

**Appendix A**

**Maze Lake Project**

**Detailed Project Description**

**Placer Dome (CLA) Limited**

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## **Maze Lake Detailed Project Description Placer Dome (CLA) Limited**

### **1. Introduction**

Maze Lake is an early stage gold exploration project operated by Placer Dome (CLA) Limited. It is under an agreement with Nunavut Tunngavik Incorporated (NTI). The agreement was signed in April 2003 and consists of 5 Inuit Land Parcel (WC02-03-01 to 05). Payments to keep the parcels in good standing for 2004 have been made in February. A Level II Land Use Permit (KVL203B282) was emitted in 2003 and will expire on 15<sup>th</sup> of July 2004. A new Level III Land Use Permit application is requested to cover the planned drilling program and the construction of a temporary camp. A water permit application has also been sent to NWB for the water use. The project was register to the Nunavut Planner website and requested forms have been completed and submitted.

Limited exploration work was carried at Maze Lake by Placer Dome in 2003. Field work has taken place from July 19 to August 18. It has consisted in prospecting, geological mapping, rock sampling, soil sampling, lake water sampling and an airborne geophysical magnetic survey. The crew was composed of 1 prospector, 2 Inuit assistants, 3 geologists, a pilot and a part time helicopter engineer. Daily transportation from Rankin Inlet to the site was by helicopter. No camp was established, no water was used and no waste was produced on the project area in 2003.

### **2. Project activities and their necessity**

Following the results of the 2003 exploration work at Maze Lake, Placer Dome wishes to continue exploring the project area in 2004. In order to better define the zones susceptible to contain gold mineralization and to asses if they have economic potential, more exploration work is needed.

For 2004, the plans are to continue the geological mapping and complete the soil and lake water sampling program started last summer. For two areas defined last year, we wish to carry a ground geophysical survey and to carry diamond drilling on the best targets. Plans are for approximately 14 diamond drill holes totalling 1800 m of core. Amount of drilling and drill holes location will depend on the geophysical and sampling results. The first area is located in the southern part of the project and most of the geophysical and drilling work will be performed there. The second one is at the project northwest extremity. To support these activities, a temporary camp needs to be built. Camp will be built to host a maximum of 14 people and should consist of 7 to 8 main buildings.

If approval is granted by a land use inspector, the ground geophysical survey program (Induced Polarization) could be carried from mid to late June during the caribou calving period. This type of survey, which needs to have a metal pin driven into the ground,

yields much better results if done after mid-June when snow is gone and ground is thawing. If the survey has to wait until July 16, risks are high for not having the results in time to continue with the drilling program. An IP survey is not noisy, will be limited to a small area and should involve only 4 people. All procedures as stated in Appendix H of the Keewatin Regional Land Use Plan will be followed if authorization is granted.

Plans beyond 2004 are very speculative and depends on the quality of the 2004 results and budgets. With positive results and an appropriate budget, further diamond drilling will likely be necessary.

### 3. Schedule of Activities

The actual plans are for 7 to 8 weeks program between the 16<sup>th</sup> of July and 15<sup>th</sup> of September. If bad weather was to delay the program or if results justify it, the program could be extended up to October 31. If authorization is granted, a 12 days geophysical survey program could take place earlier between June 15 and June 26. The last week of the program will be used at dismantling the camp, removing equipment, remaining waste and restoring the site.

Program	Start Date	End Date	Comment
Ground geophysical survey	15 June 04	26 June 04	Need Land Use Inspector approval
Geological mapping, soil sampling, water sampling, camp building	16 July 04	15 Sept 04	
Drilling	11 Aug 04	9 Sept 04	14 drill holes, 1800m
Restoration	10 Sept 04	15 Sept 04	
Shut down	16 Sept 04	15 March 05	

### 4. Location

The project is located on Inuit Owned Lands, 45 km west of Whale Cove and 90 km southwest of Rankin Inlet in the Kivalliq District of Nunavut. The 5 Inuit Land Parcels of the agreement cover a total area of 39,886 hectares. See maps 1 and 2.

- There is no existing and will not have new lines, trails and cleared areas in 2004.
- All buildings, greywater sumps and the main fuel cache will be located within the camp area. Approximate areas: Camp: 10 hectares, Airstrip: not known yet, Secondary fuel cache: 0.2 hectares. Drill holes location is not known yet and neither the area they will cover.
- There is no existing and will not have new bridges, dams, ditches, etc... built in 2004. The project is on caribou calving ground.
- There is no known archaeological site or carving stone quarry known in the project area.

## 5. Camp structures

The planned camp will be located on a sandy point between a large lake and a smaller one. Location is 62° 16' 33" lat and 93° 37' 39" long. To our knowledge, no camp has been built before on the proposed site. Alternative camp sites have also been selected in the event of KIA, communities or the camp contractor considering the site to be unfit. The location has been selected based on air photos and was quickly inspected during the 2003 field activities. The site is close to the main work area which can be access by boat or by foot in case of an emergency or if the helicopter cannot fly. It also minimizes helicopter time. An esker located 1 km west of the camp could probably be used as a landing strip, without need of grading operations (needs a pilot approval first). It is the only esker suitable for landing on the project area. Fixed-wings support will be needed for mobilization and demobilization operations. The large lake could also be used for float planes. The camp will be built by a specialized contractor and the following is what is likely to be built. Camp layout is preliminary and could change. See map 3.

- 1 wood frame kitchen, 16x16, wood floor, hot and cold running water, stove, refrigerator.
- 1 dry tent, 14x16, wood floor, hot and cold running water, hot water tank, washing machine
- 1 core-logging tent, 14x16, wood floor
- 1 office tent, 14x16, wood floor
- 3 sleep tents, 14x16, wood floor
- 1 sleep tent , 12x12, wood floor
- 1 Generator shack housing 12 Kw generator
- 2 wood frame outhouses
- 1 drill foreman shed
- 1 2 x 2 x2 m wooden emergency shelter, travels with the drill.

People: 7 to 12, max of 14 for a short period of time. Approximately . 450-500 man-days.

## 6. Equipment

Equipment Type	Units	Size-Dimension	Proposed Use	Grd. Pressure
Helicopter	1	31 ft x 6.4 ft x9 ft	Transportation, sampling, drill moves	1.03 psi
Diamond Drill	1	102 in x 64 in	Exploration drilling	2.21 psi
Generator	2	24 in x 26 x 22 in	Provide electricity to camp and drill	0.25 psi
Water pump	2	28 in x 21 x 17 in	Provide water to camp	0.08 psi
Core rock saw	1	20 in x 29 in x20 in	To cut core	0.08 psi
Vehicles	None			

## 7. Fuel

Fuel move is planned for spring time. The main fuel storage area will be located at the camp. The different types of fuel will be segregated and empty drums will be stored apart. Fuel area will be at requisite distance from water. All drums will be lying on their side in a single row, with walking distance between rows. Bungs will be at 3 and 9 o'clock and all facing the same direction. Wooden cribs will be constructed to support fuel drums at tents. Propane cylinders will be stored near the kitchen-dry in an upright and secure position. Empty drums and cylinders will be taken out on returning flights.

A secondary smaller fuel cache could be located at the north end of the project area with Jet B and Diesel drums if drilling occurs in this area. One spill kit will be kept at all fuel caches. Absorbing pads or drip pans will be located underneath stationary equipment and where fuel is transferred. A visual inspection of drums and hoses for seepage will be done daily.

Upon arrival at camp, personnel will be instructed on the spill response plan and safe manipulation of hazardous substances. Spill contingency plan is in Appendix C.

<b>Fuels</b>	<b>Use</b>	<b>Nb-Capacity of Container</b>	<b>Storage Method</b>	<b>Transfer Method</b>
P-50 Diesel	Drill, generators, incinerator	60- 205 l	In metal drums	Hand pump
Gasoline	Water pump	3-205 l	In metal drums	In smaller standard plastic containers using a hand pump.
Jet B	Helicopter	100-205 l	In metal drums	With an electric pump
Propane	Cooking, hot water tank	20-45 kg	In metal cylinders	No transfer
Stove oil	Heating	40-205 l	In metal drums	No transfer, drums replaced

## 8. Hazardous Material Use

Drill additives to be used will be as much as possible the least toxic ones available on the market. Drill mud and salt use will be limited as much as possible. Most of these substances will be stored in camp in or by the drill foreman shed. MSDS sheets in appendix E are typical of brands used in the industry. Once the drilling contractor known, if other brands are to be used the MSDS sheets will be updated.

<b>Material</b>	<b>Use</b>	<b>Nb-Capacity of Container</b>	<b>Storage Method</b>	<b>Transfer Method</b>
Oil, greases	Drilling, generators	9-10 litres	Plastic containers stored in boxes	Poured from container
Drill mud	Drilling	15-20 litres	Plastic pails on pallets	Pumped?
Antifreeze	Pumps	5-2 litres	Plastic containers in boxes	Poured from container
Calcium chloride salt	Drilling	300 bags	Plastic bags on pallets	Poured from container
Lead-Acid batteries	Electricity	2	Stored in boxes	NA
Household cleaners	Cleaning	10-650 ml	Plastic containers in boxes	NA

## 9. Waste

Waste will be burned in an incinerator when possible. Otherwise it will be flown out to approved municipal facilities.

<b>Waste type</b>	<b>Composition</b>	<b>Method of disposal</b>	<b>Additional treatment</b>
Bulky item-scrap metal	Wood, metal, plastic containers	Reused when possible otherwise burned in incinerator. Non-combustible will be packaged and flown out to an approved municipal discharge.	None
Garbage-solid waste	Kitchen refuse, paper, cardboard	Collected in standard garbage bins and incinerated daily.	None
Camp greywaters	Cooking, washing	Discharged in a covered sump dug in sandy soil at requisite distance from water.	Sump to be filled.
Sewage	Human waste	Outhouses to be equipped of a plastic pail lined with plastic bags. Content burned daily.	None
Hazardous waste	Oil, grease, household cleaners	Only a very small amount to be generated. If suitable, fuel- oil will be used for the incinerator. If not will be flown out to source.	None
Drill greywater	Water	80% of water will be recirculated. Otherwise will be discharged to a sump.	Sump to be covered at end of season.
Sludges	Drill cuttings	Will be discharged in sumps	Sump to be filled.
Empty barrels	barrels and cylinders	Flown out back to source.	None

## 10. Water Use

Water will be pumped from the large lake adjacent to the camp to provide potable water to camp. Water will also be pumped for drilling purpose. Lakes will be chosen so pumping does not impact on water level. Intake pump hose will have a screen. Water use should be in average of 4900 litres/day. Water will be discharged in sumps away from bodies of water.

## 11. Transportation

Operations are fly-in, fly-out.

**Helicopter:** probably a Bell 206L, the drill, equipment, fuel drums and personnel will be moved from site to site by helicopter. Personnel mobilization from nearest airport is likely to be done by helicopter.

**Fixed Wing:** Twin Otter equipped with tundra tires is expected to make a few trips for camp mobilization, demobilization and to supply camp.

A bombardier or similar equipment could be used to bring fuel and the drill to the project area in the spring.

No snowmobiles or ground vehicles will be used for the 2004 program.

## 12. Environment

The project area is located on traditional Qamanirjuaq caribou herd calving ground and the Caribou Protection Measures apply. The area is subject to special measures between May 15 and July 15. There is no caribou water crossings located in the project area. Two wolf dens, a few swans and raptors were observed during the 2003 operations. The project is located in the theoretical distribution range of both Polar and Grizzly bears. A Wildlife Observation Form to record sightings was used in 2003 and will be used again in 2004 (appendix F).

There are small eskers on the project area with a very long one located at the east edge of the project. No work is planned on the eskers. One esker, located 1 km away from planned camp site could be used as a landing strip if needed. Before doing so, it will be inspected for archaeological sites and nests. The esker would be used as is and no grading will be done.

No archaeological or burial sites are known on the project area. If any are found or suspected, the area will be protected and its location reported to authorities. A reporting form and an avoidance procedure will be in place.

The closest community is Whale Cove at 45 km to the east. It will not be affected by the exploration activities. Regular meetings in Whale Cove and Rankin Inlet are planned to keep the community up to date with the exploration activities.

### **13. Environmental Impact**

The project is still at an early stage and will have only low and temporary environmental impact. Noise from the helicopter and drill will be the most disturbing. Light wear on the vegetal cover could happen in most used camp areas. Water needs to be pumped from lakes for camp and drill use. Greywaters will have to be discharged in sumps.

Low level flights will be avoided as much as possible but will be needed during drill moves and during soil sampling program. It will be for short period of time and will be cancelled if a caribou herd is present. Animal dens and nesting areas will be protected and disturbance will be avoided. The proposed camp location will be inspected for dens, nests and archaeological-burial sites before being set up. If a caribou herd was to move through a drilling site or camp, activities would cease until the animals in close proximity leave the site. Harassing or taming animals will not be permitted.

Upon arrival at camp, personnel will be instructed on the environmental procedures applicable to the project.

Once the 2004 project completed, the only thing left on the site will be the core, neatly stacked.

### **14. Abandonment and Reclamation Plan**

Camp will be dismantled at the end of the summer, equipment flown out to source and waste either burned or flown out to an approved municipal discharge. Sumps will be covered. Sumps and areas with worn out vegetal cover will be covered with peat moss and slightly fertilized to promote natural growth. See the appendix D.

### **15. Benefits to Inuit**

It is Placer Dome sustainability policy to promote local employment and the utilisation of competitive goods and services. At least two field assistants will be locally hired for the total length of the program. Various opportunities for service provision will exist (e.g., hotel accommodation, taxi, supplies, carpenter, local airline charter...) resulting in direct dollars to communities. Project planning is still in its early stage and more contacts will be established during the meetings at Whale Cove and Rankin Inlet (March 15-17).

### **16. Safety**

Upon arrival at camp, personnel will be instructed on:

- Communication systems and procedures
- Camp and work place safety



- Fire emergency procedures
- Accident and Med-Evac emergency procedures
- Personal protective equipment requirements
- Spill response procedures and safe manipulation of hazardous substances
- Survival and protection from aggressive wildlife
- Aircraft safety
- Safety meeting schedule

A Safety and Emergency Response Procedures Plan, detailing above items is being prepared and will be submitted with the Worker Compensation Board for approval.

### **17. Communications**

The camp will be equipped with at least 2 satellites telephones, handheld FM radios and one MSAT telephone. A second MSAT telephone will be provided by the drilling company. Phones will be in different tents. The helicopter and drill will also have a satellite phone. Hand-held FM radios will be used for communications between helicopter and field crews. All personnel will be fully instructed on the use of all communication equipment and a list of emergency contacts will be posted with the telephones.

### **18. Supervisory and First Aid certificates**

N.Prud'homme: Level II Supervisors Certificate (Nunavut)

Drill Foreman: Level II Supervisors Certificate (Nunavut)

Drillers: Level I Supervisors Certificate (Nunavut)

Cook and/or N. Prud'homme: Advance First Aid Level 2 certificate

Drill Foreman, Drillers, Pilot: Safety Oriented First Aid certificate

Most personnel in camp will have at least valid Safety Oriented First Aid training.

### **19. Fire Plan**

All tents will be equipped with a minimum 4-5 kg fully charge ABC type fire extinguisher located near point of exit and/or proximal to equipment that poses a fire hazard. No smoke signs to be posted at all fuel caches, kitchen, propane depot and other areas of possible hazard.

Fuel caches will be located at least 100m away from the tents.

All personnel will be instructed in fire emergency procedures and the safe use of fire equipment. Personnel will be aware of a common assembly area away from the tents.