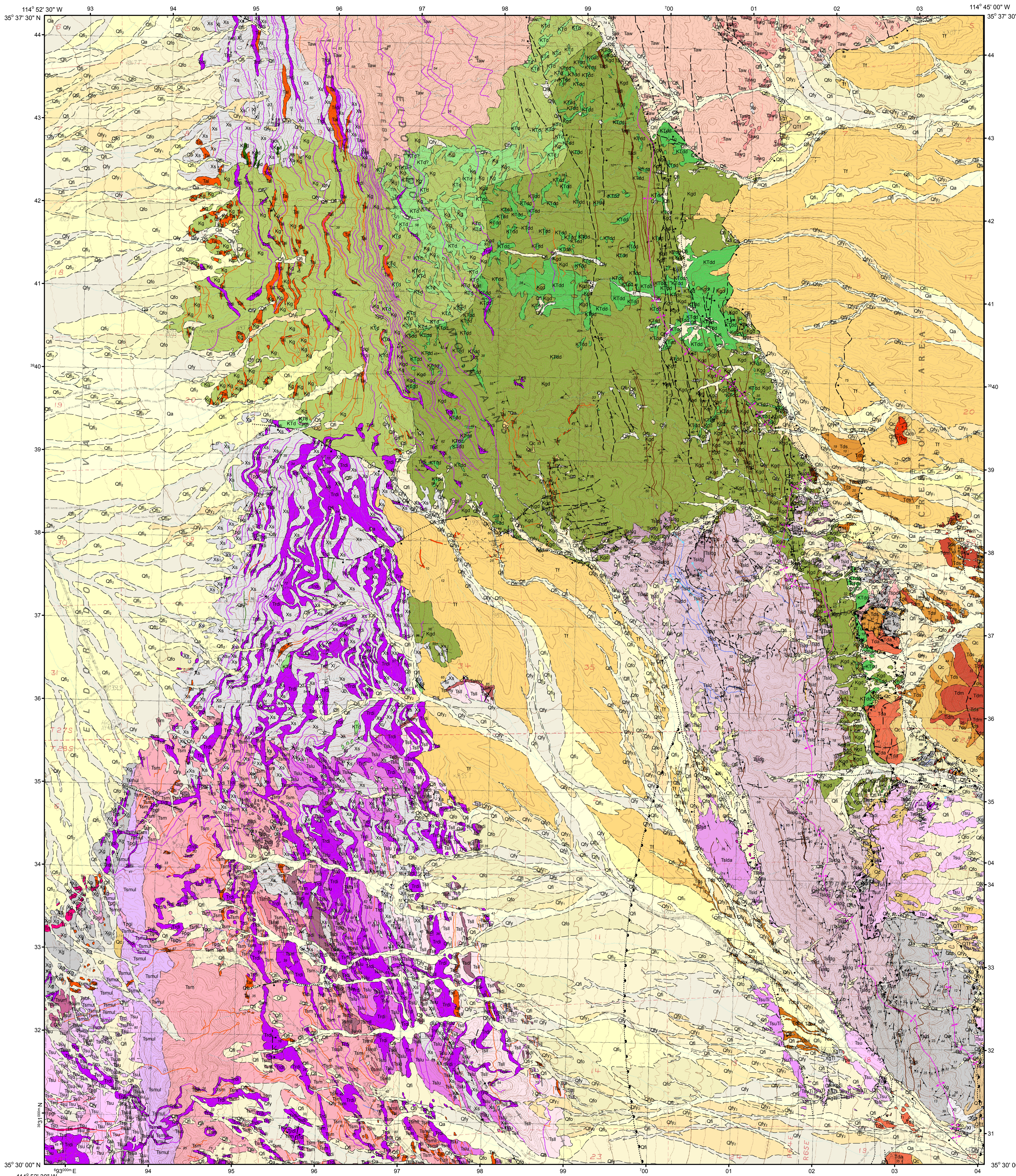
Prepared with support from the Bureau of Land Management through the Southern Nevada Public Land Management Act (SNPLMA)



PRELIMINARY GEOLOGIC MAP OF THE IRETEBA PEAKS QUADRANGLE, CLARK COUNTY, NEVADA

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2012

ANTHROPOGENIC DEPOSITS

- Qm — Mine waste

QUATERNARY DEPOSITS

- Qa — Alluvial deposits in recently active washes (modern to late Holocene)
- Qfy_1 — Young alluvial-fan deposits (late to middle Holocene)
- Qfy_2 — Young alluvial-fan deposits (early Holocene to late Pleistocene)
- Qfy — Young alluvial-fan deposits, undivided
- Qfi_1 — Intermediate alluvial-fan deposits (late Pleistocene)
- Qfi_2 — Intermediate alluvial-fan deposits (late to middle Pleistocene)
- Qfi — Intermediate alluvial-fan deposits, undivided
- Qfo — Older alluvial-fan deposits (middle to early Pleistocene)
- QTf — Old alluvial-fan deposits (early Pleistocene to Pliocene)
- Qc — Colluvial deposits (Holocene to Pleistocene)
- Qcb — Colluvial deposits consisting of clasts of Tby

LATE TERTIARY DEPOSITS (late Miocene to Pliocene)

- Tby — Young basalt - 11.3 Ma basalt flows and possible intrusions
- Tf — Gravels (Pliocene to late Miocene)

MOUNT DAVIS VOLCANICS (middle Miocene)

- Tdm — Mafic lavas - basalt and basaltic andesite lavas and flow breccias
- Tds — Sedimentary rocks - matrix-supported conglomerate and coarse-grained sandstone
- Tdbx — Crystalline breccias composed primarily of plutonic and metamorphic rock, probable rock-avalanche origin
- Tdbv — Volcanic breccias
- Tda — Andesite-dacite - massive generally finely porphyritic andesite and dacite domes and lavas

VEINS (middle Miocene)

- Tqv — Quartz veins

EASTERN IRETEBA PEAKS-COPPER MOUNTAIN DIKE SWARM (middle Miocene)

- Tadi — Andesite-diorite dikes

OTHER INTRUSIONS (middle Miocene)

- Trqi — Quartz-bearing rhyolite dikes
- Tgdi — Porphyritic granodiorite dikes
- Ti — Miocene dikes and intrusions undivided
- Tspdi — Porphyritic trachydacite dikes and intrusions probably related to Searchlight pluton
- Tpai — Andesite porphyry
- Tpgi — Porphyritic granite dikes
- Tri — Sparsely porphyritic rhyolite dikes

ELDORADO DIKE SWARM (middle Miocene)

- Trdi — Intermediate to felsic dikes
- Taiq — Quartz-bearing andesite dikes
- Tai — Andesite and diorite dikes

AZTEC WASH PLUTON (middle Miocene)

- Tawg — Granitc pods in the Aztec Wash pluton
- Taw — Aztec Wash pluton, undivided granite, diorite, gabbro, and numerous lithic blocks of country rock

SEARCHLIGHT PLUTON (early to middle Miocene)

- Tsai — Aplite dikes undistinguished, middle and lower Searchlight pluton
- Tsua — Upper Searchlight pluton, aplite dikes and sills
- TsuTi — Upper Searchlight pluton, quartz monzonite, plus numerous undivided Miocene dikes
- Tsud — Upper Searchlight pluton, diorite intrusions
- Tsu — Upper Searchlight pluton, quartz monzonite
- Tsuf — Upper Searchlight pluton, porphyritic phase
- Tsum — Upper Searchlight pluton, mafic margin
- Tsmul — Middle Searchlight pluton, leucogranite in uppermost middle Searchlight pluton
- Tsmll — Middle Searchlight pluton, leucogranite in lower part of middle searchlight pluton
- Tsdi — Diorite dikes and sills in middle and lower Searchlight pluton
- Tsm — Middle Searchlight pluton, granite
- Tslda — Lower Searchlight pluton, hydrothermally altered
- Tslsd — Lower Searchlight pluton, hydrothermally altered and partly silicified
- Tslu — Lower Searchlight pluton, upper quartz monzonite
- Tsll — Lower Searchlight pluton, lower quartz monzonite
- Tslmy — Lower Searchlight pluton margin, mylonite
- Tsl — Lower Searchlight pluton
- Tsld — Lower Searchlight pluton, ductilely deformed quartz monzodiorite
- Tsldd — Lower Searchlight pluton, ductilely deformed diorite pod
- Tsldg — Lower Searchlight pluton, ductilely deformed gabbro

VOLCANIC AND SEDIMENTARY ROCKS (early Miocene)

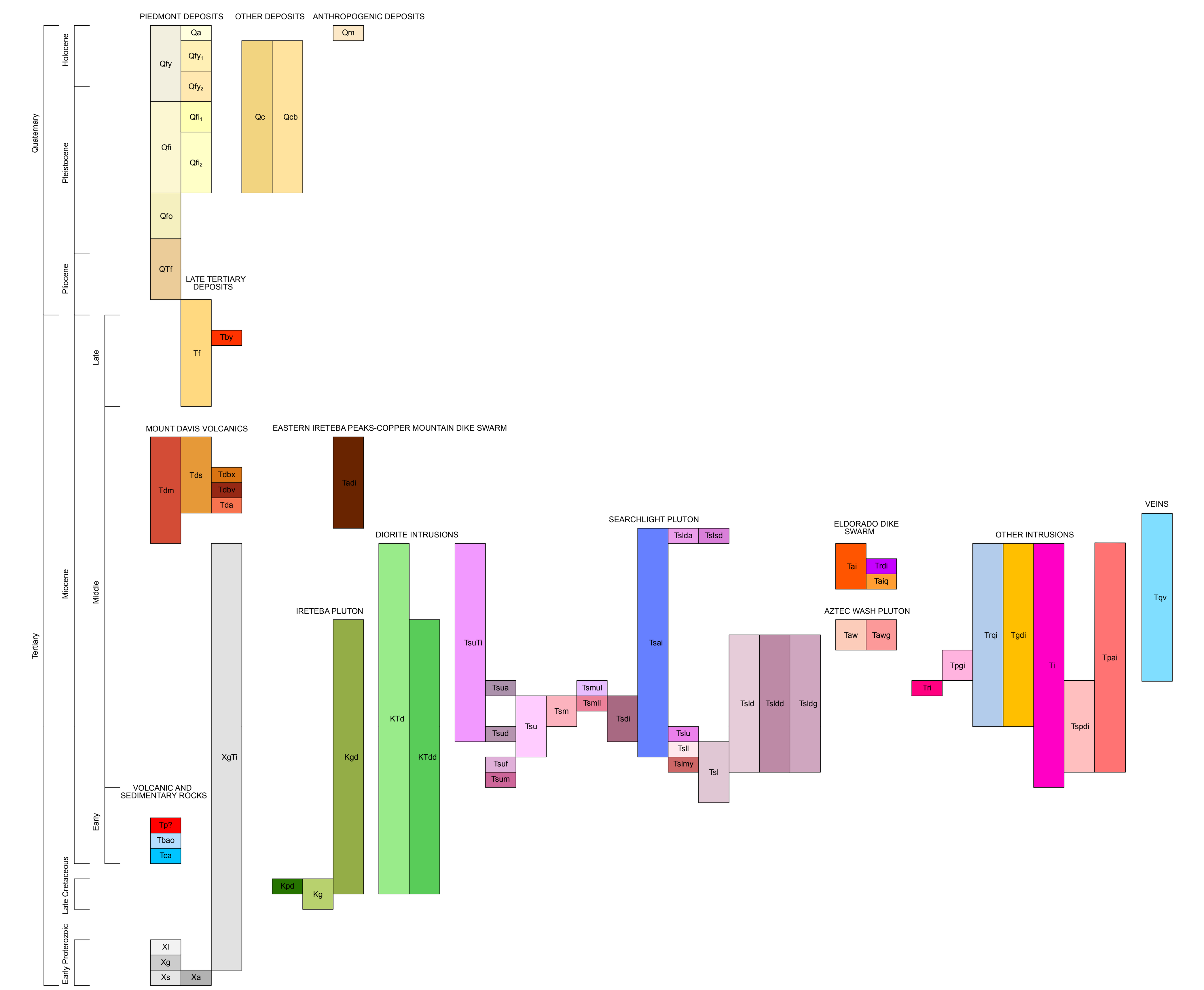
- Tp? — Peach Springs Tuff - altered rhyoitic tuff at or near base of Miocene section probably correlative with 18.5 Ma Peach Springs Tuff
- Tbao — Older basaltic andesite and basalt flows
- Tca — Basal arkosic conglomerate and sandstone

CRETACEOUS GRANITE, MAFIC INTRUSIONS, AND PEGMATITE DIKES (late Cretaceous)

- KTd — Diorite and andesite in the Ireteba pluton and Proterozoic gneiss
- KTdd — Diorite and andesite in the Ireteba pluton, ductily deformed
- Kpd — Pegmatite dikes
- Kg — Ireteba pluton, granite
- Kgd — Ireteba pluton, granite, ductily deformed

EARLY PROTEROZOIC BASEMENT

- Xl — Leucogranite
- XgTi — Orthogneiss with lesser mica schist, with numerous undivided Miocene dikes
- Xg — Orthogneiss with lesser mica schist
- Xs — Paragneiss with lesser orthogneiss
- Xa — Amphibolite gneiss



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Symbology (per FGDC-STD-013-2006)

Contact Long-dashed where approximate; queried if identity or existance uncertain. Locally showing dip.

Normal fault Long-dashed where approximate, dotted where concealed; queried if identity or existence uncertain. Ball on downthrown side, locally showing dip and bearing of striae.

Oblique-slip left-lateral fault Long-dashed where approximate. Arrows show relative motion.

Oblique-slip right-lateral fault Long-dashed where approximate, dotted where concealed. Arrows show relative motion.

Strike-slip left-lateral fault Long-dashed where approximate. Arrows show relative motion.

Strike-slip right-lateral fault Long-dashed where approximate. Arrows show relative motion.

Low-angle normal fault Long dashed where approximately located, dotted where concealed; queried if identity or existance uncertain. Half-circles on downthrown block.

Anticline Solid where certain, dotted where concealed.

Syncline Solid where certain, dotted where concealed.

Small, minor fault Showing strike, dip and lineation bearing.
Inclined

Strike and dip of bedding
Inclined; Horizontal

Strike and dip of foliation in igneous rock
Inclined

Strike and dip of foliation in metamorphic rock
Inclined; Vertical; Inclined with lineation

Strike and dip of cumulate foliation
Inclined; Vertical

Minor inclined joint
Inclined

Bearing of stretching lineation in metamorphic rock
Inclined; Horizontal

Dike Approximately located. Locally showing dip.
Tadi, Tai, Taiq, Tawg, Tgdi, Tpgi, Tri, Trdi, Trqi, Tsai, Tsmll, Tsua, Kpd, KTd, KTdd

Vein Approximately located. Locally showing dip
Tqv

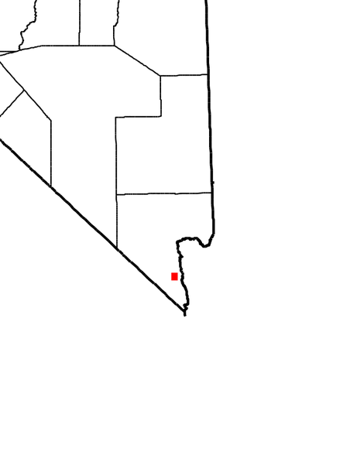
Tephra bed

Stratigraphic horizon associated with tephra

UTM GRID AND 1980 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

Adjoining 7.5' quadrangle names

1 Keyhole Canyon
2 Nelson
3 Fire Mountain
4 Nelson SW
5 Ireteba Peaks
6 Mount Davis
7 Searchlight
8 Fourth of July Mountain
9 Spirit Mtn. NW



Scale 1:24,000

0 0.5 1 kilometer

0 0.5 1 mile

0 1000 2000 3000 4000 5000 feet

CONTOUR INTERVAL 10 METERS

Projection: Universal Transverse Mercator, Zone 11, North American Datum 1927 (m)

Base map: U.S. Geological Survey Ireteba Peaks 7.5' quadrangle (Provisional Edition 1984)

Nevada Bureau of Mines and Geology
Mackay School of Earth Sciences and Engineering
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DRAFT
Preliminary geologic map
Has not undergone office or field review
Will be revised before publication

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