

GEOLOGIC HAZARDS

THERE IS A SPECIAL FLOOD HAZARD AREA LOCATED WITHIN 1 MILE OF THE WELL PAD

Collapsible & Expandable Soils - EG-14 Eolian (wind-blown) deposits
 Collapsible & Expandable Soils - EG-14 Cretaceous and Tertiary Formations

Soil Types in Proposed Oil and Gas Location: Platner loam (0-3% slopes) & Wiley-Adena-Renohill complex (3-20% slopes).

These soil types are considered to have a potential for collapse, but failure is uncommon and this hazard poses minimal risk to the proposed Oil and Gas Operations.

Resources Reviewed:

COGCC. GIS Online Interactive Map. - Accessed October 19, 2024 https://cogccmap.state.co.us/cogcc_gis_online/

FEMA National Flood Hazard Layer Firmette - Accessed October 19, 2024

Colorado Geological Survey Earthquake and Fault Map Server Colorado Earthquake and Fault Map Server (mines.edu). - Accessed October 19, 2024 <https://cgsarcimage.mines.edu/ON-001/>

Colorado Geological Survey – Statewide Landslide Inventory Map - ON-006-01 Colorado Landslide Inventory (arcgis.com). - Accessed October 19, 2024 <https://cologeosurvey.maps.arcgis.com/apps/webappviewer/index.html?id=9dd73db7fbc34139abe51599396e2648>

USDA-NRCS Web Soil Survey. - Accessed October 19, 2024 <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>

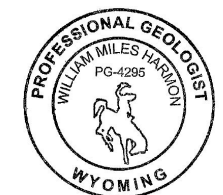
Colorado Division of Reclamation, Mining and Safety Map Viewer - DRMS Mapping (state.co.us). - Accessed October 19, 2024 <https://maps.dnrgis.state.co.us/drms/Index.html?viewer=drms>

Colorado Geological Survey – ON-B-40M – Radioactive Mineral Occurrences of Colorado - ON-B-40M Radioactive Mineral Occurrences of Colorado (arcgis.com). - Accessed October 19, 2024 <https://cologeosurvey.maps.arcgis.com/apps/webappviewer/index.html?id=c5381e1335284d63bfa5d4b018b3372f>

Colorado Geological Survey - ON-006-04 - Collapsible Soils in Colorado - Accessed October 24, 2024 <https://cologeosurvey.maps.arcgis.com/apps/webappviewer/index.html?id=a6f816b35fb64d3da096e84af661f070>

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 the following Geologic Hazards within a one mile radius: Special Flood Hazard, Collapsible Soils & Historical Earthquakes.

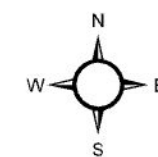
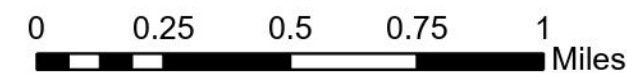
William Miles Harrison 10/25/2024
 Signature Date



Project PO: OI-747
 Date Created: 10/24/2024 Created by: DAM



Geologic Hazards Map
747 Pad
 Adams County, CO



W 1/2 of NW 1/4 OF SECTION 08, T-3-S, R-65-W, 6th P.M. ADAMS COUNTY, COLORADO

- Working Pad Surface
- Limits of Disturbance
- Proposed Access Road
- 1 Mile Radius From Well Pad
- Sections
- Colorado County Boundaries
- Township Boundary
- Historical Earthquakes
- Special Flood Hazard
- EG-14 Cretaceous and Tertiary Formations
- EG-14 Dune and sheet sand deposits
- EG-14 Eolian (wind blown) deposits