Geologic Map of Tonto National Monument

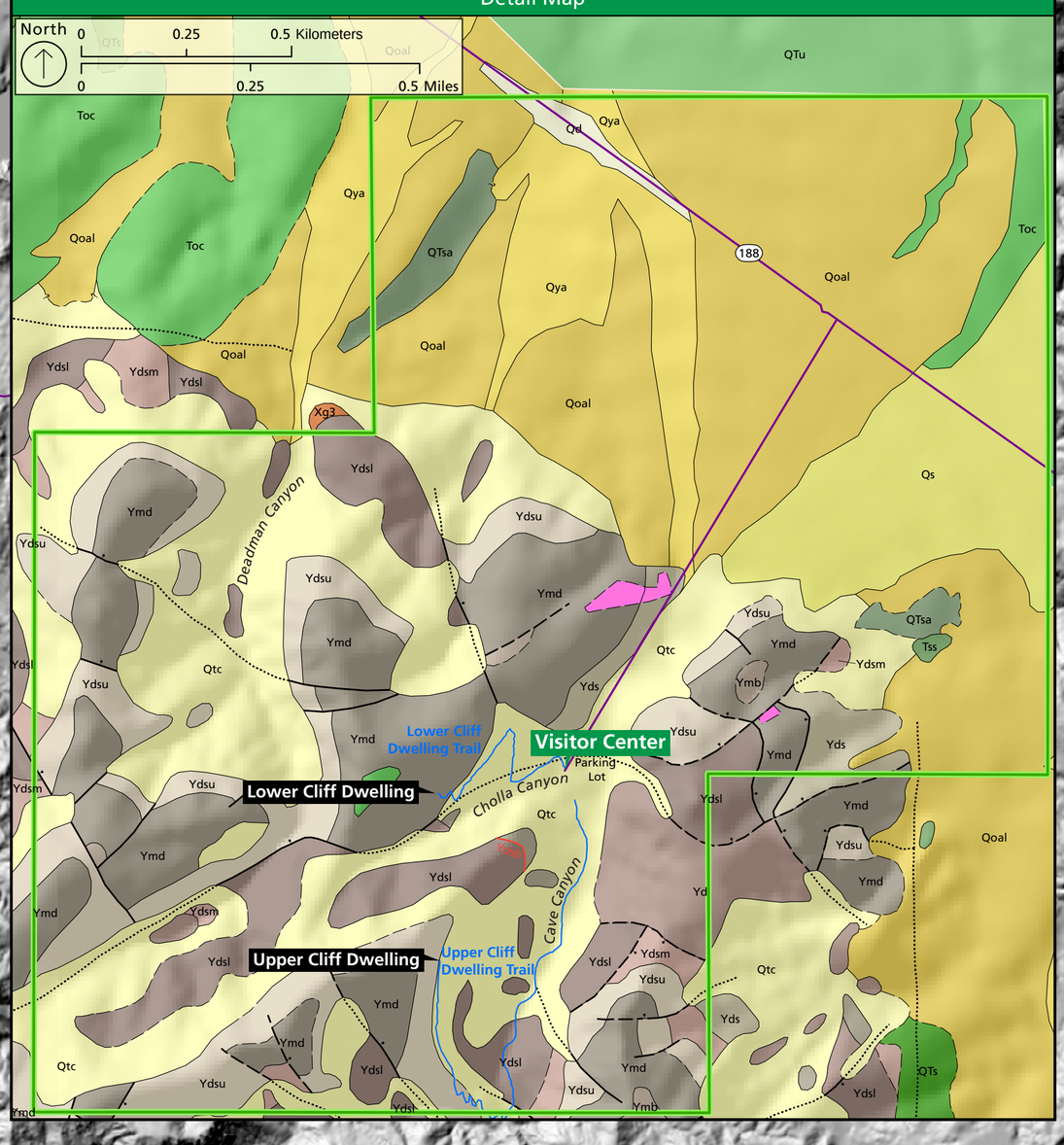
Arizona

National Park Service
U.S. Department of the Interior

Geologic Resources Inventory
Natural Resource Stewardship and Science

area of detail

Detail Map



NPS Boundary

Transportation
- highways
- trails

Geologic Point Features
- individual spring

Linear Dikes
- TXp - Pegmatite dike (Miocene (?) to Early Proterozoic (?)), approximate
- TXm - Mafic dikes (Miocene to Early Proterozoic), known or certain
- Tt - Tuff (early to middle Miocene), known or certain
- Tt - Tuff (early to middle Miocene), approximate

Linear Geologic Units
- Ydsl - Dripping Spring Quartzite, lower unit (Middle Proterozoic), known or certain
- Ydslb - Dripping Spring Quartzite, Barnes Conglomerate (Middle Proterozoic), known or certain
- Yps - Pioneer Formation, Scanlan Conglomerate (Middle Proterozoic), known or certain
- Yps - Pioneer Formation, Scanlan Conglomerate (Middle Proterozoic), approximate

Geologic Line Features
- quartz vein

Folds
- syncline, approximate

Faults
- thrust fault, known or certain
- high-angle fault, solid known or certain, dashed where approximate, dotted where concealed, dashed with question marks where approximate and queried

Deformation Areas
- shear zone
- breccia zone
- area of shattered rock

Geologic Contacts
- solid where known or certain, long-dashed where approximate, dotted where concealed, dashed with question marks where approximate and queried, short-dashed where inferred, hashed where gradational
- GRI map boundary
- boundary between source maps
- water or shoreline

Geologic Units
- Water
- Qd — Disturbed ground (Holocene)
- Qya — Young alluvium (Holocene)
- Qs — Surficial deposits (Quaternary)
- Qtc — Talus and colluvium (Quaternary)
- Qoa — Old alluvium (Quaternary)
- Qr — River gravel (Pleistocene)
- Qoal — Old alluvium (middle and early Pleistocene)
- QTu — Undifferentiated sediments (Tertiary (?) to Quaternary (?))
- QTls — Landslide deposits (Pliocene to Quaternary)
- QTs — Older alluvium (Miocene to Quaternary)
- QTsa — Conglomerate, Apache Group clasts (Miocene to Quaternary)
- QTsg — Poorly sorted sand and gravel deposits (Pliocene to Pleistocene)
- QTr — Old major river deposits (Pliocene to middle Pleistocene)
- Tsy — Siltstone, sandstone and sparse conglomerate (Pliocene)
- Tsyc — Conglomerate (Pliocene or Miocene)
- Tss — Sandstone, pebbly sandstone and siltstone (Miocene)
- Toc — Older conglomerate (Miocene)
- TXp — Pegmatite dikes (Miocene (?) to Early Proterozoic (?))
- TXm — Mafic dikes (Miocene to Early Proterozoic)
- Tta — Apache Leap Tuff (early Miocene)
- Tt — Tuff (early to middle Miocene)
- Mr — Redwall Limestone (Mississippian)

Martin Formation
- Dm — undivided (Devonian)
- Dmj — Jerome Member (Middle to Late Devonian)
- Dms — sandstone (Middle to Late Devonian)
- Dmb — Beckers Butte Member (Early to Middle Devonian)
- Cb — Bolsa Quartzite (Middle Cambrian)
- PZYu — Undifferentiated rocks associated with Roundup Hill (Proterozoic (?) to Paleozoic (?))
- Yd — Diabase (Middle Proterozoic)
- Yt — Troy Quartzite (Middle Proterozoic)

Apache Group

Mescal Limestone
- Ym — undivided (Middle Proterozoic)
- Yma — argillite (Middle Proterozoic)
- Ymb — basalt (Middle Proterozoic)
- Ymd — dolomite (Middle Proterozoic)

Dripping Spring Quartzite
- Yds — undivided (Middle Proterozoic)
- Ydsu — upper unit (Middle Proterozoic)
- Ydsm — middle unit (Middle Proterozoic)
- Ydsl — lower unit (Middle Proterozoic)
- Ydslb — Barnes Conglomerate (Middle Proterozoic)

Pioneer Formation
- Yp — undivided (Middle Proterozoic)
- Yps — Scanlan Conglomerate (Middle Proterozoic)
- Yg — Coarse-grained porphyritic biotite granite (Middle Proterozoic)
- Yga — Aplite associated with course-grained porphyritic biotite granite (Middle Proterozoic)
- YXgm — Granite and schist (Middle and Early Proterozoic)

Granitic Rocks of Cottonwood Creek
- Xga3 — aplite and aplitic granite (Early Proterozoic)
- Xg3 — granodiorite (Early Proterozoic)
- Xgbc — granitic rocks in Bronco Creek (Early Proterozoic)

Granitic Rocks of Rock Creek Area
- Xga2 — aplitic granite (Early Proterozoic)
- Xg2 — course-grained granite (Early Proterozoic)
- Xgmvg — mixed granite and metavolcanics (Early Proterozoic)

Granitic Rocks of Mills Canyon Area
- Xg1 — granite (Early Proterozoic)
- Xgd1 — granodiorite (Early Proterozoic)
- Xgb — diorite-gabbro phase (Early Proterozoic)

Buckhorn Creek Crystalline Complex
- Xb — undivided (Early Proterozoic)
- Xbf — felsic unit (Early Proterozoic)
- Xbm — mafic unit (Early Proterozoic)
- Xhm — Hornblendite and mafic intrusive rocks (Early Proterozoic)
- Xms — Metasedimentary rocks, undivided (Early Proterozoic)
- Xmv — Metavolcanic rocks (Early Proterozoic)
- NA — Unmapped area

This map displays geologic map data compiled by the National Park Service Geologic Resources Inventory.

It is not a substitute for site-specific investigations.

Spencer, J.E., S.M. Richard, C.A. Ferguson, and W.G. Gilbert. 1999, Preliminary bedrock geologic map and cross sections of the Windy Hill 7.5' Quadrangle, Gila County, Arizona (scale 1:24,000). Open-File Report OFR 99-12. Arizona Geological Survey, Tucson, Arizona. http://repository.azgs.az.gov/uri_gin/azgs/dlio/1045

Spencer, J.E., and S.M. Richard. 1999. Geologic map and report for the Theodore Roosevelt Dam Area, Gila and Maricopa Counties, Arizona (scale 1:24,000). Open-File Report OFR 99-06. Arizona Geological Survey, Tucson, Arizona. http://repository.azgs.az.gov/uri_gin/azgs/dlio/1045

Source Scale 1:24,000 According to US National Map accuracy standards, features are within 12 m (40 ft) of their true location.

Poster Layout: Georgia Hybels and Jake Suri (Colorado State University). **Poster Date**: September 2020

All Geologic Resources Inventory geologic map data and publications are available at http://go.nps.gov/gripubs.