

Jericho Diamond Mine

Mine Plan

Submitted to the Nunavut Water Board

February 23, 2005

Jericho Diamond Mine

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Jericho Site Arrangement 2008
Jericho Site Arrangement 2013

1.0 INTRODUCTION

Tahera Diamond Corporation (Tahera) on behalf of Benachee Resources Inc. (a wholly owned subsidiary of Tahera Diamond Corporation) plans to commence mining at its Carat Lake site 30 km north of the Lupin Gold Mine in Nunavut in 2006. Mobilization of materiel and construction is planned to occur from February to April of 2005. The complete transition from the construction phase to full-scale operations is expected in the first quarter of 2006.

This document is intended to provide information for the planned mining operation. The current mine plan is based on engineering studies / designs and experience gained by our personnel or contractors at other northern diamond mining operations. See figure on Construction Management Organization Chart for management information.

The current plan is based upon open pit mining methods and underground mining later in the mine life. A final decision regarding underground mining will be required to be made during the operational phase. The prime open pit contractor for the earthworks and mining is Nuna Logistics; a majority owned Inuit Company with experience at other northern diamond mines.

See the Property Location figure.

2. LOCATION AND GENERAL MINE LAYOUT

Tahera Diamond Corporation has actively explored for diamonds in Nunavut for the past seven years (prior to 1999 as its predecessor company, Lytton Minerals). The development would take place in the "Barren Lands", a tundra environment north of the tree-line and about 60km south of the Arctic Circle within the zone of continuous permafrost. Unlike the Lac De Gras kimberlites, the Jericho kimberlite pipe is land-based in permafrost.

2.1 Property Location

The Jericho Project is located approximately 420 km northeast of the city of Yellowknife, 200 km southeast of Kugluktuk, and 350 km south of Ikaluktutiak (Cambridge Bay) Nunavut. The site is accessible by air 12 months of the year and by winter road from January to April.

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The coordinates of the mine site are 65° 59' 50" N Latitude, 111° 28' 30" W Longitude. All property work is based on the National Topographic Survey NAD83 survey datum.

Tahera's subsidiary Benachee Resources Inc. is the registered holder of the property and has mineral tenure on the property held with Indian and Northern Affairs Canada (INAC). The Company has a water license held with the Nunavut Water Board, and land leases with INAC who are the administrator of the crown lands and leases with the Kitikmeot Inuit Association for Inuit Owned surface rights.

2.2 Climate

There are 26 years of regional climate data from Environment Canada weather stations at Lupin Mine / Contwoyto Lake. Tahera has supplemented this information by collecting site-specific data for five years. Mean Annual Runoff (MAR) for the site is 190mm per annum with Total Annual Precipitation at 246mm. Evaporation rates are similar to those seen at Ekati or Diavik.

Air temperatures range from about +20°C during the summer to -30°C in the winter months. The mean annual temperature is -11.8° C. Wind direction and speeds are variable but tend to favour a NE-SW orientation.

2.3 General Mine Layout

The diamond deposit is contained in a multiple-phase land-based kimberlite pipe that is located about 1km to the northeast of the proposed mining camp and processing plant.

One creek (commonly known as stream C1) will need to be diverted around the northwest corner of the open-pit. The C1 diversion will control freshet flows from C1 and C2 lakes to the west of the pit. The waste dump is to the east of the pit, with runoff collection ponds considered if there is any leachate problem noted.

Overburden will be stockpiled separately, and its viability for reclamation determined. Ongoing progressive reclamation and research is planned, and a proposed Closure Plan is in place.

Mined kimberlite will be processed on site by the use of heavy media separation. The nominal ore feed rate is approximately 1000-2000 tonnes per day, with the upper limit dependent on the conversion of certain inferred resources into economic reserves. Kimberlite coarse rejects will be trucked to a land dump or utilized for site use, while fines will be pumped to Long Lake immediately to the south of the process plant.

The mining area and site facilities are shown on the accompanying site layout plan (see Staged figures at back of Report)

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3. GEOLOGICAL SETTING

The Jericho Diamond Mine is located within the northern portion of the Slave Structural Province of the Canadian Shield. The Jericho kimberlite is located on the south shore of Carat Lake within the Contwoyto-Itchen Region. The host rock is an Archean granite-greenstone terrane intruded by synvolcanic to post-volcanic granitic plutons.

The area of the open pit is primarily biotite-muscovite granite to tonalite (+/- pegmatite). A NNW trending diabase dyke approximate 45m thick cuts the east wall of the pit (see figure on geological setting).

The land-based Jericho kimberlite is in a shallow depression south of Carat Lake and is completely masked by 10-15m of glacial till. The kimberlite is elliptical, roughly 300m long and trends NNW. The kimberlite was formed from multiple emplacement phases identified by colour, mineralogy, serpentinization and macrocryst count.

Geotechnical studies have characterized the rocks as:

Table 1
Jericho Rock Type Assessment

Rock Type	Rock Classification	RMS (MPa)	RMR	Density (Wet)
Granite	2A - 2B			2.65
Contact Zone Granite	3B - 5A	10 - 50		
Contact Zone Kimberlite	3B - 5A	5 - 10	10 - 25	
Upper Kimberlite	2B - 3B	10 - 20	30 - 45	2.60
Lower Kimberlite		30 - 45	50 - 65	

4. MINE DESIGN

Various geotechnical assessments have been undertaken since 1995, with the most recent being done by SRK Consultants, with the majority of this information presented throughout the NIRB and NWB processes. The assessment included:

- Drillhole data
- Underground exposure
- Permafrost
- Kinematic analysis

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- Empirical base case design
- Numerical analysis
- Slope design

SRK recommends the pit design parameters listed in Table 2. Current design refinements are being reviewed to potentially reduce the need for kimberlite stockpiling and to smooth stripping rates over the course of the mine life. Impact barriers (of the Ekati Diamond Mine™ design) are planned for every fourth bench.

The initial year will see the development of a starter pit that will allow follow-up slope stability assessment as the Company believes that steeper pit slopes can be maintained because of the presence of permafrost. Pushback pits may be incorporated in the final design plans.

Additional geotechnical diamond drilling will be done in the area of the ultimate pit wall. The plan is to utilize the recommended slope angles until a steeper design can be confirmed and approved by the mines inspector.

Table 2
Jericho Pit Bench Slope Angles

	Kimberlite	Granodiorite	Overburden
Slopes			
Inter-ramp < 100m (degree)	41-70	65-70	26.5 (2:1)
Inter-ramp > 100m (degree)	41	60	-
Bench Configuration			
Bench height (m)	10	10	10
Bench face angle (degree)	70	85	-
Bench width (m)	8	8	-
Berm Interval (m)		30 (triple bench)	
Ramp Configuration			
Gradient (%)	10	10	10
Width (m)	22	22	22

2011 SCHEDULE

January – March 2005	Receive Water License and Land Leases to mobilize on winter road
March – April 2005	Begin Jericho starter pit pre-strip for site Infrastructure (use of waste rock for pads and roads)
March – April 2005	Phase 1 of Fuel Farm
April – August 2005	Building of site pads and roads

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May 2005	Begin development of Waste Dump 1
May 2005	Camp accommodations completed and Process Plant construction started (project process plant to be completed by Nov. 05)
May – June 2005	Causeway Construction
July – August	Phase 2 of Fuel Farm
September 2005	Dewatering of Long Lake
October 2005	Development of PKCA Divider Dyke
November 2005 – March 2006	West and East Dam Construction
December 2005	Process Plant commissioning. Full-scale mining commences.
January-March 2006	Start and build up to full production begins.
June – July 2006	Stream C1 Diversion
January 2007	Begin development of Waste Dump 2
April 2009	Open pit development projected to be completed
Summer 2009	Proposed Commencement of Underground Mining
Summer 2011	Completion of Underground Mining
2011 – 2013	Processing of stockpiled ore
2014	Proposed beginning of closure activities

6. MINING METHODS AND EQUIPMENT

6.1 Mining Methods

Conventional truck-and-shovel open pit mining methods will be utilized at the Jericho Diamond Mine. The fleet will be supplied by mining contractor Nuna Logistics (Nuna). The fleet will be composed of D-300 trucks and small loaders for the initial work of removing the waste rock pile from underground mining; and the construction of site lay-downs. A larger fleet will be used for the bulk of the open pit mining.

6.2 Mining Rate

The overall strip ratio, for open pit mining only, is approximately 35,775k tonnes waste: 5,199k tonnes of kimberlite (7:1). The mining rate for kimberlite feed to the process plant is projected to be 800 tonnes per day. As discussed earlier, more work is being done to smooth the waste mining rate for the life of mine, which is expected to be 8 years. The waste mining rate is unlikely to exceed 11,000 tonnes per day.

6.3 Equipment Fleet

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Nuna Logistics will be using a similar fleet to the one that they use at the Misery Pit of Ekati Diamond Mines. The Drilling and Blasting Contractor will be using drills similar to those used at both Diavik and Ekati Diamond Mines. The contractors under consideration have northern experience and an excellent understanding of the requirements of the Mines Act and Regulations.

The mining fleet will consist of:

- 3 to 5 Cat D300 Articulated haul trucks
- 4 Cat 777A haul trucks
- 1 Cat 992G loader
- 1 Cat 5130 ME / FS
- 1 Cat 980C loader
- 1 Cat 345 Excavator
- 3 Cat D9R tracked dozers
- 1 Cat 16H Grader
- 1 Cat 14G Grader.
- 1 Svedala Reedrill 400 Hydratrac Cab - (3 to 4" pioneering drill)
- 1 Svedala Reedrill 300 Cab – (3 to 4" pioneering drill)
- 1 Interoc AN 109B – (backup drill to SKF)
- 1 SKF Infinity – (6" DTHH Blast-hole drill)

7. MINING OPERATIONS

7.1 Drilling

As is the norm at other mining operations, surveyors will lay-out engineered blast patterns in areas (benches) that have been leveled. Good site preparation is required for safety and productivity.

The starter pit mining is planned to be completed using 75mm (3") and 150mm (6") drill holes. During the subsequent years a larger diameter blast hole is being considered. Pre-shearing will still be done with the 150mm hole size.

7.2 Blasting

The blasting contractor will have experience working under the Mines Act and Regulations and the blasting supervisor will be accountable for meeting all requirements such as signage, guarding and blast tie-ins. The explosives contractor will deliver the blasting product to the blast hole.

It is expected that permafrost conditions will be a beneficial factor in controlling groundwater problems and wet blast holes under normal conditions. It is anticipated that during the spring freshet or during the rainy season, and the drilling of frozen tills and

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overburden with higher ice content, that ground conditions may require “hot loading” approval by the inspector.

The blast design is variable but has been based on experience in other northern diamond mines. The primary explosive delivered to the blast hole will be a 70% emulsion 30% ANFO blend. In the initial stripping, the emulsion plant will not be available and bagged ANFO will be used.

This will mean a tightening of the blast patterns to about a 3m x 3m equilateral design. Small fragmentation is a priority for the site infrastructure construction and for process plant feed. To minimize wall rock vibration damage hole-by-hole delays will be utilized.

A year's supply of AN prill will be delivered to site on the annual winter road beginning in 2005. Delivery will be in “mega-bags” that will be stored inside a storage building and in the initial year will be placed on and covered by tarps. The Emulsion Plant is located to the east of the camp site meeting all setback distances and has been designed to meet or exceed all explosives handling/production regulations.

The explosives contractor will be responsible for making the product at the facility and delivering it to the borehole in trucks that can accurately meter the quantities used. These trucks have the capability to deliver emulsion, ANFO or a mixture all on one truck bearing three compartments.

Blasts are envisioned to be 50-100,000 tonnes in size, occurring about once to twice per week. The blasts will have surface delays and as much free-face as possible to minimize vibration and fly-rock.

Pit walls are almost entirely the granite-tonalite host rock described previously. Two short sections will be intercepted by a near vertical diabase dyke. The dyke and its contacts are not expected to cause a slope stability problem.

7.3 Excavation

The mining fleet for removing the underground bulk sample waste pile and initial starter pit mining will include five Cat D-300 articulated haul trucks and one Cat 980 loader. Two of the D-300's will remain for hauling process plant coarse rejects and smaller construction related requirements.

Nuna will be using a Cat 5130 Mass Excavator and four Cat 777A haul trucks for the majority of the mining of the ultimate pit. The excavator configuration has been proven effective in stripping of overburden. When the pit configuration allows, the excavator will be converted to a front shovel. Backup Cat 992 loaders will be used to ensure continuity of plant feed.

For safety purposes the pit crests will be “chain-scaled” to remove loose material. This will be done from above to provide workers with the highest degree of safety. When this is not possible, the Cat 345 excavator can be used from a muck-pile.

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7.4 Haulage and Traffic Management

The pit will be located some 250m to the northwest of the road between the airstrip and main camp. Access to the pit will be limited to authorized and properly trained personnel. To maintain simplicity of standards and reduce confusion, right hand drive will be used site-wide.

For design purposes the haul roads and ramps will be for two lane traffic to accommodate Cat 777 trucks. The only exception at this stage is a single lane ramp for Cat D-300's in the pit bottom. From the maintenance shop to the open pit the roads will be 24m wide. Pit ramps may be wider to accommodate crest blast over-break, ditches and shoulder barriers $\frac{3}{4}$ the height of the Cat 777 tire.

The surface roads will be constructed of run-of-mine granite waste. They will be capped with -2" and -3/4" crush to minimize tire wear and improve operator comfort. The intended height of the roads will be about 2m and will incorporate a 5H:1V side slope. The side slopes will provide ease of maintenance and emergency run-out capability.

Speed limits will be limited to 60 km/hr on haul roads and 20 km/hr in the camp and shop area. Speed limits will be posted. Operators will be expected to drive to conditions and to wear seatbelts at all times.

Intersections will be a standard T shape with stop signs at the lesser-traveled route. During dusty conditions water sprays or approved dust suppression products may be used to improve visibility and minimize inhalation hazards.

Right-of-way for vehicles will follow these priorities:

- 1) Emergency vehicles that are responding to an emergency.
- 2) Wildlife
- 3) Crew buses at shift-change, or crew buses with tour guests.
- 4) Vehicles carrying explosives.
- 5) Road maintenance equipment.
- 6) Loaded haul trucks.
- 7) Empty haul trucks.
- 8) Auxiliary and other equipment.
- 9) Pick-up trucks or other light vehicles.

7.5 Materials and Water Management

The primary crusher will be fed as needed from ROM stockpiles to an exterior hopper by a loader. The ore will then be fed into the processing plant. The main ore stockpiles would be a short term ore supply for ore type blending, optimize pit equipment scheduling and provide surge capacity in the event that plant feed was not available within the pit.

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For example, this surge capacity would cover events such as adverse weather conditions, thermal inversions, shovel maintenance or lack of ore exposure. The stockpiles likely would be limited to about 20,000 tonnes (~10 days plant feed) and would be re-handled by Cat 980 (or equivalent) sized loading equipment.

Waste dumps will be constructed in smaller segments, contoured and constructed, when possible, to decrease the footprint of the ultimate footprint. This will also permit better scheduling of work and a longer period to test the progressive reclamation strategy.

Scheduling and storage of material with respect to acid rock drainage potential has been considered although there are no known acid-rock generating lithologies in the pit. The primary concerns runoff containing fines or ammonium nitrates from blasting. Collection ponds (A, B, and C) have been proposed to be used in case they are required to control site run-off. Pit water will be pumped to the PKCA either directly or via sediment pond B. All water from collection ponds will be directed to the PKCA unless it is shown that direct discharge can occur.

7.6 Adaptive Management Strategy

The Company endorses the concept of adaptive management in order to limit environmental impacts and improve or enhance mitigative measures related to the mining activities. Tahera's environmental staff will work closely with site operations/mining personnel to understand opportunities that present themselves during the construction and operations phases.

If adaptive management strategies are discovered, but deviate from the current mine plan, the Company will notify the NIRB or the NWB, or appropriate regulator as to those changes and seek the required approvals which are necessary.

7.7 Monitoring

The Company will be involved in extensive monitoring activities during the construction phase and operation of the mine. A detailed description of monitoring activities is outlined in the Monitoring Summary Report (ref. Submission to the Nunavut Water Board, August 2004, Monitoring Summary, Appendix I) and in the Aquatic Effects Monitoring Plan (ref. Submission to the Nunavut Water Board, August 2004, Aquatics Effects Monitoring Plan, Appendix N). Monitoring will include the areas of:

- climate
- vegetation
- dust
- stream flows
- water chemistry

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- sediment chemistry
- ground ice
- geotechnical structures
- Aquatic Effects
- Wildlife

8. EMPLOYEE WORKING ARRANGEMENTS

The construction phase of the project is expected to last about ten months and be a 24/7 arrangement. While the winter road is open, contractors will be housed at Lupin mine and bused over for their work shift. It is expected that the mining camp will be in place by May 2005.

Once the initial construction earthworks phase is completed, the day-to-day mining operation will be reduced to a limited schedule such as day-shift only. Once plant operations begin the process plant and loader feeding the primary crusher will work 24/7. Also working nights would be mining personnel, security and required supervision or other support staff. Medical personnel will be located on site and available for call out for any nighttime requirement. Most employees will work 12-hour shifts on a rotation of 14-days on site followed by 14days off-site. A 7-day on, 7-day off rotation schedule is also being considered.

A semi-permanent modular camp will be erected to house offices, security, first aid, kitchen, recreational facilities and accommodations. Peak occupancy should not exceed 120 during plant construction and pre-stripping. During the operations phase occupancy numbers should be on the order of about 70-90 people, the majority of which will be contractors.

9. HEALTH AND SAFETY PLAN

The Health and Safety Plan is effective from start-up of mine construction and applies to the Jericho Diamond Mine operated by Tahera Diamond Corporation at Carat Lake Nunavut, all ancillary facilities including the mine site, plant site, airstrip, outbuildings, explosives magazines, storage facilities, and all activities associated with the operation of the Mine and Processing Plant.

It is expected that all contractors meet, or exceed, Tahera Diamond Corporation policies and standards. Contractors will be responsible for safe work practices and Standard Operating Procedures within their Scope of Work. That being said, Tahera retains ultimate responsibility for the safety of all workers at the Jericho Diamond Mine.

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Tahera Diamond Corporation is committed to a high standard of occupational health and safety by establishing an effective internal responsibility system, taking into account both the expectations of stakeholders and evolving science and technology.

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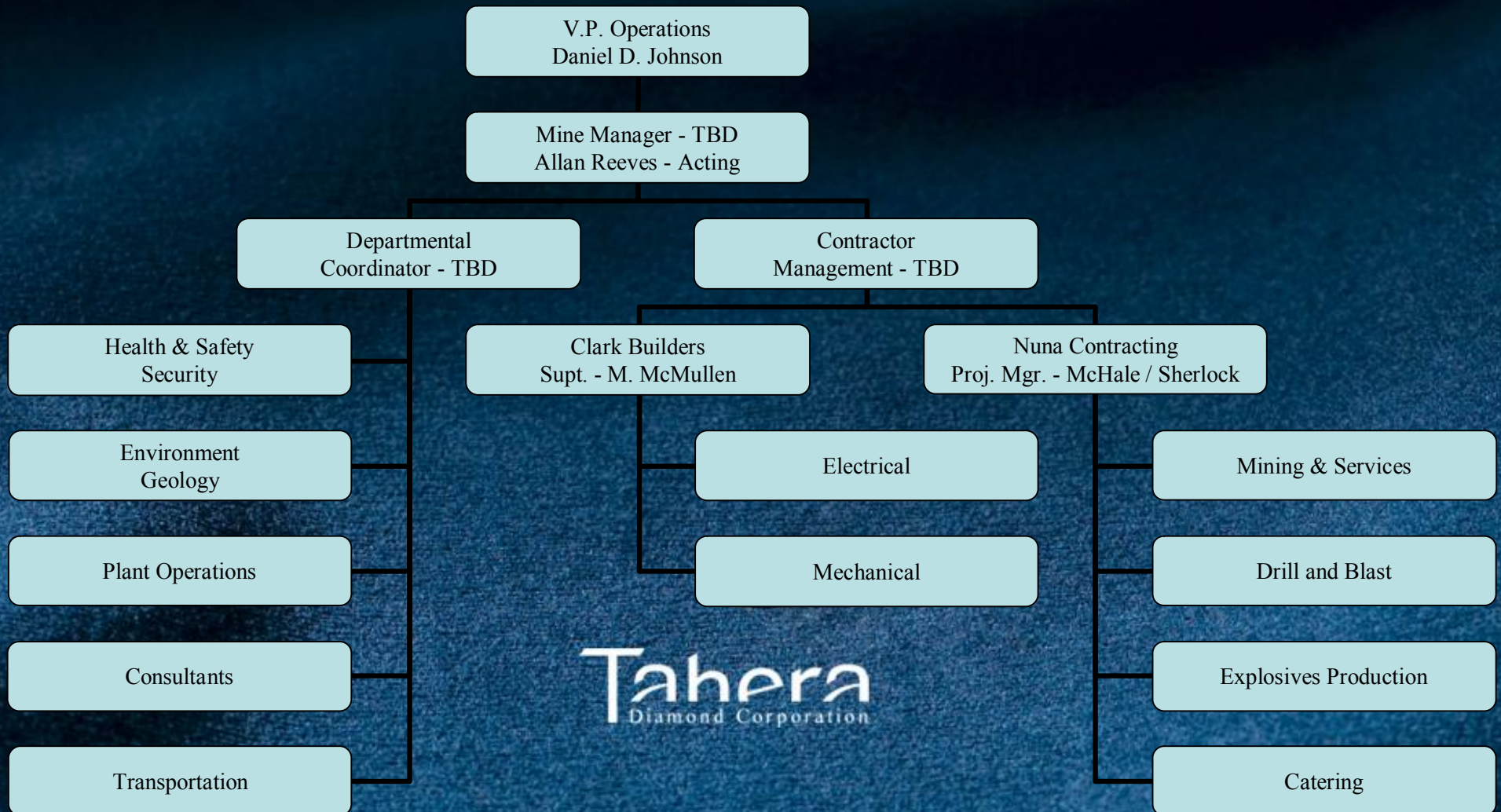
9.1 Tahera Safety Policy:

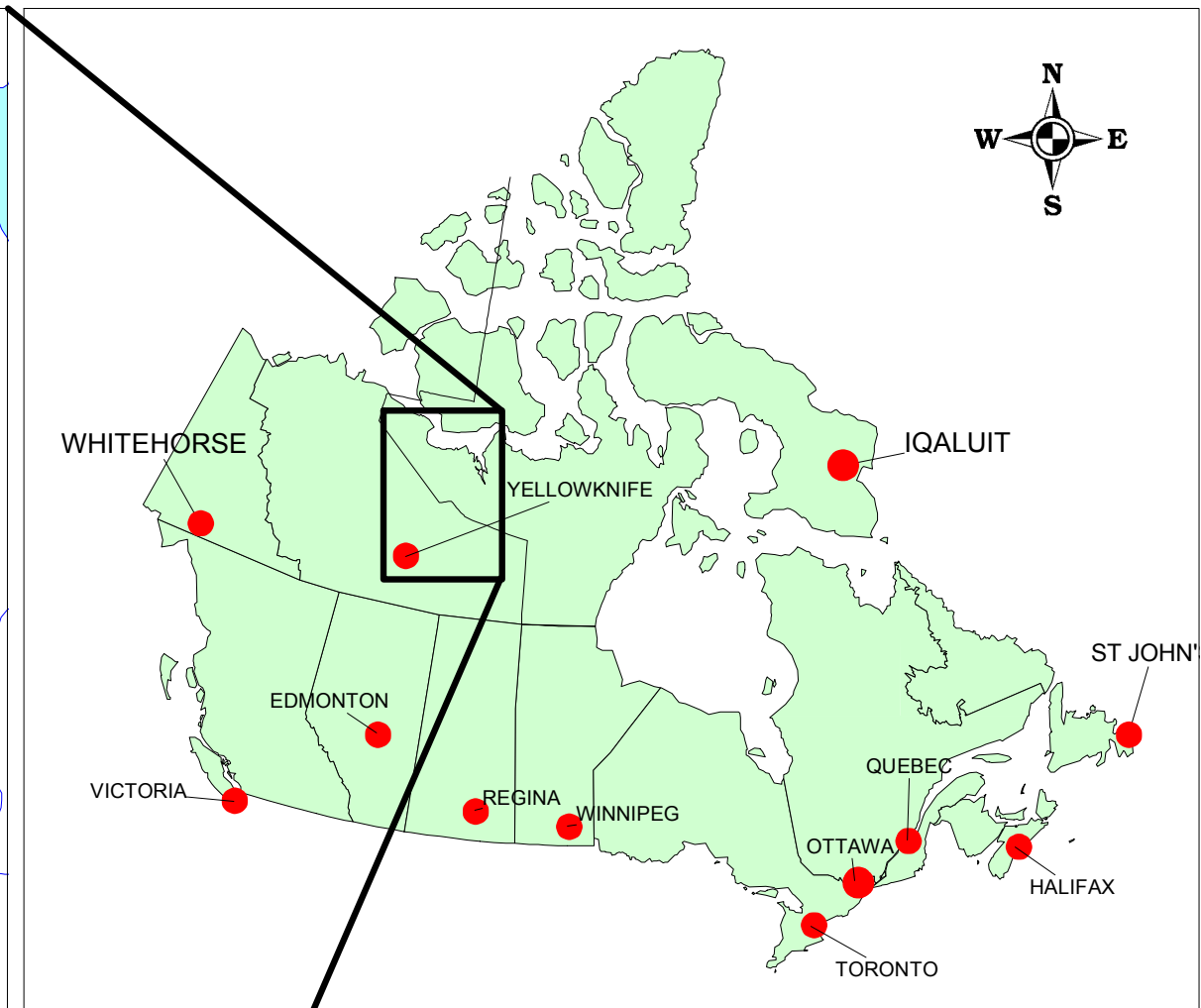
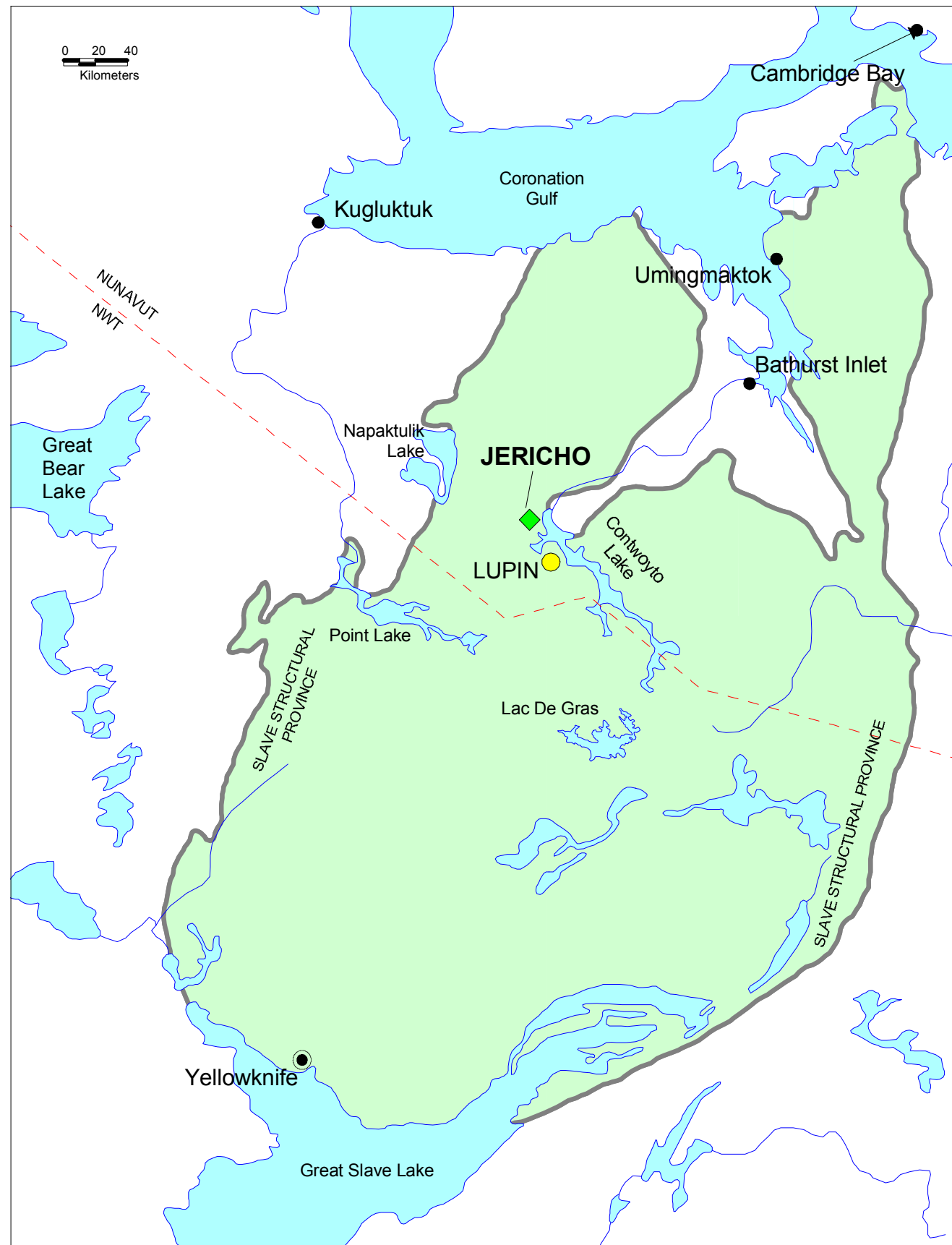
It is Tahera policy to:

- Comply with all applicable laws, regulations and standards, and where adequate laws do not exist, adopt and apply standards to prevent adverse health and safety impacts associated with its operation, products or services.
- Have standards/procedures in place to identify and control hazards.
- Integrate safety into all aspects of our work.
- Set objectives in safety and health performance.
- Commit appropriate resources to safety and health.
- Explain safety and health responsibilities to all employees and ensure they understand them.
- Ensure employees are trained to work safely and use proper protective equipment.
- Ensure hazard reporting procedures are in place that encourages employees to report all unsafe acts/conditions to their supervisors.
- Ensure every manager, supervisor, worker and contract employee knows and understands their health and safety responsibilities, and know that they are to be held accountable for their performance.
- Keep records of program activities, improvements and training in compliance with the Federal Privacy Act.
- Review all health and safety programs on an annual basis and make improvements as needed.
- Communicate openly with employees, government and the community on occupational health and safety issues; and contribute to the development of relevant occupational health and safety policy, legislation and regulations.
- Tahera believes that everyone has a common interest in avoiding injury and illness.

Jericho Diamond Mine Organization Chart

Construction Phase





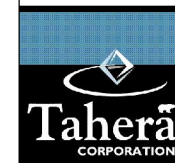
Property Location Map

30/6/2000

DRAFTED BY: MJ

Office: Van

FIG 1.1



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