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Calgary, June 10th, 1918.

The Controller,
Department of the Interior,
Mining Lands & Yukon Branch,
Ottawa, Ont.



Dear Sir:

In reply to your favor of the 4th inst., I beg to advise you as follows:-

The plant being installed for the extraction of the gasoline from the gas at our works on Section 6, as indicated in the Document filed with the Department and referred to by you, is basically and directly a conservation of the natural gas to the extent that the process extracts from the gas those heavy hydro carbons which resolve into high grade or high gravity gasoline, and which otherwise would "go up into smoke" if not so extracted before utilization of the gas, as a fuel or power energy.

I enclose herewith, illustrations which give in a general way, the character of the installation we are making. By referring to the Document filed with the Department, you will see that the estimated expenditure on this initial plant is \$50,000.00, when completed and in operation.

We have predicated the proposition on the basis of being able to extract from $\frac{3}{4}$ to 1 gal. of 88° to 90° Be gravity gasoline per 1000 cubic feet of gas, passed through the absorbers and stills of the plant.

The residual gas, or the gas after passing through the absorbers is still suitable for fuel and other purposes, and in this connection I might say that we have in view the installation of a plant for the manufacture from this residual gas, of carbon black, a product now being largely used in the manufacture of Printers Ink, Rubber goods, Paints, Varnishes, and etc., the demand for which is increasing very rapidly.

Heretofore, the utilization of natural gas, as you are aware, has been in the use of it as a fuel only, but, in the last few years, practical and experimental efforts, aided to some extent, by scientific and research work, have resulted in evolving various mechanism and processes, through the operation of which various and valuable by products are being extracted from the gas prior to its utilization as a fuel product only. The gas now obtainable at the wells of my company is of the quality or character capable of producing these valuable by products, as above indicated, and the utilization of it in these ways is not a waste, but a conservation, in the fullest sense possible. Further utilization of the residual gas, than as a fuel only, will undoubtedly follow further research work, improvements in processes, new processes, and etc., a progression applying to the utilization of all natural products. In this respect we purpose keeping up with the latest and best methods and practices.

Our absorption plant will be the first one to be erected and operated in Canada, and our carbon black plant, when installed, will be the first of its kind in Canada also.

In this connection we are encouraged, in our work, to learn that the Department is becoming concerned in this matter of the conservation of this great natural resource, and we auger from/



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from it that we may hope for sympathetic and equitable support, not from the Interior Department alone, but from the Trade & Commerce, and Mining Departments, as these also are materially related to the work pertaining to the development and conservation of the natural resources of the country.

I thank you for your favor of the 4th inst., and will be pleased to furnish any further information you may require, and which I may be possessed of.

I have the pleasure to remain,

Yours very truly,

A. W. Dimpson

Managing Director

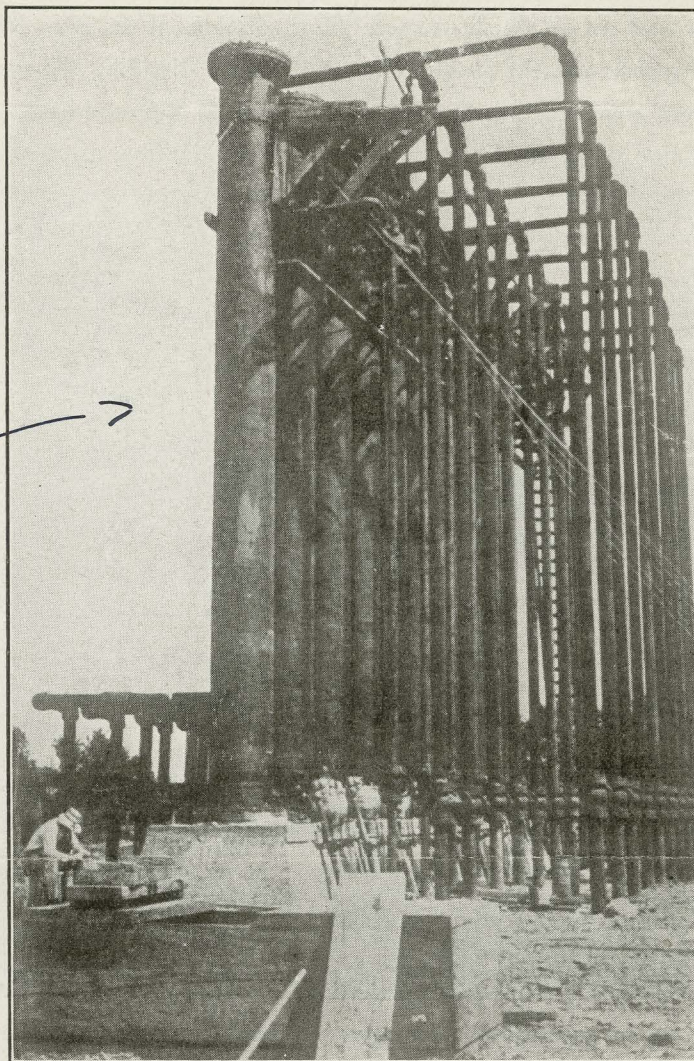
Calgary Petroleum Products Limited

The Extraction of Gasoline from Natural Gas

By PERRY BARKER

The extraction of gasoline from natural gas has become a well established and profitable industry. Greater financial returns are shown each year, due to the steadily increasing price of the product and to improved methods of recovery.

The first step in the development of the industry was the use of compressors, by which the gasoline was liquefied under high pressure. During the year 1915, 24,000,000,000 cubic feet



Absorbers →

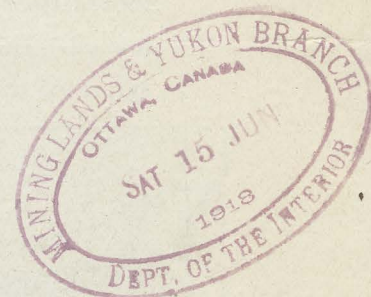


Photo. 1. View of Absorbers in the recovery system - Gasoline from Natural Gas.

of "casing-head" gas was treated by compression and condensation in the United States, with an average yield of 2.57 gallons of gasoline per 1,000 cubic feet. These methods are used only for the treatment of "casing-head" gas which has been allowed to go to waste in the operation of oil wells. This "wet" or "casing-head" natural gas must yield more than one gallon of gasoline per 1,000 cubic feet to make the recovery a paying proposition.

The treatment of "casing-head" gas with less than 1 gallon of gasoline per 1,000 cubic feet or the "dry" gas requires a radically different procedure. The "dry" natural gas occurs widely distributed throughout the United States and Canada and is the gas used for lighting and manufacturing purposes. A large percentage of this "dry" gas contains sufficient hydrocarbon vapors, including gasoline, to make profitable recovery by the use of the improved methods.

The gasoline is reclaimed from "dry" gas by various methods of absorption. These consist in passing the gas through a washer or absorber in which the gas is sprayed or brought in intimate contact with an oil which extracts the gasoline from the gas. This oil is then removed from the absorber and the gasoline is separated by distilling the mixture of gasoline and oil. The oil from which the gasoline has been separated is passed back into the absorber, saturated with gasoline vapors and removed again to the distilling apparatus.

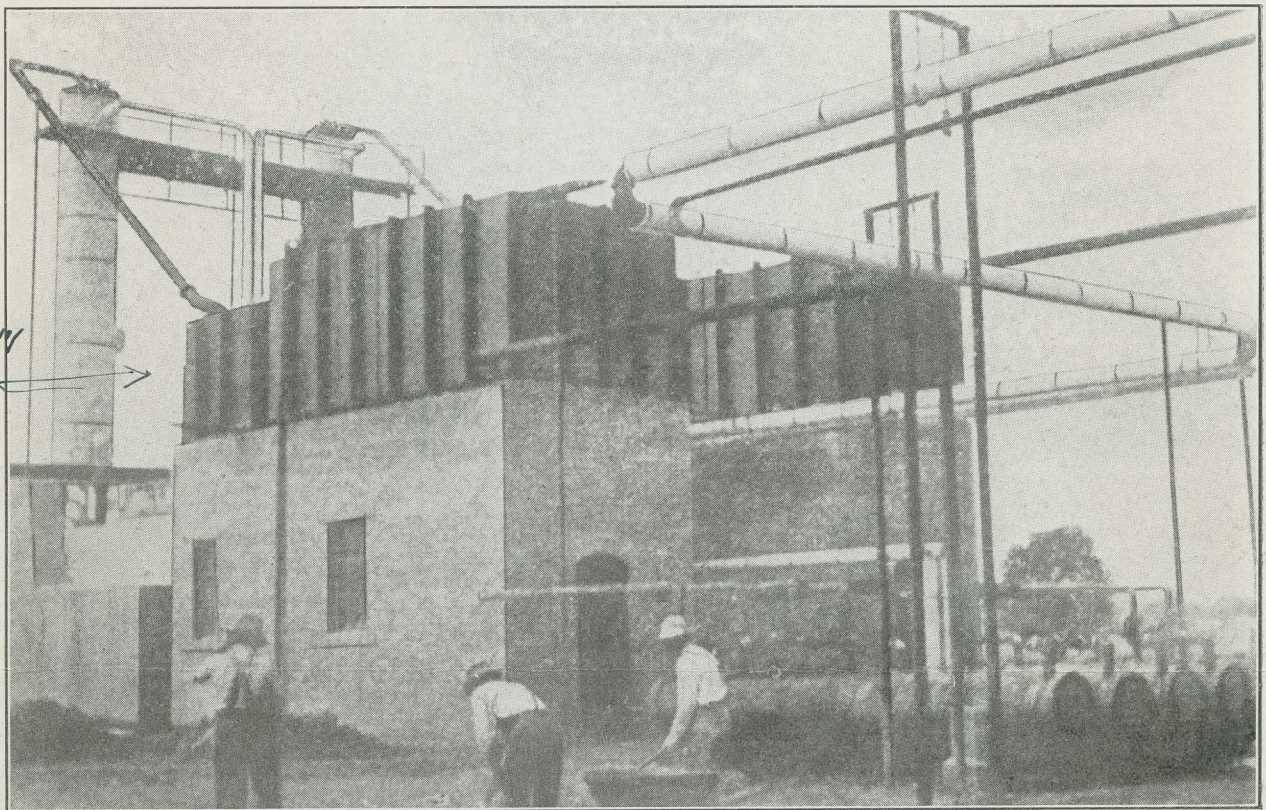


Photo. 2 Stills for evaporating the recovered Gasoline from the absorbing Oil.

The absorbers of a large extraction plant treating 80,000,000 cubic feet of gas per day are shown in photograph No. 1. The absorbing oil is circulated through the towers until saturated with gasoline vapors and is then pumped to the stills.

Photograph No. 2 is a view of the stills, heat exchangers and condensers. The stills contain a number of steam-heated radiators over which the saturated oil flows. The vapors of gasoline are driven off and pass to the condensers in which the liquid gasoline is produced by water-cooling in warm weather and by circulating air in the winter months.

General views of two complete gasoline extraction plants are shown in photographs Nos. 3 and 4. The storage tanks for gasoline shown in the foreground of photograph No. 3 have a capacity of 10,000 gallons each. The plant pictured in photograph No. 4 is treating about 5,000,000 cubic feet of "dry" gas per day. This plant extracts $\frac{1}{3}$ rd of a gallon of gasoline per 1,000 cubic feet of gas treated, or 1,500 gallons per day. This comparatively small plant has a daily income of \$330, of which \$300 is profit based on a selling price of 22 cents per gallon. The return on the plant investment is about 450 per cent annually.

This new industry affords a means of recovering a waste material and thereby conserving one of the greatest natural resources. The business is highly profitable and the increasing demand for gasoline assures a market at or very near the point of production.

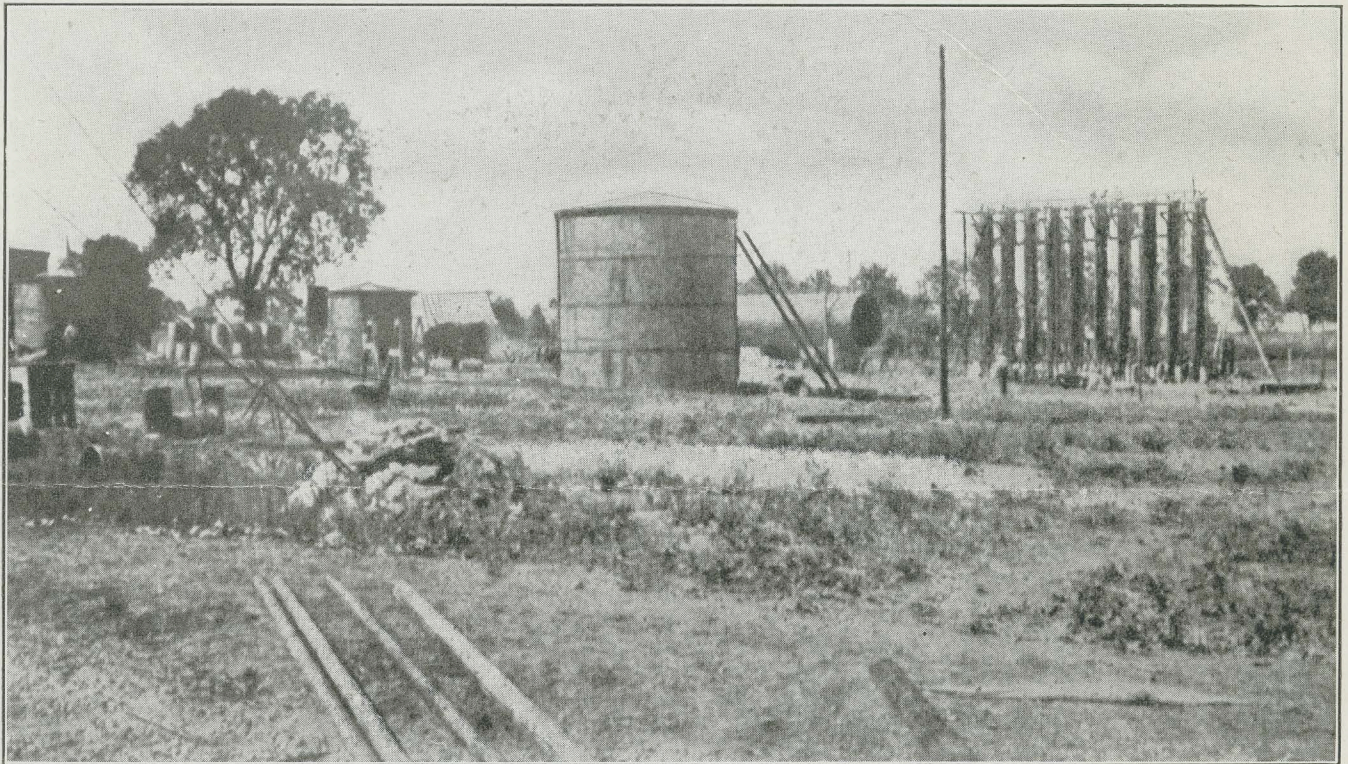


Photo 3.



Housing

Photos 3 & 4. General view of two small Casoline Extraction Plants.

The statements made herein are from official or other sources considered reliable, or are the expression of our belief.