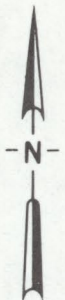


**Explanation**

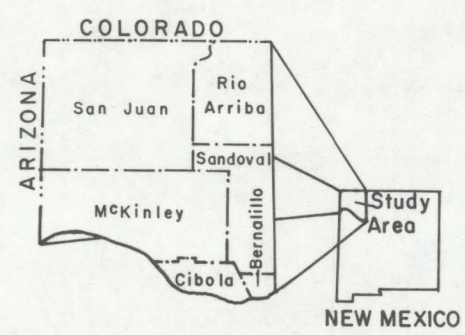
- Geologic contact
- Fault
- /// Dike
- 6500 — Topographic contour; interval = 500 ft



Scale 1:500,000  
1 inch equals approximately 8 mi

0 10 20 30 mi

0 10 20 30 km



Drafted by James Brannan  
Base from U.S. Geological Survey  
Geology modified from Dane and Bachman (1965) by W. J. Stone

**GEOLOGIC UNITS**  
(see text for descriptions)

**Quaternary**

- Qal Alluvium; includes landslide deposits (east side of Chuska Mountains), terrace deposits (San Juan River valley)
- Qb Basalt

**Quaternary/Tertiary**

- Qts Santa Fe Group and younger alluvium, undifferentiated (Rio Grande valley)

**Tertiary**

- Ti Intrusions, dikes
- Tb Basalt
- Tv Volcanics other than basalt
- Tc Chuska Sandstone
- Tsj San Jose Formation
- Tn Nacimiento Formation
- Toa Ojo Alamo Sandstone

**Tertiary/Cretaceous**

- Tka Animas Formation

**Cretaceous**

- Kkf Fruitland Formation-Kirtland Shale, undifferentiated
- Kpc Pictured Cliffs Sandstone
- Kl Lewis Shale
- Kmv Mesaverde Group, undifferentiated
- \*Kch Cliff House Sandstone
- \*Klv La Ventana Tongue, Cliff House Sandstone
- \*Kmf Menefee Formation
- \*Kpl Point Lookout Sandstone
- Kms Satan Tongue, Mancos Shale
- \*Kph Hosta Tongue, Point Lookout Sandstone
- \*Kcc Crevasse Canyon Formation
- Kmm Mulatto Tongue, Mancos Shale
- \*Kg Gallup Sandstone
- Km Mancos Shale, undifferentiated
- Kd Dakota Sandstone; includes Burro Canyon Formation (northeast)

\*in Mesaverde Group

**Jurassic**

- Jm Morrison Formation
- Jsr San Rafael Group, undifferentiated; includes Entrada Sandstone, Todito Limestone, Summerville Formation, Cow Springs Sandstone/Bluff Sandstone, in ascending order

**Triassic**

- R Triassic rocks, undifferentiated; includes Chinle Formation and overlying Glen Canyon Group

**Paleozoic**

- P Permian rocks, undifferentiated; includes Abo Formation (south), lower Cutler Formation (north), DeChelly Sandstone, Yeso Formation, Gorieta Sandstone, San Andres Limestone, in ascending order
- IP Pennsylvanian rocks, undifferentiated; includes Molas Formation, Pinkerton Trail Formation, Paradox Formation (northwest), Honaker Trail Formation, in ascending order

**Precambrian**

- pC Precambrian rocks, undifferentiated

**WATER-YIELDING CHARACTERISTICS\***

- Aquifer
- Locally an aquifer or contains aquifer
- Aquitard
- Poorly known or outside study area

\*See table 14 (inside front cover) for summary of aquifer characteristics

Hydrogeologic map of the San Juan Basin, New Mexico