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**REPORT  
ON**

COAST IRON EXPLORATION  
1964  
INCLUDING  
SUMMARY OF  
TEXADA ISLAND WORK

**MINING DIVISION**

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COAST IRON EXPLORATION - TEXADA ISLAND WORK - 92 - F  
Summary Report by: J. J. McDougall - Mar 4/65

SUMMARY REPORT OF  
COAST IRON EXPLORATION, 1964  
INCLUDING  
SUMMARY OF TEXADA ISLAND WORK  
(Project #122)  
(Project #128)

Vancouver, B. C.  
March 4, 1965.

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Geologist.

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MAPS: BCIP/64 - General Index Map, B.C.	Bound
KC/1/64 - Sketch Map of Kinman Creek Anomaly Scale 1" =	In Pocket
SC/1/64 - Sketch Map of Storie Creek Magnetite and Anomaly Scale 1" = 50'	In Pocket
WCI/2/64 - Revised Map of Central Texada (TI/1/64) Island Scale 1" = 1 mile	In Pocket



# INDEX MAP BCIP/64

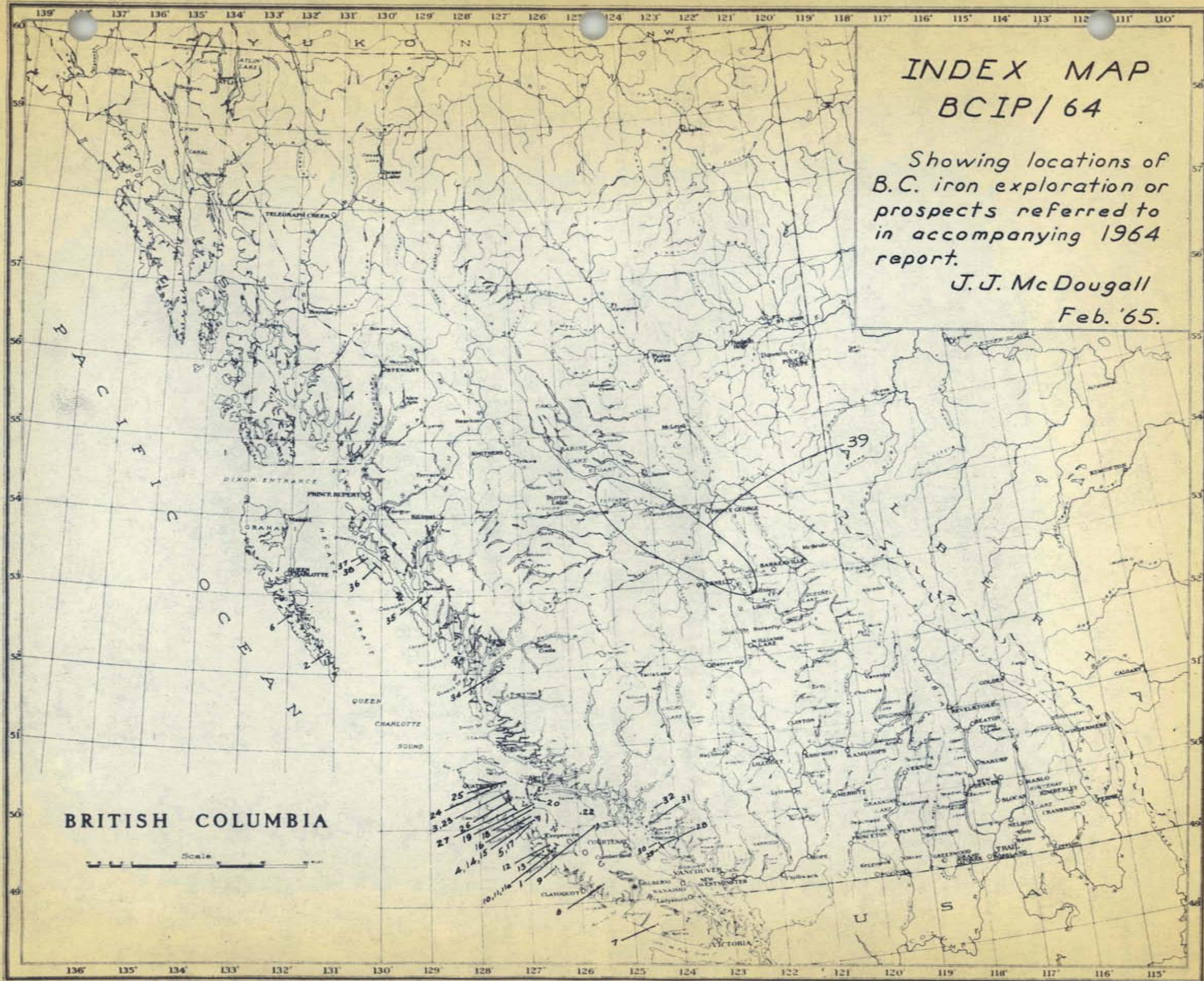
*Showing locations of  
B.C. iron exploration or  
prospects referred to  
in accompanying 1964  
report.*

*J. J. McDougall*

*Feb. '65.*

BRITISH COLUMBIA

Scale





SUMMARY REPORT OF  
COAST IRON EXPLORATION, 1964  
INCLUDING  
SUMMARY OF TEXADA ISLAND WORK  
(Project #122)  
(Project #128)

INTRODUCTION:

Although on a subdued scale, iron exploration was continued on the Coast during 1964. Separate reports have been prepared on properties on which work beyond prospecting or magnetic surveying was carried out. These include (with numbers referring to locations shown on accompanying Map BCIP/64) (1) Bacon Lake where some packsack drilling and dip needle surveying was carried out; (2) Ikeda where drilling and magnetometer surveying was done on the Lily Extension; (3) Ecila which received two test drill holes plus surveys; (4) Hiller, a portion of which was geologically mapped, magnetically surveyed and drilled; and the (5) Churchill which, prior to purchase by Falconbridge, was gone over with the magnetometer. At Tasu (6) our geophysicist was used to outline the magnetic anomaly on the "Townsite Claim" and our BBS1 drill was used by Boyles for follow-up drilling. Our map showing airborne magnetometer work on the coast was brought up to date and the additions filed with the Provincial Government. Some of the anomalies checked were those shown on B. C. Government air-mag maps and were picked off at random by our eastern geophysical department with surprising success through deduction. Although a few boat and aeroplane wrecks and old gold mines were circled in red, so were about half a dozen magnetite occurrences, half of which only the writer had prior knowledge of.

Airmag work utilizing the hand-held MF1 flux-gate magnetometer was done by Roy Hepworth and the writer from helicopter OXJ. Ground mag

work was largely carried out by Bob Mickle using a small Finnish AEM magnetometer. Some dip needle work was done by Cross, Hepler and Schussler.

A. Vancouver Island

Nothing was done on the Bugaboo Iron (Axe Claims) (7) as work on the main property owned by Noranda has been shelved for the time being. Work to date has shown no body of iron occurring near surface on our ground although the position of the claim boundaries is still somewhat obscure. Airmag flying along a limestone contact north of Kennedy Lake (8) again failed to show anything of interest nor did a few passes made over the Hesquiat Lake (9) deposits. At Tahsis Inlet Strange (10) and Bodega (11) Islands were flown in detail following prospector's advice but no anomalous magnetics were encountered. A low but large scale reading was obtained over Fidalgo Passage (11a) but as the magnetics increased slightly over adjoining islands it was concluded that magnetic volcanics were responsible. On the east side of Tahsis Inlet (12) a few miles north of Strange Island, Thorne Forrest spent a few hours examining and sampling a "near-the-beach" pyrrhotitic-magnetite deposit of unimpressive dimensions which the airmag failed to add to. A few traverses were made north and west of Crawfish and Ewart Lakes (13) on central Nootka Island.

The Helicopter - MF1 mag combination was used to re-discover and pinpoint the Hiller #8 (14) showing then covered by snow. Air traverses at low level were made in an effort to help locate the source of magnetite float found at a similar elevation a couple thousand feet north but the topography caused problems. Low but discernible readings were obtained over Mickles #12 (15) showings however. Work on the

Artlish (16) again failed to show up anything of interest. While Mickle was ground surveying the Churchill to Churchill Cliffs area (17) the airmag was used to delimit the topographically rough cliff zone.

Flights were made over our Klaanch deposit (18) adjoining now abandoned Nimpkish Iron Mines. As mentioned previously, the anomaly associated with the closest of the Klaanch deposits is fairly strong although it is only a few hundred feet long. Limited testing by Nimpkish surprisingly, however, had failed to reveal a mineable block of ore. Our remaining deposits are only a fraction as good airmag-wise thus their importance with the depletion of Nimpkish is much diminished. While in the area a 3-mile square section of Nimpkish Valley (19) north and east of the old mine was flown in detail without indications of any prominent magnetics.

An anomaly on Kinman Creek (20) which was discovered during previous flights was pinpointed for Mickle and the latter put in nearly on a 4-day camp. The magnetite responsible for the anomaly was soon discovered as were claim posts representing previous staking in the heavily timbered area by Mastodon-Bell (1963) and N. McDiarmid (1964). Mickle reports the one well-exposed creek-cut showing of good grade magnetite, in limestone near a granitic contact, to be about 20 feet wide and erratically exposed for a couple hundred feet. This is within a "boomerang-shaped" anomaly measuring about 600 feet in length as shown on accompanying map KC/1/64. A second smaller outcropping occurs about 250 feet south of the first. A small amount of stripping has been done. About 1500 feet to the northwest a 50' x 10' magnetite body occurs on the limestone-granitic contact.

A short distance to the northwest at the headwaters of Storie Creek (21) Mickle discovered a more sizeable but more contaminated body of pyritic magnetite. Sketch Map SC/1/64 accompanying this report shows the mineralization exposed through about 70 feet with widths of 10-35 feet. It occurs along a locally unexposed northwesterly trending limestone-diorite (?) contact within a magnetically anomalous area at least 600 feet long and 100 feet wide. The dip is reportedly westerly at a 30-40° angle. Mickle reports up to 20% pyrite present. The showing had been once staked, probably by the late Mr. Storie whom we had known at Alert Bay, but is now open. There is little evidence of any serious work having been done.

A few low level flights were made down the valley of Davis Creek (near Davis Copper)(22) but nothing recorded.

In the Quatsino Area the Ecila Area (23) was flown in more detail in conjunction with drilling then going on. The positions of the negative anomalies were more accurately plotted in an attempt to gain some order out of the magnetic occurrence. A small B. C. Government airmag map anomaly occurring just west of the head of Bish Creek on the north shore of Quatsino Inlet (24) about 8 miles west of Coal Harbour was again flown. After completion of the early Hiller and the Kyuquot work, Schussler and Cross spent a day prospecting this section in the hopes of finding associated copper. The narrow anomaly was picked up on the ground (15-20° pull on the dip needle) associated with a cross-break approximately as predicted. The prospectors report the area composed entirely of "conglomerate" (possibly agglomerate?) and except for a little rust near the supposed fault, nothing of interest was encountered and no claims staked.



Well known (?) Red Island (25) near the head of the inlet about 10 miles to the east was again flown with more attention being paid the water area. The property is held by Little Joe interests of Port Hardy. The anomaly (10 - 15,000 gammas at 200 feet) is moderate and quite large enclosing the island and 1000 feet of waterways to shore on the northwest side. A few years ago we checked and reported on Red Island. Low grade magnetite such as does occur in an old adit is impure containing pyrite, pyrrhotite, and the hoped-for/<sup>chalco-</sup>pyrite present as a weak replacement of micaceous skarn or altered volcanics. It is not known if the property has ever been drilled so, as the anomalous area is large, the possibility of associated magnetite of interest remains despite the poor showing on the island.

The Jeune Landing copper-magnetite (26) deposit (current interest by C. M. & S. and Rio Tinto) was flown and readily detected with the MFI. (Our older flux-gate mag failed to register on this one). The detectable magnetic area, however, remains small and, as far as the writer is concerned, insignificant magnetite-wise.

A few additional strips were flown, while on ferry flights, in the Benson Lake - Artlish River contact area (27) but again this supposedly potential zone, apparently because of the lack of granitic intrusives, registered nothing.

#### B. South Coast Area

Accompanied by Bob Mickle who was familiar with the area, a flight was made to that east central portion of Texada Island (28) where earlier B. C. Government air mag maps showed a number of anomalous zones. In general the section was not as geologically exciting as the related (?) Texada Mines zone to the west where considerable limestone is present -

a prerequisite for any legitimate contact magnetite deposit of commercial interest. However it was felt that some of the narrow limestone bands could thicken and be important.

Although bucking a 40 mph wind, we were unable to detect the anomalies occurring south of Northeast Point and it is quite safe to say that any magnetite of importance there is not magnetic. The ridge immediately south of the Black Prince Deposit (29) registered a few thousand gammas above background but volcanic rock exposed showed no magnetite of interest. The ridge in question is bounded by scarps probably representing a northwesterly trending fault system which carries through to the Black Prince which itself was easily picked up from the air. This property and a few others were rapidly checked this year by Hans Morris and his description is included as follows:

NOTES ON TEXADA ISLAND SHOWINGS VISITED MAY 1964

(by H. R. Morris)

Ref. Map WCI/2/64

1. North Pole group of claims (staked 1962). 9 miles ESE of Vananda, 3 miles SE of Black Prince showings, 13 claims extend from seashore to 6000 ft. S.

Ore: Magnetite with minor chalcopyrite and native copper.

Geology: Country rock is "porphyrite", i.e. porphyritic andesite or micro-diorite, probably basaltic in part.

"Pit" showing: 3 ft. magnetite in micro-diorite, slight siliceous and pyritic alteration; average 75% magnetite, trace of native copper; vein strike SW, dip 75° SE. A magnetic high may be followed for 150 ft. SW from pit.

"Creek" showing: 2½ ft. magnetite, 50%, streaky, in andesite, with 1-2%

chalcopyrite. Other mag anomalies on property not yet tested by pitting. Au found by ground magnetometer prospecting with Arvela instrument. Overburden depth 5 to 20 ft. Small air-mag anomalies indicated by B.C. Govt. survey of 1957 are covered by the claims, and not yet checked by ground work or pitting. Showings are 2-3000 ft. west of fault indicated by air mag. No limestone exposed on claims, nearest 2 miles south; but large inclusions of limestone in andesite are seen on Black Prince magnetite/chalcopyrite showings, 3 miles NW.

Development: by claim owners, Brennan & Mickle: bulldozing plus two small hand pits on "Pit" showing; one small pit on "Creek" showing.

- 2.. Volunteer (old showing, No. 5 on McConnell's map)(GSC Mem 58, 1914)  
Half mile west of Vananda on Blubber Bay road. Near vertical veined fracture zone trending NW in micro-diorite, with pyrite and trace of chalcopyrite in series of small overgrown pits. Extensive shallow overburden.
- 3.. Golden Slipper (old small high-grade gold mine, No. 15 on McConnell's map)  $3\frac{1}{2}$  miles SSW of Vananda, about 1000 ft. north of small cove which is 3000 ft. east of Welcome Bay, on south shore of Island. Old pit on knoll; steep fracturing trending few degrees W of S in greenstone, with traces of skarn; magnetite/calcite/garnet/chalcopyrite seen in rocks on dump. Agglomeratic breccia in outcrops 500 ft. north.
- 4.. Cornell (old chalcopyrite/bornite mine on diorite/limestone contact)  
SE end of Emily Lake. Large dump on hillside, no sign of ore material, and diorite stock not seen. Limestone outcrops to south are white or pale buff coloured, medium-fine grained, dark or medium-grey weathering.

5.. Copper Queen (old chalcopyrite/bornite mine, similar to Cornell)

Half mile SE of Vananda on Emily Lake road. Very little to be seen at shaft and dump. All outcrops visible are grey limestone.

H. R. Morris.

A large broad anomaly (5-7,000 g) was outlined in the flattish section south and west of Raven Bay (30). The government maps showed regional background highs in the same general area. At least one anomalous section within the "high" will be ground checked by Mickle but it is felt that magnetic diorites and volcanics which crop out more than usual are totally responsible.

On the mainland, a logged area about 8 miles northwest of Powell River (31) and a few miles west of Powell Lake was checked as ground highs and indications of magnetite had been picked up by Mickle. Some weak 1-2000 gamma anomalies were picked up but certainly nothing to suggest a worthwhile magnetite occurrence. A 1 x 2 mile contact area immediately north of Olson Lake (32) near Powell Lake was flown in detail and again only weak magnetics recorded. The zone is a copper prospecting bet of Mickle's and a Powell River partner.

A magnetic anomaly reported to us as occurring in the logging area north of central Drury Inlet (33) could not be found, or at least detected, from the air due to vagueness of description. Burned slash areas have, however, exposed some healthy looking, rusty weathering meta-sediments, which although when flown in detail showed no magnetics, are a fair prospecting bet.

As is usual during feasible weather, airmag-ferry flights were made along various coastal inlet and mountainous areas but outside of a



few previously unrecorded amphibolite-hornblende diorite magnetic zones nothing of interest was recorded.

C.. North Coast & Inland Area

At Kwatna Inlet (34) an unsuccessful attempt was made to locate the known and tested copper-magnetite deposit with results similar to those of Alex Smith's a few years ago. Fuel and weather dictated that additional tests be carried out at some later date. A limestone remnant in the Chapple Inlet Area (35) was both air mag and ground checked without affirmative results although our boat equipped crew did come up with minor magnetite and pyrrhotite showings. A few sections on Banks Island (36) were rapidly tested. Some copper-magnetite was found by Mickle at Elbow Lake (37) and similar material had previously been discovered by Hepler at Kingdown Lake (38). As on the lower coast, a few additional bodies of highly magnetic amphibolites were outlined during our Hecate Island prospecting, including those of northwestern Pitt Island.

Inland, in the Prince George area (39) Earl Dodson spent some time last spring investigating some of the more prominent magnetic occurrences shown on published federal-provincial maps. The following summary is included:

"Several anomalies on recently published aeromagnetic maps of the Quesnel-Burns Lake area formed the basis for limited investigation during 1964. A crew of four men with a light truck investigated six of the more interesting anomalies over a three week period. The anomalies were located on the ground using dip-needle and Arvela magnetometer. Those investigated appeared to be of no economic significance as they were readily explained by local geologic conditions.

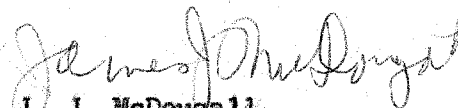
E. D. Dodson."

CONCLUSIONS & RECOMMENDATIONS:

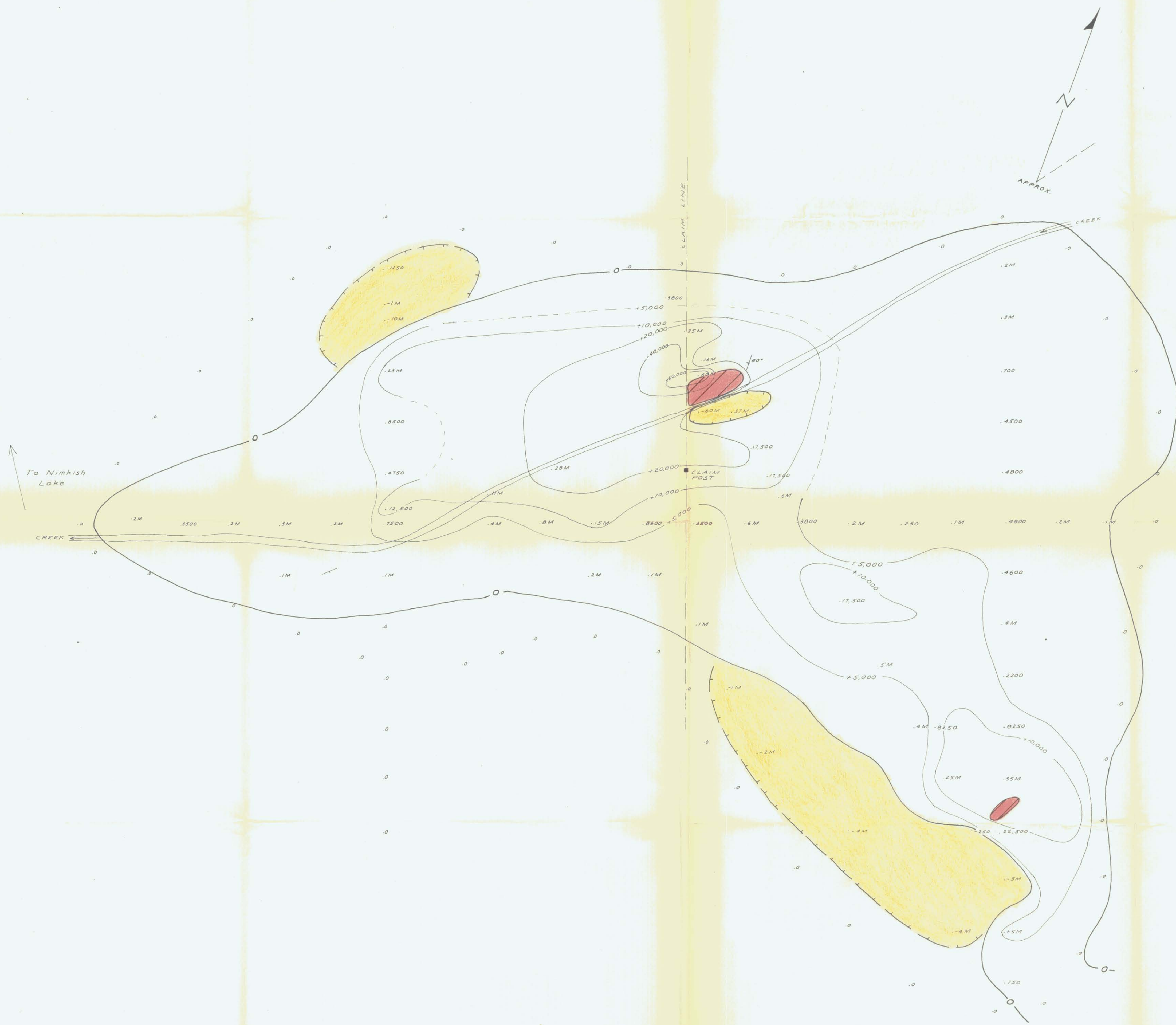
In most cases, we have been able to pick up the more interesting or prominent anomalies shown on the government maps and find them on the ground. In many cases topographic highs and magnetic highs go hand in hand and thus entirely legitimate despite much armchair calculation to the contrary. This is especially true on the west coast of Vancouver Island. Fortunately considerable bedrock in these locations is generally exposed and such anomalies can be written off rapidly. In general, we cannot afford to ignore such information as shown on government magnetic maps and should continue to investigate portions of interest as they become available.

The Storie Creek zone should be more thoroughly investigated and a better sampling job done to determine the actual impurity content. Kwatna Inlet can remain in the cards, as can a closer look at Red Island and Drury Inlet. Otherwise recommendations for 1965 include those presented in the Hiller and Churchill reports.

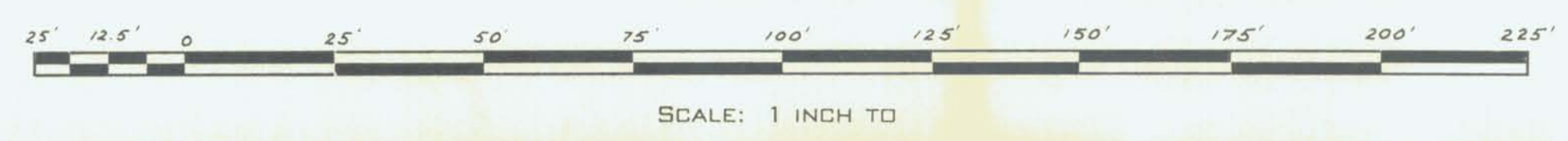
Vancouver, B. C.  
March 4, 1965.

  
J. J. McDougall,  
Geologist.





LEGEND  
■ Visible Magnetite  
■ Negative Areas



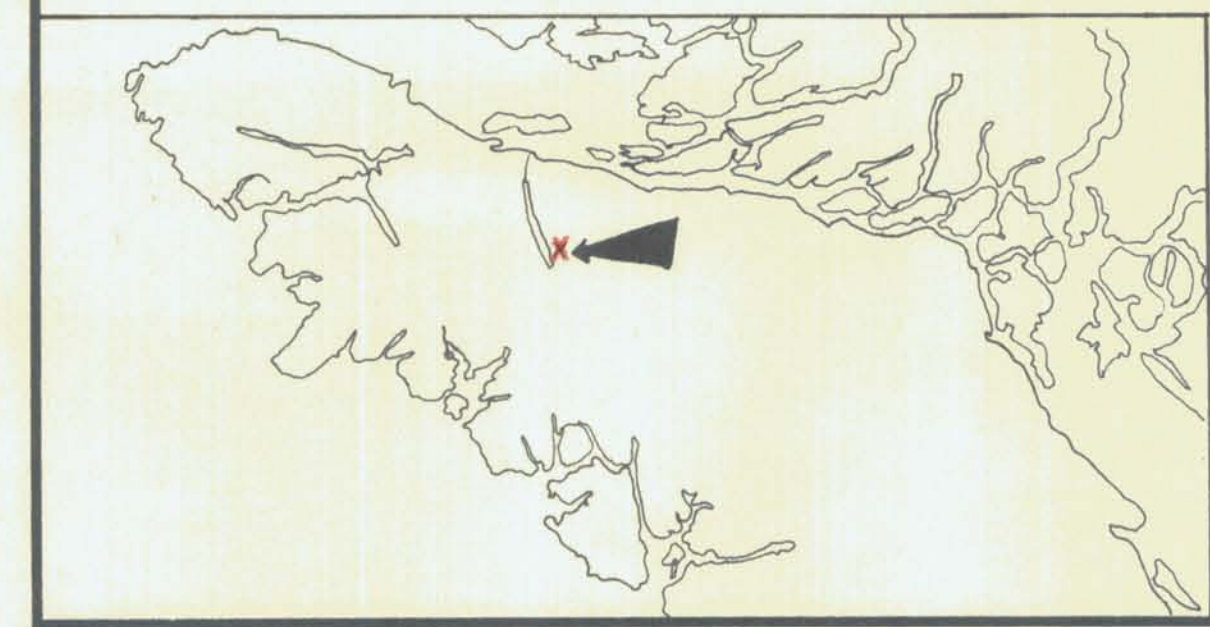
COMPANY . . . FALCONBRIDGE NICKEL MINES LTD.  
 PROPERTY . . . KINMAN CREEK MAGNETITE  
 LOCATION . . . NORTH BRANCH OF KINMAN CREEK

WORKING PLACE . . .  
 TYPE OF MAP . . . PACE SKETCH  
 BASED ON . . . A.E.M. MAGNETOMETER

DATE . . . 23 MAR 65  
 DRAWN BY . . . R.E.M., D.H.H.  
 DATE OF WORK . . . 18 OCT 64

MAP No. KC-1-64





SCALE: 1 INCH TO

COMPANY . . . FALCONBRIDGE NICKEL MINES LTD.

PROPERTY . . .

LOCATION . . . STOREY CREEK - DRAINS INTO NIMKISH LAKE BASED ON . . . A.E.M. MAGNETOMETER


WORKING PLACE . . . 1.5 MILES FROM NIMKISH LAKE

TYPE OF MAP . . .

DATE . . . 22 DEC 64

DRAWN BY . . . D.H. HELGESEN - R.E.M.

DATE OF WORK . . . 20 OCT. 64

 MASSIVE MAGNETITE AND PYRITE  
Trace of gold in grab sample.

The ore contacts the granitic rock and dips westerly under the crystalline limestone at a 30-40° angle.

Suggest more magnetometer prospecting north-west along the contact which veers north-west- away from the creek.

