



Contact dashed where gradational or approximately located

Fault dashed where inferred; dotted where concealed; queried where existence doubtful; double arrows indicate strike-slip movement; U - upthrown side; D - downthrown side relatively

Axis of fold arrow on axis indicates direction of plunge

Strike and dip of strata

conglomerate bed  
sandstone bed  
artificial fill

References cited:

Herd, D.G., 1977. Geologic map of the Las Positas, Greenville, and Verona faults, eastern Alameda County, California: U.S. Geological Survey Open-File Report 77-689, 25 p.

Huey, A.S., 1948. Geology of the Tesla quadrangle, California: California Division of Mines Bulletin 140.

Nilsen, Tor H., 1972. Preliminary Photointerpretation Map of Landslide and other Surficial Deposits of Parts of the Altamont and Carbona 15-minute Quadrangles, Alameda County, California: U.S. Geological Survey Miscellaneous Field Studies Map MF-321

Geology mapped and field checked by Thomas W. Dibblee, Jr., 1975-1977; modified from A. Huey, 1948, H. Sonneman and J. Switzer, unpublished, and D. Herd, 1977.

\* Only a few landslides have been mapped. For a more complete map of landslide deposits, see Nilsen (1972).

PRELIMINARY GEOLOGIC MAP OF THE ALTAMONT QUADRANGLE, ALAMEDA COUNTY, CALIFORNIA

by  
Thomas W. Dibblee, Jr.  
1980

- Qg  
Qa Qls  
Surficial deposits  
Qa; alluvium  
Qls; landslide debris  
Qg; stream gravel
- Unconformity  
Qoa  
Older alluvium
- Unconformity  
QTI  
Livermore Gravel  
Light reddish-gray cobble-pebble gravel containing debris from Franciscan rocks; minor to major amounts of gray claystone
- Unconformity  
Tps  
Nonmarine sedimentary rocks  
Tps; weakly indurated pebble conglomerate, sandstone and greenish gray claystone
- Unconformity  
Tn Tmss  
Tmss  
Sedimentary rocks  
Tn; Neroly Formation, nonmarine blue to gray thick bedded sandstone, locally pebbly  
Tmss; nonmarine and brackish marine (?) claystone, siltstone, gray sandstone and pebble conglomerate
- Unconformity  
Tts  
Tesla Formation  
White to tan arkosic sandstone and sandy siltstone, contains thin coal beds
- Disconformity  
Km  
Moreno Shale  
Clay shale
- Disconformity  
Kp Kps  
Panoche Formation  
Kp; micaceous clay shale; few thin sandstone beds  
Kps; tan, arkosic sandstone, with large concretions, and some micaceous shale
- Disconformity  
Ks  
Marine clay shale
- Disconformity  
fs fc  
Franciscan assemblage (Pervasively sheared, slightly metamorphosed marine sedimentary sequence)  
fs; sandstone (graywacke), gray, hard, with minor micaceous shale or phyllite; may include local small greenstone lenses  
fc; white, green to red thinbedded chert, highly fractured and contorted

ALTAMONT, CALIF.  
WITH ALTAMONT 15 QUADRANGLE  
N47375-W121375725