DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

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UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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GEOLOGIC MAP OF THE SANTA YNEZ QUADRANGLE, CALIFORNIA

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UNITS SOUTH OF THE SANTA YNEZ FAULT

Tsp — Sespe Formation
nonmarine red claystone and sandstone

Ta — Alegria Formation
shallow marine light grey sandstone

Tg — Gaviota Formation
marine gray sandstone; Refugian age

Tsa | Tsas — Sacate Formation
marine sandstone and shale; Narizian age
Tsa – predominantly shale
Tsas – predominantly sandstone

Tcd | Tcds — Cozy Dell Shale
marine micaceous shale mostly Narizian age
Tcd – shale
Tcds – sandstone strata

Tma | Tmas — Matilija Sandstone
marine arkosic sandstone thin shale interbeds
Tma – sandstone
Tmas – sandstone & shale

Tan | Tjs | Tj — marine strata
micaceous shale; few thin sandstones; mid. or lower Eocene
Tan – Anita Shale
Tj, Tjs – Juncal Formation
Tj – shale
Tjs – sandstone

Kjs | Kj — Jalama Formation
marine
Kjs – sandstone
Kj – shale and siltstone

Oligocene / Eocene / TERTIARY / ? – ? – ? / CRETACEOUS

STRUCTURE SYMBOLS

Contact
shown dashed where gradational or approximately located, and between members

Fault
shown dashed where inferred; dotted where concealed; U – upthrown side, D – downthrown side, relatively; arrow indicates dip of fault plane

Anticline

Syncline

Axis of fold
shown dotted where concealed; arrow on axis indicates direction of plunge

inclined
vertical
overturned

Strike & dip of bedding
numbers indicate amount of dip in degrees

direction of landslide movement

Sandstone

Conglomerate

hard carbonate strata

Abandoned test hole for oil or gas

PERTINENT REFERENCES

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UNITS NORTH OF THE SANTA YNEZ FAULT

Qa | Qg — Surficial Sediments
Qg – stream gravel & sand
Qa – valley alluvium

Qls — Landslide debris

Qoa | Qoa3 Qoa2 Qoa1 — Older surficial sediments
Qoa – undivided
Qoa3 – youngest remnants
Qoa2 – intermed. remnants
Qoa1 – oldest remnants

Qog — Older gravel
cobble–boulder gravel of sandstone detritus

UNCONFORMITY

QTp — Paso Robles Formation
valley sediments; pebble gravel, sand, and clay

Tca — Careaga Sandstone
shallow marine soft sandstone with hard, calcareous shell bed at base

UNCONFORMITY

Tsq — Sisquoc Formation
marine white punky diatomite or diatomac. shale, lower Plioc. or upper Mioc.

Tm | Tml — Monterey Shale
marine shale
Tm – upper part: hard platy siliceous shale, locally cherty; Mohnian age
Tml – lower part: siliceous shale, fissile shale, and thin calcareous strata, foraminiferal; Luisian–Relizian age

Tt — "Temblor" Sandstone
marine; locally fossiliferous; contains bentonitized tuff near base locally; uppermost Saucesian age

UNCONFORMITY

Tr — Rincon Shale
marine; gray claystone or clay shale; Saucesian–upper Zembrian age

Tvq — Vaqueros Sandstone
marine; Zemorrian age

Tsg — Sespe Formation
nonmarine green to red claystone, sandstone, and conglomerate of Franciscan debris

UNCONFORMITY

Tes | Tesh | Tec — Marine strata
Tes – sandstone and siltst.
Tesh – silty shale
Tec – cobble conglomerate

UNCONFORMITY

Ke — Espada Formation
marine thin bedded shale, thin sandstones; may be in part upper Jurassic

sp — Serpentinite
and associated mafic igneous rocks

Holocene / Pleistocene / Pliocene / QATERNARY / Miocene / Oligocene / TERTIARY / Eocene / lower / CRETACEOUS

Base from U.S. Geological Survey, Santa Inez, 1974

SCALE 1:24000
1 MILE
1 KILOMETER
CONTOUR INTERVAL 40 FEET
DOTTED LINES REPRESENT 20-FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

UTM GRID AND 1974 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

Geology mapped in 1939–40, 1955, 1958
Drafted by E. J. Wiedmann, 1979

QUADRANGLE LOCATION

This map is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards and stratigraphic nomenclature.