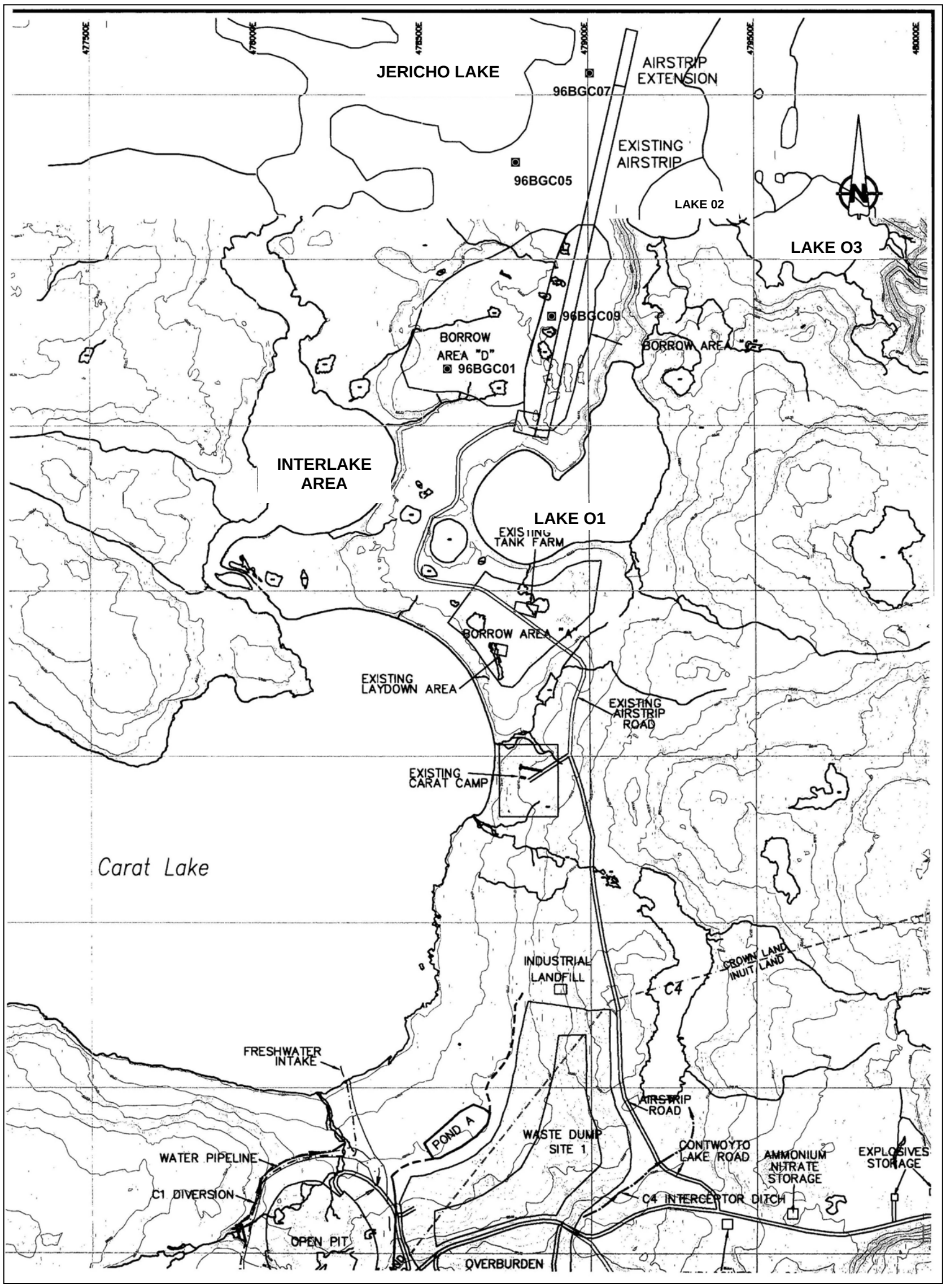
No boreholes were located in Borrow Area A, which is an outwash delta deposit and tends to be finer material than esker found in Borrow Areas C and D, based on test pits dug by Tahera (1999).

Two of the boreholes drilled by BGC (1996a) were located in the proposed borrow areas (Figure 2-1):

- 96BGC01 Borrow Area D
- 96BGC09 Borrow Area C

BGC's report indicates the following, based on borehole logs:

- 96BGC01 0 – 4.35 m Sand
  4.35 – 4.5 m Ice
  4.5 – 13 m Sand
  13 – 17 m Sand + silt
  17 m End of borehole



JERICHO DIAMOND PROJECT
Figure 2-1

Esker Borrow Areas With Existing and Planned Facilities

Drawing for Water Licence Application 16 April 2004

- 96BGC09 0 – 4.72 m Sand
4.72 m End of borehole

Two boreholes north of Borrow Area D (96BGC05 and 96BGC07) were drilled to just less than 13 and just less than 8 m, respectively, and finished in esker sand, indicating generally substantial esker thickness. Ice was encountered in two of the four boreholes drilled in the general area of the proposed borrow areas (Figure 2-1):

- 96BGC01 (previously indicated)
  4.35 – 4.5 m 1.5 m
- 96BGC07
  2.6 – 4.1 m 1.5 m

Permafrost is at about –2m at the airstrip, based on thermistor data reported by BGC (1996b) and measurements during plant phenology (growth) studies (Jericho Final EIS, Tahera 2003), thus indicating that ground ice is unlikely to undergo significant melting with the maintenance of 2 m of esker sand above the upper surface of the ice.

2.2.2 Exploitable Esker Area

Areas of the proposed borrow sites are as follows:

- Area A 95,320 m^2
- Area C 89,960 m^2
- Area D 155,400 m^2
- Total 340,680 m^2

The airstrip occupies approximately one quarter of Area C, and it will not be safe to operate equipment close to the airstrip. Thus approximately one half of the area will not be useable. Area A currently contains the exploration fuel farm which will need to be dismantled and removed and the area soils decontaminated if necessary. This will conservatively eliminating about one half of Area A. The total estimated reduction is 92,600 m^2, leaving approximately 248,000 m^2. The area used in the Jericho final EIS was 250,000 m^2.

Assuming a mean useable depth of about 10 m and an ice layer of 1.5 m in that esker layer at approximately 3 m leaves an average depth of useable esker sand of 8.5 m over a 248,000 m^2 area, or approximately 2 million m^3 of esker sand. Of this, the top approximately 3 m may be exploitable without breaking through ice. This results in a potential availability of approximately 744,000 m^3.

2.3 Implementation Plan For Borrow Material Use

With reference to Drawing 1CT004.06 – G8, borrow areas A1 and A2 will be exploited first, depending on the availability of unfrozen aggregate; area A3 will not be exploited until the summer of 2005. The schedule of material required will depend on progress of construction at the Jericho minesite and aggregate needs. The mine manager will discuss needs with the mining contractor prior to extraction and will set out the sequence of removal of aggregate material. The mine manager or designate will supervise esker removal. Payment of a royalty is required for esker use and thus the volume of esker removed will be recorded. Records will be kept by the mine manager available for government inspection.

To ensure aggregate is removed from designated areas only, the sites will be staked out prior to removal of aggregate. No esker material will be removed closer than 30 m from a permanent water body. Any vegetative layers and organic soil on the borrow surface will be removed, if of sufficient volume to practically handle, and stockpiled near the borrow site for revegetation on closure of the site. A front-end loader will be used to scrap up the aggregate in bucket-width rows across the area being exploited. The eventual profile of borrow areas will resemble that shown in the cross section of Drawing 1CT004.06 – G8.

2.4 Estimated Borrow Requirement and Schedule for Use

The estimated total requirement for esker sand for mine construction is 50,000 m^3, mostly required in Year 1. In Year 2, stockpiled overburden low in organic content will be substituted for esker where practical. Presently, an estimate cannot be made of the amount of overburden substitution possible and therefore the mine plan calls for extraction of the full amount of esker. Esker borrow is not planned to be used on closure but rather soil from the overburden stockpile is planned for cover. Coarse PK may also be substituted if metals leaching or acid generation concerns prove unfounded at Jericho[1]. Soil cover will be required at two stages: end of open pit mining when waste rock dump #1 and #2 are reclaimed and at end of mine life when the remainder of the Jericho site is reclaimed. Estimates of soil requirements are as follows:

- Year 5 114,000t 60,00 m^3
- Year 9 429,210t 225,900 m^3
- Total 543,210t 477,260 m^3

The above assumes 0.3 m of soil cover on all flat surfaces of stockpiles, waste dumps, the PKCA, roads and facilities areas. The present estimated volume of overburden is well in excess of requirements at an estimated 880,000 m^3.

2.5 Location and Schedule for Removal

Two areas of Borrow Area A and one area in Borrow Area D have been designated (SRK Drawing 1CT004.06 – G8, Appendix 1).

Construction will commence in February of 2005 and esker borrow will be used as soon as it can be handled. At that point, borrow material will be extracted at a relatively constant rate for the remainder of Year 1 until freeze up (typically October). Esker will be withdrawn from Areas A1 through A2 initially to make up the volume required. Only if required, will area A3 be exploited.

The current plan calls for removal of the top two (2) metres of esker for use, starting with esker areas that have were disturbed for exploration activities, i.e., Areas A1 and A2.

[1] Ekati Diamond Mine™ has found that acidic drainage can occur as a result of interaction between coarse PK and underlying organic soils. Ekati also noted that plants uptake anomalous (although not phytotoxic) concentrations of nickel from fine PK.

3.0 ENVIRONMENTAL MANAGEMENT

3.1 Drainage and Erosion Control

Drainage patterns are not expected to change as a result of the extraction method proposed. Initial removal will be away from water bodies. As well, runoff readily infiltrates esker surfaces down to the bottom of the active layer and thus natural attenuation of runoff is afforded. No steep surfaces leading away from the working surfaces of the esker will be created from removal and runoff scouring of slopes is not expected to occur.

In the event that ponding or erosion does occur contrary to expectation the following measures will be taken:

- For ponding, water will be allowed to evaporate or, alternately, drained off by creation of a ditch leading from the pond gently downslope on the borrow area. The ditch will gradually widen thus affording more area for water to infiltrate into the esker surface.

- For slope scouring, the angle of the slope will be reduced and cross bars constructed to reduce the velocity of runoff thus reducing erosion potential and allowing sediment to drop out of the runoff water.

There are three natural drainage areas in Borrow Area D that lead to the west (Figure 2-1). These areas partly fill with snow in the winter and will drain over the west edge of the esker deposit when the snow melts in the spring. During the remainder of the summer they do not flow. At such time as Area D is exploited, these areas will be avoided and a minimum 10 m buffer kept around them.

3.2 Massive Ice

BCG boreholes indicate ice layers, when encountered, are at 2 to 4 m depth. Removal of esker in areas where the ice is 2 m from the surface may result in some summer melting. Water is expected to be absorbed by the esker and move only slowly downslope if there are no preferential drainage areas in the exploited esker surface. Esker removal can be managed to ensure preferential drainage areas are not created where water could flow to a surface waterbody.

3.3 Treatment of Melt Water

A record will be kept of massive ice encounters and the sites will be monitored by the mine manager or designate. The standard procedure will be to recover the ice and select a new location to extract esker. Should melt water become evident, it will be sampled to determine water quality. Should water quality prove to be problematic (concentrations higher than CCME guidelines), water would be collected in a sump, pumped to a tank and transported to the PKCA for treatment. A collection pond would be constructed downslope from the melting ice to intersect melt water but far enough away that further melting of the ice would not occur.

If the ice lenses are small enough, they may be removed and transported to the PKCA for treatment. This would be the expectation for much of the ice. Experience at Lupin Mine showed that ice lenses are typically pickup truck size (Lupin, pers. comm.).

3.4 Air Quality Management

Eskers with limited vegetated cover naturally result in dusting based on observations at Jericho over several years. Dust tends to collect in wind shadow areas (e.g., against hillsides and in gullies). It can be expected, therefore, that dust will be generated from wind blown esker fines when surfaces are disturbed. In light of the fact that eskers naturally create dust, covering of fines that readily become airborne will be undertaken once esker removal from the site has been completed. In such cases, during spring and summer months, esker removal sites will be sprayed with water to control dust.

3.5 Wildlife Management

Esker removal will occur initially in areas previously disturbed during exploration and for construction of the airstrip. Some additional disturbance of small mammal (ground squirrels and microtine rodents) may be expected from removal of esker materials. Three years of small mammal trapping at the airstrip indicated that very few microtine rodents used the southern end of Borrow Area D and thus disturbance of these animals is not expected to be significant (Tahera 2003). In all cases when caribou are on borrow sites where extraction is to take place, machinery operation will cease and the caribou will be encouraged to move off the site. Normally the approach of people on foot will cause the caribou to move away a short distance. Large herds moving through the area will trigger cessation of activities until herds have passed. Carnivores will be discouraged from approaching the area by activities and by a strict adherence to not feeding animals. There are no carnivore dens in the esker areas designated for extraction (Tahera 2003).

Ground nesting birds have not been observed to nest in esker areas disturbed for exploration and since these areas will be exploited initially, ground nesting birds should not be disturbed. In the event that vegetated areas of Borrow Area D require removal during the breeding bird nesting season, a survey will be conducted by the mine environmental coordinator prior to disturbance and nesting areas will be avoided. A 10 m buffer around nests will be established, the area flagged and avoided by removal activities until nests are vacated. Any esker removal in early spring will not conflict with nesting birds.

4.0 RECLAMATION

4.1 Progressive

No reclamation of esker borrow sites will take place in Years 1 and 2 because esker materials will actively be removed from the borrow sites. Post Year 2, the requirement for esker material will drop to the occasional use. At that point, parts of the borrow areas that will not be used further will be reclaimed. Prior to extraction commencing it is not possible to indicate what areas will be able to be reclaimed first.

Borrow areas to be reclaimed will be resloped if necessary to 1:3 or less as shown on drawing 1CT004.06 – G8, and microcontoured. Since esker borrow areas will be some of the first disturbed areas to be reclaimed, vegetation test plots will be established on areas to be reclaimed. If successful, revegetation can then be applied to the rest of the borrow areas.

4.2 Closure

Any borrow area left unreclaimed at the end of the requirement for esker materials on mine closure will be reclaimed as above, or as indicated from previous experience at the mine. This is currently planned to be a relatively small area of borrow areas. The airstrip, which forms part of Borrow Area C will also be reclaimed if liability for the facility is not assumed by others.

5.0 ENVIRONMENTAL MONITORING

5.1 Operations

Environmental monitoring of the borrow areas during all phases of mining will be the responsibility of Tahera Diamond Corporation and at the Jericho site, specifically that of the environmental coordinator. The following will be routinely monitored by inspection:

- dust generation and wind erosion;
- ponding of water and water erosion;
- slumping from ice layer melting;
- water quality of melting of ice layers;
- potential for disturbance of ground nesting birds;
- management of wildlife on the borrow areas, specifically caribou.

Triggers for action and proposed management approaches are discussed in Section 3.0.

5.2 Post Closure

Esker borrow areas will be monitored as above during the post closure active monitoring period. The expectation is that revegetation will stabilize the areas. Should this prove not to be the case from reclamation experience after Year 2 disturbance, alternate stabilization methods will be developed and management plans provided in subsequent Abandonment and Restoration Plans developed by the Jericho Mine. The somewhat more coarse aggregate used to surface the airstrip has not resulted in excessive dust generation over the 8 years the strip has been in use and esker borrow areas are expected to behave similarly. If coarse aggregate is still problematic based on operating experience, a dust suppressant will be investigated.

REFERENCES

Bruce Geotechnical Consultants Inc. 1996a. Jericho Diamond Project 1996 Granular Borrow Investigations Factual Field Report. Report prepared for Canamera Geological Ltd.

Bruce Geotechnical Consultants Inc. 1996b. Jericho Diamond Project Ground Thermal Regime Factual Report. Report prepared for Canamera Geological Ltd.

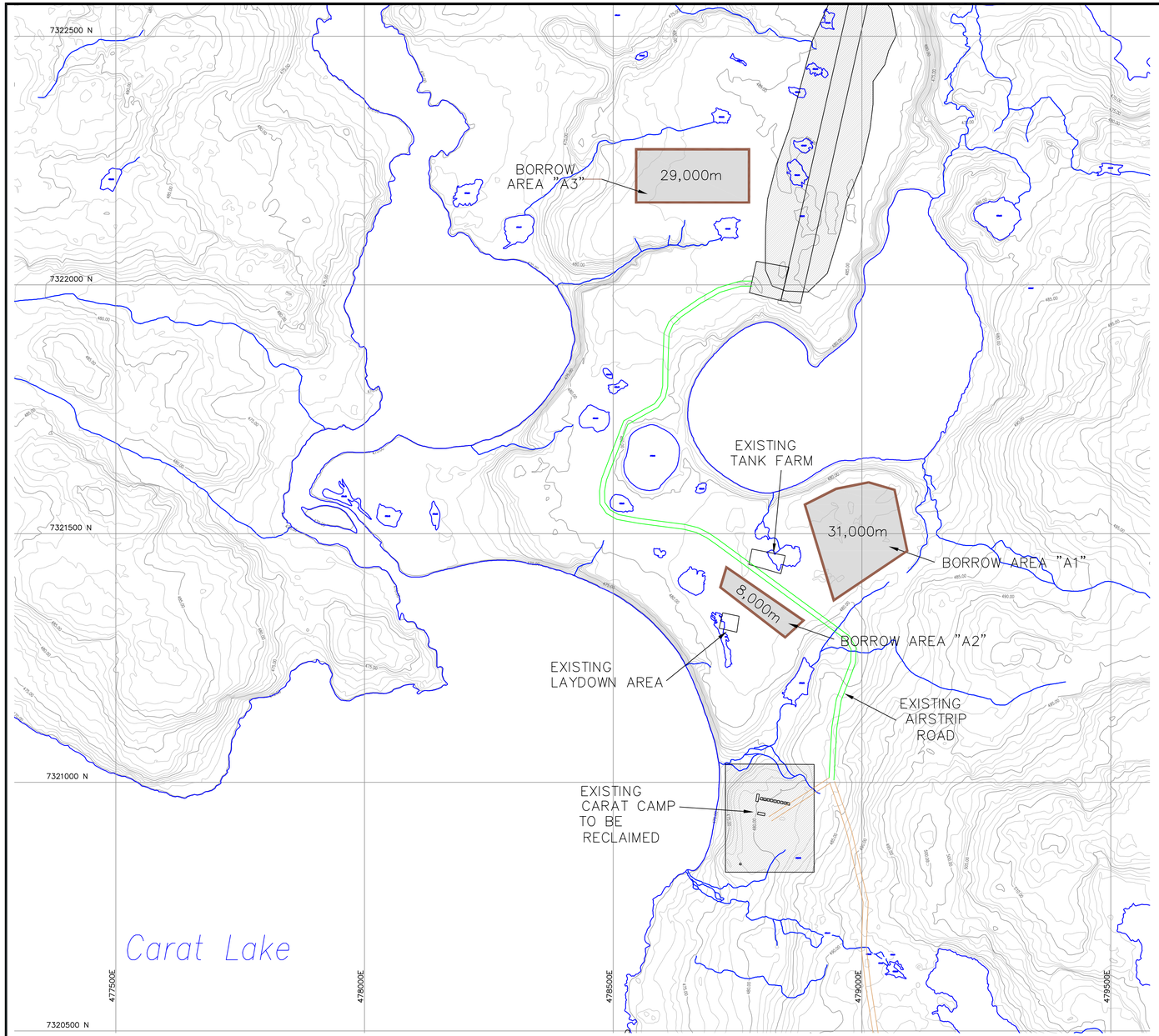
Canamera Geological Consultants Ltd. 1996. Jericho Diamond Project Environmental Baseline Studies for 1996. Report prepared for Lytton Minerals Ltd.

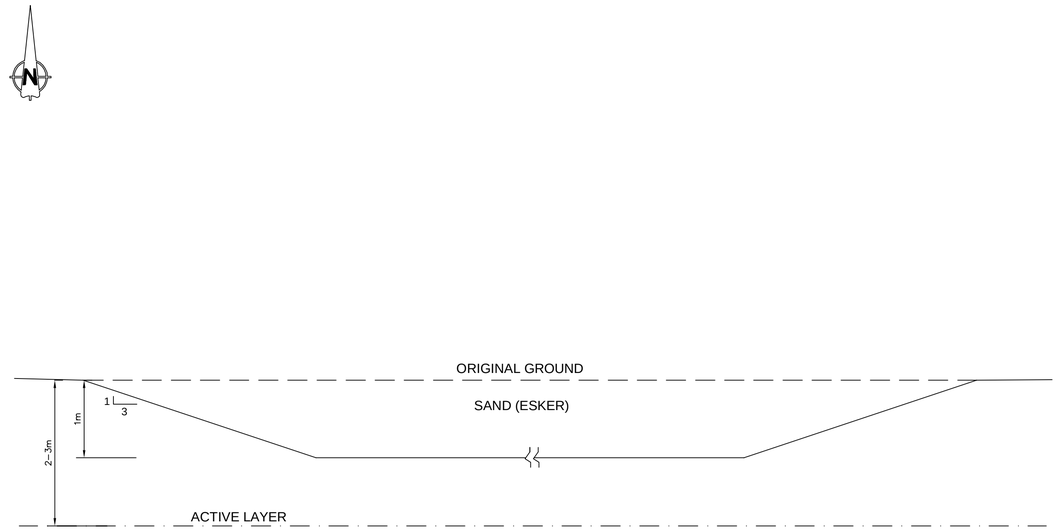
Tahera Corporation. 1999. Esker Particle Size Analysis. Internal Tahera Report.

Tahera Corporation. 2003. Jericho Diamond Project Final Environmental Impact Statement. Submitted to Nunavut Impact Review Board January 2003.

APPENDIX 1

BORROW PLAN AREAS





TYPICAL SECTION THROUGH BORROW AREAS

0 50 100 150 200 250 METRES
1:5000

TAHERA CORPORATION
JERICHO LAKE SOUTHWEST EXTENSION

Date of Photography: August 5, 1995.
Scale of Photography: 1:10 000
Survey control supplied by: Canamera Geological Ltd.
Survey control based on: UTM Projection, NAD 27, Zone 12
Compiled by The ORTHOSHOP, Calgary, October 1995.
WO 7423

DRAWING NO.	DRAWING TITLE
DRAWING G-10	GENERAL ARRANGEMENT APRIL 2006
DRAWING G-9	AMMONIUM NITRATE STORAGE LAYOUT
DRAWING G-7	TERRAIN EVALUATION MAP
DRAWING G-6	BEDROCK GEOLOGY MAP
DRAWING G-5	QUATERNARY GEOLOGY MAP
DRAWING G-4	EXISTING THERMISTOR INSTALLATION PLAN
DRAWING G-3	SITE INVESTIGATION MAP
DRAWING G-2	SITE VICINITY MAP
DRAWING G-1	PROJECT LOCATION AND DRAWING INDEX

REFERENCE DRAWINGS

DRAWING NO.	DRAWING TITLE
DRAWING G-14	CLOSURE CONCEPTS
DRAWING G-13	GENERAL ARRANGEMENT APRIL 2013
DRAWING G-12	GENERAL ARRANGEMENT APRIL 2008
DRAWING G-11	GENERAL ARRANGEMENT APRIL 2007

No.	DESCRIPTION	CHK'D	APP'D	DATE

REVISIONS

REV.	ISSUE PURPOSE	AUTH. BY	DATE
A	DETAIL DESIGN	CSS	JULY 2004

ISSUE AUTHORIZATION

WATER LICENSE APPLICATION

SRK Consulting Engineers and Scientists

DESIGNED BY: DL	DRAWN BY: JM
DATE: JULY 2004	DATE: JULY 2004
CHECKED BY: CCS	DISCIP. ENGR.
DATE: JULY 2004	DATE:
PROJ. MGR:	PROJ. ENGR.
DATE	DATE

SRK PROJECT NUMBER: 1CT004.06

Tahera Corporation

JERICHO PROJECT

BORROW AREAS PLAN AND TYPICAL SECTION

DRAWING NUMBER: 1CT004.06 – G8

REV.: A

FILE NAME: F:\Tahera Corp.(Lytton minerals)\Mapping and Drawings-2004 dwgs\general-...(2004)\REVISED...\FIGURE6-8.DWG

APPENDIX 2

BORROW SITE PHOTOS

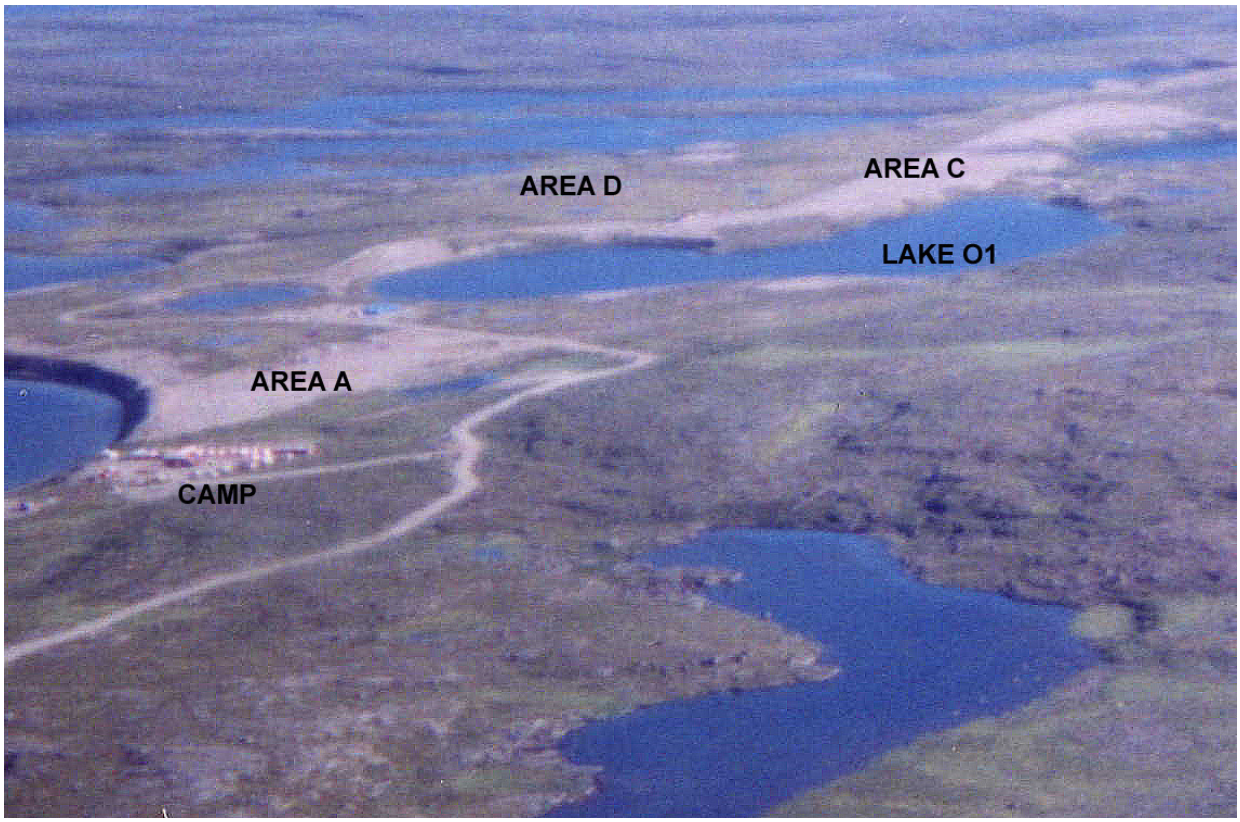


Photo 1: Aerial view of borrow areas from southeast. The airstrip is in Area C.

Photo 2. Borrow Areas C and D from S end of Borrow C

Photo 3: Southeast side of Borrow Area A looking south