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Perkins Peak  
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PERKINS PEAK (WALLACE) HAEMATITE DEPOSITS

LOCATION

These deposits consist of pure haematite and are situated near the bottom of a cirque on the southeast side of Perkins Peak at an elevation of 7500 feet and therefore far above timber line. As shown on the accompanying map it is reached by a trail from Klinaklin Flats about 18 miles in length which follows an easy grade up one of the branches of the Klinaklin River. Klinaklin Flats are on the Chilcootin motor road about 150 miles west of Williams Lake on the Pacific Great Eastern Railway. From salt water at the head of Knight Inlet or Bute Inlet the distance is about 70 miles. It is about 40 miles from Tatlayoko Lake which is one of the probable sites of the power plant of the Chilco Hydroelectric scheme. The greater part of this distance is already provided with a fairly good motor road and the remaining part passes through a country in which roads could be quickly and cheaply built.

Previous Work

The deposit is described by J. D. Galloway in the Minister of Mines Report for 1916, page 167, and by V. Dolmage in the Summary Report of the Geological Survey for 1925, Part A page 163.

GEOLOGY

The haematite is a replacement deposit in a bed of porous tuff which is a member of a thick series of sedimentary and volcanic beds of Lower Cretaceous age. This series of rocks is older

than and is intruded by the Coast Range batholith. The iron bearing tuff bed is about a mile distant from the main eastern contact of the batholith but dykes and small satellites of the batholith occur much nearer. The haematite bed strikes nearly parallel to the main contact and dips toward it at a flat angle of about 20 degrees. For a distance of 100 yards or more the dip of the bed is parallel to the slope of the ground and it outcrops therefore over an area of considerable extent but irregular shape which is strewn with large angular blocks of pure haematite amounting in bulk to several thousand tons. The haematite bed is exposed by a number of open cuts which follow in a rough way for about 100 yards the strike of the beds. They show the replacement to be somewhat irregular varying in width from six to nearly thirty feet of practically pure haematite. From this main bed there are many offshoot veins of specularite a few inches in width. The beds above and below the haematite are heavily pyratized and considerably altered to sericite and talc. A tunnel was driven under the outcrop in a northerly direction but it passed through the haematite bed in the first few feet and for the remainder of the distance was under the flat dipping bed as shown in the accompanying sketch. This explains why no ore was found in the tunnel even though it was under some large outcrops. The downward extension of the haematite along the dip has not been investigated nor has much effort been made to trace it along the strike. It seems highly probable that the deposition of the haematite was performed by solutions emanating from the batholith and flowing slowly up the dip of the porous tuff. In the light of this theory the chances of the haematite extending from the dip towards the contact for a great distance probably as far as the contact itself are decidedly favorable and even if the width were not more than 10 feet which is a fair average of the exposures already made it would amount to

a very <sup>large</sup> ~~tonnage~~. This theory could be tested out fairly cheaply by first carefully mapping the geology then prospecting by open cuts along the strike where the overburden is not too deep or heavy and then using geophysical methods over the whole area. If the haematite was found to extend down the dip any distance, large tonnages could be proven by comparatively shallow diamond drilling.

The haematite is of exceptional purity as indicated by three analyses in Mr. Galloway's report. They show 47.6%, 48.4%, and 57.0% iron respectively, with no sulphur and only traces of phosphorous. Other analyses made by the Bethlehem Steel Company show a higher iron content and about the same impurities.

The deposit was no doubt formed by the metasomatic replacement of the tuff bed by solutions emanating from the magmas of the Coast Range batholith and it is therefore entirely different in its mode of origin from the great sedimentary iron ore deposits and cannot be expected to continue along the beds with the same certainty and regularity as those deposits. It will be at best on a smaller scale and be somewhat irregular in its distribution but still might be found in sufficient quantities to form a commercial deposit of great value.

Since the writer made his examination of the deposit in 1925 certain events have occurred and information been obtained which must necessarily modify the conclusions formed at that time and also the still earlier conclusions of Mr. Galloway. For one thing, since that time other deposits of exactly the same type have been or <sup>are</sup> being explored which have been found to be of important dimensions and of considerable economic value. This greatly modifies my former conclusion that because of the nature of its origin it would not be likely to be large in extent. Since that time also the iron ore reserves of

the North American Continent have been depleted to such a great extent that considerable alarm is now felt by many of the large Steel Companies concerning future supplies. Already considerable ore is imported to the United States from Sweden, Chili and Newfoundland and an entirely new set of values may be placed on any potential iron deposits such as the one in question. Again, the inaccessible position of the deposit may be regarded in an entirely different light if the great Chilco Hydroelectric scheme is developed. The electric smelting and the electrolytic production of high grade irons and steels are found in close proximity with abundant cheap power such for example as in Sweden. These products demand a special price and for many purposes hold a commanding position in the market.

In view of these considerations the Wallace iron ores fully merit the expenditure of considerable sums on their further exploration the amount of the expenditure depending upon the results obtained as exploration continues.

(Signed) V. DOLMAGE

13 Licenses  
perkins creek (wallace) Haematite Deposit

