

## Geologic Map of the Mesa 30' x 60' Quadrangle, East-Central Arizona

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Compilers

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Scale 1:100,000

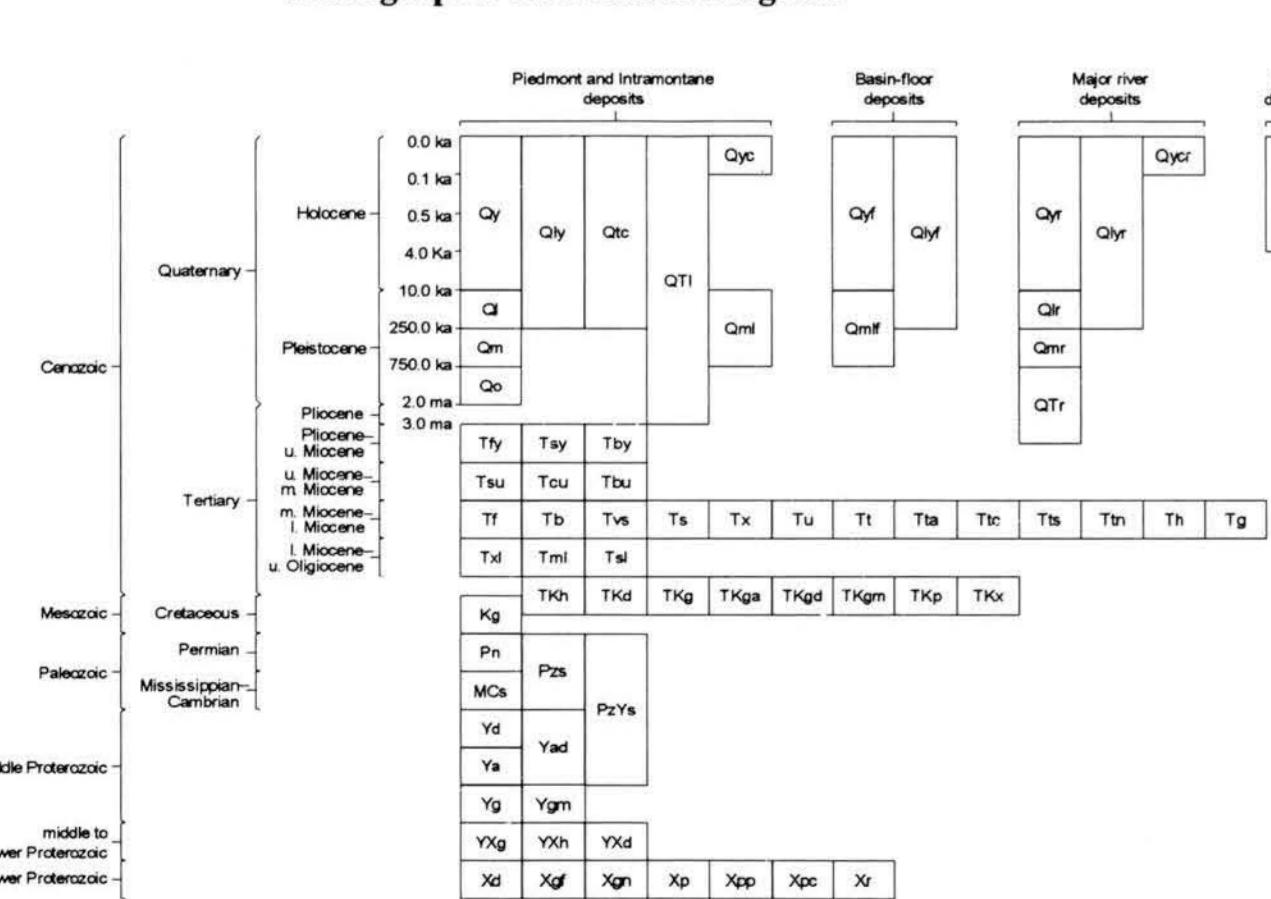
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Scale: 1:100,000

5,000 0 2 4 6 8 10 KILOMETERS

10,000 20,000 30,000 40,000 FEET

### Stratigraphic Correlation Diagram



### EXPLANATION

#### Map Units

##### Quaternary sedimentary deposits

Piedmont and Intramontane Deposits

Qyc Channel deposits of ephemeral streams (late Holocene)—Deposits consist of stratified sand, pebbles, cobbles, and boulders, with little or no soil development.

Qy Low-angle normal fault and terrace deposits (late Holocene)—Deposits consist of poorly sorted silt, sand, pebbles, cobbles, and boulders, with weak soil development.

Qhs Hillslope deposits, talus and colluvium (Holocene and Pleistocene)—Deposits of angular gravel, sand, silt, and clay, derived from bedrock.

Qm Moderately dissected alluvial fan and terrace deposits (late Pleistocene)—Deposits typically consist of sand to cobbles, soil clay accumulation and modest reddening.

Qm Dissolved alluvial-fan and terrace deposits (middle Pleistocene)—Coarse, cobble deposits are with some angular sediment; moderate soil clay accumulation and reddening.

Qml Late-stage moderately dissected alluvial-fan and terrace deposits.

Qd Deeply dissected alluvial-fan remnants (early Pleistocene)—Coarse, poorly sorted cobble and boulder deposits; soils have petrolic horizons, variable clay content.

Basin-Floor Deposits

Tb Floodplain and alluvial-fan and terrace deposits (Holocene)—Deposits consist of sand, silt, and fine gravel, minimal soil development.

Tbf Fine-grained floodplain and basin-floor terrace deposits (late Holocene)—Deposits consist of sand, silt, clay, and fine gravel, substantial soil clay accumulation.

Eolian Deposits

Qyc Modern channel deposits of the Gila, Salt, and Santa Cruz rivers (late Holocene)—Deposits consist of sand, silt, and clay.

Qyc Floodplain and low-angle normal fault and terrace deposits (Holocene)—Deposits consist of coarse channel gravels and sand to silt overbank deposits; minimal to weak soil development.

Qyc Moderately high moderately dissected terrace deposits (late Holocene)—Deposits are cobbly with fine layers; moderate soil clay and carbonate development.

Qm High dissected terrace deposits (middle Pleistocene)—Deposits are cobbly with minor sandy, silty layers; strong soil carbonate and moderate clay development.

Tertiary Intrusive Rocks

Tb Hypayal porphyry (late Cretaceous to early Tertiary)—Dikes, dike swarms, and irregular shallow-level intrusions.

Tg Granite and granodiorite (middle to early Miocene)—South Mountain granodiorite and granite stock north of Superior.

Laramide (late Cretaceous to early Tertiary) granitoids

TKh Hypayal porphyry (late Cretaceous to early Tertiary)

TKd Diorite (late Cretaceous to early Tertiary)

TKg Granite and granodiorite (late Cretaceous to early Tertiary)

TKd Diorite (late Cretaceous to early Tertiary)

TKg Muscovite granite (late Cretaceous to early Tertiary)

TKg Porphyry granite (late Cretaceous to early Tertiary)

Kg Saccaton Peak granite (late Cretaceous to early Tertiary)

Symbol Legend

CONTACTS (dashed where approximately located, dotted where concealed)

Intrusive or depositional contact

High-angle fault, showing dip, ball on downthrow side

Low-angle normal fault, ticks on hanging-wall block

Low-angle fault, nature uncertain

Potassium-argon or Ar/Ar radiometric date

Bedding: upright — horizontal — overturned —

Foliation with lineation in grainoids and metamorphic rocks, compositional layering in gneiss — vertical —

Eutectic foliation in welded tuffs, flow foliation in lava flows —

Dikes: Felsic ----- intermediate ----- mafic -----

Pegmatite — Quartz vein —

Minor fold hinge —

Mine dump, tailings, and slag —

Generalized from detailed surficial geologic map

Reconnaissance mapping based primarily on soil surveys

Reconnaissance mapping and USGS quadrangle maps

##### Quaternary to upper Tertiary sedimentary units

QT1 Landslide deposits north of Superior (early Pleistocene to Pliocene).

QT2 Very old, high, degraded remnant terrace deposits along major rivers (early Pleistocene to late Pliocene).—Deposits are cobbly to bouldery with strong soil carbonate development.

QT3 Landslide deposits of ephemeral streams (late Holocene).—Deposits consist of stratified sand, pebbles, cobbles, and boulders, with little or no soil development.

QT4 Low-angle normal fault and terrace deposits (middle to late Pliocene).—Deposits consist of poorly sorted silt, sand, pebbles, cobbles, and boulders, with weak soil development.

QT5 Hillslope deposits, talus and colluvium (Holocene and Pleistocene).—Deposits of angular gravel, sand, silt, and clay, derived from bedrock.

QT6 Moderately dissected alluvial fan and terrace deposits (late Pleistocene).—Deposits typically consist of sand to cobbles, soil clay accumulation and modest reddening.

QT7 Dissolved alluvial-fan and terrace deposits (middle Pleistocene).—Coarse, cobble deposits are with some angular sediment; moderate soil clay accumulation and reddening.

QT8 Deeply dissected alluvial-fan remnants (early Pleistocene).—Coarse, poorly sorted cobble and boulder deposits; soils have petrolic horizons, variable clay content.

QT9 Floodplain and alluvial-fan and terrace deposits (Holocene).—Deposits consist of sand, silt, and fine gravel, minimal soil development.

QT10 Finely sorted floodplain and basin-floor terrace deposits (late Holocene).—Deposits consist of sand, silt, clay, and fine gravel, substantial soil clay accumulation.

QT11 Eolian dune deposits (middle to late Holocene).—Deposits consist of well-sorted sand.

QT12 Major river channel deposits of the Gila, Salt, and Santa Cruz rivers (late Holocene).—Deposits consist of sand, silt, and clay.

QT13 Floodplain and low-angle normal fault and terrace deposits (Holocene).—Deposits consist of coarse channel gravels and sand to silt overbank deposits; minimal to weak soil development.

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