

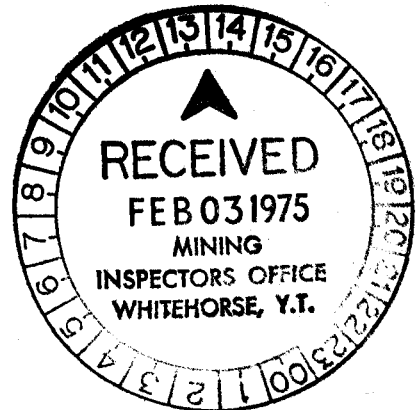


A Geological and Geochemical Report on the

Bat (1-24) Claims

Bonnet Plume River Area,

Mayo M.D., Yukon



Claim Sheet: 106-C-10

Coordinates: 64° 42' N. Lat., 132° 53' W. Long.

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of \$2400.00

[Signature]

Resident Geologist or
~~Resident Mining Engineer~~

Considered as representation work under
Section 53 (4) Yukon Quartz Mining Act

[Signature]

Commissioner of Yukon Territory

By:

T. L. Sadlier-Brown and

2400

C. Ikona, P. Eng.

Bow River Resources

and

Highhawk Mines Ltd.

BAT claims

Remarks:

The claims are in the Corn Creek area, 15 miles east of Pinguicula Lake. The area is underlain by ~~east~~ easterly dipping carbonates and clastics of Hadrynian to Cambrian age. No sulphide minerals were observed during geological mapping ~~of~~ on the property. A geochemical soil survey did not outline any significant lead or zinc anomalies.



Department of Indian Affairs and Northern Development
YUKON QUARTZ MINING ACT

FORM "C" - APPLICATION FOR A CERTIFICATE OF WORK

(This form required in duplicate with sketch showing location of work.)



I (Name)	GEORGE BLEILER	Occupation	PROSPECTOR
(Postal Address)	333 - 885 Dunsmuir Street, Vancouver, B. C.		

OFFICE DATE STAMP

MAKE OATH AND SAY, THAT :-

- I am the owner, or agent of the owner, of the mineral claim(s) to which reference is made herein.
- I have done, or caused to be done, work on the following mineral claim(s):
(Here list claims on which work was actually done by number and name)

BAT 1-24 inclusive Y 86210-Y86233 inclusive

situated at CORN CREEK Claim Sheet No. 106-C-10
in the MAYO Mining District, to the value of at least \$2,400.00
dollars, since the 18th day of JANUARY 19 74

to represent the following mineral claims under the authority of Grouping Certificate No. _____
(Here list claims to be renewed in numerical order, by grant number and claim name, showing renewal period requested).

<u>GRANT NUMBER(S)</u>	<u>CLAIM NAMES</u>
Y 86210-Y86233 inclusive	BAT 1-24 inclusive

(1 year)

- The following is a detailed statement of such work: (Set out full particulars of the work done indicating dates work commenced and ended in the twelve months in which such work is required to be done as shown by Section 53.)

\$3,706.42 expended, as per accompanying report by T. Sadlier-Brown and C. Ikona, between August 20 and September 24, 1974 - \$2,400.00 to be applied for 1 years assessment work on BAT NOS. 1-24 inclusive.

Sworn before me at Vancouver B.C.
this 16 day of January 19 75

[Signature]
Notary Public

[Signature]
Applicant.

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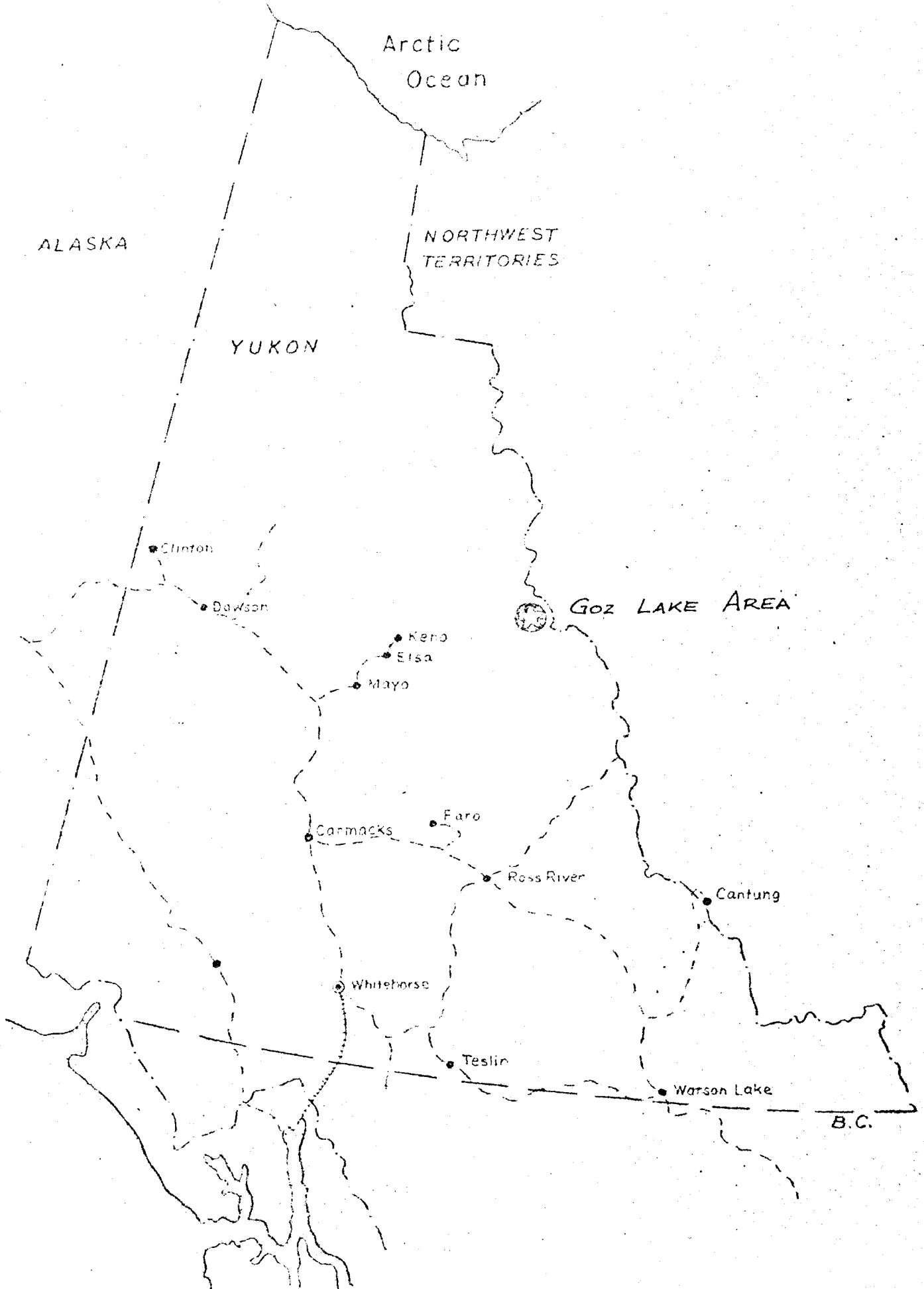
Summary

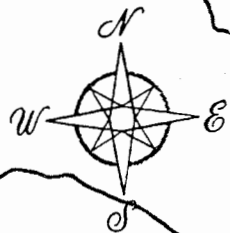
The Bat claims are situated in the Bonnet Plume River area of the east central Yukon. This region has recently been recognized as a potentially important zinc province and the centre of intense exploration activity.

The property is underlain by proterozoic slates siltstones and shale and by palaeozoic quartzite, shale, and dolomite all with a shallow to moderate easterly dip.

Although no sulphides have been found on the claims a number of geochemical samples were found to contain above background Zn concentrations. These are located in the eastern part of the property near the lowest palaeozoic dolomite unit (Ec¹).

Detailed prospecting in and near the palaeozoic carbonate units and further geochemical sampling are recommended.





LOCATION MAP OF

BAT CLAIMS

Bonnet Plume River Area, Yukon.

Pinguicula
Lake

BAT CLAIMS

BONNET
PLUME
RIVER

CORN
CREEK

SNAKE
RIVER

RIVER

Goz Lake

3

1 Introduction

1.1 Property Description & Terms of Reference

The Bat Group comprises twenty four contiguous mineral claims held by Bow River Resources and Highhawk Mines Ltd., of 333-885 Dunsmuir Street, Vancouver, B.C. The claims were staked under the Yukon Quartz Mining Act and were intended to cover rocks similar in age and lithology to those known to contain zinc sulphides further to the east. The present program was conducted on behalf of the property holders as a preliminary geological assesement.

The claims are plotted on map 106-C-10, have consecutive record numbers from Y 86201 to Y 86233 inclusive, and become due for renewal on January 18th, 1975.

1.2 Location and Access

The property is located about three miles east of Corn Creek and 17 miles east of Pinguicula Lake in the east central part of the Yukon Territory. The nearest supply centre is the town of Mayo 115 miles to the southwest. Access from here for the work described herin was by float plane to Goz Lake, 20 miles east southeast of the claim group and by helicopter from there to the property.

1.3 Topography & Physiography

The Bat claims lie between elevations of about 3,800 and 6,000 feet in the valley of a major tributary of Corn Creek and on the slope to the north. In the central portion of the property is a valley heavily mantled with galcial debris, including many large dolomite blocks resembling outcrops. Exposure, however, is limited to the mountain slopes east and west of this depression and in the creekbed to the south of it.

The drift covered area is topographically irregular and contain several small lakes or ponds. Drainage is southerly to the main east-west valley, then west to Corn Creek.

The lower areas are moderately forested with spruce and a few deciduous varieties including alder and willow. Above about 4,500 feet only alpine plants persist.

1.4 Survey Methods

The area covered in this report has been mapped by the Geological Survey of Canada at scales of 1 : 50,000 and 1 : 250,000. Data from these maps was used for both geological and topographical control in the field along with both pace and compass and chained survey lines.

2 Geology

2.1 General Statement

The Bonnet Plume Range, in which the Bat claims are located is made up of the proterozoic and palaeozoic sedimentary rocks of the Selwyn basin. Proterozoic rocks tend to consist of clastic sediments, carbonates (mainly dolomites), and thin units of quartzite and shale. The palaeozoic rocks are predominantly carbonates (limestone & dolomite) with lesser, but significant thicknesses of shale. The Selwyn basin occupies a large area of the eastern Yukon and extends into the western part of the District of MacKenzie N.W.T. It has recently been recognized as a potentially important zinc province and extensive exploration efforts by a number of mining companies are presently under way.

2.2 Previous Work

To the best of the writers knowledge no work other than the GSC mapping mentioned earlier has been undertaken on the claims. The GSC maps are presently available as Open File documents 205 and 206 dated June 1974.

2.3 Stratigraphy and Structure

The area is underlain by easterly dipping stratified sedimentary rocks of Proterozoic and Palaeozoic age. Their sequence and description are described in the following table:

Table of Formations:

Palaeozoic

Cambrian:

<u>Backbone Ranges Formation</u>	Eq ²	Brown and grey weathering quartzite and siltstone. Black and grey shale Undivided.
	Ec ²	Brown weathering buff-grey dolomite.
	Eq ¹	1/ Grey quartzite 2/ Rusty weathering brown quartzite 3/ Greenish brown shale 4/ Grey and brown quartzite 5/ Green and red shale.
	Eqc	1/ Buff grey dolomite 2/ Dark grey platey silty dolomite 3/ Orange weathering platey dolomite
	Ec1	Massive to thick bedded orange to buff weathering grey dolomite.

Unconformity

Proterozoic-Palaeozoic

Hadrynian-Cambrian:

<u>Sheepbed Formation</u>	HEs	Grey slate locally relict bedded.
	HEsc	Brown and reddish brown shale, silty shale, siltstone and slate.

No faulting or major folding was observed on the property. An unconformity is inferred at the base of the orange weathering dolomite (Ec¹). Rocks below the unconformity may exhibit slaty cleavages and have attitudes somewhat different from those above it.

2.4 Economic Geology

No sulphides were observed on the Bat Group during the course of the geological mapping. One rock unit, the dolomite (Ec¹) at the base of the Cambrian sequence is similar in appearance to zinc bearing dolomites elsewhere in the region and several geochemical samples obtained near it (See map and discussion in section 3.2) contained Zn values well above background.

3 Geochemistry

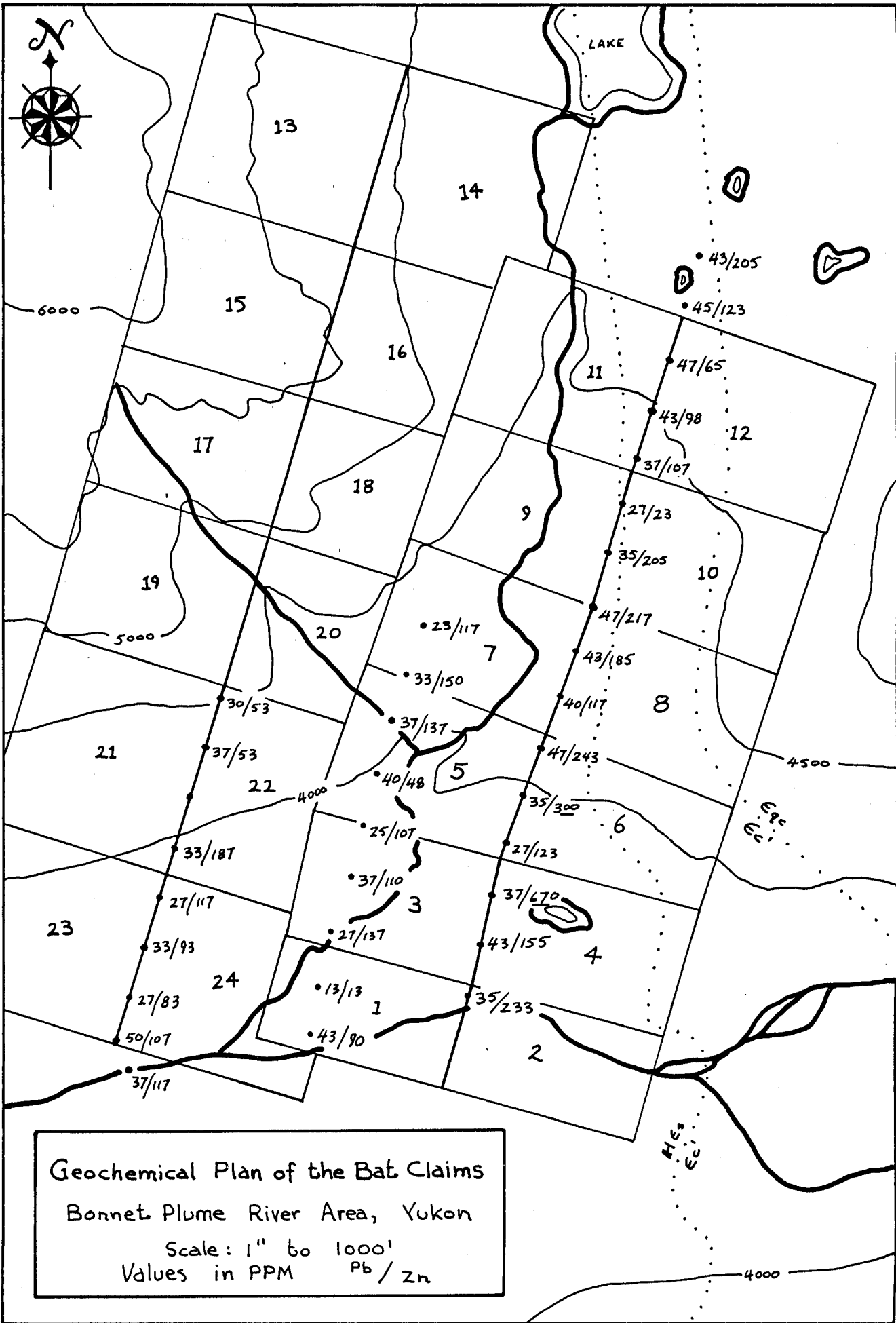
3.1 General Statement

Soil sampling was done on three north south lines on the Bat Claims including the two claim lines. Thirty three samples were taken at 400 foot intervals from shallow holes dug with a mattock. They were placed in paper envelopes, numbered, and sent to Vangeochem Lab. Ltd. of North Vancouver, B.C. for analysis. An atomic absorption spectrophotometer was used to test samples of - 80 mesh material after digestion in hot acid. Results were given in parts per million and plotted on the accompanying map.

3.2 Observations

Background lead values were found to be from 25 to 30 PPM and the range was from 13 PPM to 50 PPM. No significant Pb value or group of values was found on the Bat Claim.

Zinc values ranged from 13 PPM to 640 PPM with a background of about 100 to 110 PPM and an average of 145 PPM. Seven samples ran over 205 PPM Zn and all were obtained on the eastern claim line which parallels a west facing slope near the lower Cambrian dolomite unit (Ec¹). Because of the reconnaissance nature of the survey, the values do not constitute an anomaly but do point to a moderate Zn source probably in the vicinity of claim 6, 8, and 10.



Geochemical Plan of the Bat Claims

Bonnet Plume River Area, Yukon

Scale: 1" to 1000'

Values in PPM Pb/Zn

4 Discussion

4.1 Conclusion

While no sulphide minerals were observed on the Bat group geochemical sampling does indicate that a moderate Zn source could be present on the mountainside in the eastern part of the property, specifically on or near claims 6, 8, and 10. Samples from this area were found to contain about twice background values in Zn. The source of this material is quite likely the lower Cambrian dolomite unit (Ec¹) which outcrops uphill to the east of the sample line.


The geochemical values are not high in comparison to those found in other areas within the Selwyn basin rocks but they do constitute local highs which may be significant.

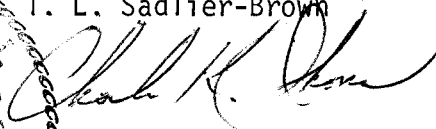
4.2 Recommendations

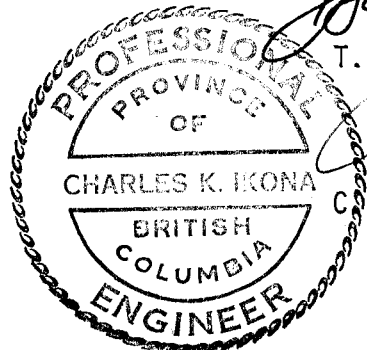
It is recommended that detailed prospecting and additional geochemical sampling carried out in the dolomite units (Ec¹ and Ec²) in the south-east part of the property and in the main valley to the east.

The Ec¹ unit is also present as an outlier in the northwest part of the property on claims 15, 16, and 17. Additional work similar to that described above might also be warranted.

Respectfully submitted,


T. L. Sadlier-Brown


C. Ikona P. Eng.



The seal is circular with a double-line border. The text inside the seal reads: 'PROFESSIONAL ENGINEER' at the top, 'PROVINCE OF' in the middle, 'CHARLES K. IKONA' in the center, and 'BRITISH COLUMBIA' at the bottom.

List of Personnel for the Bat Group:

Tim Sadlier Brown

Aug. 20, Sept. 24/27/23

1307 Harwood Street

Vancouver, B.C.

Steve Toporowski

Aug. 19/20

812 Seafair Place

Richmond, B.C.

Kevin Milledge

Aug. 19/20/7

5794 Atlantic Ave.,

Halifax, N.S.

BAT MINERAL CLAIM GROUP
Statement of Expenditures

November 6, 1974

Direct Costs:

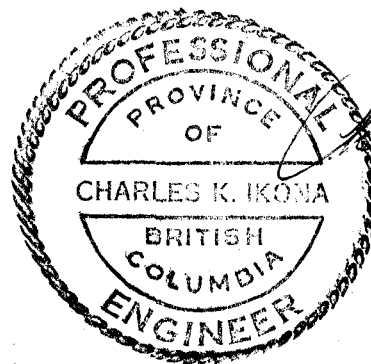
wages	\$ 120.00	
tagging posts	192.00	
geologic fees	560.00	
helicopter support	835.80	
geochem samples	66.00	
field equipment expense	30.00	
camp cost expense	<u>50.00</u>	\$ 1,853.80

Pro-Rata General Expense Costs

equipment supply depreciation	146.23	
contracts and rentals	14.30	
wages (camp mob/demob/cook)	380.25	
food	per diem	
fuels	per hour	
helicopter (general)	437.27	
fixed wing (general)	378.63	
travel & accomodation	29.42	
sundry and administration	261.42	
geochem supplies	16.67	
expediting services	134.66	
air travel and airfreight	<u>58.77</u>	<u>1,852.62</u>

Total on Account

3,706.42

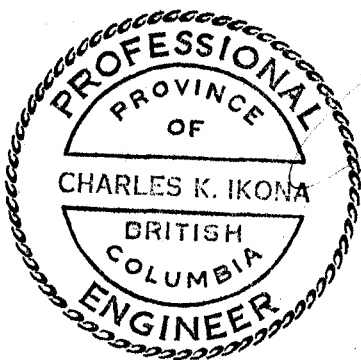


ENGINEERS CERTIFICATE

I, CHARLES K. IKONA of 2614 St. John's St., Port Moody, in the Province of British Columbia do hereby certify that:

1. I am a consulting mining engineer with offices at 609-850 W. Hastings St., Vancouver, B.C.
2. I am a graduate at the University of British Columbia with a degree in Mining Engineering.
3. I am a member in good standing at the Association of Professional Engineers of the Province of British Columbia.
4. The work described in the accompanying report on the Bat Claim Group was performed under my personal supervision.

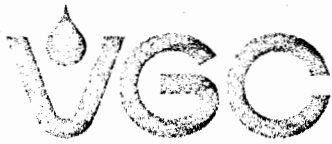
Dated this 30th day of August 1974 at Vancouver, B.C.



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

TIME BREAKDOWN - T.L. SADLIER-BROWN.

<u>Days Charged</u>			<u>Charge To.</u>			
August	7	- 1	Vancouver to Goz Lake (travel)			
	8	- 1	Goz Lake (Bar Group visit)			
	9	- 1	" (Gyr Group visit)			
	10	- 1	Sun Group			
	11	- 1	"			
	12	- 1	King Group			
	13	- 1	Goz Lake			
	14	- 1	King Group			
	15	- 1	Peso Group			
	16	- 1	"			
	17	- 1	"			
	18	- 1	Bid Group			
	19	- 1	Pong Group			
	20	- 1	Bat Group			
	21	- 1	Arctic Red - DeBock Showing			
	22	- 1	Goz Lake			
	23	- 1	D.J. Group			
	24	- 1	Goz Lake to Mayo (travel)			
	25	- 1	Mayo to Vancouver			
	27	- ½	Bid Group report			
	28	- ½	"			
	29	- 1	"			
	30	- 1	"			
Sept.	5	- ½	D.J. Group			
	6	- ½	"			
	9	- 1	King, D.J.			
	10	- 1	King Group			
	11	- 1	King, Peso			
	12	- 1	Peso			
	13	- ½	"			
	16	- ½	"			
	18	- ½	"			
	19	- ½	Pong	Sept. 24 - 1	Bat Group	
	20	- ½	"	27 - 1	Bat Group	
	23	- 1	Pong, Bat	30 - ½	D.J. Group.	
	24	- 1	Bat			



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Certificate of Geochemical Analyses

-IN ACCOUNT WITH-

Harman Management Ltd.,
 #821 - 602, West Hastings St.,
 Vancouver, B.C.
 Attention:

Report No: **74-45-003** Page **1** of **5**
 Samples Arrived: **August 19th, 1974**
 Report Completed: **August 26th, 1974**
 For Project:
 Analyst: **E. Tang**
 Invoice # **3055**

Sample Marking	Pb ppm	Zn ppm			
Bat L1 S # 1	37	117			25 mesh
S 2	47	27			
Bat L1 1	50	107			
2	27	83			
3	33	93			
4	27	117			
5	33	187			
Bat L1 6	37	53			
Bat L1 7	30	53			
Bat L2 1	43	90			
2	13	13			
3	27	137			
4	37	110			
5	25	107			
6	40	48			
7	37	137			
8	33	150			
Bat L2 9	23	117			
Bat L3 3	35	233			
4	43	155			
5	37	670			
6	27	123			
7	35	300			
8	47	243			
9	40	117			
10	43	185			
11	47	217			
12	35	205			
13	27	23			
14	37	107			
15	43	98			
16	47	65			
17	45	123			
Bat L3 18	43	205			
(Pong L1) 1	53	60			
silt 1	43	85			
2	27	83			
silt 2	43	120			
Pong L1 3	37	63			

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REMARKS:

Signed:

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	CYPRESS (CHARGE TO CYPRESS)	3	9		
	R.A.F. GROUP (CKI)		7		
	BAT-PONG GROUP (GRAHAM & WILLIE IN) PING. M'LEED & BLYLER.	1	6		
		6	2	222	3

OUR NUMBER

275616

DATE

Aug 7-74

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R.G. STURGES

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VIA

C-GHFA.

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	PING GROUP (MOVE IN J.T. & M.B.)	1	7		
	TOM DICK HARRY GROUP		5		
	GYR (JOHN HOGAN)	1	1		
	BAT GROUP		8		
	MIRE PROTET (CHRISTOLM) (STAINING.)	1	0		
	902 LAKE - CONINCO TO BAROP	1	6		
	1.6 ?				
		6	7	236	6

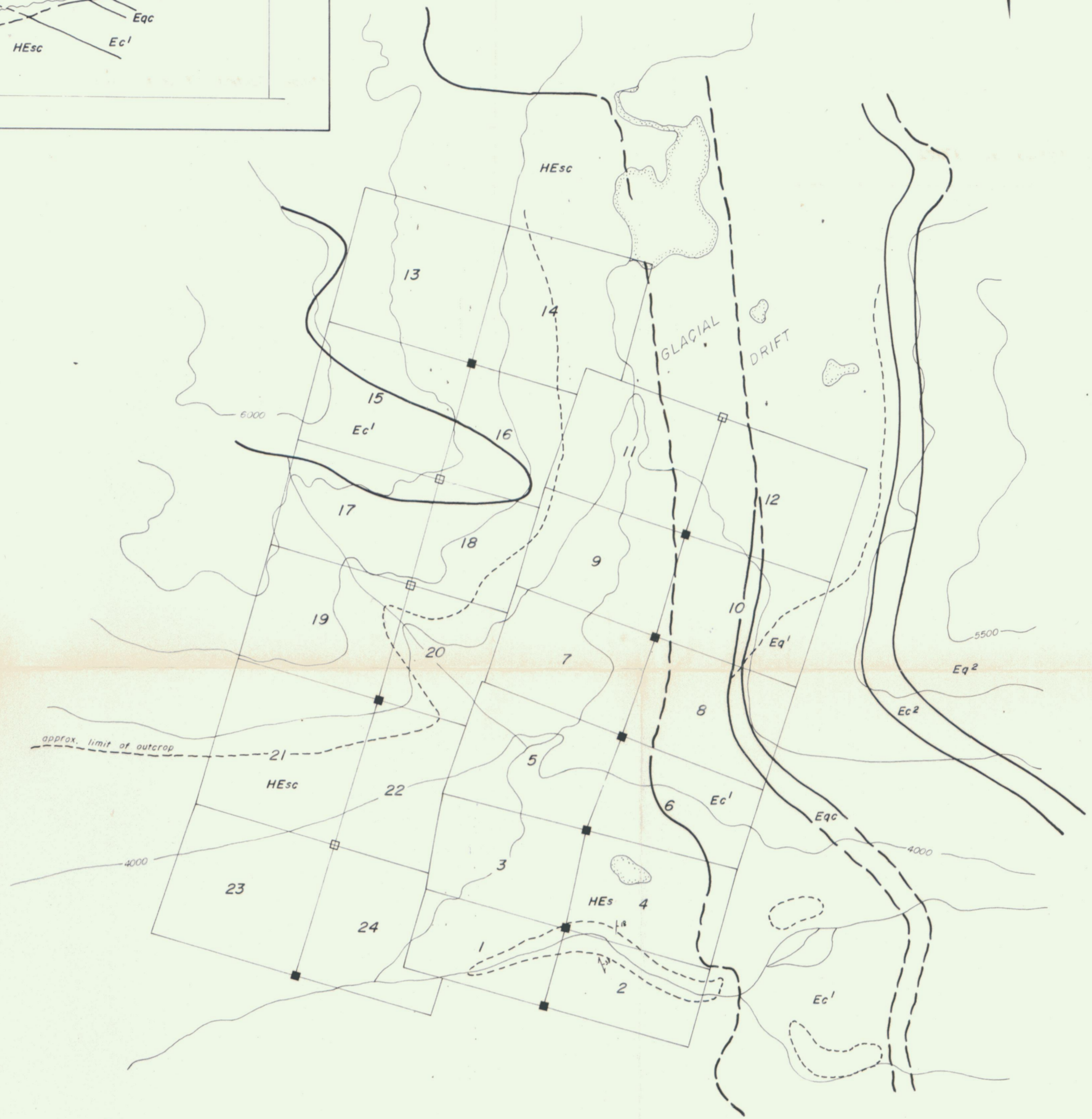
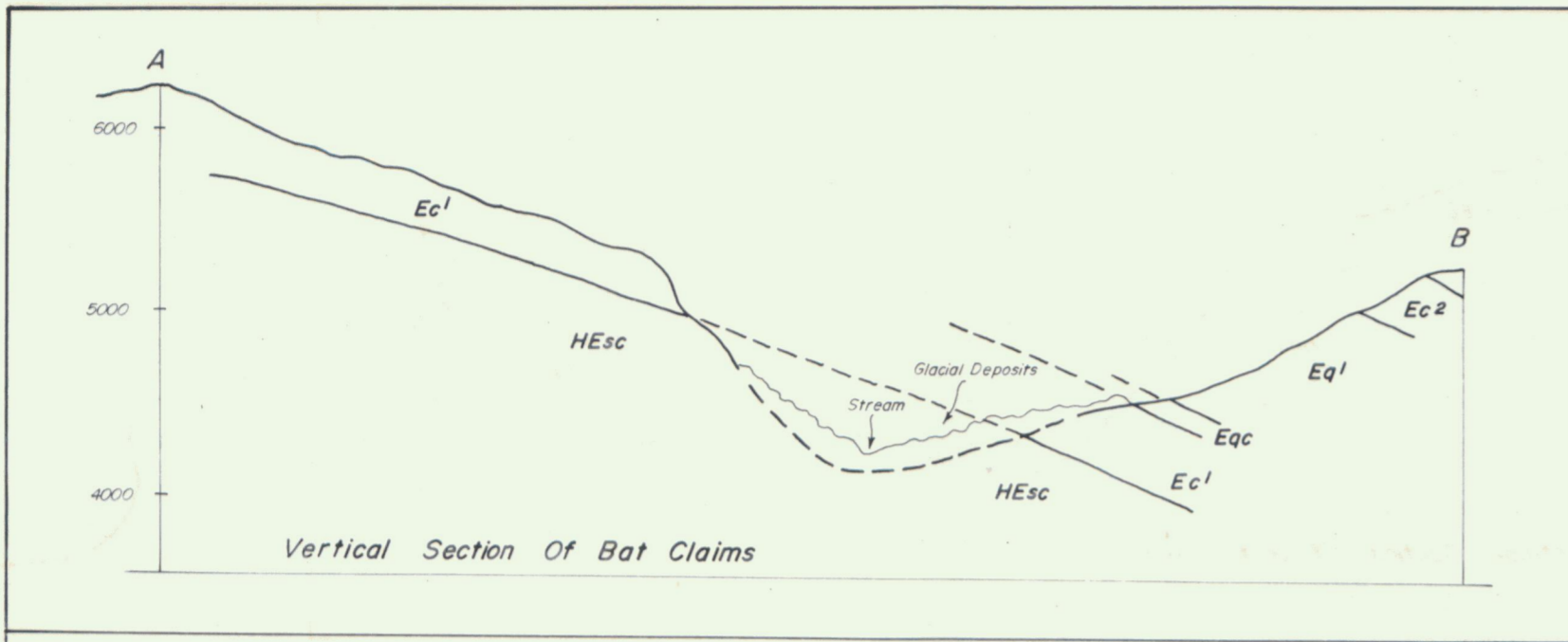


TABLE OF FORMATIONS

PALAEOZOIC

Cambrian

Backbone Ranges Formation

Eq2 Brown and grey weathering; quartzites and siltstones, black and grey shale.

Ec2 Brown weathering grey to buff dolomite

Eq1 Grey and rusty weathering quartzite, green, red and brown shale.

Eqc Platey orange weathering; grey dolomite, silty dolomite and buff weathering grey dolomite.

Ec1 Massive to thick bedded orange to buff weathering grey dolomite.

PROTEROZOIC — PALAEOZOIC

Hadrynian — Cambrian

Sheepbed Formation

HEs Grey slate

HEsc Brown and reddish brown shale, silty shale and siltstone.

LEGEND

- Geological boundary — defined
- " " — approximate
- Strike and dip of bedding
- " " " " slatey cleavage
- Fault — defined
- " — approximate
- Limit of outcrop
- Claim post — defined
- " " — approximate
- Stream

BOW RIVER RESOURCES LTD. — HIGHLAWK MINES LTD.

BONNET PLUME RIVER AREA, YUKON

GEOLOGICAL MAP OF THE BAT CLAIMS (1-24)



By - T.L.S.B.

August 1974