

Entire area appears to be part of a deeply dissected and erosionally modified large landslide

Fault zone exposed in canyon consists of 30 m wide zone of shears in the Purisima Formation. The shears contain gouge, they strike $W40^{\circ}$ to $45^{\circ}N$, parallel to bedding in the Purisima northeast of the shears, and they dip $60^{\circ}SW$. Terrace deposits northeast of the fault are 55 to 61 m higher than those southwest of the fault, indicating that the fault movement is normal.

Large linear valley through ridge. Probable trace of fault. Fault not exposed but indicated by differences in attitude of bedrock. Purisima Formation is "dragged" into attitudes parallel to the fault traces. Marine terraces is 40 to 52 m higher northeast of this fault compared to terrace elevation southwest

Upper part of the Purisima Formation and the overlying marine terrace deposits are offset an uncertain amount by a fault. This fault strikes due north to $N10^{\circ}W$ and dips steeply eastward at the top of the cliff. It flattens and follows a resistant sandstone bed of the Purisima Formation in the middle part of the cliff. The fault could be tectonic but may also be part of a landslide

Roadcut exposes Purisima Formation faulted over marine terrace deposits. The zone of shearing dips gently to the northeast and is interpreted as the slide plane of a large rotational landslide

Wave-cut platform of the marine terrace tilts approximately 5° toward the NE. As the dip is contrary to the normal dip of wave-cut platforms, the northeastward tilt is believed to be of tectonic origin

Strong aerial photo and topographic lineament indicated by linear stream valleys and associated alluviated flats. However, there is no indication of faulting in the seaciff exposures where the Purisima Formation is undisturbed. Lineament apparently related to cuestas like landform developed in northeast dipping beds

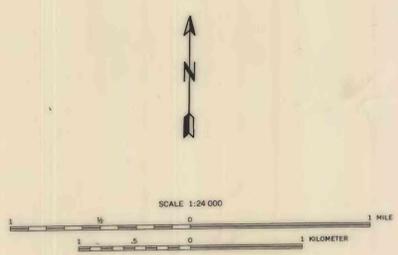
Purisima formation and marine terrace offset along three northeasterly dipping thrust faults. The base of the wave-cut platform is about 12 m in elevation on the southeast side of the fault complex and 49 m in elevation on the northeast side, indicating approximately 37 m of vertical separation since the terrace was formed (85,000 to 125,000 years B.P.). These faults are part of the Frijoles segment.

A discontinuity in the marine terraces across the mouth of Pescadero Creek suggests that a major fault must underlie the recent alluvium and sand dunes at the mouth of the creek. Similarly, the trend and dip pattern of faulting along the Frijoles segment to the southeast suggest the presence of a major fault underlying the recent sediments

Arroyo de los Frijoles is a narrow canyon incised 61 to 76 m into the northwest-southeast trending ridge topped by The Mesa. It has no headwaters and contains a classic underfit stream. The headwaters have been captured by Gasos Creek, and Arroyo de los Frijoles has been offset by right lateral displacement along the Frijoles segment and Coastways segment of the San Gregorio fault zone

Of the seven marine terraces southwest of the San Gregorio fault, six are present on the southwest side of The Mesa. All of these terraces are tilted to the northwest with the tilting becoming progressively greater with age. Consequently the elevation difference between terraces becomes less to the northeast

Toe of landslide possibly offset in a right lateral sense along fault trace



MAP OF QUATERNARY FAULTING ALONG THE SAN GREGORIO FAULT ZONE, SAN MATEO AND SANTA CRUZ COUNTIES, CALIFORNIA

by
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Base from USGS 7.5' topo series: HALF MOON BAY, 1961, pr. 1965, 40 ft., and MONTARA MOUNTAIN, 1956, pr. 1968, 25 ft., CALIF. Compiled by Menlo Park Base Map Section. (31-37) (1-77) LAJOIE

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