

In the magnetometer the vertical force of the normal terrestrial field is counter-balanced beforehand by a small weight on the arm of the needle. Through the swinging of the needle in a plane, as above mentioned, the horizontal intensity of the earth's normal magnetic field and the horizontal component of the magnetic force of the ore-body become annulled, and the vertical component of the magnetic force of the ore-body is, therefore, the only magnetic force which affects the needle, and, according to its strength in the different places, causes the different readings marked on the map. The places which have positive magnetic intensity—i.e., when the north pole of the magnetic needle points below the horizontal plane—are marked blue, and, on the other hand, the places where negative magnetic intensity—i.e., where the south pole of the needle points below the horizontal plane—are marked yellow on the map.

"To avoid misunderstanding by any person who is not familiar with magnetic maps of this kind, I desire to point out that all the area coloured blue cannot be considered to be underlain by magnetite, but only a certain part of it. Further development-work will find the magnetite underneath the places with the highest positive readings, and north of them for a short distance down the hill, and here outcrops of magnetite were and will be found where strong negative readings were observed. This fact is due to the topography of the ground, the instrument being set up below the upper pole of the ore-body. This attracts the north pole of the magnetic needle and causes the negative reading. The map shows three separate deposits or groups of deposits, which for reference have been numbered I., II., and III.

No. I. outcrops on the river-bank, as before stated. The top of the bank is covered with soil, and no work has been done to ascertain the width of the deposit; but, to judge from the magnetic curves and outcrops available, the width at the west end may be estimated at not less than 100 feet. The length of the ore-body may be assumed to be about 190 feet.

"Group II. is the most important and may be assumed to consist of two, possibly three, ore-lenses, not counting the small pockets in the southern part of the group. The largest of these ore-lenses has a length of at least 350 feet; a width of 60 feet is very probable, and in some places it is even greater.

"Group III. is altogether covered by soil. The magnetic curves show, however, the ore strikes to be about parallel with the former group, with a length of about 450 feet, and a width which, in places, may be assumed to be very little less than that of the former. In regard to the depth of the different ore-lenses, no conclusion can be drawn from the magnetic map; but as far as surface indications go the claim may be said to be one of the best iron prospects on Vancouver Island, and well worth further development."

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