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COAL MINING IN THE CANADIAN NORTH-WEST.

IN the summer of 1881, Sir A. T. Galt, Mr. Lethbridge, of London, England, and several other gentlemen applied to the Dominion Government for the lease of five coal mining locations in various parts of Alberta, on the Bow and Belly rivers, with a view to test the quality of coal prior to the opening up of the Northwest Territories by the construction of the Canadian Pacific Railway. Having obtained three leases, a party of mining experts were sent in the spring of 1882 to examine these, and by the end of the same year an exhaustive report on each location was received, which showed that the coal on the Bow Rivers, although more favorably located for shipment to market than the Galt mine coal, was much inferior in quality and in consequence would not warrant the expenditure of a large sum of money in development, it being apparent that sooner or later the Lethbridge coal would become accessible to market, and, owing to its superior steam-producing qualities, the Bow River location would ultimately become of small value.

It was therefore decided to open the Galt mines at Lethbridge, and transport the coal in barges down the Belly River to Medicine Hat, the point at which the C. P. R. crosses the South Saskatchewan River, and for this purpose a company was formed in the spring of 1883 with a capital of £50,000 sterling, and preparations were made to build the steamer and a fleet of barges to convey 3,000 tons of coal from the mines to Medicine Hat, which the C. P. R. had agreed to take from the company at a good price in order to encourage the enterprise and ensure cheap fuel for the prairie country which their railway would open up for settlement.

The difficulties to be overcome in the building of these boats were immense, as the material, excepting the lumber for the hulls, had to be freighted in bull wagons from Swift Current (at that time the terminus of the C. P. R.) to Lethbridge, a distance of 250 miles, and the lumber had to be brought from the company's saw mill in the Porcupine Hills, a distance of 60 miles, to the shipyard at Lethbridge.

Skilled ship-builders were brought from Yankton and Pittsburgh via the Missouri River and Benton, and on the 1st of June, 1883, the steamer "Baroness" was launched and floated down the river to Medicine Hat to receive her machinery, but owing to various disappointments and delays some 200 tons of coal only were brought down the river that season (1883).

Finding that the season of navigation on the Belly River for the transportation of coal was going to prove very short, the company determined to increase its floating tonnage by building two new steamers and sixteen new barges, which was done during the fall and winter of 1883-4, and on the opening of navigation in the spring of 1884, the company had three steamers and twenty-five barges employed in carrying coal to Medicine Hat.

The navigation of the river however proved very diffi-

cult, and the duration of its season extended over a period of seven weeks only, thereby demonstrating that some other means of transport would require to be employed if it was expected to bring the coal into general use in Manitoba and the Northwest Territories.

Government for a charter to build a narrow gauge line of railway, which was granted, and with it a railway land grant of 3,840 acres per mile, to be paid for at the rate of ten cents per acre.

The company now increased its capital to £150,000 sterling and issued bonds to £160,000 sterling, to build the railway, and the contracts were let to commence work in April, 1885, on the railway construction, but owing to the rebellion breaking out about that time, it was impossible to get the contractors to begin work before the end of May, and until the railway was completed the various

work parties had to be afforded military protection. Fortunately, however, owing to the judicious action of the Government, the Indians in Alberta were kept quiet and the railway was finished on the 28th day of August, 1885, and on the following day coal was delivered on the C. P. R. at Dunmore, being the point of junction with that railway. The railway connects at Dunmore with the Canadian Pacific main line 650 miles west of Winnipeg. The line was finished Aug. 28th, 1885, and the first train of coal hauled over it the next day being delivered to the C. P. R. on August 31st. There are now four or five trains daily, each of about 16 cars of coal and the passenger cars. The water is hard upon the boilers, except at Lethbridge, where good water is had, but boring will be done this year along the line for artesian well supply.

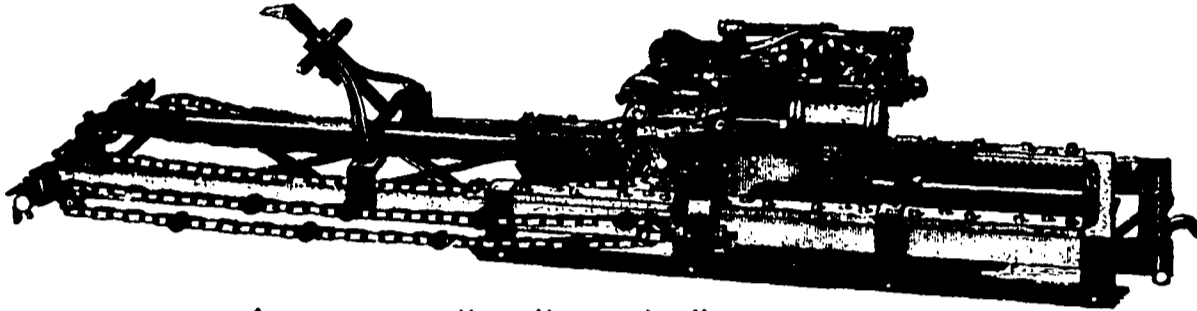
The total cash receipts for the first month's working were \$8,721, while those for November, 1886, were nearly double, or \$15,079; one week in that month showing the business to have been 8,862 tons of coal, 54 tons of company's freight and 70 passengers carried. All the locomotive and other repairing is done at the machine shops. The water supply for the railway, the collier and the town is drawn from the Belly River by a force pump in the valley and driven up a steep bank of 300 feet.

The machine shop contains one six-foot planer, one large lathe for car wheel work, one general purpose lathe, one drill two-inch capacity, one nut and bolt machine, one wheel press and one 24-inch fan for blacksmith's use,

all run by a 26-horse-power engine, and all from Bertram & Sons, Dundas, Ont.

The most extensive coal deposits are on the Bow and Belly rivers, which form the South Saskatchewan, and it is on the Belly the Galt mines are situated. The seam can be seen for several miles on both banks at different heights, the outcrop being known to extend from St. Mary River for 70 miles. The supply is exhaustless and is estimated by Professor George M. Dawson at five to nine million tons under each square mile, showing from 40 to 56 per cent. (and more) of fixed carbon. The seam of coal is five feet two inches thick, is almost flat and very regular. There are three double "entries" to the mine running into the bank from the lever of the rivers, each "entry" being now in

a distance of about 1,200 feet and a working chamber 21 feet wide is opened out every 24 feet in these "entries." The quality of the coal and character of the coal is



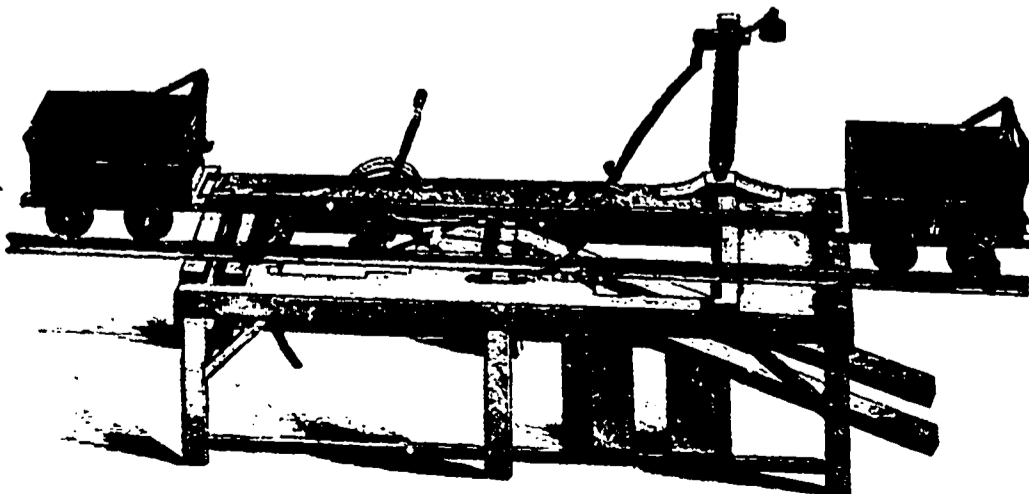
MINING MACHINE—SIDE VIEW.

Short as the season was, the company succeeded, however, in delivering to the C. P. R., 3,000 tons of coal before the fleet had to be laid up, owing to low water in the river and this coal on being thoroughly tested in the



DRILL AT WORK.

locomotives of the C. P. R., proved to be of great value for steam purposes, so much that the C. P. R. company offered to give the coal company a contract for a large



PIT CARS, DUMP TRACK AND SCHIURE.

quantity of coal for a term of years, if they would build a railway to connect the mines with the C. P. R. Having obtained this contract they applied to the Dominion