

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

GEOLOGIC MAP OF THE RATTLESNAKE FLAT QUADRANGLE,
MINERAL COUNTY, NEVADA

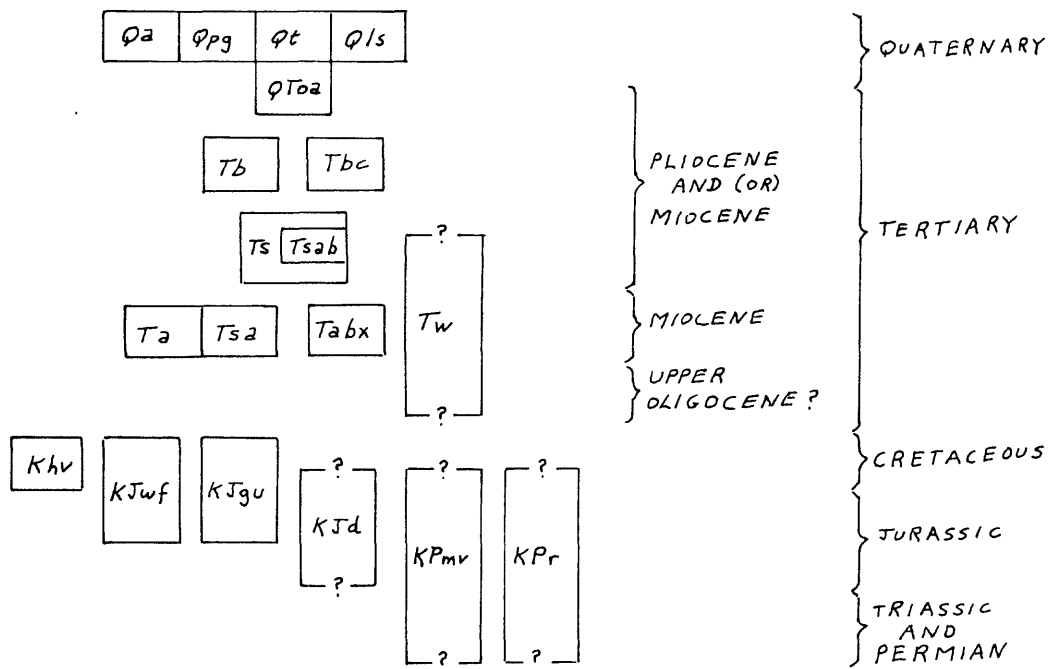
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Prepared in cooperation with Nevada Bureau of Mines and Geology

This map is preliminary and has not been
reviewed for conformity with U.S. Geological
Survey editorial standards and stratigraphic
nomenclature

CORRELATION OF MAP UNITS - RATTLESNAKE FLAT



---?--- Contact -- Queried where approximately located.
 - - - - - Fault -- Dashed where inferred or approximately located; dotted where concealed. Bar and ball on downthrown side.
 25
 / \ Strike and dip of beds.

DESCRIPTION OF MAP UNITS

Qa	ALLUVIAL DEPOSITS
Qpg	PEDIMENT GRAVEL
Qt	TALUS DEPOSITS
Qls	LANDSLIDE DEPOSITS
QToa	OLDER ALLUVIAL DEPOSITS
Tb	BASALT--Chiefly lava flows, includes dikelike bodies
Tbc	BASALT CINDER
Ts	TUFFACEOUS CONGLOMERATE, SANDSTONE, AND SILTSTONE--Includes a volcanic subunit:
Tsab	Andesitic basalt
Tw	WELDED TUFF, UNDIVIDED--Age uncertain
Ta	ANDESITE FLOWS AND BRECCIA (LAHAR)--Includes flows of intermediate composition
Tsa	SILICIFIED ANDESITE OR FLOWS OF INTERMEDIATE COMPOSITION
Tabx	ANDESITE BRECCIA (LAHAR)--Temporal and lithic equivalent of andesite breccia in Ta unit; mapped separately from Ta unit only in east-central and southernmost parts of quadrangle
Khv	GRANODIORITE OF HUNTOON VALLEY--Light- to medium-gray medium- to coarse-grained equigranular to porphyritic hornblende biotite granodiorite. Average mineral composition, in percent: quartz (19), potassium feldspar (17), plagioclase feldspar (49), mafic minerals (15). Distinguished from adjacent plutonic rocks by a gray topsoil and biotite flakes as large as 8 mm across. Sodic andesine (An ₃₂) crystals are subhedral to euhedral, as long as 4.5 mm, and show normal zoning; cores of some of crystals are sericitized. Myrmekite is uncommon. Microcline and microcline perthite are subhedral and as long as 1 cm. Quartz is as large as 3 mm in diameter. Brown biotite, as much as 8 percent of rock, occurs in cores of hornblende crystals and as individual flakes as large as 8 mm. Green hornblende, as much as 6 percent of rock, and averaging 3 percent is subhedral to euhedral and as long as 3.5 mm. Small amounts of green chlorite occur as distinct flakes or alteration products of biotite. Other minerals observed in small amounts (1 percent or less) include magnetite, sphene, and apatite. K-Ar ages of 86 m.y. (biotite) and 100 and 101 m.y. (hornblende) were obtained from samples collected in adjacent Rattlesnake Flat and Huntoon Valley quadrangles (Evernden and Kistler, 1970, loc. nos. 238, 239)

- KJwf GRANITE OF WHISKEY FLAT--Light-gray to pinkish-gray medium- to coarse-grained porphyritic biotite granite. Average mineral composition, in percent: quartz (26), potassium feldspar (31), plagioclase feldspar (37), and mafic minerals (6). Rock weathers readily to coarse sandy grus. Oligoclase (An_{25}) forms subhedral crystals as long as 4 mm that exhibit weak zoning and uncommon myrmekite intergrowths. Some twin lamellae are noticeably bent. Orthoclase(?)--perthite forms subhedral phenocrysts as long as 15 mm. Quartz crystals are anhedral and as much as 3.5 mm in diameter. Mafic minerals, constituting from 2 to 10 percent of rock, include chiefly biotite (as much as 8 percent of rock but averaging 3 percent) and lesser amounts of hornblende. Biotite forms light-brown to brown subhedral crystals as long as 4 mm and is chloritized in some parts of pluton. Muscovite and sericite range in amount from a trace to as much as 8 percent of rock, and their concentration in altered zones indicates a probable secondary origin related to hydrothermal alteration. Opaque minerals constitute as much as 2 percent of rock and include magnetite and hematite. Other minerals, present from trace amounts up to as much as 1 percent include sphene, apatite, and zircon
- KJgu GRANITIC ROCKS UNDIVIDED--Rocks not assigned to a specific pluton. Consists of two isolated outcrops in northernmost part of quadrangle. Consists of large pink orthoclase in medium-grained matrix of quartz, plagioclase, biotite, and hornblende. Probably either granite of Cory Creek (Stewart and others, 1981) or granite of Whiskey Flat
- KJd DUNLAP FORMATION--Very fine grained laminated quartzite to conglomerate with clasts as large as 13 cm. Clasts mostly of very fine grained sandstone and siltstone. Hornfels and greenstone common. Sparse marble
- KPmv METAVOLCANIC ROCK--In west-central part of quadrangle includes abundant metaconglomerate and metasiltstone that may be part of Dunlap Formation
- KPr FLOW-BANDED APHANITIC RHYOLITE--In northeastern part of quadrangle

REFERENCES CITED

- Evernden, J. F., and Kistler, R. W., 1970, Chronology of emplacement of Mesozoic batholithic complexes in California and western Nevada: U.S. Geological Survey Professional Paper 623, 42 p.
- Stewart, J. H., and Johannesen, D. C., 1981, Geologic map of the Powell Mountain quadrangle, Mineral County, Nevada with surficial geology by J. C. Dohrenwend: U.S. Geological Survey Miscellaneous Field Studies Map MF-1268, scale 1:62,500.