



Arizona Rocks 50

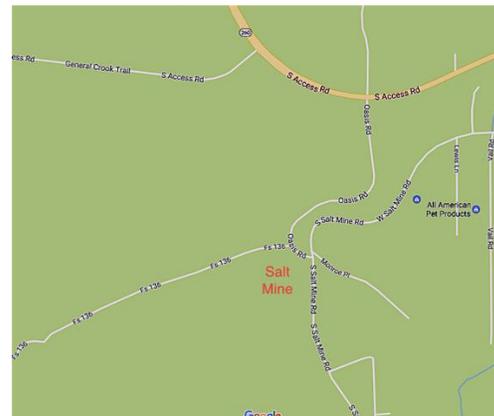
Text and photos by Ray Grant

About 8 million years ago a basalt lava flow blocked off the end of the Verde Valley and a lake filled the valley. As the lake water evaporated, different rocks were deposited in the valley. Limestone was the most common rock formed and it covers most of the Verde Valley, but at a couple of locations there are salt deposits. The salt was mined by the Native Americans, the early settlers, and commercially during the 1920s and early 1930s. Mineral collectors and clubs have been visiting the salt mine for years to collect halite, sodium chloride (rarely a purple color), thenardite; sodium sulfate, and glauberite; sodium calcium sulfate. The earliest miners wanted the salt, but the later commercial operations were mainly for the sodium sulfate used for paper pulp processing.

When the glauberite is exposed to the atmosphere, it changes quickly to gypsum, hydrated calcium sulfate. And pseudomorphs of gypsum after glauberite are very abundant at the salt mine. There are many other areas east of the mine with abundant, sometimes large pseudomorphs of gypsum after glauberite.

Another area that collectors have visited for years is in the wash about a mile southwest of the mine. Take Forest Road 136 to the parking area for the Copper Canyon Trailhead (has restrooms and tables); from here, walk up the dry wash to find calcite and aragonite pseudomorphs after glauberite. They are loose in the wash and also in the outcrops along the side of the wash. They become more common as you walk further up the wash. The calcium carbonate from the abundant limestone in the region has replaced the sulfate to form these pseudomorphs.

Next month, Montezuma's Castle and Elephant Hill, when mammoths roamed the Verde Valley



Map showing the location of the Salt Mine and FS Route 136, from Google Earth



Satellite Photo showing Salt Mine (white area near center) from Google Earth



Glauberite crystals from the Verde Salt Mine, they are clear when collected



Gypsum pseudomorphs after glauberite from the Verde Salt Mine, the slopes are covered with these



Verde Salt Mine



Collecting fresh glauberite crystals from the outcrop at the Verde Salt Mine



Large gypsum after glauberite collected a few miles east of the Salt Mine

Calcite pseudomorphs after glauberite from the wash up FS route 136



