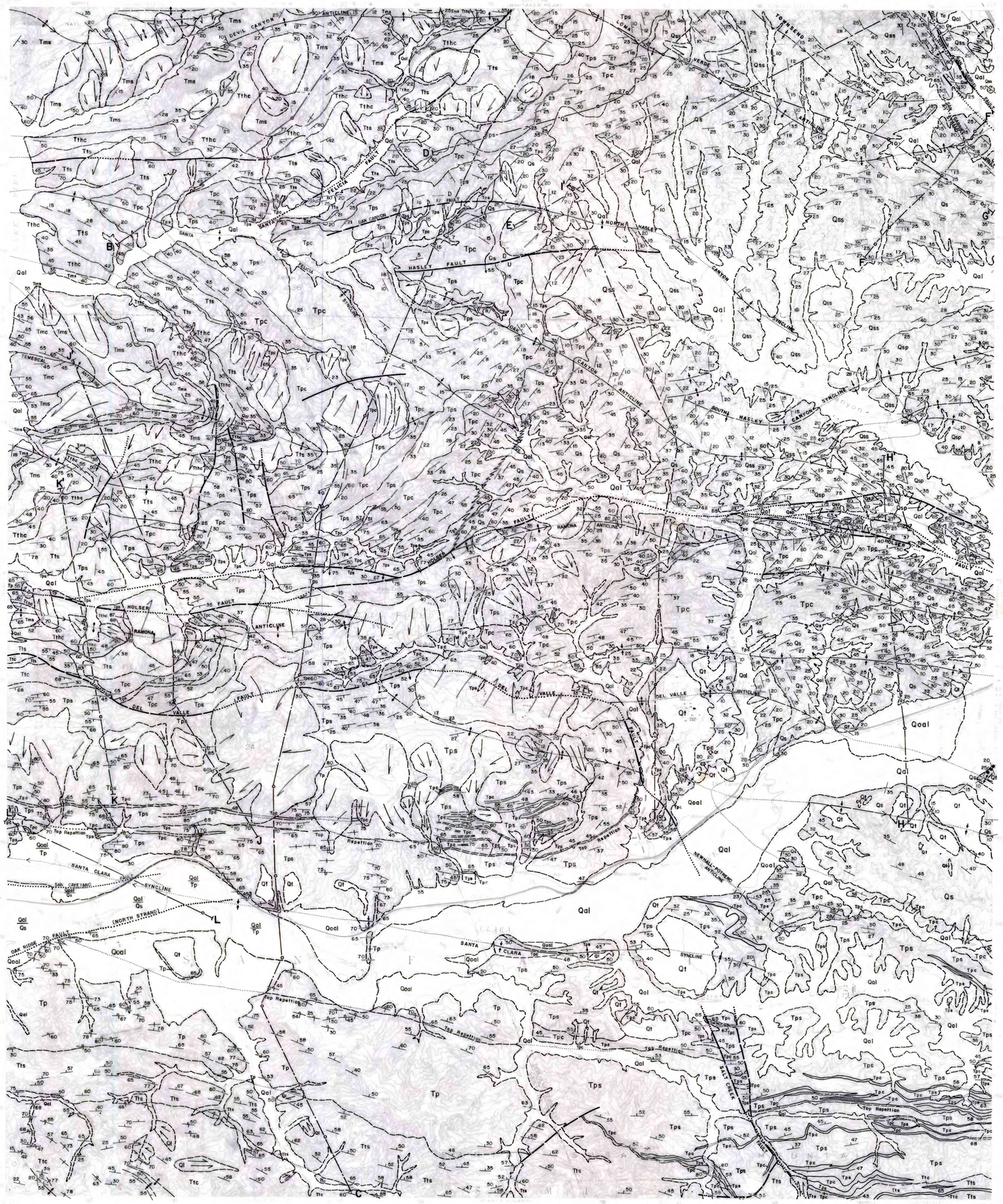
DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OPEN-FILE REPORT
85-587



EXPLANATION

SURFICIAL DEPOSITS

Qal Alluvium

Qoal Older alluvium

Landslide material
Arrows in direction of sliding

Qt Stream terrace material, preserved on surfaces above present drainage, may grade into Qoal

BEDROCK UNITS

Qs Saugus Formation, undifferentiated. Nonmarine sandstone, conglomerate, and siltstone grading downsection into brackish water and marine sandstone, conglomerate and siltstone.

Qsp, Qss Qsp, Saugus Formation with clasts of San Francisquito sandstone (Weber, 1979); Qss, Saugus Formation with clasts of Pelona Schist (Weber, 1979).

Tp Pico Formation, undifferentiated. Marine siltstone, sandstone, and conglomerate.

Tpc, Tps Tpc, marine conglomerate and sandstone with minor siltstone; Tps, siltstone and fine grained sandstone.

Tts, Ttc, Tthc Towsley Formation: Tts, predominantly siltstone or mudstone; Ttc, predominantly sandstone or conglomerate; Tthc, Hasley conglomerate, basal reddish-brown conglomerate, lower part of Towsley contains Mohnian microfossils.

Tms, Tmc, Tmcb Tm, Modelo Formation, undifferentiated. Contains Mohnian microfossils in all but lowermost beds near Agua Blanca fault; these contain Luisian microfossils.
Tms, gray to greenish-gray siliceous shale, siltstone, and fine-grained sandstone; Tmdc, Devil Canyon conglomerate member; Tmc, gray to gray-brown conglomerate, sandstone, and subordinate siltstone; Tmcb, basal sedimentary breccia of Weber (1979) with clasts of local basement.

Tvb, Tc Tc, Castaic Formation, predominantly marine siltstone; Tvb, Violin Breccia, angular clasts of gneiss and granitic rock in sandstone matrix.

Tr, Trss Rincon Formation: Tr, mudstone, claystone; Trss, sandstone. Saucesian microfossils.

Tvq Vaqueros Formation: predominantly fossiliferous sandstone.

Tss, Tsc Sespe Formation: Tss, brown pebbly sandstone with interbedded red mudstone and gray-green conglomerate; Tsc, brown conglomerate and breccia, clasts of anorthosite and gneiss.

Te, Te_3, Te_2, Te_1 Te, unnamed Eocene strata of Squires (1977).
Te_3, arkosic sandstone.
Te_2, white sandstone, middle Eocene molluscs.
Te_1, mudstone, middle Eocene molluscs and foraminifera.

gr Granodiorite

gn Gneiss

Contact — Dashed where approximately located; dotted where covered by younger deposits.

Fault, showing dip — Dashed where approximately located; dotted where covered by younger deposits.

Folds, showing crestline and troughline and direction of plunge; dashed where approximately located or inferred; dotted where covered by younger deposits

Paleomagnetic sampling site; filled circle indicates reversed magnetic polarity

Line of geologic cross section; open circle indicates oil or water well.

Holocene	QUATERNARY
Pleistocene	
Pliocene	TERTIARY
Miocene	
Oligocene	
Eocene	
MESOZOIC	
PRECAMBRIAN	

BASE FROM U.S. GEOLOGICAL SURVEY
TOPO SERIES 1:24,000 VAL VERDE, CA

15½°
TRUE NORTH
MAGNETIC NORTH
APPROXIMATE MEAN DECLINATION, 1986

SCALE 1:24 000
1 ½ 0 1 MILE
1 .5 0 1 KILOMETER

CONTOUR INTERVAL 25 FEET
DOTTED LINES REPRESENT 5 FOOT CONTOURS
DATUM IS MEAN SEA LEVEL

CALIF
QUADRANGLE LOCATION

CENOZOIC STRUCTURE OF THE VAL VERDE 7 1/2 MINUTE QUADRANGLE AND SOUTH HALF OF THE WHITAKER PEAK 7 1/2 MINUTE QUADRANGLE, CALIFORNIA

by

Robert S. Yeats, James W. McDougall, and Leonard T. Stitt

1985

This map is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards and stratigraphic nomenclature. Any use of trade names is for descriptive purposes only and does not imply endorsement by the USGS.