THIS PROSPECTUS CONSTITUTES A PUBLIC OFFERING OF THESE SECURITIES ONLY IN THOSE JURISDICTIONS WHERE THEY MA SALE AND THEREIN ONLY BY PERSONS PERMITTED TO SELL SUCH SECURITIES.

NO SECURITIES COMMISSION OR SIMILAR AUTHORITY IN CANADA HAS IN ANY WAY PASSED UPON THE MERITS OF THE SECURITIE ANY REPRESENTATION TO THE CONTRARY IS AN OFFENCE.

017873

OR

**PROSPECTUS** 

PECTUS I.D.I.

Industrial Dominion, Inc.

(hereinafter called the "Issuer" NERGY, MINES
305 - 455 Granville Streef UM RESOURCES
Vancouver, British Columbia

(604) 682-1808

SMITHERS, B.C.

DATED: MAY 3, 1990

Pitt Island

**PUBLIC OFFERING: 580,000 Common Shares** 

	Price to Public (1)	Commission (2)	Net Proceeds to be received by the Issuer (3)
Per Share	\$ 0.50	\$ 0.05	\$ 0.45
	\$290,000.00	\$29,000.00	\$261,000.00

# 357,776 Flow-Through Common Shares

	Price to	Public (1)	Comi	nission (2)	Net Pro received b	ceeds to be y the Issuer (3)
Per Share	\$	0.50	\$	0.05	\$	0.45
	\$178.	,888.00	\$17	,888.00	\$161	,000.00

- (1) The price to the public was determined by negotiation between the Issuer and the Agents.
- (2) The commission was determined by negotiation between the Issuer and the Agents.
- (3) Before deduction of the costs of the issue estimated to be \$25,000.00.

AFTER GIVING EFFECT TO THIS ISSUE, THE NET BOOK VALUE OF EACH COMMON SHARE WILL BE \$0.18 REPRESENTING A DILUTION PER SHARE OF \$0.32 FROM THE NET TANGIBLE BOOK VALUE THEREOF AT JANUARY 31, 1990 WHICH RESULTS IN A DILUTION FACTOR OF 64%.

THERE IS NO MARKET THROUGH WHICH THESE SECURITIES MAY BE SOLD.

THIS OFFERING IS SUBJECT TO A MINIMUM SUBSCRIPTION FOR 760,000 COMMON SHARES BEING RECEIVED BY THE ISSUER BY JULY 31, 1990. SEE ALSO CAPTION "PLAN OF DISTRIBUTION" HEREIN.

A PURCHASE OF SECURITIES OFFERED BY THIS PROSPECTUS MUST BE CONSIDERED SPECULATIVE. ALL OF THE PROPERTIES IN WHICH THE ISSUER HAS AN INTEREST ARE IN THE EXPLORATION AND DEVELOPMENT STAGE ONLY AND ARE WITHOUT A KNOWN BODY OF COMMERCIAL ORE. NO SURVEY OF ANY PROPERTY OF THE ISSUER HAS BEEN MADE AND THEREFORE IN ACCORDANCE WITH THE LAWS OF THE JURISDICTION IN WHICH THE PROPERTIES ARE SITUATE, THEIR EXISTENCE AND AREA COULD BE IN DOUBT. SEE ALSO CAPTION "RISK FACTORS" HEREIN.

THE EXCHANGE HAS CONDITIONALLY LISTED THE SECURITIES BEING OFFERED PURSUANT TO THIS PROSPECTUS. LISTING IS SUBJECT TO THE ISSUER FULFILLING ALL THE LISTING REQUIREMENTS OF THE EXCHANGE ON OR BEFORE JULY 31, 1990, INCLUDING PRESCRIBED DISTRIBUTION AND FINANCIAL REQUIREMENTS.

NO PERSON IS AUTHORIZED BY THE ISSUER TO PROVIDE ANY INFORMATION OR TO MAKE ANY REPRESENTATION OTHER THAN THOSE CONTAINED IN THIS PROSPECTUS IN CONNECTION WITH THE ISSUE AND SALE OF THE SECURITIES OFFERED BY THE ISSUER.

UPON COMPLETION OF THIS OFFERING THIS ISSUE WILL REPRESENT 41% OF THE SHARES THEN OUTSTANDING AS COMPARED TO 41.5% THAT WILL THEN BE OWNED BY THE CONTROLLING PERSONS, PROMOTERS, DIRECTORS AND SENIOR OFFICERS OF THE ISSUER. REFER TO CAPTION "PRINCIPAL HOLDERS OF SECURITIES" HEREIN FOR DETAILS OF SHARES HELD BY DIRECTORS, PROMOTERS AND CONTROLLING PERSONS AND ASSOCIATES OF THE AGENTS.

THE CEE DEDUCTION DESCRIBED MORE FULLY UNDER THE CAPTION "CANADIAN FEDERAL INCOME TAX CONSEQUENCES" WILL NOT BE AVAILABLE FOR AN INVESTOR FOR THE 1989 TAXATION YEAR.

WE, AS AGENTS, CONDITIONALLY OFFER THESE SECURITIES SUBJECT TO PRIOR SALE, IF, AS AND WHEN ISSUED BY THE ISSUER AND ACCEPTED BY US IN ACCORDANCE WITH THE CONDITIONS CONTAINED IN THE AGENCY AGREEMENT REFERRED TO UNDER "PLAN OF DISTRIBUTION" IN THIS PROSPECTUS SUBJECT TO APPROVAL OF ALL LEGAL MATTERS ON BEHALF OF THE ISSUER BY O'NEILL & BENCE, AND ON OUR BEHALF BY OUR LEGAL COUNSEL.

#### BRINK, HUDSON & LEFEVER LTD.

1500 - 666 Burrard Street Vancouver, British Columbia V6C 3C4

**EFFECTIVE DATE: MAY 11, 1990** 

Hay 29/90

# INDUSTRIAL DOMINION, INC.

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# EXAMINATION AND EVALUATION REPORT

ON THE

I. D. I. CLAIM

ON

PITT ISLAND

IN THE

SKEENA MINING DIVISION OF BRITISH COLUMBIA

FOR

INDUSTRIAL DOMINION INC.

MAY 9, 1988

MANNY CONSULTANTS LTD.

E. AMENDOLAGINE, P. ENG.

REVISED: January 23, 1990

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# APPENDIX II

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#### APPENDIX III

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#### APPENDIX IV

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A8926471 DATED 09 OCT 89 A8926472 DATED 12 OCT 89

#### APPENDIX V

I.D.I. CLAIM RECORDIND FORM G

RECORD # 6384 DATED 29 SEP 87

#### INTRODUCTION

At the request of Industrial Dominion Inc., a property examination and evaluation was made, of their I.D.I. #1 claim on Pitt Island in the Skeena Mining Division of British Columbia.

The property examination was made during the period of May 6 to 8, 1988, after the studies of reports found in the Appendices # 1,2,3 and References.

- 1) Minister of Mines, B. C. Annual Report, 1914-15.
- 2) G.S.C Economic Geology Series No. 3 Iron Ores of Canada Vol. 1 by G.A. Young and W.L. Uglow, 1926, pages 16 through 26.
- 3) G.S.C. Paper 70-41, Douglas Channel Hecate Strait Map area by J.A. Roddick pages 25-26 1970.

The E.A. report of May 9, 1988, and December 27, 1989, is revised as of January 23, 1990.

# SUMMFEA

The field examination and the studies of all the documented information, both government and private, confirm the presence of a wide face of massive magnetite mineralization on the south shore of the small bay, on the IDI claim group on Pitt Island, in the Skeena Mining Division, British Columbia.

The claim area excludes any portion over tidal water as per recording Form G record No .6384.

The purpose of this project is to develop a magnetite ore body for marketing.

Reference 'is made to information in the government reports, as outlined in the introduction and referred to as the following:

No 1. The information in W.M. Brewer's paper of 1915 is..

#### PITT ISLAND.

This island is situated about five miles south-east from Gibson island, and it was visited because of information that it contained an extensive deposit of magnetic iron ore. This was found on a point on the north end of the island near Stuart's anchorage, where there is a bluff 50 feet high by about 50 feet wide, made up of practically solid iron ore, occurring in a hornblende-schist country-rock. The apparent line of strike was followed towards the south-east for about 300 feet, and the same character of ore found exposed in a series of several trenches, some of which crosscut the ore-body for about 30 feet. A sample taken assayed: Iron, 59.1 per cent.; sulphur, nil; phosphorus, trace.

No 2. The Economic Geology "Iron Ore of Canada" by C.A. Young and W.L. Uglow of 1926 discuss magnetite occuring in small quantities in a 150 to 250 foot mica schist ridge formation.

The ridge strikes NW-SE and rises some 100 feet in height.

The rock outcrop exposed at the NW shore of the ridge measures a few feet wide and 150 feet long extending from the shore along the NE side and close to the axis of the ridge.

The magnetite outcrops in several masses at the water edge at the northwest end of the ridge, and is exposed in a band not averaging more than 4 feet in width and which for a length of 200 feet is visible in the long exposure on the northeast face of the hill. Sixty feet southeast of the end of this band of ore and along its strike, no magnetite is visible in a crosscutting trench. Seventy-five feet farther southeast, a second trench shows schist impregnated with magnetite over a width of several feet.

In the case of the several smaller masses of magnetite at the seaward end of the ridge and the long, band-like area, on the northeast slope, although one boundary may be sharply defined, the other usually is not so and for a space of one or more feet the bordering schist is rich in magnetite, or bands of schist and magnetite-rich schist may alternate. The several small bodies at the shore end of the ridge range in length from 15 to 30 feet, and in each case end to the southeast rather abruptly and, possibly, against a fault-plane, though no direct evidence of the existence of a fault was noted. The purer magnetite is compact, fine-grained, with some admixed biotite and other mineral constituents of the schists.

The paper states that no evidence was secured that indicate the outcropping bodies will materially widen either along strike or dip or that any concealed bodies will be greater size than those now visible. The larger band-like deposits might yield 100 tons of ore for every foot of depth. They state that a body with dimensions such as this could scarcely be mined as iron ore at a profit.

No 3. G.S.C. paper 70-41 Douglas Channel Hecate Strait Map Area by J.A. Roddick discuss the detailed geology related to the property area.

Due to the accumulative information of previous reports of the magnetite mineralization, geology and modern technology of exploration, it is recommended that the property should be further explored to delimit the magnetite mineralization.

To develop a magnetite ore body, an exploration program should be conducted. It is recommended that an aerial magnetometer survey be completed followed up with a ground magnetometer survey in conjunction with geologic mapping, surface stripping and sampling.

The results from these surveys may outline target areas for drilling to prove up an ore body.

The exploration program should be carried out in two phases. The first phase of aerial and ground magnetometer surveys in conjunction with geologic mapping and surface stripping would require some \$160,000.

The second phase would be based on favorable results in the first phase and would require a minimum of 1,000 meters of B.Q. diamond drilling costing \$319,000 for drilling, engineering and sampling.

The first and second phase combined will require \$479,000.

The third phase would consist of mine development, mining, and setting up a plant. This phase would depend on favourable results in phases one and then favourable results in phase two.

The progression to the third phase would require an engineering feasibility study to determine the viability of mining the magnetite as iron ore and setting up a D.R.I. plant.

#### PROPERTY

The property consists of claims IDI #1, 6384 (20 units modified grid), and Bonnie #1, 2993 (two post claim). The Bonnie claim is overstaked by the IDI #1 claim.

The Tara claim was a valid 2 post mineral claim. It was overstaked by IDI #1 claim, and was not considered part of the Industrial Dominion Inc. property. The current status of the Tara claim is that it expired on the 20nd of November 1989. The ground became open. The open ground was staked as IDI #2. It is being transfered into the Industrial Dominion Inc. IDI claim area.

The northern portion of IDI #1, IDI #2 and Bonnie #1 claim area encompass—the water area of the Stuart Anchorage and the Grenville Channel. The water areas are not included as part of the mineral rights held by Industrial Dominion Inc. The claim area excludes any portion over tidal water as per recording certificate form G record No 6384.

#### LOCATION

These claims are all located in the Skeena Mining Division of British Columbia. See attached claim map 103G/16E.

The L.C.P. of IDI #1 is located at the junction on the north side of a creek emptying into Stuart Anchorage Bay.

The claim is located 32 air km SSE of Prince Rupert, British Columbia. It is located at 53°51" N latitude, 130°04' W longitude on the eastern shoreline of Pitt Island and Grenville Channel. See attached topographic map 103G/16 and road map.

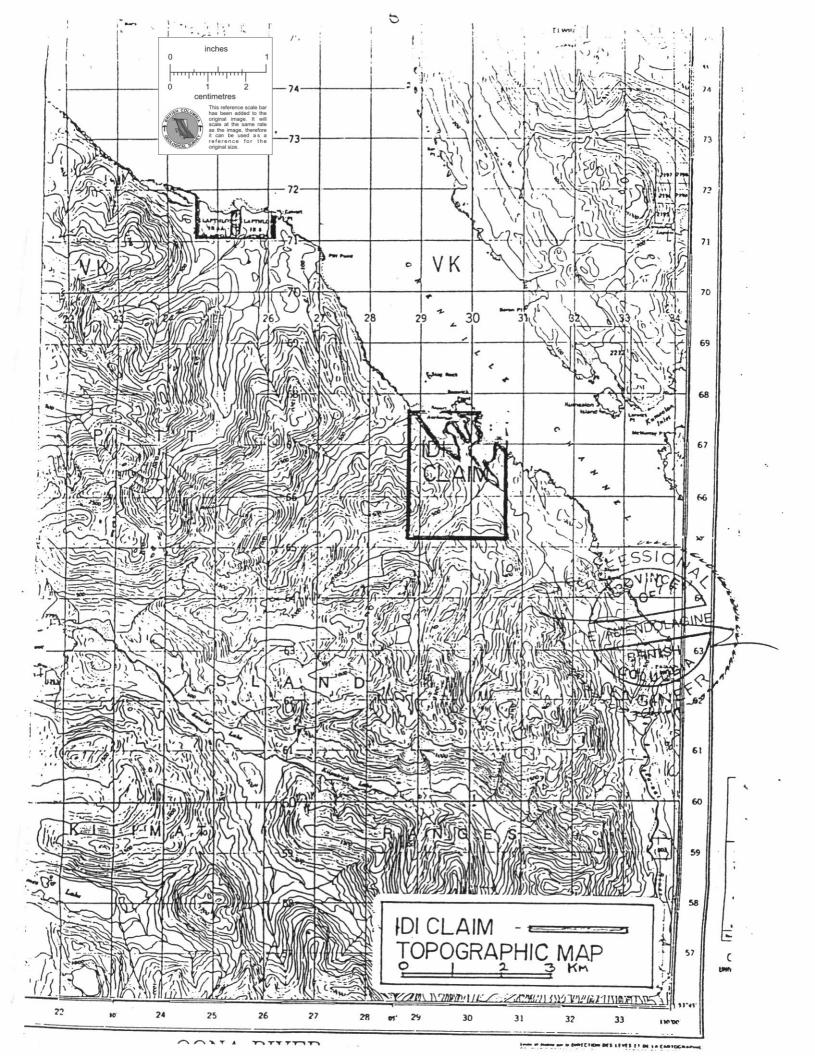
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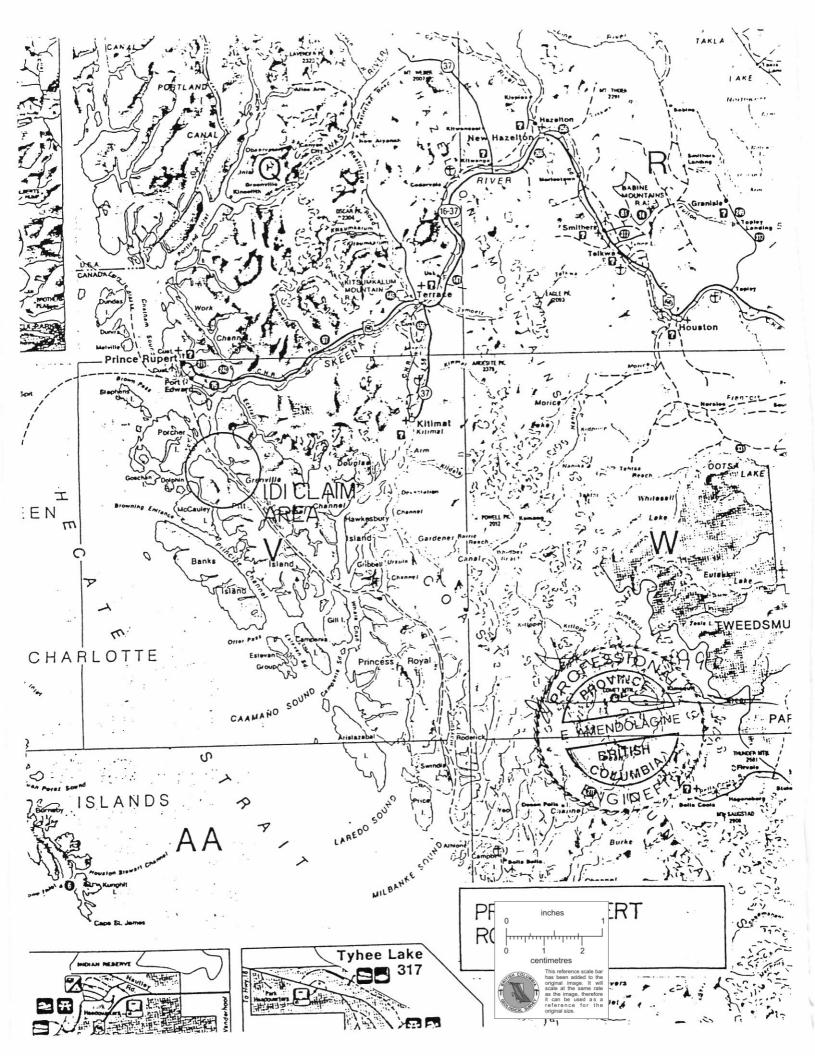
The property is accessible by daily major airline flights to Prince Rupert, B.C. then by float plane or by boat to the north east shore of Pitt Island. Grenville Channel is the deep water route for north-south coastal travel from Prince Rupert to Port Hardy and Vancouver, B. C.

#### CLIMATE AND VEGETATION

Typical west coast climate, accessible twelve months per year. Vegetation is heavily timbered with cedar, hemlock and spruce.

# M103G/16E IFCIND CO. PEYERIED C.G. MINIERAL CLAIM FORFEITED MINIERAL CLAIM MENIED IEGAL COMME POST IRGAL SURVEY ISOAL CORRE POST & IAG PRIMETE CLAIM DUTLIN 20 are frible inches 0 Н





# PROPERTY HISTORY, GEOLOGY, MAGNETITE OCCURRENCE

The following is an excerpt from the Annual Report of the Minister of Mines for 1914.

#### PITT ISLAND.

This island is situated about five miles south-east from Gibson island, and it was visited because of information that it contained an extensive deposit of magnetic iron ore. This was found on a point on the north end of the island near Stuart's anchorage, where there is a bluff 50 feet high by about 50 feet wide, made up of practically solid iron ore, occurring in a hornblende-schist country-rock. The apparent line of strike was followed towards the south-east for about 300 feet, and the same character of ore found exposed in a series of several trenches, some of which crosscut the ore-body for about 30 feet. A sample taken assayed: Iron, 59:1 per cent.; sulphur, nil; phosphorus, trace.

The following is an excerpt from the Economic Geology Series No. 3 The Iron Ore of Canada, Vol. 1, British Columbia and Yukon, 1926 by C.Ag Young and W.L. Uglow, pp 24 - 26

#### (3) Stuart Anchorage, Pitt Island

#### LOCATION

The Royal mineral claims have been located to include certain outcrops of magnetite on the east coast of the north end of Pitt island. About 7 miles southeast of the head of the island, a short distance south of Stuart anchorage, a low point projects eastward about ½ mile and is penetrated by two narrow bays trending southeast. The mineral location is on the eastern shore of the more easterly of the two bays about halfway to its head.

The iron ore occurrence has been known for some years and was briefly reported upon, in 1915, by W. M. Brewer.

#### GENERAL GEOLOGY

Pitt island lies within the limits of the Coast Range batholith, but, as indicated by V. Dolmage<sup>2</sup>, Triassic or Carboniferous schists and limestone of the Prince Rupert formation occur in the vicinity of Stuart anchorage. Near the magnetite outcrops, the rocks consist of a schistose series in which the planes of schistosity and of bedding nearly coincide and strike southeast. The rocks, save for a few, thin, discontinuous beds of crystalline limestone, consist largely of finely granular, banded quartzoses, biotite gneisses, or schists varying from pale grey to nearly black according to the amount of biotite and other dark-coloured constituents that may be present. The rocks, presumably, are mainly deformed sediments. They are cut, transverse to the direction of schistosity, by dykes of finegrained granite.

<sup>&</sup>lt;sup>1</sup> Brewer, W. M.; Ana. Rept., Minister of Mines, B.C., 1914, p. 130.

<sup>2</sup> D.Mmaya, V.; "Coost and Islands of British Columbia between Dougles Chancel and the Almahan Houselary." Geol. Surv., Canada, 1922, pt. A.

#### DESCRIPTION OF THE ORE OCCURRENCES

At several places on the jutting point southeast of Stuart anchorage, magnetite occurs in small quantity impregnating parts of bands of micaceous schist, but only in one place does any important amount appear at the surface. At this place a band of mica schist possibly 150 to 250 feet broad forms a narrow ridge which strikes southeast at right angles to the shore and rises along its axis to a height of 100 feet in a distance of 200 feet from the sea. The ridge is largely covered with drift, but rock is exposed at its base at its shore end and over an area a few feet wide and 150 feet long extending from the shore along the northeast side of and close to the axis of the ridge. Several shallow trenches extend from the long rock exposure across the axis of the ridge and two other trenches, respectively 60 and 135 feet distant from the southeast end of the long rock outcrop, cross the strike of the strata. Farther southeast along the ridge a few rock exposures are present.

The magnetite outcrops in several masses at the water edge at the northwest end of the ridge, and is exposed in a band not averaging more than 4 feet in width and which for a length of 200 feet is visible in the long exposure on the northeast face of the hill. Sixty feet southeast of the end of this band of ore and along its strike, no magnetite is visible in a crosscutting trench. Seventy-five feet farther southeast, a second trench shows schist impregnated with magnetite over a width of several

seet.

In the case of the several smaller masses of magnetite at the seaward end of the ridge and the long, hand-like area, on the northeast slope, although one boundary may be sharply defined, the other usually is not so and for a space of one or more feet the bordering schist is rich in magnetite, or bands of schist and magnetite-rich schist may alternate. The several small bodies at the shore end of the ridge range in length from 15 to 30 feet, and in each case end to the southeast rather abruptly and, possibly, against a fault-plane, though no direct evidence of the existence of a fault was noted. The purer magnetite is compact, fine-grained, with some admixed biotite and other mineral constituents of the schists.

#### MODE OF ORIGIN

The occurrence of the magnetite in bed-like masses associated with schists of, presumably, sedimentary origin, may suggest that the magnetite also is of sedimentary origin. The sporadic appearance of magnetite elsewhere in the general vicinity and the numerous examples along the Pacific coast of magnetite bodies associated in origin with plutonic rocks, gives rise to the presumption that the magnetite occurrences on the Royal claim also are secondary, and are of the nature of replacement bodies formed along lines of weakness in the more schistose members of the sedimentary series.

#### ECONOMIC CONSIDERATIONS

The band-like body of magnetite outcropping on the northeast side of the ridge is exposed over a length of 200 feet. At its northwest end it passes below sea-level. At the southeast end it disappears beneath drift. Sixty feet beyond the southeast end, a cross-trench fails to reveal ore; either the band ends in this distance or it has been displaced by a fault. The smaller bodies of magnetite along the shore at the end of the ridge end abruptly without any direct sign of faulting and it seems probable that the longer band ends in the same way. Further cross-trenching would determine where and how the long band ends and might uncover other masses of magnetite. No evidence was secured that indicates that the outcropping bodies will materially widen either along the strike or dip, or that any concealed bodies will be of greater size than those now visible. The larger, band-like deposit might yield 100 tons of ore for every foot in depth. A body with dimensions such as this could scarcely be mined as iron ore at a profit.

Economic Geology Series No. 3, The Iron Ore of Canada, Vol 1, British Columbia and Yukon, 1926, by C.A. Young

Ref:

#### GENERAL GEOLOGY PITT ISLAND

Pitt Island: Near Nevenor Inlet on Pitt Island the diorite is strongly foliated and commonly gneissic. Steep dipping, northwest attitudes dominate except near the head of the inlet where they swing to the northeast. Zones of agmatite and gneiss, and gradation into quartz diorite are common. The inclusions, which consist mainly of amphibolite and range from elongate to ribbon varieties, are locally abundant. Biotite schist and quartzite screens are also common and range from a few feet to more than 100 feet in width. Phases of the diorite are almost massive, with only ghostly, nebulitic relicts of the former banding.

At the southeastern end of Pitt Island and the southern part of adjacent Farrant Island, the diorite is dark, fine-grained and commonly chloritized. Here and there are screens of metasediments which include amphibolite, limestone with epidote skarn, biotite-garnet schist and quartzite. Zones and streaks within the screens are commonly dioritized. The diorite there is more massive than farther north on Pitt Island but alternating bands of fine- and coarse-grained material form local planar structures. The coarse-grained phase contains in places hornblende crystals up to 2 inches long. Locally the diorite is intensely sheared along northwest trends.

Gneissic diorite and dioritic migmatite is exposed on the east side of Pitt Island along Grenville Channel where most of the rock is a sheared gneissic hornblende biotite diorite that commonly grades into quartz diorite. The shearing is thought to be related to an inferred major fault in Grenville Channel. In places the diorite contains plagioclase augen and elongate, lensoid, amphibolitic inclusions, but it is characterized by thin screens of rusty-weathering metasedimentary rocks. These include a 50-foot-thick bed of marble, thin beds of buff-weathering crystalline limestone in places containing garnet, epidotic and diopsidic skarn, hornblende schist, and greenish to purplish quartzite derived possibly from unit 2b. In places, hornblende schist alternates with 2- to 6-inch-thick beds of crystalline limestone. The metasedimentary screens conform to the foliation of the diorite which is normally vertical and parallel with Grenville Channel.

A large area between Nevenor Lagoon and Ogden Channel is underlain mainly by unit 5b. Owing to the poor exposures only sparse data are avail-The complex is made up of numerous screens of quartz-biotite and biotite-hornblende schist, fine-grained gneiss, quartzite, amphibolite, and argillite, with intervening areas of gneissic diorite, massive diorite, quartz diorite, and minor granodiorite and quartz monzonite (10d). The area around Hevenor Lagoon and the eastern part of Hevenor Inlet is underlain mainly by hornblende; blotite diorite that is more homogeneous than that elsewhere in the Hore detailed work could probably separate this phase as unit 7b. Quartzite and argillite were observed only at the contact with Captain Cove Pluton in the cove and on Ogden Channel. Sills of the garnet-bearing, commonly aplitic quartz monzonite (10d) were recorded in the eastern part of the The quartz monzonite and unit 5b are intimately interfingered northwest Screens and foliated plutonic rock of unit 5b strike mainly of Wyndham Lake. northwesterly and dip vertically to moderately east.

#### GEOLOGY OF PROPERTY

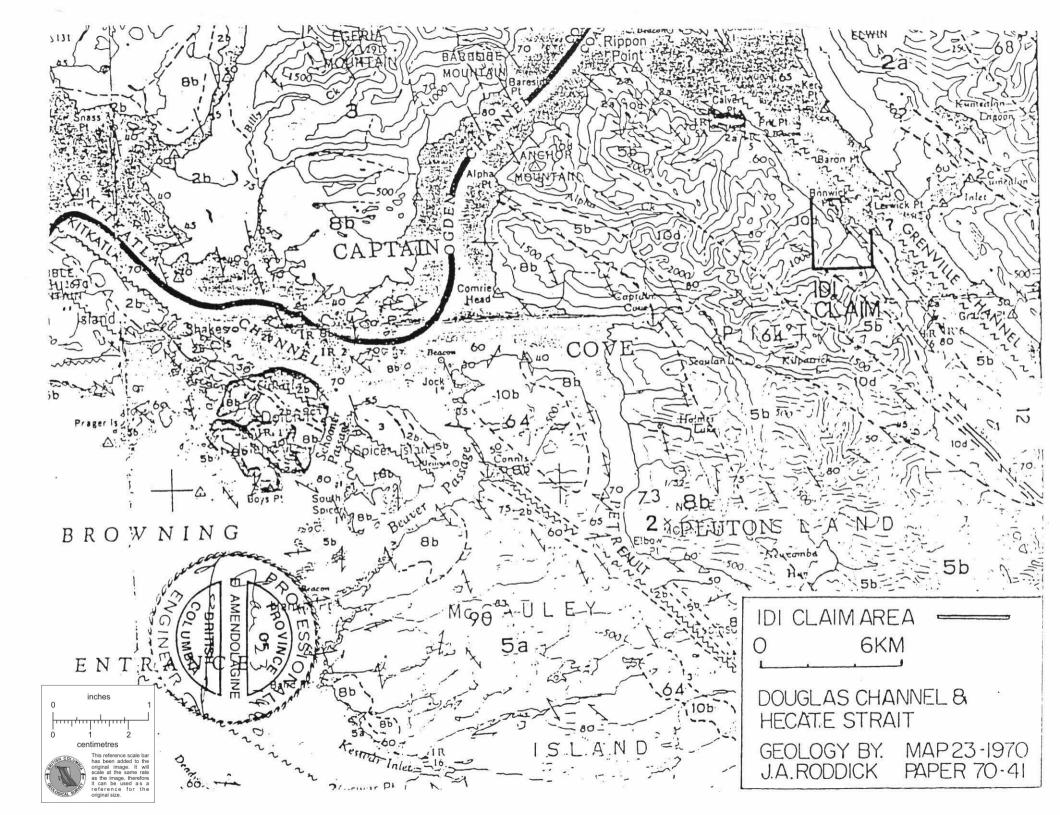
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The northwestern and southern portion of the claim is underlain by aplitic and garnetiforous quartz monzonite.

The northeastern portion of the claim, mainly by Bonwick peninsula is underlain by Paleozoic Permian or older mainly metasediments These are composed of a variety of hornblende biotite plagioclase schists and gneisses.

This is shown on J.A. Roddick's geologic map that follows.

Ref: GSC, 70-41; Douglas Channel Hecate Strait Map B.C.; Map 23-1970, by J.A. Roddick



#### PROPERTY EXAMINATION

The property was visited on May 7, 1988 with Jack Anderson and the pilot of a Beaver Float plane.

The LCP was located, as shown on the claim map, at the junction of an easterly flowing creek with Grenville Channel.

The following information was on the modified grid claim tag.

TAG No. 108657

Located by: Joseph Iwasenko

For: Industrial Dominion Inc.

FMC 298387

Date Com: Sept. 2, 1987

Time 8 am

Date Comp. Sept. 3, 1987

Time 5 pm

Units 5-S, 4E

The projection of the east claim line strikes across Stuart Anchorage bay and across the northern end of the most easterly of two peninsulas which jut out into Grenville Channel. This can be seen on the claim map. The claim area excludes any portion over tidal water as per recording form G, record No 6384.

Both peninsulas strike in a general northwest-southeast direction.

The magnetite exposure is on the west shore of the most easterly of the two peninsulas.

Approximately half way south of the north tip of the peninsula on the west shore line, there is a small bay with a small island.

The magnetite is exposed on the south shore of the small bay south of the small island.

At low tide there is no water in the bay or around the small island. The face of the rock outcrop exposure on the south shore of the small bay strikes in a general N 40°E trend. The outcrop ridge is approximately 30 meters high.

The magnetite mineralization is exposed in a band approximately 1.2 meters (4 feet) wide and 20 meters long. The outcrop was tested with a magnet.

The small island in the small bay has a band of magnetite, about  $0.4 \times 20$  meters, striking approximately N 35°W along the western part of the small island.

Magnetite is exposed also on the east slope of a ridge for some 40 meters south east of the outcrop face of magnetite in the bay.

There is an Xray drill hole, drilled at  $-15^{\circ}$  in a westerly direction, some 50 meters south of the magnetite face. There is no data available on the results of the drilling.

My visit to the property was to substantiate the presence of magnetite. The magnetite outcrops and minor working are all as described in the G.S.C. bulletins. I did not explore the property during my examination for other magnetite mineralization zones. I checked only the reported information.

Five bags of randomly selected grab samples were taken off the magnetite outcrop by the author and delivered to at Chemex Lab in North Vancouver to be assayed for iron. The five samples assayed averaged 63.44% iron. Ref: A8926471, App. IV.

A composite sample was cut from the five samples and checked for impurities and deleterious elements. The elements checked for are: Si, Al, Ca, Na, K, Ti, P, Mn, Ba, C, S. The deleterious elements are sulphur and phosphorus. The composite assay of the five samples did not indicate any significant amount. For a detailed discusion of the characteristics of the feed stock of D.R.I. see

Ref. AIME Iron and Steel Society.

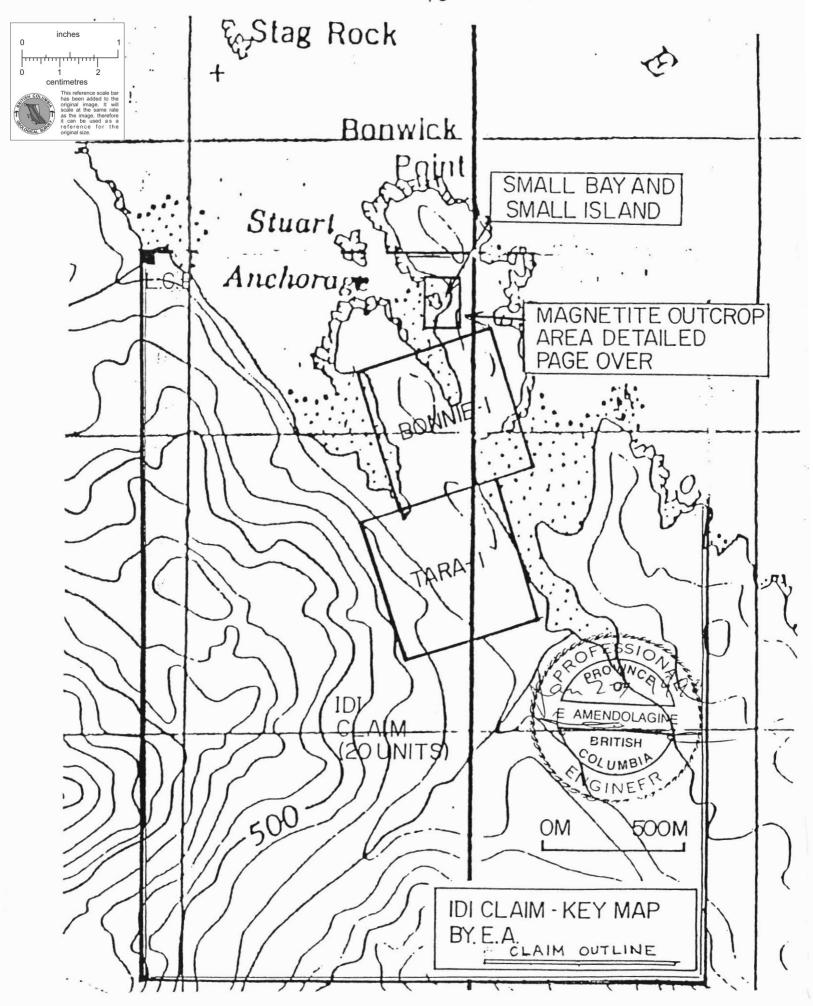
Direct Reduced Iron Technology and Economics

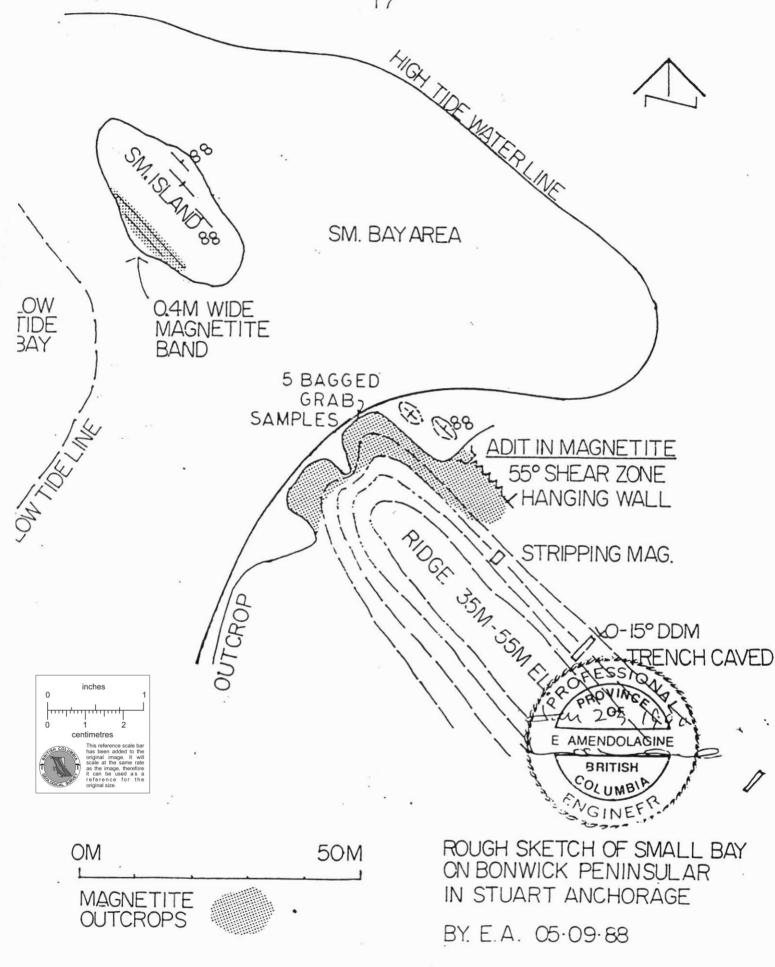
of Production and Use
edited by Robert L. Stephenson &

Ralph M. Smailer dated 1980

pg 36

The following is an enlarged topographical map and a rough sketch of the workings.





#### DISCUSSION

Magnetite has been known to be present on the Bonwick Point Peninsula of Stuart Anchorage prior to 1914. Ref: Minister of Mines, Annual Report 1914. The magnetite was reported as being extensive and a sample of magnetite yielded 59.1 percent iron.

The G.S.C. Economic Geology Series No. 3, "Iron Ores of Canada" dated 1926, elaborates on the magnetite exposure, indicates tonnage possibilities of 100 tons per vertical foot and with the technology and application for magnetite in 1926, they said that "..this could scarcely be mined as iron ore at a profit."

Industrial Dominion Inc. has plans for production and distribution of Direct Reduced Iron (sponge iron), derived from the magnetite.

The sequence of events required to implement I.D.I. plans of production and distribution of D.R.I. are:

- 1. Develop a viable magnetite ore body.
- 2. Engineering feasibility study.
  - 3. Set up operation to mine and produce D.R.I.

My property examination consisted of examining the reported areas of magnetite mineralization. During my examination I did not explore for additional areas of magnetite mineralization. This report recommends that the entire property be explored for additional magnetite zones.

To date no engineering studies have been done to indicate whether this could be a commercially viable operation.

The purpose of this report is to set up a program that would outline the extent of the magnetite mineralization on the entire property and determine the possibility of developing a viable iron ore body.

#### CONCLUSIONS

The field examination of the IDI claim confirms the presence of magnetite mineralization reported in the Minister of Mines of British Columbia Annual Report of 1914, the G.S.C. reports of 1926 and 1970 and Independent Reports of the magnetite mineralization on the Bonwick Point peninsula.

In order to proceed with the I.D.I. plan for production and marketing of D.R.I., a viable magnetite ore body has to be established.

I recommend that in order to determine if an ore body is present on the I.D.I. claims , the following program will have to be implemented.

The program should be carried out in a minimum of two phases.

The first phase would be to establish the magnetic zone with an aerial magnetometer survey to outline the magnetic area on the ground. This will have to be followed up with a ground magnetometer survey to delimit the magnetic zone.

This will be in conjunction with geological mapping.

Based on favourable results in the first phase, the second phase will be a 1000 meter drill program and surface stripping program, for bulk sampling, to delimit the magnetite mineralized zone.

The magnetite mineralization is reported parallel to the strike of the NW-SE ridge.

The survey information will assist in locating drill targets along the ridge and at the face of the magnetite exposure in the small bay area.

A minimum of four drill set ups will be required along the ridge with the possibility of two drill holes from each set up. This will require a minimum of 250 meters for each drill section.

Surface stripping will be required at right angles along the strike of the zone.

Based on favourable results in the second phase, then the third phase would be an engineering feasibility study to determine the viability of mining the magnetite as iron ore and setting up a D.R.I. plant to treat the magnetite.

# ESTIMATES OF COSTS

# FIRST PHASE

Air fares	\$	3,000
Aerial magnetometer survey		35,000
Ground magnetometer survey		20,000
Geological mapping		10,000
Field assistant geol.		4,000
2 field helpers for stripping		8,000
Field camp for 6 men		6,000
Food and supplies		8,000
Boat transportation on property		10,000
Crew transportation to property		8,000
Assays and geologic studies		10,000
Communication, radio, phone		4,000
Consultants		20,000
Contingencies 10%	_	14,000
TOTAL FIRST PHASE	\$.	160,000

# SECOND PHASE

Minimum of 1,000 meters drilling Geologic logging Core Grabber Assay and studies and metallurgy Room and board, transportation Surface stripping Consultant and report Contingencies @ 10%	\$125,000 15,000 15,000 35,000 25,000 55,000 20,000
TOTAL SECOND PHASE	\$319,000
TOTAL FIRST AND SECOND PHASE	\$479,000

Respectfully submitted MANNY CONSULTANTS LTD.

EMANUEL AMENDOANS

May 9, 1988

REPORT REVISED: January 23, 1990

#### CERTIFICATE

- I, Emanuel Amendolagine, of the City of Vancouver, in the Province of British Columbia, hereby certify:
- 1. That I am a geologist and reside in Vancouver, British Columbia.
- 2. That I am a graduate of Hunter College of the City of New York, and Columbia University with a B.A. and M.A. respectively, and have practised my profession as a geologist for 35 years.
- 3. That I am a Registered Professional Engineer in the Province of British Columbia.
- 4. That this report is based on my trip to the property on May 7, 1988 and on the studies of government and private reports.

GSC Eco. Geol. Series 3 Iron Ores of Canada Young & Uglow GSC Paper 70-41 Douglas Channel Hecate Strait J.A. Roddick

Annual Report of the Minister of Mines 1914 Richard McBride

Green Construction Company Inter-Office Memo Bill Powell

IDI Business Plan for Production & Marketing Sponge Iron.

Joseph Iwasenko

5. That the author does not have, nor does he expect to receive, either directly or indirectly, any interest in the Industrial Dominion Inc., property, its claims or its associated companies.

E. AMENDO

AMENDOLAGINE

6. That this report may be used for the purpose of a Prospectus or Statement of Material Facts if so desired.

DATED AT VANCOUVER, British Columbia, this 23th day of January 1990.

REVISED: January 23, 1990.

APPENDIX I
ANNUAL REPORT
MINISTER OF MINES
DATED 1914

by crystalline limestone on the south-west boundary, which is apparently the permanent tanging-wall. A sample taken from the open-cut by the writer across the 8-foot are-body ussayed: Guld, 0.02 uz.; silver, 3 oz.; copper 6.3 per cent.

In a S. 15° E. direction from the No. I open-cut, and also on the Wild Goose claim, there we four more open-cuts, and an adit in a distance of about 300 feet. In all of these the discretization is very similar to that in the No. I open-cut, but the width and values appear to radually decrease.

In a N. 15° W. direction from the No. 1 open-cut, and on the Ophelia claim, there are two open-cuts; in these the width of the mineralized zone appears to be about the same as u the No. 1 open-cut, and judging from appearances, the values are about the same, but no amples were taken for assay, as it was hardly practicable to systematically sample the entire re-body unless considerable work was done clearing out each open-cut.

Three diamond-drill holes had been bored in 1913, but these were all located several feet rom the ore-body on the foot-wall side, and apparently pointed away from the ore-body rather han at an angle which would intersect it, unless the dip changes, of which there does not ppear to be any indication.

On the Copper King mineral claim, adjoining the Wild Coose on the south-east, there is a outcrop of bornite and chalcopyrite mixed with limestone on which no work had been done. From this a sample taken as representing a fair average assayed: Gold, trace; silver, 2 oz.; opper, 1.6 per cent.

#### PITT ISLAND.

This island is situated about five miles south-east from Gibson island, and it was visited ecause of information that it contained an extensive deposit of magnetic iron ore. This was sund on a point on the north end of the island near Stuart's anchorage, where there is a bluff 0 feet high by about 50 feet wide, made up of practically solid iron ore, occurring in a ornblende-schist country-rock. The apparent line of strike was followed towards the south-ist for about 300 feet, and the same character of ore found exposed in a series of several renches, some of which crosscut the ore-body for about 30 feet. A sample taken assayed: ron, 59.1 per cent.; sulphur, nil; phosphorus, trace.

#### SKEENA MINING DIVISION.

#### NOTES BY PROVINCIAL MINERALOGIST.

The Provincial Mineralogist has been favoured with the following information regarding to mine at Surf inlet, Princess Royal island, by the kindness of C. E. Verrill, M.E.:—

- "During January and February the property was examined by the Tonopah-Belmont evelopment Company of Philadelphia. The above company took a working bond on the operty in April, and immediately thereafter began the installation of a compressor plant ad mining equipment with which to carry on development-work.
- "A 10-drill compressor plant was installed, entire new camp buildings built, and actual

# ANNUAL REPORT

OF THE

# MINISTER OF MINES,

1914.

To His Honour Frank Stillman Barnard,

Lieutenant-Governor of the Province of British Columbia.

MAY IT PLEASE YOUR HONOUR:

The Annual Report of the Provincial Mineralogist upon the Mining Industry of the Province for the year 1914 is herewith respectfully submitted.

RICHARD McBRIDE,
Minister of Mines.

Minister of Mines' Office, April 18th, 1915. AFPENDIX II

GEOLOGICAL SURVEY of CANADA

THE IRON ORES OF CANADA

bу

G.A. YOUNG and W.L. UGLOW
DATED 1926

The deposits at Whitehorse and those already described as occurring respectively, near Nordenskiöld river and Giltana lake are essentially of the same general character. They are contact-metamorphic, replacement deposits which have developed mainly in strata near or at the edge of invading bodies of granitic rocks. The three localities occur within a distance of 75 miles and lie 7 to 20 miles northeast of the east edge of the batholithic area of the Coast Range intrusives with which, in all probability, are connected the outlying bodies of granitic rocks that gave rise to the ore deposits. Presumably other iron ore-hodies occur in the territory adjacent to the edge of the main body of Coast Range intrusives which extends northwest past Giltana lake for a distance of 50 to 75 miles or more. These deposits are counterparts of the magnetite bodies which occur west of the Coast Range batholith along the Pacific coast of British Columbia and like them are irregular in form and variable in composition. but locally contain many thousands of tons of magnetite iron ore with a comparatively low sulphur and insignificant copper content.

#### BRITISH COLUMBIA

#### OMINECA MINING DIVISION

(1) Summit Creek, Zymoetz River

Source of Information. Macketon, J. D.: Cool. Serv., Canada, Sera, Rept. 1913, pp. 87-49.

#### GENERAL DESCRIPTION

The following account of this limonite deposit is derived from the report by Mackenzie, which is accompanied by a geological plan of the ore occurrence. The property has also been described by W. M. Brewer,

"The box iron ore property owned by the North Pacific Iron Mines. Limited, of Prince Rugert, is situated on Limonite (Summit) creek, a tributary of the Zymoetz (Conner) river, 38 miles east of Copper city on the Skeena. It is o miles west of the summit of the Zymoetz River-Telkwa River trail, and about 40 miles from Telkwa. The property consists of nine claims on the north side or the creek, covering approximately 375 acres.

"The largest of the decesits on the property . . . . was examined . . . but ut is renorted) that other, smaller, similar deposits occur at higher elevations . . . . farther back from the creek. . . The deposit examined, which consists of a sheet of box iron ore of unknown thickness, extenuing from the "moss mots" to indrock, lies on the steep north side of Limonite Creek valley. It extends from the stream . . . . . for . . . 1.500 feet in a straight line up the mountain side . . from an elevation of 2,600 teet . . . to 3,500 teet . . . . The irregular area unueriain by limonite measures about 2,250,000 square feet. and its greatest width is about 1.500 feet. Everywhere in this area. veilow or brown earing limonite may be uncovered inerely by removing the moss from the surface: there is no overburden except the trees and 

"The deposit consists of hedded line from ore . . . in placy layers from I to 2 inches thick, tying parallel to the bill-side, which here

#### Index to Localities Represented by Numbers on Figure 3 (pages 18, 19) -

- 1. Semmit treek, Zympous river
- 2. Porther pland
- 2. Steart anchorage, Pitt island
- 1. Faire Steart inchorage, Pitt Island
- 1. Kemeeles lalet
- 1. Kitimas river
- 1. Irea Duke mineral claims, Louise Island
- 8. Aper mountain and Tam harbour, Morroby Island
- 1. Bernaby island
- 10. Barnet harbour, Burton lalet, Ikeda bay, and Callison bay; Morreby island
- 11. Dean channel
- 12. Evens arm. King island
- 13. Rivers salet
- 11. Seymour salet
- 15. Knight inlat.
- 14. Chromium creek, Kligabilel river
- II. Nimekish (Klasech) river
- 18. Fasoy bay and vicinity, Phillips ares
- 19. Measics bay, Vancouver Island
- 20. Iren river, Vancouver island
- 21. Bame lake, Vancouver Island
- 22 West Redeads saland
- 23. Sable eiver, Vancouver island
- 21. Tetada island 25. Alta lake
- 28. Harrison lake
- 27. Tipella mevatata
- "1 Illiance take and samplement
- 33. Tames river
- 30. Thompson and France sivers above Lytton
- 31. Glen, Magage, Moore, and either magnetics deposits
- 32. Near Merritt and south of Micola
- 33 Louissings movestate
- 21. Downaary district
- 11. Franklin tame
- 34. Near Birenbane
- 37. Beauty, etc.
- 21. Fenual Oresite and Salmes civers
- 27. Near Crawlord bay
- 40. Kitthener
- 41. Lamp tires
- tt. Juli giver ana dana erren
- 41 Figger lake
- H. Cameron river
- 43. East 20084 44. Port randuan
- 47 Sarita river and Cupper island
- IL irenam
- 49. Alberni canas
- 30 Hongeren jage and Cabucatesit harbour
- 11. Renneuv lake and Deer erees
- M. Hernung take
- 31. Ileau bav, Flusana arm
- U. incersoil river
- 36. June croup, 1)untiting sound
- 37 Yest sem, Tratino sound

<sup>&</sup>quot; Brower, W. M.; Pres, of Minuser of Mines, B.C., 1911, pp. 123-121.

inches

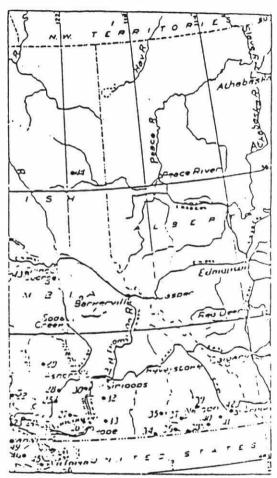
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Figure 2. Inies man of Dritish Culumbia snowing positions of tree are accurrences. If or came



19

sice of locasity numbers, are page 17.7

has an average slope of nearly 30 degrees. In addition to the stripping of the ore, prospecting has been done by trenching and sinking numerous pits.

The greatest thickness of limonite anywhere exposed is 15 feet; in two or three places 10 feet are exposed, and several cuts show 3 to 4 feet. In no place has the bottom of the sheet of ore been reached"

"The ore consists of yellow and brown earthy limonite free from . .

impurities, rather soft, and of a loose consistency" . . .

The country rock on which the ore lies is an altered, greenish porphyry containing in many places, impregnations of pyrite. The writer is informed that on the mountain side above and to the north of the iron deposit are many quartz veins carrying pyrite . . . . Water is constantly flowing down the hill-side . . . . The water flowing over the iron deposit has a strong tasce of iron salts . . . plainly . . . . . derived from the decomposition of iron sulphides farther up the mountain side. This strong solution of iron sulphates . . . has built up the deposit . . . by the progressive transformation to limonite of successive layers of moss and other vegetation. . . . (as) is borne witness by the limonite twigs, roots, chips, fir needles, and cones that have been transformed parily or wholly to limonite in the lew years since the burned areas were cleared."

"An average depth of 5 feet for the deposit is almost certain: 10 feet is probable and perhaps the depth is greater. In other terms, 562,500 tous may be considered as almost certainly proven; twice that as probable and perhaps the amount is considerably larger. Analyses of the ore are given below:

"Analyses of Ore from North Pacific Iron Mines, Limited

<u> </u>	1 1 1	2 . 1	3 (	4
roe imetallici	34-20 1	36-01 1	34-32 1	32-17
Silven (Silver	1.07 1	0.43 1	1-99 1	1 - 34
Maaranen i Mat	0.43 1	0-31 1	0-39 1	0.10
Photonorus (P)	0-4071	0.0161	0.0631	0.416
Selener till	1-10 1	1 - 32 :		1.47
Waur, combined	18 - 54 1 -	16-02 1	20-47	19-61

Asslywe by H. A. Levens, Mines Brases, from samples collected by J. D. Mac Kentle.

Since the property was examined by Mackenzic, the denosit has been reported upon by privately engaged engineers and in one suca report it is stated that an open-out situated near the centre of the deposit . . . . "exposed a thickness of 22 feet at present, and is said to have a shuft, now (1917) filled up, at the end which showed S feet more of ore without reaching bottom." Until the thickness of the deposit has been determined at a number of places any estimate of the ore content may prove misleading, but all available data corroporates the conclusion reached by Muckensie that at least 300,000 tons of easily mined, nearly pure limonite is present and that it is not improvable that the total is considerably in excess of 1,000,000 tons.

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#### (2) Porcher Island

#### LOCATION

Ten or more mineral claims known respectively as Rupert No. 1. Rupert No. 2, etc., have been located on the east side of Porcher island close to the shore of Chismore passage and about 17 miles south of Prince Rupert. The claims are staked along a northwesterly trending line. commence in the south on the slope descending to the bay into which Spiller river empties, and extend northwards for 31 miles to a point about directly opposite the northwest end of Elizabeth island. Commencing at the noint at the north end of the line of claims, outcrops of magnetite occur along or close to the shore for about one-half mile or to the head of a small bay. From the head of the bay a trail leads southward, rising and falling several hundred feet, and passing on the way the various known "showings" of iron ore. These lie one-half mile or less inland from the cast coast of the island, in a tract of comparatively low ground which borders the higher country of the interior.

Except for passing references in several annual reports of the Minister of Mines, British Columbia, these mining claims do not appear to have been reported upon hitherto.

#### GENERAL GEOLOGY

Porcher island lies within the general area of the Coast Range batholith, but as indicated by V. Dolmage, a large part of the island is occurred by the Prince Rupert formation consisting of crystalline schists and limestone presumed to be of Carboniferous or Triassic age. These schists form the country rock in which the iron ore occurs. In the vicinity of the small hay at the north end of the mining claims, various types of schist outeron as well as a narrow zone of white limestone, which weathers hale vellow. The limestone was seen as intervals over a length of one-half mile with a strike of east 40 degrees south (true) and dipping northeast at an angle varying between 60 and 70 degrees. The limestone occurs in beds up to 10 feet thick with thinner interbeds and lavers of nearly dense. dark greenish grey, chloritic schist. The begging planes and planes of schistosity nearly coincide. To the northeast of the limestone, the rocks are various types of schist, for the most part very fine-grainen, chloritic, sericitie, or biotitie, but in part coarser-grained, banded, and siliceous and resembling deformed clastic sediments or granute rocks.

To the southward rock exposures are comparatively few in the vicinity of the fron ore occurrences which lie in a narrow tone striking southeast approximately parallel to the strike of the schistouty.

#### DESCRIPTION OF THE ORE OCCURRENCES

The exposures of magnetite occur in several detached grouns distributed mong a course whose northern part strikes east 15 degrees south and zoutnern part east 35 deerces south. The outcrops of magnetite commence in the north on the eastern shore of what is a small island at extreme high tide, and occur at short intervals along or near the shore for a distance of 2.100 feet. In this distance, eighteen distinct exposures of imagnetite were observed within a zone having a maximum midth of 200 feet. The

<sup>1.</sup> Asmaio of a trenen wall, from 2 to 10 feet below the surface. Taken by cutting a groove t lost wide, a sarme acep, \$ lest long, and numbering to a minute.

<sup>2.</sup> A occur specimes representing a Lings, harner, more compact hand about 2 feet below 

I. Samele of dump tram a treach. . . .

<sup>&</sup>quot;The iron are is excellently situated for mining, provided transportation could be obtained."

<sup>·</sup> Mackentie, J. D.: Oc. ett.

<sup>1</sup> Dalmore, I' : "Cuses see I livens of Breinh Colombia between Desgue Casses and the Ababan Measurer":

outcrops lie in part on the side of a low ridge, in part along the shore, and in part below highwater mark where the rocks are nearly continuously exposed along their strike. The individual outcrops vary in character from a width of several feet of schist bearing films and narrow discontinuous streaks of finely granular magnetite to, in one case, a body of nearly solid magnetite 12 feet thick. In most places rock exposures are sufficiently continuous to indicate that the individual films, streaks, and narrow bands do not continue for more than 30 feet along their strike, which in general coincides with the strike of the planes of schistosity of the enclosing rocks. In places the magnetite streaks, etc., may be seen to die out in a lew feet along the strike. At one place a zone of films, streaks, and lenticular bands is exposed at intervals over a length of nearly 200 feet. In places the immediately associated rock is rich in biotite and finely granular quartz, is banded with narrow layers of nearly pure quartz, and others which are dense and chloritic. In other places the rock is dense and carries much finely disseminated epidote and in other cases the country rock is a chloritic schist.

The outcrops of magnetite cease before the head of the small bay is reached. Possibly the magnetite-bearing zone continues beneath the waters of the bay, but since a number of barren rock exposures along the shore and below highwater mark lie on the strike of the magnetite-bearing zone it seems probable that the magnetite is not there developed. South of the head of the bay exposures are wanting for a distance of 300 feet, but recommence on the lower slopes of rising ground and continue southward at wide intervals along the north side of a low ridge. Five hundred feet southeast of the head of the bay, or 1,300 feet southeast of the last magnetite exposure, outcrops of mineralized rocks recommence. They form at least fifteen distinct outcrops in a zone 3,300 feet long and having a maximum breadth of 200 feet. Less than ten other rock outcrops occur along the zone, for nearly the whole country side is drift-covered.

The first outcrops, commencing at the north end, are green, epidotic schists in which are a few stringers of quartz and films and small patenes of magnetite developed parallel to the planes of senistority. Farther southeast at one outcrop the epidotized schist over an area about 5 feet in diameter, carries magnetite in films, small patches, and small masses up to 1 foot in length and 0 inches in breadth. At another outcrop, still farther southeast, the planes of schistosity in the country rock are corrugated and along one such corrugation, magnetite forms a small body 1 foot thick. Nearby the magnetite occurs in irregular, healthe notice fraving out and disappearing in one direction, and in the other uniting into a poorly exposed body of magnetite 4 feet wide and 10 feet long. At this place, as elsewhere, the masses of inagnetite, though naving the general appearance of conforming to the strike of the schistosity, do in places out across it at a small angle.

No further exposures occur over a distance of 650 feet to where are outcrops of the usual applicated and chloritie scinist carrying much magnetite in two onness each about one toot wine. Southeast over a distance of 1,500 at the arrowing on magnetite-maring exposures occur with only one of the exposure of barren rock. The various exposures have a general three another but differ in detail. Several are so grouped at to give a nearly continuous section across a width of 200 feet. It seems possible that the schists are continuously mineralized over a

length of 2,000 feet and more, but the outcrops are too few and too midely senttered to warrant assuming this to be actually so. It may be that the mineralization is largely confined to comparatively small, isolated areas. The exposures in general consist of epidotized schist-hearing magnetite of of zones of such rock in green schists. One exposure 40 feet long along the strike and in part 30 feet wide, consists of schist with lavers rich in magnetite, the widest of which maintains a width of 2 feet for a length of 30 feet and is nearly solid magnetite with only a few, thin, intermittent partings of schist. At soveral exposures the magnetite forms two or more bands each several feet wide, and largely composed of magnetite, but with numerous partings of rock; in such cases the neighbouring schists may entire thin, discontinuous films and streaks of magnetite or may be quity batten. In places over a width of several feet, the rock consists of lavers of magnetite up to I inch in width, alternating with lavers of barren rock with an average width twice that of the magnetite bands. In general the magnetite layers conform to the planes of schistosity, but in places depart from this attitude. The individual layers die out along the strike and others take their place at slightly different horizons. The individual layers vary in character from sparsely mineralized rock to nearly solid magnetite which is always very finely granular.

Farther southward along the general strike outcrops are wanting for a space of 1,700 feet, beyond which for a length of 1,300 feet exposures again occur. The most northerly is a green tenist with a few films of magnetite and layers several inches wide of a chlorite-magnetite schist. Beyond are exposures in which magnetite in small crystais and accompanied by some pyrite in small crystals is thickly disseminated in a microceous, illiceous schist over a which of 5 to 10 feet. In places the magnetite forms thin bands, in one case 21 feet wide, of nearly solid magnetite.

To the southeast, after an exposureless interval of 2,000 feet, light-coloured schists, in part showing much pyrite and a little magnetite outcorp over a distance of several hundred feet. Beyond this for 1,500 feet no outcrons of mineralized rock are known to occur to where, on the slone to Smiller river, is one exposure of schist in piaces sparingly mineralized with magnetite either in disseminated grains or aggregated in streaks and thin layers.

#### MODE OF ORIGIN

The occurrence of the magnetite within a narrow, nearly straight zone striking parasiel with the schirtosity of the neighbouring toes, the distribution of the magnetite in films, streaks, and bands parasleting the sensitosity, the sedimentary enaracter of at Past some of the association rocks, and the fact that wherever observable the planes of sensitivity and bedding coincide, are phenomena that inight he field to indicate that the magnetite and containing rocks are sediments and that the ore is a boulded frequently is equipped and otherwise has an altered aspect, and since over a considerable stretch where the iron oxide is parser it is associated with pyrite, it is thought that the magnetite is secondary and that like most if not all the occurrences of magnetite on the Pacific coast, it is connected in origin with the minimic rocks of the region. In this instance the magnetite appears to have partly replaced the strata upong a marrow, straight zone paralleling the granite contact less than nail a mile to the maximum.

#### DESCRIPTION OF THE ORE OCCURRENCES

At several places on the jutting point southeast of Stuart anchorage, magnetite occurs in small quantity impregnating parts of bands of micaccous schist, but only in one place does any important amount appear at the surface. At this place a band of mica schist possibly 150 to 250 feet broad forms a narrow ridge which strikes southeast at right angles to the shore and rises along its axis to a height of 100 feet in a distance of 200 feet from the sea. The ridge is largely covered with drift, but rock is exposed at its base at its shore end and over an area a few feet wide and 150 feet long extending from the shore along the northeast side of and close to the axis of the ridge. Several shallow trenches extend from the long rock exposure across the axis of the ridge and two other trenches, respectively 60 and 135 feet distant from the southeast end of the long rock outcrop, cross the strike of the strata. Farther southeast along the ridge a few rock exposures are present.

The magnetite outcrops in several masses at the water edge at the northwest end of the ridge, and is exposed in a band not averaging more than 4 feet in width and which for a length of 200 feet is visible in the long exposure on the northeast face of the bill. Sixty feet southeast of the end of this band of ore and along its strike, no magnetite is visible in a crosscutting trench. Seventy-five feet farther southeast, a second trench shows schist impregnated with magnetite over a width of several

leet.

In the case of the several smaller masses of magnetite at the seaward end of the ridge and the long, band-like area, on the northeast alope, although one boundary may be sharply defined, the other usually is not so and for a space of one or more feet the bordering schist is rich in magnetite, or bands of schist and magnetite-rich schist may alternate. The several small bodies at the shore end of the ridge range in length from 15 to 30 feet, and in each case end to the southeast rather abruptly and, possibly, against a fault-plane, though no direct evidence of the existence of a fault was noted. The purer magnetite is compact, fine-grained, with some admixed biotite and other mineral constituents of the schists.

#### HODE OF ORIGIN

The occurrence of the magnetite in bed-like masses associated with schists of, presumably, sedimentary origin, may suggest that the magnetite also is of settlementary origin. The sporadic appearance of magnetite elsewhere in the general vicinity and the numerous examples along the Pacific coast of magnetite bodies associated in origin with plutonic rocks, gives rise to the presumption that the magnetite occurrences on the Royal claim also are secondary, and are of the nature of replacement bodies formed along lines of weakness in the more schistose members of the sedimentary series.

#### ECONOMIC CONSIDERATIONS

The hand-like body of magnetite outcropping on the northeast side of the ridge is exposed over a length of 200 feet. At its northwest end it passes below sea-level. At the southeast end it disappears beneath drift. Sixty feet beyond the southeast end, a cross-trench fails to reveal ore; either the band ends in this distance or it has been displaced by a fault.

#### ECONOMIC CONSIDERATIONS

Nowhere along the mineralized zone is any large hody of magnetite displayed. The largest visible mass of ore is 12 feet thick and this body in a distance of no more than 30 feet decreases in width to less than 4 feet. Much of the magnetite-impregnated material is low grade. The bands of purer magnetite in places may be seen to thin to nothing and wherever the mineralized zone is exposed it is manifest that the individual streaks, patches, and bands of magnetite or magnetite-impregnated rock do not continue far along the strike. The situation at the head of the bay just south of the first described group of magnetite exposures seems unmistakably to indicate that mineralization is lacking along considerable lengths of the general zone. This conclusion is further substantiated by the general lack of exposures along other sections of the zone, for magnetite is resistant to weathering and where it is extensively developed it tends to form elevations which probably would project through the drift covering. The exposures are distributed over a length of nearly 4 miles and the number of the individual exposures is considerable. They possibly present a fair sample of the mineralized zone and if they do, no body of iron ore o merchantable size is present.

#### (3) Stuart Anchorage, Pitt Island

#### LOCATION

The Royal mineral claims have been located to include certain nuterops of magnetite on the east coast of the north end of Pitt island. About 7 miles southeast of the head of the island, a short distance south of Stuart anchorage, a low point projects eastward about 4 mile and is penetrated by two narrow bays trending southeast. The mineral location is on the eastern shore of the more easterly of the two bays about halfway to its head.

The iron ore occurrence has been known for some years and was briefly reported upon, in 1915, by W. M. Brewer,

#### GENERAL GEOLOGY

Pitt island lies within the limits of the Coast Range batholith, but, as indicated by V. Doimage', Triassic or Carbonilerous schists and lime-stone of the Prince Rupert formation occur in the vicinity of Stuart anchorage. Near the magnetite outcrops, the rocks consist of a schistose series in which the planes of schistosity and of bedding nearly coincide and strike southeast. The rocks, save for a few, thin, discontinuous beds of crystalline limestone, consist largely of finely granular, banded quartzoses, biotite gneisses, or schists varying from pale grey to nearly black according to the amount of biotite and other dark-coloured constituents that may be present. The rocks, presumably, are mainly deformed sediments. They are cut, transverse to the direction of schistosity, by dykes of fine-grained granite.

<sup>1</sup> Brown, W. M.; Am. Ropt., Minister of Mires, B.C., 1911, p. 130.

<sup>1</sup> Dilmays, V.: "Corn and lotes and Deltish Columbia between Desyme Channel and the Alexana Possedary"
Gool, heaver, Caman, 175, pt. A.

The smaller bodies of magnetite along the shore at the end of the ridge end abruptly without any direct sign of faulting and it seems probable that the longer band ends in the same way. Further cross-trenching would determine where and how the long band ends and might uncover other masses of magnetite. No evidence was secured that indicates that the outcropping bodies will materially widen either along the strike or dip, or that any concealed bodies will be of greater size than those now visible. The larger, band-like deposit might yield 100 tons of ore for every foot in depth. A body with dimensions such as this could scarcely be mined as iron ore at a profit.

#### (4) False Stuart Anchorage, Pitt Island

On the northeast side of Pitt island, a short distance northwest of False Stuart anchorage and about opposite the entrance to Kumeolon inlet on the mainland shore of Grenville channel, are a number of exposures of magnetite. These occur close to the shore on a broad, irregular point of land underlain by schistose rocks of the Prince Rupert formation, which a short distance south and inland are cut off by the intrusive granitic rocks of the Coast Range batholith.

At the southernmost occurrence of magnetite, several small strippings close to the shore disclose mica schist with several highly micaceous bands carrying considerable magnetite and occasional streaks of nearly pure iron ore. About 100 yards northwest, a shallow shaft was sunk years ago in a zone of disturbed mica schist with masses, large and small, or garnetite, and small areas of the schist richly impregnated with magnetite. Over a farther distance northwest, of 350 yards, the dark mica schists are visible in places and occasionally carry some magnetite.

Nowhere is any body of iron ore visible. The mode of occurrence is like that of the magnetite masses at Stuart anchorage and farther north on the Rupert claims on Porcher island.

#### (5) Kumeolon Inlet

Kumeolon inlet is a comparatively small inlet on the east side of Grenville channel. 25 miles south of Prince Rupert. Deposits of magnetite have been reported to occur near the shores of the inlet. No information is available as to the exact position, character, or size of the deposits.

#### (6) Kltimat River

Kitimat river empties into the head of Kitimat arm. Douglas channel. A few miles up the broad river valley are outcrops of magnetite with varying amounts of chalcopyrite. Private reports have been received which indicate that the deposits so far located should not be considered as sources of iron ore except as a by-product.

<sup>4</sup> Apr., Root., Misserry of History, D.C., 1912, p. 99; 1917, p. 43,

Asa, Hest., Slumter of Streen, D.C., 1207, p. 37,

# APPENDIX III

GEOLOGICAL SURVEY of CANADA

DOUGLAS CHANNEL - HECATE STRAIT MAP AREA

BRITISH CLUMBIA by

J.A. RODDICK

DATED 1970

PAPER 70-41

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DOUGLAS CHANNEL-HECATE STRAIT MAP-AREA.
BRITISH COLUMBIA

REFERENCE UPTE OFTHE

DEPARTMENT OF ENERGY, MINES AND RESOURCES

the interfor part of McCauley Island. The gabbre is cut by a large number of marrow (1- to 18-inch-wide) besaltic dybes, which weather recessively into the gabbre. Quartz and epidote value also cut the gabbre is places.

The rock is such the same near Twests laket at the south end of Pitt laked. The variable textured gabbro and diorite are cut by dykes of dark, fine-grained microdiorite that in places form a stockwork. One lissuation ectes was observed in the gabbro-diorite complex. At the contact with the biotite-hornblends quests diorite (8a) south of the complex, the dioritic phase is whitten and biotite is the dominant masks mineral. Although no apphyses of diorite or gabbro appear in the quests diorite, attingers of the latter cut the former.

Similar but more migratitic is the dark heterogeneous gabbro-diorite complex in the vicinity of Bareard Marbour, southeast of Gil Island. In places the rock there is an irregular mixture of limestone and starm blocks in a diaritic matrix, with much epidetisation.

#### Mas-unit St

The main occurrence of this unit are on Fitt, Banks, and Princess bays! Islands. The complexes consist chiefly of heterogeneous disrite, commonly gesissic, and characterized by apidots and chlorite, and by numerous metasedimentary screens. Northleads is the dominant mineral but here and there bottle is compicuous. The disrite phase has clearly formed by grasitization of metasedimentary and metavolcanic rock. The remnent across are mainly amphibolite, achiet and share but rerely quertrite, which suggests the parent rocks were more likely unit 2 and 3 rether than the highly quertrite unit 2 which is resistant to disritization although some fellespathization is common. In places, such as the south and of Sanks Island, wispy lighter coloured and mere silicanus zones in the disrite suggest the early stages of conversion to quert disrite. Itsep northwest-trending feliation is common and invariably parallel with the contained measedimentary acrosses.

Pitt Island: Near Nevenor Inlet on Pitt Island the dierite is strongly felisted and commonly present. Steep dipping, northwest stiftudes dominate
except near the head of the inlet where they eving to the northwest. Iones of
agnetite and gneiss, and gradation into quests diorite are common. The inclusions, which consist mainly of amphibolite and range from elongste to ribbon
verieties, are locally abundant: Slotite schiet and questies eccuse are
also common and range from a few feet to more than 100 feet in width. Phases
of the diorite are almost messive, with only shortly, nebulitic relicts of the
fermer bonding.

At the southeastern and of Pitt Island and the southern part of adjacest Farrant Island, the diorite is dark, fine-grained and commonly chlorite-lised. Here and there are occurrent of netissediments which include asphibolita, limestone with epidote sharm, biotite-gainet schiat and quartite. Zones and attests within the acreens are commonly distributed. The diorite there is more assive than farther north on Pitt Island but altermeting bends of fine- and costse-grained meterial form local planar attuctures. The coarea-grained phase costsins in places bornblands crystals up to 2 faches long. Locally the dioritie is intensely sheared along morthwest tready.

Chalseld diorite and dioritic migmatite is exposed on the east side of Pitt leland along Granville Channel where most of the rock is a sheared gaselesic hornblender-biestic diorite that commonly grades into quarts diorite. The shearing is thought to be related to an inferred major fault in Granville Channel. In places the diorite contains plegioclass augen and elengate, lansold, amphibolitic inclusions, but it is characterized by thin acreans of rusty-weathering metased/mentary rocks. These includes a 50-foot-bitch bed of marble, thin beds of buff-weathering crystalline limestone is places containing genet, epidotic and diopsidic sharm, hornblends achiet, and granmish to

- /1

purplish quartite derived possibly from unit 2b. In places, hotmblende ith alternates with 2- to 6-inch-thick beds of crystalline limestons. The meta medimentary acrosses coniors to the foliation of the diorite which is normall vertical and parallel with Greaville Channel.

A large area between Nevener Legeon and Ogden Onnnel is underlain mainly by unit 3b. Owing to the poor appeaules only aparse data are available. The complex is made up of numerous accesson of quarti-bletite and biestice-hormhends achiest, fine-grained gasies, quartrite, amphibilite, and argifilite, with intervening areas of gneistic diorite, asserve diorite, quardiorite, and almor granodierite and quarts monionite (104). The area areas Revenor Lagoon and the asstern part of Nevener lalet is underlain mainly by hormblende-blotite diorite that is more homogeneous than that elsewhere in t unit. More datafled work could probably separate this phase as unit 7b. Quartrite and argifilite were observed only at the context with Captain Cov-monly aplitic quarts monionite (104) were recorded in the descent part of th unit. The quarts monionite and unit 3b are intinately interflegated active of Uyadham Lahe. Screens and foliated plutonic rock of unit 3b atrite asia merthwesterly and dip vertically to moditately east.

Campanio lelend: On the mortheast side of Campania Island a diorite complex is exposed. It is libely related to the diorite on Cil Island to the east, it owing probably to alteration by the quests monsonite pluton (10a). bisitie is commonly the dominant melic mineral. Nost of the diorite is tests grained. Between it and the granediorite is a 'nipactitic complex' of quests diorite, gramediorite, bands of guessa, amphibolite, shear, and applicit stockworks.

A similar complex underlies the southeestern rad of Campania Island, will contains more metasedimentary bands, including thinly bedded quartitic blette achiet, crystalline limestone, and generalizerous starm. The parnet is placed forms sphemitic masses about 1 inch across rather than large discrete crystals. In the complex are sones up to 100 feat wide of inclusion-free granedicties. The granedicties also forms discontinuous lenses in the metasediments. Other granifold zones consist of garnet-beating, grainissic quart. diorite. Dierite was not observed but probably lies a short distance offshor

Princess Royal Channeli. The area underlain by unit 3b in the vicinity of 1. Lake is about I miles wide and thins northward to its termination in a probab syntlinel nose on the west side of Elskane Inlat. A cooplex of lithologies are present and roughly estimated at 50 per cent algorithm, 35 per cent coops stively clean plutonic rock, and 13 per cent metasseleentary rock. The metasseleentary rock. sedimentary rock consists chiefly of vell-bedded horableade-biotite-quarte schist grading into fine-grained guales, and dark impure quartiite. These tocks comonly form acreess ranging is width from a few feet to several hunds feet. The mignatitic areas consist chiefly of elongate agentite, irregulari layered gardes, and fibbon gardes. The latter to made up of gardesic plutos rock containing amerous ribbons and achieven of achievose rocks. Sphene i especially epidote are comes in these areas. The plutonic phase is nainly well-foliated or gnelastic distite and quarts distite. Inclusions and achier are 'abundant in most places, but locally absent. The heterogeneity of the plutonic rock and the irregular menner in which it grades into mignatitic and metasedimentary rocks make it difficult to map on any scale.

#### · Hap-unit 6

Discrete gabbro plutons (unit 6) are rare in the map-area, but severa small once were discovered. Two lie east of the Grenville Channel-Princess Royal Channel line. The only one that is entirely exposed lies is quarte ditte terrane on a ridge south of Barrie Reach (Cardner Canal) and coarists of irregular textured, coarea-grained horbblende gabbro, containing areas of

AFPENDIX IV

CHEMEX LABS LTD.

ASSAY REFORT CERTIFICATES

A8926471 - 09 OCT 89

A8926472 - 12 OCT 89



Analytical Chemists \* Geochemists \* Registered Assayers 111 BROOKSBANK AVE. HORTH VANCOUVER: BRITISH COLUMBIA, CANADA V7J-1CI

PHONE '( A04) 984-011'

To INDUSTICIAL IXMINION INC.

1635 SCARBOROUGH CR. PORT COQUITLAM; BC V3C 2P9

Project 's ...

Comments: CC: B. MONNY

ettaje Ni. al Tota Pages 1 Date . : 09-(XT 12

Involce 1:1-1016471

P.O. F.

CERTIFICATE	OF	ANALYSIS 1 A8 9 2 6 4 7	1

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# Chemex Labs Ltd.

111, DROOKSDANK AVE. HORTH VANCOUVER, BRITISH COLLMBIA, CANADA V7J-1CI

PHONE. (684), 9.14-8211

To: INDUSTRIAL DOLL

1635 SCARBOROUGH CR. PORT COQUITLAM, BC V3C 2P9

Comments: CC: E. MONNY

A8976471

# CERTIFICATE A8926471

IDUSTRIAL DOMINION INC.

.O.IRCT :

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mples submitted to our lab in Vancouver, BC, ils report was printed on 12-OCT-89.

# SAMPLE PREPARATION DESCRIPTION 101 Assay: Crushaplit.ring

# ANALYTICAL PROCEDURES

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# Chemex Labs Ltd

Analytical Chemists \* Geochemists \* Registered Assayers

111 BROOKSBANK AVE . NORTH VANCOUVER. BRITISH COLLMBIA, CANADA V7J-1CI

" PHONE ((604) 984-02-21

To: INDUSTRIAL DOMINION INC.

1635 SCARBOROUGH CR. PORT COQUITLAM, BC V3C 2P9

Comments: CC: E. MONNY

A8924472

#### CERTIFICATE A8926472

INDUSTRIAL DOMINION.INC

'NOJECT :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 12-OCT-89.

# SAMPLE PREPARATION

	MMBER . SAMPI,ESI	DESCRIPTION
199		Sample split from other certif Whole rock fusion

#### · NOTE 1:

Tode 1000 is used for repeat gold analyses it shows typical sample variability due to coarse gold effects. Each value is correct for its particular subsample.

## ANALYTICAL PROCEDURES

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588		CaO %: Whole rock	ICP-AES	0.01	99 00
599		Na20 %: Whole rock	ICP-AES	0.01	11 00
8 2 1	1 1	K10 %: Whole rock	ICP-AES	0.01	1 n O
595	1	TiO2 %: Whole rock	ICP-AES	0.01	99.00
1 597	! 1	P2O5 %: Whole rock	ICP-AES	0.01	າາົດດ
. 596		MnO %: Whole rock	ICP-AES	0.01	19.00 ·
542	1	DaO %: Whole rock	ICP-AES	0.01	11.00
475		L.O.I. %: Loss on ignition	PURNACE	0.01	11 00
540	•	Total %	CALCULATION	0.01	14/4
367	1	C %: Leco induction furnace	LECO-IR DETECTOR	0.01	100 0
368	1	CO2 %: Inorganic	LECO-GASOMETRIC	0.1	ton n
180	' i	S %: Leco induction furnace	LECO-IR DETECTOR	0.001	100 0
451	i	FeO %: Acid decomposition	TITRATION	0.01.	100 0



Analytical Chemists \* Geochemists \* Registered Assayers

111 DROOKSBANK AVE. NORTH VANCOHVER.

PHONE (604) 984-0111

To : INDUSTRANCE

1633 SCARBOROUGH CR.
PORT COQUITLAM, BC
V3C 2P9

Comments: CC: E. MONNY

1. Invoice it represent

CERTIFICATE OF ANALYSIS A8926472

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# APPENDIX V I.D.I. CLAIM RECORDING FORM G

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REFERENCE I INDEPENDENT REPORT GREEN CONSTRUCTION CO.

PRINCE RUPERT MAGNETITE DEPOSIT

to SIGURD E. ANDERSON, CHAIRMAN

DATED JULY 12, 1971

REFERENCE II INDUSTRIAL DOMINION INC.

BUSINESS PLAN on

PRODUCTION AND MARKETING OF SPONGE IRON

REFERENCE II

AIME IRON and STEEL SOCIETY

DIRECT REDUCED IRON

TECHNOLOGY and ECONOMICS

of PRODUCTION and USE

edited by ROBERT L. STEPHENSON & RALPH M. SMAILER DATED 1980

pg 36

#### CERTIFICATE OF THE ISSUER AND THE PROMOTERS

MAY 3, 1990 DATED:

The foregoing constitutes full, true and plain disclosure of all material facts relating to the securities offered by this Prospectus as required by the Securities Act and its regulations.

THE COMPANY

Chief Executive Officer

ROBERT D. PROCTOR

Chief Financial Officer

ON BEHALF OF THE BOARD OF DIRECTORS

ROBERT D. PROCTOR

Director

STANLEY RAYMOND

Director

PROMOTER

CERTIFICATE OF THE AGENTS

DATED: MAY 3, 1990

To the best of our knowledge, information and belief the foregoing constitutes full, true and plain disclosure of all material facts relating to the securities offered by this Prospectus as required by the <u>Securities Act</u> and its regulations.

BRINK, HUDSON

Muo The