

LOG NO:	<i>April 30/91</i>	RD.
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**GEOLOGICAL AND GEOCHEMICAL REPORT
ON THE
CROWN SOUTH PROPERTY**

**Liard Mining Division, British Columbia
NTS 104B/10E
Latitude: 56°-43' North
Longitude: 130°-31' West**

Prepared for
CANADIAN CARIBOO RESOURCES LTD.
Vancouver, B.C.

Prepared by
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April 14, 1991

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

21,249

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INTRODUCTION

The Crown South property is located within the "Golden Triangle" area of northwestern British Columbia which hosts the mesothermal shear/vein Snip gold deposit and the polymetallic Eskay Creek deposit. The Snip, which is undergoing production preparation by Cominco Ltd., has ore reserves, cut and diluted, of 1.032 million tons grading 0.875 oz/ton gold (Vancouver Stockwatch, November 7, 1989). The Eskay Creek deposit has geochemical reserves of 4.364 million tons grading 0.77 oz/ton gold and 29.12 oz/ton silver (Vancouver Stockwatch, September 18, 1990). The Crown South property is located some 34 km east-northeast of the Snip and 9 km north-northwest of the Eskay Creek deposit.

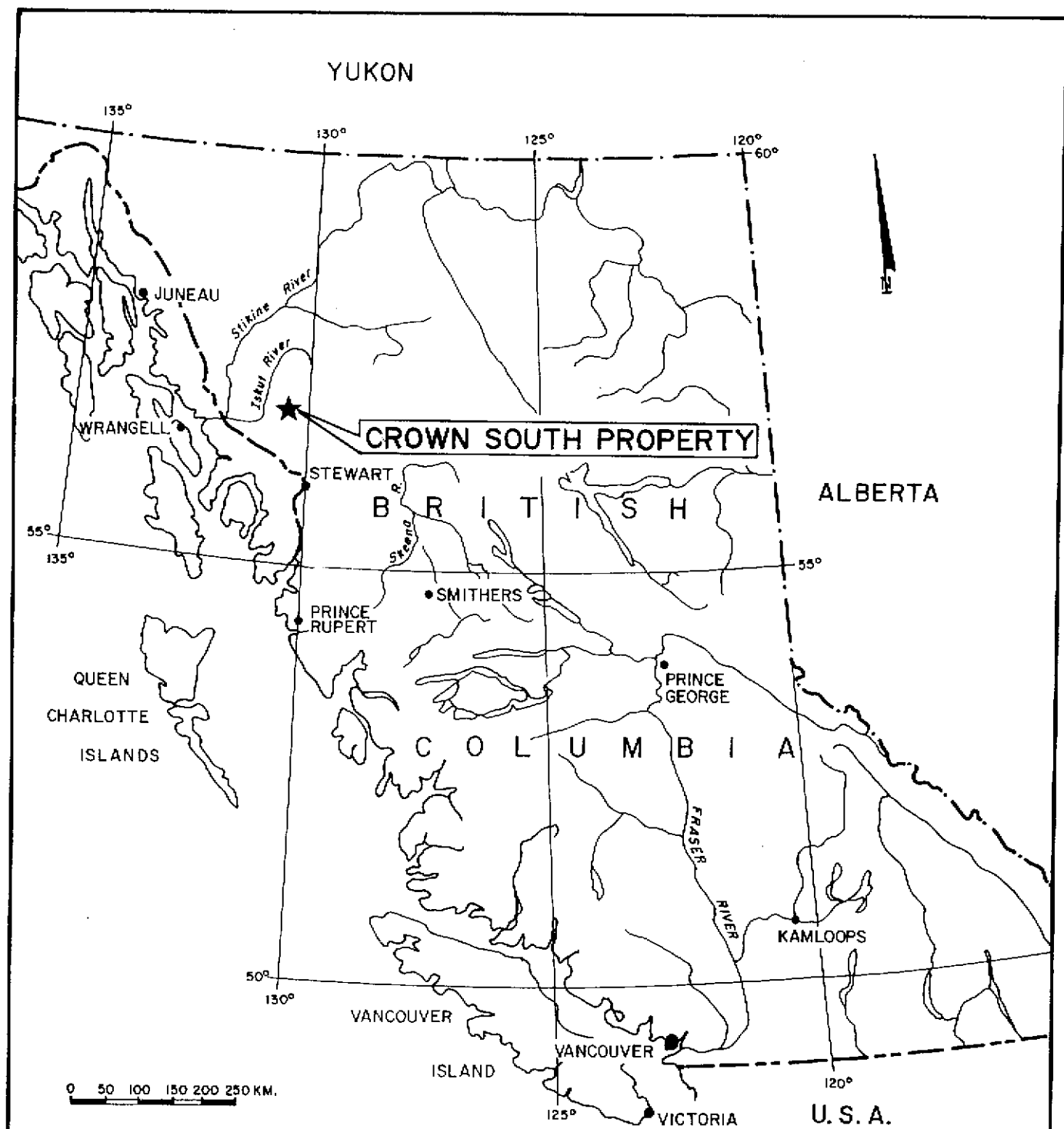
During September of 1990, Keewatin Engineering Inc. was engaged by Canadian Cariboo Resources Ltd., the project operator, for the purpose of conducting a small exploration program on the property. The target was economic gold \pm silver \pm base metal mineralization, in particular an Eskay Creek and/or Snip-type of deposit.

1. Location, Access, Physiography and Climate

The Crown South property is located in northwestern British Columbia, approximately 90 km northwest of the town of Stewart (Figure 1). The property is centred upon 56°-43' North latitude and 130°-31' West longitude. This is within the 104B/10E NTS map sheet.

Access is by fixed-wing aircraft from Smithers or Terrace (290 km to the southeast) to the Bronson creek airstrip which services the Snip deposit. Transprovincial Airlines Ltd. of Terrace provided daily scheduled trips into the area and would land at Bronson Creek on request. Central Mountain Airlines of Smithers serviced the area with trips on Monday, Wednesday and Friday, as well as numerous unscheduled supply flights. Alternate fixed-wing access is from Wrangell, Alaska which is located at tidewater, 80 km to the west of the airstrip. The Bronson Creek airstrip was lengthened to 1,600 metres during 1988 and is now capable of accommodating Hercules aircraft. Small aircraft are also able to land at the Forrest Kerr airstrip.

Access to the property from Bronson Creek can be made by helicopter, a distance of some 34 kilometres. Numerous landing spots are found throughout the property.



PROPERTY LOCATION MAP
CROWN SOUTH PROPERTY

Figure 1

Future road access to the area will follow the Iskut River Valley from Bob Quinn Lake on the Stewart-Cassiar Highway to Bronson Creek. This road, whose construction was announced by the B.C. government in 1990, will pass within 5 km of the Crown South property.

The Crown South property covers fairly steep, southeast to southwest facing slopes which are cut by numerous, deeply incised creek drainages. Much of the property is above treeline, with the northeastern and eastern side of the property partially covered by glacial ice. Elevations range from 1,890 metres in the northwest to less than 823 metres in the southwestern corner of the property.

A transitional tree line is found at the 915 metre elevation and is covered by scattered, dwarfed shrubs. At lower elevations, along the southern boundary, are mature hemlock and spruce trees. Several patches of slide alder and devil's club were also observed.

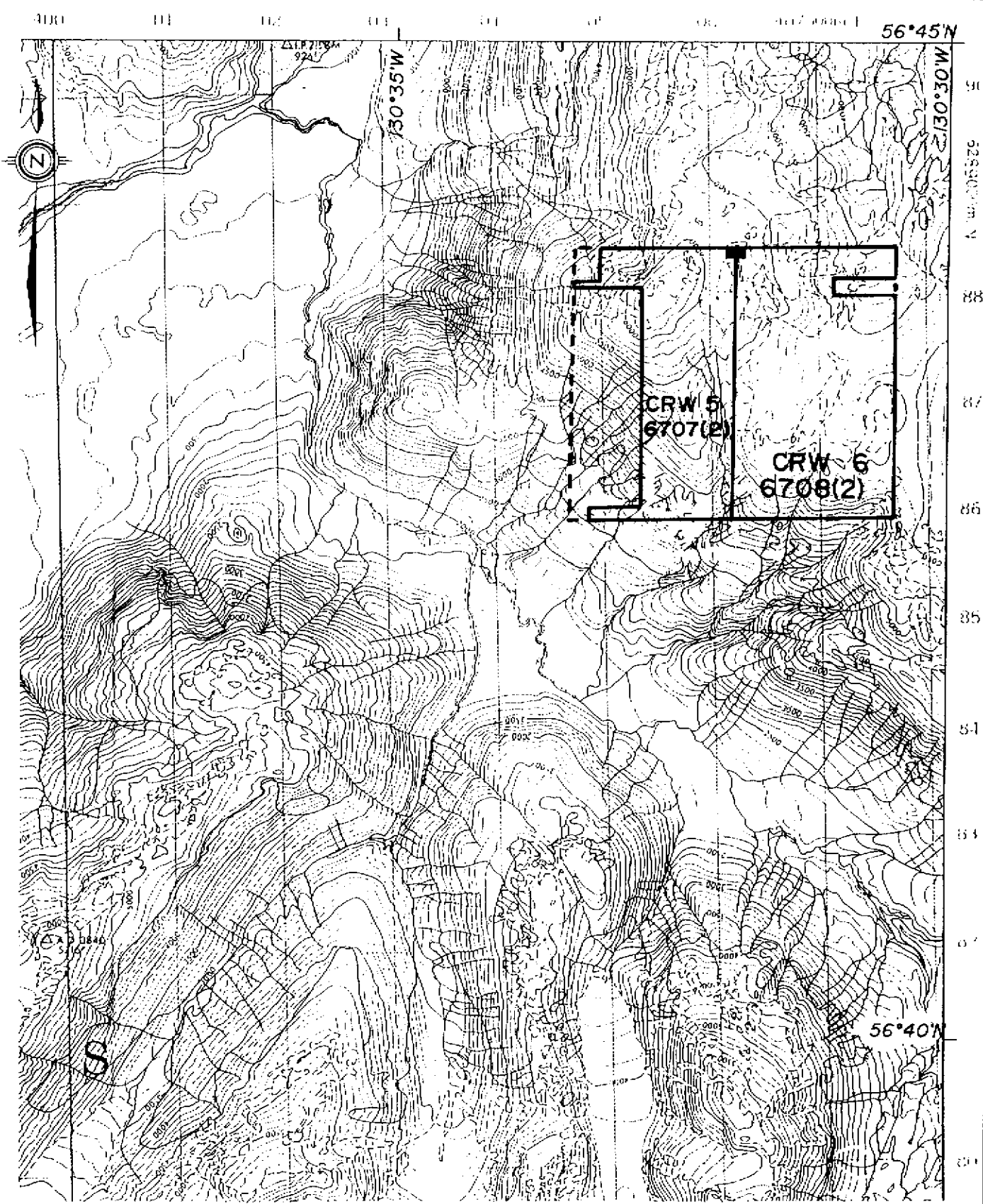
The climate is typified by cold, snowy winters and warm, wet summers. Snow accumulations at the higher elevations normally exceed five metres.

2. Property Status

The property consists of two contiguous mineral claims (30 units). These claims are registered in the name of Canadian Cariboo Resources Ltd. and are located within the Liard Mining Division. Their status (Figure 2) is summarized as follows:

TABLE 1: Claim Status				
Claim Name	No. of Units	Record No.	Date Recorded	Expiry Year
CRW 5	15	6707	February 13, 1990	1994
CRW 6	15	6708	February 13, 1990	1993

It should be noted that the claims were located by a common Legal Corner Post only, due to steep terrain and deep snow conditions at the time of staking. Due to overstaking of pre-existing claims, the ground covered by the Crown South's claims is considerably less than the 30 claim units recorded. No effort was made to locate the Legal Corner Post during 1990.

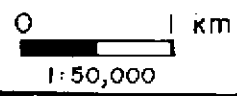


**CLAIM MAP
CROWN SOUTH PROPERTY**

■ LEGAL CORNER POST (LCP)

NTS 104B/10E

Figure 2



3. History of Exploration

The area drained by the upper reaches of the Stikine, Iskut, Unuk, Craig and Bell-Irving Rivers has been explored since the late 1800's when prospectors passed through the region on their way to the interior. In the 1950's and 1960's, the porphyry copper-molybdenum boom brought numerous mining companies into the area. During this time, the Galore Creek porphyry copper-gold deposit was discovered.

Intense exploration began again in the early 1980's, and was then, as now, primarily for gold. At that time the Johnny Mountain property was acquired by Skyline Exploration Ltd. (now Skyline Gold Corp.), the Snip property by Cominco Ltd. (now owned and operated by the Prime Resources Corporation and Cominco Ltd.), and the Sulphurets property by Esso Minerals Ltd. (now owned by Newhawk Gold Mines Ltd./Corona Corporation/Granduc Mines Ltd.). Since 1990, well over 100 new gold prospects have been found in the Iskut-Unuk-Sulphurets-Stewart-Galore areas (Golden Triangle), establishing the entire region as a major gold 'camp'.

The Eskay Creek deposit, a joint venture between Stikine Resources Ltd. and Prime Resources Group Inc., appears to be the most significant discovery found to date. Gold was first discovered in the Eskay Creek area in 1932 and exploration has continued there, sporadically, since then. Prior to the current Eskay Creek joint venture, eleven companies carried out exploration on the present claim area. This included diamond drilling (over 13,000 feet) and underground development to the south of the recent discovery (after Idziszek et al., Mining Magazine, March 1990). In September of 1988, the first significant, high grade gold, silver and base metal mineralization was intersected in a drill hole, on what is called the #21 Zone. Mineralized drill intercepts up to 660 feet long have been reported. In drill hole 109, a 200 foot section averaged 2.9 oz/ton gold, 0.85 oz/ton silver, 1.9% lead and 3.4% zinc. By September 1990, 657 drill holes had been completed. The #21 Zone has been extended for 4,600 feet along strike and remains open, both along strike and down dip. Preliminary geological reserves of 4,364,000 tons uncut and undiluted, grading 0.77 oz/ton gold and 29.12 oz/ton silver have been calculated (Vancouver Stockwatch, September 18, 1990).

In the Iskut River area are the Johnny Mountain and Snip deposits. The Johnny Mountain Gold Mine which began production in 1988 and closed in 1990, currently has proven and possible ore reserves of 740,000 tons grading 0.52 oz/ton gold, 1.00 oz/ton silver and 0.75% copper (D. Yeager, Skyline Gold Corp., personal communication). The adjacent Snip deposit presently has ore reserves,

cut and diluted, of 1.032 million tons grading 0.875 oz/ton gold (Vancouver Stockwatch, November 7, 1989). Cominco Ltd. expects to bring the Snip into production in early 1991.

On the north side of the Iskut River, numerous gold occurrences have been reported. Avondale Resources' Forrest claims and Kestral Resources' KRL claims were subjected to extensive exploration during 1989 and 1990. Drilling was done on both of these properties during 1990. Gulf International Minerals carried out a successful drill program on their McLymont Creek property. They have drilled over 31 holes from which results include 17.37 metres of 0.346 oz/ton gold and 9.63 metres of 2.122 oz/ton gold (Vancouver Stockwatch, July 24 and August 30, 1990).

During 1990, exploration intensified further north, in the More Creek-Forrest Kerr Creek area, after Noranda announced the discovery of high grade, polymetallic boulders on their GOZ-RDN property. Noranda's exploration evidently revealed four mineralized zones (George Cross Newsletter, September 13, 1990). Boulders from the Carcass Creek zone reportedly assayed up to 2.69 oz/ton gold, 2.43 oz/ton silver, 3.2% copper, 43.7% zinc and 3.96% lead. Initial results from their Waterfall zone returned 0.154 oz/ton gold across an estimated true width of 7.73 metres. Noranda has completed an airborne EM and magnetometer survey and drilled fifteen holes. Final drill results are still to be reported. Noranda has a number of other joint ventured properties in the More Creek area on which mineralized and altered, auriferous structural zones have been reported.

A review of the assessment files and Minfile data indicates that no previous exploration work has been reported from the area presently covered by the Crown South property.

In 1988, results from a governmental stream sediment survey of the region were released. The three samples collected from creeks draining the present Crown South property area returned only slightly elevated zinc and nickel values. All other elements are at background levels.

Recent regional, geological mapping by the GSC (Read et al., 1990) covered the area of the Crown South property.

4. 1990 Work Program Summary

During September and October, Keewatin's field personnel carried out geological, geochemical and prospecting traverses on the property. An area of, approximately, 2.76 km² was geologically mapped and prospected during this program. Rock, soil and most of the silt samples were collected

during the course of the geological traverses. Several of the silt samples were collected, just south of the claim boundaries, from creeks draining the property.

GEOLOGY

1. Regional Geology

The Forrest Kerr Creek-Iskut River area lies within the Intermontane tectono-stratigraphic belt - one of five, parallel, northwest/southeast trending belts which comprise the Canadian Cordillera. This belt of Permian to Middle Jurassic volcanic and sedimentary rocks defines the Stikinia/Stikine terrain (Figure 3). This is bounded on the west by the Coast Plutonic Complex and overlapped on the east by sediments of the Bowser Basin. The belt has been intruded by at least four episodes of plutonic rocks, from Late Triassic to Oligocene-Miocene. These include synvolcanic plugs, small stocks, dyke swarms, isolated dykes and sills, as well as batholiths belonging to the Coast Plutonic Complex.

The entire sequence has undergone various degrees of folding, faulting and metamorphism.

2. Property Geology

Mapping by Read (1990) indicated that the area covered by the Crown South property is underlain by sediments of the Bowser Lake Group (Middle and Upper Jurassic). Extrapolation of mapping to the south by Alldrick (1989) indicates that the property should be underlain by sediments of the Salmon River Formation (Middle Jurassic). Unfortunately, Alldrick included Bowser Lake Group strata within his Salmon River Formation.

Mapping during 1990 indicates that the property is predominantly underlain by fissile and frost heaved, well bedded, dark grey siltstone. Lesser interbeds of sandstone and polymictic conglomerate were also observed. The sandstones are generally well bedded and display minor carbonate fracture fillings and local siderite patches. The conglomerates contain subrounded, black siltstone clasts, up to 2.5 cm in diameter, quartz grains and light to medium grey feldspathic clasts, 2 to 8 mm across.

Bedding attitudes are quite variable (137-150°/38-83°E). Local drag folding, associated with small scale shearing was observed. Local carbonate and ankerite alteration was noted in the sandstones.

3. Mineralization

No significant mineralization was found within the Crown South property.

Quartz fracture filling and local stockworks were observed within the sandstones. These consist mainly of bull quartz, but minor crystalline and gossanous fracture fillings were noted. Only a trace amount of pyrite was discovered.

GEOCHEMISTRY

1. Sampling

A total of 3 soil, 20 silt and 8 rock samples were collected during the 1990 field season (see Appendix 4). The soils were collected with the use of a long handled shovel and consist of talus fines and drift material. The silts were generally taken from the active portion of the sampled drainages. The rocks represent chip or grab samples of altered and/or veined outcrops or boulders.

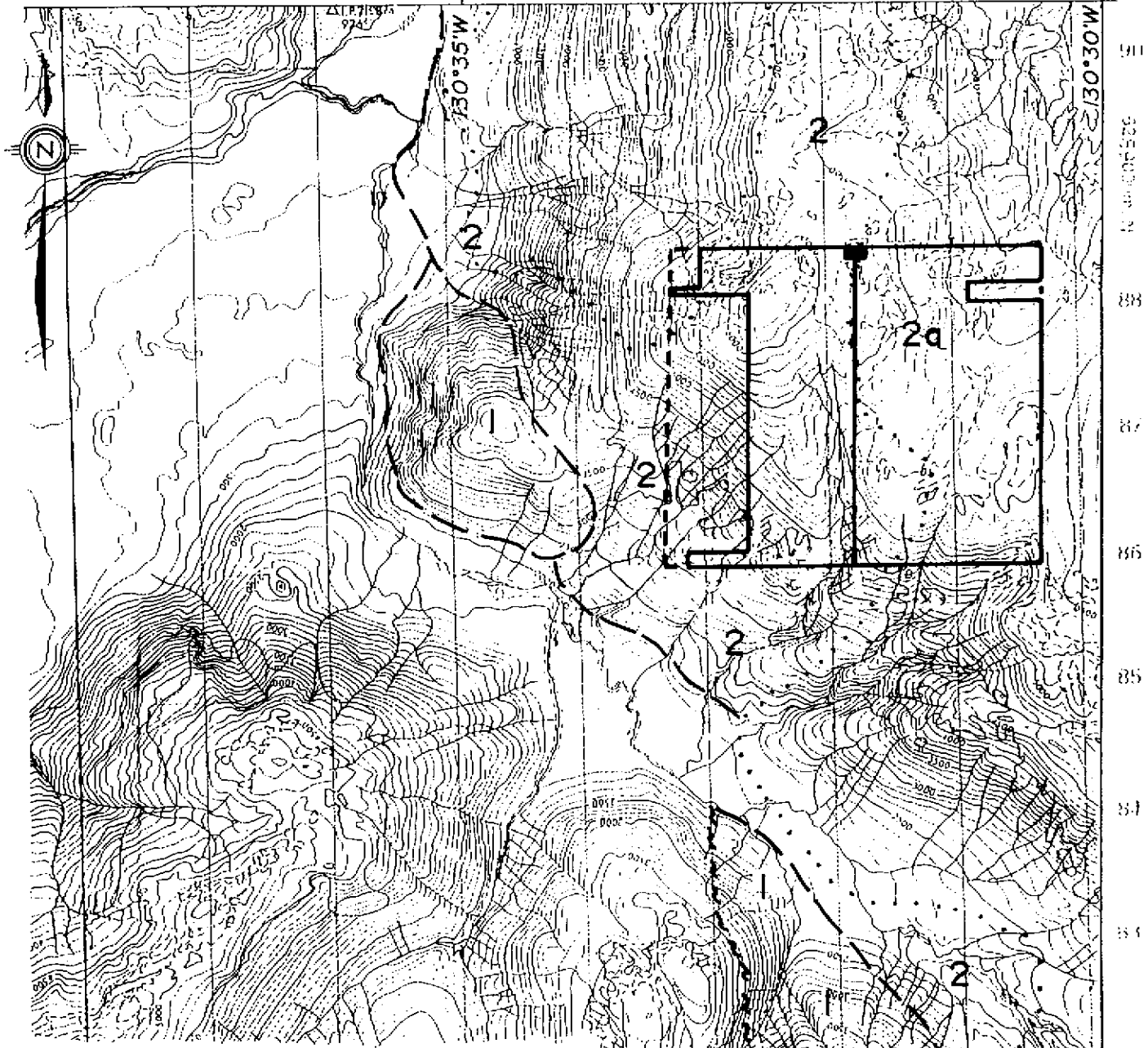
2. Analysis

All of the samples were shipped to Min-En Laboratories in Smithers for preparation and then to their lab in North Vancouver for analysis. This analysis consisted of fire assay preparation-atomic absorption finish gold and an eight element ICP package (Ag, As, Cu, Mo, Pb, Sb, Zn and Hg).

3. Description and Discussion of Results

All of the samples collected returned results at background levels.

Silt sample results range up to 8 ppb gold, 2.3 ppm silver, 67 ppm copper, 47 ppm lead, 284 ppm zinc, 54 ppm arsenic, 4 ppm antimony, 7 ppm molybdenum and 230 ppb mercury. The soil samples returned up to 11 ppb gold, 3.9 ppm silver, 66 ppm copper, 39 ppm lead, 136 ppm zinc, 13 ppm arsenic, 4 ppm antimony, 4 ppm molybdenum and 95 ppb mercury. The rock sample results



LEGEND

MIDDLE JURASSIC

2 Bowser Lake Group and/or Salmon River Formation
Siltstone sequence : dark grey well bedded
siltstone with minor sandstone and
conglomerate (2a)

LOWER JURASSIC

1 pyroclastic - epiclastic sequence (Salmon River
Formation): heterogeneous, green, grey locally
purple and maroon, massive to bedded pyroclastic
and sedimentary rocks, pillow lava

(Geology after Read et al 1990,
Anderson and ThorKelson 1990 and
Alldrick et al 1989)

■ LEGAL CORNER POST (LCP)

PROPERTY GEOLOGY
CROWN SOUTH PROPERTY

NTS 104B/10E

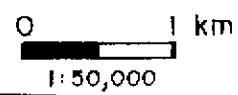


Figure 4

range up to 15 ppb gold, 1.3 ppm silver, 69 ppm copper, 47 ppm lead, 113 ppm zinc, 60 ppm arsenic, 5 ppm antimony, 5 ppm molybdenum and 245 ppb mercury.

CONCLUSIONS

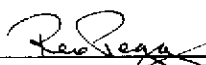
It appears that the Crown South property is underlain by sediments of the Bowser Lake Group. Geochemical results combined with geological observations appear to indicate that this ground is not very prospective.

RECOMMENDATIONS

No further work is recommended on this property.

Respectfully submitted,

KEEWATIN ENGINEERING INC.



Rex Pegg, B.Sc., P.Eng.



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Pegg, R.S. (1989): Stewart-Sulphurets-Iskut Areas, Geological Compilation (private report).

Read, et al. (1990): G.S.C. Open File 2094; Geology, More and Forrest-Kerr Creeks (Parts of 104B/10, 15, and 16 and 104G/1 and 2), Northwestern British Columbia.

Vancouver Stockwatch.

APPENDIX 1

Statement of Qualifications

STATEMENT OF QUALIFICATIONS

I, REX STEPHEN PEGG, of #1 - 410 Mahon Avenue in the District of North Vancouver in the Province of British Columbia, do hereby certify that:

- 1) I am a graduate of the University of Toronto, BA.Sc. (1976) in Geological Engineering (Exploration option) and have practised my profession continuously since graduation.
- 2) I have over 14 years of experience in exploration for base and precious metals in the Canadian Cordillera.
- 3) I am a member in good standing of the Association of Professional Engineers of British Columbia.
- 4) I am an independent consulting geologist with an office at #1-410 Mahon Avenue, North Vancouver, British Columbia.
- 5) I am presently under contract to Keewatin Engineering Inc. with offices at Suite 800 - 900 West Hastings Street, Vancouver, British Columbia.
- 6) I am the author of the report entitled "Geological and Geochemical Report on the Crown South Property, Liard Mining Division, British Columbia", dated April 14, 1991.
- 7) I have personally supervised and/or performed the work referenced in this report and I am familiar with the regional geology and geology of nearby properties.
- 8) I do not own or expect to receive any interest (direct, indirect or contingent) in the property described herein nor in the securities of Canadian Cariboo Resources Ltd., in respect of services rendered in the preparation of this report.
- 9) I consent to and authorize the use of the attached report and my name in the Company's Statement of Material Facts or other public document.

Dated at Vancouver, British Columbia this 14th day of April, 1991.



Respectfully submitted,



Rex S. Pegg, BA.Sc., P.Eng.

Keewatin Engineering Inc.

APPENDIX 2

Summary of Field Personnel

SUMMARY OF FIELD PERSONNEL

R. Pegg	- Senior Geologist	September 26; October 8
R. Honsinger	- Project Geologist	September 26; October 13
A. Dupras	- Prospector	September 26
C. Davies	- Assistant	October 13
D. Barker	- Assistant	October 13
S. McTague	- Assistant	September 26
S. Chandler	- Cook/1st Aid Attendant	October 13



APPENDIX 3

Statement of Expenditures

STATEMENT OF EXPENDITURES

i)	<u>Labour</u>		
	R. Pegg	2.0 days @ \$400/day	\$ 800.00
	R. Honsinger	2.0 days @ \$335/day	670.00
	A. Dupras	1.0 days @ \$325/day	325.00
	C. Davies	1.0 days @ \$200/day	200.00
	D. Barker	1.0 days @ \$175/day	175.00
	S. McTague	1.0 days @ \$175/day	175.00
	S. Chandler	1.0 days @ \$260/day	<u>260.00</u>
			\$2,605.00
ii)	<u>Geochemical Analysis</u> (faa Au + 8 element ICP)		
	Soils	3 samples @ \$11.30 ea.	\$ 33.90
	Silts	20 samples @ \$11.30 ea.	226.00
	Rocks	8 samples @ \$13.75 ea.	<u>110.00</u>
			369.90
iii)	<u>Helicopter</u> (Hughes 500D)		
		2.8 hours @ \$705/hour	1,974.00
iv)	<u>Room & Board</u>	10.0 man days @ \$60 (includes pilot)	600.00
v)	<u>Rentals</u> (binocular microscope, radios, rock saw, generator, field equipment, truck, ATV, copier, etc. - split)		273.19
vi)	<u>Consumables</u> (sample bags, tags, copies, paint, flagging, etc.)		223.52
vii)	<u>Fixed Wing Support</u> (split)		149.07
viii)	<u>Expediting</u> (split)		21.17
ix)	<u>Travel</u> (split)		6.77
x)	<u>Camp Costs</u> (fuel, etc. - split)		25.81
xi)	<u>Courier Charges</u> (split)		0.43
xii)	<u>Report</u> (writing, drafting, processing, copying)		<u>1,751.14</u>
	TOTAL EXPENDITURES:		<u>\$8,000.00</u>

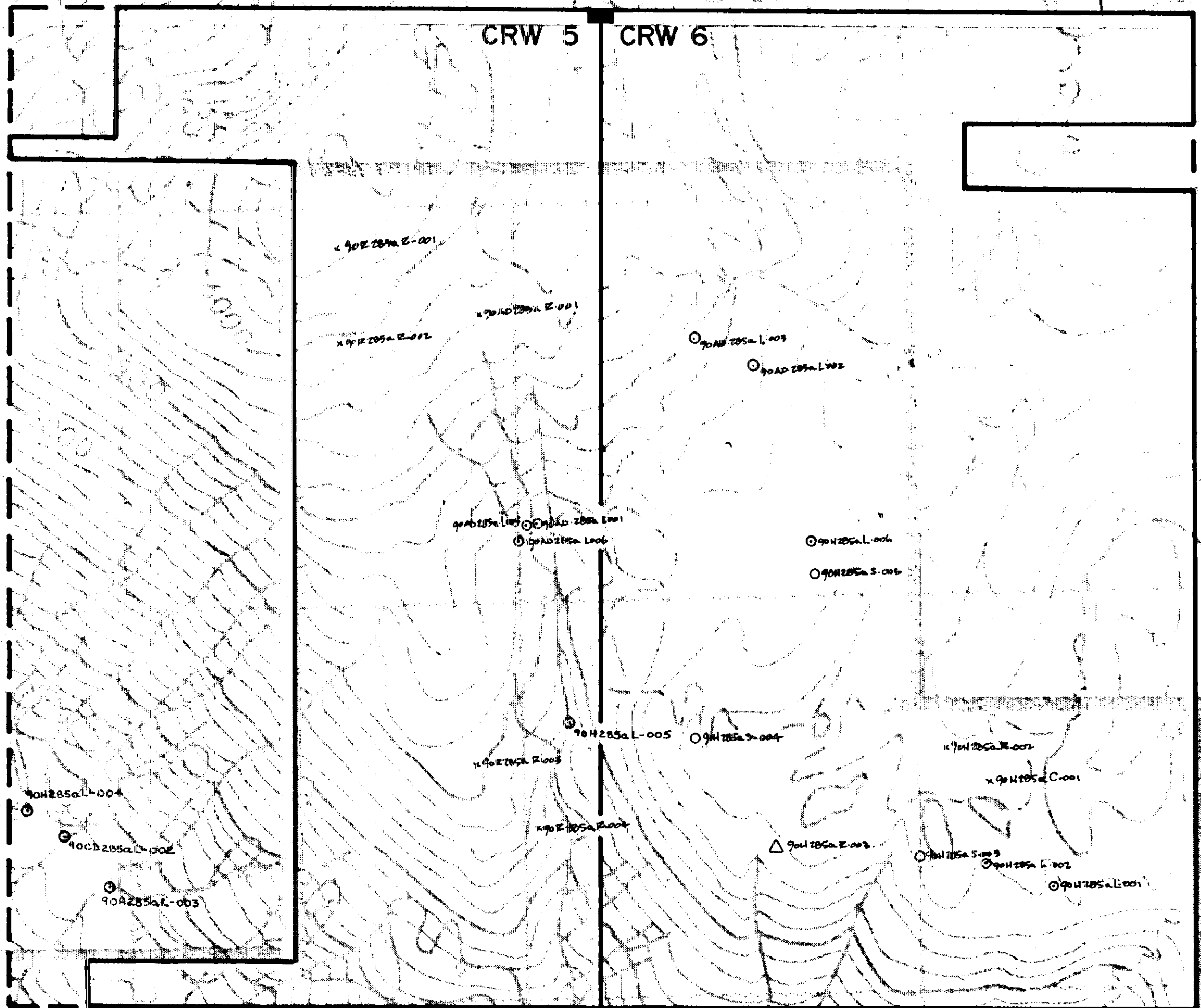
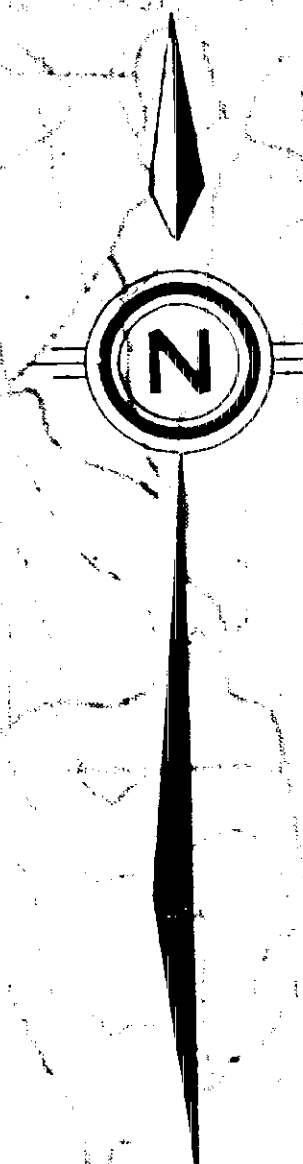


APPENDIX 4

Geochemical Sample Descriptions

APPENDIX 5

Geochemical Results



GEOLOGICAL BRANCH
ASSESSMENT REPORT

21,249



LEGEND

- x Grab/Chip rock sample
- △ Float rock sample
- Silt sample
- Soil sample

4500 - 100 foot contour interval
Note: Claim boundaries taken from government claim map.



CANADIAN CARIBOO RESOURCES LTD.	
CROWN SOUTH PROPERTY	
GEOCHEMICAL SAMPLE LOCATIONS	
DATE: Jan., 1991	NTS: 1048/10E
PROJECT: 285 a	PRJ: GEOL.
SCALE: 1:10,000	
Keewatin Engineering Inc. MAP No. 2	