



EXPLANATION

RINCONADA FAULT ZONE
San Marcos section

Name of fault zone and associated fault section—Fault zone divided into sections on the basis of sense of fault movement and geomorphic expression

Fault—Solid line where accurately located; long-dashed where approximately located; short-dashed where location is inferred; dotted where location is concealed; queried where identity or existence may be questionable. U, relatively upthrown side; D, relatively downthrown side. Arrows indicate direction of relative movement. Tick shows direction of dip; number indicates measured dip value

Thrust fault—Solid line where accurately located; long-dashed where approximately located; short-dashed where location is inferred; dotted where location is concealed; queried where identity or existence may be questionable. Sawtooth on upper (tectonically higher) plate

Earthquake epicenter—From U.S. Geological Survey/U.C. Berkeley Northern California Seismic Network Catalog (January 1967 to August 2008). Red circles denote earthquake epicenters spatially associated with Rinconada Fault Zone and Reliz Fault Zone. Yellow circles denote earthquake epicenters spatially associated with other seismic sources (not labeled on map), such as San Andreas Fault Zone

- M=2.0-2.9
- M=3.0-3.9
- M=4.0-4.9
- M=5.0-5.9
- M=6.0-6.9

Cross-fault correlation locality—Approximate location of offset feature. Letter indicates either northern or southern (for example, A or A', respectively) point of locality pair

- A, A'—Contact between Pancho Rico Formation and Santa Margarita Sandstone; A, northern limit; A', southern limit (Durham, 1965, fig. 2)
- B, B'—Basement uplift; B, Paso Robles area basement outcrop; B', buried shallow-basement high (Lockwood high of Durham, 1974; see also, Dibblee, 1976, fig. 18)
- C, C'—Structural sedimentary trough; C, Arroyo Seco trough; C', southern Salinas basin (Dibblee, 1976, fig. 18; Dibblee, 1979, fig. 3)
- D, D'—Sierra de Salinas schist belt of Ross (1974); D, northern extent of outcrop; D', northern limit of subcrop as extrapolated from well-core data (Ross, 1974, sheet 1)

Key fault locality—Significant feature along fault (for example, possible Quaternary deformation, well-exposed fault trace, or exploratory trench that has fault present)

- 1—Rinconada Fault, exposed in trench at Atascadero State Hospital (fig. 4, in pamphlet); Paso Robles Formation is juxtaposed against Monterey Formation (Pacific Geoscience, Inc., unpub. data, 1990)
- 2—Rinconada Fault, exposed in trench on Rocky Canyon Road (fig. 5, in pamphlet); Paso Robles Formation is juxtaposed against Monterey Formation (Geometric Consultants, Inc., unpub. data, 2007)
- 3—Rinconada Fault, exposed in trench at Chicago Grade Landfill (fig. 6, in pamphlet); lower part of Paso Robles Formation is faulted (GeoSynTech Consultants, unpub. data, 2002)
- 4—Rinconada Fault, exposed in trench at Santa Ysabel Ranch (figs. 7, 8, in pamphlet); Paso Robles Formation is vertically offset (GeoSolutions, Inc., unpub. data, 2000)
- 5—Rinconada Fault, exposed in railroad cut (fig. 3, in pamphlet); fault (strike N. 30° W., dip 72° to southwest) cuts Paso Robles Formation; horizontal grooves are present in fault plane (this study)
- 6—Location of hot spring that erupted in Paso Robles Public Library/City Hall parking lot during December 22, 2003 San Simeon earthquake (this study)
- 7—San Antonio Thrust Fault (fig. 9, in pamphlet); separates Monterey Formation from Santa Margarita Sandstone in a 40-m-wide shear zone (strike N. 35° W., dip 86° to southwest) (this study)
- 8—Espinosa section of the Rinconada Fault; apparent truncation of older alluvium and associated alluvial fan surfaces against east-facing scarp (Hart, 1985)
- 9—Middle Pleistocene (estimated age, 400–300 ka) alluvial fan surface that is offset vertically 3 to 6 m by Espinosa section of the Rinconada Fault (Klaus, 1999)
- 10—Location of excavation that exposed folded rocks of the Paso Robles Formation in the footwall of the Los Lobos Thrust Fault (Gribi, 1979). Overlying middle to late Pleistocene stream-terrace deposits are undeformed
- 11—Los Lobos Thrust Fault, exposed in trench; Pancho Rico Formation is thrust over Paso Robles Formation; 0.5-m-wide fault gouge dips 40° to southwest (Thorpe, unpub. data, 1970, in Dibblee, 1979)
- 12—Reliz Fault, exposed in roadcut at north end of bridge (strike N. 30° W., dip 74° to southwest) (fig. 10, in pamphlet); Pleistocene fluvial terrace is not offset (Schubel, 1940; Tinsley and Dohrenwend, 1979)
- 13—Location of magnetometer survey that indicates magnetic “low” of 6007, as well as seismic-refraction survey that indicates bedrock step at depth of 160 feet (49 m), both suggesting buried fault trace (Wire, unpub. data, 1974)
- 14—Las Palmas Fault, exposed in trench (fig. 11, in pamphlet); fault offsets Pliocene(?)–Pleistocene continental deposits but does not offset overlying late Pleistocene colluvium (Terratech, Inc., unpub. data, 1989)
- 15—Pliocene(?)–Pleistocene continental deposits, exposed on west side of River Road (strike N. 70° W., dip 52° to northeast) (Tinsley, 1975)
- 16—Location of U.S. Geological Survey DMW-1 well that contains anomalously thick section of Purisima Formation (Hanson and others, 2002)
- 17—Location of gravity and aeromagnetic surveys that suggest that Reliz Fault continues offshore (Langenheim and others, 2002; R.C. Jachens, unpub. data, 2002)

Base projected from 1:250,000-scale U.S. Geological Survey Digital Raster Graphic (DRG) topographic-bathymetric maps; Monterey, 1998; San Luis Obispo, 1998.
Original projection: UTM Zone 10, 1983 North American Datum
Current projection: UTM Zone 10, 1983 North American Datum

Hillshade created from 1 arc-second U.S. Geological Survey National Elevation Dataset (NED) digital elevation model, 2007
Original projection: Geographic coordinate system
Current projection: UTM Zone 10, 1983 North American Datum

Ocean boundary simplified from California Spatial Information Library “County Boundaries (1:24,000)” shapefile, 2005
Original projection: California Teale Albers, 1927 North American Datum
Current projection: UTM Zone 10, 1983 North American Datum

APPROXIMATE MEAN DECLINATION, 2009

SCALE 1:250 000
5 0 5 10 15 20 MILES
5 0 5 10 15 20 25 KILOMETERS

CONTOUR INTERVAL 200 FEET
DOTTED LINES REPRESENT 100-FOOT INTERVALS
NATIONAL GEODETTIC VERTICAL DATUM OF 1929
BATHYMETRIC CONTOUR INTERVALS: 10 METERS TO THE 200 METER DEPTH,
50 METERS TO THE MAXIMUM DEPTH
DATUM: MEAN LOWER LOW WATER
SHORELINE REPRESENTS MEAN HIGH WATER

MAP LOCATION

Mapping compiled in 2002–2003
GIS database and digital cartography by Lewis I. Rosenberg
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Map of the Rinconada and Reliz Fault Zones, Salinas River Valley, California

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