




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: AMSO RD&D Project-Phase 1	MINE/PROSPECTING ID#: P-2008-046	MINERAL: Oil shale	COUNTY: Rio Blanco
INSPECTION TYPE: Monitoring	WEATHER: Clear	INSP. DATE: August 7, 2023	INSP. TIME: 12:00
OPERATOR: American Shale Oil, LLC	OPERATOR REPRESENTATIVE: Bruce Smith	TYPE OF OPERATION: MP - Mineral Prospecting	
REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: None	BOND AMOUNT: \$46,789.00	
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None	
INSPECTOR(S): Amy Yeldell	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: August 17, 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>NA</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 (Division) normal monitoring program. The AMSO RD&D Project-Phase 1 is a Hard Rock NOI located in Rio Blanco County. Amy Yeldell of the Division conducted the inspection. Bruce Smith represented the American Shale Oil, LCC. No representative of the White River Field Office BLM was present for the inspection.

The permitted NOI includes a total of 10.7 acres (13.6ac) and has a current cash bond of \$46,789. The entire site is in final reclamation. All equipment, surface facilities or other mining related infrastructure has been removed. All surface grading/contouring and topsoil application have been completed. The pads have been seeded with the appropriate BLM seed mixes and are waiting for adequate plant establishment. A three-strand wire exclusion fence remains in place around all affected lands. Over all pads are stable with no signs of erosion.

The MWP1 has a short access road leading to the pad (Photo One). Overall the pad has good shrub cover which has increased since the previous inspection. Some grasses have established but they do not seem to be increasing or spreading as expected. There is a fair amount of Russian Thistle which has been treated. Treatment of noxious weed species has resulted in areas with sparse vegetation and desirable grasses have not volunteered to fill in the gaps (Photo Two). Desirable cover is estimated to be approximately 50%.

The Test Pad has two access roads. The back road to the radio tower remains in place as reclaimed two-track for access to the tower. The front one is fenced and reclaimed. Reclamation on the pad is extremely patchy especially along the southwest corner. Vegetation tends to be entirely noxious weeds or dense patches of desirable plants (Photo Three). Russian Thistle is primarily the species of concern in this area but Kochia and Cheatgrass were also identified. Overall the shrubs seem to be progressing well but the understory grass is struggling to outcompete the weeds (Photo Four).

*The HB Pad has a fairly long access road with a break to allow for cattle to cross. Adjacent to the county road is a pipeline which crosses the access road. This pipeline has recently been reworked (Photo Five). The Operator is not liable for reclamation of this area as areas were previously reclaimed prior to disturbance by the gas company (Photo Six). Vegetation naturally blends with surroundings. Reclaimed areas have dense well established shrubs. Native grasses have also established in the understory and overall cover is at least 80% (Photos Seven and Eight). Little to no weeds were observed aside from a few stray Russian Thistle and Cheatgrass. Undesirable species were less than 3% of overall cover and comparable to surrounding areas.

The TM Pad is similar to the Test Pad in that vegetation is either entirely weeds or desirable, with little in between. However the Kochia seems to be much worse here compared to the other pads. The Division estimates that 50% of all vegetation is noxious weeds (Photos Nine and Ten). Very few shrubs and grasses have established. Additional reclamation measures will likely be necessary for final reclamation to be achieved given that routine weed treatments have proven unsuccessful.

The MWP-2 Pad have a very long access road off of the east side of TM pad. It also has a break in the exclusion fencing to allow for animals to cross. Overall reclamation of the road is spotty. Areas within the fence break appear to be doing no worse than areas within the protection of the fencing. The northern section of road is better established compared to the south (Photo Eleven). The pad itself has sufficient shrub cover but the understory is mostly Russian Thistle (undesirable). Very few areas were observed without some presence of Russian Thistle (Photo Twelve). Desirable grasses were observed but they are not abundant enough to outcompete weeds or to be considered sustainable or successfully reclaimed.

The Operator is aware of the ongoing weed problem and its effect on establishing successful reclamation. In

general the site would benefit from a more aggressive weed management plan. Multiple surveys and treatments throughout the growing season are critical for effective management. The Operator may wish to explore alternative method for noxious weed management as well. Both burning and controlled grazing were discussed as potential options. The Operator should first discuss these options with the BLM and gain approval prior to implementation. Given that overall initial reclamation efforts with the current weed management have proven inadequate the Operator will likely need to re-reclaim areas of failure. The two growing season minimum for evaluation of reclamation success will begin anew for any areas where reclamation efforts have started over.

Responses to this inspection report should be directed to Amy Yeldell at the Division of Reclamation, Mining and Safety, 1313 Sherman St., Room 215, Denver, CO 80203. Direct contact can be made by phone at 303-866-3567 Ext 8183 or via email at amy.yeldell@state.co.us

*Indicates pads where final reclamation has been achieved and areas are eligible for an acreage reduction to remove them from the permit boundary.

Inspection Contact Address

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EC: James Roberts, BLM and Permittee Contact: agoldin@genie.com

PHOTOGRAPHS

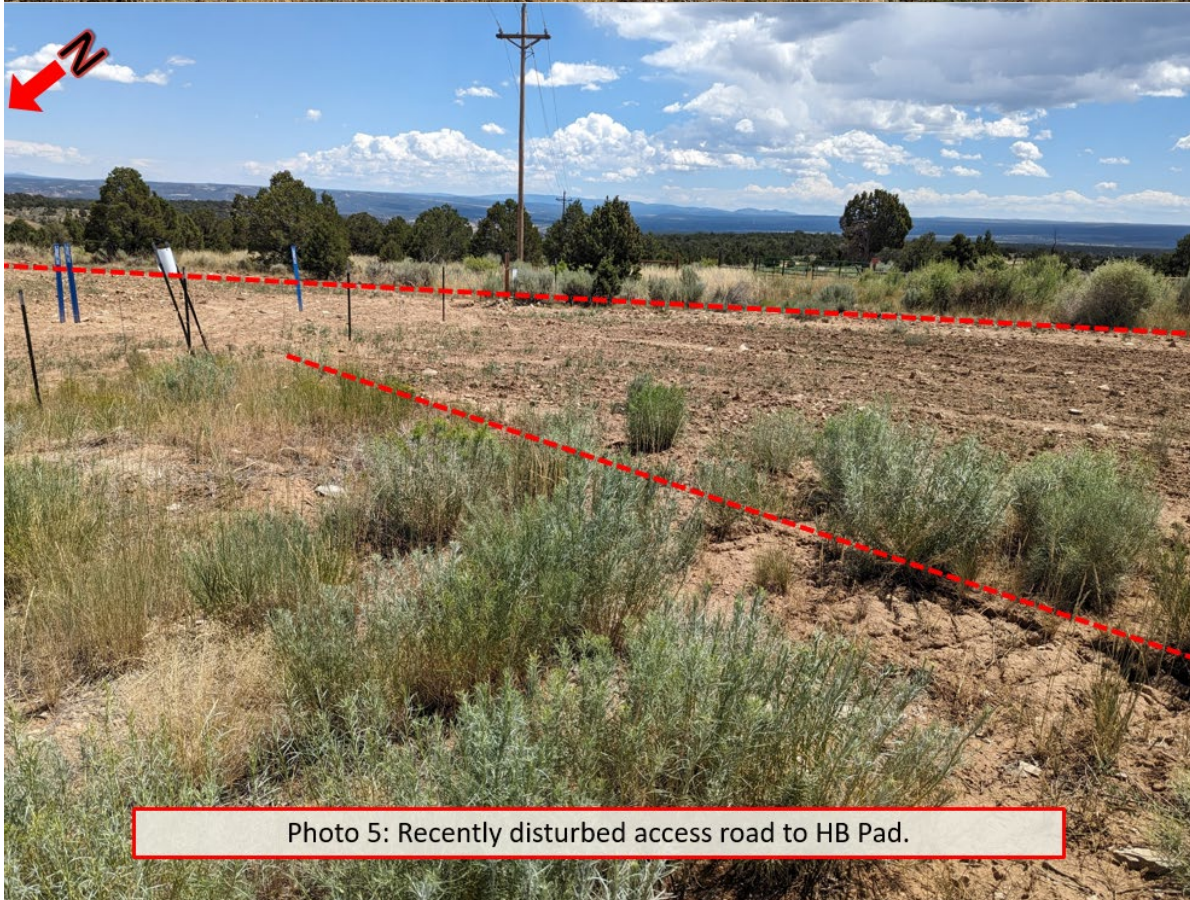




Photo 2: MWP1 Pad



Photo 3: Test Pad, vegetation spotty



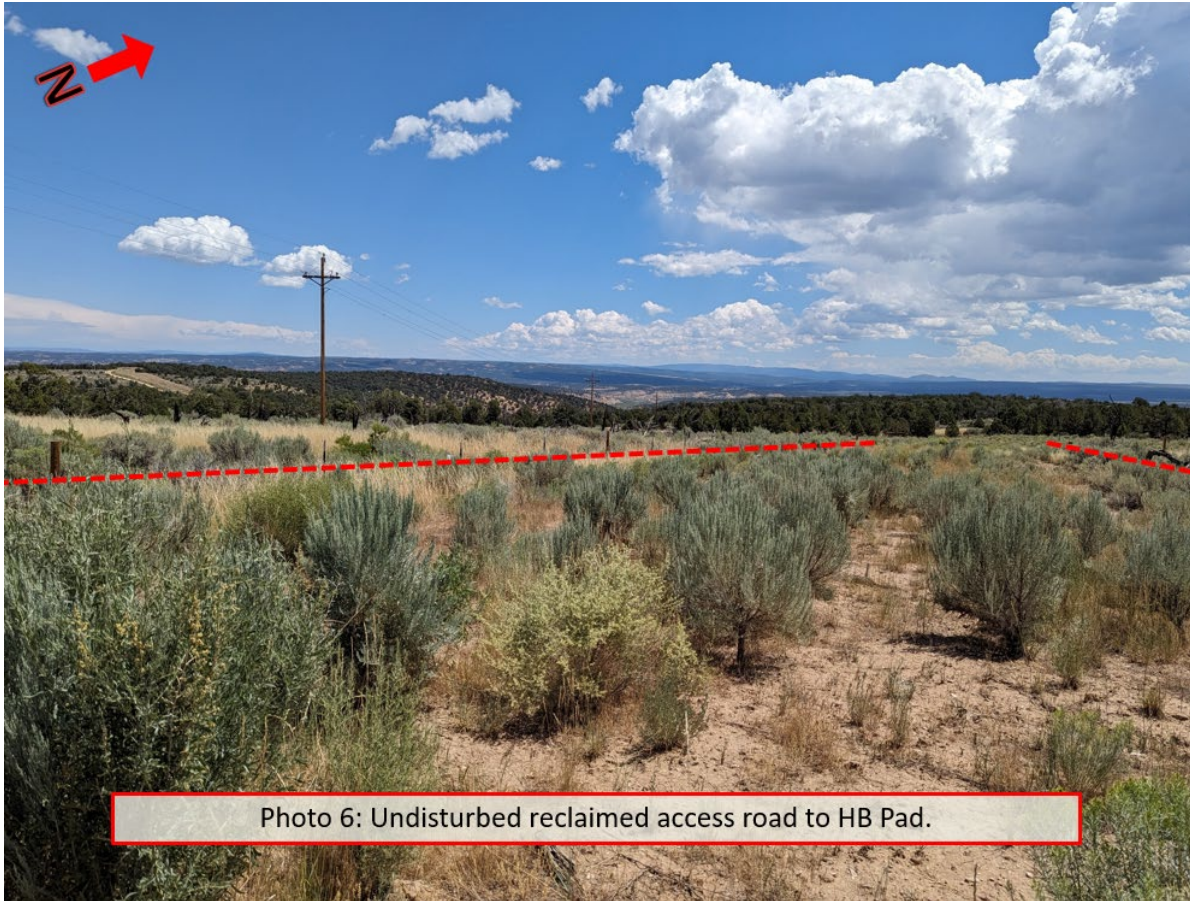






Photo 10: TM Pad, dense weeds outcompeting desirables



Photo 11: MWP2 Pad access road, break in fence

