

COMINCO LTD.

EXPLORATION
N.T.S. 92I/9W

WESTERN DISTRICT
JUNE 5, 1978

PERCUSSION DRILLING
ASSESSMENT REPORT
AND 2 (RECORD NO. 314)
SHUMWAY HILL AREA
KAMLOOPS M.D., B.C.
50°32'30"; 120°17'30"

MINERAL RESOURCES BRANCH ASSESSMENT REPORT 6752 NO. _____
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(Work Performed May 23 - June 2 , 1978)

INTRODUCTION

This report describes a percussion drilling program on a property owned and operated by Cominco Ltd. near the southeast contact of the Iron Mask batholith in the Kamloops Mining Division, South Central, B.C.

SUMMARY

Cominco Ltd. acquired this 20 unit claim by staking in March 1976 on the basis of published geological and geophysical information on the southern Iron Mask batholith area. The principal area of interest on the claim is a large I.P. anomaly indicated by an I.P. survey conducted by Kenting Exploration Services Ltd. in 1972 on the Jean claim on behalf of its owners Joy Mining Ltd. Only scant drilling information was available. It was considered that an untested potential existed in the western part of the anomaly where no drilling had been done. Programs involving geological mapping, confirmatory I.P. and percussion drilling were carried out by Cominco Ltd. The final part of this program, the percussion drilling, has recently been completed and this report describes the drilling and suggests the probable explanation for the anomaly.

LOCATION AND ACCESS

The property covers grazing land and light forested areas lying between Shumway Hill in the west and Shumway Lake in the east. Highway No. 5 linking Kamloops to Merritt runs along the eastern edge of the claim. Access to the central part of the property and the area of interest is via Jackson Road from Highway No. 5 at a point 8 km south of Knutsford. Four km south along this road is the base of Shumway Hill and the beginning of the area of interest.

PREVIOUS WORK

Joy Mining Ltd. during the Afton rush in 1972 conducted the first systematic exploration program known on what is now AND 2. The first part of the work consisted of about 64 km of I.P. and resistivity surveying on the property. This was a time domain survey carried out by Kenting Exploration Services Ltd., Calgary, Alberta.

The survey is the subject of B.C. Ministry of Mines Assessment Report No. 4306 by T.R.B. Dundas. This survey indicated a very large anomaly covering all of the former JEAN 9 to 14 mineral claims. The central part of the anomaly falls within the 15 to 20 millisecc apparent chargeability contour and this area was subject to a drilling program involving both percussion and diamond drilling. A total of 21 percussion holes are reported to have been drilled totalling 1888 m (6230 feet) (Pentland). An additional total of about 450 meters (1475 feet, more or less) of diamond drilling is reported in two holes, one of which is said to have been drilled to 386 m (1275 feet) @ -45° (Pentland). Cominco Ltd. has found a total of 16 percussion hole collars in the central part of the anomaly along lines 48N, 60N and 68N and two diamond drill collars in the same general area as the percussion drilling. Quite possibly the remaining five percussion holes are located in the southern part of the I.P. anomaly where no detailed search for holes has been carried out. None of the drilling was filed for assessment purposes and Cominco Ltd. has not been able to secure a map showing the location of the holes or the individual depth reached. Pentland indicates that strongly fractured ground occurring in the central part of the I.P. anomaly prevented the holes from reaching the designed depth of 121 m. Instead depths of 45 to 91 m were reached. He indicates the percussion holes intersected ground impregnated with pyrite but the assays were submarginal with only a few grains of chalcopyrite noted. A deep diamond drill hole collared in the north central part of the anomaly was designed to cross cut the anomaly as much as possible on a 270° azimuth @ -45°. This hole was lost when the rods became stuck at 386 m (1275 feet). Pentland reports submarginal copper values from the diamond drilling with only a few visible grains of chalcopyrite. A report in George Cross Newsletter No. 197, October 12, 1972 states that 272 m (900 feet) of the core carried copper minerals including chalcopyrite, bornite and native copper. No assay information was ever published on any of this drilling. The drill core was subsequently dumped. From the available data it seemed possible that a substantial sulphide system was indicated and although the anomaly had already been extensively drill tested some possibility for economic copper mineralization remained untested in the western part of the anomaly. Geologically, the area is favourable because of its close proximity to the Iron Mask batholith, a structural intersection in the area, and the possibility of preserved supergene mineralization under the nearby Kamloops capping. Following ground acquisition in 1976 Cominco Ltd. carried out 1"=1000' scale geological mapping on AND 2. This work suggested that favourable augite porphyry of the Upper Triassic Nicola group was far more widespread than indicated by the 4 mile

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scale mapping of the G.S.C. Virtually all outcrops found were of this lithology. I.P. was done on an adjacent AND claim to the north and this work was extended to include a line over part of the Joy I.P. anomaly. The result of this test was positive and a decision was then made to drill a few percussion holes in the western part of the anomaly. This work was originally planned for 1977 but other priorities lead to its postponement.

GRID REFERENCE

This area being grazing land, the grid had become more or less totally obliterated with only a few pickets, or remnants of pickets, bearing recognizable coordinates. The position of the grid was first re-established by us in 1976 at which time the grid was in a much better condition than at present. The position of the above lines is shown on the attached maps in order that the present work can be related to the Apparent Chargeability plot, Figure No. 2 of Assessment Report 4306.

PERCUSSION DRILLING

Two holes totalling 146 m were drilled on AND 2 mineral claim. The position of the holes is shown on the attached plan, and the rock description that follow include the coordinates, elevation of collars, depths of overburden and individual lengths of the holes.

Percussion hole 78-2 is a 250 m westward step-out from the Joy percussion drilling. Information obtained by word of mouth upon the completion of this hole indicated that most of Joy holes on line 48 and the western part of line 60 N had intersected similar sediments to the hole just completed. A second hole was drilled about 225 m to the north. This hole, 78-3, intersected pyritic sediments as well. At this point drilling was stopped as the anomaly seems due to the pyritic sediments which probably offer little Cu potential.

ROCK DESCRIPTION

PH AND 78-2
Coordinates 1#29E, 48+38N
Length of hole 54.6 m (180 feet)
Collar elevations 3150 m

<u>Interval</u>	<u>Lithology</u>	<u>Description</u>
0' - 18' (0-5.5 m)	Overburden	
18' - 180' (5.5-54.6 m)	Argillite	Black, pyritic, containing ½ - 3% pyrite occurring mainly in fine grained disseminated form, minor coarse fracture fillings in feldspathic gangue. No copper minerals observed.

<u>Interval</u>	<u>Lithology</u>	<u>Description</u>
		No chalcopryrite noted. Pyrite content is the highest at the top and decreases with depth.

Hole lost at 54.6 m when the rods sanded in.
All equipment recovered from hole.

ROCK DESCRIPTION

PH AND 78-3
Coordinates BL at 58+00N
Length 91 m (300 feet)
Collar Elevation 3150 feet

<u>Interval</u>	<u>Lithology</u>	<u>Description</u>
0 - 35' (0-10.6 m)	Overburden	
35' -300' (10.6-91 m)	Argillite	Black, pyritic similar to 78-2 but containing generally <1% py. The pyrite content decreases with depth. No copper minerals were observed.

CONCLUSIONS

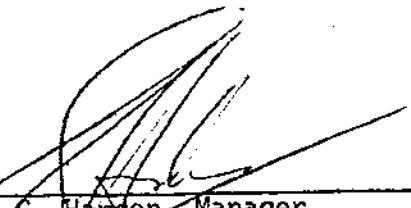
It is considered that the fine grained character of the pyrite as well as the indicated amounts of pyrite present offer an explanation for the I.P. anomaly. Phyllosilicates undoubtedly contribute to the I.P. effect but the amount or types present were not determined. Pyritic sediments were not considered important as a cause of this anomaly originally because of the preponderance of augite porphyry outcrops in the area. It does now, however, appear that the pyritic sediments outcropping at Shumway Lake 1.6 km east of PH AND 78-2 and 3 at elev. 250 m below the collars of these holes do extend well into the I.P. anomaly. These sediments dip 60° west. In the absence of any change in the dip these sediments should occur at depths very much below the drilling. The fact that they appear at first bedrock in the percussion holes herein discussed indicates probable folding and/or faulting.

Report by: Reynard A. Bruaset
R.U. Bruaset,
Project Geologist

Endorsed by: F.L. Wynne
F.L. Wynne,
Senior Geologist

5/5 June 1978

Approved for
Release by:



G. Harden, Manager
Exploration
Western District

RUB:gk

Attachments:

Index Map - Plate 1
Drilling Plan- Plate 2
Assay Sheets
Statement of Expenditure
Statement of Qualifications

Reference:

Joy Mining Ltd. Summary Report of Exploration 1972 Kamloops area,
A.G. Pentland, February 24, 1973.

COMINCO LTD.

EXPLORATION
N.T.S. 92I/9W

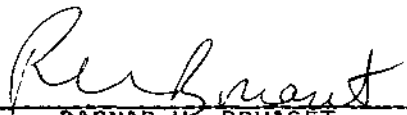
WESTERN DISTRICT
JUNE 5, 1978

IN THE MATTER OF THE B.C. MINERAL ACT
IN THE MATTER OF A PERCUSSION DRILLING PROGRAMME
CARRIED OUT ON THE AND 2 MINERAL CLAIM
LOCATED IN THE SHUMWAY HILL AREA
IN THE KAMLOOPS M.D.
PROVINCE OF BRITISH COLUMBIA
MORE PARTICULARLY N.T.S. 92I/9W

A F F I D A V I T

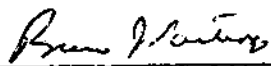
I, RAGNAR U. BRUASET, of the City of Vancouver, in the Province of British Columbia, make oath and say:-

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 "Exhibit A" to this my affidavit is a true copy of expenditures incurred on percussion drilling on the AND 2 Mineral Claim;
3. THAT the said expenditures were incurred between the 23rd day of May - 2nd of June, 1978 for the purposes of mineral exploration on the above noted property.



RAGNAR U. BRUASET

SWORN BEFORE ME AT THE CITY
OF VANCOUVER IN THE PROVINCE
OF BRITISH COLUMBIA THIS
20th DAY OF JUNE , 1978



A Commissioner for Taking
Affidavits in British Columbia

COMINCO LTD.

EXPLORATION

WESTERN DISTRICT
JUNE 2, 1978

EXHIBIT A

STATEMENT OF EXPENDITURE

(Work Performed May 23 - June 2, 1978)

Alan Miller Percussion Drilling Ltd.

480 feet (145 m) @ \$3.67/foot \$12.17/m \$ 1,764.00

Assaying 179.75

Salary - R.U. Bruaset 3½ days 455.00

Transportation 60.00

Domicile 60.00

\$2,518.75

Cost/foot = \$ 5.24

Cost/meter = \$17.37

STATEMENT OF QUALIFICATIONS

I, RAGNAR U. BRUASET, with business address at 409 Granville Street, Vancouver, British Columbia, V6C 1T8, do hereby certify that I have supervised the percussion drilling programme on the AND Property.

I also certify that:

1. I am a graduate of the University of British Columbia with a degree of B.Sc. in Geology 1967.
2. That I have been involved in exploration work for Cominco Ltd. since 1967 and that I have been involved in all phases of porphyry copper exploration and development since 1968 to the present.
3. That I have been closely involved with the exploration work on the AND Property during the period 1976 to 1978.

Respectfully submitted:

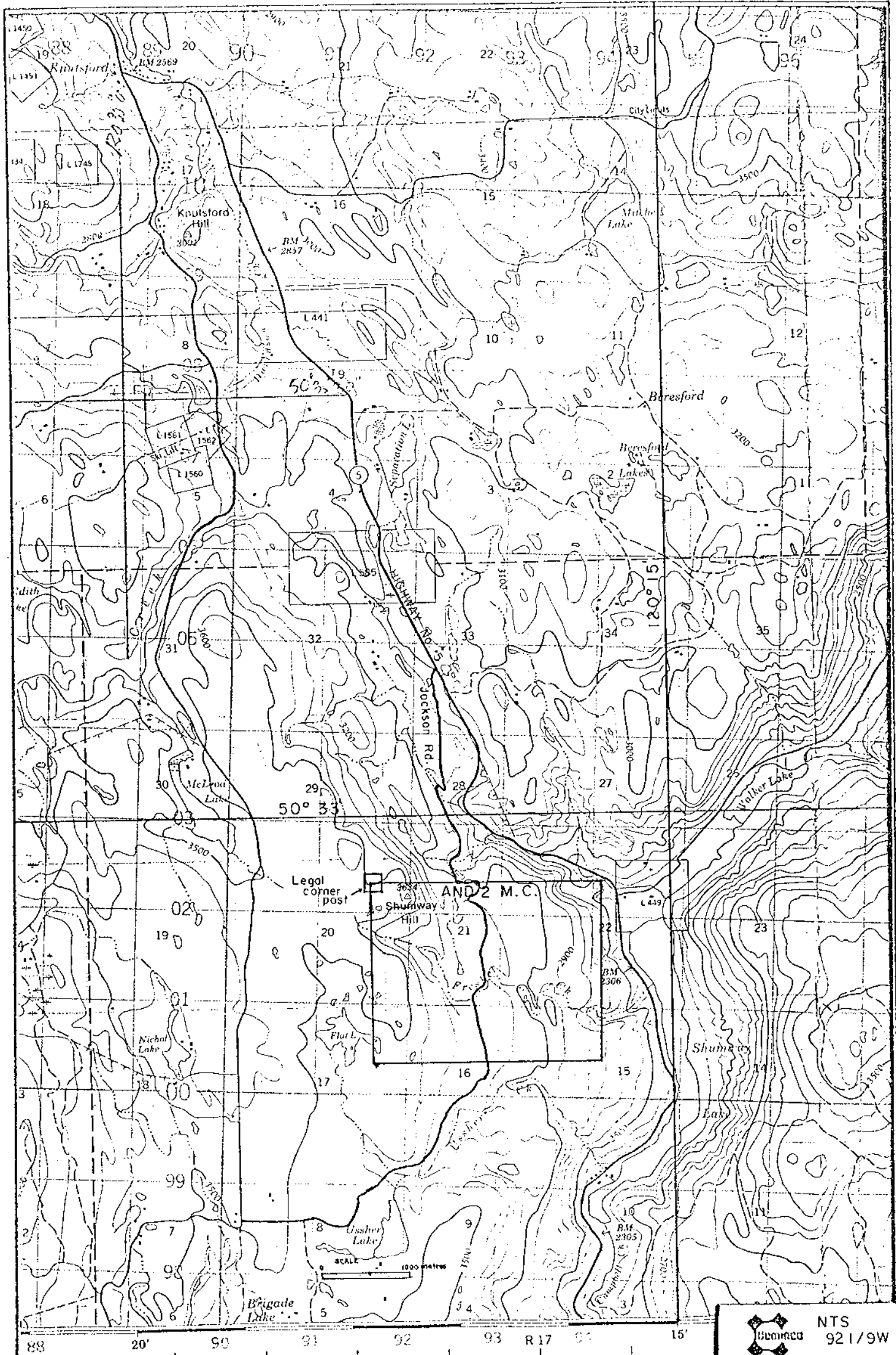


R.U. Bruaset, B.Sc.
Project Geologist

AND PROPERTY

REPORTING DATE 2 JUNE 1978

	FOOTAGE	CU ppm	
87503I	18-30	104	
87504I	30-40	73	
87505I	40-50	110	
87506I	50-60	97	
87507I	60-70	79	
87508I	70-80	74	
87509I	80-90	76	
87510I	90-100	89	PH AND 78-2
87511I	100-110	70	0-18 ft. overburden
87512I	110-120	100	
87513I	120-130	98	
87514I	130-140	100	
87815I	140-150	100	
87516I	150-160	95	
87517I	160-170	98	
87518I	170-180	95	
87519I	35-40	100	
87520I	40-50	116	← check sample 100 ppm
87521I	50-60	98	
87522I	60-70	102	PH AND 78-3
87523I	70-80	100	0-35 ft. overburden
87524I	80-90	96	
87525I	90-100	90	← check sample 80 ppm
87526I	100-110	89	
87527I	110-120	95	
87528I	120-130	104	← check sample 102 ppm
87529I	130-140	93	
87530I	140-150	101	
87531I	150-160	89	
87532I	160-170	70	
87533I	170-180	67	
87534I	180-190	59	
87535I	190-200	78	
87536I	200-210	96	
87537I	210-220	89	
87538I	220-230	102	
87539I	230-240	102	
87540I	240-250	93	← check sample 80 ppm
87541I	250-260	97	
87542I	260-270	87	← check sample 89 ppm
87543I	270-280	91	
87544I	280-290	100	
87545I	290-300	91	



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

AND 2 M.C.
SHUMWAY HILL AREA - KAMLOOPS M.D.

INDEX MAP **6752**

Scale: 1:50,000

Date: 3 JUNE 1978

Plate: 1

