

Round Rock

Site 2: Round Rock, AZ: Site 1: Round Rock, AZ. This area includes superb cyclical Chinle strata that are maximally gradational into Glen Canyon Group rocks. The site is the best place for recovering the ETE and trying to paleontological sites around the ETE in Utah [e.g., (1)]. However, Kayenta strata are largely if not entirely replaced by the Navajo eolian sandstone and the Moenave interval is mostly replaced by replaced by the Wingate Formation (2) although the exact relationships remain to be worked out. Thus, the site is not adequate for younger parts of the Early Jurassic. In addition, the site has a condensed Moenkopi section [< 20 m thick]. Preferred site at about 36.503997° , -109.658266° ; total depth approximately 700 m; core hole inclination 60° , azimuth 000° [true north].

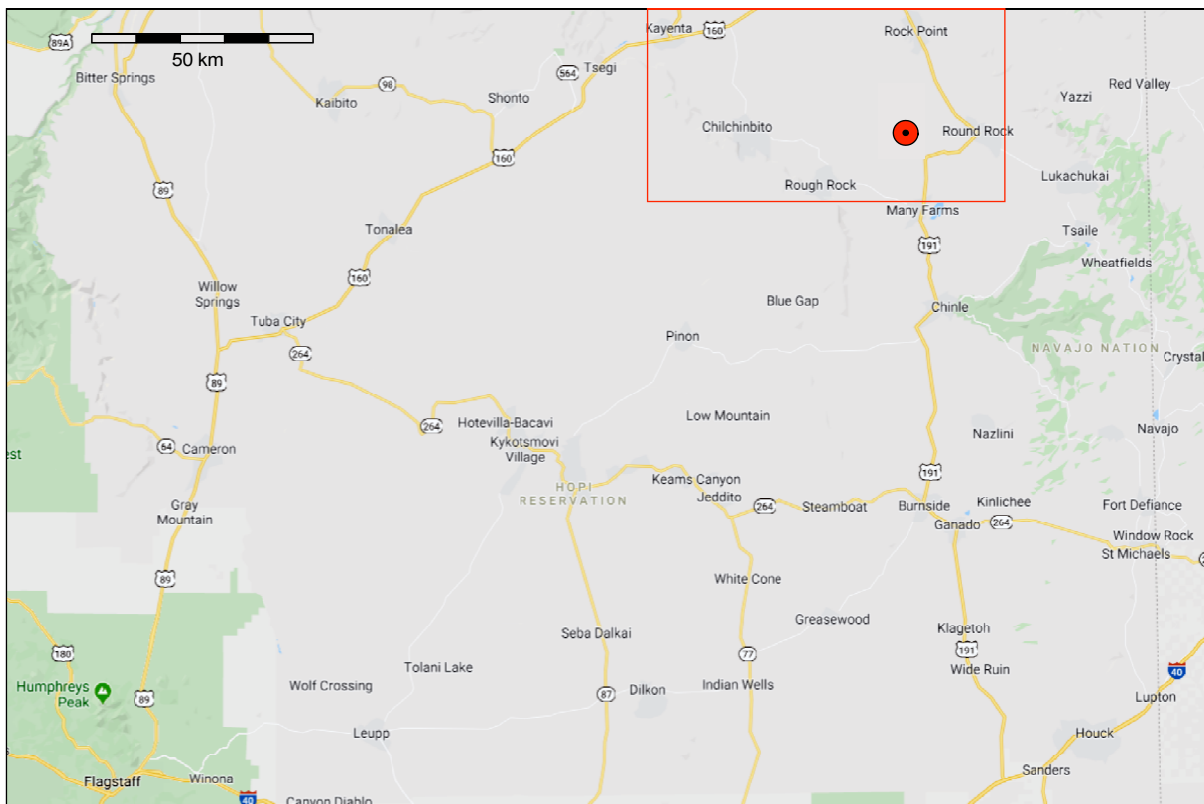


Figure 1: Map of northeastern Arizona showing location of Round Rock site [red dot]. Red inset is position of Figure 2. GoogleMap image.



Figure 2: Location of Round Rock site, Apache County, Navajo Nation, AZ. GoogleMaps image.



Figure 3: Round Rock, preferred site at 36.503997° , -109.658266° [red dot], Gold Spring Ranch. GoogleEarth Image.



Figure 4: Overview of Round Rock site area, with one other possible sites also disturbed. Linear light zones are older Quaternary dunes. GoogleEarth image.

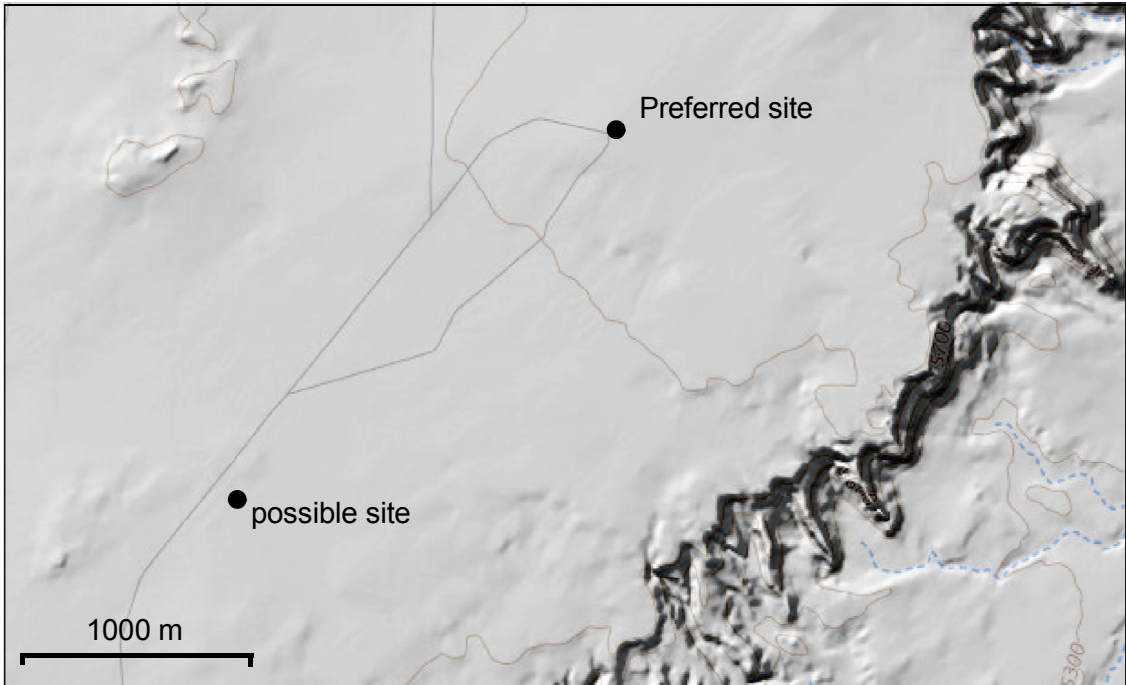


Figure 5: Topography of Round Rock area. National Map (3) image with hillshade topography and contours. National Map image with hillshade topography and contours.

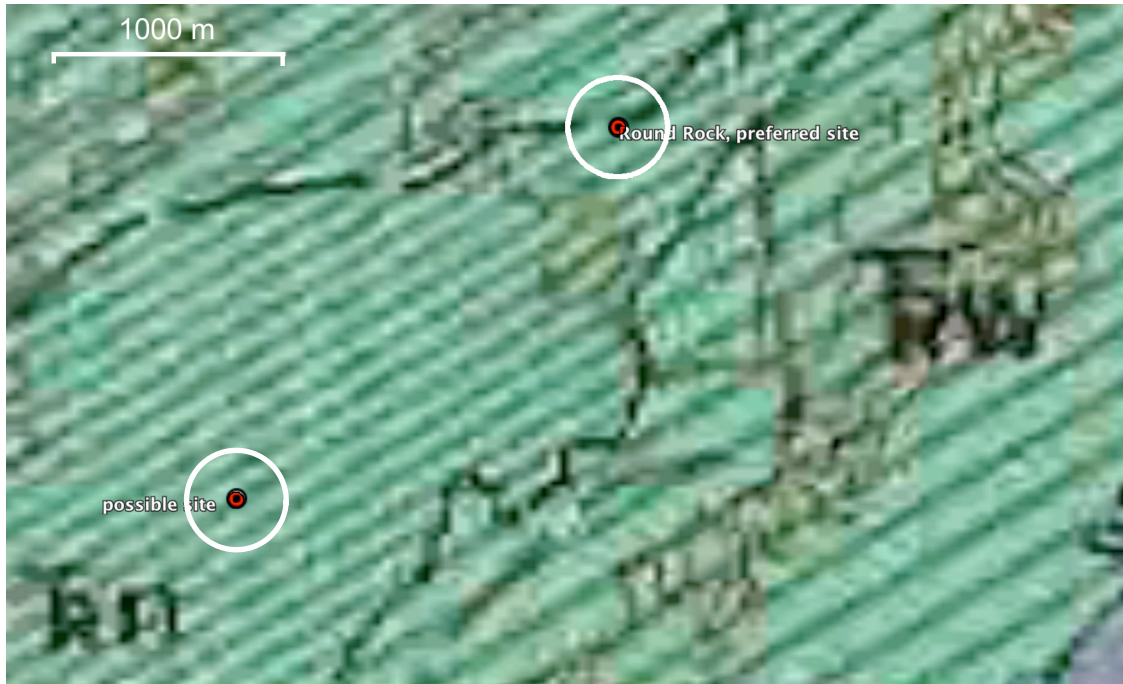


Figure 6: Bedrock geology of Round Rock site. Units are : Trn, Navajo Sandstone [thought to be Triassic in age at the time]; Trw, Wingate Sandstone (also thought to be Triassic at the time). From (4). Other red dot is another possible site.

References:

1. J. W. Martz, R. B. Irmis, A. R. Milner, in *Geology of Utah's far South*, J. S. MacLean, R. F. Biek, J. E. Huntoon, Eds. (2014), pp. 397-448.
2. G. E. Lewis, J. H. Irwin, R. F. Wilson, Age of the Glen Canyon Group (Triassic and Jurassic) on the Colorado Plateau. *Geological Society of America Bulletin* **72**, (1961).
3. USGS. (U. S. Department of Interior, U. S. Geological Survey, 2018), vol. 2019.
4. R. B. O'Sullivan, H. M. Beikman, Geology, structure, and uranium deposits of the Shiprock quadrangle, New Mexico and Arizona *USGS Miscellaneous Geologic Investigations Map I-345*, (1963).