

of the brine is gradually diminishing. The same formation affords brine and gypsum in the vicinity of the Grand River of Ontario, and rock-salt and strong brine at Goderich. It is worked for gypsum in the vicinity of Sandusky, Ohio. It underlies the whole of the lower peninsula of Michigan (Fig. 91) in the form of a vast basin, whose borders come to the surface at Milwaukee on the west, Mackinac on the north, the Grand River of Ontario on the east, and Sandusky on the southeast. This great salt basin has been penetrated, under the guidance of geology, at St. Clair and at Point aux Barques, and successful wells eleven hundred feet deep are now in operation. A new well is about to be put in operation at Mount Clemens, in Macomb County, and others are in progress at various points.

The next saliferous formation, in ascending order, is one which is peculiar to the lower peninsula of Michigan, and has hence been styled the "Michigan Salt Group." Its geological position is between the Marshall sandstone and the Mountain limestone. It underlies, like a great dish, nearly the whole of the peninsula. Its outcropping rim is marked by a circuit of salt springs. Filtration has leached out most of the brine into the underlying sandstones. The gypsum, however, mostly remains in the formation, and is extensively worked. The wells of East Saginaw and Saginaw City are supplied from this formation. As in the case of the Salina basin, this one is reached by deep borings over the most depressed portion (Fig. 91). These borings were originally undertaken as the result of a pure geological induction, and strong and copious brine was obtained at the depth of about eight hundred feet. The first rock, even, was one hundred feet from the surface, and the whole thickness of the Coal-measures had to be crossed. I consider such successes ample vindication of the utility of geological science. The geological sur-