



GEOLOGIC  
HAZARD  
MAP

- Proposed Working Pad Surface (WPS)

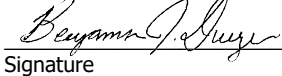
Proposed Access Road

Proposed Oil & Gas Location

1-Mile Radius around WPS

Soil Type Boundaries

FEMA 100-Year Floodplain

Terminated Surface Sand and Gravel Mine (no risk)
- Projection: WGS 1984  
Date: 08/26/2021  
Drafted by: LMH  
Revised:  
  
N  
0 500 1,000  
Feet  
  
1 inch equals 1,333 feet
- THERE ARE NO GEOLOGIC HAZARDS WITHIN ONE MILE OF THE WORKING PAD SURFACE.
- The terminated surface sand and gravel mine shown on the map was listed as a surface facility and does not appear to have been used, so it does not pose a geologic hazard. It is also located >1 mile from the WPS.
- Soil Type in Proposed Oil and Gas Location: Valent sand, 3 to 9 percent slopes (not considered a collapsible soil)
- Resources Reviewed:  
**COGCC.** GIS Online Interactive Map. [cogccmap.state.co.us/cogcc\\_gis\\_online/](https://cogccmap.state.co.us/cogcc_gis_online/). Accessed August 20, 2021.  
**Colorado Geological Survey.** ON-001 Colorado Earthquake and Fault Map. <https://cgsarcimage.mines.edu/ON-001/>. Accessed August 20, 2021.  
**Colorado Geological Survey.** ON-006-01 Statewide Landslide Inventory Map. <https://cologeosurvey.maps.arcgis.com/apps/webappviewer/index.html?id=9dd73db7fbc34139abe51599396e2648>. Accessed August 20, 2021.  
**Colorado Geological Survey.** ON-006-06 Colorado Historic Coal Mines. <https://cologeosurvey.maps.arcgis.com/apps/webappviewer/index.html?id=1891e3149eda44af9dc8af81c4dc58a8>. Accessed August 20, 2021.  
**Colorado Geological Survey.** ON-B-40M Radioactive Mineral Occurrences of Colorado and Bibliography. <https://cologeosurvey.maps.arcgis.com/apps/webappviewer/index.html?id=c5381e1335284d63bfa5d4b018b3372f>. Accessed August 20, 2021.  
**Natural Resources Conservation Service.** Web Soil Survey. [websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx](https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx). Accessed August 17, 2021.  
**Weld County Property Portal.** [co.weld.co.us/maps/propertyportal/](https://co.weld.co.us/maps/propertyportal/). Accessed August 20, 2021.  
**White, J.L. and Greenman, C.** 2008. Collapsible Soils in Colorado. Colorado Geological Survey, p. 57-61.
- I certify that I am a Professional Geologist, having met the educational requirements and professional work experience required by C.R.S. 23-41-208(b). I have reviewed information pertaining to this Oil and Gas Location and the surrounding area, and have identified no Geologic Hazards within a one mile radius.
- Benjamin Dwyer, P.G.  
Geologist/Field Operations Coordinator  
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Signature  
08/27/2021  
Date