DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

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PLATE 2

MARINE GEOLOGIC MAP OF WESTERN VENTURA BASIN-OXNARD PLAIN OFFSHORE REGION, CALIFORNIA

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Offshore geologic data obtained by seismic reflection profiles

Scale — 1: 62,500

2 Statute Miles

2 Nautical Miles

2 Kilometers

Prepared in cooperation with California State Department of Water Resources

EXPLANATION

- Qal ALLUVIUM
- Qsd SAND DUNE DEPOSITS
- Qt NONMARINE (Qt) and MARINE (Qtm) TERRACE DEPOSITS
- Qcf CANYON FILL DEPOSITS
- Qls SUBMARINE LANDSLIDES
- Qh HOLOCENE MARINE DEPOSITS
- Qp UPPER PLEISTOCENE DEPOSITS
- QTt BURIED MARINE TERRACE
- Qs SAN PEDRO FM. / Qu QUATERNARY undiff.
- QTs SANTA BARBARA FM / QTu QUATERNARY-TERTIARY undiff.
- Tp PICO FORMATION
- Tm MONTEREY SHALE
- Tmt CONEJO VOLCANICS
- Td DIABASE INTRUSION
- Tt TOPANGA-VAQUEROS undiff. / TOPNGA-VAQUEROS-CONEJO undiff.

HOLOCENE / QUATERNARY / PLEISTOCENE / PLIOCENE / MIOCENE / TERTIARY / CENOZOIC

33 ——— 33' Offshore section; E ——— E' Onshore section

Sections shown on Plate 1

Onshore geology modified after Gamble (1957); State of California Department of Water Resources (1965); Jennings and Strand, Geologic Map of California Los Angeles Sheet (1969); Trask and Holt (1959). Geology around Anacapa Island modified after Schall (1960).

CONTACT

D-Downthrown U-Upthrown. Box indicates displacement within Miocene and older material only. Triangle indicates structure in Pliocene Pico Fm?

FAULT

Thrust fold in Quaternary probably faulted in older material below.

THRUST FAULT-FLEXURE

Anticline / Syncline / Monocline

Arrow shows direction of plunge. Box indicates structure in Miocene rocks only. Triangle indicates structure in Pliocene Pico Formation

FOLDS

TRUE DIP AND STRIKE OF BEDS

APPARENT DIP AND STRIKE OF BEDS

HORIZONTAL BEDDING

AREA OF DOWNSLOPE SEDIMENT CREEP

Crossed-hatched area indicates slump scarp; dashed where inferred.

SLUMP

Area of possible relict canyon fill. Evidenced by absence of seismic reflectors and mostly incoherent acoustical noise

Upper terrace in Mugu Canyon; poorly defined and eroded into Quaternary strata.

Lower terrace in Mugu Canyon; probably eroded on a hard shale member of Topanga Vaqueros undifferentiated unit.

Topographic base modified from U.S. Geological Survey, 7.5 minute quadrangle series: Camarillo 1950, Oxnard 1950, Pitas Point 1950, Point Mugu 1949, Santa Paula 1951, Saticoy 1951, Ventura 1951, scale 1:24,000, and U.S. Coast and Geodetic Survey Chart 5114, Anacapa Passage 1967, scale 1:250,000.
Bathymetry modified from U.S. Coast and Geodetic Survey Chart 1206N-15, Santa Barbara to Huntington Beach 1968, from soundings made by the USGS, 1970.

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