

December 17, 2021  
Denise Arthur, Reclamation Supervisor  
Colorado Oil and Gas Conservation Commission  
Department of Natural Resources  
1120 Lincoln Street, Suite 801  
Denver, CO 80203

**RE: Response to G21 Request for Additional Topsoil Information**  
N. Parachute – 65S96W 21SWNE (Facility I.D. 335929) (Inspection - Document #696202572)  
Garfield County, Colorado

Dear Ms. Arthur,

Caerus Piceance, LLC (“Caerus”) is providing this letter in response to the request from COGCC Reclamation Staff, for additional topsoil information at the G21, COGCC Facility I.D. 335929 (G21). This letter is being submitted through a Form 4 Sundry Document # 402903193. In its Petition dated November 1, 2021, the Staff said that it “is willing to relieve Caerus of the corrective action . . . in Inspection Report No. 696202572 if Caerus submits a Form 4 detailing why there was limited topsoil and providing identification on aerial photos of the location of the rock outcroppings traversing the location.”

The G21 was constructed by Conoco Philips in 2008. Ownership of the G21 location was transferred to Encana Oil and Gas, (Encana) in 2010 and to Caerus in 2017. Records indicate that Encana completed Interim Reclamation in the fall of 2011. The records that were later transferred to Caerus do not contain specific details or volume calculations for the segregated topsoil. Topsoil from the surrounding area seems to exist at various depths due to the nearby rock outcrops. Based on a visual assessment of the area it appears that the previous operator attempted to place topsoil back at depths that match the surrounding native depths. The Plat Diagram found on the COGCC website, that was submitted by Conoco Philips on October 10<sup>th</sup>, 2007, indicates that there is approximately 4,120 cubic yards of available topsoil.

There are no stockpiles of topsoil on the G21. It is assumed that the available topsoil was spread over the interim reclamation area by the previous operator. Using all of the available topsoil during interim reclamation is a typical industry standard and is consistent with Bureau of Land Management’s (BLM) Gold Book Reclamation Standards, *“To maintain healthy, biologically active topsoil; and to minimize habitat, visual, and forage loss during the life of the well, all salvaged topsoil should be spread over the area of interim reclamation, rather than stockpiled”* (BLM Gold Book - Chapter 6, Page 46).

The current depth of topsoil on the G21 appears comparable to the depth of topsoil on the surrounding area, which like the G21 contains substantial rock outcrops. The location of the original rock outcrops, in relation to where the topsoil has been placed to date, is depicted in Exhibits A and B.

On November 19<sup>th</sup>, 2021, Summit Environmental, a third-party environmental consultant, collected soil from within the interim reclaim area and from within the adjacent undisturbed area. Soil sample collection points and the associated lab data can be found in Exhibit C.

The soil analytical data report, was sent to Kleinfelder, a third-party environmental consulting firm, for assessment. Their Natural Resource Specialist reviewed all data collected from the G21 and has provided

Caerus with a Technical Memo that can be found in Exhibit C. The report notes that, “when compared to analytical results of the G21 well pad reference site (G21ND) and supplementary information for surrounding soils, the chemical composition of topsoil within the G21 well pad reclamation area (G21YD) is not notably different from soils within the surrounding undisturbed area. Additionally, the soil properties identified during Caerus’ field assessment at each sample location indicate that the physical composition of the soil is similar for both the G21 well pad reclamation area and reference site.” The sample results from the reclaimed area and the adjacent undisturbed area are substantially similar and show that the topsoil within the reclaim area is viable and fully capable of supporting the vegetation that is typically found in similar soil types. Analysis of the samples concludes that the importation of additional foreign topsoil is not necessary.

Photos were collected by WestWater Engineering, a third-party environmental consulting company, on July 29<sup>th</sup>, 2021, during the growing season. Photos were collected from within the Interim Reclamation area and from within the adjacent undisturbed area. The photos show that there are well established shrubs, forbs, and native grasses within the reclaim area similar to the vegetation found in the adjacent undisturbed area. Vegetation photos can be found in Exhibit D.

Caerus is committed to maintaining the G21 location while the location is in the interim reclamation stage and will be responsible for final reclamation when the time comes. At that time, Caerus will be responsible for further identifying what topsoil is available, amending the topsoil as necessary, placing the topsoil, seeding the location, and maintaining the location until the site has met the criteria for successful reclamation. Caerus understands that these requirements must be met in order for the location to be released of all liability through a COGCC Passing Final Reclamation Inspection or BLM Final Abandonment Notice (FAN) approval.

Caerus fully understands the importance of topsoil segregation, storage, and placement during the separate phases of reclamation. Caerus understands that topsoil is absolutely essential for successful reclamation. Caerus is committed to employing the required topsoil management practices on all future construction projects.

The G21 has met the requirements of Rule 1003.e.2. The soils were replaced to their relative position and contour. The site is stable. The site was seeded with a native seed mix consistent with the landowner and BLM recommended seed mix for this area. The vegetation is established and reflects pre-disturbance reference area vegetation.

Caerus again respectfully requests closure of the above referenced inspection.

Sincerely,  
**Caerus Piceance LLC**

Exhibits:

- A. G21-596 Pre-Disturbance Figure – Reclamation – Rock Outcrop Area Overlay
- B. G21-596 Post-Disturbance Figure – Reclamation – Rock Outcrop Area Overlay
- C. Soil Sample Assessment, Sample Location Figures, and Analytical Data
- D. Vegetation Photos of Reclaim Area and Adjacent Undisturbed Area