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:** Pueblo Cement Plant and Limestone Quarry | **MINE/PROSPECTING ID#:** M-2002-004 | **MINERAL:** Limestone (general) | **COUNTY:** Pueblo |
| **INSPECTION TYPE:** Monitoring | **INSPECTOR(S):** Patrick Lennberg | **INSP. DATE:** November 10, 2020 | **INSP. TIME:** 09:00 |
| **OPERATOR:** GCC Rio Grande, Inc. | **OPERATOR REPRESENTATIVE:** Diana Furman | **TYPE OF OPERATION:** 112c - Construction Regular Operation | |

| | | |
|---|---|---|
| **REASON FOR INSPECTION:** Normal I&E Program | **BOND CALCULATION TYPE:** Complete Bond | **BOND AMOUNT:** $1,885,000.00 |
| **DATE OF COMPLAINT:** NA | **POST INSP. CONTACTS:** None | **JOINT INSP. AGENCY:** None |
| **WEATHER:** Clear | **INSPECTOR'S SIGNATURE:** Patrick Lennberg | **SIGNATURE DATE:** December 11, 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---------- Y | (FN) FINANCIAL WARRANTY-------- Y | (RD) ROADS---------- Y |
| (HB) HYDROLOGIC BALANCE---------- Y | (BG) BACKFILL & GRADING---------- Y | (EX) EXPLOSIVES--------- Y |
| (PW) PROCESSING WASTE/TAILING---- N | (SF) PROCESSING FACILITIES------- Y | (TS) TOPSOIL---------- Y |
| (MP) GENL MINE PLAN COMPLIANCE- Y | (FW) FISH & WILDLIFE---------- N | (RV) REVEGETATION---- Y |
| (SM) SIGNS AND MARKERS---------- Y | (SP) STORM WATER MGT PLAN---- N | (RS) RECL PLAN/COMP-- Y |
| (ES) OVERBURDEN/DEV. WASTE--------- N | (SC) EROSION/SEDIMENTATION--- Y | (ST) STIPULATIONS------- N |
| (AT) ACID OR TOXIC MATERIALS------- N | (OD) OFF-SITE DAMAGE---------- N | |

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

## OBSERVATIONS

The GCC Rio Grande Pueblo Cement Plant and Limestone Quarry was inspected by Patrick Lennberg with the Division of Reclamation, Mining and Safety (Division/DRMS). The inspection was completed as part of the Division's routine monitoring inspection program. The site was previously inspected by the Division on November 13, 2015 as part of routine monitoring program. Diana Furman, representing the Operator, accompanied me during the inspection. The weather was clear and warm.

The Pueblo Cement Plant and Limestone Quarry is located in Pueblo County approximately 8 miles south southeast of Pueblo, Colorado. The Pueblo Cement Plant and Limestone Quarry is a 2,500- acre 112c Construction Materials Reclamation Permit. The permit was issued in August 2003. The primary commodity mined at the site is limestone. The approved post-mining land use for the quarry area is rangeland and industrial/commercial for the plant site area. A mine sign was not posted at the mine entrance as required by Rule 3.1.12. However, after the inspection the operator was able to post a new mine sign prior to issuance of this report.

In 2011 the approval of AM-01 removed the cement plant site from the affected area calculations and removed the requirement for the operator to carry a financial warranty for reclaiming the plant area. In 2015 TR-5 was approved to allow the operator to use bag house dust as backfill material in the quarry area. The material must have a three foot cover including overburden and top soil. In 2020 updates to the Groundwater Sampling and Analysis Plan were approved through TR-7.

Currently there are three groundwater monitoring wells, MW-6, -7, and -8 that are sampled quarterly. Well MW-8 was installed earlier this year. Sample collection from wells MW-6 and MW-8 have proven to be challenging dues to low recharge rates. The operator is currently evaluating protocols and methods to be able to consistently collect samples from the slow recharging wells. As part of TR-7 the operator submits to the Division an annual groundwater sampling report. Any exceedances of groundwater standards are reported in accordance with Rule 3.1.7(9).

Mining activities have affected all of mine block 1 and portions of mine blocks 2 and 3, see attached map. The attached map, provided by the operator, shows the status of the affected area as of 11/19/2020. Approximately 121.9 acres have been backfilled, graded to a 3H:1V slope or shallower, and seeded. There are some areas that have 3+ years of growth and appear very stable and self-regenerating. There are 14.9 acres, to-be-reclaimed, were material is actively being backfilled. There are 13.2 acres, stabilized, that require final grading and seeding. The active mining area is 12.4 acres and includes a highwall that is 14,670 feet long and averages 29 feet in height. Haul roads and conveyors account for 58.6 acres. The conveyor system consists of 4,440 feet of conveyor from a storage dome to a mobile crusher. The conveyor system is cemented in place with the remaining portion is made up of a mobile conveyor segments to the crusher/screener. Stormwater runoff from in the quarry area is directed to a 1.9 acre pond located at the entrance to the quarry area. The pond is pumped out according to their discharge permit.

Mining is completed at the site by first removing topsoil and overburden material that covers the Fort Hays Limestone. The removed material is then used to reclaim previously mined areas. The limestone is typically 35 feet thick and overlays the Codell Sandstone. In TR-04 the mining plan was changed to reflect that mining would not extend into the sandstone unit as was originally approved. This change would leave a couple feet of

limestone as the pit floor. Once the limestone is exposed a blasting occurs, the depth of blasting varies but averages around 29 feet. The blasted material is then loaded into a mobile screener/crusher located near the active mine face. The material is reduced in size to about 5-inches and conveyed to a storage dome located on within the plant and processed into cement products.

As mentioned above topsoil and overburden material is used to reclaim previously mined areas. If an area is not prepared for the material then topsoil and overburden are stockpiled in separate stockpiles. All slopes are graded to 3H:1V at a minimum but a 4H:1V slope is what the operator has been reclaiming most slopes to. The pit area is to be reclaimed to achieve contours that reflect the original contours and that is to slope towards the Saint Charles River located north of the site. Because of this and varying thickness of limestone the thickness that overburden is placed will vary across the site but at a minimum overburden will be 12-inches. Topsoil will be replaced 6-inches at a minimum. However, in TR-05 the operator committed to placing a 3-foot cover of overburden and topsoil over areas where bag house dust was being used as backfill material. The operator is reclaiming the site by placing 3 feet of material everywhere. The operator was approved to landfill clean and inert material on approval of TR-05. The haul roads will be reclaimed by ripping, covering, and seeding. The permanent conveyor system will be removed to the storage dome in the plant area.

The financial warranty was recalculated as part of this inspection. A copy of the Division's estimate will be sent to the operator for review under a separate cover letter.

Photographs taken during the inspection are attached.

Please contact Patrick Lennberg (303)866-3567 ext. 8114 or email at patrick.lennberg@state.co.us if you have any questions regarding this report.

**Inspection Contact Address**
Diana Furman
GCC Rio Grande, Inc.
3372 Lime Road
Pueblo, CO 81004

cc: Jared Ebert, DRMS

ec: Diana Furman, GCC Rio Grande, Inc., dfurman@gcc.com

## PHOTOGRAPHS

**Photo 1:** Entrance to the quarry, where the conveyor system connects to the storage dome

**Photo 2:** Conveyor leading to the active mining area

**Photo 3:** Stormwater detention basin, water from recent storm event

**Photo 4:** Typical conditions of reclaimed areas that have multiple years of growth

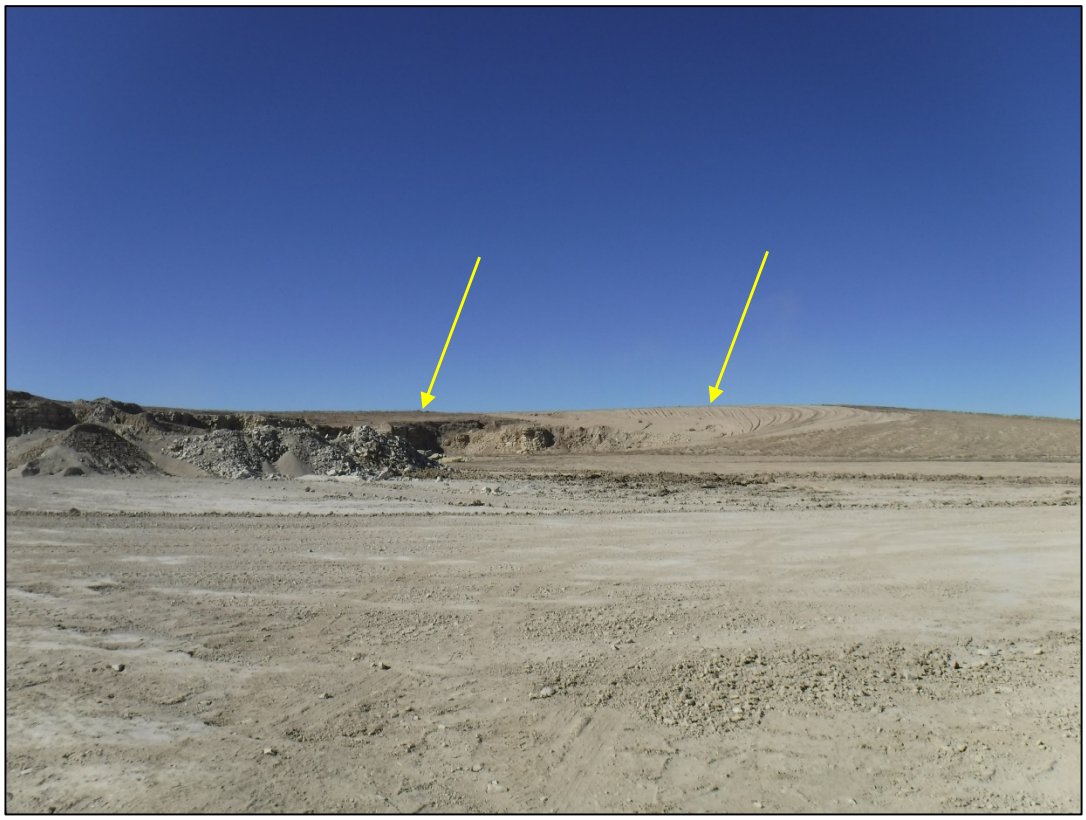


**Photo 5:** Reclaiming activities, yellow arrows indicate mine face and concurrent reclamation

**Photo 6:** Scraper transporting overburden material to be placed, yellow arrow indicate topsoil stockpile, note highwall below scraper

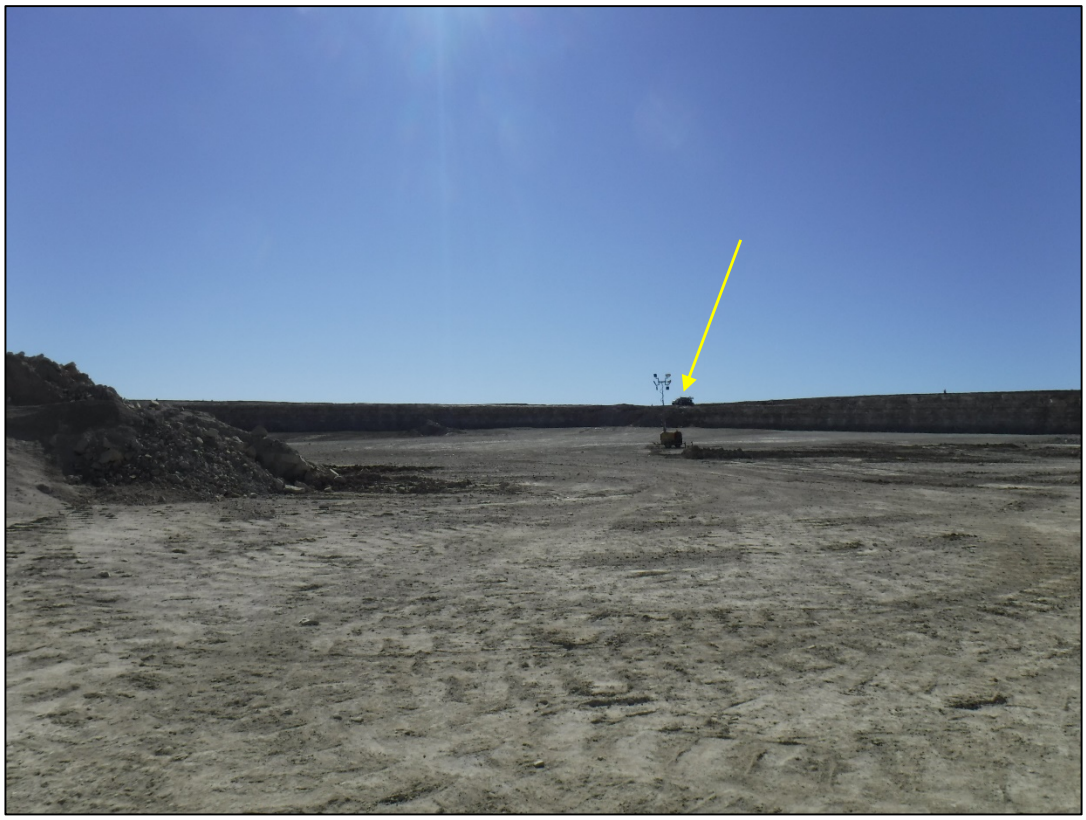


**Photo 7:** Active highwall area, yellow arrow shows ANFO truck loading blast holes

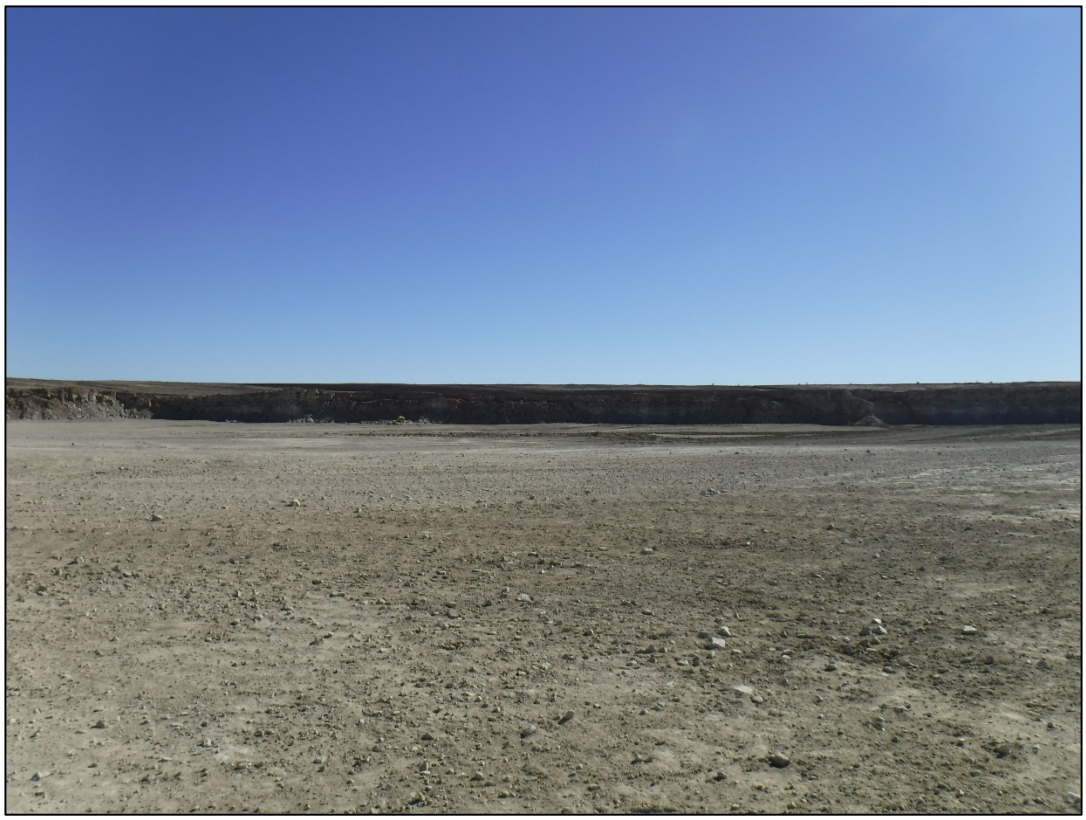


**Photo 8:** Another portion of the active highwall area

**Photo 9:** Mobile crusher/screener near active mine area

**Photo 10:** Mobile conveyor belt segments

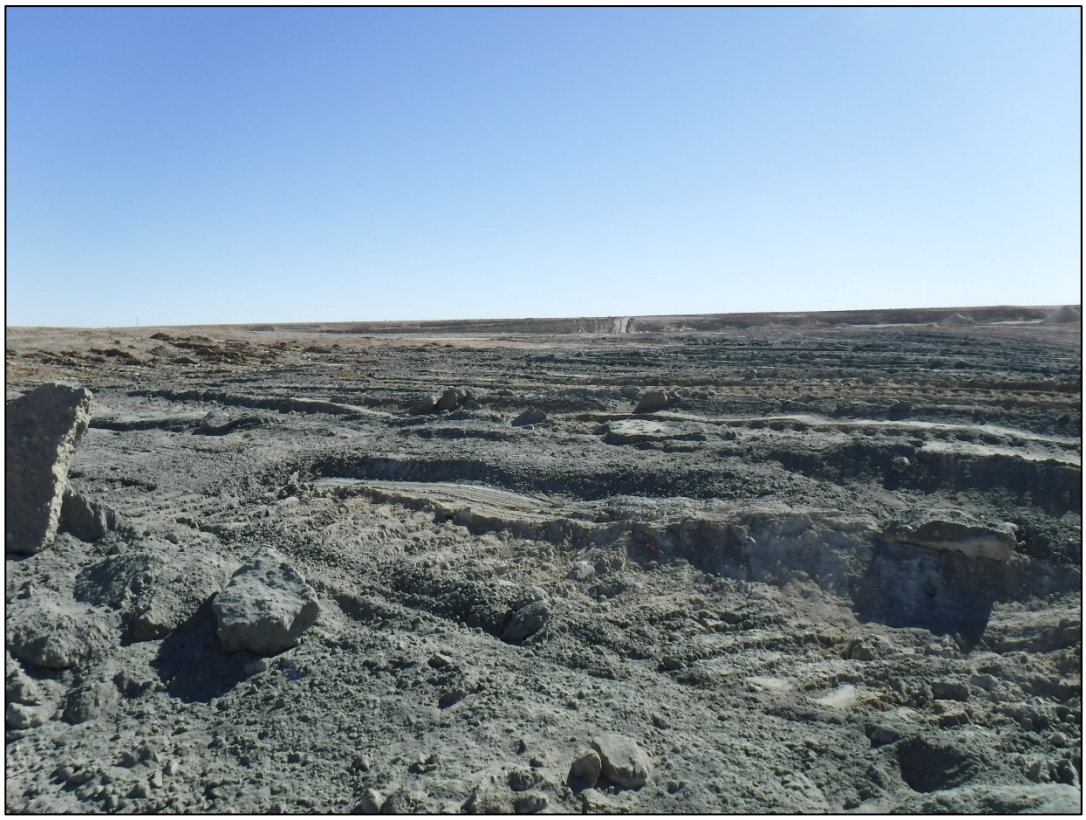


**Photo 11:** Reject raw feed and product used for backfill, will be under three feet of overburden and topsoil

**Photo 12:** Reject material foreground and bag house dust material background (yellow arrow)

**Photo 13:** Bag house dust material being beneficially reused

**Photo 14:** Active pit area from a distance

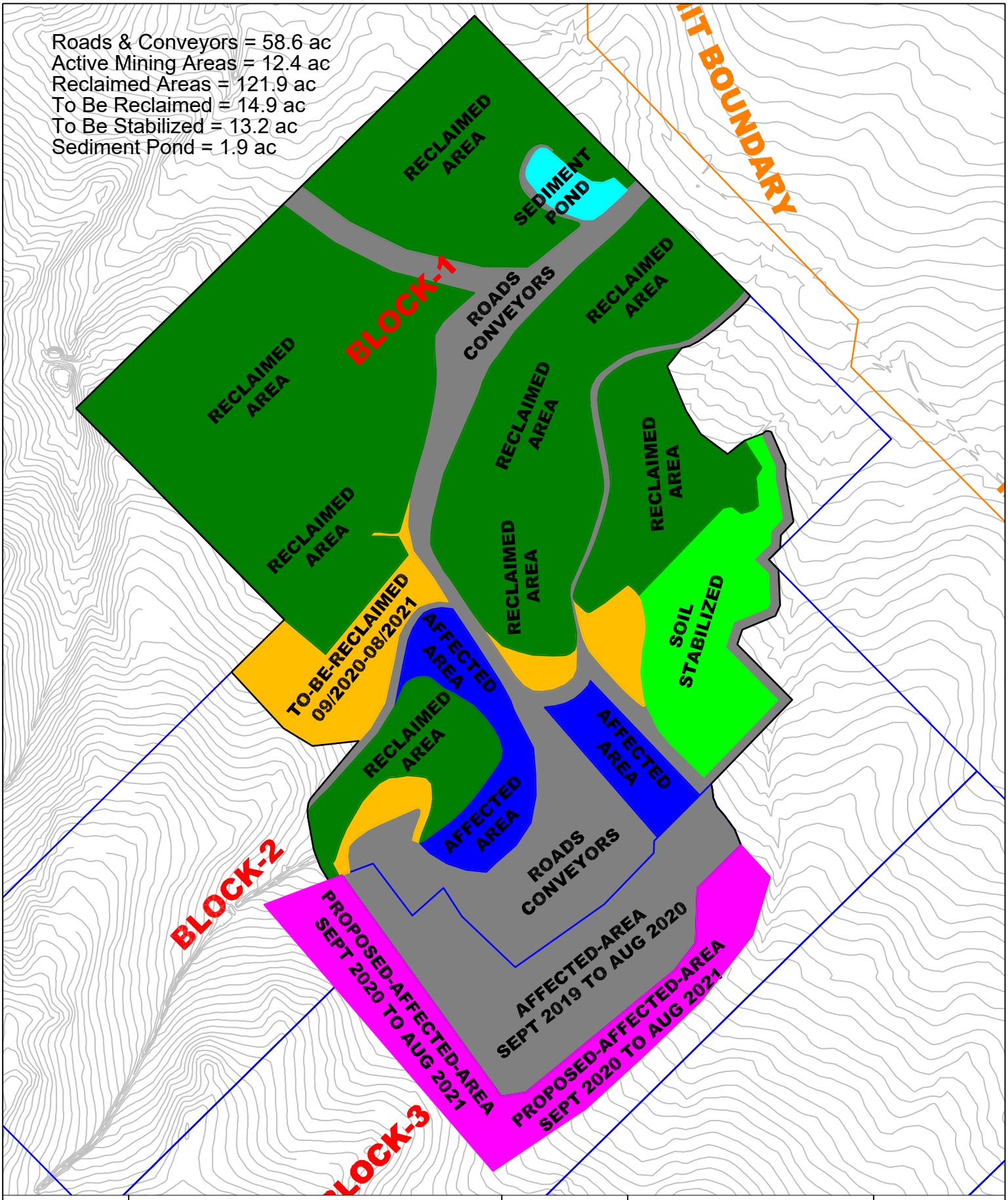
**Photo 15:** Conveyor belt system with crusher/screener (center left of picture)

**Photo 16:** Conditions of site unaffected by mining

**Photo 17:** Monitoring wells 6 and 7

**Photo 18:** Monitoring well 8


**Photo 19:** Mine sign posted after inspection




| | | | |
|---|---|---|---|
| | **Project: Reclamation Map** | | **Date: Nov-23-2020** |
| | **Designed By: Joseph Joshua** | | **Scale: 1" = 49.8642'** |
| | **Approved By: Joseph Joshua** | | **Rev #: 01** |