




**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.

<b>MINE NAME:</b> Worthing Pit	<b>MINE/PROSPECTING ID#:</b> M-1977-526	<b>MINERAL:</b> Sand and gravel	<b>COUNTY:</b> Adams
<b>INSPECTION TYPE:</b> Monitoring	<b>INSPECTOR(S):</b> Jared L. Ebert	<b>INSP. DATE:</b> November 9, 2017	<b>INSP. TIME:</b> 09:30
<b>OPERATOR:</b> Albert Frei & Sons Inc.	<b>OPERATOR REPRESENTATIVE:</b> Ben Frei and Steve O'Brian	<b>TYPE OF OPERATION:</b> 112c - Construction Regular Operation	
<b>REASON FOR INSPECTION:</b> Normal I&E Program	<b>BOND CALCULATION TYPE:</b> None	<b>BOND AMOUNT:</b> \$230,800.00	
<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> November 29, 2017	

**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>N</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>Y</u>	(SF) PROCESSING FACILITIES----- <u>Y</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>Y</u>	(SP) STORM WATER MGT PLAN---- <u>NA</u>	(RS) RECL PLAN/COMP-- <u>Y</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>Y</u>	(SC) EROSION/SEDIMENTATION--- <u>Y</u>	(ST) STIPULATIONS----- <u>NA</u>
(AT) ACID OR TOXIC MATERIALS----- <u>Y</u>	(OD) OFF-SITE DAMAGE----- <u>Y</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 monitoring inspection of the Worthing Pit, DRMS Permit No. M-1977-526, operated by Albert Frei and Sons, Inc. (Operator). I, Jared Ebert with the Colorado Division, of Reclamation, Mining and Safety (Division or DRMS) conducted the inspection. This inspection was conducted in response to a complaint received by the Division on October 6, 2017 from Mr. Ken Russell the representative of Grace Russell and S.H. Bud Scott who own property adjacent to a portion of the site's eastern permit boundary where they run a artesian water business called the Fountain of Health. I met with Mr. Russell, Mrs. Russell and Mr. Scott at their property at 09:30am to discuss their concerns. At 10:07am, I met with Ben Frei with Albert Frei and Sons, Inc. and Steve O'Brian their consultant with Environment, Inc. at the site.

The Worthing Pit is a 160.9 acre 112c mining operation for sand and gravel located in Adams County. The approved post mine land use for the site is residential, recreation, rangeland and water storage.

Below is a list of items included in Mr. Russell's complaint followed by the Division's response to these items:

1.) By a verbal agreement between the Operator and Mrs. Russell, a berm was constructed on Mrs. Russell's property between their home and the processing facilities/mining operation to the west and between their home and the mine entrance to the north. According to Mr. Russell, it was agreed the Operator would remove the berm once the crusher was removed from the mine's property. Mr. Russell indicated the Operator now refuses to remove the berm.

Since the complaint was received by the Office, it appears Mr. Russell and Mr. Frei have agreed the berm will be removed. According to Mr. Russell, they signed a statement indicating they wished the berm was removed and sent it to the Operator. After speaking with Ben Frei, he indicated once he gets the signed statement requesting the berm's removal, they would remove the berm. At the time of the inspection, it appears part of the berm had been removed by the Operator. The berm is about 15 feet in height with steep side slopes and partially vegetated with annual weeds. The majority of the berm was located on the Russell's property with the remainder within the Worthing Pit's permit area.

2.) The crusher went out of operation over 5 years ago and no reclamation was ever performed on the property surrounding the Fountain of Health's business/Russell property.

The area north of the Russell property is used as the access point for the mining operation and the inert fill activity occurring at the site. The area to the west and south of the Russell property is part of the North Expansion Area that was approved to be mined in 2005 with the approval of the Amendment No. 1 (AM01) application. There was a pre-existing lake west of the Russell property prior to the AM01 application. It looks like mining operations began south and west of the pre-existing lake and moved eastward. Based on Google Earth™ aerial imagery and the Annual Reports submitted by the Operator, it seems construction materials extraction ceased in the North Expansion Area between 2008 and 2010 and the Operator began to backfill this area with tailings from the mining operation. Since that time, the Operator has slowly backfilled the pit on the south and west side of the North Expansion Area and have slowly backfilled north toward the Russell property. The Operator was stockpiling material directly west of the Russell property up until 2014. The approved reclamation plan calls for backfilling the North Expansion Area. The total volume and final elevation of the backfilling was approved to be dependent on whether the Operator was going to create a lined water storage

reservoir in the Pit 1 and 2 area north of the Russell property.

In accordance with C.R.S. 34-32.5-112(6), "reclamation shall be completed within five years after the date the Operator advises the board (Colorado Mined Land Reclamation Board) that each phase of construction material extraction has been completed, as provided by section 34-32.5-116(4)(q). Such five-year period may be extended by the board upon finding that additional time is necessary for the completion of the terms of the reclamation plan." Based on a review of the Operator's annual reports submitted for this site, active construction material extraction was last noted in the 2014 annual report received by the Division on March 12, 2014. Since then, the Operator has noted that they continue to process mined material and remove material from onsite stockpiles. In accordance C.R.S. 34-32.5-112(6) and C.R.S. 34-32.5-116(4)(q), the Operator has until March 12, 2019 to complete reclamation of the North Expansion Area. After speaking with Ben Frei, he indicated they intend to conduct some additional excavation within the slurry wall lined pit located in the South Expansion Area. Given this, they will have excess material they intend to use to complete backfilling the North Expansion Area. He estimated this would occur in the next year and a half. The Operator will need to file a technical revision to update the mining and reclamation plan for this proposed activity.

In conclusion, the Operator has several options regarding the completion of reclamation of the North Expansion Area. First, they could complete reclamation by March 12, 2019. Second, the Operator would have to seek approval from the Division for additional time to complete reclamation in accordance with Rule 3.1.3. This could be accomplished by filing a Technical Revision. Third, the Operator could file a Technical Revision to update the mining plan and reclamation plan to address the additionally proposed excavation within the South Expansion Area and the utilization of material from this excavation to backfill the North Expansion Area. If this is done, the Operator would have five years from completion of the additional excavation to complete reclamation.

3.) Concerns regarding truck traffic, noise, dust and economic impact on the Fountain of Health water business.

While the Division sympathizes with the concerns raised regarding these issues, under provisions of C.R.S. 34-32.5-101 et seq., these issues are not subject to this Office's jurisdiction.

#### Backfilling and Grading:

The Operator continues to backfill inert material in the lined pit (Pit 2) in the northeast portion of the site. The Operator is slowly backfilling the North Expansion Area in the "Tailings Area" shown on the 2017 annual report map.

#### Hydrologic Balance:

The groundwater drain installed in the South Expansion Area was observed. This drain appears to be functioning and water was flowing and discharging into the South Platte River.

#### Gen. Compliance With Mine Plan:

Overall, it appears construction materials extraction has been completed at the site, at least temporarily. The Operator has continued to sell and remove material from the existing onsite material stockpiles located in the processing area. As indicated above, the Operator may conduct some additional excavation in the South Expansion Area within the slurry wall lined pit to deepen the reservoir. According to Mr. Frei, this would yield excess shale material they would use to backfill the remaining tailings area in the North Expansion Area. The

Operator will need to file a Technical Revision to the mining and reclamation plan to address this change in the currently approved plan.

Reclamation Success:

Portions of both the North and South Expansion Area have been backfilled, graded and revegetated with a mixture of grasses and Alfalfa. These areas are depicted on the 2017 Annual Report Map. These area appear stable and well vegetated.

Pit 1 is an open water lake that is used for recreation.

Pit 2 is being filled with inert fill. A small pit remains to be filled. The area surrounding the pit is graded fairly level and a French drain has been installed on the east side of the pit. The French drain drains to a channel and a pipe that flows west into Pit 1 north of the residential area within the site.

Support Facilities On-site:

Mined material stockpiles are located within the processing area.

Topsoil:

Topsoil is stockpiled in the southwest corner of the former plant site.

## **PHOTOGRAPHS**



**Figure 1. Northeast corner of Russell property looking west at the berm.**



**Figure 2. Northwest corner of the berm partially removed.**



Figure 3. South Expansion Area reservoir from the north end looking southwest.



Figure 4. South Expansion Area reservoir from the north end looking southeast.





Figure 5. North end of South Expansion Area, reclaimed.



Figure 6. Groundwater drain.



**Figure 7. Groundwater drain discharge.**



**Figure 8. Groundwater drain.**





Figure 9. From the south end of the North Expansion Area looking northeast.



Figure 10. From the middle of the North Expansion Area looking northeast.



Figure 11. Northeast corner of North Expansion Area.



Figure 12. Inert fill in Pit 2.



Figure 13. Pit 2 from west side looking east.



Figure 14. French drain installed on the east side of Pit 2.

**Inspection Contact Address**

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