

Geologic map of the Redington 7 1/2' Quadrangle, Cochise, Graham, and Pima Counties, Arizona

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Arizona Geological Survey
Digital Geologic Map 60 (DGM-60), version 3.0

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1:24,000 scale

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Map Unit Descriptions

Other Units

- Plowed areas - historically or actively plowed fields, irrigated pastures, and other lightly disturbed ground
- Disturbed ground - heavily disturbed ground due to agriculture, extensive excavation, or construction of earth dams
- Quaternary hillslope talus and colluvium - unconsolidated to weakly consolidated, very poorly sorted angular rock debris deposited at the base of bedrock slopes

San Pedro River Alluvium

- Active river channel deposits - unconsolidated, very poorly sorted sandy to cobbly beds in active river channels
- Flood channel and low terrace deposits - unconsolidated sand, gravel, and silt deposits on bars, low terraces, and flood channels
- Historical river terrace deposits - unconsolidated sand, gravel, and silt deposits on low terraces inset below the abandoned early historical floodplain
- Latest Holocene to historical river deposits - silt, clay, sand, and minor gravel deposits underlying the early historical floodplain
- Late to early Holocene river terrace deposits - silt, clay, sand, and minor gravel terrace deposits slightly above the early historical floodplain
- Late Pleistocene river terrace deposits - gravelly, sandy river terrace deposits from 5 to 20 m above the active river channel
- Middle to late Pleistocene river terrace deposits - higher intermediate terraces composed of a mix of river gravel, sand, silt, and clay from 15 to 35 m above the active river channel
- Middle to late Pleistocene river terrace deposits (younger member)
- Middle to late Pleistocene river terrace deposits (older member)
- Early to middle Pleistocene river terrace deposits - isolated deposits covered with well-rounded river gravel from 30 to 60 m above the active river channel

Piedmont Alluvium and Surficial Deposits

- Modern stream channel deposits - unconsolidated, very poorly sorted sandy to cobbly ephemeral channel deposits
- Latest Holocene alluvium - intermittent tributary channel deposits and low-lying piedmont channel terraces flanking active drainages
- Late Holocene alluvium, active fan deposits - active portions of young fan deposits exhibiting distributary drainage patterns
- Late Holocene alluvium - planar terrace deposits located along incised drainages, broad low-relief distal fan deposits overlapping onto Holocene river alluvium, and infrequently active tributary drainage deposits
- Older Holocene alluvium - broad, low-relief, undulating fan deposits exhibiting widespread, shallow braided drainage patterns
- Holocene alluvium derived from distal Quibiris basin fill alluvium - unconsolidated alluvium derived predominantly from basin fill deposits
- Late Pleistocene alluvial fan and terrace deposits - relatively planar, reddish terraces mantled by angular to sub-angular pebbles to cobbles
- Middle to late Pleistocene alluvial fan and terrace deposits - broad planar fan terraces capping Quibiris basin fill deposits, inset into older, more well-rounded alluvial deposits, or lining significant piedmont drainages
- Middle to late Pleistocene alluvial fan and terrace deposits (younger member) - broad planar fan terraces capping Quibiris basin fill deposits, typically inset into slightly older Q2 and Q2a deposits
- Middle to late Pleistocene alluvial fan and terrace deposits (older member) - broad planar fan terraces capping Quibiris basin fill deposits, typically inset into slightly older Q2c deposits

- Early to middle Pleistocene alluvial fan and terrace deposits - high-standing, moderately to well-rounded alluvial deposits exhibiting strong carbonate accumulation (where preserved) capping underlying Quibiris basin fill deposits
- Early Pleistocene alluvial fan deposits - high, moderately consolidated gravelly deposits with variable soil development
- Late Pliocene to early Pleistocene fan gravel - coarse, moderately to well-consolidated gravelly deposits capping high rounded ridges

Tertiary Basin Fill alluvium

- Late Miocene to Pliocene Quibiris basin fill deposits, alluvial fan facies - Sandy to gravelly, moderately to strongly indurated alluvial fan deposits
- Pliocene Quibiris basin fill deposits, low energy fluvial deposits - alternating thin weakly-consolidated beds of gypsum, silt, and very fine sand with sparse pebble stringers
- Late Miocene to Pliocene Quibiris deposits, fan toe and axial valley facies - Sandy to clayey, moderately indurated axial valley and plays margin deposits

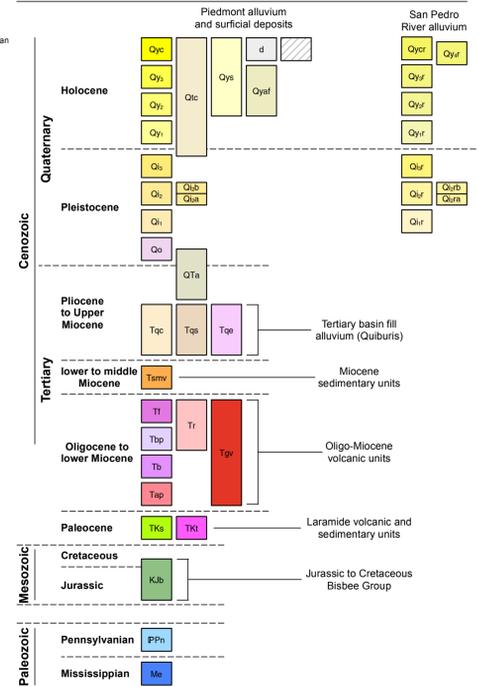
Miocene sedimentary units

- Conglomerate, San Manuel Formation, volcaniclastic Soza Canyon facies - clasts are derived primarily from volcanic rock like those that make up most of the Galuro mountains as well as locally exposed, depositionally underlying bedrock in lower Soza Canyon (Dickinson, 1991)

Bedrock units

- Rhyolite lava (Oligo-Miocene) - flow-banded silicic lava containing 2-3% <2 mm quartz, 1-3% <3 mm plagioclase, and ~1-2% <2 mm sandstone
- Felsite lava (Oligo-Miocene) - variably beccatized, aphyric lava flows that contains <1%, <1 mm quartz, and <1%, <1 mm sandstone
- Bedded Pyroclastic Rocks (Oligo-Miocene) - bedded pyroclastic rocks contain 1-2%, <1 mm quartz, <1%, <1 mm biotite(?), <1%, <1 mm sandstone, and abundant, 1-10 cm, angular, volcanic-rock fragments. Bedding is crudely defined by variations in volcanic-lithic fragment abundance and size
- Basalt (Oligo-Miocene) - basalt in Redfield Canyon
- Andesite porphyry lava flows (Oligo-Miocene) - tabular to dark gray to dark brown, generally massive lava flows with conspicuous, 10-50%, 3-30 mm, medium, plagioclase porphyroclasts ("Turkey-track porphyry")
- Galluro Volcanics, undivided (Oligo-Miocene) - Oligocene-Miocene Galluro Volcanics, undivided
- Sandstone and conglomerate (late Cretaceous to early Tertiary) - moderately lithified, moderately sorted sandstone and silty sandstone in beds 10-100 cm thick, with subordinate conglomerate
- Rhyolite tuff (late Cretaceous to early Tertiary) - quartz-biotite tuff with flattened pumice fragments and fresh biotite
- Bisbee Group, undivided (Cretaceous to Jurassic) - siltstone, sandstone, and conglomerate of the Bisbee Group, undivided
- Naco Group - Pennsylvanian Horquilla Limestone consisting of thin-bedded blue-gray limestones interbedded with red shale and shaly limestone and Pennsylvanian-Pemian Earp Formation containing more shale as well as sandstone, dolomite and rare conglomerate
- Escabrosa Limestone - thick-bedded, coarse-grained, cliff-forming very dark gray coarse-grained dolomite and pure light gray limestone with subordinate dolomite beds

Correlation of map units



Map Symbols

Contacts

- Contact, accurately located
- Contact, approximately located
- Contact, concealed
- Contact, gradational

Faults

- Fault, accurately located
- Fault, approximately located
- Fault, concealed

Structure Symbols

- bedding, horizontal
- bedding, inclined
- bedding, overturned with tops known
- slickenside striae lineation
- inclined eutaxitic foliation
- fault or vein dip

