State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

Inspection Report

Permit Number:	**C0150018**
Inspection Type:	PARTIAL
Inspection Date:	Tuesday, June 2, 2020
Start Date/Time:	6/2/2020 10:00:00 AM
End Date/Time:	6/2/2020 12:20:00 PM
Last Inspection:	Thursday, May 14, 2020

Inspector: Priscilla Burton,

Weather: sun 70F

InspectionID Report Number: 6689

Accepted by:SCHRISTE
6/29/2020

Representatives Present During the Inspection:	
Company	Dennis Oakley
OGM	Steve Christensen
OGM	Kendra Hinton
OGM	Amanda Daniels
OGM	Justin Eatchel
OGM	Priscilla Burton

Permitee: **PACIFICORP**
Operator: **INTERWEST MINING CO**
Site: **DEER CREEK MINE**
Address: **PO BOX 310, HUNTINGTON UT 84528**
County: **EMERY**
Permit Type: **PERMANENT COAL PROGRAM**
Permit Status: **ACTIVE**

Current Acreages

20,276.18	**Total Permitted**
57.38	**Total Disturbed**
2.93	**Phase I**
2.93	**Phase II**
2.93	**Phase III**

Mineral Ownership

- [x] Federal
- [x] State
- [ ] County
- [x] Fee
- [ ] Other

Types of Operations

- [x] Underground
- [ ] Surface
- [ ] Loadout
- [ ] Processing
- [ ] Reprocessing

Report summary and status for pending enforcement actions, permit conditions, Division Orders, and amendments:

Water in the reclaimed Deer Creek channel moves underground and re-appears on a slope 1,500 feet downstream, where it has cut a new side channel reporting to the main drainage. The Division was notified of this issue two weeks prior, but due to the COVID 19 pandemic was unable to meet at the site until now. During this site visit Division technical staff observed approximately 200 gpm emerging from the reclaimed slope. Mr. Oakley presented an action plan and proposed resolution.

Inspector's Signature: Priscilla Burton

Priscilla Burton
2020.06.29 12:04:46 -06'00'

Date Wednesday, June 17, 2020

Priscilla Burton,
Inspector ID Number: 37

Note: This inspection report does not constitute an affidavit of compliance with the regulatory program of the Division of Oil, Gas and Mining.

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UTAH DNR OIL, GAS & MINING

REVIEW OF PERMIT, PERFORMANCE STANDARDS PERMIT CONDITION REQUIREMENTS

1. Substantiate the elements on this inspection by checking the appropriate performance standard.
a. For COMPLETE inspections provide narrative justification for any elements not fully inspected unless element is not appropriate to the site, in which case check Not Applicable.
b. For PARTIAL inspections check only the elements evaluated.
2. Document any noncompliance situation by reference the NOV issued at the appropriate performance standard listed below.
3. Reference any narratives written in conjunction with this inspection at the appropriate performace standard listed below.
4. Provide a brief status report for all pending enforcement actions, permit conditions, Divison Orders, and amendments.

	Evaluated	Not Applicable	Comment	Enforcement
1. Permits, Change, Transfer, Renewal, Sale	☑	☐	☑	☐
2. Signs and Markers	☐	☐	☐	☐
3. Topsoil	☑	☐	☑	☐
4.a Hydrologic Balance: Diversions	☐	☐	☐	☐
4.b Hydrologic Balance: Sediment Ponds and Impoundments	☐	☐	☐	☐
4.c Hydrologic Balance: Other Sediment Control Measures	☐	☐	☐	☐
4.d Hydrologic Balance: Water Monitoring	☐	☐	☐	☐
4.e Hydrologic Balance: Effluent Limitations	☑	☐	☑	☐
5. Explosives	☐	☐	☐	☐
6. Disposal of Excess Spoil, Fills, Benches	☐	☐	☐	☐
7. Coal Mine Waste, Refuse Piles, Impoundments	☐	☐	☐	☐
8. Noncoal Waste	☐	☐	☐	☐
9. Protection of Fish, Wildlife and Related Environmental Issues	☐	☐	☐	☐
10. Slides and Other Damage	☑	☐	☑	☐
11. Contemporaneous Reclamation	☐	☐	☐	☐
12. Backfilling And Grading	☐	☐	☐	☐
13. Revegetation	☐	☐	☐	☐
14. Subsidence Control	☐	☐	☐	☐
15. Cessation of Operations	☐	☐	☐	☐
16.a Roads: Construction, Maintenance, Surfacing	☐	☐	☐	☐
16.b Roads: Drainage Controls	☐	☐	☐	☐
17. Other Transportation Facilities	☐	☐	☐	☐
18. Support Facilities, Utility Installations	☐	☐	☐	☐
19. AVS check	☐	☐	☐	☐
20. Air Quality Permit	☐	☐	☐	☐
21. Bonding and Insurance	☐	☐	☐	☐
22. Other	☐	☐	☐	☐

1. Permits, Change, Transfer, Renewal, Sale

Mr. Oakley discussed the Permittee's current plan for evaluating the drainage issue and how, based on that evaluation, the possible mitigation measures that would be implemented. The Deer Creek Mining and Reclamation Plan (MRP) will need to be amended in order to facilitate the mitigation measures. Mr. Oakley discussed two phases for this process.

The first phase is focused solely on accurately identifying the point at which the undisturbed drainage deviates from the recently completed diversion channel. Mr. Oakley indicated that they will need to work fast in this regard given that the spring snowmelt could realistically end in approximately 2-4 weeks. RB&G was scheduled to come onto the site in an effort to aid the Permittee in evaluating the issue as well as what mitigation measures could be undertaken.

The second phase would involve earthwork. Topsoil will need to be removed/salvaged and the reclaimed slopes excavated to determine the point of errant runoff. Once this is completed, Mr. Oakley indicated that in the area where the rill has formed, a diversion channel may be needed. The area would then be regarded/reclaimed. This work would occur in the fall after the slopes subsurface draines. Additionally, the Permittee is proposing additional armoring measures on the reclaimed channel in order to prevent the runoff from infiltrating into the sub-grade.

Mr. Oakley indicated that addressing this issue during this construction season is his top priority.

3. Topsoil

An irrigation system waters approximately 5 acres of land at the mouths of Deer Canyon and Deer Creek Canyon, where surface soils had high SAR values. The surface was treated with elemental sulfur in the fall of 2019. There are four irrigation lines. Each station runs 24/7 until it is manually changed to the next station. Many of the pocks are holding water, but on the ridges between pocks, the grass vegetation is very green.

4.e Hydrologic Balance: Effluent Limitations

Mr. Oakley stated during the inspection that water qualtiy samples of the flow at various locations throughout the site indicate that the flow is in compliance with existing water quality standards for Deer Creek. Lab testing sheets appeared to support this information.

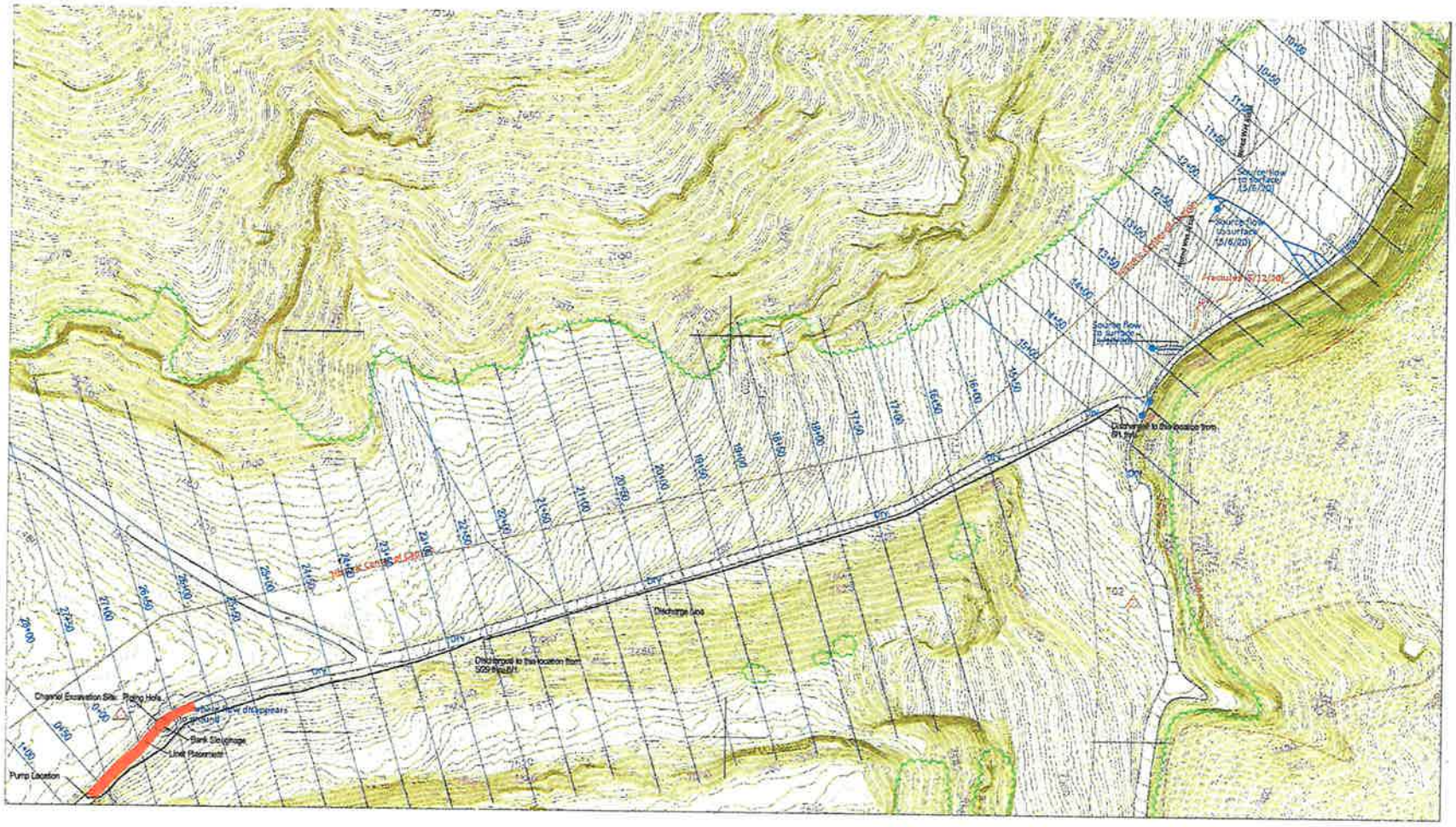
10. Slides and Other Damage

Mr. Oakley presented the Division staff with a packet of information on the "Deer Creek Runoff Issues." A copy is attached to this inspection report. The reference map in this report locates the channel excavation site and piping hole at station 27+00 (where water disappears from the constructed channel) and the location of the source flow to surface at station 12+00 (where water re-emerges on the side slope), a distance of 1,500 feet.

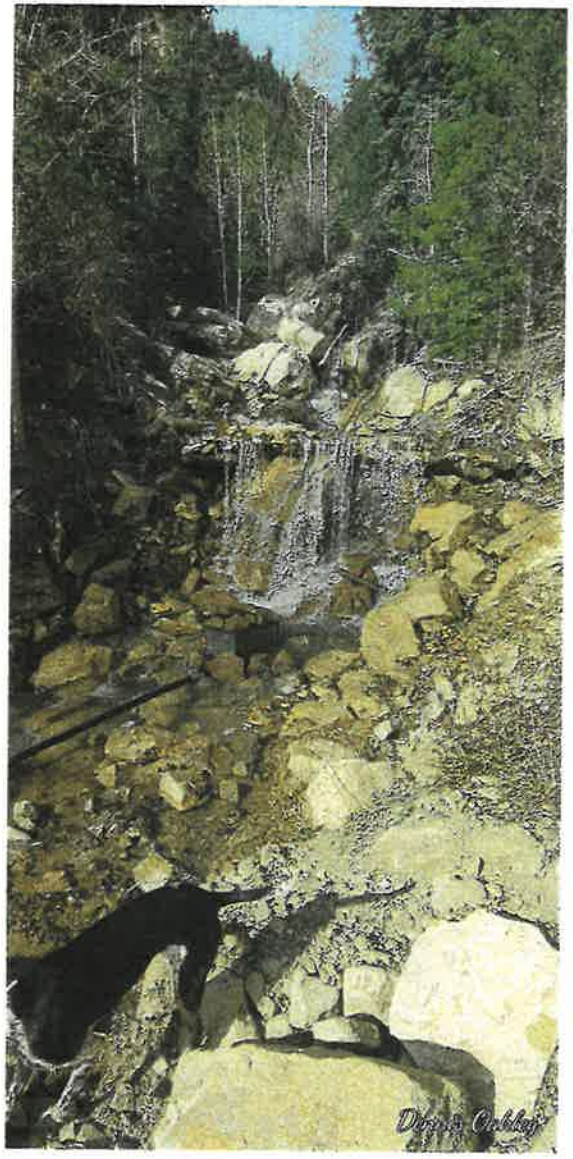
Water that disappears from the Deer Creek channel is transient, and re-appears periodically in different locations on the slope 1,500 feet below. Some places where the water first emerged are now dry as the channel re-routs to other locations nearby. In places where the water doesn't flow anymore there are open potholes approximately 2-3 feet wide and up to 4 feet deep. Mr. Oakley has plans to mitigate these potholes once the larger runoff issues have been addressed.

Deer Creek Runoff Issues
DOGM Site Visit

Update June 2, 2020


Channel Excavation Site
Piping Hole
Pump Location
Bank Slough
Liner Placement
Discharge line
Discharge to this location from 509 Shaft
Discharge to this location from 511 Shaft
Source flow to surface (5/6/20)
Source flow to surface (5/6/20)
Source flow to surface (5/6/20)
Flow to surface (5/12/20)
Creek Center of Flow
Flow to surface
Flow to surface
Flow to surface

Approximately 1 cfs (estimated on 5/11/20) is flowing into disturbed area from above mine site. Source of water is snowmelt runoff. Box and pipe supplies water to irrigation system below.



Ponding area. The bottom in this area is bedrock. Ponded water enters into riprap and filter material at this location. Station location is 1+00 to 2+00 in Deer Creek Canyon.

At approximately sta. 27+00, water infiltrates riprap and disappears into the ground . Photo taken 5/6/20.

Slough bank on south side of channel at approximately sta. 26+75. Appeared 5/11/20.

Water reappears in a location above reclaimed sediment pond area approximately 1500' below its infiltration location at sta. 26+75.

Installation of pump to by-pass water around infiltration area.

Discharge end of by-pass hose approximately 600 feet downstream of infiltration area.

Removing riprap and filter material from sloughage area to begin assessment process.

Piping hole found approximately 10′ below channel bottom. Size is approximately 2′ in diameter. Water source is drainage from filter material.

Gravel pile exposed below channel.

Water flowing from gravel pile. Ponded water is below pile.

Removing riprap from section of channel to prepare for repair.

Moving Forward:

- Complete assessment of channel to delineate extent of piping along reclaimed channel corridor.
- Develop plan for extent of repairs.
- Repairs will be completed in two phases:
  - Phase 1 – Repair Channel: Potential repair alternatives: geomembrane channel liner, clay layer, chemical foam injection into piping cavern.
  - Phase 2 – Repair Sediment Pond Area: Regrade/repair side hill where flow currently discharges. Will occur in fall after subsurface completely drains.
- Plan for repairs will be certified by geotechnical engineer.

ATTACHMENT A – Photos

2018 pre-reclamation looking upstream at Deer Creek Canyon

2020 Deer Creek Canyon constructed channel above piping into fill and location of pump.

Fill excavated down to a buried gravel layer thought to be responsible for piping

Water is pumped past the location of piping

ATTACHMENT A – Photos continued

Piped water is returned to the channel and again disappears into fill

Water re-emerges on side slope. Elk Cyn in distance.

Flow re-enters channel at former site of sediment pond

2018 Former sediment pond below Elk Cyn,

ATTACHMENT A – Photos continued

2020 Four irrigation lines to leach sodic soil.

2020 soil treated with elemental sulfur and irrigated.