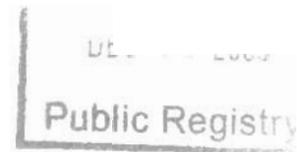


# HIGH LAKE PROJECT

## Preliminary Project Description Summary: Update

December 6, 2005



## Table of Contents

		<b>Page</b>
<b>1.</b>	<b>Introduction.....</b>	<b>1</b>
<b>2.</b>	<b>Project Location.....</b>	<b>1</b>
<b>3.</b>	<b>Site Characteristics.....</b>	<b>2</b>
3.1	High Lake Mine Site.....	2
3.2	Ulu Mine Site.....	3
3.3	Dock Site.....	3
3.4	All-Season Access Road.....	3
3.5	Winter Access Roads.....	4
3.6	Open-Water Season Shipping Route.....	4
<b>4.</b>	<b>Key Project Elements.....</b>	<b>4</b>
4.1	High Lake Mine Site.....	4
4.2	Ulu Mine Site.....	7
4.3	Dock Site.....	8
4.4	All-season Access Road.....	9
4.5	Winter Access Roads.....	9
<b>5.</b>	<b>Construction Phase Activities.....</b>	<b>9</b>
5.1	High Lake Mine Site.....	9
5.2	Ulu Mine Site.....	10
5.3	Dock Site.....	10
5.4	Winter Access Roads.....	10
5.5	All-season Access Road.....	11
<b>6.</b>	<b>Operation Phase Activities.....</b>	<b>11</b>
6.1	High Lake Mine Site.....	11
6.2	Ulu Mine Site.....	11
6.3	Dock Site.....	12
6.4	All-season Access Road.....	12
<b>7.</b>	<b>Closure and Reclamation.....</b>	<b>13</b>
7.1	High Lake Mine Site.....	13
7.2	Ulu Mine Site.....	13
7.3	Dock Site.....	13
7.4	All-season Access Road.....	14
7.5	Winter Access Roads.....	14

**High Lake Project**  
**Preliminary Project Description Summary: Update**

**List of Figures (attached)**

Figure 1	High Lake Project, Location Map
Figure 2	Site Layout, Proposed High Lake Mine Site
Figure 3	Proposed Site Layout, Ulu Project
Figure 4	Conceptual Site Layout, Proposed Dock Facility
Figure 5	Proposed All-season and Winter Road Routes

**High Lake Project**  
**Preliminary Project Description Summary: Update**

## **1. Introduction**

Wolfden Resources Inc. (Wolfden) is a Canadian exploration and mining development company based in Thunder Bay, Ontario and is a publicly traded company on the Toronto Stock Exchange (TSX). In addition to a number of mineral properties across Canada, including gold deposits in Ontario and Quebec, Wolfden is actively exploring and conducting pre-feasibility studies at its High Lake base metal and Ulu gold properties in Nunavut.

Wolfden's vision, after completing pre-feasibility and feasibility studies on these properties, is to bring them into mining production for the benefit of its shareholders and the residents of Nunavut in a manner that respects the environmental and socio-economic conditions in Nunavut. Wolfden will operate in a highly professional manner to generate trust and respect between the firm and residents of Nunavut. Wolfden has a corporate environmental policy that must be followed by all employees and contractors in all aspects of the High Lake Project. Wolfden is committed to investment in Nunavut and will continue to actively pursue exploration and mining opportunities.

The High Lake Project consists of a proposed mine adjacent to High Lake, containing copper, zinc, gold and silver reserves in three ore bodies. The following accessory components support the High Lake Project:

- the Ulu mine site;
- a dock facility at Grays Bay, Coronation Gulf;
- all-weather road access between the dock facility and the High Lake mine site, and a winter road between the High Lake and Ulu mine sites; and
- shipping for the purposes of transporting metal concentrates to markets, and to re-supply the mining development.

It is anticipated that construction of the High Lake Project will begin in early 2008.

## **2. Project Location**

The proposed High Lake mine site is located in the Kitikmeot Region of Nunavut, at approximately 67° 22" north and 110° 51" west (Figure 1). It is approximately 50 km (as the Raven flies) south of Grays Bay, and about 175 km east of Kugluktuk. An exploration camp currently exists at the High Lake property.

**High Lake Project**  
**Preliminary Project Description Summary: Update**

The proposed Ulu mine site is located about 55 km (as the Raven flies) south of the High Lake mine site at 110°59" west and 66°54" north. Ulu is currently an advanced exploration site with existing infrastructure in place, and temporarily closed underground workings.

The proposed dock facility is located approximately at 110° 51" West and 67° 48" North, at Grays Bay on the south side of the Coronation Gulf.

### **3. Site Characteristics**

#### **3.1 High Lake Mine Site**

The conceptual layout of the proposed High Lake mine site is shown on Figure 2. It is situated at an elevation of about 300 m above sea level, in rugged bedrock-dominated terrain, with moderate to steeply inclined slopes, occasional flatter ridge tops, and numerous lakes. There are no eskers at or near the High Lake mine site. The catchment of High Lake is relatively small, compared to other lakes in the vicinity at approximately 380 ha. The water body of High Lake itself, which is up to 38 m deep, occupies about one quarter of the total catchment area. There are ten other smaller lakes in the High Lake catchment, which drain into High Lake. High Lake drains into the Kennarctic River, located to the east of High Lake. This river flows north to the Coronation Gulf. Acute toxicity tests conducted in 2005 on the water of High Lake indicate that fish cannot survive in High Lake. Several of the smaller adjacent lakes contain trout. No arctic char have been detected in any of the lakes in the High Lake catchment; however, land-locked char have been found in lakes located in adjacent catchments.

The site is underlain by permafrost to an estimated depth of 400 to 500 m, based on the results of thermistors installed in exploration drill holes at High Lake in 2005. It is expected that the zone of thawed bedrock beneath High Lake does not extend through to the underlying regional groundwater system.

The harsh arctic climate at site supports low-lying vegetation, and surficial soils are discontinuous and relatively thin. Numerous cliffs and rock outcrops are visible across the site. No major archaeological sites have been detected in the proposed mine site development area. Various mammals including grizzly bear, wolverine and caribou traverse the site.

### **3.2 Ulu Mine Site**

The current layout of the proposed Ulu Mine site is shown on Figure 3. The Ulu mine site is located on a broad relatively flat ridge, amid undulating glacially modified bedrock-dominated terrain, bounded by a linear lake (West Lake) on the west, and a small semi-circular lake (East Lake) on the southeast. The terrain is rugged, consisting of exposed bedrock, modified by frost action into blocks, angular boulders, and relocated bedrock boulders. A small area overlooking West Lake is a swale of soggy sedge tundra, as are large portions of the shores of the lakes. Elevations in the vicinity of the Ulu mine site range from about 400 to 500 m above sea level.

### **3.3 Dock Site**

The conceptual layout for the dock site is shown on Figure 4. The peninsula being considered for the dock site is generally underlain by rock at surface or shallow depth. The main peninsula rises steeply from the coast, but the western flank consists of a gently sloping shelf. The site will not obstruct any major drainages. A number of archaeological sites have been mapped within the area of expected construction, and are considered to be mitigatable. The seafloor at the proposed dock site slopes gently, and is generally mantled with sediment. The thickness of the sediments is variable, increasing with distance from shore. The underlying bedrock slopes at between 20 degrees and more than 35 degrees, with several ridges and trenches evident. A diving inspection was conducted in summer 2005, in which soft silts and loose sands and gravels were noted immediately beneath the seafloor. No archaeological features were found during the survey. Further drilling and probing investigations are planned for the winter of 2006 to provide sufficient information for dock siting and design.

### **3.4 All-Season Access Road**

The proposed all-season access road route between the dock site and the High Lake mine site will be used to haul concentrate to the storage shed at the dock site, and to back-haul re-supply material and equipment for operations at High Lake and Ulu. The proposed route for the all-season road follows an approximately north-south route across undulating yet rugged terrain, interspersed by several prominent rocky escarpments. The route crosses 15 major drainages, ranging in catchment area between 60 and 17,000 ha, likely requiring a range of structures including bridges and culverts that address both fish protection and flood control objectives. The route for the all-season road is shown on Figure 5.

### **3.5 Winter Access Roads**

A winter access road will be required during the construction phase between the dock site and the High Lake mine site. The proposed route takes maximum advantage of lakes and rivers, resulting in about 20% of the overall route length consisting of portages across rocky terrain. The route would traverse approximately 16 lakes.

In addition, ore will be hauled from the Ulu mine site to High Lake mine site seasonally on a winter road, with back-hauling of operating supplies shipped to the dock site at Grays Bay. The preliminary route identified between the High Lake mine site and the Ulu mine site requires approximately 32 portages over 40% of the route length. The route for the winter access roads is shown on Figure 5.

### **3.6 Open-Water Season Shipping Route**

Fuel and supplies for the High Lake Project will be either barged or shipped to the Grays Bay dock site during each open water season. Bulk carrier ships will take copper and zinc concentrates from the dock site, using the western Coronation Gulf and entering international waters off the coast of Alaska State. Concentrate would be shipped to various markets via the Pacific Ocean.

## **4. Key Project Elements**

### **4.1 High Lake Mine Site**

Three mineral deposits containing primarily copper and zinc, with less significant showings of gold and silver, have been investigated at the site, and pre-feasibility planning and engineering is in progress. Conceptual mine plans indicate that two of the deposits, A/B and D Zones, can be mined most efficiently by open pit excavation initially, potentially followed by subsequent underground mining accessed from the bottom of each pit. The third deposit, the West Zone, will be mined entirely from underground. Figure 2 shows the conceptual site layout for the proposed High Lake mine.

The open pits will be mined using conventional drilling and blasting techniques, with ore and waste rock removal using mechanical excavators and trucks. Conceptual plans for an integrated mine and process waste material containment and water management system are now being considered to address environmental concerns and to ensure that appropriate design mitigation is identified and adopted. The results of the 2005 summer field data collection programs are being used to provide input to ongoing planning and engineering design.

**High Lake Project**  
**Preliminary Project Description Summary: Update**

Site infrastructure will include equipment maintenance shops, warehousing and laydown areas, power generation, fuel storage, explosives storage and manufacturing plant, water supply, sewage disposal, water treatment, airstrip, haulage and access roads, and a combined accommodation / office / kitchen / recreation complex. All major site surface facilities and features, except for the airstrip and the fresh water supply intake, will be located within the High Lake catchment. A single-lane road will extend to the West Zone area from site infrastructure to provide access to ventilation fans above the underground mine.

The two proposed open pit mines at the A/B and D Zones are located to the immediate west and south of High Lake. These pits will be excavated by drilling and blasting, using explosives manufactured on site from ammonium nitrate, combined with diesel fuel. The distance across the perimeter of the open pits will be approximately between 300 and 400 m. The overall depths of the open pits are expected to vary between about 150 and 200 m below ground surface. The open pit walls will be benched in stepped profile, with 15 m high bench faces and catch berms to control falling rock, and will have overall slopes of between 35 and 50 degrees to horizontal. The open pits will be accessed by ramps on a 10% grade with a 24 m width, allowing for two-way truck traffic, ditching and safety berms. Underground mining will occur beneath these pits, if deemed economical, and would be accessed from portals at or near the base of each of the open pits. A third separate deposit, the West Zone, located outside the High Lake catchment, 1.5 km to the southwest of High Lake, will be mined entirely from underground. Access to underground mining for the West Zone ore body, will be through a single portal located adjacent to the process plant, within the High Lake catchment. All ore will be trucked, from both the underground and the open pits, to a stockpile area and crushing facility close to the process plant.

Mine waste rock will be managed in two stockpiles, as shown on Figure 2. Part of the waste rock will be used to backfill underground cavities. Waste rock materials not utilized as underground backfill or for construction will be permanently stored on surface within the High Lake catchment in both stockpiles. The chemical characteristics of all excavated and exposed rock materials are being investigated and analyzed so that any potential for acid generation or metals leaching can be managed and mitigated. In general, the strategy for managing these materials will be either to place them underground as backfill or to encapsulate them in surface piles such that they will be either frozen or fully submerged and saturated over the long term. Preliminary estimates indicate that the volume of waste rock stored in the surface piles will be up to approximately 17 million cu.m. Approximate outlines of the two mine rock piles are shown on Figure 2.

All surface ore and mine rock haulage will be by 70 tonne capacity trucks. Ore will be excavated at an approximate rate of 4,000 tonnes per day using an excavator with a 4 cu.m. bucket, while waste rock will be loaded with a 6 cu.m. capacity backhoe. Other mining equipment will include a D9 sized bulldozer, a grader, water truck, fuel/lubrication/service truck, explosives transport and mixing truck, and several pick-up trucks. Two blast hole drills would be required.

**High Lake Project**  
**Preliminary Project Description Summary: Update**

Ore will be mined underground from the West Zone at a rate of 3,300 tonnes per day. Additional specialized equipment will be utilized for underground mining of the West Zone, which will be accessed by a single ramp extending down to a depth of about 300 m below ground surface. Sublevels for accessing ore will be developed at 50 to 60 m vertical intervals to an estimated total depth of 900 m below ground surface. Maintenance facilities, refuge stations, first-aid stations, fuel bays, and explosives storage will be provided underground. All underground development will be carried out by standard drilling, loading and hauling equipment. Ground support will be installed as required during operations. Mined out stopes will be backfilled with frozen or cemented waste rock.

Ore from the three High Lake deposits and from the Ulu deposit will be processed in a single facility, located at the High Lake mine site, at a combined rate of up to 4,000 tonnes per day. The process plant will be located adjacent to the two open pits and will comprise separate process systems for copper, zinc and gold. Crushed ore will be stockpiled adjacent to the process plant and subjected to grinding down to a size of approximately 100 microns.

The A/B Zone ore primarily contains copper, with low zinc values, and will be processed to recover copper only. The West and D Zone ores are primarily zinc ores with copper values that are of economic value, and will be processed to recover both elements.

Copper and zinc ores will be processed to produce a concentrate using standard grinding and flotation methods, and then thickened, filtered and dried to remove excess moisture in readiness for storage and subsequent shipping at a moisture content of about 6 %. After crushing and grinding, copper and zinc ore will be subject to staged flotation and cyclone separation processes, generating concentrates and waste tailings. The concentrates will be filtered and dried to meet market and shipping specifications. The tailings will be partially de-watered in a thickener to about 50% solids content, to maximize use of recycled water, then delivered by pipe into the tailings impoundment. Gold bearing ore from Ulu will be processed in a separate circuit involving crushing, grinding, and cyanide leaching, filtration, precipitation and smelting to produce gold doré (bars).

Approximately 14 million tonnes of tailings will be produced by mining and processing ores from the deposits at High Lake, requiring an estimated containment volume of 9 million cu.m. It is proposed to contain tailings within High Lake, with a permanent cover of about a 2 m depth of water, by constructing several relatively small dams across topographically low points around the lakeshore. Excess water will be monitored and treated, if required, prior to discharge.

Power for processing and other infrastructure needs will be generated using diesel generators. The power house will be integral with the process plant complex. It is intended to utilize diesel generator sets obtained from the Nanisivik Mine for most of the projects power requirements, estimated at 12 MW. The used equipment is in good condition; however, some additional new equipment will be required. A lined

**High Lake Project**  
**Preliminary Project Description Summary: Update**

and bermed fuel tank farm will be located adjacent to the plant site complex. Alternative energy sources may be considered if feasibility investigations prove they are practical and cost-effective. Waste heat will be recycled to heat facilities, living space and for process activities such as drying the concentrate.

Camp accommodation for an estimated 250 personnel will be constructed adjacent to the process plant. An airstrip capable of handling turbo-prop aircraft up to Hercules size, and potentially jets, will be constructed at a site nearby which is yet to be determined. The airstrip will likely have a terminal building. Fixed wing aircraft will likely be fueled only at their point of origin or other regional stops.

Mine access and haulage roads from all of the mining zones will be exclusively contained within the High Lake catchment. Exceptions would be branch roads to the airstrip, fresh water supply intake, explosives storage facility, and the West Zone ventilation fan houses for the underground mine. All roads associated with the High Lake mine site, with the exception of the winter access road to/from the Ulu mine site, will be all weather. During the construction phase a winter road will be used between the dock site and the High Lake mine site until the all-weather road is completed.

Materials used in the manufacture of explosives will be stored within the High Lake catchment, approximately 600 m north of the A/B Zone open pit.

The A/B and D Zone ore bodies would be mined using open pit methods for up to approximately the first 4 years, and underground mining of the A/B, D and West Zones would occur subsequently. The anticipated life of the proposed High Lake mine, based on the currently defined ore reserves, is in the range of 10 to 15 years.

## **4.2 Ulu Mine Site**

The proposed underground mine will produce gold bearing ore that will be transported to the process plant at the High Lake mine site by winter road. Mine rock will be stored on surface, and ore will be temporarily stored on surface for up to 6 months before being transported to the High Lake mine site.

The development of the Ulu mine site is more advanced than at the High Lake mine site, with its existing underground access ramp and exploratory workings. The deposit will be mined year round, from underground. There will be no tailings produced from the Ulu mine since ore will be processed at the High Lake facility, and there is expected to be minimal permanent storage of mine waste rock on surface. Waste rock and ore have the long term potential for acid generation and metal leaching, and runoff from the stockpile pads will be monitored and treated if required, prior to discharge.

Existing surface infrastructure includes a 1360 m long airstrip, an office and 50-person camp, diesel power generator, two tank farms, equipment maintenance facilities and a warehouse (Figure 3). Upgrades

**High Lake Project**  
**Preliminary Project Description Summary: Update**

and expansion of these facilities will be required for production. Fresh water will continue to be pumped from the adjacent West Lake to the west of the facilities. Additional facilities for explosives storage, an airport terminal building, and mine ventilation may be required, but have not yet been determined. The types of mining equipment and the size of the workforce required have also not been determined. It is anticipated that the Ulu mine site would operate for about 7 years. Evaluation of the Ulu deposit is continuing as part of ongoing optimization engineering and the sequencing of Ulu in relation to the overall High Lake Project has yet to be finalized.

### **4.3 Dock Site**

The proposed dock site is located on a peninsula approximately 2.5 km west of the mouth of the Kennarctic River. Based on a depth survey of Grays Bay, two sites for safe ship passage were identified, from four alternatives. Of these two sites, the proposed peninsula site is closer to High Lake and field investigations determined that it is less sensitive from an environmental perspective. The other potential site was identified some 10 km further west and would have involved an additional major river crossing.

The proposed dock site will be located on the west side of the peninsula in a water depth of about 15 m, to accommodate ships of up to approximately 50,000 DWT (dead weight tonnes) (Figure 4). The ships will be used to convey copper and zinc concentrate westwards to markets accessed via the Pacific Ocean and also will bring in fuel and consumables for the High Lake and Ulu mine sites. Barges will also be used to bring in supplies. Up to about 190,000 tonnes of copper and zinc concentrate material will be stored within a purpose-built enclosed shed. Concentrate will be mechanically reclaimed from inside the storage shed and conveyed by a ship-loader across the dock into the holds of the ships.

Diesel fuel will be pumped off ships or barges and stored in a lined and bermed tank farm with an expected capacity of approximately 30 million litres. The tank farm will be located as close as possible to the dock to minimize the overall footprint. Other supplies, including processing reagents, ammonium nitrate, cement, milling steel, tires and spare parts will be stored in containers or weather-proof palletized packages for trans-shipment by truck to High Lake during the rest of the year. These materials will be placed in a holding area adjacent to the dock. Up to 300 containers may be stored temporarily.

Additional facilities will include a camp for an estimated 10 to 15 persons, a small office, a generator, and a vehicle maintenance workshop. Potable water will be supplied by truck from the High Lake mine site or by desalination. Mobile equipment based at the dock will include a crane, light vehicles, small loaders and dozers for concentrate handling, and graders and small trucks for road maintenance.

## **4.4 All-season Access Road**

The proposed all-season access road route between the dock site and the High Lake mine site will be used to haul copper and zinc concentrate to the storage shed at the dock site, and to back-haul re-supply material and equipment for operations at the High Lake and Ulu mine sites. The frequency of transport traffic on the road will be relatively light, amounting to 15 to 20 vehicles per day. Design criteria will emphasize safety, wildlife management, and hazard mitigation. Conceptual design is in progress at this time, based on detailed topographic mapping and on biophysical and geotechnical inspections conducted in the summer of 2005.

## **4.5 Winter Access Roads**

Based on consideration of minimizing environmental impacts and construction costs, winter haulage methods will be used to transport gold ore from the Ulu mine site to the High Lake process plant, and to deliver consumables and fuel to the Ulu mine site. Design criteria will emphasize safety, minimizing disturbance to terrain and vegetation across portage sections, wildlife management, and hazard mitigation, including spill containment and clean-up. In addition, a winter road will be used between the Grays Bay dock site and the High Lake mine site during the construction phase until construction of the all-weather road is completed.

# **5. Construction Phase Activities**

## **5.1 High Lake Mine Site**

All major buildings and structures at the High Lake mine site will be founded on bedrock, with appropriate precautions to manage the permafrost environment. Structural materials and some process equipment from the Nanisivik Mine, including the mill and concentrate storage facility, will be used. Aggregates for concrete, structural backfills, and dam liner bedding will likely be produced from crushed quarried rock, and/or potentially from deposits of glacio-fluvial sand and gravel in the vicinity of the project.

The dams for tailings containment in High Lake are being designed with low permeability synthetic liners, also taking advantage of permafrost to develop a permanent frozen barrier to seepage from the tailings impoundment. Deposition of tailings will also be arranged to enhance development of the frozen barrier.

**High Lake Project**  
**Preliminary Project Description Summary: Update**

Mine site haul roads will be mostly constructed using selected mine waste rock that is chemically inert. The period of construction would be between one and two years, depending on such factors as procurement, shipping, winter haulage schedules, and receiving required approvals.

## **5.2 Ulu Mine Site**

The existing portal at the Ulu mine site will be used for underground mining. Mining will be conducted using drilling and blasting, with a minimum distance from surface of 25 m to prevent ingress of surface water. Specialized underground trucks and loaders will handle ore and waste rock. Mine rock will be backfilled underground to the maximum practical extent. Expansion of the existing ore and waste rock piles will be required, including a perimeter drainage collection system. No further details of the underground mine plan are available at this time, pending completion of the pre-feasibility study.

## **5.3 Dock Site**

The exact location and type of dock structure is undetermined at this time, pending further geotechnical investigations and design. Possible types of dock foundation structures include piles founded on underlying bedrock or cells seated on prepared platforms. Excavation or dredging of weak sediments overlying the bedrock may be required to found a stable platform. Underwater blasting may be required. The dock structure, extending out to about 15 m water depth, will be connected to the shoreline by a rockfill causeway. The causeway will support the ship-loading concentrate conveyor and fuel pipeline, and will allow passage of trucks and forklifts moving general cargo to laydown areas on shore. Onshore facilities will be supported on platforms by placing rockfill or by excavation of bedrock.

## **5.4 Winter Access Roads**

For initial pioneering access during the mobilization and construction phase, a winter road will be built from the dock site to the High Lake mine site. The roadway will be formed by dragging snow and pumping water, forming ice embankments across the portages between the lakes. Road construction would typically commence in December taking up to a month or more, using bulldozers, graders, water trucks, snow blowers and loaders, and the road would remain usable possibly until May.

During the years when the Ulu mine is in operation, a winter road will be constructed to the High Lake mine site in order to haul raw ore and to back-haul fuel and supplies delivered to the Grays Bay dock site each summer.

## **5.5 All-season Access Road**

The all-season access road will be constructed between the dock site and the High Lake mine site by conventional excavation and filling methods, borrowing material from cuts. A high proportion of the cuts will be in rock and drilling and blasting will generally be required. Road fills will comprise rockfill, with a surface of crushed rock. Streams will be crossed by either culverts or bridges suitably configured and sized to meet requirements for fish habitat and passage, and to safely convey flood flows.

## **6. Operation Phase Activities**

### **6.1 High Lake Mine Site**

Mining will take place at High Lake on a year-round basis. Ore mined by either underground or open pit methods from each deposit at the High Lake mine site will be processed in individual batches for optimal efficiency at an overall rate of about 4,000 tonnes per day. Copper and zinc concentrate will be trucked to the dock site year-round and stored in a covered shed. Process water and waste heat and energy will be recycled and conserved as much as possible.

All surface water within the High Lake catchment will be managed, separating clean runoff from water in contact with mining or process activity, with emphasis on minimizing sources of contaminated runoff through best practices and progressive reclamation.

Site personnel and perishable goods will be transported to and from the site by fixed wing turbo-prop or jet aircraft operating from regional centres and from major centres such as Yellowknife. Various monitoring and management plans will be in place for traffic, aircraft, wildlife, domestic waste management, water and mine waste management, and progressive reclamation.

Inert waste materials will be buried within the waste rock stockpile, or placed underground. Other non-hazardous materials will be incinerated in suitable devices. All hazardous materials and potential chemical contaminants will be stored appropriately to prevent migration to the receiving environment.

### **6.2 Ulu Mine Site**

The Ulu mine will be operated year-round as a satellite activity to the larger High Lake mine. Ore will be stockpiled seasonally at Ulu, and transported by truck on a winter road to the High Lake mine site. The

**High Lake Project**  
**Preliminary Project Description Summary: Update**

quantity of ore to be hauled and processed has not been finalized, pending completion of the prefeasibility study and supporting metallurgical evaluation. Gold doré from the Ulu ore will be shipped from the High Lake mine site by air on a regular basis.

Personnel, supplies and equipment will be moved between the two sites and to/from regional centres and Yellowknife by aircraft, supplemented by bulk supplies delivered on the winter road from the High Lake mine site.

The winter haulage road from Ulu to the High Lake mine site will be constructed for each year of operations of the Ulu mine. The roadway will be formed by dragging snow and pumping water, forming ice embankments across the portages between the lakes. Road construction would typically commence in December, taking up to a month or more, using dozers, graders, water trucks, snow blowers and loaders.

### **6.3 Dock Site**

Ships and barges bringing in supplies and taking out concentrate will travel to and from the Orient and/or the west coast of North America through the Coronation Gulf and the Beaufort Sea. Shipping will operate unassisted during the ice-free season, typically from late July to early October. The entire inventory of concentrate will be loaded onto between 4 and 6 ships per season. The primary fuel storage facility will be located at the dock site.

### **6.4 All-season Access Road**

Year-round haulage of freight (anticipated to be less than 5,000 tonnes per season), concentrate (less than 250,000 tonnes per season), and fuel (approximately 30 million litres) will be by conventional tractor trailer units of various sizes and configurations from the dock site to High Lake. Vehicle speeds will be restricted according to load, frequency of traffic, weather conditions, alignment and grade to ensure safety and minimize risk of accident and spillage. All vehicles would be equipped for winter survival and sufficient snow clearing equipment will be available to restore haulage operations after winter storms. Traffic management plans and procedures will be developed that are sensitive to wildlife habitat and movements.

## **7. Closure and Reclamation**

Closure and reclamation of the High Lake Project will be in accordance with regulatory requirements. The following subsections provide a preliminary description of the main activities associated with closure and reclamation.

### **7.1 High Lake Mine Site**

Mine planning and design during the feasibility study phase and beyond will include progressive closure of completed mining zones. This will be integral with detailed scheduling of mine waste rock stockpiling and backfilling of the underground mine. All underground openings at surface, including the ventilation shaft and main access portal, will be sealed off in a structurally stable manner and reclaimed. Permanent mine rock stockpiles will be capped with chemically inert and physically competent mine rock to ensure long-term stability and to meet water quality and regulatory objectives.

A permanent cover of water is proposed for the tailings deposited in High Lake, discharging excess water through a permanent spillway at the north end. Water management planning will extend through to the post-closure period, and include monitoring and adaptive management.

At closure all buildings will be demolished. All spare fuel and other chemicals will be removed from site, and the fuel storage facility fully dismantled. Fuel or metal-contaminated soils, if found, will be remediated. Any obstructions of drainage by constructed facilities will be removed and restored to a stable condition.

### **7.2 Ulu Mine Site**

At cessation of mining, the underground mine will be sealed off to ensure long-term stability. All buildings and other infrastructure will be demolished and removed or buried. All consumables and fuel will be removed from the site. The ore and mine rock storage pads would be emptied or capped with geochemically benign mine rock. Any disruptions to surface drainage would be restored.

### **7.3 Dock Site**

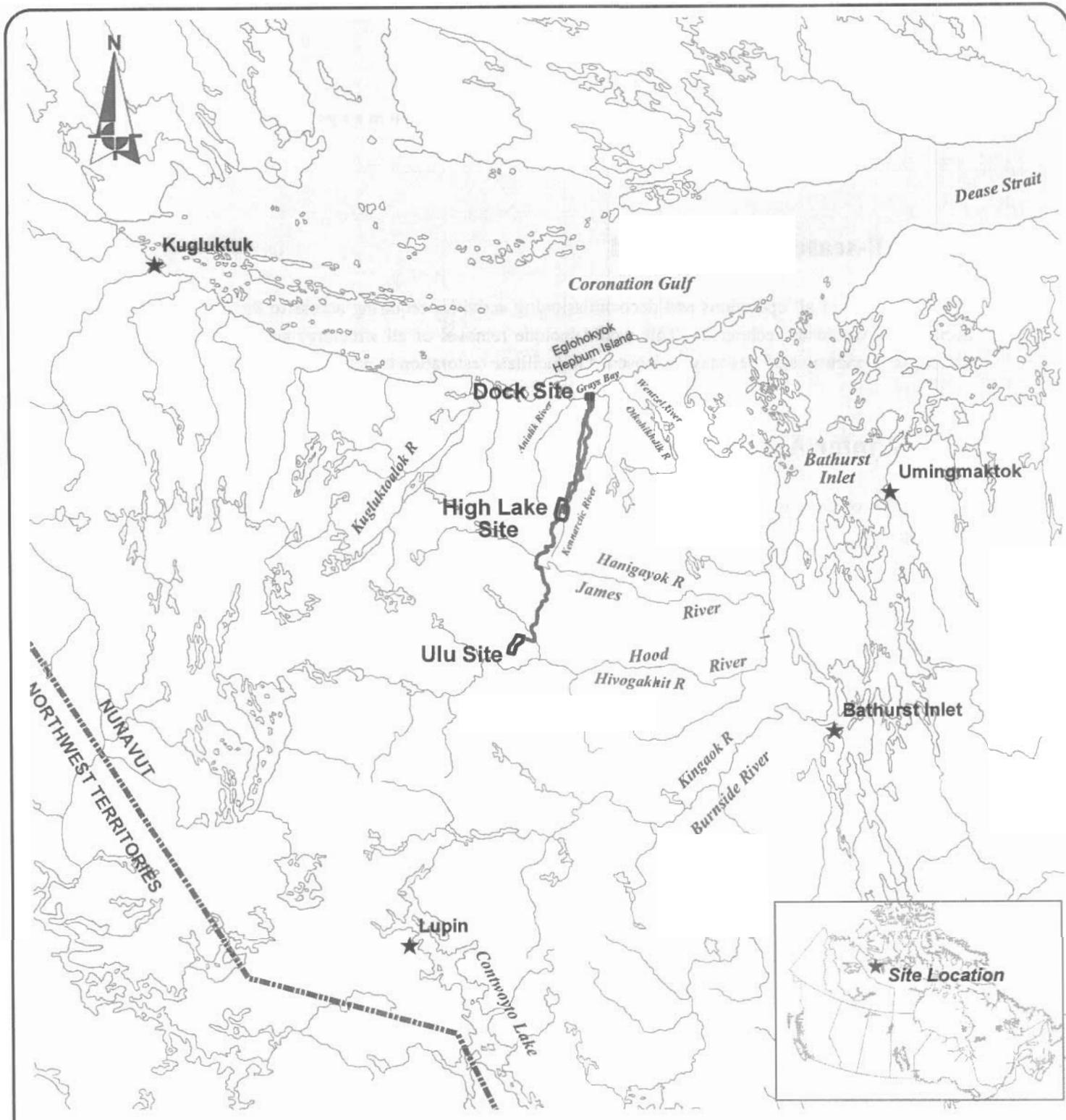
Upon cessation of mining and ore concentration transport, all facilities at the dock will be dismantled and the entire site reclaimed and restored. All concentrate, fuel, and hazardous materials will be removed.

## **7.4 All-season Access Road**

Upon cessation of all operations and decommissioning activities requiring access to the dock, the main access road would be reclaimed. This would include removal of all structures across waterways and drainages. Roadway surfaces may be loosened to facilitate restoration to natural conditions.

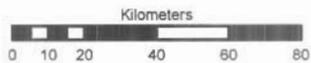
## **7.5 Winter Access Roads**

At cessation of each winter haulage season, ice-bridges across streams will be demolished to prevent flooding.



**Legend**

- ★ Community
- Proposed All Weather Road - June/05
- - - Proposed Winter Road - June 05



1:2,000,000

Projection:  
Canada NRCan Lambert Conformal Conic

Reviewed By: AK  
 Prepared By: PW  
 Date Issued: November, 2005  
 Project No.: 51-027  
 File Name:  
 P51027\_B2\_05kNov29\_Fig1\_LocMap.mxd  
 Revision: 0



Project: High Lake Project Description  
 Location: High Lake, Nunavut  
 Client: Wolfden Resources Inc.

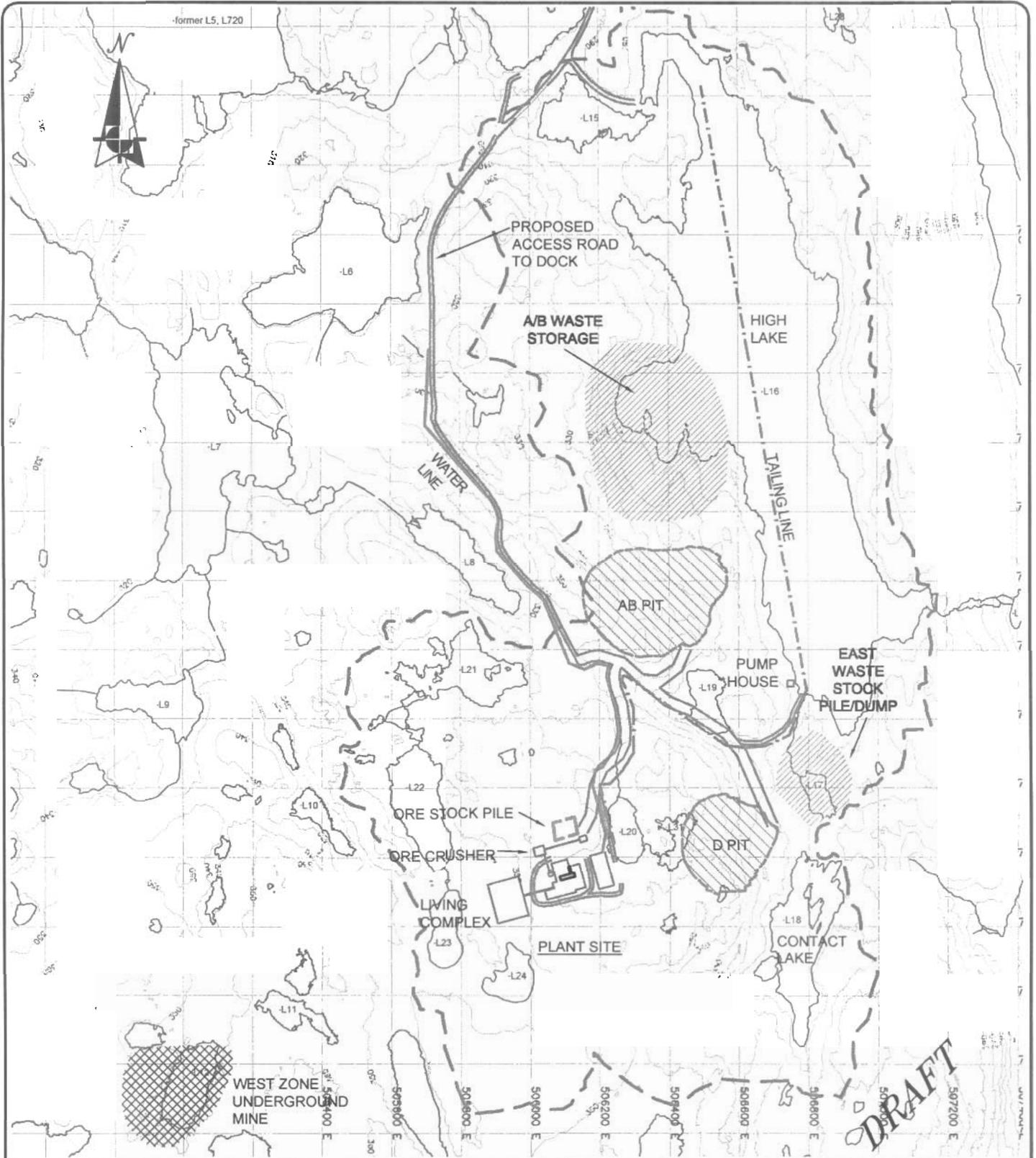
**HIGH LAKE PROJECT  
 LOCATION MAP**



Gartner Lee

Figure No.  
**1**

Path: S:\AutoCad\acad-2005\2005\51-027 HL Proj Descrip\B2\_Alistair\_Work\_Nov05\ Plotted on: Nov 28, 2005-5:21pm Edited by: pwhiting



**DRAFT**

**LEGEND:**

- GROUND CONTOUR 2m
  - SURFACE DRAINAGE
  - ROAD
  - TAILINGS LINE
  - WATER LINE
  - PIT
  - STOCK PILE
  - HIGH LAKE CATCHMENT AREA
  - BUILDING - PROPOSED
- 0 150 300 450 600 750 m
- SCALE 1:15,000**

PROJECTION: NAD 83 ZONE 12  
 CONTOUR INTERVAL: 2 m (ASL)

REVIEWED BY: AK  
 PREPARED BY: PW  
 DATE ISSUED: NOVEMBER, 2005  
 PROJECT NUMBER: 51-027  
 FILE NAME: 51027-B2-02.dwg  
 REVISION: 0

Project: High Lake Project Description  
 Location: High Lake, Nunavut  
 Client: Wolfden Resources

**SITE LAYOUT  
 PROPOSED  
 HIGH LAKE MINE**

Gartner Lee Figure No. 2