

ferric oxide to the dull gray ferrous carbonate. During the droughts, when the standing water was entirely or nearly evaporated, the dissolved salts were concentrated to the point of saturation, and crystals of the minerals in solution were formed on the shores and possibly on the bottom of the ponds, which at such times were probably reduced to alkali swamps or even to dry encrusted playa flats. Glauberite and perhaps other allied minerals crystallized out, altho molds of salt crystals have not been observed in this region. The crystals that were formed in the saturated muds, and others that were quickly covered by sediment during the next influx of water into the basin, became inclosed in the sands and clays and preserved in the strata.

The fact that in at least two and possibly all three occurrences in the Gettysburg area the rocks which contain the molds are somewhat altered and hardened by the action of heated waters given off from the dikes or sills of diabase, whose proximity to the localities where the cavities were found is shown in figure 1, may perhaps be regarded as indicating that the glauberite crystals were still present in these clays and sands at the time when the igneous rocks intruded them and the sediments were hardened around the crystals, so that when they were subsequently dissolved by circulating waters their molds were preserved sharp and clear, as shown in the photographs (frontispiece).

It is probable, therefore, that glauberite crystallized out of ponded waters at various times during the Triassic epoch; and the crystals were inclosed at many horizons thruout the Triassic section, altho thus far clearly defined molds of the mineral have been found in this area only in beds which have been somewhat hardened by the metamorphic action of the intrusive diabase.

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BARITE FROM GREAT NOTCH, N. J. ERNEST H. WILSON. *Caldwell, N. J.*—Some years ago the writer obtained at the Great Notch trap quarry a 5 x 10 cm. specimen showing an aggregate of small crystals of a dull white color, on a fragment of trap rock. This has recently been submitted to Mr. H. P. Whitlock, of the American Museum of Natural History, who has identified it by blowpipe tests as barite. Altho this mineral is not infrequently associated with trap rocks, and has been found under such circumstances at several other localities in New Jersey, this appears to be the first report of it from this place. At one end of the specimen are a number of very small calcite crystals and a couple of globular crystals of prehnite, but the barite rests directly upon the trap, suggesting that it was one of the earliest minerals to form.