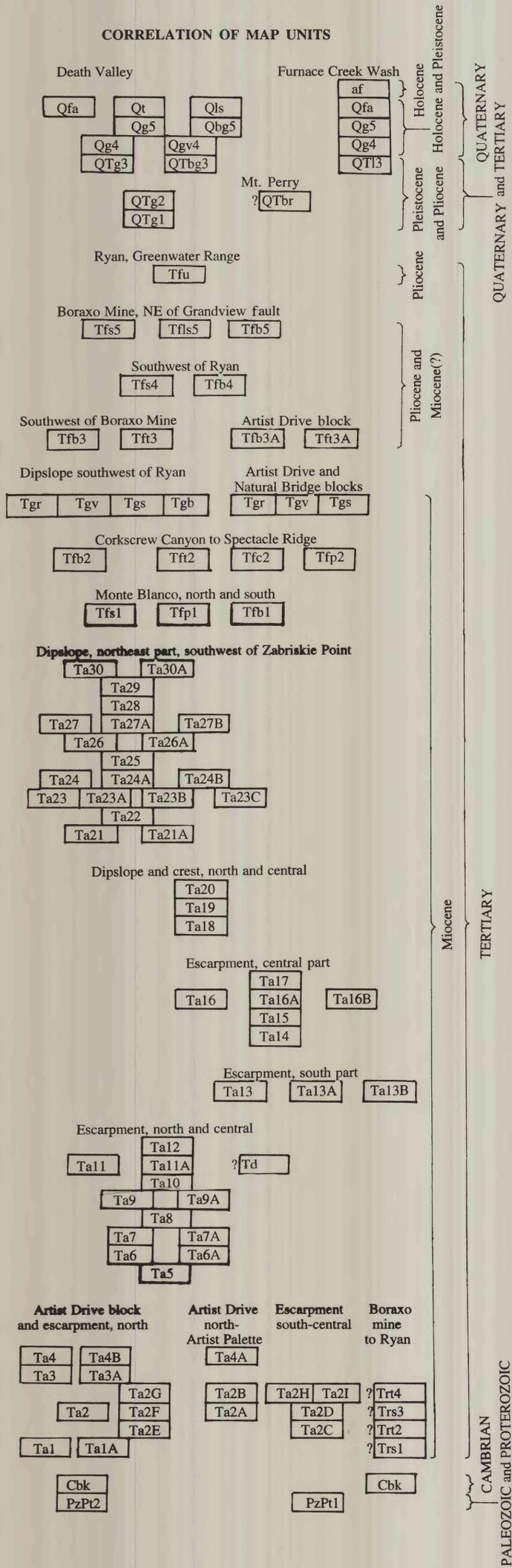


CORRELATION OF MAP UNITS



DESCRIPTION OF MAP UNITS

SURFICIAL DEPOSITS and VOLCANIC ROCKS (HOLOCENE, PLEISTOCENE, and PLOICENE)

- af Artificial fill
- Qfa Silt, sand and gravel
- Qt Talus
- Qls Landslide deposits
- Qg5 Silt, sand, and gravel
- Qbg5 Gravel
- Qg4 Silt, sand, and gravel
- Qgv4 Sand, gravel, basalt, rhyolitic tuff
- QTg3 Cobble and boulder gravel
- QTI3 Sandy silt and clay
- QTbg3 Cobble and boulder gravel of basalt fragments
- QTbr Rhyolite breccia
- QTg2 Silt, sand, and gravel
- QTg1 Silt, sand, and gravel

FUNERAL FORMATION (PLIOCENE)

- Tfu Basalt

FURNACE CREEK FORMATION, Upper Units (PLIOCENE and MIOCENE?)

- Tfs5 Siltstone, sandstone, shale: tan, well-bedded
- Tfs5 Limestone, nodular
- Tfb5 Basalt: flows, cinder, agglomerate
- Tfs4 Siltstone, sandstone, shale: tan, well-bedded
- Tfb4 Basalt: flows, cinder, agglomerate
- Tfb3 Basalt: stacks of flows 5-10 ft thick each, mostly vesicular, brecciated
- Tft3 Sandstone and gritstone: tan to light gray, tuffaceous and epiclastic
- Tfb3A Basalt: amygdaloidal flows, agglomerate, cinder agglutinate
- Tft3A Sandstone and gritstone: tuffaceous, local rhyolite fragments and pebbly layers

GREENWATER FORMATION (MIOCENE)

- Tgr Rhyolite: pale-red, flow-banded or flow breccia, sparse microphenocrysts plagioclase, biotite, and hornblende; local vitrophere or tuff
- Tgv Vitrophere: medium-gray, commonly breccia, common microphenocrysts plagioclase, biotite and hornblende, flow-banded where partially devitrified
- Tgs Sandstone and gritstone, tuffaceous, tan to light-gray, locally pinkish-gray, consists of volcanic rock fragments, shards, pumice; massive to bedded
- Tgb Basalt

FURNACE CREEK FORMATION, Lower Units (MIOCENE)

- Tfb2 Basalt, stacks of flows 3-15 ft thick each
- Tft2 Sandstone and gritstone: tuffaceous, mostly gray to tan
- Tfc2 Cinder agglutinate
- Tfp2 Palagonite tuff
- Tfs1 Siltstone, sandstone, shale: tan, well-bedded
- Tfp1 Palagonite tuff
- Tfb1 Basalt

ARTIST DRIVE FORMATION (MIOCENE)

- Ta30A Basalt, interlayered with sedimentary rocks of unit Ta30
- Ta30 Conglomerate, sandstone and limestone: cobbles of volcanic rocks, limestone, quartzite, local granitic rocks
- Ta29 Sandstone and siltstone: tuffaceous, pinkish- and greenish-gray, thin-bedded
- Ta28 Siltstone and sandstone: tuffaceous, yellowish-gray
- Ta27B Sandstone: tuffaceous, pinkish- and greenish-gray
- Ta27A Basalt
- Ta27 Sandstone, conglomerate, and interlayered basalt: sandstone is tuffaceous, coarse-grained, mostly greenish-gray; conglomerate has cobbles volcanic rocks and limestone
- Ta26A Siltstone, sandstone, limestone, basalt, palagonite
- Ta26 Sandstone and siltstone, tuffaceous, pinkish and greenish gray; ash-flow tuff, pinkish-gray, brown-weathering near top
- Ta25 Sandstone, mostly greenish-gray; conglomerate; limestone; interlayered basalt
- Ta24B Basalt
- Ta24A Sandstone and siltstone: tuffaceous, pinkish- and greenish -gray, locally tan; interlayered basalt
- Ta24 Sandstone and gritstone; interlayered basalt
- Ta23C Sandstone and interlayered basalt
- Ta23B Siltstone: tuffaceous
- Ta23A Basalt
- Ta23 Siltstone and sandstone: tuffaceous, greenish- and brownish-gray, local rhyolite vitrophere
- Ta22 Tuff: ash flow, greenish-gray and gray, dark-brown weathering, locally vitric
- Ta21A Sandstone and siltstone: tuffaceous, pinkish- and greenish-gray, minor interlayered basalt

- Ta21 Sandstone and siltstone: tuffaceous, pinkish- and greenish-gray
 - Ta20 Conglomerate and gritstone: dark greenish gray, mostly limestone cobbles
 - Ta19 Shale and siltstone with minor sandstone and conglomerate: epiclastic, yellowish-gray to yellowish-brown, well-bedded; conglomerate has clasts of limestone, quartzite, basalt and granitic rocks
 - Ta18 Basalt, stack of 3 to 20 ft thick flows
 - Ta17 Sandstone and siltstone: tuffaceous, pinkish-gray, light-gray, and reddish-brown; locally greenish-gray and conglomeratic
 - Ta16B Conglomerate: cobbles limestone, quartzite, volcanic rocks
 - Ta16A Interlayered rhyolite, basalt, and sedimentary rocks
 - Ta16 Sandstone and siltstone: tuffaceous, alternating subunits greenish-gray and tan
 - Ta15 Basalt, stack of 3-20 ft flows
 - Ta14 Sandstone: tuffaceous, non-bedded alternating subunits reddish-brown to pinkish-gray and light-gray; local thin basalt
 - Ta13B Sandstone: tuffaceous, tan to greenish-gray
 - Ta13A Basalt
 - Ta13 Rhyolite: mostly light-brownish-gray, weathers dark brown, some flow-banded, some breccia, mostly massive layers, locally thinner layers with minor tuff or shale interlayered
 - Ta12 Sandstone, siltstone and shale: tuffaceous, yellowish-gray, with interlayered basalt
 - Ta11A Rhyolite and dacite: light-brownish-gray flow-banded or breccia; some is black vitrophere
 - Ta11 Rhyolite: light-brownish gray, faintly to distinctly flow-banded, sparse minute plagioclase and hornblende phenocrysts
 - Ta10 Basaltic andesite: dark-gray and olive gray, 3 to 6 thick flows, abundant microphenocrysts plagioclase
 - Ta9A Sedimentary rocks: tuffaceous, pink- and greenish-gray
 - Ta9 Basalt
 - Ta8 Sandstone, siltstone, and shale: epiclastic, yellowish-gray, well bedded, local interlayered basalt
 - Ta7A Rhyolite: mostly light-brownish-gray, flow-banded, some vitrophere, some breccia
 - Ta7 Ash-flow tuff and tuffaceous sedimentary rocks: in part pinkish-, in part greenish-gray, contains pumice and volcanic rock fragments, local basal gritstone and conglomerate
 - Ta6 Sandstone, siltstone, and shale: epiclastic, light gray, well bedded
 - Ta6A Basalt
 - Ta5 Rhyolite: pale-brown, aphyric, part flow-banded, part breccia, local basal vitrophere
 - Ta4B Sandstone: tuffaceous, tan
 - Ta4A Basalt: mostly breccia and agglomerate, some platy, dark gray to dark-reddish- or greenish-gray
 - Ta4 Basalt and andesite: thick, obscure flows, dark-gray and brownish-gray, some contains abundant plagioclase phenocrysts
 - Ta3A Tuffaceous sedimentary rocks with interlayered basalt, some in sills
 - Ta3 Siltstone, sandstone, gritstone: thin-bedded
 - Ta2I Rhyolite: massive, pinkish-gray, may be intrusive
 - Ta2H Conglomerate: microdiorite clasts, weathering dark brown
 - Ta2G Tuffaceous sedimentary rocks, dacite, and rhyolite: similar to unit 5.5
 - Ta2F Rhyolite, dacite, and basalt with minor tuffaceous sedimentary rocks
 - Ta2E Tuffaceous sedimentary rocks: mostly greenish-gray, local conglomerate; interlayered dacite and rhyolite: dark- to light-brownish-gray, flow-banded and breccia
 - Ta2D Ash-flow tuff and tuffaceous conglomerate, greenish-gray, thin interlayered basalt
 - Ta2C Shale, siltstone, limestone: thin-bedded
 - Ta2B Tuffaceous sedimentary rocks: pinkish-and greenish-gray; basalt; rhyolite: flow-banded, breccia, and vitrophere
 - Ta2A Basalt: weathering yellowish brown to olive brown
 - Ta2 Tuffaceous sedimentary rocks, greenish and pinkish gray, local conglomerate
 - Ta1A Basalt, mostly breccia, some with large plagioclase phenocrysts
 - Ta1 Shale, siltstone, sandstone, minor conglomerate: epiclastic, tan to light-gray, well-bedded
- SEDIMENTARY ROCKS AND TUFF of RYAN AREA (MIOCENE?)
- Trt4 Greenish-gray tuff
 - Trs3 Sandstone, conglomerate
 - Trt2 Greenish-gray tuff
 - Trs1 Sandstone, conglomerate, siltstone, shale, limestone
- BASEMENT ROCKS (PALEOZOIC and PROTEROZOIC)
- Cbk Bonanza King Formation: Limestone, dolomite
 - PzPt2 Dolomite, quartzite, limestone
 - PzPt1 Gneiss, marble, pegmatite, schist
- INTRUSIVE ROCKS (MIOCENE?)
- Td Rhyolite dikes

CORRELATION AND DESCRIPTION OF MAP UNITS FOR GEOLOGIC MAP OF NORTHERN BLACK MOUNTAINS, DEATH VALLEY, CALIFORNIA

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