# GEOCHEMICAL REPORT

# ON THE

# VIC CLAIM GROUP

# VICTOR CREEK - DAWSON RANGE AREA

# WHITEHORSE MINING DISTRICT

# YUKON TERRITORY

FOR

GREAT HORN MINING SYNDICATE INCORPORATED

BY

D. H. WAUGH

INTERNATIONAL MINE SERVICES LTD.

FIELD WORK: JULY 22 - AUGUST 12, 1970



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

$ 12,224

D. B. Craig

~~Resident Geologist~~

Resident Mining Engineer

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

Commissioner of Yukon Territory

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on the

Vic 1-96 And Vic 109-112 Claims

for

International Mine Services Ltd.

October, 1970 D. H. Waugh

## INTRODUCTION

During the period of July 22nd to August 12th, 1970, employees of International Mine Services Ltd. conducted a geochemical and geological soil survey on the Vic Claim Group under the supervision of J. L. Tindale, Professional Engineer, in the Province of Ontario for Great Horn Mining Syndicate Incorporated.

The Vic Group includes the one hundred and four contiguous mineral claims Vic 1-96 and Vic 109-112, located on Victor Creek in the Dawson Range area, Yukon Territory.

The Vic Claims adjoin the CO group of claims owned by Newmount Mining Corporation of Canada and presently under option to United Keno Hill Mines. The Vic property is underlain by the favourable quartz monzonite and granodiorite rocks of the Klotassin Batholith host to the Casino Silver Mines porphyry copper-molybdenum mineral deposit.

A regional geochemical survey of the Dawson Range area in 1969 included silt sampling of the Victor Creek

drainage where anomalous copper and molybdenum values were found. The 104 Vic claims were subsequently staked in September of that year.

The purpose of the geochemical soil survey conducted by International Mine Services on the Vic claims was to attempt to locate and evaluate the source of the anomalous copper and molybdenum silt values. This report will describe the 1970 geochemical soil sampling program on the Vic claims. Recommendations for a limited amount of additional work are offered.

## HISTORY and OWNERSHIP

The Vic claims were staked following the regional stream silt sampling program in the Mt. Cockfield area of the Dawson Range and discovery of anomalous copper and molybdenum values in the silts of Victor Creek.

A group of 104 claims comprising the Vic Group were staked and recorded at the Whitehorse Mining Recorders' Office and subsequently transferred to Great Horn Mining Syndicate Incorporated of Suite 1601-8 King Street East, Toronto 1, Ontario.

The 104 contiguous Vic claims are more particularly described as follows:

| CLAIMS NAME | RECORD NUMBER | RECORD DATE |
|---|---|---|
| VIC 1-16 | Y38759-Y38774 | Sept. 22/69 |
| VIC 17-32 | Y38001-Y38016 | Sept. 22/69 |
| VIC 33-40 | Y38329-Y38336 | Sept. 30/69 |
| VIC 41-96 | Y38017-Y38072 | Sept. 22/69 |
| VIC 105-108 | Y38073-Y38076 | Sept. 22/69 |

PROPERTY LOCATION and ACCESS

The Vic claim group is situated on the headwaters of Victor Creek, latitude 62° 38' and longitude 138° 35' in the Dawson Range are of the Whitehorse Mining District. The claim group straddles the upper east end of the Victor Creek valey on the west flank of Mt. Cockfield situated on Claim Sheet 115-J-10. The property is located in the north-eastern corner of the Snag Map area a distance of 175 air miles northwest of Whitehorse and some fifty-two miles west of the Minto airstrip. The International Mine Services Victor Creek camp was located 23 miles west of the main base camp on Hayes Creek and approximately 8 miles southeast of the Casino airstrip.

Access to the property was by a Bell 47G-3B-2 helicopter on contract from Trans North Turbo Air Ltd. of Whitehorse, Personnel, equipment and supplies were transported by helicopter from Minto to the Victor Creek camp via I.M.S.L.'s base camp on Hayes Creek. Fuel used by the helicopter for the Vic Survey was transported to the Hayes Creek winter airstrip by Beaver aircraft of Territorial Airways in April and May, of 1970. The helicopter was based at the Hayes Creek camp and serviced the Vic camp from this location. During the latter 6 days of the Vic Survey men were positioned for work on the eastern half of the Vic Group by helicopter to eliminate a 6 to 8 mile walk to and from work.

For further location purposes the reader is asked to refer to the Index and Location Maps, Fig. 1 and Fig. 2 in the appendix of this report.

GEOMORPHOLOGY

The Vic claims are situated in mountainous terrain of the Dawson Range area of the Yukon Plateau. The east boundary of the group is located at the head of Victor Creek at an elevation of approximately 5,000 feet above sea level. The claim group extends westward along Victor Creek and the creek valley roughly bisects the property. the lowest elevation on the property is about 3,000 feet above sea level situated on the creek bed at the western boundary of the claim group. The southeast corner of the property is situated on the precipitous west flank of Mt. Cockfield. The western two-thirds of the property lies on smoothly eroded ridges bordering the narrow Victor Creek valley. Outcrops are scarce on the property and comprise less than 1% of the surface area. Talus slopes are located on the precipitous slopes in the southeast corner of the property.

The east half of the Vic claim group is located above the tree line and is sparsely covered by moss and stunted buckbrush on open ridges and mountain slopes. The lower west half of the property is covered by dense buckbrush, alders, spruce and some second growth of poplar and birch.

GENERAL GEOLOGY

The Vic property is located in the Dawson Range area of the Yukon Plateau. Most of the Yukon Plateau escaped glaciation during the Pleistocence ice age and is most readily illustrated by the lack of lakes, presence of V-shaped valleys and abundance of residual soil deposits on hill tops and mountain slopes. The property is located

on the Klotassin Batholith and consists chiefly of medium grained quartz monzonite and granodiorite that intruded the metasedimentary rocks of the Yukon Group. The Yukon Group, Cambrian to Precambrian in age, is comprised of schists gneiss, quartzite, amphibolite, minor limestone and conglomerate which form the basement rocks of the area. The Klotassin Batholith is intruded by younger quartz rich stocks known to contain mineralization of possible economic value.

The Vic claim group has less than 1% outcrop occurence though fairly extensive felsenmeer and talus give a relatively reliable indication of the bedrock geology. The entire property appears to be underlain by quartz-rich biotile-hornblende monzonite, medium to coarse-grained.

## GEOCHEMICAL SURVEY

A total of 1284 soil samples were collected on the Vic grid during the 1970 geochemical survey of the Vic claims. The samples were sent to the Whitehorse Assay Office to be analyzed for copper, lead and molybdenum by the hot acid extraction method. The Vic soil survey was conducted on the Vic 1-96 and Vic 109-112 claims.

### METHOD OF CONTROL

A 27,000 east-west baseline was cut and chained at 100-foot intervals by employees of International Mines Services Ltd. Grid lines were turned off the base line at 800-foot intervals by Brunton Compass and entended to the north and south boundaries of the property, a distance of approximately 4,800 feet and 4,600 feet respectively. The north-south grid lines were chained at 200 feet (horizontal distance) station intervals and stations marked using north-south and east-west co-ordinates. A plan map showing the grid lines, claim locations, annd geochemical plot is located in the envelope of this report.

### SOIL TYPE

The greater part of the survey area is covered by light to moderate overburden consisting of residual soils, talus, felsenmeer and minor fluvial deposits. The soil is an immature, skeletal or azonal soil variety that is typical of much of the mountainous terrain in the Dawson Range. Characteristic of skeletal soils, the soil from the Vic property has thin and usually indistinct horizons

containing a relatively highproportion of partially-weathered rock debris. The A horizon consists of a thin moss layer underlain by a thin dark brown to black-coloured organic layer. The B horizon, where developed, is a light brownish-coloured sandy-clay material. The C horizon constitutes the bulk of the soil in the survey area on the Vic claims. It is a light-coloured sand-clay material mixed with abundant partially decomposed rock material. The ph of the soil, tested by a Lamotte ph kit, ranges between 4.0 and 6.0 for this region.

SAMPLING METHOD

Samples were taken at a depth of 6 inches to 2 feet below surface in the B horizon or upper part of the C horizon using a soil auger and sampling at an interval of 200 feet on 800 foot centered grid lines. Samples locations were noted in a soil sample record book by north-south and east-west co-ordinates and a description of the soil composition noted. Samples were placed in water resistant Kraft bags, labeled and dried at room temperature. A total of 1284 samples were collected for analysis.

METHOD OF ANALYSIS

The soil samples from the Vic claims were all dried and sieved to a minus 80 mesh at the Whitehorse Assay Office in Whitehorse, Y.T. A one gram sample of the minus 80 mesh fraction was weighed on an analytical balance and digested in a hot nitric acid and potassium perchloric acid bath. The digested sample was bulked to 20 c.c. and

analysis made for copper, lead and molybdenum by atomic absorption spectrometry with readings reported in parts per million.

CONCLUSIONS and RECOMMENDATIONS

A histogram (see Fig. 3 in the appendix) on 1284 soil samples from the Vic Survey was constructed showing the frequency of the ranges of copper values in parts per million. From the histrogram a median value (mean background) of 18 ppm copper and a threshold value of 50 ppm copper were selected for the survey area. Of the 1284 values, 27 lie above the selected threshold and of these, 15 values are considered as being possibly anomalous and 12 values (those greater than 100 ppm) as being probably anomalous.

Only one anomalous copper zone was indicated by the survey and is located between lines 184 East and 208 East. The zone trends roughly east-west and appears to be somewhat eliptical in shape. The 27 values occurring above threshold represent this zone and these copper values range from 40 ppm to 430 ppm. The zone covers an area of approximately 2,400 feet in length.

Lead values and molybdenum values are lowin the survey area. Statistical analysis of the lead values shows a median value of 15 ppm and threshold of 30 ppm with less than 1% of the values being greater than the threshold value.

Additional work is recommended on the copper zone located between L184E and L208E

1) Soil sampling on a 200 foot grid at 100 foot centers.
2) Limited trenching on geochemical copper highs where overburden is shallow.
3) An induced polarization survey over the copper zone.

# APPENDIX

# INDEX MAP

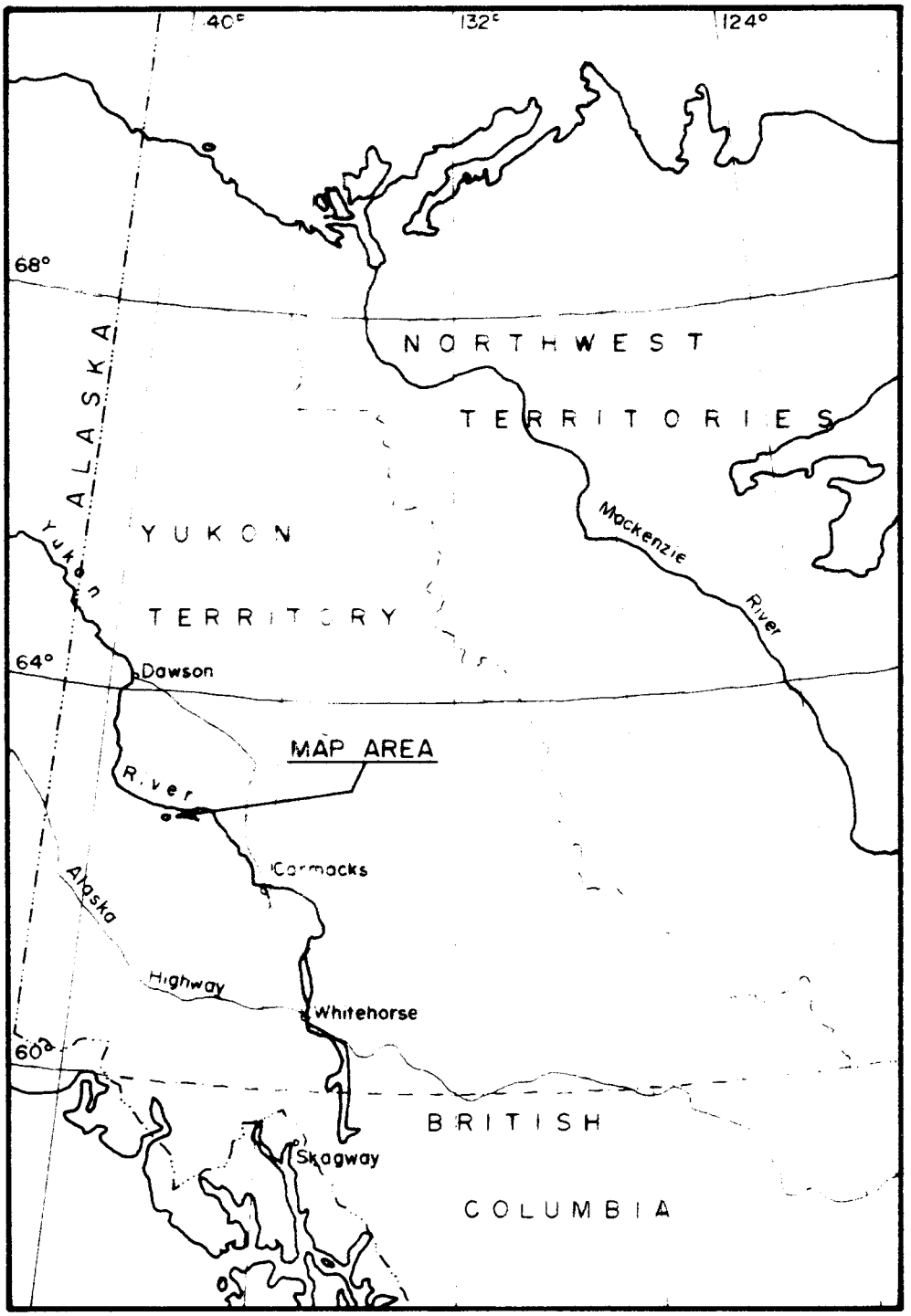



Fig. 1

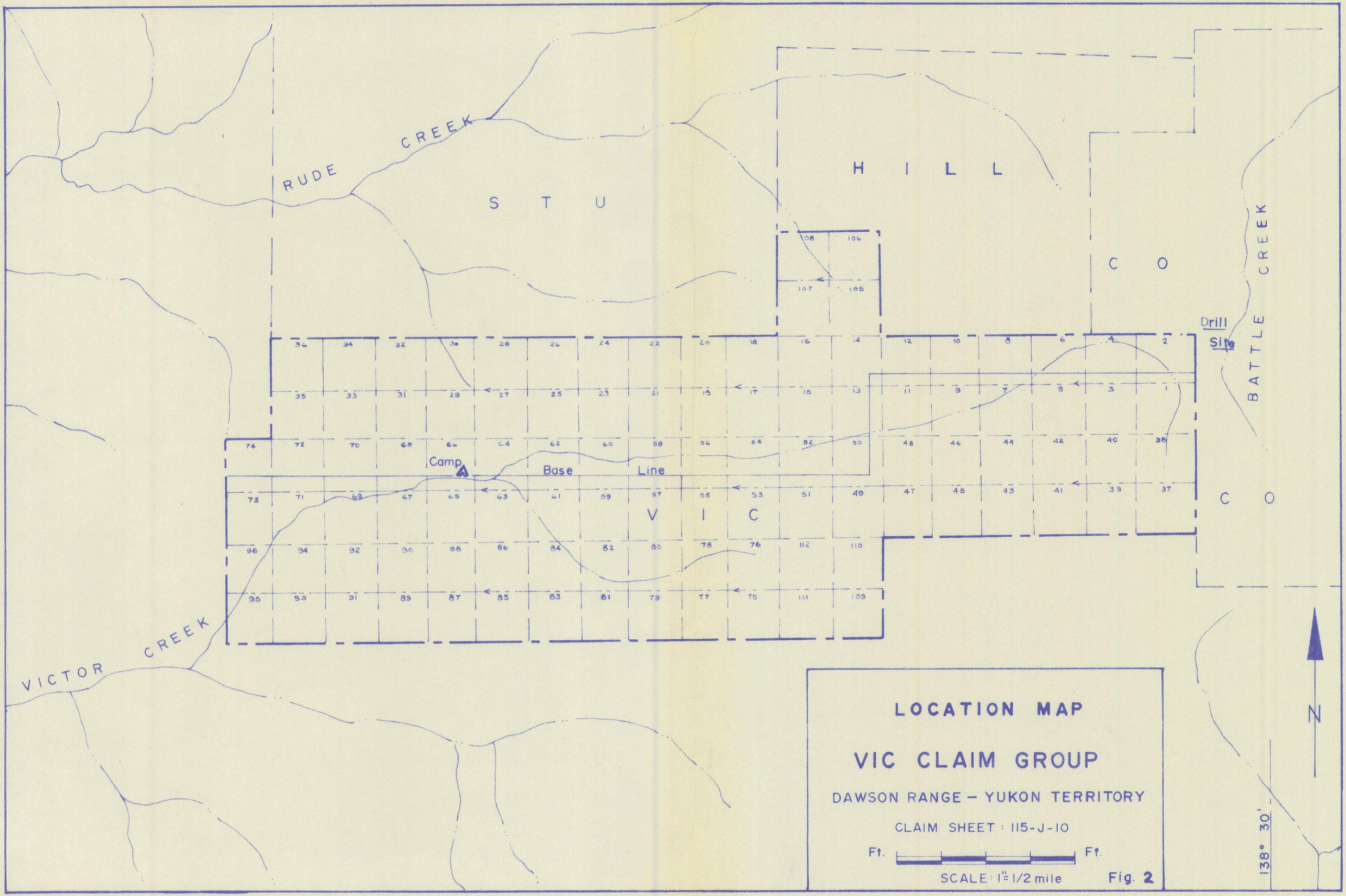

RUDE CREEK
S T U
H I L L
C O
BATTLE CREEK
Drill Site
Camp
Base Line
V I C
C O
VICTOR CREEK
N
138° 30'
LOCATION MAP
VIC CLAIM GROUP
DAWSON RANGE – YUKON TERRITORY
CLAIM SHEET : 115-J-10
Ft.
Ft.
SCALE: 1" = 1/2 mile

Fig. 2

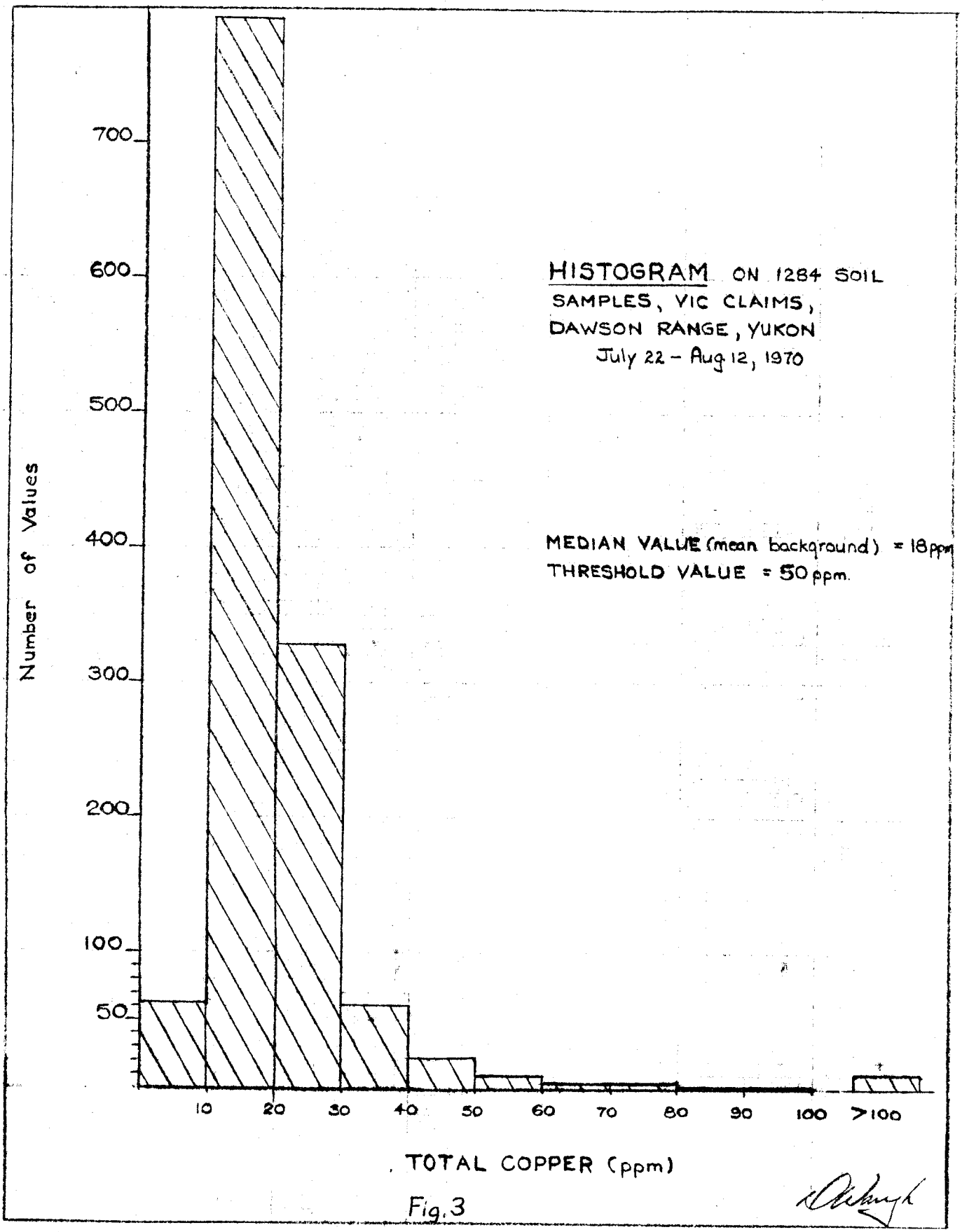

HISTOGRAM ON 1284 SOIL SAMPLES, VIC CLAIMS, DAWSON RANGE, YUKON
July 22 – Aug 12, 1970
MEDIAN VALUE (mean background) = 18ppm
THRESHOLD VALUE = 50 ppm.
Number of Values
700
600
500
400
300
200
100
50
10
20
30
40
50
60
70
80
90
100
>100
TOTAL COPPER (ppm)

Fig. 3

# Statement of Qualifications

I, David H. Waugh of P.O. Box 1052, Whitehorse, Yukon Territory, do hereby state that:

1. I am a geologist, educated in the geological sciences at Michigan College of Mining and Technology, '64.
2. I have practised my profession as a geologist in the field of mining exploration and development for the past six years.
3. I have been employed as senior geologist and resident Project Manager in the Yukon during the past three years for International Mine Services Ltd.
4. The information in this report represents the findings of this company during the 1970 survey conducted by myself under the direction and supervision of J. L. Tindale, Professional Engineer in the Province of Ontario.

Dated this 1st day of ~~September~~ October, 1970, at Whitehorse, Yukon Terr.

David H. Waugh

# LIST OF EMPLOYEES

Ian McRae, 1665 Bloor St., Mississauga, Ontario

Linecutting and soil sampling, 18 man days

George Waugh, 11 Spruce Street, Kirkland Lake, Ontario

Linecutting and soil sampling, 14 man days

Terrence Graham, 16 Saugeen Cr., Scarborough 703, Ontario

Linecutting and soil sampling, 22 man days

Robert Mahoney, Box 761, Antigonish, Nova Scotia

Linecutting and soil sampling, 22 man days

Carl Anderson, Vernon Garden Apts., Apt 14-K, Rockville, Conn.

Soil Sampling, 17 man days

Ken Hossick, 44 Cremono Cr,. Ottawa 12, Ontario

Soil Sampling, 17 man days

Michael Braet, Box 1052, Whitehorse, Yukon

Drafting, 5 man days

David Waugh, Box 1052, Whitehorse, Yukon

Management and supervision, 6 man days

SUMMARY OF COSTS

| | | | |
|---|---|---|---|
| Wages: | 110 man days @ $20 per day | | $ 2200.00 |
| | 5 man days @ $30 per day | | 150.00 |
| | 6 man days @ $40 per day | | 240.00 |
| | Total | $2590.00 | |
| Camp and Cookery: | 140 man days @ $10 per day | | 1400.00 |
| Transportation: | 33.7 helicopter hrs. @ $150 /hr | | 5088.00 |
| | ($130 /hr contract, $20 /hr fuel costs) | | |
| Assays: | 1284 samples @ $2.00 | | 2568.00 |
| Miscellaneous: | company trucks, sample bags, pickets, camp fuel, expediting services, etc. | | 600.00 |
| | Total Expenditures Listed | | $12246.00 |
| Expenditures on a per claim basis (100) claims | | | $ 122.46 |

AFFIDAVIT

CANADA

Yukon Territory

To Wit:

I, David H. Waugh, of Whitehorse, Yukon Territory, and agent for International Mine Services Ltd. of Suite 1601, 8 King St. East, Toronto 1, Ontario, make oath and state:

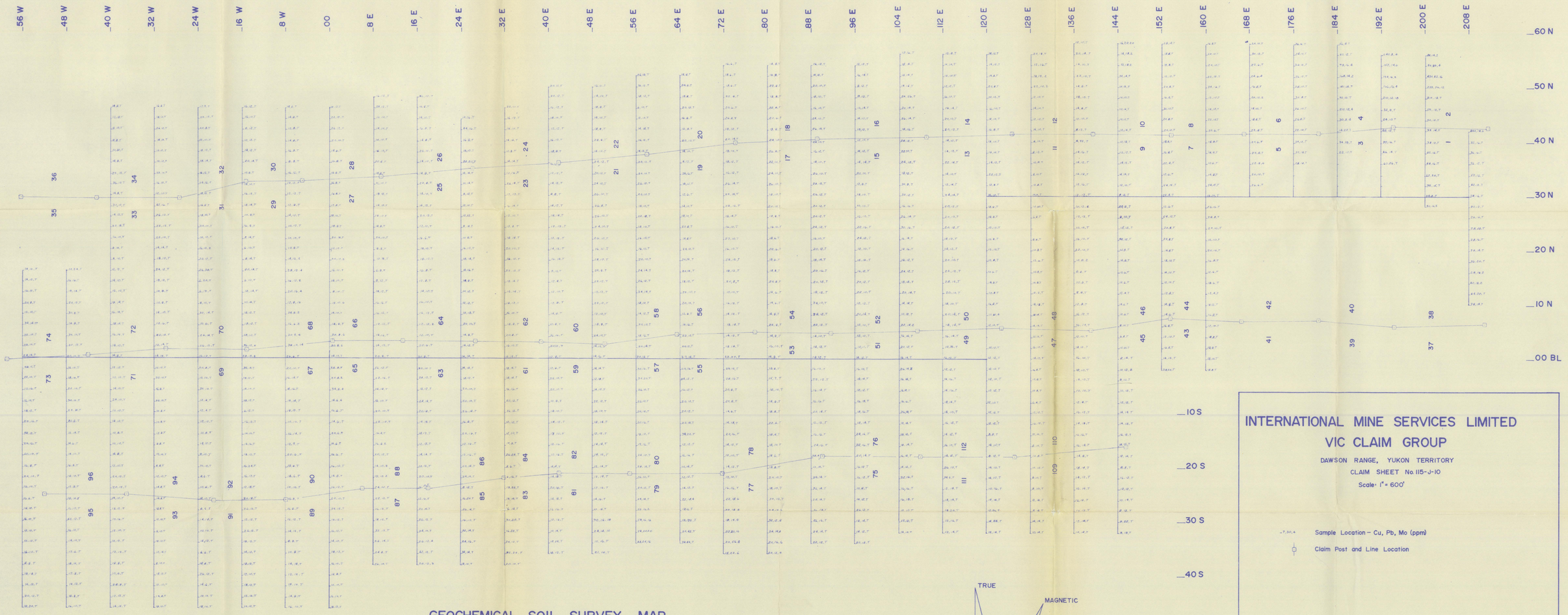
That the expenditures incurred for the geochemical survey conducted by International Mine Services Ltd. from July 22 nd to August 12th, 1970, on the Vic claims, Victor Creek - Dawson Range area, Yukon Territory are true and exact to the best of my knowledge.

Signature

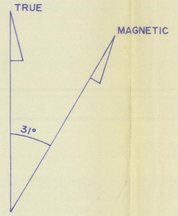
WHITEHORSE, Y.T.

OCT 8 1970

A Commissioner for taking Affidavits
in and for the Yukon Territory.




# GEOCHEMICAL SOIL SURVEY MAP
# COPPER, LEAD, MOLYBDENUM PLOT, 1970




## INTERNATIONAL MINE SERVICES LIMITED
## VIC CLAIM GROUP

DAWSON RANGE, YUKON TERRITORY

CLAIM SHEET No. 115-J-10

Scale: 1" = 600'

-7.30.4 Sample Location – Cu, Pb, Mo (ppm)

Claim Post and Line Location