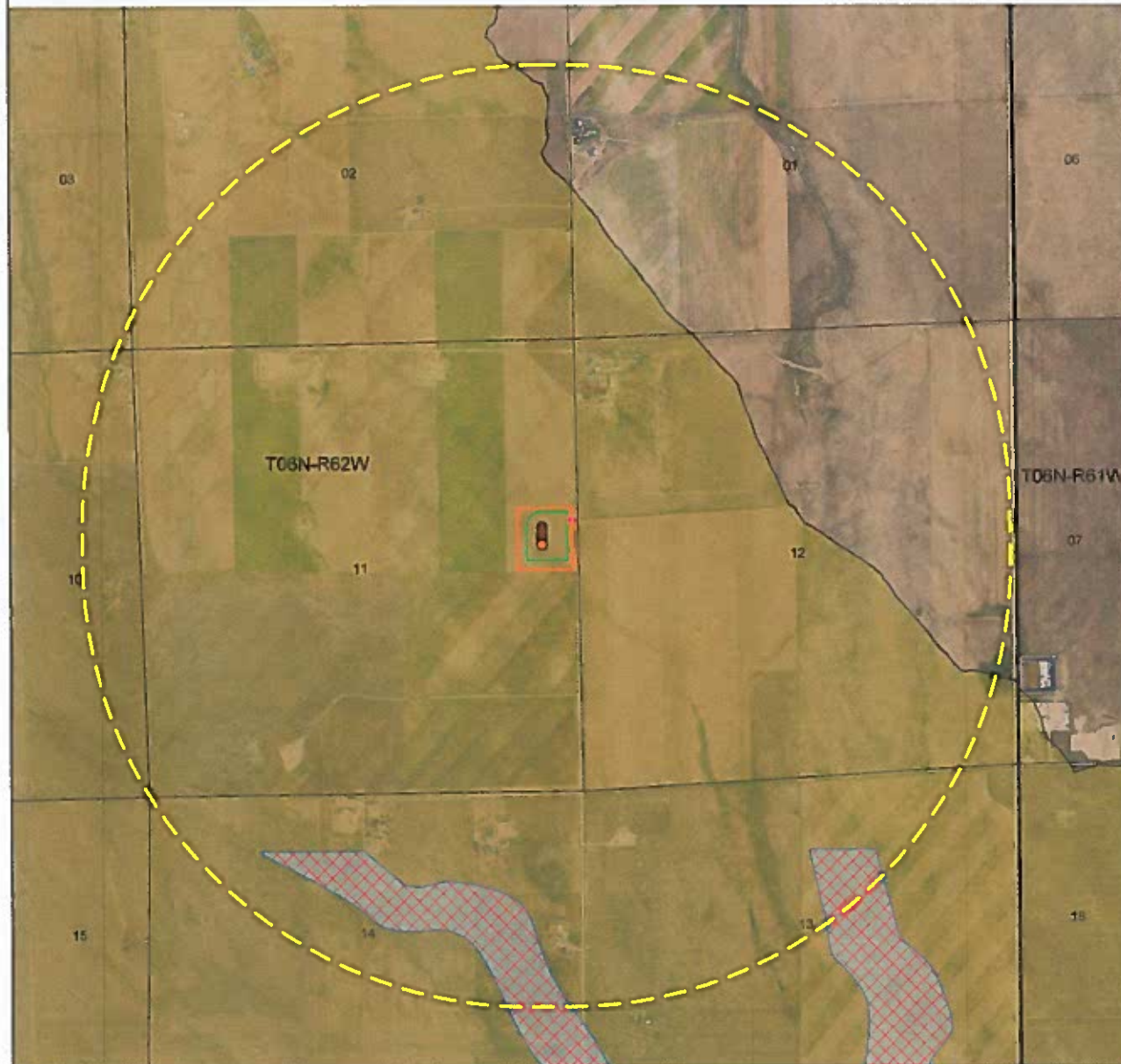


RUH STATE SOUTH PAD GEOLOGIC HAZARD MAP



POTENTIAL GEOLOGIC HAZARDS:

(AS MEASURED FROM THE PROPOSED WORKING PAD SURFACE)

COLLAPSIBLE & EXPANDABLE SOILS - DUNE & SHEET SAND DEPOSITS AND EOLIAN (WIND-BLOWN) DEPOSITS

3 0

FLOODPLAIN

±3952' SW, ±4450' SE

IDENTIFIED SOILS ARE EXTENSIVE BEYOND MAP SCOPE LIMITS

| HAZARD TYPE | DISTANCE (N/A IF >5280') | SOURCE DESCRIPTION IF <5280' |
|---|--------------------------|---|
| AVALANCHES | N/A | COGCC GIS, WELD COUNTY PROPERTY PORTAL, CO GEOLOGIC SURVEY MAPS |
| LANDSLIDES | N/A | COGCC GIS, WELD COUNTY PROPERTY PORTAL, CO GEOLOGIC SURVEY MAPS |
| ROCK FALLS | N/A | COGCC GIS, WELD COUNTY PROPERTY PORTAL, CO GEOLOGIC SURVEY MAPS |
| MUDFLOWS | N/A | COGCC GIS, WELD COUNTY PROPERTY PORTAL, CO GEOLOGIC SURVEY MAPS |
| UNSTABLE OR POTENTIALLY UNSTABLE SLOPES | N/A | COGCC GIS, WELD COUNTY PROPERTY PORTAL, CO GEOLOGIC SURVEY MAPS |
| SEISMIC EFFECTS | N/A | COGCC GIS, WELD COUNTY PROPERTY PORTAL, CO GEOLOGIC SURVEY MAPS |
| RADIOACTIVITY | N/A | COGCC GIS, WELD COUNTY PROPERTY PORTAL, CO GEOLOGIC SURVEY MAPS |
| GROUND SUBSIDENCE | N/A | COGCC GIS, WELD COUNTY PROPERTY PORTAL, CO GEOLOGIC SURVEY MAPS |
| MINE EXTENT | N/A | COGCC GIS, WELD COUNTY PROPERTY PORTAL, CO GEOLOGIC SURVEY MAPS |

NOTES:

1. COLLAPSIBLE AND EXPANSIVE SOILS AS MAPPED DO NOT CONSTITUTE A GEOLOGIC HAZARD. ANY AREAS OF POTENTIAL OR PREVIOUS SUBSIDENCE DUE TO COLLAPSIBLE AND EXPANSIVE SOILS WILL BE IDENTIFIED AND MAPPED AS A SUBSIDENCE GEOLOGIC HAZARD AS PROVIDED BY GEOLOGIST. EXPANSIVE AND COLLAPSIBLE SOILS ARE EXTENSIVE BEYOND MAP LIMITS. (DATA SOURCE: CGS/CJENT)

2. PER THE COLORADO GEOLOGIC SURVEY (CGS), EG-14 COLLAPSIBLE SOILS ARE PRESENT IN THE VICINITY OF THE LOCATION. THESE SOIL TYPES ARE PRONE TO BOTH WATER EROSION AND SOIL BLOWING. HERV OIL WILL DEPLOY DUST MITIGATION MEASURES PROVIDED IN THE DUST MITIGATION PLAN THAT WILL MITIGATE AND MINIMIZE WIND EROSION. THE GRADING AND DRAINAGE DESIGN OF THE LOCATION, IN ADDITION TO IMPLEMENTATION OF STORMWATER CONTROLS PER HERV OIL'S STORMWATER MANAGEMENT PLAN, WILL MITIGATE AND MINIMIZE WATER EROSION. IN ACCORDANCE WITH HERV OIL'S STANDARD OPERATING PROCEDURE, AND AS OUTLINED IN THE TOPSOIL PROTECTION PLAN, A GEOTECHNICAL EXPLORATION WILL BE COMPLETED BY A GEOTECHNICAL ENGINEER PRIOR TO THE COMMENCEMENT OF PAD CONSTRUCTION CONSISTING OF MULTIPLE SOIL BORES ACROSS THE LOCATION. DURING PAD CONSTRUCTION, COLLAPSIBLE SOILS (IF PRESENT) WILL BE OVER EXCAVATED AND THROUGHOUT CONSTRUCTION ALL SOIL WILL BE MOISTURE CONDITIONED AND COMPACTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT. PROPER SLOPING AND BENCHING TECHNIQUES WILL BE ADHERED TO IN ACCORDANCE WITH OSHA REGULATIONS AND STEEP EMBANKMENTS WILL BE AVOIDED. PERMANENT FACILITY EQUIPMENT WILL BE INSTALLED ON DEEP-FOUNDATION ELEMENTS CONSISTING OF HELICAL PILES. NONE OF THE IDENTIFIED SOILS WITHIN THE AREA SURROUNDING THE RUH STATE SOUTH PAD ARE CONSIDERED A SIGNIFICANT HAZARD TO PUBLIC HEALTH, SAFETY, PROPERTY, OR THE ENVIRONMENT.

THE FOLLOWING SOURCES HAVE BEEN CONSULTED TO DETERMINE IF ANY HAZARDS EXIST AND TO ASCERTAIN THE BOUNDARIES OF ANY IDENTIFIED HAZARDS:

COGCC GIS: http://co.ccgmap.state.co.us/cogcc_gis_online/

Weld County Property Portal: <https://www.co.weld.co.us/maps/propertyportal/>

Colorado Geological Survey: OH-001 -- Colorado Earthquake and Fault Map

<https://cgsarcimage.mines.edu/ON-001/>

ON-006-01 -- Statewide Landslide Inventory Map

gis.com/apps/webappviewer/index.html?id=9dd73

ON-006-06 – Colorado Historic Coal Mines

<https://colosseum.mars.ac.ukis.com/apps/webviewer/index.html?id=1891>

ON-4-40M – Radioactive Mineral Occurrences of Colorado and Bibliography

<https://colostate.survey.mant.agt.su.com/apps/webappviewer/index.html?id=5381e1335284d63bfa5d4b018b3372f>

cosurvey.maps.arcgis.com/apps/webappviewer/index.html?id=c5381e1335284d63bfa5d46018b3372f
FEMA FLOOD8: <https://www.fema.gov/flood-maps/national-flood-hazard-layer>

CLIENT PROVIDED DATA MAY ALSO BE UTILIZED BEYOND THESE SOURCES.

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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 no Geologic Hazards within a one mile radius."


SIGNATURE

SIGNATURE

Professional Geologist

DATE 12/9/22

TITLE

DATE _____

DISCLAIMER
THIS PLOT DOES NOT REPRESENT A MONUMENTED LAND SURVEY AND SHOULD NOT BE RELIED UPON TO DETERMINE BOUNDARY LINE, PROPERTY OWNERSHIP OR OTHER PROPERTY INTERESTS. PARCEL LINES, IF DEPICTED HAVE NOT BEEN FIELD VERIFIED AND MAY BE BASED UPON PUBLICLY AVAILABLE DATA THAT ALSO HAS NOT BEEN INDEPENDENTLY VERIFIED.

ASCENT
A COMMERCIAL REAL ESTATE COMPANY

8620 North Court
Berwyn, PA 19001
(610) 261-2726
www.ascentcommercial.com

| | |
|----------------------------|------------------------------|
| FIELD DATE: 09-14-22 | DRAWING DATE: 10-17-22 |
| DRAWN BY: CSG | CHECKED BY: JUM |

| | |
|-------------------|---|
| STATE NAME: | RUH STATE SOUTH PAD |
| SURFACE LOCATION: | SE 1/4 NE 1/4 SEC. 11, T8N, R62W, 6TH P.M. WELD COUNTY, COLORADO |

DATA SOURCE:
AERIAL IMAGERY: NAMP 2021
GEOLOGIC HAZARDS: COUNTY GIS, COGMS, USGS GIS
FLOODPLAIN: FEMA

PUBLICLY AVAILABLE DATA SOURCES HAVE NOT
BEEN INDEPENDENTLY VERIFIED BY ASCENT.

LEGEND:
 = PROPOSED WELL

- PROPOSED ACCESS ROAD
- SECTION LINE
- TOWNSHIP LINE
- FLOODPLAIN

- 5280' BUFFER FROM WPS
- OIL & GAS LOCATION
- WORKING PAD SURFACE

- COLLAPSIBLE & EXPANDABLE
SOILS - DUNE & SHEET SAND
DEPOSITS AND EOLIAN
(WIND-BLOWN) DEPOSITS

HERVOLI

PLAT: P:\VCHY_BCH0001\PROCS\STATE SOUTH PAD SW20001 COTTONC HAZARD MAP LAYOUT TAB C:\msp\Hazard

Ruh State OGDG Geologic Hazard Map Supplement

Ruh State North Pad
Ruh State South Pad

Per the Colorado Geologic Survey (CGS), EG-14 Collapsible soils are present in the vicinity of the Ruh State OGDG.

These eolian deposits are not deemed to be geohazards in regard to the proposed locations either as a cause of long-term damage to the surface or a hazard to the drilling operations that could result in compromising the environment or safety of individuals in the immediate area.

While these soil types are prone to both water erosion and soil blowing, there are no known cases of subsidence due to eolian soil collapse in the area as a result of drilling operations. There have been previous drilling operations in greater Wattenberg Field (and specifically in T6N-62W) in areas mapped as eolian deposits that have not encountered nor created any problems related to collapsible soils, erosion, or wind.

The drill site will be constructed and managed using approved practices that preclude fluids from leaving the immediate location:

- Operator shall install stormwater controls, constructed in a manner that is consistent with good engineering practices, that will prevent offsite migration of sediment/contaminant into the nearby intermittent streams and roadside ditches.
- Stormwater controls shall be installed prior to construction activities. Gas, oil, and water gathering lines will be co-located to minimize potential of erosion associated with construction of any pipeline(s).
- Stormwater Management is coordinated with Weld County via Preliminary Drainage Report to be submitted as part of 1041WOGLA22-0021 and 1041WOGLA22-0022, and a Grading Permit and Final Drainage Report will be approved by Weld County Public Works prior to site construction.