




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 | WEATHER: Clear | INSP. DATE: July 26, 2023 | INSP. TIME: 07:45 |
| 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 | |
| INSPECTOR(S): Amy Yeldell | INSPECTOR'S SIGNATURE:  | SIGNATURE DATE: August 11, 2023 | |

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>NA</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, Dillon Berry and Dave Murray 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 and production wells have been abandoned and pads have been reclaimed. The final reclamation efforts were completed in 2016 and now are awaiting adequate vegetation establishment. Some spot seeding has been done more recently. The past winter consisted of heavy snows with warmer than average temperatures. The early spring/summer was very cold and plant germination was slow up till mid-June when temperature's skyrocketed into the high 90's with little to no moisture. Late June a few storms have begun but the summer monsoons have not truly started. Wild horse populations have continued to be a nuisance despite the round up last year. Vegetation throughout much of the Piceance Basin is showing signs of overgrazing. Though grazing pressures from the horses' are considerably less at higher elevations sites. Cattle were also observed grazing throughout the private property. 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:

- B11-36: Short access road with gate. The weeds have improved significantly since the previous inspection, very few weeds remain. A wide variety of native shrubs/forbs are present with some perennial grasses coming. This pad has been grazed very hard but overall is doing well considering the pressure. Pad will likely be eligible for release next year if things continue to improve. See Photo One.
- M7R: Despite being on a steep slope the pad has very little erosion. Drill seed/ contours have nearly all flattened out now. A hand full of noxious weeds (Hounds tongue) still remain but the infestation is steadily decreasing year to year. Desirable vegetation is a blend of well-established shrubs and perennial grasses. Overall cover is 70% and comparable to surrounding areas. Continue to manage weeds over the summer and pad will likely be eligible next year. See Photo Two.
- *M9R: There is a short two track road with some evidence of use but overall is stable and mostly vegetated. Overall pad is rocky but good grass cover. The few shrubs and forbs appear to be well-established. Overall plant cover is diverse and approximately 80% with no noxious weeds observed. See Photo Three.
- *M18L5: This area is located off of Airplane Ridge road and has previously been utilized by another operator as a staging area. The area has since recovered well. Cheatgrass observed during the last inspection appears to be well controlled and desirable vegetation is outcompeting well. In general vegetation appears sustainable and comparable to the adjacent undisturbed areas. See Photo Four.

*M19L5: A long access road from pad M18L. This road is less frequently used but still has a faint two track. Vegetation is present throughout the road and erosion is well controlled even with use. The pad itself is slightly rocky but low shrubs appear to be doing well. Perennial grasses are also present with no weeds. See Photo Five.

M20L5: Overall good plant diversity which includes perennial grasses, forbs, and flowers. There are patches where overall desirable plant density is low, likely due to previously having weeds that have since been treated. Weeds should continue to be maintained to allow for desirable species to continue to establish. See Photo Six.

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 continuing to volunteer. Establishment of vegetation is not required per MD-5 so long as erosion is well controlled. Slopes have been contoured and naturally blend with vegetation at approximately 50% cover. Weeds are being effectively managed and soils appear stable. The lower sediment/evaporation pond adjacent to the tank farm has resulted in a slight depression. Vegetation appears to be well established. See Photos Seven and Eight.

Repairs have begun on the stormwater channel. The previously installed straw waddles have proved inadequate over time. Earthen berms have been installed with a geomembrane that will be covered with imported rock. Additional rock is to be placed on and within the channel. It is recommended to add smaller rock check dams along the channel. Creating a more u-shaped channel rather than v-shaped will also help distribute the water and reduce downward cutting. Completion of this project is anticipated this fall. See Photo Nine.

*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 (identify if this is being taken over by another operator). Roads are stabilized with gravel. Surrounding areas are stabilized with vegetation. Weed management treatments appear to be appropriate. See Photo Ten.

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 landowner 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. Please provide documentation from Division of Water resources once complete. Once permit modifications are complete, release of eligible areas may be requested. Alternatively if they are 'double' permitted through DRMS, Shell could request release so long as there is no lapse in jurisdiction. See Photos Eleven and Twelve.

Coral Gulch Microwave/relay tower: Feature remains on site. It was discussed that another operator may want to assume liability for this feature rather than having the Operator remove it. The Operator will need to modify their reclamation plan to allow the features to remain and provide documentation that the asset has been transferred. Or a different operator can permit the feature, thus 'double' permitting it and Shell can request release since there is no lapse in liability.

*Airplane Ridge Road (Private Portions): 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 no erosion or sedimentation.

* Indicates areas where final reclamation has been achieved and areas are eligible for release.

Once an acreage reduction has been processed, a surety reduction to reflect progress to be made can also be requested. Please provide documentation of the features which remain on site and associated acreages requiring reclamation with the request.

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

Inspection Contact Address

Samantha Baker
Shell Frontier Oil & Gas Inc.
4487 County Road 233
Rifle, CO 81650

EC:
Travis Marshall, Senior EPS, Grand Junction DRMS
Samantha Baker, Shell
Dave Murray, Consultant

PHOTOGRAPHS



Photo 1: Pad B11-36 pad is rocky and desirable species are slowly establishing



Photo 2: Pad M7R increasing vegetative cover, continue to manage weeds



Photo 3: Pad M9R rocky but good cover and no weeds.



Photo 4: Pad M18L5 recovered well and blends.

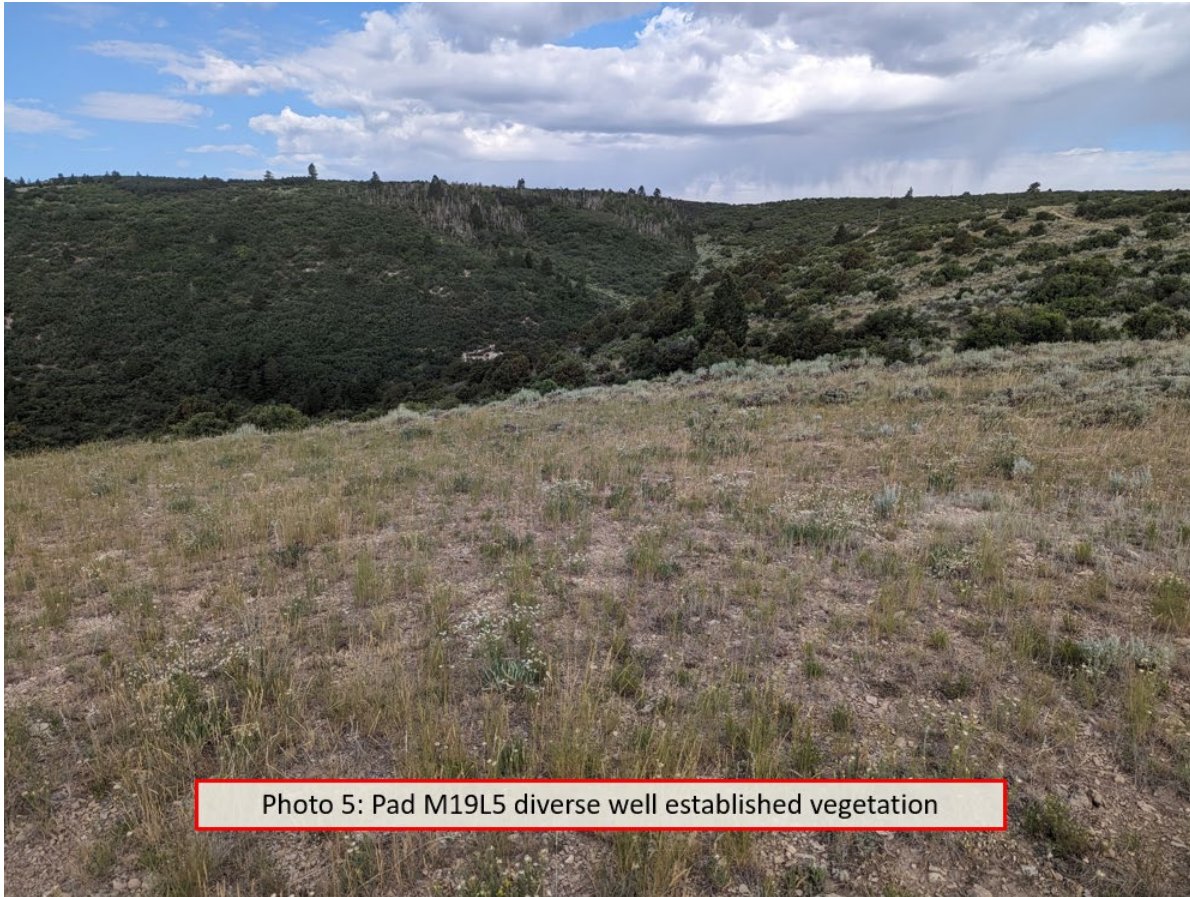


Photo 5: Pad M19L5 diverse well established vegetation



Photo 6: Pad M20L5 few patches were more vegetation is needed



Photo 7: Upper facility areas, buildings remain and vegetation volunteered



Photo 8: Upper facility area, slopes stable and vegetation has established



Photo 9: overview of stormwater channel repair.



Photo 10: Upper camp warehouse area.



Photo 11: Coral Gulch / Lower Camp trailers remaining on site



Photo 12: Lower camp warehouse