




COLORADO DIVISION OF RECLAMATION, MINING AND SAFETY
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): Elliott R. Russell	INSP. DATE: October 21, 2015	INSP. TIME: 10:00
OPERATOR: Cripple Creek & Victor Gold Mining Company	OPERATOR REPRESENTATIVE: Chris Hanks	TYPE OF OPERATION: 112d-3 - Designated Mining Operation	

REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: None	BOND AMOUNT: \$173,434,420.00
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None
WEATHER: Raining	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: February 12, 2016

GENERAL INSPECTION TOPICS

This list identifies the environmental and permit parameters inspected. 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>Y</u>
(HB) HYDROLOGIC BALANCE----- <u>Y</u>	(BG) BACKFILL & GRADING----- <u>Y</u>	(EX) EXPLOSIVES----- <u>N</u>
(PW) PROCESSING WASTE/TAILING---- <u>N</u>	(SF) PROCESSING FACILITIES----- <u>Y</u>	(TS) TOPSOIL----- <u>Y</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>Y</u>	(SW) STORM WATER MGT PLAN---- <u>N</u>	(CI) COMPLETE INSP---- <u>N</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>N</u>	(SC) SEDIMENT CONTROL----- <u>Y</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 / N = Not inspected / NA = Not applicable to this operation / PB = Problem cited / PV = Possible violation cited

PROBLEMS/POSSIBLE VIOLATIONS

None observed during the site inspection.

OBSERVATIONS

The Division of Reclamation, Mining and Safety (Division) conducted an inspection of the Cresson Project (Permit File No. M-1980-244), a Regular 112d(3) Designated Mining Operation Reclamation Permit with 5,989.7 permitted acres and an approved post-mining land use of Rangeland and Wildlife Habitat. The mine is located southeast of Cripple Creek, Colorado and north of Victor, Colorado. Elliott Russell, with the Division, inspected the site. Chris Hanks, representing the Operator, accompanied the inspection. This inspection was carried out as a part of the Division's normal monitoring program. The primary focus of this inspection was to observe solution levels in the Pregnant Solution Storage Area (PSSA) and to monitor ongoing construction projects on site. The following facilities were inspected during this site visit:

- Squaw Gulch Underdrain Ponds
- Squaw Gulch Valley Leach Facility (SGVLF)
- Arequa Gulch Valley Leach Facility (AGVLF)
- Pertinent Environmental Protection Facilities (EPFs):
 - AGVLF Solution level check

Squaw Gulch Underdrain Ponds Inspection:

The on-going construction of the underdrain sump and ponds was observed. The underdrain pond geomembrane liner had recently been installed (**Photo 1**). The location for the sump had been excavated and the foundation for the sub-surface enclosure was being prepared (**Photo 2**). The enclosure was staged near where Squaw Gulch intersects Shelf Road.

SGVLF Inspection:

The Division and Mr. Hanks were accompanied by Ron DiDonato into the SGVLF. LLDPE geomembrane liner had been deployed to the 9,750' level and Drain Cover Fill (DCF) was staged and was being spread from the 9,550' to 9,650'; these activities were occurring on the northeast slope of the VLF at the time of the inspection (**Photo 3**). The Division observed personnel identifying potentially-damaged areas of the liner (**Photo 4**). Eroded DCF had been repaired in the PSSA and the southwest slope of the spent ore had been graded down to approximately 3.5H:1V (**Photo 5**).

AGVLF Inspection:

The Division observed several tension cracks on a section of haul road west of the Load out Bin (LOB) and east of the northern overlook (**Photo 6**). Within roughly 700 feet, thirteen 1-2" wide tension cracks spanned the haul road and were all approximately in the northwest to southeast direction. Mr. Hanks stated that these were just recently been discovered and CC&V was actively monitoring the area with a series of prisms and a total station. They also had geotechnical specialists scheduled to analyze the cracks in the next few days. After the inspection, CC&V stated they would provide the Division with a report addressing the tension cracks and it appeared that the cracks were a sign of settling, likely from the high precipitation received over the prior year and possibly the construction of the 10,200 lift just south of the haul road.

The current progress of resolving the issue of standing solution on various portions of the top of the pad, cited in the August 8, 2015 aerial inspection report, was checked. The Division observed no standing solution on top of the pad; the ripping efforts appear to have made all solution infiltrate into the pad (**Photos 7 & 8**).

While traveling on the 10,100 access road, the Division observed a small area (approximately 150 sq. ft.) across the road that contained ponded solution, likely caused by a broken feeder line observed just above the road. On October 29, 2015, CC&V provided photo documentation that the area in question had been ripped, that the feeder line had been repaired, and all water had infiltrated the pad (**Photos 9 & 10**). Since the Operator has resolved this issue to the satisfaction of the Division prior to the date of this report, the ponded solution will not be cited as a problem in this inspection report.

Temporary netting was being installed over a trench in the northern portion of the AGVLF where solution is allowed to infiltrate into the VLF from the High Grade Mill (**Photo 11**).

PSSA Solution Levels:

The inspection continued as the Division visited each of the high and low volume solution collection system transducers and recorded the solution level values (field data sheet attached) for each Phase of the AGVLF. The values obtained from this visit are summarized in the Transducer Readings table below (see **Table 1**). All of the readings were within their corresponding range of acceptable values. It appears that the issues from earlier in the year regarding the water management of PSSA levels has been resolved and there has been no reported exceedances in the last few months. The water management problem was primarily a result from a broken header pipe in Phase 4 and the unusual amount of precipitation in the first part of 2015.

This concludes the Division's Inspection Report; a subset of photographs taken during the time of the inspection are included below. If you need additional information or have any questions, please contact me at Division of Reclamation, Mining and Safety, 1313 Sherman Street, Room 215, Denver, CO 80203, by telephone at **303-866-3567 x8132**, or by email at elliott.russell@state.co.us.

PHOTOGRAPHS



Photo 1. Liner installed in the Squaw Gulch Underdrain Ponds; looking southeast.



Photo 2. Excavation for the sub-surface enclosure for the underdrain pond sump; looking east.



Photo 3. GPS bulldozers grading out DCF on the northeast slope of SGVLF; looking northeast.

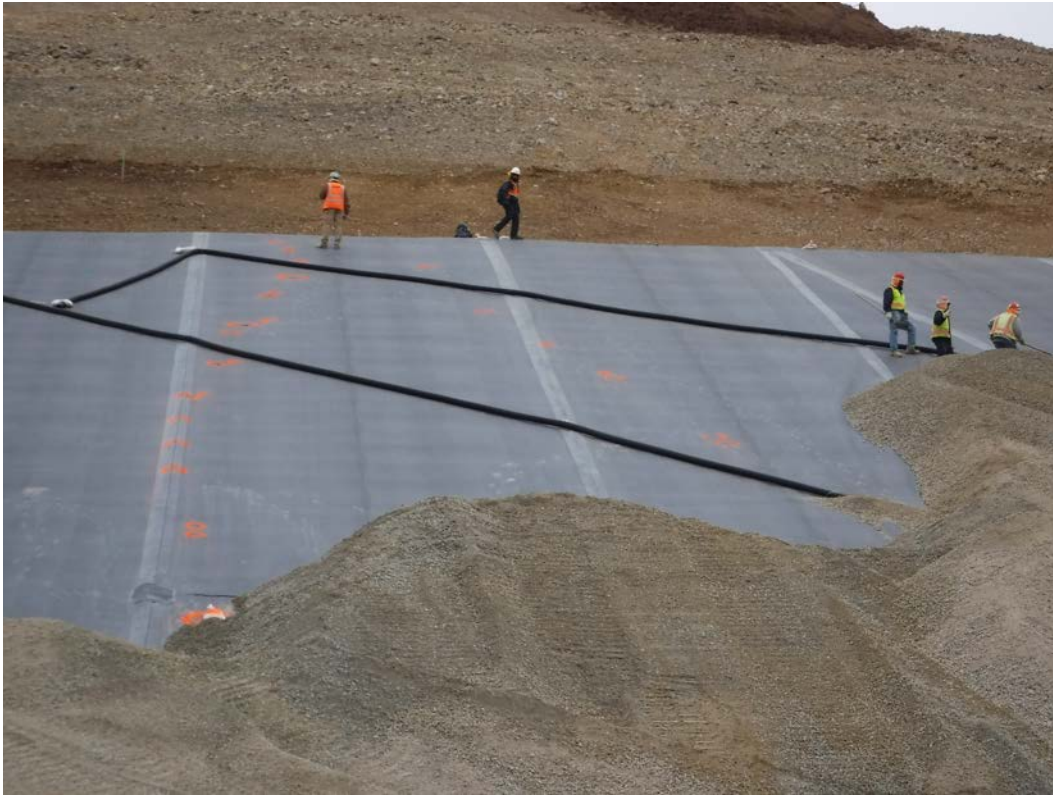


Photo 4. Areas on the geomembrane, identified by orange paint, that need to be tested for damage; looking east.



Photo 5. Graded spent ore and repaired DCF in the SGVLF PSSA; looking southwest.



Photo 6. Tension across haul road west of LOB; looking west.



Photos 7 & 8. No signs of standing solution on top of AGVLF Pad.



Photos 9 & 10. Photos submitted by the Operator showing ponded solution on 10,100 access road has been resolved.



Photo 11. High Grade Mill water Infiltration trench on the north side of the AGVLF, workers installing temporary wildlife netting over it; looking west.

Table 1. Transducer readings recorded at the Cresson Project on October 21, 2015.

<u>Phase I High Volume Solution Collection</u> (readings in ft)				
<u>Pump #299 / XDCR #xx</u>	<u>Pump #300 / XDCR #00</u>	<u>Pump #301 / XDCR #01</u>	<u>Pump #302 / XDCR #02</u>	<u>Pump #303 / XDCR #03</u>
47.2	34.4	24.2	25.6	30.3
<u>Phase I Low Volume Solution Collection</u> (readings in ft)				
<u>Pond Lvl / XDCR #1</u>	<u>System Press / XDCR #2</u>			
0.66	0.63			
<u>Phase I Pond Piezometers</u> (readings in ft)				
<u>Piezo #1 (HAND)</u>	<u>Piezo #2 (AUTO)</u>			
47.4	45.8			
<u>Phase II & III High Volume Solution Collection</u> (readings in ft)				
<u>Pump / XDCR #4</u>	<u>Pump / XDCR #5</u>	<u>Pump / XDCR #6</u>		
12.7	15.4	13.7		
<u>Phase II & III Low Volume Solution Collection</u> (readings in ft)				
<u>Pump / XDCR #1 (AUTO)</u>	<u>Pump / XDCR #2 (AUTO)</u>			
0.35	0.24			
<u>Phase II & III Pond Piezometer</u> (readings in ft)				
<u>Piezo (Pipe)</u>				
30.9				
<u>Phase IV High Volume Solution Collection</u> (readings in ft)				
<u>Pump #4 / XDCR #307</u>	<u>Pump #5 / XDCR #308</u>	<u>Pump #6 / XDCR #309</u>	<u>XDCR pipe (#310 Reserved)</u>	
23.4	23.1	23.7	23.9	
<u>Phase IV Low Volume Solution Collection</u> (readings in inches)				
<u>Pump / XDCR #1</u>	<u>Pump / XDCR #2</u>			
9.1	11.9			
<u>Phase V High Volume Solution Collection</u> (readings in ft)				
<u>XDCR #311 (AUTO)</u>	<u>XDCR #312 (AUTO)</u>	<u>XDCR #313 (AUTO)</u>	<u>XDCR #314 (AUTO)</u>	
15.6	15.2	15.7	14.9	
<u>Phase V Low Volume Solution Collection</u> (readings in inches)				
<u>XDCR #001</u>	<u>XDCR #002</u>			
8.32	10.20			
<u>External Pond Low Volume Solution Collection</u> (readings in inches)				
<u>Pump / XDCR #1-EXT (AUTO)</u>	<u>Pump / XDCR #2-EXT (AUTO)</u>			
13.7	16.8			

Inspection Contact Address

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

Enclosure: 10-21-15 M1980244 Field Data Sheet

CC: Chris Hanks; CC&V
Wally Erickson; DRMS
Tim Cazier; DRMS
Amy Eschberger; DRMS

ATTACHMENT A

Date:

Phase I High Volume Solution Collection

Pump #299 / XDCR #xx

Note: 80% Pump #300 / XDCR #00

cap. @ 63.75 Pump #301 / XDCR #01

ft Pump #302 / XDCR #02

Pump #303 / XDCR #03

Phase I Pond Piezometers

80% cap. @ 63.75 ft **Pond Lvl / XDCR #1**

System Press / XDCR #2

Phase I Low Volume Solution Collection

Note: Req'd Piezo #1 (HAND)

< 2 ft Piezo #2 (AUTO)

Phase II & III High Volume Solution Collection

Note: 80% Pump / XDCR #4

cap. @ 49.4 Pump / XDCR #5

ft Pump / XDCR #6

Phase II & III Pond Piezometer

80% @ 49.4 ft **Piezo (Pipe)**

Phase II & III Low Volume Solution Collection

Note: Req'd Pump / XDCR #1 (AUTO)

< 2 ft Pump / XDCR #2 (AUTO)

Phase IV High Volume Solution Collection

Pump #4 / XDCR #307

Note: 80% Pump #5 / XDCR #308

cap. @ 56.5 Pump #6 / XDCR #309

ft **XDCR pipe (#310 Reserved)**

Phase IV Low Volume Solution Collection

Note: Req'd Pump / XDCR #1

< 24" Pump / XDCR #2

Phase V High Volume Solution Collection

XDCR #311 (AUTO)

Note: 80% XDCR #312 (AUTO)

cap. @ 36.5 XDCR #313 (AUTO)

ft XDCR #314 (AUTO)

Phase V Low Volume Solution Collection

Note: Req'd XDCR #001

< 24" XDCR #002

External Pond Low Volume Solution Collection

Note: Req'd Pump / XDCR #1-EXT (AUTO)

< 24" Pump / XDCR #2-EXT (AUTO)

Underdrain Discharge Area

South Underdrain (S U/D)

Note: 1 4" Pipe Discharge AG 01 Spring Pipe

l/sec = NPDES Discharge AG 1.5 -001A

15.85 gpm North Underdrain (N U/D)

24-inch Solid Pipe

Arequa Gulch Monitor Well Pumpback System

35A

Data first 63B

collected by B63

DRMS 3/8/12

A35

	3/11/15	5/21/15	6/17/15	7/21/15	8/12/15	10/21	Notes
TIME:	12:12	13:23		12:07		12:59	
(ft)	36.9	34.5	39.5	58.7	48.7	47.2	
(ft)	34.3	37.9	35.0	33.7	34.5	34.4	
(ft)	23.0	51.5	48.8	23.6	22.7	24.2	
(ft)	33.8	58.5	55.1	37.4	28.0	25.6	
(ft)	37.8	67.7	66.3	45.0	34.9	30.3	
TIME:		13:23		12:07		12:59	
(ft)		53.2	71.9	71.6	59.4	49.0	47.4
(ft)		48.8	49.6	50.7	48.5	45.2	45.8 system head
TIME:	12:19	13:34		12:16		1:04	
(ft)	0.57	0.52	0.49	0.56	0.50	.66	
(ft)	0.74	0.61	0.53	0.77	0.47	.63	
TIME:	12:33	13:37		12:19		1:08	
(ft)	23.0	25.3	14.6	16.3	20.3	12.7	
(ft)	17.8	24.0	17.4	17.4	22.8	15.4	
(ft)	24.7	29.5	14.6	16.1	21.9	13.7	
TIME:		13:37		12:19		1:08	
(ft)		31.8	30.9	30.9	30.9	30.9	30.9
TIME:	12:30	13:39		12:20		1:09	
(ft)	0.71	0.70	0.36	0.53	0.66	.35	
(ft)	0.41	0.32	0.38	0.54	0.38	.24	
TIME:	11:28	12:00		11:37		12:08	
(ft)	32.9	35.0	26.8	UNK (100)	30.9	23.4	
(ft)	32.8	35.2	26.5	UNK (100)	31.1	23.1	
(ft)	32.5	35.0	26.7	UNK (100)	off	23.7	
(ft)	32.5	35.0	26.8	ooo	30.9	23.9	
TIME:	11:35	12:15		11:42		12:11	
(in)	17.8	16.3	11.7	19.0	20.0	9.1	
(in)	11.8	11.9	11.5	11.9	11.7	11.9	
TIME:	12:04	13:09		11:55		12:49	
(ft)	32.74	42.87	14.10	18.80	--	15.6	
(ft)	21.17	21.04	13.30	18.10	--	15.2	
(ft)	20.30	19.90	14.20	19.10	--	15.7	
(ft)	30.90	31.65	13.90	17.90	--	14.9	
TIME:	11:59	13:13		11:57		12:51	
(in)	9.42	13.14	12.34	12.46	--	8.38	
(in)	15.50	14.60	14.80	14.40	--	10.2	
TIME:	12:24	13:29		12:12		1:02	
(in)	9.7	14.0	--	13.7	13.7	13.7	
(in)	13.4	11.8	--	11.4	14.9	16.8	
TIME:	12:42			12:27			
(gpm)	15.0	28.6	--	~30*	--	--	
(gpm)	Dry	Dry	--	Dry	--	--	
(gpm)	Dry	Dry	--	Dry	--	--	
(gpm)	Dry	Dry	--	Dry	--	--	
(gpm)	Dry	Dry	--	Dry	--	--	
TIME:		13:46		12:31			
(in)	0.00	0.00	--	0.00	--	--	
(ft)	36.98	39.38	--	28.20	--	--	
(gpm)	0.0	0.0	--	low	--	--	
(gpm)	0.0	0.0	--	0.0	--	--	