






















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.

 S. Reed Johnson
Senior Project Geologist
Entrada Consulting Group

GEOLOGIC HAZARDS EVALUATED		LEGEND		 0 1,000 2,000 ft
 Avalanche Areas (None)	 Mines (None)	 Access Road	 Well Pad	
 Mapped Landslides (None)	 Radioactive Mineral Deposits (None)	 1 mile Buffer		
 Mass Wasting Hazard (None)	 Corrosive Soils (None)	 Intermittent Streams	 Perennial Creeks/Rivers	
 Subsidence/Collapsible Soils (None)	 Seismic Events (None)	 100-Year Floodplain, Rio Blanco County (1)	 Wetland	
	 Faults (None)	 Lake/Pond		

	ELU M12-496 Pad Geologic Hazard Map NWSW / SWSW, Section 12, T4S R96W, 6th P.M. Rio Blanco County, Colorado	 330 Grand Avenue, Unit C Grand Junction, CO 81501 970-549-1015	
		Survey Date:	
Figure 1		Date Drawn:	11/27/2023
		Drawn By:	Nathan Baier
		Scale:	1 inch = 2,000 ft



Geological Hazards Map and Assessment References:

Hail, W.J., 1975, Preliminary geologic map of the Cutoff Gulch Quadrangle, Rio Blanco and Garfield Counties, Colorado, Open-file report MF-691, United States Geological Survey, 2 map sheets.

O'Sullivan, R.B., Wahl-Pierce, F., and Arbelbide, S.J., 1981, Preliminary geologic map of the McCarthy Gulch Quadrangle, Rio Blanco and Garfield Counties, Colorado, Miscellaneous Field Studies Map MF-860, United States Geological Survey, 1 map sheet.

Nelson-Moore, J.L., Bishop C.D., and Hornbaker, A.L., 2005, Colorado Geologic Survey, Bulletin 40, *Radioactive Mineral Occurrences of Colorado*, 1054 p.

White, J. L., and Greenman, C., 2008, *EG-14 Collapsible Soils in Colorado*, Colorado Geological Survey, Department of Natural Resources, 108p, 1 map sheet

Online References:

American Institute for Avalanche Research and Education
<https://avtraining.org/>

ECMC Online Interactive Map
https://cogccmap.state.co.us/cogcc_gis_online/

Colorado Abandoned Mine Land Map
<https://erams.com/aml/>

Colorado Department of Public Health and Environment – Radon
<https://cdphe.colorado.gov/understanding-radon>

Colorado Division of Reclamation and Mining Safety. Interactive Map of Mines in Colorado. <https://maps.dnrgis.state.co.us/drms/Index.html?viewer=drms>

Colorado Geological Survey ON-006-01 Statewide Landslide Inventory Map
<https://cologeosurvey.maps.arcgis.com/apps/webappviewer/index.html?id=9dd73db7fbc34139abe51599396e2648>

Colorado Geological Survey ON-006-15M Colorado Earthquake and Fault Map
<https://cgsarcimage.mines.edu/ON-001/>



Colorado Geological Survey ON-B-40M Radioactive Mineral Occurrence in Colorado
<https://cologeosurvey.maps.arcgis.com/apps/webappviewer/index.html?id=c5381e1335284d63bfa5d4b018b3372f>

Rio Blanco County Colorado GIS/Survey/Mapping
<https://www.rbc.us/261/GISSurveyMapping>

USDA Natural Resources Conservation Service, Web Soil Survey
<https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>

USGS Earthquake Hazards Program
<https://earthquake.usgs.gov/>

USGS Mine Related Features
<https://mrdata.usgs.gov/usmin/map-us.html>