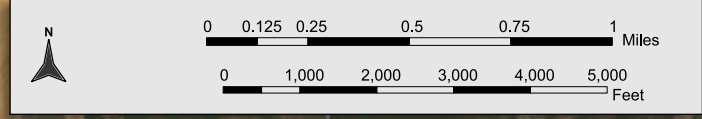
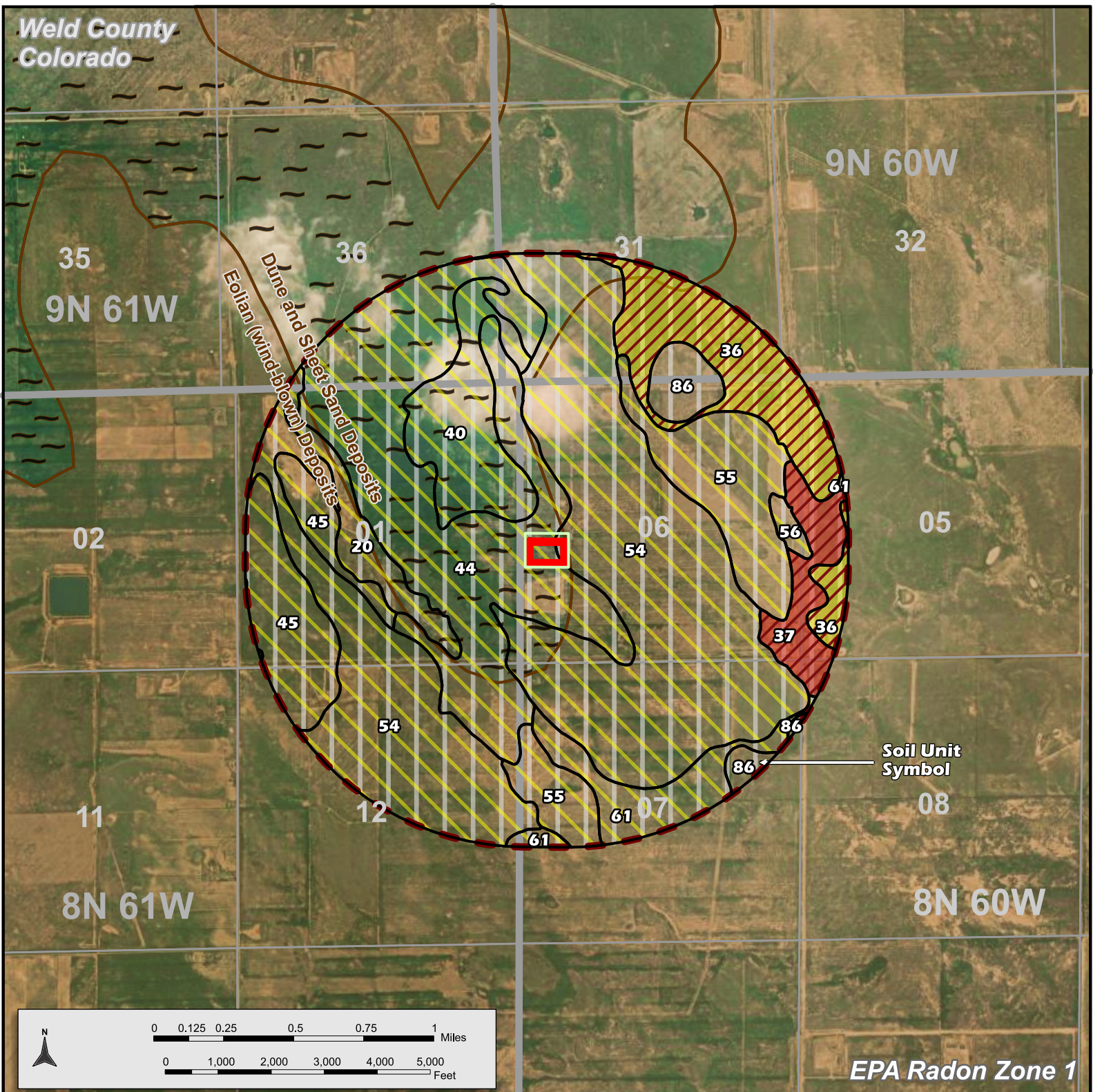


Hornet 0136 PAD GEOLOGIC HAZARD MAP



EPA Radon Zone 1



Verdad Resources
1125 17th Street,
Suite 550
Denver, CO 80202
720-845-6900
verdadresources.com

Drawn by:
VG

Checked by:
JB

Drawing Date:
03-10-24

Data Source:
Esri, Maxar, GeoEye, AeroGRID,
Earthstar Geographics,
CNES/Airbus DS, USDA, USGS,
IGN, GIS User Community

Site Name:
Hornet 0136

Surface Location:
**SEC 01 T 08-N, R 61-W
Weld County, Colorado**

Entire map area is within:
EPA Radon Zone 1

Legend:

5280' Radius from WPS

Working Pad Surface

Collapsible Soils:

CGS EG-14 Dune and sheet sand deposits

CGS EG-14 Eolian (wind-blown) loess deposits

Expansive Soils:
Plastic Index: **Low**
Liquid Index: **Low**

COVERS ENTIRE MAP AREA

Landslide, Coal Mines, Floodplain:
NOT PRESENT

Corrosion of Concrete

	High	Soil Unit Symbol # 37	Soil Rating High
	Moderate	Soil Unit Symbol # 36	Soil Rating Moderate

Compressible Soils
Unified Soil Classification (Surface)

Moderate

Corrosion of Steel

	High	Soil Unit Symbol # 36, 37	Soil Rating High
	Moderate	Soil Unit Symbol # 20, 40, 44, 45, 54, 55, 56, 61	Soil Rating Moderate

Moderate

Soil Unit Symbol #

CL - 36, 37, 40, 54, 61
SC - 44, 45, 55, 56

Geologic Hazards Summary for Hornet 0136

Location: NW ¼ SW ¼ Section 6, T8N-R60W 6th P.M.

Summary:

My name is Jason Burris, and I am currently employed as Senior Development Geologist for Verdad Resources LLC ("Verdad"). I certify that I am a Professional Geologist, satisfying the requirements of C.R.S. 23-41-208 (b). The matters described herein were devised under my direction and control. To the best of my knowledge and belief, all the matters set forth herein, my testimony and the supporting exhibits, are true, correct, and accurate.

Based on this review of available geologic data comprised of experience, measurements, and published reports, I determine that the following hazards are present at the proposed location: soil corrosion of concrete [1], soil corrosion of steel [1], compressible soils [1], collapsible soils [1,2], and Radon (NORM) [8]. Other absent, or very low, hazards examined at the proposed location are expansive soils [1,3,4], landslides [1,6], 100-year floodplain [7], NORM & TENORM [9], induced seismicity [10], natural rate seismicity [11], and coal mine subsidence [12]. A map summary of these findings is attached.

Corrosion to concrete is identified as a potential hazard. The concrete on location will serve as a combustor base. Considering the soil composition, and Verdad's facility design and management, I determine the soil corrosion to concrete hazard is insignificant.

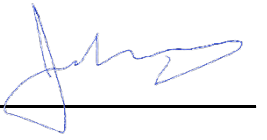
Corrosion to steel is identified as a potential hazard at the proposed location. No steel at the proposed location will be exposed to the soil because 1) all steel equipment on location will have impervious liners, 2) steel flowlines will have protective lining, and 3) imported gravel or road base will separate the natural soil from steel. Considering the primary soil on the location, and facility design and management, I determine the steel corrosion hazard from soil at the proposed location is insignificant.

Compressible soils are identified as a potential hazard. Prior to construction at the proposed location, topsoil is removed. During the cut and fill process, the ground is wetted and compacted. A cap of about 4-6" of road base provides additional protection from differential compaction. The grade and ditches promote flow from the proposed location to further mitigate the risk of water saturating soils. Considering the soil composition, and Verdad's facility design and management, I determine the compressible soil hazard is low.

Collapsible soils are identified as a potential hazard. Prior to construction at the proposed location, topsoil is removed. During the cut and fill process, the ground is wetted and compacted. A cap of about 4-6" of road base provides additional protection from differential compaction. The grade and ditches promote flow from the proposed location to further mitigate the risk of water saturating soils. Considering the soil composition, and Verdad's facility design and management, I determine the collapsible soil hazard is low.

Radon hazard is identified as a potential geo hazard on the map. However, there are no inhabited structures, or structures occupied throughout the working day, planned at the location. Considering the EPA radon zone, and the lack of inhabited structures, the radon hazard at the proposed location, I determine the radon hazard at the proposed location is insignificant.

Based on this review of available geologic data comprised of experience, measurements, and published reports, I determine that there are no known geologic hazards of significance at the proposed location.



Jason Burris

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- [12] Colorado Historical Coal Mines. Colorado Geologic Survey, <https://www.arcgis.com/apps/webappviewer/index.html?id=1891e3149eda44af9dc8af81c4dc58a8> [Accessed 13 March 2024].