

Geologic Map and Report for the Theodore Roosevelt  
Dam area, Gila and Maricopa Counties, Arizona

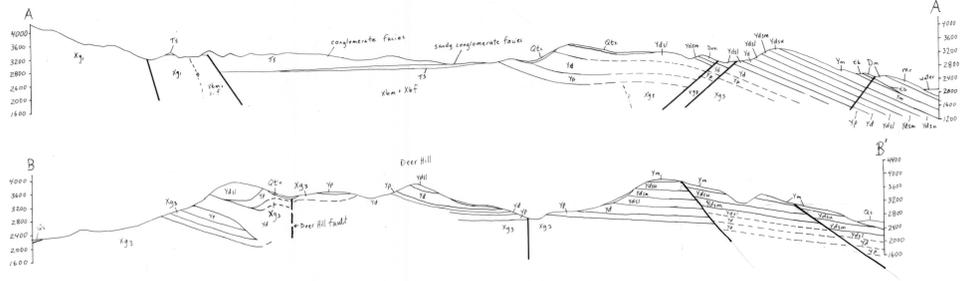
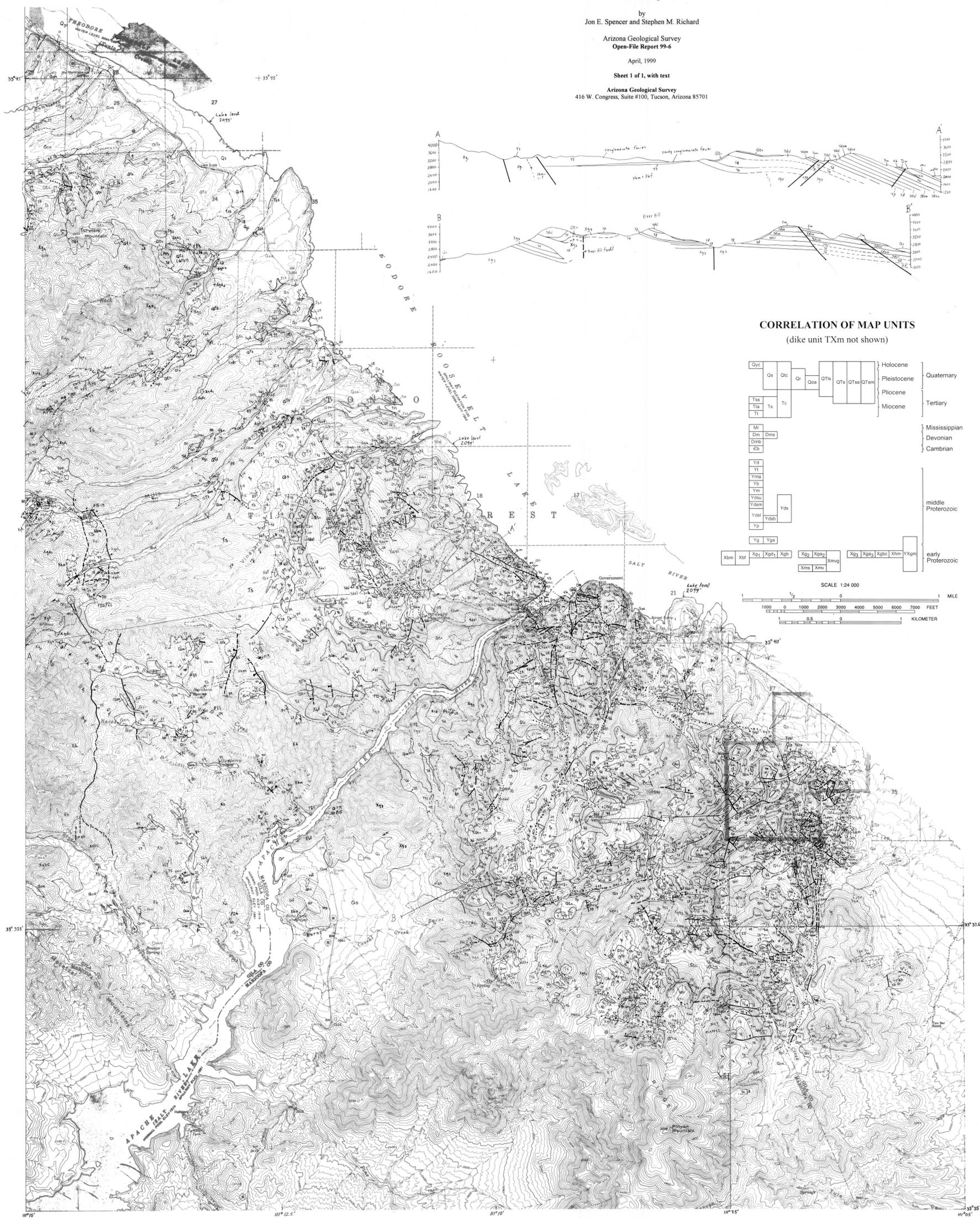
by  
Jon E. Spencer and Stephen M. Richard

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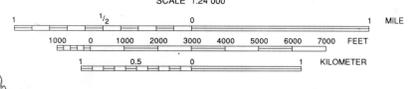
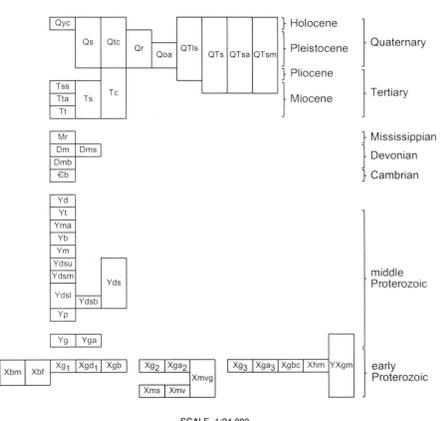
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Sheet 1 of 1, with text

Arizona Geological Survey  
416 W. Congress, Suite #100, Tucson, Arizona 85701



**CORRELATION OF MAP UNITS**  
(dike unit TXm not shown)



**Rock Units**

**CENOZOIC SEDIMENTARY AND VOLCANIC ROCKS**

- Qyc Young alluvium (Holocene)
- Qs Surficial deposits, undivided (Quaternary)
- Qtc Talus and colluvium (Quaternary)
- Qr River gravel (Pleistocene)
- Qoa Old alluvium (Middle Pleistocene to Early Pleistocene)
- QTls Landslide deposits (Quaternary to Pliocene)
- QTs Old alluvium (Quaternary to Miocene)
- QTSa Conglomerate, Apache Group clasts (Quaternary to Miocene)
- QTsm Conglomerate, mixed clasts (Quaternary to Miocene)
- Tss Sandstone, pebbly sandstone, and siltstone (Miocene)
- Ts Conglomerate (Miocene)
- Tta Apache Leap Tuff (Early Miocene)
- Tt Tuff (Middle Miocene to Early Miocene)
- Tc Conglomerate (Pliocene or Miocene)

**CENOZOIC OR PROTEROZOIC DIKES**

- TXm Mafic dikes (Miocene to Early Proterozoic)

**PALEOZOIC SEDIMENTARY ROCKS**

- Mr Redwall Limestone (Mississippian)
- Martin Formation (Devonian)**
- Dm Jerome Member, Martin formation (Middle to Late Devonian)
- Dms Sandstone in the Martin Formation (Middle to Late Devonian)
- Dmb Beekers Butte Member of the Martin Formation (Early to Middle Devonian)
- Cb Bolsa Quartzite (Middle Cambrian)

**MIDDLE PROTEROZOIC ROCKS**

- Yd Diabase (Middle Proterozoic)
- Yt Troy Quartzite (Middle Proterozoic)
- Apache Group (Middle Proterozoic)**
- Yma Argillite in the Mescal Limestone
- Yb Basalt in the Mescal Limestone
- Ym Dolomite in the Mescal Limestone
- Yds Dripping Spring Quartzite, undivided
- Ydsu Upper unit
- YdsM Middle unit
- YdsL Lower unit (dots at base represent Barnes Conglomerate)
- Ydsb Basal Barnes Conglomerate
- Yp Pioneer Formation (dots at base represent Scanlan conglomerate)
- Yg Coarse-grained, porphyritic biotite granite (Middle Proterozoic)
- Yga Aplite associated with coarse-grained porphyritic biotite granite (Middle Proterozoic)

**EARLY TO MIDDLE PROTEROZOIC CRYSTALLINE ROCKS**

- YXgm Granite and schist (Early to Middle Proterozoic)

**EARLY PROTEROZOIC CRYSTALLINE ROCKS**

- Granitic Rocks of Cottonwood Creek (Early Proterozoic)**
- Xga<sub>1</sub> Aplite and aplitic granite
- Xgs Granodiorite
- Xgbc Granitic rocks in Bronco Creek

- Granitic Rocks in Rock Creek Area (Early Proterozoic)**
- Xga<sub>2</sub> Aplite granite
- Xg<sub>2</sub> Coarse-grained granite
- Xmvg Mixed granite and metavolcanic rocks

- Granitic Rocks in Mills Canyon Area (Early Proterozoic)**
- Xg<sub>1</sub> Granite
- Xgd<sub>1</sub> Granodiorite
- Xgb<sub>1</sub> Diorite-gabbro phase

- Buckhorn Creek Crystalline Complex (Early Proterozoic)**
- Xbf Felsic unit
- Xbm Mafic unit

- Xhm Hornblende and mafic intrusive rocks (Early Proterozoic)
- Xms Metasedimentary rocks, undivided (Early Proterozoic)
- Xmv Metavolcanic rocks (Early Proterozoic)

**Map Symbols**

- UNIT IDENTIFICATION**
- Leader connecting areas of identical map unit
  - Scanlon Conglomerate at base of Pioneer Formation or Barnes Conglomerate at base of Dripping Spring Quartzite
- CONTACTS** (dashed where approximately located, dotted where concealed)
- Intrusive or depositional contact
  - High-angle fault, showing dip, ball on downthrown side
  - Gradational or obscure contact associated with Buckhorn Crystalline Complex
- ATTITUDES** (orientation of planar and linear features)
- Bedding:**
- Upright
  - Horizontal
  - Overturned
  - Approximate (upright)
  - Apparent dip
- Joints and cleavage:**
- Joint
  - Upright disjunct (spaced) cleavage
  - Vertical disjunct (spaced) cleavage
- Foliation:**
- Weakly developed shape fabric
  - Moderately developed shape fabric
  - Strongly developed shape fabric
  - Mylonitic fabric
  - Eutaxitic foliation in volcanic rocks, flow foliation in intrusive rocks
  - Eutaxitic foliation with parallel tectonic fabric overprint
  - Compositional banding
  - Vertical compositional banding
  - Contorted compositional banding
  - Vertical generic foliation
- Lineation associated with foliation:**
- Mylonitic
  - Shape
- DIKES AND VEINS**
- Mafic dike
  - Pegmatite dike
  - Quartz vein
- STRUCTURES**
- Anticline axis
  - Shear zone
  - Shattered rock
  - Brecciated rock (shattered and mixed)
- MISCELLANEOUS**
- Sample location
  - Contact determined from physiography