



December 11, 2012

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## October 10, 2012 Inspection of the Kensington Gold Mine

The purpose of this inspection was a general examination of the Kensington Mine with particular attention paid to the Tailings Treatment Facility Dam. This was the first opportunity to inspect the recently completed Stage II dam raise construction.

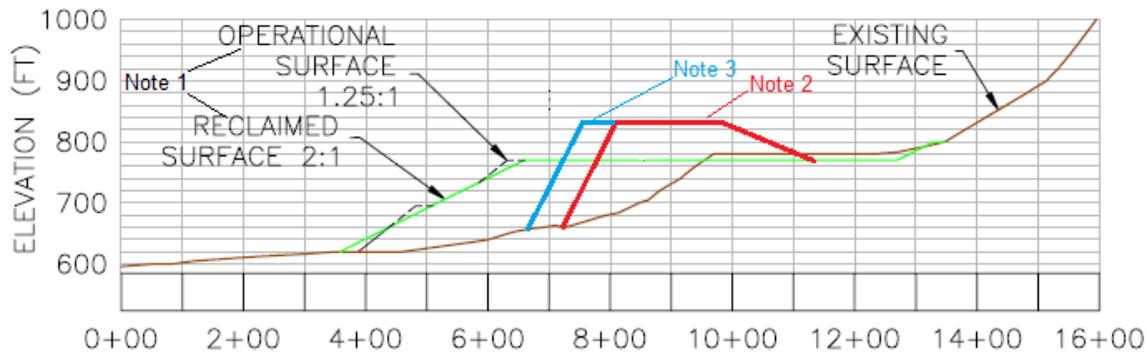
The inspection team arrived on site at about 8:45 AM and consisted of a multidisciplinary group of geologists, engineers, and hydrologists from the United States Forest Service (USFS), Alaska Department of Natural Resources (ADNR), and Alaska Department of Environmental Conservation (ADEC). The team traveled to the mine site in a De Havilland *Beaver* Floatplane, and was met at the Slate Creek Cove port facility by Kevin Eppers, the Environmental Superintendent of Coeur Alaska, who escorted the team throughout the entire visit. The team was brought to the Camp area so two of the USFS employees could watch orientation videos, as it was their first trip to the mine.

After obtaining the equipment needed for traveling underground, the team traveled through the underground portion of the mine to the Comet side, and stopped at the Comet Wasterock Pile. Sediment was flowing down the side of the road from a washout area for concrete trucks as can be seen in Figure 1. The sediment was being tracked from the washout area on the tires of trucks as they pulled away. Rip-rap size aggregate had been recently placed at the washout area to mitigate sediment tracking, and appeared to be working well.



Figure 1. Sediment flowing from the Concrete Washout Area.

From the top of the waste rock pile, a large wooden spool could be seen in Ophir Creek. It appeared to have rolled down from the top of the pile after being placed. Mr. Eppers said that the spool would be removed. The Wasterock pile continues to be built in nonconformance with the Reclamation Plan (Figure 2), and the Plan should be amended to reflect the new construction design.



Note 1: Shows the planned surface at the time that the Reclamation Plan was developed.

Note 2: Actual surface as of 2-1-2012

Note 3: Actual surface as of 10-10-2012

Figure 2. Not Drawn to Scale.

The team moved to the Comet Water Treatment Plant. Pond 1 had recently been relined, and mine water was flowing into Pond 2. A silt fence designed to segregate Pond 1 into two sections and help the sediment settle out was to be installed before returning it to operation. The newly constructed sumps in the mine are working well, and there has been a noticeable reduction in the amount of sediment flowing to the plant. The team walked to the outfall area on Sherman Creek. Coeur Alaska had recently upgraded the trail leading to the outfall area, and it was in good shape. After leaving the outfall area, the team moved to the Comet Beach Camp. The majority of the Comet Beach area was clean and well maintained. Hydraulic oil was leaking from a stored paste pump inside the shop, and had escaped the secondary containment. However, floor dry had been placed on the oil and there was no imminent danger of release to the environment.

The team left the Comet Beach Camp, and traveled to the Underground Paste Plant. The Paste Plant was not working at the time of the inspection, and Coeur continues to fine tune its operation. If the Plant is operating at its full efficiency, the Company should be able to place 90% of its tailings back underground.

After lunch, the inspectors stopped at the North Mud Dump. Approximately 8000 yd.<sup>3</sup> of potentially acid generating graphitic phyllite was excavated during the Stage II dam raise, and has been placed in the facility. An HDPE membrane surrounds the material and can be seen in Figure 3. The membrane will help to prevent oxidation of the rock until it can be placed underground sometime in 2014.



Figure 3. Covered Graphitic Phyllite.

Engine oil was observed to be leaking from a skid steer loader near the above ground shop. A Coeur employee was notified and he placed oil absorbent pads under the leak.

The inspection team then traveled to the Tailings Treatment Facility. Coeur had recently finished construction of the Stage II dam raise, and special attention was paid to the dam and the surrounding area. Shotcrete has been placed in and above the emergency spillway to cover a formation of potentially acid generating graphitic phyllite on the west embankment. Water with a low pH seeped through the shotcrete covering the same material during Stage I of the dam operation and produced surface staining in and above the spillway. The same type of staining is already seen on the shotcrete that was applied during construction of Stage II (Figure 4), suggesting that metals continue to leach from the water seeping through the shotcrete.



Figure 4. Staining on Shotcrete.

Currently, all water seeping through the shotcrete drains into the plunge pool at the bottom of the emergency spillway, where it is pumped to a small batch water treatment plant, treated and discharged to an infiltration gallery. It is likely that the water draining from the graphitic phyllite will require treatment after closure to meet water quality standards. The graphitic phyllite material is currently being tested for depletion rates, and an area specific



Figure 5. Covered Graphitic Phyllite

closure plan is forthcoming. Before leaving, the inspectors stopped at a pile of about 200 yd.<sup>3</sup> of covered graphitic phyllite (Figure 5) that had been removed from the dam abutment after the material in the North Mud Dump site had already been sealed beneath an HDPE membrane. The plastic cover on the material lacked sufficient weight to hold it in place. Mr. Eppers stated that more weight would be added to assure that wind could not blow the plastic off. The material is planned to be placed underground near the beginning of 2013. The next stop was at the marine facility where a Beaver floatplane was met for the ride home to Juneau.

Action items:

- Contain the sediment flowing from the concrete washout area.
- Prevent oil from leaking from the machine in the Comet Beach shop.
- Properly dispose of the contaminated soil under the skid steer at the above ground shop.
- Place the 200 yd.<sup>3</sup> of graphitic phyllite material currently stored at the tailings treatment facility underground.
- Update the Reclamation Plan to show the current configuration of the Comet Wasterock Pile.

*Additional mine inspection photos including high resolution versions are available upon request.*