

# 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:		MINE/PROSPECTING ID#:	MINERAL:	COUNTY:
Bijou Clay Mine		M-1997-007	Clay (general)	Elbert
INSPECTION TYPE:		INSPECTOR(S):	INSP. DATE:	INSP. TIME:
Monitoring		Amy Eschberger	June 17, 2021	11:30
OPERATOR:		OPERATOR REPRESENTATIVE:	TYPE OF OPERATION:	
The Denver Brick Company		Richard Murphy	112c - Construction Regular Operation	
DE LOON FOR INGREGATION		DOLD GAY GAY ARVOY FAIRE	DOME ALCOHOLIS	
REASON FOR INSPECTION:		BOND CALCULATION TYPE:	BOND AMOUNT:	
Normal I&E Program		Complete Bond	\$196,124.37	
DATE OF COMPLAINT:		POST INSP. CONTACTS:	JOINT INSP. AGENCY:	
NA		None	None	
WEATHER:	INSPECTOR'S SIGNATURE:		SIGNATURE DATE:	
Clear		any Excherger	August 24, 2021	

### **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>Y</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 N	(SF) PROCESSING FACILITIES $\underline{N}$	(TS) TOPSOIL $\underline{Y}$
(MP) GENL MINE PLAN COMPLIANCE- Y	(FW) FISH & WILDLIFE $\underline{Y}$	(RV) REVEGETATION <u>Y</u>
(SM) SIGNS AND MARKERS <u>Y</u>	(SP) STORM WATER MGT PLAN Y	(RS) RECL PLAN/COMP Y
(ES) OVERBURDEN/DEV. WASTE <u>N</u>	(SC) EROSION/SEDIMENTATION $\underline{Y}$	(ST) STIPULATIONS <u>N</u>
(AT) ACID OR TOXIC MATERIALS N	(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**

This was a normal monitoring inspection of the Bijou Clay Mine (Permit No. M-1997-007) conducted by Amy Eschberger of the Division of Reclamation, Mining and Safety (Division) while in the area inspecting the operator's adjacent permit, Dawson Mine (Permit No. M-1977-392). The operator was represented by Richard Murphy during the inspection. Jason McGraw with General Shale Brick, Inc. was also present for the inspection. The site is located approximately 11.5 miles northeast of Kiowa, CO in Elbert County. The site is accessed from the west via Co Rd 73, and by traveling through the Dawson Mine. **Photos 1-12** taken during the inspection are included with this report.

This is a 112c operation permitted for 33.75 acres to mine clay. The clay product is transported off site for processing and the production of bricks. The site was initially mined in three phases, moving generally from south to north. However, AM-1 added an additional (4<sup>th</sup>) mine phase to the south consisting of 12 acres. The maximum mining depth was approximately 40 feet for the original pits and 60 feet for the new southern pit. Salvaged overburden and topsoil is to be stored along the outside edges of each pit area for use in reclamation of that mine phase. The central portion of the permit area (original mine phase 1) will be leveled and used for stockpiling.

The approved post-mining land use for the site is rangeland. The reclamation plan includes grading all slopes to 3H:1V or flatter, replacing approximately 12 inches of topsoil on disturbed lands, and revegetating the lands with a grass and shrub mixture. The approved seed mixture includes Western wheatgrass, Sideoats grama, Blue grama, Switchgrass, Little bluestem, Green needlegrass, and Fourwing saltbush. The main access road will remain after reclamation for continued use by the landowner.

At the time of the inspection, the weather was hot and dry. No standing water was observed on site. A permit sign was posted at the site entrance off of Co Rd 73. The permit area was delineated with barbed wire fencing, except for the triangular-shaped portion including the access road on the western edge of the site, which was delineated with white PVC posts. The entire site is in final reclamation at this time. According to the operator, their brick manufacturing plant in Castle Rock was shut down in 2019. This forced the operator to complete mining operations at their permitted sites earlier than initially planned, and to either begin final reclamation or pursue a permit transfer. For this site, the operator decided to complete final reclamation.

Mining in the northern portion of this site (mine phases 2 and 3) was completed in 2010 and the area was graded to 3H:1V or flatter and seeded. This area was reseeded in the fall of 2019. The central portion of the site (mine phase 1) was used as a stockpiling area up until the recent completion of mining in the southern phase 4 pit. A few mounds of remaining stockpiled material remain in this area, but they have been graded to match surrounding topography. Grading and initial seeding were completed in this area in the fall of 2019. All slopes in this area have been graded to 3H:1V or flatter, including the south-facing steep slope that existed along the northern edge of the stockpile area, referred to in previous inspection reports as the "overburden highwall". Mining in the southern phase 4 area began in 2013/2014 and was completed in 2019. This area was graded to 3H:1V and seeded in the fall of 2019. Reclamation of the site has left two 40-60 foot deep basins with 3H:1V slopes, which drain to the east (north pit) and to the southeast (south pit). This drainage plan roughly follows natural conditions at the site prior to mining, in which water from the top of the hill flows down existing drainages to the east, and ultimately into West Bijou Creek (located over a mile east of the site).

The required grading and initial seeding has been completed at the site. All that remains is to achieve successful revegetation of disturbed areas. During the inspection, the Division observed a wheat cover crop growing throughout much of the site. Evidence of a straw mulch application remained. Grasses were observed growing in some areas, along with some annual weeds. The vegetative cover was very sparse in some areas, particularly

along the tops of graded slopes. The operator indicated they will reseed the site this fall, if necessary. The Division recommends the operator continue to monitor revegetation progress at the site, and reseed and/or fertilize as needed. The operator should also continue to monitor the growth and spread of weeds in the affected area, particularly of any state-listed noxious weed species, and implement the approved weed control plan as needed. Revegetation of the site is off to a great start. However, it will be very important during this phase to keep the weeds from interfering with the growth of the desired vegetation.

The Division recaclulated the required financial warranty for completing reclamation at the site, which includes revegetation only at this point in time. The currently held financial warranty in the amount of \$196,124.37 was found to be adequate.

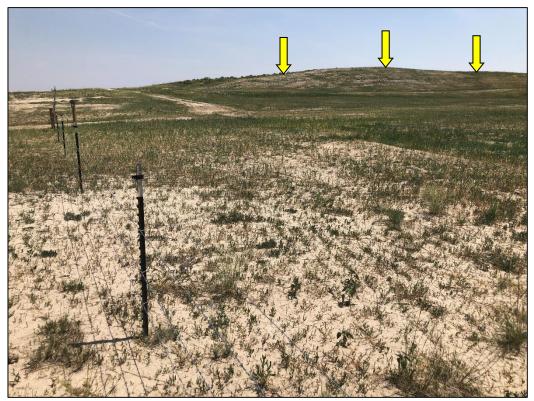
This concludes the report.

Any questions or comments regarding this inspection report should be forwarded to Amy Eschberger at the Colorado Division of Reclamation, Mining and Safety, 1313 Sherman Street, Room 215, Denver, CO 80203, via telephone at 303-866-3567, ext. 8129, or via email at <a href="mailto:amy.eschberger@state.co.us">amy.eschberger@state.co.us</a>.

## **PHOTOGRAPHS**



**Photo 1.** View looking southeast from western permit boundary across southern portion of permit area. Note barbed wire fence (at right) delineating permit boundary.



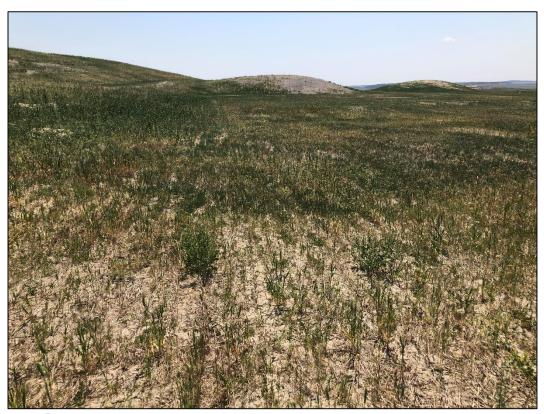
**Photo 2.** View looking northeast from western permit boundary across relatively flat central portion of permit area which was used for stockpiling. Graded "overburden highwall" visible in background (indicated).



**Photo 3.** View looking southeast across northern slope of phase 4 pit (in southern portion of permit area), showing slopes graded 3H:1V or flatter. Note sparse vegetative cover along top of slope which may require additional seeding.



**Photo 4.** View looking southeast across phase 4 pit (in southern portion of permit area), showing slopes graded to 3H:1V or flatter. Note sparse vegetative cover along top of slopes and in a few areas on the pit floor which may require additional seeding.



**Photo 5.** View looking east across relatively flat central portion of permit area which was used for stockpiling. All slopes in this area are graded to 3H:1V or flatter.



**Photo 6.** Ground view in central portion of permit area, showing wheat cover crop, remaining straw mulch, and some germinated grasses.



**Photo 7.** View looking southeast across phase 2 and 3 pit area (in northern portion of permit area), showing slopes graded to 3H:1V or flatter. Note sparse vegetative cover in some areas which may require additional seeding.



**Photo 8.** View looking east across phase 2 and 3 pit area (in northern portion of permit area), showing slopes graded to 3H:1V or flatter. Note sparse vegetative cover in some areas which may require additional seeding.



**Photo 9.** View looking northeast across phase 2 and 3 pit area (in northern portion of permit area), showing slopes graded to 3H:1V or flatter. Note sparse vegetative cover in some areas which may require additional seeding.



**Photo 10.** View looking north across northwestern corner of permit area where a large topsoil stockpile had been stored. This topsoil was used for reclamation of the site. Note area in foreground with very sparse vegetative cover which may require additional seeding.



**Photo 11.** View looking south across phase 2 and 3 pit area (in northern portion of permit area), showing slopes graded to 3H:1V or flatter. Note area in foreground with very sparse vegetative cover which may require additional seeding.



**Photo 12.** View looking southwest across triangular shaped western portion of permit area (delineated with white PVC posts) where material had been stockpiled adjacent to access road. This area may require additional seeding.

PERMIT #: M-1997-007 INSPECTOR'S INITIALS: AME INSPECTION DATE: June 17, 2021

Inspection Contact Address
Richard Murphy
The Denver Brick Company 210 Acme St Denton, TX 76205

Encl(s):

Google Earth image of site Reclamation plan map, approved in AM-1

CC: Michael Cunningham, DRMS



