

EXPLANATION

Qal
Alluvium
Gravel, sand, silt

Qt₁ Qt₂ Qt₃ Qt₄
Stream terrace deposits
Sand, gravel, and rubble, locally reddish-brown in color; terrace deposits along Santiago Creek have been correlated tentatively and each terrace numbered in order of age with Q₁ the youngest. Undifferentiated terrace deposits, Q₁

Qtd
Deformed terrace deposits
Indurated coarse sandy conglomerate, faulted

Tpy
Yerba member
Chocolate brown to pink siltstone, locally diatomaceous

Tpsq
Soquel member
Buff sandstone, interbedded siltstone, local conglomerate

Tlv
La Vida member
Chocolate brown to black siltstone, locally with phosphatic nodules; buff andesite tuff locally lying between Paute and Topanga formations, l₂

Td
Andesite dikes
Gray vesicular andesite dikes

Tema
Andesite flows and flow breccias
Red, buff, and gray vesicular andesite flow and flow breccias; interbedded tuffaceous and limy breccias; interbedded red limy volcanic breccias, b₂

Temu
Palagonite tuff and tuff breccia
Light buff palagonite tuff and tuff breccia of andesite composition, in part waterlain

Temb
Basalt flows
Gray to black vesicular porphyritic olivine basalt flows, locally overlain by thin-bedded limy siltstone

Td₂
Basalt dikes
Black dense basalt dikes

Tt
Topanga formation
Buff sandstone, conglomerate, and interbedded gray siltstone, white vitric tuff interbedded in Topanga formation, l₁; limy organic siltstone, l₂, lying between the El Modeno volcanics and Topanga formation

Tvs
Vaqueros and Sope formations, undifferentiated
Buff, green, red, and white clayey sandstone, conglomerate, and sandy clay, in part nonmarine; upper part contains lower Miocene fossils

Tsa
Santiago formation
Upper part white to buff massive coarse sandstone and conglomerate; lower part thin-bedded brown sandstone, sandy siltstone, and conglomerate

Tsi
Silverado formation
Upper part green-gray sandstone; lower part coarse micaceous felspathic sandstone

Contact
Dashed where approximately located

Inferred contact
U, D, S

Fault
Showing dip, dashed where approximately located; U, upthrown side; D, downthrown side

Inferred fault

Concealed fault

Strike and dip of beds

Strike of vertical beds

Landslide

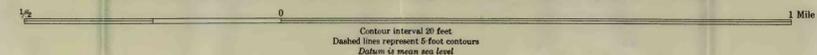
Dry hole

TRUE NORTH
MAGNETIC NORTH

INDEX MAP SHOWING AREAS MAPPED BY AUTHOR

Base from U.S.G.S Orange Quadrangle, 7 1/2 minute series, Edition of 1950

GEOLOGIC MAP OF EL MODENO AREA, ORANGE COUNTY, CALIFORNIA



Geology by D. M. Kinney, J. G. Vedder, and R. F. Yerkes. Mapped during 1949-52

QUATERNARY

TERTIARY