



**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.

<b>MINE NAME:</b> Bijou Clay Mine	<b>MINE/PROSPECTING ID#:</b> M-1997-007	<b>MINERAL:</b> Clay (general)	<b>COUNTY:</b> Elbert
<b>INSPECTION TYPE:</b> Monitoring	<b>INSPECTOR(S):</b> Amy Eschberger, TC Wait	<b>INSP. DATE:</b> June 3, 2014	<b>INSP. TIME:</b> 10:30
<b>OPERATOR:</b> The Denver Brick Company	<b>OPERATOR REPRESENTATIVE:</b> Rob Tibbetts	<b>TYPE OF OPERATION:</b> 112c - Construction Regular Operation	

<b>REASON FOR INSPECTION:</b> Normal I&E Program	<b>BOND CALCULATION TYPE:</b> None	<b>BOND AMOUNT:</b> \$196,124.37
<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> <i>Amy Eschberger</i>	<b>SIGNATURE DATE:</b> August 21, 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----- <u>Y</u>	(FN) FINANCIAL WARRANTY----- <u>N</u>	(RD) ROADS----- <u>Y</u>
(HB) HYDROLOGIC BALANCE----- <u>Y</u>	(BG) BACKFILL & GRADING----- <u>Y</u>	(EX) EXPLOSIVES----- <u>NA</u>
(PW) PROCESSING WASTE/TAILING---- <u>Y</u>	(SF) PROCESSING FACILITIES----- <u>NA</u>	(TS) TOPSOIL----- <u>Y</u>
(MP) GENL MINE PLAN COMPLIANCE- <u>Y</u>	(FW) FISH & WILDLIFE----- <u>N</u>	(RV) REVEGETATION---- <u>Y</u>
(SM) SIGNS AND MARKERS----- <u>Y</u>	(SP) STORM WATER MGT PLAN---- <u>Y</u>	(SB) COMPLETE INSP---- <u>Y</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>Y</u>	(SC) EROSION/SEDIMENTATION--- <u>Y</u>	(RS) RECL PLAN/COMP-- <u>Y</u>
(AT) ACID OR TOXIC MATERIALS----- <u>NA</u>	(OD) OFF-SITE DAMAGE----- <u>Y</u>	(ST) STIPULATIONS----- <u>NA</u>

Y = Inspected and found in compliance / 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 (File No. M-1997-007) conducted by Amy Eschberger and TC Wait of the Division of Reclamation, Mining and Safety (Division). Mr. Rob Tibbetts, representing The Denver Brick Company, was present for the inspection. The site is located 11.25 miles northeast of Kiowa, Colorado in Elbert County. The land surface is owned by Donald and Flora Schriener, and the mineral rights are owned by Anadarko Land Corporation. The site is accessed via Co Rd 73, approximately 0.25 miles east of the Dawson Mine (File No. M-1977-392) permitted under the same Operator. The post-mining land use for this site is rangeland.

At the time of inspection, it was clear, hot and windy. The access road enters the site from the west and runs along its western and northern boundaries. A permit sign was posted off of Co Rd 73 just west of the site (Photo 1). The permit boundary was marked with metal posts and PVC pipes (Photo 2).

This is a 112c operation permitted for 33.75 acres to mine clay product for brick manufacturing. The product is stockpiled on site and transported to an off-site processing plant as needed. The only equipment present during the inspection was a front end loader which was cleaning up stockpiles (Photo 3). According to the recent annual report, mining activities last occurred at this site in November 2013. The site is permitted to operate intermittently.

The site consists of a large graded area to the north where reclamation commenced in 2010, a relatively flat stockpile area south of the graded area, and a new pit located in the southwestern portion of the site where mining commenced in 2013. The graded area consists of a deep basin with slopes of 3H:1V or flatter (Photo 4). Some annual weeds and native grasses have volunteered throughout this area. No standing water was observed on the basin floor. Stormwater runoff appears to exit the basin to the east, flowing into a dry gulch located outside of the permit area (Photo 5). At this time, the drainage area appears to be stabilized by vegetative cover. However, the Operator should continue to monitor this drainage area and work to prevent any offsite damage from occurring in accordance with Rule 34-32.5-116(4)(j).

According to Mr. Tibbetts, no topsoil has been spread over the graded area, but it was broadcast seeded in the fall of 2010. The approved reclamation plan for this site states that 4 inches of topsoil will be replaced on affected land. A large topsoil stockpile is located northwest of the graded area and is stable with vegetative cover (Photo 6). The Operator will need to use this topsoil for reclamation.

The graded area to the north is separated from the stockpile area to the south by an overburden highwall with a southern aspect and slopes near 1H:1V (Photo 7). According to the approved mining plan, a large quantity of overburden (up to 25 feet) was removed to access the clay material. This overburden was stockpiled south of the pit excavation, and it appears that the northern slope of this stockpile was graded into the basin during reclamation of the area in 2010. Currently, the overburden highwall is stabilized with vegetative cover.

The relatively flat stockpile area is located just south of the overburden highwall (Photo 8). Only a few puddles of water left by a recent rain event were observed on the floor of this area. Berms surround the perimeter of the stockpile area. Stormwater runoff appears to be directed primarily to the south where the berms open up to a relatively flat, sparsely vegetated area where erosion does not currently appear to be a problem (Photo 9).

A haul road runs down to the new pit area located in the southwestern portion of the permit area. This haul road runs through the pit and back up to the stockpile area. The new pit is on the 12 acre area added to the permit through an Amendment (AM-01) approved on 01/30/2012. The pit area currently occupies approximately two acres. It is anticipated that mining will occur down to approximately 60 feet deep in this pit. Highwalls in the pit

are approximately 4-5 feet in height with near vertical slopes (Photo 10). So far, three terraces have been cut into the southern pit wall (Photo 11). Berms surround the perimeter of the pit.

During the inspection, standing water was observed on the pit floor (See Photos 10 and 11). Mr. Tibbetts indicated that this water is from the rain event that occurred the previous day. The Division understands that because this is a clay mine, water may be retained longer than if the ground consisted of more permeable sediments. However, if water is retained on site for more than 72 hours, the Division of Water Resources requires the Operator to obtain a substitute water supply plan or augmentation plan approved by water court. Because the new pit is located down-gradient from the rest of the permit area in what appears to be a natural drainage path, it is likely that the pit receives a significant amount of surface runoff from up-gradient. Therefore, to help prevent and control water retention and sedimentation, it may be necessary for the Operator to install a diversion ditch around the northern side of the pit to divert stormwater and overland flow around the pit and back into the original drainage to the south.

A large overburden stockpile is located just north of the main access road, near the western permit boundary (Photo 12). This stockpile has some erosion damage along its slopes; however, it appears to be stable with some vegetative cover. Because erosion has been a problem at this site in the past, the Division recommends that the Operator continue to monitor the stability of all surface areas of the affected land, including stockpiles, and work diligently to prevent and control erosion in accordance with Rule 3.1.6(3).

The bond amount for this site was increased in February of 2012 with the approval of Amendment-01. After conducting this inspection, the current bond amount of \$196,124.37 was found to be adequate for reclamation of this site.

## **PHOTOGRAPHS**



**Photo 1.** View of permit sign posted off of Co Rd 73.



**Photo 2.** View of boundary marker at southwest corner of permit area.



**Photo 3.** View of front end loader in operation during inspection.





**Photo 4.** View looking southwest across graded basin in northern portion of permit area.



**Photo 5.** View looking southeast at primary drainage area for graded basin in northern portion of permit area.



**Photo 6.** View of large topsoil stockpile stabilized with vegetative cover located at northwestern corner of permit area.





**Photo 7.** View looking north at portion of overburden highwall. The remains of a product stockpile are shown at the base of the highwall.



**Photo 8.** View looking southwest across eastern portion of stockpile area.



**Photo 9.** View looking southwest across sparsely vegetated area just south of stockpile area.





**Photo 10.** View looking northeast across new pit located in southwestern portion of permit area.



**Photo 11.** View looking east across new pit located in southwestern portion of permit area.



**Photo 12.** View looking north at overburden stockpile located north of access road near western permit boundary.

**Inspection Contact Address**

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Enclosure:

CC: TC Wait, DRMS  
Tom Kaldenbach, DRMS

CERTIFIED MAIL: 7012 3460 0000 6384 8246  
Return Receipt Requested