NEW MEXICO BUREAU OF MINES AND MINERAL RESOURCES
A DIVISION OF NEW MEXICO INSTITUTE OF MINING & TECHNOLOGY

Dr. Peter A. Scholle
Director and State Geologist

Dr. Paul W. Bauer
Geologic Mapping Program Director

NMBMMR Open File Map Series
Maps OF–GM–15 and OF–GM–26
Map last modified on 6 April 2000
Plate I of II.

Geology of Santo Domingo Pueblo and Santo Domingo Pueblo SW quadrangles, Sandoval County, New Mexico

April 1998
6 April 2000 Revision
Plate I of II.

Gary A. Smith and Andrika J. Kuhle

Department of Earth and Planetary Sciences, University of New Mexico, Albuquerque, NM 87131

David J. McCraw
Digital Cartography

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Comments to Map Users

A geologic map graphically displays information on the distribution, nature, orientation and age relationships of rock and surficial units and the occurrence of structural features. These data are derived from geologic field mapping, compilation of published and unpublished work, analyses of borehole geophysics and well-cuttings, and photogeologic interpretation. Locations of geologic unit contacts are not surveyed; therefore, the accuracy of contact locations depends on the scale of mapping and the interpretation of the geologist(s). Portions of the study area may have been mapped at scales either smaller or larger than that depicted on the geologic map; therefore, the user should be aware of significant variations in map detail. Any enlargement of this map could cause misunderstanding in the detail of mapping and may result in erroneous interpretations. Site-specific conditions should be verified by detailed surface mapping or subsurface exploration.

This map has not been reviewed according to New Mexico Bureau of Mines and Mineral Resources standards. Revision of the map is likely because of the on-going nature of work in the region (Please note the date of last modification in the upper right of Plate I). The contents of this map and associated report should not be considered final and complete until reviewed and published by the New Mexico Bureau of Mines and Mineral Resources. The views and conclusions contained in this document are those of the authors and should not be interpreted as necessarily representing the official policies, either or expressed or implied, of the State of New Mexico or the U.S. Government.

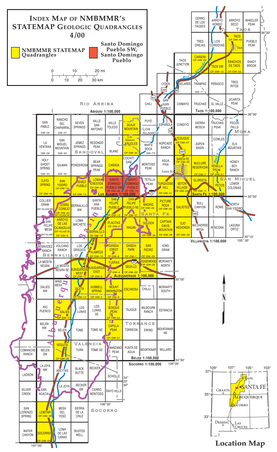
Acknowledgments

This mapping project was possible only because of the greatly appreciated interest and cooperation of the Governors and Tribal Councils of Santo Domingo and Cochiti Pueblos and the Cochiti Environmental Protection Office. Consultations with Bill White, Dave Sawyer, and Charles Stearns were helpful for framing our ideas. Discussions of USGS geophysics studies with Tien Grauch have been very beneficial.

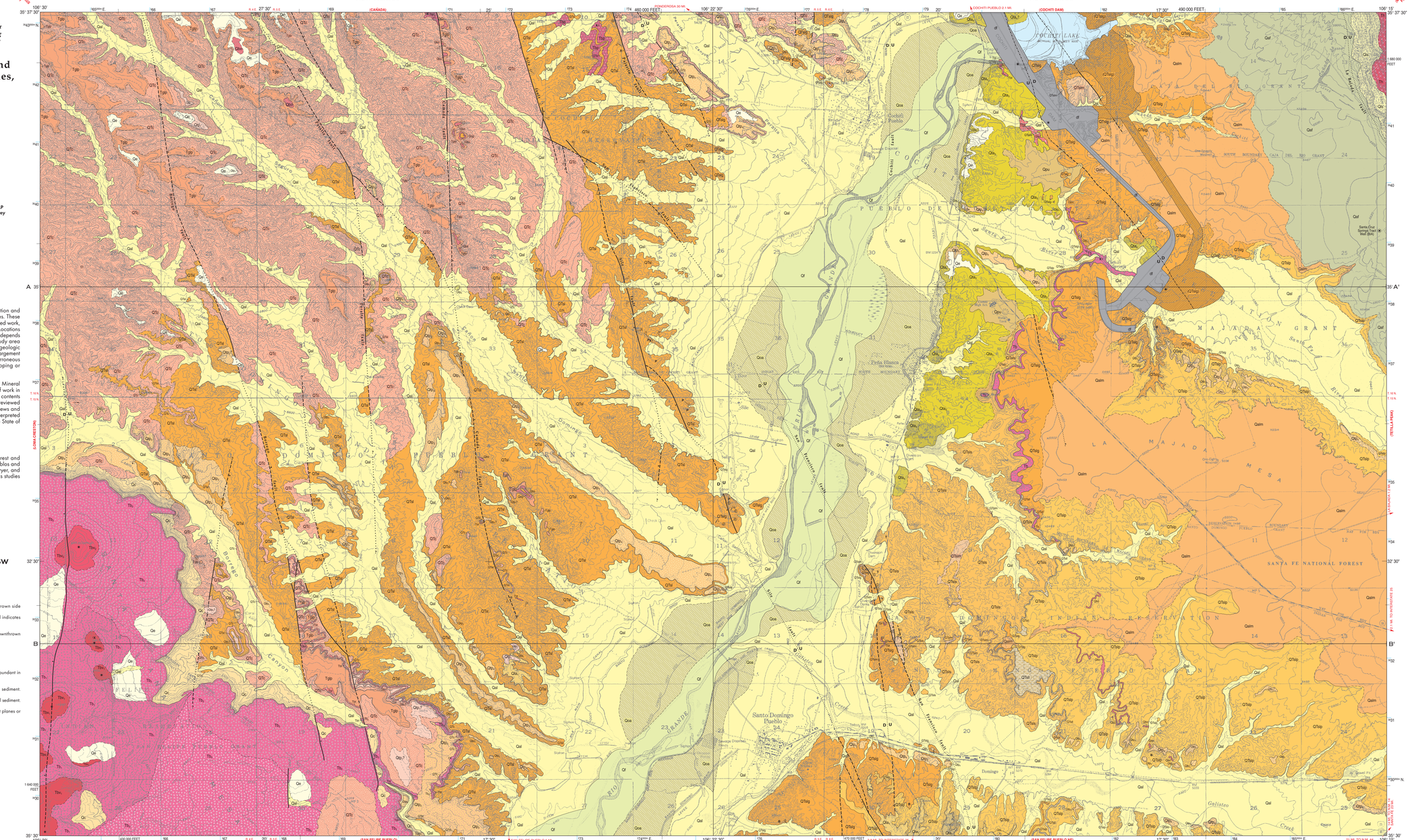
Explanation of Map Symbols
Santo Domingo Pueblo and Santo Domingo Pueblo SW 7.5' Quadrangles

- Exposed geologic contact
- Approximate or inferred geologic contact
- High-angle normal fault, tick showing dip, bar and ball indicates downthrown side
- Normal fault, approximately located on the basis of outcrops, bar and ball indicates downthrown side
- Normal fault, approximately located on the basis of well logs, D indicates downthrown side
- Concealed normal fault, D indicates downthrown side
- Strike and dip of bedding
- P — **Peralta Tuff Member biotite - rhyolite pumice lapilli (upper Miocene)** abundant in fluvial sediment.
- T — **Tschicoma Formation dacite pumice lapilli (Pliocene)** abundant in fluvial sediment.
- B — **Bandelier Tuff rhyolite pumice lapilli (lower Pleistocene)** abundant in fluvial sediment.
- Prominent zone of calcite cementation. Generally located along exposed fault planes or in coarse-grained beds in close proximity to faults.
- Approximate positions of vents from which units *Tb* and *Tbt* were erupted
- Location of $^{40}Ar/^{39}Ar$ geochronology samples

Index Map of NMBMMR's STATEMAP Geologic Quadrangles 4/00



SANTO DOMINGO PUEBLO SW QUADRANGLE
NEW MEXICO



Base from U.S. Geological Survey 1953, photorevised 1993
1927 North American datum, Projection and 10,000-foot grid based on New Mexico coordinate system, central zone (Transverse Mercator)
1000-meter Universal Transverse Mercator grid ticks, zone 13, shown in blue

D. J. McCraw and P. Brown: digital cartographic production

UTM GRID AND 1993 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1:24,000
CONTOUR INTERVAL 20 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

QUADRANGLE LOCATION

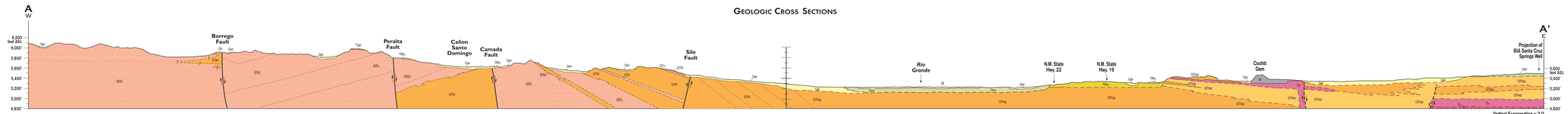
SANTO DOMINGO PUEBLO QUADRANGLE
NEW MEXICO

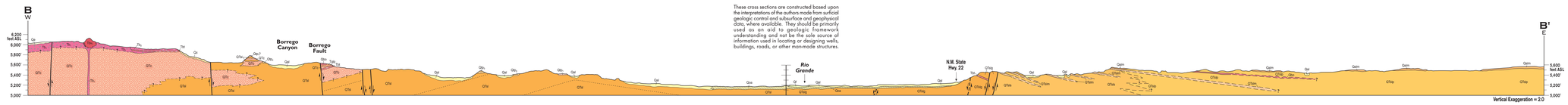
Base from U.S. Geological Survey 1953, photorevised 1993
1927 North American datum, Projection and 10,000-foot grid based on New Mexico coordinate system, central zone (Transverse Mercator)
1000-meter Universal Transverse Mercator grid ticks, zone 13, shown in blue

D. J. McCraw and G. E. Jones: digital cartographic production

UTM GRID AND 1993 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

Geologic Cross Sections





These cross sections are constructed based upon the interpretations of the authors made from surficial geologic control and subsurface and geophysical data, where available. They should be primarily used as an aid to geologic framework understanding and not be the sole source of information used in locating or designing wells, buildings, roads, or other man-made structures.