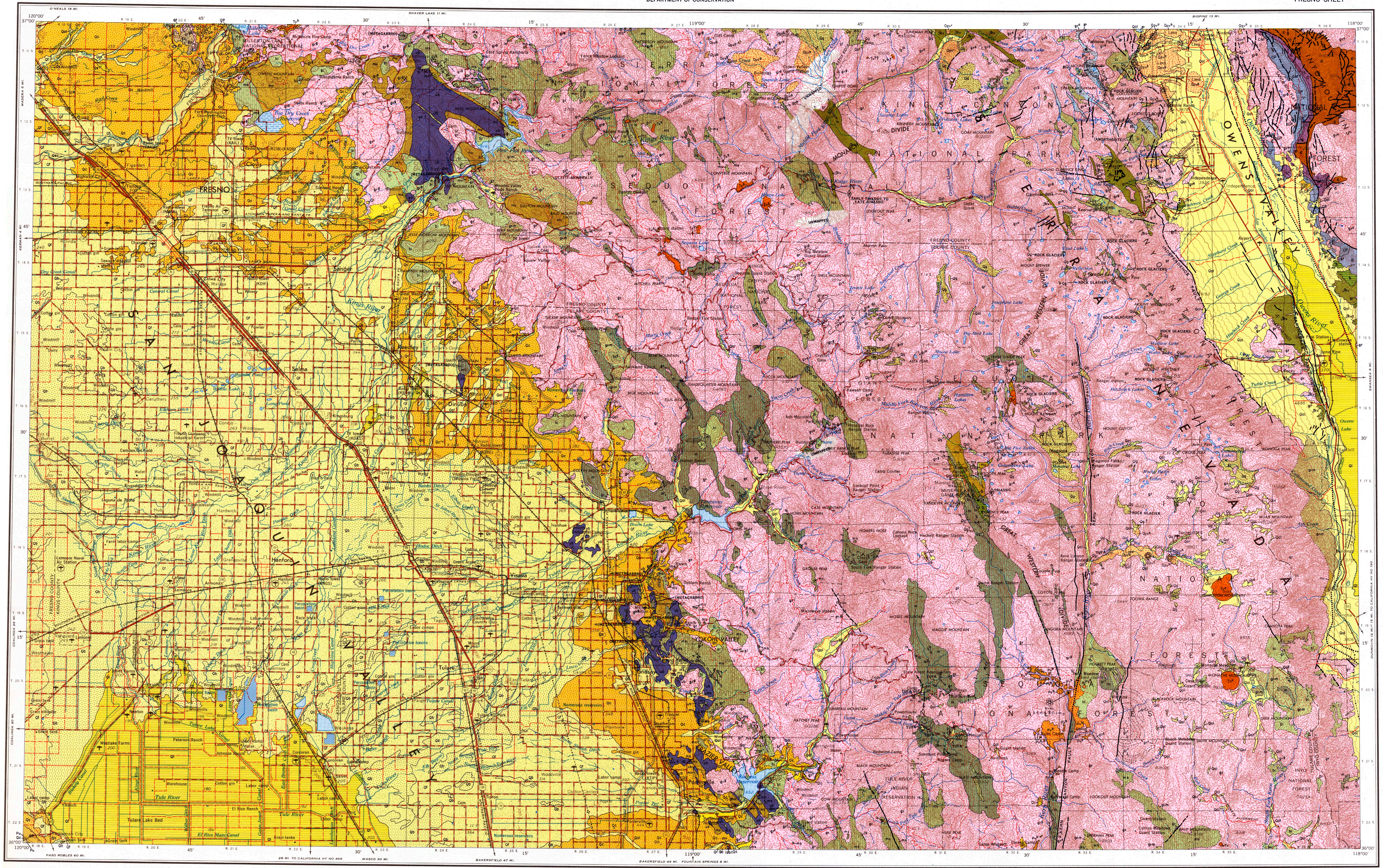
DIVISION OF MINES AND GEOLOGY
IAN CAMPBELL, CHIEF
GORDON B. OAKESHOTT, DEPUTY CHIEF

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF CONSERVATION

GEOLOGIC MAP OF CALIFORNIA
FRESNO SHEET



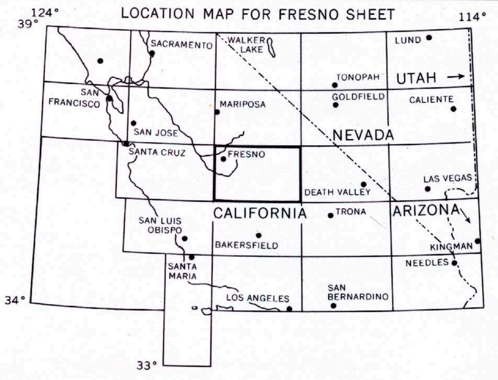
TOPOGRAPHIC BASE MAP

Prepared by the Army Map Service (KC), Corps of Engineers, U.S. Army, Washington, D.C. Compiled in 1961 by photogrammetric methods and from United States Quadrangles, 1:24,000, 1:25,000, 1:50,000, 1:62,500, U.S. Geological Survey and AMS, 1919-56. Planimetric detail revised by photo-planimetric methods. Horizontal and vertical control by USC&GS, USGS, USFS, USCE and USBR. Map field checked 1962.

Land net prepared by U.S. Geological Survey

Minor corrections and additions to culture by California Division of Mines and Geology, 1966

LOCATION MAP FOR FRESNO 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

(Megafossil locality)

(Radiometric age determination)

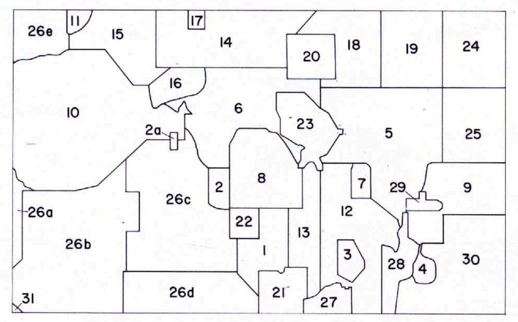
Scale 1:250,000

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
FRESNO SHEET
COMPILATION BY ROBERT A. MATTHEWS AND JOHN L. BURNETT, 1965



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EXPLANATION

SEDIMENTARY AND METASEDIMENTARY ROCKS — IGNEOUS AND META-IGNEOUS ROCKS

CENOZOIC

QUATERNARY

Recent
- Qs — Dune sand
- Qal — Alluvium
- Qsc — Stream channel deposits (GREAT VALLEY)
- Qf — Fan deposits (GREAT VALLEY)
- Qb — Basin deposits (GREAT VALLEY)
- Qrv — Recent volcanic: Qrv[r] —rhyolite; Qrv[a] —andesite; Qrv[b] —basalt; Qrv[p] —pyroclastic rocks
- Qst — Salt deposits
- Ql — Quaternary lake deposits
- Qg — Glacial deposits
- Qt — Quaternary nonmarine terrace deposits

Pleistocene
- Qm — Pleistocene marine and marine terrace deposits
- Qpv — Pleistocene volcanic: Qpv[r] —rhyolite; Qpv[a]—andesite; Qpv[b] —basalt; Qpv[p] —pyroclastic rocks
- Qc — Pleistocene nonmarine
- QP — Plio-Pleistocene nonmarine
- Quaternary and/or Pliocene cinder cones

TERTIARY

Pliocene
- Pc — Undivided Pliocene nonmarine
- Puc — Upper Pliocene nonmarine
- Pu — Upper Pliocene marine
- Pv — Pliocene volcanic: Pv[r] —rhyolite; Pv[a]—andesite; Pv[b] —basalt; Pv[p] —pyroclastic rocks
- Pmlc — Middle and/or lower Pliocene nonmarine
- Pml — Middle and/or lower Pliocene marine

Miocene
- Mc — Undivided Miocene nonmarine
- Muc — Upper Miocene nonmarine
- Mu — Upper Miocene marine
- Mv — Miocene volcanic: Mv[r] —rhyolite; Mv[a] —andesite; Mv[b] —basalt; Mv[p] —pyroclastic rocks
- Mmc — Middle Miocene nonmarine
- Mm — Middle Miocene marine
- Ml — Lower Miocene marine

Oligocene
- Φc — Oligocene nonmarine
- Φv — Oligocene volcanic: Φv[r]—rhyolite; Φv[a] —andesite; Φv[b]—basalt; Φv[p]—pyroclastic rocks
- Φ — Oligocene marine

Eocene
- Ec — Eocene nonmarine
- Ev — Eocene volcanic: Ev[r] —rhyolite; Ev[a] —andesite; Ev[b] —basalt; Ev[p] —pyroclastic rocks
- E — Eocene marine

Paleocene
- Epc — Paleocene nonmarine
- Ep — Paleocene marine

Undivided
- QTc — Cenozoic nonmarine
- QTv — Cenozoic volcanic: QTv[r]—rhyolite; QTv[a]—andesite; QTv[b] —basalt; QTv[p] —pyroclastic rocks
- Tc — Tertiary nonmarine
- Ti — Tertiary intrusive (hypabyssal) rocks: Ti[r]—rhyolite; Ti[a] —andesite; Ti[b] —basalt
- Tl — Tertiary lake deposits
- Tm — Tertiary marine
- Tv — Tertiary volcanic: Tv[r] —rhyolite; Tv[a] —andesite; Tv[b] —basalt; Tv[p] —pyroclastic rocks

MESOZOIC

CRETACEOUS
- K — Undivided Cretaceous marine
- Ku — Upper Cretaceous marine
- Kl — Lower Cretaceous marine
- KJf — Franciscan Formation
- KJfv — Franciscan volcanic and metavolcanic rocks
- gr — Mesozoic granitic rocks: gr[a]-granite and adamellite; gr[g]-granodiorite; gr[t]-tonalite and diorite

JURASSIC
- Jk — Knoxville Formation
- bi — Mesozoic basic intrusive rocks
- Ju — Upper Jurassic marine
- ub — Mesozoic ultrabasic intrusive rocks
- Jml — Middle and/or Lower Jurassic marine
- JTRv — Jura-Trias metavolcanic rocks

TRIASSIC
- TR — Triassic marine

UNDIVIDED
- m, ls — Pre-Cretaceous metamorphic rocks (ls = limestone or dolomite)
- mv — Pre-Cretaceous metavolcanic rocks
- ms — Pre-Cretaceous metasedimentary rocks
- gr-m — Pre-Cenozoic granitic and metamorphic rocks
- P, ls — Paleozoic marine (ls = limestone or dolomite
- Pv — Paleozoic metavolcanic rocks

PALEOZOIC

PERMIAN
- P — Permian marine
- Pmv — Permian metavolcanic rocks

CARBONIFEROUS
- C — Undivided Carboniferous marine
- Cv — Carboniferous metavolcanic rocks
- CP — Pennsylvanian marine
- CM — Mississippian marine

DEVONIAN
- D — Devonian marine
- Dv — Devonian metavolcanic rocks
- Dv? — Devonian and pre-Devonian? metavolcanic rocks

SILURIAN
- S — Silurian marine
- pSs — Pre-Silurian metasedimentary rocks
- pS — Pre-Silurian metamorphic rocks
- pSv — Pre-Silurian metavolcanic rocks

ORDOVICIAN
- O — Ordovician marine

CAMBRIAN
- Є — Cambrian marine

PRECAMBRIAN
- Є? — Cambrian – Precambrian marine
- pЄc — Precambrian igneous and metamorphic rock complex
- pЄ — Undivided Precambrian metamorphic rocks; pЄg = gneiss, pЄs = schist
- pЄgr — Undivided Precambrian granitic rocks
- lpЄ — Later Precambrian sedimentary and metamorphic rocks
- epЄ — Earlier Precambrian metamorphic rocks

HEAVY BORDER ON BOXES INDICATES UNITS THAT APPEAR ON THIS SHEET