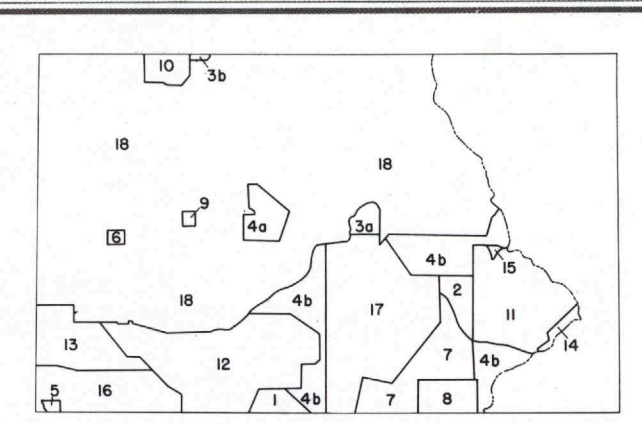
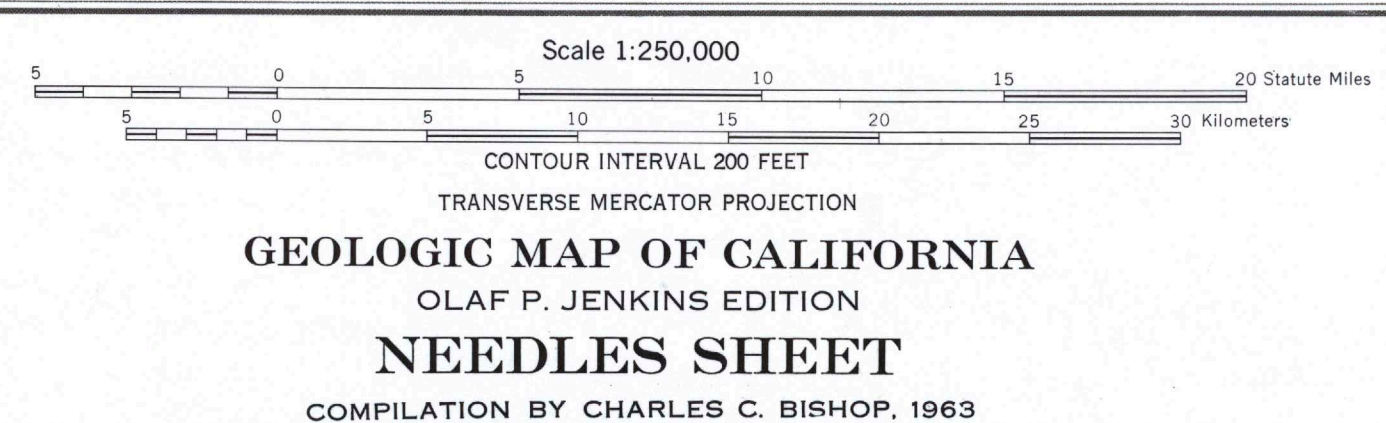
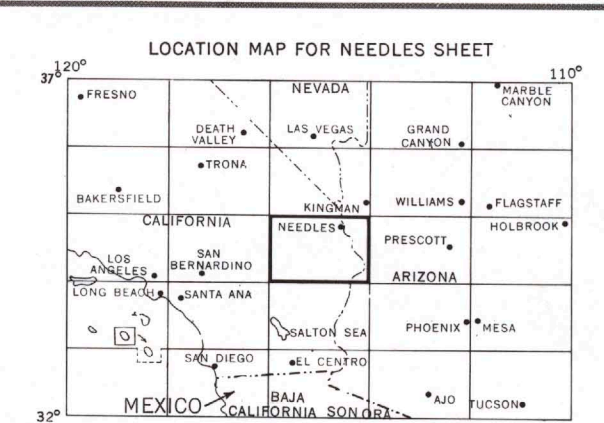


Geologic Period	Unit Name	Symbol	Volcanic Type
QUATERNARY	Dune sand	Qd	
	Alluvium	Qa	
	Stream channel deposits	Qc	
	Fan deposits	Qf	
	Basin deposits	Qb	
	Salt deposits	Qs	
	Quaternary lake deposits	Ql	
	Glacial deposits	Qg	
	Quaternary nonmarine terrace deposits	Qt	
	Pleistocene marine and marine terrace deposits	Qp	Recent volcanic: Qp ^r -rhyolite; Qp ^a -andesite; Qp ^b -basalt; Qp ^c -pyroclastic rocks
	Pleistocene nonmarine	Qn	
	Plio-Pleistocene nonmarine	Qpl	
	Undivided Pliocene nonmarine	Qpu	
	Upper Pliocene nonmarine	Qpu	
	Upper Pliocene marine	Qpm	Pliocene volcanic: Pp ^r -rhyolite; Pp ^a -andesite; Pp ^b -basalt; Pp ^c -pyroclastic rocks
Middle and/or lower Pliocene nonmarine	Qml		
Middle and/or lower Pliocene marine	Qml		
TERTIARY	Undivided Miocene nonmarine	Mu	
	Upper Miocene nonmarine	Mu	
	Upper Miocene marine	Mum	Miocene volcanic: Mm ^r -rhyolite; Mm ^a -andesite; Mm ^b -basalt; Mm ^c -pyroclastic rocks
	Middle Miocene nonmarine	Mm	
	Middle Miocene marine	Mm	
	Lower Miocene marine	Mm	
	Oligocene nonmarine	Ol	Oligocene volcanic: Oo ^r -rhyolite; Oo ^a -andesite; Oo ^b -basalt; Oo ^c -pyroclastic rocks
	Oligocene marine	Ol	
	Eocene nonmarine	Eo	Eocene volcanic: Ee ^r -rhyolite; Ee ^a -andesite; Ee ^b -basalt; Ee ^c -pyroclastic rocks
	Eocene marine	Eo	
MESOZOIC	Paleocene nonmarine	Pc	
	Paleocene marine	Pcm	
	Cenozoic nonmarine	Cn	Cenozoic volcanic: Cv ^r -rhyolite; Cv ^a -andesite; Cv ^b -basalt; Cv ^c -pyroclastic rocks
	Tertiary nonmarine	Tn	
	Tertiary lake deposits	Tl	
	Tertiary marine	Tm	
	Undivided Cretaceous marine	Km	Franciscan volcanic and metvolcanic rocks
	Upper Cretaceous marine	Km	
	Lower Cretaceous marine	Km	
	Knosville Formation	Kf	Mesozoic granitic rocks: g ¹ -granite and adamellite; g ² -granodiorite; g ³ -tonalite and diorite
PALEOZOIC	Upper Jurassic marine	Jm	Mesozoic basic intrusive rocks
	Middle and/or Lower Jurassic marine	Jm	Mesozoic ultrabasic intrusive rocks
	Triassic marine	Jm	Jura-Trias metvolcanic rocks
	Pre-Cretaceous metamorphic rocks (ls = limestone or dolomite)	Pm	Pre-Cretaceous metvolcanic rocks
	Pre-Cretaceous metasedimentary rocks	Pm	Pre-Cenozoic granitic and metamorphic rocks
	Paleozoic marine (ls = limestone or dolomite)	Pm	Paleozoic metvolcanic rocks
	Permian marine	Pm	Permian metvolcanic rocks
	Undivided Carboniferous marine	Cm	Carboniferous metvolcanic rocks
	Pennsylvanian marine	Cm	
	Mississippian marine	Cm	
PRECAMBRIAN	Devonian marine	Dm	Devonian metvolcanic rocks
	Silurian marine	Dm	Devonian and pre-Devonian? metvolcanic rocks
	Pre-Silurian meta-sedimentary rocks	Ps	Pre-Silurian metamorphic rocks
	Ordoevian marine	Ps	
	Cambrian marine	Cm	
	Cambrian-Precambrian marine	Cm	
	Undivided Precambrian metamorphic rocks	Pc	Precambrian igneous and metamorphic rock complex
	Later Precambrian sedimentary and metamorphic rocks	Pc	Undivided Precambrian granitic rocks
	Earlier Precambrian metamorphic rocks	Pc	Precambrian anorthosite

TOPOGRAPHIC BASE MAP
Prepared by the Army Map Service (KCBM), Corps of Engineers, U. S. Army, Washington, D. C. Compiled in 1957 by U. S. Coast & Geodetic Survey by photogrammetric methods and from United States Quadrange 1:24,000, 1:50,000, 1:62,000, USGS and AMS, 1947-1954. Metropolitan Water District, 1:120,000, California, Sheet 69, 1929. Planimetric detail revised by photogrammetric methods. Horizontal and vertical control by USCGS, USGS, and CE. Photography field annotated 1956.
Land net prepared by U. S. Geological Survey.
Minor corrections and additions to culture by California Division of Mines and Geology, 1963



- Anonymous, unpublished.
- Anonymous, unpublished.
- Blanco, C. C., unpublished.
- Bishop, C. C., unpublished.
- Evans, J. J., 1964.
- Gale, H. S., 1951.
- Gilmore, F. W., unpublished.
- Hamilton, W. B., unpublished.
- Hazard, J. G., 1953.
- Lambert, H. A., 1964.
- Hazard, J. G., 1954.
- Kiefer, D. H. and Bassett, A. M., 1962.
- Moyle, W. R., Jr., 1961.
- Noble, J. A., unpublished.
- Noble, L. F., 1931.
- Ripley, T. H. and Jennings, C. W., unpublished.
- Sau, R. B., unpublished.
- Southern Pacific Company, unpublished.

HEAVY BORDER ON BOXES INDICATES UNITS THAT APPEAR ON THIS SHEET