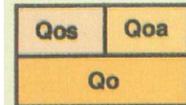
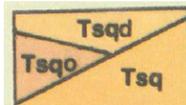




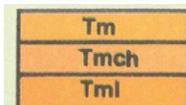
**SURFICIAL SEDIMENTS**  
 Qs beach sand deposits  
 Qds dune sand deposits  
 Qa valley and floodplain alluvial deposits  
 Qls landslide debris



**OLDER DISSECTED SURFICIAL SEDIMENTS**  
 Qos dune sand deposits, in places weakly consolidated  
 Qoa remnants of weakly consolidated stream terrace and alluvial fan deposits of silt, sand and gravel  
 Qo Orcutt Sand: tan to rusty brown, poorly consolidated to locally indurated, wind-deposited sand; pebble gravel at base locally



**SISQUOC FORMATION**  
 marine; late Miocene age  
 Tsqd white to cream-white, punky, diatomaceous claystone and clayey diatomite  
 Tsqo same as Tsqd, but oil-saturated and partly burned locally to frothy stone  
 Tsq (Todos Santos Claystone Member of Woodring and Bramlette, 1950): light gray claystone and slightly diatomaceous or siliceous clay shale



**MONTEREY SHALE**  
 marine; middle to late Miocene age  
 Tm and Tmch - Mohnian Stage;  
 Tml - Luisian and Relizian(?) Stages  
 Tm upper shale unit: white-weathering, thin bedded, hard, platy, porcelaneous siliceous shale  
 Tmch same as Tm, but brittle and cherty  
 Tml lower shale unit: white-weathering, thin bedded, fissile to platy, semi-siliceous shale with thin, hard limestone strata

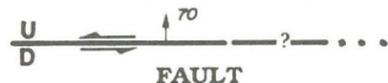


**SYMBOLS**

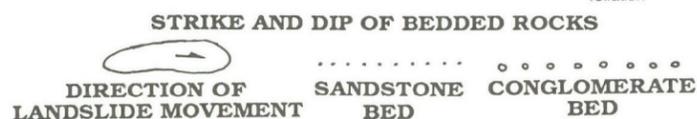
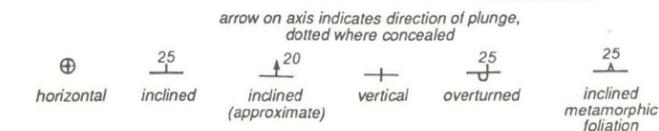
not all symbols present on each map

**FORMATION CONTACT**      **MEMBER CONTACT**  
 dashed where inferred or indefinite

**CONTACT BETWEEN SURFICIAL SEDIMENTS**  
 located approximately in places



dashed where indefinite or inferred, dotted where concealed, queried where existence doubtful. Parallel arrows indicate inferred relative lateral movement. Relative vertical movement shown by U/D (U = upthrown side D = downthrown side). Short arrow indicates dip of fault plane.



**ABANDONED EXPLORATORY OIL WELL**

OIL WELL LOCATIONS INDICATED ON TOPOGRAPHIC BASE MAP.



0      2,000      4,000

Scale in Feet

1 inch = 2,000 feet

Reference:

Dibblee, T.W. Jr., 1989, Geologic map of the Casmalia and Orcutt quadrangles, Santa Barbara County, California: Dibblee Geological Foundation, Map DF-24 (Ehrenspeck, H.E., ed.), scale 1:24,000.

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**Figure 4-8**

**Geologic Map of the Casmalia Quadrangle, Santa Barbara County, California**

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 Casmalia Resources Superfund Site

January 2011