

Report on the Occurrences of Iron-ore Deposits on Vancouver and Texada Islands, B.C.

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OUTLINE OF REPORT.



THE following report is made after an examination by the writer of the various occurrences of iron ore on Vancouver and Texada Islands during the summer of 1914, in compliance with instructions from the Provincial Mineral Survey. The most important deposits of iron ore occur at several points along the west coast of Vancouver Island, also at points near the east coast; and on the west coast of Texada Island, in the strait of Georgia.

The most notable points along the west coast of Vancouver Island where such deposits occur are the Gordon river, Ingaboo creek, Hurkley sound, Alberni canal, Henderson lake, Kennedy lake, and Nootka and Quatsino sounds. Near the east coast of Vancouver Island deposits are found on the Upper Quinsam lake and on Klaskan river. On the west coast of Texada Island the deposits occur between three and four miles north of Gilles bay.

Magnetite is the most usual iron ore occurring at the several points referred to. This ore is usually found at or near the contact between crystalline limestone and eruptive rocks belonging to the Vancouver series, as classified by the late Dr. Dawson. The percentage of iron carried by the ore is usually between 55 and 70 per cent., with the percentage of phosphorus quite low and generally considerably below the "Bessemer" limit.

In some of the deposits the content of sulphur is more than 1 per cent., but usually it is less than that. The higher sulphur content is accounted for by the fact that there is sometimes a variable quantity of pyrrhotite and iron pyrites more or less closely associated with the magnetite, and generally when this is the case some of the ore also carries a low percentage of copper.

In many cases the magnetite-deposits have been found to carry a percentage of copper sufficiently high to cause such deposit to possess a greater commercial value for the copper content, and therefore no value for iron-making. Many of the occurrences of copper ore on the islands referred to are closely associated with magnetite, and such ore is sometimes attractive to smelters on account of the fluxing qualities. None of such occurrences of copper ore are described in this report, which is confined to a description of such deposits only as apparently possess commercial value as iron-ore mines for the production of pig-iron.

The percentage of insoluble matter, chiefly silica, contained in a number of samples varies appreciably, ranging from less than 3 to 26 per cent.

Limelite, or bog-iron ore, occurs on the west coast of Vancouver Island, near its north end, on the West arm of Quatsino sound.

Hamatite has been reported to occur on the islands referred to in this report, but the writer failed to find any deposits of this variety of iron ore during his examinations.

Tonnage.—From the writer's observations and estimations of the surface showings and the development-work on the various mineral claims examined by