THE STATE of ALASKA
GOVERNOR BILL WALKER

Department of Natural Resources
DIVISION OF MINING, LAND & WATER
Mining Resources Section
Southeastern Office

P. O. Box 111020
Juneau, Alaska 99811-1020
Main: 907.465.3400
TDD: 907.269.8411
Fax: 907.586.2954

December 29, 2014

Weather: Cloudy
Precipitation: None
Temperature: Upper 30's F

December 18th Inspection of the Kensington Gold Mine

This report covers the December 18th, 2014 inspection of the Kensington Gold Mine. The multiagency inspection team (team) consisted of David Wilfong from the Alaska Department of Natural Resources (ADNR), and Curtis Caton and Matthew Reece from the United States Forest Service (USFS). The team was accompanied by Pete Strow from Coeur Alaska (Coeur) for the entire duration of the inspection. Transportation to and from the mine was provided by a USFS chartered Ward Air Cessna floatplane. The purpose of the trip was to conduct a general inspection, with an emphasis on visiting the recently approved surface exploration pads and the proposed site of the fuel tank farm and supporting pipeline needed to fill the tanks. Due to the short winter days, the team limited the inspection to the Kensington "side" of the mine.

The inspection team arrived at Slate Creek Cove at approximately 9:45 am, and was met at the port terminal by Pete Strow. After unloading gear from the plane, the team was shuttled to the surface exploration site near the camp area (Pad #1 in Figure 1). The original proposal for the surface exploration was for no additional surface disturbance, and the timber pads were to be built on the edge of existing roads. However, approximately 250 cubic yards of wasterock fill was dumped and graded to construct the exploration pad (Figure 2). The pad is located on private property, and the proposal was revised to include the extra fill. The revised proposal was then subsequently approved by the ADNR.

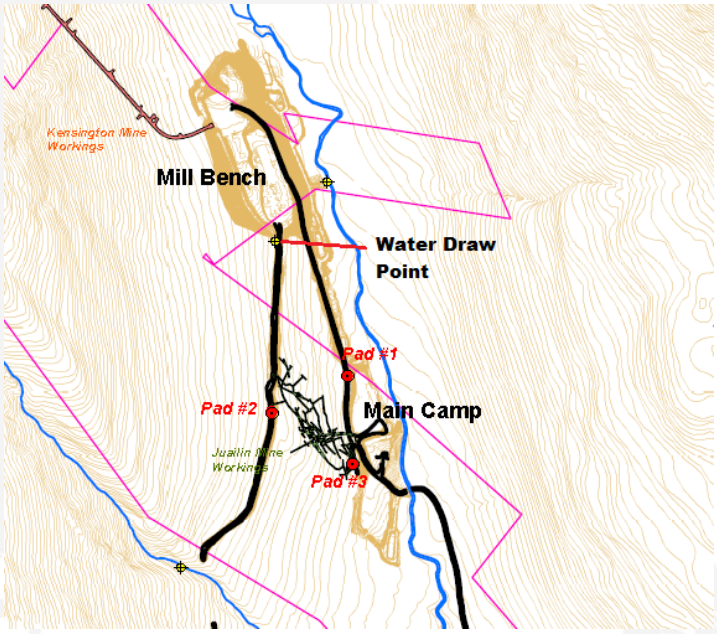

Figure 1 Exploration pad sites, and water withdrawal points.

When the team arrived at the drill pad, drilling operations were actively occurring. Drilling ceased for a short time for a site induction and safety briefing. The drill pad was neat and clean, and no safety or environmental concerns were observed. It was noted that this was a very elaborately built drill pad with 10 foot tall walls on three sides. The walls were intended to dampen the sound coming from the 24 hour per day operation of the drill rig, as the main bunkhouse for the miners was about 100 yards away. Drill make-up water was pumped through a steel reinforced, flexible hose from a permitted draw point about 1150 feet away on the Mill Bench as shown in Figure 1.

Figure 2 Surface exploration drill pad.

Figure 3 Plunge pool. Note the new guarding.

The team left the drill site, moved to the Tailings Treatment Facility (TTF), and drove to the downstream face of the TTF Dam. Additional guarding has been placed around the emergency spillway plunge pool (Figure 3) to satisfy a Mine Safety and Health Administration (MSHA) requirement. MSHA had determined that the extra guarding may prevent the possibility of drowning in the 3-6 inches of water in the plunge pool (frozen over in Figure 3). The water level is maintained by a pump and a float activated switch. When present, plunge pool water is pumped to a holding tank near the small water treatment plant (WTP). The water is then treated and discharged in batches. Due to the recent cold weather, no water was exfiltrating through the shotcrete covering the graphitic phyllite, and the small graphitic phyllite WTP was not operating due to the lack of water.

The team retreated from the dam area, and moved to the north end of the TTF. Surprisingly, the graphitic phyllite barrel tests were thawed. The Southeast Alaska Weather had been unusually warm up to the point of the inspection, with a cold front moving in just a couple days earlier, and only a dusting of snow was on the ground. At the time this report was written, water samples had been collected during the month of November and December, meaning that Coeur was able to collect monthly

Figure 4 The new access road will be constructed in this area.

Figure 5 The TTF was partially frozen over.

samples from May until December. The inspectors climbed the small hill behind the barrel tests to walk along the future access road alignment in Parcel 25 (Figure 4). The access road needs to be realigned due to the rising water in the TTF which threatens to inundate the old road. The USFS, ADNR, and Alaska Department of Environmental Conservation (ADEC) all agree that the old roadbed could be reclaimed in place. However, Coeur has the option to recycle the material from the old roadbed to build the new road alignment. The old road alignment, like the future alignment, is constructed with geochemically inert wasterock from the mine. The newly constructed road will require revisions to the BMP Plan, part of the Plan of Operations. The Reclamation Plan will need to be updated with a written narrative and figures that describe the position of the new road alignment, but the Reclamation Cost Estimate should not change as the rising water will reclaim the old alignment, and new road will be the same length and will use a very similar construction design and material. The surface of the TTF was partly clear of ice at the time of the inspection, with most of the ice occurring at the south end, near the dam (Figure 5).

Figure 6 Internal secondary containment designed and constructed by Pete Strow. A very robust design.

Figure 7 Internal, individual secondary containment for muriatic acid.

The inspectors traveled to the TTF Water Treatment Plant and walked around its exterior. Coeur has begun using internal secondary containment (Figures 5 and 6) for the safe storage of chemicals used at the WTP. The external secondary containment was prone to filling up with rain water, having equipment run over it, and tearing due to opening and closing the doors, rendering the containment ineffective. Coeur purchased a 20 foot container with prefabricated self-containment, heating, and ventilation

for use at the Comet Water Treatment Plant. This type of container provides a more efficient manner of storing chemicals that are prone to freezing in Alaska's cold weather. Coeur has begun building a more robust design of internal secondary containment in their existing containers (Figure 6). The design utilizes heavy timbers to form a rectangular perimeter around the inside of the container which is lined with a High Density Poly-Ethylene (HDPE) liner. A second layer of heavy timbers sandwiches the HDPE in place, leaving a rectangular reservoir below. The timbers have sufficient spacing to allow chemicals to pass to the lower reservoir should a leak occur. A forklift with a telescoping boom will likely be used to insert and remove totes from the container. This in-house design will eliminate rain filled containment, and is more efficient use of space than the "SAF-TAINER" individual tote containment.

After lunch, the team moved to the vegetation test plots (Figure 7) on the "Pipeline Road". The road is used mainly to access the test plots, but also is used for exploration drilling. The road is rough, but easily passable in a vehicle with good ground clearance. The test plots were covered with a light dusting of snow, and appeared to be done growing for the season. The three plots were constructed using soil with significant amounts of sand and gravel, but little organic material. They are all constructed on a slope with a rip-rap like sub-base material, and are well drained. Plot #1(A) was treated with fertilizer, urea and mulch (Closest plot in the photo). Plot #2(B) utilizes no soil amendment, while Plot #3(C) is treated with a biopolymer designed to promote soil stability and plant growth. All three plots were planted using an approved upland seed mix at a rate of approximately 43 pounds of seed per acre. The plots were planted in July 2013, and they initially experienced rapid growth. By the end of the growing season in 2013, Plot #1 showed more than 50% ground coverage, and quantitative monitoring ensued. But, the growth seems to have slowed significantly during the growing season of 2014, and when quantitative monitoring began in July 2014, it was found that Plot #1 did not show the 50% coverage required, and qualitative monitoring resumed. By the end of the growing season, none of the plots showed 50% ground coverage by the planted vegetation.

Figure 8 The revegetation test plots.

After leaving the vegetation test plots, the team stopped briefly at the before mentioned drill make-up water draw point. The draw point, permitted through the ADNR Water Section, is located in a diversion ditch designed to ensure that clean runoff water from the hillside does not contact the mine site. Because the drill is more than 1000 feet from the draw point, a high pressure diaphragm pump is used to move the water from the sump. A leak had developed in the hose about 10 feet from the pump, and was spraying a jet of water onto the wasterock-built pad. No erosion was visible due to the spray, and the water quickly infiltrated into the ground and flowed back into the ditch.

The team moved on to the top of the Jualin wasterock pile (Figure 9). Pete mentioned that the mine was running low on areas to place wasterock. Kensington mainly places wasterock in two different areas (piles). Both piles are located near the portal on their respective sides. One pile is on the Comet side of the mine, and the other pile is on the Jualin side of the mine. Lately, Coeur has opted to place most of the produced wasterock on the Jualin side to stockpile it for use in the construction of Phase 3 of the TTF Dam. The wasterock will be sorted according to size using a portable screen plant and placed in the earthen dam according to the construction specifications approved by the ADNR Dam Safety office. The construction of the third and final raise of the dam at the TTF, scheduled for the summer of 2015, will use a sizable amount of the available wasterock, and the size of the pile will diminish. In the interim, Coeur must find enough space to satisfy the mine's output of wasterock.

Figure 9 The pile is beginning to be pushed south toward the camp.

Because the toe of the Jualin wasterock pile is nearing the disturbance boundary set by the Forest Service, the pile cannot be pushed further northward. The wasterock pile is now being built to the south along the east side of the Mill Bench access road. To prepare the ground's surface for the disposal of waste rock, Coeur needs to reposition two storm water settling ponds. Construction of new settling ponds was underway, and nearly complete (Figure 10) at the time of the inspection. The settling ponds are used to reduce or remove the sediment from storm water runoff, and will be placed about 200 yards south of the old ponds. The new ponds use the same design as the old ponds, with a sandy bedding material underlying geotextile fabric and an HDPE liner. The HDPE and geotextile liners will be removed from the old ponds, and will be buried beneath wasterock as approved in the Reclamation Plan.

Figure 10 Construction of two new storm water runoff ponds was nearly complete.

The inspection team left the mine area, and was shuttled down to Slate Creek Cove to look at the area of the proposed fuel tank farm. The USFS has determined that it will prepare an Environmental Assessment under NEPA for the proposal. The tank farm would consist of seven 50,000 gallon self-contained fuel storage tanks, and a 3" pipe will connect the tanks to the barge landing. The pipe will be buried where possible, and connected to a standpipe near the bottom of the road in a safe location. The approximate path that the buried pipe would take if approved, and the estimated location of the standpipe can be seen in Figure 11. Currently, the mine's fuel is transported in International Standardization Organization (ISO) tank containers from a barge to a landing area up the road, and stacked three high. When needed, a container is removed from the stack, loaded on a truck, and hauled up the road to the main fuel tank near the mill.

After discussing the tank farm, the team waited at the Marine Terminal a few minutes until the floatplane arrived, and loaded up for the short flight back to the Juneau airport.

Figure 11 The approximate path the buried 3" pipe will take to the proposed tank farm. Note the ISO containers next to the road.

The ADNR would like to thank the USFS for supplying floatplane transportation to and from the Kensington Gold Mine, and Coeur Alaska for a safe and informative inspection.

High resolution versions of these and other inspection photos are available upon request.

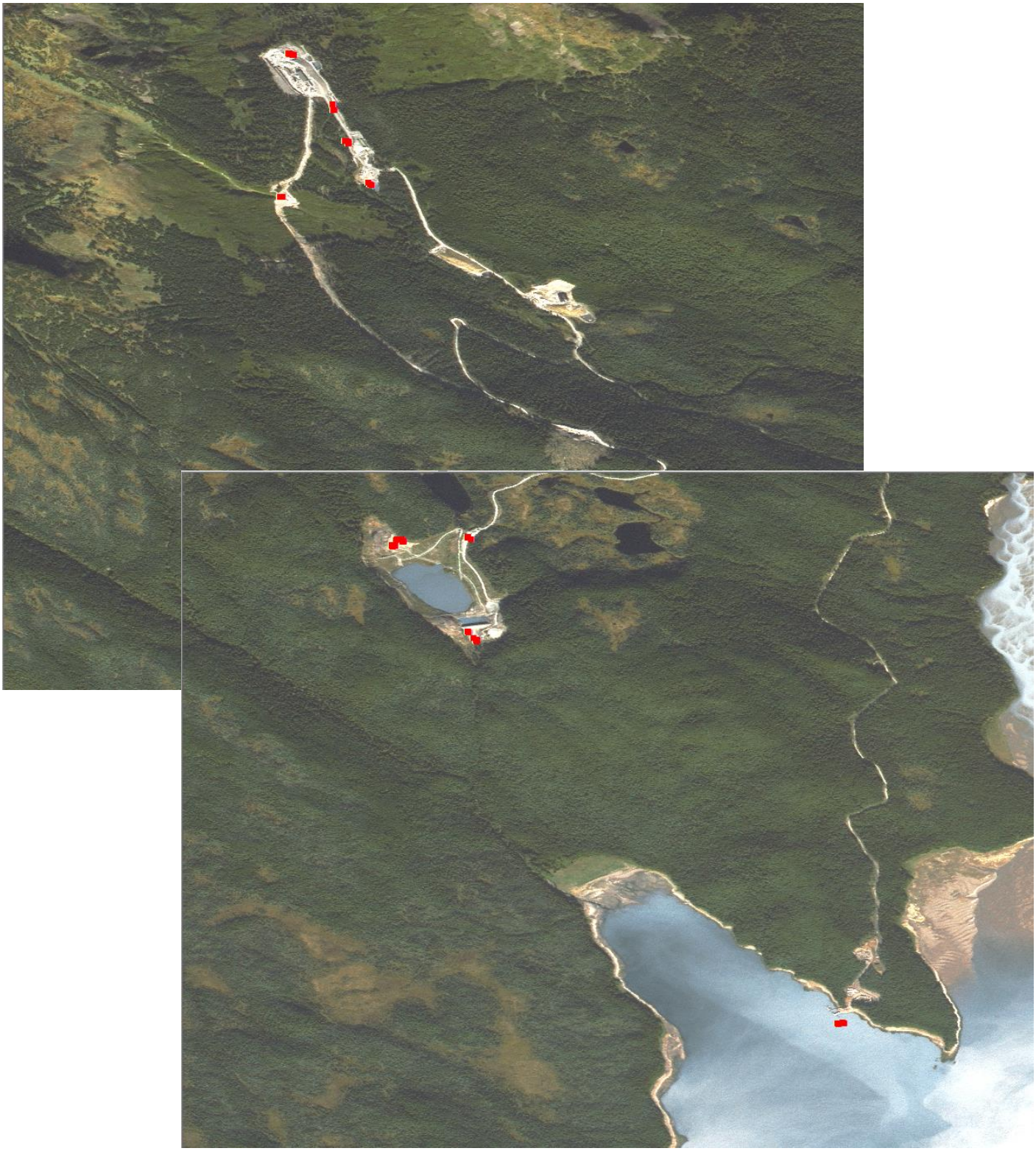

Figure 12 Inspection Photo Points