

83-#717 - 11717

10/84

1983 Assessment Report

Geochemical and Geophysical Surveys

Title: BROWN CLAIM GROUP

Claims: BROWN 1-8

Commodity: Silver, Gold, Copper

Location: Pathfinder Creek - Granby River
18 km north of Grand Forks
82 E 1W Greenwood M.D.

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Owner and XING HAI RESOURCES LTD.
Operator 401-595 Howe Street
Vancouver, B.C., V6C 2T5

Work Dates: October 10, 1983 to December 9, 1983

Submittal Date: December 9, 1983

GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,717

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Assessment Report
on the
Geophysical and Geochemical Survey
on the
BROWN MINERAL CLAIMS

SUMMARY

The Brown claim group consists of eight claims located 18 km north of Grand Forks and within four km of two properties on which massive sulphide zones are known to occur and from which past production is documented.

The peripheral properties include one of production from which "1,250 tons of ore shipped up to 1920 assaying 0.43 oz. Au/ton and 3.9 oz. Ag/ton" and another where diamond drilling revealed zones of up to "75 feet of .07 oz. Au/ton to 26 feet of .20 oz. Au/ton.

On an adjacent property to the south a recent drill hole intersection of 1.4 oz Au/ton across "2.4 feet" has been reported. A 1983 exploration program of geophysical and geochemical surveys on the BROWN claims carried out by King Hai Resources has delineated two significant prime correlative anomalous zones with a number of minor secondary anomalies, all of which require follow-up exploration.

INTRODUCTION

During October 1983, geophysical and geochemical surveys were carried out on the BROWN claims.

As an initial exploration to the location of potential massive sulphide gold bearing zones comparable to those known to exist on the adjacent and peripheral properties.

As the surveys completed on the Brown claims were successful in delineating potential areas of mineralization, this report relates information as to the method of exploration, the results and a recommendation for follow-up surveys.

PROPERTY

The property consists of eight two post mineral claims within the Greenwood Mining Division of N.T.S. map sheet 82E 1W. Particulars are as follows:

<u>Claim Name</u>	<u>Record No.</u>	<u>Expiry</u>
Brown 1-8	3265-3272	October 28, 1986 *

* Pending approval of 3 years work applied October 27, 1983

On the claims map 82E 1W there is an indicated overstaking of most of the eastern portion of the Brown claims and a local approximate 15 hectare area along the southern portion. An effective Brown claim area of 125 hectares is thus indicated.

Any legal aspects pertaining to the BROWN claims are beyond the scope of this report.

LOCATION AND ACCESS

The Brown claims are located within 18 km north of Grand Forks adjacent and east of the Granby River. The claims cover the mouthwaters of the westerly flowing Pathfinder Creek.

Access is via the paved North Fork highway north from Grand Forks which passes within 500 meters east of the property. Secondary roads within and adjacent and peripheral to the northern boundary of the claims provides access to the northwestern sector of the property.

WATER AND POWER

A year-round water supply would be available from the westerly flowing Pathfinder Creek or from other minor water courses within the property boundaries.

A commercial power line is within two km west of the property.

PHYSIOGRAPHY AND CLIMATE

The property lies within the Christina Range of the Monashee Mountains characterized by moderate forest sloped mountains to elevations of 1,750 meters.

Elevations on the property range up to 950 meters above sea level in the southeastern portion from 610 meters near the mouth of Pathfinder Creek.

Moderate stands of pine with fir, alder and poplar are predominant on the property with considerable recently logged off portions in the area.

The general climate is of long arid summers, with moderate winters which would provide a surface exploration season of up to 10 months of the year.

HISTORY

The history of the area stems from placer deposits discovered along Rock Creek and Boundary Creek west of Grand Forks in the early 1950's.

Then in 1890 gold-copper deposits were discovered at Rossland, 55 km east of Grand Forks stimulating prospecting throughout the area. The following year, large low-grade copper deposits were discovered near Phoenix, 13 km northeast of Grand Forks. The Phoenix district produced about 15 million tons of ore averaging slightly over 1.5% copper with significant gold and silver values. The Phoenix mine ceased operations in 1919, however was later reopened and in production to 1978.

In the immediate vicinity of the BROWN mineral claims, exploration and development on the Pathfinder property (adjacent to the south) to 1920 resulted in "1,250 tons of ore being shipped assaying 0.43 oz. Au/ton and 3.9 oz. Ag/ton". In a 1983 diamond drilling program on the Pathfinder, reported results include "2.4 feet of 1.4 oz Au/ton, 12.2 feet of .12 oz Au/ton and 7.2 feet of .128 oz Au/ton" from three drill holes. On a property within four km to the southeast, exploration has been intermittently carried out since 1901 with 1939 production from the Simpson Mine of 364 tons of ore from which 2,592 ounces of gold and 90 ounces of silver were extracted. The Simpson is one of few zones known on that property. Diamond drilling during the 1970's on a mineral zone south of the Simpson Mine returned values ranging from "75 feet of .07 oz. Au/ton to 26 feet of .20 oz. Au/ton".

There is no known mineralization on the Brown claims other than that indicated from the 1983 exploration program.

GEOLOGY

The general geology of the area is of Nelson and Coryell and Valhalla Intrusives to the north in contact with sedimentary rocks and greenstones of Palaeozoic age to the south. Local to extensive areas of Intrusive also occur within the Palaeozoic rocks. Overlying are the Paleocene or Eocene Phoenix group of predominantly volcanics with minor tuffs and sediments and the Kettle River Formation of predominantly rhyolitic intrusives and flows in addition to local sediments.

The BROWN claims are located within one km to the north of the contact zone and are indicated to be underlain by the Nelson Intrusives. A major northerly trending fault zone delineating the western boundary of a large block of Proterozoic (?) gneiss occurs along the eastern portion of the claim group.

The paragneiss (which includes schists, quartzites and calcereous gneiss) with minor crystalline limestone and pegmatite is designated as the Monashee and Grand Forks group of rocks.

Mineralization on peripheral properties occurs as "veins" of massive pyrrhotite with accompanying pyrite and chalcopryrite in varying degrees and variable to no quartz.

The Simpson zone to the east is described as "a quartz filled shear zone in the Anarchist greenstone skarn area which has been mineralized with pyrite pyrrhotite and chalcopryrite across a width of 100 feet or more". Former production from this area returned an average of 0.71 ounces of Au/ton and 0.25 ounces of silver per ton.

A second mineralized area is in part indicated by a gossan zone with "disseminated pyrite, pyrrhotite and chalcopryrite within quartz diorite over an area of 500 feet by 1,000 feet". The width of the zone is reported as approximately 30 feet.

On the adjacent Pathfinder there are reportedly four distinct veins "running parallel and from eight to 21 feet in width. There are good showings on all the veins". Gold mineralization in the drill core occurs within a pyritic silicified meta volcanic.

GEOCHEMICAL SURVEY

1. Survey Procedure

A grid system of north-south grid lines at 025° at 100 meter intervals was established covering most all of the western portion of the property as indicated on accompanying Figure 1.

Samples were picked up at 25 meter intervals along the main 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 co-ordinates marked thereon. A total of 355 soil samples were analysed.

2. Testing Procedure

All samples were tested by Acme Laboratories of Vancouver, B.C. The testing procedure was 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 HNO₃ to H₂O at 90 deg. more or less for one hour. The sample is diluted to 10 mls. with water. The samples were then analysed by atomic absorption for five metals - zinc, silver, lead, arsenic and copper.

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 read-out.

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	As	Ag	Pb	Zn
Mean background value	18	6.1	.21	12	64
Sub-anomalous threshold value	28	10.1	.35	17	90
Anomalous threshold value	38	14.1	.51	22	116

All values are in parts per million.

GEOPHYSICAL SURVEY

VLF-EM

A Sabre Model 27 VLF-EM Receiver instrument manufactured by Sabre Electronics of Vancouver was utilized in the VLF-EM survey.

The VLF-EM Receiver measures the amount of distortion produced in a primary transmitted magnetic field - in this case Seattle at a frequency of 24.6 Khz - and a secondary magnetic field which may be induced by a conductive mass such as a sulphide body. The VLF-EM unit - due to its relatively high frequency - can detect low conductive zones such as fault or shear zones, carbonaceous sediments or lithological contacts.

The major disadvantage of the VLF method, however is that the high frequency results in a multitude of anomalies from unwanted sources such as swamp edges, creeks and topographical highs.

A total of 8.5 line km of survey were completed.

MAGNETOMETER SURVEY

The magnetometer survey was carried out utilizing a Model G-10 fluxgate magnetometer manufactured by Geotronics Instruments of Vancouver.

All rocks contain some magnetite from very small fractions of a percent up to several percent, and even several tens of percent in the case of magnetic iron deposits. The distribution of magnetite or certain characteristics of its magnetic properties may be used in exploration or mapped for other purposes.

The anomalies from naturally occurring rocks and minerals are due chiefly from the presence of the most common magnetic mineral magnetite or of related minerals including ilmenite and pyrrhotite (with sulfide mineralization).

Magnetic anomalies in the earth's magnetic field are caused by two different kinds of magnetism: induced and remanent. Induced magnetization refers to the action of the field on the material wherein the ambient field is enhanced and the material itself acts as a magnet.

The proportion of magnetism is related to the magnetic susceptibility of the material. Typically, more basic igneous rocks have a higher susceptibility than the acid igneous rocks; the latter in turn have a higher susceptibility than sedimentary rocks.

The remanent magnetization is often the predominant magnetization (relative to the induced magnetization) in many igneous rocks. The remanent mineralization is important in geological mapping.

Magnetic minerals may also occur in association with sulphide zones or may be decomposed through the action of dynamic or thermal metamorphism. Thus the survey results could indicate lithology structure, alteration patterns and most significantly, mineral zones in a favorable geological environment.

From the field data, an average determined value of 54,200 gammas was subtracted from each reading and the results were contoured at 50 gamma intervals.

RESULTS OF THE 1983 EXPLORATION PROGRAM

The results of the survey are presented in the accompanying Figures 2 through 8. In Figure 9 the results are presented in correlative form.

The significant areas for follow-up exploration would be the correlative anomalous areas. In this regard two prime correlative anomalous areas that warrant further exploration are:

Area A - A correlative anomalous area along the southwest boundary of the property which covers an area of 1100 meters by 260 meters. The area contains two main correlative zones. The easternmost is 260 by 300 meters and is of predominantly arsenic with correlative zinc-copper and lead in the south and the north. The arsenic and lead zones finger westward to correlate with fingering lead zones extending from the western zone eastward. The western zone is of predominantly arsenic with correlative copper-zinc-silver and lead sub and anomalous zones.

Further to the west in the northwest and southwest corners of Area A multielement correlative zones occur.

Within the eastern portion of Area A the magnetometer response was generally high whereas within the western portion the area completed reflected a magnetometer low.

The E.M. response was inconclusive, however local E.M. "anomalous" zones predominate within Area A.

Area B - A 100 by 100 meter area of a general lead zone with localized correlative arsenic-silver and localized copper zones.

The results of the survey are presented in the accompanying Figures 2 through 8. In Figure 9 the results are presented in correlative form.

The significant areas for follow-up exploration would be the correlative anomalous areas. In this regard two prime correlative anomalous areas that warrant further exploration are:

CONCLUSIONS

The geophysical and geochemical surveys completed by Xing Hai Resources Ltd. in October 1983 were successful in delineating two prime multielement correlative areas. Area A along the southern boundary could indicate mineralization along or peripheral to the Anarchist - Nelson Intrusive contact with mineralization associated with a greenstone skarn area such as at the nearby Simpson Mine.

The central Area B anomaly is encouraging in that a mineralized zone within the intrusive may be indicated.

RECOMMENDATIONS

It is recommended that a follow-up exploration program be carried out on the BROWN claims. The program should be designed to detail the indicated anomalous areas and to extend the exploration to the balance of the property.

Resubmitted,



Laurence Sookchoff, P.Eng.
Consulting Geologist

December 9, 1983
Vancouver, B.C.

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- Geological Report on the HEK and HEL claims
for Aries Resources Ltd., February 25, 1980.

- Exploration Progress Report on the SAT Mineral
Claims for New Hope Resources Ltd., March 1, 1983

CERTIFICATE

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 seventeen 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 and from the supervision of the 1983 exploration program carried out on the Brown claims.
5. I have no direct, indirect or contingent interest in the property described herein or in the securities of Xing Hai Resources Ltd. nor do I expect to receive any.



December 9, 1983
Vancouver, B.C.

XING HAI RESOURCES LTD.
 1983 Assessment Report
 GEOPHYSICAL AND GEOCHEMICAL SURVEY
AFFIDAVIT OF EXPENSES

The geophysical and geochemical surveys were carried out on the Brown mineral claims, Greenwood M.D., B.C., from October 10, 1983 to December 9, 1983 to the value of the following:

Geochemical Survey

Fieldwork 2 men 56 hours @ \$45	\$ 2,520.00
M. Klein and A. Kabatoff October 10, to October 17, 1983	
Vehicle rental, 7 days @ \$65 plus gas, mileage	585.00
Assaying 365 samples @ \$5.50	2,007.50
Field supplies	175.00
Room and Board 7 days @ \$40/day/man	560.00
Data compilation and draughting	850.00
Engineering, supervision and reports	1,280.00

Geophysical Survey

Field work 2 men October 17-20, 1983	
32 hours @ \$45	\$ 1,440.00
Field supplies - instrument rental	280.00
Room and board 4 days @ \$40/man/day	320.00
Car rental, gas & mileage	260.00
Data compilation and draughting	<u>340.00</u>

\$10,617.50

=====



FIGURE 1

SOOKCHOFF CONSULTANTS INC.
~~XING HAI RESOURCES LTD.~~
 Brown Claims
 LOCATION & CLAIM MAP
 N.T.S. — 82E-1W
 GREENWOOD M.O., B.C.

0 1 2 3 KM

SCALE 1:50,000 NOV 1983

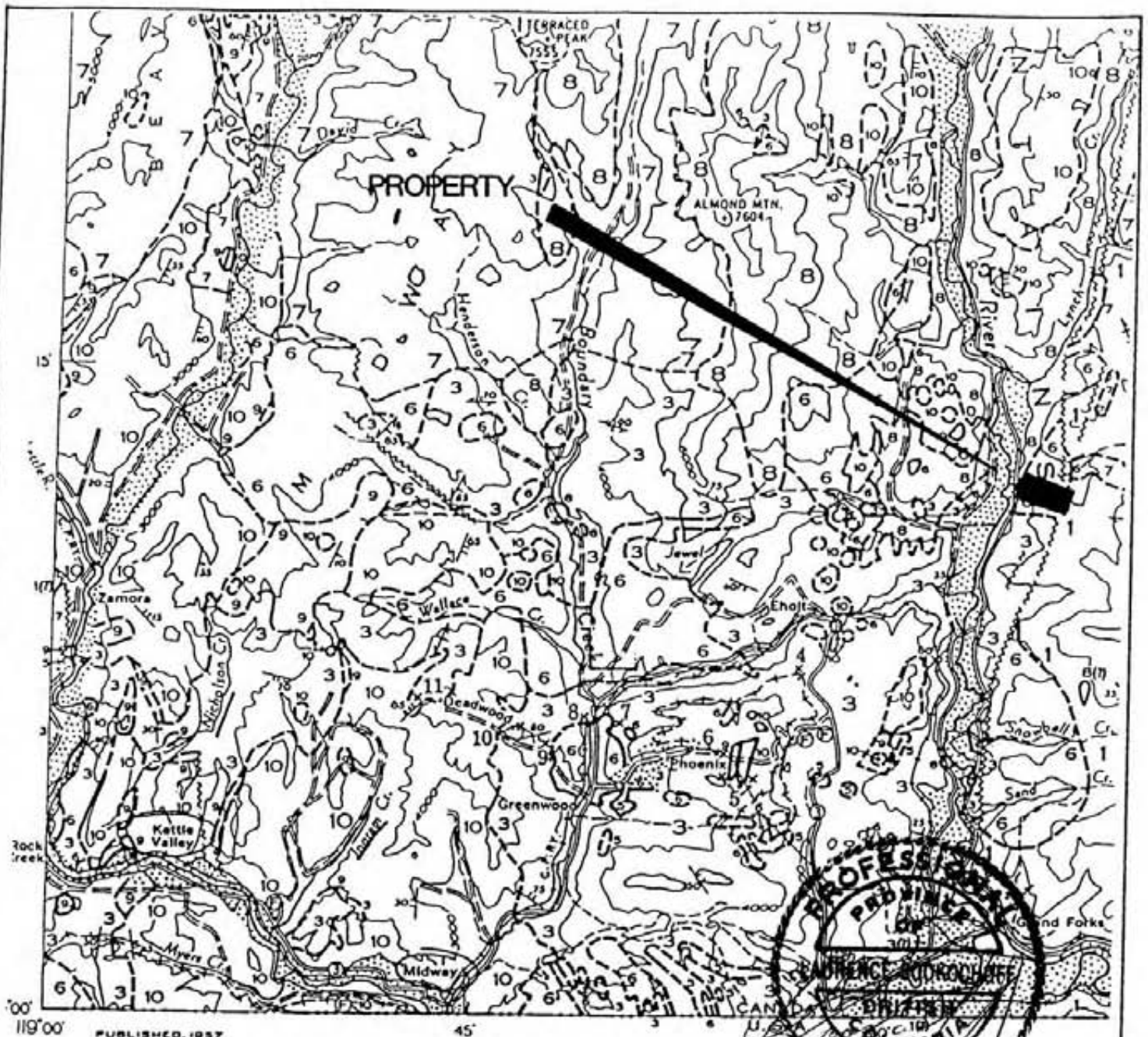


FIGURE 1A

Sookochoff Consultants Inc.
XING HAI RESOURCES LTD.
Brown Claims

Scale: One Inch to Four Miles = $\frac{1}{253,440}$
Miles



REGIONAL GEOLOGY

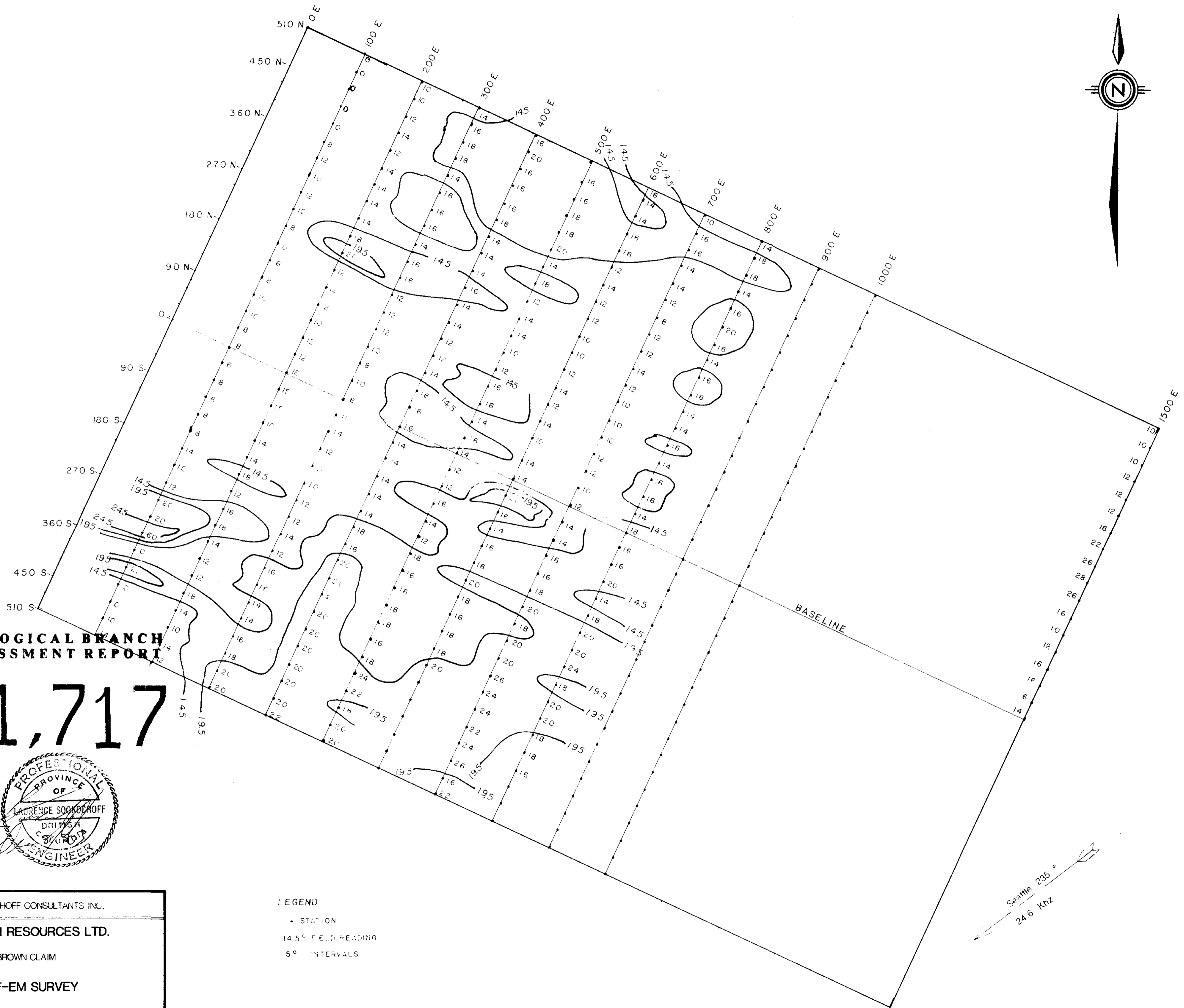
N.T.S. 82E 1W

Greenwood M.D.



LEGEND

- GENOZOIC**
- TERTIARY
MIOCENE(?)
 - 11 Basalt, olivine basalt
 - PALEOCENE OR EOCENE
 - PHOENIX VOLCANIC GROUP
 - 10 Andesite, trachyte; minor basalt; locally, interbedded tuff, shale, and/or siltstone
 - 9 KETTLE RIVER FORMATION: rhyolite and dacite tuff; locally, conglomerate, sandstone, and shale; minor rhyolite flows and intrusive porphyritic rhyolite
 - PALEOCENE(?)
 - 8 CORYELL INTRUSIONS: syenite; monzonite, shonkinite and granite
- MESOZOIC**
- CRETACEOUS(?)
LOWER CRETACEOUS(?)
 - 7 VALHALLA INTRUSIONS: granite, porphyritic granite
 - 6 NELSON INTRUSIONS: granodiorite, porphyritic granite; diorite monzonite, quartz monzonite
 - 5 Ultrabasic intrusions, serpentinite
 - JURASSIC
 - ROSSLAND GROUP
 - 4 Andesite, latite; agglomerate and flow breccia; minor greywacke
- PALAEOZOIC**
- PERMIAN(?)
 - ANARCHIST GROUP
 - 3 Greenstone, greywacke, limestone; paragneiss
 - PENNSYLVANIAN AND/OR PERMIAN
 - 2 MOUNT ROBERTS FORMATION: greywacke, greenstone, limestone; paragneiss
- PROTEROZOIC (?)**
- 1 MONASHEE AND GRAND FORKS GROUPS
Paragneiss; minor crystalline limestone and pegmatite



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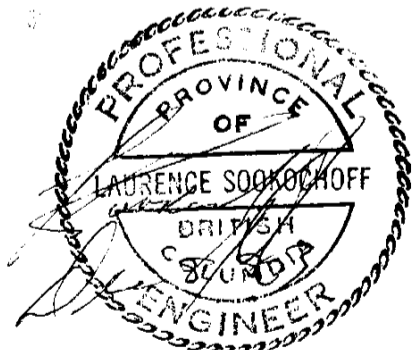


FIGURE 2

SOOKOCHOFF CONSULTANTS INC.

XING HAI RESOURCES LTD.

BROWN CLAIM

VLF-EM SURVEY

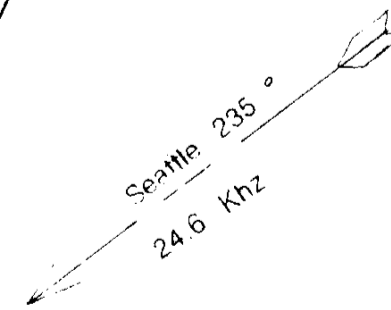
LEGEND

- STATION
- 14.5% FIELD READING
- 5° INTERVALS

NTS 82E IW Greenwood MD



Scale 1:4000 Nov. 1983



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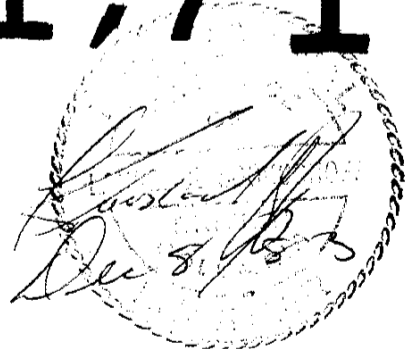


FIGURE 3

SOOKOCHOFF CONSULTANTS INC.

XING HAI RESOURCES LTD.

BROWN CLAIM

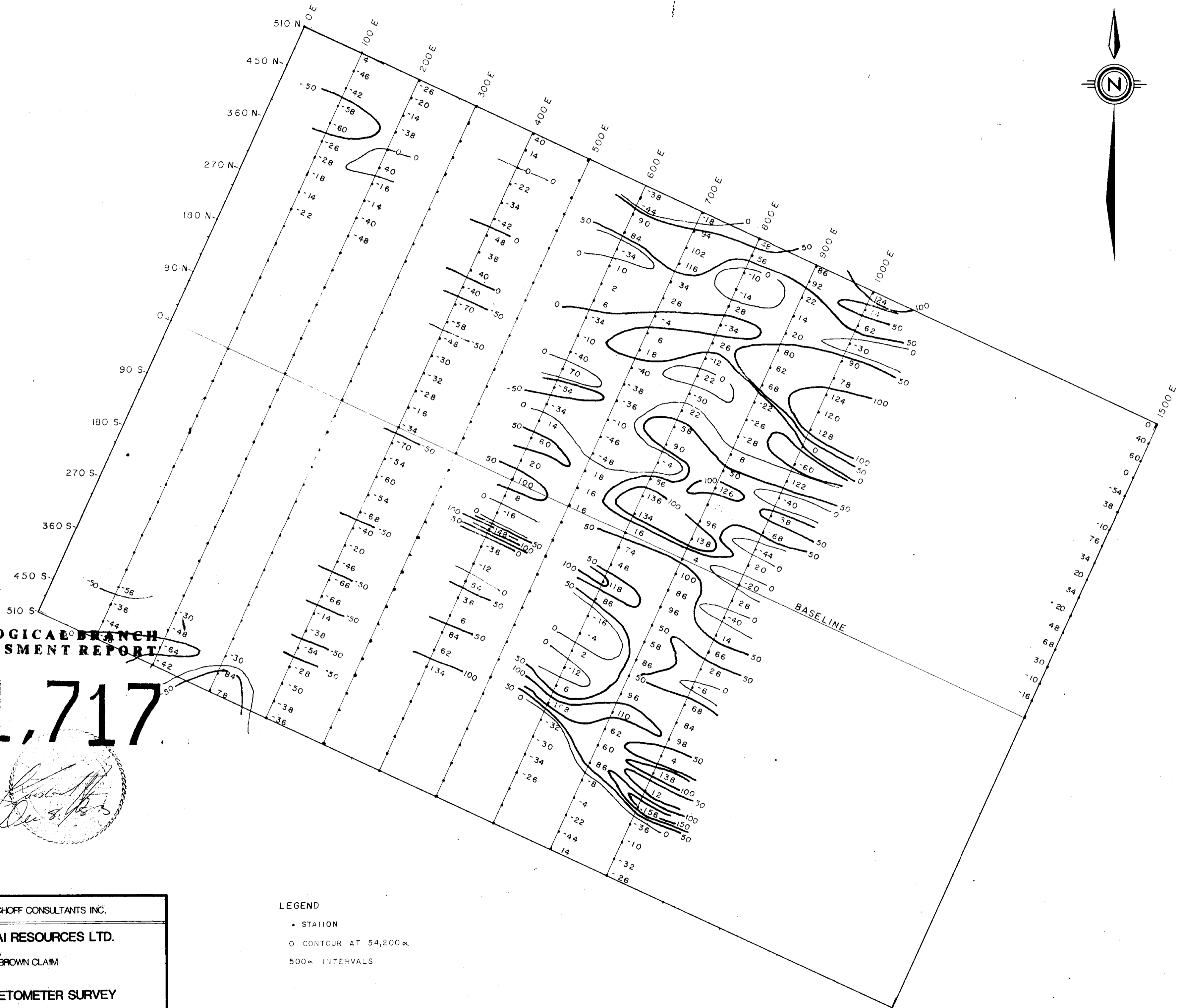
MAGNETOMETER SURVEY

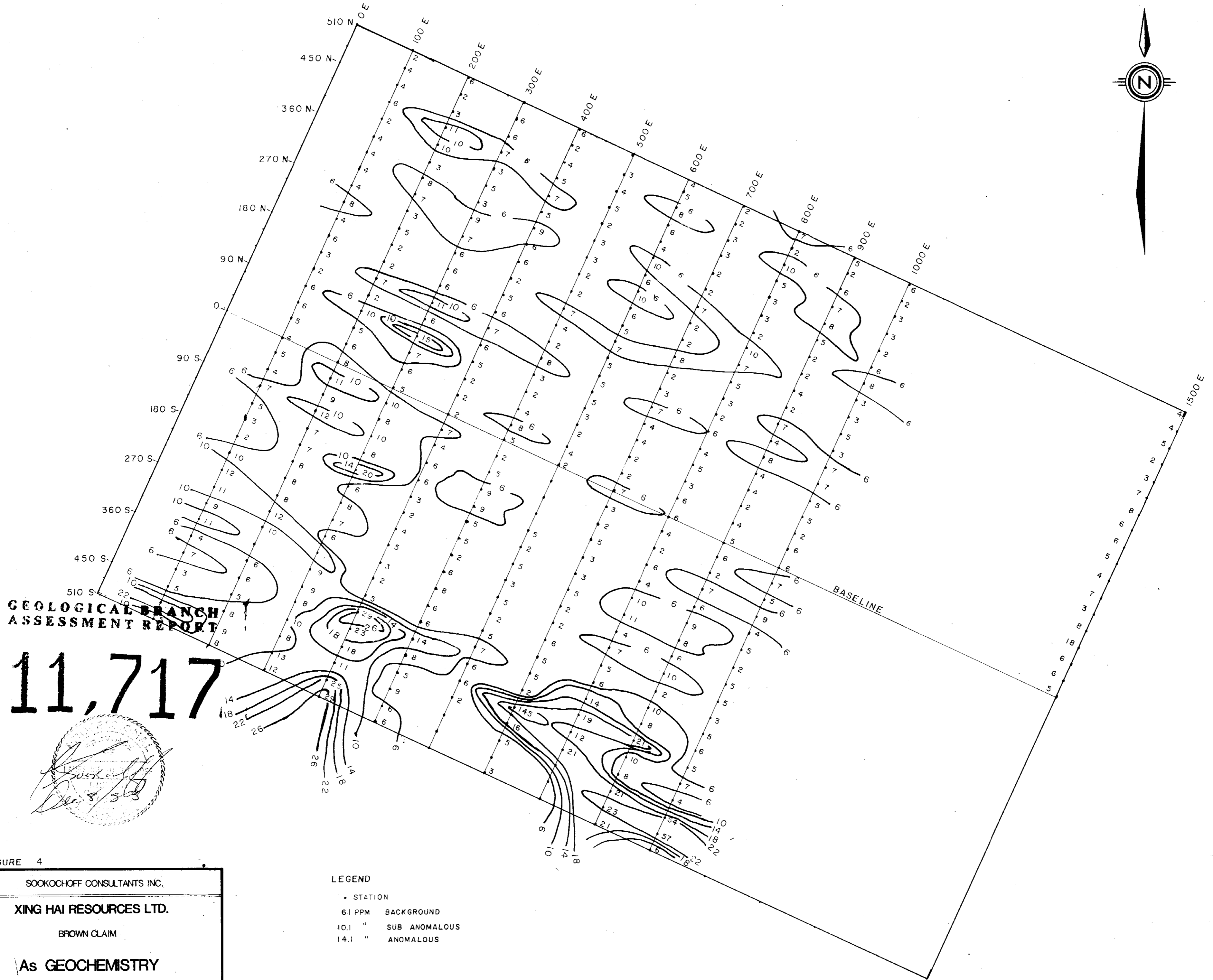
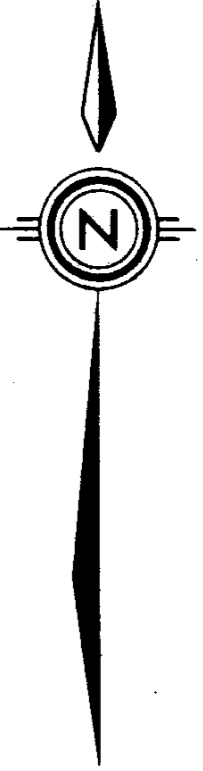
N.T.S. 82E 1W Greenwood M.D.

Scale 1:4000 Nov. 1983

LEGEND

- STATION
- CONTOUR AT 54,200 α
- 500 α INTERVALS





GEOLOGICAL BRANCH
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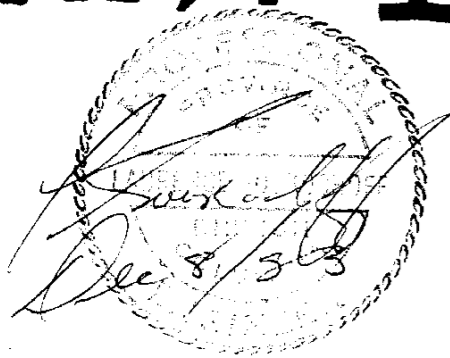


FIGURE 4

SOOKOCHOFF CONSULTANTS INC.

XING HAI RESOURCES LTD.

BROWN CLAIM

As GEOCHEMISTRY

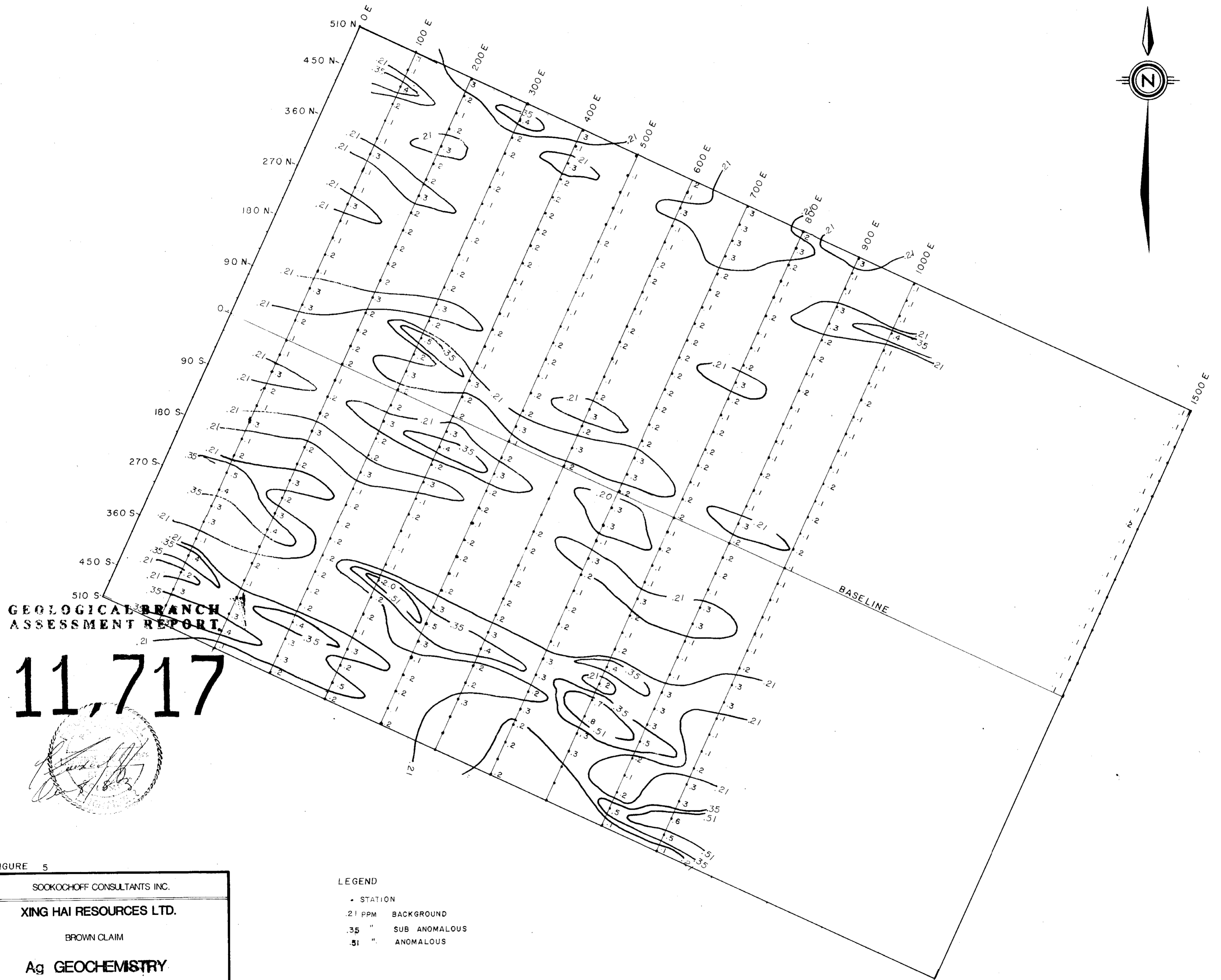
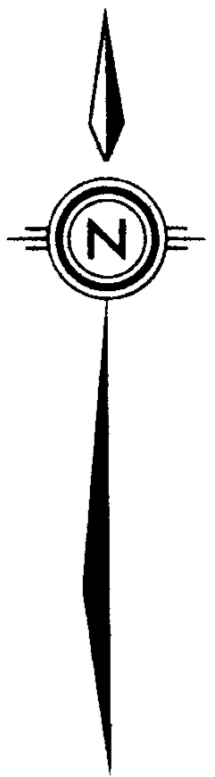
N.T.S. 82E IW Greenwood M.D

0 100 200 300 m

Scale 1:4000 Nov 1983

LEGEND

- STATION
- 61 PPM BACKGROUND
- 10.1 " SUB ANOMALOUS
- 14.1 " ANOMALOUS



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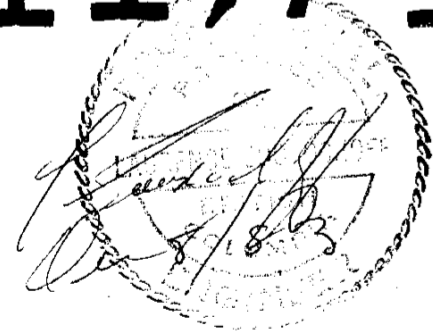


FIGURE 5

SOOKOCHOFF CONSULTANTS INC.

XING HAI RESOURCES LTD.

BROWN CLAIM

Ag GEOCHEMISTRY

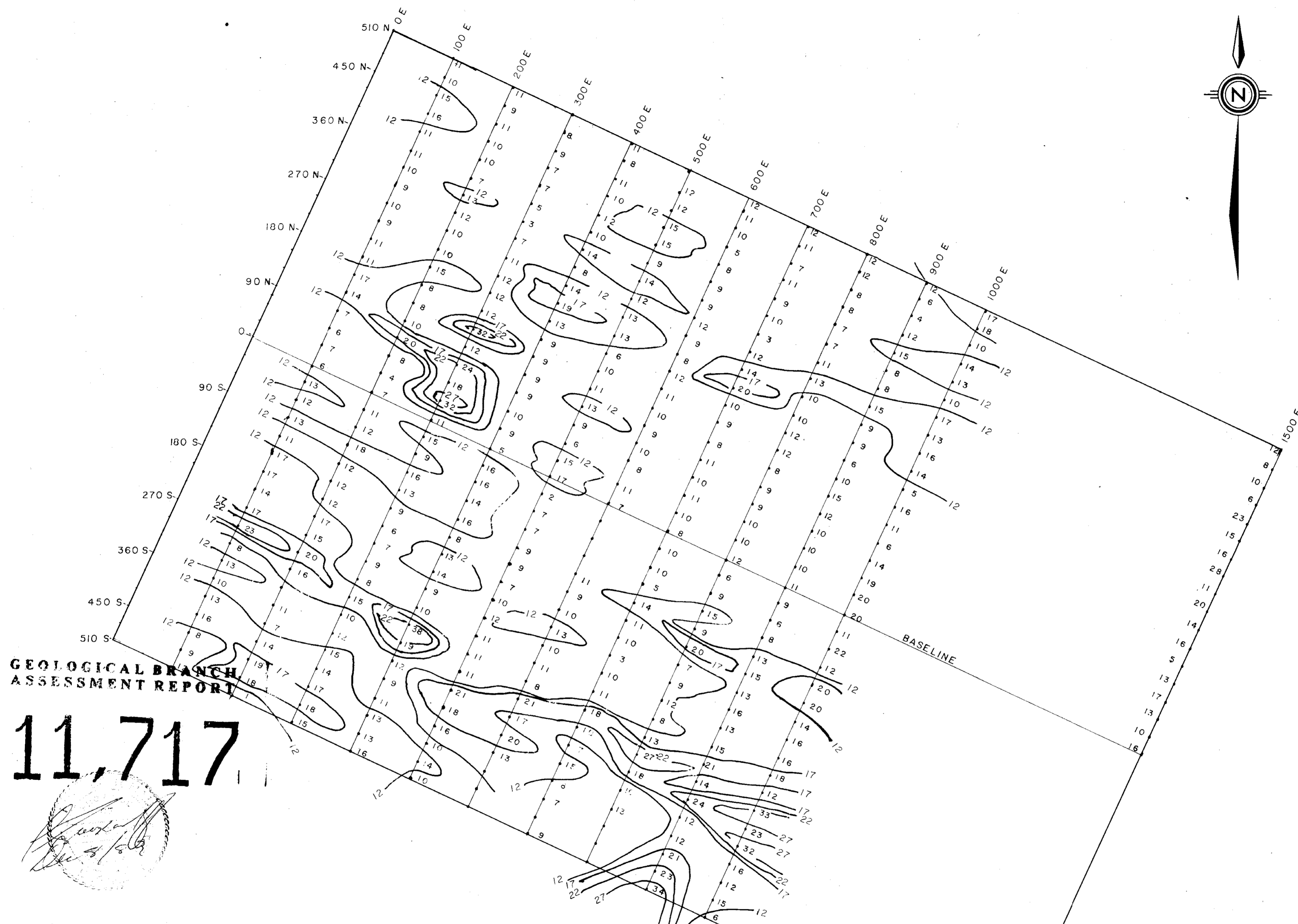
NTS 82E IW Greenwood M.D.

0 100 200 300 m

Scale 1:4000 Nov. 1983

LEGEND

- STATION
- .21 PPM BACKGROUND
- .35 " SUB ANOMALOUS
- .51 " ANOMALOUS



**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

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FIGURE 6

SOOKOCHOFF CONSULTANTS INC.

XING HAI RESOURCES LTD.

BROWN CLAIM

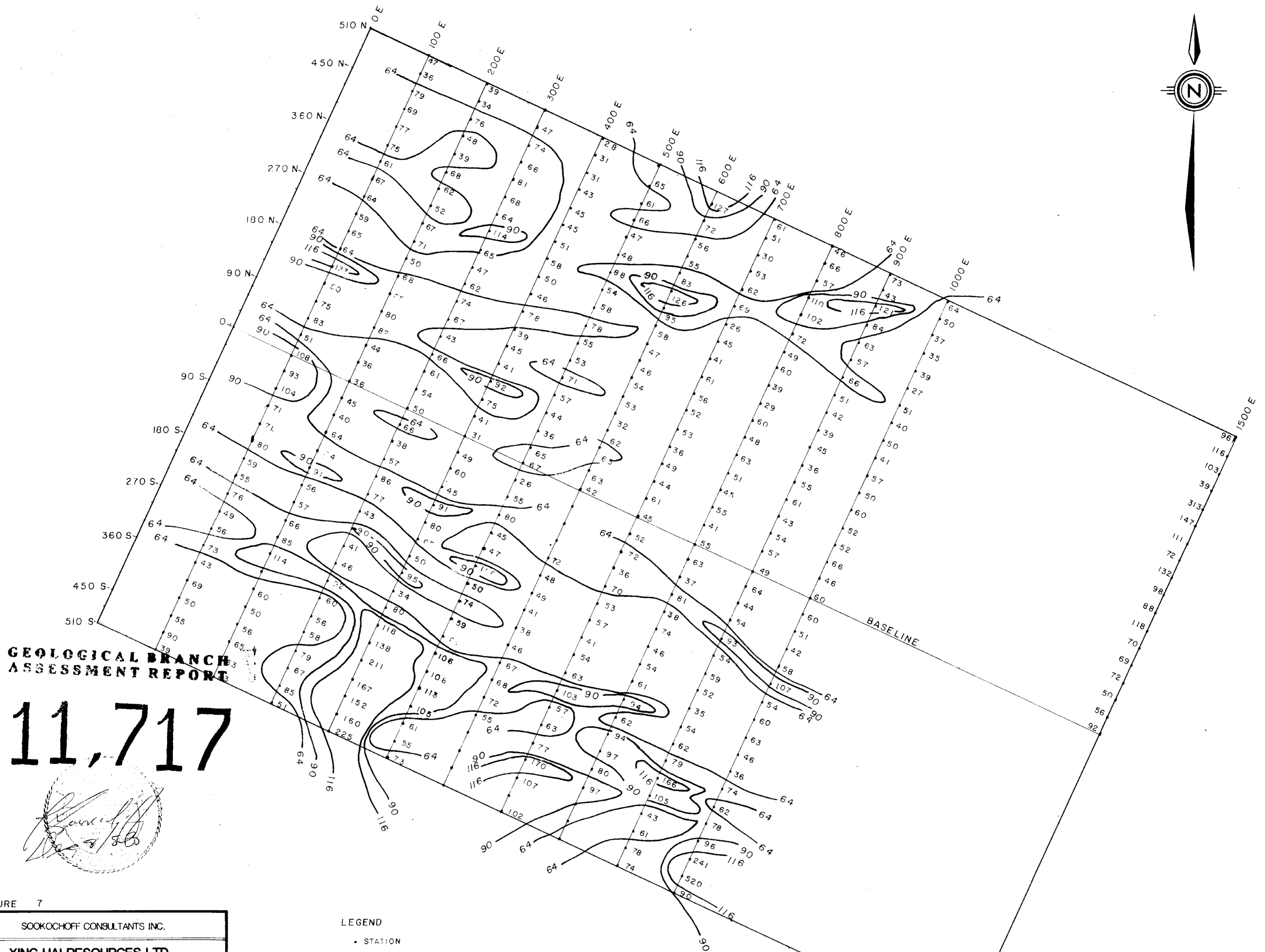
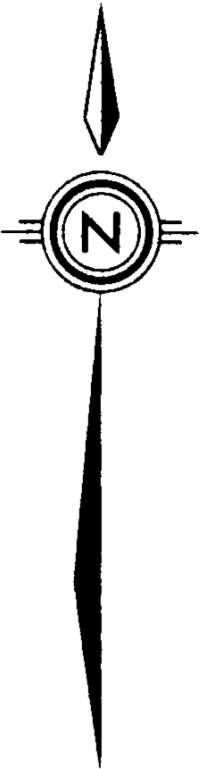
Pb GEOCHEMISTRY

N.T.S. 82E 1W Greenwood MD

Scale 1:4000 Nov. 1983

LEGEND

- STATION
- 12 PPM BACKGROUND
- 17 " SUB ANOMALOUS
- 22 " ANOMALOUS



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FIGURE 7

SOOKOCHOFF CONSULTANTS INC.

XING HAI RESOURCES LTD.

BROWN CLAIM

Zn GEOCHEMISTRY

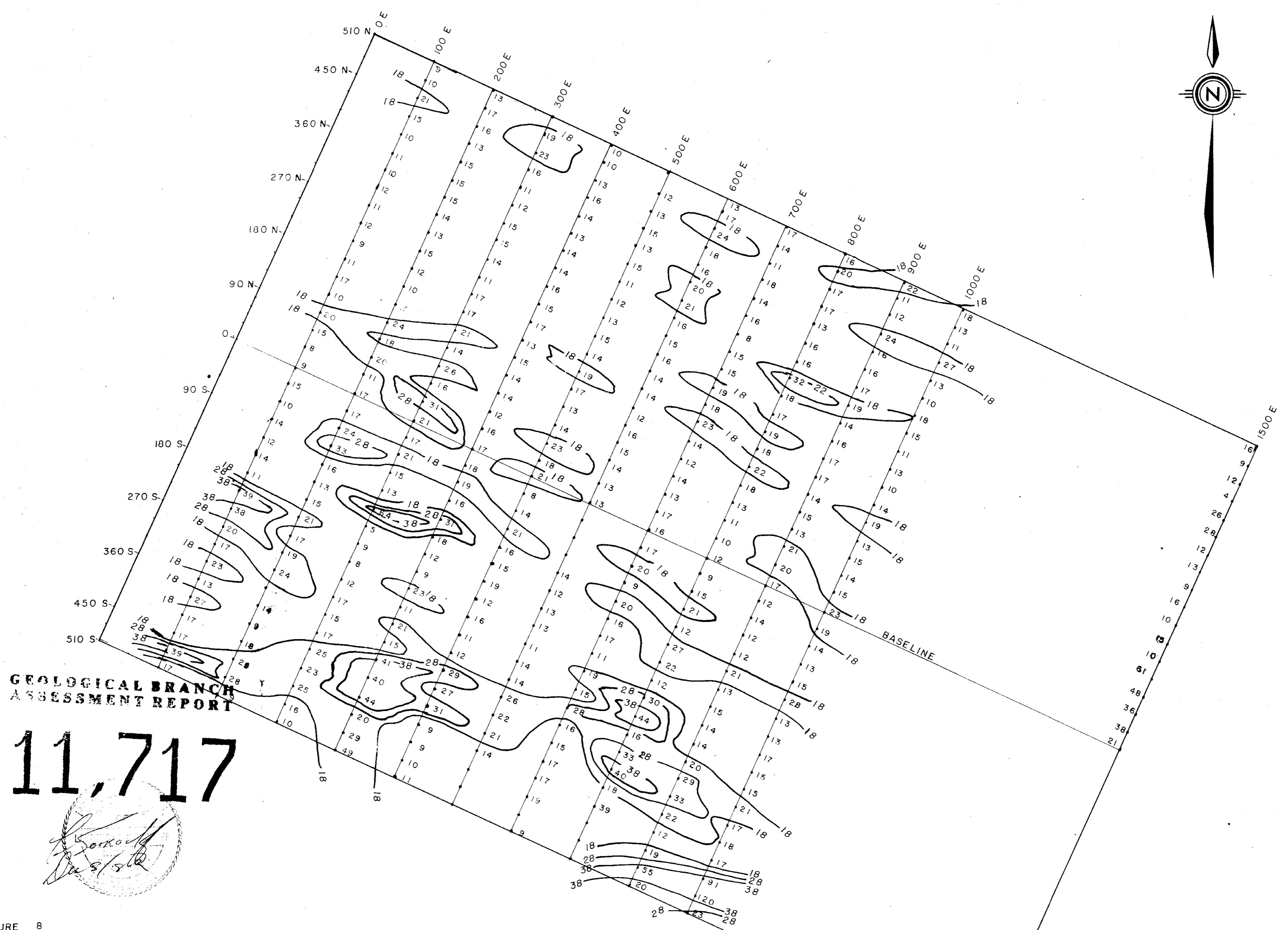
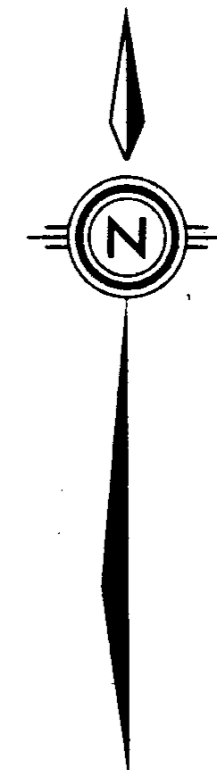
NTS 82E IW Greenwood M.D

0 100 200 300 m

Scale 1:4000 Nov. 1983

LEGEND

- STATION
- 64 PPM BACKGROUND
- 90 " SUB ANOMALOUS
- 116 " ANOMALOUS



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[Handwritten signature]
11/5/83

FIGURE 8

SOOKOCHOFF CONSULTANTS INC.

XING HAI RESOURCES LTD.

BROWN CLAIM

Cu GEOCHEMISTRY

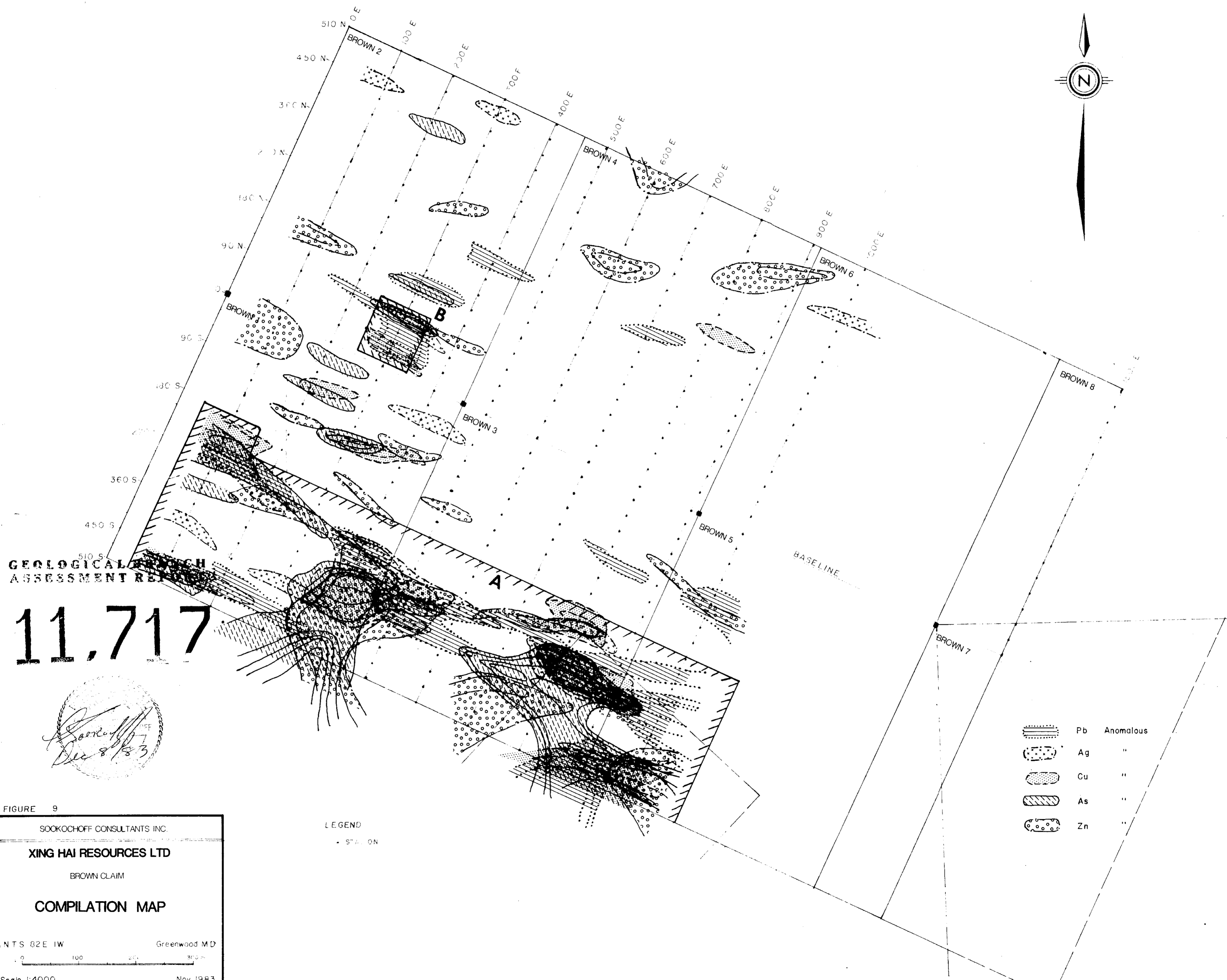
N.T.S. 82E IW Greenwood MD

0 100 200 300 m

Scale 1:4000 Nov 1983

LEGEND

- STATION
- 18 PPM BACKGROUND
- 28 " SUB ANOMALOUS
- 38 " ANOMALOUS



GEOLOGICAL MAP
ASSESSMENT REPORT

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Garrett
Dec 8 1983

FIGURE 9

SOOKOCHOFF CONSULTANTS INC.

XING HAI RESOURCES LTD

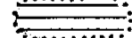


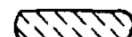
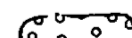
BROWN CLAIM

COMPILATION MAP

NTS 82E 1W Greenwood MD

Scale 1:4000 Nov 1983

LEGEND
- STATION

-  Pb Anomalous
-  Ag "
-  Cu "
-  As "
-  Zn "