

**CORRELATION OF MAP UNITS**

Holocene and Pleistocene	QUATERNARY	CENOZOIC
Holocene, Pleistocene, and Pliocene	QUATERNARY AND TERTIARY	
Pliocene and Miocene	TERTIARY	MESOZOIC
	JURASSIC, TRIASSIC AND PERMIAN	
	PERMIAN TO PRECAMBRIAN	
	PRECAMBRIAN	

**DESCRIPTION OF MAP UNITS**

**SURFICIAL VALLEY-FILL DEPOSITS**

- Fine-grained deposits**—White to light brown sandy silt and mudstone of the Las Vegas Formation
- Heterogeneous deposits**—Mixtures of coarse- and fine-grained deposits or thinly interbedded sequences of the two
- Coarse-grained deposits**—Poorly sorted, unconsolidated to consolidated gravel and sandy gravel on alluvial fans and pediments. Fine sand along Las Vegas Wash, and conglomerate along lower Las Vegas Wash
- Muddy Creek Formation**—Unconsolidated to consolidated deposits that include fanglomerate east of Henderson; interbedded gravel, sand, silt, and clay south and west of Sunrise Mountain; silt at Whitney Mesa, and sandstone, siltstone, and claystone north of Sunrise Mountain
- Clastic deposits**—Interbedded claystone, siltstone, sandstone, conglomerate, freshwater limestone, gypsum and magnesite beds, and lava flows of the Thumb and Horse Spring Formations in southeast part of study area. Conglomerate, sandstone, and tuffaceous sediments in north part of study area

**BEDROCK**

- Igneous rocks**—Volcanic flow, flow breccias, and shallow intrusives of dacite, andesite, and basalt in River Mountains and McCullough Range. Also includes quartz monzonite in McCullough Range
- Clastic rocks**—Sandstone, shale, conglomerate, gypsum beds, and limestone. Composed of unnamed members: Cocoon Sandstone, Torowopp Formation, Kailash Limestone, Mowkopi Formation, Clinle Formation, and Acton Sandstone (Longwell and others, 1965, p. 35-41)
- Carbonate rocks**—Mostly limestone and dolomite but includes conglomerate, quartzite, sandstone, and shale. Comprises Wood Canyon Formation, Tapewa Sandstone, Pache Shale, Lyndon Limestone, Chisholm Shale, Goodspings Dolomite, Pogonip Group, Eureka Quartzite, Ely Springs Dolomite, Lone Mountain Dolomite, Sultan Limestone, Monte Cristo Limestone, Rogers Spring Limestone, Bird Spring Formation, Callville Limestone (modified from Longwell and others, 1965, p. 14-35)
- Metamorphic rocks**—Gneiss at base of Frenchman Mountain. Unit underlies entire study area at various depths

**CONTACTS**—Approximately located. Queried where uncertain

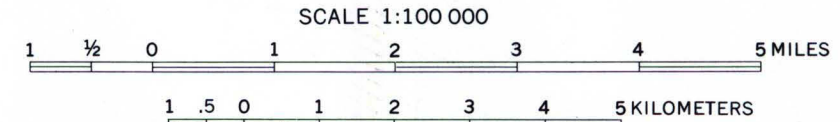
**FAULTS**—Dashed where approximately located

**FAULT SCARP**—Dashed where approximately located. Hashures on downthrown side. May not mark exact fault trace owing to erosion of scarp

**THRUST FAULT**—Sawtooth on upper plate. Dotted where concealed

**DRAINAGE-BASIN BOUNDARY**

Base from U.S. Geological Survey 1:100,000, Boulder City, Ariz.-Nev., Las Vegas, Nev.-Calif., Mesquite Lake, Nev.-Calif., 1978; Lake Mead, Nev.-Ariz., 1979



Geology from Meinberg (1965); Longwell and others (1965); Haynes (1967); Engler (1977); Bell and Smith (1980); Bell (1981); Matti and Bachhuber (1982); and Matti and Morton (1982a,b); modified by R.W. Plume, 1981

**GEOLOGIC MAP OF LAS VEGAS VALLEY, NEVADA**