# 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.**

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| **MINE NAME:**<br>Henderson Mine | **MINE/PROSPECTING ID#:**<br>M-1977-342 | **MINERAL:**<br>Molybdenum | **COUNTY:**<br>Clear Creek |
| **INSPECTION TYPE:**<br>Monitoring | **INSPECTOR(S):**<br>Peter S. Hays | **INSP. DATE:**<br>May 20, 2016 | **INSP. TIME:**<br>10:00 |
| **OPERATOR:**<br>Climax Molybdenum Company | **OPERATOR REPRESENTATIVE:**<br>Tim Haynes, Bryce Romig | **TYPE OF OPERATION:**<br>112d-3 - Designated Mining Operation | |

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| **REASON FOR INSPECTION:**<br>Normal I&E Program | **BOND CALCULATION TYPE:**<br>None | **BOND AMOUNT:**<br>$10,354,051.00 |
| **DATE OF COMPLAINT:**<br>NA | **POST INSP. CONTACTS:**<br>None | **JOINT INSP. AGENCY:**<br>None |
| **WEATHER:**<br>Clear | **INSPECTOR'S SIGNATURE:** | **SIGNATURE DATE:**<br>June 27, 2016 |

## 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.**

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| (AR) RECORDS---------- N | (FN) FINANCIAL WARRANTY-------- N | (RD) ROADS---------- N |
| (HB) HYDROLOGIC BALANCE---------- N | (BG) BACKFILL & GRADING---------- N | (EX) EXPLOSIVES--------- N |
| (PW) PROCESSING WASTE/TAILING---- N | (SF) PROCESSING FACILITIES------- N | (TS) TOPSOIL---------- N |
| (MP) GENL MINE PLAN COMPLIANCE- N | (FW) FISH & WILDLIFE---------- N | (RV) REVEGETATION---- N |
| (SM) SIGNS AND MARKERS---------- N | (SW) STORM WATER MGT PLAN---- N | (CI) COMPLETE INSP---- N |
| (ES) OVERBURDEN/DEV. WASTE--------- N | (SC) EROSION/SEDIMENTATION--- N | (RS) RECL PLAN/COMP-- N |
| (AT) ACID OR TOXIC MATERIALS------- N | (OD) OFF-SITE DAMAGE---------- N | (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 Henderson Mine and Mill was inspected by Peter Hays and Tyler O'Donnell with the Division of Reclamation, Mining and Safety (Division/DRMS) as part of the Division's monitoring inspection program. Mr. Tim Haynes, Mr. Bryce Romig, Mr. Geoff Nigler and Mr. Dillon Benbow with Climax Molybdenum - Henderson Operations (Henderson) were present during the inspection.

The inspection began with a meeting to discuss the ongoing and future permitting items at the site. The following topics were discussed: the pending notice of financial warranty increase letter from the Division, the Tailing Impoundment technical revision request letter, the Aspen Canyon Ranch POC well, the future Notice of Intent (NOI) for exploration activities north of the tailings impoundment, hydro-seeding of the sand seep project area and the 3-Dam Seepage Collection System release.

Henderson Surety Increase (SI-03)

As discussed during the May 4, 2016 meeting with Division and Henderson staff, the Division is preparing to issue a surety increase in the amount of $27,639,734, for a total financial warranty of $56,142,434. The notice of financial warranty increase will be issued by the Division on or around June 6, 2016. Henderson will have 60 days from the date of the notice letter to submit the increased financial warranty amount.

Borrow Material Exploration Project

Henderson plans to submit a notice of intent (NOI) to conduct exploration operations, pursuant to Rule 5.1, on or around June 10, 2016. The exploration activities will be conducted to determine if the required borrow materials (topsoil and overburden) to perform reclamation are available in the land owned by Henderson north of the tailings impoundment. The exploration activities are planned to be conducted this summer using existing roads to access the area.

Sand Seep Project (TR-26) Seeding and As-Builts

The completed final slope of the Sand Seep Project area was hydro-mulched recently. The sand seep area was observed by the Division as part of the inspection. The final as-built drawings and engineering certification are required to be submitted to the Division pursuant to Rule 7.3.2.

3-Dam Seepwater Collection System Release

Henderson notified the Division by phone of a release of process water from the 3-Dam seepwater collection system on May 3, 2016. The written follow-up notice pursuant to Rule 8.1 ad 8.2 was received by the Division on May 13, 2016. The cause of the seepwater release was identified and corrected by Henderson staff on May 4, 2016. The lower and upper collection system vaults and the seep collection area were observed during the inspection. Iron staining was observed downhill from the upper vault overflow pipe. The iron staining dissipated to the east in the wetland area below the seepwater collection area. The Operator stated elevated iron levels have not been reported in groundwater monitoring wells (MLGW-18 and MLGW-19) located down gradient of the seepwater collection area.

Aspen Canyon Ranch (MLGW-ACR)

Henderson submitted a Groundwater Quality Memorandum for the Aspen Canyon Well (MLGW-ACR) on April 29, 2016. The well head was inspected as part of this inspection. Henderson staff is continuing to work with the well owner and the Water Quality Control Commission regarding the elevated iron and manganese levels in the Aspen Canyon Ranch well. The possibilities of rehabilitating the well with a combination of mechanical

and chemical methods and replacing the well to reduce the iron and manganese levels were discussed during the inspection.

Tailings Impoundment Inspection and Reporting Schedule

On May 17, 2016, the Division sent Henderson a letter requiring a technical revision (TR) to the Henderson permit to provide a protocol whereby routine inspections of the tailings impoundment are ensured and the results of the inspection are reported to the Division. The content of the letter was discussed to clarify the Division's intent. Henderson's current tailings impoundment inspection and reporting procedure was also discussed.

The tailings impoundment is inspected annually by the internal corporate Tailings Stewardship Team (TST) and by AECOM and other engineering firms on a monthly basis. Item #2 of the TR letter requested a certified report of the inspections within 20 working days after each inspection. Henderson staff stated this timeframe would be difficult to achieve. The general timeframe for the annual impoundment inspection conducted in July of each year is November for the initial engineer report and March for the final report. The general timeframe for the monthly impoundment inspection is one week for the draft report and one month for the final report. The Division is open to revising the reporting timeframe for Item #2 to accommodate the current engineer reporting timeframes. Henderson offered to prepare a presentation to provide the Division with information on the current tailing management efforts. The Division and Henderson will continue to work on the details of the tailings impoundment inspection and reporting requirements.

Photographs taken during the inspection are attached.

**Inspection Contact Address**

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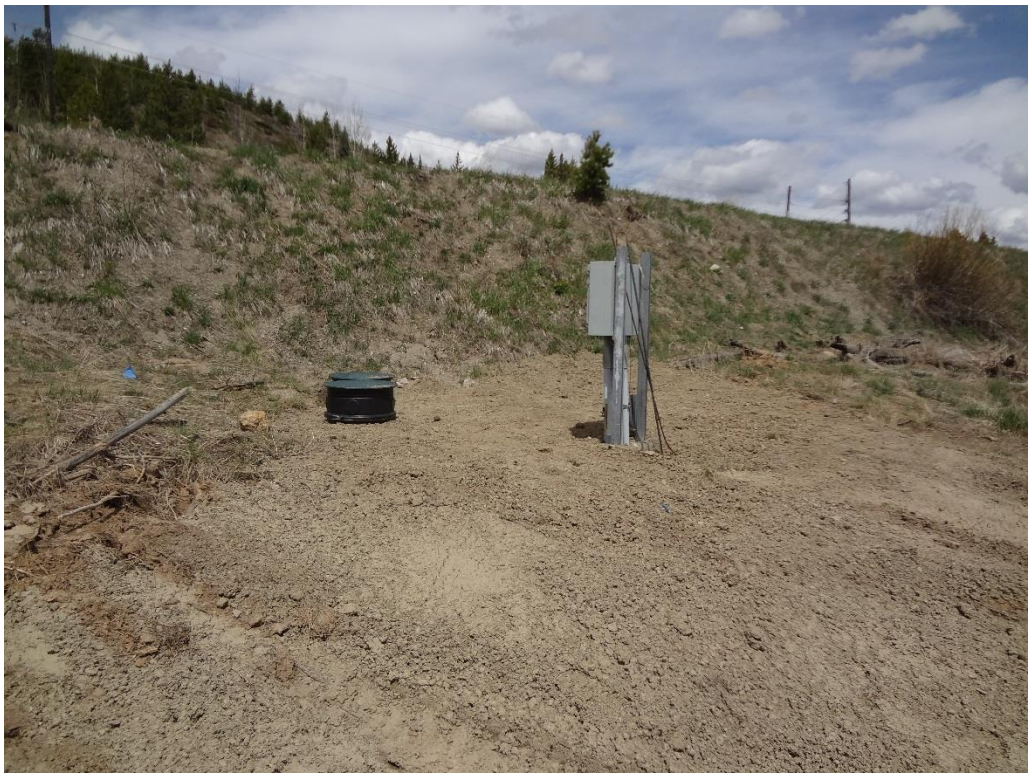
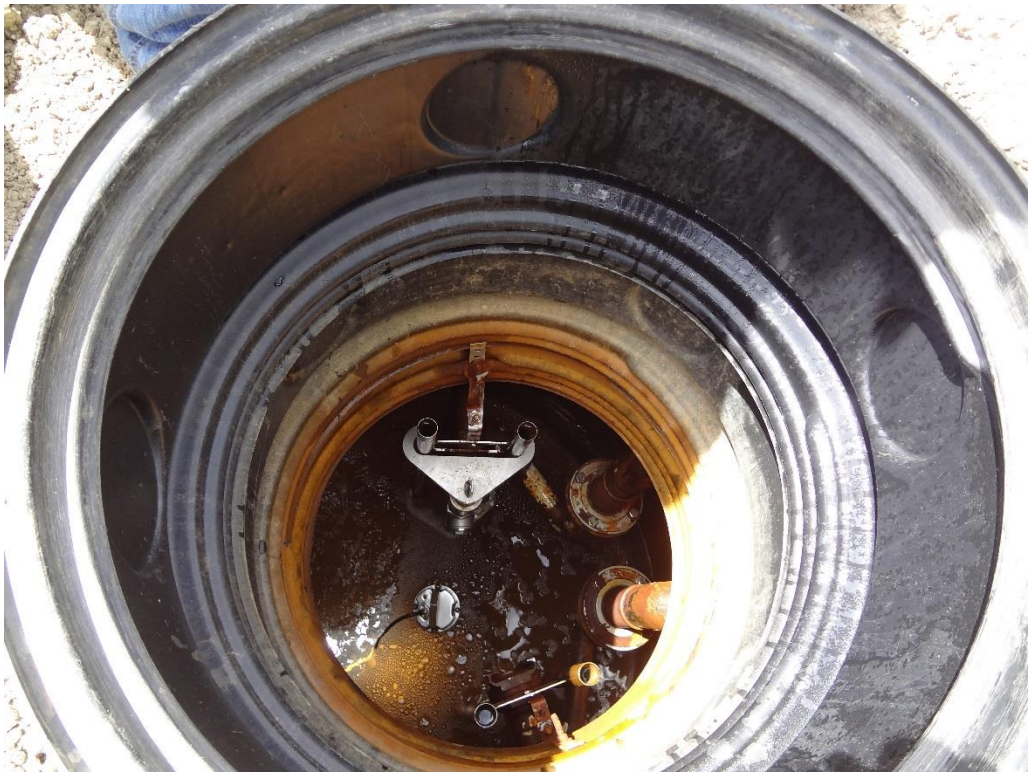
Climax Molybdenum Company
P.O. Box 68
Empire, CO 80438

Cc: Wally Erickson, DRMS
Michael Cunningham, DRMS
Tyler O'Donnell, DRMS
Stephanie Mitchell, DRMS

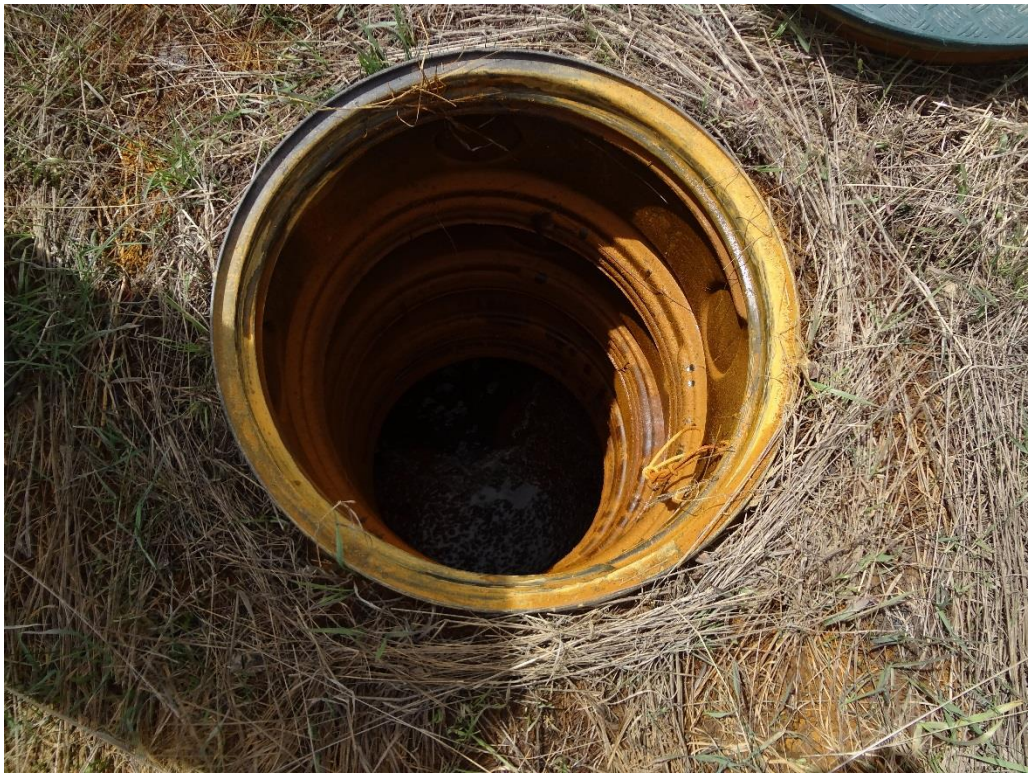
## PHOTOGRAPHS



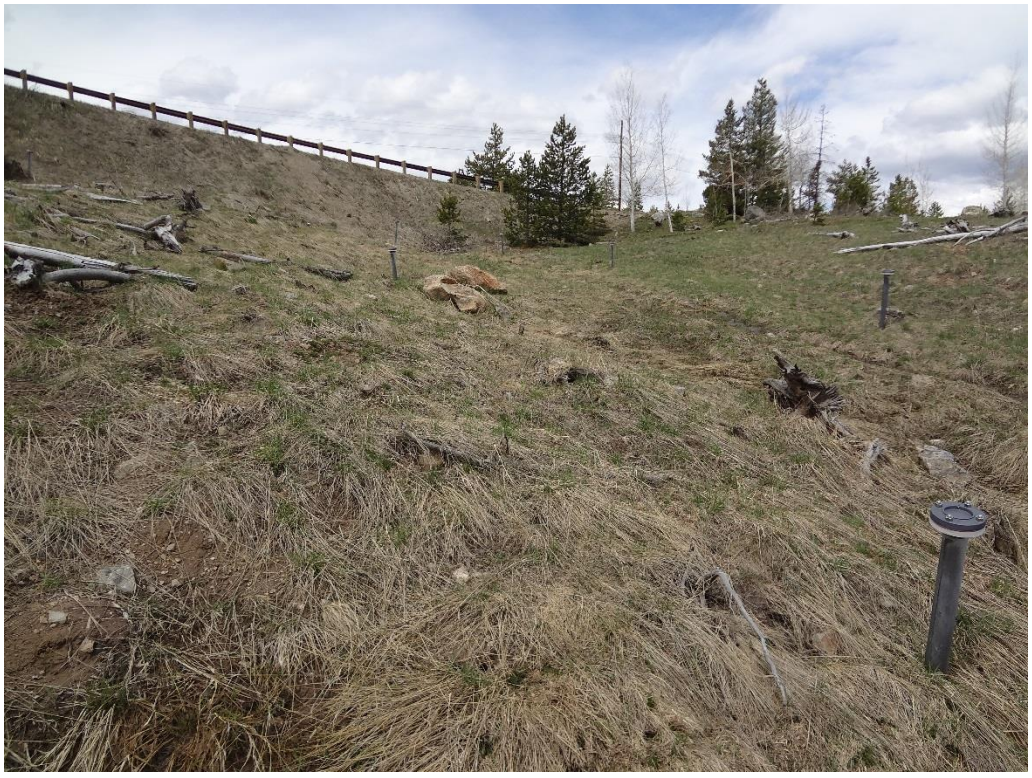
3-Dam Seepage Collection Lower Vault



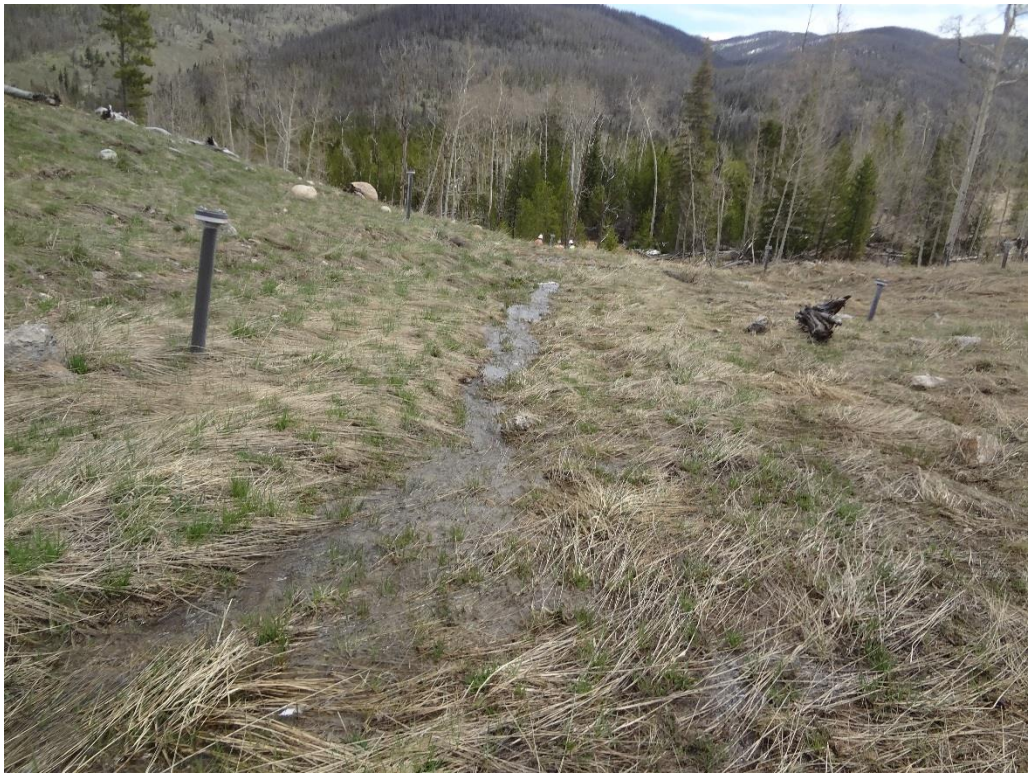
3-Dam Seepage Collection Lower Vault – Replaced Pump



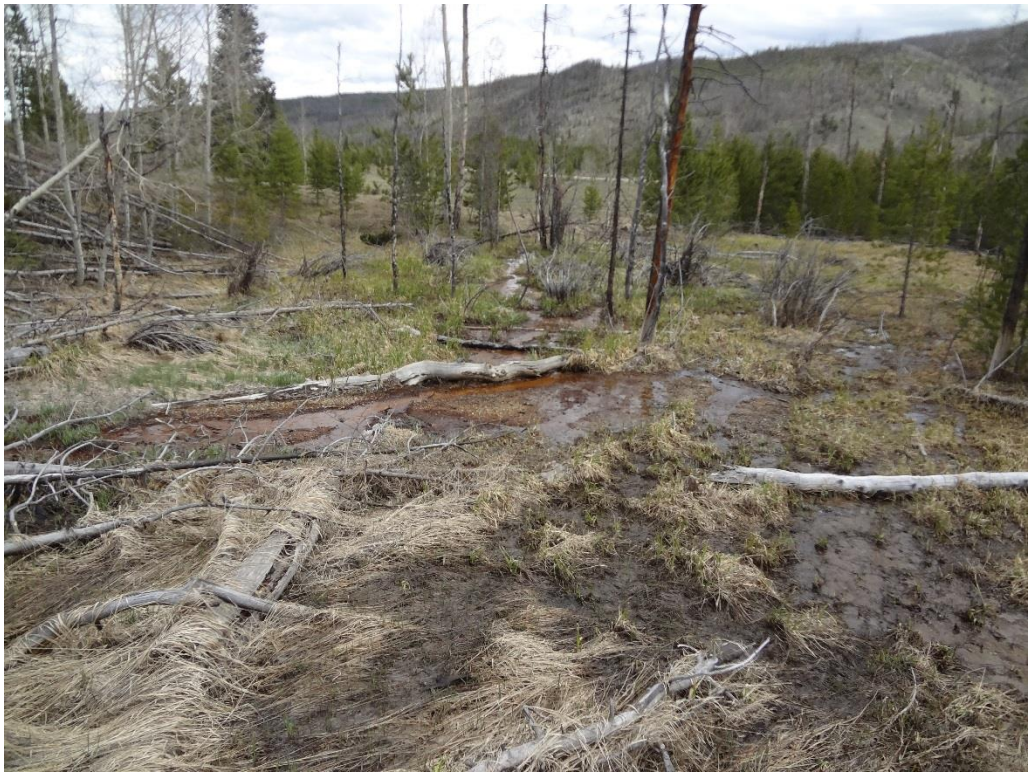
3-Dam Seepage Collection Upper Vault



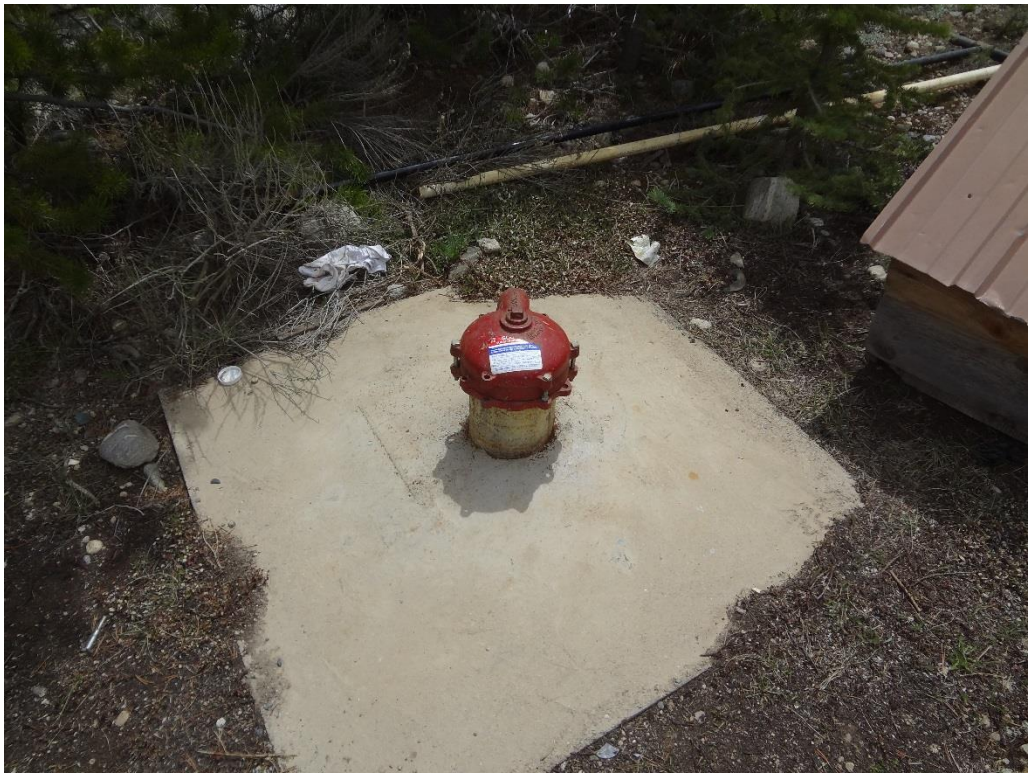
Looking uphill from 3-Dam Seepage Collection Lower Vault



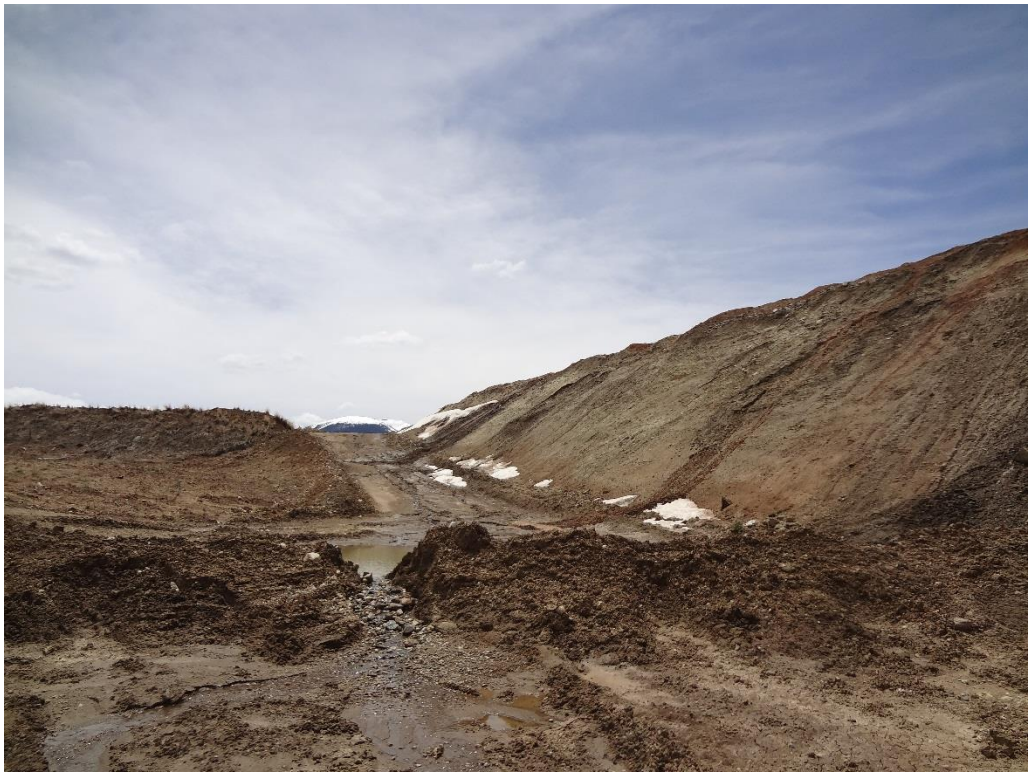
3-Dam Seepage Collection Field above Lower Vault



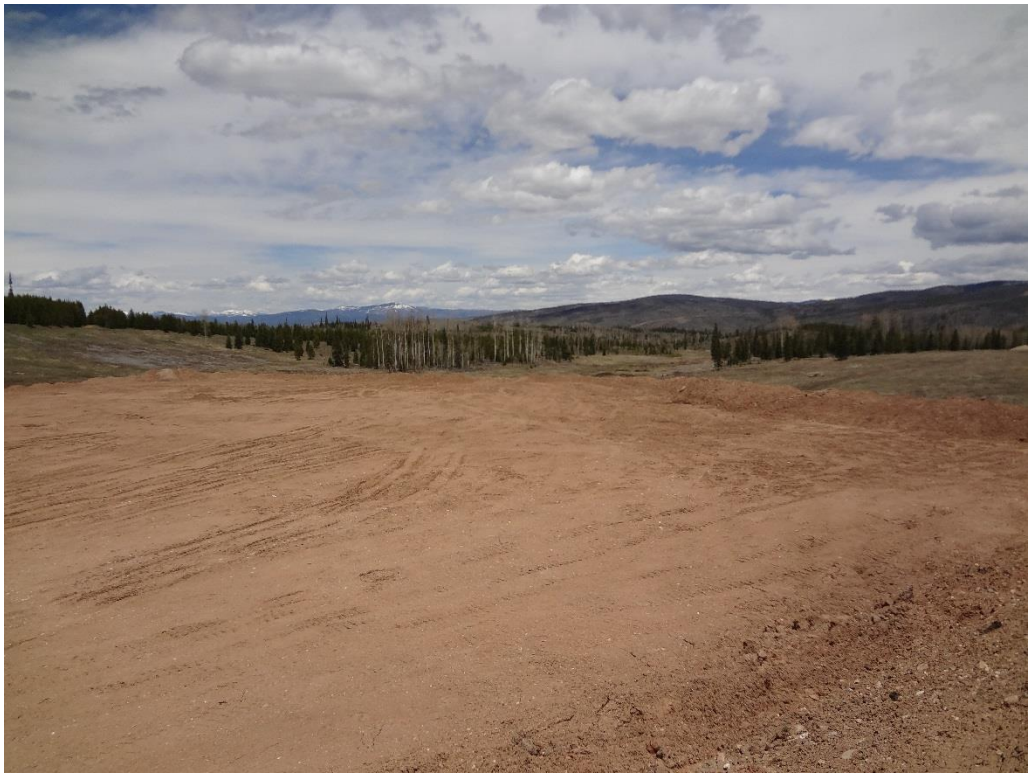
Looking downstream from 3-Dam Seepage Collection Lower Vault



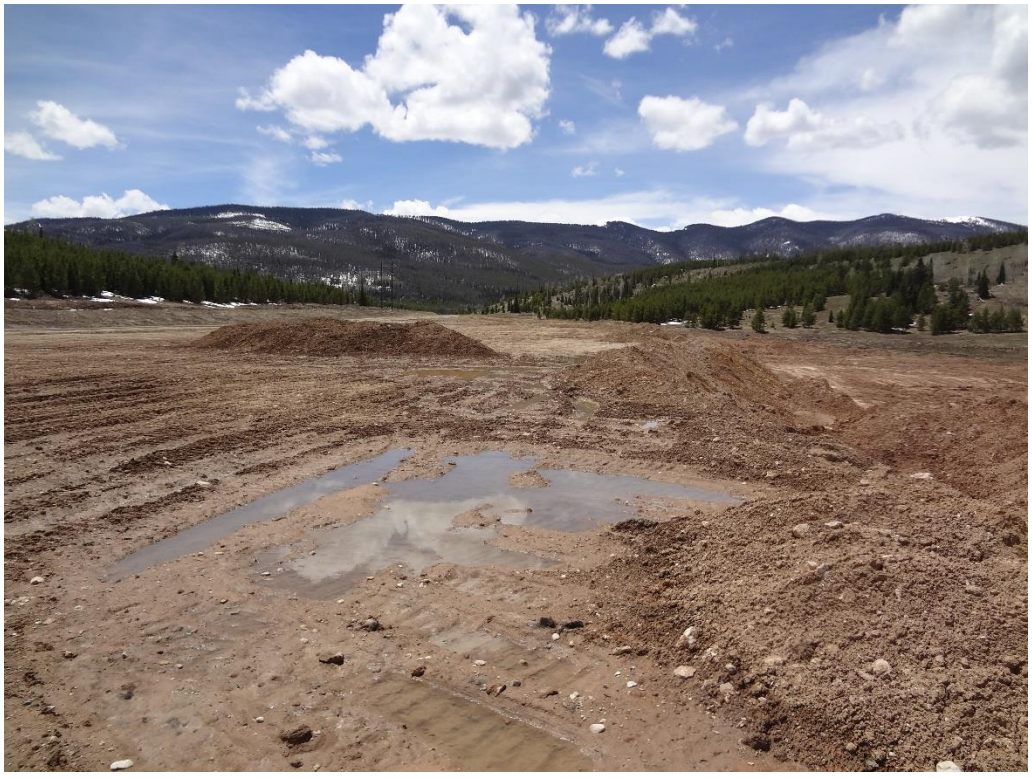
Aspen Canyon Ranch Wellhead



South topsoil stockpile (erosion features)



Looking NE from uphill north topsoil stockpile area



Looking SW from current upper bench of north topsoil stockpile area