

84-#446 -# 12419

5/83

1984 Assessment Report

Geochemical Survey

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

*Property:* EDITH LAKE  
*Claims:* SUNNY  
*Commodity:* Copper, Silver, Gold  
*Location:* Edith Lake - Kamloops M.D.  
N.T.S. 92I/9W  
120° 20.5'W 50° 34.5'N  
*Owner and  
Operator:* ARGENTA RESOURCES LTD.  
1406 - 1066 West Georgia Street  
Vancouver, B.C., V6E 3P3  
*Author and  
Consultant:* L. Sookochoff, P.Eng.  
Sookochoff Consultants Inc.  
311 - 409 Granville St.  
Vancouver, B.C., V6C 1T2  
*Dates of Work:* May 20 - 22, 1984  
*Submittal Date:* June 28, 1984

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Fig 7      compilation

In pocket.



1984 Assessment Report

on a

Geochemical Survey

for

ARGENTA RESOURCES LTD.

on the

SUNNY CLAIM

INTRODUCTION

During May 1984 a localized geochemical survey was carried out on the SUNNY CLAIM. The purpose of the survey was to follow up on a geochemical survey carried out in 1980.

This report is to provide information on the survey procedure, results and conclusions as to the survey in addition to establishing a correlative information with the 1980 and 1982 surveys.

SUMMARY

The SUNNY CLAIM is situated along the southwestern edge of the Iron Mask - Nicola Volcanic contact, 10 km south of Kamloops, B.C.

The Iron Mask Batholith is host to a number of copper - gold - silver showings which have been explored to varying degrees. Former producers include the Iron Mask Mine, 10 km to the northwest from which five million pounds of copper in addition to gold and silver were produced.

A Nicola volcanic - Iron Mask diorite contact trends northwesterly along the eastern edge of Edith Lake. Associated with the contact and for 300 meters north within the diorite is a zone of argillic alteration. Chalcopyrite occurs within quartz veins in the altered zone.

Samples from the mineralized area returned .40% and .03% Cu.

Former exploration on a portion of the ground covered by the SUNNY CLAIM disclosed a weak I.P. anomalous zone which coincides with high copper geochem values.

A 1980 geochemical and geophysical survey by Jocelyn Resources revealed a number of correlative anomalous areas. The contact zone was revealed by the VLF-EM Survey. A 1982 geochemical survey by ARGENTA RESOURCES LTD. delineated a 200 x 200 meter central copper - zinc anomalous zone within an area of the Iron-Mask batholith.

The 1984 geochem survey indicated a northern extension to the mineralization as expressed by trenching to the south. The general geochemical anomalous area is bounded by a main northwesterly trending contact fault zone between Nicola rocks and the Iron Mask Batholith and a northeasterly fault zone.

An I.P. survey over the anomalous area is recommended to determine vertical anomalous extent.

#### PROPERTY

The property is comprised of one claim of nine units. Particulars are as follows:

<u>Claim Name</u>	<u>Units</u>	<u>Record No.</u>	<u>Expiry Date*</u>
Sunny	9	3488	May 19, 1987

\* Upon approval of three years assessment work applied May 22, 1984.

#### LOCATION AND ACCESS

The claim is located 10 km south of Kamloops and covers the eastern portion of Edith Lake.

Access is provided via a secondary road branching off to the south at Knutsford. The Edith Lake cutoff is taken to the west for three and one half km to the claim.

### WATER AND POWER

Sufficient water for all phases of the exploration program would be available from lakes and streams covered or in the immediate area of the property.

Commercial power sources would be available from within 10 km.

### TRANSPORTATION AND SUPPLIES

Railroad facilities are available in Kamloops where all supplies would be obtainable. Kamloops is served daily by Pacific Western Airlines from Vancouver.

### PHYSIOGRAPHY

The property lies within the physiographic area known as the Thompson Plateau. Elevations on the property are up to 1040 meters above sea level with a relief of 75 meters.

### AREA HISTORY

The Kamloops area has been explored for copper - gold - silver since the turn of the century. Scattered occurrences of mineralization occur within a band of Nicola rocks stretching from Kamloops to the south of Princeton. Production from ore zones within the Nicola series occur at Princeton and at Merritt. However near Kamloops, the Iron Mask batholith is of greater geological significance as the more significant mineral occurrences found to date are located within this intrusive.

The Iron Mask Mine - a former producer is located within the Iron Mask Batholith 10 km to the northwest. The Afton Mine is 13 km to the northwest.

On the SUNNY CLAIM, former exploration work included the following:

1. In 1970 a geochemical survey carried out by Erin Explorations Ltd. which included the southern three units of the SUNNY CLAIM, a 700 meter wide northwesterly trending anomalous copper geochem zone was delineated along the central unit. Values within this anomaly ranged up to 200 ppm Cu in a Background of 52 ppm Cu. A 1972 I.P. survey over the same area disclosed a weak chargeability anomaly (approximately three times background) which was concluded to coincide with high copper geochemical values (of the 1970 survey).

In 1980, Jocelyn Resources Ltd. completed recce geophysical, geochemical and geological surveys on the SUNNY CLAIM.

In 1982, ARGENTA RESOURCES LTD. purchases the property and carried out a localized geochemical survey.

#### GENERAL GEOLOGY

The property lies along the eastern boundary of a north-south arcuate trending band of Nicola rock extending from Princeton in the south through Merritt and beyond Kamloops Lake to the north. Peripheral rocks are predominantly intrusives in addition to cappings of younger sediments and volcanics. Stocks and plugs of intrusives occur throughout the Nicola band.

Numerous mineral occurrences - predominantly copper with gold and silver values - occur within the Nicola rocks of Upper Triassic sediments and volcanics. The Similkameen deposit in Princeton and the Craigmont deposit at Merritt occur within Nicola rocks and are associated with intrusives.

Adjacent and to the north and east of the SUNNY CLAIM is the Iron Mask Batholith with which are associated a number of significant mineralized zones.

The SUNNY CLAIM according to geological map 886 A is indicated to cover a Nicola-Iron Mask northwesterly trending contact zone.

Old trenches on a mineralized zone just north of the SUNNY CLAIM indicate a mineral zone to trend southerly to the property. The trenching is on the former Fargo group where the showings reportedly consist of veins in the Iron Mask diorite.

RESULTS OF THE 1980 EXPLORATION WORK ON THE SUNNY CLAIM

1. A geological survey indicated a Nicola-Iron Mask contact trending northwesterly through the central portion of the property. Propylitic to argillic alteration in addition to quartz flooding and copper mineralization occurs along and peripheral to the contact.
2. A VLF-EM survey indicated an anomalous area generally correlating with the contact zone in addition to north-south anomalous zones within the Iron Mask intrusive.
3. A magnetometer survey generally indicated magnetic highs enveloped by E.M. anomalies, possibly indicating the magnetic lows as structural or altered zones where a deterioration of magnetic minerals has occurred.
4. A central sub-anomalous copper zone correlating with the contact and with a peripheral zinc zone could reflect mineralization associated with the contact.

RESULTS OF THE 1982 GEOCHEMICAL SURVEY ON THE SUNNY CLAIM

1. A detailed geochemical survey revealed a central copper-zinc anomalous area covering an area of 200 x 200 meters. The anomalous zone is within an area of the indicated Iron Mask Batholith.

MINERALIZATION

Mineralization consists of blebs and patches of chalcopyrite hosted by quartz veins within the Iron Mask diorite. The mineralization occurs along the Iron Mask Nicola contact at the southeastern portion of Edith Lake. Chip sample assays from two locations along the zone returned 4,000 ppm Cu (.4% Cu) and 330 ppm Cu (.033% Cu).

The mineralization occurs within an argillic altered zone which is evident for up to 300 meters northeast of the contact.



## GEOCHEMICAL PROCEDURE

### 1. Survey Procedure

Two east west grid lines 60 meters apart were established at 1140N and 1200N from 600W to 500E.

Samples were picked up at 30 meter intervals along the grid lines. Samples were selected from the B horizon of the brown to brownish gray sandy-loam forest soil at a depth of commonly 30 centimeters. The soil was placed in a brown wet-strength paper bag with the grid coordinates marked thereon. A total of 81 samples were analyzed.

### 2. Testing Procedure

All samples were tested by Acme Laboratories of Vancouver, B.C. The testing procedure is first to thoroughly dry the sample. (The samples were not sifted.) Then .500 grams of material is digested with 3 ml. of 3:1:3 HCL to HNO<sub>3</sub> to H<sub>2</sub>O at 90 deg. more or less for one hour. The sample is diluted to 10 mls. with water. The samples were then analyzed by atomic absorption for five metals - copper, zinc, silver, lead and arsenic.

### 3. Treatment of Data

In assessing the data results, the background, sub-anomalous and anomalous values were determined utilizing a pocket calculator with a mean and standard deviation readout.

The sub-anomalous threshold value, which is a value not considered anomalous, but an indicator of potential mineralization, is taken as one standard deviation from the mean background value. The anomalous values or the prime indicator values are taken at two standard deviations from the mean background values.

The results of the data treatment were as follows:

	Cu	Ag	Pb	Zn	As
Mean background value	128	.11	2.7	46.7	6.8
Sub-Anomalous	165	.16	4.1	52.0	9.5
Anomalous threshold value	202	.21	5.5	57.3	12.2

All values are in parts per million.



## RESULTS OF THE 1984 GEOCHEMICAL SURVEY

The anomalous areas delineated are located predominantly proximal and to the east of the E.M. anomaly as delineated in an earlier survey. The zones are mainly one station anomalies and occur along the northwesterly extension of the trenched zones. Extending eastward from the E.M. zone at 550W, anomalous silver, lead, copper, arsenic extend from 100 meters west of the E.M. zone for 400 meters to a northeasterly trending E.M. zone.

This general area extending southward from 1100N to 800N and confined to the main northwesterly and northeasterly trending E.M. zones appears to confine the major portion of the 1982 and 1984 geochemical anomalous zone. This area also incorporates a magnetic high enclosed by and paralleling the northeasterly trending E.M. anomaly.


## CONCLUSIONS

The results of the 1984 geochemical survey indicated a northward extension to an anomalous area enclosed by a E.M. anomaly which suggest fault or contact zones. The anomalous area occurs within a diorite of the Iron Mask Batholith which is in contact with the Nicola Volcanics to the southwest. The northeasterly trending E.M. anomalies could reflect structures enclosing a more mafic phase of the intrusive as expressed by the mag high and confirmed by the 1980 geology. A zone of intermixed mafic material is also indicated in the most northerly trench at 300W and 1120N at the south of the 1984 anomalous area. Thus mineralization is indicated to associate with the mafic or amphibolic phase of the Iron Mask Batholith.

## RECOMMENDATIONS

An I.P. survey is recommended over the northern anomalous area bounded by the E.M. zones to determine degree of potential subsurface mineralization.

Respectfully submitted,

A circular professional seal for Laurence Sookochoff, P.Eng., Consulting Geologist. The seal contains the text "PROFESSIONAL ENGINEER" around the top and "LAURENCE SOOKOCHOFF" in the center. A signature is written across the seal.  
Laurence Sookochoff, P.Eng.  
Consulting Geologist

June 28, 1984  
Vancouver, B.C.

Certificate of Expenditure

Geochemical Survey - Sunny Claim, Kamloops M.D.

May 20 - 22, 1984

J. Robins - 3 days at \$175	\$ 525.00
Car rental - 3 days at \$40	120.00
Gas	82.90
Kilometerage 1410 km @ .17	239.70
Room 2 days @ \$37.50	75.00
Assays	347.40
Drafting	120.00
Report	<u>500.00</u>
	\$2,100.00
PAC Account Withdrawal	\$ <u>600.00</u>
	\$2,700.00
	=====

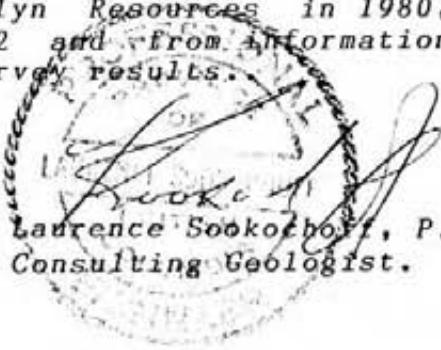
CERTIFICATE AND CONSENT

I, Laurence Sookochoff, of the City of Vancouver, in the Province of British Columbia, do hereby certify:

That I am a Consulting Geologist with offices at 311-409 Granville Street, Vancouver, B.C., V6C 1T2.

I further certify that:

1. I am a graduate of the University of British Columbia (1966) and hold a B.Sc. degree in Geology
2. I have been practising my profession for the past eighteen years.
3. I am registered with the Association of Professional Engineers of British Columbia.
4. The information for this report was obtained from sources as cited under bibliography, from work performed by the writer on the property for Jocelyn Resources in 1980, from the geochemical survey of 1982 and from information obtained from the 1984 geochemical survey results.

  
Laurence Sookochoff, P.Eng.  
Consulting Geologist.

June 28, 1984  
Vancouver, B.C.

BRUSSET, R. U. - Assessment Report Percussion Drilling, Wildrose Mineral Claim. Edith Lake Area, Kamloops M.D. September 10, 1978 Assessment Report No. 6991

COCKFIELD, W.E. - Geology and Mineral Deposits of Nicola Map-Area, British Columbia Memoir 249 G.S.C.

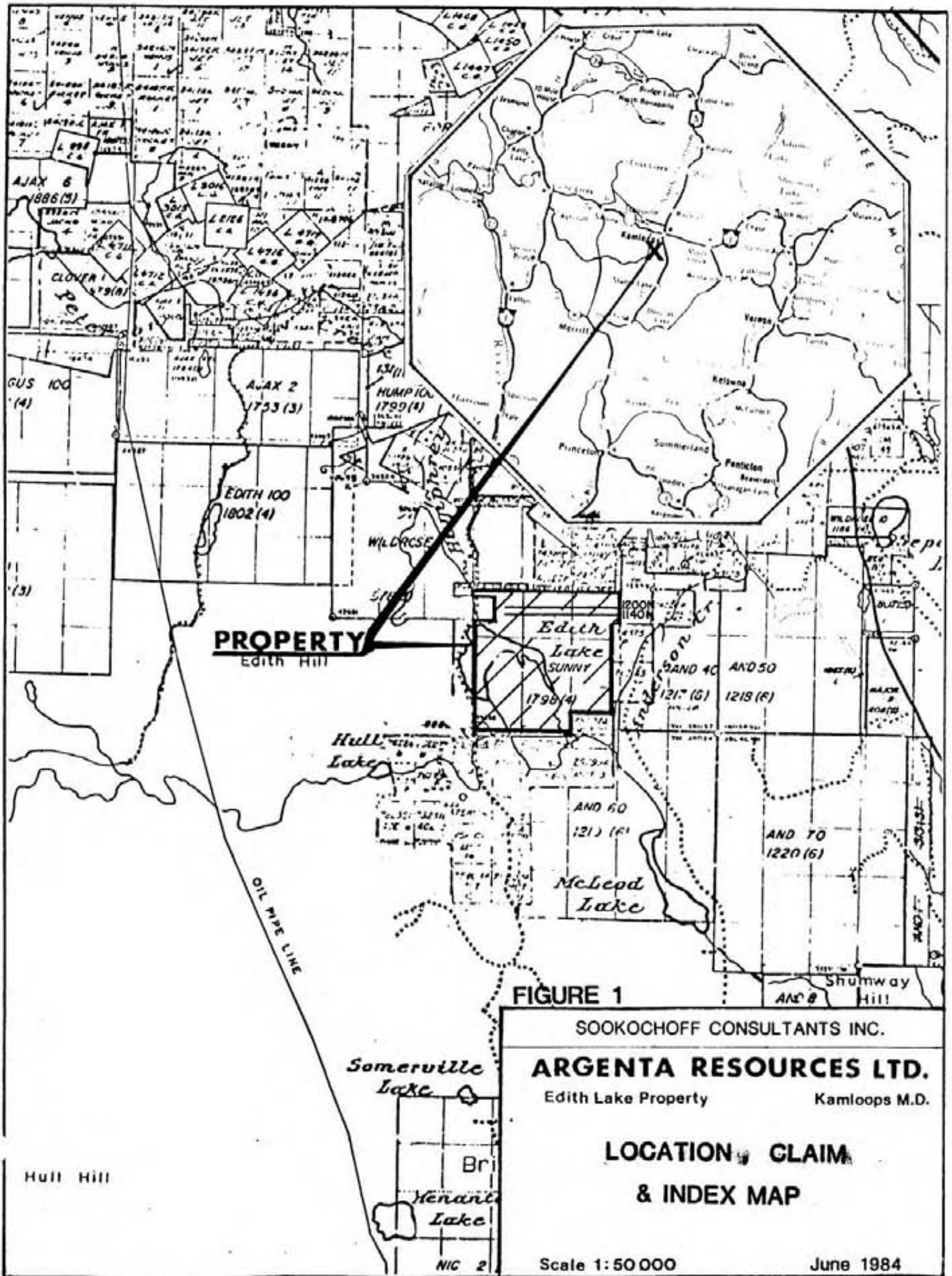
SOOKOCHOFF, L. - Progress Report on the Sunny Claim for Jocelyn Resources Ltd., July 22, 1980.

- 1980 Assessment Report on the Sunny Claim for Argenta Resources Ltd.

STADNYK, M.P. - Report on a Geochemical Survey on Ace, Mot Mineral Claims, Edith Lake, British Columbia for Erin Explorations Ltd., February 19, 1971. Assessment Report No. 2871.

TULLY, D.W. - Report on a Geochemical Survey of the Rose claims for Plaza Resources Ltd., January 1973.

WHITE, G.E. - Geophysical Report on an Induced Potential Survey on behalf of Erin Explorations Ltd. (N.P.L.) Mot claim group. April 27, 1972. Assessment report No. 4018.

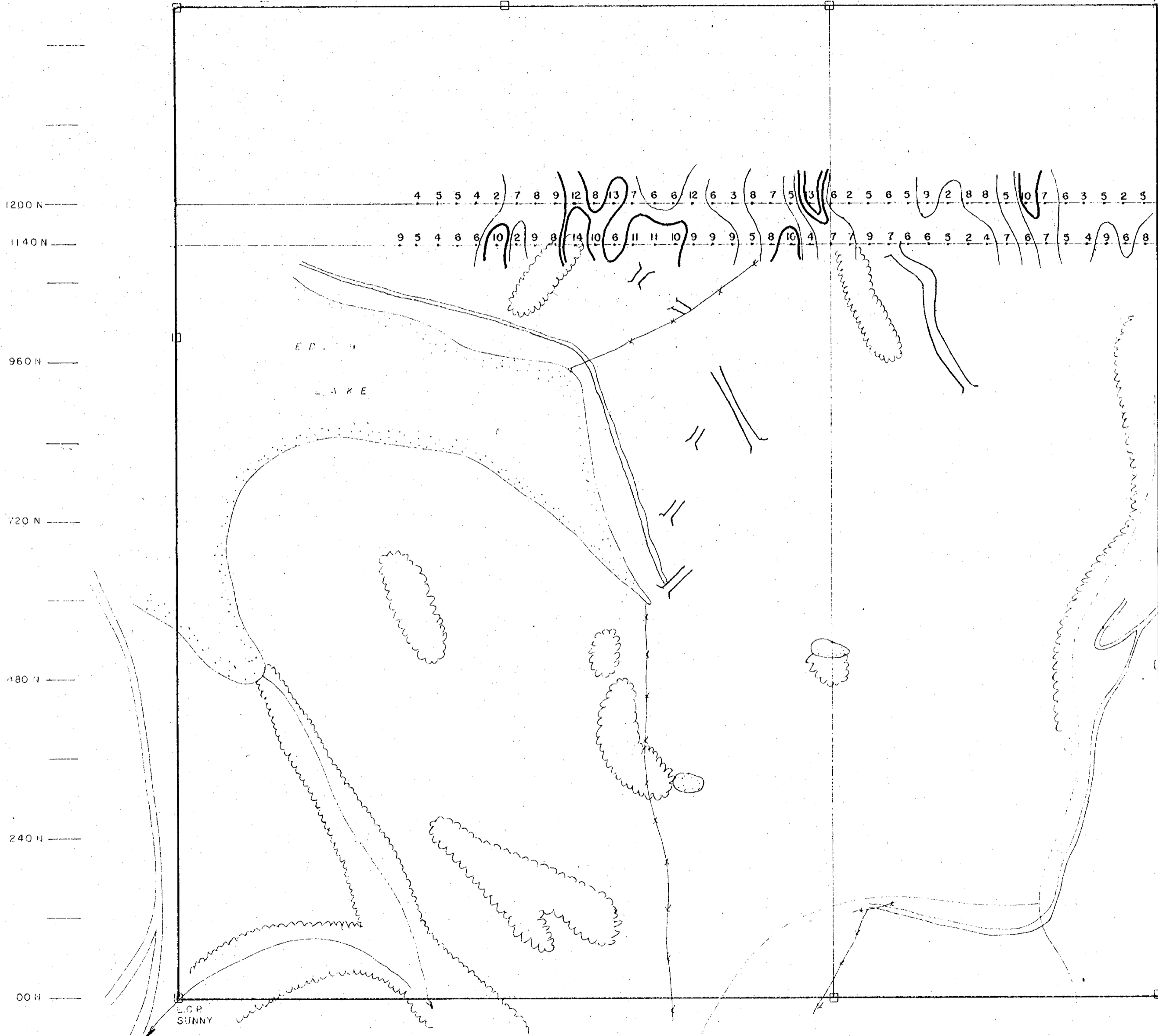


**PROPERTY**  
Edith Hill

**FIGURE 1**

SOOKOCHOFF CONSULTANTS INC.  
**ARGENTA RESOURCES LTD.**  
 Edith Lake Property Kamloops M.D.  
**LOCATION CLAIM & INDEX MAP**  
 Scale 1:50 000 June 1984

NIC 2



LEGEND

- ROAD
- TRENCH
- FENCE
- CREEK
- STATION
- CLAM POST
- TREE LIMIT
- LAKE

- BACKGROUND 6.8 ppm
- SUB ANOMALY 9.5 "
- ANOMALY 12.2 "

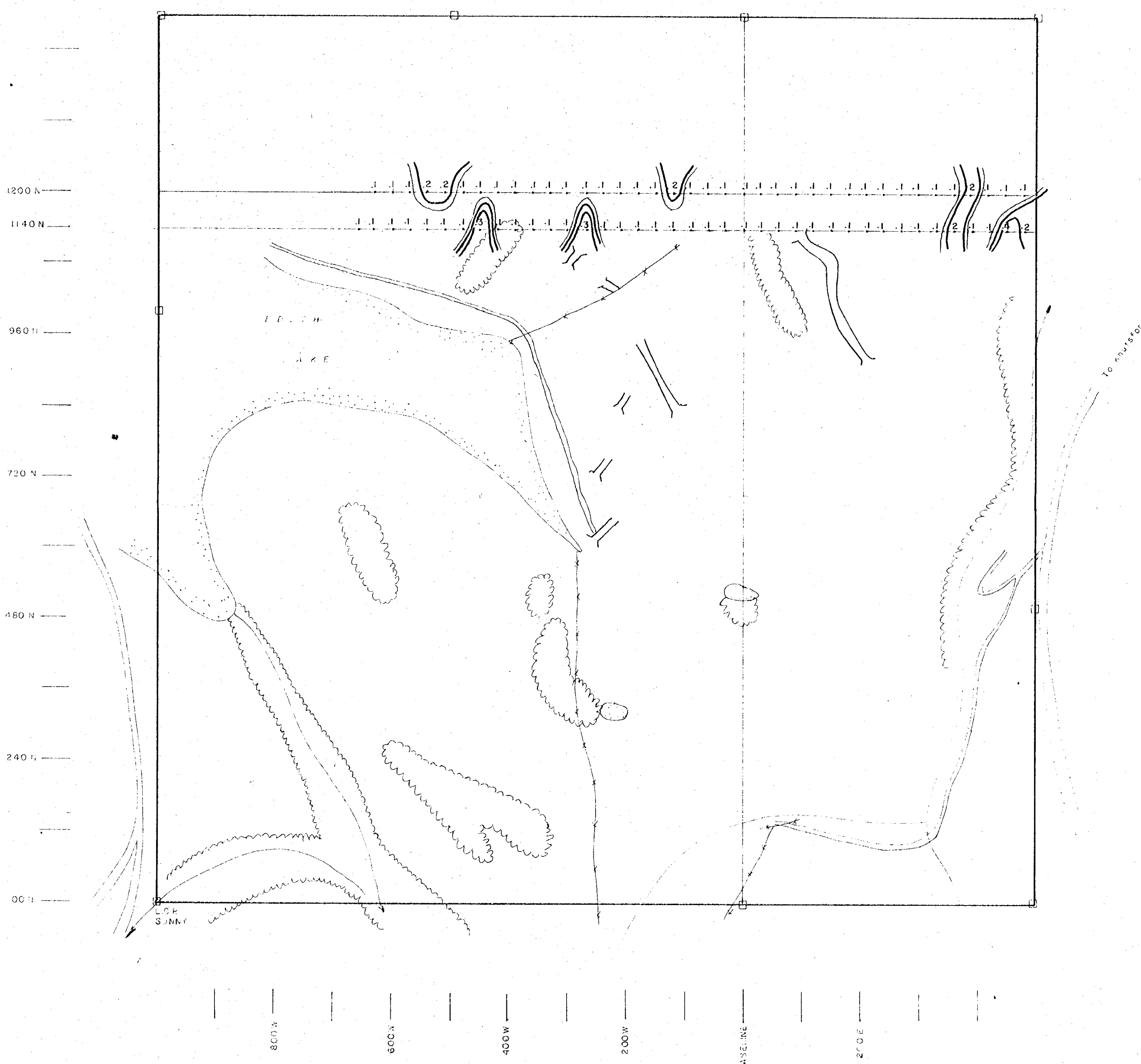
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FIGURE 2

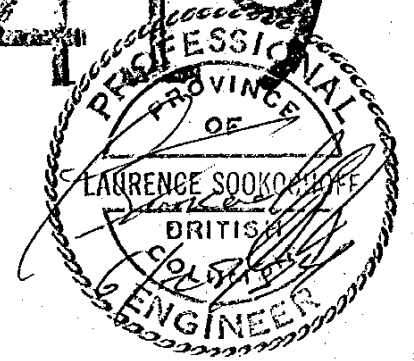
SOOKOCHOFF CONSULTANTS INC.	
<b>ARGENTA RESOURCES LTD.</b>	
SUNNY CLAIM	
KAMLOOPS M.D.	N.T.S. 921/9W
<b>As GEOCHEMISTRY</b>	
SCALE 1:5000	JUNE 1984



- LEGEND
- ROAD.
  - TRENCH
  - FENCE
  - CREEK
  - STATION
  - CLAM POST
  - TREE LIMIT
  - LAKE
- BACKGROUND .11 ppm  
 SUB ANOMALY .16 "  
 ANOMALY .21 "

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**FIGURE 3**

SOOKOCHOFF CONSULTANTS INC.

**ARGENTA RESOURCES LTD.**

**SUNNY CLAIM**

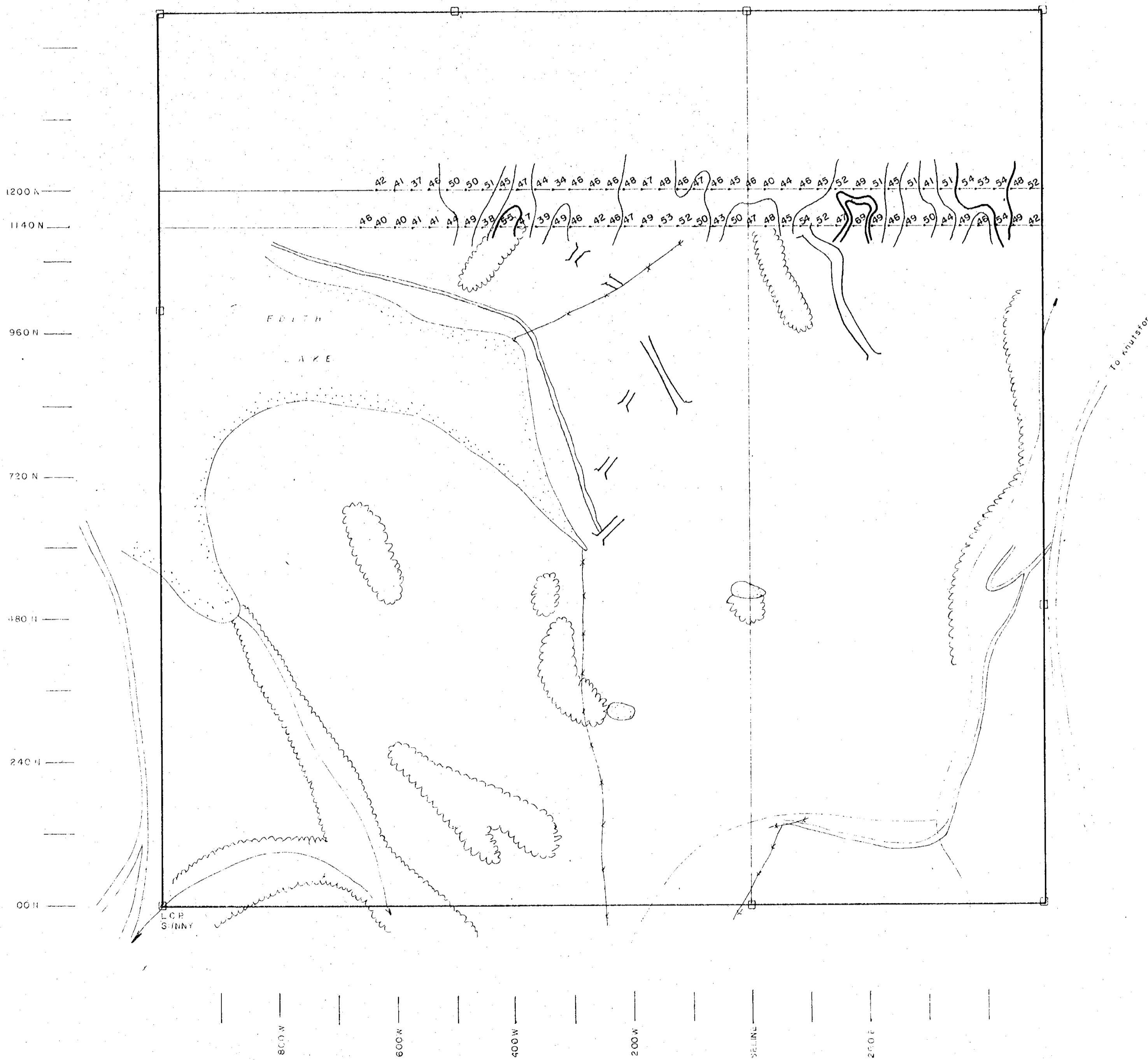
KAMLOOPS M.D. N.T.S. 92I/9W

**Ag GEOCHEMISTRY**

0 300 Meters

SCALE 1:5000 JUNE 1984





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FIGURE 4

SOOKOCHOFF CONSULTANTS INC.

ARGENTA RESOURCES LTD.

SUNNY CLAIM

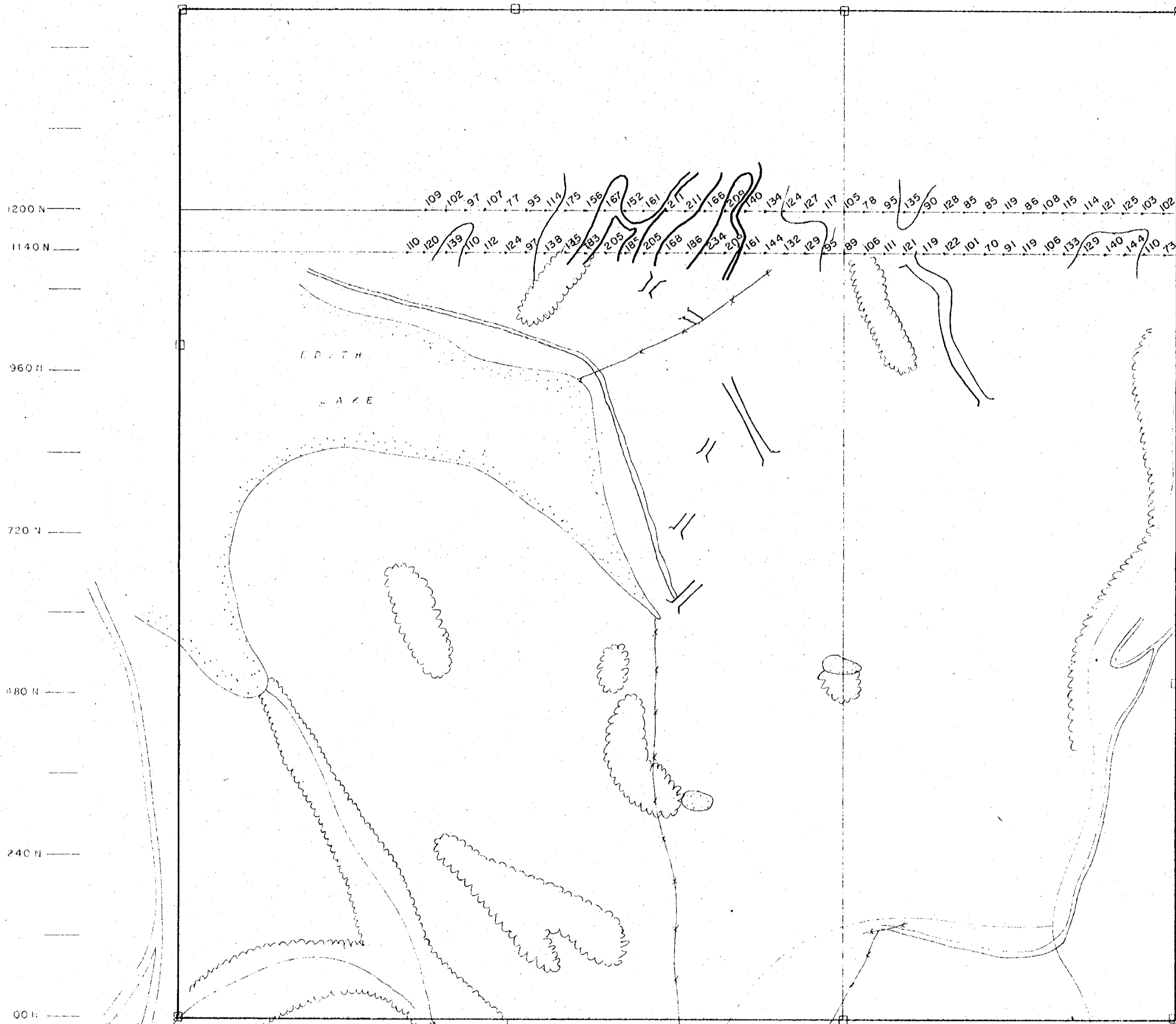
KAMLOOPS M.D. N.T.S. 921/9W

Zn GEOCHEMISTRY

0 500 Meters

SCALE 1:5000

JUNE 1984



LEGEND

- ROAD
  - TRENCH
  - FENCE
  - CREEK
  - STATION
  - CLAM POST
  - TREE LIMIT
  - LAKE
- BACKGROUND 128 ppm  
 ——— SUB ANOMALY 165 "  
 ——— ANOMALY 202 "

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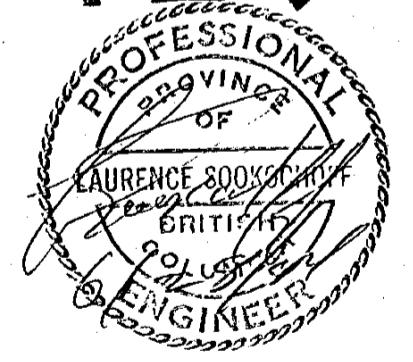


FIGURE 5

SOOKOCHOFF CONSULTANTS INC.

**ARGENTA RESOURCES LTD.**

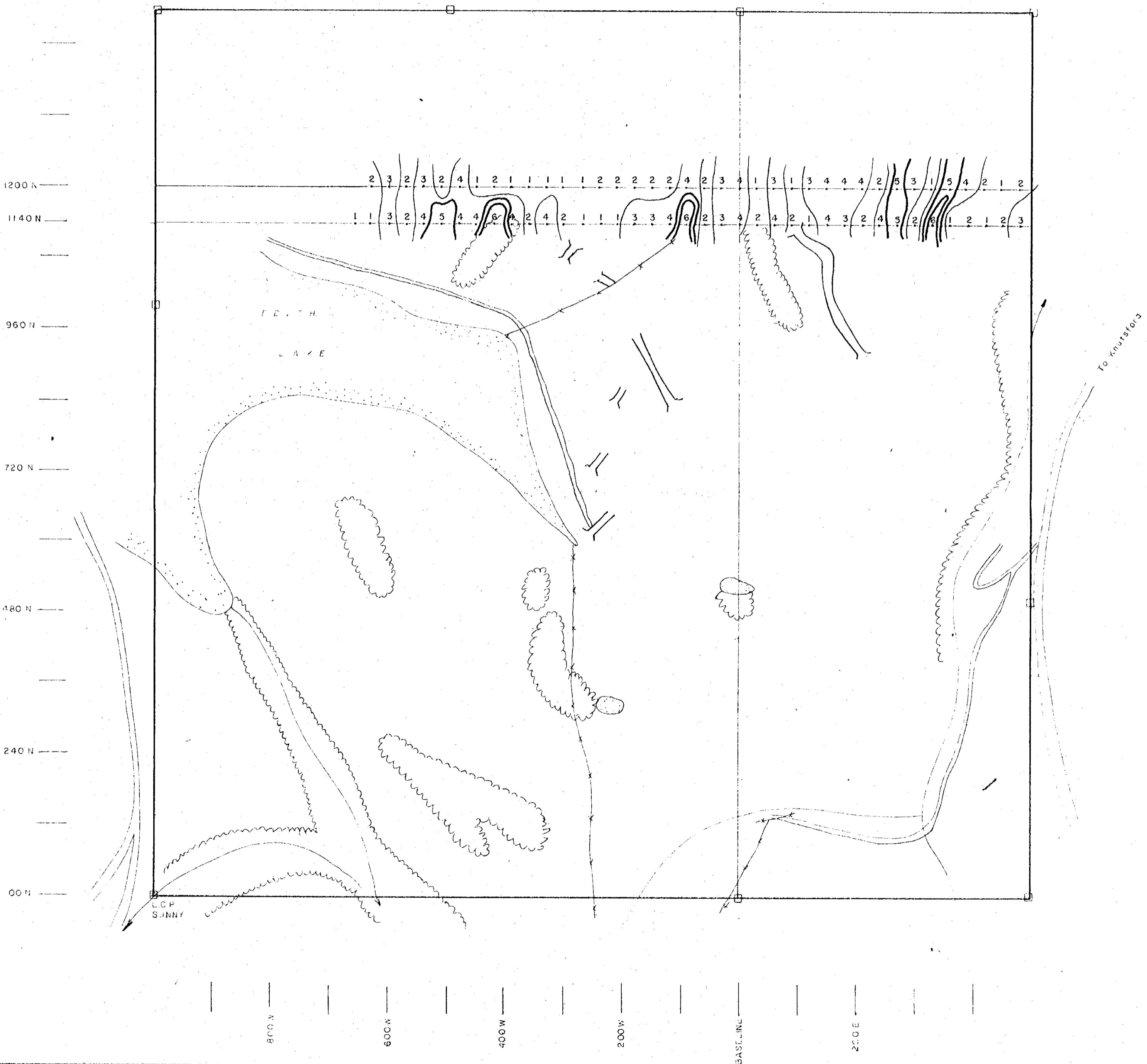
SUNNY CLAIM

KAMLOOPS M.D. N.T.S. 92/19W

**Cu GEOCHEMISTRY**

0 300 Meters

SCALE 1:5000 JUNE 1984



LEGEND

- ROAD
- TRENCH
- FENCE
- CREEK
- STATION
- CLAM POST
- TREE LIMIT
- LAKE

- BACKGROUND 2.7 ppm
- SUB ANOMALY 4.1 "
- ANOMALY 5.5 "

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FIGURE 6

SOOKOCHOFF CONSULTANTS INC.

**ARGENTA RESOURCES LTD.**

SUNNY CLAIM

KAMLOOPS M.D. N.T.S. 921/9W

**Pb GEOCHEMISTRY**

0 300 Meters

SCALE 1:5000

JUNE 1984

GEOLOGICAL BRANCH  
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LEGEND

- ROAD
- TRENCH
- FENCE
- CREEK
- STATION
- CLAM POST
- TREE LIMIT
- LAKE

- 1980 Mag Anomaly
- 1980 EM Anomaly
- Zn Anomaly 75 ppm
- 1982 Zn Anomaly 65 ppm
- Cu Anomaly 190 ppm
- 1980 Survey Area
- 1984 Pb Anomaly
- Cu
- Zn
- Cu

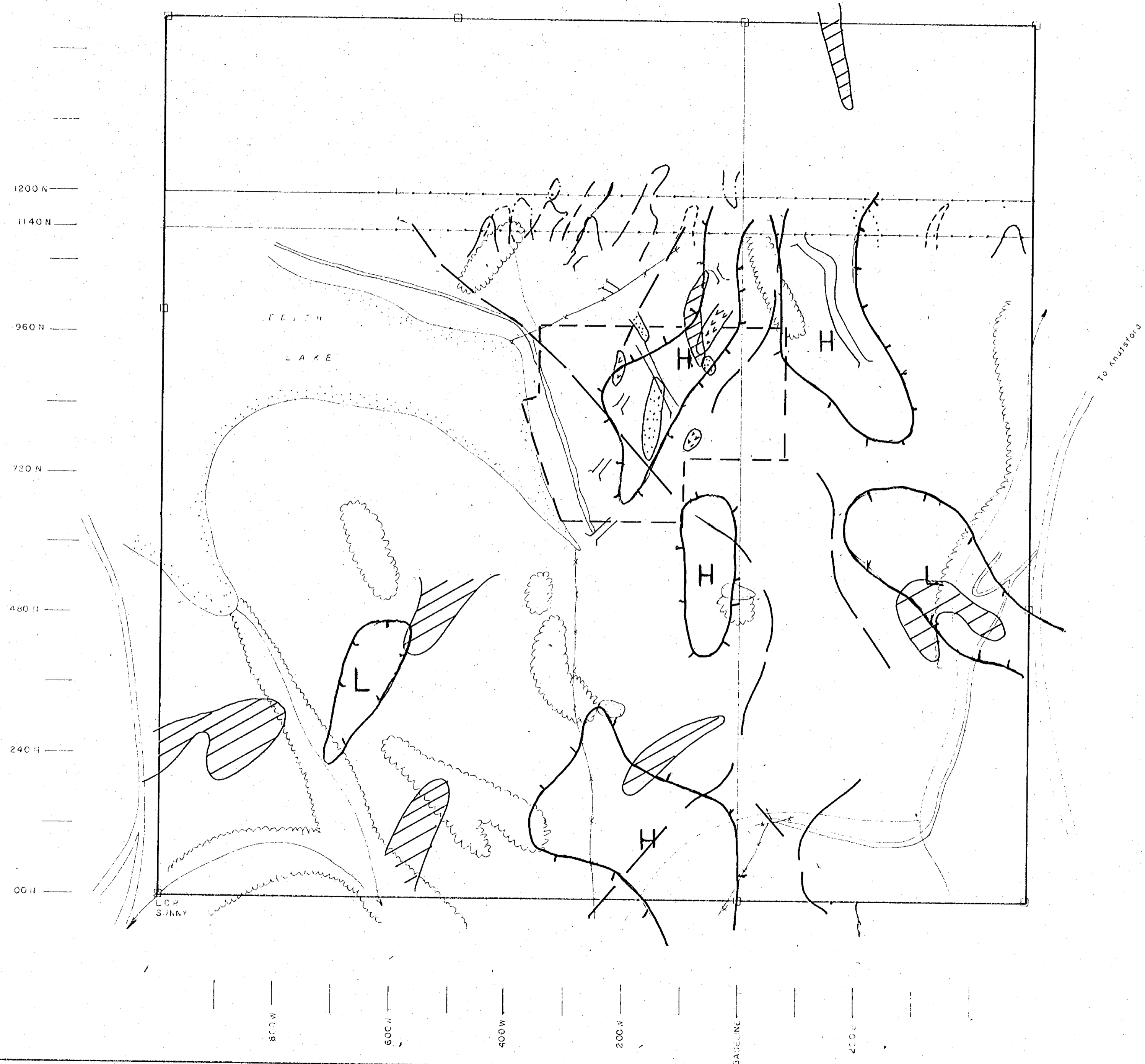
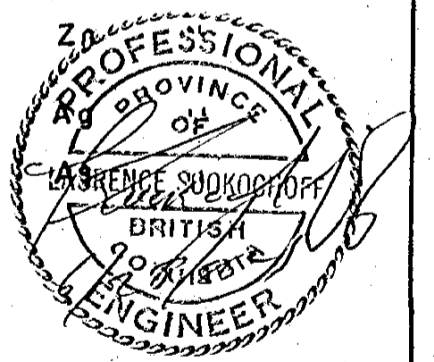


FIGURE 7

SOOKOCHOFF CONSULTANTS INC.

**ARGENTA RESOURCES LTD.**

SUNNY CLAIM

KAMLOOPS M.D. N.T.S. 921/9W

**COMPILATION MAP**

0 300 Meters

SCALE 1:5000

JUNE 1984