



February 9, 2021

Kurt Blunt  
Blue Mountain Energy, Inc.  
3607 County Rd. 65  
Rangely, CO 81648

**RE: Deserado Mine, Permit No. C-1981-018  
2020 Annual Hydrology Report**

Dear Mr. Blunt,

The Division received the 2020 Annual Hydrology Report (AHR) on January 22, 2021. Thank you for your timely submittal. The Division finds the 2020 AHR is in compliance with the following Rules:

Rule 4.05.13(4)(a) – The data collected for the 2020 AHR is kept and maintained at the Deserado Mine Office.

Rule 4.05.13(4)(b) – The 2020 AHR is compiled from the analysis of hydrologic data collected from the monitoring period of October 1, 2019 to September 30, 2020.

Rule 4.05.13(c)(i), (ii), (iii) – The 2020 AHR was submitted to the Division by the determined date on which the permittee and the Division agreed to. The report included an interpretation of the collected data and identified mining related impacts to the hydrologic balance.

The 2020 data supports the predictions of the Probable Hydrologic Consequences (PHC) of the Deserado Mine permit. The following is a review of the 2020 data as per the PHC:

- Groundwater inflow is usually 20 to 40 gallons per minute (gpm), occasional increased inflows occur when a localized perched water table is encountered. Other inflows to the mine are the result of water from leaks and water line brakes. The total incidental inflow of water into the mine was approximately 8.21 gpm in the 2020 water year. The value is in the predicted range of 5 to 10 gpm. In May of 2012 a dewatering pump system was installed to pump excess water captured in the underground mine to the surface. Water pumped to the surface from the B Seam in the 2020 water year was 27,024,424 gallons or 51.42 gpm. Water



pumped from the SDH-3/5 D-Seam Dewatering System during the 2020 water year was 132,636,160 gallons or 252.35 gpm.

- Predicted by the PHC, Monitoring wells in close proximity to the mine workings show a decrease in piezometric levels. Well 29-4U was subsided in 2013 and the well became blocked. Wells 30-8M and 32-7U remained dry. Four wells showed an increase in piezometric level and three wells showed a decrease in piezometric level. Two wells, 33-8M and 33-8U, remained at the same level as the previous year. Three wells have been plugged to eliminate connection with the surface; 29-4M, 32-7M and 32-7L. Well Qal-5 is the only remaining alluvial well. The data from the full suite analysis are all within the historical ranges.
- The point of compliance well, 22-3M, was sampled for the correct parameters but the **incorrect frequency** in the 2020 water year. **Exhibit C indicates that Field samples were collected in August of 2019 and October of 2020. These dates are outside the 2020 Water Year. Please provide the Division with documentation of field samples for 22-3M if they were taken within the 2020 Water Year. Field measurements for pH, conductivity, temperature and water level. Samples from October 29, 2020 were collected and analyzed in a lab for total dissolved solids, dissolved iron and dissolved manganese.**
- The effects of subsidence on Red Wash were predicted to be short-term. Ponding in the stream bed and surface cracks in the alluvium were created by subsidence of the drainage. Red Wash contains a high content of clay and silt sediments that have filled in the cracks and depressions, maintaining the original stream channel. Scullion Gulch has no observed surface hydrologic consequences due to the effects of subsidence.
- Discharge monitoring reports and the 2020 AHR indicate that outfalls 001 (DP-1), 026 (SDH-3), and 029 (B Seam Dewatering System No. 1) discharged during the 2020 water year. The Facilities Area pond PP-2 did not discharge to Scullion Gulch during the 2020 water year. There was no discharge to Red Wash from any of the ponds treating water from the refuse disposal area. Ponds RP-1, RP-2/3/4 and RP-5 are designed to treat all the run-off from the waste piles. There are no springs or seeps located in the refuse disposal area. The ponds associated with the Slot Storage and Rail Loadout did not record any discharge. The mine site also receives a low amount of annual precipitation.

This concludes the Division's review of the 2020 Annual Hydrology Report for the Deserado Mine. The Division has no further comments or questions. If you have any questions, please contact me at (303) 866-3567 x8144.

Kurt Blunt  
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Sincerely,

A handwritten signature in black ink that reads "Clayton Wein". The signature is written in a cursive, slightly slanted style.

Clayton Wein  
Environmental Protection Specialist  
clayton.wein@state.co.us