



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.

MINE NAME: Barnes Pit	MINE/PROSPECTING ID#: M-1991-075	MINERAL: Gravel	COUNTY: Kiowa
INSPECTION TYPE: Monitoring	INSPECTOR(S): Amy Eschberger	INSP. DATE: October 11, 2018	INSP. TIME: 09:20
OPERATOR: Kiowa County	OPERATOR REPRESENTATIVE: Allen Watts	TYPE OF OPERATION: 112c - Construction Regular Operation	
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: Cloudy	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: November 28, 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>NA</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---- <u>N</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>	(SP) STORM WATER MGT PLAN---- <u>Y</u>	(RS) RECL PLAN/COMP-- <u>Y</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 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 Barnes Pit (Permit No. M-1991-075) conducted by Amy Eschberger of the Division of Reclamation, Mining and Safety (Division). Mr. Allen Watts represented the operator during the inspection. The site is located approximately 16 miles southeast of Sheridan Lake, Colorado in Kiowa County. Access to the site is from the west off Co Rd 76. **Photos 1-10** taken during the inspection are included with this report.

This is a 112c operation permitted for 48.5 acres to mine sand and gravel for use in county road construction and maintenance (see enclosed mining plan map). No material processing occurs on site. Mined material is directly hauled off site for use or temporarily stored on the pit floor until needed. The approved permit area is rectangular in shape, and includes a segment of an unnamed drainage at its northern end. The operation began mining from an existing pit located at the northern edge of the permit area, expanding it generally southward. Salvaged topsoil will be stored at the eastern edge of the pit for use in reclamation.

The approved post-mining land use for the site is rangeland. Reclamation of the site will include grading all disturbed slopes to 3H:1V or flatter, replacing 12-36 inches of topsoil on disturbed land, and seeding the land with a native grass seed mixture.

The site was not active during the inspection. However, according to annual reports submitted by the operator, the site is active every year. A permit sign was posted at the main site entrance. The corners of the permit boundary were delineated with T-posts. The operation has disturbed approximately 17.5 acres in the northern half of the permit area, south of the drainage. The edges of disturbance are very close to the western and eastern boundaries. The highwall is approximately 20-25 feet in height with near vertical slopes, and daylights to the north. Portions of the western highwall have been graded to 3H:1V and have some vegetative cover consisting of native grasses and annual weeds. Mined material was stockpiled on the pit floor. Topsoil was stockpiled along the eastern edge of the pit.

Some ponded water was present on the pit floor during the inspection due to a recent storm event. The operator should be aware, the Division of Water Resources requires that all stormwater contained on site either infiltrate into the ground or be released to the natural stream system within 72 hours, or all work must cease until a Substitute Water Supply Plan or Augmentation Plan is obtained.

At the northwestern edge of the site, the operator has constructed a berm to separate the pit from the adjacent drainage. The drainage is typically dry, flowing only during large storm events. Water was present in the drainage during the inspection. The operation has had issues with the drainage flow overtopping the berm and entering the pit during high flow events. Mr. Watts indicated the berm was recently raised four feet higher to help prevent this from re-occurring. Additionally, the operation is backfilling the northwestern corner of the pit as overburden is made available to reduce the slopes and extend the berm southward from the drainage. The Division observed some erosional rilling and a few gullies along the northwestern pit wall which has steeper slope gradients. Backfilling this portion of the pit should resolve the erosion issues observed. Once the operator has completed backfilling this area, the Division recommends the operator retopsoil and seed the western highwall and any other disturbed areas that will not be redisturbed as soon as possible to help stabilize these areas and prevent weed growth.

The operation appears to be following the approved mining plan. No problems were observed.

This concludes the report.

PHOTOGRAPHS



Photo 1. View looking east across active highwall along southern edge of pit, approximately 20-25 feet in height with near vertical slopes.



Photo 2. View looking northeast across pit from its southwestern corner. Note ponded water on pit floor due to recent storm event.



Photo 3. View looking west across pit from its southeastern edge.



Photo 4. View of topsoil stockpile stored east of pit, which appeared to be stable with some vegetative cover.



Photo 5. View looking west across pit from its eastern edge.



Photo 6. View looking east across berm separating pit (at right) from nearby drainage (at left).



Photo 7. View looking southeast across pit from top of berm separating pit from nearby drainage. Note southern slope of berm (in foreground) graded to 3H:1V or flatter. Also note ponded water present on pit floor due to recent storm event.



Photo 8. View looking west across northwestern portion of pit that operator is working to backfill. Steeper slopes in this area will be reduced to 3H:1V or flatter.



Photo 9. View looking west across western edge of berm separating pit from nearby drainage. The operator intends to place additional backfill in this area.



Photo 10. View looking south across portion of western pit wall graded to 3H:1V with some volunteer grass cover.

Inspection Contact Address

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P.O. Box 591
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Encl: Approved Mining Plan Map

CC: Michael Cunningham, DRMS

Barnes Pit
Mining Plan
Scale 1 inch = 200 feet
Pit Depth 25 to 40 feet

N 1

We are going to take 12" of top soil and 12" of overburden and place along east boundary. This will be done with a loader and dozer. The operation will start at the existing pits southern edge and continue south as the need comes. Sufficient room will be left along fences to keep slopes at a 3 to 1 angle. Gravel will be pushed into a pile and loaded.

