

5395

REPORT ON BANKS ISLAND CLAIMS
PRINCE RUPERT MINING DIVISION

130° 14' W, 53° 19' N.
NTS 103 G 8

#5395

OREQUEST SYNDICATE

103G/8E

R. WARES
Field Geologist

Vancouver, B. C.

November, 1974

Department of Mines and Petroleum Resources ASSESSMENT REPORT NO. 5395 MAP

INDEX

	Page No.
1. GENERAL	1
1.1 Location	
1.2 Access	
1.3 Topography	
1.4 Claim Status	
1.5 Previous Work	
2. REGIONAL GEOLOGY	2
3. GEOLOGY	3
3.1 General	
3.2 Granitic Rocks	
3.3 Schists	
3.4 Carbonate Units	
3.5 Structural Geology	
3.6 Sulphide Distribution	
4. SUMMARY	5
5. CONCLUSIONS	6
6. BUDGETARY ESTIMATE	7

APPENDIX

- Fig. 1 #1 Location
2 #3 Claim Map
3 # Regional Geology
4 #4 Geology
5 #5 Linears

Statement of Costs

Statement of Qualification

Department of
Mines and Petroleum Resources

ASSESSMENT REPORT

NO. 5395 MAP _____

1. GENERAL

1.1 Location

The Banks Island claim groups are located on the west side of Banks Island, British Columbia near Foul Bay. The claims are about 260 miles south of Prince Rupert (fig. 1)

1.2 Access

Access to the claim group is from Prince Rupert by float plane or, alternatively, from Sandspit on the Queen Charlotte Islands. Suitable landing spots on the coast are limited by tide conditions and by the frequency of adverse winds.

1.3 Topography

The claim groups lie at low elevations and nowhere exceed 150' elevation. Tree cover is, with few exceptions, relatively poor and low scrub and peat accumulations blanket much of the area.

1.4 Claim Status

The Banks Island claims cover two separate groups and total 87 claims (fig. 2). The claims were staked and recorded in May, 1974.

AXE 1-20 incl., Record Nos. 38509-687 Expiring May 22/75
22, 25, 27-46 incl.
47 Fr., 48-92 incl.
26 Fr.

1.5 Previous Work

There is clear evidence of moderate exploration in the area of the Axe claims. This is evident in the old claim posts dated from 1963 onwards, cut lines and some small trenches. There is no published data available in assessment files or in theses to indicate the results obtained.

2. REGIONAL GEOLOGY

The amount of regional geological information is modest. The only two relevant sources are the reports by Bapty¹ and McDougall², (fig. 3).

Essentially Banks Island consists of a heterogeneous suite of granitic rocks with remnants and fault controlled zones of meta sediments. The strong fracture zone that transects Banks Island is the one that controls the economic mineralization. The mineralized zones are located primarily in skarn zones developed along the linears adjacent to sediments and less commonly, granitic rocks. Alteration zones in granitic rocks are locally mineralized. The deposits of auriferous pyrite are developed at first and second order shear intersections.

3. GEOLOGY

3.1 General

The Banks Island claim group consists essentially of narrow, arcuate belts of limestone and marble which are fault controlled and have belts of biotite schist and granodiorite between the faulted carbonate units (fig. 4).

3.2 Granitic Rocks

There is a group of heterogeneous granitic rocks on the Axe claims. To the north of Barge Bay and in a narrow salient towards Waller Bay, there are exposures of granodiorite and quartz monzonite.

The granodiorite and quartz monzonite appear to form minor domes not unlike a mantled gneiss dome with biotite schists and a veined and injected zone forming the periphery. Minor granite dykes

1 Bapty, H. Banker Claims - Minister of Mines Annual Report 1963, p 21

2 McDougall, J. J. The Relationship between Lineaments and Mineral deposits on Banks Island, B. C. (abstract) G. A. C. Symposium 1972, p 17

and pegmatite stringers are present. Locally the granodiorite is sheared and silicified near linears. Minor pyrite is locally present in small quartz stringers in the granodiorite and quartz monzonite.

3.3 Schists

A heterogeneous group of metasediments have a parallel distribution to those of the granitic rocks and comprise narrow wedges between strongly developed linears and as flanking zones in the granitic terrain.

The schists comprise hornblende biotite schists and quartz biotite schists with a strongly developed cleavage. Pyrite is frequent and generally forms minor shear zones with an impersistent width and strike length. The shears generally carry minor quartz stringers which carry pyrite and more rarely pyrrhotite.

Occasional large quartz veins up to 4' wide are present but these are related to the linears and no evidence of sulphide mineralization was seen.

3.4 Carbonate Units

The carbonate units are those of most economic interest. There are minor carbonate units to the north of Barge Bay but the best development is on the coast at Foul Bay and to the north of Waller Bay.

To the east of the strong linear at Waller Bay there is a coarse grained marble that is exposed over a strike length of at least three miles and is marked by a topographic and vegetational feature. Minor pyrite is present in the coarse marble but the unit is markedly clean. Occasionally there are thin ribs of siltstones which are frequently mineralized with 1/2% to 1% pyrrhotite. These ribs are 2" to 6" wide and frequently define minor folds. The exception is close to the strong topographic linears where minor pyrrhotite is present.

On the Foul Bay coast there is a broad zone mapped as

limestone and marble, with minor quartzite. In contrast to the eastern zone, there is a strongly banded limestone and quartz schist (probably fine siltstones) which defines bedding and structure.

3.5 Structural Geology

No attempt was made to conduct a statistical survey of the Banks Island data, primarily because of the scatter of the outcrops and the randomness of the traverse lines.

There are, however, a number of salient points that can be made. The linears in fig. 5 give some idea of the trend of major linears. A schematic stress orientation is included on the map. The Banks Lake linear along which some of the Falconbridge mineralization occurs is interpreted as the Primary 1st order wrench with the Waller Bay lineament as a complementary 1st order wrench. If this interpretation is correct, then the Barge Bay lineament is a second order left lateral wrench, which is in accord with the displacement of the carbonate unit.

3.6 Sulphide Distribution

The distribution of sulphides shows a clear relationship to the structure of the property.

Pyrite has a relatively wide distribution, especially in the schist belt. Pyrite occurs in small shear zones in the schists though these zones are minor in their width and known strike length. Rock chip sampling of these pyrite zones did not give any significant results.

Pyrrhotite occurs predominantly in the carbonate belt and especially in the skarn and silicified zones close to the linears. Pyrrhotite does not form more than 1/2% to 1% in the skarn zones examined.

4. SUMMARY

The project on Banks Island was a preliminary program of reconnaissance prospecting to provide basic data for formulating a more sophisticated and intensive investigation. The northern claim group on Banks Lake was not investigated as the prospecting was terminated because of adverse weather.

The target areas of interest are the linear zones adjacent to carbonate and metasedimentary zones. These are the loci of occurrence of sulphide deposits which, if scant published data is correct, form pipe-like massive sulphides with a vertical axis.

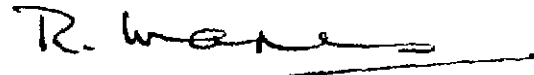
The amount of exposure in the Axe claim group is disappointingly small, especially along the linears. However, there are reasonable grounds to suppose that more intensive prospecting would reveal more outcrop and clearer evidence of the economic potential of the claim group.

The investigation of the above claims with a moderate potential would require a two week program involving ground geophysics along and close to the linears with magnetic, EM-16 and mercury vapour detection equipment with, in addition, some scintillometer work. The possible targets are of small dimension and a close grid along the linears would be required. A four-man crew would be required.

A budgetary estimate is appended.

CONCLUSIONS

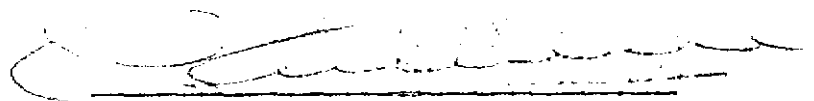
1. The Axe claim group straddles a group of linears on Banks Island, B. C.
2. These linears cut a heterogeneous group of rock types from granodiorite to limestone and marble. It is the junctions of these linears with carbonates that appear to have most potential in the claim group.
3. A portion of the claim group has sufficient potential to warrant some more detailed geophysical work to investigate the linears.
4. Estimated cost of the program is \$7,500.00.



R. Wares, B. Sc.

CERTIFICATE

I hereby certify that Mr. Roy Wares B. Sc. Geology was employed under my overall supervision on the Banks Island Project during September and October, 1974.



L. G. White, P. Eng.

6.

BUDGETARY ESTIMATE

Salaries, Compensation & Management Fee	\$ 2500.00
Transportation	400.00
Field Transportation	800.00
Equipment Rental	1000.00
Camp Cost	400.00
Hotels & Meals	200.00
Assays	1000.00
Report Preparation	500.00
	<hr/>
TOTAL	\$ 6800.00
10%	<hr/>
	680.00
	<hr/>
	\$ 7480.00
	<hr/>
-Say-	\$ 7500.00
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STATEMENT OF COSTS

Air Transportation	\$690.00	\$ 450.00 applied
Room & Board (34 man days @ \$15/day)		510.00
Salaries & Wages:		
R. Wares,	Sept. 13, 14, 15, 16, 17, 18, 19, 20, 21, 27, 28, 29, 30 Oct. 1, 2, 3, 4, 17 man days @ \$60/day	1020.00
P. Meindl,	Sept. 13, 14, 15, 16, 17, 18, 19, 20, 21 9 man days @ \$45/day	405.00
G. Ramsay	Sept. 27, 28, 29, 30, Oct. 1, 2, 3, 4 8 man days @ \$45/day	360.00
	TOTAL	<u>\$ 2745.00</u>

A total of \$2200.00 applied to the claims

STATEMENT OF QUALIFICATIONS

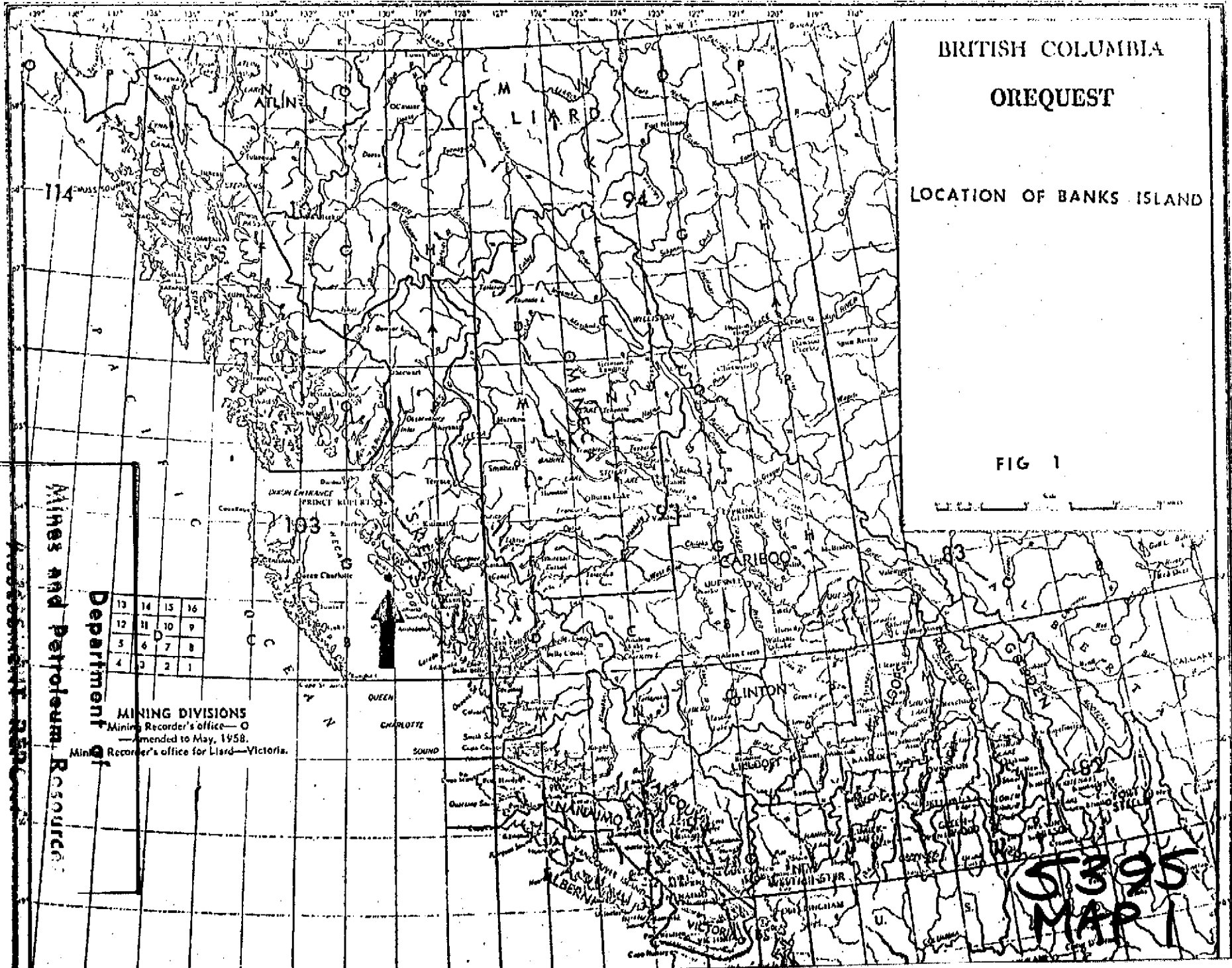
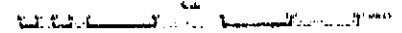
- R. WARES B. Sc. Aberdeen, M. Sc. Queen's.
Mr. Wares has been employed in mineral exploration for ten years while in the employ of Orequest Syndicate for the past three years, Falconbridge Nickel Mines Ltd., Granduc Mines, Geological Survey of Canada and the Ontario Department of Mines. Mr. Wares has worked in British Columbia, the Yukon, Arizona, Ontario and the U. K. while engaged in mineral exploration.
- P. MEINDL Field Assistant. Mr. Meindl has been engaged in mineral exploration in B. C. for eight years with the past three in the employ of Home Oil Co. Ltd. Mr. Meindl is experienced with sampling, surveying and prospecting.
- G. RAMSAY Field Assistant. Mr. Ramsay has been engaged in mineral exploration in Ontario and B. C. for the past few years and is experienced in prospecting.

BRITISH COLUMBIA

OREQUEST

LOCATION OF BANKS ISLAND

FIG 1



13	14	15	16
12	11	10	9
5	6	7	8
4	3	2	1

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MINING DIVISIONS
 Mining Recorder's office—O
 Mined to May, 1958.
 Mining Recorder's office for Liard—Victoria.

Mines and Petroleum Resources

NO. 5395

MAP #1

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MAP 1

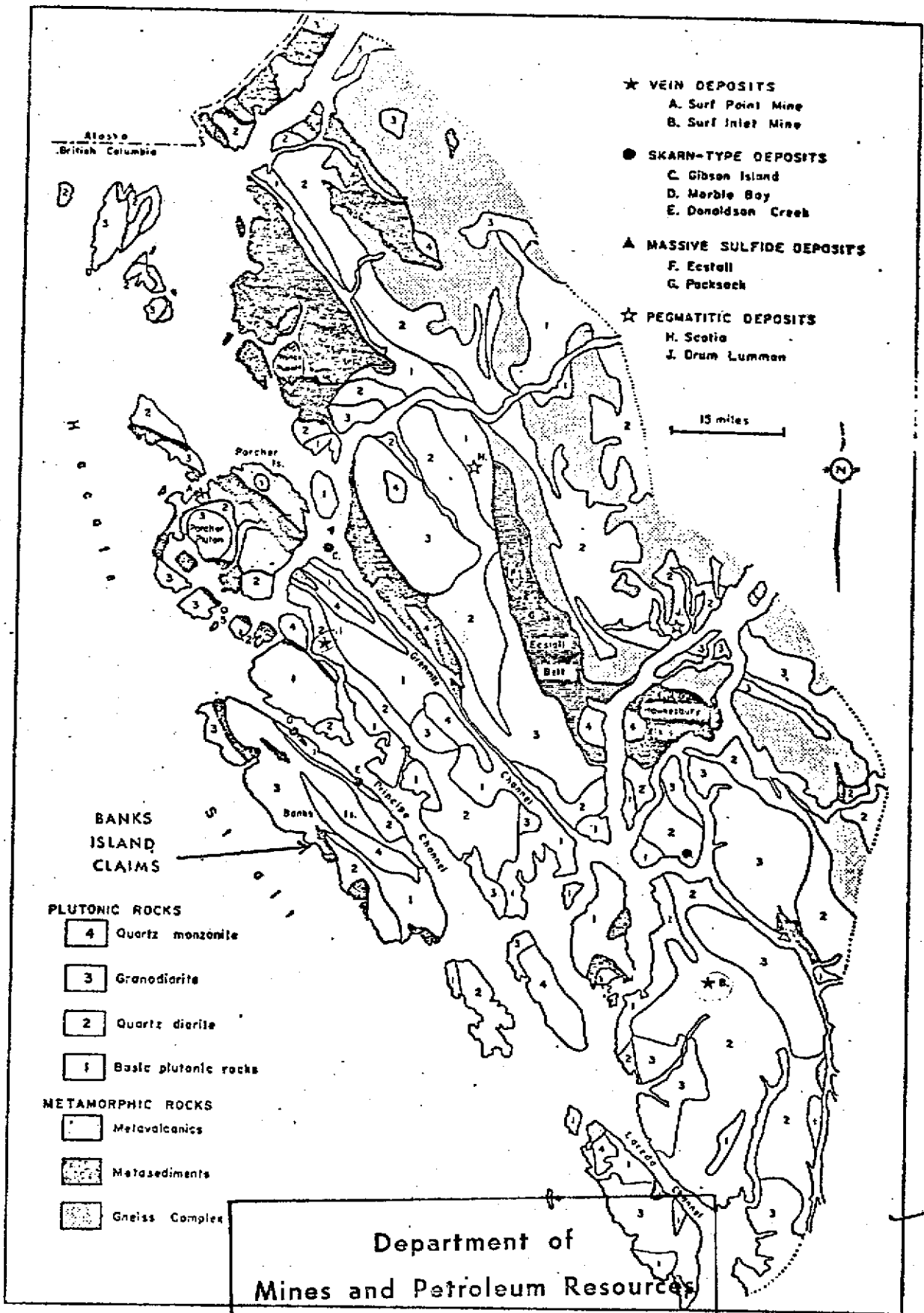
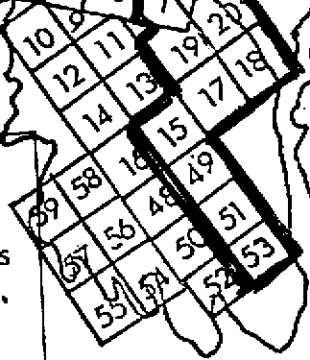
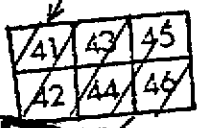
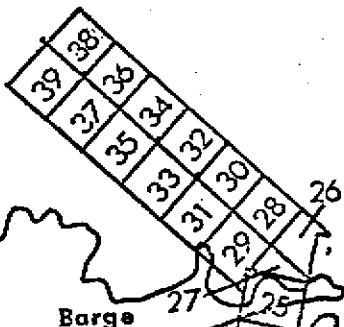
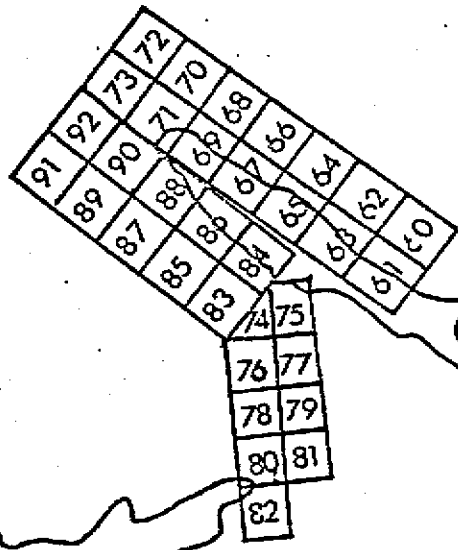
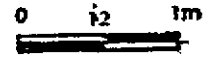


FIG. 2. Generalized geology, and mineral deposits, based on data from R. J. Woodsworth (1964, 1967), and Rodnick (1970).

ASSESSMENT REPORT
 Regional Geology
 NO. 5395 MAP #2 FIG 3

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 MAP 2



Survey Bay

Banks Lake

Barge Bay

Foul Bay

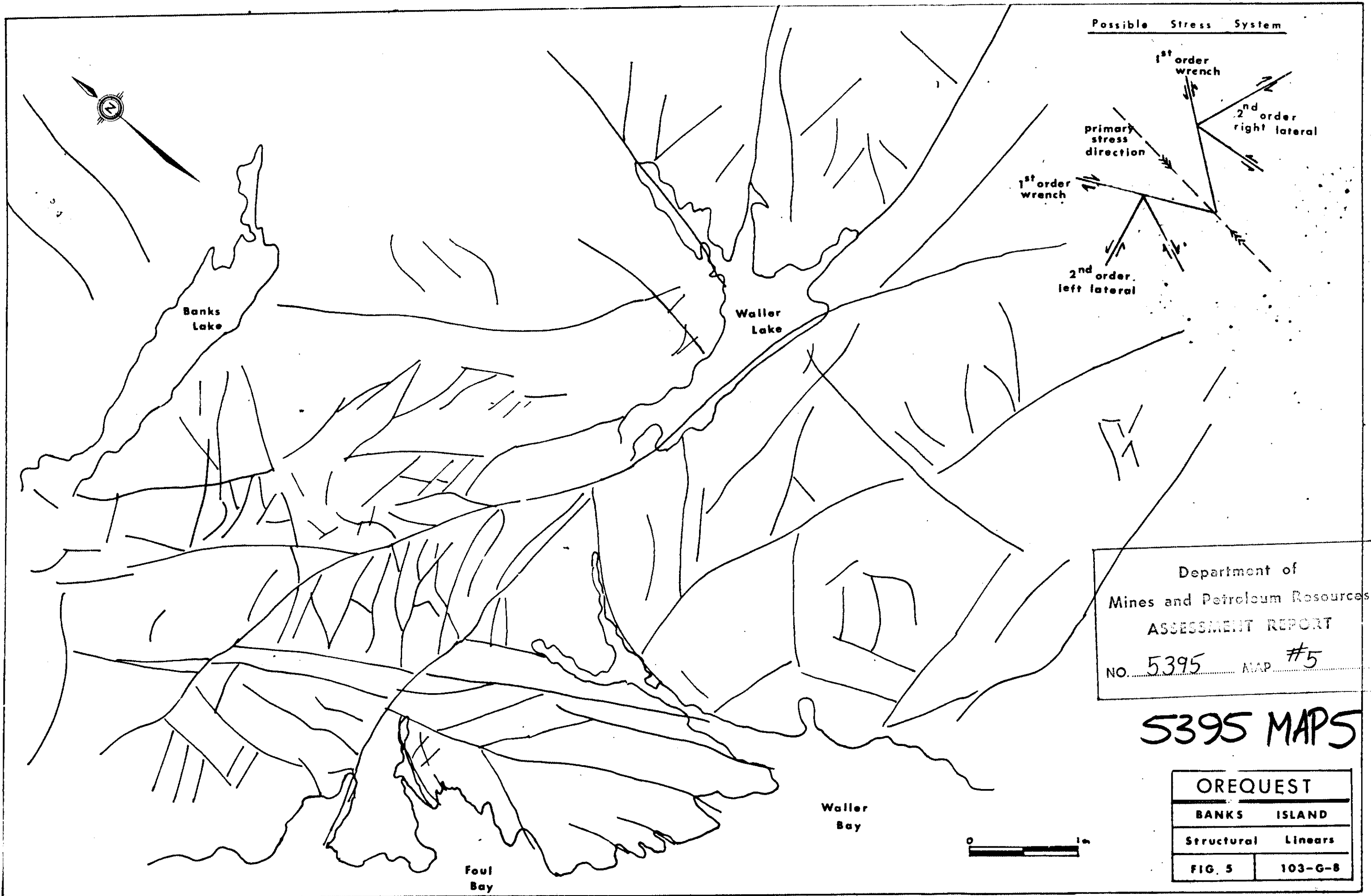
Waller Bay

claims in contention

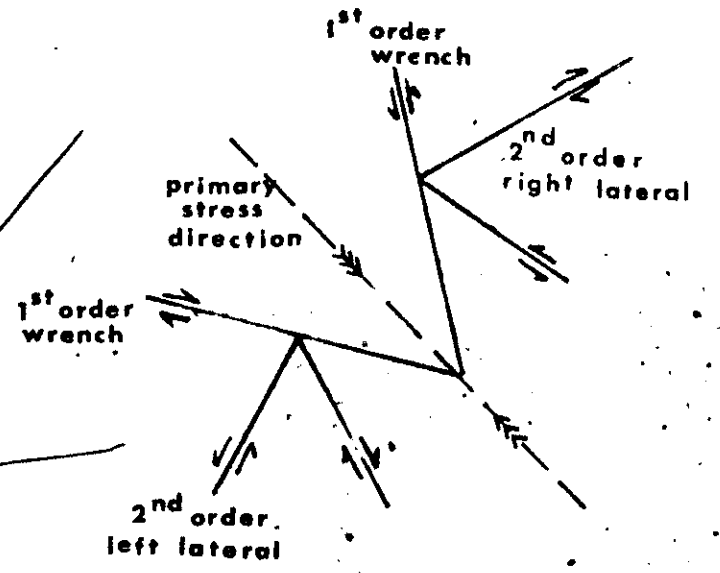
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 NO. 5395 MAP #3

BANKS ISLAND CLAIM GROUP

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MAP 3



Possible Stress System



Banks Lake

Waller Lake

Waller Bay

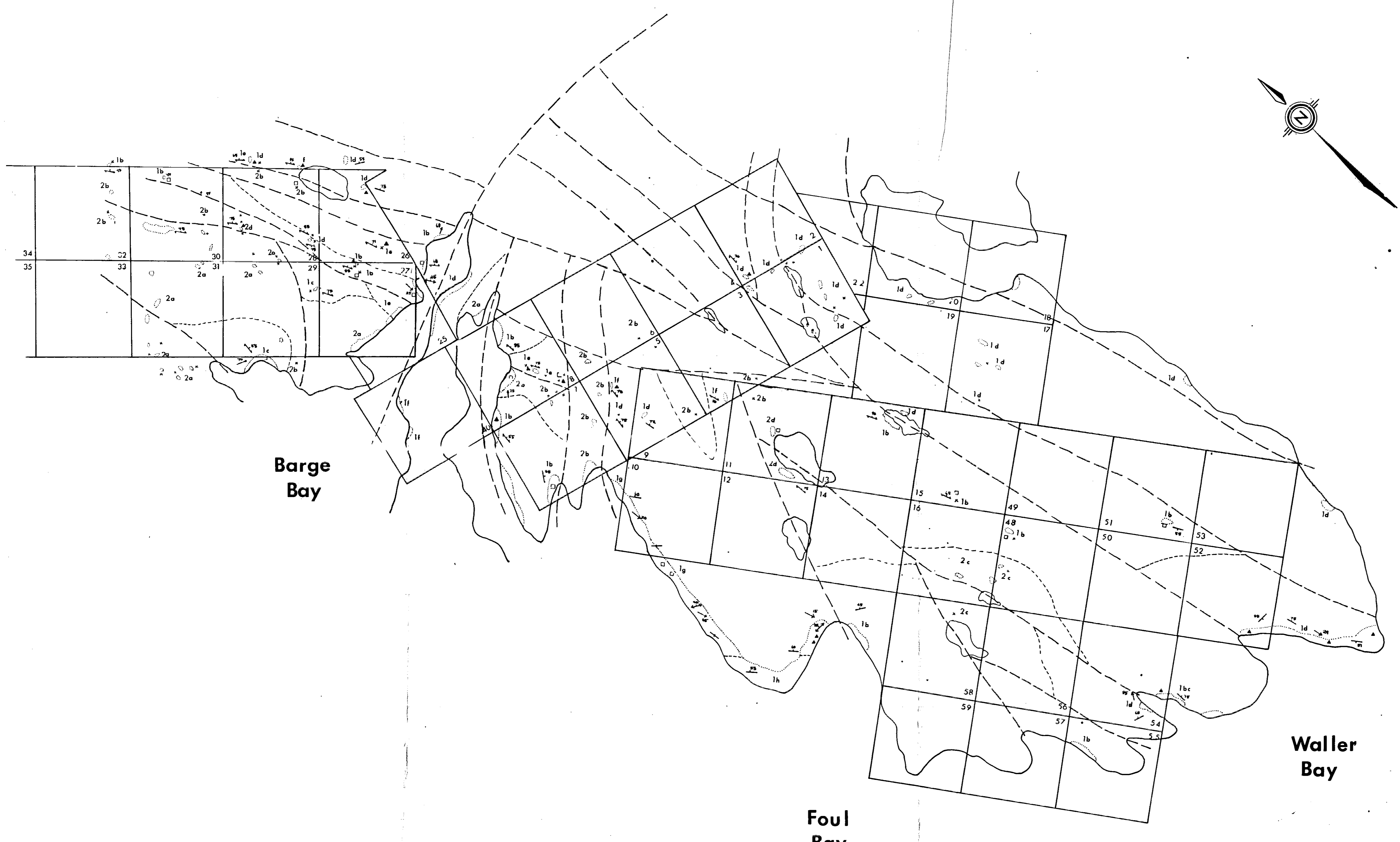
Foul Bay

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NO. 5395 MAP #5

5395 MAPS

OREQUEST	
BANKS	ISLAND
Structural	Linears
FIG. 5	103-G-8





Legend

- 2a QUARTZ MONZONITE
- 2b GRANODIORITE
- 2c DIORITE
- 2d INJECTION COMPLEX
- 1a HORNBLende SCHIST
- 1b HORNBLende BIOTITE SCHIST
- 1c QUARTZ BIOTITE SCHIST
- 1d MARBLE
- 1e MYLONITE
- 1f CALC SILICATES
- 1g LIMESTONE
- 1h QUARTZITE
- foliation
- bedding
- axial plane
- lineation
- fold axis
- linear
- formation boundary
- pyrrhotite
- pyrite
- quartz vein

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ASSESSMENT REPORT
NO. 5395 MAP #4

5395
MAP 4

BANKS ISLAND	GEOLOGY	OREQUEST
103 C 8	FIG 4	0 400' 800' 1600'
		Nov 74.