

Field Monitoring Report -- Pebble Copper/Gold Exploration Project --

Personnel:	Inspection Date: 7/8/2010
Kate Malloy, ADF&G	Site Contact: Gernot Wober
Jim Vohden, DNR	APMA #: A20106118
Gay Harpole, DEC	
<input checked="" type="checkbox"/> Inspection Type:	<input checked="" type="checkbox"/> Wildlife Observed:
<input type="checkbox"/> Complete:	<input type="checkbox"/> Bear: None
<input checked="" type="checkbox"/> Partial: x	<input type="checkbox"/> Caribou: None
<input type="checkbox"/> Follow-up:	<input type="checkbox"/> Moose: None
<input type="checkbox"/> Response to Public Complaint:	<input type="checkbox"/> Waterfowl: None
	<input type="checkbox"/> Fish: None
<input checked="" type="checkbox"/> Weather Conditions:	<input type="checkbox"/> Other:
<input type="checkbox"/> Temperature: Approx. 50 F	
<input type="checkbox"/> Wind: Light breeze, Beaufort 2 (4-6 knots)	<input checked="" type="checkbox"/> Water level at Frying Pan Lake:
<input type="checkbox"/> Precipitation: None	<input type="checkbox"/> Observed inflow: Not observed
<input type="checkbox"/> Visibility: 4 - 5 miles	<input type="checkbox"/> Observed outflow: Not observed
<input type="checkbox"/> Sky Conditions: Partly cloudy	
<input type="checkbox"/> Ground Conditions: Dry	
<p>Comments: PLP staff reported a 10-20 gallon hydraulic oil spill (quick gel, polymer # 1 and vegetable oil) upon agency arrival at drill rig. Spill occurred approx. 4 am that morning. Spill was limited to trench and sump pits. Sorbent pads and blue oil scrubbers were in use cleaning sump water. Adequate response to spill was underway upon agency arrival at the site.</p>	
<p>Recommendations: See actions needed.</p>	
<p>Actions Needed: PLP to follow up with DEC regarding spill final report and additional suggested clean up measures (i.e., if there are any traces of hydraulic oil left in the trench underneath the rig platform and/or inside sump pits, PLP should scrape the sides of the trench and pits and move the soil off site, either back to Iliamna for remediation, or ship to Emerald on the next scheduled soil shipment).</p>	

Drill Hole/Site No.: 10488	Rig No.: 3
Activity: Drilling suspended while cleaning up hydraulic oil spill	Date: 7/8/2010
<ul style="list-style-type: none"> ■ Condition of Drilling Site: cleaning spill, otherwise good and orderly <ul style="list-style-type: none"> ○ Distance from waterbody: Approx. 500 ft. ○ Location of fuel storage: Behind medic tent, near rig ○ Sorbent pads present: Yes ○ Tundra mat: Yes ○ Pipe off tundra: Yes ○ Litter: No ○ Trash containment: Yes ○ Sanitary facilities: Yes ○ Any spills or staining: Yes, see comments on page 1 ○ General impression: Orderly 	<ul style="list-style-type: none"> ■ Sump Pit (continued): <ul style="list-style-type: none"> ○ Location and extent of discharged material: ○ Topsoil, muck, tundra stockpiled: Yes ○ Location of secondary sump pit: Behind first pit ○ Hose color: Yellow
<ul style="list-style-type: none"> ■ Drilling Activity: <ul style="list-style-type: none"> ○ Drill additives in use: quick gel, polymer #1, vegetable oil ○ Water recirculation: Yes ○ Water discharged: Not at time of inspection due to spill ○ Artesian zone encountered: Not observed 	<ul style="list-style-type: none"> ■ Drill Water Supply: <ul style="list-style-type: none"> ○ Stream, lake, kettle pond: Stream ○ Location: ~ 500 ft. west of drill rig ○ Adequate water flow and depth for fish passage in streams: Yes ○ Evidence of significant impacts to riparian vegetation or stream banks: No ○ Relative water level: Mid bank ○ General impression of water body, i.e. clear, turbid, tannic: Clear ○ Intake structure: Yes, new intake screens in use ○ Structure clear of debris: Yes ○ Mesh size: 1 mm x 12 mm (consistent with 0.04 inch mesh size for Group A fish) ○ Submerged: Yes ○ Pump location to source: > 100 ft
<ul style="list-style-type: none"> ■ Sump Pit: <ul style="list-style-type: none"> ○ Location: Adjacent to rig ○ Discharge trench: Between rig and sump pit ○ Dimensions of pit: 3 pits, each approx. 3 ft wide x 8 ft long x 4-5 ft deep ○ In use: Yes, drillers were skimming oil from water surface at time of inspection 	<ul style="list-style-type: none"> ○ Catch basin for fuel supply: Yes ○ Sorbent pads: Yes ○ Hose color: Yellow



Figure 1. Drill rig 3 on DH 10488.



Figure 2. Trench from rig leading to the sump pit. Note white sorbent pads in trench and near blue oil scrubber barrel. Small hydraulic oil spill occurred in the morning on July 8, 2010.



Figure 3. Faulty mud mixer motor was suspected cause of spill.



Figure 4. Part of the spill response kit, oil scrubber bin helps remove oil from the water, using the hydrophobic material in the white bag. Water that has been scrubbed goes into the sump pit.



Figure 5. Sorbent pads had been placed in the sump pits to help collect the hydraulic oil.



Figure 6. Screened water intake structure.