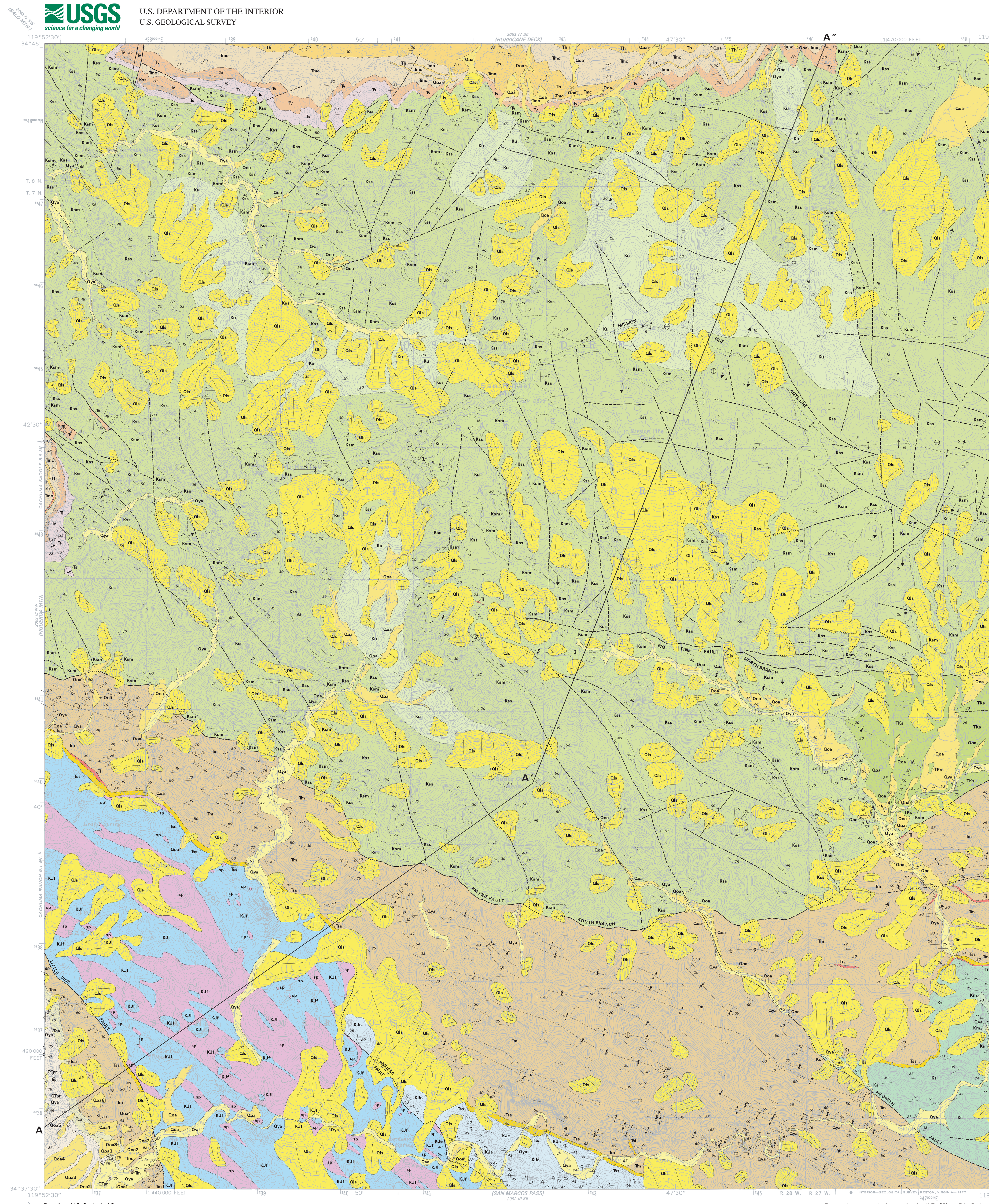
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OPEN-FILE REPORT 01–290
Pamphlet accompanies map



Base from U.S. Geological Survey 7.5' San Rafael Mtn. quadrangle, photorevised 1988

Polyconic projection

APPROXIMATE MEAN DECLINATION, 1988

SCALE 1:24 000

1 MILE

7000 FEET

1 KILOMETER

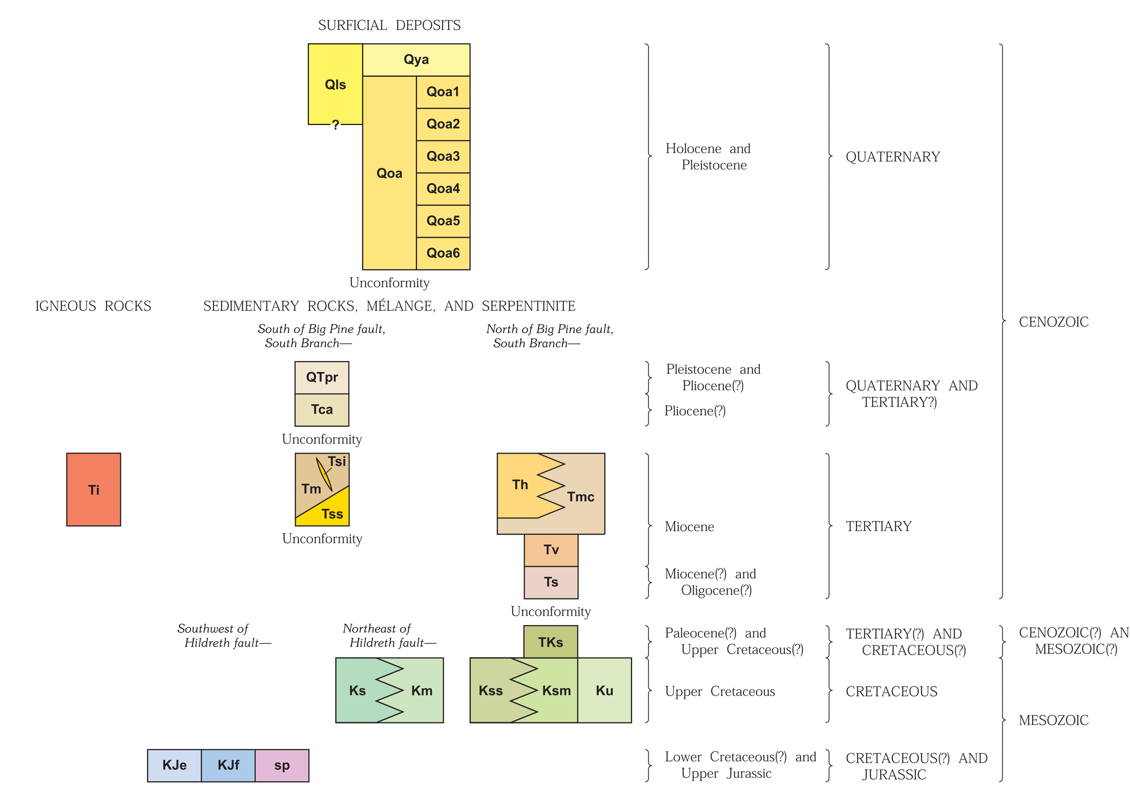
CONTOUR INTERVAL 40 FEET

MAP LOCATION

Reconnaissance geologic mapping by H.E. Clifton, D.L. Durham, H.D. Gower, and J.G. Vedder, April-May 1965. Selective geologic mapping, including helicopter overflights, by Hugh McLean and J.G. Vedder, September 1980; September 1981. Detailed geologic mapping of Franciscan Complex by A.D. Wahl, 1990-1992. Detailed geologic mapping by R.G. Stanley and J.G. Vedder, September 1996; June, September, and October 1997. Detailed geologic mapping by R.G. Stanley, June, September, October 1998.

Digital preparation by R.G. Stanley, S.E. Graham, and Z.C. Valin.

CORRELATION OF MAP UNITS



MAP UNITS

- Qls — **Landslide deposits (Quaternary)**
- Qya — **Young alluvium (Quaternary)**
- Qoa — **Old alluvium (Quaternary)**
- QTpr — **Paso Robles(?) Formation (Pleistocene and Pliocene?)**
- Tca — **Careaga Sandstone (Pliocene?)**
- Tsi — **Unnamed sandstone intrusive into the Monterey Formation (Miocene)**
- Ti — **Unnamed intrusive and extrusive rocks (Miocene)**
- Tm — **Monterey Formation (middle and lower Miocene)**
- Th — **Hurricane Deck Formation of Thomas and others (1988) (middle and lower Miocene)**
- Tmc — **Unnamed mudstone (middle and lower Miocene)**
- Tss — **Unnamed sandstone (lower Miocene)**
- Tv — **Vaqueros(?) Formation (lower Miocene)**
- Ts — **Simmler(?) Formation (lower Miocene? and Oligocene?)**
- TKs — **Mudstone and subordinate sandstone (Paleocene? and Upper Cretaceous?)**
- Kss — **Sandstone and subordinate mudstone and conglomerate (Upper Cretaceous)**
- Ksm — **Mudstone and subordinate sandstone (Upper Cretaceous)**
- Ku — **Sandstone, mudstone, and subordinate conglomerate (Upper Cretaceous)**
- Ks — **Sandstone and subordinate mudstone (Upper Cretaceous)**
- Km — **Mudstone and subordinate sandstone (Upper Cretaceous)**
- KJe — **Espada Formation of Dibblee (1950, 1966) (Lower Cretaceous? and Upper Jurassic)**
- KJf — **Franciscan Complex (Lower Cretaceous? and Upper Jurassic)**
- sp — **Serpentinite (Lower Cretaceous? and Upper Jurassic)**

EXPLANATION

Contact—Located accurately. Long dash where located approximately; short dash where inferred. Intertonguing contacts diagrammatic and (or) generalized

Fault—Located accurately. Long dash where located approximately; short dash where inferred; dotted where concealed. Arrows indicate apparent relative direction of movement (shown in cross section only)

Anticline—Long dash where located approximately; short dash where inferred

Overturned anticline—Long dash where located approximately; short dash where inferred

Syncline—Long dash where located approximately; short dash where inferred

Overturned syncline—Long dash where located approximately; short dash where inferred

Strike and dip of bedding—
Inclined
25 **Orientation measured on the ground**
25 **Orientation estimated from helicopter or distant sighting**
25 **Orientation estimated from aerial photographs**
Overturned
25 **Orientation measured on the ground**
25 **Orientation estimated from helicopter or distant sighting**
25 **Orientation estimated from aerial photographs**
Vertical
Orientation measured on the ground
Orientation estimated from helicopter or distant sighting
Orientation estimated from aerial photographs

Horizontal or nearly horizontal—Estimated from the ground or from aerial photographs

25 **Apparent dip of bedding**—Estimated from the ground or from aerial photographs

Landslide area—Arrows show direction of downslope movement. Interpreted mainly from aerial photographs

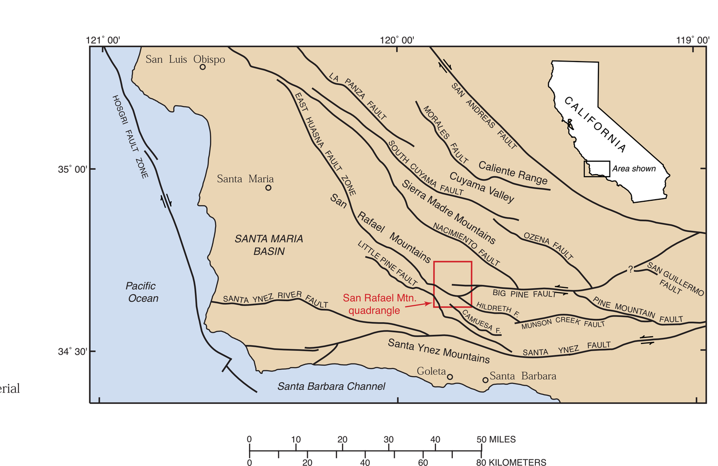
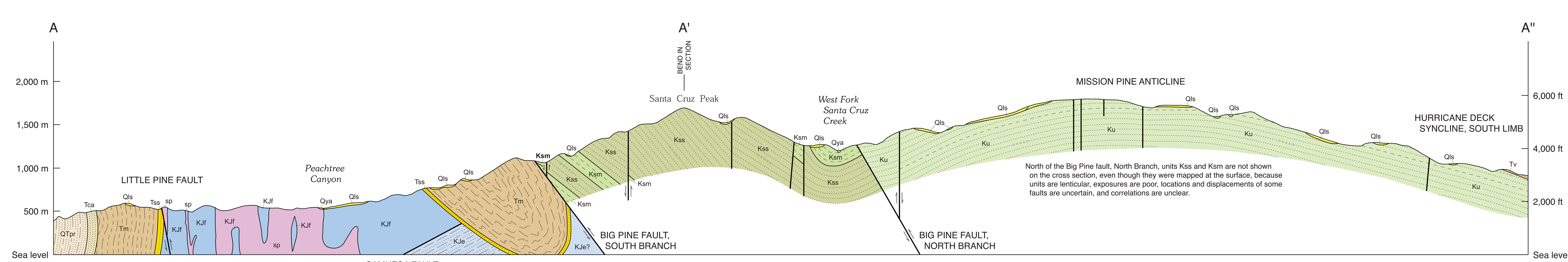


Figure 1. Map showing locations of San Rafael Mtn. quadrangle and selected faults in southwestern California.



Contacts between Franciscan Complex (KJf) and serpentinite (sp) shown diagrammatically

Small-scale folding in Monterey Formation (Tm) shown diagrammatically. Location and dip of Camuesa fault uncertain in this area

Distribution of sandstone, mudstone, and conglomerate in Upper Cretaceous strata (units Kss, Ksm, Ku) shown diagrammatically.

GEOLOGIC MAP AND DIGITAL DATABASE OF THE SAN RAFAEL MTN. 7.5-MINUTE QUADRANGLE, SANTA BARBARA COUNTY, CALIFORNIA

By
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2001

This report is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards or with the North American Stratigraphic Code. Any use of trade, firm, or product names in this publication is for descriptive purposes only and does not imply endorsement by the U.S. Government.

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