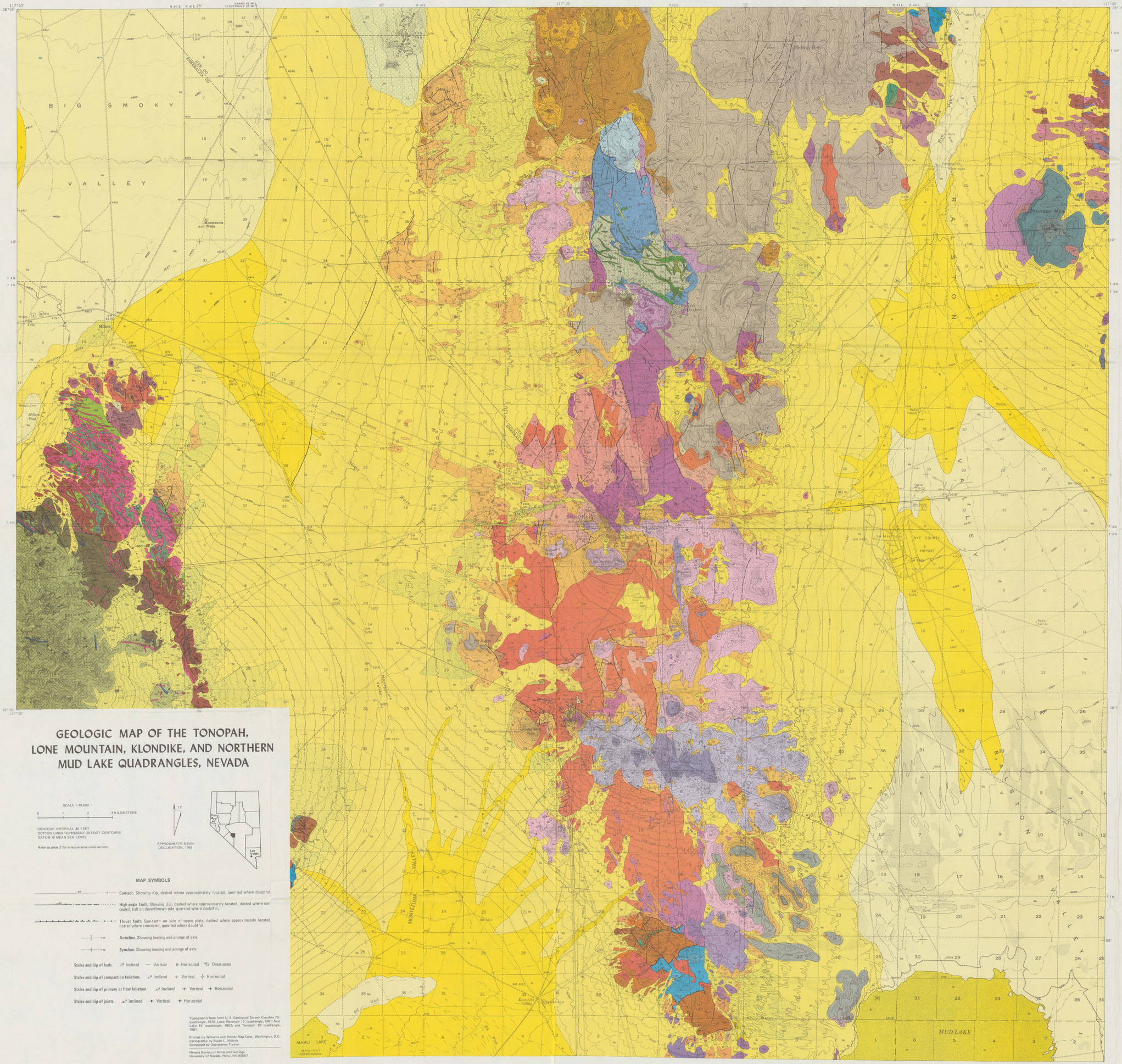


GEOLOGIC MAP OF THE TONOPAH, LONE MOUNTAIN, KLONDIKE, AND NORTHERN MUD LAKE QUADRANGLES, NEVADA

SCALE 1:48,000

0 1 2 3 KILOMETERS

CONTOUR INTERVAL 40 FEET
DOTTED LINES REPRESENT 20-FOOT CONTOURS
DATUM IS MEAN SEA LEVEL

Refer to plate 2 for interpretative cross sections

APPROXIMATE MEAN DECLINATION, 1961

MAP SYMBOLS

Contact. Showing dip, dashed where approximately located, querried where doubtful.

High-angle fault. Showing dip, dashed where approximately located, dotted where concealed, ball on downthrown side, querried where doubtful.

Thrust fault. Saw-teeth on side of upper plate, dashed where approximately located, dotted where concealed, querried where doubtful.

Anticline. Showing bearing and plunge of axis.

Syncline. Showing bearing and plunge of axis.

Strike and dip of beds. Inclined · Vertical · Horizontal · Overturned

Strike and dip of compaction foliation. Inclined · Vertical · Horizontal

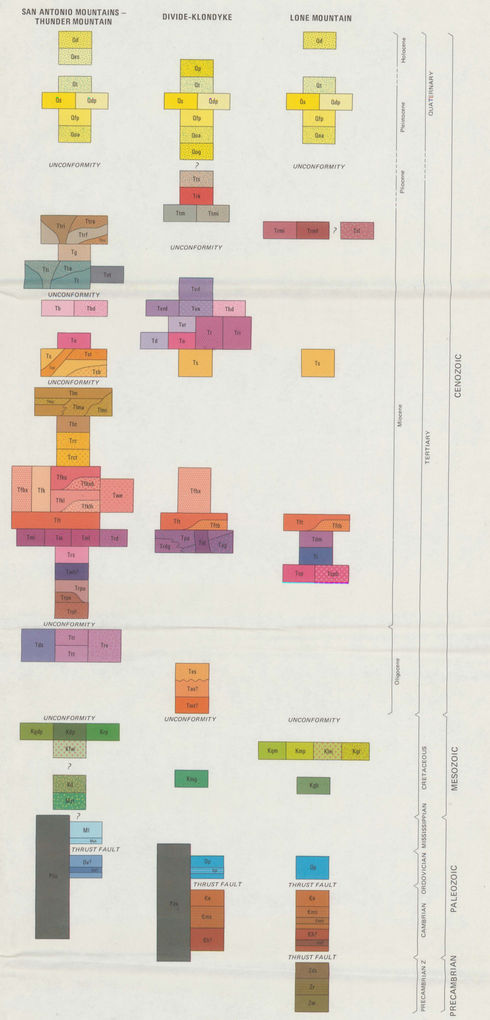
Strike and dip of primary or flow foliation. Inclined · Vertical · Horizontal

Strike and dip of joints. Inclined · Vertical · Horizontal

Topographic base from U. S. Geological Survey Klondike 7½' quadrangle, 1970; Lone Mountain 15' quadrangle, 1961; Mud Lake 15' quadrangle, 1952; and Tonopah 15' quadrangle, 1961.

Printed by Williams and Heintz Map Corp., Washington, D.C.
Cartography by Susan L. Nichols
Composed by Georgianna Trexler

Nevada Bureau of Mines and Geology
University of Nevada, Reno, NV 89557



MAP UNITS

- Qd — Mine dumps and tailings
- Qes — Dunes and eolian sand
- Qp — Playa deposits
- Qt — Talus
- Qa — Ephemeral stream deposits
- Qdp — Mixed dune-playa deposits
- Qfp — Fan and pediment deposits
- Qoa — Older alluvial deposits
- Qog — Old gravel deposits
- Tts — Travertine spring deposits
- Trk — Rhyolite of Klondyke
- Trl — Rhyolite, northeastern Lone Mountain

Rhyolite of Millers
- Tmi — intrusive rocks
- Tmif — flows

Trachyandesite of Mud Lake
- Tlm — flows
- Tlmi — intrusive rocks

Trachyandesite of Red Mountain
- Trri — intrusive rocks
- Trra — agglomerate
- Trrf — flows
- Trrs — tuffaceous sedimentary rocks
- Tg — Gravel

Trachyandesite of Thunder Mountain
- Tth — intrusive rocks
- Tta — agglomerate
- Tt — flows
- Ttd — Olivine trachyandesite intrusive

Volcanics of Donovan Peak
- Tvd — dacite
- Tvrd — rhyodacite to rhyolite intrusive rocks and flows
- Tva — agglomerate related to Tvrd
- Tvr — flow-banded rhyolite
- Td — Divide Andesite

Brougher Rhyolite
- Tb — flows
- Tbd — domes
- Tdo — Oddie Rhyolite
- Tr — Rhyolite domes and associated pyroclastic breccias
- Trf — Rhyolite dikes and intrusive breccias

Siebert Formation
- Tsh — trachyandesite intrusive rocks
- Tsr — trachyandesite flows
- Ts — volcaniclastic and tuffaceous sedimentary rocks
- Tsb — basal sedimentary breccia

Volcanics of Lime Mountain
- Tlmi — intrusive rocks
- Tlma — agglomerate
- Tlmv — tuffaceous sedimentary rocks
- Tlmf — flows
- Tlt — Heller Tuff

Rhyolite of the Cleft
- Trc — spherulitic rhyolite domes
- Trct — rhyolite tuff, air-fall and surge deposits near vents

Fraction Tuff – King Tonopah Member
- TRu — upper cooling unit
- TRub — local concentration of boulders at base of upper cooling unit
- TRl — lower cooling unit
- TRlb — local concentration of boulders at base of lower cooling unit
- TRk — undivided
- TRa — breccia unit

Fraction Tuff – Tonopah Summit Member
- TRt — ash-flow tuff
- TRtb — basal sedimentary breccia
- Twe — West End Rhyolite and Extension Breccia (cross sections only)

Mizpah Formation
- Tmi — intrusive rocks
- Tm — predominantly flows
- Tml — lahars
- Trid — Intrusive rhyodacite and dacite

Dacite, rhyodacite, pyroxene andesite and hornblende-biotite andesite of Northern Goldfield Hills
- Trid — intrusive rhyodacite
- Tpa — pyroxene andesite
- Tag — hornblende-biotite andesite
- Trdg — rhyodacite flows
- Tdn — Dacite, Millers area
- Tlp — Lamprophyre dikes; some small dikes not shown
- Trd — Silicic porphyry dikes and intrusive rocks
- Tpb — Silicic porphyry, intrusive breccia
- Trs — Rhyolite of Silver Ace
- Twb — Tuff of White Blotch Spring(?)

Tuffs of Rye Patch
- Trpu — upper ash-flow tuff
- Trps — tuffaceous sedimentary rocks
- Trpl — lower ash-flow tuff
- Tds — Dacite, Silver Ace area

Tonopah Formation
- Trv — rhyolite flows and domes
- Trt — ash-flow tuffs and sedimentary rocks
- Trv — Tuff of Ralston Valley
- Tes — Epiclastic sedimentary rocks
- Tas? — Tuffs of Antelope Springs(?)
- Tmn? — Monotony Tuff(?)
- Kgr — Microcline granite
- Klm — Lone Mountain pluton
- Kmp — Moly prospect granite, General Thomas Hills
- Kqm — Quartz monzodiorite
- Kgdo — Granodiorite porphyry
- Kdp — Diorite porphyry
- Krp — Rhyolite porphyry
- Kfm — Frazier's Well pluton
- Kmg — Muscovite granite of Klondyke
- Kgb — Gabbro
- Kd — Hornblende diorite
- Mzu — Welded tuff and minor sedimentary rocks

Limestone and shale near Rays
- Ml — limestone
- Mlsh — shale

Valmy(?) Formation
- Ov? — chert, argillite and minor greenstone
- Ovl? — limestone

Palmetto Formation
- Op — chert and argillite
- Opl — limestone
- Ce — Emigrant Formation

Mule Spring Limestone
- Cmu — limestone
- Cmsh — hornfels

Harkless(?) Formation
- €hr? — hornfels and dark quartzite
- €hr? — limestone
- Pzu — Paleozoic undivided (cross sections only)
- Zdo — Deep Spring Formation
- Zr — Reed Dolomite
- Zw — Wyman Formation

GEOLOGY BY H. F. BONHAM, JR., AND L. J. GARSIDE, 1968–76