

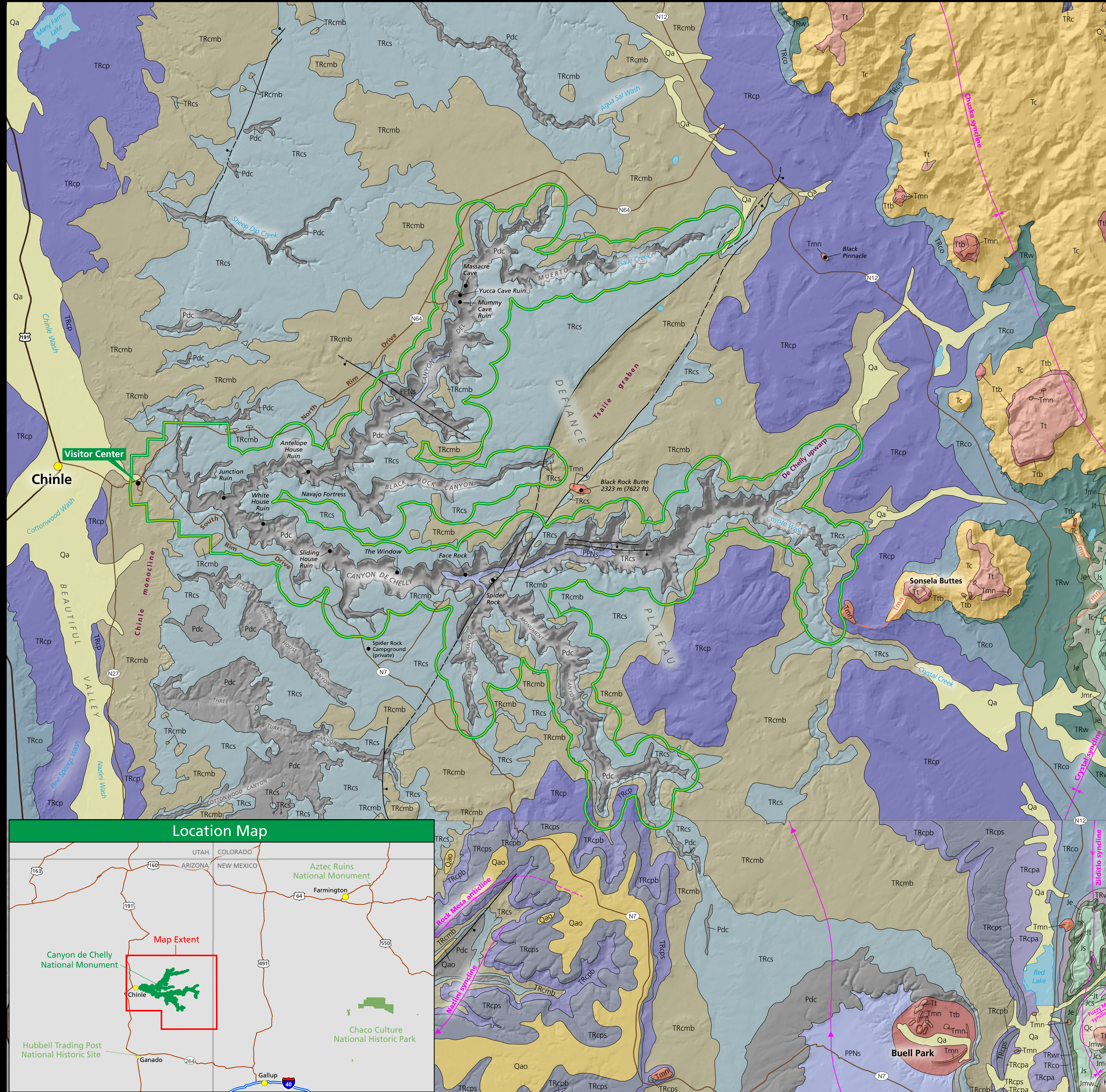
Geologic Map of Canyon de Chelly National Monument

Arizona

National Park Service
U.S. Department of the Interior



Geologic Resources Inventory
Natural Resource Stewardship and Science



LEGEND

- NPS boundary
- Highway
- Major road
- Map quadrangle boundary
- Town
- Point of interest
- Lake

- Linear Geologic Features**
- Minette dikes (Oligocene to Miocene), dashed where approximate

- Folds**
- Plunging anticline, solid where known or certain, dashed where approximate
 - Plunging syncline, solid where known or certain, dashed where approximate

- Faults**
- Solid where known or certain, dashed where approximate, bar and ball indicates downthrown side

- Geologic Contacts**
- Solid where known or certain, dashed where approximate

- Geologic Units**
- Qa Alluvium (Holocene)
 - Ql Landslide debris (Holocene and Pleistocene)
 - Qc Colluvial deposits, undifferentiated (Holocene)
 - Qao Alluvium and/or eolian deposits on older surfaces such as terraces and pediments (Holocene and Pleistocene)
 - Tt Trachybasalt (Oligocene to Miocene)
 - Ttb Tuff breccia (Oligocene to Miocene)
 - Tmn Minette (Oligocene to Miocene)
 - Tc Chuska Sandstone (Eocene? to lower Oligocene)
 - Kd Dakota Sandstone, main body (Upper and Lower Cretaceous)
 - Jm Morrison Formation, undivided (Upper Jurassic)
 - Jmw Morrison Formation, Westwater Canyon Member (Upper Jurassic)
 - Jmr Morrison Formation, Recapture Member (Upper Jurassic)
 - Js Summerville Formation (Middle Jurassic)
 - Jcs Cow Springs Sandstone (Middle Jurassic)
 - Jt Todilto Limestone (Middle Jurassic)
 - Je Entrada Sandstone, undivided (Middle Jurassic)
 - TRw Wingate Sandstone, undivided (Lower Jurassic)
 - TRwr Wingate Sandstone, Rock Point Member (Lower Jurassic)
 - TRc Chinle Formation, undivided (Upper Triassic)
 - TRco Chinle Formation, Owl Rock Member (Upper Triassic)
 - TRcp Chinle Formation, Petrified Forest Member (Upper Triassic)
 - TRcpa Chinle Formation, Petrified Forest Member, upper part (Upper Triassic)
 - TRcps Chinle Formation, Petrified Forest Member, Sonsela Sandstone Bed (Upper Triassic)*
 - TRcpb Chinle Formation, Petrified Forest Member, lower part (Upper Triassic)
 - TRcmb Chinle Formation, Monitor Butte Member (Upper Triassic)*
 - TRcs Chinle Formation, Shinarump Member (Upper Triassic)
 - Pdc De Chelly Sandstone (lower Permian)
 - PPNs Supai Formation, main body (early Permian and Pennsylvanian)

* Following Lucas and Hayden (1989), the Monitor Butte Member and the red member (TRcmb) are now correlated with the Bluewater Creek Member of the Chinle Formation. Following mapping by Martz et al. (2012), the Sonsela Sandstone Bed of the Petrified Forest Member (TRcps) is now recognized as the Sonsela Member of the Chinle Formation.

Lucas, S. G., and S. N. Hayden. 1989. Triassic stratigraphy of west-central New Mexico. Pages 191–211 in O. J. Anderson, S. G. Lucas, D. W. Love, and S. M. Cather, editors. Southeastern Colorado Plateau. Fall Field Conference Guidebook 40. New Mexico Geological Society, Socorro, New Mexico.

Martz, J. W., W. G. Parker, L. Skinner, J. J. Raucci, P. Umhoefer, and R. C. Blakey. 2012. Geologic map of Petrified Forest National Park, Arizona (scale 1:50,000). Contributed Map CM-12-A. Arizona Geological Survey, Tucson, Arizona.

Note: Geologic units and features that end abruptly (such as at a quadrangle boundary) may reflect differences in interpretation between source maps rather than actual geologic conditions. Resolving these differences is not within the scope of the GRI program.

This map displays geologic map data compiled by the National Park Service Geologic Resources Inventory. It is not a substitute for site-specific investigations. All GRI products are available at <https://go.nps.gov/gripubs>.

Source Maps:
 Hackman, R. J., and A. B. Olson. 1977. Geology, structure, and uranium deposits of the Gallup 1° x 2° quadrangle, New Mexico and Arizona (scale 1:250,000), sheet 1 of 2. Miscellaneous Investigations Series Map I-981. US Geological Survey, Washington, DC.
 O'Sullivan, R. B., and H. M. Beikman. 1963. Geology, structure, and uranium deposits of the Shiprock quadrangle, New Mexico and Arizona (scale 1:250,000), sheet 1 of 2. Miscellaneous Geological Investigations Map I-345. US Geological Survey, Washington, DC.

Source Scale: According to US National Map Accuracy Standards, features are within 127 meters (417 feet) of their true location at a scale of 1:250,000.

Poster Layout: Thom Curdts and Shea Slonkosky (Colorado State University) **Poster Date:** May 2024

