

Petroleum Resources of Northern Alberta

Interesting Facts and Statistics with Respect to Production and Consumption of Petroleum Products

Up to the present time, oil in considerable quantities has not been found in Western Canada. Respecting the possibility that petroleum will be discovered, particularly in the Viking area and the Peace and Athabasca valleys, the situation may be summed up as very promising.

A small quantity of dark oil obtained in one of the wells in the Viking gas-field is an encouraging indication, and oil has also been found in the Pelican Rapids gas-well. Seepages of oil have been found near Waterton lake in southwestern Alberta, and in the Flathead valley in southeastern British Columbia.

In northern Alberta, there are enormous tar seepages which evidence an upwelling of petroleum unequalled elsewhere in the world. Along the Athabasca river, they extend from Pelican rapids to Fort McKay, a distance of over 100 miles. The known occurrences indicate that there is in sight at least 6½ cubic miles of bitumen, and the petroleum from which it was derived must have been many times greater. While this enormous amount of petroleum has escaped, there must be untapped reservoirs in the Devonian limestones whence it was derived. Similar seepages occur near the Peace and Mackenzie rivers.

Near Peace River Landing, oil has been found in two wells, 900 and 1,100 feet deep, respectively. The first well is reported to have yielded 3 to 4 bbls. per day when oil was struck in the upper portion of the tar sands and to have had a maximum production of about 9 bbls. Drilling, however, was continued through the tar sands, which are about 80 feet in thickness at this point, and a heavy flow of water and gas was struck immediately below the sands.

The second well is in the tar sands and is reported to be yielding about 25 bbls. per day.

In the Sheep Creek district, about 32 miles southwest of Calgary, the production of oil is reported as follows:

Company	Depth of well, feet	Specific gravity (Beaumé)	Production, bbls. per day
Calgary Petroleum Products Co., No. 1 well*	3,920	62°	10
Alberta Petroleum Consolidated	2,720	38° to 40°	25
Canada Southern Co.	2,400	55°	5
Northwest Pacific Co. (when operating)	3,500	38°	4
Alberta Southern Co., No. 1 well	3,200	55° to 56°	10 to 15
Southern Alberta Co., No. 1 well	3,300	58° to 60°	30

The Mid-West, 3,200 feet deep, and the Acme, 3,200-3,300 feet, also in the Sheep Creek district, are reported to have struck oil.

As "commercial" gasoline is 60° to 65° B., the oil produced by the Calgary Petroleum Products, Canada Southern, Alberta Southern and Southern Alberta companies approximates to the fuel ordinarily marketed as "gasolene".

In the year ending March 31, 1917,

we imported into Western Canada, for fuel purposes, 95,693,497 gallons of petroleum, valued at \$2,738,555. For refining, we imported, in the same year, 35,313,717 gallons, valued at \$1,040,047. The discovery of extensive oil-fields in Alberta and Saskatchewan would retain in Canada at least \$3,750,000 which we are now paying for petroleum importations and an additional \$1,250,000 paid for petroleum products, such as gasoline and kerosene, or in all, \$5,000,000.

In 1917, 31,200 gallons of gasoline and kerosene were recovered from Alberta crude oils. Presumably, part of this production was from petroleum produced during 1916.

During 1917, the production of crude petroleum in Alberta amounted to 8,500 bbls., or 297,500 Imp. gallons.

*Commonly known as the Dingman well.

Mr. Dingman, president of the Calgary Petroleum Products Co., states that the company's oil wells have a combined capacity of 5 million cubic feet of gas per day; that their measurements indicate a content of one gallon of gasoline per 1,000 cubic feet of gas and that, if only one-half the gasoline be recoverable, they could maintain an output of 2,500 gals. of gasoline per day.

—James White in *Fuels of Western Canada*.

ABOUT APPEARANCES

Appearances are often deceptive. The poorly dressed individual we sometimes see on the street may not be a vagrant, but a gentleman in hard luck. Similarly, the house that is badly in need of painting may not be the home of slovenly people, but of a family which is financially embarrassed. Nevertheless, it is true, that "the apparel oft proclaims the man". Likewise a man often either makes his own environment or his environment makes him. Painless, weather-beaten houses, whether in town or country, have a most depressing effect on those who must live in them, or near them. In addition, wood and metal materials rapidly deteriorate if not given a protective covering of some sort. Even whitewash, or a coat of good ochre and oil is better than nothing, but for better service and a wide variety of artistic effects paints are essential.

Making Small Farms Pay

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husking corn (Longfellow and Quebec Yellow) gave 175 bushels of ears and 18 tons of fodder; 16 rows of potatoes, 20 rods long, yielded 80 bushels, one acre of turnips yielded 1,200 bushels; 13 acres of pasture sustained 14 milk cows, 4 yearling heifers and 3 horses. The balance of the farm was in softing crop, garden, orchard, etc.

A careful account was kept of each department of the farm and below is the result of the year's operations, March 1st, 1918, to March 1st, 1919:

RECEIPTS	
Milk sold	\$1,951.72
Live Stock	912.20
Poultry and eggs	139.19
Farm products	80.65
Fees	20.00
Prize money, etc.	94.22
Increase in live stock during year, also feed	593.00
Total	\$3,790.98
EXPENSES	
Feed purchased	\$451.29
Stock purchased	547.04
Repairs, upkeep, insurance, etc.	196.98
Hired help, silo filling, etc.	85.25
Loss on stock	16.00
Interest on investment	600.00
(\$10,000 at 6 per cent)	
Taxes	82.55
Total	\$1,889.11
Total income, including increase in live stock of \$593.00	\$3,790.98
Total expenses, including \$196.98, repairs to building, machinery, etc.	1,889.11

Total wages for my wife

and myself over expenses \$1,901.87

"In addition to this income, we also had free house, all the vegetables, apples, maple syrup, milk, eggs and fowls that we required. We also had our butter, until Nov. 1st, when we commenced shipping milk to Montreal. These results were obtained under ordinary conditions. While we have a number of pure bred animals, we valued them as grades. From March 1st, 1918, until May, the cream was shipped. From May until Oct. 15, the milk was sent to the condensery. From Oct. 15th until March 1st, 1919, the whole milk was sent to Montreal."

A NEGLECTED FERTILIZER

Many towns and cities have experienced a scarcity of manure since the vacant-lot garden movement has become so popular. The St. Thomas Horticultural Society, a very wide-awake institution, has met this difficulty by collecting and storing annually about 400 loads of pavement sweepings, stable manure and leaves. This is stored in a convenient place just outside the city where it decomposes, being frequently turned to hasten rotting and prevent burning. It is afterwards applied to the Society's boulevard beds and to reclaimed waste areas, whilst some is sold to members. It is important that as much leaves and stable manure as possible be mixed with the pavement sweepings as the latter are apt to be leached out and to consist of a good deal of dirt, not of high manurial value.

POTATO SEED TESTS

Tests by the Ontario Department of Agriculture, last year, showed that potatoes grown from Northern Ontario seed yielded 30 bags per acre more than those grown from Old Ontario seed. New Brunswick seed did not give quite as good results as that from Northern Ontario

Solving Pure Seed Problem in Quebec

Co-operative Seed Cleaning and Grading Plant is Proving Valuable Asset

At Ste. Rosalie, Que., is to be found one of the most unique co-operative enterprises of its kind on the North American continent. It is a plant containing an equipment for the purpose of cleaning and grading seed grain for the farmers of the province. Seed grain and some other farm supplies are also bought and sold.

The capital required for the erection of the plant and the purchasing of the machinery was raised by selling shares at \$100 per share, each shareholder being limited to one share.

The need for cleaner and better graded grain for seed purposes has long been felt in Quebec and this plant is intended to meet the need. The cleaning and grading machinery in the plant was made in France and is the very best of its kind obtainable. A fixed charge is made for cleaning and grading.

The cleaning is well done, which is a distinct improvement on old conditions, as there are very few good fanning mills in the district. Wheat is turned out in four grades as to plumpness and size of berry. The best is used for seed and the other grades are used for flour or feed purposes according to the quality. Oats are graded into two grades. The largest and plumpest being used for seed and the smaller and inferior kernels ground for feed. In this way, the proportion of the grain unfit for seed is best utilized by feeding it rather than by sowing. Grass, clover and all cereals are handled in this plant.

A three per cent discount off list prices is made to members and shareholders who purchase seeds or other supplies handled by the Society. Farmers' clubs and other co-operative societies may join the Ste. Rosalie society and receive the same benefits on purchases as individual members. The plant is running at full capacity and it is the hope of the Society that many other farm products and supplies will eventually be handled by them. The profits are being allowed to accumulate for the purpose of enlarging the plant in the near future.

—F. C. Nunnick

COPPER IN MANITOBA

The copper discoveries of Manitoba are rapidly assuming considerable magnitude. Prof. Wallace, Commissioner for Northern Manitoba, states that, in one copper mine, as yet undeveloped, 20,000,000 tons of ore averaging \$8.75 a ton in value have been blocked out. He estimates that when railway facilities are available this area will provide employment for 1,000 men for about fifteen years.

These tests will be continued for three years more and an effort will now be made to test the productivity of various soils in the province planted to the same kind of seed.