

The Collieries of British North America.

CORRESPONDENCE COLLIERY GUARDIAN.

The most important mineral—by values—produced in the Dominion of Canada during the year 1890 was coal, the quantity of which (3,117,661 tons, valued at places of production at 6,496,110 dols.) exceeded the production of the following year by 398,183 tons. As I have pointed out in an earlier contribution, almost all this coal was produced in the oceanic provinces of British Columbia and Nova Scotia, but the coal deposits of the North-West Territories are of enormous importance—they are apparently inexhaustible, the coal-bearing area being there estimated at 65,000 square miles, comprising seams of coal of varied thickness, estimated to produce 4,500,000 to 9,000,000 tons of lignite and bituminous coal per square mile. Inasmuch as the United States of America have hitherto controlled the production of anthracite coal, it is interesting to note that, in the proximate Rocky Mountains large quantities of anthracite have been discovered, and are now operated near Banff, on the line of the Canadian Pacific railway, by the Alberta Railway and Coal Company and the Canadian Anthracite Company. All the coal consumed by the great transcontinental line from the town of Brandon west to the Pacific coast is now exclusively the produce of the native mines, and as a constant demand for anthracite is maintained at San Francisco, which is nearer to the Canadian mines than to the American points of production, I can hardly do otherwise than concede to the Banff mines a complete monopoly of the markets of California themselves. Furthermore, we must recognize the importance—from an imperial point of view—of large deposits of this smokeless coal within two days' journey of the principal naval station of the North Pacific Ocean, and admit that this vast unexploited coal region of the North-west Territories is to be the field of lucrative enterprise in a near future. In considering these mines, and, in fact, all the mines of British America, I shall advance from Vancouver Island to Cape Breton, thus:—

BRITISH COLUMBIA.

In British Columbia, six coal mining companies, with an aggregate approximate authorized capital of \$5,508,000, are now in operation, viz:—

The Cambrian Coal Company, Limited, with an authorized capital of \$33,100, divided into 831 £20 shares, and owns 831 acres of mineral land in the Cedar district of Vancouver Island, but the operations are either temporarily suspended or of little importance relatively.

The Crow's Nest Coal and Mineral Company Limited, with an authorized capital of \$2,000,000, divided into 20,000 shares of a par value of £20 each, owns 11,000 acres of coal lands near Martin Creek and Morrissey Creek, in the East Kootenay District, but although \$30,000 have been expended up to October 1, 1890, in prospecting, &c., mining upon any extensive scale will not be initiated until more advantageous shipping facilities have been provided. The analysis of the seam is:—Hygroscopic water, 1.59; volatile combustible matter, 39.41; fixed carbon, 63.33; ash, 4.37. Coke per cent, 67.70.

The East Wellington Coal Company (Nanaimo Harbor), has a capital of \$1,500,000, and operates the East Wellington Collieries, at Nanaimo, directed exclusively by San Francisco men, who in 1889 employed 190 men, and produced 51,272 tons of coal, of which 7,636 tons were consumed at home and 43,636 tons exported. The seam varies from 2½ feet to 7½ feet in height, into which five levels have been driven and two good shafts sunk, and is connected with the staiths at Nanaimo by a railroad four-and-a-half mile long. Two pairs of hoisting

engines lift the coal to the screens, whence it is despatched in 34½-ton cars, drawn by two locomotives to Nanaimo.

The New Vancouver Coal Mining and Land Company of London, which was formed to acquire the properties of the Vancouver Coal Mining and Land Company, owns some 32,000 acres of freehold land, and operates the Nanaimo collieries upon Vancouver Island, the total output of which, for the year ending 31 December, 1890, was 389,600 tons, distributed as to home consumption 93,340 tons, and as to exportation 292,809 tons. Four principal shafts are in operation thus:—

	Seam.		
	Ft.	in.	Ft. in.
South Field, No. 2	5	0	10 0
" " 3	5	0	" 10 0
Esplanade " 1	5	0	" 12 0
North Field " 4	1	6	

From which railways diverge as to the South Field mines, five miles long with siding; as to the Esplanade mine, one mile; and as to the North Field mine, four and a half miles to Departure Bay. The line is laid with steel rails 56 lb. per yard, gauged according to the standard, viz., 4 ft. 8½ in. The mines are equipped with eight hauling and pumping engines, twelve steam pumps, four locomotives, 200 6 ton coal cars, lumber, and ballast cars, fitting shops, lathes, boring, drilling, planing, and screw-cutting machines, hydraulic presses, steam hammers, and diamond boring machines. Besides these facilities at the shipping port there are wharves of 1,070 ft. frontage, at which ships of the largest size can load at all stages of the tide, and at convenient localities with brick fields, stone quarries, &c. The net output from the East Field mine during the half-year ending June 30, 1891, was 75,226 tons. Electric haulage has here been introduced, installed by the Edison Electric Company, whose system is estimated to yield considerable saving in the cost of production. South Field No. 2:—The net output during the same period was 100,180 tons. A new shaft has been sunk 505 ft. into 6 ft. of coal, which indicates 1 ft. more coal than encountered further away in the old shaft.

The net output from the South Field No. 3 was 35,000 tons of pillar-drawn coal, that of South Slope Field No. 4 (a driven slope) 624 tons, and that of North Field Mine 42,257 tons for the half year to June 30, 1891. An analysis of the principal seams by slow coking indicated: Volatile matter, 33.40; fixed carbon, 51.45; ash, 10.50; coke firm.

Union Colliery of British Columbia Limited. As mentioned in a prior contribution, the coal-fields of Vancouver Island cropping out at the northwest corner of the island, trend southeast and again enter the water at Nanaimo upon the southeast coast, being thus, like those of Cape Breton, in the form of a fringe of a coalfield the main body of which reposes upon the bed of the Straits of Georgia, this fringe being divided by a synclinal into the Nanaimo and Comox basins, in the first of which the coalfields just described exist, and in the last of which the Union Mine is in operation producing 31,204 tons in 1889, distributed as to exportation 23,790, and as to home consumption 100 tons; and 69,537 tons in 1890, distributed as before, 64,048 tons and 1,481 tons respectively. The seam is of good coal, 7 ft 6 in. thick, indicating hygroscopic water 1.70, volatile combustible matter 27.17, fixed carbon 68.27, ash 2.86, and is operated by twelve miles of railway, 4 ft. 8½ in. gauge, two locomotives, fifty coal wagons, one diamond drill, four stationary engines, four steam pumps, one wharf, &c.

These Vancouver coalmines in the aggregate yielded 1,029,097 of bituminous coals in 1891, of a very high quality, commanding a better price at San Francisco—where they rank with Northumberland West Hartley, than any other coal of America, and compare therewith as to steam properties thus:—Wellington 1.407, Nanaimo 1.335, Seattle, Washington Territory, U.S.A., 1.330.

Their total production from 1874 to 1890 (both inclusive) was:

Tons.		Tons.	
1874	81,000	1883	213,000
1875	110,000	1884	394,370
1876	139,000	1885	365,000
1877	151,000	1886	326,630
1878	171,000	1887	413,360
1879	241,000	1888	548,017
1880	265,000	1889	649,409
1881	228,000	1890	759,517
1882	232,000		

Making a total of 5,343,009, or an average per annum of 314,294, being an average of 1,072,964 tons less than the average for Nova Scotia bituminous coals over the same period, the total production of which was 23,593,395, with an average of 1,387,258. The following were the exports:—

Tons.		Tons.	
1874	51,001	1883	271,214
1875	65,342	1884	245,478
1876	116,910	1885	250,191
1877	118,252	1886	274,466
1878	165,734	1887	356,657
1879	186,094	1888	405,071
1880	219,878	1889	470,683
1881	187,791	1890	508,882
1882	179,552		

Making a total of 4,073,696, or an average per annum of 239,629, being an average of 51,177 tons greater than that for Nova Scotia over a similar period, the exportations of which were 3,203,701 tons, or an average of 188,452.

The markets for British Columbian coal are very important, viz., the markets of the North Pacific coast of America, and the home markets in a country where miners are rapidly developing the superior wealth of the allied mineral.

The Public Debt.

The increase in the public debt is frequently made the basis of a charge of extravagance against the Dominion government by persons ill informed upon the subject, and anxious only to score a party point. All Canadians, however, are interested in learning the extent and nature of the national liabilities and in knowing the relative ratio in which this obligation may be increasing. Like a private debt, that of the Dominion is properly to be measured by the benefits conferred by the investments of the capital proceeds, by the extent of the business carried on, by the burden of taxation involved, by the effect of the expenditures upon the national credit abroad. An examination of the balance sheets of mercantile houses will constantly show an increase in the outstanding liabilities, in other words the aggregate of debts, but on the other hand a more than corresponding addition to the assets has been made and the actual position is bound to be greatly improved. Moreover, as the area of trade extends, a larger capital is required to conduct it, while, at times, borrowings are made not only for the interchange, but equally for the production of articles of commerce. The view in which, therefore, the national debt is to be regarded is from the standpoint of a number of members of a firm engaged in an undertaking in the benefits or otherwise of which all are partakers, though not to the same degree. To take a familiar illustration, the people of the Dominion, partners in the public business or government of the country, decided some years ago by a formal majority vote, to embark in the enterprise of constructing a railway to the Pacific coast. They engaged certain persons to carry out the works, with whom a formal bargain as to terms was made, the pith of which was a payment in money and land as an inducement to fulfil the undertaking. Whether the arrangement was prudent or not, whether its results have justified the course taken, is unnecessary at this time to enquire, although there is really no room for two opinions on the point, but it may be useful to show how such a venture affects the obliga-