

U. S. Geological Survey
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60-95

EXPLANATION

Pleistocene Recent
 Pliocene (?)
 Upper Miocene
 (?)
 Middle Miocene (?)
 Miocene (?)
 Early Tertiary (?)

QUATERNARY
 TERTIARY
 (?)
 MESOZOIC
 PALEOZOIC (?)
 CARBONIFEROUS
 PALEOZOIC

PALEOZOIC (continued)

Qal Qp
 Alluvium and playa sediments
Qdal
 Dissected alluvium

Tlmr Tlmd Tlml Tlma
 Lane Mountain volcanics
 Tlmr, rhyolite flows; Tlmd, dacite flows; Tlml, latite flows; Tlma, andesite flows; Tlmt, silicic tuff, tuff breccia and tuffaceous sandstone.

Tid Til Tia
 Intrusive volcanic rocks
 Tid, dacite; Til, latite; Tia, andesite; Tiv, unidentified silicic volcanic rock.

Tmbss Tmbl Tmbc
 Barstow formation
 Tmbss, predominantly fluvial conglomeratic sandstone; Tmbl, lacustrine sandstone, mudstone, siltstone, limestone, and tuff; Tmbc, granitic conglomerate member.

Unconformity
 Local conformity

TPa Tpd Tpcu Tpbr Tpm
 Pickhandle formation
 Tp, undifferentiated tuff, tuff breccia, agglomerate, and tuffaceous sandstone; Tpa, hornblende andesite flow; Tpd, biotite dacite flow; Tpcu, calcic andesite flow; Tpbr, granitic breccia; Tpm, biotite dacite mudflow breccia.

Local unconformity
Tjt Tjbr Tjba Tjc
 Jackhammer formation
 Tjt, biotite dacite tuff, welded tuff, and tuff breccia; Tjbr, landslide breccia; Tjba, olivine basalt flows; Tjc, arkosic conglomerate grading to conglomeratic arkose containing local freshwater limestone.

Qal
 Quartz latite porphyry dikes

MZf
 Silicic felsite dikes

MZgp MZgl
 Granite
 MZgp, pink biotite granite; MZgl, leucocratic biotite granite.

MZjm *shown as MZpm on map*
 Jack spring quartz monzonite

MZdg *shown as MZag on map*
 Daisy granodiorite

MZlc
 Larrea complex
 Diorite-gabbro

MZad
 Ausland quartz diorite

MZd
 Hornfelsed diorite porphyry

MZnw MZnm MZnc *shown as MZlw on map shown as MZlm on map shown as MZlc on map*
 Noble Well formation
 MZnw, undifferentiated hornfels, feldspathic quartzite, pebble conglomerate, and marble; MZnm, marble (locally tactite); MZnc, meta-conglomerate and meta-arkose.

Prh Prm *mudstone, shale, etc. marl*
 Rustic formation
 Prh, predominantly hornfels (derived from mudstone and shale) containing interbeds of crystalline limestone; Prm, predominantly impure thin-bedded marble interbedded with hornfels derived from marl.

Pcq3 Pch4 *qtz siliceous dolo*
Pcs3 Pch3 *dolo or marl*
Pcmb Pcu2 *basalt siliceous dolo*
Pcs2 Pcu1 *qtz*
Pcq2 Pcmo *qtz, arkose andesite*
Pcs1 Pcm *felsite middle-late*
Pch1 Pcmc Pcmcg *sandy dolo bedded chert chert pebble cgl quartzite*
Pca *arkosite tuff*
 Carbide formation
 Pcq3, quartzite and schist; Pch4, wollastonite-diopside hornfels derived from siliceous dolomite; Pcs3, biotite-muscovite-quartz-schist; Pch3, hornfels derived from impure dolomite or marl; Pcmb, meta-basalt; Pcu2 horn-

fels derived from siliceous dolomite; Pcs2, biotite-muscovite-quartz schist; Pcu2, undifferentiated quartzite, marble, and hornfels of the Paradise Range; Pcu1, undifferentiated quartzite, schist, and rare marble; Pca, feldspathic quartzite, meta-arkose, biotite-muscovite-quartz schist, and vitreous quartzite; Pcmo, hornfels derived from andesite flows; Pcs1, slightly schistose siltstone and shale; Pcm, lenses and beds of siliceous marble; Pch1, hornfels derived from sandy dolomite; Pcmc, recrystallized bedded chert; Pcmcg, metamorphosed chert conglomerate; Pca1, feldspathic quartzite and schist with minor interbedded marble and hornfels; Pca, amphibolite and biotite amphibolite derived from andesitic tuff.

Pwu Pwm Pwc

Williams Well formation
 Pwu, unidentified conglomerate, marble and schist; Pwm, marble; Pwc, pebble conglomerate associated with micaceous and feldspathic quartzite and Ca-Mg silicate hornfels.

Metamorphic Rocks of Uncertain Relative Age

Usm

Starbright formation
 Marble and dolomitic marble

Uq

Feldspathic and micaceous quartzite

Uh

Hornfels derived from marl, impure dolomite and siliceous limestone

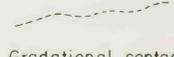
Um

Marble



Contact

(Dashed where approximately located and dotted where concealed.)

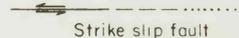


Gradational contact



Dip slip fault

(Showing dip and relative movement. Dashed where approximately located and dotted where concealed.)



Strike slip fault

(Showing relative movement. Dashed where approximately located and dotted where concealed.)



Anticline

(Showing trace of axial plane and bearing and plunge of axis.)



Syncline

(Showing trace of axial plane and bearing and plunge of axis.)



Bearing and plunge of minor folds.



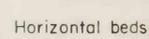
Strike and dip of beds



Strike and dip of overturned beds



Strike of vertical beds



Horizontal beds



Strike and dip of planar structure

(Foliation of metamorphic rocks and flow structure of igneous rocks.)



Strike and dip of vertical planar structure



Bearing and plunge of lineation



Strike and dip of foliation and bearing and plunge of lineation.



Strike and dip of beds and bearing and plunge of lineation.



Fissure emitting thermal water.

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