CONTACT INFORMATION
Mining Records Curator
Arizona Geological Survey
416 W. Congress St., Suite 100
Tucson, Arizona 85701
602-771-1601
http://www.azgs.az.gov
inquiries@azgs.az.gov

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Notes on NEVADA TERIARY VOLCANICX

J.P.Albers, Tertiary and Quaternary Rocks, in Mineral and Water Resources of Nevada, Nevada Bur.Mines Bull.95,1964,30-32.

Correlation is far from complete;these generalizations are tentative.

Latest Eocene or early Oligocene: andesitic flows. Elko,NE Nye,White Pine counties. Shrtly after,in same regions,great sheets of rhyolitic to dacitic ash flows. Most are welded;oldest,39 m.y.= very early Oligocene. Others upper or middle Oligocene. Some granitic intrusions,same time. S and W Nevada undergoing er sion at this time.

Volcanism started ,in W and N parts of Nevada,late Oligocene or very early Mio ene. At start,mainly rhyolitic ash flows and lava flows (Hartford Hill rhyolite). Later, andesite and daci e flows,mainly in NW Nevada,

E Nevada probably undergoing erosion during much of the Miocene.

S Nye Co., oldest Tv weilded tuff,16 m.y.(upper middle Miocene).

Block faulting accompanied or shortly followed the Oligocene and early Miocene volcanism. Formed basins,lakes,late Mio.,early Plio. Esmeralda. Between 8 and 13 m. years ago,same time as extensive ash flows erupted from huge calderas in S Nye Co.
(Lower middle Pliocene to uppermost Miocene).

After this lacustrine and fluviatile sedimentation,renewed volcanism in much of N and W part,yielding additional ash flows in some areas, thick andesite and dacie flows in others.

Late Pliocene,early Ple stocene-basalt flows.

Earl F.Cook,1965, Stratigraphy of Tetiary volcanic rocks in eastern Nevada,Nevada Bur.Mines Report 11.

Most volcanic rocks in E Nevada are ignimbrites,mainly of rhyodacite composition. This does not apply to Jarbidge on the N. Pliocene welded tuff and othe tuff horizons,but thick rhyolite flows. Cougar Pt. welded tuff = younger rhyolite of Schrader.

The known area within which most Teriary volcanics are ign mbrites occup es most of the south half of eastern Nevada,although Cook extends the ignimbri e area to cover most of central Nevada from near Winnemucca southward. P resumably in this cen ral area ignimbrites exist but do not dominate. Cook implies this when he states (p.2-3,that ignimbrites that seem to below to different provinces are found in far NE Nevada (Jarbidge),in extreme S Nevada and wes ward,Battle Mt.,Antler Peak,Gabbs, Austin and Tonopah areas;V,City, Silver Peak,Beatty,and the AEC Nevada Test Site.

~~Age on ignimbrites in Cook's mapped area range from~~

This is partly confirmed by he fact hat Cook's ignimbrites range in age from lower Oligocene to middle Miocene,while the Jarbidge welded tuff is Pliocene.

The only important epithermal deposit in Cook's area is Telamar. Mineralization is thought to have occurred after the close of ignimbrite eruption.

In SW Nevada the Hartford Hill rhyolite and Kate Peak formation are widespread,the Alta andesite,between the two,somewhat less so. At Silver City (Gianella,1936) the earliest TV was andesite. After a period of erosion the Hartford Hill rhyolite was intruded,consising of flows and tuffs of rhyolite and quartz latite. Late Oligocene to early Miocene.

The Alta andesite overlies the Hartford Hill rhyo.in the Comstack-Silver City area. This consists of a thick series of andesitic lavas and pyroclastics In places the entire formation seems to consist of soda trachyte (Thompson and White, 1964, A 12.

Overlying the Alta is the Kate Peak formation.Flows and pyroclastic beds of pyroxene andesite;flows of rhyodacite;thick tuff-breccias. Age probably early Miocene to early Pliocene.

IIn the Ione quadrangles (Vitaliano,1963)the lowermost Tv consists of rhyolite, r tuff,trachyte,trachyte tuff,qtz latite;erosion: Keratophyre, trachyte,rhyolite,qtz latite,dacite,andesite,trachandesite.Esmeralda seds.and pyroclastics;Oddie rhyolite;qtz latite,mainly ignimbrites. Andesite trachyandesite. Erosnial unconformities separate all members.