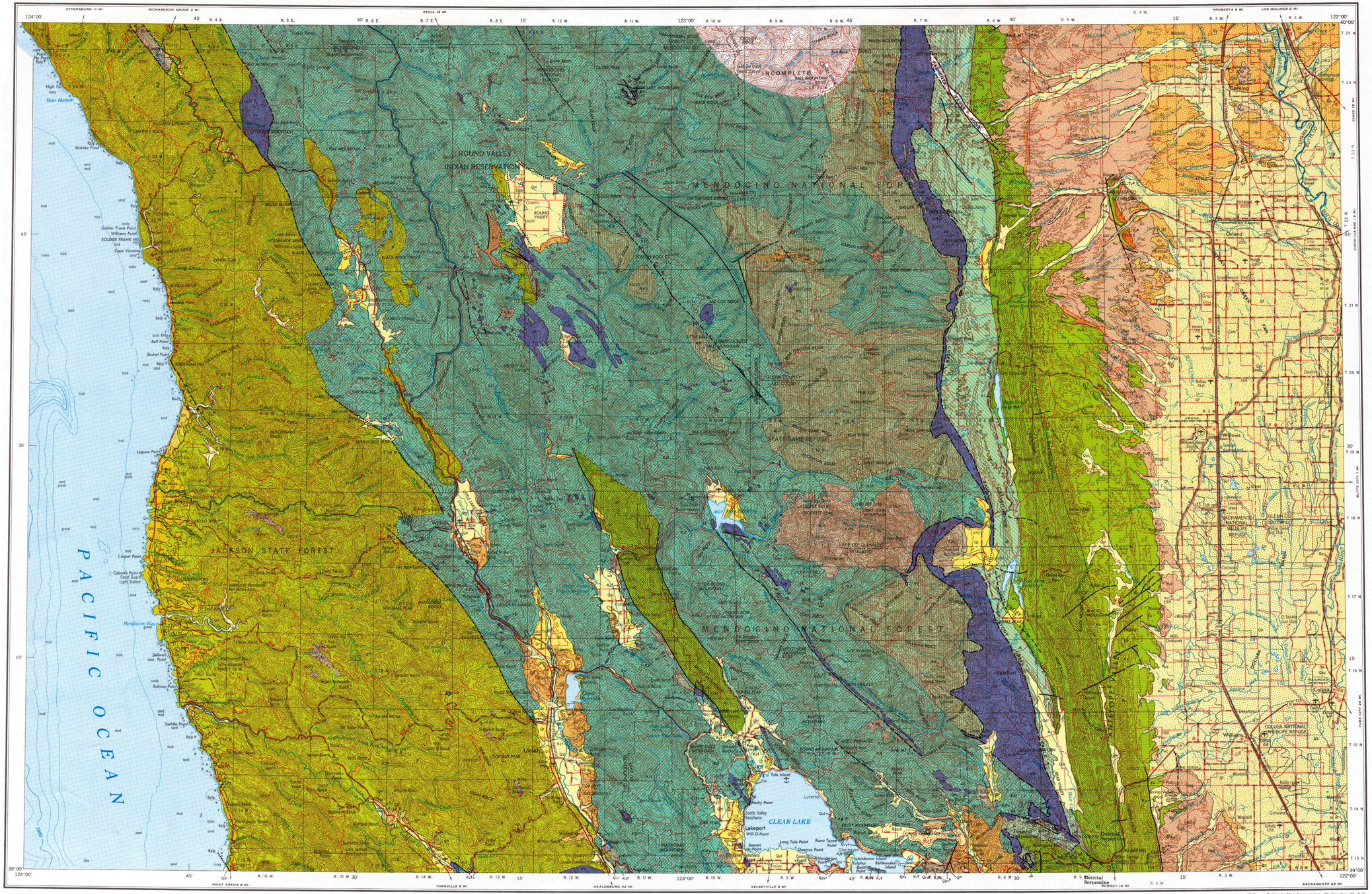
DIVISION OF MINES
IAN CAMPBELL, CHIEF
GORDON B. OAKESHOTT, DEPUTY CHIEF

STATE OF CALIFORNIA
DEPARTMENT OF NATURAL RESOURCES

GEOLOGIC MAP OF CALIFORNIA
UKIAH SHEET



Williams & Heintz Map Corporation, Washington 27, D.C.

TOPOGRAPHIC BASE MAP

Prepared by the Army Map Service (KCSX), Corps of Engineers, U. S. Army, Washington, D. C. Compiled in 1957 from: United States Quadrangles, 1:24,000, 1:25,000, 1:50,000, 1:62,500, U. S. Geological Survey and Army Map Service, 1942-53; USC&GS Chart 5602, 1955. Planimetric detail revised by photo-planimetric methods. Control by USGS, USC&GS and CE. Map field checked 1957.

Land net prepared by U. S. Geological Survey

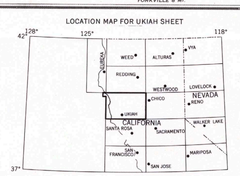
Submarine contours adapted from Shepard and Emery Special Paper No. 31, Geol. Soc. America

SUBMARINE CONTOUR INTERVAL 300 FEET

Local depressions 1500

Limit of danger: Reef
Rocks: Awash; Sunken
Foreshore flat
Intermittent or dry stream
Marsh or swamp

LOCATION MAP FOR UKIAH SHEET



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

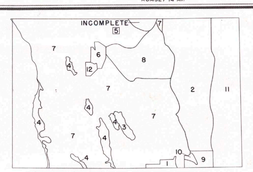
UKIAH SHEET

COMPILATION BY CHARLES W. JENNINGS AND RUDOLPH G. STRAND 1960

THIRD PRINTING, 1992

Contact
(Dashed where approximately located, gradational or inferred)

Fault
(Dashed where approximately located)



INDEX TO GEOLOGIC MAPPING
(COMPLETE INDEX ON EXPLANATORY SHEET)

1. Anderson, Charles A., 1936
2. Anonymous, unpublished
3. Banks, P., Iwamura, T., and West, L. J., unpublished
4. California Division Water Resources, 1956
5. Chesterman, Charles W., unpublished
6. Clark, Samuel G., 1940
7. Irwin, W. P., and Tatlock, D. B., 1955 and Irwin, W. P., 1960
8. Kilmer, F., Voloshin V., Cipperly, J., and Hicks, B., unpublished
9. Lawton, John E., unpublished
10. Myers, W. B., unpublished
11. Olmsted, F. H., and Davis, G. H., 1958
12. Wyatt, W. C., and Taylor, C., unpublished

EXPLANATION

SEDIMENTARY AND METASEDIMENTARY ROCKS

CENOZOIC — QUATERNARY

Recent
- Qd — Dune sand
- Qal — Alluvium
- Qsc, Qf, Qb — Stream channel deposits, Fan deposits, Basin deposits (GREAT VALLEY)
- Qsd — Salt deposits
- Ql — Quaternary lake deposits
- Qg — Glacial deposits

Pleistocene
- Qt — Quaternary nonmarine terrace deposits
- Qm — Pleistocene marine and marine terrace deposits
- Qc — Pleistocene nonmarine

Pliocene
- QP — Plio-Pleistocene nonmarine
- Pn — Undivided Pliocene nonmarine
- Pun — Upper Pliocene nonmarine
- Pu — Upper Pliocene marine
- Pmn — Middle and/or lower Pliocene nonmarine
- Pm — Middle and/or lower Pliocene marine

CENOZOIC — TERTIARY

Miocene
- Mn — Undivided Miocene nonmarine
- Mun — Upper Miocene nonmarine
- Mu — Upper Miocene marine
- Mmn — Middle Miocene nonmarine
- Mm — Middle Miocene marine
- Ml — Lower Miocene marine

Oligocene
- ON — Oligocene nonmarine
- O — Oligocene marine

Eocene
- En — Eocene nonmarine
- E — Eocene marine

Paleocene
- Pan — Paleocene nonmarine
- Pa — Paleocene marine

Undivided
- Tn — Cenozoic nonmarine
- Tt — Tertiary nonmarine
- Tl — Tertiary lake deposits
- T — Tertiary marine

MESOZOIC — CRETACEOUS
- K — Undivided Cretaceous marine
- Ku — Upper Cretaceous marine
- Kl — Lower Cretaceous marine
- Kx — Knoxville Formation

MESOZOIC — JURASSIC
- Ju — Upper Jurassic marine
- Jm — Middle and/or Lower Jurassic marine

MESOZOIC — TRIASSIC
- Ts — Triassic marine

Franciscan Formation: Kfs, Kfl, Kfu

PALEOZOIC — UNDIVIDED
- Pzn — Pre-Cretaceous metamorphic rocks (ls = limestone or dolomite)
- Pzu — Pre-Cretaceous metasedimentary rocks
- Pzls — Paleozoic marine (ls = limestone or dolomite)

PALEOZOIC — PERMIAN
- Pl — Permian marine

PALEOZOIC — CARBONIFEROUS
- C — Undivided Carboniferous marine
- CP — Pennsylvanian marine
- CM — Mississippian marine

PALEOZOIC — DEVONIAN
- Dv — Devonian marine

PALEOZOIC — SILURIAN
- S — Silurian marine

PALEOZOIC — ORDOVICIAN
- pSs — Pre-Silurian metasedimentary rocks
- pSu — Pre-Silurian metamorphic rocks
- pSv — Pre-Silurian metavolcanic rocks
- O — Ordovician marine

PALEOZOIC — CAMBRIAN
- Є — Cambrian marine
- Cambrian – Precambrian marine

PRECAMBRIAN
- pЄu — Undivided Precambrian metamorphic rocks pЄg = gneiss, pЄs = schist
- pЄs — Later Precambrian sedimentary and metamorphic rocks
- pЄe — Earlier Precambrian metamorphic rocks

IGNEOUS AND META-IGNEOUS ROCKS

- Qrv — Recent volcanic: Qrv^r—rhyolite; Qrv^a—andesite; Qrv^b—basalt; Qrv^p—pyroclastic rocks
- Qpv — Pleistocene volcanic: Qpv^r—rhyolite; Qpv^a—andesite; Qpv^b—basalt; Qpv^p—pyroclastic rocks
- Qc — Quaternary and/or Pliocene cinder cones
- Pv — Pliocene volcanic: Pv^r—rhyolite; Pv^a—andesite; Pv^b—basalt; Pv^p—pyroclastic rocks
- Mv — Miocene volcanic: Mv^r—rhyolite; Mv^a—andesite; Mv^b—basalt; Mv^p—pyroclastic rocks
- Ov — Oligocene volcanic: Ov^r—rhyolite; Ov^a—andesite; Ov^b—basalt; Ov^p—pyroclastic rocks
- Ev — Eocene volcanic: Ev^r—rhyolite; Ev^a—andesite; Ev^b—basalt; Ev^p—pyroclastic rocks
- Tv — Cenozoic volcanic: Tv^r—rhyolite; Tv^a—andesite; Tv^b—basalt; Tv^p—pyroclastic rocks
- Tg — Tertiary granitic rocks
- Ti — Tertiary intrusive (hypabyssal) rocks: Ti^r—rhyolite; Ti^a—andesite; Ti^b—basalt
- Tv — Tertiary volcanic: Tv^r—rhyolite; Tv^a—andesite; Tv^b—basalt; Tv^p—pyroclastic rocks
- Kfv — Franciscan volcanic and metavolcanic rocks
- gr — Mesozoic granitic rocks: gr^a-granite and adamellite; gr^d-granodiorite; gr^t-tonalite and diorite
- bi — Mesozoic basic intrusive rocks
- ui — Mesozoic ultrabasic intrusive rocks
- Jtv — Jura-Trias metavolcanic rocks
- mv — Pre-Cretaceous metavolcanic rocks
- gmr — Pre-Cenozoic granitic and metamorphic rocks
- Pv — Paleozoic metavolcanic rocks
- Pl — Permian metavolcanic rocks
- Cv — Carboniferous metavolcanic rocks
- Dv — Devonian metavolcanic rocks
- Dvf — Devonian and pre-Devonian? metavolcanic rocks
- pSu — Pre-Silurian metamorphic rocks
- pSv — Pre-Silurian metavolcanic rocks
- pЄu — Precambrian igneous and metamorphic rock complex
- pЄgr — Undivided Precambrian granitic rocks
- pЄan — Precambrian anorthosite

HEAVY BORDER ON BOXES INDICATES UNITS THAT APPEAR ON THIS SHEET