U.S. GEOLOGICAL SURVEY
OPEN FILE MAP

75-394

PACHECO PASS

Turonian | Santonian & Coniacian | Campanian | Maestrichtian

Contact
Querried where gradational or approximately located

Fault
Dashed where uncertain
Dotted where concealed
and location approximate
arrows indicate horizontal movement
U-upthrown, D-downthrown side

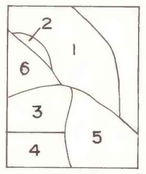
anticline — syncline
Surface axis of fold, end arrow indicates direction of plunge

inclined — overturned — vertical
Strike and dip of strata

Test hole

6
Fossil locality (from Schilling, 1961)

INDEX TO 7½ MINUTE QUADRANGLE BASE MAPS



INDEX TO SOURCE OF GEOLOGY

1. Schilling, 1961, and H.S. Sonneman, fieldwork, 1967†
2. E.H. Bailey, D.L. Jones and M.C. Blake fieldwork, 1968
3. Ernst and others, 1970
4. Cotton, 1971†
5. T.W. Dibblee Jr., fieldwork, 1973–74
6. unmapped†

† Geology interpreted or modified by T.W. Dibblee Jr. from aerial photographs

References

Ernst, W.G.; Seki, Y.; Dnuki, H.; Gilbert, M.C., 1970, Comparitive study of low grade metamorphism in the Calif. Coast Ranges and the outer metamorphic belt of Japan: Geol. Soc. America Memoir 124, p. 276

Cotton, W.R., 1971, Preliminary geol. map of the Franciscan rocks in the central part of the Diablo Range, Santa Clara and Alameda Counties, California USGS Misc. Field Studies Map MF 343

Schilling, F.A., 1961, Geol. map of Cretaceous and Tertiary Formations in the Pacheco Pass Quadr., Calif. (Scale 1:31680) Ph.D. thesis, Stanford Univ.

Base from U.S.G.S. 7.5' topo series: SAN LUIS DAM, 1969, 20 ft.; PACHECO PASS, 1955, PR. 1971, 40 ft.; CREVISON PEAK, 1955, PR. 1971, 40 ft.; HOWARD RANCH, 1953, PR. 1971, 25 ft.; CALIFORNIA

1 0 1 2 3 4 MILES
3000 0 3000 6000 9000 12000 15000 18000 21000 FEET
1 0 1 2 3 4 5 KILOMETERS

SCALE: 1:62,500
Compiled Base Map Unit, Menlo Park, California 6/73 (6/12)

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

COMPILED BY T.W. DIBBLEE JR., 1975

GEOLOGIC MAP OF THE PACHECO PASS QUADRANGLE, CALIFORNIA

4 August. 1975 TWD

QUATERNARY
- Holocene
- Pleistocene

TERTIARY
- ? Pliocene
- Miocene
- Eocene
- Paleocene

CRETACEOUS
- Upper
- ? Lower?

JURASSIC
- Upper
- ? Lower?

JURASSIC OR CRETACEOUS

Qme — Man-made enbankment

Qa — Alluvium

Qls — Landslide rubble

Qoa — Older alluvium

— UNCONFORMITY —

QTt — Tulare Formation (terrestrial gravel and clay)

— UNCONFORMITY —

Tvb — Quien Sabe volcanic rocks - basalt

— UNCONFORMITY —

Tkd — Kreyenhagen Shale and Domengine Sandst., undifferentiated (marine)

Tls — Laguna Seca Sandst. of Briggs, 1953 (fine grained, marine)

Kcs — Crevison Sandst. of Schilling, 1961 (marine; Maastrichtian age)

Km / Kms — Moreno Shale (marine, Maastrichtian age) Km - clay shale; Kms - sandstone

Kp | Kps | Kpc — Panoche Formation (marine, Campanian to Turonian age)
Kp - micaceous shale includes thin interbeds of sandstone
Kps - sandst. includes interbeds of shale
Kpc - cobble conglom. includes interbeds of sandstone and shale
sub numbers indicate ages as follows where designated by fossils *
Kp_1 - Maastrichtian; Kp .- Campanian
Kp_2 - Coniacian - Santonian
Kp_3 - Turonian
* (Schilling, 1961; Sonneman

JKh — Hawk Shale of Schilling, 1961 (marine, Tithonian age in part)

vb / vr — Unnamed volcanic rocks (extrusive marine)
vb - basaltic rocks
vr - andesitic rocks (keratophyre)

sp — Serpentine
gb — Gabbro

— FAULT CONTACT —

fc | fs | fg | fm | gl — Franciscan rocks (marine eugeosynclinal sedimentary rocks, slightly metamorphosed, pervasively sheared)
fs - hard sandstone (graywacke) includes interbedded micaceous shale
fc - chert
fg - greenstone (metamorphosed from basalt
gl - glaucophane blueschist
fm - melange - sheared claystone containing monolithic fragments of greywacke and few of chert, greenstone and glaucophane rock

† may be in part Campanian