

the Beaver Collieries. On the probable outcrops, he estimates 32,000,000 tons; on the probable, but unproved outcrops, 16,700,000; on the unproved, but not improvable outcrops, 24,600,000, making a total tonnage of 73,300,000. It is impossible in the space at our disposal to go into further details, but the prospectus issued by the company contains complete information which should appeal to those interested in coal propositions.

The company are making an issue at par of \$300,000 6 per cent. gold bonds. With each bond is given a bonus of 5 ordinary shares of a par value of \$10. After the sale of the first \$200,000 worth of bonds, this bonus offered ceases, and the prices will be advanced.

The \$200,000 which is being raised will be sufficient to build the necessary railroad, tipples and screening plant, and will provide also working capital in addition. All the assets of the company are both now and for the future, covered by the bonds. The bonds are also convertible so that should the stock rise, say, to 150, the bondholders will have the privilege of exchanging their bonds for stock.

The officers and directors are as follows:—President and managing director, J. B. Ferguson; vice-president, A. E. Woods; secretary-treasurer, J. R. Seymour; assistant secretary and accountant, J. J. Cowderoy; consulting engineer, F. B. Smith. Directors, J. B. Ferguson, Vancouver; A. E. Woods, Vancouver; J. R. Seymour, Vancouver; A. St. G. Hamersley, Oxford, Eng.; J. E. Miller, Victoria; Hon. R. E. McKechnie, Vancouver; H. J. Thorne, Vancouver; J. H. Senkler, Vancouver; J. N. Lake, Toronto.

ST. CLAIR TUNNEL ELECTRIFIED.

Grand Trunk System Has Adopted Scientific Methods in Its Ontario Tube.

Safety, cleanliness and speed, are three of the many advantages accruing from the electrification of the St. Clair tunnel, which runs beneath the St. Clair River and connects Port Huron, Michigan, with Sarnia, Ont., From portal to portal its length is 6,032 feet. The total distance between the American and Canadian summits is about $2\frac{1}{4}$ miles. It was opened for traffic in 1890 by the St. Clair Tunnel Company, which was organized as a subsidiary company of the Grand Trunk Railway system.

The tunnel in its electric garb was inspected by many railroad officials and newspaper men last week, when the electrification was formally inaugurated. As a matter of fact, it was ready for traffic six months ago. During that period the Westinghouse Electric and Manufacturing Company, of Pittsburg, Pa., the contractors for the electrification, have thoroughly tested the system and found it entirely satisfactory.

Tough Blue Clay All Along.

The first work was boring in the bed of the river to ascertain the nature of the deposit and strata. These borings showed a tough blue clay at all points. Work on the preliminary drift was begun in October, 1886. A shaft 14 by 6 feet was sunk on each bank of the river to a depth of about 85 feet, or 70 feet below the surface of the river. The drift was pushed out 20 feet on the American side and 186 on the Canadian side. These drifts were finally abandoned in July, 1887, after about nine months had been spent upon the work.

After study of the subject by Chief Engineer Hobson, the shield system was finally decided upon. The shield consisted of cylindrical steel shells, 15 feet 3 inches in length and 21 feet 6 inches in external diameter, made of steel plates one inch in thickness. Each shield was divided into twelve compartments by means of two horizontal and three vertical stays, which were built up to a thickness of two inches.

Tunnel is Perfect Circle.

The engineering work in laying out the line of the tunnel was simple, yet it was carried out with great care. An error in alignment would have increased the cost of the work and might also have caused the failure of the whole enterprise. The tunnel is a perfect circle with an internal diameter of 19 feet 10 inches.

The grade on both the Canadian and American sides is 1 in 50 or 105.60 feet per mile. The total cost of the work was \$2,700,000. These are the details:

Expended on preliminary work	\$ 250,000
Machinery and plant used in construction.....	250,000
Labor, all classes	900,000
Cast iron for lining	800,000
Other materials	100,000
Real estate, land damage, legal expenses	110,000
Permanent equipment (tracks, locomotives, etc.)..	50,000
Approaches	200,000
Engineering superintendence, etc.	40,000
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	2,700,000

On September 19, 1901, the tracks were laid and the formal opening took place. There were present in Port Huron on that day all the Grand Trunk officials, including Sir Henry Tyler, president, general manager Sargeant, chief engineer Hobson and others. From that time until a few months ago all trains were hauled through the tunnel by special locomotives built by the Baldwin works at Philadelphia.

Dangers Are Obviated.

Since the tunnel was completed a number of men have lost their lives while taking trains through the bore. The electrification does away with dangers of stalled trains and at the same time is a further example of Grand Trunk enterprise.

The social side of the inauguration took the form of a luncheon at Sarnia and a dinner at Port Huron. As hosts, the Grand Trunk officials excelled their previous achievements. Many newspaper men were present, including representatives of the Monetary Times and Canadian Engineer.

FIVE MILLIONS ISSUE—AND NOBODY KNOWS.

"One of the smaller Canadian railways will issue \$1,000,000 debentures."

This cable message, dated from London, Eng., appeared in the Canadian daily press on Monday and Tuesday. Guesses have been made as to the particular railroad which is to make this issue.

The Monetary Times has inquired of Senator A. Campbell, president of the proposed Central Railway of Canada, whether or not the message refers to his road. He says "I have not heard anything definite from London within the last few days and do not know whether the dispatch applies to the Central Railroad of Canada or not."

Mr. McDonald of the Randolph McDonald Company, Ltd., contractors for the proposed road, knows nothing of the matter.

The Toronto office of the Canadian Northern knows nothing whatever about it here.

A score of brokers, bankers and others are in similar ignorance.

Future cable messages regarding an issue of five million dollars railroad debentures may well be more explicit.

SOAKED IN PETROLEUM

Alberta is Believed to Contain the World's Greatest Oil and Gas Fields.

Calgary, Nov. 17.—When enough men are able to turn their attention from wheat growing and ranching, and take up the matter in earnest, there is no doubt that a very considerable proportion of the world's supply of petroleum will be produced in Alberta.

From the American boundary on the south, to Lake Athabasca, several hundred miles north of Edmonton, there are signs that the underlying rock is saturated with petroleum, and that in many places there are immense accumulations of natural gas.

Along the Athabasca River the deposits appear at or near the surface. Natural gas and oil pour out of the river banks and the bed of the stream, and the famous "tar sands," which are simply sand covered with the residue of the petroleum which has run out and evaporated, stretch for over 100 miles.

Near Pincher Creek some successful oil and gas wells have been bored, and the Western Oil and Coal Consolidated, who have leased for oil boring purposes 13,000 acres of the most promising land surrounding that town, are now actively engaged in drilling for both oil and natural gas.

Dr. I. C. White, State Geologist of West Virginia, and one of the most successful oil and gas geologists on the continent, recently examined the sections where this company's outfits are drilling. He says that the character of the underlying rock, and the way the layers are tilted, provide the conditions par excellence for the accumulation of oil and gas in commercial quantities. He regards it as almost certain that the gas will be found about half a mile north-east of Pincher Creek, and oil a little farther away.

Western Oil and Coal Consolidated have secured a charter for lighting Pincher Creek with natural gas, and this and other pushing western towns will soon enjoy the cheapest of all lights and fuels.

The capital stock of the Russell Telephone Company, of Manitoba, has been increased from \$5,000 to \$25,000 by the issue of 200 new shares of \$100 each.