The Year Book of British Columbia 1897 to 1901

THE·YEAR·BOOK·OF BRITISH·COLUMBIA

COMPENDIUM
1897-1901.

B. C.

R. E. GOSNELL.

HR
F 5803.1
Y391
1901
Cop. 2

The Year Book of British Columbia 1897 to 1901

ciently cheap method for metallurgical treatment. Water-power and timber for mining purposes are both available in the locality. In addition to the Britannia group, several other properties of almost equal promise, including the Goldsmith, Marlborough and Empress group, have been located in the same neighborhood.

TEXADA ISLAND.

Texada Island is situated in the Straits of Georgia, between Vancouver Island and the Mainland, and is 27 miles in length, and has an extreme breadth of a little more than five miles. Exploratory work has been conducted at intervals for many years, prospecting being chiefly confined to the northern portion of the Island; but it was not until about four years ago that mining operations were commenced extensively on systematic lines. The result of these developments has been generally satisfactory. The geological formations in the present productive area are very similar to those of the West Coast of Vancouver Island, but the gold values are considerably higher, averaging from $8 to $9 per ton, and in individual cases often considerably higher. From the town of Van Anda northwards the principal ore deposits are copper carbonates and bornite, and in the Copper Queen mine, one of the Van Anda group, at the 400-foot level averages $25 per ton in value. This mine has been opened up to a depth of 500 feet, and the adjacent mine, the Cornell, owned by the same company, to about 200 feet. Previous to the erection of a smelter of 50 tons capacity in 1899 (increased last year to 75 tons), the ore was sent to Swansea, Wales, for treatment. Last year 8,000 tons of ore of the exceptional high grade above mentioned were matted locally. The smelter returns from June to December, 1899, were as follows: Total ore smelted, 4,133 tons, yielding 442,005 lbs. fine copper, 9,523 oz. fine silver, and 1,440 oz. gold; total value, $99,484.03. In addition to the Van Anda company's properties, the Marble Bay mine is now entering the productive stage. The important iron occurrences on the west coast of Texada Island are worth more than passing reference. The property, comprising 2,700 acres of land, on which the iron in the form of magnetite occurs, was purchased by the Puget Sound Iron Company some thirty years ago. For a period the ore was mined and turned to commercial uses. Operations were, however, discontinued until quite lately, when it was decided to resume upon a far more considerable scale. The deposits are said to be traceable for four miles, following the coast line, from which they are distant from a quarter to three-quarters of a mile. The development to date has exposed 8,000,000 tons of ore, which is remarkably free from impurities. The output of the Van Anda mines for 1900 was 7,054 tons, an increase of over 100 per cent. on the 1899 returns.

Satisfactory Results.

Iron Deposits.

MOUNT SICKER.

The Mount Sicker mining area lies about six miles distant from tidal water, on the east coast of Vancouver Island, south of the Chemainus River, and at about an equal distance from Westholme Station, on the Esquimalt & Nanaimo Railway. On the south slope of the mountain, the altitude of which is 2,000 feet above sea level, are located what are at present regarded, in consequence of their development, as the most important mines—the Lenora and the Tyee, the former of which has been productive for over a year past. The locality was first prospected in 1896, but, though the indications were favorable, it was not until 1899 that serious mining commenced.

The result of operations in 1900 was such as to justify in the most satisfactory manner the earlier high expectations entertained concerning the extent and value of

The Year Book of British Columbia 1897 to 1901

IRON ORES OF BRITISH COLUMBIA.

THE Engineering Magazine of New York and London contains an article in the issue of December, 1900, by H. Mortimer Lamb, editor of the British Columbia Mining Record, in which is epitomized the most available information on the subject of iron deposits in British Columbia, and from which are here extracted the points of principal value and interest.

The editors of the Engineering Magazine as a foot-note make the following comments which are of interest in this connection:

"Conditions on the Pacific Coast of America afford one of the most interesting studies now open in the economies of industry. Immediately at hand are vast stores of fuel and iron—the prime elements of all manufacture. Across the Pacific are the enormous new markets of the East, which water transport is bringing nearer every week. Wherever such conditions exist, foci of industry have been created. The dawning century seems likely to witness the birth of new Clevelands, Pittsburgs, Manchesters, in the neighbourhood of Puget Sound. Mr. Lamb's article is essentially a review of some of the material of this new world of wealth."

A New Iron Centre.

Although discoveries of large bodies of iron-bearing ores have been made in various localities of the province at intervals since 1872, no annual production has much exceeded 2,000 tons, and on only one or two occasions has the aggregate output of one year reached that figure. The productive sources have been practically limited to three, or more properly speaking, two mines; one, the Glen Iron Mine, on the line of the Canadian Pacific Railway at Cherry Bluff, near Kamloops, and the other the Puget Sound Iron Company's properties at Texada Island. In the case of the former the product has been exclusively used for fluxing purposes by the smelters at Tacoma, Revelstoke and Nelson, while the Texada ore has been shipped to Irondale, Washington Territory, and there smelted with a mixture of from 1-9 to 3-10 of bog ore, making an excellent foundry pig, which was subsequently marketed in San Francisco and utilized by the Union Iron Works in the construction of the United States warships Olympia, Monterey, Charleston and Oregon. In addition to the two mines mentioned, more or less extensive bodies of iron-bearing ores have been discovered at Sooke, Chemainus and Barclay Sound, on Vancouver Island; at Rivers and Knight Inlets, on the Mainland coast; on the Queen Charlotte Islands, and also in several localities of the inland districts of Similkameen and Cariboo.

Sources of Supply.

The Puget Sound Iron Company's property of 2,700 acres is situated on the southwest side of Texada Island. The ore-mass, which on the surface varies in width from 20 to 25 feet, is an irregular contact deposit between limestone and granite, traceable northward for nearly four miles along a ridge following the coastline, and distant from it a quarter to three-quarters of a mile. Sufficient development work has been done to expose an ore-body estimated by experts as representing 5,000,000 tons of commercially valuable iron in sight. In the course of development, at one point, copper in the form of solid pyrites was found in irregular bunches and stringers in the magnetite, but with increased depth this disappeared. Analyses of the ore have been made on several occasions in the laboratory of the Canadian Geological Survey, one result showing 68.40 per cent. of iron, with only .003 per cent. of phosphorus; but a more detailed test gave :

Texada Island.

Iron	69.85
Manganese	trace
Siliceous matter	2.75
Sulphur	.6
Phosphoric acid	trace
Moisture	trace

The formation containing the iron ore of Texada Island is believed to be the same as that constituting the greater part of Vancouver and its adjacent islands.

The profitable local manufacture on a large scale of iron from these ores is not altogether a remote contingency, for, as I have previously stated, in a limited way

The Year Book of British Columbia 1897 to 1901

abundant wood is the Douglas fir, which is successfully used for the manufacture of chemical pulp. Its suitability for mechanical pulp is not so certain. North of Knight's Inlet is the spruce and hemlock belt, affording enormous supplies of excellent pulp-wood—the Sitka spruce especially being unexcelled by any other wood for pulp purposes. These woods cover large tracts immediately contiguous to the sea coast, so that logs can be landed at the mills at very low cost.

Pulping Woods.

An important point in favor of industries on the sea-coast of British Columbia is the mildness of the winters, which admits of operations being carried on throughout the whole year. The forests of this province are much more densely wooded than those of Eastern Canada, 500 cords per acre being not uncommon, while from 100 to 150 cords may be taken as a fair average of good timber lands. With proper husbanding the forests are practically inexhaustible for pulp-wood purposes. This is essentially a timber country. Atmospheric conditions are especially favorable to tree growth, which is very rapid, and the extent of otherwise valueless country along the coast that can be devoted to forestry is enormous. Owing to its wealth of raw material, excellent water-powers and geographical position, British Columbia occupies a position of eminent advantage in competing for the pulp and paper trade of the Pacific. A practically unlimited market is afforded by Australia, Japan, China and the western coast of America—both North and South.

Economic Conditions.

The Industrial Power Company, after cruising many miles of the coast in the search for a suitable water-power, has finally secured Clowhom River Falls, Sechelt Inlet. Clowhom River empties into the sea over a series of falls, the altitude between the top of the highest fall and sea-level being 120 feet. Twelve thousand horse-power (12,000 h. p.) is available from these falls, a special feature being the comparatively low cost at which the power can be developed, the ground being very favorably situated for that purpose. Mills can be erected practically at the edge of the ocean, thus securing excellent shipping facilities; and as there is no ice (as in Eastern Canada), shipments can be made during the whole year without incurring the expense of railway haulage. By the agreement recently entered into by this company with the Honorable the Chief Commissioner of Lands and Works, a large area of timber lands situated on the north end of Vancouver Island, and on the Mainland opposite, has been reserved for two years, to enable the company to select the timber necessary for its undertaking.

Industrial Power Co.

One of the most important water-powers of the province, viz., that at Powell River, has been secured by the Pacific Coast Power Company. Powell River forms the outlet of Powell Lake, and flows into Malaspina Straits, about 80 miles north of Vancouver. The power available at this point is estimated at 18,000 horse-power, and its situation is admirably adapted as a centre of industrial activity. Thirty miles to the west are the coal fields of Vancouver Island; and Texada Island, with its rich copper and gold mines, is only ten miles distant. There is every reason to believe that in the near future mills of various kinds, utilizing this fine natural power, will be established at Malaspina—the name given to their townsite by the Pacific Coast Power Company, and where the company holds about 1,800 acres of freehold land. Important timber areas have been reserved at Kingcome and Tsaw-Watti Rivers and at Thompson and Wakeman Sounds, to assist the company in its selection of spruce and other timber lands necessary for supplying pulp-woods to the mills which this company propose to erect.

Powell River Falls.