

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

Personnel: Bill Cole (DNR, Mining Section)	Inspection Date: October 15, 2009
Ron Benkert (DF&G)	Site Contact: Gary Deschutter
	APMA #: A096118
■ Inspection Type:	■ Wildlife Observed:
<ul style="list-style-type: none"> ○ Complete: Inspected 2 of three drills on site. One was moving to new location. Visited Big Wiggly fuel storage site and inspected 4 reclaimed 2009 core hole sites. 	<ul style="list-style-type: none"> ○ Bear:
<ul style="list-style-type: none"> ○ Partial: 	<ul style="list-style-type: none"> ○ Caribou:
<ul style="list-style-type: none"> ○ Follow-up: 	<ul style="list-style-type: none"> ○ Moose:
<ul style="list-style-type: none"> ○ Response to Public Complaint: 	<ul style="list-style-type: none"> ○ Waterfowl:
	<ul style="list-style-type: none"> ○ Fish:
■ Weather Conditions:	<ul style="list-style-type: none"> ○ Other: Noted beaver ponds and lodges in upper South Fork Koktuli River drainage, above Frying Pan Lake. Ponds appear to be occupied, as indicated by well maintained lodges and dams. Two swans observed on Big Wiggly Lake
<ul style="list-style-type: none"> ○ Temperature: 40-45 degrees F 	
<ul style="list-style-type: none"> ○ Wind: light, 5-10 mph 	■ Water level at Frying Pan Lake: Appeared full from the air
<ul style="list-style-type: none"> ○ Precipitation: none 	<ul style="list-style-type: none"> ○ Observed inflow:
<ul style="list-style-type: none"> ○ Visibility: unlimited 	<ul style="list-style-type: none"> ○ Observed outflow:
<ul style="list-style-type: none"> ○ Sky Conditions: mostly cloudy 	
<ul style="list-style-type: none"> ○ Ground Conditions: damp, no snow cover 	
<p>Comments: Only three drills were operating. Visited drills #2 and #4. Drill #3 was being broken down and transported to a new location. Drills were clean and in good order. All fuel was stored in appropriate aluminum containment structures. There were no spills. Inspected four recently reclaimed drill holes northwest of Frying Pan Lake. Inspection of reclaimed drill holes was from the air only. Hovered above holes at sufficiently low height to read hole numbers on</p>	

marker posts. Fuel is still being flown into Big Wiggly fuel storage facility using a Beaver on floats. The lake has not begun to freeze. See figures 16-20 for Big Wiggly storage facility.

Recommendations: None

Actions Needed: None

Drill Hole/Site No.: 9473	Rig No.: 4
Activity: Finishing hole, pulling drill rods. Depth 711'	Date: 10/15/2009
<p>■ Condition of Drilling Site:</p> <ul style="list-style-type: none"> ○ Distance from waterbody: 800' ○ Location of fuel storage: Next to drill ○ Sorbent pads present: Yes ○ Tundra mat: Yes ○ Pipe off tundra: Yes ○ Litter: None ○ Trash containment: Yes ○ Sanitary facilities: Yes ○ Any spills or staining: No ○ General impression: Clean and orderly 	<p>■ Sump Pit (continued):</p> <ul style="list-style-type: none"> ○ Location and extent of discharged material: Up hill from drill about 300' onto tundra. Flowed downhill about 200', soaking into ground. ○ Topsoil, muck, tundra stockpiled: Yes ○ Location of secondary sump pit: as above ○ Hose color: Black
<p>■ Drilling Activity:</p> <ul style="list-style-type: none"> ○ Drill additives in use: Pure Vis, minor Quick Gel ○ Water recirculation: Yes ○ Water discharged: Some, to tundra, up hill from drill about 300' ○ Artesian zone encountered: No 	<p>■ Drill Water Supply:</p> <ul style="list-style-type: none"> ○ Stream, lake, kettle pond: Kettle pond ○ Location: about 800' N of drill ○ Adequate water flow and depth for fish passage in streams: NA ○ Evidence of significant impacts to riparian vegetation or stream banks: No ○ Relative water level: Near full ○ General impression of water body, i.e. clear, turbid, tannic: Tannic, slightly turbid ○ Intake structure: Yes ○ Structure clear of debris: Yes ○ Mesh size: 1X12 mm ○ Submerged: Yes ○ Pump location to source: 100' west
<p>■ Sump Pit:</p> <ul style="list-style-type: none"> ○ Location: Next to drill ○ Discharge trench: Yes ○ Dimensions of pit: 3 pits: 15' X 6', 6'X6", and 6'X6' ○ In use: Yes 	<ul style="list-style-type: none"> ○ Catch basin for fuel supply: Yes ○ Sorbent pads: Yes ○ Hose color: yellow



Figure 1: Drill #4 on DDH 9473. Note fuel containment, spill barrel and oil scrubber, tundra pads.

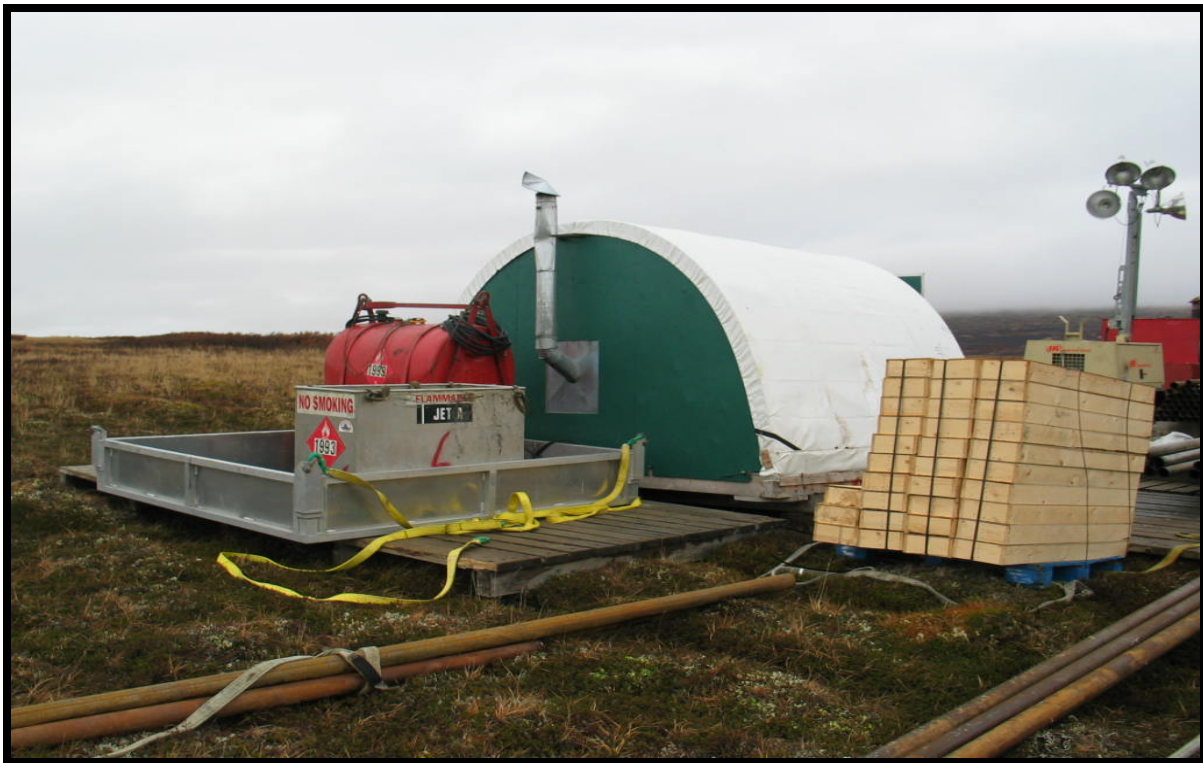


Figure #2: Drill #4. Crew hut with fuel for hut, core boxes.



Figure #3: Drill #4. Tank for recycling drilling fluid. Sump is for excess drilling fluid.



Figure #4: Drill #4. Water pump. Fuel is in containment, with spill kit and scrubber barrel.



Figure #5: Water intake for Drill #4.

Drill Hole/Site No.: 9471	Rig No.: 2
Activity: Pulling drill rods; preparing to run geophysical logs. Depth 900'	Date: 10/15/2009
<ul style="list-style-type: none"> ■ Condition of Drilling Site: 	<ul style="list-style-type: none"> ■ Sump Pit (continued):
<ul style="list-style-type: none"> ○ Distance from waterbody: 350' 	<ul style="list-style-type: none"> ○ Location and extent of discharged material: 2 areas; uphill from drill, onto tundra, covering area 100'X30'. Downhill from drill covering area about 100'X40'.
<ul style="list-style-type: none"> ○ Location of fuel storage: Next to drill 	<ul style="list-style-type: none"> ○ Topsoil, muck, tundra stockpiled: Yes
<ul style="list-style-type: none"> ○ Sorbent pads present: Yes 	<ul style="list-style-type: none"> ○ Location of secondary sump pit: As above
<ul style="list-style-type: none"> ○ Tundra mat: Yes 	<ul style="list-style-type: none"> ○ Hose color: White
<ul style="list-style-type: none"> ○ Pipe off tundra: Yes 	
<ul style="list-style-type: none"> ○ Litter: None 	<ul style="list-style-type: none"> ■ Drill Water Supply:
<ul style="list-style-type: none"> ○ Trash containment: Yes 	<ul style="list-style-type: none"> ○ Stream, lake, kettle pond: Kettle Pond
<ul style="list-style-type: none"> ○ Sanitary facilities: Yes 	<ul style="list-style-type: none"> ○ Location: 350' west of drill
<ul style="list-style-type: none"> ○ Any spills or staining: No 	<ul style="list-style-type: none"> ○ Adequate water flow and depth for fish passage in streams: NA
<ul style="list-style-type: none"> ○ General impression: Clean 	<ul style="list-style-type: none"> ○ Evidence of significant impacts to riparian vegetation or stream banks: No
	<ul style="list-style-type: none"> ○ Relative water level: Full
<ul style="list-style-type: none"> ■ Drilling Activity: 	<ul style="list-style-type: none"> ○ General impression of water body, i.e. clear, turbid, tannic: Clear, tannic
<ul style="list-style-type: none"> ○ Drill additives in use: Pur Vis, Veg Oil, Quick Gel 	<ul style="list-style-type: none"> ○ Intake structure: Yes
<ul style="list-style-type: none"> ○ Water recirculation: Yes 	<ul style="list-style-type: none"> ○ Structure clear of debris: Yes
<ul style="list-style-type: none"> ○ Water discharged: Some, to tundra 	<ul style="list-style-type: none"> ○ Mesh size: 1X12 mm
<ul style="list-style-type: none"> ○ Artesian zone encountered: No 	<ul style="list-style-type: none"> ○ Submerged: Yes
	<ul style="list-style-type: none"> ○ Pump location to source: 125' west
<ul style="list-style-type: none"> ■ Sump Pit: 	<ul style="list-style-type: none"> ○ Catch basin for fuel supply: Yes
<ul style="list-style-type: none"> ○ Location: Next to drill 	<ul style="list-style-type: none"> ○ Sorbent pads: Yes
<ul style="list-style-type: none"> ○ Discharge trench: Yes 	<ul style="list-style-type: none"> ○ Hose color: Black
<ul style="list-style-type: none"> ○ Dimensions of pit: 3 pits: 6'X15', 6'X6', 6'X6' 	
<ul style="list-style-type: none"> ○ In use: Yes 	



Figure #6: Drill #2 on DDH 9471.



Figure #7: Fuel containment at Drill #2.

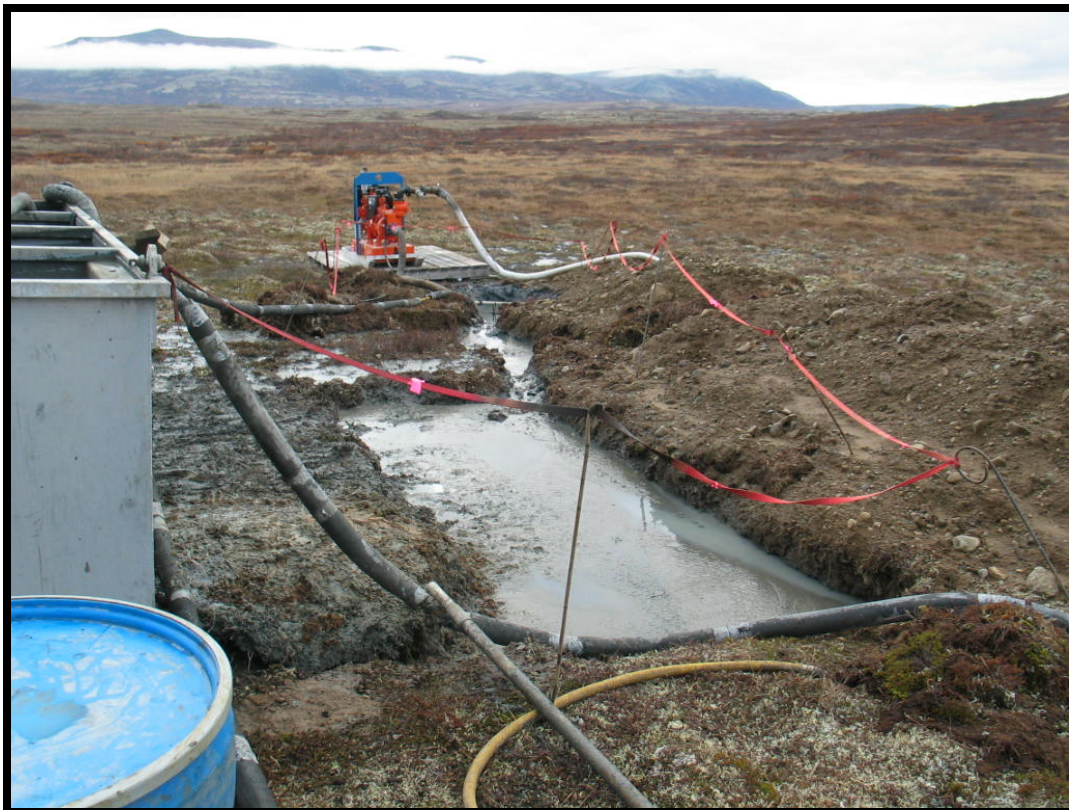


Figure #8: Recirculation tank and sump pits at Drill #2.

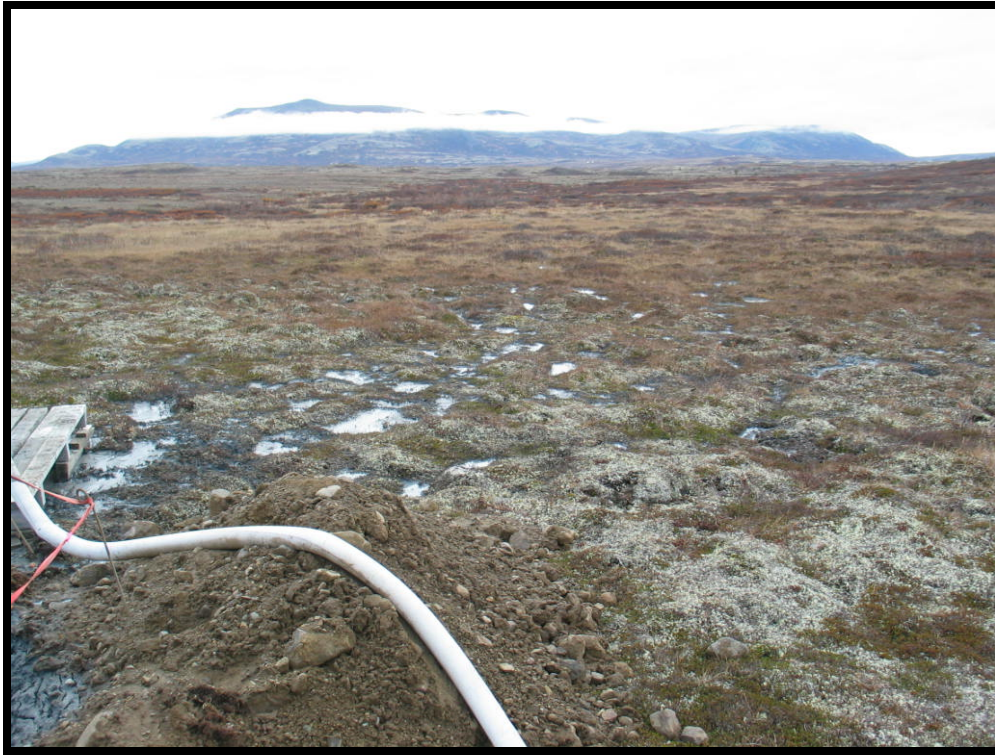


Figure #9: Drilling fluid discharge downhill from Drill #2.



Figure #10: Fuel containment for water pump at Drill #2.



Figure #11: Water intake for Drill #2.

Abandoned Drill Hole/Site No.: 9462	Date: 10/15/2009
<ul style="list-style-type: none"> ■ Plugged: Yes ■ Cemented: Not observed ■ Standing pipe: Yes ■ Sump pit filled in: Pit has not been reclaimed. ■ Water discharge trench filled in: Partially ■ Site revegetated: Natural revegetation, limited reseeding ■ Artesian water present: No ■ Any spills or staining: No ■ Comments/General impression: This hole was recently drilled, and is only partially reclaimed. 	

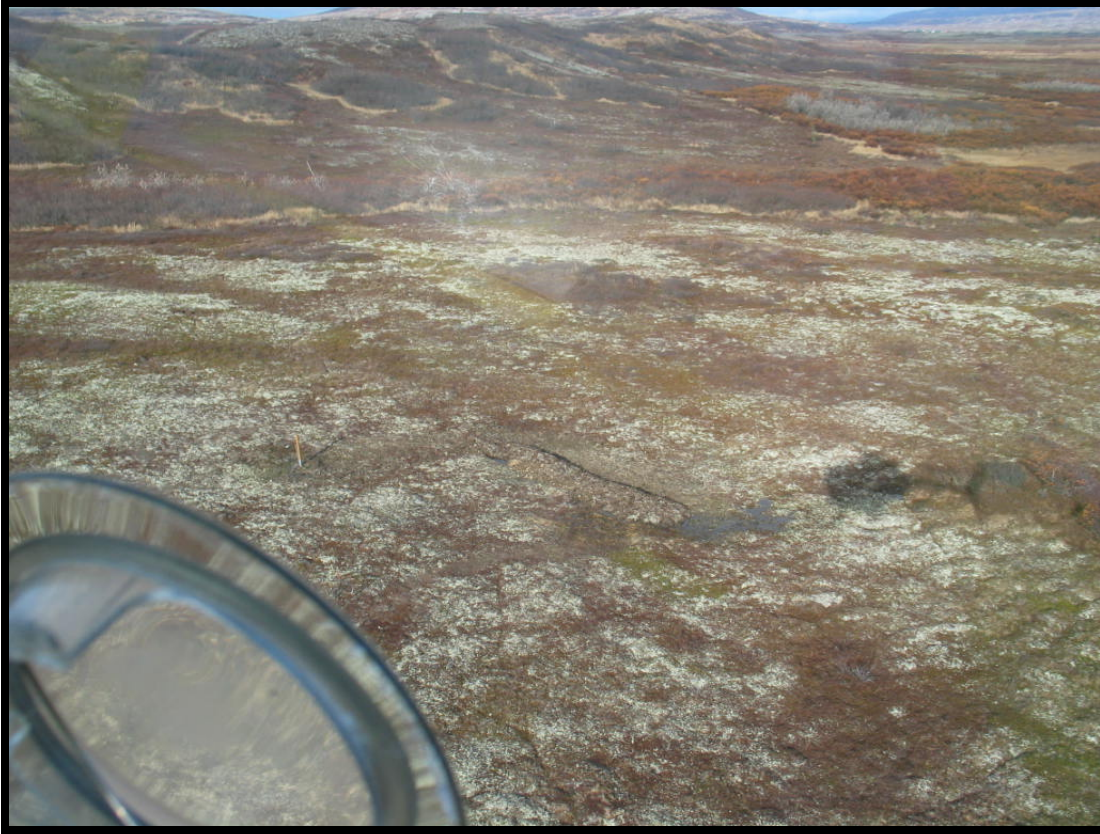


Figure 12: Reclaimed DDH 9462.

Abandoned Drill Hole/Site No.: 9451	Date: 10/15/2009
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- Plugged: Yes
- Cemented: Not observed
- Standing pipe: Yes
- Sump pit filled in: Yes
- Water discharge trench filled in: Yes
- Site revegetated: Natural revegetation, limited reseeding
- Artesian water present: No
- Any spills or staining: No
- Comments/General impression: 2009 drill site. Recently reclaimed.



Figure 13: Reclaimed DDH 9451.

Abandoned Drill Hole/Site No.: 9448

Date: 10/15/2009

■ Plugged: Yes

■ Cemented: Not observed

■ Standing pipe: Yes

■ Sump pit filled in: Yes

■ Water discharge trench filled in: Yes

■ Site revegetated: Natural revegetation, limited reseeding

■ Artesian water present: No

■ Any spills or staining: No

■ Comments/General impression: 2009 hole. Recently reclaimed.



Figure 14: Reclaimed DDH 9448.

Abandoned Drill Hole/Site No.: 9445

Date: 10/15/2009

■ Plugged: Yes

■ Cemented: Not observed

■ Standing pipe: Yes

■ Sump pit filled in: Yes

■ Water discharge trench filled in: Yes

■ Site revegetated: Natural revegetation, limited reseeding

■ Artesian water present: No

■ Any spills or staining: No

■ Comments/General impression: 2009 hole. Recently reclaimed.

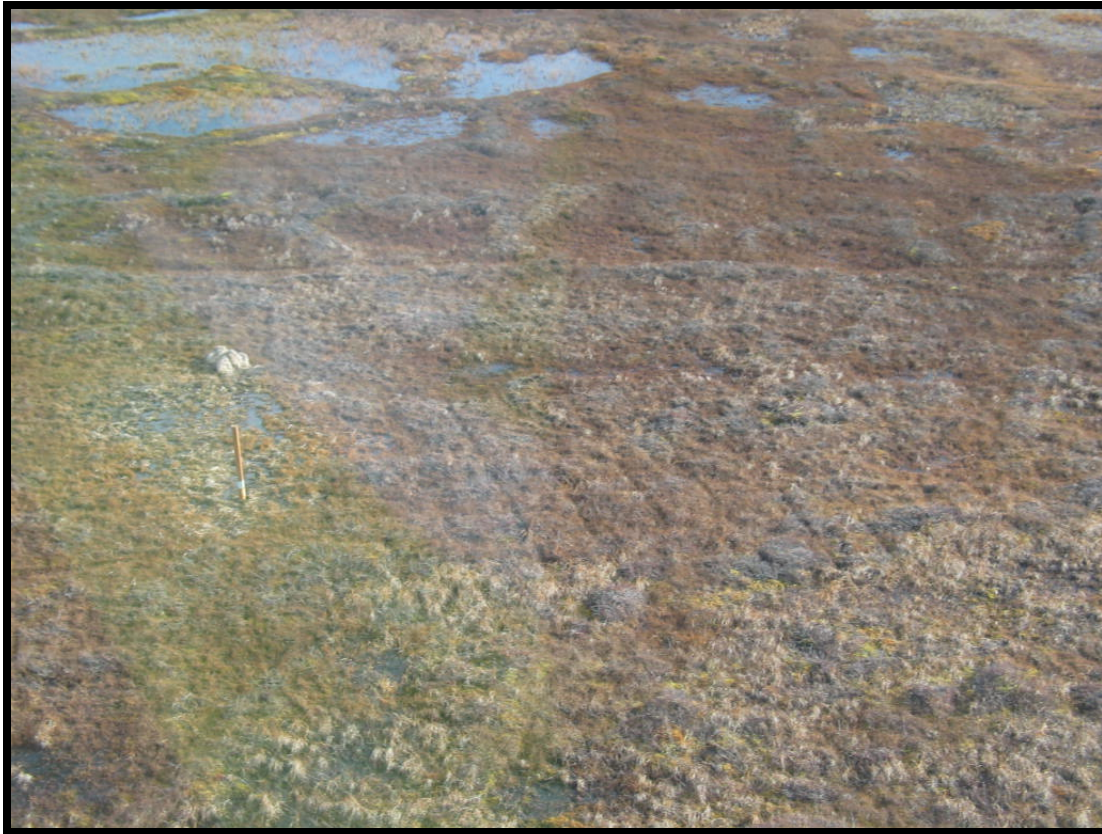


Figure 15: Reclaimed DDH 9445.



Figure 16: Big Wiggly Lake and Fuel Storage Facility



Figure 17: Dock at Big Wiggly Fuel Storage



Figure 18: Fuel tanks at Big Wiggly Lake



Figure 19: Fuel transfer pump at Big Wiggly



Figure 20: Helicopter refueling at Big Wiggly