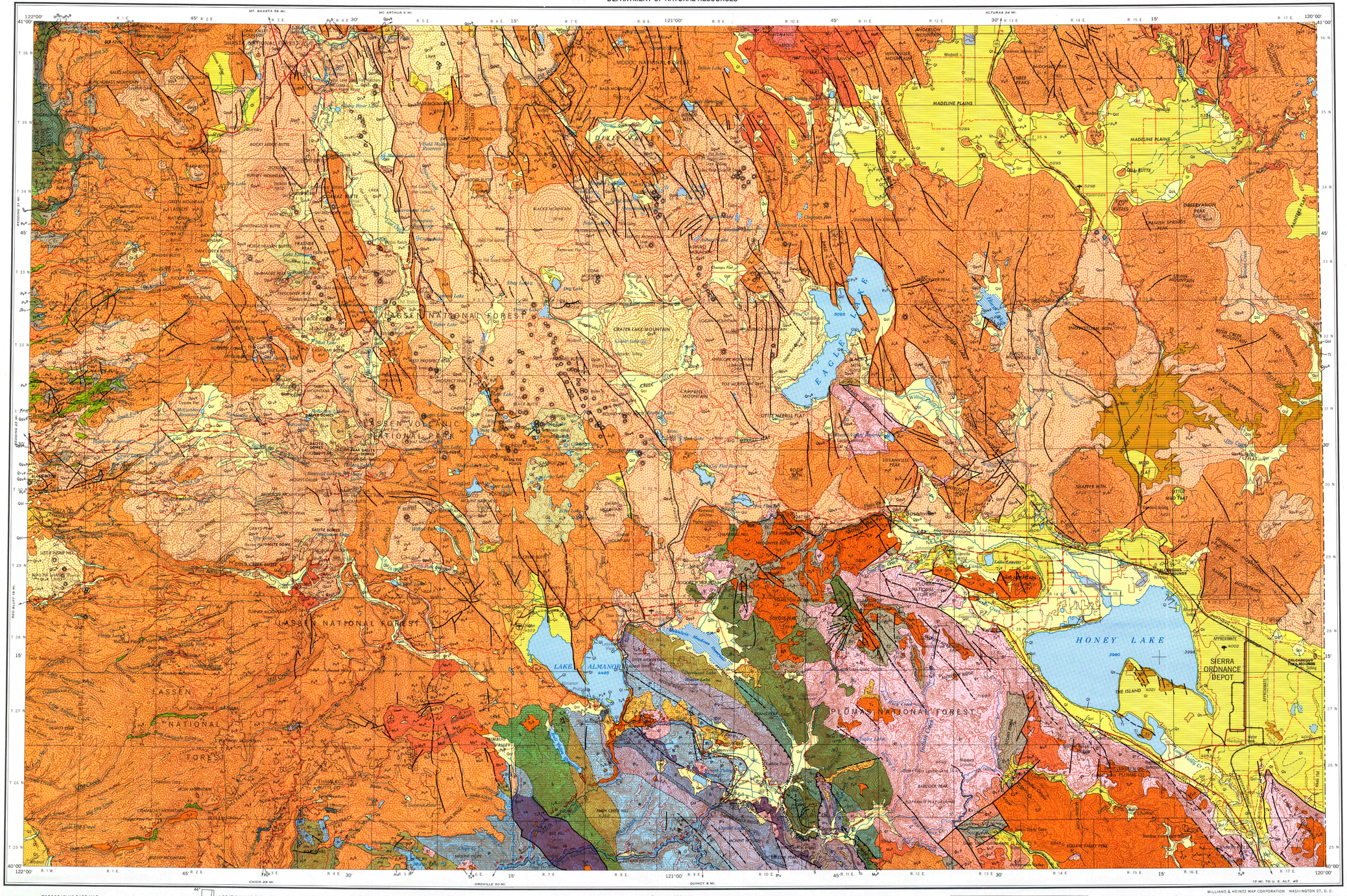
DIVISION OF MINES
IAN CAMPBELL, CHIEF
GORDON B. OAKESHOTT, DEPUTY CHIEF

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

GEOLOGIC MAP OF CALIFORNIA
WESTWOOD SHEET



EXPLANATION

SEDIMENTARY AND METASEDIMENTARY ROCKS

CENOZOIC

QUATERNARY

Recent

- Dune sand (Qs)
- Alluvium (Qal)
- Stream channel deposits (Qsc)
- Fan deposits (Qf)
- Basin deposits (Qb)
  (GREAT VALLEY)
- Salt deposits (Qsl)
- Quaternary lake deposits (Ql)
- Glacial deposits (Qg)
- Quaternary nonmarine terrace deposits (Qt)

Pleistocene

- Pleistocene marine and marine terrace deposits (Qm)
- Pleistocene nonmarine (Qc)

Undivided

- Plio-Pleistocene nonmarine (QP)

TERTIARY

Pliocene

- Undivided Pliocene nonmarine (Pc)
- Upper Pliocene nonmarine (Puc)
- Upper Pliocene marine (Pu)
- Middle and/or lower Pliocene nonmarine (Pmc)
- Middle and/or lower Pliocene marine (Pm)

Miocene

- Undivided Miocene nonmarine (Mc)
- Upper Miocene nonmarine (Muc)
- Upper Miocene marine (Mu)
- Middle Miocene nonmarine (Mmc)
- Middle Miocene marine (Mm)
- Lower Miocene marine

Oligocene

- Oligocene nonmarine (Oc)
- Oligocene marine (O)

Eocene

- Eocene nonmarine (Ec)
- Eocene marine (E)

Paleocene

- Paleocene nonmarine (Epc)
- Paleocene marine (Ep)

Undivided

- Cenozoic nonmarine (TCn)
- Tertiary nonmarine (Tn)
- Tertiary lake deposits (Tl)
- Tertiary marine

MESOZOIC

CRETACEOUS

- Undivided Cretaceous marine (K)
- Upper Cretaceous marine (Ku)
- Lower Cretaceous marine (Kl)
- Knoxville formation (Kn)

JURASSIC

- Upper Jurassic marine (Ju)
- Middle and/or Lower Jurassic marine (Jml)

TRIASSIC

- Triassic marine (Tr)

UNDIVIDED

- Pre-Cretaceous metamorphic rocks (Is = limestone or dolomite) (PK Is)
- Pre-Cretaceous metasedimentary rocks (PK s)
- Paleozoic marine (Is = limestone or dolomite) (P Is)

PERMIAN

- Permian marine (P)

CARBONIFEROUS

- Undivided Carboniferous marine (C)
- Pennsylvanian marine (CP)
- Mississippian marine (CM)

DEVONIAN

- Devonian marine (D)

SILURIAN

- Silurian marine (S)

ORDOVICIAN

- Ordovician marine (O)

CAMBRIAN

- Cambrian marine (C)
- Cambrian – Precambrian marine (C-pC)

PRECAMBRIAN

- Undivided Precambrian metamorphic rocks (pC = gneiss, pCs = schist)
- Later Precambrian sedimentary and metamorphic rocks (pC)
- Earlier Precambrian metamorphic rocks (pC)

IGNEOUS AND META-IGNEOUS ROCKS

- Recent volcanic: Qv^r —rhyolite; Qv^a —andesite; Qv^b —basalt; Qv^{py} —pyroclastic rocks (Qv^r)
- Pleistocene volcanic: Qov^r —rhyolite; Qov^a—andesite; Qov^b —basalt; Qov^p —pyroclastic rocks (Qov)
- Quaternary and/or Pliocene cinder cones
- Pliocene volcanic: v^r —rhyolite; v^a—andesite; v^b —basalt; v^p —pyroclastic rocks (Pv)
- Miocene volcanic: Mv^r —rhyolite; Mv^a—andesite; Mv^b —basalt; Mv^p—pyroclastic rocks (Mv)
- Oligocene volcanic: Ov^r—rhyolite; Ov^a—andesite; Ov^b—basalt; Ov^p—pyroclastic rocks (Ov)
- Eocene volcanic: Ev^r —rhyolite; Ev^a — andesite; Ev^b — basalt; Ev^p —pyroclastic rocks (Ev)
- Cenozoic volcanic: QTv^r—rhyolite; QTv^a – andesite; QTv^b —basalt; QTv^p —pyroclastic rocks (QTv)
- Tertiary intrusive (hypabyssal) rocks: T^r —rhyolite; T^a —andesite; T^b —basalt (T)
- Tertiary volcanic: Tv^r – rhyolite; Tv^a—andesite; Tv^b —basalt; Tv^p —pyroclastic rocks (Tv)
- Franciscan volcanic and metavolcanic rocks (KJFv)
- Mesozoic granitic rocks (gr)
- Mesozoic basic intrusive rocks (bi)
- Mesozoic ultrabasic intrusive rocks (ub)
- Jura-Trias metavolcanic rocks (JTrv)
- Pre-Cretaceous metavolcanic rocks (mv)
- Pre-Cenozoic granitic and metamorphic rocks (g-m)
- Paleozoic metavolcanic rocks (PEv)
- Permian metavolcanic rocks (Pv)
- Carboniferous metavolcanic rocks (Cv)
- Devonian metavolcanic rocks (Dv)
- Undivided pre-Devonian and Devonian metavolcanic rocks (pDv)
- Undivided Precambrian granitic rocks (pC gr)

HEAVY BORDER ON BOXES INDICATES UNITS THAT APPEAR ON THIS SHEET

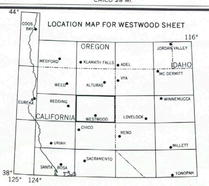
TOPOGRAPHIC BASE MAP

Prepared by the Army Map Service (KCSX), Corps of Engineers, U.S. Army, Washington, D.C. Compiled in 1956 by photogrammetric methods and from: United States Quadrangles, 1:62,000, USGS, 1953; United States Quadrangles; 1:125,000, USGS, Burney, Mineral, 1935; Halls Flat, 1933. Planimetric detail revised by photo-plasimetric methods. Horizontal and vertical control by USC&GS, USGS and CE. Photography field annotated 1954-55.

Land net prepared by the U.S. Geological Survey, 1960.

Corrections and additions to culture by Division of Mines, 1960.

LOCATION MAP FOR WESTWOOD SHEET



Contact
Dashed where approximately located, gradational or inferred

Fault
Dashed where approximately located; dotted where concealed

Thrust fault
Barbs on upper plate; dashed where approximately located, dotted where concealed

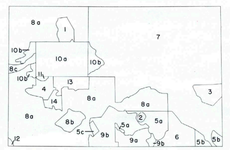
Scale 1:250,000

5 0 5 10 15 20 Statute Miles
5 0 5 10 15 20 25 30 Kilometers

CONTOUR INTERVAL 200 FEET
WITH SUPPLEMENTARY CONTOURS AT 100 FOOT INTERVALS

GEOLOGIC MAP OF CALIFORNIA
OLAF P. JENKINS EDITION
WESTWOOD SHEET

COMPILATION BY P. A. LYDON, T. E. GAY, JR. AND C. W. JENNINGS 1960



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14. Wilson, T. A., unpublished