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RECONNAISSANCE GEOLOGIC MAP OF THE
GRANITE PEAK QUADRANGLE, NEVADA

Larry J. Garside

Fieldwork in support of the
U.S. Geological Survey COGEOMAP
Program

This information should be considered preliminary.
It has not been edited or checked for completeness
or accuracy.

xerogr.

see Tube 85 for mylar (8 ft.): 

RECONNAISSANCE GEOLOGIC MAP OF THE GRANITE PEAK QUADRANGLE, NEVADA

by Larry J. Garside

Explanation

- Qa: Alluvial plain and undifferentiated alluvial deposits. Unconsolidated sand and gravelly sand. Sheetwash and sidestream and wash alluvium in late Holocene to modern channels or as broad, low-gradient alluvial plains.
- Qpg: Pediment deposits. Thin deposits of bouldery and pebbly, unconsolidated gravel. The clasts consist of Mesozoic metamorphic and granitic rocks. Unit Qpg overlies unit Ts west of Freds Mountain.
- Qf: Alluvial-fan deposits. Moderately to deeply eroded semiconsolidated pebbly to bouldery sand, moderately weathered. Much of the unit consists of clastic material derived from granitic rocks (granite wash). Debris-flow material, consisting in part of large granitic boulders, apparently occurs locally within the unit in Red Rock Valley.
- Tob: Olivine basalt. Black, dense and platy jointed; locally vesicular. Possibly equivalent to mid-Miocene basalt in the Verdi quadrangle (see Bell and Garside, 1987).
- Ts: Tertiary sedimentary rocks. Lacustrine and fluvial conglomerate, sandstone, and tuffaceous siltstone and shale. Predominately white to light gray and commonly poorly exposed. Thin-bedded to massive granite sandstone makes up a major part of the unit in some areas. May be covered with a thin lag gravel of unit Qpg.
- Ttws: Tuffs of Whiskey Spring. The tuffs of Whiskey Spring are white to light-gray and pale-red rhyolitic vitric to crystal-vitric tuffs, slightly to highly welded, with phenocrysts which are 45-65% sanidine, 35-45% plagioclase, 1-5% quartz, and a trace to 2% biotite. Hornblende is present in one cooling unit. Pumice is present, but is generally not obvious in most samples. Lithic content is variable. Vapor-phase alteration is common in the upper parts of certain cooling units. The tuffs often weather and erode along closely spaced polygonal fractures that develop on weathered surfaces. The "nubbly"-weathering character of this surface combined with the platy- or hackly-fracturing nature of the sanidine phenocrysts serves as a unique field identification characteristic.

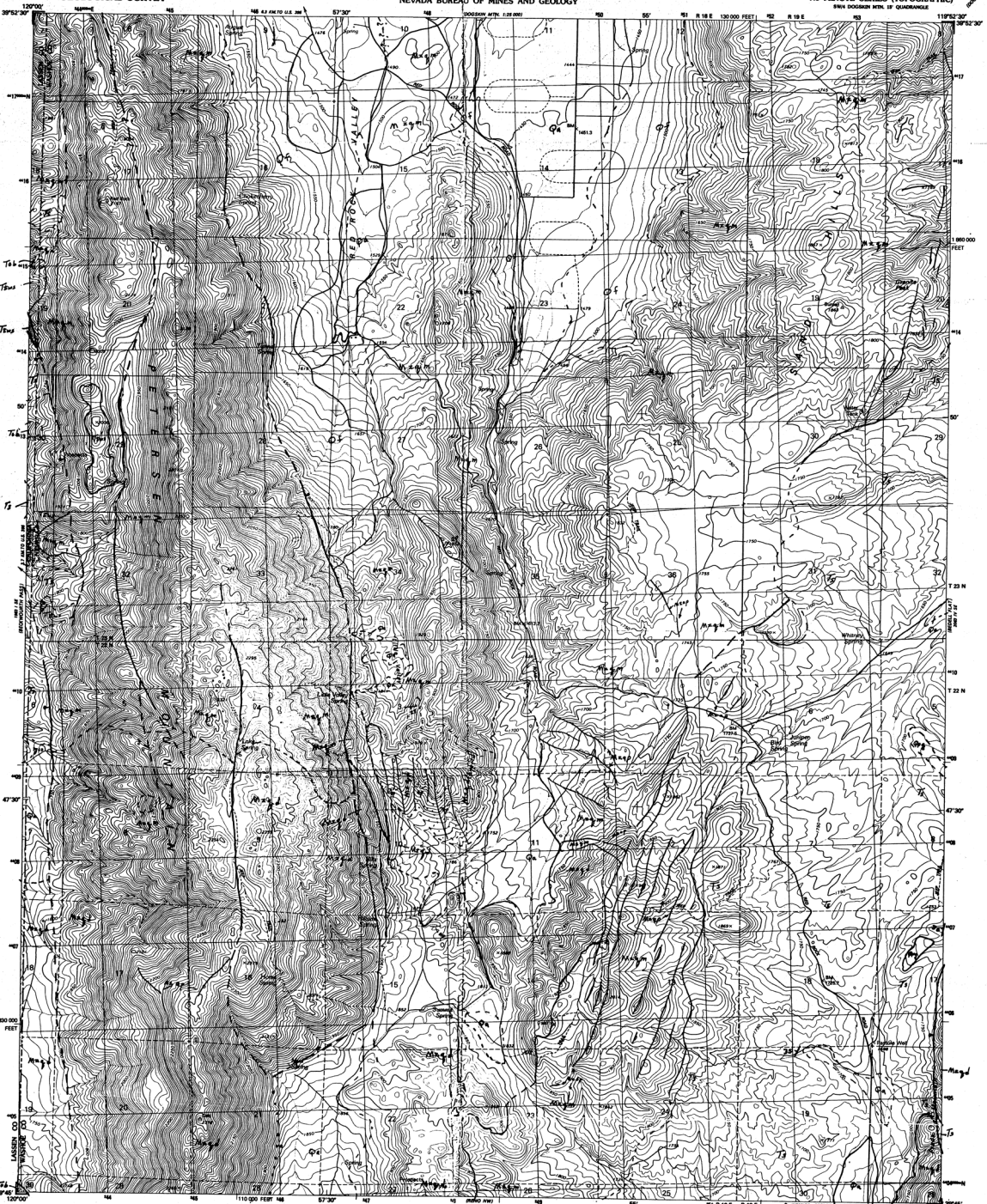
H. F. Bonham, Jr. (written commun., 1980) has subdivided the tuffs of Whiskey Spring into, from top to bottom, the tuff of Palute Creek, an unnamed tuff, and the tuff of Rattlenake Canyon (which has been dated by K-Ar methods at 28.6 m.y.). The tuffs of Whiskey Spring are equivalent to the tuffs of Seven Lakes Mountain of Deino (1985), who has divided them into the following informal tuff units, from top to bottom, the Harry's Spring, Long Valley, Constantino, and Zamboni. These range in age from about 29 to 31 m.y. The tuffs

of Whiskey Spring commonly lie on pre-Tertiary basement rocks in the western part of the Reno 1:100,000-scale quadrangle; they are equivalent to the tuffs of McKisnick Springs of Hutton (1978) and Seidl (1982).

- Mzap: Aplite and pegmatite dikes. Long, 1-2m wide, high-angle aplite or aplite/pegmatite dikes, consisting predominantly of quartz and alkali feldspar. Light gray to pink; dikes commonly form long, narrow, linear ridges in more easily eroded granitic wall rock. The dikes cut both Mzqm and Mzqd, but are much more common in Mzqm, and may be related to that phase of magmatism. Many of the dikes occur in a northeast-trending swarm in the southwest part of the quadrangle.
- Mzqm: Quartz monzonite of Granite Peak. Light gray to nearly white biotite quartz monzonite; hypidiomorphic-granular, medium to coarse grained, locally contains some hornblende. Commonly deeply weathered to grus containing numerous 5mm quartz grains. Probably Cretaceous, believed to intrude Mzqd.
- Mzqd: Quartz diorite of Peterson Mountain. Massive medium to coarse grained pluton of dark-gray hornblende-biotite quartz diorite. High color index; weathers to rounded, knobby outcrops. Equivalent to quartz diorite to the south in the Reno NW 7-1/2-minute quadrangle (Soller and Nielsen, 1980). Locally converted to a hybrid rock of more felsic composition adjacent to the intrusive contact with Mzqm. The unit has not been radiometrically dated, but it is probably Cretaceous, based on approximately 90 m.y. age dates of granodiorite to the west and south (see Bell and Garside, 1987).

REFERENCES

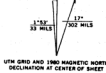
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- Soeller, S. A. and Nielsen, R. L., 1980, Geologic map of the Reno NW quadrangle, Nevada: Nevada Bureau of Mines and Geology Urban Series, Map 4Dg.



Produced by the United States Geological Survey

Control by **LEADS and WDS/WRD** from aerial photographs taken 1974-76. Field checked 1976. Map edited 1980

Projection and 10,000-foot grid ticks: Nevada coordinate system, west zone (Transverse Mercator)
1000-meter Universal Transverse Mercator grid, zone 11
1987 North American Datum
To place on the grid: North American Datum 1983
The projection lines 13 meters north and 87 meters east are shown by dashed corner ticks



CONTOUR INTERVAL 10 METERS
SUPPLEMENTARY CONTOUR INTERVAL 5 METERS
NATIONAL GEODETIC VERTICAL DATUM OF 1989

ROAD CLASSIFICATION
Primary highway ——— Light-duty road, hard or
Secondary highway, hard surface ——— Unimproved road ———
Interstate Route U.S. Route State Route

GRANITE PEAK, NEV.-CALIF.
7.5 MINUTE SERIES (TOPOGRAPHIC)
8000-HORIZONTAL METERS BY QUADRANGLE
N3546-101192-2/5

THIS MAP COMPLEYS 4TH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY-CENTRAL COLORADO ROUTE 8 OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

1980
CONTOURS AND ELEVATIONS IN METERS DMM 8000 IV SW-SERIES 1986