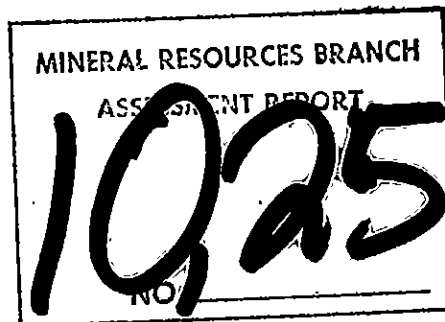


BB GROUP
BB 1-2 MINERAL CLAIMS
N.T.S. 93A11W
LATITUDE 52°38'N - LONGITUDE 121°25'W
CARIBOO MINING DIVISION
REPORT ON GEOLOGY AND GEOCHEMISTRY
BY
T. A. JONES
Dates of Work: July 5 - July 16, 1981



Owner: Canadian Nickel Company Limited
Operator: Canadian Nickel Company Limited
80 - 10551 Shellbridge Way
Richmond, British Columbia
V6X 2W9

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I. INTRODUCTION

1) Location, Access and Physiography

The BB1 and 2 mineral claims are located 10 km east of the village of Likely (Figs. 1 and 2). The claims are accessible by a track that extends up the valley of Blackbear Creek.

The claims are situated on the southwestern edge of the Quesnel Highlands near the border with the relatively subdued, rolling topography of the interior plateau. Summit elevations rise to 1850 m immediately north of the claims.

2) Property Definition

The property consists of 2 claims (30 units) staked on March 14, 1981. Data for these claims is tabulated below.

<u>Claim Name</u>	<u>Units</u>	<u>Record #</u>	<u>Recorded</u>	<u>Due Date</u>
BB1	12	3264	Mar. 25/81	Mar. 25/82
BB2	18	3265	"	"

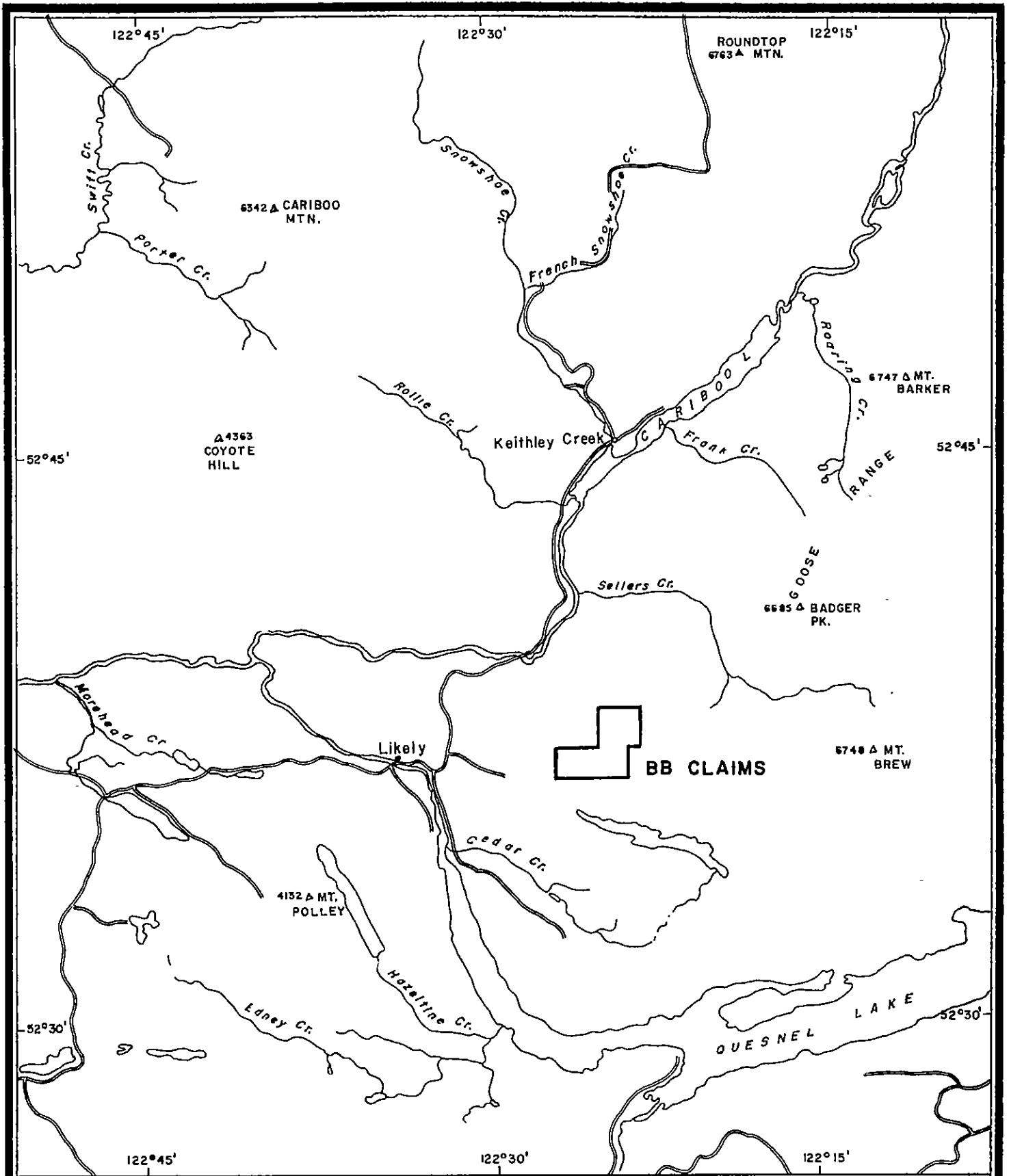
3) Property History

The claims were staked on the basis of a geological evaluation that suggested that the area might be a suitable locale for lode gold deposits. This suggestion is supported by a long history of placer mining in Blackbear and Spanish Creeks and by the reported presence (BCDM Annual Report, 1902) of galena and auriferous pyrite bearing quartz veins in the valley of Blackbear Creek.

4) 1981 Program Summary

A total of 26 man days was spent on and about the BB 1-2 claims during the period July 5-16, 1981. Work performed consisted of:

- a) geological reconnaissance mapping at a scale of 1:15840 over a total area of 750 hectares
- b) 10 rock chip samples were collected and analysed for gold and arsenic. Five of these were also analysed for silver and lead
- c) twenty-three stream sediment samples were collected from twelve sites on, and in the immediate vicinity of, the claims. The -80 mesh fractions were assayed for gold, arsenic, silver and lead
- d) Seven large stream sediment samples (~4 kg) were collected for heavy mineral analyses from streams around the BB claims. The heavy fractions were assayed for gold.



**BB CLAIMS
 CARIBOO PROJECT
 BRITISH COLUMBIA**
 SCALE 1:250,000

II. GEOLOGY

1) Regional Geology

The BB 1-2 claims lie near the contact of two major tectonic belts; the Omenica Belt and the Intermontane Belt. Outcrop is poor throughout the area and the exact position of this contact is uncertain. GSC Map 3-1961 (Campbell, 1961) shows the claims to be underlain by rocks of the Midas and Snowshoe Formations of the Lower Cambrian Cariboo Group. Later interpretations of regional geology have suggested that these rocks are more likely to be correlated with the Proterozoic Kaza Group.

G.S.C. Open File 574 (Campbell, 1978) shows the claims to be underlain by Triassic mafic volcanics of the Intermontane Belt. Observations on the few outcrops found on the BB claims suggest that this later interpretation is correct.

2) Property Geology

a) Summary

Reconnaissance style geology was carried out at the scale of 1:15840 by airphoto controlled pace and compass methods. Data were subsequently transferred to 1:12000 scale enlargements of the relevant 1:50000 topographic map (NTS 93A11W, Fig. 3). The objectives of the mapping were:

- i) To verify which regional geological interpretation is correct
- ii) To evaluate the lode gold potential of the claims

b) Lithology & Correlation

Outcrop is scarce except in the major stream valleys. Most outcrops seen consist of non-descript chlorite-rich schists. One outcrop was observed to contain relict patches of less deformed amygdaloidal volcanic material, indicating a volcanic origin for these rocks.

One small isolated outcrop of pyritic pelite probably occurs as an interbed within the meta-volcanics.

These observations support the 1978 interpretation of Campbell which showed the claims to be underlain by Triassic Volcanics of the Intermontane Belt.

c) Structure

The only structural element seen is a pervasive schistosity which strikes 090° - 120° and dips gently to steeply to the south.

III. GEOCHEMISTRY

1. Rock Geochemistry

Ten rock chip samples of quartz vein material and host chlorite schist were collected during the geological mapping program and analysed for gold and arsenic. Four were also analysed for silver and tungsten. All analytical work was performed by:

Kamloops Research and Assay
2095 West Trans Canada Highway
Kamloops, B.C.
V1S 1A7

Results and analytical methods are compiled as Appendix 1 and the results shown on Fig. 3. Descriptions of the various samples are compiled as Appendix 2.

The highest values received were; gold 40 ppb, arsenic 12 ppm, tungsten not detected and one anomalous silver value of 5.7 ppm. The gold values are not considered anomalous and are not considered worthy of follow-up.

2. Stream Silt Geochemistry

Twenty-three stream silt samples were collected from twelve small tributaries of Blackbear Creek. The -80 mesh fractions were analysed for gold, arsenic, silver and lead at;

Kamloops Research & Assay
2095 West Trans Canada Highway
Kamloops, B.C.
V1S 1A7

Results and analytical methods are compiled as Appendix 3 and the results shown in Figure 3.

Weakly anomalous gold values of 60, 100 and 200 ppb were returned from two streams draining the northern slope of Blackbear Creek in claim BB1. All remaining values were 30 ppb or less and are not considered to be anomalous.

The sample site that returned 200 ppb gold also returned weakly anomalous arsenic values of 36 and 40 ppm.

On the basis of these results, the north slope of Blackbear Creek in claim BB1 may warrant further work.

3. Heavy Mineral Geochemistry

Seven 4 kg. samples were collected from major creeks in the general vicinity of the BB claims in the area bounded by Spanish Creek and Seller

Creek. Location of the sample sites is given in Fig. 4.

Heavy mineral concentrates were prepared at:

C. F. Minerals Research Ltd.
263 Lake Avenue
Kelowna, British Columbia
V1Y 5W6

The resulting heavy mineral concentrates were analysed for gold by Fire Assay - AA methods by:

Exploration Assay Laboratory
Field Exploration Dept.
Inco Metals Co.
Highway 17 West
Copper Cliff, Ontario
POM 1N0

Results are compiled as Appendix 4.

Strong anomalies in heavy non-magnetic fractions occur in Spanish Creek, 3 km east of Spanish Lake (1280 ppb) and 4 km northwest of Spanish Lake (2850 ppb). Weaker anomalies of 145 ppb, 560 ppb and 210 ppb occur in samples from Collins Creek, Blackbear Creek and an un-named Creek draining into the north shore of Spanish Lake respectively (Fig. 4).

The significance of these anomalies with respect to lode gold exploration is not apparent since the strongest anomalies come from streams with a long history of placer exploration and production.

IV. CONCLUSIONS

1) The area of the BBl and 2 claims is underlain by an assemblage of metamorphosed basic volcanics and interbedded pelites of Triassic age in agreement with Campbell (1978) and not by Paleozoic Cariboo Group or Proterozoic Kaza Group sediments.

2) Stream silt anomalies of 100 and 200 ppb gold and 36-40 ppm arsenic are present in creeks draining the north slope of Blackbear Creek in claim BBl. These may warrant additional work.

3) Moderate to strong heavy mineral anomalies are present in Spanish and Blackbear Creeks. The significance of these anomalies is uncertain because of the long history of placer exploration and mining in these creeks.

ITEMIZED COST STATEMENT

Labour

T. Jones	July 5, 10-13, 15-16	7 days @ 145	1,015	
S. Simigian	July 10-13, 15-16	6 days @ 90	540	
C. Dionne	July 9-12, 14-15	6 days @ 71	426	
D. Magnuson	July 9-15	7 days @ 60	<u>420</u>	
		26 days	2,401	2,401

Personnel Expenses

Food & Allied Expenses	26 man days @ 17.35			451
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Transportation

Truck Rental & Fuel				2,502
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Analytical Costs

Rock Chip Samples

Sample Preparation	10 @ 2.50	25		
Au Geochem	10 @ 5.25	52		
As Geochem	10 @ 3.00	30		
Ag Geochem	4 @ 1.75	7		
W Geochem	4 @ 4.00	<u>16</u>		
		120		120

Stream Silt Samples

Sample Preparation	23 @ 0.60	14		
Au Geochem	23 @ 5.25	121		
As Geochem	23 @ 3.00	69		
Ag Geochem	23 @ 0.75	17		
Pb Geochem	23 @ 1.75	<u>40</u>		
		261		261

Heavy Mineral Concentrates

Sample Preparation	7 @ 60.00	420		
Au Assay	21 @ 6.50	<u>136</u>		556
		556		

Miscellaneous Expenses

Equipment & Supplies	- 621			
Freight	<u>10</u>			
	631			631

Report

Report Writing	- 4 days @ 145	580		
Drafting	5 days @ 66	<u>330</u>		
		910		
		Total	<u>910</u>	7,832

REFERENCES

B.C. Dept. of Mines, Annual Report, 1902.

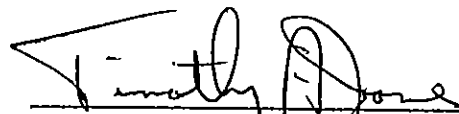
Campbell, R. B. (1961): Geology Quesnel Lake (West Half) B.C., G.S.C. Map 3-1961
(1:253,440)

Campbell, R. B. (1978): Geological Map of the Quesnel Lake Area (N.T.S. 93A),
G.S.C. Open File 574 (1:125,000)

CERTIFICATE

I, TIMOTHY A. JONES, OF SUDBURY, ONTARIO, DO HEREBY CERTIFY THAT;

1. I am a graduate of McGill University (1975) with an Honours B.Sc. in Geological Sciences.
2. I practised my profession part-time in 1975 and 1976, and have practised it continuously since 1977.
3. At the time this work was performed I was employed by Inco Metals Co., Highway 17 West, Copper Cliff, Ontario, as a Senior Geologist (Field Exploration Dept.).
4. I have previously conducted and/or supervised exploration programs involving geological, geophysical and geochemical surveys, and drilling; and that I have previously submitted assessment reports in the Provinces of Saskatchewan and Newfoundland.
5. I am the author of this report based on field work conducted by employees of Inco Metals Co. and Canadian Nickel Co. Ltd. during the summer of 1981.



TIMOTHY A. JONES
Geologist

Copper Cliff, Ontario
March, 1982

APPENDIX 1

ROCK CHIP GEOCHEMICAL ASSAYS

**KAMLOOPS
RESEARCH & ASSAY
LABORATORY LTD.**

B.C. CERTIFIED ASSAYERS

2095 WEST TRANS CANADA HIGHWAY -- KAMLOOPS B.C.
V1S 1A7
PHONE: (604) 372-2784 -- TELEX: 048-8320

GEOCHEMICAL LAB REPORT

Canadian Nickel Company Ltd.
80 - 10551 Shellbridge Way
Richmond, B.C.
V6X 2W8

DATE September 17, 1981

ANALYST _____

CARIBOO PROJECT B.B. Claims.

FILE NO G-582

AL NO	IDENTIFICATION	ppb Au	ppm As						
1	RX 030301	40	3						
2	030302	40	.3						
3	030303	20	L2						
4	030304	15	L2						
5	030305	5	L2						
79	RX 042420	20	PPB 22	PPM 3.2	PPM 12				
80	042421	20	5	.4	4				
81	042422	15	10	.5	7				
82	042423	15	8	1.4	4				
83	042424	25	9	.6	4				

APPENDIX 2

SAMPLE DESCRIPTIONS

TRAVERSE NUMBER _____
 N.T.S. 93A11W

PROJECT BB Claims
 AREA Blackbear Creek

GEOLOGIST(S) Sandra Simigian
 DATE July 12/81

SAMPLE NUMBER	SAMPLE TYPE			SAMPLE LENGTH, WIDTH, AREA	LATITUDE, LONGITUDE and/or U.T.M.	SAMPLE DESCRIPTION Rock type, lithology, character of soil, stream silt, etc. Formation Mineralization, etc.	RESULTS (ppm. /% /oz. per ton)			
	RX Rock, Talus	SX Stream Silt, Soil	Grab, Chip, Channel				Au ppb	Ag ppm	W ppm	As ppm
RX 042420	talus		grab			rusty qtz boulder	20	5.7	<4	12
RX 042421	"		"			qtz boulder in creek	20			4
RX 042422	"		"			large qtz boulder with rusty colour	15			7
423	"		"			large qtz. boulder with orangey mica	15			4
424	otcp.		"			chl schist interbedded with rusty qtz.	25	0.6	<4	4
RX 030301	"		"			Chlorite schist with relict patches. amyg.	40	0.6	<4	3
						volcanic				
302	talus		"			Massive qtz. vein with minor muscovite	40			3
303	"		"			large qtz. boulder with rusty colour	20			<2
304	"		"			large qtz. boulder with bluish tinge	15			<2
305	"		"			large qtz boulder	5	0.3	<4	<2

APPENDIX 3

STREAM SILT GEOCHEMICAL RESULTS

APPENDIX 4

HEAVY MINERAL GEOCHEMICAL RESULTS

C.C. EXPLORATION GEOCHEM LABORATORY

SUBMITTED BY E. F. Pattison

APPROVED _____

REPORTED TO _____

DATE February 4, 1982

NOTES

BB Claims, Heavy Mineral Samples

ALL RESULTS IN P.P.M.
UNLESS OTHERWISE STATED

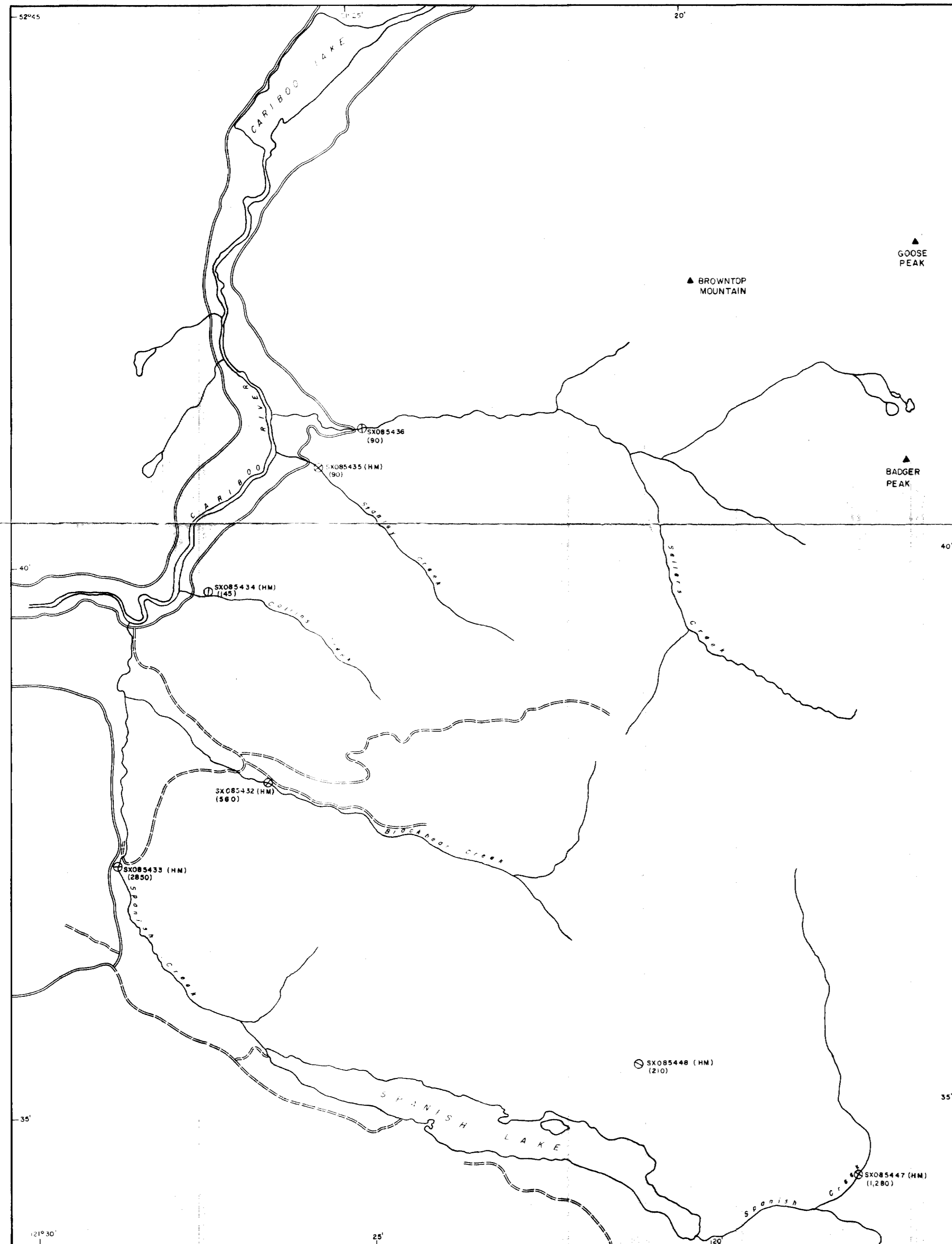
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PHONE 682-4441

#	Sample No.	Wt.	Au ppb				
1	SX85432-I		20				
2	HPHN		560				
3	HM		25				
4	SX85433-I		30				
5	HPHN		2.85	ppm			
6	HM		(<150)				
7	SX85434-I		15				
8	HPHN		145				
9	HM		15				
10	SX85435-I		30				
11	HPHN		90				
12	HM		(<30)				
13	SX85436-I		30				
14	HPHN		90				
15	HM		25				
16	SX85447-I		45				
17	HPHN		1.28	ppm			
18	HM		5				
19	SX85448-I		10				
20	HPHN		210				
21	HM		10				
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							

I = Intermediate S.G. Fraction
 HPHN = Heavy Non-Magnetic Fraction
 HM = Heavy Magnetic Fraction

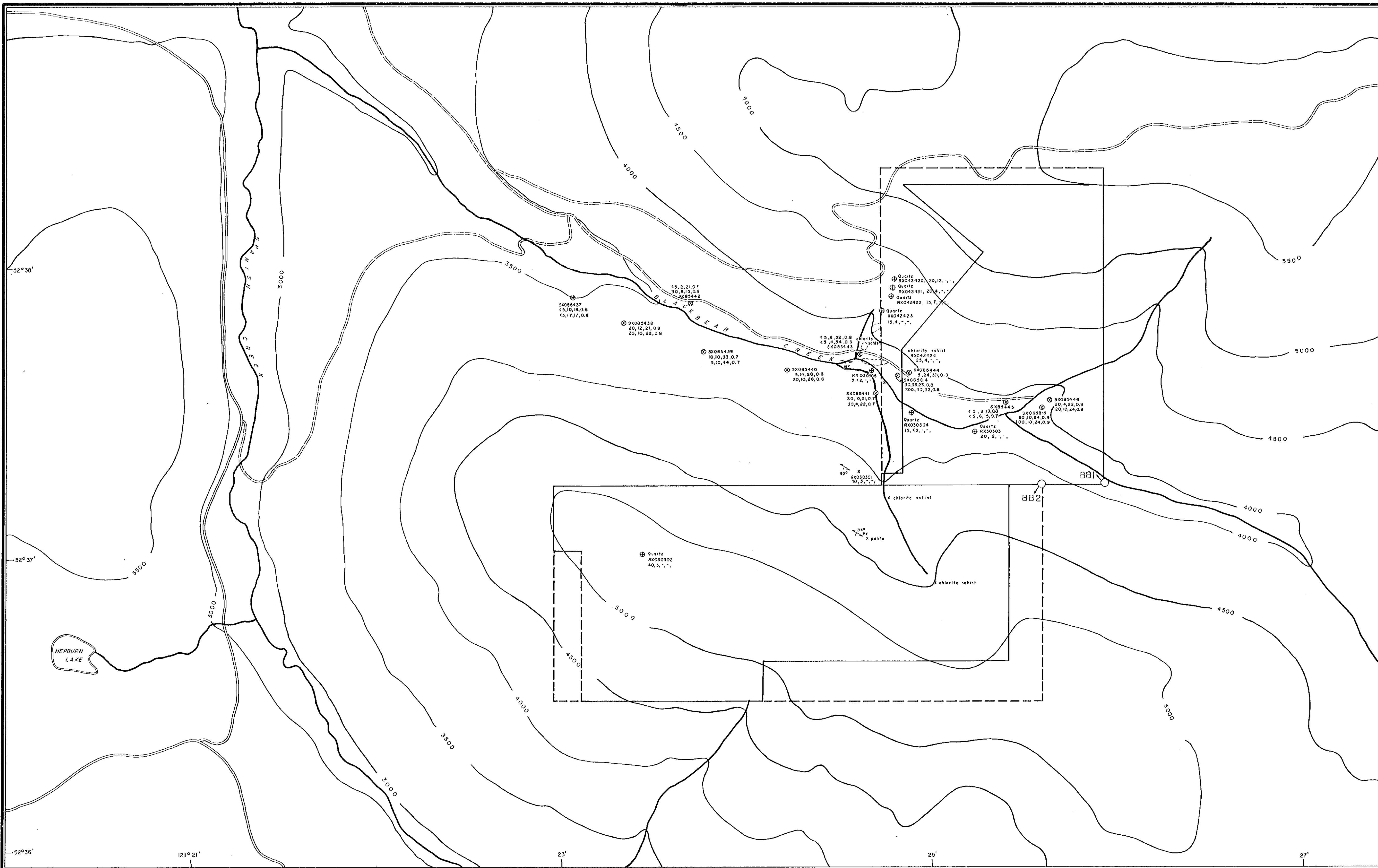
Fire Assay
 Aqua Regio - AA



10,251

⊖ Heavy Mineral Sample Site
 (90) Au ppb in heavy non-magnetic fraction

Canadian Nickel Company Limited		Copper Cliff, Ontario POM 190	
HEAVY MINERAL & GEOCHEMISTRY		SHEET	FIGURE
Project: BB CLAIMS		Area: CARIBOO, BRITISH COLUMBIA	
Supervisor: T. A. Jones	Instrument:	Survey date:	
Compiled by: E. F. Patterson	Drawn by: H. Humphreys	Date drawn: March/82	Revised:
Scale: 1:50,000	File:	NTS 93A 11W	



LEGEND

- Outcrop, Outcrop Area
 - Floot, erratics
 - Stream Geochem Sample Site.
 - Legal Corner Post
 - Schistosity
- SK 085437
5,10,18,0.6
Geochemical Sample Number
Au ppb, As ppm, Pb ppm, Ag ppm
- RX042420
20,12,-,-
Rock chip sample number
Au ppb, As ppm, Ag ppm, W ppm

10,251

Canadian Nickel Company Limited		Copper Cliff, Ontario POM 1190	
GEOLOGY & GEOCHEMICAL SURVEY		SHEET	FIGURE
Project: BB CLAIMS		Area CARIBOO, BRITISH COLUMBIA	
Supervisor T.A. Jones	Instrument	Survey date July - Aug. 1981	
Compiled by: E. F. Pattison	Drawn by: H. Humphreys	Date drawn: March 1982	Revised:
Scale: 1:12000	File	NTS 93A IIW	