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P R E L I M I N A R Y

REPORT

ON

BACON LAKE

AND THE

WILLY IRON PROSPECTS

Nanaimo

MINING DIVISION

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PRELIMINARY REPORT

on

BACON LAKE AND THE WILLY IRON PROSPECTS

NANAIMO N. D., B. C.

by

James J. McDougall

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INTRODUCTION AND SUMMARY:

A partially completed dip needle survey of a locality west of Campbell River has been made to investigate a small airborne magnetic anomaly. Very limited rock outcrop is present and no magnetite is exposed. Although very near a first class road haulage distances involved are considerable. As low cost mining is possible and magnetics are spread over a fair area a half million ton deposit here could well await future development if need be. Several short drill holes are recommended as an initial step in evaluating the property.

LOCATION, ACCESS AND HISTORY:

The Bacon Lake prospect occurs at approximately the 1900 foot level near the top of a small hill 17 miles west of the Port of Campbell River. The property is about 1/2 mile east of the north end of Bacon Lake, a small 3/4 mile long body of water situated 2 miles west of the northern outlet of much larger Upper Campbell Lake (see Map BL 1). The Quinsam Lake iron deposit formerly worked by Utah Construction is about 9 miles to the southeast and its distance of about 23 miles by road from Campbell River is about the

same as that from Bacon Lake. A short logging road leaves the Campbell River - Gold River road at the north end of Upper Campbell Lake and is constructed to a logged-off area around Bacon Lake. From here a short road climbs the hill to the east and terminates at a forestry lookout station. The iron property is on top of a moderately wooded ridge about 1500 feet north of the lookout road.

The area is about a mile within the private domain of the Elk River Timber Company who rigidly control all travel in the district. A move is underway to ease such restrictions but at the present time a well guarded, locked gate at the Lake crossing effectively prevents road access to over 100 miles of Northwestern Vancouver Island. Under special conditions such as ours a permit is usually obtainable. The deposit is also within the E & N Land Grant area in which a small royalty is payable on all metals save gold and silver.

The climate is not as wet as that of the West Coast. Snow may or may not remain all winter and the property has been snow-free to the present date (February) since last December. Year-round operations are possible.

Tree growth is moderate to heavy but good timber does not occur in the claim area and such has been by-passed by loggers. In summer water will be absent and will have to be obtained from Bacon Lake 550 feet below unless there is sufficient in a small creek about 1000 feet southwest of the property.

The magnetic zone was discovered last spring while

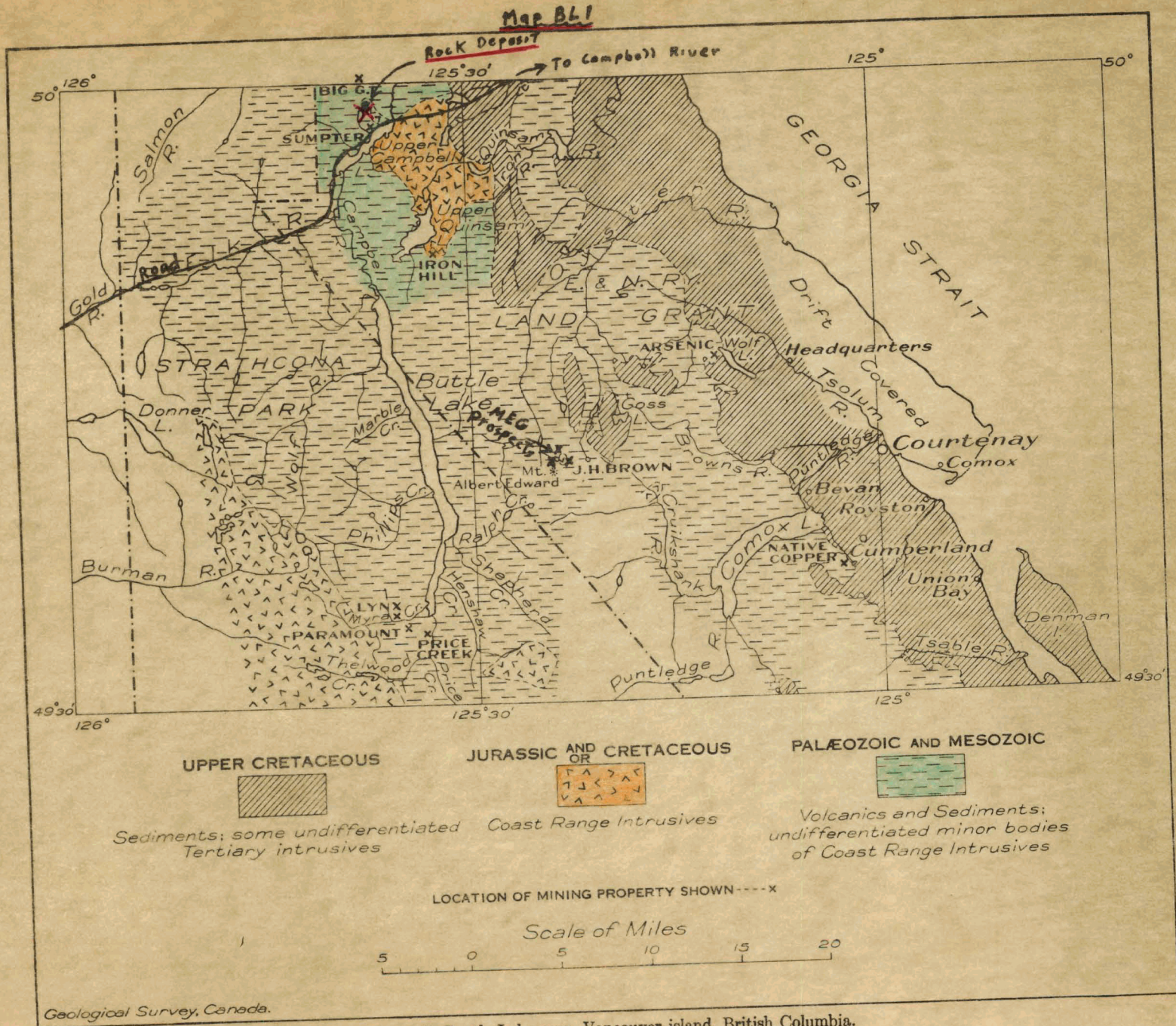
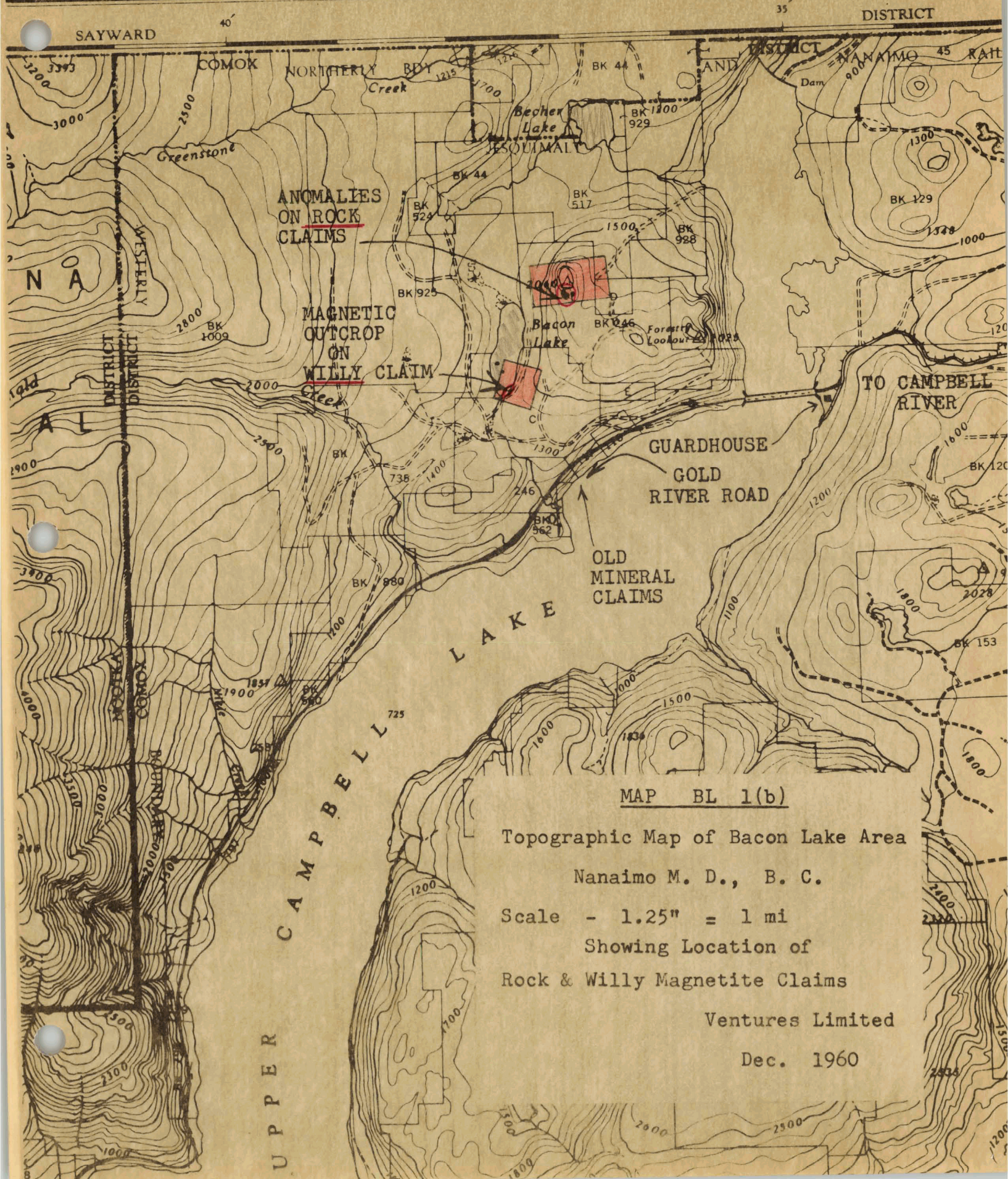


Figure 5. Butte Lake area, Vancouver island, British Columbia.

CANADA

SECOND EDITION

1:50,000



MAP BL 1(b)

Topographic Map of Bacon Lake Area

Nanaimo M. D., B. C.

Scale - 1.25" = 1 mi

Showing Location of
Rock & Willy Magnetite Claims

Ventures Limited

Dec. 1960

running the air mag over a geologically favorable area known to contain small magnetite occurrences. The two "Rock" claims were staked to cover the anomaly. Later a partially exposed and well known magnetite body near Bacon Lake was covered by the "Willy" claim as previous locations had been allowed to lapse. (This will be described briefly later in this report).

During late November with 2 feet of snow already on the ground a rapid dip needle survey was carried out and the results plotted on Map BL 2.

Stan Bridcut, Roy Hepworth, Gerry Davis and Al Pembroke accompanied the writer on the property at one time or another.

GENERAL GEOLOGY:

The Bacon Lake area is fortunately included within one of the few geologically mapped areas of Vancouver Island⁽¹⁾ and a copy of the map is enclosed. We have attempted no geological work and little can be added to that shown on this map.

The only rocks noted to date in the Rock claim area besides diorite are tuffaceous greenstones and/or andesitic volcanics. The volcanics are probably Mesozoic in age and could possibly be correlated at long range with Gunnings Bonanza rocks. Minor limestone lenses may be included but our limited prospecting in the immediate area has not yet indicated them. Several scattered diorite or quartz-diorite out-

(1) Gunning - G.S.C. Summ.Rept. Part "A", 1930.

crops have been noticed but no attempt has yet been made to establish contacts. The overall picture may be as indicated on Map BL 1 with a small tongue of granitic rock intruding the volcanics and the magnetite occurring as replacement bodies in these volcanics near the contact. Regional attitudes are not known but the writer believes low dip angles to exist.

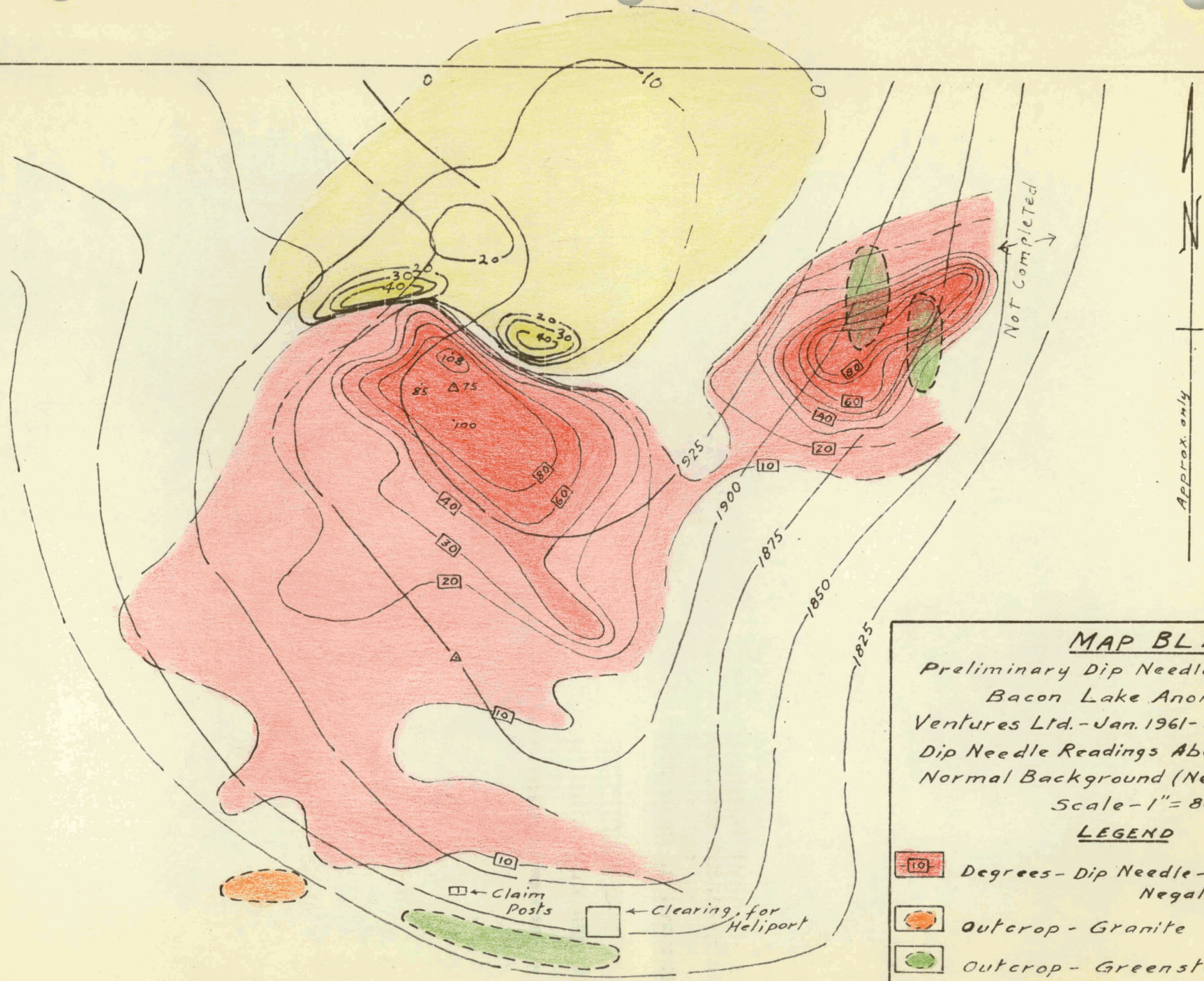
DESCRIPTION OF PROPERTY:

Magnetic readings have been obtained within a rectangular area 350 feet wide by 500 feet long. Significant dip needle readings occur over 2 distinct sections totaling about 40,000 square feet and deflections greater than 10 degrees occur over a combined 75,000 square feet area.

There are no known outcrops of magnetite in the claim area but the presence of such at no great depth appears a certainty judging from air mag and dip needle reactions.

Attitudes of the enclosing volcanic rocks are not known but the writer would guess that such are nearly flat. The attitude of the unexposed orebody judging by the magnetics is also predicted as having a low dip to the south or south-west but geophysicists unaccustomed to topographic effect might seriously question this - possibly with good reason in this case where extremely strong negatives may be the direct result of polarity.

Overburden is not great and a maximum of about 10 feet is envisioned.



MAP BL 2

*Preliminary Dip Needle Results
 Bacon Lake Anomaly
 Ventures Ltd. - Jan. 1961 - J. McDougall
 Dip Needle Readings Above or Below
 Normal Background (Needle at Rest)
 Scale - 1" = 80'*

LEGEND

- 10 Degrees - Dip Needle - Positive Red
Negative Yellow
- Outcrop - Granite
- Outcrop - Greenstone
- Topographic Form Lines (Approx. only)
- △ Flag Station

ASSAYS AND RESERVES:

This is one of the few properties we possess where indicated reserves are exactly nil.

By combining the two significant anomalies a total probable reserve of 5000 tons per vertical foot exists. Enlarging this to include dip needle readings of + 10° or better underlying magnetite tonnage factor of about 9000 tons per vertical foot is possible.

Air magnetics limit the zone to this area. However dip needle work was not completed toward the downhill side of the easternmost anomaly and such could continue a hundred feet or more in this direction.

Grade varies greatly within the district and only broad generalities can be forecast for this deposit. The Quinsam Lake deposit contained no harmful impurities but grade was low. The Iron River showing (as yet unmined) a few miles east of Quinsam on the other hand is of high grade and so are the impurities, it in fact being a possible copper mine. Surface outcrops of magnetite on the Willy claim show no harmful impurities at least to 2 foot depths. If the magnetite on the Rock claims is present as a replacement of andesitic volcanics, and such appears to be the case, an overall grade of 45 to 50% iron is predicted.

CONCLUSIONS AND RECOMMENDATIONS

To be economic at a distance of 23 miles from loading facilities at the present time reserves of magnetite must total at least 1,000,000 tons. In light of the predicted reserves per vertical foot this is a difficult goal

if, as suggested, the deposit has a flat dip. To satisfy it the envisioned blanket-like deposit would have to average over 100 feet thick - unlikely but not impossible.

Factors favoring the possibility of working a smaller deposit in this locality include an already constructed road almost to it and an ideal open-pit set-up.

Recommendations are that a limited number of holes be put down on the property this year to more accurately determine existing conditions guessed at above. If indications are favorable a more detailed program can be laid out which could be executed in this locality during much of the "off-season."

Drilling of the few holes initially required should be done with our Longyear machine preferably while water exists near at hand in early spring. However given sufficient hose such could be obtained (as previously mentioned) from Bacon Lake any time in the year.

A transit controlled magnetometer survey should be run before drilling advances too far and a magnetic map redrawn to replace the present "sketch-map."

If the deposit proves too small to justify more work in the near future (i.e. under 500,000 tons possible) it nevertheless should be kept for possible use in the more distant future. As is often the case iron ore companies with insufficient tonnages to honour contract guarantees can afford to make these up by mining smaller deposits at a slight loss.

Several thousand dollars should be made available

for work on the Rock claims in 1961. The royalties payable to the Crown and to the E. & N. Railway could be prohibitive. Copies of a 1925 Summary on the latter is contained in the Gem Lake Report. Changes since then are being investigated but it is thought negotiation is now a major factor.

WILLY IRON DEPOSIT

DESCRIPTION OF PROPERTY:

The Willy claim was staked in November to cover a small but well known magnetite deposit occurring along a logging road near Bacon Lake about 1/2 mile southwest of the Rock anomaly. This showing has been described in "Iron Ores of Canada", B. C. Volume, and a copy of such is included here. Claims staked on and around it in the past by others have been allowed to lapse.

Little work has been done on the property since the enclosed report was written. No signs of drilling are evident although Utah is known to have looked it over quite thoroughly. Several shallow pits and trenches have more or less confirmed a length of at least 200 or 300 feet but have added little information otherwise. Air mag detection is difficult except from altitudes of 100 feet or less.

RECOMMENDATIONS AND CONCLUSIONS:

This prospect alone would probably not be worth staking but in conjunction with possible production at the

(21) Bacon Lake -

Bacon lake is a small body of water which drains into Upper Campbell lake on the northwest side about $1\frac{1}{2}$ miles from the foot of the lake. A highway leads from Campbell River to the southeast shore of Campbell lake. No well-defined trail leads to Bacon lake which is separated from Campbell lake by a comparatively low ridge less than 1 mile broad. The only known published reference to deposits of magnetite in this vicinity is the following.

Anon.: "Campbell River Iron Deposits"; Min., Eng., and Elect. Rec., vol. 19, No. 3, p. 75 (1913).
Magnetite outcrops are stated to be traceable over a length of 2 miles and a width of 2,000 feet.

The district is occupied by associated sedimentary and volcanic rocks, presumably Triassic, penetrated by large bodies of granodiorite and diorite of late Jurassic or early Cretaceous age. On the ridge separating Upper Campbell and Bacon lakes magnetite is known to occur in several localities, more particularly in the vicinity of a tunnel which has been driven on the slope rising from the northwest shore of Upper Campbell lake a mile from its outlet and also in the vicinity of Bacon lake. Very little work has been done on any of the magnetite outcrops and none of any great size was seen. What appears to be the most important occurrence lies about 300 feet east of the outlet of Bacon lake. At this point, in a length of 300 feet, magnetite is visible in ten or twelve isolated outcrops which lie within a zone 10 to 25 feet wide and are bordered in part by altered volcanics, in part by crystalline limestone, and in part by diorite. The individual outcrops range from several feet to 40 feet in length, but are all less than 5 feet wide. At most exposures the magnetite is nearly pure, but at some is disseminated through greenstone. Rock outcrops are rare and no work has been done on the deposit. At one outcrop the magnetite appears to lie nearly horizontally upon greenstone. It may be that the magnetite outcrops belong to one or more, nearly horizontal, tabular bodies 10 to 15 feet thick, extending into the hill and overlain and underlain by greenstone and limestone. The possible amount of ore that may be present cannot be safely estimated until some trenching and stripping have been done. If the magnetite occurs in two nearly horizontal, tabular masses it seems highly improbable that more than 50,000 tons of ore are present, and it might be that no more than 10,000 tons are present.


Rock deposit a couple of weeks "free" mill-feed is assured.

A rapid transit and magnetometer survey should be carried out and a few packsack drill holes put in to help determine depth and grade possibilities. Another claim should be staked along strike to the north as such would connect the Willy and Rock claims forming a group.

The above work can be done easily and at any time.

Vancouver, B. C.

February 10th, 1961



Jas. J. McDougall
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