Minerals Exploration/Sampling/Testing Inspection

U.S. Department of the Interior
Bureau of Land Management
Royal Gorge Field Office

The BLM has conducted an inspection of your operations, which concludes whether the documented operations on file with BLM are compliant or non-compliant. Any non-compliance issues are reported in the Additional Actions Necessary section of this inspection.

Operation Type: ☐ 3802 Pre-10/21/1976 ☑ 3802 Post-10/21/1976 ☐ 3809 included

Date: Aug 6, 2020 **Time:** 09:10 **Weather:** Sunny	**Operation Name:** Dawson-Green Mtn., El Plomo section **Operator:** Zephyr **Case Number:** N/A **CDRMS Number:** P-2020-002
Attendees **BLM:** S. Carter, L. Skinner **Operator(s):** Scott Parks-geologist **Other(s):** Two drillers with Godbe Drilling	**General** **Operation(s) are in compliance with documentation on file** ☑ Yes ☐ No ☐ N/A **Operation(s) and disturbance on-site coincide with the operations and access on file** ☐ Yes ☐ No ☑ N/A

Inspection Purpose: ☑ Pre-Operations ☑ General ☐ Final ☐ Trespass ☐ Complaint

Inspection Items	Compliant	Non-Compliant	N/A
1. Method of Operations Drilling, Trenching/Surface Excavation & Underground Excavation			
a. Drilling	☑	☐	☐
i. Pad/Platform Construction	☑	☐	☐
ii. Drill/Drilling Equipment	☐	☐	☑
iii. Mud Pits	☑	☐	☐
iv. Borehole Abandonment/Monitoring Well Conversion	☐	☐	☑
Borehole Status: ☐ Complete ☑ Incomplete	☐	☐	☑
v. Pad/Platform Reclamation			
b. Trenching/Surface Excavation	☐	☐	☑
i. Trench/Excavation Construction	☐	☐	☐
ii. Trench/Excavation Stability	☐	☐	☐
iii. Excavation/Reclamation Equipment	☐	☐	☐
iv. Trench/Excavation Reclamation	☐	☐	☐
c. Underground Excavation	☐	☐	☑
i. Portal Construction	☐	☐	☐
ii. Portal Stability	☐	☐	☐
iii. Blasting Operations	☐	☐	☐
Status: ☐ Internal ☐ External	☐	☐	☐
iv. Excavation/Reclamation Equipment	☐	☐	☐
v. Portal Reclamation/Conversion of Entry			
2. Site Conditions			
a. Material/Waste Rock Management	☐	☐	☑
b. Erosion & Stormwater Control	☑	☐	☐
c. Man-made Structures	☑	☐	☐

d. Weed Management	☐	☐	☑
e. Safety Conditions	☑	☐	☐
f. Interim Reclamation	☐	☐	☑
g. Interim Management Plan	☐	☐	☑

Inspection Items	Compliant	Non-Compliant	N/A
3. Housekeeping			
a. Container Management	☑	☐	☐
b. Spills/Leaks Observed	☑	☐	☐
c. Hazardous Substances/POL Management	☑	☐	☐
d. General Housekeeping	☑	☐	☐
4. Access			
a. Road Management	☐	☐	☑
b. Berms	☐	☐	☑
c. Security	☐	☐	☑
d. Signage	☐	☐	☑
e. Surface Water Controls	☐	☐	☑
5. Quality Assurance/Quality Control			
a. Routine Site Conditions Monitoring	☑	☐	☐
b. Air, Water, Noise, Other Monitoring	☐	☐	☑
c. Monitoring Reporting	☑	☐	☐
d. Regulatory Submittals	☑	☐	☐
e. Other Agency/Entity Permits	☑	☐	☐
6. Final Reclamation	☐	☐	☑
a. Drill holes/Sample locations:	☐	☐	☐
b. Access Roads/Landing Area:	☐	☐	☐
c. Revegetation	☐	☐	☐
d. Removal of Structures	☐	☐	☐
e. Free of Trash	☐	☐	☐
f. BLM RGFO Solid Minerals FINAL Reclamation Standards met:	☐	☐	☐
7. WSA (3802 regs)			
a. Access: No construction and/or major improvements and maintenance	☑	☐	☐
b. Trees: ≥2” at the base not cut	☑	☐	☐
c. Equipment: No use of tracked vehicles or mechanized earth moving equipment	☑	☐	☐
d. Vehicles: No use of motorized vehicles over other than open use areas and trails	☑	☐	☐
e. No construction or placing of any mobile, portable, or fixed structure on BLM for more than 30 days	☑	☐	☐
f. No use of explosives	☑	☐	☐
g. No operations have caused changes to a water course	☑	☐	☐

Additional Information and Actions Necessary by the operator

1.a.

i. The drilling structure for EP-20-01 was constructed onsite on 8/1/2020. Images 1 and 2.

ii.
- The Deadman anchor and grounding rod for the rig were installed on 8/5/2020.
- The drill being used is an Atlas Copco CS-1000.
- The entire hole is being cored. EP-20-01 started on 8/5/2020, with a total of 10' for that day.
- The water pump is 8-9 hp (maximum of 10 gpm) in size and runs continually (Image 3).
- There are two hoses, each with a diameter of <2", that extend from the water pump to the rig platform. These hoses displayed little movement vertically (none laterally) and were mostly extended across rocky areas and a small drainage. Image 4.

iii. No additives in the drilling fluids are being used at this time, just water. Water is pumped up from the creek to use for a drilling lubricant. Any excess water is filtered through a separator, which is a centrifuge that separates the solids or drill cuttings from the drilling water that is then recirculated. Any cuttings are stored in a drum on the platform.

2.b. For the initial use of installing the Deadman anchor and surface casing, some water was expelled over the site of the platform, as the pump system was not yet set up. No erosional features were observed. Image 5.

2.e. A fire extinguisher and signage onsite regarding diesel fuel, no smoking. Radios present on the working platform. A straight line to the top of the hill from the rig is marked with pink flagging, so workers know where to go to obtain cell service.

3.a.
- The drum containing cuttings (after being filtered through the separator) is currently not labeled accurately, as the drum was used previously for other materials. The separated cuttings are stored in this drum until they are of sufficient quantity to be removed from the site. The drillers will fix the label to accurately reflect the contents. Image 6.
- A stock tank is used for secondary containment of the water pump, which is located adjacent to the creek. If an oily-water mix accumulates in the trough, it is pumped and hauled out by helicopter.
- Diesel fuel for the water pump is sourced from a 50-gallon, lined container adjacent to the pump (Image 7). All diesel fuel is flown in to refuel the pump.
- Absorbent pads available for use on the platform, as needed.
- Secondary containment/tubs used for equipment on platform (Image 9).
- Visqueen lines the top of the wooden platform, as a barrier from the working site to native ground below (Image 9).

3.d. The porta potty is contained. Routine servicing is conducted by helicopter. The tank is removed and replaced with an empty one, as needed. No staining or discharge observed. Porta potty is tethered to the platform and appeared stable. Image 10.

4. All access is conducted by a walking a trail from the Grape Creek Trail Head (north of the State section) or by helicopter. There is only one landing site identified for use with EP-20-01 and did not include a portable structure (Image 11).

5.a.
- Drill site is manned 24-hours a day, utilizing two shifts.
- General monitoring includes site conditions, housekeeping, water pump, drill platform conditions.
- Preventative maintenance checks of the water pump are conducted when it is being refueled.

5.c. All water usage is metered at the drill platform location and usages are reported to multiple authorizing agencies daily.

Final Notes
General Comments: - The drilling platform was not solid on the bottom, which allows for vegetation to remain within the footprint of the drilling area (Image 12). - Noise from the water pump is limited, due to the location and placement of it along the creek exhibiting steep canyon walls on both sides. A snapshot of the area along the trail where the pump could be heard is shown below in Images 15 and 16. - Noise from the drill rig could only be heard along the trail from directly below the rig location.
Date inspection shared with CDRMS: 8/10/2020
Date inspection shared with Operator: 8/10/2020

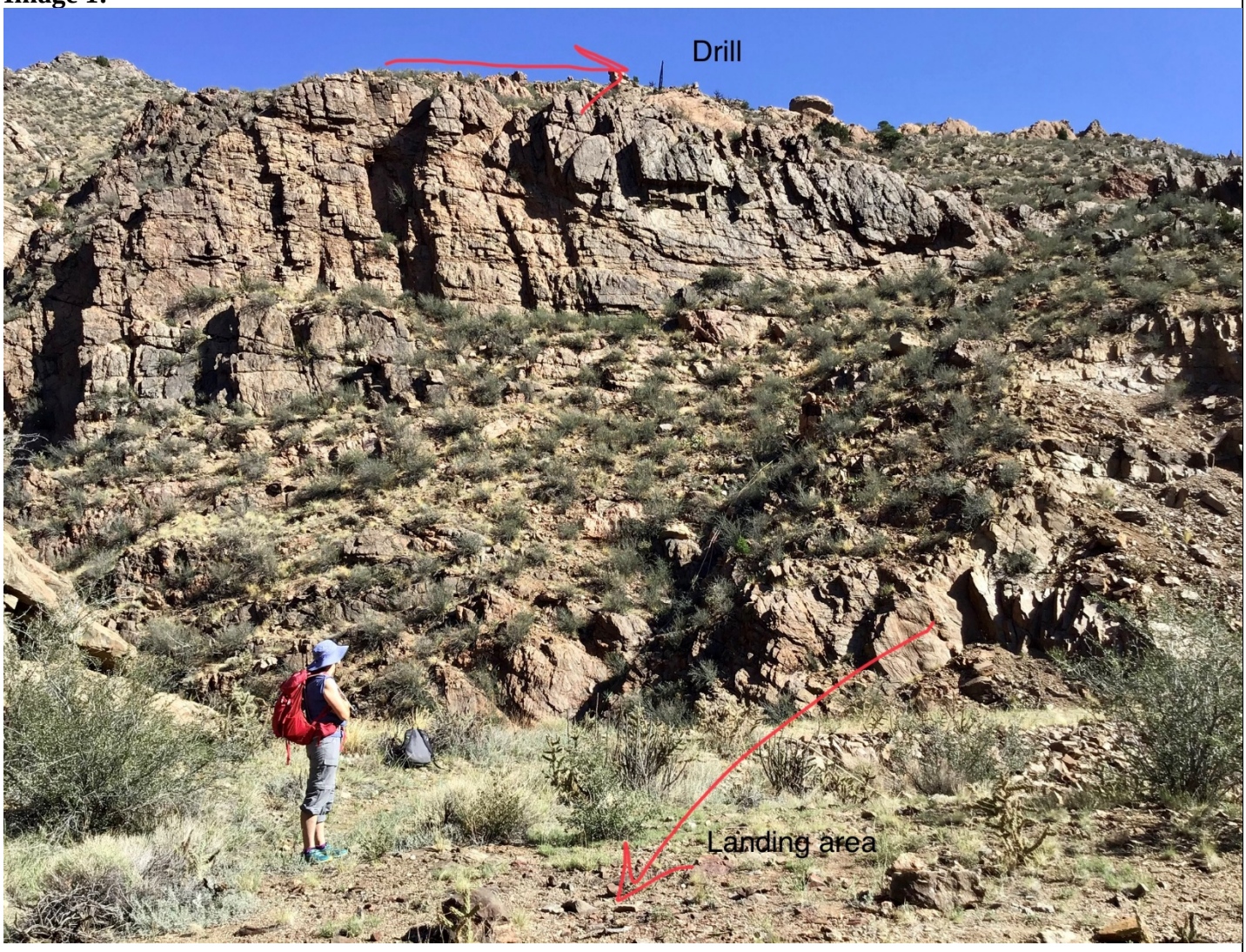
Images
Image 1: 
Comment: Overall EP-20-01 site and landing area

Image 2:

Comment: General overview of EP-20-01 drill site

Image 3:

Comment: Red arrow indicates water pump location along creek

Image 4:

Comment: Water hoses

Image 5:

Comment: Side of drill platform with expelled water from Deadman anchor and surface casing installation

Image 6:

Comment: Separator and drum

Image 7:

Comment: Close-up of water pump along creek with fuel storage indicated by red arrow

Image 8:

Comment: Rig platform area and pipe

Image 9:

Comment: Rig platform, red arrow indicates Visqueen barrier

Image 10:

Comment: Porta Potty and ground below, red arrow indicates tethers attached to the platform

Image 11:

Comment: Helicopter landing area for EP-20-01

Image 12:

Comment: Vegetation visible underneath platform

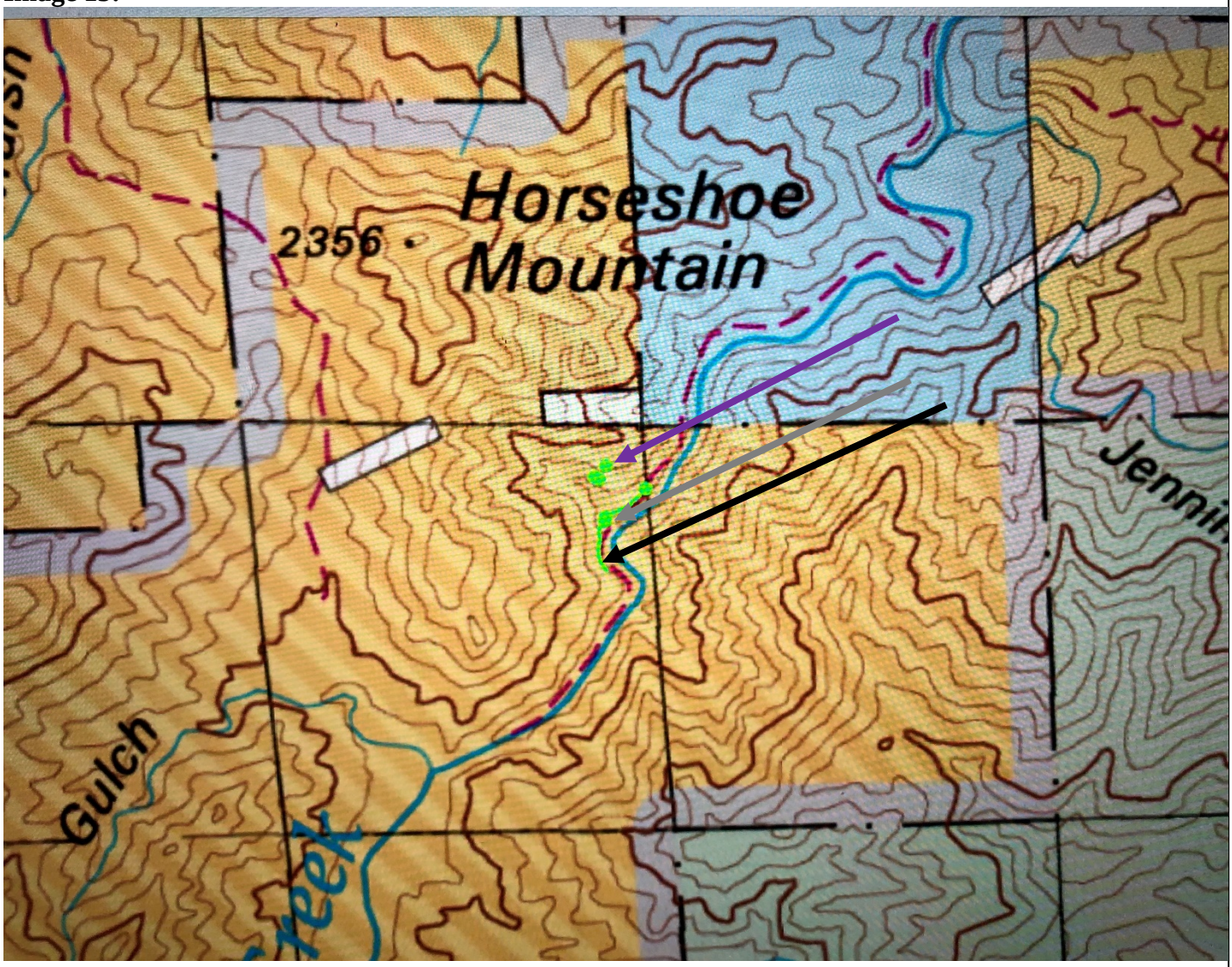
Image 13:

Comment: Storage area adjacent to rig, red arrow indicates storage box has space underneath

Image 14:

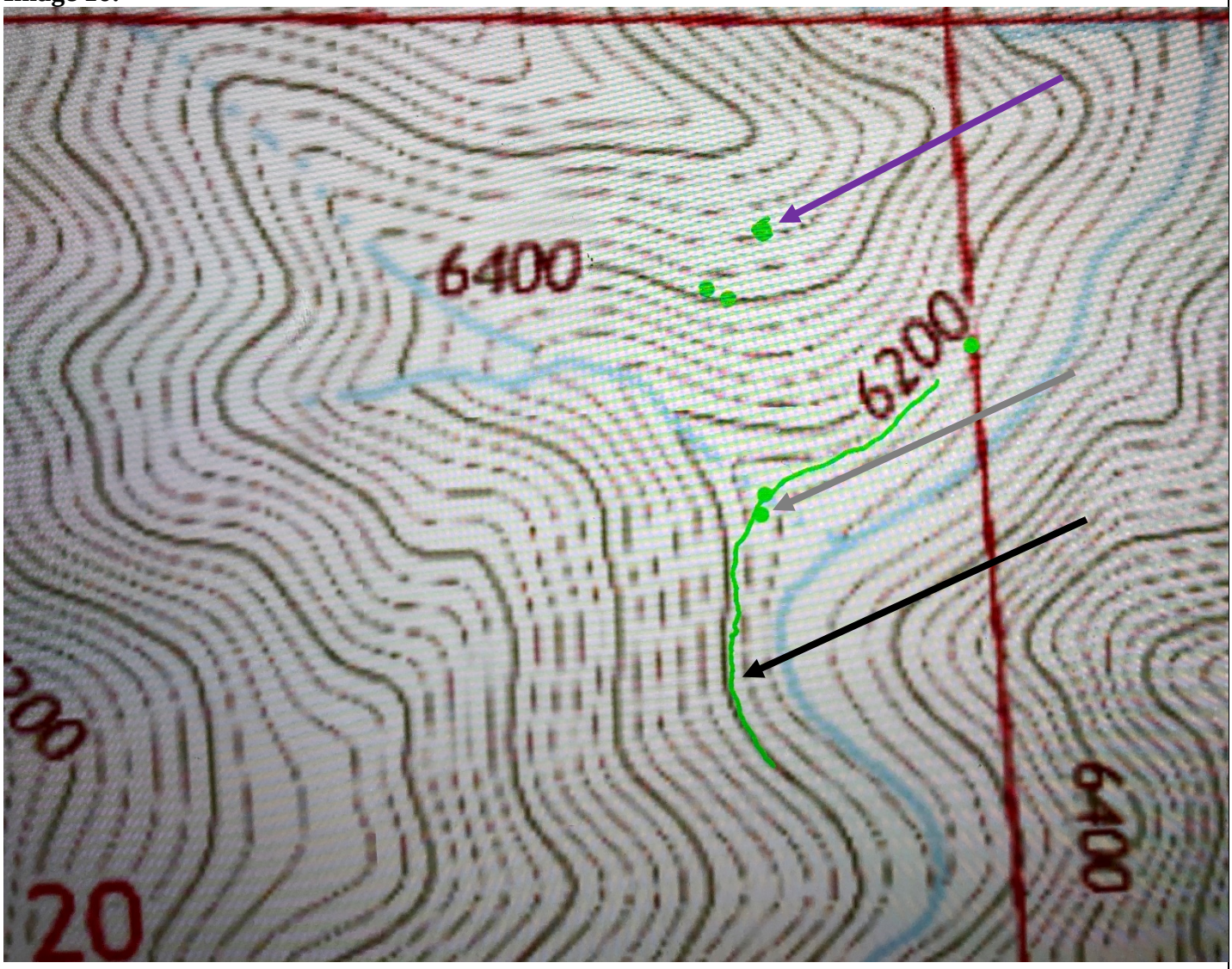
Comment: Additional storage area adjacent to rig, red arrow indicates storage box sitting flush on the ground

Image 15:



Comment: EP-20-01
Topo area snapshot with surface ownership. Black arrow is pointing to the green-highlighted part of the trail where the pump noise is audible. Purple arrow indicates location of rig platform. Gray arrow indicates helicopter landing area.

Image 16:



Comment: EP-20-01
Topo area snapshot. Black arrow is pointing to the green-highlighted part of the trail where the pump noise is audible. Purple arrow indicates location of rig platform. Gray arrow indicates helicopter landing area.