

The shales which underlie this new formation when subjected to a close examination have revealed many interesting features, foremost amongst which is the presence of numerous examples of the macrospores *Protosalvinia Huronensis* described by Sir William Dawson in his "Report on the Erian Flora of Canada" in 1871. These macrospores from the bore-hole and drillings when examined under a microscope show very marked characters. They are thus described by Sir William Dawson (loc. cit. supra): "Macrospores in the form of discs or globes, smooth and thick walled, the walls penetrated by minute radiating pores. Diameter about $\frac{1}{100}$ ths of an inch or a little more. When *in situ* several macrospores are contained in a thin cellular sporocarp, probably globular in form. From the upper Erian and perhaps lower carboniferous shales of Kettle Point."

The Niagara and Clinton formations of the Silurian system and the Corniferous formation of the Devonian system, are the formations from which most of the gas and petroleum of Canada have hitherto been obtained in the Province of Ontario.

So far as I am aware, none of the oil or gas producing wells of Western Ontario derive their oil or gas from the Trenton formation of the Ordovician (Lower Silurian) system. (See discussion.)

That the Trenton formation of the States of Ohio and Pennsylvania is well known as a gas and oil-producing series of strata need scarcely be mentioned before this Mining Institute, and whilst in only one or two isolated instances the Trenton formation has been reached by the drill, nevertheless we venture to hope that before long wells sunk sufficiently deep to reach the Trenton formation, which underlies the Devonian and Silurian strata of the Huron-Erie peninsula of Ontario at a depth of some 3,000 feet, (more or less, depending upon the points of departure,) will reward the enterprising company which will make the venture.

It will be clearly seen that every few hundred feet of strata which overlie the gas- or oil-producing strata which are eagerly sought by the drillers makes considerable difference in the calculations as to the relative position and exact geological horizon indicated. From a very complete series of drillings recently received at the Geological Survey