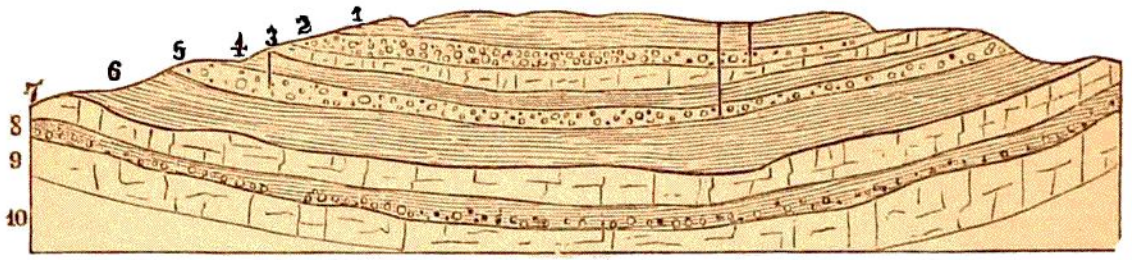

Fig. 91. Section from East to West across the lower peninsula of Michigan. 1, 2, 3, 4, 5, 6, etc. The several groups of strata from the Coal-measures to the Lower Silurian.

will suffer the diluting influence of surface waters only around the outcropping borders. Fresh water will float as a distinct stratum upon a stratum of strong brine. The deepest parts of a saliferous formation must consequently contain the strongest brine. The place of salt springs will naturally be along the outcropping belt of the formation. They are the mere overflow of the basin caused by surface rains. The region over the most depressed portion of the basin, and consequently over the deposit of strongest brine, is likely to be completely destitute of salt springs. The position of the brine-supply is therefore a problem for strictly geological determination. It is an induction from the general geology of the entire region. Superficial investigators have frequently instituted borings in the vicinity of brine springs. Inevitably such explorations must immediately pass below the source of brine-supply, and must prove unsuccessful, unless they can be extended to some more deeply seated basin, whose outcropping rim is comparatively remote. The most successful salt wells are those which are bored far from surface indications, in places pointed out by geology as located over the central portion of a saliferous basin.

From the conditions of the case, it is almost a hydrostatical impossibility that a good brine well should be a flowing well. The strong brine must be pumped up from the bottom. It may be asked why, if the borders of the basin