COLORADO
Division of Reclamation, Mining and Safety
Department of Natural Resources

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):** Timothy A. Cazier	**INSP. DATE:** November 29, 2017	**INSP. TIME:** 9:15
OPERATOR: Cripple Creek & Victor Gold Mining Company	**OPERATOR REPRESENTATIVE:** Justin Bills & Clara Steward	**TYPE OF OPERATION:** 112d-3 - Designated Mining Operation	

REASON FOR INSPECTION: Normal I&E Program	**BOND CALCULATION TYPE:** None	**BOND AMOUNT:** $207,991,188.00
DATE OF COMPLAINT: NA	**POST INSP. CONTACTS:** None	**JOINT INSP. AGENCY:** None
WEATHER: Clear	**INSPECTOR'S SIGNATURE:** 	**SIGNATURE DATE:** February 27, 2018

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

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

OBSERVATIONS

The Division conducted a monitoring inspection of the site on November 29, 2017. Mr. Justin Bills and Ms. Clara Steward represented CC&V during the inspection. Tim Cazier represented the Division. The planned inspection agenda included the following facilities and areas:

- High Grade Mill (HGM): vat leach and east side secondary containment;
- Arequa Gulch Valley Leach Facility (AGVLF): overview and water level check;
- Squaw Gulch Valley Leach Facility (SGVLF);
- East Cresson Overburden Storage Area (ECOSA) seep;

Site Inspection:

High Grade Mill: The Division was accompanied by Dave Rigsby at the HGM to perform an exterior walk-around inspection. The focus was to observe the status of secondary containment on both the west side (vat leach area) and the east side. On the east side, the secondary containment areas for the Process Ore Thickener and High pH Water Tank showed no significant reduction in capacity. Mine personnel were adding water to slurry in the secondary containment area on the west side of the High pH Thickener (**Photo 1**). Mr. Rigsby explained the situation as being a result of a pump being down for maintenance and water was being added for the restart of the pump. The slurried material appeared to be confined to the west side of the High pH Thickener secondary containment area, as the east side (Neutral Process Water Tank) was clean (**Photo 2**). Secondary containment on the vat leach side was observed to be partially consumed (**Photo 3**). Mr. Rigsby stated it would be cleaned up. The Division received photographic evidence of the cleaned up secondary containment on December 4, 2017.

The Division observed the construction status of the new concentrate shipping facility (reference TR-89, Con Barn) as seen in **Photos 4** and **5**.

Arequa Gulch Valley Leach Facility: The Division was accompanied by Ms. Steward and Mr. Bills to check the Arequa Gulch VLF high and low volume solution collection system water levels in Phases I, II/III, IV and V. All observed water levels were below reporting levels and in compliance (see **Attachment A**). The underdrains were all dry with the exception of the south undrain with a measured flow rate of 3.2 gal/min.

Squaw Gulch Valley Leach Facility: The Division was accompanied by Ms. Steward and Mr. Bills to observe the surface for ponded solution and general slope stability concerns (**Photo 6**). A small area of ponded solution was observed (**Photo 7**). CC&V's Process Group was contacted to address the ponded solution. The Division received photographic evidence of the ponded solution being eliminated on December 4, 2017. No slope concerns were observed.

The Squaw Gulch VLF high and low volume solution collection system water levels were checked. All observed water levels were below reporting levels and in compliance (see **Attachment A**).

Ms. Steward stated the new procedure to "pancake" mill tailings in between layers of crushed ore from the load out bin (LOB) has all but eliminated the problem of haul trucks inadvertently dumping tailings off the VLF liner.

ECOSA seep: A seep at the toe of the south end of the ECOSA was first observed during the Division's June 15, 2017 inspection. Subsequent review of aerial photos taken on March 30, 2017 suggest the seep may have been active at that time.

During this inspection, the Division was accompanied by Ms. Steward, Mr. Bills and Mr. Brian Crawford to observe the seep area. No flow was observed (see **Photo 8**) as the length of the seep area previously observed was walked. Ice and sediment were observed in the seep ponding area where CC&V has been collecting the seep water using a pump (see **Photo 9**).

As stated in an earlier inspection report, a CC&V representative collected samples of the seep water for laboratory analyses during the Division's July 27, 2017 inspection. The results of the laboratory analyses were received by the Division on August 22, 2017. Several analytes exceeded the Table Value Standards of the Water Quality Control Division's Rule 41 for groundwater (reference the July 27, 2017 inspection report). The Division and CC&V representatives have agreed CC&V would submit a technical revision (TR) to the permit to install infiltration drains and a monitoring plan for the seep. As of the date of this report, the Division has not received the request for this required TR. The Division expects to receive this TR request by **April 8, 2018** and installation of the necessary monitoring wells during the second quarter of 2018 with the goal of monitoring seepage impacts during the summer of 2018.

Closure Meeting: After the site inspection, this inspector met with CC&V personnel in the Victor office to discuss the following topics

a) CC&V was reminded of the commitment during the review and approval of Amendment 10 (AM-10) that a financial warranty (Permit Exhibit L) update is due with the annual report in even numbered years, specifically in April of 2018. We discussed using Nevada's Standard Reclamation Cost Estimator (SRCE) cost estimating software. The Division would accept the cost estimate as long as the unit costs are justified for Colorado, and appropriate indirect costs (as required by C.R.S 32-34-117(4) and Rule 6.4.12) are included.
b) CC&V announced they are having a third party review the VLF closure designs. The Division agreed this is action is appropriate and timely given no material is being added to the AGVLF and CC&V's Amendment 11 commitment to address erosion an stormwater control for closure.
c) CC&V announced they were working on TR to increase backfill height in the WHEX pit. The Division received the TR request on January 4, 2018 and approved it on February 2, 2018.

Please contact Tim Cazier (303-866-3567, ext. 8169) if you have any questions regarding this report.

PHOTOGRAPHS

Photo 1. Crew washing slurry out of High pH Thickener secondary containment area.

Photo 2. Neutral Process Water Tank secondary containment area.

PHOTOGRAPHS (cont.)

Photo 3. Vat leach secondary containment observed to be partially consumed.

Photo 4. Concentrate shipping facility (Con Barn) construction (from AGVLF overlook, looking NNE).

PHOTOGRAPHS (cont.)

Photo 5. Concentrate shipping facility (Con Barn) construction (looking NW).

Photo 6. SGVLF (from AGVLF overlook, looking NW).

PHOTOGRAPHS (cont.)

Photo 7. Ponded solution on SGVLF (from AGVLF overlook, looking NW).

Photo 8. No flow in ECOSA seep area.

PHOTOGRAPHS (cont.)

Photo 9. Ice and sediment observed in the ECOSA seep ponding area (looking south).

Inspection Contact Address

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ATTACHMENT A

CC&V VLF Inspection Readings

Date:		Previous Results							
		5/12/16	6/16/16	7/19/16	9/20/16	12/20/16	4/18/17	11/29/17	Notes
AREQUA VLF:									
Phase I HVSC & Pond Piezometers	TIME:	13:04				12:57	12:19	10:19	
Note: 80% cap. @ 63.75 ft — Max. of Pump #299, #300, #301, 302, or #303 (Circle Pump #)	(ft)			--	--	50.2	55.1	#299 57.3	
Pond Lvl / XDCR #1	(ft)	42.6	--	--	--	50.0	54.8	57.4	
System Press / XDCR #2	(ft)	44.1	--	--	--	43.2	44.0	46.3	system head
Phase I Low Volume Solution Collection	TIME:	13:12			10:15	12:48	12:03	9:53	
Note: Req'd < 2 ft — Piezo #1 (HAND)	(ft)	0.40	--	--	0.56	0.71	0.65	0.42	
Piezo #2 (AUTO)	(ft)	0.62	--	--	0.37	0.75	0.57	0.76	
Phase II & III HVSC & Pond Piezometer	TIME:	13:18				12:53	12:10	9:59	
Note: 80% @ 49.4 ft — Max. of XDCR #4, #5, or #6 (Circle XDCR #)	(ft)			--	--	20.9	15.3	#5 19.7	
Piezo (Pipe)	(ft)	30.9	--	--	--	30.9	30.9	30.9	
Phase II & III Low Volume Solution Collection	TIME:	13:16				12:50	12:12	9:52	
Note: Req'd < 2 ft — Pump / XDCR #1 (AUTO)	(ft)	0.57	--	--	--	0.50	0.58	0.34	
Pump / XDCR #2 (AUTO)	(ft)	0.51	--	--	--	0.53	0.37	0.24	
Phase IV High Volume Solution Collection	TIME:	12:30				13:09		10:49	
Note: 80% cap. @ 56.5 ft — Max. of Pump #4, #5, or #6 (Circle Pump #)	(ft)			--	--	15.7	--	20.5	#307 #309 SAME
XDCR pipe (#310 Resv'd)	(ft)	19.0	--	--	--	15.5	--	34.4	
Phase IV Low Volume Solution Collection	TIME:	12:34				13:13		10:46	
Note: Req'd < 24" — Pump / XDCR #1	(in)	16.4	--	--	--	17.5	--	15.1	
Pump / XDCR #2	(in)	11.7	--	--	--	11.3	--	12.0	
Phase V High Volume Solution Collection	TIME:	12:55	13:31			13:29		9:36	
Note: 80% cap. @ 36.5 ft — Max. of XDCR #311, #312, #313, or #314 (Circle XDCR #)	(ft)			--	--	17.4	--	#311 18.5	
Phase V Low Volume Solution Collection	TIME:	12:57	13:43			13:27		9:34	
Note: Req'd < 24" — XDCR #001	(in)	8.25	9.17	--	--	7.03	--	14.61	
XDCR #002	(in)	16.10	16.10	--	--	15.50	--	14.4	
External Pond Low Volume Solution Collection	TIME:	13:10						9:50	
Note: Req'd < 24" — Pump / XDCR #1-*EXT* (AUTO)	(in)	14.0	--	--	--	--	--	10.6	
Pump / XDCR #2-*EXT* (AUTO)	(in)	15.7	--	--	--	--	--	15.6	
Underdrain Discharge Area	TIME:	13:28						10:05	
South Underdrain (S U/D)	(gpm)	10.9	--	--	--	--	--		26AL/37sec
Note: 1 ℓ/sec = 15.85 gpm — 4" Pipe Discharge AG 01 Spring Pipe	(gpm)	Dry	--	--	--	--	--	DRY	
NPDES Discharge AG 1.5 -001A	(gpm)	Dry	--	--	--	--	--		
North Underdrain (N U/D)	(gpm)	Dry	--	--	--	--	--		
24-inch Solid Pipe	(gpm)	Dry	--	--	--	--	--		
Arequa Gulch Monitor Well Pumpback System	TIME:	13:25						10:11	
Data first collected by DRMS 3/8/12 — 35A	(in)	0.00	--	--	--	--	--	0.00	
63B	(ft)	37.77	--	--	--	--	--	36.56	
B63	(gpm)	0.00	--	--	--	--	--	0.00	
A35	(gpm)	0.0	--	--	--	--	--	0.00	
SQUAW GULCH VLF High Vol. SC:	TIME:				11:57	13:53	14:59	12:00	
LIT #88301 (north end)	(ft)	10.0	--	50.12	58.58	61.50	69.24	37.05	
Note: 80% cap. @ 94 ft — LIT #88303	(ft)	19.4	--	50.09	58.33	61.18	69.02	36.99	
LIT #88305	(ft)	5.6	--	50.44	58.70	61.54	68.84	36.22	
LIT #88307 (south end)	(ft)	5.4	--	50.26	58.38	61.34	68.84	36.32	
Piezometer-LIT #88314	(ft)		--	33.53	61.42	64.78	75.49	43.52	
SQUAW GULCH VLF Low Vol. SC:	TIME:				11:53	13:58	15:02	12:08	
Note: Req'd < 24" — Leachate Pump 1	(in)				12.70	6.80	12.50	12.5	
Leachate Pump 2	(in)				13.70	8.00	13.50	13.1	