

(200)
T67c
no. 366

PLEASE REPLACE IN POCKET
IN BACK OF BOUND VOLUME

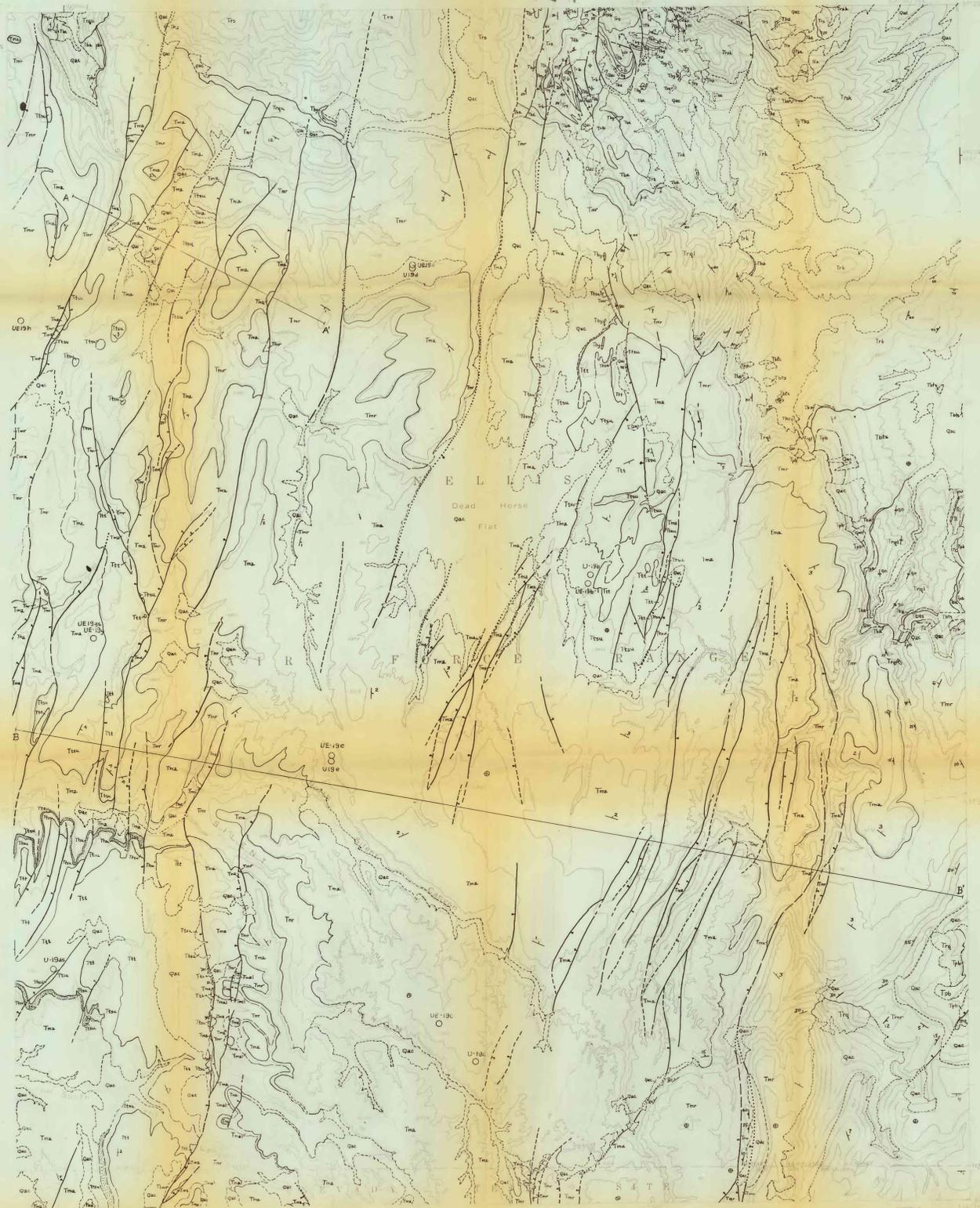
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U. S. ATOMIC ENERGY COMMISSION

TEI-866
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DEPARTMENT OF INTERIOR
UNITED STATES GEOLOGICAL SURVEY

DESCRIPTION OF MAP UNITS

- Qac ALLUVIUM, COLLUVIUM, AND TALUS (0-100+ ft.)—surficial deposits composed entirely of locally derived material.
- Tby BASALT OF BASALT RIDGE (0-10 ft.)—discontinuous dikes of scoriaceous alkalic basalt
- Tst THERISTY CANYON TUFF: densely welded maroon, brown, and gray devitrified and glassy rhyolitic ash-flow tuff; sparse to common phenocrysts of sodium-rich sanidine, and sparse to rare quartz, sodic plagioclase, clinopyroxene, fayalite, and amphibole. As mapped includes 1.5 ft. of pumice-rich ash-fall tuff at base.
- Tsu SPEARHEAD MEMBER, UPPER PART (5-100 ft.)—compound cooling unit of densely to partially welded maroon, gray, and brown devitrified and glassy conchoiditic to trachytic sodic-rhyolitic ash-flow tuff; phenocrysts as in Trail Ridge Member; basal pumice-rich ash-fall tuff shown by stipple pattern where thick enough to map separately. As mapped includes 0.20 ft. of glassy bedded tuff at base and may also locally include thin ash-flow tuffs of the lower ash-flow sheet of the member. Tuff contains common to abundant phenocrysts of sanidine, quartz, and plagioclase, common to sparse biotite, clinopyroxene, and hornblende, and accessory opaque iron oxides, sphene, zircon, and apatite.
- Tta AMMONIA TANKS MEMBER: Main part (0-300 ft.)—compound cooling unit of ash-flow tuff consisting of partially to densely welded gray and buff glassy and devitrified quartz latitic tuff, which overlies partially to densely welded gray devitrified and glassy rhyolitic and quartz latitic tuff, which in turn overlies a thin basal zone of partially to densely welded pink, gray, and black glassy rhyolitic tuff. As mapped includes 0.70 ft. of glassy bedded tuff at base and may also locally include thin ash-flow tuffs of the lower ash-flow sheet of the member. Tuff contains common to abundant phenocrysts of sanidine, quartz, and plagioclase, common to sparse biotite, clinopyroxene, and hornblende, and accessory opaque iron oxides, sphene, zircon, and apatite.
- TtaL Lower part (0-40 ft.)—densely to partially welded local simple cooling unit of dark-gray, buff, and pink glassy and devitrified quartz latitic ash-flow tuff; phenocrysts as in quartz-latitic part of main part of member.
- Ttr RAINIER MESA MEMBER (0-1,400 ft.)—compound cooling unit of ash-flow tuff consisting of a thin zone of poorly welded brown or pink glassy tuff, which overlies densely to partially welded gray, reddish-gray, maroon, and black devitrified and glassy rhyolitic and quartz-latitic tuff, which in turn overlies 5-100 ft. of nonwelded to densely welded pink, gray, and black glassy rhyolitic tuff; phenocrysts as in Ammonia Tanks Member except that sanidine and sphene are less abundant.
- Ttp PAINTBRUSH TUFF: REBERD TUFF (0-200 ft.)—thin, to thick-bedded pale gray and brown, to part reworked, pumice-rich ash-fall tuff; sparse to abundant crystals of quartz, feldspar, and biotite.
- Ttpw STOCKADE WASH(?) MEMBER (0-25 ft.)—simple cooling unit of partially welded glassy rhyolitic ash-flow tuff; gray to gray-brown where glassy; pale grayish-yellow where zeolitic; sparse phenocrysts of quartz, sanidine, sodic plagioclase, and biotite.
- TtI OLIVINE LATITE OF SOUTH KANICH VALLEY (0-80 ft.)—fine-grained dark-gray to black phenocryst-poor olivine latite lava.
- TtC TUFFACEOUS CONGLOMERATE (0-100 ft.)—very thick-bedded yellowish- to pinkish-gray zeolitic conglomerate and breccia containing common to abundant subangular to rounded lapilli to boulder-sized fragments of dark silicic lava and pumice in a tuffaceous sandstone matrix.
- Trs RHVOLITE OF SAUER MESA: UNDIFFERENTIATED LAVAS (0-1,000+ ft.)—numerous flows and dikes of gray, red, and brown mainly devitrified flow-laminated and massive conchoiditic and trachytic sodic-rhyolite lavas; sparse to abundant phenocrysts of sodium-rich sanidine and sparse to rare clinopyroxene and fayalite. As mapped locally includes thin lenses of ash-fall tuff.
- Trsk PHENOCRYST-FREE LAVAS AT KAW STATION (0-1,000 ft.)—bluish-gray and brown devitrified flow-laminated aphyric conchoiditic lavas. As mapped locally includes 0-150 ft. of genetically related densely to partially welded devitrified to glassy aphyric ash-fall tuff.
- Trb LAVAS AT BASKET VALLEY (0-100+ ft.)—red devitrified trachytic sodic rhyolite containing common phenocrysts of soda-rich sanidine and sparse clinopyroxene and fayalite. Beds are probably lavas but may be wholly or in part densely welded and subsequently fluidized ash-fall tuff.
- Ttb TUFF OF BASKET VALLEY (0-100+ ft.)—densely welded to nonwelded glassy and devitrified trachytic sodic rhyolitic ash-fall tuff; black, brown, reddish-brown, and green; possesses well-developed extrusive structure; contains common phenocrysts of soda-rich sanidine and sparse clinopyroxene and fayalite.
- Tbg GROUSE CANYON TUFF: GROUSE CANYON MEMBER (0-70 ft.)—compound cooling unit of densely welded conchoiditic ash-flow tuff; devitrified except for thin vitrophyre locally present at base; green, grayish-buff, and red; prominently developed compaction and flow foliation and flow lineation present in most outcrops; lenticular gas cavities containing super-phase crystals of quartz, sanidine, and sodic amphibole common in upper and middle parts of unit; lithophase locally present near base; rare to uncommon phenocrysts of sodium-rich sanidine and very rare to sparse quartz, clinopyroxene, and fayalite.
- Tbts TUB SPRING MEMBER (0-200 ft.)—compound cooling unit of densely welded to nonwelded buff to gray devitrified conchoiditic ash-flow tuff; common to abundant phenocrysts of sodium-rich sanidine, quartz, and sparse clinopyroxene and fayalite.
- Trq RHVOLITE OF QUARTZ DOME (0-1,000+ ft.)—thick flows and domical bodies of distinctive gray, typically devitrified, coarsely flow-layered conchoiditic lava; abundant phenocrysts of sodium-rich sanidine, quartz, and sparse clinopyroxene and fayalite.
- Trql LAVAS OLDER THAN THE TUB SPRING MEMBER (Tbts).
- Trk RHVOLITE OF KANICH VALLEY (0-500+ ft.)—devitrified and glassy well flow-laminated gray, red, green, and yellow conchoiditic lavas; sparse to common phenocrysts of sodium-rich sanidine, quartz, and rare clinopyroxene and fayalite; spherulitic devitrification and zeolitic alteration common.
- Tba ASH-FALL TUFF AND TUFFACEOUS SEDIMENTARY ROCKS (0-500+ ft.)—ash-fall and reworked tuff, and epiclastic volcanic sandstone, tuffaceous conglomerate, and breccia locally intertonguing with lavas and welded tuffs; rocks are buff, yellow, and reddish-colored and commonly zeolitized. Where too thin to map, such rocks are included with the overlying unit.



EXPLANATION

Qac Alluvium, colluvium, and talus

UNCONFORMITY

Tby Basalt of Basalt Ridge

UNCONFORMITY

Tst Trail Ridge Member

Tsu Spearhead Member, upper part
stipple shows ash-fall tuff

UNCONFORMITY

Tta Ammonia Tanks Member
TtaL, lower part

Ttr Rainier Mesa Member

UNCONFORMITY

Ttp Boulded tuff

TtI Olivine latite of south Kanich Valley

TtC Tuffaceous conglomerate

UNCONFORMITY

Trsk Stockade Wash(?) Member

UNCONFORMITY

Trs Rhvolute of Sauer Mesa and tuff of Basket Valley
Trs, undifferentiated lava
Trsk, phenocryst-free lava at Kaw Station
Ttb, tuff of Basket Valley
Ttr, lava at Basket Valley

Trb Rhvolute of Quartz Dome
Trb, lava younger than the Grouse Canyon Member (Tbg)
Trql, lava older than the Tub Spring Member (Tbts)

Trq Ash-fall tuff and tuffaceous sedimentary rocks intercalated with bracketed units

Tbg Grouse Canyon Member

Tbts Tub Spring Member

Trk Rhvolute of Kanich Valley

--- Contact
- - - - - Dashed where approximately located, short dashed where inferred or gradual

--- Fault
- - - - - Dashed where approximately located, short dashed where inferred, dotted where concealed. Bar and half on downthrown side

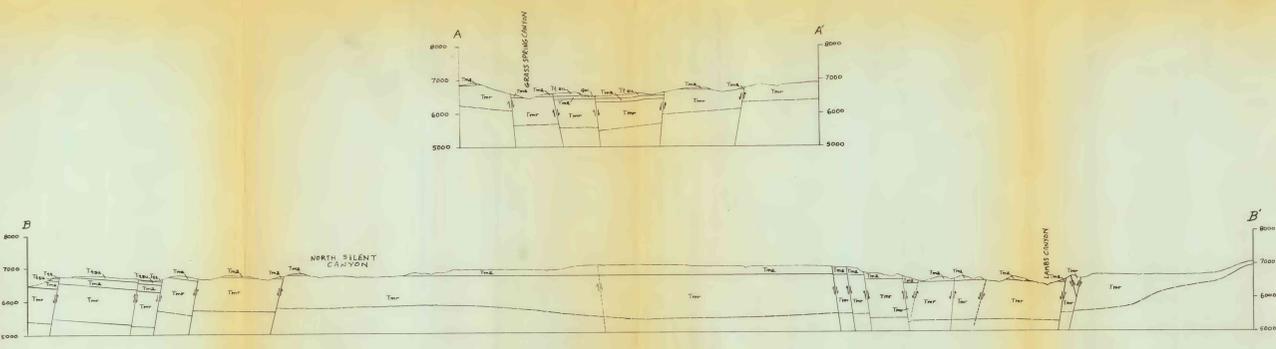
37° 90° 37°
Inclined Horizontal
Strike and dip of beds and of large-scale layering in welded tuffs

37° 90° 37°
Inclined Vertical Horizontal
Strike and dip of compaction foliation in welded tuff and of flow foliation in lava

U19b
O
Bore hole

Base map by U.S. Geological Survey, 1960
0,000 foot grid based on Nevada Coordinate System, central zone

Geology mapped in 1962-64



GEOLOGIC MAP OF THE DEAD HORSE FLAT QUADRANGLE, NYE COUNTY, NEVADA

By
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