

OIL IN PRINCE EDWARD ISLAND

Of the many fields open to the prospectors of the twentieth century, the oil field is perhaps the most prominent. One's own backyard may have, hidden under its barren and uninviting surface, untold wealth waiting to be uncovered by the hand of man. Where yesterday may have been sand and desert, the monotony broken only by a few huts and hovels, tomorrow may find a thriving town arisen over night as the result of a prospector's luck in striking oil or natural gas—for luck it is. If he strikes one of nature's reservoirs of petroleum he becomes rich; if not, he is out the cost of equipment and labour. In the latter case he moves on and tries in some other place as did his forefathers of the nineteenth century in their search for gold.

Of late much talk has been heard of the possibilities of finding oil in Prince Edward Island: indeed a certain New York firm has already commenced boring on Governor's Island, and all indications seem to point to the likelihood of the development into a great industrial centre of this little Island of ours, which, on account of its lack of minerals of any sort has been considered only as an agricultural province and Fox Ranching district.

In the year 1919 Mr. Hugh J. McKay, a native of Pictou County, Nova Scotia, who has had much experience in the oil regions of Oklahoma, visited Prince Edward Island, and, being struck by the great similarity existing between the geological structure of the Island and that of the Oklahoma oil fields, he immediately sought from the government a license to bore for, and develop, any oil or natural gas on the Island. The following year this was granted him by an act passed by the Island Legislature. This act provides that all the oil and natural gas found on P. E. I. shall belong to the license; and that the government shall get a royalty of 5% of the gross output at the mouth of the well or wells, but that any other minerals which may be found, such as, coal, salt, etc., shall belong to the Crown.

Last spring Mr. McKay sold his oil and gas rights in P. E. I. to the Henry L. Doherty Co., a New York firm, which has vast interests in electric lights, gas, street railways, and oil all over America. In the month of May a staff of engineers came on from New York, and, after

investigation, selected Governor's Island, in Hillsborough Bay, as the site of their first well. The reason of their selecting this spot was that they found evidence of an anticlinal formation, which ran in almost a straight line from Earnscliffe, through Governor's Island, and on to St. Peter's Island. By an anticline is meant a ridge in the earth's crust caused by the cooling and consequent contraction of the earth.

The highest point of this anticline formerly towered like a hugh dome to a height of perhaps two thousand feet above the present level of Governor's Island, but in the course of countless ages this dome-like structure was worn down by erosion and weathering, until the surface of the land is now only a few feet above sea level. Just as the surface of the earth was roof-shaped in this region, so now the lower oil-bearing strata of sand or porpous rock, if they exist, would also be inclined upward. The removal by erosion of this overlying material means that these strata are just so much nearer the surface.

At Earnscliffe, it may be remembered, a certain Mr. Stover drilled for oil about fifteen years ago, but after having reached a depth of eighteen hundred feet, he abandoned his project. This same stratum of rock which he struck at the distance of eighteen hundred feet beneath the soil, shows itself at the surface on Governor's Island, so that geologically speaking, the drilling on that Island is starting at the same level at which Mr. Stover left off.

Thus, if P. E. I. contains any deposits of oil or natural gas, it is most likely to be found where the sloping strata are highest, for, contrary to the prevalent opinion that oil exists in hugh subterranean pools, oil-well operators have found that it is beds of sand, or sometimes layers of porous rock, which are the reservoirs. The oil seeps through the sand, and, during the ages, it is forced to the top by the heavier water; indeed it would rise right to the very surface and would be lost to us, were it not for the layers of impervious rock covering the oil-bearing strata.

About the middle of last September, the Doherty Company began their preparations. An eighty-five foot steel tower has been constructed above the spot selected for sinking the well, and, on December 2nd, the first day of actual boring, a depth of forty-one feet was reached.

Their method is very much the same as the modern method of drilling wells for water. It differs only in the fact that it is carried on upon a much larger scale, and the equipment and machinery used are much more nearly perfect. Near the top of the tower, directly over the well, is a pulley through which runs a $\frac{7}{8}$ inch steel cable. One end of this cable is wound around a huge drum which is held stationary by a brake. To the other end of the cable is attached the drill. This drill consists of a five and half inch steel column called the "stem," to the lower end of which is screwed the drill-bit. The complete drill measures about forty feet in length, and weighs over two tons. About fifteen feet up that portion of the cable running from the drum to the pulley, at the top of the tower, is fastened a hempen cable, connected, at the other end, to an eccentric, which, in revolving, alternately tightens it up and releases it. In this way the drill is made to rise and fall a distance of three or four feet. Owing to the twist of the cable, the drill is kept turning, and rarely falls twice in the same position. The rock, thus pulverized, is then drawn out by means of the sand-pump, which measures about fifteen feet in length, by twenty inches in diameter. In this way is the work carried on night and day, and if success crowns the efforts of this company, many will be the benefits accruing to Prince Edward Island.

Some of these advantages are already apparent; labour has been supplied to some thirty-five or forty workmen who have all along been engaged in the preparatory work. Think of the great amount of labour that will be provided, if oil is found in any quantity—labour that will obviate the necessity of our young men seeking employment in other countries! This will be most desirable in view of the fact that our population has been decreasing; for a country cannot be prosperous whose man-power is being diminished. What greater good at present could be done to Prince Edward Island than that a means be placed at our disposal by which we could prevent the ever-increasing emigration from which this province suffers.

In another way would the realization of this project benefit us. Much ready cash would be scattered throughout the Island and our government would be enriched by the royalty it would receive on the gross output of the oil.

Let us then wish luck to those who are boring on Governor's Island for, as has been truly said, "Fortunate indeed is the country which possesses stores of petroleum, for, like gold, it brings other industries with it, and a healthy prosperity which helps to weave the ever-growing fabric of international trade."

D. O'L., '28.

Beauty is worse than wine; it intoxicates holder and beholder.

Mine honour is my life; both grow in one;
Take honour from me, and my life is done.

—*Shakespeare*

Our bodies are gardens to which our minds are gardeners.

—*Shakespeare.*

It is excellent to have a giant's strength, but tyrannous to use it like a giant.

—*Shakespeare.*

Crafty men contemn studies, simple men admire them, and wise men use them.

—*Bacon.*

Great souls by instinct to each other turn,
Demand alliance, and in friendship burn.

—*Addison.*

An idler is a watch that wants both hands;
As useless if it goes as when it stands.

—*Cowper.*