UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

WATSONVILLE EAST QUADRANGLE
CALIFORNIA
7.5 MINUTE SERIES (TOPOGRAPHIC)

UNITS SOUTHWEST OF SAN ANDREAS FAULT

Qal | Qls | Qc | Qof | Qf | Qcf | Qb

Qal, alluvium; silt, sand, clay and gravel
Qls, landslide debris[1]
Qc, colluvium; silt, sand and gravel
Qof, older flood-plain deposits; silt and gravel
Qf, alluvial fan deposits; sand, silt and gravel
Qcf, abandoned channel fill deposits; clay, silty clay and silt
Qb, basin deposits; clay and silty clay

Holocene — QUATERNARY

Qwf | Qwa

Qwf, Terrace deposits of Watsonville, (Sangamon?); fluvial facies; silt, sand, silty clay and gravel
Qwa, Terrace deposits of Watsonville, (Sangamon?); alluvial fan facies; silty clay, silt, sand and gravel

Pleistocene — QUATERNARY

Qa | Qaf

Aromas Sand
Qa, Aromas sand; dune deposits
Qaf, Aromas sand; stream deposits; silt, clay and gravel

Pleistocene and Pliocene? — QUATERNARY AND TERTIARY ?

QTc

Continental deposits; sand, silt, and gravel. Could be Paso Robles Formation

UNCONFORMITY

Tp | Tps

Purisima Formation
Marine
Tp, siltstone and sandstone
Tps, sandstone

Pliocene — TERTIARY

UNCONFORMITY

Tb

Marine shale
Micaceous shale, with thin sandstone interbeds

Eocene — TERTIARY

UNCONFORMITY

gg

Hornblende-quartz gabbro

MESOZOIC

Notes

1. Only a few of the major landslides are shown. For landslides in Santa Cruz County, see map by Cooper, Clark and Associates (1975).
2. Recently active faults, such as the San Andreas, Zayante, and Corralitos, are shown on maps by Sarna and others (1975) and Hall and others (1974). See these maps for an assessment of the geologic hazards. The hazard, if any, associated with the other faults has not been determined except in a general way for the Sargent fault by McLaughlin (1974) and Wesson and others (1975, Table 1).
3. See map by Dupré (1975) for the liquefaction potential of Quaternary deposits.
4. Some attitudes and geology compiled from Allen (1946) and McLaughlin (1971). Quaternary deposits southwest of the San Andreas fault are from Dupré (1975).
5. See Clark and Rietman (1973) for Bouguer gravity field and an interpretation of the stratigraphy, tectonics and paleogeography.

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UNITS BETWEEN SAN ANDREAS AND SARGENT FAULTS

Qal | Qls

Surficial deposits
Qal, alluvium
Qls, landslide debris[1]

UNCONFORMITY

Tcg

Nonmarine pebble conglomerate

UNCONFORMITY

Tmp

Shale of Mount Pajaro area (Monterey Shale of Allen, 1946)
Marine siliceous shale; argillaceous shale in lower part; Saucesian and Zemorrian Stages

Tss

Marine arkosic sandstone; minor micaceous shale

Tsh

Marine shale
Micaceous shale, few thin sandstone strata

Kcg

Marine conglomerate

UNITS NORTHEAST OF SARGENT FAULT

Tms

Temblor Sandstone
marine sandstone

UNCONFORMITY

sp

Serpentinite

fag | fg | fs | fl

Franciscan rocks
pervasively sheared slightly metamorphosed marine rocks:
fag, greenstone altered from basaltic agglomerate
fg, greenstone altered from basalt
fs, graywacke sandstone, minor micaceous shale or argillite
fl, limestone

Miocene — TERTIARY
Oligocene & L. Miocene — TERTIARY
Eocene? — TERTIARY
Paleoc.? — TERTIARY
CRETACEOUS
JURASSIC AND CRETACEOUS

Contact (dashed where gradational or approximately located)

Fault[2] (dashed where approximately located or inferred; dotted where concealed; double parallel arrows indicate strike-slip movement)

anticline — syncline
Axis of fold

30 inclined
vertical — overturned
Strike and dip of bedding

Down-slope movement of landslide (indicated by half arrow)

Abandoned test hole drilled for oil or gas

PRELIMINARY GEOLOGIC MAP OF THE WATSONVILLE EAST QUADRANGLE, SANTA CRUZ, SANTA CLARA, AND MONTEREY COUNTIES, CALIFORNIA

BY

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1978

U. S. Geological Survey
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This report is preliminary and has not been edited or reviewed for conformity with Geological Survey Standards and nomenclature