



Arizona Rocks 23

Text and photos by Ray Grant

The chart on the following page can be used to identify all of the different sedimentary rocks. Remember there are two main types clastic and chemical. The clastic are named according to the size and shape of the particles and the chemical are named according to what mineral they contain. Each of these different sedimentary rocks has been described in a previous Arizona Rocks.



Clastic Sedimentary Rock
 Chinle Formation in the Petrified Forest/Painted Desert, typical rounded hills formed from shale.



Clastic Sedimentary Rock
 Shinarump Conglomerate (Triassic age) in exhibit at the Wupatki National Monument Visitors Center



Chemical Sedimentary Rock
 Montezuma Castle National Monument with limestone that formed in a lake in the area about 8 mya



Clastic Sedimentary Rock
 Cross beds from sand dunes in the Navajo Sandstone near Page.



Chemical Sedimentary Rock
 Dolomite crystals on dolostone Black Rock, AR
 Photo by S. Coté

Clastic Sedimentary Rocks	Texture	Rock Name	Characteristics	
	Particle Size			
Greater than 2mm		Conglomerate	Round pieces of rock cemented together	
		Breccia	Angular pieces of rock cemented together	
Between 2mm and 1/16mm		Sandstone	Sand grains mainly quartz; cemented together by silica, calcite, or iron oxide; feels like sandpaper	
		Arkose	Quartz and feldspar; red color	
Less than 1/16mm		Shale (siltstone, mudstone)	Shale breaks on planes (layers); mudstone and siltstone are massive	
Chemical Sedimentary Rocks	Mineral Present	Rock Name	Characteristics	
	Calcite	Limestone includes Chalk and Coquina	Fine to coarsely crystalline; often contains fossil fragments; many colors black, gray, tan, etc.; limestone is a variable rock TEST with ACID	
	Dolomite	Dolostone	Similar to limestone, but reacts slowly with acid , or must be powdered to react	
	Halite	Evaporite	Rock Salt	Salty taste; good cleavage; H = 2.5
	Gypsum		Gypstone	Can be massive, fibrous, or show good cleavage; H = 2; scratches easily with fingernail
	Fine-grained quartz	Chert	Massive fine-grained quartz; H = 7; breaks on curved surfaces; scratches glass; can be called jasper, flint, agate	
	Organic Matter	Coal	Black color; will burn; light weight	