

EXPLANATORY NOTES

This preliminary map is one of a series that covers a large part of the Los Padres National Forest and adjoining areas from the vicinity of Santa Margarita to Big Pine Mountain. Most of the fieldwork for this map was done at intervals during 1980, 1981, and 1982. From 1980 through 1983, the regional mapping was supported by funds supplied under the provisions of the Wilderness Act for a survey of the mineral resource potential of designated "wilderness" and "roadless" areas.

Because large parts of this map were constructed using reconnaissance field methods of widely separated ground traverses, helicopter overflights, and photogeology, contacts and structures are highly interpretive. For example, most faults shown by short dashes were inferred by examination of aerial photographs.

Rock units northeast of a line connecting San Juan Creek, Barrett Creek, and Chimineas Ranch were compiled largely from unpublished 1:62,500-scale mapping by T.W. Dibblee, Jr., and 1:50,000-scale mapping by J.A. Bartow. The crystalline rocks adjoining Barrett Creek were mapped by D.C. Ross (1972). To supplement the structural control, selected strike and dip symbols were compiled from unpublished reconnaissance maps of the Branch Mountain 15' quadrangle by T.W. Dibblee, Jr., and R.D. Brown, Jr.

Designation of submarine-fan lithofacies (Walker and Mutti, 1973) in the Upper Cretaceous, Paleocene (?) and Eocene strata is generalized from field notes.

SYMBOLS

- Long dashes where approximately located; short dashes where inferred; interlocking contacts diagrammatic.
- Fault trace  
U, relatively upthrown side; D, relatively downthrown side; arrows, inferred direction of strike slip; bar and number indicate dip of fault plane; long dashes where approximately located; short dashes where inferred; dots where concealed.
- Anticline, approximate crestline  
Short dashes where inferred
- Syncline, approximate troughline  
Short dashes where inferred
- Landslide area  
Arrows show direction of movement
- Strike and dip of bedding  
Solid symbol, measured on the ground; broken dip line, estimated from helicopter or distant sighting; broken dip and strike lines, estimated from aerial photographs
- Strike and dip of overturned beds  
Solid and broken symbols described above
- Strike of vertical beds  
Solid and broken symbols described above
- Horizontal or nearly horizontal beds  
Solid and broken symbols described above
- Apparent dip of beds  
AB EG
- Generalized submarine-fan lithofacies of Walker and Mutti (1973)
- Fossil locality

DESCRIPTION OF MAP UNITS

- QUATERNARY DEPOSITS**
- Holocene and Pleistocene Deposits
- Qya Young alluvium—Gravel, sand, and silt along modern stream channels, in fans, and on flood plains
- Qoa Old alluvium—Gravel, sand, and silt generally perched above modern stream channels; dissected; depositional surfaces preserved at base
- QUATERNARY AND/OR TERTIARY SEDIMENTARY ROCKS**
- Pleistocene and Pliocene (?) sedimentary rocks
- QTn Sandstone, conglomerate, and mudstone; semiconsolidated nonmarine; derived chiefly from nearby pre-Pliocene sedimentary rocks; unconformity at base; may correlate in part with Paso Robles Formation of Dibblee (1973a) and unit Qca
- TERTIARY SEDIMENTARY ROCKS**
- Pliocene sedimentary rocks
- Tmo Morales Formation—conglomerate, sandstone, and minor mudstone; semiconsolidated; nonmarine; indistinctly bedded; derived chiefly from nearby pre-Pliocene rocks; unconformity at base
- Miocene sedimentary rocks
- Tsm Santa Margarita Formation—sandstone, minor pebble conglomerate; shallow marine; indistinctly bedded; contains "Margaritan" Stage mollusks and echinoids
- Tsmc Clayey siltstone and mudstone; lenticular; contains middle (?) Miocene foraminifers; occurs southwest of La Panza fault in lower part of unit Tsm
- Tmw Whitestock Bluff Shale Member of the Monterey Formation—shale and claystone; marine; laminated to thin bedded; generally siliceous; contains Retzius (?) and Leisian Stage foraminifers; Dibblee (1973a, b) described lithologic variations and stratigraphic relations in this area and in adjoining areas
- Tma Salton Shale Member of the Monterey Formation—claystone, siltstone, and mudstone; marine; thin to indistinctly bedded; calcareous to siliceous; contains Retzius Stage foraminifers; Dibblee (1973a, b) described lithologic variations and stratigraphic relations in this area and in adjoining areas
- Tvp Painted Rock Sandstone Member of the Vaqueros Formation—sandstone, conglomeratic sandstone, and minor siltstone; shallow marine; thick bedded to lenticular; contains early Miocene mollusks; unconformable on Upper Cretaceous strata, metamorphic rocks, and the Simmler Formation
- Oligocene (?) sedimentary rocks
- Ts Simmler Formation—Conglomerate, breccia and mudstone; nonmarine; consists chiefly of detritus derived from underlying sedimentary rocks; unconformable on unit Ku
- Eocene and/or Paleocene sedimentary rocks**
- Tuo Sandstone, conglomerate and minor mudstone; interbedded and lenticular; submarine fan deposits; abundant siliceous metavolcanic clasts in conglomerate; mudstone contains poorly preserved Paleogene (?) foraminifers
- TERTIARY IGNEOUS ROCKS**
- Tb Basaltic flows and/or intrusions; forms sill-like bodies or flows of early or middle Miocene age; occurs in unit Tvp
- UPPER CRETACEOUS SEDIMENTARY ROCKS**
- Ku Sandstone, conglomerate, and concretionary mudstone; lenticular and interbedded; submarine fan deposits; mudstone contains sparse poorly preserved Late Cretaceous foraminifers; sandstone near Deadman Flat contains Maastrichtian (?) mollusks, may include strata of Paleocene age in upper part
- ROCKS OF UNKNOWN AGE ON BARRETT RIDGE**
- B Gneiss; dominantly quartz-feldspathic; grading to biotite-rich gneiss or less commonly to biotite and hornblende schist; strongly foliated
- m Marble; occurs as fault breccia along Chimineas fault
- a Alaskite-apatite suite; medium-grained felsic alaskite, minor apatite; occurs as large mass intruding gneiss, and as sills and dikes
- q Quartzite (quartz schist); occurs as lenses at south end of Barrett Ridge; layering likely reflects remnant bedding

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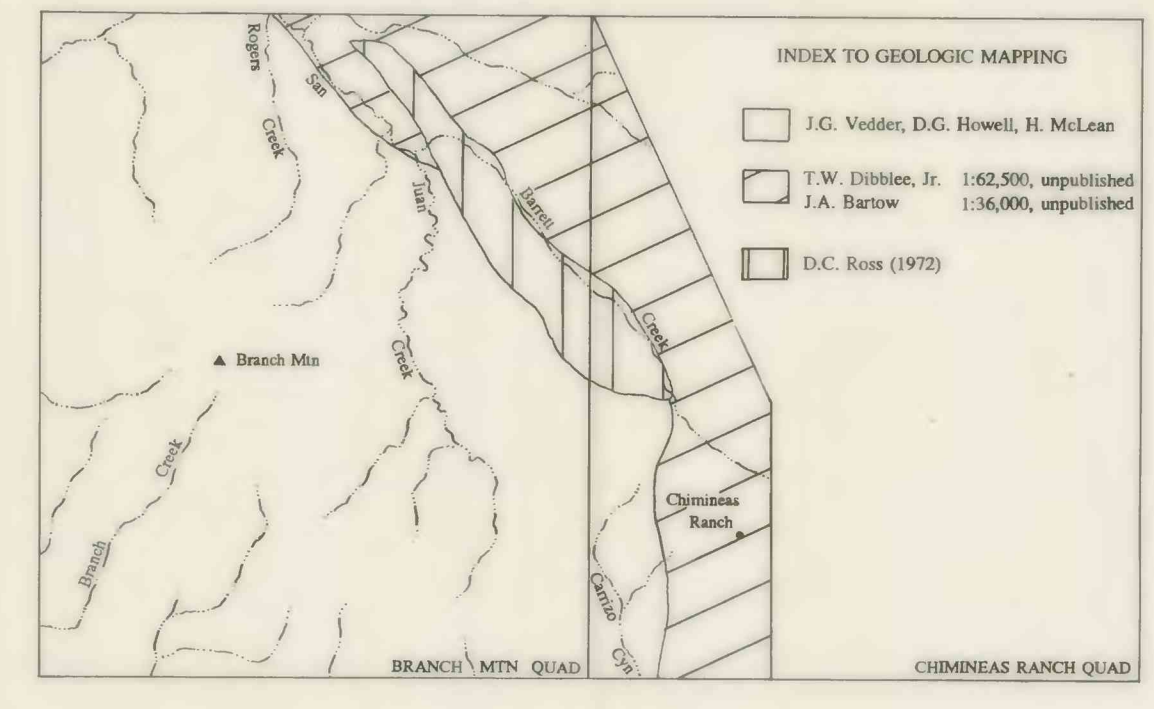
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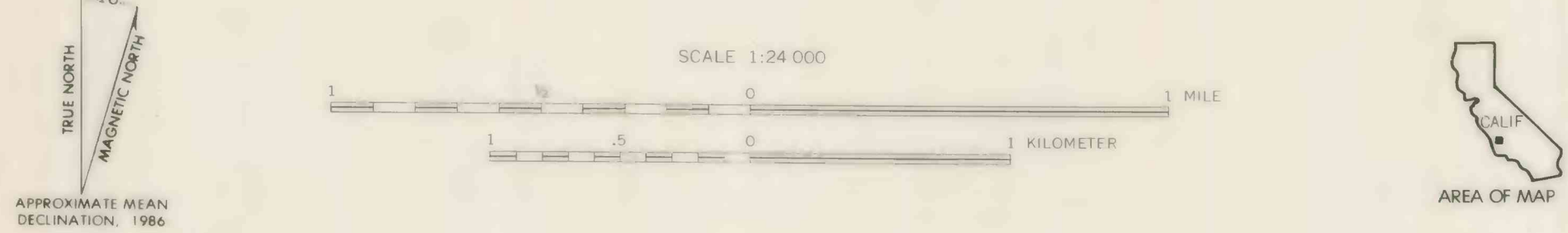
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Base from U.S. Geological Survey Branch Mountain, 1967, and Chimineas Ranch, 1959



GEOLOGIC MAP OF BRANCH MOUNTAIN QUADRANGLE AND PART OF CHIMINEAS RANCH QUADRANGLE, CALIFORNIA

by

J.G. Vedder, D.G. Howell, Hugh McLean, and J.M. Joyce

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Geology mapped at intervals in 1980, 1981, and 1982 by J.G. Vedder, D.G. Howell, Hugh McLean, and J.M. Joyce. Area northeast of Barrett Creek mapped by T.W. Dibblee, Jr., and J.A. Bartow. Crystalline rocks adjoining Barrett Creek mapped by D.C. Ross. Open-file format prepared by L.D. Gergen.

This map is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards and stratigraphic nomenclature.