

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

U.S. GEOLOGICAL SURVEY
OPEN FILE MAP

75-394

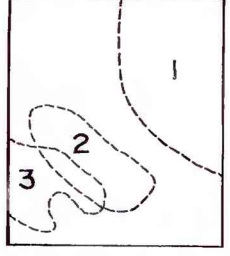
PANOCHÉ VALLEY QUADRANGLE
CALIFORNIA
15 MINUTE SERIES (TOPOGRAPHIC)

Approximate locality of ammonite fossils from Panoche Formation in Panoche Hills; age within Upper Cretaceous as follows (from Payne, 1960, fig. 3)

- 1. Albian
- 2. Coniacian
- 3. Santonian
- 4. Cenomanian
- 5. Turonian
- 6. Coniacian
- 7. Santonian
- 8. Santonian
- 9. Santonian
- 10. Campanian?
- 14. Campanian

Units of Panoche Fm. (Group) mapped in Panoche Hills by Payne (1960, 1962) (Ss - sandstone; sh - shale; cg - conglomerate lenses)

| Symbol | Formation | Goudkoff zones |
|-----------------|----------------|---------------------|
| Kps | Uhalde ss & sh | D, E, F |
| Kps | Television ss | F |
| Kp ₃ | Up. Marlife sh | F, G, I |
| Kps | Llanada ss | G ₁ |
| Kp ₅ | Lo. Marlife sh | G ₂ |
| Kps | Ortiguilla ss | inclu. Carnerado cg |
| Kp ₇ | Ciervo sh | |
| Kps | Benito ss | |
| Kp ₉ | Redil sh | inclu. Papanatus cg |



INDEX TO SOURCE OF GEOLOGY

Entire quadrangle mapped by T. W. Dibblee Jr., 1972, 1974, assisted by T. H. Nilsen, 1974, on Eocene strata; original mapping by - I. Payne, 1960, 2. Yates and Hilpert, 1945, 3. Enos, 1959



INDEX TO 7 1/2 MINUTE QUADRANGLE BASE MAPS

- Contact**
Queried where gradational or approximately located
- Fault**
Dashed where doubtful
Dotted where concealed
U, Upthrown side
D, Downthrown side
Arrows indicate horizontal movement
- Anticline** **Syncline**
Axis of fold, showing direction of plunge
- Horizontal**
30°
Inclined
Vertical
70°
Overturned
- Abandoned well drilled for oil or gas



- Qg** Stream gravel and sand
- Qa** Alluvium
- Qls** Landslide rubble
- Qoa** Older alluvium
- UNCONFORMITY**
- QTI, QTS** Valley sediments (terrestrial)
QTI - caliche marl, cl.; Tulare
QTS - Gravel, sand Form.
QTS - Gravel - Santa Clara Fm.
(San Benito Gravel of Wilson, 1943)
- UNCONFORMITY**
- Tun** Unnamed non-marine sediments (greenish to reddish clay, sandstone and pebble conglom.)
- UNCONFORMITY**
- Tb** Volcanic rocks
Tb - basalt
- Tms, Tm, Tmc, Tts** Marine sedimentary rocks (middle Miocene)
Tms - sandstone
Tm - Monterey Shale
Tmc - semi-silic. to argillac
Tts - Temblor Sandstone
- LOCAL UNCONFORMITY**
- Tki, Tk, Tks** Kreyenhagen Shale (marine, late Eocene)
Tki - semi-siliceous shale
Tk - argillaceous shale
Tks - sandstone
- Tdy** Domengine Sandstone (marine, middle Eocene (includes Yokut Sandstone of White, 1940))
- UNCONFORMITY**
- Tlc** Lodo Formation (marine; lower Eocene, possibly older where quarried)
- Tlk, Tlh, Tli** Honda (clay) Shale Member
Tli - Cantua Sandstone Member
- TKh** Clay shale (marine; L. Eoc., Paleoc., and/or U. Cretac.)
- Km, Kms** Moreno Shale (marine)
Km - clay shale
Kms - sandstone
- Kp, Kpi, Kps, Kpc** Panoche Formation (marine)
Kp - micaceous shale
Kpi - semi-silic. shale
Kps - sandstone, minor interbedded shale
Kpc - cobble conglom.
- Kgf** Gravely Flat Fm. of Rose & Calburn, 63 (dark shale, thin basal sandstones)
- UNCONFORMITY**
- di** Dioritic rocks
- pe, sp, pr** Peridotite Serpentine Prehnite
- fb, fa** Volcanic rocks
fb - basalt, including pillow-lavas
fa - andesitic rocks incl. keratophyre
fi - tuff breccia and graywacke
- fgl, fc, fs** Franciscan rocks (marine; slightly to severely sheared)
fgl - glaucophane blue schist
fg - greenstone
fc - red and green chert
fs - graywacke sandstone and micaceous shale, slightly to pervasively sheared
fm - melange (chaotic mixture) of pervasively sheared shale, graywacke and greenstone

Holocene
QUATERNARY
Pleistocene
Pliocene
Miocene
TERTIARY
Eocene
Upper Cretaceous
Lower Cretaceous
JURASSIC OR CRETACEOUS

Mapped, edited, and published by the Geological Survey
Control by USGS and USC&GS
Topography by planetable surveys 1940-1941
Culture revised from aerial photographs taken 1949 and 1950. Field check 1956
Polyconic projection, 1927 North American datum
10,000-foot grid based on California coordinate system, zone 4
1000-meter Universal Transverse Mercator grid ticks, zone 10, shown in blue
Dashed faint lines indicate approximate locations

SCALE 1:62,500

ROAD CLASSIFICATION
Light-duty Unimproved dirt

PANOCHÉ VALLEY, CALIF.
N. 3630 - W. 12045 / 15
1956
AMS 1897 III - SERIES 7593

MAPPED AND COMPILED BY T. W. DIBBLEE JR., 1975

References:
White, R. T., 1940, A.A.P.G. Bull. v. 24, p. 1722-1751
Wilson, I. F., 1943, Calif. Jour. Mines and Geol., State Min. Rpt. 39, n. 2, p. 183-270
Payne, M. B., 1962, Calif. Div. Mines and Geol. Bull. 181, pl. 13
Yates, R. G. and Hilpert, L. S., 1945, Calif. Div. Mines Rpt. 41, pl. 1
Enos, P., 1965, Calif. Div. Mines and Geol. Map sheet 5
Payne, M. B., 1960, Type Panoche, Panoche Hills area, Fresno Co., Cal.; Pac. Sec. S.E.P.M. 1960 spring field trip

GEOLOGIC MAP OF THE PANOCHÉ VALLEY QUADRANGLE, CALIFORNIA