

## Key for preliminary oblique geologic map of part of Monterey County

Geologic data, units, and descriptions from compilation by Lewis Rosenberg and Monterey County Planning Dept., 2001

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Qd	Dune deposits ( <b>Holocene</b> )—Unconsolidated, well-sorted, fine-to medium-grained sand; deposited as linear strip of coastal dunes and belts of parabolic dunes
Qal	Alluvial deposits, <b>undifferentiated (Holocene)</b> —Unconsolidated, heterogeneous, moderately sorted silt and sand with discontinuous lenses of clay and silty clay
Qfp	Flood-plain deposits, <b>undifferentiated (Holocene)</b> —Unconsolidated, relatively fine-grained, heterogeneous deposits of sand and silt; commonly includes relatively thin, discontinuous layers of clay
Qch	Alluvial fan deposits, <b>undifferentiated</b> —Unconsolidated, moderately to poorly sorted sand, silt, and gravel, with layers of silty clay
Qhf	Alluvial fan deposits, <b>undifferentiated (Holocene)</b> —Unconsolidated, moderately to poorly sorted sand, silt, and gravel, with layers of silty clay
Qv	Various Quaternary Deposits
Qls	Landslide deposits ( <b>Quaternary</b> )—Heterogeneous mixture of deposits ranging from large block slides of indurated bedrock to debris flows in semiconsolidated sand and clay
Qa	Aromas Sand, <b>undifferentiated (Pleistocene)</b> —Heterogeneous sequence of mainly eolian and fluvial sand, silt, clay, and grave
QTc	Continental deposits, <b>undifferentiated (Pleistocene-Pliocene?)</b> —Semiconsolidated, relatively fine-grained, oxidized sand and silt. Probably equivalent to Paso Robles Formation
Qt	Fluvial terrace deposits, <b>undifferentiated (Pleistocene and Holocene)</b> —Weakly consolidated to semiconsolidated, moderately to poorly sorted silt, silty clay, sand, and gravel deposited in a fluvial environment
Qct	Coastal terraces, <b>undifferentiated (Pleistocene)</b> —Semiconsolidated, moderately well-sorted marine sand containing thin, discontinuous gravel-rich layers. Locally includes some terrace surfaces and debris flow deposits resting on terrace surfaces
QTP	Paso Robles Formation, <b>undifferentiated (Pleistocene-Pliocene?)</b> —Terrestrial sediments of Salinas Valley, weakly indurated pebble gravel with minor sand and clay.
Tpo	Pancho Rico Formation, <b>mudstone (late Miocene to early Pliocene)</b> —Diatomaceous mudstone, siltstone to sandy siliceous sediments
Tsm	Santa Margarita Sandstone ( <b>late Miocene</b> )—Marine and brackish-marine, white, friable, fine- to coarse-grained, arkosic sandstone
Tm	Monterey Formation, <b>siliceous mudstone (Miocene)</b> —Light brown to white, hard, brittle, platy; Mohnian Stage. Mapped as McLure Shale Member northeast of San Andreas fault.
Tml	Monterey Formation, <b>semi-siliceous mudstone (middle Miocene)</b> —Semi-siliceous mudstone and siltstone (Sandholdt Shale Member of Durham, 1968; 1974)
Tmc	Monterey Formation, <b>clay shale (middle and early? Miocene)</b> —Clay shale (Sandholdt Shale Member of Durham, 1968; 1974)
Tts	Marine sandstone ( <b>middle Miocene</b> )—Marine; buff to light gray, poorly to well-sorted arkosic sandstone, locally friable, locally conglomeratic
Trb	Red beds ( <b>middle Miocene</b> )—Terrestrial; red to gray, poorly sorted arkosic sandstone, cobble conglomerate, and siltstone. Age of unit is probably middle Miocene
Tvp	Pinnacles Formation ( <b>late Oligocene-early Miocene</b> )—Dacitic breccia and tuff breccia
Tva	Basaltic andesite flows ( <b>Oligocene</b> )
Tvq	Vaqueros Formation ( <i>of Hamlin, 1904; Durham, 1974</i> ) ( <b>Oligocene</b> )—Light brown marine arkosic sandstone
Tr	Reliz Canyon Formation ( <b>Middle Eocene to Late Paleocene</b> )—Thick to very thick bedded sandstone, subordinate mudstone and conglomerate.
Tss	Piedras Altas Formation ( <b>Eocene or Paleocene</b> )—Non-marine sandstone, red beds, and conglomerate
KTs	Marine clastic sedimentary rocks ( <b>Paleocene and Late Cretaceous</b> )—Light brown, hard sandstone, minor shale, and conglomerate
KTg	Marine clastic sedimentary rocks ( <b>Paleocene and Late Cretaceous</b> )—Light brown, conglomerate, minor sandstone
Ks	Marine clastic sedimentary rocks, <b>western facies (Late Cretaceous)</b> —Mostly sandstone
Ku	Marine clastic sedimentary rocks, <b>eastern facies (Late Cretaceous)</b> —Mostly sandstone
Kgj	Granite of Jacks Hill (Ross, 1972) ( <b>Cretaceous</b> )
Kqmf	Quartz monzonite of Bickmore Canyon (Ross, 1972) ( <b>Cretaceous</b> )
Kgdn	Quartz monzonite of Fremont Peak (Ross, 1972) ( <b>Cretaceous</b> )
Kqdj	Quartz diorite-granodiorite of Johnson Canyon (Ross, 1972) ( <b>Cretaceous</b> )
Kqdg	Gneissic quartz diorite of Stonewall Canyon (Ross, 1972) ( <b>Cretaceous</b> )
Kgh	Heterogeneous granitic complex of Wiebe (1966) ( <b>Cretaceous</b> )
Kqmg	Garnetiferous quartz monzonite of Pine Canyon (Ross, 1976) ( <b>Cretaceous</b> )
Kqml	Garnetiferous quartz monzonite of Little Sur and South Ventana Cone (Wiebe, 1966) and possibly related rocks near Arroyo Seco ( <b>Cretaceous</b> )
Kqmv	Variable quartz monzonite-granodiorite of Big Pines and Island Mountain (Wiebe, 1966) and similar(?) mass of Willow Creek ( <b>Cretaceous</b> )
Kgdm	Porphyritic granodiorite of Monterey (Ross, 1976) ( <b>Cretaceous</b> )
Kgdc	Granodiorite of Cachagua (Ross, 1976) ( <b>Cretaceous</b> )
Kqds	Hornblende-biotite quartz diorite of Soberanes Point (Ross, 1976) ( <b>Cretaceous</b> )
Kgds	Porphyritic granodiorite of Sand Creek (Ross, 1976) ( <b>Cretaceous</b> )
Kqdp	Hornblende-biotite quartz diorite of the Paraiso-Paloma area (Ross, 1976) ( <b>Cretaceous</b> )
Kqmp	Quartz monzonite of Pinyon Peak (Ross, 1976) ( <b>Cretaceous</b> )
Kgdj	Porphyritic granodiorite of Junipero Serra Peak (Ross, 1976) ( <b>Cretaceous</b> )
Kgdb	Granodiorite-quartz diorite of Bear Mountain (Ross, 1976) ( <b>Cretaceous</b> )
Kqdc	Hornblende-biotite quartz diorite-diorite of Corral de Tierra (Ross, 1976) ( <b>Cretaceous</b> )
Kct	Charnockitic tonalite of Compton (1960) and related(?) rocks ( <b>Cretaceous</b> )
Kms	Schist of the Sierra de Salinas ( <b>Cretaceous</b> )
Kmi	Ultramafic rocks ( <b>Cretaceous</b> )—Mainly hornblende diorite and hornblende-olivine gabbro
KJf	Franciscan Complex, <b>undifferentiated (Cretaceous and Jurassic)</b>
KJfm	Franciscan Complex, <b>melange (Cretaceous and Jurassic)</b>
pKg	Graphitic and pyritic belt ( <b>Cretaceous or earlier</b> )—Los Padres unit of Wiebe (1970)
pKc	Coast Ridge belt ( <b>Cretaceous or earlier</b> )—Mostly marble
pKqf	Quartzofeldspathic rocks ( <b>Cretaceous or earlier</b> )—Gneiss, granofels, quartzite, and minor schist
pKms	Mica schist ( <b>Cretaceous or earlier</b> )—Gabilan Range
pKm	Marble ( <b>Cretaceous or earlier</b> )—Mainly metamorphosed limestone, some dolomite in the Gabilan Range. Includes slide blocks near Parkfield