



Qa Qls
Surficial deposits
Qa; alluvium
Qls; landslide debris
Unconformity
Qoa
Older alluvium
Unconformity

rh
Rhyolite
Tan rhyolitic to dacitic felsite, highly fractured, (intrusive and extrusive)
Tps
Nonmarine sedimentary rocks
Weakly indurated, greenish-gray clay, few thin hard calcareous lenses, and gray to tan sandstone and pebble conglomerate containing debris from Franciscan rocks
Local Unconformity
Tmss
Tmsl
Tmsi
Tso
Marine sedimentary rocks
Tmss; light gray arkosic sandstone; some beds hard, calcareous, pebbly, with abundant clam shells; minor gray siltstone
Tmsl; light gray to brown siltstone, massive to indistinctly bedded, argillaceous to sandy
Tmsh; siliceous shale, gray-white brittle, thin-bedded,
Tso; Sobrante Sandstone, tan, massive, fine-grained, arkosic, locally pebbly at base

Unconformity
Kp Kps
Panoche Formation (marine)
Kp; clay shale, gray, micaceous, argillaceous to silty, minor thin sandstone beds,
Kps; sandstone, tan, hard, arkosic, locally contain large concretions, some interbedded clay shale
Kpc; conglomerate composed of cobbles of granitic and dioritic rocks porphyritic rocks, quartzite and black chert in matrix of brown sandstone

JKK
JKc
Knoxville Formation
JKK; dark, micaceous shale, minor thin sandstone
JKc; conglomerate and dark sandstone, minor shale

sp **gb**
Mafic and Ultramafic rocks
sp; serpentine
gb; gabbro-diorite, partly serpentinized

fg **fc** **fs** **gl**
Franciscan assemblage
(Pervasively sheared and slightly metamorphosed; locally highly metamorphosed)
fg; greenstone
fc; chert
fs; sandstone (graywacke), and shale, sheared
gl; glaucophane schist

QUATERNARY
PLIOCENE
MIOCENE
UPPER CRETACEOUS
CRETACEOUS
UPPER JURASSIC OR LOWER CRETACEOUS
JURASSIC AND/OR CRETACEOUS

--- Contact
dashed where gradational
or approximately located

--- Fault
dashed where inferred;
dotted where concealed;
queried where existence
doubtful;
double arrows indicate
strike-slip movement;
U - upthrown side
D - downthrown side
relatively

--- anticline
--- syncline

Axis of fold
arrow on axis indicates
direction of plunge
30° inclined
/ inclined (approximate)
\ vertical
o overturned

Strike and dip of strata
--- shear zone
--- sandstone bed

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* Only a few landslides have
been mapped. For a more
complete map of landslide
deposits, see Nilsen, 1973

Geology mapped and field-checked by
T.W. Dibblee, Jr. (1977), modified
from G.D. Robinson (1956), A.C. Lawson
(1914) and M.E. Perkins (1974).
Hayward fault lines partly from Herd
(1978) and partly from Radbruch-Hall
(1974).

