In those limestone regions where the strata have been deeply shattered by complicated folding and faulting and sink holes are both numerous and deep, the water obtained from new wells may contain much fine clay matter in suspension. For example, in the Saucon Valley deep drilling has shown that the rocks are shattered and cavernous to the depth of approximately 400 feet. Some of the wells yield murky water for a considerable time, so long that the owners become skeptical of clear water ever being secured. However, eventually the clay filling the openings through which the water circulates is washed away and the water clears.

CAMBRIAN SANDSTONES

The band of sandstones and quartzites along the sides of the South Mountain has been prospected for water in few places, mainly on account of the narrowness of its outcrop. The quantity of water encountered in the operation of the limonite iron mines in this belt of rocks in a few places proves that these sandstones and quartzites contain much water. The water passes along joints and bedding planes or through the rocks themselves and is seldom concentrated in definite streams, except in places where the rocks have been broken and displaced by earth movements. The best place to procure water is at the contact between these rocks and the underlying gneisses.

Wells in these rocks should be sunk a short distance away from where they disappear beneath the limestones. As the rocks near the mountain almost invariably dip steeply, the sandstones or quartzites are within a short distance carried beyond the depth at which they are available as sources of water. Springs are not numerous in these rocks, but there are some in places where the rocks have been shattered.

The water from the Cambrian quartzites and sandstones is low in mineral content because of the insoluble character of the rocks with which it comes into contact, and it is uncontaminated because the slopes of the mountain are sparsely settled.

CRYSTALLINE ROCKS

Until recently there has been little demand for underground water in that portion of the county underlain by the crystalline rocks of South Mountain as there were few residences and no industries requiring large quantities of water. With improved roads and the year-round use of automobiles many homes have been built in these elevated areas.

The springs at the base of these hills have already been described. A surprisingly large number of springs emerge on the upper slopes and almost at the summits, probably from fault or fractured zones.

The Lechauweki Springs, on the north slope of the hill a short distance east of the Children’s Home, Fountain Hill, were at one time better known than now. The water comes to the surface along a fault plane of a few hundred feet displacement. Coming from the gneiss, the water is soft.

At one time a resort hotel with 120 rooms was erected here. An advertising leaflet issued in the spring of 1875 contained the following: