




## MINERALS PROGRAM INSPECTION REPORT

PHONE: (303) 866-3567

The Division of Reclamation, Mining and Safety 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> Varra-Coulson Resource Project	<b>MINE/PROSPECTING ID#:</b> M-2013-064	<b>MINERAL:</b> Gravel and sand	<b>COUNTY:</b> Weld
<b>INSPECTION TYPE:</b> Monitoring	<b>INSPECTOR(S):</b> Peter Hays	<b>INSP. DATE:</b> September 28, 2020	<b>INSP. TIME:</b> 10:00
<b>OPERATOR:</b> Varra Companies, Inc.	<b>OPERATOR REPRESENTATIVE:</b> Garrett Varra, Brad Janes, Brad Jones	<b>TYPE OF OPERATION:</b> 112c - Construction Regular Operation	
<b>REASON FOR INSPECTION:</b> Normal I&E Program	<b>BOND CALCULATION TYPE:</b> Complete Bond	<b>BOND AMOUNT:</b> \$205,801.00	
<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> 	<b>SIGNATURE DATE:</b> October 27, 2020	

### 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>N</u>
(HB) HYDROLOGIC BALANCE----- <u>Y</u>	(BG) BACKFILL & GRADING----- <u>N</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>N</u>
(SM) SIGNS AND MARKERS----- <u>Y</u>	(SP) STORM WATER MGT PLAN---- <u>N</u>	(RS) RECL PLAN/COMP-- <u>N</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>N</u>	(SC) EROSION/SEDIMENTATION--- <u>N</u>	(ST) STIPULATIONS----- <u>N</u>
(AT) ACID OR TOXIC MATERIALS----- <u>N</u>	(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

The Varra-Coulson Resource Project was inspected by Peter Hays with the Division of Reclamation, Mining and Safety (Division/DRMS) in response to the submittal of a technical revision request by the Operator. The site was previously inspected by the Division on March 2, 2017. Mr. Garrett Varra, Mr. Brad Janes and Mr. Brad Jones with Varra Companies, Inc. were present during the inspection.

The Operator submitted the technical revision request (TR-01) on September 9, 2020. The Division is required by Rule 1.9 to act on a technical revision within 30 days after being filed with the Division. On September 29, 2020, the Division approved the Operator's request to extend the decision date by 30 days until November 2, 2020. The Operators' request to extend the decision date nullifies the automatically approval provision in Rule 1.9.1.

The technical revision proposes to update the following aspects of the approved mining operation:

### Middle Field

- The perimeter slopes are being mined at a 2.5H:1V grade from the top of slope to 15 feet above the pit floor and at a vertical grade for the final 15 feet to a total depth of 40 feet below grade.
- The planned relocation of the Greeley Irrigation Canal #3 will not occur.

### South Field

- The perimeter slopes are being mined at a 2.5H:1V grade from the top of slope to 35 to 40 feet below grade to the pit floor.
- The oil and gas facilities located in the southeast corner of the field have been abandoned and the area will be mined by the Operator.
- The perimeter slopes will be backfilled at a final 3H:1V grade with the construction of a clay liner.
- A temporary access road was constructed in the northwest corner of the field connecting the site with the adjacent Durham Sand and Gravel Pit operated by Varra Companies, Inc.
- The southwest corner of the field (8.94 acres) will be used as a topsoil stockpile area until the topsoil is utilized for site reclamation or excess topsoil is relocated off-site. The area will be mined by the Operator following the removal of the stockpile.

### General Mining Plan Revisions

- The maximum allowable mining depth will be increase to 60 feet or deeper from the currently approved 40 feet depth.
- The slopes will be mined at 3H:1V from 40 to 60 feet in depth.
- The life of mine is now estimated at 12 years or 50 percent faster than originally estimated by the Operator.
- The Operator estimated an additional \$70,681.68 in financial warranty is required to account for the grading changes proposed in the technical revision.

The site is an 112c Construction Regular Operation permitted for 100.63 total acres. The site is divided into 3 mining fields; north, middle and south fields. The technical revision proposes a total of 66.56 acres of land will be disturbed south of the Poudre River in the Middle and South Fields, an increase of 2.25 acres from the originally proposed 64.31 acres. The increased acreage amount includes the addition of 0.45 acres for the oil

and gas peninsula and pad, 1.98 acres for not relocating the canal and subtracts 0.18 acres for additional offset from the Poudre River. The planned 10.75 acres of disturbance in the North Field remains unchanged with the submittal of the technical revision.

The approved Mining Plan states the perimeter slopes, critical and non-critical, will be mined with a 10 foot offset from the permit boundary at a 1.25H:1V slope from the top of slope to 20 feet below grade and at a 3H:1V slope from 20 to 40 feet below grade to the pit floor. As described in the technical revision, the perimeter slopes of the South and Middle Fields were being mined at a typical 2.5H:1V grade with a 50 foot offset from the permit boundary to the top of slope. The Division will require the Operator to submit a revised Geotechnical Stability Analysis pursuant to Rule 6.5(2) demonstrating the revised perimeter slope geometry is in accordance with Table 1 - Recommended Factors of Safety for Slope Stability Analysis for Operations and Reclamation within Section 30.4 of the Policies of the Mined Land Reclamation Board (MLRB) effective May 16, 2018.

The site was active during the inspection. Material was being excavated and loaded into haul trucks with a tracked mounted excavator in the western portion of the South Field. The excavated material is processed at the adjacent Durham Pit operated by Varra under Permit No. M-1978-056. The South Field was being dewatered from perimeter trenches located at the elevation of a clay lens approximately 40 feet below grade. The Middle Field was not actively being dewatered and was filling with groundwater. The geometry of the Middle Field perimeter slopes could not be observed during the inspection due to the presence of the groundwater covering the lower portion of the slopes.

The approved post-mining land use is developed water resource with the creation of clay lined reservoirs. The Division will require the Operator to update the Reclamation Plan Map to include the changes proposed under TR-01 including, the removal of the oil and gas peninsula in the South Field and the configuration of the Middle Field since the Greeley Canal will not be relocated as originally indicated on the map. The topsoil stockpile located in the southern portion of the South Field was stable and no erosion features were observed during the inspection. Overall, the site was generally as depicted on the 2020 annual report map submitted by the Operator.

The Division currently holds a reclamation bond in the amount of \$205,801.00. The Operator proposed a financial warranty increase of \$70,681.68 based on the technical revision. The Division updated the bond estimate with the revised perimeter backfill volume provided by the Operator as part of TR-01 and updated unit costs to current values. The financial warranty has not been recalculated by the Division since the original estimate in 2014. The Division calculated the required financial warranty in the amount of \$343,000.00, an increase of \$137,199.00. A copy of the updated bond estimate is attached. The Division will allow the Operator 30 day from the signature date of this report to review the bond estimate prior to the Division issuing a notice of surety increase letter.

The mine sign and boundary markers were observed as required by Rule 3.1.12.

Photographs taken during the inspection are attached. If you need additional information or have any questions, please contact me at the Division of Reclamation, Mining and Safety, 1313 Sherman Street, Room 215, Denver, CO 80203, by telephone at 303.866.3567 x 8124, or by email at [peter.hays@state.co.us](mailto:peter.hays@state.co.us).

## PHOTOGRAPHS



View of the South Field from the northwest corner looking south



View of the South Field from the northwest corner looking southeast





View of the South Field from the northwest corner looking east



View of the South Field from the west side looking east





View of the South Field from the southwest corner looking northeast



View of perimeter slope at the southwest corner of the South Field looking east





View of the topsoil stockpile located in the southern portion of the South Field



View of the South Field from the east side looking northwest





View of the Middle Field from the south side looking north



View of the Middle Field from the southwest corner looking northeast





Varra Coulson mine sign

**Inspection Contact Address**

Garrett Varra  
Varra Companies, Inc.  
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Frederick, CO 80516

Enclosure – Varra Coulson TR-01 Bond Estimate

Ec: Jared Ebert, DRMS