



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: Munsch Pit	MINE/PROSPECTING ID#: M-2000-018	MINERAL: Sand and gravel	COUNTY: Cheyenne
INSPECTION TYPE: Monitoring	INSPECTOR(S): Elliott R. Russell	INSP. DATE: June 29, 2016	INSP. TIME: 08:00
OPERATOR: Cheyenne County	OPERATOR REPRESENTATIVE: Jim Brown	TYPE OF OPERATION: 110c - Construction Limited Impact	

REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: None	BOND AMOUNT: NA
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None
WEATHER: Clear	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: July 29, 2016

The following inspection topics were identified as having Problems or Possible Violations. OPERATORS SHOULD READ THE FOLLOWING PAGES CAREFULLY IN ORDER TO ASSURE COMPLIANCE WITH THE TERMS OF THE PERMIT AND APPLICABLE RULES AND REGULATIONS. If a Possible Violation is indicated, you will be notified under separate cover as to when the Mined Land Reclamation Board will consider possible enforcement action.

GENERAL INSPECTION TOPICS

The following list identifies the environmental and permit parameters inspected

(AR) RECORDS----- <u>Y</u>	(FN) FINANCIAL WARRANTY----- <u>NA</u>	(RD) ROADS----- <u>Y</u>
(HB) HYDROLOGIC BALANCE----- <u>PV</u>	(BG) BACKFILL & GRADING----- <u>Y</u>	(EX) EXPLOSIVES----- <u>NA</u>
(PW) PROCESSING WASTE/TAILING---- <u>NA</u>	(SF) PROCESSING FACILITIES----- <u>NA</u>	(TS) TOPSOIL----- <u>Y</u>
(MP) GENL MINE PLAN COMPLIANCE- <u>Y</u>	(FW) FISH & WILDLIFE----- <u>Y</u>	(RV) REVEGETATION---- <u>Y</u>
(SM) SIGNS AND MARKERS----- <u>PB</u>	(SP) STORM WATER MGT PLAN---- <u>NA</u>	(CI) COMPLETE INSP---- <u>Y</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>NA</u>	(SC) SEDIMENT CONTROL----- <u>Y</u>	(RS) RECL PLAN/COMP-- <u>Y</u>
(AT) ACID OR TOXIC MATERIALS----- <u>NA</u>	(OD) OFF-SITE DAMAGE----- <u>PV</u>	(ST) STIPULATIONS----- <u>NA</u>

Y = Inspected / N = Not inspected / NA = Not applicable to this operation / PB = Problem cited / PV = Possible violation cited

PROBLEMS/POSSIBLE VIOLATIONS

INSPECTION TOPIC: Signs & Markers

COMPLIANCE PROBLEM #1: The affected area boundary markers are missing or incorrectly placed. This is a problem for failure to maintain boundary markers around the affected area as required by Section 3.1.12(2) of the rule.

CORRECTIVE ACTIONS: The operator shall conduct a survey and replace the boundary markers in the correct location(s). The operator shall provide proof to the Division that this has been done by the corrective action date.

CORRECTIVE ACTION DUE DATE: August 28, 2016

INSPECTION TOPIC: Hydrologic Balance

POSSIBLE VIOLATION #1: Ladder Creek has breached into the pit and the site is improperly impounding surface drainage/runoff. This is a possible violation at this time pursuant to C.R.S. 34-32.5-116(4)(h) for failure to minimize disturbance to the prevailing hydrologic balance.

CORRECTIVE ACTIONS: This possible violation has been scheduled to be considered by the Mined Land Reclamation Board, during the September 28-29, 2016 Board meeting. Official notice of the schedule and other details for the MLRB hearing will be provided under a separate document to be sent via certified mail to the operator.

CORRECTIVE ACTION DUE DATE: September 28, 2016

INSPECTION TOPIC: Off-site Damage

POSSIBLE VIOLATION #2: Land has been affected outside of the approved permit boundary. This is a possible violation at this time pursuant to C.R.S. 34-32.5-116(4)(i) for failure to protect areas outside of the affected land from slides or damages occurring during the mining operation.

CORRECTIVE ACTIONS: This possible violation has been scheduled to be considered by the Mined Land Reclamation Board, during the September 28-29, 2016 Board meeting. Official notice of the schedule and other details for the MLRB hearing will be provided under a separate document to be sent via certified mail to the operator.

CORRECTIVE ACTION DUE DATE: September 28, 2016

OBSERVATIONS

This inspection was conducted as part of the Division's routine monitoring program for permitted operations. The Munsch Pit is a Construction Material Limited 110c Operation Reclamation Permit with 9.5 permitted acres and an approved post mining land use of Rangeland. The mine is located approximately 4 miles south-southeast of Cheyenne Wells, Colorado. Elliott Russell, with the Division, inspected the site. Jim Brown, with Cheyenne County Road & Bridge, represented the Operator and accompanied the inspection.

At 0800 hours, the Division and Mr. Brown met at the mine site, located southeast of County Road M and County Road 43. At the time of the inspection the temperature was hot, the sky was clear, and the ground was damp. The mine site identification sign was posted at the entrance to the mine site. The permit boundary was delineated by a t-posts along the southern boundary, but the Division could not locate the markers delineating the 3 other corners of the permit. This is cited as Compliance Problem #1 on page 2 of this report.

The site was not actively being mined during the inspection, but a bulldozer was located on-site and there was evidence of recent mining activities. The site is permitted for a mining operation located inside of a tight meander of Ladder Creek, an ephemeral channel. The site consists of one large excavation (referred to as pit #1 in this report) with a smaller pit (referred to as pit #2 in this report) located near the northern permit boundary. Mr. Brown indicated these two excavations would be connected as mining progresses. Topsoil had been stockpiled along a portions of the southern and northern permit boundary. Mined material had recently been pushed up from both pits and piled along the western portion of the excavations. The Operator was reminded to ensure topsoil is stripped and stockpiled in advance of the pit and product stockpiles.

During the inspection, the Division observed a significant erosion feature located near the southeast corner of the pit

where the creek channel has breached the southeast slope of the site. The breach is located just downstream of the topsoil stockpile along the southern permit boundary. A head cut has formed in the creek channel and was approximately 10-15 feet deep and over 100 feet long. It appears Ladder Creek is completely re-directed into the pit. Mr. Brown indicated there was a severe storm event in the area in the spring of 2015 which lead to flooding and caused Ladder Creek to have significant flows. Water was currently ponded in the pit and the Division observed flood debris throughout the pit, indicating the entire pit was inundated at one time, likely during the severe storm event. Upon further investigation at the site, the Division has determined the erosion event was caused because the mining excavation came too close to the creek bank. Additionally, the topsoil stockpile, piled along the southern permit boundary, had not been extended the entire length of the meander, which may have prevented water from overtopping the creek bank and flowing into the pit. The mining operation is impounding all water from Ladder Creek and thus, the site has failed to minimize disturbance to the prevailing hydrologic balance of the affected land and surrounding area. This is cited as Possible Violation #1 on page 2 of this report.

After the inspection, the Division reviewed the permit file and determined the mining activities, as well as the erosional head cut feature, have affected lands outside of the approved permit boundary. Using the approved 5/12/2005 AM-01 Mine Plan Map, the Division has prepared a Google Earth map which shows the approximate location of the permit boundary; both maps are attached for reference. The permit boundary was determined using dimensions/distances, provided on the 5/12/2005 AM-01 Mine Plan Map, from County Road M and County Road 43. The Division has determined the boundary marker delineating the eastern point along the southern boundary is incorrectly placed in the field; this has been added Compliance Problem #1 on page 2 of this report. Using the aerial image, the Division has determined the erosional feature discussed above has actually affected lands outside of the approved permit boundary. Additionally, portions of the access road and the topsoil stockpiles along the northern and southern boundaries have also affected lands outside of the approved permit boundary. The total size of disturbance located outside of the approved permit boundary is approximately .8 acres. This is cited as Possible Violation #2 on page 2 of this report.

This concludes the Division's Inspection Report; a subset of photographs taken during the time of the inspection are included below. If you need additional information or have any questions, please contact me at Division of Reclamation, Mining and Safety, 1313 Sherman Street, Room 215, Denver, CO 80203, by telephone at **303-866-3567 x8132**, or by email at elliott.russell@state.co.us.

Inspection Contact Address

Marcy Brossman
Cheyenne County
P.O. Box 567
Cheyenne Wells, CO 80810

Enclosure 5/12/2005 AM-01 Mine Plan Map M2000018
 6/29/2016 Inspection Report Map M2000018

CC: Wally Erickson; DRMS

PHOTOGRAPHS



Mine identification sign posted along CR M; looking southeast.



Overview of Pit #2 from the northern topsoil stockpile; looking southwest.



Overview of Pit #1 (location of the creek breach identified by red arrow); looking southeast.



Additional overview of Pit #1 (location of the creek breach identified by red arrow), note the standing water; looking southeast.



Significant erosion feature caused by creek breach; looking north into the permit from the southern creek bank.



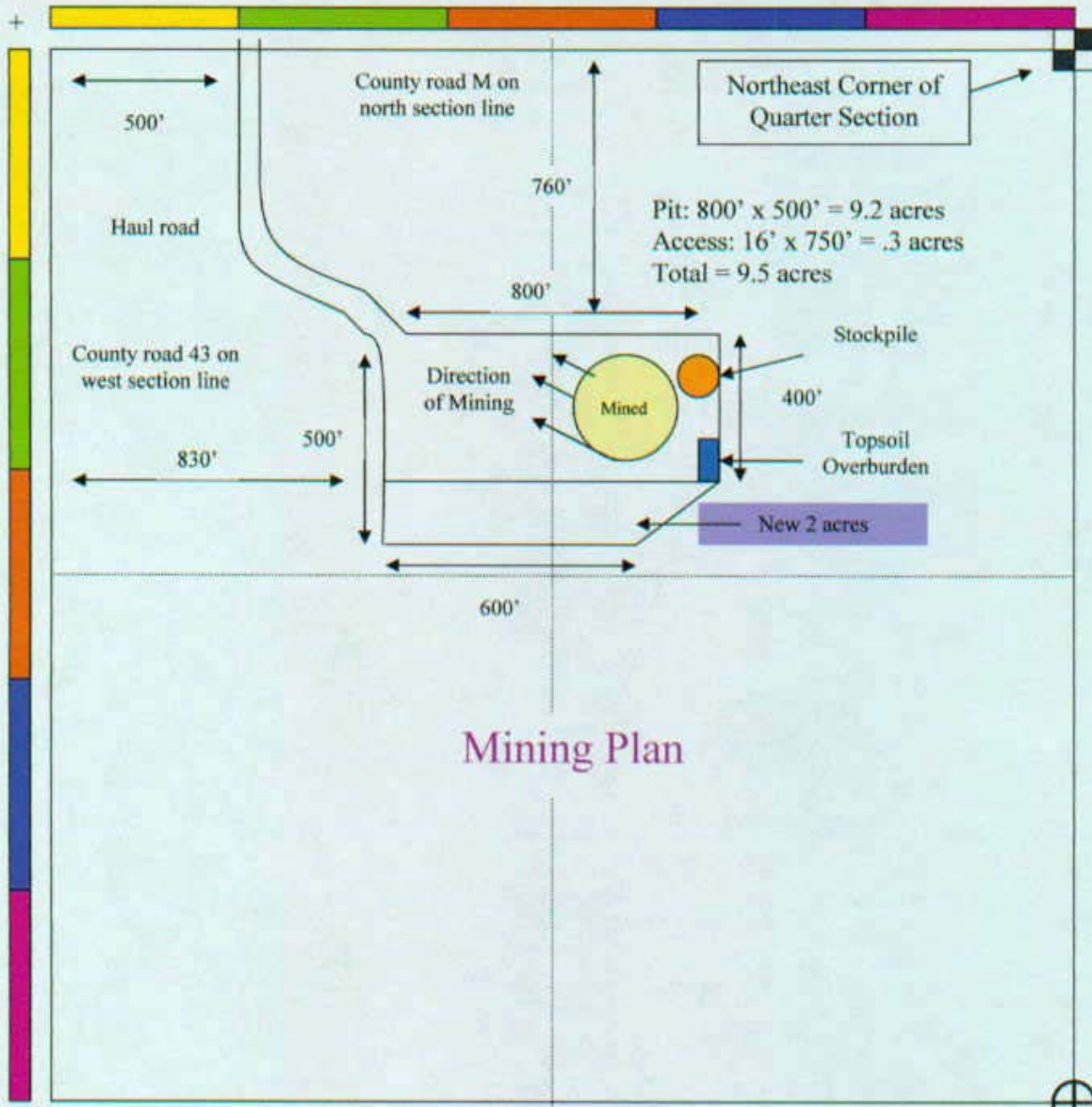
Significant erosion feature caused by creek breach; looking east from within Ladder Creek.

MUNSCH PIT (M-2000-018)

Landowners: Lawrence A. & Mary Edna Munsch

Mining Map: 4-21-05

Map View: Northwest Quarter of Section 8



Mining Plan

528 feet or 1/10 mile

Southeast Corner of
Quarter Section



NORTH HALF OF THE NORTHWEST
QUARTER (N $\frac{1}{2}$ NW $\frac{1}{4}$) OF SECTION
EIGHT (8), TOWNSHIP FIFTEEN (15)
SOUTH, RANGE FORTY-FOUR (44)
WEST OF THE 6TH P.M., CHEYENNE
COUNTY, COLORADO

Inspection Report Map

Munsch Pit (M-2000-018)
Aerial Image Date: 11/15/2015
Perpared by ERR on 7/29/2016



Legend

-  Approximate Permit Boundary
-  Off-site Disturbance