

COMINCO LTD.

EXPLORATION

NTS: 104K/12E

WESTERN DISTRICT

ASSESSMENT REPORT

GEOLOGICAL REPORT

CO-2 Claim

ATLIN MINING DIVISION

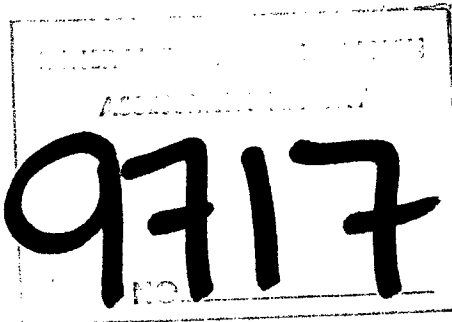
Tulsequah Valley Area

LATITUDE: 58<sup>0</sup>41'N

LONGITUDE: 133<sup>0</sup>35'W

WORK PERFORMED: June 24, 1981

12 AUGUST 1981



J. PAUL SORBARA

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12 August 1981

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CO-2 Claim

ATLIN MINING DIVISION

INTRODUCTION

The CO-2 mineral claim is located on the east side of the Tulsequah river valley, west of the peak of Mt. Manville, about 1 mile south of the Tulsequah Chief Mine. Access to the area is by air from Atlin or by boat from Juneau, Alaska. The property is part of a contiguous group of claims which extend from north of the Tulsequah Chief Mine to the Big Bull mine some 5.6 miles to the South. All of this property is currently owned by Cominco Ltd. The mines, which are now inactive, were operated by Cominco Ltd. until 1957.

GEOLOGICAL SURVEY

On June 24, 1981 two east-to-west traverses were completed across the CO-2 claim. These were conducted by the author, assisted by P.L. Armstrong and by J.D. Weir, who is a geology student at the University of Manitoba. Mapping was carried out using provincial government air photo BC5614 - No.180 as a base and is at a scale of roughly 1/2 mile to the inch. The total length of the traverses is roughly 2.5 miles.

TECHNICAL DATA

The purpose of this work was to examine the area for the possible occurrence of felsic volcanic centers. These occur, and are believed to be related to mineralization, at the Tulsequah Chief mine to the north, and the Big Bull mine to the south. The traverses were started at an elevation of 1100 m and ended at the Tulsequah River flood plain which has an elevation of 100 m at that point.

The rocks encountered along most of the traverses comprised massive dark to medium green volcanics containing dark angular fragments and some epidotized phenocrysts up to 2 mm across. These are interpreted to be andesite flows. However at two locations, elevations 680 m on the northern line and 220 m on the southern line, felsic rocks were

2.

found. These comprised fine-grained buff white volcanics with possible flow banding or tuffaceous layering and the odd small plagioclase phenocryst. No mineralization was seen in the rocks, which are believed to be rhyolite flows or tuffs. Samples were taken for slabbing and thin sections. Two silt samples were also taken.

### INTERPRETATION

The presence of felsic rocks within the CO-2 claim is interpreted to indicate proximity to a volcanic center with which stratabound mineralization may be associated.

Report by: J. Paul Sorbara  
J.P. Sorbara  
Geologist

Endorsed by: F.D. Gill  
F.D. Gill  
Assistant Manager

Approved for  
Release by: G. Harden  
G. Harden  
Manager,  
Exploration,  
Western District

JPS/skg

#### Distribution

Mining Recorder (2)  
Western District (1)  
JPS/FDG (2)

## TECHNICAL RESULTS

### 1. Silt Sampling (See Locations - Plate 2)

<u>Sample</u>	<u>Cu(ppm)</u>	<u>Pb(ppm)</u>	<u>Zn(ppm)</u>	<u>Ag(ppm)</u>	<u>Au(ppb)</u>
CS-81-21A	34	<4	49	<.4	<10
CS-81-21B	56	<4	59	<.4	<10

### 2. Thin Sectioning (See Locations - Plate 2)

#### CR-18-3J

Sample CR-81-3J is a felsic volcanic rock which is predominantly composed of fine-grained recrystallized quartz with some dirty grey-brown sericitic alteration and minor very-fine pyrite. In hand sample the specimen is bone white with fine (<1 mm) laminae of grey quartz, parallel to rusty to tan coloured staining, defining a pronounced foliation of a primary nature. The sample is believed to be a rhyolitic ash fall tuff.

#### PS-81-18

Sample PS-81-18 is a dark, massive, grey-green rock containing substantial chlorite, sericite and minor carbonate together with altered plagioclase remnants, dark fine-grained angular lithic(?) fragments and quartz. Chlorite-sericite occurs both in the groundmass and in irregular fine stringers along with epidote. The largest stringer appears to be a fracture filling about 3 mm across. The sample is believed to represent a subaqueous andesitic flow.

#### PS-81-20

Sample PS-81-20 is a medium green to grey, very fine-grained volcanic rock which has a high quartz content, along with chlorite and some sericite and minor carbonate. The specimen exhibits a layer-parallel foliation defined by siliceous bands some 4-5 mm thick, separated by thin sericitic partings. A possible flame structure occurs on one of these bands which are believed to reflect original or reworked bedding in a subaqueous andesitic to dacitic ash.

#### PS-81-22

Sample PS-81-22 is a light-green to off-white rock with subhedral quartz phenocrysts to 1-2 mm as well as some scattered euhedral pyrite cubes to 2 mm in a highly altered, mottled groundmass. Chlorite + sericite are abundant and the rock is irregularly fractured. Fractures contain rusty weathered material and some epidote. The sample is believed to be an altered intermediate to felsic volcanic rocks.

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APPENDIX I

STATEMENT OF EXPENDITURES

SALARIES

J. Paul Sorbara	June 24, 1981 - 1 day @ \$161.04/day	\$ 161.04
J.D. Weir	June 24, 1981 - 1 day @ \$105.60/day	105.60
P.L. Armstrong	June 24, 1981 - 1 day @ \$ 93.28/day	93.28
		<u>\$ 359.92</u>

GEOCHEMISTRY

6 rock samples slabbed @ 1.50/sample	9.00
4 rock samples thin sectioned @ 6.50/sample	26.00
2 silt samples analysed @ 7.50/sample	15.00
	<u>\$ 50.00</u>

TOTAL: \$ 409.92

Signed: *J. Paul Sorbara*  
J.P. Sorbara, Geologist

12 August 1981

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APPENDIX II

IN THE MATTER OF THE B.C. MINERAL ACT AND  
IN THE MATTER OF A GEOLOGICAL AND GEOCHEMICAL  
PROGRAM CARRIED OUT ON THE  
CO-2 MINERAL CLAIM  
LOCATED IN THE ATLIN MINING DISTRICT  
OF THE PROVINCE OF BRITISH COLUMBIA  
MORE PARTICULARLY NTS: 104K/12E

A F F I D A V I T

I, JAMES PAUL SORBARA, OF THE CITY OF NORTH VANCOUVER IN THE PROVINCE OF BRITISH COLUMBIA, MAKE OATH AND SAY:-

1. THAT I am employed as a geologist by Cominco Ltd., and as such have a personal knowledge of the facts to which I hereinafter depose;
2. THAT annexed hereto and marked as Appendix I to this my affidavit is a true copy of expenditures for geological mapping on the CO-2 mineral claim.
3. THAT the said expenditures were incurred on June 24 1981 for the purpose of mineral exploration on the above noted claim.

Signed: \_\_\_\_\_

*J. Paul Sorbara*  
J. Paul Sorbara, Geologist

12 August 1981

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APPENDIX III

STATEMENT OF QUALIFICATIONS

I, J. PAUL SORBARA, OF THE CITY OF NORTH VANCOUVER, IN THE PROVINCE OF BRITISH COLUMBIA, HEREBY CERTIFY:-

1. THAT I am a geologist residing at 1209-2012 Fullerton Avenue, North Vancouver, British Columbia, with a business address at 409 Granville Street, Vancouver, British Columbia.
2. THAT I graduated with a B.Sc. in geology from the University of Toronto, Toronto, Ontario in 1976, and with a M.Sc. in geology from the University of Toronto in 1979.
3. THAT I have practised geology with Cominco Ltd. from 1979 to 1981.

Signed: \_\_\_\_\_

*J. Paul Sorbara*  
J. Paul Sorbara, M.Sc.

12 August 1981



133°30'

58°45'



TULSEQUAH RIVER

CO 1  
995 (3)

CO 2  
996 (3)

CO 3  
997 (3)

CO 5  
998 (3)

K  
303

TAKU RIVER

9717

0 .5 1  
Miles

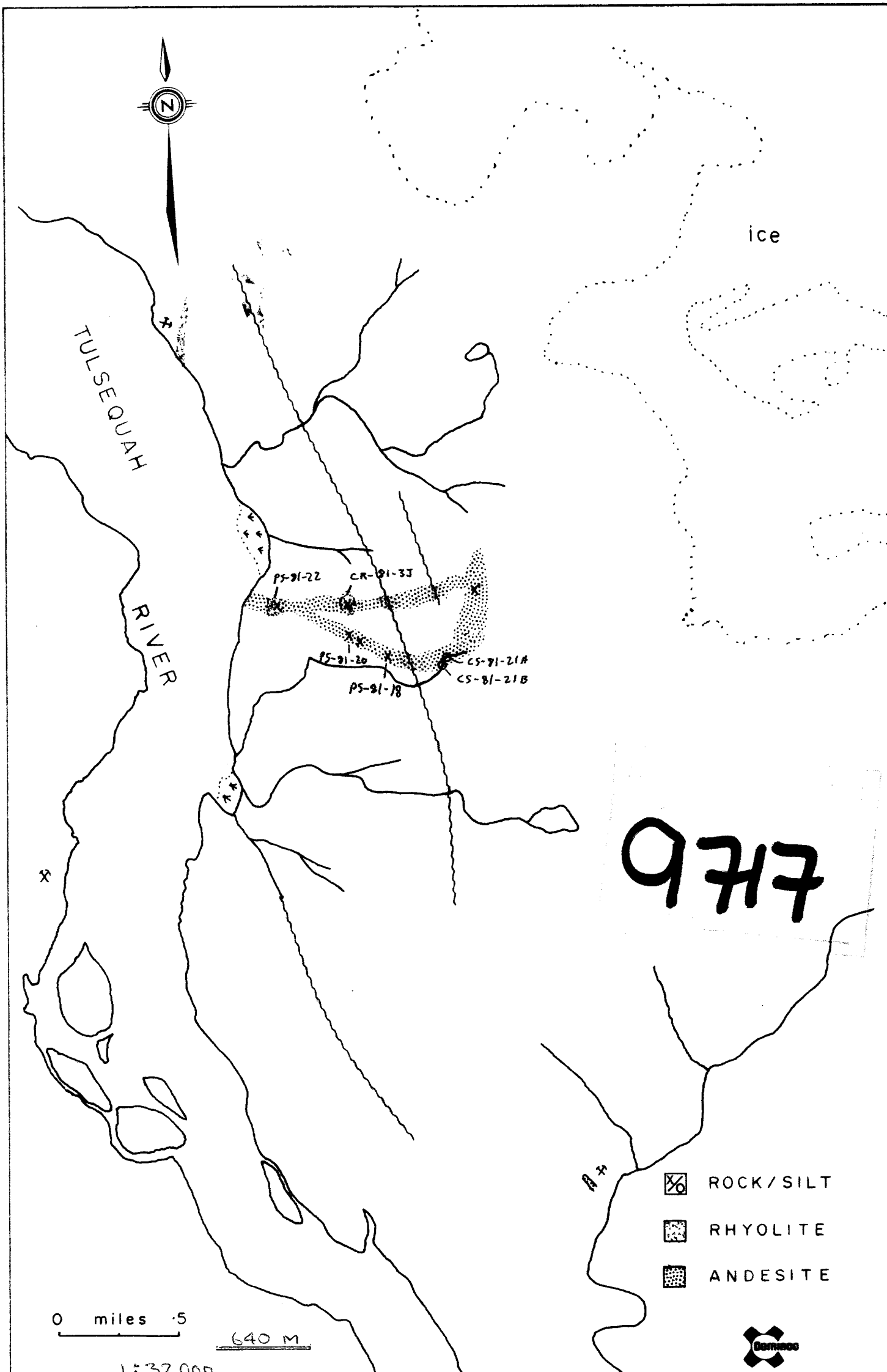
1 KM.



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

**MAP I**  
**INDEX AND CLAIM LOCATIONS**  
 (as per claim map 104K/12E)

Scale: 1 : 50,000      Date: august 12 / 81      Plate: 1.



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

**MAP 2**  
**GEOLOGY OF C-2 CLAIM**  
**JUNE 24, 1981 TRAVERSES**

Scale: AIR PHOTO BC 5614 No. 180      Date: AUGUST 12, 1981      Plate: 2