



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: Rother Gravel Pit	MINE/PROSPECTING ID#: M-1985-173	MINERAL: Sand and gravel	COUNTY: Kiowa
INSPECTION TYPE: Monitoring	INSPECTOR(S): Amy Eschberger	INSP. DATE: October 11, 2018	INSP. TIME: 11:30
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: Clear	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: January 30, 2019	

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>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>Y</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 Rother Gravel Pit (Permit No. M-1985-173) 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 14.5 miles northwest of Sheridan Lake, Colorado in Kiowa County. The site is situated just southeast of the intersection of Co Rd Z and Co Rd 61. Access to the site is from the west off Co Rd 61. Photos 1-14 taken during the inspection are included with this report.

This is a 112c operation permitted for 113 acres to mine sand and gravel for use in county road construction and maintenance (see enclosed Google Earth images of site). This permit included the affected lands of three permits held by A & S Construction Company (M-1985-057, M-1985-058, and M-1985-059), which were terminated after this permit was approved. The maximum mining depth is approximately 25 feet. The site will be mined through a series of 13 mining phases (see enclosed mining plan map). The operation began mining the existing pit in mining phase 1 at the southeastern edge of the permit area, and will move generally westward and northward through the permit area. The permit authorizes material processing (crushing) to occur on site. Haul roads and the mobile crusher will move with the operation as needed. Salvaged topsoil and overburden will be stockpiled along the perimeter of the affected land.

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 8-13 inches of overburden and approximately 4 inches of topsoil on disturbed land, and seeding the land with a native grass seed mixture consisting of Blue grama, Sideoats grama, Western wheatgrass, and Sand dropseed. All access roads will be reclaimed. Reclamation of disturbed areas will be completed as the operation moves into new mining phases.

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 northern and western permit boundaries are straight, and run adjacent to the county roads. The eastern and southern permit boundaries are more complicated with several corners and curved portions. These permit boundaries are delineated by metal posts. Current disturbance is approximately 22 acres, and is located primarily in mining phases 1, 2, and 4 in the southeastern portion of the permit area. Disturbance at the site includes an excavated pit approximately 20 feet in depth (in mining phases 1, 2, and 4), overburden and topsoil stockpiles stored along the eastern edge of the pit, an older pit and overburden stockpile located just to the west of the active pit (in mining phases 4 and 6), and an access road off Co Rd 61 (crossing mining phases 2, 4, and 5).

The active highwall is along the northern edge of the pit, and has near vertical slopes. This highwall has some significant erosion at its bottom 5-10 feet where the softer substrate is eroding beneath the harder substrate above. If this highwall will not be mined in the near future, the Division recommends the operator grade the slopes to a more stable configuration to help protect the land surface from erosion in accordance with Rules 3.1.5(3) and 3.1.6(3). According to Mr. Watts, the county does not process material on site. Mined material is directly hauled off site for use or temporarily stockpiled on the pit floor until needed. A few material stockpiles are currently stored on the pit floor, near the active highwall.

Large topsoil and overburden stockpiles are stored along the eastern edge of the active pit. The topsoil stockpile is stored to the south of the overburden stockpile, and is stable with good grass cover. The overburden stockpile is also stable with some grass cover. The stockpiles are fairly close to the eastern permit boundary, so the operation will need to be careful not to disturb land outside the boundary when accessing the stockpiles for reclamation. The Division estimates the topsoil stockpile to be located 20-40 feet from the eastern permit boundary, and the overburden stockpile to be located 55-65 feet from this boundary.

The southern portion of the pit disturbance (primarily in mining phase 2) has slopes graded mostly to 3H:1V, and this area has been retopsoiled and seeded. Portions of this reclaimed area have good grass growth, while other portions have sparse vegetative cover consisting primarily of annual weeds. The Division recommends the operator continue to monitor vegetative growth in this area and reseed the area as needed to achieve successful grass cover. The old pit located west of the active pit (in mining phases 4 and 6) has slope gradients ranging from 1.5H:1V to 2.5H:1V. This pit area is well vegetated with volunteer grasses and shrubs, and appears to be stable at this time.

During the inspection, Mr. Watts indicated the operation would like to expand the current pit northward where good sand and gravel exists. The Division informed the operator the permit area could be expanded through submittal of an amendment application. This application can be downloaded from the Division's website at: <https://mining.state.co.us>. From the homepage, hover over "Forms", click on "Mineral Mines", then under "Applications" click on "Construction Material Regular 112 Operation Reclamation Permit Application Package" to view the application to submit for a permit amendment. If the operator decides to submit an amendment application to revise the permit boundary, the Division strongly recommends the operator propose a simpler permit boundary shape (i.e., rectangular) which will be easier to delineate and keep disturbances within its bounds as the operation moves to different mining phases.

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

PHOTOGRAPHS



Photo 1. View looking southeast across southern portion of pit (mining phase 2) in reclamation. Some portions of this area have good grass growth, while other portions have very sparse vegetative cover consisting mainly of annual weeds.



Photo 2. View looking south at southern edge of pit (mining phase 2) in reclamation. Some portions of this area have good grass growth, while other portions have very sparse vegetative cover consisting mainly of annual weeds.



Photo 3. View looking north/northwest, showing metal post marking eastern permit boundary.



Photo 4. View looking south/southwest at topsoil stockpile stored at eastern edge of active pit. Note stockpile is stable with good grass cover.



Photo 5. View looking south across topsoil stockpile stored at eastern edge of active pit. Note stockpile is stable with good grass cover.



Photo 6. View looking west at overburden stockpile stored at eastern edge of active pit. Note stockpile is stable with some grass cover.



Photo 7. View looking north at overburden stockpile stored at eastern edge of active pit. Note stockpile is stable with some grass cover.



Photo 8. View looking southwest from top of topsoil stockpile across southern portion of pit (mining phase 2) in reclamation.



Photo 9. View looking east, showing metal post marking a northern corner of the permit boundary (northwest of active pit).



Photo 10. View looking west/southwest across portion of active highwall along northern edge of pit. Note erosion of softer substrate at bottom of highwall.



Photo 11. View looking south across northern portion of active pit, showing a few material stockpiles stored on pit floor.



Photo 12. View looking north at active highwall along northern edge of pit. Note material stockpiles stored on pit floor near highwall.



Photo 13. View looking northeast across old pit located west of active pit (in mining phases 4 and 6). Slope gradients in this area range from 1.5H:1V to 2.5H:1V. This area is well vegetated with volunteer grasses and shrubs, and appears to be stable.



Photo 14. View looking southeast across old pit located west of active pit (in mining phases 4 and 6). Slope gradients in this area range from 1.5H:1V to 2.5H:1V. This area is well vegetated with volunteer grasses and shrubs, and appears to be stable.

Inspection Contact Address

Allen Watts
Kiowa County
P.O. Box 100
Eads, CO 81036

Encl: Google Earth image of site showing permit area
Google Earth image of site showing closer view of disturbed area
Approved Mining Plan Map

CC: Michael Cunningham, DRMS

4250

Adjacent Landowner
Irvin E. Robinson

4237

12 7
13 8

SCALE: 1 in. = 400 ft.

KIOWA COUNTY

APPLICANT: Herman Rother

11 12 13

9 10

Adjacent
Landowner
Lender C.
Weber

Gravel Pit

PROPERTY OWNER
HERMAN ROTHER

Vegetation

Percent Cover - 15%

Type - Bouteloua gracilis, Sporebolus
cryptandrus, Sitanion hystrix, Agropyron
smithii

Range Condition - Poor

LEGEND

- STRIPPINGS
- EXISTING PIT
- TOPSOIL

- PERMIT BOUNDARY
- FINES
- STAGE BOUNDARY

8

7

6

5

4

3

2

18

RECEIVED

SEP 9 1985

MINED LAND
RECLAMATION DIVISION

Pit

4250

County Road

4194

13 18

DATE PREPARED: August 20, 1985

PREPARED BY: James L. Schmieding
President/Reclamation Consultant
JLS Mining Reclamation Consultant
Inc. (303) 424-0958

M-1985-173 / Rother Gravel Pit / Kiowa County (112c)

Red outline = 113 acres = Approved permit area
(Image data from 10/11/2015)



M-1985-173 / Rother Gravel Pit / Kiowa County (112c)

Closer view of disturbed area.

Red outline = 113 acres = Approved permit area

(Image data from 10/11/2015)

