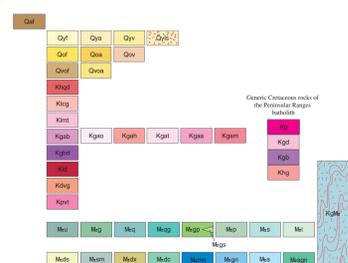


CORRELATION OF MAP UNITS



DESCRIPTION OF MAP UNITS

VERY YOUNG SURFICIAL DEPOSITS—Sediment recently transported and deposited in channels and washes, on surface of alluvial fans and alluvial plains, and on hillslopes. Soil profile development is nonexistent. Includes:

Artificial fill (Holocene)—Unconsolidated deposits of fill resulting from mining activities.

YOUNG SURFICIAL DEPOSITS—Sedimentary units that are slightly consolidated to cemented and slightly to moderately dissected. Alluvial fan deposits (Qy1 series) typically have low cone-fine-clast ratios. Younger surficial units have upper surfaces that are capped by slight to moderately developed pedogenic soil profiles (AC to AAC/BA/Ca/Ca, profiles). Includes:

Young alluvial fan deposits (Holocene and late Pleistocene)—Unconsolidated deposits of alluvial fans and headward drainages of fans. Cones predominantly of gravel, sand, and silt. Trunk drainages and proximal parts of fans contain higher percentage of coarse-grained sediment than distal parts. Qy6 is northeast corner of the quadrangle is the fine-grained distal part of the abandoned alluvial fan of Banista Creek located in the Heret quadrangle.

Young alluvial channel deposits (Holocene and late Pleistocene)—Fluvial deposits consisting of unconsolidated sand, silt, and clay-bearing alluvium.

Young alluvial valley deposits (Holocene and late Pleistocene)—Fluvial deposits along valley floors. Consists of unconsolidated sand, silt, and clay-bearing alluvium.

Young landslide (Holocene and late Pleistocene)—Highly fragmented to largely coherent landslide deposits. Unconsolidated to consolidated.

OLD SURFICIAL DEPOSITS—Sedimentary units that are moderately to well developed. Includes:

Old alluvial fan deposits (late to middle Pleistocene)—Reddish brown, gravel and sand alluvial fan deposits. Moderately to well developed pedogenic soils (AAB/BA/Ca, profiles) and Bt horizons as much as 1 to 2 m thick and maximum hues in the range of 10YR 5/4 and 6/4 through 7.5YR 6/4 to 4/4 and mature Bt horizons extending 2.5 R (50). Includes:

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Old alluvial channel deposits (late to middle Pleistocene)—Fluvial sediments deposited on canyon floors. Restricted to single alluvial exposure in southwestern part of quadrangle. Consists of moderately indurated, generally slightly dissected gravel, sand, silt, and clay-bearing alluvium. May be capped by thin, discontinuous alluvial deposits of Holocene age.

Old alluvial valley deposits (late to middle Pleistocene)—Fluvial deposits along valley floors. Restricted to small exposure in major drainage 2 km west of Winchester. Consists of moderately indurated, commonly slightly dissected sandy alluvium containing lesser silt, and clay-bearing alluvium. Some deposits may include thin, discontinuous alluvial deposits of Holocene age.

VERY OLD SURFICIAL DEPOSITS—Sediments that are slightly to well consolidated to indurated, and moderately to well dissected. Upper surfaces are capped by moderate to well developed pedogenic soils (AAB/BA/Ca, profiles) having Bt horizons as much as 2 to 3 m thick and maximum hues in the range of 7.5YR 6/4 and 4/4 through 2.5YR 6/4 to 4/4 and mature Bt horizons extending 2.5 R (50). Includes:

Very old alluvial fan deposits (middle to early Pleistocene)—Moderately to well indurated, reddish-brown, mostly very dissected gravel, sand, silt, and clay-bearing alluvium. In places, includes thin, discontinuous alluvial deposits of Holocene age.

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Green Acres gabbro complex (Cretaceous)—Medium- to very coarse-grained olivine-bearing gabbro that weathers gray to black. Named for community of Green Acres, Riverside County. Includes: (Morton, 1969). Included within San Marcos gabbro by Larsen (1948). Most gabbros have hypocrystalline textures. Includes: Ring and porphyritic rock less common. Weathers to form semi-circular slopes lined with scattered small boulders. Includes rare orbicular gabbro and porphyritic gabbro. Consists overall small areas of quartzofeldspathic, biotite quartz-feldspar, and granitic schists. In northern part of gabbro complex are a few occurrences of quartz-feldspathic mylonite. Color of decomposed gabbro and soil derived from gabbro is typically dark red brown. Includes:

Heterogeneous mixture of olivine, pyroxene, and hornblende gabbro—Northern part of Green Acres gabbro complex is very heterogeneous and includes olivine, pyroxene, and hornblende gabbro intruded by quartz diorite and tonalite. Slopes covered with gabbro rubble generally mask presence of quartz diorite and tonalite.

Olivine gabbro—Southern half of Green Acres gabbro is mostly olivine gabbro, which ranges from a few percent to about one-third olivine (F₅₀ to F₉₀). Kelyphic rims are common around olivine. Anorthite (An₉₀) makes up 30 to 90 percent of gabbro as included to subhedral, complexly twinned crystals. Stubby, anhedral orthopyroxene in this section is nearly colorless to very pale-pink, and clinopyroxene, commonly forming overgrowths of, or intergrowths with, clinopyroxene or hornblende. Augite occurs as subhedral, lath-like, irregularly shaped, colorless crystals, some of which contain white-like intergrowths of a violet, platy, nearly opaque mineral. Augite is commonly mantled with brown and/or green hornblende. Hornblende occurs as both brown hornblende and nearly colorless to very light green hornblende. Later coarse primary in reaction rims (Kelyphic rims) intergrowths with spinel grains and brown hornblende; occurs most commonly as interstitial crystals and as subhedral crystals. Opaque minerals, including magnetite, occur abundantly as a symplectic intergrowth with amphibole. Colorless to light green clinopyroxene is abundant in some protogabbro. Plagioclase (An₉₀) hornblende-spinel masses are locally common in gabbro having abundant olivine. Small hornblende gabbro dikes are mineralogically similar to that of enclosing olivine gabbro. Some dikes are medium-grained, meso- to melanocratic hornblende gabbro; others consist of porphyritic hornblende gabbro.