



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.

MINE NAME: Dougherty Pit	MINE/PROSPECTING ID#: M-1978-079	MINERAL: Sand and gravel	COUNTY: Lincoln
INSPECTION TYPE: Monitoring	INSPECTOR(S): Amy Eschberger	INSP. DATE: August 27, 2015	INSP. TIME: 11:20
OPERATOR: Lincoln County	OPERATOR REPRESENTATIVE: John DeWitt and Rick Ashcraft	TYPE OF OPERATION: 110c - Construction Limited Impact	

REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: None	BOND AMOUNT: \$0.00
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None
WEATHER: Clear	INSPECTOR'S SIGNATURE: <i>Amy Eschberger</i>	SIGNATURE DATE: September 18, 2015

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>NA</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>N</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>	(SW) STORM WATER MGT PLAN---- <u>Y</u>	(CI) 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 Dougherty Pit (Permit No. M-1978-079) conducted by Amy Eschberger of the Division of Reclamation, Mining and Safety (Division). Mr. John DeWitt and Mr. Rick Ashcraft represented the operator, Lincoln County during the inspection. The site is located approximately 8 miles south of Karval, CO. The affected land is owned by Purvis Dougherty. Access to the site is off of Co Rd J. The northern permit boundary is directly adjacent and parallel to Co Rd J, with the access road completely included in the permit area. The approved post-mining land use for the site is rangeland.

This is a 110c operation permitted for 9.9 acres to mine sand and gravel for use in county road construction and maintenance. The maximum mining depth is approximately 20 feet. The operation began mining in the northwestern portion of the site and has advanced eastward and southward. Topsoil was not salvaged for reclamation when the operation first began in the 1970's. However, in the permit Amendment (Revision No. AM-01) approved by the Division in 1997, the operator committed to salvaging topsoil as the operation continues. On 09/02/2015, the Division approved a Technical Revision (Revision No. TR-04) to update the Mining Plan Map and Reclamation Plan Map to more accurately define the permit boundary using GPS coordinates, and also, to correct the spelling of the site name from "Daugherty Pit" to "Dougherty Pit".

At the time of the inspection, the weather was clear, warm and sunny, and the ground was dry. A permit identification sign was posted at the main site entrance off of Co Rd J (**Photo 1**). However, some of the text had worn off the sign. The Division recommends the operator replace the permit sign, including at a minimum, the information required by Rule 3.1.12(1): the name of the operator, a statement that the permit was issued by the Colorado Mined Land Reclamation Board (MLRB), and the permit number. The permit boundary was adequately delineated with metal posts (**Photo 2**). The mine was not active during the inspection; however, a small dozer and screen were stored on site. The county extracts, processes, and/or hauls off material from this site every year, which is in compliance with its intermittent status.

The Division estimates that approximately 6.95 acres have been disturbed by this operation (see enclosed Google Earth image of site). This disturbance includes a bowl-shaped pit that is approximately 15-20 feet deep with mined wall slope gradients of mainly 3H:1V or flatter (**Photos 3-7**), a few small topsoil stockpiles stored northwest and east of the pit (**Photo 8**), a few small stockpiles of mined material stored on the pit floor (see **Photos 5-7**), and a short haul road. The earlier mined northwestern portion of the site has slope gradients of 4H:1V or flatter and slightly more vegetative cover than other disturbed areas (**Photo 9**; also see **Photo 7**). The topsoil stockpiles appeared to be stable with vegetative cover (mainly annual weeds). Minor erosion was observed on the pit walls. However, eroded material is not leaving the site or affecting reclaimed areas. The operator should monitor the mined slopes for continued erosion and work to control and repair any additional erosional damage as necessary. Volunteer native grasses (mainly blue gramma and buffalo grass), some yucca, forbs, and annual weeds were volunteering across the disturbed area, helping stabilize the pit walls.

The operation was most recently working the eastern pit wall. It should be noted that portions of the southern pit wall are very close to the southern permit boundary (**Photo 10**; also see enclosed Google Earth image of site). The southern pit wall has been backfilled and graded to approximately 3H:1V or flatter, as required by the approved reclamation plan. It appears that additional disturbance of this slope is not anticipated. However, as the pit is expanded eastward, the operator should be careful not to disturb land outside of the permit boundary, as only 200 feet or less remains between the edge of the pit and the eastern boundary.

The approved reclamation plan calls for grading all mined slopes to 3H:1V or flatter, replacing any salvaged overburden and an average of 6 inches of topsoil on disturbed areas, and revegetating the site to rangeland. The dirt access road included in the permit area will be reclaimed.

No problems were observed during the inspection.

PHOTOGRAPHS



Photo 1. View of permit sign posted at main site entrance off of Co Rd J. This sign needs to be replaced as it is no longer readable.



Photo 2. View looking west, showing metal post marking southwestern corner of permit boundary.



Photo 3. View looking northwest across pit from eastern edge, showing slopes graded mainly to 3H:1V or flatter.



Photo 4. View looking south across most recently mined eastern pit wall, showing slopes graded mainly to 3H:1V or flatter.



Photo 5. View looking east across pit from western edge, showing slopes graded mainly to 3H:1V or flatter. Note the few small material stockpiles stored on pit floor.



Photo 6. View looking north across western mined wall, showing slopes graded mainly to 3H:1V or flatter.



Photo 7. View looking northeast across (earlier mined) northwestern portion of pit, showing slopes graded closer to 4H:1V.



Photo 8. View of small topsoil stockpile stored east of pit, stable with vegetative cover.



Photo 9. View looking north across (earlier mined) northwestern portion of site, showing slopes graded to 4H:1V or flatter. Note slightly more vegetative cover here than in other disturbed areas.



Photo 10. View looking east across southern mined wall (graded to 3H:1V). Portions of this disturbance are within only 10-20 feet of the southern permit boundary.

Inspection Contact Address

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Enclosure(s): Google Earth image of site with Division markings

CC: Wally Erickson, DRMS

M1978-079 / Dougherty Pit / Lincoln County

Red Outline = 9.9 acres = Approved Permit Area

Blue Outline = 6.95 acres = Disturbed Area (as of 8/27/2015 inspection)

M1978-079

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Google earth

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300 ft