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

Personnel: Steve McGroarty (ADNR)	Inspection Date: August 27, 2008
David Johnson (ADEC)	Site Contact: Lena Brommeland
	APMA #: A086118
■ Inspection Type: Routine - Partial	■ Wildlife Observed:
o Complete:	o Bear: None
o Partial:	o Caribou: None
o Follow-up:	o Moose: None
o Response to Public Complaint:	o Waterfowl: None
	o Fish: None
■ Weather Conditions:	<ul> <li>Other: One ground squirrel &amp; one ptarmigan</li> </ul>
o Temperature: 50 f	J. S.
o Wind: Light	■ Water level at Frying Pan Lake:
o Precipitation: N/A	o Observed inflow: not observed
○ Visibility: > 1 mile	o Observed outflow: not observed
o Sky Conditions: PC/Cloudy	
o Ground Conditions:	
Comments: Most drill sites were clean and orderly.	
Recommendations: None.	
Actions Needed: It was not apparent whether or not DDH # 8405 and DDH # 8415 were plugged when sites were reclaimed; please confirm whether or not this is the case. Please determine whether the unreclaimed exploration trench is located on PLP claims and if so, please indicate when it will be reclaimed.	

Drill Hole/Site No.: P-08-87	Rig No.: 8
Activity: Active Drilling	Date: 8/27/08
Drilling monitoring well to approx 300'	59 50 39.3/155 09 03.4
■ Condition of Drilling Site: No spills noted	■ Sump Pit (continued):
<ul> <li>Distance from waterbody: &gt; 500-ft (see photo)</li> </ul>	<ul> <li>Location and extent of discharged material: RC drill cuttings were discharged adjacent to drillhole</li> </ul>
<ul> <li>Location of fuel storage: At drill rig; in secondary containment</li> </ul>	o Topsoil, muck, tundra stockpiled: n/a
o Sorbent pads present: Yes	<ul> <li>Location of secondary sump pit: n/a - geotechnical drill rig</li> </ul>
<ul> <li>Tundra mat: most equipment &amp; supplies were on cribbing or pallets</li> </ul>	o Hose color: n/a
o Pipe off tundra: all but a few sections of pipe	
o Litter: None observed	■ Drill Water Supply:
o Trash containment: Ok	o Stream, lake, kettle pond: stream
o Sanitary facilities: Ok	o Location: > 500-ft from drill rig
o Any spills or staining: None noted	<ul> <li>Adequate water flow and depth for fish passage in streams: yes</li> </ul>
o General impression: clean and orderly	<ul> <li>Evidence of significant impacts to riparian vegetation or stream banks: None</li> </ul>
	<ul> <li>Relative water level: 1-2 ft deep, 20-ft wide</li> </ul>
■ Drilling Activity:	<ul> <li>General impression of water body, i.e.</li> <li>clear, turbid, tannic: clear</li> </ul>
o Drill additives in use: not observed	o Intake structure: Screened
o Water recirculation: yes	o Structure clear of debris: Yes
o Water discharged: yes	o Mesh size: Small – not measured.
o Artesian zone encountered: not determined	<ul><li>Submerged: yes</li><li>Pump location to source: &gt; 50 ft from stream</li></ul>
■ Sump Pit: none - geotechnical drill rig	o Catch basin for fuel supply: yes
o Location: n/a	o Sorbent pads: yes
o Discharge trench: n/a	o Hose color: yellow
o Dimensions of pit: n/a	
o In use: n/a	



Figure 1: Drill Rig #8 - Geotechnical drilling rig at hole number P-08-87.

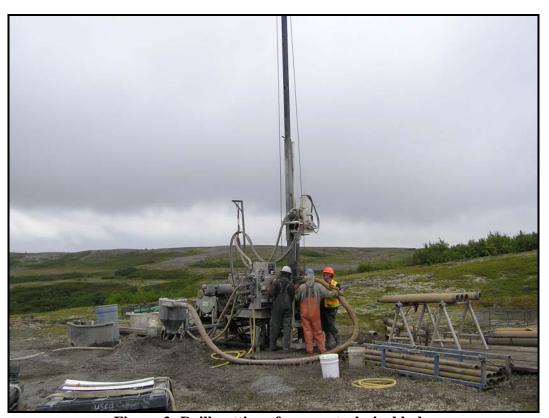


Figure 2: Drill cuttings from geotechnical hole.



Figure 3: Drill Rig # 8.



Figure 4: Water pump for Drill Rig # 8.

Drill Hole/Site No.: 8421	Rig No.: 3
Activity: Active Drilling @ 5078 feet.	Date: 8/27/08
	59 54 06.3/155 14 38.5
■ Condition of Drilling Site: no spills observed	■ Sump Pit (continued):
o Distance from waterbody: See photo	<ul> <li>Location and extent of discharged material:</li> </ul>
<ul> <li>Location of fuel storage: At drill rig; in secondary containment</li> </ul>	o Topsoil, muck, tundra stockpiled: Yes
o Sorbent pads present: Yes	<ul> <li>Location of secondary sump pit: adjacent to primary pit; 6' x 8'</li> </ul>
o Tundra mat: Yes	o Hose color: blue
o Pipe off tundra: Yes	
o Litter: None observed	■ Drill Water Supply:
o Trash containment: Ok	o Stream, lake, kettle pond: Stream
o Sanitary facilities: Ok	<ul> <li>Location: approximately 200-ft from drill rig - see photo</li> </ul>
o Any spills or staining: None noted	<ul> <li>Adequate water flow and depth for fish passage in streams: Yes</li> </ul>
o General impression: clean and orderly	<ul> <li>Evidence of significant impacts to riparian vegetation or stream banks: None</li> </ul>
	o Relative water level: normal
■ Drilling Activity:	<ul> <li>General impression of water body, i.e.</li> <li>clear, turbid, tannic: Clear</li> </ul>
<ul> <li>Drill additives in use: Yes - EZ Mud plus &amp; Penetrol</li> </ul>	o Intake structure: Screened
o Water recirculation: Yes	o Structure clear of debris: Yes
o Water discharged: Occasionally	o Mesh size: Small – not measured.
o Artesian zone encountered: No	o Submerged: yes
	o Pump location to source: see photo
■ Sump Pit:	o Catch basin for fuel supply: Yes (Photo)
o Location: Adjacent to drill rig	o Sorbent pads: Yes
o Discharge trench: Yes	o Hose color: White
o Dimensions of pit: 8' x 10' - See photo	Intake at 59 54 03.5/155 14 31.8
o In use: Yes	
0	



Figure 5: ADEC inspecting Drill Rig # 3.



Figure 6: Primary and secondary sumps at Drill Rig # 3.



Figure 7: Source water pump with generator & Drill Rig # 3 in background.



Figure 8: Discharge location for Drill Rig #3 (Rig # 3 in background).

Drill Hole/Site No.: 8423	Rig No.: 2
Activity: Active Drilling	Date: 8/27/08
	59 53 54.3/155 14 37.3
■ Condition of Drilling Site: Fuel odor/small stain	■ Sump Pit (continued):
○ Distance from waterbody: See photo	<ul> <li>Location and extent of discharged material: on ridge near rig - see photo.</li> </ul>
<ul> <li>Location of fuel storage: At drill rig; in secondary containment</li> </ul>	o Topsoil, muck, tundra stockpiled: Yes
o Sorbent pads present: Yes	<ul> <li>Location of secondary sump pit: Next to primary sump.</li> </ul>
o Tundra mat: Yes	o Hose color: Black.
o Pipe off tundra: Yes	
o Litter: There was a little litter at this site.	■ Drill Water Supply:
o Trash containment: Ok	o Stream, lake, kettle pond: small stream
o Sanitary facilities: Ok	o Location: 59 53 52.2/155 14 27.7
o Any spills or staining: None noted	<ul> <li>Adequate water flow and depth for fish passage in streams: Yes.</li> </ul>
<ul> <li>General impression: There was a slight fuel odor near the fuel tanks and the site was just not quite as clean and orderly as the other rigs inspected.</li> </ul>	<ul> <li>Evidence of significant impacts to riparian vegetation or stream banks: None</li> </ul>
•	o Relative water level: normal
■ Drilling Activity: Rig was not currently drilling.	<ul> <li>General impression of water body, i.e.</li> <li>clear, turbid, tannic: clear</li> </ul>
o Drill additives in use: EZ Mud Plus	o Intake structure: Screened
o Water recirculation: n/a	o Structure clear of debris: Yes
o Water discharged: n/a	o Mesh size: Small – not measured.
o Artesian zone encountered: Yes 5 – 7 gpm	o Submerged: yes
	<ul> <li>Pump location to source: Electric pump in source; generator 50' from source.</li> </ul>
■ Sump Pit: Rig was not currently drilling.	o Catch basin for fuel supply: Yes
o Location: Near rig - see photo	o Sorbent pads: yes
o Discharge trench: Yes	o Hose color: Yellow
o Dimensions of pit: 3 sumps - 8' x 10'	Intake at 59 53 52.2/155 14 27.7
o In use: n/a	



Figure 9: Drill Rig # 2 at drill hole number 8423.



Figure 10: Discharge location for Drill Rig # 2.



Figure 11: Bud Green of Pebble environmental staff inspecting water source for Drill Rig # 2.



Figure 12: There was a slight fuel odor near the fuel tanks for Drill Rig # 2 and a little staining on the ground.



Figure 13: Sumps at Drill Rig # 2.



Figure 14: Screened intake for Drill Rig # 2.

Drill Hole/Site No.: 8420	Rig No.: 5
Activity: Active Drilling @ 4331'	Date: 8/27/08
	59 53 35.5/155 15 24.6
■ Condition of Drilling Site: Clean	■ Sump Pit (continued):
o Distance from waterbody: See photo	<ul> <li>Location and extent of discharged material: discharge point appears to have been moved periodically; currently to tundra.</li> </ul>
o Location of fuel storage: At drill rig	o Topsoil, muck, tundra stockpiled: Yes
o Sorbent pads present: Yes	<ul> <li>Location of secondary sump pit: See photo.</li> </ul>
o Tundra mat: Yes, plus pallets	o Hose color: White
<ul> <li>Pipe off tundra: Most pipe was off the tundra; five sections of pipe were partially on tundra.</li> </ul>	
o Litter: None observed	■ Drill Water Supply:
o Trash containment: Ok	o Stream, lake, kettle pond: Pond
o Sanitary facilities: Ok	o Location: n/a
o Any spills or staining: None noted	<ul> <li>Adequate water flow and depth for fish passage in streams: n/a</li> </ul>
o General impression: clean site	<ul> <li>Evidence of significant impacts to riparian vegetation or stream banks: None</li> </ul>
	o Relative water level: normal
■ Drilling Activity:	<ul> <li>General impression of water body, i.e. clear, turbid, tannic: clear</li> </ul>
o Drill additives in use: EZ Mud Plus	o Intake structure: Screened
o Water recirculation: Not determined.	o Structure clear of debris: Yes
o Water discharged: Yes	o Mesh size: Small – not measured.
o Artesian zone encountered: Not determined.	o Submerged: yes
	<ul> <li>Pump location to source: Electric pump in source; generator in containment away from pond.</li> </ul>
■ Sump Pit:	o Catch basin for fuel supply: Yes
o Location: Next to drill rig – see photo	o Sorbent pads: yes
o Discharge trench: Yes, see photo	o Hose color: Yellow
<ul> <li>Dimensions of pit: 3 sumps 8'x10' - see photo</li> </ul>	
o In use: Yes	



Figure 15: Drill Rig # 5 on drill hole No. 8420.



Figure 16: Drill Rig # 5 sumps.



Figure 17: Fuel storage for Rig # 5.



Figure 18: Discharge point for Drill Rig # 5.

Drill Hole/Site No.: 8418	Rig No.: 6
Activity: Active Drilling @ 2766'	Date: 8/27/08
	59 53 26.6/155 16 12.3
■ Condition of Drilling Site: See photo	■ Sump Pit (continued):
o Distance from waterbody: > 200'	<ul> <li>Location and extent of discharged material: To tundra.</li> </ul>
o Location of fuel storage: At drill rig	o Topsoil, muck, tundra stockpiled: Yes
o Sorbent pads present: Yes	<ul> <li>Location of secondary sump pit: Adjacent to primary sump.</li> </ul>
o Tundra mat: Yes & pallets.	o Hose color: White
o Pipe off tundra: Yes	
o Litter: None observed	■ Drill Water Supply:
o Trash containment: Ok	o Stream, lake, kettle pond: Pond
o Sanitary facilities: Ok	o Location: Approximately 200' from rig.
o Any spills or staining: None noted	<ul> <li>Adequate water flow and depth for fish passage in streams: Yes</li> </ul>
o General impression: Very clean & orderly	<ul> <li>Evidence of significant impacts to riparian vegetation or stream banks: None</li> </ul>
	o Relative water level: Normal
■ Drilling Activity:	<ul> <li>General impression of water body, i.e. clear, turbid, tannic: Clear</li> </ul>
o Drill additives in use: Not determined.	o Intake structure: Screened
o Water recirculation: Not determined.	o Structure clear of debris: Yes
o Water discharged: Yes.	o Mesh size: Small – not measured.
o Artesian zone encountered: Not determined.	o Submerged: yes
	<ul> <li>Pump location to source: Electric pump in source; generator in containment 100' from pond.</li> </ul>
■ Sump Pit:	o Catch basin for fuel supply: Yes.
o Location: Adjacent to drill rig.	o Sorbent pads: yes
o Discharge trench: Yes.	o Hose color: Yellow
<ul><li>Dimensions of pit: 3 sumps ranging from 6' x 8' to 8' x 10'</li></ul>	Intake @ 59 53 23.7/155 16 13.6
o In use: Yes.	



Figure 19: Drill Rig # 6 with water source in background.



Figure 20: Discharge point with Drill Rig # 6 in background.

Drill Hole/Site No.: 8422	Rig No.: 1
Activity: Active Drilling @ approx 3244'	Date: 8/27/08
	59 53 36.4\155 15 59.1
■ Condition of Drilling Site: Clean	■ Sump Pit (continued):
o Distance from waterbody: >500'	<ul> <li>Location and extent of discharged material: On tundra – see photo</li> </ul>
o Location of fuel storage: At drill rig	o Topsoil, muck, tundra stockpiled: Yes
o Sorbent pads present: Yes	<ul> <li>Location of secondary sump pit: Adjacent to primary sump.</li> </ul>
<ul> <li>Tundra mat: Yes, but some totes were placed directly on ground.</li> </ul>	o Hose color: White
o Pipe off tundra: Yes	
o Litter: None observed	■ Drill Water Supply:
o Trash containment: Ok	o Stream, lake, kettle pond: pond
o Sanitary facilities: Ok	o Intake location: 59 53 36.5\155 16 01.9
o Any spills or staining: None noted	<ul> <li>Adequate water flow and depth for fish passage in streams: n/a</li> </ul>
o General impression: Clean	<ul> <li>Evidence of significant impacts to riparian vegetation or stream banks: None</li> </ul>
	o Relative water level: normal
■ Drilling Activity:	<ul> <li>General impression of water body, i.e.</li> <li>clear, turbid, tannic: clear</li> </ul>
o Drill additives in use: EZ Mud	o Intake structure: Screened
o Water recirculation: Yes	o Structure clear of debris: Yes
o Water discharged: Periodically	o Mesh size: Small – not measured.
o Artesian zone encountered: no	o Submerged: yes
	<ul> <li>Pump location to source: Electric pump in source; generator near drill rig.</li> </ul>
■ Sump Pit: two 8' x 10' pits	o Catch basin for fuel supply: Yes
o Location: Adjacent to drill rig.	o Sorbent pads: yes
o Discharge trench: Yes	o Hose color: Black.
o Dimensions of pit: 8' x 10'	
o In use: Yes	



Figure 21: Drill Rig # 1 on drill hole No. 8422.



Figure 22: Sections of drill pipe on racks.



Figure 23: Sumps at Drill Rig # 1.



Figure 24: Discharge from Drill Rig # 1.

Drill Hole/Site No.: 8417	Rig No.: 4
Activity: Active Drilling @2300'	Date: 8/27/08
	59 53 45.4/155 15 43.8
■ Condition of Drilling Site: Reasonably clean	■ Sump Pit (continued):
o Distance from waterbody: >300' see photo	<ul> <li>Location and extent of discharged material: Not observed</li> </ul>
o Location of fuel storage: At drill rig	o Topsoil, muck, tundra stockpiled: Yes
o Sorbent pads present: Yes	<ul> <li>Location of secondary sump pit: Adjacent to primary sump</li> </ul>
o Tundra mat: Yes	o Hose color: White
o Pipe off tundra: Yes	
o Litter: None observed	■ Drill Water Supply: 59 52 00.6/155 09 45.1
o Trash containment: Ok	o Stream, lake, kettle pond: see photo
o Sanitary facilities: Ok	o Location:
o Any spills or staining: None noted	<ul> <li>Adequate water flow and depth for fish passage in streams: not determined</li> </ul>
o General impression: reasonably clean site	<ul> <li>Evidence of significant impacts to riparian vegetation or stream banks: None</li> </ul>
	o Relative water level: not observed
■ Drilling Activity:	<ul> <li>General impression of water body, i.e. clear, turbid, tannic: not observed</li> </ul>
o Drill additives in use: yes EZ Mud	o Intake structure:
o Water recirculation: Not determined.	o Structure clear of debris:
o Water discharged: Yes	o Mesh size:
o Artesian zone encountered: Not determined	o Submerged:
	o Pump location to source:
■ Sump Pit:	o Catch basin for fuel supply:
o Location: Adjacent to rig	o Sorbent pads:
o Discharge trench: Yes	o Hose color:
o Dimensions of pit: 3 sumps 8' x 10'	
o In use: Yes	



Figure 25: Drill Rig # 4 on hole No. 8417.



Figure 26: Sumps for Drill Rig # 4.



Figure 27: Drill Rig # 4; note distance from water.



Figure 28: Drill Rig # 4; assumed water source in background on left.

DDH-8405 site was observed near Drill Rig # 3. The site was free of litter and debris. The disturbed area had straw mulch. The drillhole casing extended above the ground surface approximately one foot. It was not possible to determine whether or not this drill hole had been plugged.



Figure 29: Reclaimed site - DDH #8405.



Figure 30: Reclaimed site of DDH # 8405.



Figure 31: Open casing for DDH # 8405; unable to determine if hole had been plugged.

DDH-8415 site was observed near Drill Rig # 5. The site was free of litter and debris. The disturbed area had straw mulch. The drillhole casing extended above the ground surface approximately one foot. It was not possible to determine whether or not this drill hole had been plugged.



Figure 32: Reclaimed drill site for hole No. 8415.



Figure 33: DDH No. 8415 - unable to determine if hole was plugged.



Figure 34: Geochemical barrel testing station.



Figure 35: Material in geochemical barrel test.

During the flight back from the project area to Iliamna, we observed an unreclaimed trench at 59 52.00.6 / 155 09 45.1. These coordinates indicate that the unreclaimed trench is located on State Mining Claim PEB EB 7 (ADL 642344).



Figure 36: Unreclaimed trench at 59 52 00.6 / 155 09 45.1.