84-#654 - # 13102

GEOLOGICAL AND GEOCHEMICAL REPORT

HUSTON PROPERTY

HUSTON #1-#3 and HAMMER MINERAL CLAIMS

SKEENA MINING DIVISION

MORESBY ISLAND, QUEEN CHARLOTTE ISLANDS, B.C.

NTS 103B/3E and 6E

LATITUDE 52 16'N LONGITUDE 131 12'W

DATES OF WORK:
June 8-14, 1984 - MR #216276E
June 8-July 23, 1984 - MR #216837E

OWNER OF RECORD J.S. CHRISTIE
OPERATOR K.W. LIVINGSTONE
WORK BY JMT SERVICES CORP.

BY J.S. CHRISTIE, Ph.D.

August 9, 1984

TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

INTRODUCTION

Early exploration in the general claim area led to the discovery of the JEDWAY Fe-Cu skarn deposit immediately north of the present HUSTON claims in the 1860s and its subsequent development in the 1950s and '60s. Between 1962 and 1968, 4.3 million tons of magnetite averaging 62% Fe were produced from the Jedway Mine. During the course of exploration for Fe-Cu skarn deposits related to development activity at Jedway, eight iron and/or copper showings were found in the area now covered by the HUSTON property prior to 1962 (Figure 3A).

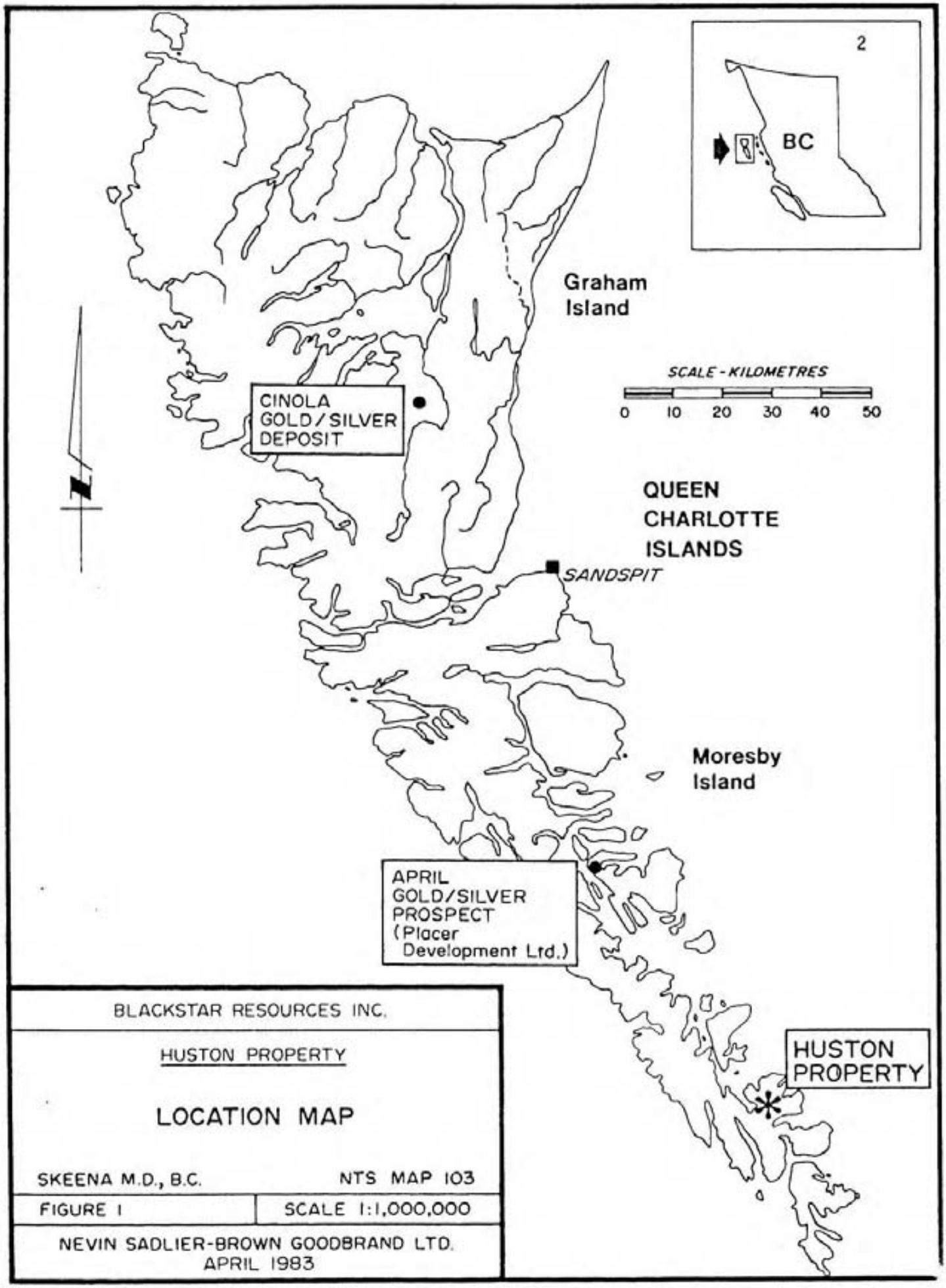
In the late 1970s the region was assessed for its gold potential by JMT Services Corporation and others. The HUSTON claims were staked in 1979 by G.G. Richards and the HAMMER claim in 1980 by J.S. Christie on gold geochem anomalies in stream sediments discovered by JMT. Subsequently, Chevron Canada Ltd. optioned the claims and conducted soil and rock geochem surveys, a magnetometer survey and geological mapping in 1980 and 1981. Chevron relinquished their option in 1982.

In 1983, the claims were optioned to Blackstar Resources Inc. and Nevin Sadlier-Brown Goodbrand Ltd. were engaged to report on the property. Mr. B.D. Fairbank, P.Eng., examined the property in March of 1983 and reviewed all of the JMT and Chevron data.

Fairbank concluded that:

1. Three exploration targets have been defined corresponding to coincident, strong Au-Cu soil anomalies designated Anomalies 1, 2, and 3 of Figure 5.

2. Anomaly 1 is the most thoroughly mapped and sampled. Rock geochem indicates local enrichment of gold within skarn and silicified rock. The anomalous zone is near the northern limit of the Chevron grid and is open to the north.



BLACKSTAR RESOURCES INC.

HUSTON PROPERTY

LOCATION MAP

SKEENA M.D., B.C. NTS MAP 103

FIGURE 1 SCALE 1:1,000,000

NEVIN SADLIER-BROWN GOODBRAND LTD.
APRIL 1983

3. Detailed geological and rock geochem data regarding Anomalies 2 and 3 is unavailable.

Fairbank recommended the following exploration programme:

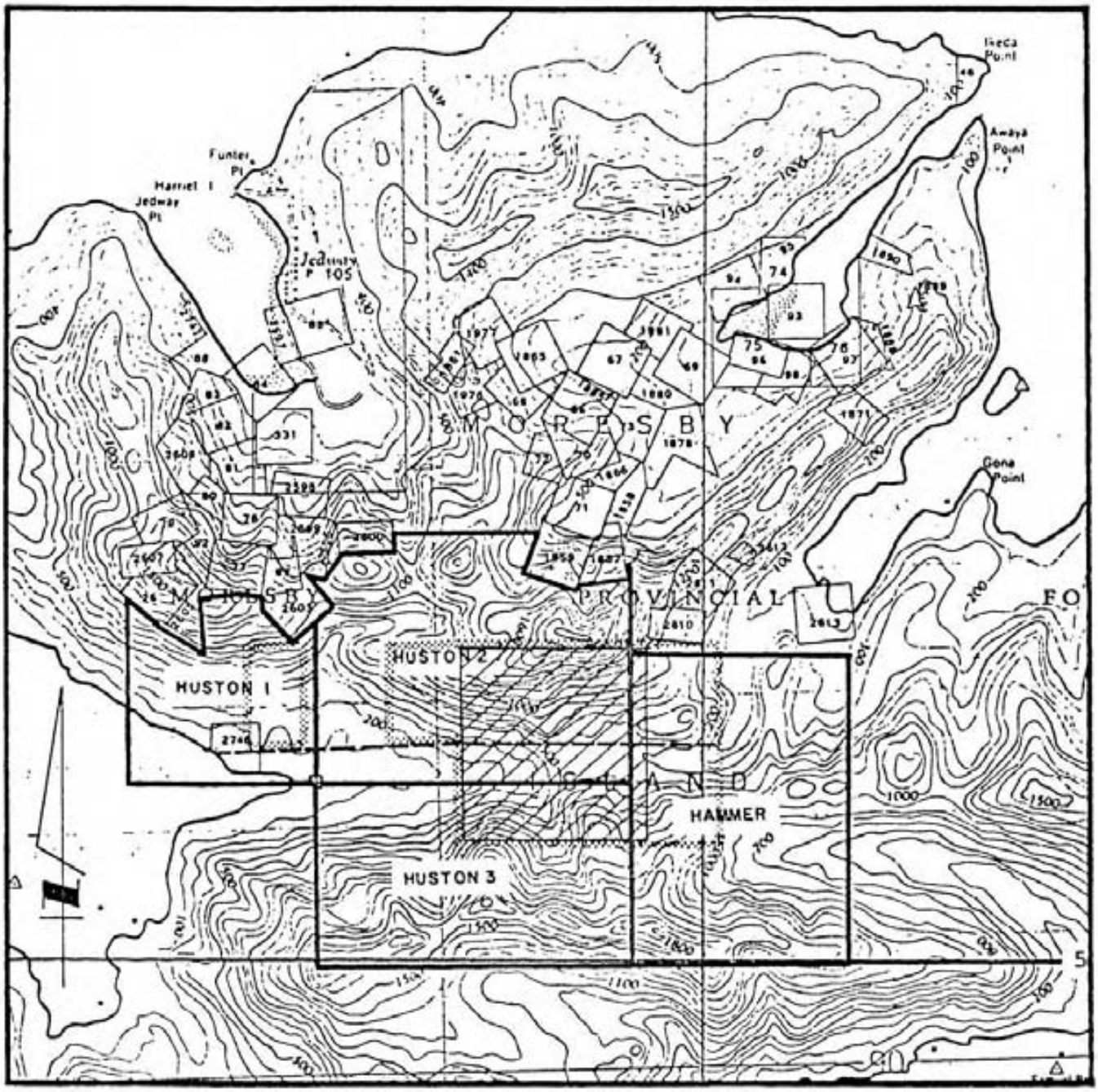
1. Install new grid over Anomalies 1 and 2 with the baseline centred on the target areas (approximately 4N) with line spacing of 50m; extend lines northward to at least the height of land at approximately 8N.
2. Install fill-in grid lines across Anomaly 3.
3. Detailed mapping and rock sampling.
4. Soil sampling at 25 m station intervals. (50m x 25m coverage).
5. Magnetometer survey of Anomalies 1 and 3.

In addition, the Chevron grid should be extended to the east to explore the granodiorite contact and known skarn showings (Sutherland-Brown, 1968) in that direction.

In early June of 1984, Blackstar made arrangements with K.W. Livingstone to finance the assessment work required in 1984. JMT Services Corp. was engaged to carry out part of the programme recommended by Fairbank, which included detailed mapping and sampling of Anomaly 1 on a new 50 x 25 metre grid, as indexed on Figure 5.

The new East-West baseline was established to coincide with approximately the 6N level of the Chevron grid. North-South grid lines were run and flagged from the new baseline. All sample locations were flagged.

In total, 264 soils and 22 rock chip samples were collected and analyzed for gold and arsenic by Chemex Labs Ltd.. Detailed geology and geochem map is enclosed in the pocket (Figure 6).



SCALE - KILOMETRES

0 1 2 3 4 5

LEGEND

Claim boundary

Chevron Standard grid area

Geochem grid baseline

Area of Figures 4 & 5

BLACKSTAR RESOURCES INC.

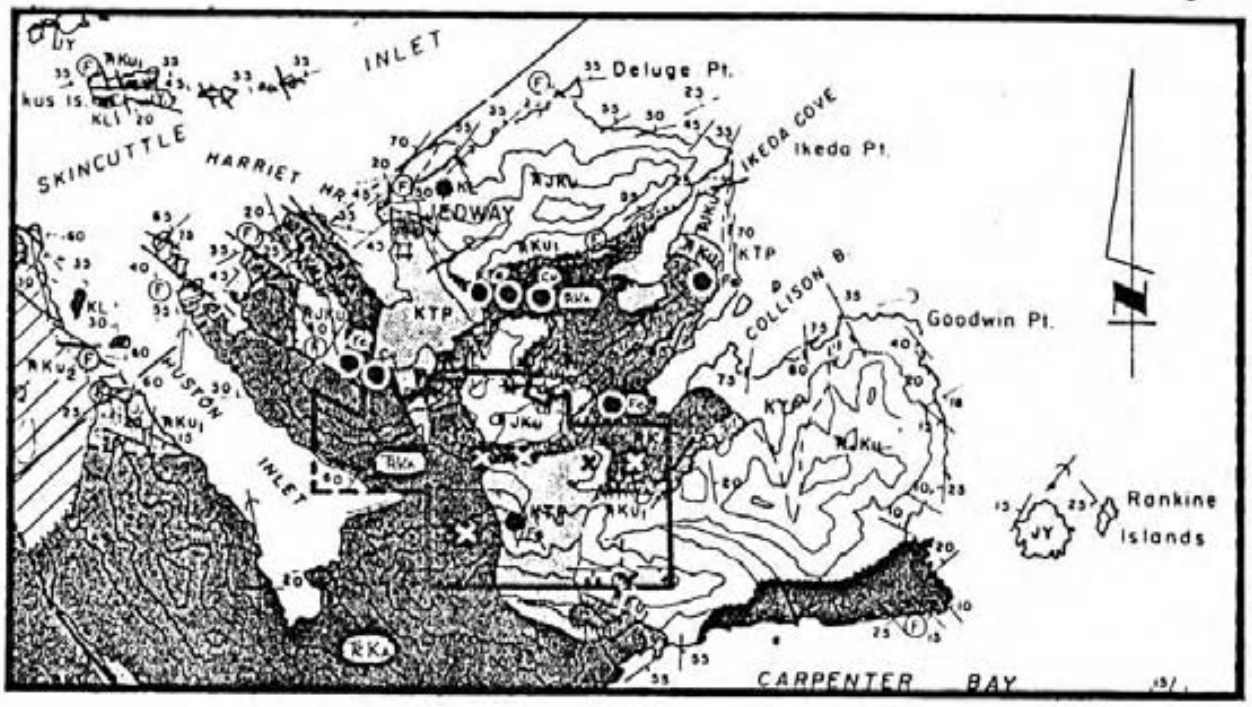
HUSTON PROPERTY

CLAIM MAP AND LOCATION KEY

SKEENA M.D., B.C. NTS MAP 103 B/6

FIGURE 2 SCALE 1:50000

NEVIN SADLIER-BROWN GOODBRAND LTD.
APRIL 1983



SCALE - KILOMETRES

1 0 2 4 6

STRATIFIED ROCKS

CRETACEOUS

QUEEN CHARLOTTE GROUP

NEOCOMIAN

KL — LONGARM FORMATION: dark grey calcareous siltstone and fine lithic greywacke, angular fine conglomerate, minor volcanic rocks.

VANCOUVER GROUP

JURASSIC

BAJOCIAN-CALLOVIAN

JY — YAKOUN FORMATION: porphyritic andesite agglomerate and flows, calcareous scoraceous lapilli tuff, volcanic sandstone and conglomerate, minor tuffaceous shale, coal.

JURASSIC AND TRIASSIC

KARNIAN-SINEMURIAN

TrJKu — KUNGA FORMATION: massive grey limestone, flaggy black limestone, flaggy black argillite - undivided.

- JKu — Flaggy black argillite member, minor limestone
- TrKu$_2$ — Flaggy black limestone member, minor argillite
- TrKu$_1$ — Massive grey limestone member
- TrKu — Limestone members - undivided

TRIASSIC

KARNIAN AND OLDER

TrKA — KARMUTSEN FORMATION: basalt massive flows, pillow lavas, pillow breccia and tuff, related sills, minor interlava limestone, volcanic sandstone and shale; amphibolitized equivalents.

PLUTONIC ROCKS

CRETACEOUS AND TERTIARY

KTP — POST-TECTONIC PLUTONS: quartz monzonite, granite, granodiorite, quartz diorite

- ● Mineral deposit: Fe=Iron, Cu=Copper
- X Showing
- —— Property Outline

Geology by A.S. Brown, 1958-63, from Bulletin 54, Sheet A, B.C. Dept. of Mines and Petroleum Resources, 1968.

BLACKSTAR RESOURCES INC.

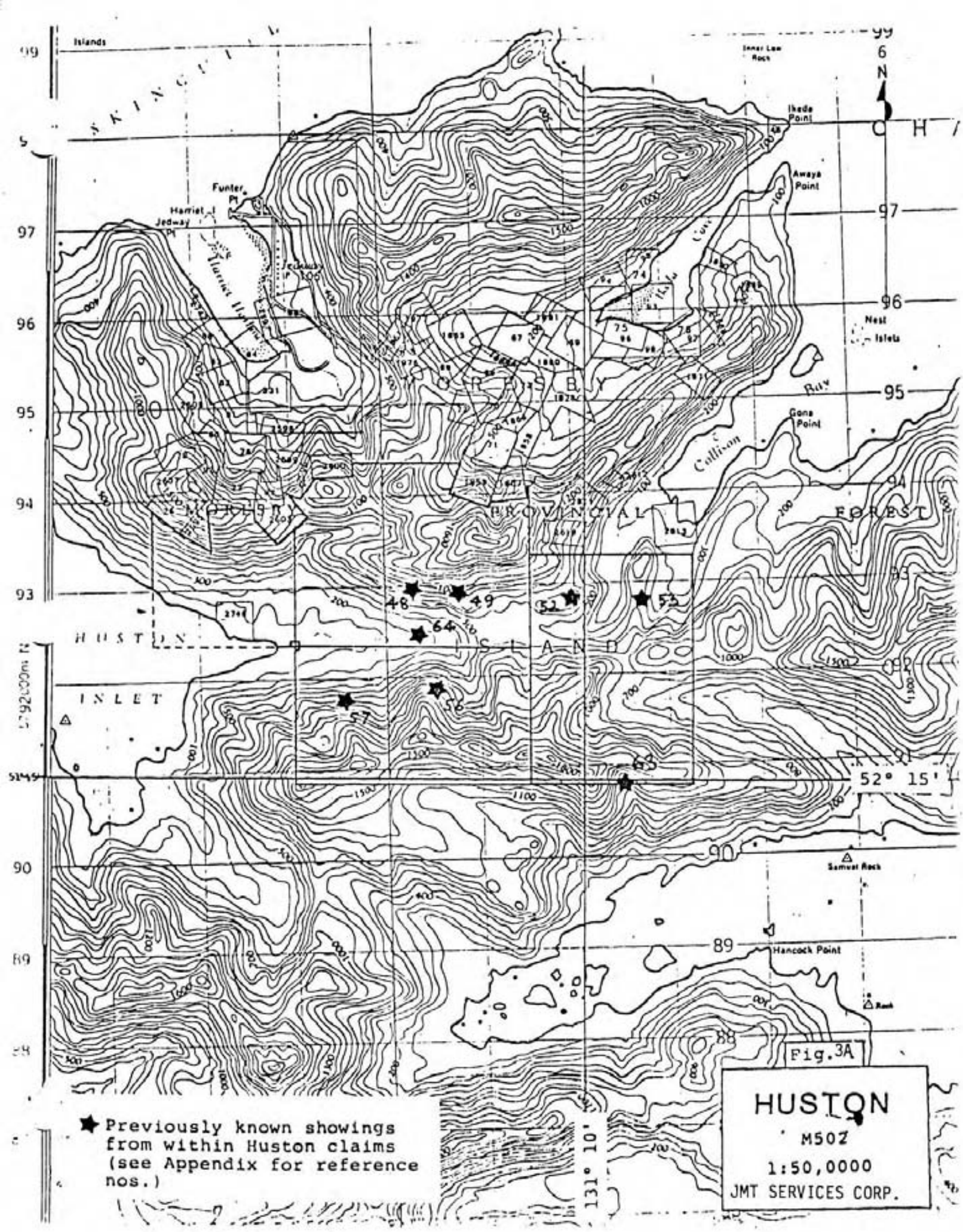
HUSTON PROPERTY

GEOLOGIC SETTING

SKEENA M.D., B.C. NTS MAP 103 B

FIGURE 3 | SCALE 1:125000

NEVIN SADLIER-BROWN GOODBRAND LTD.
APRIL 1983


Islands
SKINCLIFF
Inner Law Rock
Ibeda Point
Away Point
Funter Pt.
Harriet Jedway Pt
Nest Islets
Gens Point
Collinson
PROVINCIAL FOREST
HUSTON ISLAND
INLET
52° 15'
Samwat Rock
Hancock Point
131° 10'
48
49
52
53
64
57
56
65
6 N
Fig. 3A
HUSTON
M502
1:50,0000
JMT SERVICES CORP.
★ Previously known showings from within Huston claims (see Appendix for reference nos.)

LOCATION, ACCESS AND PHYSIOGRAPHY

The HUSTON Property is located near the southeastern tip of Moresby Island, 115 km south-southeast of Sandspit and 740 km northwest of Vancouver, B.C. (Figure 1). The JEDWAY Fe-Cu skarn deposit and former settlement of the JEDWAY are 2.5 and 5 km respectively north of the HUSTON claims. The claim group straddles a valley leading eastward from Huston Inlet and extends to the north and south to include ridgetops between 425-600 m (1400-2000 ft) in elevation (Figure 2).

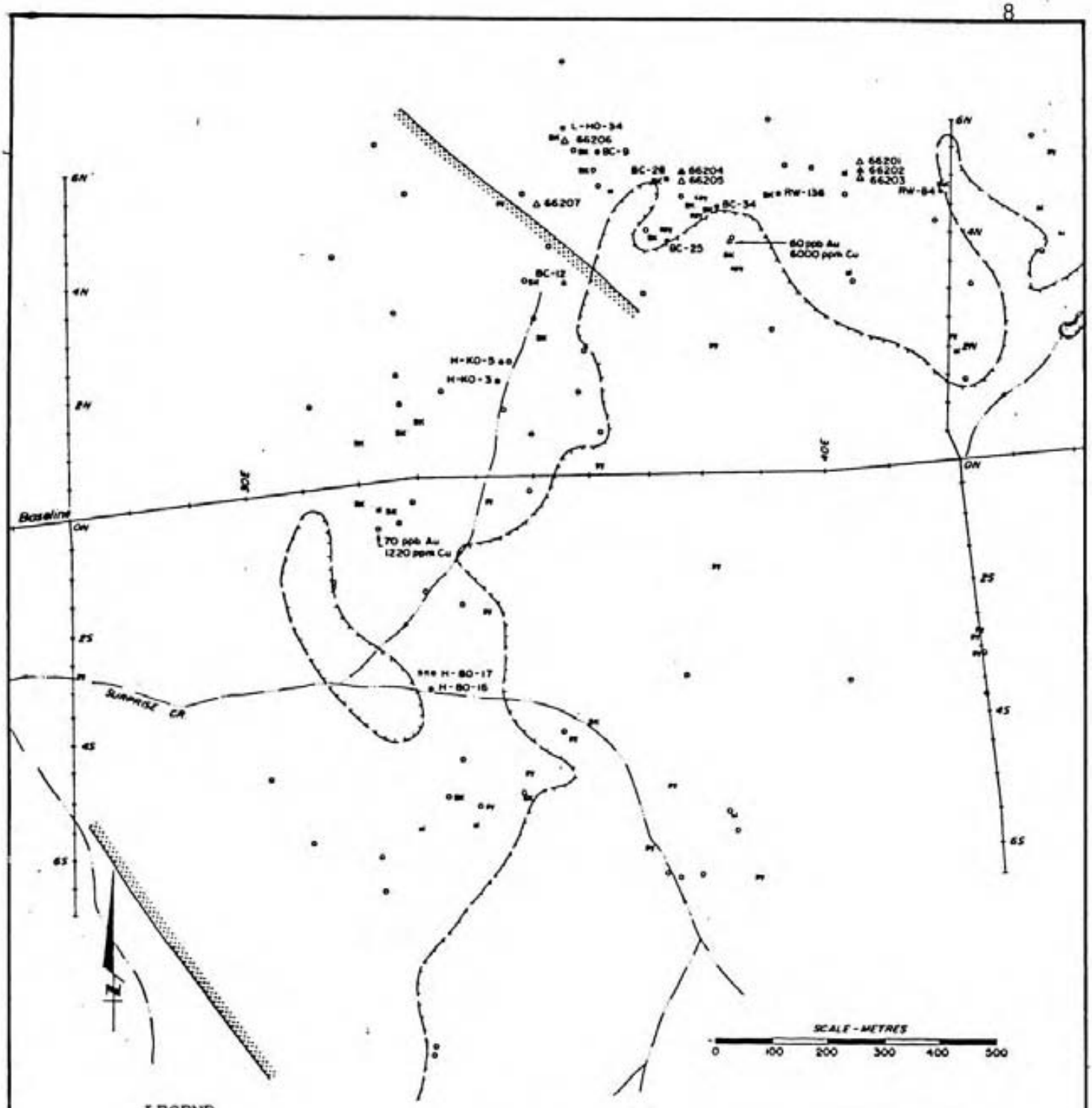
Hillsides flanking the east-west central valley are moderately steep and heavily forested by mature timber. Undergrowth is thin but moss and fallen trees are common. Bedrock is exposed in local outcrops on steep slopes and in small creek beds; otherwise the claim area is blanketed by thin overburden.

Both timber and water are in abundant supply.

Access is by helicopter or float plane from Sandspit, a community with daily scheduled air service (Pacific Western Airlines) from Vancouver, B.C.. Travel within the claim group is on foot.

MINERAL CLAIMS

NAME	UNITS	RECORD NO.	RECORD DATE	OWNER
HUSTON #1	9	1355	June 4, 1979	J.S. Christie
HUSTON #2	20	1356	June 4, 1979	J.S. Christie
HUSTON #3	15	1617	August 7, 1979	J.S. Christie
HAMMER	20	2685	December 2, 1980	J.S. Christie



LEGEND

- Creek
- Granodiorite & diorite stock
- Approx. limit of rhyolite dykes
- Geochem grid line
- o △ Rock geochem sample (Chevron, Fairbank)
- ● ▲ Rock geochem sample - Au > 100 ppb (Chevron, Fairbank)
- SK Skarn cpy Chalcopyrite
- py Pyrite si Silicified zone

BLACKSTAR RESOURCES INC.

HUSTON PROPERTY

GEOLOGY & ROCK GEOCHEM COMPILATION MAP

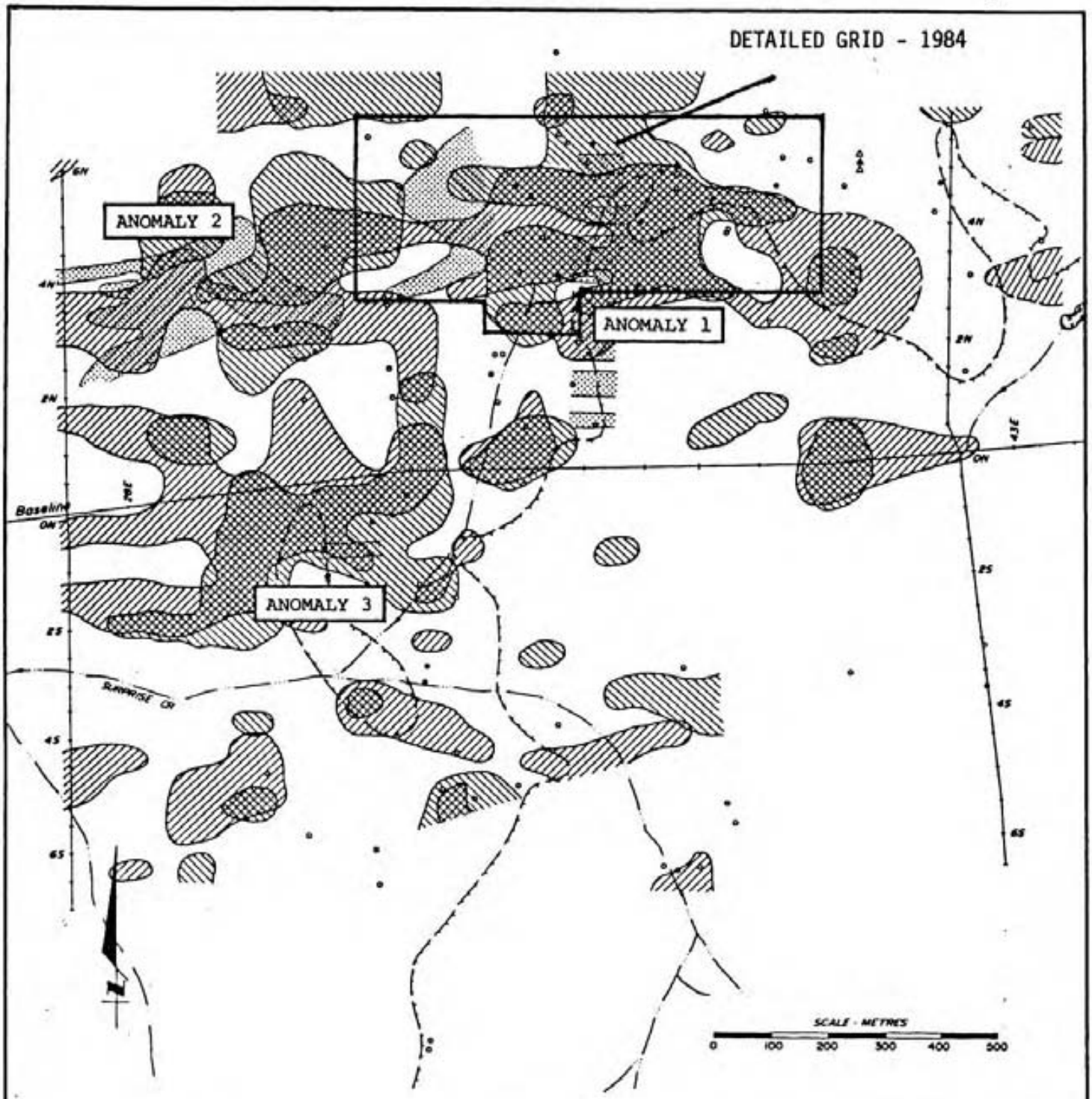
modified after Whalliston and Armanek (1981)

SKEENA M.D., B.C. NTS MAP 103 B/6

FIGURE 4 | SCALE 1:10,000

NEVIN SADLIER-BROWN GOODBRAND LTD.

APRIL 1983



LEGEND

- Creek
- Granodiorite & diorite stock
- Geochem grid line
- Au ≥25 ppb
- Cu ≥80 ppm
- Mag ≥1000 gammas, total field

BLACKSTAR RESOURCES INC.

HUSTON PROPERTY

SOIL GEOCHEM & MAGNETOMETER COMPILATION MAP

SKEENA M.D., B.C. NTS MAP 103 B/6

FIGURE 5 SCALE 1:10,000

NEVIN SADLIER-BROWN GOODBRAND LTD.
APRIL 1983

Omit page 10

[redacted]

Economic Geology

The area of the survey grid installed by Chevron Canada is shown relative to the claim boundaries on Figure 2. This grid encloses four of a total of eight iron and/or copper showings described by Sutherland-Brown (1968) which reportedly occur within the HUSTON and HAMMER claims area (Figure 3A).

The geology of the primary interest area delineated by Chevron is compiled on Figure 4. The approximate border of the granodiorite stock is shown for reference; stratified rocks are not differentiated.

Rock geochem results reported by Chevron (McAllister and Arscott, 1981) indicate that anomalous gold values occur locally in magnetite skarns and silicified basalts closely associated with skarns. The highest gold geochem result reported to date (4400 ppb) corresponds to a grade of 4.4 gr/tonne (0.13 oz/ton). Other anomalous rock geochem values are well below ore-grade but indicate that gold content is locally enriched by processes associated with metasomatism or silicification. There is a strong correlation between high gold and high copper content. The origin of the gold is not clear; however, Chevron geologists consider that silicification and possible gold mineralization may be associated in part with the emplacement of the Tertiary rhyolite dykes.

Potential concentrating mechanisms for the gold mineralization are unknown. No association with structure has been defined to date and samples of silicified rock, magnetite skarn and calc-silicate skarn may

be barren or have variably enriched gold (± copper) content. Potential gold mineralization may be irregularly distributed within the altered host rocks.

Anomalous gold rock geochem values all occur within a few hundred metres of the intrusive stock and are most prevalent on the south-facing slope between lines 34E-42E and stations 2N-6N (Figure 4).

Detailed Geology Grid Area - 32E to 40E x 3N to 7N

The map area includes basal Karmutsen greenstones, overlying Kunga limestones, granodiorite and rhyolite intrusions, and skarns as shown on Figure 6. Within the limestones strike and dip measurements on bedding show consistent 030°-050° strikes with 25°-45° dips to the northwest. These attitudes may be semi-conformable with the margin of the granodiorite stock which lies just southeast of the map area. Rhyolite intrusives of probable Tertiary age occur as dykes and larger more irregular bodies (sills, laccoliths?) that appear to have been fed by the dykes which have northwest-southeast strikes and steep dips. Most of the rhyolite dykes are characterized by quartz eyes, flow banding and up to 5% disseminated pyrite.

Kunga limestone has been strongly recrystallized to form light gray marble in several areas. These marbles are mineralized with up to 5% disseminated pyrite, and are strongly anomalous for gold such as D323 and D402 (234 and 183 ppb gold respectively).

Skarns have been strongly developed in Karmutsen greenstones and are well exposed in the south and central parts of the map area. Silicate skarn composed of andradite garnet and pyroxene with minor pyrite,

pyrrhotite and quartz is common. Small pods of magnetite skarn are developed within silicate skarn in the area of 36E to 38E x 5m. These are composed of medium to coarse grained and massive magnetite with chalcopyrite, pyrrhotite and pyrite. Malachite stains are often evident in outcrop.

The skarns are believed to be closely related to the emplacement and contacts of the granodiorite stock which outcrops to the southeast and may dip under the map area. There is a close spatial association of skarn with rhyolite dykes in the area 35E to 36E x 4N to 6N. The rhyolite dykes cut the skarn and are believed to be considerably younger.

Rock chip samples containing anomalous gold values were obtained from both magnetite and silicate skarns but not all samples were anomalous. The highest value from skarn,--D320 - 418 ppb was of the magnetite variety.

GEOCHEMISTRY

The soil and rock chip survey described in this report was designed to provide much more detailed data within one of three large anomalies outlined in previous work by Chevron. The flagged grid established by Chevron in 1980-81 is badly deteriorated although enough of the old station markings were sufficiently readable to allow a tie into the previous grid. A number of Chevron grid points and gold geochem results are shown on accompanying maps.

A total of 264 soil samples and 22 rock chip samples were taken in the current programme.

Soil samples were collected from pits excavated with a hand pick to a depth of 15-25 cm. The samples were dug from the pit using a stainless steel scoop, and placed in gussetted kraft sample bags. The soil samples were collected from B horizon soils, or the best approximation to B soil as possible at each location. Sample size was usually 300 to 500 grams.

Rock chip samples were collected from outcrops with some visible signs of sulfide mineralization, skarnification or hydrothermal alteration. These were usually composed of several (three to five) chips from an outcrop of bedrock. Three hundred to 500 grams of sample were collected and placed in a gussetted kraft sample bag.

All samples were shipped to Chemex Labs Ltd., 212 Brooksbank Avenue, North Vancouver, B.C. for preparation and analysis.

In the case of soil samples, the samples were dried and sieved with the minus 80 mesh fraction or a suitable portion of it retained for analysis.

Rock chip samples were crushed and pulverized to minus 80 mesh and a suitable size portion obtained for analysis.

Gold values were determined by fire assay preconcentration followed by neutron activation analysis.

Arsenic values were determined using a perchloric-nitric acid digestion followed by standard atomic absorption hydride finish.

Gold and arsenic values are presented in map form on Figure 6.

Gold

Values in rocks ranged from 1 to 418 ppb gold and from 1 to 2740 ppb gold in soils. On the basis of experience in the Charlottes in similar terrain and geological environments, 15 ppb gold is considered to be the threshold anomalous value in soils and rocks. Values of 25-100-1000 ppb are contoured on Figure 6. A large arcuate soil anomaly exceeding 25 ppb-Au has been defined within which two greater than 100 ppb anomalies are shown. Of these, the large 230 x 75 metre anomaly centred approximately on sample D336 in the north central part of the grid is prominent, with a 90 x 30 metre core exceeding 1000 ppb gold in soil. An outcrop of marble was mapped and sampled just south of this 1000 ppb core zone and sample D-402 returned an anomalous value of 183 ppb gold. No outcrop was found within the 1000 ppb anomaly.

The second greater than 100 ppb gold in soil anomaly occurs in the south central part of the survey. Spot highs of 897 and 2740 ppb gold have been obtained within this zone but no contourable area of greater than 1000 ppb gold was found.

Arsenic

Arsenic values range from 2 to 270 ppm in rocks and 1 to 1900 in soils. A large arcuate soil anomaly exceeding 30 ppm arsenic has been contoured on Figure 6. Stronger, greater than 100 ppm anomalies are present inside the 30 ppm zone but these have not been contoured. The 30 ppm arsenic contour shows a high degree of co-incidence with the 25 ppb gold contour.

Interpretation

A large area approximately 400 m x 200 m of coincident anomalous gold and arsenic in soils has been defined. The highest arsenic values are to a large extent found within the 100 ppb gold contour peripheral to the highest gold values. Gold values exceeding 1000 ppb are associated with arsenic values at intermediate levels, suggesting that higher grade gold mineralization is peripheral to the arsenic high.

A good exploration target has been defined by the 1000 ppb gold contour in the vicinity of 36E-6N. This area occurs on the moderate upper slope just below the ridgeline in an area with sparse outcrop although outcrops of limestone and greenstone flank downslope portions of the anomaly. The area of interest is in the order of 200 m x 30 m and open towards the ridgeline where deeper overburden may have interfered with the soil survey. An outcrop of marble with anomalous gold--D402 - 183 ppb--is the only known outcrop within this region of high gold geochem. There is a good possibility that the higher gold values in soil reflect better grade gold mineralization within at least part of the anomaly. Overburden thickness is not believed to be excessive and hand trenching may be an effective means of evaluation.

Secondary targets requiring more geochemical sampling and mapping are indicated in two areas as follows:

1. Area south and east of 40E x 4N where an outcrop of marble with strongly anomalous gold--D323 - 234 ppb Au was mapped.
2. Area within the 100 ppb gold contour and south of 35E to 36E x 3N to 5N. Several very high soil values (897 and 2790 ppb) were obtained and require follow up.

CONCLUSIONS AND RECOMMENDATIONS

(1) A strong gold anomaly in soil with values exceeding 1000 ppb has been identified centred on 36E-6N. This anomaly should be further explored by a programme of hand trenching.

(2) Two other areas at the south-central and south-east limits of the map area have been identified for additional and more detailed sampling and mapping.

(3) The remainder of the programme recommended by B.D. Fairbank, P.Eng., in his report dated May 3, 1983, should be completed.

Respectfully submittted,

J.S. Christie, Ph.D.

HUSTON-HAMMER PROPERTY

1984 COST STATEMENT

PERSONNEL			
J.S. Christie, Geologist	June 9, 10, 1/2 (11,16)	3 days @ $250	$ 750.00
D. Bennett, Geologist	June 9-19	11 days @ $225	2,475.00
S. Courte, Technician	June 10-17	8 days @ $150	1,200.00
DISBURSEMENTS			
JMT Ford - Vancouver-Sandspit	2 days @ $60		120.00
Camp rental			100.00
SBX-11 Radiotelephone rental			50.00
Chainsaw rental - cut helipaths camp - 7 days @ $15			105.00
Meals - Field -- 16 mandays @ $30			480.00
Queen Charlotte Helicopters - #5267-5633			2,267.20
Airfares - PWA - 2 men 1 way Vancouver-Sandspit			306.70
PWA airfreight			324.00
Sandspit Inn			74.03
Hudson Bldg. Supplies #459 - technical supplies, camp			376.32
Chemex Labs, #3138-39			3,030.90
B.C. Telephone			35.00
Preparation of Maps, Report, including drafting and duplication			1,500.00
		Total.	$13,194.15

Distribution

June 8-14, 1984	MR #216276E	4,500.00
June 8-July 23, 1984	MR #216837E	9,194.15
	Total.	$13,194.15

STATEMENT OF QUALIFICATIONS

I, James S. Christie of Vancouver, British Columbia, do hereby certify that:

1. I am a Professional Geologist residing at 3921 West 31st Avenue, Vancouver, B.C., V6S 1Y4.
2. I am a graduate of the University of British Columbia, B.Sc., Honours Geology, 1965; Ph.D. Geology, 1973;
3. I have practised my profession as a mining exploration geologist, continuously since 1965.
4. I am a Fellow of the Geological Association of Canada.
5. I am a Member of the Geological Society of America.
6. This report is based on my personal knowledge of the district, and mapping of the geology at the property.

James S. Christie, Ph.D.

APPENDIX I

PREVIOUSLY KNOWN SHOWINGS

PREVIOUSLY KNOWN SHOWINGS OUTCROPPING WITHIN HUSTON CLAIMS (Excerpts from Sutherland-Brown 1968)

Plunger (56)

This property is part of the large group of claims held by Jedway Iron Ore Limited and The Granby Mining Company Limited, specifically the Plunger 1 to 4 held by Granby. It seems likely these showings were originally called the Ivan in 1913. They are 1 mile east of the southeast end of Huston Inlet and scattered on the south side of the valley from about 300 to 850 feet. There are two principal showings: one at about 550 feet elevation is a blob-like body some 50 by 30 feet on the surface, composed of magnetite and garnet; the other, between 700 and 825 feet elevation, is a planar deposit some 500 feet long and 25 feet or less wide, composed of skarn with magnetite, pyrite, and chalcopyrite. The upper deposit apparently is a replacement of a northwest-trending shear zone and is of interest primarily for copper content. A number of pits dating from the early exploration expose the mineralization. A small adit of similar age below the showings fails to reach the mineralization.

The showings are all very near the contact of the Carpenter quartz monzonite stock, and the lower magnetite deposit is actually a local flatish contact. Most of the replacement is of metamorphosed Karmutsen greenstones, some of granitic rock. Post-ore rhyolite and basalt dykes are common in the area. In 1962 Jedway did 150 feet of packsack drilling on the property.

[References: *Minister of Mines, B.C.*, Ann. Rept., 1913, p. 101; Young and Uglow, *Geol. Surv., Canada*, Iron Ores of Canada, Vol. 1, Ec. Geol. Ser. No. 3, 1926, pp. 42–43.]

Ida (48)

This property is part of the Jim group of recorded claims held by Jedway Iron Ore Limited, about a mile east of the southeast end of Huston Inlet and about 1,000 feet west of the Hercules. The showing, at an elevation of about 800 feet, is a vertical dyke-like body of magnetite-rich skarn striking north 10 degrees east. The magnetite contains green garnet and calcite in variable amounts and minor sulphides. The body can be traced for nearly 200 feet and is up to 25 feet wide.

[References: *Minister of Mines, B.C.*, Ann. Rept., 1907, p. 68; Young and Uglow, *Geol. Surv., Canada*, Iron Ores of Canada, Vol. 1, Ec. Geol. Ser. No. 3, 1926, p. 43.]

Hercules (49)

This property is part of the Jim group of recorded claims held by Jedway Iron Ore Limited. The showing is 1¼ miles east of the southeast end of Huston Inlet at an elevation of about 1,100 feet. It was discovered about 1906 by McMillin, Watson, and McEachern. The showing consists of the irregular metasomatic replacement of the contact of the Karmutsen Formation with the Carpenter quartz monzonite stock, near the base of the Kunga limestone and is up to 100 feet thick. The purity of the skarn varies widely, much being quite garnetiferous. Some cuts and two small adits expose the ore on the steep but covered slope.

[References: *Minister of Mines, B.C.*, Ann. Repts., 1907, p. 68; 1913, p. 101; Young and Uglow, *Geol. Surv., Canada*, Iron Ores of Canada, Vol. 1, Ec. Geol. Ser. No. 3, 1926, pp. 43–44.]

PREVIOUSLY KNOWN SHOWINGS OUTCROPPING WITHIN HUSTON CLAIMS (Excerpts from Sutherland-Brown 1968)

Plunger (56)

This property is part of the large group of claims held by Jedway Iron Ore Limited and The Granby Mining Company Limited, specifically the Plunger 1 to 4 held by Granby. It seems likely these showings were originally called the Ivan in 1913. They are 1 mile east of the southeast end of Huston Inlet and scattered on the south side of the valley from about 300 to 850 feet. There are two principal showings: one at about 550 feet elevation is a blob-like body some 50 by 30 feet on the surface, composed of magnetite and garnet; the other, between 700 and 825 feet elevation, is a planar deposit some 500 feet long and 25 feet or less wide, composed of skarn with magnetite, pyrite, and chalcopyrite. The upper deposit apparently is a replacement of a northwest-trending shear zone and is of interest primarily for copper content. A number of pits dating from the early exploration expose the mineralization. A small adit of similar age below the showings fails to reach the mineralization.

The showings are all very near the contact of the Carpenter quartz monzonite stock, and the lower magnetite deposit is actually a local flatish contact. Most of the replacement is of metamorphosed Karmutsen greenstones, some of granitic rock. Post-ore rhyolite and basalt dykes are common in the area. In 1962 Jedway did 150 feet of packsack drilling on the property.

[References: *Minister of Mines, B.C.*, Ann. Rept., 1913, p. 101; Young and Uglow, *Geol. Surv., Canada*, Iron Ores of Canada, Vol. 1, Ec. Geol. Ser. No. 3, 1926, pp. 42–43.]

Ida (48)

This property is part of the Jim group of recorded claims held by Jedway Iron Ore Limited, about a mile east of the southeast end of Huston Inlet and about 1,000 feet west of the Hercules. The showing, at an elevation of about 800 feet, is a vertical dyke-like body of magnetite-rich skarn striking north 10 degrees east. The magnetite contains green garnet and calcite in variable amounts and minor sulphides. The body can be traced for nearly 200 feet and is up to 25 feet wide.

[References: *Minister of Mines, B.C.*, Ann. Rept., 1907, p. 68; Young and Uglow, *Geol. Surv., Canada*, Iron Ores of Canada, Vol. 1, Ec. Geol. Ser. No. 3, 1926, p. 43.]

Hercules (49)

This property is part of the Jim group of recorded claims held by Jedway Iron Ore Limited. The showing is 1¼ miles east of the southeast end of Huston Inlet at an elevation of about 1,100 feet. It was discovered about 1906 by McMillin, Watson, and McEachern. The showing consists of the irregular metasomatic replacement of the contact of the Karmutsen Formation with the Carpenter quartz monzonite stock, near the base of the Kunga limestone and is up to 100 feet thick. The purity of the skarn varies widely, much being quite garnetiferous. Some cuts and two small adits expose the ore on the steep but covered slope.

[References: *Minister of Mines, B.C.*, Ann. Repts., 1907, p. 68; 1913, p. 101; Young and Uglow, *Geol. Surv., Canada*, Iron Ores of Canada, Vol. 1, Ec. Geol. Ser. No. 3, 1926, pp. 43–44.]

Hope (64)

This property is part of a group of located claims held by The Granby Mining Company Limited. The showings are about 1 mile east of the southeast end of Huston Inlet at about 300 feet elevation. The showings consist of a dyke-like replacement body of sulphide-rich skarn, of interest primarily for its copper content. The body is exposed for about 80 feet and is up to 20 feet wide, although the copper-rich portion is narrower. Grades of the order of 2.7 per cent copper across 10 feet are reported (Ann. Rept., 1918). It strikes north 60 degrees west and dips steeply east. A similar showing occurs several hundred feet to the south along strike. The body occurs near the contact of the Carpenter quartz monzonite but is seemingly entirely within that body. Silver Standard Mines Limited drilled one short packsack hole in February, 1960, which intersected 20 feet of magnetite with 5 feet containing 0.85 per cent copper.

[References: *Minister of Mines, B.C.*, Ann. Repts., 1913, p. 101; 1918, pp. 39–40; 1929, p. 61.]

Ivan (57) Cu, Fe replacement in Karmusten.

APPENDIX II

GEOCHEM RESULTS

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1

TELEPHONE: (604) 984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

RECEIVED JUL 20 1984

CERTIFICATE OF ANALYSIS

TO : JMT SERVICES CORPORATION

8827 HUDSON STREET
VANCOUVER, B.C.
V6B 4N1

CERT. # : A8413138-001-A
INVOICE # : I8413138
DATE : 17-JUL-84
P.O. # : NONE
HLSTON

Sample description	Prep code	AS ppm	AU NAA ppb				
D 318	205	160	23	--	--	--	--
D 319	205	7	6	--	--	--	--
D 320	205	10	418	--	--	--	--
D 323	205	110	234	--	--	--	--
D 331	205	14	11	--	--	--	--
D 332	205	12	3	--	--	--	--
D 352	205	2	<1	--	--	--	--
D 364	205	2	<1	--	--	--	--
D 370	205	4	<1	--	--	--	--
D 374	205	79	2	--	--	--	--
D 375	205	79	41	--	--	--	--
D 376	205	69	89	--	--	--	--
D 377	205	10	<1	--	--	--	--
D 379	205	140	24	--	--	--	--
D 380	205	150	47	--	--	--	--
D 402	205	29	183	--	--	--	--
D 407	205	270	120	--	--	--	--
D 409	205	61	23	--	--	--	--
D 410	205	5	50	--	--	--	--
D 413	205	20	4	--	--	--	--
D 420	205	5	10	--	--	--	--
D 423	205	3	1	--	--	--	--

Certified by .....

CTA MEMBER CANADIAN TESTING ASSOCIATION

Chemex Labs Ltd.

Analytical Chemists • Geochemists • Registered Assayers

212 Brooksbank Ave.
North Vancouver, B.C.
Canada V7J 2C1

Telephone:(604) 984-0221
Telex: 043-52597

CERTIFICATE OF ANALYSIS

TO : JMT SERVICES CORPORATION

8827 HUDSON STREET
VANCOUVER, B.C.
V6B 4N1

CERT. # : A8413139-001-
INVOICE # : I8413139
DATE : 23-JUL-84
P.O. # : NONE
HUSTON

RECEIVED JUL 24 1984

Sample description	Prep code	AS ppm	Au NAA ppb				
D 300	201	7	6	--	--	--	--
D 301	201	7	8	--	--	--	--
D 302	201	6	3	--	--	--	--
D 303	201	4	11	--	--	--	--
D 304	201	3	9	--	--	--	--
D 305	201	3	6	--	--	--	--
D 306	203	4	<1	--	--	--	--
D 307	201	5	<1	--	--	--	--
D 308	201	22	5	--	--	--	--
D 309	201	45	9	--	--	--	--
D 310	201	30	14	--	--	--	--
D 311	201	23	5	--	--	--	--
D 312	203	32	9	--	--	--	--
D 313	201	220	104	--	--	--	--
D 314	201	36	13	--	--	--	--
D 315	201	32	435	--	--	--	--
D 316	201	101	8	--	--	--	--
D 317	201	20	72	--	--	--	--
D 321	201	23	64	--	--	--	--
D 322	201	110	85	--	--	--	--
D 324	203	11	64	--	--	--	--
D 325	201	12	117	--	--	--	--
D 326	201	4	81	--	--	--	--
D 327	203	140	20	--	--	--	--
D 328	201	43	65	--	--	--	--
D 329	201	9	11	--	--	--	--
D 330	201	32	33	--	--	--	--
D 333	201	19	325	--	--	--	--
D 334	201	55	460	--	--	--	--
D 335	201	46	181	--	--	--	--
D 336	201	46	2200	--	--	--	--
D 337	201	85	1670	--	--	--	--
D 338	201	5	14	--	--	--	--
D 339	201	3	104	--	--	--	--
D 340	201	4	70	--	--	--	--
D 341	201	4	10	--	--	--	--
D 342	201	6	3	--	--	--	--
D 343	203	5	3	--	--	--	--
D 344	201	10	6	--	--	--	--
D 345	201	6	38	--	--	--	--

CTA

Certified by ..Ian Bichler...

Chemex Labs Ltd.

Analytical Chemists • Geochemists • Registered Assayers

212 Brooksbank Ave.
North Vancouver, B.C.
Canada V7J 2C1

Telephone:(604) 984-0221
Telex: 043-52597

CERTIFICATE OF ANALYSIS

TO : JMT SERVICES CORPORATION

8827 HUDSON STREET
VANCOUVER, B.C.
V6B 4N1

CERT. # : A8413139-002-
INVOICE # : I8413139
DATE : 23-JUL-84
P.O. # : NONE

RECEIVED JUL 24 1984 HUSTON

Sample description	Prep code	AS ppm	Au NAA ppb				
D 346	201	20	2740	--	--	--	--
D 347	201	5	6	--	--	--	--
D 348	201	6	3	--	--	--	--
D 349	201	10	5	--	--	--	--
D 350	203	15	8	--	--	--	--
D 351	201	15	2	--	--	--	--
D 353	217	9	6	--	--	--	--
D 354	201	4	26	--	--	--	--
D 355	201	4	11	--	--	--	--
D 356	203	2	73	--	--	--	--
D 357	201	17	11	--	--	--	--
D 358	201	12	48	--	--	--	--
D 359	201	29	702	--	--	--	--
D 360	201	23	57	--	--	--	--
D 361	201	55	331	--	--	--	--
D 362	201	27	55	--	--	--	--
D 363	201	46	90	--	--	--	--
D 365	201	3	<1	--	--	--	--
D 366	217	2	4	--	--	--	--
D 367	201	6	8	--	--	--	--
D 368	201	3	8	--	--	--	--
D 369	201	6	7	--	--	--	--
D 371	201	7	1	--	--	--	--
D 372	201	41	6	--	--	--	--
D 373	201	94	2740	--	--	--	--
D 378	201	130	897	--	--	--	--
D 381	201	44	39	--	--	--	--
D 382	201	48	56	--	--	--	--
D 383	201	24	39	--	--	--	--
D 384	203	20	122	--	--	--	--
D 385	201	48	33	--	--	--	--
D 386	201	55	110	--	--	--	--
D 387	201	45	67	--	--	--	--
D 388	201	9	59	--	--	--	--
D 389	201	27	33	--	--	--	--
D 390	201	20	28	--	--	--	--
D 391	201	11	8	--	--	--	--
D 392	201	15	10	--	--	--	--
D 393	201	2	1	--	--	--	--
D 394	201	16	<1	--	--	--	--

Certified by Hart Bichler

CTA

Chemex Labs Ltd.

Analytical Chemists • Geochemists • Registered Assayers

212 Brooksbank Ave.
North Vancouver, B.C.
Canada V7J 2C1

Telephone:(604) 984-0221
Telex: 043-52597

CERTIFICATE OF ANALYSIS

TO : JMT SERVICES CORPORATION

8827 HUDSON STREET
VANCOUVER, B.C.
V6B 4N1

CERT. # : A8413139-003-A
INVOICE # : I8413139
DATE : 23-JUL-84
P.O. # : NONE

RECEIVED JUL 24 1984 VANCOUVER

Sample description	Prep code	AS ppm	Au NAA ppb				
D 395	201	15	6	--	--	--	--
D 396	201	4	4	--	--	--	--
D 397	201	1	4	--	--	--	--
D 398	201	4	2	--	--	--	--
D 399	201	45	3	--	--	--	--
D 400	203	14	4	--	--	--	--
D 401	201	6	2	--	--	--	--
D 403	201	10	35	--	--	--	--
D 404	201	43	4	--	--	--	--
D 405	201	16	17	--	--	--	--
D 406	201	20	40	--	--	--	--
D 408	201	71	33	--	--	--	--
D 411	201	53	81	--	--	--	--
D 412	201	57	113	--	--	--	--
D 414	203	1900	263	--	--	--	--
D 415	201	210	119	--	--	--	--
D 416	203	230	68	--	--	--	--
D 417	201	83	115	--	--	--	--
D 418	201	250	29	--	--	--	--
D 419	201	73	6	--	--	--	--
D 421	201	22	5	--	--	--	--
D 422	203	7	<1	--	--	--	--
D 424	201	3	1	--	--	--	--
D 425	203	19	6	--	--	--	--
D 426	203	50	11	--	--	--	--
D 427	201	41	16	--	--	--	--
D 428	201	97	72	--	--	--	--
D 429	201	43	3	--	--	--	--
D 430	201	7	<1	--	--	--	--
D 431	201	6	<1	--	--	--	--
D 432	201	3	3	--	--	--	--
D 433	201	6	5	--	--	--	--
D 434	203	2	<1	--	--	--	--
D 435	201	3	2	--	--	--	--
D 436	203	24	<2	--	--	--	--
D 437	201	17	4	--	--	--	--
D 438	201	35	117	--	--	--	--
D 439	201	88	59	--	--	--	--
D 440	203	83	4	--	--	--	--
D 441	201	170	4	--	--	--	--

GTA

Certified by ..... Hart Bichler .....

Chemex Labs Ltd.

Analytical Chemists • Geochemists • Registered Assayers

212 Brooksbank Ave.
North Vancouver, B.C.
Canada V7J 2C1

Telephone:(604) 984-0221
Telex: 043-52597

CERTIFICATE OF ANALYSIS

TO : JMT SERVICES CORPORATION

8827 HUDSON STREET
VANCOUVER, B.C.
V6B 4N1

CERT. # : A8413139-004-/
INVOICE # : I8413139
DATE : 23-JUL-84
P.O. # : NONE
HUSTON

RECEIVED JUL 24 1984

Sample description	Prep code	AS ppm	Au NAA ppb				
D 442	201	59	12	--	--	--	--
D 443	201	63	10	--	--	--	--
D 444	201	69	15	--	--	--	--
J 196	203	14	24	--	--	--	--
J 197	201	19	16	--	--	--	--
J 198	203	27	5	--	--	--	--
J 199	201	67	6	--	--	--	--
J 200	201	63	7	--	--	--	--
J 201	201	24	14	--	--	--	--
J 202	201	27	18	--	--	--	--
J 203	201	25	38	--	--	--	--
J 204	201	29	65	--	--	--	--
J 205	201	9	78	--	--	--	--
J 206	201	6	7	--	--	--	--
J 207	201	12	7	--	--	--	--
J 208	203	9	6	--	--	--	--
J 209	203	14	16	--	--	--	--
J 210	203	19	9	--	--	--	--
J 211	203	15	12	--	--	--	--
J 212	203	9	5	--	--	--	--
J 213	203	6	3	--	--	--	--
J 214	201	19	54	--	--	--	--
J 215	201	23	4	--	--	--	--
J 216	203	46	<2	--	--	--	--
J 217	203	29	2	--	--	--	--
J 218	201	24	9	--	--	--	--
J 219	203	24	5	--	--	--	--
J 220	203	17	3	--	--	--	--
J 221	203	7	16	--	--	--	--
J 222	203	24	8	--	--	--	--
J 223	201	24	6	--	--	--	--
J 224	201	33	9	--	--	--	--
J 225	203	25	9	--	--	--	--
J 226	203	22	7	--	--	--	--
J 227	201	15	1	--	--	--	--
J 228	201	22	9	--	--	--	--
J 229	201	14	6	--	--	--	--
J 230	201	430	12	--	--	--	--
J 231	201	30	6	--	--	--	--
J 232	201	4	22	--	--	--	--

Certified by .....

CTA

Chemex Labs Ltd.

212 Brooksbank Ave.
North Vancouver, B.C.
Canada V7J 2C1

Analytical Chemists • Geochemists • Registered Assayers

Telephone:(604) 984-0221
Telex: 043-52597

CERTIFICATE OF ANALYSIS

TO : JMT SERVICES CORPORATION

8827 HUDSON STREET
VANCOUVER, B.C.
V6B 4N1

CERT. # : A8413139-005-
INVOICE # : I8413139
DATE : 23-JUL-84
P.O. # : NONE

RECEIVED JUL 2 4 1984 ... TON

Sample description	Prep code	AS ppm	Au NAA ppb				
J 233	201	10	12	--	--	--	--
J 234	203	9	42	--	--	--	--
J 235	203	90	5	--	--	--	--
J 236	201	10	7	--	--	--	--
J 237	201	15	15	--	--	--	--
J 238	201	27	19	--	--	--	--
J 239	201	32	17	--	--	--	--
J 240	201	36	27	--	--	--	--
J 241	201	19	18	--	--	--	--
J 242	203	30	19	--	--	--	--
J 243	203	430	4	--	--	--	--
J 244	203	10	3	--	--	--	--
J 245	203	7	<2	--	--	--	--
J 246	203	12	10	--	--	--	--
J 247	203	6	5	--	--	--	--
J 248	201	38	9	--	--	--	--
J 249	201	57	7	--	--	--	--
J 250	203	59	34	--	--	--	--
J 251	203	81	38	--	--	--	--
J 252	201	43	88	--	--	--	--
J 253	201	38	27	--	--	--	--
J 254	201	25	21	--	--	--	--
J 255	203	16	20	--	--	--	--
J 256	203	20	11	--	--	--	--
J 257	203	23	23	--	--	--	--
J 258	201	7	7	--	--	--	--
J 259	201	14	35	--	--	--	--
J 260	201	65	132	--	--	--	--
J 261	203	81	195	--	--	--	--
J 262	201	67	101	--	--	--	--
J 263	201	46	24	--	--	--	--
J 264	201	27	5	--	--	--	--
J 265	201	24	7	--	--	--	--
J 266	201	33	25	--	--	--	--
J 267	201	16	4	--	--	--	--
J 268	201	17	8	--	--	--	--
J 269	201	22	2	--	--	--	--
J 270	201	36	38	--	--	--	--
J 271	201	19	131	--	--	--	--
J 272	201	55	262	--	--	--	--

Certified by .... Hart Bichler

CTA

Chemex Labs Ltd.

Analytical Chemists • Geochemists • Registered Assayers

212 Brooksbank Ave.
North Vancouver, B.C.
Canada V7J 2C1

Telephone:(604) 984-0221
Telex: 043-52597

CERTIFICATE OF ANALYSIS

TO : JMT SERVICES CORPORATION

8827 HUDSON STREET
VANCOUVER, B.C.
V6B 4N1

CERT. # : A8413139-006-
INVOICE # : I8413139
DATE : 23-JUL-84
P.O. # : NONE
HUSTON

RECEIVED JUL 24 1984

Sample description	Prep code	AS ppm	Au NAA ppb				
J 273	201	65	95	--	--	--	--
J 274	201	4	6	--	--	--	--
J 275	201	3	2	--	--	--	--
J 276	201	3	24	--	--	--	--
J 277	201	5	<1	--	--	--	--
J 278	203	10	5	--	--	--	--
J 279	203	19	9	--	--	--	--
J 280	201	16	34	--	--	--	--
J 281	201	3	<1	--	--	--	--
J 282	201	1	<1	--	--	--	--
J 283	201	2	4	--	--	--	--
J 284	201	51	21	--	--	--	--
J 285	203	33	18	--	--	--	--
J 286	201	32	31	--	--	--	--
J 287	201	9	4	--	--	--	--
J 288	201	6	6	--	--	--	--
J 289	201	4	5	--	--	--	--
J 290	203	7	3	--	--	--	--
J 291	203	9	3	--	--	--	--
J 292	201	4	7	--	--	--	--
J 293	201	9	7	--	--	--	--
J 294	203	4	3	--	--	--	--
J 295	201	5	9	--	--	--	--
J 296	201	10	27	--	--	--	--
J 297	201	16	14	--	--	--	--
J 298	201	25	38	--	--	--	--
J 299	203	29	19	--	--	--	--
J 300	201	27	21	--	--	--	--
J 301	201	15	17	--	--	--	--
J 302	201	16	14	--	--	--	--
J 303	201	9	12	--	--	--	--
J 304	201	7	8	--	--	--	--
J 305	201	5	10	--	--	--	--
J 306	201	9	22	--	--	--	--
J 307	201	12	73	--	--	--	--
J 308	201	5	11	--	--	--	--
J 309	201	3	6	--	--	--	--
J 310	201	3	<1	--	--	--	--
J 311	201	7	5	--	--	--	--
J 312	201	11	24	--	--	--	--

CTA

Certified by .Stewart Bichler....

Chemex Labs Ltd.

Analytical Chemists • Geochemists • Registered Assayers

212 Brooksbank Ave
North Vancouver, B.C.
Canada V7J 2C1

Telephone:(604) 984-0221
Telex: 043-52597

CERTIFICATE OF ANALYSIS

TO : JMT SERVICES CORPORATION

8827 HUDSON STREET
VANCOUVER, B.C.
V6B 4N1

CERT. # : A8413139-007-
INVOICE # : I8413139
DATE : 23-JUL-84
P.O. # : NONE
HUSTON

RECEIVED JUL 24 1984

Sample description	Prep code	AS ppm	Au NAA ppb				
J 313	201	12	67	--	--	--	--
J 314	201	10	21	--	--	--	--
J 315	201	50	64	--	--	--	--
J 316	201	22	27	--	--	--	--
J 317	201	24	21	--	--	--	--
J 318	201	33	34	--	--	--	--
J 319	201	17	80	--	--	--	--
J 320	201	11	35	--	--	--	--
J 321	201	6	44	--	--	--	--
J 322	201	7	3	--	--	--	--
J 323	201	9	84	--	--	--	--
J 324	201	6	31	--	--	--	--
J 325	201	30	15	--	--	--	--
J 326	201	20	8	--	--	--	--
J 327	201	12	41	--	--	--	--
J 328	201	12	15	--	--	--	--
J 329	201	53	22	--	--	--	--
J 330	201	7	9	--	--	--	--
J 331	201	11	20	--	--	--	--
J 332	201	11	26	--	--	--	--
J 333	203	38	5	--	--	--	--
J 334	201	27	7	--	--	--	--
J 335	201	15	17	--	--	--	--
J 336	201	11	6	--	--	--	--

CTA

Certified by Hart Bichler

GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,102

GEOCHEMISTRY KEY

1000
100
25

GOLD – p.p.b.

HUSTON PROPERTY

QUEEN CHARLOTTE ISLANDS — BRITISH COLUMBIA

GEOLOGY & GEOCHEMISTRY
ARSENIC / GOLD

BY JMT SERVICES CORP.

LEGEND:

- RIDGE
- CREEK
- OUTCROP
- X FLOAT LOCATION
- SLIDE AREA OR CLEARING
- H HELICOPTER LANDING
- SOIL SAMPLE LOCATION
- SILT SAMPLE LOCATION
- ROCK SAMPLE LOCATION
- J203 SAMPLE NUMBER
- 1+00N OLD CHEVRON GRID STATION – As, ppb
- 25/38 ASSAY RESULTS As, ppm / Au, ppb

GEOCHEMISTRY KEY – GOLD:

- ⊗ 10–24 p.p.b. Au
- ◑ 25–99 p.p.b. Au
- ● >99 p.p.b. Au

GEOLOGICAL LEGEND:

- 5ii MAGNETITE SKARN – MASSIVE MAGNETITE, MAY CONTAIN CHALCOPYRITE
- 5i SILICATE SKARN – ANDRADITE GARNET, EPIDOTE, CHLORITE, PYRRHOTITE, COARSE QUARTZ CRYSTALS
- 4 RHYOLITE INTRUSIVES – OFTEN BANDED, CONTAINS QUARTZ EYES
- 3i / 3ii GRANODIORITE INTRUSIVE / DIORITE INTRUSIVE MARBLE
- 2c DARK GREY TO BLACK ARGILLACEOUS LIMESTONES – BEDDED OR MASSIVE
- 2b LIGHT GREY LIMESTONES USUALLY BEDDED
- 2a MASSIVE BASALTIC ANDESITES AND ANDESITIC TO BASALTIC DYKES
- 1

- GEOLOGICAL CONTACT
- s CONTAINS SIGNIFICANT SULPHIDES ≥ 1%
- q COARSE GRAINED QUARTZ
- BEDDING ATTITUDE

20m 10m 0 20m 40m 60m
1 : 1000

DATE - AUG./84

FIGURE NO.: 6