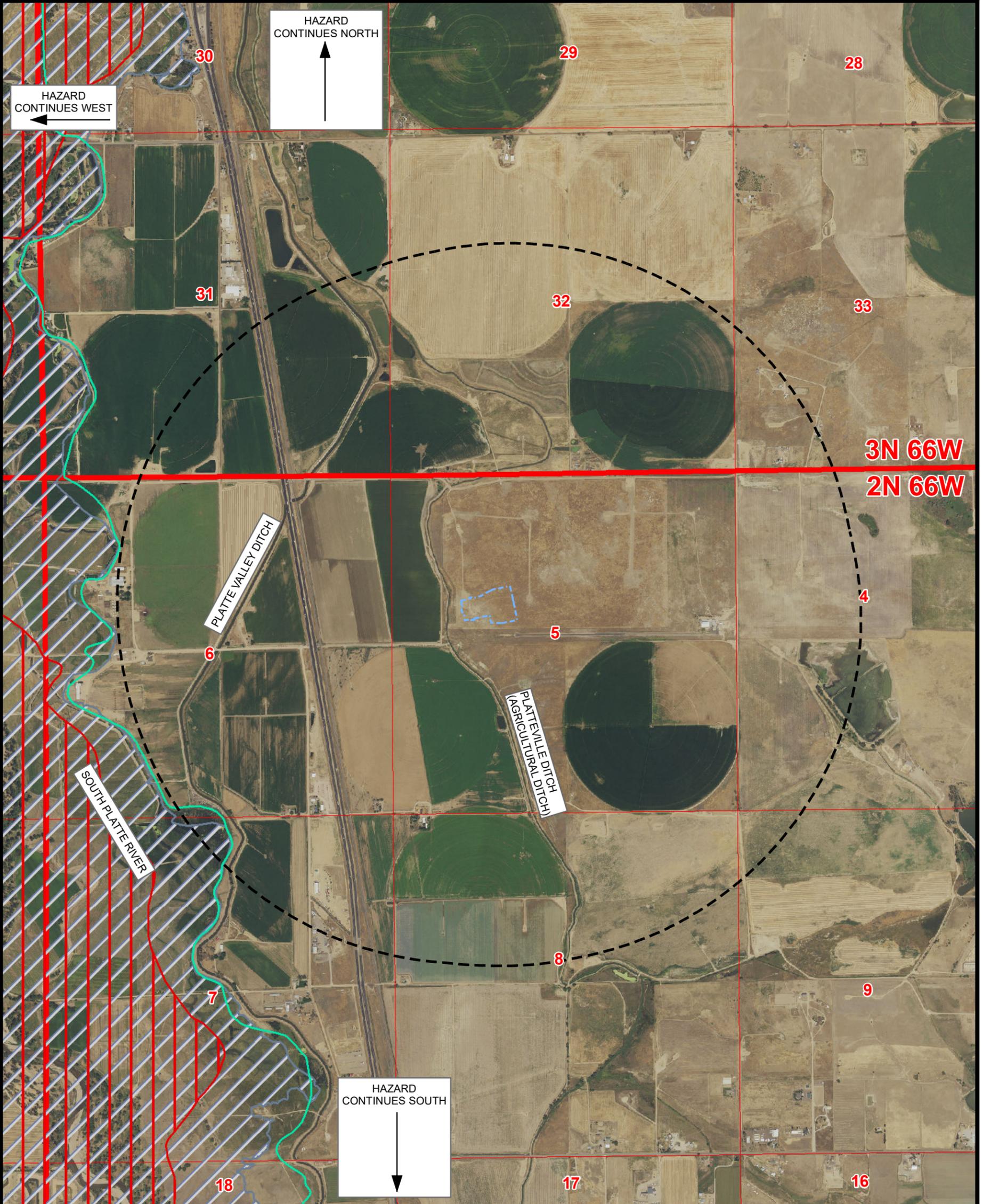


**GEOLOGIC HAZARD MAP
LARKSPUR FED**

SECTION 5, TOWNSHIP 2 NORTH, RANGE 66 WEST, 6TH P.M., WELD COUNTY, COLORADO



Legend

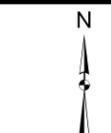
- PROPOSED WORKING PAD SURFACE
- 1 MILE BUFFER - WORKING PAD SURFACE
- 100-YEAR FLOODPLAIN (EFFECTIVE, 2016)
- 100-YEAR FLOODWAY (PRELIMINARY, 2020)
- 100-YEAR FLOODPLAIN (PRELIMINARY, 2020)

NOTE:
THIS MAP IS A COMPILATION OF PUBLICLY AVAILABLE DATA. THE ACCURACY AND COMPLETENESS OF SAID DATA HAS NOT BEEN VERIFIED BY 609 CONSULTING, LLC. EXISTING CONDITIONS MAY DIFFER FROM WHAT IS SHOWN.

**Kerr-McGee Oil &
Gas Onshore LP**
1099 18th Street
Denver, Colorado 80202



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6706 North Franklin Avenue
Loveland, Colorado 80538
Phone 970-776-4331
SHERIDAN OFFICE
1095 Saberton Avenue
Sheridan, Wyoming 82801
Phone 307-674-0609



NAD83 CO-Nft

1" = 1,500ft

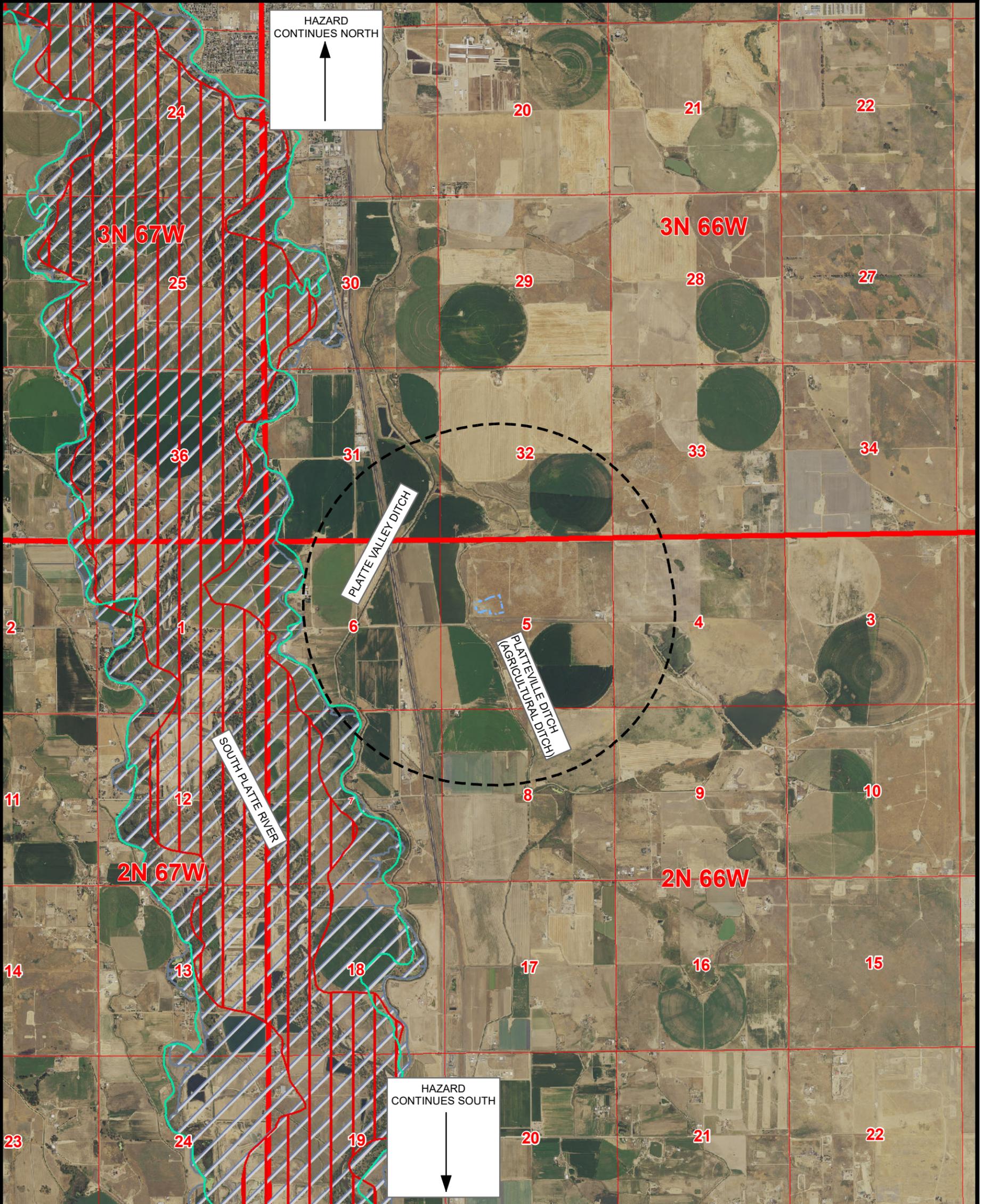
Drawn by: AK
Revised:

Date: 8 Mar 2024
Date:

0 750 1,500

**GEOLOGIC HAZARD MAP
LARKSPUR FED**

SECTION 5, TOWNSHIP 2 NORTH, RANGE 66 WEST, 6TH P.M., WELD COUNTY, COLORADO



K:\ANADARKO\2023\2023_125_LARKSPUR_FED_T2N_R66W_SEC_5\GIS\FORM2\1\LARKSPUR_GEOLOGIC_HAZARDS_MAP_ZOOMED_OUT.mxd 3/7/2024 4:08:37 PM

Legend

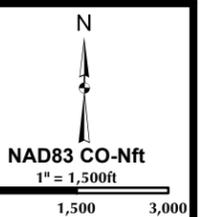
- PROPOSED WORKING PAD SURFACE
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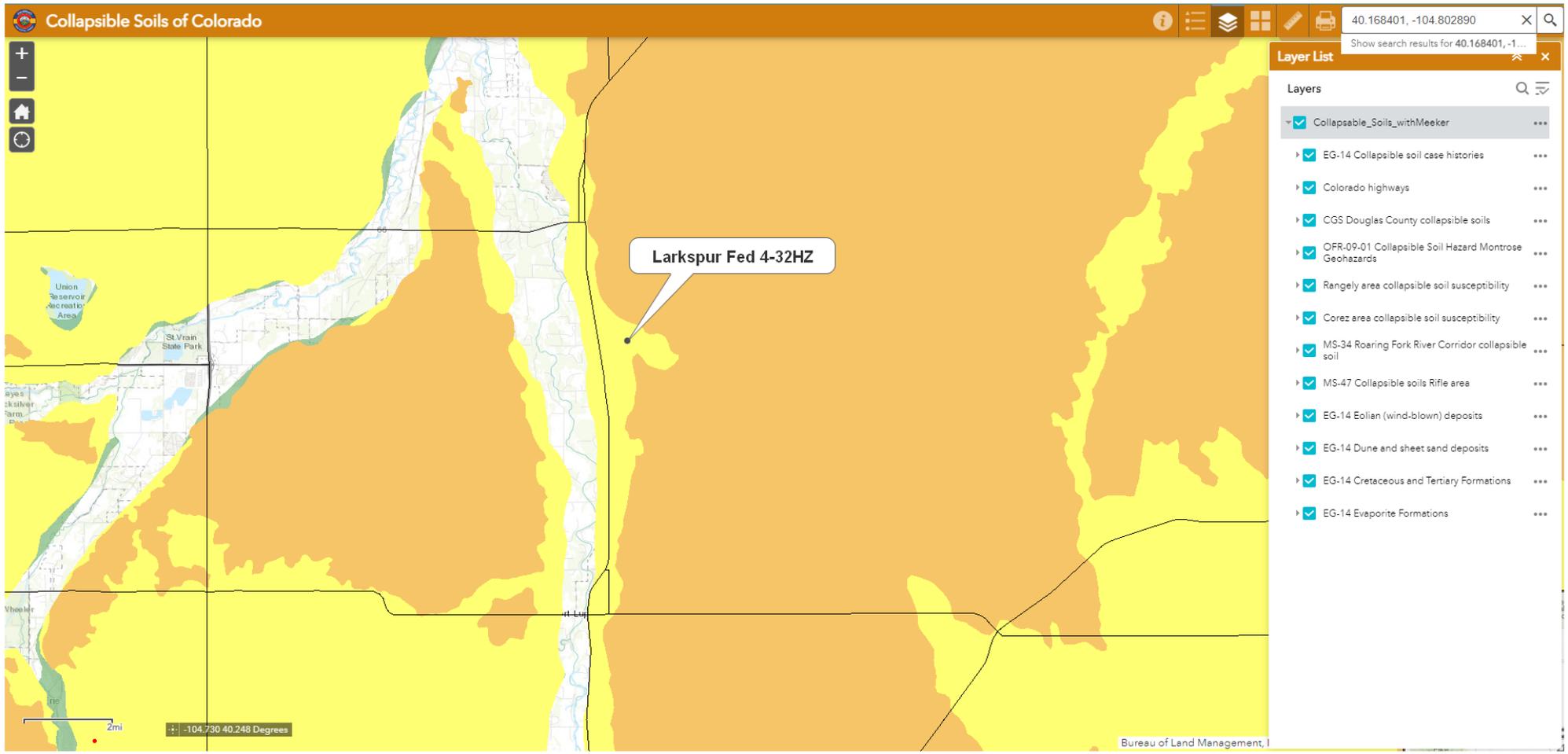


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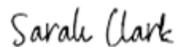
I certify that I am a Professional Geologist, having met the educational requirements and professional work experience required by C.R.S. 23-41-208(b). I have reviewed information pertaining to this Oil and Gas Location and the surrounding area and have identified the following Geologic Hazards within a one-mile radius: 100-year preliminary & effective floodplain.

The floodplain is present within one mile of the proposed drilling location; however, based on the National Flood Hazard Layers depicting the 100-year effective and preliminary floodplain boundaries, the floodplain is not present at the surface drilling location, nor does it impact the proposed access road.

The Geologic Hazard Plan includes best management practices that will protect the location against potential impacts in the unlikely event of a flood larger than the 100-year event. The data source for floodplain information is the Federal Emergency Management Agency GIS Datasets (both effective and preliminary). Additional datasets, maps, and published papers used to evaluate other possible geologic hazards included in C.R.S. § 24-65.1-103 are listed below.

Collapsible soils as mapped by the Colorado Geologic Survey (CGS) are present in the vicinity of the location. These soils do not constitute a geologic hazard. Kerr-McGee will mitigate any potential issues by using proper engineering, construction, stormwater and dust practices.

Respectfully,
Kerr-McGee Oil & Gas Onshore LP



Sarah Clark
Staff Geologist

- Floodplain
 - ECMC Floodplains (FEMA) <https://ecmc.state.co.us/maps.html#/gisonline>
 - National Flood Hazard Layer (NFHL) <https://hazards-fema.maps.arcgis.com/apps/webappviewer/>
 - Weld County: <https://www.weldgov.com/Government/Departments/Planning-and-Zoning/Floodplain-Management>
- Surface Mines
 - ECMC DRMS Mine: <https://ecmc.state.co.us/maps.html#/gisonline>
 - Weld County: <https://www.weldgov.com/Government/Departments/Planning-and-Zoning>
- Earthquakes:
 - USGS: <https://www.usgs.gov/natural-hazards/earthquake-hazards/science/>
 - USGS: <https://earthquake.usgs.gov/earthquakes/map/>
- Landslides
 - CGS: <https://cologeosurvey.maps.arcgis.com/apps/webappviewer/>
- Sub-Surface Mines
 - ECMC Coal Mine: <https://ecmc.state.co.us/maps.html#/gisonline>
 - Roberts, S.B., Hynes, J.L., and Woodward, C.L. Maps Showing the Extent of Mining, Locations of Mine Shafts, Adits, Air Shafts, and Bedrock Faults, and Thickness of Overburden above Abandoned Coal Mines in the Boulder-Weld Coal Field, Boulder, Weld and Adams Counties, Colorado. 1:48:000. Denver, CO: US Geological Survey: 2001
 - Ivery, J.B., and Hynes, J.L., Subsidence Hazard Map Boulder-Weld Coal Field Boulder and Weld Counties, Colorado. Map No. 7361-6 1:24,000. Colorado Geological Survey: 1974
- Collapsible Soils
 - Collapsible Soils of Colorado: <https://cologeosurvey.maps.arcgis.com/apps/webappviewer/index.html?id=a6f816b35fb64d3da096e84af661f070>.
 - White, J.L and Greenman, C., Collapsible Soils in Colorado, Engineering Geology 14, Colorado Geological Survey, 2008.