




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: Mahogany Research Project - Prospecting on SFOGI Land	MINE/PROSPECTING ID#: P-2003-022	MINERAL: Oil shale	COUNTY: Rio Blanco
INSPECTION TYPE: Monitoring	INSPECTOR(S): Amy Yeldell	INSP. DATE: June 1, 2022	INSP. TIME: 09:00
OPERATOR: Shell Frontier Oil & Gas Inc.	OPERATOR REPRESENTATIVE: Samantha Baker	TYPE OF OPERATION: MP - Mineral Prospecting	
REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: None	BOND AMOUNT: \$6,666,003.00	
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None	
WEATHER: Clear	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: June 14, 2022	

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>Y</u>
(HB) HYDROLOGIC BALANCE----- <u>Y</u>	(BG) BACKFILL & GRADING----- <u>Y</u>	(EX) EXPLOSIVES----- <u>NA</u>
(PW) PROCESSING WASTE/TAILING---- <u>NA</u>	(SF) PROCESSING FACILITIES----- <u>Y</u>	(TS) TOPSOIL----- <u>NA</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>N</u>	(RS) RECL PLAN/COMP-- <u>Y</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>NA</u>	(SC) EROSION/SEDIMENTATION--- <u>Y</u>	(ST) STIPULATIONS----- <u>Y</u>
(AT) ACID OR TOXIC MATERIALS----- <u>NA</u>	(OD) OFF-SITE DAMAGE----- <u>NA</u>	

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

OBSERVATIONS

This inspection was conducted as part of the Colorado Division of Reclamation, Mining, and Safety normal monitoring program. The Mahogany Research Project – Prospecting on SFOGI Land is a Hard Rock NOI located in Rio Blanco County. Amy Yeldell of the Division conducted the inspection. Samantha Baker represented the Operator.

The permitted NOI includes a total of 72.33 acres and has a required bond of \$6,666,003. The last acreage reduction AR-3 occurred in 2021. Additionally MD-5 allowed for the upper facilities to remain. Many of these areas are eligible for acreage reductions or surety reductions so long as the current land use and post-mining land use match. The following pads/locations remain permitted: Pad 6-25, B11-26, B-13-2, M7R, M9R, M16L5, M17L5, M18L5, M19L5, M20L5, Upper Loop Road, Upper Facility Area, Coral Gulch-Met Station, Sagebrush Hill- Met Station, Bad D- Met Station, Moon Lake Electrical Substation, Powerline – 25Kv Moon Lake substation to MIT, Powerline – 138 KV to MLS, Powerline - 7.2Kv MLS to MDP/MTE site, Powerline – 14.4Kv to MDP/MTE site and Airplane Ridge Road (private portion) including utilities along easement. All hydrology wells have been abandoned and pads have been reclaimed. The last reclamation efforts were completed in 2016 and now are awaiting adequate vegetation establishment. The past winter was extremely dry with very little snow/ moisture. This spring/ early summer has been very cold with limited precipitation. Generally plants are behind schedule in germination and inspection timing is more comparable to typical March/April site conditions. Wild horse populations have significantly increased and vegetation throughout the Piceance Basin is showing signs of overgrazing. Over all pads are stable with no signs of erosion. All mining related debris has been removed from the site(s). Specific observations of each pad/feature are listed below:

Lower Camp/Coral Gulch: Four office trailers, the galley and one living quarters trailer remains on site. Similarly the warehouse, gas station, buried propane, septic and gas sheds also remain on site. These features are being utilized by the landowner for purposes other than mining. The current reclamation plan calls for total removal of all features upon final reclamation. Given that the landowners bought these assets and wants to keep them the Operator needs to modify their reclamation plan to allow for them to remain post-mining. Documentation of the landowner assuming liability for the features will also be required. The domestic water well should be transferred, if it has not already been. Once permit modifications are complete, release of eligible areas may be requested.

Coral Gulch Microwave/relay tower: Feature remains on site. It was discussed that another operator may want to assume liability this feature rather than having the Operator remove it. This can be done by modifying bother permits, one to remove it and the other to add it. After permit modification a release may be requested.

*M9R: Overall pad is rocky but good grass cover. A few shrubs have begun to immerge. Overall plant cover is approximately 80% with no noxious weeds observed.

M20L5: Overall good plant diversity which includes forbs, and flowers. Lower (downhill) portion of the pad has dense patches of Cheatgrass that needs to be maintained before it spreads. Overall the pad density and cover meets the release criteria minus the cheatgrass area, aggressive management should be employed.

M18L5: This area is located off of Airplane Ridge road and has been utilized by another operator as a staging area. All equipment has since been removed but evidence of vehicle traffic was apparent. Some patches of Cheatgrass have immerge due to disturbance.

Upper Loop Road and Upper Facility Areas (MDP, DHT and MFE): Upper camp control room warehouse and electrical room remain in place per MD-5. The pad area has been graded and vegetation is starting to volunteer, establishment is not required per MD-5. Slopes have been contoured and naturally blend with vegetation at approximately 50%. Weeds are being effectively managed and soils appear stable. The stormwater channel needs maintenance/repair. Straw waddles have been undermined and are cutting/eroding a channel. More permanent BMPS, as well as employing vegetative buffers may help combat erosion. The lower sediment/evaporation pond adjacent to the tank farm has resulted in slight depression however vegetation has yet to establish. Given the time to allow for natural establishment additional touch-up work may be necessary.

M7R: Drill seed rows/ contouring is continuing to hold. Despite being on a hill the pad is free of erosion. Hand full of noxious weeds (Houndstounge) but infestation is steadily decreasing year to year. Vegetative cover is slowly increasing however overall density is still fairly low (less than 50%). Spot/hand seeding may be beneficial to get additional boss in vegetation establishment to meet release criteria.

*M16L5: Located off the side of the road/drainage. Area blends naturally with surrounding topography.

*M17L5: Long access road that is primarily grasses. Pad itself is well vegetated and appears as a natural opening. No signs of erosion or noxious weeds.

*Upper Camp: Warehouse building with cistern and septic system remains on site. Upper camp warehouse was permitted to remain in MD-5. All portable trailers have been removed. The communication/ radio building remains in place. Roads are stabilized with gravel. Surrounding areas are stabilized with vegetation. Weed management treatments appears to be appropriate.

*Airplane Ridge Road (Private): Road is to remain due to use by other users. Overall the road is in good shape and appears well maintained. Misc. utilities located in road easement are all well reclaimed and only identifiable my signs or markers. No roadside weeds were observed and as well as no erosion or sedimentation.

B11-36: Short road with gate. Mostly undesirable plants but they are not state listed noxious weeds. Removal treatments will likely leave the pad nearly void of vegetation. Operator may wish to consult with vegetation/ weed expert to see if native vegetation will outcompete to establish desirable plants without intervention. Wide variety of native shrubs/forbs just at very low densities.

B13-2: Access road. Lots of noxious weeds and undesirable plants. Some shrubs and a few grasses. Evaluate efficiency of treating undesirables which may result in little to no remaining vegetation on pad.

*** Note B10-35 was inspected however based on the Divisions records this pad was released in 2015 under AR-2.

* Indicates areas where final reclamation has been achieved.

Responses to this inspection report should be directed to Amy Yeldell at the Division of Reclamation, Mining and Safety, Room 215, 1001 E 62nd Ave, Denver, CO 80216. Direct contact can be made by phone at 303-866-3567 Ext 8183 or via email at amy.yeldell@state.co.us

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Enclosure

EC:

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PHOTOGRAPHS

























