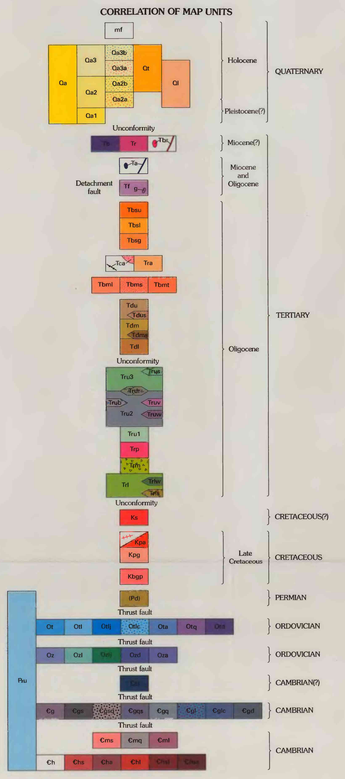
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

GEOLOGIC QUADRANGLE MAP
MANHATTAN QUADRANGLE, NEVADA
GQ-1775

Pamphlet accompanies map

CORRELATION OF MAP UNITS



LIST OF MAP UNITS

- mf — Manmade fill (modern)
- Qa — Alluvium, undivided (Holocene and Pleistocene?)
- Qa3 — Youngest alluvium, undivided (Holocene)
- Qa3b — Youngest alluvium (Holocene)
- Qa3a — Youngest alluvium (Holocene)
- Qa2 — Older alluvium, undivided (Holocene and Pleistocene?)
- Qa2b — Older alluvium (Holocene)
- Qa2a — Older alluvium (Holocene and Pleistocene?)
- Qa1 — Oldest alluvium (Pleistocene?)
- Qt — Talus (Holocene)
- Ql — Landslide (Holocene and Pleistocene?)
- Tf — Basalt (Miocene?)
- Tr — Rhyolite (Miocene?)
- Tbx, Tsx — Breccia dikes and sill (Miocene?)
- Tg–p — Andesite and latite dikes and plugs (Miocene and Oligocene)
- Tf — Dacite of Ferguson Hill (Miocene and Oligocene)
- Tf — Glass lenses scattered throughout Tf flow domes
- Tbsu — Tuff of The Bald Sister (upper Oligocene)
- Tbsu — Upper member
- Tbsl — Lower member
- Tbsg — Granite-boulder tuff
- Tca — Crone Gulch Andesite (upper Oligocene)
- Tra — Rhyolite and andesite plug (Oligocene)
- Tbml — Bald Mountain Formation (upper Oligocene)
- Tbms — Tuffaceous siltstone and sandstone lakebeds
- Tbmt — Sandstone
- Tdu — Ash tuff
- Tdun — Diamond King Hill Formation (upper Oligocene)
- Tdm — Upper member
- Tdms — Sandstone units
- Tdl — Middle member
- Tru — Sandstone units
- Tru3 — Lower member
- Tru3? — Round Rock Formation (upper Oligocene)
- Tru2 — Upper member
- Tru1 — Upper unit of upper member
- Trp — Eruptive megabreccia unit of Silver Creek
- Trm — Rhyolite megabreccia
- Trl — Middle unit of upper member
- Trl — Breccia
- Trv — Vitrophyre
- Tru — Welded tuff
- Tru1 — Lower unit of upper member
- Trp — Rhyolite plug and dikes
- Trm — Middle (megabreccia) member—Labels indicate clast: r, rhyolite; a, andesite; r/a, rhyolite predominant over andesite; a/r, andesite predominant over rhyolite
- Tr — Lower member
- Tru — Welded tuff
- Tru — Eruptive(?) megabreccia of Sloppy Gulch
- Ks — Syenite plug (Cretaceous?)
- Kpg — Granite of Pipe Spring (Late Cretaceous)
- Kpg — Aplite
- Kpg — Granite
- Kbgp — Granite of Shoshone Mountain (Late Cretaceous)
- Kbgp — Belmont pluton
- Psu — Porphyritic granite
- (Pd) — Paleozoic rocks, undivided
- Diablo Formation (Permian)
- Toquima Formation (Upper and Middle Ordovician)
- Ot — Toquima Formation, undivided
- Otl — Limestone
- Otlj — Jasperized limestone
- Otlc — Calc-silicate-mineralized limestone
- Ota — Argillite
- Otq — Quartzite
- Otrl — Dolostone
- Zanzibar Formation (Middle Ordovician)
- Oz — Zanzibar Formation, undivided
- Ozl — Limestone
- Ozlj — Jasperized limestone
- Ozld — Dolostone
- Oza — Argillite
- Siltite (Cambrian?)
- Gold Hill Formation (Lower Cambrian)
- Cg — Gold Hill Formation, undivided
- Cgs — Schist
- Cgsq — Interlayered schist and quartzite
- Cgpq — Interlayered quartzite and schist
- Cgq — Quartzite
- Cgl — Limestone
- Cglc — Calc-silicate-mineralized limestone
- Cgsl — Dolostone
- Mayflower Schist (Cambrian?)
- Cms — Schist
- Cmq — Quartzite
- Cml — Limestone
- Harkless Formation (Lower Cambrian)
- Ch — Harkless Formation, undivided
- Chs — Schist
- Cha — Siliceous argillite
- Chl — Limestone
- Chsl — Siltstone
- Chsc — Sandstone

MAP SYMBOLS

- Contact—Dashed where approximately located or uncertain. Arrow shows dip; cross indicates vertical dip
- Trace of layering within units—In cross sections, indicates diagrammatic form lines
- Normal fault—Dashed where uncertain; dotted where concealed. Ball and bar on downthrown side; opposed arrows show component of strike-slip movement. Arrow shows dip; cross indicates vertical dip
- Normal or reverse fault—Only in cross sections. Arrow shows direction of movement. T, movement toward reader; A, movement away from reader
- Thrust fault—Dashed where uncertain; dotted where concealed. Teeth on upper plate. Single barbed arrow shows dip; double-barbed arrow shows bearing and plunge of lineation
- Overturned thrust fault—Dotted where concealed. Teeth point down overturned thrust fault
- Detachment fault—Dotted where concealed. Teeth on upper plate. Single-barbed arrow shows dip; double-barbed arrow shows bearing and plunge of lineation
- Overturned syncline—Generalized trace of axial plane of Gold Hill syncline
- Strike and dip of layered rocks—Arrow shows bearing and plunge of lineation; decorated arrow shows plunge of minor fold axis
- Inclined—Attitude in Paleozoic strata inferred; structural complexity there prevents determination of original orientation of layers
- Inclined—Attitude in Paleozoic strata determined to be upright
- Inclined—Double arrow shows bearing of current lineation in volcanic-sedimentary strata
- Vertical—Arrows indicate horizontal lineations
- Overturned—Attitude in Paleozoic strata inferred; structural complexity there prevents determination of original orientation of layers
- Overturned—Attitude in Paleozoic strata determined to be overturned
- Horizontal—Arrow shows bearing of streaked-mineral lineation; arrow with cross shows bearing of kink-band lineation
- Lineation—Streaked-mineral
- Horizontal—Showing bearing
- Plunging—Showing bearing and plunge
- Minor fold axis
- Horizontal—Showing bearing
- Plunging—Showing bearing and plunge
- Plunging—Showing range in bearing and plunge
- Strike and dip of foliation—Schistosity in metasedimentary rocks; shear foliation in granite; compaction foliation in ash-flow tuff; flow layering in dacite flow dome and dike
- Inclined—Attitude inferred in Paleozoic metasedimentary rocks; structural complexity prevents determination of original orientation there. Arrow shows bearing and plunge of streaked-mineral lineation in metasedimentary rocks, stretched-pumice lineation in ash-flow tuff
- Inclined—Foliation parallel to bedding
- Vertical
- Overturned—Attitude inferred in Paleozoic metasedimentary rocks; structural complexity prevents determination of original orientation there
- Overturned—Foliation parallel to bedding
- Foliation in granite—In cross sections; density suggests intensity of foliation
- Vein or mineralized fault—Arrow shows dip; cross on vertical vein; qtz, quartz vein; f, fissure vein
- Aplite dike or sill—Arrow shows dip
- (Pd) — Large block in megabreccia—Colored as megabreccia; label in parentheses indicates specific map unit
- Outline of area of tourmaline occurrence
- Pit outline
- Rock sample locality—Sample collected for radiometric age determination. Letter identifies sample
- Fossil locality—Fossils identified by W.B.N. Berry and R.J. Ross, Jr. Number identifies sample
- Breccia

Geology mapped in July 1975, August 1976, June–August 1977, July–September 1978, and June 1979; assisted by E.E. Foord July–August 1978

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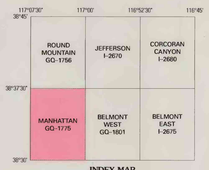
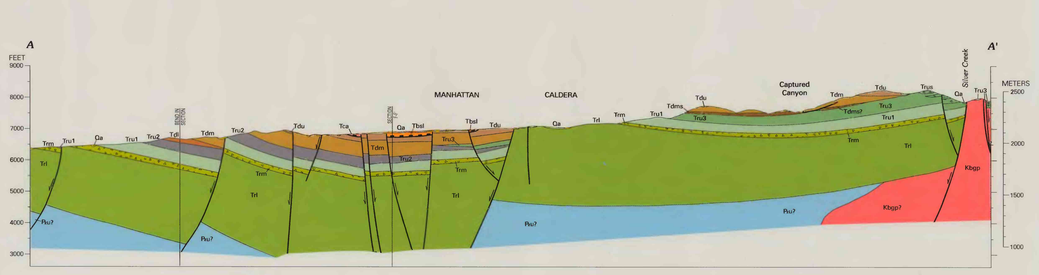
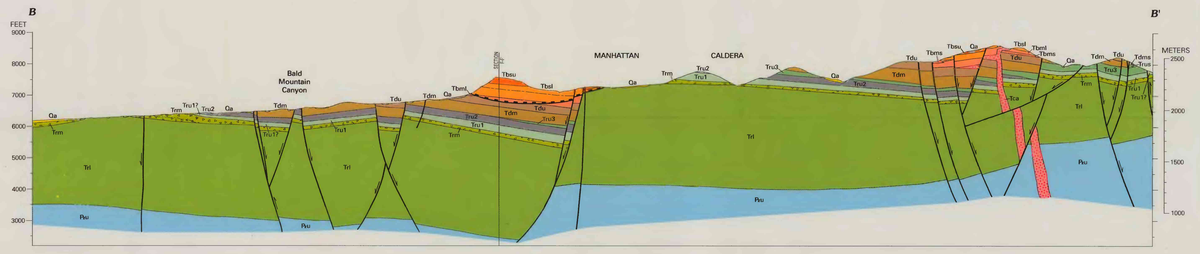
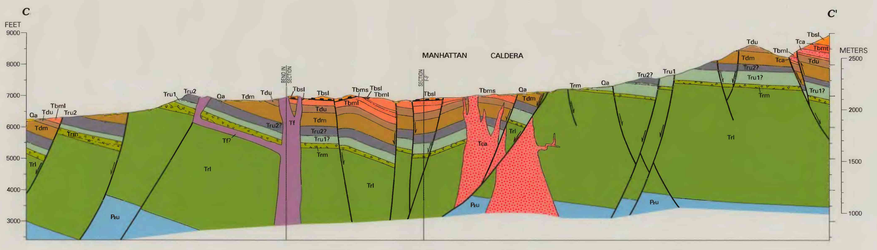
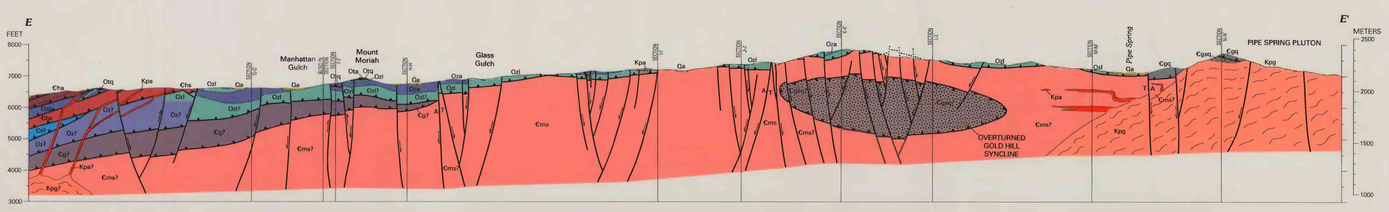


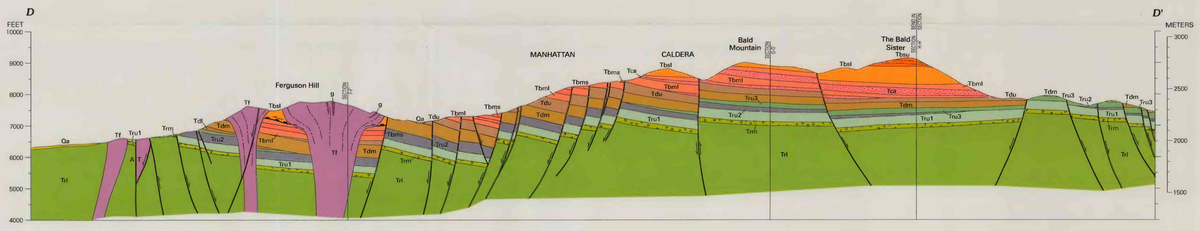
INDEX MAP

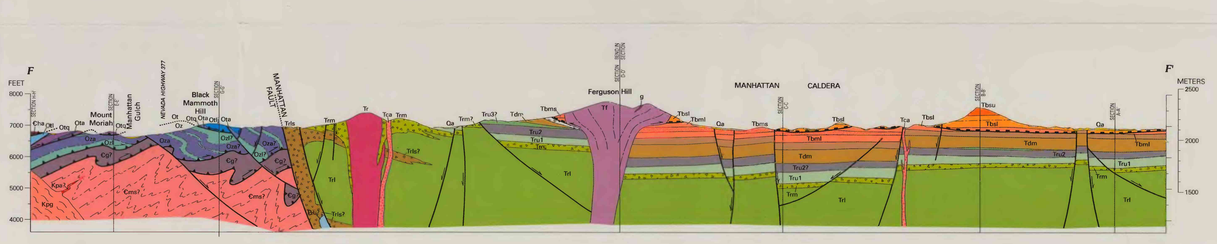


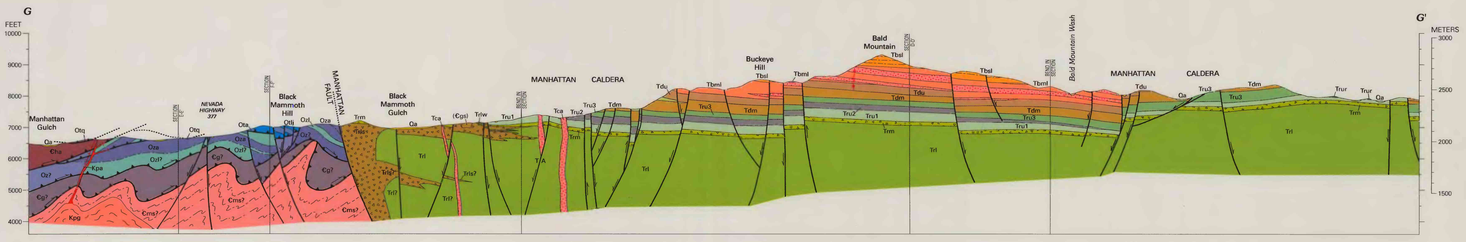


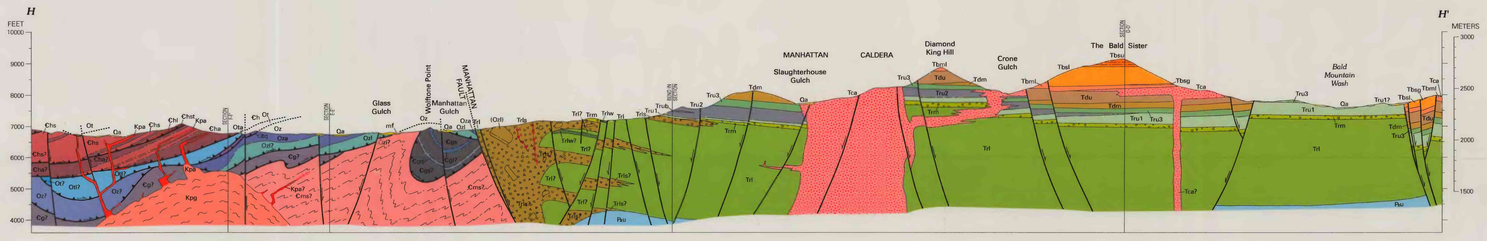


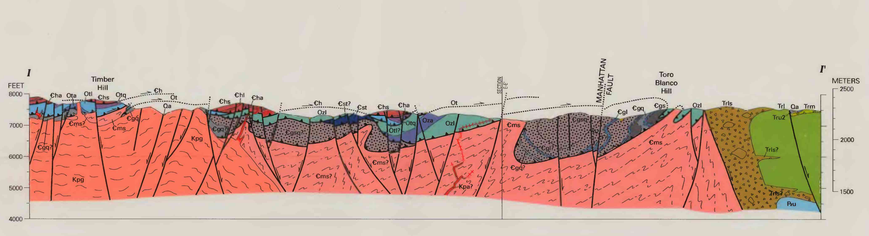


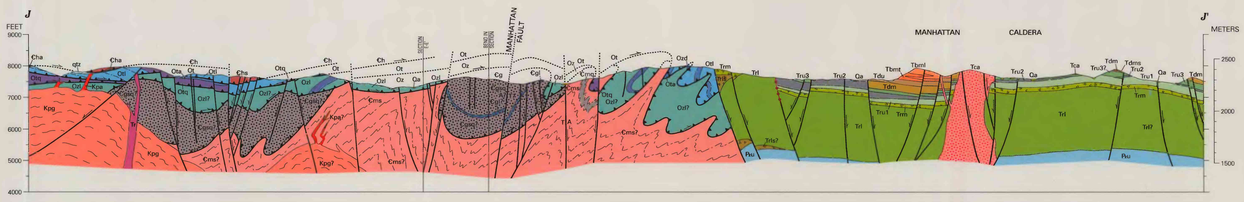


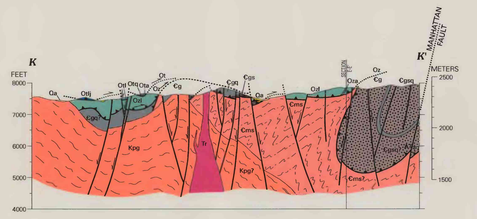


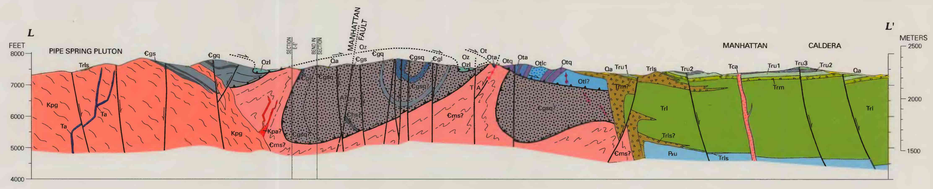


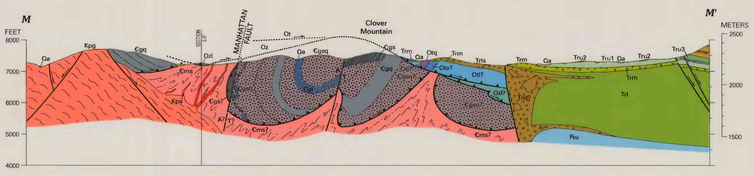


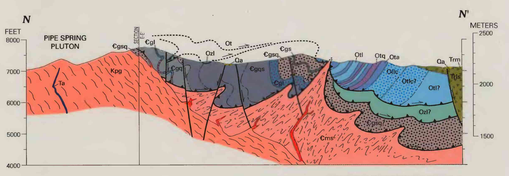












GEOLOGIC MAP OF THE MANHATTAN QUADRANGLE, NYE COUNTY, NEVADA

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Daniel R. Shawe
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