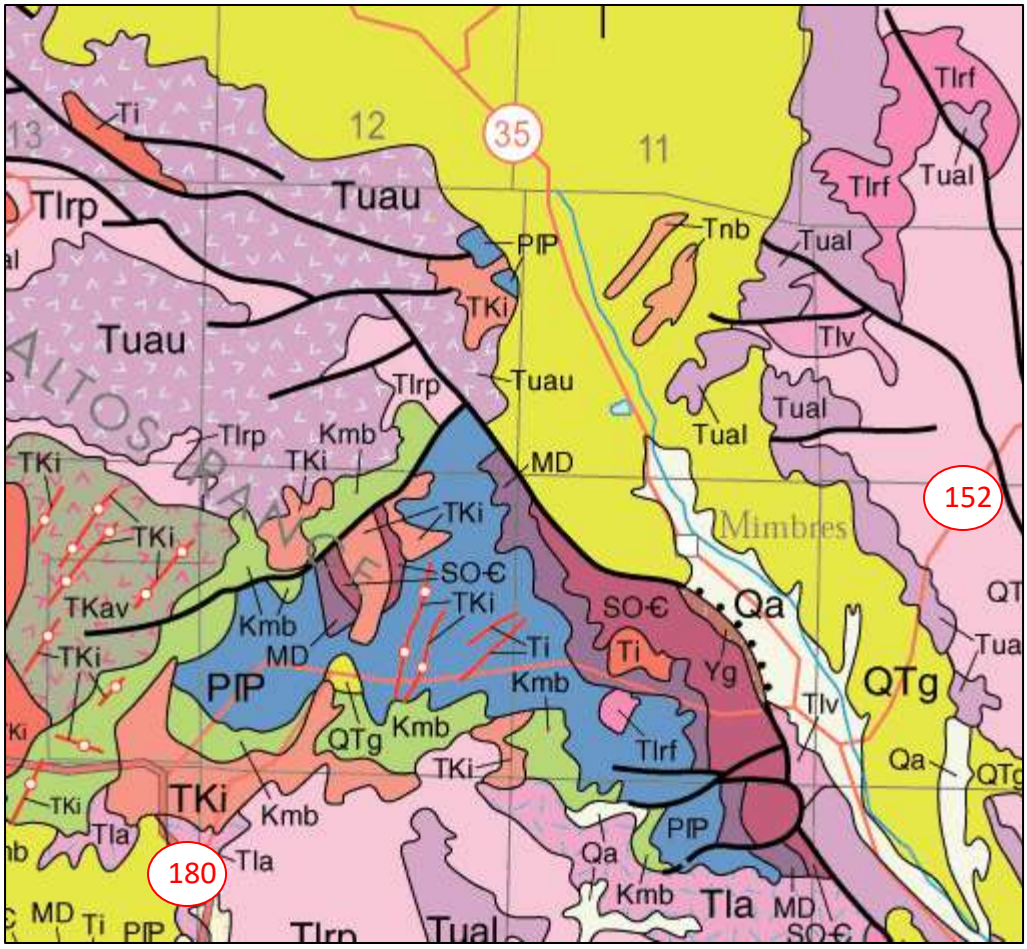
Geology of San Lorenzo and Georgetown area



From: The geologic Map of New Mexico (downloaded from: geoinfo.nmt.edu)

Simplified Legend: (Youngest at top, oldest at the bottom)

Qal (light yellow): Alluvium – modern river deposits.
QTg (yellow): Gravels – sediment shed from adjacent highlands into the Mimbres Valley.
T (pinks): Volcanic rocks including ash falls and lava flows.
TKav (olive green): Lava flows and breccias composed of volcanic rocks intruded by dikes (TKi – red).
Kmb (grass green): Cretaceous Beartooth Quartzite and Mancos (Colorado) Shale.
PP (blue): Pennsylvanian Magdalena Limestone, Permian Abo Formation at Allie Canyon
MD (purple): Mississippian Lake Valley Limestone and Devonian Percha Shale
SOC (light purple): Silurian Fusselman Formation, Ordovician Montoya and El Paso Formation and Cambrian Bliss Formation
Yg (brown): Proterozoic granites about 1.4 billion years old – at San Lorenzo greenstones are present
Black lines: Faults – Mimbres Valley dropped down relative to highlands to the west.

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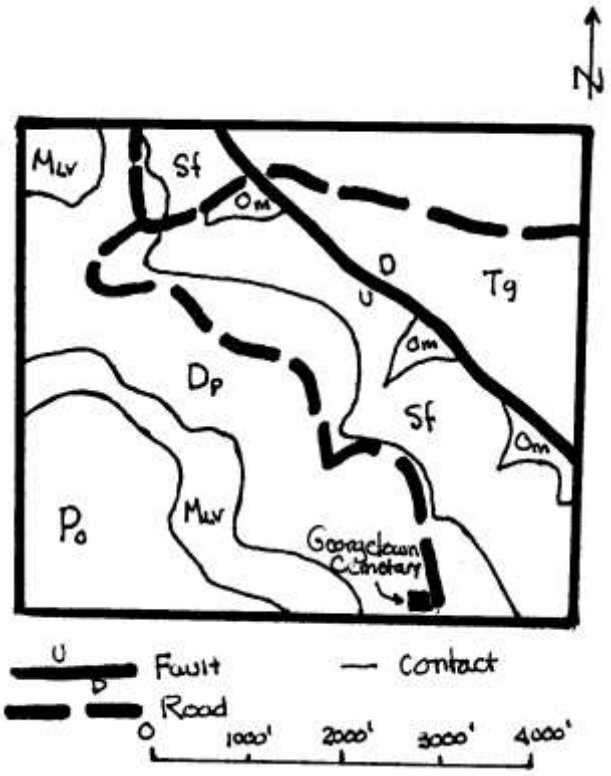
General Geology of the Georgetown Area



Geologic Map of Georgetown Area

Description of Rock Layers
Listed from youngest to oldest

Tg - Tertiary Gravels
Gravels deposited in the Mimbres Valley.

Po - Pennsylvanian Oswaldo Formation
Gray limestone with many thin shales layers and occasional sandstone lenses. There is a thick (up to 40') shale at the base.

Mlv - Mississippian Lake Valley Formation
Light gray limestone with some thin shaly limestone beds. Four alternating layers that form gentle slopes and prominent ledges tens of feet high. Contains a large group of fossils including crinoids, brachiopods, corals and bryozoa.
300 - 400 feet thick.

Simplified

Dp - Devonian Percha Shale
The upper Percha is a gray shale that contains abundant limestone nodules (1-4 inches) in diameter. Fossils include many kinds of brachiopods (about 50 different species have been described from the Percha Shale), bryozoa, corals, and crinoids. It is about 100 feet thick in the Georgetown area.
The lower Percha is a black shale that is fissile, that is it breaks easily into small flakes. It commonly erodes to gentle slopes and deep gullies. The lower Percha is for the most part unfossiliferous, although some fish plates and teeth have been found in the basal beds. In the Georgetown area it is about 300 feet thick.

Sf - Silurian Fusselman Dolomite
Dark, brownish, gray dolomite that is thick bedded and weathers to a very rough pitted surface. Silicified fossil, mostly corals and gastropods are present in the upper part of the unit. It is estimated to be about 100-125 feet thick in the Georgetown area.

Om - Ordovician Montoya Dolomite
Light gray dolomite interbedded with dark chert layers (1/4 - 1/2 in. thick). Few fossils are found in this area in the Montoya.

Reference: Jones, W. R., Hernon, R. M., and Moore, S. L., 1967, General Geology of Santa Rita Quadrangle: USGS Professional Paper 555, 144p.

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