



## Bureau of Land Management Colorado River Valley Field Office Minerals Inspection Report

General Information	
<b>Date</b>	8/28/2018
<b>Project Name</b>	Rifle Quarry
<b>Operator</b>	Colorado Lien Company
<b>Serial Number</b>	COC-077876
<b>Project Classification</b>	Plan of Operations
<b>Project Location</b>	T4S R92W Sec15, Garfield County
<b>Inspection Purpose</b>	Reclamation site inspection
<b>Time Period Onsite</b>	1 hour
<b>Attendees</b>	Jessica Lopez Pearce, BLM Geologist
	Amy Yeldell, CO-DRMS Environmental Protection Specialist
	Wally Erickson, CO-DRMS Senior Environmental Protection Specialist

### New Remarks

On August 28, 2018, I inspected the Colorado Lien Company Rifle Quarry with Amy Yeldell and Wally Erickson from DRMS to check on final reclamation progress of the remaining 1.65 permitted acres and ensure compliance with the Final Reclamation Plan (which was authorized July 1, 2016). The weather was windy with temperatures in the 70's.

I observed the access road blocked per the Final Reclamation Plan. There was evidence of approved alternative growth media and mulching material (a combination of fish emulsion solids, spent grain solids, spent potato mash solids, mulch, and topsoil) on the surface of the road; however, it appeared to be dried out and washed away in some areas, exposing bare rock and mineral soil. There was significantly more vegetation along the sides and down the middle of the old road than in the wheel ruts. Thistle was observed growing on the access road. Signage was present at the southeast corner of the main quarry area.

The 1.65-acre site includes a highwall on the north side and a backfilled and regraded area to the south. The backfilled quarry floor terminates to the east with an east-facing, 20-foot high, approximately 2:1 slope. There is a bermed access route up the eastern slope to the recontoured quarry floor. The eastern slope, the quarry floor, the northern upper access bench, as well as most of the remaining quarry area contained dried alternative growth media and mulching material. However, some of this material had washed away, exposing bare rock and mineral soil. It was a hot and dry summer and this was evident in the lack of vegetation success within the Rifle Quarry. Vegetation from the current growing season covered approximately 35% of the recontoured quarry floor. A robust variety of Western Yarrow, which is an allowable part of the 2016 BLM-approved seed mix, was prevalent but in many cases dried and dead on the reclaimed quarry floor. Sweet clover and small sage sprouts were also observed throughout the quarry floor. The vegetation along the south side of the pit floor was much more successful, as this side of the quarry is shaded and adjacent to a small drainage. Future inspections will monitor the revegetation within the reclaimed area.

There were several 24" tall sediment control windrows running perpendicular to the west-to-east gradient on the quarry floor. These windrows were fairly effective at trapping sediment and eroded growth media. The vegetation on the quarry floor also appeared to prevent erosion. There was some evidence of slight



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gullying/rilling and erosion of material in channels on the quarry floor. The channelization and erosion wasn't extensive, but additional erosion could occur if measures are not taken. Future inspections will continue to monitor effectiveness of sediment control.

### Recommended Changes to Operations or Corrective Actions Needed

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- No corrective actions at this time.

### Photo Summary

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Photo 1: Looking west along the barricaded access road. Grasses, forbs, and thistle was observed growing in the middle and along the sides of the road, but there was very little vegetation success within the wheel ruts. Clipboard for scale.





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Photo 2: Looking east to the access road from the eastern slope of the quarry. Note the patches of dry vegetation and exposures of bare rock and soil.



Photo 3: Looking west at the quarry floor. Western Yarrow comprised the majority of the vegetation in the middle of the pit floor. There was abundant bare ground in this area.





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Photo 4: It has been a hot and dry summer; the Western Yarrow was observed drying out and dying on the pit floor. Clipboard for scale.



Photo 5: Looking east from the west side of the pit floor. Last year, the grasses were abundant and green on the slope between the upper bench and lower bench. This year, the grasses are dried and brown.





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Photo 6: Looking east along the south side of the quarry floor. Grasses and forbs had much higher success in the shade along the southern drainage.

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