

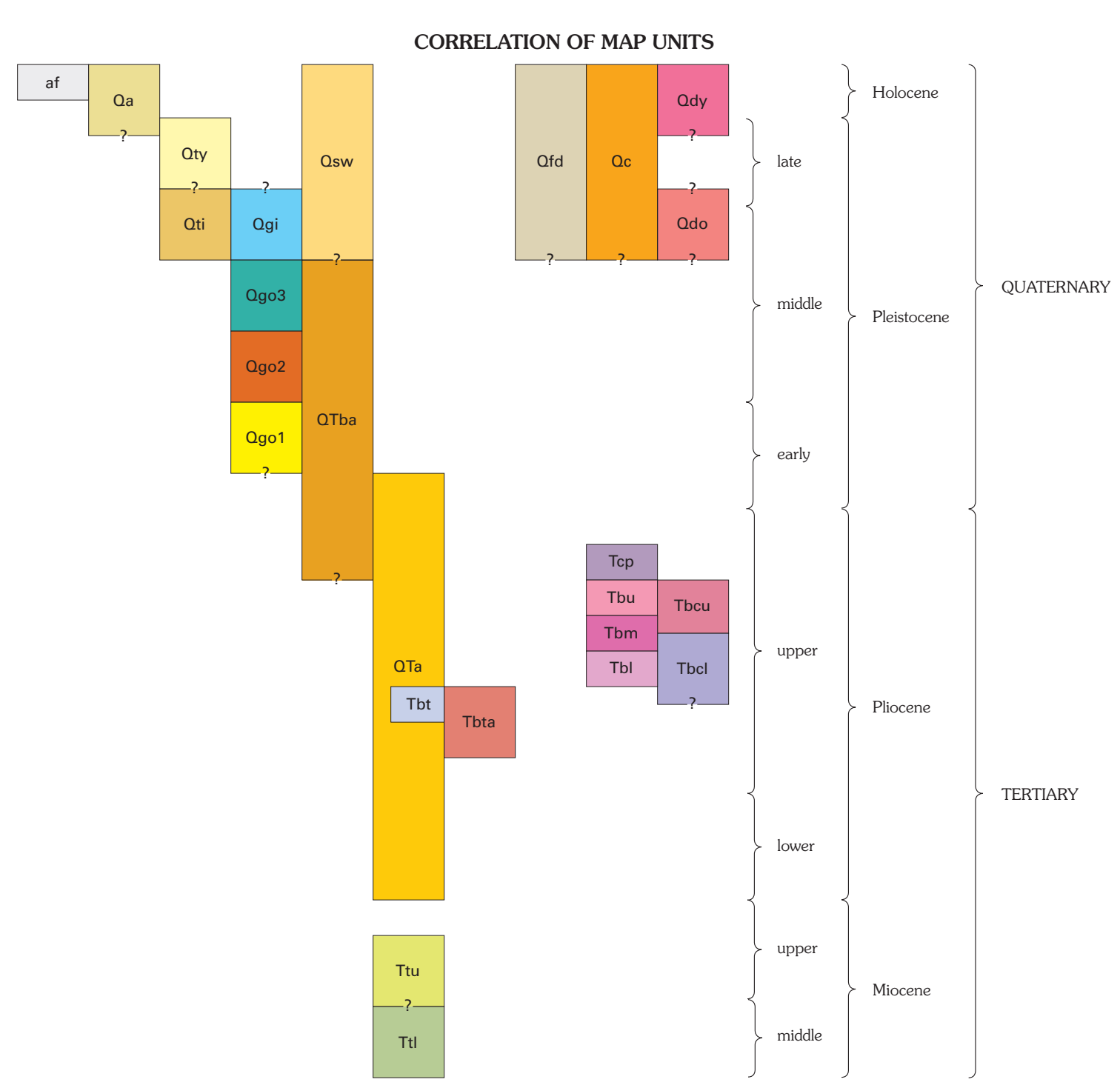
Base from U.S. Geological Survey, 1951; revised 1993
Projection and 15,000-foot grid ticks: New Mexico
coordinate system, central zone (Transverse
Mercator)
1,000-meter Universal Transverse Mercator grid ticks,
zone 13
North American Datum of 1927

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

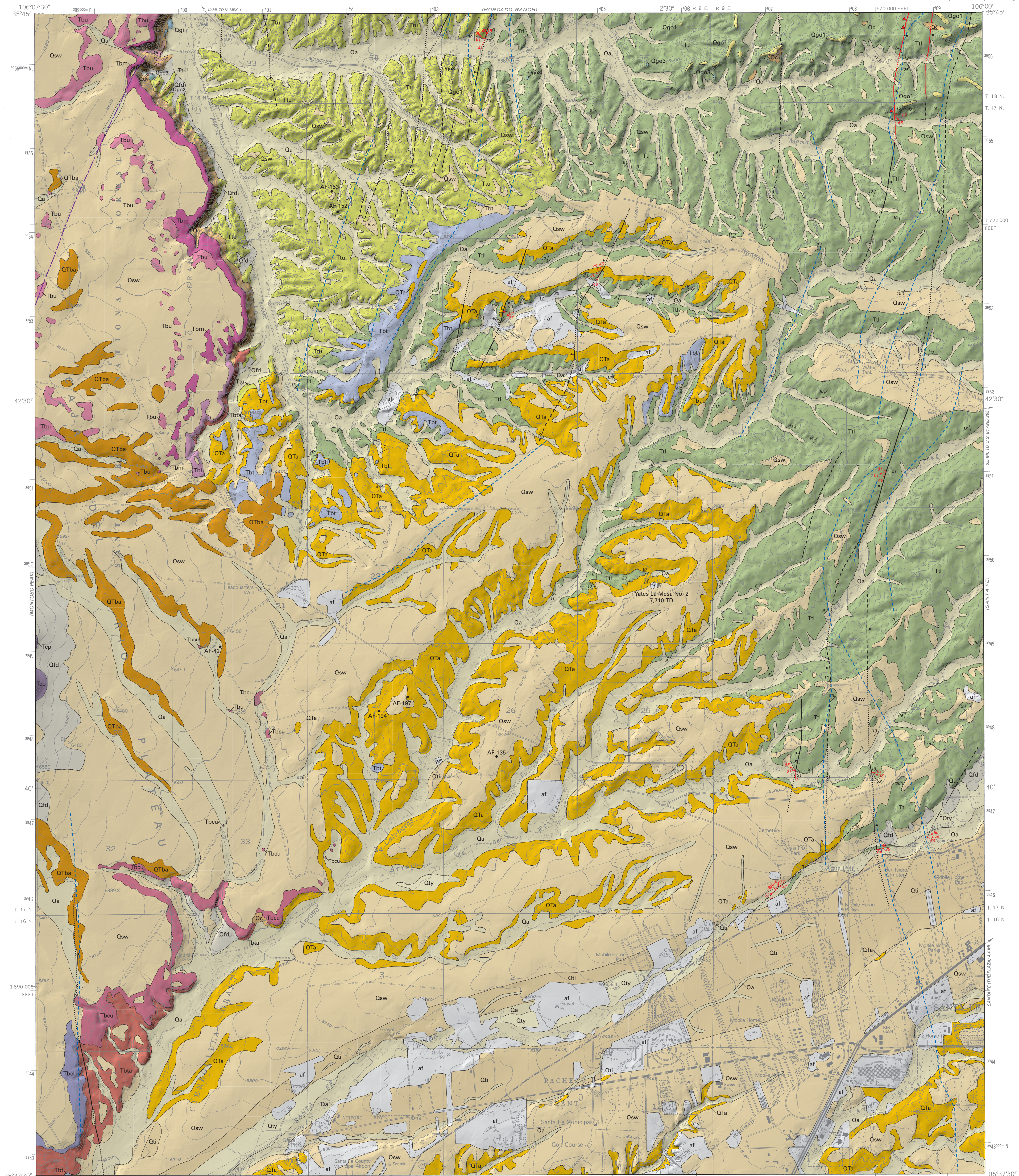
QUADRANGLE LOCATION

Geology mapped by R.R. Shroba, R.A. Thompson, and
S.A. Minor, 1998-2004
Geologic map database by Theodore R. Brandt
Editing and digital cartography by Alessandro J.
Donatich, Central Publications Group
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GEOLOGIC MAP



- LIST OF MAP UNITS**
SURFICIAL DEPOSITS
- Artificial fill deposits**
- af Artificial fill (latest Holocene)
- Alluvial deposits**
- Qa Alluvium in stream channels and below low terraces (Holocene and late Pleistocene?)
 - Qny Younger terrace alluvium (late Pleistocene?)
 - Qm Intermediate terrace alluvium (late? and middle Pleistocene)
 - Qsw Sheetwash deposits (Holocene to middle? Pleistocene)
 - Qg Intermediate gravelly stream alluvium (late? and middle Pleistocene)
 - Qgco3 Lower older gravelly stream alluvium (middle Pleistocene)
 - Qgco2 Higher older gravelly stream alluvium (middle Pleistocene)
 - Qgco1 Oldest gravelly stream alluvium (early? Pleistocene)
- Undivided alluvial and colluvial deposits**
- Qnd Fan alluvium and debris-flow deposits, undivided (Holocene to middle? Pleistocene)
- Colluvial deposits**
- Qc Colluvial deposits, undivided (Holocene to middle? Pleistocene)
 - Qdy Younger debris-flow deposits (Holocene and late Pleistocene?)
 - Qdo Older debris-flow deposits (late? and middle? Pleistocene)
- LAVA FLOWS AND RELATED DEPOSITS OF THE CERROS DEL RIO VOLCANIC FIELD**
- QTba Basaltic and andesitic alluvium (middle? Pleistocene to late Pleistocene?)
 - Tbt Basaltic tephra (upper Pliocene)
 - Tbca Basaltic tephra and Ancha Formation, undivided (upper Pliocene)
 - Tcp Andesite of Cerro Portillo (upper Pliocene)
 - Tbu Basalt of Cañada Ancha (upper Pliocene)
 - Tbu Upper unit
 - Tbm Middle unit
 - Tbl Lower unit
 - Tbu Basalt of Arroyo Calabasas (upper Pliocene)
 - Tbu Upper unit
 - Tbl Lower unit
- SANTA FE GROUP**
- Qts Ancha Formation (lower Pleistocene and Pliocene)
 - Ttu Upper coarse unit of the Tesuque Formation (upper and middle? Miocene)
 - Ttl Lower unit of the Tesuque Formation (middle? Miocene)
- Contact**—Located with certainty. Contacts between units Qts and Tbt and between units Ttu and Ttl are approximately located. Contacts for units Qts, Ttu, and Ttl are modified in part from Spiegel and Baldwin (1963, plate 2)
- Fault**—Dashed where inferred from stereo aerial photographs; dotted where concealed. Bar and ball on apparent downthrown side. Tick shows direction and angle of dip; diamond-headed arrow shows trend and rake of slickensides. Dip and slickenside measurements that are shown along concealed fault traces crossing the Santa Fe River channel are from outcrops of sediment of the lower unit of the Tesuque Formation (unit Ttl) that are too small to show at map scale
- Fault, silica cemented**—Dotted where concealed. Cementation discontinuous along fault zone
- Fault, based on analysis of aeromagnetic data**—Inferred (Grauch and Barkley, 2003)
- Lineament**—Located on aerial photographs and coincides with zone of minor fracturing
- Outcrop**—Silica cemented rocks in the lower unit of the Tesuque Formation (unit Ttl)
- Inclined bedding**—Showing strike and dip. Most measurements are from Spiegel and Baldwin (1963). Bedding measurements in areas of Quaternary surficial deposits (units Qsw and Qa) were made on sediment of the lower and upper units of the Tesuque Formation (units Ttl and Ttu) exposed in nearly vertical stream cuts or on outcrops that are too small to show at map scale
- Dry hole drilled for hydrocarbons**—Approximately located. Lease name, hole number, and total depth (TD) in feet
- Pumice sample localities**—Approximately located. Most samples dated by the ⁴⁰Ar/³⁹Ar method or identified by chemical correlation



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GEOLOGIC MAP WITH SHADED RELIEF

GEOLOGIC MAP OF THE AGUA FRIA QUADRANGLE, SANTA FE COUNTY, NEW MEXICO

By
Ralph R. Shroba, Ren A. Thompson, Scott A. Minor, V.J.S. Grauch, and Theodore R. Brandt
2005

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