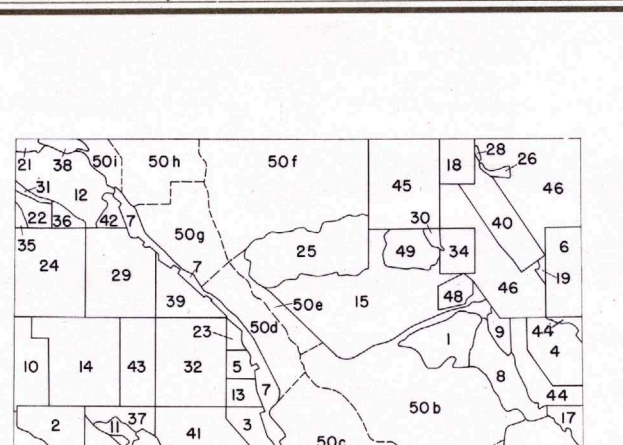
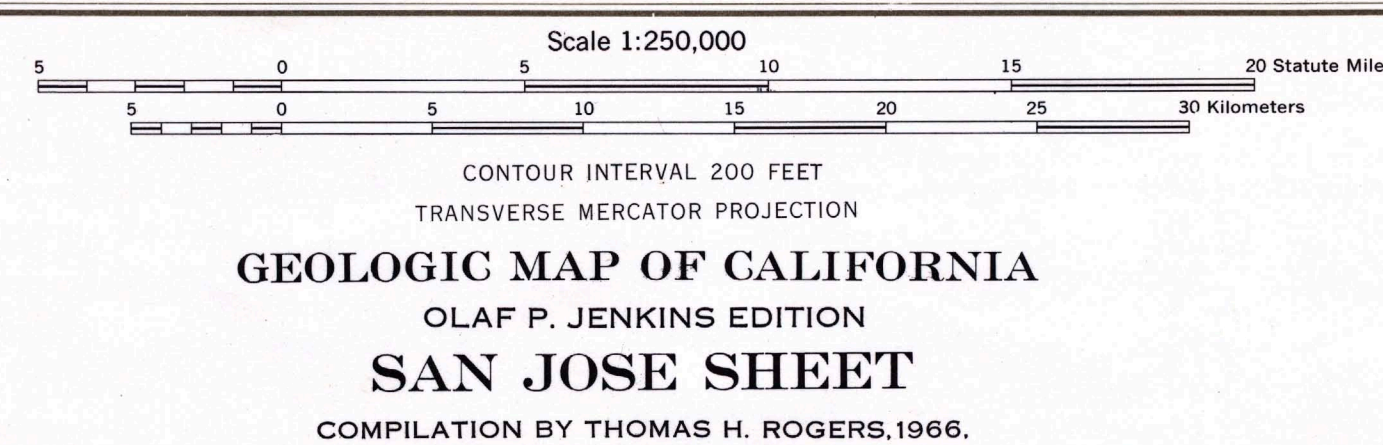
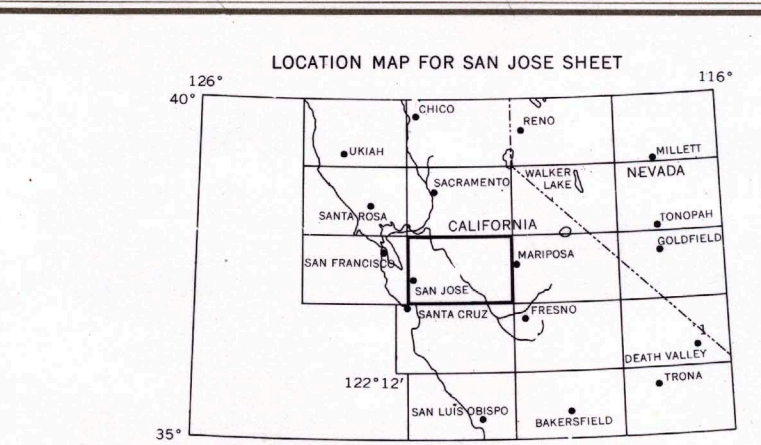


SEDIMENTARY AND METASEDIMENTARY ROCKS		IGNEOUS AND META-IGNEOUS ROCKS	
Quaternary	Dune sand	Recent volcanic: Qv <sup>1</sup> - rhyolite; Qv <sup>2</sup> - andesite; Qv <sup>3</sup> - basalt; Qv <sup>4</sup> - pyroclastic rocks	
	Alluvium		
	Stream channel deposits		
	Fan deposits		
	Basin deposits		
	Salt deposits		
	Quaternary lake deposits		
	Glacial deposits		
	Quaternary marine terrace deposits		
	Platocene marine and marine terrace deposits	Platocene volcanic: Qp <sup>1</sup> - rhyolite; Qp <sup>2</sup> - andesite; Qp <sup>3</sup> - basalt; Qp <sup>4</sup> - pyroclastic rocks	
	Platocene nonmarine		
	Plio-Platocene nonmarine	Quaternary and/or Pliocene cinder cones	
	Undivided Pliocene nonmarine		
	Upper Pliocene nonmarine		
	Upper Pliocene marine	Pliocene volcanic: Pp <sup>1</sup> - rhyolite; Pp <sup>2</sup> - andesite; Pp <sup>3</sup> - basalt; Pp <sup>4</sup> - pyroclastic rocks	
	Middle and/or lower Pliocene nonmarine		
	Middle and/or lower Pliocene marine		
	Undivided Miocene nonmarine		
	Upper Miocene nonmarine		
	Upper Miocene marine	Miocene volcanic: Mv <sup>1</sup> - rhyolite; Mv <sup>2</sup> - andesite; Mv <sup>3</sup> - basalt; Mv <sup>4</sup> - pyroclastic rocks	
	Middle Miocene nonmarine		
	Middle Miocene marine		
	Lower Miocene marine		
	Oligocene nonmarine	Oligocene volcanic: Oo <sup>1</sup> - rhyolite; Oo <sup>2</sup> - andesite; Oo <sup>3</sup> - basalt; Oo <sup>4</sup> - pyroclastic rocks	
	Oligocene marine		
	Eocene nonmarine	Eocene volcanic: Ee <sup>1</sup> - rhyolite; Ee <sup>2</sup> - andesite; Ee <sup>3</sup> - basalt; Ee <sup>4</sup> - pyroclastic rocks	
	Eocene marine		
	Paleocene nonmarine		
	Paleocene marine		
	Cenozoic nonmarine	Cenozoic volcanic: Cv <sup>1</sup> - rhyolite; Cv <sup>2</sup> - andesite; Cv <sup>3</sup> - basalt; Cv <sup>4</sup> - pyroclastic rocks	
	Tertiary nonmarine	Tertiary intrusive (hypabyssal) rocks: T <sup>1</sup> - rhyolite; T <sup>2</sup> - andesite; T <sup>3</sup> - basalt	
	Tertiary lake deposits	Tertiary volcanic: Tv <sup>1</sup> - rhyolite; Tv <sup>2</sup> - andesite; Tv <sup>3</sup> - basalt; Tv <sup>4</sup> - pyroclastic rocks	
	Tertiary marine		
Mesozoic	Undivided Cretaceous marine		
	Upper Cretaceous marine	Franciscan Formation	Franciscan volcanic and metavolcanic rocks
	Lower Cretaceous marine		Mesozoic granitic rocks: G <sup>1</sup> - granite and adamellite; G <sup>2</sup> - granodiorite; G <sup>3</sup> - tonalite and diorite
	Knoxville Formation		Mesozoic basic intrusive rocks
	Upper Jurassic marine		Mesozoic ultrabasic intrusive rocks
	Middle and/or Lower Jurassic marine		Jura-Trias metavolcanic rocks
	Triassic marine		
	Pre-Cretaceous metamorphic rocks (is = limestone or dolomite)		Pre-Cretaceous metavolcanic rocks
	Pre-Cretaceous metasedimentary rocks		Pre-Cretaceous granitic and metamorphic rocks
	Paleozoic marine (is = limestone or dolomite)		Paleozoic metavolcanic rocks
	Permian marine		Permian metavolcanic rocks
	Undivided Carboniferous marine		Carboniferous metavolcanic rocks
	Pennsylvanian marine		
	Mississippian marine		
	Devonian marine		Devonian metavolcanic rocks
	Silurian marine		Devonian and pre-Devonian? metavolcanic rocks
	Pre-Silurian metamorphic rocks	Pre-Silurian metamorphic rocks	Pre-Silurian metavolcanic rocks
	Ordovician marine		
	Cambrian marine		
	Cambrian - Precambrian marine		Precambrian igneous and metamorphic rock complex
	Undivided Precambrian metamorphic rocks		Undivided Precambrian granitic rocks
	Later Precambrian sedimentary and metamorphic rocks		Later Precambrian igneous and metamorphic rocks
	Earlier Precambrian metamorphic rocks		Precambrian anorthosite

TOPOGRAPHIC BASE MAP  
Prepared by the Army Map Service (KC), Corps of Engineers, U. S. Army, Washington, D. C. Compiled in 1962 by photogrammetric methods and from United States Quadrangles, 1:24,000, 1:25,000, 1:62,500, U.S. Geological Survey and AMS, 1942-61. Planimetric detail revised by photogrammetric methods. Horizontal and vertical control by USGS, USC&GS, CE, Alameda County, California State Land Commission, and State of California. Map field checked in 1962. Minor corrections and additions to culture by California Division of Mines and Geology, 1966. Land not prepared by U.S. Geological Survey.

Contact  
(Dashed where approximately located, gradational or inferred)

Fault  
(Dashed where approximately located, dotted where concealed)



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HEAVY BORDER ON BOXES INDICATES UNITS THAT APPEAR ON THIS SHEET