861851

GEOLOGICAL SURVEY OF THE KOOTENAY CLAIMS

Location: 103 C 16 / E
Moresby Island, Queen Charlotte Islands, BC

FOR:
Mr. Ken Foote (claim owner)
Box 197
Sandspit, BC
V0T 1T0

BY:
Mr. Robert A Lake
Geologist
2043-47 Ave. SW
Calgary, Alberta

September 16, 1987.

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FIGURES AND MAPS

1. Introduction

This report presents the results of two visits to the claims, during the 1987 field season. A survey of the outcrops within the claims was carried out, plus a detail sampling of a vein system on the claims.

The claims involved are; Gill 3763, Swindle #1-#8, J-1 4269, B-1 4146, F-1 4147. All of the claims are controlled by Mr. Ken Foote of Sandspit,BC.

The claims are located on the north side of Kootenay Inlet, the topographic setting changes from a 5 degree slope angle at the Inlet, to slopes of 50 degrees near the top of the mountain. The entire surface area of the claims is covered with a mature forest of cedars and hemlocks. An immature soil covers the bedrock even on the steeper slopes. The soil zone thickens as the slope angle decreases. With a very complete tree cover, outcrops could not be located with aerial photo's. Heavy rainfall has created stream run-offs, which removes the soil cover along these drainage patterns. This allows the rocks to be mapped along these random patterns of the stream beds. When the slopes angles are below 20 degrees, the streams no longer expose the bedrocks. As stream sediments form the bottom of the streams. Thus only in positions of 20 degree slopes or greater are there outcrops to be found.

2. Geological Survey

The regional geology of the north side of Kootenay Inlet is a complex group of Triassic marine volcanic rocks. This system is overlain by a younger limestone sequence. This contact was not observed in the field, but Sutherland-Brown (ref.#1) who mapped this area, reports this to be a conformity contact. Southerland-Brown names the volcanic rocks the KARMUTSEN formation, while he named the limestone facies the KUNGA formation.

The Karmutsen was observed in numberous locations, while the Kunga has very few outcrops within the claims. The volcanic Karmutsen, has numberous flow facies, all appear to be marine. The flow beds dip between 40 to 50 degrees to the south, or towards the younger Kunga. This basaltic sequence according to Southerland-Brown can be up to 15,000 feet thick. Only the youngest of the Karmutsen formation are observed within these claims.

While the Kunga was only sampled at two locations, both were similiar, a marine limestone, which had undergone extensive low grade metamorphic changes. Complete infilling of the porosity has occured along with the metamorphic changes. No bedding angles were measured within this massive limestone, but are assumed to be similiar to the Karmutsen in direction and angle.

During the creation of the mountains on the north side of the claims, a series of faults, with shear motions were established. This pattern was only obervered within the Karmutsen, but are speculated to exist within the Kunga limestone. These faults have allowed epithermal deposites of quartz and various sulphide minerals to be deposited.

Brecciation along the host rock occurs, while the centre of the wider veins is almost completely changed to quartz. The sulphide evidence occurs randomly within this facies. The width varies from 6 inches to 5 feet, the lenth of this quartz system is not known. The limited outcrop exposures allowed sampling approximately every 200-500 feet. Gold was deposited within this epithermal facies. The gold is a very fine grain size, not visible with a hand-lens. The concentration of gold varies greatly at most locations. Gold assays vary along strike and across the veins. In general the veins are east-west in strike direction. While the dip is to the south, the dip angle of these veins is between 80-85 degrees.

Sulphide minerals were observed at most locations within the epithermal facies, pyrite and malacite was repeately observed. Pyrite was alwas representing below 5% of the total minerals within this facies.

The Kunga was sampled, it showed no evidence of sulphides, but since a very limited surface of this formation is exposed within these claims, they may occur. Along the contact zone the epithermal events may be deposited. This contact will be sampled through a soil geochemistry survey,this survey is planned for 1988.

While the 1987 survey indicates very exciting gold deposites, the planned surveys will extend our ability to include the low angle slopes along the south side of the claims.

1. Interpretation of the 1987 survey.

These claims have a geological setting which have allowed epithermal events to concentrate gold in economic values. With the poor exposure of the rocks, soil sampling appears to be the best method to use to determine where these events occur. While the distribution of gold varies greatly within the quartz system, measurable gold values were found in every sample.

While a series of parallel quartz veins have been discovered on the steeply sloping Karmutsen formation, excellent potential exists within gently sloping area to the south. The contact between the volcanic and limestone rocks can not be oberserved in the field, soil sampling will be needed to test this portion of the claims. The 1984 Cusac soil survey (ref.#5) found many anomoly's along this contact.

Gold concentrations within the known veins varies greatly, the distribution of gold should be studied and mapped in more detail. These claims have been explored since the 1920's, but only the outcrop areas have been looked at. Geochemistry will greatly increase improve our ability to explore for new epithermal events.

Expenses Statement

Salary:	Robert Lake, geologist 350/day X 10 days	
	Susan Lake, helper 250/day X 10 days	
	May 17,18, Aug. 4-11, 1987	
		$ 6,000.00
Camp expenses:	tent, sleeping bags, cooking gear, rain gear	
	radio, etc.	$ 800.00
Food expenses:	2 persons at 50/day X 12 days	
		$ 600.00
Helicopter expences:		$ 1,465.00
Assay costs:	20 samples at 25.00/ sample	$ 500.00
Travelling expenses:	350/day X 2 days	$ 700.00
Mile-age costs:	0.40 X 1500 kms	$ 600.00
Written report:	350/day X 2 days	$ 700.00

TOTAL EXPENSES: $ 11,365.00

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B.Sc. 1977 Earth Science Major
Un. of Guelph
Guelph Ontario

Assay Data

Sample location and assay results:

Location #1. Sample #1. Lower quartz vein, width 5 feet, grab sample, in highest pyrite area, 0.336 oz/ton.
Sample #21. chip sample across the vein, 0.036 oz/ton.

Location #2. Sample #2. Upper quartz vein, 5 feet wide, grab sample in sulphide zone, 0.711 oz/ton
Sample #22. Chip sample across the vein 0.03 oz/ton

Location #3. Sample #3. In the old adit, lower vein, 3 feet wide, grab in the middle of the vein 0.125 oz/ton.
Sample #23. 3 feet wide chip sample across the vein 0.183 oz/ton

Location #4. Sample #4. Core material, lower vein, location unknown, 1984 drilling program 0.03 oz/ton.

Location #5. Sample #5. Lower vein, 5 feet wide, grab in the middle. 0.058 oz/ton

Location #6. Sample #6. Grab sample in the dump of adit beside old mill, source is lower vein 0.493 oz/ton.

Location #7. Sample #7. Grab sample in the lower dump of adit, lower vein, 0.243 oz/ton.

Location #8. Sample #8. Grab on outcrop, Kunga formation massive limestone, 0.001 oz/ton

Location # 9. Sample #9. Chip sample taken across a 3 feet wide zone, 0.032 oz/ton.

Location # 10 Sample # 10. Grab sample in the lower vein, 0.001 oz/ton.

Location # 11 Sample # 11. Chip sample taken on 2 feet wide vein, 0.085 oz/ton.
Sample # 31. Grab sample 0.08 oz/ton.

Location # 12 Sample # 12. Grab sample in the upper vein, 0.12 oz/ton.
Sample # 32. Chip sample taken across a 2 foot wide location, 0.09 oz/ton.

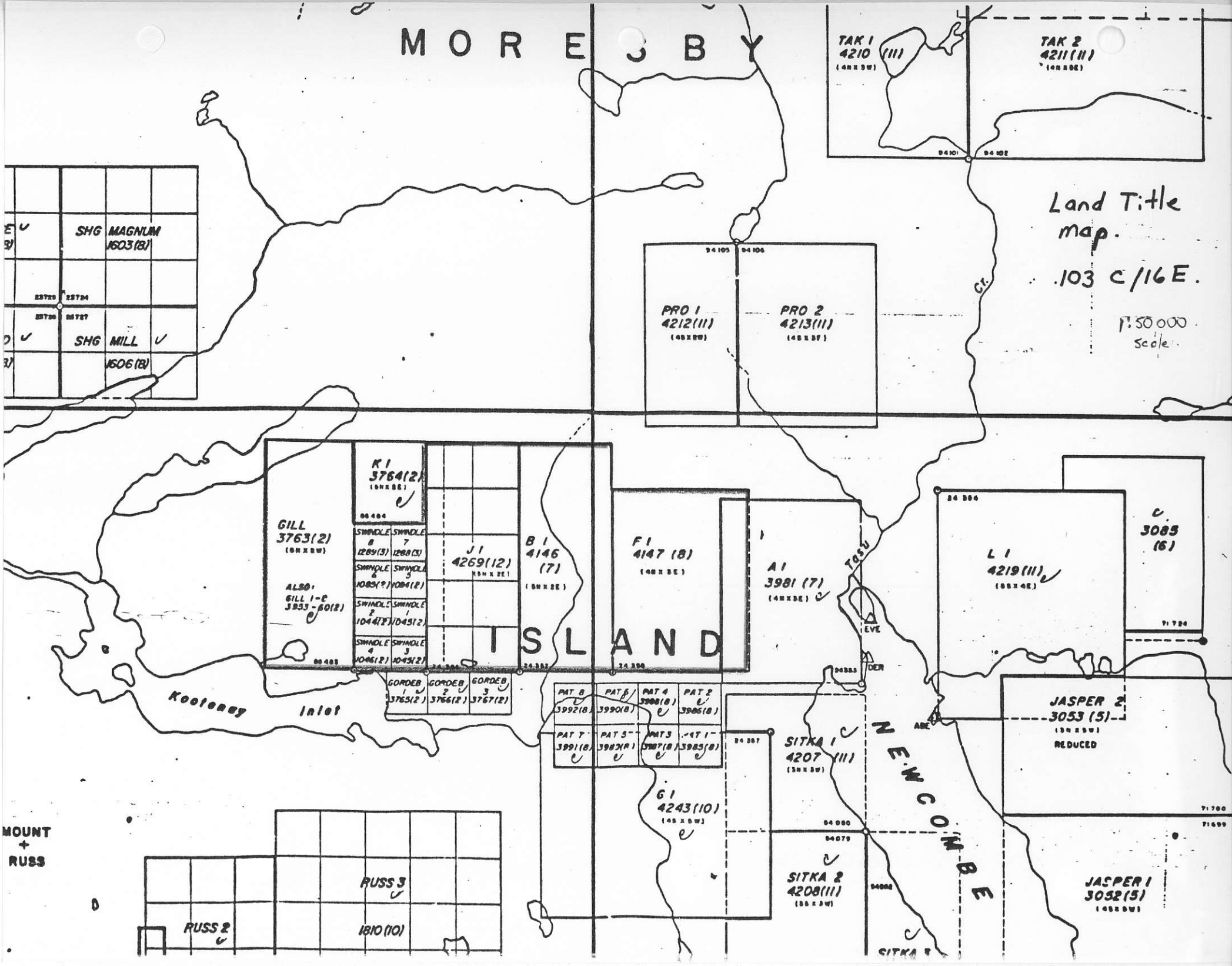
Location # 13 Sample # 13. Grab sample east of location 1, 0.025 oz/ton.

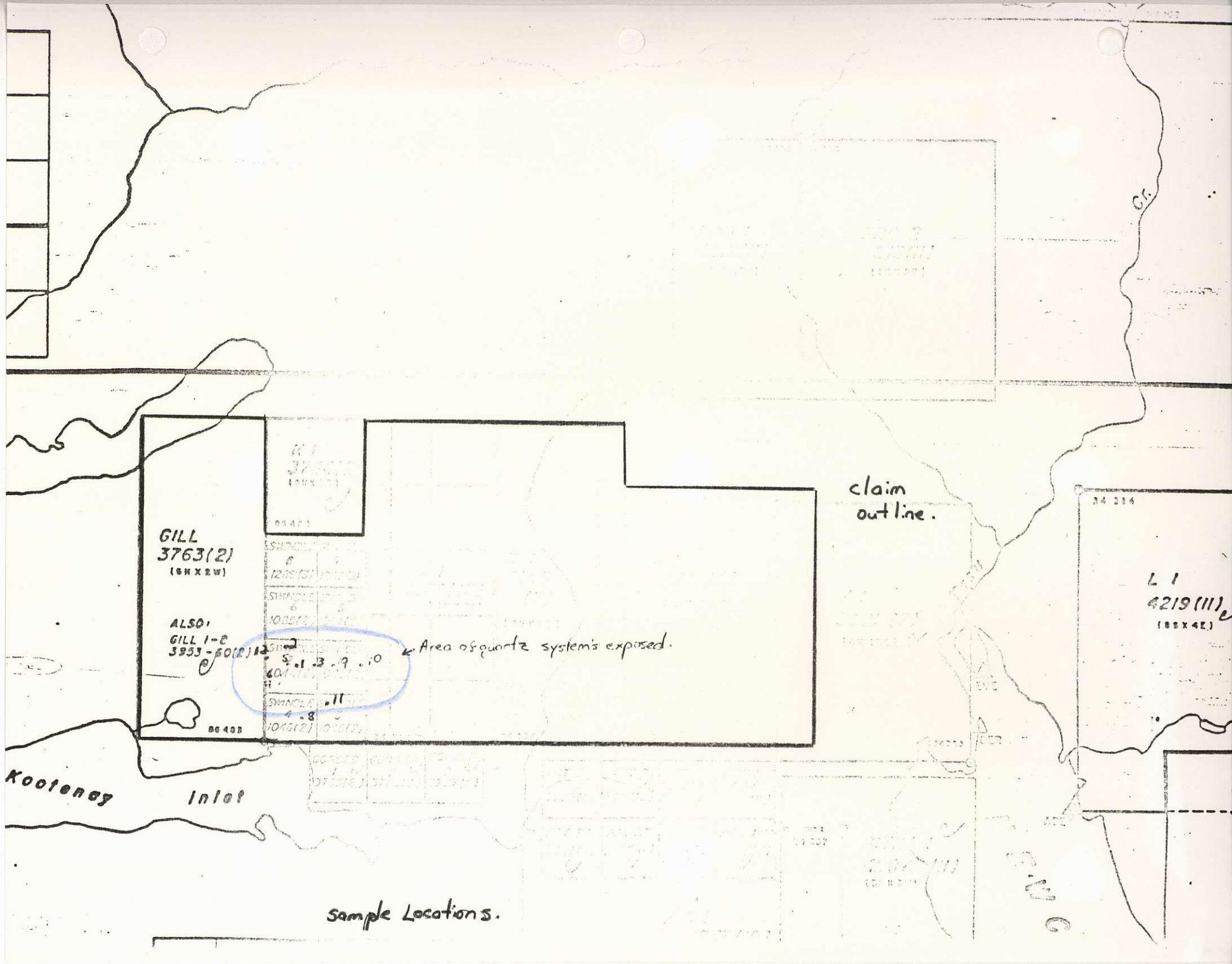
Location # 14 Sample # 14. Chip sample, 5 feet wide vein just east of locations 1 and 13, 0.02 oz/ton.

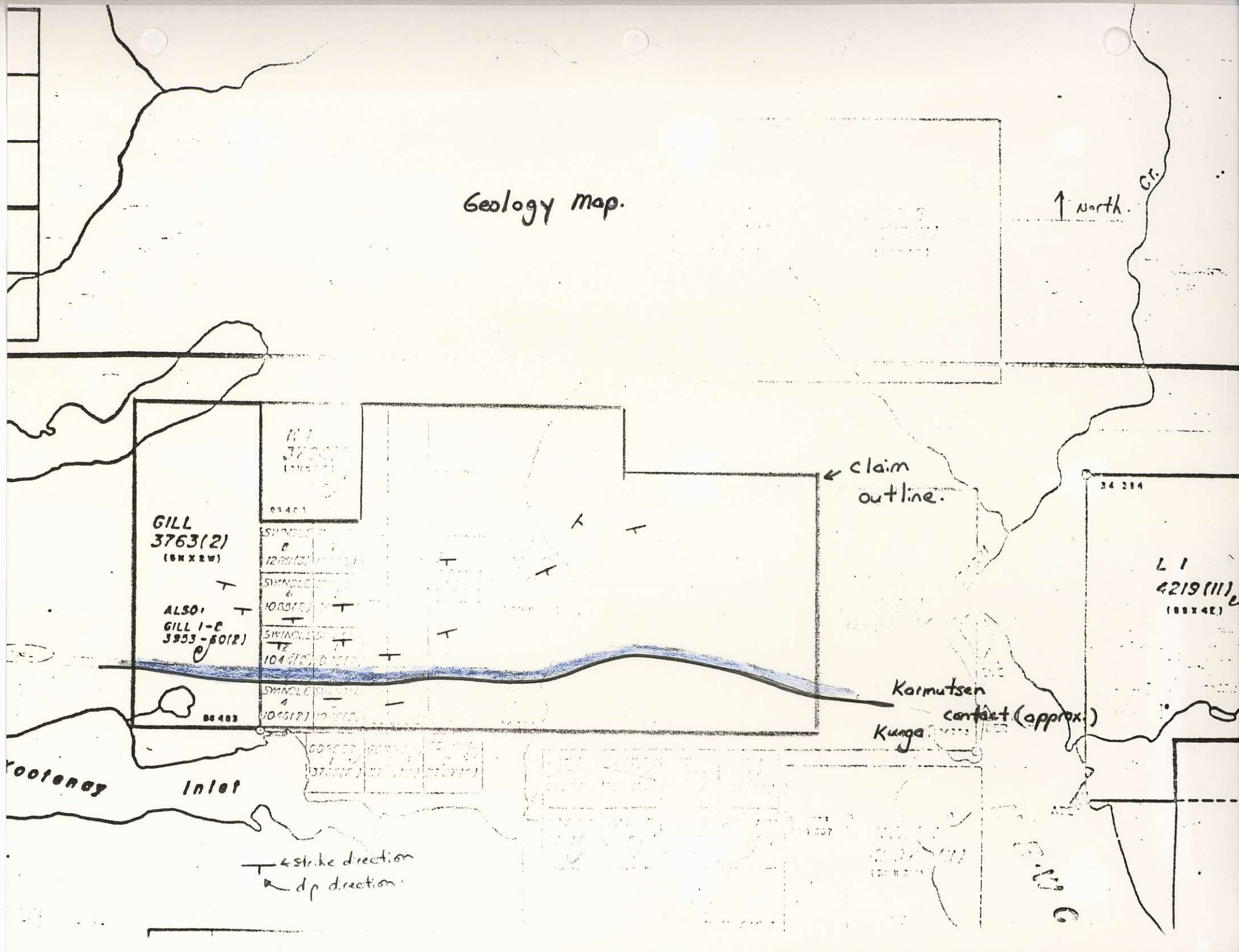
Location # 15 Sample # 15. Grab sample beside location 7, 0.015 oz/ton

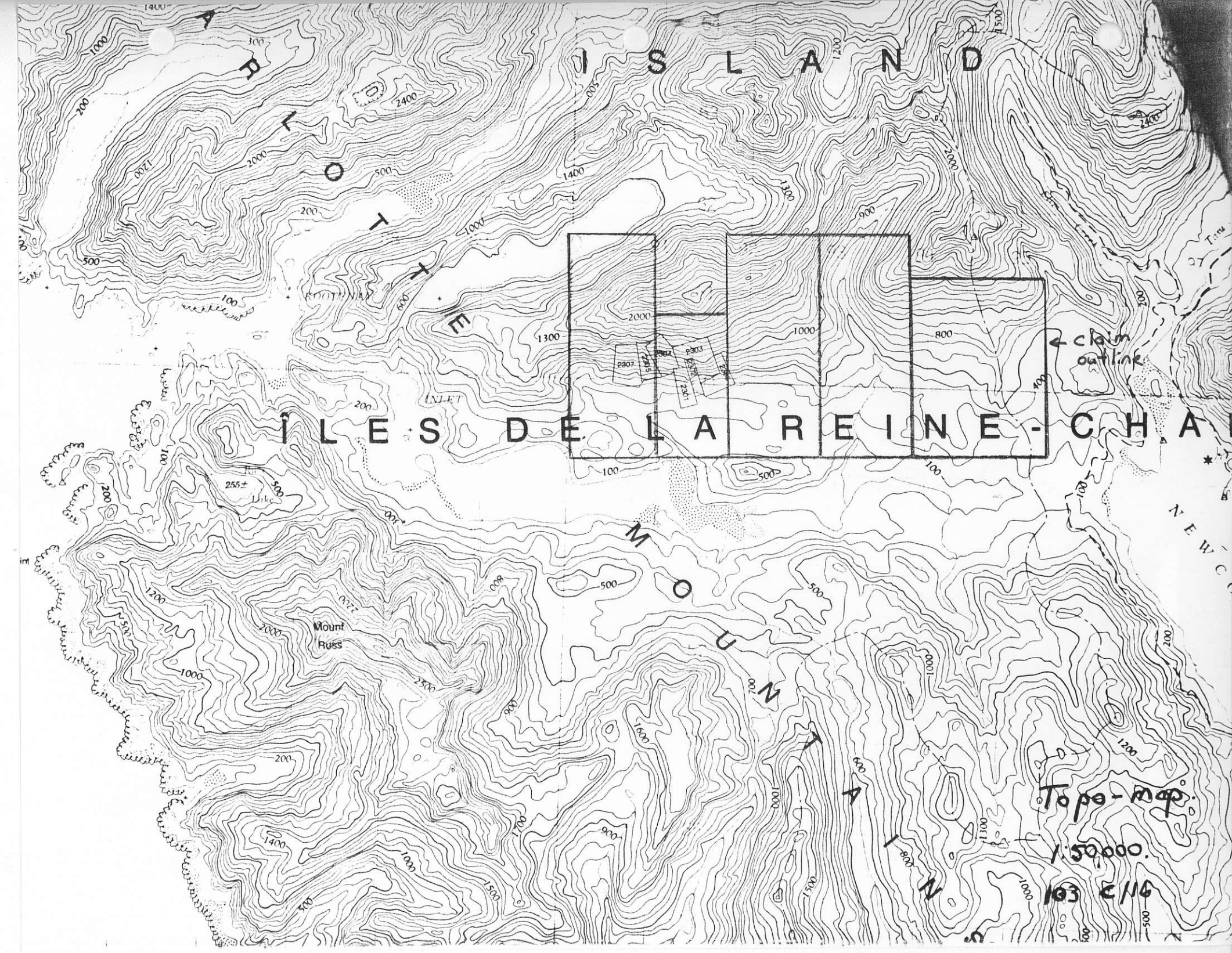
References

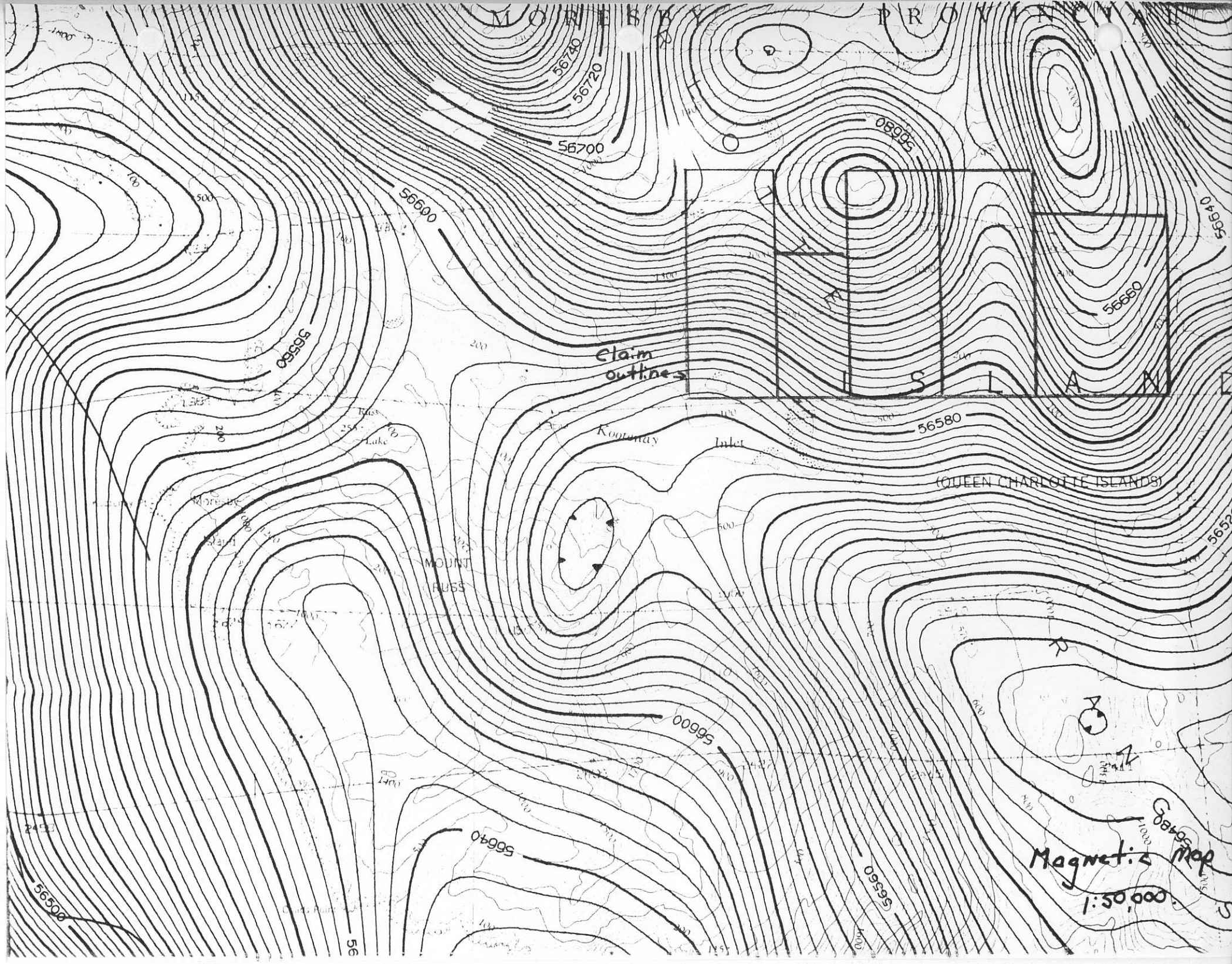
1. Southerland-Brown. 1968 Dept. of Mines Bulletin #54.
2. Hutchison et al 1979 GSC Skeena River Sheet 103
3. Topographic map 1:50000 scale, map 103 C/16
4. Aerial Magnetic Map, sheet 9497 G-1985 Canada Dept. of Mines
5. Cusac Industries Inc. progress report 1984 Kootaney Inlet, Dr. W. Groves March 1985


MOREBY
TAK 1
4210 (III)
TAK 2
4211 (III)
Land Title map.
103 C/16E.
1:50 000 Scale
SHG MAGNUM
1503 (8)
SHG MILL
1506 (8)
PRO 1
4212 (III)
PRO 2
4213 (III)
K1
3764 (2)
GILL
3763 (2)
ALSO:
GILL 1-6
3953-60 (2)
J1
4269 (12)
B1
4146 (7)
F1
4147 (8)
A1
3981 (7)
L1
4219 (III)
3085 (6)
ISLAND
Kootenay Inlet
GORDEB 1
3765 (2)
GORDEB 2
3766 (2)
GORDEB 3
3767 (2)
PAT 8
3992 (8)
PAT 6
3990 (8)
PAT 4
3988 (8)
PAT 2
3986 (8)
PAT 7
3991 (8)
PAT 5
3989 (8)
PAT 3
3987 (8)
PAT 1
3985 (8)
G1
4243 (10)
SITKA 1
4207 (III)
SITKA 2
4208 (III)
JASPER 2
3053 (5)
REDUCED
JASPER 1
3052 (5)
NEWCOMBE
MOUNT + RUSS
RUSS 3
RUSS 2
1810 (10)

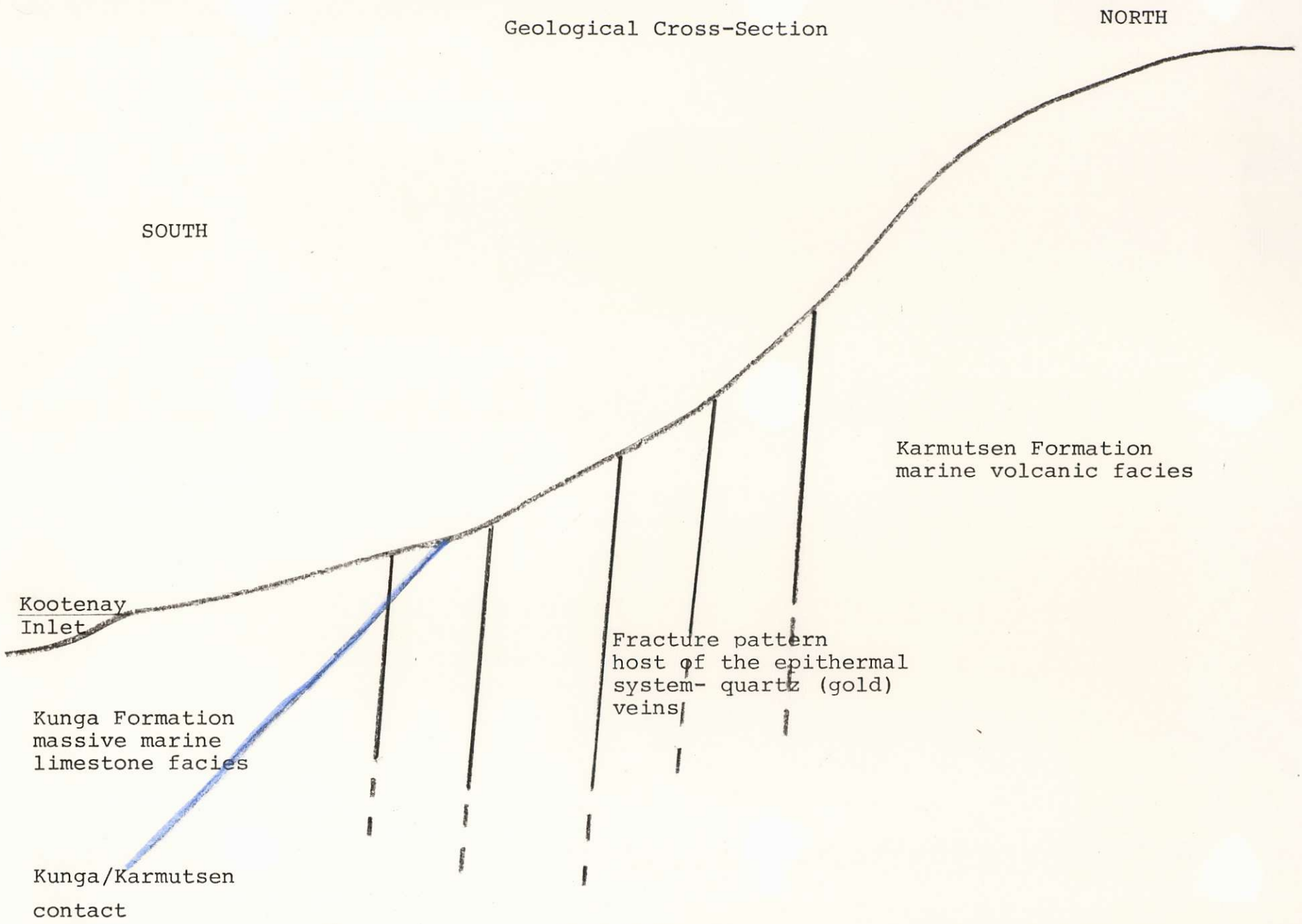

GILL
3763(2)
(6H X 2W)
ALSO:
GILL 1-8
3953-60(2)12
claim
outline.
Area of quartz system's exposed.
.1 .3 .9 .10
.11
.8
L 1
4219 (11)
(8E X 4E)
Kootenay
Inlet
sample Locations.

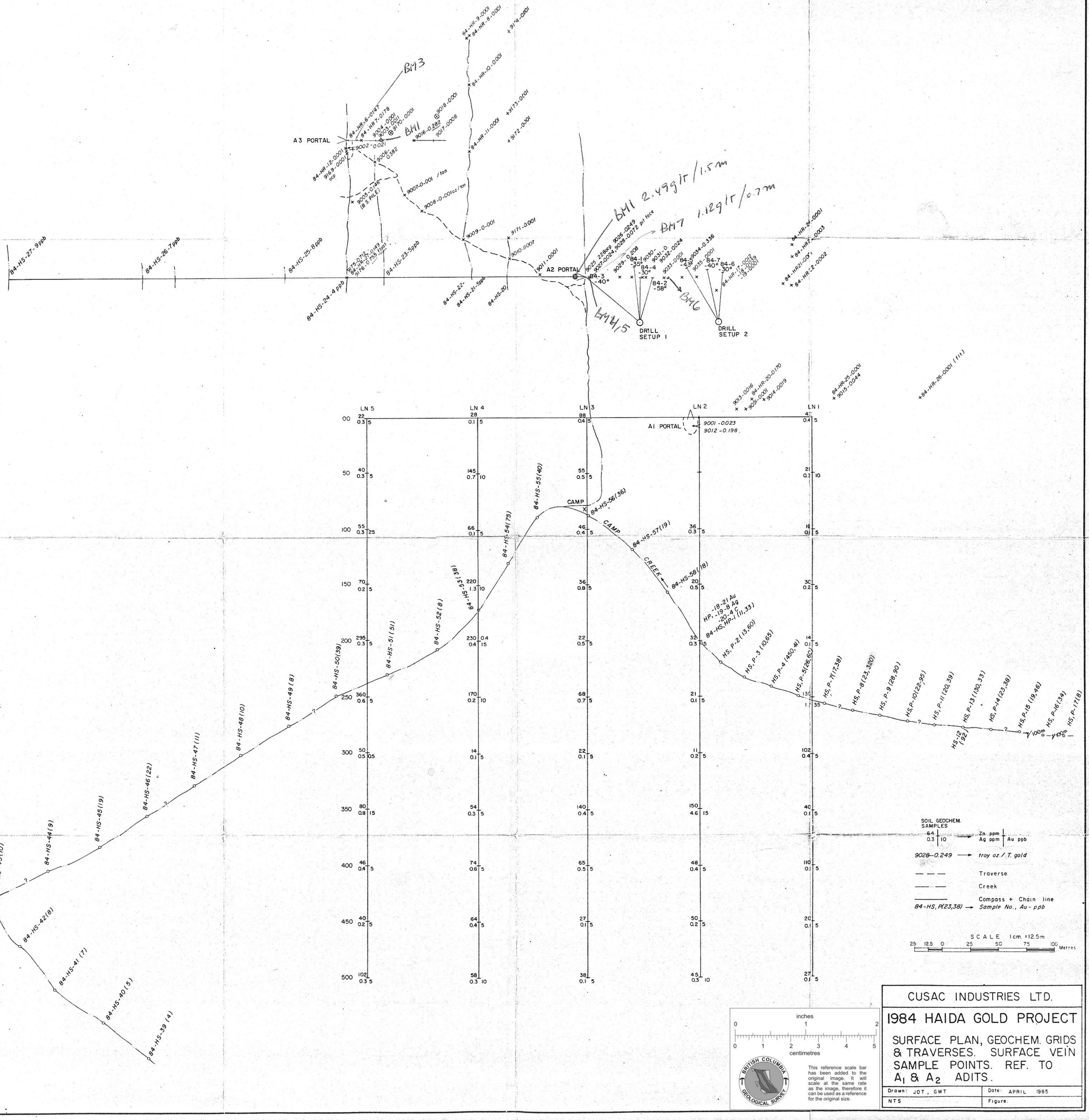

Geology map.
↑ north.
claim outline.
GILL 3763(2) (6N X 2W)
ALSO: GILL 1-C 3953-60(2)
Kormutsen
contact (approx.)
Kunga
Kootenay Inlet
strike direction
dip direction
L 1 4219 (III) (8S X 4E)


ARLOTTE ISLAND
ILES DE LA REINE-CHA
claim outline
Mount Russ
MOUNTAIN
NEWC
Topo-map
1:50,000
103 E/16


MONTEBY
PROVINCIAL
56740
56720
56700
56680
56660
56640
56620
56600
56580
56560
56540
56520
56500
Claim outlines
ISLAND
Kootenay Inlet
(QUEEN CHARLOTTE ISLANDS)
MOUNT
RUSS
Russ Lake
Magnetic Map
1:50,000

Geological Cross-Section





CUSAC INDUSTRIES LTD.

1984 HAIDA GOLD PROJECT

SURFACE PLAN, GEOCHEM. GRIDS & TRAVERSES. SURFACE VEIN SAMPLE POINTS. REF. TO A_1 & A_2 ADITS.

Drawn: JOT, GWT	Date: APRIL 1985
NTS	Figure.