




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 Russell	INSP. DATE: September 2, 2021	INSP. TIME: 10:00
OPERATOR: Cripple Creek & Victor Gold Mining Company	OPERATOR REPRESENTATIVE: Jeana Ratcliff	TYPE OF OPERATION: 112d-3 - Designated Mining Operation	

REASON FOR INSPECTION: Priority	BOND CALCULATION TYPE: None	BOND AMOUNT: \$209,491,188.00
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None
WEATHER: Clear	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: October 14, 2021

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.

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>N</u>
(HB) HYDROLOGIC BALANCE----- PB	(BG) BACKFILL & GRADING----- <u>N</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>N</u>	(RV) REVEGETATION---- <u>N</u>
(SM) SIGNS AND MARKERS----- <u>N</u>	(SP) STORM WATER MGT PLAN---- <u>N</u>	(RS) RECL PLAN/COMP-- <u>N</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>N</u>	(SC) EROSION/SEDIMENTATION--- PB	(ST) STIPULATIONS----- <u>N</u>
(AT) ACID OR TOXIC MATERIALS----- PB	(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

PROBLEMS/POSSIBLE VIOLATIONS

INSPECTION TOPIC: Acid And Toxic Materials

COMPLIANCE PROBLEM #1: A seep has expressed at the toe of the East Cresson Overburden Storage Area. This is a problem at this time in accordance with the approved Mine Plan, Rule 3.1.5, and C.R.S. 34-32-116(7)(c).

CORRECTIVE ACTIONS: The Operator shall submit a report regarding the new seep by the corrective action date. Within this report the Operator needs to include: 1) Background information on the design of the ECOSA and an overview of the seeps; 2) An update on the status of the original seep and any information regarding a reduction of flow rates as a result of the concurrent reclamation; 3) A description of the new seep and a discussion about the possible cause(s); 4) A water quality sample result of the seep; and 5) A formal plan on how the new seep will be monitored and managed.

CORRECTIVE ACTION DUE DATE: December 13, 2021

INSPECTION TOPIC: Hydrologic Balance

COMPLIANCE PROBLEM #2: The Operator has notified the Division of recent groundwater quality exceedances observed in Grassy Valley. This is a problem at this time pursuant to Rule 3.1.6, 3.1.7, and C.R.S. 34-32-116(7)(g).

CORRECTIVE ACTIONS: The Operator shall increase water sampling of GVMW-8A, GVMW-8B, GVMW-22A, GVMW-22B, and GVMW-25 from quarterly to monthly until further notice. Results of this monthly monitoring shall be provided to the Division as soon as available. The Operator shall submit the analytical lab sheet results as well as running graphs of all analytes for the monthly sampling.

CORRECTIVE ACTION DUE DATE: Ongoing

INSPECTION TOPIC: Sediment Control

COMPLIANCE PROBLEM #3: A stormwater ditch failed and caused sediment to accumulate on undisturbed lands within the permit boundary. Additionally, an inactive drill pad, located west of the ECOSA near EMP-20, does not have adequate stormwater and sediment controls in place. This is a problem at this time for failure to protect the affected land from erosion pursuant to Rule 3.1.6 and C.R.S. 34-32-116(7)(i).

CORRECTIVE ACTIONS: The Operator shall provide photo documentation to the Division verifying the deposited sediment has been appropriately cleaned up and sediment control measures have been installed/constructed around the drill pad by the corrective action date. Additionally, the Operator shall demonstrate the repaired ECOSA perimeter ditch is appropriately sized and constructed to safely convey the modeled 100yr/24hr storm event to EMP-20 by the corrective action date

CORRECTIVE ACTION DUE DATE: December 13, 2021

OBSERVATIONS

The Division of Reclamation, Mining and Safety (DRMS or Division) conducted an inspection of the Cresson Project, Permit No. M-1980-244 (Permit), a Regular 112d(3) Designated Mining Operation Reclamation Permit with 6,007 permitted acres and an approved post-mining land use of Rangeland and Wildlife Habitat. The mine, operated by the Cripple Creek & Victor Golding Mining Company (CC&V or Operator), is located southeast of Cripple Creek, Colorado and north of Victor, Colorado. Elliott Russell, with the Division, inspected the site. Jeana Ratcliff and several others, representing the Operator, accompanied the inspection.

This inspection was conducted to observe the backfilling operation of the Schist Island Pit. Additionally, the Division utilized this focused inspection as an opportunity to investigate a recent incident spill report submitted to the Colorado Department of Public Health and Environment (CDPHE). Lastly, the Division inspected the East Cresson Overburden Storage Area (ECOSA).

Schist Island

As approved in Amendment 13, the Schist Island Pit will be backfilled to allow the construction of the Phase 3 of Valley Leach Facility 2 (VLF 2), including an additional PSSA. The backfill will consist of two zones based on proximity to the proposed geomembrane. The first zone is considered the “low compaction” zone and is from the bottom of the mined out pit to 35 feet beneath the proposed geomembrane surface. The Operator will place material in accordance with the approved specifications and submit weekly reports to the Division and then will have the Engineer of Record (EoR) submit a final report of all of the completed low compaction fill lifts utilizing the Operator’s weekly backfill reports. The second zone is considered the “high compaction” zone where the Operator will place material the final 35 feet to the proposed geomembrane surface. The EoR will document and test construction activities of the high compaction zone and will submit a final QA/QC certifying the construction of the high compaction zone. The low compaction zone consists of larger lifts and larger sized material as compared to smaller lifts and smaller material of the high compaction zone.

Prior to the inspection, the Operator notified the Division that backfilling operations in the Schist Island Pit would commence the week of August 30th. The first low compaction lift, at height of 20 feet, was being backfilled at the time of the inspection (see **Photo 1** and **Photo 2**). This lift was started in the southeast corner of the pit and was advancing to the north and west. The Operator stated the plan is to complete four lifts with heights of 20, 15, 20, and 20 feet. The second lift is planned for only 15 feet because the Operator needs complete remediation of historic workings on the first 35-foot highwall bench in the northern part of the pit. The Division observed several haul truck cycles during the inspection and all material dumped appeared to pass the approved specification of all material being smaller than 60 inches (see **Photo 3**). One truck contained a rock larger than 60 inches, but was flagged by a shift supervisor while the truck was descending into the Schist Island Pit (see **Photo 4**); this truck was rerouted to the ECOSA and the Operator stated the shift supervisor had a follow-up discussion with the equipment operator who loaded the oversized material into the haul truck. Based on the Division’s observations, CC&V was complying with the Amendment 13 Schist Island Backfill Specifications at the time of the inspection.

CDPHE Spill Report

On August 17, 2021, the Division was copied on a CDPHE incident spill report regarding a caller who reported white foam on Beaver Creek on August 15th. The caller alleged the foam was from the Victor Mine and provided a location of 100 yards east of CR 81 and Beaver Valley Road. Following the incident report, the Division was involved in multiple discussions with CDPHE and Colorado Parks and Wildlife. It was believed the foam was directly associated with the August 15th storm event and that it was likely no longer visible. Additionally, it was discussed that the operation has no processing facilities nor chemical usage within the area of the report. CDPHE requested the Division, during the next monitoring inspection, inspect the area where the caller reported the source of the foam, a gulley at approximately 38°44'27.36"N 105° 7'15.81"W just down gradient of a culvert under CR 81 (see **Photo 5**). The Division inspected this gulley, the culvert, and the path of stormwater associated with CR 81 and the adjacent area above the culvert (see **Photo 6**). The eastern side of the CR 81 culvert contains significant erosion head-cutting and the culvert is suspended in the air with an approximate 12” drop (see **Photo 7**). The Division inspected the western bar ditch of CR 81 from above the culvert to the crest of the drainage divide, approximately 3,200 feet to the south. The Division observed no evidence of any recent sedimentation or erosional features entering into the bar ditch from the permit area which is located west of CR 81 (see **Photo 8**).

Based on the observations made during the inspection and the information presented in the spill report, it appears the foam is unrelated to the Cresson Project operation; through discussions with CDPHE after the inspection, the source of this foam may have been from decaying plant matter that had accumulated in and near the bar ditch of CR 81. This material breaks down into organic compounds of fatty acids and oils which act like surfactants; when air and turbulence is introduced to the water containing these compounds, such as the height

drop on the east side of the CR 81 culvert, foam could be created. In the future, if the Division is on-site conducting an inspection during a rain event, this area will be further inspected.

ECOSA

On August 18, 2021, during a telephone conversation, the Operator informed the Division that with the significant amount of precipitation the site had recently received, an additional seep had developed on the ECOSA. The ECOSA is designed to allow stormwater infiltrating through the waste rock to drain into the underlying volcanic diatreme structure which buffers and neutralizes the impacted stormwater before eventually being discharged at the Carlton Tunnel, a mining district wide drainage tunnel located approximately 3,000 feet lower and 7 miles to the southwest. During the inspection, the Division observed the location of the new seep, located approximately 2,500 feet to the northwest from the first seep. In the summer of 2017, the first seep was discovered along eastern toe of the ECOSA which created a small pool of accumulated seep water in a low spot on the inside of the ECOSA's toe berm. The Operator determined this seep was directly related to precipitation events and was likely due to compacted layers within the ECOSA causing some of the infiltrating precipitation to express at the side of the dump face. The Operator proposed to initiate concurrent reclamation upgradient of the seep to reduce the amount precipitation infiltrating into the ECOSA. The Operator also proposed to monitor the expressed seep, frequently pump the impounded water, and haul it to one the VLF liners while reclamation was occurring. Reclamation is still on-going so water from the original seep is still frequently pumped, however the Operator believes there has been some reduction in the amount of water which accumulates in the low spot based on the partial reclamation which has already been completed (see **Photo 9**). At the location of the new seep, the Operator has created two small sumps to collect water for pumping (see **Photo 10** and **Photo 11**). The water within these two sumps has the same dark-red discoloration of the water within the sump of the original seep. Additionally, the EMP-20 pond, located between the original and new seep locations, had a slight orange/brown discoloration (see **Photo 12**). The development of an additional seep on the ECOSA has been cited as Compliance Problem #1 requiring the Operator to submit a report regarding the seep; please see page 2 of this report for more information. Based on a review of this report and the longevity of the seep, the Division may require a Technical Revision to the permit to address a long term solution to ensure precipitation which infiltrates through the ECOSA continues down into the underlying diatreme as designed.

On the same day as the inspection, the Operator provided the Division a Notification of Water Quality Analysis Parameter Exceedance in accordance with Rule 3.1.7 for several monitoring wells on site, including GVMW-25. GVMW-25 was proposed through Technical Revision TR97 in 2018 to be installed downgradient of the first seep to monitor the infiltration effectiveness of the diatreme to ensure the water expressing at the original seep was not migrating down Grassy Valley and off-site. Within this notification the Operator reported that the 3rd quarter sampling of GVMW-25 on August 19, 2021 showed exceedances of beryllium, cadmium, fluoride, manganese, pH, sulfate, and zinc, all exceedances of which were a first since the well had been completed. Additionally, fluoride exceedances were reported for GVMW-8A, GVMW-8B, and GVMW-22A. The Operator submitted an additional exceedance notification on September 16th indicating a pH exceedance also occurred with GVMW-22A for the same August 19, 2021 sampling date, but was not provided in the September 2nd notification. On September 30th, the Operator provided the Division another Notification of Water Quality Analysis Parameter Exceedance for GVMW-25 regarding a resampling of the well on September 1, 2021. The resampling of GVMW-25 showed a new exceedance of aluminum and further exceedances of beryllium, cadmium, fluoride, manganese, pH, sulfate, and zinc again. With the significant rainfall the site has experienced, the development of an additional seep on the ECOSA, and water quality exceedances observed in Grassy Valley, the Division is citing Compliance Problem #2. The Operator is required to increase water sampling of GVMW-8A, GVMW-8B, GVMW-22A, GVMW-22B, and GVMW-25 from quarterly to monthly until further notice. Results of this monthly monitoring shall be provided to the Division as soon as available. The Operator shall submit the analytical lab sheet results as well as running graphs of all analytes for the

monthly sampling. Please note, if the increased monthly sampling results show exceedances, the Operator is still required to notify the Division in accordance with Rule 3.1.7.

While inspecting the area between the original seep and EMP-20, the Division observed a large sediment deposit located against the wildlife fence, just downgradient of an inactive drill pad (see **Photo 13** and **Photo 14**). The Operator stated that this damage occurred during a storm event on July 16th where a section of the ECOSA's perimeter stormwater ditch failed and caused stormwater and sediment to flow across the drill pad and deposited against the fence. This failure appears to have been at the location of where the access road to the drill pad crossed the ditch. The inactive drill pad had berms along the northern and eastern sides, but no berm was along the southern side where the stormwater and sediment had traveled off the pad (see **Photo 15** and **Photo 16**). Furthermore, the edge of the drill pad disturbance did not have any sediment control features (silt fencing, straw wattles, catch ditches/berms, etc.). Following the storm event, the Operator repaired the ditch and increased the height of the outside ditch bank in several areas (see **Photo 17**), however the sediment that had been deposited on the undisturbed lands against the wildlife fence had not been cleaned up. Additionally, no further stormwater controls were installed around the inactive drill pad to control sediment from precipitation falling within the footprint of the drill pad. This has been cited as Compliance Problem #3 requiring the Operator to remove the deposited sediment and reclaim the disturbance between the drill pad and the wildlife fence. The Operator will also need to install stormwater controls for the drill pad. The Operator also discussed the possibility of reclaiming the inactive drill pad; this is an option, however, stormwater controls will still need to be constructed/installed along the edge of the reclaimed footprint until adequate vegetation is established. Lastly, the Operator will need to demonstrate the ECOSA perimeter ditch is appropriately sized and constructed to safely convey the modeled 100yr/24hr storm event to EMP-20. The Operator mentioned they had recently constructed the final reclamation 500yr channel along the reclaimed portions of the ECOSA above the area where clay was currently being mined and that the plan is to continue this channel once the clay area is backfilled and graded. As this area is just above the ditch which failed in the recent storm event, the Operator may want to submit the designs to construct the 500yr channel all the way to EMP-20 as a part of the corrective action, however, the minimum requirement at this time is for the 100yr/24hr event.

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

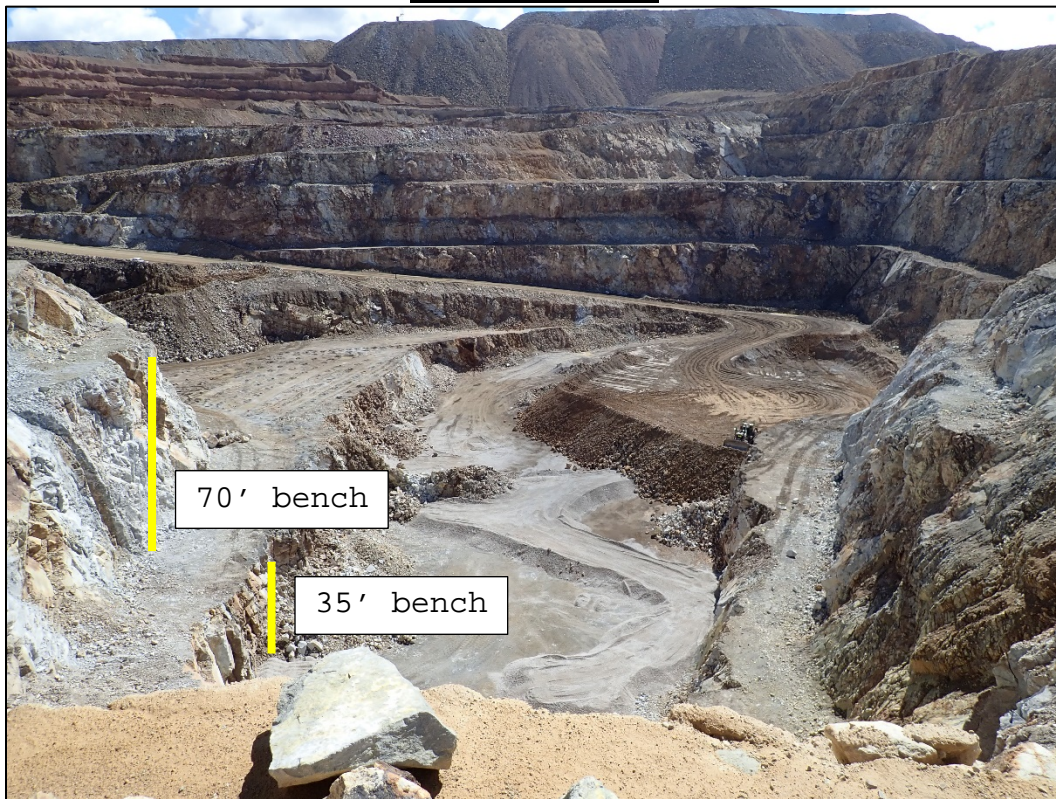


Photo 1. Schist Island backfill, first 20-foot lift; looking east.



Photo 2. First lift of the Schist Island backfill, all material on dump face appears to be less than the 60-inch maximum specification; looking east.



Photo 3. First lift backfilling activities, all material dumped from the previous haul truck appears to be less than less than the 60-inch maximum specification; looking north.



Photo 4. Oversized material leaving the Schist Island Pit; looking northeast.

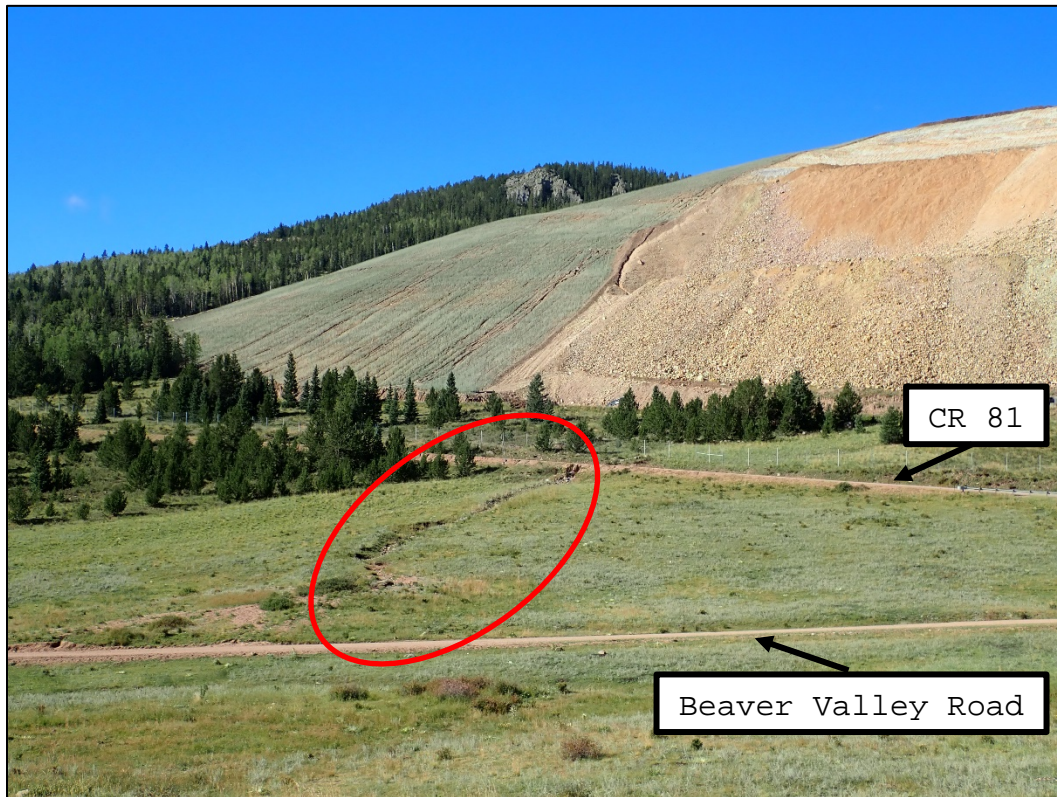


Photo 5. Gulley where foam was reported; looking south.

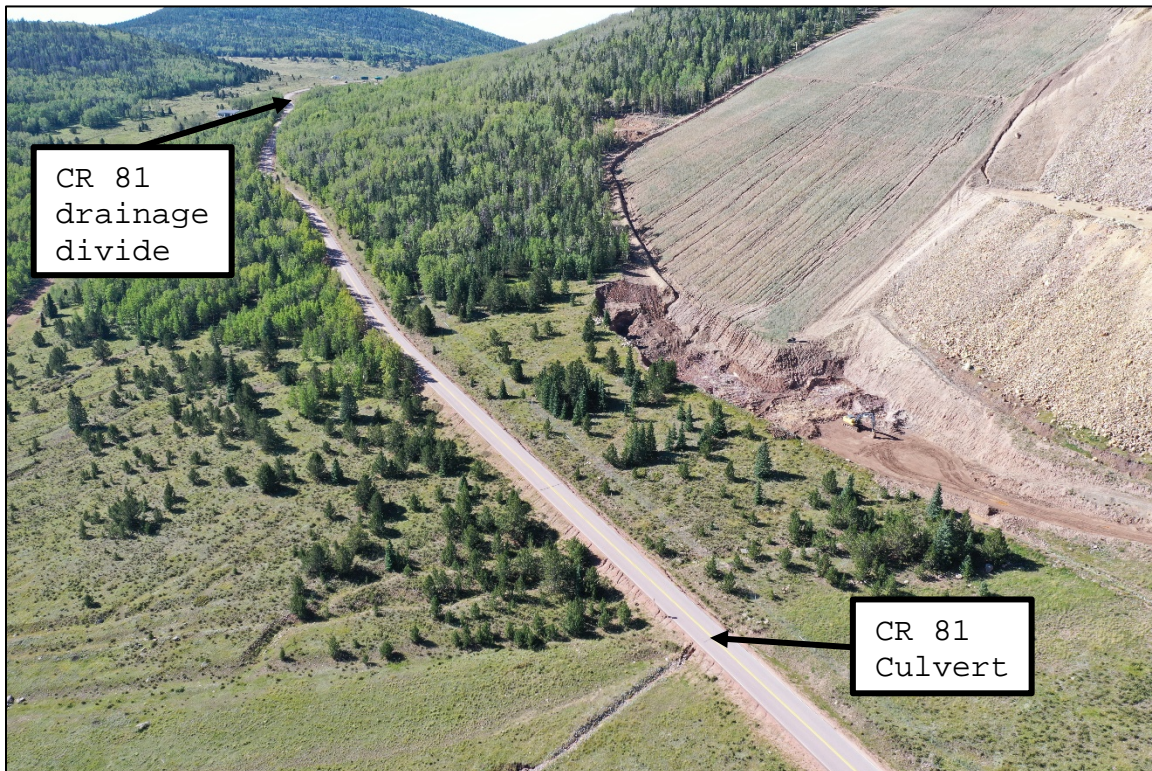


Photo 6. Aerial view of CR 81; looking south.



Photo 7. Eastern side of the CR 81 culvert; looking south.



Photo 8. One of two old but stabilized drainages which flow into the western bar ditch; looking southwest.



Photo 9. Original seep collection area; looking southeast.



Photo 10. First sump of the new seep, located inside of the toe berm; looking northwest.



Photo 11. Second sump of the new seep, excavated into access road area outside of the toe berm; looking southeast.



Photo 12. EMP-20 pond with discolored water; looking west.



Photo 13. Sediment deposited against wildlife fence; looking northwest.

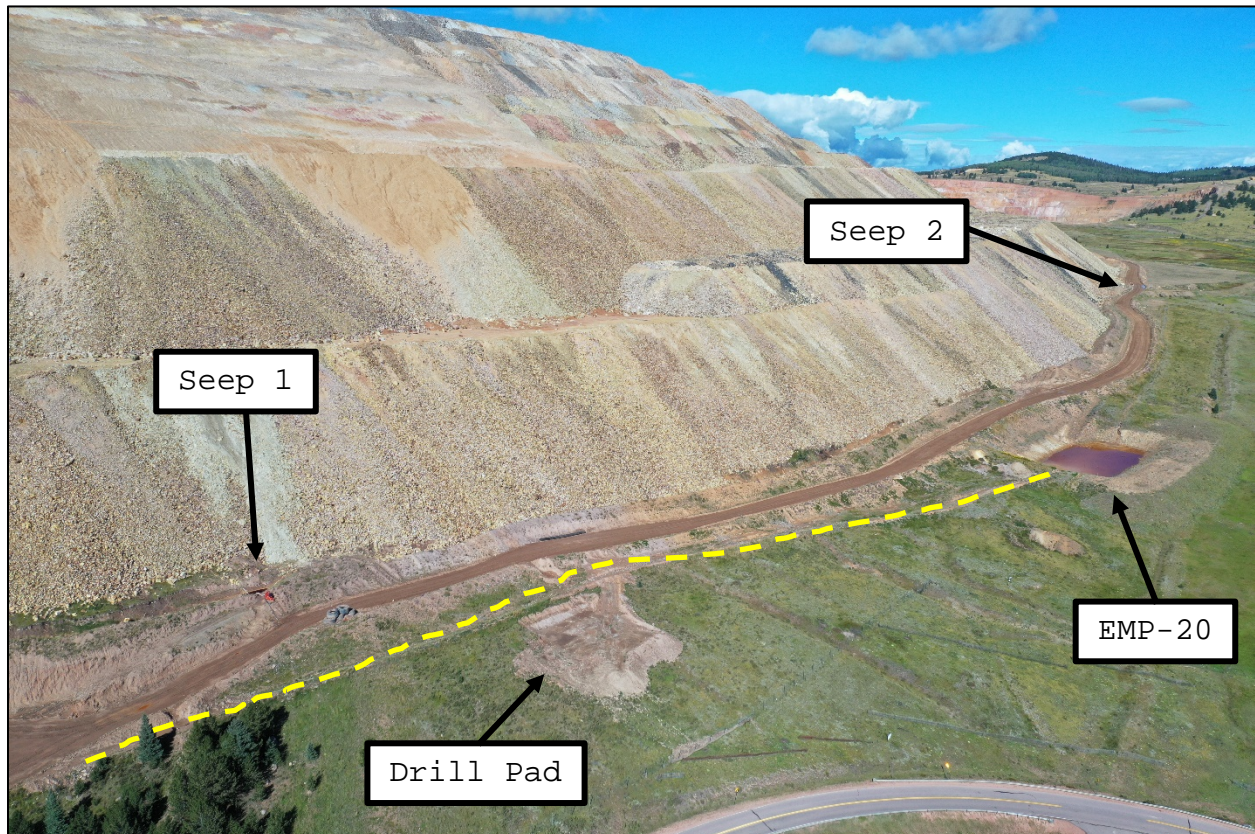


Photo 14. Aerial overview of the ECOSA, perimeter ditch identified by dash line; looking west.



Photo 15. Drill pad, path of stormwater identified by dashed line; looking east.



Photo 16. Drill pad, path of stormwater identified by dashed line; looking east.



Photo 17. Repaired ECOSA perimeter ditch; looking southeast.

Inspection Contact Address

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