

84-#272 - #12312

COMINCO LTD.

EXPLORATION

WESTERN DISTRICT

NTS: 104 B-11

ASSESSMENT REPORT
1983 GEOLOGICAL AND GEOCHEMICAL REPORT
ON THE
MILL 1, 2, 3, 4, 5, 6, 7 MINERAL CLAIMS
IN THE CRAIG RIVER AREA
LIARD MINING DIVISION, BRITISH COLUMBIA

LATITUDE: 56°34'N LONGITUDE: 131°15'W

OWNER AND OPERATOR: COMINCO LTD.

PERIOD OF WORK: SEPTEMBER 7-25, 1983

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

R.J. SHARP

APRIL 23, 1984

12,312

TABLE OF CONTENTS

	<u>Page No.</u>
INTRODUCTION	1
DETAILED TECHNICAL DATA AND INTERPRETATION	1
Geological Survey	
- Purpose	1
- Lithology	1
- Structure	2
- Mineralization	2
Geochemical Survey	
- Purpose	2
- Field and Analytical Technique	2
- Results	3
 <u>Attachments</u>	
1. Appendix A: Exhibit "A" - Itemized Cost Statement	
2. Appendix B: Author's Qualifications	
3. Plate 1: Location Map	
4. Plate 2: Claim Map	
5. Plate 3: Geology - Rock Geochemistry	
6. Plate 4: Geochemistry - Gold	

COMINCO LTD.

EXPLORATION

WESTERN DISTRICT

23 April 1984

ASSESSMENT REPORT

1983 Geological and Geochemical Report on the
Mill 1, 2, 3, 4, 5, 6, 7 Mineral Claims
in the Craig River Area

INTRODUCTION

The Mill claims are located at 56°34'N latitude and 131°15'W longitude in the Liard Mining Division, northwestern British Columbia NTS 104-B-11. The nearest town is Stewart, B.C., 110 km SSE of the claims. Access is via helicopter from Stewart or from Snippaker Cr. airstrip (30 km east) during the summer months. Plates 1 and 2 show the location of the claims.

The claims were staked in 1983. Cominco Ltd. owns 100% of the claims and is the operator.

The 1983 work consisted of geological mapping and rock plus soil sampling. A total of 400 hectares was geologically mapped and prospected at a scale of 1:10,000. Thirty-five rocks and seventy-one soil samples were analyzed for gold. In addition, thirty-one of the rocks were analyzed for arsenic.

DETAILED TECHNICAL DATA AND INTERPRETATION

i. Geological Survey

a. Purpose

The purpose of the geological survey was to correlate between geology and mineralization and geochemical results. Prospecting for mineralization was also carried out while geological mapping was done.

b. Lithology

The claims cover a sequence of pre-Permian argillite that have been intruded by porphyritic monzonite stocks and by a granodiorite batholith, both related to the coast range intrusive complex. The porphyritic monzonite plugs are believed to be Cretaceous-Tertiary and the granodioritic rocks are early Tertiary (GSC map 1418A, Iskut River).

The Craig River valley follows a northeast structural trend where extensional faults predominate. The early Tertiary intrusives also follow this trend. Figure 3 shows the geology.

Pre-Permian argillite (Unit 1) is the oldest rock type recognized on the claim group. This unit consists of siltstone, cherty siltstone, minor chert beds; minor basaltic volcanoclastic layers are interbedded with the siltstone and chert locally.

Unit 2 is a feldspar porphyry intrusive composed dominantly of coarse grained white feldspar phenocrysts, probably orthoclase. The matrix material is mainly biotite with minor fine grained feldspar and local sericite. Homogeneity, texture and feldspar content is variable. Some outcrops contain minor amounts of calcite (up to 2%) and pyrite (up to 2 1/2%) but no significant alteration was seen.

Unit 3 is a fine grained leucocratic feldspathic rock termed felsite. The felsite carries up to 5% pyrite and intrudes the feldspar porphyry unit as small stocks and in an elongate mass in the northwest corner of unit 3.

Unit 4 is a medium-grained granodiorite, related to the coast range intrusive complex. It is exposed on the higher slopes of the property on Mill 2 and in the walls of Dick Cr.

Unit 5 is a cream coloured mylonite that weathers rusty brown. This unit is developed from shearing of the argillite and is 5-20 m wide. The rock is made up dominantly of finely crushed quartz and feldspar with 20% sericite, 20% biotite and 8% pyrite.

c. Structure

The bedded rocks strike east-west and commonly have steep dips to the north or south. Creek gullies that trend NW and NE on the property probably follow fault planes. The Craig River valley runs NS and bends NE along the easterly side of the claims; this valley is related to Tertiary and Quaternary extensional faulting. Several pyritic mylonite zones, bearing NE and SE, cut the argillite in the central part of Mill 1.

d. Mineralization

No economic minerals were observed in the field. Sampling of discontinuous quartz veins 2-10 cm wide and 1-2 m long, small weakly pyritic and sericitic patches, and two small mylonite zones, did not reveal any significant mineralization. Most areas returned nil to only trace gold values.

ii. Geochemical Survey

a. Purpose

The purpose of the geochemical survey was to test for blind mineralization upslope of the sample sites. The rock sampling program was intended to test for gold values in the different lithologies and favourable zones on the property.

b. Field and Analytical Technique

The geochemical survey consisted of soil and rock sampling on the Mill claims. All soil samples were collected from either the B soil horizon at a

depth of 15-25 cm below surface or from the "fines" at a similar depth on talus covered slopes. Rock chip samples weighing 3 kg were collected from outcrops (1-2 m wide) on the claim group, and were stored in labelled plastic bags. The soil samples were stored in large kraft sample envelopes and shipped to the laboratory for analysis.

All samples were analyzed at the Cominco Exploration Research Laboratory, 1486 East Pender Street, Vancouver, B.C. The soil samples were dried and sieved to -80 mesh then analyzed for Au. Duplicate analyses of 10 g sample portions were made (total 20 g) to test for reproducibility of results for the soils. The rock samples were crushed and sieved to -80 mesh then analyzed for Au and As.

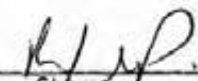
Gold values were obtained by aqua regia digestion of sample material followed by solvent extraction and atomic absorption spectrophotometry. Arsenic was released from the samples by pyrosulfate fusion and its concentration was estimated colourimetrically.

c. Results

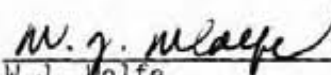
Geochemical results are shown on plate 3, for rock samples, and plate 4, for soil samples. Rock results are low and range from <10 to 122 ppb Au with a median value of 20 ppb Au. Arsenic values are uniformly low.

Results from the soil sampling were negative. No significant values were obtained. The heavy forest, steep slopes and poor soil development may contribute to such poor results but no auriferous zones upslope appear to be present on the property. Duplicate analyses of most of the samples show that the nugget effect is not a factor on the property and support the interpretation that no significant anomalies exist.

Report by:


R.J. Sharp
Geologist II

Endorsed by:


W.J. Wolfe
Assistant Manager

Approved for
Release by:

 for
G. Harden
Manager, Exploration
Western District

RJS/sav

Distribution
Mining Recorder (2)
Western District (1)

APPENDIX A

STATEMENT OF EXPENDITURES

ON THE MILL 1, 2, 3, 4, 5, 6, 7 MINERAL CLAIMS FOR 1983

Geology, Geochemistry

Salaries - Field

R.J. Sharp	September 7 - 25 (19 days x \$176.88/day)	3,360.72
D.A. O'Brian	September 7 - 25 (19 days x \$ 87.12/day)	1,655.28

Salaries - Office

R.J. Sharp	5 days x \$142.04/day	710.23
Drafting	5 days x \$130.00/day	650.00

Transportation

Truck Rental	(3/4 mo. x \$1,016.50/mo.)	762.38
Fixed Wing	Mob + Demob to Snippaker Airstrip	1,116.71
Helicopter	Mob, Demob, Supply (7.98 hrs. x \$550/hr.)	4,389.00
Fuel (Truck)		184.50

<u>Expense Accounts</u>	(Mob, Demob for Crew)	189.58
-------------------------	-----------------------	--------

<u>Freight</u>		147.83
----------------	--	--------

<u>Camp Supplies, Food, Geology Supplies</u>		614.96
--	--	--------

<u>Equipment</u>		500.00
------------------	--	--------

Geochemistry

Rocks	31 x 11.25 (Prep. + Au, As)	348.75
	4 x 7.75 (Prep + Au)	31.00

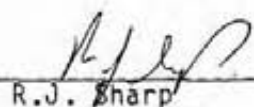
Soils	116 x 5.65 (Prep + Au) (Note 58 x 2-duplicate analysis)	655.40
	13 x 5.65 (Prep + Au) (Single analysis)	73.46

<u>Maps, Photo Enlargements, Reproduction, Office Supplies</u>		123.08
--	--	--------

<u>Radio (Rental)</u>		256.80
-----------------------	--	--------

TOTAL EXPENDITURE		<u>\$15,769.67</u>
-------------------	--	--------------------

Signed:


 R.J. Sharp
 Geologist II

APPENDIX "B"

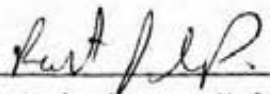
STATEMENT OF QUALIFICATIONS

1, ROBERT J. SHARP, OF THE CITY OF VANCOUVER, BRITISH COLUMBIA, HEREBY CERTIFY:

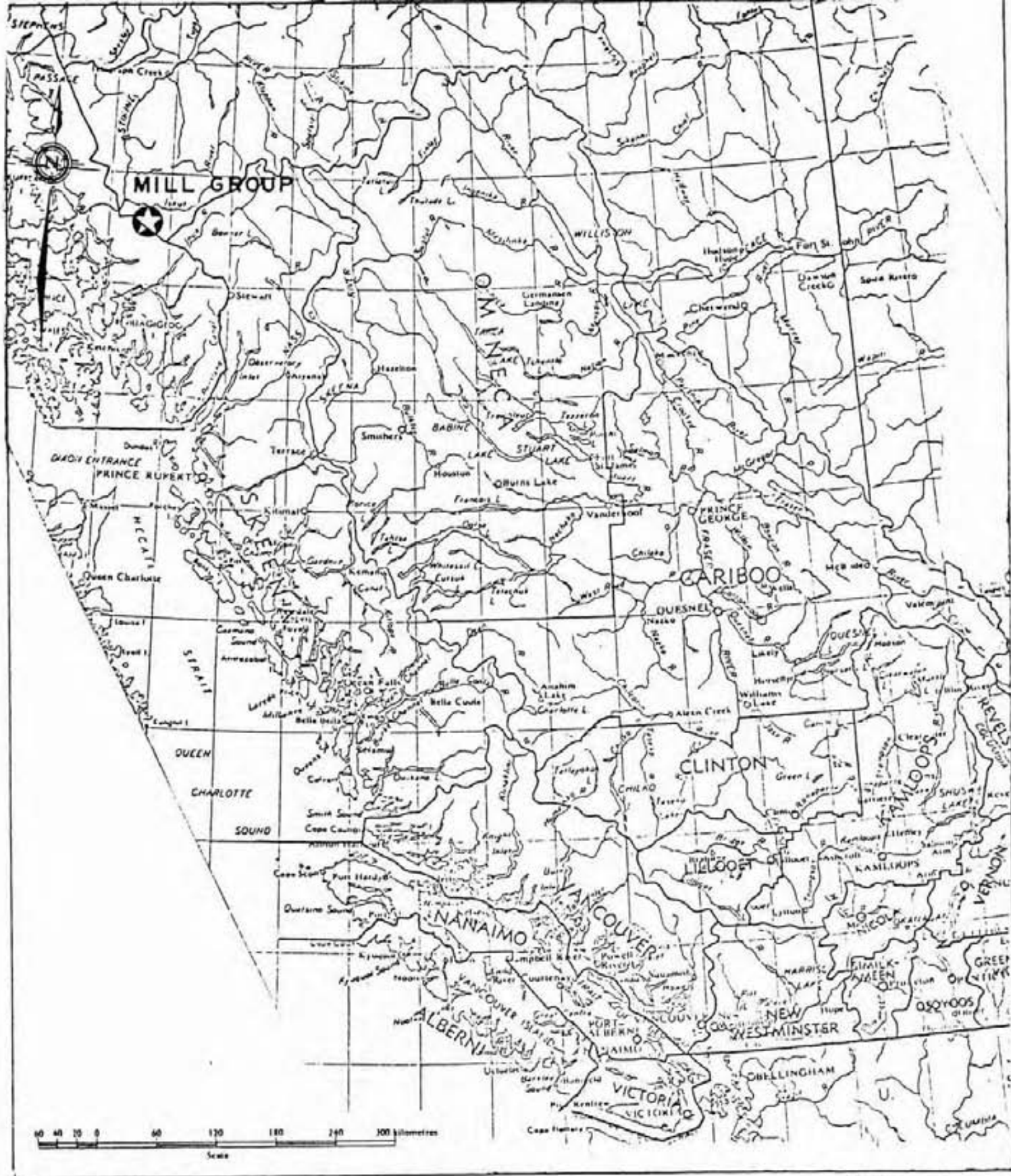
1. THAT I AM A GEOLOGIST RESIDING AT 2819 WEST FOURTEENTH AVENUE, VANCOUVER, BRITISH COLUMBIA, WITH A BUSINESS ADDRESS AT 700 - 409 GRANVILLE STREET, VANCOUVER, BRITISH COLUMBIA.
2. THAT I GRADUATED WITH A B.SC. DEGREE IN MINERAL ENGINEERING FROM THE UNIVERSITY OF ALBERTA IN 1975.
3. THAT I GRADUATED WITH A M.SC. DEGREE IN GEOLOGY FROM THE UNIVERSITY OF ALBERTA IN 1980.
4. THAT I HAVE PRACTISED GEOLOGY WITH THE UNION OIL COMPANY OF CANADA LTD., MINERALS DIVISION, IN CALGARY, ALBERTA FROM 1978 UNTIL 1980.
5. THAT I HAVE PRACTISED GEOLOGY WITH COMINCO LTD. FROM 1980 to 1982.

DATED THIS 23RD DAY OF APRIL 1984, AT VANCOUVER, BRITISH COLUMBIA.

Signed:



Robert J. Sharp, M.Sc.



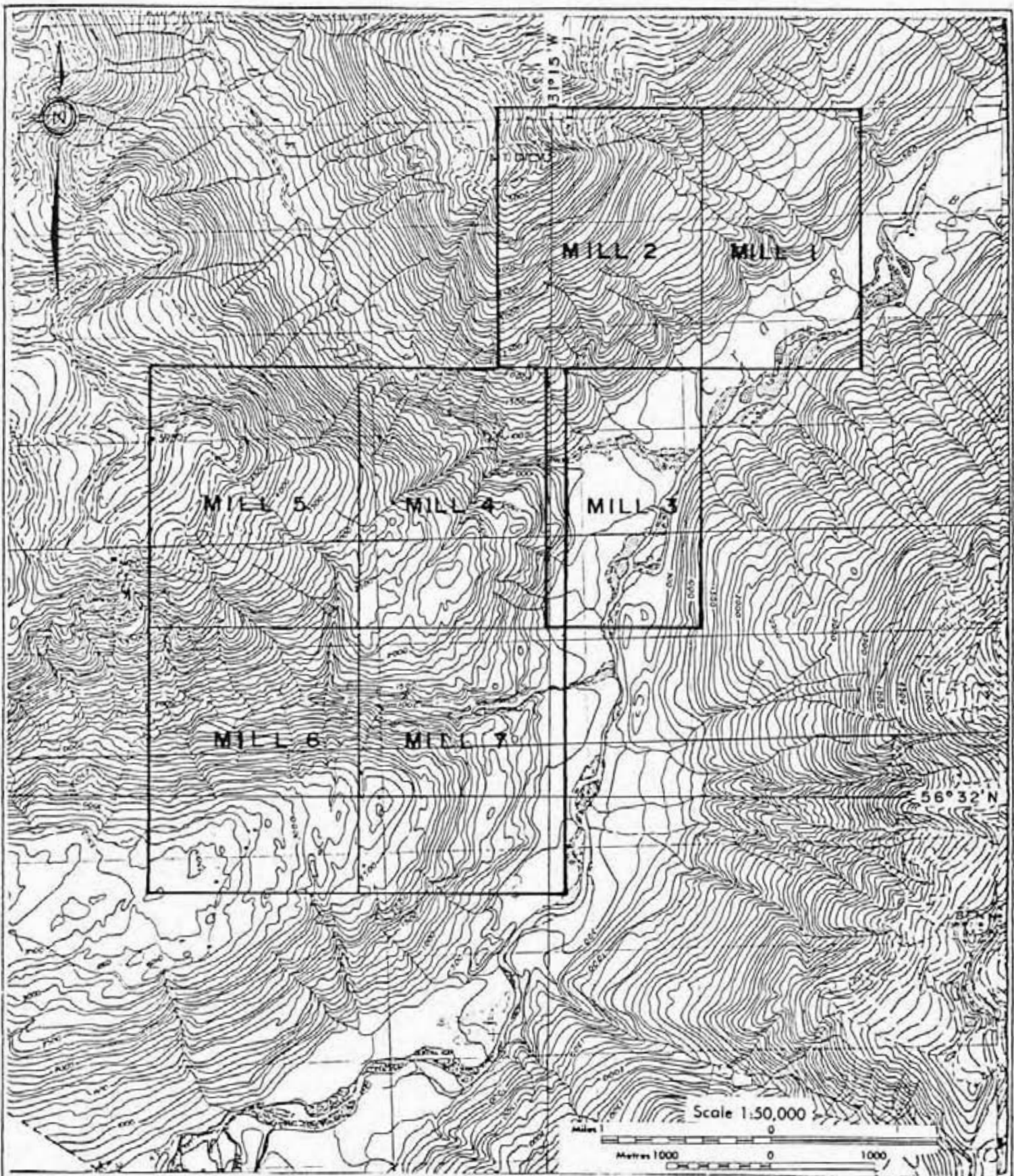
MILL GROUP

COMBINED NTS
104 B 11

Drawn by:	Traced by:
Revised by: Date	Revised by: Date

LOCATION MAP LIARD M.D., B.C.

Scale: 1" = 84 mi Date: APRIL 1984 Plate: 1



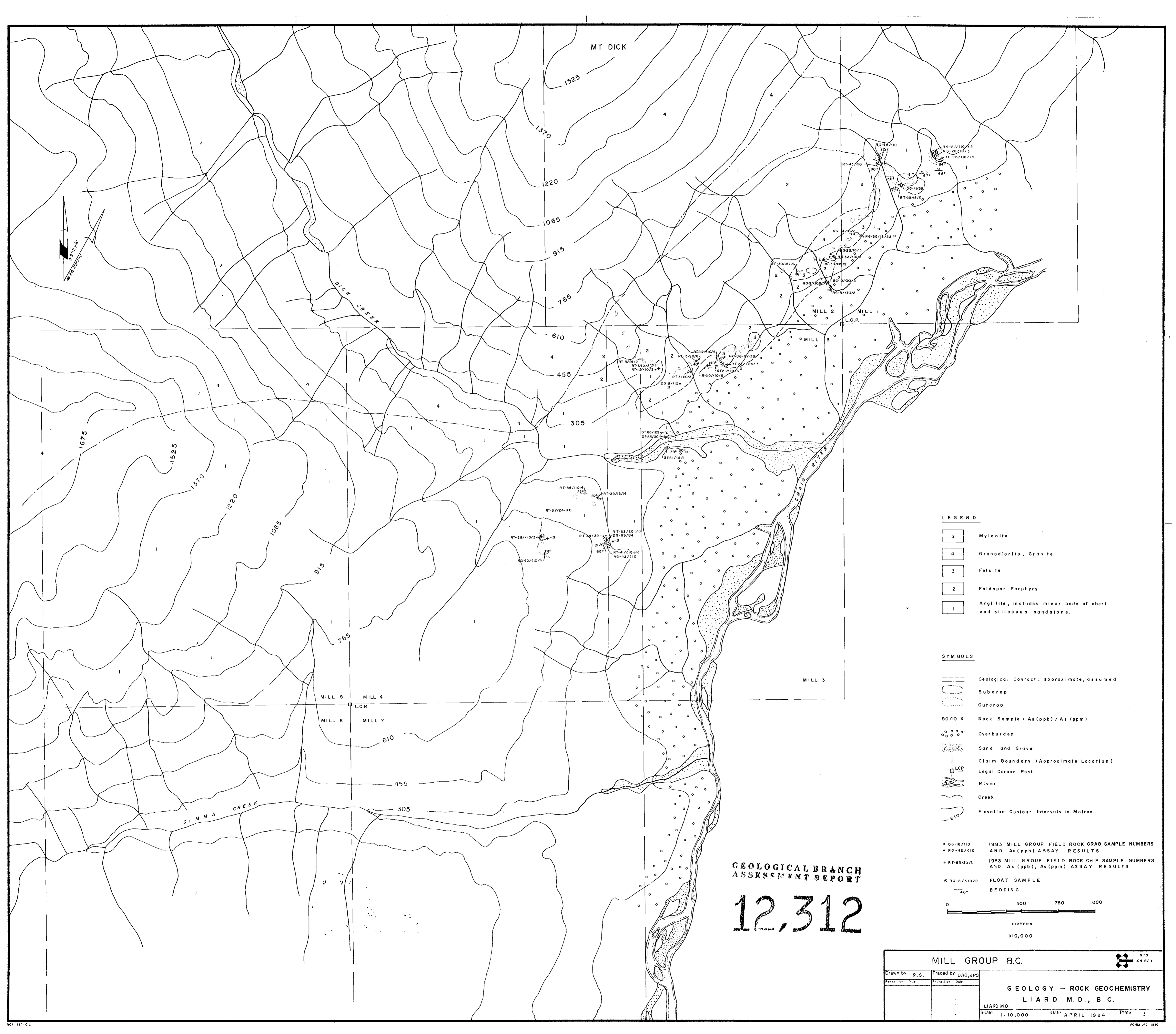
Drawn by:	Traced by:
Revised by: Date	Revised by: Date

NTS
104 B-11

**MILL GROUP
CLAIM MAP**

LIARD M. D., B. C.

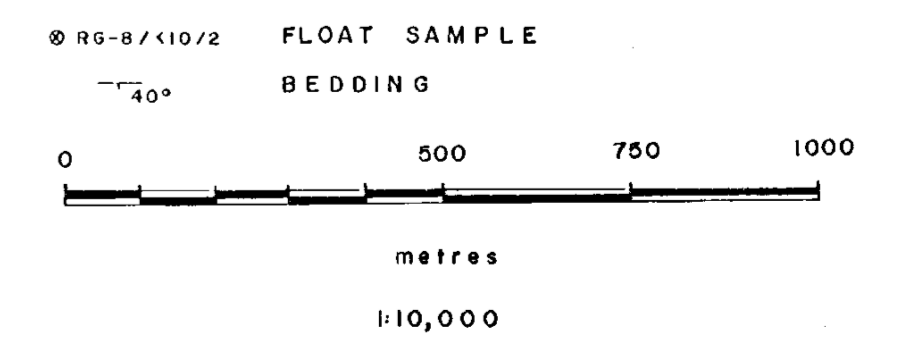
Scale: 1:50,000 Date: Nov. 1983 Plate: No. 2



- LEGEND**
- 5 Mylonite
 - 4 Granodiorite, Granite
 - 3 Felsite
 - 2 Feldspar Porphyry
 - 1 Argillite, includes minor beds of chert and siliceous sandstone.

- SYMBOLS**
- Geological Contact: approximate, assumed
 - Subcrop
 - Outcrop
 - 50/10 X Rock Sample: Au (ppb) / As (ppm)
 - Overburden
 - Sand and Gravel
 - Claim Boundary (Approximate Location)
 - Legal Corner Post
 - River
 - Creek
 - Elevation Contour Intervals in Metres

- 06-18/110 1983 MILL GROUP FIELD ROCK GRAB SAMPLE NUMBERS AND Au (ppb) ASSAY RESULTS
- 06-42/110 1983 MILL GROUP FIELD ROCK GRAB SAMPLE NUMBERS AND Au (ppb) ASSAY RESULTS
- + RT-63/20/2 1983 MILL GROUP FIELD ROCK CHIP SAMPLE NUMBERS AND Au (ppb), As (ppm) ASSAY RESULTS



**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

12,312

MILL GROUP B.C.		 NTS 104 B/11
Drawn by R.S.	Traced by DAO, JPS	
Revised by	Revised by	GEOLOGY - ROCK GEOCHEMISTRY LIARD M.D., B.C. LIARD M.D. Scale 1:10,000 Date APRIL 1984 Plate 3

MT DICK

1525

1370

1220

1065

915

765

610

455

305

1525

1370

1220

1065

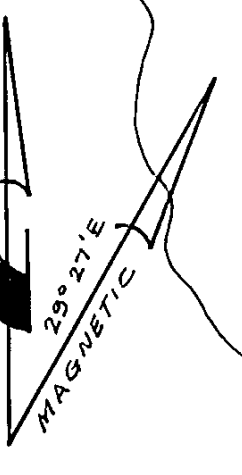
915

765

610

455



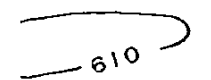

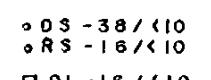
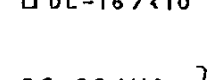
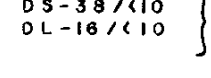
305

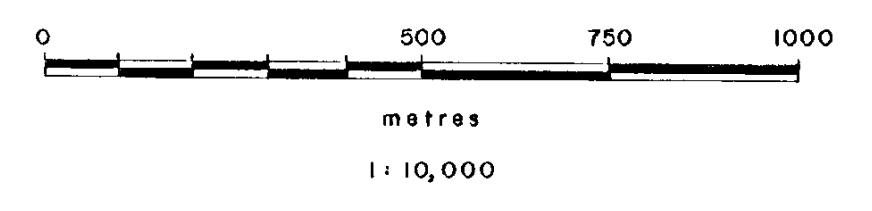


DICK CREEK

SIMMA CREEK

CRAB RIVER

-  RIVER
-  CREEK
-  ELEVATION CONTOUR INTERVALS IN METRES
-  610
-  SOIL SAMPLE
-  SILT SAMPLE
-  1983 MILL GROUP FIELD SAMPLE LOCATION NUMBER / AND Au ASSAY RESULTS



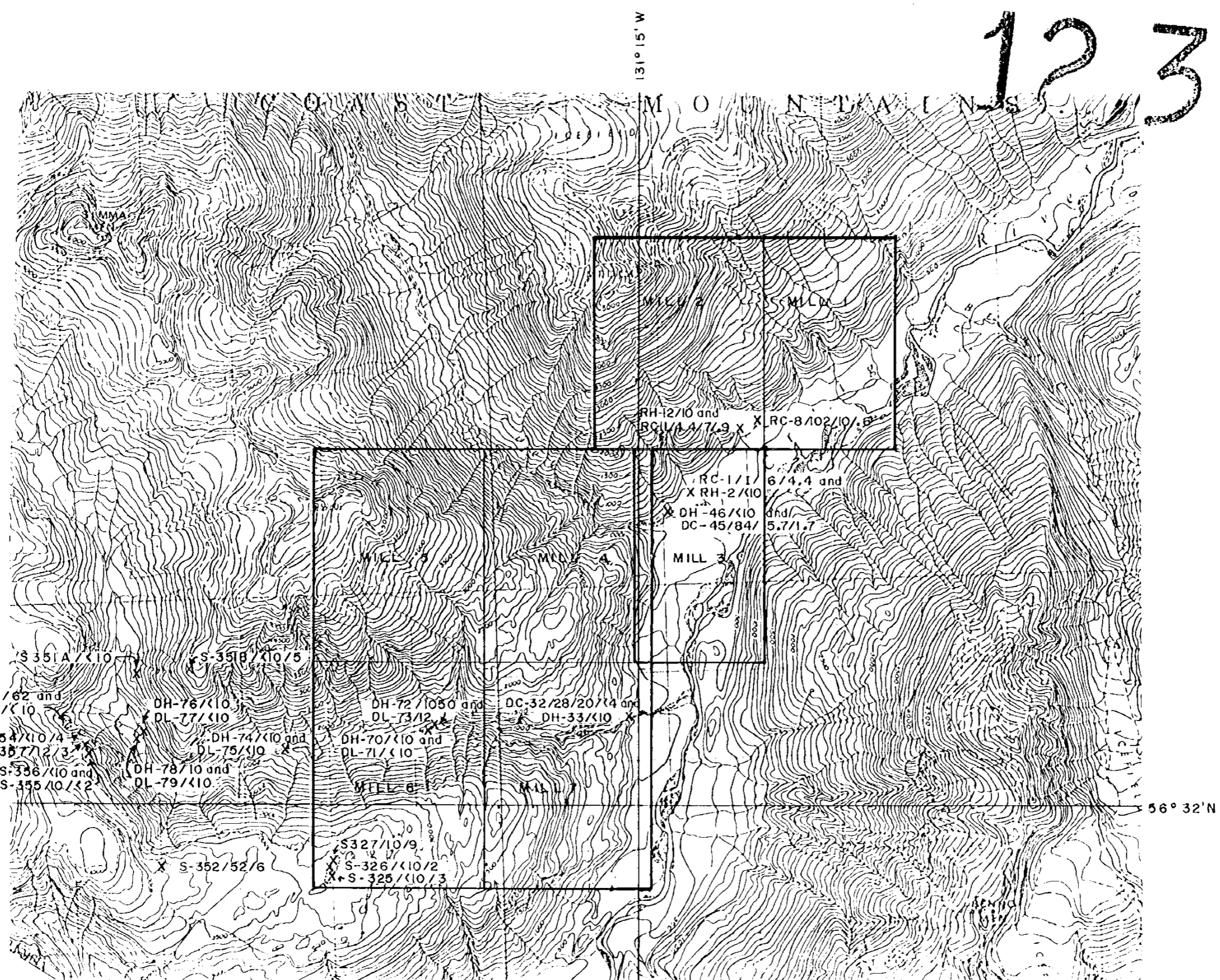
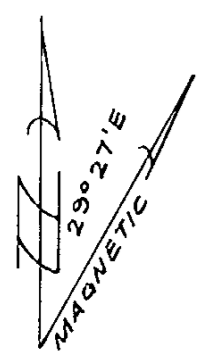
GEOLOGICAL BRANCH
ASSESSMENT REPORT

12,312

MILL GROUP B.C.		NTS 104 B/11	
Drawn By R. S.	Traced by DAO, JPS	GEOCHEMISTRY-GOLD	
Revised By	Revised By	LIARD M.D., B.C.	
Date	Date	Scale 1:10,000	Date APRIL 1968 Plate 4


GEOLOGICAL BRANCH
ASSESSMENT REPORT

12312



- X S-354/10/4 1983 MILL GROUP FIELD ROCK SAMPLE LOCATION AND NUMBER / Au(ppb) / As(ppm) ASSAY RESULTS
- X RH-2/10 1983 MILL GROUP FIELD HEAVY MINERAL SAMPLE LOCATION AND NUMBER / Au(ppb) ASSAY RESULTS
- X DH-76/10
- X DL-77/10 1983 MILL GROUP FIELD SILT SAMPLE LOCATION AND NUMBER / Au(ppb) ASSAY RESULTS
- X RC-1/1/6/4.4 1983 MILL GROUP FIELD PANNED CONCENTRATE SAMPLE LOCATION AND NUMBER / Au(ppb) / Ag(ppm) / As(ppm) ASSAY RESULTS
- X DC-45/84/5.7/1.7
- I INSUFFICIENT SAMPLE MATERIAL CLAIM BOUNDARY (APPROXIMATE LOCATION)



MILL GROUP				 NTS 104 B II	
Drawn by:	R S	Traced by:	J.P.S.	REGIONAL GEOCHEMISTRY LIARD M.D., B.C.	
Revised by:	Date	Revised by:	Date		
Scale: 1:50,000				Date: APRIL 1984	Plate: 5