

85-121-14284

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**14,284**

02/86

**ASSESSMENT REPORT  
ON THE  
ADAM CLAIM**

Located in the Adam River Area, Vancouver Island  
Nanaimo Mining Division  
NTS 92L/8E

at

**FILMED**

Latitude 50°18'N  
Longitude 126°03'W

for

**CRAVEN RESOURCES INC.**

by

**Charles K. Ikona, P.Eng.**

February 25, 1985

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## 1.0 INTRODUCTION

The Adam claim is located approximately 15 kilometres west of Kelsey Bay, in the Adam River area, in the northeastern part of Vancouver Island, British Columbia. It was requested by Craven Resources Inc., that Pamicon Developments Ltd., conduct a property examination of the Adam claim.

A program of geological mapping, geochemical sampling, re-logging and sampling of selected old drill core was done in the early part of September, 1984.

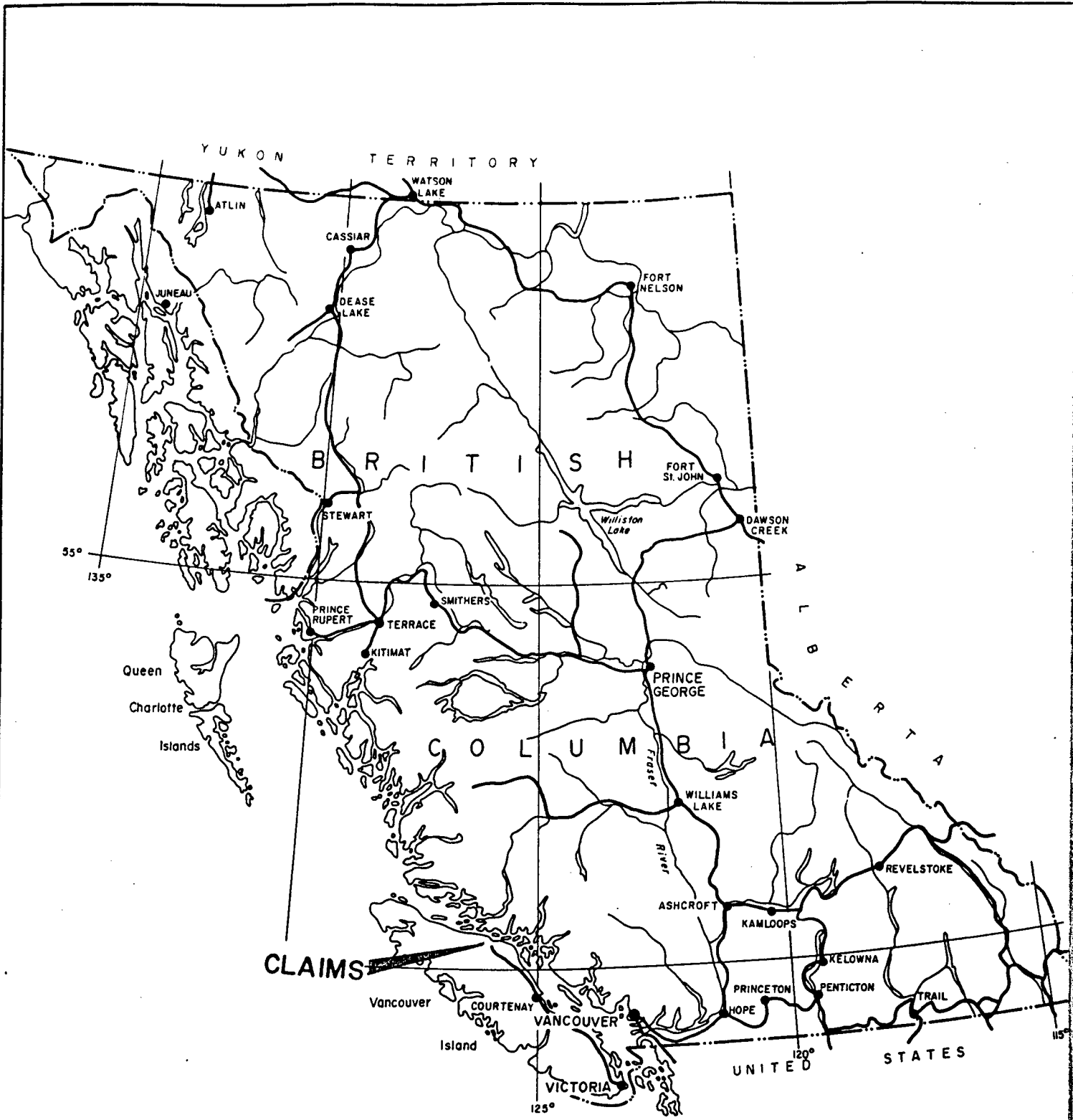
This program was intended to carry out the initial portion of the Stage I program for the property as recommended by Mr. H. Veerman, P.Eng. in his report of June 14, 1983. The program was not designed to complete the total Stage I program but to initiate some of Mr. Veerman's recommendations and to fill in some gaps in the information which was available at the date of Mr. Veerman's report. This would enable a more efficient use of the balance of the Stage I funds.

The following sections of this report discuss the results in more detail and present recommendations for the property at this stage.

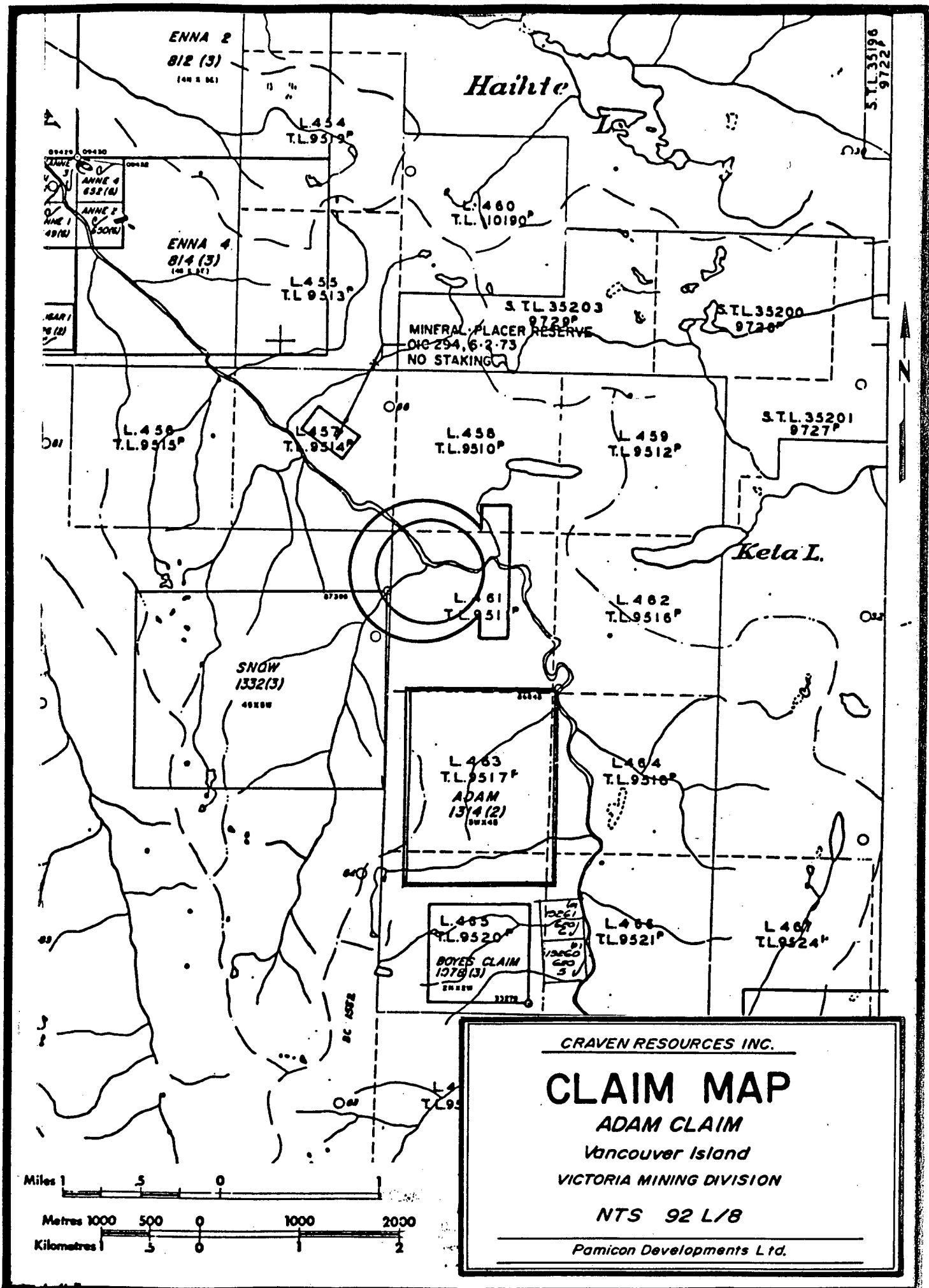
Part of the information on which this report is based was abridged from a report by Mr. H. Veerman, P.Eng., dated June 14, 1983.

## 2.0 LOCATION, ACCESS AND PHYSIOGRAPHY

The location of the property at less than 2 kilometres from the Island Highway makes for easy access by car or truck. The logging road system of MacMillan Bloedel leads to the claim's northerly and westerly boundaries.



<b>Craven Resources Inc.</b>			
<i>ADAM CLAIM</i>			
<b>PROPERTY LOCATION MAP</b>			
<b>PAMICON DEVELOPMENTS LTD.</b>			
DRAWN	PROJECT	DATE	FIG.



ENNA 2  
812 (3)  
(40 x 80)

ANNE 1  
491 (U)

ANNE 2  
450 (U)

ANNE 3  
632 (U)

ANNE 4  
632 (U)

ENNA 4  
814 (3)  
(40 x 80)

MINERAL PLACER RESERVE  
D/C 294, 6-2-73  
NO STAKING

L.456  
T.L. 9515<sup>P</sup>

L.457  
T.L. 9514<sup>P</sup>

L.458  
T.L. 9510<sup>P</sup>

L.459  
T.L. 9512<sup>P</sup>

S.T.L. 35201  
9727<sup>P</sup>

SNOW  
1332 (3)  
40000

L.463  
T.L. 9517<sup>P</sup>  
ADAM  
1374 (2)  
20000

L.464  
T.L. 9516<sup>P</sup>

L.465  
T.L. 9520<sup>P</sup>  
BOYES CLAIM  
1378 (3)  
20000

L.466  
T.L. 9521<sup>P</sup>

L.467  
T.L. 9524<sup>P</sup>

CRAVEN RESOURCES INC.

**CLAIM MAP**

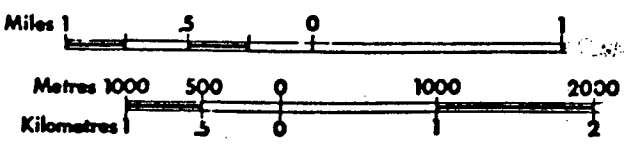
ADAM CLAIM

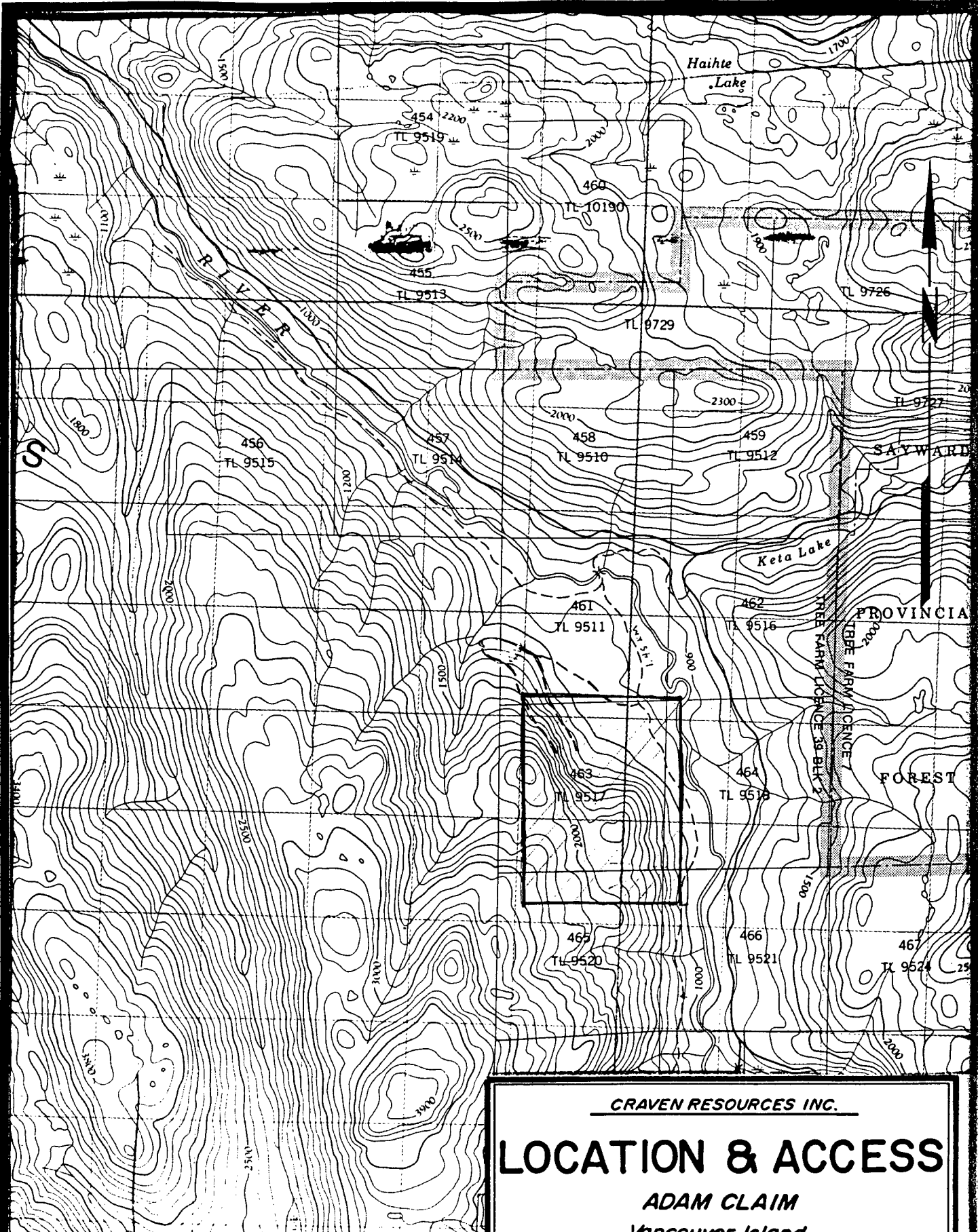
Vancouver Island

VICTORIA MINING DIVISION

NTS 92 L/8

Pamicon Developments Ltd.





**CRAVEN RESOURCES INC.**

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**LOCATION & ACCESS**

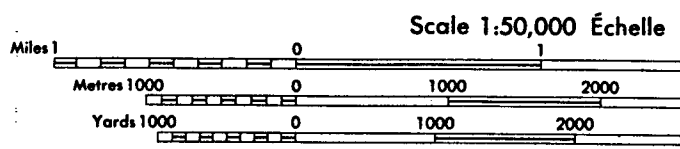
**ADAM CLAIM**  
*Vancouver Island*

**VICTORIA MINING DIVISION**

**NTS 92 L/8**

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*Pamicon Developments L td.*



The property is at a distance of about 15 kilometres west of the logging community of Kelsey Bay, where most of the elementary services are available. Campbell River, about 100 kilometres to the southeast, offers the facilities of a larger community.

The property itself is steep and heavily forested. Some rock slides on the east slope indicate the precipitousness of the terrain. The highest point is about 700 meters, or 400 meters above the valley of the Adam River.

Outcrops are nevertheless relatively scarce on the lower slopes except in the creek beds. Overburden and loose rock from slides covering the northeast slope make interpretation of soil sampling results difficult.

### 3.0 LIST OF CLAIMS

The B.C. Ministry of Mines, Energy and Petroleum Resources indicates that the following claim constitutes the Adam property.

<u>Claim Name</u>	<u>Record No.</u>	<u>Units</u>	<u>Record Date</u>
Adam	1314	12	February 10, 1983

### 4.0 HISTORY

The earliest work recorded in the area was carried out on the Lucky Jim claims in 1918. This property is located some 7 kilometres to the south of the Adam claim near the mouth of Compton Creek. The ore, classified as belonging to the contact-metamorphic type (Minister of Mines Annual Report 1918) is reported to have assayed 0.9 ounces in gold, 1.8 ounces in silver and 5.35% copper.

During the period from 1968 to 1972 the area was very active with several companies carrying out exploration programs in search of copper. Most of the assessment work reports date from this period. (See references).

Geochemical surveys were carried out over several claim groups in the area, but the samples were assayed for copper only. (Assessment Report No. 3235). The activities came to a halt when the political climate in the province changed in 1972.

Copper, gold and silver are reported from the Lucky Jim and from the Boyes property directly to the south of the Adam claim. (Assessment Report 1993). The geological environment and mineralization on these properties is similar to that encountered on the Adam property, and appears to be stratigraphically related to certain volcanic and limy horizons. Further work is necessary to test this hypothesis.

## 5.0 PROGRAM DESCRIPTION

The program period was September 5 to 11, with personnel consisting of a geologist, Bob Yorston, and an experienced prospector-sampler, Kevin Milledge.

During this period the property was prospected, mapped geologically, drill core from previous drilling was examined and sampled, samples were collected from several mineralized surface outcrops and two reconnaissance lines of soil geochemical samples were collected on strike from the apparent trend of the observed mineralization.

All samples were analyzed for copper, gold and silver. The precious metal samples were of particular interest as no record existed for any previous precious metal samples from the property. The general geological setting of the claims has



recently been recognized as potential host for precious metals deposits, e.g. Kennedy Lake area and Toodoggone areas in B.C. Sample descriptions and analyses are presented in Appendices.

## 6.0 GEOLOGY AND MINERALIZATION

The Adam claim is underlain by the Karmutsen group of rocks consisting principally of basalt to andesite flows. The top of a light grey limestone unit is exposed on the northwest portion of the claims showing a conformable contact with the overlying volcanics. The entire layered sequence dips gently northward.

The base of the limestone is not exposed but pillow structures and amygdaloidal textures within the volcanic rocks above and below the limestone indicate that the limestone unit is an interbed and not likely the Quatsino formation limestone outcropping near the north end of the Adam claim.

The north-south trend of numerous steep bluffs on the property reveals the dominant fracture pattern of the area. A few unmineralized quartz-carbonate lenses occur within propylitic alteration zones but structures such as shearing or strong quartz veining were not seen.

Locally the degree of alteration and copper mineralization may be related to an east-west trending fracture system. Some narrow east-west sheeted fracture zones containing carbonate-quartz veinlets and alteration minerals occur near the area of the copper showings. The topographical expression at the showing area also has a general east-west cross-cutting trend. No dominant fracture control is evident in the small outcrops containing the mineralization but small scale joints trend N10W and N70W.

Drill core investigation reveals that the mineralized volcanic underlies the limestone unit but control over mineralization is likely more related to fracturing and hydrothermal alteration than to a stratigraphic horizon.

Mineralization consists of sparsely disseminated bornite and chalcopyrite with lesser chalcocite and native copper. The copper minerals sometimes partially replace the chlorite grains in the altered volcanics and also often occur with the amygdaloidal minerals consisting of quartz, epidote and calcite. Some microfractures contain improved mineralization.

Although alteration and brecciated zones in the drill core can be 3 to 4 metres in section, copper mineralization is sparse and non-continuous.

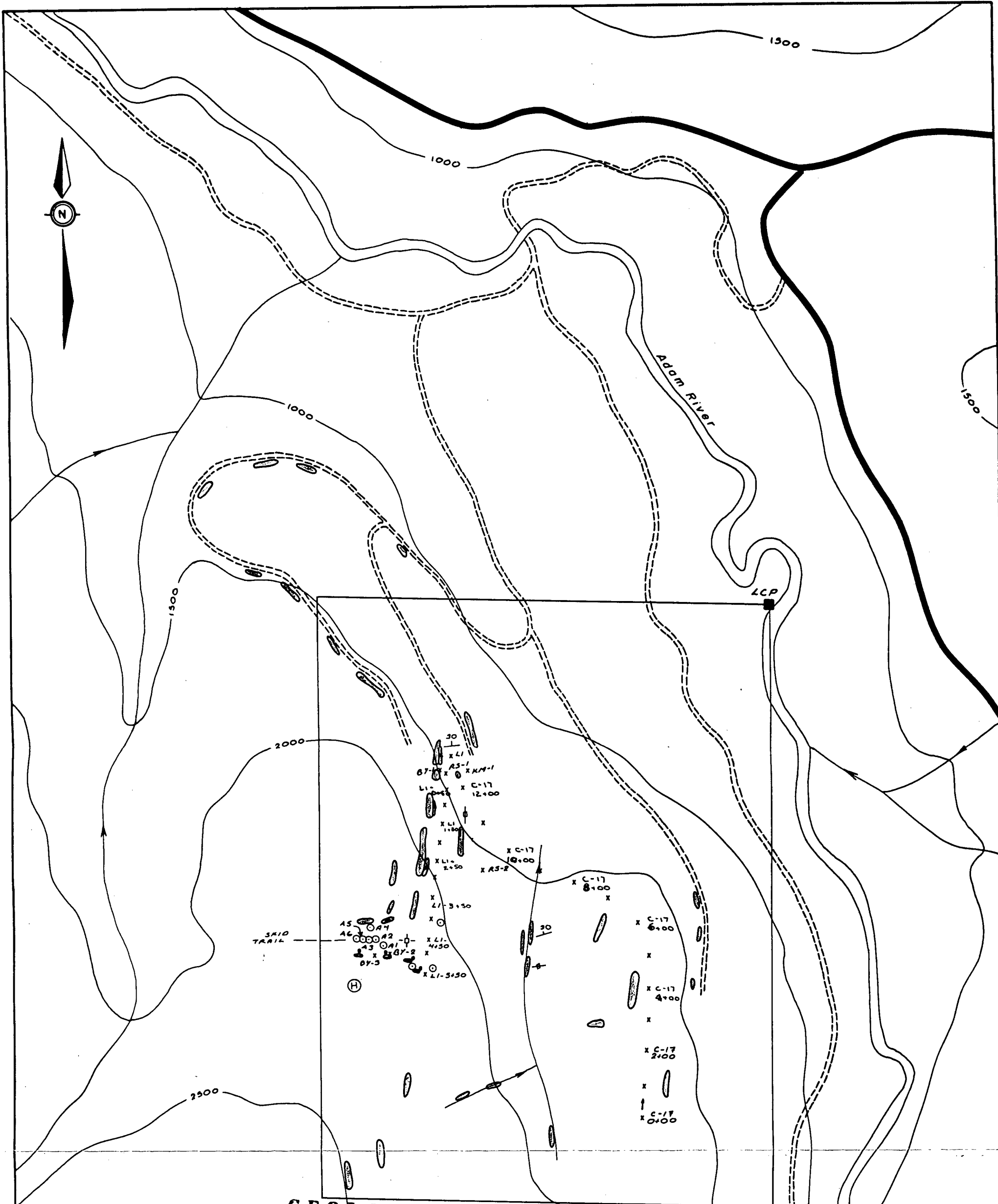
Quartz veining and silicification zones are minor, reducing the potential for precious metal values.

Sample results for precious metals were low although copper results did indicate the existence of a fairly extensive copper anomaly. While the low precious metal values are disappointing, analysis for these should be done during the next stage of any program to ensure that whether this potential is available on the property.

## 7.0 GEOCHEMISTRY

During the programs, 38 soil samples and 17 rock samples were collected. All samples were sent to Acme Analytical Laboratories of Vancouver and analyzed for Cu, Au and Ag.

Due to a very thick organic layer considerable effort is required to obtain a representative soil sample. However, all samples were taken of red-brown B horizon material and placed in brown kraft envelopes for shipment.

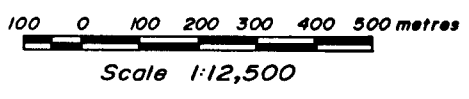


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**LEGEND**

- ⊗ BASALT & ANDESITE
- LIMESTONE
- AM BG DIAMOND DRILL HOLE
- X-RAY DRILL HOLE
- COPPER MINERALIZATION
- Ⓜ HELICOPTER PAD
- ↘ CREEK
- ▬ ROAD
- - - TRAIL
- X SAMPLE STATION



CRAVEN RESOURCES INC.

**Geology Map  
ADAM CLAIM  
Vancouver Island  
VICTORIA MINING DIVISION  
NTS 92 L/B**

Oct., 1984 Figure

PAMICON DEVELOPMENTS LTD.

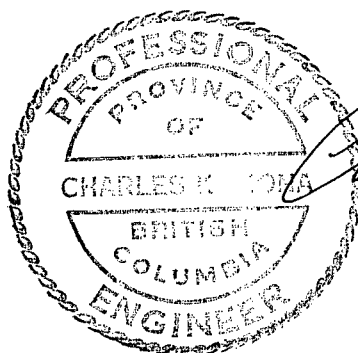
One soil sample line at 50 metre sample spacing was run below the limestone unit to test the stratigraphic potential for mineralization. The other line was a reconnaissance contour line covering most of the claim area. Both lines crossed below the saddle where the showing and drill holes are located.

Both lines showed apparently anomalous values for copper although the work to date has not been detailed enough to provide meaningful statistical data or allow contouring of results.

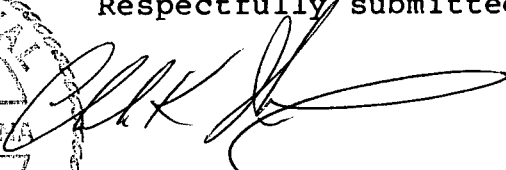
## 8.0 DISCUSSION AND CONCLUSIONS

The geology and mineralization present on the Adam Claims consisting of Karmutsen volcanics which display fracturing and alteration combined with copper mineralization of bornite, chalcopryrite with some chalcocite and native copper. These indications show that further work as recommended by Mr. Veerman is warranted.

Should the balance of this work continue to indicate a low potential for precious metals yet enhance the copper potential, the current copper market would be an important factor in the company's decision to proceed to Stage II, as outlined by Mr. Veerman. To this end, Craven may at the time be well advised to postpone the additional expenditures until such a time that copper becomes of more interest.



Respectfully submitted,

  
Charles K. Ikona, P.Eng.

## 9.0 REFERENCES

Ikona, C.K., 1984. Progress Report on Adam Claims for Craven Resources Inc.

Veerman, H., 1983. Report on the Adam Claims for Craven Resources Inc.

**APPENDIX I**

**SAMPLE DESCRIPTIONS**

## SAMPLE DESCRIPTIONS

Results - (ppm Cu; ppm Ag; ppb Au)

### Sample No.

- 18701                      Float from slide area  
Basalt with 2-3% disseminated sulphides Py,  
Pyrroh, ± Cpy  
Best mineralization on hairline fracture surfaces  
(129; 1.0; 1)
- 18702                      Fault gouge from above KM-1; width 4 cm  
Quartz, sericite, clay; no sulphides  
(136; 0.7; 5)
- 18703                      Minor showing near drill holes. Outcrop length  
5 m; not continuously mineralized  
Mineralization occurs as replacing amygdaloids in  
basalt and as trace amounts in some mafic  
grains. Total sulphides in sample approximately  
1-2% consisting of bornite and Cpy malachite and  
azurite staining. Better values associated with  
fractures N70W and N10W.  
Only mineralized rock taken for sample  
(7639; 3.1; 67)
- 18704                      Same area as BY-2  
Float sample of basalt and quartz-carbonate vein  
with malachite stain  
(2147; 0.3; 15)

## DRILL HOLE SAMPLES

Results - (ppm Cu; ppm Ag; ppb Au)

<u>Sample No.</u>	<u>Drill Hole</u>	<u>Footage</u>	
18711	A1	395-397	Minor quartz veining epidote, quartz, sericite and clay alteration. No sulphides (742; 0.6; 8)
18713	A1	77-79	Amygdaloidal basalt ± Cpy; split core (420; 0.5; 6)
18712	A1	51-53	Chorite alteration ± bornite; split core (190; 0.5; 8)
18710	A1	367-370	Minor quartz-carbonate veining. Minor brecciation; no sulphides (182; 0.5; 2)
18714	A2	331-333	Quartz-calcite healed fracture zone. Minor Py ± Cpy (379; 0.5; 2)
18717	A2	138-141	Very altered epidote, calcite, chlorite ± bornite, native Cu? Split core (276; 0.2; 2)
18716	A2	117-119	Very bleached altered volcanic split core with some pieces 2-3% disseminated bornite Cpy (1142; 0.1; 7)



**DRILL HOLE SAMPLES**

(Continued)

Results - (ppm Cu; ppm Ag; ppb Au)

<u>Sample No.</u>	<u>Drill Hole</u>	<u>Footage</u>	
18715	A2	90-92	Chloritized zone. Split core ± bornite (645; 0.1; 2)
	A3	-	No mineralization.
18707	A4	678-688, 271-272	At 678 good bornite mineralization for cm piece associated with minor epidote zone at 271, 2 cm section of bornite in small silicified zone. Split core. (2110; 0.7; 10)
18705	A4	158-159, 169-170, 193-194	Amygdaloidal basalt. Some silicification; some epidotization; some split core pieces up to 1% bornite (5729; 1.4; 16)
18706	A4	238-240	3 metre hydrothermal alteration zone. Minor disseminated Py (748; 0.4; 7)
18708	A5	181-182, 188-189	Minor quartz veing ± bornite; split core (3034; 0.8; 17)
18709	A6	98-99, 108-109	Altered basalt, minor bornite (2710; 2.0; 9)

### DRILL HOLE INFORMATION

<u>BQ Core</u>	<u>Angle</u>	<u>Direction</u>	<u>Depth</u>
DDH A1	-90		625'
DDH A2	?	?	475'
DDH A3	-45	N35E	285'
DDH A4	?	?	809'
DDH A5	?	?	275'
DDH A6	?	?	<u>278'</u>
			2747 Total Footage

X-Ray core 300'

**APPENDIX II**

**ASSAY CERTIFICATES**

ACME ANALYTICAL LABORATORIES LTD.  
52 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
PHONE 253-3158 DATA LINE 251-1011

DATE RECEIVED: SEPT 24 1984

DATE REPORT MAILED: *Sept 28/84*

### GEOCHEMICAL ICP ANALYSIS

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-3 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
THIS LEACH IS PARTIAL FOR MN.FE.CA.P.CR.MG.BA.TI.B.AL.NA.K.W.SI.ZR.CE.SN.Y.NB AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.

- SAMPLE TYPE: P1-ROCKS P2-SOILS AU\*\* ANALYSIS BY FA+AA FROM 10 GRAM SAMPLE.

ASSAYER: *D. Toye* DEAN TOYE. CERTIFIED B.C. ASSAYER

PAMICON DEVELOPMENT PROJECT # ADAM CLAIMS FIL # 84-2732 PAGE 1

SAMPLE#	CU PPM	AG PPM	AU** PPB
18701	129	1.0	1
18702	136	.7	5
18703	7639	3.1	67
18704	2147	.3	15
18705	5729	1.4	16
18706	748	.4	7
18707	2110	.7	10
18708	3034	.8	17
18709	2710	2.0	9
18710	182	.5	2
18711	742	.6	8
18712	190	.5	8
18713	420	.5	6
18714	379	.5	2
18715	645	.2	2
18716	1142	.1	7
18717	276	.2	2
STD C/FA-AU	75	6.5	50

SAMPLE#	CU PPM	AG PPM	AU** PPB
C-17 12+00N	178	1.6	1
C-17 11+50N	598	.6	5
C-17 11+00N	628	.4	1
C-17 10+50N	1032	1.0	2
C-17 10+00N	750	1.6	2
C-17 9+50N	237	1.4	2
C-17 9+00N	177	1.4	1
C-17 8+50N	277	1.4	2
C-17 8+00N	181	1.6	1
C-17 7+50N	100	1.6	1
C-17 7+00N	240	1.8	1
C-17 6+50N	73	1.7	8
C-17 6+00N	86	1.6	1
C-17 5+50N	32	1.0	1
C-17 5+00N	55	2.1	22
C-17 4+50N	92	1.6	2
C-17 4+00N	67	1.6	4
C-17 3+50N	54	1.4	4
C-17 3+00N	94	1.4	2
C-17 2+50N	135	1.5	3
C-17 2+00N	91	1.6	1
C-17 1+50N	166	.9	1
C-17 1+00N	103	1.5	1
C-17 0+50N	58	1.4	1
C-17 0+00N	66	1.6	2
L1 0+00	205	.5	1
L1 0+50	111	1.1	1
L1 1+00	103	1.1	3
L1 2+00	85	1.1	5
L1 2+50	165	.8	1
L1 3+00	73	1.0	1
L1 3+50	112	1.4	2
L1 4+00	116	1.3	1
L1 4+50	274	1.2	1
L1 5+00	453	1.2	1
L1 5+50	220	1.5	1
RS-1	218	.6	1
RS-2	641	.9	2
STD C/FA-AU	60	6.2	54

**APPENDIX III**

**ITEMIZED COSTS**

ITEMIZED COSTSWAGES

R. Yorston, Geologist  
 215 - 543 Granville St.  
 Vancouver, B.C.  
 September 6 - 11, 1984  
 6 Days @ \$250.00/Day

\$1,500.00

K. Milledge, Assistant  
 215 - 543 Granville St.  
 Vancouver, B.C.  
 September 6 - 11, 1984  
 5.5 Days @ \$150.00/Day

825.00

\$2,325.00

ACCOMMODATIONS & MEALS

Salmon River Inn, Sayward, B.C.

313.08

B.C. Ferries, Horseshoe Bay/Nanaimo - Return

36.00

TRUCK RENTAL

6 Days @ \$50.00/Day  
 Fuel

300.00

88.00

388.00

DRAFTING & REPRODUCTIONS

Western Reproducers (Invoice #81791)  
 B. Meneley - 5 Hours @ \$20/Hour

30.98

100.00

130.98

EXPENDABLE MATERIALS

100.00

ASSEY & GEOCHEMISTRY

Acme Laboratories  
 38 soil samples for Au, Ag, Cu  
 17 rock samples for Au, Ag, Cu

523.30

REPORT

500.00

MANAGEMENT FEE

647.45

TOTAL COST

\$4,963.81

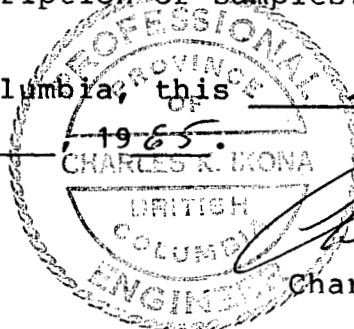
## ENGINEER'S CERTIFICATE

I, Charles K. Ikona, of 5 Cowley Court, Port Moody, in the Province of British Columbia, DO HEREBY CERTIFY THAT:

1. I am a Consulting Mining Engineer with offices at 215, 543 Granville Street, Vancouver, British Columbia.
2. I am a graduate of the University of British Columbia with a degree in Mining Engineering.
3. I am a member in good standing of the Association of Professional Engineers of the Province of British Columbia.
4. This report is based on a report by Mr. H. Veerman, P.Eng., dated June 14, 1983, on previously published information, and on work conducted on the property under my supervision by Robert Yorston, Geologist, of our office.
5. I have no interest in the property reported on or in the securities of Craven Resources or any company associated with Craven Resources, nor do I expect to acquire any such interest.
6. I consent to the use by Craven Resources of this report in a Prospectus or Statement of Material Facts or any other such document as may be required by the Vancouver Stock Exchange or the office of the Superintendent of Brokers, and hereby give Craven Resources permission to reproduce this report with or without the appended description of samples.

DATED at Vancouver, British Columbia, this 25<sup>th</sup> day of

Feb



*[Signature]*  
Charles K. Ikona, P.Eng.