




MINERALS PROGRAM INSPECTION REPORT
PHONE: (303) 866-3567

The Division of Reclamation, Mining and Safety has conducted an inspection of the mining operation noted below. This report documents observations concerning compliance with the terms of the permit and applicable rules and regulations of the Mined Land Reclamation Board.

MINE NAME: Cresson Project	MINE/PROSPECTING ID#: M-1980-244	MINERAL: Gold	COUNTY: Teller
INSPECTION TYPE: Monitoring	INSPECTOR(S): Amy Eschberger	INSP. DATE: December 20, 2016	INSP. TIME: 10:00
OPERATOR: Cripple Creek & Victor Gold Mining Company	OPERATOR REPRESENTATIVES: Clara Steward, Jeff Campbell, Don Rodaba, Gary Hornton, Roy Leed, Cheyne Mann, Erik Munroe, and Ron Parratt	TYPE OF OPERATION: 112d-3 - Designated Mining Operation	
REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: None	BOND AMOUNT: \$173,934,420.00	
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None	
WEATHER: Clear	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: March 15, 2017	

GENERAL INSPECTION TOPICS

This list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each. No problems or possible violations were noted during the inspection. The mine operation was found to be in full compliance with Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials and/or for Hard Rock, Metal and Designated Mining Operations. Any person engaged in any mining operation shall notify the office of any failure or imminent failure, as soon as reasonably practicable after such person has knowledge of such condition or of any impoundment, embankment, or slope that poses a reasonable potential for danger to any persons or property or to the environment; or any environmental protection facility designed to contain or control chemicals or waste which are acid or toxic-forming, as identified in the permit.

(AR) RECORDS----- <u>N</u>	(FN) FINANCIAL WARRANTY----- <u>N</u>	(RD) ROADS----- <u>N</u>
(HB) HYDROLOGIC BALANCE----- <u>N</u>	(BG) BACKFILL & GRADING----- <u>N</u>	(EX) EXPLOSIVES----- <u>N</u>
(PW) PROCESSING WASTE/TAILING---- <u>N</u>	(SF) PROCESSING FACILITIES----- <u>Y</u>	(TS) TOPSOIL----- <u>N</u>
(MP) GENL MINE PLAN COMPLIANCE- <u>Y</u>	(FW) FISH & WILDLIFE----- <u>N</u>	(RV) REVEGETATION---- <u>N</u>
(SM) SIGNS AND MARKERS----- <u>N</u>	(SP) STORM WATER MGT PLAN---- <u>N</u>	(CI) COMPLETE INSP---- <u>N</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>Y</u>	(SC) EROSION/SEDIMENTATION--- <u>N</u>	(RS) RECL PLAN/COMP-- <u>N</u>
(AT) ACID OR TOXIC MATERIALS----- <u>N</u>	(OD) OFF-SITE DAMAGE----- <u>N</u>	(ST) STIPULATIONS----- <u>N</u>

Y = Inspected and found in compliance / N = Not inspected / NA = Not applicable to this operation / PB = Problem cited / PV = Possible violation cited

OBSERVATIONS

This was a normal monitoring inspection of the Cresson Project (Permit No. M-1980-244) conducted by Amy Eschberger of the Division of Reclamation, Mining and Safety (Division). This is a 112d-3 Designated Mining Operation permitted for 6,068 acres to mine and process gold on site. The site is located between the towns of Cripple Creek, Colorado and Victor, Colorado. The approved post-mining land use is rangeland and wildlife habitat.

This inspection included the following:

- Inspection of Squaw Gulch Overburden Storage Area
- Inspection of High Grade Mill facility
- Recording of water level readings for Arequa Gulch Valley Leach Facility and Squaw Gulch Valley Leach Facility
- Inspection of Squaw Gulch Valley Leach Facility
- Close-out meeting in Victor office

Inspection of Squaw Gulch Overburden Storage Area:

The Squaw Gulch Overburden Storage Area (SGOSA) is located just northeast of the Squaw Gulch Valley Leach Facility, between the Main Cresson Mine and the North Cresson Mine. Clara Steward represented the operator during this portion of the inspection. The Division inspected the entire perimeter of the SGOSA, starting at the northwestern edge and working counter-clockwise (**Photos 1-4**). The Division observed the slopes of the SGOSA to range from gradients of approximately 1.5H:1V to 2H:1V. The Division did not observe any sloughing along the slopes of the stockpile, or any other evidence that might indicate slope instability. The operator maintains a ditch lined by a berm around the edge of the stockpile to keep any loose rocks from rolling onto the adjacent haul road. The Division observed some rocks up to boulder sized that had been caught by the berm. Ms. Steward indicated the SGOSA is inspected regularly by the operator's geotechnical team. The Division observed haul trucks hauling material to the top of the SGOSA during the inspection. However, Ms. Steward indicated the operation has slowed in placing additional overburden on the SGOSA due to the longer haul distance required. The SGOSA has not yet reached its maximum allowed height approved by the Division. The Division observed the top of the SGOSA, where a small screening facility is present. The operator is currently stockpiling high grade ore at the top of the SGOSA (**Photo 5**).

Inspection of High Grade Mill facility:

The High Grade Mill facility is located at the top of a large platform at the southeastern edge of the Squaw Gulch Valley Leach Facility. This facility was inspected as a follow-up to the minor spill that occurred on December 5, 2016 as first reported by the operator via email on December 6, 2016. The spill occurred at approximately 10:00 am near the Carbon in Pulp (CIP) circuit. Most of the slurry released was retained by the containment structure inside the mill building. However, approximately 25 gallons of slurry composed of 31% solids with a WAD Cyanide concentration of 670 ppm overflowed from the discharge pump box, and ran under a nearby access door onto the floor of the mill secondary containment area. The operator attempted to back flush the pump in order to regain flow, but was unsuccessful. At that time, they changed to the backup CIP discharge pump, and full flow was achieved. The work area supervisor was contacted and the cleanup of released slurry commenced immediately. The slurry that was lost to the secondary containment floor was excavated with a skid steer loader and placed into the primary containment of the high-pH thickener. Impacted

material was then triple rinsed into the high-pH containment sump pump and transferred into the high-pH thickener. The oversize rock from the excavation was placed back into the spill excavation area after the rinse.

On December 12, 2016, the operator submitted to the Division a written report of the event in accordance with Rule 8.2.3, which requires the report be submitted within five working days after an emergency situation or condition is reported and addressed. The operator determined the main cause of the event to be the failure of the CIP transfer pump. Since then, the operator has repaired the pump and continues to operate with a duty/standby pump. The access door which was compromised by the slurry spill will be removed and replaced with a concrete berm that adjoins the existing structure walls. This will increase the existing facility containment by an estimated 8 inches.

Don Rodaba, Gary Hornton, and Roy Leed represented the operator during the Division's inspection of the mill facility. During the inspection, the Division observed the CIP #5 area where the spill had occurred (**Photo 6**). The equipment appeared to be functioning properly, and no evidence of the spill remained. The Division observed the concrete containment wall around the CIP area which was constructed approximately 1-1/2 years ago (**Photo 7**). The capacity of the containment structure did not appear to be compromised at the time of the inspection. A concrete ramp had been constructed across the containment wall to allow access for a loader, without compromising the function of the containment structure. The operator estimates this ramp was constructed approximately 4 months prior to the inspection. The Division observed the access door which had been compromised by the slurry spill had been removed and the bottom half filled in with concrete (**Photos 8 and 9**). The Division observed the mill secondary containment floor (outside of the building) where the slurry had seeped from beneath the access door. It appeared that all of the slurry had been extracted from the floor of this area.

Recording of water level readings:

Jeff Campbell represented the operator during this portion of the inspection. The Division recorded water level readings from the transducers for the Arequa Gulch Valley Leach Facility (AGVLF) high volume solution collection system (HVSCS) and pond piezometers for Phases I, II/III, IV, and V. Readings were also obtained from the AGVLF low volume solution collection system (LVSCS) for Phases I, II/III, IV, and V. The Division then obtained water level readings from the transducers for the Squaw Gulch Valley Leach Facility (SGVLF) HVSCS (**Photo 10**) and pond piezometer, and the SGVLF LVSCS. The recording sheet for values obtained during this inspection is enclosed as **Attachment A**. All recorded readings were well beneath their respective 80% capacity limits.

Readings were not obtained from the AGVLF external pond LVSCS, underdrain discharge area, or monitor well pumpback system during this inspection.

Inspection of Squaw Gulch Valley Leach Facility:

Jeff Campbell represented the operator during this portion of the inspection. The Division inspected the top surface of the Squaw Gulch Valley Leach Facility (SGVLF) where cyanide solution is leached through the ore via driplines (**Photos 11-15**). The top of the leach pad was ripped leaving approximately 8 inch deep furrows across the surface. The Division did not observe any ponded solution exceeding the 3 feet x 3 feet maximum surface area allowed under the operator's approved Wildlife Protection Plan. However, it should be noted that some snow cover was present at the top of the leach pad, which prevented the Division from completing a full visual inspection of the surface.

Close-out Meeting:

After the inspection, the Division met with Cheyne Mann, Jeff Campbell, Erik Munroe, and Ron Parratt in the operator's Victor office. The following items were discussed:

- Follow-up on required corrective action from Division's August 18, 2016 inspection report (sent on November 21, 2016) to replace missing or damaged edge of liner signs delineating AGVLF liner. The operator stated the signs had been ordered, but would not be received in time to post before the corrective action deadline of December 21, 2016. Therefore, the operator would need to request an extension to the corrective action deadline. (This problem was considered abated on February 7, 2017.)
- The operator's efforts in tracking down ownership for the offsite affected lands near the Chicago Tunnel site (Permit No. M-1988-026) which must be incorporated into a permit. The Chicago Tunnel permit area and a portion of the offsite affected lands were incorporated into the Cresson Project permit area through the Division's approval of Amendment No. 11. The operator intends to incorporate the remainder of the offsite affected lands into the Cresson Project through submittal of an Amendment No. 12.
- The Division's concerns regarding protection of wildlife as reviewed in Exhibits E and H of Amendment No. 11. In Exhibit H, the operator committed to installing a minimum 6-foot high chain link fence around the crest of the mine areas where highwalls of greater than approximately 100 feet would remain after reclamation. In the Division's follow-up adequacy review for AM-11, dated October 18, 2016, the Division requested additional information on how the operator will protect wildlife from encountering the hazard of a highwall during the mining operation. The Division also requested the operator commit to sending to the Division copies of all Wildlife Incident Reports. The operator indicated that wildlife incidents at the site are very low, with no wildlife fatalities known to be contributed to highwall hazards. (Amendment No. 11 was approved on February 8, 2017.)
- The Division's review timeline for the SGVLF Phase 1 Completion Record of Construction Report submitted as Technical Revision No. 87. (TR-87 was approved on January 23, 2017.)
- Spill reporting procedures as required by Rule 8, in reference to the High Grade Mill facility.
- Groundwater standards as required by the Colorado Department of Public Health and Environment Water Quality Control Division's Regulation No. 41 – The Basic Standards for Ground Water. (The Division sent the operator a letter on December 28, 2016, giving the operator 90 days to demonstrate that the operation's approved groundwater monitoring plan and groundwater conditions on site comply with Regulation No. 41 requirements.)

No problems were observed during the inspection.

PHOTOGRAPHS



Photo 1. View of northwestern side of SGOSA.



Photo 2. View of western side of SGOSA, showing slope gradients of approximately 1.5H:1V to 2H:1V.



Photo 3. View of southern side of SGOSA.



Photo 4. View of northern side of SGOSA.



Photo 5. View of top of SGOSA, where small screening facility operates and high grade ore is currently being stored.



Photo 6. View of Carbon in Pulp #5 area located inside high grade mill facility where December 5, 2016 spill occurred.



Photo 7. View of concrete containment wall lining perimeter of CIP area inside high grade mill facility.



Photo 8. View of access door (now removed and bottom half filled in with concrete; circled) where December 5, 2016 spill left mill building. Note concrete ramp constructed across containment wall for loader access.



Photo 9. Outside view of access door (circled) shown in Photo 8. Slurry has been extracted from floor of mill secondary containment.



Photo 10. View of SGVLF High Volume Solution Collection System pumps from which water level readings were recorded.



Photo 11. View looking west across top surface of first lift in SGVLF. No ponded solution exceeding 3' x 3' observed.



Photo 12. View looking northwest across top surface of SGVLF. No ponded solution exceeding 3' x 3' observed.



Photo 13. View looking northwest across top surface of SGVLF. No ponded solution exceeding 3' x 3' observed. Note surface ripped to create furrows.

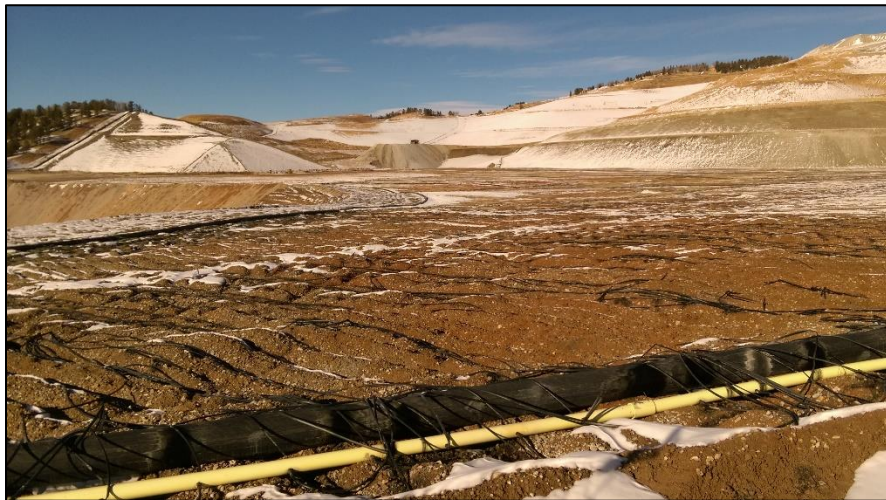


Photo 14. View looking north across top surface of SGVLF. No ponded solution exceeding 3' x 3' observed.



Photo 15. View looking northeast from top surface of SGVLF. No ponded solution exceeding 3' x 3' observed. Note high grade mill facility located in background (top center).

Inspection Contact Address

Jack Henris
Cripple Creek & Victor Gold Mining Company
100 North Third Street
Victor, CO 80860

Enclosure: Attachment A (recording sheet for AGVLF and SGVLF water level values)

EC: Meg Burt, CC&V
Cheyne Mann, CC&V
Tim Cazier, DRMS
Elliott Russell, DRMS
Wally Erickson, DRMS

ATTACHMENT A

CC&V VLF Inspection Readings

Previous Results

AME

Date:

3/15/16	5/12/16	6/16/16	7/19/16	9/20/16	12/20/16	Notes
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AREQUA VLF:

Phase I HVSC & Pond Piezometers

TIME	13:08	13:04			12:57	
Max. of Pump #299, #300, #301, 302, or #303 (Circle Pump #)	(ft)		--	--	50.2, 37.3, 22.5, 38.0, 29.2	
Pond Lvl / XDCR #1	(ft)	48.5	42.6	--	50.0	
System Press / XDCR #2	(ft)	45.1	44.1	--	43.2	system head

Phase I Low Volume Solution Collection

TIME	13:14	13:12			10:15	12:48
Piezo #1 (HAND)	(ft)	0.63	0.40	--	0.56	0.71
Piezo #2 (AUTO)	(ft)	0.52	0.62	--	0.37	0.75

Phase II & III HVSC & Pond Piezometer

TIME	13:21	13:18			12:53	
Max. of XDCR #4, #5, or #6 (Circle XDCR #)	(ft)		--	--	13.4, 20.9, 13.5	
Piezo (Pipe)	(ft)	30.9	30.9	--	30.9	

Phase II & III Low Volume Solution Collection

TIME	13:20	13:16			12:50	
Pump / XDCR #1 (AUTO)	(ft)	0.28	0.57	--	0.50	
Pump / XDCR #2 (AUTO)	(ft)	0.58	0.51	--	0.53	

Phase IV High Volume Solution Collection

TIME	12:18	12:30			13:09	
Max. of Pump #4, #5, or #6 (Circle Pump #)	(ft)		--	--	14.3, 14.0, 15.7	
XDCR pipe (#310 Resv'd)	(ft)	15.6	19.0	--	18.5	

Phase IV Low Volume Solution Collection

TIME	12:21	12:34			13:13	
Pump / XDCR #1	(in)	16.3	16.4	--	17.5	Small shed
Pump / XDCR #2	(in)	12.2	11.7	--	11.3	

Phase V High Volume Solution Collection

TIME	12:52	12:55	13:31		13:29	
Max. of XDCR #311, #312, #313, or #314 (Circle XDCR #)	(ft)		--	--	17.4, 17.4, 17.1, 17.3	

Phase V Low Volume Solution Collection

TIME	12:54	12:57	13:43		13:27	
XDCR #001	(in)	10.36	8.25	9.17	7.03	
XDCR #002	(in)	14.60	16.10	16.10	15.5	

External Pond Low Volume Solution Collection

TIME	13:16	13:10				
Pump / XDCR #1-EXT (AUTO)	(in)	13.7	14.0	--	--	
Pump / XDCR #2-EXT (AUTO)	(in)	11.5	15.7	--	--	

Underdrain Discharge Area

TIME	13:31	13:28				
South Underdrain (S U/D)	(gpm)	17.1	10.9	--	--	
4" Pipe Discharge AG 01 Spring Pipe	(gpm)	Dry	Dry	--	--	
NPDES Discharge AG 1.5 -001A	(gpm)	Dry	Dry	--	--	
North Underdrain (N U/D)	(gpm)	Dry	Dry	--	--	
24-inch Solid Pipe	(gpm)	Dry	Dry	--	--	

Arequa Gulch Monitor Well Pumpback System

TIME	13:31	13:25				
35A	(in)	0.00	0.00	--	--	
63B	(ft)	29.06	37.77	--	--	
B63	(gpm)	0.63	0.00	--	--	
A35	(gpm)	0.0	0.0	--	--	

SQUAW GULCH VLF High Vol. SC:

TIME		11:57	13:53			
LIT #88301 (north end)	(ft)		10.0	--	50.12	58.58
LIT #88303	(ft)		19.4	--	50.09	58.33
LIT #88305	(ft)		5.6	--	50.44	58.70
LIT #88307 (south end)	(ft)		5.4	--	50.26	58.38
Piezometer-LIT #88314	(ft)			--	33.53	61.42

SQUAW GULCH VLF Low Vol. SC:

TIME		11:53	13:58			
Leachate Pump 1	(in)		12.70	6.8	Small shed @	
Leachate Pump 2	(in)		13.70	8.0	Corner	