



MAP UNITS

UNITS YOUNGER THAN THE BIG HORN VOLCANICS

- Qs Younger alluvium (HOLOCENE)
- Qt Unconsolidated talus (HOLOCENE)
- Qeo Mid-level alluvial deposits (HOLOCENE)
- Qts Older alluvium (UPPER MIOCENE TO HOLOCENE)
- Thr Hot Rock basalt (MIDDLE MIOCENE)
- Tf Undifferentiated fanglomerate, sedimentary breccia, megabreccia, and lahar deposits; generally includes a cover of Qts (MIDDLE TO UPPER MIOCENE (?))
- Tbx Megabreccia and sedimentary breccia; protolith of breccia shown in parentheses where known (MIDDLE MIOCENE)

BIG HORN VOLCANICS (LOWER TO MIDDLE MIOCENE)

- Tbb Beer Bottle rhyolite member
- Tbbc Lithic tuff
- Tba Moon Anchor volcanics member
- Tba2 Porphyritic andesite flows with mafic inclusions
- Tba1 Porphyritic, vesicular andesite flows with plagioclase megacrysts
- Tba3 Basalt flow
- Tub Upper aphyric basalt member
- Tuv Mine Wash andesite member
- Tvwt Lithic tuff
- Ts Sugarloaf rhyolite member
- Tst Lithic tuff
- Tb Blue Hope rhyolite member
- Tb2 Flows with quartz as a dominant phenocryst
- Tb1 Flows with abundant hornblende phenocrysts
- Tbt Lithic tuff
- Th Hummingbird rhyolite member
- Th3 Flow-foliated, phenocryst-poor rhyolite flows
- Th2 Porphyritic, sanidine-rich rhyolite flows
- Th2b Porphyritic, biotite-rich rhyolite flows
- Th2c Xenolith-bearing, porphyritic rhyolite flows
- Th1 Porphyritic, hornblende-rich rhyolite flows
- Tht Lithic tuff
- Thwt Porphyritic welded rhyolite tuff
- To Old Camp volcanic member
- To2 Undifferentiated rhyolite & pheno-rhyodacite flows
- To2a Quartz-rich rhyolite flows
- To2b Biotite-rich rhyolite flows
- To2bt Biotite-rich lithic-crystal and lithic pheno-rhyodacite tuff
- To1 Pheno-rhyodacite and pheno-dacite flows
- Toc Lithic tuffs and tuffaceous sedimentary rock
- Tms Morningstar rhyolite member
- Tmst Lithic tuff
- Td Dead Horse volcanics member; principally basalt flows
- Td3 Quartz-phenocryst-rich tuff and sedimentary rock
- Td2 Quartz-phenocryst-bearing welded tuff
- Td1 Porphyritic andesite
- Tdc Nonwelded lithic tuff, volcanoclastic sandstone, and conglomerate
- Tds Volcanoclastic sandstone and conglomerate

LOWER TO MIDDLE MIOCENE INTRUSIVE ROCKS

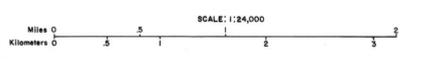
- Ti Undifferentiated rhyolite intrusions
- Tia Aphyric rhyolite intrusions
- Tiq Quartz-rich rhyolite intrusions
- Tif Feldspar-rich rhyolite intrusions
- Tim Mafic and intermediate intrusions
- +++++ Undifferentiated felsic intrusions
- Undifferentiated intermediate intrusions
- Undifferentiated mafic intrusions

UNITS OLDER THAN THE BIG HORN VOLCANICS

- Tc Basal sandstone and conglomerate (OLIGOCENE - LOWER MIOCENE (?))
- Ka Aplitic dikes (UPPER CRETACEOUS (?))
- Kg Granodiorite and granite (UPPER CRETACEOUS)
- XTEK Garnet-bearing granite (LOWER PROTEROZOIC OR CRETACEOUS-LOWER TERTIARY)
- Q-Qb Spectral-hematite-bearing quartz vein (PROTEROZOIC (?))
- Ggb Gabbroic intrusive (LOWER PROTEROZOIC(?))
- Xg Granite (LOWER PROTEROZOIC)
- Xs Schist and phyllite (LOWER PROTEROZOIC)
- Xm Gneiss and metamorphic rocks
- Xa Amphibolite (LOWER PROTEROZOIC)

SYMBOLS

- Strike and dip of bedding
- Strike of vertical bedding
- Horizontal bedding
- Strike and dip of foliation
- Strike of vertical foliation
- Low-angle normal fault -- Dashed where approximately located; dotted where concealed -- Hatchures on upper plate
- High- to moderate-angle normal fault -- Dashed where approximately located; dotted where concealed -- Bar and ball on down-thrown block
- High-angle fault -- Dashed where approximately located; dotted where concealed
- Incipient argillic alteration and silicification -- Density of stippling indicates relative intensity of alteration
- Vitrophyre



PRELIMINARY GEOLOGIC MAP OF THE CENTRAL BIG HORN MOUNTAINS, WEST-CENTRAL ARIZONA

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Base maps modified after U.S.G.S. Preliminary 7.5' Topographic Maps: Big Horn Mountains NE and SE, and Aquila SE and SW; Maricopa County, AZ