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

by
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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 it's 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 fanglomerate 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 Texigrayphaea. 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.

Map 1

GEOLOGICAL SURVEY

NEW MEXICO
7 5 MINUTE SERIES (TOPOGRAPHIC)

104°15' — 104°07'30" — 35°00' — 34°52'30" — 57'30"

R 25 E. — R 26 E — 6 MI TO INTERSTATE 40 — 12'30" — 515 II SW (RATE CANYON) — 560 000 FEET — 1 450 000 FEET

T 8 N

SANTA ROSA 23 NE — 5153 IV NE (SALT LAKE) — (CAÑADA COLORADO) 5153 IV SE — 5153 I NW — (IMA) 5153 I NE — (IMA SE) 5153 I SE

MESA — LUCIANO — VALLEY — ARMOUR

GUADALUPE CO / QUAY CO

Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography by photogrammetric methods from aerial photographs taken 1957. Field checked 1968

Polyconic projection. 1927 North American datum
10,000-foot grid based on New Mexico coordinate system, east zone
1000 meter Universal Transverse Mercator grid ticks, zone 13, shown in blue

Fine red dashed lines indicate selected fence lines

UTM GRID AND 1968 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1 24000

1 MILE — 1000 0 1000 2000 3000 4000 5000 6000 7000 FEET — 1 KILOMETER

CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

ROAD CLASSIFICATION

Light-duty road, all weather, improved surface

Unimproved road, fair or dry weather

State Route

NEW MEXICO

QUADRANGLE LOCATION

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U S GEOLOGICAL SURVEY DENVER, COLORADO 80225 OR WASHINGTON, D C 20242
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

IMA NW, N. MEX.
N3452 5—W10407 5/7 5

1968

AMS 5153 I NW–SERIES V881

Formerly (Salado) NW N Mex (K)
NC K–8
Nancy
FS Pauline