


**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.

<b>MINE NAME:</b> Henderson Mine	<b>MINE/PROSPECTING ID#:</b> M-1977-342	<b>MINERAL:</b> Molybdenum	<b>COUNTY:</b> Clear Creek, Grand
<b>INSPECTION TYPE:</b> Monitoring	<b>INSPECTOR(S):</b> Peter S. Hays	<b>INSP. DATE:</b> October 25, 2018	<b>INSP. TIME:</b> 09:30
<b>OPERATOR:</b> Climax Molybdenum Company	<b>OPERATOR REPRESENTATIVE:</b> Miguel Hamarat, Aaron Hilshorst, Ron Hickman	<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> \$37,993,785.00	
<b>DATE OF COMPLAINT:</b> NA	<b>POST INSP. CONTACTS:</b> None	<b>JOINT INSP. AGENCY:</b> None	
<b>WEATHER:</b> Clear	<b>INSPECTOR'S SIGNATURE:</b> 	<b>SIGNATURE DATE:</b> November 5, 2018	

**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>N</u>
(HB) HYDROLOGIC BALANCE----- <u>Y</u>	(BG) BACKFILL & GRADING----- <u>Y</u>	(EX) EXPLOSIVES----- <u>N</u>
(PW) PROCESSING WASTE/TAILING---- <u>Y</u>	(SF) PROCESSING FACILITIES----- <u>N</u>	(TS) TOPSOIL----- <u>Y</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>Y</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--- <u>Y</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

## **OBSERVATIONS**

The Henderson Mill site was inspected by Peter Hays and Stephanie Mitchell with the Division of Reclamation, Mining and Safety (Division/DRMS) as part of the Division's monitoring inspection program. Aaron Hilshorst, Miguel Hamarat and Ron Hickman with Climax Molybdenum - Henderson Operations (Henderson) were present during the inspection.

### **TR-30 - Seep Water Collection and Return System Improvements:**

The Seep Water Collection and Return System Improvements below 1-Dam were approved by the Division under TR-30 on October 1, 2018. Pre-cast modular blocks were observed at the diesel pump platform. The blocks will be used to construct the diesel pump system MSE wall. The 25 foot extension section of 42" diameter HDPE North Feeder Channel culvert pipe was installed and the concrete extension block was poured. The concrete connection block will be backfilled as part of the seep road improvements. The cutoff trench was being installed from south to north with approx. 300 feet of trench completed at the time of the inspection. The trench was excavated to competent material and backfilled with select embankment fill. Henderson expects to complete the cutoff trench installation this year before winter. Vegetation was stripped on the outside bank of the road ahead of material placement to widen the road.

### **3-Dam Buttress Project - Stage 1:**

The 3-Dam Buttress Project - Stage 1 was approved by the Division under TR-29 on April 4, 2018. The placement of filter sand on the stepback area has continued since the previous inspection and was approaching the southern extent planned for 2018. Additional filter sand and a minimum of one foot of tailings material will be placed to the south on the upper buttress area this year. The lower north and south buttresses have been final graded. The south buttress was graded at a 4H:1V slope, which exceeds the designed 3H:1V slope. The buttress project will be surveyed and as-built drawing for this year will be completed soon. The change in lower south slope will be updated in the as-built drawings for the phase of the project. The north lower buttress access road will be regraded into the 3-Dam slope in the future.

### **Ute Park Extraction Wellfield:**

The above ground components of the Ute Park extraction wells; MLEX-1, MLEX-2, MLEX-3, MLEX-4, MLEX-5 were observed and appeared to be in compliance with the approved as-built drawings for the wells and associated infrastructure.

### **Ute Park Pump House:**

The Ute Park Pump House was observed during the inspection. The pump house was not operational at the time of the inspection due to the control infrastructure upgrades associated with the Seep Road Project gate instrumentation improvements.

Photographs taken during the inspection are attached.

**Inspection Contact Address**

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

Ec: Michael Cunningham, DRMS  
Stephanie Mitchell, DRMS

## PHOTOGRAPHS



View of final graded lower south 3-dam buttress looking north from south end



View of final graded lower south 3-dam buttress looking north from south end





View of final graded lower north 3-dam buttress looking north from south end



View of the south portion of the upper 3-Dam buttress looking north from the south end





View of the south portion of the upper 3-Dam buttress looking south



View of the middle portion of the upper 3-Dam buttress looking south





View of the backfill portion of the cutoff trench looking north from the south end



View of the backfill operation for the cutoff trench





View of the extended north feeder channel culvert and concrete block



View of MLEX-1