

84-#323-12252

5

Assessment Report  
on  
Geophysical and Geochemical Surveys  
on the  
"A" Mineral Claim  
Ft. Steele, M.D. 82G 12E

Location: 12 km NE of Ft. Steele  
Wallinger Creek

Owner JUSTICE MINING CORPORATION  
and 475 Howe Street  
Operator: Vancouver, B.C., V6C 1B3

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

Dates of Work: July 12, 1983 - December 19, 1983

Date of Report: December 19, 1983

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

12,252

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*Cost statement  
in map  
pocket*

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Geochemical and Geophysical Report

on the

A Mineral Claim

for

JUSTICE MINING CORPORATION

INTRODUCTION

During the period of July 12 to July 31, 1983 a field exploration program consisting of geochemical and geophysical surveys was carried out on the A mineral claim group. The exploration program was initiated on the writer's Stage I recommendations as set out in a report dated June 29, 1983.

The purpose of the survey was to locate potential economic mineral bearing zones comparable to the zones of mineralization located on the Dardenelles and the Mother Lode claims adjacent to the south.

The exploration work was carried out by Worldwide General Contracting.

This report provides the results of that work, the interpretation and the conclusions thereof.

PROPERTY

The property is comprised of one located mineral claim of 18 units. Particulars are as follows:

<u>Claim Name</u>	<u>Record No.</u>	<u>Expiry Date</u>
A	1786	May 27, 1984

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

LOCATION AND ACCESS

The property is located 14 km northeast of Fort Steele and adjacent and to the east of Wild Horse River (Creek) and covering a portion of Wallinger Creek. Wild Horse River is a southwesterly flowing tributary of the Kootenay River with the confluence at Fort Steele which is 16 km northeast of Cranbrook and 29 km southeast of Kimberly and the Sullivan Mine.

Access if from Fort Steele for approximately eleven km via a paved to gravel to dirt road paralleling the Wild Horse River along the south. The LCP is two km north of Boulder Creek and adjacent to the road.

The Dardenelles and Motherlode mineral claims which were explored, worked and from which production ensued in 1896 and more recently in 1975, are adjacent to the south-central boundary of the property.

TIMBER AND TOPOGRAPHY

The property is within the Purcell Range of mountains and covering moderate to steep timbered westerly facing slopes between Shepard Gulch (Creek) and Wallinger Creek within included portions thereof. Elevations range up to 1875 meters with a relief of 600 meters.

TRANSPORTATION AND SUPPLIES

Cranbrook, the nearest major commercial center is 40 km west of Fort Steele and is where most supplies would be obtainable. It is served daily by commercial airline from Vancouver 515 air km distant to the west.

Rail facilities are available from Fort Steele to the Trail Smelter, 190 km by rail to the west southwest.

### WATER AND POWER

Water would be available from Boulder Creek or from water courses on the property for most of the snow free surface exploration period which may last up to seven months.

Diesel electric power would be required for all phases of the exploration and development program.

The nearest commercial power source is at Fort Steele.

### HISTORY

The history of the property area stems from the production of gold from the placers of the Wild Horse River tributaries.

In 1893 it was reported that Wild Horse River yielded over six million dollars in placer gold but little prospecting for gold in hard rock has been done up to that date.

In 1894 new discoveries of gold in quartz were made on Wild Horse River.

In 1896 the discovery of many mineral locations on Wild Horse River was reported on one of which the Dardenelles, mining was being done.

In the fall of 1896, 30 tons of ore were hauled down a two and a half km trail from the workings "2,200 feet" above the creek to the arrastra at the creek which was built in 1896 to process the Dardenelle ore.

The Dardenelles was worked periodically thereafter to approximately 1919. In a 1925 report, the workings consisted of an upper incline shaft sunk for a distance of "55 feet" with a lower incline shaft sunk on a parallel mineralized quartz vein for a distance of "217 feet".

In 1975 three shipments of ore were made by Magnum Enterprises of Cranbrook to the Trail smelter. The shipments were 48.3 tons, 22.2 tons and 24.8 tons for a total of 95.3 dry tons.

During the latter part of the 1800's and the early 1900's and at the time the Dardenelles was in the stages of initial exploration, other properties in the immediate area were also being worked. These properties included the Kootenay King on the north side of Wild Horse River on Lakit Mountain and within five km northwest of the Dardenelles and where three tunnels explore a mineralized zone.

On the Tit for Tat group of three reverted crown grants within two km north of the "C" mineral claim, numerous trenches and inclined shafts explore a mineralized quartz zone in association with quartzites and interbedded thin talcose schists.

Other groups of reverted crown grants on which exploration work was performed are seven km north of the "A" mineral claim.

There is no known previous exploration work on the "A" claim prior to the 1983 exploration program carried out by Justice Mining Corporation.

#### REGIONAL GEOLOGY

The general geological setting of the area is of predominantly the Creston formation of Precambrian age. The Creston formation is transitional from the Aldridge formation and embraces that succession of greyish argillaceous quartzites which is included between the dark rusty weathering, argillaceous quartzites of the lower Aldridge formation and the thin bedded calcereous rocks of the upper Kitchener formation. In general, the Creston formation consists of argillaceous quartzites, purer quartzites and argillites whose beds average about one foot in thickness.

The main constituent of the purer quartzites is quartz of small angular interlocking grains 0.05 - 1 mm in diameter. The argillaceous quartzites have an argillaceous cement which is usually altered to a dense network of sericite needles. The argillaceous cement is in a few cases, replaced and also accompanied by calcium and magnesium carbonate thus giving rise to calcereous and dolomitic quartzites.

The Creston formation is host to gold quartz veins on Perry Creek, a northeasterly flowing tributary of the St. Marys River with the confluence 14 km west of the "C" mineral claim and 13 km northwest of Cranbrook. The deposits occur in the argillaceous quartzites which are well bedded in beds "2 inches to 2 feet" in thickness, the latter separated by thin beds of metargillites.

The deposits occur as true fissure veins averaging about "8 feet" with some as wide as "20 feet". They can be traced for long distances along strike. The gold values occur as native in the outcrops and with pyrite at depth are unequally distributed.

#### PROPERTY GEOLOGY

In the property area and more specifically on the Tit for Tat group of reverted crown grants within two km north the the "A" mineral claim, green, purple and white argillaceous quartzites of the Creston formation occur. Dolomitic argillite of the Kitchener formation is also indicated. The quartzites strike from N 10 W to N 30 E with dips from 38 to 60 W often interbedded with these quartzites are thin beds of a talcose schist.

The mineralized quartz veins also strike northerly (N 25 W to N 35 E but dip to the east (12 to 45 ). The vein is up to one meter wide however and is predominantly from 25 to 50 cm wide over a horizontal distance of 140 meters.

At the Kootenay King, the country rock is composed of shales and various quartzites striking N 50 E and dipping at an angle of 65 . Aplitic dykes are also reported. Three tunnels explore mineralized zones which are indicated by sandy shale on a dump heavily impregnated with galena in addition to quartz veins cutting the quartzites "but seeming to dip under the next bed of slate". Several porphyry dykes "all more or less decomposed and containing only slight values in silver and copper are reported on the property".

On the Dardenelles the country rock is composed of shales, slates, schists and beds of quartzite, the shales being predominant. A quartz vein striking NW by SE and dipping SW at an angle of 23 to 33 contains a small amount of iron pyrites and galena besides gold values. The vein can be traced for 1,200 meters in the country rock of slate.

#### MINERALIZATION

Mineralized zones on properties of the immediate area to the "A" mineral claim are mainly confined to quartz veins, however on the Kootenay King (four km NW) mineralization is reported to occur within "porphyry dykes".

On the Tit for Tat group mineralization is mainly of disseminated iron sulphides and galena which occur mainly as large stringers and segregations in a quartz vein 25-50 cm wide and traced for a horizontal distance of 140 meters. Gold and copper sulphides are also reported.

Assays from the vein are reported up to .426 oz. Au/ton across 20 cm with many in the .05 to .18 oz Au/ton range. A reported assay of 2.388 oz Au/ton is not allocated to location.

On the Kootenay King an open-cut on a steep hillside at an elevation of "7,550 feet" consisting of a finely crystalline mixture of lead, zinc and iron sulphides occurs in a sheared zone having a northerly and southerly strike. A sample taken across a width of 7 feet gave the following returns; "gold 0.02 oz; silver 6.6 oz to the ton; lead 19.1 per cent; zinc 21.9 per cent".

Three tunnels were driven to explore the mineralized outcrop. In the first tunnel a narrower sheared zone is exposed. A sample "across 40 inches assayed: gold 0.013; silver 5.1 oz to the ton; lead 14.8 per cent; zinc 18.1 per cent. In the second tunnel, "109 feet below the outcrop" and driven into the hill for "375 feet" the shear zone was out at the "178 foot distance" showing mineralization in stringers and small bunches. The third tunnel "226 feet" below the open-cut was driven for "311-feet in a northerly direction and apparently parallel to the sheared zone".



On the Dardenelles a northwesterly striking mineralized quartz vein occurring within schists and quartzite striking N 10 W and dipping 60 W has been traced for some length from the main workings which consist of a 17 meter and a 53 meter incline shaft. The 17 meter workings are on a 1.2 meter wide quartz vein which contains a central band of galena up to 6 cm wide. Assays from the vein are reported up to 0.80 oz Au/ton across 1.2 meters. The high values reportedly occur with the galena or confined to enriched streaks near the walls of the vein. Shipments from the property in 1975 included 22.2 tons of material grading 0.81 oz Au/ton.

There is no known mineralization on the "A" mineral claim other than that indicated from the 1983 geochemical survey.

#### THE 1983 EXPLORATION PROGRAM

In July and August 1983 a geochemical and geophysical survey was carried out over the southeastern portion of the A mineral claim. Thirteen north-south grid lines spaced from 100 to 200 meters apart from an east-west base line along the southern portion of the claim. Approximately two-fifths of the property was covered by the survey. A total of twelve km of survey were completed.

#### Geochemical Survey

##### 1. Survey Procedure

Samples were picked up at 50 meter intervals along the main grid lines. Samples were selected from the B horizon of the brown forest soil at an average depth of 30 centimeters. The soil was placed in a brown wet-strength paper bag with the grid coordinates marked thereon. A total of 231 soil samples were collected.

##### 2. Testing Procedure

All samples were tested by Acme Laboratories of Vancouver, B.C. The testing procedure was first to thoroughly dry the sample, pulverize and then .500 grams of material digested with 3 ml. of 3:1:3 HCL to HNO<sub>3</sub> to H<sub>2</sub>O at 90 deg. for one hour. The samples are diluted to 10 mls. with water. The samples were then analysed by atomic absorption for six metals - zinc, copper, arsenic, silver, lead and gold.

### 3. Treatment of Data

In assessing the data results, the background sub-anomalous and anomalous values were determined utilising a pocket calculator with a mean 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	Zn	Ag	Pb	Au	As
Mean-background value	11	44	0.1	19	6	9
Sub-anomalous threshold value	18	71	0.2	28	11	14
Anomalous threshold value	25	98	0.3	37	16	19

All values are in parts per million except for gold which is in parts per billion.

### Geophysical Survey

#### VLF-EM

A Scintex Model SC 81 VLF-EM receiver manufactured by Scintex of Toronto 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 multiple of anomalies from unwanted sources such as swamp edges, creeks and topographical highs.

### RESULTS OF THE 1983 EXPLORATION PROGRAM

The results of the geochemical and geophysical surveys completed by Justice Mining Corporation in 1983 are indicated in the accompanying maps 3 to 9 with map 10 presenting a compilation and correlation of all data.

Four prime correlative anomalous areas were delineated (Figure 10) with particulars as follows:

#### Area A

An area north of Wendy's Creek and open to the north consists of two localized correlative zones paralleling the northwesterly flowing creek and a northern zone also trending northwesterly. The creek zone is of correlative copper-lead-zinc and lead-silver with the northern zinc a general copper zone with correlative lead-silver arsenic. Anomalous gold zone occurs adjacent and to the north of a correlative zone on the creek.

#### Area B

A 400 by 550 meter area in the northeast portion of the survey encloses a general silver sub and anomalous zone to the south with an overlapping copper zone extending to the north. Localized arsenic and to a lesser degree lead zones are correlative. The zone is open to the north.

#### Area C

Within the central portion of the survey area is a general silver zone with localized correlative zone of copper-arsenic in the south lead-arsenic-copper in the west and centre and lead-zinc-copper in the north. A gold anomaly occurs in the northwest between two correlative anomalous zones.

The EM survey disclosed only subtle anomalous areas, the strongest of which is east west trending adjacent to the south of the area.

#### Area D

A somewhat localized area of correlative silver-copper and arsenic sub and anomalous values. The zone is open to the east.

Other areas such as a gold anomaly along the central east portion of the survey area and a large arsenic-lead zone along the southwest portion should also be examined for the causitive source.

CONCLUSIONS

Within the delineated areas, Area A appears to be the more significant in that the northwesterly flowing creek could represent a major structure with the associated anomalous zones indicating Dardenelles type mineral zones.

In Area B, there is not a predominant trend to the zones, however northwesterly and northeasterly zones are indicated with only a localized lead zone. A gold zone to the southeast however could indicate a southeast trending structure from Area B.

Area C warrants investigation for the widespread silver zone trending southward to the Motherlode and Dardenelles. In addition, a central gold zone enveloped by correlative zones including lead to the west of the silver zone could indicate a Dardenelles type mineral zone.

An arsenic-lead zone along the southwest portion should also be examined for the causitive source.

RECOMMENDED EXPLORATION PROGRAM

It is recommended that Stage II of the writer's recommended exploration program as detailed in a report on the "A" mineral claim and dated June 29, 1983 be initiated. The program would consist of detailed geochemical and geophysical surveys within delineated correlative sub and anomalous areas as outlined in accompanying Figure 10.

The surveys would be followed by trenching and sampling of prime localized zones.

Respectfully submitted,

Laurence Sookehoff, P.Eng.  
Consulting Geologist



December 19, 1983  
Vancouver, B.C.

BIBLIOGRAPHY

## Minister of Mines Reports

1893 - p. 1065  
1896 - p. 523  
1898 p. 1027  
1899 p. 659  
1902 p. 130  
1913 p. 423  
1925 p. 229  
1934 p. E 29

KREGOSKY, R.D. - Geological Report on the  
1982 Tit for Tat Claim Group

SCHOFIELD, S.J. - Geology of Cranbrook Map Area  
1915 British Columbia

SOOKOCHOFF, L. - Geological Evaluation Report for -  
Seco Resources Ltd. on the Dardenelles  
and Mother Lode Mineral Claims  
May 4, 1983

- Geological Evaluation Report for  
Bowes-Lyon Resources Ltd. on the  
C Mineral Claim, June 30, 1983

- Geological Evaluation Report on the  
A Mineral Claim for Justice Mining  
Corporation, June 29, 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, from a property examination made on June 13, 1983 and from field data supplied to the writer.
5. I have no direct, indirect or contingent interest in the property described herein or in the Securities of Justice Mining Corporation nor do I expect to have any.

Laurence Sookochoff, P.Eng.  
Consulting Geologist

December 19, 1983  
Vancouver, B.C.

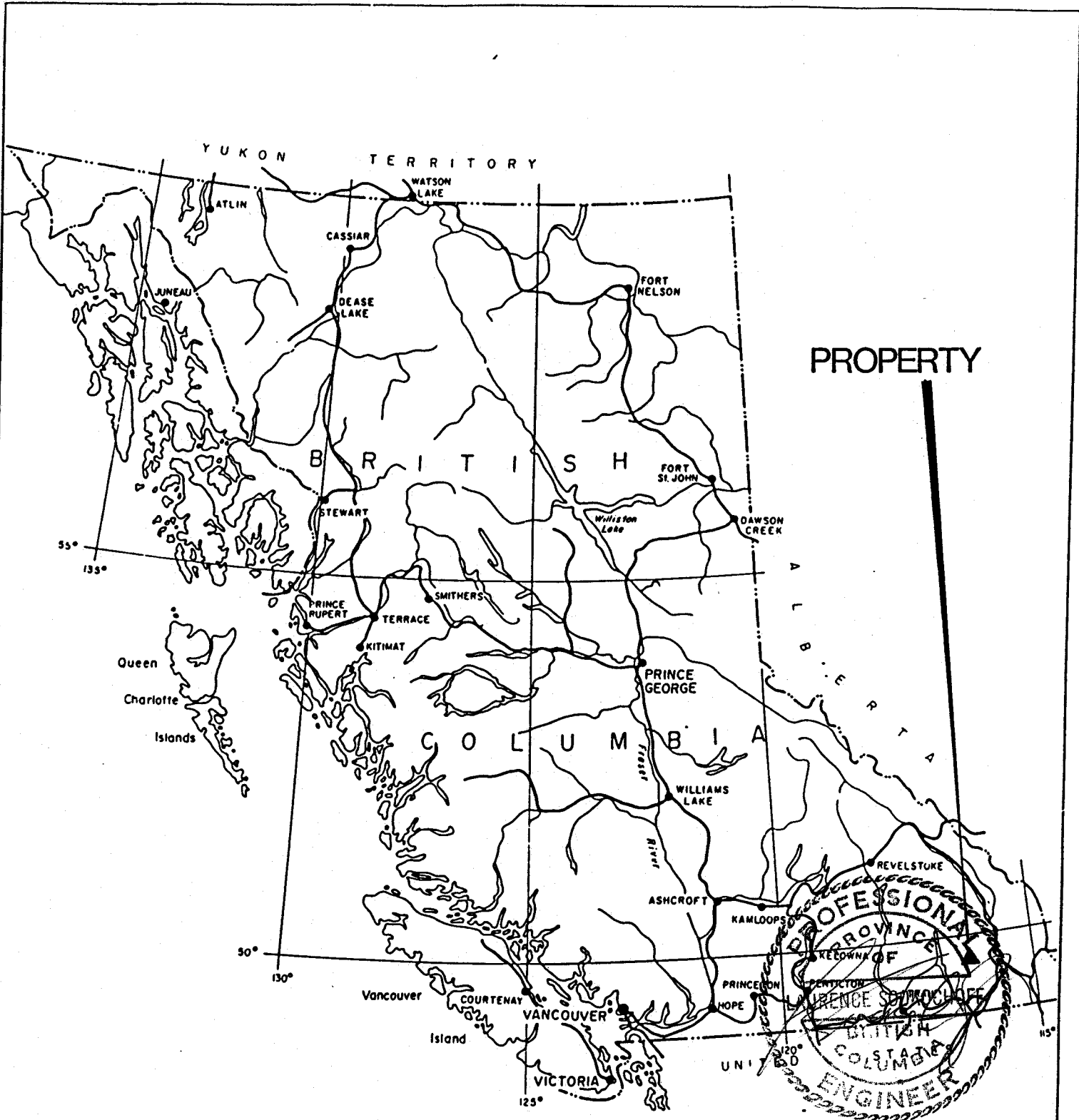


FIGURE 1

**JJUSTICE MINING CORPORATION**  
 A MINERAL CLAIM  
 PROPERTY LOCATION MAP

0 100 200 MILES  
 0 100 200 300 KILOMETRES

DRAWN	PROJECT	DATE	FIG.
		DEC 1992	1

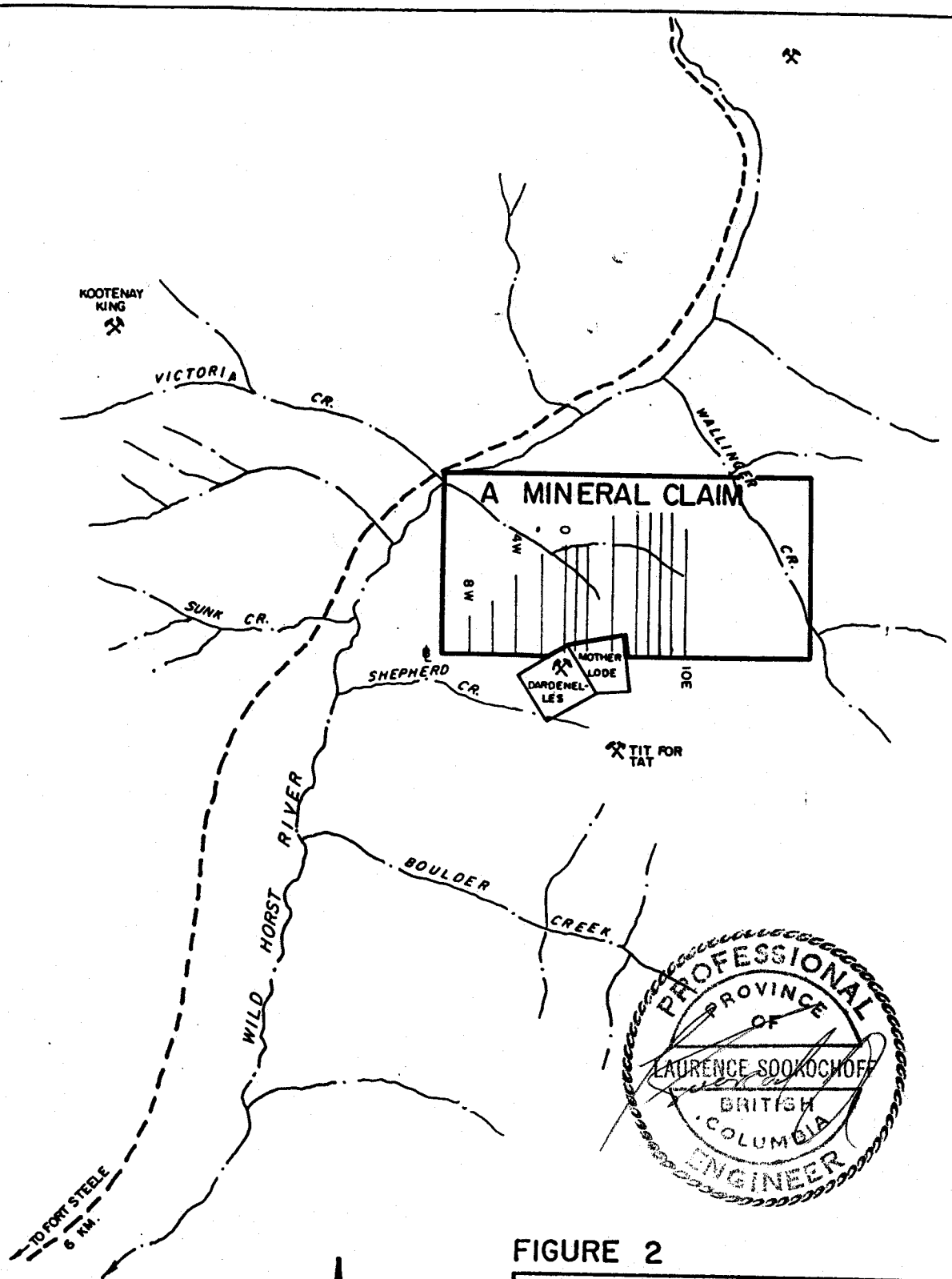


FIGURE 2

SOOKOCHOFF CONSULTANTS INC.  
 JUSTICE MINING CORPORATION  
 A MINERAL CLAIM  
**CLAIM MAP**  
 N.T.S. 826 - 12 E FORT STEELE M.D., BC.  
 0 1 2 3 KM.  
 SCALE 1:50,000 DEC. 1983



WORLD WIDE GENERAL CONTRACTING LTD.  
6071 - 148th Street  
Surrey, B. C.  
V3S 3C3  
Telephone (604) 591-2603

Justice Mining Corporation  
413 - 475 Howe Street  
Vancouver, B. C.  
V6C 2B3

16 November, 1983

Gentlemen:

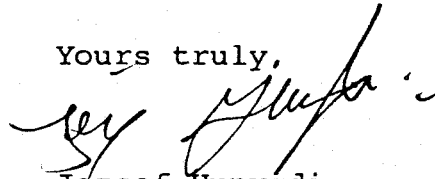
For your assistance in filing the work done on the "A" claims, this letter will verify that the following work has been completed in accordance and supervised by your consultants L. Sookochoff, P.Eng. We have received your cheque.

Geochemical Survey	5,500.00
Geophysical Survey	
VLF-EM	3,500.00
<del>Claim locating</del>	<del>300.00</del>
<del>Road Repair</del>	<del>1,500.00</del>
<del>Prospecting and Sampling</del>	<del>1,200.00</del>
Assays	1,725.30
Draifing	561.89

\$ 14,287.19

11287.19

Yours truly,



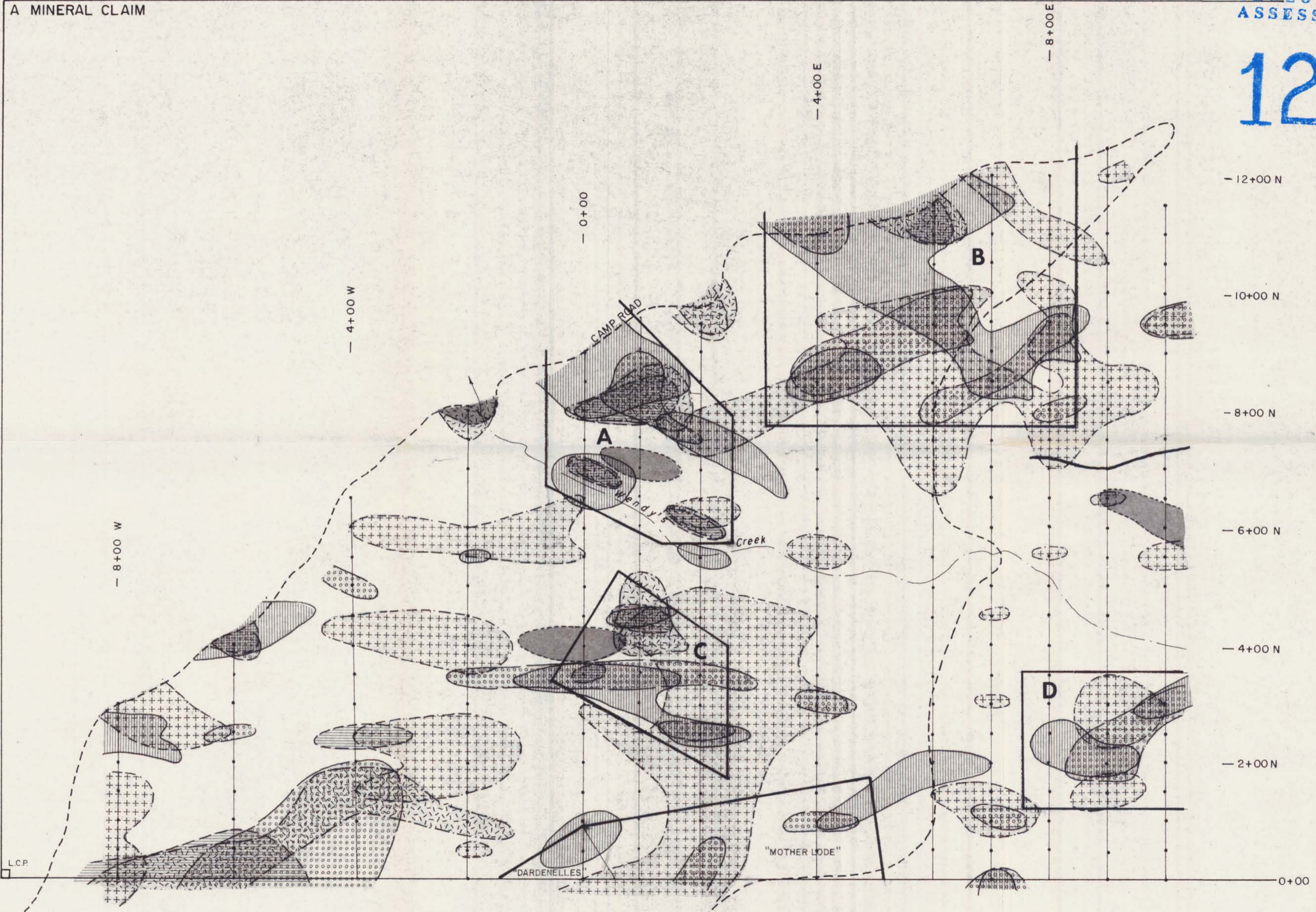
Jozsef Hunyadi  
Managing Director  
WORLD WIDE GENERAL CONTRACTING

JH:ms

A MINERAL CLAIM

GEOLOGICAL BRANCH  
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LEGEND

- STATION
- EM-16 CONDUCTOR
- Cu ANOMALIES
- Pb ANOMALIES
- Zn ANOMALIES
- Ag "
- As "
- Au "

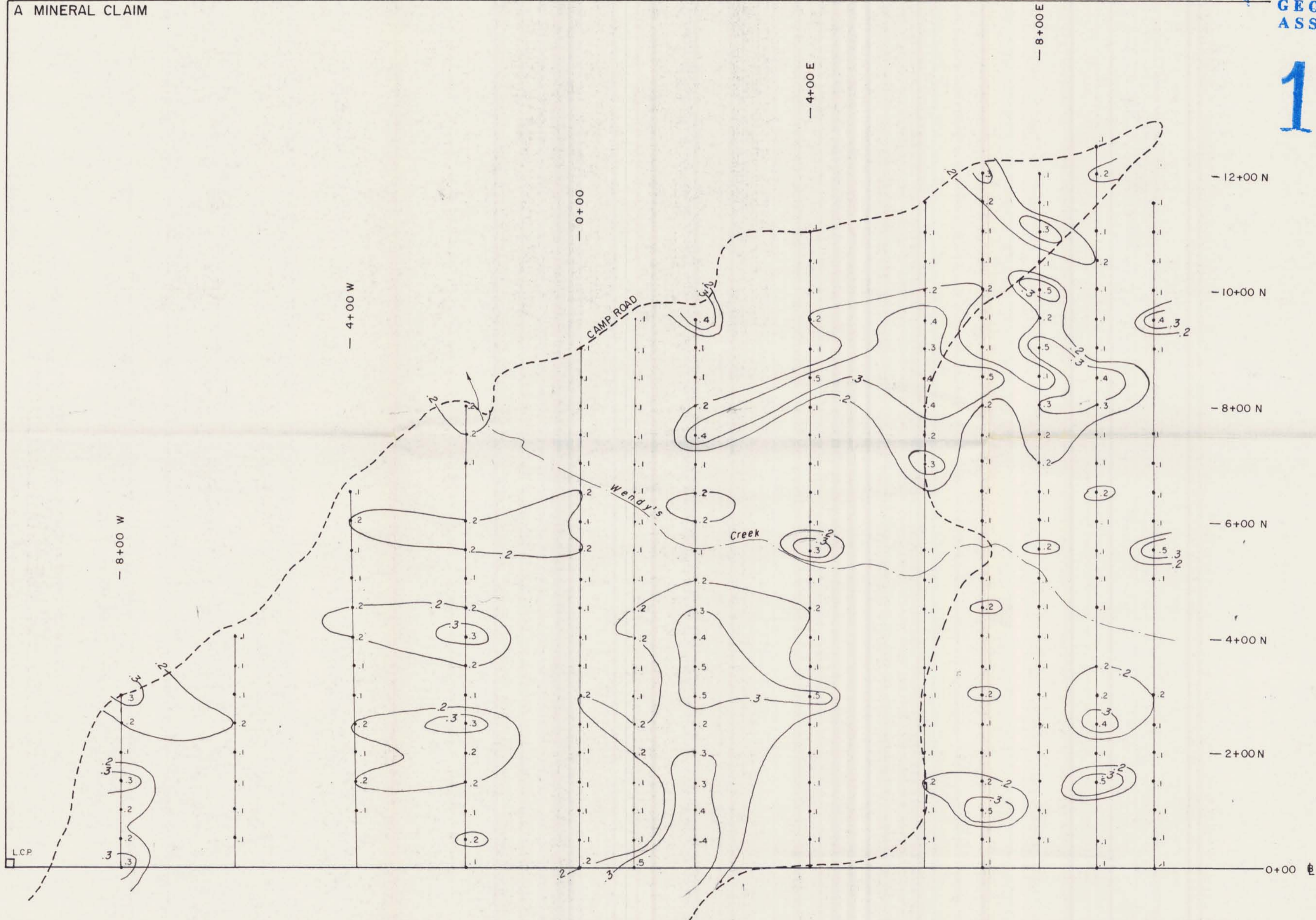


FIGURE 10

SOOKOCHOFF CONSULTANTS INC.  
 JUSTICE MINING CORPORATION  
 A MINERAL CLAIM  
**COMPILATION MAP**  
 N.T.S. 82G-12E FORT STEELE M.D., B.C.  
 SCALE 1:5000 NOV. 1983

12,252

A MINERAL CLAIM



LEGEND

- STATION
- 1 PPM BACKGROUND
- 2 " SUB ANOMALOUS
- 3 " ANOMALOUS



FIGURE 9

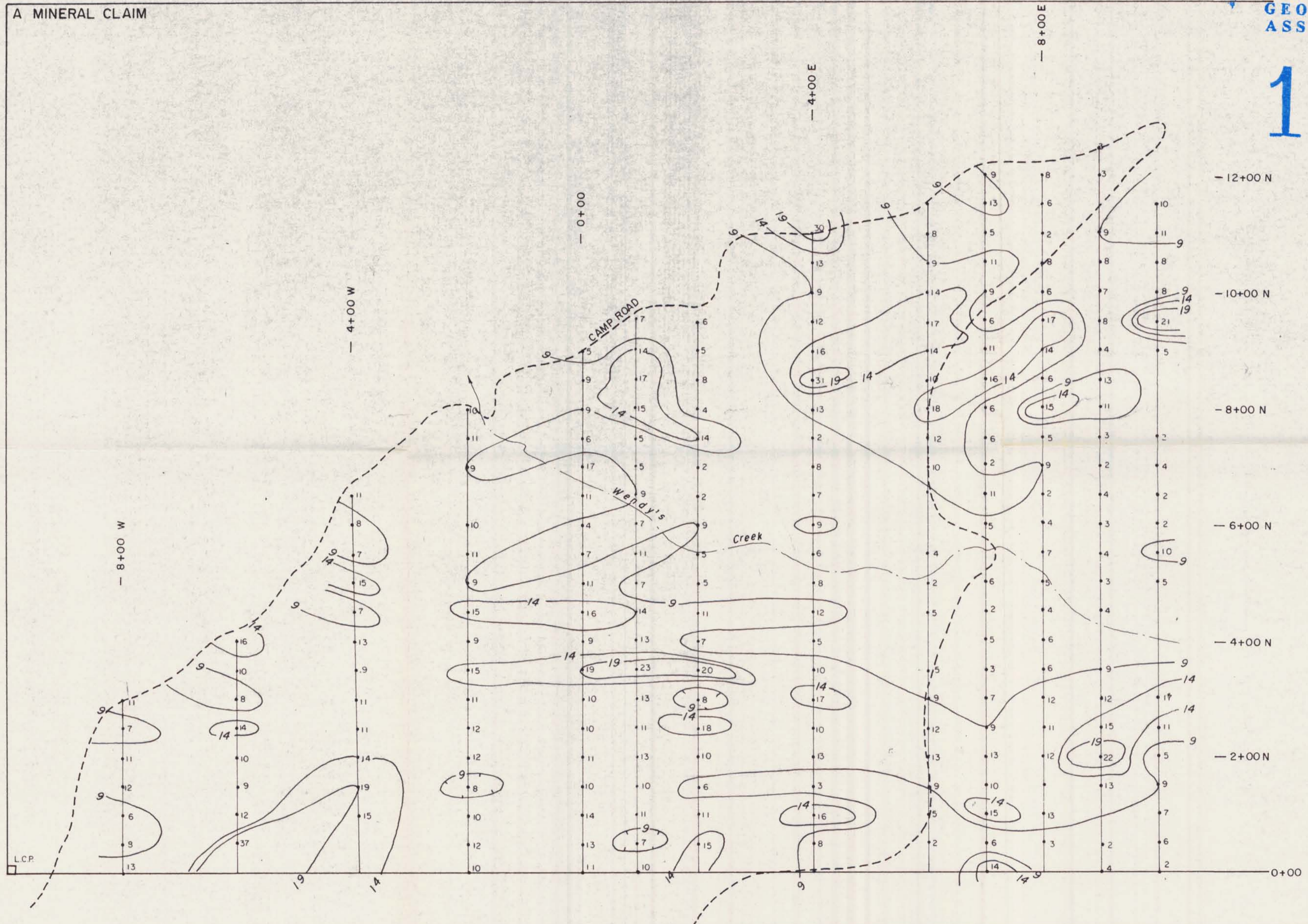
SOOKCHOFF CONSULTANTS INC.  
JUSTICE MINING CORPORATION  
A MINERAL CLAIM  
**GEOCHEMISTRY - Ag**

N.T.S. 82G-12E FORT STEELE M.D., B.C.

0 100 200 300 METRES

SCALE 1:5000 NOV. 1983

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**LEGEND**

- STATION
- 9 PPM BACKGROUND
- 14 " SUB ANOMALOUS
- 19 " ANOMALOUS



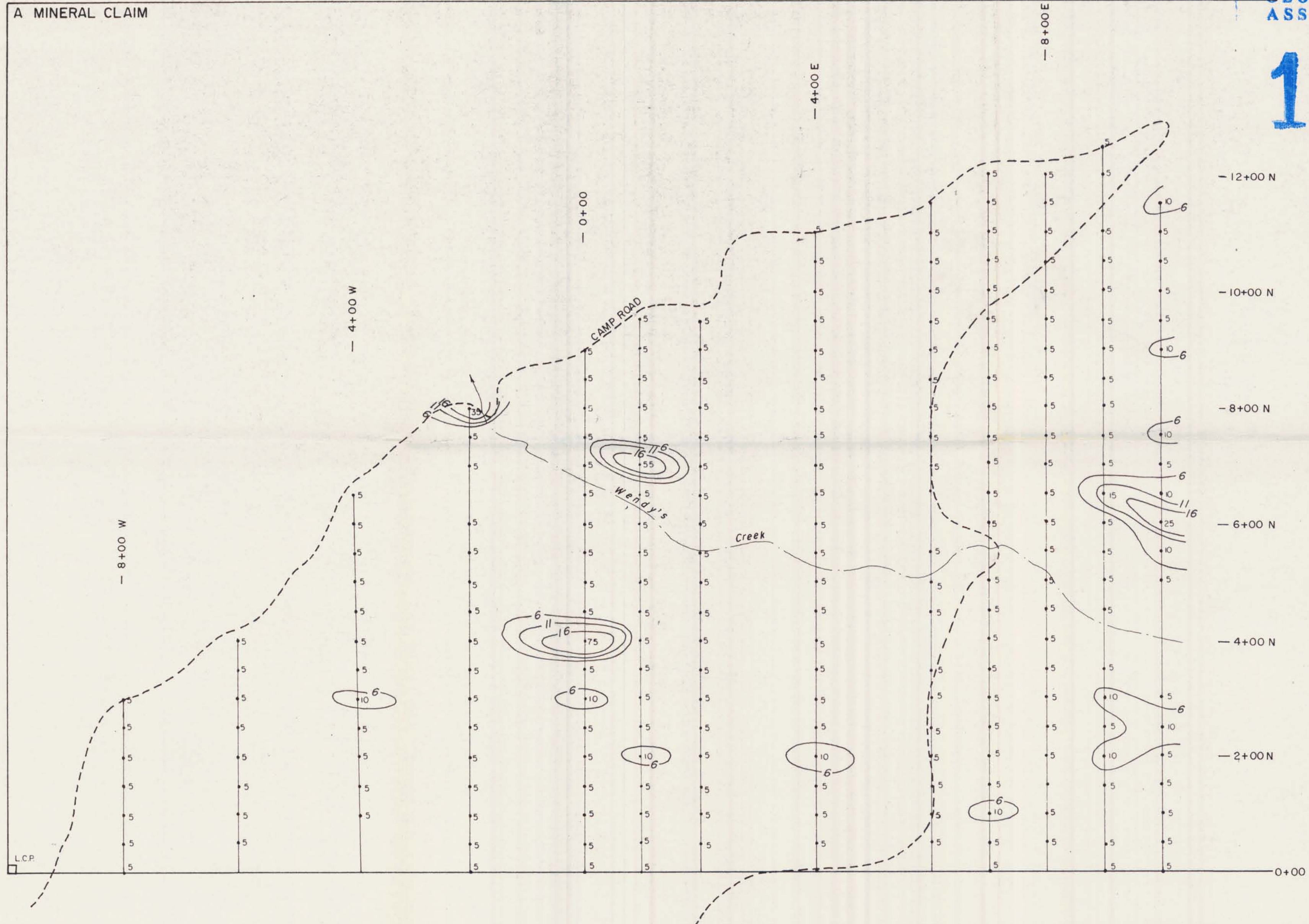
**FIGURE 8**

SOOKOCHOFF CONSULTANTS INC.  
 JUSTICE MINING CORPORATION  
 A MINERAL CLAIM  
**GEOCHEMISTRY - As**

N.T.S. 82G-12E FORT STEELE M.D., B.C.

0 100 200 300 METRES  
 SCALE 1:5000 NOV. 1983

12,252



- LEGEND**
- STATION
  - 6 PFB BACKGROUND
  - 11 " SUB ANOMALOUS
  - 16 " ANOMALOUS



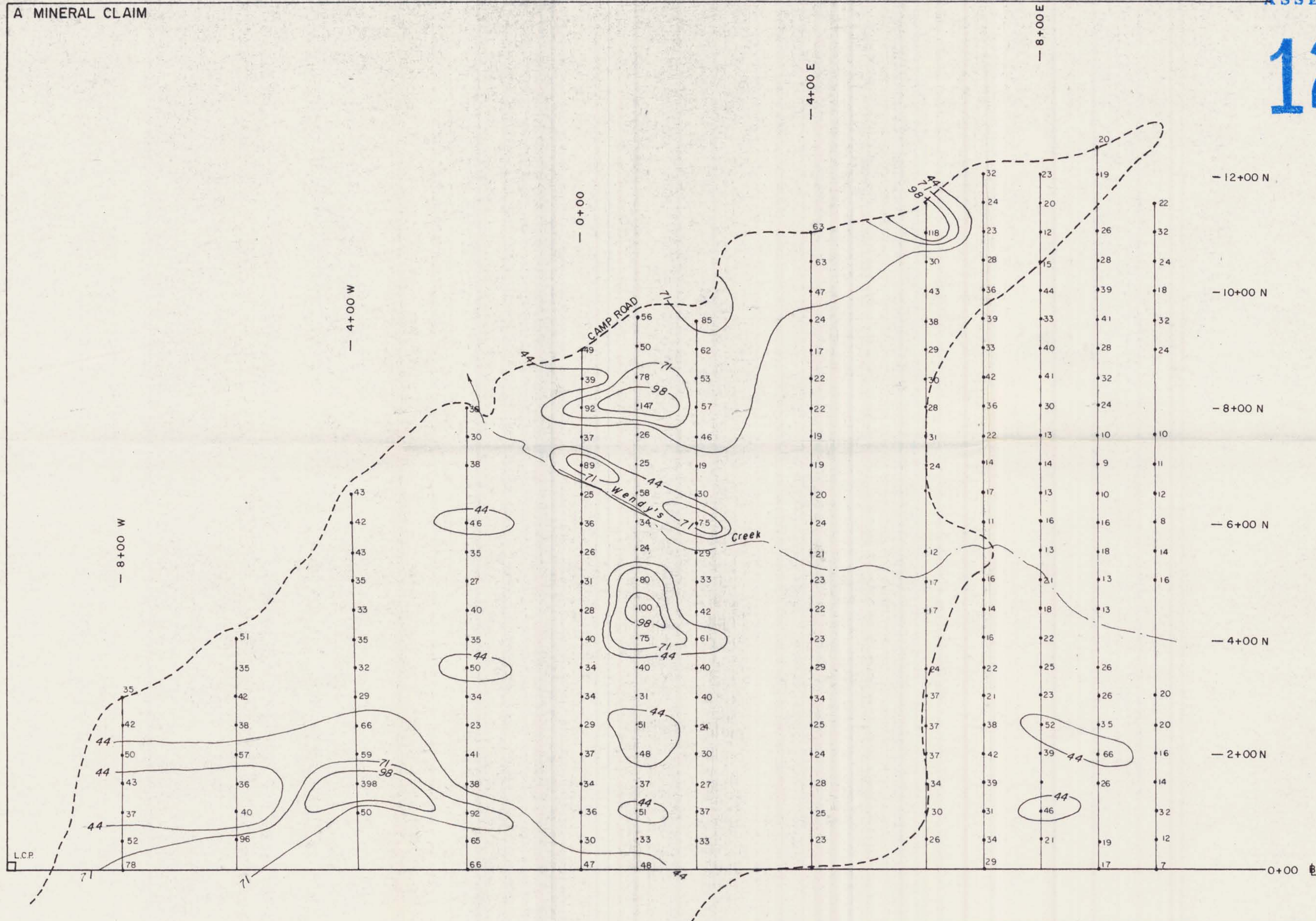
**FIGURE 7**

SOOKCHOFF CONSULTANTS INC.  
JUSTICE MINING CORPORATION  
A MINERAL CLAIM  
**GEOCHEMISTRY - Au**

N.T.S. 82G-12E FORT STEELE M.D., B.C.  
0 100 200 300 METRES  
SCALE 1:5000 NOV. 1983

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A MINERAL CLAIM



LEGEND

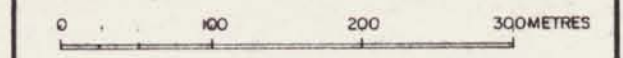
- STATION
- 44 PPM BACKGROUND
- 71 " SUB ANOMALOUS
- 98 " ANOMALOUS



FIGURE 6

SOOKOCHOFF CONSULTANTS INC.  
JUSTICE MINING CORPORATION  
A MINERAL CLAIM  
**GEOCHEMISTRY - Zn**

N.T.S. 82G-12E FORT STEELE M.D., B.C.

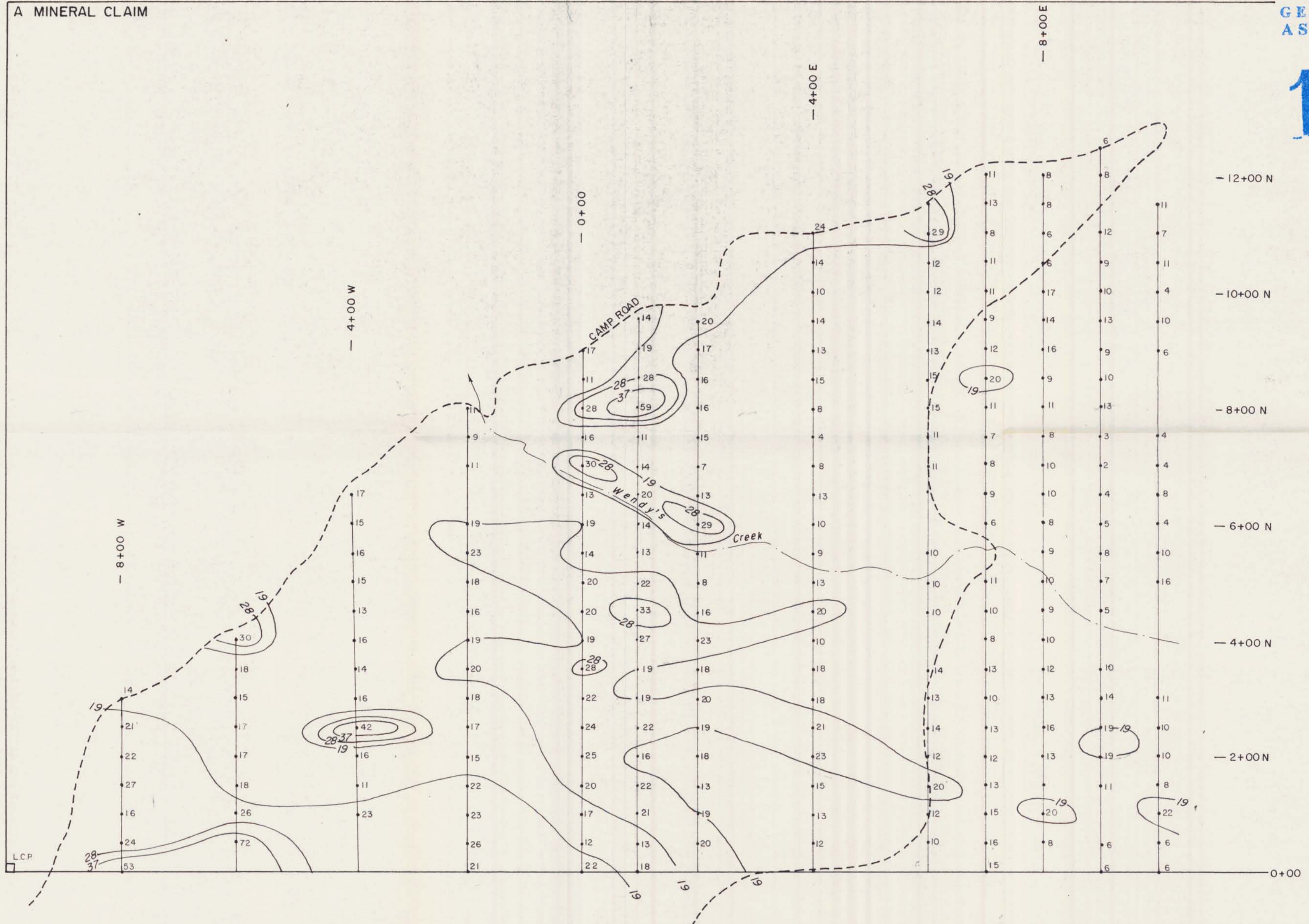


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**LEGEND**

- STATION
- 19 PPM BACKGROUND
- 28 " SUB ANOMALOUS
- 37 " ANOMALOUS



FIGURE 5

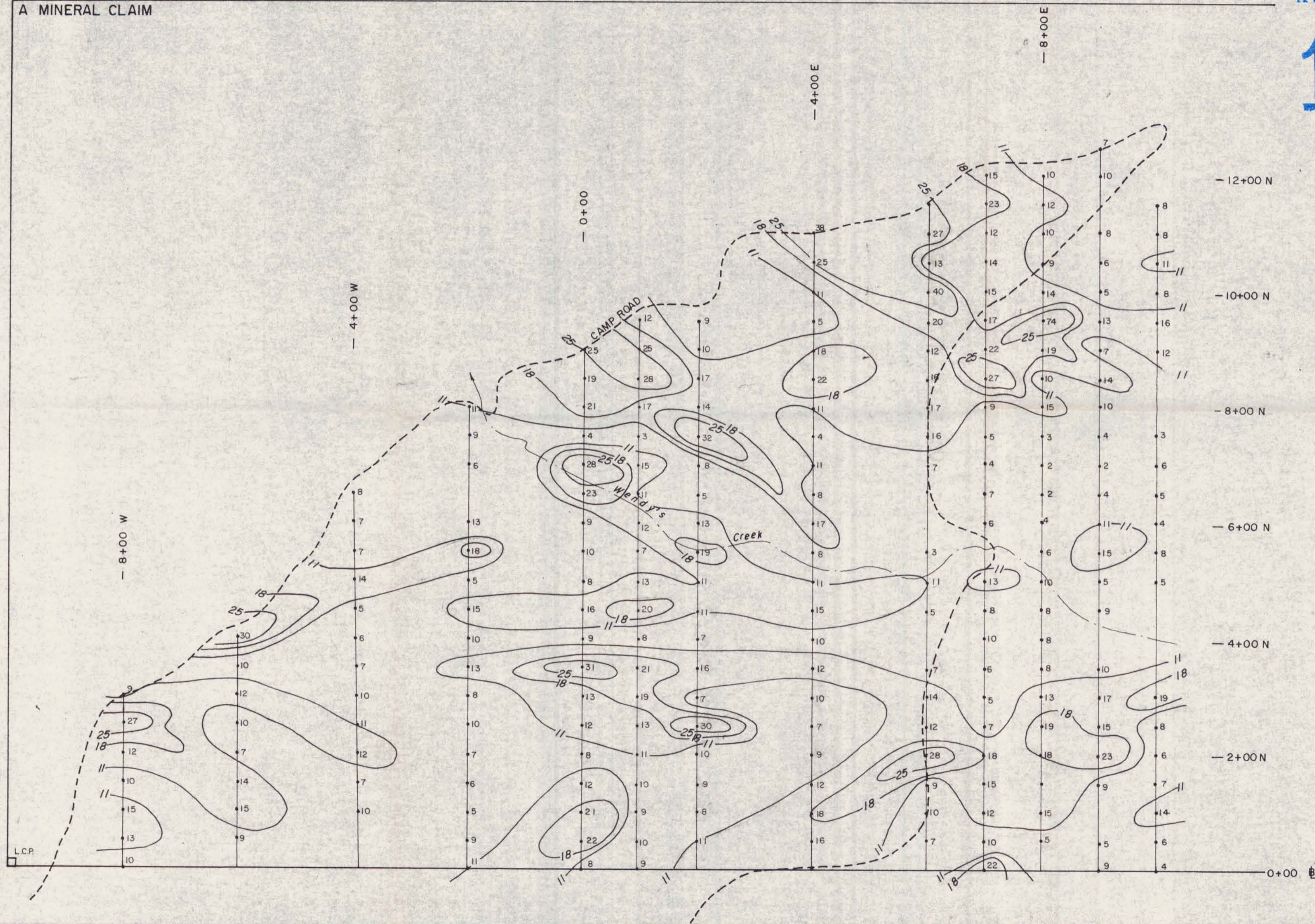
SOOKCHOFF CONSULTANTS INC.  
 JUSTICE MINING CORPORATION  
 A MINERAL CLAIM  
**GEOCHEMISTRY - Pb**

N.T.S. 82G-12E FORT STEELE M.D., B.C.

0 100 200 300 METRES  
 SCALE 1:5000 NOV. 1983

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A MINERAL CLAIM



LEGEND

- STATION
- 11 PPM BACKGROUND
- 18 " SUB ANOMALOUS
- 25 " ANOMALOUS



FIGURE 4

SOOKOCHOFF CONSULTANTS INC.  
JUSTICE MINING CORPORATION  
A MINERAL CLAIM  
**GEOCHEMISTRY - Cu**

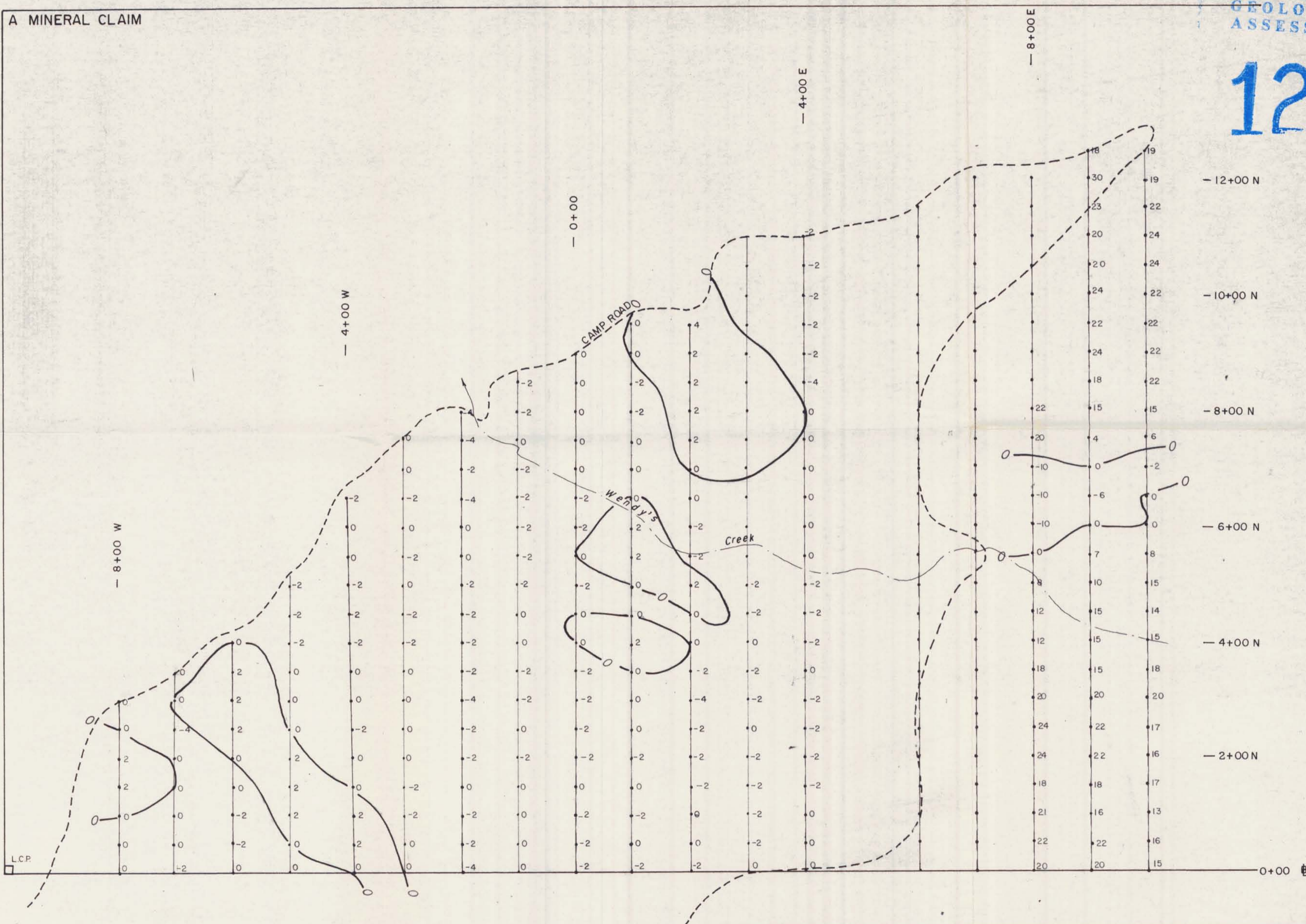
N.T.S. 826-12E FORT STEELE M.D., B.C.  
0 100 200 300 METRES  
SCALE 1:5000 NOV. 1983



A MINERAL CLAIM

GEOLOGICAL BRANCH  
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LEGEND

- STATION
- 4 FIELD READING IN DEGREE



**FIGURE 3**

SOOKCHOFF CONSULTANTS INC.  
 JUSTICE MINING CORPORATION  
 A MINERAL CLAIM  
**EM-16 SURVEY**

N.T.S. 82G-12E FORT STEELE M.D., B.C.

0 100 200 300 METRES

SCALE 1:5000 NOV. 1983