that attracted attention was made when boring for gas or oil, in 1878, in Wyoming County, a dozen years after the discovery at Goderich, and ten years before that near Cleveland, Ohio.

By evidence from borings, rock salt is now known to occur in New York at depths of 800 to 3000 feet or more, over an area measuring 150 miles from east to west, and 60 to 65 miles in width if extending only to the Pennsylvania boundary. The northern limit of the area is near Morrisville, where 12 feet of salt were found, and near Leroy, 100 miles west of Syracuse, where a bed 40 feet thick exists. To the south, in Livingston and Wyoming counties, beds of salt occur at depths of 1000 to 2500 feet, and they have an aggregate thickness of 50 to 100 feet, some beds of pure salt being 40 to 80 feet thick. At Ithaca, the several beds of salt have together a thickness of 250 feet; they alternate with shale between depths of 1900 feet and 3130 feet. At Goderich, six beds 6 to 35 feet thick were passed in a boring 1617 feet deep; and other localities occur within 40 miles to the north, east, and south. Near Cleveland (at Newburg) there are four beds 5 to 50 feet thick in a range of beds 500 feet thick, between 2000 and 2500 feet below the surface. The evidence shows that the Goderich basin is independent of the New York, as pointed out in 1876 by T. S. Hunt. How it is related to the Cleveland basin is not positively known.

The strata are non-fossiliferous; but as they include beds of limestone, this is probably owing to loss of shells and other relics by trituration through the gentle movements of the water. The beds abound in mud-cracks, and other evidences that they were made as mud-flats or bottoms in shallow water. The facts are believed to prove that the region through which the salt beds extend was an area of great salt marshes or flats, or in other words "salt-pans," over which sea water, admitted at intervals from the interior continental sea, evaporated and deposited salt. The fineness of the material of the shales is such as would be produced by the gentle ripplings of such waters.

The gypsum in the beds sometimes constitutes layers, but oftener parts of layers, or imbedded masses, as illustrated in the following figures (from Hall); but the most of the gypsum is connected with the overlying Water-lime beds. The lines of stratification in the beds sometimes run through the gypsum, as in Fig. 792; and in other cases the layers of the shale are bulged up around the nodular masses (Fig. 793). In all such cases, the gypsum was formed after the beds were deposited, by the action of sulphuric acid on an imbedded mass or bed of limestone, converting CaO_3C into gypsum (hydrous lime sulphate $= CaO_4S + 2\ H_2O$). It may be now forming. Sulphur springs, emitting sulphuretted hydrogen, are common in New York, and especially about Salina and Syracuse. Dr. Beck describes several, and mentions one, near Manlius, which is "a natural sulphur bath, a mile and a half long, half a mile wide, and 168 feet deep, — a fact exhibiting in a striking manner the extent and power of the agency concerned in the evolution of the *gas*," and showing, it may be added, that the effects on the rocks