

LOG NO: 0119	RD.
ACTING	
FILE NO:	

A GEOLOGICAL REPORT
ON THE J CLAIM GROUP

SKEENA MINING DIVISION
BRITISH COLUMBIA

LATITUDE 54° 10' NORTH
LONGITUDE 128° 40' WEST

N.T.S.
103I/2E

FILMED

by
G.H. RAYNER, P. ENG.
G.H. RAYNER & ASSOCIATES LTD.

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VANCOUVER, B.C.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

WEST VANCOUVER, B.C.

NOVEMBER 5, 1987

16,860

ARIS SUMMARY SHEET

District Geologist, Smithers

Off Confidential: 89.01.12

ASSESSMENT REPORT 16860

MINING DIVISION: Skeena

PROPERTY: J
LOCATION: LAT 54 10 21 LONG 128 40 06
UTM 09 6002548 521651
NTS 103I02E

CLAIM(S): J 1-2
OPERATOR(S): Rayner, G.H. and Assoc.
AUTHOR(S): Rayner, G.
REPORT YEAR: 1987, 13 Pages

COMMODITIES

SEARCHED FOR: Copper, Gold

GEOLOGICAL

SUMMARY: Bedded pyrite and some chalcopryrite occur in a pendant of Lower Jurassic Hazelton Group andesite tuffs surrounded by Upper Cretaceous Coast Plutonic Complex intrusives.

WORK
DONE: Geological
GEOL 1000.0 ha
Map(s) - 1; Scale(s) - 1:5000

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APPENDIX I

ASSAY SHEETS

1:0 INTRODUCTION

The J Group of mineral claims covers an area of Hazelton Group volcanics in a district with emerging potential for volcanogenic massive sulphide mineralization.

During the fall of 1987, a preliminary evaluation of the ground was made by the writer including geological mapping and prospecting. Much of the ground is overburden covered however close prospecting uncovered outcrop in some unexpected places.

2:0 LOCATION AND ACCESS

The property is located astride the Wedeene River at a point about 9 kilometers north of the town of Kitimat, B.C. On the N.T.S. system, the property lies on Map Sheet 103I/2E. The specific location would be 54° 10' North Latitude; 128° 40' West Longitude.

There is good road access to the property on both sides of the Wedeene River. On the west, the main haulage logging road of the Eurocan Pulp and Paper Company traverses the length of the group just inside the west boundary. Local branch roads give good coverage of the ground on the west side of the river.

On the east side of the river, the claims similarly have a good logging road coverage. The access to this road network is from the Terrace-Kitimat Highway at a point just north of the Kitimat River bridge. From here, connecting logging roads lead south for a distance of some 14 kilometers to the claims area.

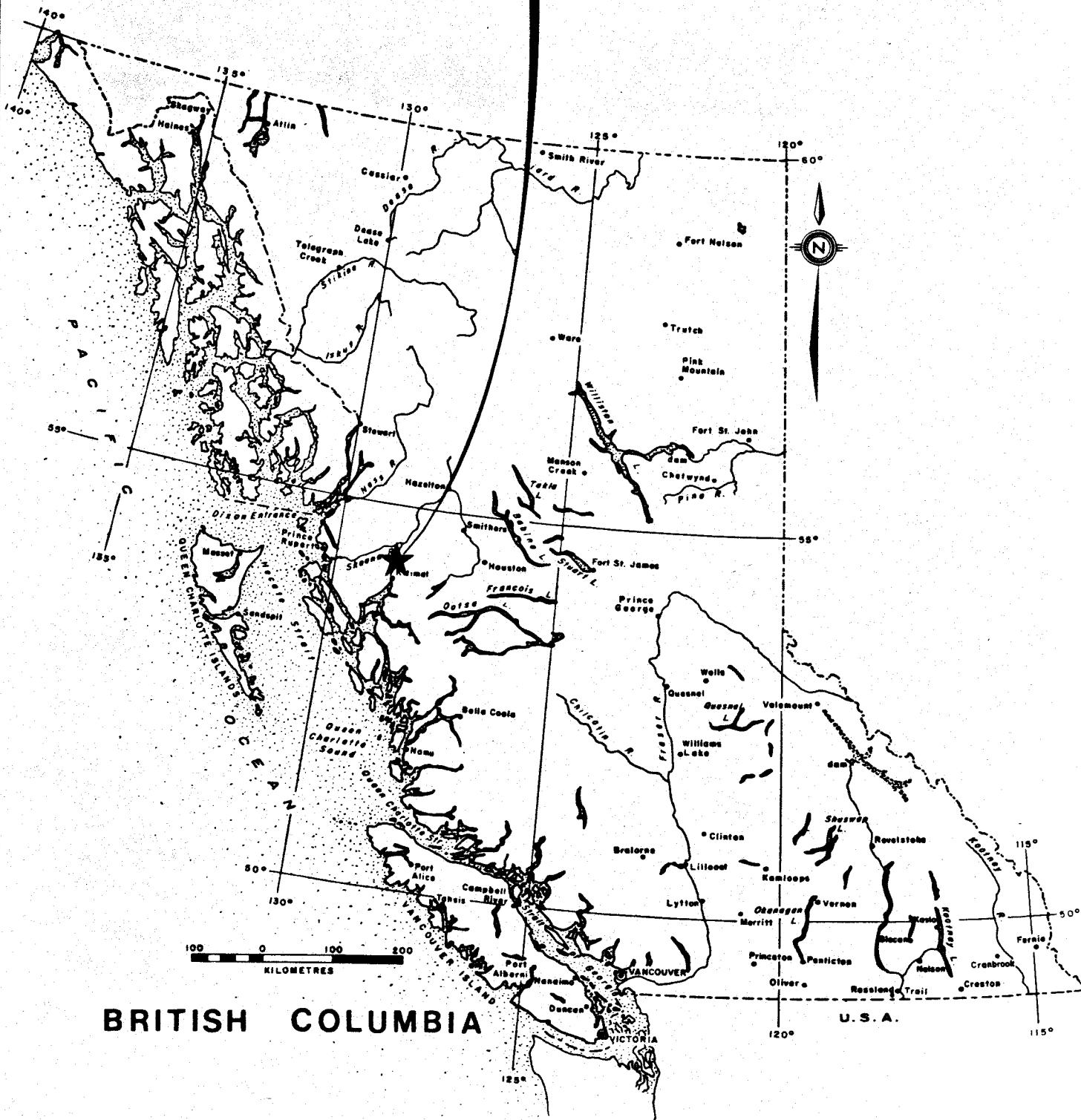
The property is also crossed by the branch line of the Canadian National Railway running from Terrace to the port of Kitimat.

G.H.RAYNER & ASSOCIATES LTD.

J CLAIMS

LOCATION MAP

J CLAIMS



BRITISH COLUMBIA

U.S.A.

The terrain is generally low, rolling, logged-over land rising to higher elevations in the northeast where the property surrounds the southern end of Iron Mountain. The core of Iron with its substantial magnetite deposit is held by Falconbridge Ltd.

Kitimat, a town of some seven thousand people, provides most basic services.

3:0 PROPERTY

The property consists of two M.G.S. claims, the J-1 and 2 of twenty units each. The J-1 claim envelopes much of Falconbridge Ltd.'s Wedeene Iron property so that the J-1 claim would probably consist of about 14 units net. The Billy Group of claims adjoin the property to the west. Both J claims are held in the name of G.H. Rayner & Assoc. Ltd. The expiry date for both is January 30, 1988 and the record numbers are 5766 and 5767 respectively.

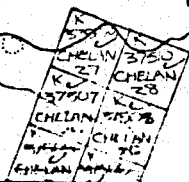
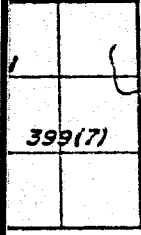
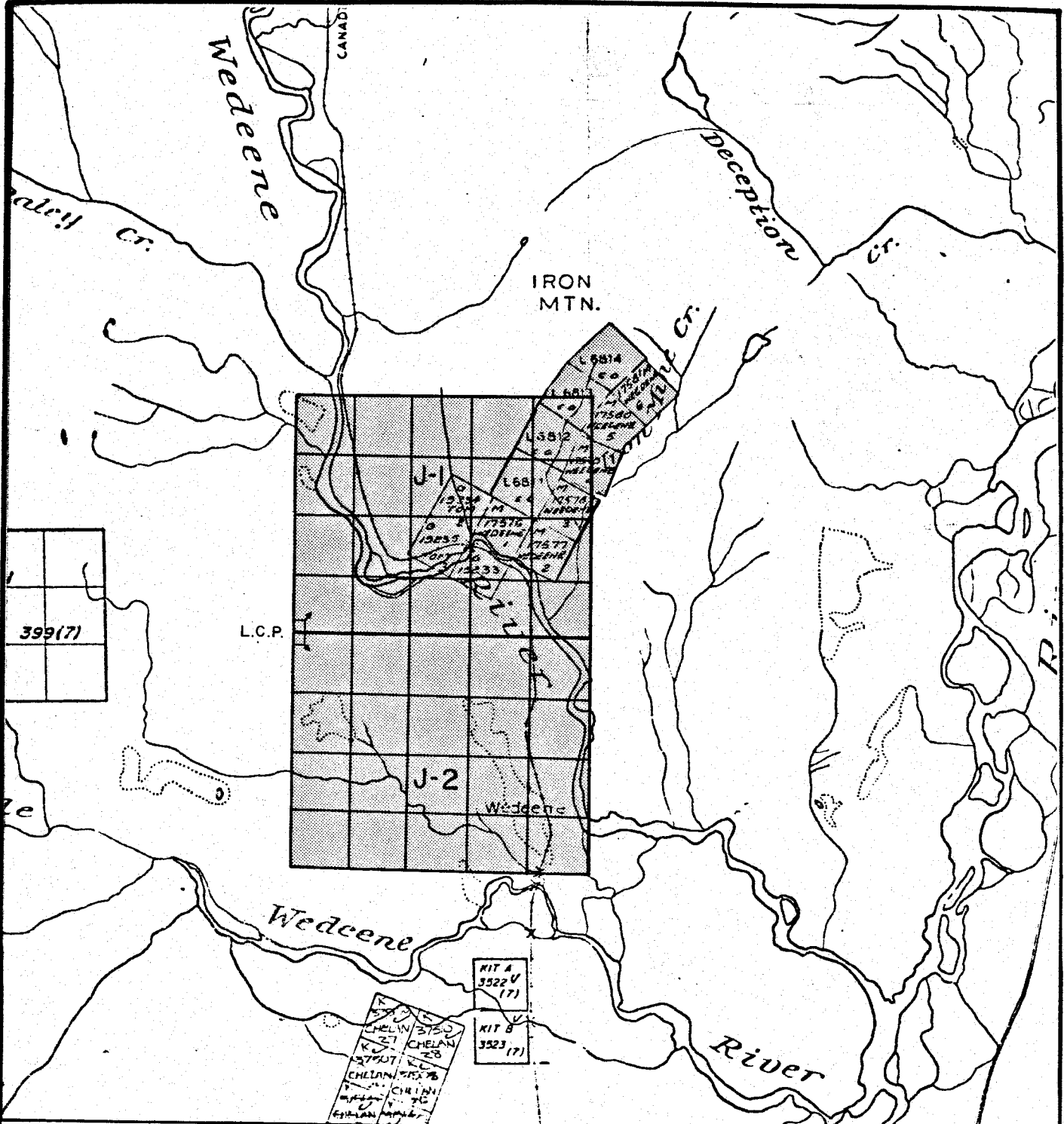
4:0 HISTORY AND PREVIOUS WORK

To the writer's knowledge, no prior work has been carried out on the ground covered by the J claims.

In years past, Falconbridge has done extensive work including closely spaced diamond drilling on their Wedeene Iron claims on Iron Mountain. Some work is also understood to have been carried out on the Billy Group of the J claims during the past year by B.P.-Selco who hold the ground under option.

5:0 DISTRICT GEOLOGY AND MINERALIZATION

The regional geology (See Figure 3) is dominated by a large pendant of Hazelton Group rocks surrounded by Coast Intrusions. The pendant is lens-shaped with a north-south elongation of about 30 kilometers and a maximum width of about 13 kilometers. The Hazelton Group is considered to be of Lower (?) and Middle Jurassic Age. Regionally,



KIT A
 3522V
 (17)

KIT B
 3523
 (17)



G.H.RAYNER & ASSOCIATES LTD.		
J CLAIMS		
CLAIM MAP		
G.H.RAYNER, P.ENG.		
N.T.S. 103 1/2E	SCALE: 1:50,000	FIG.
SKEENA M.D., B.C.	DRAWN: G.H.R./dw	2

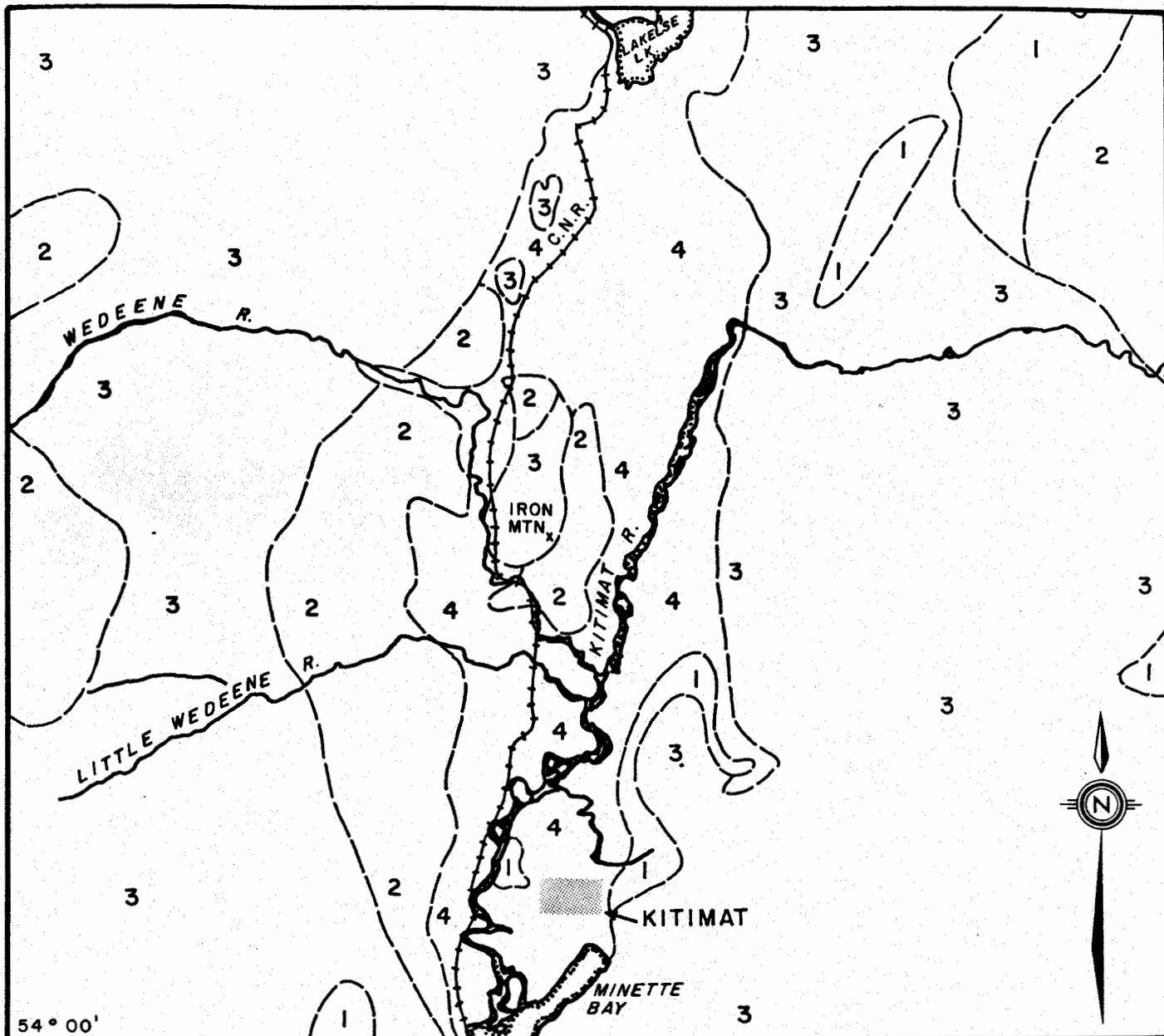
that subdivision of the Hazelton occurring in the property area consists primarily of andesitic flows, dust tuffs and tuff breccias.

The Hazelton rocks are cut and engulfed by extensive areas of Coast Intrusion granodiorite of Upper Cretaceous of later age. Where noted in the district and on the property these intrusives are generally fresh, unaltered and monotonous.

Known mineral deposits in the immediate district are confined to the Hazelton rocks. Although the Coast Range Intrusives surrounding the Hazelton pendant are extensively exposed, no deposits or occurrences appear to be known within them.

Three areas of mineralization are known within the pendant outside the subject claims. The most extensive and best known of these is the Wedeene Iron deposit on Iron Mountain on claims lying partly surrounded by the northeast portion of J-1 M.C. This ground, as previously noted, is owned by Falconbridge Ltd. and was drilled by them in some detail from 1959-1962. There is not a great deal of information about the property in the public record. It is generally considered to be a normal magnetite-skarn deposit of some size by andesitic volcanics. Some chalcopyrite and pyrite are known to occur with the magnetite but the amounts and mineral relationships are unknown. The skarn zone trends generally northeast-southwest.

The second mineral zone in the surrounding district is the Jeanette which lies about 2 kilometers west of the J-1 M.C. This zone carries chalcopyrite-gold mineralization in the same group of volcanic rocks. The Jeanette mineralization consists of chalcopyrite and pyrite with gold values in a shattered heterogenous mixture of strongly chloritic, siliceous to andesitic pyroclastics. The showings lie close to the Coast Range intrusive contact and are cut by dykes and small intrusive bodies of various types. Adjacent to this area there are exposures of schistose quartz-sericite-pyrite material carrying low values in copper.



AFTER: DUFFELL & SOUTHER, 1964

LEGEND

QUATERNARY

4 ALLUVIUM

CRETACEOUS or Later

3 COAST INTRUSIONS

LOWER (?) & MIDDLE JURASSIC

2 HAZELTON VOLCANICS

TRIASSIC (?)

1 LIMESTONE BOULDER CONGLOMERATE
GREYWACKE, CHERT



G.H.RAYNER & ASSOCIATES LTD.

J CLAIMS

REGIONAL GEOLOGY

G.H.RAYNER, P.ENG.

N.T.S. 103 1/2E

SCALE: 1:253,440

FIG.

SKEENA M.D., B.C.

DRAWN: G.H.R./dw

3

To the south west of the J claims and south of the Josephine showings, bedded mineralization carrying pyrite and barite with copper values has been reported. Results of recent work by Selco in this area are understood to have been disappointing.

6:0 PROPERTY GEOLOGY AND MINERALIZATION

The claims were located to cover low lying terrain along the projected strike of the Falconbridge magnetite skarn on Iron Mountain. The ground is mostly river lowland and swamp with some glacial-fluvial deposits so little outcrop was anticipated. Close prospecting during the present work located outcrops in some unexpected locations so that the geology proved to be somewhat more informative than expected. (See Figure 4)

Exposures of both Coast Range intrusive and Hazelton volcanics were mapped. In addition, a mineralized section was mapped in a position that puts it roughly on strike with the Iron Mountain skarn.

6:1 COAST RANGE INTRUSIVES

Coast Range Intrusives were mapped on the west shoulder of Iron Mountain adjacent to the Falconbridge ground. The exposures consist of massive, unaltered granodiorite with few distinctive characteristics. The contacts against Hazelton volcanics are sharp but irregular. Near the contacts the granodiorite contains numerous volcanic xenoliths in various stages of digestion.

6:2 HAZELTON VOLCANIC ROCKS

The volcanic rocks seen in outcrop were all exposed in the northern half of the property. All exposures seen were of tuffs of andesitic composition. Bedding attitudes are variously northwesterly to northerly with generally westerly dips. Most exposures of volcanics are found

at no great distance from intrusive exposures so that the observed attitudes are probably somewhat dislocated.

Pyrite is sparse throughout the tuffs. Traces of chalcopyrite and/or malachite can be found with the hammer in most exposures. The volcanics are generally chloritic and in some areas epidote is a conspicuous alteration product.

In one area in the CNR Railway cut on the south side of the Wedeene River, there appears to be incipient digestion of the volcanics by the Coast Range intrusives. Elsewhere, contacts are sharp.

6:3 MINERALIZATION

Pyrite is sparsely distributed throughout the tuffs and traces of chalcopyrite and/or malachite can be found with the hammer in most volcanic outcrops.

In one area, pyrite and pyrite-chalcopyrite mineralization of clearly strataform character was seen. This lies on the south bank of the Wedeene River east of the CNR bridge. (See Figure 4) Similar bedded pyritic material but with less chalcopyrite is seen in the railroad cut to the south of the riverbank exposures.

The exposures containing the mineralization are not extensive and some of the material may not be exactly in place. Surprisingly for such an accessible area, the mineralization does not seem to have been discovered or worked on previously.

The maximum exposed width of material well mineralized with chalcopyrite was about $\frac{1}{2}$ meter however the full width is not known since one side of the outcrop was bounded by overburden.

Seven specimens of this material (Nos. W1-W7) were collected to illustrate various aspects of the mineralization particularly the sulphide content and the banded nature.

These specimens were halved on a diamond saw and one half analysed by ICP (27 elements) plus geochemical gold. The results are given in Appendix I. Of the seven specimens, six ran between 9000 ppm (0.9%) and 20,000 ppm (2%) in copper. Gold values ranged between 108 ppb and 300 ppb for these specimens except for W4 which returned 8 ppb. These specimens suggest the tenor of mineralization that may occur in the zone but they are not representative of any measurable body of mineralization because of the limited exposure of this material.

Bands of pyrite up to a few centimeters thick are common in the tuff exposures along the river to the east of the copper-bearing outcrop. A grab specimen from one of these pyritic bands (No. 501) was sawn and analysed by the same method. This specimen ran 560 ppb gold. No chalcopyrite was observed in the specimen but the copper value was 1270 ppm (0.13%).

7:0 CONCLUSIONS

The mineralization seen along the south side of the Wedeene River and along the CNR track is bedded and carries over 1% copper and traces of gold in places. Clearly, this warrants further work.

This mineralization appears to be of the volcanogenic massive sulphide type and lies more or less along strike from the Iron Mountain magnetite deposit. Further work will be required if the magnetite zone is to be conclusively linked to the volcanic-exhalative system.

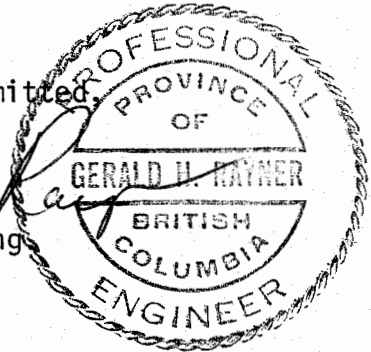
8:0 RECOMMENDATIONS

Additional work on the property should initially center on the zone exposed in the rail cut and river bank. This area should be prospected in detail to delineate an area for more intensive work. Following the prospecting,

a grid should be cut over the showings and surrounding area to give control for geological mapping, soil geochemistry and magnetometer and E.M. surveys.

Respectfully submitted,

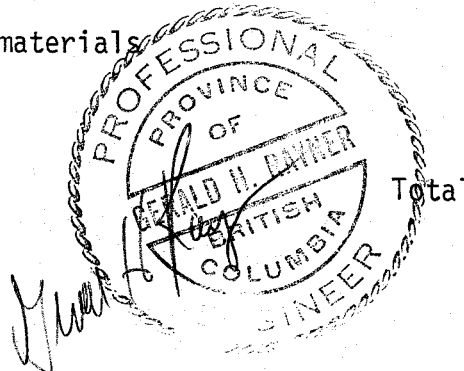
Gerald H. Rayner
G.H. Rayner, P.Eng



9:0 STATEMENT OF COSTS

G.H. Rayner, P. Eng.

Travel time: October 10th and 16th 2 days @\$450/day	\$ 900.00
Property work: October 11th to 15th 5 days @\$450/day	2,250.00
Report preparation: 3 days @\$450/day	1,350.00
Airfare: Vancouver to Prince Rupert R/T	393.40
Hotel and Motel (7 days)	265.21
Meals	199.40
Vehicle rental	219.14
Vehicle fuel	56.48
Field materials	48.60
Assaying: 8 samples--27 element ICP plus gold geochem	146.25
Draughting	267.69
Map reproduction, blow-ups, etc.	68.20
Report photocopying and materials	28.63
Typing	86.50
	<hr/>
	Total \$6,279.50



10:0 REFERENCES

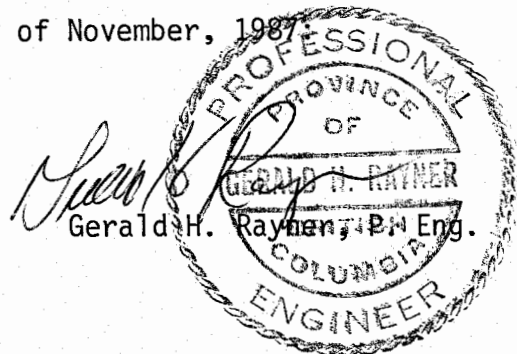
Duffell, S. and Souther, J.G.; 1964. Geology of Terrace Map-Area,
British Columbia. Geological Survey of Canada Memoir 329.

11:00 CERTIFICATE

I, Gerald H. Rayner do hereby certify that:

1. I am a consulting geological engineer with offices at 626 Duchess Avenue, West Vancouver, B.C.
2. I am a graduate of the University of British Columbia (B.Sc. Geology).
3. I am a member in good standing of the Association of Professional Engineers of the Province of British Columbia.
4. I have practised my profession since 1958 primarily in Western North America and the South Pacific.
5. This report is based on geological mapping and prospecting by the writer during the period October 11th to October 15th, 1987 and on the references cited.
6. I hold a controlling interest in G.H. Rayner & Assoc. Ltd., the owner of the property described in this report.

Dated at West Vancouver, B.C. this 5th day of November, 1987.



APPENDIX I

COMPANY: G.H.RAYNER & ASSOC. LTD.

MIN-EN LABS ICP REPORT

(ACT:F31) PAGE 1 OF 3

PROJECT NO: WEDEENE

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE NO: 7-1873/P1

ATTENTION: G.H.RAYNER

(604)980-5814 OR (604)988-4524

* TYPE ROCK GEOCHEM *

DATE: NOV 16, 1987

(VALUES IN PPM)	AG	AL	AS	B	BA	BE	BI	CA	CD	CO	CU	FE
W 1	13.3	21320	21	16	146	3.3	227	1930	.6	53	19784	110690
W 2	10.3	17990	15	5	88	2.9	185	5280	.7	59	16832	102760
W 3	7.2	24770	24	14	138	2.2	130	8900	.5	34	11468	76470
W 4	1.1	16610	7	4	275	.8	11	1430	.8	5	637	26250
W 5	9.2	39550	4	25	174	2.0	161	16630	1.3	21	14412	67780
W 6	6.7	29250	29	17	179	2.5	108	4360	.7	35	9600	85550
W 7	7.4	21440	31	12	163	3.1	122	2270	.7	54	11204	108360
501	1.2	41880	28	28	29	2.6	6	9280	2.1	13	1270	85840
JDR.	.4	25410	5	13	57	1.7	7	1430	.7	11	1132	55790

COMPANY: G.H.RAYNER & ASSOC. LTD.

MIN-EM LABS ICP REPORT

(ACT:F31) PAGE 2 OF 3

PROJECT NO: WEDEENE

705 WEST 15TH ST., NORTH VANCOUVER. B.C. V7M 1T2

FILE NO: 7-1873/P1

ATTENTION: G.H.RAYNER

(604)980-5814 OR (604)988-4524

* TYPE ROCK GEOCHEM *

DATE: NOV 16, 1987

(VALUES IN PPM)	K	LI	HG	MN	MO	NA	NI	P	PB	SB	SR	TH
W 1	5410	7	12510	444	3	560	4	640	37	31	1	5
W 2	3230	1	8600	238	3	790	2	550	28	26	8	4
W 3	4640	2	9050	298	6	2180	1	460	20	19	21	1
W 4	8580	7	11820	368	1	730	1	290	14	1	4	1
W 5	6200	2	11760	401	6	2840	4	540	24	21	38	2
W 6	7370	9	14180	540	11	1180	1	510	23	17	12	1
W 7	6190	3	13400	457	5	880	2	470	32	20	3	1
501	300	7	25930	731	2	1640	5	360	11	10	65	2
JDR.	1680	10	18990	355	2	140	2	580	18	1	3	1

COMPANY: G.H.RAYNER & ASSOC. LTD.

MIN-EN LABS ICP REPORT

(ACT:F31) PAGE 3 OF 3

PROJECT NO: WEDEENE

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

FILE NO: 7-1873/P1

ATTENTION: G.H.RAYNER

(604)980-5814 OR (604)988-4524

* TYPE ROCK GEOCHEM * DATE: NOV 16, 1987

(VALUES IN PPM)	U	V	ZN	GA	SN	W	CR	AU-PPB
W 1	1	59.7	86	1	5	3	114	265
W 2	1	53.7	67	1	2	3	157	220
W 3	1	108.8	80	1	1	3	237	190
W 4	1	55.8	31	1	1	2	45	8
W 5	2	139.8	90	1	1	4	290	300
W 6	1	80.8	69	1	1	3	139	108
W 7	2	60.4	82	2	5	3	260	123
501	1	89.7	479	2	3	4	74	560
JDR.	1	33.0	59	1	2	2	86	13



LEGEND

Cretaceous or later

1 Coast intrusions (mainly Granodiorite)

Lower (?) & middle Jurassic

2 Hazelton Group (mainly Andesitic Volcanics)

30 Dykes

40 Bedding

Cp Chalcopyrite

Py Pyrite

Note - Contours in Feet



GEOLOGICAL BRANCH
ASSESSMENT REPORT

16,860



J CLAIMS KITIMAT AREA - SKEENA M.D., B.C.		
GEOLOGY MAP		
G.H. RAYNER, P. ENG.		
N.T.S. 1031/2E	SCALE: 1:5000	FIG.
DATE: NOV. 1987	DRAWN: J.R./dw	