

# STATE OF ALASKA

## DEPARTMENT OF NATURAL RESOURCES

*DIVISION OF MINING, LAND AND WATER*

*Alaska Hydrologic Survey*

*Northern Regional Office*

SARAH PALIN  
GOVERNOR

3700 Airport Way  
Fairbanks, AK 99709  
phone: 907.451.2772  
fax: 907.451.2703  
email: jim.vohden@alaska.gov

## FIELD REPORT --PEBBLE COPPER/GOLD PROJECT--

**Date:** 5 April 2007

**Weather:** Partly cloudy, ~45°F, windy, approximately 6" snow on ground.

**Operator Contact:** Michael C.T. Smith, Bob Clough and Murray Richardson, Northern Dynasty; David Dorris, contractor to Northern Dynasty.

**Agency Personnel:** Dick Mylius, DMLW; Tom Crafford, OPMP; Andrea Meyer, OPMP; Patricia Bettis, DMLW; Scott Maclean, OHMP; Jim Vohden, DMLW.

**Objectives:** Site visit to Pebble Project.

### Site Visit:

Agency personnel, Michael C.T. Smith and David Dorris flew from Anchorage to Iliamna via a charter on Iliamna Air Taxi, provided by Northern Dynasty Minerals, Ltd. After a safety briefing we were given an overview of the project at the office in Iliamna. Currently:

- Five drill rigs, drilling up to 5700 feet below ground surface.
- Five helicopters hauling equipment and crews.
- Approximately 100 people actively working in Iliamna and on-site.
- Approximately 10 environmental staff/consultants.

Access to the project site was carried out with the group in two helicopters. The first landing site was on the northwest flank of Kuktuli Ridge, on the east side of the project area. From this location drill rigs were visible working within the vicinity and the location provided a good overview of the site. The second landing site was at drill rig number 5. The drill site was clean and orderly. Most of the drilling components were on top of a "tundra pad" which is a mobile wooden platform constructed of timbers and decking such that the impact to the tundra is minimal. This also provided a good work surface for the drill crew and can be easily removed from the work area. Many of the larger components at the drill site are constructed with stabilizing wings in order to steady them during helicopter slinging to other drill pads.

From the drill pad we hiked 1500 feet north along a 2 inch diameter water line to the pump setup at the Upper Talarik. The creek was iced over and water was continuously withdrawn at 20 gallons per minute or less. The surge tank, pump, generator and fuel (in double walled tank) were located in excess of 150 feet from the Upper Talarik itself. The screen box was not visible at this site because of the ice cover, but one was seen for demonstration purposes at the office in Iliamna. These boxes are used at the pump inlet in the waterbody in order to prevent impingement of fish at the orifice. Two of the water withdrawal locations were from the Upper Talarik Creek and the remaining three were in individual non-fish bearing ponds with 3-4 feet of ice.

Water and sediment from the drill cuttings was discharged as permitted onto the uplands directly from the drill rigs. A thin layer of sediment and water (less than half an inch thick) was observed within 100 feet downslope of the drill rig. During ice free months a sump pit will be dug to retain drill cuttings. Three reclamation crews will be on site during the summer.

On-site fuel storage for the field program is at Big Wiggly Lake. Fuel is shuttled to storage at this location year-round; one depot holds 3000 gallons and is 200 feet from the lake, the other depot holds 2000 gallons and is 100 feet from the lake. Fuel storage appeared adequate. From these locations fuel is parsed out to the various drill sites as needed.

The flight back to Iliamna proceeded over a potential road access route and across the Newhalen River. A brief tour of the core shack concluded the site visit.

**Action Items from This Site Visit:**

None.

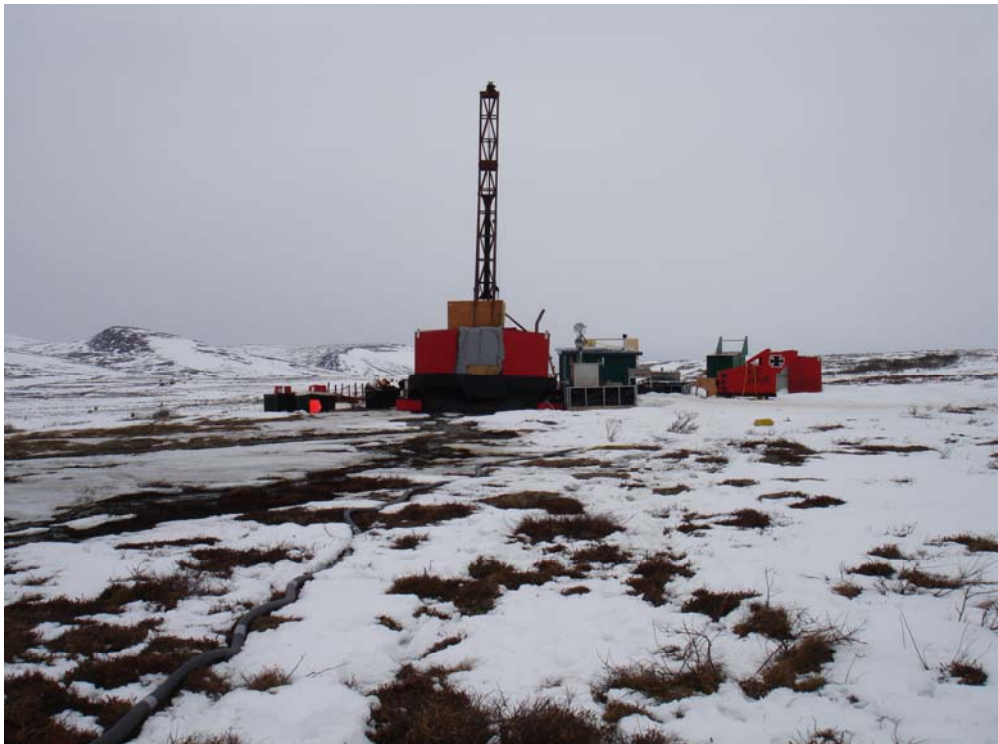
**Action Items from Previous Site Visits:**

None.

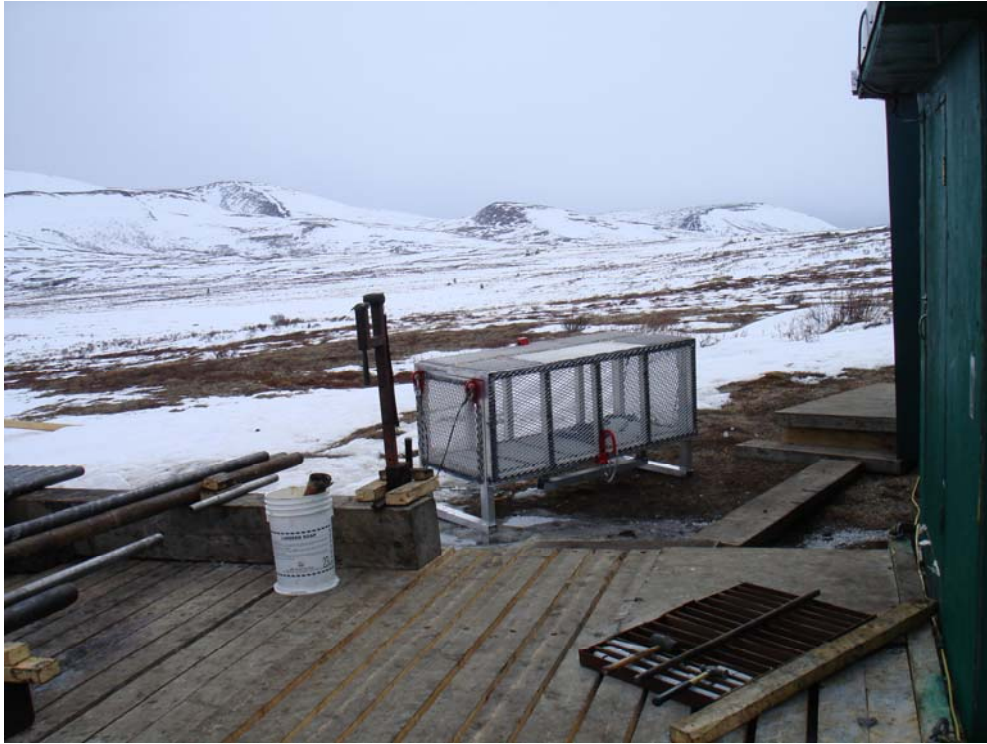
cc: Tom Crafford, ADNR, Anchorage  
Rick Fredericksen, ADNR, Anchorage  
Ed Fogels, ADNR, Anchorage  
Mark Inghram, ADNR, Anchorage



**Figure 1.** View from Koktuli Ridge looking west over project area.



**Figure 2.** Drill rig with supplies and emergency shelter.



**Figure 3.** Tundra pad and drilling core transport container.



**Figure 4.** Water and cuttings discharge on uplands.





**Figure 5.** Water withdrawal fish screen box.