



Structure Diagram of the Top of the Trenton Formation near Milton, Ont. The broken lines are approximate contours of lines passing through points of equal elevation at the top of the Trenton Formation.
 † Contour intervals 10 feet; elevations are below sea level.

the accumulation is apt to be less pronounced than in the case of the normal accumulation in domes and anticlines.

Keeping these facts in mind, the well advised prospector collects all available data as to the elevation at different points of the formation to be prospected, and then chooses the highest point for his wells. Rarely does the first well prove or disprove the field. Well must follow well, the location in each case being made in the direction of higher structure suggested by previous wells, unless no water is found, in which case low structure is to be sought. The importance of keeping samples and accurate logs of wells in such work is evident. Except in very level country the elevations of the tops of wells should be determined, as only by knowing the surface elevations, can well logs be accurately compared and structure worked out.

In the light of recent oil discoveries in southwestern Ontario and in view of the fact that considerable areas of promising country have been lost sight of by being placed in the category of country already drilled, it seems probable that new oil pools will still be found in the Onondaga (Corniferous) limestone of southwestern Ontario. The Guelph formation is only partially explored, and it is possible that, by making use of the present knowledge of the structure of the Onondaga, new pools may be found in the Guelph beneath Onondaga (Corniferous) domes. Hopes are entertained that the Trenton formation, in spite of its apparent lack of water and varying porosity, may still be successfully developed.

Suggestions to Prospectors.

The attention of the prospector for oil is called to the following considerations. In the Milton area the highest structure probably lies about three-quarters of a mile north of the well in the Brandon brick yard which has produced some oil. The accompanying diagram showing the structure of the top of the Trenton formation as determined from the logs of some of the

wells already drilled, suggests that this is the case. The absence of salt water in the Trenton near Milton, however, would suggest drilling on lower structure, that is, away from the centre of the dome. Wells drilled to the south of the "oil well," however, struck no oil and although both producing gas wells are on lower structure the gas and oil of this region occur at different levels in the Trenton. It is probable that the rock porosity is variable, and hence the occurrence of oil is likely to be "pockety."

Other favorable locations for prospecting the Trenton formation are on the middle and southern parts of Manitoulin Island, away from Manitowaning bay and the north channel with its other tributary bays which wash the Trenton outcrops and have thus allowed natural egress for oil and gas, and ingress for water. Excepting one dry well drilled by H. F. Slater 100 ft. into the Trenton at Providence bay, no drilling has been done south of Lakes Manitou, Mindemoya and Kagawong, and Bayfield sound. At Providence bay, the Trenton was struck at 900 ft. in depth. It is well known that considerable quantities of oil were found in the Trenton in wells drilled near Wekwemikong, Manitowaning and Gore Bay. At Manitowaning the Top of the Trenton was penetrated at a depth of about 440 ft.

The Bruce peninsula, north of Wiarton, also offers virgin ground for prospecting the Trenton. Numerous undulations in the rock structure are visible along the 20-mile coast line between Cabot Head and Cape Hurd, and down the eastern coast. Much of this region, however, is difficult of access and prospecting here can well await the results obtained in the Trenton elsewhere.

As indicated on the accompanying diagram, the structure in the Bothwell field suggests a favorable area for prospecting from one and one half to four miles east of Cashmere. The wells drilled to the north, south and east are not on line with the Bothwell domes and there is room for another dome in this unexplored area.