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Comprehensive Geological Report  
Moresby Mines Limited, Tasu Sound, B.C.  
D. Arscott, B.Eng., M.Sc. March 31, 1967

1112 WEST PENDER STREET,  
VANCOUVER, BRITISH COLUMBIA,  
CANADA

Comprehensive Geological Report  
Moresby Mines Limited, Tasu Sound, B.C.

D. Arscott, B.Eng., M.Sc. March 31, 1967

TASU, B.C.

INTER-OFFICE MEMORANDUM

DATE: September 22, 1967

TO: Alex Smith

COPIES TO: E-0-2  
AF-20-2  
D. Davis

FROM: E. J. Wade

SUBJECT: MORESBY MINES - GEOLOGICAL REPORT

I received a letter from Bud Johnson requesting the return of Moresby Mine's Geological Report.

I am forwarding you the report. Would you please make us a Xerox copy and return the report to them?

Thank you

  
\_\_\_\_\_  
E. J. Wade

EJW/ag

*Moresby Mines Limited*  
*Lawless Creek Mines Limited*  
*Bardale Mining & Development Limited*



1327 - 510 WEST HASTINGS ST.,  
VANCOUVER 2, B.C.  
PHONE: 684-8052

May 29, 1967

Mr. E. J. Wade,  
Wesfrob Mines Limited,  
Tasu Sound, Q.C.I., B.C.

Re: Moresby Mines Limited

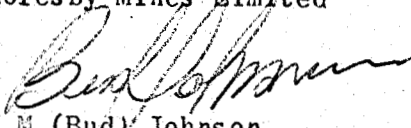
Dear Ted:

As requested by Dave Arscott, enclosed herewith is a copy of the latest geological report of the "Garnet" and "Ruby" claim groups of Moresby Mines Limited.

If you require any further information that we have available, kindly advise.

Very best regards

Yours sincerely  
Moresby Mines Limited

  
H.M. (Bud) Johnson

hmj/encl:

COMPREHENSIVE  
GEOLOGICAL REPORT

Moresby Mines  
Tasu, B.C.

D. Arscott  
31 March 1967

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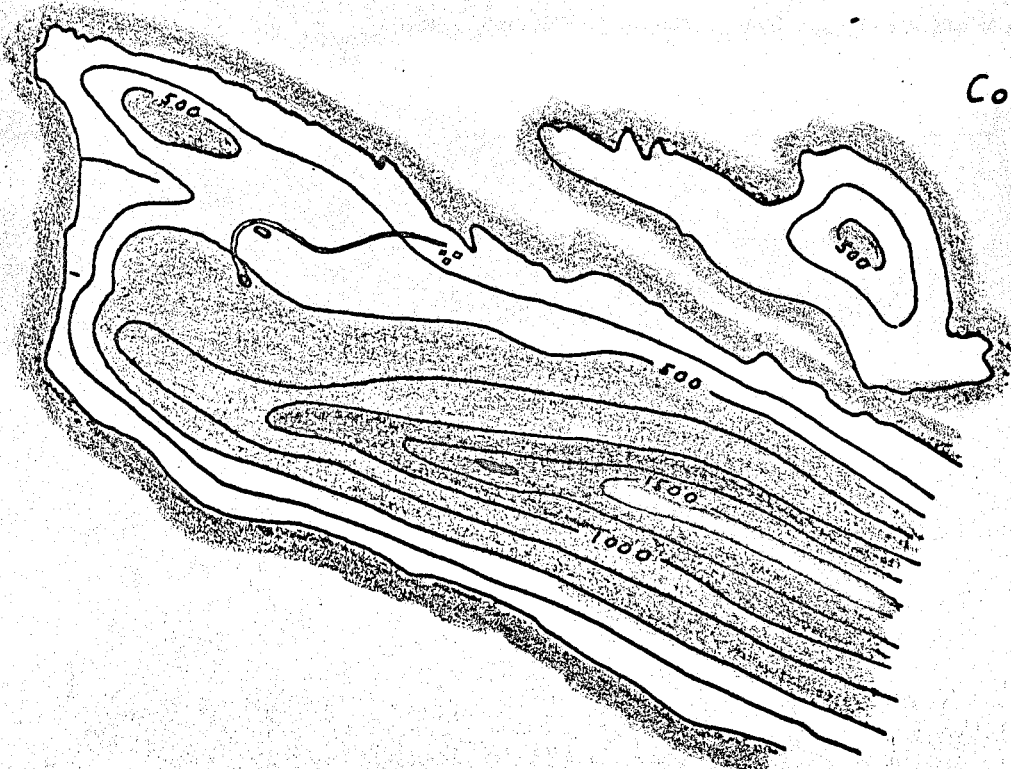
## INTRODUCTION

This report discusses the geology and related economics of the Moresby Mines property in the Queen Charlotte Islands.

The 62 claim property is located in the Moresby Provincial Forest one mile north of Tasu and 37 miles south of Sandspit.

## GEOGRAPHY

Topography is rugged, with a local relief of 1500 feet.



Contour Interval: 250'



SKETCH MAP  
1" = 3000'

Climate is characterized by moderate, consistent temperatures and heavy rainfall. High runoff and strong winds are common in the winter months.

Density of vegetation is quite variable. Timber consists of large yellow cedar and hemlock, huge spruce, and stunted jackpine. Labrador tea, characteristic of acidic soil conditions, is found in the central area of the property.

There is moderate rock exposure except on the lower east slope, where overburden is held up in terraces over a large area by resistant north-south trending dykes. It is doubted if this overburden is anywhere greater than 15 feet in depth.

Magnetic declination is  $25.8^{\circ}$  east.

#### REGIONAL GEOLOGY

Information may be gleaned from the following sources:

A. Brown and W. Jeffery, Notes on the Geology of Moresby

Island, and map, 1960

B.C. Annual Reports to Minister of Mines:

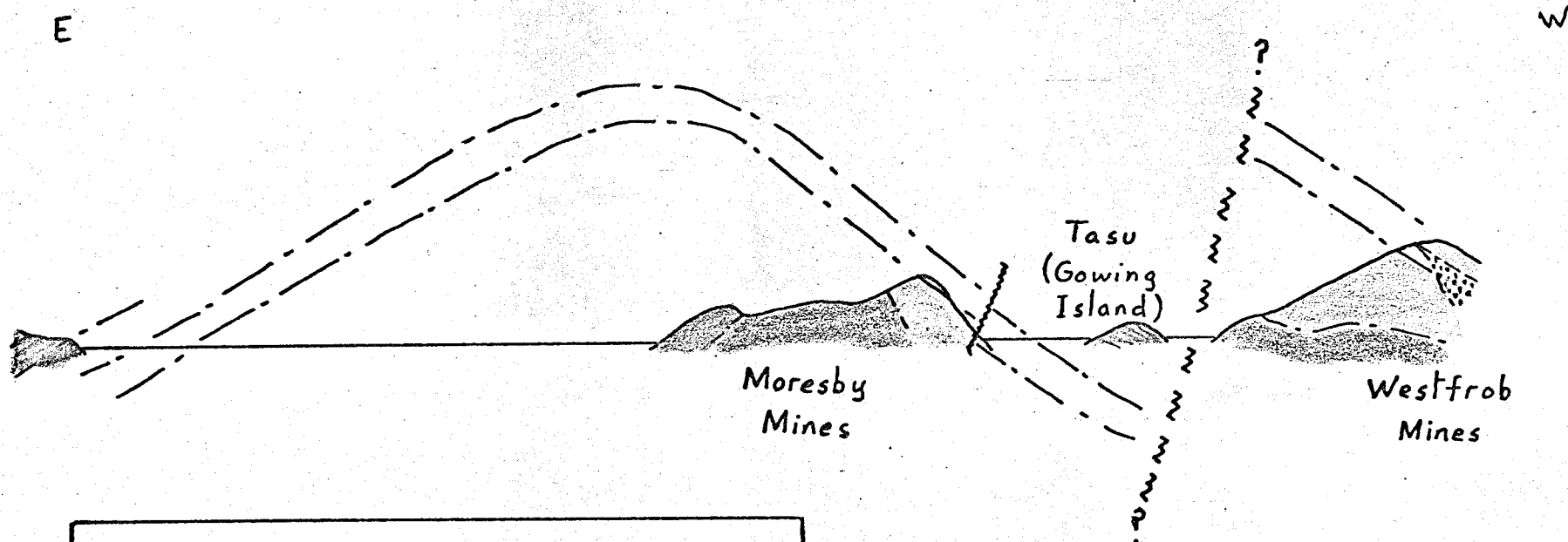
1961, pages 11 to 13

1963, pages 13 to 21










Section oriented N 50° E through Gowing Island.  
 No vertical exaggeration.

— Geological Contact  
 - - - Probable Contact  
 ~~~~ Faulting



ROCK TYPES

-  Diorite (San Cristoval)
  -  Porphyritic Andesite
  -  Feldspar Porphyry
  -  Flaggy Limestone
  -  Limestone Conglomerate
  -  Grey Limestone (Kunga)
  -  Greenstone (Karmutsen)
- } Relationship  
 } Unknown

REGIONAL SECTION SKETCH

1 inch = 3000 feet

Moresby Mines  
 Tasu, B.C.

15 April 1967  
 D. Arscott

The accompanying sketch shows a section perpendicular to the regional structure.

A general study of Tasu Sound strongly suggests:

(a) A large open anticline, centering somewhere over the main peninsula.

(b) Some major vertical dislocation just to the west of Gowing Island. This would be parallel in trend to the prominent direction of fracturing.

(c) The diorite was preferentially intruded along the anticlinal axis.

#### GEOLOGY OF THE PROPERTY

##### A. GENERAL

The west corner of the property consists mainly of greenstone (Karmutsen Formation). This is overlain by a lens of limestone which caps the ridge of the peninsula (Kunga Formation). To the east the greenstone is intruded by quartz-diorite which surfaces over some two-thirds of the property (San Cristoval batholith). In addition there are volcanics referred to as porphyritic andesite. An assortment of dykes of intermediate to mafic composition cut the above rocks.

Contact metamorphic effects, especially in the limestone, are strong.

There is a map, of scale 1 inch = 1000 feet at the end of this report.

B. DESCRIPTION OF ROCKS

The limestone is a white, coarsely crystalline, very homogeneous, and very clean rock. It could be called a marble. Bedding is rarely visible and only on certain weathered surfaces. Strike averages N 25° W and dip 40° W. A gentle warping of the bedding is apparent.

Skarn is present in many locations within the limestone. Its chief characteristic is irregularity, evident in composition, grain size and quality, and contacts. The contacts are sharp and run indifferently along or across bedding and fractures. Typical minerals are epidote, grossularite, diopside, actinolite, and, rarely, hematite. Sphalerite is almost always present, often forming a very large proportion of the skarn. Some zoning is evident. The skarns along the western side of the ridge contain more actinolite, chalcopyrite, pyrite, and hematite, that is, they are more iron rich.

The surface expression of the limestone is a very hummocky terrain with no surface drainage (Water was lost on all drill holes commenced in limestone).

Greenstone underlies the limestone conformably. It is

amygdaloidal in some parts, and where fresh appears to be a lava of basaltic composition. Alteration varies from slight to very strong, the alteration products being carbonates, chlorite, and clay minerals. Serpentine is common on small fractures.

Intruding the greenstone and limestone is a diorite mass, mostly quartz-diorite. It is homogeneous over most of the property, coarse grained and white. Mafic minerals (mostly hornblende) form 20 to 30% of the rock, and quartz 10 to 20%. Rarely there is a little potash feldspar. Magnetite is present in very small amounts as evidenced by a slight magnetism. Alteration is generally low and patchy but achieves strong proportions in two large areas. It varies from chlorite or sericite alteration to chlorite, quartz, sericite, and minor carbonate alteration. Where seen close to limestone, the diorite has developed lime silicates, especially epidote.

At the northeast corner of the property is a large knob of porphyritic andesite, older than the diorite and probably extrusive. The phenocrysts are mainly feldspar and comprise 0 to 30% of the rock. Alteration is slight. The rock is uniformly and moderately magnetic throughout.

On Botany Island is a similar volcanic mass, but with variable, locally intense alteration. This alteration is related to the common north-south trending faults. Towards the south end of

the island quartz veining is frequent.

The dykes are very varied. Most of them strike north and dip steeply eastwards. They are most numerous through the main mineralized area on the ridge of the peninsula. These dykes are diorite or intermediate fine grained types. The dykes on the eastern side of the property are feldspar porphyry, gabbro, and fine grained equivalents. A few dykes in the limestone area are pre-mineralization and strongly altered, but the vast majority are young and fresh.

### C. MINERALIZATION

#### (1) Fracture type

This type of mineralization is present in two large areas and numerous scattered locations.

One of these areas is referred to as the North Slope. This is an area of consistent low grade mineralization spanning about 1000 feet by 500 feet. It consists of disseminations of chalcopyrite on fractures and quartz veins bearing blebs of chalcopyrite and molybdenite. These veins carry some mineralization across the contact into the greenstone. Other sulphides are pyrite, disseminated and/or along fractures, but not always present, and rarely bornite. Alteration consists of silicification, chloritization, and sericitization, the first type predominating near the greenstone contact. The best mineralization occurs

with moderate alteration, but this may just reflect deeper leaching in the more strongly altered material. Alteration correlates roughly with the degree of fracturing. The more prominent fracture sets are:

- (a) Of strike N 65° E, dipping 65° S (10 fractures per foot)
- (b)           N 15° W           50° E (4 fractures per foot)
- (c)           N 35° E           50° W

Type (c) is much less evident perhaps because it approximates the topographic slope. Mineralization is found on all three surfaces. Quartz veins are restricted mostly to type (b). This type of mineralization is difficult to sample, but attempts at representative sampling were made, e.g. sample nos. 5752, 5753, 5754, 5749, 5750, 5751, 5898, 5899, 5900, and 201.

The second main area is the East Slope Area. Outcrop is scarce but the winter runoff has revealed a number of outcrops along the access road. The area is 2200 feet long and appears to have a width of 400 feet. Alteration consists of chloritization and sericitization increasing to intense proportions near the centre of the area. Mineralization is similar to that of the North Slope but is strongly zoned. The lower third of the area shows predominantly molybdenite mineralization, the upper two-thirds predominantly chalcopyrite. In both cases it is present as disseminations on fractures with either quartz or chlorite or in thin quartz veins. The main mineralized set of fractures is

oriented as type (b) of the North Slope (This fracture set is present throughout the claims area). Leaching is greater. Only two pits have been opened up, and these are at the margin of the area. Representative samples are nos. 5897 and

The scattered occurrences have much the same characteristics, except that alteration is local and patchy, or even nonexistent.

(2) Replacement type mineralization

This consists of:

- (a) The copper - iron area (near line 8 east, station 5)
- (b) Zinc - copper skarn pods in limestone
- (c) Iron - copper - zinc mineralization in what looks like a replaced limestone band 20 feet below the main limestone body.

Five hundred and fifty feet of Ex drilling (holes no. 8 to 12) was performed on the copper - iron mineralization. This showed copper occurring as disseminations in greenstone and diorite, often associated with quartz in fractures. This area can be considered as intermediate between the fracture and truly replacement types of mineralization. In fact it is undoubtedly continuous with the North Slope mineralization. Structure in the neighbourhood is complex. The mineralization lies on the south side of a tongue or dyke of quartz diorite, and is related to a major east-west fault lying just to the north. Evidence

for this relation is the increase in grade northward, and the east-west magnetic anomaly orientation. Average grades from the drill holes were 1.3% copper, 0.6 oz. per ton silver, and 0.08% molybdenite with intersections ranging from 25 to 40 feet. The iron is only loosely related to the copper. It occurs in lenses or beds within the greenstone, having a maximum width of 8 feet. They consist of fine grained magnetite with a little chalcopyrite and epidote or garnet. Typical assays are 53% iron, 0.2% copper, and 0.4 oz. per ton silver.

One thousand feet of Ax drilling in the zinc - copper bodies showed them to be of high grade (see hole no. 3) but somewhat spotty in distribution. The skarn host is described under "Description of Rocks". The drilling and mapping of these bodies has not revealed yet a useful mineralization control with which to track down significant tonnages.

The replaced limestone bed has outcrops scattered over a total distance of half the circumference of the main limestone body. Its greatest lateral extent could be 2000 feet by 500 feet. Its width varies from 4 to 10 feet and its greatest depth below ground surface would be 170 feet. It is quite variably mineralized. In places it is 90% magnetite with epidote, in others skarn with up to 4% zinc, and in yet others massive pyrite with magnetite and chalcopyrite (up to 1% copper).



### (3) History of mineralization

There were probably two pulses or stages of mineralization following the intrusion of the diorite. A very clear relation is commonly seen in which magnetite was fractured, the fracture filled with quartz, and then pyrite and chalcopyrite introduced along the quartz - magnetite contacts. The magnetite mineralization predates then at least the bulk of the sulphides.

### MINING ECONOMICS

These are the positive economic factors:

(1) There are two large areas which may prove amenable to large tonnage - low grade type exploitation. Each of these has a possible extension under areas of overburden. Adjacent to the North Slope area is moderate grade mineralization (the copper - iron area), the full extent of which is also uncertain.

(2) Access and transportation are good for ore movement and concentrate shipping.

(3) Stripping is likely to be low.

(4) Some agreement could probably be reached with Westfrob Mines Ltd. to treat small tonnages of high grade iron and zinc ore as a secondary source of revenue.

(5) Other areas of the property have potential which is

worth investigating (say by Induced Polarization survey).

(6) Other facilities, e.g. store, hotel, hospital, are already available at Tasu.

The main negative factor is that grades in the diorite are low. Insufficient accurate sampling, especially subsurface, has been done to determine exactly what they are.

Certain questions of considerable economic importance have arisen:

What is the relationship of the swampy ground on the east slope to fracturing, and hence to mineralization?

The dominant mineralized fracturing in the east slope area strikes north-south, yet the overall direction of the area is east-west. Why?

How much leaching has taken place in the east slope area?

The copper - iron mineralization trends parallel to a major east-west fault. What happens where this penetrates the main body of the diorite?

#### CONCLUSION

This property, viewed as a whole, has good economic potential.

APPENDIX I  
EXPLORATION TECHNIQUE

Drilling is preferable to pitting or other forms of sampling to give exact assay results.

An Induced Polarization survey over as wide an area as possible of the diorite is of value. Pyrite is closely associated with chalcopyrite and would therefore tend to reinforce the I.P. response. There are two possible objections. The effects of magnetite and molybdenite are variable. The former could interfere with the response; the latter might not show up. Obviously testing is necessary.

Geochemical techniques are of doubtful value because of extremely variable groundwater flow, and steep slopes. Background values would be difficult to establish. Geochemistry could possibly provide a very rough screening of the property prior to other techniques.

These methods, and others, are discussed in detail in the Work Progress Report of 30th October 1966.

APPENDIX II  
BOTANY ISLAND

Reconnaissance prospecting has revealed local mineralization in both the volcanics and the diorite. The island has been subjected to a strong north-south faulting and strong dark chloritic alteration with patchy mineralization lies on or close to these faults. Two of the samples taken are from quartz veins but most of the island's fairly numerous quartz veins are barren.

The diorite is patchily mineralized, mostly with chalcopyrite. Sample no. 5881 was a representative grab sample from a trench showing typical fracture type mineralization.

APPENDIX IIILISTS OF REPORTS, MAPS AND AIRPHOTOS

## Reports:

Consultants' Reports of Nov. 1964, Nov. 1965, and July 1966

## Resident Geologists' Reports:

Geological Report, Oct. 1966

Work Progress Report, Oct. 1966

Mineralization in the Diorites, Nov. 1966

## Geological Maps:

Map of Mineral Showings, May 1966, 1" = 100'

General Geology Map, Oct. 1966, 1" = 1000'

Limestone Area, Oct. 1966, 1" = 100'

North Slope Area, with associated alteration and structure  
maps, Feb. 1967, 1" = 100'

Main Zinc Showing (Limestone S. end), Nov. 1966, 1" = 20'

Copper - Iron Area (Limestone N. end), Nov. 1966, 1" = 20'

## Magnetic Maps:

Moresby Island Area, Feb. 1960, 1" = 3000'

Magnetic Survey, 1" = 200'

Limestone S. End, Sept. 1967, 1" = 20'

Limestone N. End, Sept. 1967, 1" = 20'

## Airphotos:

- # BC 5094 - 089
  - # BC 5094 - 099
  - # BC 5094 - 100
  - # BC 5093 - 189
- } stereo pair

These are available from the Dept. of Lands, Forests and  
Water Resources, Victoria, B.C.

File # 270339/341

# J. R. WILLIAMS & SON LTD.

PROVINCIAL ASSAYERS AND CHEMISTS

Office and Laboratory:

580 Nelson Street, Vancouver 2, B. C.

I **Hereby Certify** that the following are the results of assays made by me upon samples of Ore  
 herein described and received from Mr. R. DALE, MORESBY MINES. July 18th 19 66.

| MARKED       | GOLD              |                  | SILVER            |                  | Copper       |                  | Lead         |                  | GROSS TOTAL VALUE      |           |
|--------------|-------------------|------------------|-------------------|------------------|--------------|------------------|--------------|------------------|------------------------|-----------|
|              | Ounces<br>Per Ton | Value<br>Per Ton | Ounces<br>Per Ton | Value<br>Per Ton | Per<br>Cent. | Value<br>Per Ton | Per<br>Cent. | Value<br>Per Ton | (2000 lbs.)<br>Per Ton |           |
| <i>DAVID</i> |                   | \$               |                   | \$               |              | \$               |              | \$               | Zinc<br>%              | Iron<br>% |
| 5701 C       | 0.05              |                  | 0.55              |                  | 0.09         |                  | Trace        |                  | 0.12                   | 12.80     |
| 5702 C       | 0.01              |                  | 0.10              |                  | 0.02         |                  | 0.30         |                  | 0.07                   | 61.60     |
| 5703 C       | Trace             |                  | 0.25              |                  | 0.07         |                  | Trace        |                  | 3.75                   | 16.00     |

Gold calculated at \$.....per ounce.

Silver calculated at.....cents per ounce.

Calculated at.....cents per lb.

Calculated at.....cents per lb.

Calculated at.....cents per lb.

NOTE—Pulps of Samples retained 2 months from date of Receipt.  
 Rejects 1 week unless otherwise instructed.

*J. Moore*

Provincial Assayer.

# J. R. WILLIAMS & SON LTD.

PROVINCIAL ASSAYERS AND CHEMISTS

Office and Laboratory:

580 Nelson Street, Vancouver 2, B. C.

I **Hereby Certify** that the following are the results of assays made by me upon samples of.....Ore.....  
 herein described and received from Mr. R. Dale, Moresby Mines ..... August 4th..... 19.66..

| MARKED       | GOLD              |                  | SILVER            |                  | Copper       |                  | Lead         |                  | GROSS TOTAL VALUE<br>(2000 Lbs.)<br>Per Ton |
|--------------|-------------------|------------------|-------------------|------------------|--------------|------------------|--------------|------------------|---------------------------------------------|
|              | Ounces<br>Per Ton | Value<br>Per Ton | Ounces<br>Per Ton | Value<br>Per Ton | Per<br>Cent. | Value<br>Per Ton | Per<br>Cent. | Value<br>Per Ton |                                             |
| <i>DAVID</i> |                   | \$               |                   | \$               |              | \$               |              | \$               | Zinc<br>%                                   |
| 5704 C       | 0.005             |                  | 0.20              |                  | 0.10         |                  | Trace        |                  | 14.35                                       |
| 5705 C       | Trace             |                  | 0.10              |                  | 0.05         |                  | Trace        |                  | 31.00 <i>COKE</i>                           |
| 5706 C       | 0.02              |                  | 0.20              |                  | 0.25         |                  | Trace        |                  | 37.25                                       |
| 5707 C       | 0.015             |                  | 0.05              |                  | 0.25         |                  |              |                  | <i>COKE</i>                                 |
| 5708 C       | 0.01              |                  | 0.05              |                  | 0.10         |                  |              |                  |                                             |
| 5709 C       | 0.005             |                  | 1.05              |                  | 1.95         |                  | Trace        |                  | 13.07                                       |
| 5710 C       | Trace             |                  | 0.40              |                  | 0.57         |                  | Trace        |                  | 27.10                                       |
| 5711 C       | Trace             |                  | 0.35              |                  | 0.15         |                  | Trace        |                  | 7.80 <i>COKE</i>                            |

Gold calculated at \$.....per ounce.

Silver calculated at.....cents per ounce.

Calculated at.....cents per lb.

Calculated at.....cents per lb.

Calculated at.....cents per lb.

NOTE—Pulps of Samples retained 2 months from date of Receipt.  
 Rejects 1 week unless otherwise instructed.

*J. Moore*  
 Provincial Assayer.



SHEET NO. 1  
FILE NO. 272827/859

# J. R. WILLIAMS & SON LTD.

MUTUAL 5-5821

PROVINCIAL ASSAYERS

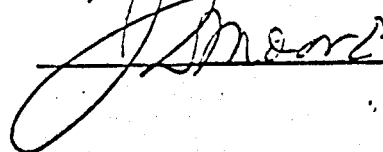
580 NELSON STREET

VANCOUVER 2, B. C. August 30th 1966

RESULTS of Assays made on samples of ore submitted by: Mr. R. Dale (Moresby Mines)

| MARK   | Gold<br>Oz./Ton | Silver<br>Oz./Ton |  | Copper<br>Per Cent | Lead<br>Per Cent | Zinc<br>Per Cent | Iron<br>Per Cent |
|--------|-----------------|-------------------|--|--------------------|------------------|------------------|------------------|
| 5712 C | Trace           | 0.60              |  | 0.70               | 0.05             | Trace            |                  |
| 5713 C | 0.005           | 0.25              |  | 0.12               | 0.10             | Trace            |                  |
| 5714 C | Trace           | 0.50              |  | 0.27               | Trace            | Trace            |                  |
| 5715 C | Trace           | 0.55              |  | 0.20               | 0.50             | 0.15             |                  |
| 5716 C | Trace           | 0.10              |  | 0.35               | Trace            | 0.32             |                  |
| 5717 C | Trace           | Trace             |  | 0.20               | Trace            | 0.87             |                  |
| 5718 C | Trace           | 0.65              |  | 1.10               | Trace            | 9.95             |                  |
| 5719 C | Trace           | 0.55              |  | 1.10               | 0.05             | 15.35            |                  |
| 5720 C | 0.005           | 0.10              |  | 0.20               | Trace            | 3.70             | 7.20             |
| 5721 C | 0.005           | 0.40              |  | 0.95               | Trace            | Trace            | 9.20             |
| 5722 C | 0.03            | 0.05              |  | 0.65               | 0.12             | Trace            | 46.00            |
| 5723 C | 0.12            | 0.20              |  | 0.17               | 0.13             | Trace            | 51.20            |
| 5724 C | 0.01            | 0.15              |  | 0.35               | Trace            | Trace            | 44.40            |
| 5725 C | 0.01            | 0.20              |  | 1.35               | 0.50             | Trace            | 46.00            |
| 5726 C | 0.01            | 0.10              |  | 1.25               | 0.50             | Trace            | 40.40            |
| 5727 C | 0.005           | 0.25              |  | 1.75               | Trace            | Trace            | 15.60            |
| 5728 C | 0.02            | 0.45              |  | 0.50               | 0.40             | Trace            | 44.80            |
| 5729 C | 0.03            | 0.05              |  | 0.35               | 0.30             | Trace            | 53.60            |
| 5730 C | 0.04            | 0.05              |  | 1.07               | 0.37             | Trace            | 37.20            |
| 5731 C | 0.02            | 0.05              |  | 0.45               | 0.28             | Trace            | 49.20            |

Assays made by:



SHEET NO. 2  
FILE NO. 272827/859

# J. R. WILLIAMS & SON LTD.

MUTUAL 5-5821

PROVINCIAL ASSAYERS

580 NELSON STREET

VANCOUVER 2. B. C. August 30th 1966

RESULTS of Assays made on samples of ore submitted by: Mr. R. Dale (Moresby Mines)

| MARK   | Gold<br>Oz./Ton | Silver<br>Oz./Ton | Copper.<br>Per Cent | Lead<br>Per Cent | Zinc<br>Per Cent | Iron<br>Per Cent |
|--------|-----------------|-------------------|---------------------|------------------|------------------|------------------|
| 5732 C | 0.03            | 0.20              | 0.80                | 0.30             | Trace            | 25.20            |
| 5733 C | 0.01            | 0.30              | 0.62                | 0.05             | 0.30             | 16.40            |
| 5734 C | 0.02            | 0.50              | 0.90                | 0.10             | Trace            | 28.40            |
| 5735 C | 0.01            | 0.40              | 0.75                |                  |                  | 30.40            |
| 5736 C | 0.02            | 0.30              | 0.75                |                  |                  | 36.00            |
| 5737 C | 0.01            | 0.55              | 1.30                |                  |                  |                  |
| 5738 C | 0.01            | 0.20              | 0.50                |                  |                  |                  |
| 5739 C | 0.01            | 0.45              | 0.30                |                  |                  | 43.20            |
| 5740 C | 0.005           | 0.30              | 0.15                | 0.05             | Trace            |                  |
| 5741 C | Trace           | 0.10              | 0.12                | Trace            | 0.07             |                  |
| 5742 C | Trace           | Trace             | 0.07                | Trace            | 0.20             |                  |
| 5743 C | Trace           | 0.15              | 0.12                | Trace            | 0.17             |                  |
| 5744 C | Trace           | 0.10              | 0.05                | Trace            | Trace            |                  |

Assays made by:

*J. M. A. D.*

SHEET NO. 1  
 FILE NO. 276778/804

# J. R. WILLIAMS & SON LTD.

MUTUAL 5-5821

PROVINCIAL ASSAYERS

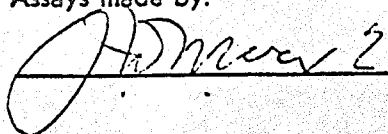
580 NELSON STREET

VANCOUVER 2, B.C. October 28, 1966

RESULTS of Assays made on samples of ore submitted by: MORESBY MINES, C/o Mr. R. Dale

| MARK          | Gold<br>Oz/Ton | Silver<br>Oz/Ton |  | Copper<br>% | Lead<br>% | Zinc<br>% | MoS <sub>2</sub><br>% |
|---------------|----------------|------------------|--|-------------|-----------|-----------|-----------------------|
| 5745 C        | Trace          | 0.05             |  | 0.07        | Trace     | Trace     |                       |
| 5746 C        | Trace          | Trace            |  | 0.12        | 0.05      | 1.35      |                       |
| 5747 C        | Trace          | 0.10             |  | 0.25        | Trace     | Trace     |                       |
| 5748 C        | Trace          | 0.05             |  | 0.15        | Trace     | 0.95      |                       |
| 5749 C        | 0.005          | 0.25             |  | 0.70        |           |           |                       |
| 5750 C        | Trace          | 0.20             |  | 1.00        |           |           |                       |
| 5751 C        | Trace          | 0.25             |  | 0.20        |           |           |                       |
| 5752 C        | Trace          | 0.20             |  | 0.30        |           |           |                       |
| 5753 C        | 0.005          | 0.05             |  | 0.30        |           |           |                       |
| 5754 C        | 0.01           | 0.20             |  | 0.65        |           |           |                       |
| 5755 C        | 0.005          | Trace            |  | 0.20        |           |           |                       |
| 5756 C        | 0.005          | 0.25             |  | 0.25        |           |           |                       |
| <u>5757 C</u> | 0.005          | 0.10             |  | 0.40        |           |           |                       |
| 5764 C        | Trace          | Trace            |  | 0.10        | Trace     | Trace     |                       |
| 5765 C        | 0.015          | Trace            |  | 0.10        | 0.10      | Trace     |                       |
| 5766 C        | 0.005          | 0.10             |  | 0.10        | Trace     | Trace     |                       |
| 5767 C        | Trace          | 0.05             |  | 0.17        | 0.18      | Trace     |                       |
| 5768 C        | 0.01           | 0.10             |  | 0.42        |           |           |                       |

Assays made by:



SHEET No. 2  
FILE No. 276667/804

# J. R. WILLIAMS & SON LTD.

MUTUAL 5-5821

PROVINCIAL ASSAYERS

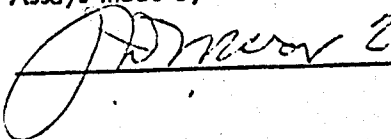
580 NELSON STREET

VANCOUVER 2, B. C. October 28th, 1966

RESULTS of Assays made on samples of ore submitted by: MORESBY MINES, C/o Mr. R. Dale

| MARK   | Gold<br>Oz/Ton | Silver<br>Oz/Ton | Copper<br>% | Lead<br>% | Zinc<br>% | MoS <sub>2</sub><br>% |
|--------|----------------|------------------|-------------|-----------|-----------|-----------------------|
| 5769 C | Trace          | 0.10             | 0.15        |           |           |                       |
| 5770 C | 0.005          | 0.05             | 0.15        |           |           | 0.005                 |
| 5771 C | Trace          | 0.05             | 0.27        |           |           | 0.296                 |
| 5772 C | 0.005          | 0.20             | 0.50        |           |           | 0.007                 |
| 5773 C | Trace          | 0.05             | 0.15        |           |           | Trace                 |
| 5774 C | Trace          | Trace            | 0.25        |           |           | 0.003                 |
| 5775 C | Trace          | 0.05             | 0.20        |           |           | 0.183                 |
| 5776 C | 0.005          | 0.10             | 0.32        |           |           | 0.043                 |
| 5777 C | Trace          | 0.20             | 0.12        |           |           | Trace                 |

Assays made by:

  
\_\_\_\_\_

SHEET No. 1  
FILE No. 277658/670

# J. R. WILLIAMS & SON LTD.

MUTUAL 5-5821

PROVINCIAL ASSAYERS

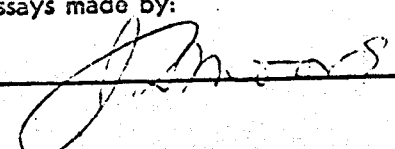
580 NELSON STREET

VANCOUVER 2, B. C. November 10 1966

RESULTS of Assays made on samples of ore submitted by: Messrs. Moresby Mines Ltd.  
Copy: Mr. R. Dale

| MARK   | Gold<br>oz. p. ton | Silver<br>oz. p. ton | Copper<br>% | Molybdenum<br>% |  |  |  |
|--------|--------------------|----------------------|-------------|-----------------|--|--|--|
| 5778 C | 0.005              | 0.25                 | 0.12        | 0.026           |  |  |  |
| 5779 C | trace              | 0.05                 | 0.02        | 0.007           |  |  |  |
| 5780 C | 0.005              | 0.05                 | 0.10        |                 |  |  |  |
| 5781 C | trace              | 0.10                 | trace       |                 |  |  |  |
| 5782 C | "                  | 0.10                 | 0.02        | trace           |  |  |  |
| 5783 C | "                  | 0.10                 | 0.07        |                 |  |  |  |
| 5784 C | "                  | 0.15                 | 0.42        |                 |  |  |  |
| 5785 C | "                  | trace                | 0.15        | 0.005           |  |  |  |
| 5786 C | "                  | 0.05                 | 0.02        | trace           |  |  |  |
| 5787 C | "                  | 0.15                 | 0.10        | "               |  |  |  |
| 5788 C | "                  | 0.20                 | 0.40        | 0.011           |  |  |  |
| 5789 C | 0.005              | 0.20                 | 0.70        | 0.013           |  |  |  |
| 5790 C | 0.005              | trace                | 0.17        | trace           |  |  |  |

Assays made by:



SHEET NO. 1  
 FILE NO. 273234/247

# J. R. WILLIAMS & SON LTD.

MUTUAL 5-5821

PROVINCIAL ASSAYERS

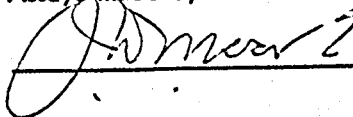
580 NELSON STREET

VANCOUVER 2, B.C., November 18, 1966

RESULTS of Assays made on samples of ore submitted by: MORESBY MINES LTD.

| MARK        | Gold<br>Oz/Ton | Silver<br>Oz/Ton | Copper<br>% | MoS <sub>2</sub><br>% | Lead<br>% | Zinc<br>% | Iron<br>% |
|-------------|----------------|------------------|-------------|-----------------------|-----------|-----------|-----------|
| 5791 GRAB   | Trace          | 0.25             | 0.10        | 0.261                 |           |           |           |
| 5792        | Trace          | 0.05             | 0.05        | 3.92                  |           |           |           |
| 5793        | Trace          | 0.20             | 0.05        | 0.490                 |           |           |           |
| 5794        | Trace          | 0.15             | 0.10        | 0.052                 |           |           |           |
| 5795        | 0.005          | 0.15             | 0.20        | 0.043                 |           |           |           |
| 5796        | Trace          | 0.25             | 0.12        | Trace                 |           |           |           |
| 5797        | Trace          | 0.30             | 0.22        |                       | Trace     | 0.25      |           |
| 5798        | Trace          | 0.30             | 0.07        |                       |           |           |           |
| 5799        | 0.01           | 0.10             | 0.05        |                       | 0.10      | Trace     |           |
| 5800 - Core | 0.01           | 0.20             | 0.75        |                       | Trace     | Trace     | 7.20      |
| 5801 "      | 0.005          | 0.25             | 1.50        |                       | Trace     | Trace     | 9.20      |
| 5802 "      | 0.01           | 0.30             | 2.00        |                       | 0.05      | Trace     | 4.80      |
| 5803 "      | 0.005          | 0.15             | 1.00        |                       | Trace     | Trace     | 10.40     |
| 5804 "      | Trace          | 0.30             | 0.15        |                       | Trace     | Trace     | 6.80      |

Assays made by:



SHEET NO. 1  
FILE NO. 278608/618

# J. R. WILLIAMS & SON LTD.

MUTUAL 5-5821

PROVINCIAL ASSAYERS

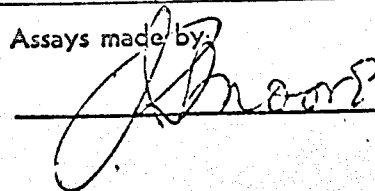
580 NELSON STREET

VANCOUVER 2, B.C. November 24 19 66

RESULTS of Assays made on samples of ore submitted by: Messrs. Moresby Mines.  
C/o Mr. R. Dale

| MARK   | Gold<br>oz. p. ton | Silver<br>oz. p. ton | Copper<br>% | Mo<br>% | Lead<br>% | Zinc<br>% | Iron<br>% |
|--------|--------------------|----------------------|-------------|---------|-----------|-----------|-----------|
| 5805 C | 0.005              | 0.35                 | 0.30        | 0.011   |           |           |           |
| 5806 C | 0.01               | 0.65                 | 1.02        |         | trace     | trace     | 5.00      |
| 5807 C | 0.01               | 0.60                 | 1.10        |         | "         | "         | 5.80      |
| 5808 C | 0.005              | 0.50                 | 0.05        |         | "         | "         | 6.00      |
| 5809 C | 0.005              | 0.50                 | 0.47        |         | "         | "         | 7.20      |
| 5810 C | trace              | 0.20                 | 0.37        |         | "         | "         | 7.20      |
| 5811 C | 0.005              | 0.10                 | 0.22        |         | "         | "         | 6.00      |
| 5812 C | 0.01               | 0.50                 | 0.15        |         | "         | "         | 52.80     |
| 5813 C | 0.005              | 0.30                 | 0.20        |         | "         | "         | 53.60     |
| 5814 C | 0.02               | 0.55                 | 0.07        |         | "         | "         | 60.80     |
| 5815 C | 0.08               | 0.15                 | 0.10        |         | "         | 1.98      | 20.40     |

Assays made by



SHEET NO. 1  
 FILE NO. 280588/621

# J. R. WILLIAMS & SON LTD.

MUTUAL 5-5821

PROVINCIAL ASSAYERS

580 NELSON STREET

VANCOUVER 2, B.C., December 21, 1966

RESULTS of Assays made on samples of ore submitted by: Messrs. Moresby Mines

| MARK        | Gold<br>oz. /ton | Silver<br>oz. /ton | Copper<br>% | Lead<br>% | Zinc<br>% | Iron<br>% | McS <sub>2</sub><br>% |
|-------------|------------------|--------------------|-------------|-----------|-----------|-----------|-----------------------|
| 5816 C Chip | 0.01             | 0.40               | 2.80        |           |           |           | 1.168                 |
| 5817 C "    | 0.005            | 0.30               | 0.90        |           |           |           | 0.174                 |
| 5818 C "    | 0.01             | 0.80               | 8.30        |           |           |           | 0.110                 |
| 5819 C "    | 0.01             | 0.35               | 3.90        |           |           |           | 0.130                 |
| 5820 C "    | 0.005            | 0.20               | 0.60        |           |           |           | 0.054                 |
| 5821 C "    | 0.005            | 0.10               | 0.25        |           |           |           | 0.078                 |
| 5822 C Core | trace            | 0.15               | 0.35        |           |           |           |                       |
| 5823 C "    | 0.02             | 0.30               | 0.65        | 0.20      | trace     |           |                       |
| 5824 C "    | 0.02             | 0.20               | 1.05        | 0.08      | 0.05      | 24.00     |                       |
| 5825 C "    | 0.02             | 1.40               | 1.65        | 0.10      | trace     | 28.00     |                       |
| 5826 C "    | 0.03             | 2.75               | 2.05        | 0.07      | "         | 24.60     |                       |
| 5827 C "    | 0.03             | 0.55               | 1.60        | 0.10      | 0.08      | 39.00     |                       |
| 5828 C "    | 0.01             | 0.40               | 1.60        | 0.15      | 0.05      | 44.00     |                       |
| 5829 C "    | 0.02             | 0.80               | 1.10        | 0.20      | 0.13      | 30.80     |                       |
| 5830 C "    | 0.04             | 0.65               | 1.10        | trace     | trace     | 24.00     |                       |
| 5831 C Chip | 0.005            | 0.10               | 0.40        | "         |           |           | 0.305                 |
| 5832 C Core | 0.05             | 0.10               | 0.70        | "         |           |           |                       |
| 5833 C Chip | 0.01             | 0.55               | 1.35        |           |           |           | 0.043                 |

Assays made by:

*[Handwritten Signature]*



RESULTS of Assays made on samples of ore submitted by: Messrs. Moresby Mines

| MARK         | Gold<br>oz. /ton | Silver<br>oz. /ton | Copper<br>% | Lead<br>% | Zinc<br>% | Iron<br>% | MoS <sub>2</sub><br>% |
|--------------|------------------|--------------------|-------------|-----------|-----------|-----------|-----------------------|
| 5834 C Core  | 0.005            | 0.10               | 0.20        | trace     | trace     |           |                       |
| 5835 C "     | trace            | 0.10               | 0.10        | "         | "         | 5.20      |                       |
| 5836 C "     | "                | 0.25               | 0.10        | "         | "         |           |                       |
| 5837 C "     | 0.04             | 0.25               | 1.15        | 0.05      | "         |           | 0.087                 |
| 5838 C "     | 0.01             | 0.25               | 0.65        | trace     | "         |           | 0.012                 |
| 5839 C "     | 0.02             | 0.40               | 0.70        | "         | "         |           | 0.065                 |
| 5840 C "     | trace            | 0.30               | 0.45        | "         | "         |           | 0.017                 |
| 5841 C "     | 0.005            | 0.10               | 0.45        | "         | "         |           | 0.078                 |
| 5842 C "     | 0.005            | 0.30               | 0.30        | "         | "         |           | 1.024                 |
| 5843 C Chip  | 0.05             | 0.15               | 0.60        |           |           |           | 0.218                 |
| 5844 C "     | 0.01             | 0.50               | 0.80        |           |           |           | 0.152                 |
| 5845 C "     | 0.03             | 0.10               | 0.20        |           |           |           | 0.008                 |
| 5846 C "     | 0.13             | 0.75               | 0.18        |           |           |           | 0.017                 |
| 5847 C "     | 0.03             | 0.25               | 0.24        |           |           |           | 0.906                 |
| 5848 C "     | 0.02             | 0.25               | 0.25        |           |           |           | 0.872                 |
| (5849 C Core | 0.005            | 0.35               | 0.20        |           |           |           | 0.231)                |

Assays made by:

*J. Moresby*

SHEET No. 1  
 FILE NO. 281817/835

# J. R. WILLIAMS & SON LTD.

MUTUAL 5-5821

PROVINCIAL ASSAYERS

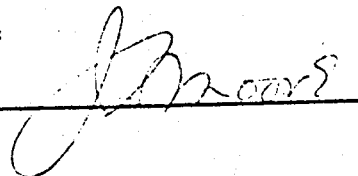
580 NELSON STREET

VANCOUVER 2, B. C. January 19 19 67

RESULTS of Assays made on samples of ore submitted by: Messrs. Moresby Mines

| MARK          | Gold<br>oz. p. ton | Silver<br>oz. p. ton | Copper<br>% | MoS <sub>2</sub><br>% | Fe<br>% |
|---------------|--------------------|----------------------|-------------|-----------------------|---------|
| 5850 C        | 0.005              | 0.15                 | 0.14        | 0.087                 |         |
| 5851 C        | trace              | 0.25                 | 0.10        | 0.196                 |         |
| 5852 C Core   | 0.02               | 0.25                 | 0.27        |                       | 43.60   |
| 5853 C "      | 0.01               | 0.70                 | 0.15        |                       | 50.80   |
| 5854 C "      | 0.02               | 0.30                 | 0.20        |                       |         |
| 5855 C        | 0.005              | 0.15                 | 0.37        | 0.011                 |         |
| 5856 C        | trace              | 0.30                 | 0.20        | trace                 |         |
| 5857 C        | 0.025              | 0.15                 | 0.44        | 0.074                 |         |
| 5858 C        | 0.01               | 0.10                 | 0.20        | 0.082                 |         |
| 5859 C        | 0.01               | 0.10                 | 0.25        | 0.013                 |         |
| 5860 C        | trace              | 0.05                 | 0.20        | 0.007                 |         |
| 5861 C        | 0.005              | 0.10                 | 0.27        | 0.065                 |         |
| 5862 C Sludge | 0.03               | 0.85                 | 2.05        | 0.018                 | 26.40   |
| 5863 C "      | 0.015              | 0.50                 | 1.47        | 0.011                 | 11.20   |
| 5864 C Core   | 0.03               | 0.45                 | 0.58        | 0.021                 | 28.80   |
| 5865 C "      | 0.03               | 1.35                 | 2.17        | 0.008                 | 32.20   |
| 5866 C "      | 0.04               | 1.55                 | 3.05        | 0.012                 | 23.80   |
| 5867 C "      | 0.03               | 0.70                 | 2.65        | trace                 | 9.40    |
| 5868 C        | 0.01               | 0.25                 | 0.58        | 0.414                 |         |

Assays made by:



SHEET NO. 1  
 FILE NO. 288120/138

# J. R. WILLIAMS & SON LTD.

MUTUAL 5-5821

PROVINCIAL ASSAYERS

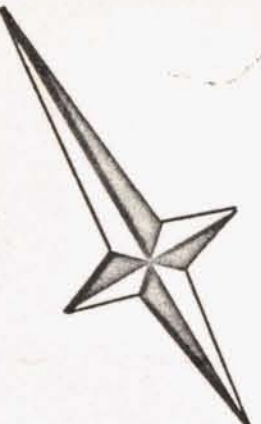
580 NELSON STREET

VANCOUVER 2, B.C. April 6th 1967

RESULTS of Assays made on samples of ore submitted by: **MORESBY MINES LTD.**

| MARK                            | Gold<br>Oz/Ton | Silver<br>Oz/Ton | Copper<br>% | Mo<br>% | MoS <sub>2</sub><br>% |
|---------------------------------|----------------|------------------|-------------|---------|-----------------------|
| 5869 C                          | 0.005          | 0.10             | 0.15        | 0.13    |                       |
| 5870 C                          | Trace          | 0.05             | 0.15        | 0.457   |                       |
| 5871 C                          | Trace          | 0.30             | 0.10        | 0.031   |                       |
| 5872 C                          | Trace          | 0.10             | 0.10        | Trace   |                       |
| 5873 D. D. H. 11<br>48.0 - 54.0 | Trace          | Trace            | 0.10        | Trace   |                       |
| 5874 C 54 - 58.0                | 0.005          | 0.10             | 0.20        | Trace   |                       |
| 5875 C 58.0 - 62.0              | Trace          | 0.10             | 0.10        | Trace   |                       |
| 5876 C 62.0 - 66.0              | Trace          | 0.15             | 0.10        | Trace   |                       |
| 5877 C 66.0 - 70.0              | Trace          | 0.10             | 0.08        | Trace   |                       |
| 5878 C Grab Sample              | 0.01           | 0.10             | 0.20        | Trace   |                       |
| 5879 C "                        | 0.005          | 0.20             | 2.10        | Trace   |                       |
| 5880 C "                        | Trace          | 0.40             | 0.20        | Trace   |                       |
| 5881 C "                        | 0.01           | 0.10             | 0.60        | Trace   |                       |
| 5882 C "                        | 0.005          | 0.15             | 0.35        | Trace   |                       |
| 5883 C "                        | 0.34           | 0.25             | 0.80        | Trace   |                       |
| 5884 C "                        | 0.03           | 0.30             | 0.45        | Trace   |                       |
| 5885 C "                        | 0.015          | 0.30             | 1.05        | Trace   |                       |
| 5886 C "                        | 0.005          | 0.20             | 0.75        | 0.007   |                       |
| 5887 C Soil Sample              |                |                  |             |         | Trace                 |

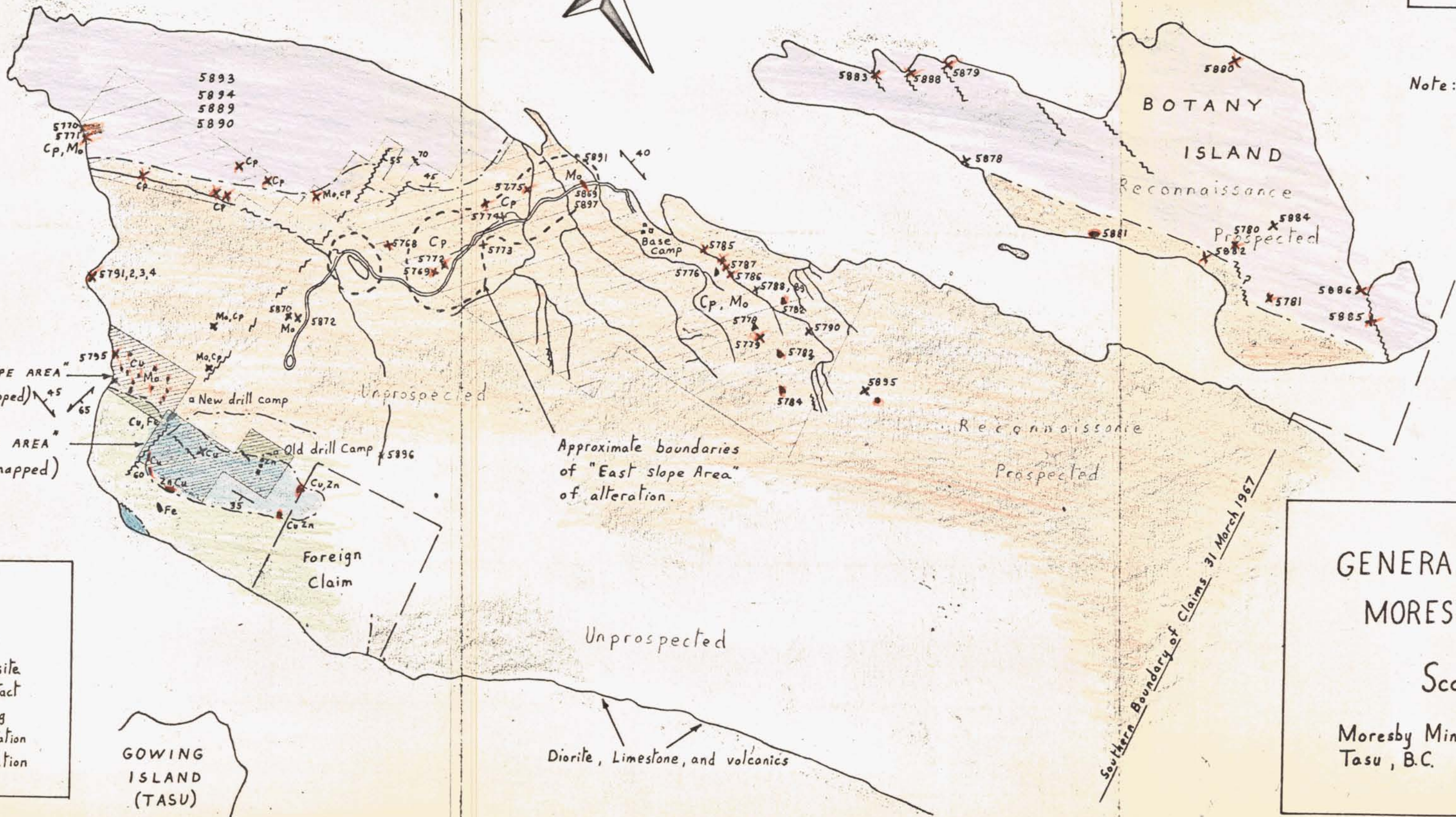
Assays made by: J. Moore



• Mineralization Showings  
 x Other occurrences  
 5710 Sample numbers

Note: Samples not shown on this map are shown on the detail maps.

TASU SOUND



"NORTH SLOPE AREA"  
 (Detail mapped)  
 "LIMESTONE AREA"  
 (Detail mapped)

Limestone  
 Greenstone  
 Diorite (Quartz)  
 Porphyritic Andesite  
 Geological Contact  
 Fault or Shearing  
 Shearing Orientation  
 Contact Orientation

GOWING ISLAND (TASU)

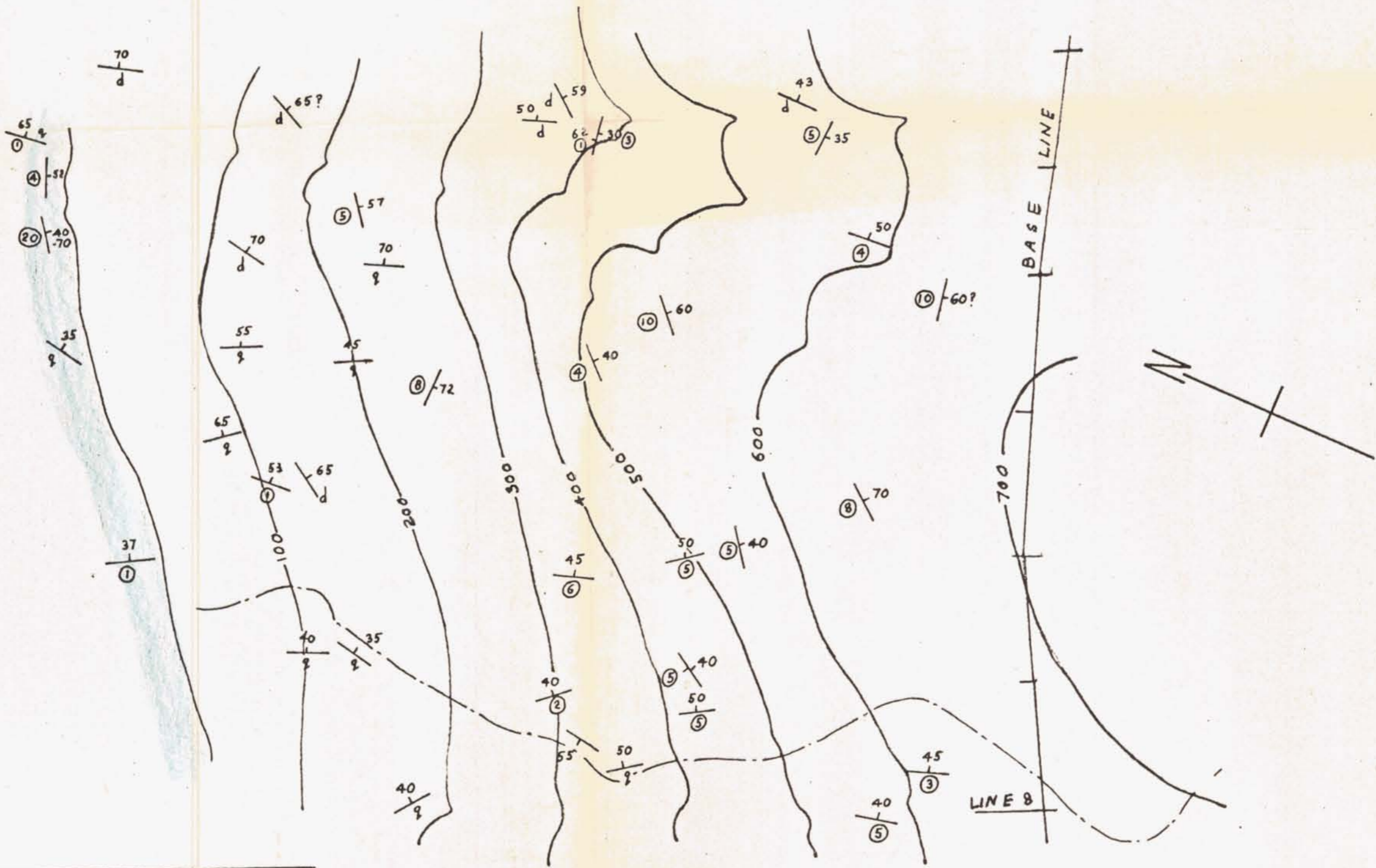
Approximate boundaries of "East slope Area" of alteration.

Unprospected  
Diorite, Limestone, and volcanics

Southern Boundary of Claims 31 March 1967

GENERAL GEOLOGY OF  
 MORESBY PROPERTY  
 Scale: 1" = 1000'  
 Moresby Mines  
 Tasu, B.C.

D. Arscott  
 31st Mar. 1967



LEGEND

- $\frac{23}{\quad}$  Strike and dip of structure
- ⊕ Fracturing: No. of fractures per foot
- d Dyke
- q Quartz vein or veins
- - - Topographic contours: 100' interval

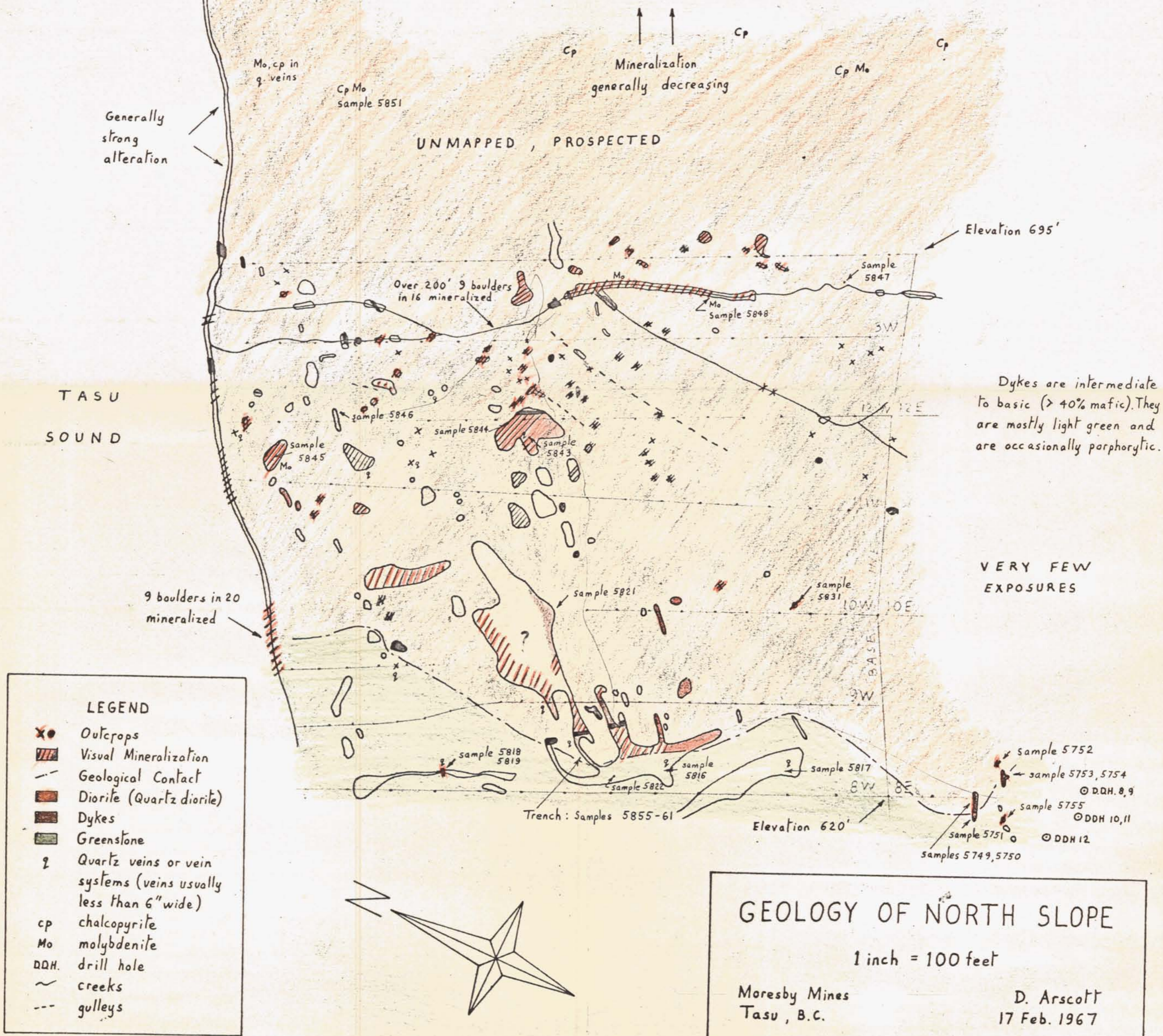
STRUCTURE MAP

North Slope D. A.  
Moresby Mines 17 Feb. 67

NOTES ON MINERALIZATION:

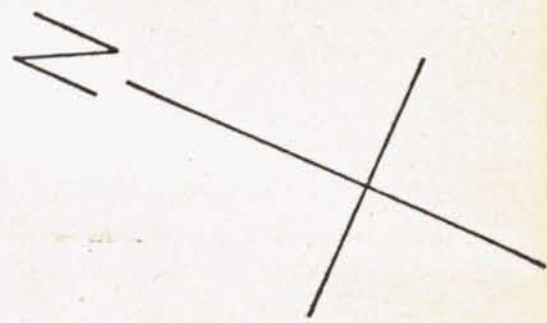
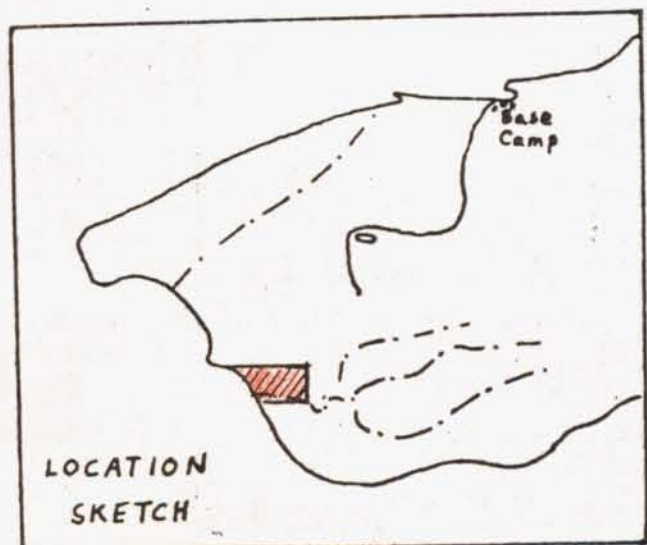
The mineralization coloured is chalcopyrite on fractures, unless otherwise shown. Molybdenite is more variable, and more closely associated with quartz. Pyrite is usually present in small proportions with the chalcopyrite and subordinate to it. It occurs as very fine disseminations up to 0.5% of the diorite, and less often on fractures.

Difficulty was encountered grading the mineralization because of leaching. For this reason it was mapped simply as trace mineralization (///) or better than trace (###). Rust alone was not considered as evidence of sulphides. Grades are expected to lie in the 0.2 to 0.4% copper range.



Alteration minerals: chlorite  
quartz  
minor carbonate

Degree of alteration: vs - very strong  
s - strong  
m - moderate  
w - weak  
o - unaltered



ALTERATION IN DIORITE  
1 inch = 100 feet  
North Slope  
Moresby Mines  
D.A.  
17 Feb. 67