1980 Geochemical and Geophysical Assessment Report

TITLE	Scroggie Creek Property
CLAIMS	Bridget 1-16 Inclusive
COMMODITY	Mo, Cu
LOCATED	120 km SSE of Dawson City, Yukon Latitude 62°56'N Longitude 138°31'W Dawson City Mining District 115 J/15, 115 J/16
BY	G.W. Booth, A.C. Hitchins and J.L. LeBel
FOR	AMAX OF CANADA LIMITED
WORK PERIOD	July 7 to August 12, 1980

AMAX Vancouver Office

090668

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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

$ 6,400.00

Resident Geologist or
Resident Mining Engineer

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

R. R. BAXTER
Supervising Mining Recorder

Commissioner of Yukon Territory

090688

TABLE OF CONTENTS

APPENDICES

ILLUSTRATIONS

Illustrations - Continued

SUMMARY

This report presents results of geological mapping, soil sampling, induced polarization and magnetometer surveys conducted during the period July 7 - August 12, 1980 on the Scroggie Creek Cu-Mo property. The property, consisting of Bridget 1-16 claims inclusive, is located on a north-flowing tributary of Scroggie Creek some 120 km south-southeast of Dawson City in Dawson Mining District. The claims were optioned by AMAX of Canada Limited from Somex Ventures Limited in early 1980.

The property is underlain by northwest-trending Paleozoic Yukon schists, and by Cretaceous or early Tertiary porphyritic granite and rhyolite. Both intrusive phases occur throughout the property as dykes in schist and form no central stock or dyke concentration.

Sulphide mineralization consists of (1) chalcopyrite, molybdenite, pyrite and magnetite in quartz veins in biotite schist in trenches on the ridge crest near the northern margin of a large Cu-Mo soil geochemical anomaly. Best assay results were 241 ppm Mo, 210 ppm Cu, (2) disseminated pyrite (up to 3%), minor pyrrhotite and traces of chalcopyrite are widespread in rholite dykes, and (3) a speck of native gold was found in a quartz veinlet in Yukon schist at the northeast corner of the grid.

Grid soil sampling over an area of 0.5 sq km on lines 120 m apart revealed the presence of a coincident Cu-Mo soil anomaly measuring 300 by 600 m in extent and "open" to the south. Anomalous threshold was taken at 100 ppm Cu and 50 ppm Mo. Peak values were 410 ppm Cu and 235 ppm Mo. Anomalous soil values for both metals are similar to those obtained in rock chips from adjacent trench outcrops of Yukon schist. Au, W, and Zn, the other metals analyzed for in soils, returned peak values of 40 ppb, 1200 ppm, and 170 ppm, respectively.

A 12 km dipole-dipole induced polarization survey with a = 200 feet, n = 1-5, conducted over the main grid area, detected a broad weak 3-6% frequency effect anomaly which trends northwesterly across the grid. It coincides roughly with the above mentioned Cu-Mo soil anomaly.

A 12 km magnetometer survey conducted over the main grid area outlined a 300-600 m wide northwest-trending magnetic high, partly coincident with the soil geochemistry and frequency effect anomalies. As indicated on government aeromagnetic maps of this area (115 J/15, 115 J/16), the magnetic anomaly is of regional extent, and hence is interpreted as related to a magnetite-bearing gneissic band within the northwest-striking Yukon schists.

INTRODUCTION

General Statement

This report summarizes work completed on the Scroggie Creek property during the period July 7 - August 12, 1980. This evaluation was conducted by G. Booth, B. Booth (AMAX), J. Marsh, G. Ovellet (Phoenix Geophysics), and H. Algotssan (Nordic Contracting).

Location, Access and Topography

The Scroggie Creek claims lie within the Klondike Plateau some 120 km south-southeast of Dawson City.

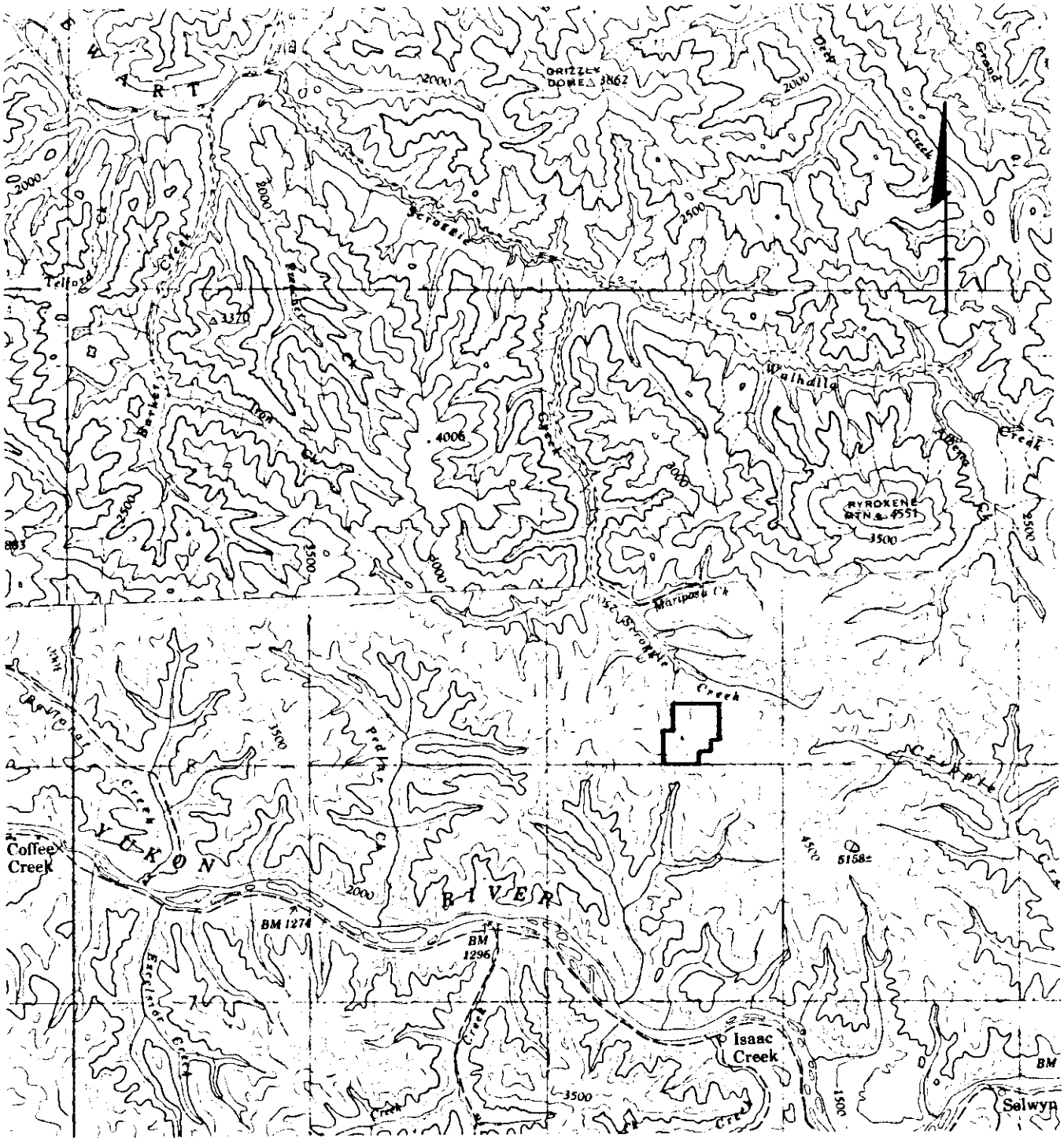
The property can be reached by helicopter from either Dawson, Carmacks or Minto; heavy equipment may be transported by barge from Dawson City to within 10 km of the claims via the Yukon River.

The area is characterized by a series of elongate north-south trending low ridges, occasionally covered with minor outcrop or subcrop, and separated by deep, narrow valleys.

Claims Data

As has been mentioned, the first claims located in this area were staked by Silver Standard Mines and American Smelting and Refining. In 1978 some of these claims were allowed to lapse, at which point Bridget claims 1 and 2 were staked for Somex Ventures Limited. When the last of original claims were abandoned in 1979 the remaining 14 Bridget claims were added by the same company to form the group presented to AMAX in the option offer.

In July 23, 1980 a further four claims were staked but not recorded along the southern boundary of the group for AMAX, to cover a greater portion of the original grid. In early August, tags for Bridget claims 1-16 were affixed on the corresponding posts in accordance with the Yukon Quartz Mining Act.



AMAX OF CANADA LIMITED

SCROGGIE CREEK PROPERTY

DAWSON MINING DISTRICT – YUKON TERRITORY

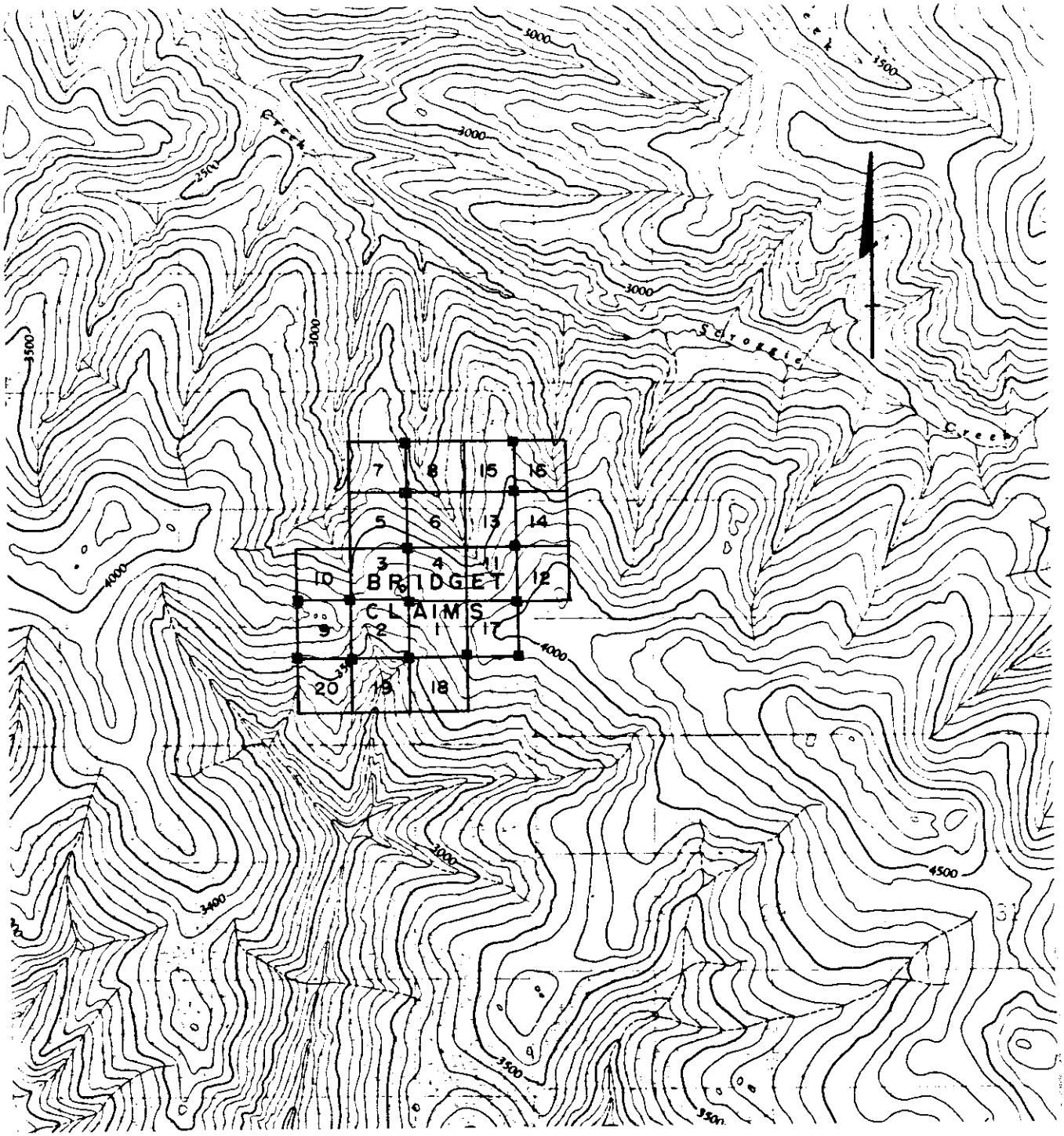
LOCATION MAP

SCALE 5 0 5 KILOMETRES
3 0 3 MILES

1:250,000

N.T.S. Ref. 115 J 15, 16

FIG. 1



AMAX OF CANADA LIMITED

SCROGGIE CREEK PROPERTY

DAWSON MINING DISTRICT — YUKON TERRITORY

CLAIM MAP

SCALE 1000 500 0 1000 METRES
3000 0 3000 FEET

1:50,000

N.T.S. Ref. 115 J 15, 16

FIG. 2

Previous Work

In the late 1960's American Smelting and Refining and Silver Standard Mines carried out a regional silt sampling program within the west central Yukon. Values of up to 100 ppm Mo (against 1 ppm regional background) were obtained from creeks draining both to the north and south of the area presently included within the Bridget claim group. Subsequently prospecting resulted in the discovery of mineralized float (up to 0.42% MoS_2) on the ridge separating these aforementioned creeks.

During the 1972 field season a detailed follow-up program consisting of line cutting, soil sampling, trenching and a VLF-EM survey was initiated over this same ridge. Results from the soil geochemistry analysis outlined coincident molybdenum and copper anomalies within the cut grid while trenched bedrock samples established the presence of an underlying weakly mineralized biotite schist. Geophysical prospecting failed to reveal any significant conductors within this same zone.

1980 Exploration Program

A detailed re-examination of this property was undertaken during the 1980 field season. Mapping of all local outcrops and trenched bedrock was completed as was a soil sample survey in order to estimate background concentrations for those metals of interest and corroborate earlier anomalous findings. An additional two test pits were dug to permit examination and sampling of local soil profiles. Panning and sampling of all streams draining the Bridget claims was also carried out. Prior to commencement of the geophysical program, 9 of the 11 original grid lines were recut to facilitate crew movements. Both induced polarization and magnetometer surveys were then run in an attempt to detect mineralized zones.

REGIONAL GEOLOGY

This portion of the Klondike plateau is underlain by Proterozoic and/or Paleozoic pelitic schists and gneisses belonging to the Yukon stratigraphic group. Locally felsic igneous rocks cross-cut these schists in the form of high level stocks or dykes. In general, three varieties of mineralized showings have been identified within this broad region (Templeman-Kluit, 1974):

i) chalcopyrite, scheelite and/or molybdenite in magnetite skarns related to Mesozoic granite intrusion
ii) chalcopyrite in contact skarns associated with felsic volcanic extrusion
iii) disseminated chalcopyrite or molybdenite within or spatially associated with acidic Tertiary volcanic and plutonic rocks.

PROPERTY GEOLOGY

General Statement

Due to the lack of outcrop within the property, it was necessary to map outside the claims in order to evaluate this area geologically. Generally, outcrop was restricted to ridge tops and flanks with minor subcrop and float exposed in the valleys and stream beds.

Rock Units

The predominant lithology recognized in this area was found to be a thinly laminated felsic to intermediate biotite schist to gneiss with a west-northwest strike and steep northeast dip (Figures 3a and 3b). The metasediments were found on occasion to grade imperceptibly into both hornblende and garnet-bearing gneisses. Along the western boundary of the property, these same pelitic schists and gneisses appear to have undergone intense hydrothermal alteration transforming them into epidote schists and locally epidosites. This alteration may have been produced by the numerous igneous intrusions scattered through the map-area. Massive microporphyritic rhyolites and medium to

coarse grained quartz-feldspar porphyries pervade, as flows and small discontinuous dykes respectively, within and around schist outcrops. From their positions relative to one another, particularly as exposed in those outcrops bordering on the eastern half of L4N, it would appear that these coarser porphyries are essentially intrusive equivalents of the volcanics. It should also be mentioned that while no stockwork of any kind exists within these younger igneous lithologies intense silicification of contiguous country rock is frequently in evidence in those zones cross-cut by numerous dykes. The only remaining unit exposed within the map-area is a variably skarned siliceous limestone-marble, discovered in strongly disjointed felsenmeer zones and less frequently as boulders on scattered ridge tops.

MINERALIZATION

In general most visible signs of mineralization noted within the Scroggie Creek claim group showed some spatial association with late stage quartz veining. The most intensely mineralized specimens were taken from Trench #1 in the northern portion of the grid. Here copper and iron sulphides along with magnetite and minor molybdenite were seen concentrated in a silicified biotite schist, some of the mineralization occurring as disseminations within the quartz veins. In other sections of the property where quartz veins are less abundant, mineralized samples are difficult to find.

Along with copper and molybdenum enrichment in this area, some minor samples containing visible gold and sizeable grains of scheelite were also found, once again, within quartz veins.

The only apparent exception to this established association appears to lie with the felsic igneous rocks, in particular the extrusive end members of this unit. Pyrite, pyrrhotite (<3%) and rarely chalcopyrite can all be seen within these microporphyritic felsites.

GEOCHEMISTRY

General Statement

During this most recent evaluation of the Scroggie Creek property, some 160 soil, 52 pan and silt, and 70 rock chip samples were taken for geochemical analyses. Soil samples were taken at 60 metre intervals along lines 4N, 0N, 4S, and 8S to verify earlier anomalous results obtained in this same area. Further soil sampling was carried out along the two north-south trending claim lines to assess background concentrations for those elements of interest. Soils were also taken from the various trenches and test pits in an effort to establish which if any depth was more likely to concentrate the elements, and precisely how metal concentrations varied with depth. Pan and silt samples were taken at closely spaced intervals along local creek beds in an effort to evaluate the relative quantities of scheelite and gold present. Rock chips were obtained from each of the various lithologies exposed within and around this property, with emphasis on those bearing visible sulphide and/or tungsten mineralization.

Soil Profile and Provenance

Separate and different soil horizons are extremely difficult to isolate within the profiles developed on this property. The only variation in soil composition with depth appears to be an increase in rock fragments with depth. Coincident soil and lithogeochemical anomalies located within the principle zone of interest on this property (Figure 4a and 4b) combined with this area's glacial history would suggest that the soils developed here are essentially residual.

Results of Geochemistry

Gold contents of soil are generally background values of 10 ppb with a few samples up to 30-40 ppb along the claim line between Bridget 7 and 8 (Figure 4a, 4b).

Copper and molybdenum values in soil are anomalous over much of the centre and western portions of the grid with highs of 410 and 235 ppm respectively. However the Cu and Mo from mineralized rock chips are similar to those in soil. Not enough samples were taken from test pits to determine if there is a Cu or Mo concentration within a specific horizon.

Tungsten results are usually low except for a 1200 ppm W in a quartz veined and epidotized schist sample on Bridget 2 and scattered anomalies in the creeks produced by placering of scheelite grains.

GEOPHYSICAL SURVEYS

Introduction

An induced polarization/resistivity survey and a magnetometer survey were conducted to supplement the evaluation of the soil geochemical anomaly on the property. The objectives of the surveys were to determine the distribution of sulphides and evaluate a small magnetic closure on a seven mile long linear aeromagnetic anomaly which crosses the property.

The induced polarization/resistivity survey was conducted by Phoenix Geophysics Limited between August 2-10, 1980 using Phoenix frequency domain equipment. Specifications for the survey were: array-dipole-dipole, electrode spacing - 200 feet, separations - n=1-5, and frequencies - 0.3 and 5.0 hertz.

The magnetometer survey was conducted by AMAX personnel between August 5-7, 1980 using a McPhar M700 fluxgate (vertical component) magnetometer. Corrections for diurnal variations were made by re-reading base stations and distributing any changes recorded by time base linear interpolation.

The results of the induced polarization/resistivity survey - apparent resistivity at.3 hertz in ohm-ft/2π and apparent frequency effect in per cent are displayed in the standard contoured pseudosection format (Figures 6a to 6j). A topographic profile is also shown.

The results of the magnetometer survey are shown in plan (Figure 5a) and contoured at 200 gamma intervals (Figure 5b).

Results

The induced polarization/resistivity survey detected a broad weak 3% to 6% frequency effect anomaly. The highest frequency effects on the property were obtained from a narrow

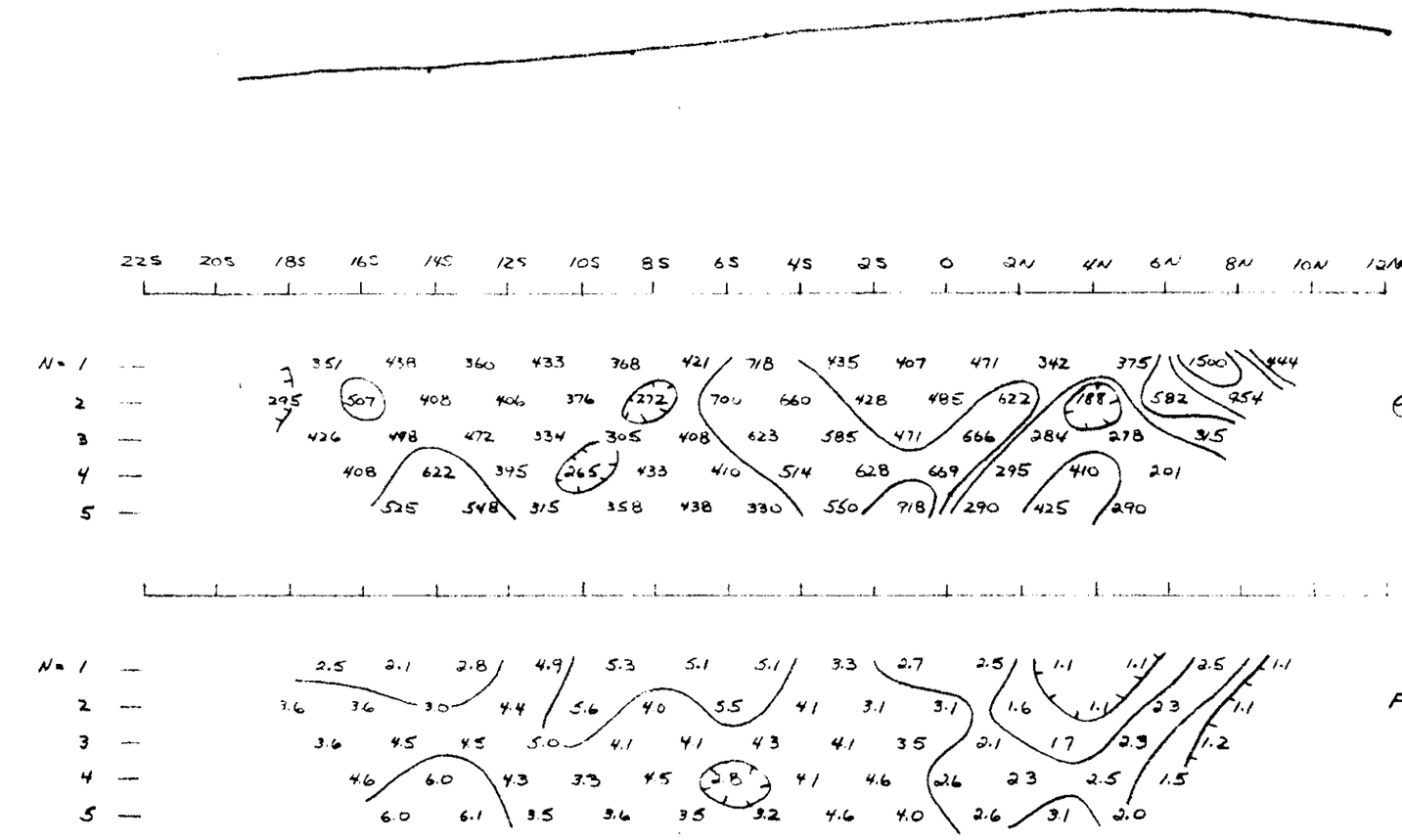
200 foot wide zone centred at 800E on Line 2100S. On several lines the frequency effects increase with depth indicating that the anomaly is covered by a thin non-polarizable layer. The northern edge of the anomaly occurs at Station 0 on the base line and trends northwesterly across the grid. The oblique angle between the contact and the grid lines is probably responsible for the peculiar frequency effect lows located at: 800S, 1200E; 400S, 12-0E; and 000, 700E. The anomaly is open to the south. Its western and eastern edges occur at approximately 1300W and 1600E, respectively but coverage was not extensive enough to clearly define its east/west limits.

Apparent resistivities varying from 300 ohm ft/2π to 800 ohm ft/2π are relatively uniform throughout most of the sections. Most of the resistivities greater than 800 ohm ft/2π and less than 300 ohm ft/2π form small isolated features probably caused by surface effects which are emphasized by the short electrode spacing used for the survey. An exception is a 50 m to 300 m wide resistivity low (resistivity less than 300 ohm ft/2π) which crosses the west side of the grid. The low straddles two small creeks and a saddle in the main ridge and strikes north-south oblique to the lithological trend.

The magnetometer survey outlined a 300 m to 600 m wide northwest-trending magnetic high composed of a series of anomalies varying in width and intensity. Bland background variations of less than 200 gammas emphasize the anomaly which is open to the northwest and southeast.

The northern edges of the frequency effect and magnetic anomalies approximately coincide but elsewhere correlation between the geophysical units is poor. The south edge of the magnetic anomaly is not reflected in either the frequency effect or resistivity.

3.6.



ρ_a (ohm-ft/2π)

FE (%)

AMAX OF CANADA LIMITED

SCROGGIE CREEK PROPERTY

BRIDGET CLAIMS

DAWSON MINING DISTRICT — YUKON TERRITORY

I.P. / RESISTIVITY SURVEY

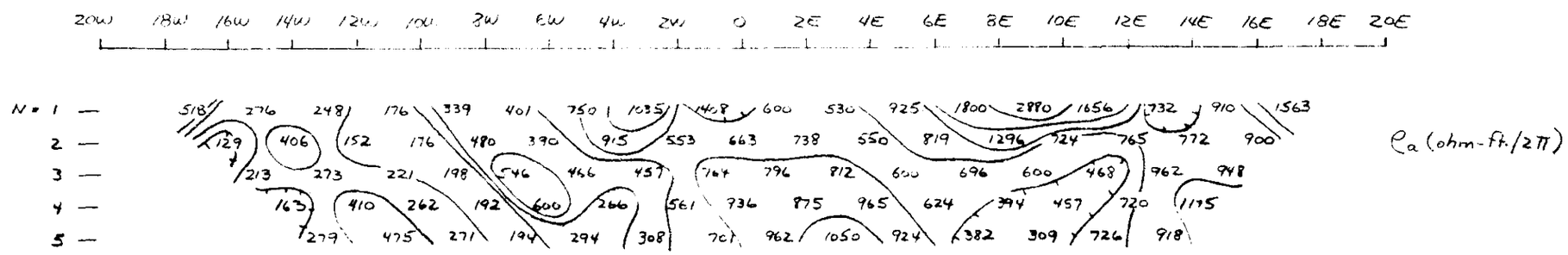
BASE LINE

SCALE 200 0 200 METRES / 500 0 500 FEET

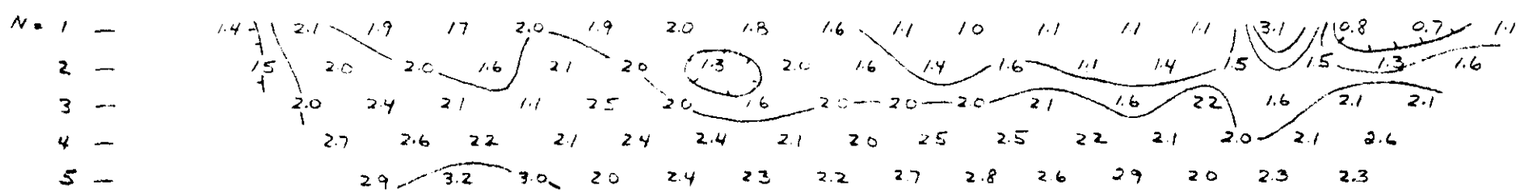
1 : 5,000

FIG. 6a

N.T.S. Ref. 115 J 15 and 16



ρ_a (ohm-ft./2π)



FE_a (%)

AMAX OF CANADA LIMITED

SCROGGIE CREEK PROPERTY

— BRIDGET CLAIMS —

DAWSON MINING DISTRICT — YUKON TERRITORY

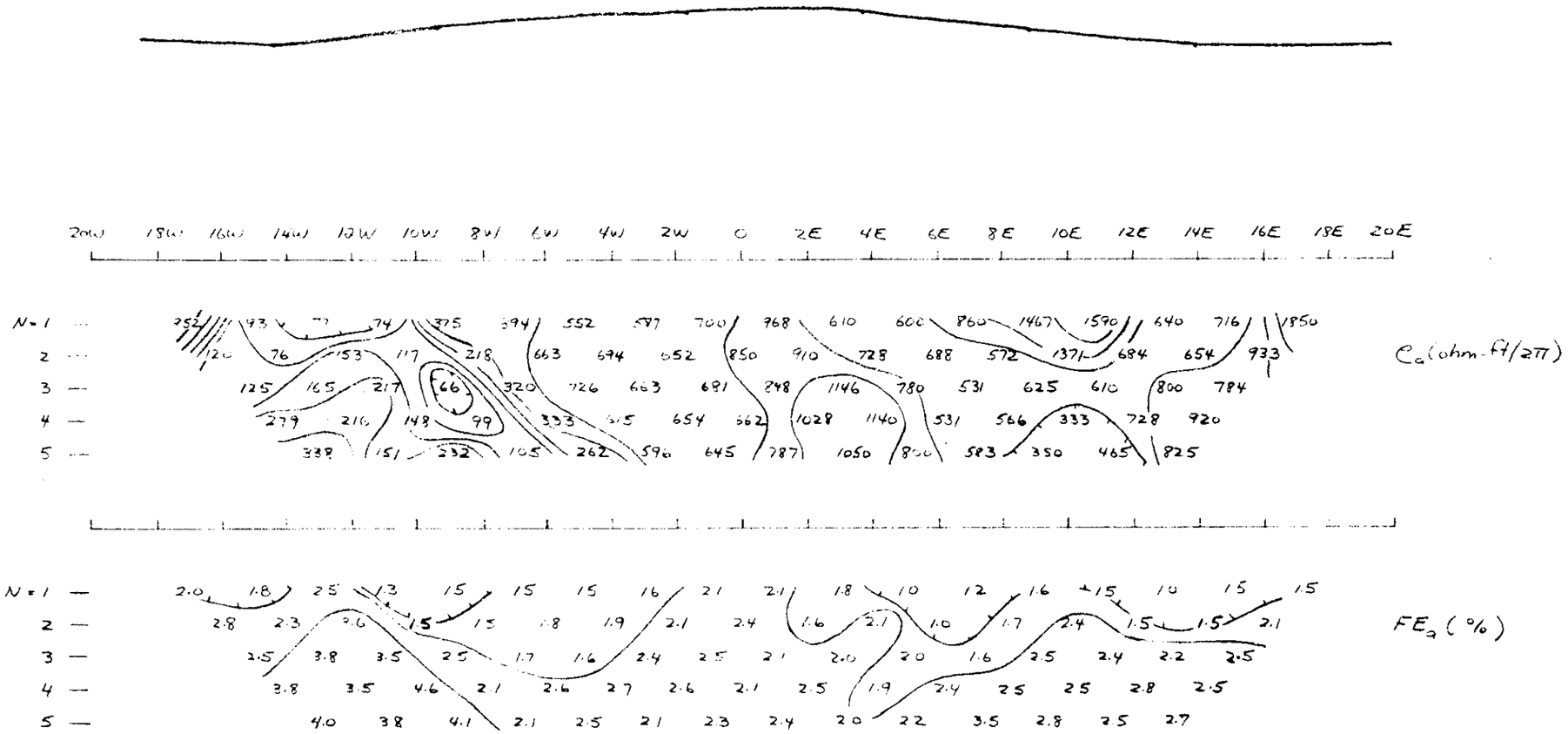
I.P. / RESISTIVITY SURVEY

L 12+00 N

SCALE 200 0 200 METRES FEET
500 0 500
1 : 5,000

FIG.

N.T.S. Ref. 115 J 15 and



AMAX OF CANADA LIMITED

SCROGGIE CREEK PROPERTY

BRIDGET CLAIMS

DAWSON MINING DISTRICT — YUKON TERRITORY

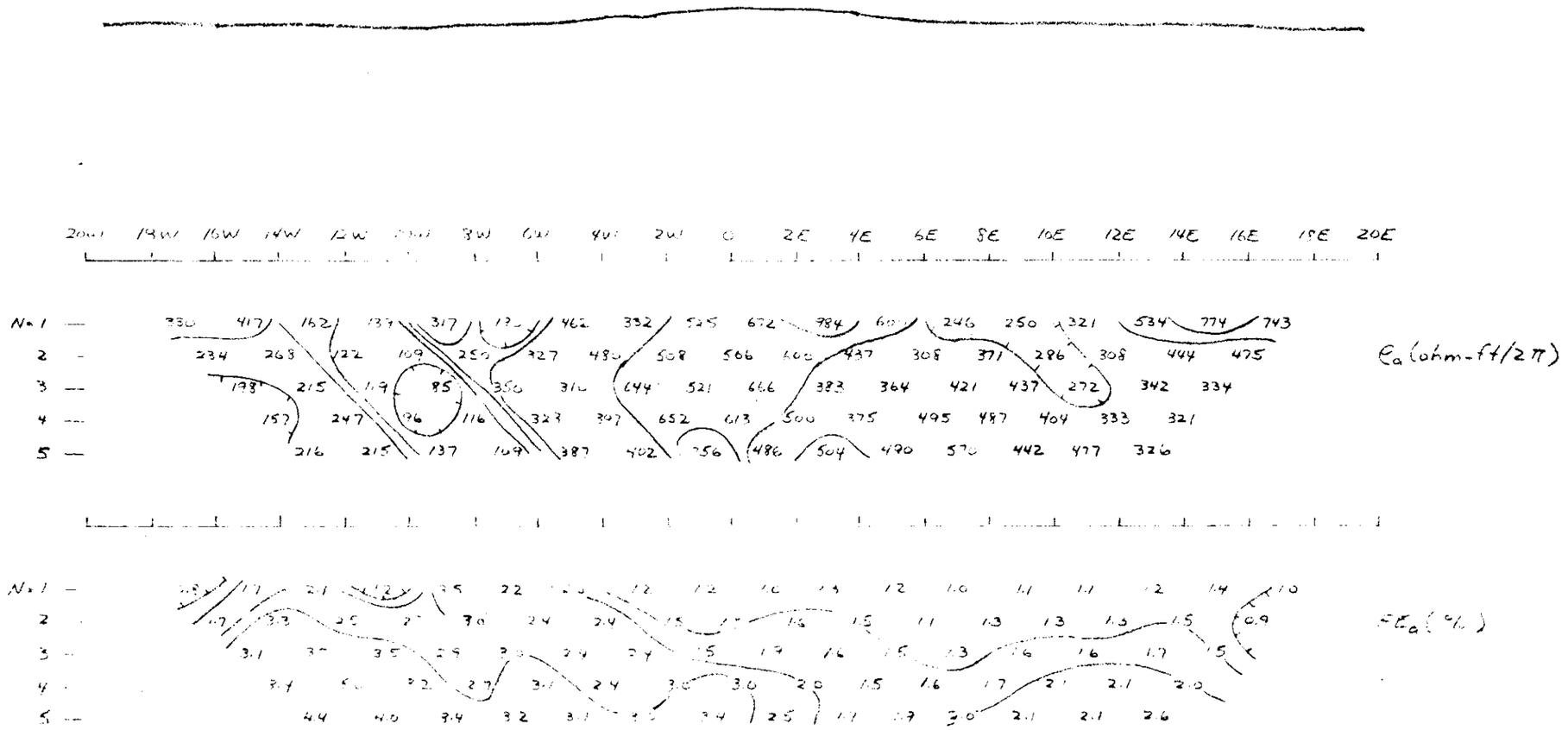
I.P. / RESISTIVITY SURVEY

L 8+00 N

SCALE 200 0 200 METRES / FEET
500 0 500
1 : 5,000

FIG. 6c

N.T.S. Ref. 115 J 15 and 16



AMAX OF CANADA LIMITED

SCROGGIE CREEK PROPERTY

BRIDGET CLAIMS

DAWSON MINING DISTRICT — YUKON TERRITORY

I.P. / RESISTIVITY SURVEY

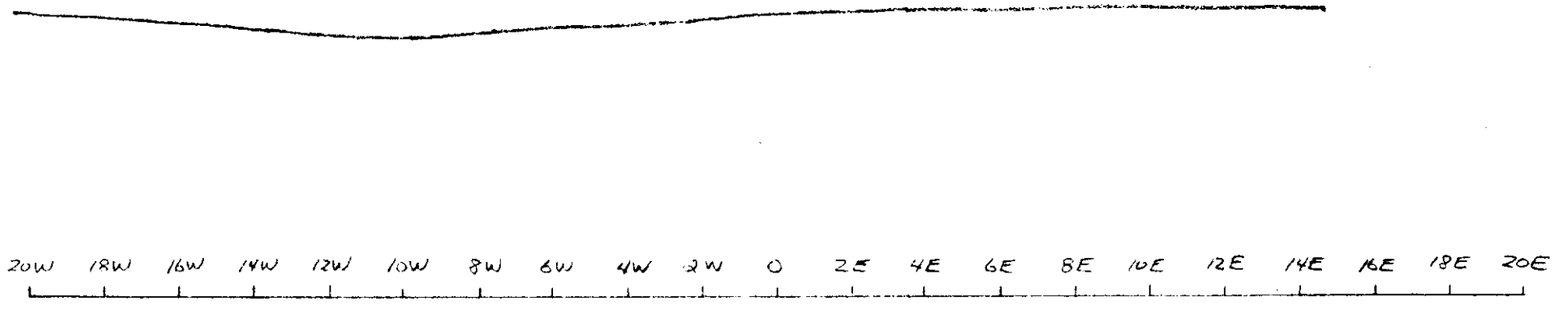
L 4+00 N

SCALE 200 0 200 METRES
500 0 500 FEET
1 : 5,000

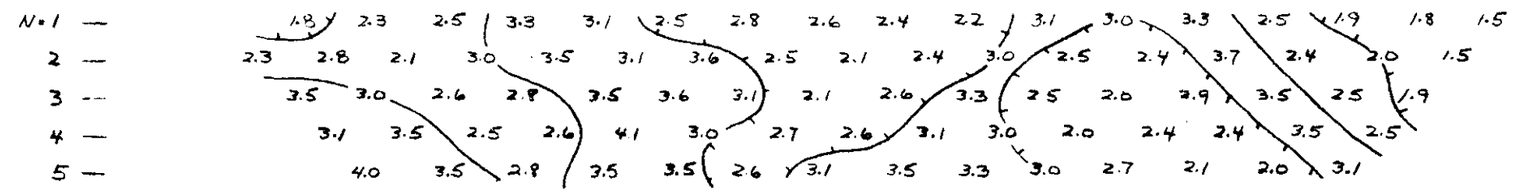
FIG. 6d

N.T.S. Ref. 115 J 15 and 16

L 0+00



ρ_a (ohm-ft./2π)



FE_a (%)

AMAX OF CANADA LIMITED

SCROGGIE CREEK PROPERTY

BRIDGET CLAIMS

DAWSON MINING DISTRICT — YUKON TERRITORY

I.P. / RESISTIVITY SURVEY

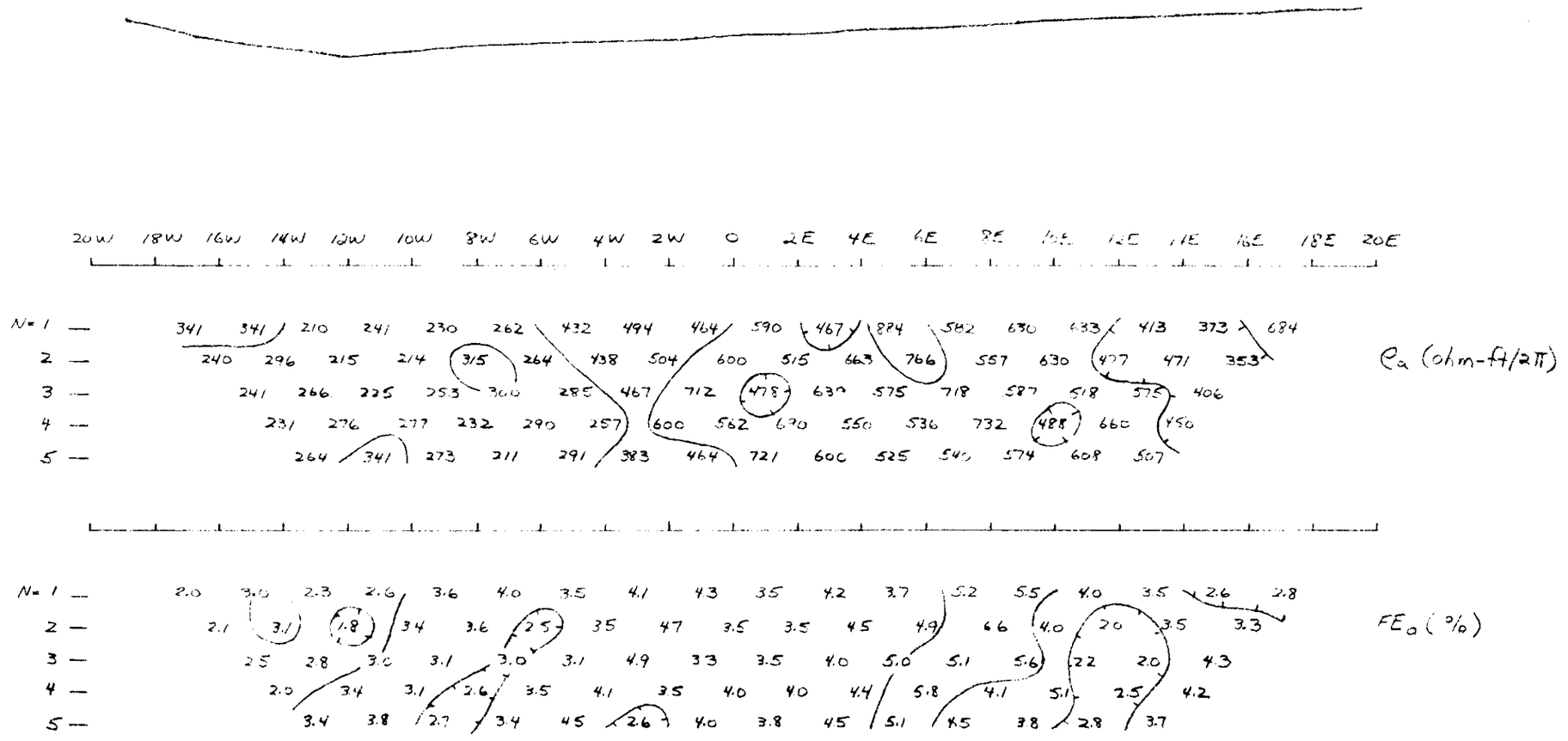
L 0+00

SCALE 200 0 200 METRES
500 0 500 FEET
1 : 5,000

FIG. 6e

N.T.S. Ref. 115 J 15 and 16

L 4+00 S



AMAX OF CANADA LIMITED

SCROGGIE CREEK PROPERTY

— BRIDGET CLAIMS —

DAWSON MINING DISTRICT — YUKON TERRITORY

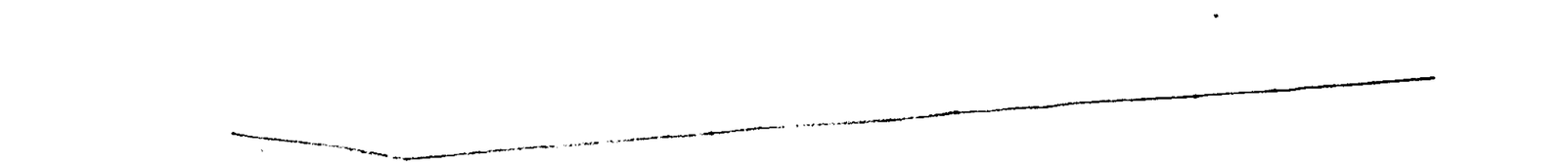
I.P. / RESISTIVITY SURVEY

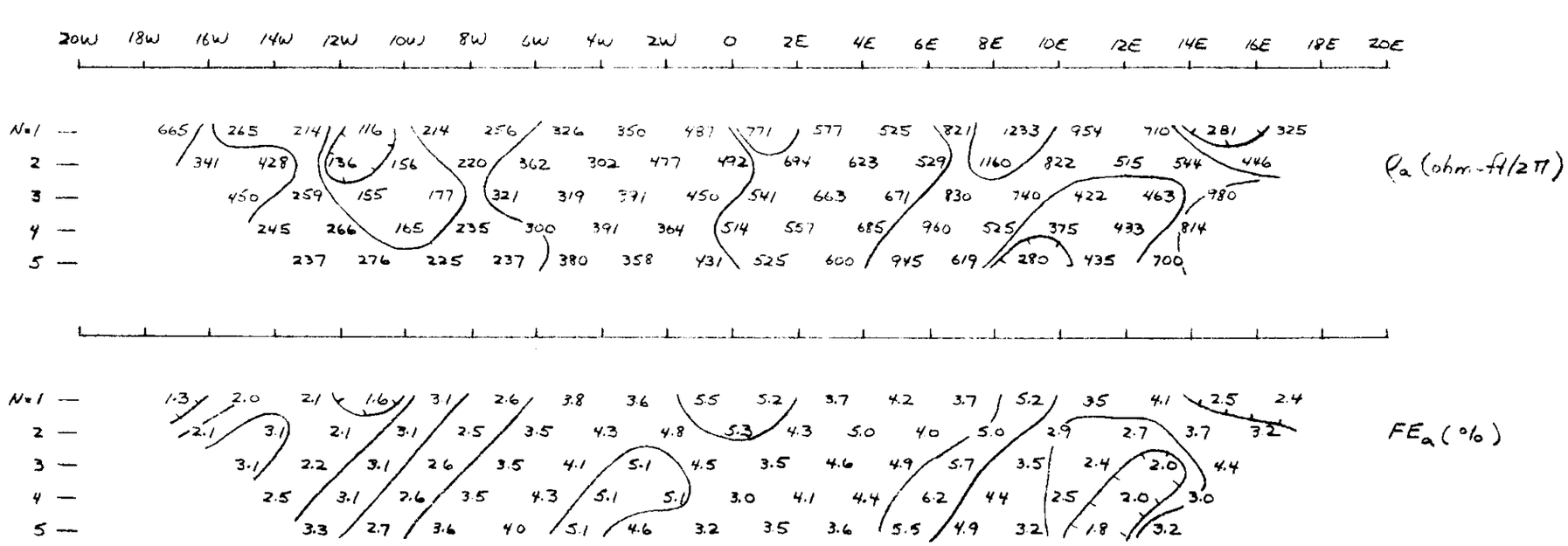
L 4+00 S

SCALE 200 0 200 METRES FEET
500 0 500
1 : 5,000

FIG. 6f

N.T.S. Ref. 115 J 15 and 16





ρ_a (ohm-ft/2π)

FE_a (%)

AMAX OF CANADA LIMITED

SCROGGIE CREEK PROPERTY

BRIDGET CLAIMS

DAWSON MINING DISTRICT — YUKON TERRITORY

I.P. / RESISTIVITY SURVEY

L 8+00 S

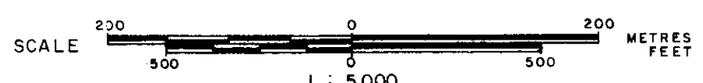
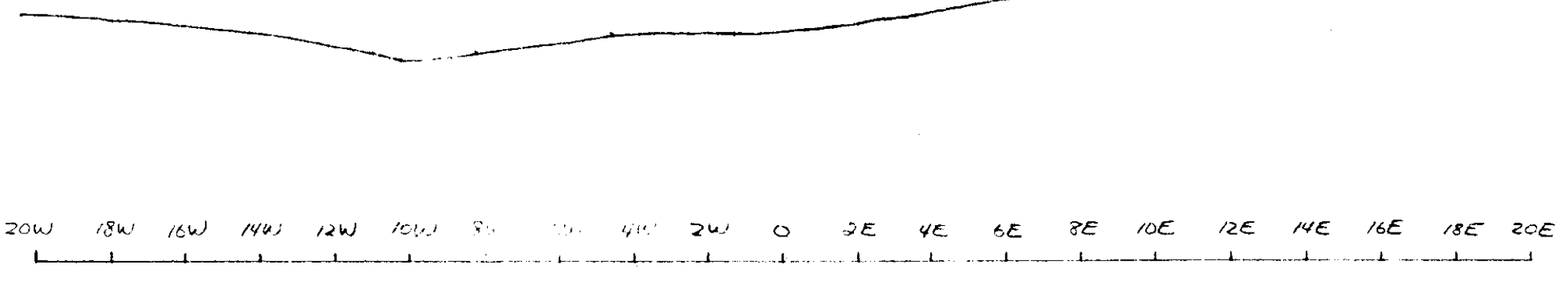
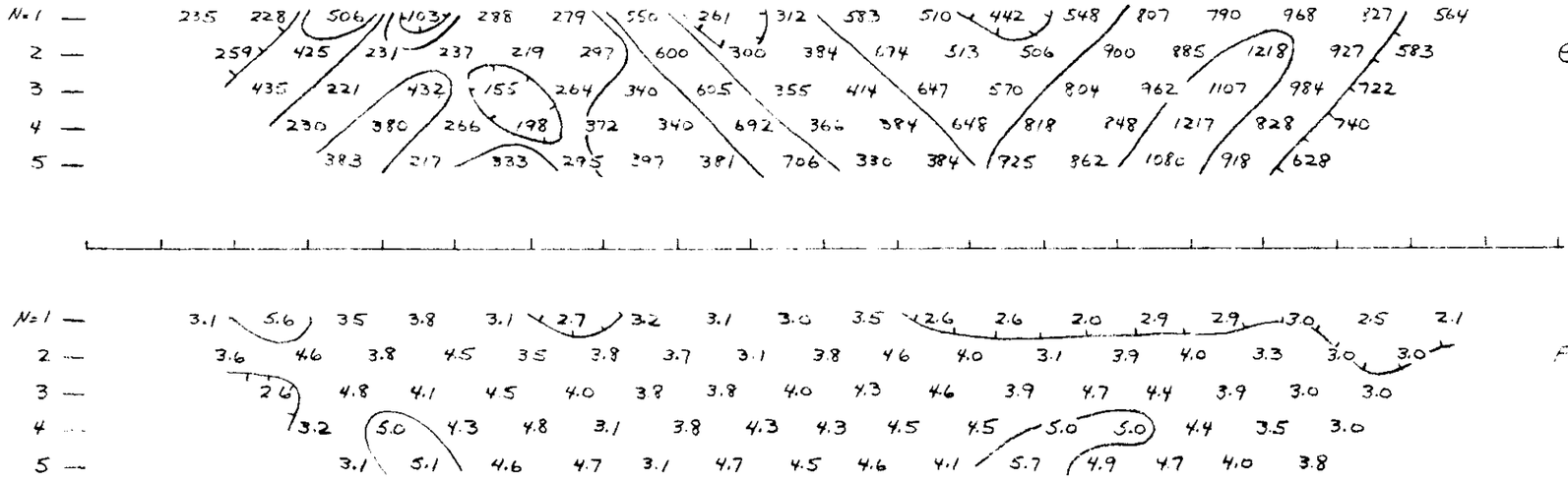


FIG. 6g

N.T.S. Ref. 115 J 15 and 16

L 12+00 S





AMAX OF CANADA LIMITED

SCROGGIE CREEK PROPERTY

BRIDGET CLAIMS

DAWSON MINING DISTRICT — YUKON TERRITORY

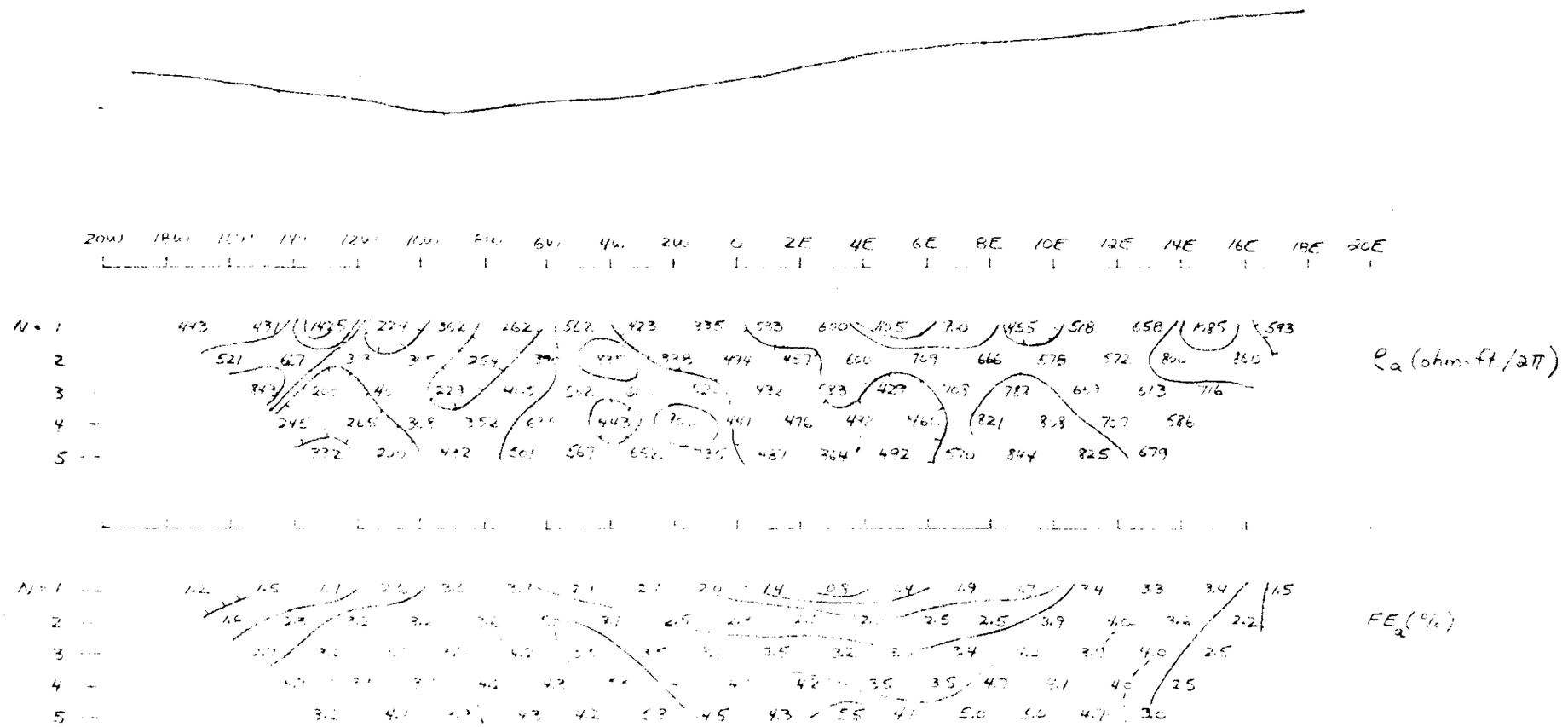
I.P. / RESISTIVITY SURVEY

L 12+00 S

SCALE 200 0 200 METRES
500 0 500 FEET
1 : 5,000

FIG. 6h

N.T.S. Ref. 115 J 15 and 16



AMAX OF CANADA LIMITED

SCROGGIE CREEK PROPERTY

BRIDGET CLAIMS

DAWSON MINING DISTRICT — YUKON TERRITORY

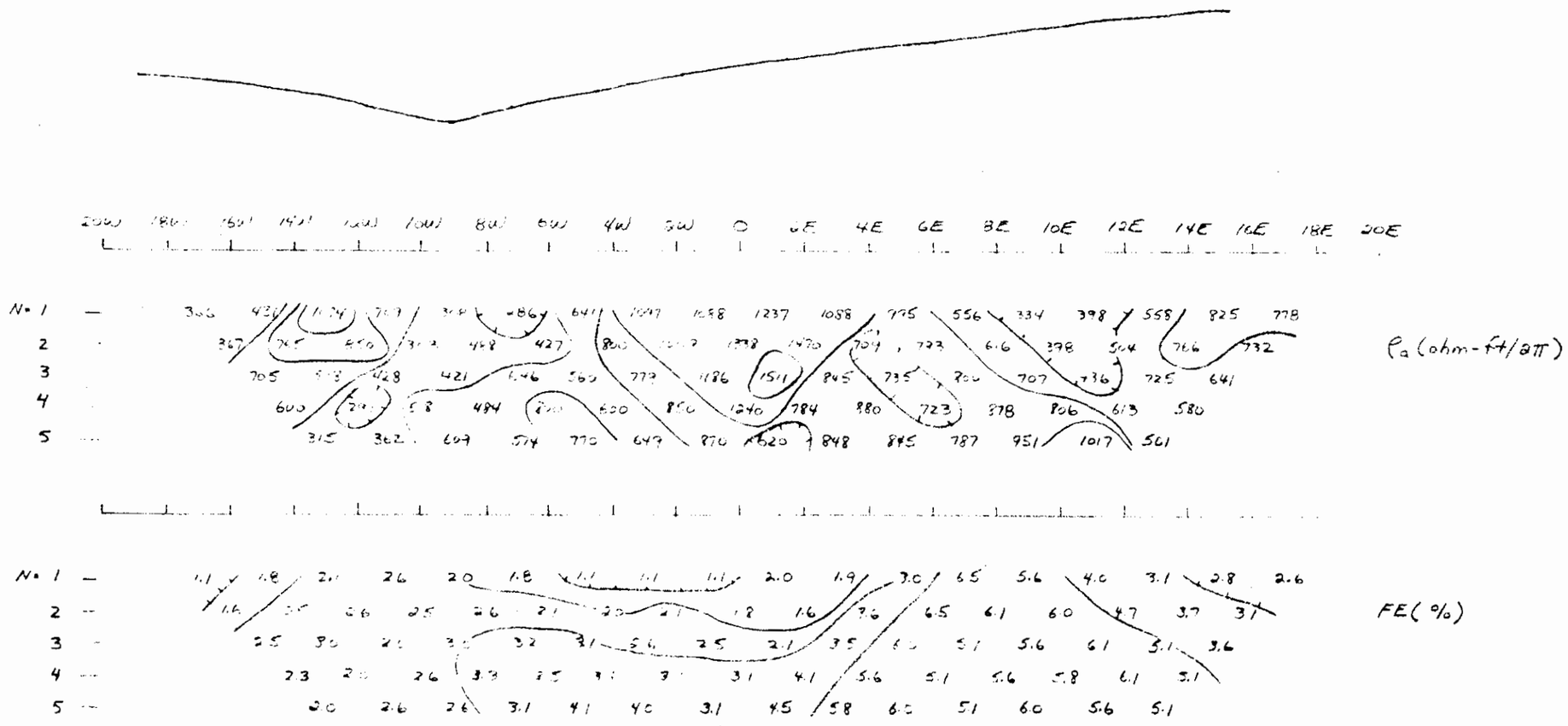
I.P. / RESISTIVITY SURVEY

L 16+00 S

SCALE 200 0 200 METRES
500 0 500 FEET
1 : 5,000

FIG. 6i

N.T.S. Ref. 115 J 15 and 16



AMAX OF CANADA LIMITED

SCROGGIE CREEK PROPERTY

BRIDGET CLAIMS

DAWSON MINING DISTRICT — YUKON TERRITORY

I. P. / RESISTIVITY SURVEY

L 21+00 S

SCALE 200 0 200 METRES
500 0 500 FEET
1 : 5,000

FIG. 6j

N. T. S. Ref. 115 J 15 and 16

Discussion of Results

The surveys were conducted primarily over Yukon Group schists and gneisses. The weak frequency effect anomaly detected reflects up to 1% polarizable minerals by volume. Since the eastern, western and southern edges of the anomaly were not adequately defined, it is not clear whether it is restricted in size and possibly related to a local source or whether it is a large feature related to variations in composition of the underlying rocks.

The magnetic anomaly is probably caused by the magnetite observed on the property. Both the ground and aeromagnetic surveys indicate that the magnetic anomaly has regional proportions thereby down-grading the possibility that the magnetite is derived from a local source. A magnetite rich phase of the gneisses is the most logical explanation for the anomaly. Magnetite is eliminated as a possible source for the induced polarization anomaly because anomalous frequency effects were recorded away from the magnetic anomaly.

G.W. Booth

A.C. Hitchins

J.L. LeBel

REFERENCES

1. Property Report: Somex Ventures Ltd., N.W. Burmeister, March, 1980

2. Property Report; Silver Standard Mines, R.C. McMichael, February, 1973

3. Tempelman-Kluit, D.J., Reconnaissance Geology of Aishihik Lake, Snag and part of Stewart River Map-Areas, West Central Yukon; G.S.C. Paper 73-41, 1974

APPENDIX I - STATEMENT OF COSTS

SCROGGIE CREEK - Geochemical & Geophysical Report

PERSONNEL

G.W. Booth, Geologist 509-30 Charles Street, West, Toronto July 7 - August 12, 1980 40 days @ $74.96/day	2,998.40
B.E. Booth, Jr. Assistant 509-30 Charles Street West, Toronto July 7 - August 12, 1980 37 days @ $37.57/day	1,390.09

CONTRACTORS

Phoenix Geophysics Limited - Inv. 2005	6,776.61
Nordic Contracting - Inv. 43152	4,140.00

EXPEDITING

Bema Industries Limited - Inv. 436	375.68

ROOM & BOARD

77 man days @ $25.00/day	1,925.00

HELICOPTER & FIXED WING

Shirley Helicopters Ltd. - Inv. 74605,74623,74630	3,717.10
Trans North Turbo Air - Inv. 42353,49328,49339,42370, 49356	4,675.45

TRUCK RENTAL

Castle Rentals Inc. - Inv. 3079	576.48
Shipping truck - Vancouver to Whitehorse White Pass & Yukon Route - Inv. 11275 (1/3 of $800.00)	266.67

TRAVEL

Vancouver/Whitehorse/Vancouver (1/3 of tickets for G.W. Booth and B.E. Booth)	200.00

GEOCHEMICAL ANALYSES

Rossbacher Laboratory Ltd. - Inv. 285	2,206.20

DRAFTING AND REPORT PREPARATION (J.L. LeBel & A.C. Hitchins)	1,627.32
TOTAL	$30,875.00

Of this total an estimated $26,000.00 has been spent on the Bridget 1-16 claims

PHOENIX Geophysics Limited

200 YORKLAND BLVD., WILLOWDALE, ONTARIO, CANADA M2J 1R5 TELEPHONE (416) 493-6350
Telex: 06-986856
Cable: PHEXCO TORONTO

RECEIVED SEP 2 1980 VANCOUVER OFFICE

INVOICE

August 28, 1980
Invoice No. 2005

Amax of Canada Ltd.
601 - 535 Thurlow Street
Vancouver, B.C.
V6E 3L6

Attention: Chris J. Hodgson - Chief Geologist

REFERENCE: Geophysical Survey Contract PV-1084
- IP Survey, Mag Rental, Scroggie Creek, Y.T.

CREW: J. Marsh, G. Ouellette

PERIOD: August 2, 1980 - August 10, 1980

7 Operating Days @ $555.00		$3,885.00
1 Bad Weather Day @ $225.00		225.00
1 Standby Day @ $225.00		225.00

MOBILIZATION - DEMOBILIZATION

Meals, Accommodation and Telephone		$ 384.20
Freight (2 tents - Vancouver, Whitehorse, Vancouver)		95.06
Vehicle Rental		
- 1725 km @ $0.20/km	$345.00	
1 week @ $192.00/wk	192.00	
5 days @ $32.00/day	160.00	
Insurance - 12 days @ $6.00/day	72.00	
Gas Fill Up	46.40	
Drop-off charge (Whitehorse)	150.00	
	$965.40	965.40
Additional Fuel		122.03
Tire Repair		11.50
Misc. Supplies (Salt, water cans left at Client's request)		27.82
		1,606.01
+10%		160.60
Total Expenses		1,766.61
3 Travel Days (Watson Lake-Dawson City- Whitehorse) @ $225.00		675.00
Total Mob-demob		$2,441.61
		$6,776.61

Approved for payment

PHOENIX GEOPHYSICS LIMITED
Vancouver Office: 214-744 West Hastings Street, British Columbia V6C 1A5 Telephone (604) 669-1070
Denver Office: 4690 Ironton Street, Colorado, 80239, U.S.A. Telephone (303) 373-0332

INVOICE

043152
DATE Aug 12/80
CUSTOMER'S ORDER
SALESMAN Norbert Contractor
TERMS
F.O.B.

SOLD TO AMAX MINERALS
535 Thurlow St #601
SHIPPED TO
ADDRESS
VIA

Geophysics - helpers
PROJECT 1035
Scroggie Creek
CK 20254 AUG 14 1980

VANCOUVER OFFICE AUG 15 1980 RECEIVED

$4,440.00
$4,140.00

BEMA INDUSTRIES LTD.

RECEIVED SEP 2 1980 VANCOUVER OFFICE

Attention: Mr. Tony Hitchins

~~19793 - 88 AVENUE PP - LANGLEY BC V3A 6V3 (604) 888-9300~~ 530-9731
5780 - 203rd Street, Langley, B.C. V3A 1W3 INVOICE A 436

Amax Canada Ltd.
601 - 535 Thurlow Street
Vancouver, B.C.
V6E 3L6

DATE July 31, 1980
FILE NO.
PROJECT 80-B

Re: Expediting Services
June 29 - July 28, 1980
Your project # ~~1060~~ 1095

Expediting retainer for the above period		$ 175.00
Hourly charges as per attached time cards	16/30	
3½ hours @ $20.00/hour		$ 70.00
		245.00

DISBURSEMENTS

Beaver Lumber Co. Ltd.	$ 19.75	
General Enterprises 1095	$ 23.35	
Hougen's Ltd.	$ 5.49	
Hougen's Ltd.	$ 9.90	
Northern Metallic Sales	$ 9.84	
Northern Safety Supply 1095	$ 29.15	
6/20 Whitepass Petroleum Services 1095	$ 16.16	
	$113.64	$ 113.64
15% service charge		$ 17.04
TOTAL INVOICE		$ 375.68

This is our account: $ 375.68

BEMA INDUSTRIES LTD.

PER: Barbara Miller

ADDITIONAL APPROVED 9/4/80

Project No.	Shop C.O.			Amount
1095		16.30	245.00	
1095		16.90	114.52	
1095		16.20	16.16	

gg

Date of Issue: August 29, 1980

20337 SEP 4 1980

37568

RECEIVED SEP 4 1980

Shirley Helicopters Ltd.

Hangar 6A, Municipal Airport
Edmonton, Alberta
Phone 453-5121

FLIGHT TICKET A 14604

DATE July 9/80 A/C C-GSHZ
CHARTER ☑ CONTRACT AMAX NON-REV. ☐
CUSTOMER AMAX EXPLORATION
ADDRESS 601-535 THURLOW ST VANCOUVER B.C.
P.O. # V6E 3L6
PROJECT

RECEIVED AUG 1980 VANCOUVER OFFICE

FLIGHT PASSENGER DETAILS	Fuel Supplied By S.H.L.	Fuel Supplied By CUST.	HRS.	MIN.
Dawson - Scroggie Cr - Dominion -				
Scroggie Cr - Local - Dominion -				
Dawson	✓		3	1
Equipment in				
Tony Hitchins				
Chris Hodgson				
Loch + Geoff Booth				
TOTAL FLIGHT HOURS			3	1
TOTAL HOURS THIS CONTRACT TO DATE				

PILOT'S SIG Wayne G. Myren
CUSTOMER SIG. Tony Hitchins (Engr CL)
MTCE. ENG. Mel Kang

A/F TTSOH ✓
ENG. TTSOH 6

	SPECIAL REMARKS	FUEL USED	CACHE REMAINING
N.W.T.			
YUKON			
ALBERTA	3 1 hr C 445 9 1329 52		
B.C.	3 1 hr Local 6 9 152 52		
SASK.	3 1 hr Dom 6 9 3 00		
MAN.			
...	Total = 1536 52		

Shirley Helicopters Ltd.

Hangar 6A, Municipal Airport
Edmonton, Alberta
Phone 453-5121

FLIGHT TICKET

A 14623

DATE July 25/80 A/C C GSHZ

CHARTER ☑ CONTRACT AMAX NON-REV. ☐

CUSTOMER AMAX MINERALS EXPLORATION

ADDRESS 601-535 THURLOW ST VANCOUVER B.C.

P.O. # PROJECT

VANCOUVER OFFICE

FLIGHT/PASSENGER DETAILS	Fuel Supplied By S.H.L	Fuel Supplied By CUST.	HRS.	MIN.
DAWSON - DOMINION - SCROGGIE CR - MOVE FLY CAMP TO DOMINION - RTN DAWSON	✓		2	0
TOTAL FLIGHT HOURS			2	0
TOTAL HOURS THIS CONTRACT TO DATE				

PILOT'S SIG. Wayne H Myers

CUSTOMER SIG. Stephen W. Boots

MTCE. ENG. Merv Kuntz

A/F TTSOH

ENG. TTSOH 58

	SPECIAL REMARKS	FUEL USED	CACHE REMAINING
N.W.T.			
YUKON			
ALBERTA	20 hrs @ 445 /hr = 1390 75	✓	
B.C.	20 hrs fuel @ Capital 199 60	✓	
SASK	20 hrs fuel @ 5.25 = 92 45	✓	
MAN.			
ONT.			
QUE.	TOTAL = 1681 80	✓	

Shirley Helicopters Ltd.

Hangar 6A, Municipal Airport
Edmonton, Alberta
Phone 453-5121

FLIGHT TICKET

A 14636

DATE July 29/80 A/C C GSHZ

CHARTER ☑ CONTRACT AMAX NON-REV. ☐

CUSTOMER AMAX MINERALS EXPLORATION

ADDRESS 601-535 THURLOW ST VANCOUVER B.C.

P.O. # PROJECT

VANCOUVER OFFICE

FLIGHT/PASSENGER DETAILS	Fuel Supplied By S.H.L	Fuel Supplied By CUST.	HRS.	MIN.
DAWSON - SCROGGIE CR. - MOVE CAMP AND CREW FROM SCROGGIE TO BRIGIT CLAIMS - RTN DAWSON	✓		2	4
			2	4
TOTAL FLIGHT HOURS				
TOTAL HOURS THIS CONTRACT TO DATE				

Project 1095 Code Scroggie

JT

PILOT'S SIG. Wayne H Myers

CUSTOMER SIG. Stephen W. Boots

MTCE. ENG. Merv Kuntz CK 202

A/F TTSOH

ENG. TTSOH

	SPECIAL REMARKS	FUEL USED	CACHE REMAINING
N.W.T.			
YUKON			
ALBERTA	24 hrs @ 445 /hr = 1068 80		
B.C.	24 hrs fuel @ 1.25 per gal = 119 52		
SASK	24 hrs fuel @ 1.25 per hr = 2 52		
MAN.			
ONT.			
QUE.	TOTAL = 1189 52		

TRANS NORTH TURBO AIR LTD.
BOX 4338 WHITEHORSE YUKON · Y1A 3T6
TELEPHONE (403) 668-2127 · TELEX 036-8-290

ACCOUNT NUMBER: 60 42353

Max Minerals Explo
401 - 535 Thurlow St
BILLING ADDRESS
Vancouver B.C.

INVOICE DATE: 19 08 80
A/C TYPE: C-206 · AIRCRAFT REGISTRATION: GJFK
FLIGHT DATE: DAY 29 · MONTH 07 · YEAR 80
PURCHASE ORDER NO.

PAID & OUT: TNTA ✓ · CUST
TNTA FUEL USED · HRS.-GALS. · FROM: DA

FROM / TO	MILES	HOURS	ZONE	REMARKS - NO. OF PASS - FREIGHT LBS.
Dawson / Scroggie CR	75			3pass 1 Day @ gear
Dawson / Scroggie CR	75			1 Drum water
Dawson / Scroggie CR	75			500 lbs gear

MAX MINERALS EXPLO
AUG 25 1980
RECEIVED
VANCOUVER OFFICE

26 8/25/80

SUB	G.L.	AMOUNT
892	60 20	345 00
892	61 10	84 63

1095 · 6840 · 4763
2028 3
30C · 11.15 · 345 00 ✓

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

WAITING TIME	·	/HR.	
FUEL: 39	· 2.17	/GAL.	84 63 ✓
FUEL	·	/GAL.	
MEALS & LODGING			
OTHER			
OTHER			

TOTAL $ 429 63

Geoffrey W. Booth
ENGINEER'S SIGNATURE
Carl Gudeon AEB
PILOT'S SIGNATURE
222
ENGINEER'S NAME

Ame.

TRANS NORTH TURBO AIR LTD.
WHITEHORSE YUKON · Y1A 3T6
TELEPHONE (403) 668-2127 · TELEX 036-8-290

ACCOUNT NUMBER: 60 49328

AUG 18 1980
Max Minerals Explo
401 - 535 Thurlow St
VANCOUVER OFFICE
Vancouver B.C. V6E 3L6

INVOICE DATE: 07 08 80
A/C TYPE: Bell 206B · AIRCRAFT REGISTRATION: GTNG
FLIGHT DATE: DAY 02 · MONTH 08 · YEAR 80
PURCHASE ORDER NO.

PAID & OUT: TNTA ✓ · CUST
TNTA FUEL USED: JP4 · HRS.-GALS.: 3.7 hrs. · FROM: DA.

FROM / TO	MILES	HOURS	ZONE	REMARKS - NO. OF PASS - FREIGHT LBS.
Dawson City / Scroggie CK				Survey Crew
Blackmarks CK. (3 trips)				J. Marsh
Rtn. Dawson.		3.7		B. Gilles
				& Geol.
Project #1095				

8/19/80
1095 6840 1579.07

SUB	G.L.	AMOUNT
807	50 20	1480 00
807	21 10	119 07

3.7 · 400 1480 00 ✓
CK 20255 AUG 19 1980

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

WAITING TIME	·	/HR.	
FUEL: 81	· 1.47	/GAL.	119 07 ✓
FUEL	·	/GAL.	
MEALS & LODGING			
OTHER			
OTHER			

TOTAL $ 1599 07

Geoffrey Booth
ENGINEER'S SIGNATURE
Rod Watt RBW
PILOT'S SIGNATURE
RBW / AOM.
ENGINEER'S NAME

Ame.

TRANS NORTH TURBO AIR LTD.
TELEPHONE (403)668-2177 · TELEX 036-8-290

ACCOUNT NUMBER 60
49339
INVOICE DATE 13 08 80

CHARTERER: Amax Northwest Mineralys
BILLING ADDRESS: 601 535 Thurlow St. Vancouver B.C.

A/C TYPE: 206B
AIRCRAFT REGISTRATION: GTNG
FLIGHT DATE: DAY 06 MONTH 08 YEAR 80
PURCHASE ORDER NO.:

FUEL & OILS TNTA / CUST	TNTA FUEL USED	HRS.-GALS.	FROM
✓	JP4	1.4	DA

FROM	TO	MILES	HOURS	ZONE	REMARKS - NO. OF PASS - FREIGHT LBS.
Dawson	Scroggie Crk (Amax camp)				1000-1200
drop off propane + feed					
P/U 1 pass. + gear return Dawson					

AMAX
AUG 25 1980
VANCOUVER OFFICE

Project 1095
Scroggie Creek

SUB	G/L	AMOUNT
807	5020	560 00
807	5110	45 57

1.4 · 400 · 560 00

CR 20283 AUG 25 1980

WAITING TIME · /HR.
FUEL 31 · .147 GAL. 45 57
FUEL 8/25/80
OTHER 1095 16.80 605 57

TOTAL $ 605 57

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

Geoffrey Booth
CHARTERER'S SIGNATURE
ARS
RBW + ADM

TRANS NORTH TURBO AIR LTD.
TELEPHONE (403)668-2177 · TELEX 036-8-290

ACCOUNT NUMBER 60
42370
INVOICE DATE 27 08 80

CHARTERER: Amax
BILLING ADDRESS: 601-535 Thurlow St. Vancouver B.C. V6E 3L6

A/C TYPE: C-206
AIRCRAFT REGISTRATION: BJFC
FLIGHT DATE: DAY 11 MONTH 08 YEAR 80
PURCHASE ORDER NO.:

FUEL & OILS TNTA / CUST	TNTA FUEL USED	HRS.-GALS.	FROM
✓	1.9		DA

FROM	TO	MILES	HOURS	ZONE	REMARKS - NO. OF PASS - FREIGHT LBS.
Scroggie	Dawson	75	.6		Camp Move
Dawson	Scroggie	75	.6		1560 lbs gear
Scroggie	Dawson	75	.7		Total 2 Trips

SEP 9 1980
VANCOUVER OFFICE

(1.9)

AMAX
SEP 26 1980
VANCOUVER OFFICE

SUB	G/L	AMOUNT
893	6020	358 75
893	6110	53 07

225 · 1.15 · 258 75

WAITING TIME · /HR.
FUEL 22 · 1.53 GAL. 33 74
FUEL 9/26/80
MEALS LODGING
OTHER 1095 8.80 311 82

TOTAL $ 311.82

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

1095 Accumulate for Signature

L.G. Booth
CHARTERER'S SIGNATURE

ALS
PILOT'S SIGNATURE

ZZZ
ENGINEER'S NAME

CR 20492 SEP 26 1980

TRANS NORTH TURBO AIR LTD.
BOX 4339, WHITEHORSE, YUKON Y1A 3T9
TELEPHONE (403)668-2177 · TELEX 036-8-290

ACCOUNT NUMBER 60
49356

INVOICE DATE 13 08 80

A/C TYPE Bell 206B

AIRCRAFT REGISTRATION C-GTWG

FLIGHT DATE DAY 11 MONTH 08 YEAR 80

PURCHASE ORDER NO.

OWNER AMAX Northwest Mining
MINERALS

BILLING ADDRESS

FUEL & OIL: TNTA	CUST	TNTA FUEL USED	HRS.-GALS.	FROM
✓		JPY	4.0 M.	DA.

FROM	TO	MILES	HOURS	REMARKS	NO. OF PASS.	FREIGHT LBS.
DAWSON CITY	SCROGGIE CREEK				2	580
BLACK HILLS CREEK	LOCAL	195		8640		172936
RTN. DAWSON			4.0	OK 202833 AUG 25 1980		
				Project 1035 Scroggie Creek		

AMAX
AUG 25 1980
VANCOUVER OFFICE

MCF	CCL	AMOUNT
897502	0	1600 00
807511	0	129 36

	4.0	400	1600	00
WAITING TIME		/HR.		
FUEL 88	1.47	/GAL.	129	36 ✓
FUEL		/GAL.		
MEALS & LODGING				
OTHER				
OTHER				

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

Jeffrey Boot
Rob Wall RBW
PILOT'S SIGNATURE

RBW / ADM.
PRINT NAME

TOTAL $ 172936

CASTLE RENTALS INC.

A CANADIAN COMPANY

1790 Marine Dr., North Vancouver, B.C. V7P 1V2

Phone: 986-3351
Telex: 04-352763

INVOICE

CHARGE TO: Amax Exploration Inc. DATE June 25, 1980
#601 - 595 Thurlow Street
Vancouver, B.C.
V6E 3L6 VANCOUVER OFFICE No: 3079

AMAX
JUL 2 1980
VANCOUVER OFFICE

R/A No.: 5013
Unit No: 803
Period: July 1 to July 31, 1980

RE: PROJECT 1067/1068

Basic rental:	400	00
Canopy:	80	00
Extra Equipment:	7	00
Insurance:	70	00

APPROVED 7/3/80

Project No.	Value	
1067	8640	288 24
1068	8640	288 24
		576 48

TAX	19	48
TOTAL DUE	576	48

DATE DUE: July 1, 1980

White Pass & Yukon Route
P.O. BOX 10140 701 WEST GEORGIA ST.
VANCOUVER B.C. V7Y 1E6
PHONE (604) 683-7221 TELEX 0451412

AND ARCTIC RAILWAY AND NAVIGATION COMPANY, BRITISH COLUMBIA YUKON RAILWAY COMPANY, THE BRITISH YUKON RAILWAY COMPANY FURNISHING THE MEANS OF TRANSPORTATION KNOWN AS
WHITE PASS & YUKON ROUTE
(HEREIN COLLECTIVELY CALLED "THE CARRIERS" OR "THE COMPANY". REFERENCE TO "THE CARRIER" SHALL MEAN THE INDIVIDUAL CARRIER HAVING THE GOODS IN ITS OWN CUSTODY) AND, IN CONNECTION THEREWITH, LOISELLE TRANSPORT LIMITED.

CONNECTING CARRIER: AMAX | CODE | CARTAGE COMPANY | $ | INDICATE WHETHER: ☐ PREPAID ☒ COLLECT | INVOICE / WAYBILL NO. 11 275

CONSIGNED TO: AMAX EXPLORATION WHITEHORSE, YT. | SHIPPER AND ORIGIN: AMAX OF CANADA LTD. VANCOUVER, B.C | 3964

RECEIVED MAY 28 1980 VANCOUVER OFFICE

3964

DEST 16 | ORIGIN 2 | CLASS 10

PARTICULARS FURNISHED BY SHIPPER OF GOODS

NO. OF PIECES OR PACKAGES	DESCRIPTION OF GOODS INCLUDE MARKS, NUMBERS, AND CUBIC FEET IF APPLICABLE	WEIGHT SUBJECT TO CORRECTION	TARIFF ITEM	CODE	WEIGHT OR UNITS	RATE	FREIGHT
	IF HEATED OR COOLER OR FREEZER SERVICE DESIRED, SPECIFY SERVICE REQUIRED						
1	FORD PICK-UP (RED) '80 WITH CANOPY S.N. F25GCJA1808 (1068-8680)	5000	105		1 UNIT	400.00	400 00

APPROVED 6/4/80

1068 | 8680 | 400 00

THIS IS YOUR INVOICE.
NO OTHER STATEMENT WILL BE ISSUED
Please remit to White Pass & Yukon Corp.
Box 4070, Whitehorse, Yukon Y1A 3T1
within 7 days.

Personal Effects Shipped ORD

CONTAINER	WEIGHT ANALYSIS	FREIGHT CHARGES	400 00
		C.O.D.	
		C.O.D. FEE	
		TOTAL CHARGES	400 00
		PREPAID	
		COLLECT	

K 19703 JUN 4 1980

3674 5000

DECLARED VALUE OF SHIPMENT $ _____ PAGE _____ OF _____

TOTAL | FREE GOODS | TOTAL 5000

NOT RESPONSIBLE FOR IMPROPER MARKING OF PACKAGES SEIZED BY U.S. OR CANADIAN CUSTOMS OFFICIALS
IN NO EVENT SHALL CARRIERS LIABILITY EXCEED THE DECLARED VALUE.

Received, subject to the classification and tariffs in effect on the date of issue of this original bill of lading, goods described above in apparent good order, except as noted, contents and condition of contents of packages unknown, marked consigned and destined as indicated above. The Company under reserve as noted, contents and condition of contents of packages unknown, marked consigned and destined as indicated above. The Company under reserve as noted, contents and condition of contents of packages unknown, marked consigned and destined as indicated above. The Company agrees to carry said goods to its usual place of delivery at the destination, or on the Company's route, otherwise to deliver to another connecting carrier on the route to destination. It is mutually agreed as to each carrier of all or any of said goods over all or any portion of route to destination and as to each party at any time interested in all or any of said goods, that every service performed hereunder is subject to the terms and conditions hereof. Such property is hereby specifically agreed to be subject to a lien for all charges, whether prepaid or collect, herein contained, including conditions on the back hereof as they are set out and/or incorporated by reference herein. The shipper accepts and agrees to all such terms and conditions for himself and his assigns.

DATED AT _____ THIS _____ DAY OF _____ 19 ____

SHIPPER _____ BY: _____
NAME SIGNATURE

ON BEHALF OF CARRIERS SEVERALLY AND NOT JOINTLY

ABOVE GOODS RECEIVED BY THE CARRIERS ON BEHALF OF NAMED CONSIGNEE

STRAIGHT BILL OF LADING

Rossbacher Laboratory Ltd.

GEOCHEMICAL ANALYSTS & ASSAYERS

2225 S. SPRINGER AVE.,
BURNABY, B. C.
CANADA
TELEPHONE: 299-6910
AREA CODE: 604

AMAX MINERALS EXPLORATION
601-535 Thurlow St.
Vancouver, B.C.
Project 1095

DATE Sept 2,1980
INVOICE NO. 0285
CERTIFICATE NO. as marked

ITEM	DESCRIPTION		SUB-TOTAL	TOTAL
✓266	Geochem analysis for 4 elements	@ $ 2.70	$ 718.20	
✓266	W	2.25	~~569.50~~	
✓255	Au	3.00	765.00	
✓215	Soil prep	0.30	64.50	
✓40	Rock prep	1.50	60.00	
				$ 2,197.20

APPROVED 9/4/80

1095 | 8690 | 2706.20

20339 SEP 4 1980

TERMS – NET 30 DAYS

APPENDIX II - STATEMENT OF QUALIFICATIONS

G.W. Booth

#509 - 30 Charles Street West, Toronto, Ontario M4Y 1R5

Education - Secondary - University of Toronto Schools 1969-1973
Tertiary - Western Australian Institute of Technology, 1973-1974 University of Toronto, 1974-1980; B.Sc. Geology 1978, M.Sc. Geology 1981.
Scholarships - Rotary International Student Exchange Scholarship to Perth, Western Australia, to attend the Western Institute of Technology
M.Sc. Thesis Topic - The Pamiutuq Lake Batholith; a large (700 sq.km.) hypabyssal porphyritic acidic intrusion of Paleohelikan age located in the Baker Lake Basin of the N.W.T. A petrological, geochemical and geophysical evaluation of the body has been undertaken as part of a 1:250,000 scale regional mapping project of the Basin itself, initiated by the Geological survey of Canada in 1976.

Experience -1973 - Underground and surface labourer, Agnico Eagle Gold Mines Ltd.
1975 - Junior Geologist, Camflo Gold Mines Ltd.
1976 - Junior Geologist, Hollinger Mines Ltd. Labrador Mining Ltd.
1977 - Junior Geologist, United Siscoe Mines Ltd.
1978 - Senior Geologist, Geological Survey of Canada, Precambrian Division
1979 - Senior Geologist, Geological Survey of Canada, Precambrian Division
1980 - Senior Geologist - AMAX of Canada Limited - 1980 Field Season

B.E. Booth

#509 - 30 Charles Street West, Toronto, Ontario M4Y 1R5

Education - University of Toronto B.Sc. 1981 or 1982
Gemological Institute of America G.G. 1981
W.A. Porter Collegiate Grade 13 1974

Experience- AMAX of Canada Limited - 1980 field season - junior assistant

APPENDIX III

GEOCHEMICAL RESULTS AND PROCEDURES FOR COLLECTION & PROCESSING OF GEOCHEMICAL SAMPLES

Rossbacher Laboratory

GEOCHEMICAL ANALYSTS & ASSAYERS

2225 S SPRINGER AVE.
BURNABY, B.C.
CANADA
TELEPHONE: 299-6910
AREA CODE: 604

AMAX

CERTIFICATE OF ANALYSIS

VANCOUVER OFFICE

CERTIFICATE NO. 80395-1

INVOICE NO.

DATE ANALYSED Aug 1980

PROJECT 1095

TO: AMAX MINERALS EXPLORATION
601 - 535 THURLOW ST.
VANCOUVER, B.C.

No.	Sample	pH	Mo	Cu	Ni	Zn	W	PPB Au	No.
01	80XLS1		23	30	16	92	30	10	01
02	2		27	52	16	84	30	10	02
03	3		46	90	18	84	2	10	03
04	4		19	20	14	44	0	10	04
05	5		102	402	10	18	0	10	05
06	6		64	170	20	66	2	10	06
07	7		47	152	20	98	5	10	07
08	8		75	114	22	78	5	10	08
09	9		26	48	22	68	5	10	09
10	80XLS10		3	42	18	58	10	10	10
11	11		80	48	30	272	300	10	11
12	12		1	24	22	62	15	10	12
13	13		16	54	14	52	30	10	13
14	14		18	100	20	318	250	10	14
15	15		95	210	18	32	5	10	15
16	16		33	110	16	92	20	10	16
17	17		14	66	14	52	15	10	17
18	18		5	58	14	52	5	10	18
19	19		3	22	18	70	10	10	19
20	STD A		7	76	10	32	15	-	20
21	80XLS20		12	52	18	74	20	10	21
22	21		7	20	14	56	12	10	22
23	22		19	130	18	70	15	10	23
24	23		8	54	24	66	5	10	24
25	24		8	92	22	62	2	10	25
26	25		18	180	26	74	8	10	26
27	26		108	250	26	80	25	10	27
28	27		70	90	26	66	2	10	28
29	28		52	84	12	66	12	10	29
30	80XLS29		17	56	14	24	2	10	30
31	30		62	60	16	90	20	10	31
32	31		22	62	18	92	40	10	32
33	32		53	94	26	144	45	10	33
34	33		10	36	12	80	30	10	34
35	34		60	252	42	168	40	10	35
36	35		15	86	20	76	30	10	36
37	36		48	52	26	62	20	10	37
38	37		93	104	44	134	20	10	38
39	80XLS38		141	140	34	118	30	10	39
40	STD A		8	20	10	32	15	-	40

Certified by J. Rossbacher

Rossbacher Laboratory

GEOCHEMICAL ANALYSTS & ASSAYERS

2225 S. SPRINGER AVE.,
BURNABY, B.C.
CANADA
TELEPHONE: 299-6910
AREA CODE: 604

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 80395-2

INVOICE NO.

DATE ANALYSED Aug, 1980

PROJECT 1095

TO: AMAX MINERALS EXPLORATION
601 - 535 THURLOW ST.
VANCOUVER, B.C.

No.	Sample	pH	Mo	Cu	Ni	Zn	W	Au						No.
01	80XLS34		154	344	30	82	35	10						01
02	41		29	176	26	90	15	10						02
03	42		19	174	26	92	10	10						03
04	43		80	370	30	104	25	10						04
05	43		70	336	32	94	20	10						05
06	44		53	244	28	94	10	10						06
07	45		40	116	28	104	20	10						07
08	46		40	168	22	70	0	10						08
09	47		21	92	22	80	20	10						09
10	80XLS48		8	50	14	28	0	10						10
11	49		8	28	32	80	15	10						11
12	50		22	30	20	48	10	10						12
13	51		8	40	26	90	35	10						13
14	52		5	30	22	56	15	10						14
15	53		10	38	26	98	15	10						15
16	54		4	24	24	86	15	10						16
17	55		6	40	28	88	0	10						17
18	56		7	46	22	78	15	10						18
19	57		5	64	12	28	0	10						19
20								-						20
21	80XLS58		10	60	26	80	30	10						21
22	59		15	124	16	98	20	10						22
23	60		27	242	20	102	40	10						23
24	61		5	34	22	52	10	10						24
25	62		7	96	24	92	10	10						25
26	63		29	150	32	86	65	10						26
27	64		9	56	36	224	60	10						27
28	65		11	64	24	124	65	10						28
29	66		16	92	24	152	70	10						29
30	80XLS67		30	80	18	140	70	10						30
31	68		160	232	18	90	20	10						31
32	69		102	144	22	158	75	10						32
33	70		110	110	28	104	25	10						33
34	71		106	182	32	108	20	10						34
35	72		95	274	28	100	20	10						35
36	73		66	144	22	88	0	10						36
37	74		70	162	30	112	0	10						37
38	75		56	112	18	68	15	10						38
39	80XLS76		50	88	32	102	140	10						39
40	STD C		14	186	58	114	35	-						40

Certified by V. Rossbacher

Rossbacher Laboratory

GEOCHEMICAL ANALYSTS & ASSAYERS

2225 S. SPRINGER AVE.,
BURNABY, B.C.
CANADA
TELEPHONE: 299-6910
AREA CODE: 604

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 80395-3

INVOICE NO.

DATE ANALYSED Aug, 1980

PROJECT 1095

TO: AMAX MINERALS EXPLORATION
601 - 535 THURLOW ST.
VANCOUVER, B.C.

No.	Sample	pH	Mo	Cu	Ni	Zn	W	PPB Au						No.
01	80XLS77		21	62	30	162	18	10						01
02	78		13	40	22	94	12	10						02
03	79		7	96	24	60	20	10						03
04	80		7	72	30	92	120	10						04
05	81		3	16	20	58	12	10						05
06	82		3	40	14	34	0	10						06
07	83		4	98	22	62	8	10						07
08	84		1	16	22	62	5	10						08
09	85		113	324	24	116	5	10						09
10	80XLS86		11	74	12	44	20	10						10
11	87		40	98	18	60	12	10						11
12	88		11	180	28	82	12	10						12
13	89		28	58	22	68	60	10						13
14	90		23	118	98	94	60	10						14
15	91		15	52	26	80	70	10						15
16	92		8	30	22	68	40	10						16
17	93		19	66	20	72	18	10						17
18	94		31	120	38	170	25	10						18
19	95		21	46	20	78	20	10						19
20														20
21	80XLS96		47	150	20	92	25	10						21
22	97		88	910	16	130	80	10						22
23	98		28	76	16	76	25	10						23
24	99		25	84	10	72	80	10						24
25	100		1	16	10	96	12	10						25
26	01		1	42	10	36	5	10						26
27	02		1	44	18	118	70	10						27
28	03		5	24	20	106	70	10						28
29	04		11	72	20	98	5	10						29
30	80XLS105		14	80	16	50	12	10						30
31	06		16	76	18	88	40	10						31
32	07		19	56	16	100	30	10						32
33	08		4	54	14	46	5	10						33
34	09		13	116	28	134	12	10						34
35	10		6	98	18	134	8	10						35
36	11		4	98	14	64	8	10						36
37	12		6	26	14	120	45	10						37
38	13		1	24	14	108	240	10						38
39	80XLS114		1	36	14	110	60	10						39
40	STD C		14	126	42	172	20							40

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Rossbacher Laboratory

GEOCHEMICAL ANALYSTS & ASSAYERS

2225 S. SPRINGER AVE.,
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TELEPHONE: 299-6910
AREA CODE: 604

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 80395-4

INVOICE NO.

DATE ANALYSED Aug, 1980

PROJECT 1095

TO: AMAX MINERALS EXPLORATION
601 - 535 THURLOW ST.
VANCOUVER, B.C.

No.	Sample	pH	Mo	Cu	Ni	Zn	W	PPB Au	No.
01	80XLS115		1	52	18	60	70	10	01
02	16		1	46	20	112	90	10	02
03	17		1	28	16	60	55	10	03
04	18		3	38	14	94	140	10	04
05	19		1	42	12	98	55	10	05
06	20		1	12	10	52	40	20	06
07	21		1	26	10	24	30	10	07
08	22		1	18	12	42	40	20	08
09	23		1	28	20	88	35	20	09
10	80XLS124		1	30	14	60	12	90	10
11	25		1	22	8	170	20	10	11
12	26		1	16	10	30	0	20	12
13	27		1	16	10	58	20	10	13
14	28		1	30	8	18	0	10	14
15	29		1	16	8	30	12	10	15
16	30		30	76	8	88	80	30	16
17	31		29	76	12	74	70	30	17
18	32		20	64	14	76	80	10	18
19	33		15	68	16	90	60	30	19
20	940 E		1	72	36	146	0	-	20
21	80XLS134		25	74	12	78	80	30	21
22	35		28	52	16	62	45	40	22
23	80XLS136		52	34	14	66	35	20	23
24	80XLL 1		22	48	14	82	80	10	24
25	2		15	26	8	44	50	70	25
26	3		17	24	4	44	70	30	26
27	4		20	22	10	42	100	30	27
28	5		24	26	8	48	50	20	28
29	6		27	46	8	44	400	10	29
30	80XLL 7		21	26	16	80	100	10	30
31	8		14	16	10	52	180	20	31
32	9		11	14	8	46	2	30	32
33	10		18	32	10	82	70	20	33
34	11		20	32	10	88	100	20	34
35	12		7	26	14	76	70	20	35
36	13		2	12	8	70	80	20	36
37	14		8	18	10	98	140	10	37
38	15		10	10	8	46	100	10	38
39	80XLL16		15	26	12	92	140	20	39
40	940 E		3	36	36	220	0	-	40

Certified by J. Rossbach

Rossbacher Laboratory

GEOCHEMICAL ANALYSTS & ASSAYERS

2225 S. SPRINGER AVE.,
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TELEPHONE: 299-6910
AREA CODE: 604

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 80395-5

INVOICE NO.

DATE ANALYSED Aug 1980

PROJECT 1095

TO: AMAX MINERALS EXPLORATION
601 - 535 THURLOW ST.
VANCOUVER, B.C.

No.	Sample	pH	Mo	Cu	Ni	Zn	Pb	PPB Au	W	No.
01	80XLL17		16	18	18	68	70	10	70	01
02	18		6	12	22	62	20	10	20	02
03	19		7	10	18	52	12	10	12	03
04	20		6	8	16	48	12	10	12	04
05	21		4	8	18	52	12	10	8	05
06	22		4	10	16	62	8	10	60	06
07	23		39	42	32	136	60	10	240	07
08	24		5	12	18	66	40	10	35	08
09	25		11	22	22	98	35	10	70	09
10	80XLL26		10	14	16	72	70	10	300	10
11	27		14	22	20	92	300	10	50	11
12	28		6	12	16	56	30	10	30	12
13	29		6	10	16	50	30	10	30	13
14	30		10	20	18	88	30	10	25	14
15	31		7	8	14	42	25	10	12	15
16	32		5	12	12	58	12	10	12	16
17	33		5	8	16	50	12	10	20	17
18	34		54	144	20	114	30	10	60	18
19	35		56	70	26	106	60	10	50	19
20	STDC		24	202	58	118	50	-	70	20
21	36		49	62	16	84	30	10	30	21
22	80XLL37		24	26	16	58	30	10	50	22
23	80XBL 1		1	20	28	100	50	30	8	23
24	2		1	18	26	84	12	10	8	24
25	3		130	140	22	136	8	10	35	25
26	4		31	40	22	110	35	10	35	26
27	5		37	50	26	130	35	10	60	27
28	6		6	22	20	56	60	10	30	28
29	7		8	26	26	66	30	10	25	29
30	80XBL 8		4	22	24	62	25	10	70	30
31	9		18	34	26	94	70	10	30	31
32	10		1	8	18	44	30	10	18	32
33	11		3	12	20	50		10	140	33
34	12		2	8	20	42		10	40	34
35	13		2	10	20	42		10	20	35
36	14		4	18	24	56		10	18	36
37	15		5	16	22	52		10	20	37
38	16		6	24	20	52		10	18	38
39	80XBL17		8	18	24	58		10	30	39
40	STDC		22	196	58	120		-	70	40

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Rossbacher Laboratory

GEOCHEMICAL ANALYSTS & ASSAYERS

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BURNABY, B.C.
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TELEPHONE: 299-6910
AREA CODE: 604

AMAX
SEP 8 1980
VANCOUVER OFFICE

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 80395-7

INVOICE NO.

DATE ANALYSED Aug 1980

PROJECT 1095

TO: AMAX MINERALS EXPLORATION
601 - 535 THURLOW ST.
VANCOUVER, B.C.

No.	Sample	pH	Mo	Cu	Ni	Zn	W	Au	No.
01	80XBT33		1	4	20	54	0	10	01
02	36		11	10	16	30	0	10	02
03	37		6	10	20	14	5	10	03
04	38		16	24	22	62	0	10	04
05	40		4	6	16	18	0	10	05
06	41		1	16	14	80	0	10	06
07	45		44	24	10	4	0	10	07
08	46		200	60	12	6	10	10	08
09	47		5	38	12	34	15	10	09
10	80XBT49		5	14	20	38	10	10	10
11	51		6	24	32	46	0	10	11
12	52		2	14	24	60	0	10	12
13	53		3	18	22	58	0	10	13
14	54		256	70	22	62	0	10	14
15	57		5	6	38	38	10	10	15
16	59		7	34	10	4	15	10	16
17	60		6	28	28	74	0	10	17
18	61		8	30	24	82	0	10	18
19	62		93	126	24	34	0	10	19
20	C		20	170	60	112	20	10	20
21	80XBT65		5	56	16	62	0	10	21
22	80XBT14		3	8	38	10	5	10	22
23	80XBT31		1	2	12	28	0	10	23
24									24
25									25
26									26
27									27
28									28
29									29
30									30
31									31
32									32
33									33
34									34
35									35
36									36
37									37
38									38
39									39
40									40

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Rossbacher Laboratory

GEOCHEMICAL ANALYSTS & ASSAYERS

2225 S SPRINGER AVE.
BURNABY, B.C.
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TELEPHONE: 299-6910
AREA CODE: 604

AMAX

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 80395-6

INVOICE NO.

DATE ANALYSED Aug, 1980

PROJECT 1095

TO: AMAX MINERALS EXPLORATION
601 - 535 THURLOW ST.
VANCOUVER, B.C.

No.	Sample	pH	Mo	Cu	Ni	Zn	W	Au	No.
01	80XBL18		10	72	24	84	12	10	01
02	80XBL19		15	68	22	80	70	10	02
03	80XBS1		40	480	38	122	18	10	03
04	2		32	410	30	100	5	10	04
05	3		28	262	28	98	5	10	05
06	4		3	28	22	64	18	10	06
07	5		7	62	28	88	25	10	07
08	6		26	86	18	158	40	10	08
09	7		16	58	32	64	5	10	09
10	80XBS8		235	242	32	66	8	10	10
11	9		86	174	36	72	5	10	11
12	10		6	48	32	62	2	10	12
13	11		34	212	30	80	25	10	13
14	12		21	190	26	74	2	10	14
15	13		76	126	24	128	40	10	15
16	14		66	60	18	42	5	10	16
17	15		80	78	22	56	2	10	17
18	16		178	194	18	60	10	10	18
19	17		80	66	18	42	0	10	19
20	STD E		3	72	38	140	70	-	20
21	80XBS18		100	184	20	66	15	10	21
22	19		67	178	20	60	20	10	22
23	20		100	188	16	60	18	10	23
24	21		19	248	24	132	20	10	24
25	22		19	384	24	170	18	10	25
26	80XBS23		16	274	22	152	15	10	26
27	80XBT1		3	12	24	10	70	10	27
28	4		26	6	18	10	15	10	28
29	7		1	6	24	46	2	10	29
30	15		6	6	10	28	2	10	30
31	16		2	2	20	12	40	10	31
32	17		8	2	22	16	30	10	32
33	18		1	4	20	36	12	10	33
34	19		1	2	16	80	0	10	34
35	22		3	2	16	14	130	10	35
36	24		1	10	12	44	2	10	36
37	26		2	2	20	80	2	10	37
38	27		3	2	18	52	12	10	38
39	80XBT30		2	2	12	32	5	10	39
40	STD E		5	68	38	146	70	-	40

Certified by W. Rossbacher

Rossbacher Laboratory

GEOCHEMICAL ANALYSTS & ASSAYERS

AMAX

SEP 2 1980

VANCOUVER OFFICE

2225 S. SPRINGER AVE.,
BURNABY, B. C.
CANADA
TELEPHONE: 299-6910
AREA CODE: 604

CERTIFICATE NO. 80488

CERTIFICATE OF ANALYSIS

INVOICE NO.

DATE ANALYSED AUG, 1980

PROJECT 1095

TO: AMAX MINERALS EXPLORATION
601 - 535 THURLOW ST.
VANCOUVER, B.C.

No.	Sample	pH	Mo	Cu	Ag	W	PPB Au							No.
01	80XBT66		36	94	2.4	1200	10							01
02	67		6	6	1.4	0	40							02
03	68		96	280	1.0	0	10							03
04	69		741	210	1.0	0	10							04
05	80XBT70		197	106	0.8	0	10							05
06														06
07														07
08														08
09														09
10														10
11														11
12														12
13														13
14														14
15														15
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31														31
32														32
33														33
34														34
35														35
36														36
37														37
38														38
39														39
40														40

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Kossbacher Laboratory
GEOCHEMICAL ANALYSTS & ASSAYERS

CANADA
TELEPHONE 299 6910
AREA CODE 604

April 30, 1974

SUMMARY OF SOME ANALYTICAL TECHNIQUES CURRENTLY IN USE AT ROSSBACHER LABORATORY

A ANALYTICAL TECHNIQUES FOR GEOCHEMICAL SAMPLES

SAMPLE PREPARATION

Packages of samples are opened as soon as they arrive at the laboratory and the bags placed in numerical sequence in an electrically heated sample drier (maximum temperature 70°C).

After drying soil and sediment samples they are lightly pounded with a wooden block to break up aggregates of fine particles and are then passed through a 35 mesh stainless steel sieve. The coarse material is discarded and the minus 35 mesh fraction replaced in the original bag providing that this is undamaged and not excessively dirty.

Rock samples are exposed to the air until the outside surfaces are dry; only if abnormally wet are rocks placed in the sample drier. Rock samples are processed in such manner that a fully representative 1/2 g. sample can be obtained for analysis. The entire amount of each sample is passed through a jaw crusher and thus reduced to fragments of 2 mm. size or less. A minimum of 1 kg. is then passed through a pulverizer with plates set such that 95% of the product will pass through a 100 mesh

Rock Chips

Composite rock chip samples normally consist of some ten small fragments broken from unweathered outcrop with a steel hammer. Each fragment weighs some 50 gms. Samples are placed in strong polythene bags and sealed with non-contaminating wire tabs. Samples are restricted to a single rock type and obvious mineralization is avoided.

Soil, sediment and rock samples are packed securely in cardboard boxes or canvas sacks and dispatched by road or air.

Calibration

1. Set 1 gamma/ml to read 40 equivalent to 20 gamma/gm

   Factor $\frac{1}{2}$ x meter reading

   Check standards

   4, 10, 20, 40 ppm Ag in sample

2. Set 15 gamma/ml to 100 equivalent to 100 ppm

   Check standards

   40, 100 ppm

   Factor directly in ppm Ag

3. Rotate burner to maximum angle

   Set 10.0 gamma/ml Ag to read 100

   Check standards

   100,200,400,1000 ppm Ag

   Factor 10x scale reading

4. Samples higher than 1000 ppm should be re-analyzed by assay procedure

5. Background correction for sample reading between 1 to 5 ppm

   Calibrate AA in step 1

   Dial wavelength to 300 (peak)

   Read the samples again

   Subtract the background reading from the first reading

Standards

1. 1000 gamma/ml Ag - 0.720 gm Ag_2SO_4 dissolved in 20 mls HNO_3 and dilute to 500 mls

2. 100 gamma/ml Ag - 10 mls of above + 20 mls $HClO_4$, dilute to 100 mls

3. Recovery spiked standard

   5 gamma/ml Ag - 5 mls 100 gamma/ml dilute to 100 mls with "mixed" acid

Working AA Standards

Pipette .2, .5, 1, 2, 5, 10 mls of 100 gamma/ml and 2, 5 mls 1000 gamma/ml dilute to 100 mls with 20% $HClO_4$. This equivalent to 4, 10, 20, 40, 100, 200, 400, and 1000 ppm Ag in the sample .50 g diluted to 10 mls.

Recovery Standard

Pipette 2 mls of 5 gamma/ml Ag in mix acids into a sample and carry through the digestion. This should give a reading of 20 ppm Ag + original sample content.

Follow the general geochemical procedure for sample preparation and digestion.

For low assay Ag, the same procedure is used. Ag is then calculated in oz/ton.

1 ppm = .0292 oz/ton

conversion factor

oz/ton = .0292 x ppm Ag

Zn Geochemical AA Setting

Lamp Zn

Current 8 #3 Slit 20A

Wave length 2133 Dial 84.9

Fuel - Acetylene Flow 14

Oxidant - Air Flow 14

Burner - P.E. short path 90°

Range

0 - 20 gamma/ml Factor 4x - 0 to 400 ppm

0 - 50 gamma/ml Factor 10x -0 to 1000 ppm

For Waters - Burner AB- 51 in line 1 gamma/ml read 100 to give 0 to 1000 ppb

High Zn Burner Boling in line. Wavelength 3075. Dial 250 Slit 7A

Fuel 14 Air 14.5

0 to 1000 gamma/ml read 0 to 20 Factor 400 x

Pure Standard 10,000 gamma/ml

1 gm Zn dissolved, H_2O, HCl, HNO_3, $HClO_4$, fumed to $HClO_4$ - make up to 100 mls H_2O

1000, 100 gamma/ml and 100 ml by dilution in 20 % $HClO_4$

0 to 200 gamma/ml Zn use combined Cu, Ni, Co, Pb, Zn standards

Pipette

1, 2, 3, 5, 8, 10 mls of 10,000 gamma/ml - dilute to 100 mls with 20% $HClO_4$ to give

100, 200, 300, 500, 800, 1000 gamma/ml Zn for high standards

Co Geochemical AA Setting

Lamp - 5 multi element

Current 10 #4 Slit 2A

Wavelength 2407 Dial 133.1

Fuel - Acetylene Flow 14

Oxidant - Air Flow 14

Burner - AB 51 in line

Range

0 - 10 gamma/ml read 100 Factor 2 x reading to 200 ppm

0 - 20 gamma ml read 100 Factor 4 x reading to 400 ppm

Burner at maximum angle

0 - 100 gamma/ml read 100 Factor 20 x reading to 2000 ppm

0 - 200 gamma/ml read 100 Factor 40 x reading to 4000 ppm

Standards - 1000 gamma/ml

1.000 gm cobalt metal dissolved in HCl, HNO, and fumed into $HClO_4$, dilute to 1 liter

Pipette

1, 2, 10, 20 mls into 100 ml vol flasks diluted to mark with 20% $HClO_4$

This gives

10, 20, 100, 200 gamma/ml Co

Mixed - combination standards of Cu, Ni, Co, Pb, Zn

of

1, 2, 5, 10, 20, 30, 50, 80, 100, 150, 200 gamma/ml are used for calibration

Fe Geochemical AA Setting

Lamp - Fe

- Do not use multi element Fe

Current 10 #4 Slit 2A

Wavelength 3440.6 Dial 317.5

Fuel - Acetylene Flow 14.0

Oxidant - Air Flow 14.0

Burner - PE Short Path 90°

Range

0 - 5000 gamma/ml 0.1 x % - 0 to 10.0%

0 - 10,000 gamma/ml 0.2 x % - 0 to 20.0%

Higher Fe - 10 x dilution

Standards 10,000 gamma/ml

Weigh 5.000 gms iron wires, into beaker, add H_2O, HCl, HNO_3, $HClO_4$, heat to $HClO_4$ fumes. Add $HClO_4$ to 100 mls + 100 mls H_2O, warm, dilute to 500 mls

Pipette

1, 5, 10, 20, 30, 50, 80 mls 10,000 gamma/ml dilute to 100 mls with 20% $HClO_4$ to give

100, 500, 1000, 2000, 3000, 5000, 8000 gamma/ml to be equivalent to .2, 1.0, 2.0, 4.0, 6.0, 10.0%, 16.0% Fe in geochem sample

Ni Geochemical AA Setting

Lamp P.E. H/C. Ni or multi element Cu, Ni, Co, Mn, Cr

Current 10 #4, Slit 2A

Wave length 3415 Dial 312.5

Fule - Acetylene Flow 14.0

Oxidant - Air Flow 14.0

Burner AB 51 in line

Range

0 - 20 gamma/ml Factor 4x - 0 - 400 ppm

0 - 100 gamma/ml Factor 20x - 0 - 2000 gamma

45° 0 - 200 gamma/ml Factor 40x - 0 - 4000 ppm

0 - 500 gamma/ml Factor 100x - 0 - 10,000 ppm

Ni in waters and very low ranges

Wave length 2320 Dial 113

Range 0 - 5 gamma/ml Factor 1x - 0 - 100 ppm

Standards 10,000 gamma/ml

1.000 gm pure Ni metal dissolved in HCl, HNO_3, $HClO_4$ to perchloric fumes, dilute to 100 ml H_2O

1000 gamma/ml and 100 gamma/ml Successive 10x dilutions in 20% $HClO_4$

1, 2, 5, 8, 10 mls of 100 gamma/ml

2, 5, 8, 10 mls 1000 gamma/ml

2, 5, 8, 10 mls 10,000 gamma/ml - dilute to 100 mls in 20% HClO4. This gives

1, 2, 5, 8, 10, 20, 50, 80, 100, 200, 500, 800, 1000 gamma/ml

Combined Standards - Cu, Ni, Co, Pb, Zn is used as a working standard

2. Sinter in rotary for 2 to 3 minutes (Flux dull red for one minute)
3. Cool, add 10 mls H_2O, heat in sand bath to boiling, cool, let sit overnight
4. Stir, crush, and mix. Let settle
5. Take 2 ml aliquot into screw cap test tube
6. Add 7 mls $SnCl_2$, heat in hot water bath for 5 minutes (80°C)
7. Cool to less than 15°C
8. Add 1 ml 20% KSCN, mix (if lemmon yellow; compare color standard 10x)
9. Add ½ ml extractant, cap, shake vigorously 1 minute
10. Compare color

Molybdenum in Water Samples

1. Transfer 50 mls to 125 separatory funnel
2. Add 5 ml .2% ferric chloride in conc HCl
3. Add 5 mls of mixed KSCN and $SnCl_2$
4. Add 1.2 mls isopropyl ether, shake for 1 minute, and allow phases to separate
5. Drain off water
6. Compare the color of extractant

Standardization

Pipette 0, .2, .5, 1, 2, 3, 4, 5, mls of 1 gamma/ml and 1, 1.5, 2, mls of 10 gamma/ml dilute to 50 mls with demineralized H_2O, and continue step #2.

This is equivalent to -

1, 4, 10, 20, 40, 60, 80, 100, 200, 300, 400 ppb Mo

Artificial color - Nabob orange extract dilute with 1:1 H_2O to methanol to match. Seal tightly

$SnCl_2$ - 15% in 15% HCl

300 gm $SnCl_2 \cdot 2H_2O$ + 300 mls HCl, until $SnCl_2$ dissolved dilute to 2 liters

KSCN - 5% in H_2O

Mixed $SnCl_2$ - KSCN

3 parts $SnCl_2$ to 2 parts KSCN

Water Samples Run for AA

1. Cu ~ 2 gamma/ml reads 80 scale therefore 1 unit = 25 ppb
2. Zn ~ 1 gamma/ml reads full scale therefore 1 unit = 10 ppb
3. Ni ~ 2.5 gamma/ml reads 50 scale therefore 1 unit = 50 ppb

Burner: long slot techtron burner in line

Sulphate in Natural Waters

1. Pipette 0.5 ml sulphate reagent mix into a colorimetric tube
2. Add 5 ml water sample and mix
3. Read at 343 mμ against a demineralized water blank
4. Read again at 400 mμ and subtract from sulphate reading
5. Calculate ppm sulphate from the graph

Reagent

Dissolve 54 grams red mercuric oxide (J.T. Baker 2620- Can Lab) in 185 ml 70% perchloric acid and 20 ml H_2O, shake for one hour. Add 46.3 grams ferric perchlorate [$Fe(ClO_4)_3 \cdot 6H_2O$] (GFS 39) and 47 grams aluminum perchlorate [$Al(ClO_4)_3 \cdot 8H_2O$] (GFS 2) Add 400 ml water to dissolve, let settle overnight, decant into bottle and make to 1 liter

pH MEASUREMENTS

Soil and drainage sediment samples are dampened with water in a glass beaker to a pasty consistency. Demineralized water is used for this purpose as it has a low buffer capacity and thus does not influence the pH of the sample. Measurement is made with a Fisher Acument pH meter. Electrodes are stored in buffer overnight. A 30 minute warm up time is allowed for the instrument each morning. A 10 ml aliquot is taken from water samples for pH measurement.

ROSSBACHER LABORATORY

P. Rossbacher

L E G E N G

3	3a *Quartz feldspar porphyry, porphyritic granite.* 3b *Rhyolite, microporphyritic rhyolite.*
2	*Calc-silicate skarn, siliceous limestone, limestone.*
1	1a *Muscovite-biotite schist/gneiss.* 1b *Hornblende-biotite-garnet schist/gneiss.* 1c *Epidote rich schist/gneiss, epidosite.*

S Y M B O L S

- *Outcrop, felsenmeer suboutcrop.*
- x *Boulder.*
- *Geological contact.*
- *Fault.*
- *Bedding, schistosity, gneissosity attitude (inclined, vertical).*
- *Jointing attitude.*
- *Pit, trench.*
- *Grid picket line*
- *Claim post.*
- *Property boundary*
- *Stream.*
- *Topographic contour (contour interval 100 feet).*

AMAX OF CANADA LIMITED

SCROGGIE CREEK PROPERTY
— BRIDGET CLAIMS —
DAWSON MINING DISTRICT — YUKON TERRITORY

GEOLOGICAL MAP

SCALE 200 0 200 METRES
500 0 500 FEET
1 : 5,000

To accompany 1980 Assessment Report by: B. W. Booth, A. C. Hitchins and J. L. LeBel.

Vancouver — H.F.

N.T.S. Ref. 115 J 15 and 16

FIG. 3a

L E G E N D

3	3a *Quartz feldspar porphyry, porphyritic granite.* 3b *Rhyolite, microporphyritic rhyolite.*
2	*Calc-silicate skarn, siliceous limestone, limestone.*
1	1a *Muscovite-biotite schist/gneiss.* 1b *Hornblende--biotite-garnet schist/gneiss.* 1c *Epidote rich schist//gneiss, epidosite.*

S Y M B O L S

- *Outcrop, felsenmeer suboutcrop.*
- x *Boulder.*
- *Geological contact.*
- *Fault.*
- *Bedding, schistosity, gneissosity attitude (inclined, vertical).*
- *Jointing attitude.*
- *Grid picket line.*
- *Claim post.*
- *Property boundary*
- *Stream*
- *Topographic contour (contour interval 100 feet).*

AMAX OF CANADA LIMITED

SCROGGIE CREEK PROPERTY
BRIDGET CLAIMS
DAWSON MINING DISTRICT — YUKON TERRITORY

GEOLOGICAL MAP

SCALE 400 0 400 METRES / 1000 0 1000 FEET — 1 : 10,000

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FIG. 3b

NOTE—

Some samples were analysed for p.p.m. Ag content, shown at the end of the analytical results sequence.

SYMBOLS

80XL 95 5,46,20,78,20,10	Soil
80 XL 35 56,70,26,106,50,10	Silt
80XB 22 3,2,16,14,130,10	Rock chip

Sample site; sample number; p.p.m. Mo, Cu, Ni, Zn, W, and p.p.b. Au.

80XB 3 (3) 130,10,22,36,35,10 — *Pan, silt sample site; sample number (number of scheelite grains in concentrate), p.p.m. Mo, Cu, Ni, Zn, W, and p.p.b. Au.*

Pit, trench.

Grid picket line.

Claim post.

Property boundary

Stream.

3000 — *Topographic contour (contour interval 100 feet).*

AMAX OF CANADA LIMITED

SCROGGIE CREEK PROPERTY

BRIDGET CLAIMS

DAWSON MINING DISTRICT — YUKON TERRITORY

GEOCHEMICAL MAP

SCALE 200 0 200 METRES
500 0 500 FEET
1 : 5,000

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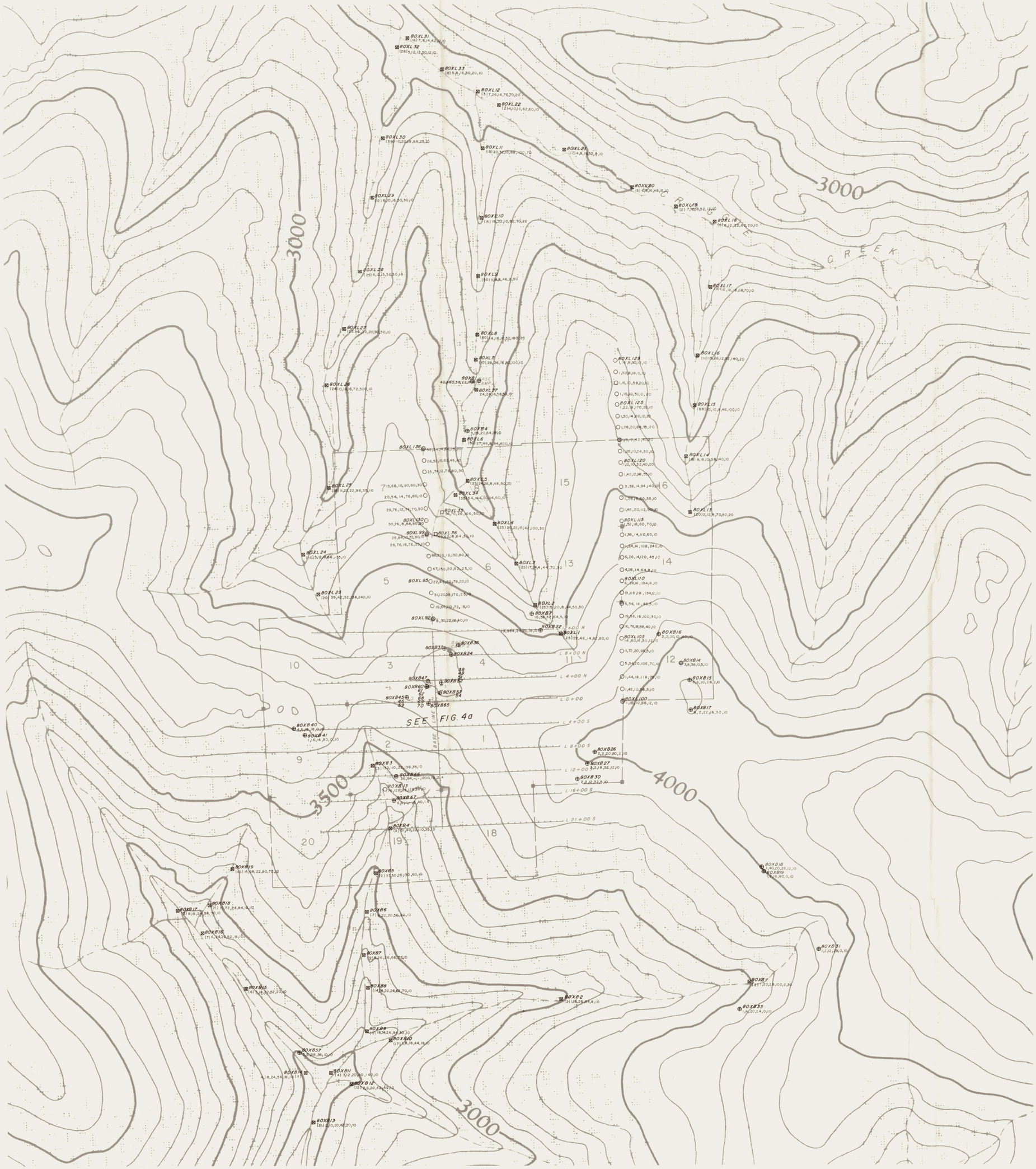
FIG. 4a


3000
3000
3500
4000
3000
SCROGGIE CREEK
SCROGGIE CREEK
BASE LINE
SEE FIG. 4a
L 0+00
L 4+00 N
L 8+00 N
L 4+00 S
L 8+00 S
L 12+00 S
L 16+00 S
L 21+00 S
80XB1 BASE CAMP
80XL136
80XL95
80XL92
80XL30
80XL99
80XL36
80XL24
80XL23
80XL29
80XL28
80XL27
80XL26
80XL31
80XL32
80XL33
80XL12
80XL22
80XL30
80XL11
80XL21
80XL20
80XL13
80XL18
80XL10
80XL3
80XL17
80XL8
80XL7
80XL16
80XL129
80XL15
80XL125
80XL14
80XL120
80XL115
80XL13
80XL105
80XL110
80XL100
80XB1
80XB2
80XB3
80XB4
80XB5
80XB6
80XB7
80XB8
80XB9
80XB10
80XB11
80XB12
80XB13
80XB14
80XB15
80XB16
80XB17
80XB18
80XB19
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80XB21
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80XB26
80XB27
80XB30
80XB31
80XB33
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80XB43
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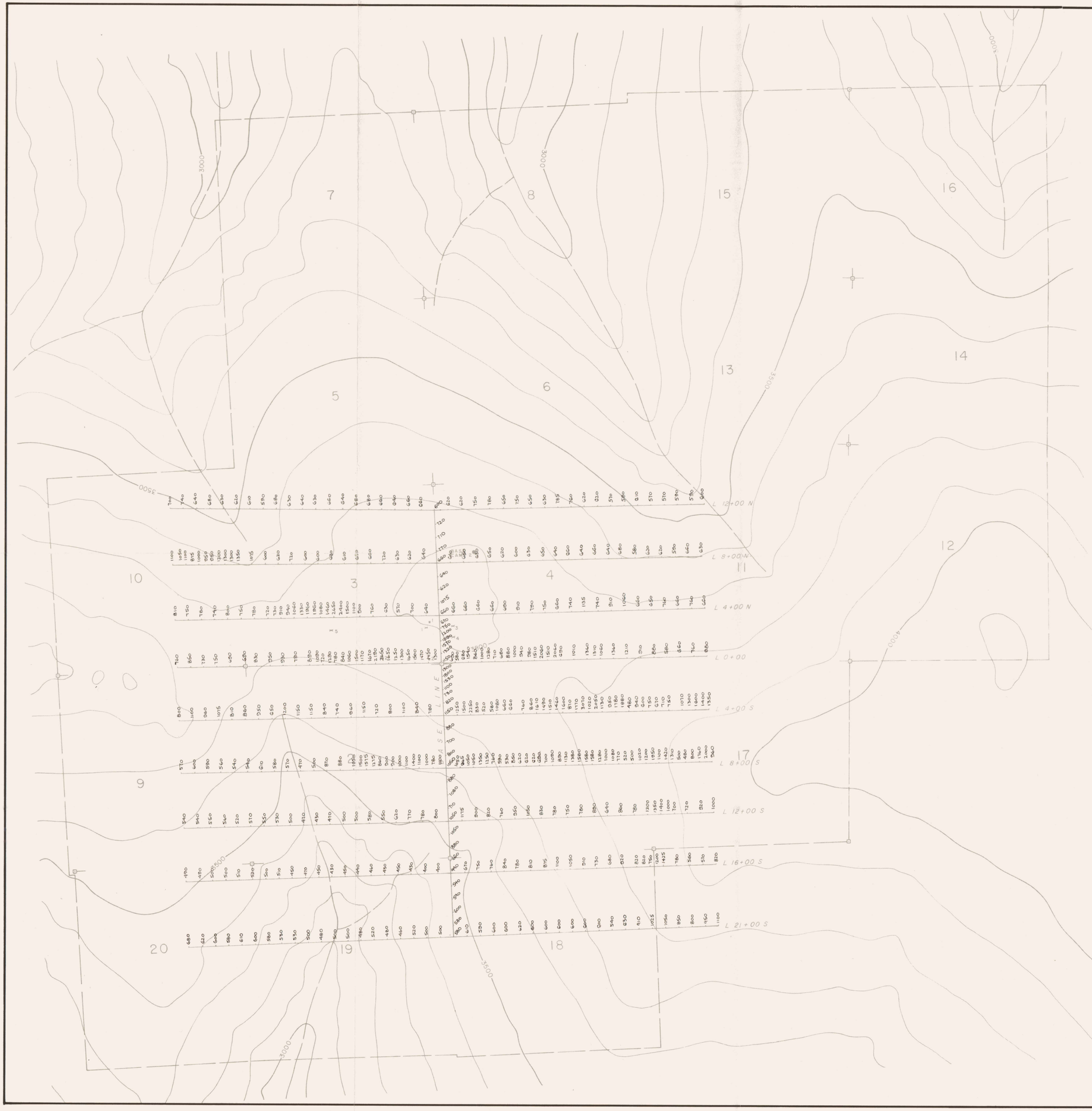
80XB45



SYMBOLS

- 1280 — Magnetometer survey readings in gammas.
- Pit, trench.
- Grid picket line.
- Claim post.
- Property boundary
- Stream.
- 3000 — Topographic contour (contour interval 100 feet).

AMAX OF CANADA LIMITED

SCROGGIE CREEK PROPERTY

— BRIDGET CLAIMS —

DAWSON MINING DISTRICT — YUKON TERRITORY

MAGNETOMETER SURVEY

RELATIVE VERTICAL COMPONENT READINGS

SCALE 200 0 200 METRES / 500 0 500 FEET

1 : 5,000

To accompany 1980 Assessment Report by: G.W. Booth, A.C. Hitchins and J.L. LeBel.

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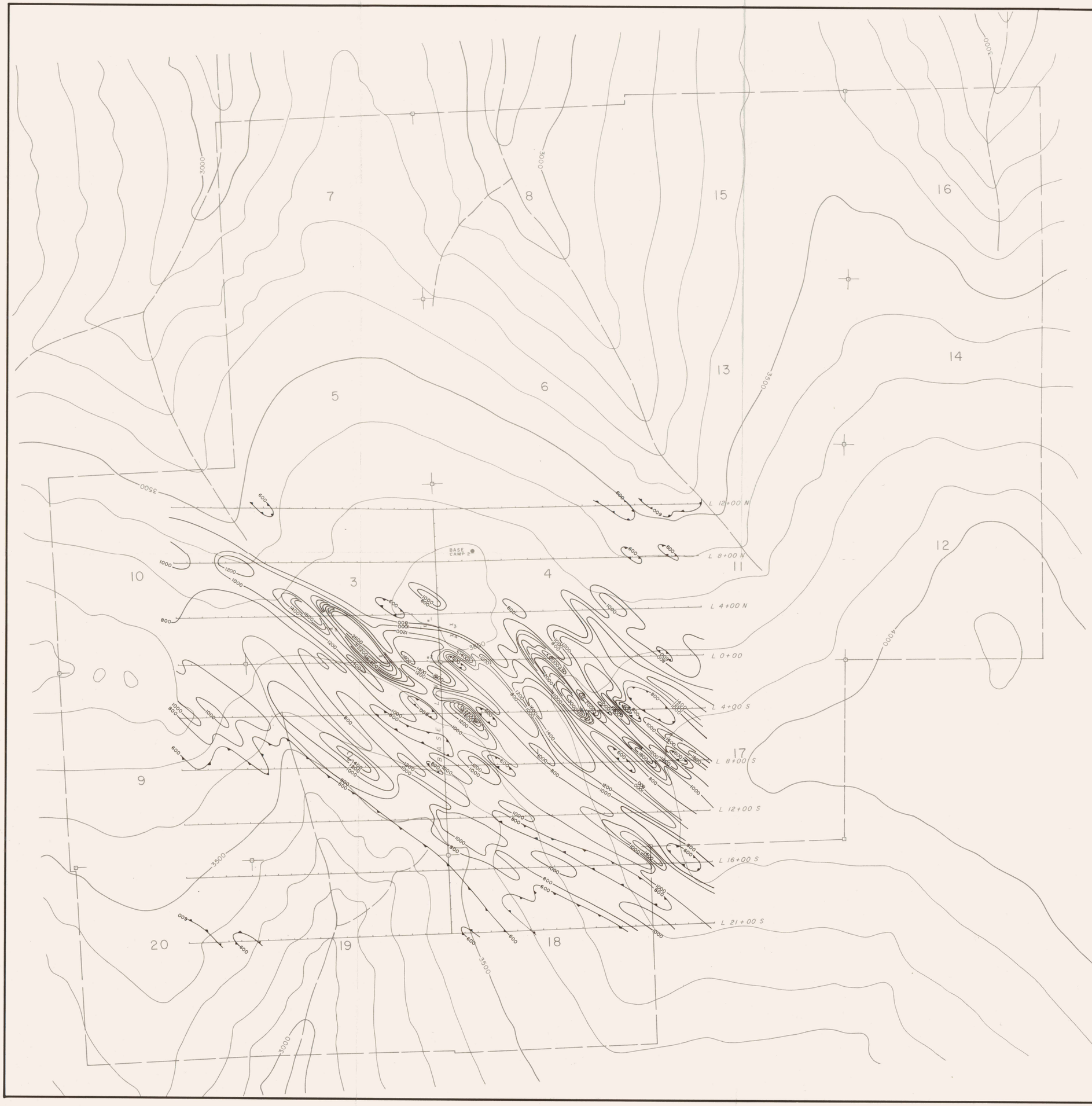
FIG. 5a



SYMBOLS

- 1000 — Magnetometer survey contour (contour interval 200 gammas).
- Magnetic low.
- Pit, trench.
- Grid picket line.
- Claim post.
- Property boundary
- Stream.
- 5000 — Topographic contour (contour interval 100 feet).

AMAX OF CANADA LIMITED

SCROGGIE CREEK PROPERTY

— BRIDGET CLAIMS —

DAWSON MINING DISTRICT — YUKON TERRITORY

ISOMAGNETIC CONTOURS

SCALE 200 0 200 METRES
500 0 500 FEET
1 : 5,000

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FIG. 5b