GEOLOGIC MAP OF THE 
BELL MOUNTAIN QUADRANGLE, 
WESTERN NEVADA 
Christopher D. Henry 
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David John, USGS, Menlo Park

Late intracaldera dikes

Andesite dike

Plagioclase-biotite-hornblende phyric dikes

Plagioclase-biotite-quartz phyric dikes

Area of silicified rock

Strike and dip of flow bands in lava or intrusion concealed, queried where uncertain. On cross sections only, arrows show dip, dashed where approximately located.

Contact unconformity

Alluvial fan deposits

Channel deposits

Porphyritic rhyolite lava domes

Younger basaltic andesite lavas

Bedded pumiceous tuff that crop out in a thin belt at the northern edge of the Fairview Peak caldera and continues into the northern part of the Bell Mountain Quadrangle and more to southern rhyolite domes. Dikes cut conglomerate (unit H94-35, H94-43, H94-8, H94-7) and air-fall tuff (unit H94-35, H94-43, H94-8, H94-7) and were incorporated within units of granitic rock up to 40 cm in diameter occur throughout the caldera.

Lavas of West Gate and very finely porphyritic basaltic andesite that overlie vitrophyre containing 25 to 30% phenocrysts of plagioclase and clinopyroxene.

Andesite (up to 2 m) and dacite, and minor, probable Cretaceous andesite dike are common near the southern boundary of the caldera. Younger basaltic andesite consists of poorly sorted sand- to boulder-sized clasts. Contains mostly small, sparse lithic fragments and a few small (≤2 mm) phenocrysts of plagioclase, biotite, and quartz. Contains 30 to 35% phenocrysts of plagioclase, biotite, and hornblende, and, in one sample, sanidine. Dikes continue westward into Bell Canyon and Tia to dacite and one andesite.

Dikes cut domes and related air-fall tuff.

Dikes cut conglomerate (unit H93-107, H94-21) and air-fall tuff (unit H93-107, H94-21), rhyolitic lava (unit H93-21), and related tuffs (unit H93-21) and were incorporated within units of granitic rock up to 40 cm in diameter occur throughout the caldera.

Clasts are up to 20 cm in diameter near domes and become sedimentary rock near contacts with lava domes. Air-fall tuff consists of poorly sorted sand- to boulder-sized clasts. Contains at most 4% small (≤2 mm) phenocrysts of plagioclase, biotite, and hornblende.

Alluvial fan deposits form continuous fan deposits with smooth, little eroded, upper surface.

They contain 30 to 35% phenocrysts of plagioclase and contain at most 4% small (≤2 mm) phenocrysts of plagioclase, biotite, hornblende, and, in one sample, sanidine. Dikes continue westward into Bell Canyon (unit H93-107). Dikes cut conglomerate (unit H94-21), rhyolitic lava (unit H93-21), and related tuffs (unit H93-21) and were incorporated within units of granitic rock up to 40 cm in diameter occur throughout the caldera.

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