

STATE OF
COLORADO

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M1984041, Eagle-Gypsum Mine, August 2023 Inspection Report

1 message

Simmons - DNR, Leigh <leigh.simmons@state.co.us>

Wed, Oct 18, 2023 at 1:28 PM

To: Jon Edeen <Jon.Edeen@americangypsum.com>

Mr. Edeen,

Please find attached the inspection report from the inspection carried out in August of this year. I apologize for the delay in sending this out to you.

You'll see that a problem has been cited with the mine ID sign - I trust this will be fairly simple for you to address. I'd appreciate it if you would send me a picture when you have been able to resolve the problem.

You'll also see that the Financial Warranty is still under review. I have requested some assistance from colleagues to re-evaluate the site-wide reclamation cost estimate and will share the results of that work with you when it is complete.

Please let me know if you have any comments or questions,

Leigh Simmons
Environmental Protection Specialist



COLORADO
Division of Reclamation,
Mining and Safety
Department of Natural Resources

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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: Eagle-Gypsum Mine	MINE/PROSPECTING ID#: M-1984-041	MINERAL: Anhydrite, gypsum	COUNTY: Eagle
INSPECTION TYPE: Monitoring	WEATHER: Clear	INSP. DATE: August 17, 2023	INSP. TIME: 10:30
OPERATOR: American Gypsum Company LLC	OPERATOR REPRESENTATIVE: Jon Edeen	TYPE OF OPERATION: 112c - Construction Regular Operation	

REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: None	BOND AMOUNT: \$2,614,549.39
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None
INSPECTOR(S): Leigh Simmons	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: October 18, 2023

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.

INSPECTION TOPIC: Signs & Markers

PROBLEM/POSSIBLE VIOLATION: Problem: The mine identification sign was not posted at the entrance of the mine site. This is a problem for failure to post a mine identification sign as required by Section 3.1.12(1) of the rule. The Operator shall, at the entrance of the mine site post a sign, which shall be clearly visible from the access road, with a minimum size equaling one hundred and eighty-seven (187) square inches, such as eleven (11) inches in height and seventeen (17) inches in width, with appropriate font size, with the following: the name of the Operator, a statement that a reclamation permit for the operation has been issued by the Colorado Mined Land Reclamation Board; and the permit number.

CORRECTIVE ACTIONS: The operator shall, at the entrance of the mine site, post a sign which shall be clearly visible from the access road with the following: the name of the operator, a statement that a reclamation permit for the operation has been issued by the Colorado Mined Land Reclamation Board; and the permit number. The operator shall submit photo documentation that a proper sign has been posted by the corrective action date.

CORRECTIVE ACTION DUE DATE: 11/17/23

OBSERVATIONS

This inspection was conducted as part of the normal monitoring program established by the Colorado Division of Reclamation, Mining and Safety (Division). The inspection was conducted by Leigh Simmons of the Division, and accompanied by Jon Edeen of American Gypsum Company, LLC.

The Eagle-Gypsum Mine is a 112c operation with a total permit area of 929.2 acres, of which a maximum of 353.2 acres are permitted to be affected. The mine is located about 1 1/4 mile north of Gypsum, with access off Trail Gulch Road. The site was active at the time of the inspection.

The pre-mining land use of the site was Wildlife Habitat and Recreation, and the site will ultimately be reclaimed to Wildlife Habitat and Recreation. Per the most recent Annual Report, 198.6 acres are currently affected and 13.6 acres have been backfilled. An additional 4 affected acres and 3 reclaimed acres were anticipated in 2023.

Mr. Edeen stated that 12,000 tons of material are typically mined from the site per week. 100% of the mined product is gypsum, all of which is transported by truck to the wall board plant (also owned by American Gypsum Company) in the town of Gypsum.

The locations of photos taken during the inspection are shown on the screenshot of the field map.

Financial Warranty:

The Division currently holds a financial warranty of \$2,614,549 for the site. This figure is equal to the Minimum Required Surety, which was calculated based on cost estimates completed for TR-10 (2017), TR-11 (2019), and AM-04 (2020). The Division is reviewing the adequacy of the Financial Warranty, and will present a single site-wide cost estimate, with current unit costs, in the near future.

Roads:

The existing haul road to the Lower Pit was in use for the transportation of material, but, to the east, a new haul road which will replace it was under construction. The mine plan calls for the lower (southern) section of the existing haul road to be mined through and for the upper (northern) section to be backfilled, (see Figures 2 and 8).

Hydrologic Balance:

The pits are "zero discharge" facilities; storm water is contained at a low spot within the pit until it infiltrates or evaporates. At the time of the inspection a small amount of water was pooled in the upper pit.

During operations two water trucks fill up at the wall board plant and bring water to the site in order to control dust in the pit.

Six sediment ponds at the site all treat road run-off. Each was inspected, (see Figures 4, 6, 14-18).

Gen. Compliance With Mine Plan:

At the time of the inspection all mining activity was in the Lower Pit. Two Rotomill machines were in operation, each of which typically moves at 40 ft per minute, with an 8 ft wide rotating drum, taking a 6 inch

deep pass. The Rotomill machines left a windrow of material behind them. Two 980 Loaders were sorting gypsum from waste rock. Gypsum was loaded into belly dump trucks (six of which were in operation), and was then transported to the wall board plant for further crushing and processing. Waste material was loaded into an articulated dump truck and used for backfill on site.

Seams of Anhydrite were visible in the pit walls and on the floor in places. Gypsum and Anhydrite are both calcium sulfate minerals, but Gypsum is hydrated ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$) and Anhydrite is not (CaSO_4). The "waters of hydration" impact the physical properties of the two minerals to the extent that Anhydrite is considered waste here; it is much harder than Gypsum and slows the Rotomill progress to about 1 ft per minute. Mr Edeen said that it is best dealt with using a hammer on an excavator to break it up, however the permit allows for blasting.

Mr Edeen estimated that the Lower Pit will be mined for three more years, and the pit floor will be lowered by 30-50 ft. The approved reclamation plan is to backfill the pit wall to the ridge, with a maximum 3H:1V slope. Backfilling on the north east edge of the pit had begun and was currently in progress, (see Figure 13). It's possible that there will be a future project to explore the ridge to the east, although no exploration plan had yet been proposed.

At the time of the inspection there was no activity in the Upper Pit, (see Figures 19-22). The currently approved plan calls for the pit floor to be lowered by 50-200 ft by future mining.

Reclamation Success:

Reclamation of the Beaver Slide was viewed from across the drainage. The area had been disturbed for exploration drilling in 2016. Although most of the bond for the exploration had been released some was still held for this drainage, at the request of the BLM. Mr Edeen had made check dams and broadcast seed in 2019/20. At the time of the inspection the reclaimed area appeared to blend in well with the surroundings, (see Figure 23).

No vegetation had yet germinated on a reclaimed section of exploration road, (see Figure 24).

Support Facilities On-site:

All fuel storage was at the mine office area, and was contained within a berm.

Signs and Markers:

The sign posted at the mine entrance did not satisfy the requirements of the Rules, details are given in the problem citation on the first page of this report, (see Figure 3).

PHOTOGRAPHS

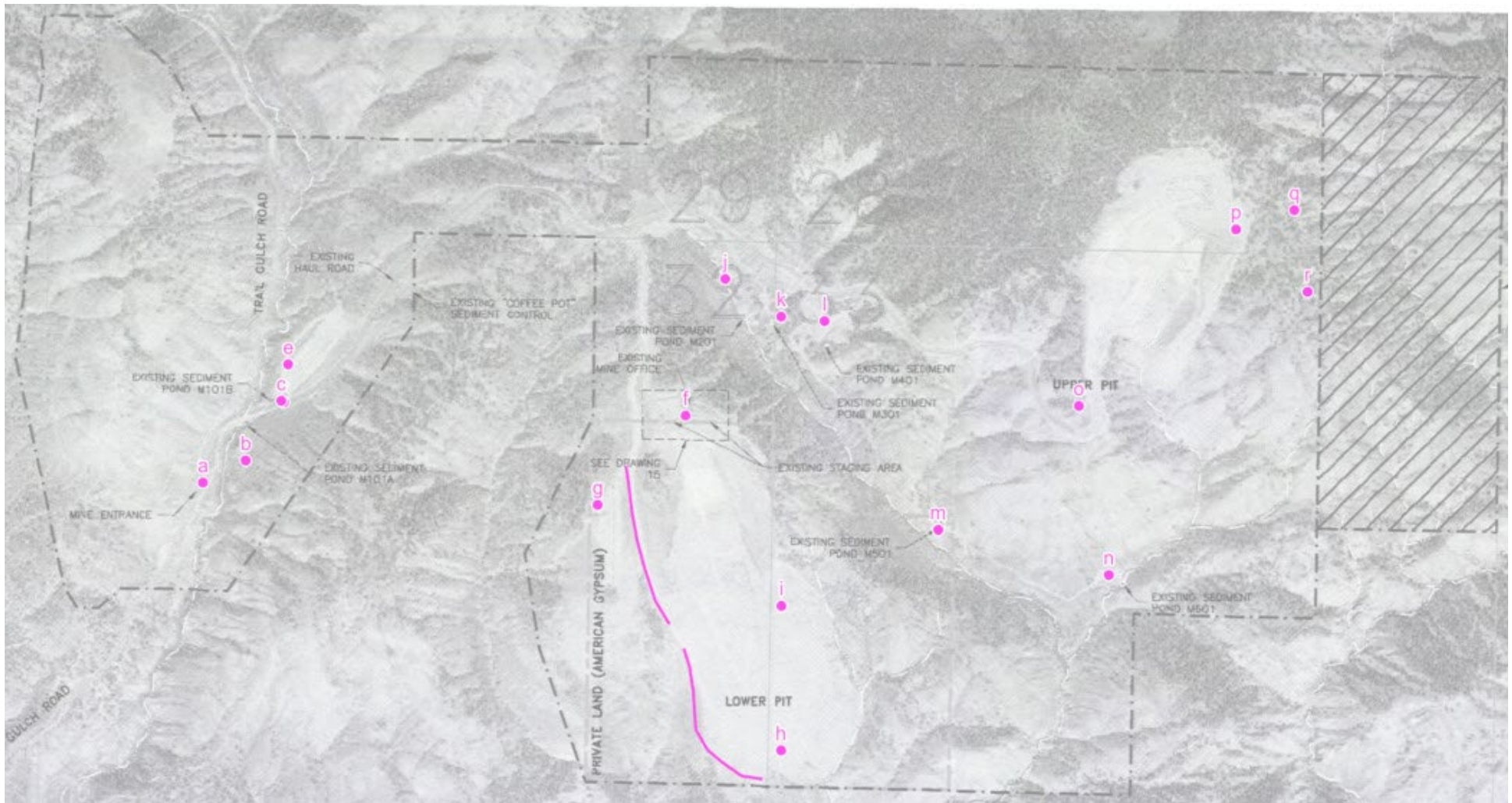


Figure 1: Inspection features, overlaid on 2019 Plan of Operations



Figure 2: Permit boundary and inspection features, overlaid on satellite imagery. Existing Lower Pit haul road shown with pink line.



Figure 3: Mine entrance, showing inadequate Mine ID sign, (a)



Figure 4: Sediment pond 1 south, cleaned earlier this year. Previous erosion problems mitigated with check dams. Most runoff diverted to the Sediment pond 1 north, (b)



Figure 5: Lower of two sumps for Ore Storage Area, no discharge, (c)



Figure 6: Sediment pond 1 north, (d)



Figure 7: Ore Storage Area. Contains enough material for ~2 weeks, around 24,000 tons. No discharge, (e)



Figure 8: Lower Pit North - mined out, (f). Upper section of new haul road on right side of picture.



Figure 9: Upper waste rock dump, parts and equipment storage, (g) (1 of 2)



Figure 10: Upper waste rock dump, parts and equipment storage, (g) (2 of 2)



Figure 11: Mining in progress, Lower pit, (h)



Figure 12: Lower pit, (h)



Figure 13: Backfilling in progress, Lower pit, (i)



Figure 14: Sediment pond M201, (j)



Figure 15: Sediment pond M301, (k)



Figure 16: sediment pond M401, (l)



Figure 17: Sediment pond M501, cleaned out in 2020, (m)



Figure 18: Sediment pond M601, made bigger with permitting of East Pit, (n)



Figure 19: Upper Pit, (o) (1 of 3)



Figure 20: Upper Pit, (o) (2 of 3)



Figure 21: Upper Pit, (o) (3 of 3)



Figure 22: Reclaimed area north of Upper Pit. Bare area was regraded to reduce steepness at BLM request. Will be hydro-seeded again in autumn, (p)



Figure 23: Beaver Slide from across drainage (q)



Figure 24: Reclaimed exploration road, (r)

GENERAL INSPECTION TOPICS

The following list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each

(AR) RECORDS----- <u>N</u>	(FN) FINANCIAL WARRANTY----- <u>Y</u>	(RD) ROADS----- <u>Y</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>Y</u>	(TS) TOPSOIL----- <u>N</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>PB</u>	(SP) STORM WATER MGT PLAN---- <u>N</u>	(RS) RECL PLAN/COMP-- <u>Y</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

Inspection Contact Address

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740 Hwy 6
Gypsum, CO 81637

Enclosure

CC: