

NMBMMR Open-file Report 399

Geologic map of the Ima NW quadrangle,
Guadalupe and Quay Counties, New Mexico

by

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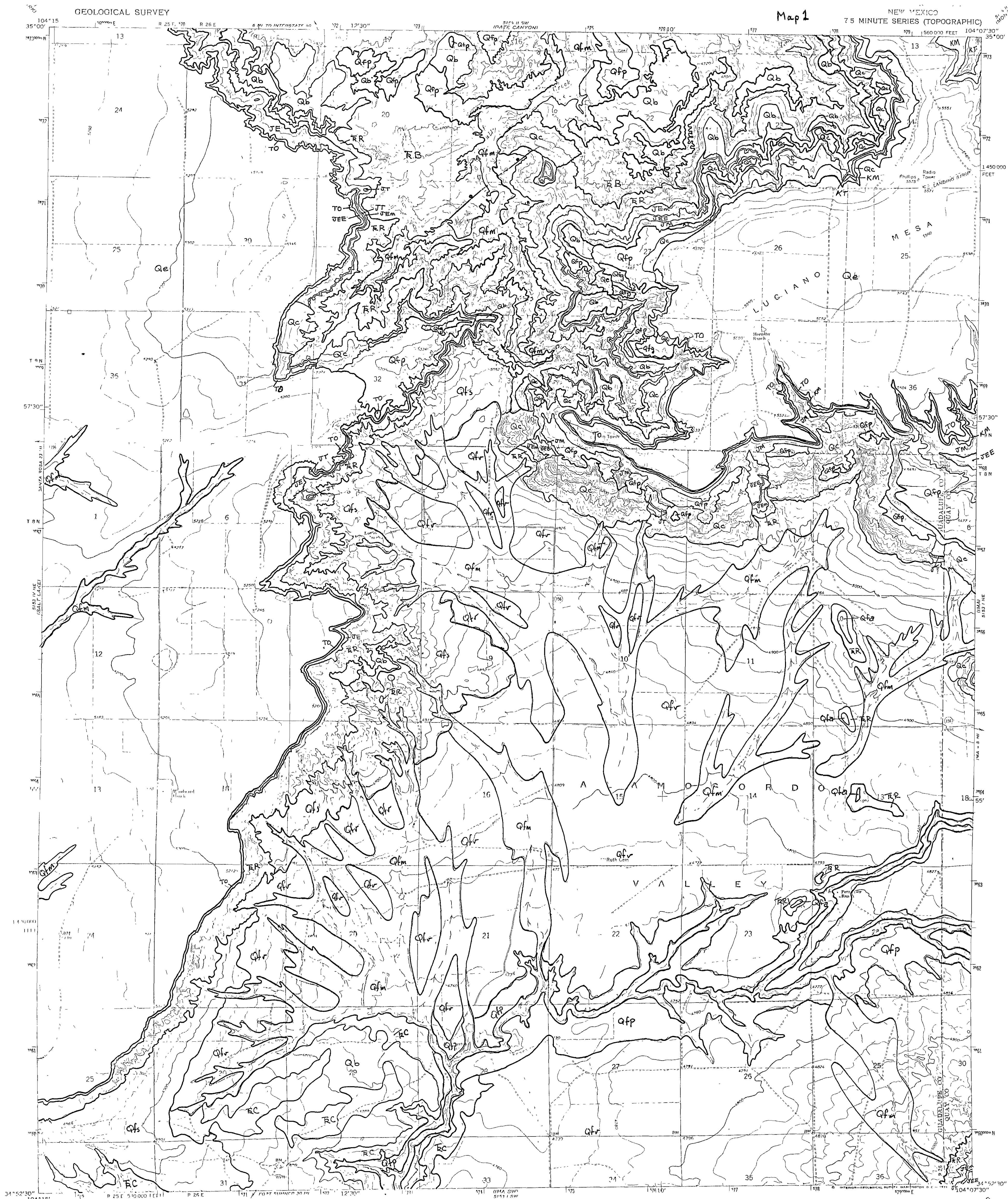
1994

Stratigraphic Units of the Ima N.W. Quadrangle

- Qf** - Valley fill sequences, including six major Quaternary units.
- Qfm** - Active floodplain alluvium, associated with surfaces graded to present local base level. Fine-grained river and floodplain deposits containing minor amounts of calcium carbonate. Thickness, 1 to 3 meters.
 - Qfp** - Fluvial and eolian alluvium, associated with graded surfaces formed during previous periods of Bull Canyon dissection and partial backfilling. Fine-grained river, floodplain and eolian sediments containing large amounts of pedogenic calcium carbonate. Thickness, 2 to 12 meters.
 - Qfa** - Axial fluvial alluvium, associated with graded surfaces formed during a previous period of Alamogordo Valley entrenchment and backfilling. Generally, coarse-grained river-channel alluvium, containing small amounts of pedogenic carbonate. Thickness, up to 1.5 meters.
 - Qfg** - Axial fluvial alluvium, associated with graded surfaces formed during early dissection of the Ogallala surface. Generally, coarse-grained river-channel alluvium containing large amounts of primary and secondary calcium carbonate. Thickness, 2.5 to 25 meters.
 - Qfs** - Valley slope alluvium, associated with alluvial aprons and graded surfaces formed during a previous period of Alamogordo Valley backfilling. Gravels to silt-clay with some fluvial margins and upper surface slightly influenced by pedogenesis, containing small amounts of pedogenic carbonate. Thickness, up to 7 meters.
 - Qfv** - Valley floor alluvium, eolian as well as arroyo, fan and terrace sediments having surfaces graded to present base level. Generally fine-grained sediments some of which contain minor amounts of pedogenic calcium carbonate. Thickness, up to 1.5 meter
- Qc** - Colluvium; Colluvial wedges of poorly sorted boulders, sand and clay covering hillslopes. Some deposits exhibit slight pedogenesis and minor amounts of calcium carbonate. Thickness, 1 to 4 meters.

- Qe** - Coversands of the Llano Estacado; Extensive veneer of eolian sand and loess mantling the Llano Estacado and its outliers. Fine-grained sand, silt and clay influenced by long-term pedogenesis, lower horizons have abundant calcium carbonate. Thickness, 2 meters.
- Qb** - Bench deposits; Thin veneer of saprolitic sand and eolian loess mantling large strath terraces and isolated benches. Generally fine-grained sand and silt influenced by slight pedogenesis having minor accumulations of calcium carbonate. Thickness, .3 to 1 meter.
- To** - Ogallala Fm.; Regional multi-basin fill sequence, having three major facies subdivisions or members: upper member, piedmont-slope pedogenic facies, middle member, piedmont-slope conglomerate facies, and lower member, fluvial facies. The upper two members contain large amounts of calcium carbonate and could be considered petrocalcic. The lower member locally contains minor amounts of pedogenic calcium carbonate. Thickness, 9 to 14 meters.
- Km** - Mesa Rica Sandstone; Yellowish brown to pale orange highly indurated quartzose sandstone. Thickness, up to 17 meters.
- Kt** - Tucumcari Shale; Pale green, yellow and purple shale having numerous fossil *Texigryphaea*. Thickness, up to 13 meters.
- Jm** - Morrison Fm.; Interbedded pale green to reddish brown claystone and grayish orange to white sandstone. Thickness, up to 50 meters.
- Jt** - Todilto Fm.; Dark gray kerogenic limestone with minor interbeds of sandstone and shale near base. Thickness, up to 3 meters.
- Je** - Entrada Sandstone; Yellowish orange and pale orange quartzose sandstone that locally displays large-scale trough crossbedding. Entrada main body thickness up to 26 meters, and Exeter member up to 10 meters.
- Tr** - Redonda Fm.; Interbedded reddish brown and light brown siltstone mudstone and sandstone. Thickness, up to 45 meters.

- Tb** - Bull Canyon Fm.; Interbedded reddish brown mudstone, siltstone and sandstone having minor conglomerate lenses. Thickness, up to 85 meters.
- Tc** - Cuervo Fm.; Greenish gray and yellowish gray micaceous quartzose sandstone having minor interbedded conglomerates and reddish brown mudstones. Thickness, up to 32 meters.



Mapped, edited, and published by the Geological Survey

Control by USGS and USGAS

Topography by photogrammetric methods from aerial
photographs taken 1967. Field checked 1968Polyconic projection. 1927 North American datum.
10,000-foot grid based on New Mexico coordinate system,
east zone.
1000 meter Universal Transverse Mercator grid tick,
zone 13, shown in blue.

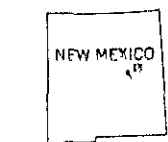
Fine red dashed lines indicate selected fence lines

UTM GRID AND 1968 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEETTHIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
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A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

ROAD CLASSIFICATION

Light-duty road, all weather, Unimproved road, fair or dry
unimproved surface weather

State Route



QUADRANGLE LOCATION

IMA NW, N. MEX.
N3452 5-W10407 5/7 5

1968

AMS 5153 1 NW-SERIES V881

Formerly
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N3452 5-W10407 5/7 5
1968
FS Publication