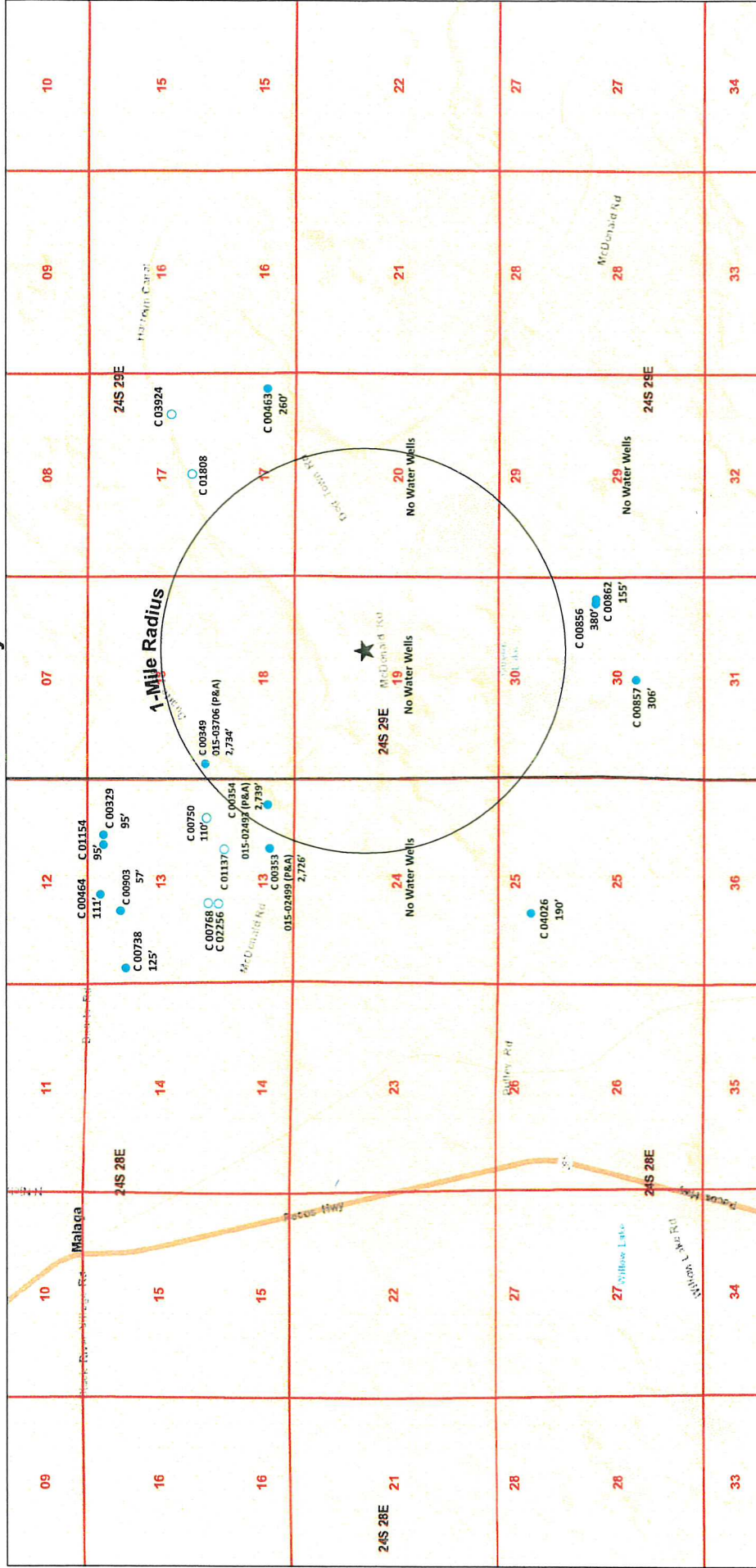


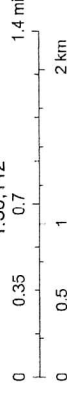
Water Wells in Site Vicinity



6/27/2019 12:01:28 PM

- ☐ PLSS First Division
- ☐ PLSS Second Division
- ☐ PLSS Townships

1:36,112



- ☐ Water Well with Records/Log Information
Indicating State ID No. and Reported Depth
- ☐ Water Well without Records/Log Information
Indicating State ID No.

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community, BLM

Water Well Data from:
New Mexico Water Rights Reporting System @ <http://nmwrrs.ose.state.nm.us/nmwrrs/meterReport.html>

New Mexico Oil Conservation Division
NM OCC Oil and Gas Map <http://nm-omnd.maps.arcgis.com/apps/webappviewer/>

OCD Case No. 20583
Key Energy Services, LLC
Exhibit 1b

Depth to Basement Map

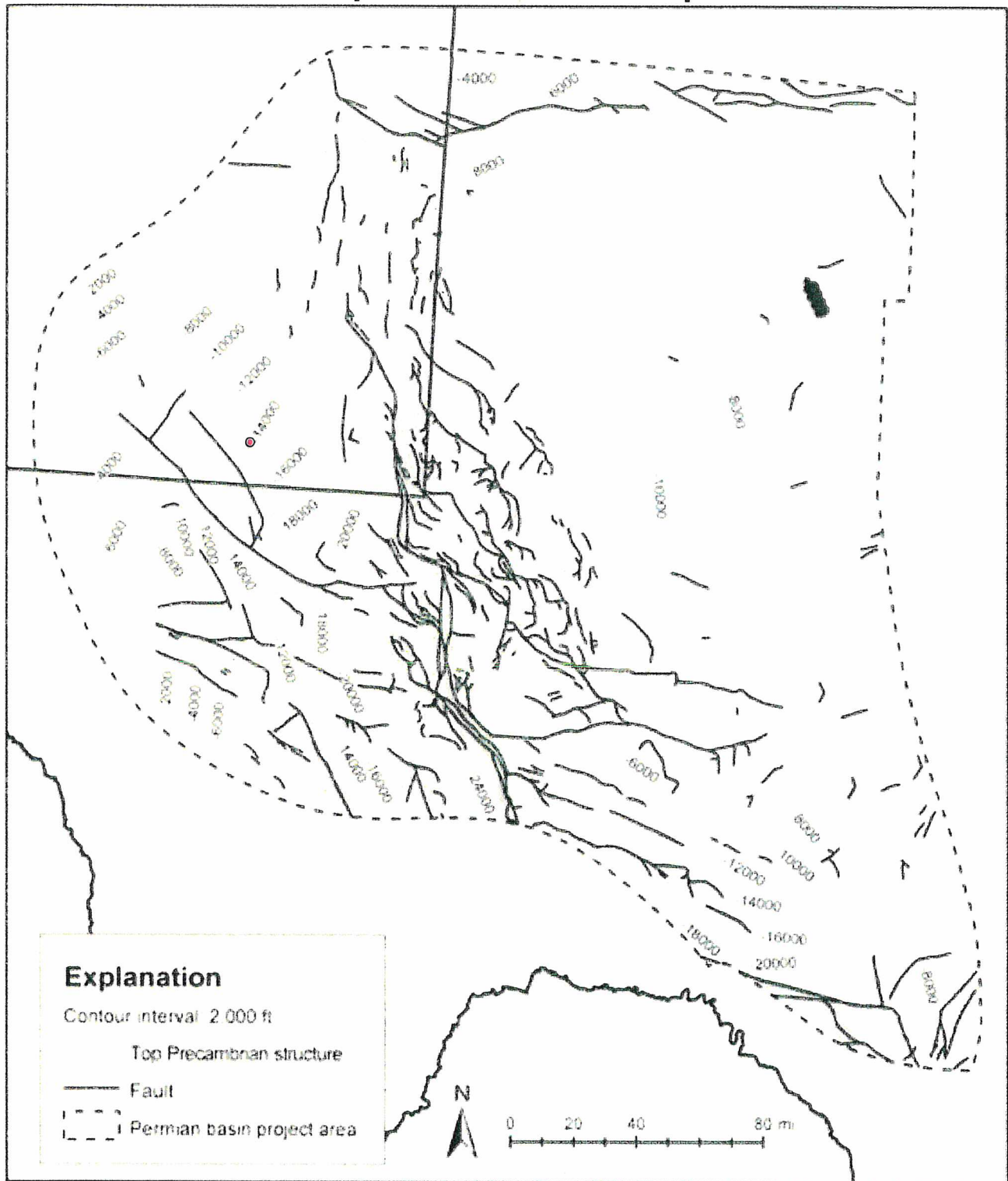


Figure 6. Structure map on top of Precambrian strata from Ruppel et al. (2005). Contours are subsea depths.

Site = 2,946' (GL) + 14,000' (MSL depth from Map) = 16,956' Basement Depth

Source: Update on Permian Basin Geological Synthesis Project (2005 mid-year report) @ http://www.beg.utexas.edu/resprog/permianbasin/geolog_synth/2005midyear_report.htm

Original Source: Ruppel, S. C., Jones, R. H., Breton, C. L., and Kane, J. A., 2005, Preparation of maps depicting geothermal gradient and Precambrian structure in the Permian Basin: The University of Texas at Austin, Bureau of Economic Geology, contract report prepared for the U.S. Geological Survey under order no. 04CRSA0834 and requisition no. 04CRPR01474, 23 p. + CD-ROM

OCD Districts

 **OCD District Offices**

PLSS First Division

PLSS Second Division

PLSS Townships

Source: USGS Search Earthquake Catalog @ <https://earthquake.usgs.gov/earthquakes/search/> (searched on 6/28/19)

1. Event = Magnitude 3.9 on 11/28/74 @ 32.311° , -104.143° - 10.1 Miles NW of Site

2. Event = Magnitude 3.1 on 3/18/12 @ 32.281°, -103.892° - 9 Miles NE of Site

Area of Review = 5.65 miles radius = 100 square miles

1:144,448

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, IHS, NCEA, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), Swisstopo, Mapbox Labs, Stadia, Uber Technologies, Inc., OpenStreetMap contributors, and the GIS User Community, OGC

STATE OF NEW MEXICO
DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES
OIL CONSERVATION DIVISION

APPLICATION OF	§	
KEY ENERGY SERVICES, LLC	§	
FOR A SALTWATER DISPOSAL WELL,	§	
KNOWN AS THE QUEEN LAKE FEDERAL	§	
19 NO. 1, SECTION 19, T-24-S, R-29-E,	§	
EDDY COUNTY, NEW MEXICO	§	CASE NO. 20583

GEOLOGIC AFFIRMATION

I have examined the available engineering and geologic data, and have found no evidence of open faults or any other hydrologic connection between the proposed disposal interval in the above-described well and underground sources of drinking water.

By: Michael G. Eide
Michael G. Eide, P.G.

Date: 8/18/19