




**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.

<b>MINE NAME:</b> Cresson Project	<b>MINE/PROSPECTING ID#:</b> M-1980-244	<b>MINERAL:</b> Gold	<b>COUNTY:</b> Teller
<b>INSPECTION TYPE:</b> Monitoring	<b>INSPECTOR(S):</b> Timothy A. Cazier	<b>INSP. DATE:</b> July 21, 2015	<b>INSP. TIME:</b> 10:00
<b>OPERATOR:</b> Cripple Creek & Victor Gold Mining Company	<b>OPERATOR REPRESENTATIVE:</b> Chris Hanks	<b>TYPE OF OPERATION:</b> 112d-3 - Designated Mining Operation	

<b>REASON FOR INSPECTION:</b> Normal I&E Program	<b>BOND CALCULATION TYPE:</b> None	<b>BOND AMOUNT:</b> \$136,475,000.00
<b>DATE OF COMPLAINT:</b> NA	<b>POST INSP. CONTACTS:</b> None	<b>JOINT INSP. AGENCY:</b> None
<b>WEATHER:</b> Cloudy	<b>INSPECTOR'S SIGNATURE:</b> 	<b>SIGNATURE DATE:</b> July 29, 2015

**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>Y</u>	(FN) FINANCIAL WARRANTY----- <u>N</u>	(RD) ROADS----- <u>Y</u>
(HB) HYDROLOGIC BALANCE----- <u>Y</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>Y</u>	(RV) REVEGETATION---- <u>N</u>
(SM) SIGNS AND MARKERS----- <u>N</u>	(SP) STORM WATER MGT PLAN---- <u>N</u>	(SB) COMPLETE INSP---- <u>N</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>N</u>	(SC) EROSION/SEDIMENTATION--- <u>Y</u>	(RS) RECL PLAN/COMP-- <u>N</u>
(AT) ACID OR TOXIC MATERIALS----- <u>Y</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**

The Division conducted a monitoring inspection of the site on July 21, 2015. Chris Hanks represented the Operator during various parts of the inspection. Tim Cazier represented the Division. The following facilities were inspected during this site visit:

- Squaw Gulch Underdrain Ponds,
- Arequa Gulch Valley Leach Facility (AGVLF) HVSCS/LVSCS water levels,
- Mill Platform Area Drain Line Containment Area,
- Carlton Tunnel,
- Appurtenant Environmental Protection Facilities (EPFs):
  - Carlton Adsorption/Desorption Recovery (ADR),
  - Carlton Assay Lab

### **Underdrain Pond Inspection:**

Ron DiDonato was on site for the Squaw Gulch underdrain pond inspection. Small cracks were observed in all four corners of each of the two ponds (see **Photo 1**), but not in the overflow chute between the two ponds (see **Photo 2**). Mr. DiDonato explained the standing water in the ponds (see **Photo 3**) would be pumped out prior to installing the GCL/geomembrane liner approved by the Division as part of TR-74. The liner installation should be completed in less than a week's time. He also pointed out the location of the proposed pumpback pump enclosure (see **Photo 4**) between the upgradient pond and the stormwater diversion ditch at the toe of the Hwy 67 embankment. Mr. DiDonato confirmed the mine would provide a quality assurance certification report for the installation of the liner; separate from the SGVLF Phase I certification report. The pumpback line had been installed and buried in a trench along the north Hwy 67 embankment contact (see **Photo 5**).

### **Construction:**

Mr. DiDonato provided a construction update on the SGVLF Phase I liner construction:

- The recent frequent rains have caused erosion problems with the drain cover fill (DCF);
- Ames is re-inspecting the geomembrane liner prior to replacing the DCF.

### **Mill Area Drain Inspection:**

Jeff Winterton was on site for the Mill Platform Area Drain Line Containment Area inspection. Mr. Winterton explained the temporary setup for conveying water collected in mill area sumps CB-3, CB-4, and CB-5 (west to east) to the SGVLF approved Pregnant Solution Storage Area (PSSA) necessary until the SGVLF Phase I and II liner is tied into the mill platform liner. As Mr. Winterton explained, some mill process water gets combined with meteoric water in the mill area. This water is collected in sumps CB-3, CB-4, and CB-5, the drained via gravity in the CPE Storm Drain ultimately through the HGM Drain Line to the Mill Platform Area Drain Line Containment Area (see **Photo 6**), where it was transferred to the SGVLF PSSA. However, due to the low acidity, precipitates were clogging the drain pipes. The mine is now pumping approximately 100 gpm of the low acidity water (pH ~ 4) directly from CB-3 (see **Photo 7**) to the SGVLF PSSA. This will no longer be necessary once there is an approved continuous liner between the PSSA and the mill area liner.

### **Carlton ADR and Assay Lab Inspection:**

The Carlton ADR and Assay Lab were inspected as part of the Division's more structured inspection program for EPFs. Mr. Hanks stated the mine is high volume producer of lead waste and that Safe Harbors transports their lead waste off site to a proper disposal site.

A mine representative familiar with each respective facility escorted this inspector through and around both buildings. The Division noted proper secondary containment protocols in place, such as in the reagent storage area of the assay lab (see **Photo 8**) and that the majority of containers stored outside were labeled properly (see **Photo 9**). This inspector noted labels on some five-gallon buckets used for storing purchased inert gravel (used in some lab testing) had worn off.

Mine personnel were assigned to marking those containers prior to this inspector leaving the facility. This inspector observed some large blue plastic drums (see **Photo 10**) on the north side of the assay lab. The lab representative was unsure what was inside and opened one up to reveal it contained small bags of drill cuttings. Because of the uncertainty of its contents and the proximity to the lab where potentially hazardous substances are used, the Division recommends all containers be labeled (even with "Non-hazardous Material" or "Inert Material" if appropriate) and properly segregated in order to avoid accidental exposure. No leaking or damaged containers were observed.

Water levels:

The inspection continued as the Division visited each of the high and low solution collection system transducers and recorded water level values. The recording sheet is included as **Attachment A**, and the values are summarized below in the Transducer Readings. Post inspection the Division noted Phase II Pond Piezometer (Piezo (Pipe)) is remarkably constant given the variability in the three Phase II pump transducers. The Division's recorded level from the last three inspections (5/21, 6/17, 7/21) was 30.9 feet and the two inspections previously (2/24 & 3/11) at 31.8 feet (both times). The Division recommends verifying the Phase II Pond piezometer is functioning properly.

Transducer Readings:

<b>Phase I High Volume Solution Collection (readings in ft)</b>			
<u>Pump #299 / XDCR #xx</u>	<u>Pump #300 / XDCR #00</u>		
58.7	33.7		
<u>Pump #301 / XDCR #01</u>	<u>Pump #302 / XDCR #02</u>	<u>Pump #303 / XDCR #03</u>	
23.6	37.4	45.0	
<b>Phase I Low Volume Solution Collection (readings in ft)</b>			
<u>Pond Lvl / XDCR #1</u>	<u>System Press / XDCR #2</u>		
59.40	48.50		
<b>Phase I Pond Piezometers (readings in ft)</b>			
<u>Piezo #1 (HAND)</u>	<u>Piezo #2 (AUTO)</u>		
0.56	0.77		
<b>Phase II &amp; III High Volume Solution Collection (readings in ft)</b>			
<u>Pump / XDCR #4</u>	<u>Pump / XDCR #5</u>	<u>Pump / XDCR #6</u>	
16.3	17.4	16.1	
<b>Phase II &amp; III Low Volume Solution Collection (readings in ft)</b>			
<u>Pump / XDCR #1 (AUTO)</u>	<u>Pump / XDCR #2 (AUTO)</u>		
0.53	0.54		
<b>Phase II &amp; III Pond Piezometer (readings in ft)</b>			
<u>Piezo (Pipe)</u>			
30.90			
<b>Phase IV High Volume Solution Collection (readings in ft)</b>			
<u>Pump #4 / XDCR #307</u>	<u>Pump #5 / XDCR #308</u>	<u>Pump #6 / XDCR #309</u>	<u>XDCR pipe (#310 Resv'd)</u>
UNK (100)	UNK (100)	UNK (100)	#N/A
<b>Phase IV Low Volume Solution Collection (readings in inches)</b>			
<u>Pump / XDCR #1</u>	<u>Pump / XDCR #2</u>		
19.00	11.90		
<b>Phase V High Volume Solution Collection (readings in ft)</b>			
<u>XDCR #311 (AUTO)</u>	<u>XDCR #312 (AUTO)</u>	<u>XDCR #313 (AUTO)</u>	<u>XDCR #314 (AUTO)</u>
18.80	18.10	19.10	17.90
<b>Phase V Low Volume Solution Collection (readings in inches)</b>			
<u>XDCR #001</u>	<u>XDCR #002</u>		
12.46	14.40		
<b>External Pond Low Volume Solution Collection (readings in inches)</b>			
<u>Pump / XDCR #1-EXT (AUTO)</u>	<u>Pump / XDCR #2-EXT (AUTO)</u>		
13.7	11.4		

Summary:

- 1) As most, but not all the containers in the area outside the assay lab, the Division recommends the mine review their hazard communication and materials handling plans to ensure proper labeling, storage and segregation of used materials is practiced.
- 2) Due to the unexpected constant water levels recorded by the Division during the last five water level inspections, the Division recommends verifying the Phase II Pond Piezometer is functioning properly. Therefore, the Division requests the mine's logs be available for review during the August 2015 inspection.

**PHOTOGRAPHS**



Photo 1. Typical small crack observed in corners of each underdrain pond.



Photo 2. No cracks observed in underdrain overflow chute.



**PHOTOGRAPHS (cont.)**



Photo 3. Temporary pump setup for underdrain ponds (looking south).



Photo 4. Location of proposed pumpback pump enclosure (looking NE).



**PHOTOGRAPHS (cont.)**



Photo 5. Pumpback line trench along the north Hwy 67 embankment contact (looking north).



Photo 6. Mill Platform Area Drain Line Containment Area (looking west).



**PHOTOGRAPHS (cont.)**



Photo 7. Mill Platform Area sump CB-3 (looking north).



Photo 8. Secondary containment in the Assay Lab reagent storage area.



**PHOTOGRAPHS (cont.)**



Photo 9. Labeled 55-gallon drums outside ADR / no leaks were observed.



Photo 10. Large blue plastic drums on the north side of the assay lab.

**Inspection Contact Address**

Chris Hanks  
Cripple Creek & Victor Gold Mining Company  
100 North Third Street  
Victor, CO 80860

Enclosure

CC: Wally Erickson, DRMS  
Amy Eschberger, DRMS  
Elliott Russell, DRMS  
Chris Hanks, CC&V  
DRMS file

## ATTACHMENT A

Date:

## Phase I High Volume Solution Collection

	1/7/15	2/24/15	3/11/15	5/21/15	6/17/15	7/21/15	Notes
Units	15:19	10:59	12:12	13:23		12:07	
Pump #299 / XDCR #xx (ft)	34.1	42.1	36.9	34.5	39.5	58.7	
Note: 80% Pump #300 / XDCR #00 (ft)	33.9	44.1	34.3	37.9	35.0	33.7	
cap. @ 63.75 Pump #301 / XDCR #01 (ft)	39.6	24.9	23.0	51.5	48.8	23.6	
ft Pump #302 / XDCR #02 (ft)	46.3	37.3	33.8	58.5	55.1	37.4	
Pump #303 / XDCR #03 (ft)	52.8	42.0	37.8	67.7	66.3	45.0	

## Phase I Pond Piezometers

	15:19	10:59	12:12	13:23	12:07	
80% cap. @ Pond Lvl / XDCR #1 (ft)	63.8	57.1	53.2	71.9	71.6	59.4
63.75 ft System Press / XDCR #2 (ft)	51.9	48.2	48.8	49.6	50.7	48.5

## Phase I Low Volume Solution Collection

	14:44	10:21	12:19	13:34	12:16	
Note: Req'd Piezo #1 (HAND) (ft)	0.39	0.55	0.57	0.52	0.49	0.56
< 2 ft Piezo #2 (AUTO) (ft)	0.64	0.68	0.74	0.61	0.53	0.77

## Phase II &amp; III High Volume Solution Collection

	15:10	10:47	12:33	13:37	12:19	
Note: 80% Pump / XDCR #4 (ft)	38.4	25.0	23.0	25.3	14.6	16.3
cap. @ 49.4 Pump / XDCR #5 (ft)	46.4	18.3	17.8	24.0	17.4	17.4
ft Pump / XDCR #6 (ft)	42.9	27.1	24.7	29.5	14.6	16.1

## Phase II &amp; III Pond Piezometer

	15:10	10:47	12:33	13:37	12:19	
80% @ 49.4 ft Piezo (Pipe) (ft)	46.7	31.8	31.8	30.9	30.9	30.9

## Phase II &amp; III Low Volume Solution Collection

	15:12	10:52	12:30	13:39	12:20	
Note: Req'd Pump / XDCR #1 (AUTO) (ft)	0.70	0.46	0.71	0.70	0.36	0.53
< 2 ft Pump / XDCR #2 (AUTO) (ft)	0.25	0.30	0.41	0.32	0.38	0.54

## Phase IV High Volume Solution Collection

	13:47	11:52	11:28	12:00	11:37	
Note: 80% Pump #4 / XDCR #307 (ft)	27.1	35.7	32.9	35.0	26.8	
cap. @ 56.5 Pump #5 / XDCR #308 (ft)	26.7	35.4	32.8	35.2	26.5	
ft Pump #6 / XDCR #309 (ft)	26.7	35.3	32.5	35.0	26.7	
XDCR pipe (#310 Reserved) (ft)	26.7	35.3	32.5	35.0	26.8	

## Phase IV Low Volume Solution Collection

	13:52	11:57	11:35	12:15	11:42	
Note: Req'd Pump / XDCR #1 (in)	16.7	18.3	17.8	16.3	11.7	19.0
< 24" Pump / XDCR #2 (in)	11.0	11.5	11.8	11.9	11.5	11.9

## Phase V High Volume Solution Collection

	15:27	11:08	12:04	13:09	11:55	
XDCR #311 (AUTO) (ft)	29.46	19.20	32.74	42.87	14.10	18.8
Note: 80% XDCR #312 (AUTO) (ft)	19.13	29.53	21.17	21.04	13.30	18.1
cap. @ 36.5 XDCR #313 (AUTO) (ft)	28.34	32.29	20.30	19.90	14.20	19.1
ft XDCR #314 (AUTO) (ft)	18.96	32.28	30.90	31.65	13.90	17.9

## Phase V Low Volume Solution Collection

	15:29	11:12	11:59	13:13	11:52	
Note: Req'd XDCR #001 (in)	10.08	12.84	9.42	13.14	12.34	12.46
< 24" XDCR #002 (in)	16.80	16.30	15.50	14.60	14.80	14.4

## External Pond Low Volume Solution Collection

	14:40	10:18	12:24	13:29	12:12	
Note: Req'd Pump / XDCR #1-EXT (AUTO) (in)	13.5	9.1	9.7	14.0	--	13.7
< 24" Pump / XDCR #2-EXT (AUTO) (in)	17.1	12.2	13.4	11.8	--	11.4

## Underdrain Discharge Area

	14:56	10:39	12:42	12:27	
South Underdrain (S U/D) (gpm)	14.0	8.0	15.0	28.6	--
Note: 1 4" Pipe Discharge AG 01 Spring Pipe (gpm)	Dry	Dry	Dry	Dry	--
8/sec = NPDES Discharge AG 1.5 -001A (gpm)	Dry	Dry	Dry	Dry	--
15.85 gpm North Underdrain (N U/D) (gpm)	Dry	Dry	Dry	Dry	--
24-inch Solid Pipe (gpm)	Dry	Dry	Dry	Dry	--

## Arequa Gulch Monitor Well Pumpback System

	14:52	10:32	13:46	12:31	
35A (in)	0.00	0.00	0.00	0.00	--
Data first 63B (ft)	28.29	35.92	36.98	39.38	--
collected by 863 (gpm)	0.4	0.0	0.0	0.0	--
DRMS 3/8/12 A35 (gpm)	0.0	0.0	0.0	0.0	--