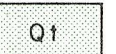


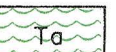
EXPLANATION

SEDIMENTARY ROCKS



Terrace gravel  
Resistant remnants of gravel sheets capping low mesa; principally igneous cobbles intermixed with San Andres limestone debris.

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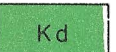


Agglomerate and Tuft  
Volcanic debris and tuff intercalated with discontinuous beds of sandstone and mudstone; extremely lenticular and variable throughout.

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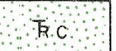


Mancos shale  
Fossiliferous, black, fissile marine shale with occasional sand stringers. Section not completely exposed in map area, but a minimum of 650 ft. is represented.



Dakota formation  
Light gray to buff medium-grained quartz sandstone with shale beds in the middle and upper parts grading into the overlying Mancos shale. Shale layers contain meager plant remains; sand units variable; formation average about 150 ft. in thickness.

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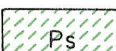
Chinle formation  
Red to lavender fine to medium-grained, poorly sorted, platy, lenticular quartz sandstone and mudstone. Beds soft and incompetent for the most part averaging 400 ft. in thickness.



Santa Rosa formation  
Red, fine to medium-grained, well-sorted, micaceous quartz sandstone containing shale and siltstone lenses with lenticular quartz and chert pebble conglomerate near the top. Good porosity and permeability near base and top; Average about 200 ft. thick.

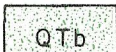


Bernal formation  
Brick red to buff, fine to medium-grained, highly calcareous sandstones with silty partings and some shale beds. Thickness varies considerably over short distances ranging from less than 200 ft. to over 300 ft.



San Andres formation  
Gray impure limestone containing chert concretions and yellowish-brown sandstone beds near the base and gypsum interbeds towards the top. Thicknesses are variable because of late Permian erosion which developed solution cavities and sink holes, some with dimensions measured in miles. Formation averages 600 ft. in thickness.

IGNEOUS ROCKS



Basic intrusives and extrusives  
Dark gray to black olivine and quartz-bearing basalt (?) sills and dikes. Extensive flows to the west and south of the mapped area.



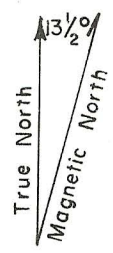
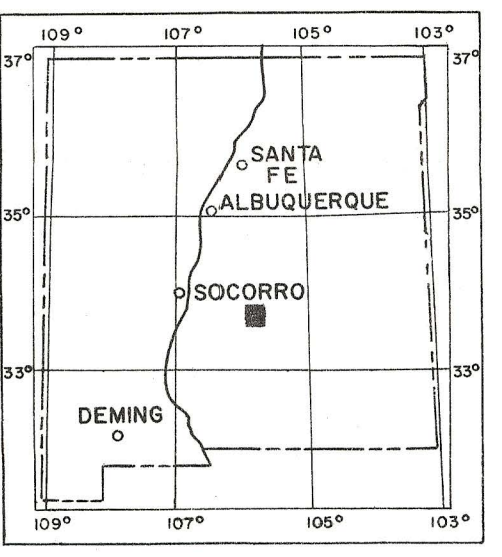
Quartz bearing intrusives and extrusives  
Quartz free felsic intrusives and extrusives



Tg, Irregular granite dikes and masses; white rhyolite dikes and sills weathering to a light yellow.  
Tm, Gray monzonite and monzonite porphyry stocks, laccoliths, and dikes; latite and latite porphyry dikes and sills.

Contact  
Dashed where approximately located; dotted where concealed.

Fault  
Dashed where approximately located



Approximate mean declination, 1950

RECONNAISSANCE GEOLOGIC MAP  
OF  
LITTLE BLACK PEAK FIFTEEN-MINUTE QUADRANGLE, EAST HALF

By Clay T. Smith and A. J. Budding

