

Geologic map of the Kingman 7 1/2 Quadrangle, Mohave County, Arizona

Arizona Geological Survey
Digital Geologic Map 113 (DGM-113), version 1.0

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Introduction
The Kingman 7 1/2 Quadrangle encompasses much of the city of Kingman in Mohave County, northwestern Arizona. Geologic mapping was done under the joint State-Federal STATEMAP program, as specified in the National Geologic Mapping Act of 1992, and was jointly funded by the Arizona Geological Survey and the U.S. Geological Survey under STATEMAP assistance award # G13AC00374. Backscatter geologic mapping was conducted by Charles Ferguson and surficial geologic mapping was conducted by Joseph Cook. Mapping was completed digitally using ESRI ArcGIS software.

Surficial geology
The map area encompasses a drainage divide that separates the Colorado River drainage to the west from the Colorado Plateau drainage to the east. The divide is marked by a prominent alluvial fan and terrace deposits, and nearby fan valley floors are occupied by ephemeral washes, floodplains, and low terraces.

Bedrock geology
The geology of the Kingman area is dominated by a sequence of Miocene volcanic rocks that fill a broad northeast-trending paleo-valley (Beard and Faulds, 2011) that can be traced from the southwest Black Mountains southeast through Kingman and across the Peach Springs, Arizona to the southern rim of the Grand Canyon. The older volcanics consist of mafic lavas with interbeds of sandstone, conglomerate, and thin (<3m thick) nonwelded, silicified tuff beds. The conglomerates are dominantly composed of granitic clasts derived from the valley, but in one area near Gross Spring (see map), rounded clasts of dacitic lava most likely derived from the Black Mountains.

Other units
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References cited
Beard, L.S., and Faulds, J.E., 2011. Kingman uplift, paleo-valley, and extensional tectonics in northwestern Arizona. In Beard, L.S., Karlstrom, K.E., Young, R.A., and Balfanz, G.H., eds., *Crustal Evolution—Origin and Evolution of the Colorado River system*, workshop abstracts. U.S. Geological Survey Open-File Report 2011-1210, 300 p.

Description of Map Units
Disturbed ground - Heavily disturbed ground due to mining, extensive excavation, construction, and other human activities.

Undifferentiated - Quaternary deposits in cross-section.

Landslide - Landslide masses composed chiefly of mafic lava derived from the Colorado Plateau.

Quaternary alluvial fans and colluvium - Unconsolidated to weakly consolidated very poorly sorted angular rock debris deposited at the base of bedrock slopes.

Holocene debris flow deposits - Sheds, levees, scoured debris flow channels, and debris flow-dominated fans. Qy1 deposits are located on or at the base of steep slopes and are characterized by well-sorted, rounded to sub-angular clasts.

Low energy sheetflood deposits - Qy2 deposits consist of unconsolidated very fine to medium sand to silt with scattered pebbles and clasts. Qy2 deposits are typically found in low energy sheetflood channels and are characterized by well-sorted, rounded to sub-angular clasts.

Active channel and arroyo deposits - Qy3 deposits consist of unconsolidated very poorly sorted sandy to cobble sediment. Qy3 deposits are typically found in active channels and are characterized by well-sorted, rounded to sub-angular clasts.

Broad, low relief alluvial fan and terrace deposits - Qy4 deposits consist of poorly to moderately well-sorted sandstone and siltstone with scattered pebbles and clasts. Qy4 deposits are typically found on broad, low relief alluvial fans and terraces.

Inactive alluvial fan remnants, terraces, and bars - Qy5 deposits consist of planar terraces along large drainage lines that are older than the broad, low relief alluvial fan and terrace deposits. Qy5 deposits are typically found on inactive alluvial fan remnants, terraces, and bars.

Partially buried Pleistocene alluvial fan deposits - Qy6 deposits represent the remnant of alluvial fan erosion and deposition that resulted in a discontinuous bank of alluvium by younger deposits. Qy6 deposits are typically found on partially buried Pleistocene alluvial fan deposits.

Older, higher standing intermediate alluvial fan deposits - Qy7 deposits are relic terraces that are older than the broad, low relief alluvial fan and terrace deposits. Qy7 deposits are typically found on older, higher standing intermediate alluvial fan deposits.

Very old alluvial fan deposits - Qy8 deposits are deeply dissected, high-standing alluvial fan remnants. Qy8 deposits are typically found on very old alluvial fan deposits.

Younger Conglomerate and sandstone - Conglomerate and sandstone younger than the Peach Springs Tuff in medium to thick-bedded, and mostly class-supported. These units are typically found in the Kingman area.

Tuff of Bonelli House - A pair of nonwelded to poorly welded, light gray, phenocryst-poor ignimbrites containing 1-3% to 5% medium to coarse phenocrysts. The tuff is typically found in the Kingman area.

Basaltic andesite lava - Basaltic andesite lava containing 1-3% to 5% medium to coarse phenocrysts. The lava is typically found in the Kingman area.

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