

Big Lignite Deposits in North May Have Value

Preliminary Testing of Large Area Yields Estimate of Big Tonnage but Economic Significance is Not Determined. Several Factors Make Forecasts Risky.

All in the North are interested at present in the lignite deposits north of Cochrane and authoritative information about these deposits is eagerly sought. This is particularly true in regard to the matter in view of the fact that on the successful development of the lignite north of Cochrane may depend the fate of the railway extension north of Cochrane and the immediate prospects of the country served. The following article from the annual number of The Northern Miner will be welcomed:

Extensive Ontario Lignite Deposits

"In the current year there has been some discussion concerning Ontario's lignite deposits on the Onakawana River, 60 miles south of Moosonee on the T. & N. O. Railway extension from Cochrane to James Bay. Reference was made in the Legislative Assembly to certain negotiations with private interests which sought to develop these lignite measures. The public announcement that the province would itself undertake further work on this provincially owned crown coal occurrence has aroused considerable interest.

"Starting in 1926 the Ontario government investigated the Onakawana deposits, the existence of which was known for several years. The area was reserved to the Crown, surveyed, diamond drilled and tested underground by two shafts. The work eventually resulted in a tentative estimate of 100,000,000 tons of lignite.

"There followed a thorough testing of the material by the Ontario Research Foundation. Parcels of lignite were shipped to Germany and Austria for processing by different methods and a mass of data was assembled on treatments, mining and transportation costs and a possible market. Several of these factors are dealt with in the following paragraphs, taken from the Department of Mines publication, "A Technical Investigation of Ontario Lignite."

Details of Research

"Near Blacksmith Rapids on the Abitibi river, 60 miles south of Moosonee, a large body of lignite exists. It lies at an average depth of 65 feet below the surface and is covered with boulder clay, crataceous clay, and sand. The deposit occurs in two seams and covers an area of approximately six square miles. The lignite in its raw state contains 50 per cent. water, and in this condition is of no economic importance at the present time.

"Good second-hand equipment can be purchased in Canada at the present time for strip-mining operations at the deposit. No unusual mining problems of a technical character can be foreseen, and three independent authorities have agreed in substance as to the methods and cost of mining raw lignite. The mining costs contained in this report are based on the recommendations of T. H. Hogg, and he estimates the cost of raw lignite to be 88 cents per ton on the basis of mining 300,000 tons per annum.

"Several processes have been tested on a plant scale with a view to obtaining lignite products that could be transported and used by railways, industrial consumers, and householders. Two of these processes, the Fleissner process and flue-gas drying, have been investigated to the point of estimating the cost of the products to consumers in various centres in Northern Ontario.

"Fleissner lignite is an excellent fuel containing 20 per cent. moisture and 9,000 B.t.u. per pound. It can be transported without excessive breakage losses, and when necessary it can be stored without danger from spontaneous combustion. This fuel could be delivered to the T. & N. N. Railway at Onakawana for \$3.30 per ton, and at this price could compete with imported American coal. Certain technical uncertainties exist, however, with regard to its use in locomotives. There are no serious technical problems associated with the use of Fleissner lignite in industry, but unless the price to the consumer can be reduced by (1) an increase in total production, (2) lower freight rates, or (3) economies in production costs, Fleissner lignite cannot compete in the industrial market. Greater success can be expected in the domestic field if successful trials in standard equipment are conducted.

"The Ontario Research Foundation cannot recommend any immediate commercial development of the lignite deposit. On the basis of the evidence submitted in this report, they feel justified in recommending a further expenditure of \$60,000 to mine and process sufficient lignite to test adequately the burning of lignite products in locomotives, and in industrial and domestic furnaces. The results from these tests, in conjunction with the material embodied in this report, will permit a final conclusion as to the possibilities of commercial development in the near future, and will in any case

establish the value of this deposit to the province of Ontario as a contingency fuel reserve.

Potential Market

"Paper mills use fuel for steam-raising and are generally equipped with furnaces designed to burn bituminous coal in pulverized form. During the last few years there has been an increasing tendency, however, to install electric power. The condition has markedly reduced, at least temporarily, the consumption of coal, and it is impossible to predict the future. From a purely technical point of view, Fleissner lignite should create few problems. The high content of volatile matter and the tendency of the particles to disintegrate and burn rapidly favour the possibility of maintaining the capacity of installed equipment. It should be possible to use coarser particles and thus allow more material to pass through the pulverizer. The high moisture content is not a hindrance to successful pulverization, and in practice it could be reduced by using pre-heated air in the mills. The market for bituminous coal has shrunk in recent years from 125,000 tons in 1929 to 60,000 tons in 1931. The Foundation recommends the use of about 200 tons of Fleissner lignite for trials at the paper mills. If the 1931 tonnage could be replaced by Fleissner lignite, it would create an annual market for 75,000 to 80,000 tons.

"The smelter at Noranda Mines uses 90,000 tons of the best quality Nova Scotia bituminous coal. It is pulverized and used in reverberatory furnaces, which must maintain very high temperatures. The company buys Nova Scotia rather than American coal because of its higher heat value and ease of grinding. Their concern for efficiency in the attainment of the desired temperatures is shown by their decision to dry the coal to a moisture content of below one per cent. before grinding. Provided technical efficiency can be maintained, the company would welcome any reduction in fuel costs and would co-operate in any attempt to bring this about. It is very doubtful whether Fleissner lignite could be used in these furnaces. If the moisture content were still further reduced from 20 to 2 per cent., there would be a stronger possibility. The company is willing to co-operate by carrying out trials in a small furnace fired with pulverized fuel if 50 tons of Fleissner lignite could be supplied. The possible market, 140,000 tons per annum, is larger than the proposed initial output.

"The gold mines are consumers of bituminous coal for steam-raising, mostly for heating purposes. The coal is of American origin and is supplied to the fires by underfeed screw stokers of the "Iron Fireman" type. In Western Canada lignite has been used successfully in underfeed stokers of the plunger type, but no information is available regarding the possibility of using the screw-type with lignite products. The present consumption of coal by the mines is approximately 25,000 tons per annum.

Domestic Use

"The facts regarding the domestic market are difficult to secure. In large buildings bituminous coal is burned, using industrial equipment. During recent years there has undoubtedly been an increase in the use of wood in the homes with a corresponding reduction in the use of coal. There is still a moderate use of imported anthracite, and on a price basis Fleissner lignite could compete. The domestic furnace firepot has been designed to take these fuels such as anthracite. If the change is made to Fleissner lignite, a householder must find room in the furnace at night for an amount of lignite equal to two and one-half times the volume of anthracite normally used to keep the house warm until the morning. In spite of the knowledge of this condition through experience in Western Canada, the manufacturers of domestic furnaces are not supplying specially designed lignite furnaces. Certainly they are not in the homes in Northern Ontario, and it is doubtful whether they would be installed even to take advantage of a cheaper fuel. By-product coke, which suffers from the same disadvantage, has not replaced more expensive fuels. The domestic market is comparatively a small part of the market. It is at present occupied by several fuels and a great variety of types of equipment, to be followed by a carefully planned educational campaign.

"On purely technical grounds it has been shown that there can be no assured market for processed lignite in Northern Ontario until successful commercial trials have been run using representative material in the existing fuel-burning equipment."

Detroit Free Press:—It is rumored that Galt is to have a nudist colony this summer but many residents are shocked at the bare thought of such a thing.

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Do Birds Bite When Their Nests or Young Disturbed?

(Kerry Wood in Edmonton Journal)

At this season of hatching birds, many curious humans who "want to see" have been frightened by the parent birds darting at their heads and threatening to peck at the eyes. Often the question is asked, "Will birds actually attack humans?"

It might be good strategy to say "Yes" to discourage those who sometimes violate the secret of a nest site so clumsily and often that the birds forsake it. But the truth is, it is rather rare that a bird, large or small, will attack a human in defence of the nest.

There is one bird who provides a consistent exception to this rule, for the female Great Horned Owl, in defence of her owlets, will not hesitate to use her needle-sharp talons on the head of any human who ventures to molest the young. The mother horned owl is a very fierce old lady at such times and woodsmen who have been too curious can show you nasty scars. However, most of us aren't lucky enough to find her nest, anyway. . . . Some of the larger birds—crows, magpies, ducks and doves—will meekly fly off and do nothing at all. The Great Blue Heron will not fly, but will sit still until a man climbs into view, when the dagger bill flashes out straight for the eyes.

And have you ever been chased by that fragment of dynamite, the hummingbird? You'll be really alarmed when these tom-thumbs of birdland take after you and reveal how gigantic they can be.

Battle of Wits at London Dominion Day Banquet

A sparkling duel of wit between Lord Hewart, lord chief justice, and J. H. Thomas, dominions' secretary, marked the annual Dominion Day dinner at London, England, on Monday. G. Howard Ferguson, Canadian high commissioner in London, presided.

Other ceremonies in observance of Dominion Day were a service in the morning at the famous church of St. Mary le Bow in Cheapside, conducted by Rev. Gordon Ponsonby, and a reception by Mr. and Mrs. Ferguson at Canada House in the afternoon, attended by 1,500 persons.

Proposing the toast to the British Empire, Lord Hewart first made an eloquent reference to what Pericles said about the Athenian empire, and then went on to discuss the merits of "the Rt. Hon. James Henry Thomas," who was to respond and who "seemed to enjoy conspicuous security of tenure in office."

He was known as Jim Thomas everywhere, declared the lord chief justice, and a reasonable jury would regard that as a strong piece of evidence of character.

"How many other members of the present powerful government are spoken to like that?" asked Lord Hewart. "Did you ever hear anyone speak of Stan Baldwin? Did anyone ever refer to the chancellor of the exchequer as Nev Chamberlain?"

"Europe is full of the praises of Sir John Simon, but was he ever known in the smoke room of the Commons as Jack Simon and did anyone ever venture to refer to Tony Eden? The whole world rejoices that Lord Halsbury has become lord chancellor, but it would be like brawling in church or at least contempt of court if one spoke of him as Duggie Hogg (his name is Douglas Hogg)."

Lord Hewart finally summed up Thomas as one who was "at home equally with prince and peasant, bishop and billiard-marker. The British Empire is unlikely to slip off the rails while Jim Thomas is in charge of the train."

The laughter was quickly renewed when Thomas, in reply, alluded to Lord Hewart's reference to "Pericleose"—that was how Thomas pronounced it. "I make a dignified protest on behalf of this company against Gordon Hewart's airy assumption that we know everything about classical history. A lot of people around me have been asking who Pericleose was," he said.

"Gordon," declared Thomas, addressing the Lord Chief Justice, "you may be all right as a judge but you are no good as an after-dinner speaker. My first thought, though, after hearing you is thankfulness that my parents had the foresight to christen me Jim."

Sir Josiah Stamp, distinguished economist, proposing the toast to the Dominion, said he was looking forward to the time when Canada would play a tremendous part in international finance. Standing between the United States dollar and the pound, she would have immense influence.

Alluding to the establishment of a central bank in Canada, Sir Josiah said: "Those on this side who know how important a part this organization is destined to play hope the Canadian people will give this financial novelty at least the benefit of any doubts they may entertain on the project."

North Bay Nugget:—The mechanical lie detector tells the truth about half the time, according to a U. of M. professor. Why, the thing is almost human!

Advancement Made in the Study of Silicosis

Lions Club Hear Interesting and Informative Address on Silicosis, with Emphasis on the Progress Made in Preventing and Curing the Disease.

Dr. N. H. Russell, one of the two Canadians who attended the symposium at the Trudeau sanatorium at Saranac lake at the beginning of June, was the guest speaker at the Timmins Lions Club last Thursday evening. The study of silicosis was Dr. Russell's subject, and it is one with which he is well acquainted.

The Porcupine affords one of the most fertile fields on the continent for the study of the disease, and the work done here by Dr. Russell, who is associated with the Workmen's Compensation Board, has contributed greatly to medical science's knowledge, not only of early detection but also of treatment.

The sanatorium at Saranac is to become the central registration point for the study of silicosis. Dr. Russell said, if plans at present under consideration work out as expected.

Needs Highly Specialized Men

A highly specialized physician is required to diagnose the disease with accuracy, especially in the early stages. The examination of X-ray plates is possibly the only sure method of determining whether or not a patient is suffering from silicosis, and even then when examination is made by those unfamiliar with the work, diagnosis is apt to be incorrect. The plates reveal, in the later stages of the disease, shadows (which appear white on the negative) of about the size of a buckshot, scattered throughout the lung. These are caused partially by scar tissue and partially by actual silica introduced into the lung by continued breathing of rock dust containing silica particles. In the later stages, calcium, introduced from the blood stream, adds to the contraction caused by the scar tissue and prevents the parts of the lung affected from being used. It is usually the central part of the lungs that becomes seriously harmed, the extreme upper and lower parts having much enlarged air cells.

From X-ray records in St. Mary's hospital here, taken by Dr. Russell and his assistant in the study of the disease that has affected so many miners, it is possible to study the various stages in detail, and to watch closely the effects of continued work and treatments. From the thousands of films in the cabinets of the X-ray department, plates can be chosen showing

every stage, from the first visible sign, until those cases which have become hopeless. Patients are able to continue work for many years after first contracting the disease, and although rest cures and other more recently advanced treatments may aid in recovery, the surest method to cut down the incidence of the disease is prevention. Methods of prevention have been carefully studied not only in Canada, but all over the continent. Those who are occupied in the business of sand blasting, or in factories where silica dust is likely to be found, contract silicosis much more quickly than miners, so that the study of preventive measures is a most important one to industry as a whole.

Use Inhalators Now

The use of inhalators by workers is the logical solution to cutting down the incidence of silicosis to the lowest possible point, it is now believed, and at least one iron mine in the United States has now made it compulsory for their miners to wear masks while engaged in their work. It is understood that at least one mine in the Porcupine is seriously considering putting a similar measure into effect.

Dr. Russell's visit to the Trudeau sanatorium was made in company with Dr. Riddell of the Department of Health of Ontario. Dr. LeRoy Gardiner, pathologist at the institution, recognized as one of the foremost men on the continent in the study of silicosis, made some very interesting remarks about recent work.

The sanatorium itself is one of the oldest on the continent and was founded by Dr. Trudeau, who, finding himself suffering from tuberculosis, went up into the Adirondacks and after fishing and lying about in the bright sunlight, found himself much improved. It was in this way that the idea of sanatoriums found great favour with medical men in the treatment of tuberculosis.

A worthwhile article on the subject of silicosis will appear in a future issue of The Advance.

The Lions Club in Timmins is continuing its work in providing spectacles for children of school age who would otherwise not be able to afford them. An average of one pair of glasses a week is being maintained.

"On a Bicycle Built For Three"



With cycling becoming increasingly popular in the Old Country as the weather daily grows warmer, the problem of what to do with Master Baby, crops up. It is solved in a perfect manner, however, by this Inverness cyclist, and his wife, who built a tiny sidecar for their bicycle in which the child sits with comfort enjoying the fresh air and countryside. A glass windshield protects the child from dust and dirt. The photo is from Inverness, Scotland.

Moose Sing "O Canada" at Dominion Day Function

Delegates to the 47th annual convention of the Loyal Order of Moose at Boston, Mass., on Monday of this week celebrated Dominion Day as the opening sessions got under way.

Two members, William Ramsey of Kirkland Lake, Ont., and Bert Bridgeman of Rouyn, Que., led the singing of "O Canada" while the several thousand delegates stood.

A large delegation of Canadian members was present, among them several prominent in the order, including Norman G. Heyd of Toronto, regional director of Canada; Stuart Slater, supreme auditor of Canada; Joseph Hackson of Toronto, supreme forum member, and George E. Johns of Walkerville, Ont.

Among the women present were Mrs. Josephine Jackson of Toronto, grand regent of the Women of Moose, and

Mrs. Mitella of St. Thomas, Ont., president of the Women of Moose Association.

Timmins I.O.D.E. Make Fine Donation to the Shelter

Mrs. Condie, matron at the District Children's Aid Society Shelter, this week received a generous donation from the Timmins Golden Chapter Daughters of the Empire. The gift was a cheque for \$25.00 to be spent for needed linens for the Shelter. When the Shelter was opened here eight years ago the Kiwanis provided a notable array of the best of linens and wonderful service was received from these linens. Some replacements are necessary and the donation from the I.O.D.E. will make possible the purchase of linens that will give somewhat similar value to those replaced.

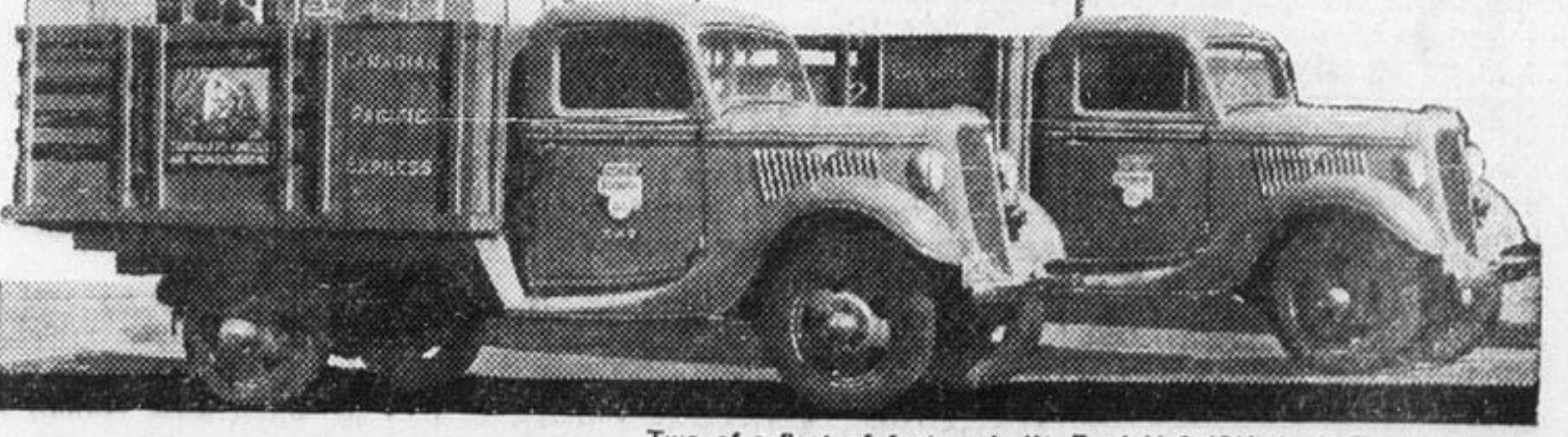
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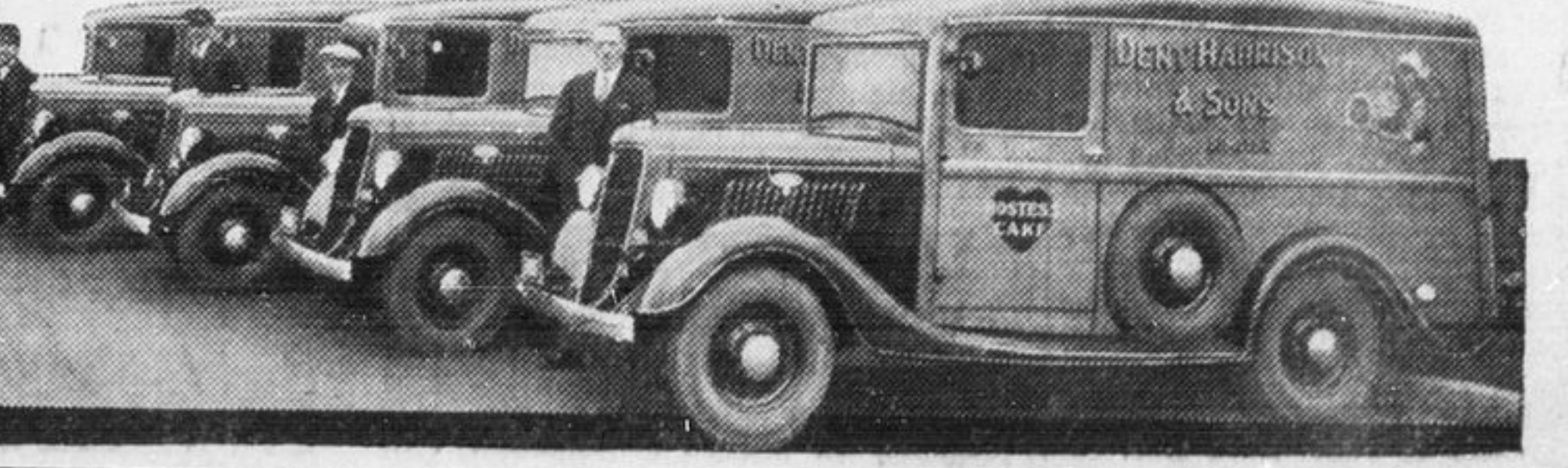
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The United Church of Canada, South Porcupine
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