



**CORRELATION OF MAP UNITS**

Map Unit	Stratigraphic Unit	Age
Qo1-Qo10	Quaternary	Quaternary
Qo11-Qo15	Tertiary	Tertiary
Qo16-Qo20	Triassic	Triassic
Qo21-Qo25	Permian	Permian

**INTRODUCTION**  
Purgatory Canyon 7.5-minute quadrangle is in northern Mohave County, Arizona, and is bounded on the east by the Colorado State line (Fig. 1). The map encompasses approximately 63 sq mi of northwestern Arizona. Elevation ranges from 2,240 ft at the Virgin River to 5,880 ft on a highland near the southeastern corner of the quadrangle. The highest point is 5,880 ft, above a mile northeast of the map area. The main access to the area is by Interstate 15 to the southwest, and by the Black Rock road, locally referred to as the Black Rock road, that leads from the Black Rock interchange to the southern part of the quadrangle. The area is mostly unpopulated by the U.S. Bureau of Land Management and a few sections are controlled by the State of Arizona. Some privately owned land is located in the southeastern part of the quadrangle. The area is mostly unpopulated by the U.S. Bureau of Land Management and a few sections are controlled by the State of Arizona. Some privately owned land is located in the southeastern part of the quadrangle. The area is mostly unpopulated by the U.S. Bureau of Land Management and a few sections are controlled by the State of Arizona. Some privately owned land is located in the southeastern part of the quadrangle.

**PREVIOUS WORK**  
A preliminary geologic map of the Purgatory Canyon quadrangle at a scale of 1:24,000 was made by Thompson (1961) for the Mohave County 7.5-minute quadrangle, Arizona, bordering the west edge of the map (Shaner, 1966). The area was included in state geologic maps at a scale of 1:250,000 (Shaner, 1966) and other maps at a scale of 1:100,000 (Shaner, 1968). Geologic maps in progress, including this map, include the Mohave County 7.5-minute quadrangle, Arizona, and on the east, the Lizard Point 7.5-minute quadrangle, Arizona.

**GEOLOGIC SETTING**  
The quadrangle lies in the southeastern Colorado Plateau Geologic Province characterized by Mesozoic and Paleozoic strata that dip about 5° to the east or northeast. The area is dissected by the Virgin River and its tributaries.

**STRATIGRAPHY**  
About 3,650 ft of Permian and Triassic strata are exposed in the quadrangle. Triassic rocks cover the entire area but have been eroded near except where protected by late Tertiary alluvium. The formations exposed are, in ascending order, the Laramie Sandstone, sandstone facies of the Hermit Shale, Toroweap Formation, and Kaibab Formation (Lower Permian). The Toroweap Formation is a sequence of thin-bedded sandstone and siltstone. The Kaibab Formation is a sequence of massive sandstone and siltstone. The Hermit Shale is a sequence of thin-bedded sandstone and siltstone. The Laramie Sandstone is a sequence of thin-bedded sandstone and siltstone.

**DESCRIPTION OF MAP UNITS**  
Qo1 Artificial fill (bedrock) consisting of gravel, sand, and silt, deposited in stream channels and on floodplains. Thickness 1-10 ft.  
Qo2 Stream-channel alluvium (Holocene). Unconsolidated to poorly consolidated, consisting of sand, silt, and gravel. Thickness 1-10 ft.  
Qo3 Interstream alluvium (Holocene). Unconsolidated to poorly consolidated, consisting of sand, silt, and gravel. Thickness 1-10 ft.  
Qo4 Valley-fill deposits (Holocene and Pleistocene). Partly consolidated, consisting of sand, silt, and gravel. Thickness 1-10 ft.  
Qo5 Low-terrace deposits (Holocene and Pleistocene). Similar to Qo4, but with more sand and silt. Thickness 1-10 ft.  
Qo6 High-terrace deposits (Holocene and Pleistocene). Similar to Qo5, but with more sand and silt. Thickness 1-10 ft.  
Qo7 High alluvial-fan deposits (Holocene and Pleistocene). Unconsolidated, consisting of sand, silt, and gravel. Thickness 1-10 ft.  
Qo8 High alluvial-fan deposits (Holocene and Pleistocene). Unconsolidated, consisting of sand, silt, and gravel. Thickness 1-10 ft.  
Qo9 High alluvial-fan deposits (Holocene and Pleistocene). Unconsolidated, consisting of sand, silt, and gravel. Thickness 1-10 ft.  
Qo10 High alluvial-fan deposits (Holocene and Pleistocene). Unconsolidated, consisting of sand, silt, and gravel. Thickness 1-10 ft.

Qo11 Young terrace deposits (Holocene). Unconsolidated to poorly consolidated, consisting of sand, silt, and gravel. Thickness 1-10 ft.  
Qo12 Valley-fill deposits (Holocene and Pleistocene). Partly consolidated, consisting of sand, silt, and gravel. Thickness 1-10 ft.  
Qo13 Low-terrace deposits (Holocene and Pleistocene). Similar to Qo4, but with more sand and silt. Thickness 1-10 ft.  
Qo14 High-terrace deposits (Holocene and Pleistocene). Similar to Qo5, but with more sand and silt. Thickness 1-10 ft.  
Qo15 High alluvial-fan deposits (Holocene and Pleistocene). Unconsolidated, consisting of sand, silt, and gravel. Thickness 1-10 ft.  
Qo16 High alluvial-fan deposits (Holocene and Pleistocene). Unconsolidated, consisting of sand, silt, and gravel. Thickness 1-10 ft.  
Qo17 High alluvial-fan deposits (Holocene and Pleistocene). Unconsolidated, consisting of sand, silt, and gravel. Thickness 1-10 ft.  
Qo18 High alluvial-fan deposits (Holocene and Pleistocene). Unconsolidated, consisting of sand, silt, and gravel. Thickness 1-10 ft.  
Qo19 High alluvial-fan deposits (Holocene and Pleistocene). Unconsolidated, consisting of sand, silt, and gravel. Thickness 1-10 ft.  
Qo20 High alluvial-fan deposits (Holocene and Pleistocene). Unconsolidated, consisting of sand, silt, and gravel. Thickness 1-10 ft.

Qo21 Middle and Lower Triassic  
Qo22 Lower Permian  
Qo23 Lower Permian  
Qo24 Lower Permian  
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Qo99 Lower Permian  
Qo100 Lower Permian

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# GEOLOGIC MAP OF THE PURGATORY CANYON QUADRANGLE, NORTHERN MOHAVE COUNTY, ARIZONA

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This map is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards or with the North American Stratigraphic Code. Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.