

Table 1.—Description of

Geologic unit; The codes shown with unit names are used to identify aquifers, formations, General lithology: Descriptions modified from Haynes and others (1972); Jobin (1962); Samsion (1971); Baars (1962); Craig (1981); O'Sullivan and Pierce (1983). System: L, lower; M, middle.

Erathem System Series	Geologic unit	General lithology	
CENOZOIC	Quaternary Pleistocene and Holocene	Alluvial and eolian deposits (111ALVM)	Silt, sand, and gravel in stream valleys and floodplains. Windblown silt and sand on upland areas, benches, and broad valleys. Sand and gravel deposits on benches along major streams. Poorly sorted angular to well-rounded sand, pebbles, and boulders on dissected pediment surfaces surrounding the Abajo Mountains.
		Colluvium (112CLVM)	Talus, slopewash, and block rubble.
	Pleistocene	Alluvial-fan deposits	Dissected deposits of poorly sorted silt, sand, and gravel.
		Alluvial gravel deposits (112ALVM)	Well-rounded and well-sorted deposits; mostly glacial outwash.
Tertiary	Glacial till	Unsorted, unstratified, morainal deposits	
		Igneous intrusives (stocks, laccoliths, dikes, and sills)	Abajo Mountains--prophyritic rock composed mainly of diorite to quartz-diorite, but including granodiorite and quartz monzonite La Sal Mountains--prophyritic rock composed mainly of diorite, but including soda syenite, syenite, and monzonite.
MESOZOIC (200M5ZC)	Cretaceous Upper Cretaceous	Mancos Shale (200MNC5)	Gray to black soft fissile shale, mudstone, and siltstone with minor thin sandstone beds
		Dakota Sandstone (210DROT)	Yellowish-brown to gray quartzitic sandstone and conglomeratic sandstone, with interbedded gray to black carbonaceous shale. Some thin beds of low grade coal. A coarse basal conglomerate is present locally.
	Lower Cretaceous	Burro Canyon Formation (217BRQN)	White, gray, and light brown sandstone and conglomerate; interbedded with green and purplish siltstone, shale, and mudstone; thin beds of impure limestone; copper bearing in Lisbon Valley. Shale predominates in upper one-half, with sandstone and conglomerate predominating in lower one-half.
		Jurassic (220JF5C) Upper Jurassic	Morrison Formation (221MRSN)
Westwater Canyon Member (221WSRC)-- mostly yellowish and greenish-gray to pinkish-gray lenticular fine- to coarse-grained sandstone. Some interbedded greenish-gray or grayish-red sandy shale and mudstone.			
Recapture Member (221RCPR)-- reddish-gray, white, and brown fine- to medium grained sandstone, interbedded reddish-gray siltstone and mudstone.			
Salt Wash Member (221SLWS)-- white, light gray, grayish-orange or moderate reddish-brown fine- to medium-grained sandstone in thick discontinuous beds. Interbedded greenish, gray, and reddish-gray siltstone and mudstone. Locally thin limestone beds near base.			

geologic units

or other geologic units in tables 4, 5, 6, 8, 9, and 10. Williams (1964); Sandborn (1958); Wiegand (1981);

Thickness and areal extent	Water-bearing ¹ characteristics	Aquifer system
In Spanish Valley, deposits are as much as 360 feet thick. Otherwise, scattered deposits generally are not more than 100 feet thick.	Low to moderate permeability. Yields small quantities of water to shallow wells in the San Juan River valley. Springs in the Abajo Mountains issue from this unit. For example, spring (D-33-23) 30DCC-SL.	D aquifer
Present high on flanks of the La Sal and Abajo Mountains.		
Present only in the La Sal Mountains		
Exposed only in the middle of the mountains.	Yields water only where fractured.	
Thin remnants underlie hills and ridges on the Sage Plain east of Monticello. Thicker sections flank the Abajo Mountains on the north and east sides.	Very low permeability. In the Monticello area; retards recharge from precipitation.	D aquifer
Present on downthrown limb between the Lisbon fault and La Sal Mountains; on the flanks of the Abajo Mountains; and capping mesas in the southern part of the area. Maximum thickness is 150 feet.	Very low to low permeability. Generally unconfined, but in places under confined conditions. The Dakota Sandstone is the primary source of water near Monticello and La Sal. The Burro Canyon Formation is the primary source of water around Blanding and on the Sage Plain east of Monticello.	
Caps mesas in Blanding area and east of Monticello where the Dakota Sandstone is eroded. Maximum thickness is 160 feet but averages 130 feet. Thins southward to a thin conglomerate at the San Juan River and to zero at the Utah-Arizona State line.		
Forms a conspicuous slope below the Burro Canyon Formation or Dakota Sandstone. Thickness ranges from 250 to 700 feet.	Very low permeability. It is the confining bed between the D and M aquifers.	M aquifer
Thickness of 180 feet near Bluff; interfingers and eventually grades into the Brushy Basin Member northeast of a northwest-trending line passing between Monticello and Blanding.		
Maximum thickness is 200 feet. Grades into Salt Wash Member northward from a line extending from Blanding to Cortez.	Very low to low permeability. The Bluff Sandstone Member is the most permeable unit. This aquifer is confined southeast of the Abajo Mountains, resulting in flowing wells in the vicinity of Montezuma Creek and Aneth.	
Present on the Sage Plain and near La Sal. Maximum thickness is 490 feet in central part of area; thins southward where upper part is defined as the Recapture Member.		