

not been struck, gas in large quantities has been proved. Wherever the tar sands underly, there is gas in the beds above. The government test well at a place called Pelican struck a great flow of gas which has been escaping into the atmosphere for twenty years. At present this gas is too far from the market to be commercially valuable, and the pressure is low, but the field is probably extensive and the advance of population and industry may render this gas of immense value. Within the past few weeks an Anglo-Canadian syndicate has commenced important exploration in this section and has sought acquisition of gas franchises there.

Farther west, in the Peace River country, considerable development is going on. Several large oil companies are interested here and active drilling has been carried on for quite a period with encouraging results. The oil is tarry and very heavy and occurs in beds believed to be a continuation of tar sands of Athabaska. The Shell Transport Company, British offshoot of the Royal Dutch Shell combine, and capitalized at \$50,000,000, has already spent large sums of money in this section and is prepared to spend more. The Anglo-Persian Oil Company, through its subsidiary known as the D'Arcy Exploration Company, has sought important concessions in the Peace River country and its representatives have declared the company is ready to spend millions in exploration work. The region is said to resemble the Taurus plateau in Asia Minor, which is rich in petroleum.

There are signs of oil in the country bordering on Great Slave Lake and farther north in the Mackenzie River basin. Much of the lake shore is low and swampy, so there is not sufficient exposure for the structure to be clearly determined, but oil rises to the surface of the water in several places and there are small pools of thick, dark oil on the land, with occasional cavities in the dolomite-limestone con-

taining light yellow oil. There are many indications of oil in the Mackenzie River region, some of the chief seepages occurring beyond Fort Norman. The shales in this neighbourhood smell very strongly of oil and the structure of the strata is favourable to the accumulation of extensive pools. Test wells are now being bored and very recent reports state that the results are highly satisfactory.

Going south again, we come to the better oil fields of Alberta. In the extreme southwest corner of the province, on the west side of Waterton Lake at a place once called Oil City, we have the oldest oil field in Alberta. About twenty years ago several wells were drilled here and in two of them a very promising amount of oil was found. One well is said to have flowed at the rate of 100 barrels a day, and small tanks were filled with oil. A short time ago the well was cleaned out and many barrels of oil were baled out into a tank. A new well will soon be sunk alongside this old producer.

Authorities believe that the best chances of striking oil in Alberta are in the foothold belt. Some fifty wells have already been drilled in the foothills and it might be considered that this would be an ample test. In the opinion of Dr. T. O. Bosworth, chief geologist of the Imperial Oil Company, this is not so, however, for with few exceptions the wells have been located without proper regard for geological structure and have achieved no useful purpose at all. Most of the wells have been bored in one section, too—the Okotoks fields, a comparatively small area, yielding oil of remarkably high grade in considerable quantity. The annual production in 1918 was about 18,000 barrels. Not far away there is a valuable flow of natural gas. One of the wells gives about 2,000,000 cubic feet a day. The gas is fairly rich in gasoline, which is extracted by an up-to-date plant for the purpose—the first to be operated in Canada.