

"The country-rock on which the ore lies is an altered, greenish porphyry, containing in many places impregnations of pyrite. Across the valley of Limonite creek to the south this porphyry is in contact with quartz diorites of the Coast Range rocks, which are probably intrusive into it. The writer is informed that on the mountain-side above and to the north of the iron-deposit are many quartz veins carrying pyrite.

"The deposit lies on the western slope of the high eastern ridges of the Coast range, and the rainfall in this district, to judge by the vegetation, is very much in excess of that only a few miles to the east. At any rate, moisture is abundant throughout most of the year, and water is constantly flowing down the hillside under the moss. The water flowing over the iron-deposit has a strong taste of iron salts, and plainly has been derived from the decomposition of iron sulphides farther up the mountain-side. This strong solution of iron sulphates trickling down under the moss has built up the deposit as it now stands by the progressive transformation to limonite of successive layers of moss and other vegetation from beneath. That the efficacy of this process is undoubted is borne witness to by the limonitized twigs, roots, chips, fir-needles, and cones that have been transformed partly or wholly to limonite in the few years since the burned areas were cleared. In several places beautiful stalactitic terraced accumulations of limonite have been built up, which are even now in rapid process of growth.

"The iron ore is excellently situated for mining, provided transportation could be obtained. There is ample hemlock and balsam fir timber in the vicinity, and Limonite creek, with its fall of 400 feet in the first mile of its course from the lakes at its head, would furnish sufficient power for a considerable plant, at all seasons, as the water could be readily impounded in storage reservoirs."

During the summer of 1914 the writer (Wm. M. Brewer) examined the group of mineral claims owned by the North Pacific Iron Mines, Limited, described in MacKenzie's report herein quoted. His report was published in the *Minister of Mines' Report for 1914*. It is not necessary to reproduce it in this bulletin, because MacKenzie's report shows that he was enabled to devote more time to the examination and cover the ground more thoroughly than the writer (Wm. M. Brewer), who had no guide conversant with the property to assist him in his examination.

The following remarks relative to transportation facilities and other iron-ore prospects are copied from the writer's (Wm. M. Brewer) old report, as they are equally applicable to the conditions prevailing in 1917:—

"At the present time this property is handicapped by the lack of transportation, but the Grand Trunk Pacific Railway Company has had a preliminary survey made, and from that data the length of this railroad from the property to Copper City, on the main line of the Grand Trunk Pacific Railway, would be about sixty miles. The writer was informed by C. C. van Arsdol, chief engineer of the Grand Trunk Pacific Railway Company, that it was perfectly feasible to construct a railroad through this portion of the country via the Zymoetz River route for local freight-haulage, but that there were difficulties to be surmounted which made it inadvisable to incorporate that section in a transcontinental route.

The property is very favourably situated with regard to timber for mining, fuel, and a fair supply for lumber, the varieties being of hemlock and balsam, as well as some cedar. The water-supply furnished by Summit creek would be ample for all purposes, even to developing power for a plant of considerable magnitude.

Mansel Clarke, the discoverer and locator of this property, informed the writer (Wm. M. Brewer) that he had found other outcroppings of both magnetite and limonite iron ore for a distance of about nine miles in a N. 75° E. direction, or on the extreme summit at the headwaters of the Telkwa river, but could not find any deposits that would begin to approach in extent the body on the group of mineral claims examined."