Base from U.S. Geological Survey, 1963

Geologic mapping done in 1974-75
Final map preparation assisted by
Robert S. Zech, 1975

CONTOUR INTERVAL 40 FEET
DOTTED LINES REPRESENT 20-FOOT CONTOURS
DATUM IS MEAN SEA LEVEL

PRELIMINARY GEOLOGIC MAP OF THE DALTON PASS QUADRANGLE, McKINLEY COUNTY, NEW MEXICO

by

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1976

DESCRIPTION OF MAP UNITS

Qar — SAND AND GRAVEL (HOLOCENE)--Deposited in arroyos, as fans and on valley floors since the inception of the most recent cycle of arroyo cutting (c. 1850) (Bryan, 1954)

Qal — UNCONSOLIDATED SAND, SILT, AND GRAVEL (HOLOCENE OR PLEISTOCENE ?)--Light yellow-brown weathering material deposited in graded stream valleys and on flood plains prior to the incention of the most recent cycle of arroyo cutting

Qoa — SAND, SILT, AND GRAVEL (HOLOCENE OR PLEISTOCENE ?)--Light yellow-brown to gray weathering remnants of dissected alluvial fans and pediment surfaces; located topographically above recent (Qar and Qal) alluvial deposits

Qtg — CHERT-PEBBLE CONGLOMERATE (HOLOCENE OR PLEISTOCENE ?)--Moderately to well indurated remnants of old pediment surfaces (?)

Qt — TALUS DEPOSITS (HOLOCENE TO PLEISTOCENE ?)

Qls — LANDSLIDE DEPOSITS AND SLUMP BLOCKS (HOLOCENE TO PLEISTOCENE ?)

Qc — COLLUVIUM (HOLOCENE TO PLEISTOCENE ?)--Conbination of talus and slope wash deposits; mapped only in areas representing significant continuous cover of underlying material

Qe — EOLIAN SAND AND SILT (HOLOCENE TO PLEISTOCENE ?)--Mapped where greater than one metre in thickness and/or represent areally significant cover of underlying map units, may locally contain some to much reworked residual material

POINT LOOKOUT SANDSTONE (UPPER CRETACEOUS)

Kpl — Upper member--yellowish-gray to buff fine- to very fine-grained well sorted calcareous sandstone; is upper-most part of the Point Lookout Sandstone where split by the Satan Tongue at the Mancos Shale but is undifferentiated Point Lookout Sandstone where the Satan Tongue is absent. Thickness up to 85 metres exposed; upper contact is eroded and section is incomplete

Kplh — Hosta Tongue--yellowish-gray to buff fine- to very fine-grained well sorted calcareous sandstone; locally fossiliferous at the top. Mapped as the lower part of the Point Lookout Sandstone only where the Satan Tongue of the Mancos Shale splits the Point Lookout Sandstone into upper and lower parts. Thickness 0 to 37 metres

MANCOS SHALE (UPPER CRETACEOUS)

Kms — Satan Tongue--Interbedded light gray to tan shale and mudstone and thin beds of tan to buff fine-grained well sorted calcareous sandstone; thins rapidly and becomes considerably sandier to the southwest where it pinches out between the Point Lookout Sandstone, upper member and the Hosta Tongue at the Point Lookout Sandstone. Thickness 0 to 50+ (incomplete) metres. Thickness to the northeast where upper contact eroded or base not exposed

Kmm — Mullato Tongue--Interbedded light gray to tan shale and mudstone and thin beds of buff to tan fine-grained well sorted calcareous sandstone. Thickness 36 to 48 metres

Km — Main body--Light to dark gray fissile shale with minor amounts of silty material; some scattered thin discontinuous limestone and calcareous sandstone bed. Thickness up to 200 metres, of the Dakota Sandstone. Lower to the uppermost Two Wells Tongue contact not exposed in this quadrangle

CREVASSE CANYON FORMATION (UPPER CRETACEOUS)

Kcg — Gibbson Coal Member--Consists of a variable sequence of interbedded lenticular medium- to very coarse-grained poorly sorted channel sandstone, siltstone, mudstone, shale, and thin coal beds. Thickness 85 to 134 metres

Kcda — Dalton Sandstone Member--Yellowish-gray fine- to very fine-grained well sorted calcareous sandstone. Most commonly occurs as two prominent sandstone ledges; the upper ledge is massive and the lower is thin bedded. Thickness 16 to 28 metres

Kcdi — Dilco Coal Member--Consists of a variable sequence of thin interbedded fine- to medium-grained areally continuous sheet sandstone, siltstone, mudstone, variegated shale, and thin coal beds. Thickness 32 to 53 metres

Kcdit — Lower fluvial channel sandstone of the Dilco Coal member at Torrivio Mesa (Molenaar, 1973)--Pink to buff fine- to coarse-grained poorly sorted highly crossbedded fluvial sandstone. Thickness 0 to 30 metres

GALLUP SANDSTONE (UPPER CRETACEOUS)

Kg — Main body--Pink to tan fine grained, moderately sorted to well sorted locally crossbedded and calcareous sandstone. Thickness 12 to 22 metres

Bed "b" of lower Gallup Sandstone--Pink to tan fine- to medium-grained moderately sorted to well sorted calcareous sandstone. Thickness variable up to 4.5 metres; locally pinches out

Bed "a" of lower Gallup Sandstone--Pink to tan fine- to medium-grained moderately sorted to well sorted calcareous sandstone. Thickness variable up to 3 metres; locally pinches out

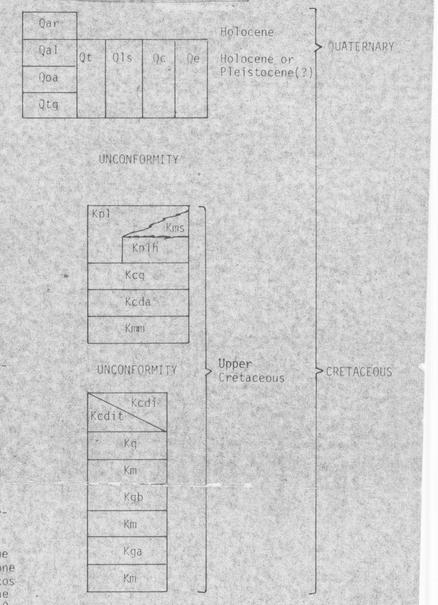
EXPLANATION

- CONTACT--Dashed where approximately located.
- U 25 / D — FAULT--Dashed where approximately located; dotted where inferred. U, unthrown side; D, downthrown side. Displacement in metres where measured
- 40 — STRIKE AND DIP OF BEDS
- EARTH DAM OR DIKE

STRIKE AND DIP OF JOINTS

- 70° — Inclined
- Vertical

CORRELATION OF MAP UNITS



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