

83-#869 - 11705

1/84

1983 Assessment Report

Geochemical and Geophysical Survey

Title: HON CLAIM GROUP

Claims: HON, CON, BON

Commodity: Silver, Gold, Copper

Location: Glover Creek - Greenwood M.D.
19 km north of Grand Forks
82 E 1W
49° 12' N
118° 27.5' W

Consultant and Author: L. Sookochoff, P.Eng.
Sookochoff Consultants Inc.
311-409 Granville Street
Vancouver, B.C., V6C 1T2

Owner and Operator: G. NAKADE
Box 511
Grand Forks, B.C., V0H 1H0

Work Dates: October 15, 1983 to January 12, 1984

Submittal Date: January 12, 1984

GEOLOGICAL BRANCH ASSESSMENT REPORT

11,705

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1983 Assessment Report

on the HON CLAIM GROUP

SUMMARY

The fieldwork of a geophysical and geochemical survey was carried out on the Hon claim group from October 15, 1983 to October 16, 1983 the results of which disclosed one localized correlative anomalous zone in addition to other delineated anomalies.

The Hon claim group is located 19 km north of Grand Forks and adjacent and within one 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 drilling revealed zones of up to "75 feet of .07 oz Au/ton to 26 feet of .20 oz Au/ton".

A total of 47 soil samples were obtained from the Hon claim group for 2.3 line km in addition to 2.3 km of VLF-EM and magnetometer surveys.

INTRODUCTION

During October 1983, geophysical and geochemical surveys were carried out on the Hon claim of the Hon claim group.

The purpose of the exploration program was to locate potential massive sulphide gold bearing zones comparable to those known to exist on properties in the immediate area.

As the surveys completed were successful in delineating potential areas of mineralization, this report relates information as to the results thereof and recommendations as to procedure for follow-up exploration on the claim group.

PROPERTY

The property consists of three contiguous claims consisting of 17 units within the Similkameen Mining Division of N.T.S. map sheet 82E 1W. Particulars are as follows:

<u>Claim Name</u>	<u>Units</u>	<u>Record No.</u>	<u>Expiry</u> [†]
Hon	8	3341	November 1984
Con	5	3339	November 1984
Bon	4	3337	November 1984

[†]Pending approval of one years assessment work applied November 9, 1983.

LOCATION AND ACCESS

The Hon claim group is within 19 km north of Grand Forks within one km west of the Granby River and covering Glover Creek and other southerly flowing tributaries of Pass Creek.

Access is via the paved North Fork highway north from Grand Forks to the Brown Creek road which passes through the eastern portion of the Hon and Bon Claims. Secondary roads extending northward from the Pass Creek road include a road paralleling Rock Candy Creek provide access to the western portion of the Hon claim.

WATER AND POWER

A year-round water supply would be available from the southerly flowing tributaries of Pass Creek which bisect the property or from other minor water courses within the property boundaries.

A commercial power line is within one km of the property.

PHYSIOGRAPHY AND CLIMATE

The property lies within the Christina Range of the Monashee Mountains characterized by moderate to steep forest sloped mountains to elevations of 1,950 meters.

Elevations on the property range up to 1,200 meters above sea level in the western portion from 610 meters near Granby River.

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 1850's.

Then in 1890 gold-copper deposits were discovered at Rosslund, 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 Hon claim group, exploration and development on the Pathfinder property (one km to the east) to 1920 resulted in "1,250 tons of ore being shipped assaying 0.43 oz. Au/ton and 3.9 oz. Ag/ton". On an adjacent property to the north, exploration has been intermittently carried out since 1901. In 1939 production from the Simpson Mine was 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 the 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 previous exploration on ground covered by the Hon claim group.

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 Hon claim group is indicated to cover the Coryell Intrusives with indicated plugs of Nelson Intrusive rocks on the Hon claim and possibly at the southeastern corner of the Bon claim.

The Anarchist Group consists very largely of highly metamorphosed sedimentary rocks but includes also altered greenstones and possibly also altered intrusive rocks. The sedimentary members of the group are the altered equivalents of quartzite, slate and limestone, micaceous quartzites, mica schists, and crystalline limestone. The sheared greenstones possibly represent both intrusive and extrusive types.

A second group of rocks within the Anarchist series are light grey, granitic rocks, quite generally gneissic, the outcrops of which have in some cases a slightly rusty appearance. Quartz and microcline predominate with orthoclase and albitic-oligoclase generally present. These granitic rocks are intrusive into the schists of the Anarchist series.

Another group of rocks within the Anarchist series consists of sheared basic intrusives which can in local areas be represented as serpentine with considerable pyrite development in association with shear zones.

Feldspar porphyry "dykes" are also common. The rock is described as a "pale pink to flesh colored, fine grained rock with granitic texture. Quartz is fairly common and feldspar, shreds of biotite, hornblende, small individuals of apatite and some iron ore make up the balance of the rock."

The Coryell Intrusives are reddish to buff syenite that grade locally into granite or shankenite. Some of the smaller bodies are composed of augite monzonite or olivine syenite.

Mineralization on the Hek claim adjoining to the south occurs as "veins" of massive pyrrhotite with accompanying pyrite and chalcopyrite in varying degrees and variable to no quartz.

The Simpson zone is described as "a quartz filled shear zone in the Anarchist greenstone skarn area which has been mineralized with pyrite pyrrhotite and chalcopyrite 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 chalcopyrite 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 Pathfinder within one km east of the Hon Group there are reportedly four distinct veins "running parallel and from eight to 21 feet in width. There are good showings on all the veins".

GEOCHEMICAL SURVEY

1. Survey Procedure

One grid line was established covering the central portion of the Hon claim from its western edge.

Samples were picked up at 50 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 co-ordinates marked thereon. A total of 47 samples were analysed.

2. Testing Procedure

All samples were tested by Acme Laboratories of Vancouver, B.C. The testing procedure is first to thoroughly dry the sample. 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 - 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 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	Ag	Pb	Zn	As
Mean background value	14.6	0.18	13.8	59	6
Sub-anomalous threshold value	20.4	0.28	17.8	80	8.5
Anomalous threshold value	26.2	0.38	21.8	101	11.0

All values are in parts per million.

VLF-EM SURVEY

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.

The grid line of the geochem survey was utilized for the VLF-EM and magnetometer survey for a total of 2.3 line km. Readings were taken at 25 meter intervals.

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 54,000 gammas was subtracted from each reading and the results were contoured on 100 gamma intervals.

RESULTS OF THE GEOCHEMICAL AND GEOPHYSICAL SURVEYS

The results of the surveys are shown on Figures 2 through 8 accompanying this report.

The VLF-EM survey (Figure 3) indicated a sharp cross-over at 200 E and a general cross-over at 875 E correlating with a creek.

The cross-over at 200 E could be an indication of the Nelson-Coryell contact with the creek zone the eastern contact.

The magnetometer survey indicated a mag low at 875 E and at the creek which would correlate with the VLF-EM anomaly.

In the geochemical results correlative anomalies are indicated at 1950E - where one station copper-zinc anomalies occur.

Other single anomalous zones are localized along the grid line and should be checked for the causitive source.

CONCLUSIONS

The geophysical and geochemical surveys on the Hon claim group were successful in delineating anomalous zones of which one correlative zone could be significant in delineating potential mineralized structures.

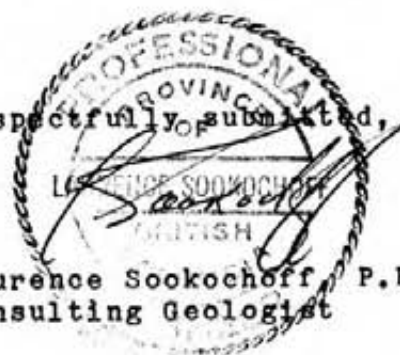
The VLF-EM survey results could have been successful in locating the Coryell-Nelson intrusive contact zone, however correlative geochem values were absent.

The low mag correlative with the creek VLF-EM anomaly could confirm a fault contact zone where incipient intrusive magnetic minerals have decayed.

RECOMMENDATIONS

It is recommended that the anomalous zones be examined for the causative source prior to any follow-up exploration.

Respectfully submitted,



Laurence Sookochoff P. Eng.
Consulting Geologist

January 12, 1984
Vancouver, B.C.

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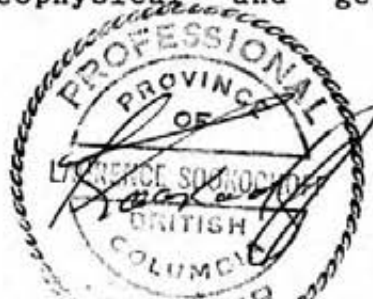
CERTIFICATE

I, Laurence Sookchoff, 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 the accompanying report is based on pertinent material as cited under references, and from the supervision of the geophysical and geochemical surveys reported on herein.



Laurence Sookchoff, P.Eng.
Consulting Geologist

January 12, 1984
Vancouver, B.C.

HON CLAIM GROUP
 1983 ASSESSMENT REPORT
 GEOPHYSICAL AND GEOCHEMICAL SURVEYS
AFFIDAVIT OF EXPENSES

The fieldwork of the geophysical and geochemical surveys were carried out on the SAT mineral claims, Greenwood M.D., B.C. from October 15, 1983 to October 16, 1983 to the value of the following.

Fieldwork 2 men October 15-16, 1983	
4 man days @ \$150	\$ 600.00
Vehicle rental, 2 days @ \$65 plus gas, mileage	130.00
Assaying 47 samples @ \$6.50	295.50
Field supplies	50.00
Room and Board 4 days @ \$40/day/man -	160.00
Data compilation, draughting and printing	164.50
Supervision and reports	<u>300.00</u>
	\$ 1,700.00
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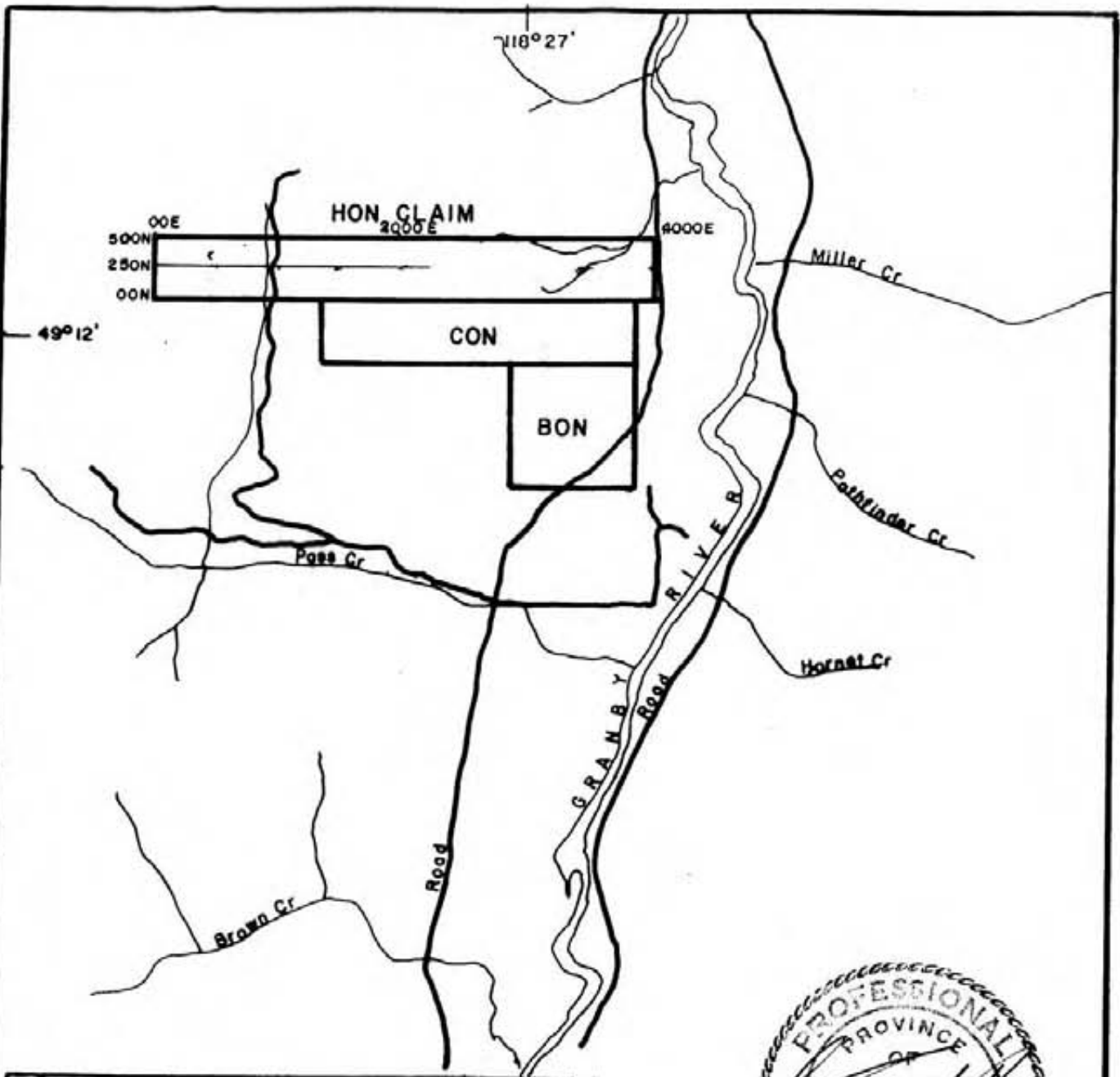
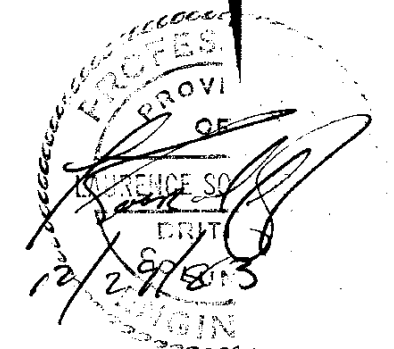
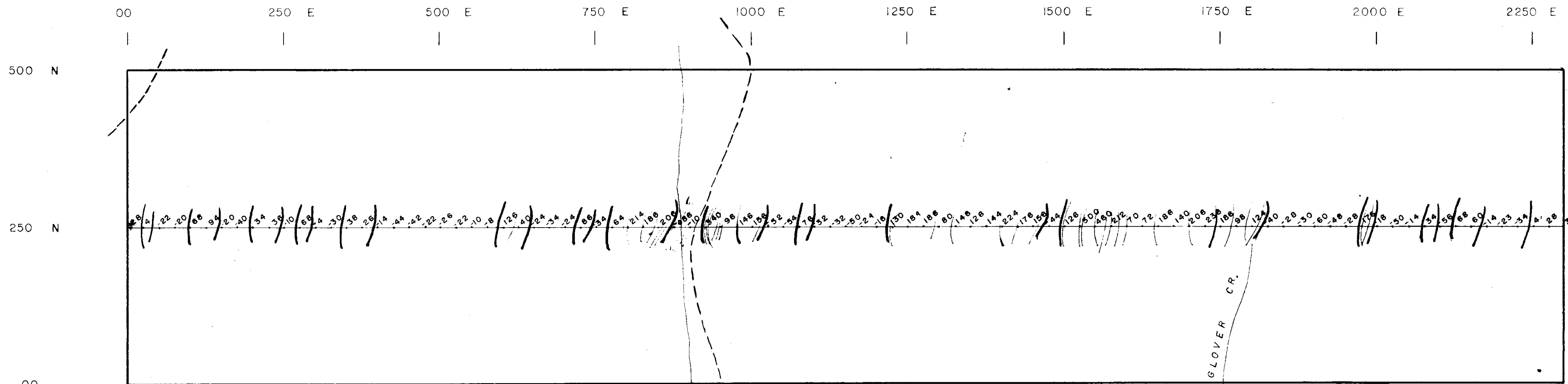


FIGURE 1
SOOKCHOFF CONSULTANTS INC.
 HON, CON & BON CLAIMS
LOCATION & CLAIM MAP
 N.T.S. 82E 1W GREENWOOD M.D.
 0 1 2 3 km
 Scale 1:50000 DEC. 1983

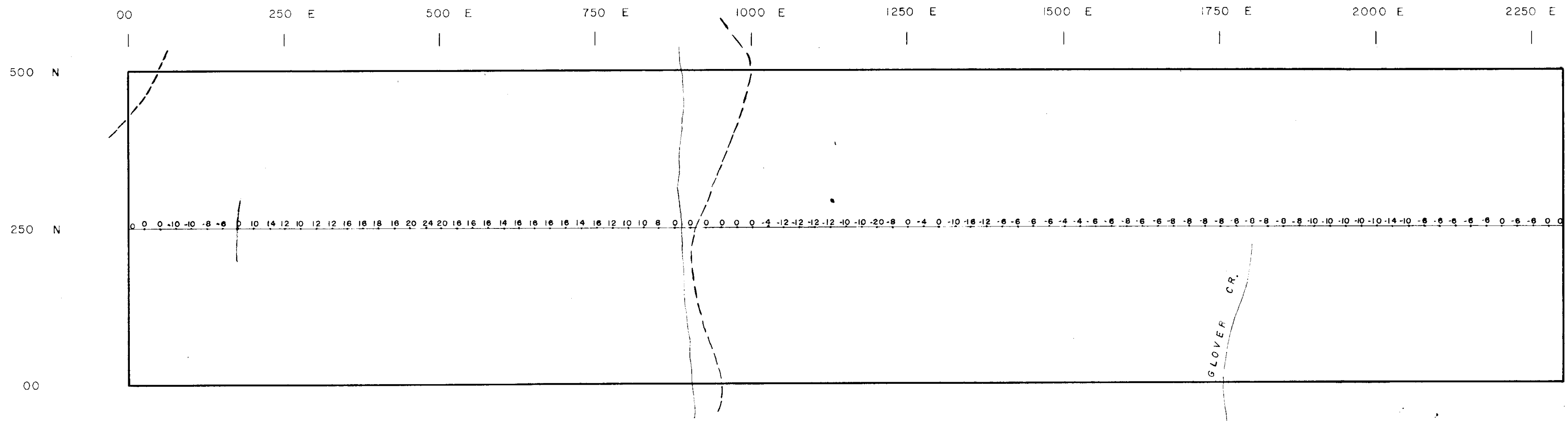


LEGEND
 • STATION
 O CONTOUR AT 54,000 γ

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FIGURE 2

SOOKOCHOFF CONSULTANTS INC.	
HON CLAIM	
N.T.S. 82E/1E	Greenwood M.D., B.C.
MAGNETOMETER SURVEY	
Scale 1:5000	December 1983



LEGEND

STATION

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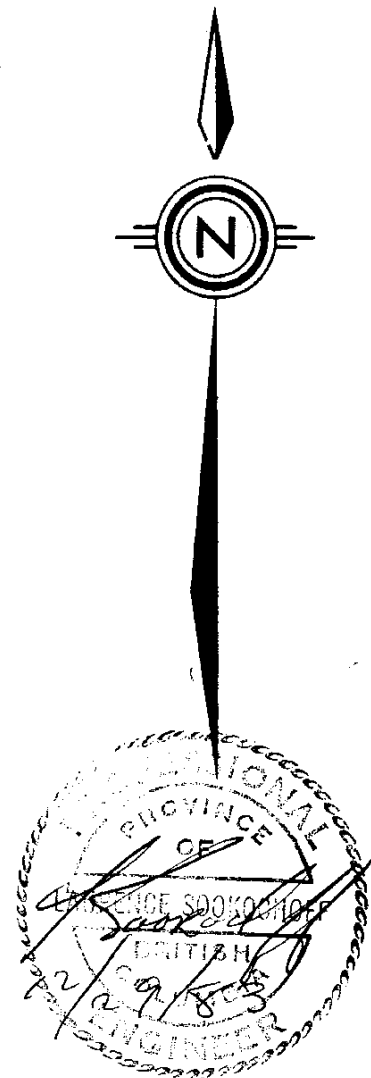
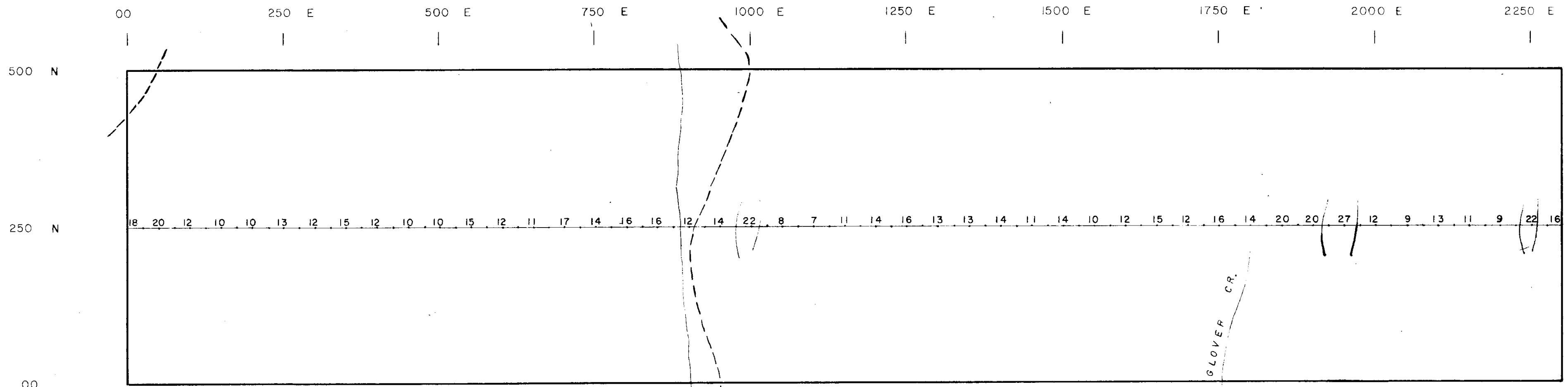


FIGURE 3

SOOKOCHOFF CONSULTANTS INC.	
HON CLAIM	
N.T.S. 82E/1E	Greenwood M.D.,B.C.
VLF - EM SURVEY	
Scale 1:5000	December 1983



LEGEND

- STATION
- 13.8 PPM BACKGROUND
- 17.8 " SUB ANOMALOUS
- 21.8 " ANOMALOUS

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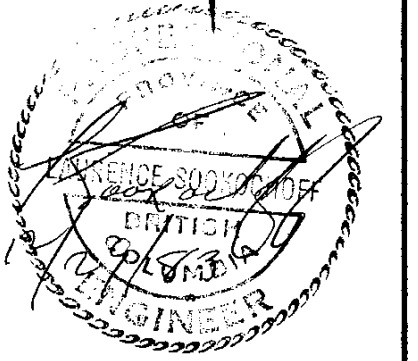


FIGURE 4

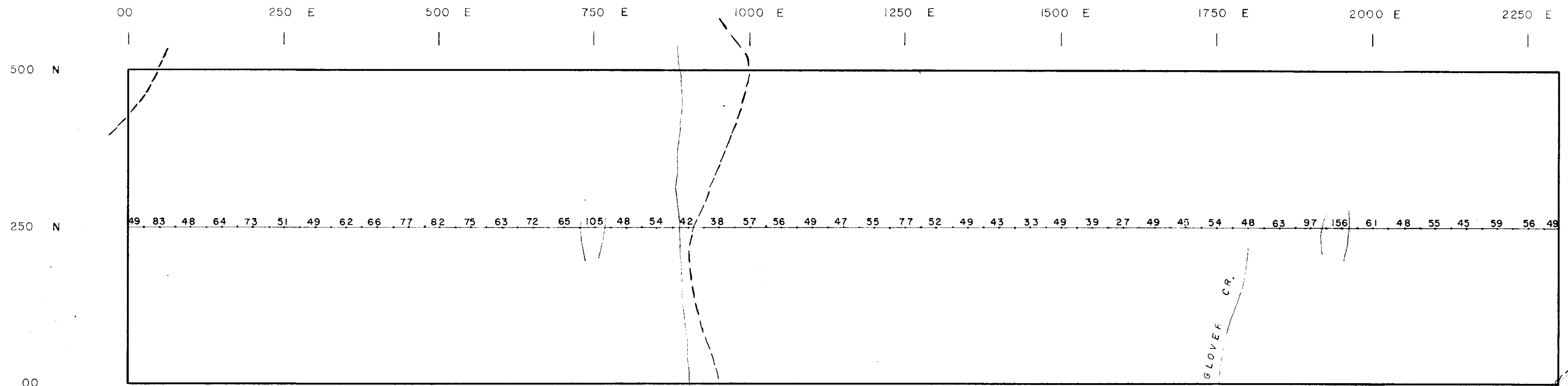
SOOKCHOFF CONSULTANTS INC.

HON CLAIM

N.T.S. 82E/IE Greenwood M.D.B.C.

Pb GEOCHEMISTRY

Scale 1:5000 December 1983



LEGEND

- STATION
- 59 PPM BACKGROUND
- 80 " SUB ANOMALOUS
- 101 " ANOMALOUS

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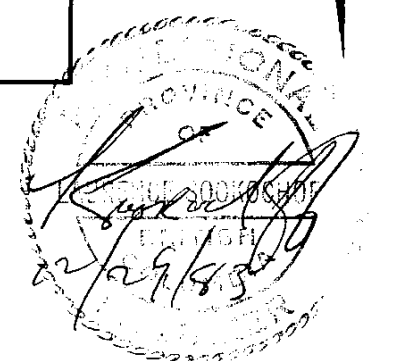
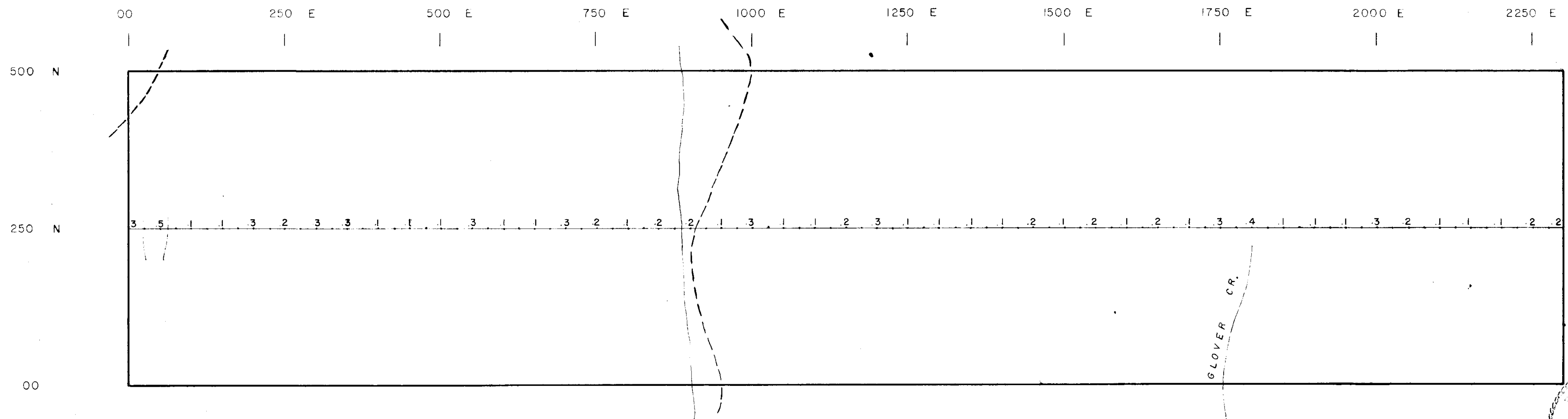


FIGURE 5

SOOKOCHOFF CONSULTANTS INC.	
HON CLAIM	
N.T.S. 82E/1E	Greenwood M.D., B.C.
Zn GEOCHEMISTRY	
Scale 1:5000	December 1983



LEGEND

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

GEOLOGICAL BRANCH
ASSESSMENT REPORT

11,705

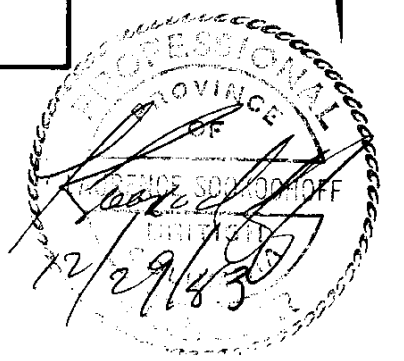


FIGURE 6

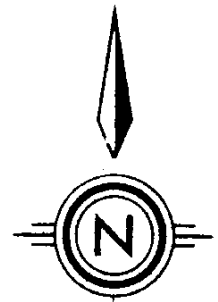
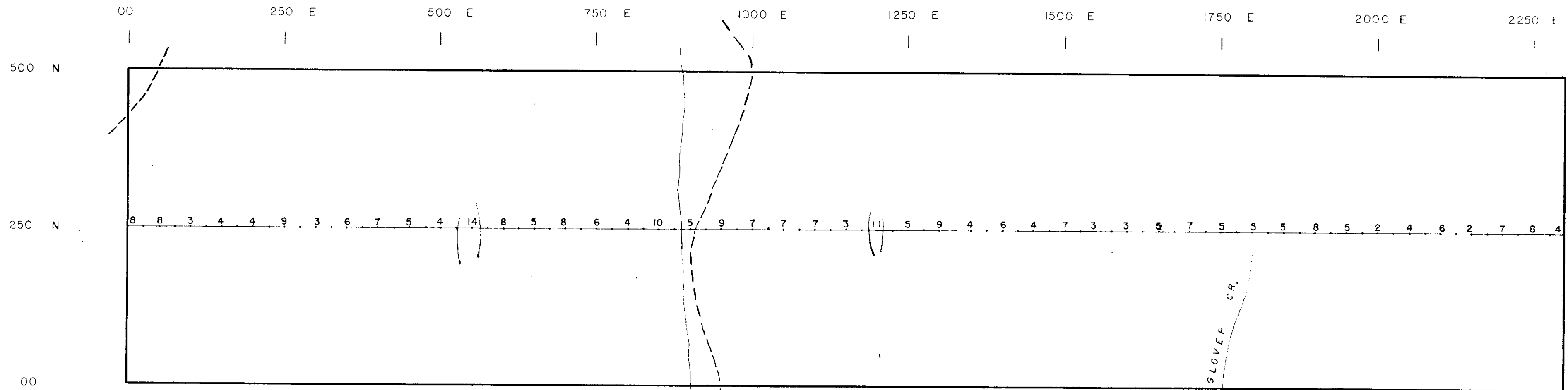
SOOKOCHOFF CONSULTANTS INC.

HON CLAIM

N.T.S. 82E/1E Greenwood M.D., B.C.

Ag GEOCHEMISTRY

Scale 1:5000 December 1983



LEGEND

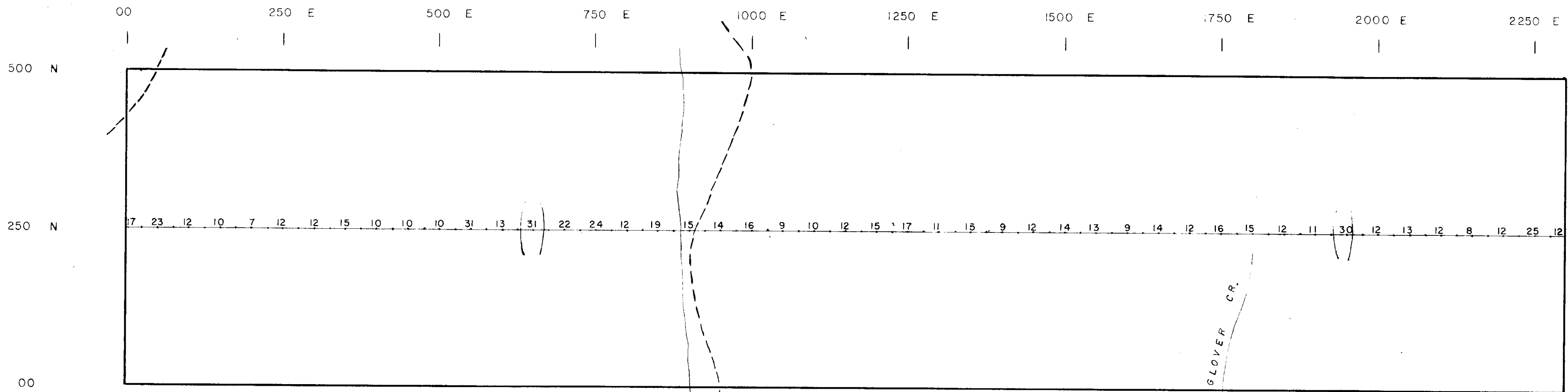
- STATION
- 6.0 PPM BACKGROUND
- 8.5 " SUB ANOMALOUS
- 11.0 " ANOMALOUS

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FIGURE 7

SOOKOCHOFF CONSULTANTS INC.	
HON CLAIM	
N.T.S. 82E/1E	Greenwood M.D., B.C.
As GEOCHEMISTRY	
Scale 1:5000	December 1983



LEGEND

• STATION

14.6 PPM BACKGROUND

20.4 " SUB ANOMALOUS

26.2 " ANOMALOUS

GEOLOGICAL BRANCH
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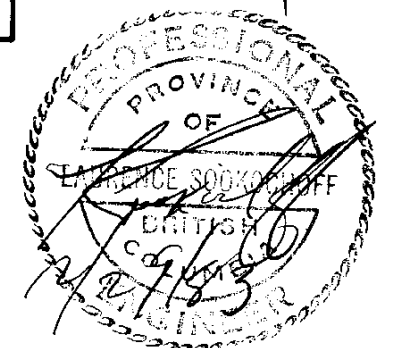


FIGURE 8

SOOKCHOFF CONSULTANTS INC.	
HON CLAIM	
N.T.S. 82E/1E	Greenwood M.D., B.C.
Cu GEOCHEMISTRY	
Scale 1:5000	December 1983