# 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:**<br>Cresson Project | **MINE/PROSPECTING ID#:**<br>M-1980-244 | **MINERAL:**<br>Gold | **COUNTY:**<br>Teller |
| **INSPECTION TYPE:**<br>Monitoring | **INSPECTOR(S):**<br>Timothy A. Cazier | **INSP. DATE:**<br>August 7, 2014 | **INSP. TIME:**<br>08:25 |
| **OPERATOR:**<br>Cripple Creek & Victor Gold Mining Company | **OPERATOR REPRESENTATIVE:**<br>Chris Hanks | **TYPE OF OPERATION:**<br>112d-3 - Designated Mining Operation | |

| | | |
|---|---|---|
| **REASON FOR INSPECTION:**<br>Normal I&E Program | **BOND CALCULATION TYPE:**<br>None | **BOND AMOUNT:**<br>$136,471,600.00 |
| **DATE OF COMPLAINT:**<br>NA | **POST INSP. CONTACTS:**<br>None | **JOINT INSP. AGENCY:**<br>None |
| **WEATHER:**<br>Cloudy | **INSPECTOR'S SIGNATURE:** | **SIGNATURE DATE:**<br>November 12, 2014 |

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

**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 August 7, 2014. Timm Comer, Tim Brown, and Chris Hanks were present for a pre-inspection meeting. Tim Cazier represented the Division. The focus of this inspection was to observe water levels, ongoing construction and inspect the Grassy Valley stormwater ponds.

Pre-Inspection Meeting:
Mr. Comer provided a status update on the following activities:

- Spent ore transport from the Arequa VLF (AGVLF) to the Squaw Gulch PSSA – the mine plans to move 1.7 million tons from the Phase IV area of the AGVLF to the PSSA as proposed in TR-72 beginning in October 2014 and ending in April 2015.
- The mercury emissions control devices required by CDPHE had been installed and ready to start compliance testing for the EPA. CDPHE's Air Pollution Control Division will provide oversight.

Mr. Brown provided an overview of CC&V's exploration activities, including possible integration of the Chicago Tunnel (M-1988-026) and Providence Mine (M-2012-052).

Inspection:
Mr. Hanks accompanied the Division representative on the site inspection.

Mine plan: Production drilling and blasting continued in the Wildhorse Extension (WHEX) pit (see **Photo 1**). The new power line on the south side of the AGVLF was completed (see **Photos 2** and **3**).

Construction: The Division observed concurrent placement of soil liner fill (SLF), 100 mil single-sided textured geomembrane and low volume solution collection fill (LVSCF) in the PSSA (see **Photo 4**). The low volume solution collection (LVSC) riser pipes (see **Photo 5**) were also installed in the south corner of the PSSA. PVC pipe used to determine when the required 3-foot thickness of the LVSCF is achieved was observed (see **Photo 6**).

Grassy Valley Stormwater Ponds: The Division inspected pond numbers 16, 17, 17N, 18, 19, and 20. All ponds appeared to be functioning properly. Riprap in the spillways (see **Photos 7** and **8**) appeared in good condition and adequate overflow capacity appeared to be available (see **Photos 9** and **10**).

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.

The North and South Arequa Gulch underdrains were inspected. The South Underdrain discharge was determined to be 12.0 gpm. The North Underdrain, A35 pumpback line and B63 pumpback line were dry.

Transducer Readings:

**Phase I High Volume Solution Collection** (readings in ft)

| Pump #299 / XDCR #xx | Pump #300 / XDCR #00 |
|---|---|
| 34.8 | 35.3 |

| Pump #301 / XDCR #01 | Pump #302 / XDCR #02 | Pump #303/XDCR #03 |
|---|---|---|
| 24.7 | 36.8 | 39.9 |

**Phase I Low Volume Solution Collection** (readings in ft)

| Pond Lvl / XDCR #1 | System Press / XDCR #2 |
|---|---|
| 56.20 | 49.00 |

**Phase I Pond Piezometers** (readings in ft)

| Piezo #1 (HAND) | Piezo #2 (AUTO) |
|---|---|
| 0.36 | 0.52 |

**Phase II & III High Volume Solution Collection** (readings in ft)

| Pump / XDCR #4 | Pump / XDCR #5 | Pump / XDCR #6 |
|---|---|---|
| 26.1 | 30.4 | 28.1 |

**Phase II & III Low Volume Solution Collection** (readings in ft)

| Pump / XDCR #1 (AUTO) | Pump / XDCR #2 (AUTO) |
|---|---|
| 0.40 | 0.46 |

**Phase II & III Pond Piezometer** (readings in ft)

| Piezo (Pipe) |
|---|
| 31.00 |

**Phase IV High Volume Solution Collection** (readings in ft)

| Pump #4 / XDCR #307 | Pump #5 / XDCR #308 | Pump #6 / XDCR #309 | XDCR pipe (#310 Reserved) |
|---|---|---|---|
| 17 | 16.7 | 16.5 | 16.5 |

**Phase IV Low Volume Solution Collection** (readings in inches)

| Pump / XDCR #1 | Pump / XDCR #2 |
|---|---|
| 16.10 | 11.60 |

**Phase V High Volume Solution Collection** (readings in ft)

| XDCR #311 (AUTO) | XDCR #312 (AUTO) | XDCR #313 (AUTO) | XDCR #314 (AUTO) |
|---|---|---|---|
| 17.45 | 15.77 | 16.04 | 19.41 |

**Phase V Low Volume Solution Collection** (readings in inches)

| XDCR #001 | XDCR #002 |
|---|---|
| 12.30 | 15.50 |

**External Pond Low Volume Solution Collection** (readings in inches)

| Pump / XDCR #1-EXT (AUTO) | Pump / XDCR #2-EXT (AUTO) |
|---|---|
| 13.3 | 13.6 |

## PHOTOGRAPHS

Photo 1. Active mining in the WHEX area (looking south).

Photo 2. New power line on the south side of the AGVLF (looking NE).

## PHOTOGRAPHS (cont.)

Photo 3. New power line on the south side of the AGVLF (looking SE).

Photo 4. Placement of SLF, 100 mil single-sided textured geomembrane & LVSCF) in PSSA (looking SW).

## PHOTOGRAPHS (cont.)

Photo 5. LVSC) riser pipes (looking south).

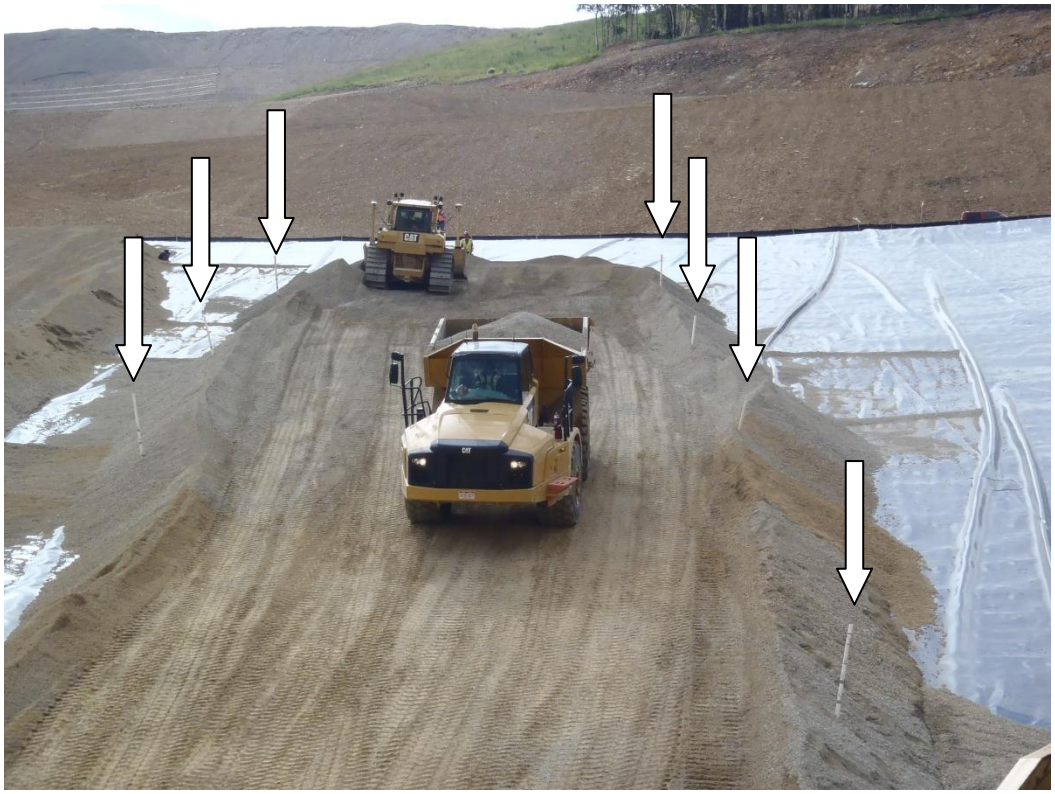

Photo 6. PVC pipes used to determine required 3-foot thickness of the LVSCF in the PSSA.

## PHOTOGRAPHS (cont.)

Photo 7. Spillway riprap – Pond #17N (looking north).

Photo 8. Inlet riprap – Pond #16 (looking north).

## PHOTOGRAPHS (cont.)

Photo 9. Available capacity in Pond #17 (looking north).

Photo 10. Available capacity in Pond #19 (looking north).

**Inspection Contact Address**

Timm Comer
Cripple Creek & Victor Gold Mining Company
100 North Third Street
Victor, CO 80860

Enclosure

EC: Tom Kaldenbach, DRMS
Amy Eschberger, DRMS
Elliott Russell, DRMS
Chris Hanks, CC&V
DRMS file

# ATTACHMENT A

| Date: | | | 6/19/13 | 9/4/13 | 10/30/13 | 1/30/14 | 4/9/14 | 6/3/14 | Notes |
|---|---|---|---|---|---|---|---|---|---|
| **Phase I High Volume Solution Collection** | | Units | No Check | 11:13 | 15:30 | 12:58 | No Check | 12:31 | |
| | Pump #299 / XDCR #xx | (ft) | n/a | 57.7 | 34.2 | 54.6 | n/a | 34.8 | ~ |
| *Note: 80% cap. @ 63.75 ft* | Pump #300 / XDCR #00 | (ft) | n/a | 37.5 | 35.4 | 35.0 | n/a | 35.3 | ~ |
| | Pump #301 / XDCR #01 | (ft) | n/a | 26.1 | 21.8 | 24.4 | n/a | 22.4 | ~ |
| | Pump #302 / XDCR #02 | (ft) | n/a | 40.8 | 37.8 | 36.9 | n/a | 35.3 | ~ |
| | Pump #303 / XDCR #03 | (ft) | n/a | 43.3 | 41.8 | 41.3 | n/a | 38.7 | ~ |
| **Phase I Pond Piezometers** | | | No Check | 11:13 | 15:30 | 12:58 | No Check | 12:31 | |
| | Pond Lvl / XDCR #1 | (ft) | n/a | 57.3 | 53.4 | 55.1 | n/a | 53.7 | |
| | System Press / XDCR #2 | (ft) | n/a | 45.4 | 45.2 | 46.5 | n/a | 48.7 | system head |
| **Phase I Low Volume Solution Collection** | | | No Check | 11:22 | 15:42 | 11:15 | No Check | 12:36 | |
| *Note: Req'd < 2 ft* | Piezo #1 (HAND) | (ft) | n/a | 0.51 | 0.62 | 0.58 | n/a | 0.44 | ~ |
| | Piezo #2 (AUTO) | (ft) | n/a | 0.69 | 0.51 | 0.56 | n/a | 0.78 | ~ |
| **Phase II & III High Volume Solution Collection** | | | No Check | 11:27 | 15:36 | 11:12 | No Check | 12:39 | |
| *Note: 80% cap. @ 49.4 ft* | Pump / XDCR #4 | (ft) | n/a | 29.6 | 14.1 | 16.0 | n/a | 12.9 | ~ |
| | Pump / XDCR #5 | (ft) | n/a | 29.2 | 15.8 | 15.8 | n/a | 15.4 | ~ |
| | Pump / XDCR #6 | (ft) | n/a | 33.1 | 15.6 | 18.6 | n/a | 14.0 | ~ |
| **Phase II & III Pond Piezometer** | | | No Check | | 15:36 | 11:07 | No Check | 12:37 | |
| | Piezo (Pipe) | (ft) | n/a | 36.5 | 31.9 | 31.9 | n/a | 31.0 | |
| **Phase II & III Low Volume Solution Collection** | | | No Check | 11:25 | 15:38 | 11:05 | No Check | 12:40 | |
| *Note: Req'd < 2 ft* | Pump / XDCR #1 (AUTO) | (ft) | n/a | 0.38 | 0.32 | 0.39 | n/a | 0.26 | ~ |
| | Pump / XDCR #2 (AUTO) | (ft) | n/a | 0.32 | 0.58 | 0.66 | n/a | 0.46 | ~ |
| **Phase IV High Volume Solution Collection** | | | No Check | 9:49 | No Check | 12:14 | 11:06 | 11:56 | |
| | Pump #4 / XDCR #307 | (ft) | n/a | 42.2 | n/a | 32.0 | 11.6 | 12.3 | ~ |
| *Note: 80% cap. @ 56.5 ft* | Pump #5 / XDCR #308 | (ft) | n/a | 41.9 | n/a | 31.7 | 11.2 | 12.0 | ~ |
| | Pump #6 / XDCR #309 | (ft) | n/a | 41.7 | n/a | 31.9 | 11.4 | 11.9 | ~ |
| | XDCR pipe (#310 Reserved) | (ft) | n/a | 41.8 | n/a | 31.9 | 11.4 | 12.0 | ~ |
| **Phase IV Low Volume Solution Collection** | | | No Check | 9:47 | No Check | 12:19 | 11:06 | 12:02 | |
| *Note: Req'd < 24"* | Pump / XDCR #1 | (in) | n/a | 18.5 | n/a | 19.5 | 16.8 | 17.1 | ~ |
| | Pump / XDCR #2 | (in) | n/a | 13.1 | n/a | 12.1 | 12.0 | 11.6 | ~ |
| **Phase V High Volume Solution Collection** | | | No Check | 11:03 | No Check | 11:42 | No Check | 12:22 | |
| | XDCR #311 (AUTO) | (ft) | n/a | 27.00 | n/a | 14.08 | n/a | 16.78 | ~ |
| *Note: 80% cap. @ 36.5 ft* | XDCR #312 (AUTO) | (ft) | n/a | 27.09 | n/a | 14.86 | n/a | 17.06 | ~ |
| | XDCR #313 (AUTO) | (ft) | n/a | 27.04 | n/a | 15.58 | n/a | 16.96 | ~ |
| | XDCR #314 (AUTO) | (ft) | n/a | 27.45 | n/a | 15.73 | n/a | 16.77 | ~ |
| **Phase V Low Volume Solution Collection** | | | No Check | 11:05 | No Check | 11:44 | No Check | 12:24 | |
| *Note: Req'd < 24"* | XDCR #001 | (in) | n/a | 11.38 | n/a | 13.26 | n/a | 8.92 ← 8.92 | ~ |
| | XDCR #002 | (in) | n/a | 17.00 | n/a | 17.00 | n/a | 16.30 | ~ |
| **External Pond Low Volume Solution Collection** | | | No Check | 11:19 | 15:42 | 11:07 | No Check | 13:03 | |
| *Note: Req'd < 24"* | Pump / XDCR #1-*EXT* (AUTO) | (in) | n/a | 13.4 | 9.5 | 13.6 | n/a | 13.2 | ~ |
| | Pump / XDCR #2-*EXT* (AUTO) | (in) | n/a | 15.0 | 10.5 | 10.4 | n/a | 8.6 | ~ |
| **Underdrain Discharge Area** | | | No Check | 11:32 | 11:05 | 11:28 | 13:20 | 12:55 | |
| | South Underdrain (S U/D) | (gpm) | n/a | Dry | 14.1 | 4.6 | 3.6 | ~ | ~~2gal/33 sec~~ 2gal//15sec |
| *Note: 1 ℓ/sec = 15.85 gpm* | 4" Pipe Discharge AG 01 Spring Pipe | (gpm) | n/a | Dry | Dry | Dry | Dry | DRY | |
| | NPDES Discharge AG 1.5 -001A | (gpm) | n/a | Dry | Dry | Dry | Dry | ↓ | |
| | North Underdrain (N U/D) | (gpm) | n/a | Dry | Dry | Dry | Dry | | |
| | 24-inch Solid Pipe | (gpm) | n/a | Dry | Dry | Dry | Dry | ↓ | |
| **Arequa Gulch Monitor Well Pumpback System** | | | No Check | | 11:55 | 11:21 | 13:17 | 12:45 | |
| | 35A | (in) | n/a | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | CIRC 4.75 Check |
| *Data first collected by DRMS 3/8/12* | 63B | (ft) | n/a | 14.59 | 17.75 | 23.75 | 35.37 | 30.29 | |
| | B63 | (gpm) | n/a | 0.66 | 0.62 | 0.98 | 0.00 | ← 2gal/ 3:37 | |
| | A35 | (gpm) | n/a | 0.00 | 0.00 | 0.00 | 0.00 | DRY | |

8/7/14 14:05

0.22

DRY

16gal/5sec