

ARCHER, CATHRO

& ASSOCIATES LIMITED

CONSULTING GEOLOGICAL ENGINEERS

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



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VANCOUVER, B.C. V6B 1L8



REPORT ON
GEOLOGICAL AND GEOCHEMICAL SURVEYS
CONDUCTED AUGUST 8 - AUGUST 18, 1980
FLATASA 1-40 CLAIMS YA42115-YA42154

MAYO MINING DISTRICT
CLAIM SHEET 105N/9

Latitude 63°37'N Longitude 132°11'W

A.R. ARCHER, P. Eng

090822



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

\$ 14013.⁰⁰

Ruth Debride Alegre
Resident Geologist or June 19/87
Resident Mining Engineer

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

Commissioner of Yukon Territory

258000

FROM: Mining Recorder at MAYO

TO: Supervising Mining Recorder at Whitehorse, Y.T.



FOR ACTION ARE:

NEW APPL'N for PLACER LEASE to PROSPECT; Name: _____ Lease No. _____

RENEWAL APPL'N PLACER LEASE to PROSPECT; Name: _____ Lease No. _____

AFFIDAVIT of EXPENDITURE on PLACER LEASE. Name: _____ Lease No. _____

ASSIGNMENT of PLACER LEASE No. _____
From: _____ To: _____

GROUPING APPL'N UNDER SEC. 52(2) PLACER MINING ACT.
Owner: _____

DIAMOND DRILL LOGS:
Claims: _____ Claim sheet no: _____

QUARTZ ASSESSMENT REPORT:
Claims: "FLATASA" 1-40 Claim sheet no: 105-N-9

Type of report: G. G.C. Submitted by: ARCHER, CATHRO & ASSOCIATES

Cls. work performed on: _____ \$ Req. for ren. application \$14013.00

Signature [Handwritten Signature]

REPLY ACTION:

Date Ret. _____

090822

Signature _____

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SUMMARY AND RECOMMENDATIONS

The Flatasa 1-40 claims are located in the Hess Mountains of east-central Yukon. The claim group was staked on August 8, 1980 by Argent Joint Venture to cover two drainages which returned anomalous silver and lead values as a result of a regional exploration program conducted earlier the same year. The claims lie west of an area of known lead-silver vein mineralization on Cyprus Anvil's Plata property. Grid soil sampling for Cu, Pb and Ag at 100 m spacing revealed only weakly anomalous silver values on the southeast side of the property. This poorly exposed and heavily vegetated target requires additional prospecting and hand pitting to discover the source of the geochemical anomaly.

INTRODUCTION

The Flatasa 1-40 claim group was staked on August 8, 1980 by Argent Joint Venture (Welcome North Mines Ltd., Rio Alto Development Co. Ltd., Rio Alto Exploration Ltd., ABM Mining Group Inc. and Ebony Resources Ltd.). The program was managed by R.C Carne and supervised by A.R. Archer, P. Eng of Archer, Cathro and Associates Limited.

The property was staked to cover two drainages which returned anomalous silver and lead values as a result of an earlier regional exploration program. The area is underlain by Paleozoic sedimentary rocks which host high-grade silver-lead vein mineralization on the adjoining Plata claims, owned by Cyprus Anvil Mining Corp.

Geological mapping and grid geochemical sampling of the property were conducted between August 8 and August 18, 1980 by J. Dennett, A. Halleran and J. Staniforth under the overall supervision of R.C. Carne.

PROPERTY, LOCATION AND ACCESS

The property consists of 40 contiguous claims recorded at the Mayo Mining Recorder's office as follows:

<u>Claim Name</u>	<u>Grant Numbers</u>	<u>Expiry Date</u>
Flatasa 1-40	YA42115-YA42154	8 August, 1981

The claims are located in the Hess Mountains of east-central Yukon, near the headwaters of the Hess River at coordinates 63°37'N , 132°11'W. Access was by fixed-wing DC-3 aircraft from Whitehorse to the Plata Airstrip and by helicopter to the property, located 15 km to the north-northwest.

FIELD AND ANALYTICAL PROCEDURES

The 1980 program consisted of geochemical soil sampling at 100 m spacing using the claim lines as base lines. Approximately 641 soil samples were collected in prenumbered kraft paper bags from the B soil horizon (where possible). The sample lines were located using compass and hip-chain. Sample sites were marked with orange fluorescent flagging.

The samples were shipped by air freight to Chemex Labs Ltd., North Vancouver, B.C. where they were dried, screened to a minus 80 mesh fraction and analyzed for copper, lead and silver using a nitric-pechloric acid extraction and atomic absorption spectrometry. A portion of the minus 80 mesh fraction from each sample was stored at the lab.

GEOMORPHOLOGY

The Flatasa 1-40 claim group lies within the Bostock Mountain Range of the Hess Mountains. Relief is locally subdued, rising from 760 m (2500 feet) elevations of valley floors to ridge crests at 1500 m (5000 feet). Granite-cored mountains to the north rise to more than 2200 m (7000 feet) elevation in a rugged terrain in which most ridge tops exceed 1800 m (6000 feet). Broad, flat-bottomed valleys characterize the region. The U-shaped intermontane areas are mantled with thick accumulations of glacio-fluvial outwash and glacial drift which reach up the valley sides to about 1375 m (4500 feet) elevations. Tree line is at about 1375 m (4500) feet, above which is largely outcrop or scree. Slopes below tree line sustain a thick growth of stunted black spruce, dwarf birch and mountain alder. In areas of heavy overburden cover, such as in the Hess and Macmillan River valleys, mature stands of tall spruce are extensive.

The Plata claims cover a north facing mountain slope which is transected by a

northerly flowing tributary of the Rogue River in the central part of the property. Elevations on the south part of the claims rise locally to 1675 m (5500 feet) while the north side of the property along the Rogue River valley lies at about 1000 m (3300 feet) elevation.

GEOLOGY

The Hess Mountains area is underlain by a thick sequence of marine sedimentary rocks with minor volcanics ranging in age from Hadrynian to Triassic (Figure A-2). A northwest-trending belt of mid-Cretaceous granodiorite and quartz monzonite stocks cuts across the project area. Generalized geology of the Flatasa claims is shown on Figures A-3, A-4 and A-5.

Sedimentary and volcanic rocks in the project area are grouped into three tectonic assemblages (Figure A-2) based on summaries published by the GSC (Open File Map 572, 1979). Hadrynian and (?) lower Cambrian shallow water sedimentary rocks of the Windemere-Rapitan Assemblage are conformably overlain by shale, chert, carbonate and minor volcanic rocks of the Cambrian to middle Devonian Main Ranges Assemblage. A major depositional break is represented by the widespread accumulation of upper Devonian clastic sedimentary rocks of the Front Ranges Assemblage deposited unconformably upon older Paleozoic strata.

Windemere-Rapitan Assemblage (Pw)

The Proterozoic Windemere-Rapitan Assemblage is composed of shallow water clastic sedimentary and carbonate rocks. Lower part of the section consists of the Hadrynian "Grit Unit" (HIG), Shallow water algal dolomites and dolomite breccia interbedded with thick intervals of shale, turbidites and conglomerate characterize the section. The "Grit Unit" is conformably overlain by the Hadrynian and (?) Cambrian Sheepbed Formation (HIGs) consisting of red and green shale, limestone and interbedded quartzite. The

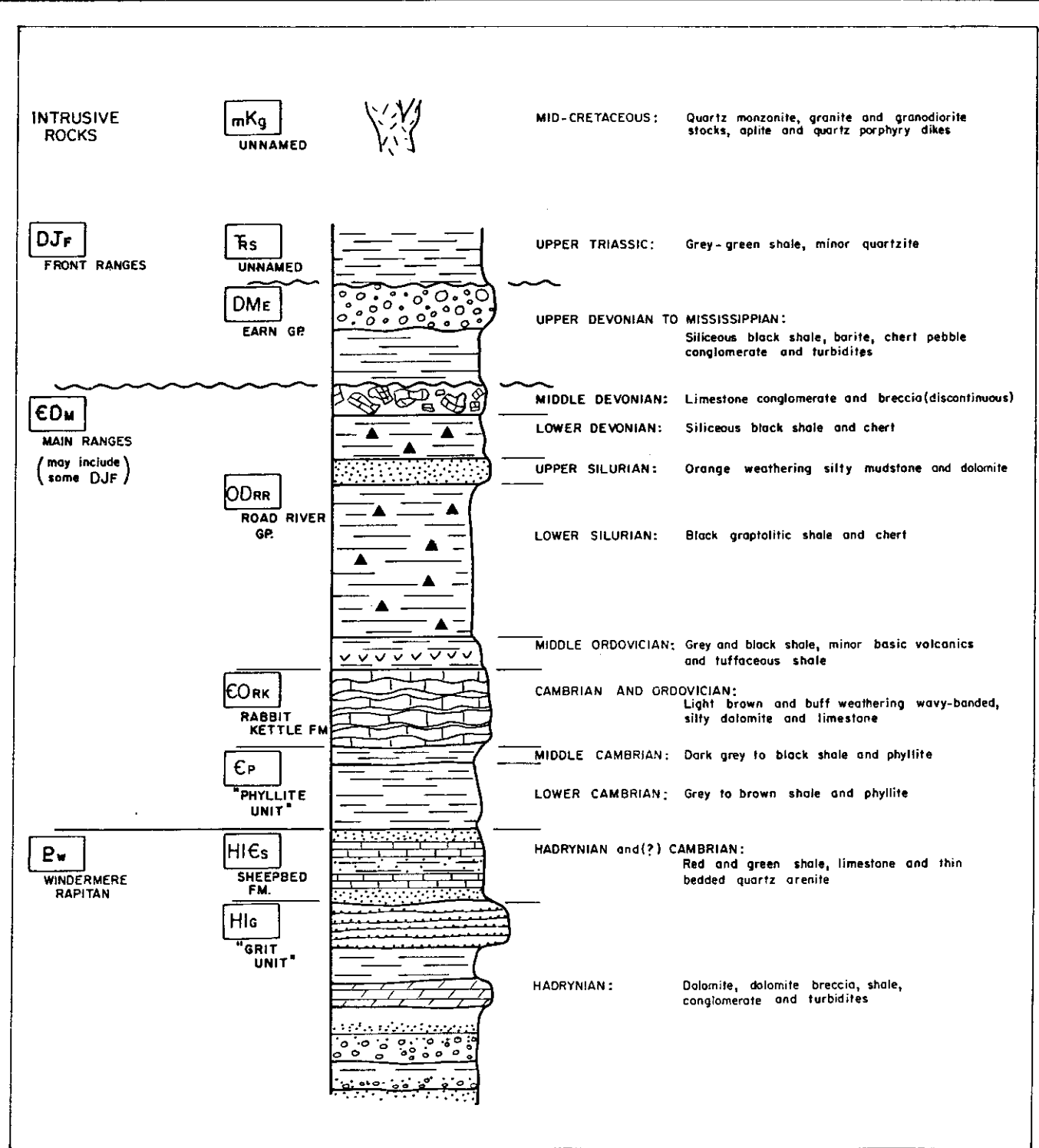


Fig. A-2
REGIONAL STRATIGRAPHIC SECTION
AJV AGREEMENT AREA

Windermere-Rapitan Assemblage (Ew) has not been differentiated on the Flatasa claims.

Main Ranges Assemblage (EDm)

The Main Ranges Assemblage underlies much of Selwyn Basin. Basal part is comprised of lower to middle Cambrian, recessive grey to brown and black phyllite and shale of the "Phyllite Unit" (Ep). Cambrian and Lower Ordovician wavy-banded, silty dolomite and limestone of the Rabbitkettle Formation (EOrk) form a distinctive marker horizon throughout much of Selwyn Basin. The Ordovician to middle Devonian Road River Group (ODrr) is dominantly comprised of graptolitic, slightly calcareous, very carbonaceous black shale in the project area. The unit undergoes a rapid facies change to deepwater chert towards the southwest in central Selwyn Basin. A few thin, basic amygdaloidal flows are interstratified with tuffaceous shale near its base. Diabase dykes cutting the older rocks are probably genetically related to this volcanism. Upper Silurian lithologies are represented by a distinctive orange-brown weathering, dolomitic silty mudstone. A thin siliceous black shale and chert sequence caps the "starved-basin" depositon of the Road River Group. The Main Ranges Assemblage (EDm) has not been differentiated into separate units on the Flatasa claims.

Front Ranges Assemblage (DJf)

A prominent regional unconformity marks the end of Selwyn Basin shale deposition at the upper Devonian (Figure A-2).

Basal part of the upper Devonian to Jurassic Front Ranges Assemblage (DJf) consists of the Earn Group (DMe). Characteristically silver-grey weathering, siliceous black shale, barite and conglomerate of the package overlie Selwyn Basin lithologies over much of eastern Yukon and northeast B.C. Scattered erosional remnants of grey-green Triassic shale and quartzite cap the succession.

Intrusive Rocks (mKg)

Mid-Cretaceous granitic stocks and small batholith-sized bodies occur throughout

northeastern Selwyn Basin. Composition ranges from quartz monzonite to granite and granodiorite with lesser quartz diorite and quartz monzonite. Aplite and quartz porphyry dykes on the Flatasa claims are probably related to a nearby unroofed or unexposed granitic stock.

MINERALIZATION

No mineralization was detected on the Flatasa claims during the course of the 1980 field program.

GEOCHEMISTRY

Results of the 1980 soil sampling program on the Flatasa claims are shown on Figures A-3, A-4 and A-5 for Cu, Pb and Ag geochemistry, respectively.

Although rigorous statistical evaluation of the regional geochemical data is not feasible due to the variability of soil types sampled in conjunction with the variety of underlying lithologies encountered over the project area, a brief examination of the results shows that average values returned from the sampling program are comparable with those known for similar areas in eastern Yukon. Ranges, modal and approximate threshold values for Cu, Pb and Ag geochemical results are given below:

	<u>Mode (ppm)</u>	<u>Threshold (ppm)</u>	<u>Range (ppm)</u>
Cu	60-70	100	2 -110
Pb	10-15	50	2 -280
Ag	0.1	0.6	0.1-5.6

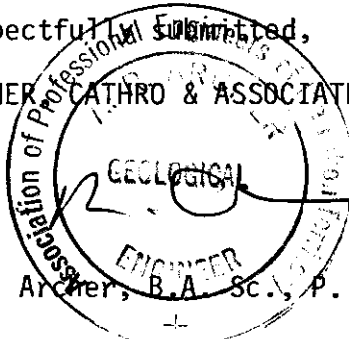
Copper response over the claim group is uniformly low with only one sample returning weakly anomalous values (110 ppm). Like copper, lead values are low with

only eight samples of the 641 total returning assays greater than the 50 ppm threshold. Random scattering of these anomalous samples, moreover, suggests that no major lead mineralization is present. Silver soil assays range from 0.1 ppm to 5.6 ppm. A significant proportion of the samples returned values greater than the 0.6 ppm Ag threshold value determined for the Hess Mountain region. Most of the high values occur singly and may represent spurious anomalies caused by irregular organic concentration of the silver contents of black shale into overlying soils. A clustering of weakly to moderately anomalous values occurs in a 700 m x 500 m area bounded by grid lines 20+00E to 24+00E and 5+00S to 12+00S. This area should be investigated by closer spaced soil sampling in conjunction with detailed prospecting and soil pitting to discover the source of anomalous silver soil geochemistry.

CONCLUSIONS

Two drainages which returned anomalous values of lead and silver during the course of regional exploration were staked in August, 1980 as the Flatasa 1-40 claims. Prospecting and generalized geologic mapping failed to discover any lead-silver mineralization although it was determined that the claims are underlain by a continuation of the stratigraphic and structural assemblage which hosts potentially economic silver-lead vein mineralization on the adjoining Plata-Inca claims. A detailed soil geochemical survey over the property returned disappointingly low lead and copper values although a small, weakly to moderately anomalous silver zone was located in the southeast part of the property.

Respectfully Submitted,
ARCHER CATHRO & ASSOCIATES LIMITED,
C
A.R. Archer, B.A. Sc.I., P. Eng.

A circular professional seal for the Association of Professional Engineers, Geologists and Geophysicists of Ontario. The seal contains the text "Association of Professional Engineers, Geologists and Geophysicists of Ontario" around the perimeter, "GEOLOGICAL ENGINEER" in the center, and "1970" at the bottom. A handwritten signature is written across the seal.

ARCHER, CATHRO & ASSOCIATES LIMITED

CONSULTING GEOLOGICAL ENGINEERS

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

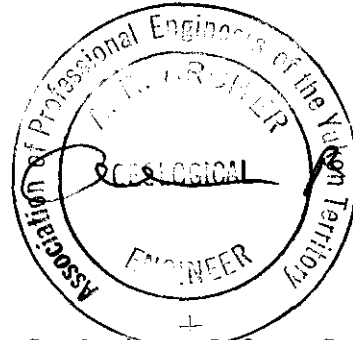
Box 4127, WHITEHORSE, Y.T. Y1A 3S9 (403) 667-4415

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

I certify that I am a geological engineer, having graduated from the University of British Columbia as a Bachelor of Applied Science in 1957.

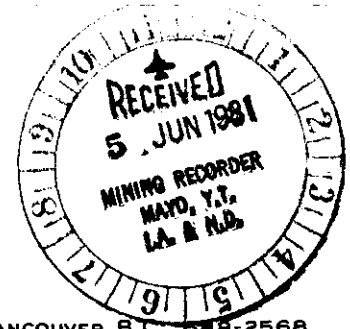
I have practised my profession continuously since 1957 and have been in supervisory positions since 1963.

I am currently a senior partner with the geological consulting firm Archer, Cathro & Associates Limited.



Alan R. Archer, B.Sc., P.Eng.

ARCHER, CATHRO
AND ASSOCIATES LTD.
CONSULTING GEOLOGICAL ENGINEERS



Box 4127, Whitehorse, Y.T. Y1A 3S9 667-4415

STANDARD BUILDING, VANCOUVER, B.C. 688-2568

1016 STANDARD BUILDING
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 Flatasa 1-40 mineral claims on Claim Sheet 105N/9 is accurate.


Joan Mariacher

Sworn before me at Vancouver, B.C.
this 24th day of
February, 1981.


Notary, Yukon Territory

Statement of Expenditures
Flatasa 1-40 Claims
February 1981

Management

Archer, Cathro & Associates Limited \$ 1,300.00

Labour

J. Dennett (crew chief) - Aug. 8-18 in field, Aug. 19-31 office data compilation - total 24 days at \$147/day	\$ 3,528.00	
A. Halleran (helper) - Aug. 8-18 field; 19-20 office - total 13 days at \$77/day	1,001.00	
J. Staniforth (helper) - Aug. 8-18 field; 19-20 office - total 13 days at \$68/day	884.00	
R. Carne - 2 days report preparation in November	<u>300.00</u>	5,713.00

Expenses

Room and board - 33 days field at \$40/day plus 17 days Whitehorse at \$30/day	1,830.00	
Helicopter (camp demob) TNTA Hughes 500D - 3.9 hours at \$360/hr plus \$100 fuel	1,504.00	
Fixed wing (camp demob) Air North DC3 - Whitehorse/Plata airstrip return	1,846.00	
Geochem analyses - 641 samples for Cu, Pb, Ag at Chemex Labs Ltd. at \$2.84/ea	<u>1,820.00</u>	<u>7,000.00</u>
		<u>\$14,013.00</u>

ACCOUNT NUMBER	118
43007	
INVOICE DATE	22 08 80
A/C TYPE	H-369D
AIRCRAFT REGISTRATION C	67N19
FLIGHT DATE	1 8 08 80
PURCHASE ORDER NO.	
WJV-6A	

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 CHARTERER

BILLING ADDRESS

FUEL & OIL-L	TNTA FUEL USED	HRS.-GALS.	FROM
TNTA CUST.	<input checked="" type="checkbox"/>		

FROM	MILES	HOURS	ZONE	REMARKS - NO. OF PASS. - FREIGHT LBS.
GRASS LK				
MARMOT PROPERTY		0.4		DUNCAN, CHRIS, MIKE
PIKA AREA		0.4		U. SCHMIDT, LEO
ARGENT - MOVE CAMP				JACK DENNET
TO PLATA AIRSTAIR		3.9		BILL, JENNIFER,
DRILL MOVE				2,000 LBS
DRILL MOVE		1.6		
DRILL EQUIPMENT		1.0		
DRILL CREWS		0.3		

AP-3.9 1404⁰⁰
 3.7 1332⁰⁰
 GP

SUB	G.L.	AMOUNT
0205020		2736 00

7.6 @ 360.00 2736 00

TERMS: EIGHTEEN PERCENT INTEREST PER ANNUM WILL BE CHARGED ON ALL INVOICES NOT PAID WITHIN 30 DAYS OF DATE ISSUED.

WAITING TIME	e	/HR.
FUEL:	e	/GAL.
FUEL:	e	/GAL.
MEALS & LODGING		
OTHER		
OTHER		

Michael Di...
 CHARTERER'S SIGNATURE

RJB R. Bathy
 PILOT'S SIGNATURE

RPS 5406YKO
 ENGINEER'S NAME

ch

TOTAL \$ 2736 00

**FLIGHT REPORT
 INVOICE**



INVOICE

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

- ANALYTICAL CHEMISTS
- GEOCHEMISTS
- REGISTERED ASSAYERS

TO: Archer Cathro & Assoc. Ltd.
Box 4127

CERTIFICATE NO. 55449-455

INVOICE NO. 37979

ATTN: Whitehorse, Y.T.

PROJECT ARGENT

DATE Aug. 20/80

	DESCRIPTION	SUB-TOTAL	TOTAL
240	Analyzed for Cu, Pb, Ag @ \$3.05	732.00	
240	Prepared @\$0.50	120.00	
		852.00	
	Less 20%	170.40	
			\$681.60

pd Aug 29/80 #156

TERMS—NET 30 DAYS

1½% Per Month (18% Per Annum) Charged on Overdue Accounts

78-040



INVOICE

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

- ANALYTICAL CHEMISTS
- GEOCHEMISTS
- REGISTERED ASSAYERS

TO: Archer Cathro & Assoc. Ltd.,
1016 - 510 W. Hastings St.,
Vancouver, B.C. V6B 1L8

CERTIFICATE NO. 8010070-001 to 015

8010071

INVOICE NO. 38512

ATTN:

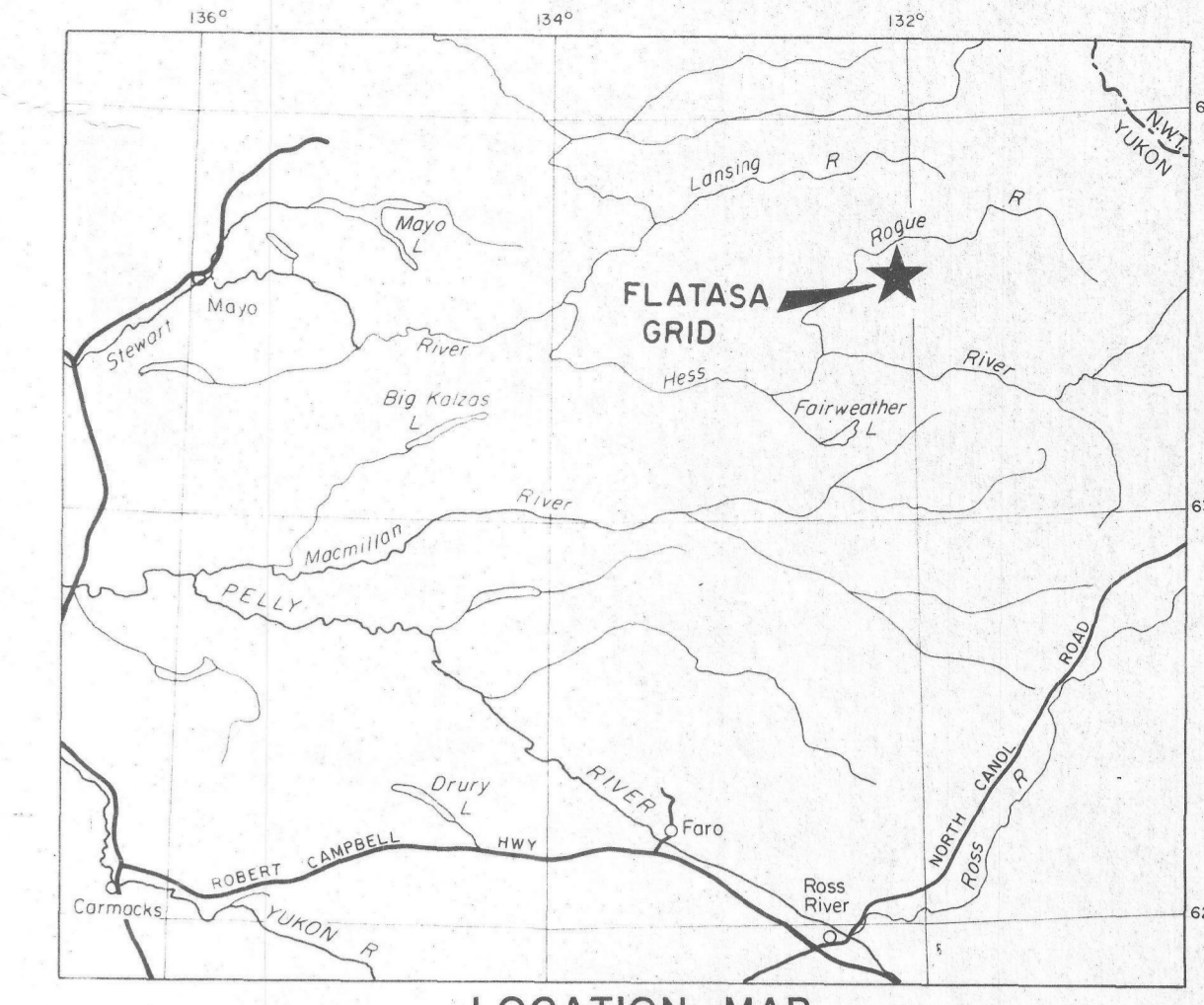
DATE Sept. 9/80

	DESCRIPTION	SUB-TOTAL	TOTAL
600	Argent/Flatasa Analyzed for Cu Pb And Ag @ \$3.05 Prepared @ \$0.50 Less 20%	\$1830.00	
600		300.00	
		2130.00	
		426.00	
			\$1704.00

TERMS—NET 30 DAYS

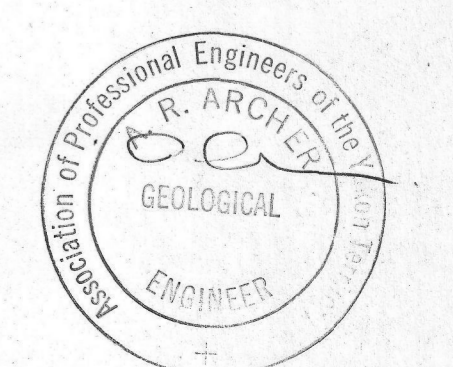
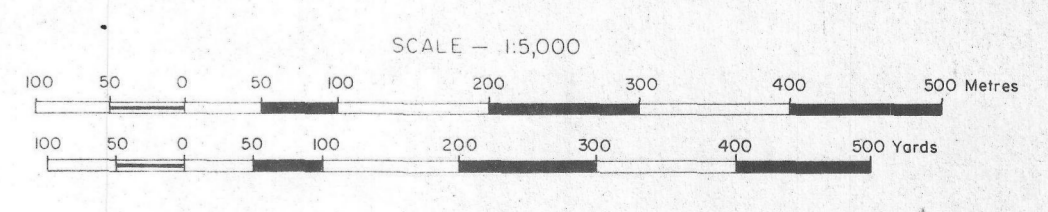
1½% Per Month (18% Per Annum) Charged on Overdue Accounts

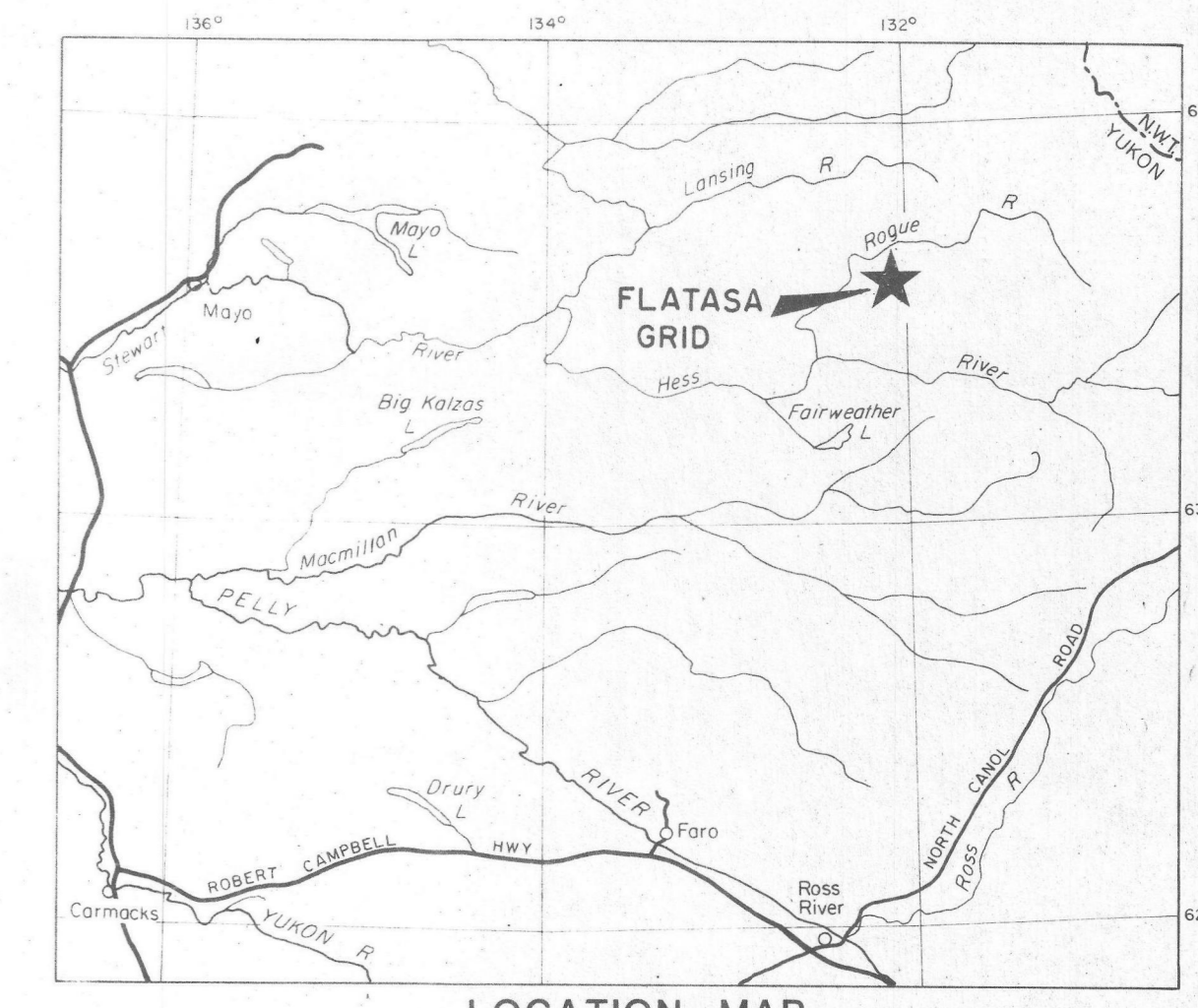
78-040



- LEGEND**
- x/2 silt sample (ppm Ag)
 - o/4 soil sample (ppm Ag)
 - bedding attitude
 - fault (assumed)
 - contact (known, assumed)
 - syncline, anticline
- See Figure A-2 for geological legend

FIGURE A-5
ARCHER, CATHRO & ASSOCIATES LTD.
GEOLOGY AND SILVER GEOCHEMISTRY
FLATASA GRID
ARGENT JOINT VENTURE





LOCATION MAP
SCALE - 1:200,000
0 20 40 60 80 100 km
0 20 40 60 80 100 Miles

- LEGEND**
- x 3# silt sample (ppm Pb)
 - 3# soil sample (ppm Pb)
 - bedding altitude
 - fault (assumed)
 - - - contact (known, assumed)
 - + + + syncline, anticline
- See Figure A-2 for geological legend

FIGURE A-4
ARCHER, CATHRO & ASSOCIATES LTD
**GEOLOGY AND
LEAD GEOCHEMISTRY**
FLATASA GRID
ARGENT JOINT VENTURE

