Technical Memorandum W

Site Water Management

Jericho Project, Nunavut

Report Prepared for

Tahera Diamond Corporation

Report Prepared by

SRK Consulting
Engineers and Scientists

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1 Introduction

This report presents the designs of the site water management systems for the Water License application by Tahera Diamond Corporation (“Tahera”) for its Jericho Diamond Project, Nunavut Territory. The Jericho Diamond Project is located approximately 420 km northeast of Yellowknife.

The report was prepared by Clearwater Consultants Ltd., (“Clearwater”) for Steffen, Robertson & Kirsten (Canada) Inc., (“SRK”) on behalf of Tahera Corporation. The report presents the design criteria and designs for water management facilities around the Jericho Diamonds Project site and the overall site water balance and contaminant load model for the project. The designs of the site water management plan and facilities have been based on a series of previous reports and studies listed in the References. In particular, the report is based on Technical Memorandum F and Technical Memorandum G (SRK 2003a, b), two of a series of supplemental memoranda responding to review comments and concerns raised by the Nunavut Impact Review Board on Tahera Corporation’s Final Environmental Impact Statement.

Site hydrology characteristics were initially presented in Technical Memorandum C (SRK 2003c) and water quality estimates for potential source areas around the project site were initially presented in Technical Memorandum I (SRK 2003d). The initial estimates were unaffected by the current designs.

2 Site Water Management Facilities

2.1 General Description

Drawing 1CT004.06-W-1 shows the location and general configuration of water management facilities around the Jericho site. Drawings 1CT004.06-G-10, 1CT004.06-G-11, 1CT004.06-G-12 and 1CT004.06-G-13, a series of staged project general arrangements, show the progressive development of the various facilities over the mine operating period. The major water management facilities are summarized as follows:

- A diversion channel (the C1 Diversion) west of the Open Pit directing Stream C1 around the pit and into Carat Lake;
- A clean water ditch (the C4 Ditch) southeast of Waste Dump Site 1 directing clean natural upslope runoff away from the waste dump towards Lake C4;
- Ponds/sumps within the open pit collectively referred to as the Pit Pond;
- The Processed Kimberlite Containment Area (PKCA) located at Long Lake;
- A fresh water intake at Carat Lake;

At the start of operations (Drawing 1CT004.06-G-10 corresponding to April 2006) there will be a series of temporary ponds and sumps constructed as required to direct runoff and seepage towards the open pit should monitoring indicate that the water quality is unacceptable for discharge to the environment. Other facilities listed below are considered contingencies that could potentially be constructed during operations if and as required to provide additional control on water quantity and quality.

- Pond A collecting runoff and potential seepage from Waste Dump Site 1;
- Pond B collecting runoff and potential seepage from Waste Dump Site 2;
- Pond C collecting runoff from the processing plant and accommodation area, ore stockpiles, coarse tailings area and low grade stockpile. Pond C will be supplemented by a series of smaller collection ponds and pump sumps within the plantsite area and ore stockpile area;
- The Settling Pond downstream of the PKCA.

Since the NIRB Hearings in January 2004, minor modifications have been made to the layouts of the Waste Dump Sites and the Overburden Stockpile area as described elsewhere. In addition, adjustments have been made to the construction schedule. Waste Dump Site 2 will be developed first as a location for overburden storage and the initial stages of waste rock production. Waste Dump Site 1 will be developed starting in Year 2. The staging of construction has been designed to allow seepage and runoff to be directed to the open pit as required during the first few years of operations. Monitoring data collected during this period will be used to evaluate whether the other collection facilities will need to be constructed. Drawings 1CT004.06-G-10, 1CT004.06-G-11 and

1CT004.06-G-12 show the development of the various site facilities over the first three years of operations.

Figure W1 shows a schematic representation of component areas and the routing of water to and from the areas during the operations phase. Initially, using a series of temporary ditches and sumps, all component area runoff will be directed to the open pit and then pumped to the PKCA if necessary. If component area runoff water quality is acceptable it will be released directly to the receiving environment. Areas A, B and C on Figure W1 represent, initially, a series of water quality monitoring points comprising ditches and ponds with sufficient capacity to ensure that water can be directed to the pit sump. Scheduling of dump construction will ensure that the area flows can be directed by gravity to the pit. If runoff from a component area proves to be unacceptable for direct release and/or water inflows to the pit become excessive, larger collection Ponds A, B and/or C could be constructed to provide additional attenuating water storage prior to transfer of the water to the PKCA.

Figure W2 shows a schematic representation of component areas and the routing of water to and from the areas during the closure phase. After mining is completed all site area runoff will be directed into the open pit. Further discussion of conceptual closure considerations is presented in Section 2.8 of this report.

2.2 Hydrologic Design Criteria

Diversion Channel and Clean Water Ditch: The primary purpose of the diversion channel and clean water ditch is to divert clean natural runoff water away from Waste Dump Site 1 (C4 Ditch) and the open pit (Diversion C1). All other project facilities are located in the upper parts of the local catchment and will not require any diversion works. Diversion channels have been designed to convey peak flows from a 200 year return period event plus a minimum 0.3 m freeboard allowance. A 200 year return period event is an appropriate and conservative design event for small water-conveying channels where there is no credible threat to human life and no likelihood of catastrophic environmental damage due to failure of the channels. Diversion C1 also incorporates fisheries enhancement features (see Section 2.3.1) to maximize available fish habitat in the diverted stream. Diversion channels will require regular inspections and maintenance to ensure proper operation. In particular, ditches should be inspected in late winter/early spring, and any snow and ice blockages should be removed to allow diversion of the spring snowmelt away from project facilities.

Collector Ditches: Collector channels from Areas A, B and C will direct collected runoff to the open pit. The channels will be designed for 200 year peak flows and will generally be constructed in conjunction with mine roads. Channels will be monitored and maintained as for the diversion channels.

Collection Ponds: As a possible contingency, a system of three main collection ponds designated A, B and C has been developed to control sediment from the site facilities and, if necessary, to collect and convey site runoff to the PKCA. Each pond will include allowances for the storage of sediment and the temporary storage of runoff flows, and will have sufficient installed pumping capacity to convey runoff to the PKCA. Water quality at each pond location will be monitored during operations. If water quality at a pond satisfies discharge limits, pumping to the PKCA could be discontinued and outflows from the pond could be directed by gravity towards Carat Lake. The pond would continue to operate as a sediment control pond. Sizing of the pond volumes and pumping capacities has been based on the maximum inflow month with a 200 year return period. The maximum inflow month was assumed to be June, corresponding to the maximum snowmelt period. The average installed pump capacity will be sufficient to remove the design total annual inflow volume over a four month period. Additional peak pumping capacity of 1.5 to 2 times the average capacity will be available to handle peak snowmelt and/or rainfall-runoff inflows in conjunction with available storage volumes. Each collection pond includes an emergency spillway to protect against overtopping of the containment berms. The spillways are designed for a 200 year event assuming a full pond at the start of the 200 year event. Emergency spillway outflows from the ponds would be directed towards the open pit.

Pit Pond: A sump or sumps will always be available within the open pit to keep the working area of the pit dewatered and to pump runoff inflows from the pit to the PKCA. The location and size of the sump(s) will vary as the pit is developed. Typically in-pit sumps are designed for rainfall-runoff events with return periods of 10 to 25 years. Pumping capacity from the pit and sump storage volume(s) will be developed in conjunction with mining engineers based on estimated inflows and the risk to mining operations of exceeding available storage capacity at each stage of development.

Other Ponds and Sumps: Smaller collection ponds/pump sumps will be located near key infrastructure facilities such as the plantsite, fuel farm and ore stockpiles. These ponds will make use of natural topographic features wherever possible and will serve as sediment control ponds with low flows pumped to the PKCA. Drawings 1CT004.06-G-10 and 1CT004.06-G-11 show a typical sump located in a natural depression between the low grade stockpile and the coarse PK stockpile. Pumping distances and pumping heads to the PKCA would be lower for these smaller ponds than for water pumped from the pit. Overflows from the smaller ponds during extreme rainfall-runoff events, or high rates of snowmelt, would flow by gravity towards Pond C and the pit.

Processed Kimberlite Containment Area (PKCA): The PKCA reservoir will have sufficient storage capacity to absorb at least two year's runoff from all site facilities at the start of operations assuming, as a contingency, no releases over the first two years of operations. An emergency spillway will be provided to protect the containment dams against overtopping. The spillway has been designed to safely pass runoff from a 24 hour Probable Maximum Precipitation (PMP) assuming a full pond at the start of the PMP. Base case water management operations (see Section 3.2) assume that releases of excess water by pumping from the PKCA to Stream C3 will begin in the first summer of operation. Closure pond elevations will be significantly lower than the maximum potential operating pond level. The spillway level and pond level will be lowered further for closure to minimize or eliminate water storage volumes during closure and to facilitate placement of cover materials over the deposited fine kimberlite tailings.

Freshwater Intake: Freshwater for process water make-up and potable camp use will be taken from Carat Lake. The design flow will be 40 cu m per hour. Normal operating flows are expected to be from 20 to 30 cu m per hour. A rockfill causeway will be constructed west of the Stream C1 outlet (Drawing 1CT004.06-W-1 and 1CT004.06-W-6) with a pump and pipeline installation. The intake will be located in a minimum 4 m depth of water to allow operation under the ice during the winter.

Settling Pond: The Settling Pond is a contingency structure that, if required, could serve as an additional polishing pond for releases from the PKCA. The Settling Pond would be constructed only if there is inadequate settling in the PKCA and high suspended solids levels preclude direct releases to Stream C3. Additional flocculants could be added to PKCA releases and the Settling Pond would provide a minimum 24 hour retention volume for the controlled releases. The pond would have an emergency spillway outlet designed to pass a PMP, including routed PMP outflows from the PKCA.

2.3 Channels

2.3.1 C1 Diversion

The general arrangement of the C1 Diversion is shown on Drawing 1CT004.06-W-2. Typical cross sections and details are shown on Drawing 1CT004.06-W-3. The channel is designed to convey a peak 200 year flow of 0.7 m^3/s from a total catchment area of 105 ha. The diversion consists of a small diversion dam located downstream of Lake C1. The first approximately 150 m of the channel (Reach A) will be excavated as an unlined channel into the local bedrock with a minimum base width of 2 m, minimum depth of 1 m, and a longitudinal slope of about 1.5%. Reach B will be 150 m long with a 3.5% slope section founded on bedrock with lined banks. The channel will transition via a small pool into a 180 m long lined channel (Reach C) excavated into the active layer of overburden materials which comprise mainly sand and gravel, with some zones of silt and till. This section of channel will be fully lined with geotextile and riprap to prevent erosion or movement of fines into the channel and will incorporate fisheries enhancement measures as described below. The lined channel will transition into the natural C1 channel discharging into Carat Lake north of the open pit. The channel alignment will be adjusted in the field to allow for local ground conditions and topography. Final channel dimensions will likely be in excess of the design requirements due to practical construction considerations.

The lined channel section will include a number of fisheries enhancement measures as shown on Drawing 1CT004.06-W-3 and summarized as follows:

- The alignment in plan will include a number of gentle bends and meanders, each with a typical meander length of about 20 m;
- The channel cross section will include a low flow channel and pool-riffle complexes located about every 10 m to 15 m along the channel. Pool depths will be from 0.2 to 0.5 m.
- The channel lining will consist of coarse, clean rock and gravel with larger cobbles and boulders incorporated into the pool-riffle sequences.

The operation of all components of the diversion channel system will be monitored and, depending on performance, will be modified as and when appropriate.

2.3.2 C4 Ditch

The general arrangement of the C4 Ditch is shown on Drawing 1CT004.06-W-1. The clean water ditch will collect overland flow from southeast of Waste Dump Site 1 and will discharge into Lake C4. The channel is designed to convey a peak 200 year flow of 0.2 m^3/s from a total catchment area of about 18 ha. For practical construction purposes, the ditch will have minimum base width of at least 2 m and a minimum depth of 1 m thereby providing a flow capacity well in excess of the 200 year flow. The ditch alignment will be determined in the field to, as much as possible, follow pre-existing ground contours. The ditch will be constructed primarily by creating a berm on the surface of the natural ground: excavated cut sections will be avoided as much as possible so as to minimize potential impacts on permafrost conditions. Gravel and clean rock lining material will be installed as required to minimize erosion and to ensure containment of diverted waters. The operation of the clean water ditch will be monitored and, depending on its performance, will be modified as and when appropriate.

2.3.3 Collector Ditches

Component areas (plantsite, dumps, stockpiles etc.) will be graded and incorporate a series of ditches to direct local runoff towards the open pit and/or towards collection ponds. Collector ditches will also be located below (downhill of) the facilities. Preliminary ditch locations are shown on Drawing 1CT004.06-W-1 and typical details are shown on Drawings 1CT004.06-W-4 and 1CT004.06-W-5. Site surveys will be carried out to determine final alignments in conjunction with the final design of all site facilities. The ditches will be designed for peak flows from a 200 year event. Design flows will typically be in the range of 0.2 to 0.4 m^3/s depending on the local catchment area. Ditches will generally be located on the upslope side of local access and haul roads and so will have capacities well in excess of the 200 year flows. Excavated cut sections of ditch will be avoided as much as possible so as to minimize potential impacts on permafrost conditions. Erosion protection will be provided as required. Any suspended sediment generated by ditch operation will either be directed into the open pit or would be contained within the collection ponds if constructed.

2.4 Collection Ponds A, B and C

If required to optimize water management on the site, collection Ponds A, B and C could be constructed. The locations and general arrangements of the Ponds are shown on Drawing 1CT004.06-W-1. Cross sections, dimensions and details are shown on Drawings 1CT004.06-W-4 and 1CT004.06-W-5. The ponds are described following:

- Pond A would collect runoff and potential seepage from Waste Dump Site 1;
- Pond B would collect runoff and potential seepage from Waste Dump Site 2, including the stockpiled overburden;
- Pond C would collect runoff from the ore stockpiles, coarse tailings area and plantsite area;

The collection ponds will generally be kept nearly empty and operated at minimum storage volumes to ensure storage availability in the event of significant rainfall or snowmelt runoff. Sediment accumulation within the ponds will be monitored and deposited sediment removed as required to maintain required storage volumes. Water quality within the ponds will be monitored.

2.5 PKCA Facilities

Water management facilities for the PKCA include reclaim/decant facilities and an emergency spillway channel. Under operational conditions water will be reclaimed to the process plant and/or decanted to Stream C3 via a pumped system. The pumping system will be installed on a floating barge located at the western end of the PKCA.

Reclaim to the process plant and decanting of excess water to Stream C3 will likely only occur during the summer months. The pump barge will be removed from the pond and stored during the winter and the decant and reclaim pipelines will be winterized. If pond and ice conditions permit, reclaim will be carried out throughout the year. Section 3 of this report presents the overall water balance for the site. All water flows associated with the PKCA including annual and monthly release volumes of excess water from the impoundment to Stream C3 are discussed in Section 3.3.

The emergency spillway will be excavated into rock around the right (north) abutment of the West Dam. During operations the inlet elevation of the spillway will be 523 m with the outlet elevation 516.5 m. The spillway will discharge into a natural pond at the headwaters of Stream C3 with riprap installed as required to prevent erosion. The spillway channel will have with a nominal base width of 3 m and 1 to 1 (horizontal to vertical) excavated side slopes. The alignment and typical section of the spillway is shown on Drawing 1CT004.06-P-8. The spillway will be cleared of snow and ice accumulations every year prior to the annual snowmelt to minimize the potential for channel blockage.

Further details on the design and operation of the PKCA are provided in *"Technical Memorandum P: Design of the Processed Kimberlite Containment Area, Jericho Project, Nunavut"* (SRK 2004a).

2.6 Fresh Water Intake

The general arrangement of the fresh water intake causeway is shown on Drawing 1CT004.06-W-1. The causeway is located approximately 200 m west of the Stream C1 outlet. This is considered to be a preferred location in terms of fish habitat rather than the causeway location shown in the FEIS, which was a similar distance east of the Stream C1 outlet. The causeway will be constructed of clean coarse rock fill and will extend approximately 90 m into Carat Lake. Details of the causeway and intake/pumping facilities are shown on Drawing 1CT004.06-W-6. The intake will be located in a minimum 4 m depth of water to allow operation under the ice during the winter. The design flow will be 40 cu m per hour to account for process water makeup and potable camp water use, but normal operating flows are expected to be from 20 to 30 cu m per hour.

2.7 Other Facilities

Small culverts may be required under local site roads at minor creek crossings. The locations of any such crossings will be determined in the field and installations will be carried out in accordance with the appropriate Nunavut regulations and guidelines. Regular inspections of the culverts and maintenance will be carried out as required to ensure proper operation.

If the Settling Pond is constructed, an emergency spillway channel would be excavated into rock around the right (north) abutment of the Settling Pond dam. A concrete stoplog control structure would be founded on bedrock within the spillway channel. The minimum inlet elevation of the stoplogs would be set to provide a minimum 24 hour retention capacity based on the rate of decant during the summer months. Appropriate measures would be included at the spillway outlet to prevent erosion during spillway operation.

Various conservative assumptions and contingency measures have been included in the water management design as discussed in Section 3.4. Spray irrigation has been evaluated as one contingency measure for the possible treatment of site runoff water prior to release to the environment. Depending on actual PKCA water quality during the first one or two years of operation, pilot testing of a spray irrigation scheme would be carried out. Water would be pumped from the PKCA during the summer months to a testing area located northwest of the PKCA. Details of potential pumping and area requirements are presented in the *"Spray Irrigation Plan"* (AMEC 2004b). If a specific water quality parameter or parameters in the PKCA releases become an issue during operations, other appropriate parameter-specific treatment alternatives would be evaluated at that time.

2.8 Closure Considerations

The conceptual site closure plan is presented in the *"Abandonment and Restoration Plan"* (AMEC 2004a) and shown on Drawing 1CT004.06-G-15. Figure W2 shows a schematic of water flows during the closure phase. The following water management activities will be undertaken after the completion of mining and processing activities:

- All flows from all the mine components will be directed into the open pit. Channels into the pit will be armoured as required to ensure long-term stability.

- Drainage from reclaimed areas around the process plant site and stockpile areas will be directed into the open pit.

- Part of the flow from the C1 diversion could be directed into the pit if a faster rate of pit filling is desirable (see Section 3.4). Excess flows during the freshet period or other periods of high flow could be "skimmed" into the pit using an overflow weir structure located at the C1 diversion dam. Minimum flows would remain in Stream C1 at all times to satisfy fisheries requirements.

- After the pit has filled (see Section 3.4) and water quality is determined to be acceptable for release, lows from the pit could be directed into the C1 stream channel or could be directed into a separate open channel discharging along the east shore of Carat Lake. The final configuration will be determined once sufficient monitoring data are available to refine the present pit water quality estimates.

- The PKCA will be reclaimed as described in the "*Abandonment and Restoration Plan*" (AMEC 2004a). The emergency spillway will be lowered or the West Dam will be partially or totally removed to minimize or eliminate stored water within the pond and to facilitate the reclamation activities. Once the water quality of runoff from the reclaimed area has been determined to be acceptable for direct uncontrolled release, the Settling Pond dam (if constructed) will be breached. Runoff will flow over the (lowered) PKCA spillway and directly into Stream C3 draining into Lake C3.

3 Site Water Balance and Load Concentration Model

3.1 General Description

A continuous simulation water quantity and quality model was developed by Clearwater for the Jericho Project site. The spreadsheet model used monthly time steps to simulate inflows and outflows from the various project components. These include: the open pit mine area; Waste Dump Sites 1 and 2; ore storage areas including the low grade stockpile, the central lobe stockpile, and the north lobe stockpile; the coarse tailings storage area; the processing plant, sewage treatment plant, accommodations complex and surrounding area; areas draining to potential collection ponds A, B and C; and the PKCA drainage area including the processed kimberlite slurry flow. Figure W1 shows a schematic of the project site components and the flow relationships used for the water balance model during mine operations. Figure W2 shows a schematic site flow diagram for the closure period.

The model is flexible and process parameters, hydrological variables, and operational plans may be adjusted to evaluate water quantities and water quality for a range of variables at all key locations. The following input parameters are required:

- Average annual and monthly precipitation, rainfall and snowfall, lake evaporation and evapotranspiration;
- The monthly distribution of the annual spring snowmelt in May, June and July;
- Annual precipitation for a range of return periods from a 10 year return period dry year up to a 200 year return period wet year;
- Estimated evaporative losses from disturbed ground and undisturbed ground around the site as a function of lake evaporation rates;
- Process parameters including processed fine kimberlite slurry percent solids, settled dry density and specific gravity, and the maximum potential reclaim rate from the PKCA to the processing plant;
- Estimated flows including potential seepage rates from storage facilities, freshwater inflows to the system, groundwater flow into the open pit, sewage flows, and other potential flows;
- Maximum and minimum limits on water storage volumes in the PKCA;
- Ore and waste rock processing rates for each year of operation;

- Catchment areas for each component, divided into ground areas covered with water, disturbed ground, and undisturbed ground.

- Water quality associated with runoff from all project component areas. Source water quality was estimated by SRK (Technical Memorandum I, SRK 2003d), as summarized in Attachment 1 for 35 parameters including physical parameters, major ions, nutrients, dissolved metals and total metals.

- Elevation-storage volume relations for the PKCA (Figure W3), the Settling Pond (Figure W4) and the open pit (Figure W5).

Parameters which may be adjusted in the model on a year-by-year basis are:

- The return period of the annual precipitation for the year;

- Months in which decant releases or reclaim are allowed from the PKCA;

- The location to which flows are directed from Ponds A, B and C, the Pit Pond and Diversion C1 during active mining operations and during the closure period.

Water quantities are calculated monthly in the model based on input values for process-related flows including tailings slurry flow, void losses in deposited fine kimberlite tailings, other process inflows, sewage, and seepage flows. Net runoff volumes are calculated for each catchment and each type of ground cover (disturbed and undisturbed ground and pond areas) based on monthly precipitation and evaporative losses appropriate for the ground type. The annual snowmelt runoff is distributed over May, June and July with the bulk of the runoff occurring during June, similar to flows in the natural environment. Snowmelt is generated from the cumulative snowfall from September through May each year.

Water quality is modeled by simple dilution calculations for each catchment area and each collection pond area in the system. All contaminants are assumed to remain in the water. The water quality parameter to be modeled is selected for a given run and concentrations for each source location are determined from a data input table. For a given parameter, the concentration of a mixture of various streams of water at a given location is determined in the model using the following relation:

$C_{mixture} = [(Q_1 \times C_1) + (Q_2 \times C_2) + \ldots + (Q_n \times C_n)]$ divided by $[Q_1 + Q_2 + \ldots + Q_n]$

Where Q_i equals the volume of water (m^3) in flow i with an associated parameter concentration of C_i (mg/L)

Output from the model consists of the following tables:

- Table W1 – Input Data and Assumptions
- Table W2 – Monthly Water Balance Volumes - Base Case
- Table W3 – Monthly Water Balance Effluent Concentrations and Loadings - Base Case
- Table W4 – Annual Water Balance Summary of Volumes - Base Case
- Table W5 – Net Annual Inflow Volumes v. Precipitation Return Period
- Table W6 – Summary of Peak Estimated Parameter Concentrations - Base Case

The tables and graphical output from the model in Figures W6 to W12 show the variation of PKCA volumes, pond elevations, and selected parameter concentrations over the model period. The Base Case input parameters and output results are discussed in the following sections.

3.2 Base Case Model Conditions

The model was used to evaluate water storage requirements in the PKCA and to estimate potential release volumes of excess water from the system. In addition, the water quality module estimated monthly concentrations of selected water quality parameters at all locations. The “base case” scenario included the following assumptions for modeling purposes:

1. Eight years of ore processing starting in the first quarter of 2006. The model timeframe was extended beyond eight years to cover the expected time required to fill the pit after the completion of mining activities.

2. Average precipitation and evaporation conditions. Dry and wet precipitation years were also evaluated to assess the impact on water quality and quantity.

3. Average expected source concentrations for the modeled parameters.

4. If runoff/seepage water quality from a project component area is acceptable for direct release, water would be directed to the receiving environment. The Base Case model assumed that, over the entire operating period, all water, runoff and seepage from all site components will be collected and directed to the PKCA for temporary storage until released from the system.

5. Water will be reclaimed from the PKCA to the processing plant from June to September.

6. The PKCA pond level will be limited to a maximum elevation of 523 m at the west dam, corresponding to a total storage volume of 1,790,000 m^3 based on a ‘struck level’ volume calculation. The minimum allowable operating PKCA pond volume was assumed to be 100,000 m^3.

7. The elevation of solids stored within the PKCA and the elevation of the total of water plus solids each year were estimated from the PKCA elevation-storage relation (Figure W3) conservatively

assuming flat line or horizontal storage. As shown on the staged general arrangement drawings (Drawings 1CT004.06-G-10 to 1CT004.06-G-13), solids will be encouraged to deposit above water around the eastern end of the impoundment using an internal splitter dike and perimeter spigotting.

8. Releases of excess water will be allowed from the PKCA starting in the first summer of operation: the model indicates that water quality in the PKCA will be acceptable for release. Releases will occur in June, July, August and September. Release rates will be varied to follow the pattern of flow rates in the receiving environment.

9. After the completion of active mining operations and starting in Year 9 (2014 in the model), all site area flows will be directed into the open pit.

3.3 Water Balance and Load Concentration Model Results

3.3.1 Water Volumes

Table W2 shows calculated monthly water volumes, inflows, outflows and storage variations over the model period. Water volumes stored within the PKCA during operations and in the open pit after completion of mining activities are calculated based on monthly inflows and outflows. Pond elevations at the end of each month are determined from elevation-storage volume relations developed by SRK. Figures W6 and W7, respectively, show the variation of storage volumes and pond elevations within the PKCA. As mentioned previously, elevations were conservatively calculated assuming horizontal deposition of both solids and water. Actual PKCA pond elevations will likely be lower than shown on Figure W7. After the completion of ore processing, the PKCA pond level will stabilize at an approximate elevation of 519.7 m, assuming a minimum remaining pond volume of 100,000 m^3.

Table W4 summarizes total annual water flow volumes from each component area. The Table shows that, of the 487,000 m^3 total net inflow to the PKCA each year (average precipitation conditions), about 140,000 m^3/year (29%) originates from local runoff and process inflows (including about 16,000 m^3 from the sewage treatment plant). The remaining net inflow volume is pumped either from the open pit or from the collection ponds (if constructed) minus the volume reclaimed to the process. Area A contributes 127,000 m^3 (about 26%), Area B (49,000 m^3, 10%), Area C (118,000 m^3, 24%), the Pit Pond (83,000 m^3, 17%), and about 30,000 m^3 per year (6%) is reclaimed to the processing plant. Table W5 shows the variation in annual inflow volumes for a range of annual precipitation return periods.

In order to maintain the water balance within the PKCA the net inflow of excess water must be released each year. Typical monthly release volumes (June to September) are shown in Table W2 and, for the base case, would range from about 300,000 m^3 in June (60% of the annual total) to about 36,000 m^3 in September (7% of the annual total). The monthly releases shown in the table follow the approximate shape of the natural flow hydrograph in Stream C3. Maximum proposed release rates are less than 5 year to 10 year return period estimated flood flows that the natural C3 channel has probably experienced a number of times over the years. Additional overbank flooding or local erosion due to the proposed PKCA releases are, therefore, expected to be minimal or non-existent. The C3 channel will be evaluated prior to releases from the PKCA. During operations the C3 channel will be monitored and additional erosion protection measures installed as required.

3.3.2 Water Quality

Table W3 shows the calculated monthly concentration of the selected water quality parameter in the runoff from each of the Areas A, B and C, the pit pond, and the PKCA. Monthly concentrations and loads are shown in the table for total copper, TCu, as an example. Figures W8 to W11 show the month-to-month variation in concentration in the PKCA for selected parameters: NH_4-N, total copper (TCu), and total nickel (TNi). These figures illustrate temporal variations in concentrations due to sources with different proportions of these parameters, for example TCu from waste rock versus TNi from kimberlite ore and from coarse PK.

Table W6 summarizes the peak calculated monthly parameter concentrations for all modeled parameters at all locations over the life of the mine for the Base Case conditions (average source concentrations). Peak concentrations typically occur in August/September. Month-to-month variations in concentrations are shown on the figures. Table W6 also shows peak estimated concentrations under average precipitation conditions, but conservatively assuming maximum expected source concentrations over the entire model period. For comparison with average precipitation conditions, peak estimated concentrations are shown for TDS and TSS for 10 year return period dry and wet years. The results are not significantly different from those determined for average precipitation conditions.

Maximum concentrations in the filled pit pond after the end of active mining are shown on Table W6 for two different assumptions regarding inflows to the pit during closure. The first case assumes inflows to the pit from all site areas and results in the pit filling over about 19 years after closure. The second case assumes those inflows plus some additional inflows from Stream C1 each year during the freshet, decreasing the pit filling time to about 15 years. The water quality estimates were based on source concentrations from the operations period. An additional analysis of post-closure water quality which addresses potential freeze-back of permafrost within the waste dumps is presented in *"Post-Closure Pit Lake Quality"* (SRK 2004b *in* AMEC 2004a).

The discharge water quality estimates and flows presented herein were used to estimate receiving water quality in Lake C3 and in Carat Lake. Those estimates are presented in "*Technical Memorandum N: Estimates of Receiving Water Quality for the Jericho Project*" (SRK 2004c).

3.4 Discussion

The Base Case site water balance analysis presented above includes a number of conservative assumptions regarding both water quantity and water quality during the operations phase. "Conservative" in this context implies assumptions that result in either higher volumes of runoff or in higher potential estimated contaminant concentrations. Actual conditions are, therefore, expected to be better than those presented herein.

- All water (runoff and seepage) from all site components was assumed to always be collected and directed to the PKCA for temporary storage until released from the system. Water quality will be monitored at all runoff collection areas and, if acceptable, runoff from a component area would be released from the system and not be directed to the PKCA.

- Calculations of runoff from the waste dump(s) do not allow for any ‘wetting” of the waste rock, i.e. permanent loss of water which adheres to waste rock particles. This loss could amount to perhaps 2% to 4% by weight of the 13.3 million tonnes of waste rock or some 260,000 to 530,000 m^3 of water. Wetting of the waste will significantly reduce the volume of runoff, and hence contaminant load, per year generated by the waste dump(s). Experience at Ekati indicates that freeze-back of permafrost into the placed waste rock will also significantly reduce dump runoff as some of the infiltrating rainfall and snowmelt will become permanently frozen within the dump. The Base Case, therefore, probably represents conditions near the end of the operations period but provides overestimates of flow volumes and contaminant loadings in the early years of operation.

- Total water and contaminant loading to the PKCA assumes collecting runoff from all of the area of Waste Dump Site 1 starting in the first year of operation. None of the Site 1 area will be used in the first year and only a part of the area will be used in the second year of operations. The whole Site 1 area will not be used until the third year of operation (see General Arrangement Drawings 1CT004.06-G-10, 1CT004.06-G-11 and 1CT004.06-G-12).

- Reclaim to the process plant is assumed in the model for only June through September at a maximum of 80% of the total slurry water flow equal to about 7,500 m^3 per month. If reclaim is feasible in the freezing months and reclaim water quality is acceptable in the process, 60,000 m^3 less water would report to the PKCA per year.

Contingency allowances included in the system include the conservative assumptions above, plus:

- The PKCA has more than ample storage to, if necessary due to water quality concerns, store all site area runoff (all component area runoff plus pit inflows plus PKCA area runoff) for the first two years of operations without any releases.

- If processed kimberlite settling characteristics within the PKCA are less efficient than expected, additional flocculants could be used and the Settling Pond could be constructed to serve as a final settling and polishing pond for PKCA releases.

- Depending on actual PKCA water quality during the first one or two years of operation, pilot testing of a spray irrigation scheme would be carried out. The removal of water from the PKCA for possible spray irrigation trials has not been included in the water balance.

- If a specific water quality parameter or parameters in the PKCA releases become an issue during operations, other appropriate treatment alternatives would be evaluated at that time. The available storage within the PKCA would allow water to be retained thereby providing time to evaluate potential parameter-specific treatment alternatives.

The conceptual site closure plan is presented in AMEC 2004a and shown on Drawing 1CT004.06-G-15. Depending on actual water quality conditions at the time of closure, a number of conceptual water management options exist for this phase:

- Allow the open pit to fill only with direct precipitation plus local runoff supplemented by site component area runoff. For an estimated pit volume of about 6,500,000 m^3, the water balance model indicates that the pit would fill to elevation 480 m in about 19 years.

- Increase the rate of pit filling by directing some of the flow during the freshet period from Stream C1 into the open pit. Minimum flows would be left in Stream C1 at all times to satisfy fisheries requirements. The pit could be filled in about 15 years for this option.

- Minimize the time required to fill the pit by directing some of Stream C1 into the pit as well as pumping water in from Carat Lake. Assuming, for example, pumping from Carat Lake at about 5% of the annual total Jericho River flow volume could result in the pit being filled in less than four years.

- After filling, flows from the pit could be directed into the C1 stream channel or could be directed into a separate open channel discharging along the east shore of Carat Lake. The final configuration will be determined once sufficient monitoring data are available to refine the present pit water quality estimates.

Water quality in the filled open pit is discussed in *"Technical Memorandum O: Post-Closure Pit Lake Quality"* (SRK 2004b *in* AMEC 2004a).

4 Water Monitoring Requirements

Flows and water quality will be monitored at key locations to determine whether individual flows are acceptable for direct release, and to anticipate any deviations from the conditions assumed in the present water and load balance model that could indicate the need for implementation of contingencies. The site monitoring program will be complemented by monitoring of the waste rock, kimberlite and processed kimberlite solids, monitoring of receiving water quality, and environmental effects monitoring. Details of those other programs are provided in the *"Operational Monitoring Summary*" (AMEC 2004c). Key locations in the site water monitoring network (Drawing 1CT004.06-G-14) include:

- Temporary or permanent collection ponds A, B and C, which will be used as control structures to direct water to the environment, the pit sump or the PKCA during operations
- The pit sump(s)
- The process plant supernatant
- Treated sewage effluent
- PKCA pond water
- PKCA discharge water

During the first two years of operations, each of the above locations would be established as "routine monitoring stations" for measurement of flow and water quality.

The physical stability of the C1 Diversion, the C4 ditch and all collector ditches will be monitored during operations and remedial measures implemented as required to prevent erosion. Stream C3 will be assessed prior to, and monitored during, releases from the PKCA. Stabilization measures (riprap, gravel) would be installed as necessary.

The monitoring locations representing internal flows at the site (i.e. to the pit sump or PKCA) are intended to provide an early indication of how the systems are performing. This information will be used by the mine operator to make adaptive management decisions and projections of PKCA discharge water quality. Sampling of the PKCA inflows would be on a bi-weekly basis during the open water season (generally June to September) for the first two years of operations. The PKCA pond and any inflows that continue through the winter months (i.e. the supernatant and the treated sewage) would be monitored on a monthly basis. Depending on the level of variability observed in the monitoring results, Tahera may request a modification after two years to reduce the sampling frequency for the internal monitoring locations to once per month.

The monitoring locations representing potential discharges from the site are expected to meet a set of discharge limits specified in the Water Licence. Proposed discharge criteria for the PKCA are discussed in *"Proposed Discharge Limits for the Jericho Project, Nunavut"* (SRK 2004d). The

PKCA discharge would be monitored on a weekly basis during the discharge period from June through September.

The methods for estimating flow will depend on the final details of the water management facilities. Pump installations would be equipped with totalizer flow meters to record the total volume of water pumped between sampling events. Ditch flows would be monitored using weirs and/or current meter measurements during the summer months. Piped flows discharging by gravity would be estimated using bucket and stopwatch methods. Topographic surveys and soundings of the PKCA in conjunction with regular measurements of the pond elevation would be used to estimate water volumes in storage in the pond.

An annual seepage survey would be completed along the down-gradient side of the waste rock dumps, the ore stockpiles, the coarse PK stockpile, the recovery plant stockpile, and any sumps in the plant area to develop a better understanding of variations in source concentrations from different areas of site. This information would be used to optimize the water management system. For example, seeps that meet discharge criteria may be managed separately from those that do not. This sampling should take place in late August to early September to coincide with expected maximum seepage concentrations. It should be noted that the provision of routine monitoring stations at each of the collection points ensures that seepage and runoff from the waste rock is monitored on a routine basis. Therefore an annual seepage survey is considered sufficient.

All samples would be submitted for testing for the parameters outlined in Table W7. Standard QA/QC procedures for water sampling including collection of field, travel and method blanks and duplicate samples will be included in the program. The results of the seepage monitoring would be provided in an annual seepage and waste rock monitoring report.

5 Conclusions

This report presents the designs of the site water management facilities and an evaluation of the Jericho Project overall site water balance. Water management facilities are described. An overall site water balance model was developed to estimate monthly and annual inflows, outflows and storage volumes based on hydrological data, process inputs and operating assumptions. Monthly concentrations of water quality parameters were estimated in the PKCA, the Pit Pond and Collection Ponds A, B and C. The results for the mine operating period and the closure period are presented in a series of tables and figures. Recommendations are made for water quantity and quality monitoring during mining operations.

6 References

AMEC Earth & Environmental, 2004a. Abandonment and Restoration Plan, Jericho Diamond Mine Nunavut. Report Prepared for Tahera Corporation, July 2004.

AMEC Earth & Environmental, 2004b. Spray Irrigation Plan, Jericho Diamond Mine Nunavut. Report Prepared for Tahera Corporation, July 2004.

AMEC Earth & Environmental, 2004c. Operational Monitoring Summary, Jericho Diamond Mine Nunavut. Report Prepared for Tahera Corporation, July 2004.

SRK Consulting, 2003a. Technical Memorandum F: Site Water Balance and Load Concentration Model Jericho Diamond Project. Prepared for Tahera Corporation, October 2003.

SRK Consulting, 2003b. Technical Memorandum G: Water Management Facilities Design Criteria Jericho Diamond Project. Prepared for Tahera Corporation, October 2003.

SRK Consulting, 2003c. Technical Memorandum C: Climate and Hydrology Jericho Diamond Project. Prepared for Tahera Corporation, October 2003.

SRK Consulting, 2003d. Technical Memorandum I: Estimates of Source Concentrations - Jericho Project, Nunavut. Prepared for Tahera Corporation, October 2003.

SRK Consulting, 2004a. Technical Memorandum P: Design of the Processed Kimberlite Containment Area, Jericho Project, Nunavut. Prepared for Tahera Corporation, July 2004.

SRK Consulting, 2004b. Technical Memorandum Q: Post Closure Pit Lake Quality. Prepared for Tahera Corporation, May 6, 2004. (*Presented as an appendix to:* “Abandonment and Restoration Plan”, AMEC 2004a)

SRK Consulting, 2004c. Technical Memorandum N: Estimates of Receiving Water Quality for the Jericho Project, Nunavut. Prepared for Tahera Corporation, July 2004.

SRK Consulting, 2004d. Technical Memorandum O: Proposed Discharge Limits for the Jericho Project, Nunavut. Prepared for Tahera Corporation, July 2004.

TABLES

TABLE W1 - JERICHO PROJECT SITE AREA WATER BALANCE - INPUT DATA & ASSUMPTIONS

VERSION 1.2

1) Annual Average Precipitation, Evaporation & Snowmelt Distribution

Precipitation = 330.1 mm   Lake Evaporation = 273 mm

Evaporative Losses

Losses from Disturbed Ground = 82 mm, or 30% of Lake Evap.

Evapotranspiration Losses = 109 mm, or 40% of Lake Evap.

Annual Snowmelt Distribution : 5% in May, 75% in June, 20% in July

2) Average Monthly Conditions

Month	Total Precip	Rainfall (mm)	Snowfall (mm)	Lake Evaporation (mm)	Evapotrans-piration	Reclaim Allowed from PKCA	Controlled Releases Allowed from PKCA
Jan	11.6	0	11.6			NO	NO
Feb	10.5	0	10.5			NO	NO
Mar	13.8	0	13.8			NO	NO
Apr	16.6	0	16.6			NO	NO
May	21.3	6.6	14.7	15	6.0	NO	NO
June	30.6	30.6	0	79	31.6	YES	YES
July	43.9	43.9	0	96	38.4	YES	YES
Aug	61.4	61.4	0	58	23.2	YES	YES
Sept	49.5	28.5	21.0	25	10.0	YES	YES
Oct	35.3	0	35.3		0.0	NO	NO
Nov	18.3	0	18.3			NO	NO
Dec	17.3	0	17.3			NO	NO
YEAR	330.1	171.0	159.1	273.0	109		

3) Extreme Year Precipitation

Return Period		Total Precipitation (mm)	Rainfall (mm)	Snowfall (mm)
10yr Dry	1	250	130	120
Average	2	330	171	159
Wet	5	400	207	193
Wet	10	430	223	207
Wet	20	450	233	217
Wet	50	480	249	231
Wet	100	500	259	241
Wet	200	520	269	251
		100%	52%	48%

(Total Precipitation rounded to nearest 10 mm)

4) Process Parameters

Void Water Losses = 156.5% of weight of solids (calculated)

Settled (Dry) Density = 0.50 t/m3

Tailings Slurry % Solids = 30.0% by weight

Solids Specific Gravity = 2.30

Maximum Allowable Reclaim % = 80.0% as percent of slurry water (July to September only)

5) Other Assumed Flows

Seepage from PKCA = 0.2 L/s

Freshwater to Pit = 1.0 L/s

Groundwater to Pit = 0.077 L/s (~1000 m3/yr, MJJAS only)

Total Pitwater Pumped = 1.077 L/s

Sewage to PKCA = 0.5 L/s

Other Inflows to PKCA = 0 L/s

6) Assumed Water Storage Volumes

Assumed Initial PKCA start-up pond volume = 30,000 m3

Minimum PKCA Operating Pond Volume = 100,000 m3 (nominal)

Maximum PKCA Operating Pond Volume = 1,790,000 m3 (Elev 523 m)

Max Monthly Controlled Release from PKCA = 650,000 m3

Minimum Elevation Difference - PKCA to Settling Pond = 0.1 m

7) Assumed Future Operating Conditions

Year	Precipitation Return Period	Precipitation Depth (mm)	Annual Production Rates (1000 tonnes) Total Ore	Ore to Plant	Ore to LG Stockpile	Fine Tailings	Coarse Tailings	Over-Burden	Waste Rock
(Note 1)	(Note 2)								
2006	2	330	741.25	316.25	425	47.5	268.8	800	6100
2007	2	330	741.25	316.25	425	47.5	268.8	800	5500
2008	2	330	741.25	316.25	425	47.5	268.8	0	1700
2009	2	330	741.25	316.25	425	47.5	268.8	0	0
2010	2	330	316.25	316.25	0	47.5	268.8	0	0
2011	2	330	316.25	316.25	0	47.5	268.8	0	0
2012	2	330	316.25	316.25	0	47.5	268.8	0	0
2013	2	330	316.25	316.25	0	47.5	268.8	0	0
2014	2	330	0	0	0	0	0	0	0
2015	2	330	0	0	0	0	0	0	0
2016	2	330	0	0	0	0	0	0	0
2017	2	330	0	0	0	0	0	0	0
Total			4230	2530	1700	380	2150	1600	13300

Year	Releases Allowed from PKCA	Water Management: Collection Area Discharges pumped to PKCA ? Area A	Area B	Area C	Pit Pond	
2006	YES	YES	YES	YES	YES	
2007	YES	YES	YES	YES	YES	
2008	YES	YES	YES	YES	YES	
2009	YES	YES	YES	YES	YES	
2010	YES	YES	YES	YES	YES	
2011	YES	YES	YES	YES	YES	
2012	YES	YES	YES	YES	YES	
2013	YES	YES	YES	YES	YES	
2014	YES	NO	NO	NO	NO	
2015	YES	NO	NO	NO	NO	
2016	YES	NO	NO	NO	NO	
2017	YES	NO	NO	NO	NO	
		Carat L.	Pond A	Carat L.	Carat L.	<=== Gravity Release to
		Carat L.	Pit	Pit		<=== Spillway Overflow to

Closure Water Management
(Year 2014 onwards)

Area	Flows to Pit ?		
Area A	YES		
Area B	YES		
Area C	YES		
Stream C1	YES	38,000	m3 Minimum Monthly Flow in C1

8) Catchment Areas in hectares (ha)

Year	Areas within PKCA Total	Pond	Land	Beach
2006	53.5	15.0	37.0	1.5
2007	53.5	15.0	36.0	2.5
2008	53.5	15.5	35.0	3.0
2009	53.5	16.0	34.0	3.5
2010	53.5	17.0	33.0	3.5
2011	53.5	18.0	32.0	3.5
2012	53.5	19.0	31.0	3.5
2013	53.5	20.0	30.0	3.5
2014	53.5	20.0	30.0	3.5
2015	53.5	20.0	30.0	3.5
2016	53.5	20.0	30.0	3.5
2017	53.5	20.0	30.0	3.5

Areas (ha) draining to indicated Collection Area

Component Area Description	Area A	Area B	Area C	Pit Pond	Stream C1	Component Area Concentration mg/L
Total Area	52.6	20.4	48.3	21.2	105.2	
Waste Dump #1	29.6					0.0644
Waste Dump #2		12.8				0.0644
Overburden Stockpile	8.1					0.0644
Coarse Kimberlite Stockpile			12.7			0.0031
Low Grade Ore Stockpile			10.6			0.0031
Central Lobe Ore Stockpile			4.0			0.0031
North Lobe Ore Stockpile			4.6			0.0031
Plantsite			7.8			0.0056
Open Pit				10.1		0.0118
Other - Disturbed Ground	5.1	3.0	6.8	3.5	0	0.0056
Other - Undisturbed Ground	9.0	4.3	1.0	7.6	99.5	0.0034
Other - Pond Area	0.8	0.35	0.75	0	5.7	

9) Water Quality Parameter Concentrations (mg/L)

Enter Parameter to model TCu (Selections in Sheet "Other Input Data")

Average enter 'Average" or "Maximum"

Concentrations (mg/L) for Other Flows	
Groundwater Inflows to Pit/Underground	0.0730
Tailings Slurry (to PKCA)	0.0029
Beach Area Runoff (within PKCA)	0.0029
Sewage Flows (to PKCA)	0.0020
Other Inflows (to PKCA)	0.0000
Freshwater from Carat Lake	0.0020
Stream C1	0.0020

(concentrations looked up from Sheet "Other Input Data")

NOTES

1) "Production years" from January 1 to December 31 each year.
2) Snowfall years from October 1 to September 31
3) "Maximum Reclaim %" = maximum % of slurry transport water that could be reclaimed from PKCA to the mill process.
4) Month-to-month variations will occur in water-covered pond areas
5) Years **2014 to 2017** correspond to years after completion of active mining operations.

TABLE W2 - Jericho Project - Monthly Water Balance Volumes - Base Case

VERSION 1.2

(all water volumes in cubic metres)

Month & Year	Tailings (tonnes)	Return Period	Precipitation: Rainfall (mm)	Precipitation: Snowfall (mm)	Processed Kimberlite Containment Area Local Inflows & Outflows – Local INFLOWS: Precip + Runoff	Local INFLOWS: Slurry Water	Local INFLOWS: Other Inflows	OUTFLOWS & LOSSES: Evap. Losses	OUTFLOWS & LOSSES: Tailings Void Losses	OUTFLOWS & LOSSES: Seepage	Total Local INFLOW to PKCA	Net Inflows to Collection Areas (= Precip + Runoff - Evap Losses): Area A	Area B	Area C	Pit Pond	Diversion C1	Discharge from Collection Areas: Pumped to PKCA	Released to Carat Lake	Total Inflow to Open Pit (Closure only)	Total INFLOW to PKCA	Reclaim to Mill	Net INFLOW to PKCA	Controlled Release	Un Controlled Spill	Total Water Stored in PKCA	Cumulative Tailings Volume Deposited	Total Volume Stored in PKCA	PKCA Pond Elevation (m)	Water Stored in Open Pit	Closure Pit Pond Elevation (m)
Aug-05																									30,000		30,000	512.40	0	n/a
Sep-05	0	2	28.5	21.0	0	0	0	0	0	0	0	0	0	0	0	18,607	0	0	0	0	0	0	0	0	30,000	0	30,000	512.40	0	n/a
Oct-05	0	2	0.0	35.3	0	0	1,339	0	0	0	1,339	0	0	0	0	0	0	0	0	1,339	0	1,339	0	0	31,339	0	31,339	512.45	0	n/a
Nov-05	0	2	0.0	18.3	0	0	1,296	0	0	0	1,296	0	0	0	0	0	0	0	0	1,296	0	1,296	0	0	32,635	0	32,635	512.50	0	n/a
Dec-05	0	2	0.0	17.3	0	0	1,339	0	0	0	1,339	0	0	0	0	0	0	0	0	1,339	0	1,339	0	0	33,974	0	33,974	512.56	0	n/a
Jan-06	4,034	2	0.0	11.6	0	9,413	1,339	0	6,314	0	4,438	0	0	0	2,678	0	2,678	0	0	7,116	0	7,116	0	0	41,091	8,068	49,159	513.10	0	n/a
Feb-06	3,644	2	0.0	10.5	0	8,502	1,210	0	5,703	0	4,008	0	0	0	2,419	0	2,419	0	0	6,428	0	6,428	0	0	47,518	15,356	62,875	513.43	0	n/a
Mar-06	4,034	2	0.0	13.8	0	9,413	1,339	0	6,314	0	4,438	0	0	0	2,678	0	2,678	0	0	7,116	0	7,116	0	0	54,635	23,425	78,059	513.78	0	n/a
Apr-06	3,904	2	0.0	16.6	0	9,110	1,296	0	6,111	0	4,295	0	0	0	2,592	0	2,592	0	0	6,887	0	6,887	0	0	61,522	31,233	92,755	514.07	0	n/a
May-06	4,034	2	6.6	14.7	5,499	9,413	1,339	2,250	6,314	0	7,687	5,071	1,950	4,762	4,902	8,487	16,685	0	0	24,373	0	24,373	0	0	85,894	39,301	125,196	514.48	0	n/a
Jun-06	3,904	2	30.6	0.0	68,532	9,110	1,296	11,850	6,111	0	60,977	65,334	25,261	60,480	29,027	122,771	180,101	0	0	241,079	7,288	233,791	219,685	0	100,000	47,110	147,110	514.75	0	n/a
Jul-06	4,034	2	43.9	0.0	25,870	9,413	1,339	14,400	6,314	0	15,908	23,282	8,926	22,058	12,102	35,977	66,368	0	0	82,276	7,531	74,745	74,745	0	100,000	55,178	155,178	514.85	0	n/a
Aug-06	4,034	2	61.4	0.0	24,004	9,413	1,339	8,700	6,314	0	19,742	22,299	8,586	20,887	11,772	38,203	63,544	0	0	83,286	7,531	75,755	75,755	0	100,000	63,247	163,247	514.95	0	n/a
Sep-06	3,904	2	28.5	21.0	11,435	9,110	1,296	3,750	6,111	0	11,980	10,682	4,116	9,986	7,054	18,607	31,837	0	0	43,817	7,288	36,529	36,529	0	100,000	71,055	171,055	515.04	0	n/a
Oct-06	4,034	2	0.0	35.3	0	9,413	1,339	0	6,314	536	3,902	0	0	0	2,678	0	2,678	0	0	6,581	0	6,581	0	0	106,581	79,123	185,704	515.17	0	n/a
Nov-06	3,904	2	0.0	18.3	0	9,110	1,296	0	6,111	518	3,776	0	0	0	2,592	0	2,592	0	0	6,368	0	6,368	0	0	112,949	86,932	199,881	515.31	0	n/a
Dec-06	4,034	2	0.0	17.3	0	9,413	1,339	0	6,314	536	3,902	0	0	0	2,678	0	2,678	0	0	6,581	0	6,581	0	0	119,530	95,000	214,530	515.44	0	n/a
Jan-07	4,034	2	0.0	11.6	0	9,413	1,339	0	6,314	536	3,902	0	0	0	2,678	0	2,678	0	0	6,581	0	6,581	0	0	126,110	103,068	229,179	515.58	0	n/a
Feb-07	3,644	2	0.0	10.5	0	8,502	1,210	0	5,703	484	3,525	0	0	0	2,419	0	2,419	0	0	5,944	0	5,944	0	0	132,054	110,356	242,410	515.70	0	n/a
Mar-07	4,034	2	0.0	13.8	0	9,413	1,339	0	6,314	536	3,902	0	0	0	2,678	0	2,678	0	0	6,581	0	6,581	0	0	138,635	118,425	257,060	515.83	0	n/a
Apr-07	3,904	2	0.0	16.6	0	9,110	1,296	0	6,111	518	3,776	0	0	0	2,592	0	2,592	0	0	6,368	0	6,368	0	0	145,003	126,233	271,236	515.97	0	n/a
May-07	4,034	2	6.6	14.7	5,514	9,413	1,339	2,250	6,314	536	7,167	5,071	1,950	4,762	4,902	8,487	16,685	0	0	23,852	0	23,852	0	0	168,855	134,301	303,157	516.22	0	n/a
Jun-07	3,904	2	30.6	0.0	68,601	9,110	1,296	11,850	6,111	518	60,528	65,334	25,261	60,480	29,027	122,771	180,101	0	0	240,629	7,288	233,342	302,197	0	100,000	142,110	242,110	515.70	0	n/a
Jul-07	4,034	2	43.9	0.0	25,966	9,413	1,339	14,400	6,314	536	15,468	23,282	8,926	22,058	12,102	35,977	66,368	0	0	81,836	7,531	74,306	74,306	0	100,000	150,178	250,178	515.77	0	n/a
Aug-07	4,034	2	61.4	0.0	24,062	9,413	1,339	8,700	6,314	536	19,264	22,299	8,586	20,887	11,772	38,203	63,544	0	0	82,808	7,531	75,278	75,278	0	100,000	158,247	258,247	515.85	0	n/a
Sep-07	3,904	2	28.5	21.0	11,460	9,110	1,296	3,750	6,111	518	11,486	10,682	4,116	9,986	7,054	18,607	31,837	0	0	43,323	7,288	36,036	36,036	0	100,000	166,055	266,055	515.92	0	n/a
Oct-07	4,034	2	0.0	35.3	0	9,413	1,339	0	6,314	536	3,902	0	0	0	2,678	0	2,678	0	0	6,581	0	6,581	0	0	106,581	174,123	280,704	516.05	0	n/a
Nov-07	3,904	2	0.0	18.3	0	9,110	1,296	0	6,111	518	3,776	0	0	0	2,592	0	2,592	0	0	6,368	0	6,368	0	0	112,949	181,932	294,881	516.16	0	n/a
Dec-07	4,034	2	0.0	17.3	0	9,413	1,339	0	6,314	536	3,902	0	0	0	2,678	0	2,678	0	0	6,581	0	6,581	0	0	119,530	190,000	309,530	516.27	0	n/a
Jan-08	4,034	2	0.0	11.6	0	9,413	1,339	0	6,314	536	3,902	0	0	0	2,678	0	2,678	0	0	6,581	0	6,581	0	0	126,110	198,068	324,179	516.39	0	n/a
Feb-08	3,774	2	0.0	10.5	0	8,806	1,253	0	5,907	501	3,651	0	0	0	2,506	0	2,506	0	0	6,156	0	6,156	0	0	132,267	205,616	337,883	516.50	0	n/a
Mar-08	4,034	2	0.0	13.8	0	9,413	1,339	0	6,314	536	3,902	0	0	0	2,678	0	2,678	0	0	6,581	0	6,581	0	0	138,847	213,685	352,532	516.61	0	n/a
Apr-08	3,904	2	0.0	16.6	0	9,110	1,296	0	6,111	518	3,776	0	0	0	2,592	0	2,592	0	0	6,368	0	6,368	0	0	145,216	221,493	366,709	516.72	0	n/a
May-08	4,034	2	6.6	14.7	5,552	9,413	1,339	2,325	6,314	536	7,129	5,071	1,950	4,762	4,902	8,487	16,685	0	0	23,814	0	23,814	0	0	169,030	229,562	398,592	516.98	0	n/a
Jun-08	3,904	2	30.6	0.0	68,789	9,110	1,296	12,245	6,111	518	60,320	65,334	25,261	60,480	29,027	122,771	180,101	0	0	240,422	7,288	233,134	302,164	0	100,000	237,370	337,370	516.49	0	n/a
Jul-08	4,034	2	43.9	0.0	26,206	9,413	1,339	14,880	6,314	536	15,228	23,282	8,926	22,058	12,102	35,977	66,368	0	0	81,596	7,531	74,066	74,066	0	100,000	245,438	345,438	516.56	0	n/a
Aug-08	4,034	2	61.4	0.0	24,207	9,413	1,339	8,990	6,314	536	19,119	22,299	8,586	20,887	11,772	38,203	63,544	0	0	82,663	7,531	75,133	75,133	0	100,000	253,507	353,507	516.62	0	n/a
Sep-08	3,904	2	28.5	21.0	11,523	9,110	1,296	3,875	6,111	518	11,424	10,682	4,116	9,986	7,054	18,607	31,837	0	0	43,261	7,288	35,973	35,973	0	100,000	261,315	361,315	516.68	0	n/a
Oct-08	4,034	2	0.0	35.3	0	9,413	1,339	0	6,314	536	3,902	0	0	0	2,678	0	2,678	0	0	6,581	0	6,581	0	0	106,581	269,384	375,964	516.80	0	n/a
Nov-08	3,904	2	0.0	18.3	0	9,110	1,296	0	6,111	518	3,776	0	0	0	2,592	0	2,592	0	0	6,368	0	6,368	0	0	112,949	277,192	390,141	516.91	0	n/a
Dec-08	4,034	2	0.0	17.3	0	9,413	1,339	0	6,314	536	3,902	0	0	0	2,678	0	2,678	0	0	6,581	0	6,581	0	0	119,530	285,260	404,790	517.02	0	n/a
Jan-09	4,034	2	0.0	11.6	0	9,413	1,339	0	6,314	536	3,902	0	0	0	2,678	0	2,678	0	0	6,581	0	6,581	0	0	126,110	293,329	419,439	517.13	0	n/a
Feb-09	3,644	2	0.0	10.5	0	8,502	1,210	0	5,703	484	3,525	0	0	0	2,419	0	2,419	0	0	5,944	0	5,944	0	0	132,054	300,616	432,671	517.22	0	n/a
Mar-09	4,034	2	0.0	13.8	0	9,413	1,339	0	6,314	536	3,902	0	0	0	2,678	0	2,678	0	0	6,581	0	6,581	0	0	138,635	308,685	447,320	517.32	0	n/a
Apr-09	3,904	2	0.0	16.6	0	9,110	1,296	0	6,111	518	3,776	0	0	0	2,592	0	2,592	0	0	6,368	0	6,368	0	0	145,003	316,493	461,497	517.42	0	n/a
May-09	4,034	2	6.6	14.7	5,589	9,413	1,339	2,400	6,314	536	7,092	5,071	1,950	4,762	4,902	8,487	16,685	0	0	23,777	0	23,777	0	0	168,780	324,562	493,342	517.64	0	n/a
Jun-09	3,904	2	30.6	0.0	68,976	9,110	1,296	12,640	6,111	518	60,113	65,334	25,261	60,480	29,027	122,771	180,101	0	0	240,214	7,288	232,927	301,707	0	100,000	332,370	432,370	517.22	0	n/a
Jul-09	4,034	2	43.9	0.0	26,446	9,413	1,339	15,360	6,314	536	14,988	23,282	8,926	22,058	12,102	35,977	66,368	0	0	81,356	7,531	73,826	73,826	0	100,000	340,438	440,438	517.27	0	n/a
Aug-09	4,034	2	61.4	0.0	24,352	9,413	1,339	9,280	6,314	536	18,974	22,299	8,586	20,887	11,772	38,203	63,544	0	0	82,518	7,531	74,988	74,988	0	100,000	348,507	448,507	517.33	0	n/a
Sep-09	3,904	2	28.5	21.0	11,585	9,110	1,296	4,000	6,111	518	11,361	10,682	4,116	9,986	7,054	18,607	31,837	0	0	43,198	7,288	35,911	35,911	0	100,000	356,315	456,315	517.38	0	n/a
Oct-09	4,034	2	0.0	35.3	0	9,413	1,339	0	6,314	536	3,902	0	0	0	2,678	0	2,678	0	0	6,581	0	6,581	0	0	106,581	364,384	470,964	517.49	0	n/a
Nov-09	3,904	2	0.0	18.3	0	9,110	1,296	0	6,111	518	3,776	0	0	0	2,592	0	2,592	0	0	6,368	0	6,368	0	0	112,949	372,192	485,141	517.59	0	n/a
Dec-09	4,034	2	0.0	17.3	0	9,413	1,339	0	6,314	536	3,902	0	0	0	2,678	0	2,678	0	0	6,581	0	6,581	0	0	119,530	380,260	499,790	517.69	0	n/a
Jan-10	4,034	2	0.0	11.6	0	9,413	1,339	0	6,314	536	3,902	0	0	0	2,678	0	2,678	0	0	6,581	0	6,581	0	0	126,110	388,329	514,439	517.79	0	n/a
Feb-10	3,644	2	0.0	10.5	0	8,502	1,210	0	5,703	484	3,525	0	0	0	2,419	0	2,419	0	0	5,944	0	5,944	0	0	132,054	395,616	527,671	517.88	0	n/a
Mar-10	4,034	2	0.0	13.8	0	9,413	1,339	0	6,314	536	3,902	0	0	0	2,678	0	2,678	0	0	6,581	0	6,581	0	0	138,635	403,685	542,320	517.99	0	n/a
Apr-10	3,904	2	0.0	16.6	0	9,110	1,296	0	6,111	518	3,776	0	0	0	2,592	0	2,592	0	0	6,368	0	6,368	0	0	145,003	411,493	556,497	518.07	0	n/a
May-10	4,034	2	6.6	14.7	5,649	9,413	1,339	2,550	6,314	536	7,002	5,071	1,950	4,762	4,902	8,487	16,685	0	0	23,687	0	23,687	0	0	168,690	419,562	588,252	518.25	0	n/a
Jun-10	3,904	2	30.6	0.0	69,282	9,110	1,296	13,430	6,111	518	59,629	65,334	25,261	60,480	29,027	122,771	180,101	0	0	239,730	7,288	232,443	301,133	0	100,000	427,370	527,370	517.88	0	n/a
Jul-10	4,034	2	43.9	0.0	26,830	9,413	1,339	16,320	6,314	536	14,412	23,282	8,926	22,058	12,102	35,977	66,368	0	0	80,780	7,531	73,250	73,250	0	100,000	435,438	535,438	517.94	0	n/a
Aug-10	4,034	2	61.4	0.0	24,584	9,413	1,339	9,860	6,314	536	18,626	22,299	8,586	20,887	11,772	38,203	63,544	0	0	82,170	7,531	74,640	74,640	0	100,000	443,507	543,507	517.99	0	n/a
Sep-10	3,904	2	28.5	21.0	11,685	9,110	1,296	4,250	6,111	518	11,211	10,682	4,116	9,986	7,054	18,607	31,837	0	0	43,048	7,288	35,761	35,761	0	100,000	451,315	551,315	518.04	0	n/a
Oct-10	4,034	2	0.0	35.3	0	9,413	1,339	0	6,314	536	3,902	0	0	0	2,678	0	2,678	0	0	6,581	0	6,581	0	0	106,581	459,384	565,964	518.12	0	n/a
Nov-10	3,904	2	0.0	18.3	0	9,110	1,296	0	6,111	518	3,776	0	0	0	2,592	0	2,592	0	0	6,368	0	6,368	0	0	112,949	467,192	580,141	518.21	0	n/a
Dec-10	4,034	2	0.0	17.3	0	9,413	1,339	0	6,314	536	3,902	0	0	0	2,678	0	2,678	0	0	6,581	0	6,581	0	0	119,530	475,260	594,790	518.29	0	n/a
Jan-11	4,034	2	0.0	11.6	0	9,413	1,339	0	6,314	536	3,902	0	0	0	2,678	0	2,678	0	0	6,581	0	6,581	0	0	126,110	483,329	609,439	518.38	0	n/a
Feb-11	3,644	2	0.0	10.5	0	8,502	1,210	0	5,703	484	3,525	0	0	0	2,419	0	2,419	0	0	5,944	0	5,944	0	0	132,054	490,616	622,671	518.45	0	n/a
Mar-11	4,034	2	0.0	13.8	0	9,413	1,339	0	6,314	536	3,902	0	0	0	2,678	0	2,678	0	0	6,581	0	6,581	0	0	138,635	498,685	637,320	518.54	0	n/a
Apr-11	3,904	2	0.0	16.6	0	9,110	1,296	0	6,111	518	3,776	0	0	0	2,592	0	2,592	0	0	6,368	0	6,368	0	0	145,003	506,493	651,497	518.62	0	n/a
May-11	4,034	2	6.6	14.7	5,709	9,413	1,339	2,700	6,314	536	6,912	5,071	1,950	4,762	4,902	8,487	16,685	0	0	23,597	0	23,597	0	0	168,600	514,562	683,162	518.80	0	n/a
Jun-11	3,904	2	30.6	0.0	69,588	9,110	1,296	14,220	6,111	518	59,145	65,334	25,261	60,480	29,027	122,771	180,101	0	0	239,246	7,288	231,959	300,559	0	100,000	522,370	622,370	518.45	0	n/a
Jul-11	4,034	2	43.9	0.0	27,214	9,413	1,339	17,280	6,314	536	13,836	23,282	8,926	22,058	12,102	35,977	66,368	0	0	80,204	7,531	72,674	72,674	0	100,000	530,438	630,438	518.50	0	n/a
Aug-11	4,034	2	61.4	0.0	24,816	9,413	1,339	10,440	6,314	536	18,278	22,299	8,586	20,887	11,772	38,203	63,544	0	0	81,822	7,531	74,292	74,292	0	100,000	538,507	638,507	518.54	0	n/a
Sep-11	3,904	2	28.5	21.0	11,785	9,110	1,296	4,500	6,111	518	11,061	10,682	4,116	9,986	7,054	18,607	31,837	0	0	42,898	7,288	35,611	35,611	0	100,000	546,315	646,315	518.59	0	n/a
Oct-11	4,034	2	0.0	35.3	0	9,413	1,339	0	6,314	536	3,902	0	0	0	2,678	0	2,678	0	0	6,581	0	6,581	0	0	106,581	554,384	660,964	518.67	0	n/a
Nov-11	3,904	2	0.0	18.3	0	9,110	1,296	0	6,111	518	3,776	0	0	0	2,592	0	2,592	0	0	6,368	0	6,368	0	0	112,949	562,192	675,141	518.75	0	n/a
Dec-11	4,034	2	0.0	17.3	0	9,413	1,339	0	6,314	536	3,902	0	0	0	2,678	0	2,678	0	0	6,581	0	6,581	0	0	119,530	570,260	689,790	518.84	0	n/a
Jan-12	4,034	2	0.0	11.6	0	9,413	1,339	0	6,314	536	3,902	0	0	0	2,678	0	2,678	0	0	6,581	0	6,581	0	0	126,110	578,329	704,439	518.92	0	n/a
Feb-12	3,774	2	0.0	10.5	0	8,806	1,253	0	5,907	501	3,651	0	0	0	2,506	0	2,506	0	0	6,156	0	6,156	0	0	132,267	585,877	718,143	519.00	0	n/a
Mar-12	4,034	2	0.0	13.8	0	9,413	1,339	0	6,314	536	3,902	0	0	0	2,678	0	2,678	0	0	6,581	0	6,581	0	0	138,847	593,945	732,792	519.07	0	n/a
Apr-12	3,904	2	0.0	16.6	0	9,110	1,296	0	6,111	518	3,776	0	0	0	2,592	0	2,592	0	0	6,368	0	6,368	0	0	145,216	601,753	746,969	519.13	0	n/a
May-12	4,034	2	6.6	14.7	5,769	9,413	1,339	2,850	6,314	536	6,822	5,071	1,950	4,762	4,902	8,487	16,685	0	0	23,507	0	23,507	0	0	168,723	609,822	778,545	519.28	0	n/a
Jun-12	3,904	2	30.6	0.0	69,894	9,110	1,296	15,010	6,111	518	58,661	65,334	25,261	60,480	29,027	122,771	180,101	0	0	238,762	7,288	231,475	300,197	0	100,000	617,630	717,630	519.00	0	n/a

TABLE W2 - Jericho Project - Monthly Water Balance Volumes - Base Case

(all water volumes in cubic metres)

VERSION 1.2

			Precipitation		Processed Kimberlite Containment Area Local Inflows & Outflows: Local INFLOWS			OUTFLOWS & LOSSES				Net Inflows to Collection Areas (= Precip + Runoff - Evap Losses)					Discharge from Collection Areas													
Month & Year	Tailings (tonnes)	Return Period	Rainfall (mm)	Snowfall (mm)	Precip + Runoff	Slurry Water	Other Inflows	Evap. Losses	Tailings Void Losses	Seepage	Total Local INFLOW to PKCA	Area A	Area B	Area C	Pit Pond	Diversion C1	Pumped to PKCA	Released to Carat Lake	Total Inflow to Open Pit (Closure only)	Total INFLOW to PKCA	Reclaim to Mill	Net INFLOW to PKCA	Controlled Release	Un Controlled Spill	Total Water Stored in PKCA	Cumulative Tailings Volume Deposited	Total Volume Stored in PKCA	PKCA Pond Elevation (m)	Water Stored in Open Pit	Closure Pit Pond Elevation (m)
Jul-12	4,034	2	43.9	0.0	27,598	9,413	1,339	18,240	6,314	536	13,260	23,282	8,926	22,058	12,102	35,977	66,368	0	0	79,628	7,531	72,098	72,098	0	100,000	625,699	725,699	519.04	0	n/a
Aug-12	4,034	2	61.4	0.0	25,048	9,413	1,339	11,020	6,314	536	17,930	22,299	8,586	20,887	11,772	38,203	63,544	0	0	81,474	7,531	73,944	73,944	0	100,000	633,767	733,767	519.07	0	n/a
Sep-12	3,904	2	28.5	21.0	11,885	9,110	1,296	4,750	6,111	518	10,911	10,682	4,116	9,986	7,054	18,607	31,837	0	0	42,748	7,288	35,461	35,461	0	100,000	641,575	741,575	519.11	0	n/a
Oct-12	4,034	2	0.0	35.3	0	9,413	1,339	0	6,314	536	3,902	0	0	0	2,678	0	2,678	0	0	6,581	0	6,581	0	0	106,581	649,644	756,225	519.18	0	n/a
Nov-12	3,904	2	0.0	18.3	0	9,110	1,296	0	6,111	518	3,776	0	0	0	2,592	0	2,592	0	0	6,368	0	6,368	0	0	112,949	657,452	770,401	519.24	0	n/a
Dec-12	4,034	2	0.0	17.3	0	9,413	1,339	0	6,314	536	3,902	0	0	0	2,678	0	2,678	0	0	6,581	0	6,581	0	0	119,530	665,521	785,050	519.31	0	n/a
Jan-13	4,034	2	0.0	11.6	0	9,413	1,339	0	6,314	536	3,902	0	0	0	2,678	0	2,678	0	0	6,581	0	6,581	0	0	126,110	673,589	799,700	519.38	0	n/a
Feb-13	3,644	2	0.0	10.5	0	8,502	1,210	0	5,703	484	3,525	0	0	0	2,419	0	2,419	0	0	5,944	0	5,944	0	0	132,054	680,877	812,931	519.44	0	n/a
Mar-13	4,034	2	0.0	13.8	0	9,413	1,339	0	6,314	536	3,902	0	0	0	2,678	0	2,678	0	0	6,581	0	6,581	0	0	138,635	688,945	827,580	519.50	0	n/a
Apr-13	3,904	2	0.0	16.6	0	9,110	1,296	0	6,111	518	3,776	0	0	0	2,592	0	2,592	0	0	6,368	0	6,368	0	0	145,003	696,753	841,757	519.57	0	n/a
May-13	4,034	2	6.6	14.7	5,829	9,413	1,339	3,000	6,314	536	6,732	5,071	1,950	4,762	4,902	8,487	16,685	0	0	23,417	0	23,417	0	0	168,420	704,822	873,242	519.71	0	n/a
Jun-13	3,904	2	30.6	0.0	70,200	9,110	1,296	15,800	6,111	518	58,177	65,334	25,261	60,480	29,027	122,771	180,101	0	0	238,278	7,288	230,991	299,411	0	100,000	712,630	812,630	519.44	0	n/a
Jul-13	4,034	2	43.9	0.0	27,982	9,413	1,339	19,200	6,314	536	12,684	23,282	8,926	22,058	12,102	35,977	66,368	0	0	79,052	7,531	71,522	71,522	0	100,000	720,699	820,699	519.47	0	n/a
Aug-13	4,034	2	61.4	0.0	25,280	9,413	1,339	11,600	6,314	536	17,582	22,299	8,586	20,887	11,772	38,203	63,544	0	0	81,126	7,531	73,596	73,596	0	100,000	728,767	828,767	519.51	0	n/a
Sep-13	3,904	2	28.5	21.0	11,985	9,110	1,296	5,000	6,111	518	10,761	10,682	4,116	9,986	7,054	18,607	31,837	0	0	42,598	7,288	35,311	35,311	0	100,000	736,575	836,575	519.55	0	n/a
Oct-13	4,034	2	0.0	35.3	0	9,413	1,339	0	6,314	536	3,902	0	0	0	2,678	0	2,678	0	0	6,581	0	6,581	0	0	106,581	744,644	851,225	519.61	0	n/a
Nov-13	3,904	2	0.0	18.3	0	9,110	1,296	0	6,111	518	3,776	0	0	0	2,592	0	2,592	0	0	6,368	0	6,368	0	0	112,949	752,452	865,401	519.68	0	n/a
Dec-13	4,034	2	0.0	17.3	0	9,413	1,339	0	6,314	536	3,902	0	0	0	2,678	0	2,678	0	0	6,581	0	6,581	0	0	119,530	760,521	880,050	519.75	1,000	n/a
Jan-14	0	2	0.0	11.6	0	0	1,339	0	0	536	804	0	0	0	0	0	0	0	0	804	0	804	0	0	120,333	760,521	880,854	519.75	1,000	310.2
Feb-14	0	2	0.0	10.5	0	0	1,210	0	0	484	726	0	0	0	0	0	0	0	0	726	0	726	0	0	121,059	760,521	881,580	519.75	1,000	310.2
Mar-14	0	2	0.0	13.8	0	0	1,339	0	0	536	804	0	0	0	0	0	0	0	0	804	0	804	0	0	121,863	760,521	882,383	519.76	1,000	310.2
Apr-14	0	2	0.0	16.6	0	0	1,296	0	0	518	778	0	0	0	0	0	0	0	0	778	0	778	0	0	122,640	760,521	883,161	519.76	1,000	310.2
May-14	0	2	6.6	14.7	5,829	0	1,339	3,000	0	536	3,633	5,071	1,950	4,762	2,337	8,487	0	0	14,120	3,633	0	3,633	0	0	126,273	760,521	886,794	519.78	15,120	312.3
Jun-14	0	2	30.6	0.0	70,200	0	1,296	15,800	0	518	55,178	65,334	25,261	60,480	26,909	122,771	0	0	262,755	55,178	0	55,178	81,451	0	100,000	760,521	860,521	519.66	277,875	351.1
Jul-14	0	2	43.9	0.0	27,982	0	1,339	19,200	0	536	9,586	23,282	8,926	22,058	9,326	35,977	0	0	63,592	9,586	0	9,586	9,586	0	100,000	760,521	860,521	519.66	341,467	354.8
Aug-14	0	2	61.4	0.0	25,280	0	1,339	11,600	0	536	14,484	22,299	8,586	20,887	8,952	38,203	0	0	60,927	14,484	0	14,484	14,484	0	100,000	760,521	860,521	519.66	402,394	358.3
Sep-14	0	2	28.5	21.0	11,985	0	1,296	5,000	0	518	7,763	10,682	4,116	9,986	4,367	18,607	0	0	29,150	7,763	0	7,763	7,763	0	100,000	760,521	860,521	519.66	431,544	360.0
Oct-14	0	2	0.0	35.3	0	0	1,339	0	0	536	804	0	0	0	0	0	0	0	0	804	0	804	0	0	100,804	760,521	861,324	519.66	431,544	360.0
Nov-14	0	2	0.0	18.3	0	0	1,296	0	0	518	778	0	0	0	0	0	0	0	0	778	0	778	0	0	101,581	760,521	862,102	519.66	431,544	360.0
Dec-14	0	2	0.0	17.3	0	0	1,339	0	0	536	804	0	0	0	0	0	0	0	0	804	0	804	0	0	102,385	760,521	862,905	519.67	431,544	360.0
Jan-15	0	2	0.0	11.6	0	0	0	0	0	536	-536	0	0	0	0	0	0	0	0	-536	0	-536	0	0	101,849	760,521	862,370	519.66	431,544	360.0
Feb-15	0	2	0.0	10.5	0	0	0	0	0	484	-484	0	0	0	0	0	0	0	0	-484	0	-484	0	0	101,365	760,521	861,886	519.66	431,544	360.0
Mar-15	0	2	0.0	13.8	0	0	0	0	0	536	-536	0	0	0	0	0	0	0	0	-536	0	-536	0	0	100,829	760,521	861,350	519.66	431,544	360.0
Apr-15	0	2	0.0	16.6	0	0	0	0	0	518	-518	0	0	0	0	0	0	0	0	-518	0	-518	0	0	100,311	760,521	860,832	519.66	431,544	360.0
May-15	0	2	6.6	14.7	5,829	0	0	3,000	0	536	2,294	5,071	1,950	4,762	2,157	8,487	0	0	13,940	2,294	0	2,294	0	0	102,605	760,521	863,125	519.67	445,484	360.8
Jun-15	0	2	30.6	0.0	70,200	0	0	15,800	0	518	53,882	65,334	25,261	60,480	25,983	122,771	0	0	261,828	53,882	0	53,882	56,487	0	100,000	760,521	860,521	519.66	707,312	373.9
Jul-15	0	2	43.9	0.0	27,982	0	0	19,200	0	536	8,247	23,282	8,926	22,058	8,529	35,977	0	0	62,795	8,247	0	8,247	8,247	0	100,000	760,521	860,521	519.66	770,107	376.3
Aug-15	0	2	61.4	0.0	25,280	0	0	11,600	0	536	13,144	22,299	8,586	20,887	8,517	38,203	0	0	60,491	13,144	0	13,144	13,144	0	100,000	760,521	860,521	519.66	830,598	378.6
Sep-15	0	2	28.5	21.0	11,985	0	0	5,000	0	518	6,467	10,682	4,116	9,986	4,198	18,607	0	0	28,981	6,467	0	6,467	6,467	0	100,000	760,521	860,521	519.66	859,579	379.7
Oct-15	0	2	0.0	35.3	0	0	0	0	0	536	-536	0	0	0	0	0	0	0	0	-536	0	-536	0	0	99,464	760,521	859,985	519.65	859,579	379.7
Nov-15	0	2	0.0	18.3	0	0	0	0	0	518	-518	0	0	0	0	0	0	0	0	-518	0	-518	0	0	98,946	760,521	859,466	519.65	859,579	379.7
Dec-15	0	2	0.0	17.3	0	0	0	0	0	536	-536	0	0	0	0	0	0	0	0	-536	0	-536	0	0	98,410	760,521	858,931	519.65	859,579	379.7
Jan-16	0	2	0.0	11.6	0	0	0	0	0	536	-536	0	0	0	0	0	0	0	0	-536	0	-536	0	0	97,875	760,521	858,395	519.65	859,579	379.7
Feb-16	0	2	0.0	10.5	0	0	0	0	0	501	-501	0	0	0	0	0	0	0	0	-501	0	-501	0	0	97,373	760,521	857,894	519.64	859,579	379.7
Mar-16	0	2	0.0	13.8	0	0	0	0	0	536	-536	0	0	0	0	0	0	0	0	-536	0	-536	0	0	96,838	760,521	857,358	519.64	859,579	379.7
Apr-16	0	2	0.0	16.6	0	0	0	0	0	518	-518	0	0	0	0	0	0	0	0	-518	0	-518	0	0	96,319	760,521	856,840	519.64	859,579	379.7
May-16	0	2	6.6	14.7	5,829	0	0	3,000	0	536	2,294	5,071	1,950	4,762	2,061	8,487	0	0	13,844	2,294	0	2,294	0	0	98,613	760,521	859,134	519.65	873,424	380.2
Jun-16	0	2	30.6	0.0	70,200	0	0	15,800	0	518	53,882	65,334	25,261	60,480	25,492	122,771	0	0	261,338	53,882	0	53,882	52,495	0	100,000	760,521	860,521	519.66	1,134,761	390.1
Jul-16	0	2	43.9	0.0	27,982	0	0	19,200	0	536	8,247	23,282	8,926	22,058	8,119	35,977	0	0	62,385	8,247	0	8,247	8,247	0	100,000	760,521	860,521	519.66	1,197,146	391.7
Aug-16	0	2	61.4	0.0	25,280	0	0	11,600	0	536	13,144	22,299	8,586	20,887	8,256	38,203	0	0	60,230	13,144	0	13,144	13,144	0	100,000	760,521	860,521	519.66	1,257,377	393.3
Sep-16	0	2	28.5	21.0	11,985	0	0	5,000	0	518	6,467	10,682	4,116	9,986	4,080	18,607	0	0	28,863	6,467	0	6,467	6,467	0	100,000	760,521	860,521	519.66	1,286,240	394.1
Oct-16	0	2	0.0	35.3	0	0	0	0	0	536	-536	0	0	0	0	0	0	0	0	-536	0	-536	0	0	99,464	760,521	859,985	519.65	1,286,240	394.1
Nov-16	0	2	0.0	18.3	0	0	0	0	0	518	-518	0	0	0	0	0	0	0	0	-518	0	-518	0	0	98,946	760,521	859,466	519.65	1,286,240	394.1
Dec-16	0	2	0.0	17.3	0	0	0	0	0	536	-536	0	0	0	0	0	0	0	0	-536	0	-536	0	0	98,410	760,521	858,931	519.65	1,286,240	394.1
Jan-17	0	2	0.0	11.6	0	0	0	0	0	536	-536	0	0	0	0	0	0	0	0	-536	0	-536	0	0	97,875	760,521	858,395	519.65	1,286,240	394.1
Feb-17	0	2	0.0	10.5	0	0	0	0	0	484	-484	0	0	0	0	0	0	0	0	-484	0	-484	0	0	97,391	760,521	857,911	519.64	1,286,240	394.1
Mar-17	0	2	0.0	13.8	0	0	0	0	0	536	-536	0	0	0	0	0	0	0	0	-536	0	-536	0	0	96,855	760,521	857,376	519.64	1,286,240	394.1
Apr-17	0	2	0.0	16.6	0	0	0	0	0	518	-518	0	0	0	0	0	0	0	0	-518	0	-518	0	0	96,337	760,521	856,857	519.64	1,286,240	394.1
May-17	0	2	6.6	14.7	5,829	0	0	3,000	0	536	2,294	5,071	1,950	4,762	1,989	8,487	0	0	13,772	2,294	0	2,294	0	0	98,630	760,521	859,151	519.65	1,300,012	394.5
Jun-17	0	2	30.6	0.0	70,200	0	0	15,800	0	518	53,882	65,334	25,261	60,480	25,106	122,771	0	0	260,952	53,882	0	53,882	52,512	0	100,000	760,521	860,521	519.66	1,560,963	401.4
Jul-17	0	2	43.9	0.0	27,982	0	0	19,200	0	536	8,247	23,282	8,926	22,058	7,557	35,977	0	0	61,822	8,247	0	8,247	8,247	0	100,000	760,521	860,521	519.66	1,622,786	403.1
Aug-17	0	2	61.4	0.0	25,280	0	0	11,600	0	536	13,144	22,299	8,586	20,887	7,916	38,203	0	0	59,891	13,144	0	13,144	13,144	0	100,000	760,521	860,521	519.66	1,682,677	404.6
Sep-17	0	2	28.5	21.0	11,985	0	0	5,000	0	518	6,467	10,682	4,116	9,986	3,934	18,607	0	0	28,717	6,467	0	6,467	6,467	0	100,000	760,521	860,521	519.66	1,711,394	405.4
Oct-17	0	2	0.0	35.3	0	0	0	0	0	536	-536	0	0	0	0	0	0	0	0	-536	0	-536	0	0	99,464	760,521	859,985	519.65	1,711,394	405.4
Nov-17	0	2	0.0	18.3	0	0	0	0	0	518	-518	0	0	0	0	0	0	0	0	-518	0	-518	0	0	98,946	760,521	859,466	519.65	1,711,394	405.4
Dec-17	0	2	0.0	17.3	0	0	0	0	0	536	-536	0	0	0	0	0	0	0	0	-536	0	-536	0	0	98,410	760,521	858,931	519.65	1,711,394	405.4
Jan-18	0	2	0.0	11.6	0	0	0	0	0	536	-536	0	0	0	0	0	0	0	0	-536	0	-536	0	0	97,875	760,521	858,395	519.65	1,711,394	405.4
Feb-18	0	2	0.0	10.5	0	0	0	0	0	484	-484	0	0	0	0	0	0	0	0	-484	0	-484	0	0	97,391	760,521	857,911	519.64	1,711,394	405.4
Mar-18	0	2	0.0	13.8	0	0	0	0	0	536	-536	0	0	0	0	0	0	0	0	-536	0	-536	0	0	96,855	760,521	857,376	519.64	1,711,394	405.4
Apr-18	0	2	0.0	16.6	0	0	0	0	0	518	-518	0	0	0	0	0	0	0	0	-518	0	-518	0	0	96,337	760,521	856,857	519.64	1,711,394	405.4
May-18	0	2	6.6	14.7	5,829	0	0	3,000	0	536	2,294	5,071	1,950	4,762	1,901	8,487	0	0	13,684	2,294	0	2,294	0	0	98,630	760,521	859,151	519.65	1,725,078	405.8
Jun-18	0	2	30.6	0.0	70,200	0	0	15,800	0	518	53,882	65,334	25,261	60,480	24,644	122,771	0	0	260,490	53,882	0	53,882	52,512	0	100,000	760,521	860,521	519.66	1,985,568	412.1
Jul-18	0	2	43.9	0.0	27,982	0	0	19,200	0	536	8,247	23,282	8,926	22,058	7,068	35,977	0	0	61,334	8,247	0	8,247	8,247	0	100,000	760,521	860,521	519.66	2,046,901	413.3
Aug-18	0	2	61.4	0.0	25,280	0	0	11,600	0	536	13,144	22,299	8,586	20,887	7,647	38,203	0	0	59,622	13,144	0	13,144	13,144	0	100,000	760,521	860,521	519.66	2,106,524	414.5
Sep-18	0	2	28.5	21.0	11,985	0	0	5,000	0	518	6,467	10,682	4,116	9,986	3,829	18,607	0	0	28,612	6,467	0	6,467	6,467	0	100,000	760,521	860,521	519.66	2,135,136	415.1
Oct-18	0	2	0.0	35.3	0	0	0	0	0	536	-536	0	0	0	0	0	0	0	0	-536	0	-536	0	0	99,464	760,521	859,985	519.65	2,135,136	415.1
Nov-18	0	2	0.0	18.3	0	0	0	0	0	518	-518	0	0	0	0	0	0	0	0	-518	0	-518	0	0	98,946	760,521	859,466	519.65	2,135,136	415.1
Dec-18	0	2	0.0	17.3	0	0	0	0	0	536	-536	0	0	0	0	0	0	0	0	-536	0	-536	0	0	98,410	760,521	858,931	519.65	2,135,136	415.1

TABLE W3 - Jericho Project - Monthly Water Balance - Effluent Concentrations & Loadings

VERSION 1.2

Parameter Modeled **TCu**

	Area A			Area B			Area C			Pit Pond			PK Containment Area Pond		
Month & Year	Outflow Volume (m3)	Area A Concentration (TCu mg/L)	Total Load (kg)	Outflow Volume (m3)	Area B Concentration (TCu mg/L)	Total Load (kg)	Outflow Volume (m3)	Area C Concentration (TCu mg/L)	Total Load (kg)	Outflow Volume (m3)	Pit Pond Concentration (TCu mg/L)	Total Load (kg)	Outflow Volume (m3)	PKCA Pond Concentration (TCu mg/L)	Outflow Total Load (kg)
Aug-05														0.0020	
Sep-05	0	0	0.00	0	0	0.00	0	0	0.00	0	0.00	0.0	0	0.0029	0.00
Oct-05	0	0	0.00	0	0	0.00	0	0	0.00	0	0.00	0.0	0	0.0028	0.00
Nov-05	0	0	0.00	0	0	0.00	0	0	0.00	0	0.00	0.0	0	0.0028	0.00
Dec-05	0	0	0.00	0	0	0.00	0	0	0.00	0	0.00	0.0	0	0.0028	0.00
Jan-06	0	0	0.00	0	0	0.00	0	0	0.00	2,678	0.0020	0.01	0	0.0027	0.00
Feb-06	0	0	0.00	0	0	0.00	0	0	0.00	2,419	0.0020	0.00	0	0.0027	0.00
Mar-06	0	0	0.00	0	0	0.00	0	0	0.00	2,678	0.0020	0.01	0	0.0026	0.00
Apr-06	0	0	0.00	0	0	0.00	0	0	0.00	2,592	0.0020	0.01	0	0.0026	0.00
May-06	5,071	0.0493	0.25	1,950	0.0439	0.09	4,762	0.0038	0.02	4,902	0.0074	0.04	0	0.0066	0.00
Jun-06	65,334	0.0480	3.14	25,261	0.0426	1.08	60,480	0.0038	0.23	29,027	0.0077	0.22	219,685	0.0163	3.57
Jul-06	23,282	0.0500	1.16	8,926	0.0447	0.40	22,058	0.0039	0.09	12,102	0.0078	0.09	74,745	0.0187	1.40
Aug-06	22,299	0.0490	1.09	8,586	0.0436	0.37	20,887	0.0038	0.08	11,772	0.0077	0.09	75,755	0.0195	1.48
Sep-06	10,682	0.0488	0.52	4,116	0.0435	0.18	9,986	0.0038	0.04	7,054	0.0076	0.05	36,529	0.0193	0.71
Oct-06	0	0	0.00	0	0	0.00	0	0	0.00	2,678	0.0020	0.01	536	0.0182	0.01
Nov-06	0	0	0.00	0	0	0.00	0	0	0.00	2,592	0.0020	0.01	518	0.0172	0.01
Dec-06	0	0	0.00	0	0	0.00	0	0	0.00	2,678	0.0020	0.01	536	0.0163	0.01
Jan-07	0	0	0.00	0	0	0.00	0	0	0.00	2,678	0.0020	0.01	536	0.0155	0.01
Feb-07	0	0	0.00	0	0	0.00	0	0	0.00	2,419	0.0020	0.00	484	0.0149	0.01
Mar-07	0	0	0.00	0	0	0.00	0	0	0.00	2,678	0.0020	0.01	536	0.0143	0.01
Apr-07	0	0	0.00	0	0	0.00	0	0	0.00	2,592	0.0020	0.01	518	0.0137	0.01
May-07	5,071	0.0493	0.25	1,950	0.0439	0.09	4,762	0.0038	0.02	4,902	0.0074	0.04	536	0.0141	0.01
Jun-07	65,334	0.0480	3.14	25,261	0.0426	1.08	60,480	0.0038	0.23	29,027	0.0077	0.22	302,715	0.0173	5.23
Jul-07	23,282	0.0500	1.16	8,926	0.0447	0.40	22,058	0.0039	0.09	12,102	0.0078	0.09	74,841	0.0192	1.44
Aug-07	22,299	0.0490	1.09	8,586	0.0436	0.37	20,887	0.0038	0.08	11,772	0.0077	0.09	75,813	0.0198	1.50
Sep-07	10,682	0.0488	0.52	4,116	0.0435	0.18	9,986	0.0038	0.04	7,054	0.0076	0.05	36,554	0.0195	0.71
Oct-07	0	0	0.00	0	0	0.00	0	0	0.00	2,678	0.0020	0.01	536	0.0184	0.01
Nov-07	0	0	0.00	0	0	0.00	0	0	0.00	2,592	0.0020	0.01	518	0.0174	0.01
Dec-07	0	0	0.00	0	0	0.00	0	0	0.00	2,678	0.0020	0.01	536	0.0165	0.01
Jan-08	0	0	0.00	0	0	0.00	0	0	0.00	2,678	0.0020	0.01	536	0.0157	0.01
Feb-08	0	0	0.00	0	0	0.00	0	0	0.00	2,506	0.0020	0.01	501	0.0150	0.01
Mar-08	0	0	0.00	0	0	0.00	0	0	0.00	2,678	0.0020	0.01	536	0.0144	0.01
Apr-08	0	0	0.00	0	0	0.00	0	0	0.00	2,592	0.0020	0.01	518	0.0138	0.01
May-08	5,071	0.0493	0.25	1,950	0.0439	0.09	4,762	0.0038	0.02	4,902	0.0074	0.04	536	0.0142	0.01
Jun-08	65,334	0.0480	3.14	25,261	0.0426	1.08	60,480	0.0038	0.23	29,027	0.0077	0.22	302,683	0.0173	5.25
Jul-08	23,282	0.0500	1.16	8,926	0.0447	0.40	22,058	0.0039	0.09	12,102	0.0078	0.09	74,601	0.0193	1.44
Aug-08	22,299	0.0490	1.09	8,586	0.0436	0.37	20,887	0.0038	0.08	11,772	0.0077	0.09	75,668	0.0198	1.50
Sep-08	10,682	0.0488	0.52	4,116	0.0435	0.18	9,986	0.0038	0.04	7,054	0.0076	0.05	36,492	0.0195	0.71
Oct-08	0	0	0.00	0	0	0.00	0	0	0.00	2,678	0.0020	0.01	536	0.0184	0.01
Nov-08	0	0	0.00	0	0	0.00	0	0	0.00	2,592	0.0020	0.01	518	0.0174	0.01
Dec-08	0	0	0.00	0	0	0.00	0	0	0.00	2,678	0.0020	0.01	536	0.0165	0.01
Jan-09	0	0	0.00	0	0	0.00	0	0	0.00	2,678	0.0020	0.01	536	0.0157	0.01
Feb-09	0	0	0.00	0	0	0.00	0	0	0.00	2,419	0.0020	0.00	484	0.0151	0.01
Mar-09	0	0	0.00	0	0	0.00	0	0	0.00	2,678	0.0020	0.01	536	0.0144	0.01
Apr-09	0	0	0.00	0	0	0.00	0	0	0.00	2,592	0.0020	0.01	518	0.0138	0.01
May-09	5,071	0.0493	0.25	1,950	0.0439	0.09	4,762	0.0038	0.02	4,902	0.0074	0.04	536	0.0142	0.01
Jun-09	65,334	0.0480	3.14	25,261	0.0426	1.08	60,480	0.0038	0.23	29,027	0.0077	0.22	302,225	0.0174	5.25
Jul-09	23,282	0.0500	1.16	8,926	0.0447	0.40	22,058	0.0039	0.09	12,102	0.0078	0.09	74,361	0.0193	1.44
Aug-09	22,299	0.0490	1.09	8,586	0.0436	0.37	20,887	0.0038	0.08	11,772	0.0077	0.09	75,523	0.0199	1.50
Sep-09	10,682	0.0488	0.52	4,116	0.0435	0.18	9,986	0.0038	0.04	7,054	0.0076	0.05	36,429	0.0196	0.71
Oct-09	0	0	0.00	0	0	0.00	0	0	0.00	2,678	0.0020	0.01	536	0.0184	0.01
Nov-09	0	0	0.00	0	0	0.00	0	0	0.00	2,592	0.0020	0.01	518	0.0174	0.01
Dec-09	0	0	0.00	0	0	0.00	0	0	0.00	2,678	0.0020	0.01	536	0.0165	0.01
Jan-10	0	0	0.00	0	0	0.00	0	0	0.00	2,678	0.0020	0.01	536	0.0157	0.01
Feb-10	0	0	0.00	0	0	0.00	0	0	0.00	2,419	0.0020	0.00	484	0.0151	0.01
Mar-10	0	0	0.00	0	0	0.00	0	0	0.00	2,678	0.0020	0.01	536	0.0144	0.01
Apr-10	0	0	0.00	0	0	0.00	0	0	0.00	2,592	0.0020	0.01	518	0.0139	0.01
May-10	5,071	0.0493	0.25	1,950	0.0439	0.09	4,762	0.0038	0.02	4,902	0.0074	0.04	536	0.0143	0.01
Jun-10	65,334	0.0480	3.14	25,261	0.0426	1.08	60,480	0.0038	0.23	29,027	0.0077	0.22	301,651	0.0174	5.25
Jul-10	23,282	0.0500	1.16	8,926	0.0447	0.40	22,058	0.0039	0.09	12,102	0.0078	0.09	73,785	0.0194	1.43
Aug-10	22,299	0.0490	1.09	8,586	0.0436	0.37	20,887	0.0038	0.08	11,772	0.0077	0.09	75,175	0.0199	1.50
Sep-10	10,682	0.0488	0.52	4,116	0.0435	0.18	9,986	0.0038	0.04	7,054	0.0076	0.05	36,279	0.0196	0.71
Oct-10	0	0	0.00	0	0	0.00	0	0	0.00	2,678	0.0020	0.01	536	0.0185	0.01
Nov-10	0	0	0.00	0	0	0.00	0	0	0.00	2,592	0.0020	0.01	518	0.0175	0.01
Dec-10	0	0	0.00	0	0	0.00	0	0	0.00	2,678	0.0020	0.01	536	0.0166	0.01
Jan-11	0	0	0.00	0	0	0.00	0	0	0.00	2,678	0.0020	0.01	536	0.0158	0.01
Feb-11	0	0	0.00	0	0	0.00	0	0	0.00	2,419	0.0020	0.00	484	0.0151	0.01
Mar-11	0	0	0.00	0	0	0.00	0	0	0.00	2,678	0.0020	0.01	536	0.0145	0.01
Apr-11	0	0	0.00	0	0	0.00	0	0	0.00	2,592	0.0020	0.01	518	0.0139	0.01
May-11	5,071	0.0493	0.25	1,950	0.0439	0.09	4,762	0.0038	0.02	4,902	0.0074	0.04	536	0.0143	0.01
Jun-11	65,334	0.0480	3.14	25,261	0.0426	1.08	60,480	0.0038	0.23	29,027	0.0077	0.22	301,077	0.0174	5.25
Jul-11	23,282	0.0500	1.16	8,926	0.0447	0.40	22,058	0.0039	0.09	12,102	0.0078	0.09	73,209	0.0195	1.43
Aug-11	22,299	0.0490	1.09	8,586	0.0436	0.37	20,887	0.0038	0.08	11,772	0.0077	0.09	74,827	0.0200	1.50
Sep-11	10,682	0.0488	0.52	4,116	0.0435	0.18	9,986	0.0038	0.04	7,054	0.0076	0.05	36,129	0.0197	0.71
Oct-11	0	0	0.00	0	0	0.00	0	0	0.00	2,678	0.0020	0.01	536	0.0185	0.01
Nov-11	0	0	0.00	0	0	0.00	0	0	0.00	2,592	0.0020	0.01	518	0.0176	0.01
Dec-11	0	0	0.00	0	0	0.00	0	0	0.00	2,678	0.0020	0.01	536	0.0167	0.01
Jan-12	0	0	0.00	0	0	0.00	0	0	0.00	2,678	0.0020	0.01	536	0.0158	0.01
Feb-12	0	0	0.00	0	0	0.00	0	0	0.00	2,506	0.0020	0.01	501	0.0152	0.01
Mar-12	0	0	0.00	0	0	0.00	0	0	0.00	2,678	0.0020	0.01	536	0.0145	0.01
Apr-12	0	0	0.00	0	0	0.00	0	0	0.00	2,592	0.0020	0.01	518	0.0139	0.01
May-12	5,071	0.0493	0.25	1,950	0.0439	0.09	4,762	0.0038	0.02	4,902	0.0074	0.04	536	0.0143	0.01
Jun-12	65,334	0.0480	3.14	25,261	0.0426	1.08	60,480	0.0038	0.23	29,027	0.0077	0.22	300,716	0.0175	5.25

TABLE W3 - Jericho Project - Monthly Water Balance - Effluent Concentrations & Loadings

VERSION 1.2

Parameter Modeled **TCu**

	Area A			Area B			Area C			Pit Pond			PK Containment Area Pond		
Month & Year	Outflow Volume (m3)	Area A Concentration (TCu mg/L)	Total Load (kg)	Outflow Volume (m3)	Area B Concentration (TCu mg/L)	Total Load (kg)	Outflow Volume (m3)	Area C Concentration (TCu mg/L)	Total Load (kg)	Outflow Volume (m3)	Pit Pond Concentration (TCu mg/L)	Total Load (kg)	Outflow Volume (m3)	PKCA Pond Concentration (TCu mg/L)	Outflow Total Load (kg)
Jul-12	23,282	0.0500	1.16	8,926	0.0447	0.40	22,058	0.0039	0.09	12,102	0.0078	0.09	72,633	0.0196	1.42
Aug-12	22,299	0.0490	1.09	8,586	0.0436	0.37	20,887	0.0038	0.08	11,772	0.0077	0.09	74,479	0.0201	1.50
Sep-12	10,682	0.0488	0.52	4,116	0.0435	0.18	9,986	0.0038	0.04	7,054	0.0076	0.05	35,979	0.0198	0.71
Oct-12	0	0	0.00	0	0	0.00	0	0	0.00	2,678	0.0020	0.01	536	0.0186	0.01
Nov-12	0	0	0.00	0	0	0.00	0	0	0.00	2,592	0.0020	0.01	518	0.0176	0.01
Dec-12	0	0	0.00	0	0	0.00	0	0	0.00	2,678	0.0020	0.01	536	0.0167	0.01
Jan-13	0	0	0.00	0	0	0.00	0	0	0.00	2,678	0.0020	0.01	536	0.0159	0.01
Feb-13	0	0	0.00	0	0	0.00	0	0	0.00	2,419	0.0020	0.00	484	0.0152	0.01
Mar-13	0	0	0.00	0	0	0.00	0	0	0.00	2,678	0.0020	0.01	536	0.0146	0.01
Apr-13	0	0	0.00	0	0	0.00	0	0	0.00	2,592	0.0020	0.01	518	0.0140	0.01
May-13	5,071	0.0493	0.25	1,950	0.0439	0.09	4,762	0.0038	0.02	4,902	0.0074	0.04	536	0.0144	0.01
Jun-13	65,334	0.0480	3.14	25,261	0.0426	1.08	60,480	0.0038	0.23	29,027	0.0077	0.22	299,929	0.0175	5.25
Jul-13	23,282	0.0500	1.16	8,926	0.0447	0.40	22,058	0.0039	0.09	12,102	0.0078	0.09	72,057	0.0197	1.42
Aug-13	22,299	0.0490	1.09	8,586	0.0436	0.37	20,887	0.0038	0.08	11,772	0.0077	0.09	74,131	0.0202	1.50
Sep-13	10,682	0.0488	0.52	4,116	0.0435	0.18	9,986	0.0038	0.04	7,054	0.0076	0.05	35,829	0.0198	0.71
Oct-13	0	0	0.00	0	0	0.00	0	0	0.00	2,678	0.0020	0.01	536	0.0187	0.01
Nov-13	0	0	0.00	0	0	0.00	0	0	0.00	2,592	0.0020	0.01	518	0.0177	0.01
Dec-13	0	0	0.00	0	0	0.00	0	0	0.00	2,678	0.0020	0.01	536	0.0168	0.01
Jan-14	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0020	0	536	0.0166	0.01
Feb-14	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0020	0	484	0.0165	0.01
Mar-14	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0020	0	536	0.0163	0.01
Apr-14	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0020	0	518	0.0161	0.01
May-14	5,071	0.0493	0.25	1,950	0.0439	0.09	4,762	0.0043	0.02	14,120	0.0257	0	536	0.0156	0.01
Jun-14	65,334	0.0480	3.14	25,261	0.0426	1.08	60,480	0.0043	0.26	262,755	0.0188	5	81,970	0.0109	0.89
Jul-14	23,282	0.0500	1.16	8,926	0.0447	0.40	22,058	0.0043	0.10	63,592	0.0204	7	10,121	0.0099	0.10
Aug-14	22,299	0.0490	1.09	8,586	0.0436	0.37	20,887	0.0043	0.09	60,927	0.0214	9	15,019	0.0090	0.14
Sep-14	10,682	0.0488	0.52	4,116	0.0435	0.18	9,986	0.0043	0.04	29,150	0.0218	9	8,281	0.0086	0.07
Oct-14	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0218	9	536	0.0085	0.00
Nov-14	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0218	9	518	0.0084	0.00
Dec-14	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0218	9	536	0.0083	0.00
Jan-15	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0218	9	536	0.0083	0.00
Feb-15	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0218	9	484	0.0083	0.00
Mar-15	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0218	9	536	0.0083	0.00
Apr-15	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0218	9	518	0.0083	0.00
May-15	5,071	0.0493	0.25	1,950	0.0439	0.09	4,762	0.0043	0.02	13,940	0.0219	10	536	0.0081	0.00
Jun-15	65,334	0.0480	3.14	25,261	0.0426	1.08	60,480	0.0043	0.26	261,828	0.0207	15	57,005	0.0053	0.30
Jul-15	23,282	0.0500	1.16	8,926	0.0447	0.40	22,058	0.0043	0.10	62,795	0.0212	16	8,782	0.0049	0.04
Aug-15	22,299	0.0490	1.09	8,586	0.0436	0.37	20,887	0.0043	0.09	60,491	0.0217	18	13,680	0.0047	0.06
Sep-15	10,682	0.0488	0.52	4,116	0.0435	0.18	9,986	0.0043	0.04	28,981	0.0218	19	6,985	0.0046	0.03
Oct-15	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0218	19	536	0.0046	0.00
Nov-15	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0218	19	518	0.0046	0.00
Dec-15	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0218	19	536	0.0046	0.00
Jan-16	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0218	19	536	0.0046	0.00
Feb-16	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0218	19	501	0.0046	0.00
Mar-16	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0218	19	536	0.0046	0.00
Apr-16	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0218	19	518	0.0046	0.00
May-16	5,071	0.0493	0.25	1,950	0.0439	0.09	4,762	0.0043	0.02	13,844	0.0219	19	536	0.0045	0.00
Jun-16	65,334	0.0480	3.14	25,261	0.0426	1.08	60,480	0.0043	0.26	261,338	0.0212	24	53,013	0.0029	0.15
Jul-16	23,282	0.0500	1.16	8,926	0.0447	0.40	22,058	0.0043	0.10	62,385	0.0215	26	8,782	0.0027	0.02
Aug-16	22,299	0.0490	1.09	8,586	0.0436	0.37	20,887	0.0043	0.09	60,230	0.0218	27	13,680	0.0028	0.04
Sep-16	10,682	0.0488	0.52	4,116	0.0435	0.18	9,986	0.0043	0.04	28,863	0.0219	28	6,985	0.0028	0.02
Oct-16	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0219	28	536	0.0028	0.00
Nov-16	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0219	28	518	0.0028	0.00
Dec-16	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0219	28	536	0.0028	0.00
Jan-17	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0219	28	536	0.0028	0.00
Feb-17	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0219	28	484	0.0028	0.00
Mar-17	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0219	28	536	0.0028	0.00
Apr-17	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0219	28	518	0.0028	0.00
May-17	5,071	0.0493	0.25	1,950	0.0439	0.09	4,762	0.0043	0.02	13,772	0.0220	29	536	0.0027	0.00
Jun-17	65,334	0.0480	3.14	25,261	0.0426	1.08	60,480	0.0043	0.26	260,952	0.0214	33	53,031	0.0017	0.09
Jul-17	23,282	0.0500	1.16	8,926	0.0447	0.40	22,058	0.0043	0.10	61,822	0.0216	35	8,782	0.0017	0.01
Aug-17	22,299	0.0490	1.09	8,586	0.0436	0.37	20,887	0.0043	0.09	59,891	0.0218	37	13,680	0.0018	0.03
Sep-17	10,682	0.0488	0.52	4,116	0.0435	0.18	9,986	0.0043	0.04	28,717	0.0219	38	6,985	0.0019	0.01
Oct-17	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0219	38	536	0.0019	0.00
Nov-17	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0219	38	518	0.0019	0.00
Dec-17	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0219	38	536	0.0019	0.00
Jan-18	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0219	38	536	0.0019	0.00
Feb-18	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0219	38	484	0.0019	0.00
Mar-18	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0219	38	536	0.0019	0.00
Apr-18	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0219	38	518	0.0019	0.00
May-18	5,071	0.0493	0.25	1,950	0.0439	0.09	4,762	0.0043	0.02	13,684	0.0220	38	536	0.0019	0.00
Jun-18	65,334	0.0480	3.14	25,261	0.0426	1.08	60,480	0.0043	0.26	260,490	0.0215	43	53,031	0.0012	0.06
Jul-18	23,282	0.0500	1.16	8,926	0.0447	0.40	22,058	0.0043	0.10	61,334	0.0217	45	8,782	0.0012	0.01
Aug-18	22,299	0.0490	1.09	8,586	0.0436	0.37	20,887	0.0043	0.09	59,622	0.0219	46	13,680	0.0014	0.02
Sep-18	10,682	0.0488	0.52	4,116	0.0435	0.18	9,986	0.0043	0.04	28,612	0.0220	47	6,985	0.0015	0.01
Oct-18	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0220	47	536	0.0015	0.00
Nov-18	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0220	47	518	0.0015	0.00
Dec-18	0	0	0.00	0	0	0.00	0	0	0.00	0	0.0220	47	536	0.0015	0.00

TABLE W4 - Jericho Project - Annual Water Balance- Summary of Annual Water Volumes

(all volumes in cubic meters)

		Precipitation		Total Local INFLOWS								at end of Year		
Year	Tailings (tonnes)	Return Period	Depth (mm)	to PKCA	to Area A	to Area B	to Area C	to Pit Pond	Volume Pumped to PKCA	Reclaim to Mill	Total INFLOW to PKCA	Total Volume Stored in PKCA	PKCA Pond Elevation (m)	Controlled Release
2006	47,500	2	330	145,055	126,668	48,840	118,171	83,173	376,852	29,637	492,270	214,530	515.44	406,715
2007	47,500	2	330	140,600	126,668	48,840	118,171	83,173	376,852	29,637	487,816	309,530	516.27	487,816
2008	47,630	2	330	140,034	126,668	48,840	118,171	83,260	376,939	29,637	487,336	404,790	517.02	487,336
2009	47,500	2	330	139,215	126,668	48,840	118,171	83,173	376,852	29,637	486,431	499,790	517.69	486,431
2010	47,500	2	330	137,567	126,668	48,840	118,171	83,173	376,852	29,637	484,783	594,790	518.29	484,783
2011	47,500	2	330	135,919	126,668	48,840	118,171	83,173	376,852	29,637	483,135	689,790	518.84	483,135
2012	47,630	2	330	134,397	126,668	48,840	118,171	83,260	376,939	29,637	481,699	785,050	519.31	481,699
2013	47,500	2	330	132,623	126,668	48,840	118,171	83,173	376,852	29,637	479,839	880,050	519.75	479,839
2014	0	2	330	96,138	126,668	48,840	118,171	51,891	0	0	96,138	862,905	519.67	113,283
2015	0	2	330	80,370	126,668	48,840	118,171	49,383	0	0	80,370	858,931	519.65	84,344
2016	0	2	330	80,353	126,668	48,840	118,171	48,008	0	0	80,353	858,931	519.65	80,353
2017	0	2	330	80,370	126,668	48,840	118,171	46,501	0	0	80,370	858,931	519.65	80,370

TABLE W5 - Annual Volumes v. Annual Precipitation Return Period

Return	Annual Total Local Inflows to						Total **from**
Period	PKCA	Area A	Area B	Area C	Pit Pond	Creek C1	PKCA
10 yr Dry	105,406	88,690	34,215	82,362	68,389	158,708	349,424
2	140,600	126,668	48,840	118,171	83,173	224,045	487,816
5	175,318	161,066	62,173	149,830	96,998	292,026	615,748
10	190,352	175,847	67,905	163,402	102,955	321,588	670,824
20	200,374	185,700	71,727	172,450	106,926	341,295	707,541
50	215,408	200,481	77,459	186,022	112,883	370,856	762,617
100	225,430	210,335	81,281	195,071	116,855	390,564	799,334
200	235,452	220,189	85,102	204,119	120,826	410,271	836,052

TABLE W6 - Jericho Project - Summary of Peak Estimated Parameter Concentrations - Base Case

(all concentrations in mg/L)

Location	Dissolved Metals		Nutrients				Physical		Major Ions							Total Metals										
	DAl	DFe	NH4-N	NO2-N	NO3-N	P	TDS	TSS	Alk	Ca*	Cl*	K	Mg*	Na	SO4	TAl	TAs	TCd	TCr	TCu	TFe	TMo	TNi	TPb	TU	TZn
AVERAGE Precipitation Conditions, AVERAGE Source Parameter Concentrations																										
Area A	0.19229	0.28485	2.2	0.1587	5.56	0.0101	529	5.3	41	133	86	23	63	31	144	0.6284	0.0014	0.0005	0.0046	0.0500	0.7362	0.0289	0.0153	0.0042	0.2384	0.0215
Area B	0.17988	0.27231	2.0	0.1402	4.91	0.0101	481	5.5	39	119	78	21	56	28	128	0.6688	0.0013	0.0004	0.0041	0.0447	0.7457	0.0257	0.0138	0.0050	0.2290	0.0199
Area C	0.0407	0.19912	2.0	0.1412	4.94	0.0101	3176	8.8	89	161	1674	100	586	27	520	0.6759	0.0027	0.0025	0.0084	0.0039	0.8090	0.2552	0.1198	0.0065	0.1142	0.0221
Pit Pond/Sump	0.33589	1.11038	2.2	0.2866	5.49	0.0098	167	7.0	14	40	77	5	17	5	24	0.4700	0.0004	0.0001	0.0059	0.0078	1.2341	0.0047	0.0702	0.0033	0.0663	0.0134
PKCA	0.1200	0.2598	1.8	0.1648	4.96	0.0870	1074	6.3	42	101	487	36	175	21	184	0.4933	0.0013	0.0008	0.0047	0.0202	0.6251	0.0746	0.0423	0.0038	0.1225	0.0154
Closure Pit (w. A+B+C)	0.14434	0.30298	2.0	0.1557	4.99	0.0099	1081	6.7	47	109	467	37	180	23	202	0.7038	0.0015	0.0009	0.0048	0.0269	0.8132	0.0925	0.0428	0.0061	0.1827	0.0185
Closure Pit (w. A+B)	0.11982	0.24549	1.6	0.1249	4.03	0.0095	868	5.7	38	88	375	30	144	19	162	0.5741	0.0012	0.0007	0.0043	0.0220	0.6564	0.0741	0.0344	0.0049	0.1464	0.0152
AVERAGE Precipitation Conditions, MAXIMUM Source Parameter Concentrations																										
Area A	0.40457	1.21057	4.4	0.3171	11.10	0.0101	1082	9.1	100	263	152	27	68	46	419	0.8407	0.0025	0.0005	0.0046	0.0500	1.6619	0.0593	0.0315	0.0043	1.8148	0.0676
Area B	0.36731	1.08966	3.9	0.2801	9.81	0.0101	969	8.8	91	234	136	24	60	41	371	0.8562	0.0023	0.0004	0.0041	0.0447	1.5630	0.0525	0.0280	0.0050	1.6209	0.0605
Area C	0.04139	0.46294	3.5	0.2476	8.67	0.0101	4320	8.8	109	284	2040	196	697	56	917	0.6766	0.0043	0.0036	0.0103	0.0049	1.0728	0.4630	0.1220	0.0069	0.1423	0.0301
Pit Pond/Sump	0.33589	1.11038	2.2	0.2866	5.49	0.0098	167	7.0	14	40	77	5	17	5	24	0.4700	0.0004	0.0001	0.0059	0.0078	1.2341	0.0047	0.0702	0.0033	0.0663	0.0134
PKCA	0.21079	0.64102	2.9	0.2271	7.44	0.0870	1635	7.4	70	202	647	64	206	36	380	0.8993	0.0021	0.0011	0.0099	0.0206	1.0446	0.1372	0.0625	0.0040	0.6827	0.0341
Diavik WL Limits			2.00	1.0000	na	0.2000	na									1.5000	0.0500	0.0020	0.0200	0.0200	na	na	0.0500	0.0100	na	0.3000
10 year return period DRY Year Precipitation Conditions, AVERAGE Source Parameter Concentrations																										
Area A							531	5.3																		
Area B							483	5.5																		
Area C							3215	8.9																		
Pit Pond/Sump							169	6.8																		
PKCA							1089	6.5																		
							1051	6.3																		
10 year return period WET Year Precipitation Conditions, AVERAGE Source Parameter Concentrations																										
Area A							520	5.2																		
Area B							470	5.4																		
Area C							3149	8.7																		
Pit Pond/Sump							163	7.2																		
PKCA							1051	6.3																		
							1011	6.1																		

NOTES

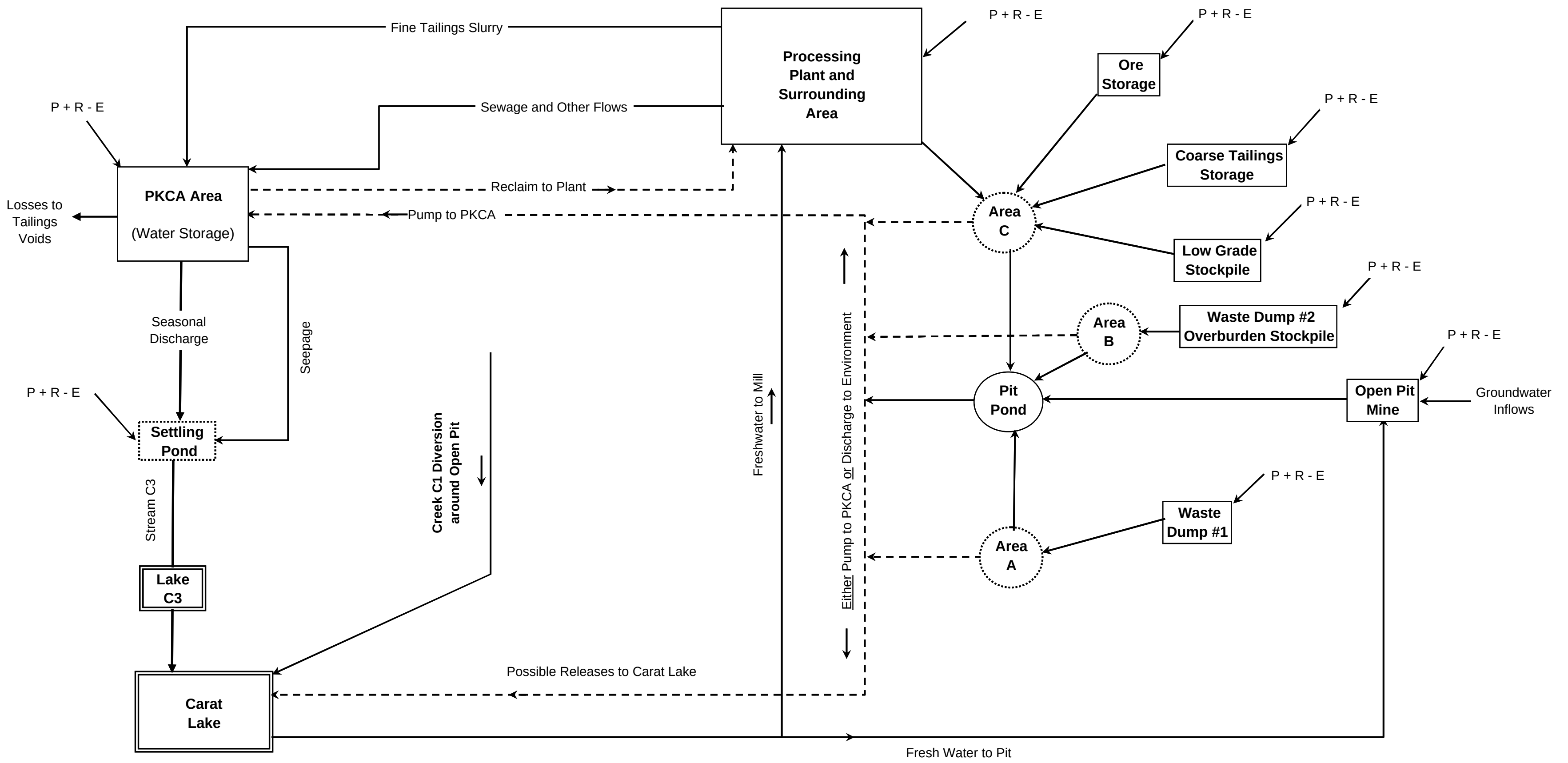
1) 2013 used as "typical" year,
2) Concentrations for Areas A, B and C occur only during May through September period as a result of runoff.
3) Releases from PKCA only in June-July-August-September
4) Source parameter concentrations provided by SRK (April 2004)
5) "Closure Pit" after mining ends, inflow to the pit from Areas A, B or C as shown.

Table W7 - Analytical Parameters for Water Quality Monitoring

Test Group	Analytical Parameters	Measurement Units
Routine	Alkalinity, acidity, chloride, carbonate, bicarbonate, total hardness, hydroxide, sulphate, total suspended solids (TSS), total organic carbon (TOC), total inorganic (TIC), pH (field and lab) ORP (field) Conductivity (field and lab) Temperature (field) Turbidity	mg/L pH units mV uS/cm ^{o}C NTU
Metals (total and dissolved)	Ca, Mg, Na, K, Al, As, Ba, B, Be, Cd, Cr, Co, Cu, Fe, Hg, Pb, Mn, Mo, Ni, Se, Sr, U, V, Zn	mg/L
Nutrients	Ammonia-N, Nitrate-N, Nitrite-N, Total Kjeldahl Nitrogen (TKN) Total Phosphorus, Orthophosphate	mg N/L mg/L

FIGURES

FIGURE W1 - Jericho Project - Schematic Site Water Balance - Operations

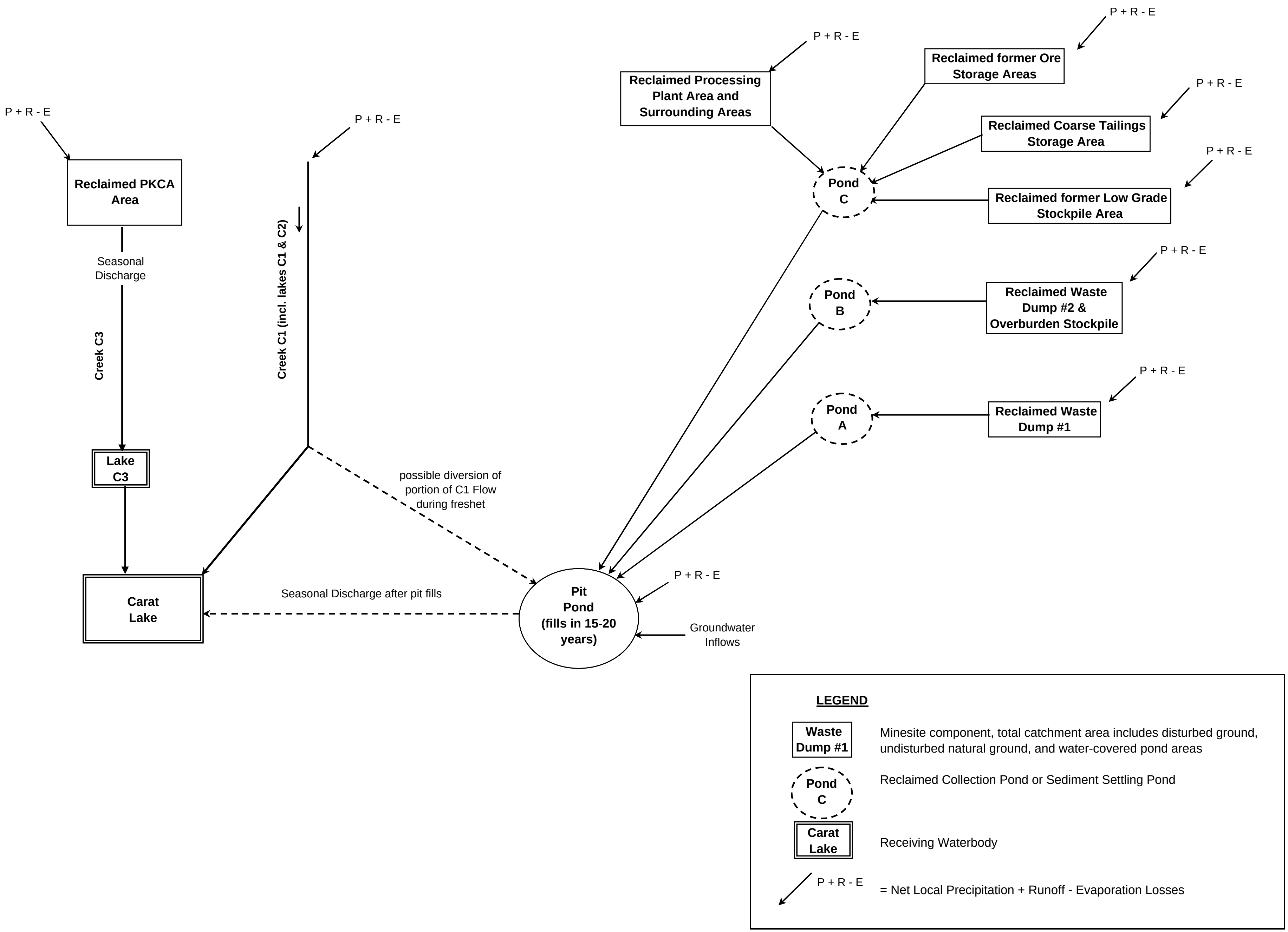


NOTES
1) Areas A, B and C initially represent a series of small ponds used as water quality monitoring points.
2) Ponds A, B and C and the Settling Pond would be constructed if required for water management purposes.
3) All component area runoff will be monitored for water quality. Acceptable quality water will be released to the receiving environment. Unacceptable water will be directed to the open pit and pumped to the PKCA.
4) If constructed, water collected in Ponds A, B and C would be pumped to the PKCA.

LEGEND

Waste Dump #1	Minesite component, total catchment area includes disturbed ground, undisturbed natural ground, and water-covered pond areas
Area C	Possible Collection Pond or Sediment Settling Pond (Pumped OR Gravity outflow)
Carat Lake	Receiving Waterbody
P + R - E	= Net Local Precipitation + Runoff - Evaporation Losses
- - - - →	Possible alternate flow path (pumped or gravity flow)

FIGURE W2 - Jericho Project - Schematic Site Water Balance - Closure



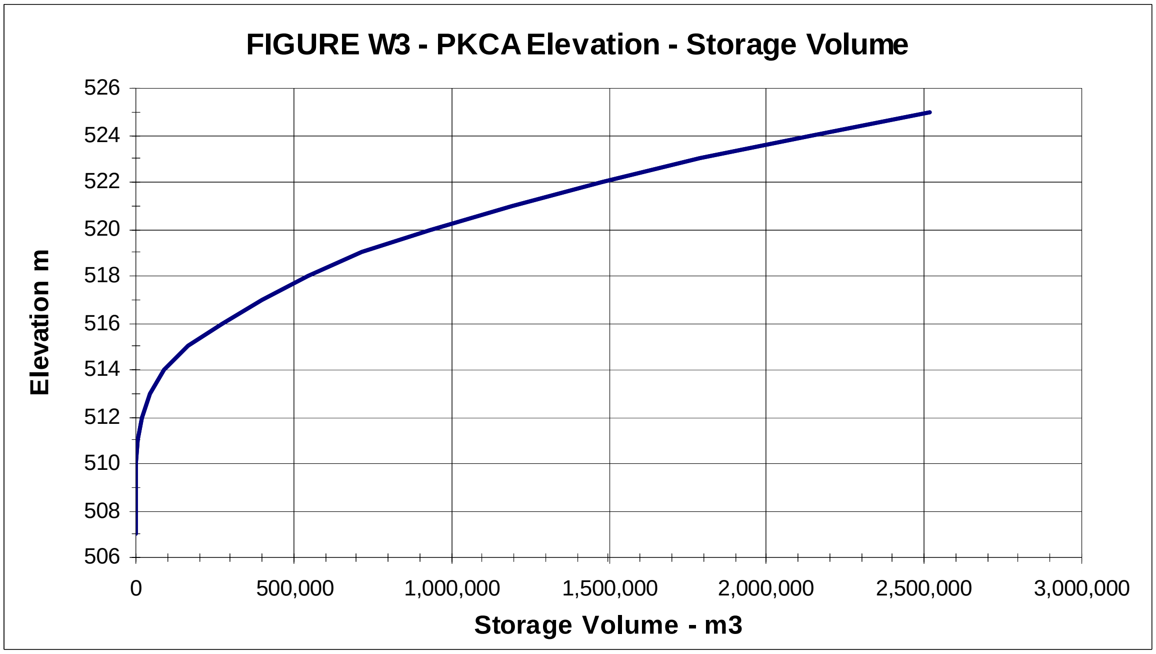


FIGURE W3 - PKCA Elevation - Storage Volume
Elevation m
526
524
522
520
518
516
514
512
510
508
506
0
500,000
1,000,000
1,500,000
2,000,000
2,500,000
3,000,000
Storage Volume - m3

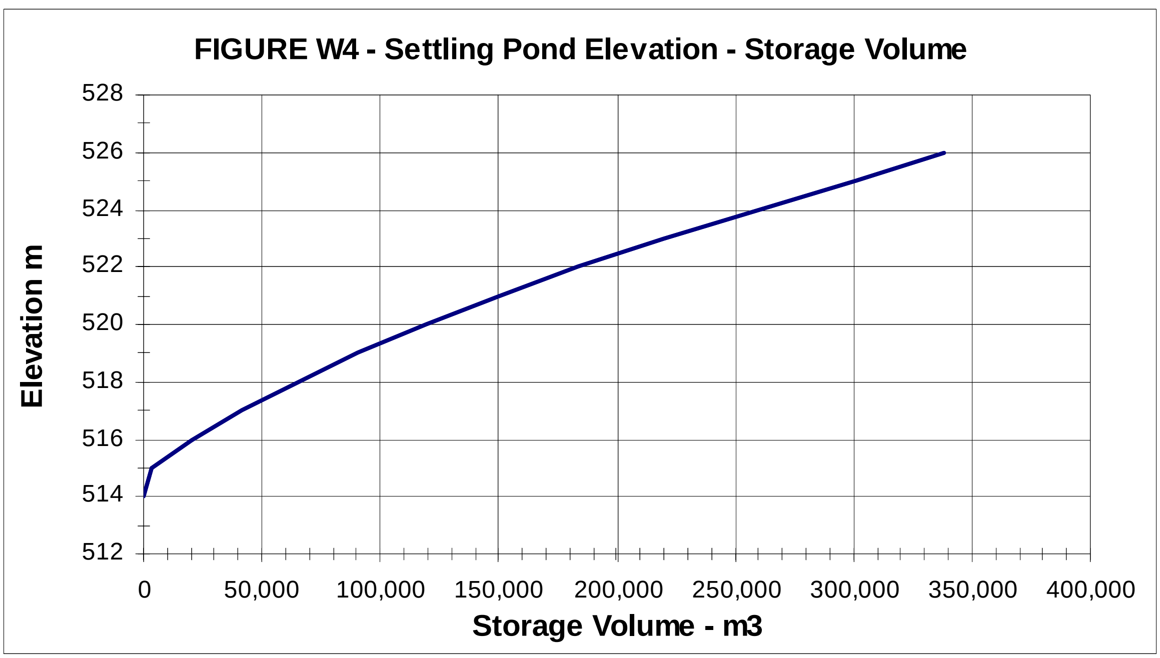


FIGURE W4 - Settling Pond Elevation - Storage Volume
Elevation m
528
526
524
522
520
518
516
514
512
0
50,000
100,000
150,000
200,000
250,000
300,000
350,000
400,000
Storage Volume - m3

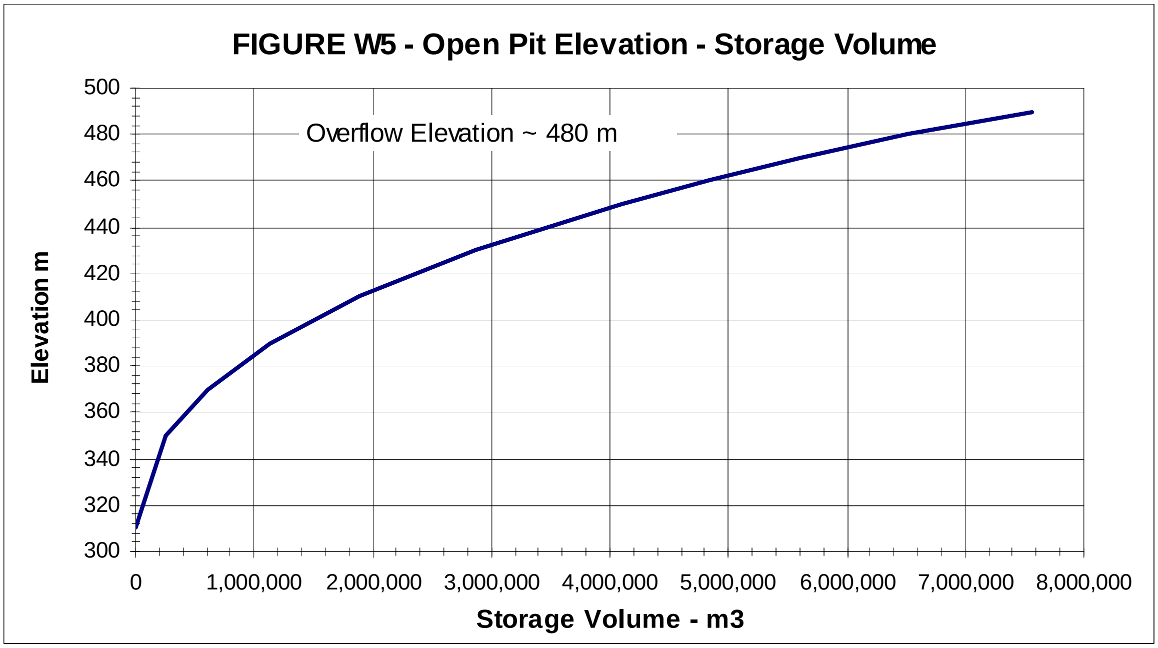


FIGURE W5 - Open Pit Elevation - Storage Volume
Overflow Elevation ~ 480 m
Elevation m
500
480
460
440
420
400
380
360
340
320
300
0
1,000,000
2,000,000
3,000,000
4,000,000
5,000,000
6,000,000
7,000,000
8,000,000
Storage Volume - m3

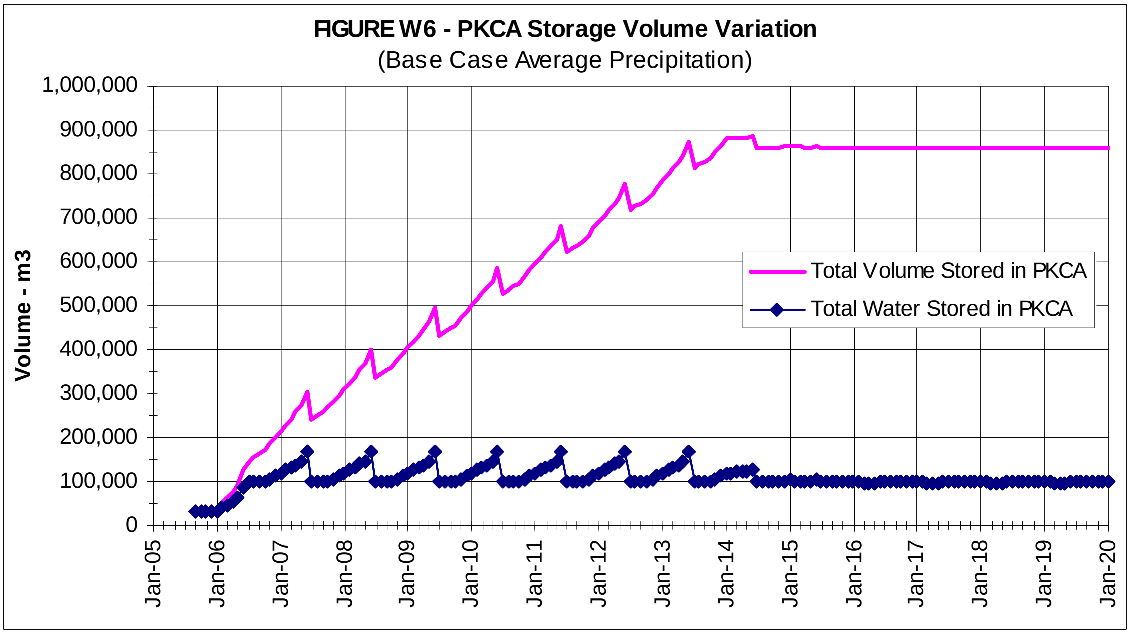


FIGURE W6 - PKCA Storage Volume Variation
(Base Case Average Precipitation)
Volume - m3
1,000,000
900,000
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
Total Volume Stored in PKCA
Total Water Stored in PKCA
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Jan-16
Jan-17
Jan-18
Jan-19
Jan-20

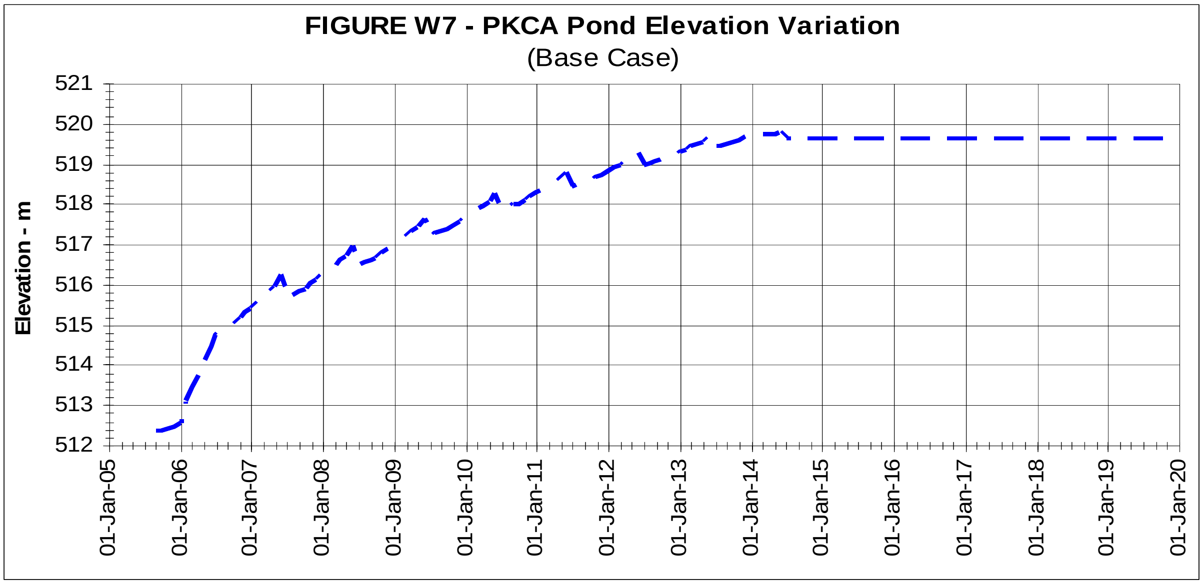


FIGURE W7 - PKCA Pond Elevation Variation
(Base Case)
Elevation - m
521
520
519
518
517
516
515
514
513
512
01-Jan-05
01-Jan-06
01-Jan-07
01-Jan-08
01-Jan-09
01-Jan-10
01-Jan-11
01-Jan-12
01-Jan-13
01-Jan-14
01-Jan-15
01-Jan-16
01-Jan-17
01-Jan-18
01-Jan-19
01-Jan-20

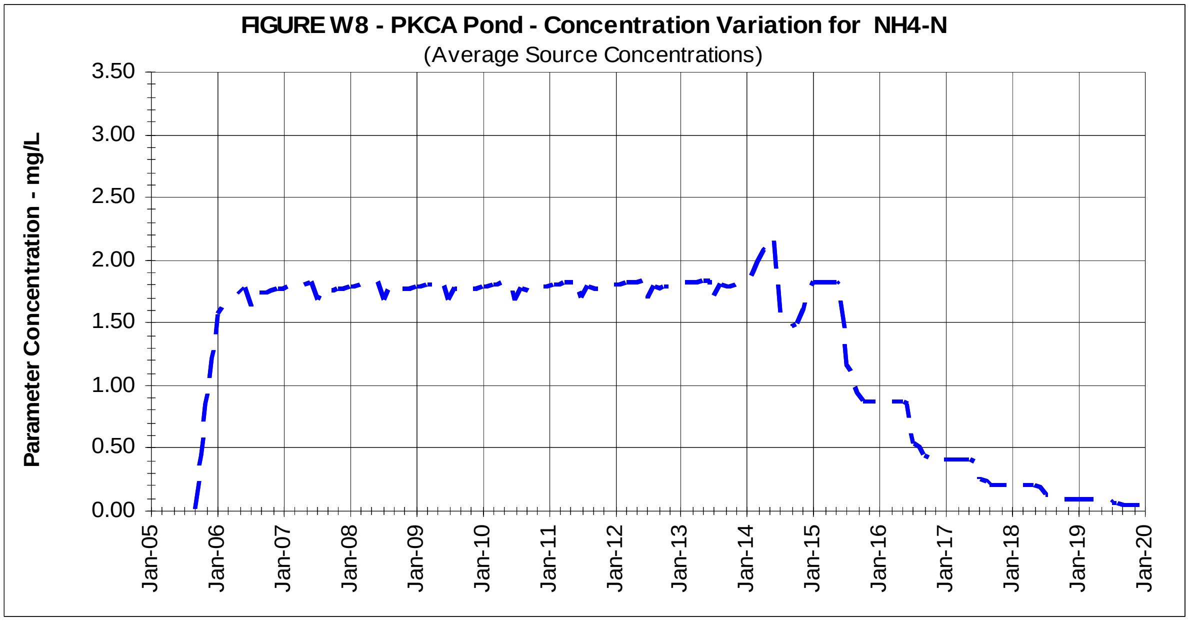


FIGURE W8 - PKCA Pond - Concentration Variation for NH4-N
(Average Source Concentrations)
Parameter Concentration - mg/L
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Jan-16
Jan-17
Jan-18
Jan-19
Jan-20

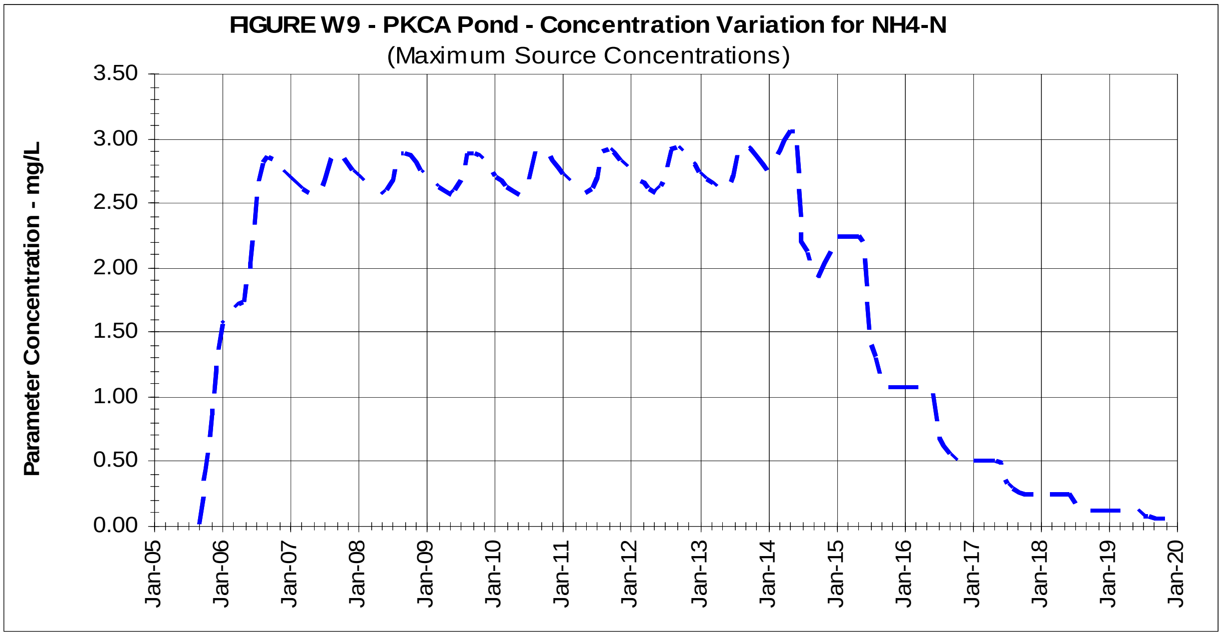


FIGURE W9 - PKCA Pond - Concentration Variation for NH4-N
(Maximum Source Concentrations)
Parameter Concentration - mg/L
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Jan-16
Jan-17
Jan-18
Jan-19
Jan-20

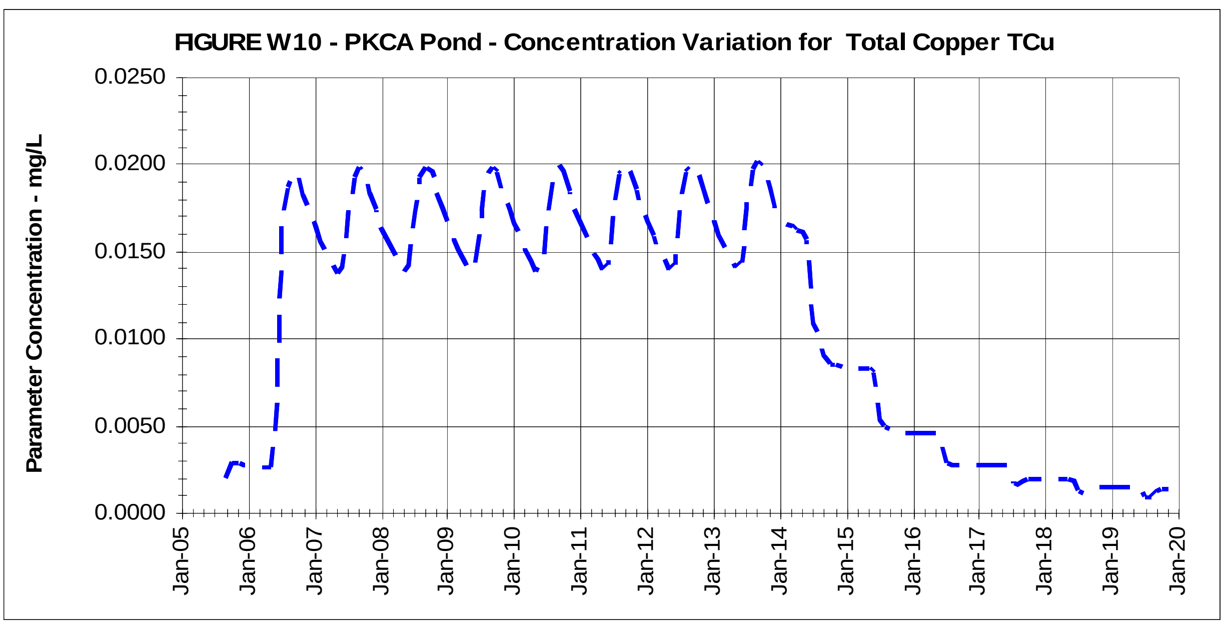


FIGURE W10 - PKCA Pond - Concentration Variation for Total Copper TCu
Parameter Concentration - mg/L
0.0250
0.0200
0.0150
0.0100
0.0050
0.0000
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Jan-16
Jan-17
Jan-18
Jan-19
Jan-20

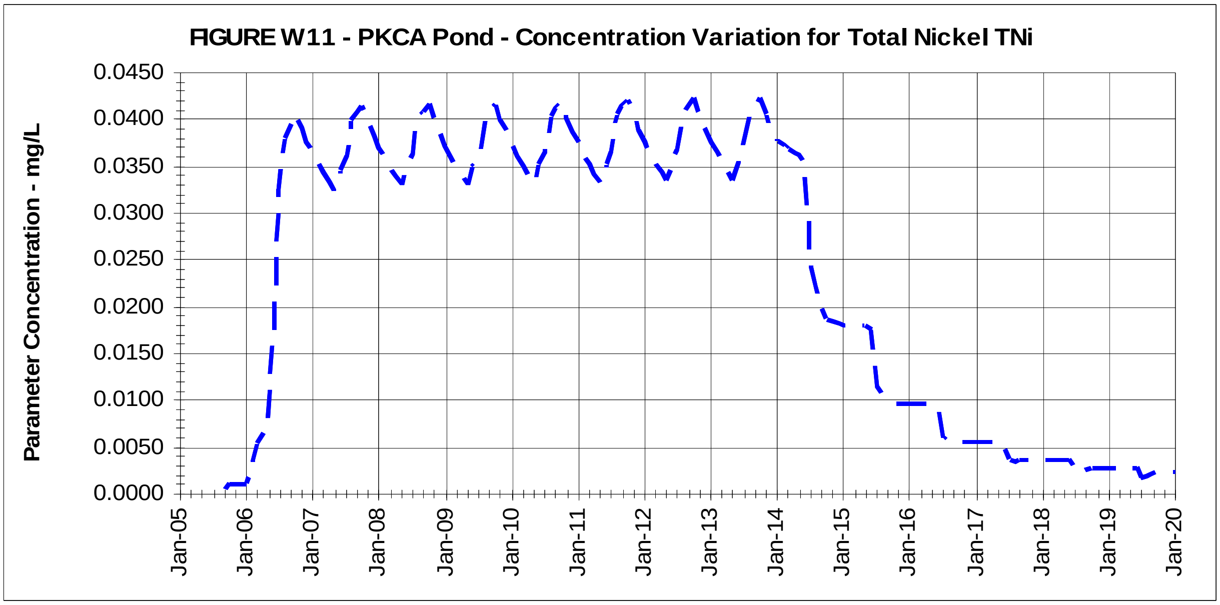


FIGURE W11 - PKCA Pond - Concentration Variation for Total Nickel TNi
Parameter Concentration - mg/L
0.0450
0.0400
0.0350
0.0300
0.0250
0.0200
0.0150
0.0100
0.0050
0.0000
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Jan-16
Jan-17
Jan-18
Jan-19
Jan-20

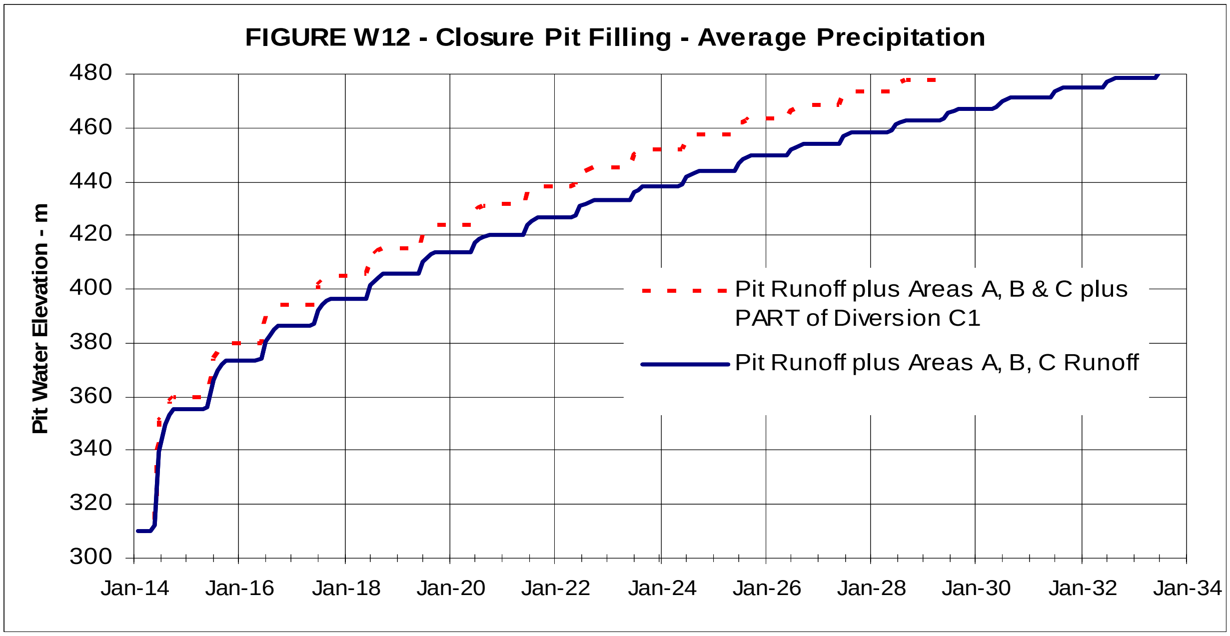
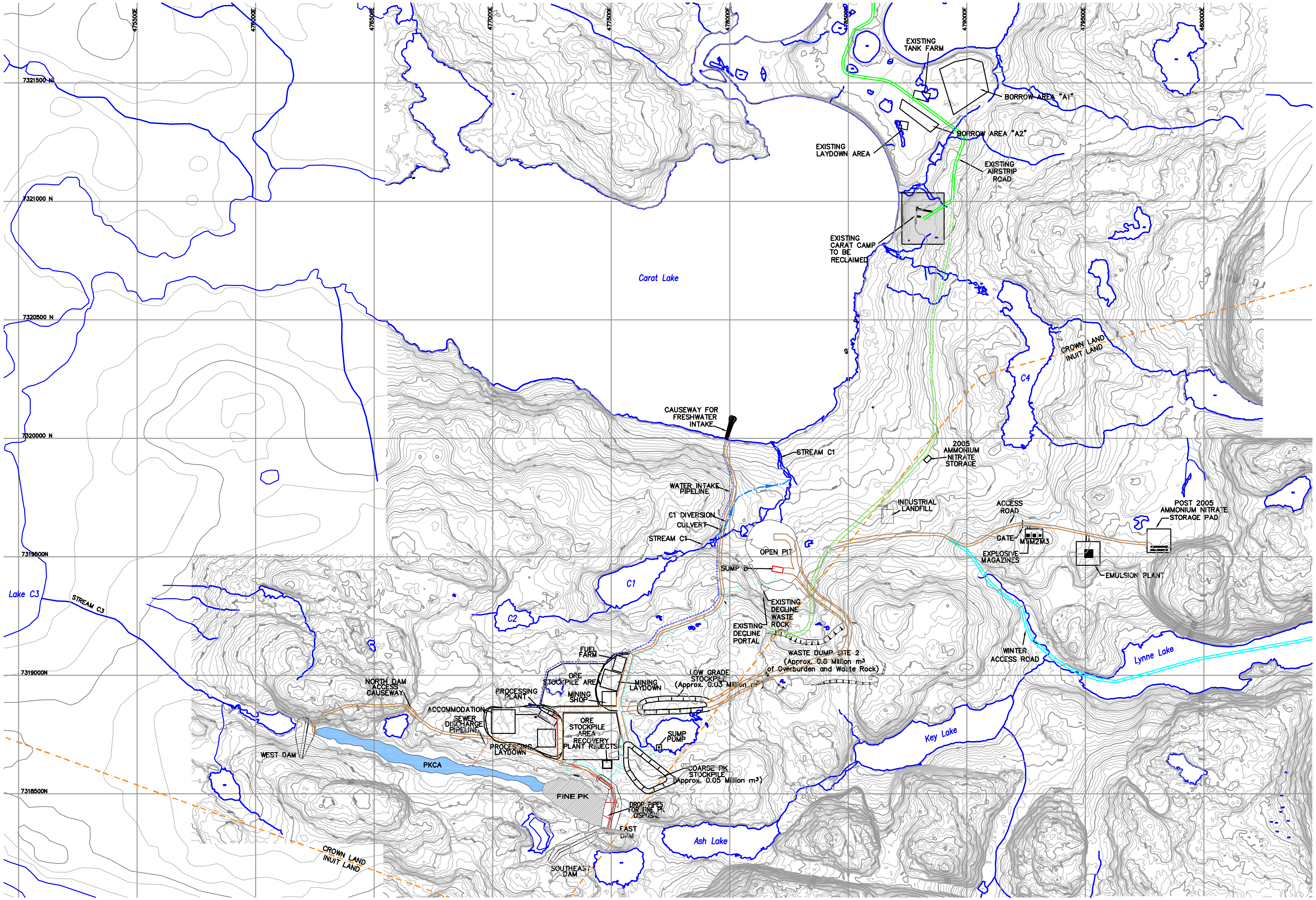


FIGURE W12 - Closure Pit Filling - Average Precipitation
Pit Water Elevation - m
480
460
440
420
400
380
360
340
320
300
Jan-14
Jan-16
Jan-18
Jan-20
Jan-22
Jan-24
Jan-26
Jan-28
Jan-30
Jan-32
Jan-34
Pit Runoff plus Areas A, B & C plus PART of Diversion C1
Pit Runoff plus Areas A, B, C Runoff

DRAWINGS



LEGEND

- EXISTING ROAD
- EXISTING ROAD (APPROXIMATE LOCATION)
- ROAD REQUIRED BY YEAR 1
- WINTER ROAD
- FRESH WATER PIPELINE
- MINE WATER PIPELINE
- FINE PK DISCHARGE PIPELINE
- RECLAIM PIPELINE
- SEWER PIPELINE
- DITCH

NOTES:

1. LAYOUTS ARE APPROXIMATE AND MAY NOT REFLECT ACTUAL SIZE AND FOOTPRINT LOCATIONS
2. SHOULD THE GRADE OF THE LOW GRADE MATERIAL BE FAVORABLE, THIS MATERIAL MAY GET PROCESSED WHICH WOULD LEAD TO A REDUCTION IN THE SIZE OF THE STOCKPILE
3. THE EAST AND SOUTHEAST DAMS WILL, AT A MINIMUM BE CONSTRUCTED TO PROVIDE STORAGE FOR A FULL YEAR OF PKCA INFLOWS.
4. THE TIMING OF THE CONSTRUCTION AT THE NORTH DAM, AND THE COMPLETION OF OF THE EAST AND SOUTHEAST DAMS WILL BE REVIEWED ANNUALLY UNTIL THE DAMS ARE CONSTRUCTED OR OPERATIONS CEASE.
5. SUMP PUMPS SHOWN DISCHARGE TO THE PKCA.
6. THE FINAL LAYOUT OF THE C1 DIVERSION WILL BE FIELD FIT IN ORDER TO OPTIMIZE THE REQUIRMENTS FOR FISH HABITAT AND FISH PASSAGE

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

0 100 200 300 400 500 METRES
1:8000

DRAWING NO.	DRAWING TITLE	DRAWING NO.	
DRAWING G-9	AMMONIUM NITRATE STORAGE LAYOUT		
DRAWING G-8	BORROW AREAS PLAN & SECTION		
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-14	CLOSURE CONCEPTS
DRAWING G-3	SITE INVESTIGATION MAP	DRAWING G-13	GENERAL ARRANGEMENT APRIL 2013
DRAWING G-2	SITE VICINITY MAP	DRAWING G-12	GENERAL ARRANGEMENT APRIL 2008
DRAWING G-1	PROJECT LOCATION AND DRAWING INDEX	DRAWING G-11	GENERAL ARRANGEMENT APRIL 2007

REFERENCE DRAWINGS

No.	DESCRIPTION	CHK'D	APP'D	DATE

REVISIONS

REV.	ISSUE PURPOSE	AUTH.	BY	DATE
A	WATER LICENSE APPLICATION	CCS		JULY 2004

ISSUE AUTHORIZATION

WATER LICENSE APPLICATION

SRK Consulting
Engineers and Scientists

DESIGNED BY: CCS	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 Diamond Corporation

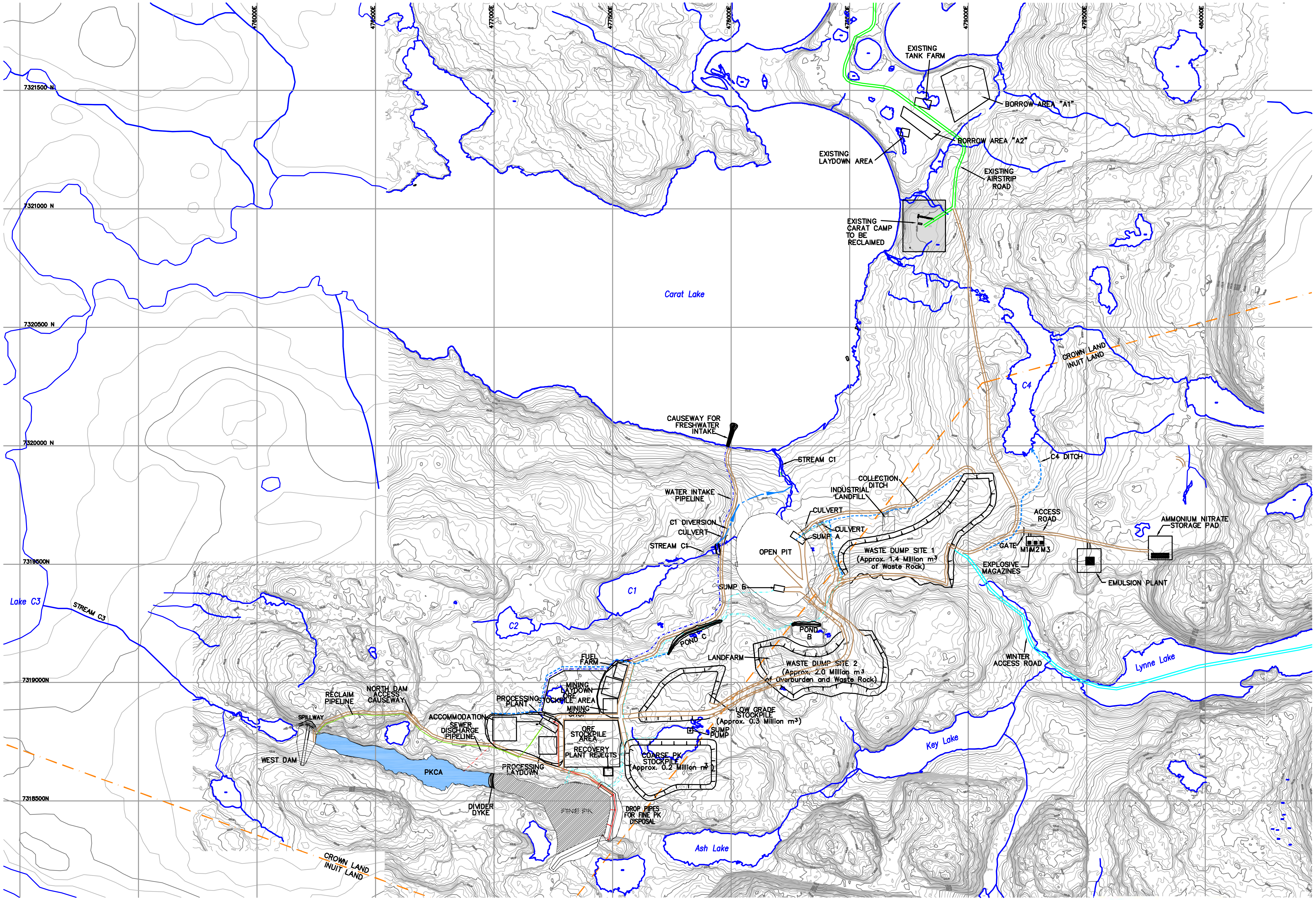
JERICHO PROJECT

GENERAL ARRANGEMENT AT END OF APRIL 2006

DRAWING NUMBER: 1CT004.06 – G10

REV. A

FILE NAME: F:\Tahera Corp (Lytton minerals)\Mapping and Drawings-2004 dwgs\general-figures(2004)\figureGA-year1



LEGEND

- EXISTING ROAD
- EXISTING ROAD (APPROXIMATE LOCATION)
- ROAD REQUIRED BY YEAR 2
- WINTER ROAD
- FRESH WATER PIPELINE
- MINE WATER PIPELINE
- FINE PK DISCHARGE PIPELINE
- RECLAIM PIPELINE
- SEWER PIPELINE
- PKCA DISCHARGE PIPELINE
- DITCH

NOTES:

1. LAYOUTS ARE APPROXIMATE AND MAY NOT REFLECT ACTUAL SIZE AND FOOTPRINT LOCATIONS
2. SHOULD THE GRADE OF THE LOW GRADE MATERIAL BE FAVORABLE, THIS MATERIAL MAY GET PROCESSED WHICH WOULD LEAD TO A REDUCTION IN THE SIZE OF THE STOCKPILE
3. THE TIMING OF THE CONSTRUCTION AT THE NORTH DAM, AND THE COMPLETION OF OF THE EAST AND SOUTHEAST DAMS WILL BE REVIEWED ANNUALLY UNTIL THE DAMS ARE CONSTRUCTED OR OPERATIONS CEASE.
4. THE TIMING OF THE CONSTRUCTION OF POND B WILL BE REVIEWED ANNUALLY.
5. SUMP PUMPS SHOWN DISCHARGE TO THE PKCA.

TAHERA CORPORATION
JERICHO LAKE SOUTHWEST EXTENSION

Date of Photography: August 5, 1995.
Scale of Photography: 1:10 000
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0 100 200 300 400 500 METRES
1:8000

DRAWING NO.	DRAWING TITLE	DRAWING NO.	
DRAWING G-	AMMONIUM NITRATE STORAGE LAYOUT		
DRAWING G-8	BORROW AREAS PLAN & SECTION		
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-14	CLOSURE CONCEPTS
DRAWING G-3	SITE INVESTIGATION MAP	DRAWING G-13	GENERAL ARRANGEMENT APRIL 2013
DRAWING G-2	SITE VICINITY MAP	DRAWING G-12	GENERAL ARRANGEMENT APRIL 2008
DRAWING G-1	PROJECT LOCATION AND DRAWING INDEX	DRAWING G-10	GENERAL ARRANGEMENT APRIL 2006

REFERENCE DRAWINGS

No.	DESCRIPTION	CHK'D	APP'D	DATE

REVISIONS

REV.	ISSUE PURPOSE	AUTH.	BY	DATE
A	WATER LICENSE APPLICATION	CCS		JULY 2004

ISSUE AUTHORIZATION

WATER LICENSE APPLICATION

SRK Consulting
Engineers and Scientists

DESIGNED BY: CCS	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 Diamond Corporation

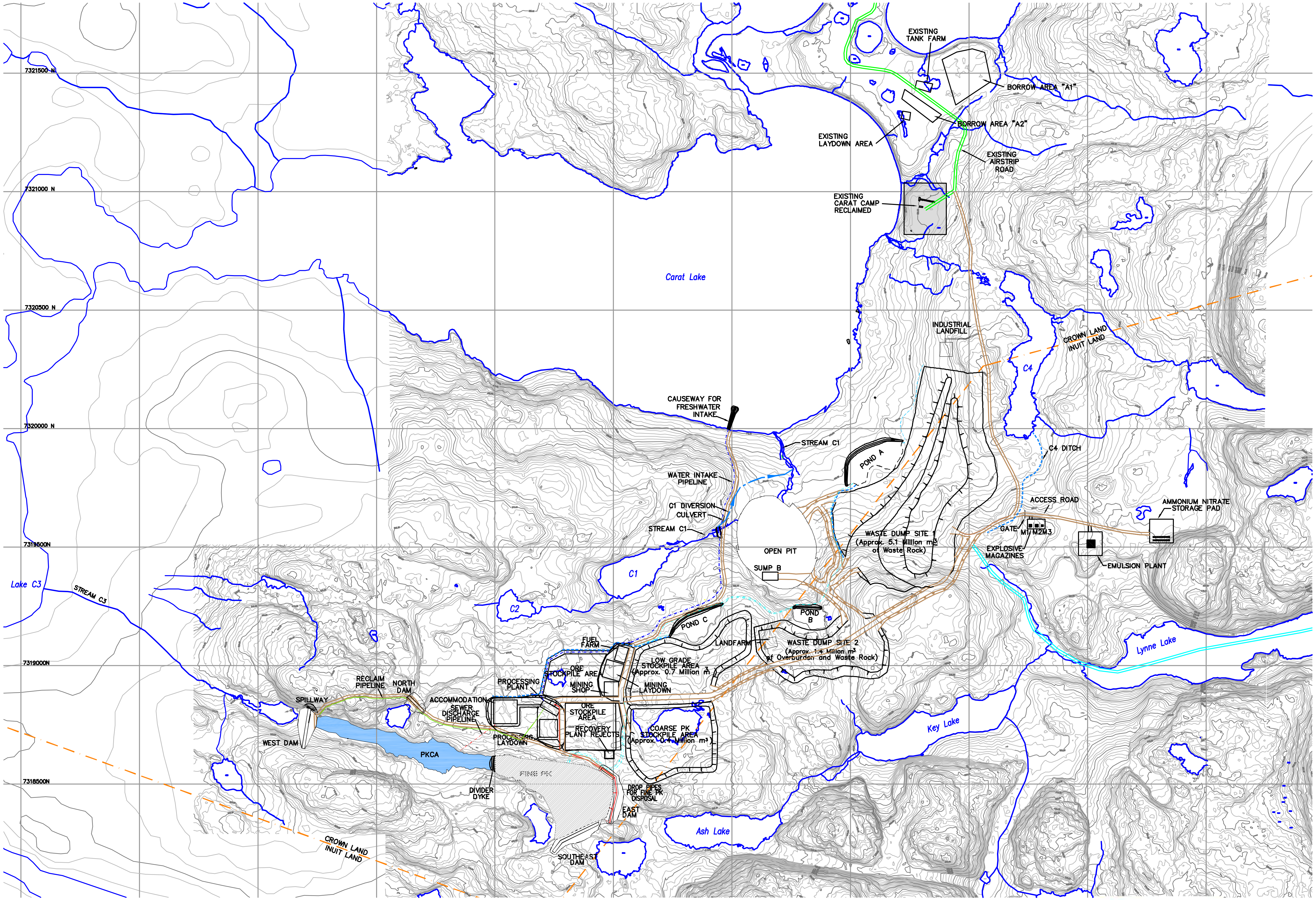
JERICHO PROJECT

GENERAL ARRANGEMENT AT END OF APRIL 2007

DRAWING NUMBER: 1CT004.06 – G11

REV.: A

FILE NAME: F:\Tahera Corp (Lytton minerals)\Mapping and Drawings-2004 dwgs\general-figures(2004)\figureGA-year1



<u>LEGEND</u>

- EXISTING ROAD
- EXISTING ROAD (APPROXIMATE LOCATION)
- ROAD REQUIRED BY YEAR 3
- WINTER ROAD
- FRESH WATER PIPELINE
- MINE WATER PIPELINE
- FINE PK DISCHARGE PIPELINE
- RECLAIM PIPELINE
- SEWER PIPELINE
- PKCA DISCHARGE PIPELINE
- DITCH

NOTES:

1. LAYOUTS ARE APPROXIMATE AND MAY NOT REFLECT ACTUAL SIZE AND FOOTPRINT LOCATIONS
2. SHOULD THE GRADE OF THE LOW GRADE MATERIAL BE FAVORABLE, THIS MATERIAL MAY GET PROCESSED WHICH WOULD LEAD TO A REDUCTION IN THE SIZE OF THE STOCKPILE
3. THE TIMING OF THE CONSTRUCTION AT THE NORTH DAM, AND THE COMPLETION OF THE EAST AND SOUTHEAST DAMS WILL BE REVIEWED ANNUALLY UNTIL THE DAMS ARE CONSTRUCTED OR OPERATIONS CEASE.
4. THE TIMING OF THE CONSTRUCTION OF POND B WILL BE REVIEWED ANNUALLY.
5. STOCKPILE FOR CENTRAL AND NORTH KIMBERLITE LOBES SHOW MAXIMUM LIMITS. ACTUAL FOOTPRINTS MAY VARY.

TAHERA CORPORATION
JERICHO LAKE SOUTHWEST EXTENSION

0 100 200 300 400 500 METRES
1:8000

REFERENCE DRAWINGS

DRAWING NO.	DRAWING TITLE	DRAWING NO.	
DRAWING G-9	AMMONIUM NITRATE STORAGE LAYOUT		
DRAWING G-8	BORROW AREAS PLAN & SECTION		
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-14	CLOSURE CONCEPTS
DRAWING G-3	SITE INVESTIGATION MAP	DRAWING G-13	GENERAL ARRANGEMENT APRIL 2013
DRAWING G-2	SITE VICINITY MAP	DRAWING G-11	GENERAL ARRANGEMENT APRIL 2007
DRAWING G-1	PROJECT LOCATION AND DRAWING INDEX	DRAWING G-10	GENERAL ARRANGEMENT APRIL 2006

REVISIONS

No.	DESCRIPTION	CHK'D	APP'D	DATE

ISSUE AUTHORIZATION

REV.	ISSUE PURPOSE	AUTH. BY		DATE
A	WATER LICENSE APPLICATION	CCS		JULY 2004

WATER LICENSE APPLICATION

SRK Consulting
Engineers and Scientists

DESIGNED BY: CCS DATE: JULY 2004	DRAWN BY: JM DATE: JULY 2004
CHECKED BY: CCS DATE: JULY 2004	DISCIP. ENGR. DATE:
PROJ. MGR: DATE	PROJ. ENGR. DATE
SRK PROJECT NUMBER: 1CT004.06	

Tahera Diamond Corporation

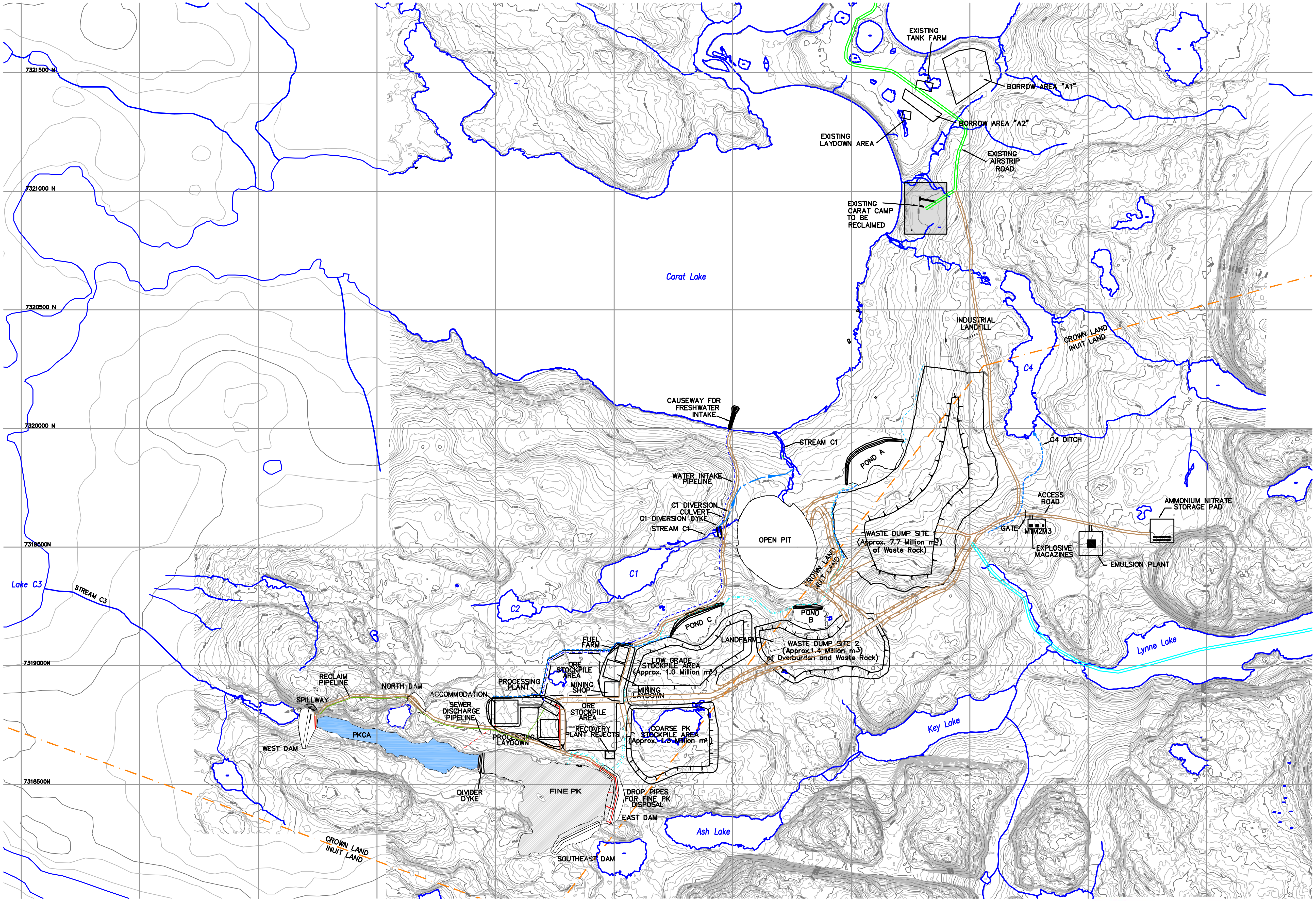
JERICHO PROJECT

GENERAL ARRANGEMENT AT END OF APRIL 2008

DRAWING NUMBER
1CT004.06 – G12

REV.
A

FILE NAME: F:\Tahera Corp (Lytton minerals)\Mapping and Drawings-2004 dwgs\general-figures(2004)\figureGA-year1



N

LEGEND

- EXISTING ROAD
- EXISTING ROAD (APPROXIMATE LOCATION)
- ROAD REQUIRED BY YEAR 7
- WINTER ROAD
- FRESH WATER PIPELINE
- MINE WATER PIPELINE
- FINE PK DISCHARGE PIPELINE
- RECLAIM PIPELINE
- SEWER PIPELINE
- PKCA DISCHARGE PIPELINE
- DITCH

NOTES:

1. LAYOUTS ARE APPROXIMATE AND MAY NOT REFLECT ACTUAL SIZE AND FOOTPRINT LOCATIONS
2. SHOULD THE GRADE OF THE LOW GRADE MATERIAL BE FAVORABLE, THIS MATERIAL MAY GET PROCESSED WHICH WOULD LEAD TO A REDUCTION IN THE SIZE OF THE STOCKPILE
3. THE TIMING OF THE CONSTRUCTION AT THE NORTH DAM, AND THE COMPLETION OF THE EAST AND SOUTHEAST DAMS WILL BE REVIEWED ANNUALLY UNTIL THE DAMS ARE CONSTRUCTED OR OPERATIONS CEASE.
4. STOCKPILE FOR CENTRAL AND NORTH KIMBERLITE LOBES SHOW MAXIMUM LIMITS. ORE STOCKPILES DEPLETED BY 2013.

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

0 100 200 300 400 500 METRES
1:8000

DRAWING NO.	DRAWING TITLE	DRAWING NO.	
DRAWING G-9	AMMONIUM NITRATE STORAGE LAYOUT		
DRAWING G-8	BORROW AREAS PLAN & SECTION		
DRAWING G-7	TERRAIN EVALUATION MAP		
DRAWING G-6	BEDROCK GEOLOGY MAP		
DRAWING G-5	QUATERNARY GEOLOGY MAP	DRAWING G-15	CLOSURE CONCEPT
DRAWING G-4	EXISTING THERMISTOR INSTALLATION PLAN	DRAWING G-14	SITE MONITORING STATION LOCATIONS
DRAWING G-3	SITE INVESTIGATION MAP	DRAWING G-12	GENERAL ARRANGEMENT APRIL 2008
DRAWING G-2	SITE VICINITY MAP	DRAWING G-11	GENERAL ARRANGEMENT APRIL 2007
DRAWING G-1	PROJECT LOCATION AND DRAWING INDEX	DRAWING G-10	GENERAL ARRANGEMENT APRIL 2006

REFERENCE DRAWINGS

No.	DESCRIPTION	CHK'D	APP'D	DATE

REVISIONS

REV.	ISSUE PURPOSE	AUTH. BY	DATE
A	WATER LICENSE APPLICATION	CCS	JULY 2004

ISSUE AUTHORIZATION

WATER LICENSE APPLICATION

SRK Consulting
Engineers and Scientists

DESIGNED BY: CCS	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 Diamond Corporation

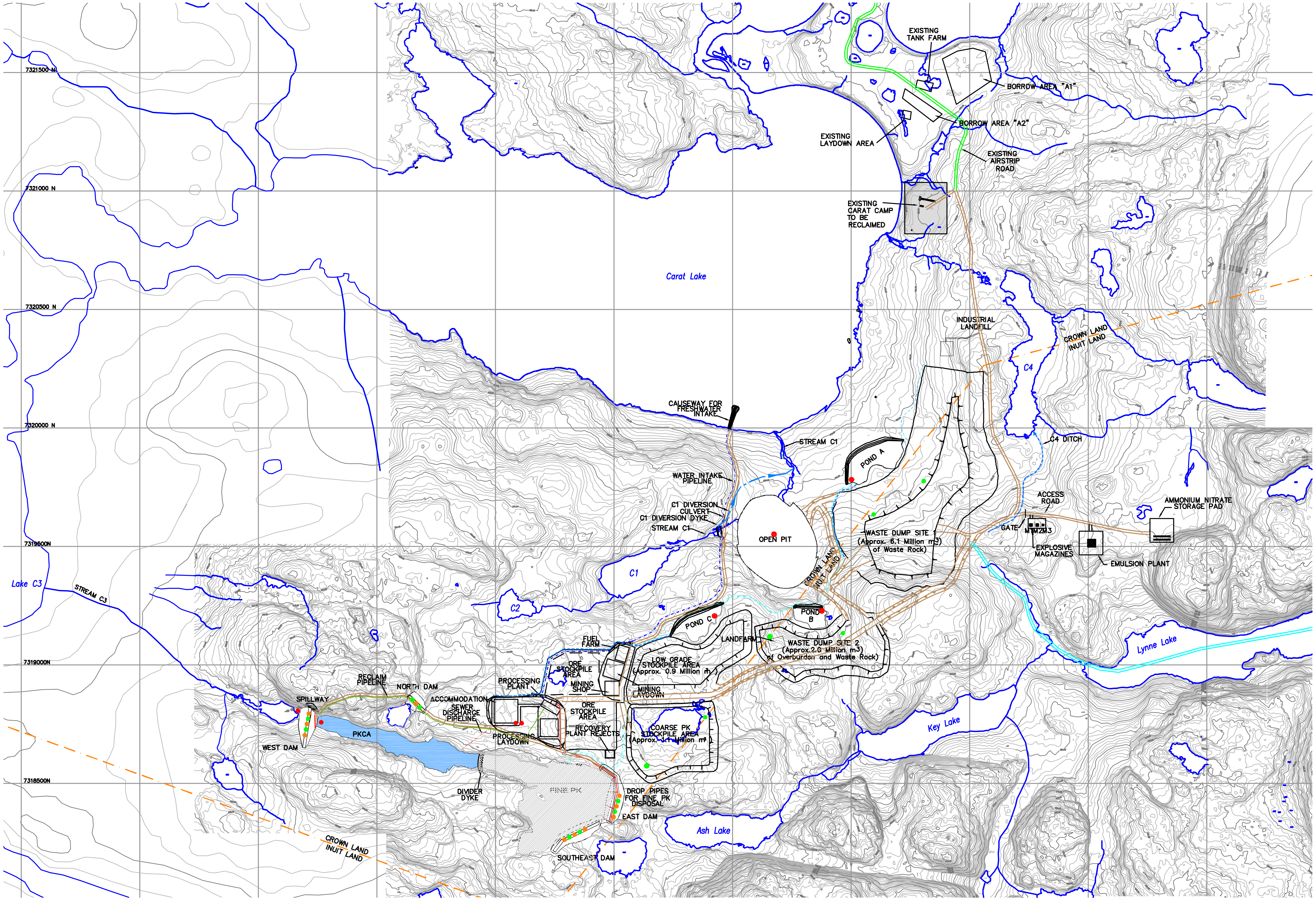
JERICHO PROJECT

GENERAL ARRANGEMENT AT END OF DECEMBER 2013

DRAWING NUMBER: 1CT004.06 – G13

REV.: A

FILE NAME: F:\Tahera Corp (Lytton minerals)\Mapping and Drawings-2004 dwgs\general-figures(2004)\figureGA-year1



LEGEND

- EXISTING ROAD
- EXISTING ROAD (APPROXIMATE LOCATION)
- ROAD REQUIRED BY YEAR 7
- WINTER ROAD
- FRESH WATER PIPELINE
- MINE WATER PIPELINE
- FINE PK DISCHARGE PIPELINE
- RECLAIM PIPELINE
- SEWER PIPELINE
- PKCA DISCHARGE PIPELINE
- DITCH
- WATER QUALITY MONITORING STATION
- THERMISTOR STATION (EXACT LOCATION YET TO BE DETERMINED)
- SURVEY MONUMENT

NOTES:

1. LAYOUTS ARE APPROXIMATE AND MAY NOT REFLECT ACTUAL SIZE AND FOOTPRINT LOCATIONS

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

0 100 200 300 400 500 METRES
1:8000

DRAWING NO.	DRAWING TITLE	DRAWING NO.	
DRAWING G-9	AMMONIUM NITRATE STORAGE LAYOUT		
DRAWING G-8	BORROW AREAS PLAN & SECTION		
DRAWING G-7	TERRAIN EVALUATION MAP		
DRAWING G-6	BEDROCK GEOLOGY MAP		
DRAWING G-5	QUATERNARY GEOLOGY MAP	DRAWING G-15	CLOSURE CONCEPTS
DRAWING G-4	EXISTING THERMISTOR INSTALLATION PLAN	DRAWING G-13	GENERAL ARRANGEMENTS DEC 2014
DRAWING G-3	SITE INVESTIGATION MAP	DRAWING G-12	GENERAL ARRANGEMENT APRIL 2008
DRAWING G-2	SITE VICINITY MAP	DRAWING G-11	GENERAL ARRANGEMENT APRIL 2007
DRAWING G-1	PROJECT LOCATION AND DRAWING INDEX	DRAWING G-10	GENERAL ARRANGEMENT APRIL 2006

REFERENCE DRAWINGS

No.	DESCRIPTION	CHK'D	APP'D	DATE

REVISIONS

REV.	ISSUE PURPOSE	AUTH. BY	DATE
A	WATER LICENSE APPLICATION	CCS	JULY 2004

ISSUE AUTHORIZATION

WATER LICENSE APPLICATION

SRK Consulting
Engineers and Scientists

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

SRK PROJECT NUMBER: 1CT004.06

Tahera Diamond Corporation

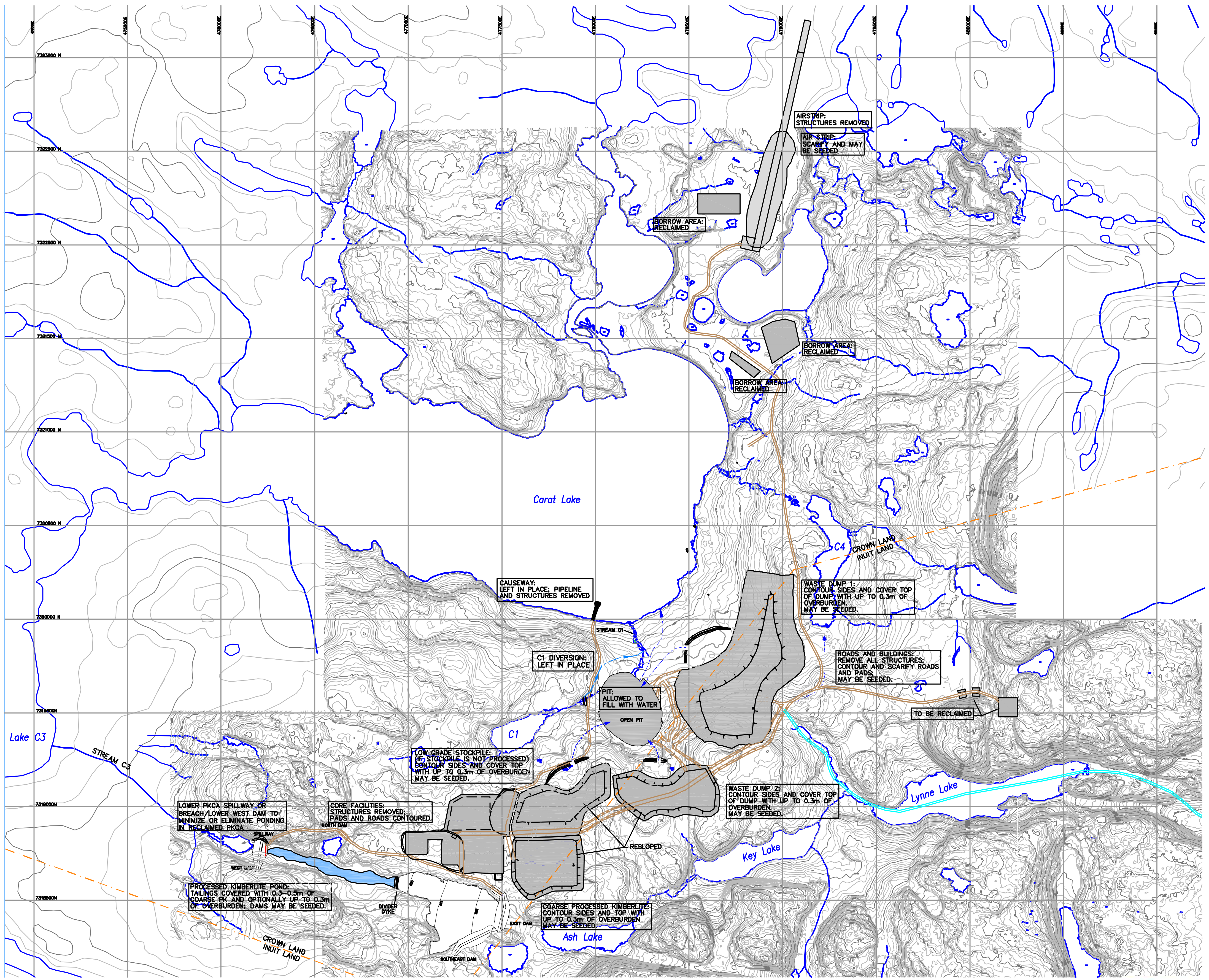
JERICHO PROJECT

SITE MONITORING STATION LOCATIONS

DRAWING NUMBER: 1CT004.06 – G14

REV. A

FILE NAME: F:\Tahera Corp (Lytton minerals)\Mapping and Drawings-2004 dwgs\general-figures(2004)\figure6A-year1



N

LEGEND

- ROAD AT CLOSURE
- WINTER ROAD
- FRESH WATER PIPELINE

NOTES ON CLOSURE ACTIVITIES:

1. BREACH DYKES AT PONDS A, B AND C. DIVERT RUNOFF TO OPEN PIT.
2. OPEN PIT TO TAKE UP TO 19 YEARS TO FILL, BUT OPTIONS EXIST TO FILL IT QUICKER.
3. AFTER OPEN PIT FILLS: OVERFLOW TO DISCHARGE INTO STREAM C1 OR INTO CONSTRUCTED CHANNEL DISCHARGING ALONG EAST SHORE OF CARAT LAKE. (LOCATION SHOWN IS CONCEPTUAL ONLY)
4. LOWER PKCA SPILLWAY OR BREACH/LOWER WEST DAM TO MINIMIZE OR ELIMINATE PONDING IN RECLAIMED PKCA.

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

0 150 300 450 600 750 METRES
1:11,000

REFERENCE DRAWINGS

DRAWING NO.	DRAWING TITLE	DRAWING NO.	
DRAWING G-9	AMMONIUM NITRATE STORAGE LAYOUT		
DRAWING G-8	BORROW AREAS PLAN & SECTION		
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-13	GENERAL ARRANGEMENT APRIL 2013
DRAWING G-3	SITE INVESTIGATION MAP	DRAWING G-12	GENERAL ARRANGEMENT APRIL 2008
DRAWING G-2	SITE VICINITY MAP	DRAWING G-11	GENERAL ARRANGEMENT APRIL 2007
DRAWING G-1	PROJECT LOCATION AND DRAWING INDEX	DRAWING G-10	GENERAL ARRANGEMENT APRIL 2006

REVISIONS

No.	DESCRIPTION	CHK'D	APP'D	DATE

ISSUE AUTHORIZATION

REV.	ISSUE PURPOSE	AUTH.	BY	DATE
A	WATER LICENSE APPLICATION	CCS		JULY 2004

WATER LICENSE APPLICATION

SRK Consulting
Engineers and Scientists

DESIGNED BY: CCS DATE: JULY 2004	DRAWN BY: JM DATE: JULY. 2004
CHECKED BY: CCS DATE: JULY 2004	DISCIP. ENGR. DATE:
PROJ. MGR: DATE	PROJ. ENGR. DATE
SRK PROJECT NUMBER: 1CT004.06	

Tahera Diamond Corporation

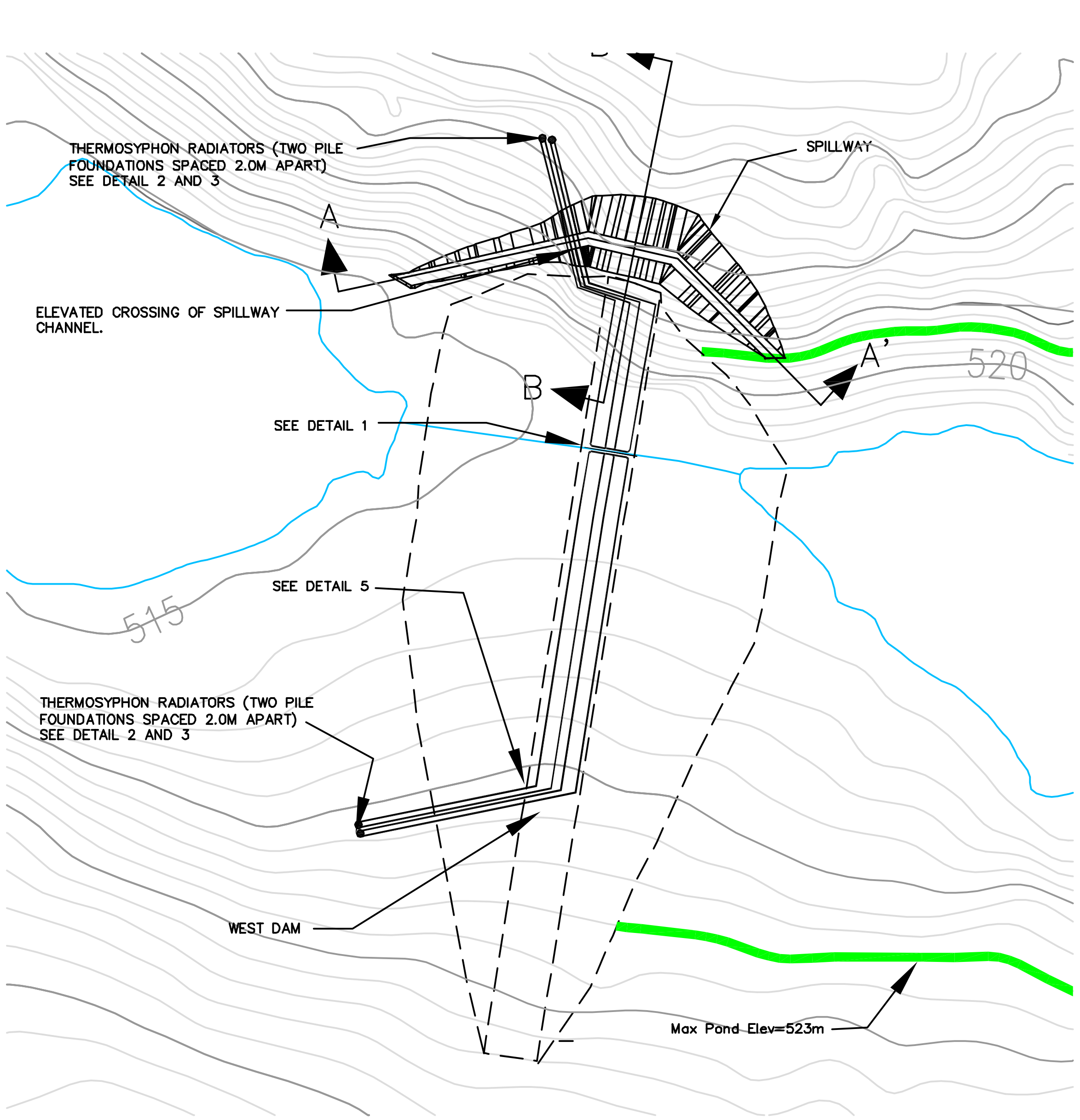
JERICHO PROJECT

CLOSURE CONCEPTS

DRAWING NUMBER: 1CT004.06 – G15

REV. A

FILE NAME: F:\Tahera Corp (Lytton minerals)\Mapping and Drawings-2004 dwgs\general-figures(2004)\figureGA-year1



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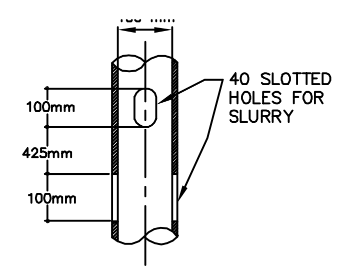
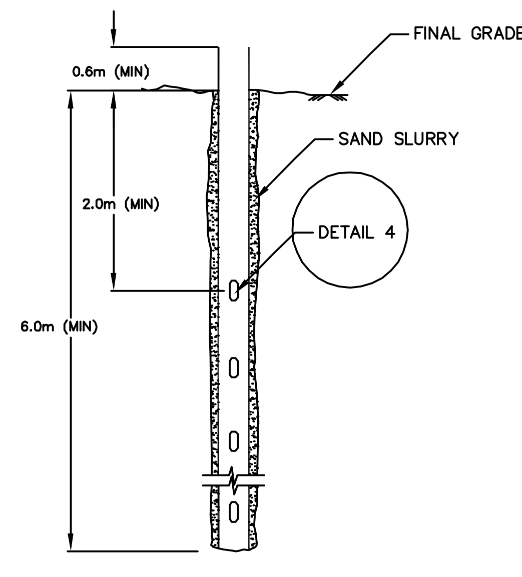
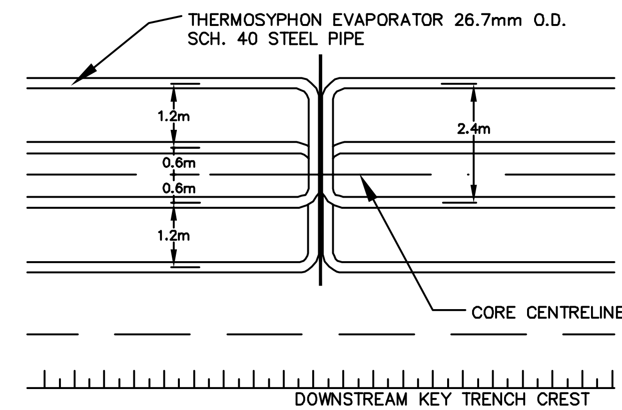


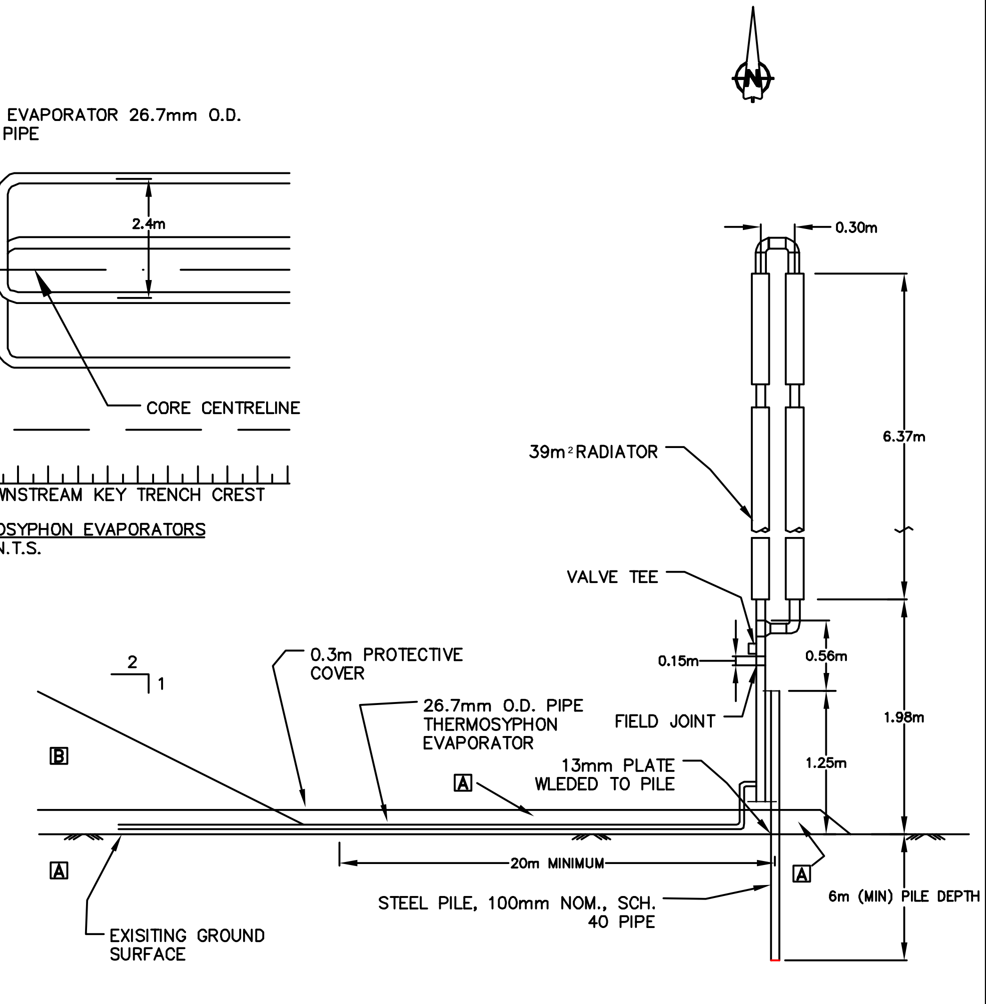
DETAIL 4 – SLURRY HOLES
N.T.S.



DETAIL 3 – RADIATOR PILE SUPPORT AND SLURRY HOLES
N.T.S.



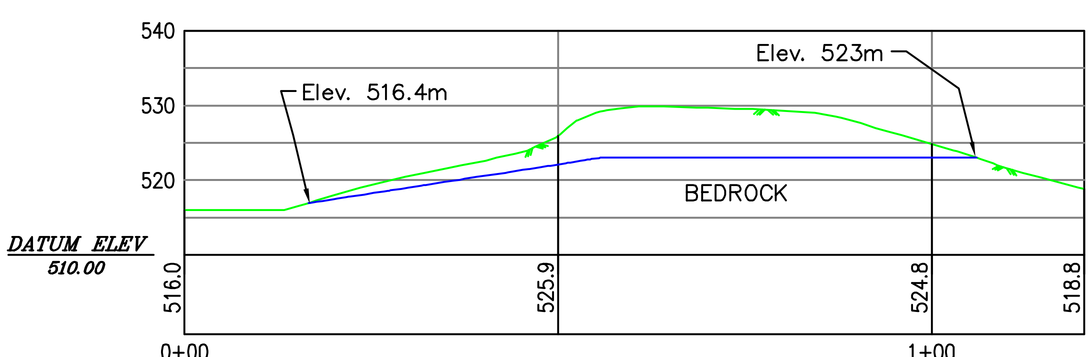
DETAIL 1 – THERMOSYPHON EVAPORATORS
N.T.S.



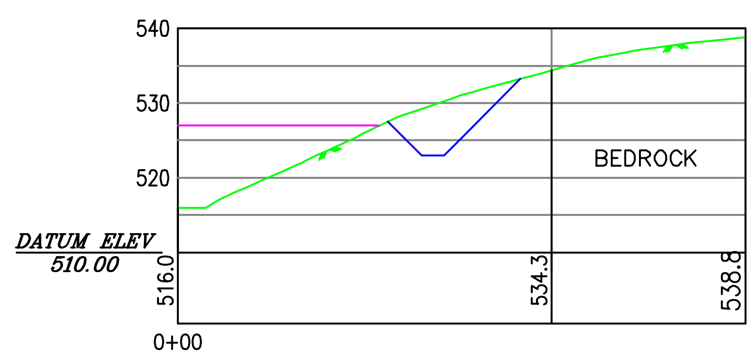
DETAIL 2 – DOWNSTREAM TOE
N.T.S.

MATERIALS:

- [A] MINUS 10mm MATERIAL
- [B] MINUS 150mm MATERIAL
- [C] RUN–OF–MINE SHELL MATERIAL
- [D] COARSE PK AND/OR RUN–OF–MINE SHELL MATERIAL

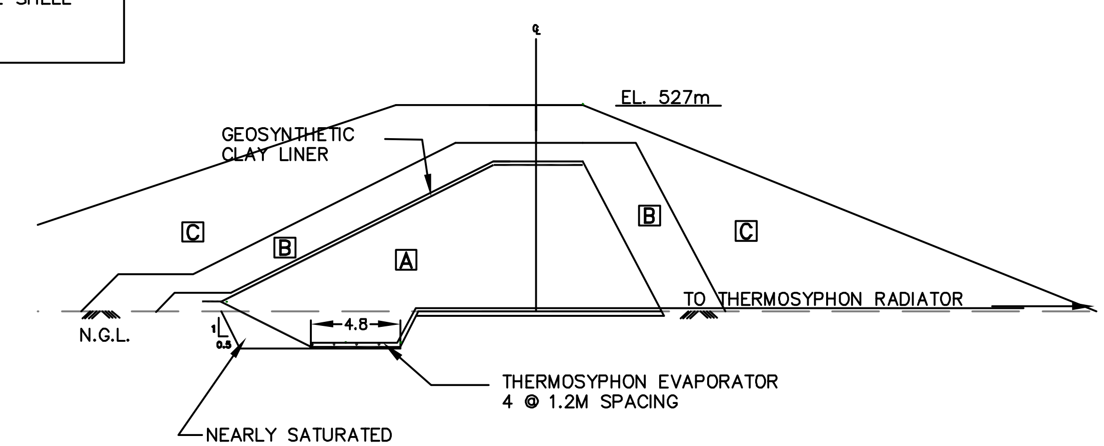


WEST DAM SPILLWAY
SECTION–A



SCALE 1:500

WEST DAM SPILLWAY
SECTION–B



DETAIL 5 – WEST DAM SECTION
SCALE 1:200

DRAWING NO.	DRAWING TITLE	DRAWING NO.	DRAWING TITLE
DRAWING P–10	PKCA MONITORING PLAN AND SECTIONS		
DRAWING P–9	CONSTRUCTION SEQUENCE		
DRAWING P–7	TYPICAL DAM CROSS SECTION AND DETAILS		
DRAWING P–6	SOUTHEAST DAM GEOLOGIC CROSS SECTIONS		
DRAWING P–5	EAST DAM GEOLOGIC CROSS SECTIONS		
DRAWING P–4	NORTH DAM GEOLOGIC CROSS SECTIONS		
DRAWING P–3	WEST DAM GEOLOGIC CROSS SECTIONS		
DRAWING P–2	SITE INVESTIGATION AND TERRAIN MAP		
DRAWING P–1	LAYOUT OF THE PKCA	DRAWING P–11	PIPELINE PLAN AND LONG SECTION

REFERENCE DRAWINGS

NO.	DESCRIPTION	CHK'D	APP'D	DATE

REVISIONS

REV.	ISSUE PURPOSE	AUTH. BY	DATE
A	WATER LICENSE APPLICATION	DL	JULY 2004

ISSUE AUTHORIZATION

WATER LICENSE APPLICATION

SRK Consulting

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

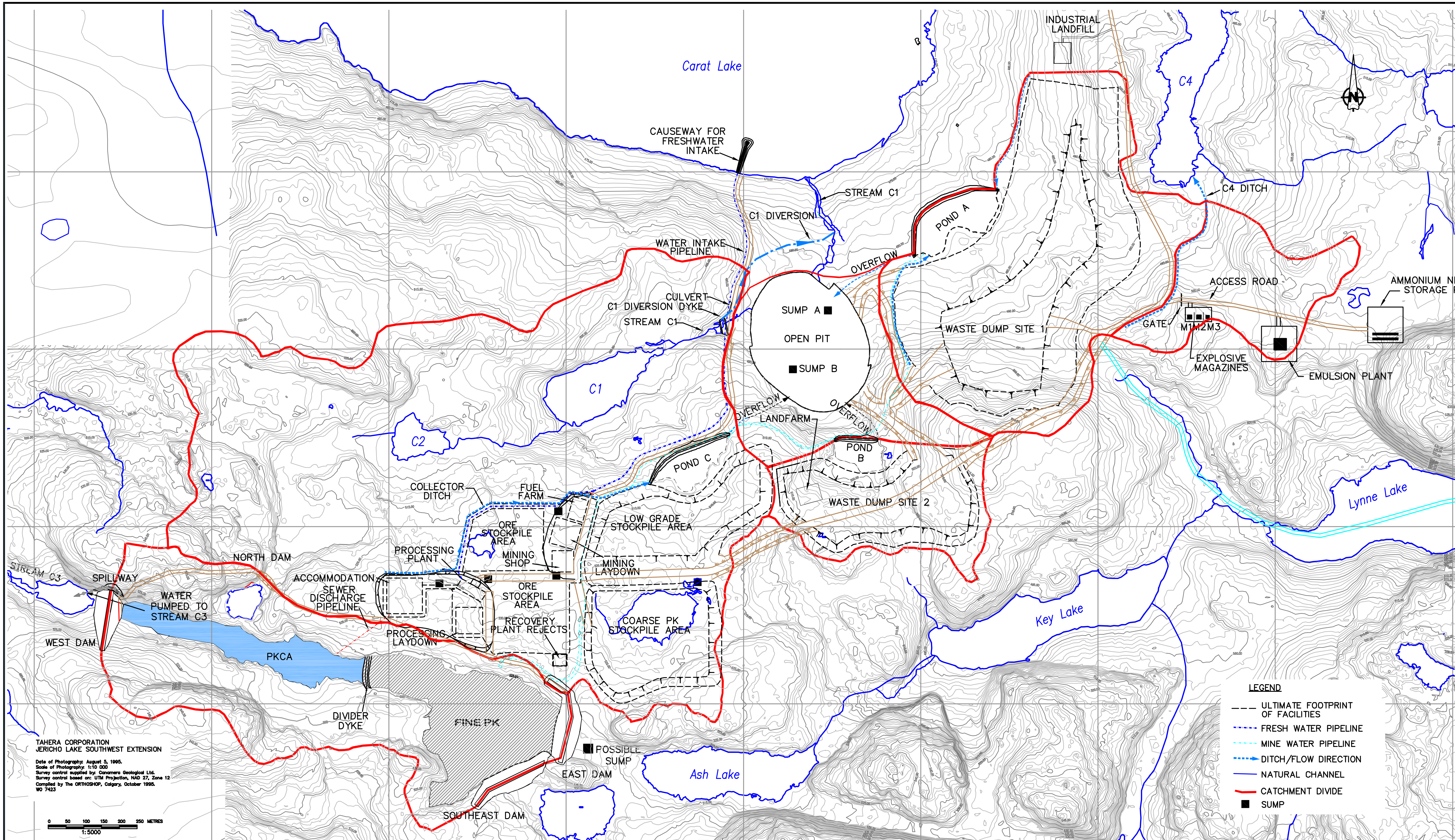
Tahera Diamond Corporation

JERICHO PROJECT

WEST DAM SPILLWAY AND THERMOSYPHON SECTIONS & DETAILS

DRAWING NUMBER: 1CT004.06 – P8

REV. A



REFERENCE DRAWINGS

DRAWING NO.	DRAWING TITLE
DRAWING W-6	PRELIMINARY LAYOUT OF CAUSEWAY AND SECTIONS
DRAWING W-5	PRELIMINARY LAYOUT OF PONDS B AND C CROSS SECTIONS AND DETAILS
DRAWING W-4	PRELIMINARY LAYOUT OF POND A CROSS SECTIONS AND DETAILS
DRAWING W-3	C1 DIVERSION DETAILS
DRAWING W-2	C1 DIVERSION PLAN AND SECTIONS

REVISIONS

NO.	DESCRIPTION	CHK'D	APP'D	DATE

ISSUE AUTHORIZATION

REV.	ISSUE PURPOSE	AUTH.	BY	DATE
A	WATER LICENSE APPLICATION	CCS		JULY 2004

WATER LICENSE APPLICATION

SRK Consulting
Engineers and Scientists

DESIGNED BY: CCS DATE: JULY 2004	DRAWN BY: JM DATE: JULY 2004
CHECKED BY: CCS DATE: JULE 2004	DISCIP. ENGR. DATE:
PROJ. MGR: DATE	PROJ. ENGR. DATE
SRK PROJECT NUMBER: 1CT004.06	

Tahera Diamond Corporation

JERICHO PROJECT

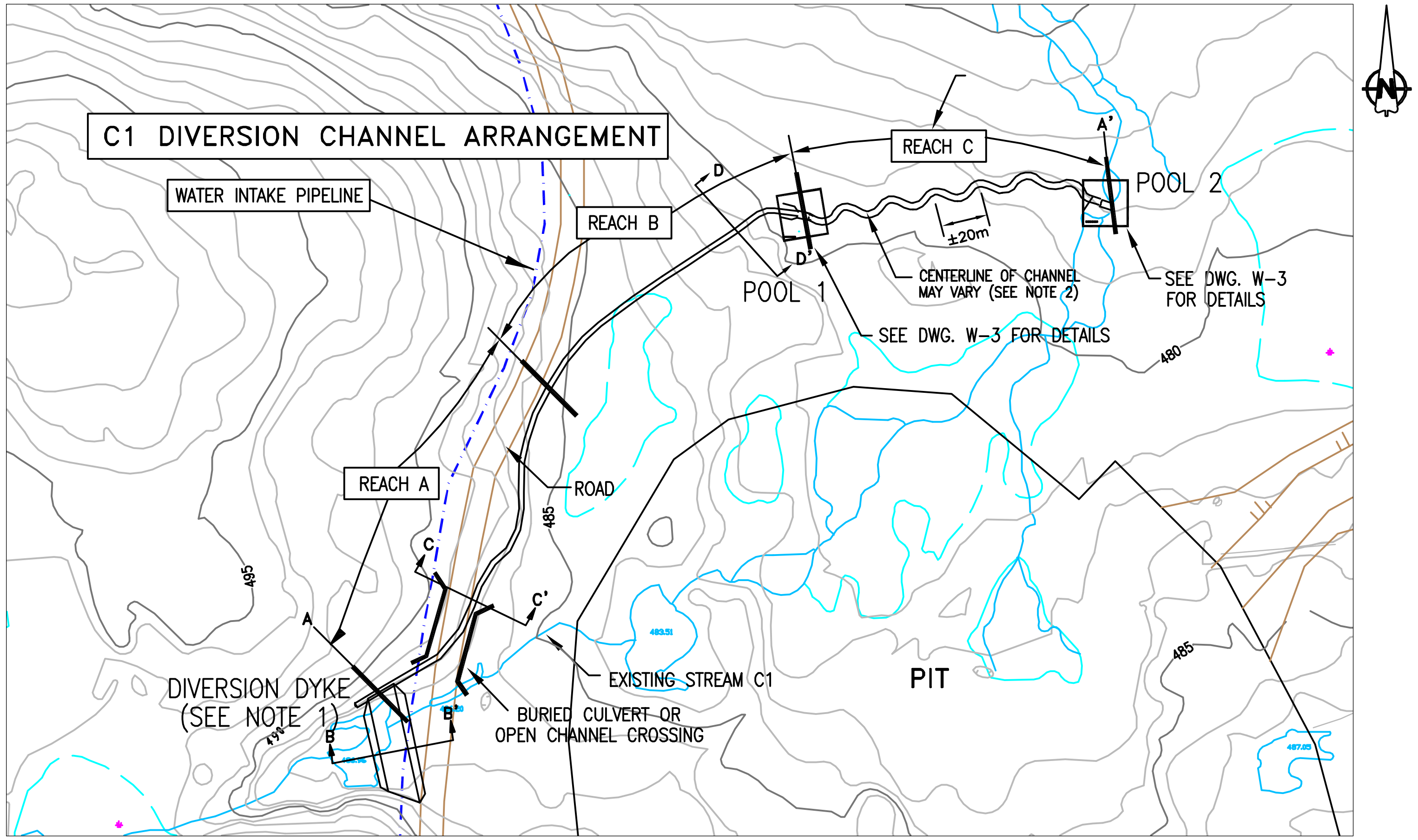
LAYOUT OF WATER MANAGEMENT FACILITIES

DRAWING NUMBER: 1CT004.06 – W1

REV.: A

FILE NAME: F:\Tahera Corp (Lytton minerals)\Mapping and Drawings–2004 dwgs\general–figures(2004)\figureGA–year1

C1 DIVERSION CHANNEL ARRANGEMENT

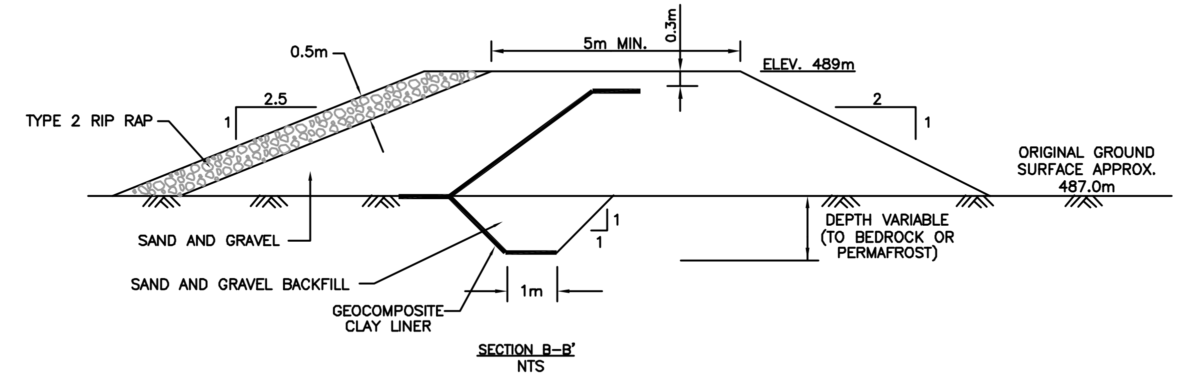


NOTE 1:
C1 DIVERSION TO BE CONSTRUCTED PRE-STARTUP

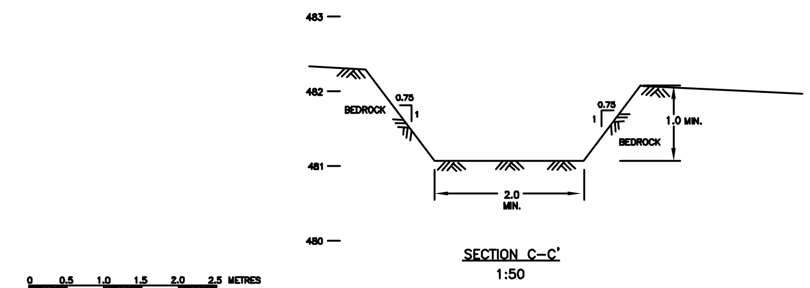
NOTE 2:
FINAL LAYOUT TO BE FIELD-FIT BASED ON SITE SPECIFIC CONDITIONS.

TAHERA CORPORATION
JERICHO LAKE SOUTHWEST EXTENSION
Plotted Scale 1:1,500
Date of Photography: August 5, 1995.
Scale of Photography: 1:5,000
Survey control supplied by: Conamera Geological Ltd.
Survey control based on: UTM Projection, NAD 27, Zone 12
Compiled by: The ORTHOSHOP, Calgary, October 1995.
WO 7423

0 25 50 75 100 125 METRES
1:1,500

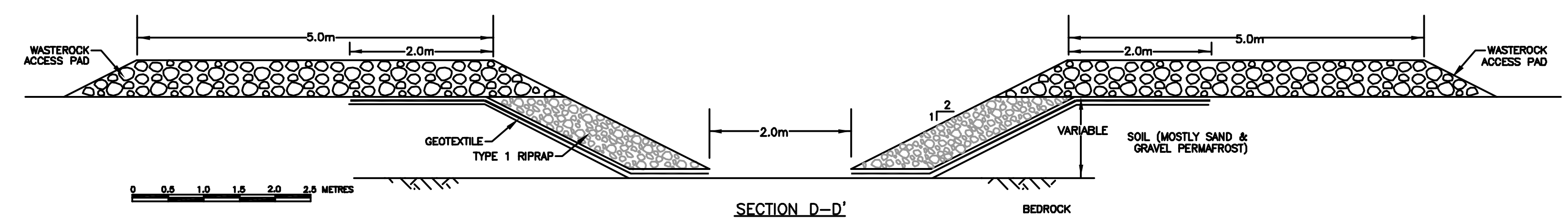


SECTION B-B'
NTS

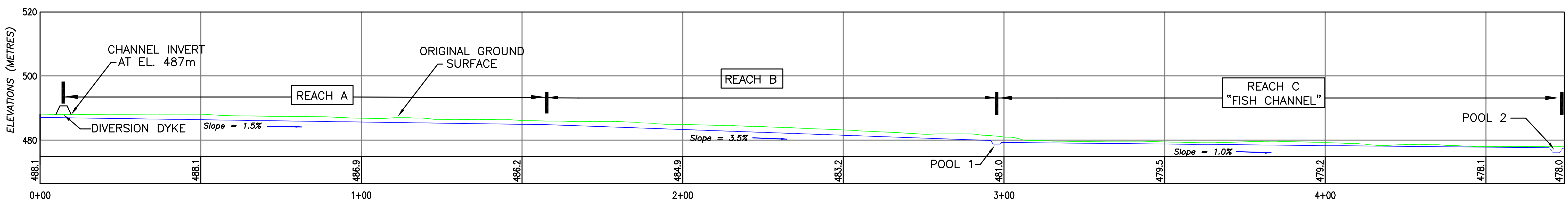


SECTION C-C'
1:50

NOTE 3:
ACTUAL DIMENSIONS AND SLOPES WILL VARY DEPENDING ON ACTUAL CONDITIONS FOLLOWING DRILLING AND BLASTING.



SECTION D-D'
1:50



0 10 20 30 40 50 METRES

PROFILE A-A' THROUGH CENTERLINE OF DIVERSION CHANNEL
SCALE: 1:600

DRAWING NO.	DRAWING TITLE
DRAWING W-6	PRELIMINARY LAYOUT OF CAUSEWAY SECTIONS AND DETAILS
DRAWING W-5	PRELIMINARY LAYOUT OF PONDS B AND C CROSS SECTIONS AND DETAILS
DRAWING W-4	PRELIMINARY LAYOUT OF POND A CROSS SECTIONS AND DETAILS
DRAWING W-3	C1 DIVERSION DETAILS
DRAWING W-1	LAYOUT OF WATER MANAGEMENT FACILITIES

REFERENCE DRAWINGS

NO.	DESCRIPTION	CHK'D	APP'D	DATE

REVISIONS

REV.	ISSUE PURPOSE	AUTH. BY	DATE
A	WATER LICENSE APPLICATION	CCS	JULY 2004

ISSUE AUTHORIZATION

WATER LICENSE APPLICATION

SRK Consulting
Engineers and Scientists

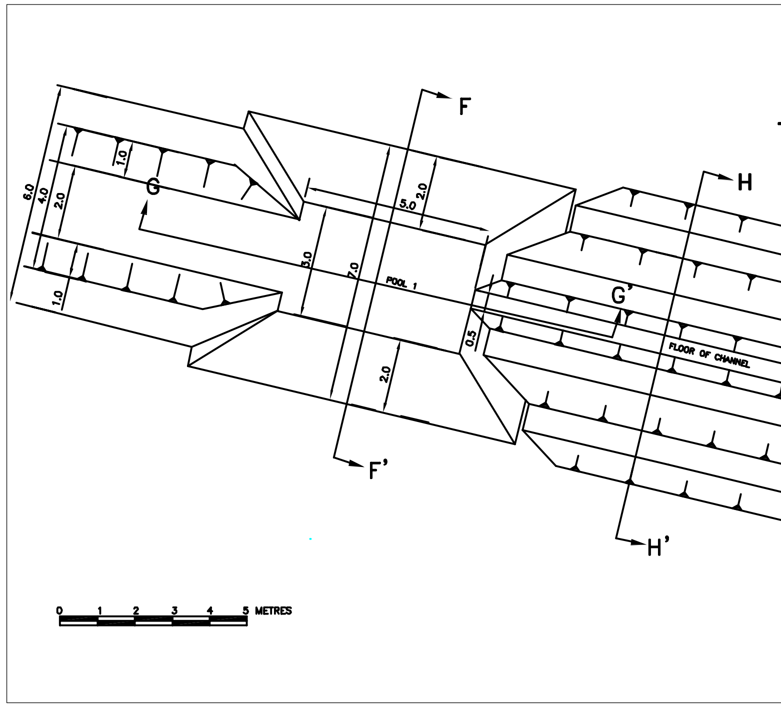
DESIGNED BY: CCS	DRAWN BY: JM
DATE: JULY 2004	DATE: JULY, 2004
CHECKED BY: CCS	DISCIP. ENGR.
DATE: JULY 2004	DATE:
PROJ. MGR:	PROJ. ENGR.
DATE	DATE
SRK PROJECT NUMBER: 1CT004.06	

Tahera Diamond Corporation
JERICHO PROJECT

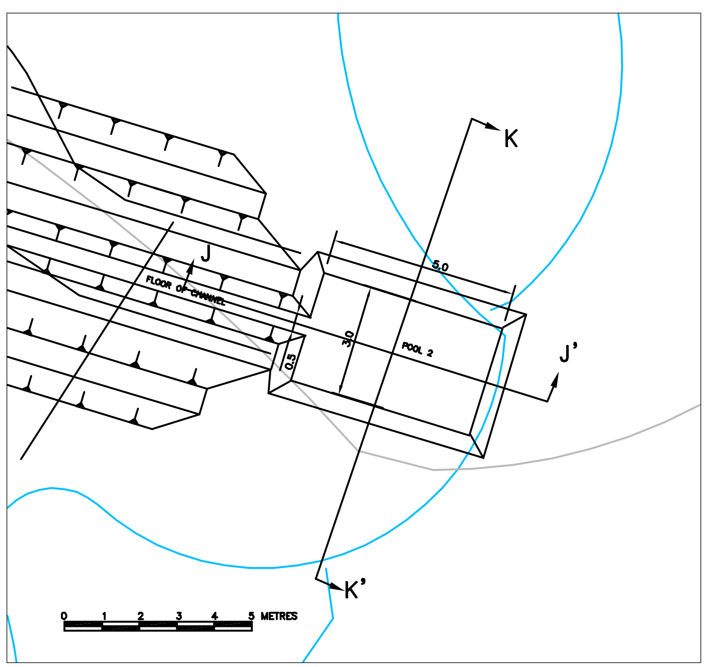
C1 DIVERSION
PLAN AND CROSS SECTIONS

DRAWING NUMBER: 1CT004.06 – W-2
REV. A

FILE NAME: P:\Tahera Corp (Lytton minerals)\Mapping and Drawings-2004 dwgs\figure 3



POOL 1
1:100

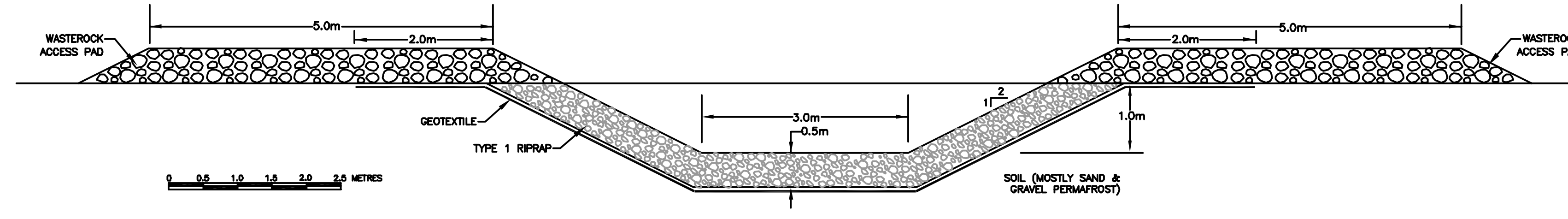


POOL 2
1:100

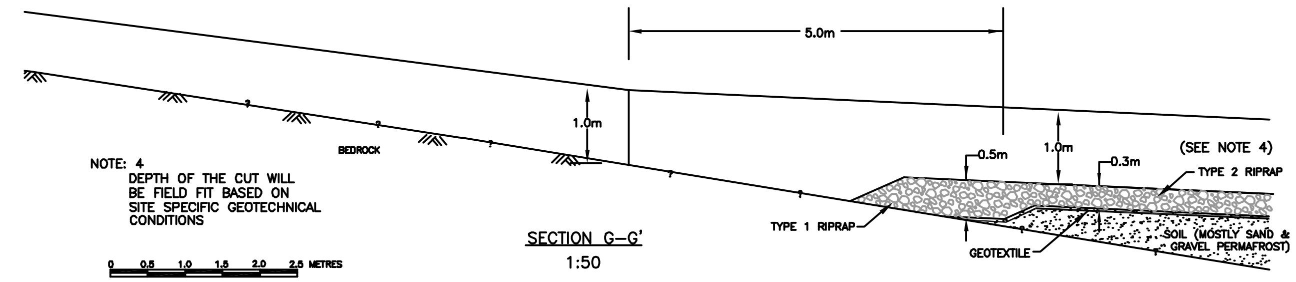
RIPRAP DETAILS		
TYPE	D_{50}	APPROXIMATE RANGE
1	250mm	100 – 300mm
2	60mm	25 – 100mm

NOTE 1:
C1 DIVERSION TO BE CONSTRUCTED PRE–STARTUP

NOTE 2:
FINAL LAYOUT TO BE FIELD–FIT BASED ON SITE SPECIFIC CONDITIONS.



SECTION F–F'
1:50



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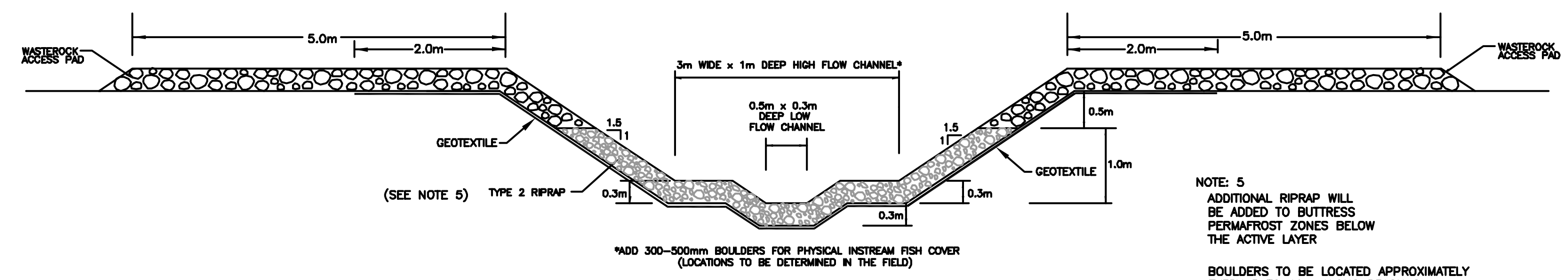
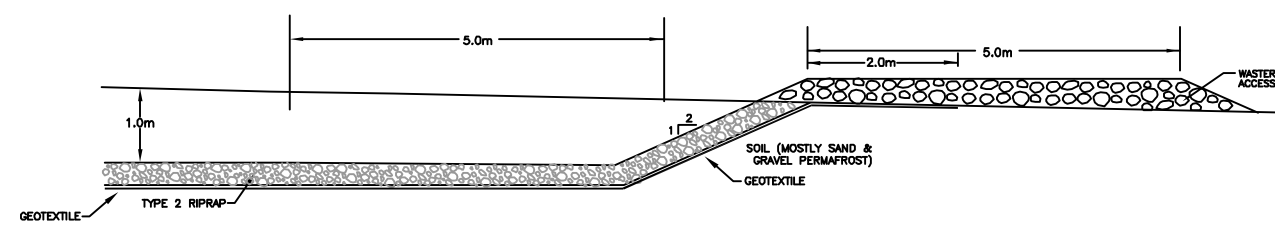
1:50



SECTION H–H' (REACH C "FISH CHANNEL" TYPICAL)
NTS



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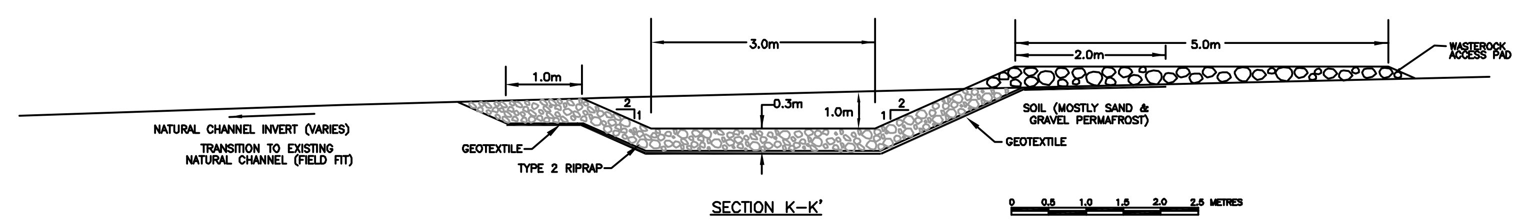


SECTION K–K'
1:50

DRAWING NO.	DRAWING TITLE
DRAWING W–6	PRELIMINARY LAYOUT OF CAUSEWAY SECTIONS AND DETAIL
DRAWING W–5	PRELIMINARY LAYOUT OF PONDS B AND C CROSS SECTIONS AND DETAILS
DRAWING W–4	PRELIMINARY LAYOUT OF POND A CROSS SECTIONS AND DETAILS
DRAWING W–2	C1 DIVERSION PLAN AND CROSS SECTIONS
DRAWING W–1	LAYOUT OF WATER MANAGEMENT FACILITIES

REFERENCE DRAWINGS

NO.	DESCRIPTION	CHK'D	APP'D	DATE

REVISIONS

REV.	ISSUE PURPOSE	AUTH. BY	DATE
A	WATER LICENSE APPLICATION	CCS	JUNE 2004

ISSUE AUTHORIZATION

WATER LICENSE APPLICATION

SRK Consulting

DESIGNED BY: DL | DATE: JUNE 2004
DRAWN BY: JM | DATE: MAR. 2004
CHECKED BY: CCS | DATE: JUNE 2004
DISCIP. ENGR. | DATE:
PROJ. MGR: | DATE
PROJ. ENGR. | DATE
SRK PROJECT NUMBER: 1CT004.06

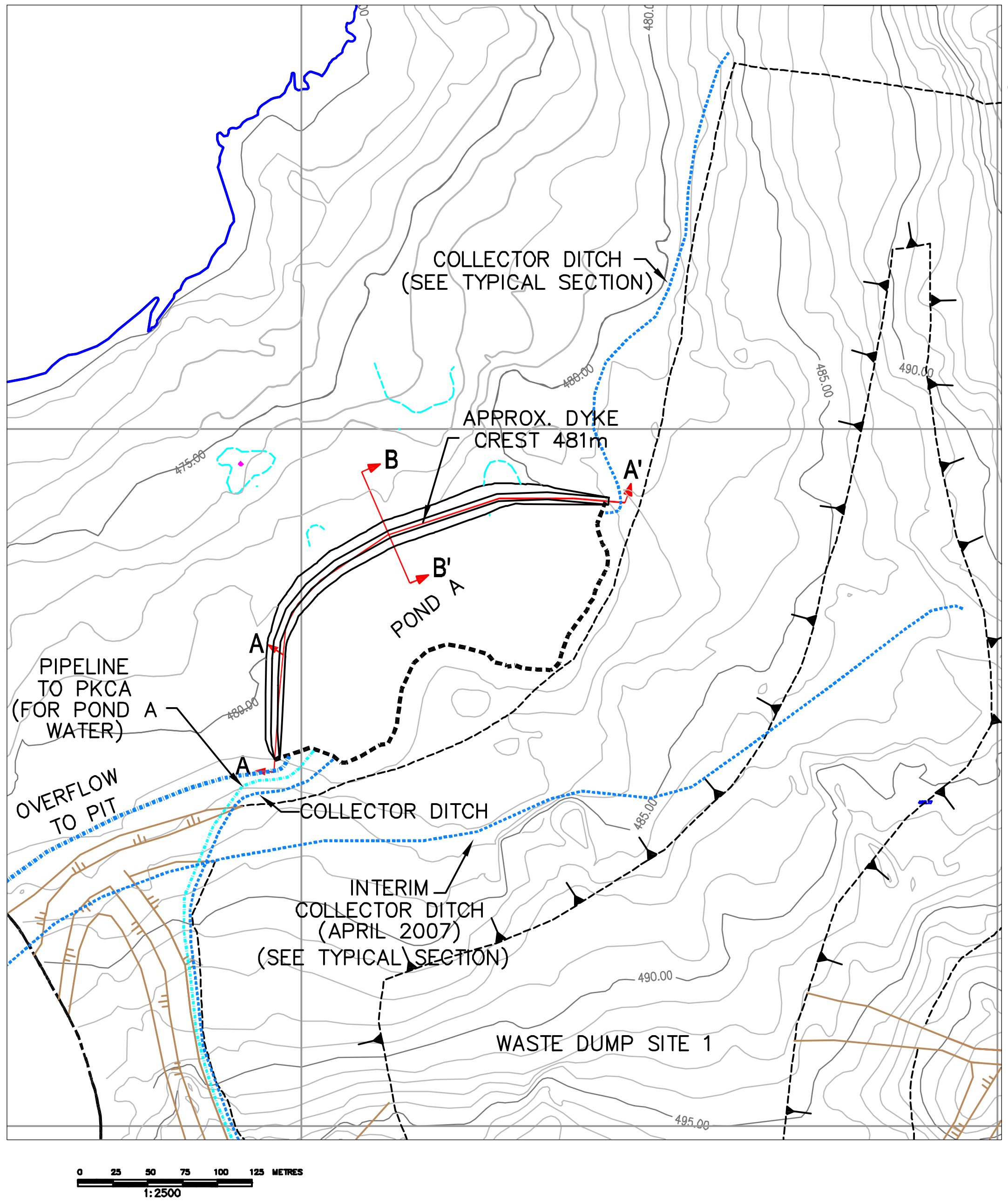
Tahera Diamond Corporation

JERICHO PROJECT

C1 DIVERSION CHANNEL DETAILS

DRAWING NUMBER: 1CT004.06 – W–3

REV. A

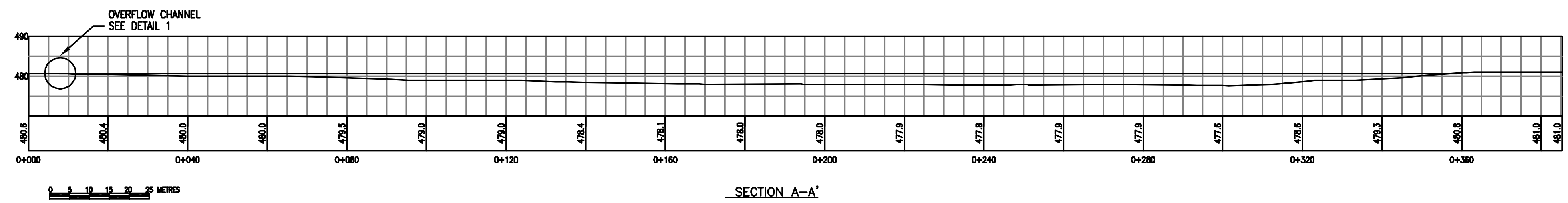


TAHERA CORPORATION
JERICHO LAKE SOUTHWEST EXTENSION

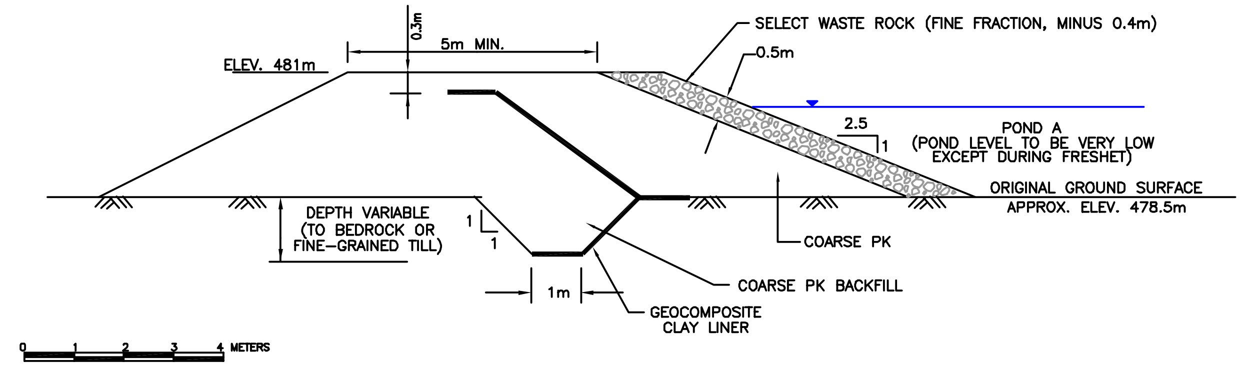
Date of Photography: August 5, 1995.
Scale of Photography: 1:10 000
Survey control supplied by: Canamera Geological Ltd.
Survey control based on: UTM Projection, NAD 27, Zone 12
Compiled by The ORTHOSHOP, Calgary, October 1995.
WO 7423

NOTE:

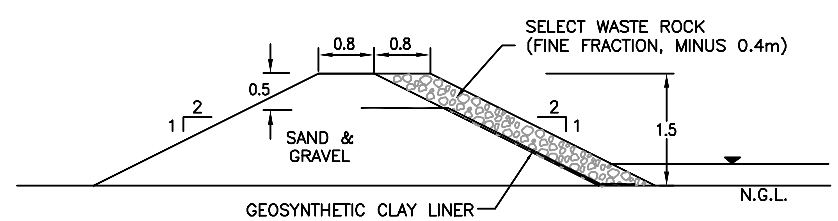
1. DRAWING SHOWS CONCEPTUAL SIZE AND LOCATION OF POND A IF REQUIRED, POND A WILL BE CONSTRUCTED BEFORE APRIL 2008.
2. DITCH ALIGNMENT AND SECTION TO BE FIELD FIT CONSISTENT WITH LOCAL GROUND CONDITIONS



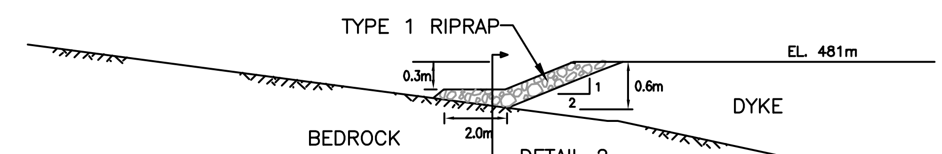
SECTION A–A'
1:750



SECTION B–B' (TYPICAL DYKE SECTION)
1:75



COLLECTOR AND INTERIM COLLECTOR DITCHES – TYPICAL SECTION
NTS



NOTE:

OVERFLOW CHANNEL DOWNSTREAM OF POND A WILL BE CONTROLLED BY A BERM ON BEDROCK SIMILAR TO THE TYPICAL COLLECTOR DITCH SECTION AND/OR A DITCH EXCAVATED IN THE NATURAL SOIL (DETAIL 2 ON DWG.1CT004.06–W5

DETAIL 1 OVERFLOW CHANNEL AT DYKE
N.T.S.

DRAWING NO.	DRAWING TITLE
DRAWING W–6	PRELIMINARY LAYOUT OF CAUSEWAY SECTIONS AND DETAILS
DRAWING W–5	PRELIMINARY LAYOUT OF PONDS B AND C CROSS SECTIONS AND DETAILS
DRAWING W–3	C1 DIVERSION DETAILS
DRAWING W–2	C1 DIVERSION PLAN AND CROSS SECTIONS
DRAWING W–1	LAYOUT OF WATER MANAGEMENT FACILITIES

REFERENCE DRAWINGS

NO.	DESCRIPTION	CHK'D	APP'D	DATE

REVISIONS

REV.	ISSUE PURPOSE	AUTH.	BY	DATE
A	WATER LICENSE APPLICATION	CSS		JULY 2004

ISSUE AUTHORIZATION

WATER LICENSE APPLICATION

SRK Consulting

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 Diamond Corporation

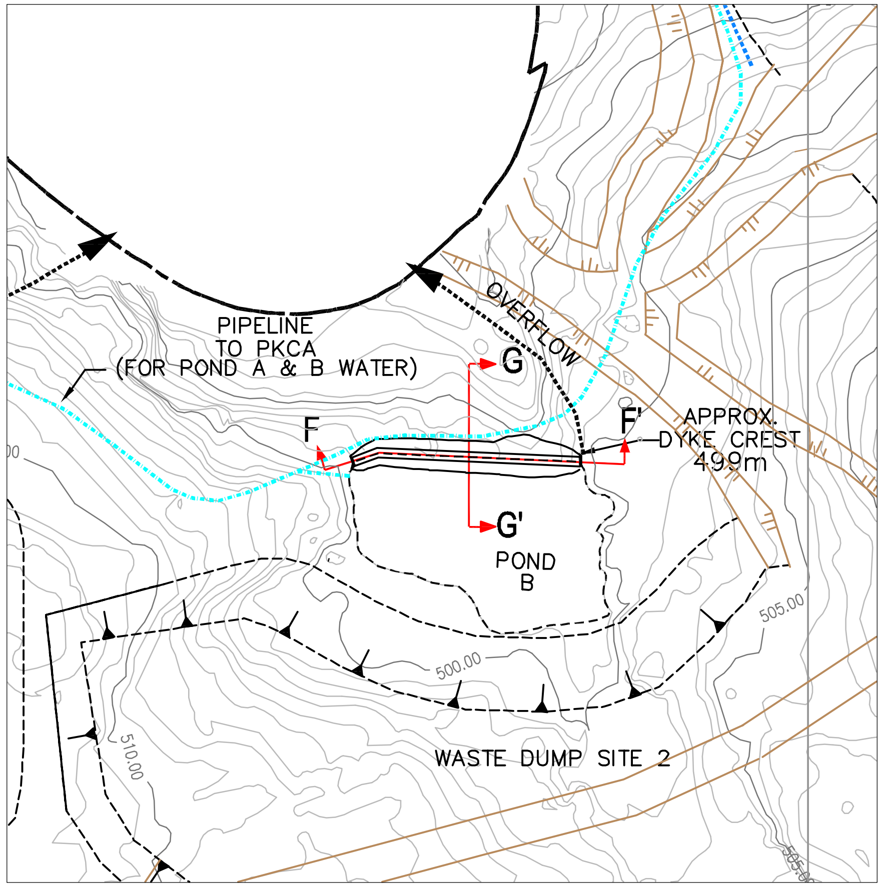
JERICHO PROJECT

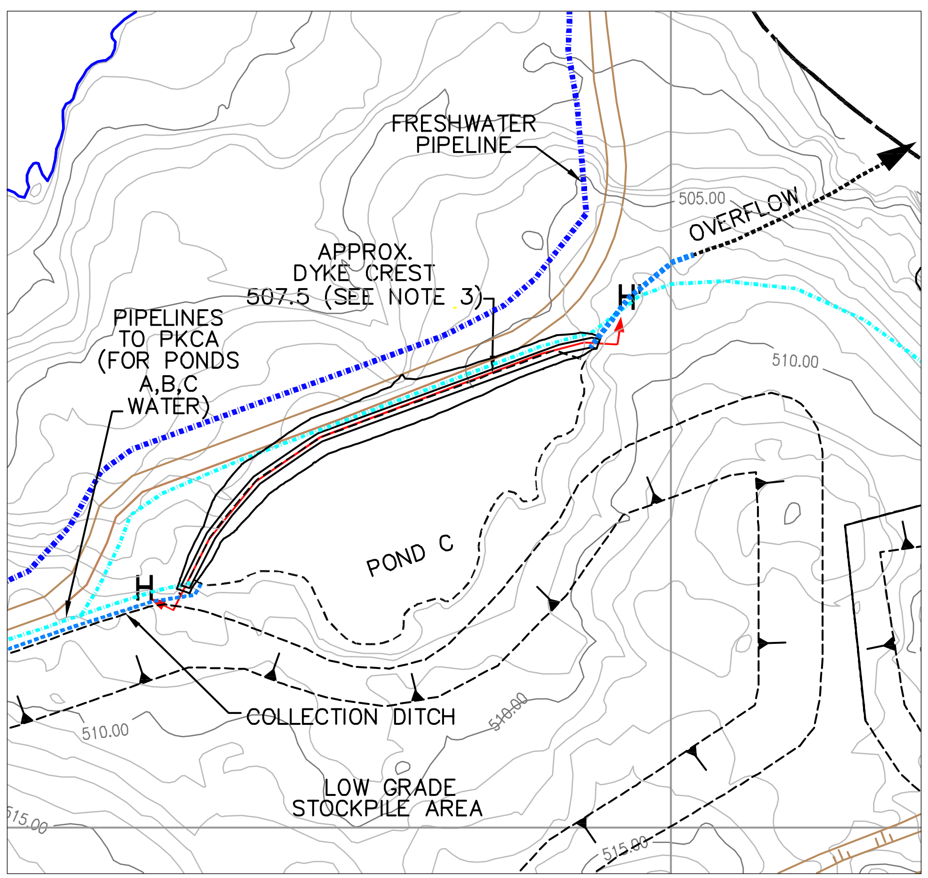
PRELIMINARY
LAYOUT OF POND A
CROSS SECTIONS & DETAILS

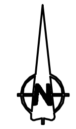
DRAWING NUMBER: 1CT004.06 – W4

REV. A

FILE NAME: F:\Tahera Corp (Lytton minerals)\Mapping and Drawings–2004 dwgs\general–figures(2004)\FIG–2

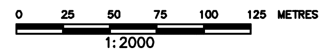


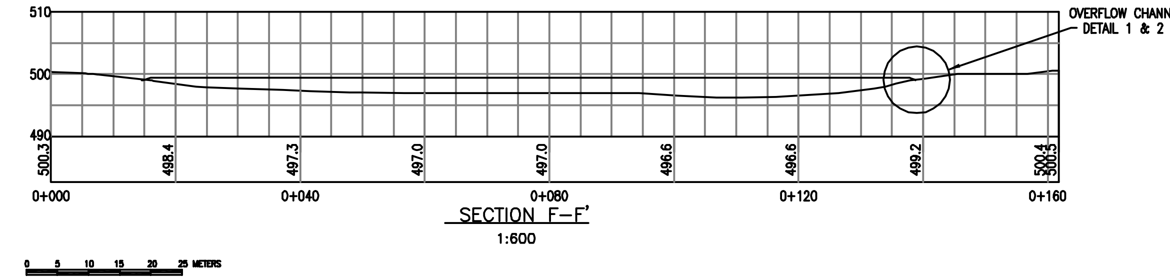




TAHERA CORPORATION
JERICHO LAKE SOUTHWEST EXTENSION

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





SECTION F–F'
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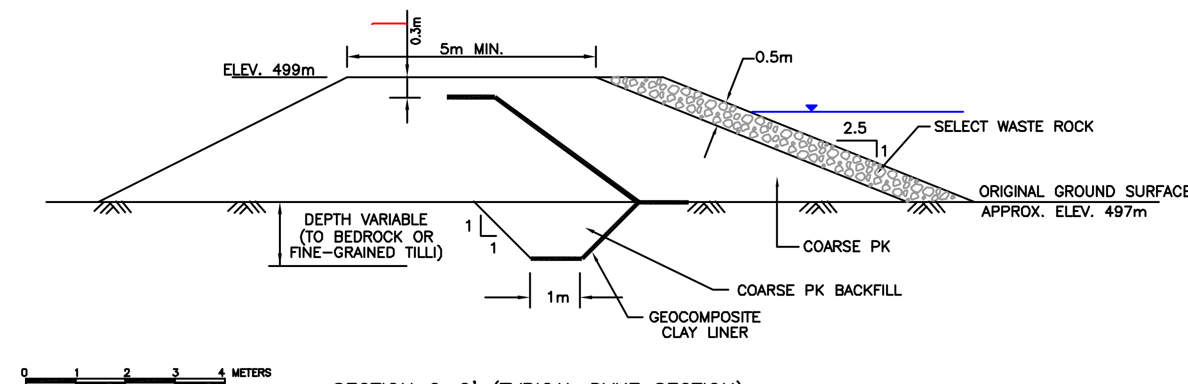
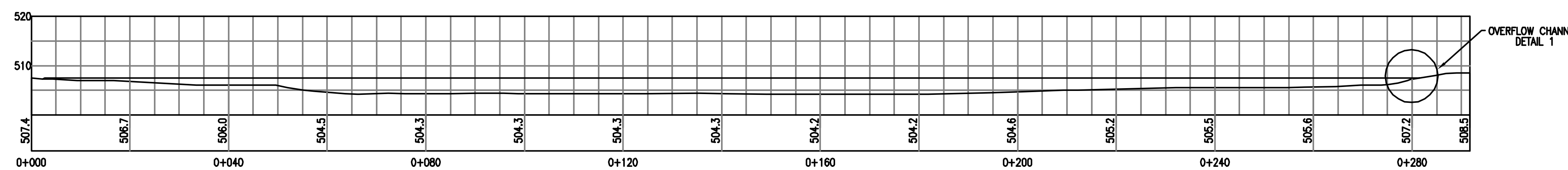


SECTION G–G' (TYPICAL DYKE SECTION)
1:100



SECTION H–H'
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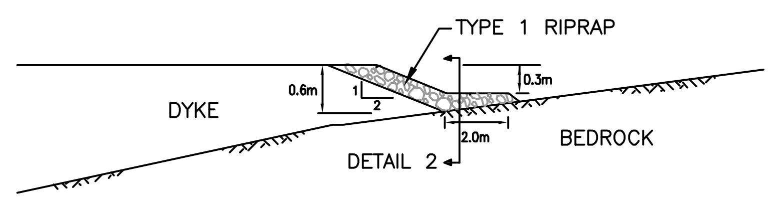
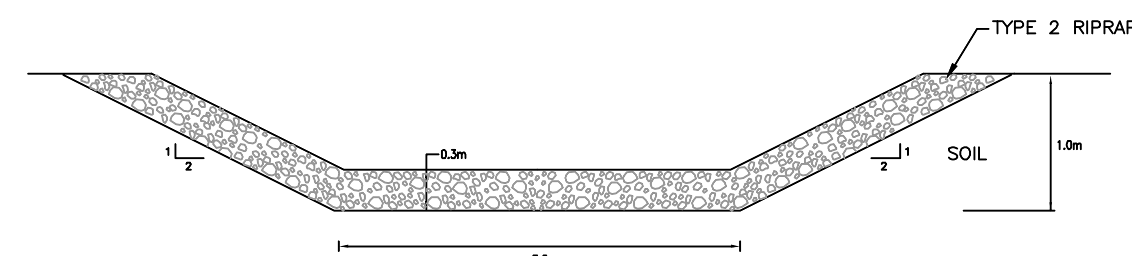


DETAIL 1 (TYPICAL OVERFLOW CHANNEL)
N.T.S.



DETAIL 2 OVERFLOW CHANNEL WHERE SOIL IS >1m THICK
N.T.S.

NOTES:

1. DRAWING SHOWS CONCEPTUAL SIZES AND LOCATIONS.
2. PONDS B & C ARE NOT REQUIRED UNTIL APRIL 2007, FINAL DECISIONS TO BE CONFIRMED IN 2006
3. OVERFLOW CHANNEL DOWNSTREAM OF PONDS B & C WILL BE CONTROLLED BY A BERM ON BEDROCK SIMILAR TO TYPICAL COLLECTOR DITCH SECTION (SEE DWG.1CT004.06–W4) THIS BERM WILL EXTEND ONLY AS FAR AS IS NECCESSARY TO DIRECT OVERFLOW TO NATURAL DRAINAGE PATHS THAT LEAD TO THE OPEN PIT

DRAWING NO.	DRAWING TITLE
DRAWING W–6	PRELIMINARY LAYOUT OF CAUSEWAY SECTIONS AND DETAILS
DRAWING W–4	PRELIMINARY LAYOUT OF POND A CROSS SECTIONS AND DETAILS
DRAWING W–2	C1 DIVERSION DETAILS
DRAWING W–2	C1 DIVERSION PLAN AND CROSS SECTIONS
DRAWING W–1	LAYOUT OF WATER MANAGEMENT FACILITIES

REFERENCE DRAWINGS

NO.	DESCRIPTION	CHK'D	APP'D	DATE

REVISIONS

REV.	ISSUE PURPOSE	AUTH.	BY	DATE
A	WATER LICENSE APPLICATION	CSS		JULY 2004

ISSUE AUTHORIZATION

WATER LICENSE APPLICATION

SRK Consulting

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

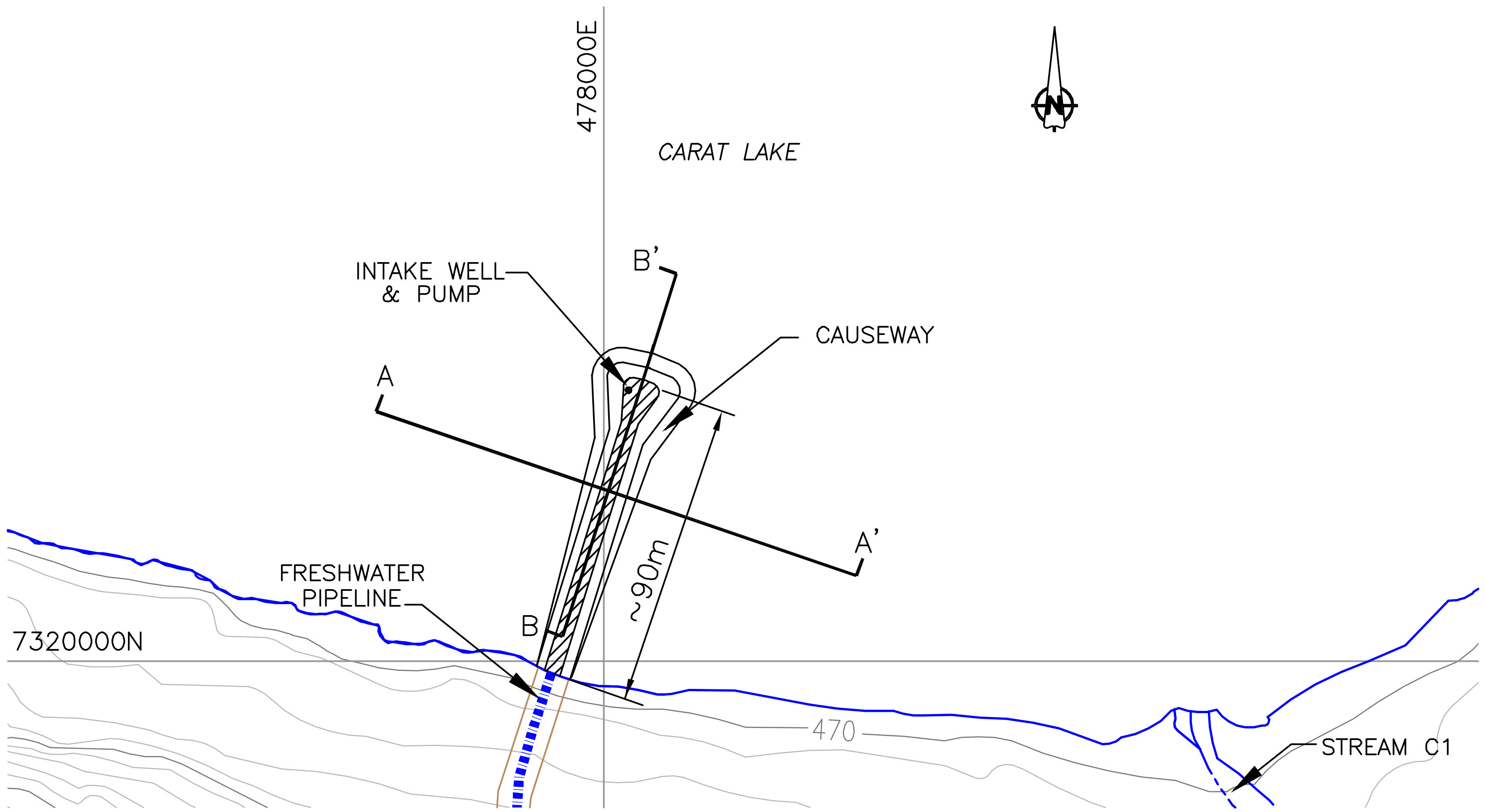
Tahera Diamond Corporation

JERICHO PROJECT

PRELIMINARY
LAYOUT OF PONDS B AND C
CROSS SECTIONS & DETAILS

DRAWING NUMBER
1CT004.06 – W5

REV.
A

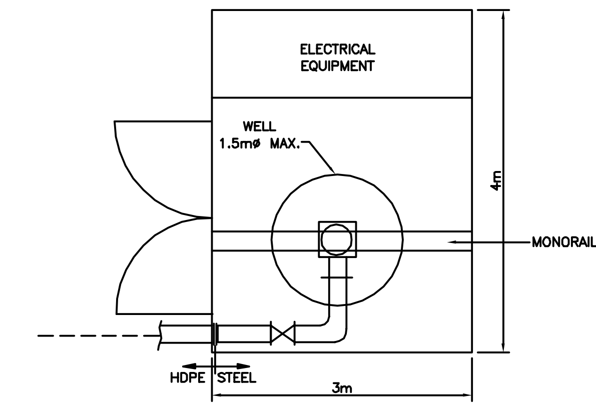


0 25 50 75 100 METRES

1:1000

TAHERA CORPORATION
JERICHO LAKE SOUTHWEST EXTENSION

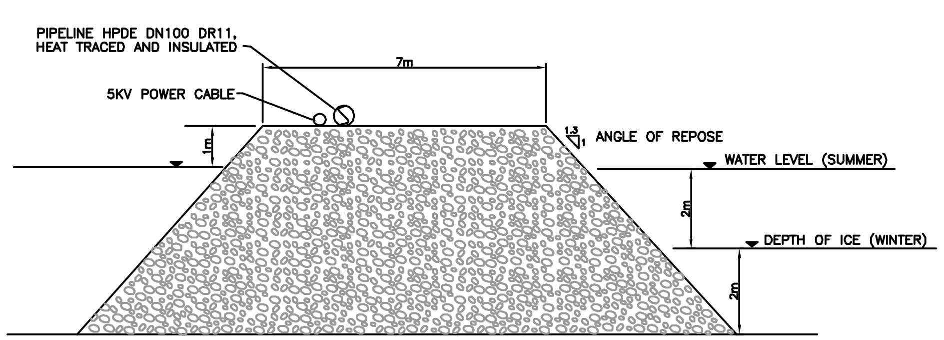
Date of Photography: August 5, 1995.
Scale of Photography: 1:10 000
Survey control supplied by: Canamera Geological Ltd.
Survey control based on: UTM Projection, NAD 27, Zone 12
Compiled by The ORTHOSHOP, Calgary, October 1995.
WO 7423



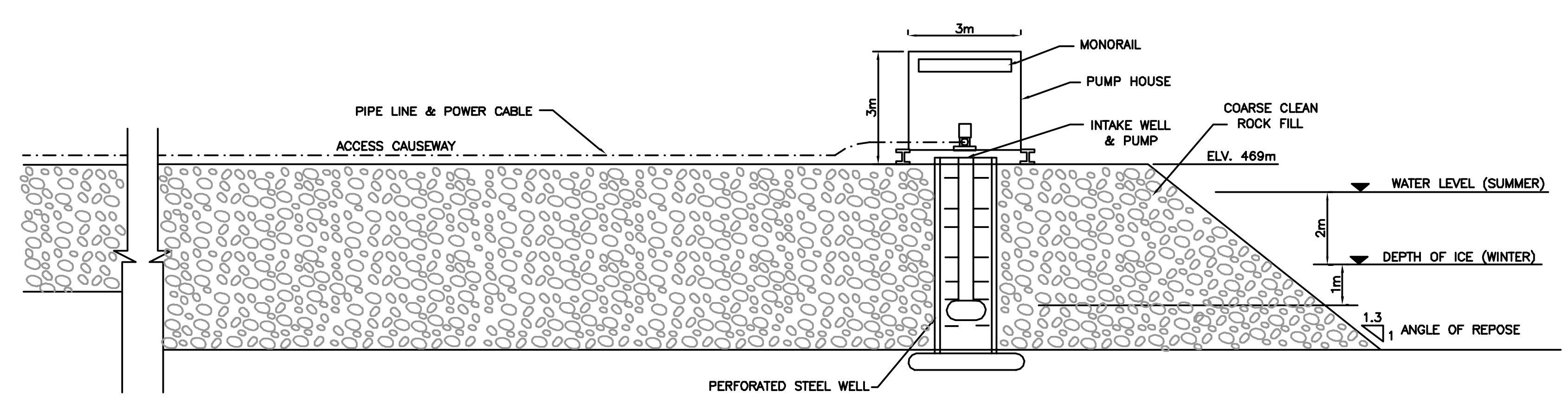
PLAN
N.T.S.

DESIGN DATA:

FLOW RATE:	40 m^3/HR
PUMP HEAD:	98m
DISCHARGE PIPE:	DN100,DR11 HPDE HEAT TRACED AND INSULATED
OPENING WELL:	EQUIVALENT TO A TOTAL AREA OF 0.5m^2, TO GET A AVERAGE INTAKE VELOCITY OF 0.02 m/s
WELL MATERIAL:	CORRUGATED GALVANIZED STEEL PIPE, 3.5mm THICK OR SUITABLE ALTERNATIVE AS APPROVED BY ENGINEER
PUMP:	VERTICAL TURBINE WITH SUCTION STRAINER, 40 HP, FLANGED COLUMN



CAUSEWAY SECTION A-A'
N.T.S.



CAUSEWAY AND INTAKE WELL SECTION B–B'
N.T.S.

DRAWING NO.	DRAWING TITLE
DRAWING W–5	PRELIMINARY LAYOUT OF PONDS B AND C CROSS SECTIONS AND DETAILS
DRAWING W–4	PRELIMINARY LAYOUT OF POND A CROSS SECTIONS AND DETAILS
DRAWING W–3	C1 DIVERSION DETAILS
DRAWING W–2	C1 DIVERSION PLAN AND SECTIONS
DRAWING W–1	LAYOUT OF WATER MANAGEMENT FACILITIES

REFERENCE DRAWINGS

NO.	DESCRIPTION	CHK'D	APP'D	DATE

REVISIONS

REV.	ISSUE PURPOSE	AUTH. BY		DATE
A	WATER LICENSE APPLICATION	CCS		JULY 2004

ISSUE AUTHORIZATION

WATER LICENSE APPLICATION

SRK Consulting
Engineers and Scientists

DESIGNED BY: CCS DATE: JULY 2004	DRAWN BY: JM DATE: JULY 2004
CHECKED BY: CCS DATE: JULY 2004	DISCIP. ENGR. DATE:
PROJ. MGR: DATE	PROJ. ENGR. DATE
SRK PROJECT NUMBER: 1CT004.06	

Tahera Diamond Corporation

JERICHO PROJECT

FRESHWATER INTAKE CAUSEWAY
AND SECTIONS
PRELIMINARY LAYOUT

DRAWING NUMBER: 1CT004.06 – W6

REV. A

FILE NAME: F:\Tahera Corp (Lytton minerals)\Mapping and Drawings-2004 dwgs\general-figures(2004)\figure6A-year1

ATTACHMENT 1

Summary of Source Concentration Estimates, including TDS Components

Steffen, Robertson and Kirsten (Canada) Inc.
Suite 800 – 1066 West Hastings Street
Vancouver, B.C. V6E 3X2
Canada

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Tel: 604.681.4196
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Memo

To:	Peter McCreath	**Date:**	June 30, 2004
cc:		**From:**	Kelly Sexsmith
Subject:	Attachment 1 – Summary of Source Concentration Estimates, including TDS Components	**Project #:**	1CT004.06

Estimates of source concentrations for seepage and discharges from each of the mine components were made to support the assessment of potential impacts on surface water quality and aquatic resources for the Jericho project. Technical Memorandum I (SRK 2003b) presents information on the sources of data used in the estimates, the calculation methods, the approach used to narrow the range of predictions, and the proposed estimated source concentrations for each of the mine components.

Estimates of total dissolved salts (TDS), dissolved metals, total metals, and nutrients from blasting residues were presented for each of the storage areas discussed in this document, discharges from the processing plant, and runoff from the PKCA. Nutrients from sewage were estimated based on information provided by the waste water treatment plant supplier. Estimates of TDS, nutrient and metal concentrations for the other mine site components, including runoff in the open pit, tailings supernatant, ground ice, and runoff from disturbed areas of the site were also discussed.

The only changes to the storage area designs that could be expected to change the earlier estimates of source concentrations are changes to size or the mass of rock contained in the piles. Consolidation of Waste Dump 1 with the Overburden Pile in the final design resulted in insignificant changes to the combined footprint of these two facilities. Therefore, the changes have a negligible influence on the current set of estimates, and the original source concentrations estimates (Table 1) for these areas were not adjusted.

During the final EIS hearings in January 2004, concentration estimates for individual components of the total dissolved solids (TDS) were requested. These were presented for each of the major site components in Technical Memorandum I, but were not included in the original summary table, nor used in the estimates of discharge water quality. The estimated concentrations for each of the major ions are presented in Table 2. It should be noted that the estimates for kimberlite ore, low grade ore and coarse processed kimberlite may be strongly influenced by the use of calcium chloride salt during bulk sample extraction and drilling, which had lead to potential overestimation of chloride, calcium, and possibly magnesium (due to ion exchange reactions) in these estimates. Experience at the Ekati Diamond MineTM has indicated that actual chloride concentrations in seepage from these materials are significantly less than indicated by the Jericho testing. Therefore, these estimates should be viewed as providing a conservative upper bound on concentrations.

Table 1
Summary of Source Concentrations (from Technical Memorandum I, SRK 2003)

Source		Physical		Nutrients				Dissolved Metals										
		TDS mg/L	TSS mg/L	NH4-N mg/L	NO3-N mg/L	NO2-N mg/L	P mg/L	Al mg/L	As mg/L	Cd mg/L	Cr mg/L	Cu mg/L	Fe mg/L	Pb mg/L	Mo mg/L	Ni mg/L	U mg/L	Zn mg/L
Carat Lake Water		11	1.4	0.009	0.18	0.001	0.0077	0.021	0.0001	0.00005	0.00005	0.0024	0.014	0.00005	0.00005	0.0004	0.00005	0.002
Sewage Water		11	10	10	30	1	1	0.021	0.0001	0.00005	0.00005	0.0024	0.014	0.00005	0.00005	0.0004	0.00005	0.002
Runoff Undisturbed Areas		24	3	0.007	0.041	0.001	0.01	0.085	0.0010	0.00005	0.00050	0.0028	0.18	0.0010	0.001	0.0050	0.00098	0.005
Runoff Disturbed Areas		180	3	0.007	0.041	0.001	0.01	0.085	0.0010	0.00005	0.00050	0.0040	0.18	0.0010	0.003	0.005	0.27	0.005
Pit Runoff (sump)		202	10	4.8	12	0.34	0.01	0.085	0.0010	0.00017	0.00073	0.0110	0.18	0.0010	0.010	0.007	0.049	0.005
Plant Runoff		180	3	2.9	7.3	0.21	0.01	0.085	0.0010	0.00005	0.00050	0.004	0.18	0.00100	0.0025	0.005	0.27	0.005
Waste Rock and Overburden	average	667	5	2.9	7.3	0.21	0.01	0.23	0.0016	0.0006	0.0038	0.060	0.32	0.0005	0.038	0.019	0.27	0.024
	max	1394	10	5.8	14.6	0.42	0.01	0.50	0.0031	0.0006	0.0038	0.060	1.5	0.0006	0.078	0.04	2.3	0.085
Tailings Supernatent	average	1221	10	0.08	0.2	0.01	0.01	0.052	0.0007	0.00016	0.0017	0.0025	0.01	0.00070	0.0067	0.026	0.00006	0.012
	max	2570	10	0.17	0.4	0.01	0.01	0.31	0.0010	0.0005	0.005	0.0040	0.02	0.0012	0.014	0.11	0.00012	0.021
Kimberlite Ore and LGO Stockpiles	average	4737	10	1.5	3.7	0.10	0.01	0.018	0.0035	0.0033	0.0025	0.0025	0.21	0.0007	0.15	0.16	0.016	0.024
	max	6206	10	2.9	7.3	0.21	0.01	0.019	0.0058	0.0041	0.0054	0.0040	0.60	0.0012	0.27	0.17	0.033	0.036
Coarse Kimberlite Stockpile	average	4395	10	3.30	8.3	0.24	0.01	0.019	0.0035	0.0042	0.0025	0.0025	0.21	0.0007	0.72	0.16	0.080	0.024
	max	6410	10	6.61	16.5	0.47	0.01	0.020	0.0058	0.0072	0.0054	0.0040	0.60	0.0012	1.30	0.16	0.16	0.036
Groundwater to Pit		2388	10	17.40	24.2	5.10	0.006	6.9	0.0010	0.0012	0.7970	0.0730	24.50	0.0300	0.00	1.62	0.27	0.24

Source		Total Metals										
		Al mg/L	As mg/L	Cd mg/L	Cr mg/L	Cu mg/L	Fe mg/L	Pb mg/L	Mo mg/L	Ni mg/L	U mg/L	Zn mg/L
Carat Lake Water		0.052	0.00016	0.00005	0.0025	0.002	0.025	0.00005	0.00005	0.0005	0.0002	0.002
Sewage Water		0.052	0.00016	0.00005	0.0025	0.002	0.025	0.00005	0.00005	0.0005	0.0002	0.002
Runoff Undisturbed Areas		0.093	0.00025	0.00005	0.0005	0.0034	0.31	0.00014	0.000065	0.00073	0.0010	0.0015
Runoff Disturbed Areas		1.63	0.00075	0.00005	0.0005	0.0056	1.19	0.0185	0.0026	0.0034	0.28	0.012
Pit Runoff (sump)		0.11	0.00037	0.00017	0.0013	0.012	0.31	0.00058	0.010	0.007	0.050	0.0053
Plant Runoff		1.63	0.00075	0.00005	0.0005	0.0056	1.19	0.0185	0.0026	0.0034	0.28	0.012
Waste Rock and Overburden	average	0.59	0.0016	0.00061	0.0058	0.064	0.75	0.0030	0.038	0.020	0.28	0.026
	max	0.87	0.0032	0.00061	0.0058	0.064	2.0	0.0031	0.078	0.041	2.3	0.087
Tailings Supernatent	average	0.45	0.00081	0.00016	0.0070	0.0029	0.19	0.0013	0.0068	0.036	0.00014	0.014
	max	2.8	0.0013	0.0005	0.033	0.0066	0.75	0.0026	0.013	0.16	0.00056	0.024
Kimberlite Ore and LGO Stockpiles	average	0.25	0.0037	0.0033	0.012	0.0031	0.64	0.0012	0.15	0.18	0.0165	0.027
	max	0.25	0.0059	0.0041	0.015	0.0045	1.0	0.0017	0.27	0.18	0.03	0.039
Coarse Kimberlite Stockpile	average	0.25	0.0037	0.0042	0.012	0.0031	0.64	0.0012	0.72	0.17	0.080	0.027
	max	0.25	0.0059	0.0072	0.015	0.0045	1.0	0.0017	1.30	0.18	0.16	0.039
Groundwater to Pit		6.9	0.0010	0.0012	0.80	0.073	25	0.030	0.0010	1.62	0.28	0.24

Table 2
Summary of Major Ion Estimates

Source	Note		Physical	Major Ions						
			TDS	SO4	Alk	Cl	Ca	Mg	Na	K
Carat Lake Water	1		11	1.2	4.7	3.4	2.3	0.8	2.0	2.0
Sewage Water	2		11	1.2	4.7	3.4	2.3	0.8	2.0	2.0
Runoff Undisturbed Areas	3		24	1	12	0.5	2.85	1.2	2.0	2.0
Runoff Disturbed Areas	4		180	13	31	29	29	6	4.0	2.0
Pit Runoff (sump)	6		214	50	12	68.8	36.1	31.8	8.0	8.3
Plant Runoff	7		180	12.5	31	29	29	6	4	2.0
Waste Rock and Overburden	8	average	667	188	48	109	170	82	40	30
		max	1394	549	125	196	342	88	60	35
Tailings Supernatent	9	average	1221	17	37	541	155	72	34	35
		max	2570	26	84	1300	486	113	81	77
Kimberlite Ore and LGO Stockpiles	11	average	4737	789	129	2506	269	861	37	146
		max	6206	1565	164	2731	353	1025	81	288
Coarse Kimberlite Stockpile	10	average	4395	717	100	2379	155	861	37	146
		max	6410	1019	120	3393	486	1025	81	288
Groundwater to Pit			2388	18	22	1400	673	171	23	34

Notes:
1. Source is water quality data from CL-05, Table 6.3, 1995-2000 Surface Water Quality Summary (Tahera 2003).
2. Source of TSS and nutrient data is letter and personal communications with P.J.Hannah Equipment Sales Corp describing performance of RBC treatment systems, otherwise Carat Lake water
3. Source is 2003 seepage data (average of sites WR1-1, WR1-2, WR2-1, WR2-2)
4. Used higher of 2003 baseline seepage data and 50% of the actual development waste seeps, unless this was higher than the BE overburden predictions, in which case the overburden predictions were used.
5. Overburden pile is 2/3 waste rock, therefore use waste rock values
6. Ions and metals are 20% that of the average of waste rock and kimberlite ore values, nutrients are same as waste rock
7. This will be the same as the disturbed areas value
8. Scaling Calculations
9. Source is pilot plant supernatent, except for nutrients, which are based on realistic powder use and nutrient loss for open pit mines.
10. Scaling Calculations for Coarse Kimberlite
11. Scaling Calculations for Ore (apply to both ore sources)