

ARCHER, CATHRO

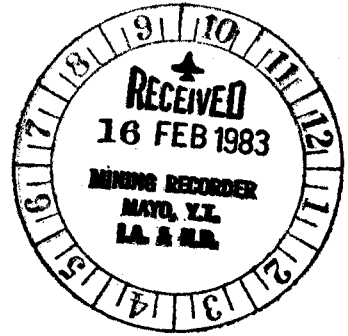
& ASSOCIATES (1981) LIMITED

CONSULTING GEOLOGICAL ENGINEERS

1016-510 WEST HASTINGS STREET
VANCOUVER, B. C. V6B 1L8

(604) 688-2568

WERNECKE JOINT VENTURE (WJV)
GEOLOGICAL AND GEOCHEMICAL REPORT
APE 1-24 CLAIMS
(YA62415-YA62438)



DECEMBER, 1982

Claim Sheet 106C/13
Latitude 64°53'N; Longitude 133°58'W

W.D. Eaton, B.A., B.Sc.
Work done on August 15, 1982

091444

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INTRODUCTION

The Ape property was staked in late May, 1981 to cover anomalous gold values (up to 11,250 ppb Au in mineralized rock specimens) obtained during reanalysis of sample splits from previous reconnaissance exploration in the area. A short program conducted later that year included geological mapping, geochemical and radiometric grid surveys and geochemical chip sampling. This work showed that the original anomalous gold values came from scattered pitchblende-bearing fractures, and also located two areas of anomalous gold, copper and cobalt response in soil peripheral to Helikian breccia bodies.

The 1982 program consisted of prospecting and more detailed rock and soil sampling in the two anomalous areas, and explored for open-pittable, large tonnage, low-grade copper occurrences with significant precious metal and/or cobalt values.

PROPERTY, LOCATION AND ACCESS

The Ape property consists of 24 contiguous mineral claims recorded in the Mayo Mining District as follows:

<u>Claim Name</u>	<u>Grant Numbers</u>	<u>Expiry Date</u>
Ape 1-24	YA62415-YA62438	8 March, 1986

The property is located at latitude 64°53'N and longitude 133°58'W within NTS claim sheet 106C/13, 175 km northeast of Mayo. The closest lake suitable for float-equipped, fixed-wing aircraft is Fairchild Lake, 11 km to the northeast, while the closest bush airstrip is on the Bear River, 17 km to the southwest. Access in 1982 was by helicopter from the WJV basecamp at Igor, some 35 km to the southeast.

GEOLOGY AND MINERALIZATION

The claims lie at the head of a north-flowing tributary of the Bonnet Plume River and cover parts of three cirques that are separated by steep ridges. Elevations range from 1375 m on the cirque floors to 1950 m on the ridges. The cirque floors and lower hillsides are largely obscured by talus, tarn lakes and lateral moraines produced by Pleistocene alpine glaciation. Outcrop is limited to cliffs on the upper slopes and a few windows through the till and talus. Vegetation is restricted to moss and lichens.

Figure WJV82-A1 in the pocket illustrates property geology, which consists of several fault blocks of Wernecke Supergroup metasediments cut by Helikian breccia bodies. The oldest rocks, Fairchild Lake Group (F₃ formation) pale green phyllites and spotted schists, occur at the north end of the property and are thrust over Quartet Group (Q₂ formation) black mudstone and siltstones interbedded with light grey quartzites. At the south end of the property, a normal fault juxtaposes Quartet Group rocks with younger Gillespie Lake Group orange weathering, stromatolitic dolomites. The breccia bodies consist of a heteroclast phase composed of 80 percent variously altered, subrounded to rounded, metasediment fragments in a fine-grained carbonate and hematite matrix; and, a homoclast phase comprised of uniformly altered, angular country rock fragments with a minor carbonate ± hematite matrix. The homoclast breccias commonly occur on the margins of heteroclast breccias, and exhibit sharp contacts with the heteroclast breccias but gradational contacts with the wallrocks. Q₂ formation mudstones and siltstones are locally altered to pale green phyllites adjacent to breccia bodies and along some faults.

At least two phases of deformation are seen. The oldest is represented by small scale isoclinal folds with east-trending axes, and the other consists of asymmetric to isoclinal folds with south- to southeasterly-trending axes that are generally overturned to the east. A strong axial planar cleavage is associated with the younger folds.

The dominant fault set on the property consists of east-trending, normal faults that post-date development of the breccia bodies. Diverse lineations on slickensided surfaces suggest that these faults have reactivated several times. Although fault offsets are generally small, a few have displacement of at least 100 m, as witnessed by the structure that juxtaposes the Gillespie Lake and Quartet Group rocks. A few east-striking, north-dipping, thrust faults and high-angle reverse faults are also present. Offsets on these range from a few metres to several hundred of metres, but most are small.

Several radioactive occurrences ranging from isolated boulders to 10 m by 10 m zones have been discovered on and adjacent to the property. The larger zones consist of wide-spaced, pitchblende-filled, hairline fractures paralleling cleavage in Fairchild Lake and Quartet Group metasediments, while the smaller occurrences are usually scattered, 1 mm to 1 cm blebs of brannerite in heteroclast breccia. Although assays up to 0.5% U_3O_8 have been obtained from selected hand specimens, the average grade of individual occurrences is less than 0.05% U_3O_8 . Some pitchblende-bearing samples have produced high molybdenum and gold assays, up to 0.6% Mo and 0.328 oz/ton Au, but no molybdenum minerals or native gold have been observed.

Pyrite, chalcopyrite and traces of cobaltite occur in siderite, ankerite and quartz veins and in open fractures along breccia margins and faults. The veins rarely exceed a few metres in width and tens of metres in length and usually contain

1 to 5 percent chalcopyrite and trace to 0.2 percent cobaltite. Limonite, malachite and erythrite are common on weathering surfaces. Disseminated hematite averages about 25 percent of the heteroclast breccia matrix and massive pods up to 5 m in diameter are occasionally found along breccia margins. Magnetite is not common, however 1 to 2 mm euhedral crystals locally form up to 10 percent of strongly sheared, carbonitized and chloritized Quartet Group phyllites.

GEOCHEMISTRY

Previous work on the property has shown that gold backgrounds in soils and rocks are low (trace to 30 ppb Au), but that gold to copper ratios in anomalous samples are high compared to the regional average. The 1982 sampling was directed toward two areas of anomalous gold values associated with copper mineralization occurring along breccia contacts. A total of six soils, two representative grab samples, and fourteen chip samples were collected and geochemical results are illustrated on Figure WJV82-A1 in the pocket. Most produced near background soil values (to 83 ppb). However, samples taken from a 150 by 100 m area of gossanous soil in the northwestern corner of the property returned up to 526 ppb Au, confirming a value of 434 ppb Au obtained from the same location in 1981. Although the soil is apparently derived from a 4 m wide siliceous fault zone containing up to 5 percent chalcopyrite and 0.5 percent cobaltite, four 5 kg chip samples taken across it returned only 1 to 49 ppb Au. This fault zone is the northwesterly extension of a shear zone which hosts uranium, molybdenum and gold-bearing fractures near the centre of the property.

CONCLUSIONS

The 1982 work has shown that there are no large areas of copper mineralization exposed on the property, and that known copper occurrences are too low grade and contain too little gold and cobalt to be of economic interest. Although moderate to strongly anomalous gold values have been obtained from a 150 by 100 m area of gossanous soil below a silicified fault zone, chip samples from the fault only produced gold values of 49 ppb or less.

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

A handwritten signature in black ink, appearing to read 'W. Douglas Eaton', with a stylized flourish at the end.

W. Douglas Eaton, B.A., B.Sc.

/mc

APPENDICES

APPENDIX I - STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, W. Douglas Eaton, geologist, with business addresses in Whitehorse, Yukon Territory and Vancouver, British Columbia, and residential address in Burnaby, British Columbia, do hereby declare:

1. I graduated from the University of British Columbia in 1980 with a B.Sc. and am currently enrolled in a M.Sc. majoring in Geological Sciences.
2. From 1971 to the present, I have been actively engaged in mineral exploration in British Columbia and Yukon Territory and on June 1, 1981, became a partner in Archer, Cathro & Associates (1981) Limited.
3. I have personally participated in or supervised the field work reported herein and have interpreted all data resulting from this work.



W. Douglas Eaton, B.A., B.Sc.

APPENDIX II - PERSONNEL

<u>Name</u>	<u>Address</u>	<u>Position</u>
D. Eaton	6108 Burns Street, Burnaby, B.C.	Geologist
D. Heberlein	2202 Stephens Street, Vancouver, B.C.	Geologist
J. Dennett	5665 Toronto Road, Vancouver, B.C.	Student Assistant

APPENDIX III - ANALYTICAL TECHNIQUES

PREPARATION

All soil samples were dried and sieved through an ASTM 35 mesh screen (0.50 mm). The minus 35 mesh fraction was then pulverized and homogenized in a ring grinder to approximately minus 100 mesh (0.15 mm). For drill core and grab and chip rock samples, the entire sample was crushed and split. A sub-sample was then pulverized in a ring grinder to approximately minus 100 mesh.

ANALYTICAL TECHNIQUES

Gold was analyzed by a "combo technique" consisting of a fire assay followed by neutron activation. Copper and cobalt were analyzed using a perchloric-nitric acid extraction followed by atomic absorption spectrometry.

ARCHER, CATHRO

& ASSOCIATES LIMITED

CONSULTING GEOLOGICAL ENGINEERS

VANCOUVER, B.C. (604) 688-2568

BOX 4127, WHITEHORSE, Y.T. Y1A 3S9 (403) 667-4415

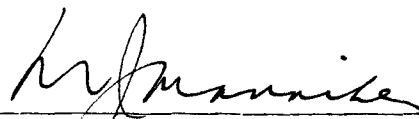
1016 - 510 WEST HASTINGS STREET
VANCOUVER, B.C. V6B 1L8



AFFIDAVIT

I, Joan Mariacher, of Vancouver, B.C. make oath and say:

That to the best of my knowledge the attached Statement of Expenditures for exploration work on the Ape 1-24 Claims mineral claims on Claim Sheet 106C/13 is accurate.


Joan Mariacher

Sworn before me at Vancouver, B.C.

this 2nd day of

February, 1983



Notary, Yukon Territory

091444

Statement of Expenditures
Geological Mapping and Geochemistry
Ape 1-24 Claims
January 10, 1983

Labour

D. Eaton - August 15 plus 2 days office report preparation - 3 days at \$260/day	\$ 780.00	
D. Heberlein - August 15 plus 1 day office report preparation - 2 days at \$200/day	400.00	
J. Dennett - August 15 - 1 day at \$131/day	<u>131.00</u>	\$1,311.00

Expenses

Helicopter - 1.8 hours contract Bell 206B from Century Helicopters at \$400/hr	720.00	
Helicopter fuel - 1.8 hours at 25 gal/hr at \$5/gal delivered to site	225.00	
Geochemistry - 22 samples for Au, Cu and Co	191.80	
Room and board - 3 mandays at \$45/day	<u>135.00</u>	<u>1,271.80</u>
		<u>\$2,582.80</u>

III ACCOUNT WITH

Project - WERNERKE JOINT VENTURE
 Date -- AUG 31, 1982

		Total
MANAGEMENT		
	Aug	3000.00
LABOUR		
Supervisory		
	M. P. Phillips - 1 hr. review C of W & claim expir	37.50
Field		
4-	D. EATON - 13 DAYS @ \$3400/mo	1426.
12-	D. HERBERLEIN - AUG 1-31 @ 2600/mo	2600.
2-	S. SHALANSKI - AUG 1-31 @ 1400/mo	1400.
-	B. SINCLAIR - AUG 1-16 @ 1700 @/mo	878.
-	D. STANFORTH - AUG 1-16 @ 1700 @/mo	932.
2	J. DIENKETT - AUG 1-25 @ 2100	1694.
6	J. MORTENSEN - AUG 1-31 @ 3000	3000.
(UNIT NAT)	H. OIYE - 7/30 OR ONE MONTH @ 2400/mo	560.
		12,490.
		6,245.
Casual	3- K. HACHMANN - 3 DAYS @ 140 plus 50%	420.
EXPENSES		
Accounting		500.00
Expediting		1400.00
Room & Board in Whse	29 MANDAY @ \$45/DAY	1305.00
	total days at \$ /day	
Field equipment from AC stock		7.90
Xerox copies, 119 copies at 25¢/copy		29.75
Radio rental 5BX100 Aug 1-21 @ 400/mo plus 1 5BX10 @ \$150/mo.		372.58
Rental AC truck at \$ /mo. plus (to) kms at /km		196.05
Petty cash 27.55 C2; 141.35 D2; 3.90 D2; 23.25 D2		196.05
Telephone		
Blueprinting, — sq. ft. Ozalid at — c/ft plus — sq. ft. Dilar at \$ — /ft.		
Drafting, 45 1/2 hrs. at \$ 22 /hr.		1001.00
rental large AC Honda generator Aug 1-21 @ \$5/day		105.00
Food Pail		17.70
Nuts&bolts		1.58
Chemice Lab		22.89
Kelly Pringles		14.36
Coffee, Tea & Spices		7.50
Yellow Wheel Prod		6.35
		4987.60
		27,180.14
Credit		
sub-let helicopter to NAT on AUG 4, 49425	(1960.00)	G1
Whitcomb Travel	(90.53)	D3
		(2050.53)
Total		25,129.61

FLIGHT TICKET / INVOICE

Keystone Helicopters Ltd.

P.O. Box 178, Atlin B.C. V0W 1A0 Phone (604) 651-7569

N^o 4515

CHARTERER

ARCHER / CATRO (WJV)

ADDRESS

DATE: 06-15/82

A/C B100

TYPE: Bell 206B3

BASE

CHEQUE CASH CHARGE

P.O.

REMARKS

PASS CARGO TIME

PIKE + ~~2 TP4~~

1 . 0.5

ARPE + 2 TP4 + 14
CORIE → BRS.

4 . 1.8
2.3

TERMS: NET 10 DAYS

TOTALS

2.3

FUEL COST \$

FLYING 2.3 HRS. AT \$400.00 = \$920.00

TOTAL

\$920.00

AUTHORIZED BY

PRINT

D. BERLEIN

SIGNATURE

[Signature]

CONTRACT HRS.

FUEL SUPPLIED BY:

CUST.

KH

KEYSTONE FUEL

GALS. FROM _____ AT _____ PER GAL.

GALS. FROM _____ AT _____ PER GAL.

GALS. FROM _____ AT _____ PER GAL.

GALS. FROM _____ AT _____ PER GAL.

PILOTS NAME

TOM TAYLOR

SIGNATURE

[Signature]



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: (604) 984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

*** INVOICE ***

To : ARCHER CATHRO & ASSOC. (1981) LTD.,

Invoice # : I8213002

1016-510 WEST HASTINGS
VANCOUVER, B.C.
V6B 1L8

Date : 8-SEP-82
P.O. # : NONE
Project WJV

Invoice for analytical work reported on certificate(s) A8213002-001

Quantity	Analysed for code description	unit price	amount
17	004 - Pb	ppm	
	005 - Zn	ppm	
	006 - Ag	ppm	
	009 - Co	ppm	
	101 - Au NAA	ppb	
	301 - Cu	%	
		15.15	257.55

Sample preparation and other charges :

17	208 - Assay - RING	3.25	55.25
----	--------------------	------	-------

TOTAL \$ 312.80
Discount (20 %) \$ 62.56

Please pay this amount ----> \$ 250.24
=====

TERMS -- NET 30 DAYS

2.0 % per month (24 % per annum) charged on overdue accounts



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: (604) 984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

*** INVOICE ***

To : ARCHER CATHRO & ASSOC. (1981) LTD.,

Invoice # : I8213003

1016-510 WEST HASTINGS
VANCOUVER, B.C.
V6B 1L8

Date : 15-SEP-82
P.O. # : NONE
Project WJV

Invoice for analytical work reported on certificate(s) A8213003-001 to -002

Quantity	Analysed for code description	unit price	amount
40	101 - Au NAA ppb	6.00	240.00
30	004 - Pb ppm	3.40	102.00
	005 - Zn ppm		
	006 - Ag ppm		

Sample preparation and other charges :

70	203 - -35 mesh sieve + ring	1.50	105.00
----	-----------------------------	------	--------

TOTAL	\$ 447.00
Discount (20 %)	\$ 89.40

Please pay this amount ----> \$ 357.60

TERMS -- NET 30 DAYS

2.0 % per month (24 % per annum) charged on overdue accounts



MEMBER
CANADIAN TESTING
ASSOCIATION



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: (604) 984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

*** INVOICE ***

To : ARCHER CATHRO & ASSOC. (1981) LTD.,

Invoice # : 18213005

1016-510 WEST HASTINGS
VANCOUVER, B.C.
V6B 1L8

Date : 8-SEP-82
P.O. # : NONE
Project WJV

Invoice for analytical work reported on certificate(s) A8213005-001

Quantity	Analysed for code description	unit price	amount
22	101 - Au NAA ppb	6.00	132.00
5	004 - Pb ppm		
	005 - Zn ppm		
	006 - Ag ppm	3.40	17.00

Sample preparation and other charges :

27	205 - Rock geochem - RING	2.50	67.50
----	---------------------------	------	-------

TOTAL	\$ 216.50
Discount (20 %)	\$ 43.30

Please pay this amount ----> \$ 173.20
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TERMS -- NET 30 DAYS

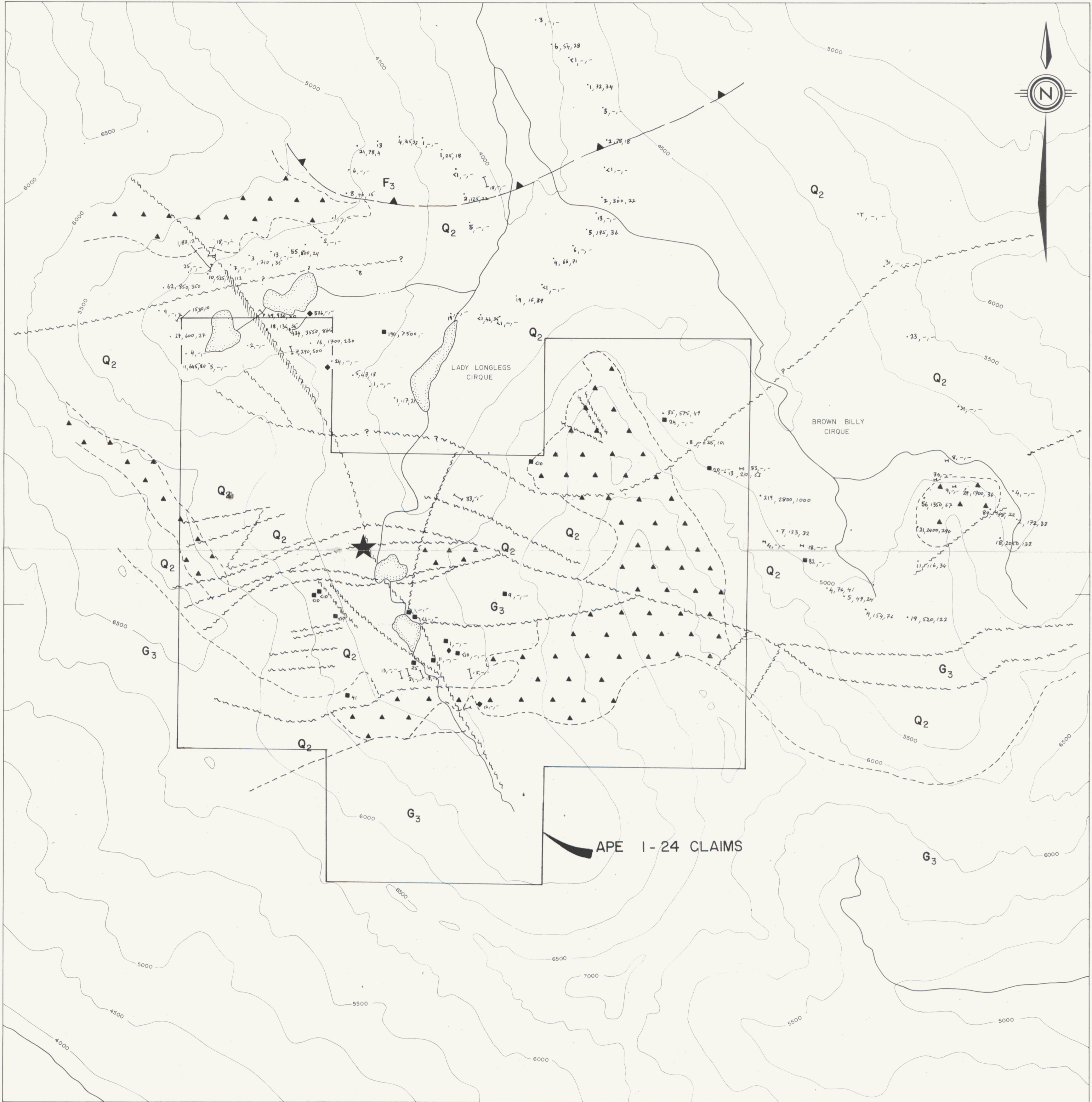
2.0 % per month (24 % per annum) charged on overdue accounts



MEMBER
CANADIAN TESTING
ASSOCIATION

134°00'

133°55'

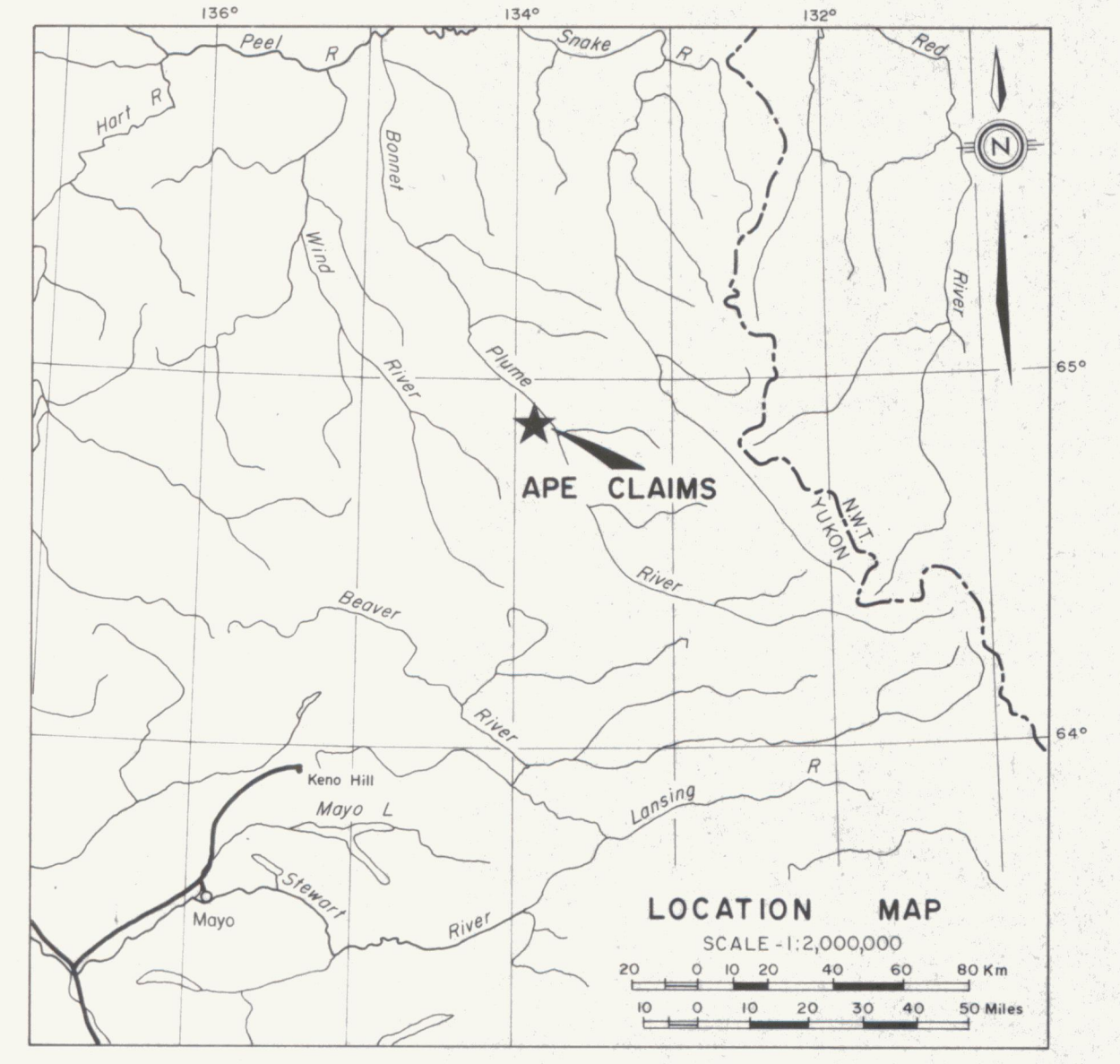


64°52'

64°52'

134°00'

133°55'



LOCATION MAP
SCALE - 1:2,000,000
0 10 20 40 60 80 Km
0 10 20 30 40 50 Miles

- LEGEND**
- HELIKIAN**
 - ▲▲ Heteroclast breccia
 - HELIKIAN OR OLDER**
 - G₃ Gillespie Lake Group - orange weathering dolomites.
 - Q₂ Quartet Group - mudstones, siltstones and quartzites.
 - F₃ Fairchild Lake Group - phyllites and spotted schists.
 - Fault
 - ▲— Thrust fault
 - - - Geological contact
 - ||||| Zone of silification
 - WJV 1981 soil sample location
 - WJV 1981 rock sample location
 - ◆ WJV 1982 soil sample location
 - WJV 1982 chip sample location
 - ★ Au, U occurrence.

091444

FIG. WJV82-A1
ARCHER, CATHRO & ASSOCIATES (1981) LTD.

GEOLOGY & GEOCHEMISTRY

APE PROPERTY
WERNECKE JOINT VENTURE

W. Wernecke
3-23/83

