DEPARTMENT OF THE INTERIOR
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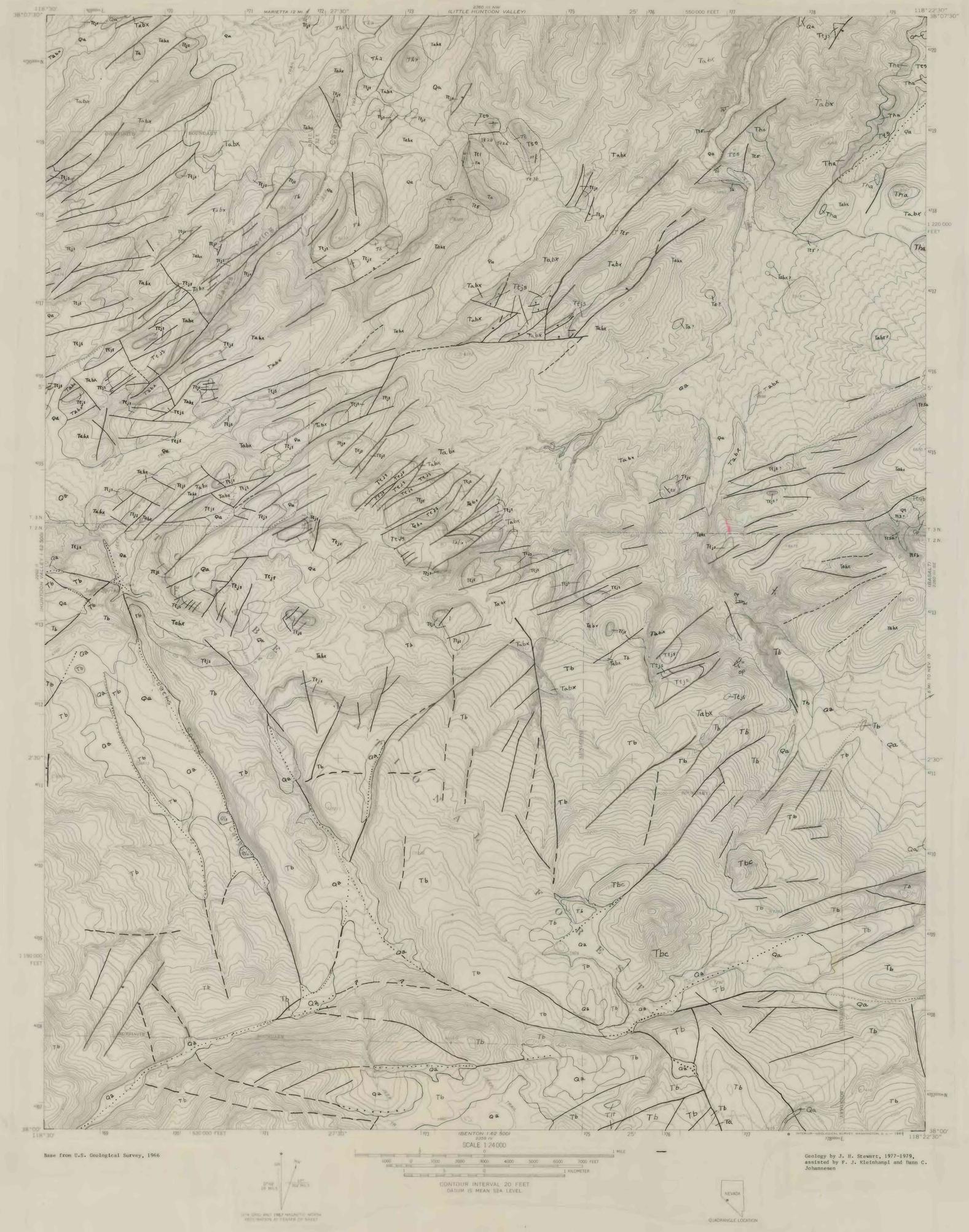
81-368



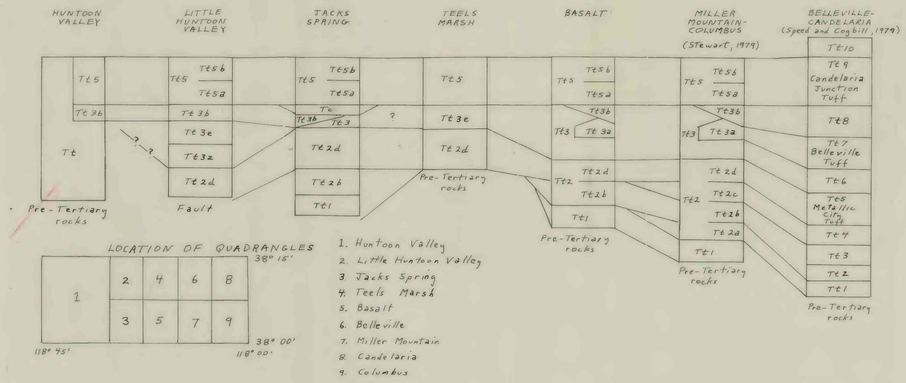


Figure 1--CORRELATION DIAGRAM FOR OLIGOCENE AND MIOCENE TUFF UNITS SHOWING MAP SYMBOLS USED IN QUADRANGLES IN SOUTHWESTERN PART OF WALKER LAKE 2° QUADRANGLE. THICKNESSES NOT TO SCALE

DESCRIPTION OF MAP UNITS

(Petrography of Cenozoic volcanic rocks in part by P. T. Robinson)

Qa ALLUVIAL DEPOSITS

Qt TALUS DEPOSITS

Qls LANDSLIDE DEPOSITS

Tb BASALT--Light to medium gray; highly vesicular; phenocrysts of olivine 1 to 2 mm across make up 5 to 10 percent of rock; fewer phenocrysts of plagioclase and pyroxene; groundmass intergranular to intersertal composed of plagioclase laths, granular pyroxene, olivine, iron oxides, alkali feldspar, and biotite (Crowder and others, 1972). Basalt in northwest part of quadrangle may be a different unit than in southern part of quadrangle

Tbc BASALT CINDER

Tlt LATITE TUFF OF TRUMAN MEADOWS--Ash-flow tuff, light-gray to brownish-gray well-developed eutaxitic structure; crystals (25 percent) consist of plagioclase, pyroxene, biotite, iron oxides, and some hornblende; abundant rock fragments of pyroxene andesite and quartz siltstone; 10 m.y. based on K-Ar dating (Gilbert and others, 1968). Occurs in only two outcrops along and near southern boundary of quadrangle. See Crowder and others (1972) for further description

Ttjs TUFF OF JACKS SPRING--Ash-flow tuff, crystal rich, not examined petrographically but abundant sanidine and biotite can be identified with hand lens, and calcic oligoclase probably also is a component as it occurs in correlative rocks in the Huntoon Valley quadrangle to the west (Gilbert and others, 1968, p. 285). Sparse fine-grained lithic fragments. Dark-colored vitrophyre commonly occurs near base. Correlative rocks in the Huntoon Valley quadrangle are 11.1 to 11.7 m.y. old on the basis of K-Ar dating (Gilbert and others, 1968)

Tabx ANDESITE BRECCIA (LAHAR)--Composed of angular blocks of andesite lava as much as 60 cm in diameter set in poorly sorted silty to sandy matrix. Occurs in 1- to 10-m-thick massive units. Includes layers of laminated to thin-bedded and crossbedded sandstone and conglomerate composed primarily of volcanic debris

Ta ANDESITE FLOW--Brownish gray to reddish brown; laths of plagioclase; locally flow banded

Tha HORNBLENDE ANDESITE--Needle-shaped crystals of hornblende as much as 1 cm long in an aphanitic matrix

Tt_5 CANDELARIA JUNCTION TUFF OF SPEED AND COGBILL (1979)--Ash-flow tuff, pale-red to grayish-red; 18 percent crystals; plagioclase, sanidine, quartz in approximate proportions 2:2:3, sparse biotite; common flattened pumice; cliff forming; 22 to 24 m.y. old based on K-Ar dating (Speed and Cogbill, 1979). See Speed and Cogbill (1979) and Stewart (1979) for further description. Two cooling units (Tt_5a and Tt_5b) mapped in east-central part of quadrangle. These two units probably also extend into other areas, or throughout quadrangle, but are not mapped

Tt_5b Upper cooling unit of Tt_5

Tt_5a Lower cooling unit of Tt_5

Tc CONGLOMERATE--Poorly exposed; recognized only on one outcrop in north-central part of quadrangle

Tt_3 TUFF AND (OR) SEDIMENTARY ROCK--Unexamined outcrop in east-central part of quadrangle

Tt_3b ANDESITE BRECCIA (LAHAR)--Composed of angular fragments of andesite lava as much as 30 cm across set in fine- to coarse-sand matrix. Mapped only in north-central part of quadrangle

Tt_2d METALLIC CITY TUFF OF SPEED AND COGBILL (1979)--Ash-flow tuff, dark gray in lower part, light gray in upper part; 25 percent crystals, plagioclase, sanidine, and quartz in approximate proportions 14:3:4; 2.7 percent biotite, sparse hornblende and opaque minerals; 1.6 percent rock fragments; cliff forming; 22 to 24 m.y. old based on K-Ar dating (Gilbert and others, 1968). Crops out only in north-central part of quadrangle. See Speed and Cogbill (1979) and Stewart (1979) for further descriptions

Tt_2b ASH-FLOW TUFF--Moderately crystal poor; crystals of sanidine, plagioclase(?), and biotite recognized with hand lens. Correlation with units in quadrangles to east is uncertain. Crops out only in north-central part of quadrangle

Tt_1 ASH-FLOW TUFF--Densely welded, crystal poor, some flattened pumice fragments. Similar to unit Tt_1 mapped in Basalt, Miller Mountain, and Columbus quadrangles to east. Includes some poorly welded tuffs

Op PALMETTO FORMATION--Chert and argillite

SYMBOLS

Contact--Dashed where approximately located

Fault--Dashed where inferred or approximately located; queried where uncertain; dotted where concealed

Strike and dip of stratified rock

CORRELATION OF MAP UNITS

Qa, Qt, Qls	QUATERNARY
Unconformity	
Tb, Tbc	TERTIARY
Unconformity	
Tlt	
Unconformity	
Ttjs	
Unconformity	
Tabx, Ta	
Tha	
Unconformity	
Tt5, Tt5b, Tt5a	
Unconformity	
Tc, Tt3, Tt3b	
Unconformity	
Tt2d	
Tt2b	
Unconformity (?)	
Tt1	
Unconformity	
Op	ORDOVICIAN

REFERENCES

Crowder, D. F., Robinson, P. T., and Harris, D. L., 1972, Geologic map of the Benton quadrangle, Mono County, California, and Esmeralda and Mineral Counties, Nevada: U.S. Geological Survey Geologic Quadrangle 1013, scale 1:62,500.

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Speed, R. C., and Cogbill, A. H., 1979, Cenozoic volcanism of the Candelaria region, Nevada: Geological Society of America Bulletin, pt. 2, v. 90, p. 456-493.

Stewart, J. H., 1979, Geologic map of the Miller Mountain and Columbus quadrangles, Mineral and Esmeralda Counties, Nevada: U.S. Geological Survey Open-File Report 79-1145.

GEOLOGY MAP OF THE JACKS SPRING QUADRANGLE, MINERAL COUNTY, NEVADA

by

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1981

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