

**2007 PLAN of OPERATIONS  
PEBBLE COPPER PROJECT  
Permit #AO6118**

(Iliamna D6 & D7 USGS Topographic Maps, Seward Meridian)

**Plan Narrative**

Northern Dynasty Mines Inc (NDM) Multi-Year Miscellaneous Land Use Permit (APMA permit #AO66118) expires December 31, 2006. NDM plans to conduct additional exploration work on the Pebble Project in 2007. The purpose of this letter is to describe NDM's exploration and reclamation plans for that period.

The Pebble Project is located on Alaska State mining claims located 17 miles NW of Iliamna, Alaska. NDM controls the Alaska State mining claims on which all exploration will take place. NDM will be the operator for the 2007 exploration work.

The following activities are anticipated from January 1 through December 31, 2007.

- o Seventy five (75) diamond bore holes.
- o One hundred twenty three (123) rotary bore hole sites
- o Sixty nine (69) seismic lines totaling no more than 185,000 ft.
- o One hundred forty one (141) shallow soils test pits

**Disturbed Acres** (1 acre = 43,560 sq ft.)

- o 0.00 - acres remaining to be reclaimed from 2005 exploration program
- o 3.18 - acres disturbed from January 1 through September 25, 2006
- o 1.94 - acres reclaimed from January 1 through September 25, 2006
- o 1.24 - disturbed acres remaining to be reclaimed on September 25, 2006

New acres to be disturbed between September 25, 2006 and December 31, 2007:

3.44 acres	Core bore sites
5.65 acres	Rotary bore sites
0.32 acres	Test Pits
2.12 acres	Seismic lines
11.54 acres	TOTAL

Reclamation will be conducted concurrently with exploration.

**Access**

- o Access to the project site will be via helicopter from the Iliamna area.
- o Additional support will be provided by light fixed wing aircraft operating off lakes and temporary snow/ice airstrips. When frost depth, ice and/or snow conditions permit a winter airstrip may be made by back blading and leveling the snow over an area of approximately 2,500 ft. x 100 ft. Vegetation or soil will not be disrupted. If a suitable lake is found with a sufficient thickness of ice to land light fixed wing aircraft it will be used instead of a snow strip.

**Personnel and Accommodations**

- o All personnel will be housed off-site in the town of Iliamna

- The “camp” built in 2004 in the SE1/4 SE1/4 Sec 21 T3S R35W continues to be used for storage i.e., drill parts, water line, reclamation supplies, etc.
- An emergency shelter and several small buildings are located at drill sites. The buildings are used for storage and employee safety. Drill platforms will be enclosed to protect the drill crews this winter. The emergency shelter will either be a WeatherPort type tent or small wooden building, and will be heated and stocked with emergency supplies, e.g., extra food and blankets. In addition, NDM must build 10' x 12' insulated and heated pump houses to keep pumps and waterlines from freezing. Structures will be built in town and moved by helicopter to each site. All are temporary, heli-portable, and moved with the drills. The structures will be lifted back to Iliamna when no longer needed due to warm spring weather.
- Portable toilets with propane burner will be located at each drill site.
- A larger core saw shop will be built on NDM's DOT leased lot in Iliamna (airport). This is permitted through the Department of Transportation and the State Fire Marshal.

### **Cultural Survey**

- A cultural resource survey will be completed over all proposed bore holes, soils test pit sites and proposed seismic survey lines.

### **Wetlands Permit (404)**

- A 404 permit is not required for the drilling program because of its *de minimis* nature. Under the Nationwide Permit Number 6 Corps of Engineers (COE) notification is not required. However, as done previously, NDM will be notifying the COE to ensure it is aware of the program.

### **Site Support**

As in previous years exploration will be supported year round by helicopter. Other than the exceptions noted below all access to and from the site and on-site will be made by helicopter.

- During winter months light fixed wing aircraft, operating from snow/ice airstrips will also be used. See prior discussion under Access.
- During months when ground and snow conditions allow, snowmobiles and other ATV equipment will be used on work site. An Argo Centaur, or similar equipment, will be used during these months; this vehicle can be used with either tires or tracks. Tires on frozen ground have five (5) psi, tracks unburdened have 1.5 psi and burdened have 2.2 psi.

### **Boring**

Up to eight diamond and two rotary drills will be on site.

#### Diamond Boring

Up to seventy five (75) bore holes are planned; maximum depths will be 6,500 ft.

- Water required for boring will be taken from nearby ponds and/or from previous bore holes should they contain sufficient water. Water will not be taken from any water body containing fish; however, screens will be placed at intakes in all water bodies.
- No bore runoff will be allowed to enter streams or wetlands.
- Emergency spill kits and absorbent material will be kept at each bore site.
- Upon completion all bore holes will be plugged with “Bentonite” or equivalent slurry, from bottom to top, with the exception of a few holes which will be temporarily

- plugged with "Margo Plugs" and used for providing drill water. If water is encountered in any bore hole, the section producing water will be pressure grouted.
- If artesian waters are encountered, the Alaska Division of Mining, Land & Water will be notified at 907-451-2788. If possible artesian waters will be held down hole using drill mud, or the interval making water will be pressure grouted. Where this is not possible, the flow will be collected in a sump and directed to uplands away from stream, lakes and wetlands. At completion, any bore hole making artesian water will be plugged according to Alaska Division of Mining, Land & Water requirements.

### Rotary Bore Holes

Up to One hundred twenty three (123) rotary bore holes may be drilled for geotechnical and groundwater sampling and measuring. The holes will be drilled into bedrock at depths ranging from 10 to 400 ft. Split tube and Shelby tube samples will be collected from the holes.

- For groundwater testing bores, two-inch-diameter PVC will be installed so holes can be use as monitoring wells. The wells will be completed with a sand pack, bentonite seal and grouted to within 10 ft. of ground surface with bentonite slurry. The top 10 ft. of the annulus will be filled with cement bentonite grout and the well will be completed at the surface with a locking protective steel casing.
- Pumping wells will be installed as follows:
  - Drive five-inch diameter welded steel casing to the target depth
  - Place four-inch diameter telescoping, continuous wire-wrap stainless steel Johnson or equivalent screen
  - Pull casing back to expose screen
  - Develop well
  - The development method will preferably include a combination of jetting with a jetting tool and surging with a surge block
- Geotechnical holes will be sampled using a split spoon or Shelby tube. These holes will be abandoned using a "Bentonite" or equivalent slurry from bottom to top.

The specific location of current drill sites and the general location of both diamond and rotary 2007 drill sites are shown on the attached map. Specific 2007 locations will be identified, mapped, and submitted to the Department of Natural resources (DNR) at least 30 days prior to drilling.

### Bore Hole Reclamation

All drill sites will be reclaimed concurrently with exploration. All bore holes will be plugged with a bentonite holeplug, a benseal mud, or equivalent slurry from bottom to top. If artesian aquifers are encountered the Division of Mining, Land & Water (907-451-2788) and/or the Department of Environmental Conservation (907-451-2101) shall be notified. All artesian zones will be grouted and plugged prior to abandoning to the hole. All trash will be collected and removed from the site on a daily basis. Bore cuttings will be shoveled down the drill hole and raked into the soil. The disturbed surface will be recontoured and reseeded with native vegetation.

## **Seismic**

### Seismic Surveys

Seismic surveys will consist of up to sixty nine (69) widely spaced lines totaling not more than 185,000 ft. All work will be helicopter supported and no ground vehicles will be used. The program will utilize a backpack portable Geometrics seismograph. Seismic energy will be provided from small (3 shots per location) explosive charges buried in hand-excavated shot holes. Each 24-geophone spread will record up to 7 shots located at different positions along the seismic cables. A total of approximately 2,500 shots will be made during the program. Each shot will excavate a hole approximately 2-3 ft. in diameter and 2-3 ft. deep. Blasting will not take place within 200 ft. of any fish bearing stream or lake. Particular care will be taken not to disturb wildlife especially, caribou, bear and moose. Blasting activities will cease should either be within ½ mile of the shot site.

### Seismic Reclamation

Each shot hole will be smoothed and rounded by hand shovel and rake. Where possible, covering vegetation will be cut out and removed prior to the blast and subsequently rolled back over the site when reclaimed. The disturbed surface will be reseeded with native vegetation. As the program will be helicopter supported, no ground footprint will be left other than the blast hole.

## **Soils Test Pits**

A maximum of One hundred forty one (141) shallow soils test pits is planned.

### Test Pit Excavation

Test pits to determine soil horizons for construction purposes will be excavated with a helicopter supported mini-excavator. Pits will be three to four ft. long, two to three ft. wide, and up to seven ft. deep.

### Soils Test Pit Reclamation

Prior to digging, the surface vegetation mat will be cut away and removed. Once sampled, test pits will be backfilled, recontoured, the surface vegetation rolled back over and the site will be seeded with native vegetation. The test pitting program will be helicopter supported and no ground footprint other than at the actual site will be made.

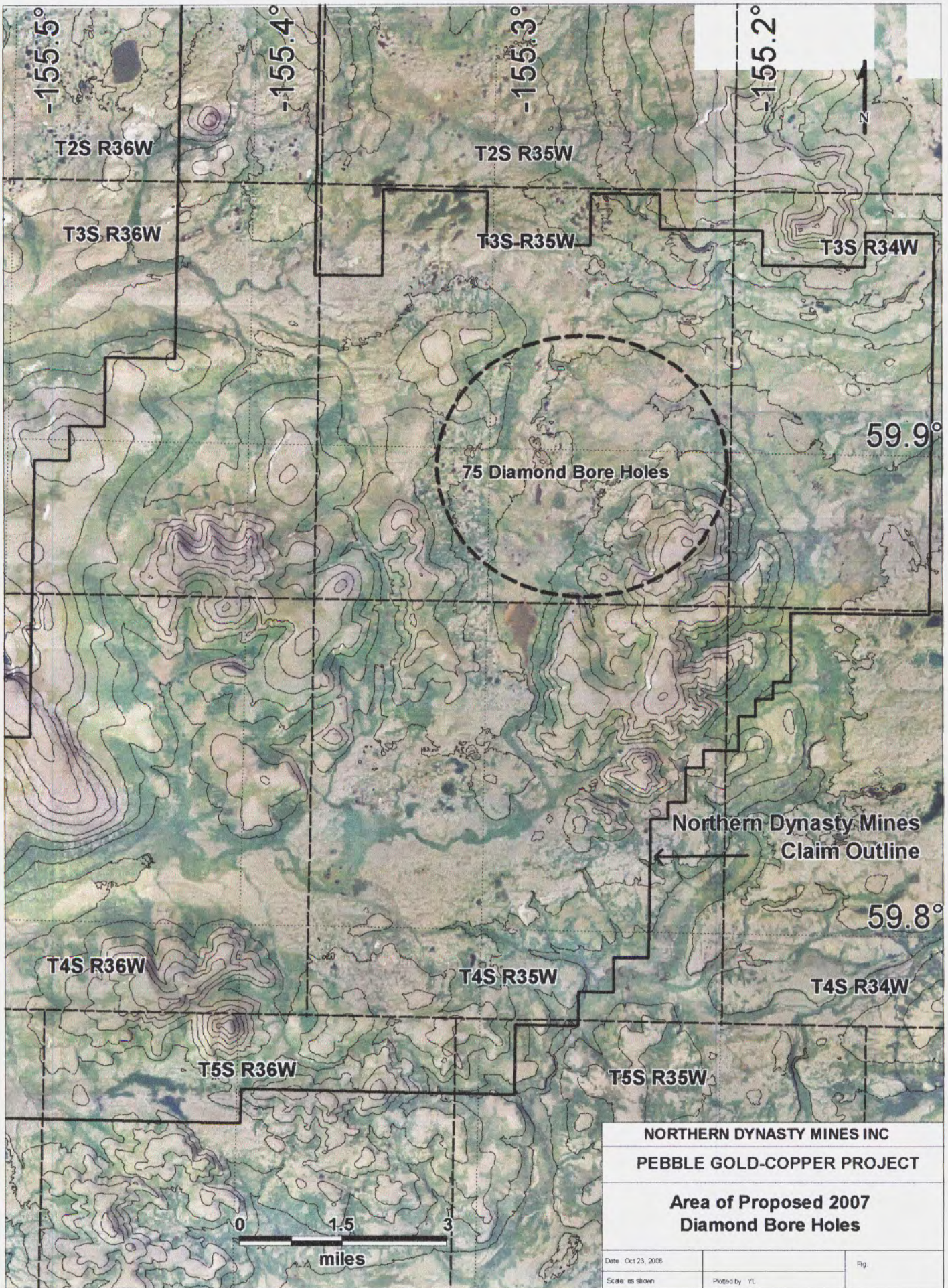
## **Fuel**

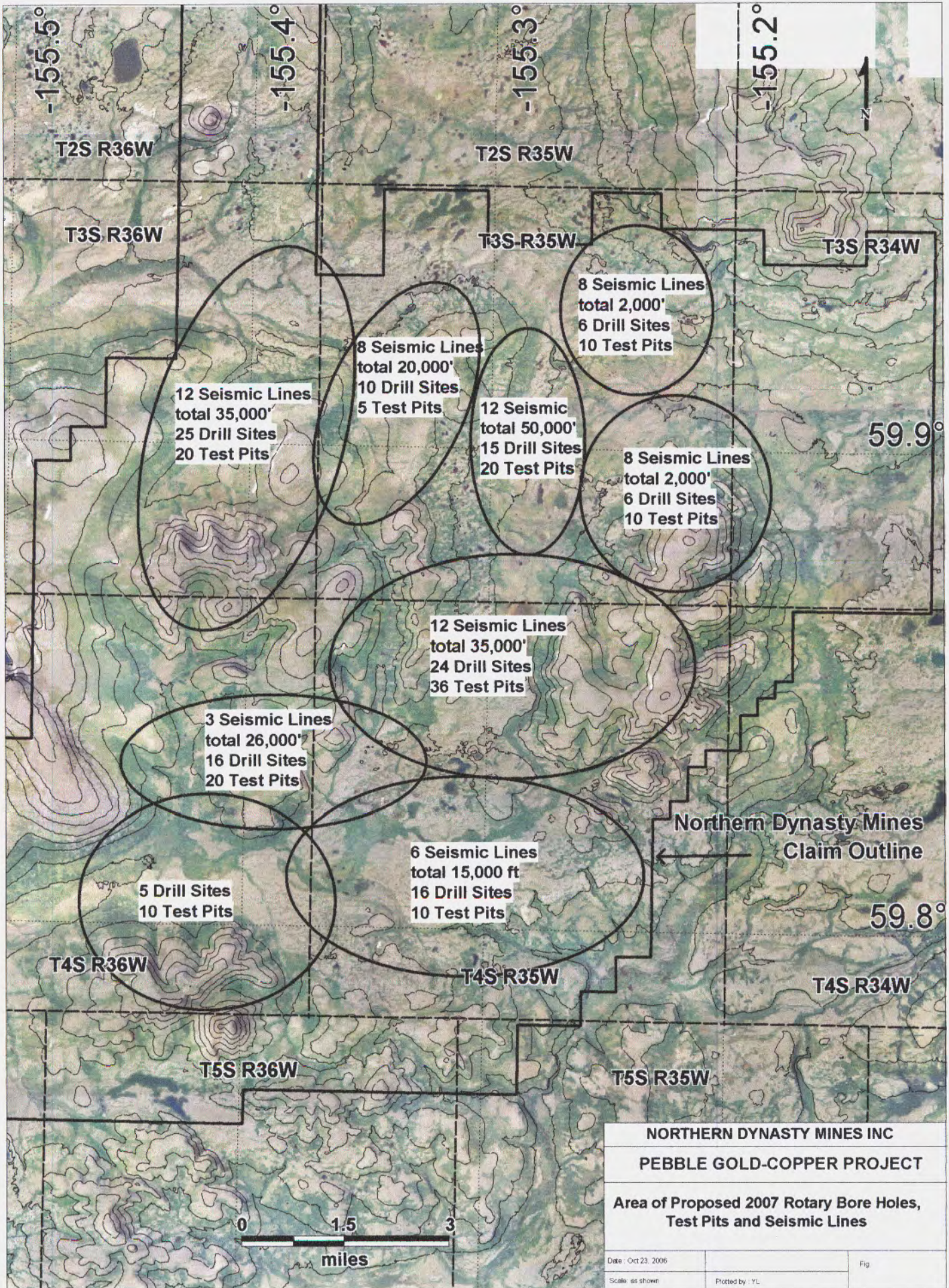
Fuel will be supplied from storage facilities in Iliamna.

- Maximum quantity of fuel stored on project sites will be 5000 gallons per location.
- Fuel stored on project sites will be kept in double wall tanks inside lined fuel storage areas. Liners will have 120% capacity of the fuel storage tanks.
- Fuel storage sites will be at least 100 ft. from water bodies
- Emergency spill kits and absorbent materials will be kept at fuel storage sites.
- NDM is preparing a Spill Prevention Control and Countermeasures (SPCC Plan). When completed a copy will be provided to the DNR.

## **Wildlife**

The Mulchatna caribou herd begins calving during early May and calving continues through to the first week of June. To prevent unnecessary disturbance and potential adverse affects from occurring, helicopter and workers will make every effort to avoid interaction with caribou. When caribou are observed, helicopters will endeavor to maintain a minimum over-flight height of 1,500 ft. above ground level and/or horizontal separations of one mile as has been previously recommended by state habitat biologists.





**NORTHERN DYNASTY MINES INC**  
**PEBBLE GOLD-COPPER PROJECT**

**Area of Proposed 2007 Rotary Bore Holes,  
 Test Pits and Seismic Lines**

Date: Oct 23, 2006  
 Scale: as shown  
 Plotted by: YL  
 Fig: