



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 and silver	COUNTY: Teller
INSPECTION TYPE: Monitoring	WEATHER: Clear	INSP. DATE: April 20, 2023	INSP. TIME: 09:30
OPERATOR: Cripple Creek & Victor Gold Mining Company	OPERATOR REPRESENTATIVE: Tony Matarrese & Josh Adams	TYPE OF OPERATION: 112d-3 - Designated Mining Operation	

REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: None	BOND AMOUNT: \$209,491,188.00
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None
INSPECTOR(S): Timothy Cazier, P.E.	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: May 10, 2023

The following inspection topics were identified as having Problems or Possible Violations. OPERATORS SHOULD READ THE FOLLOWING PAGES CAREFULLY IN ORDER TO ASSURE COMPLIANCE WITH THE TERMS OF THE PERMIT AND APPLICABLE RULES AND REGULATIONS. If a Possible Violation is indicated, you will be notified under separate cover as to when the Mined Land Reclamation Board will consider possible enforcement action.

INSPECTION TOPIC: Reclamation Success

PROBLEM/POSSIBLE VIOLATION: Problem: The Globe Hill diversion channel was observed to have accumulated a significant amount of sediment and some of the paler stone showed signs of significant weathering after being in place for about six years. This is a problem at this time for failure to protect the affected land from erosion and siltation pursuant to C.R.S. 34-32-116 (7) and Rule 3.1.5(3); and demonstrates some of the riprap used in construction did not meet the approved engineering specifications.

CORRECTIVE ACTIONS: The operator shall submit a Maintenance Plan to provide procedures for monitoring and maintaining stormwater channels, especially armored sections (e.g., riprap and grouted riprap channels) and a schedule for replacing weathered riprap by the corrective action date.

CORRECTIVE ACTION DUE DATE: June 9, 2023

OBSERVATIONS

Tim Cazier (DRMS) conducted a regular monitoring inspection of the site on Thursday, April 20, 2023. Tony Matarrese and Josh Adams represented CC&V for the duration of the inspection. The temperature was in the 20's and the wind was steady, strong and gusting to near 30 mph. The planned inspection agenda included the following facilities/areas:

- WHEX Clay Borrow Source;
- Globe Hill diversion channel;
- VLF Water Level checks;
- VLF 1 Overlook;
- New Poverty Gulch monitoring well PGMW-5;
- VLF 2 Phase III construction.

WHEX Clay Borrow Source: Messrs. Matarrese and Adams accompanied the DRMS to the WHEX Clay Borrow Source, where Jeff Gaul (CC&V). Mr. Gaul stated they had moved roughly 1,000 cubic yards to the staging area near the VLF 2 phase III construction area and that the mine expects to be finished with excavations in this borrow area in early June. He also pointed out the excavation of the clay material is limited to the area south of the toe of EMP 17 (see **Photo 1**). CC&V is installing a fence to delineate the northern extent of the clay borrow area.

Globe Hill Diversion Channel: The Globe Hill diversion channel was constructed in October 2017 after the approval of TR-86. The channel was inspected to determine if any maintenance was needed. Subsequent to the diversion channel construction, the 8-foot wildlife protection fence was installed immediately north of the channel (see **Photo 2**). As the Globe Hill pit is on the south side and there are no gates in the fence, maintenance access to the diversion channel is currently problematic. The grouted upper reach (inlet section) appeared to be in relatively good condition (see **Photo 3**), although a few cracks were observed in the grout on the side closest to the fence (see **Photo 4**). A side channel was armored with riprap as a field fit during the 2017 construction (see **Photo 5**). Much of the paler stone showed considerable signs of weathering (see **Photo 6**). Based on the approved riprap specifications (02271.0 Riprap, dated 4/25/2017) at the time the diversion channel was constructed: "Rip rap shall consist of hard, dense, and durable stone, angular in shape, and resistant to weathering." (reference paragraph 2.1.1 Riprap). In addition, sediment has accumulated in a significant section of the diversion channel, which also requires maintenance attention (see **Photo 2**). **The weathered paler stone does not meet the specifications, and the accumulated sediment are cited as a combined problem on p. 1 of this report related to controlling erosion and siltation.**

VLF Water Level checks: The high volume and low volume solution levels were checked remotely from the office adjacent to ADR2 (see **Attachment A**) with the help of Mr. Dylan Noble (CC&V). High volume water levels were observed to be below their respective 85 percent capacity limits and the low volume levels were observed to be below the two foot limit. The Phase IV and V physical locations were visited between 30 and 60 minutes after recording water levels from the ADR2 displays. The water level readouts at the physical locations appeared consistent with those observed from ADR2.

VLF 1 Overlook: CC&V representatives accompanied the DRMS to the top of VLF 1 for the primary purpose of inspecting the surface for ponded solution. Ponded solution close to or exceeding the approved wildlife protection plan limit of 3 feet by 3 feet was observed on the north 10,200 (see **Photo 7**), south 10,200 (see **Photo 8**) and the 10,400 (see **Photo 9**) levels. CC&V stated there is a challenge preventing ponded solution this time of year when solution freezes overnight and melts during the day. CC&V committed to correcting the

problem by the end of the day and provided the DRMS with photographic evidence on April 21st of having ripped the areas where ponding was observed to reestablish solution infiltration.

VLF 2 Overlook: Due to the current elevation of VLF 2, there is not a safe vantage point from which to look for ponded solution on VLF 2. An attempt was made from the west side of the powder magazine, but its distance from and low angle above VLF 2 proved unsuitable for the task. CC&V representatives said they would investigate alternative vantage points.

PGMW-5: A quick trip to the newly installed PGMW-5 monitoring well was requested by the DRMS to observe its location (see **Photo 10**). The location was obtained using this inspector's iPhone to provide an approximate location (38.746069°, -105.168222°). Mr. Matarrese stated the water in the well was muddy and he was continuing to develop it. The well ID was welded onto the casing (see **Photo 11**).

VLF 2 Phase III construction: Mr. Jeff Gaul was present for the overview and status update for the Phase III construction in the Schist Island pit. Mr. Gaul stated they were installing a leak detection trench (see **Photo 12**).

General: Observed haul road sediment traps did not appear to require maintenance. Water trucks were observed spraying roads to control dust. No issues were observed with the wildlife fencing. No oil or fuel spills were observed. A dozer was observed grading material on the VLF 1 test pad (TR-113). CC&V representatives did not know if the test pad was being decommissioned.

Close-out meeting: Messrs. Matarrese and Adams were present for the closeout meeting. Problems noted during the inspection were the ponded solution on VLF 1 and both the weathered riprap and sediment in the Globe Hill Diversion Channel. We discussed the need to locate a viable observation location for solution ponding inspection on VLF 2 and to ensure riprap durability specifications are met for all closure channels.

PHOTOGRAPHS

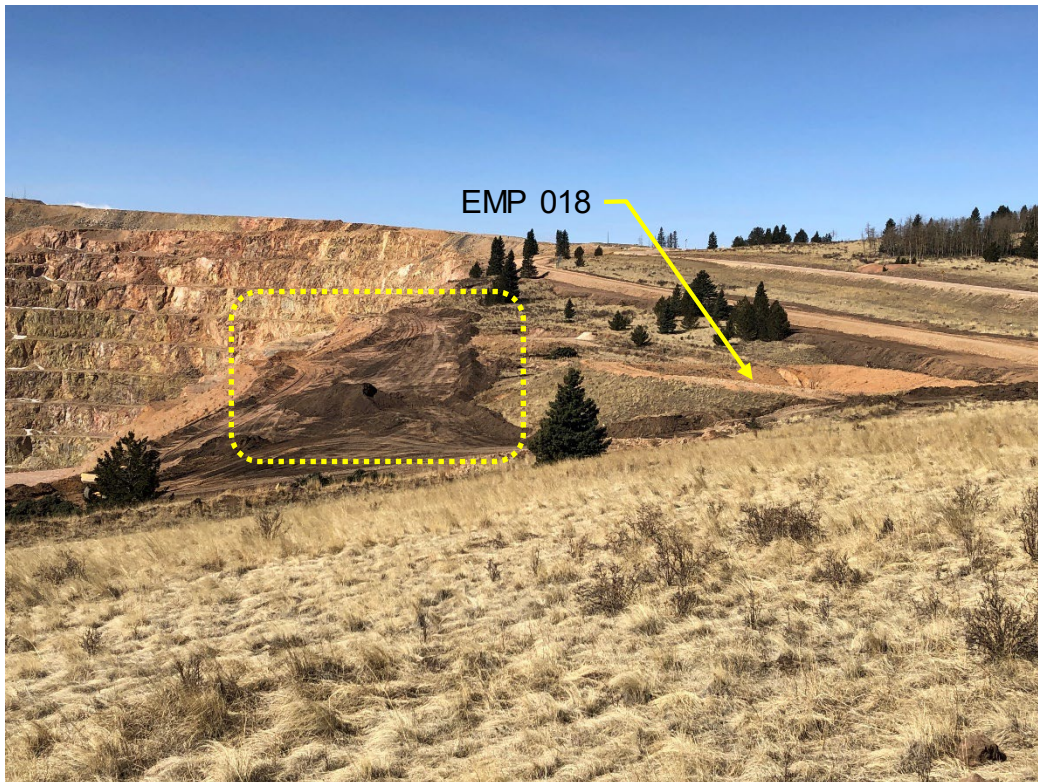


Photo 1. WHEX Clay Borrow Area (Excavation ends at toe of EMP 018, looking SSW)



Photo 2. Globe Hill Diversion Channel (looking SSW, note fence on right and sediment in riprap channel).

PHOTOGRAPHS (cont.)



Photo 3. Grouted riprap section of Globe Hill Diversion Channel (looking SE, note fence on left).



Photo 4. Cracked grout (minor) in grouted riprap section of Globe Hill Diversion Channel.

PHOTOGRAPHS (cont.)



Photo 5. Globe Hill Diversion side channel (looking north from upper end of diversion).



Photo 6. Weathered riprap in Globe Hill Diversion side channel (pale rock weathering).

PHOTOGRAPHS (cont.)



Photo 7. Solution ponding on VLF 1, north 10,200 level (looking south, note frozen solution).



Photo 8. Solution ponding on VLF 1, south 10,200 level (looking south).

PHOTOGRAPHS (cont.)



Photo 9. Solution ponding on VLF 1, 10,400 level (looking west).

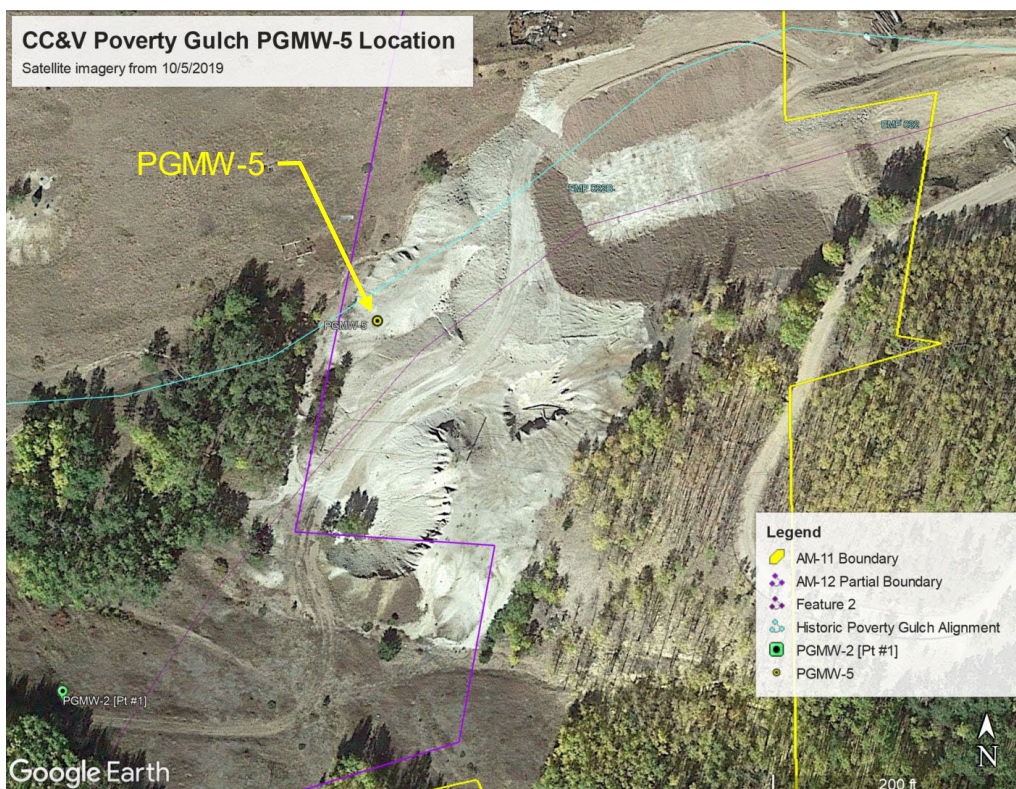


Photo 10. PGMW-5 location – west of EMP 022B.

PHOTOGRAPHS (cont.)



Photo 11. Poverty Gulch monitoring well PGMW-5 casing.

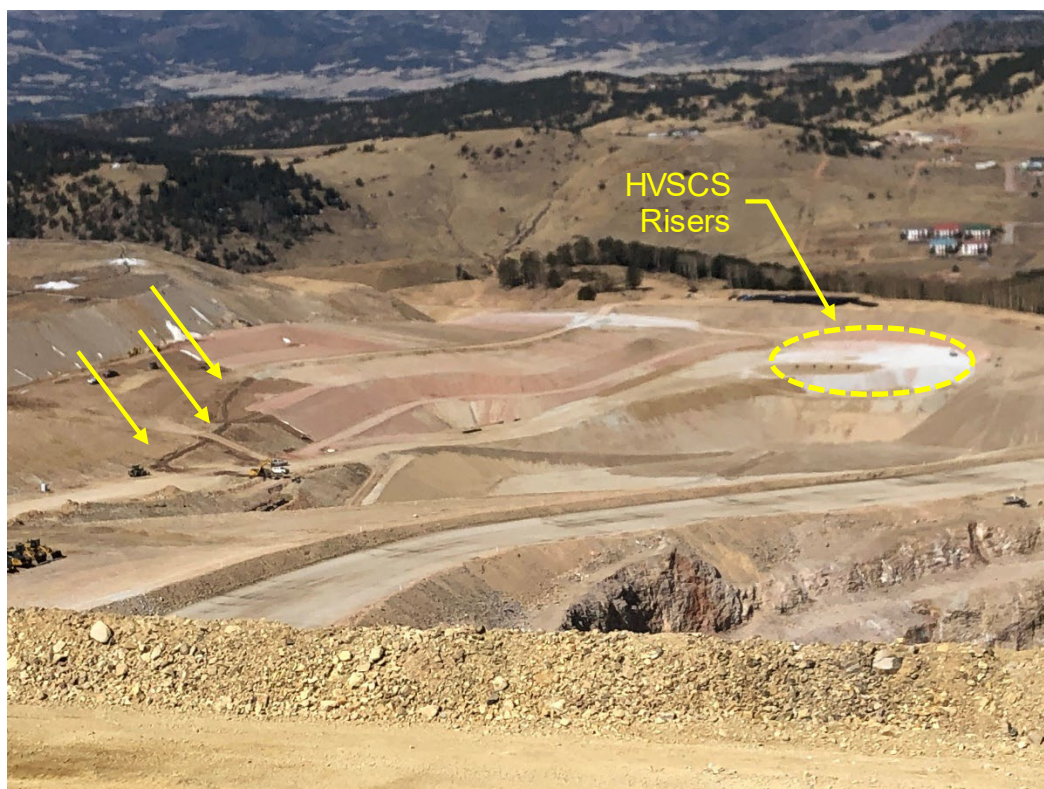


Photo 12. VLF 2, Phase III leak detection system trench (left arrows) construction (looking WSW).

GENERAL INSPECTION TOPICS

The following list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each

(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>N</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>Y</u>	(SP) STORM WATER MGT PLAN---	<u>N</u>	(RS) RECL PLAN/COMP--	<u>PB</u>
(ES) OVERBURDEN/DEV. WASTE-----	<u>N</u>	(SC) EROSION/SEDIMENTATION---	<u>N</u>	(ST) STIPULATIONS-----	<u>N</u>
(AT) ACID OR TOXIC MATERIALS-----	<u>N</u>	(OD) OFF-SITE DAMAGE-----	<u>N</u>		

Y = Inspected / N = Not inspected / NA = Not applicable to this operation / **PB = Problem cited** / PV = Possible violation cited

Inspection Contact Address

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CC&V VLF Water Level Inspection Readings

Previous Results

Date:

VLF1:

Phase I HVSC & Pond Piezometers

		7/26/22	11/28/22	1/5/23	2/1/23	3/12/2023	4/20/23
Max. of Pump #299, #300, #301, 302, or #303	(ft)	52.3	49.6	48.4	49.9	49.6	50.1
Note: 80% cap. @ 63.75 ft	Pond Lvl / XDCR #1	52.1	49	48.8	50.6	50.1	50.8
	System Press / XDCR #2	n/a	n/a	n/a	n/a	n/a	—

Phase I Low Volume Solution Collection

		7/26/22	11/28/22	12/24	12/35	13:15	11:22
Note: Req'd < 2 ft	Piezo #1 (HAND)	None	1.98	1.98	1.1	0.7	0.46
	Piezo #2 (AUTO)	None	0.55	0.55	0.56	0.66	0.75

Phase II & III HVSC & Pond Piezometer

		7/26/22	11/28/22	12/14	12/35	13:15	11:18
Note: 80% @ 49.4 ft	Max. of XDCR #4 #5, or #6	25.9	35.0	38.6	38.2	36.9	36.3
	Piezo (Pipe)	32.9	39.4	42.4	41.6	41.2	39.3

Phase II & III Low Volume Solution Collection

		7/26/22	11/28/22	12/24	12/35	13:15	11:22
Note: Req'd < 2 ft	Pump / XDCR #1 (AUTO)	None	0.36	0.31	0.34	0.59	0.66
	Pump / XDCR #2 (AUTO)	None	0.44	0.44	0.43	0.5	0.51

Phase IV High Volume Solution Collection

		7/26/22	11/28/22	12/15	12/35	13:15	11:20
Note: 80% cap. @ 56.5 ft	Max. of Pump #307, #308, or #309	36.8	19.87	33.1	25.39	42.67	48.95
	XDCR pipe (#310 Resv'd)	38	35.25	32.7	35.23	42.75	49.86

Phase IV Low Volume Solution Collection

		7/26/22	11/28/22	12/25	12/35	13:15	11:21
Note: Req'd < 24"	Pump / XDCR #1	15.3	16.12	16.18	16.12	16.2	16.2
	Pump / XDCR #2	10.9	13.45	13.36	13.23	13.3	13.44

Phase V High Volume Solution Collection

		7/26/22	11/28/22	12/16	12/35	13:15	11:19
Note: 80% cap. @ 36.5 ft	Max. of XDCR #311, #312, #313, or #314 (Circle XDCR #)	27.1	23.9	23.1	27.7	24.9	29.9

Phase V Low Volume Solution Collection

		7/26/22	11/28/22	12/26	12/35	13:15	11:20
Note: Req'd < 24"	XDCR #001	12.9	5.86	9	12.6	1.7	12.6
	XDCR #002	n/a	n/a	n/a	n/a		N/A

External Pond Low Volume Solution Collection

		7/26/22	11/28/22	12/27	12/35	13:15	11:23
Note: Req'd < 24"	Pump / XDCR #1-EXT (AUTO)	None	8.37	8.37	7.52	8.8	11.18
	Pump / XDCR #2-EXT (AUTO)	None	17.75	17.75	16.36	17.01	17.87

Underdrain Discharge Area

		7/26/22	11/28/22	12/27	12/35	13:15	11:30
	South Underdrain (S U/D)	No flow	--	--	--		
Note: 1 g/sec = 15.85 gpm	4" Pipe Discharge AG 01 Spring Pipe	--	--	--	--		
	NPDES Discharge AG 1.5 -001A	--	--	--	--		
	North Underdrain (N U/D)	No flow	--	--	--		
	24-inch Solid Pipe	--	--	--	--		

Arequa Gulch Monitor Well Pumpback System

		7/26/22	11/28/22	12/29	12/35	13:15	
	3B-63	23.7	6.14	8.80*	7.85	2.17	
Data first collected by DRMS 3/8/12	3C-124	34.3	--		--		
	3B-63	--	--	n/a	--		
	3C-124	--	--	n/a	--		

VLF2 High Vol. SC:

		7/26/22	11/28/22	12/19	12/35	13:15	11:24
	LIT #88301 (north end)	56.8	28.1	22.8	67.8	61.3	54.1
Note: 80% cap. @ 94 ft	LIT #88303	56.0	28.3	22.9	67.4	61.7	54.2
	LIT #88305	56.7	28.2	22.9	67.7	61.5	53.6
	LIT #88307 (south end)	57.1	28.4	23.1	67.8	62	52.8
	Piezometer-LIT #88314	67	46.1	41.4	75.2	70.8	69.3

VLF2 Low Vol. SC:

		7/26/22	11/28/22	12/20	12/35	13:15	11:25
Note: Req'd < 24"	Leachate Pump 1	9.5	14.1	12.7	14.6	12.8	13.8
	Leachate Pump 2	7.7	13	11.6	13.5	13	12.2

11:50 ↑
49.1
49.7 Fnd
11:52 " "
15.1
12.9 ↓
12.33
29.8
12:35
14
17.0