

D.T.P.S.

DEPARTMENT OF THE INTERIOR

CANADA

Mining Lands and Yukon Branch,

Edmonton, Alta., Sept. 6th, 1918.

Sir,-

On the 30th ult., I made an inspection of the Dingman and other wells in the vicinity of Okotoks. On file 145286, your memo. of the 12th of June last, I was requested to report on the oil refineries in the Okotoks District.

In the proper sense of the term "Refinery", there are none in that district. There are, however, three plants known as "distillation" or "skimming" plants used merely to separate the gasoline from the kerosene and the kerosene from the heavier oils.

When the crude oil is taken from the well, it is placed in a tank, and heated to a certain definite temperature, driving off a vapor, which, when condensed forms the lighter oil known as gasoline. This heating is continued at the same temperature until no further vapor is given off. It is then assumed that the gasoline has all been extracted.

The heat is then increased to a higher temperature, and further vapor is given off. The resultant product, when condensed, is the commodity commonly known as kerosene or coal oil. The residue, after the gasoline and coal oil have been removed, is a heavy thick oil which it is proposed to use in an absorption plant referred to hereunder.

There are three of these plants in the Black Diamond field, one at the Dingman well, one at the Prudential well, and a third at the Southern Alberta well.

The great bulk of gasoline and kerosene from this field comes from the Southern Alberta wells.

These plants cannot in any way be classed as refineries, for their purpose is not to refine but merely to separate the lighter oils from the heavier.

Upon inquiring at the C.P.R. Station at Okotoks, I found that up to the 31st of July last, the total quantity of gasoline and coal oil shipped from that Station, amounted to 634756 gallons. Local consumption amounts to 50 to 75 barrels per month, so that up to the present time, about three-quarters of a million gallons of gasoline and kerosene have been produced from the Okotoks field.

A considerable flow of gas is found in many of the wells. This gas is utilized for power purposes in drilling other wells, and for operating the distillation plants referred to.

The location of the wells is about 40 miles from Calgary. Owing to the distance and to the tremendous cost of piping, it would not be possible, or practical, at the present time, to pipe this gas to Calgary for domestic or other purposes.

H.H. Rowatt, Esq.,
Controller, Mining Lands & Yukon Branch,
Department of the Interior,
Ottawa, Ontario.

The gas is not a dry gas. It carries a considerable quantity of light oil, probably one-half gallon to each one thousand feet. The Dingman people are installing a plant to separate the gasoline from the gas. The process to be used is known as the "absorption" method.

As I understand it, the gas is driven through the heavy oil, or residue from the distillation plant, which acts as a filter separating the gasoline from the gas. The gasoline is then extracted by the distillation method.

I spoke to Mr. Dingman regarding the use to which the gas would be put, after the gasoline had been extracted. He replied that it would be sold to the Calgary Gas Company, or used in the manufacture of carbon black. This is a product used largely in the manufacture of inks and paints, also in rubber goods, such as auto tires and rubber heels. It seems to increase the wearing qualities of these articles. It is said that about three pounds of carbon black can be produced from one thousand feet of gas, and that it is worth in the neighborhood of 50 cents per pound.

This absorption plant is now under construction, and probably will be in operation this Fall.

I do not know if you are already aware that the Calgary Petroleum Producers are installing one of these plants. If there has been no correspondence relating to it, it might be advisable to inform the Company that it is understood the gas, after passing through the absorption plant, will not be wasted but fully utilized for domestic or power purposes, or for the manufacture of carbon black or other useful products.

I will probably visit this field again later in the season, and may have something further to report regarding it.

Your obedient servant,

(Sgd.) O. S. Finnie,

Inspecting Engineer.